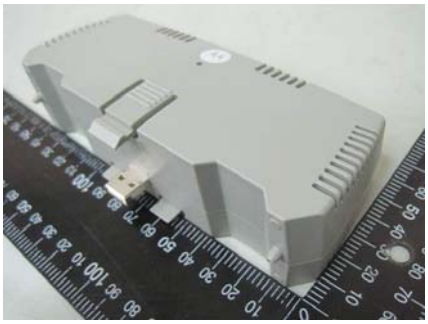
SPORTON International Inc.
No. 52, Hwa Ya 1st Rd., Kwei-Shan Hsiang, TaoYuan Hsien, Taiwan, R.O.C.
Ph: 886-3-327-3456 / FAX: 886-3-327-0973 / www.sporton.com.tw

FCC RADIO TEST REPORT

Applicant's company	**Motorola Solutions, Inc.**
Applicant Address	One Motorola Plaza Holtsville, NY 11742 USA
FCC ID	**UZ7KHUSB600**
Manufacturer's company	**Wistron NeWeb Corporation**
Manufacturer Address	20 Park Avenue II, Hsinchu Science Park, Hsinchu 308,Taiwan,R.O.C.

Product Name	802.11 a/b/g/n USB Dongle
Brand Name	MOTOROLA
Model Name	KHUSB600
Test Rule Part(s)	47 CFR FCC Part 15 Subpart E § 15.407
Test Freq. Range	5150 ~ 5350MHz / 5470 ~ 5725MHz
Received Date	May 07, 2012
Final Test Date	Jul. 10, 2012
Submission Type	Original Equipment



Statement

Test result included is for the IEEE 802.11n and IEEE 802.11a (5150 ~ 5350MHz / 5470 ~ 5725MHz) 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 C63.10-2009** and **47 CFR FCC Part 15 Subpart E** and KDB 789033 – 20120305.

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

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR250705AB	Rev. 01	Initial issue of report	Oct. 30, 2012

1. CERTIFICATE OF COMPLIANCE

Product Name	:	**802.11 a/b/g/n USB Dongle**
Brand Name	:	**MOTOROLA**
Model Name	:	**KHUSB600**
Applicant	:	**Motorola Solutions, Inc.**
Test Rule Part(s)	:	**47 CFR FCC Part 15 Subpart E § 15.407**

Sporton International as requested by the applicant to evaluate the EMC performance of the product sample received on May 07, 2012 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

Jordan Hsiao

SPORTON INTERNATIONAL INC.

2. SUMMARY OF THE TEST RESULT

Applied Standard: 47 CFR FCC Part 15 Subpart E				
Part	**Rule Section**	**Description of Test**	**Result**	**Under Limit**
4.1	15.207	AC Power Line Conducted Emissions	Complies	13.95 dB
4.2	15.407(a)	26dB Spectrum Bandwidth	Complies	-
4.3	15.407(a)	Maximum Conducted Output Power	Complies	1.79 dB
4.4	15.407(a)	Power Spectral Density	Complies	0.12 dB
4.5	15.407(a)	Peak Excursion	Complies	2.43 dB
4.6	15.407(b)	Radiated Emissions	Complies	0.18 dB
4.7	15.407(b)	Band Edge Emissions	Complies	1.03 dB
4.8	15.407(g)	Frequency Stability	Complies	-
4.9	15.203	Antenna Requirements	Complies	-

Test Items	Uncertainty	Remark
AC Power Line Conducted Emissions	±2.3dB	Confidence levels of 95%
Maximum Conducted Output Power	±0.5dB	Confidence levels of 95%
Power Spectral Density	±0.5dB	Confidence levels of 95%
Peak Excursion	±0.5dB	Confidence levels of 95%
26dB Spectrum Bandwidth / Frequency Stability	$\pm 8.5\times10^{-8}$	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 (1/2TX, 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	5150 ~ 5350MHz / 5470 ~ 5725MHz
Channel Number	19 for 20MHz bandwidth ; 9 for 40MHz bandwidth
Channel Band Width (99%)	1TX : MCS0(20MHz) : 29.76 MHz ; MCS0(40MHz) : 46.40 MHz 2TX : MCS0(20MHz) : 25.12 MHz ; MCS0(40MHz) : 38.72 MHz MCS8(20MHz) : 31.52 MHz ; MCS8(40MHz) : 41.28 MHz
Conducted Output Power	1TX : Band 1: MCS0 (20MHz): 16.68 dBm ; MCS0 (40MHz): 16.50 dBm Band 2: MCS0 (20MHz): 17.88 dBm ; MCS0 (40MHz): 17.37 dBm Band 3: MCS0 (20MHz): 17.72 dBm ; MCS0 (40MHz): 15.08 dBm 2TX : Band 1: MCS0 (20MHz): 14.03 dBm ; MCS0 (40MHz): 13.82 dBm Band 2: MCS0 (20MHz): 20.80 dBm ; MCS0 (40MHz): 18.82 dBm Band 3: MCS0 (20MHz): 20.66 dBm ; MCS0 (40MHz): 16.39 dBm 2TX : Band 1: MCS8(20MHz): 16.53 dBm ; MCS8(40MHz): 16.59 dBm Band 2: MCS8(20MHz): 22.21 dBm ; MCS8(40MHz): 18.37 dBm Band 3: MCS8(20MHz): 20.68 dBm ; MCS8(40MHz): 18.31 dBm
Carrier Frequencies	Please refer to section 3.4
Antenna	Please refer to section 3.3

IEEE 802.11a

Items	Description
Product Type	WLAN (1/2TX, 2RX)
Radio Type	Intentional Transceiver
Power Type	From host system
Modulation	OFDM for IEEE 802.11a
Data Modulation	OFDM (BPSK / QPSK / 16QAM / 64QAM)
Data Rate (Mbps)	OFDM (6/9/12/18/24/36/48/54)
Frequency Range	5150 ~ 5350MHz / 5470 ~ 5725MHz
Channel Number	19

Conducted Output Power	1TX:Band 1: 16.76 dBm ; Band 2: 18.02 dBm ; Band 3: 17.41 dBm 2TX:Band 1: 13.85 dBm ; Band 2: 20.71 dBm ; Band 3: 20.47 dBm
Carrier Frequencies	Please refer to section 3.4
Antenna	Please refer to section 3.3

Antenna & Band width

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

IEEE 802.11n spec

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

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

3.2. Accessories

N/A

3.3. Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	Remark
1	WNC	N/A	PIFA Antenna	N/A	2.4G: 5.80dBi, 5G: 5.49 dBi	TX / RX Ant.
2	WNC	N/A	PIFA Antenna	N/A	2.4G: 4.64dBi, 5G: 5.87dBi	TX / RX Ant.

Note: The EUT has two antennas.

For IEEE 802.11abgn mode (1TX/2RX):

Both Ant. 1 and Ant. 2 can be used as receiving antennas.

Only Ant. 1 can be use as transmitting antenna.

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

Both Ant. 1 and Ant. 2 can be used as transmitting/receiving antennas.

Ant. 1 and Ant. 2 could both transmit/receive simultaneously.

3.4. Table for Carrier Frequencies

For IEEE 802.11a, use Channel 36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 132, 136, 140.

There are two bandwidth systems for IEEE 802.11n.

For both 20MHz bandwidth systems, use Channel 36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 132, 136, 140.

For both 40MHz bandwidth systems, use Channel 38, 46, 54, 62, 102, 110, 126, 134.

Frequency Band	Channel No.	Frequency	Channel No.	Frequency
5150~5250 MHz Band 1	36	5180 MHz	44	5220 MHz
	38	5190 MHz	46	5230 MHz
	40	5200 MHz	48	5240 MHz
5250~5350 MHz Band 2	52	5260 MHz	60	5300 MHz
	54	5270 MHz	62	5310 MHz
	56	5280 MHz	64	5320 MHz
5470~5725 MHz Band 3	100	5500 MHz	116	5580 MHz
	102	5510MHz	132	5660 MHz
	104	5520 MHz	134	5670 MHz
	108	5540 MHz	136	5680 MHz
	110	5550 MHz	140	5700 MHz
	112	5560 MHz	-	-

3.5. Table for Test Modes

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

Test Items	Mode		Data Rate	Channel	Antenna
AC Power Conducted Emission	Normal Link		Auto	-	-
Max. Conducted Output Power Power Spectral Density	1TX:MCS0/20MHz	Band 1~2	6.5Mbps	36/40/48/52/60/64	1
		Band 3	6.5Mbps	100/116/140	1
	1TX:MCS0/40MHz	Band 1~2	13Mbps	38/46/54/62	1
		Band 3	13Mbps	102/134	1
	2TX:MCS0/20MHz	Band 1~2	6.5Mbps	36/40/48/52/60/64	1+2
		Band 3	6.5Mbps	100/116/140	1+2
	2TX:MCS0/40MHz	Band 1~2	13.5Mbps	38/46/54/62	1+2
		Band 3	13.5Mbps	102/ 134	1+2
	2TX:MCS8/20MHz	Band 1~2	15Mbps	36/40/48/52/60/64	1+2
		Band 3	15Mbps	100/116/140	1+2
	2TX:MCS8/40MHz	Band 1~2	30Mbps	38/46/54/62	1+2
		Band 3	30Mbps	102/134	1/2/1+2
	1TX:11a/BPSK	Band 1~2	6Mbps	36/40/48/52/60/64	1
		Band 3	6Mbps	100/116/140	1
	2TX:11a/BPSK	Band 1~2	6Mbps	36/40/48/52/60/64	1+2
		Band 3	6Mbps	100/116/140	1+2
26dB Spectrum Bandwidth 99% Occupied Bandwidth Measurement Peak Excursion	1TX:MCS0/20MHz	Band 1~2	6.5Mbps	36/40/48/52/60/64	1
		Band 3	6.5Mbps	100/116/140	1
	1TX:MCS0/40MHz	Band 1~2	13Mbps	38/46/54/62	1
		Band 3	13Mbps	102/ 134	1
	2TX:MCS0/20MHz	Band 1~2	6.5Mbps	36/40/48/52/60/64	1+2
		Band 3	6.5Mbps	100/116/140	1+2

	2TX:MCS0/40MHz	Band 1~2	13.5Mbps	38/46/54/62	1+2
		Band 3	13.5Mbps	102/ 134	1+2
	2TX:MCS8/20MHz	Band 1~2	15Mbps	36/40/48/52/60/64	1+2
		Band 3	15Mbps	100/116/140	1+2
	2TX:MCS8/40MHz	Band 1~2	30Mbps	38/46/54/62	1+2
		Band 3	30Mbps	102/ 134	1+2
	1TX:11a/BPSK	Band 1~2	6Mbps	36/40/48/52/60/64	1
		Band 3	6Mbps	100/116/140	1
	2TX:11a/BPSK	Band 1~2	6Mbps	36/40/48/52/60/64	1+2
		Band 3	6Mbps	100/116/140	1+2
Radiated Emission Below 1GHz	Normal Link		Auto	-	-
Radiated Emission Above 1GHz	1TX:MCS0/20MHz	Band 1~2	6.5Mbps	36/40/48/52/60/64	1
		Band 3	6.5Mbps	100/116/140	1
	1TX:MCS0/40MHz	Band 1~2	13Mbps	38/46/54/62	1
		Band 3	13Mbps	102/ 134	1
	2TX:MCS0/20MHz	Band 1~2	6.5Mbps	36/40/48/52/60/64	1+2
		Band 3	6.5Mbps	100/116/140	1+2
	2TX:MCS0/40MHz	Band 1~2	13Mbps	38/46/54/62	1+2
		Band 3	13Mbps	102/134	1+2
	2TX:MCS8/20MHz	Band 1~2	15Mbps	36/40/48/52/60/64	1+2
		Band 3	15Mbps	100/116/140	1+2
	2TX:MCS8/40MHz	Band 1~2	30Mbps	38/46/54/62	1+2
		Band 3	30Mbps	102/ 134	1+2
	1TX:11a/BPSK	Band 1~2	6Mbps	36/40/48/52/60/64	1
		Band 3	6Mbps	100/116/140	1
	2TX:11a/BPSK	Band 1~2	6Mbps	36/40/48/52/60/64	1+2
		Band 3	6Mbps	100/116/140	1+2
Band Edge Emission	1TX:MCS0/20MHz	Band 1~2	6.5Mbps	36/40/48/52/60/64	1

		Band 3	6.5Mbps	100/116/140	1
	1TX:MCS0/40MHz	Band 1~2	13Mbps	38/46/54/62	1
		Band 3	13Mbps	102/ 134	1
	2TX:MCS0/20MHz	Band 1~2	6.5Mbps	36/40/48/52/60/64	1+2
		Band 3	6.5Mbps	100/116/140	1+2
	2TX:MCS0/40MHz	Band 1~2	13Mbps	38/46/54/62	1+2
		Band 3	13Mbps	102/ 134	1+2
	2TX:MCS8/20MHz	Band 1~2	15Mbps	36/40/48/52/60/64	1+2
		Band 3	15Mbps	100/116/140	1+2
	2TX:MCS8/40MHz	Band 1~2	30Mbps	38/46/54/62	1+2
		Band 3	30Mbps	102/ 134	1+2
	1TX:11a/BPSK	Band 1~2	6Mbps	36/40/48/52/60/64	1
		Band 3	6Mbps	100/116/140	1
	2TX:11a/BPSK	Band 1~2	6Mbps	36/40/48/52/60/64	1+2
		Band 3	6Mbps	100/116/140	1+2
Frequency Stability	Un-modulation		-	40/60	N/A

3.6. Table for Testing Locations

Test Site No.	Site Category	Location	FCC Reg. No.	IC File No.	VCCI Reg. No
03CH01-CB	SAC	Hsin Chu	262045	IC 4086D	-
CO01-CB	Conduction	Hsin Chu	262045	IC 4086D	-
TH01-CB	OVEN Room	Hsin Chu	-	-	-

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	D520	E2KWM3945ABG
Notebook	DELL	E6220	N/A
Mouse	Logitech	M-U0026	DoC
Earphone	SHYARO CHI	MIC-04	N/A
Notebook	DELL	PP20L	E2KWM3945ABG
Notebook	DELL	M1330	E2KWM3945ABG
module	Motorola	N/A	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.

Power Parameters of IEEE 802.11n MCS0 20MHz

Test Software Version	ART2-GUI								
Frequency	5180 MHz	5200 MHz	5240 MHz	5260 MHz	5300 MHz	5320 MHz	5500 MHz	5580 MHz	5700 MHz
Ant. 1 (1TX)	14.00	18.00	19.50	20.00	20.00	17.50	14.00	20.00	12.00
Ant. 1+2 (2TX)	11.00	11.00	12.00	18.00	15.00	13.50	13.00	19.50	9.00

Power Parameters of IEEE 802.11n MCS8 20MHz

Test Software Version	ART2-GUI								
Frequency	5180 MHz	5200 MHz	5240 MHz	5260 MHz	5300 MHz	5320 MHz	5500 MHz	5580 MHz	5700 MHz
Ant. 1+2 (2TX)	13.00	13.50	14.50	20.00	20.00	14.00	13.00	19.50	10.50

Power Parameters of IEEE 802.11n MCS0 40MHz

Test Software Version	ART2-GUI						
Frequency	5190 MHz	5230 MHz	5270 MHz	5310 MHz	5510 MHz	5550 MHz	5670 MHz
Ant. 1 (1TX)	8.50	18.50	20.00	11.50	9.00	16.00	13.50
Ant. 1+2 (2TX)	7.00	11.50	16.50	8.50	7.00	14.00	11.00

Power Parameters of IEEE 802.11n MCS8 40MHz

Test Software Version	ART2-GUI						
Frequency	5190 MHz	5230 MHz	5270 MHz	5310 MHz	5510 MHz	5550 MHz	5670 MHz
Ant. 1+2 (2TX)	7.50	14.00	16.00	9.00	8.00	15.00	11.00

Power Parameters of IEEE 802.11a

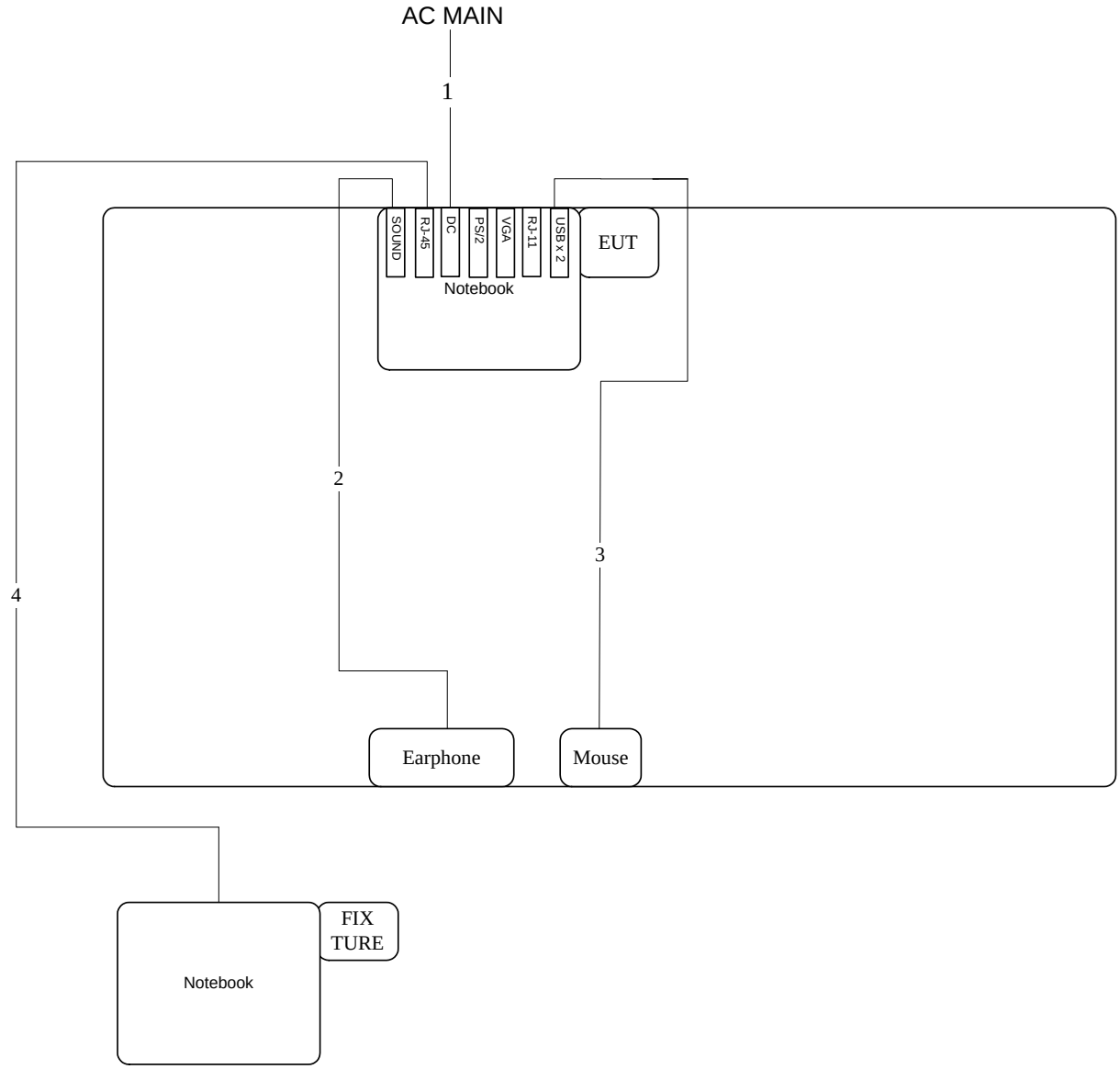
Test Software Version	ART2-GUI								
Frequency	5180 MHz	5200 MHz	5240 MHz	5260 MHz	5300 MHz	5320 MHz	5500 MHz	5580 MHz	5700 MHz
Ant. 1 (1TX)	14.50	18.00	19.50	20.00	20.00	18.00	14.00	20.00	12.50
Ant. 1+2 (2TX)	10.50	11.00	11.50	18.00	17.00	14.00	12.50	19.50	11.50

During the test, "ART2-GUI" under WIN XP was executed the test program to control the EUT continuously transmit RF signal.

3.9. Test Configurations

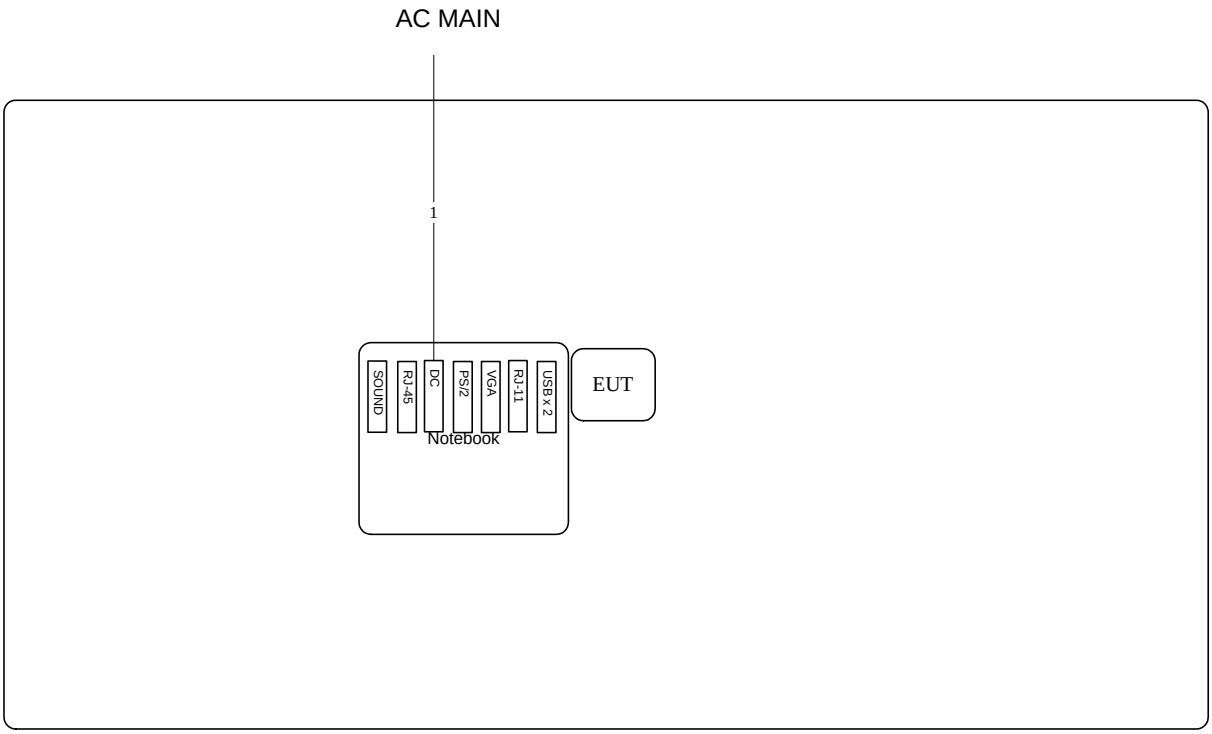
3.9.1. Radiation Emissions Test Configuration

Test Configuration: 30MHz ~1GHz



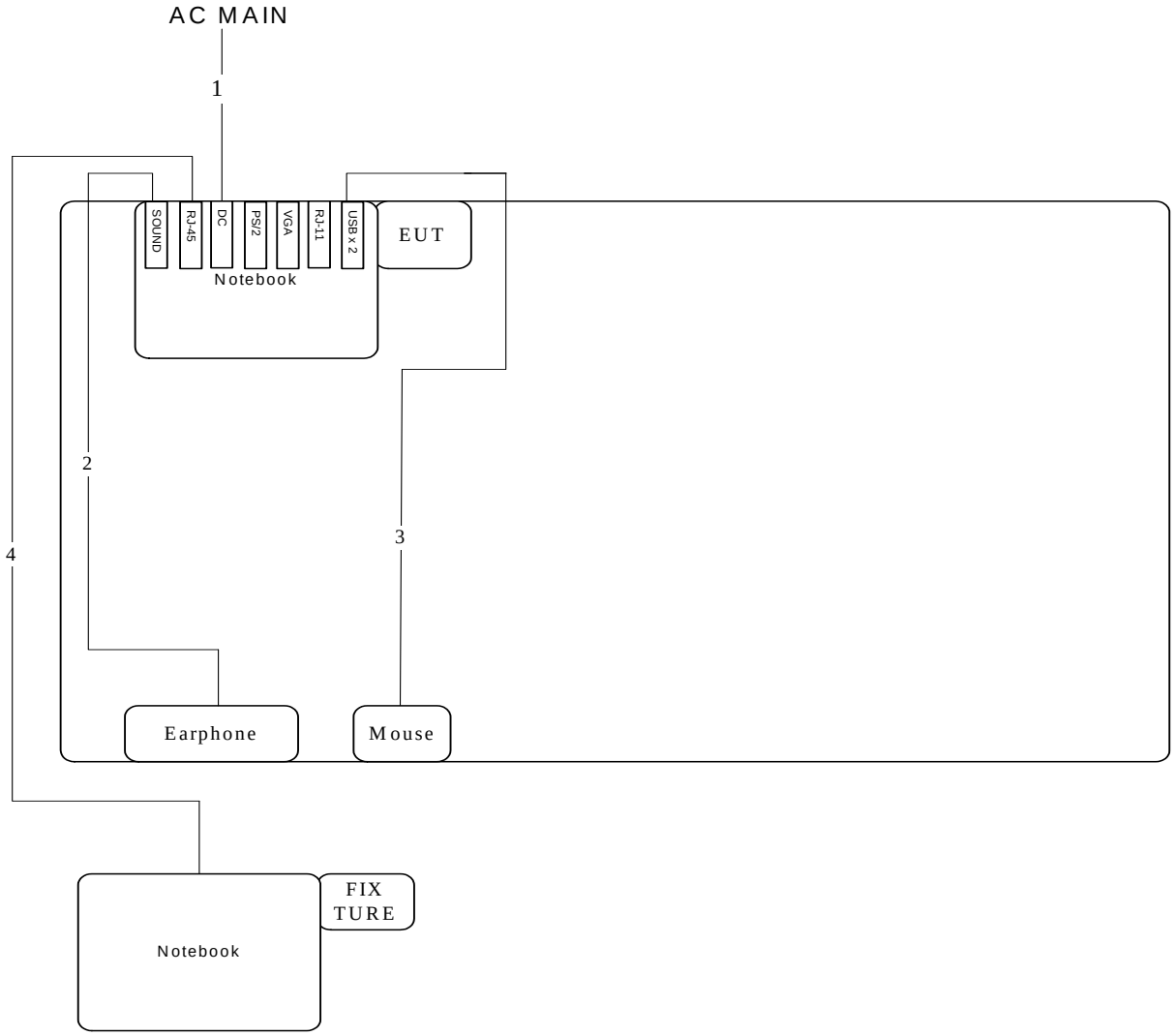
Item	Connection	Shield	Length	Remark
1	Power cable	No	2.6M	-
2	Earphone cable	No	1.1M	-
3	USB cable	No	1.8M	-
4	RJ-45 cable	No	10M	-

Test Configuration: above 1GHz



Item	Connection	Shield	Length	Remark
1	Power cable	No	2.6M	-

3.9.2. AC Power Line Conduction Emissions Test Configuration



Item	Connection	Shield	Length	Remark
1	Power cable	No	2.6M	-
2	Earphone cable	No	1.1M	-
3	USB cable	No	1.8M	-
4	RJ-45 cable	No	10M	-

4. TEST RESULT

4.1. AC Power Line Conducted Emissions Measurement

4.1.1. Limit

For this product that is designed to connect 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

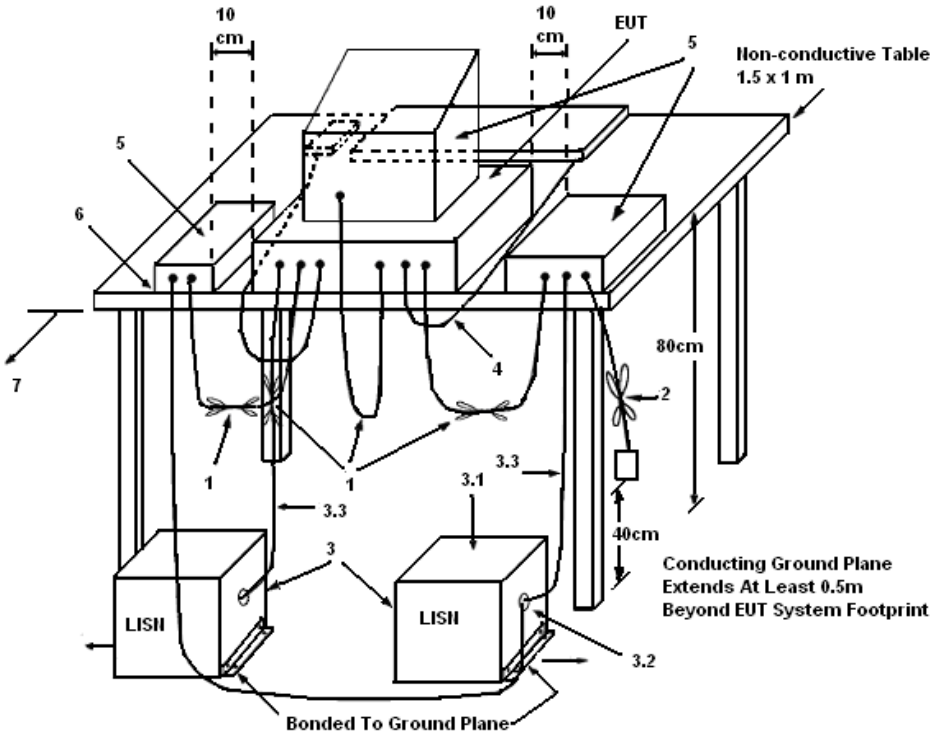
Please refer to section 5 of equipments list in this report. The following table is the setting of the receiver.

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 C63.10. The EUT or host of EUT has to be placed 0.4 meter far from the conducting wall of the shielding room and at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT or host of EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connected to the other LISNs. The LISN should provide 50uH/50ohms coupling impedance.
4. The frequency range from 150 KHz to 30 MHz was searched.
5. Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
6. The measurement has to be done between each power line and ground at the power terminal.

4.1.4. Test Setup Layout



LEGEND:

(1) Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.

(2) I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.

(3) EUT connected to one LISN. Unused LISN measuring port connectors shall be terminated in 50 Ω. LISN can be placed on top of, or immediately beneath, reference ground plane.

(3.1) All other equipment powered from additional LISN(s).

(3.2) Multiple outlet strip can be used for multiple power cords of non-EUT equipment.

(3.3) LISN at least 80 cm from nearest part of EUT chassis.

(4) Cables of hand-operated devices, such as keyboards, mice, etc., shall be placed as for normal use.

(5) Non-EUT components of EUT system being tested.

(6) Rear of EUT, including peripherals, shall all be aligned and flush with rear of tabletop.

(7) Rear of tabletop shall be 40 cm removed from a vertical conducting plane that is bonded to the ground plane.

4.1.5. Test Deviation

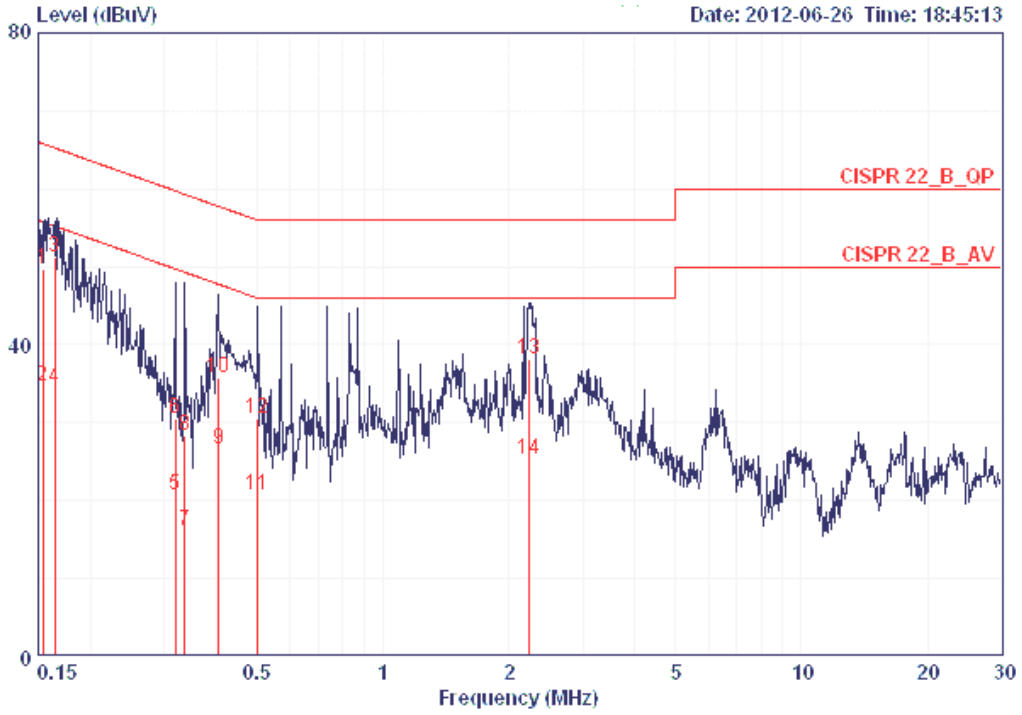
There is no deviation with the original standard.

4.1.6. EUT Operation during Test

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

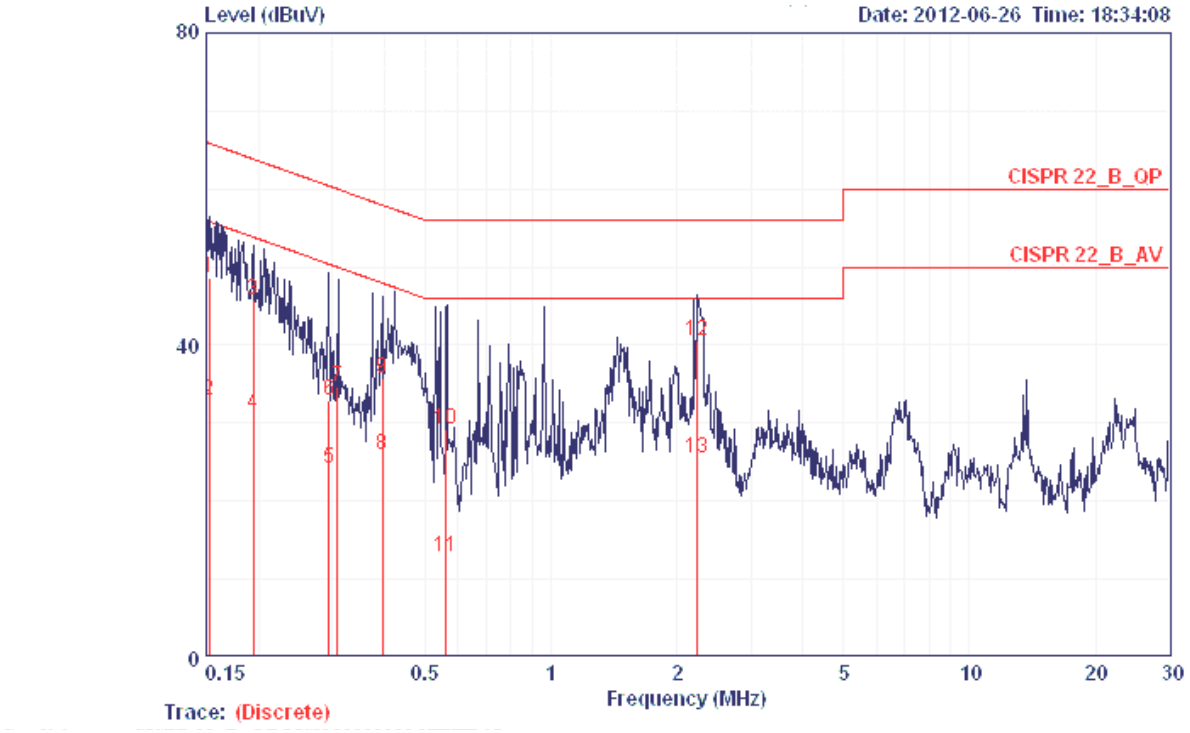
4.1.7. Results of AC Power Line Conducted Emissions Measurement

Temperature	24℃	Humidity	60%
Test Engineer	Simon Yang	Phase	Line
Configuration	Normal Link		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Pol/Phase	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.15403	49.62	-16.16	65.78	49.36	0.06	0.20	LINE	QP
2	0.15403	34.63	-21.15	55.78	34.37	0.06	0.20	LINE	AVERAGE
3 @	0.16414	51.31	-13.95	65.25	51.05	0.06	0.20	LINE	QP
4	0.16414	34.53	-20.73	55.25	34.27	0.06	0.20	LINE	AVERAGE
5	0.31830	20.70	-29.05	49.75	20.48	0.02	0.20	LINE	AVERAGE
6	0.31830	30.46	-29.29	59.75	30.24	0.02	0.20	LINE	QP
7	0.33562	16.06	-33.25	49.31	15.84	0.02	0.20	LINE	AVERAGE
8	0.33562	28.24	-31.07	59.31	28.02	0.02	0.20	LINE	QP
9	0.40400	26.64	-21.13	47.77	26.43	0.01	0.20	LINE	AVERAGE
10	0.40400	35.73	-22.04	57.77	35.52	0.01	0.20	LINE	QP
11	0.50203	20.61	-25.39	46.00	20.39	0.02	0.19	LINE	AVERAGE
12	0.50203	30.58	-25.42	56.00	30.36	0.02	0.19	LINE	QP
13	2.237	38.07	-17.93	56.00	37.79	0.08	0.20	LINE	QP
14	2.237	25.32	-20.68	46.00	25.04	0.08	0.20	LINE	AVERAGE

Temperature	24℃	Humidity	60%
Test Engineer	Simon Yang	Phase	Neutral
Configuration	Normal Link		



	Freq	Level	Limit	Line	Read Level	LISN Factor	Cable Loss	Pol/Phase	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.15240	48.56	-17.31	65.87	48.30	0.06	0.20	NEUTRAL	QP
2	0.15240	32.93	-22.94	55.87	32.67	0.06	0.20	NEUTRAL	AVERAGE
3	0.19447	45.69	-18.15	63.84	45.44	0.05	0.20	NEUTRAL	QP
4	0.19447	31.12	-22.72	53.84	30.87	0.05	0.20	NEUTRAL	AVERAGE
5	0.29398	24.26	-26.15	50.41	24.01	0.05	0.20	NEUTRAL	AVERAGE
6	0.29398	33.01	-27.40	60.41	32.76	0.05	0.20	NEUTRAL	QP
7	0.30834	34.57	-25.45	60.02	34.37	0.00	0.20	NEUTRAL	Peak
8	0.39553	25.92	-22.03	47.95	25.67	0.05	0.20	NEUTRAL	AVERAGE
9	0.39553	35.78	-22.17	57.95	35.53	0.05	0.20	NEUTRAL	QP
10	0.56111	29.13	-26.87	56.00	28.87	0.06	0.20	NEUTRAL	QP
11	0.56111	12.81	-33.19	46.00	12.55	0.06	0.20	NEUTRAL	AVERAGE
12	2.237	40.50	-15.50	56.00	40.20	0.10	0.20	NEUTRAL	QP
13	2.237	25.54	-20.46	46.00	25.24	0.10	0.20	NEUTRAL	AVERAGE

Note:

Level = Read Level + LISN Factor + Cable Loss

4.2. 99% Occupied Bandwidth Measurement

4.2.1. Limit

No restriction limits. But resolution bandwidth within band edge measurement is 1% of the 99% occupied bandwidth.

4.2.2. Measuring Instruments and Setting

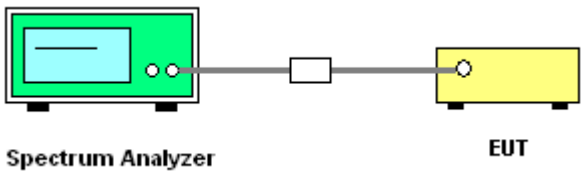
Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

Spectrum Parameters	Setting
Attenuation	Auto
Span Frequency	> 26dB Bandwidth
RB	300 kHz
VB	1000 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

4.2.3. Test Procedures

1. The transmitter output (antenna port) was connected to the spectrum analyzer in peak hold mode.
2. The resolution bandwidth of 300 kHz and the video bandwidth of 1000 kHz were used.
3. Measured the spectrum width with power higher than 26dB below carrier.

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 99% Occupied Bandwidth

Temperature	25℃	Humidity	60%
Test Engineer	Denis Su	Configurations	IEEE 802.11n

Configuration IEEE 802.11n MCS0 20MHz/Ant. 1 (1TX)

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
36	5180 MHz	28.16	18.40
40	5200 MHz	37.92	20.00
48	5240 MHz	38.88	21.44
52	5260 MHz	41.60	24.16
60	5300 MHz	44.80	28.64
64	5320 MHz	42.88	24.80
100	5500 MHz	31.84	18.72
116	5580 MHz	46.88	29.76
140	5700 MHz	31.68	18.72

Configuration IEEE 802.11n MCS0 20MHz/Ant. 1+2 (2TX)

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
36	5180 MHz	24.32	18.56
40	5200 MHz	21.60	17.60
48	5240 MHz	21.76	16.64
52	5260 MHz	40.80	24.32
60	5300 MHz	31.04	18.88
64	5320 MHz	29.60	17.76
100	5500 MHz	27.84	19.20
116	5580 MHz	39.20	25.12
140	5700 MHz	21.92	16.64

Configuration IEEE 802.11n MCS8 20MHz/Ant. 1+2 (2TX)

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
36	5180 MHz	25.28	18.24
40	5200 MHz	25.28	18.24
48	5240 MHz	26.40	18.24
52	5260 MHz	42.88	28.16
60	5300 MHz	45.28	31.52
64	5320 MHz	28.32	18.56
100	5500 MHz	24.80	18.24
116	5580 MHz	39.36	23.04
140	5700 MHz	28.48	18.24

Configuration IEEE 802.11n MCS0 40MHz/Ant. 1 (1TX)

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
38	5190 MHz	51.20	38.08
46	5230 MHz	84.80	42.24
54	5270 MHz	84.48	46.40
62	5310 MHz	52.80	36.80
102	5510MHz	48.32	36.80
110	5550 MHz	75.20	40.00
134	5670 MHz	66.24	37.12

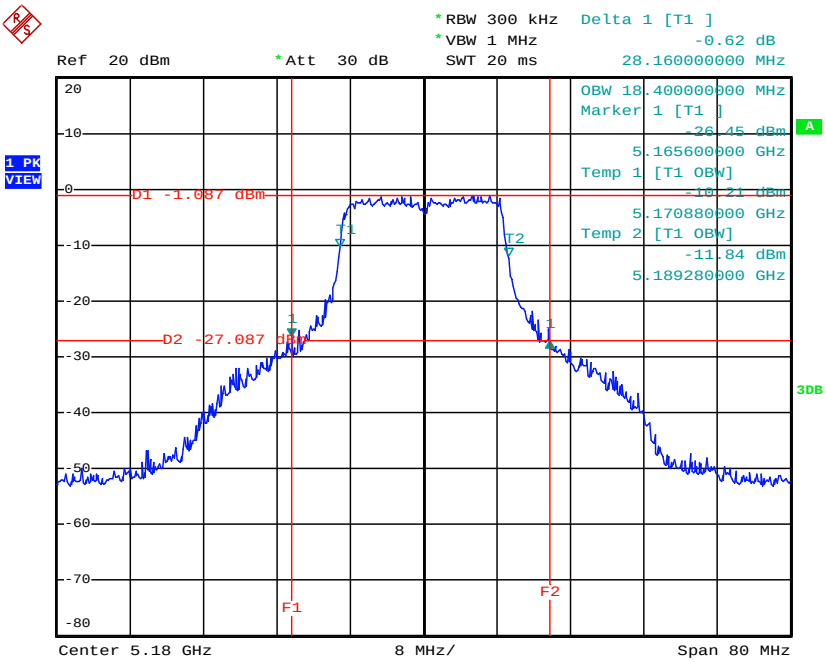
Configuration IEEE 802.11n MCS0 40MHz/Ant. 1+2 (2TX)

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
38	5190 MHz	47.04	37.12
46	5230 MHz	48.64	38.72
54	5270 MHz	73.92	37.44
62	5310 MHz	44.80	37.44
102	5510MHz	44.16	36.80
110	5550 MHz	54.72	35.52
134	5670 MHz	46.40	37.44

Configuration IEEE 802.11n MCS8 40MHz/Ant. 1+2 (2TX)

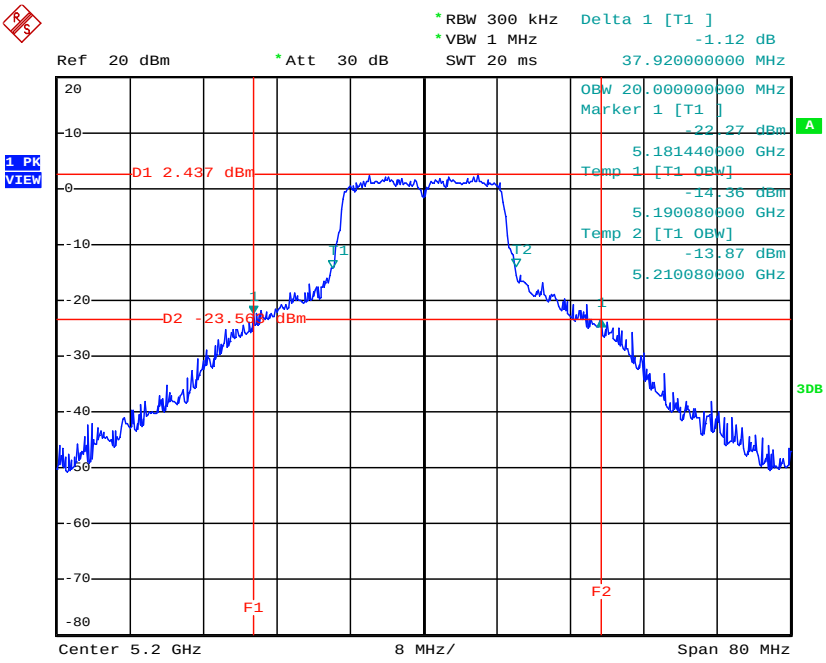
Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
38	5190 MHz	48.64	37.76
46	5230 MHz	64.32	38.08
54	5270 MHz	73.28	37.12
62	5310 MHz	44.80	36.48
102	5510MHz	43.20	36.48
110	5550 MHz	77.76	41.28
134	5670 MHz	56.32	36.80

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz / 5180 MHz / ANT. 1 (1TX)



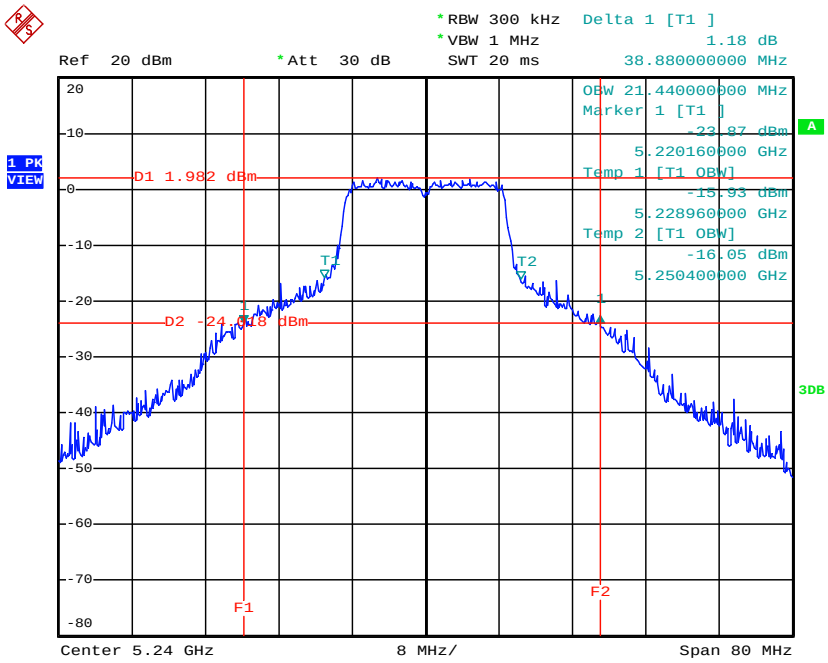
Date: 11.JUL.2012 15:31:10

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz / 5200 MHz / ANT. 1 (1TX)



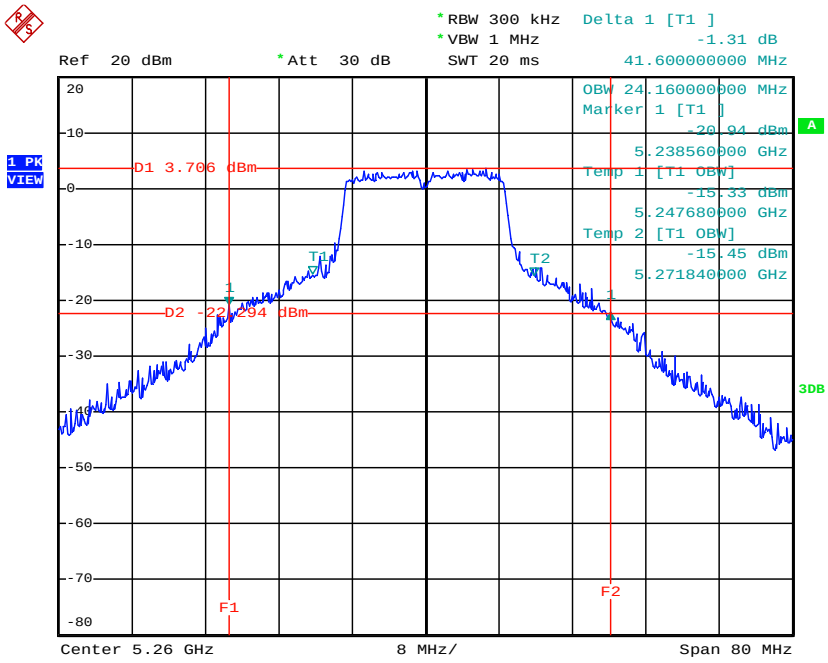
Date: 11.JUL.2012 15:31:40

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz / 5240 MHz / ANT. 1 (1TX)



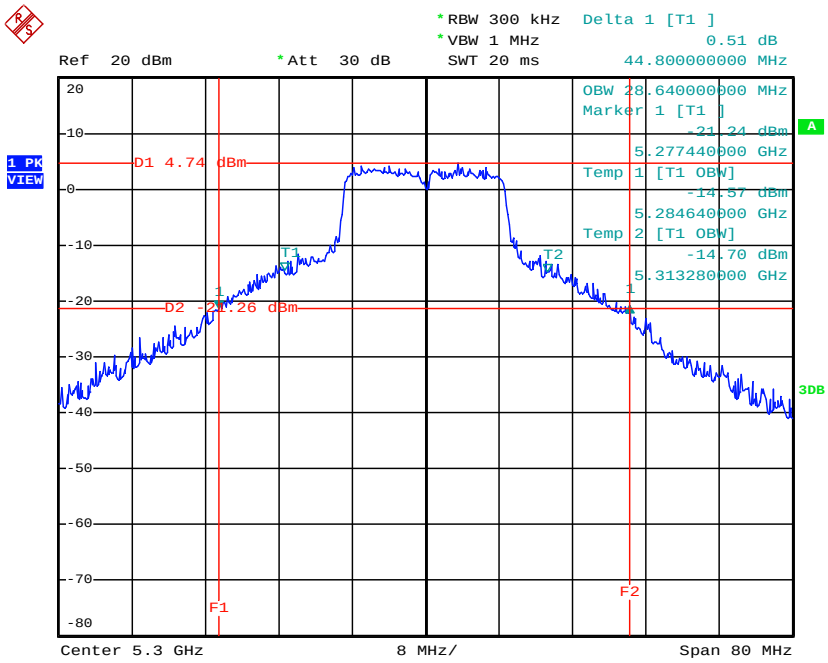
Date: 11.JUL.2012 15:32:19

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz / 5260 MHz / ANT. 1 (1TX)



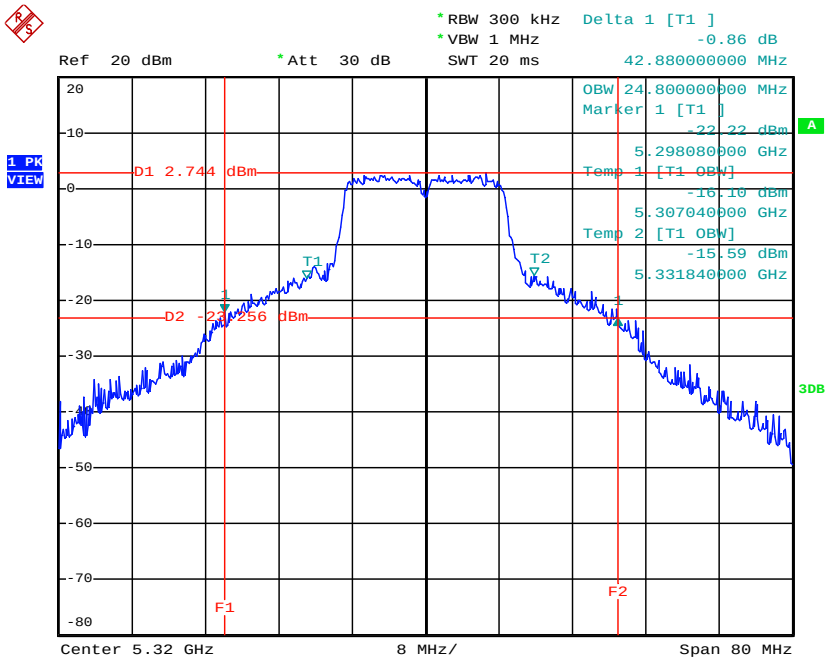
Date: 11.JUL.2012 15:32:56

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz / 5300 MHz / ANT. 1 (1TX)



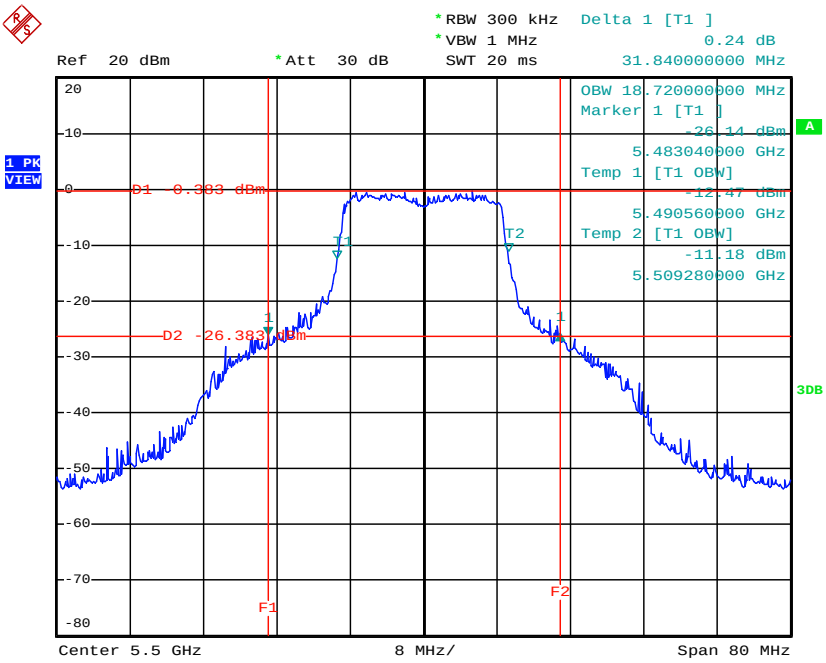
Date: 11.JUL.2012 15:33:34

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz / 5320 MHz/ ANT. 1 (1TX)



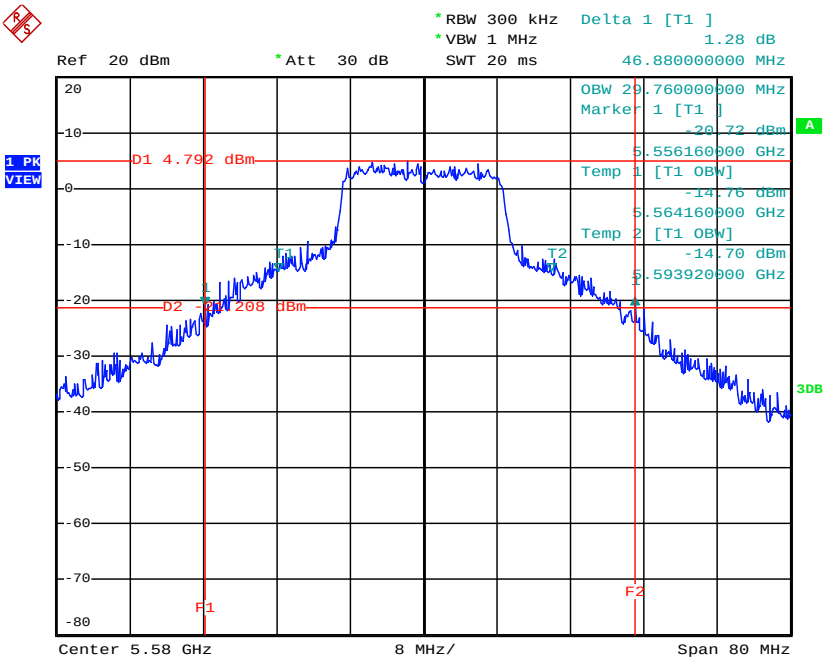
Date: 11.JUL.2012 15:34:09

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz / 5500 MHz / ANT. 1 (1TX)



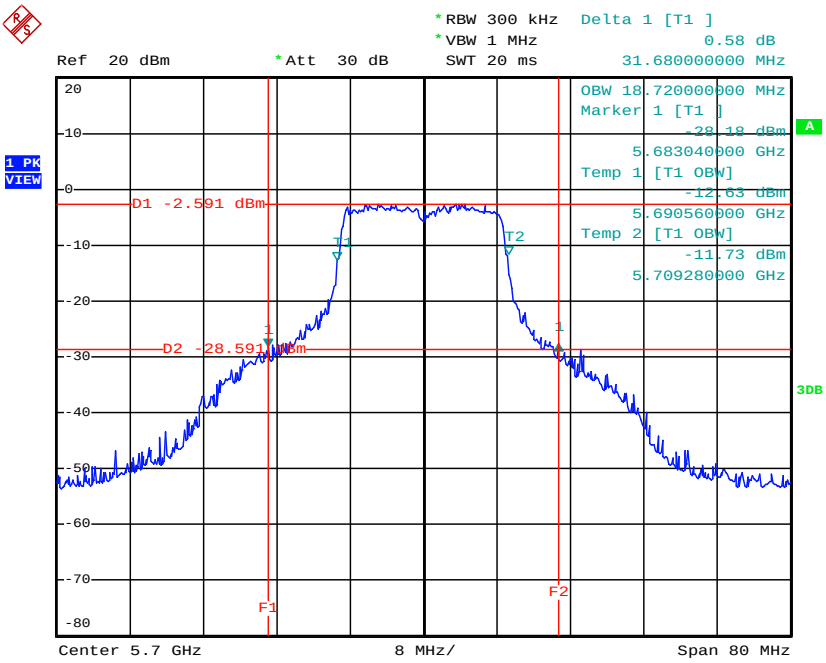
Date: 11.JUL.2012 15:35:02

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz / 5580 MHz / ANT. 1 (1TX)



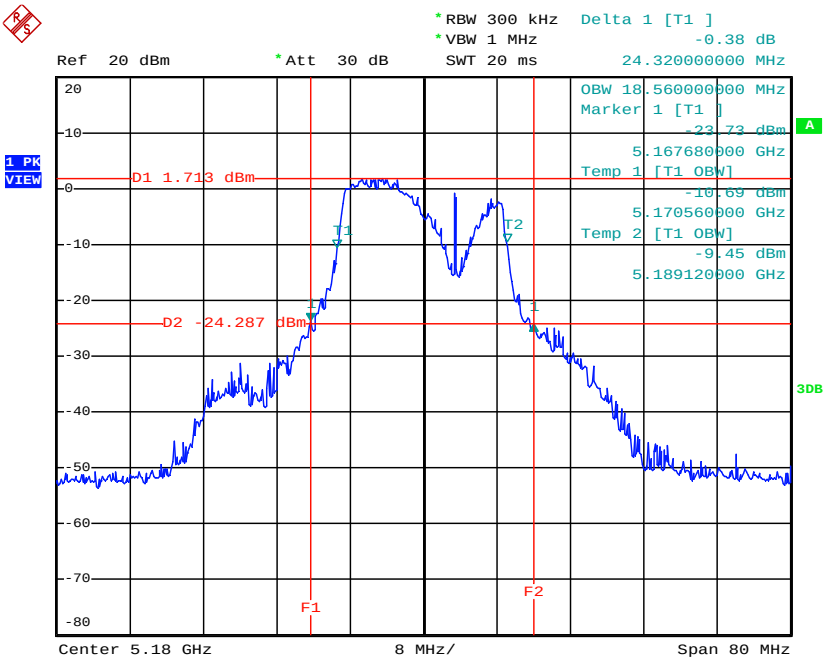
Date: 11.JUL.2012 15:35:24

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MH / 5700 MHz / ANT. 1 (1TX)



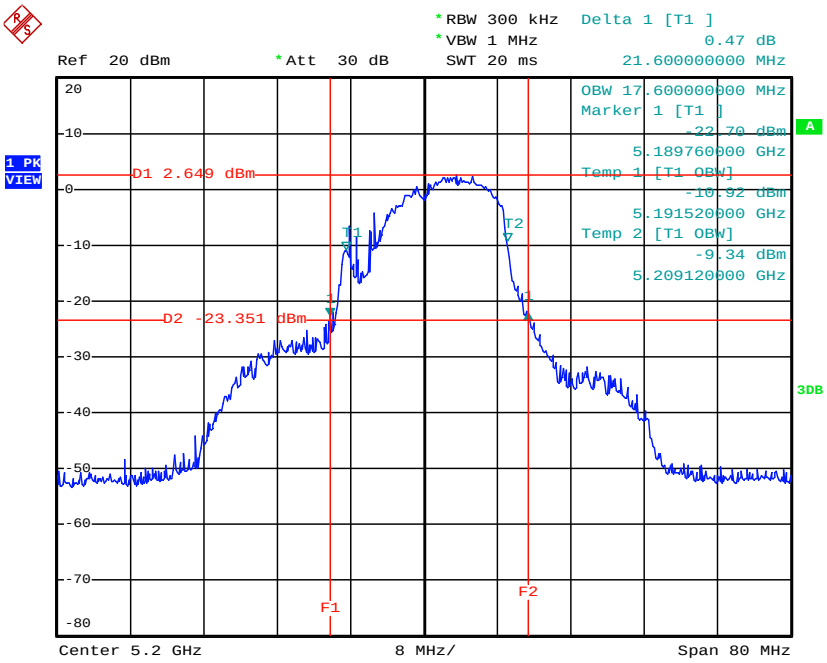
Date: 11.JUL.2012 15:35:47

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz / 5180 MHz / ANT. 1+2 (2TX)



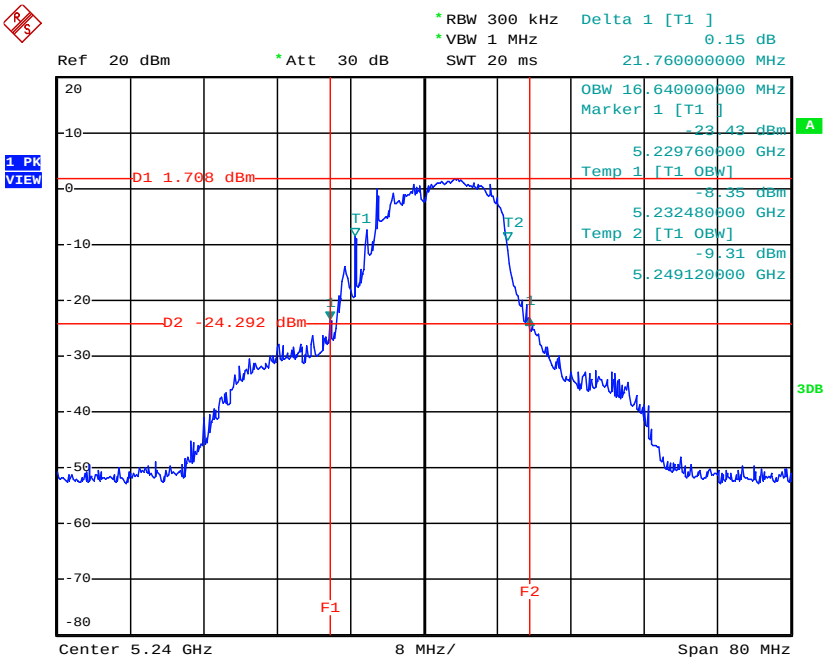
Date: 11.JUL.2012 15:15:36

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz / 5200 MHz / ANT. 1+2 (2TX)



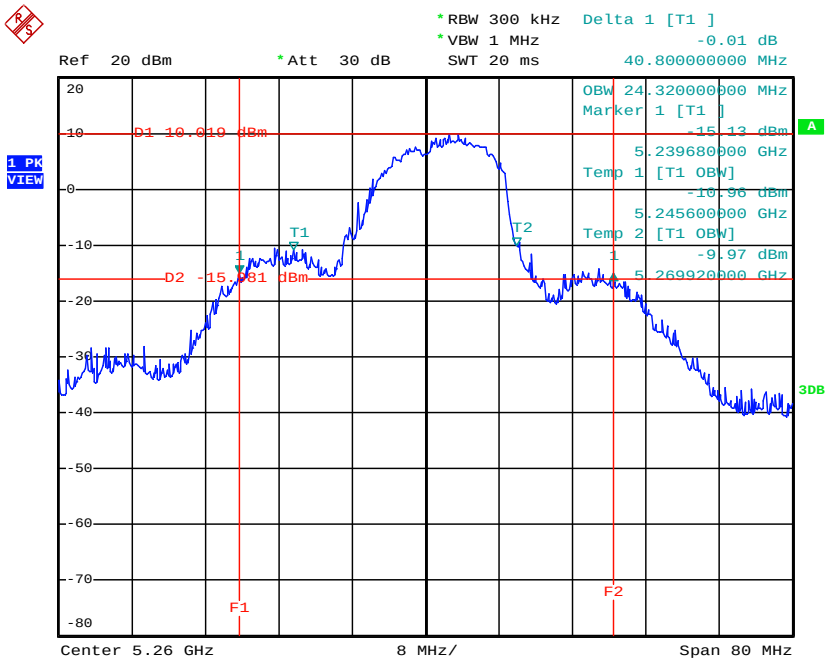
Date: 11.JUL.2012 15:15:17

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz / 5240 MHz / ANT. 1+2 (2TX)



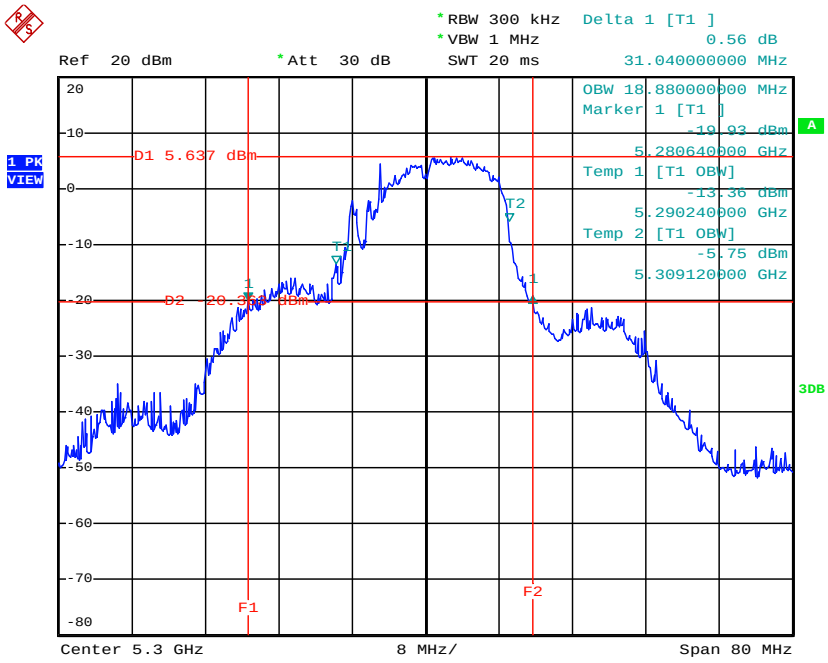
Date: 11.JUL.2012 15:14:58

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz / 5260 MHz / ANT. 1+2 (2TX)



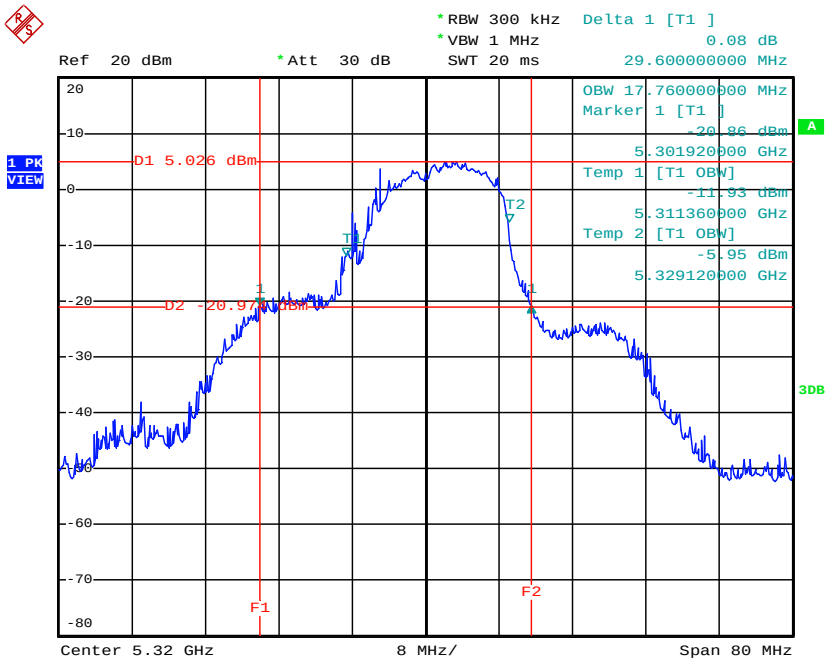
Date: 11.JUL.2012 15:14:37

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz / 5300 MHz / ANT. 1+2 (2TX)



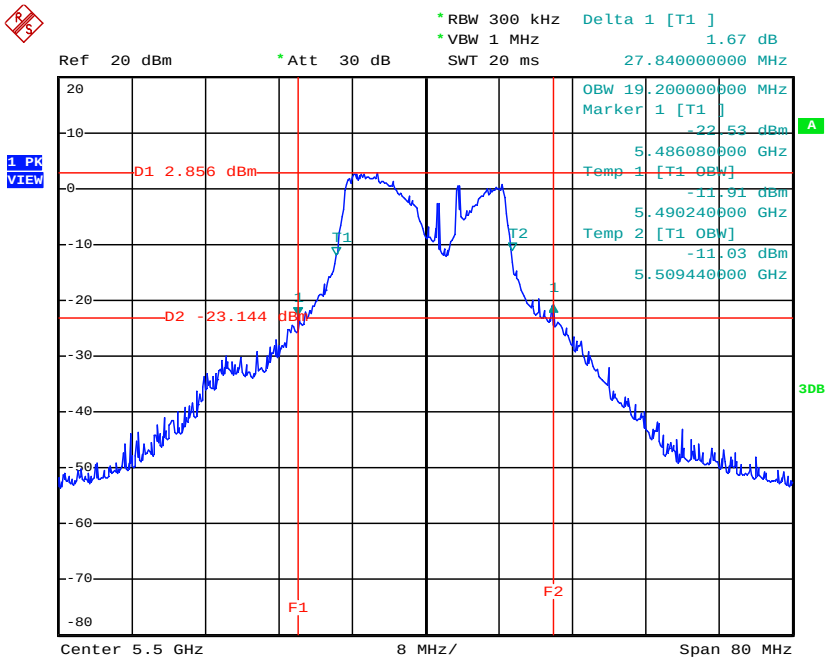
Date: 11.JUL.2012 15:14:19

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz / 5320 MHz / ANT. 1+2 (2TX)



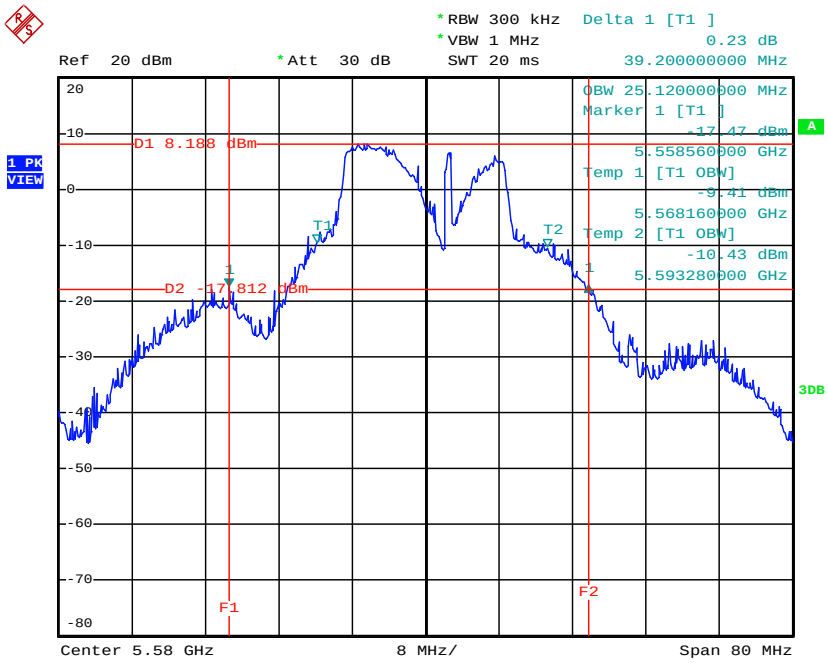
Date: 11.JUL.2012 15:13:59

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz / 5500 MHz / ANT. 1+2 (2TX)



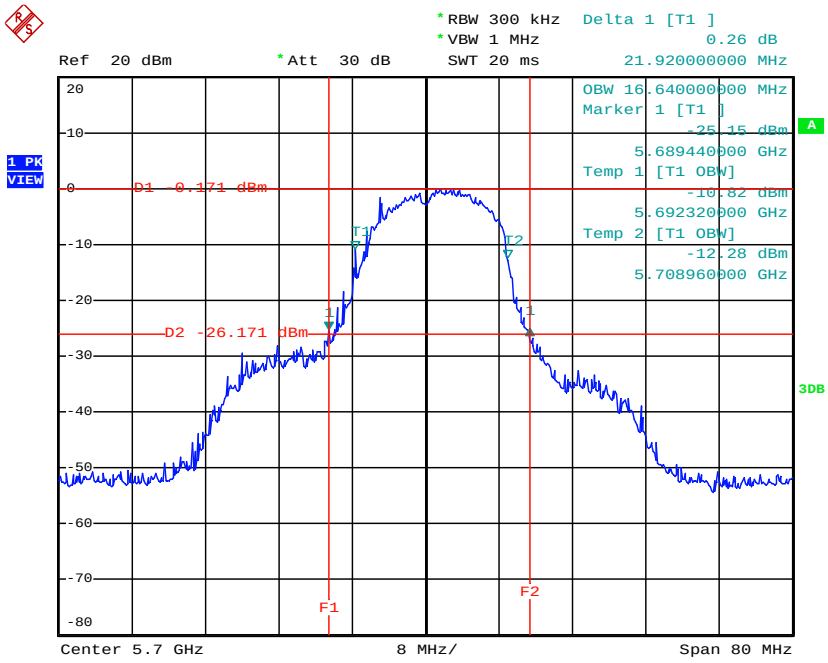
Date: 11.JUL.2012 15:13:38

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz / 5580 MHz / ANT. 1+2 (2TX)



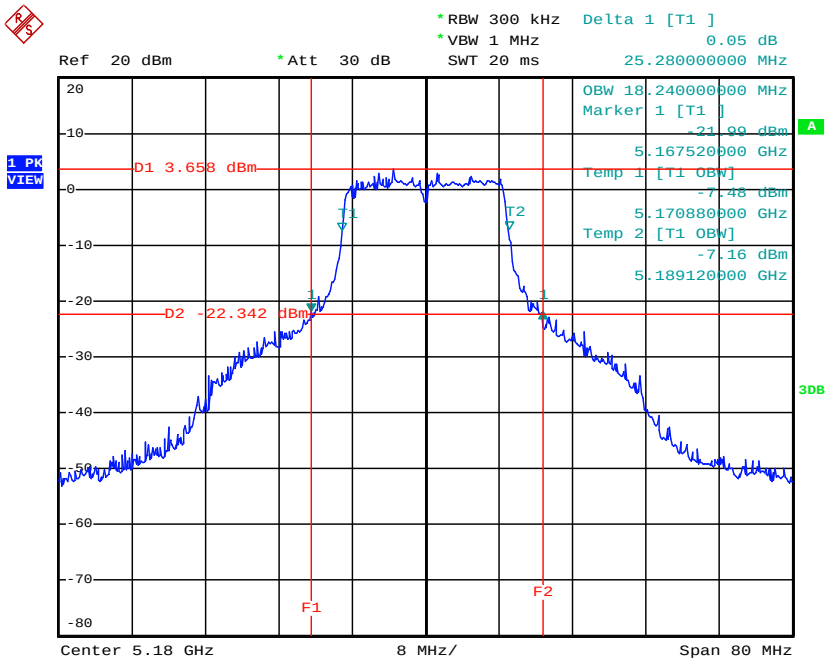
Date: 11.JUL.2012 15:13:20

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MH / 5700 MHz / ANT. 1+2 (2TX)



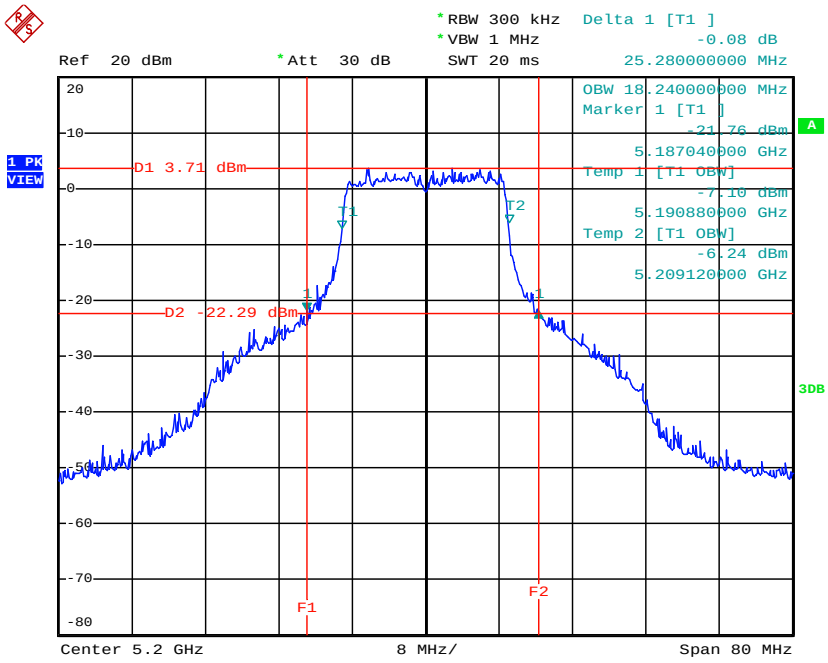
Date: 11.JUL.2012 15:13:01

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 20MHz / 5180 MHz / ANT. 1+2 (2TX)



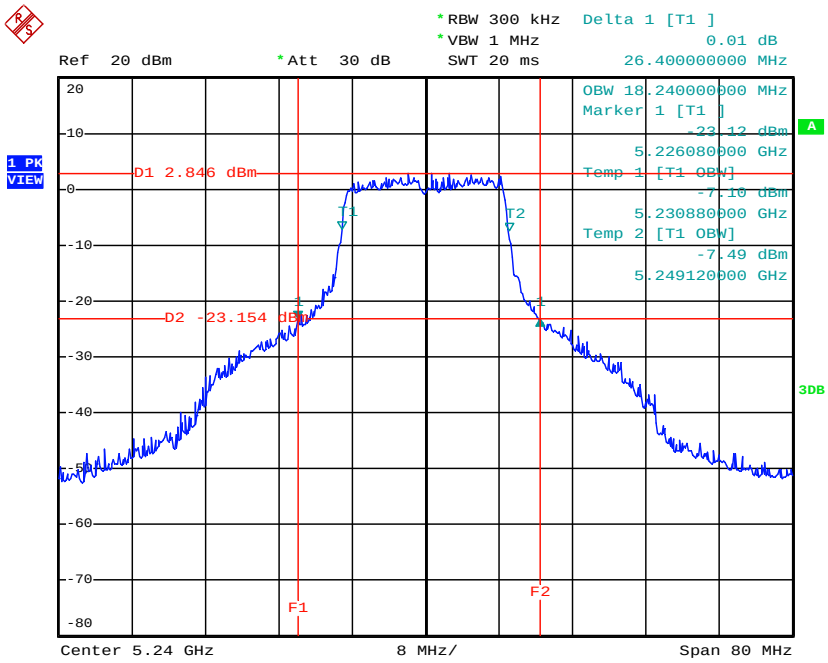
Date: 11.JUL.2012 15:07:59

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 20MHz / 5200 MHz / ANT. 1+2 (2TX)



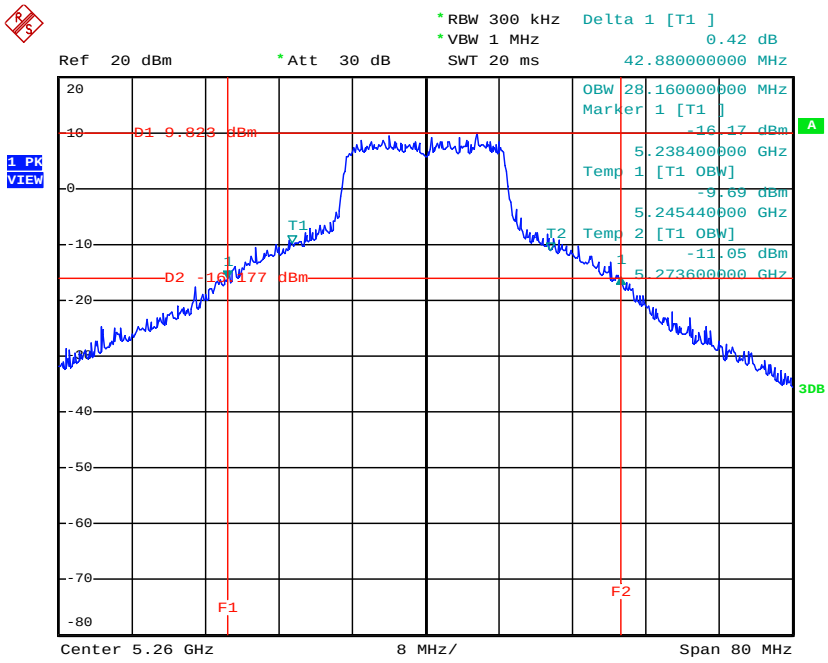
Date: 11.JUL.2012 15:09:04

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 20MHz / 5240 MHz / ANT. 1+2 (2TX)



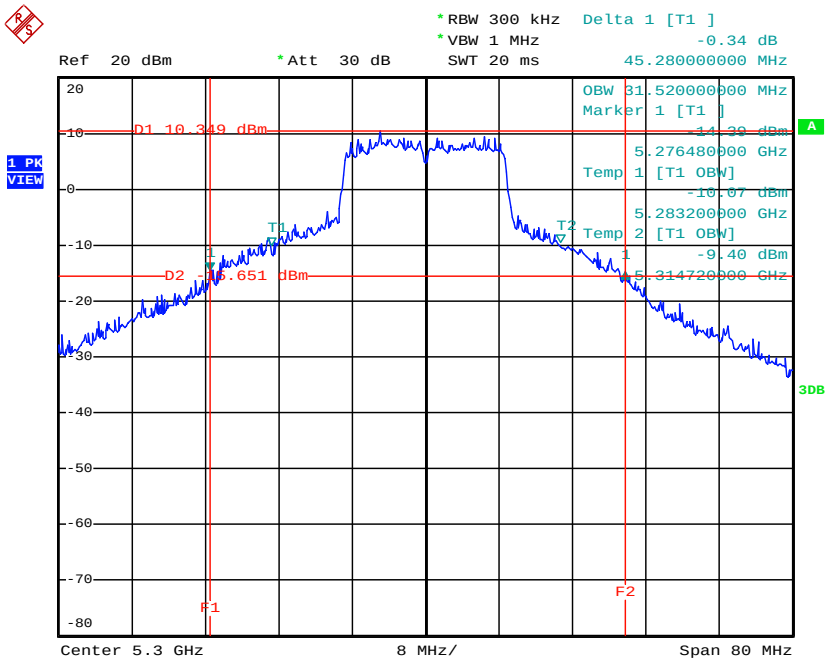
Date: 11.JUL.2012 15:09:29

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 20MHz / 5260 MHz / ANT. 1+2 (2TX)



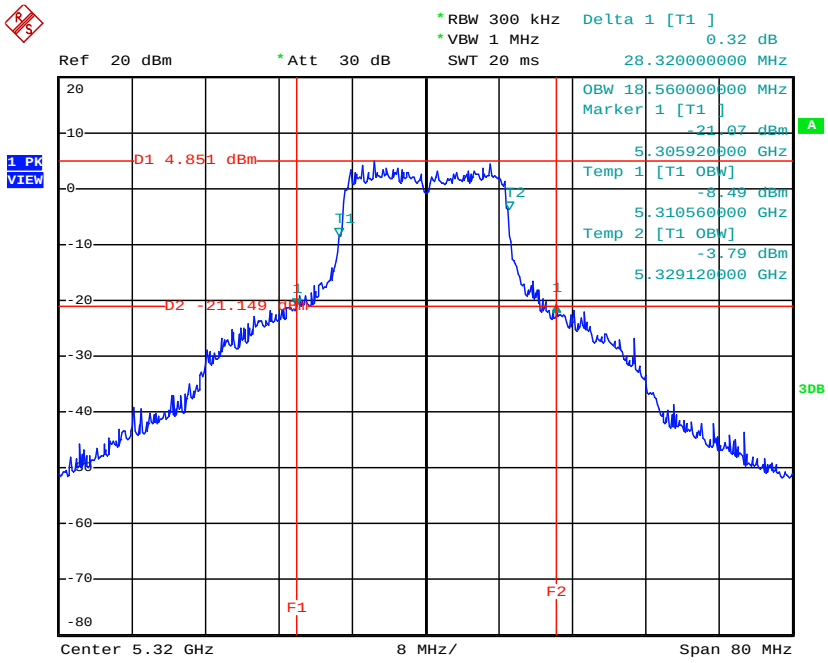
Date: 11.JUL.2012 15:10:07

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 20MHz / 5300 MHz / ANT. 1+2 (2TX)



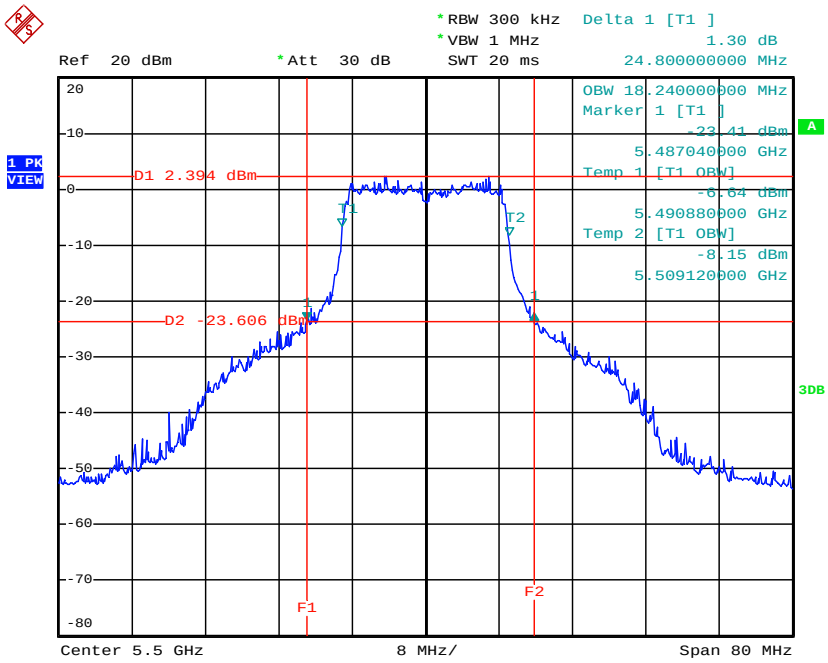
Date: 11.JUL.2012 15:10:30

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 20MHz / 5320 MHz / ANT. 1+2 (2TX)



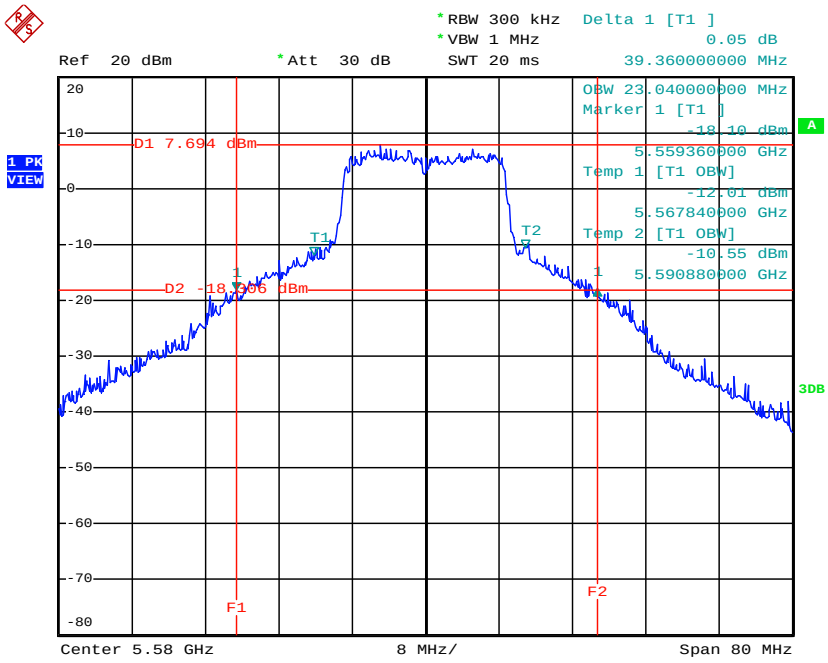
Date: 11.JUL.2012 15:10:57

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 20MHz / 5500 MHz / ANT. 1+2 (2TX)



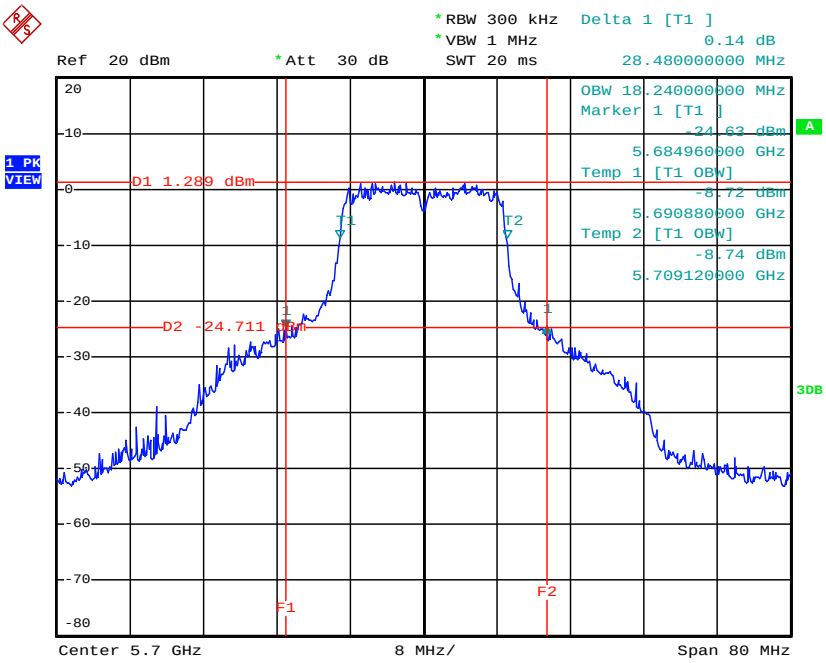
Date: 11.JUL.2012 15:11:38

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 20MHz / 5580 MHz / ANT. 1+2 (2TX)



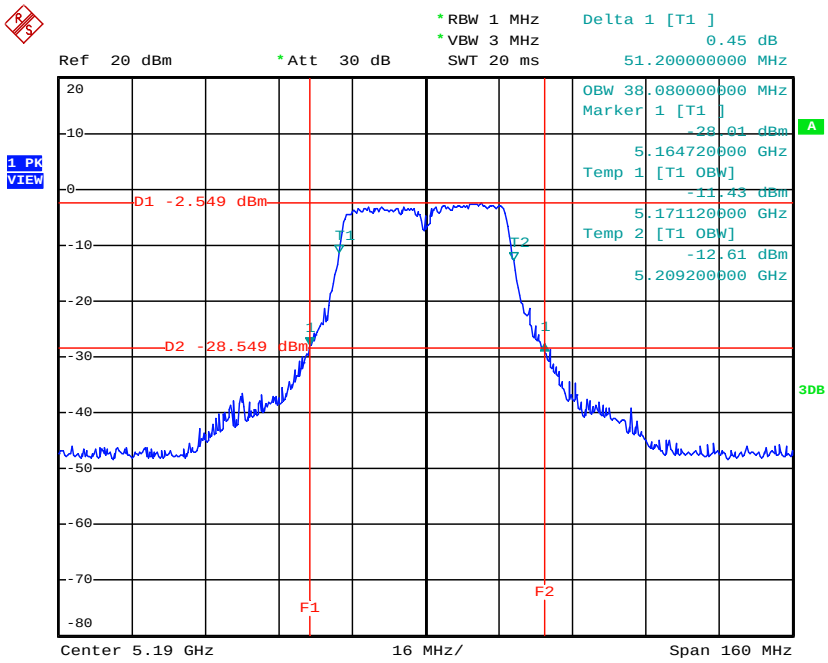
Date: 11.JUL.2012 15:12:08

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 20MH / 5700 MHz / ANT. 1+2 (2TX)



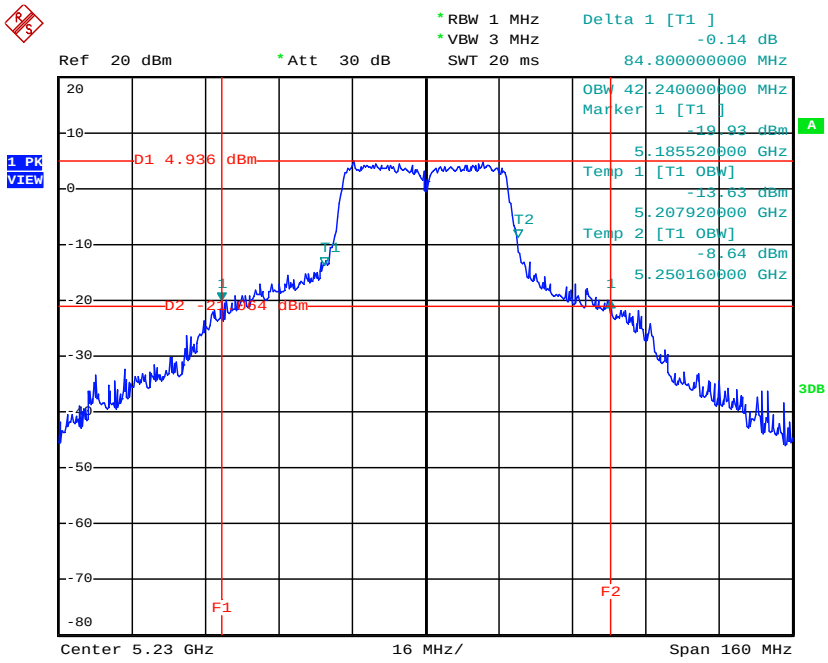
Date: 11.JUL.2012 15:12:34

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz / 5190 MHz / ANT. 1 (1TX)



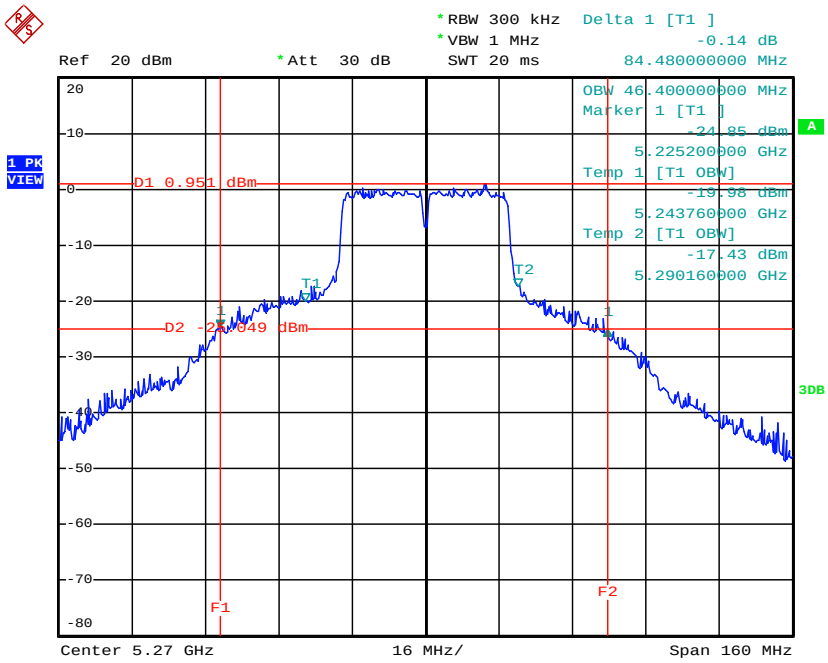
Date: 11.JUL.2012 15:26:46

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz / 5230 MHz / ANT. 1 (1TX)



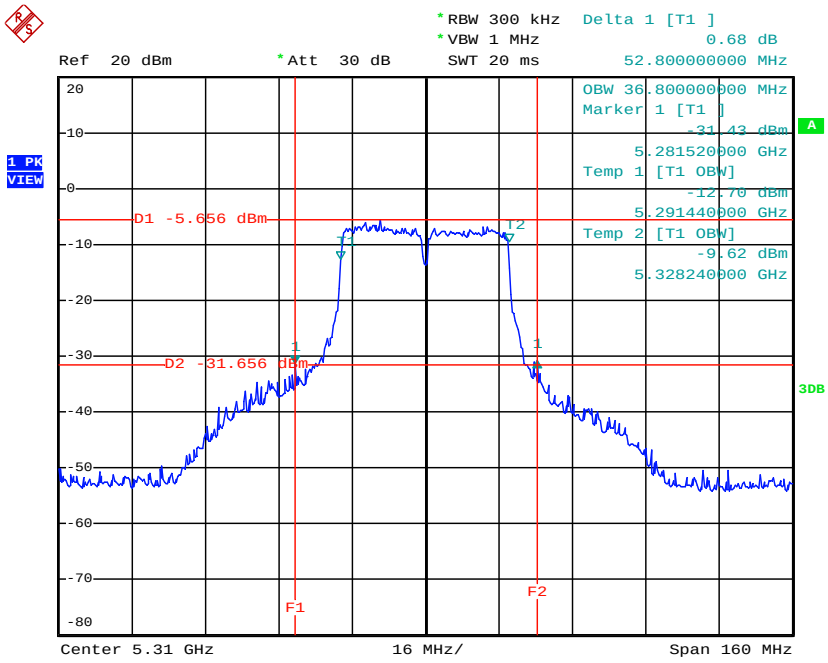
Date: 11.JUL.2012 15:27:18

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz / 5270 MHz / ANT. 1 (1TX)



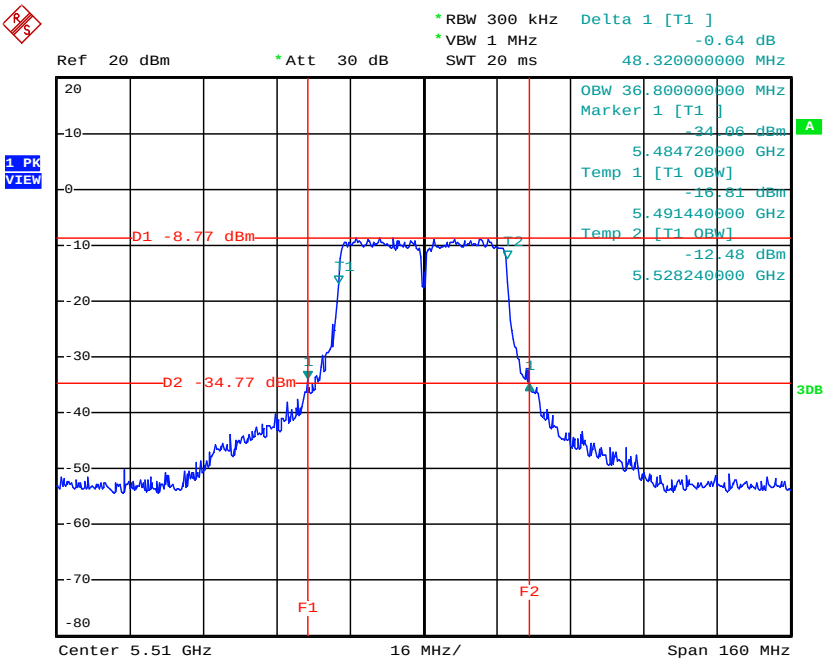
Date: 11.JUL.2012 15:27:54

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz / 5310 MHz / ANT. 1 (1TX)



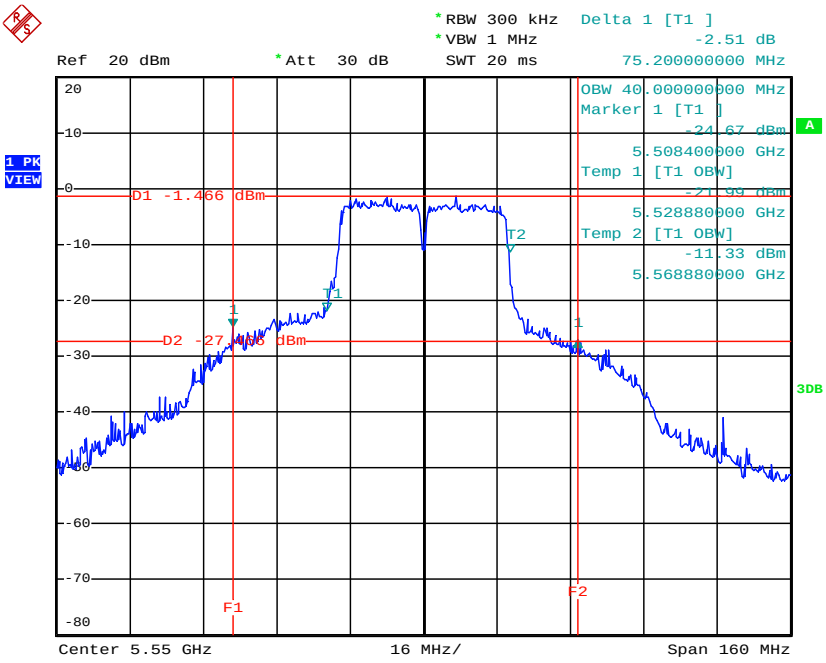
Date: 11.JUL.2012 15:28:38

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz / 5510MHz / ANT. 1 (1TX)



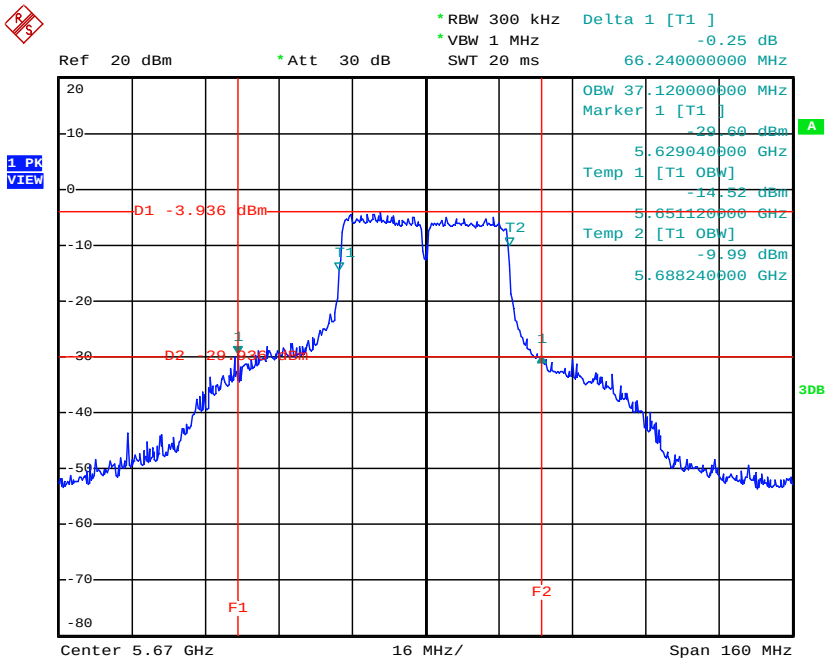
Date: 11.JUL.2012 15:29:04

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz / 5550 MHz / ANT. 1 (1TX)



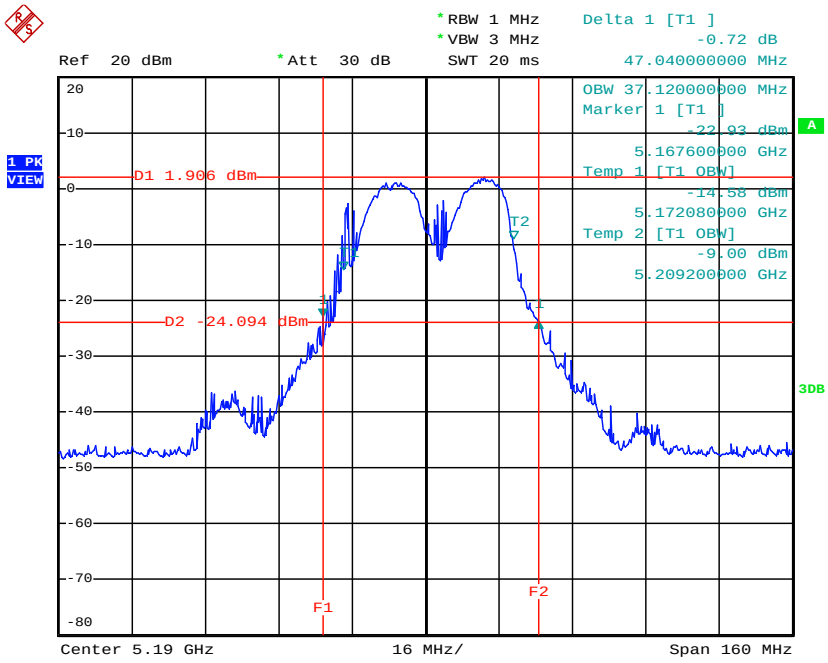
Date: 11.JUL.2012 15:29:41

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz / 5670 MHz / ANT. 1 (1TX)



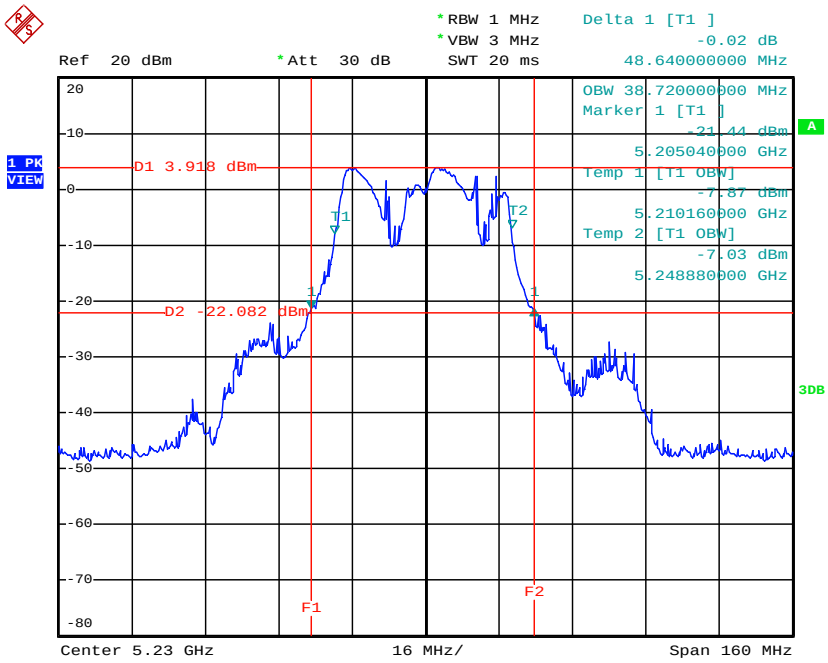
Date: 11.JUL.2012 15:30:15

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz / 5190 MHz / ANT. 1+2 (2TX)



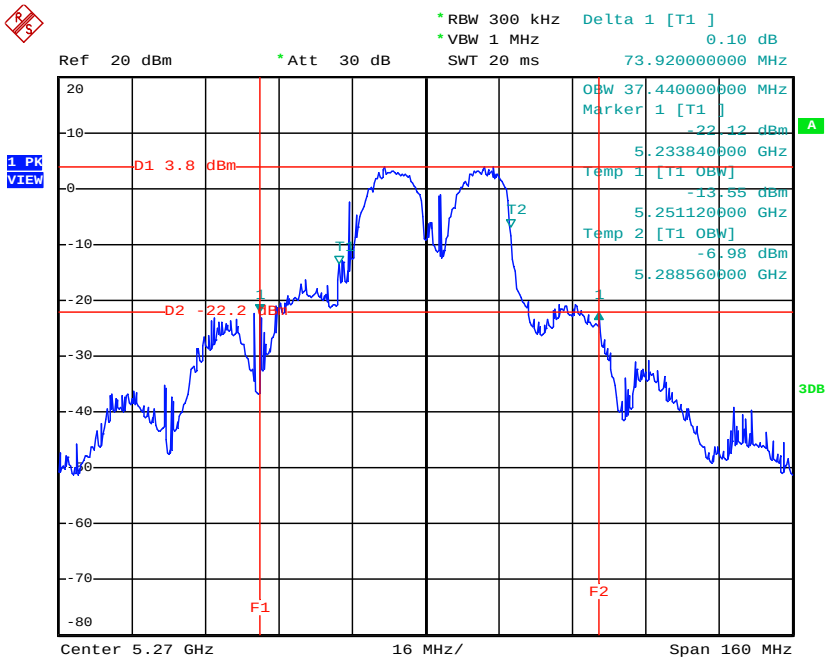
Date: 11.JUL.2012 15:18:29

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz / 5230 MHz / ANT. 1+2 (2TX)



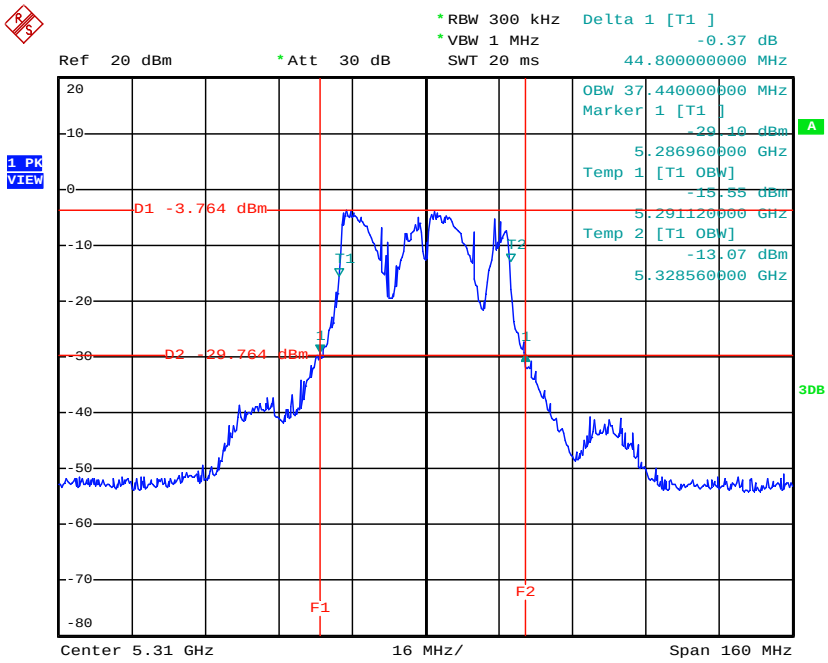
Date: 11.JUL.2012 15:18:50

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz / 5270 MHz / ANT. 1+2 (2TX)



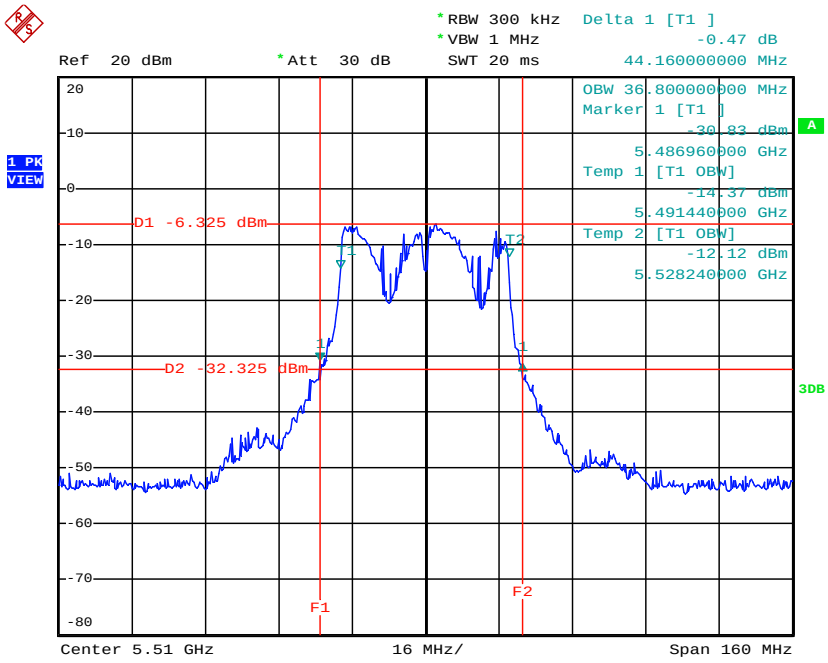
Date: 11.JUL.2012 15:19:21

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz / 5310 MHz / ANT. 1+2 (2TX)



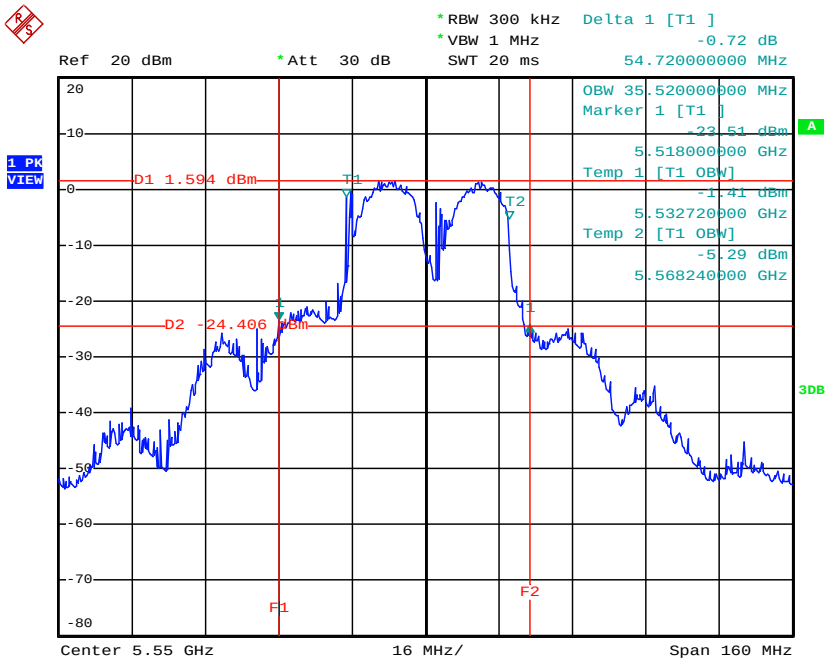
Date: 11.JUL.2012 15:19:47

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz / 5510MHz / ANT. 1+2 (2TX)



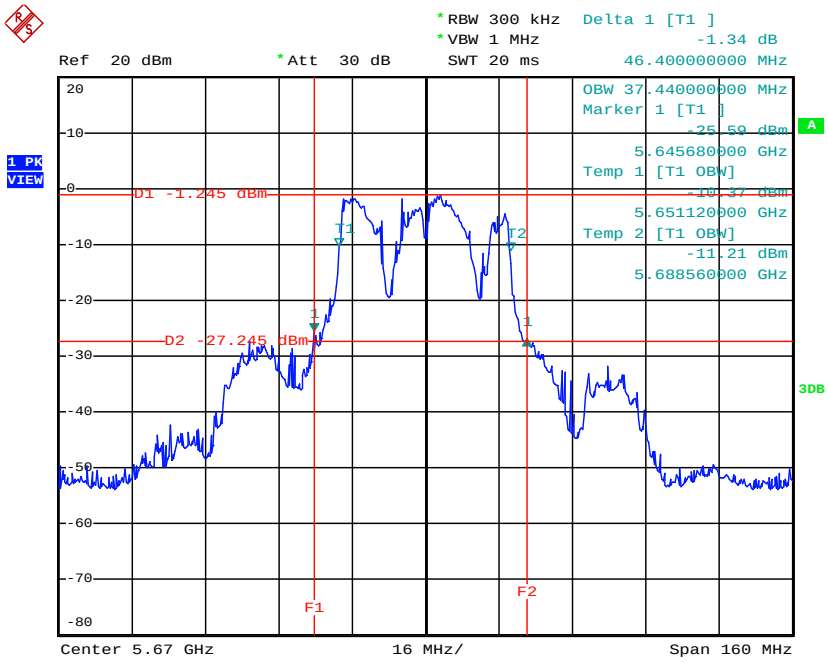
Date: 11.JUL.2012 15:20:09

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz / 5550 MHz / ANT. 1+2 (2TX)



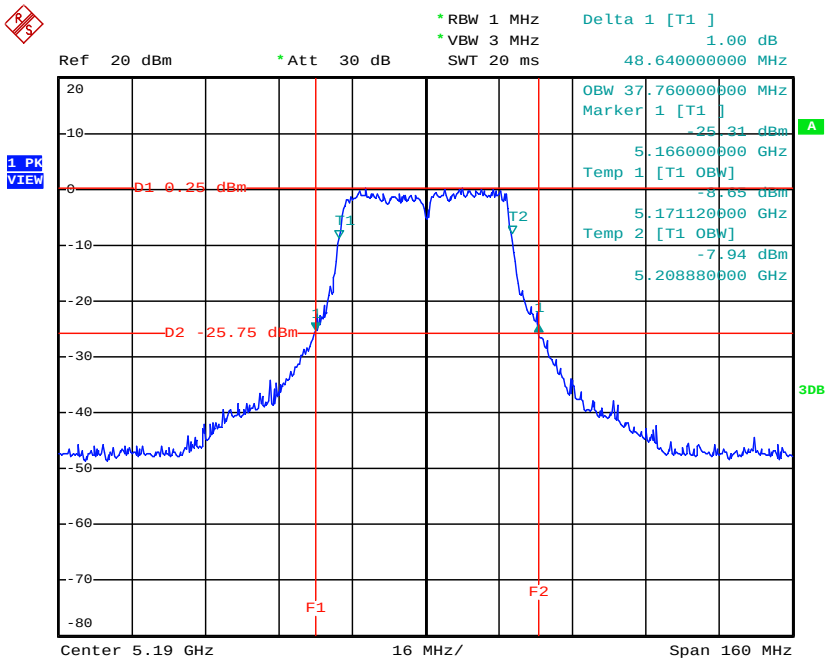
Date: 11.JUL.2012 15:20:28

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz / 5670 MHz / ANT. 1+2 (2TX)



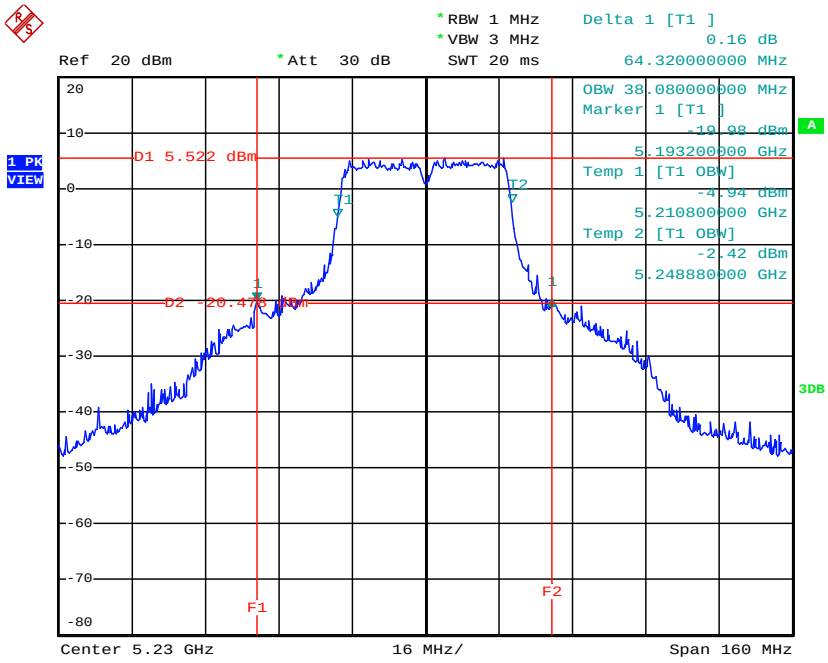
Date: 11.JUL.2012 15:20:49

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 40MHz / 5190 MHz / ANT. 1+2 (2TX)



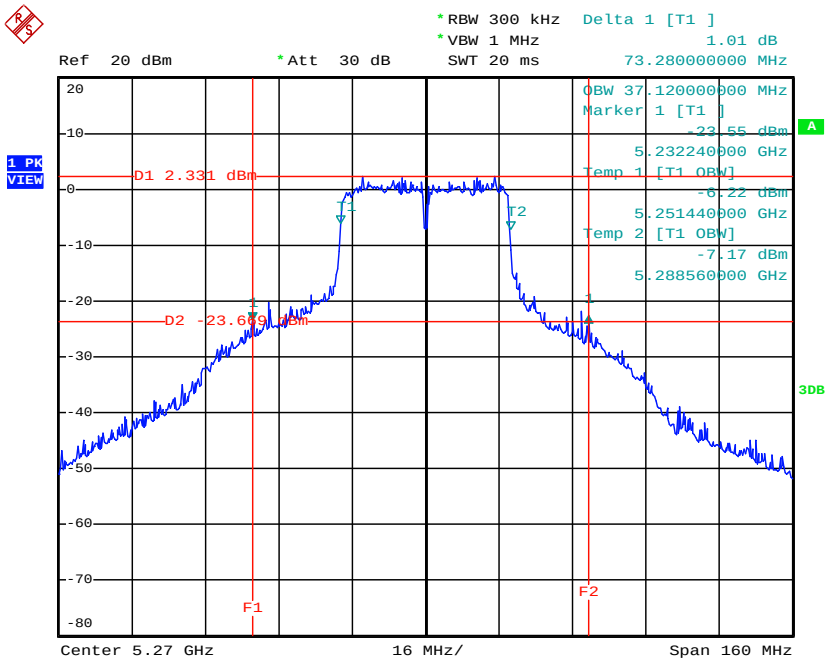
Date: 11.JUL.2012 15:23:23

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 40MHz / 5230 MHz / ANT. 1+2 (2TX)



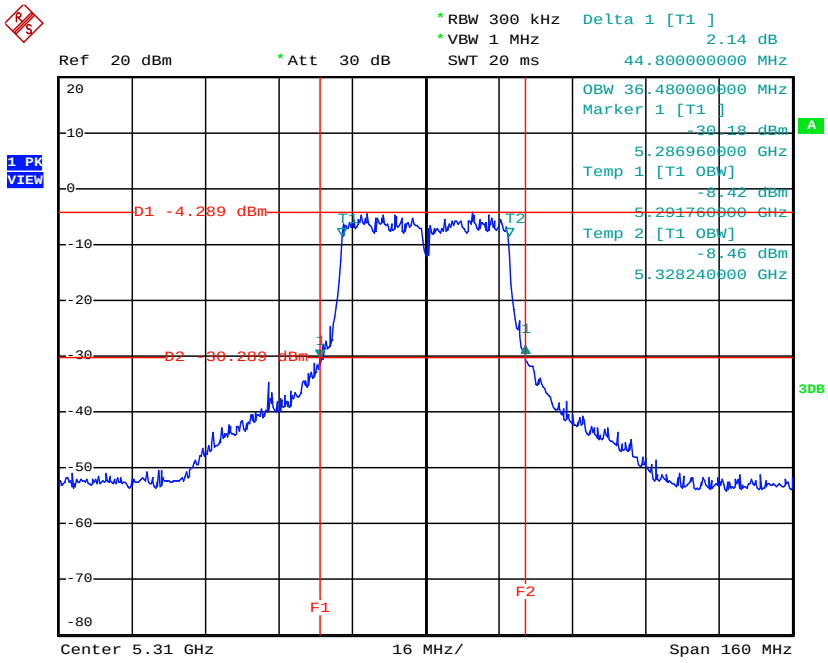
Date: 11.JUL.2012 15:23:05

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 40MHz / 5270 MHz / ANT. 1+2 (2TX)



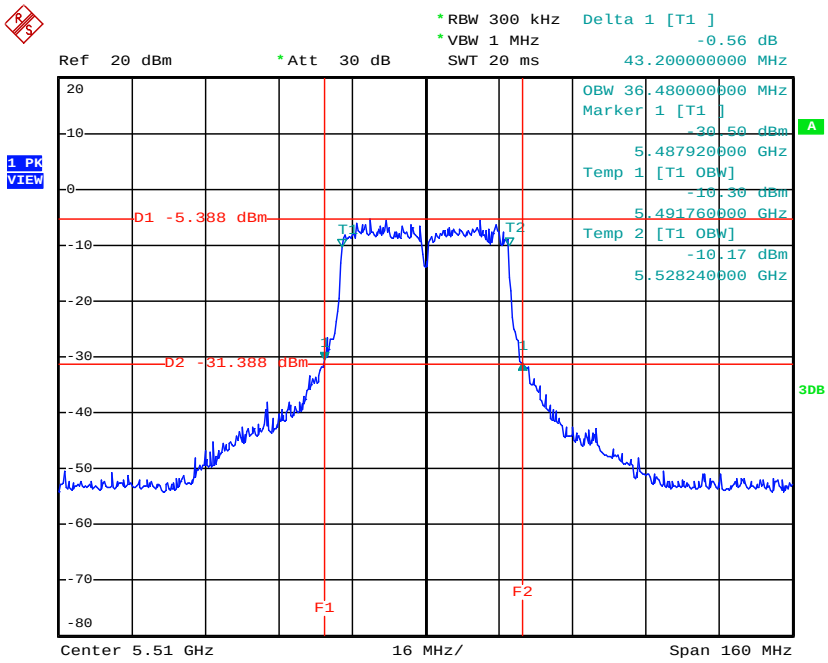
Date: 11.JUL.2012 15:22:43

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 40MHz / 5310 MHz / ANT. 1+2 (2TX)



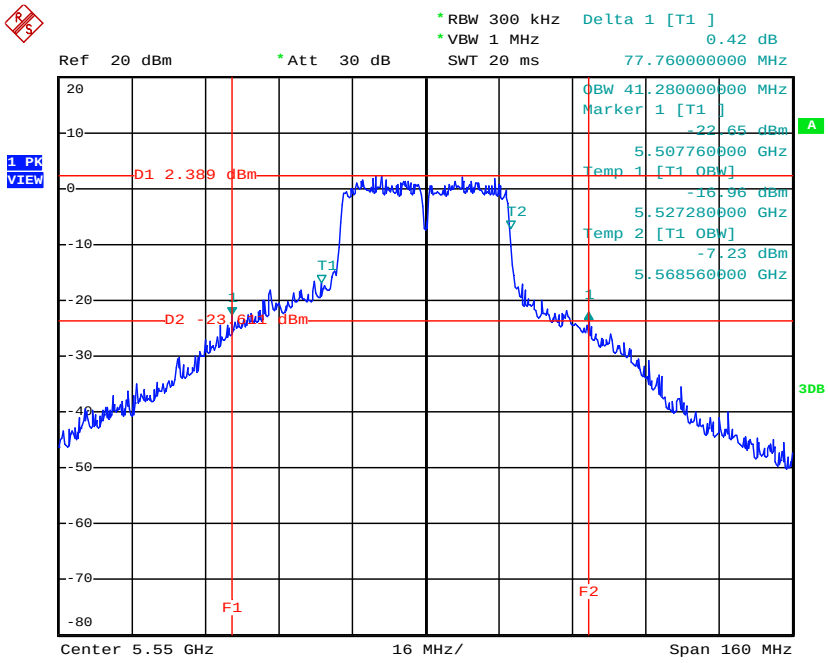
Date: 11.JUL.2012 15:22:11

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 40MHz / 5510MHz / ANT. 1+2 (2TX)



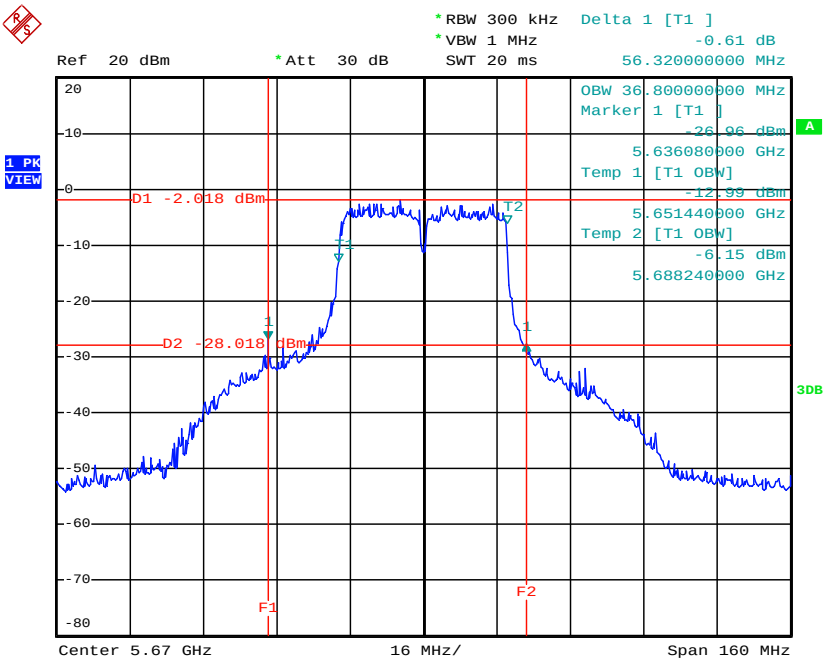
Date: 11.JUL.2012 15:21:51

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 40MHz / 5550 MHz / ANT. 1+2 (2TX)



Date: 11.JUL.2012 15:21:32

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 40MHz / 5670 MHz / ANT. 1+2 (2TX)



Date: 11.JUL.2012 15:21:09

4.3. Maximum Conducted Output Power Measurement

4.3.1. Limit

For the band 5.15~5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 50 mW (17dBm) or 4 dBm + 10log B, where B is the 26 dB emissions bandwidth in MHz. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

4.3.2. Measuring Instruments and Setting

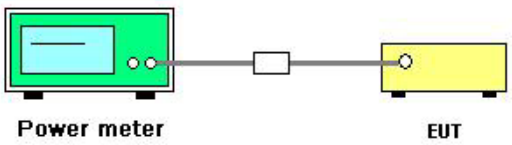
Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	Use power meter Encompass the entire emissions bandwidth (EBW) of the signal
RB	1000 kHz
VB	3000 kHz
Detector	RMS
Trace	Average Sweep count 100
Sweep Time	Auto

4.3.3. Test Procedures

Spectrum Parameter	Setting
RF Output Power Method	☒ ANSI C63.10 clause 6.10.2.1 (a) power meter method
RF Output Power Method	☐ ANSI C63.10 clause 6.10.2.1 (b) channel integration method
RF Output Power Method	☐ ANSI C63.10 clause 6.10.3.1 Method 1 - spectral trace averaging
RF Output Power Method	☐ ANSI C63.10 clause 6.10.3.2 Method 2 - zero-span mode with trace averaging

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 Maximum Conducted Output Power

Temperature	25℃	Humidity	60%
Test Engineer	Denis Su	Configurations	IEEE 802.11n

Configuration IEEE 802.11n MCS0 20MHz

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
		Ant. 1		
36	5180 MHz	13.57	17.00	**Complies**
40	5200 MHz	16.68	17.00	**Complies**
48	5240 MHz	16.48	17.00	**Complies**
52	5260 MHz	17.60	24.00	**Complies**
60	5300 MHz	17.88	24.00	**Complies**
64	5320 MHz	16.89	24.00	**Complies**
100	5500 MHz	13.66	24.00	**Complies**
116	5580 MHz	17.72	24.00	**Complies**
140	5700 MHz	12.35	24.00	**Complies**

Configuration IEEE 802.11n MCS0 20MHz

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Ant. 1	Ant. 2			
36	5180 MHz	11.60	10.36	14.03	14.31	**Complies**
40	5200 MHz	11.15	10.60	13.89	14.31	**Complies**
48	5240 MHz	10.41	11.08	13.77	14.31	**Complies**
52	5260 MHz	16.50	18.78	20.80	21.31	**Complies**
60	5300 MHz	14.99	14.43	17.73	21.31	**Complies**
64	5320 MHz	14.49	13.54	17.05	21.31	**Complies**
100	5500 MHz	13.22	11.31	15.38	21.31	**Complies**
116	5580 MHz	17.52	17.77	20.66	21.31	**Complies**
140	5700 MHz	9.89	9.43	12.68	21.31	**Complies**

Note: $\text{Directional gain} = 10\log[(10^{G1/20} + 10^{G2/20} + \ldots + 10^{GN/20})^2/N]\ \text{dBi}$ =8.69dBi > 6dBi , so the conducted power limit =(17 or 4+10log B)-(8.69dBi-6)=14.31dBm.

$\text{Directional gain} = 10\log[(10^{G1/20} + 10^{G2/20} + \ldots + 10^{GN/20})^2/N]\ \text{dBi}$ =8.69dBi > 6dBi , so the conducted power limit =(24 or 11+10log B)-(8.69dBi-6)=21.31dBm.

Configuration IEEE 802.11n MCS8 20MHz

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Ant. 1	Ant. 2			
36	5180 MHz	13.85	12.90	16.41	17.00	**Complies**
40	5200 MHz	13.66	13.38	16.53	17.00	**Complies**
48	5240 MHz	12.86	13.89	16.42	17.00	**Complies**
52	5260 MHz	19.54	18.82	22.21	24.00	**Complies**
60	5300 MHz	18.28	19.27	21.81	24.00	**Complies**
64	5320 MHz	15.01	13.95	17.52	24.00	**Complies**
100	5500 MHz	13.20	11.30	15.36	24.00	**Complies**
116	5580 MHz	17.55	17.79	20.68	24.00	**Complies**
140	5700 MHz	13.30	10.95	15.29	24.00	**Complies**

Configuration IEEE 802.11n MCS0 40MHz

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
		Ant. 1		
38	5190 MHz	9.09	17.00	**Complies**
46	5230 MHz	16.50	17.00	**Complies**
54	5270 MHz	17.37	24.00	**Complies**
62	5310 MHz	11.22	24.00	**Complies**
102	5510MHz	8.82	24.00	**Complies**
110	5550 MHz	15.08	24.00	**Complies**
134	5670 MHz	13.07	24.00	**Complies**

Configuration IEEE 802.11n MCS0 40MHz

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Ant. 1	Ant. 2			
38	5190 MHz	8.42	6.85	10.72	14.31	**Complies**
46	5230 MHz	10.88	10.74	13.82	14.31	**Complies**
54	5270 MHz	15.49	16.10	18.82	21.31	**Complies**
62	5310 MHz	8.99	8.14	11.60	21.31	**Complies**
102	5510MHz	7.37	5.24	9.44	21.31	**Complies**
110	5550 MHz	13.72	13.02	16.39	21.31	**Complies**
134	5670 MHz	11.40	12.00	14.72	21.31	**Complies**

Note: $\text{Directional gain} = 10\log[(10^{G1/20} + 10^{G2/20} + \ldots + 10^{GN/20})^2/N]\ \text{dBi}$ =8.69dBi > 6dBi , so the conducted power limit =(17 or 4+10log B)-(8.69dBi-6)=14.31dBm.

$\text{Directional gain} = 10\log[(10^{G1/20} + 10^{G2/20} + \ldots + 10^{GN/20})^2/N]\ \text{dBi}$ =8.69dBi > 6dBi , so the conducted power limit =(24 or 11+10log B)-(8.69dBi-6)=21.31dBm.

Configuration IEEE 802.11n MCS8 40MHz

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Ant. 1	Ant. 2			
38	5190 MHz	9.02	6.95	11.12	17.00	**Complies**
46	5230 MHz	13.48	13.68	16.59	17.00	**Complies**
54	5270 MHz	14.95	15.73	18.37	24.00	**Complies**
62	5310 MHz	9.40	8.56	12.01	24.00	**Complies**
102	5510MHz	8.32	6.10	10.36	24.00	**Complies**
110	5550 MHz	16.23	14.11	18.31	24.00	**Complies**
134	5670 MHz	11.30	12.00	14.67	24.00	**Complies**

Temperature	25℃	Humidity	60%
Test Engineer	Denis Su	Configurations	IEEE 802.11a

Configuration IEEE 802.11a

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
		Ant. 1		
36	5180 MHz	14.02	17.00	**Complies**
40	5200 MHz	16.76	17.00	**Complies**
48	5240 MHz	16.51	17.00	**Complies**
52	5260 MHz	17.76	24.00	**Complies**
60	5300 MHz	18.02	24.00	**Complies**
64	5320 MHz	17.18	24.00	**Complies**
100	5500 MHz	13.50	24.00	**Complies**
116	5580 MHz	17.41	24.00	**Complies**
140	5700 MHz	12.95	24.00	**Complies**

Configuration IEEE 802.11a

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Ant. 1	Ant. 2			
36	5180 MHz	11.34	10.23	13.83	14.31	**Complies**
40	5200 MHz	11.06	10.60	13.85	14.31	**Complies**
48	5240 MHz	10.05	10.98	13.55	14.31	**Complies**
52	5260 MHz	16.36	18.72	20.71	21.31	**Complies**
60	5300 MHz	17.00	16.26	19.66	21.31	**Complies**
64	5320 MHz	14.98	13.84	17.46	21.31	**Complies**
100	5500 MHz	12.84	10.63	14.88	21.31	**Complies**
116	5580 MHz	17.50	17.42	20.47	21.31	**Complies**
140	5700 MHz	14.19	12.03	16.25	21.31	**Complies**

Note: $\text{Directional gain} = 10\log[(10^{G1/20} + 10^{G2/20} + \ldots + 10^{GN/20})^2/N]\ \text{dBi}$ =8.69dBi > 6dBi , so the conducted power limit =(17 or 4+10log B)-(8.69dBi-6)=14.31dBm.

$\text{Directional gain} = 10\log[(10^{G1/20} + 10^{G2/20} + \ldots + 10^{GN/20})^2/N]\ \text{dBi}$ =8.69dBi > 6dBi , so the conducted power limit =(24 or 11+10log B)-(8.69dBi-6)=21.31dBm.

4.4. Power Spectral Density Measurement

4.4.1. Limit

The power spectral density is defined as the highest level of power in dBm per MHz generated by the transmitter within the power envelope. The following table is power spectral density limits and decrease power density limit rule refer to section 4.3.1.

Frequency Range	Power Spectral Density limit (dBm/MHz)
5.15~5.25 GHz	4
5.25-5.35 GHz	11
5470-5725	11

4.4.2. Measuring Instruments and Setting

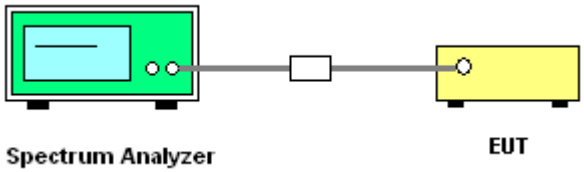
Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	Set the analyzer span to 5-30% greater than the EBW.
RB	100 kHz
VB	300 kHz
Detector	PEAK
Trace	MAX HOLD
Sweep Time	AUTO

4.4.3. Test Procedures

1. Use this procedure when the maximum conducted output power in the fundamental emission is used to demonstrate compliance. The EUT must be configured to transmit continuously at full power over the measurement duration.
2. Ensure that the number of measurement points in the sweep ≥ 2 x span/RBW (use of a greater number of measurement points than this minimum requirement is recommended).
3. Use the peak marker function to determine the maximum level in any 100 kHz band segment within the fundamental EBW.
4. Scale the observed power level to an equivalent level in 3 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where: BWCF = 10log (3 kHz/100 kHz = -15.2 dB).
5. The resulting PSD level must be ≤ 8 dBm.
6. When measuring power spectral density with multiple antenna systems, add every result of the values by mathematic formula.

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 Power Spectral Density

Temperature	25℃	Humidity	60%
Test Engineer	Denis Su	Configurations	IEEE 802.11n

Configuration IEEE 802.11n MCS0 20MHz

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180 MHz	-0.26	4.00	**Complies**
40	5200 MHz	3.06	4.00	**Complies**
48	5240 MHz	3.05	4.00	**Complies**
52	5260 MHz	4.20	11.00	**Complies**
60	5300 MHz	4.57	11.00	**Complies**
64	5320 MHz	3.26	11.00	**Complies**
100	5500 MHz	0.35	11.00	**Complies**
116	5580 MHz	5.18	11.00	**Complies**
140	5700 MHz	-1.68	11.00	**Complies**

Configuration IEEE 802.11n MCS0 20MHz

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180 MHz	1.01	1.31	**Complies**
40	5200 MHz	0.60	1.31	**Complies**
48	5240 MHz	0.87	1.31	**Complies**
52	5260 MHz	7.91	8.31	**Complies**
60	5300 MHz	4.82	8.31	**Complies**
64	5320 MHz	3.71	8.31	**Complies**
100	5500 MHz	2.06	8.31	**Complies**
116	5580 MHz	7.29	8.31	**Complies**
140	5700 MHz	-1.05	8.31	**Complies**

Note: $\text{Directional gain} = 10\log[(10^{G1/20} + 10^{G2/20} + \ldots + 10^{GN/20})^2/N]$ dBi =8.69dBi > 6dBi , so the band1 power density limit =4-(8.69dBi-6)=1.31dBm.

$\text{Directional gain} = 10\log[(10^{G1/20} + 10^{G2/20} + \ldots + 10^{GN/20})^2/N]$ dBi =8.69dBi > 6dBi , so the band2 and band3 power density limit =11-(8.69dBi-6)=8.31dBm.

Configuration IEEE 802.11n MCS8 20MHz

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180 MHz	3.17	4.00	**Complies**
40	5200 MHz	3.53	4.00	**Complies**
48	5240 MHz	3.45	4.00	**Complies**
52	5260 MHz	8.97	11.00	**Complies**
60	5300 MHz	9.70	11.00	**Complies**
64	5320 MHz	4.11	11.00	**Complies**
100	5500 MHz	2.25	11.00	**Complies**
116	5580 MHz	7.40	11.00	**Complies**
140	5700 MHz	0.45	11.00	**Complies**

Configuration IEEE 802.11n MCS0 40MHz

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
38	5190 MHz	-7.86	4.00	**Complies**
46	5230 MHz	-0.08	4.00	**Complies**
54	5270 MHz	1.14	11.00	**Complies**
62	5310 MHz	-4.95	11.00	**Complies**
102	5510MHz	-7.84	11.00	**Complies**
110	5550 MHz	-1.27	11.00	**Complies**
134	5670 MHz	-3.84	11.00	**Complies**

Configuration IEEE 802.11n MCS0 40MHz

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
38	5190 MHz	-5.34	1.31	**Complies**
46	5230 MHz	-2.27	1.31	**Complies**
54	5270 MHz	2.62	8.31	**Complies**
62	5310 MHz	-4.63	8.31	**Complies**
102	5510MHz	-6.77	8.31	**Complies**
110	5550 MHz	0.25	8.31	**Complies**
134	5670 MHz	-2.15	8.31	**Complies**

Note: $\text{Directional gain} = 10\log[(10^{G1/20} + 10^{G2/20} + \ldots + 10^{GN/20})^2/N]\ \text{dBi}$ =8.69dBi > 6dBi , so the band1 power density limit =4-(8.69dBi-6)=1.31dBm.

$\text{Directional gain} = 10\log[(10^{G1/20} + 10^{G2/20} + \ldots + 10^{GN/20})^2/N]\ \text{dBi}$ =8.69dBi > 6dBi , so the band2 and band3 power density limit =11-(8.69dBi-6)=8.31dBm.

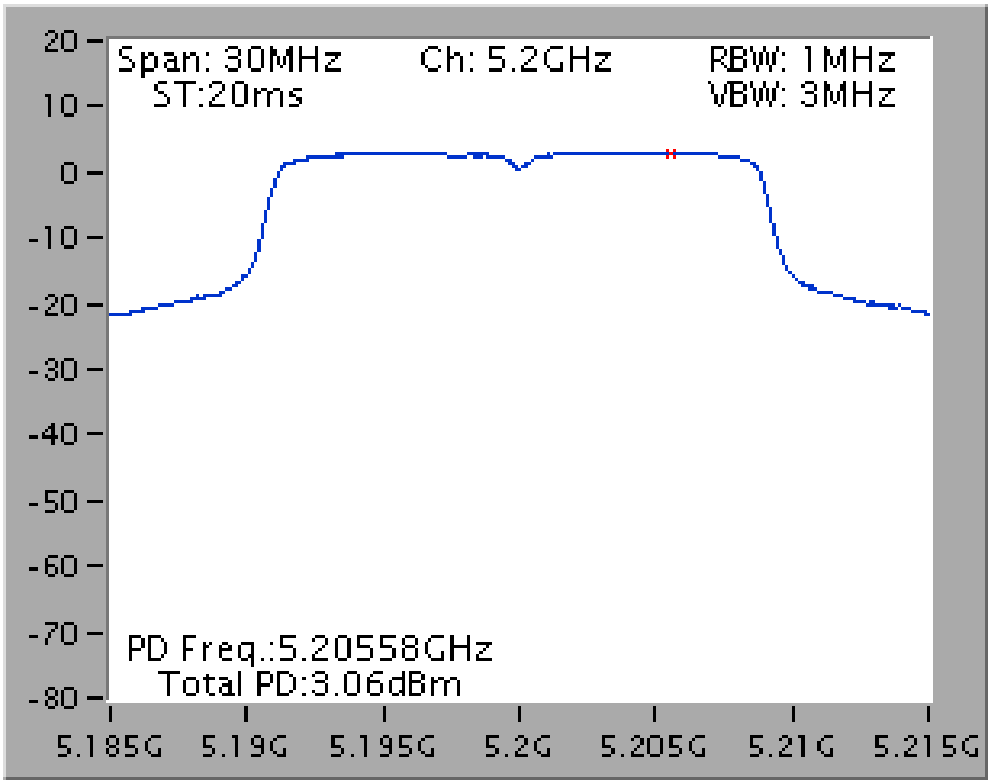
Configuration IEEE 802.11n MCS8 40MHz

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
38	5190 MHz	-5.16	4.00	**Complies**
46	5230 MHz	0.36	4.00	**Complies**
54	5270 MHz	2.31	11.00	**Complies**
62	5310 MHz	-4.13	11.00	**Complies**
102	5510MHz	-5.95	11.00	**Complies**
110	5550 MHz	2.31	11.00	**Complies**
134	5670 MHz	-2.09	11.00	**Complies**

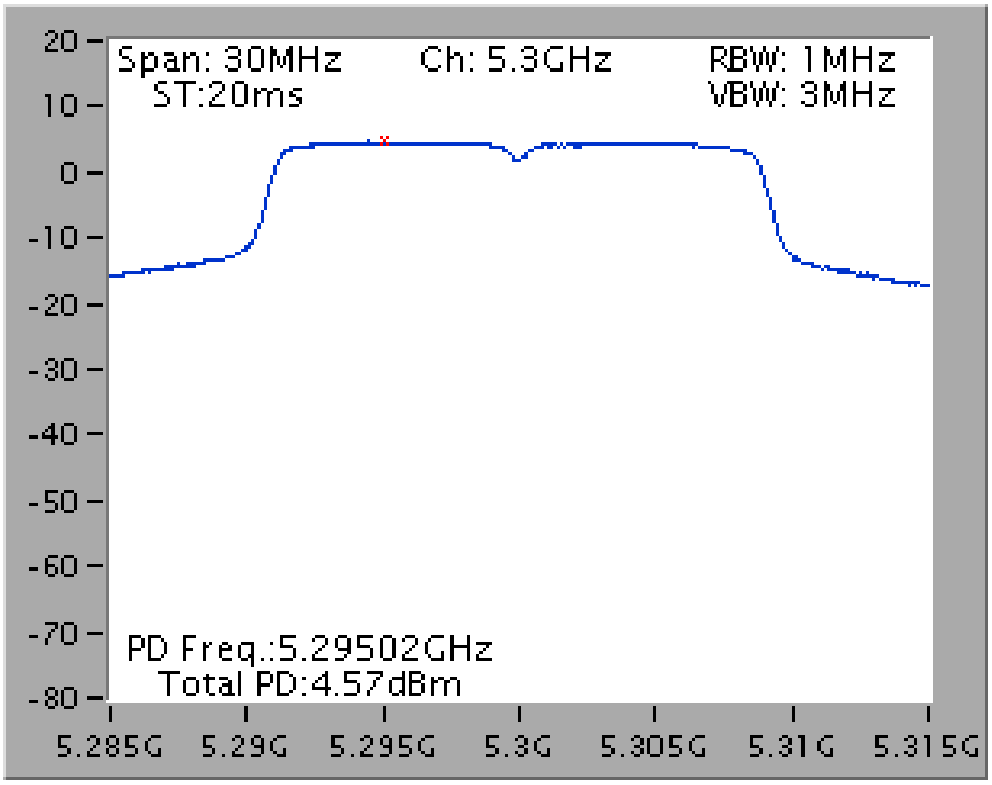
Note: All the test values were listed in the report.

For plots, only the channel with maximum results was shown.

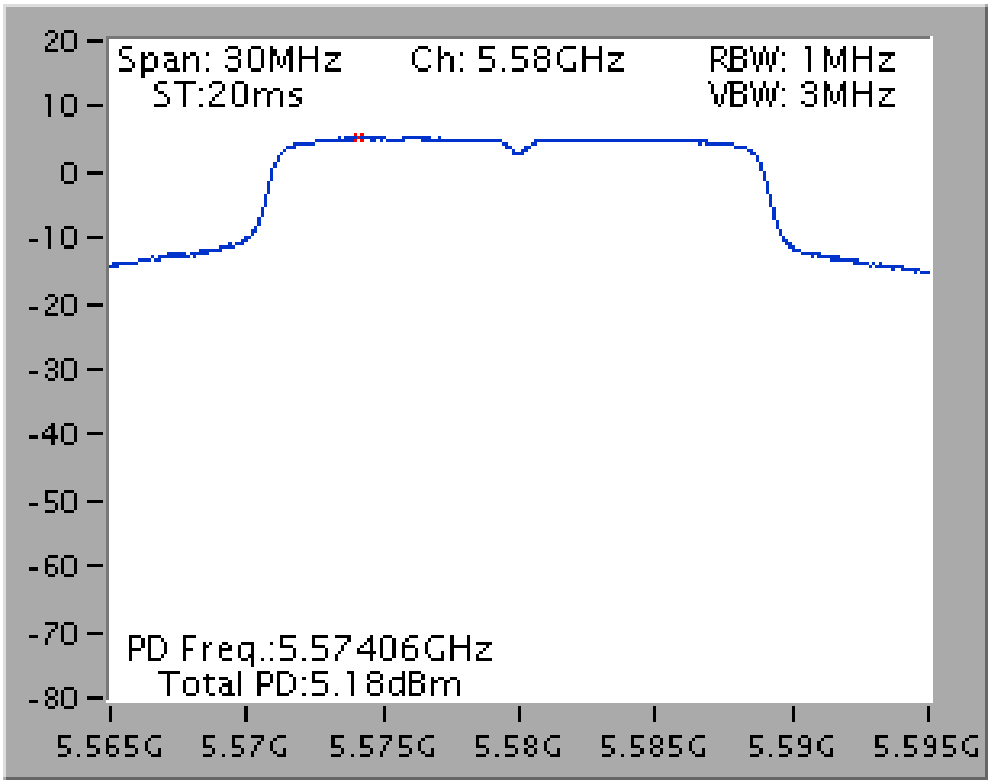
Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / 5200 MHz / ANT. 1 (1TX)



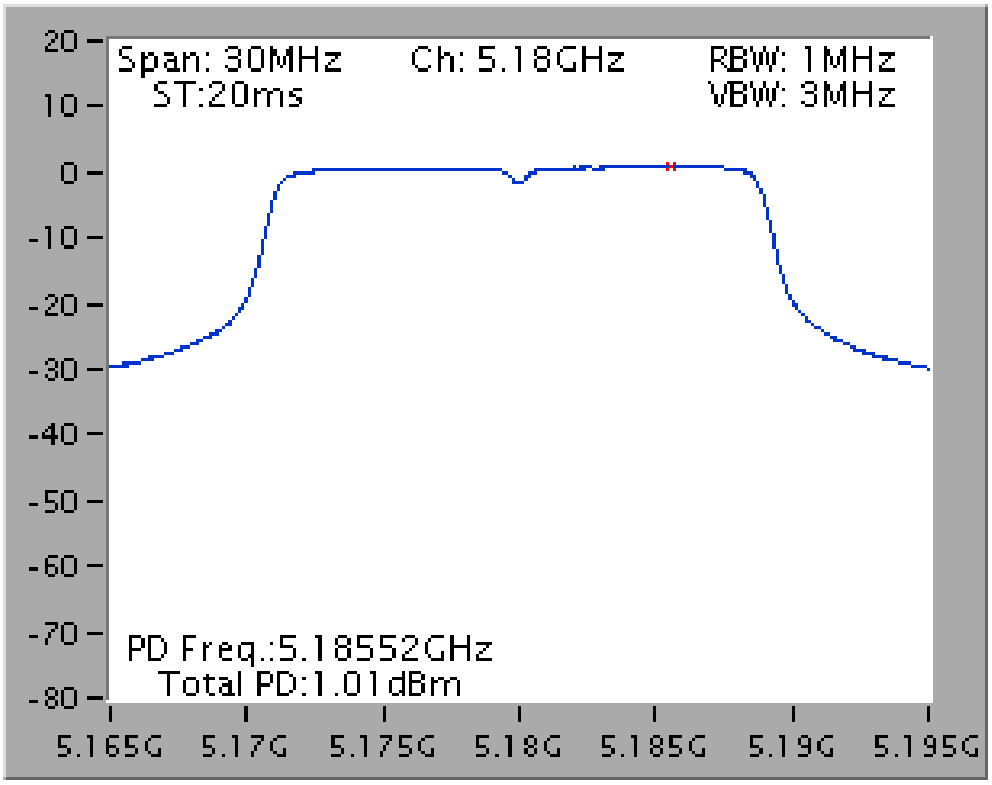
Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / 5300 MHz / ANT. 1 (1TX)



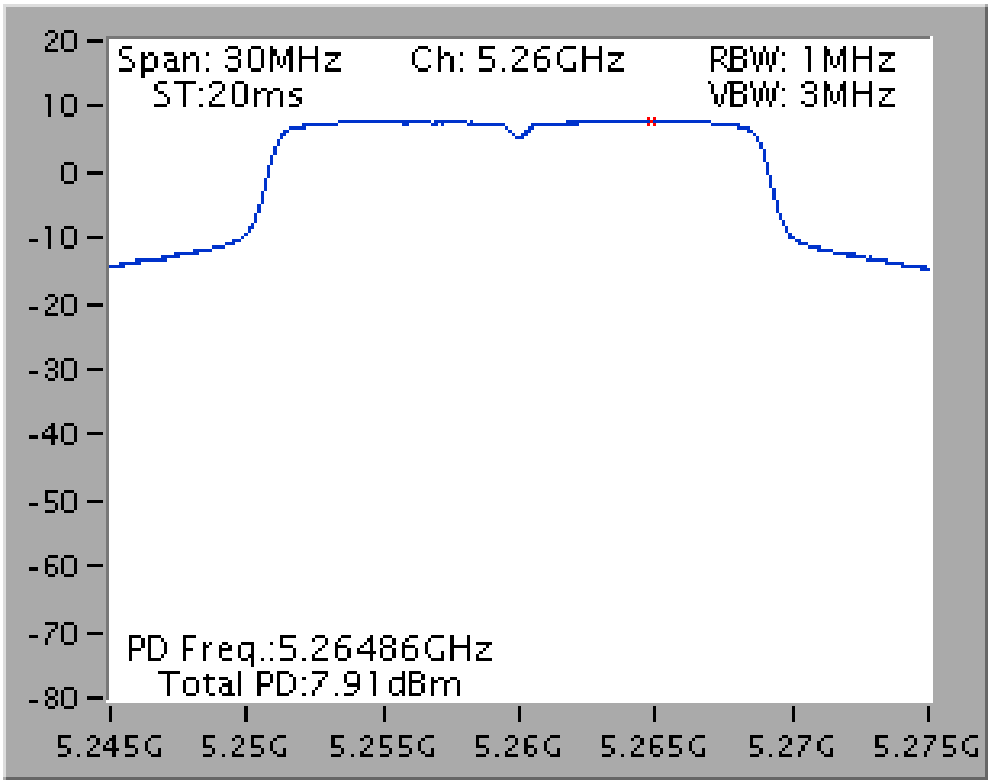
Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / 5580 MHz / ANT. 1 (1TX)



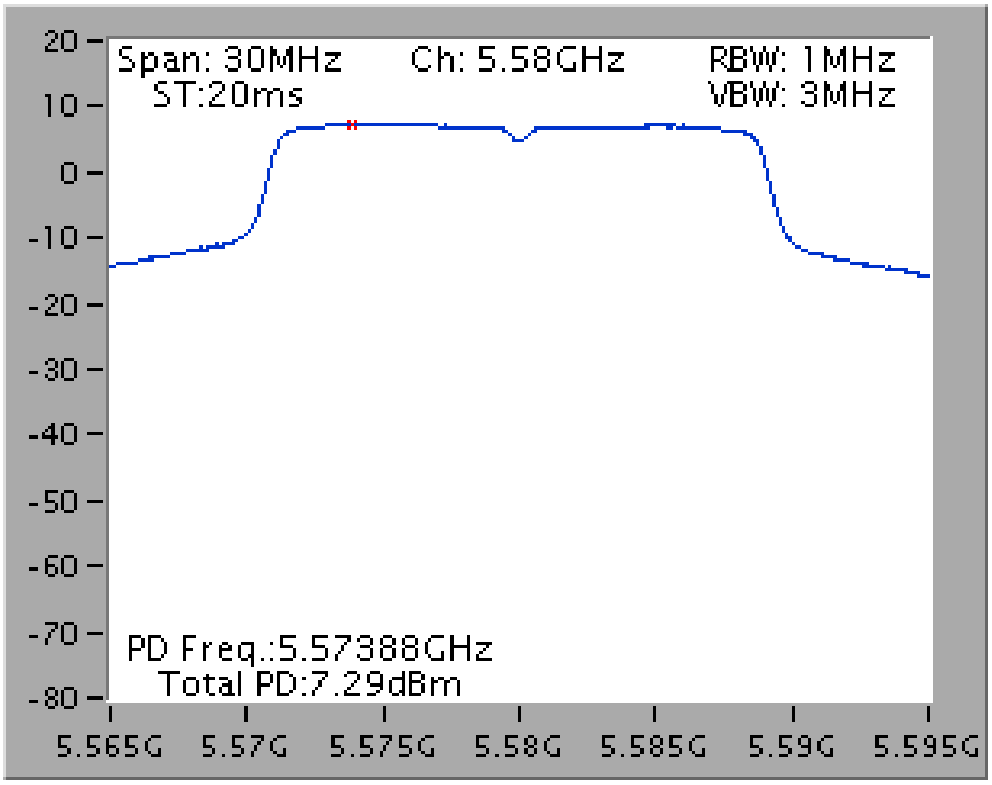
Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / 5180 MHz / ANT. 1+2 (2TX)



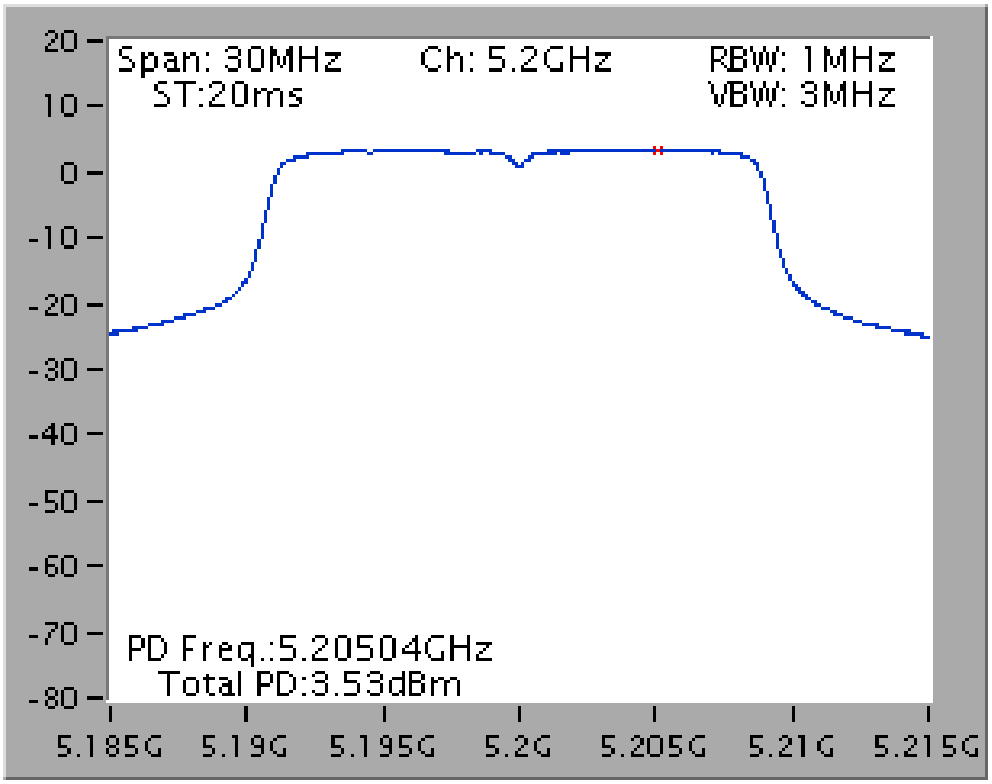
Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / 5260 MHz / ANT. 1+2 (2TX)



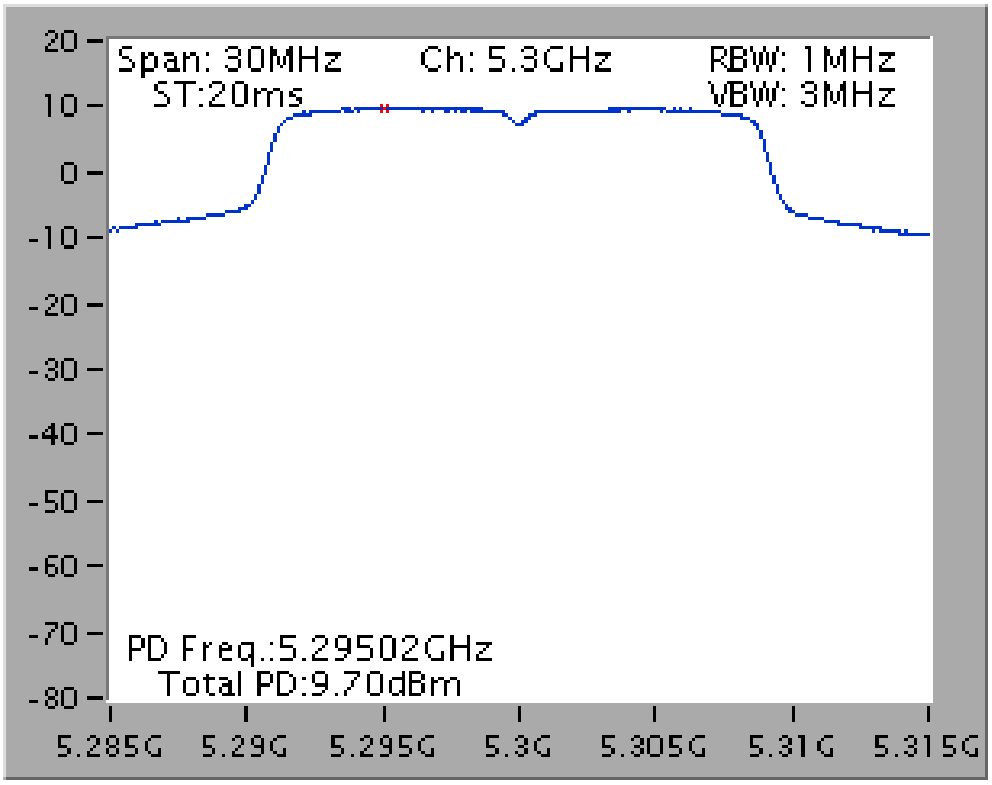
Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / 5580 MHz / ANT. 1+2 (2TX)



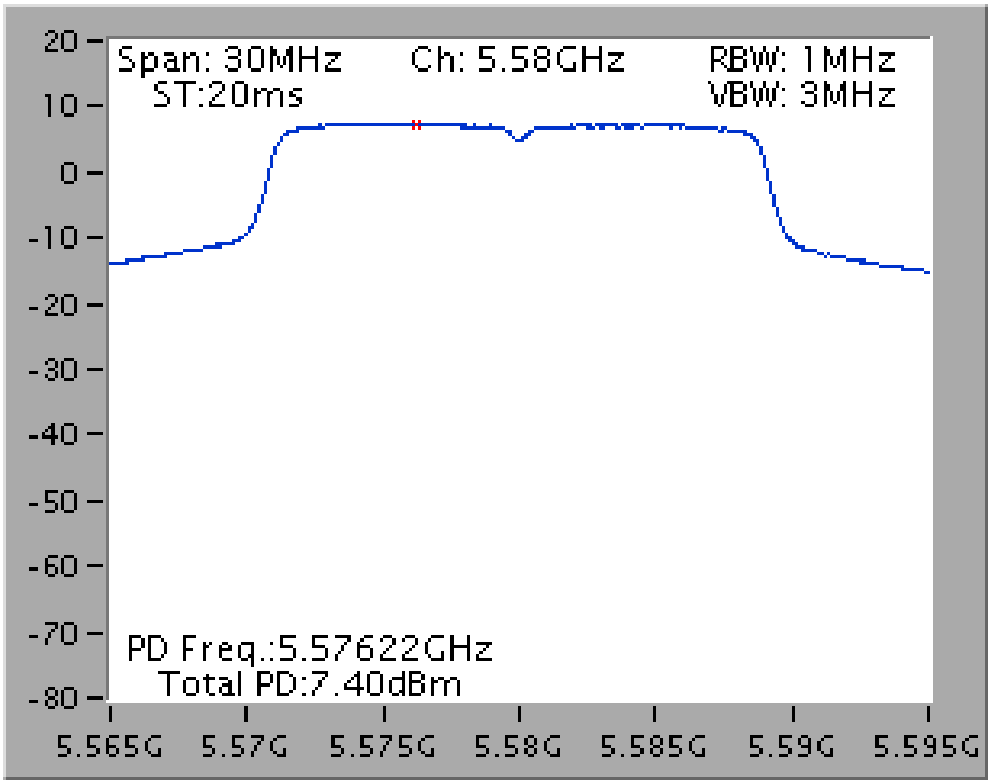
Power Density Plot on Configuration IEEE 802.11n MCS8 20MHz / 5200 MHz / ANT. 1+2 (2TX)



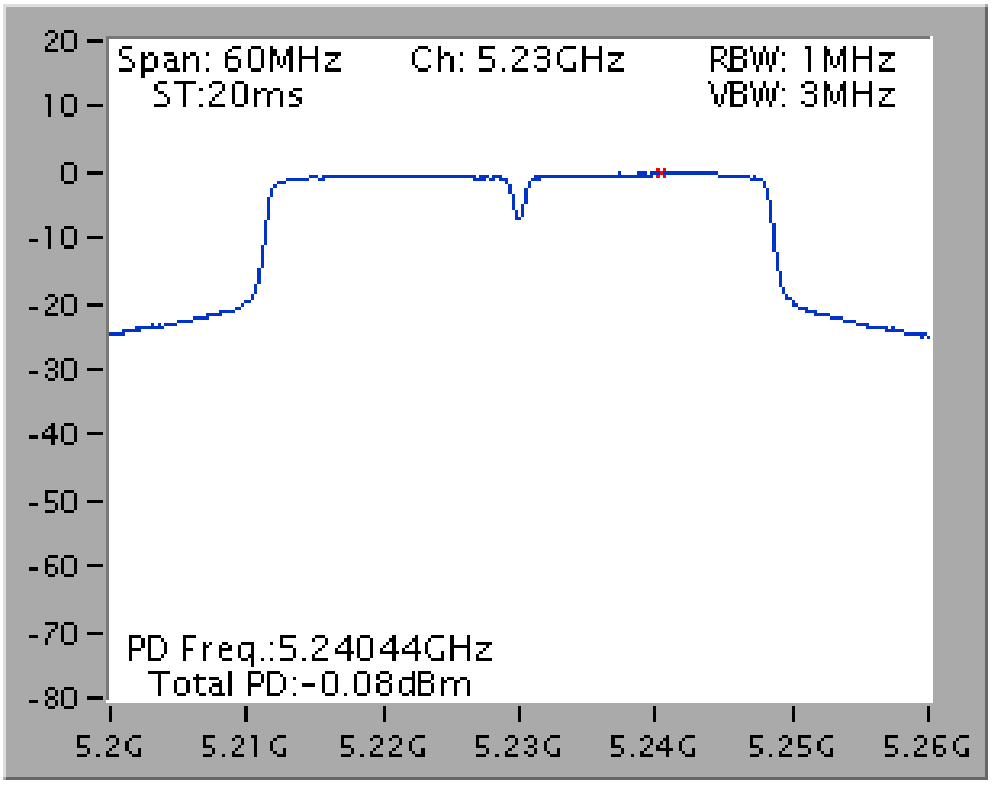
Power Density Plot on Configuration IEEE 802.11n MCS8 20MHz / 5300 MHz / ANT. 1+2 (2TX)



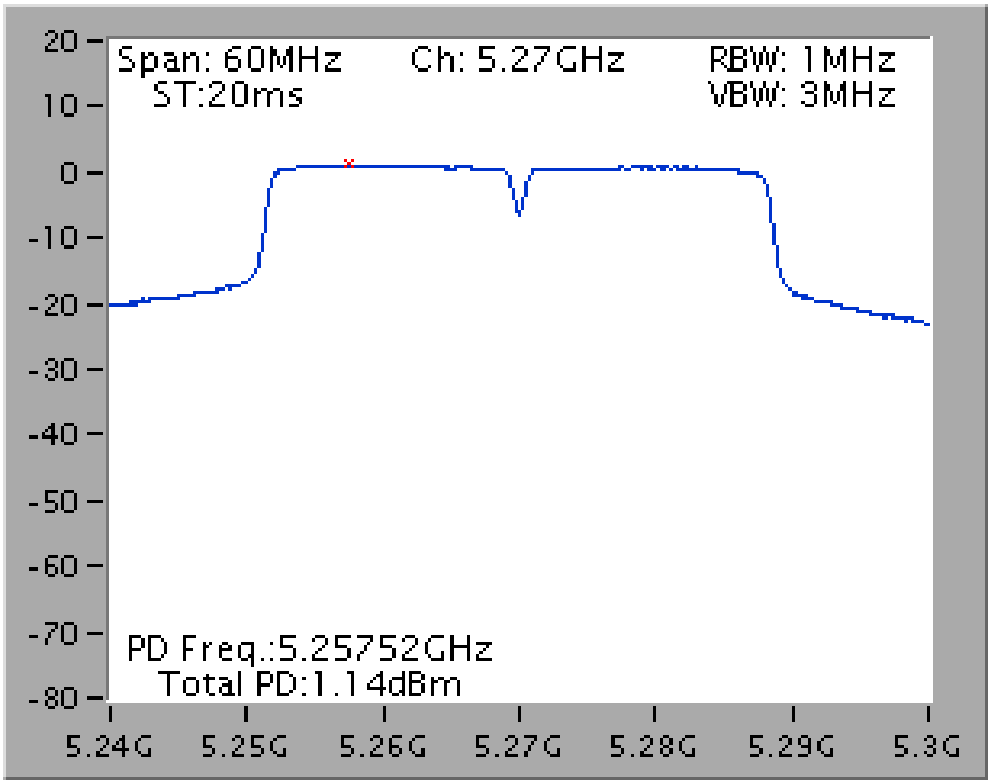
Power Density Plot on Configuration IEEE 802.11n MCS8 20MHz / 5580 MHz / ANT. 1+2 (2TX)



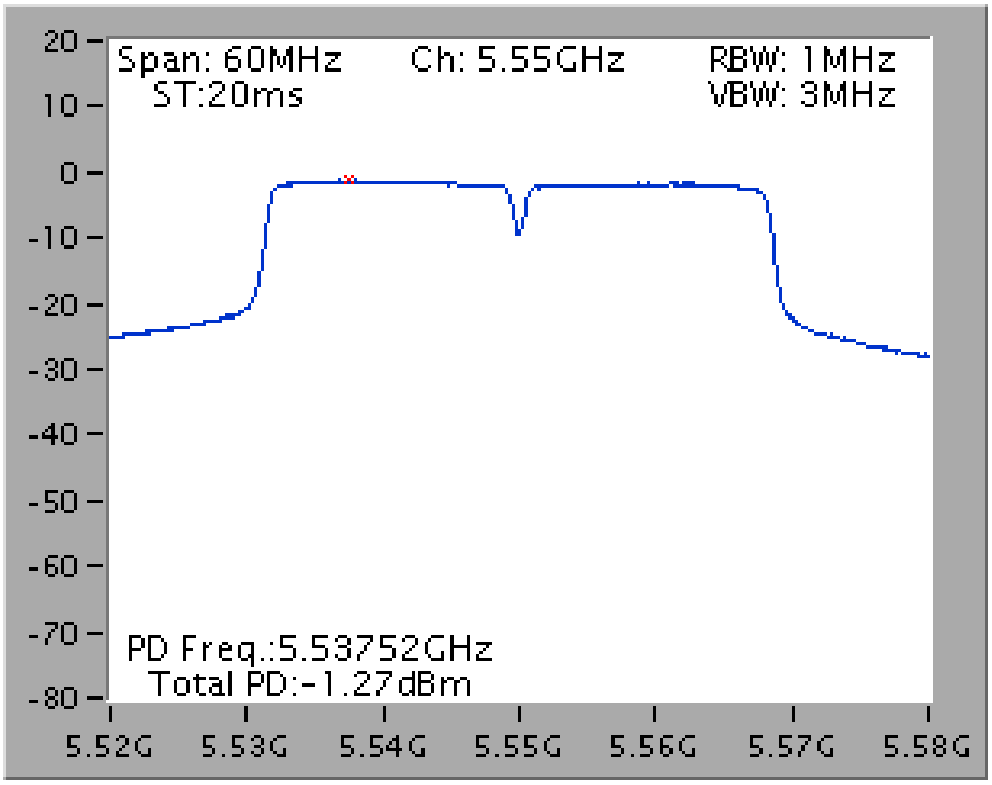
Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / 5230 MHz / ANT. 1 (1TX)



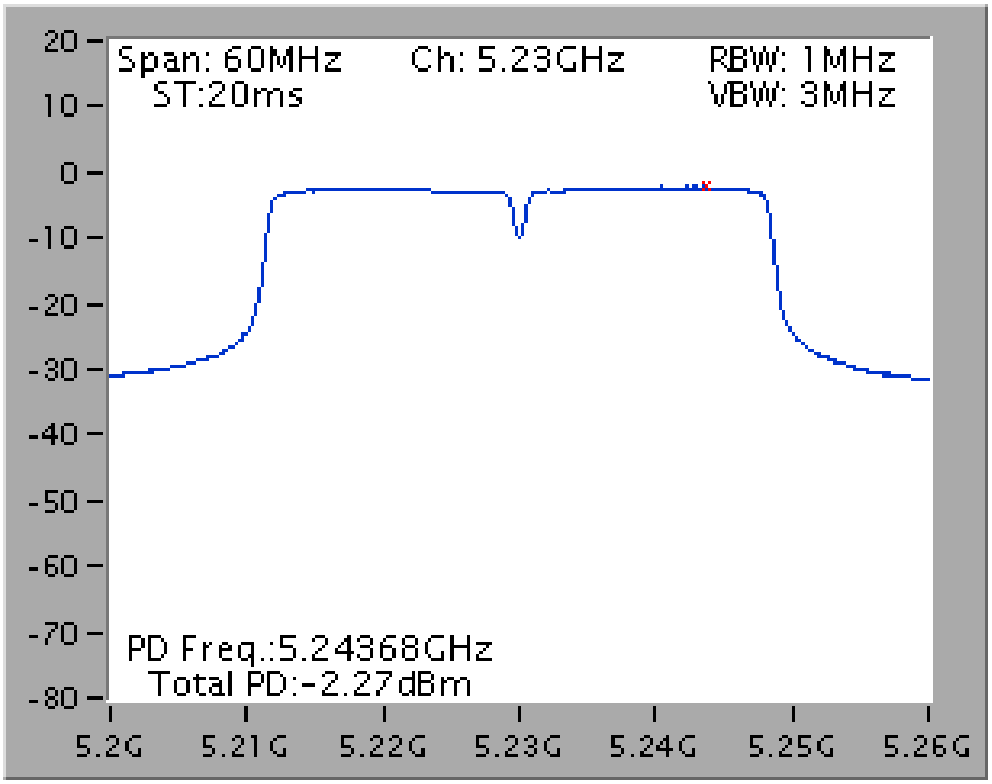
Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / 5270 MHz / ANT. 1 (1TX)



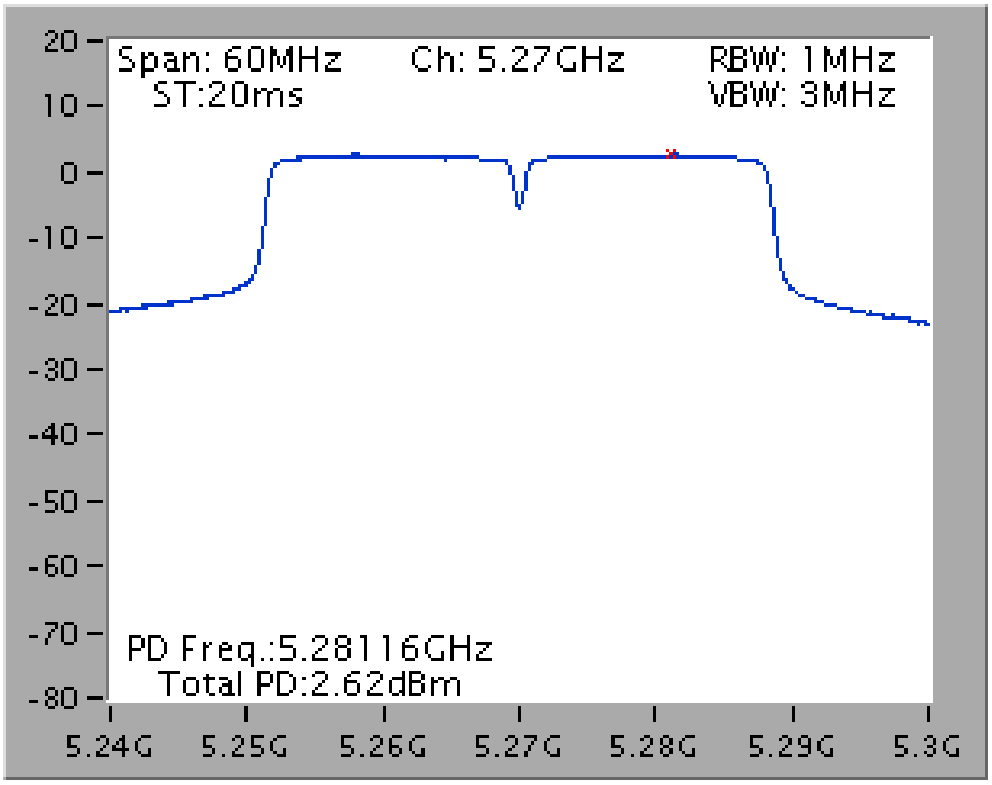
Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / 5550 MHz / ANT. 1 (1TX)



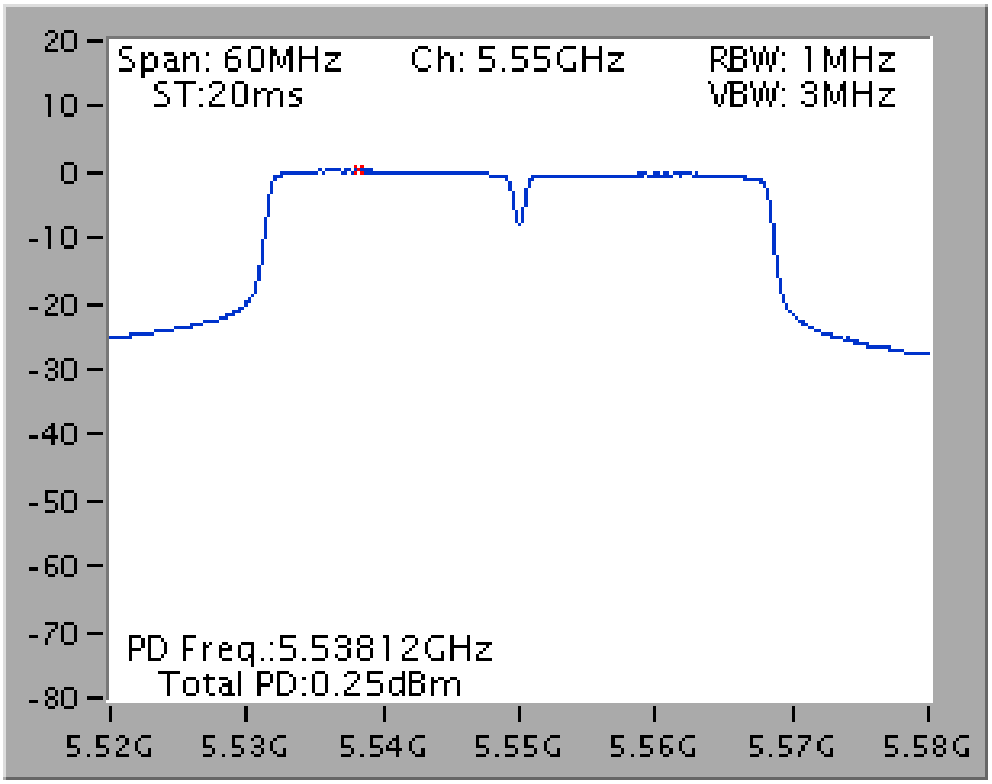
Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / 5230 MHz / ANT. 1+2 (2TX)



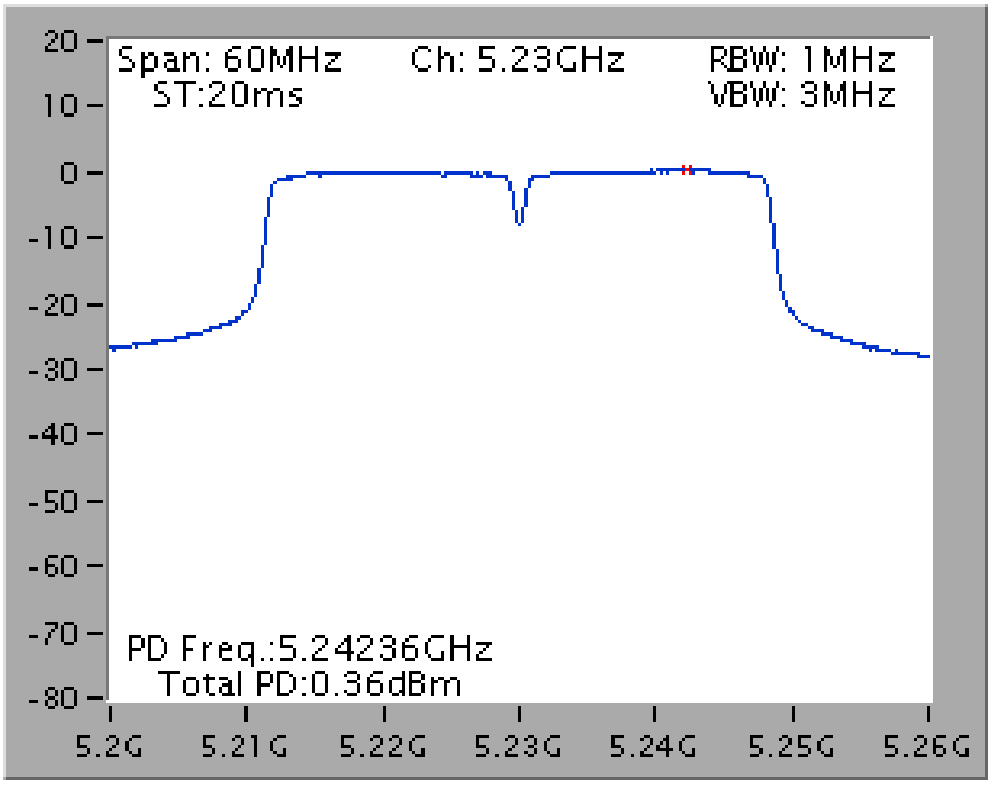
Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / 5270 MHz / ANT. 1+2 (2TX)



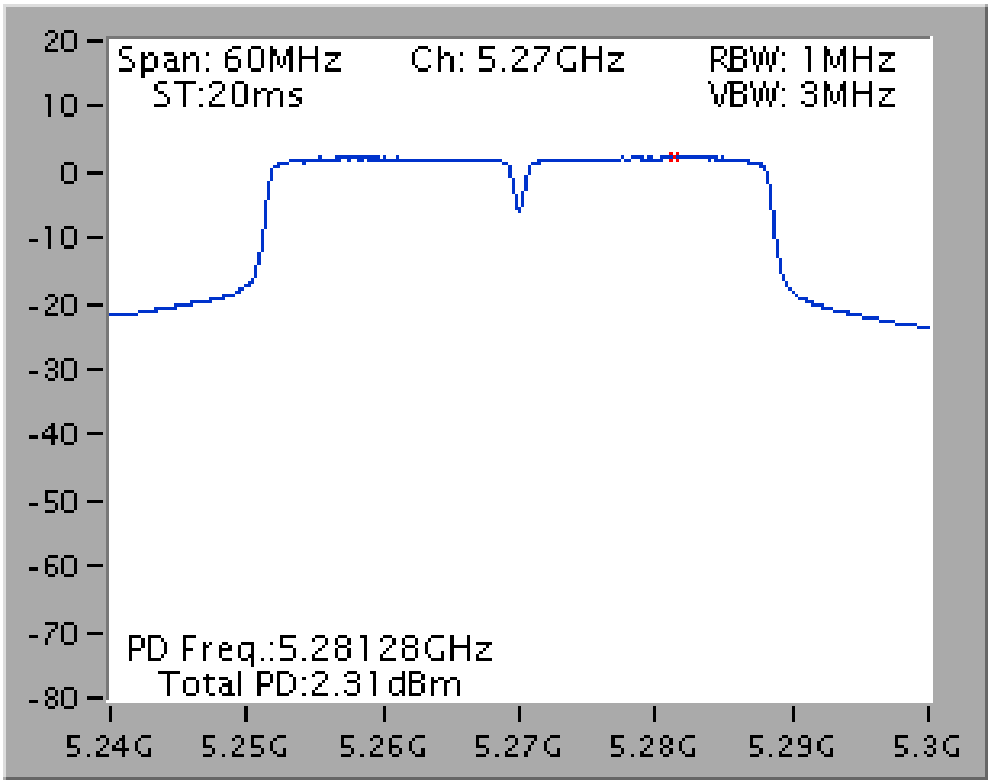
Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / 5550 MHz / ANT. 1+2 (2TX)



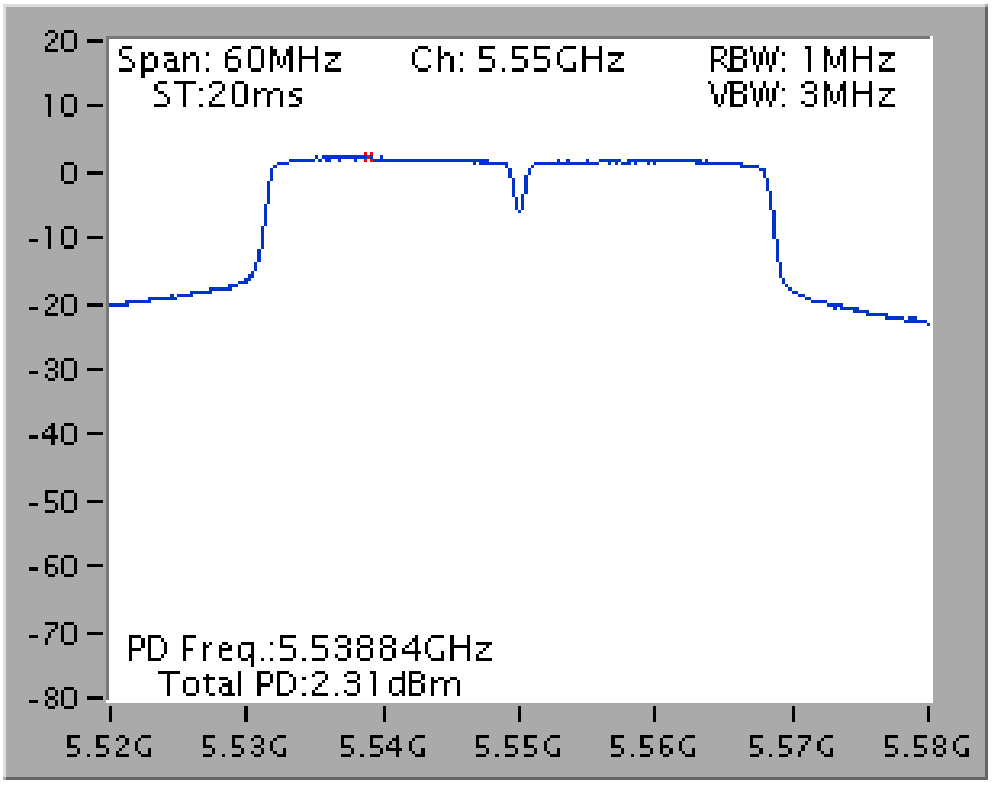
Power Density Plot on Configuration IEEE 802.11n MCS8 40MHz / 5230 MHz / ANT. 1+2 (2TX)



Power Density Plot on Configuration IEEE 802.11n MCS8 40MHz / 5270 MHz / ANT. 1+2 (2TX)



Power Density Plot on Configuration IEEE 802.11n MCS8 40MHz / 5550 MHz / ANT. 1+2 (2TX)



4.5. Peak Excursion Measurement

4.5.1. Limit

The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the maximum conducted output power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emissions bandwidth whichever is less.

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 the spectrum analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	Encompass the entire emissions bandwidth (EBW) of the signal
RB	1MHz (Peak Trace) / 1MHz (Average Trace)
VB	3MHz (Peak Trace) / 3MHz (Average Trace)
Detector	Peak (Peak Trace) / RMS
Trace	Peak : Trace :Max hold/Average: Trace Average Sweep Count 100
Sweep Time	AUTO

4.5.3. Test Procedures

1. The test procedure is the same as section 4.6.3.
2. Trace A, Set RBW =1MHz, VBW = 3MHz, Span >26dB bandwidth, Max. hold.
3. Delta Mark trace A Maximum frequency and trace B same frequency.
4. Repeat the above procedure until measurements for all frequencies were complete.

4.5.4. Test Setup Layout

This test setup layout is the same as that shown in section 4.6.4.

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. Test Result of Peak Excursion

Temperature	25℃	Humidity	60%
Test Engineer	Denis Su	Configurations	IEEE 802.11n

Configuration IEEE 802.11n MCS0 20MHz

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
36	5180 MHz	9.01	13	**Complies**
40	5200 MHz	9.11	13	**Complies**
48	5240 MHz	8.89	13	**Complies**
52	5260 MHz	8.86	13	**Complies**
60	5300 MHz	9.15	13	**Complies**
64	5320 MHz	9.40	13	**Complies**
100	5500 MHz	8.97	13	**Complies**
116	5580 MHz	9.03	13	**Complies**
140	5700 MHz	8.86	13	**Complies**

Configuration IEEE 802.11n MCS0 20MHz

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
36	5180 MHz	9.06	13	**Complies**
40	5200 MHz	8.75	13	**Complies**
48	5240 MHz	8.68	13	**Complies**
52	5260 MHz	8.87	13	**Complies**
60	5300 MHz	8.85	13	**Complies**
64	5320 MHz	9.00	13	**Complies**
100	5500 MHz	8.81	13	**Complies**
116	5580 MHz	8.87	13	**Complies**
140	5700 MHz	8.82	13	**Complies**

Configuration IEEE 802.11n MCS8 20MHz

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
36	5180 MHz	10.57	13	**Complies**
40	5200 MHz	9.40	13	**Complies**
48	5240 MHz	10.18	13	**Complies**
52	5260 MHz	9.90	13	**Complies**
60	5300 MHz	10.18	13	**Complies**
64	5320 MHz	9.82	13	**Complies**
100	5500 MHz	9.82	13	**Complies**
116	5580 MHz	10.24	13	**Complies**
140	5700 MHz	10.43	13	**Complies**

Configuration IEEE 802.11n MCS0 40MHz

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
38	5190 MHz	9.40	13	**Complies**
46	5230 MHz	8.92	13	**Complies**
54	5270 MHz	9.36	13	**Complies**
62	5310 MHz	9.77	13	**Complies**
102	5510MHz	9.50	13	**Complies**
110	5550 MHz	9.93	13	**Complies**
134	5670 MHz	9.35	13	**Complies**

Configuration IEEE 802.11n MCS0 40MHz

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
38	5190 MHz	8.88	13	**Complies**
46	5230 MHz	8.79	13	**Complies**
54	5270 MHz	8.92	13	**Complies**
62	5310 MHz	8.97	13	**Complies**
102	5510MHz	8.94	13	**Complies**
110	5550 MHz	8.97	13	**Complies**
134	5670 MHz	8.68	13	**Complies**

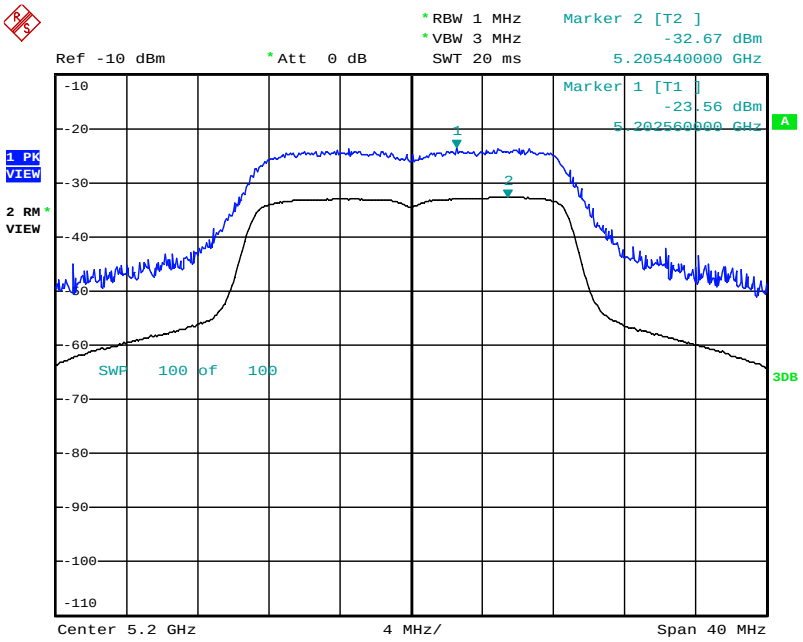
Configuration IEEE 802.11n MCS8 40MHz

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
38	5190 MHz	10.24	13	**Complies**
46	5230 MHz	10.53	13	**Complies**
54	5270 MHz	10.21	13	**Complies**
62	5310 MHz	10.25	13	**Complies**
102	5510MHz	9.95	13	**Complies**
110	5550 MHz	10.57	13	**Complies**
134	5670 MHz	10.41	13	**Complies**

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

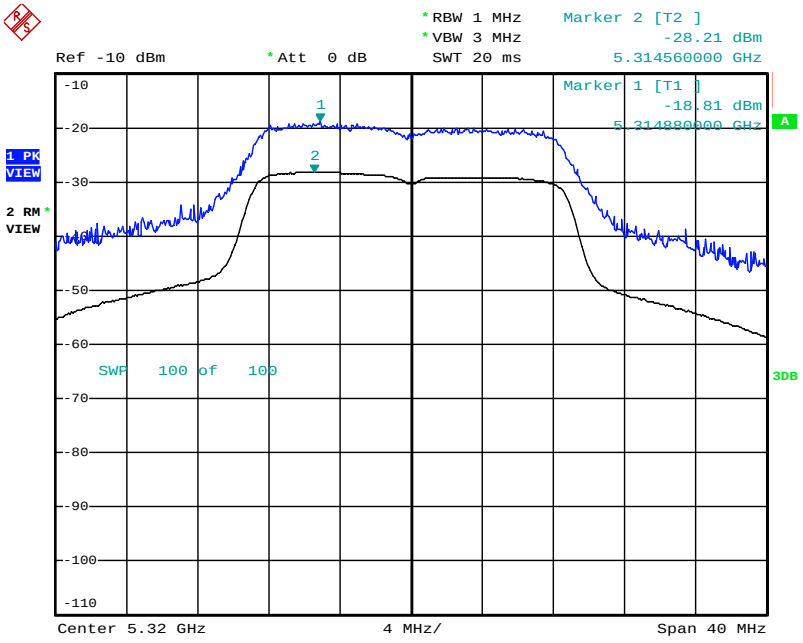
For plots, only the channel with maximum results was shown.

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 20MHz / 5200 MHz / ANT. 1 (1TX)



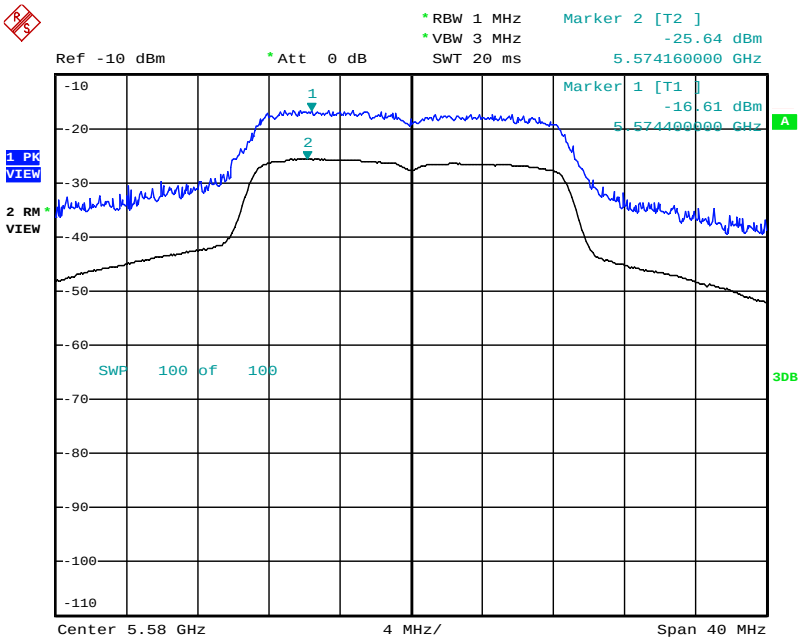
Date: 11.JUL.2012 14:40:19

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 20MHz / 5320 MHz / ANT. 1 (1TX)



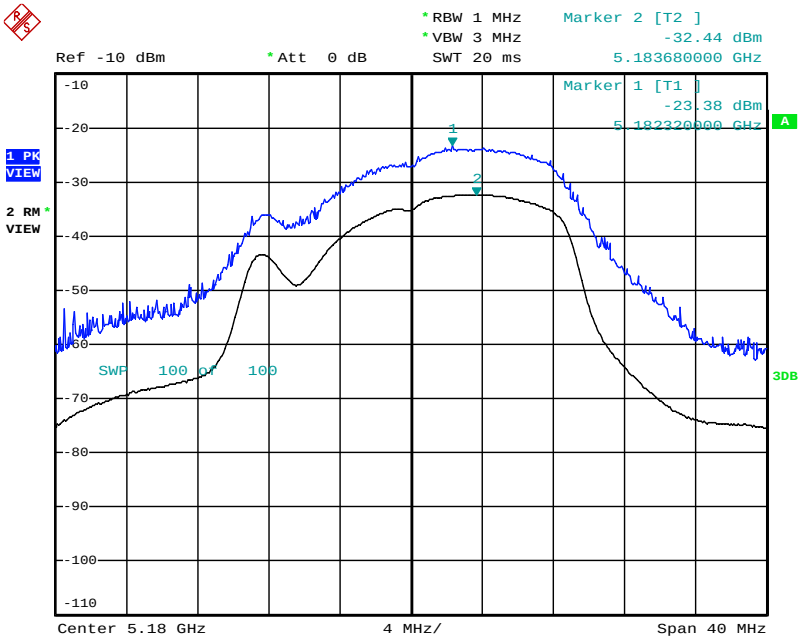
Date: 11.JUL.2012 14:42:43

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 20MHz / 5580 MHz / ANT. 1 (1TX)



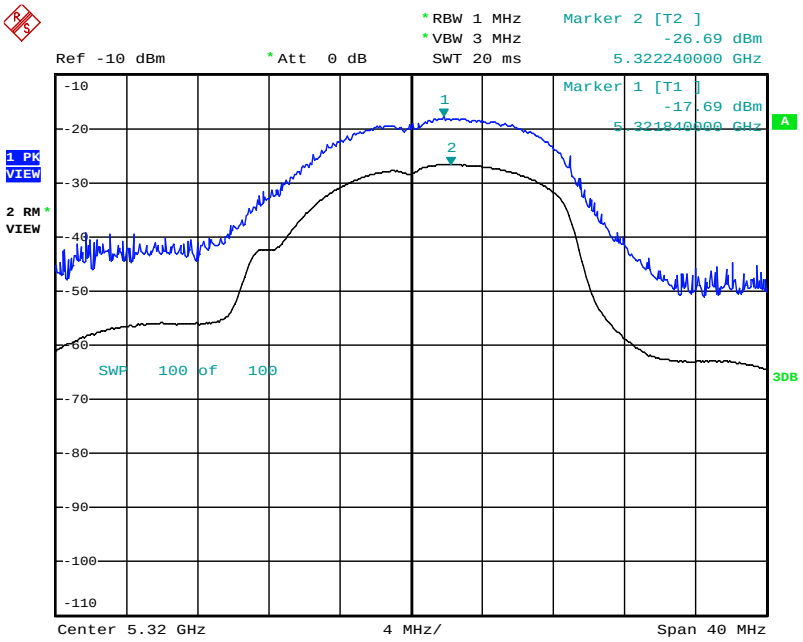
Date: 11.JUL.2012 14:44:10

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 20MHz / 5180 MHz / ANT. 1+2 (2TX)



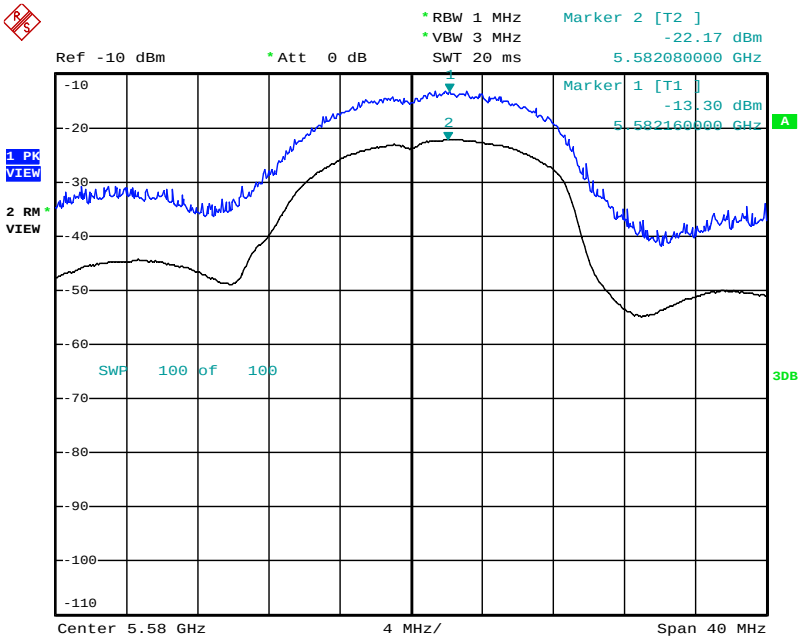
Date: 11.JUL.2012 14:56:23

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 20MHz / 5320 MHz / ANT. 1+2 (2TX)



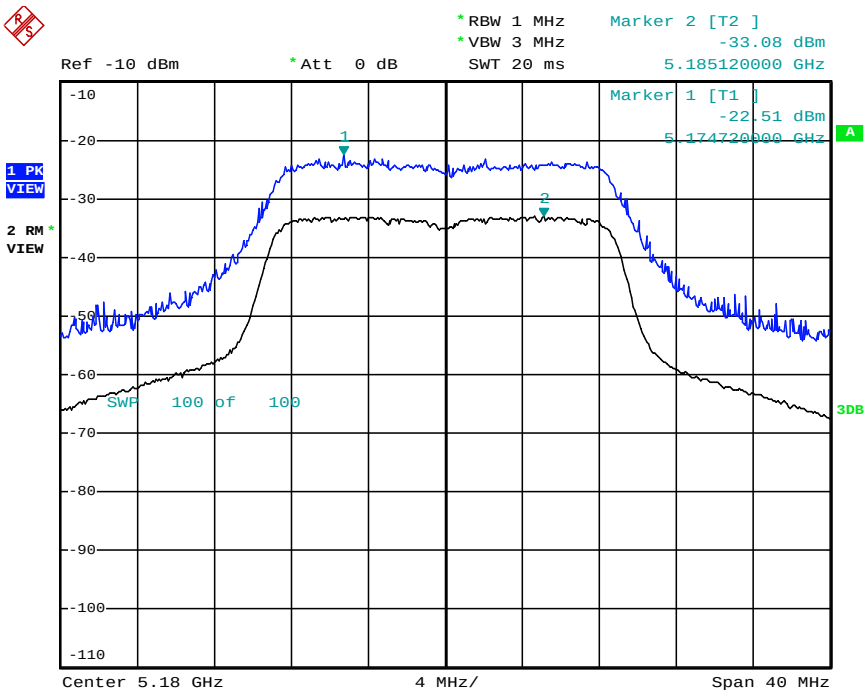
Date: 11.JUL.2012 14:58:35

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 20MHz / 5580 MHz / ANT. 1+2 (2TX)



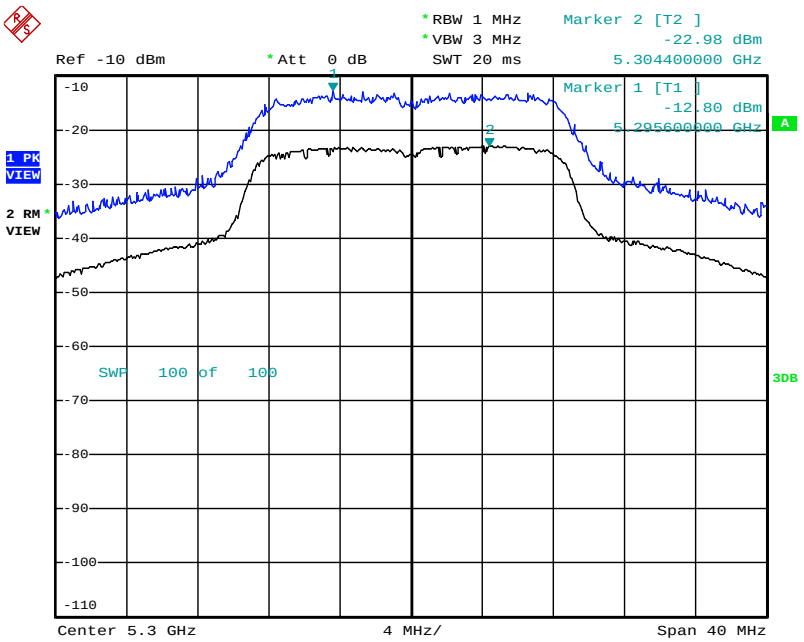
Date: 11.JUL.2012 14:59:30

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 20MHz / 5180 MHz / ANT. 1+2 (2TX)



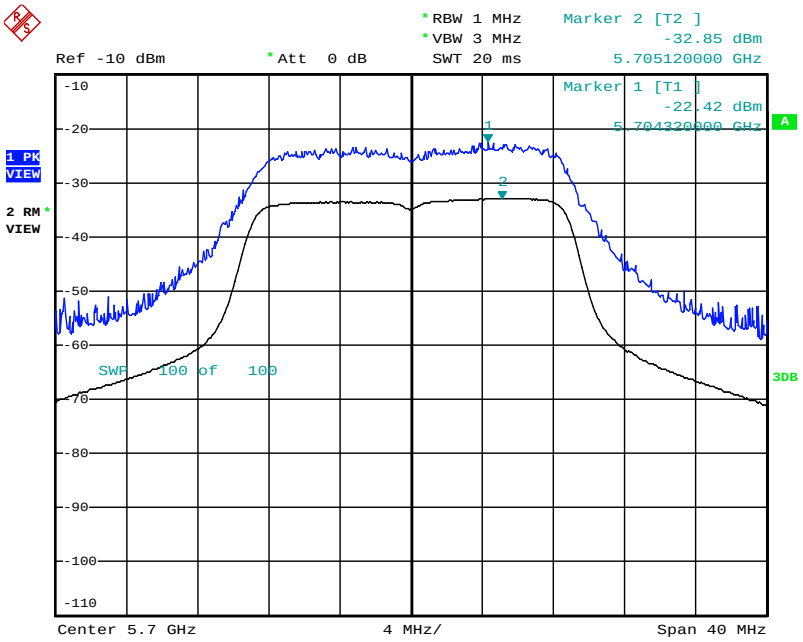
Date: 11.JUL.2012 15:05:52

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 20MHz / 5320 MHz / ANT. 1+2 (2TX)



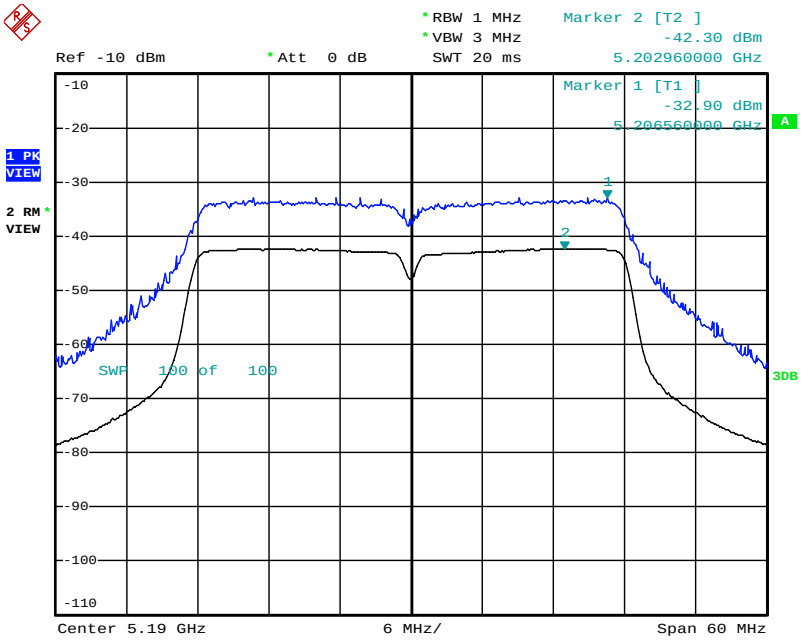
Date: 11.JUL.2012 15:02:47

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 20MHz / 5700 MHz / ANT. 1+2 (2TX)



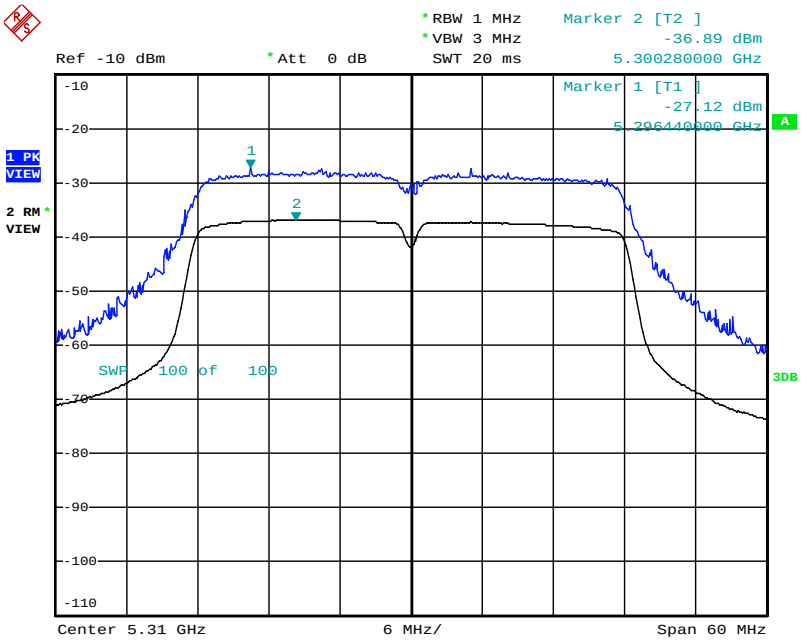
Date: 11.JUL.2012 15:00:58

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 40MHz / 5190 MHz / ANT. 1 (1TX)



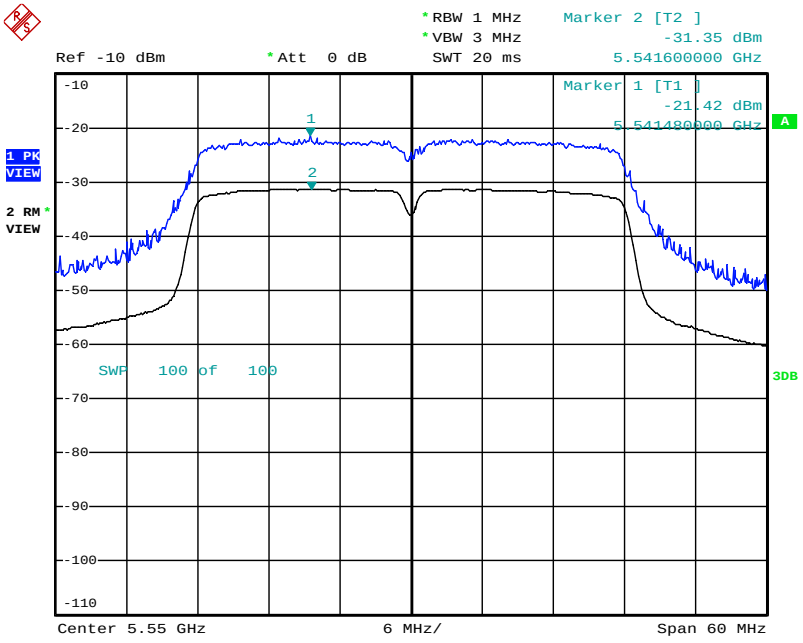
Date: 11.JUL.2012 14:45:20

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 40MHz / 5310MHz / ANT. 1 (1TX)



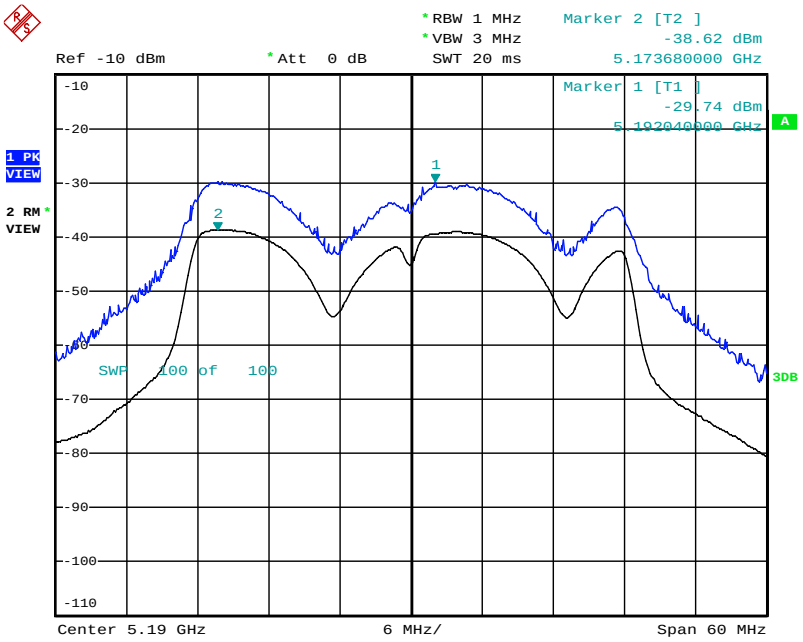
Date: 11.JUL.2012 14:46:37

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 40MHz / 5550 MHz / ANT. 1 (1TX)



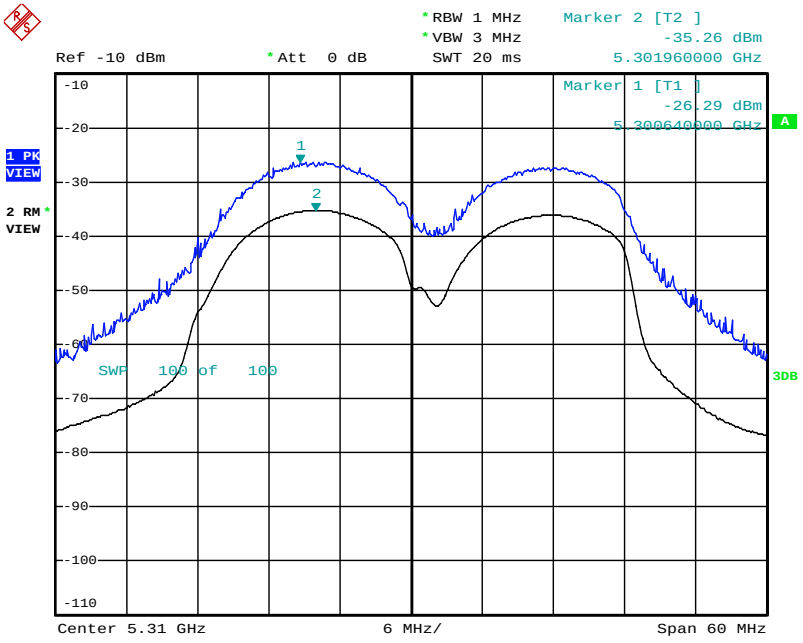
Date: 11.JUL.2012 14:47:35

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 40MHz / 5190 MHz / ANT. 1+2 (2TX)



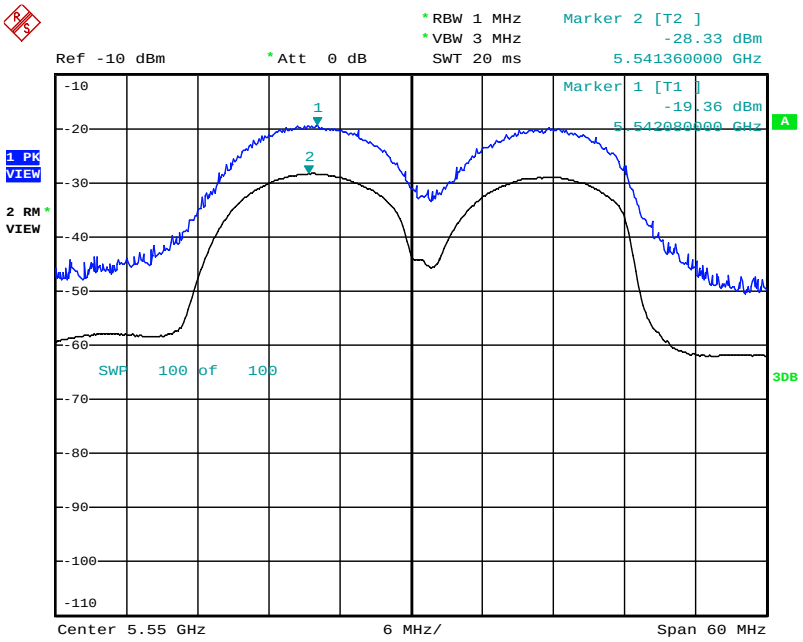
Date: 11.JUL.2012 14:51:37

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 40MHz / 5310MHz / ANT. 1+2 (2TX)



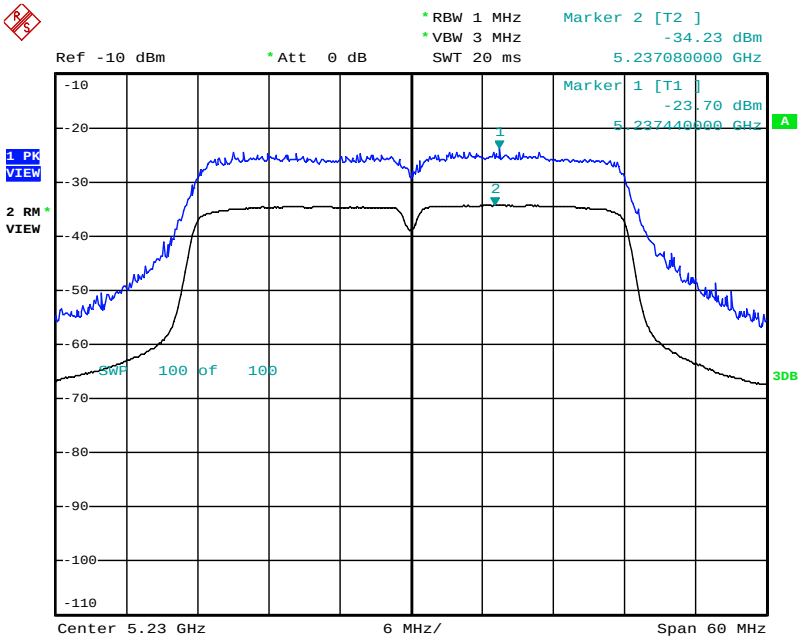
Date: 11.JUL.2012 14:50:18

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 40MHz / 5550 MHz / ANT. 1+2 (2TX)



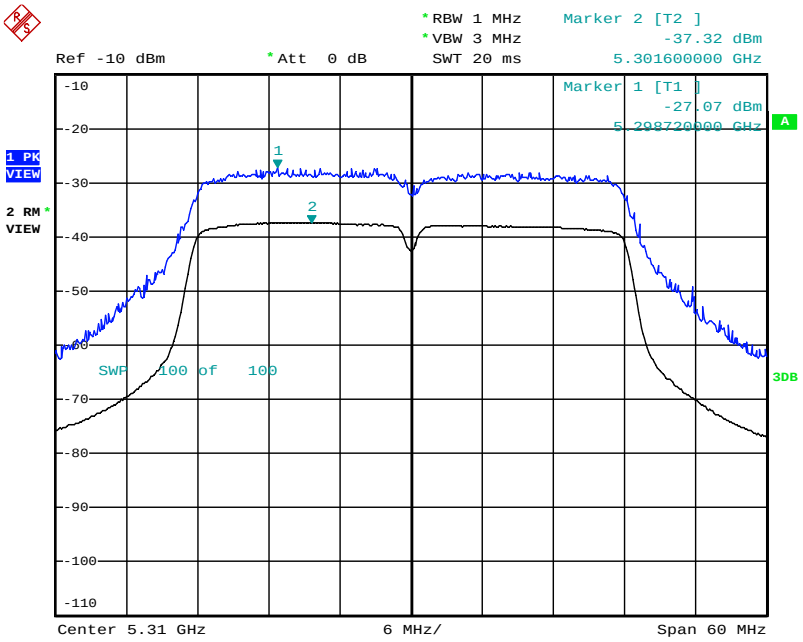
Date: 11.JUL.2012 14:49:29

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 40MHz / 5230 MHz / ANT. 1+2 (2TX)



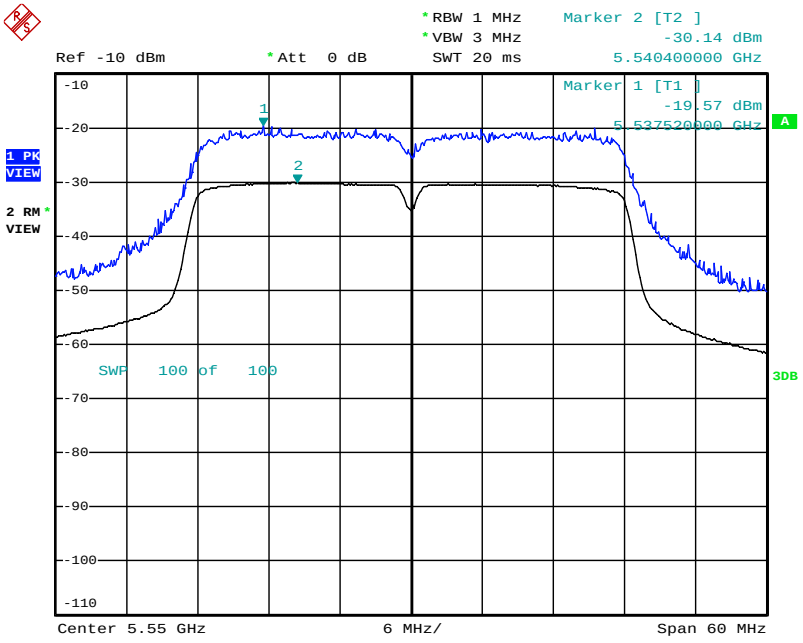
Date: 11.JUL.2012 14:53:15

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 40MHz / 5320 MHz / ANT. 1+2 (2TX)



Date: 11.JUL.2012 14:54:07

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 40MHz / 5550 MHz / ANT. 1+2 (2TX)



Date: 11.JUL.2012 14:55:03

4.6. Radiated Emissions Measurement

4.6.1. Limit

For transmitters operating in the 5.15-5.35 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz (68.3dBuV/m at 3m). For transmitters operating in the 5.470-5.725 GHz band: all emissions outside of the 5.470-5.725 GHz band shall not exceed an EIRP of -27 dBm/MHz (68.3dBuV/m at 3m). For transmitters operating in the 5.725-5.825 GHz band: all emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an EIRP of -17 dBm/MHz (78.3dBuV/m at 3m); for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an EIRP of -27 dBm/MHz (68.3dBuV/m at 3m). In addition, 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 spectrum analyzer and receiver.

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	40 GHz
RB / VB (Emission in restricted band)	1MHz / 3MHz for Peak, 1 MHz / 10Hz for Average
RB / VB (Emission in non-restricted band)	1MHz / 3MHz for peak

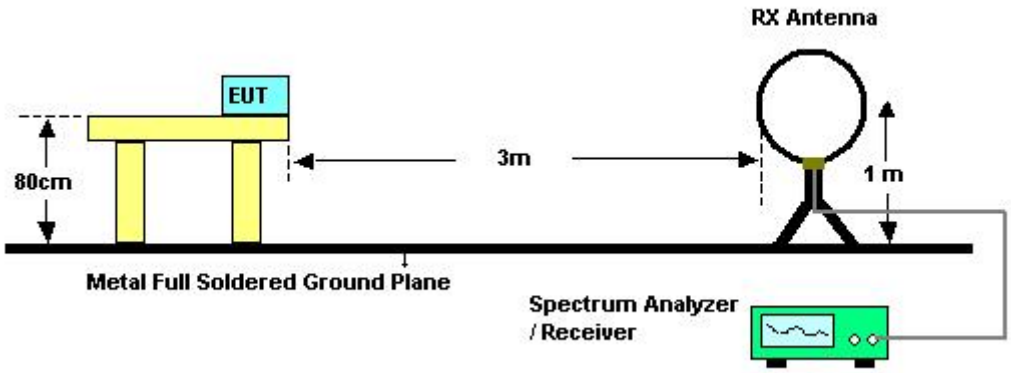
Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

4.6.3. Test Procedures

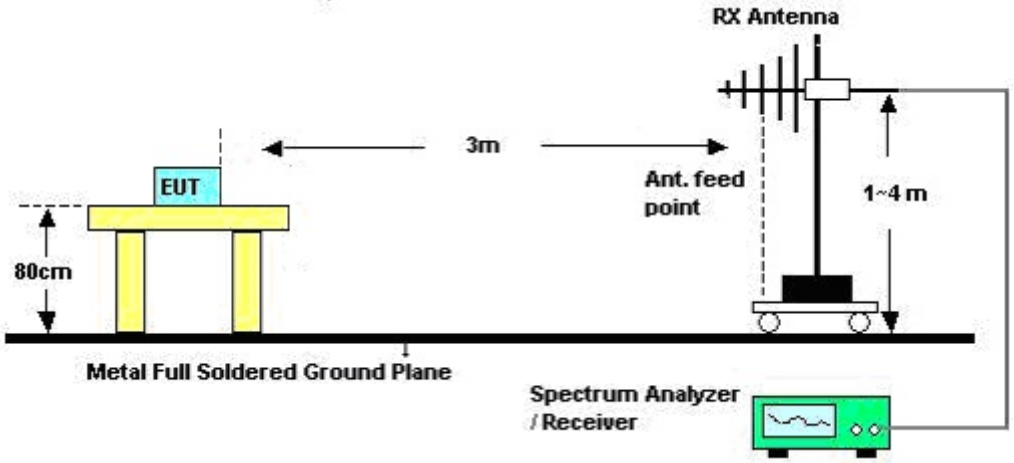
1. Configure the EUT according to ANSI C63.10. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting 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.

4.6.4. Test Setup Layout

For radiated emissions below 1GHz



For radiated emissions above 1GHz



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

Temperature	25℃	Humidity	65%
Test Engineer	Kane Liu	Configurations	Normal Link
Test Date	Jul. 10, 2012		

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 20dB below the permissible value has no need to be reported.

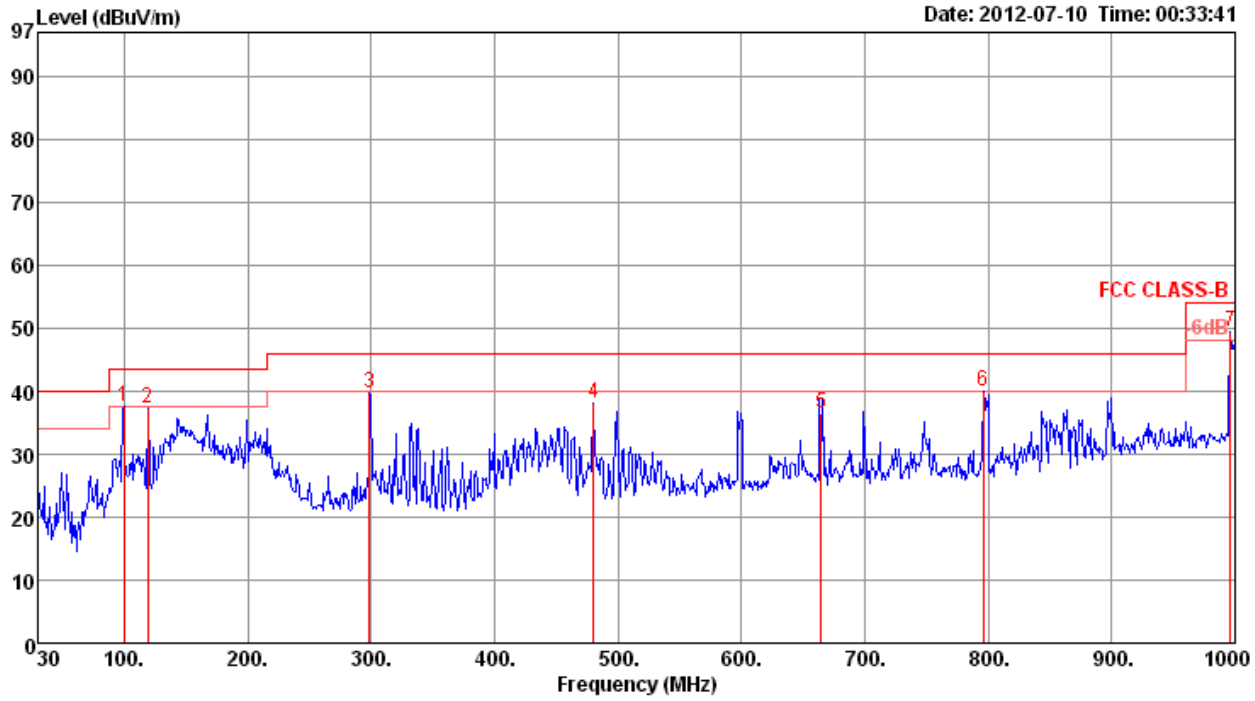
Distance extrapolation factor = 40 log (specific distance / test distance) (dB);

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

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

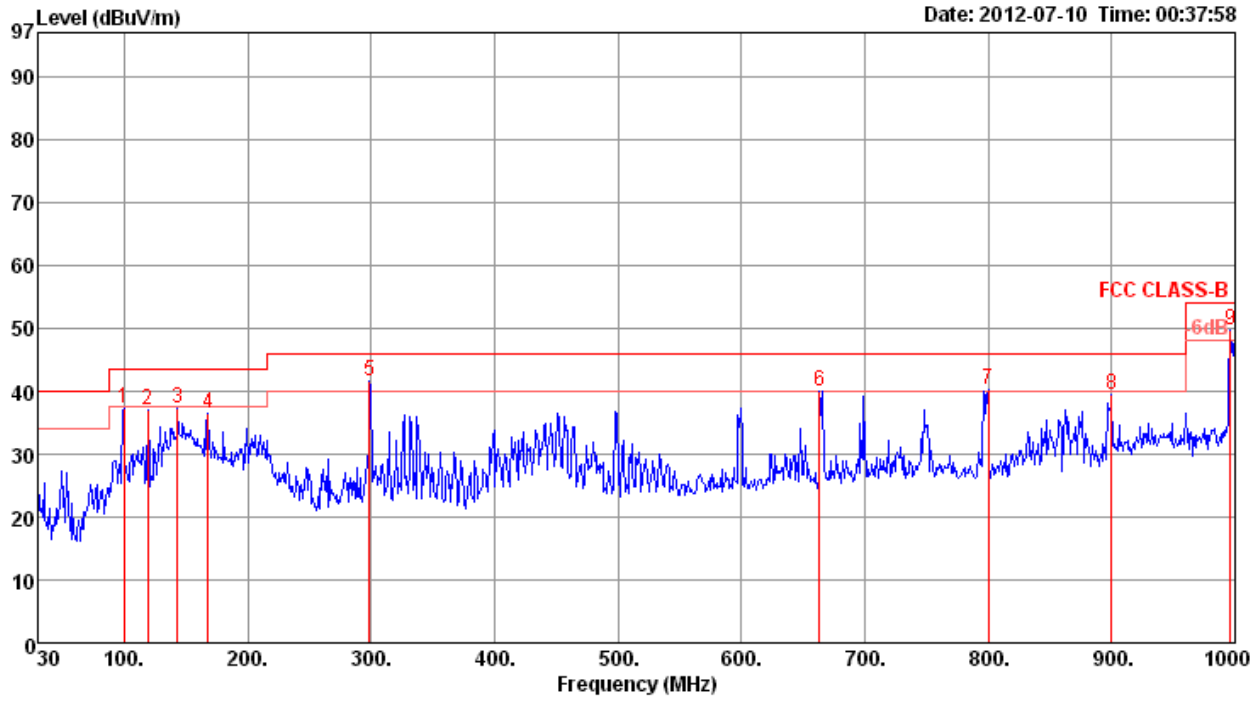
Temperature	25℃	Humidity	65%
Test Engineer	Kane Liu	Configurations	Normal Link

Horizontal



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	99.84	37.64	43.50	-5.86	53.05	1.20	10.99	27.60	Peak	400	0	VERTICAL
2	119.24	37.16	43.50	-6.34	51.00	1.20	12.46	27.50	Peak	400	0	VERTICAL
3	298.69	39.59	46.00	-6.41	51.04	2.10	13.35	26.90	Peak	400	0	VERTICAL
4	480.08	38.20	46.00	-7.80	46.23	2.66	17.31	28.00	Peak	400	0	VERTICAL
5	664.38	36.45	46.00	-9.55	42.07	3.44	18.98	28.04	Peak	400	0	VERTICAL
6	796.30	40.01	46.00	-5.99	44.57	3.32	19.74	27.62	Peak	400	0	VERTICAL
7	996.12	49.50	54.00	-4.50	51.57	3.69	21.26	27.02	Peak	400	0	VERTICAL

Vertical



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	99.84	37.23	43.50	-6.27	52.64	1.20	10.99	27.60	Peak	100	0	HORIZONTAL
2	119.24	37.15	43.50	-6.35	50.99	1.20	12.46	27.50	Peak	100	0	HORIZONTAL
3	143.49	37.21	43.50	-6.29	51.00	1.42	12.17	27.38	Peak	100	0	HORIZONTAL
4	167.74	36.36	43.50	-7.14	49.47	1.54	12.61	27.26	Peak	100	0	HORIZONTAL
5	298.69	41.51	46.00	-4.49	52.96	2.10	13.35	26.90	Peak	100	0	HORIZONTAL
6	663.41	40.09	46.00	-5.91	45.71	3.45	18.97	28.04	Peak	100	0	HORIZONTAL
7	800.18	40.37	46.00	-5.63	44.90	3.30	19.77	27.60	Peak	100	0	HORIZONTAL
8	900.09	39.48	46.00	-6.52	42.75	3.60	20.53	27.40	Peak	100	0	HORIZONTAL
9	996.12	49.61	54.00	-4.39	51.68	3.69	21.26	27.02	Peak	100	0	HORIZONTAL

Note:

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

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

4.6.9. Results for Radiated Emissions (1GHz~40GHz)

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS0 20MHz Ch 36 / ANT. 1 (1TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15536.15	36.20	54.00	-17.80	27.69	6.13	37.67	35.29	Average	100	58	HORIZONTAL
2	15543.93	50.38	74.00	-23.62	41.91	6.13	37.65	35.31	Peak	100	58	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15542.24	36.87	54.00	-17.13	28.36	6.13	37.69	35.31	Average	100	148	VERTICAL
2	15545.29	50.70	74.00	-23.30	42.19	6.13	37.69	35.31	Peak	100	148	VERTICAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS0 20MHz Ch 40 / ANT. 1 (1TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15591.91	55.54	74.00	-18.46	47.15	6.13	37.60	35.34	Peak	100	141	HORIZONTAL
2	15602.32	40.69	54.00	-13.31	32.30	6.13	37.60	35.34	Average	100	141	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15599.68	42.30	54.00	-11.70	33.91	6.13	37.60	35.34	Average	100	173	VERTICAL
2	15602.24	56.79	74.00	-17.21	48.40	6.13	37.60	35.34	Peak	100	173	VERTICAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS0 20MHz Ch 48 / ANT. 1 (1TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15714.71	53.20	74.00	-20.80	44.96	6.14	37.48	35.38	Peak	100	195	HORIZONTAL
2	15719.28	39.82	54.00	-14.18	31.59	6.14	37.48	35.39	Average	100	195	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15718.32	56.51	74.00	-17.49	48.28	6.14	37.48	35.39	Peak	100	171	VERTICAL
2	15721.84	41.97	54.00	-12.03	33.74	6.14	37.48	35.39	Average	100	171	VERTICAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS0 20MHz Ch 52 / ANT. 1 (1TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15778.32	39.06	54.00	-14.94	30.93	6.14	37.41	35.42	Average	100	96	HORIZONTAL
2	15785.29	52.56	74.00	-21.44	44.43	6.14	37.41	35.42	Peak	100	96	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15776.88	41.12	54.00	-12.88	32.99	6.14	37.41	35.42	Average	100	167	VERTICAL
2	15779.36	55.31	74.00	-18.69	47.18	6.14	37.41	35.42	Peak	100	167	VERTICAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS0 20MHz Ch 60 / ANT. 1 (1TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10600.24	49.18	54.00	-4.82	41.21	5.01	38.38	35.42	Average	100	247	HORIZONTAL
2	10601.60	63.37	74.00	-10.63	55.40	5.01	38.38	35.42	Peak	100	247	HORIZONTAL
3	15902.88	55.13	74.00	-18.87	47.13	6.15	37.29	35.44	Peak	100	226	HORIZONTAL
4	15903.61	42.18	54.00	-11.82	34.18	6.15	37.29	35.44	Average	100	226	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10600.00	49.93	54.00	-4.07	41.96	5.01	38.38	35.42	Average	100	182	VERTICAL
2	10600.00	64.51	74.00	-9.49	56.54	5.01	38.38	35.42	Peak	100	182	VERTICAL
3	15896.15	59.22	74.00	-14.78	51.22	6.15	37.29	35.44	Peak	100	170	VERTICAL
4	15899.52	45.32	54.00	-8.68	37.32	6.15	37.29	35.44	Average	100	170	VERTICAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS0 20MHz Ch 64 / ANT. 1 (1TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10640.16	46.75	54.00	-7.25	38.76	5.01	38.37	35.39	Average	100	245	HORIZONTAL
2	10641.12	60.60	74.00	-13.40	52.61	5.01	38.37	35.39	Peak	100	245	HORIZONTAL
3	15961.84	40.09	54.00	-13.91	32.15	6.15	37.23	35.44	Average	100	224	HORIZONTAL
4	15962.32	53.78	74.00	-20.22	45.84	6.15	37.23	35.44	Peak	100	224	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10638.08	60.07	74.00	-13.93	52.08	5.01	38.37	35.39	Peak	100	183	VERTICAL
2	10640.48	46.67	54.00	-7.33	38.68	5.01	38.37	35.39	Average	100	183	VERTICAL
3	15958.64	54.64	74.00	-19.36	46.70	6.15	37.23	35.44	Peak	100	194	VERTICAL
4	15959.68	40.13	54.00	-13.87	32.19	6.15	37.23	35.44	Average	100	194	VERTICAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS0 20MHz Ch 100 / ANT. 1 (1TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11000.08	59.09	74.00	-14.91	50.86	5.01	38.32	35.10	Peak	100	230	HORIZONTAL
2	11000.64	43.62	54.00	-10.38	35.39	5.01	38.32	35.10	Average	100	230	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10999.12	43.78	54.00	-10.22	35.57	5.01	38.30	35.10	Average	100	182	VERTICAL
2	10999.36	59.57	74.00	-14.43	51.36	5.01	38.30	35.10	Peak	100	182	VERTICAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS0 20MHz Ch 116 / ANT. 1 (1TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11156.15	65.47	74.00	-8.53	57.14	5.04	38.45	35.16	Peak	100	211	HORIZONTAL
2	11161.20	50.45	54.00	-3.55	42.11	5.04	38.47	35.17	Average	100	211	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11158.08	66.32	74.00	-7.68	57.99	5.04	38.45	35.16	Peak	100	65	VERTICAL
2	11158.72	51.53	54.00	-2.47	43.19	5.04	38.47	35.17	Average	100	65	VERTICAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS0 20MHz Ch 140 / ANT. 1 (1TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11398.80	41.11	54.00	-12.89	32.56	5.10	38.70	35.25	Average	100	249	HORIZONTAL
2	11400.32	54.94	74.00	-19.06	46.39	5.10	38.70	35.25	Peak	100	249	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11397.92	38.55	54.00	-15.45	30.00	5.10	38.70	35.25	Average	100	266	VERTICAL
2	11398.16	51.36	74.00	-22.64	42.81	5.10	38.70	35.25	Peak	100	266	VERTICAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS0 20MHz Ch 36 / ANT. 1+2 (2TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15537.60	51.64	74.00	-22.36	43.13	6.13	37.67	35.29	Peak	100	207	HORIZONTAL
2	15542.08	38.05	54.00	-15.95	29.58	6.13	37.65	35.31	Average	100	207	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15538.68	39.68	54.00	-14.32	31.17	6.13	37.69	35.31	Average	100	170	VERTICAL
2	15540.91	52.32	74.00	-21.68	43.81	6.13	37.69	35.31	Peak	100	170	VERTICAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS0 20MHz Ch 40 / ANT. 1+2 (2TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15603.46	60.22	74.00	-13.78	51.83	6.13	37.60	35.34	Peak	100	178	VERTICAL
2	15604.18	47.79	54.00	-6.21	39.40	6.13	37.60	35.34	Average	100	178	VERTICAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15600.19	45.95	54.00	-8.05	37.56	6.13	37.60	35.34	Average	100	202	HORIZONTAL
2	15604.33	58.61	74.00	-15.39	50.22	6.13	37.60	35.34	Peak	100	202	HORIZONTAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS0 20MHz Ch 48 / ANT. 1+2 (2TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15714.13	46.75	54.00	-7.25	38.51	6.14	37.48	35.38	Average	100	208	HORIZONTAL
2	15716.83	60.26	74.00	-13.74	52.03	6.14	37.48	35.39	Peak	100	208	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15717.64	64.30	74.00	-9.70	56.07	6.14	37.48	35.39	Peak	100	187	VERTICAL
2	15718.46	51.69	54.00	-2.31	43.46	6.14	37.48	35.39	Average	100	187	VERTICAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS0 20MHz Ch 52 / ANT. 1+2 (2TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15772.60	59.39	74.00	-14.61	51.25	6.14	37.42	35.42	Peak	100	204	HORIZONTAL
2	15774.09	45.79	54.00	-8.21	37.65	6.14	37.42	35.42	Average	100	204	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15776.44	63.88	74.00	-10.12	55.75	6.14	37.41	35.42	Peak	100	186	VERTICAL
2	15778.22	51.51	54.00	-2.49	43.38	6.14	37.41	35.42	Average	100	186	VERTICAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS0 20MHz Ch 60 / ANT. 1+2 (2TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10598.96	65.62	68.30	-2.68	57.65	5.01	38.38	35.42	Peak	116	233	HORIZONTAL
2	10600.05	53.74	54.00	-0.26	45.77	5.01	38.38	35.42	Average	115	232	HORIZONTAL
3	15893.27	59.07	74.00	-14.93	51.06	6.15	37.30	35.44	Peak	100	210	HORIZONTAL
4	15895.14	45.72	54.00	-8.28	37.71	6.15	37.30	35.44	Average	100	210	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10598.88	63.10	68.30	-5.20	55.13	5.01	38.38	35.42	Peak	100	178	VERTICAL
2	10600.88	48.57	54.00	-5.43	40.60	5.01	38.38	35.42	Average	100	178	VERTICAL
3	15898.13	43.73	54.00	-10.27	35.73	6.15	37.29	35.44	Average	100	183	VERTICAL
4	15899.66	58.07	74.00	-15.93	50.07	6.15	37.29	35.44	Peak	100	183	VERTICAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS0 20MHz Ch 64 / ANT. 1+2 (2TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10639.20	47.14	54.00	-6.86	39.15	5.01	38.37	35.39	Average	108	239	HORIZONTAL
2	10640.08	62.39	74.00	-11.61	54.40	5.01	38.37	35.39	Peak	108	239	HORIZONTAL
3	15964.33	50.21	74.00	-23.79	42.28	6.15	37.22	35.44	Peak	100	238	HORIZONTAL
4	15965.13	37.94	54.00	-16.06	30.01	6.15	37.22	35.44	Average	100	238	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10639.60	59.65	74.00	-14.35	51.66	5.01	38.37	35.39	Peak	100	181	VERTICAL
2	10640.00	47.82	54.00	-6.18	39.83	5.01	38.37	35.39	Average	100	181	VERTICAL
3	15945.82	54.96	74.00	-19.04	47.00	6.15	37.25	35.44	Peak	100	187	VERTICAL
4	15954.63	40.95	54.00	-13.05	33.01	6.15	37.23	35.44	Average	100	187	VERTICAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS0 20MHz Ch 100 / ANT. 1+2 (2TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10998.00	57.08	74.00	-16.92	48.85	5.01	38.32	35.10	Peak	100	102	HORIZONTAL
2	10998.88	45.53	54.00	-8.47	37.30	5.01	38.32	35.10	Average	100	102	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10999.12	50.25	74.00	-23.75	42.04	5.01	38.30	35.10	Peak	100	360	VERTICAL
2	10999.76	45.53	54.00	-8.47	37.32	5.01	38.30	35.10	Average	100	360	VERTICAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS0 20MHz Ch 116 / ANT. 1+2 (2TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11154.20	68.13	74.00	-5.87	59.80	5.04	38.45	35.16	Peak	100	203	HORIZONTAL
2	11157.18	53.00	54.00	-1.00	44.67	5.04	38.45	35.16	Average	100	203	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11159.49	69.51	74.00	-4.49	61.17	5.04	38.47	35.17	Peak	100	160	VERTICAL
2	11159.52	53.76	54.00	-0.24	45.42	5.04	38.47	35.17	Average	100	160	VERTICAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS0 20MHz Ch 140 / ANT. 1+2 (2TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11396.07	56.69	74.00	-17.31	48.16	5.10	38.68	35.25	Peak	101	238	HORIZONTAL
2	11396.55	44.55	54.00	-9.45	36.02	5.10	38.68	35.25	Average	101	238	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11398.64	40.70	54.00	-13.30	32.15	5.10	38.70	35.25	Average	100	195	VERTICAL
2	11399.12	54.62	74.00	-19.38	46.07	5.10	38.70	35.25	Peak	100	195	VERTICAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS8 20MHz Ch 36 / ANT. 1+2 (2TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15541.60	37.99	54.00	-16.01	29.52	6.13	37.65	35.31	Average	100	179	HORIZONTAL
2	15543.85	51.31	74.00	-22.69	42.84	6.13	37.65	35.31	Peak	100	179	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15538.72	54.60	74.00	-19.40	46.09	6.13	37.69	35.31	Peak	100	191	VERTICAL
2	15539.52	41.54	54.00	-12.46	33.03	6.13	37.69	35.31	Average	100	191	VERTICAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS8 20MHz Ch 40 / ANT. 1+2 (2TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15602.08	45.47	54.00	-8.53	37.08	6.13	37.60	35.34	Average	100	196	HORIZONTAL
2	15602.56	57.42	74.00	-16.58	49.03	6.13	37.60	35.34	Peak	100	196	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15597.44	60.71	74.00	-13.29	52.32	6.13	37.60	35.34	Peak	100	183	VERTICAL
2	15598.24	50.65	54.00	-3.35	42.26	6.13	37.60	35.34	Average	100	183	VERTICAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS8 20MHz Ch 48 / ANT. 1+2 (2TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15721.44	45.75	54.00	-8.25	37.52	6.14	37.48	35.39	Average	100	198	HORIZONTAL
2	15727.69	57.67	74.00	-16.33	49.46	6.14	37.46	35.39	Peak	100	198	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15719.68	49.10	54.00	-4.90	40.87	6.14	37.48	35.39	Average	100	182	VERTICAL
2	15722.24	56.52	74.00	-17.48	48.29	6.14	37.48	35.39	Peak	100	182	VERTICAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS8 20MHz Ch 52 / ANT. 1+2 (2TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15775.83	44.50	54.00	-9.50	36.36	6.14	37.42	35.42	Average	100	183	HORIZONTAL
2	15780.64	56.37	74.00	-17.63	48.24	6.14	37.41	35.42	Peak	100	183	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15778.88	47.37	54.00	-6.63	39.24	6.14	37.41	35.42	Average	100	185	VERTICAL
2	15779.20	58.50	74.00	-15.50	50.37	6.14	37.41	35.42	Peak	100	185	VERTICAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS8 20MHz Ch 60 / ANT. 1+2 (2TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10600.90	53.82	54.00	-0.18	45.85	5.01	38.38	35.42	Average	104	244	HORIZONTAL
2	10601.38	68.14	74.00	-5.86	60.17	5.01	38.38	35.42	Peak	104	244	HORIZONTAL
3	15902.37	45.02	54.00	-8.98	37.02	6.15	37.29	35.44	Average	100	223	HORIZONTAL
4	15904.71	58.83	74.00	-15.17	50.83	6.15	37.29	35.44	Peak	100	223	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10600.00	53.20	54.00	-0.80	45.23	5.01	38.38	35.42	Average	100	182	VERTICAL
2	10600.48	67.64	74.00	-6.36	59.67	5.01	38.38	35.42	Peak	100	182	VERTICAL
3	15901.47	48.23	54.00	-5.77	40.23	6.15	37.29	35.44	Average	100	171	VERTICAL
4	15904.87	62.08	74.00	-11.92	54.08	6.15	37.29	35.44	Peak	100	171	VERTICAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS8 20MHz Ch 64 / ANT. 1+2 (2TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10638.88	57.43	74.00	-16.57	49.44	5.01	38.37	35.39	Peak	105	222	HORIZONTAL
2	10639.84	45.70	54.00	-8.30	37.71	5.01	38.37	35.39	Average	105	222	HORIZONTAL
3	15918.33	50.01	74.00	-23.99	42.03	6.15	37.27	35.44	Peak	100	126	HORIZONTAL
4	15954.23	36.84	54.00	-17.16	28.90	6.15	37.23	35.44	Average	100	126	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10639.84	58.56	74.00	-15.44	50.57	5.01	38.37	35.39	Peak	100	174	VERTICAL
2	10640.32	46.01	54.00	-7.99	38.02	5.01	38.37	35.39	Average	100	174	VERTICAL
3	15957.12	51.61	74.00	-22.39	43.67	6.15	37.23	35.44	Peak	100	179	VERTICAL
4	15957.76	40.06	54.00	-13.94	32.12	6.15	37.23	35.44	Average	100	179	VERTICAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS8 20MHz Ch 100 / ANT. 1+2 (2TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10999.04	43.52	54.00	-10.48	35.29	5.01	38.32	35.10	Average	100	195	HORIZONTAL
2	11000.16	55.50	74.00	-18.50	47.27	5.01	38.32	35.10	Peak	100	195	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10995.51	55.87	74.00	-18.13	47.66	5.01	38.30	35.10	Peak	100	201	VERTICAL
2	11000.00	43.91	54.00	-10.09	35.70	5.01	38.30	35.10	Average	100	201	VERTICAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS8 20MHz Ch 116 / ANT. 1+2 (2TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11159.81	53.07	54.00	-0.93	44.73	5.04	38.47	35.17	Average	174	230	HORIZONTAL
2	11160.13	69.95	74.00	-4.05	61.61	5.04	38.47	35.17	Peak	174	230	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11159.84	53.30	54.00	-0.70	44.96	5.04	38.47	35.17	Average	100	148	VERTICAL
2	11162.56	68.75	74.00	-5.25	60.40	5.05	38.47	35.17	Peak	100	148	VERTICAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS8 20MHz Ch 140 / ANT. 1+2 (2TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11396.96	55.06	74.00	-18.94	46.53	5.10	38.68	35.25	Peak	100	234	HORIZONTAL
2	11399.52	43.23	54.00	-10.77	34.68	5.10	38.70	35.25	Average	100	234	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11397.76	41.39	54.00	-12.61	32.84	5.10	38.70	35.25	Average	100	190	VERTICAL
2	11400.00	49.88	74.00	-24.12	41.33	5.10	38.70	35.25	Peak	100	190	VERTICAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS0 40MHz Ch 38 / ANT. 1 (1TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15562.23	36.27	54.00	-17.73	27.82	6.13	37.63	35.31	Average	100	216	HORIZONTAL
2	15574.97	51.02	74.00	-22.98	42.61	6.13	37.61	35.33	Peak	100	216	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15564.63	36.28	54.00	-17.72	27.83	6.13	37.65	35.33	Average	100	329	VERTICAL
2	15594.68	49.36	74.00	-24.64	40.97	6.13	37.60	35.34	Peak	100	329	VERTICAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS0 40MHz Ch 46 / ANT. 1 (1TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10458.48	43.91	68.30	-24.39	36.06	5.00	38.39	35.54	Average	100	244	HORIZONTAL
2	10460.48	58.31	68.30	-9.99	50.46	5.00	38.39	35.54	Peak	100	244	HORIZONTAL
3	15676.46	52.69	74.00	-21.31	44.41	6.14	37.51	35.37	Peak	100	192	HORIZONTAL
4	15685.83	39.37	54.00	-14.63	31.09	6.14	37.51	35.37	Average	100	192	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10460.72	45.89	68.30	-22.41	38.04	5.00	38.39	35.54	Average	100	187	VERTICAL
2	10460.88	59.28	68.30	-9.02	51.43	5.00	38.39	35.54	Peak	100	187	VERTICAL
3	15693.93	39.35	54.00	-14.65	31.10	6.14	37.49	35.38	Average	100	204	VERTICAL
4	15700.82	52.18	74.00	-21.82	43.93	6.14	37.49	35.38	Peak	100	204	VERTICAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS0 40MHz Ch 54 / ANT. 1 (1TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10538.96	59.06	68.30	-9.24	51.14	5.01	38.39	35.48	Peak	100	245	HORIZONTAL
2	10541.68	44.77	68.30	-23.53	36.85	5.01	38.39	35.48	Average	100	245	HORIZONTAL
3	15804.79	51.51	74.00	-22.49	43.41	6.14	37.39	35.43	Peak	100	195	HORIZONTAL
4	15807.68	38.28	54.00	-15.72	30.18	6.14	37.39	35.43	Average	100	195	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10555.54	39.63	68.30	-28.67	31.69	5.01	38.39	35.46	Average	100	47	VERTICAL
2	10561.39	53.64	68.30	-14.66	45.70	5.01	38.39	35.46	Peak	100	47	VERTICAL
3	15813.29	40.21	54.00	-13.79	32.13	6.14	37.37	35.43	Average	100	170	VERTICAL
4	15818.09	53.33	74.00	-20.67	45.26	6.14	37.37	35.44	Peak	100	170	VERTICAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS0 40MHz Ch 62 / ANT. 1 (1TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10607.18	50.01	74.00	-23.99	42.04	5.01	38.38	35.42	Peak	100	246	HORIZONTAL
2	10619.92	36.43	54.00	-17.57	28.46	5.01	38.38	35.42	Average	100	246	HORIZONTAL
3	15910.53	35.91	54.00	-18.09	27.91	6.15	37.29	35.44	Average	100	208	HORIZONTAL
4	15931.92	49.70	74.00	-24.30	41.74	6.15	37.25	35.44	Peak	100	208	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10612.87	50.26	74.00	-23.74	42.29	5.01	38.38	35.42	Peak	104	191	VERTICAL
2	10620.24	36.28	54.00	-17.72	28.31	5.01	38.38	35.42	Average	104	191	VERTICAL
3	15908.69	36.07	54.00	-17.93	28.07	6.15	37.29	35.44	Average	100	50	VERTICAL
4	15923.51	49.13	74.00	-24.87	41.15	6.15	37.27	35.44	Peak	100	50	VERTICAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS0 40MHz Ch 102 / ANT. 1 (1TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11021.12	36.41	54.00	-17.59	28.17	5.02	38.33	35.11	Average	100	232	HORIZONTAL
2	11023.13	49.38	74.00	-24.62	41.13	5.02	38.34	35.11	Peak	100	232	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11019.76	49.32	74.00	-24.68	41.09	5.02	38.32	35.11	Peak	100	213	VERTICAL
2	11021.28	36.27	54.00	-17.73	28.04	5.02	38.32	35.11	Average	100	213	VERTICAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS0 40MHz Ch 110 / ANT. 1 (1TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11102.96	56.86	74.00	-17.14	48.57	5.03	38.40	35.14	Peak	100	266	HORIZONTAL
2	11104.81	42.81	54.00	-11.19	34.52	5.03	38.40	35.14	Average	100	266	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11096.47	61.22	74.00	-12.78	52.93	5.03	38.40	35.14	Peak	106	65	VERTICAL
2	11100.08	45.24	54.00	-8.76	36.95	5.03	38.40	35.14	Average	106	65	VERTICAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS0 40MHz Ch 134 / ANT. 1 (1TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11336.47	54.69	74.00	-19.31	46.22	5.08	38.63	35.24	Peak	100	111	HORIZONTAL
2	11337.04	41.71	54.00	-12.29	33.24	5.08	38.63	35.24	Average	100	111	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11333.67	55.33	74.00	-18.67	46.85	5.08	38.63	35.23	Peak	119	263	VERTICAL
2	11336.71	41.38	54.00	-12.62	32.91	5.08	38.63	35.24	Average	119	263	VERTICAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS0 40MHz Ch 38 / ANT. 1+2 (2TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15568.80	44.42	74.00	-29.58	35.99	6.13	37.63	35.33	Peak	100	120	HORIZONTAL
2	15571.84	37.19	54.00	-16.81	28.78	6.13	37.61	35.33	Average	100	120	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15565.59	45.76	74.00	-28.24	37.31	6.13	37.65	35.33	Peak	100	216	VERTICAL
2	15572.24	37.22	54.00	-16.78	28.81	6.13	37.61	35.33	Average	100	216	VERTICAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS0 40MHz Ch 46 / ANT. 1+2 (2TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15693.29	38.95	54.00	-15.05	30.70	6.14	37.49	35.38	Average	100	201	HORIZONTAL
2	15693.37	47.34	74.00	-26.66	39.09	6.14	37.49	35.38	Peak	100	201	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15685.03	39.59	54.00	-14.41	31.31	6.14	37.51	35.37	Average	100	181	VERTICAL
2	15699.86	47.02	74.00	-26.98	38.77	6.14	37.49	35.38	Peak	100	181	VERTICAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS0 40MHz Ch 54 / ANT. 1+2 (2TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10539.12	59.20	68.30	-9.10	51.28	5.01	38.39	35.48	Peak	107	239	HORIZONTAL
2	15800.67	49.75	74.00	-24.25	41.65	6.14	37.39	35.43	Peak	100	204	HORIZONTAL
3	15817.56	41.59	54.00	-12.41	33.51	6.14	37.37	35.43	Average	100	204	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10535.19	62.29	68.30	-6.01	54.37	5.01	38.39	35.48	Peak	100	184	VERTICAL
2	15809.36	43.99	54.00	-10.01	35.89	6.14	37.39	35.43	Average	100	184	VERTICAL
3	15827.39	56.52	74.00	-17.48	48.45	6.14	37.37	35.44	Peak	100	184	VERTICAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS0 40MHz Ch 62 / ANT. 1+2 (2TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10596.20	49.77	68.30	-18.53	41.82	5.01	38.38	35.44	Peak	100	188	HORIZONTAL
2	10618.72	37.62	54.00	-16.38	29.65	5.01	38.38	35.42	Average	100	188	HORIZONTAL
3	15905.80	35.77	54.00	-18.23	27.77	6.15	37.29	35.44	Average	100	289	HORIZONTAL
4	15923.03	48.12	74.00	-25.88	40.14	6.15	37.27	35.44	Peak	100	289	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10606.62	50.10	74.00	-23.90	42.13	5.01	38.38	35.42	Peak	100	204	VERTICAL
2	10618.48	37.76	54.00	-16.24	29.79	5.01	38.38	35.42	Average	100	204	VERTICAL
3	15914.46	44.22	74.00	-29.78	36.24	6.15	37.27	35.44	Peak	100	242	VERTICAL
4	15922.63	36.82	54.00	-17.18	28.84	6.15	37.27	35.44	Average	100	242	VERTICAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS0 40MHz Ch 102 / ANT. 1+2 (2TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11018.72	36.97	54.00	-17.03	28.73	5.02	38.33	35.11	Average	100	266	HORIZONTAL
2	11025.29	49.01	74.00	-24.99	40.76	5.02	38.34	35.11	Peak	100	266	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11020.48	36.70	54.00	-17.30	28.47	5.02	38.32	35.11	Average	100	133	VERTICAL
2	11051.25	43.04	74.00	-30.96	34.79	5.02	38.35	35.12	Peak	100	133	VERTICAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS0 40MHz Ch 110 / ANT. 1+2 (2TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11099.68	47.34	54.00	-6.66	39.05	5.03	38.40	35.14	Average	100	257	HORIZONTAL
2	11100.64	59.82	74.00	-14.18	51.53	5.03	38.40	35.14	Peak	100	257	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11094.71	60.03	74.00	-13.97	51.74	5.03	38.40	35.14	Peak	100	163	VERTICAL
2	11097.60	48.10	54.00	-5.90	39.81	5.03	38.40	35.14	Average	100	163	VERTICAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS0 40MHz Ch 134 / ANT. 1+2 (2TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11331.51	44.44	54.00	-9.56	35.96	5.08	38.63	35.23	Average	100	104	HORIZONTAL
2	11351.38	50.71	74.00	-23.29	42.21	5.09	38.65	35.24	Peak	100	104	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11333.91	42.19	54.00	-11.81	33.71	5.08	38.63	35.23	Average	100	261	VERTICAL
2	11338.72	54.20	74.00	-19.80	45.73	5.08	38.63	35.24	Peak	100	261	VERTICAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS8 40MHz Ch 38 / ANT. 1+2 (2TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15571.28	37.26	54.00	-16.74	28.83	6.13	37.63	35.33	Average	100	178	HORIZONTAL
2	15573.37	43.57	74.00	-30.43	35.16	6.13	37.61	35.33	Peak	100	178	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15524.49	50.05	74.00	-23.95	41.48	6.13	37.73	35.29	Peak	100	289	VERTICAL
2	15534.26	37.46	54.00	-16.54	28.89	6.13	37.73	35.29	Average	100	289	VERTICAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS8 40MHz Ch 46 / ANT. 1+2 (2TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15673.49	51.71	74.00	-22.29	43.41	6.14	37.53	35.37	Peak	100	340	HORIZONTAL
2	15694.17	40.38	54.00	-13.62	32.13	6.14	37.49	35.38	Average	100	340	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15700.26	40.65	54.00	-13.35	32.40	6.14	37.49	35.38	Average	100	150	VERTICAL
2	15701.06	52.95	74.00	-21.05	44.70	6.14	37.49	35.38	Peak	100	150	VERTICAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS8 40MHz Ch 54 / ANT. 1+2 (2TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10538.88	59.83	68.30	-8.47	51.91	5.01	38.39	35.48	Peak	109	235	HORIZONTAL
2	15815.29	51.01	74.00	-22.99	42.93	6.14	37.37	35.43	Peak	100	120	HORIZONTAL
3	15819.46	39.78	54.00	-14.22	31.71	6.14	37.37	35.44	Average	100	120	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10534.87	57.83	68.30	-10.47	49.91	5.01	38.39	35.48	Peak	100	207	VERTICAL
2	15812.40	50.91	74.00	-23.09	42.83	6.14	37.37	35.43	Peak	100	247	VERTICAL
3	15816.25	38.24	54.00	-15.76	30.16	6.14	37.37	35.43	Average	100	247	VERTICAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS8 40MHz Ch 62 / ANT. 1+2 (2TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10574.81	48.74	68.30	-19.56	40.78	5.01	38.39	35.44	Peak	100	14	HORIZONTAL
2	15907.88	36.90	54.00	-17.10	28.90	6.15	37.29	35.44	Average	100	187	HORIZONTAL
3	15935.13	49.36	74.00	-24.64	41.40	6.15	37.25	35.44	Peak	100	187	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10571.60	48.64	68.30	-19.66	40.70	5.01	38.39	35.46	Peak	100	230	VERTICAL
2	15894.10	49.69	74.00	-24.31	41.68	6.15	37.30	35.44	Peak	100	290	VERTICAL
3	15909.17	36.81	54.00	-17.19	28.81	6.15	37.29	35.44	Average	100	290	VERTICAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS8 40MHz Ch 102 / ANT. 1+2 (2TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11013.27	36.61	54.00	-17.39	28.37	5.02	38.33	35.11	Average	100	291	HORIZONTAL
2	11064.39	48.24	74.00	-25.76	39.97	5.03	38.37	35.13	Peak	100	291	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11019.84	46.44	74.00	-27.56	38.21	5.02	38.32	35.11	Peak	100	156	VERTICAL
2	11023.69	37.27	54.00	-16.73	29.03	5.02	38.33	35.11	Average	100	156	VERTICAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS8 40MHz Ch 110 / ANT. 1+2 (2TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11098.88	53.34	74.00	-20.66	45.05	5.03	38.40	35.14	Peak	133	229	HORIZONTAL
2	11101.12	47.29	54.00	-6.71	39.00	5.03	38.40	35.14	Average	133	229	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11100.00	64.23	74.00	-9.77	55.94	5.03	38.40	35.14	Peak	100	155	VERTICAL
2	11101.92	47.10	54.00	-6.90	38.81	5.03	38.40	35.14	Average	100	155	VERTICAL

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS8 40MHz Ch 134 / ANT. 1+2 (2TX)
Test Date	Jul. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11337.60	41.31	54.00	-12.69	32.84	5.08	38.63	35.24	Average	100	240	HORIZONTAL
2	11340.00	54.68	74.00	-19.32	46.21	5.08	38.63	35.24	Peak	100	240	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11334.87	36.07	54.00	-17.93	27.59	5.08	38.63	35.23	Average	100	215	VERTICAL
2	11346.57	50.40	74.00	-23.60	41.90	5.09	38.65	35.24	Peak	100	215	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.

4.7. Band Edge Emissions Measurement

4.7.1. Limit

For transmitters operating in the 5.15-5.35 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz (68.3dBuV/m at 3m). For transmitters operating in the 5.470-5.725 GHz band: all emissions outside of the 5.470-5.725 GHz band shall not exceed an EIRP of -27 dBm/MHz (68.3dBuV/m at 3m). For transmitters operating in the 5.725-5.825 GHz band: all emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an EIRP of -17 dBm/MHz (78.3dBuV/m at 3m); for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an EIRP of -27 dBm/MHz (68.3dBuV/m at 3m). In addition, 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

4.7.2. 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 / 3MHz for Peak, 1 MHz / 10Hz for Average
RB / VB (Emission in non-restricted band)	1MHz / 3MHz for Peak

4.7.3. Test Procedures

1. The test procedure is the same as section 4.6.3, only the frequency range investigated is limited to 100MHz around bandedges.

4.7.4. Test Setup Layout

This test setup layout is the same as that shown in section 4.6.4.

4.7.5. Test Deviation

There is no deviation with the original standard.

4.7.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.7.7. Test Result of Band Edge and Fundamental Emissions

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS0 20MHz Ch 36, 40, 48 / ANT. 1 (1TX)
Test Date	Jul. 06, 2012		

Channel 36

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5149.52	72.68	74.00	-1.32	35.58	3.43	33.67	0.00	Peak	137	102	HORIZONTAL
2	5150.00	47.09	54.00	-6.91	9.99	3.43	33.67	0.00	Average	137	102	HORIZONTAL
3	5173.91				60.97	3.44	33.70	0.00	Average	137	102	HORIZONTAL
4	5183.21				72.29	3.44	33.73	0.00	Peak	137	102	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5180 MHz.

Channel 40

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5149.36	67.88	74.00	-6.12	30.78	3.43	33.67	0.00	Peak	136	101	HORIZONTAL
2	5150.00	46.63	54.00	-7.37	9.53	3.43	33.67	0.00	Average	136	101	HORIZONTAL
3	5193.91				64.35	3.44	33.73	0.00	Average	136	101	HORIZONTAL
4	5194.55				75.24	3.44	33.76	0.00	Peak	136	101	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5200 MHz.

Channel 48

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5150.00	39.59	54.00	-14.41	2.49	3.43	33.67	0.00	Average	135	92	HORIZONTAL
2	5150.00	51.56	74.00	-22.44	14.46	3.43	33.67	0.00	Peak	135	92	HORIZONTAL
3	5233.27				72.66	3.46	33.82	0.00	Peak	135	92	HORIZONTAL
4	5234.23				62.49	3.46	33.82	0.00	Average	135	92	HORIZONTAL
5	5350.00	39.07	54.00	-14.93	1.55	3.49	34.03	0.00	Average	135	92	HORIZONTAL
6	5350.00	50.47	74.00	-23.53	12.95	3.49	34.03	0.00	Peak	135	92	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5240 MHz..

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS0 20MHz Ch 52, 60, 64 / ANT. 1 (1TX)
Test Date	Jul. 06, 2012		

Channel 52

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5150.00	39.56	54.00	-14.44	2.46	3.43	33.67	0.00	Average	135	101	HORIZONTAL
2	5150.00	51.36	74.00	-22.64	14.26	3.43	33.67	0.00	Peak	135	101	HORIZONTAL
3	5253.27				62.73	3.46	33.85	0.00	Average	135	101	HORIZONTAL
4	5255.67				73.30	3.46	33.85	0.00	Peak	135	101	HORIZONTAL
5	5350.00	39.19	54.00	-14.81	1.67	3.49	34.03	0.00	Average	135	101	HORIZONTAL
6	5350.00	50.19	74.00	-23.81	12.67	3.49	34.03	0.00	Peak	135	101	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5260 MHz.

Channel 60

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5294.55				71.17	3.47	33.91	0.00	Peak	100	219	HORIZONTAL
2	5296.80				60.63	3.48	33.94	0.00	Average	100	219	HORIZONTAL
3	5350.00	41.86	54.00	-12.14	4.34	3.49	34.03	0.00	Average	100	219	HORIZONTAL
4	5350.64	61.88	74.00	-12.12	24.36	3.49	34.03	0.00	Peak	100	219	HORIZONTAL

Item 1, 2 are the fundamental frequency at 5300 MHz.

Channel 64

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5314.71				59.92	3.48	33.97	0.00	Average	127	219	HORIZONTAL
2	5314.71				70.54	3.48	33.97	0.00	Peak	127	219	HORIZONTAL
3	5350.00	52.15	54.00	-1.85	14.63	3.49	34.03	0.00	Average	127	219	HORIZONTAL
4	5350.80	72.43	74.00	-1.57	34.91	3.49	34.03	0.00	Peak	127	219	HORIZONTAL

Item 1, 2 are the fundamental frequency at 5320 MHz.

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS0 20MHz Ch 100, 140 / ANT. 1 (1TX)
Test Date	Jul. 06, 2012		

Channel 100

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5458.08	55.04	74.00	-18.96	17.33	3.52	34.19	0.00	Peak	125	90	HORIZONTAL
2	5460.00	40.39	54.00	-13.61	2.68	3.52	34.19	0.00	Average	125	90	HORIZONTAL
3	5467.28	66.86	68.30	-1.44	29.13	3.52	34.21	0.00	Peak	125	90	HORIZONTAL
4	5493.91				60.00	3.53	34.23	0.00	Average	125	90	HORIZONTAL
5	5503.53				71.18	3.54	34.25	0.00	Peak	125	90	HORIZONTAL

Item 4, 5 are the fundamental frequency at 5500 MHz.

Channel 140

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5694.55				58.88	3.59	34.34	0.00	Average	121	98	HORIZONTAL
2	5695.99				70.05	3.59	34.34	0.00	Peak	121	98	HORIZONTAL
3	5725.00	66.80	68.30	-1.50	28.86	3.60	34.34	0.00	Peak	121	98	HORIZONTAL

Item 1, 2 are the fundamental frequency at 5700 MHz.

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS0 20MHz Ch 36, 40, 48 / ANT. 1+2 (2TX)
Test Date	Jul. 06, 2012		

Channel 36

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5149.52	72.52	74.00	-1.48	35.42	3.43	33.67	0.00	Peak	124	252	HORIZONTAL
2	5150.00	50.13	54.00	-3.87	13.03	3.43	33.67	0.00	Average	124	252	HORIZONTAL
3	5187.21				64.74	3.44	33.73	0.00	Average	124	252	HORIZONTAL
4	5187.37				75.55	3.44	33.73	0.00	Peak	124	252	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5180 MHz.

Channel 40

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5149.04	72.96	74.00	-1.04	35.86	3.43	33.67	0.00	Peak	135	258	HORIZONTAL
2	5150.00	49.29	54.00	-4.71	12.19	3.43	33.67	0.00	Average	135	258	HORIZONTAL
3	5205.45				79.27	3.45	33.76	0.00	Peak	135	258	HORIZONTAL
4	5206.41				68.01	3.45	33.76	0.00	Average	135	258	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5200 MHz.

Channel 48

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5148.08	58.67	74.00	-15.33	21.57	3.43	33.67	0.00	Peak	121	246	HORIZONTAL
2	5150.00	40.30	54.00	-13.70	3.20	3.43	33.67	0.00	Average	121	246	HORIZONTAL
3	5235.67				81.28	3.46	33.82	0.00	Peak	121	246	HORIZONTAL
4	5238.08				70.38	3.46	33.82	0.00	Average	121	246	HORIZONTAL
5	5350.00	40.68	54.00	-13.32	3.16	3.49	34.03	0.00	Average	121	246	HORIZONTAL
6	5350.96	52.90	74.00	-21.10	15.38	3.49	34.03	0.00	Peak	121	246	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5240 MHz..

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS0 20MHz Ch 52, 60, 64 / ANT. 1+2 (2TX)
Test Date	Jul. 06, 2012		

Channel 52

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5140.87	53.27	74.00	-20.73	16.20	3.43	33.64	0.00	Peak	137	248	HORIZONTAL
2	5145.19	40.63	54.00	-13.37	3.53	3.43	33.67	0.00	Average	137	248	HORIZONTAL
3	5266.25				69.85	3.46	33.88	0.00	Average	137	248	HORIZONTAL
4	5266.25				80.38	3.46	33.88	0.00	Peak	137	248	HORIZONTAL
5	5350.00	40.41	54.00	-13.59	2.89	3.49	34.03	0.00	Average	137	248	HORIZONTAL
6	5350.96	54.61	74.00	-19.39	17.09	3.49	34.03	0.00	Peak	137	248	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5260 MHz.

Channel 60

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5307.05				69.52	3.48	33.94	0.00	Average	121	247	HORIZONTAL
2	5307.05				80.70	3.48	33.94	0.00	Peak	121	247	HORIZONTAL
3	5350.00	50.84	54.00	-3.16	13.32	3.49	34.03	0.00	Average	121	247	HORIZONTAL
4	5350.32	72.93	74.00	-1.07	35.41	3.49	34.03	0.00	Peak	121	247	HORIZONTAL

Item 1, 2 are the fundamental frequency at 5300 MHz.

Channel 64

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5326.25				75.32	3.49	33.97	0.00	Peak	133	252	HORIZONTAL
2	5326.41				64.49	3.49	33.97	0.00	Average	133	252	HORIZONTAL
3	5350.00	52.38	54.00	-1.62	14.86	3.49	34.03	0.00	Average	133	252	HORIZONTAL
4	5350.16	72.90	74.00	-1.10	35.38	3.49	34.03	0.00	Peak	133	252	HORIZONTAL

Item 1, 2 are the fundamental frequency at 5320 MHz.

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS0 20MHz Ch 100, 140 / ANT. 1+2 (2TX)
Test Date	Jul. 06, 2012		

Channel 100

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5455.99	42.16	54.00	-11.84	4.45	3.52	34.19	0.00	Average	114	268	HORIZONTAL
2	5456.15	56.17	74.00	-17.83	18.46	3.52	34.19	0.00	Peak	114	268	HORIZONTAL
3	5469.84	64.80	68.30	-3.50	27.07	3.52	34.21	0.00	Peak	114	268	HORIZONTAL
4	5496.80				62.49	3.53	34.23	0.00	Average	114	268	HORIZONTAL
5	5496.80				73.37	3.53	34.23	0.00	Peak	114	268	HORIZONTAL

Item 4, 5 are the fundamental frequency at 5500 MHz.

Channel 140

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5705.45				70.27	3.60	34.34	0.00	Peak	135	229	HORIZONTAL
2	5706.09				59.14	3.60	34.34	0.00	Average	135	229	HORIZONTAL
3	5725.16	67.23	68.30	-1.07	29.29	3.60	34.34	0.00	Peak	135	229	HORIZONTAL

Item 1, 2 are the fundamental frequency at 5700 MHz.

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS8 20MHz Ch 36, 40, 48 / ANT. 1+2 (2TX)
Test Date	Jul. 06, 2012		

Channel 36

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5149.36	72.36	74.00	-1.64	35.26	3.43	33.67	0.00	Peak	125	252	HORIZONTAL
2	5150.00	51.77	54.00	-2.23	14.67	3.43	33.67	0.00	Average	125	252	HORIZONTAL
3	5173.75				62.99	3.44	33.70	0.00	Average	125	252	HORIZONTAL
4	5174.39				77.36	3.44	33.70	0.00	Peak	125	252	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5180 MHz.

Channel 40

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5150.00	51.71	54.00	-2.29	14.61	3.43	33.67	0.00	Average	110	233	HORIZONTAL
2	5150.00	72.15	74.00	-1.85	35.05	3.43	33.67	0.00	Peak	110	233	HORIZONTAL
3	5193.59				66.04	3.44	33.73	0.00	Average	110	233	HORIZONTAL
4	5198.72				78.28	3.45	33.76	0.00	Peak	110	233	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5200 MHz.

Channel 48

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5148.08	58.02	74.00	-15.98	20.92	3.43	33.67	0.00	Peak	123	245	HORIZONTAL
2	5150.00	40.59	54.00	-13.41	3.49	3.43	33.67	0.00	Average	123	245	HORIZONTAL
3	5245.77				68.68	3.46	33.85	0.00	Average	123	245	HORIZONTAL
4	5245.77				80.50	3.46	33.85	0.00	Peak	123	245	HORIZONTAL
5	5350.00	40.31	54.00	-13.69	2.79	3.49	34.03	0.00	Average	123	245	HORIZONTAL
6	5350.00	50.67	74.00	-23.33	13.15	3.49	34.03	0.00	Peak	123	245	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5240 MHz..

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS8 20MHz Ch 52, 60, 64 / ANT. 1+2 (2TX)
Test Date	Jul. 06, 2012		

Channel 52

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5134.62	40.17	54.00	-13.83	3.10	3.43	33.64	0.00	Average	133	253	HORIZONTAL
2	5135.58	53.40	74.00	-20.60	16.33	3.43	33.64	0.00	Peak	133	253	HORIZONTAL
3	5253.27				68.71	3.46	33.85	0.00	Average	133	253	HORIZONTAL
4	5253.75				80.22	3.46	33.85	0.00	Peak	133	253	HORIZONTAL
5	5350.00	41.65	54.00	-12.35	4.13	3.49	34.03	0.00	Average	133	253	HORIZONTAL
6	5350.96	56.95	74.00	-17.05	19.43	3.49	34.03	0.00	Peak	133	253	HORIZONTAL

Item 1, 2 are the fundamental frequency at 5260 MHz.

Channel 60

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5296.47				81.46	3.47	33.91	0.00	Peak	121	243	HORIZONTAL
2	5298.08				67.94	3.48	33.94	0.00	Average	121	243	HORIZONTAL
3	5350.00	52.71	54.00	-1.29	15.19	3.49	34.03	0.00	Average	121	243	HORIZONTAL
4	5350.64	72.50	74.00	-1.50	34.98	3.49	34.03	0.00	Peak	121	243	HORIZONTAL

Item 1, 2 are the fundamental frequency at 5300 MHz.

Channel 64

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5314.71				63.63	3.48	33.97	0.00	Average	133	239	HORIZONTAL
2	5323.69				76.29	3.49	33.97	0.00	Peak	133	239	HORIZONTAL
3	5350.00	72.05	74.00	-1.95	34.53	3.49	34.03	0.00	Peak	133	239	HORIZONTAL
4	5353.05	49.30	54.00	-4.70	11.78	3.49	34.03	0.00	Average	133	239	HORIZONTAL

Item 1, 2 are the fundamental frequency at 5320 MHz.

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS8 20MHz Ch 100, 140 / ANT. 1+2 (2TX)
Test Date	Jul. 06, 2012		

Channel 100

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5455.99	42.81	54.00	-11.19	5.10	3.52	34.19	0.00	Average	126	259	HORIZONTAL
2	5456.64	55.23	74.00	-18.77	17.52	3.52	34.19	0.00	Peak	126	259	HORIZONTAL
3	5469.84	66.56	68.30	-1.74	28.83	3.52	34.21	0.00	Peak	126	259	HORIZONTAL
4	5504.97				72.94	3.54	34.25	0.00	Peak	126	259	HORIZONTAL
5	5505.93				60.39	3.54	34.25	0.00	Average	126	259	HORIZONTAL

Item 4, 5 are the fundamental frequency at 5500 MHz.

Channel 140

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5693.75				71.39	3.59	34.34	0.00	Peak	110	258	HORIZONTAL
2	5695.67				57.76	3.59	34.34	0.00	Average	110	258	HORIZONTAL
3	5725.16	66.73	68.30	-1.57	28.79	3.60	34.34	0.00	Peak	110	258	HORIZONTAL

Item 1, 2 are the fundamental frequency at 5700 MHz.

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS0 40MHz Ch 38, 46, 54 / ANT. 1 (1TX)
Test Date	Jul. 06, 2012		

Channel 38

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5150.00	52.13	54.00	-1.87	15.03	3.43	33.67	0.00	Average	140	101	HORIZONTAL
2	5150.00	67.77	74.00	-6.23	30.67	3.43	33.67	0.00	Peak	140	101	HORIZONTAL
3	5176.54				53.61	3.44	33.70	0.00	Average	140	101	HORIZONTAL
4	5176.86				64.58	3.44	33.70	0.00	Peak	140	101	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5190 MHz..

Channel 46

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5148.56	68.48	74.00	-5.52	31.38	3.43	33.67	0.00	Peak	136	86	HORIZONTAL
2	5150.00	51.98	54.00	-2.02	14.88	3.43	33.67	0.00	Average	136	86	HORIZONTAL
3	5217.98				71.30	3.45	33.79	0.00	Peak	136	86	HORIZONTAL
4	5218.46				60.15	3.45	33.79	0.00	Average	136	86	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5230 MHz.

Channel 54

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5255.58				70.13	3.46	33.85	0.00	Peak	137	99	HORIZONTAL
2	5256.06				58.77	3.46	33.85	0.00	Average	137	99	HORIZONTAL
3	5350.00	45.90	54.00	-8.10	8.38	3.49	34.03	0.00	Average	137	99	HORIZONTAL
4	5350.00	60.88	74.00	-13.12	23.36	3.49	34.03	0.00	Peak	137	99	HORIZONTAL

Item 1, 2 are the fundamental frequency at 5270 MHz.

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS0 40MHz Ch 62, 102, 110 / ANT. 1 (1TX)
Test Date	Jul. 06, 2012		

Channel 62

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5296.22				52.76	3.47	33.91	0.00	Average	137	96	HORIZONTAL
2	5296.86				63.34	3.48	33.94	0.00	Peak	137	96	HORIZONTAL
3	5350.00	52.01	54.00	-1.99	14.49	3.49	34.03	0.00	Average	137	96	HORIZONTAL
4	5350.64	68.45	74.00	-5.55	30.93	3.49	34.03	0.00	Peak	137	96	HORIZONTAL

Item 1, 2 are the fundamental frequency at 5310 MHz.

Channel 102

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5459.36	59.92	74.00	-14.08	22.21	3.52	34.19	0.00	Peak	125	84	HORIZONTAL
2	5460.00	43.73	54.00	-10.27	6.02	3.52	34.19	0.00	Average	125	84	HORIZONTAL
3	5470.00	67.27	68.30	-1.03	29.54	3.52	34.21	0.00	Peak	125	84	HORIZONTAL
4	5498.14				52.10	3.53	34.23	0.00	Average	125	84	HORIZONTAL
5	5503.91				63.64	3.54	34.25	0.00	Peak	125	84	HORIZONTAL

Item 4, 5 are the fundamental frequency at 5510 MHz.

Channel 110

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5456.80	62.60	74.00	-11.40	24.89	3.52	34.19	0.00	Peak	126	90	HORIZONTAL
2	5460.00	41.50	54.00	-12.50	3.79	3.52	34.19	0.00	Average	126	90	HORIZONTAL
3	5465.19	66.18	68.30	-2.12	28.47	3.52	34.19	0.00	Peak	126	90	HORIZONTAL
4	5554.81				70.19	3.55	34.31	0.00	Peak	126	90	HORIZONTAL
5	5556.09				58.35	3.55	34.31	0.00	Average	126	90	HORIZONTAL

Item 4, 5 are the fundamental frequency at 5550 MHz.

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS0 40MHz Ch 134 / ANT. 1 (1TX)
Test Date	Jul. 06, 2012		

Channel 134

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5656.54				58.17	3.59	34.33	0.00	Average	121	98	HORIZONTAL
2	5660.71				69.58	3.59	34.33	0.00	Peak	121	98	HORIZONTAL
3	5727.56	66.60	68.30	-1.70	28.66	3.60	34.34	0.00	Peak	121	98	HORIZONTAL

Item 1, 2 are the fundamental frequency at 5310 MHz.

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS0 40MHz Ch 38, 46, 54 / ANT. 1+2 (2TX)
Test Date	Jul. 06, 2012		

Channel 38

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5149.68	71.84	74.00	-2.16	34.74	3.43	33.67	0.00	Peak	149	245	HORIZONTAL
2	5150.00	52.85	54.00	-1.15	15.75	3.43	33.67	0.00	Average	149	245	HORIZONTAL
3	5204.42				65.57	3.45	33.76	0.00	Peak	149	245	HORIZONTAL
4	5206.67				55.03	3.45	33.76	0.00	Average	149	245	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5190 MHz..

Channel 46

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5149.04	70.53	74.00	-3.47	33.43	3.43	33.67	0.00	Peak	123	236	HORIZONTAL
2	5150.00	52.56	54.00	-1.44	15.46	3.43	33.67	0.00	Average	123	236	HORIZONTAL
3	5246.03				64.70	3.46	33.85	0.00	Average	123	236	HORIZONTAL
4	5246.99				75.39	3.46	33.85	0.00	Peak	123	236	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5230 MHz.

Channel 54

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5266.47				64.94	3.46	33.88	0.00	Average	138	239	HORIZONTAL
2	5267.76				76.01	3.46	33.88	0.00	Peak	138	239	HORIZONTAL
3	5350.00	52.73	54.00	-1.27	15.21	3.49	34.03	0.00	Average	138	239	HORIZONTAL
4	5350.00	70.23	74.00	-3.77	32.71	3.49	34.03	0.00	Peak	138	239	HORIZONTAL

Item 1, 2 are the fundamental frequency at 5270 MHz.

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS0 40MHz Ch 62, 102, 110 / ANT. 1+2 (2TX)
Test Date	Jul. 06, 2012		

Channel 62

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5307.76				55.43	3.48	33.94	0.00	Average	125	234	HORIZONTAL
2	5308.08				66.14	3.48	33.94	0.00	Peak	125	234	HORIZONTAL
3	5350.00	52.33	54.00	-1.67	14.81	3.49	34.03	0.00	Average	125	234	HORIZONTAL
4	5350.64	70.69	74.00	-3.31	33.17	3.49	34.03	0.00	Peak	125	234	HORIZONTAL

Item 1, 2 are the fundamental frequency at 5310 MHz.

Channel 102

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5460.00	41.68	54.00	-12.32	3.97	3.52	34.19	0.00	Average	126	252	HORIZONTAL
2	5460.00	59.76	74.00	-14.24	22.05	3.52	34.19	0.00	Peak	126	252	HORIZONTAL
3	5464.23	66.41	68.30	-1.89	28.70	3.52	34.19	0.00	Peak	126	252	HORIZONTAL
4	5525.39				53.83	3.54	34.27	0.00	Average	126	252	HORIZONTAL
5	5525.71				64.73	3.54	34.27	0.00	Peak	126	252	HORIZONTAL

Item 4, 5 are the fundamental frequency at 5510 MHz.

Channel 110

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5456.15	43.85	54.00	-10.15	6.14	3.52	34.19	0.00	Average	124	253	HORIZONTAL
2	5459.36	68.72	74.00	-5.28	31.01	3.52	34.19	0.00	Peak	124	253	HORIZONTAL
3	5463.27	66.98	68.30	-1.32	29.27	3.52	34.19	0.00	Peak	124	253	HORIZONTAL
4	5536.22				62.22	3.55	34.29	0.00	Average	124	253	HORIZONTAL
5	5536.54				73.52	3.55	34.29	0.00	Peak	124	253	HORIZONTAL

Item 4, 5 are the fundamental frequency at 5550 MHz.

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS0 40MHz Ch 134 / ANT. 1+2 (2TX)
Test Date	Jul. 06, 2012		

Channel 134

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5664.55				58.77	3.59	34.33	0.00	Average	136	251	HORIZONTAL
2	5665.51				69.60	3.59	34.33	0.00	Peak	136	251	HORIZONTAL
3	5725.32	67.10	68.30	-1.20	29.16	3.60	34.34	0.00	Peak	136	251	HORIZONTAL

Item 1, 2 are the fundamental frequency at 5310 MHz.

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS8 40MHz Ch 38, 46, 54 / ANT. 1+2 (2TX)
Test Date	Jul. 06, 2012		

Channel 38

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5148.72	66.83	74.00	-7.17	29.73	3.43	33.67	0.00	Peak	140	263	HORIZONTAL
2	5150.00	52.25	54.00	-1.75	15.15	3.43	33.67	0.00	Average	140	263	HORIZONTAL
3	5181.03				53.87	3.44	33.73	0.00	Average	140	263	HORIZONTAL
4	5183.27				66.91	3.44	33.73	0.00	Peak	140	263	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5190 MHz..

Channel 46

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5150.00	52.06	54.00	-1.94	14.96	3.43	33.67	0.00	Average	121	253	HORIZONTAL
2	5150.00	68.67	74.00	-5.33	31.57	3.43	33.67	0.00	Peak	121	253	HORIZONTAL
3	5242.18				63.38	3.46	33.82	0.00	Average	121	253	HORIZONTAL
4	5243.46				75.56	3.46	33.82	0.00	Peak	121	253	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5230 MHz.

Channel 54

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5254.94				63.07	3.46	33.85	0.00	Average	134	259	HORIZONTAL
2	5276.41				75.93	3.47	33.88	0.00	Peak	134	259	HORIZONTAL
3	5350.00	52.76	54.00	-1.24	15.24	3.49	34.03	0.00	Average	134	259	HORIZONTAL
4	5352.56	72.70	74.00	-1.30	35.18	3.49	34.03	0.00	Peak	134	259	HORIZONTAL

Item 1, 2 are the fundamental frequency at 5270 MHz.

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS8 40MHz Ch 62, 102, 110 / ANT. 1+2 (2TX)
Test Date	Jul. 06, 2012		

Channel 62

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5298.14				55.21	3.48	33.94	0.00	Average	122	253	HORIZONTAL
2	5298.14				68.23	3.48	33.94	0.00	Peak	122	253	HORIZONTAL
3	5350.00	52.67	54.00	-1.33	15.15	3.49	34.03	0.00	Average	122	253	HORIZONTAL
4	5353.53	69.39	74.00	-4.61	31.87	3.49	34.03	0.00	Peak	122	253	HORIZONTAL

Item 1, 2 are the fundamental frequency at 5310 MHz.

Channel 102

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5459.68	56.80	74.00	-17.20	19.09	3.52	34.19	0.00	Peak	124	259	HORIZONTAL
2	5460.00	42.89	54.00	-11.11	5.18	3.52	34.19	0.00	Average	124	259	HORIZONTAL
3	5469.36	66.34	68.30	-1.96	28.61	3.52	34.21	0.00	Peak	124	259	HORIZONTAL
4	5521.22				65.65	3.54	34.27	0.00	Peak	124	259	HORIZONTAL
5	5521.54				52.39	3.54	34.27	0.00	Average	124	259	HORIZONTAL

Item 4, 5 are the fundamental frequency at 5510 MHz.

Channel 110

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5460.00	44.43	54.00	-9.57	6.72	3.52	34.19	0.00	Average	127	253	HORIZONTAL
2	5460.00	65.06	74.00	-8.94	27.35	3.52	34.19	0.00	Peak	127	253	HORIZONTAL
3	5467.76	67.14	68.30	-1.16	29.41	3.52	34.21	0.00	Peak	127	253	HORIZONTAL
4	5537.50				75.03	3.55	34.29	0.00	Peak	127	253	HORIZONTAL
5	5538.46				61.10	3.55	34.29	0.00	Average	127	253	HORIZONTAL

Item 4, 5 are the fundamental frequency at 5550 MHz.

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11n MCS8 40MHz Ch 134 / ANT. 1+2 (2TX)
Test Date	Jul. 06, 2012		

Channel 134

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5656.86				57.36	3.59	34.33	0.00	Average	123	255	HORIZONTAL
2	5662.31				70.60	3.59	34.33	0.00	Peak	123	255	HORIZONTAL
3	5725.64	66.41	68.30	-1.89	28.47	3.60	34.34	0.00	Peak	123	255	HORIZONTAL

Item 1, 2 are the fundamental frequency at 5310 MHz.

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11a Ch 36, 40, 48 / ANT. 1 (1TX)
Test Date	Jul. 06, 2012		

Channel 36

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5149.52	72.46	74.00	-1.54	35.36	3.43	33.67	0.00	Peak	124	105	HORIZONTAL
2	5150.00	49.31	54.00	-4.69	12.21	3.43	33.67	0.00	Average	124	105	HORIZONTAL
3	5175.67				62.41	3.44	33.70	0.00	Average	124	105	HORIZONTAL
4	5177.76				73.58	3.44	33.73	0.00	Peak	124	105	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5180 MHz.

Channel 40

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5150.00	45.79	54.00	-8.21	8.69	3.43	33.67	0.00	Average	136	101	HORIZONTAL
2	5150.00	66.18	74.00	-7.82	29.08	3.43	33.67	0.00	Peak	136	101	HORIZONTAL
3	5193.91				64.86	3.44	33.73	0.00	Average	136	101	HORIZONTAL
4	5196.15				75.70	3.45	33.76	0.00	Peak	136	101	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5200 MHz.

Channel 48

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5147.12	52.08	74.00	-21.92	14.98	3.43	33.67	0.00	Peak	133	96	HORIZONTAL
2	5150.00	39.47	54.00	-14.53	2.37	3.43	33.67	0.00	Average	133	96	HORIZONTAL
3	5233.75				63.15	3.46	33.82	0.00	Average	133	96	HORIZONTAL
4	5234.71				73.45	3.46	33.82	0.00	Peak	133	96	HORIZONTAL
5	5350.00	39.21	54.00	-14.79	1.69	3.49	34.03	0.00	Average	133	96	HORIZONTAL
6	5353.37	52.66	74.00	-21.34	15.14	3.49	34.03	0.00	Peak	133	96	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5240 MHz..

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11a Ch 52, 60, 64 / ANT. 1 (1TX)
Test Date	Jul. 06, 2012		

Channel 52

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5133.17	53.09	74.00	-20.91	16.02	3.43	33.64	0.00	Peak	135	98	HORIZONTAL
2	5150.00	39.60	54.00	-14.40	2.50	3.43	33.67	0.00	Average	135	98	HORIZONTAL
3	5253.75				63.32	3.46	33.85	0.00	Average	135	98	HORIZONTAL
4	5253.75				74.65	3.46	33.85	0.00	Peak	135	98	HORIZONTAL
5	5350.00	50.37	74.00	-23.63	12.85	3.49	34.03	0.00	Peak	135	98	HORIZONTAL
6	5350.48	39.23	54.00	-14.77	1.71	3.49	34.03	0.00	Average	135	98	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5260 MHz.

Channel 60

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5295.51				60.97	3.47	33.91	0.00	Average	100	220	HORIZONTAL
2	5298.40				71.56	3.48	33.94	0.00	Peak	100	220	HORIZONTAL
3	5350.00	41.29	54.00	-12.71	3.77	3.49	34.03	0.00	Average	100	220	HORIZONTAL
4	5352.89	61.88	74.00	-12.12	24.36	3.49	34.03	0.00	Peak	100	220	HORIZONTAL

Item 1, 2 are the fundamental frequency at 5300 MHz.

Channel 64

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5314.55				61.04	3.48	33.97	0.00	Average	129	220	HORIZONTAL
2	5318.08				72.11	3.48	33.97	0.00	Peak	129	220	HORIZONTAL
3	5350.00	52.30	54.00	-1.70	14.78	3.49	34.03	0.00	Average	129	220	HORIZONTAL
4	5350.16	69.79	74.00	-4.21	32.27	3.49	34.03	0.00	Peak	129	220	HORIZONTAL

Item 1, 2 are the fundamental frequency at 5320 MHz.

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11a Ch 100, 140 / ANT. 1 (1TX)
Test Date	Jul. 06, 2012		

Channel 100

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5459.20	56.99	74.00	-17.01	19.28	3.52	34.19	0.00	Peak	125	90	HORIZONTAL
2	5460.00	40.14	54.00	-13.86	2.43	3.52	34.19	0.00	Average	125	90	HORIZONTAL
3	5470.00	66.72	68.30	-1.58	28.99	3.52	34.21	0.00	Peak	125	90	HORIZONTAL
4	5494.71				60.71	3.53	34.23	0.00	Average	125	90	HORIZONTAL
5	5503.85				72.00	3.54	34.25	0.00	Peak	125	90	HORIZONTAL

Item 4, 5 are the fundamental frequency at 5500 MHz.

Channel 140

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5698.40				59.36	3.59	34.34	0.00	Average	100	203	HORIZONTAL
2	5702.89				71.15	3.59	34.34	0.00	Peak	100	203	HORIZONTAL
3	5726.28	66.87	68.30	-1.43	28.93	3.60	34.34	0.00	Peak	100	203	HORIZONTAL

Item 1, 2 are the fundamental frequency at 5700 MHz.

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11a Ch 36, 40, 48 / ANT. 1+2 (2TX)
Test Date	Jul. 06, 2012		

Channel 36

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5149.84	48.56	54.00	-5.44	11.46	3.43	33.67	0.00	Average	100	229	HORIZONTAL
2	5149.84	72.76	74.00	-1.24	35.66	3.43	33.67	0.00	Peak	100	229	HORIZONTAL
3	5184.01				62.96	3.44	33.73	0.00	Average	100	229	HORIZONTAL
4	5184.17				73.99	3.44	33.73	0.00	Peak	100	229	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5180 MHz.

Channel 40

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5146.15	72.86	74.00	-1.14	35.76	3.43	33.67	0.00	Peak	137	240	HORIZONTAL
2	5150.00	50.03	54.00	-3.97	12.93	3.43	33.67	0.00	Average	137	240	HORIZONTAL
3	5195.19				80.40	3.45	33.76	0.00	Peak	137	240	HORIZONTAL
4	5205.45				69.29	3.45	33.76	0.00	Average	137	240	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5200 MHz.

Channel 48

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5150.00	40.24	54.00	-13.76	3.14	3.43	33.67	0.00	Average	122	252	HORIZONTAL
2	5150.00	55.46	74.00	-18.54	18.36	3.43	33.67	0.00	Peak	122	252	HORIZONTAL
3	5241.92				82.66	3.46	33.82	0.00	Peak	122	252	HORIZONTAL
4	5242.40				71.39	3.46	33.82	0.00	Average	122	252	HORIZONTAL
5	5350.00	40.34	54.00	-13.66	2.82	3.49	34.03	0.00	Average	122	252	HORIZONTAL
6	5350.00	52.44	74.00	-21.56	14.92	3.49	34.03	0.00	Peak	122	252	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5240 MHz..

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11a Ch 52, 60, 64 / ANT. 1+2 (2TX)
Test Date	Jul. 06, 2012		

Channel 52

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5132.69	52.37	74.00	-21.63	15.30	3.43	33.64	0.00	Peak	123	253	HORIZONTAL
2	5136.54	40.31	54.00	-13.69	3.24	3.43	33.64	0.00	Average	123	253	HORIZONTAL
3	5257.12				69.85	3.46	33.85	0.00	Average	123	253	HORIZONTAL
4	5262.40				81.49	3.46	33.85	0.00	Peak	123	253	HORIZONTAL
5	5350.00	40.95	54.00	-13.05	3.43	3.49	34.03	0.00	Average	123	253	HORIZONTAL
6	5350.00	57.00	74.00	-17.00	19.48	3.49	34.03	0.00	Peak	123	253	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5260 MHz.

Channel 60

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5294.55				69.72	3.47	33.91	0.00	Average	120	253	HORIZONTAL
2	5305.13				80.66	3.48	33.94	0.00	Peak	120	253	HORIZONTAL
3	5350.00	46.79	54.00	-7.21	9.27	3.49	34.03	0.00	Average	120	253	HORIZONTAL
4	5350.00	72.01	74.00	-1.99	34.49	3.49	34.03	0.00	Peak	120	253	HORIZONTAL

Item 1, 2 are the fundamental frequency at 5300 MHz.

Channel 64

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5318.56				77.15	3.48	33.97	0.00	Peak	121	234	HORIZONTAL
2	5323.53				65.69	3.49	33.97	0.00	Average	121	234	HORIZONTAL
3	5350.00	50.19	54.00	-3.81	12.67	3.49	34.03	0.00	Average	121	234	HORIZONTAL
4	5350.00	72.20	74.00	-1.80	34.68	3.49	34.03	0.00	Peak	121	234	HORIZONTAL

Item 1, 2 are the fundamental frequency at 5320 MHz.

Temperature	26℃	Humidity	60%
Test Enginee	Benson Peng	Configurations	IEEE 802.11a Ch 100, 140 / ANT. 1+2 (2TX)
Test Date	Jul. 06, 2012		

Channel 100

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5454.07	41.71	54.00	-12.29	4.00	3.52	34.19	0.00	Average	142	260	HORIZONTAL
2	5455.19	54.91	74.00	-19.09	17.20	3.52	34.19	0.00	Peak	142	260	HORIZONTAL
3	5469.20	67.14	68.30	-1.16	29.41	3.52	34.21	0.00	Peak	142	260	HORIZONTAL
4	5494.23				62.53	3.53	34.23	0.00	Average	142	260	HORIZONTAL
5	5494.23				73.79	3.53	34.23	0.00	Peak	142	260	HORIZONTAL

Item 4, 5 are the fundamental frequency at 5500 MHz.

Channel 140

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5693.91				61.04	3.59	34.34	0.00	Average	109	227	HORIZONTAL
2	5693.91				71.81	3.59	34.34	0.00	Peak	109	227	HORIZONTAL
3	5725.16	67.03	68.30	-1.27	29.09	3.60	34.34	0.00	Peak	109	227	HORIZONTAL

Item 1, 2 are the fundamental frequency at 5700 MHz.

Note:

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

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

4.8. Frequency Stability Measurement

4.8.1. Limit

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emissions is maintained within the band of operation under all conditions of normal operation as specified in the user's manual or ±20ppm (IEEE 802.11nspecification).

4.8.2. Measuring Instruments and Setting

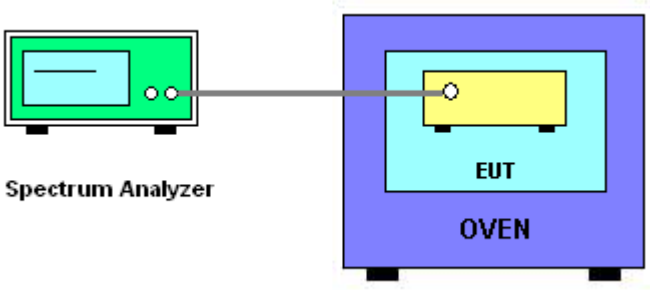
Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	Entire absence of modulation emissions bandwidth
RB	10 kHz
VB	10 kHz
Sweep Time	Auto

4.8.3. Test Procedures

1. The transmitter output (antenna port) was connected to the spectrum analyzer.
2. EUT have transmitted absence of modulation signal and fixed channelize.
3. Set the spectrum analyzer span to view the entire absence of modulation emissions bandwidth.
4. Set RBW = 10 kHz, VBW = 10 kHz with peak detector and maxhold settings.
5. fc is declaring of channel frequency. Then the frequency error formula is (fc-f)/fc × 10^6 ppm and the limit is less than ±20ppm (IEEE 802.11nspecification).
6. The test extreme voltage is to change the primary supply voltage from 85 to 115 percent of the nominal value
7. Extreme temperature rule is -30°C~50°C.

4.8.4. Test Setup Layout



4.8.5. Test Deviation

There is no deviation with the original standard.

4.8.6. EUT Operation during Test

The EUT was programmed to be in continuously un-modulation transmitting mode.

4.8.7. Test Result of Frequency Stability

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)	
(V)	**5199.9963**	**5300.0000**
126.50	5199.9987	5299.9883
110.00	5199.9988	5299.9985
93.50	5200.0021	5300.0050
Max. Deviation (MHz)	0.005800	0.011700
Max. Deviation (ppm)	**1.12**	**2.21**

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)	
(°C)	**5200**	**5300**
-30	5200.0005	5300.0011
-20	5200.0004	5300.0015
-10	5200.0003	5300.0016
0	5200.0006	5300.0019
10	5199.9897	5299.9881
20	5199.9996	5299.9989
30	5199.9986	5299.9987
40	5199.9988	5299.9986
50	5199.9989	5299.9988
Max. Deviation (MHz)	0.010300	0.011900
Max. Deviation (ppm)	**1.98**	**2.2453**

4.9. Antenna Requirements

4.9.1. 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.

4.9.2. 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
EMI Test Receiver	R&S	ESCS 30	100377	9kHz ~ 2.75GHz	Sep. 14, 2011	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Nov. 14, 2011	Conduction (CO01-CB)
V- LISN	Schwarzbeck	NSLK 8127	8127-478	9K ~ 30MHz	Jun. 22, 2012	Conduction (CO01-CB)
PULSE LIMITER	R&S	ESH3-Z2	100430	9K~30MHz	Feb. 03, 2012	Conduction (CO01-CB)
COND Cable	Woken	Cable	01	0.15MHz~30MHz	Dec. 4, 2011	Conduction (CO01-CB)
BILOG ANTENNA	Schaffner	CBL6112D	22021	20MHz ~ 2GHz	Jan. 11, 2012	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz~18GHz	Nov. 25, 2011	Radiation (03CH01-CB)
Horn Antenna	SCHWARZBEAK	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Nov. 22, 2011	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8447D	2944A10991	0.1MHz ~ 1.3GHz	Nov. 17, 2010	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Nov. 29, 2011	Radiation (03CH01-CB)
Pre-Amplifier	WM	TF-130N-R1	923365	26.5GHz ~ 40GHz	Jul. 29, 2011	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSP40	100056	9KHz~40GHz	Nov. 03, 2011	Radiation (05CH01-CB)
EMI Test Receiver	R&S	ESCS 30	100355	9KHz ~ 2.75GHz	Mar. 20, 2012	Radiation (03CH01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9 kHz - 30 MHz	Sep. 09, 2010*	Radiation (03CH01-CB)
Turn Table	INN CO	CO 2000	N/A	0 ~ 360 degree	N/A	Radiation (03CH01-CB)
Antenna Mast	INN CO	CO2000	N/A	1 m - 4 m	N/A	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-1	N/A	30 MHz - 1 GHz	Nov. 17, 2011	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-1	N/A	1 GHz – 26.5 GHz	Nov. 17, 2011	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-2	N/A	1 GHz – 26.5 GHz	Nov. 17, 2011	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-3	N/A	1 GHz - 40 GHz	Nov. 17, 2011	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-4	N/A	1 GHz - 40 GHz	Nov. 17, 2011	Radiation (03CH01-CB)
Signal analyzer	R&S	FSV40	100979	9KHz~40GHz	Sep. 26, 2011	Conducted (TH01-CB)
Temp. and Humidity Chamber	Ten Billion	TTH-D3SP	TBN-931011	-30~100 degree	Jun. 05, 2012	Conducted (TH01-CB)
Thermo-Hygro Meter	N/A	HC 520	#1	15~70 degree	Nov. 02, 2010	Conducted (TH01-CB)
Signal Generator	R&S	SMR40	100302	10MHz-40GHz	Nov. 22, 2011	Conducted (TH01-CB)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
RF Power Divider	HP	11636A	00306	2GHz ~ 18GHz	N/A	Conducted (TH01-CB)
RF Power Splitter	Anaren	44100	1839	2GHz ~ 18GHz	N/A	Conducted (TH01-CB)
RF Power Splitter	Anaren	42100	17930	2GHz ~ 18GHz	N/A	Conducted (TH01-CB)
Signal generator	R&S	SMU200A	102782	10MHz-40GHz	Jun. 07, 2012	Conducted (TH01-CB)
Horn Antenna	COM-POWER	AH-118	071187	1GHz – 18GHz	May. 09, 2012	Conducted (TH01-CB)
Horn Antenna	COM-POWER	AH-118	071042	1GHz – 18GHz	Nov. 01, 2011	Radiation (05CH01-CB)
RF Cable-high	Woken	High Cable-7	-	1 GHz – 26.5 GHz	Nov. 17, 2011	Conducted (TH01-CB)
RF Cable-high	Woken	High Cable-8	-	1 GHz – 26.5 GHz	Nov. 17, 2011	Conducted (TH01-CB)
RF Cable-high	Woken	High Cable-9	-	1 GHz – 26.5 GHz	Nov. 17, 2011	Conducted (TH01-CB)
RF Cable-high	Woken	High Cable-10	-	1 GHz – 26.5 GHz	Nov. 17, 2011	Conducted (TH01-CB)
RF Cable-high	Woken	High Cable-11	-	1 GHz – 26.5 GHz	Nov. 17, 2011	Conducted (TH01-CB)
RF Cable-high	Woken	High Cable-12	-	1 GHz – 26.5 GHz	Nov. 17, 2011	Conducted (TH01-CB)
RF Cable-high	Woken	High Cable-13	-	1 GHz – 26.5 GHz	Nov. 17, 2011	Conducted (TH01-CB)
Power Sensor	Anritsu	MA2411B	0917223	300MHz~40GHz	Nov. 01, 2011	Conducted (TH01-CB)
Power Meter	Anritsu	ML2495A	1035008	300MHz~40GHz	Nov. 01, 2011	Conducted (TH01-CB)

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

Note: "*" 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 724, 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. : L1190-110702

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 Road, 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 : July 02, 2011

P1, total 22 pages

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