SPORTON International Inc.
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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-RT3592BC8**
Manufacturer's company	**Ralink Technology Corporation**
Manufacturer Address	5F., No.36, Taiyuan St., Jhubei City, Hsinchu County 302, Taiwan, R.O.C.

Product Name	802.11a/b/g/n 2T2R combo card
Brand Name	Ralink
Model Name	RT3592BC8
Test Rule Part(s)	47 CFR FCC Part 15 Subpart C § 15.247
Test Freq. Range	2400 ~ 2483.5MHz / 5725 ~ 5850MHz
Received Date	Jun. 29, 2010
Final Test Date	Aug. 17, 2010
Submission Type	Original Equipment

Statement

Test result included is only for the 802.11n, 802.11b/g part and 802.11a (5725 ~ 5850MHz) 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.

Testing Laboratory
1190

Table of Contents

History of This Test Report

Original Issue Date: Aug. 18, 2010

Report No.: FR080317AB

■ No additional attachment.

□ Additional attachment were issued as following record:

Attachment No.	Issue Date	Description

Certificate No.: CB9908052

1. CERTIFICATE OF COMPLIANCE

Product Name	:	802.11a/b/g/n 2T2R combo card
Brand Name	:	Ralink
Model Name	:	RT3592BC8
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 Jun. 29, 2010 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 2010.8.20

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	11.94 dB
4.2	15.247(b)(3)	Maximum Conducted Output Power	Complies	5.44 dB
4.3	15.247(e)	Power Spectral Density	Complies	11.75 dB
4.4	15.247(a)(2)	6dB Spectrum Bandwidth	Complies	-
4.5	15.247(d)	Radiated Emissions	Complies	0.81 dB
4.6	15.247(d)	Band Edge Emissions	Complies	0.08 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	$\pm 8.5\times10^{-8}$	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℃	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 (2TX, 2RX)
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 / 5725 ~ 5850MHz
Channel Number	<For 2.4GHz Band>: 11 for 20MHz bandwidth ; 7 for 40MHz bandwidth <For 5GHz Band>: 5 for 20MHz bandwidth ; 2 for 40MHz bandwidth
Channel Band Width (99%)	<For 2.4GHz Band>: MCS0 (20MHz): 17.60 MHz ; MCS0 (40MHz): 35.92 MHz <For 5GHz Band>: MCS0 (20MHz): 17.48MHz ; MCS0 (40MHz): 35.84 MHz
Conducted Output Power	<For 2.4GHz Band>: MCS0 (20MHz): 24.56 dBm ; MCS0 (40MHz): 19.72 dBm <For 5GHz Band>: MCS0 (20MHz): 19.79 dBm ; MCS0 (40MHz): 19.86 dBm
Carrier Frequencies	Please refer to section 3.4
Antenna	Please refer to section 3.3

IEEE 802.11a/b/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 802.11a/g
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 / 5725 ~ 5850MHz
Channel Number	11b/g: 11 ; 11a: 5
Channel Band Width (99%)	11b: 15.24 MHz ; 11g: 16.76 MHz ; 11a: 17.40 MHz
Conducted Output Power	11b: 20.24 dBm ; 11g: 21.52 dBm ; 11a: 17.02 dBm
Carrier Frequencies	Please refer to section 3.4
Antenna	Please refer to section 3.3

NOTE:

Antenna Requirement: There is an antenna coaxial cable with a core in the end side.

The core brand is King core (K5B RH 7.9*12.8*4).

Antenna & Band width

Antenna	Single (TX)		Two (TX)	
Band width Mode	20 MHz	40 MHz	20 MHz	40 MHz
IEEE 802.11a	V	X	X	X
IEEE 802.11b	V	X	X	X
IEEE 802.11g	V	X	X	X
IEEE 802.11n	X	X	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	Antenna Gain (dBi)		Remark
					2.4GHz Band	5GHz Band	
A-1	JOYMAX	TWX-614XRSXX-999	Dipole Antenna	I-PEX	3.00	5.00	TX/RX
A-2	JOYMAX	TWX-614XRSXX-999	Dipole Antenna	I-PEX	3.00	5.00	TX/RX
B-1	ACON	APP6P-700119	PIFA Antenna	I-PEX	3.50	5.01	TX/RX
B-2	ACON	APP6P-700119	PIFA Antenna	I-PEX	3.50	5.01	TX/RX

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

Connector 1 (Main): A-1 / B-1

Connector 2 (Aux.): A-2 / B-2

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.

For IEEE 802.11n mode (2TX/RX):

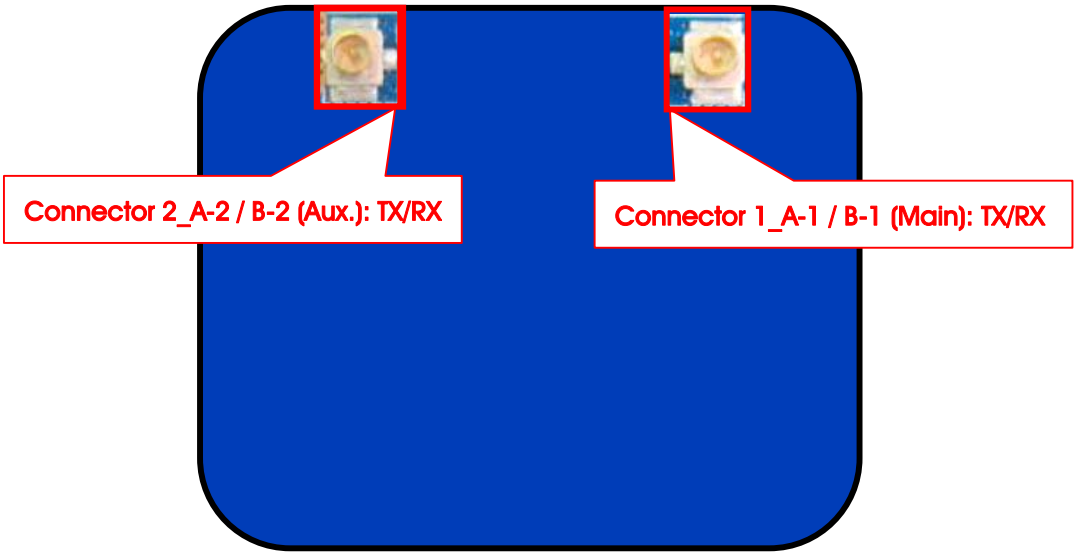
Ant. A & Ant. B could both transmit/receive simultaneously.

For IEEE 802.11a/b/g mode (1TX/1RX):

Ant. A and Ant. B can be used as transmitting or receiving antenna.

The EUT supports the antenna with TX/RX diversity function.

Due to the "Connector 1" generated higher output power than "Connector 2", all the tests were base on this setting and recorded in this report.



3.4. Table for Carrier Frequencies

<For 2.4GHz Band>

Frequency Allocation for 802.11b/g

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	-	-

<For 5GHz Band>

Frequency Allocation for 802.11a

There are two bandwidth systems for IEEE 802.11n.

For 20MHz bandwidth systems, use Channel 149, 153, 157, 161, 165.

For 40MHz bandwidth systems, use Channel 151, 159.

Frequency Band	Channel No.	Frequency	Channel No.	Frequency
5725~5850 MHz	149	5745 MHz	159	5795 MHz
	151	5755 MHz	161	5805 MHz
	153	5765 MHz	165	5825 MHz
	157	5785 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.

<For 2.4GHz Band>

Test Items	Mode	Data Rate	Channel	Antenna
AC Power Line Conducted Emissions	Normal Link	Auto	-	A / B
Max. Peak Conducted Output Power	MCS0/20MHz	6.5Mbps	1/6/11	A / B
	MCS0/40MHz	13.5Mbps	3/6/9	A / B
	11b/CCK	1 Mbps	1/6/11	A / B
	11g/BPSK	6 Mbps	1/6/11	A / B
Power Spectral Density 6dB Spectrum Bandwidth	MCS0/20MHz	6.5Mbps	1/6/11	A / B
	MCS0/40MHz	13.5Mbps	3/6/9	A / B
	11b/CCK	1 Mbps	1/6/11	A / B
	11g/BPSK	6 Mbps	1/6/11	A / B
Radiated Emissions Below 1GHz	Normal Link	Auto	-	A / B
Radiated Emissions Above 1GHz	MCS0/20MHz	6.5Mbps	1/6/11	A / B
	MCS0/40MHz	13.5Mbps	3/6/9	A / B
	11b/CCK	1 Mbps	1/6/11	A / B
	11g/BPSK	6 Mbps	1/6/11	A / B
Band Edge Emissions	MCS0/20MHz	6.5Mbps	1/11	A / B
	MCS0/40MHz	13.5Mbps	3/9	A / B
	11b/CCK	1 Mbps	1/11	A / B
	11g/BPSK	6 Mbps	1/11	A / B

<For 5GHz Band>

Test Items	Mode	Data Rate	Channel	Antenna
AC Power Line Conducted Emissions	Normal Link	Auto	-	A / B
Max. Peak Conducted Output Power	MCS0/20MHz	6.5Mbps	149/157/165	A / B
	MCS0/40MHz	13.5Mbps	151/159	A / B
	11a/BPSK	6 Mbps	149/157/165	A / B
Power Spectral Density 6dB Spectrum Bandwidth	MCS0/20MHz	6.5Mbps	149/157/165	A / B
	MCS0/40MHz	13.5Mbps	151/159	A / B
	11a/BPSK	6 Mbps	149/157/165	A / B
Radiated Emissions Below 1GHz	Normal Link	Auto	-	A / B
Radiated Emissions Above 1GHz	MCS0/20MHz	6.5Mbps	149/157/165	A / B
	MCS0/40MHz	13.5Mbps	151/159	A / B
	11a/BPSK	6 Mbps	149/157/165	A / B
Band Edge Emissions	MCS0/20MHz	6.5Mbps	149/157/165	A / B
	MCS0/40MHz	13.5Mbps	151/159	A / B
	11a/BPSK	6 Mbps	149/157/165	A / B

NOTE: All the test modes were listed as below:

<For Conducted Emissions Test>:

Test Mode 1: EUT + Dipole Antenna (Ant. A) - with 2.4GHz WLAN + 2.4GHz Bluetooth function

Test Mode 2: EUT + PIFA Antenna (Ant. B) - with 5GHz WLAN + 2.4GHz Bluetooth function

All the test modes were tested and recorded in this report.

<Radiated Emissions Test Below 1GHz and Co-location Test >:

Test Mode 1: EUT + Dipole Antenna (Ant. A) - with 2.4GHz WLAN + 2.4GHz Bluetooth function

Test Mode 2: EUT + PIFA Antenna (Ant. B) – with 2.4GHz WLAN + 2.4GHz Bluetooth function

Test Mode 3: EUT + Dipole Antenna (Ant. A) - with 5GHz WLAN + 2.4GHz Bluetooth function

Test Mode 4: EUT + PIFA Antenna (Ant. B) - with 5GHz WLAN + 2.4GHz Bluetooth function

All the test modes were tested and recorded in this report.

<For Other Tests>:

Test Mode 1: EUT + Dipole Antenna (Ant. A)

Test Mode 2: EUT + PIFA Antenna (Ant. B)

All the test modes were tested and recorded in this report.

<For MPE and Co-location Test>:

The EUT could be applied with Bluetooth and wireless LAN function; therefore Maximum Permissible Exposure (please refer to Appendix C) and Co-location (please refer to Appendix D) tests are added for simultaneously transmit between Bluetooth and wireless LAN function.

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	879474	IC 4086	-
CO04-HY	Conduction	Hwa Ya	879474	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 Supporting Units

Support Unit	Brand	Model	FCC ID
Notebook	DELL	M1330	E2KWM3945ABG
Notebook	DELL	D400	E2K24GBR
Mouse	FIRST PRICE	FP-M02	DoC
Modem	ACEEX	DM1414	IFAXDM1414
Wireless AP	Planex	GW-AP54SGX	N/A

3.8. 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>:

<For 2.4GHz Band>

Power Parameters of IEEE 802.11n MCS0 20MHz Ant. A

Test Software Version	QA RT3x9x V1.5.6.8		
Frequency	2412 MHz	2437 MHz	2462 MHz
IEEE 802.11n 20MHz	13/13	1E/1F	14/18

Power Parameters of IEEE 802.11n MCS0 40MHz Ant. A

Test Software Version	QA RT3x9x V1.5.6.8		
Frequency	2422 MHz	2437 MHz	2452 MHz
IEEE 802.11n 40MHz	11/12	15/16	10/13

Power Parameters of IEEE 802.11b/g Ant. A

Test Software Version	QA RT3x9x V1.5.6.8		
Frequency	2412 MHz	2437 MHz	2462 MHz
IEEE 802.11b	0F	18	12
IEEE 802.11g	13	1F	14

<For 5GHz Band>

Power Parameters of IEEE 802.11n MCS0 20MHz Ant. A

Test Software Version	QA RT3x9x V1.5.6.8		
Frequency	5745 MHz	5785 MHz	5825 MHz
IEEE 802.11n 20MHz	13/13	13/13	13/13

Power Parameters of IEEE 802.11n MCS0 40MHz Ant. A

Test Software Version	QA RT3x9x V1.5.6.8	
Frequency	5755 MHz	5795 MHz
IEEE 802.11n 40MHz	13/13	13/13

Power Parameters of IEEE 802.11a Ant. A

Test Software Version	QA RT3x9x V1.5.6.8		
Frequency	5745 MHz	5785 MHz	5825 MHz
IEEE 802.11a	13	13	13

<For Antenna B>:

<For 2.4GHz Band>

Power Parameters of IEEE 802.11n MCS0 20MHz Ant. B

Test Software Version	QA RT3x9x V1.5.6.8		
Frequency	2412 MHz	2437 MHz	2462 MHz
IEEE 802.11n 20MHz	10/10	1F/1F	13/17

Power Parameters of IEEE 802.11n MCS0 40MHz Ant. B

Test Software Version	QA RT3x9x V1.5.6.8		
Frequency	2422 MHz	2437 MHz	2452 MHz
IEEE 802.11n 40MHz	0D/0E	13/14	0C/0F

Power Parameters of IEEE 802.11b/g Ant. B

Test Software Version	QA RT3x9x V1.5.6.8		
Frequency	2412 MHz	2437 MHz	2462 MHz
IEEE 802.11b	0E	12	11
IEEE 802.11g	10	1F	10

<For 5GHz Band>

Power Parameters of IEEE 802.11n MCS0 20MHz Ant. B

Test Software Version	QA RT3x9x V1.5.6.8		
Frequency	5745 MHz	5785 MHz	5825 MHz
IEEE 802.11n 20MHz	13/13	13/13	13/13

Power Parameters of IEEE 802.11n MCS0 40MHz Ant. B

Test Software Version	QA RT3x9x V1.5.6.8	
Frequency	5755 MHz	5795 MHz
IEEE 802.11n 40MHz	13/13	13/13

Power Parameters of IEEE 802.11a Ant. B

Test Software Version	QA RT3x9x V1.5.6.8		
Frequency	5745 MHz	5785 MHz	5825 MHz
IEEE 802.11a	13	13	13

During the test, "QA RT3x9x V1.5.6.8" under WIN XP was executed the test program to control the EUT continuously transmit RF signal.

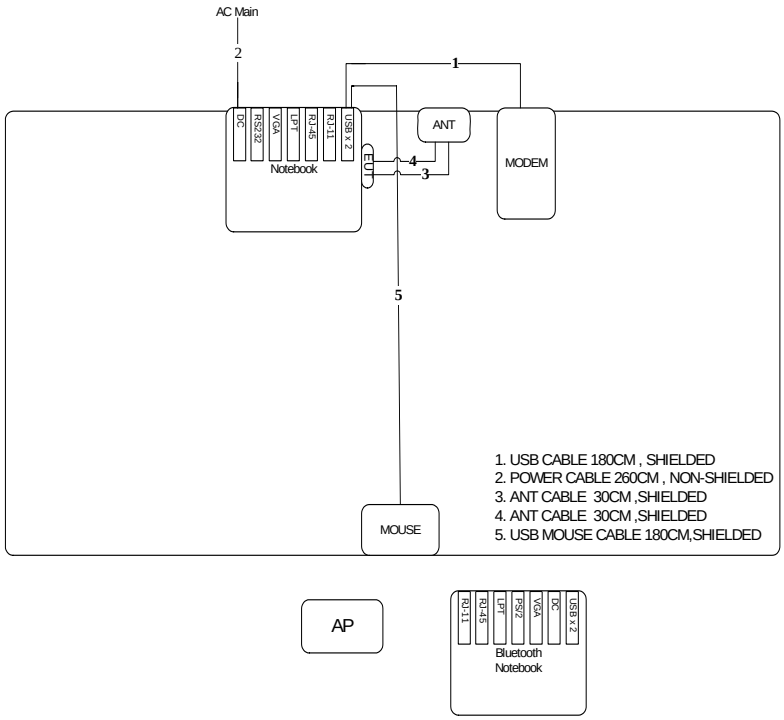
3.9. Test Configurations

3.9.1. Radiation Emissions Test Configuration

<For WLAN Function>

Test Configuration: 9kHz~1GHz

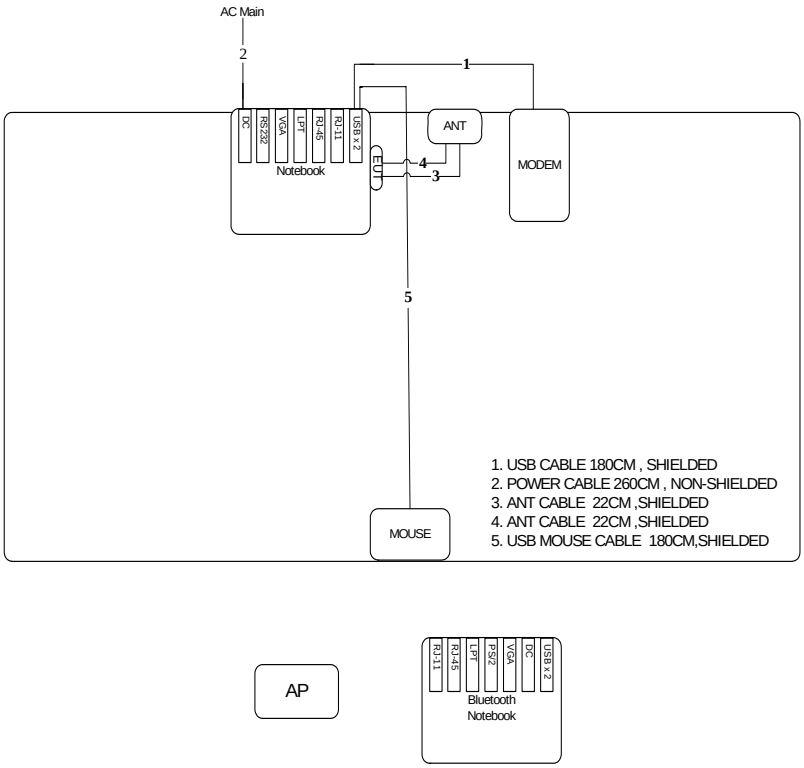
Test Mode: Mode 1 / Mode 3 (Ant. A)



<For WLAN Function>

Test Configuration: 9kHz~1GHz

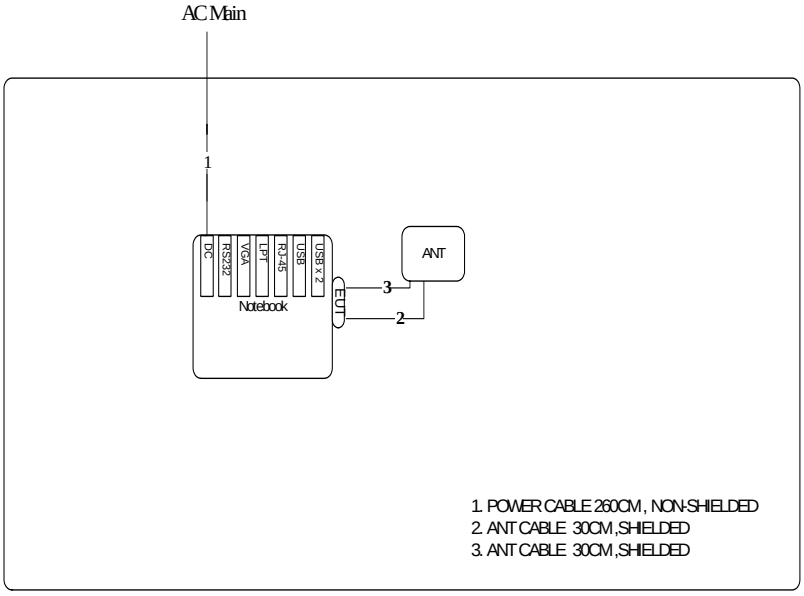
Test Mode: Mode 2 / Mode 4 (Ant. B)



<For WLAN Function>

Test Configuration: Above 1GHz

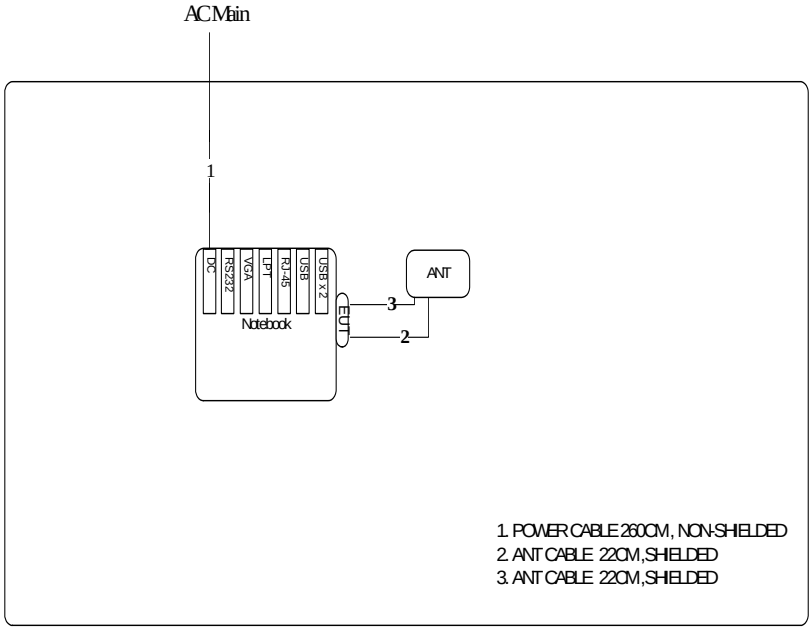
Test Mode: Mode 1 (Ant. A)



<For WLAN Function>

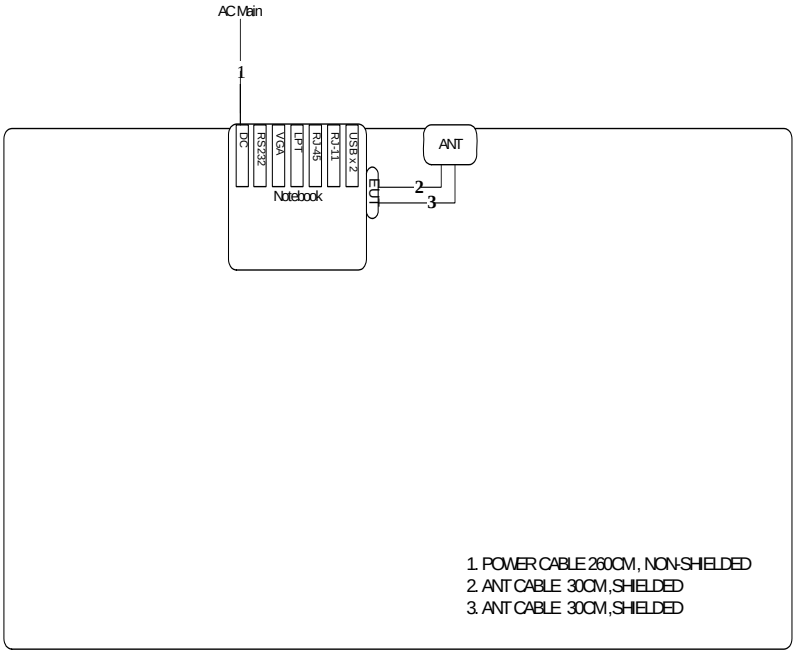
Test Configuration: Above 1GHz

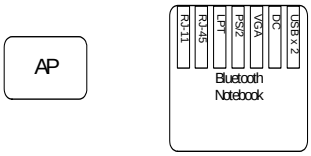
Test Mode: Mode 2 (Ant. B)



<For Co-location>

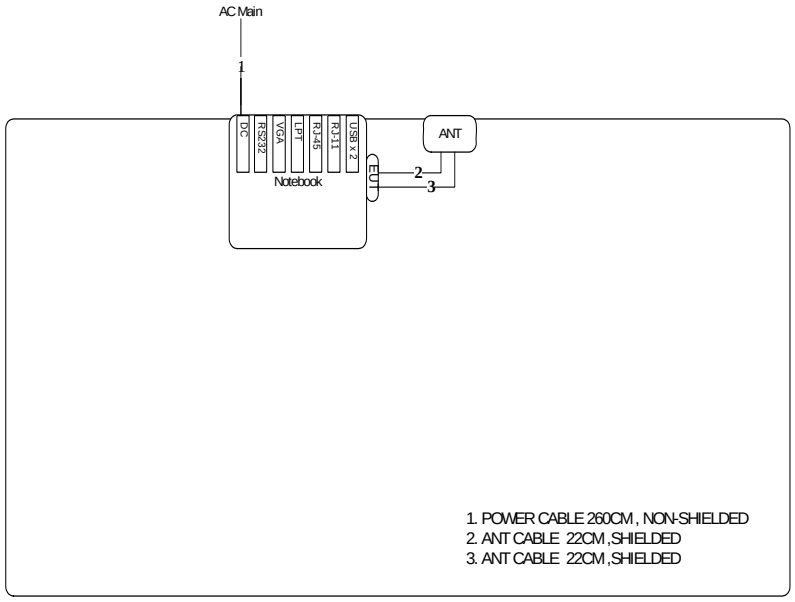
Test Mode: Mode 1 (Ant. A)

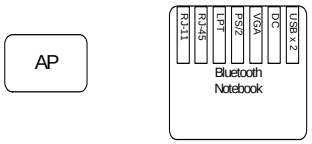




<For Co-location>

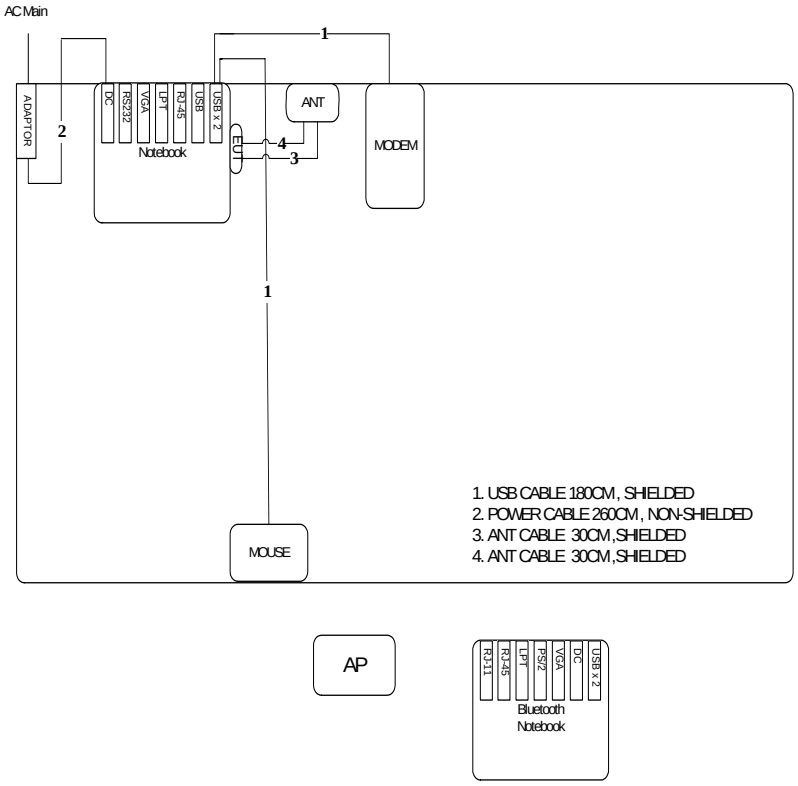
Test Mode: Mode 2 (Ant. B)



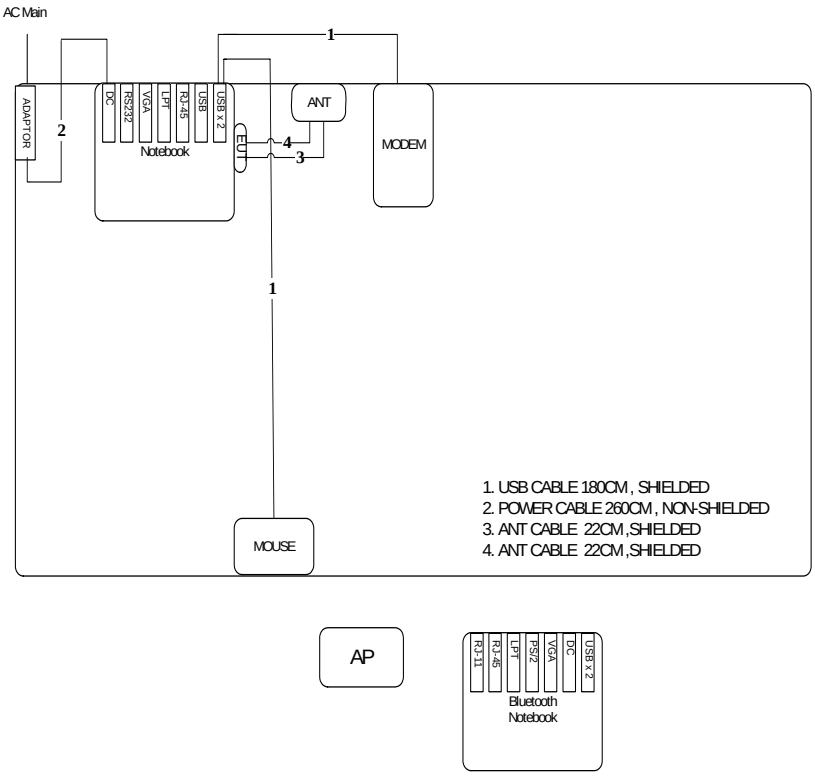


3.9.2. AC Power Line Conduction Emissions Test Configuration

Test Mode: Mode 1 (Ant. A)



Test Mode: Mode 2 (Ant. B)



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

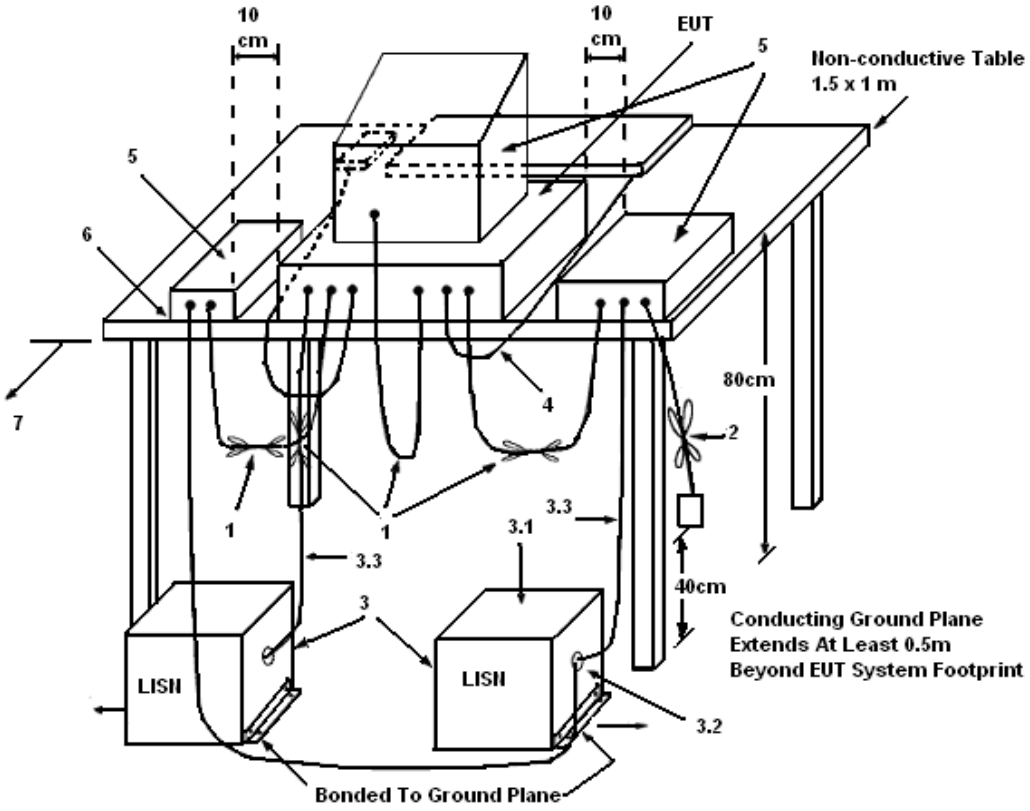
Please refer to section 5 of equipments list in this report. The following table is the setting of the receiver.

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.

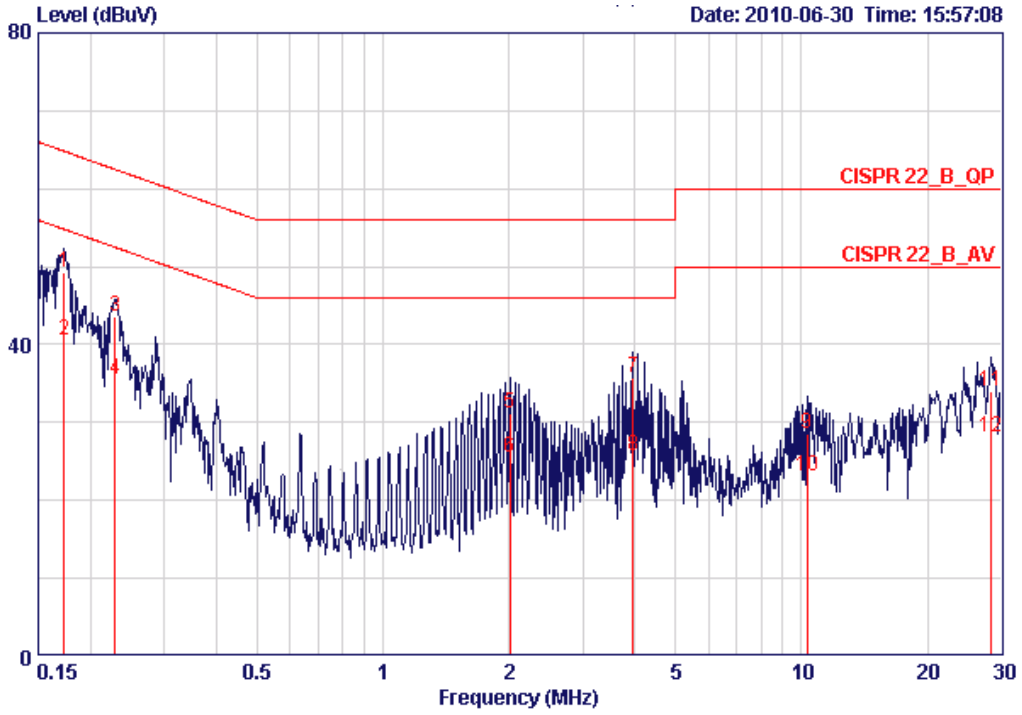
4.1.6. EUT Operation during Test

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

4.1.7. Results of AC Power Line Conducted Emissions Measurement

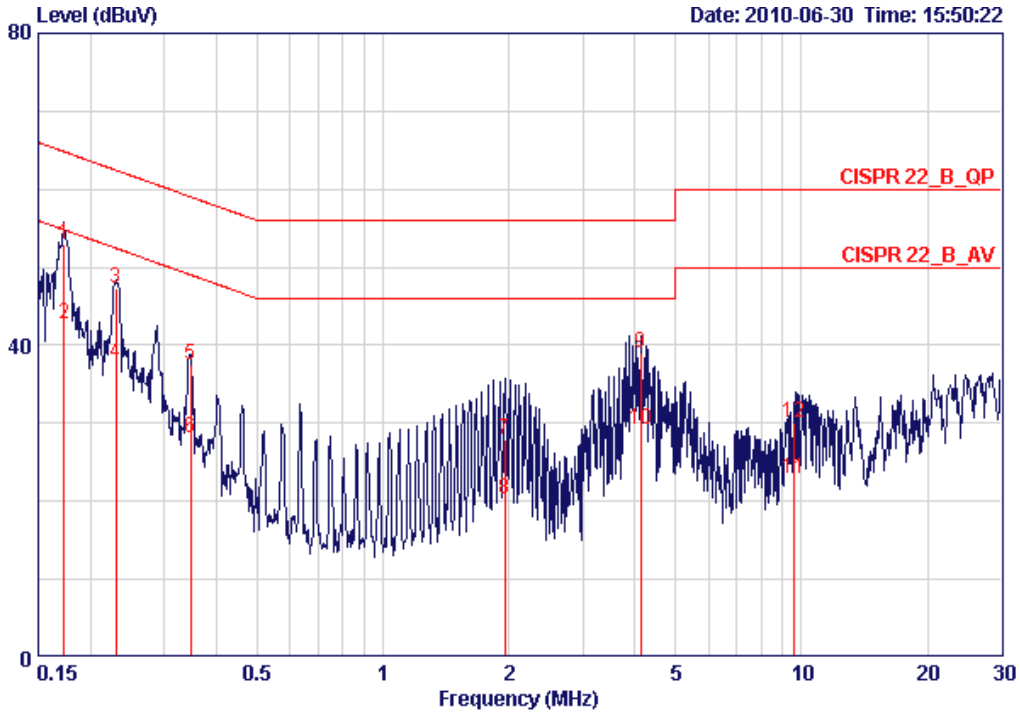
<For Mode 1 (Ant. A)>:

Temperature	23°C	**Humidity**	55%
Test Engineer	Sin Chang	**Phase**	Line
Configuration	Normal Link / Mode 1 (Ant. A)		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1 @	0.17307	49.34	-15.47	64.81	49.08	0.06	0.20	QP
2 @	0.17307	40.59	-14.22	54.81	40.33	0.06	0.20	AVERAGE
3 @	0.22918	43.56	-18.92	62.48	43.31	0.05	0.20	QP
4 @	0.22918	35.56	-16.92	52.48	35.31	0.05	0.20	AVERAGE
5	2.012	31.08	-24.92	56.00	30.83	0.05	0.20	QP
6	2.012	25.45	-20.55	46.00	25.20	0.05	0.20	AVERAGE
7	3.956	35.82	-20.18	56.00	35.42	0.10	0.30	QP
8	3.956	25.70	-20.30	46.00	25.30	0.10	0.30	AVERAGE
9	10.319	28.61	-31.39	60.00	27.89	0.37	0.36	QP
10	10.319	23.07	-26.93	50.00	22.35	0.37	0.36	AVERAGE
11	28.452	33.95	-26.05	60.00	32.00	1.35	0.60	QP
12	28.452	28.18	-21.82	50.00	26.23	1.35	0.60	AVERAGE

Temperature	23°C	Humidity	55%
Test Engineer	Sin Chang	Phase	Neutral
Configuration	Normal Link / Mode 1 (Ant. A)		



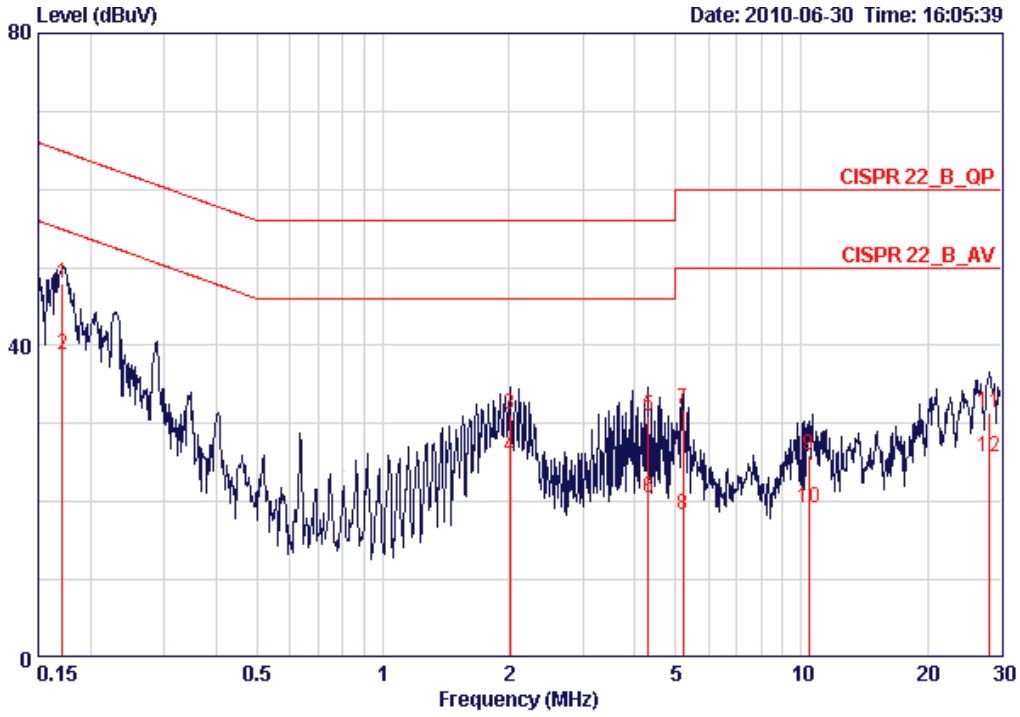
	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1 @	0.17307	52.87	-11.94	64.81	52.58	0.09	0.20	QP
2 @	0.17307	42.83	-11.98	54.81	42.54	0.09	0.20	AVERAGE
3 @	0.23040	47.40	-15.04	62.44	47.12	0.08	0.20	QP
4 @	0.23040	37.72	-14.72	52.44	37.44	0.08	0.20	AVERAGE
5	0.34646	37.49	-21.55	59.05	37.22	0.07	0.20	QP
6	0.34646	28.13	-20.91	49.05	27.86	0.07	0.20	AVERAGE
7	1.959	27.89	-28.11	56.00	27.61	0.09	0.19	QP
8	1.959	20.29	-25.71	46.00	20.01	0.09	0.19	AVERAGE
9 @	4.136	39.03	-16.97	56.00	38.58	0.15	0.30	QP
10 @	4.136	29.17	-16.83	46.00	28.72	0.15	0.30	AVERAGE
11	9.635	22.94	-27.06	50.00	22.26	0.38	0.30	AVERAGE
12	9.635	30.19	-29.81	60.00	29.51	0.38	0.30	QP

Note:

Level = Read Level + LISN Factor + Cable Loss.

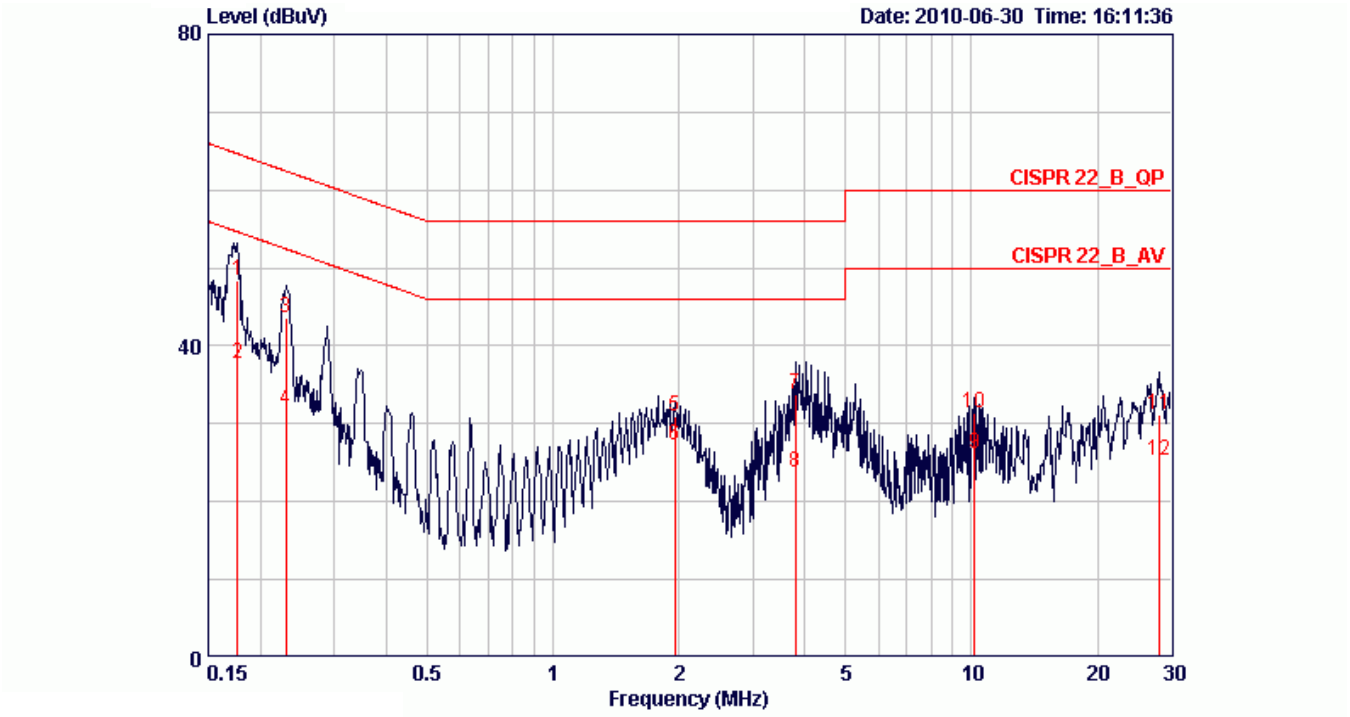
<For Mode 2 (Ant. B)>:

Temperature	23°C	Humidity	55%
Test Engineer	Sin Chang	Phase	Line
Configuration	Normal Link / Mode 2 (Ant. B)		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1 @	0.17125	47.94	-16.96	64.90	47.68	0.06	0.20	QP
2 @	0.17125	38.81	-16.09	54.90	38.55	0.06	0.20	AVERAGE
3	2.012	31.20	-24.80	56.00	30.95	0.05	0.20	QP
4	2.012	25.65	-20.35	46.00	25.40	0.05	0.20	AVERAGE
5	4.305	31.00	-25.00	56.00	30.58	0.12	0.30	QP
6	4.305	20.56	-25.44	46.00	20.14	0.12	0.30	AVERAGE
7	5.218	31.89	-28.11	60.00	31.42	0.17	0.30	QP
8	5.218	18.20	-31.80	50.00	17.73	0.17	0.30	AVERAGE
9	10.388	25.91	-34.09	60.00	25.17	0.37	0.37	QP
10	10.388	19.18	-30.82	50.00	18.44	0.37	0.37	AVERAGE
11	28.152	31.38	-28.62	60.00	29.45	1.33	0.60	QP
12	28.152	25.63	-24.37	50.00	23.70	1.33	0.60	AVERAGE

Temperature	23°C	Humidity	55%
Test Engineer	Sin Chang	Phase	Neutral
Configuration	Normal Link / Mode 2 (Ant. B)		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1 @	0.17584	48.36	-16.32	64.68	48.07	0.09	0.20	QP
2 @	0.17584	37.75	-16.93	54.68	37.46	0.09	0.20	AVERAGE
3 @	0.23040	43.63	-18.81	62.44	43.35	0.08	0.20	QP
4	0.23040	31.85	-20.59	52.44	31.57	0.08	0.20	AVERAGE
5	1.952	30.85	-25.15	56.00	30.57	0.09	0.19	QP
6 @	1.952	27.33	-18.67	46.00	27.05	0.09	0.19	AVERAGE
7	3.794	33.84	-22.16	56.00	33.40	0.14	0.30	QP
8	3.794	23.74	-22.26	46.00	23.30	0.14	0.30	AVERAGE
9	10.172	26.18	-23.82	50.00	25.44	0.40	0.34	AVERAGE
10	10.172	31.28	-28.72	60.00	30.54	0.40	0.34	QP
11	28.003	31.09	-28.91	60.00	29.13	1.36	0.60	QP
12	28.003	25.21	-24.79	50.00	23.25	1.36	0.60	AVERAGE

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. Systems operating in the 5725-5850 MHz band that are used exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted output power.

4.2.2. Measuring Instruments and Setting

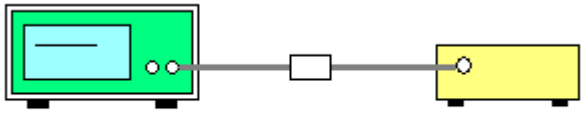
Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

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.
3. When measuring maximum conducted output power with multiple antenna systems, add every result of the values by mathematic formula.

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	20°C	Humidity	60%
Test Engineer	Alan Huang	Configurations	IEEE 802.11n

<For 2.4GHz Band>

Configuration IEEE 802.11n MCS0 20MHz Ant. A-1

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
1	2412 MHz	17.17	30.00	Complies
6	2437 MHz	21.02	30.00	Complies
11	2462 MHz	17.11	30.00	Complies

Configuration IEEE 802.11n MCS0 20MHz Ant. A-2

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
1	2412 MHz	16.27	30.00	Complies
6	2437 MHz	20.61	30.00	Complies
11	2462 MHz	17.00	30.00	Complies

Configuration IEEE 802.11n MCS0 20MHz Ant. A-1 + Ant. A-2

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
1	2412 MHz	19.75	30.00	Complies
6	2437 MHz	23.83	30.00	Complies
11	2462 MHz	20.07	30.00	Complies

Configuration IEEE 802.11n MCS0 40MHz Ant. A-1

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
3	2422 MHz	15.34	30.00	Complies
6	2437 MHz	17.01	30.00	Complies
9	2452 MHz	14.72	30.00	Complies

Configuration IEEE 802.11n MCS0 40MHz Ant. A-2

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
3	2422 MHz	14.50	30.00	Complies
6	2437 MHz	16.38	30.00	Complies
9	2452 MHz	14.10	30.00	Complies

Configuration IEEE 802.11n MCS0 40MHz Ant. A-1 + Ant. A-2

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
3	2422 MHz	17.95	30.00	Complies
6	2437 MHz	19.72	30.00	Complies
9	2452 MHz	17.43	30.00	Complies

<For 5GHz Band>

Configuration IEEE 802.11n MCS0 20MHz Ant. A-1

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
149	5745 MHz	16.25	30.00	Complies
157	5785 MHz	15.64	30.00	Complies
165	5825 MHz	16.23	30.00	Complies

Configuration IEEE 802.11n MCS0 20MHz Ant. A-2

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
149	5745 MHz	16.41	30.00	Complies
157	5785 MHz	16.71	30.00	Complies
165	5825 MHz	17.27	30.00	Complies

Configuration IEEE 802.11n MCS0 20MHz Ant. A-1 + Ant. A-2

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
149	5745 MHz	19.34	30.00	Complies
157	5785 MHz	19.22	30.00	Complies
165	5825 MHz	19.79	30.00	Complies

Configuration IEEE 802.11n MCS0 40MHz Ant. A-1

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
151	5755 MHz	16.26	30.00	Complies
159	5795 MHz	16.13	30.00	Complies

Configuration IEEE 802.11n MCS0 40MHz Ant. A-2

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
151	5755 MHz	17.36	30.00	Complies
159	5795 MHz	16.92	30.00	Complies

Configuration IEEE 802.11n MCS0 40MHz Ant. A-1 + Ant. A-2

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
151	5755 MHz	19.86	30.00	Complies
159	5795 MHz	19.55	30.00	Complies

Temperature	20°C	Humidity	60%
Test Engineer	Alan Huang	Configurations	IEEE 802.11a/b/g

Configuration IEEE 802.11b Ant. A-1

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
1	2412 MHz	17.77	30.00	Complies
6	2437 MHz	20.24	30.00	Complies
11	2462 MHz	18.13	30.00	Complies

Configuration IEEE 802.11g Ant. A-1

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
1	2412 MHz	17.52	30.00	Complies
6	2437 MHz	21.49	30.00	Complies
11	2462 MHz	16.63	30.00	Complies

Configuration IEEE 802.11a Ant. A-1

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
149	5745 MHz	17.02	30.00	Complies
157	5785 MHz	16.11	30.00	Complies
165	5825 MHz	15.72	30.00	Complies

Note: All the test values were listed in the report.

For plots, only the worse case of DSSS and OFDM modulation were listed in the report.

<For Antenna B>:

Temperature	20°C	Humidity	60%
Test Engineer	Alan Huang	Configurations	IEEE 802.11n

<For 2.4GHz Band>

Configuration IEEE 802.11n MCS0 20MHz Ant. B-1

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
1	2412 MHz	15.87	30.00	Complies
6	2437 MHz	21.73	30.00	Complies
11	2462 MHz	16.16	30.00	Complies

Configuration IEEE 802.11n MCS0 20MHz Ant. B-2

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
1	2412 MHz	15.12	30.00	Complies
6	2437 MHz	21.36	30.00	Complies
11	2462 MHz	16.27	30.00	Complies

Configuration IEEE 802.11n MCS0 20MHz Ant. B-1 + Ant. B-2

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
1	2412 MHz	18.52	30.00	Complies
6	2437 MHz	24.56	30.00	Complies
11	2462 MHz	19.23	30.00	Complies

Configuration IEEE 802.11n MCS0 40MHz Ant. B-1

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
3	2422 MHz	13.81	30.00	Complies
6	2437 MHz	16.02	30.00	Complies
9	2452 MHz	12.95	30.00	Complies

Configuration IEEE 802.11n MCS0 40MHz Ant. B-2

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
3	2422 MHz	13.01	30.00	Complies
6	2437 MHz	15.42	30.00	Complies
9	2452 MHz	12.53	30.00	Complies

Configuration IEEE 802.11n MCS0 40MHz Ant. B-1 + Ant. B-2

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
3	2422 MHz	16.44	30.00	Complies
6	2437 MHz	18.74	30.00	Complies
9	2452 MHz	15.76	30.00	Complies

<For 5GHz Band>

Configuration IEEE 802.11n MCS0 20MHz Ant. B-1

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
149	5745 MHz	16.25	30.00	Complies
157	5785 MHz	15.64	30.00	Complies
165	5825 MHz	16.23	30.00	Complies

Configuration IEEE 802.11n MCS0 20MHz Ant. B-2

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
149	5745 MHz	16.41	30.00	Complies
157	5785 MHz	16.71	30.00	Complies
165	5825 MHz	17.27	30.00	Complies

Configuration IEEE 802.11n MCS0 20MHz Ant. B-1 + Ant. B-2

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
149	5745 MHz	19.34	30.00	Complies
157	5785 MHz	19.22	30.00	Complies
165	5825 MHz	19.79	30.00	Complies

Configuration IEEE 802.11n MCS0 40MHz Ant. B-1

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
151	5755 MHz	16.26	30.00	Complies
159	5795 MHz	16.13	30.00	Complies

Configuration IEEE 802.11n MCS0 40MHz Ant. B-2

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
151	5755 MHz	17.36	30.00	Complies
159	5795 MHz	16.92	30.00	Complies

Configuration IEEE 802.11n MCS0 40MHz Ant. B-1 + Ant. B-2

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
151	5755 MHz	19.86	30.00	Complies
159	5795 MHz	19.55	30.00	Complies

Temperature	20°C	Humidity	60%
Test Engineer	Alan Huang	Configurations	IEEE 802.11a/b/g

Configuration IEEE 802.11b Ant. B-1

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
1	2412 MHz	17.12	30.00	Complies
6	2437 MHz	18.16	30.00	Complies
11	2462 MHz	17.08	30.00	Complies

Configuration IEEE 802.11g Ant. B-1

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
1	2412 MHz	15.65	30.00	Complies
6	2437 MHz	21.52	30.00	Complies
11	2462 MHz	15.09	30.00	Complies

Configuration IEEE 802.11a Ant. B-1

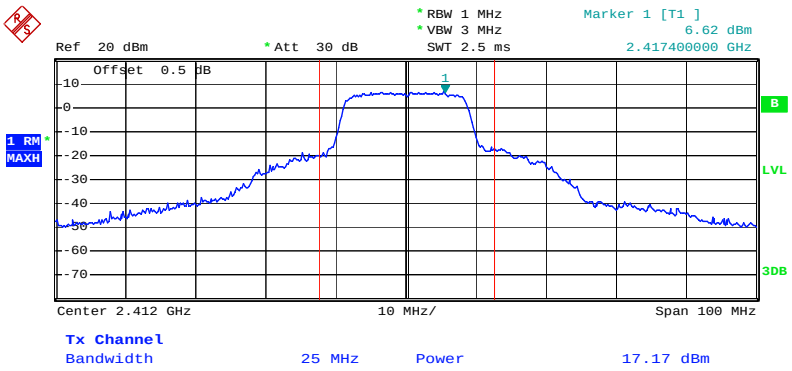
Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
149	5745 MHz	17.02	30.00	Complies
157	5785 MHz	16.11	30.00	Complies
165	5825 MHz	15.72	30.00	Complies

Note: All the test values were listed in the report.

For plots, only the worse case of DSSS and OFDM modulation were listed in the report.

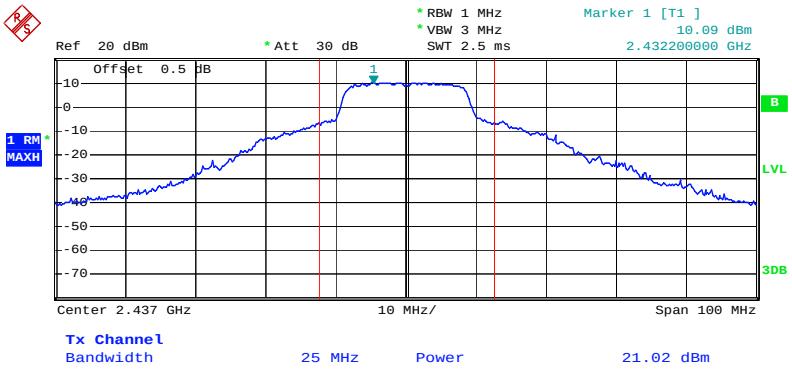
<For Antenna A>:

Channel Output Power Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. A-1 / 2412 MHz



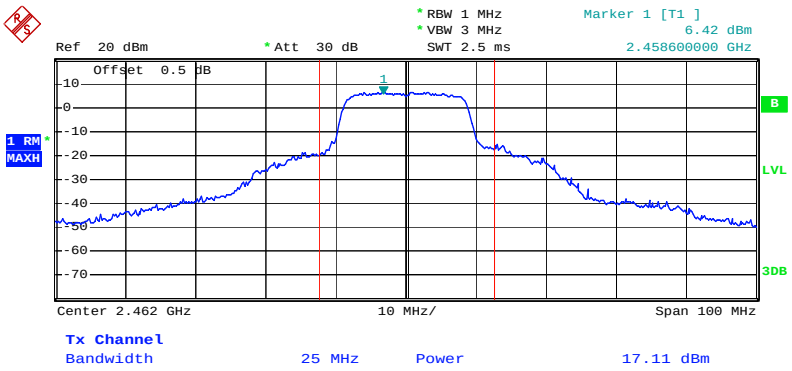
Date: 29.JUL.2010 12:49:55

Channel Output Power Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. A-1/ 2437 MHz



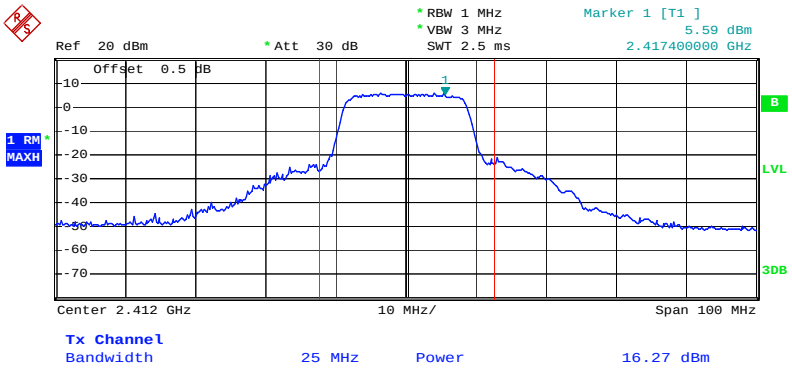
Date: 29.JUL.2010 12:53:01

Channel Output Power Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. A-1 / 2462 MHz



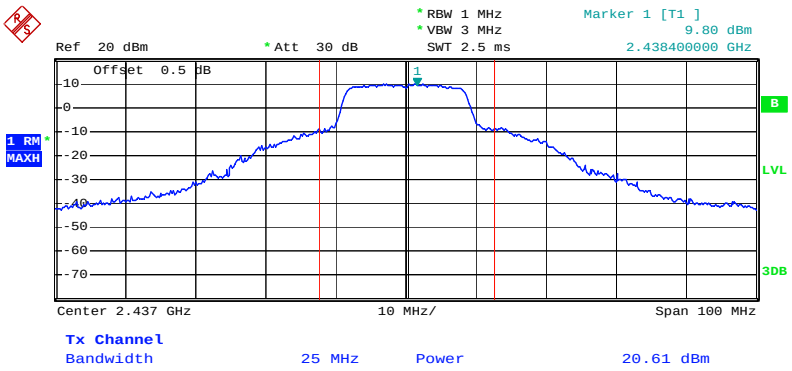
Date: 29.JUL.2010 12:53:58

Channel Output Power Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. A-2 / 2412 MHz



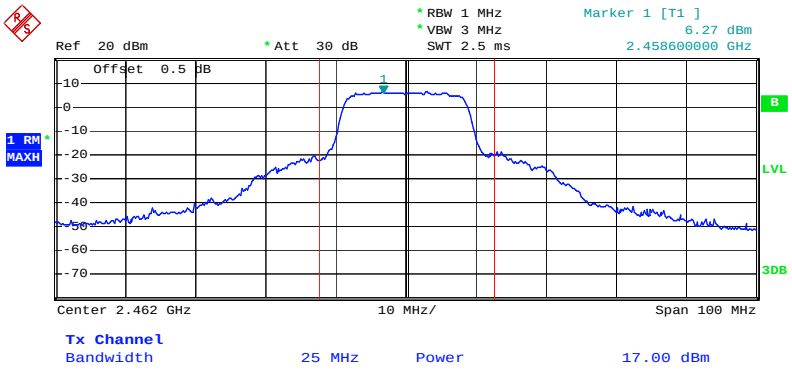
Date: 29.JUL.2010 12:51:04

Channel Output Power Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. A-2 / 2437 MHz



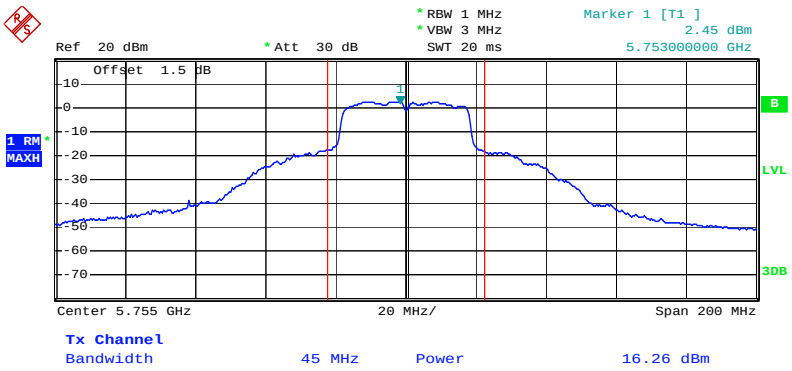
Date: 29.JUL.2010 12:52:29

Channel Output Power Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. A-2 / 2462 MHz



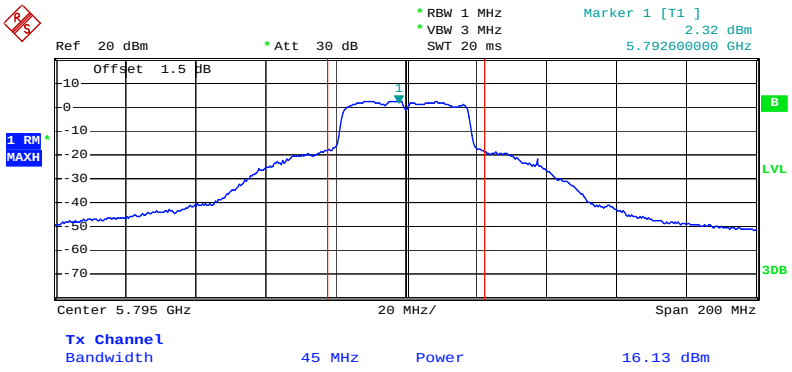
Date: 29.JUL.2010 12:54:40

Channel Output Power Plot on Configuration 11a IEEE 802.11n MCS0 40MHz Ant. A-1 / 5755 MHz



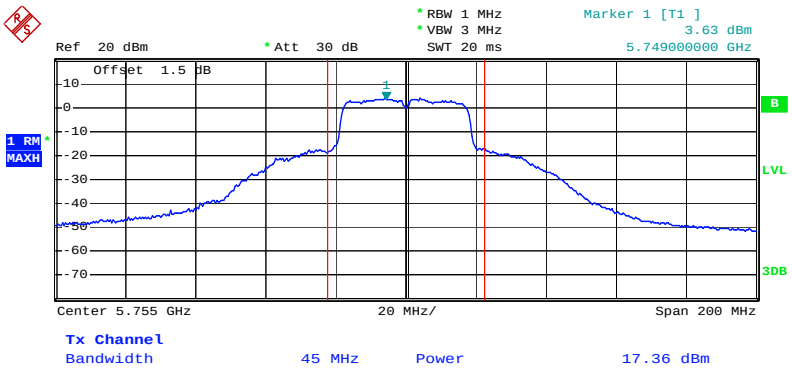
Date: 15.AUG.2010 19:06:53

Channel Output Power Plot on Configuration 11a IEEE 802.11n MCS0 40MHz Ant. A-1 / 5795 MHz



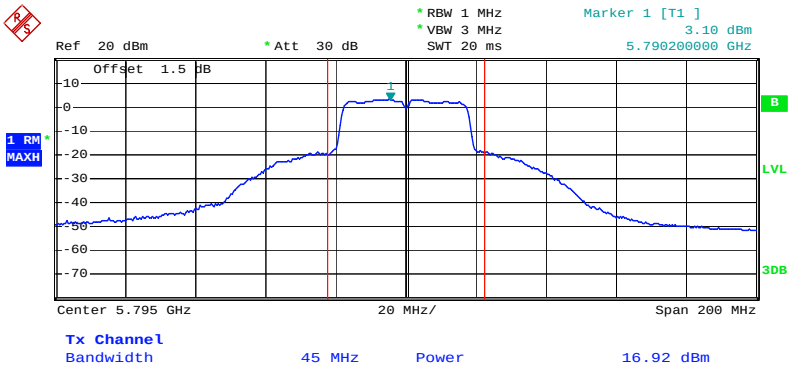
Date: 15.AUG.2010 19:09:38

Channel Output Power Plot on Configuration 11a IEEE 802.11n MCS0 40MHz Ant. A-2 / 5755 MHz



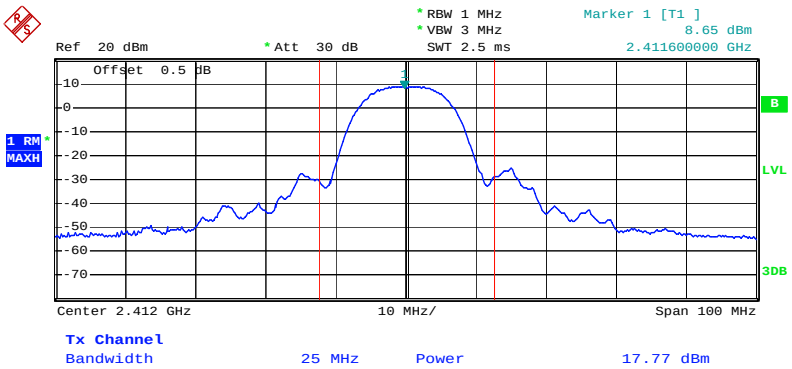
Date: 15.AUG.2010 19:07:08

Channel Output Power Plot on Configuration 11a IEEE 802.11n MCS0 40MHz Ant. A-2 / 5795 MHz



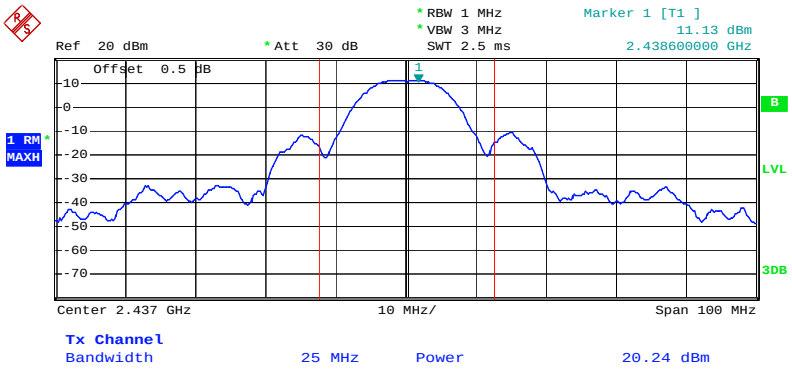
Date: 15.AUG.2010 19:10:17

Conducted Output Power Plot on Configuration IEEE 802.11b Ant. A-1 / 2412 MHz



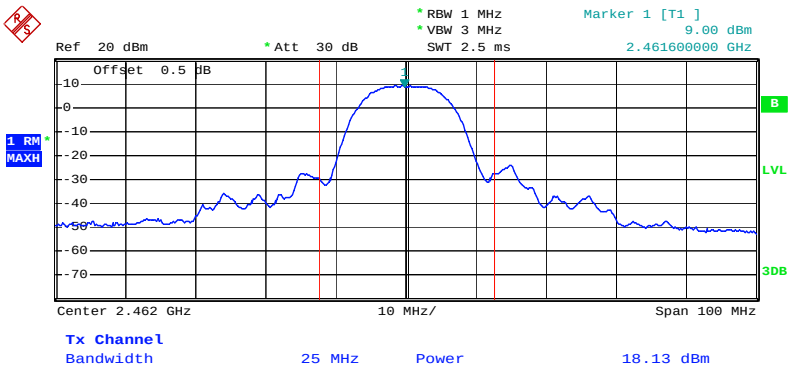
Date: 29.JUL.2010 12:31:55

Conducted Output Power Plot on Configuration IEEE 802.11b Ant. A-1 / 2437 MHz



Date: 29.JUL.2010 12:36:54

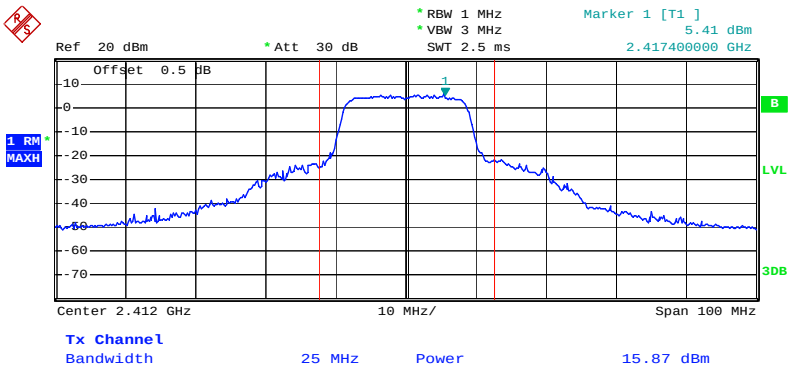
Conducted Output Power Plot on Configuration IEEE 802.11b Ant. A-1 / 2462 MHz



Date: 29.JUL.2010 12:39:39

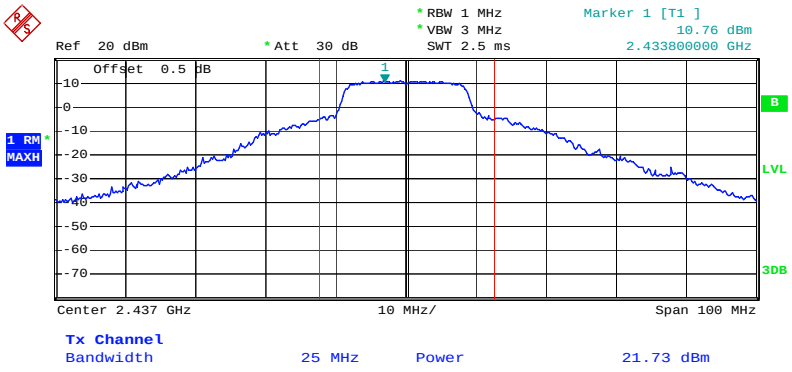
<For Antenna B>:

Channel Output Power Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. B-1 / 2412 MHz



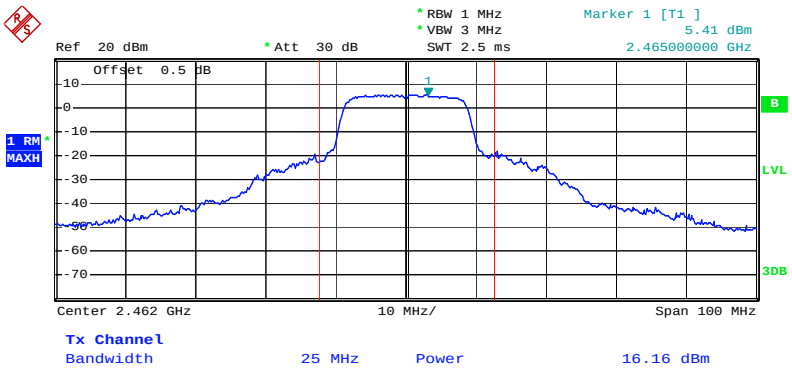
Date: 29.JUL.2010 13:37:28

Channel Output Power Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. B-1/ 2437 MHz



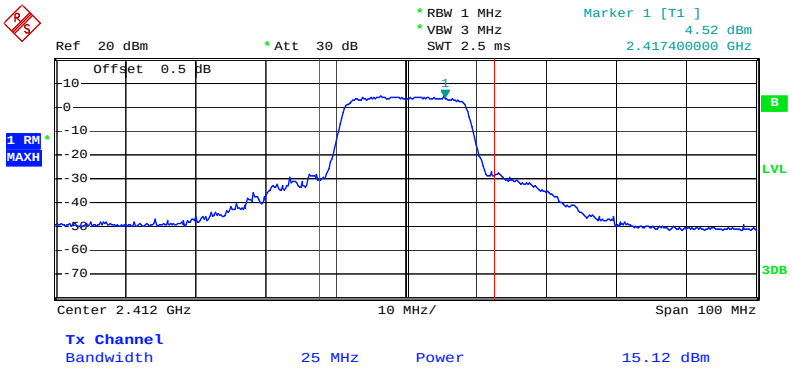
Date: 29.JUL.2010 13:43:54

Channel Output Power Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. B-1 / 2462 MHz



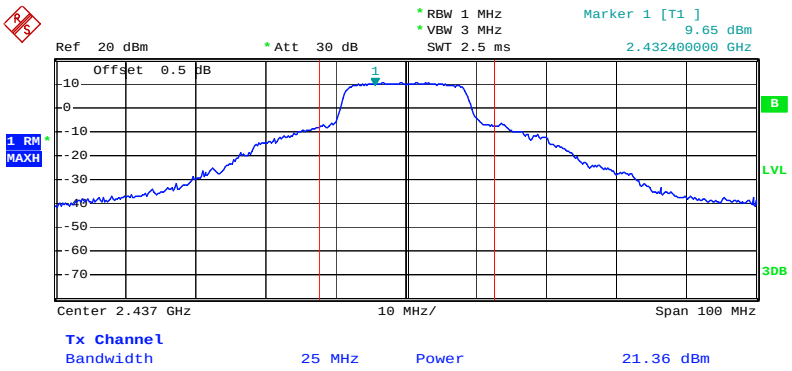
Date: 29.JUL.2010 13:46:23

Channel Output Power Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. B-2 / 2412 MHz



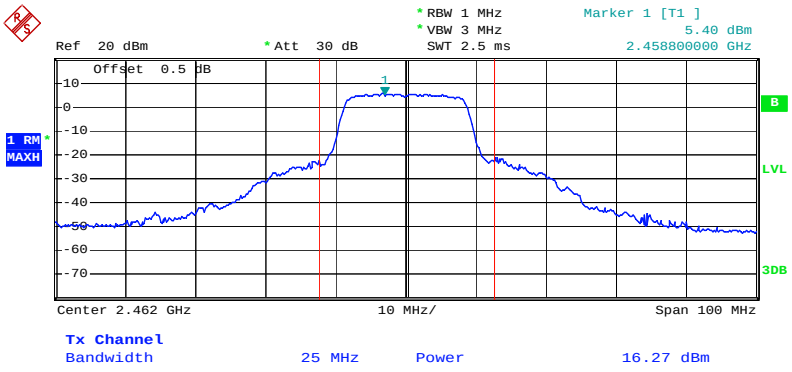
Date: 29.JUL.2010 13:36:33

Channel Output Power Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. B-2 / 2437 MHz



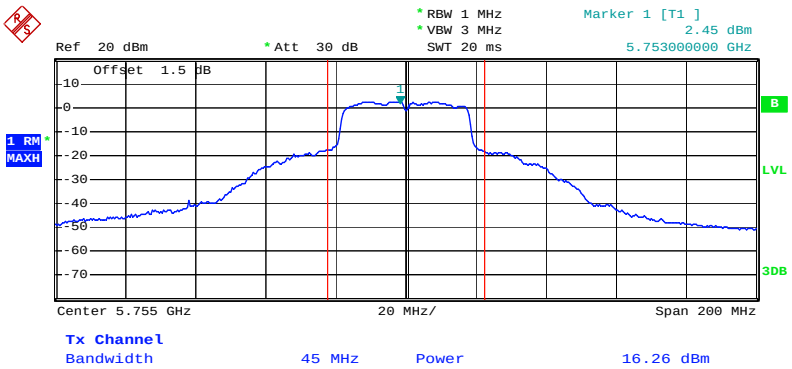
Date: 29.JUL.2010 13:43:13

Channel Output Power Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. B-2 / 2462 MHz



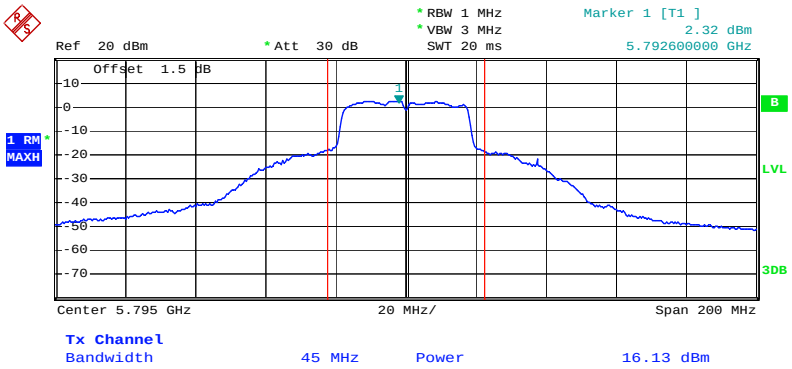
Date: 29.JUL.2010 13:45:42

Channel Output Power Plot on Configuration 11a IEEE 802.11n MCS0 40MHz Ant. B-1 / 5755 MHz



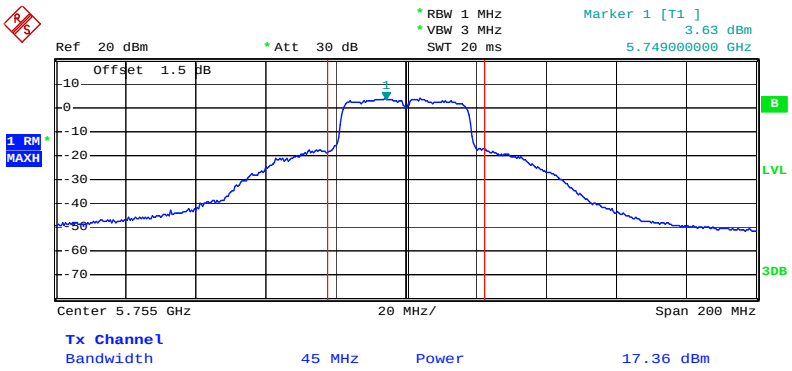
Date: 15.AUG.2010 19:06:53

Channel Output Power Plot on Configuration 11a IEEE 802.11n MCS0 40MHz Ant. B-1 / 5795 MHz



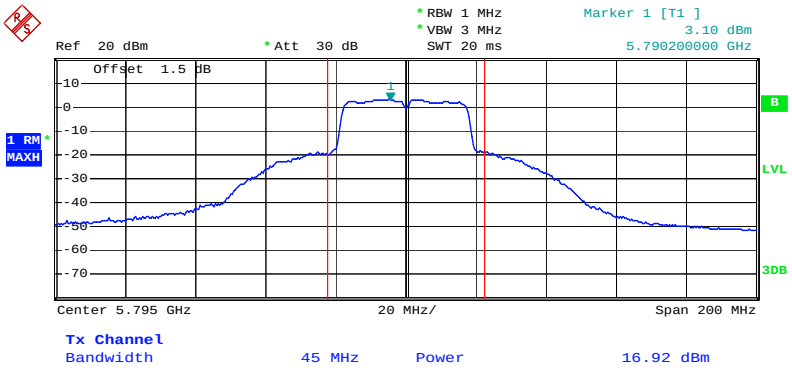
Date: 15.AUG.2010 19:09:38

Channel Output Power Plot on Configuration 11a IEEE 802.11n MCS0 40MHz Ant. B-2 / 5755 MHz



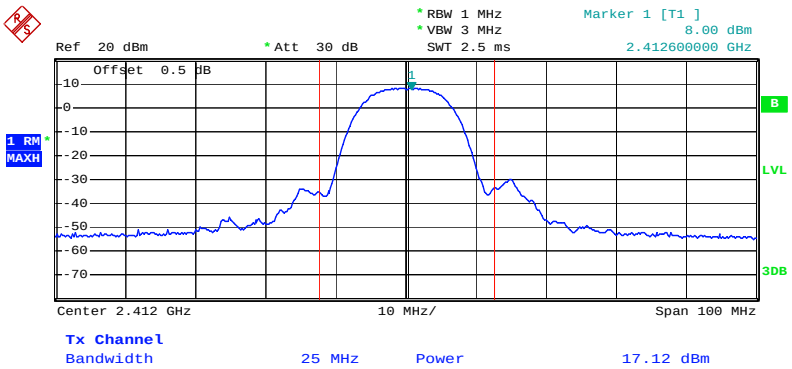
Date: 15.AUG.2010 19:07:08

Channel Output Power Plot on Configuration 11a IEEE 802.11n MCS0 40MHz Ant. B-2 / 5795 MHz



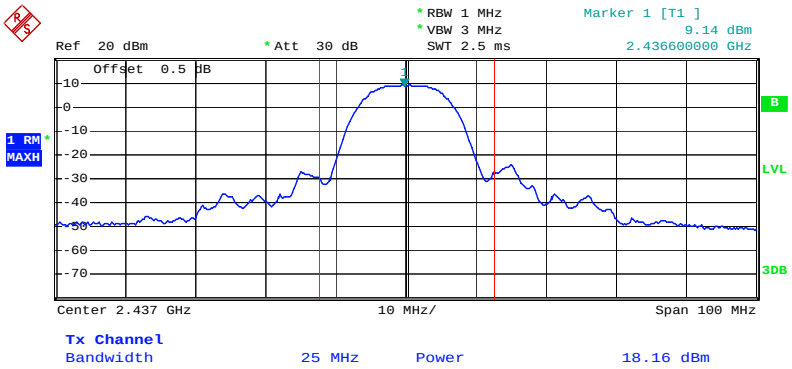
Date: 15.AUG.2010 19:10:17

Conducted Output Power Plot on Configuration IEEE 802.11b Ant. B-1 / 2412 MHz



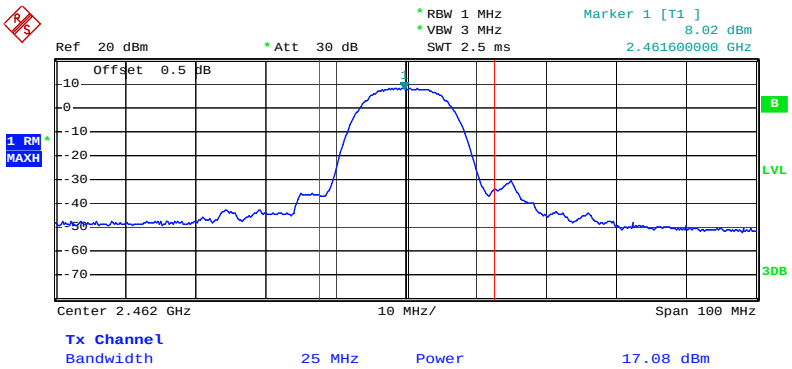
Date: 29.JUL.2010 13:50:22

Conducted Output Power Plot on Configuration IEEE 802.11b Ant. B-1 / 2437 MHz



Date: 29.JUL.2010 13:51:07

Conducted Output Power Plot on Configuration IEEE 802.11b Ant. B-1 / 2462 MHz



Date: 29.JUL.2010 13:52:04

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 8dBm 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 the 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 analyser.
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.
5. Measuring multiple antennas, the connector is required to link with spectrum analyser through a combiner.

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	20°C	Humidity	60%
Test Engineer	Alan Huang	Configurations	IEEE 802.11n

<For 2.4GHz Band>

Configuration IEEE 802.11n MCS0 20MHz Ant. A-1 + Ant. A-2

Channel	Frequency	Power Density (dBm / 3kHz)	Max. Limit (dBm/ 3kHz)	Result
1	2412 MHz	-10.56	8.00	Complies
6	2437 MHz	-5.70	8.00	Complies
11	2462 MHz	-9.44	8.00	Complies

Configuration IEEE 802.11n MCS0 40MHz Ant. A-1 + Ant. A-2

Channel	Frequency	Power Density (dBm / 3kHz)	Max. Limit (dBm / 3kHz)	Result
3	2422 MHz	-14.64	8.00	Complies
6	2437 MHz	-6.63	8.00	Complies
9	2452 MHz	-9.39	8.00	Complies

<For 5GHz Band>

Configuration 11a IEEE 802.11n MCS0 20MHz Ant. A-1 + Ant. A-2

Channel	Frequency	Power Density (dBm / 3kHz)	Max. Limit (dBm / 3kHz)	Result
149	5745 MHz	-4.56	8.00	Complies
157	5785 MHz	-4.80	8.00	Complies
165	5825 MHz	-3.95	8.00	Complies

Configuration 11a IEEE 802.11n MCS0 40MHz Ant. A-1 + Ant. A-2

Channel	Frequency	Power Density (dBm / 3kHz)	Max. Limit (dBm / 3kHz)	Result
151	5755 MHz	-4.74	8.00	Complies
159	5795 MHz	-5.00	8.00	Complies

Temperature	20°C	Humidity	60%
Test Engineer	Alan Huang	Configurations	IEEE 802.11a/b/g

Configuration IEEE 802.11b Ant. A-1

Channel	Frequency	Power Density (dBm / 3kHz)	Max. Limit (dBm / 3kHz)	Result
1	2412 MHz	-6.17	8.00	Complies
6	2437 MHz	-3.75	8.00	Complies
11	2462 MHz	-6.24	8.00	Complies

Configuration IEEE 802.11g Ant. A-1

Channel	Frequency	Power Density (dBm / 3kHz)	Max. Limit (dBm / 3kHz)	Result
1	2412 MHz	-10.67	8.00	Complies
6	2437 MHz	-5.41	8.00	Complies
11	2462 MHz	-10.84	8.00	Complies

Configuration IEEE 802.11a Ant. A-1

Channel	Frequency	Power Density (dBm / 3kHz)	Max. Limit (dBm / 3kHz)	Result
149	5745 MHz	-10.30	8.00	Complies
157	5785 MHz	-8.78	8.00	Complies
165	5825 MHz	-9.64	8.00	Complies

<For Antenna B>:

Temperature	20°C	Humidity	60%
Test Engineer	Alan Huang	Configurations	IEEE 802.11n

<For 2.4GHz Band>

Configuration IEEE 802.11n MCS0 20MHz Ant. B-1 + Ant. B-2

Channel	Frequency	Power Density (dBm / 3kHz)	Max. Limit (dBm/ 3kHz)	Result
1	2412 MHz	-7.30	8.00	Complies
6	2437 MHz	-1.52	8.00	Complies
11	2462 MHz	-5.24	8.00	Complies

Configuration IEEE 802.11n MCS0 40MHz Ant. B-1 + Ant. B-2

Channel	Frequency	Power Density (dBm / 3kHz)	Max. Limit (dBm / 3kHz)	Result
3	2422 MHz	-10.01	8.00	Complies
6	2437 MHz	-7.82	8.00	Complies
9	2452 MHz	-10.95	8.00	Complies

<For 5GHz Band>

Configuration 11a IEEE 802.11n MCS0 20MHz Ant. B-1 + Ant. B-2

Channel	Frequency	Power Density (dBm / 3kHz)	Max. Limit (dBm / 3kHz)	Result
149	5745 MHz	-4.56	8.00	Complies
157	5785 MHz	-4.80	8.00	Complies
165	5825 MHz	-3.95	8.00	Complies

Configuration 11a IEEE 802.11n MCS0 40MHz Ant. B-1 + Ant. B-2

Channel	Frequency	Power Density (dBm / 3kHz)	Max. Limit (dBm / 3kHz)	Result
151	5755 MHz	-4.74	8.00	Complies
159	5795 MHz	-5.00	8.00	Complies

Temperature	20°C	Humidity	60%
Test Engineer	Alan Huang	Configurations	IEEE 802.11a/b/g

Configuration IEEE 802.11b Ant. B-1

Channel	Frequency	Power Density (dBm / 3kHz)	Max. Limit (dBm / 3kHz)	Result
1	2412 MHz	-6.71	8.00	Complies
6	2437 MHz	-5.05	8.00	Complies
11	2462 MHz	-5.88	8.00	Complies

Configuration IEEE 802.11g Ant. B-1

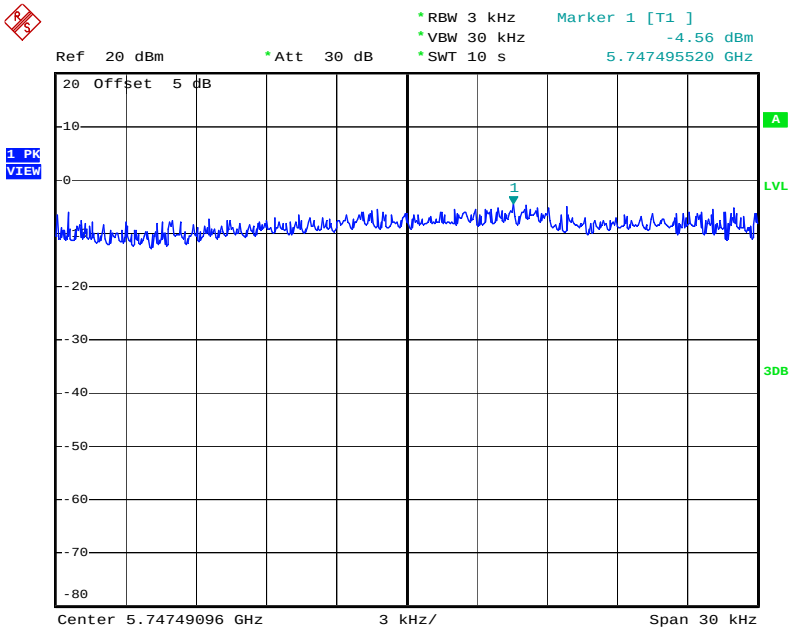
Channel	Frequency	Power Density (dBm / 3kHz)	Max. Limit (dBm / 3kHz)	Result
1	2412 MHz	-12.45	8.00	Complies
6	2437 MHz	-5.42	8.00	Complies
11	2462 MHz	-12.13	8.00	Complies

Configuration IEEE 802.11a Ant. B-1

Channel	Frequency	Power Density (dBm / 3kHz)	Max. Limit (dBm / 3kHz)	Result
149	5745 MHz	-10.30	8.00	Complies
157	5785 MHz	-8.78	8.00	Complies
165	5825 MHz	-9.64	8.00	Complies

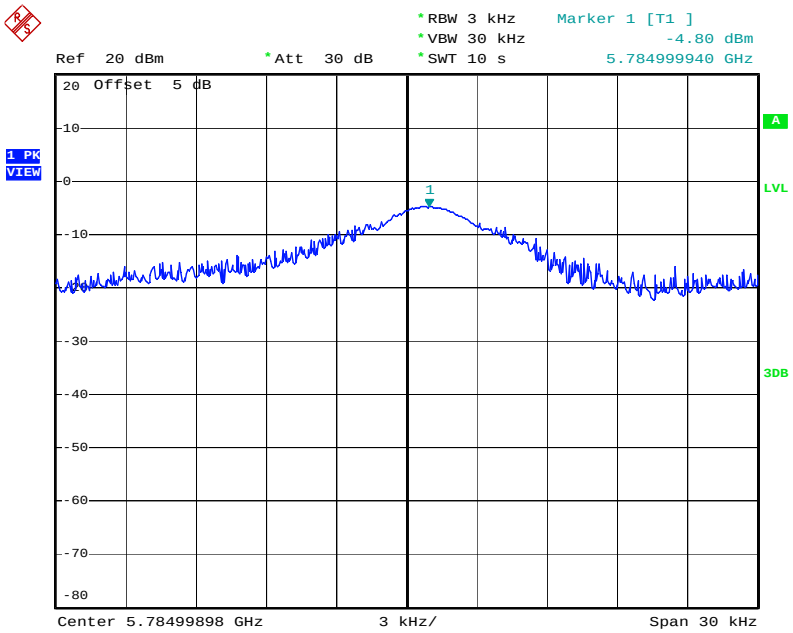
<For Antenna A>:

Power Density Plot on Configuration 11a IEEE 802.11n MCS0 20MHz Ant. A-1 + Ant. A-2 / 5745 MHz



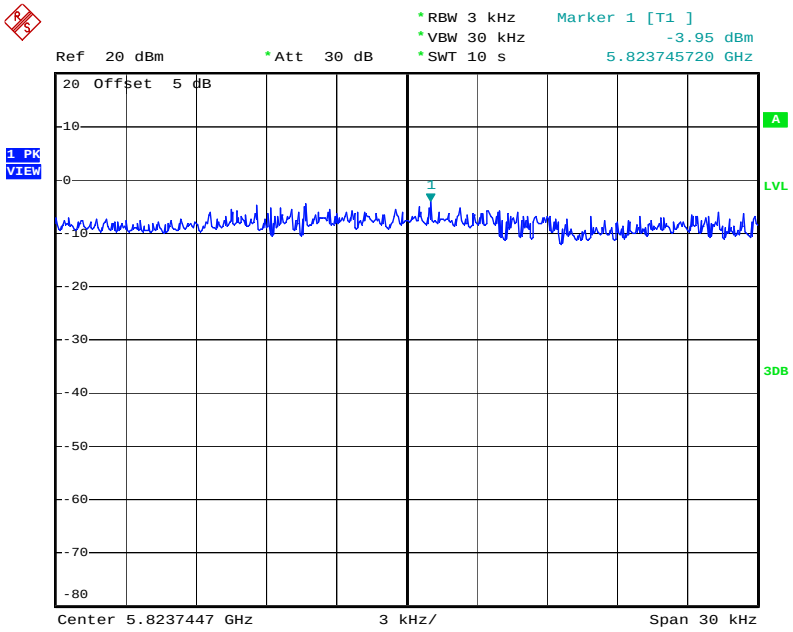
Date: 15.AUG.2010 20:22:19

Power Density Plot on Configuration 11a IEEE 802.11n MCS0 20MHz Ant. A-1 + Ant. A-2 / 5785 MHz



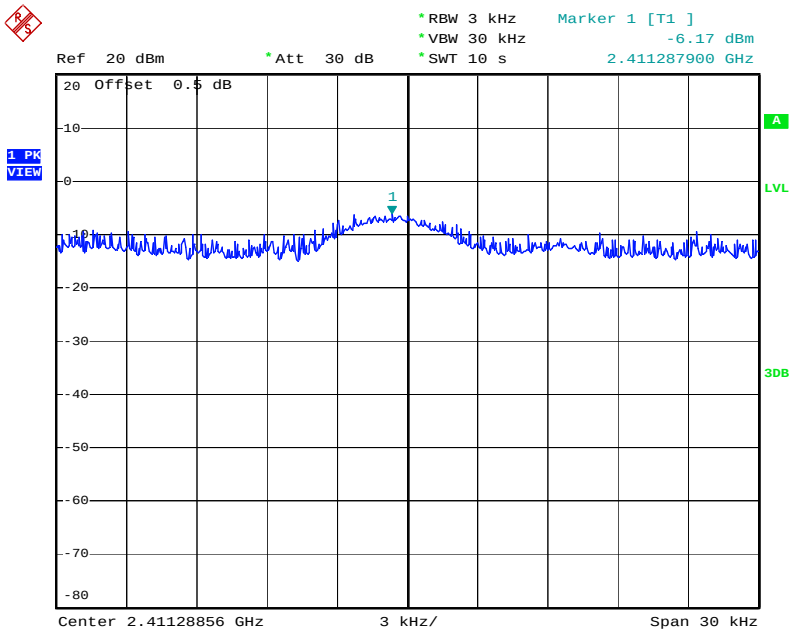
Date: 15.AUG.2010 19:28:09

Power Density Plot on Configuration 11a IEEE 802.11n MCS0 20MHz Ant. A-1 + Ant. A-2 / 5825 MHz



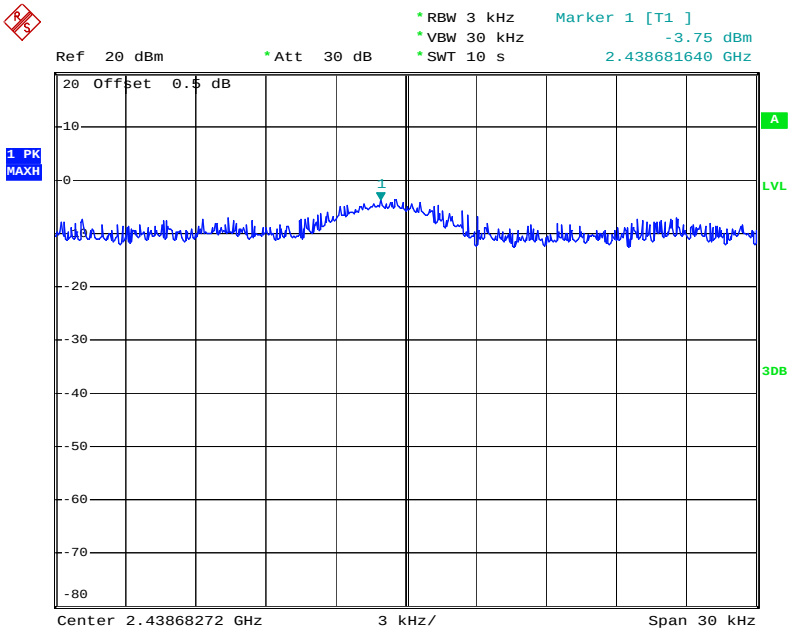
Date: 15.AUG.2010 19:30:16

Power Density Plot on Configuration IEEE 802.11b Ant. A-1 / 2412 MHz



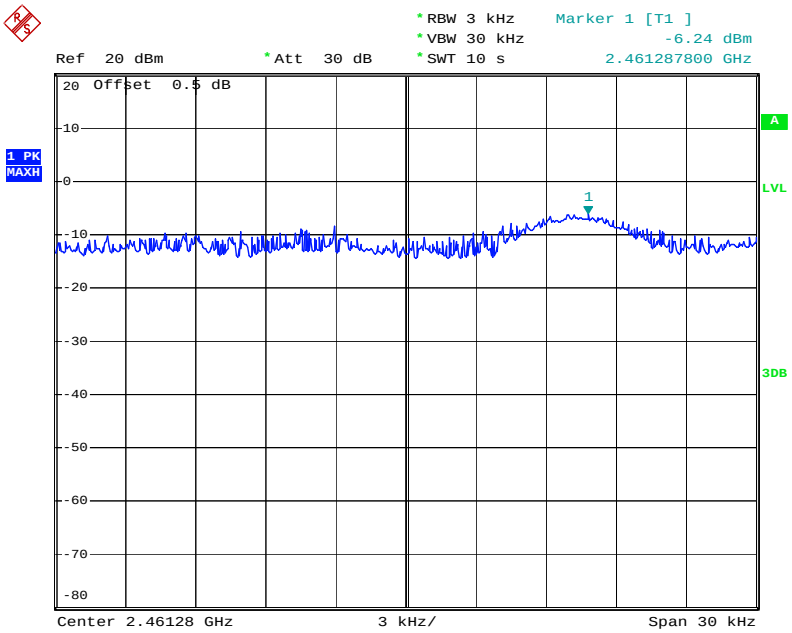
Date: 29.JUL.2010 18:31:08

Power Density Plot on Configuration IEEE 802.11b Ant. A-1 / 2437 MHz



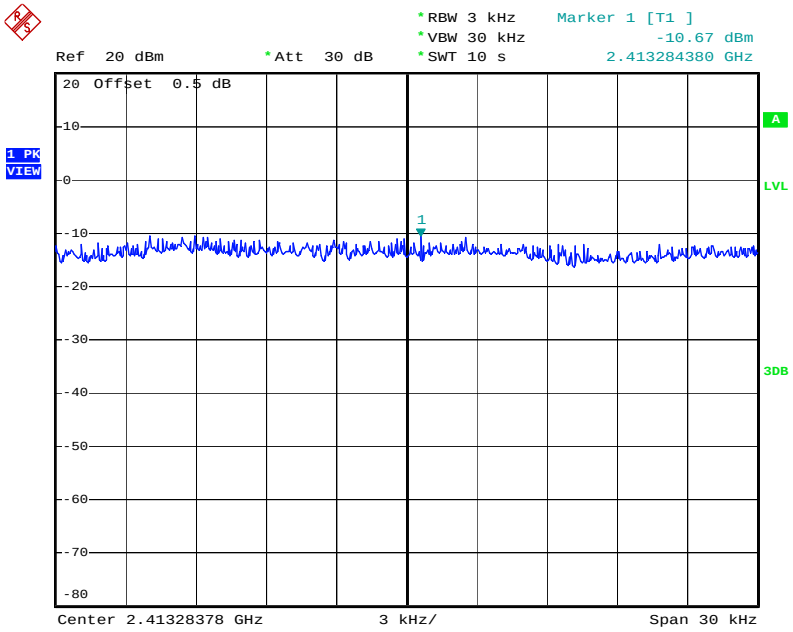
Date: 29.JUL.2010 18:44:03

Power Density Plot on Configuration IEEE 802.11b Ant. A-1 / 2462 MHz



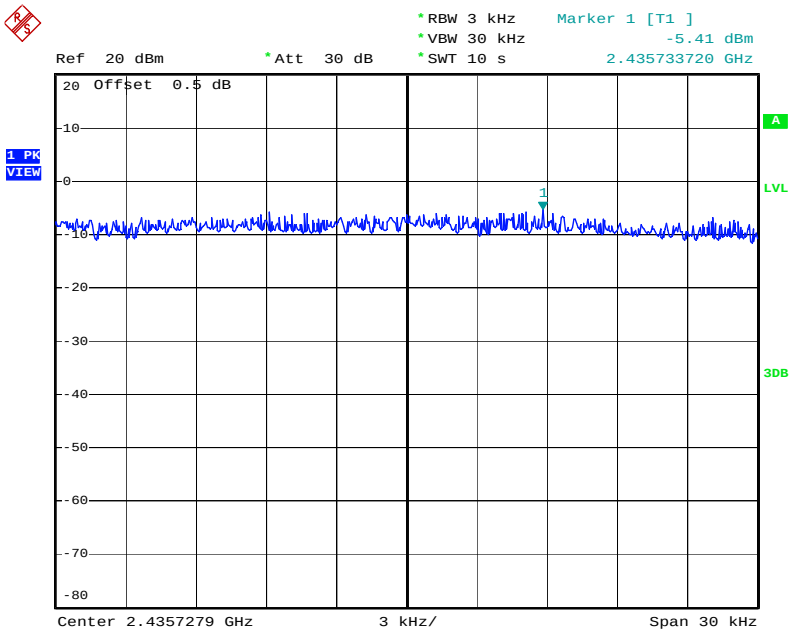
Date: 29.JUL.2010 18:49:15

Power Density Plot on Configuration IEEE 802.11g Ant. A-1 / 2412 MHz



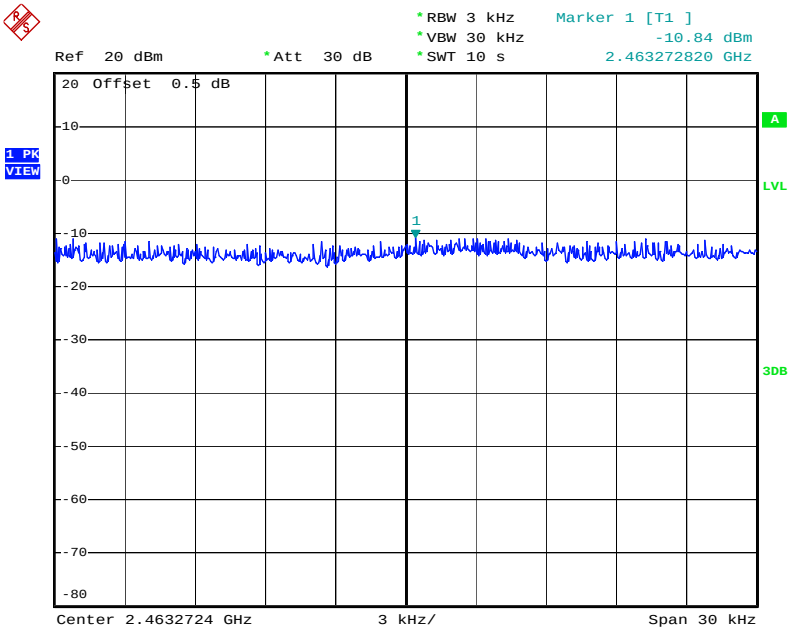
Date: 29.JUL.2010 18:52:49

Power Density Plot on Configuration IEEE 802.11g Ant. A-1 / 2437 MHz



Date: 29.JUL.2010 18:55:18

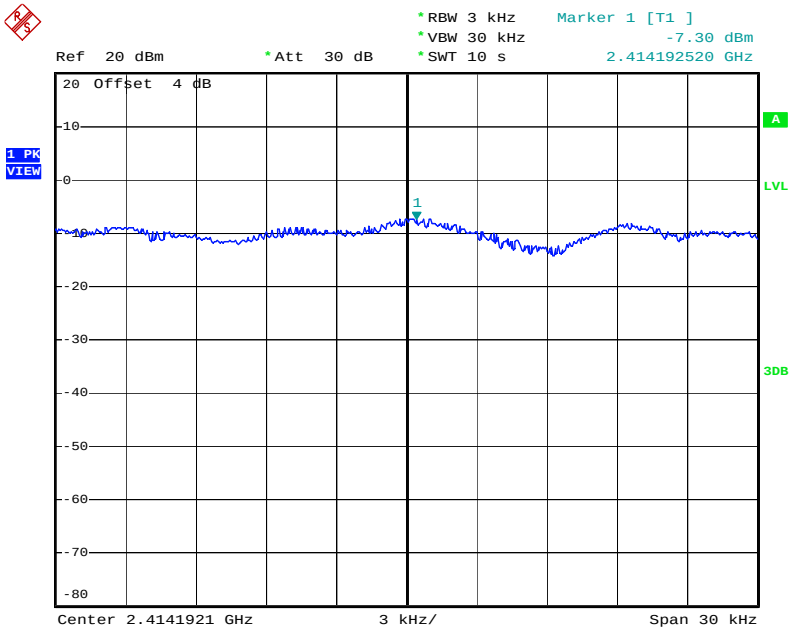
Power Density Plot on Configuration IEEE 802.11g Ant. A-1 / 2462 MHz



Date: 29.JUL.2010 18:58:12

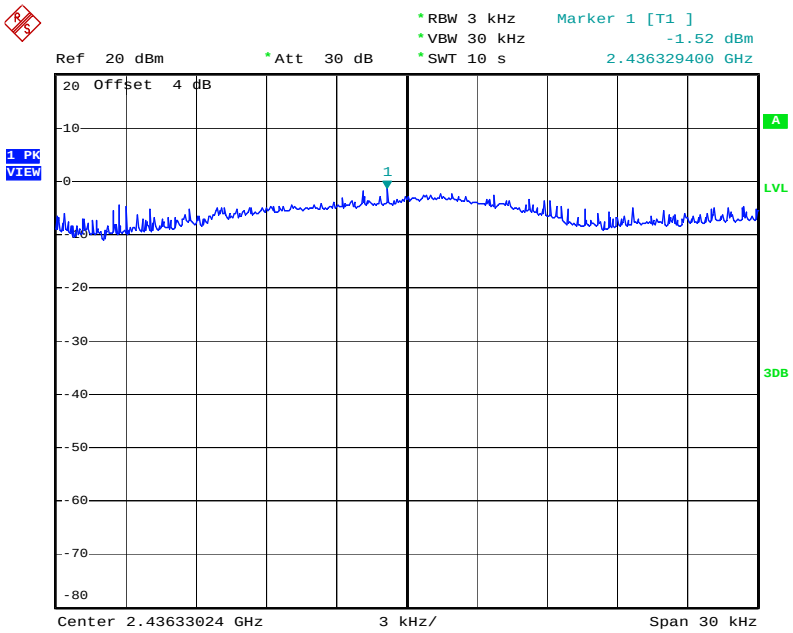
<For Antenna B>:

Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. B-1 + Ant. B-2 / 2412 MHz



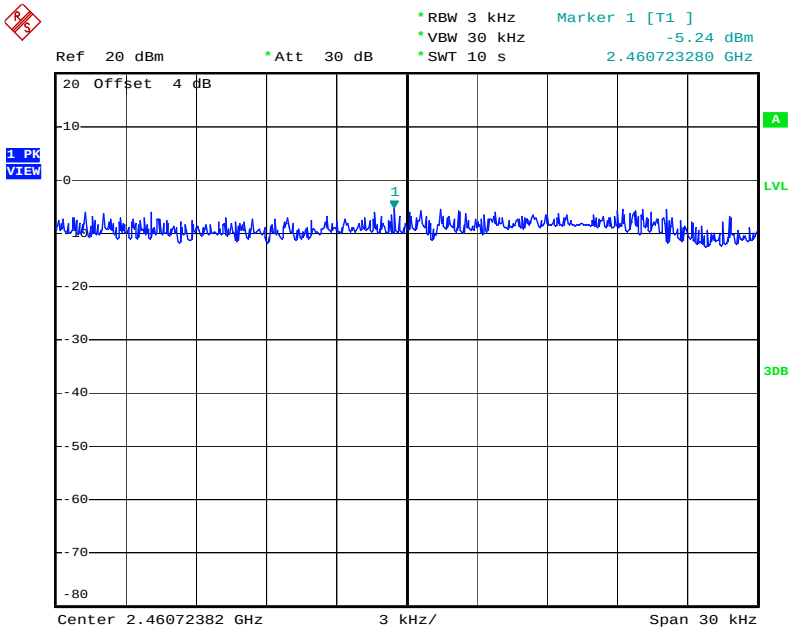
Date: 29.JUL.2010 19:51:41

Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. B-1 + Ant. B-2 / 2437 MHz



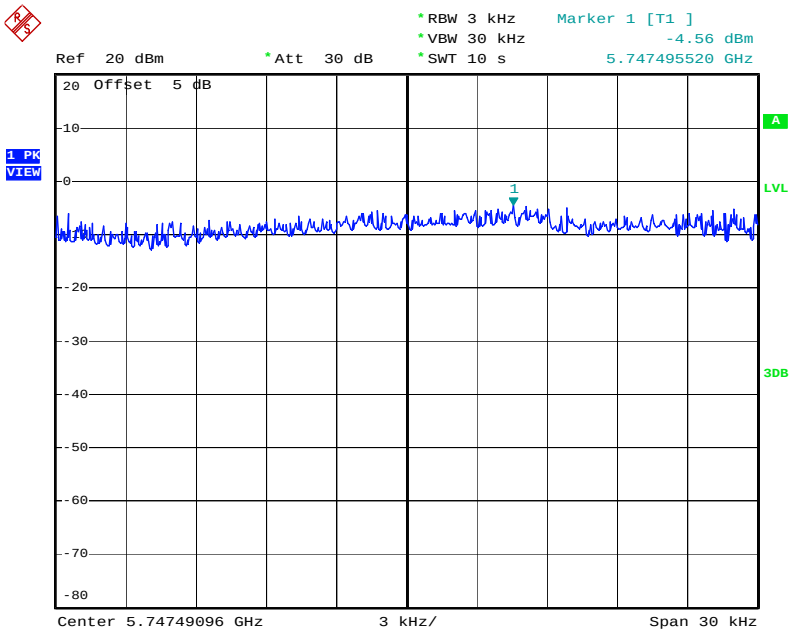
Date: 29.JUL.2010 19:54:46

Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. B-1 + Ant. B-2 / 2462 MHz



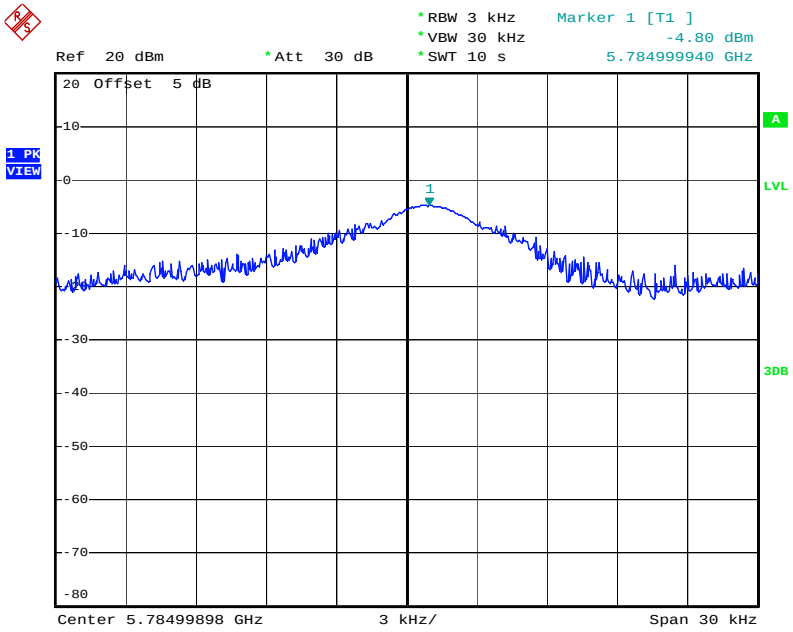
Date: 29.JUL.2010 19:57:02

Power Density Plot on Configuration 11a IEEE 802.11n MCS0 20MHz Ant. B-1 + Ant. B-2 / 5745 MHz



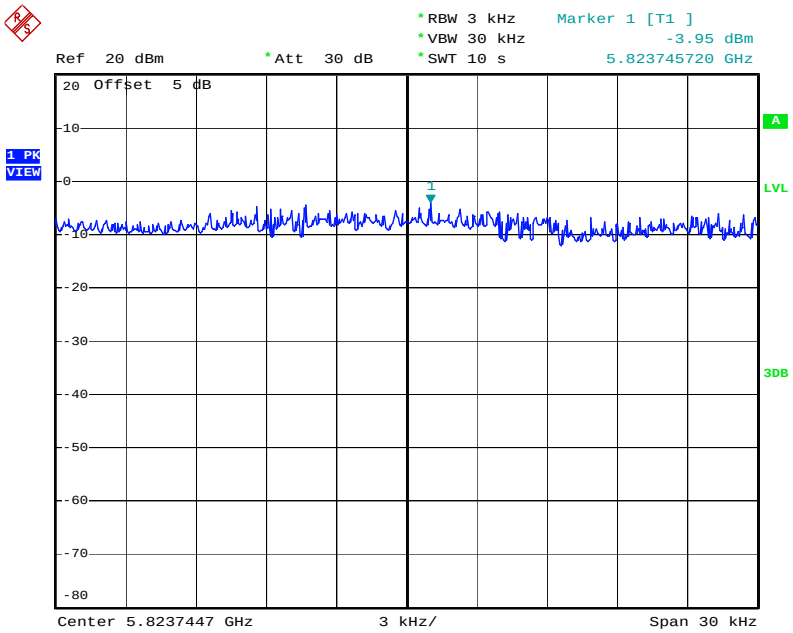
Date: 15.AUG.2010 20:22:19

Power Density Plot on Configuration 11a IEEE 802.11n MCS0 20MHz Ant. B-1 + Ant. B-2 / 5785 MHz



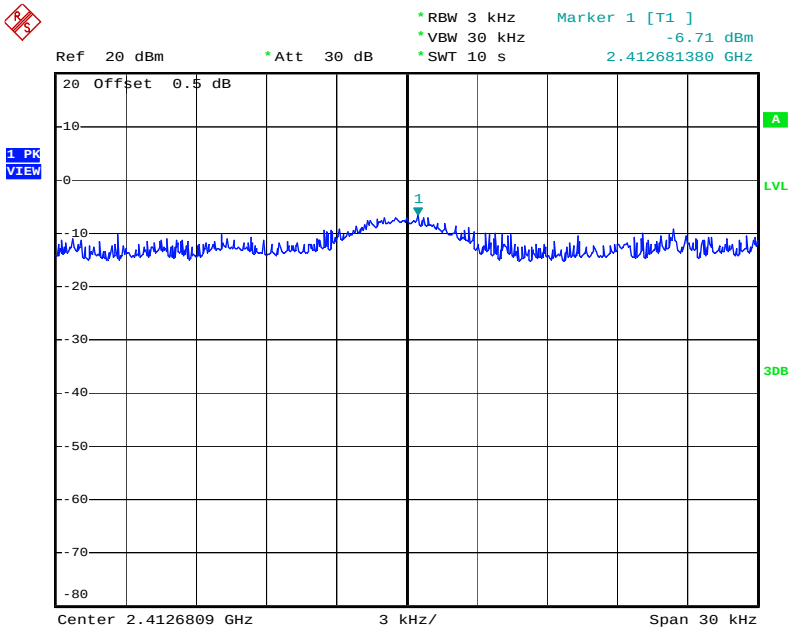
Date: 15.AUG.2010 19:28:09

Power Density Plot on Configuration 11a IEEE 802.11n MCS0 20MHz Ant. B-1 + Ant. B-2 / 5825 MHz



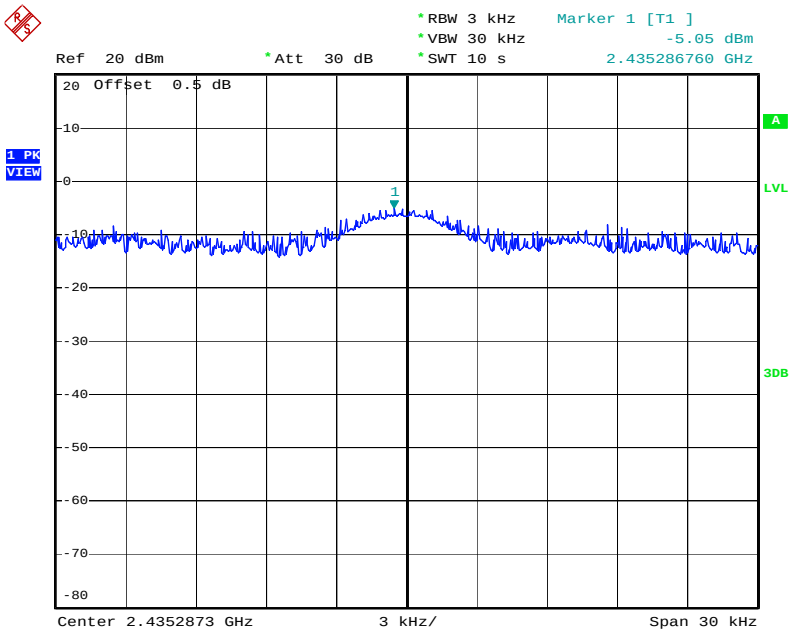
Date: 15.AUG.2010 19:30:16

Power Density Plot on Configuration IEEE 802.11b Ant. B-1 / 2412 MHz



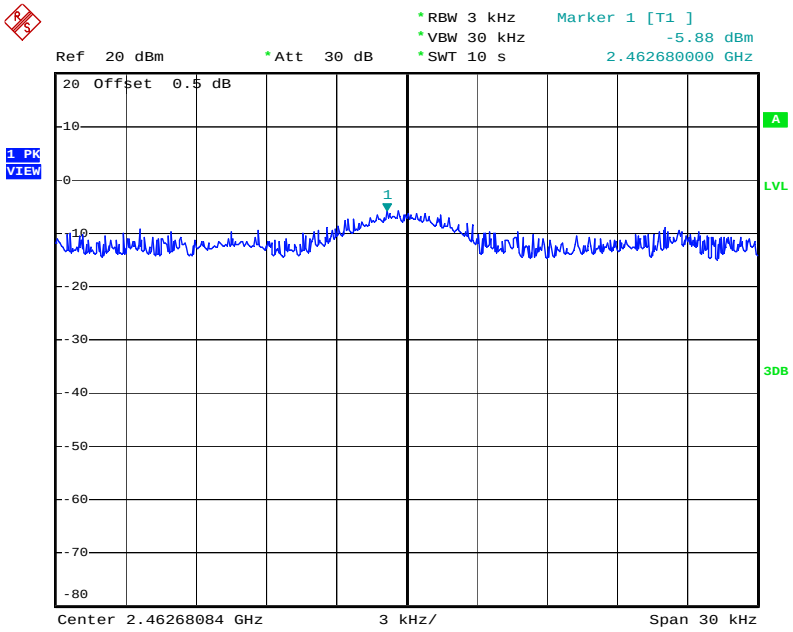
Date: 29.JUL.2010 20:00:40

Power Density Plot on Configuration IEEE 802.11b Ant. B-1 / 2437 MHz



Date: 29.JUL.2010 20:02:50

Power Density Plot on Configuration IEEE 802.11b Ant. B-1 / 2462 MHz



Date: 29.JUL.2010 20:05:11

4.4. 6dB Spectrum Bandwidth Measurement

4.4.1. Limit

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

4.4.2. Measuring Instruments and Setting

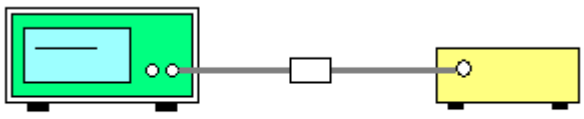
Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

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 analyser 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. Measuring multiple antennas, the connector is required to link with spectrum analyzer through a combiner.

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	20°C	Humidity	60%
Test Engineer	Alan Huang	Configurations	IEEE 802.11n

<For 2.4GHz Band>

Configuration IEEE 802.11n MCS0 20MHz Ant. A-1 + Ant. A-2

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
1	2412 MHz	16.28	17.48	500	Complies
6	2437 MHz	15.72	17.56	500	Complies
11	2462 MHz	16.20	17.48	500	Complies

Configuration IEEE 802.11n MCS0 40MHz Ant. A-1 + Ant. A-2

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
3	2422 MHz	35.04	35.84	500	Complies
6	2437 MHz	34.24	35.92	500	Complies
9	2452 MHz	35.12	35.84	500	Complies

<For 5GHz Band>

Configuration 11a IEEE 802.11n MCS0 20MHz Ant. A-1 + Ant. A-2

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
149	5745 MHz	15.48	17.48	500	Complies
157	5785 MHz	15.12	17.44	500	Complies
165	5825 MHz	15.16	17.40	500	Complies

Configuration 11a IEEE 802.11n MCS0 40MHz Ant. A-1 + Ant. A-2

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
151	5755 MHz	35.12	35.76	500	Complies
159	5795 MHz	35.04	35.84	500	Complies

Temperature	20℃	Humidity	60%
Test Engineer	Alan Huang	Configurations	IEEE 802.11a/b/g

Configuration IEEE 802.11b Ant. A-1

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
1	2412 MHz	11.12	14.56	500	Complies
6	2437 MHz	11.12	15.24	500	Complies
11	2462 MHz	11.12	14.60	500	Complies

Configuration IEEE 802.11g Ant. A-1

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
1	2412 MHz	15.84	16.40	500	Complies
6	2437 MHz	15.68	16.64	500	Complies
11	2462 MHz	16.32	16.40	500	Complies

Configuration IEEE 802.11a Ant. A-1

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
149	5745 MHz	15.12	16.60	500	Complies
157	5785 MHz	15.48	17.40	500	Complies
165	5825 MHz	15.68	16.56	500	Complies

<For Antenna B>:

Temperature	20°C	Humidity	60%
Test Engineer	Alan Huang	Configurations	IEEE 802.11n

<For 2.4GHz Band>

Configuration IEEE 802.11n MCS0 20MHz Ant. B-1 + Ant. B-2

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
1	2412 MHz	16.32	17.48	500	Complies
6	2437 MHz	16.00	17.60	500	Complies
11	2462 MHz	15.76	17.52	500	Complies

Configuration IEEE 802.11n MCS0 40MHz Ant. B-1 + Ant. B-2

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
3	2422 MHz	35.20	35.84	500	Complies
6	2437 MHz	35.44	35.84	500	Complies
9	2452 MHz	35.36	35.92	500	Complies

<For 5GHz Band>

Configuration 11a IEEE 802.11n MCS0 20MHz Ant. B-1 + Ant. B-2

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
149	5745 MHz	15.48	17.48	500	Complies
157	5785 MHz	15.12	17.44	500	Complies
165	5825 MHz	15.16	17.40	500	Complies

Configuration 11a IEEE 802.11n MCS0 40MHz Ant. B-1 + Ant. B-2

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
151	5755 MHz	35.12	35.76	500	Complies
159	5795 MHz	35.04	35.84	500	Complies

Temperature	20℃	Humidity	60%
Test Engineer	Alan Huang	Configurations	IEEE 802.11a/b/g

Configuration IEEE 802.11b Ant. B-1

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
1	2412 MHz	12.04	14.56	500	Complies
6	2437 MHz	11.08	14.60	500	Complies
11	2462 MHz	11.08	14.60	500	Complies

Configuration IEEE 802.11g Ant. B-1

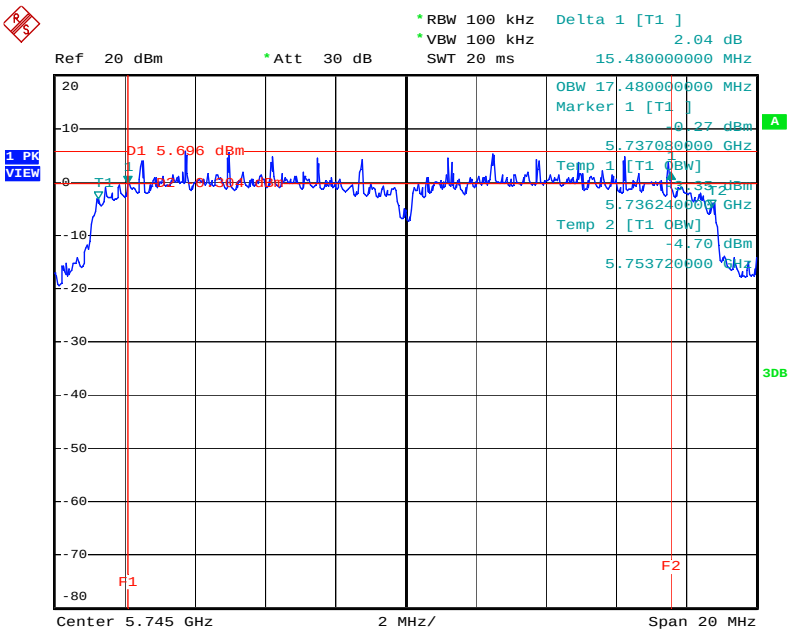
Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
1	2412 MHz	16.32	16.40	500	Complies
6	2437 MHz	15.40	16.76	500	Complies
11	2462 MHz	16.32	16.36	500	Complies

Configuration IEEE 802.11a Ant. B-1

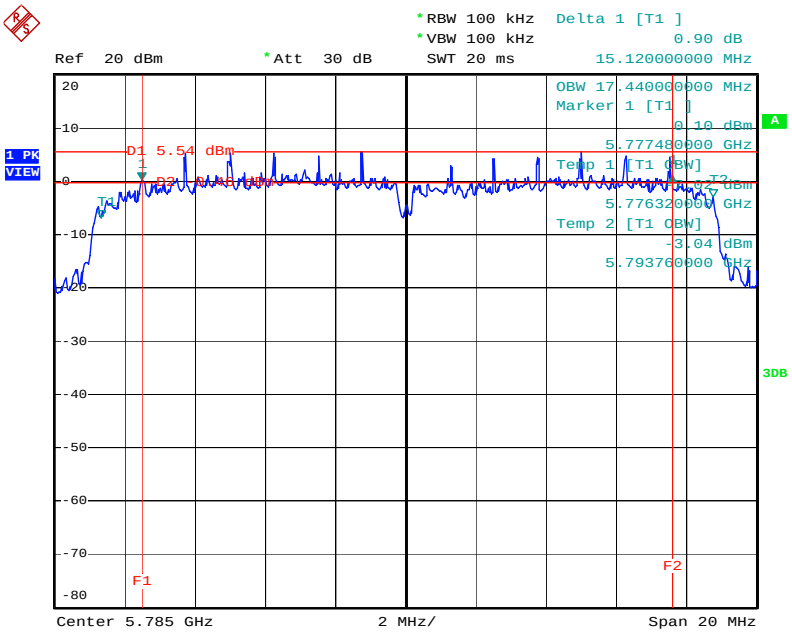
Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
149	5745 MHz	15.12	16.60	500	Complies
157	5785 MHz	15.48	17.40	500	Complies
165	5825 MHz	15.68	16.56	500	Complies

<For Antenna A>:

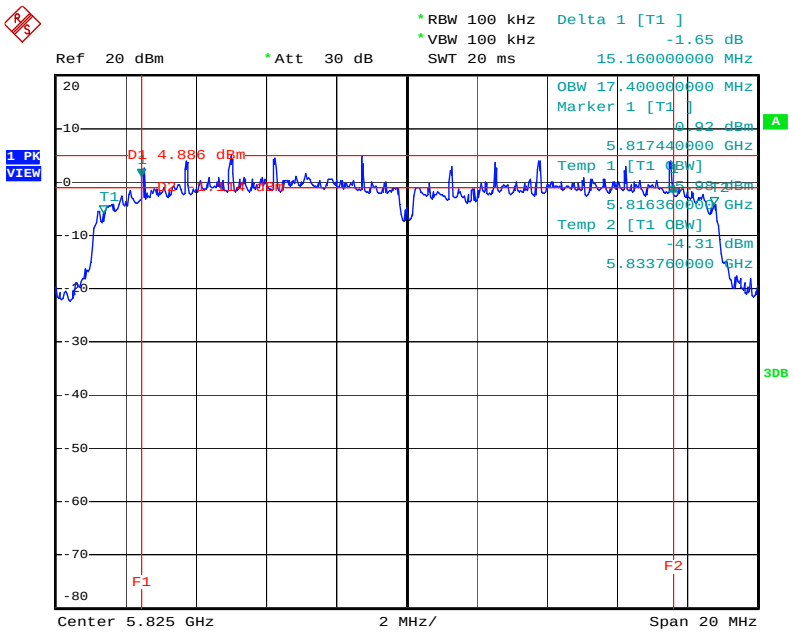
6 dB Bandwidth Plot on Configuration 11a IEEE 802.11n MCS0 20MHz Ant. A-1+ Ant. A-2 / 5745 MHz



6 dB Bandwidth Plot on Configuration 11a IEEE 802.11n MCS0 20MHz Ant. A-1+ Ant. A-2 / 5785MHz

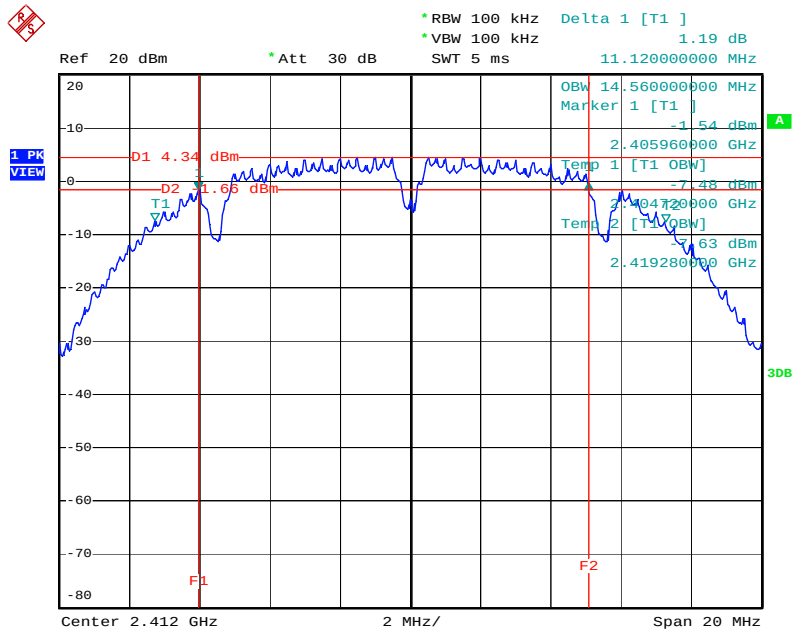


6 dB Bandwidth Plot on Configuration 11a IEEE 802.11n MCS0 20MHz Ant. A-1+ Ant. A-2 / 5825 MHz



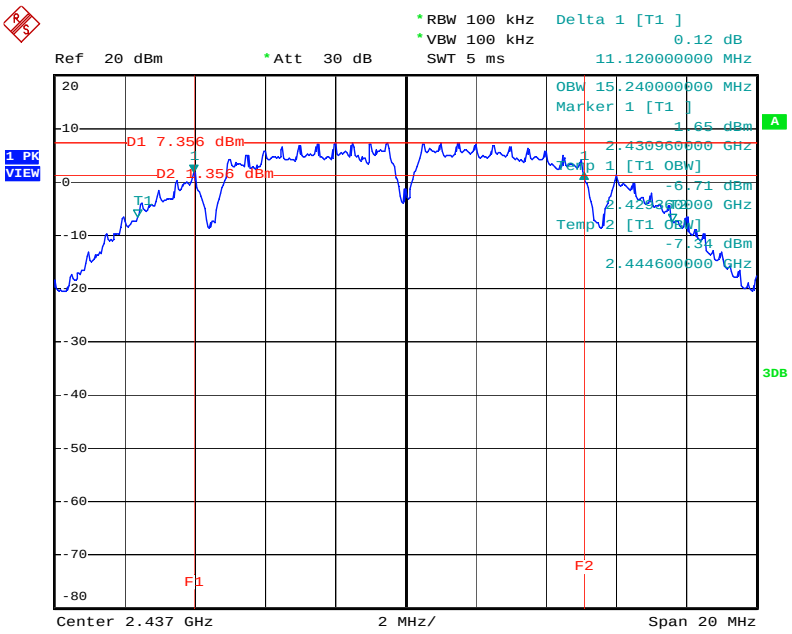
Date: 15.AUG.2010 19:28:47

6 dB Bandwidth Plot on Configuration IEEE 802.11b Ant. A-1 / 2412 MHz



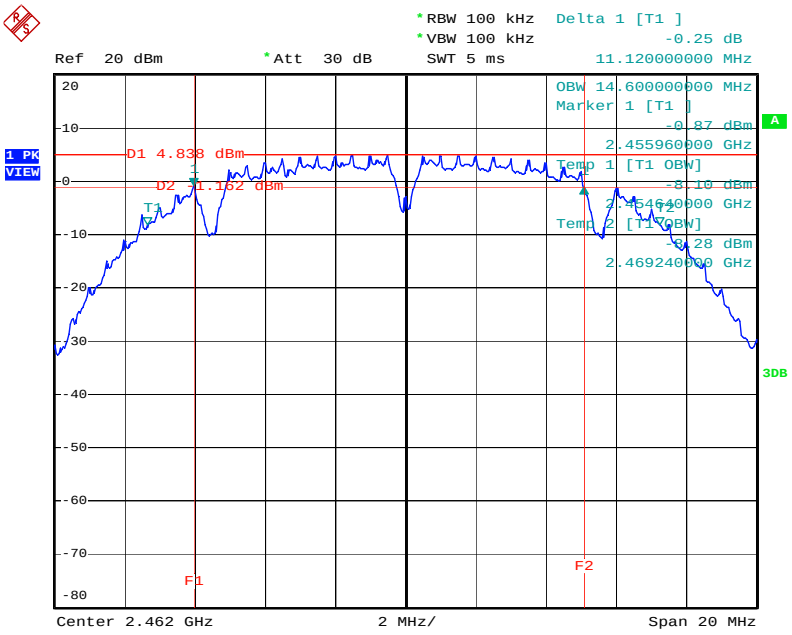
Date: 29.JUL.2010 18:29:39

6 dB Bandwidth Plot on Configuration IEEE 802.11b Ant. A-1 / 2437 MHz



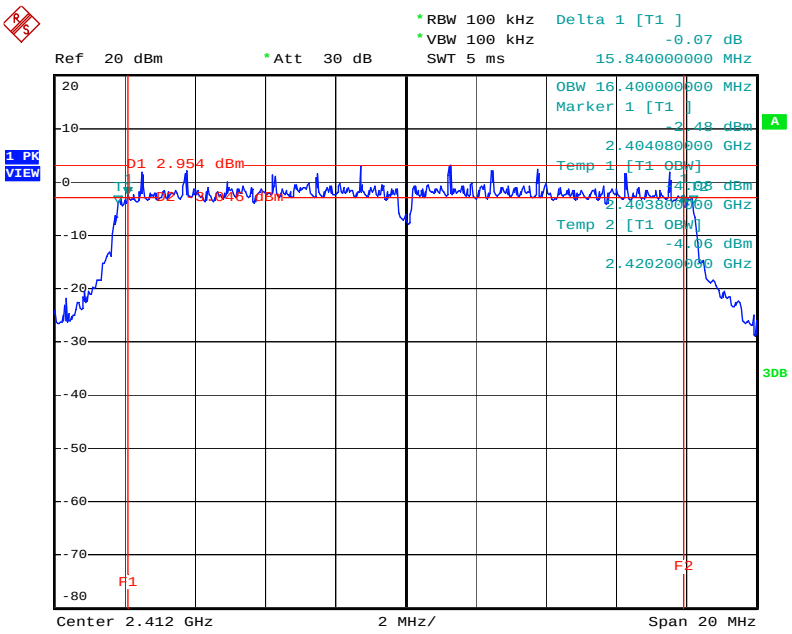
Date: 29.JUL.2010 18:40:17

6 dB Bandwidth Plot on Configuration IEEE 802.11b Ant. A-1 / 2462 MHz



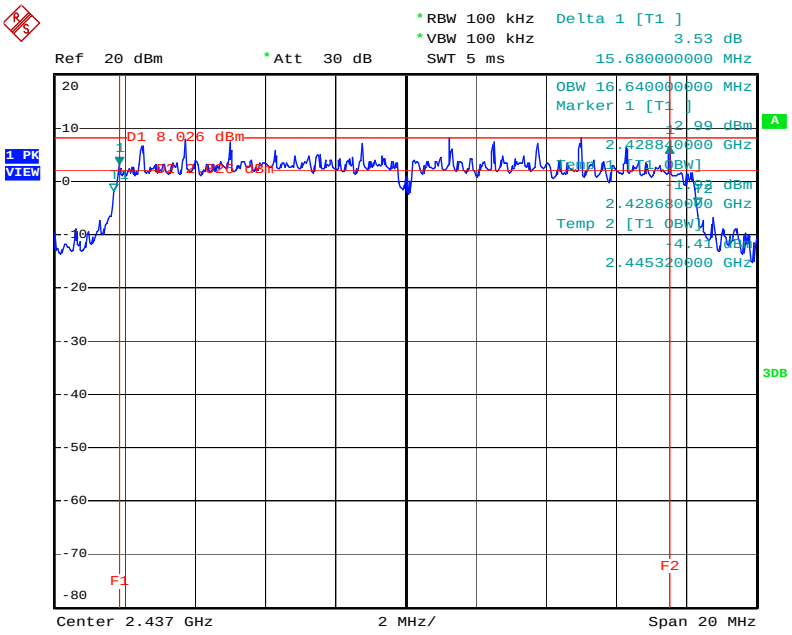
Date: 29.JUL.2010 18:45:28

6 dB Bandwidth Plot on Configuration IEEE 802.11g Ant. A-1 / 2412 MHz



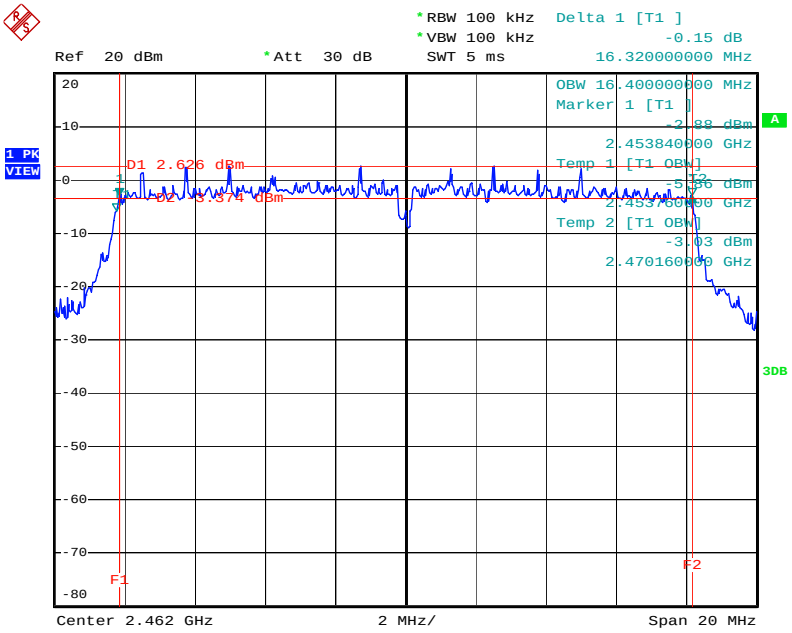
Date: 29.JUL.2010 18:51:20

6 dB Bandwidth Plot on Configuration IEEE 802.11g Ant. A-1/ 2437 MHz



Date: 29.JUL.2010 18:53:48

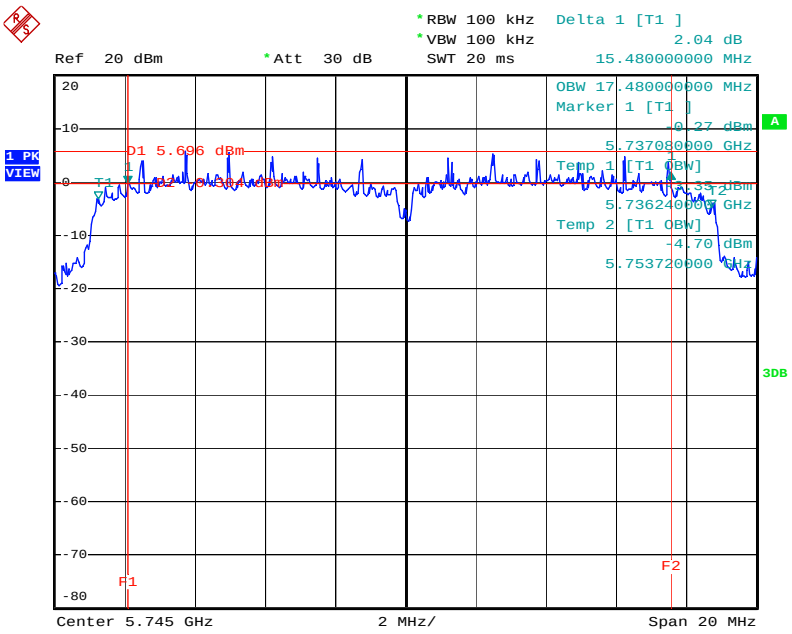
6 dB Bandwidth Plot on Configuration IEEE 802.11g Ant. A-1 / 2462 MHz



Date: 29.JUL.2010 18:56:43

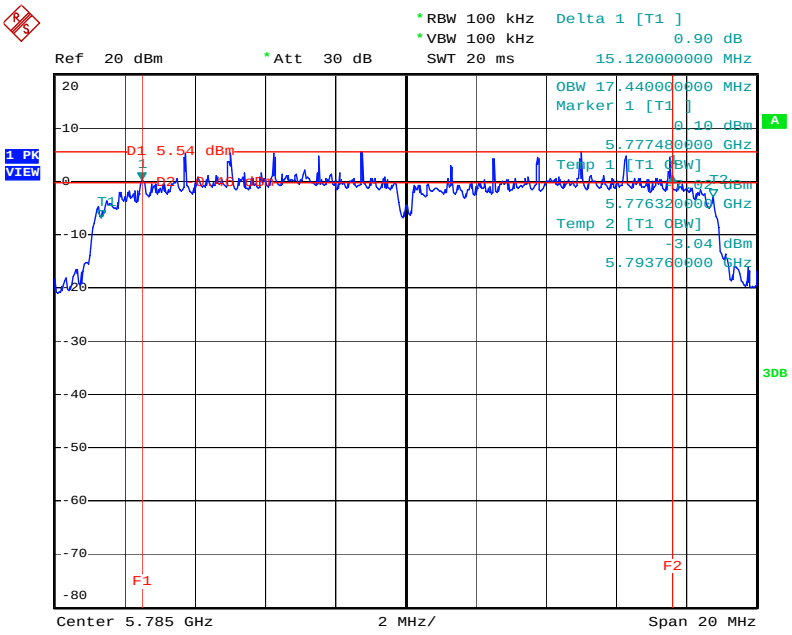
<For Antenna B>:

6 dB Bandwidth Plot on Configuration 11a IEEE 802.11n MCS0 20MHz Ant. B-1+ Ant. B-2 / 5745 MHz



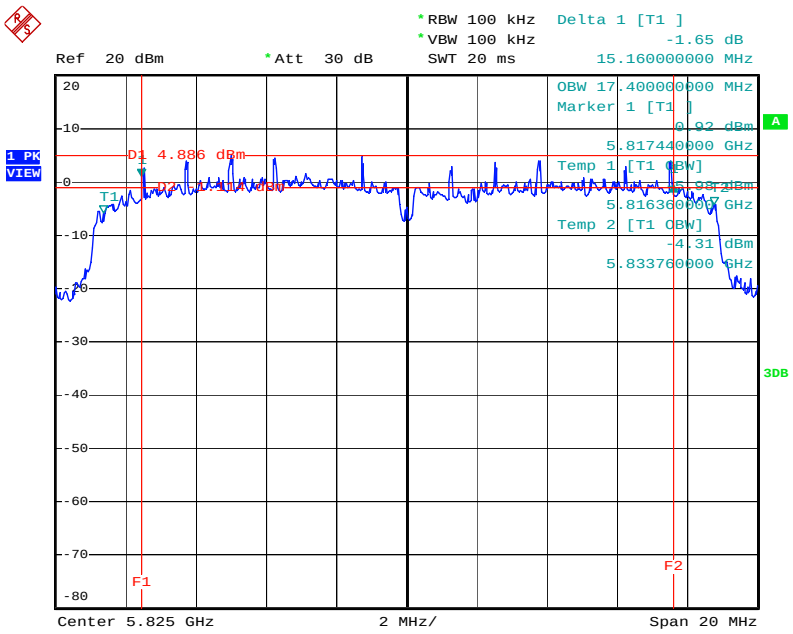
Date: 15.AUG.2010 20:20:50

6 dB Bandwidth Plot on Configuration 11a IEEE 802.11n MCS0 20MHz Ant. B-1+ Ant. B-2 / 5785MHz



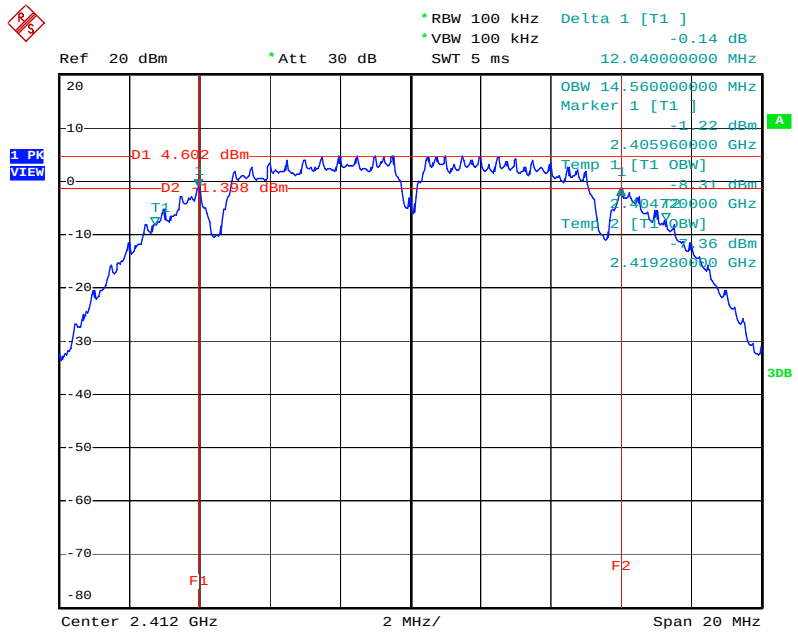
Date: 15.AUG.2010 19:26:40

6 dB Bandwidth Plot on Configuration 11a IEEE 802.11n MCS0 20MHz Ant. B-1+ Ant. B-2 / 5825 MHz



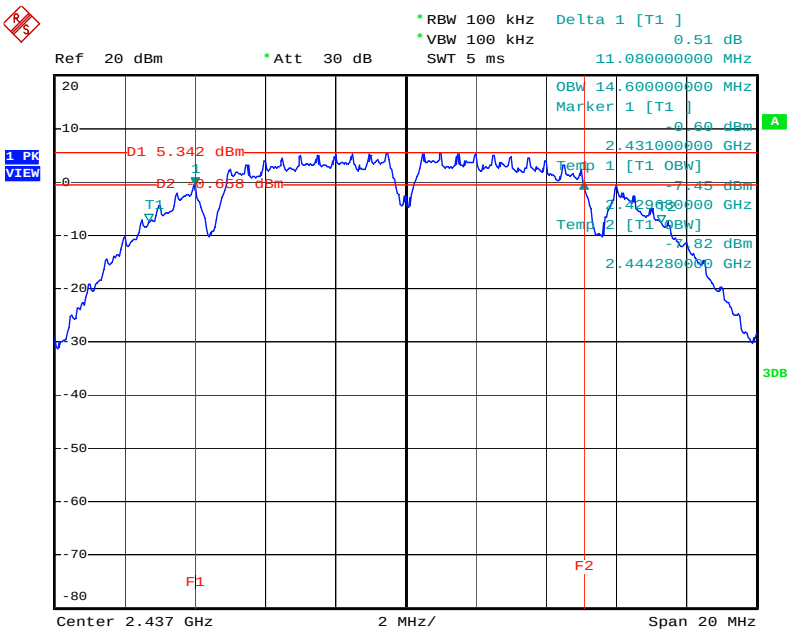
Date: 15.AUG.2010 19:28:47

6 dB Bandwidth Plot on Configuration IEEE 802.11b Ant. B-1 / 2412 MHz



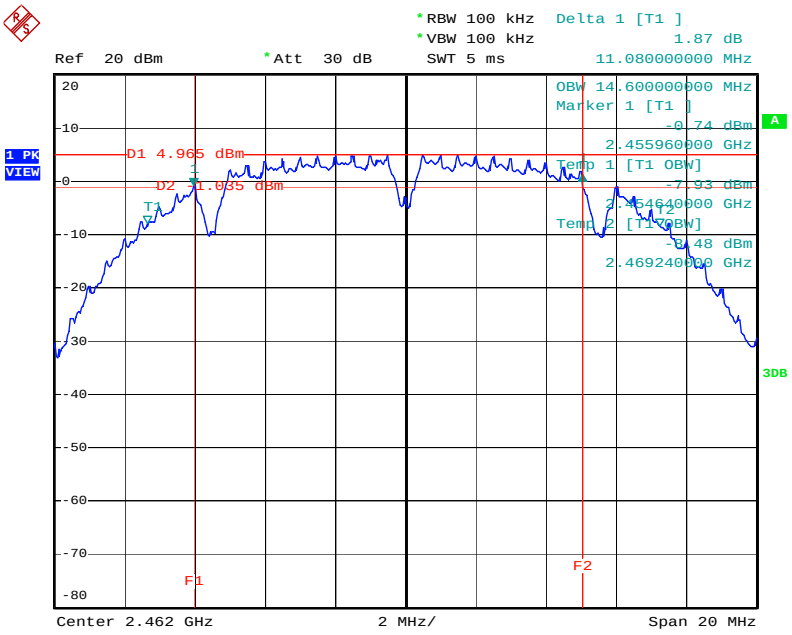
Date: 29.JUL.2010 19:59:11

6 dB Bandwidth Plot on Configuration IEEE 802.11b Ant. B-1 / 2437 MHz



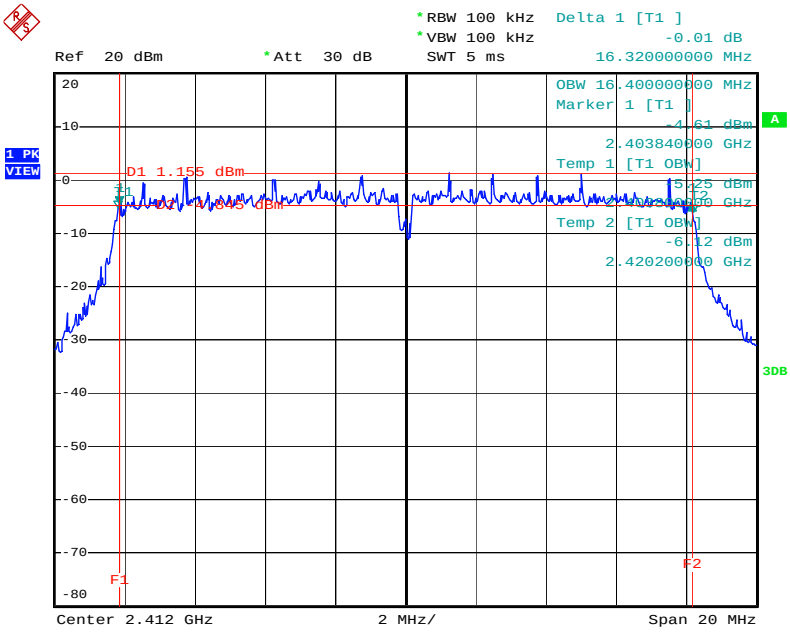
Date: 29.JUL.2010 20:01:20

6 dB Bandwidth Plot on Configuration IEEE 802.11b Ant. B-1 / 2462 MHz



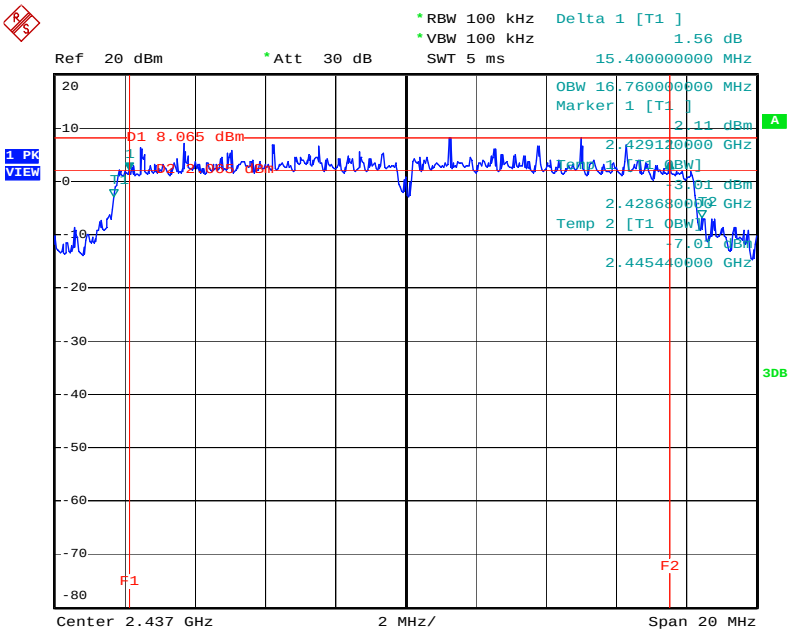
Date: 29.JUL.2010 20:03:42

6 dB Bandwidth Plot on Configuration IEEE 802.11g Ant. B-1 / 2412 MHz



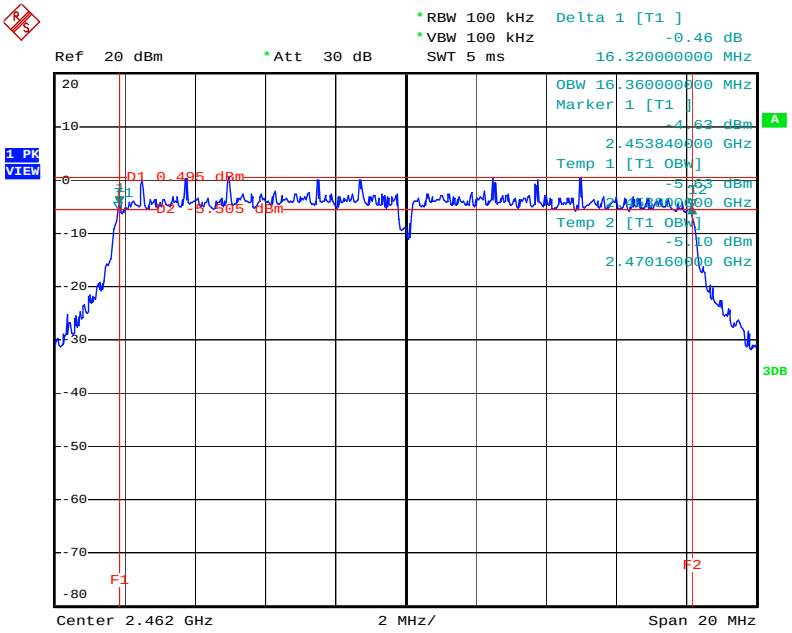
Date: 29.JUL.2010 20:06:05

6 dB Bandwidth Plot on Configuration IEEE 802.11g Ant. B-1/ 2437 MHz



Date: 29.JUL.2010 20:08:32

6 dB Bandwidth Plot on Configuration IEEE 802.11g Ant. B-1 / 2462 MHz



Date: 29.JUL.2010 20:11:03

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

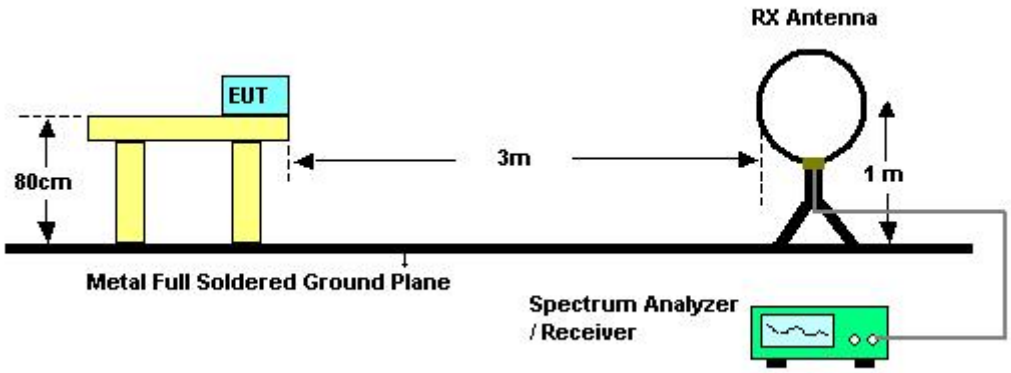
Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

4.5.3. Test Procedures

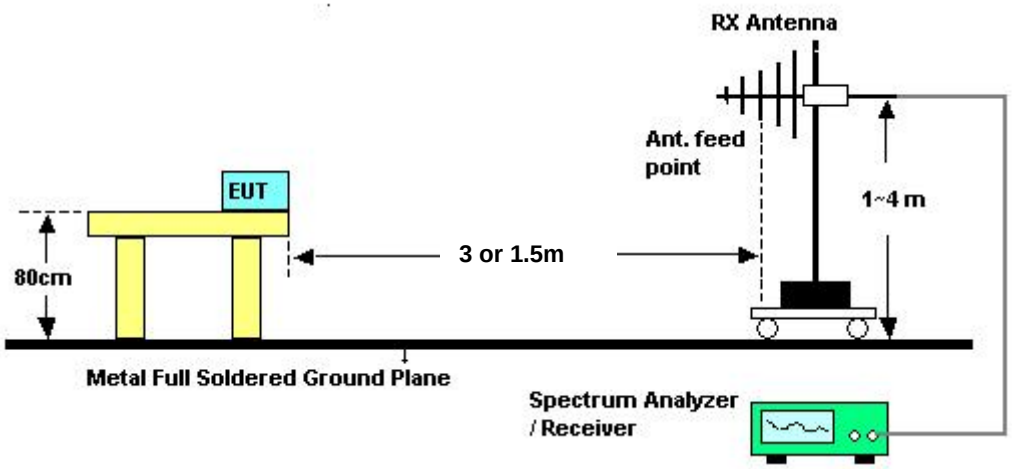
1. Configure the EUT according to ANSI C63.4. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting 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 form 3m to 1.5m.

Distance extrapolation factor = 20 log (specific distance [3m] / 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	22°C	Humidity	52%
Test Engineer	Satoshi Yang		
Evaluating Date	Jul. 13, 2010		

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

Note:

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

Distance extrapolation factor = 40 log (specific distance / test distance) (dB);

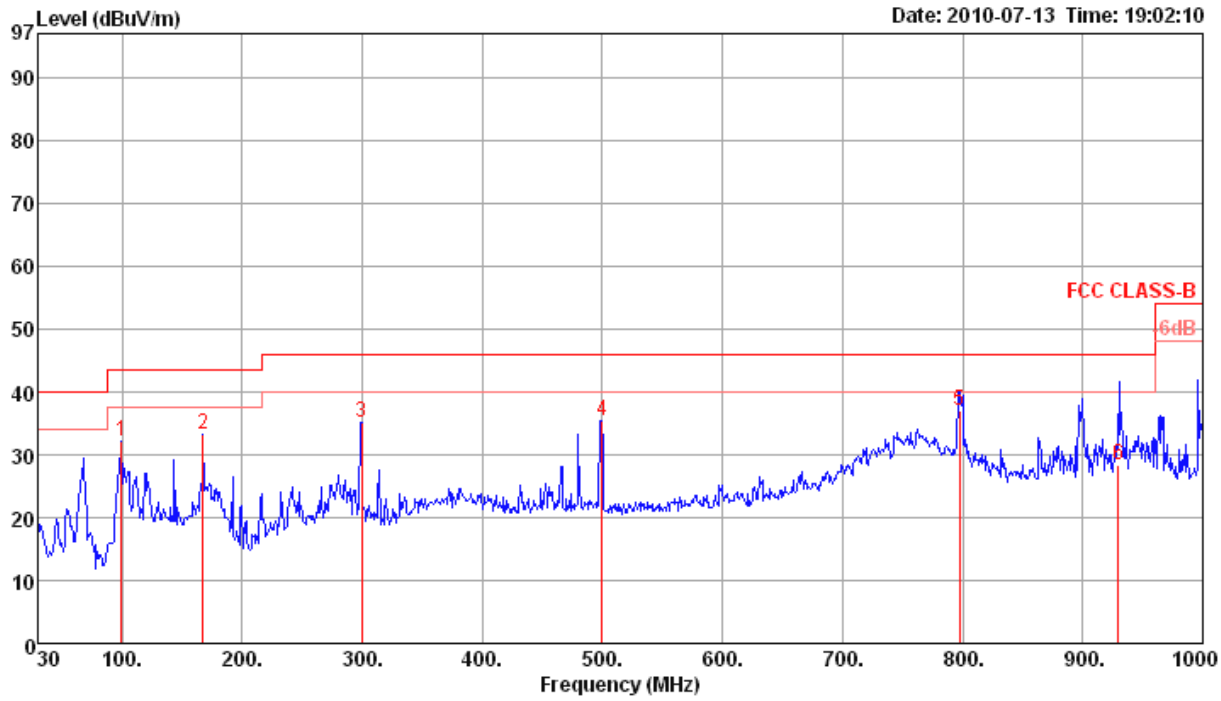
Limit line = specific limits (dBuV) + distance extrapolation factor.

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

<For Mode 1 (Ant. A)>:

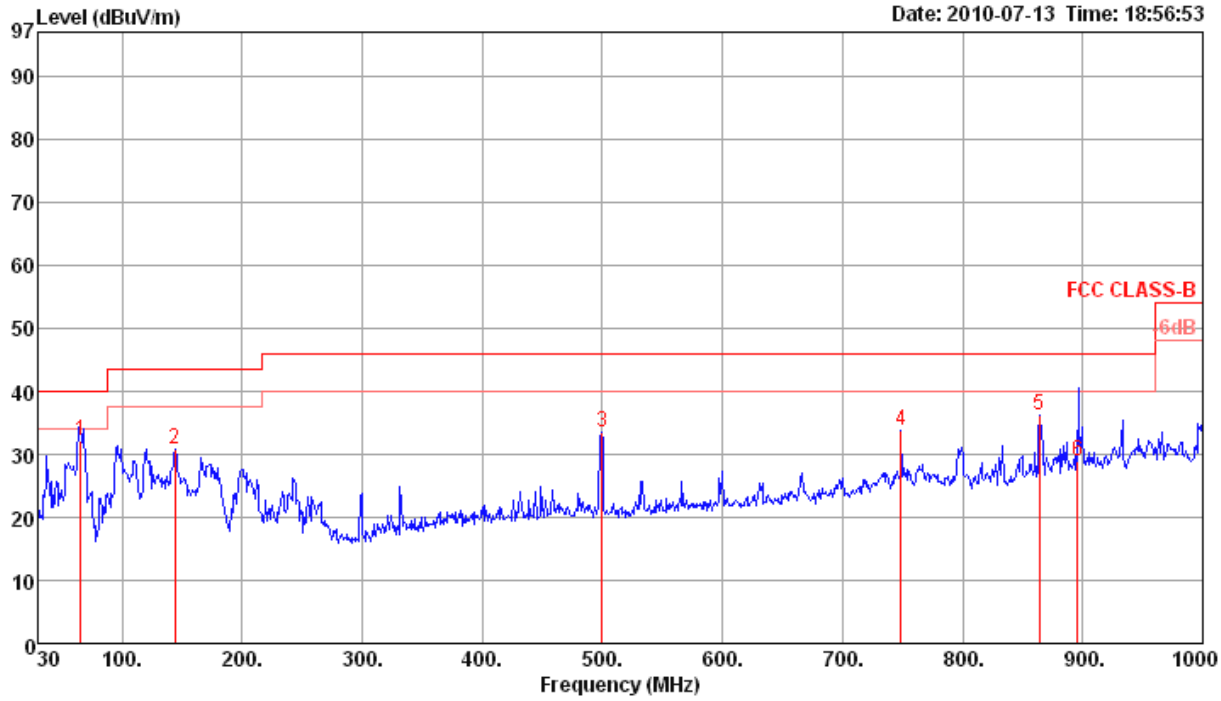
Temperature	22°C	Humidity	52%
Test Engineer	Satoshi Yang	Configurations	Normal Link / Mode 1 (Ant. A)

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	99.84	32.16	43.50	-11.34	47.57	1.20	27.60	10.99	0	100	Peak	HORIZONTAL
2	167.74	33.10	43.50	-10.40	46.21	1.54	27.26	12.61	0	100	Peak	HORIZONTAL
3	299.66	35.17	46.00	-10.83	46.61	2.10	26.90	13.36	0	100	Peak	HORIZONTAL
4	499.48	35.39	46.00	-10.61	43.17	2.70	28.09	17.61	0	100	Peak	HORIZONTAL
5 p	797.27	37.15	46.00	-8.85	41.70	3.31	27.61	19.75	0	100	Peak	HORIZONTAL
6 q	930.00	28.48	46.00	-17.52	31.40	3.60	27.28	20.76	263	100	QP	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 q	65.58	32.13	40.00	-7.87	52.30	0.88	27.74	6.69	28	167	QP	VERTICAL
2	144.46	30.71	43.50	-12.79	44.55	1.42	27.38	12.12	0	400	Peak	VERTICAL
3	499.48	33.51	46.00	-12.49	41.29	2.70	28.09	17.61	0	400	Peak	VERTICAL
4	748.77	33.76	46.00	-12.24	38.64	3.50	27.80	19.42	0	400	Peak	VERTICAL
5 p	864.20	36.16	46.00	-9.84	39.91	3.46	27.47	20.26	0	400	Peak	VERTICAL
6	896.00	28.97	46.00	-17.03	32.30	3.58	27.41	20.50	12	100	QP	VERTICAL

Note:

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

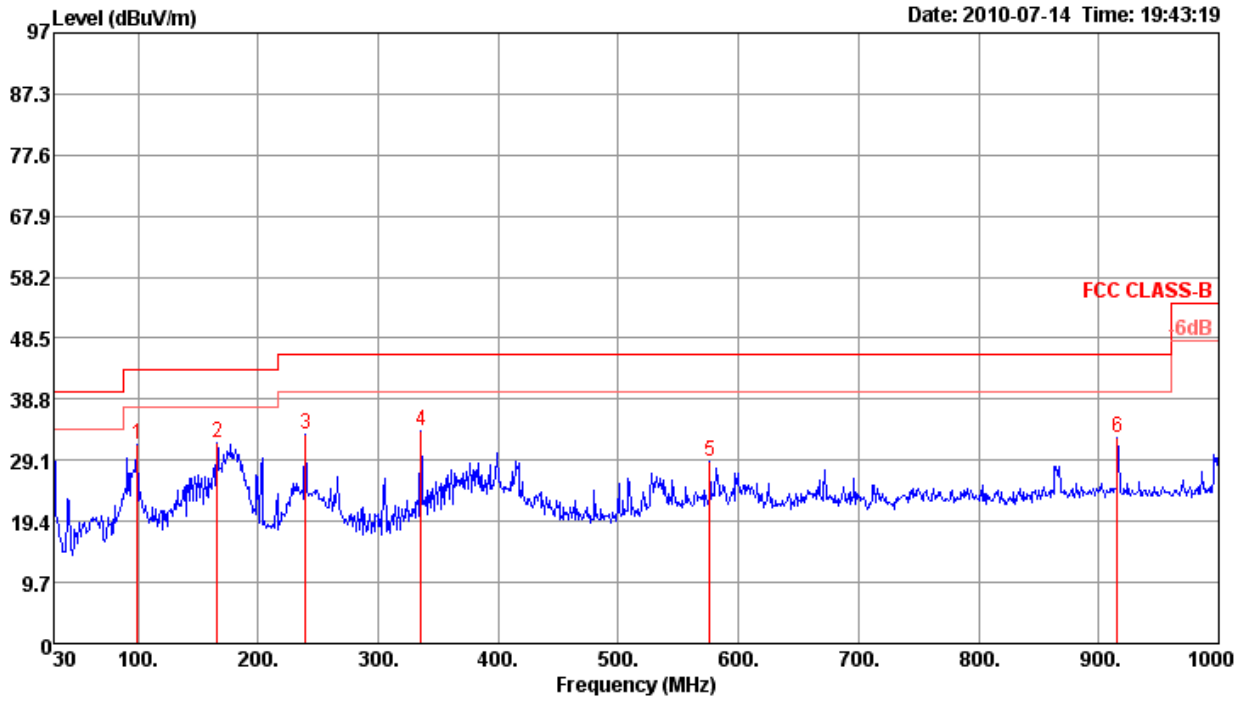
Emission level (dBuV/m) = 20 log Emission level (uV/m).

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

<For Mode 2 (Ant. B)>:

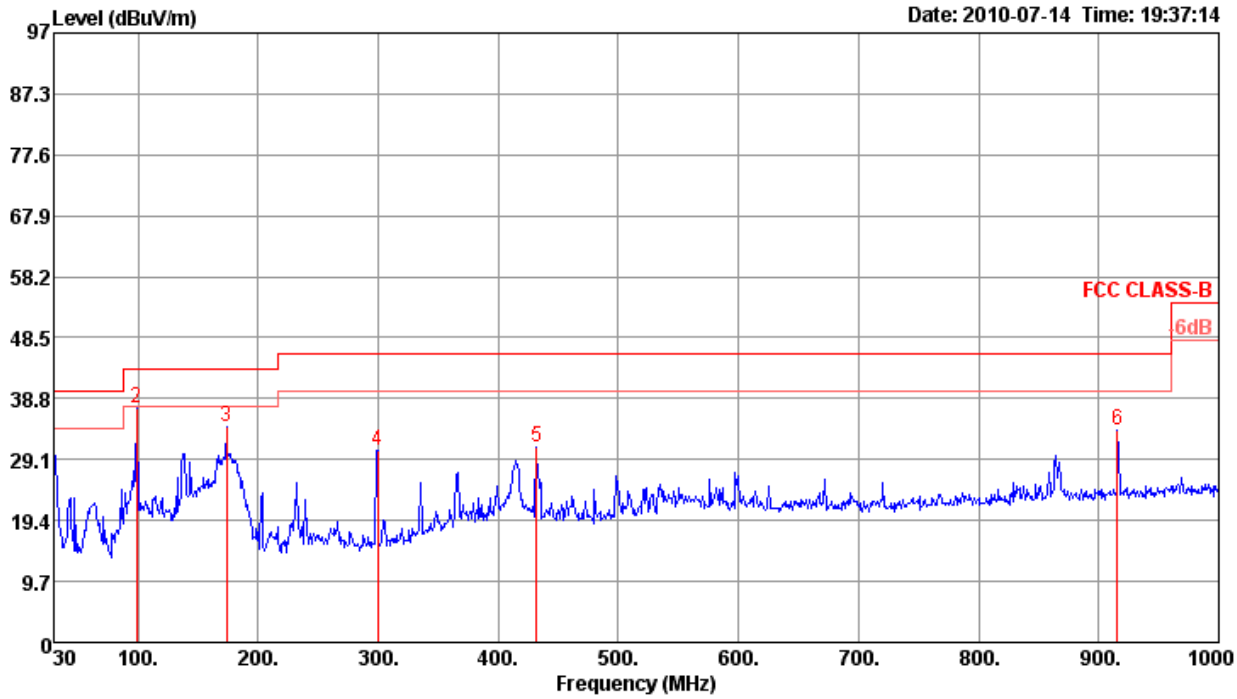
Temperature	22°C	Humidity	52%
Test Engineer	Satoshi Yang	Configurations	Normal Link / Mode 2 (Ant. B)

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	99.84	31.49	43.50	-12.01	46.90	1.20	27.60	10.99	0	100	Peak	HORIZONTAL
2	165.80	31.75	43.50	-11.75	45.02	1.53	27.27	12.47	0	100	Peak	HORIZONTAL
3	239.52	33.23	46.00	-12.77	46.41	1.86	27.02	11.98	0	100	Peak	HORIZONTAL
4	335.55	33.84	46.00	-12.16	44.49	2.17	27.15	14.33	0	100	Peak	HORIZONTAL
5	576.11	28.97	46.00	-17.03	35.73	2.85	28.10	18.49	0	100	Peak	HORIZONTAL
6	915.61	32.63	46.00	-13.37	35.71	3.60	27.33	20.65	0	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	30.00	31.63	40.00	-8.37	40.17	0.50	27.80	18.76	0	400	Peak	VERTICAL
2	98.87	37.38	43.50	-6.12	53.02	1.18	27.61	10.79	0	400	Peak	VERTICAL
3	173.56	34.28	43.50	-9.22	46.89	1.57	27.23	13.05	0	400	Peak	VERTICAL
4	299.66	30.66	46.00	-15.34	42.10	2.10	26.90	13.36	0	400	Peak	VERTICAL
5	431.58	31.20	46.00	-14.80	39.91	2.49	27.76	16.56	0	400	Peak	VERTICAL
6	915.61	33.67	46.00	-12.33	36.75	3.60	27.33	20.65	0	400	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.

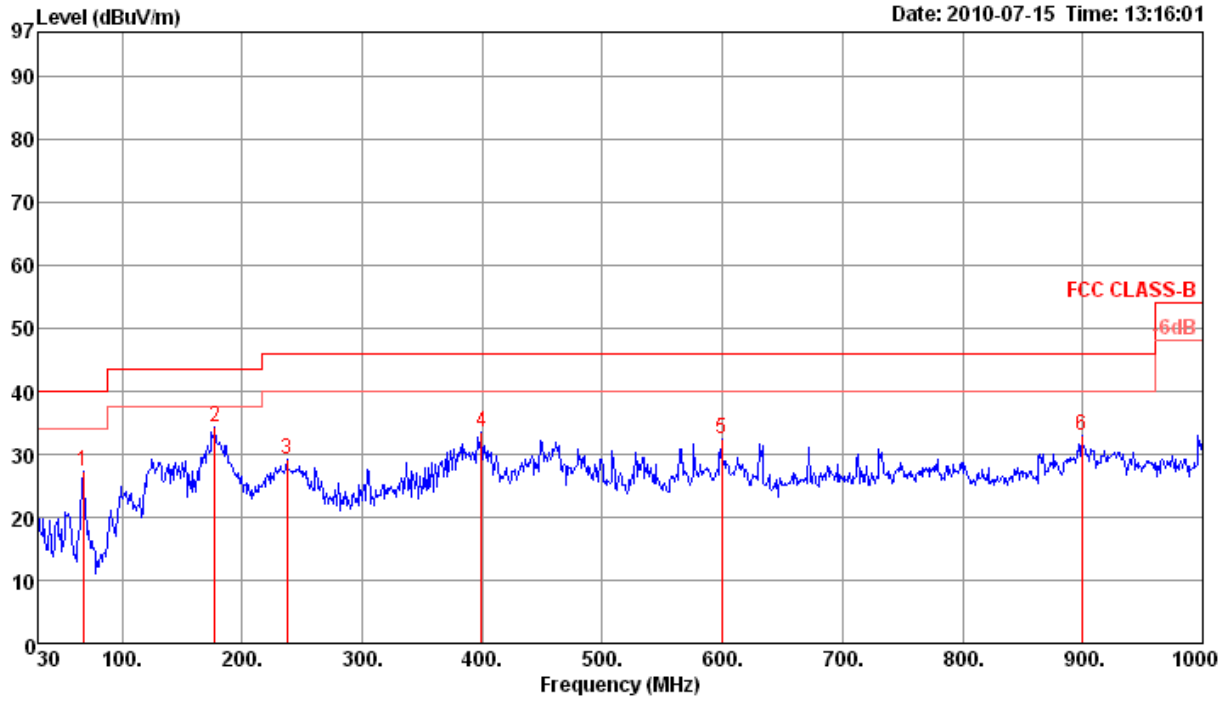
Emission level (dBuV/m) = 20 log Emission level (uV/m).

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

<For Mode 3 (Ant. A)>:

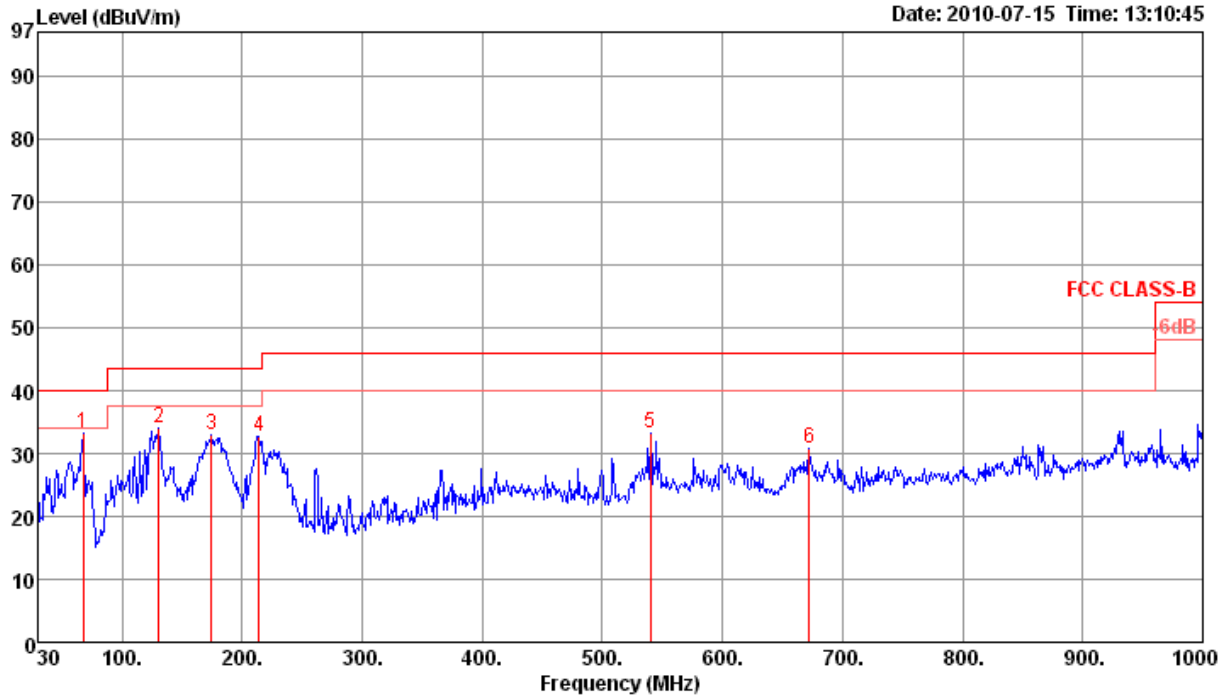
Temperature	22°C	Humidity	52%
Test Engineer	Satoshi Yang	Configurations	Normal Link / Mode 3 (Ant. A)

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	67.83	27.39	40.00	-12.61	47.61	0.84	27.73	6.67	0	100	Peak	HORIZONTAL
2 p	177.44	34.19	43.50	-9.31	46.68	1.59	27.21	13.13	0	100	Peak	HORIZONTAL
3	237.58	29.24	46.00	-16.76	42.57	1.85	27.02	11.84	0	100	Peak	HORIZONTAL
4	399.57	33.48	46.00	-12.52	42.72	2.30	27.60	16.06	0	100	Peak	HORIZONTAL
5	599.39	32.54	46.00	-13.46	38.98	2.90	28.10	18.76	0	100	Peak	HORIZONTAL
6	899.12	33.05	46.00	-12.95	36.33	3.60	27.40	20.52	0	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 p	67.83	33.27	40.00	-6.73	53.49	0.84	27.73	6.67	0	400	Peak	VERTICAL
2	130.88	33.96	43.50	-9.54	47.83	1.31	27.45	12.27	0	400	Peak	VERTICAL
3	174.53	32.88	43.50	-10.62	45.42	1.57	27.23	13.12	0	400	Peak	VERTICAL
4	214.30	32.81	43.50	-10.69	48.00	1.76	27.07	10.12	0	400	Peak	VERTICAL
5	540.22	33.35	46.00	-12.65	40.59	2.78	28.10	18.08	0	400	Peak	VERTICAL
6	672.14	30.71	46.00	-15.29	36.33	3.41	28.03	19.00	0	400	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.

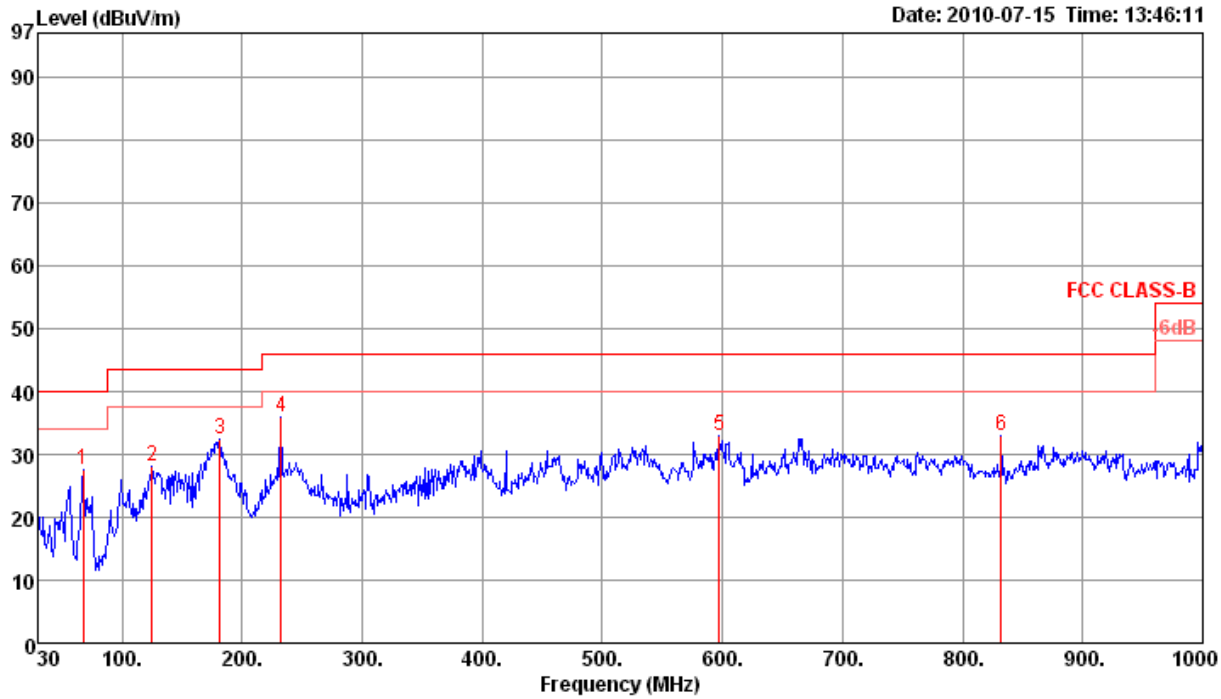
Emission level (dBuV/m) = 20 log Emission level (uV/m).

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

<For Mode 4 (Ant. B)>:

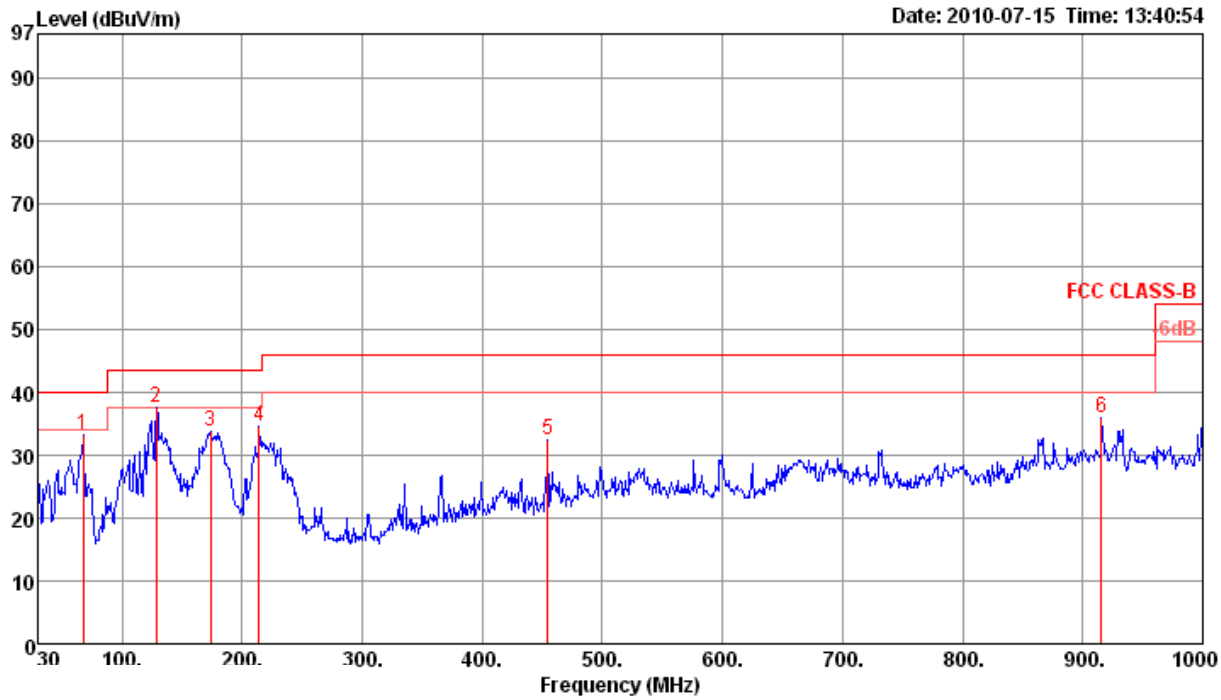
Temperature	22°C	Humidity	52%
Test Engineer	Satoshi Yang	Configurations	Normal Link / Mode 4 (Ant. B)

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	67.83	27.43	40.00	-12.57	47.65	0.84	27.73	6.67	0	100	Peak	HORIZONTAL
2	125.06	28.00	43.50	-15.50	42.02	1.25	27.48	12.21	0	100	Peak	HORIZONTAL
3	181.32	32.47	43.50	-11.03	45.12	1.60	27.19	12.94	0	100	Peak	HORIZONTAL
4 p	232.73	36.06	46.00	-9.94	49.78	1.83	27.03	11.48	0	100	Peak	HORIZONTAL
5	597.45	32.84	46.00	-13.16	39.31	2.89	28.10	18.74	0	100	Peak	HORIZONTAL
6	832.19	33.01	46.00	-12.99	37.18	3.36	27.54	20.01	0	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	67.83	33.34	40.00	-6.66	53.56	0.84	27.73	6.67	0	400	Peak	VERTICAL
2 p	128.94	37.45	43.50	-6.05	51.36	1.29	27.45	12.25	0	400	Peak	VERTICAL
3	173.56	33.73	43.50	-9.77	46.34	1.57	27.23	13.05	0	400	Peak	VERTICAL
4	214.30	34.60	43.50	-8.90	49.79	1.76	27.07	10.12	0	400	Peak	VERTICAL
5	454.86	32.46	46.00	-13.54	40.80	2.61	27.87	16.92	0	400	Peak	VERTICAL
6	915.61	35.80	46.00	-10.20	38.88	3.60	27.33	20.65	0	400	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.

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

<For Mode 1 (Ant. A)>:

Temperature	22°C	Humidity	52%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11n MCS0 20MHz Ch 1 / Mode 1 (Ant. A-1+ Ant. A-2)
Test Date	Jul. 19, 2010		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4824.01	29.48	54.00	-24.52	28.99	2.46	33.06	35.03	177	100	Average	HORIZONTAL
2	4824.02	43.59	74.00	-30.41	43.10	2.46	33.06	35.03	177	100	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4824.01	31.83	54.00	-22.17	31.34	2.46	33.06	35.03	279	100	Average	VERTICAL
2	4824.01	43.36	74.00	-30.64	42.87	2.46	33.06	35.03	279	100	Peak	VERTICAL

Temperature	22°C	Humidity	52%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11n MCS0 20MHz Ch 6 / Mode 1 (Ant. A-1+ Ant. A-2)
Test Date	Jul. 19, 2010		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4873.99	35.32	54.00	-18.68	34.72	2.47	33.16	35.03	69	100	Average	HORIZONTAL
2	4874.02	48.77	74.00	-25.23	48.17	2.47	33.16	35.03	69	100	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4873.99	43.14	54.00	-10.86	42.54	2.47	33.16	35.03	252	100	Average	VERTICAL
2	4874.01	58.88	74.00	-15.12	58.28	2.47	33.16	35.03	252	100	Peak	VERTICAL

Temperature	22°C	Humidity	52%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11n MCS0 20MHz Ch11 / Mode 1 (Ant. A-1+ Ant. A-2)
Test Date	Jul. 19, 2010		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4923.99	30.26	54.00	-23.74	29.54	2.47	33.26	35.01	237	100	Average	HORIZONTAL
2	4924.00	43.75	74.00	-30.25	43.03	2.47	33.26	35.01	237	100	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4923.99	48.37	74.00	-25.63	47.65	2.47	33.26	35.01	164	100	Peak	VERTICAL
2	4923.99	33.94	54.00	-20.06	33.22	2.47	33.26	35.01	164	100	Average	VERTICAL

Temperature	22°C	Humidity	52%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11n MCS0 40MHz Ch 3 / Mode 1 (Ant. A-1+ Ant. A-2)
Test Date	Jul. 19, 2010		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4843.99	42.46	74.00	-31.54	41.94	2.46	33.09	35.03	97	100	Peak	HORIZONTAL
2	4843.99	29.33	54.00	-24.67	28.81	2.46	33.09	35.03	97	100	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4843.98	30.17	54.00	-23.83	29.65	2.46	33.09	35.03	230	100	Average	VERTICAL
2	4843.99	44.71	74.00	-29.29	44.19	2.46	33.09	35.03	230	100	Peak	VERTICAL

Temperature	22°C	Humidity	52%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11n MCS0 40MHz Ch 6 / Mode 1 (Ant. A-1+ Ant. A-2)
Test Date	Jul. 19, 2010		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4873.98	29.16	54.00	-24.84	28.56	2.47	33.16	35.03	207	100	Average	HORIZONTAL
2	4874.00	43.34	74.00	-30.66	42.74	2.47	33.16	35.03	207	100	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4873.98	46.25	74.00	-27.75	45.65	2.47	33.16	35.03	296	100	Peak	VERTICAL
2	4873.99	32.04	54.00	-21.96	31.44	2.47	33.16	35.03	296	100	Average	VERTICAL

Temperature	22°C	Humidity	52%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11n MCS0 40MHz Ch 9 / Mode 1 (Ant. A-1+ Ant. A-2)
Test Date	Jul. 19, 2010		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4903.98	42.59	74.00	-31.41	41.95	2.47	33.19	35.02	97	100	Peak	HORIZONTAL
2	4904.03	29.01	54.00	-24.99	28.37	2.47	33.19	35.02	97	100	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4904.00	43.94	74.00	-30.06	43.30	2.47	33.19	35.02	179	100	Peak	VERTICAL
2	4904.01	30.06	54.00	-23.94	29.42	2.47	33.19	35.02	179	100	Average	VERTICAL

Temperature	22°C	Humidity	52%
Test Engineer	Satoshi Yang	Configurations	11a IEEE 802.11n MCS0 20MHz CH 149 / Mode 1 (Ant. A-1+ Ant. A-2)
Test Date	Aug. 17, 2010		

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	11490.29	58.00	80.00	-22.00	49.49	4.76	34.75	38.50	251	100	Peak	HORIZONTAL
2	11490.42	44.69	60.00	-15.31	36.18	4.76	34.75	38.50	251	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	11490.34	59.06	80.00	-20.94	50.55	4.76	34.75	38.50	130	115	Peak	VERTICAL
2	11490.50	45.37	60.00	-14.63	36.86	4.76	34.75	38.50	130	115	Average	VERTICAL

Temperature	22°C	Humidity	54%
Test Engineer	Satoshi Yang	Configurations	11a IEEE 802.11n MCS0 20MHz CH 157 / Mode 1 (Ant. A-1+ Ant. A-2)
Test Date	Aug. 17, 2010		

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	11570.02	55.33	80.00	-24.67	46.73	4.91	34.82	38.51	120	114	Peak	HORIZONTAL
2	11570.48	41.97	60.00	-18.03	33.37	4.91	34.82	38.51	120	114	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	11569.64	45.50	60.00	-14.50	36.93	4.86	34.80	38.51	250	103	Average	VERTICAL
2	11569.67	54.10	80.00	-25.90	45.53	4.86	34.80	38.51	250	103	Peak	VERTICAL

Temperature	22°C	Humidity	54%
Test Engineer	Satoshi Yang	Configurations	11a IEEE 802.11n MCS0 20MHz CH 165 / Mode 1 (Ant. A-1+ Ant. A-2)
Test Date	Aug. 17, 2010		

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	11650.39	55.60	80.00	-24.40	46.94	5.03	34.90	38.53	126	116	Peak	HORIZONTAL
2	11650.44	42.28	60.00	-17.72	33.62	5.03	34.90	38.53	126	116	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	11650.40	44.47	60.00	-15.53	35.81	5.03	34.90	38.53	243	105	Average	VERTICAL
2	11650.42	58.17	80.00	-21.83	49.51	5.03	34.90	38.53	243	105	Peak	VERTICAL

Temperature	22°C	Humidity	54%
Test Engineer	Satoshi Yang	Configurations	11a IEEE 802.11n MCS0 40MHz CH 151 / Mode 1 (Ant. A-1+ Ant. A-2)
Test Date	Aug. 17, 2010		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase	Au Facto
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm			d
1	11509.71	52.00	80.00	-28.00	43.47	4.78	34.75	38.50	107	100	Peak	HORIZONTAL	0.0
2	11510.50	38.38	60.00	-21.62	29.85	4.78	34.75	38.50	107	100	Average	HORIZONTAL	0.0

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase	Au Facto
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm			d
1	11510.32	42.57	60.00	-17.43	34.04	4.78	34.75	38.50	248	100	Average	VERTICAL	0.0
2	11510.44	55.99	80.00	-24.01	47.46	4.78	34.75	38.50	248	100	Peak	VERTICAL	0.0

Temperature	22°C	Humidity	54%
Test Engineer	Satoshi Yang	Configurations	11a IEEE 802.11n MCS0 40MHz CH 159 / Mode 1 (Ant. A-1+ Ant. A-2)
Test Date	Aug. 17, 2010		

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	11509.71	52.00	80.00	-28.00	43.47	4.78	34.75	38.50	107	100	Peak	HORIZONTAL
2	11510.50	38.38	60.00	-21.62	29.85	4.78	34.75	38.50	107	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	11589.86	55.81	80.00	-24.19	47.20	4.91	34.82	38.52	244	100	Peak	VERTICAL
2	11590.17	42.46	60.00	-17.54	33.85	4.91	34.82	38.52	244	100	Average	VERTICAL

Temperature	22℃	Humidity	54%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11b CH 1 / Mode 1 (Ant. A-1)
Test Date	Jul. 19, 2010		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4823.95	44.57	74.00	-29.43	44.08	2.46	33.06	35.03	360	203	Peak	HORIZONTAL
2	4823.97	36.90	54.00	-17.10	36.41	2.46	33.06	35.03	360	203	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4823.95	48.45	74.00	-25.55	47.96	2.46	33.06	35.03	159	114	Peak	VERTICAL
2	4823.96	44.03	54.00	-9.97	43.54	2.46	33.06	35.03	159	114	Average	VERTICAL

Temperature	22°C	Humidity	54%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11b CH 6 / Mode 1 (Ant. A-1)
Test Date	Jul. 19, 2010		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4873.98	53.68	74.00	-20.32	53.08	2.47	33.16	35.03	9	231	Peak	HORIZONTAL
2	4873.99	51.23	54.00	-2.77	50.63	2.47	33.16	35.03	9	231	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4873.94	55.09	74.00	-18.91	54.49	2.47	33.16	35.03	160	113	Peak	VERTICAL
2	4873.99	53.19	54.00	-0.81	52.59	2.47	33.16	35.03	160	113	Average	VERTICAL

Temperature	22℃	Humidity	54%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11b CH 11 / Mode 1 (Ant. A-1)
Test Date	Jul. 19, 2010		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4923.97	40.84	54.00	-13.16	40.12	2.47	33.26	35.01	7	217	Average	HORIZONTAL
2	4923.98	46.57	74.00	-27.43	45.85	2.47	33.26	35.01	7	217	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4923.89	51.74	74.00	-22.26	51.02	2.47	33.26	35.01	252	123	Peak	VERTICAL
2	4923.95	49.27	54.00	-4.73	48.55	2.47	33.26	35.01	252	123	Average	VERTICAL

Temperature	22℃	Humidity	54%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11g CH 1 / Mode 1 (Ant. A-1)
Test Date	Jul. 19, 2010		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4824.01	29.08	54.00	-24.92	28.59	2.46	33.06	35.03	61	100	Average	HORIZONTAL
2	4824.01	42.42	74.00	-31.58	41.93	2.46	33.06	35.03	61	100	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4824.00	43.93	74.00	-30.07	43.44	2.46	33.06	35.03	162	100	Peak	VERTICAL
2	4824.03	30.41	54.00	-23.59	29.92	2.46	33.06	35.03	162	100	Average	VERTICAL

Temperature	22°C	Humidity	54%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11g CH 6 / Mode 1 (Ant. A-1)
Test Date	Jul. 19, 2010		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4873.98	35.45	54.00	-18.55	34.85	2.47	33.16	35.03	112	100	Average	HORIZONTAL
2	4873.99	50.27	74.00	-23.73	49.67	2.47	33.16	35.03	112	100	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4873.98	53.96	74.00	-20.04	53.36	2.47	33.16	35.03	226	100	Peak	VERTICAL
2	4873.99	39.71	54.00	-14.29	39.11	2.47	33.16	35.03	226	100	Average	VERTICAL

Temperature	22℃	Humidity	54%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11g CH 11 / Mode 1 (Ant. A-1)
Test Date	Jul. 19, 2010		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4924.01	29.42	54.00	-24.58	28.70	2.47	33.26	35.01	179	100	Average	HORIZONTAL
2	4924.02	43.42	74.00	-30.58	42.70	2.47	33.26	35.01	179	100	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4924.00	45.43	74.00	-28.57	44.71	2.47	33.26	35.01	260	100	Peak	VERTICAL
2	4924.03	31.94	54.00	-22.06	31.22	2.47	33.26	35.01	260	100	Average	VERTICAL

Temperature	22℃	Humidity	54%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11a CH 149 / Mode 1 (Ant. A-1)
Test Date	Aug. 17, 2010		

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	11490.07	42.21	60.00	-17.79	33.70	4.76	34.75	38.50	206	110	Average	HORIZONTAL
2	11490.42	55.34	80.00	-24.66	46.83	4.76	34.75	38.50	206	110	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	11490.05	44.88	60.00	-15.12	36.37	4.76	34.75	38.50	250	101	Average	VERTICAL
2	11490.26	58.00	80.00	-22.00	49.49	4.76	34.75	38.50	250	101	Peak	VERTICAL

Temperature	22℃	Humidity	54%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11a CH 157 / Mode 1 (Ant. A-1)
Test Date	Aug. 17, 2010		

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	11569.62	45.17	60.00	-14.83	36.60	4.86	34.80	38.51	251	100	Average	HORIZONTAL
2	11570.20	58.39	80.00	-21.61	49.79	4.91	34.82	38.51	251	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	11569.62	57.38	80.00	-22.62	48.81	4.86	34.80	38.51	249	100	Peak	VERTICAL
2	11569.64	44.29	60.00	-15.71	35.72	4.86	34.80	38.51	249	100	Average	VERTICAL

Temperature	22℃	Humidity	54%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11a CH 165 / Mode 1 (Ant. A-1)
Test Date	Aug. 17, 2010		

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	11649.92	53.06	80.00	-26.94	44.40	5.03	34.90	38.53	249	100	Peak	HORIZONTAL
2	11650.28	44.49	60.00	-15.51	35.83	5.03	34.90	38.53	249	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	11649.61	58.36	80.00	-21.64	49.70	5.03	34.90	38.53	86	100	Peak	VERTICAL
2	11650.03	44.92	60.00	-15.08	36.26	5.03	34.90	38.53	86	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.

<For Mode 2 (Ant. B)>:

Temperature	22°C	Humidity	52%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11n MCS0 20MHz Ch 1 / Mode 2 (Ant. B-1 + Ant. B-2)
Test Date	Jul. 08, 2010		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4824.28	44.15	74.00	-29.85	43.66	2.46	33.06	35.03	193	127	Peak	HORIZONTAL
2	4824.50	30.31	54.00	-23.69	29.82	2.46	33.06	35.03	193	127	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4824.18	48.46	74.00	-25.54	47.97	2.46	33.06	35.03	266	130	Peak	VERTICAL
2	4824.36	32.04	54.00	-21.96	31.55	2.46	33.06	35.03	266	130	Average	VERTICAL

Temperature	22°C	Humidity	52%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11n MCS0 20MHz Ch 6 / Mode 2 (Ant. B-1 + Ant. B-2)
Test Date	Jul. 20, 2010		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4875.30	40.92	54.00	-13.08	40.32	2.47	33.16	35.03	339	197	Average	HORIZONTAL
2	4878.40	55.34	74.00	-18.66	54.74	2.47	33.16	35.03	339	197	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4875.20	45.79	54.00	-8.21	45.19	2.47	33.16	35.03	272	114	Average	VERTICAL
2	4878.50	61.69	74.00	-12.31	61.09	2.47	33.16	35.03	272	114	Peak	VERTICAL

Temperature	22°C	Humidity	52%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11n MCS0 20MHz Ch11 / Mode 2 (Ant. B-1 + Ant. B-2)
Test Date	Jul. 08, 2010		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4923.54	48.81	74.00	-25.19	48.09	2.47	33.26	35.01	156	130	Peak	HORIZONTAL
2	4924.30	32.48	54.00	-21.52	31.76	2.47	33.26	35.01	156	130	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4923.95	33.52	54.00	-20.48	32.80	2.47	33.26	35.01	269	137	Average	VERTICAL
2	4924.38	50.36	74.00	-23.64	49.64	2.47	33.26	35.01	269	137	Peak	VERTICAL

Temperature	22°C	Humidity	52%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11n MCS0 40MHz Ch 3 / Mode 2 (Ant. B-1 + Ant. B-2)
Test Date	Jul. 08, 2010		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4843.73	43.80	74.00	-30.20	43.28	2.46	33.09	35.03	185	100	Peak	HORIZONTAL
2	4844.11	30.12	54.00	-23.88	29.60	2.46	33.09	35.03	185	100	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4843.67	44.10	74.00	-29.90	43.58	2.46	33.09	35.03	261	117	Peak	VERTICAL
2	4843.95	30.48	54.00	-23.52	29.96	2.46	33.09	35.03	261	117	Average	VERTICAL

Temperature	22°C	Humidity	52%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11n MCS0 40MHz Ch 6 / Mode 2 (Ant. B-1 + Ant. B-2)
Test Date	Jul. 20, 2010		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4872.64	46.77	74.00	-27.23	46.17	2.47	33.16	35.03	166	178	Peak	HORIZONTAL
2	4873.80	30.78	54.00	-23.22	30.18	2.47	33.16	35.03	166	178	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4869.10	30.07	54.00	-23.93	29.51	2.47	33.12	35.03	249	125	Average	VERTICAL
2	4872.62	44.15	74.00	-29.85	43.55	2.47	33.16	35.03	249	125	Peak	VERTICAL

Temperature	22°C	Humidity	52%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11n MCS0 40MHz Ch 9 / Mode 2 (Ant. B-1 + Ant. B-2)
Test Date	Jul. 08, 2010		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4903.99	43.66	74.00	-30.34	43.02	2.47	33.19	35.02	242	100	Peak	HORIZONTAL
2	4904.36	29.99	54.00	-24.01	29.35	2.47	33.19	35.02	242	100	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4904.12	43.56	74.00	-30.44	42.92	2.47	33.19	35.02	255	100	Peak	VERTICAL
2	4904.48	29.94	54.00	-24.06	29.30	2.47	33.19	35.02	255	100	Average	VERTICAL

Temperature	22°C	Humidity	52%
Test Engineer	Satoshi Yang	Configurations	11a IEEE 802.11n MCS0 20MHz CH 149 / Mode 2 (Ant. B-1 + Ant. B-2)
Test Date	Aug. 17, 2010		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11490.09	49.15	80.00	-30.85	40.41	5.24	38.78	35.28	170	99	Peak	HORIZONTAL
2	11490.31	37.66	60.00	-22.34	28.92	5.24	38.78	35.28	170	99	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11489.93	55.81	80.00	-24.19	47.07	5.24	38.78	35.28	292	99	Peak	VERTICAL
2	11490.47	43.16	60.00	-16.84	34.42	5.24	38.78	35.28	292	99	Average	VERTICAL

Temperature	22°C	Humidity	54%
Test Engineer	Satoshi Yang	Configurations	11a IEEE 802.11n MCS0 20MHz CH 157 / Mode 2 (Ant. B-1 + Ant. B-2)
Test Date	Aug. 17, 2010		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11569.75	38.07	60.00	-21.93	29.29	5.25	38.83	35.30	176	99	Average	HORIZONTAL
2	11569.86	50.13	80.00	-29.87	41.35	5.25	38.83	35.30	176	99	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11570.07	53.86	80.00	-26.14	45.08	5.25	38.83	35.30	293	99	Peak	VERTICAL
2	11570.12	41.69	60.00	-18.31	32.91	5.25	38.83	35.30	293	99	Average	VERTICAL

Temperature	22°C	Humidity	54%
Test Engineer	Satoshi Yang	Configurations	11a IEEE 802.11n MCS0 20MHz CH 165 / Mode 2 (Ant. B-1 + Ant. B-2)
Test Date	Aug. 17, 2010		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11649.82	50.30	80.00	-29.70	41.46	5.28	38.86	35.30	177	99	Peak	HORIZONTAL
2	11649.87	38.12	60.00	-21.88	29.28	5.28	38.86	35.30	177	99	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11650.47	41.24	60.00	-18.76	32.40	5.28	38.86	35.30	295	99	Average	VERTICAL
2	11650.50	53.74	80.00	-26.26	44.90	5.28	38.86	35.30	295	99	Peak	VERTICAL

Temperature	22°C	Humidity	54%
Test Engineer	Satoshi Yang	Configurations	11a IEEE 802.11n MCS0 40MHz CH 151 / Mode 2 (Ant. B-1 + Ant. B-2)
Test Date	Aug. 17, 2010		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11510.17	49.25	80.00	-30.75	40.50	5.24	38.79	35.28	173	99	Peak	HORIZONTAL
2	11510.45	38.00	60.00	-22.00	29.25	5.24	38.79	35.28	173	99	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11509.76	53.67	80.00	-26.33	44.92	5.24	38.79	35.28	291	99	Peak	VERTICAL
2	11510.00	40.77	60.00	-19.23	32.02	5.24	38.79	35.28	291	99	Average	VERTICAL

Temperature	22°C	Humidity	54%
Test Engineer	Satoshi Yang	Configurations	11a IEEE 802.11n MCS0 40MHz CH 159 / Mode 2 (Ant. B-1 + Ant. B-2)
Test Date	Aug. 17, 2010		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11590.29	38.21	60.00	-21.79	29.42	5.26	38.83	35.30	309	99	Average	HORIZONTAL
2	11590.45	50.75	80.00	-29.25	41.96	5.26	38.83	35.30	309	99	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11589.76	52.81	80.00	-27.19	44.02	5.26	38.83	35.30	296	99	Peak	VERTICAL
2	11590.08	40.64	60.00	-19.36	31.85	5.26	38.83	35.30	296	99	Average	VERTICAL

Temperature	22℃	Humidity	54%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11b CH 1 / Mode 2 (Ant. B-1)
Test Date	Jul. 07, 2010		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4823.90	41.83	54.00	-12.17	41.34	2.46	33.06	35.03	105	118	Average	HORIZONTAL
2	4824.00	48.30	74.00	-25.70	47.81	2.46	33.06	35.03	105	118	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4823.99	48.84	54.00	-5.16	48.35	2.46	33.06	35.03	281	127	Average	VERTICAL
2	4824.00	52.34	74.00	-21.66	51.85	2.46	33.06	35.03	281	127	Peak	VERTICAL

Temperature	22℃	Humidity	54%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11b CH 6 / Mode 2 (Ant. B-1)
Test Date	Jul. 19, 2010		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4873.95	51.95	74.00	-22.05	51.35	2.47	33.16	35.03	162	179	Peak	HORIZONTAL
2	4873.97	49.32	54.00	-4.68	48.72	2.47	33.16	35.03	162	179	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4873.97	53.14	54.00	-0.86	52.54	2.47	33.16	35.03	272	128	Average	VERTICAL
2	4873.97	55.23	74.00	-18.77	54.63	2.47	33.16	35.03	272	128	Peak	VERTICAL

Temperature	22℃	Humidity	54%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11b CH 11 / Mode 2 (Ant. B-1)
Test Date	Jul. 20, 2010		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4923.83	47.72	74.00	-26.28	47.00	2.47	33.26	35.01	227	100	Peak	HORIZONTAL
2	4923.99	41.31	54.00	-12.69	40.59	2.47	33.26	35.01	227	100	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4923.97	51.54	74.00	-22.46	50.82	2.47	33.26	35.01	265	171	Peak	VERTICAL
2	4923.99	47.87	54.00	-6.13	47.15	2.47	33.26	35.01	265	171	Average	VERTICAL

Temperature	22℃	Humidity	52%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11g CH 1 / Mode 2 (Ant. B-1)
Test Date	Jul. 08, 2010		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4824.23	45.85	74.00	-28.15	45.36	2.46	33.06	35.03	150	132	Peak	HORIZONTAL
2	4824.48	31.47	54.00	-22.53	30.98	2.46	33.06	35.03	150	132	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4823.74	44.56	74.00	-29.44	44.07	2.46	33.06	35.03	269	100	Peak	VERTICAL
2	4824.36	31.13	54.00	-22.87	30.64	2.46	33.06	35.03	269	100	Average	VERTICAL

Temperature	22°C	Humidity	54%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11g CH 6 / Mode 2 (Ant. B-1)
Test Date	Jul. 20, 2010		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4875.70	41.78	54.00	-12.22	41.18	2.47	33.16	35.03	339	176	Average	HORIZONTAL
2	4876.00	55.23	74.00	-18.77	54.63	2.47	33.16	35.03	339	176	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4870.20	60.84	74.00	-13.16	60.28	2.47	33.12	35.03	272	128	Peak	VERTICAL
2	4871.40	46.65	54.00	-7.35	46.05	2.47	33.16	35.03	272	128	Average	VERTICAL

Temperature	22℃	Humidity	52%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11g CH 11 / Mode 2 (Ant. B-1)
Test Date	Jul. 08, 2010		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4924.23	30.40	54.00	-23.60	29.68	2.47	33.26	35.01	50	129	Average	HORIZONTAL
2	4924.41	43.95	74.00	-30.05	43.23	2.47	33.26	35.01	50	129	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4924.05	31.92	54.00	-22.08	31.20	2.47	33.26	35.01	268	113	Average	VERTICAL
2	4924.35	47.36	74.00	-26.64	46.64	2.47	33.26	35.01	268	113	Peak	VERTICAL

Temperature	22℃	Humidity	52%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11a CH 149 / Mode 2 (Ant. B-1)
Test Date	Aug. 17, 2010		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11490.09	37.66	60.00	-22.34	28.92	5.24	38.78	35.28	174	99	Average	HORIZONTAL
2	11490.22	49.56	80.00	-30.44	40.82	5.24	38.78	35.28	174	99	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11490.49	42.28	60.00	-17.72	33.54	5.24	38.78	35.28	290	99	Average	VERTICAL
2	11490.49	54.71	80.00	-25.29	45.97	5.24	38.78	35.28	290	99	Peak	VERTICAL

Temperature	22℃	Humidity	52%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11a CH 157 / Mode 2 (Ant. B-1)
Test Date	Aug. 17, 2010		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11570.04	50.00	80.00	-30.00	41.22	5.25	38.83	35.30	176	99	Peak	HORIZONTAL
2	11570.39	37.74	60.00	-22.26	28.96	5.25	38.83	35.30	176	99	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11570.28	42.30	60.00	-17.70	33.52	5.25	38.83	35.30	292	99	Average	VERTICAL
2	11570.32	54.10	80.00	-25.90	45.32	5.25	38.83	35.30	292	99	Peak	VERTICAL

Temperature	22℃	Humidity	52%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11a CH 165 / Mode 2 (Ant. B-1)
Test Date	Aug. 17, 2010		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11650.27	38.21	60.00	-21.79	29.37	5.28	38.86	35.30	171	99	Average	HORIZONTAL
2	11650.36	49.85	80.00	-30.15	41.01	5.28	38.86	35.30	171	99	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11650.43	41.40	60.00	-18.60	32.56	5.28	38.86	35.30	297	99	Average	VERTICAL
2	11650.49	53.00	80.00	-27.00	44.16	5.28	38.86	35.30	297	99	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.

4.6. Band Edge Emissions Measurement

4.6.1. 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

4.6.2. 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	100 MHz
RB / VB (Emission in restricted band)	1MHz / 1MHz for Peak, 1 MHz / 10Hz for Average
RB / VB (Emission in non-restricted band)	100 KHz /100 KHz for Peak

4.6.3. Test Procedures

1. The test procedure is the same as section 4.5.3, only the frequency range investigated is limited to 100MHz around bandedges.
2. In case the emission is fail due to the used RB/VB is too wide, marker-delta method of FCC Public Notice DA00-705 will be followed.

4.6.4. Test Setup Layout

This test setup layout is the same as that shown in section 4.5.4.

4.6.5. Test Deviation

There is no deviation with the original standard.

4.6.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.6.7. Test Result of Band Edge and Fundamental Emissions

<For Mode 1 (Ant. A)>:

Temperature	22°C	Humidity	52%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11n MCS0 20MHz Ch 1, 6, 11 / Mode 1 (Ant. A-1 + Ant. A-2)
Test Date	Jul. 19, 2010		

Channel 1

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2389.60	69.53	74.00	-4.47	39.60	1.76	28.17	0.00	331	100	Peak	VERTICAL
2	2390.00	51.92	54.00	-2.08	21.99	1.76	28.17	0.00	331	100	Average	VERTICAL
3	2405.20	94.21	54.00			1.77	28.21	0.00	331	100	Average	VERTICAL
4	2406.80	104.94	74.00			1.77	28.21	0.00	331	100	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 2412 MHz

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2389.20	61.36	74.00	-12.64	31.43	1.76	28.17	0.00	44	101	Peak	VERTICAL
2	2390.00	48.15	54.00	-5.85	18.22	1.76	28.17	0.00	44	101	Average	VERTICAL
3	2439.40	106.90	74.00			1.78	28.29	0.00	44	101	Peak	VERTICAL
4	2440.20	96.60	54.00			1.78	28.29	0.00	44	101	Average	VERTICAL
5	2483.50	44.31	54.00	-9.69	14.13	1.81	28.37	0.00	44	101	Average	VERTICAL
6	2485.30	56.08	74.00	-17.92	25.86	1.81	28.41	0.00	44	101	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 2437MHz.

Channel 11

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2455.60	103.00	74.00			1.80	28.33	0.00	160	100	Peak	VERTICAL
2	2456.20	92.24	54.00			1.80	28.33	0.00	160	100	Average	VERTICAL
3	2483.50	52.96	54.00	-1.04	22.78	1.81	28.37	0.00	160	100	Average	VERTICAL
4	2483.50	70.62	74.00	-3.38	40.44	1.81	28.37	0.00	160	100	Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 2462 MHz.

Temperature	22℃	Humidity	52%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11n MCS0 40MHz Ch 3, 6, 9 / Mode 1 (Ant. A-1 + Ant. A-2)
Test Date	Jul. 19, 2010		

Channel 3

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2389.60	72.39	74.00	-1.61	42.46	1.76	28.17	0.00	44	100	Peak	VERTICAL
2	2390.00	53.11	54.00	-0.89	23.18	1.76	28.17	0.00	44	100	Average	VERTICAL
3	2405.60	100.17	74.00			1.77	28.21	0.00	44	100	Peak	VERTICAL
4	2406.80	89.97	54.00			1.77	28.21	0.00	44	100	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 2422 MHz.

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2385.60	66.47	74.00	-7.53	36.54	1.76	28.17	0.00	89	100	Peak	VERTICAL
2	2390.00	51.50	54.00	-2.50	21.57	1.76	28.17	0.00	89	100	Average	VERTICAL
3	2452.20	91.74	54.00			1.78	28.33	0.00	89	100	Average	VERTICAL
4	2452.60	102.26	74.00			1.78	28.33	0.00	89	100	Peak	VERTICAL
5	2483.50	53.54	54.00	-0.46	23.36	1.81	28.37	0.00	89	100	Average	VERTICAL
6	2483.50	69.73	74.00	-4.27	39.55	1.81	28.37	0.00	89	100	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 2437MHz.

Channel 9

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2454.40	89.28	54.00			1.80	28.33	0.00	87	100	Average	VERTICAL
2	2454.80	100.14	74.00			1.80	28.33	0.00	87	100	Peak	VERTICAL
3	2483.50	52.85	54.00	-1.15	22.67	1.81	28.37	0.00	87	100	Average	VERTICAL
4	2485.10	72.37	74.00	-1.63	42.15	1.81	28.41	0.00	87	100	Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 2452 MHz.

Temperature	22°C	Humidity	52%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11b CH 1, 6, 11 / Mode 1 (Ant. A-1)
Test Date	Jul. 19, 2010		

Channel 1

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2386.00	61.00	74.00	-13.00	31.07	1.76	28.17	0.00	44	100	Peak	VERTICAL
2	2386.20	52.66	54.00	-1.34	22.73	1.76	28.17	0.00	44	100	Average	VERTICAL
3	2409.40	104.57	74.00			1.77	28.21	0.00	44	100	Peak	VERTICAL
4	2410.20	101.08	54.00			1.77	28.21	0.00	44	100	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 2412 MHz.

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2388.60	55.49	74.00	-18.51	25.56	1.76	28.17	0.00	213	100	Peak	VERTICAL
2	2388.80	44.47	54.00	-9.53	14.54	1.76	28.17	0.00	213	100	Average	VERTICAL
3	2438.00	104.83	74.00			1.78	28.29	0.00	213	100	Peak	VERTICAL
4	2438.80	101.35	54.00			1.78	28.29	0.00	213	100	Average	VERTICAL
5	2484.70	42.69	54.00	-11.31	12.51	1.81	28.37	0.00	213	100	Average	VERTICAL
6	2484.90	52.74	74.00	-21.26	22.56	1.81	28.37	0.00	213	100	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 2437 MHz.

Channel 11

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2459.60	104.72	74.00			1.80	28.33	0.00	88	101	Peak	VERTICAL
2	2460.20	101.13	54.00			1.80	28.33	0.00	88	101	Average	VERTICAL
3	2487.70	53.84	54.00	-0.16	23.62	1.81	28.41	0.00	88	101	Average	VERTICAL
4	2488.10	61.07	74.00	-12.93	30.85	1.81	28.41	0.00	88	101	Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 2462 MHz.

Temperature	22°C	Humidity	52%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11g CH 1, 6, 11 / Mode 1 (Ant. A-1)
Test Date	Jul. 19, 2010		

Channel 1

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2389.20	68.79	74.00	-5.21	38.86	1.76	28.17	0.00	44	100	Peak	VERTICAL
2	2390.00	53.49	54.00	-0.51	23.56	1.76	28.17	0.00	44	100	Average	VERTICAL
3	2407.00	105.56	74.00			1.77	28.21	0.00	44	100	Peak	VERTICAL
4	2408.60	94.68	54.00			1.77	28.21	0.00	44	100	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 2412 MHz.

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2388.80	61.07	74.00	-12.93	31.14	1.76	28.17	0.00	214	101	Peak	VERTICAL
2	2390.00	47.99	54.00	-6.01	18.06	1.76	28.17	0.00	214	101	Average	VERTICAL
3	2440.00	96.61	54.00			1.78	28.29	0.00	214	101	Average	VERTICAL
4	2441.00	107.22	74.00			1.78	28.29	0.00	214	101	Peak	VERTICAL
5	2485.50	55.37	74.00	-18.63	25.15	1.81	28.41	0.00	214	101	Peak	VERTICAL
6	2486.50	43.85	54.00	-10.15	13.63	1.81	28.41	0.00	214	101	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 2437 MHz.

Channel 11

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2455.20	95.72	54.00			1.80	28.33	0.00	89	100	Average	VERTICAL
2	2457.20	107.00	74.00			1.80	28.33	0.00	89	100	Peak	VERTICAL
3	2483.50	53.04	54.00	-0.96	22.86	1.81	28.37	0.00	89	100	Average	VERTICAL
4	2484.30	70.00	74.00	-4.00	39.82	1.81	28.37	0.00	89	100	Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 2462 MHz.

<For Mode 2 (Ant. B)>:

Temperature	22°C	Humidity	52%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11n MCS0 20MHz Ch 1, 6, 11 / Mode 2 (Ant. B-1 + Ant. B-2)
Test Date	Jul. 20, 2010		

Channel 1

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2390.00	53.24	54.00	-0.76	23.31	1.76	28.17	0.00	219	100	Average	VERTICAL
2	2390.00	69.86	74.00	-4.14	39.93	1.76	28.17	0.00	219	100	Peak	VERTICAL
3	2404.40	104.32	74.00			1.77	28.21	0.00	219	100	Peak	VERTICAL
4	2405.60	93.77	54.00			1.77	28.21	0.00	219	100	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 2412 MHz

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2388.40	61.68	74.00	-12.32	31.75	1.76	28.17	0.00	253	103	Peak	VERTICAL
2	2390.00	47.19	54.00	-6.81	17.26	1.76	28.17	0.00	253	103	Average	VERTICAL
3	2436.30	113.29	74.00			1.78	28.29	0.00	253	103	Peak	VERTICAL
4	2438.20	94.38	54.00			1.78	28.29	0.00	253	103	Average	VERTICAL
5	2483.50	48.13	54.00	-5.87	17.95	1.81	28.37	0.00	253	103	Average	VERTICAL
6	2484.10	63.99	74.00	-10.01	33.81	1.81	28.37	0.00	253	103	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 2437MHz.

Channel 11

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2463.40	95.08	54.00			1.80	28.33	0.00	317	126	Average	HORIZONTAL
2	2466.00	106.33	74.00			1.80	28.33	0.00	317	126	Peak	HORIZONTAL
3	2483.50	53.92	54.00	-0.08	23.73	1.81	28.38	0.00	317	126	Average	HORIZONTAL
4	2483.50	72.75	74.00	-1.25	42.56	1.81	28.38	0.00	317	126	Peak	HORIZONTAL

Item 1, 2 are the fundamental frequency at 2462 MHz.

Temperature	22℃	Humidity	52%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11n MCS0 40MHz Ch 3, 6, 9 / Mode 2 (Ant. B-1 + Ant. B-2)
Test Date	Jul. 20, 2010		

Channel 3

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2388.40	73.16	74.00	-0.84	43.23	1.76	28.17	0.00	220	100	Peak	VERTICAL
2	2390.00	53.04	54.00	-0.96	23.11	1.76	28.17	0.00	220	100	Average	VERTICAL
3	2426.40	99.12	74.00			1.77	28.25	0.00	220	100	Peak	VERTICAL
4	2433.60	87.42	54.00			1.78	28.25	0.00	220	100	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 2422 MHz.

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2390.00	50.29	54.00	-3.71	20.36	1.76	28.17	0.00	288	100	Average	VERTICAL
2	2390.00	66.01	74.00	-7.99	36.08	1.76	28.17	0.00	288	100	Peak	VERTICAL
3	2438.60	93.54	54.00			1.78	28.29	0.00	288	100	Average	VERTICAL
4	2439.00	106.42	74.00			1.78	28.29	0.00	288	100	Peak	VERTICAL
5	2483.90	51.90	54.00	-2.10	21.72	1.81	28.37	0.00	288	100	Average	VERTICAL
6	2485.10	69.77	74.00	-4.23	39.55	1.81	28.41	0.00	288	100	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 2437MHz.

Channel 9

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2456.00	92.43	54.00			1.80	28.33	0.00	82	100	Average	VERTICAL
2	2456.80	104.33	74.00			1.80	28.33	0.00	82	100	Peak	VERTICAL
3	2483.50	53.35	54.00	-0.65	23.17	1.81	28.37	0.00	82	100	Average	VERTICAL
4	2484.30	72.69	74.00	-1.31	42.51	1.81	28.37	0.00	82	100	Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 2452 MHz.

Temperature	22°C	Humidity	52%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11b CH 1, 6, 11 / Mode 2 (Ant. B-1)
Test Date	Jul. 20, 2010		

Channel 1

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2386.00	60.02	74.00	-13.98	30.09	1.76	28.17	0.00	223	100	Peak	VERTICAL
2	2386.20	51.97	54.00	-2.03	22.04	1.76	28.17	0.00	223	100	Average	VERTICAL
3	2409.20	91.76	54.00			1.77	28.21	0.00	223	100	Average	VERTICAL
4	2410.60	94.86	74.00			1.77	28.21	0.00	223	100	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 2412 MHz.

Channel6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2389.00	44.69	54.00	-9.31	14.76	1.76	28.17	0.00	252	109	Average	VERTICAL
2	2389.00	55.68	74.00	-18.32	25.75	1.76	28.17	0.00	252	109	Peak	VERTICAL
3	2435.20	101.99	54.00			1.78	28.29	0.00	252	109	Average	VERTICAL
4	2436.10	105.52	74.00			1.78	28.29	0.00	252	109	Peak	VERTICAL
5	2484.90	43.96	54.00	-10.04	13.78	1.81	28.37	0.00	252	109	Average	VERTICAL
6	2485.70	54.89	74.00	-19.11	24.67	1.81	28.41	0.00	252	109	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 2437 MHz.

Channel 11

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2463.00	101.32	74.00			1.80	28.33	0.00	333	101	Peak	VERTICAL
2	2463.60	97.69	54.00			1.80	28.33	0.00	333	101	Average	VERTICAL
3	2487.70	53.88	54.00	-0.12	23.66	1.81	28.41	0.00	333	101	Average	VERTICAL
4	2488.10	60.92	74.00	-13.08	30.70	1.81	28.41	0.00	333	101	Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 2462 MHz.

Temperature	22°C	Humidity	52%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11g CH 1, 6, 11 / Mode 2 (Ant. B-1)
Test Date	Jul. 20, 2010		

Channel 1

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2390.00	53.65	54.00	-0.35	23.72	1.76	28.17	0.00	83	107	Average	VERTICAL
2	2390.00	69.76	74.00	-4.24	39.83	1.76	28.17	0.00	83	107	Peak	VERTICAL
3	2407.40	107.74	74.00			1.77	28.21	0.00	83	107	Peak	VERTICAL
4	2414.00	97.59	54.00			1.77	28.21	0.00	83	107	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 2412 MHz.

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2389.40	60.45	74.00	-13.55	30.52	1.76	28.17	0.00	252	102	Peak	VERTICAL
2	2390.00	47.40	54.00	-6.60	17.47	1.76	28.17	0.00	252	102	Average	VERTICAL
3	2434.00	98.29	54.00			1.78	28.29	0.00	252	102	Average	VERTICAL
4	2439.70	110.84	74.00			1.78	28.29	0.00	252	102	Peak	VERTICAL
5	2484.30	60.99	74.00	-13.01	30.81	1.81	28.37	0.00	252	102	Peak	VERTICAL
6	2484.70	47.39	54.00	-6.61	17.21	1.81	28.37	0.00	252	102	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 2437 MHz.

Channel 11

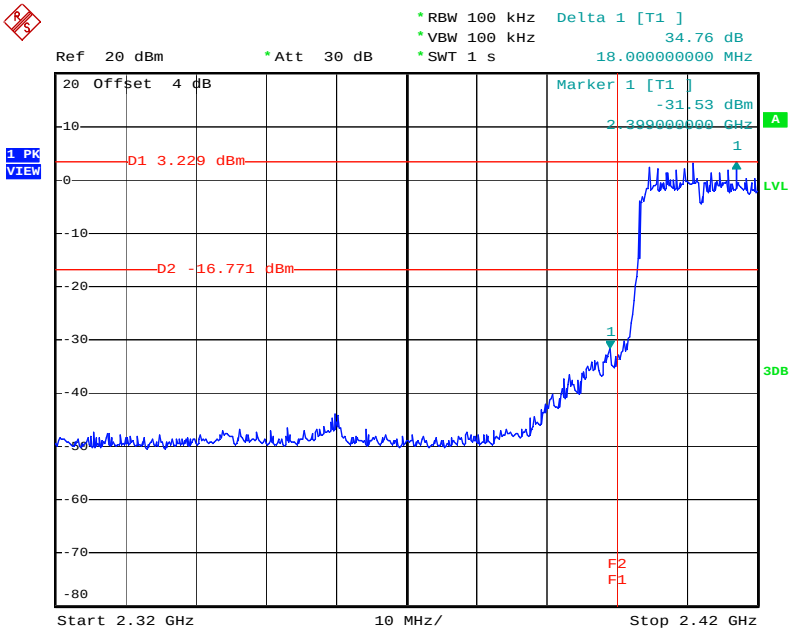
	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2457.16	108.48	74.00			1.80	28.33	0.00	82	100	Peak	VERTICAL
2	2459.14	97.19	54.00			1.80	28.33	0.00	82	100	Average	VERTICAL
3	2483.50	52.73	54.00	-1.27	22.55	1.81	28.37	0.00	82	100	Average	VERTICAL
4	2483.94	70.46	74.00	-3.54	40.28	1.81	28.37	0.00	82	100	Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 2462 MHz.

For Emission not in Restricted Band

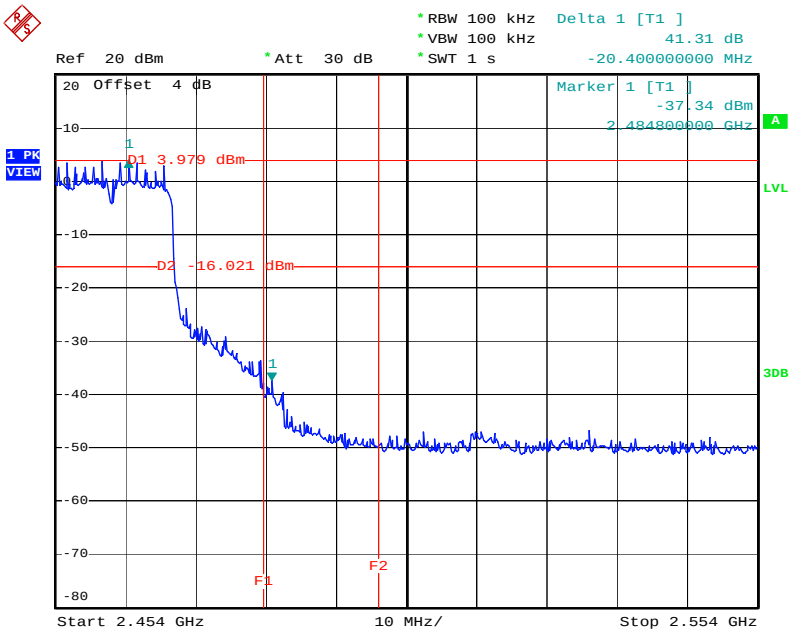
<For Antenna A>:

Low Band Edge Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. A-1 + Ant. A-2 / 2412 MHz



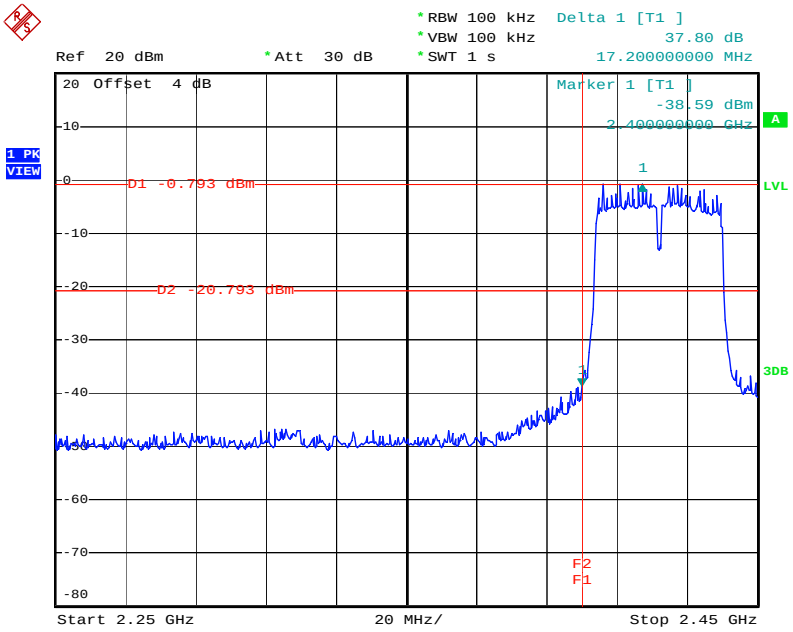
Date: 29.JUL.2010 19:03:25

High Band Edge Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. A-1 + Ant. A-2 / 2462 MHz



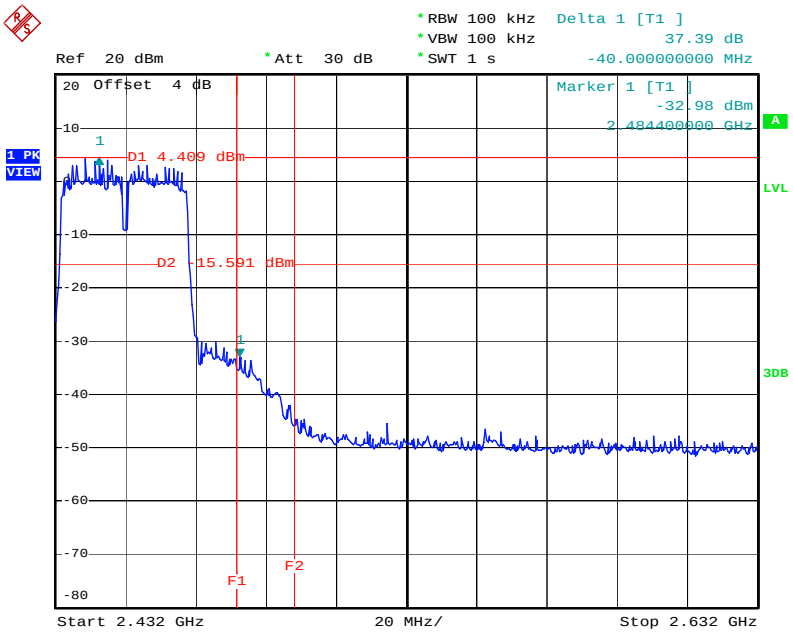
Date: 29.JUL.2010 19:08:34

Low Band Edge Plot on Configuration IEEE 802.11n MCS0 40MHz Ant. A-1 + Ant. A-2 / 2422 MHz



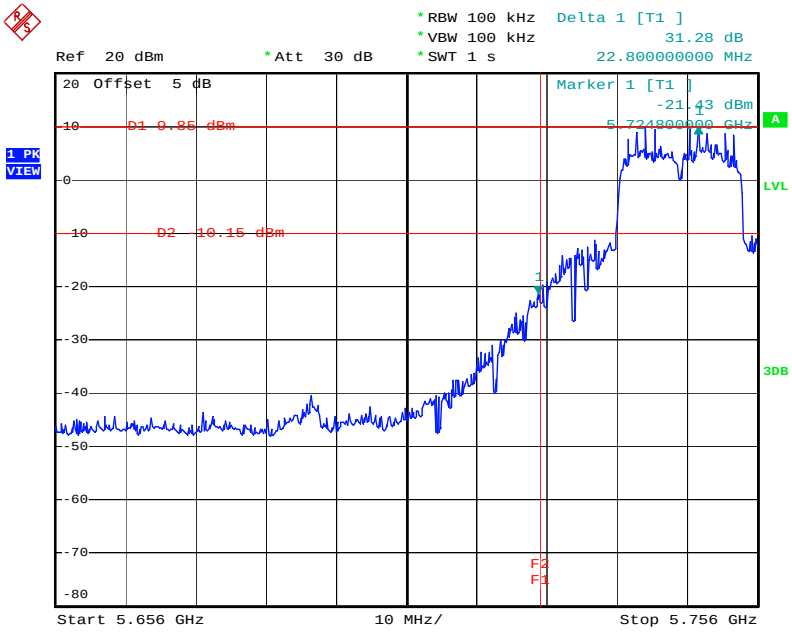
Date: 29.JUL.2010 19:11:18

High Band Edge Plot on Configuration IEEE 802.11n MCS0 40MHz Ant. A-1 + Ant. A-2 / 2452 MHz



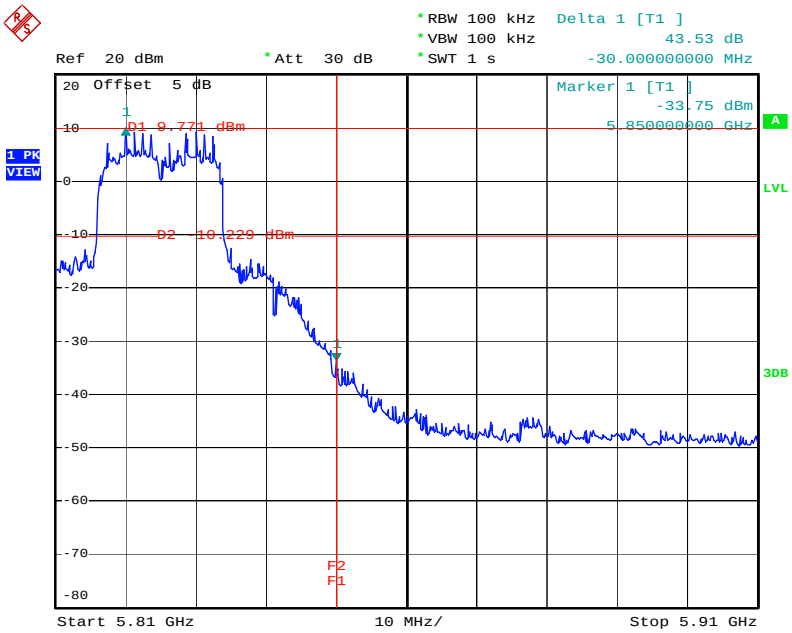
Date: 29.JUL.2010 19:17:05

Low Band Edge Plot on Configuration 11a IEEE 802.11n MCS0 20MHz Ant. A-1 + Ant. A-2 / 5745 MHz



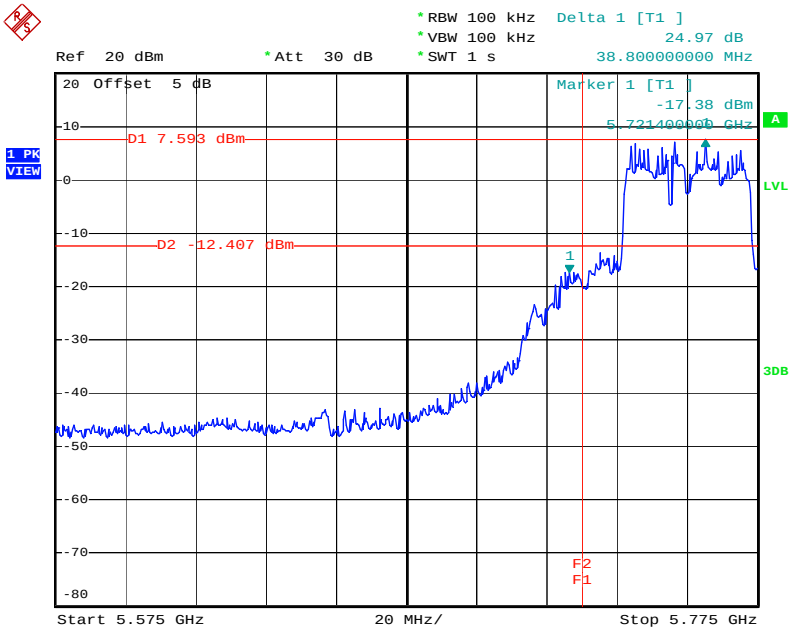
Date: 15.AUG.2010 20:22:29

High Band Edge Plot on Configuration 11a IEEE 802.11n MCS0 20MHz Ant. A-1 + Ant. A-2 / 5825 MHz



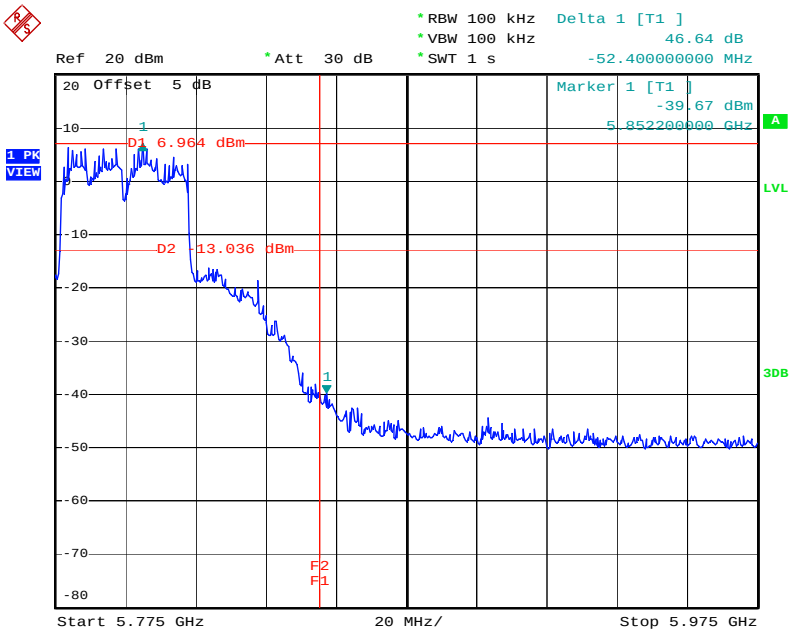
Date: 15.AUG.2010 19:30:26

Low Band Edge Plot on Configuration 11a IEEE 802.11n MCS0 40MHz Ant. A-1 + Ant. A-2 / 5755 MHz



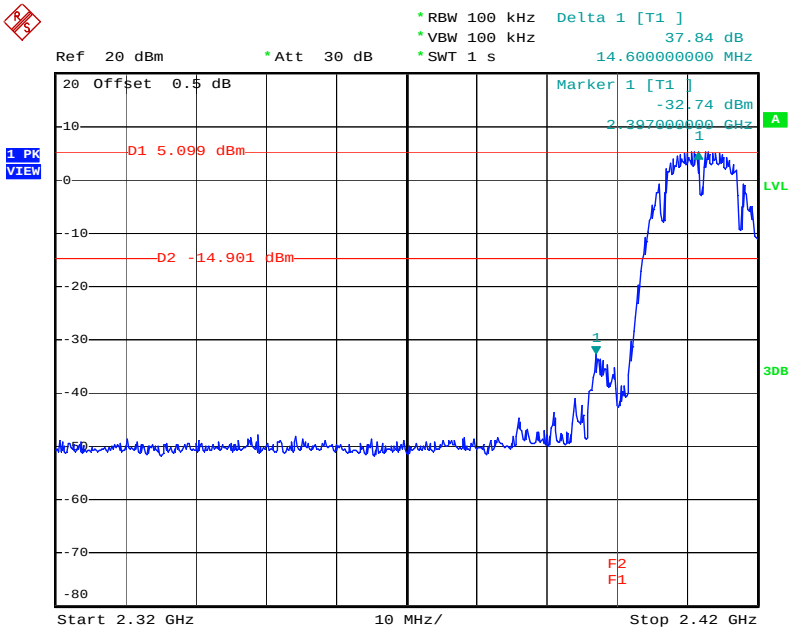
Date: 15.AUG.2010 19:23:34

High Band Edge Plot on Configuration 11a IEEE 802.11n MCS0 40MHz Ant. A-1 + Ant. A-2 / 5795 MHz



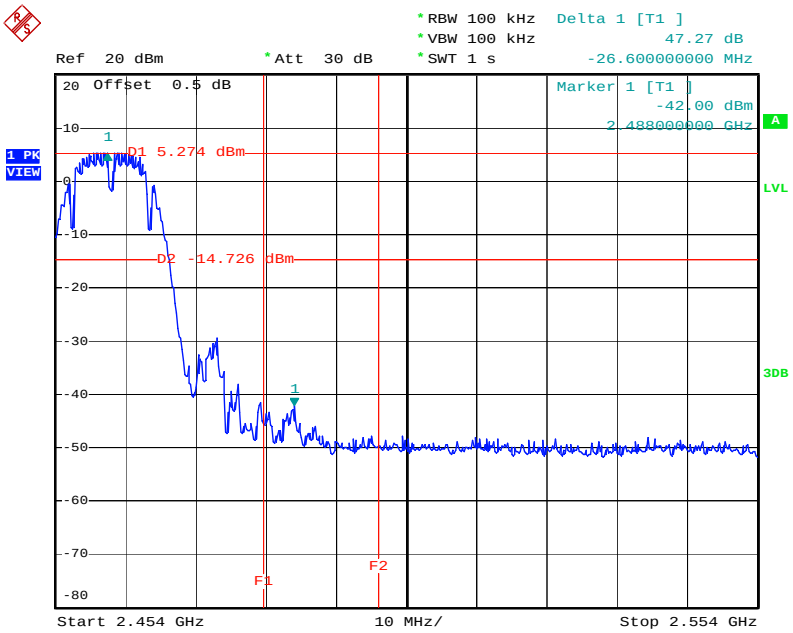
Date: 15.AUG.2010 19:20:57

Low Band Edge Plot on Configuration IEEE 802.11b Ant. A-1 / 2412 MHz



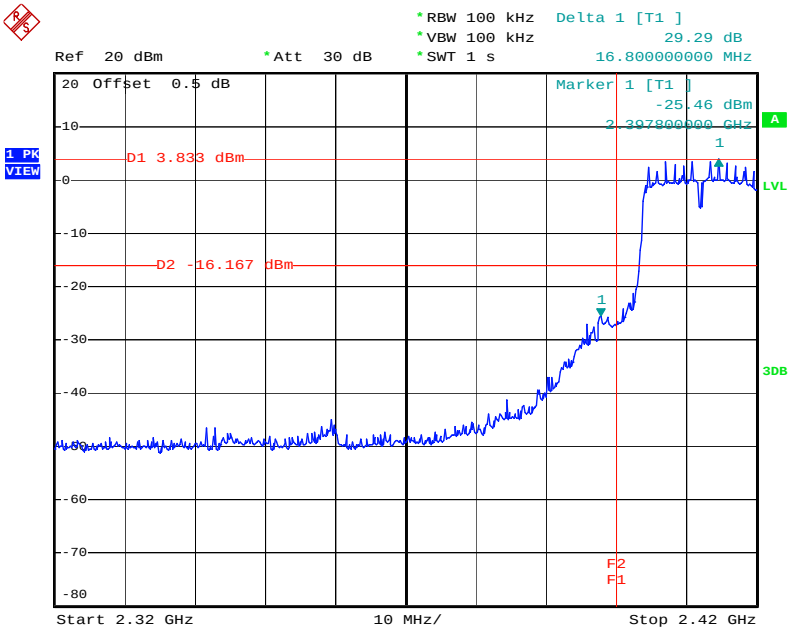
Date: 29.JUL.2010 18:31:18

High Band Edge Plot on Configuration IEEE 802.11b Ant. A-1 / 2462 MHz



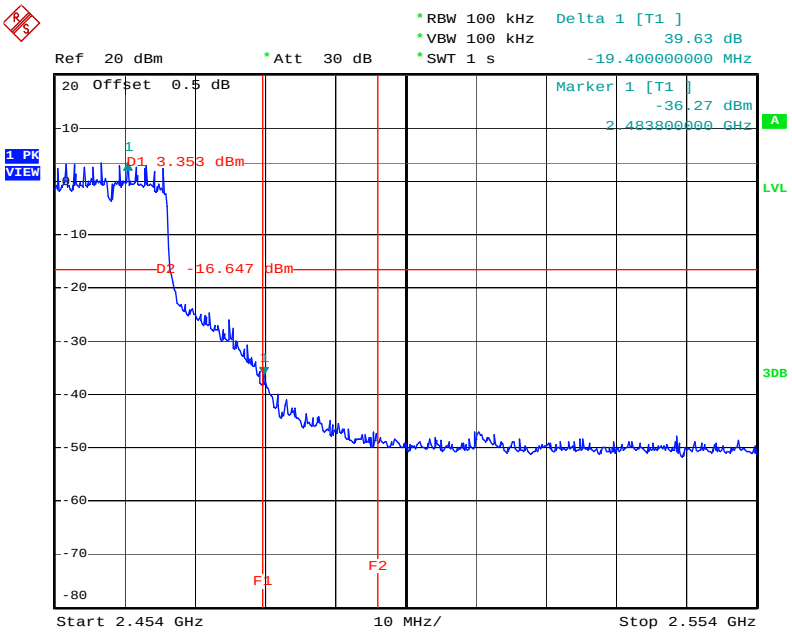
Date: 29.JUL.2010 18:47:07

Low Band Edge Plot on Configuration IEEE 802.11g Ant. A-1 / 2412 MHz



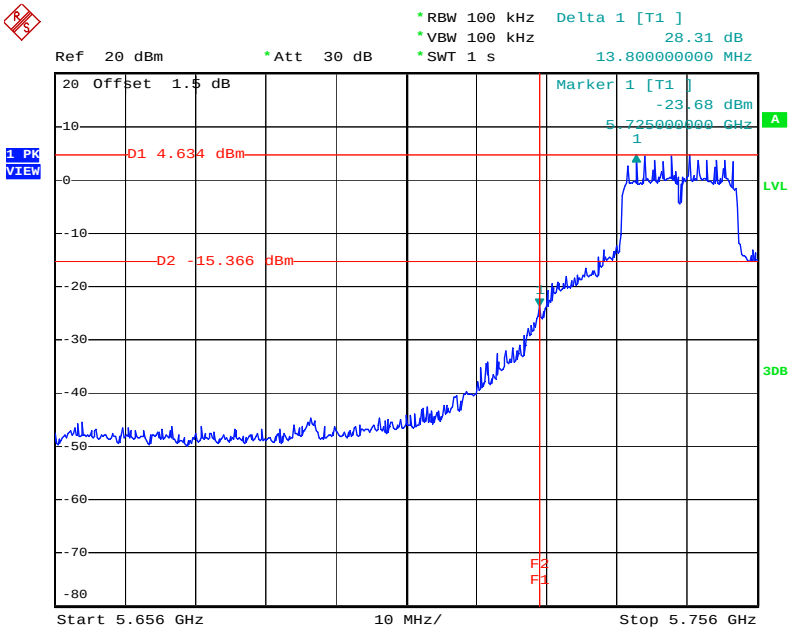
Date: 29.JUL.2010 18:52:59

High Band Edge Plot on Configuration IEEE 802.11g Ant. A-1 / 2462 MHz



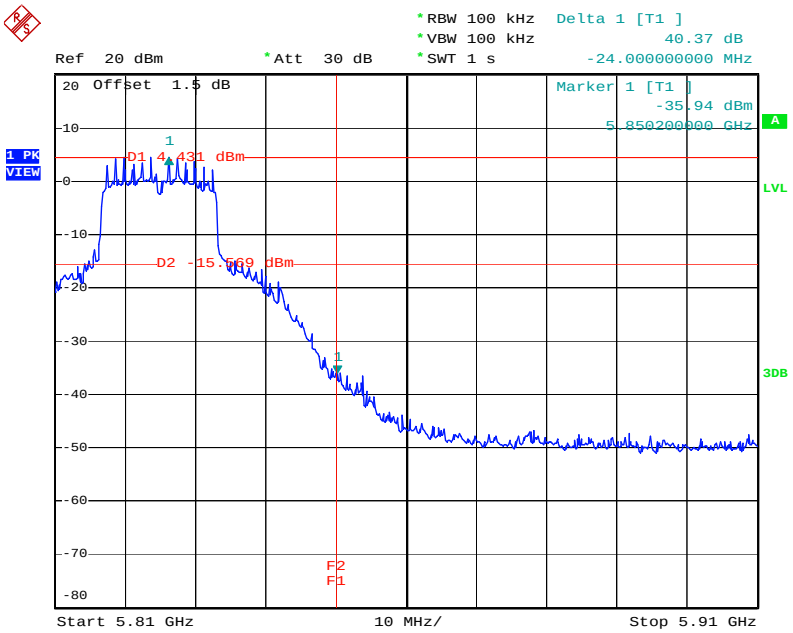
Date: 29.JUL.2010 18:58:22

Low Band Edge Plot on Configuration IEEE 802.11a Ant. A-1 / 5745 MHz



Date: 15.AUG.2010 19:42:10

High Band Edge Plot on Configuration IEEE 802.11a Ant. A-1 / 5825 MHz

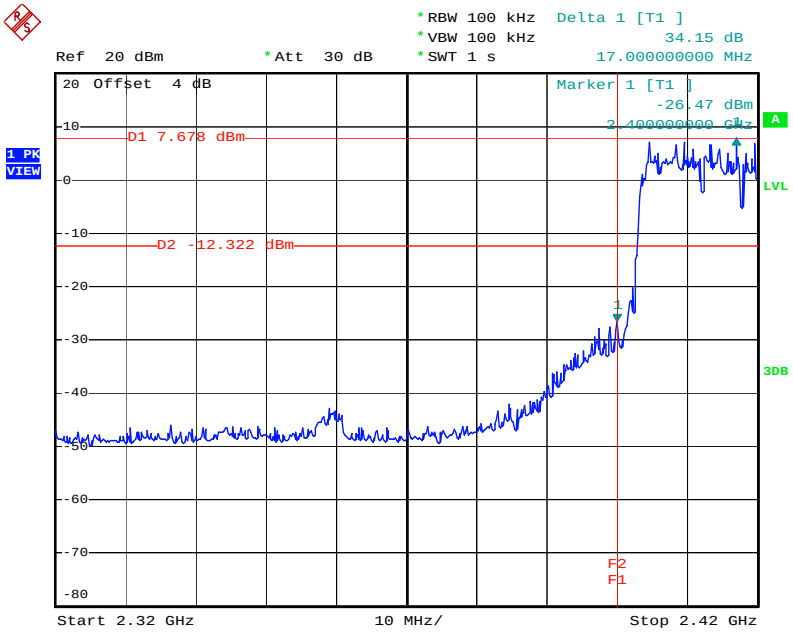


Date: 15.AUG.2010 19:45:51

For Emission not in Restricted Band

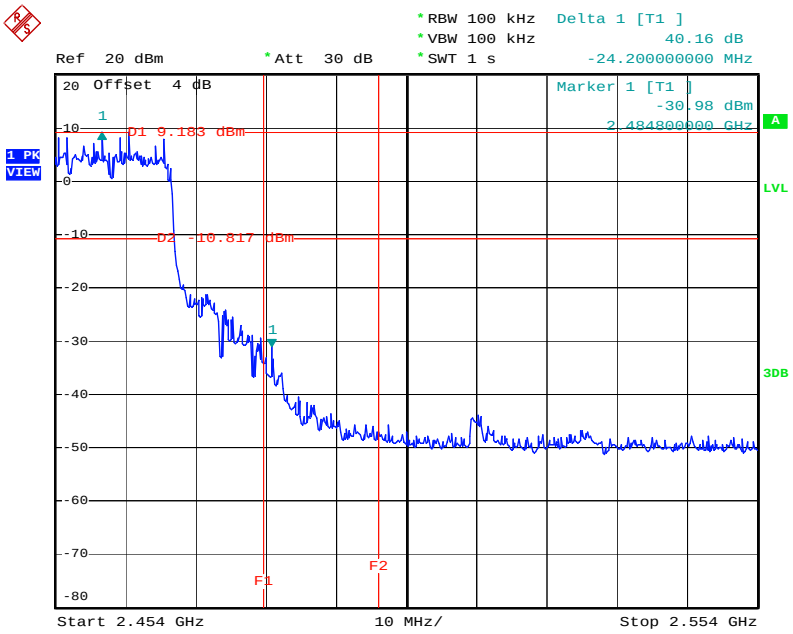
<For Antenna B>:

Low Band Edge Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. B-1 + Ant. B-2 / 2412 MHz



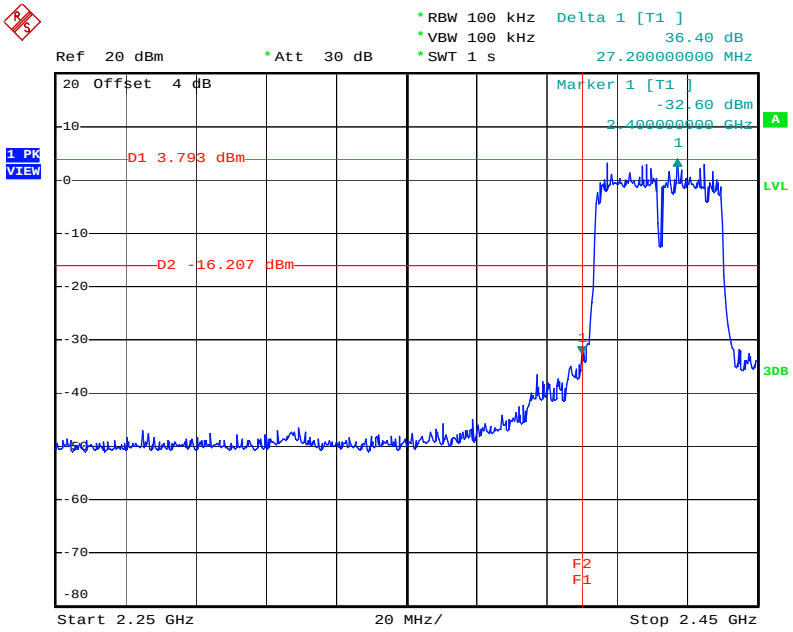
Date: 29.JUL.2010 19:51:51

High Band Edge Plot on Configuration IEEE 802.11n MCS0 20MHz Ant. B-1 + Ant. B-2 / 2462 MHz



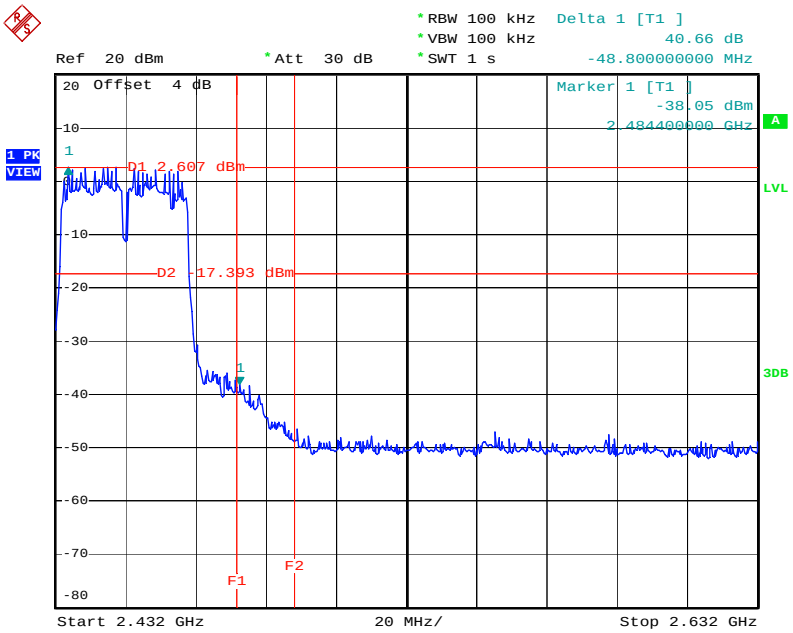
Date: 29.JUL.2010 19:57:12

Low Band Edge Plot on Configuration IEEE 802.11n MCS0 40MHz Ant. B-1 + Ant. B-2 / 2422 MHz



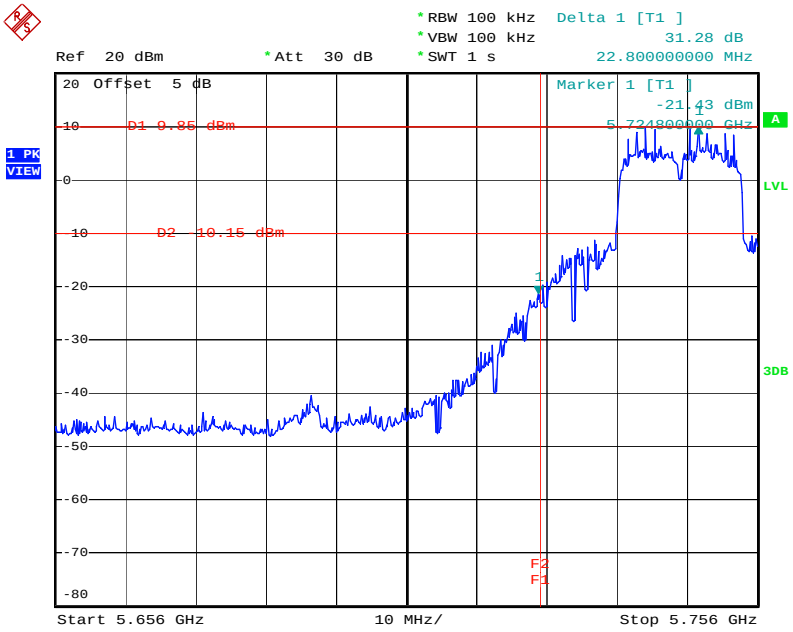
Date: 29.JUL.2010 19:42:54

High Band Edge Plot on Configuration IEEE 802.11n MCS0 40MHz Ant. B-1 + Ant. B-2 / 2452 MHz



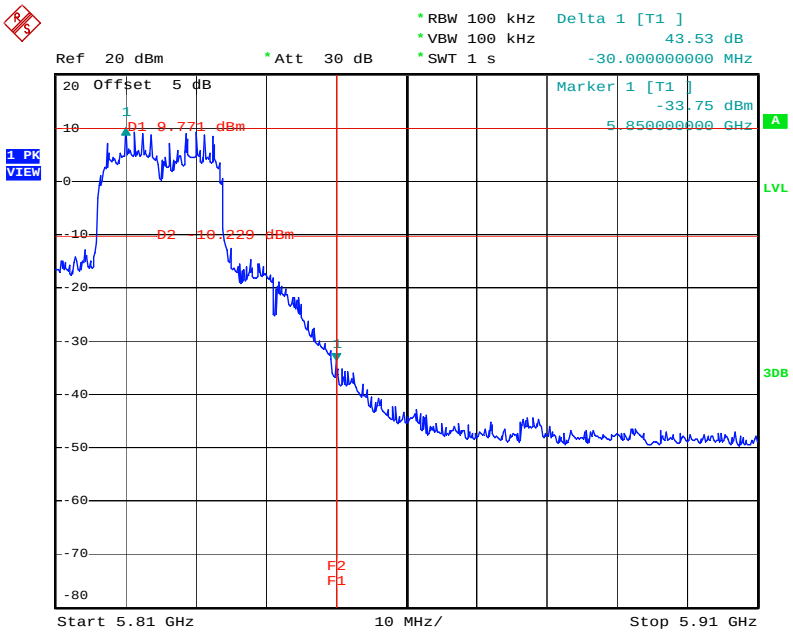
Date: 29.JUL.2010 19:48:16

Low Band Edge Plot on Configuration 11a IEEE 802.11n MCS0 20MHz Ant. B-1 + Ant. B-2 / 5745 MHz



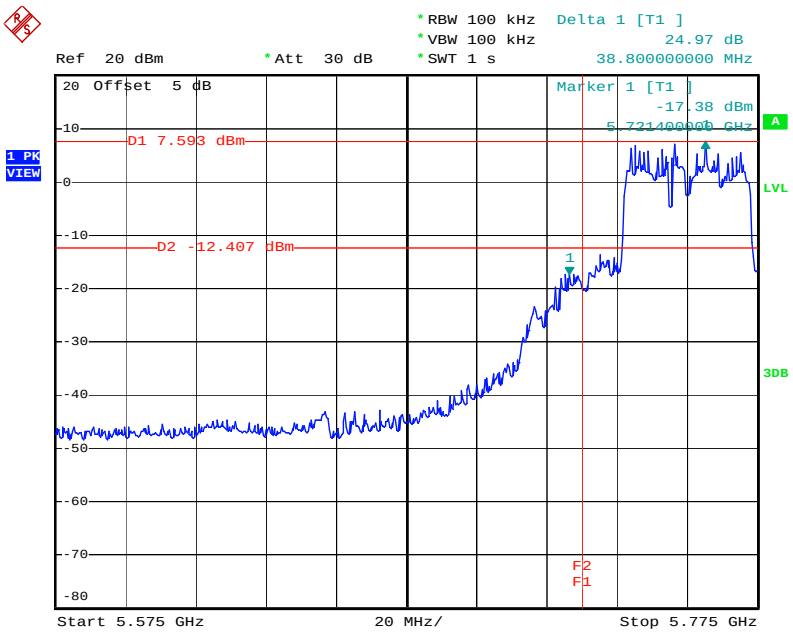
Date: 15.AUG.2010 20:22:29

High Band Edge Plot on Configuration 11a IEEE 802.11n MCS0 20MHz Ant. B-1 + Ant. B-2 / 5825 MHz



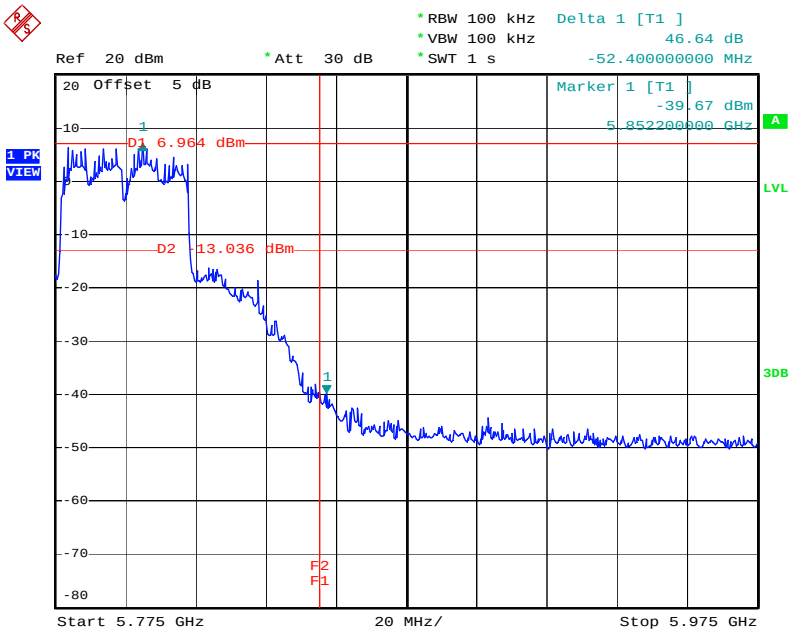
Date: 15.AUG.2010 19:30:26

Low Band Edge Plot on Configuration 11a IEEE 802.11n MCS0 40MHz Ant. B-1 + Ant. B-2 / 5755 MHz



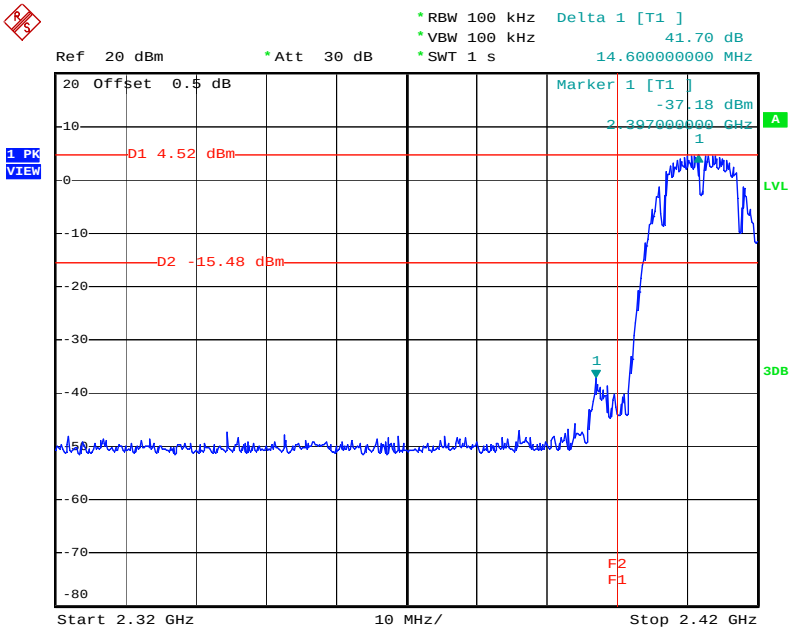
Date: 15.AUG.2010 19:23:34

High Band Edge Plot on Configuration 11a IEEE 802.11n MCS0 40MHz Ant. B-1 + Ant. B-2 / 5795 MHz



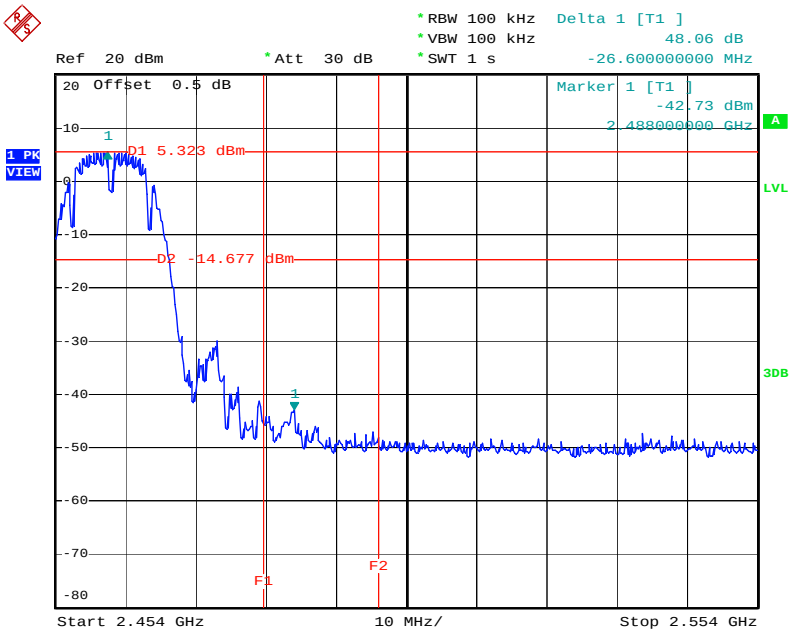
Date: 15.AUG.2010 19:20:57

Low Band Edge Plot on Configuration IEEE 802.11b Ant. B-1 / 2412 MHz



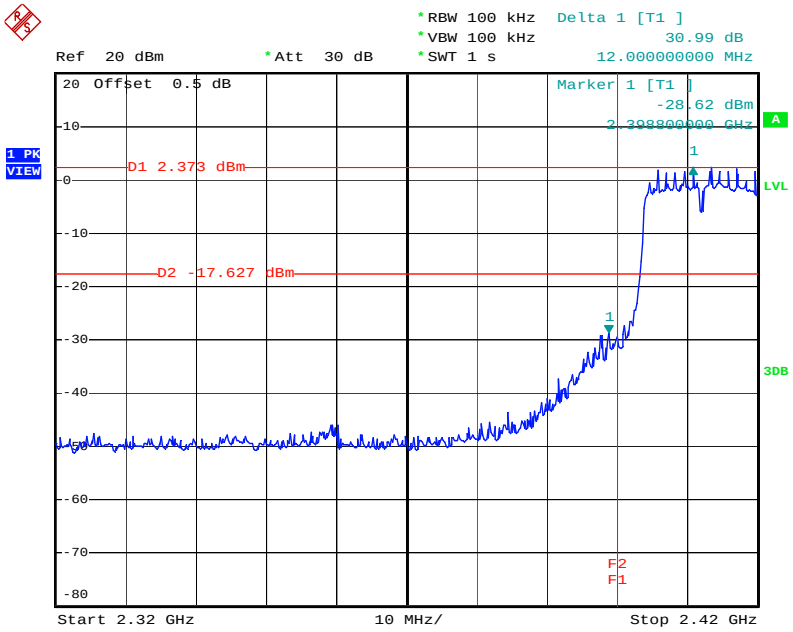
Date: 29.JUL.2010 20:00:50

High Band Edge Plot on Configuration IEEE 802.11b Ant. B-1 / 2462 MHz



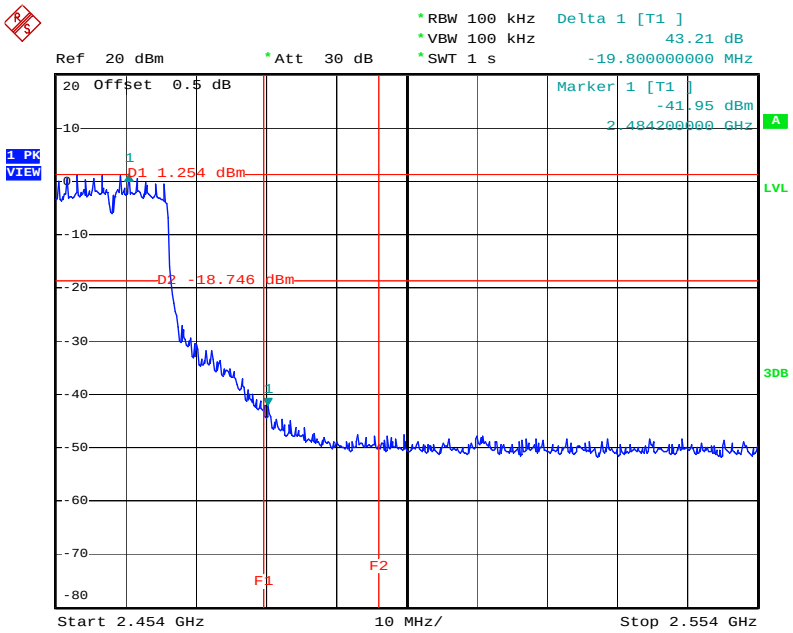
Date: 29.JUL.2010 20:05:21

Low Band Edge Plot on Configuration IEEE 802.11g Ant. B-1 / 2412 MHz



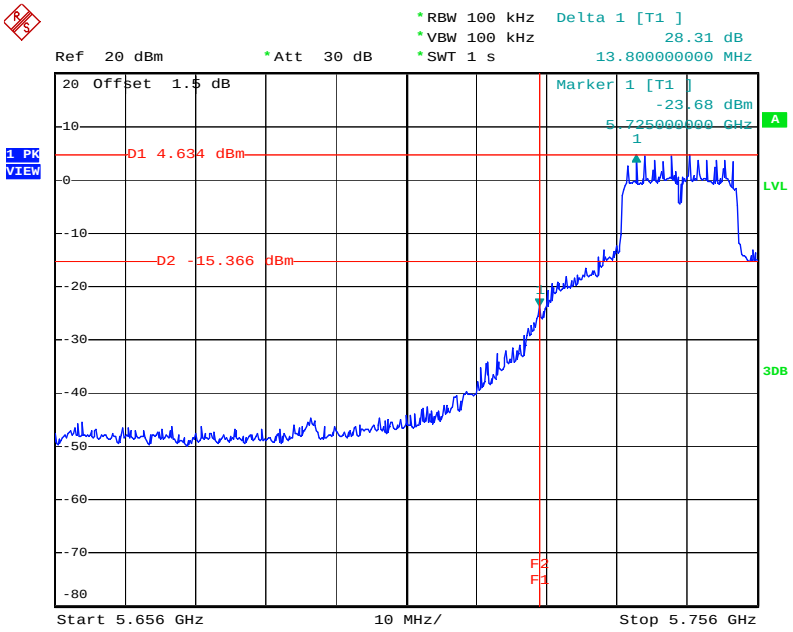
Date: 29.JUL.2010 20:07:44

High Band Edge Plot on Configuration IEEE 802.11g Ant. B-1 / 2462 MHz



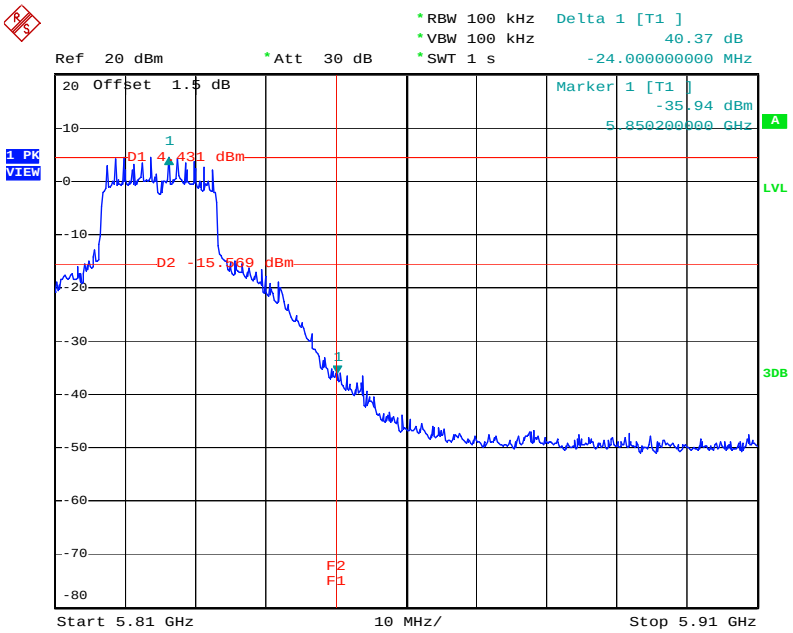
Date: 29.JUL.2010 20:12:42

Low Band Edge Plot on Configuration IEEE 802.11a Ant. B-1 / 5745 MHz



Date: 15.AUG.2010 19:42:10

High Band Edge Plot on Configuration IEEE 802.11a Ant. B-1 / 5825 MHz



Date: 15.AUG.2010 19:45:51

4.7. Antenna Requirements

4.7.1. Limit

Except for special regulations, the Low-power Radio-frequency Devices must not be equipped with any jacket for installing an antenna with extension cable. An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited. Further, this requirement does not apply to intentional radiators that must be professionally installed.

4.7.2. Antenna Connector Construction

Please refer to section 3.3 in this test report; antenna connector complied with the requirements.

5. LIST OF MEASURING EQUIPMENTS

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
EMC Receiver	R&S	ESCS 30	100174	9kHz – 2.75GHz	Apr. 06, 2010	Conduction (CO04-HY)
LISN	MessTec	NNB-2/16Z	99041	9kHz – 30MHz	Mar. 23, 2010	Conduction (CO04-HY)
LISN (Support Unit)	EMCO	3810/2NM	9703-1839	9kHz – 30MHz	Apr. 29, 2010	Conduction (CO04-HY)
RF Cable-CON	UTIFLEX	3102-26886-4	CB049	9kHz – 30MHz	Apr. 20, 2010	Conduction (CO04-HY)
EMI Filter	LINDGREN	LRE-2030	2651	< 450 Hz	N/A	Conduction (CO04-HY)
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	30 MHz - 1 GHz 3m	Jun. 06, 2010	Radiation (03CH03-HY)
Amplifier	SCHAFFNER	COA9231A	18667	9 kHz - 2 GHz	Jan. 24, 2010	Radiation (03CH03-HY)
Amplifier	Agilent	8449B	3008A02120	1 GHz - 26.5 GHz	Jul. 21, 2009	Radiation (03CH03-HY)
Amplifier	Agilent	8449B	3008A02120	1 GHz - 26.5 GHz	Jul. 21, 2010	Radiation (03CH03-HY)
Amplifier	MITEQ	AMF-6F-260400	9121372	26.5 GHz - 40 GHz	Apr. 06, 2009*	Radiation (03CH03-HY)
Spectrum Analyzer	R&S	FSP40	100004	9 kHz - 40 GHz	Oct. 03, 2009	Radiation (03CH03-HY)
Loop Antenna	R&S	HFH2-Z2	860004/001	9 kHz - 30 MHz	Jul. 28, 2008*	Radiation (03CH03-HY)
Loop Antenna	R&S	HFH2-Z2	860004/001	9 kHz - 30 MHz	Jul. 28, 2009*	Radiation (03CH03-HY)
Bilog Antenna	SCHAFFNER	CBL 6112D	22237	30 MHz – 1 GHz	Sep. 26, 2009	Radiation (03CH03-HY)
Horn Antenna	EMCO	3115	6741	1GHz ~ 18GHz	Apr. 28, 2010	Radiation (03CH03-HY)
Horn Antenna	SCHWARZBECK	BBHA9170	BBHA9170154	15 GHz - 40 GHz	Jan. 11, 2010	Radiation (03CH03-HY)
RF Cable-R03m	Jye Bao	RG142	CB021	30 MHz - 1 GHz	Jan. 05, 2010	Radiation (03CH03-HY)
RF Cable-HIGH	SUHNER	SUCOFLEX 106	03CH03-HY	1 GHz - 40 GHz	Jan. 05, 2010	Radiation (03CH03-HY)
Turn Table	HD	DS 420	420/650/00	0 – 360 degree	N/A	Radiation (03CH03-HY)
Antenna Mast	HD	MA 240	240/560/00	1 m - 4 m	N/A	Radiation (03CH03-HY)
Spectrum Analyzer	R&S	FSU26.5	100015	20Hz ~ 26.5GHz	Oct. 29, 2009	Conducted (TH01-HY)
Power Meter	R&S	NRVS	100444	DC ~ 40GHz	Jul. 31, 2010	Conducted (TH01-HY)
Power Sensor	R&S	NRV-Z51	100666	DC ~ 30GHz	Aug. 05, 2009	Conducted (TH01-HY)
Power Sensor	R&S	NRV-Z51	100666	DC ~ 30GHz	Aug. 05, 2010	Conducted (TH01-HY)
Power Sensor	R&S	NRV-Z32	100057	30MHz ~ 6GHz	Jul. 31, 2010	Conducted (TH01-HY)
AC Power Source	HPC	HPA-500W	HPA-9100024	AC 0 ~ 300V	Jul. 12, 2009*	Conducted (TH01-HY)
DC Power Source	G.W.	GPC-6030D	C671845	DC 1V ~ 60V	Mar. 13, 2010	Conducted (TH01-HY)
Temp. and Humidity Chamber	Giant Force	GTH-225-20-S	MAB0103-001	N/A	Aug. 06, 2009	Conducted (TH01-HY)
Temp. and Humidity Chamber	Giant Force	GTH-225-20-S	MAB0103-001	N/A	Aug. 06, 2010	Conducted (TH01-HY)
RF CABLE-1m	Jye Bao	RG142	CB034-1m	20MHz ~ 7GHz	Dec. 02, 2009	Conducted (TH01-HY)
RF CABLE-2m	Jye Bao	RG142	CB035-2m	20MHz ~ 1GHz	Dec. 02, 2009	Conducted (TH01-HY)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Vector Signal Generator	R&S	SMU200A	102098	100kHz ~ 6GHz	Feb. 13, 2010	Conducted (TH01-HY)
Signal Generator	R&S	SMR40	100116	10MHz ~ 40GHz	Mar. 25, 2010	Conducted (TH01-HY)
Power Sensor	Anritsu	MA2411B	0917017	300MHz~40GHz	Dec. 03, 2009	Conducted (TH01-HY)
Power Meter	Anritsu	ML2495A	0949003	300MHz~40GHz	Dec. 03, 2009	Conducted (TH01-HY)

Note: Calibration Interval of instruments listed above is one year.

Note: For "*" Calibration Interval of instruments listed above is two years.

6. TEST LOCATION

SHIJR	ADD	:	6Fl., No. 106, Sec. 1, Shintai 5th Rd., Shijr City, Taipei, Taiwan 221, R.O.C.
	TEL	:	886-2-2696-2468
	FAX	:	886-2-2696-2255
HWA YA	ADD	:	No. 52, Hwa Ya 1st Rd., Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.
	TEL	:	886-3-327-3456
	FAX	:	886-3-318-0055
LINKOU	ADD	:	No. 30-2, Dingfu Tsuen, Linkou Shiang, Taipei, Taiwan 244, R.O.C
	TEL	:	886-2-2601-1640
	FAX	:	886-2-2601-1695
DUNGHU	ADD	:	No. 3, Lane 238, Kangle St., Neihu Chiu, Taipei, Taiwan 114, R.O.C.
	TEL	:	886-2-2631-4739
	FAX	:	886-2-2631-9740
JUNGHE	ADD	:	7Fl., No. 758, Jungjeng Rd., Junghe City, Taipei, Taiwan 235, R.O.C.
	TEL	:	886-2-8227-2020
	FAX	:	886-2-8227-2626
NEIHU	ADD	:	4Fl., No. 339, Hsin Hu 2nd Rd., Taipei 114, Taiwan, R.O.C.
	TEL	:	886-2-2794-8886
	FAX	:	886-2-2794-9777
JHUBEI	ADD	:	No.8, Lane 728, Bo-ai St., Jhubei City, HsinChu County 302, Taiwan, R.O.C.
	TEL	:	886-3-656-9065
	FAX	:	886-3-656-9085

7. TAF CERTIFICATE OF ACCREDITATION

Certificate No. : L1190-091230

財團法人全國認證基金會
Taiwan Accreditation Foundation

Certificate of Accreditation

This is to certify that

Sporton International Inc.
EMC & Wireless Communications Laboratory
No.52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.

is accredited in respect of laboratory

Accreditation Criteria	:	ISO/IEC 17025:2005
Accreditation Number	:	1190
Originally Accredited	:	December 15, 2003
Effective Period	:	January 10, 2010 to January 09, 2013
Accredited Scope	:	Testing Field, see described in the Appendix
Specific Accreditation Program	:	Accreditation Program for Designated Testing Laboratory for Commodities Inspection Accreditation Program for Telecommunication Equipment Testing Laboratory Accreditation Program for BSMI Mutual Recognition Arrangment with Foreign Authorities

Jay-San Chen
President, Taiwan Accreditation Foundation
Date : December 30, 2009

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The Appendix forms an integral part of this Certificate, which shall be invalid when use without the Appendix