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FCC RADIO TEST REPORT

Applicant's company	**Motorola, Inc.**
Applicant Address	One Motorola Plaza Holtsville NY 111742 USA
FCC ID	**UZ7MB82**
Manufacturer's company	**Wistron NeWeb Corporation**
Manufacturer Address	No.10-1,Li-hsin Road I,Hsinchu Science Park,Hsinchu 300,Taiwan, R.O.C.

Product Name	MB82 Access Point Radio Module
Brand Name	Motorola
Model Name	MB82
Test Rule Part(s)	47 CFR FCC Part 15 Subpart E § 15.407
Test Freq. Range	5250 ~ 5350MHz / 5470 ~ 5725MHz
Received Date	Aug. 22, 2012
Final Test Date	Oct. 09, 2012
Submission Type	Class II Change
Operating Mode	Master

Statement

Test result included is for the IEEE 802.11n and IEEE 802.11a (5250 ~ 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 D01 v01r02.

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
FR282211-01	Rev. 01	Initial issue of report	Nov. 23, 2012

Certificate No.: CB10110139

1. CERTIFICATE OF COMPLIANCE

Product Name	:	**MB82 Access Point Radio Module**
Brand Name	:	**Motorola**
Model Name	:	**MB82**
Applicant	:	**Motorola, 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 Aug. 22, 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	10.74 dB
4.2	15.407(a)	26dB Spectrum Bandwidth	Complies	-
4.3	15.407(a)	Maximum Conducted Output Power	Complies	0.05 dB
4.4	15.407(a)	Power Spectral Density	Complies	1.22 dB
4.5	15.407(a)	Peak Excursion	Complies	0.65 dB
4.6	15.407(b)	Radiated Emissions	Complies	0.54 dB
4.7	15.407(b)	Band Edge Emissions	Complies	0.02 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%

Note: This module is intended for OEM integrator only and limited to host with brand: Motorola and model: AP-650. There were including professional installation in antenna part.

3. GENERAL INFORMATION

3.1. Product Details

IEEE 802.11n

Items	Description
Product Type	WLAN (1/2TX, 3RX)
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	5250 ~ 5350MHz / 5470 ~ 5725MHz
Channel Number	12 for 20MHz bandwidth ; 5 for 40MHz bandwidth
Channel Band Width (99%)	**Ant. 4 :** MCS0 (20MHz): 18.08 MHz ; MCS0 (40MHz): 36.80 MHz ; MCS8 (20MHz): 23.04 MHz ; MCS8 (40MHz): 39.36 MHz **Ant. 5 :** MCS0 (20MHz): 33.12 MHz ; MCS0 (40MHz): 73.28 MHz **Ant. 6 :** MCS0 (20MHz): 18.08MHz ; MCS0 (40MHz): 36.48 MHz ; MCS8 (20MHz): 18.08 MHz ; MCS8 (40MHz): 36.48 MHz **Ant. 10:** MCS0 (20MHz): 31.04 MHz ; MCS0 (40MHz): 61.76 MHz ; MCS8 (20MHz): 31.52 MHz ; MCS8 (40MHz): 58.56 MHz
Conducted Output Power	**<For Band 2>:** **Ant. 4 :** MCS0 (20MHz): 18.77 dBm ; MCS0 (40MHz): 18.47 dBm ; MCS8 (20MHz): 21.86 dBm ; MCS8 (40MHz): 20.70 dBm **Ant. 5 :** MCS0 (20MHz): 20.67 dBm ; MCS0 (40MHz): 20.49 dBm **Ant. 6 :** MCS0 (20MHz): 14.30 dBm ; MCS0 (40MHz): 14.24 dBm ; MCS8 (20MHz): 17.37 dBm ; MCS8 (40MHz): 17.09 dBm **Ant. 10:** MCS0 (20MHz): 22.97 dBm ; MCS0 (40MHz): 22.50 dBm ; MCS8 (20MHz): 23.19 dBm ; MCS8 (40MHz): 22.30 dBm **<For Band 3>:** **Ant. 4 :** MCS0 (20MHz): 18.81 dBm ; MCS0 (40MHz): 18.58 dBm ; MCS8 (20MHz): 21.56 dBm ; MCS8 (40MHz): 21.46 dBm **Ant. 5 :** MCS0 (20MHz): 20.52 dBm ; MCS0 (40MHz): 20.53dBm **Ant. 6 :** MCS0 (20MHz): 14.17 dBm ; MCS0 (40MHz): 14.35 dBm ; MCS8 (20MHz): 17.28 dBm ; MCS8 (40MHz): 17.22 dBm **Ant. 10:** MCS0 (20MHz): 23.13 dBm ; MCS0 (40MHz): 23.27 dBm ; MCS8 (20MHz): 23.09 dBm ; MCS8 (40MHz): 23.08 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, 3RX)
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	5250 ~ 5350MHz / 5470 ~ 5725MHz
Channel Number	12
Channel Band Width (99%)	**Ant. 5 :** 31.36 MHz
Conducted Output Power	**<For Band 2>:** **Ant. 4 :** 18.61 dBm **Ant. 5 :** 20.70 dBm **Ant. 6 :** 14.09 dBm **Ant. 10:** 22.88 dBm **<For Band 3>:** **Ant. 4 :** 18.80 dBm **Ant. 5 :** 20.57 dBm **Ant. 6 :** 14.30 dBm **Ant. 10:** 23.05 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	Antenna Gain (dBi)	
					2.4GHz	5GHz
1	MOTOROLA	ML-2499-BPNA3-01R	Directional Panel Antenna	N-Type Female	15.5	-
2	MOTOROLA	ML-2499-FHPA9-01R	Dipole Omni Antenna	Type-N-Male	10.5	-
3	MOTOROLA	ML-2499-PNAHD-02R	Patch Antenna	RP-SMAMale	7.5	-
4	MOTOROLA	ML-5299-HPA10-01	Omni-Directional Antenna	N male	-	10.5
5	MOTOROLA	ML-5299-BYGA15-012	Yagi Antenna	N-Type Female	-	10.5
6	MOTOROLA	ML-5299-WPNA1-01R	Directional Panel Antenna	RP-SMAMale	-	14
7	MOTOROLA	ML-2452-PNL9M3-036	3-Port Dual-Band Dir Panel Antenna (2 Vert and 1 Hor ports)	RP-SMAMale x 3	11	10.7
8	MOTOROLA	ML-2452-APAG2A1-01	Omni-Directional Antenna	SMA male RP	2.7	2
9	MOTOROLA	ML-2452-HPA6X6-036	6-Port Omni Patch Array Antenna	Type-N, Male x 6	4	6
10	MOTOROLA	ML-2452-PTA6X6-036	Dual-band MIMO omni patch array, three 2.4G elements, three 5G element Antenna	RP-SMA Male x 6	3	5

Ant.	Loss of External Cable (dB)		True Gain (dBi)		Remark
	2.4GHz	5GHz	2.4GHz	5GHz	
1	0.65	-	14.85	-	2TX, 3RX
2	1.15	-	9.35	-	2TX, 3RX
3	0.65	-	6.85	-	2TX, 3RX
4	-	2.42	-	8.08	2TX, 3RX
5	-	1.42	-	9.08	1TX, 1RX
6	-	1.42	-	12.58	2TX, 3RX
7	0.65	1.42	10.35	9.28	2TX, 3RX
8	0.65	1.42	2.05	0.58	2TX, 3RX
9	1.15	2.42	2.85	3.58	2TX, 3RX
10	0.65	1.42	2.35	3.58	2TX, 3RX

Note: 1. There is no hardware or electrical modification made to the applying modular transmitter itself. Adding ten antennas.

2. Because Ant. 1 and Ant. 7 are the same type antennas, only the higher gain antenna "Ant.1" was tested and recorded in the report.
3. Because Ant. 6 and Ant. 7 are the same type antennas, only the higher gain antenna "Ant.6" was tested and recorded in the report.
4. Because Ant. 8 and original project's Ant. 4 (Model: ML-2499-HPA3-01R) are the same type antennas, only the higher gain antenna original project's Ant.4 (Model: ML-2499-HPA3-01R) was tested and recorded in the Sporton project number: FR972826AB.
5. Because Ant. 9 and original project's Ant. 4 (Model: ML-5299-HPA1-01R) are the same type antennas, only the higher gain antenna original project's Ant. 4 (Model: ML-5299-HPA1-01R) was tested and recorded in the Sporton project number: FR972826AA.
6. Because Ant. 10 and original project's Ant. 3 (Model: ML-2499-SD3-01R) are the same type antennas, only the higher gain antenna original project's Ant. 3 (Model: ML-2499-SD3-01R) was tested and recorded in the Sporton project number: FR972826AB.

Module	Required 1TX Port
2.4G / 5G	Chain 1

Module	Required 2TX Port
2.4G / 5G	Chain 1 and Chain 3

Note: The EUT has can support both 1TX and 2TX functions.

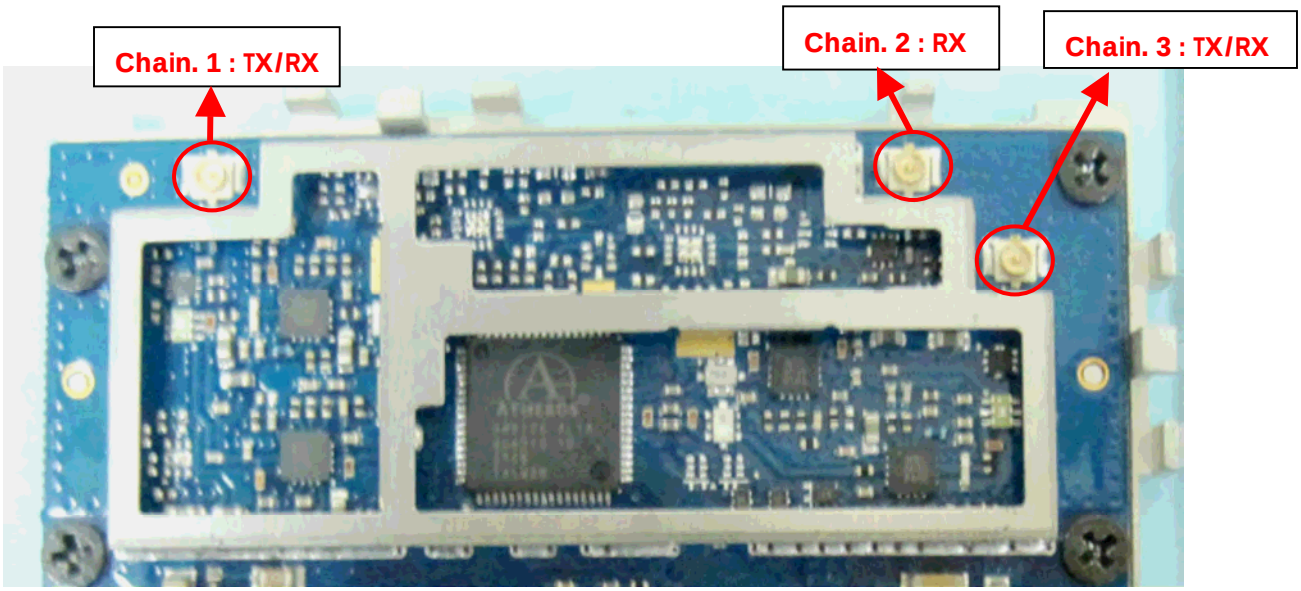
For IEEE 802.11a/n mode (1/2TX, 3RX):

1. For 2TX function:

   Chan. 1 and Chan. 3 could transmit simultaneously, but Chan. 1, Chan. 2 and Chan. 3 could receive simultaneously.

2. For 1TX function:

   Only Chan. 1 can be used as transmitting, but Chan. 1, Chan. 2 and Chan. 3 could receive simultaneously.



3.4. Table for Carrier Frequencies

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

For both 40MHz bandwidth systems, use Channel 54, 62, 102, 110, 118, 134.

Frequency Band	Channel No.	Frequency	Channel No.	Frequency
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	110	5550 MHz
	102	5510MHz	112	5560 MHz
	104	5520 MHz	116	5580 MHz
	108	5540 MHz	136	5680 MHz
	132	5660 MHz	140	5700 MHz
	134	5670 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	Chain.
AC Power Conducted Emission	CTX		Auto	-	-
Max. Conducted Output Power	MCS0/20MHz	Band 2	6.5 Mbps	52/60/64	1/3
		Band 3	6.5 Mbps	100/116/140	1/3
	MCS0/40MHz	Band 2	13.5 Mbps	54/62	1/3
		Band 3	13.5 Mbps	102/134	1/3
	MCS8/20MHz	Band 2	13 Mbps	52/60/64	1/3
		Band 3	13 Mbps	100/116/140	1/3
	MCS8/40MHz	Band 2	27 Mbps	54/62	1/3
		Band 3	27 Mbps	102/134	1/3
	11a/BPSK	Band 2	6 Mbps	52/60/64	1/3
		Band 3	6 Mbps	100/116/140	1/3
Power Spectral Density	MCS0/20MHz	Band 2	6.5 Mbps	52/60/64	1/3
		Band 3	6.5 Mbps	100/116/140	1/3
	MCS0/40MHz	Band 2	13.5 Mbps	54/62	1/3
		Band 3	13.5 Mbps	102/134	1/3
	MCS8/20MHz	Band 2	13 Mbps	52/60/64	1/3
		Band 3	13 Mbps	100/116/140	1/3
	MCS8/40MHz	Band 2	27 Mbps	54/62	1/3
		Band 3	27 Mbps	102/ 134	1/3
	11a/BPSK	Band 2	6 Mbps	52/60/64	1
		Band 3	6 Mbps	100/116/140	1
26dB Spectrum Bandwidth 99% Occupied Bandwidth Measurement Peak Excursion	MCS0/20MHz	Band 2	6.5 Mbps	52/60/64	1/3
		Band 3	6.5 Mbps	100/116/140	1/3
	MCS0/40MHz	Band 2	13.5 Mbps	54/62	1/3
		Band 3	13.5 Mbps	102/134	1/3
	MCS8/20MHz	Band 2	13 Mbps	52/60/64	1/3
		Band 3	13 Mbps	100/116/140	1/3
	MCS8/40MHz	Band 2	27 Mbps	54/62	1/3
		Band 3	27 Mbps	102/134	1/3
	11a/BPSK	Band 2	6 Mbps	52/60/64	1
		Band 3	6 Mbps	100/116/140	1

Radiated Emission Below 1GHz	CTX		Auto	-	-
Radiated Emission Above 1GHz	MCS0/20MHz	Band 2	6.5 Mbps	52/60/64	1/3
		Band 3	6.5 Mbps	100/116/140	1/3
	MCS0/40MHz	Band 2	13.5 Mbps	54/62	1/3
		Band 3	13.5 Mbps	102/134	1/3
	MCS8/20MHz	Band 2	13 Mbps	52/60/64	1/3
		Band 3	13 Mbps	100/116/140	1/3
	MCS8/40MHz	Band 2	27 Mbps	54/62	1/3
		Band 3	27 Mbps	102/134	1/3
	11a/BPSK	Band 2	6 Mbps	52/60/64	1
		Band 3	6 Mbps	100/116/140	1
Band Edge Emission	MCS0/20MHz	Band 2	6.5 Mbps	52/60/64	1/3
		Band 3	6.5 Mbps	100/116/140	1/3
	MCS0/40MHz	Band 2	13.5 Mbps	54/62	1/3
		Band 3	13.5 Mbps	102/134	1/3
	MCS8/20MHz	Band 2	13 Mbps	52/60/64	1/3
		Band 3	13 Mbps	100/116/140	1/3
	MCS8/40MHz	Band 2	27 Mbps	54/62	1/3
		Band 3	27 Mbps	102/134	1/3
	11a/BPSK	Band 2	13Mbps	52/60/64	1/3
		Band 3	13Mbps	100/116/140	1/3
Frequency Stability	Un-modulation		-	60	N/A

The following test modes were performed for all tests:

For Conducted Emission test:

Mode 1. EUT + Ant. 6

For Radiated Emission Below 1GHz test:

Mode 1. EUT + Ant. 6

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).

Please refer section 6 for Test Site Address.

3.7. Table for Class II Change

This product is an extension of original one reported under Sporton project number: FR972826-01AA

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

Modifications	Performance Checking
1. Adding ten antennas, please refer to the section 3.3 for detail. 2. Adding the 1TX function.	1. AC Power Line Conducted Emissions 2. 99% Occupied Bandwidth 3. Maximum Conducted Output Power 4. Power Spectral Density 5. Peak Excursion 6. Radiated Emissions Below 1GHz 7. Radiated Emissions Above 1GHz 8. Band Edge Emissions 9. Frequency Stability

3.8. Table for Supporting Units

Support Unit	Brand	Model	FCC ID
Notebook	DELL	D520	E2KWM3945ABG

3.9. Table for Parameters of Test Software Setting

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

Power Parameters of IEEE 802.11n / Ant. 4: Chain. 1 + Chain. 3 (2TX)

Test Software Version	ART					
Frequency	5260 MHz	5300 MHz	5320 MHz	5500 MHz	5580 MHz	5700 MHz
MCS0 20MHz	16.50	16.00	15.00	15.5	15.5	12
MCS8 20MHz	20.00	19.00	18.00	18	18	13
Frequency	5270 MHz	5310 MHz	5510 MHz	5550 MHz	5670 MHz	
MCS0 40MHz	16.00	14.00	11.5	15	15	
MCS8 40MHz	18.00	13.50	13	17.5	15	

Power Parameters of IEEE 802.11a / Ant. 4: Chain. 1 + Chain. 3 (2TX)

Test Software Version	ART					
Frequency	5260 MHz	5300 MHz	5320 MHz	5500 MHz	5580 MHz	5700 MHz
IEEE 802.11a	15.50	15.50	15.50	15.50	16.00	15.50

Power Parameters of IEEE 802.11n / Ant. 5: Chain. 1 (1TX)

Test Software Version	ART					
Frequency	5260 MHz	5300 MHz	5320 MHz	5500 MHz	5580 MHz	5700 MHz
MCS0 20MHz	21.50	20.50	18.00	18	19	16.5
Frequency	5270 MHz	5310 MHz	5510 MHz	5550 MHz	5670 MHz	
MCS0 40MHz	20.50	14.50	14	18.5	16	

Power Parameters of IEEE 802.11a / Ant. 5: Chain. 1 (1TX)

Test Software Version	ART					
Frequency	5260 MHz	5300 MHz	5320 MHz	5500 MHz	5580 MHz	5700 MHz
IEEE 802.11a	21.50	20.50	18.50	18.00	19.00	16.50

Power Parameters of IEEE 802.11n / Ant. 6: Chain. 1 + Chain. 3 (2TX)

Test Software Version	ART					
Frequency	5260 MHz	5300 MHz	5320 MHz	5500 MHz	5580 MHz	5700 MHz
MCS0 20MHz	12.00	11.50	10.50	11	11	9.5
MCS8 20MHz	15.50	14.50	13.50	12.5	14	9.5
Frequency	5270 MHz	5310 MHz	5510 MHz	5550 MHz	5670 MHz	
MCS0 40MHz	12.00	4.00	3	11	11.5	
MCS8 40MHz	15.00	8.00	7	14	13.5	

Power Parameters of IEEE 802.11a / Ant. 6: Chain. 1 + Chain. 3 (2TX)

Test Software Version	ART					
Frequency	5260 MHz	5300 MHz	5320 MHz	5500 MHz	5580 MHz	5700 MHz
IEEE 802.11a	11.00	11.50	11.50	11.00	11.50	10.50

Power Parameters of IEEE 802.11n / Ant. 10: Chain. 1 + Chain. 3 (2TX)

Test Software Version	ART					
Frequency	5260 MHz	5300 MHz	5320 MHz	5500 MHz	5580 MHz	5700 MHz
MCS0 20MHz	21.00	20.50	18.00	17.5	19.5	15.5
MCS8 20MHz	22.00	21.00	19.00	18.5	19.5	16.5
Frequency	5270 MHz	5310 MHz	5510 MHz	5550 MHz	5670 MHz	
MCS0 40MHz	19.50	15.00	13	19	16	
MCS8 40MHz	19.50	15.00	15	19	18	

Power Parameters of IEEE 802.11a / Ant. 10: Chain. 1 + Chain. 3 (2TX)

Test Software Version	ART					
Frequency	5260 MHz	5300 MHz	5320 MHz	5500 MHz	5580 MHz	5700 MHz
IEEE 802.11a	21.50	21.00	18.00	17.50	19.50	16.50

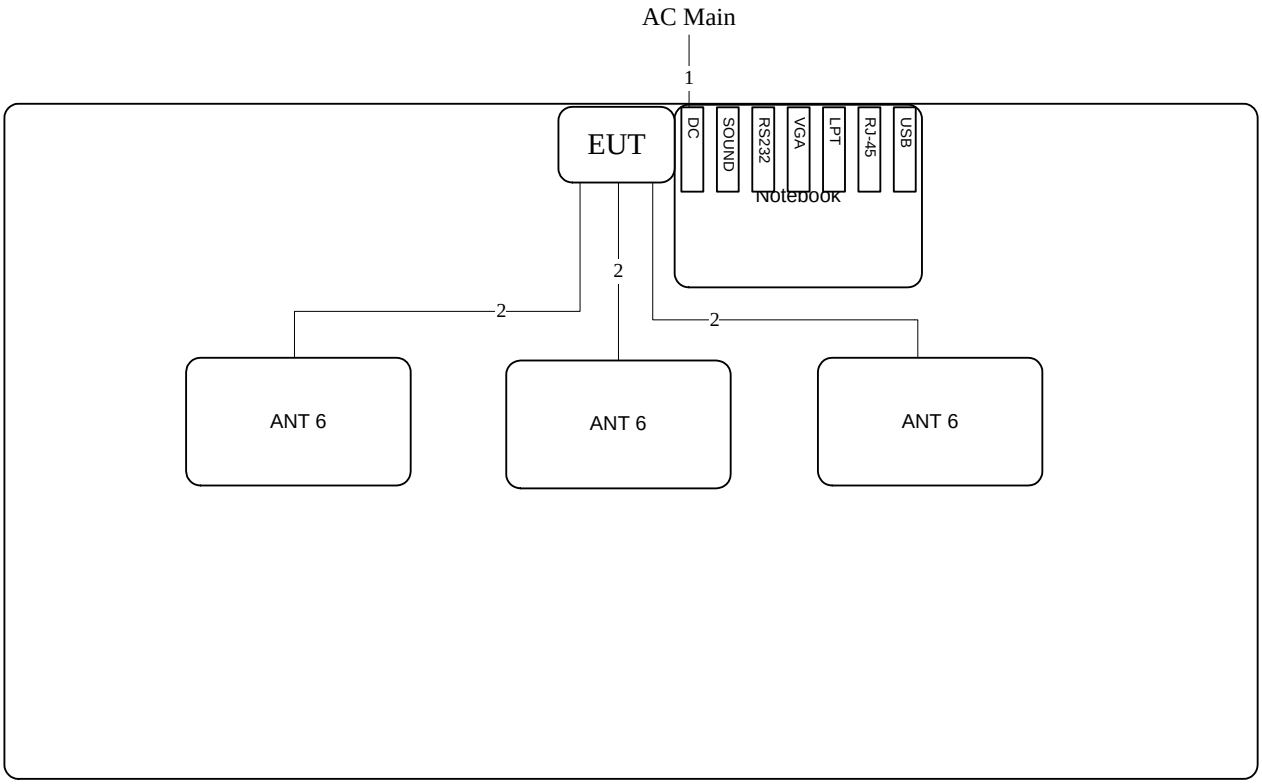
During the test, "ART" under WIN XP was executed the test program to control the EUT continuously transmit RF signal.

3.10. Test Configurations

3.10.1. Radiation Emissions Test Configuration

Test Configuration: 30MHz~1GHz

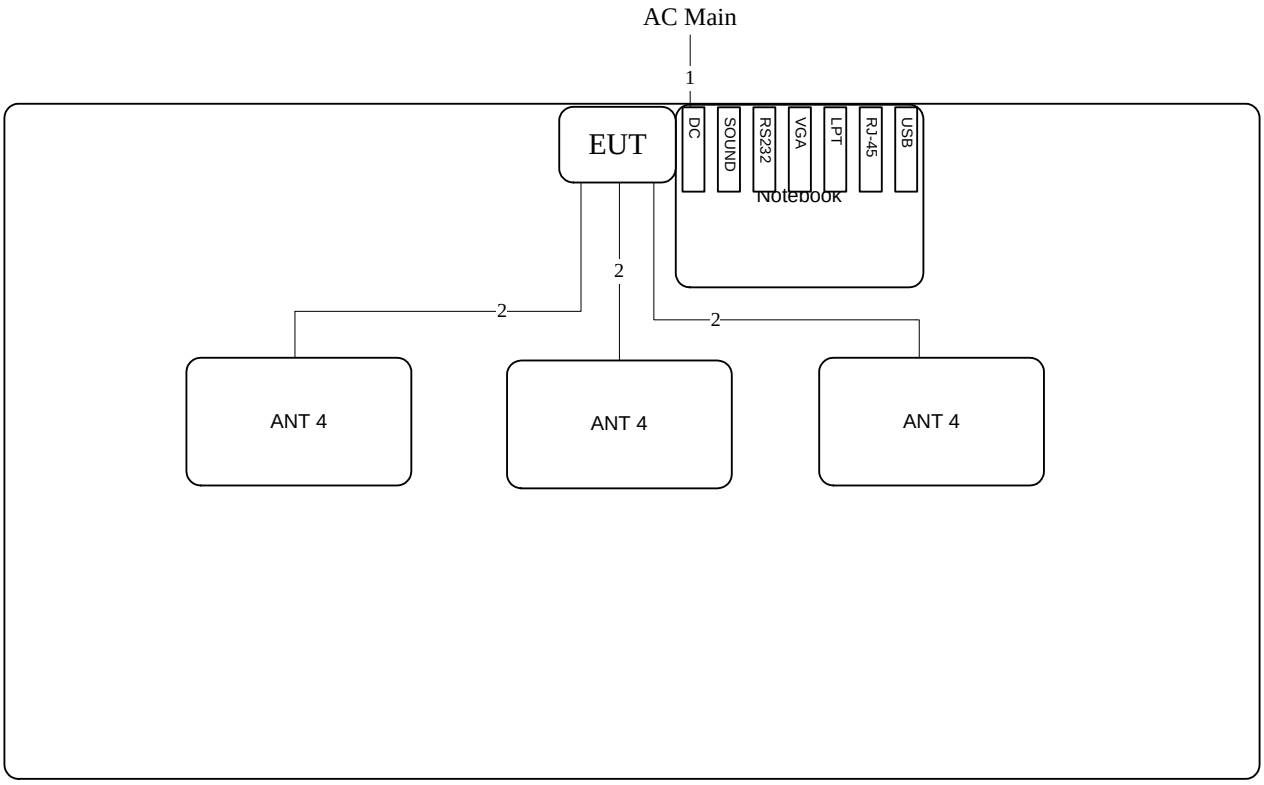
<For Ant. 6>:



Item	Connection	Shield	Length
1	Power Cable	No	2.6M
2	Ant Cable	Yes	0.9M

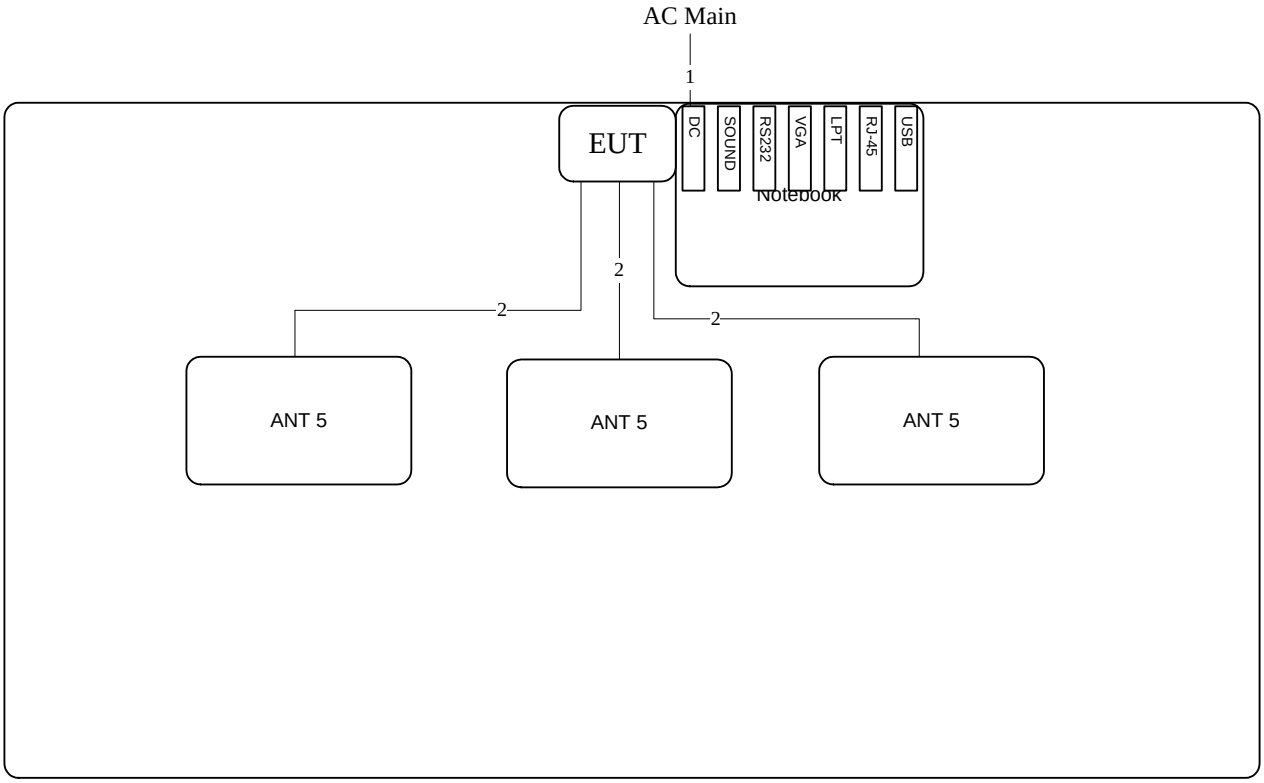
Test Configuration: above 1GHz

<For Ant. 4>:



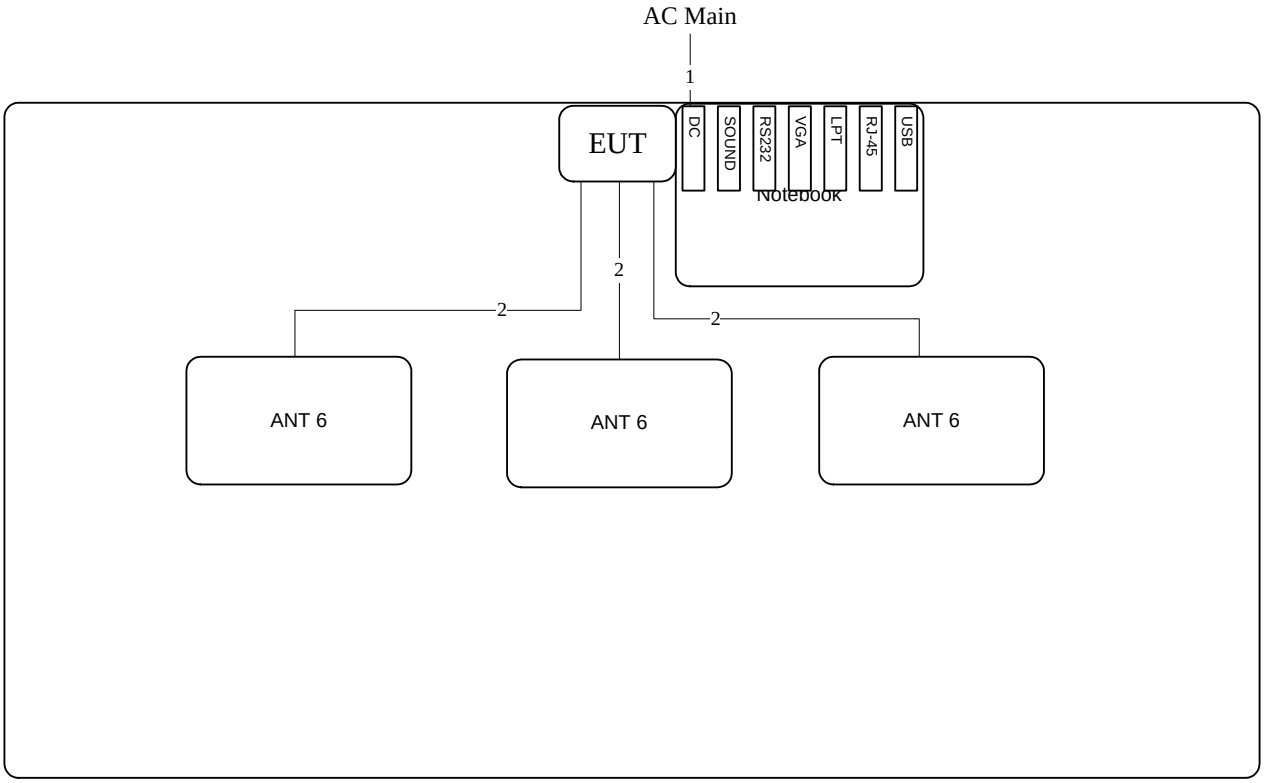
Item	Connection	Shield	Length
1	Power Cable	No	2.6M
2	Ant Cable	Yes	1M

<For Ant. 5>:



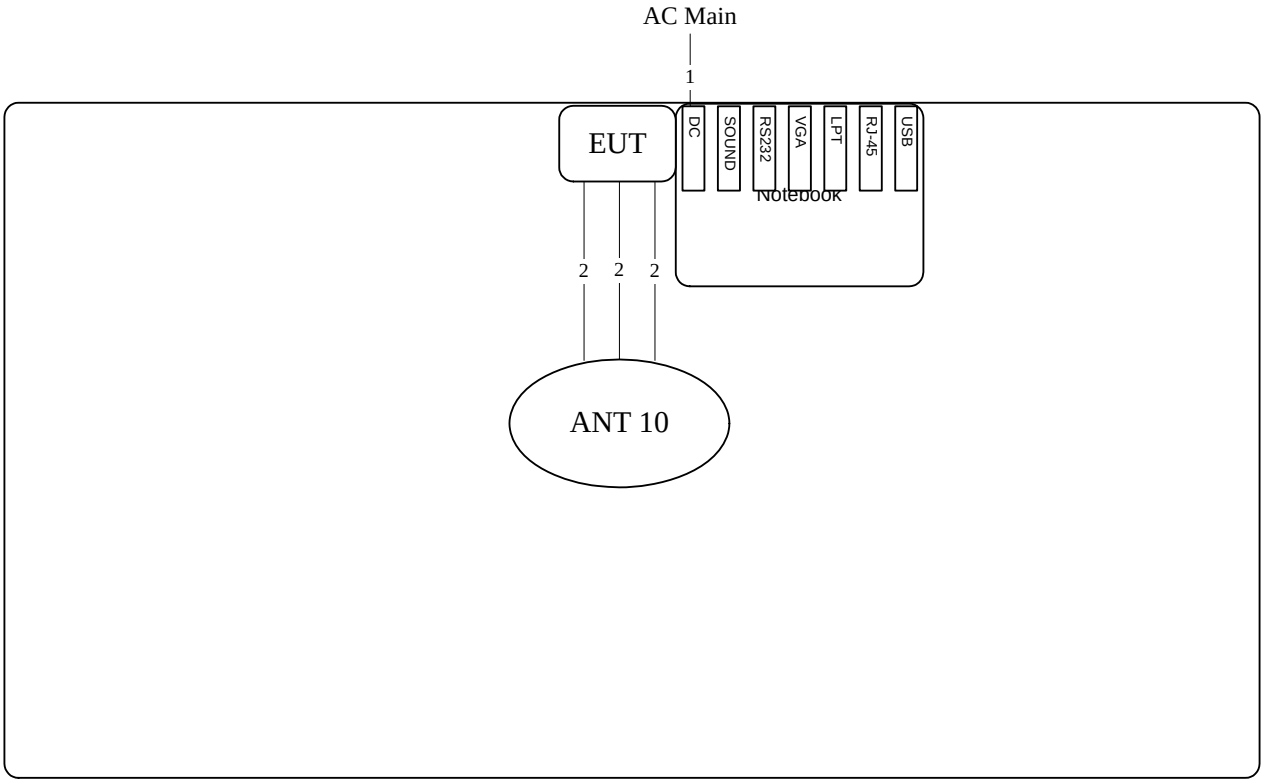
Item	Connection	Shield	Length
1	Power Cable	No	2.6M
2	Ant Cable	Yes	0.9M

<For Ant. 6>:



Item	Connection	Shield	Length
1	Power Cable	No	2.6M
2	Ant Cable	Yes	0.9M

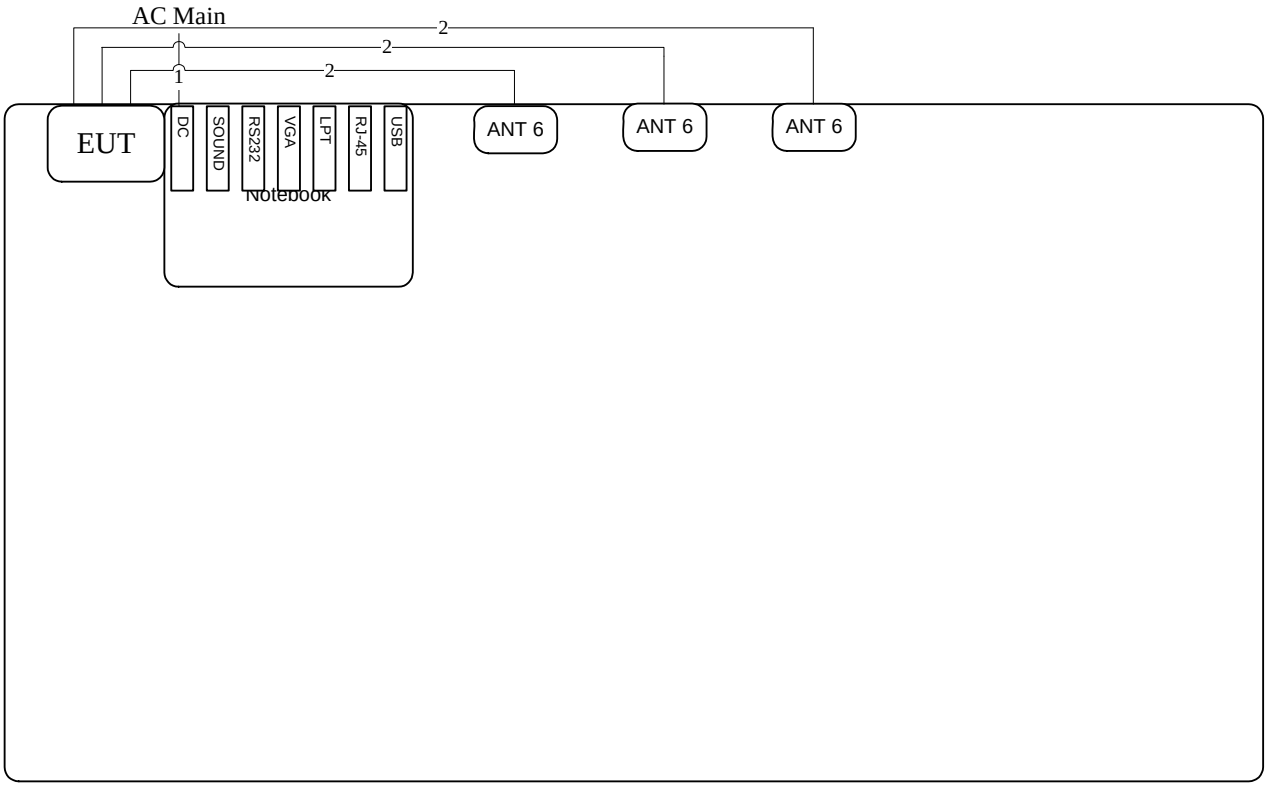
<For Ant. 10>:



Item	Connection	Shield	Length
1	Power Cable	No	2.6M
2	Ant cable	Yes	0.9M

3.10.2. AC Power Line Conduction Emissions Test Configuration

<For Ant. 6>:



Item	Connection	Shield	Length
1	Power Cable	No	2.6M
2	Ant Cable	Yes	0.9M

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

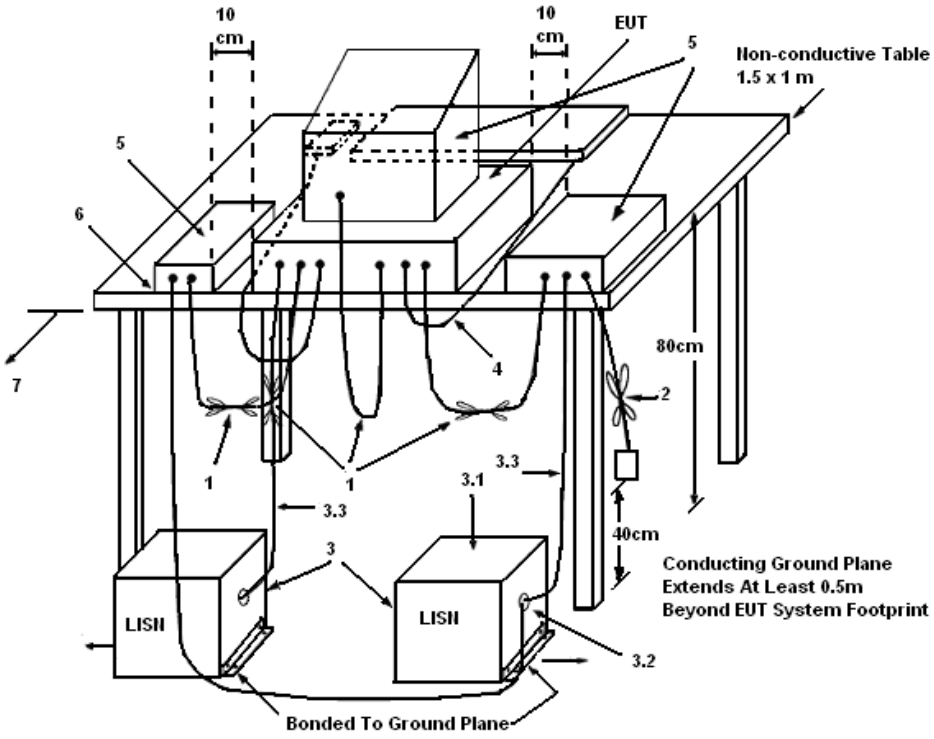
Please refer to section 5 of equipments list in this report. The following table is the setting of the receiver.

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

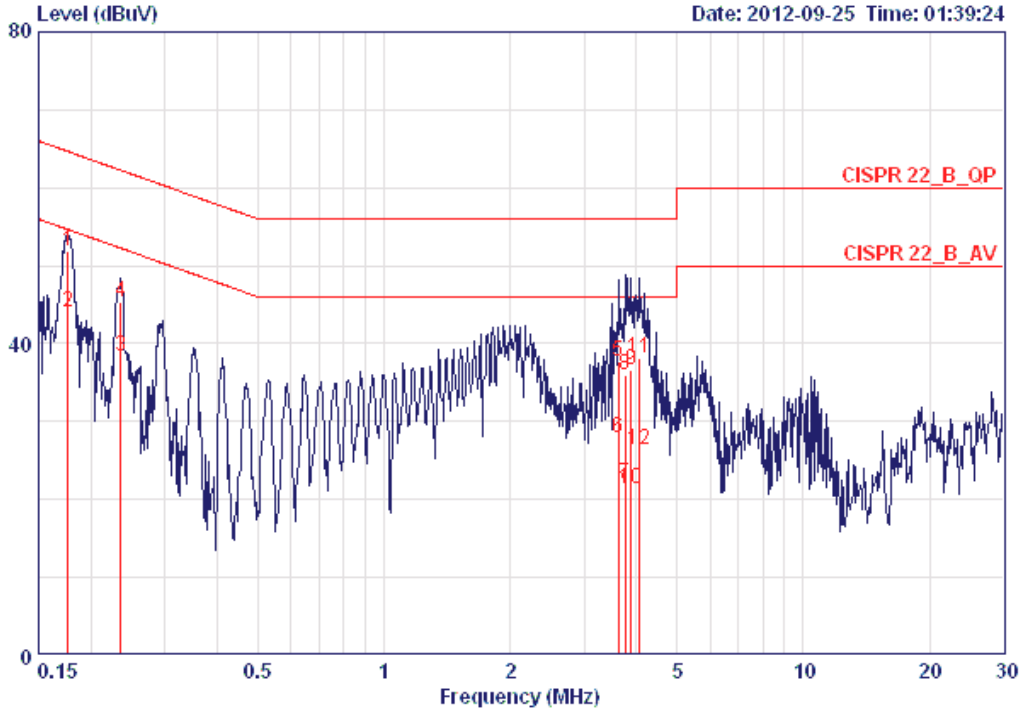
There is no deviation with the original standard.

4.1.6. EUT Operation during Test

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

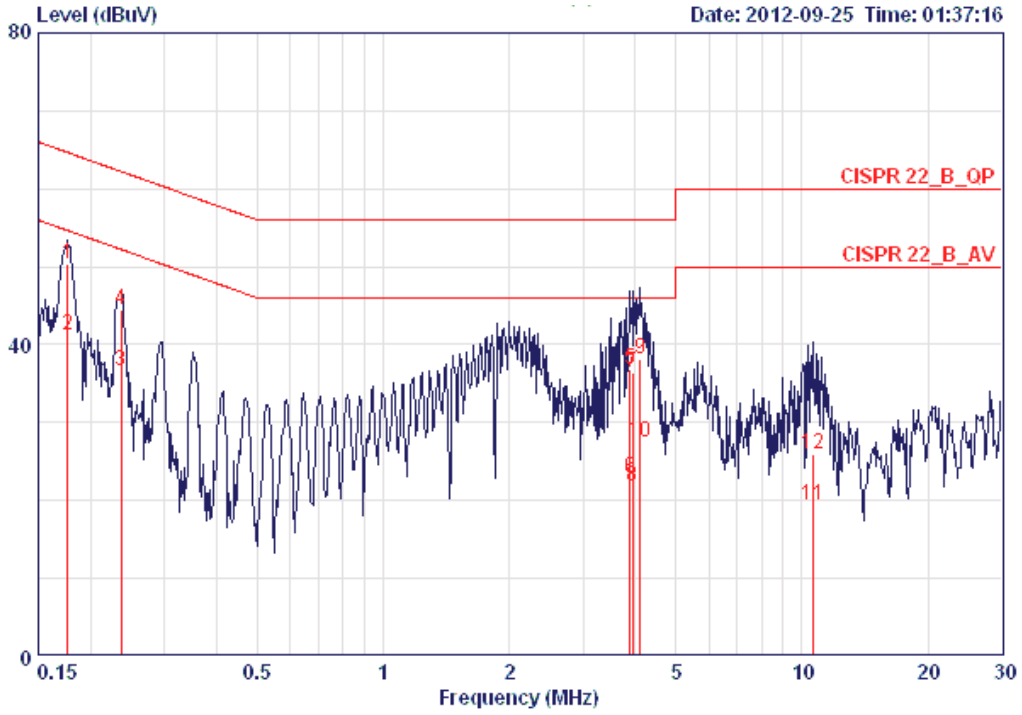
4.1.7. Results of AC Power Line Conducted Emissions Measurement

Temperature	23℃	Humidity	51%
Test Engineer	Sin Chang	Phase	Line
Configuration	CTX	Test Mode	Mode 1.



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Pol/Phase	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.17584	51.86	-12.82	64.68	51.51	0.15	0.20	LINE	QP
2 @	0.17584	43.94	-10.74	54.68	43.59	0.15	0.20	LINE	AVERAGE
3	0.23533	38.46	-13.80	52.26	38.11	0.15	0.20	LINE	AVERAGE
4	0.23533	45.35	-16.91	62.26	45.00	0.15	0.20	LINE	QP
5	3.623	37.71	-18.29	56.00	37.20	0.21	0.30	LINE	QP
6	3.623	27.96	-18.04	46.00	27.45	0.21	0.30	LINE	AVERAGE
7	3.759	21.93	-24.07	46.00	21.41	0.22	0.30	LINE	AVERAGE
8	3.759	35.92	-20.08	56.00	35.40	0.22	0.30	LINE	QP
9	3.881	36.62	-19.38	56.00	36.10	0.22	0.30	LINE	QP
10	3.881	21.27	-24.73	46.00	20.75	0.22	0.30	LINE	AVERAGE
11	4.049	38.23	-17.77	56.00	37.71	0.22	0.30	LINE	QP
12	4.049	26.41	-19.59	46.00	25.89	0.22	0.30	LINE	AVERAGE

Temperature	23℃	Humidity	51%
Test Engineer	Sin Chang	Phase	Neutral
Configuration	CTX	Test Mode	Mode 1.



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Pol/Phase	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.17584	50.40	-14.28	64.68	50.12	0.08	0.20	NEUTRAL	QP
2	0.17584	41.25	-13.43	54.68	40.97	0.08	0.20	NEUTRAL	AVERAGE
3	0.23658	36.52	-15.70	52.22	36.24	0.08	0.20	NEUTRAL	AVERAGE
4	0.23658	44.47	-17.75	62.22	44.19	0.08	0.20	NEUTRAL	QP
5	3.881	36.79	-19.21	56.00	36.36	0.13	0.30	NEUTRAL	QP
6	3.881	22.98	-23.02	46.00	22.55	0.13	0.30	NEUTRAL	AVERAGE
7	3.943	36.48	-19.52	56.00	36.05	0.13	0.30	NEUTRAL	QP
8	3.943	21.85	-24.15	46.00	21.42	0.13	0.30	NEUTRAL	AVERAGE
9	4.114	38.24	-17.76	56.00	37.81	0.13	0.30	NEUTRAL	QP
10	4.114	27.44	-18.56	46.00	27.01	0.13	0.30	NEUTRAL	AVERAGE
11	10.620	19.40	-30.60	50.00	18.75	0.25	0.40	NEUTRAL	AVERAGE
12	10.620	25.93	-34.07	60.00	25.28	0.25	0.40	NEUTRAL	QP

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

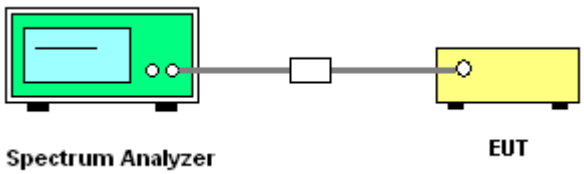
Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

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	26℃	Humidity	60%
Test Engineer	Robert Chang	Configurations	IEEE 802.11n

Configuration IEEE 802.11n MCS0 20MHz / Ant. 4: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
52	5260 MHz	25.76	18.24
60	5300 MHz	25.92	18.24
64	5320 MHz	23.52	18.08
100	5500 MHz	23.52	18.08
116	5580 MHz	23.36	18.08
140	5700 MHz	24.32	18.08

Configuration IEEE 802.11n MCS8 20MHz / Ant. 4: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
52	5260 MHz	37.60	23.04
60	5300 MHz	33.44	19.84
64	5320 MHz	30.88	18.56
100	5500 MHz	25.92	18.24
116	5580 MHz	25.60	18.24
140	5700 MHz	22.88	17.92

Configuration IEEE 802.11n MCS0 40MHz / Ant. 4: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
54	5270 MHz	64.96	36.80
62	5310 MHz	44.48	36.80
102	5510MHz	43.84	36.48
110	5550 MHz	44.16	36.48
134	5670 MHz	44.16	36.48

Configuration IEEE 802.11n MCS8 40MHz / Ant. 4: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
54	5270 MHz	75.84	39.36
62	5310 MHz	43.20	36.48
102	5510MHz	44.16	36.48
110	5550 MHz	70.40	37.12
134	5670 MHz	45.12	36.48

Configuration IEEE 802.11n MCS0 20MHz / Ant. 5: Chain. 1 (1TX)

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
52	5260 MHz	48.80	33.12
60	5300 MHz	46.88	29.28
64	5320 MHz	35.52	19.04
100	5500 MHz	36.16	18.88
116	5580 MHz	37.28	21.44
140	5700 MHz	25.28	18.40

Configuration IEEE 802.11n MCS0 40MHz / Ant. 5: Chain. 1 (1TX)

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
54	5270 MHz	102.08	73.28
62	5310 MHz	48.96	36.80
102	5510MHz	45.76	36.48
110	5550 MHz	83.52	40.00
134	5670 MHz	59.84	36.48

Configuration IEEE 802.11n MCS0 20MHz / Ant. 6: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
52	5260 MHz	23.68	18.08
60	5300 MHz	23.20	18.08
64	5320 MHz	23.20	18.08
100	5500 MHz	24.32	18.08
116	5580 MHz	24.00	18.08
140	5700 MHz	23.52	18.08

Configuration IEEE 802.11n MCS8 20MHz / Ant. 6: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
52	5260 MHz	23.36	18.08
60	5300 MHz	23.20	17.92
64	5320 MHz	22.88	17.92
100	5500 MHz	22.56	18.08
116	5580 MHz	24.16	18.08
140	5700 MHz	22.88	18.08

Configuration IEEE 802.11n MCS0 40MHz / Ant. 6: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
54	5270 MHz	44.48	36.48
62	5310 MHz	43.84	36.48
102	5510MHz	43.84	36.48
110	5550 MHz	45.12	36.48
134	5670 MHz	44.80	36.48

Configuration IEEE 802.11n MCS8 40MHz / Ant. 6: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
54	5270 MHz	44.16	36.48
62	5310 MHz	43.52	36.48
102	5510MHz	44.80	36.48
110	5550 MHz	43.52	36.48
134	5670 MHz	45.12	36.48

Configuration IEEE 802.11n MCS0 20MHz / Ant. 10: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
52	5260 MHz	46.88	31.04
60	5300 MHz	46.24	29.60
64	5320 MHz	35.52	19.36
100	5500 MHz	29.44	18.40
116	5580 MHz	39.04	21.44
140	5700 MHz	23.52	18.08

Configuration IEEE 802.11n MCS8 20MHz / Ant. 10: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
52	5260 MHz	43.68	31.52
60	5300 MHz	43.20	29.12
64	5320 MHz	35.52	20.96
100	5500 MHz	29.12	18.56
116	5580 MHz	33.28	19.36
140	5700 MHz	23.84	18.08

Configuration IEEE 802.11n MCS0 40MHz / Ant. 10: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
54	5270 MHz	92.48	61.76
62	5310 MHz	62.72	36.80
102	5510MHz	43.84	36.48
110	5550 MHz	80.64	40.64
134	5670 MHz	46.08	36.80

Configuration IEEE 802.11n MCS8 40MHz / Ant. 10: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
54	5270 MHz	86.40	58.56
62	5310 MHz	50.88	36.80
102	5510MHz	43.20	36.48
110	5550 MHz	75.84	40.32
134	5670 MHz	75.20	36.80

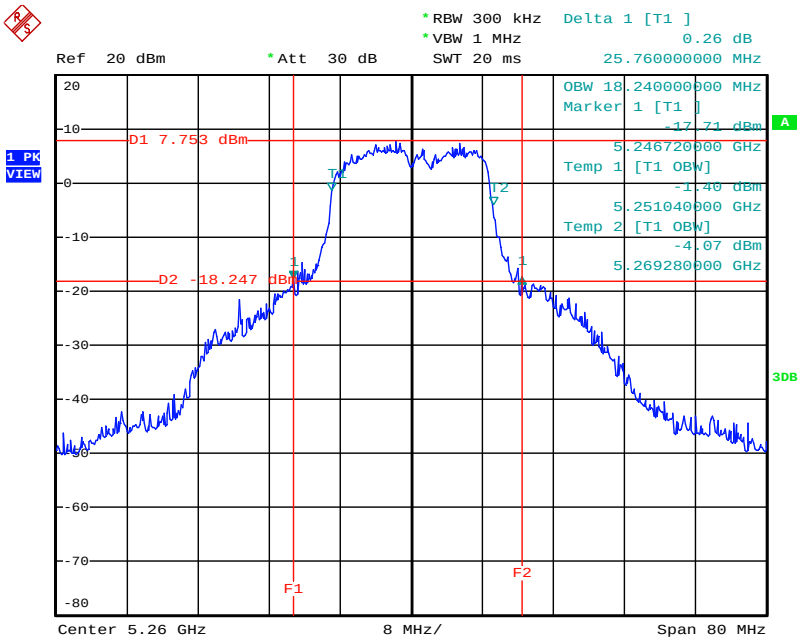
Temperature	26℃	Humidity	60%
Test Engineer	Robert Chang	Configurations	IEEE 802.11a

Configuration IEEE 802.11a / Ant. 5: Chain. 1 (1TX)

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
52	5260 MHz	44.48	31.36
60	5300 MHz	41.44	27.20
64	5320 MHz	33.92	18.88
100	5500 MHz	33.28	17.92
116	5580 MHz	37.12	20.32
140	5700 MHz	25.44	17.28

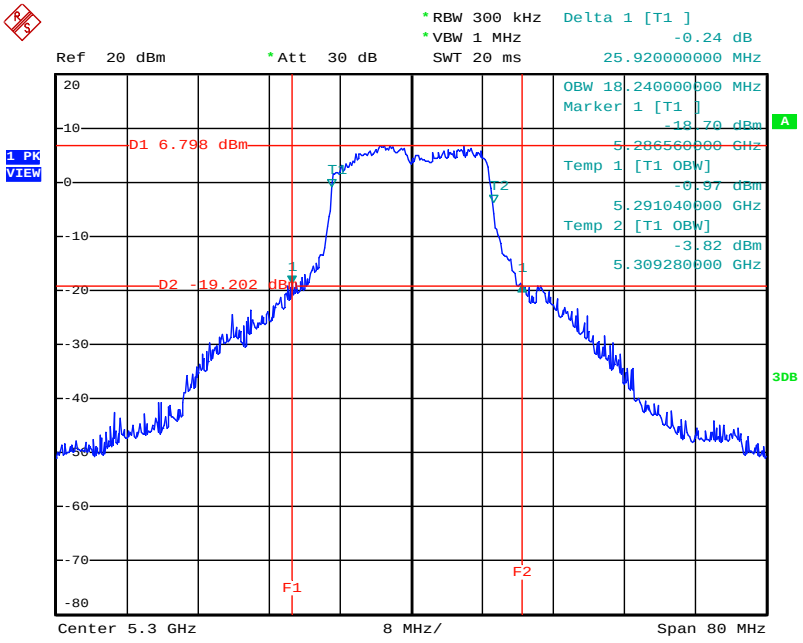
<For Ant. 4>:

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz / 5260 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 11:39:41

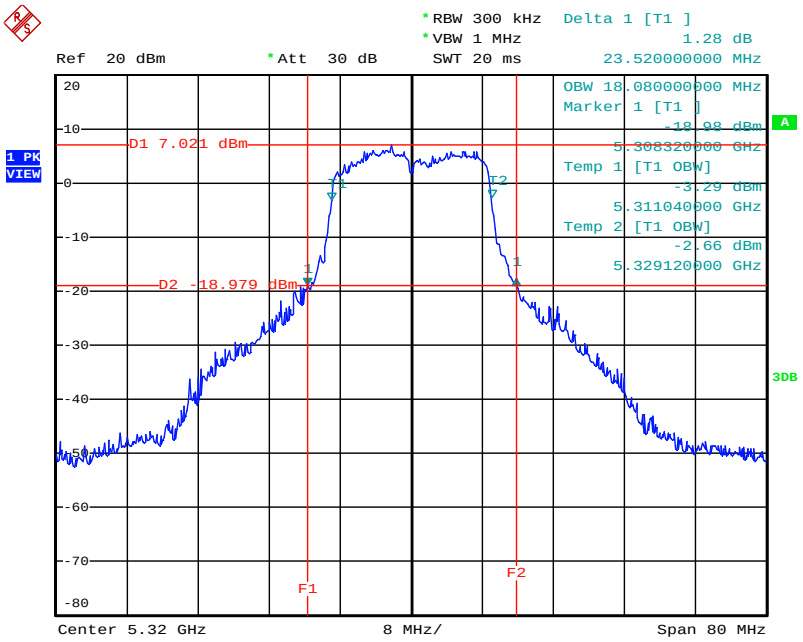
26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz / 5300 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 11:40:21

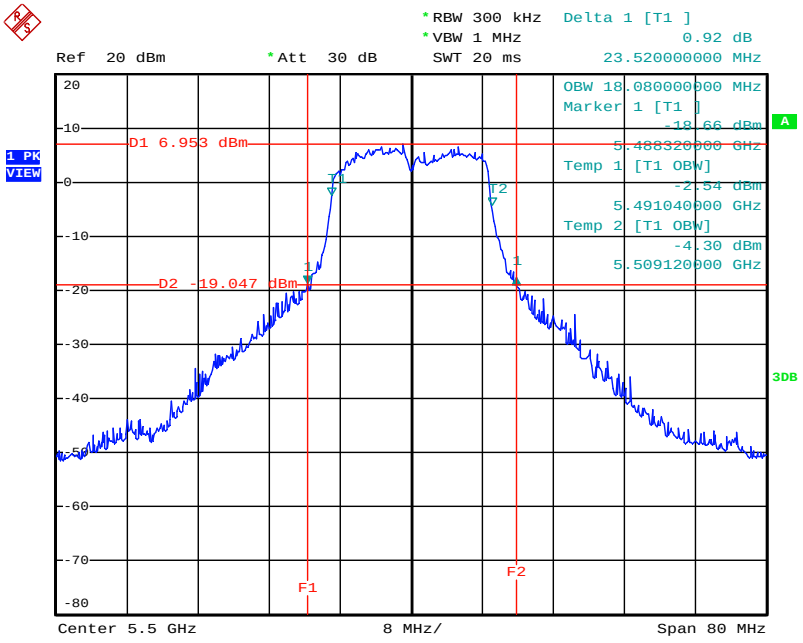
<For Ant. 4>:

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz / 5320 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 11:41:05

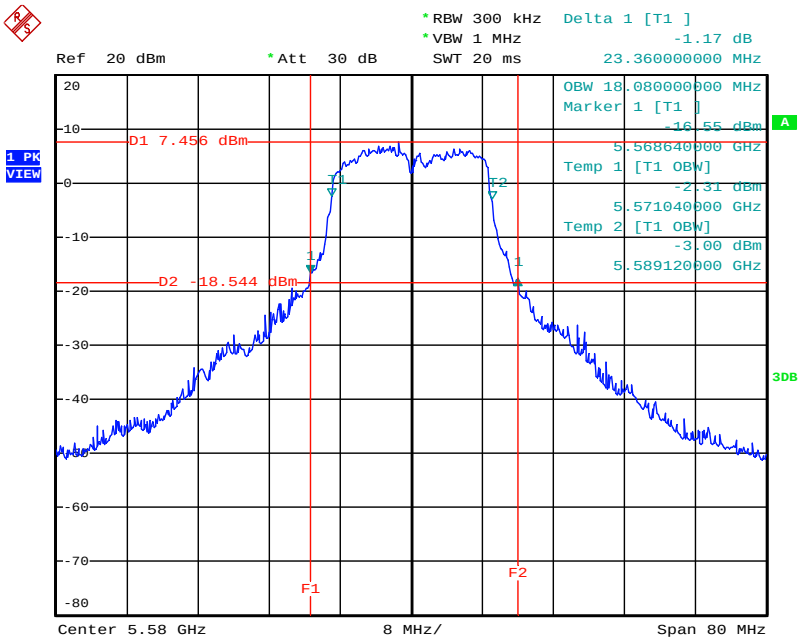
26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz / 5500 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 11:42:53

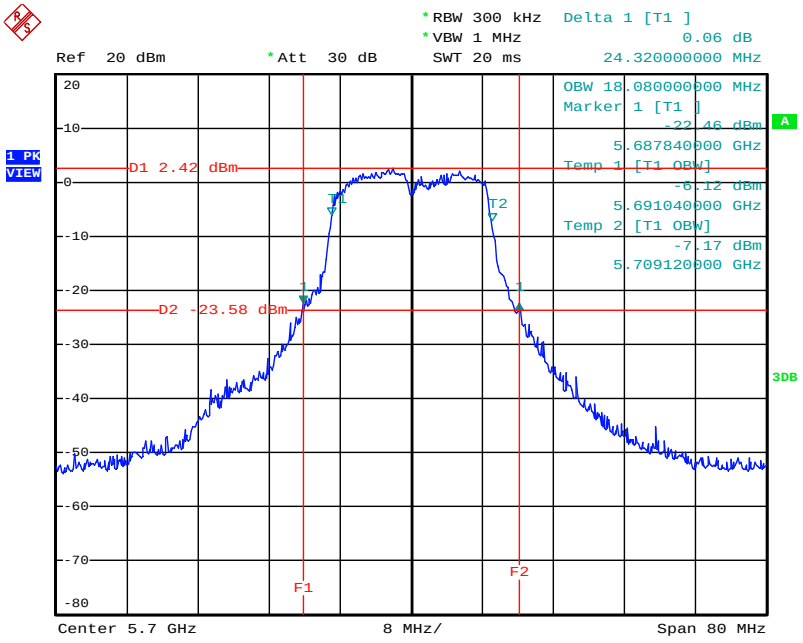
<For Ant. 4>:

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz / 5580 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 11:43:26

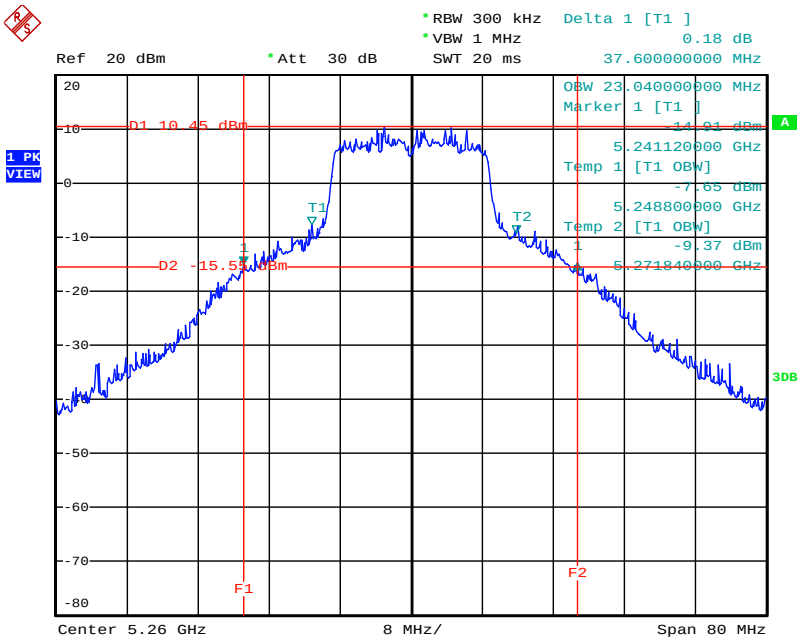
26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz / 5700 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 11:44:03

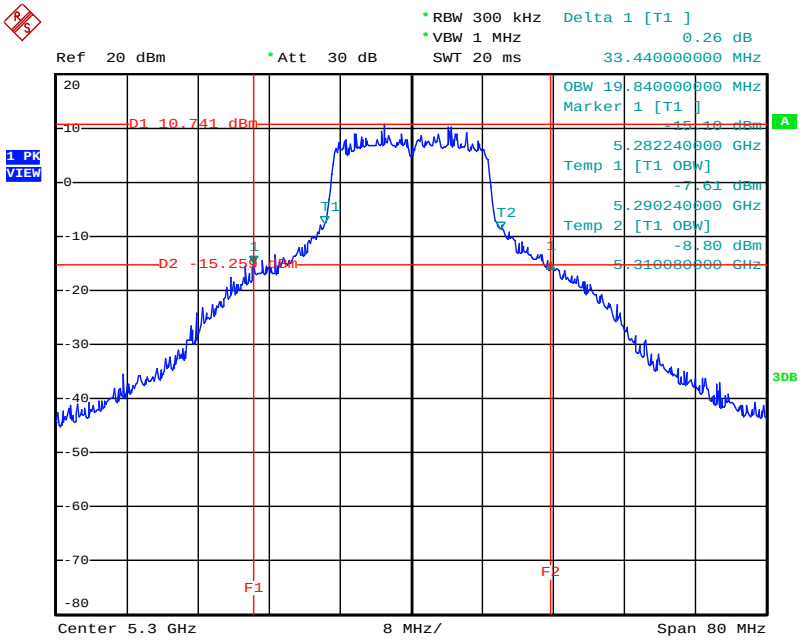
<For Ant. 4>:

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 20MHz / 5260 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 11:48:46

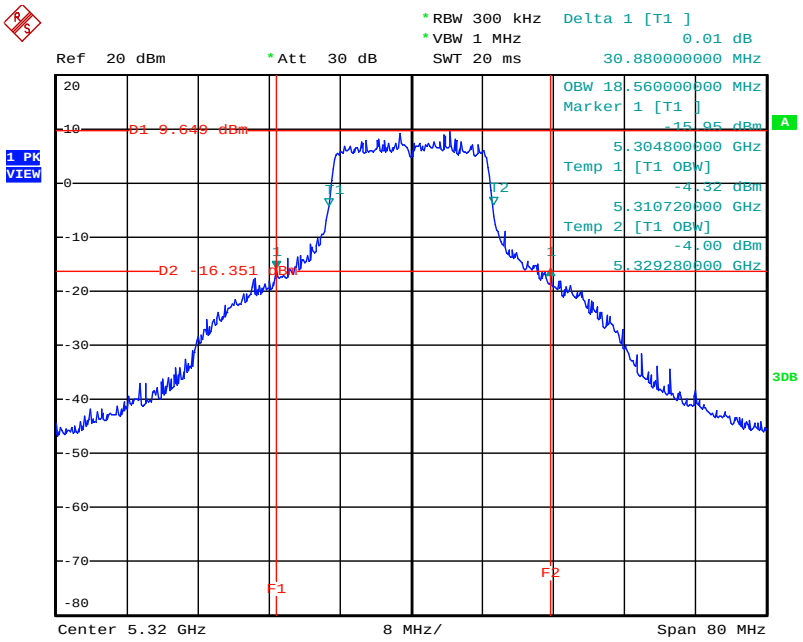
26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 20MHz / 5300 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 11:48:01

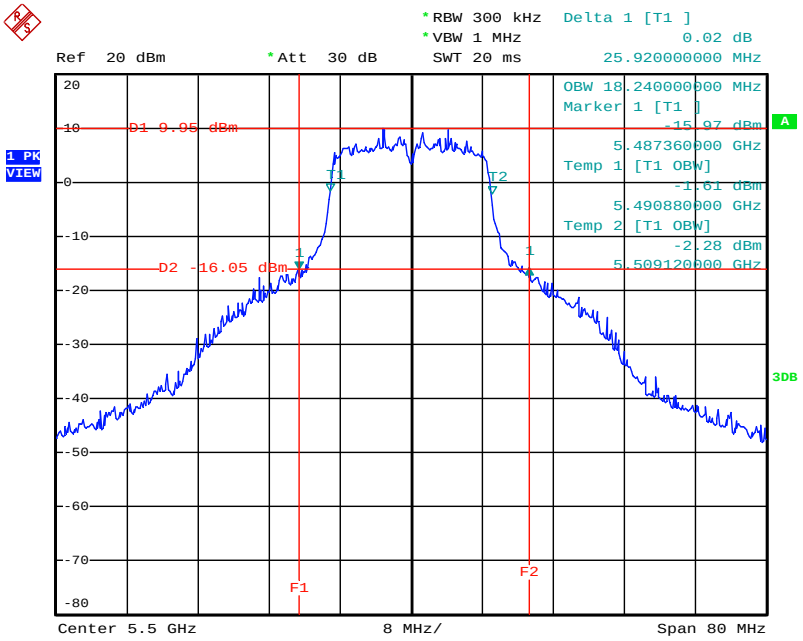
<For Ant. 4>:

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 20MHz / 5320 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 11:47:27

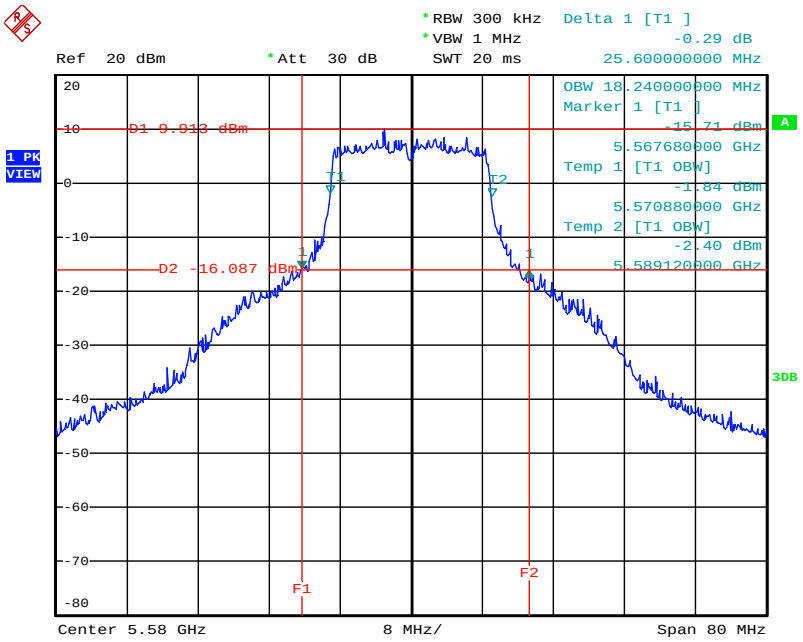
26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 20MHz / 5500 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 11:46:45

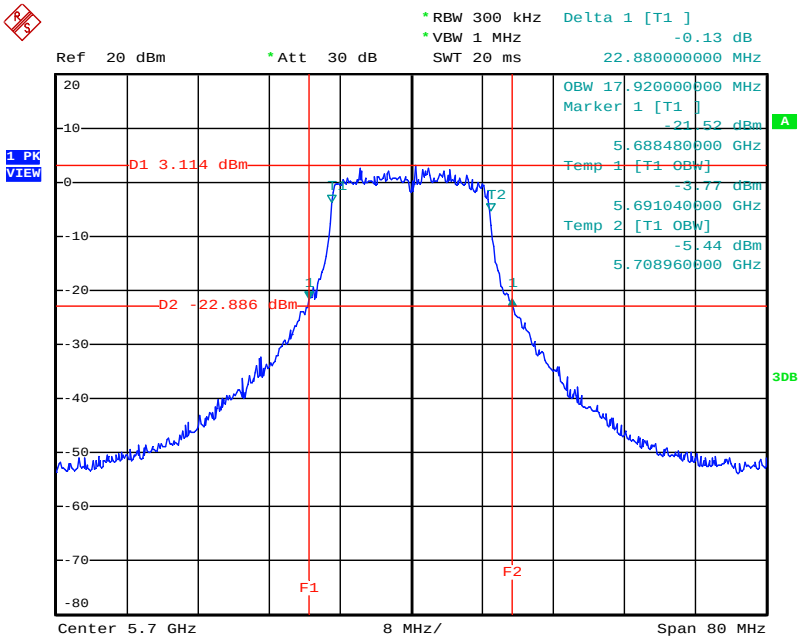
<For Ant. 4>:

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 20MHz / 5580 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 11:46:13

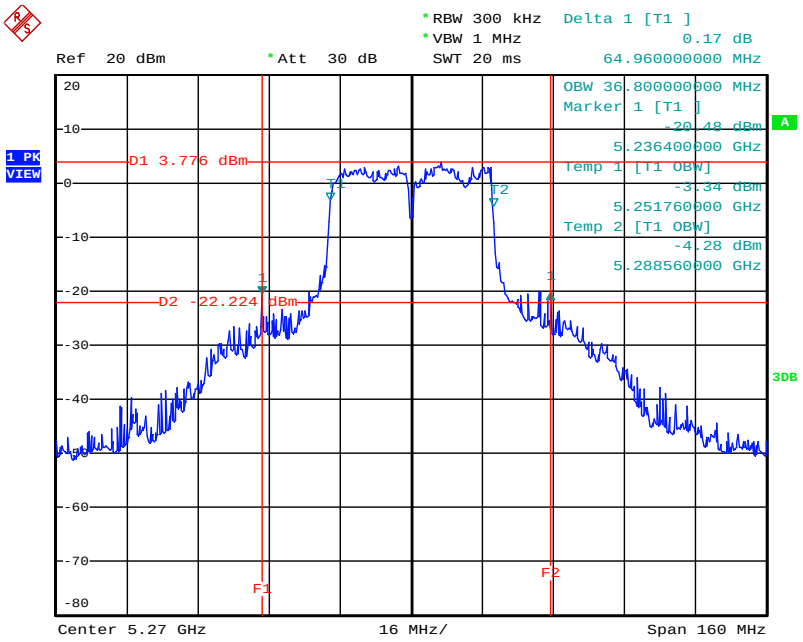
26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 20MHz / 5700 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 11:45:31

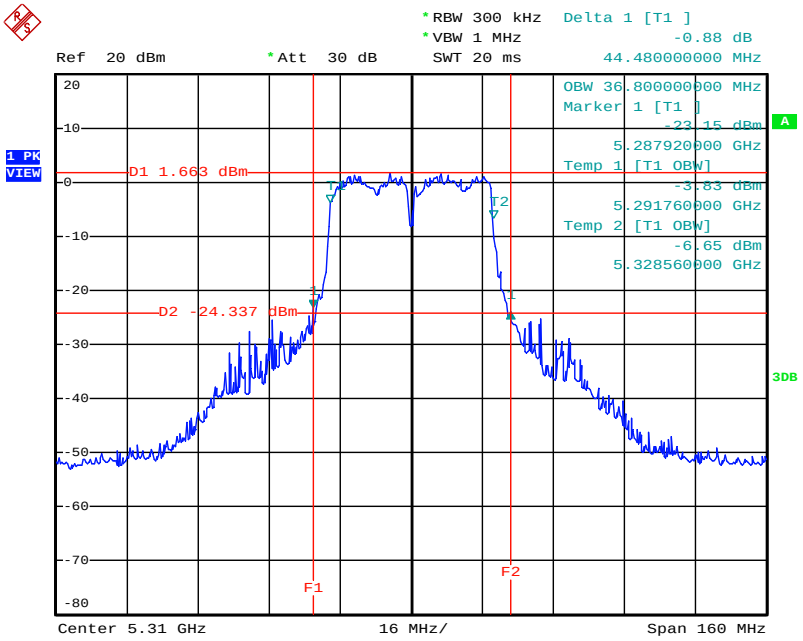
<For Ant. 4>:

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz / 5270 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 12:00:26

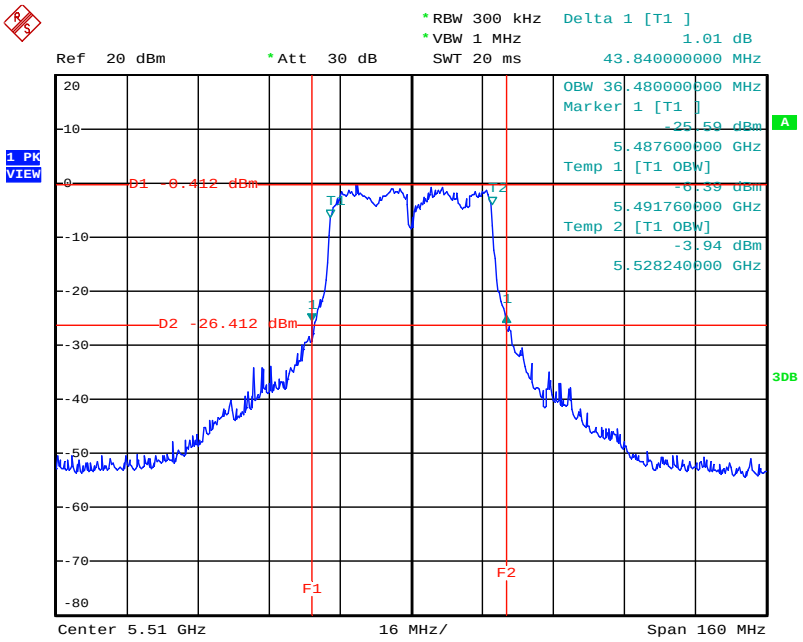
26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz / 5310 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 11:59:42

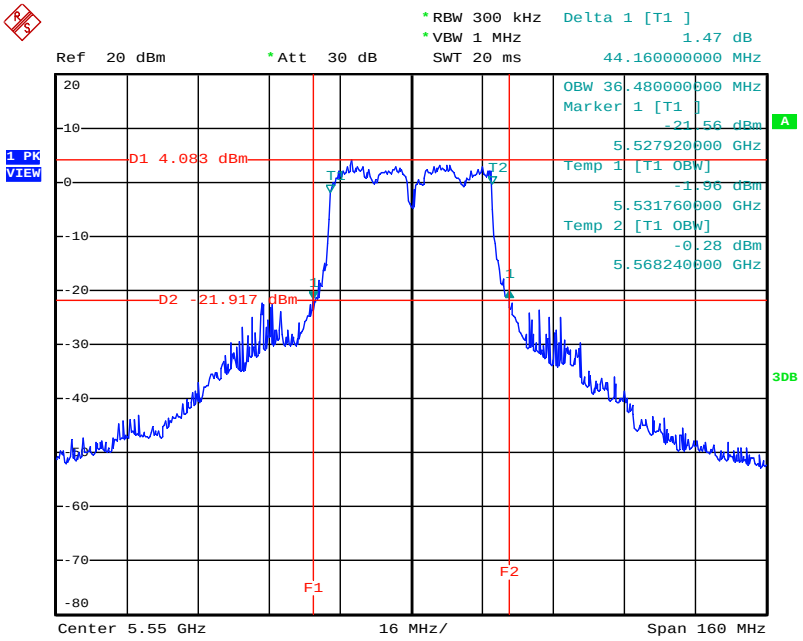
<For Ant. 4>:

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz / 5510MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 19:16:45

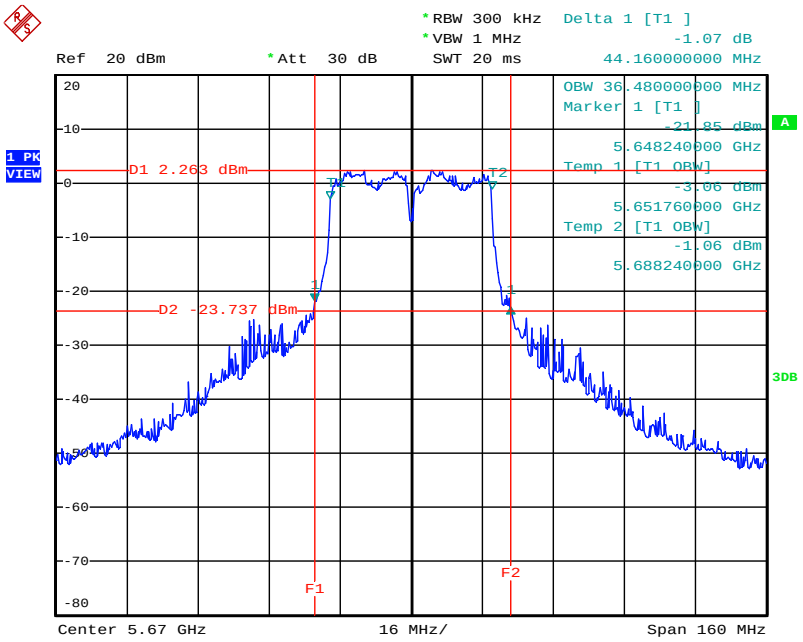
26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz / 5550 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 11:58:01

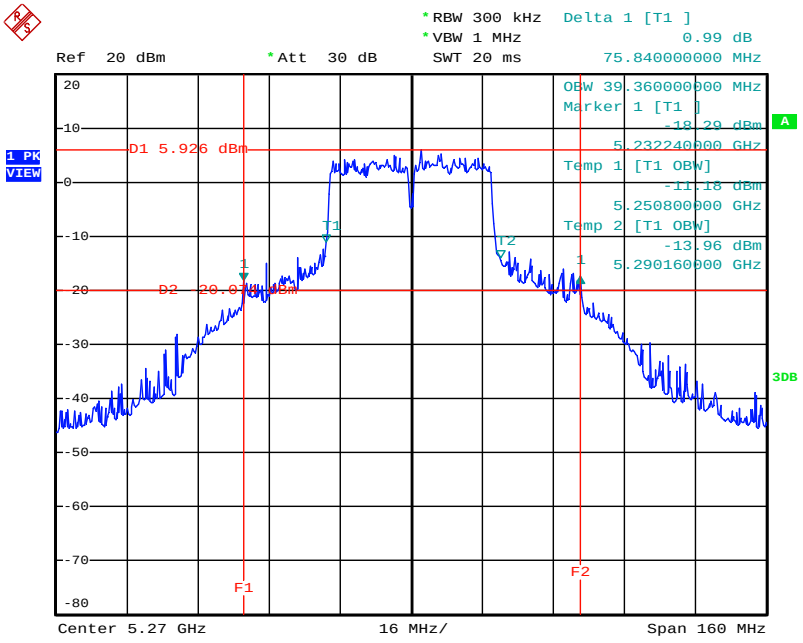
<For Ant. 4>:

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz / 5670 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 11:57:12

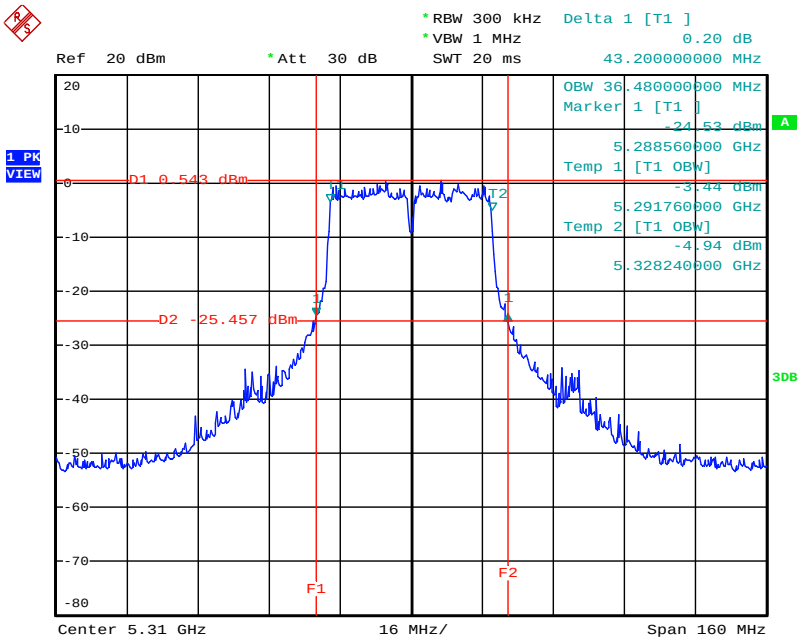
26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 40MHz / 5270 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 11:52:56

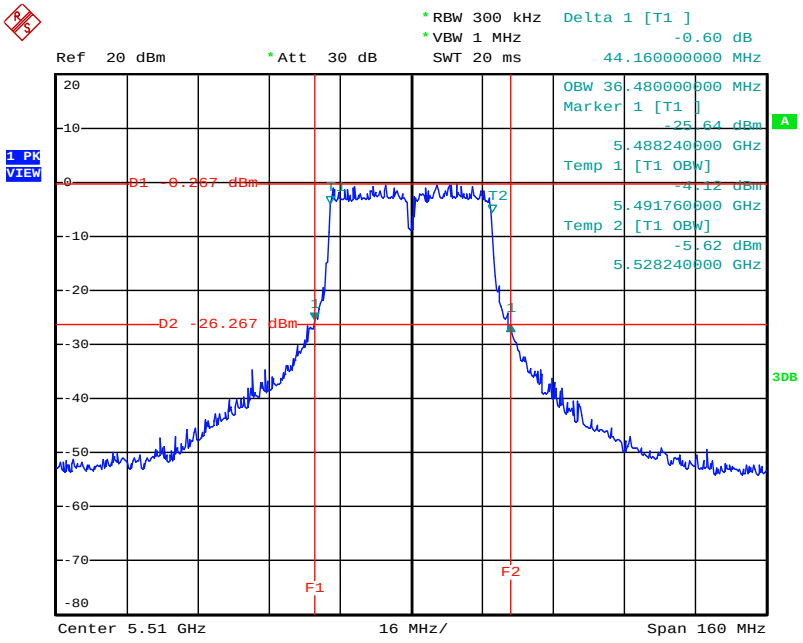
<For Ant. 4>:

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 40MHz / 5310 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 11:53:36

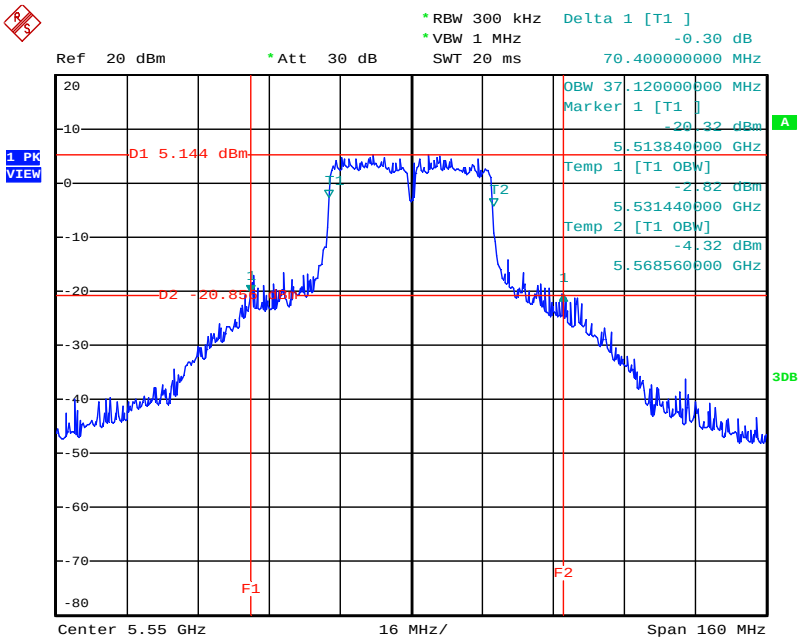
26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 40MHz / 5510MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 11:54:36

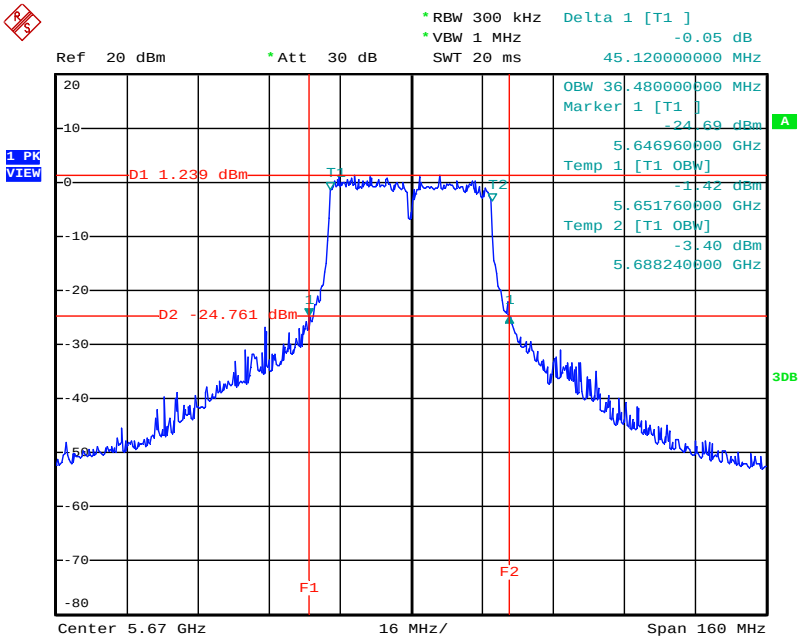
<For Ant. 4>:

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 40MHz / 5550 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 11:55:18

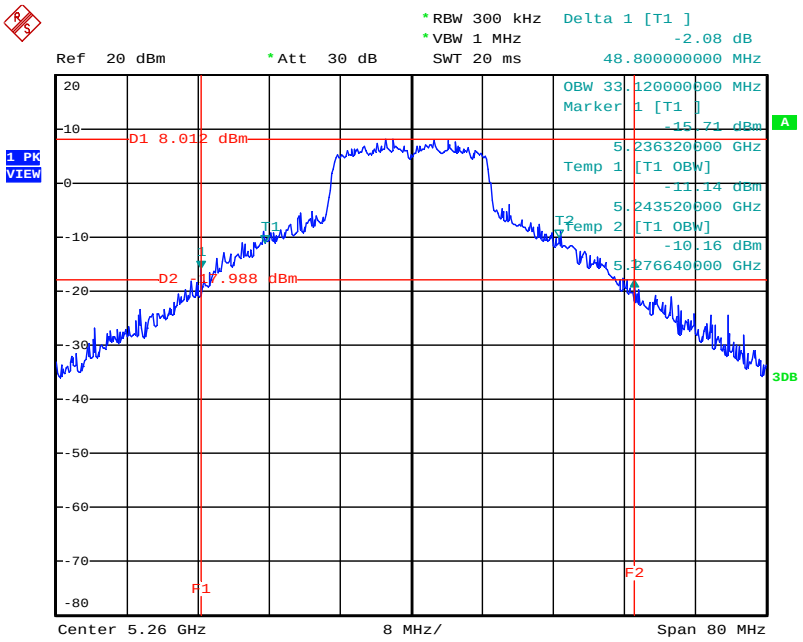
26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 40MHz / 5670 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 11:56:04

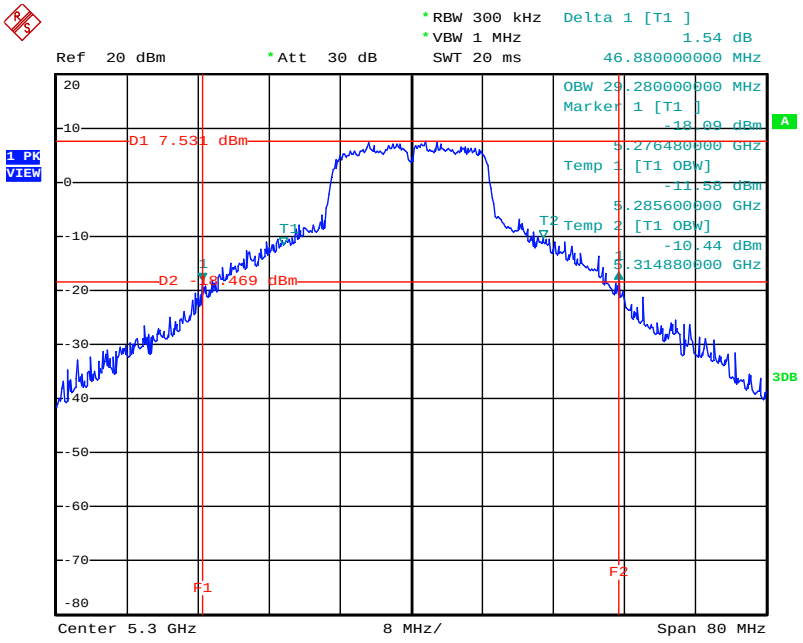
<For Ant. 5>:

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



Date: 20.SEP.2012 04:20:35

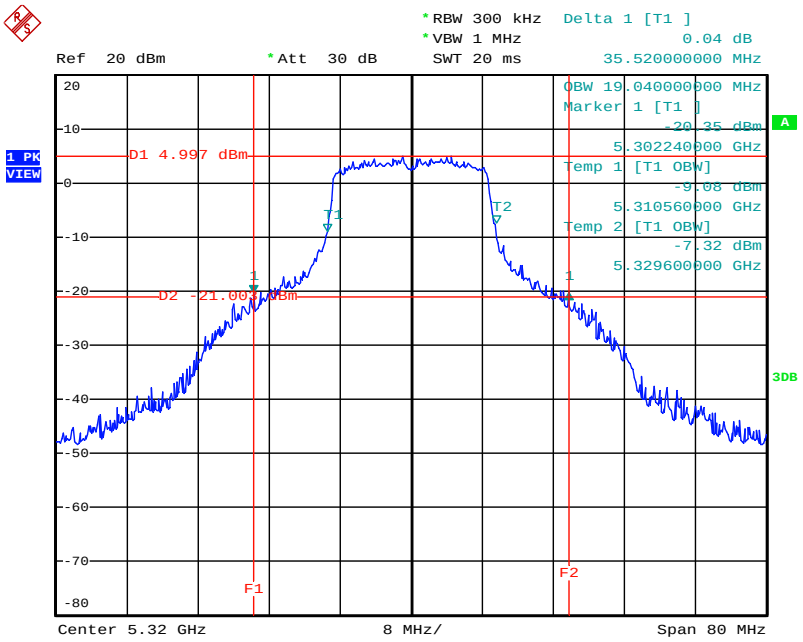
26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz / 5300 MHz / Chain. 1 (1X)



Date: 20.SEP.2012 04:21:01

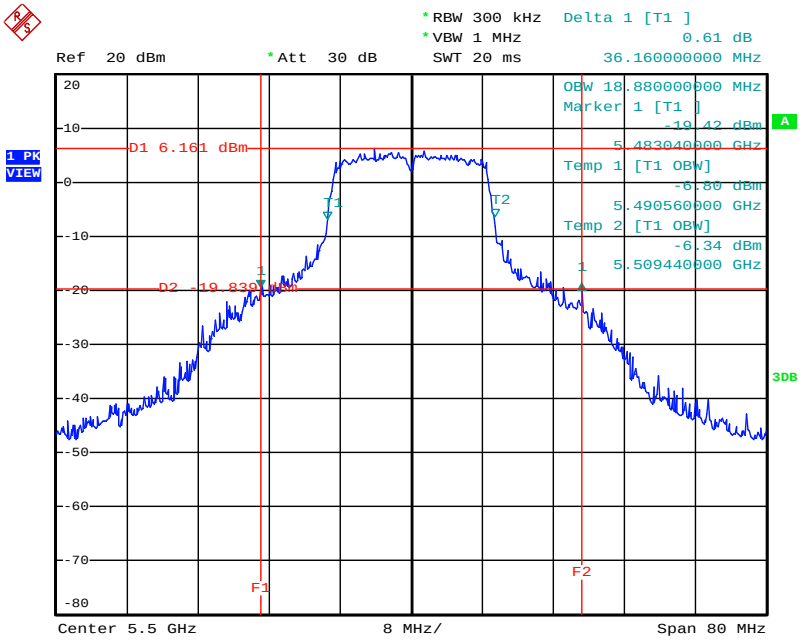
<For Ant. 5>:

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



Date: 20.SEP.2012 04:21:31

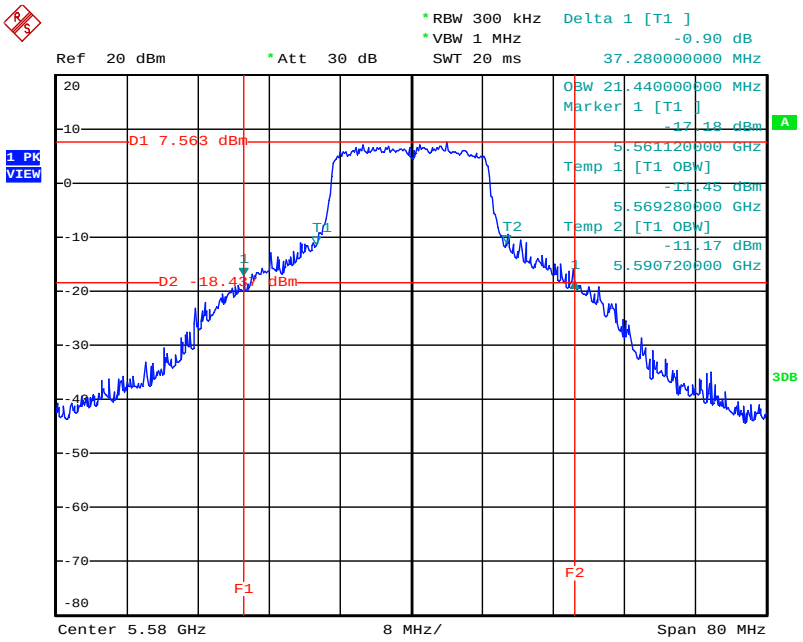
26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz / 5500 MHz / Chain. 1 (1X)



Date: 20.SEP.2012 04:22:27

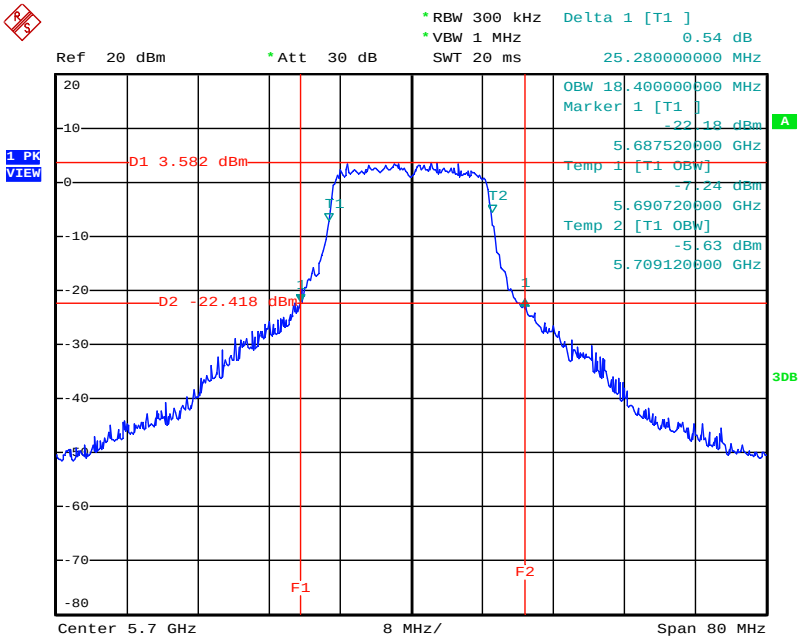
<For Ant. 5>:

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



Date: 20.SEP.2012 04:23:01

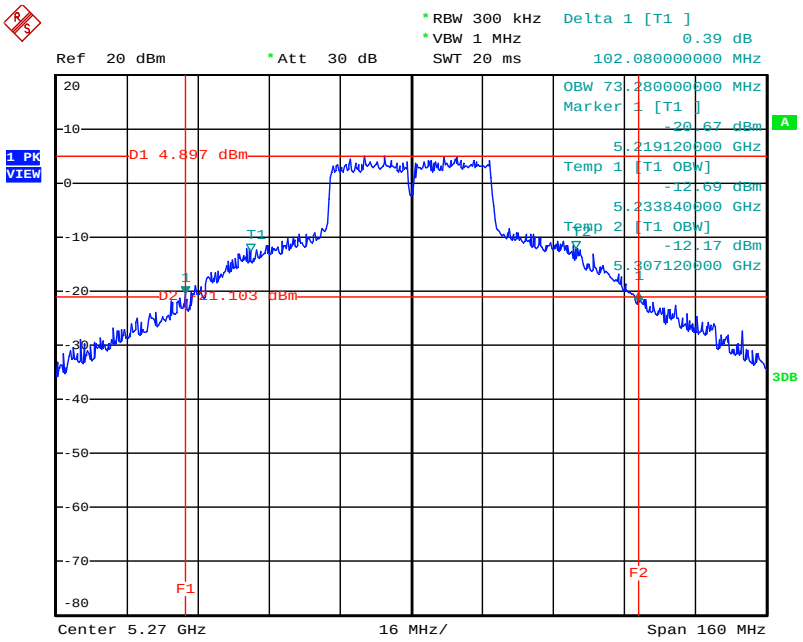
26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz / 5700 MHz / Chain. 1 (1X)



Date: 20.SEP.2012 04:23:26

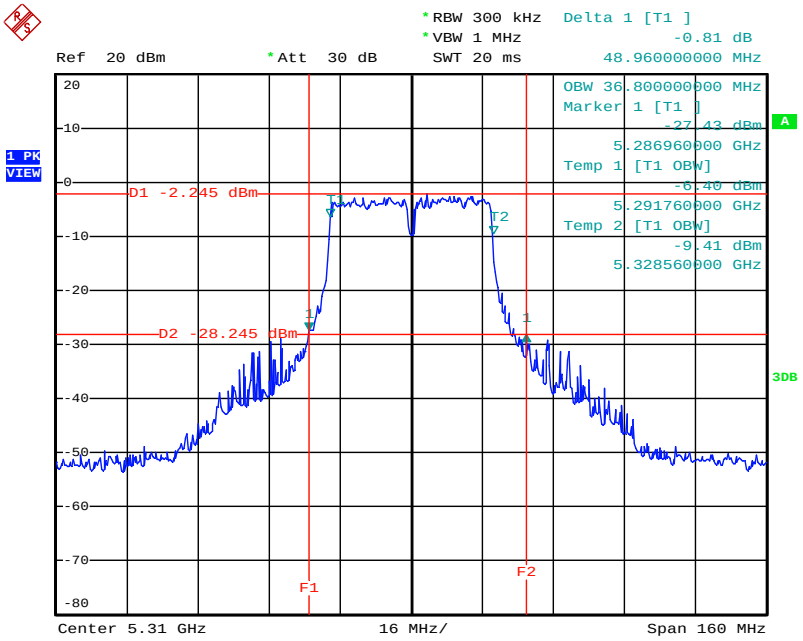
<For Ant. 5>:

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



Date: 20.SEP.2012 04:13:31

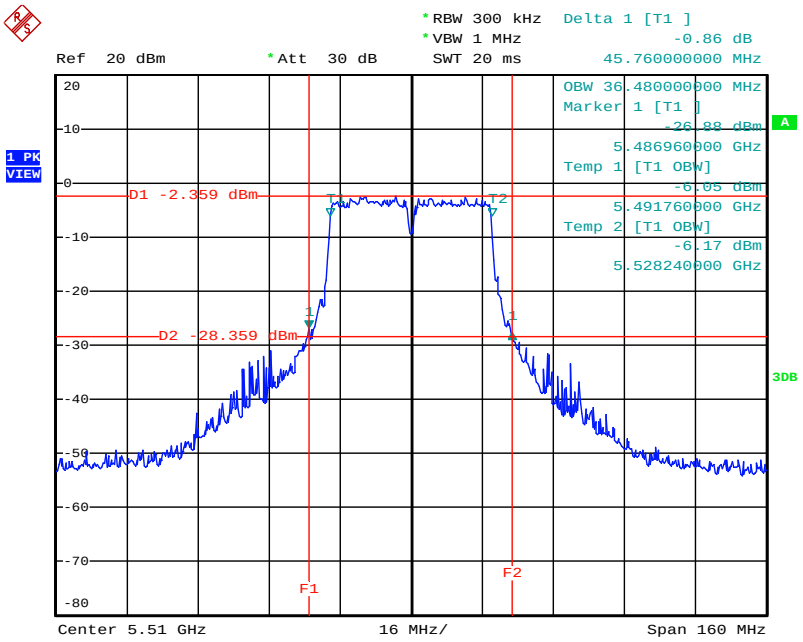
26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz / 5310 MHz / Chain. 1 (1X)



Date: 20.SEP.2012 04:12:56

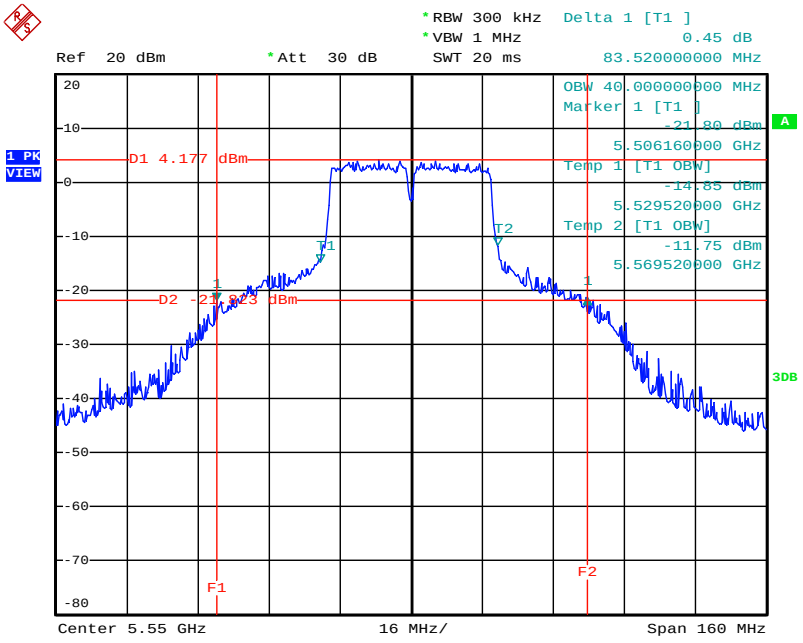
<For Ant. 5>:

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



Date: 20.SEP.2012 04:12:14

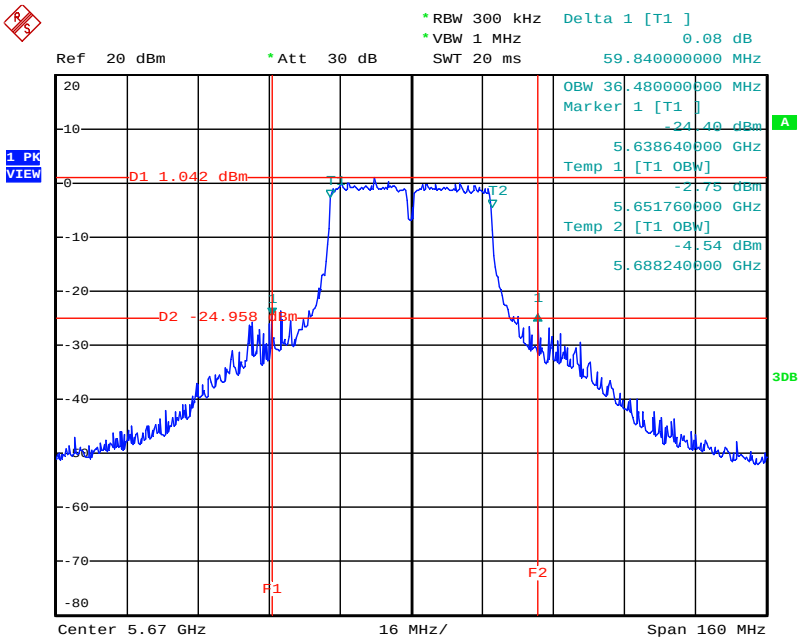
26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz / 5550 MHz / Chain. 1 (1X)



Date: 20.SEP.2012 04:11:11

<For Ant. 5>:

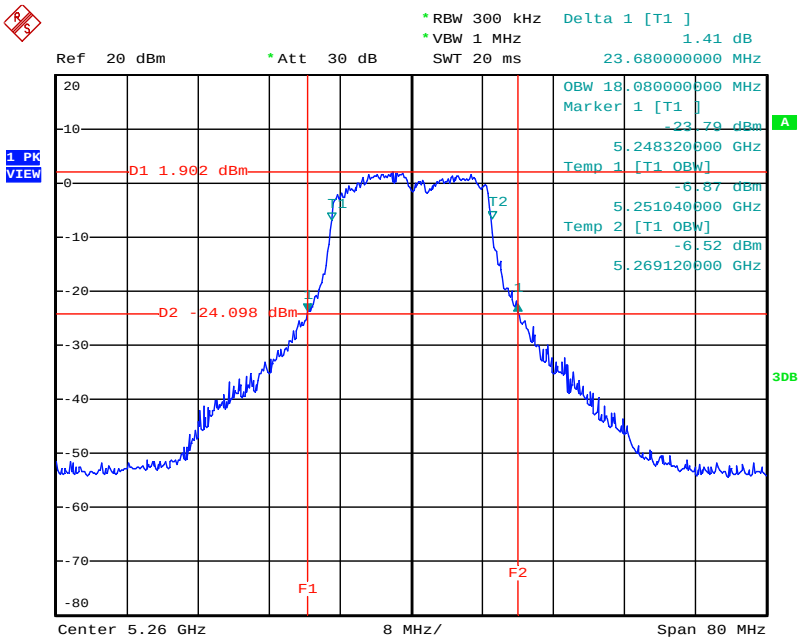
26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz / 5670 MHz / Chain. 1 (1X)



Date: 20.SEP.2012 04:10:06

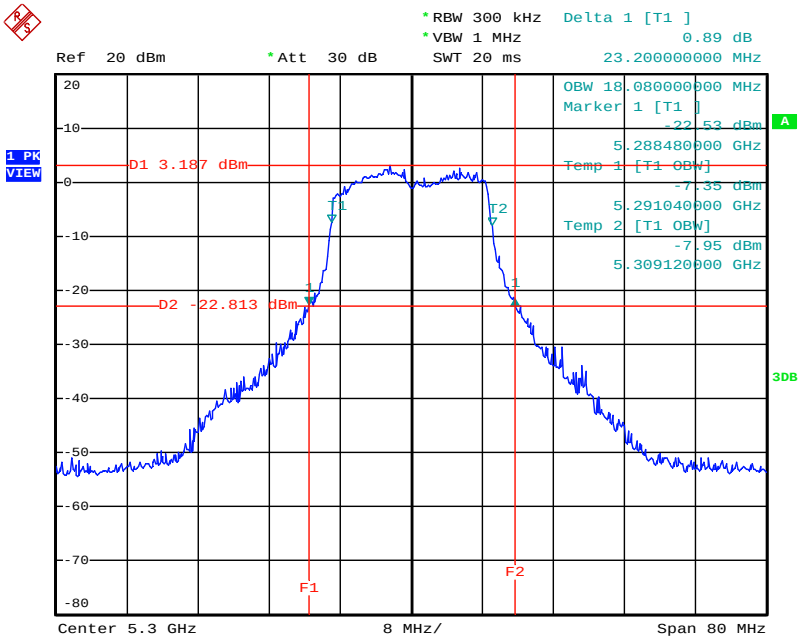
<For Ant. 6>:

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz / 5260 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 12:44:28

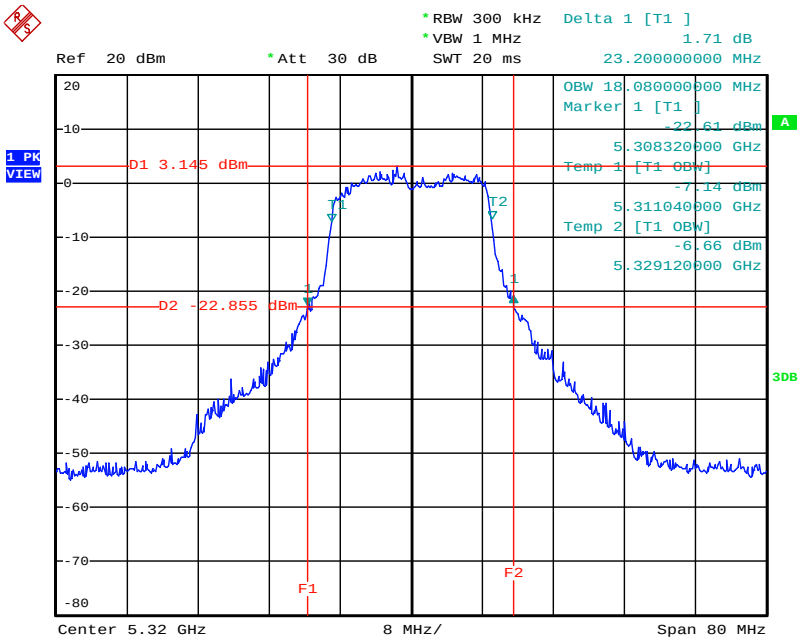
26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz / 5300 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 12:44:56

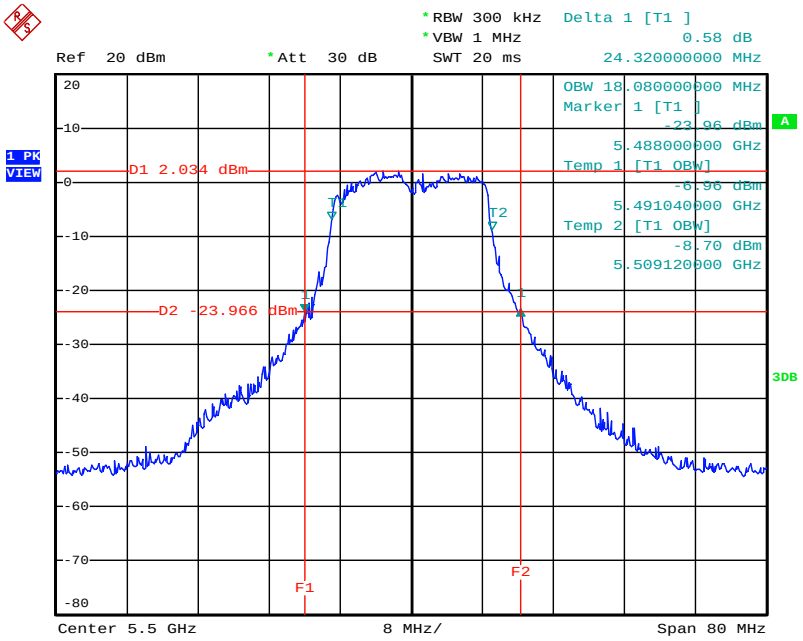
<For Ant. 6>:

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz / 5320 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 12:45:28

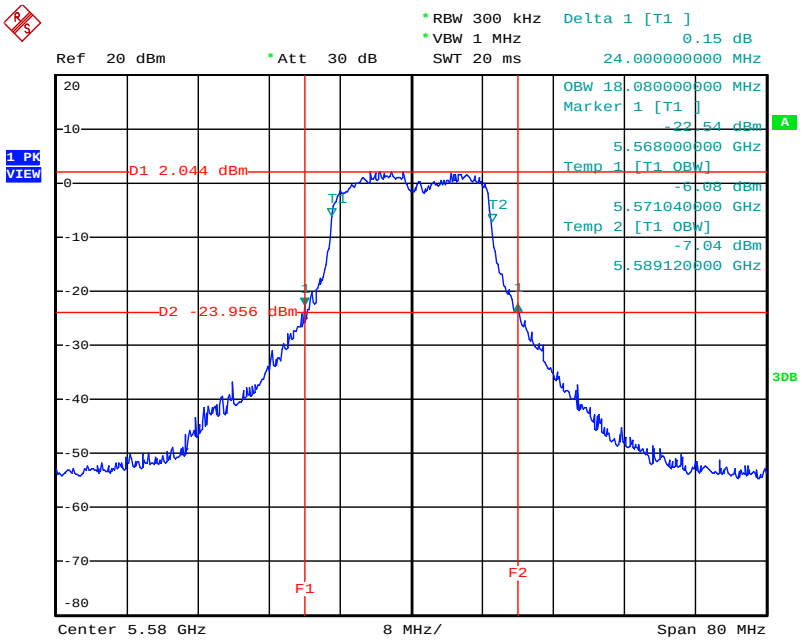
26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz / 5500 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 12:46:09

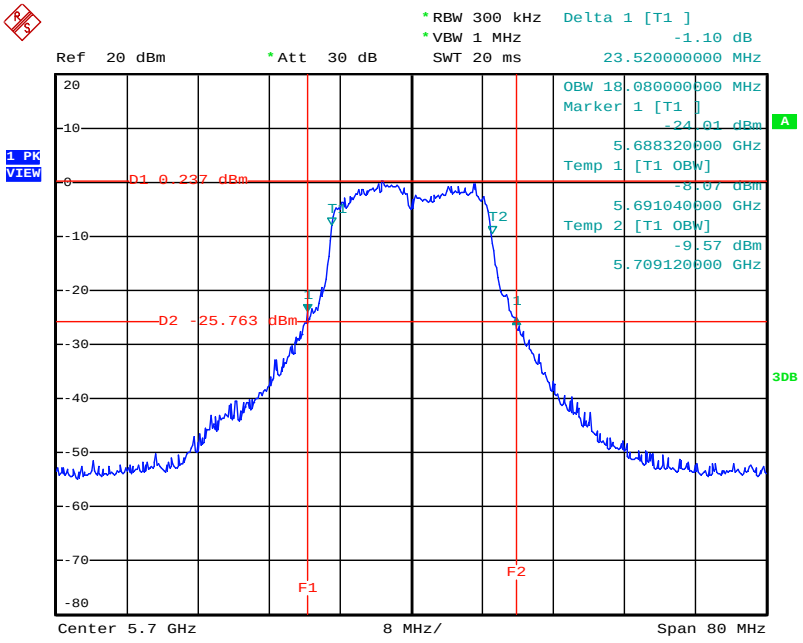
<For Ant. 6>:

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz / 5580 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 12:46:44

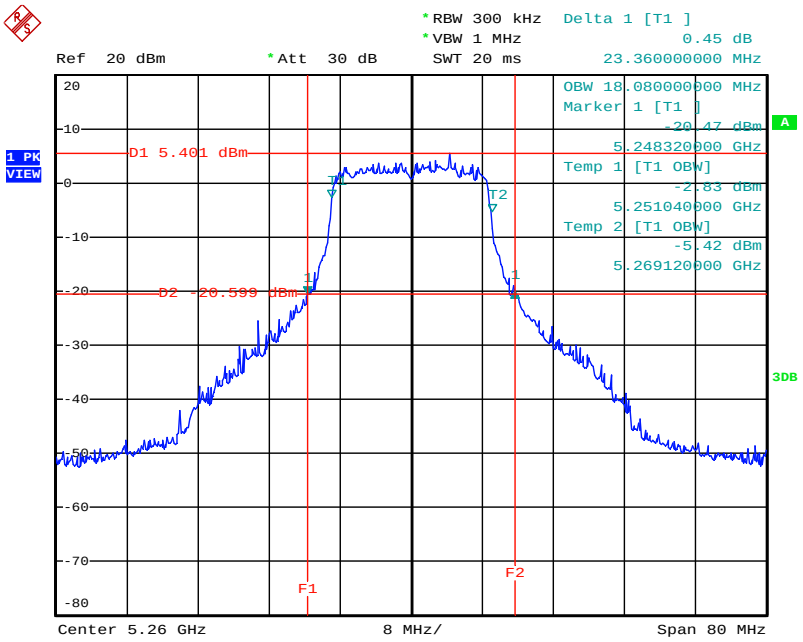
26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz / 5700 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 12:47:12

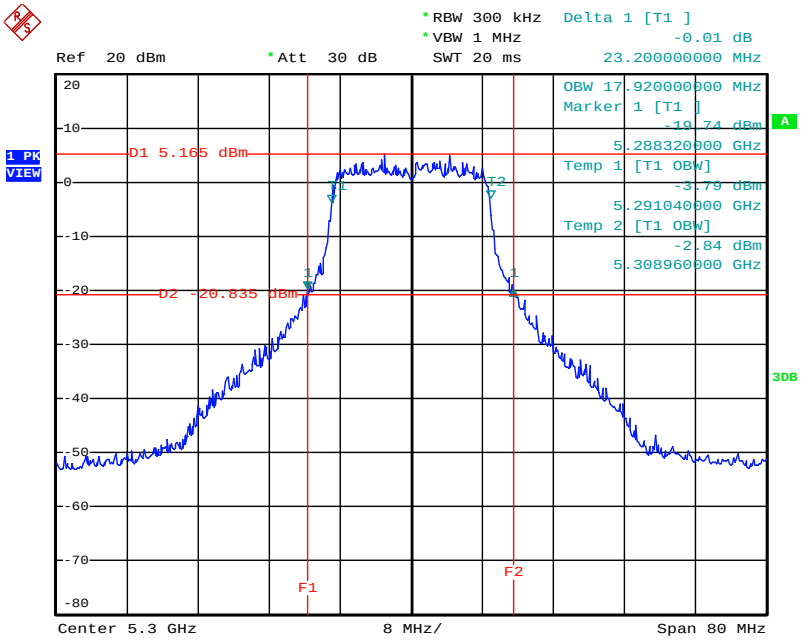
<For Ant. 6>:

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 20MHz / 5260 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 12:51:21

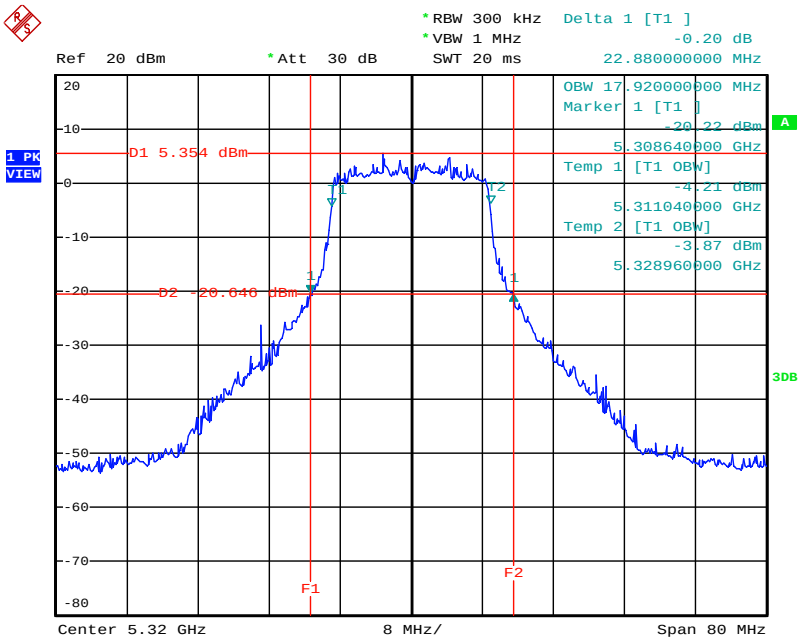
26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 20MHz / 5300 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 12:50:46

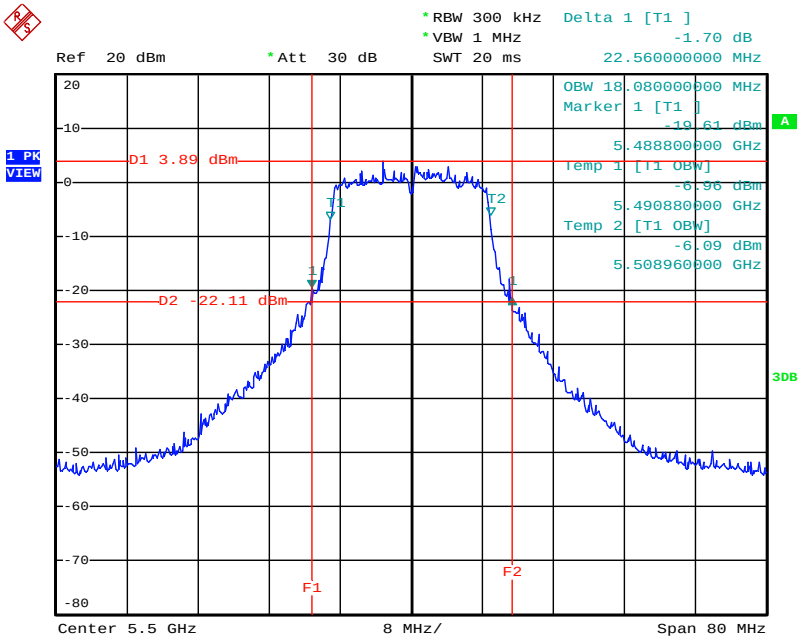
<For Ant. 6>:

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 20MHz / 5320 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 12:50:20

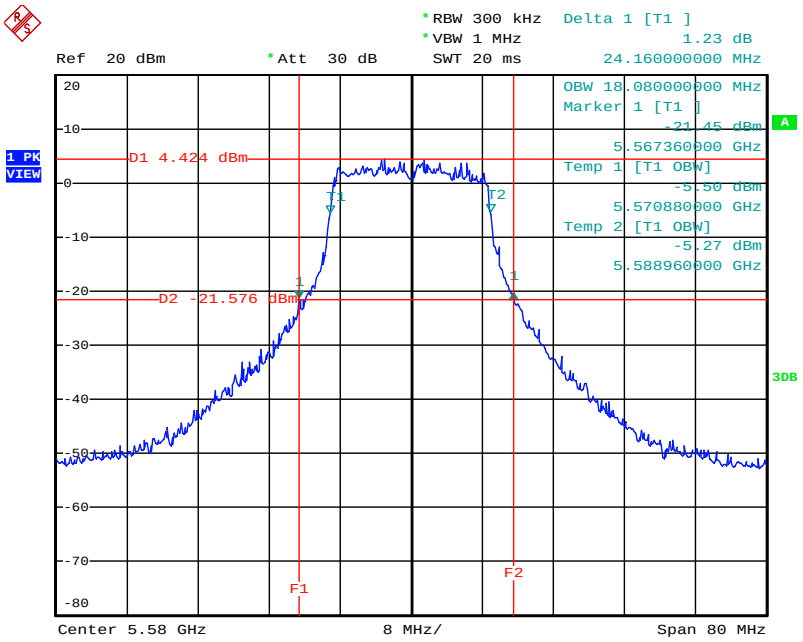
26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 20MHz / 5500 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 12:49:31

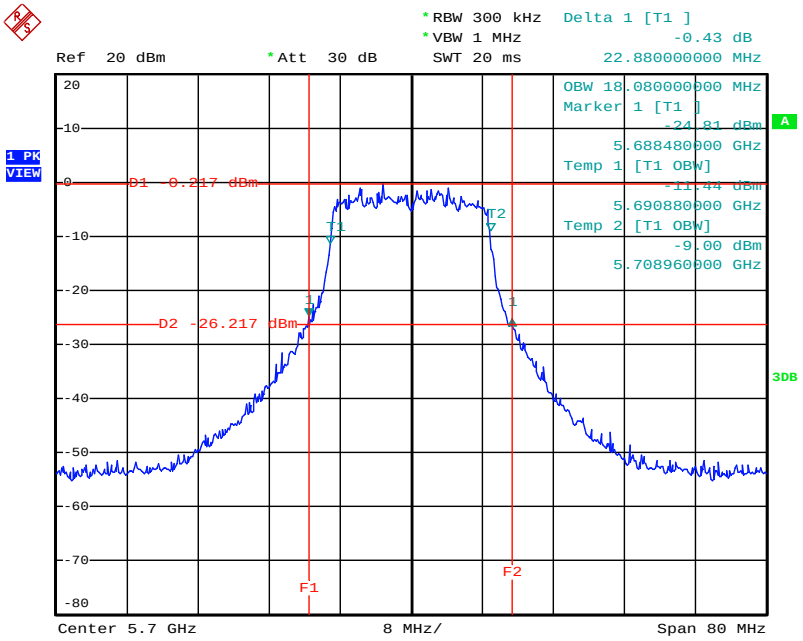
<For Ant. 6>:

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 20MHz / 5580 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 12:48:56

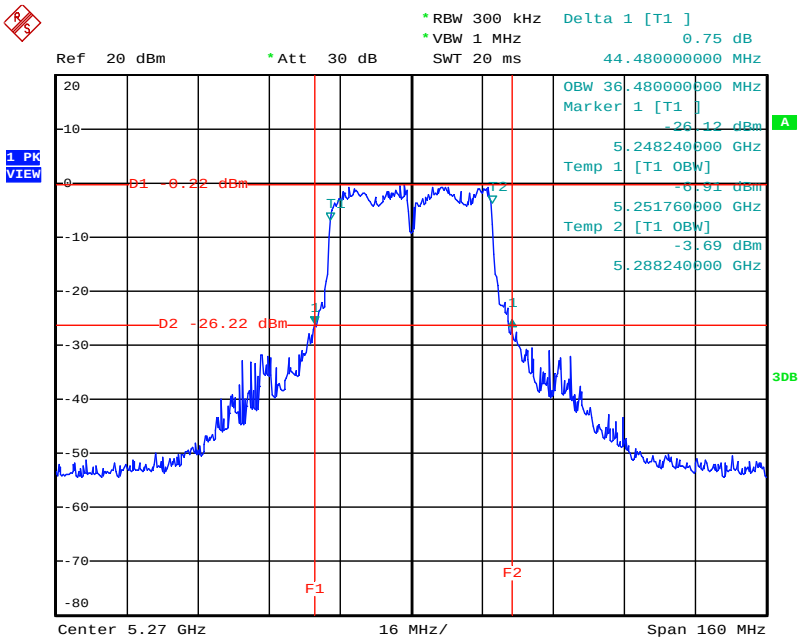
26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 20MHz / 5700 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 12:48:15

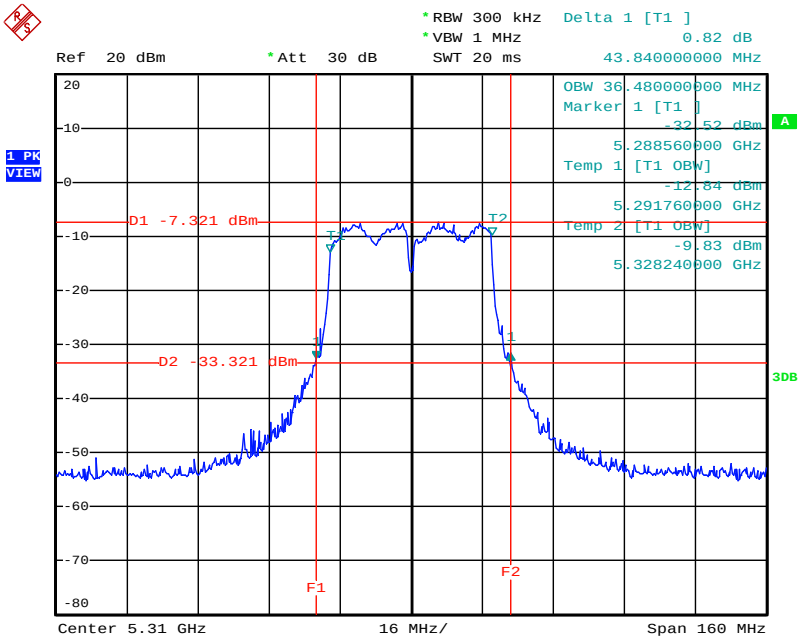
<For Ant. 6>:

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz / 5270 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 13:05:02

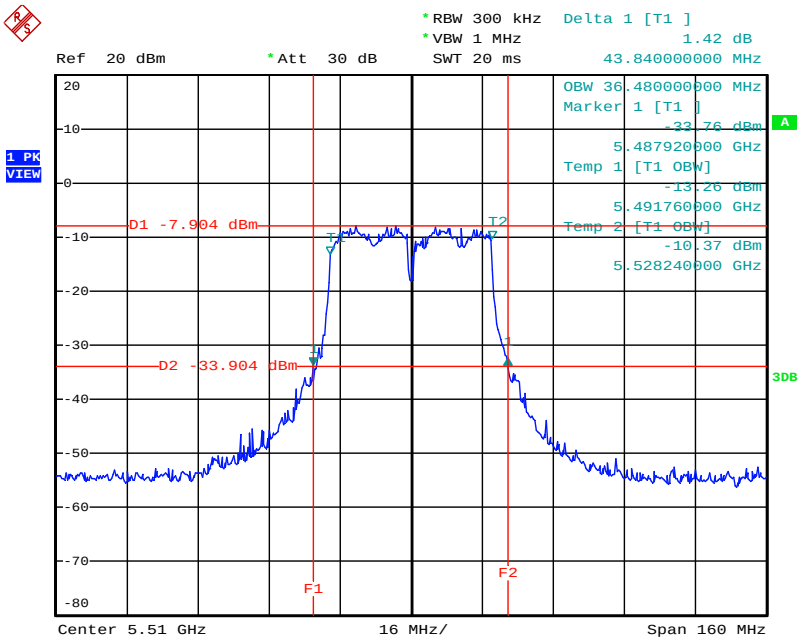
26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz / 5310 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 13:04:28

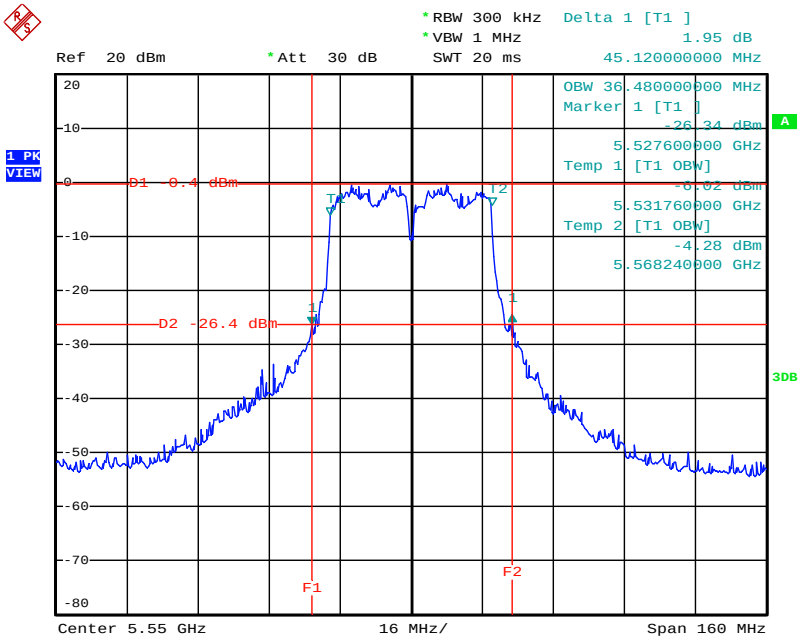
<For Ant. 6>:

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz / 5510MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 13:03:51

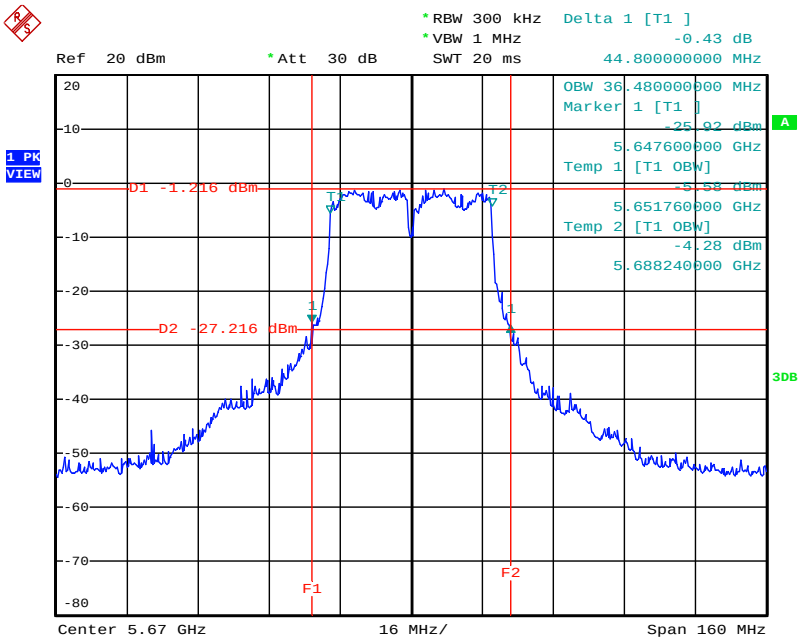
26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz / 5550 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 13:03:17

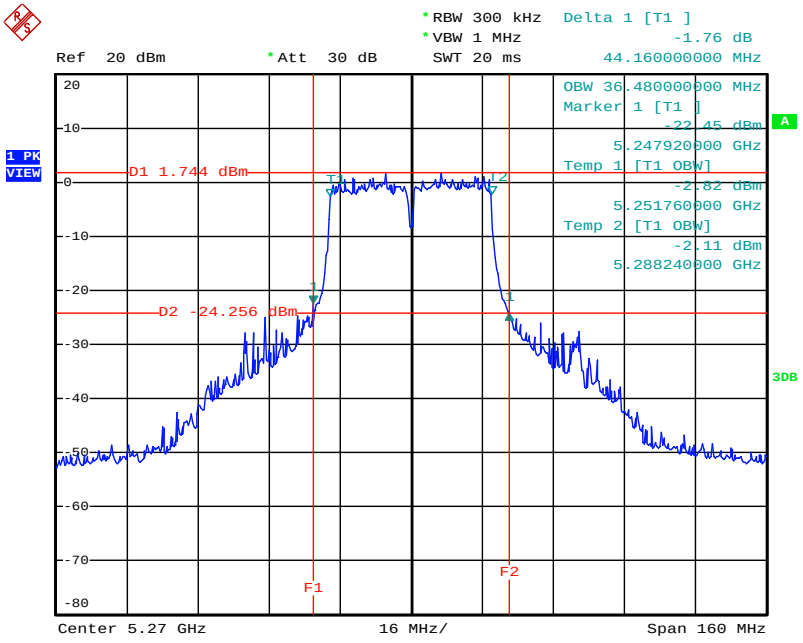
<For Ant. 6>:

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz / 5670 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 13:02:49

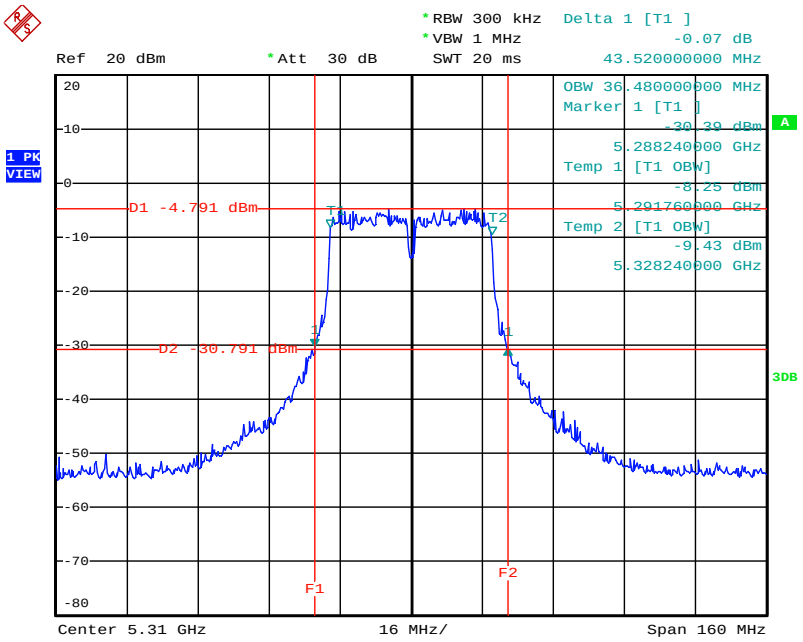
26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 40MHz / 5270 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 12:59:18

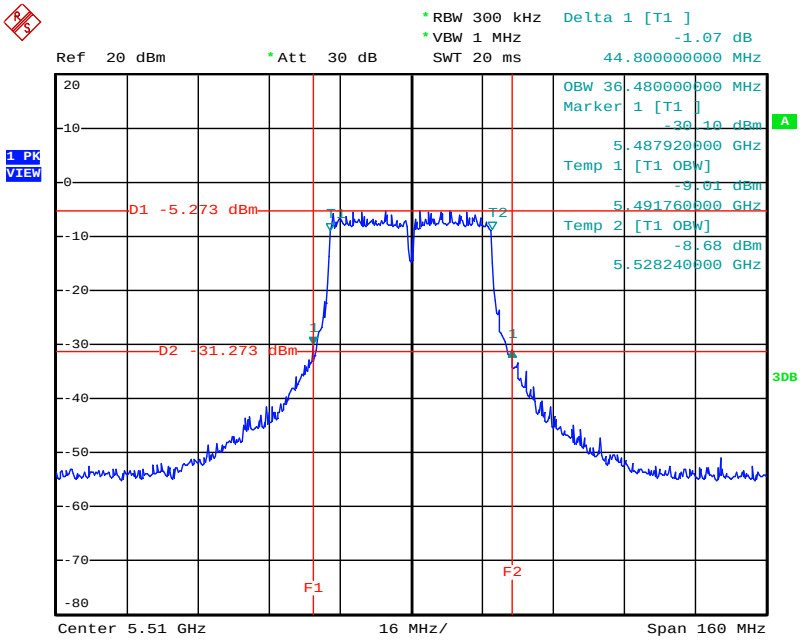
<For Ant. 6>:

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 40MHz / 5310 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 12:59:55

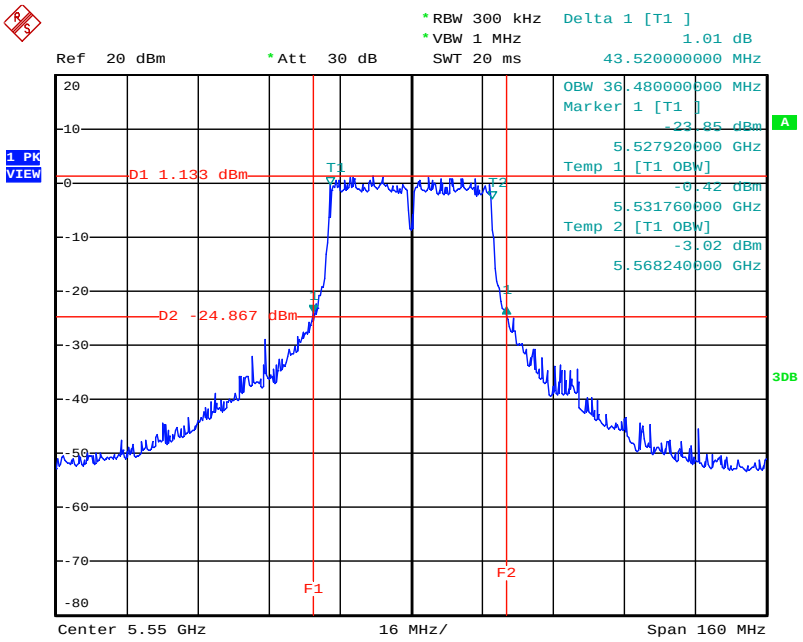
26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 40MHz / 5510MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 13:00:42

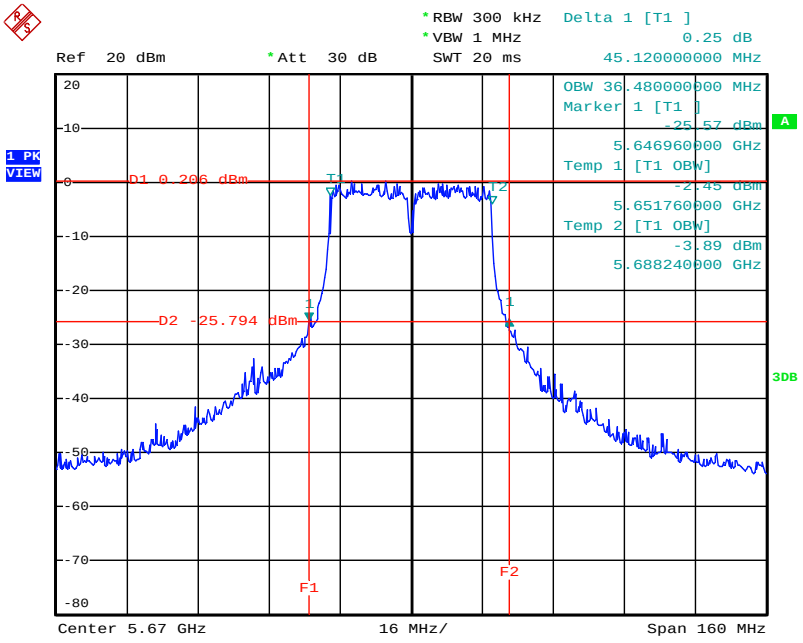
<For Ant. 6>:

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 40MHz / 5550 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 13:01:23

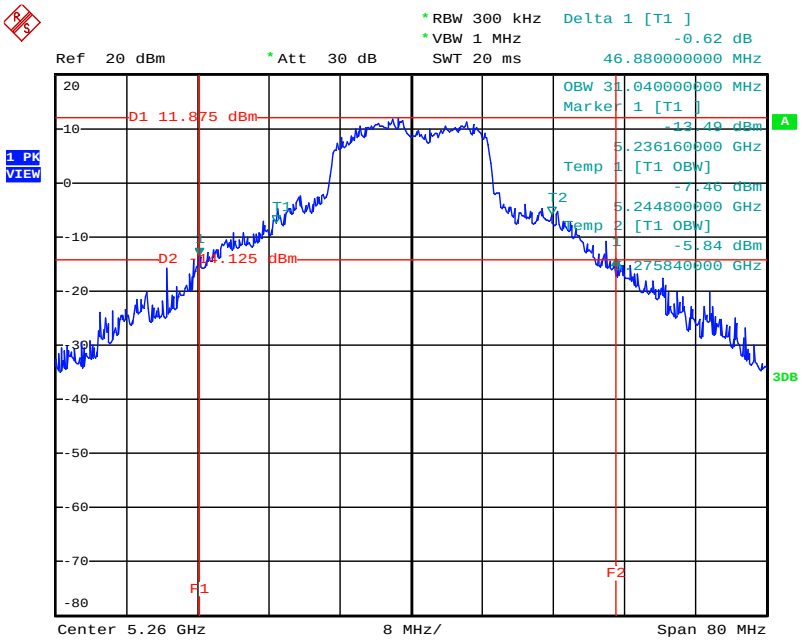
26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 40MHz / 5670 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 13:01:58

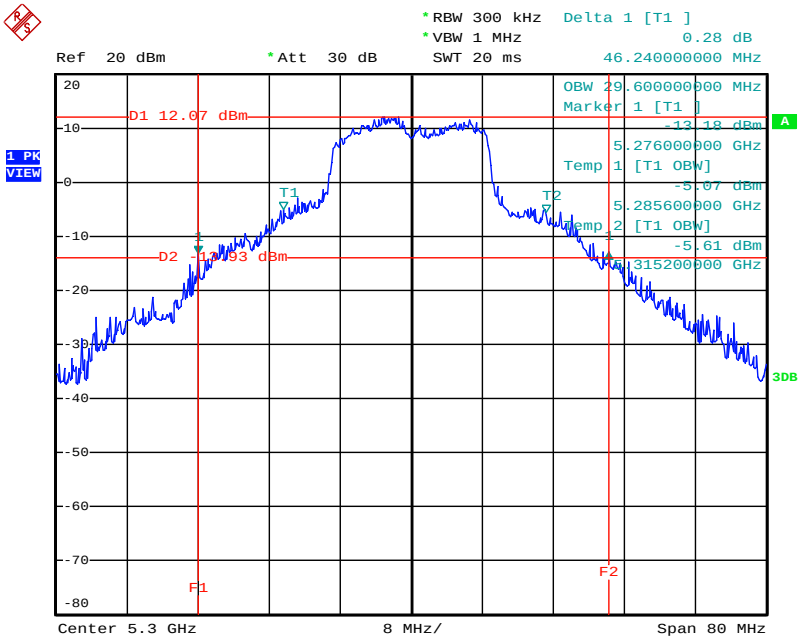
<For Ant. 10>:

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz / 5260 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 13:46:05

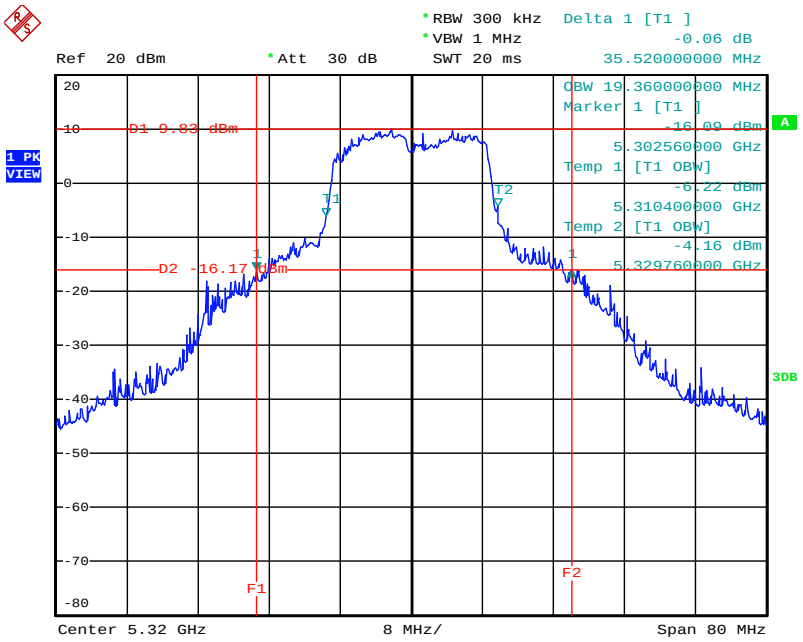
26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz / 5300 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 13:45:33

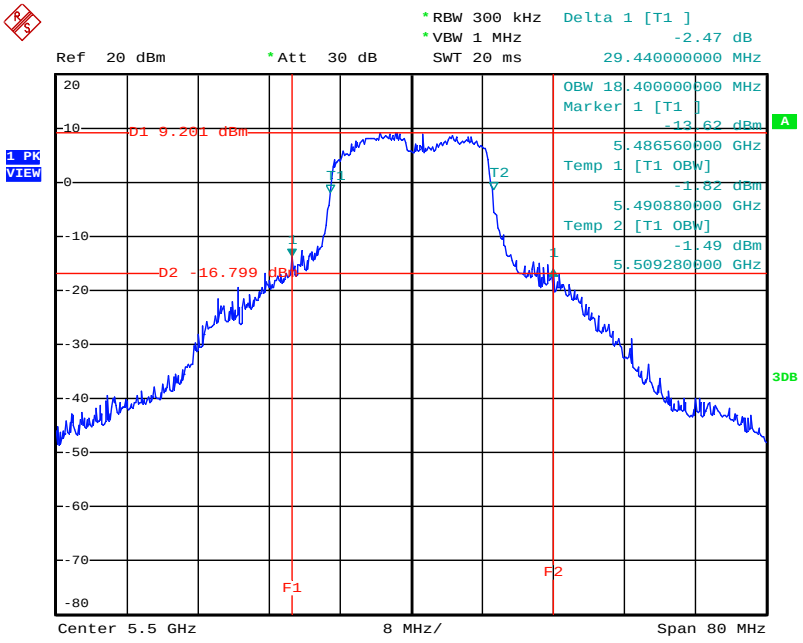
<For Ant. 10>:

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz / 5320 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 13:45:02

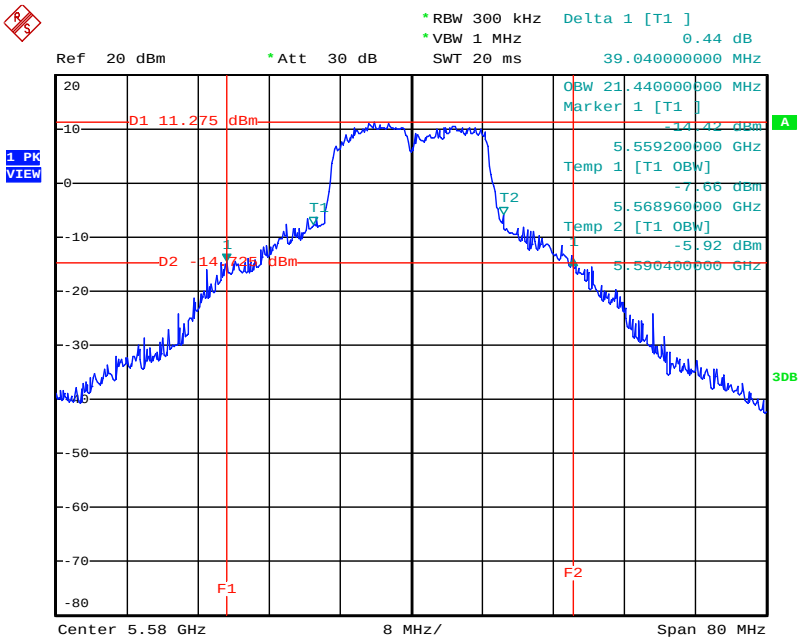
26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz / 5500 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 13:44:19

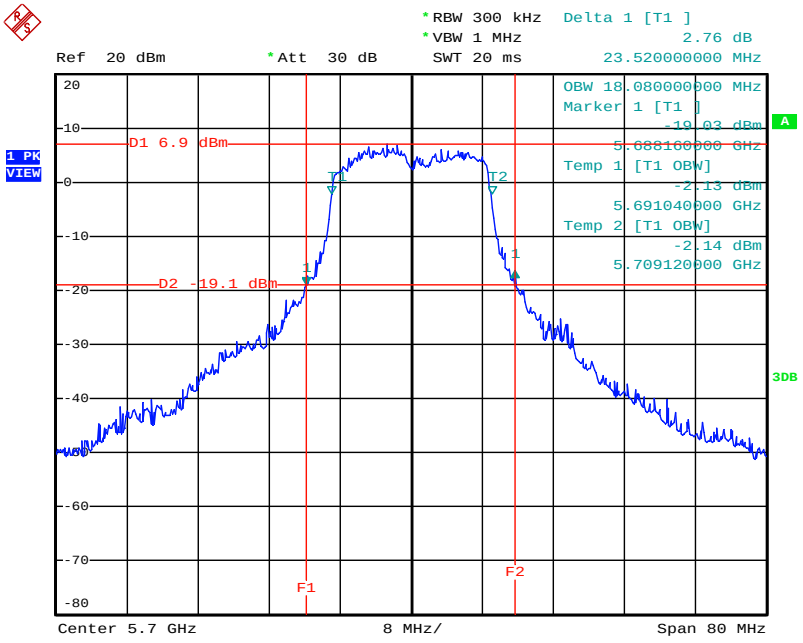
<For Ant. 10>:

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz / 5580 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 13:43:36

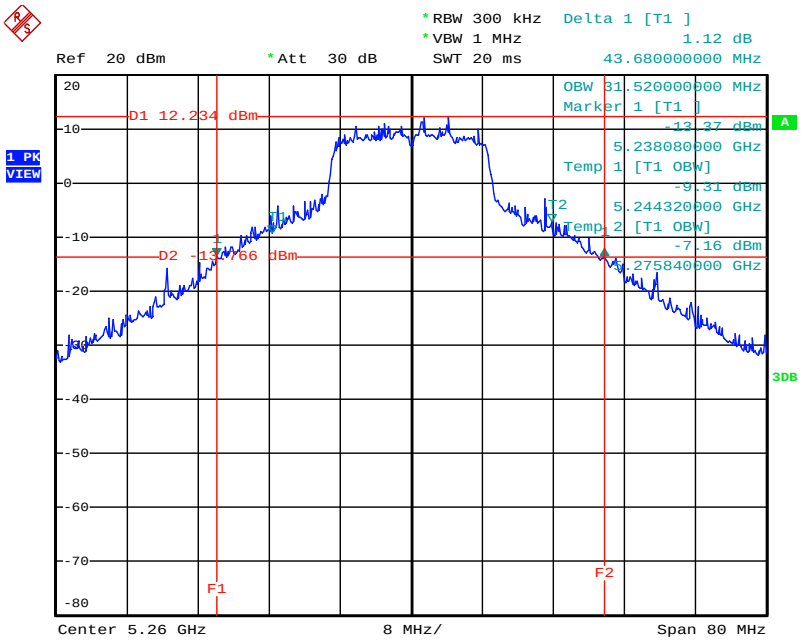
26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz / 5700 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 13:43:07

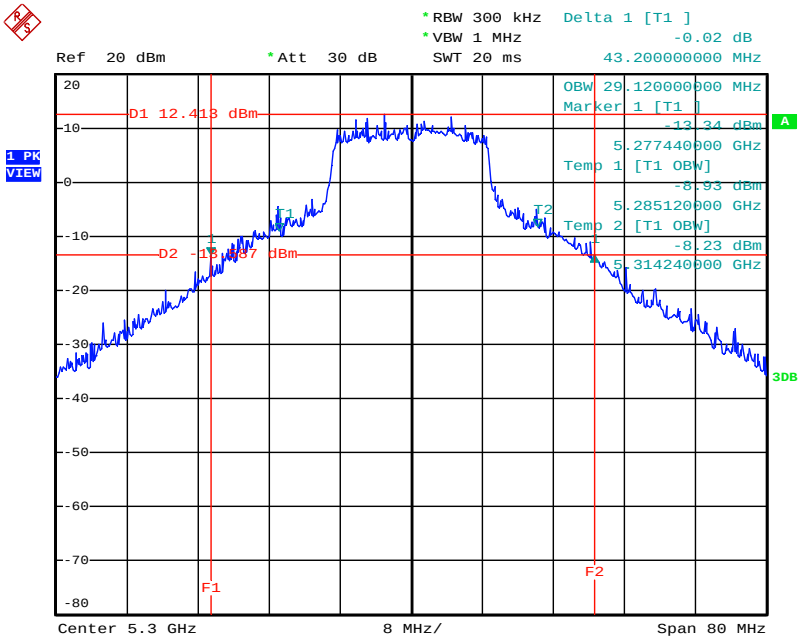
<For Ant. 10>:

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 20MHz / 5260 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 13:38:24

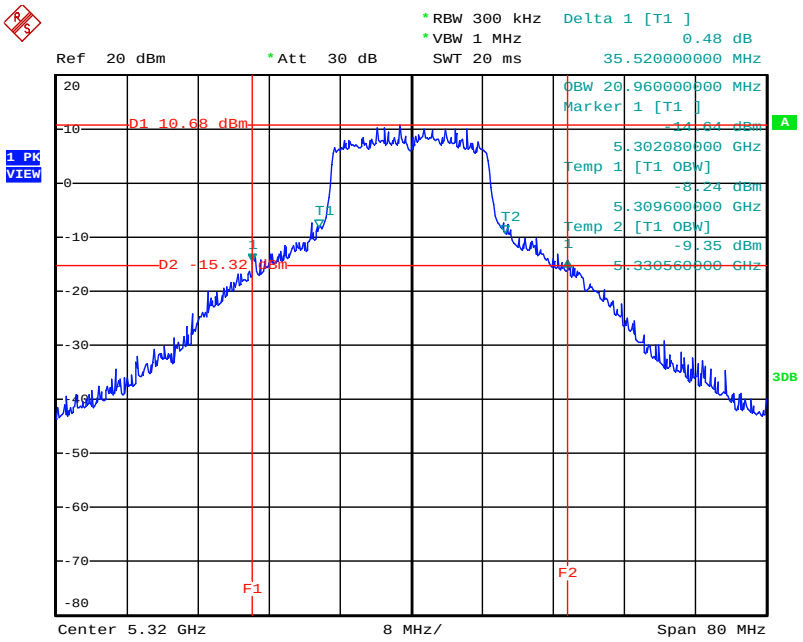
26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 20MHz / 5300 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 13:38:57

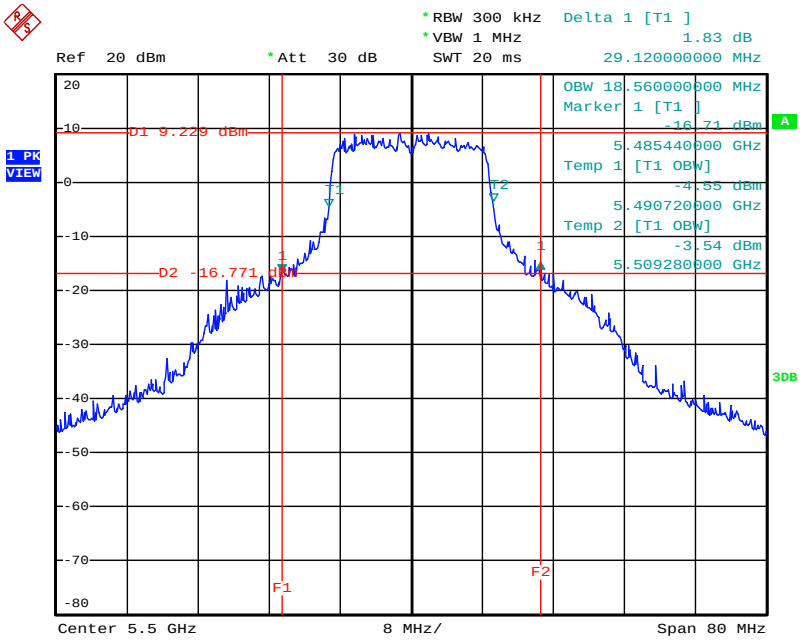
<For Ant. 10>:

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 20MHz / 5320 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 13:39:34

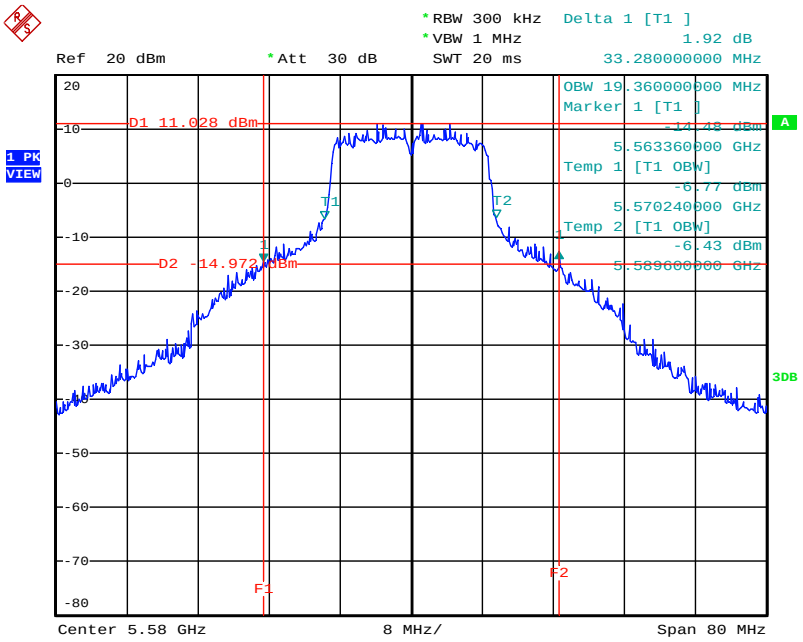
26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 20MHz / 5500 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 13:41:21

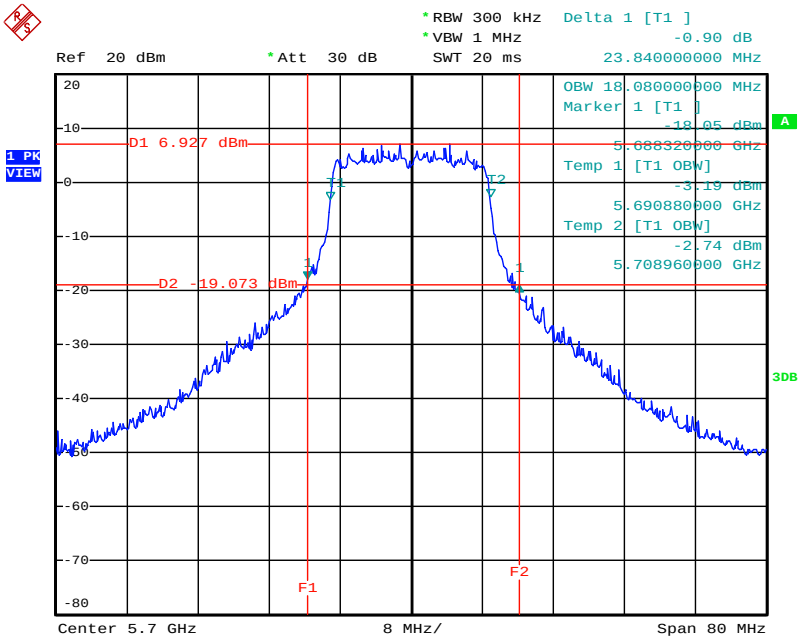
<For Ant. 10>:

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 20MHz / 5580 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 13:41:49

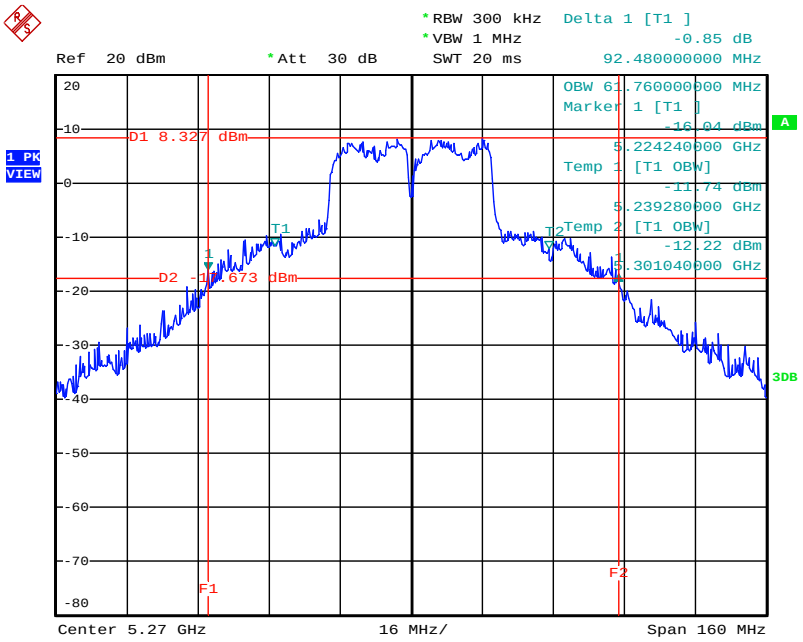
26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 20MHz / 5700 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 13:42:23

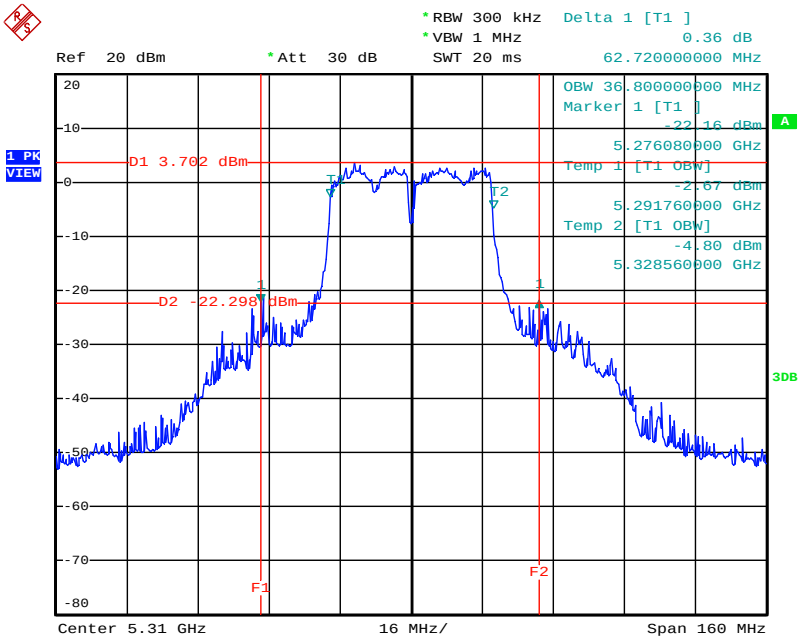
<For Ant. 10>:

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz / 5270 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 13:22:07

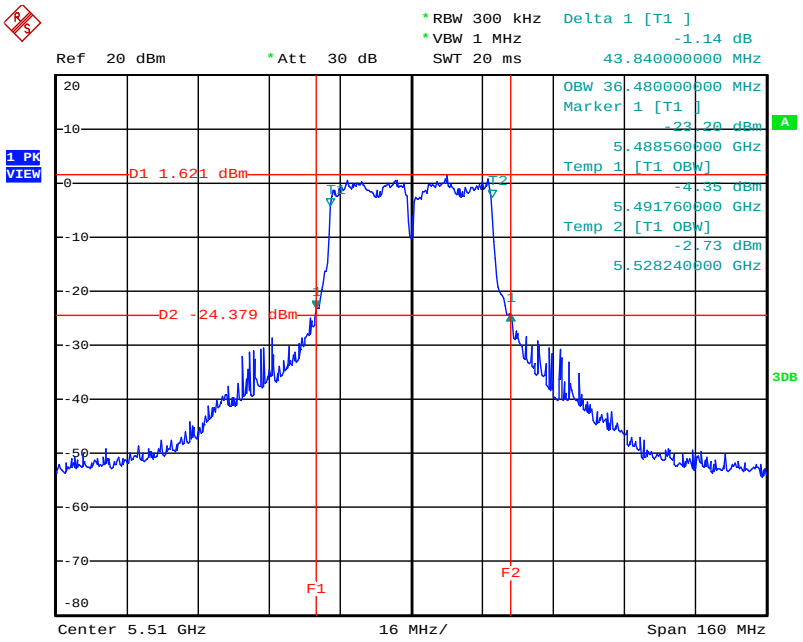
26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz / 5310 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 13:23:09

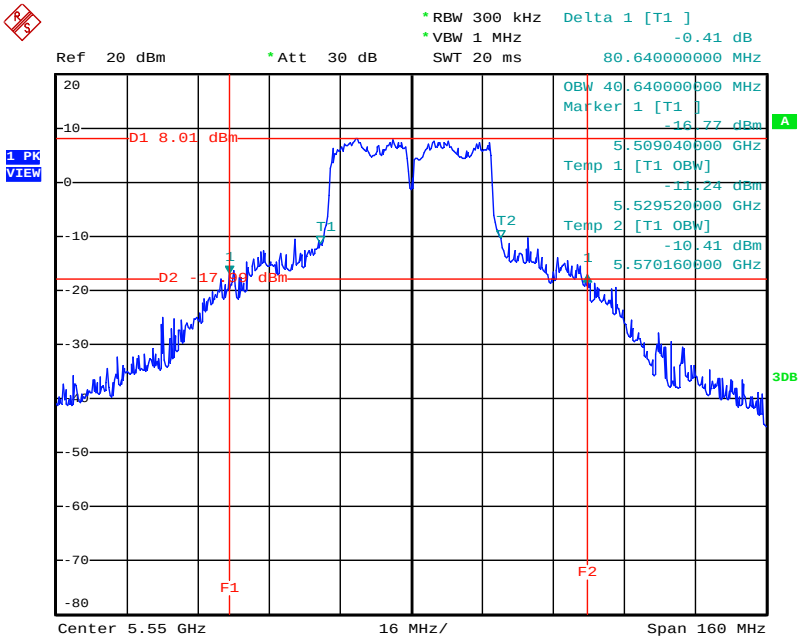
<For Ant. 10>:

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz / 5510MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 13:24:09

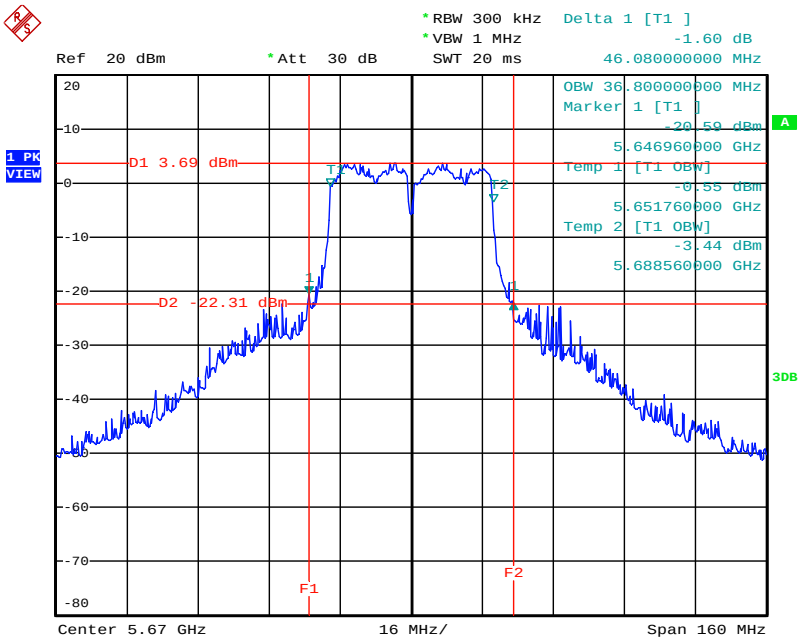
26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz / 5550 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 13:25:25

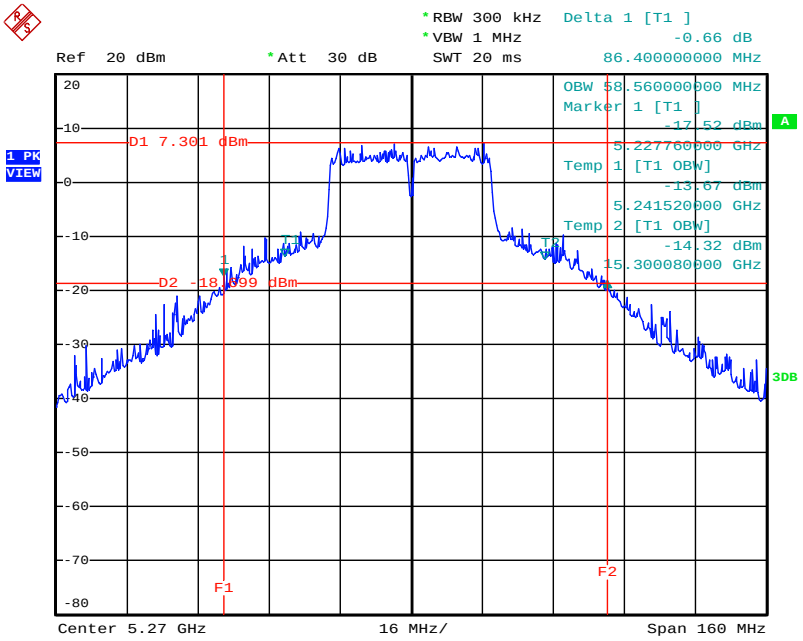
<For Ant. 10>:

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz / 5670 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 13:26:00

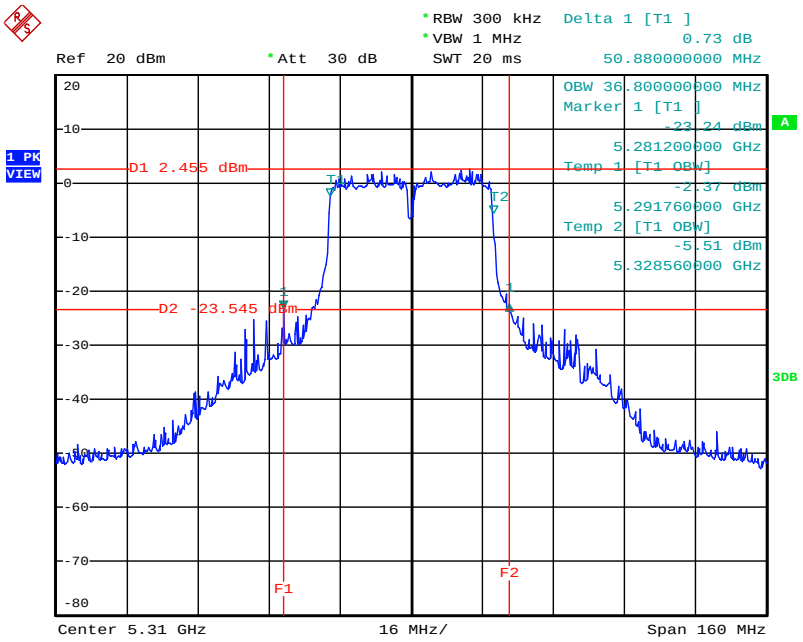
26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 40MHz / 5270 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 13:34:43

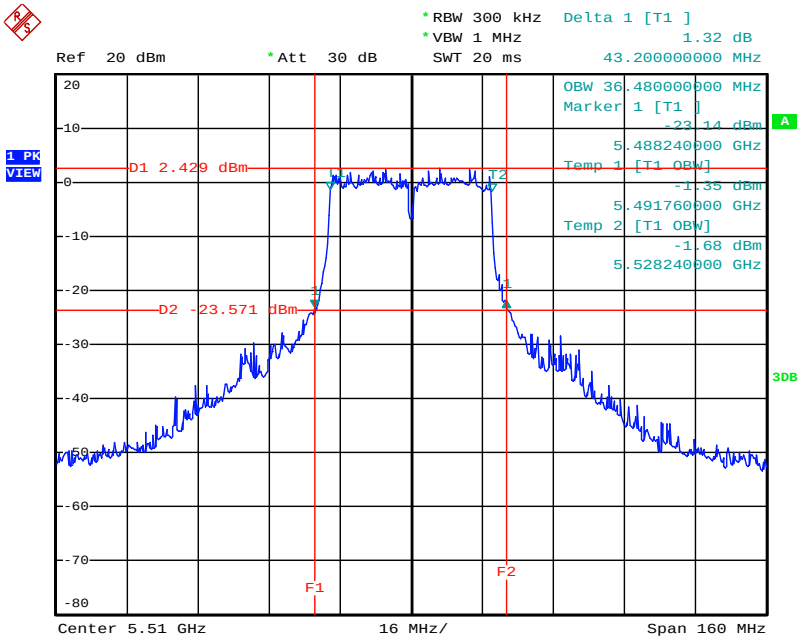
<For Ant. 10>:

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 40MHz / 5310 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 13:34:06

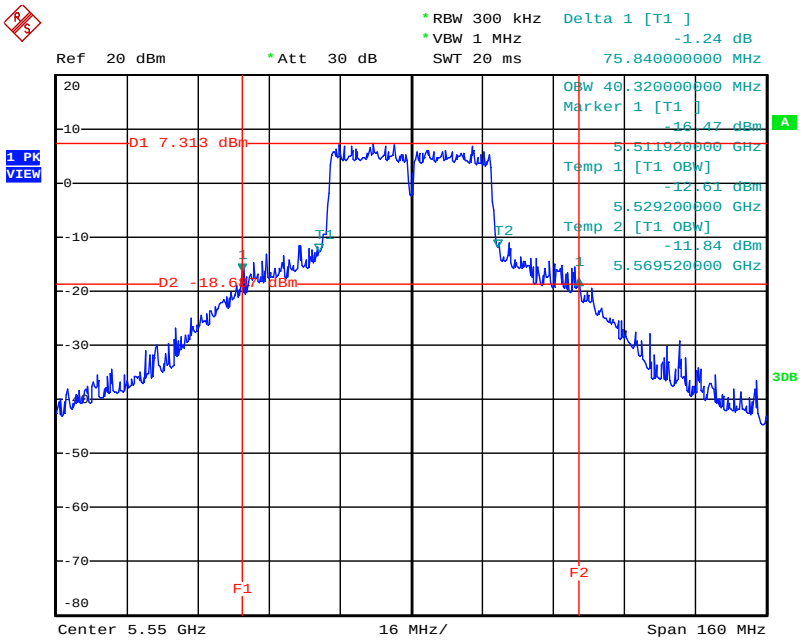
26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 40MHz / 5510MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 13:33:12

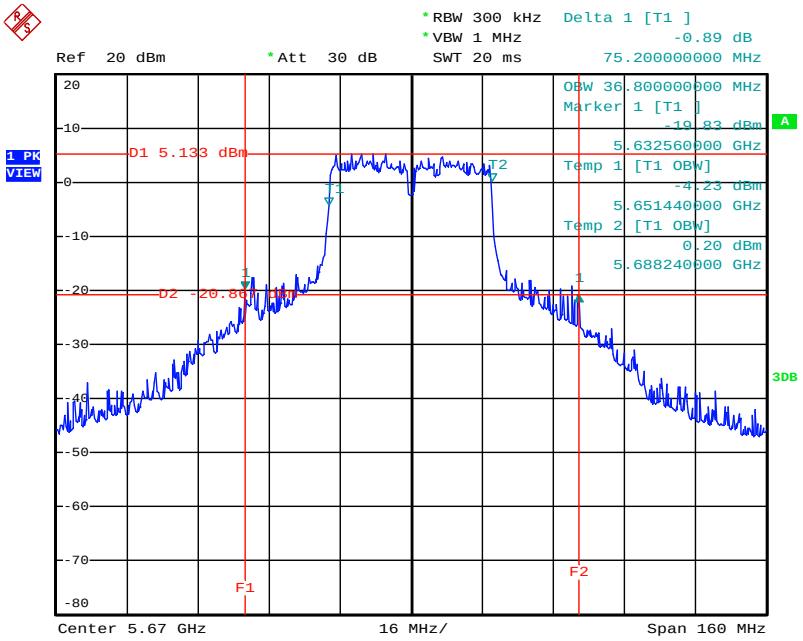
<For Ant. 10>:

26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 40MHz / 5550 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 13:32:21

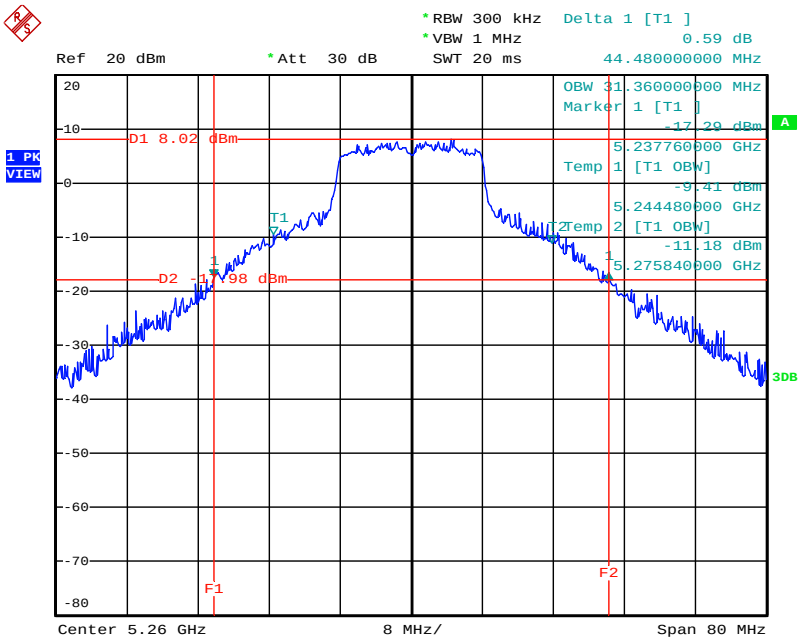
26 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 40MHz / 5670 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 13:31:17

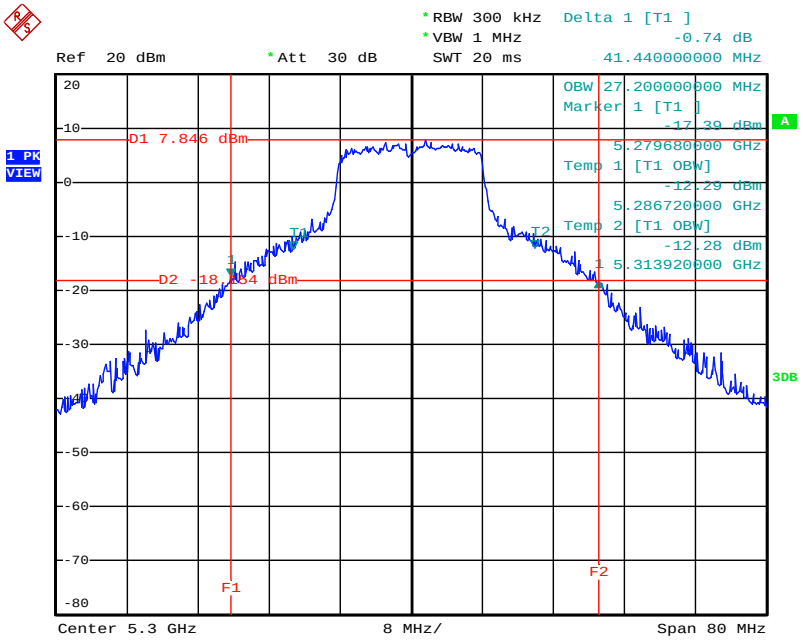
<For Ant. 5>:

26 dB Bandwidth Plot on Configuration IEEE 802.11a/ 5260 MHz / Chain. 1 (1X)



Date: 20.SEP.2012 04:31:09

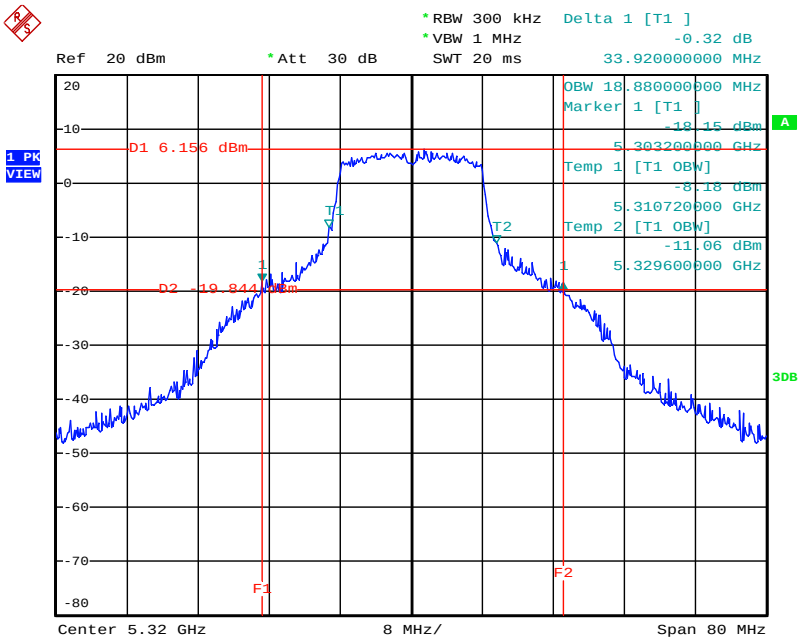
26 dB Bandwidth Plot on Configuration IEEE 802.11a/ 5300 MHz / Chain. 1 (1X)



Date: 20.SEP.2012 04:30:33

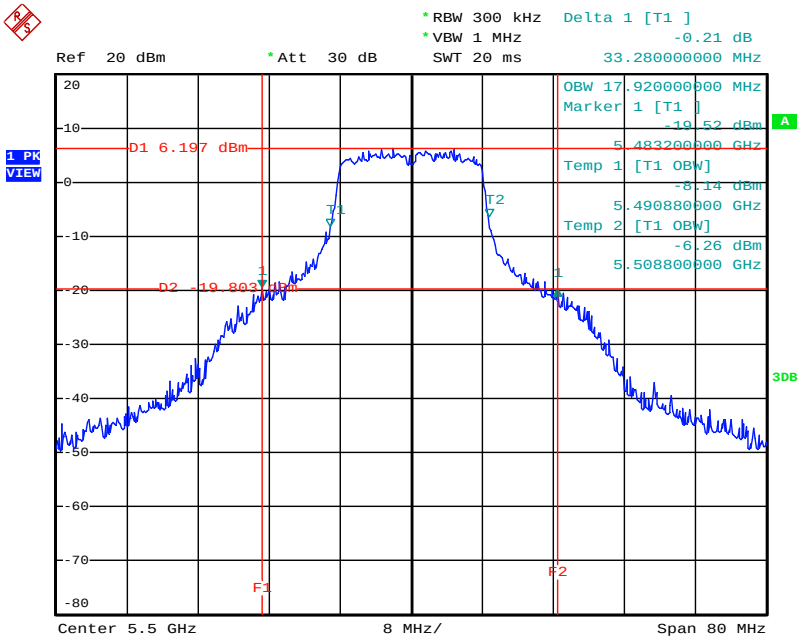
<For Ant. 5>:

26 dB Bandwidth Plot on Configuration IEEE 802.11a/ 5320 MHz / Chain. 1 (1X)



Date: 20.SEP.2012 04:30:03

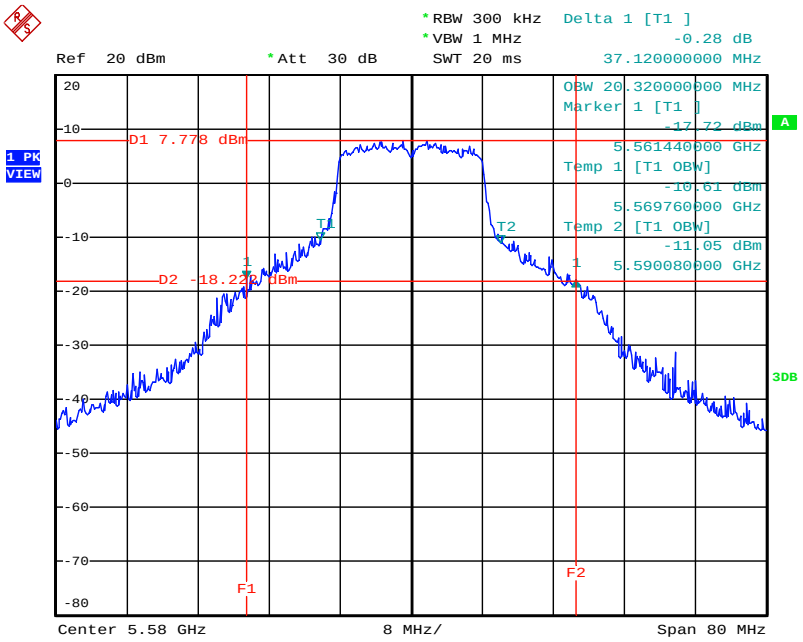
26 dB Bandwidth Plot on Configuration IEEE 802.11a/ 5500 MHz / Chain. 1 (1X)



Date: 20.SEP.2012 04:29:25

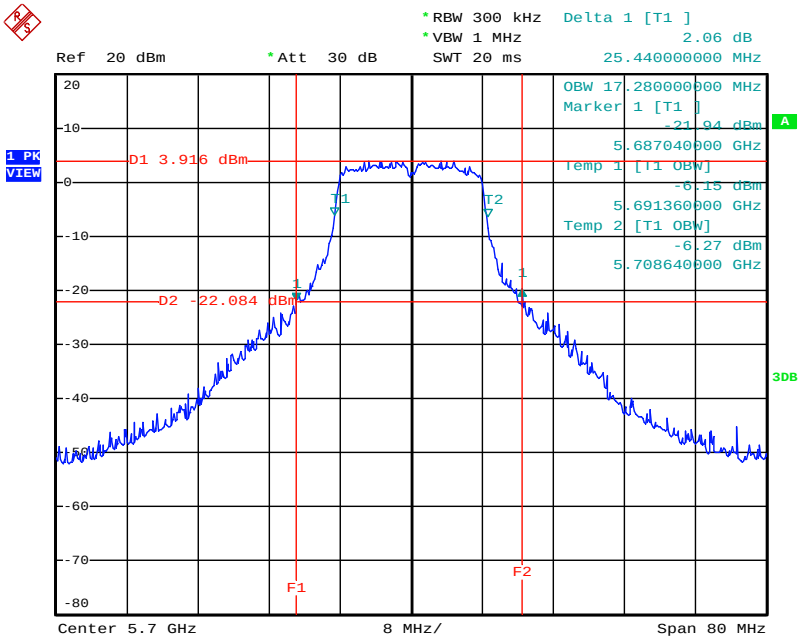
<For Ant. 5>:

26 dB Bandwidth Plot on Configuration IEEE 802.11a/ 5580 MHz / Chain. 1 (1X)



Date: 20.SEP.2012 04:28:50

26 dB Bandwidth Plot on Configuration IEEE 802.11a/ 5700 MHz / Chain. 1 (1X)



Date: 20.SEP.2012 04:28:15

4.3. Maximum Conducted Output Power Measurement

4.3.1. Limit

For the 5.25-5.35 GHz and 5.470-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW (24dBm) or 11 dBm + 10log B, where B is the 26-dB emission 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

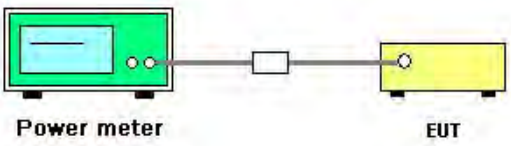
The following table is the setting of the peak power meter.

Power Meter Parameter	Setting
Bandwidth	50MHz bandwidth is greater than the EUT emission bandwidth
Detector	AVERAGE

4.3.3. Test Procedures

1. The transmitter output (antenna port) was connected to the power meter.
2. Test was performed in accordance with KDB 789033 Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices - Part 15, Subpart E,section (C) Maximum conducted output power =>(4) Method PM (Measurement using an RF average power meter) Multiple antenna systems was performed in accordance with KDB 662911 Emissions Testing of Transmitters with Multiple Outputs in the Same Band.
3. When measuring maximum conducted output power with multiple antenna systems,add every result of the values by mathematic formula.

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	26℃	Humidity	60%
Test Engineer	Robert Chang	Configurations	IEEE 802.11n
Test Date	Sep. 18, 2012		

Configuration IEEE 802.11n MCS0 20MHz / Ant. 4: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain. 1	Chain. 3			
52	5260 MHz	15.48	15.88	18.69	18.91	**Complies**
60	5300 MHz	15.55	15.96	18.77	18.91	**Complies**
64	5320 MHz	15.11	15.73	18.44	18.91	**Complies**
100	5500 MHz	15.64	15.35	18.51	18.91	**Complies**
116	5580 MHz	16.14	15.43	18.81	18.91	**Complies**
140	5700 MHz	11.20	11.42	14.32	18.91	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =11.09dBi > 6dBi, so the conducted power limit =(24 or 11+10log B)-(11.09dBi-6)=18.91dBm.

Configuration IEEE 802.11n MCS8 20MHz / Ant. 4: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain. 1	Chain. 3			
52	5260 MHz	18.76	18.93	21.86	21.92	**Complies**
60	5300 MHz	18.51	18.85	21.69	21.92	**Complies**
64	5320 MHz	17.94	18.78	21.39	21.92	**Complies**
100	5500 MHz	18.54	18.19	21.38	21.92	**Complies**
116	5580 MHz	18.90	18.17	21.56	21.92	**Complies**
140	5700 MHz	12.70	12.39	15.56	21.92	**Complies**

Configuration IEEE 802.11n MCS0 40MHz / Ant. 4: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain. 1	Chain. 3			
54	5270 MHz	15.30	15.62	18.47	18.91	**Complies**
62	5310 MHz	13.33	13.88	16.62	18.91	**Complies**
102	5510MHz	11.14	10.86	14.01	18.91	**Complies**
110	5550 MHz	15.93	15.18	18.58	18.91	**Complies**
134	5670 MHz	15.16	14.28	17.75	18.91	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =11.09dBi > 6dBi, so the conducted power limit =(24 or 11+10log B)-(11.09dBi-6)=18.91dBm.

Configuration IEEE 802.11n MCS8 40MHz / Ant. 4: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain. 1	Chain. 3			
54	5270 MHz	17.56	17.81	20.70	21.92	**Complies**
62	5310 MHz	12.74	13.20	15.99	21.92	**Complies**
102	5510MHz	12.91	12.76	15.85	21.92	**Complies**
110	5550 MHz	18.88	17.98	21.46	21.92	**Complies**
134	5670 MHz	15.13	14.20	17.70	21.92	**Complies**

Configuration IEEE 802.11n MCS0 20MHz / Ant. 5: Chain. 1 (1TX)

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
52	5260 MHz	20.67	20.92	**Complies**
60	5300 MHz	20.45	20.92	**Complies**
64	5320 MHz	18.42	20.92	**Complies**
100	5500 MHz	19.10	20.92	**Complies**
116	5580 MHz	20.52	20.92	**Complies**
140	5700 MHz	17.06	20.92	**Complies**

Configuration IEEE 802.11n MCS0 40MHz / Ant. 5: Chain. 1 (1TX)

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
54	5270 MHz	20.49	20.92	**Complies**
62	5310 MHz	14.43	20.92	**Complies**
102	5510MHz	14.34	20.92	**Complies**
110	5550 MHz	20.53	20.92	**Complies**
134	5670 MHz	16.90	20.92	**Complies**

Configuration IEEE 802.11n MCS0 20MHz / Ant. 6: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain. 1	Chain. 3			
52	5260 MHz	10.63	11.58	14.14	14.41	**Complies**
60	5300 MHz	11.05	11.51	14.30	14.41	**Complies**
64	5320 MHz	11.00	11.28	14.15	14.41	**Complies**
100	5500 MHz	10.95	11.07	14.02	14.41	**Complies**
116	5580 MHz	11.33	10.98	14.17	14.41	**Complies**
140	5700 MHz	8.83	8.67	11.76	14.41	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =15.59dBi > 6dBi, so the conducted power limit =(24 or 11+10log B)-(15.59dBi-6)=14.41dBm.

Configuration IEEE 802.11n MCS8 20MHz / Ant. 6: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain. 1	Chain. 3			
52	5260 MHz	14.12	14.59	17.37	17.42	**Complies**
60	5300 MHz	13.86	14.26	17.07	17.42	**Complies**
64	5320 MHz	13.76	14.30	17.05	17.42	**Complies**
100	5500 MHz	12.70	12.50	15.61	17.42	**Complies**
116	5580 MHz	14.65	13.85	17.28	17.42	**Complies**
140	5700 MHz	8.99	8.58	11.80	17.42	**Complies**

Configuration IEEE 802.11n MCS0 40MHz / Ant. 6: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain. 1	Chain. 3			
54	5270 MHz	10.90	11.53	14.24	14.41	**Complies**
62	5310 MHz	4.53	4.80	7.68	14.41	**Complies**
102	5510MHz	4.06	4.09	7.09	14.41	**Complies**
110	5550 MHz	11.48	11.20	14.35	14.41	**Complies**
134	5670 MHz	11.39	10.68	14.06	14.41	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =15.59dBi > 6dBi, so the conducted power limit =(24 or 11+10log B)-(15.59dBi-6)=14.41dBm.

Configuration IEEE 802.11n MCS8 40MHz / Ant. 6: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain. 1	Chain. 3			
54	5270 MHz	13.82	14.32	17.09	17.42	**Complies**
62	5310 MHz	7.57	8.14	10.87	17.42	**Complies**
102	5510MHz	7.98	7.61	10.81	17.42	**Complies**
110	5550 MHz	14.45	13.95	17.22	17.42	**Complies**
134	5670 MHz	13.55	12.44	16.04	17.42	**Complies**

Configuration IEEE 802.11n MCS0 20MHz / Ant. 10: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain. 1	Chain. 3			
52	5260 MHz	20.03	19.72	22.89	23.41	**Complies**
60	5300 MHz	19.90	20.02	22.97	23.41	**Complies**
64	5320 MHz	17.81	18.67	21.27	23.41	**Complies**
100	5500 MHz	18.17	17.88	21.04	23.41	**Complies**
116	5580 MHz	20.47	19.73	23.13	23.41	**Complies**
140	5700 MHz	15.84	15.32	18.60	23.41	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =16.59dBi > 6dBi, so the conducted power limit =(24 or 11+10log B)-(6.59dBi-6)=23.41dBm.

Configuration IEEE 802.11n MCS8 20MHz / Ant. 10: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain. 1	Chain. 3			
52	5260 MHz	20.40	19.82	23.13	24.00	**Complies**
60	5300 MHz	20.20	20.16	23.19	24.00	**Complies**
64	5320 MHz	18.89	19.46	22.19	24.00	**Complies**
100	5500 MHz	19.06	18.83	21.96	24.00	**Complies**
116	5580 MHz	20.48	19.64	23.09	24.00	**Complies**
140	5700 MHz	16.66	16.20	19.45	24.00	**Complies**

Configuration IEEE 802.11n MCS0 40MHz / Ant. 10: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain. 1	Chain. 3			
54	5270 MHz	19.55	19.43	22.50	23.41	**Complies**
62	5310 MHz	14.65	15.23	17.96	23.41	**Complies**
102	5510MHz	13.06	12.97	16.03	23.41	**Complies**
110	5550 MHz	20.70	19.78	23.27	23.41	**Complies**
134	5670 MHz	16.71	15.57	19.19	23.41	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =16.59dBi > 6dBi, so the conducted power limit =(24 or 11+10log B)-(6.59dBi-6)=23.41dBm.

Configuration IEEE 802.11n MCS8 40MHz / Ant. 10: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain. 1	Chain. 3			
54	5270 MHz	19.41	19.16	22.30	24.00	**Complies**
62	5310 MHz	14.34	14.87	17.62	24.00	**Complies**
102	5510MHz	15.26	15.14	18.21	24.00	**Complies**
110	5550 MHz	20.54	19.54	23.08	24.00	**Complies**
134	5670 MHz	18.56	17.63	21.13	24.00	**Complies**

Temperature	26℃	Humidity	60%
Test Engineer	Robert Chang	Configurations	IEEE 802.11a
Test Date	Sep. 18, 2012		

Configuration IEEE 802.11a / Ant. 4: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain. 1	Chain. 3			
52	5260 MHz	15.50	15.61	18.57	18.91	**Complies**
60	5300 MHz	15.28	15.74	18.53	18.91	**Complies**
64	5320 MHz	15.32	15.87	18.61	18.91	**Complies**
100	5500 MHz	15.21	15.71	18.48	18.91	**Complies**
116	5580 MHz	15.51	15.85	18.69	18.91	**Complies**
140	5700 MHz	15.71	15.86	18.80	18.91	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =11.09dBi > 6dBi, so the conducted power limit =(24 or 11+10log B)-(11.09dBi-6)=18.91dBm.

Configuration IEEE 802.11a / Ant. 5: Chain. 1 (1TX)

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
52	5260 MHz	20.70	20.92	**Complies**
60	5300 MHz	20.58	20.92	**Complies**
64	5320 MHz	19.17	20.92	**Complies**
100	5500 MHz	19.22	20.92	**Complies**
116	5580 MHz	20.57	20.92	**Complies**
140	5700 MHz	17.19	20.92	**Complies**

Configuration IEEE 802.11a / Ant. 6: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain. 1	Chain. 3			
52	5260 MHz	10.83	11.19	14.02	14.41	**Complies**
60	5300 MHz	10.31	11.46	13.93	14.41	**Complies**
64	5320 MHz	10.19	11.82	14.09	14.41	**Complies**
100	5500 MHz	11.29	11.17	14.24	14.41	**Complies**
116	5580 MHz	11.39	11.18	14.30	14.41	**Complies**
140	5700 MHz	10.30	10.47	13.40	14.41	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =15.59dBi > 6dBi, so the conducted power limit =(24 or 11+10log B)-(15.59dBi-6)=14.41dBm.

Configuration IEEE 802.11a / Ant. 10: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain. 1	Chain. 3			
52	5260 MHz	20.13	19.59	22.88	23.41	**Complies**
60	5300 MHz	19.46	20.16	22.83	23.41	**Complies**
64	5320 MHz	17.95	18.74	21.37	23.41	**Complies**
100	5500 MHz	18.15	17.91	21.04	23.41	**Complies**
116	5580 MHz	20.47	19.56	23.05	23.41	**Complies**
140	5700 MHz	16.93	16.34	19.66	23.41	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =6.59dBi > 6dBi, so the conducted power limit =(24 or 11+10log B)-(6.59dBi-6)=23.41dBm.

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)
5.25-5.35 GHz	11
5470-5725	11

4.4.2. Measuring Instruments and Setting

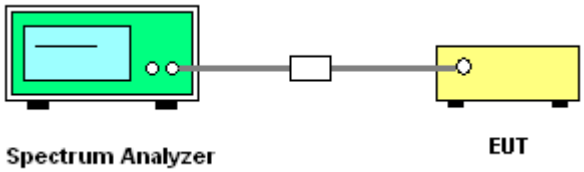
Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

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

4.4.3. Test Procedures

1. The transmitter output (antenna port) was connected RF switch to the spectrum analyzer.
2. Test was performed in accordance with KDB 789033 Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices - Part 15, Subpart E,section (C) Maximum conducted output power => (d) Method SA-2 (trace averaging across on and off times of the EUT transmissions, followed by duty cycle correction).
3. Multiple antenna systems was performed in accordance with KDB 662911 in-Band Power Spectral Density (PSD) Measurements (1) Measure and sum the spectra across the outputs.
4. When measuring first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3 and so on up to the Nth output to obtain the value for the first frequency bin of the summed spectrum. The summed spectrum value for each of the other frequency bins is computed in the same way.

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	26℃	Humidity	60%
Test Engineer	Robert Chang	Configurations	IEEE 802.11n
Test Date	Sep. 18, 2012		

Configuration IEEE 802.11n MCS0 20MHz / Ant. 4: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
52	5260 MHz	4.60	5.91	**Complies**
60	5300 MHz	3.52	5.91	**Complies**
64	5320 MHz	2.93	5.91	**Complies**
100	5500 MHz	3.75	5.91	**Complies**
116	5580 MHz	4.50	5.91	**Complies**
140	5700 MHz	0.32	5.91	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =11.09dBi > 6dBi, so the power density limit =11-(11.09dBi-6)=5.91dBm.

Configuration IEEE 802.11n MCS8 20MHz / Ant. 4: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
52	5260 MHz	7.67	8.92	**Complies**
60	5300 MHz	6.52	8.92	**Complies**
64	5320 MHz	6.04	8.92	**Complies**
100	5500 MHz	6.44	8.92	**Complies**
116	5580 MHz	7.17	8.92	**Complies**
140	5700 MHz	1.62	8.92	**Complies**

Configuration IEEE 802.11n MCS0 40MHz / Ant. 4: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
54	5270 MHz	0.68	5.91	**Complies**
62	5310 MHz	-1.91	5.91	**Complies**
102	5510MHz	-3.83	5.91	**Complies**
110	5550 MHz	0.62	5.91	**Complies**
134	5670 MHz	0.11	5.91	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =11.09dBi > 6dBi, so the power density limit =11-(11.09dBi-6)=5.91dBm.

Configuration IEEE 802.11n MCS8 40MHz / Ant. 4: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
54	5270 MHz	3.06	8.92	**Complies**
62	5310 MHz	-2.56	8.92	**Complies**
102	5510MHz	-2.40	8.92	**Complies**
110	5550 MHz	3.54	8.92	**Complies**
134	5670 MHz	0.02	8.92	**Complies**

Configuration IEEE 802.11n MCS0 20MHz / Ant. 5: Chain. 1 (1TX)

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
52	5260 MHz	5.97	7.92	**Complies**
60	5300 MHz	4.96	7.92	**Complies**
64	5320 MHz	2.79	7.92	**Complies**
100	5500 MHz	3.78	7.92	**Complies**
116	5580 MHz	5.76	7.92	**Complies**
140	5700 MHz	2.61	7.92	**Complies**

Configuration IEEE 802.11n MCS0 40MHz / Ant. 5: Chain. 1 (1TX)

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
54	5270 MHz	2.99	7.92	**Complies**
62	5310 MHz	-4.32	7.92	**Complies**
102	5510MHz	-4.35	7.92	**Complies**
110	5550 MHz	2.34	7.92	**Complies**
134	5670 MHz	-1.28	7.92	**Complies**

Configuration IEEE 802.11n MCS0 20MHz / Ant. 6: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
52	5260 MHz	-0.19	1.41	**Complies**
60	5300 MHz	-1.10	1.41	**Complies**
64	5320 MHz	-1.19	1.41	**Complies**
100	5500 MHz	-0.66	1.41	**Complies**
116	5580 MHz	-0.43	1.41	**Complies**
140	5700 MHz	-2.07	1.41	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =15.59dBi > 6dBi, so the power density limit =11-(15.59dBi-6)=1.41dBm.

Configuration IEEE 802.11n MCS8 20MHz / Ant. 6: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
52	5260 MHz	3.20	4.42	**Complies**
60	5300 MHz	1.87	4.42	**Complies**
64	5320 MHz	1.54	4.42	**Complies**
100	5500 MHz	0.86	4.42	**Complies**
116	5580 MHz	2.95	4.42	**Complies**
140	5700 MHz	-2.08	4.42	**Complies**

Configuration IEEE 802.11n MCS0 40MHz / Ant. 6: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
54	5270 MHz	-3.67	1.41	**Complies**
62	5310 MHz	-10.98	1.41	**Complies**
102	5510MHz	-11.18	1.41	**Complies**
110	5550 MHz	-3.72	1.41	**Complies**
134	5670 MHz	-3.85	1.41	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =15.59dBi > 6dBi, so the power density limit =11-(15.59dBi-6)=1.41dBm.

Configuration IEEE 802.11n MCS8 40MHz / Ant. 6: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
54	5270 MHz	-0.52	4.42	**Complies**
62	5310 MHz	-7.60	4.42	**Complies**
102	5510MHz	-7.38	4.42	**Complies**
110	5550 MHz	-0.72	4.42	**Complies**
134	5670 MHz	-1.68	4.42	**Complies**

Configuration IEEE 802.11n MCS0 20MHz / Ant. 10: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
52	5260 MHz	8.50	10.41	**Complies**
60	5300 MHz	8.17	10.41	**Complies**
64	5320 MHz	6.13	10.41	**Complies**
100	5500 MHz	5.87	10.41	**Complies**
116	5580 MHz	8.28	10.41	**Complies**
140	5700 MHz	4.15	10.41	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =11.09dBi > 6dBi, so the power density limit =11-(6.59dBi-6)=10.41dBm.

Configuration IEEE 802.11n MCS8 20MHz / Ant. 10: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
52	5260 MHz	8.83	11.00	**Complies**
60	5300 MHz	8.08	11.00	**Complies**
64	5320 MHz	7.00	11.00	**Complies**
100	5500 MHz	6.83	11.00	**Complies**
116	5580 MHz	8.27	11.00	**Complies**
140	5700 MHz	5.04	11.00	**Complies**

Configuration IEEE 802.11n MCS0 40MHz / Ant. 10: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
54	5270 MHz	4.58	10.41	**Complies**
62	5310 MHz	-0.74	10.41	**Complies**
102	5510MHz	-2.47	10.41	**Complies**
110	5550 MHz	5.03	10.41	**Complies**
134	5670 MHz	0.97	10.41	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =11.09dBi > 6dBi, so the power density limit =11-(6.59dBi-6)=10.41dBm.

Configuration IEEE 802.11n MCS8 40MHz / Ant. 10: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
54	5270 MHz	4.59	11.00	**Complies**
62	5310 MHz	-0.82	11.00	**Complies**
102	5510MHz	-0.25	11.00	**Complies**
110	5550 MHz	5.02	11.00	**Complies**
134	5670 MHz	3.17	11.00	**Complies**

Temperature	26℃	Humidity	60%
Test Engineer	Robert Chang	Configurations	IEEE 802.11a
Test Date	Sep. 18, 2012		

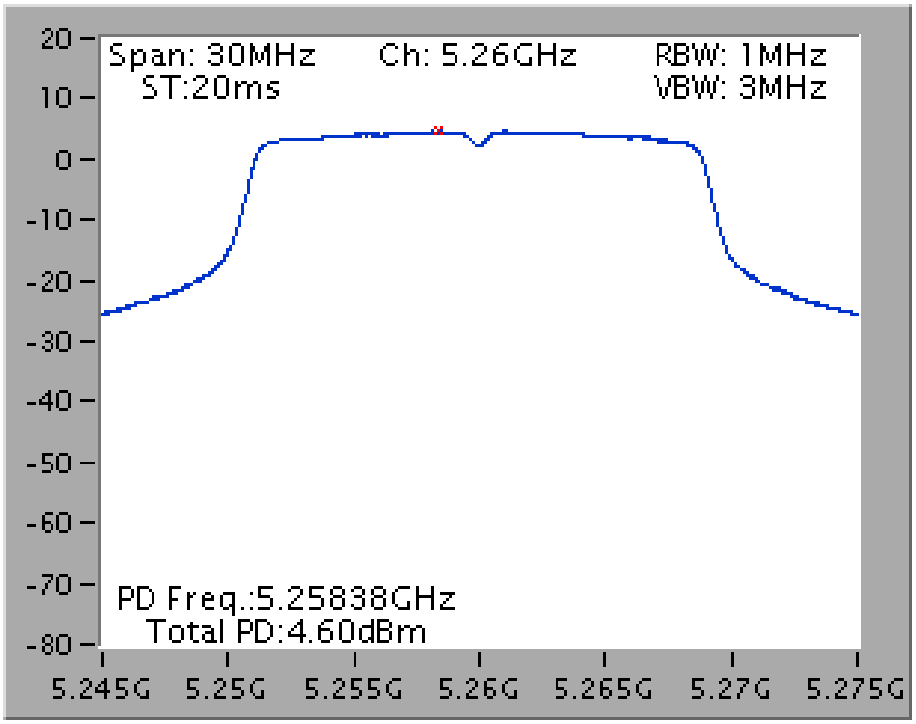
Configuration IEEE 802.11a / Ant. 5: Chain. 1 (1TX)

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
52	5260 MHz	6.46	7.92	**Complies**
60	5300 MHz	5.46	7.92	**Complies**
64	5320 MHz	3.92	7.92	**Complies**
100	5500 MHz	3.81	7.92	**Complies**
116	5580 MHz	5.75	7.92	**Complies**
140	5700 MHz	2.95	7.92	**Complies**

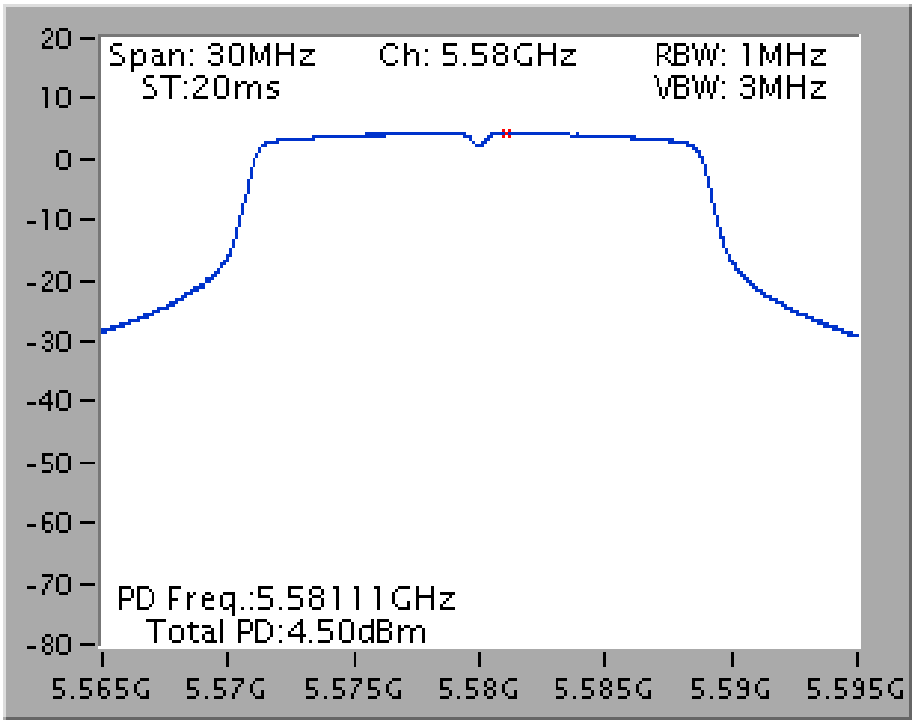
Note: All the test values were listed in the report.

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

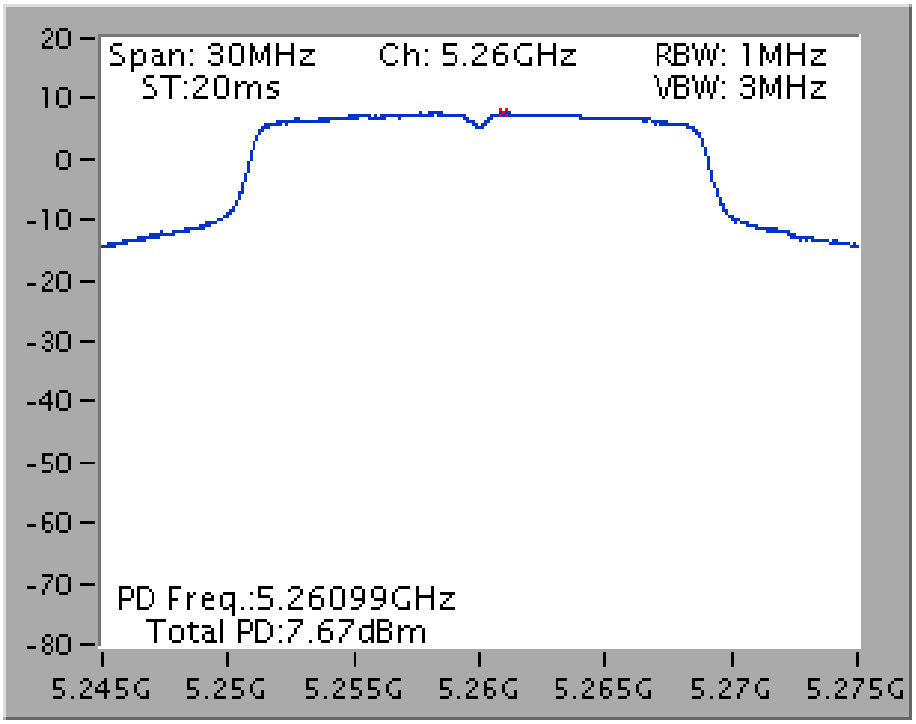
Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / 5260 MHz / Ant. 4: Chain. 1 + Chain. 3 (2TX)



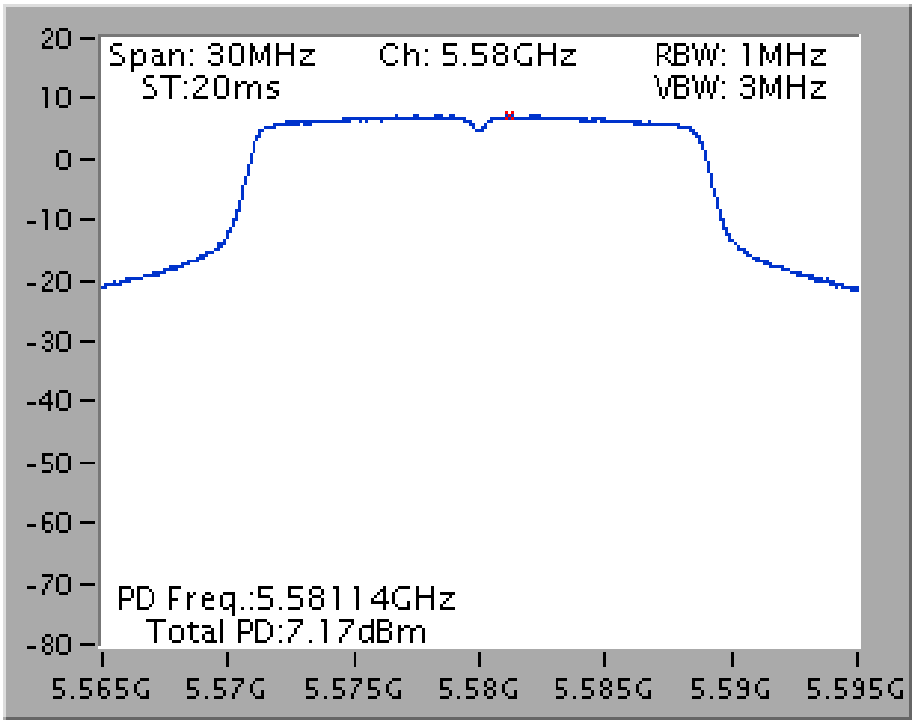
Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / 5580MHz / Ant. 4: Chain. 1 + Chain. 3 (2TX)



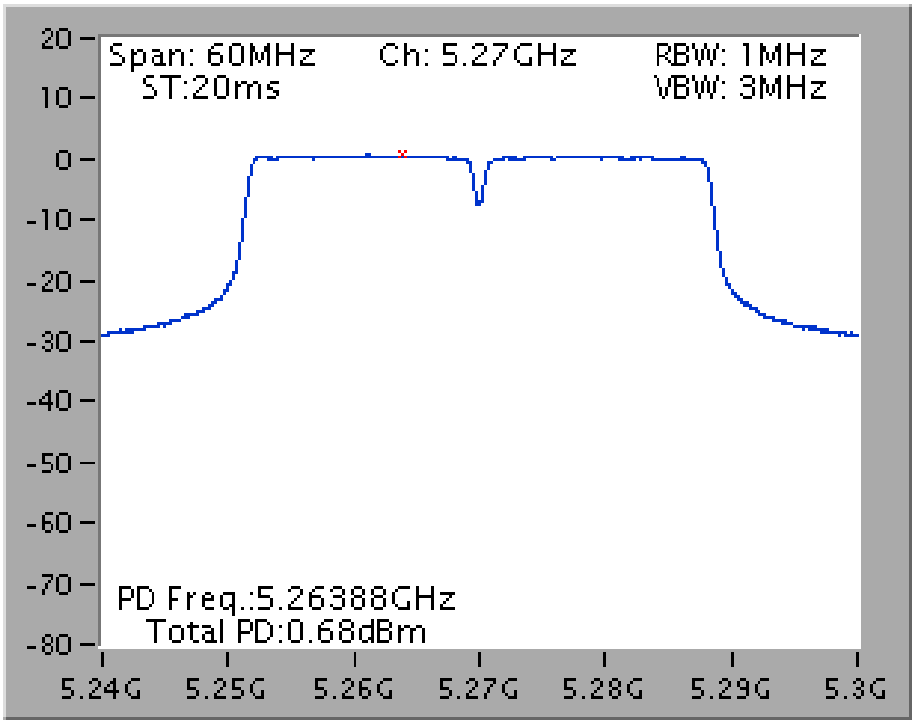
Power Density Plot on Configuration IEEE 802.11n MCS8 20MHz / 5260 MHz / Ant. 4: Chain. 1 + Chain. 3 (2TX)



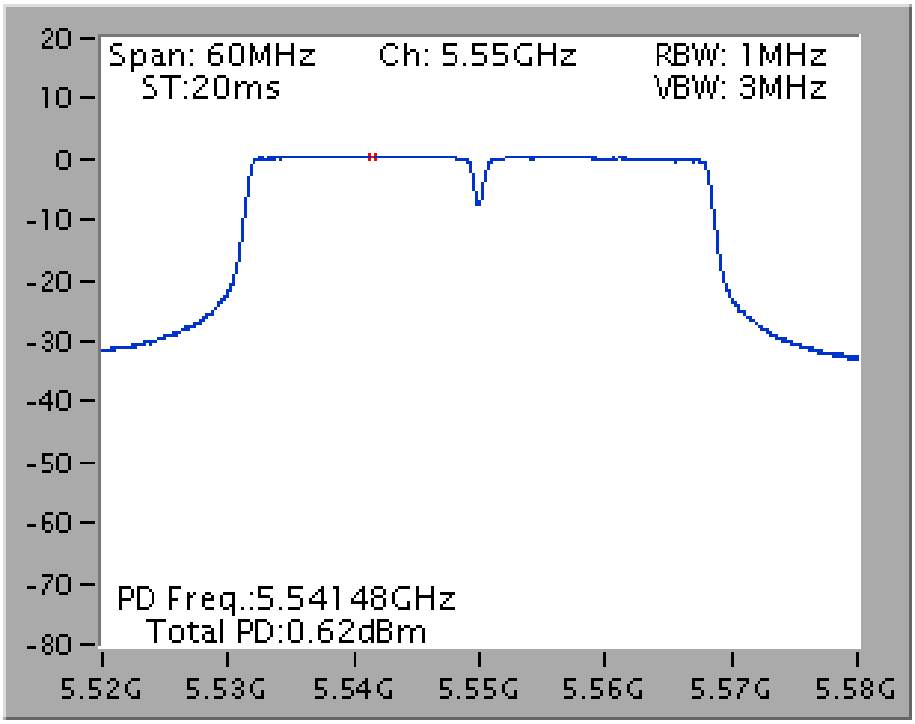
Power Density Plot on Configuration IEEE 802.11n MCS8 20MHz / 5580MHz / Ant. 4: Chain. 1 + Chain. 3 (2TX)



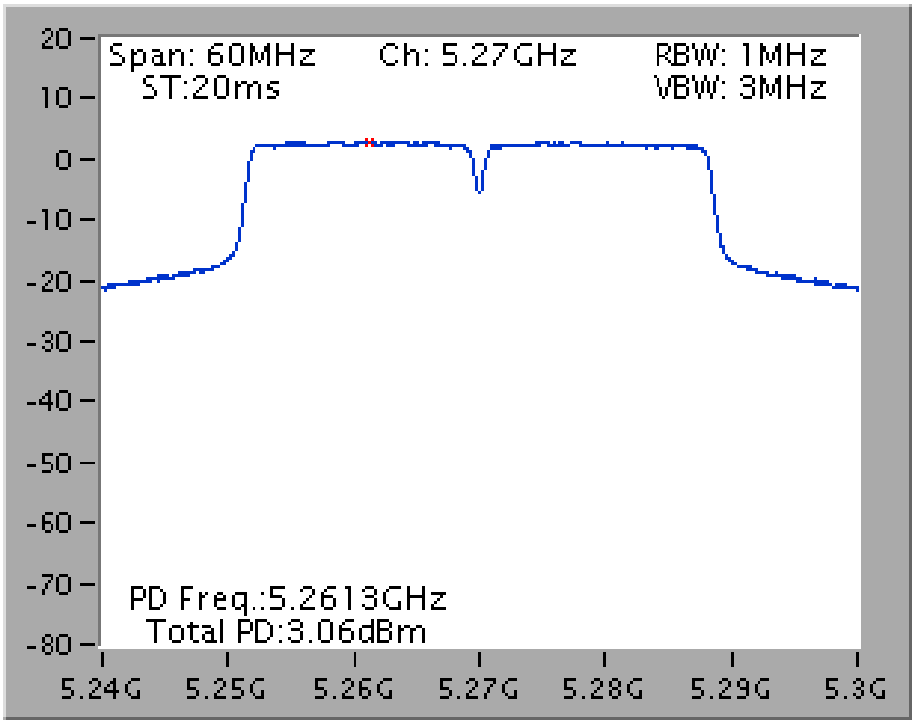
Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / 5270MHz / Ant. 4: Chain. 1 + Chain. 3 (2TX)



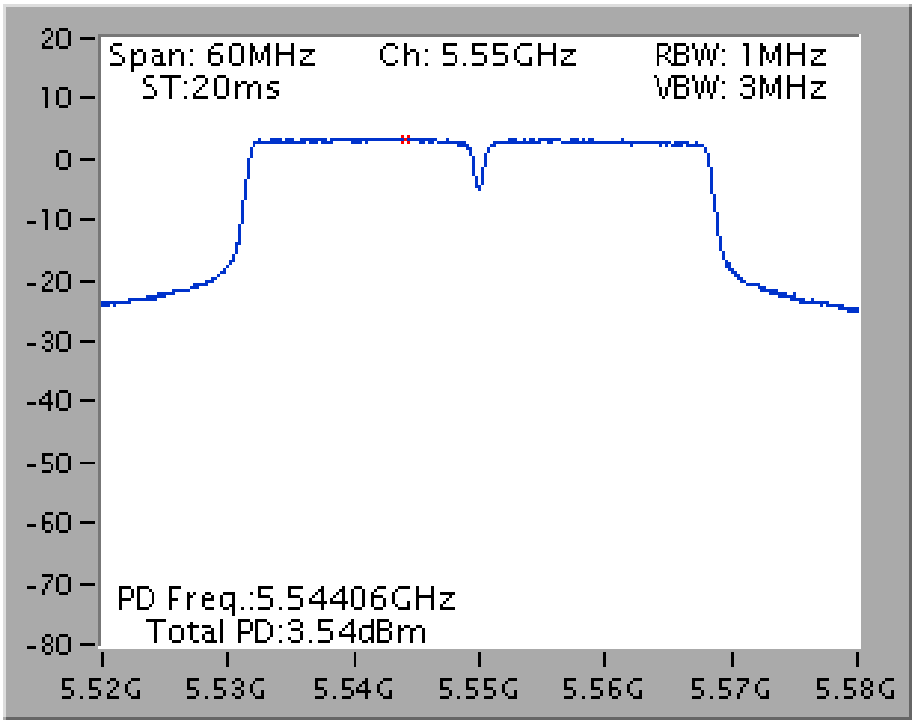
Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / 5550MHz / Ant. 4: Chain. 1 + Chain. 3 (2TX)



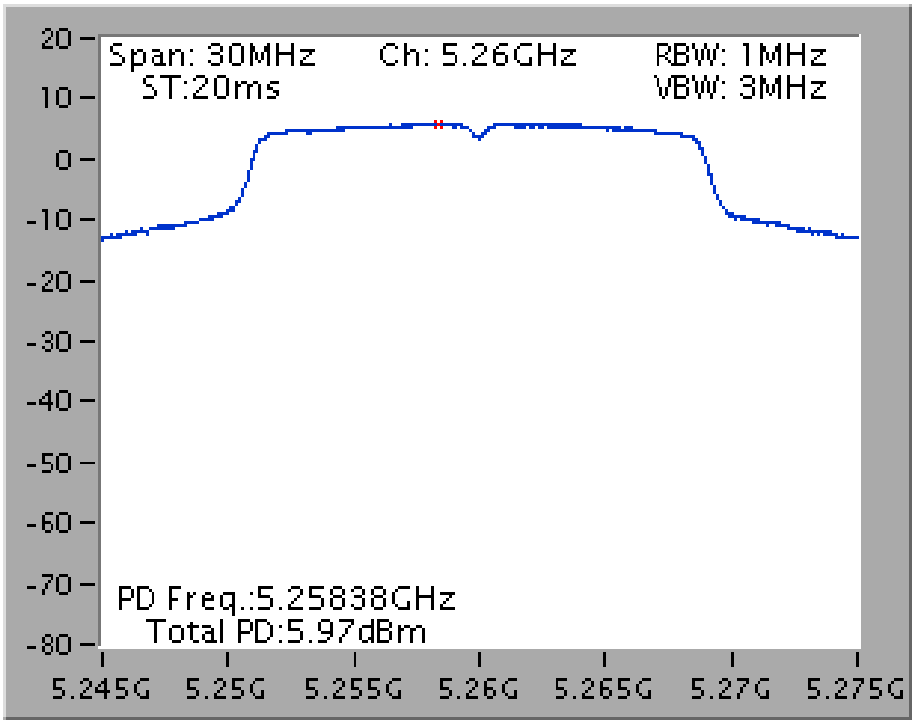
Power Density Plot on Configuration IEEE 802.11n MCS8 40MHz / 5270MHz / Ant. 4: Chain. 1 + Chain. 3 (2TX)



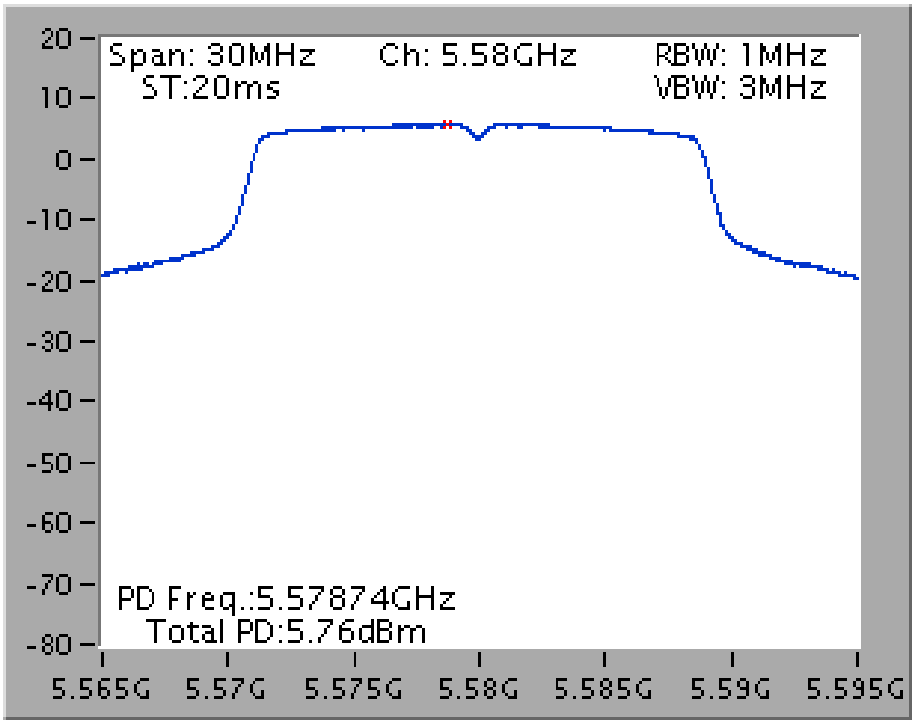
Power Density Plot on Configuration IEEE 802.11n MCS8 40MHz / 5550MHz / Ant. 4: Chain. 1 + Chain. 3 (2TX)



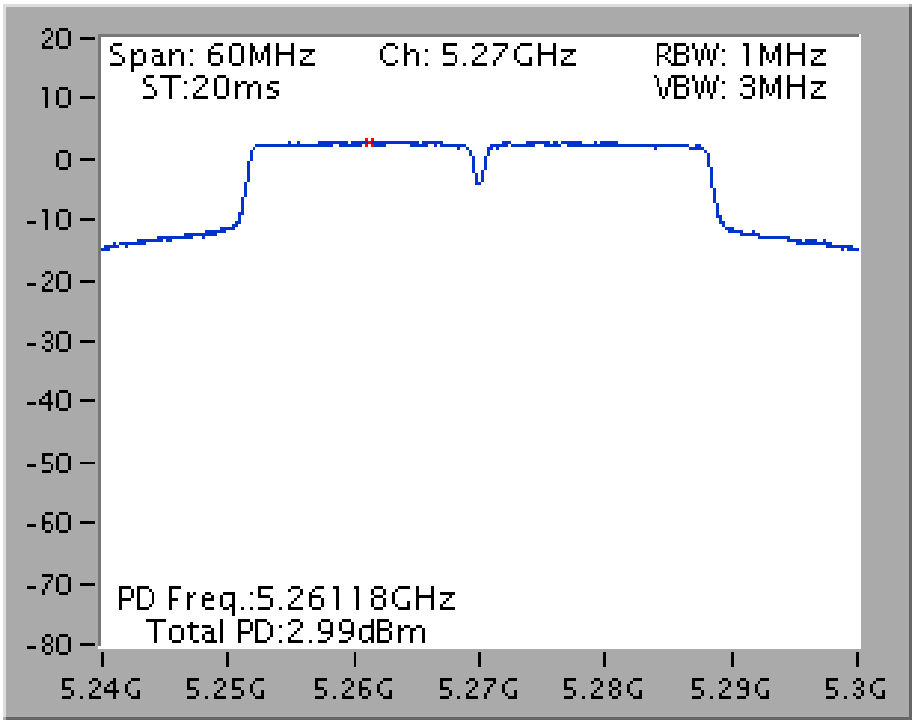
Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / 5260 MHz / Ant. 5: Chain. 1 (1TX)



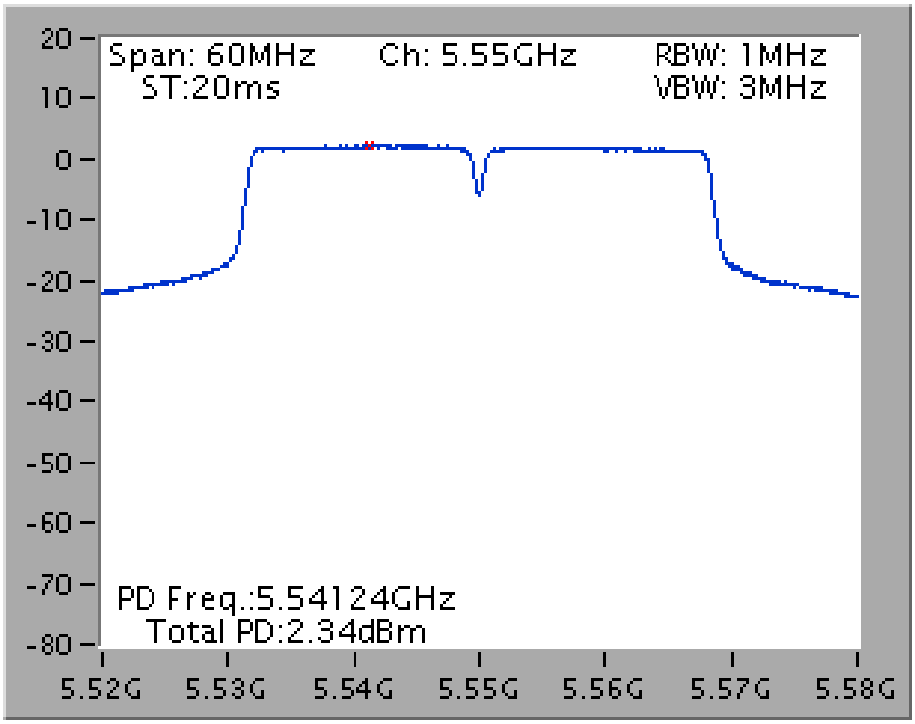
Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / 5580MHz / Ant. 5: Chain. 1 (1TX)



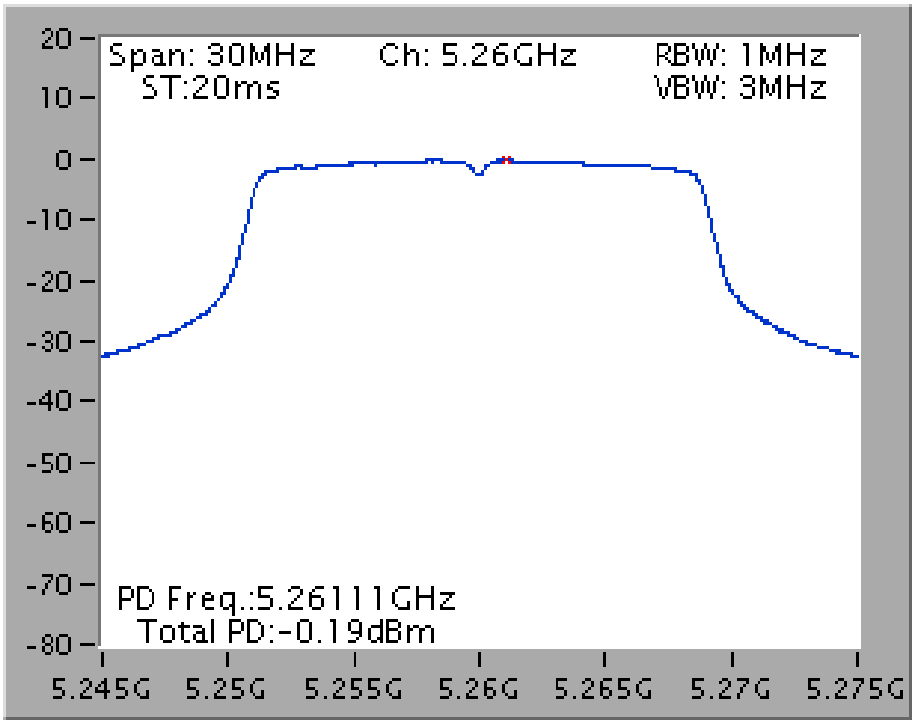
Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / 5270MHz / Ant. 5: Chain. 1 (1TX)



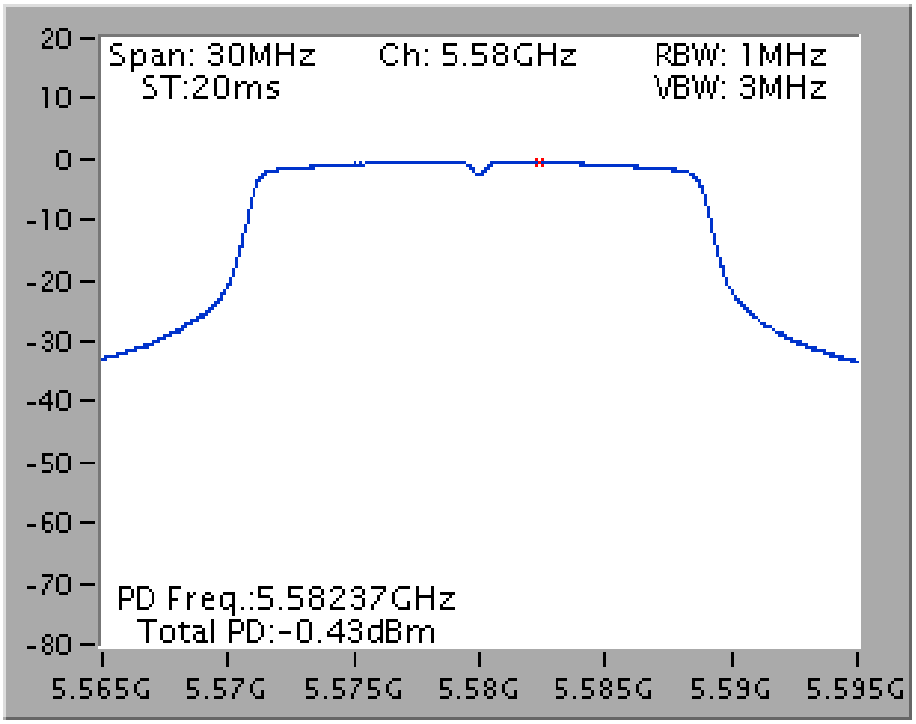
Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / 5550MHz / Ant. 5: Chain. 1 (1TX)



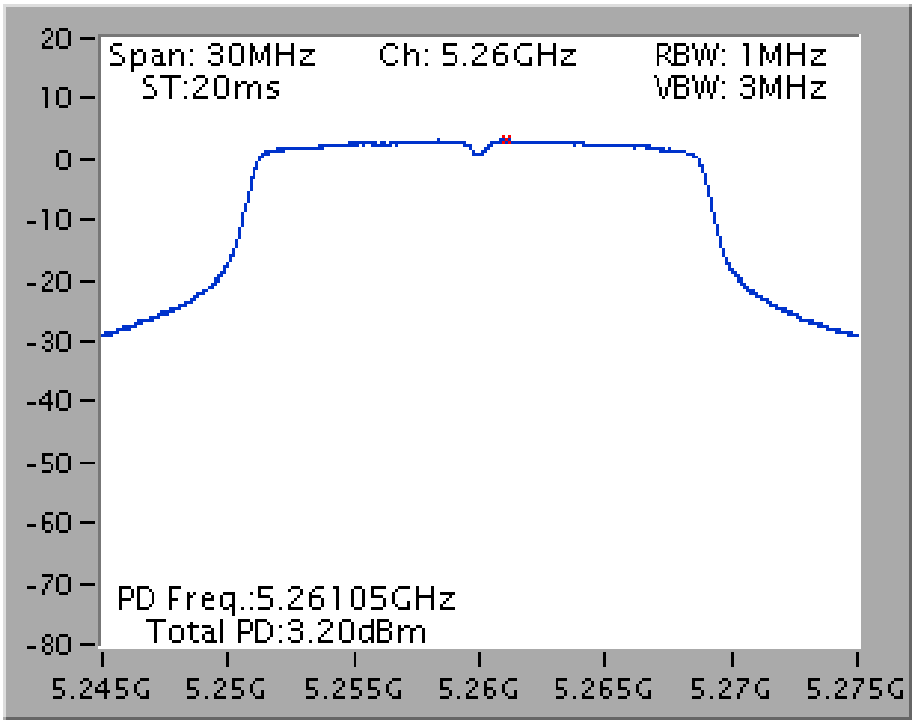
Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / 5260 MHz / Ant. 6: Chain. 1 + Chain. 3 (2TX)



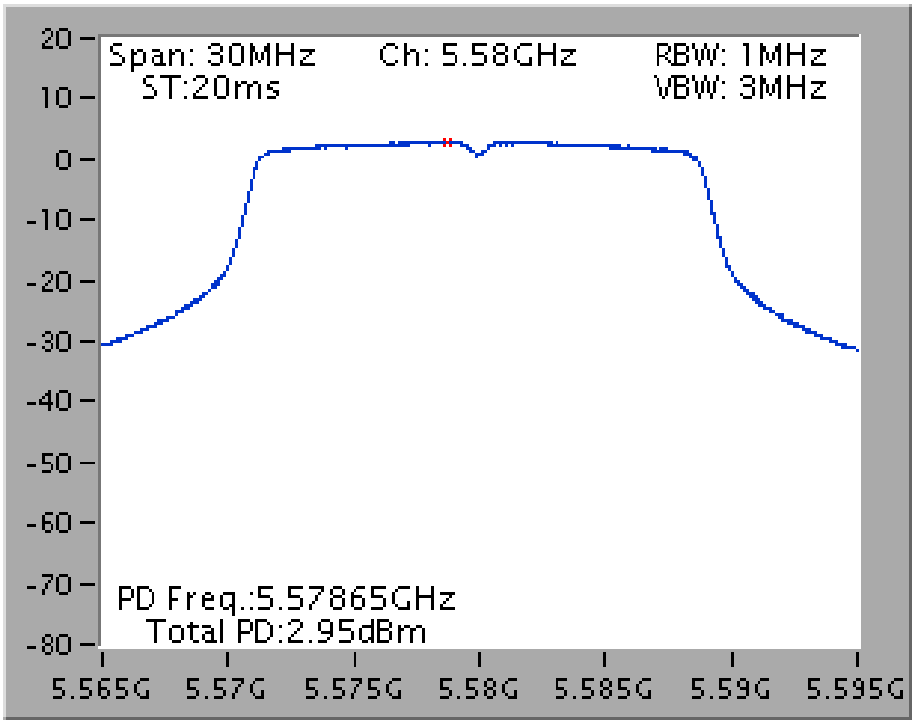
Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / 5580MHz / Ant. 6: Chain. 1 + Chain. 3 (2TX)



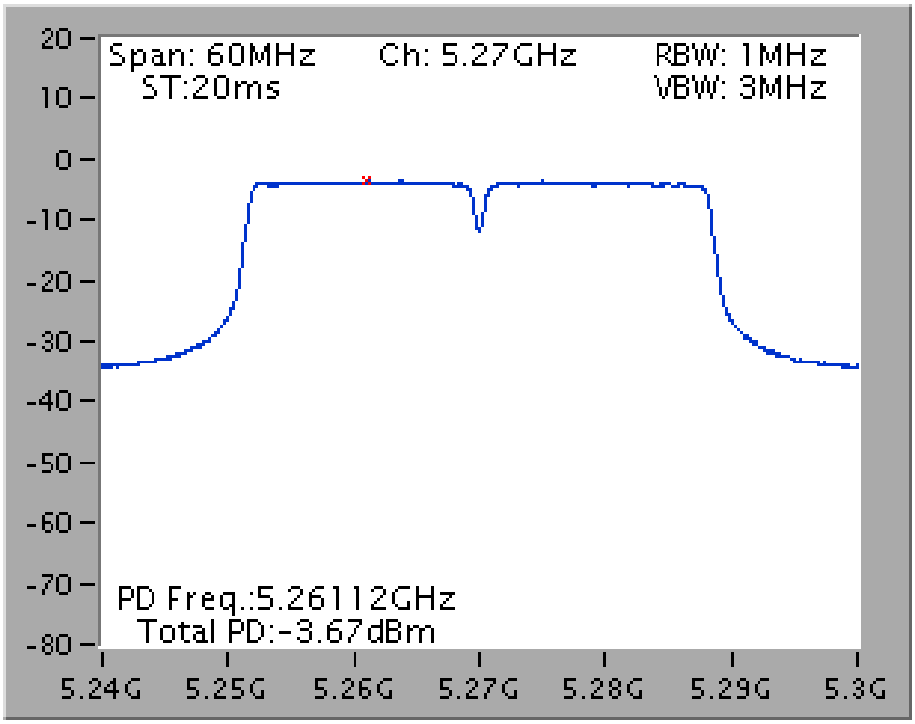
Power Density Plot on Configuration IEEE 802.11n MCS8 20MHz / 5260 MHz / Ant. 6: Chain. 1 + Chain. 3 (2TX)



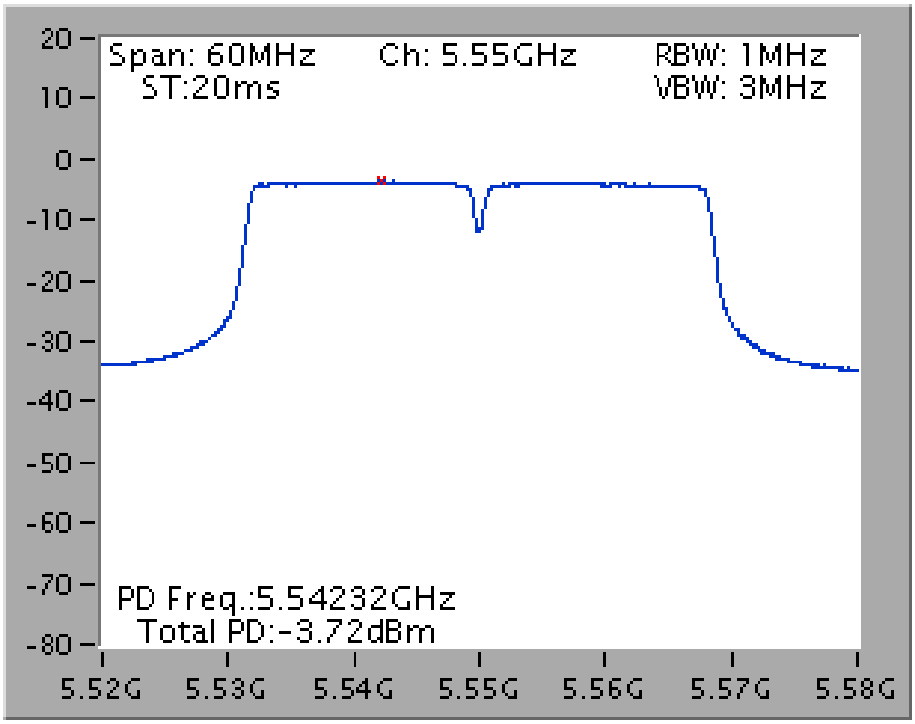
Power Density Plot on Configuration IEEE 802.11n MCS8 20MHz / 5580MHz / Ant. 6: Chain. 1 + Chain. 3 (2TX)



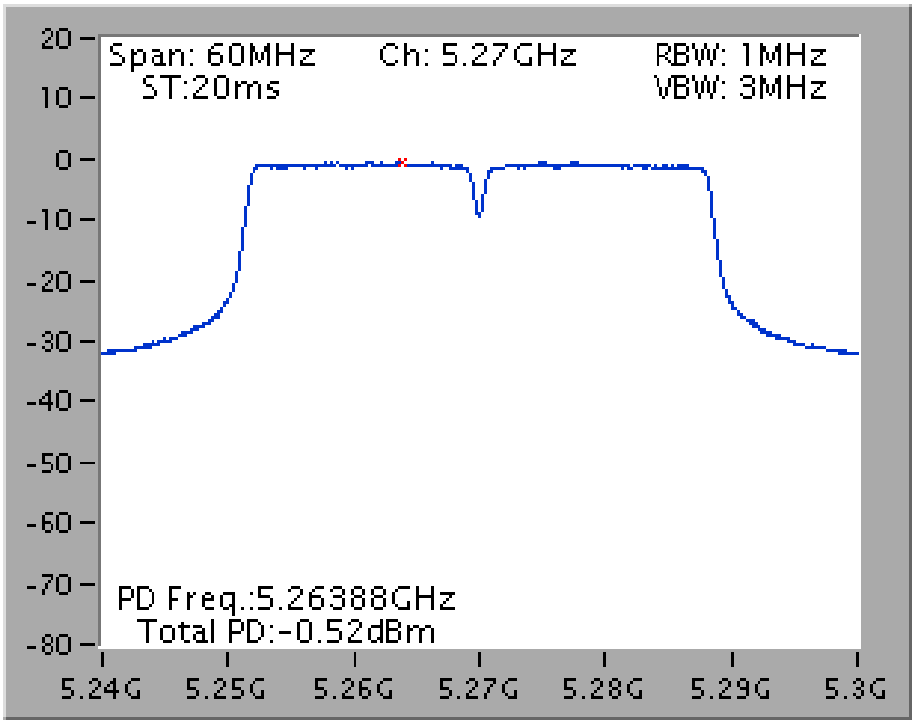
Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / 5270MHz / Ant. 6: Chain. 1 + Chain. 3 (2TX)



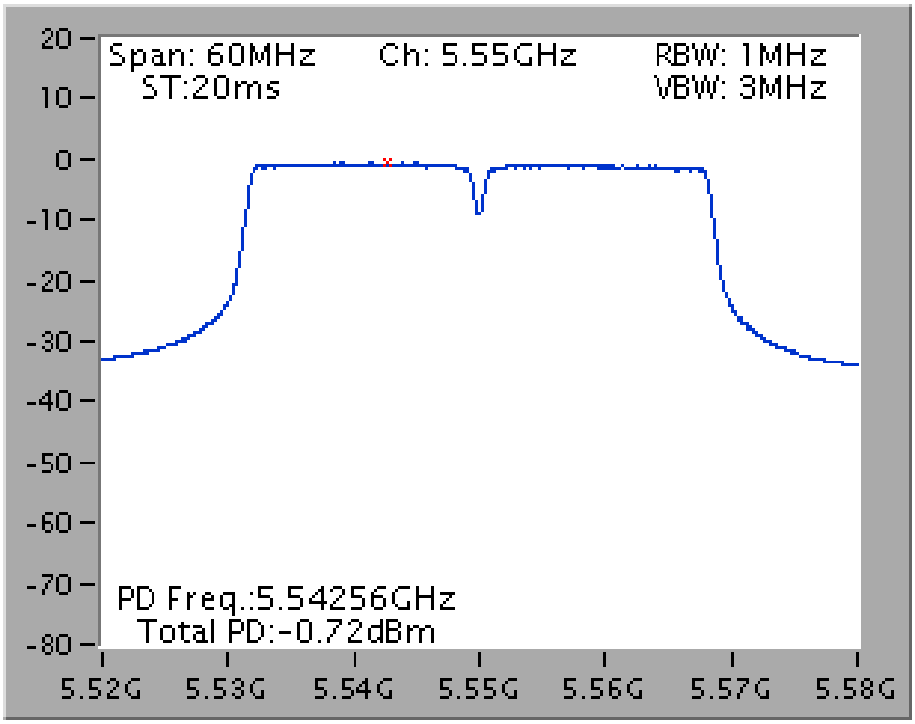
Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / 5550MHz / Ant. 6: Chain. 1 + Chain. 3 (2TX)



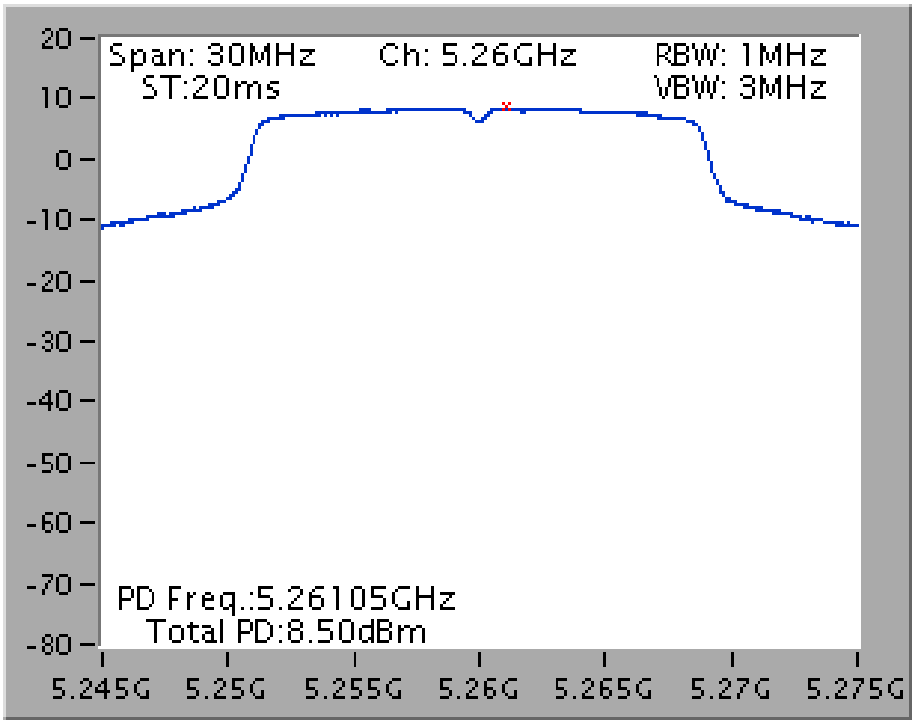
Power Density Plot on Configuration IEEE 802.11n MCS8 40MHz / 5270MHz / Ant. 6: Chain. 1 + Chain. 3 (2TX)



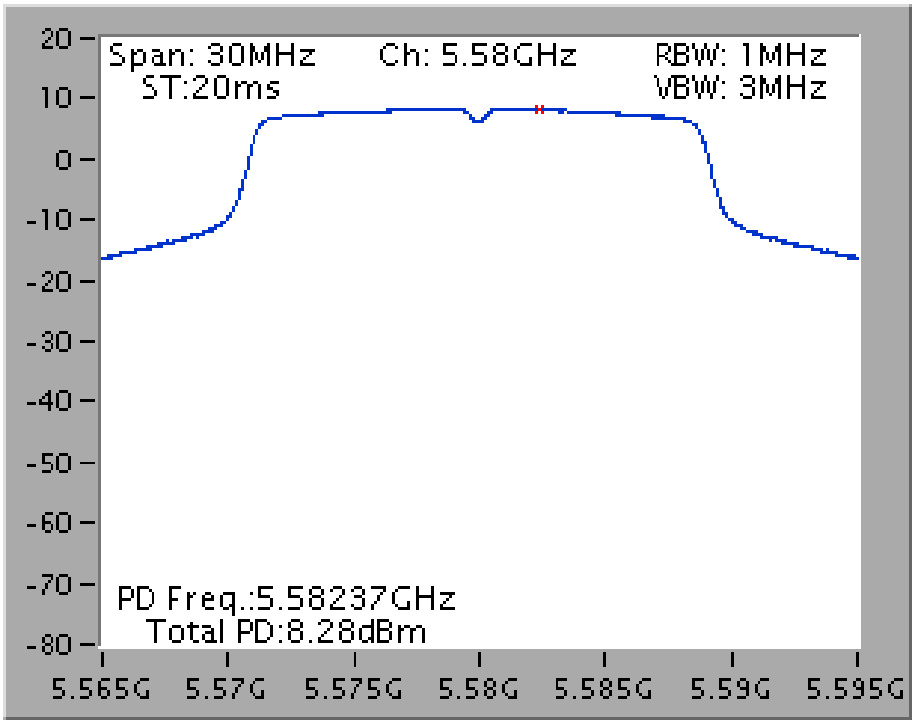
Power Density Plot on Configuration IEEE 802.11n MCS8 40MHz / 5550MHz / Ant. 6: Chain. 1 + Chain. 3 (2TX)



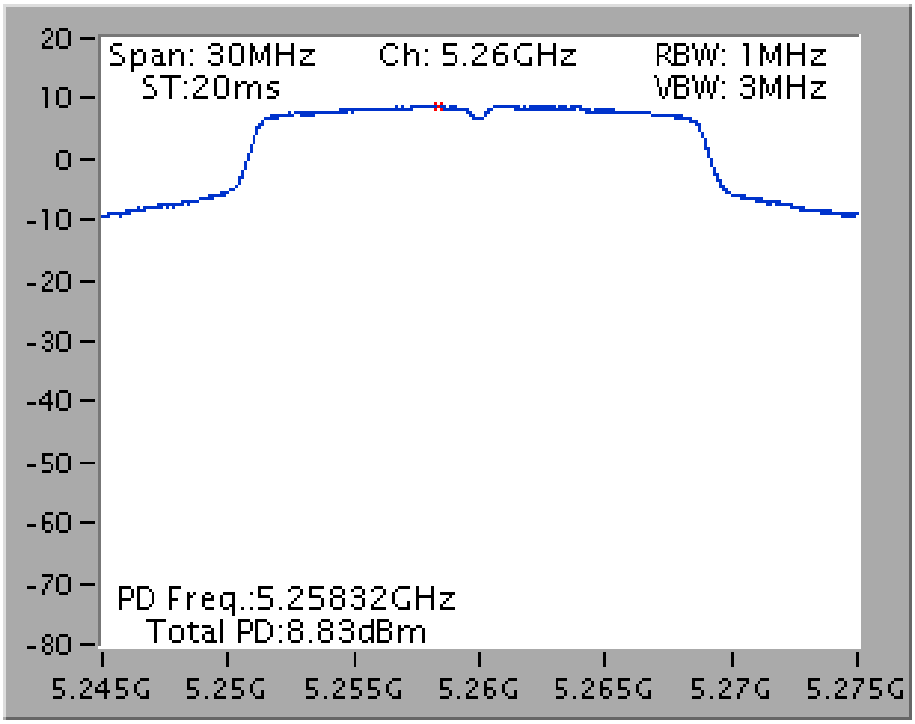
Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / 5260 MHz / Ant. 10: Chain. 1 + Chain. 3 (2TX)



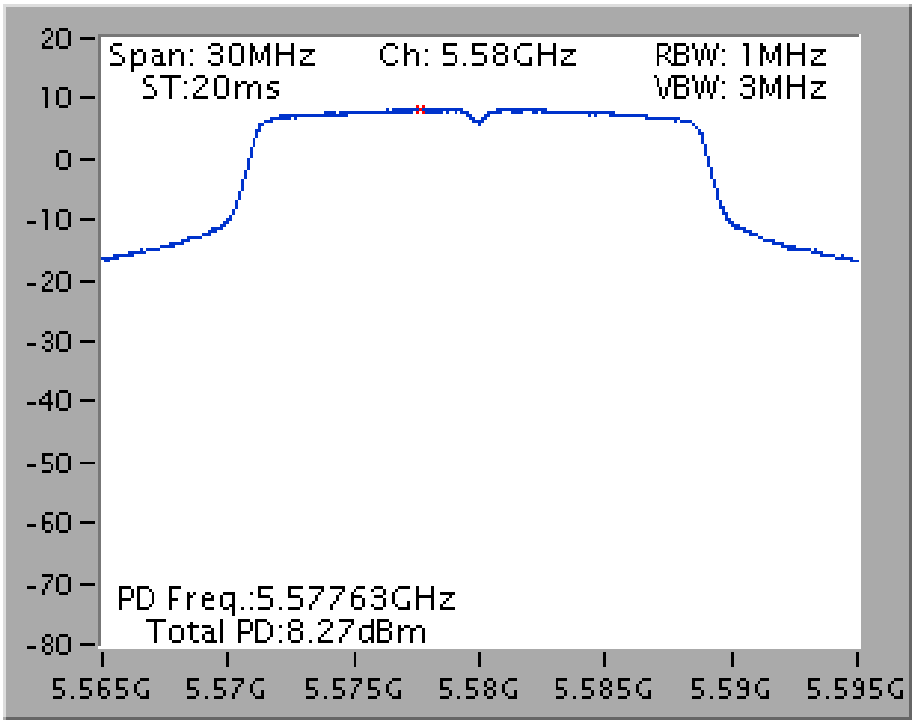
Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / 5580MHz / Ant. 10: Chain. 1 + Chain. 3 (2TX)



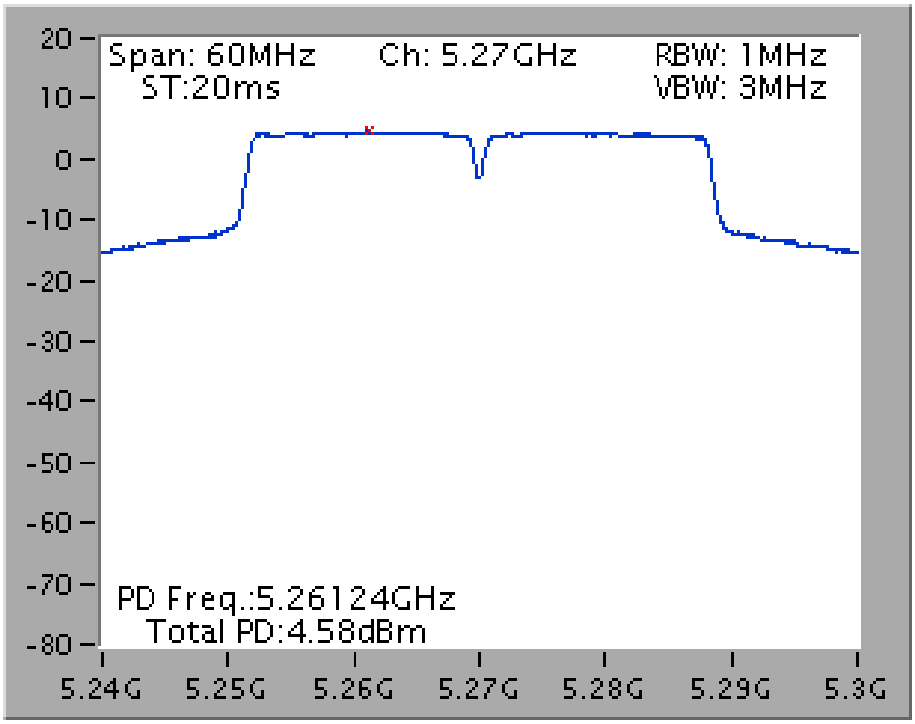
Power Density Plot on Configuration IEEE 802.11n MCS8 20MHz / 5260 MHz / Ant. 10: Chain. 1 + Chain. 3 (2TX)



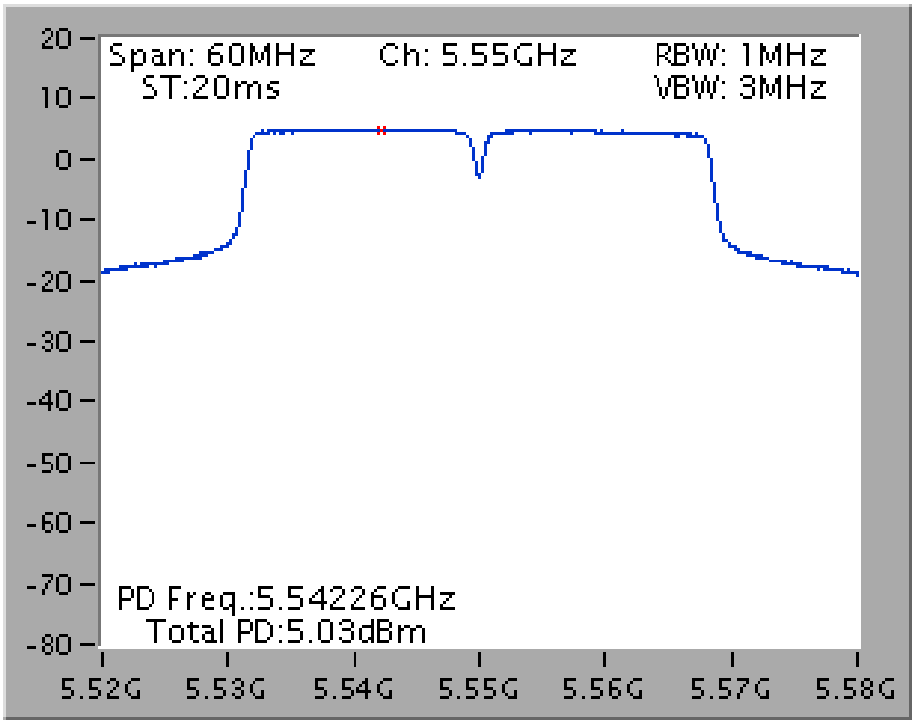
Power Density Plot on Configuration IEEE 802.11n MCS8 20MHz / 5580MHz / Ant. 10: Chain. 1 + Chain. 3 (2TX)



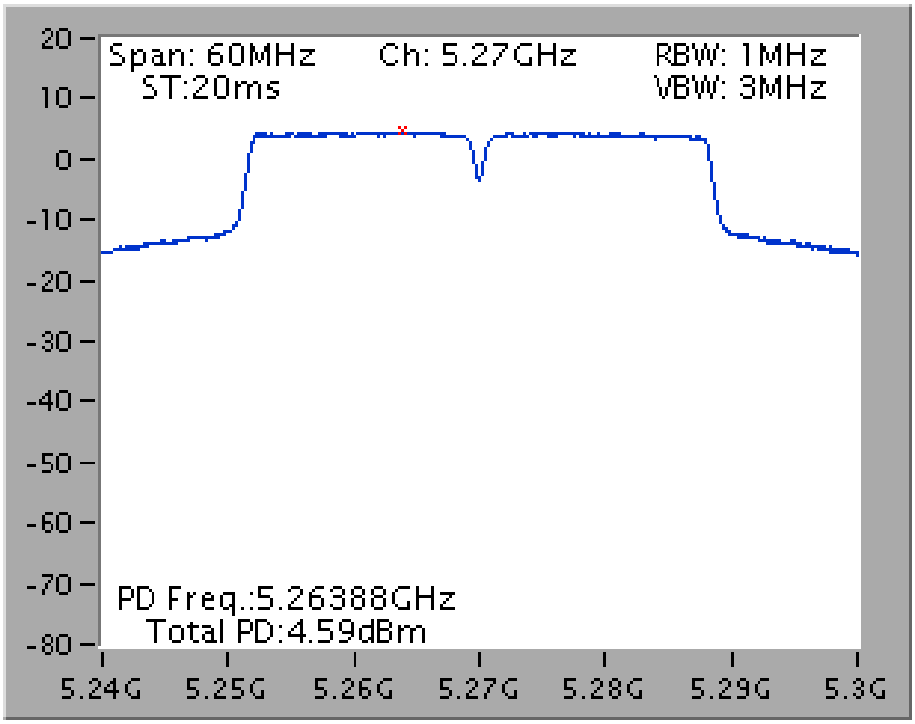
Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / 5270MHz / Ant. 10: Chain. 1 + Chain. 3 (2TX)



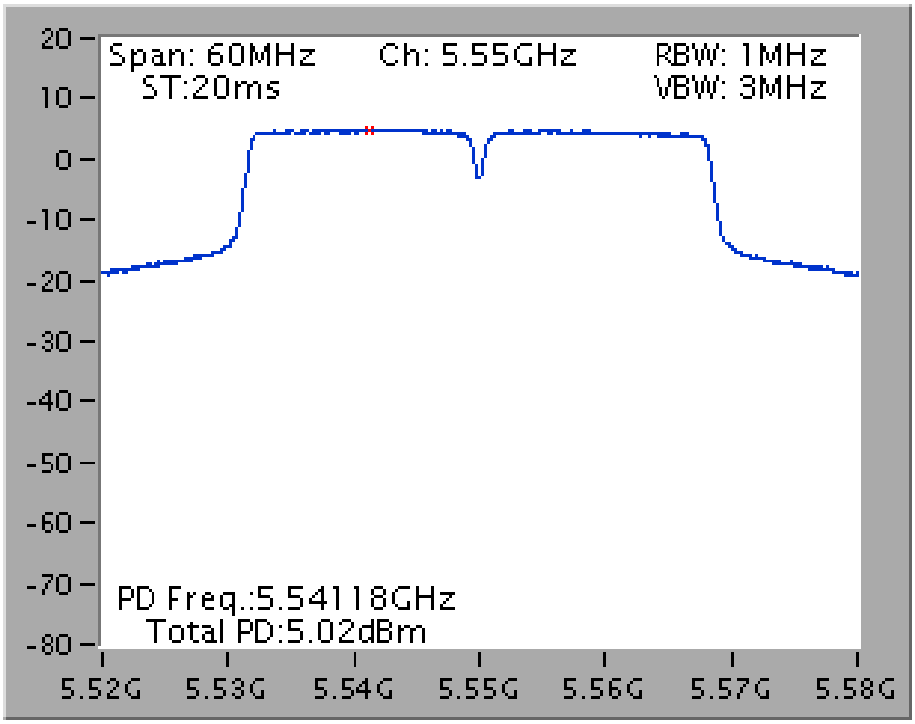
Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / 5550MHz / Ant. 10: Chain. 1 + Chain. 3 (2TX)



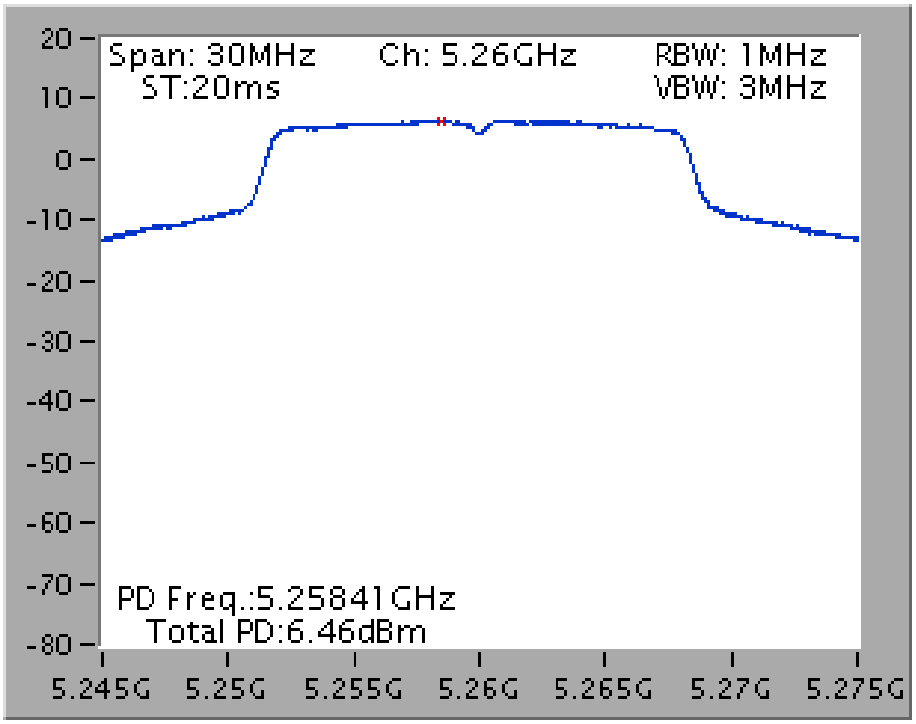
Power Density Plot on Configuration IEEE 802.11n MCS8 40MHz / 5270MHz / Ant. 10: Chain. 1 + Chain. 3 (2TX)



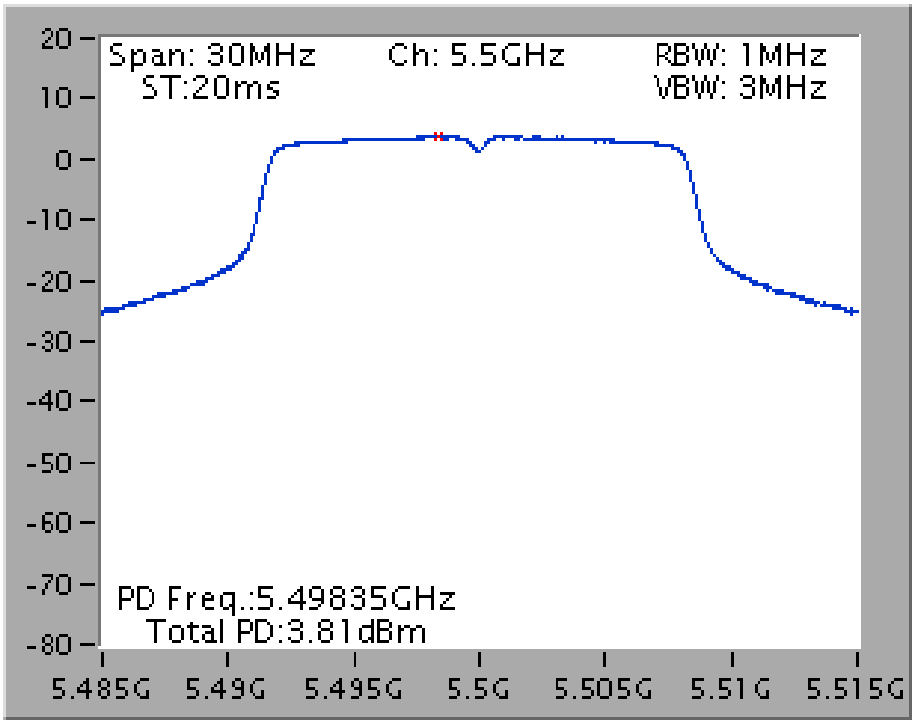
Power Density Plot on Configuration IEEE 802.11n MCS8 40MHz / 5550MHz / Ant. 10: Chain. 1 + Chain. 3 (2TX)



Power Density Plot on Configuration IEEE 802.11a / 5260 MHz / Ant. 5: Chain. 1 (1TX)



Power Density Plot on Configuration IEEE 802.11a / 5500MHz / Ant. 5: Chain. 1 (1TX)



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	26℃	Humidity	60%
Test Engineer	Robert Chang	Configurations	IEEE 802.11n

Configuration IEEE 802.11n MCS0 20MHz / Ant. 4: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	11.00	13	**Complies**
60	5300 MHz	11.52	13	**Complies**
64	5320 MHz	11.16	13	**Complies**
100	5500 MHz	11.23	13	**Complies**
116	5580 MHz	11.78	13	**Complies**
140	5700 MHz	11.73	13	**Complies**

Configuration IEEE 802.11n MCS8 20MHz / Ant. 4: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	10.53	13	**Complies**
60	5300 MHz	10.55	13	**Complies**
64	5320 MHz	10.78	13	**Complies**
100	5500 MHz	10.85	13	**Complies**
116	5580 MHz	10.72	13	**Complies**
140	5700 MHz	11.29	13	**Complies**

Configuration IEEE 802.11n MCS0 40MHz / Ant. 4: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
54	5270 MHz	12.19	13	**Complies**
62	5310 MHz	12.35	13	**Complies**
102	5510MHz	12.05	13	**Complies**
110	5550 MHz	11.46	13	**Complies**
134	5670 MHz	11.96	13	**Complies**

Configuration IEEE 802.11n MCS8 40MHz / Ant. 4: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
54	5270 MHz	10.76	13	**Complies**
62	5310 MHz	10.04	13	**Complies**
102	5510MHz	10.85	13	**Complies**
110	5550 MHz	10.72	13	**Complies**
134	5670 MHz	11.29	13	**Complies**

Configuration IEEE 802.11n MCS0 20MHz / Ant. 5: Chain. 1 (1TX)

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	9.61	13	**Complies**
60	5300 MHz	9.91	13	**Complies**
64	5320 MHz	8.95	13	**Complies**
100	5500 MHz	9.09	13	**Complies**
116	5580 MHz	9.32	13	**Complies**
140	5700 MHz	9.76	13	**Complies**

Configuration IEEE 802.11n MCS0 40MHz / Ant. 5: Chain. 1 (1TX)

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
54	5270 MHz	10.15	13	**Complies**
62	5310 MHz	9.40	13	**Complies**
102	5510MHz	9.01	13	**Complies**
110	5550 MHz	9.73	13	**Complies**
134	5670 MHz	9.59	13	**Complies**

Configuration IEEE 802.11n MCS0 20MHz / Ant. 6: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	12.12	13	**Complies**
60	5300 MHz	11.67	13	**Complies**
64	5320 MHz	11.96	13	**Complies**
100	5500 MHz	11.95	13	**Complies**
116	5580 MHz	11.62	13	**Complies**
140	5700 MHz	10.99	13	**Complies**

Configuration IEEE 802.11n MCS8 20MHz / Ant. 6: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	10.04	13	**Complies**
60	5300 MHz	10.58	13	**Complies**
64	5320 MHz	10.69	13	**Complies**
100	5500 MHz	10.66	13	**Complies**
116	5580 MHz	11.04	13	**Complies**
140	5700 MHz	10.51	13	**Complies**

Configuration IEEE 802.11n MCS0 40MHz / Ant. 6: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
54	5270 MHz	12.15	13	**Complies**
62	5310 MHz	11.61	13	**Complies**
102	5510MHz	11.80	13	**Complies**
110	5550 MHz	11.57	13	**Complies**
134	5670 MHz	12.17	13	**Complies**

Configuration IEEE 802.11n MCS8 40MHz / Ant. 6: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
54	5270 MHz	10.59	13	**Complies**
62	5310 MHz	10.25	13	**Complies**
102	5510MHz	10.64	13	**Complies**
110	5550 MHz	9.84	13	**Complies**
134	5670 MHz	9.81	13	**Complies**

Configuration IEEE 802.11n MCS0 20MHz / Ant. 10: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	11.75	13	**Complies**
60	5300 MHz	12.10	13	**Complies**
64	5320 MHz	12.10	13	**Complies**
100	5500 MHz	11.53	13	**Complies**
116	5580 MHz	12.03	13	**Complies**
140	5700 MHz	11.44	13	**Complies**

Configuration IEEE 802.11n MCS8 20MHz / Ant. 10: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	11.22	13	**Complies**
60	5300 MHz	11.01	13	**Complies**
64	5320 MHz	10.59	13	**Complies**
100	5500 MHz	10.90	13	**Complies**
116	5580 MHz	11.24	13	**Complies**
140	5700 MHz	11.01	13	**Complies**

Configuration IEEE 802.11n MCS0 40MHz / Ant. 10: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
54	5270 MHz	12.10	13	**Complies**
62	5310 MHz	11.37	13	**Complies**
102	5510MHz	11.51	13	**Complies**
110	5550 MHz	12.20	13	**Complies**
134	5670 MHz	12.30	13	**Complies**

Configuration IEEE 802.11n MCS8 40MHz / Ant. 10: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
54	5270 MHz	11.08	13	**Complies**
62	5310 MHz	10.51	13	**Complies**
102	5510MHz	10.68	13	**Complies**
110	5550 MHz	10.75	13	**Complies**
134	5670 MHz	10.26	13	**Complies**

Temperature	26℃	Humidity	60%
Test Engineer	Robert Chang	Configurations	IEEE 802.11a

Configuration IEEE 802.11a / Ant. 5: Chain. 1 (1TX)

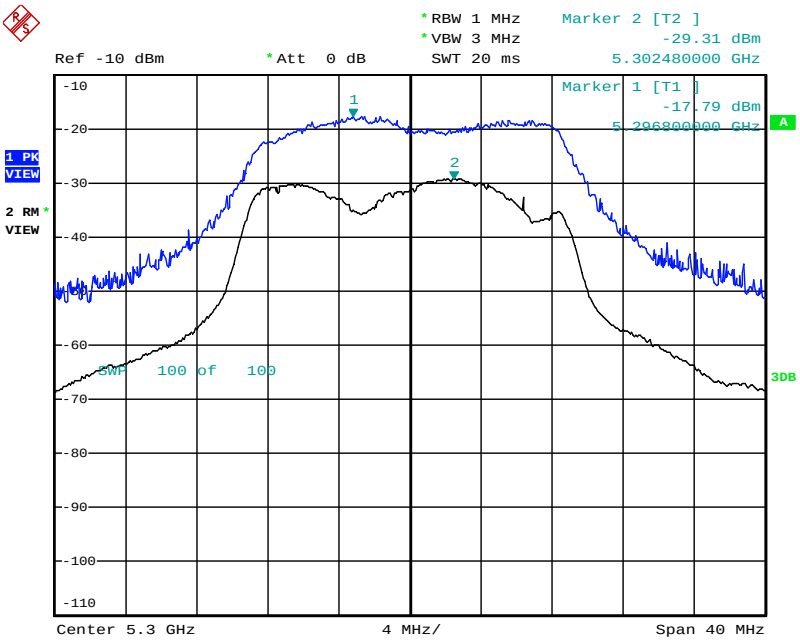
Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	9.73	13	**Complies**
60	5300 MHz	9.26	13	**Complies**
64	5320 MHz	9.29	13	**Complies**
100	5500 MHz	8.91	13	**Complies**
116	5580 MHz	9.48	13	**Complies**
140	5700 MHz	9.23	13	**Complies**

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

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

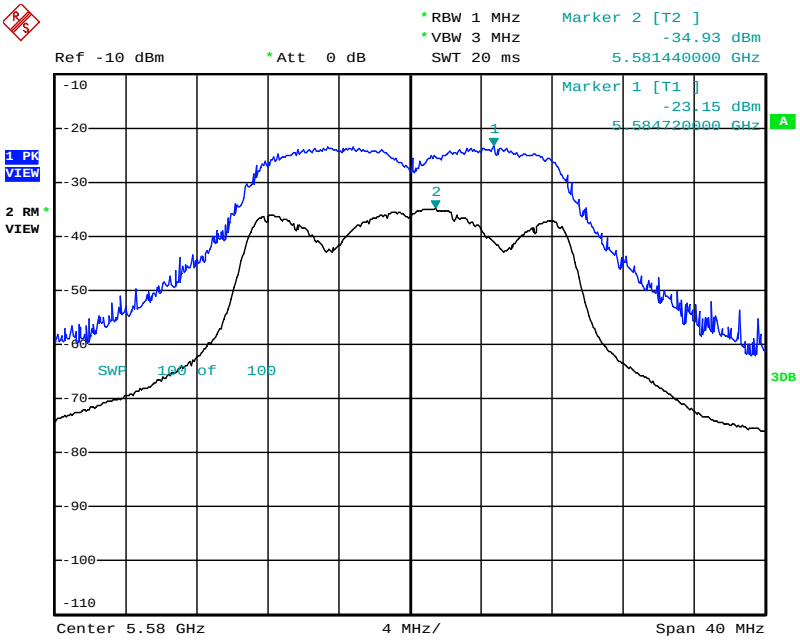
<For Ant. 4>:

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 20MHz / 5300MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 20:25:19

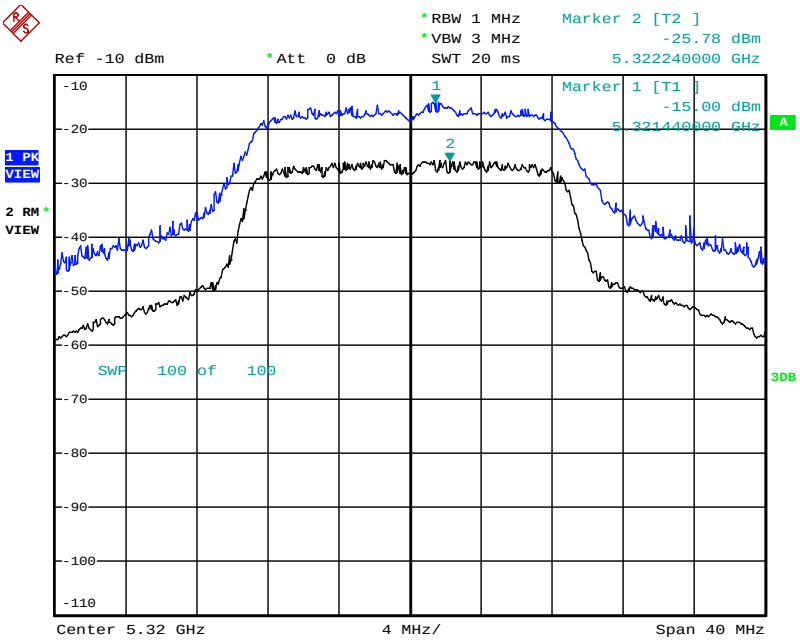
Peak Excursion Plot on Configuration IEEE 802.11n MCS0 20MHz / 5580MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 20:28:48

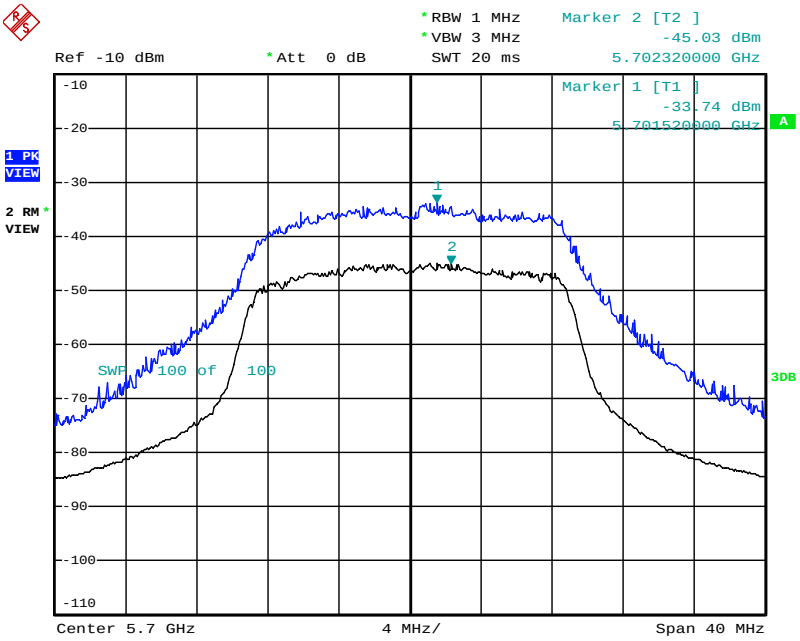
<For Ant. 4>:

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 20MHz / 5320MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 20:33:44

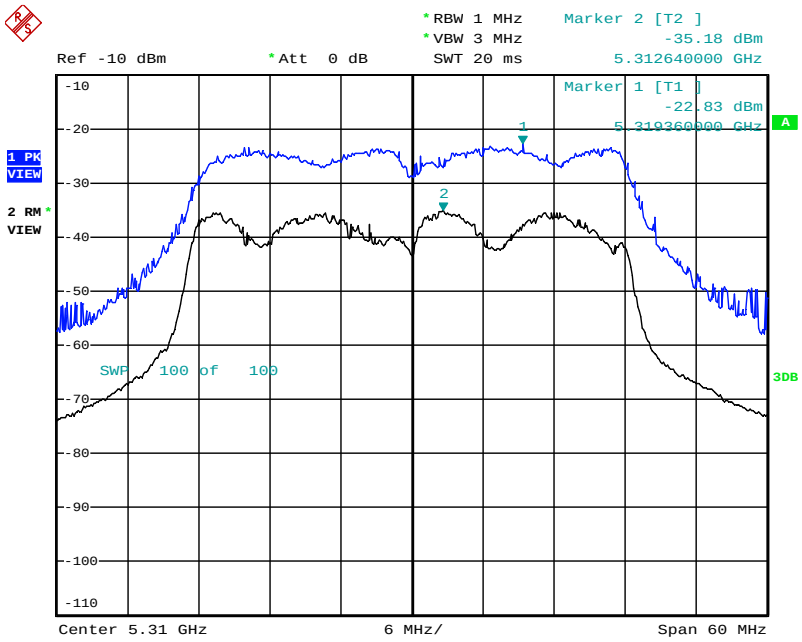
Peak Excursion Plot on Configuration IEEE 802.11n MCS8 20MHz / 5700MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 20:31:15

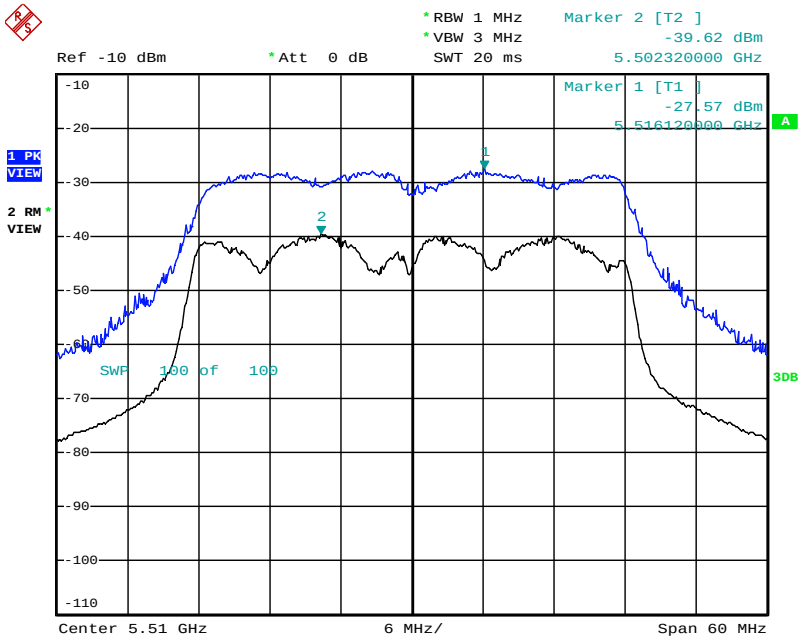
<For Ant. 4>:

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 40MHz / 5310MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 20:47:50

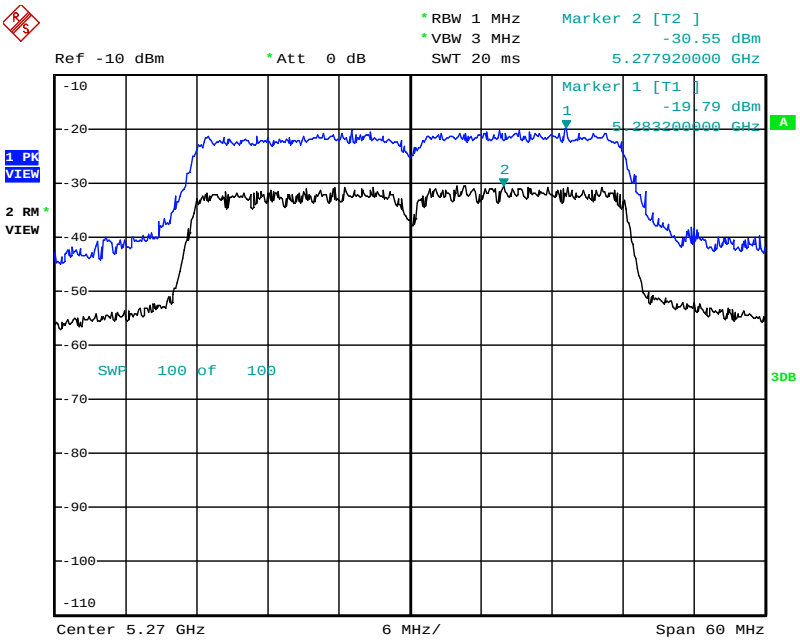
Peak Excursion Plot on Configuration IEEE 802.11n MCS0 40MHz / 5510MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 20:46:37

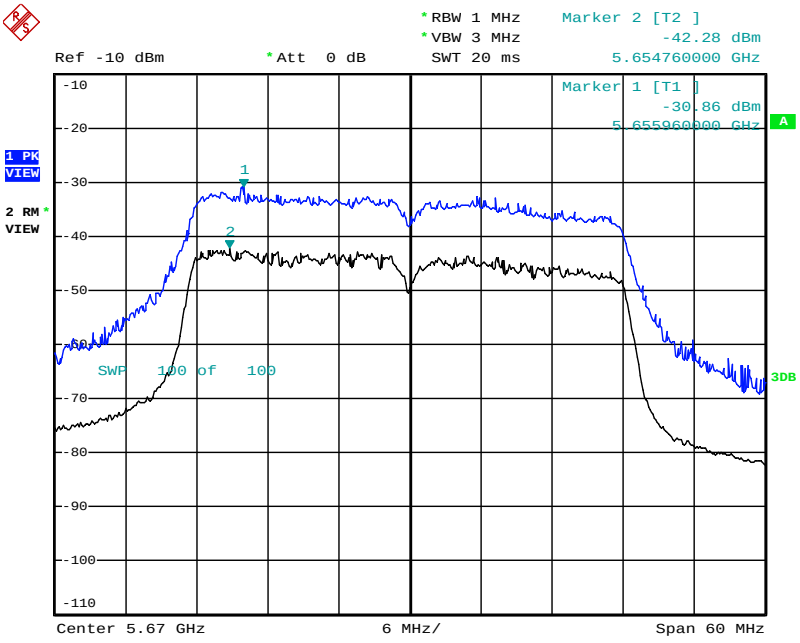
<For Ant. 4>:

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 40MHz / 5270MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 20:40:04

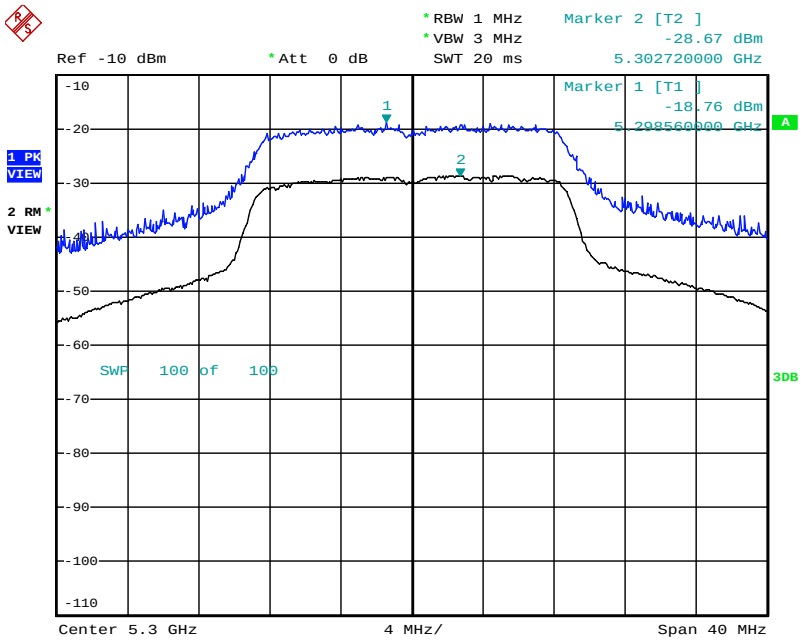
Peak Excursion Plot on Configuration IEEE 802.11n MCS8 40MHz / 5670MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 20:43:18

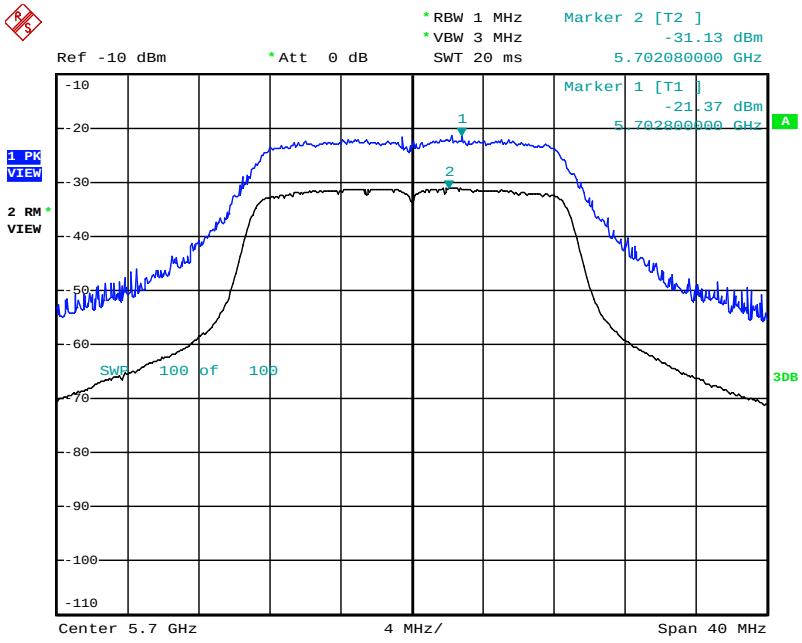
<For Ant. 5>:

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 20MHz / 5300MHz / Chain. 1 (1TX)



Date: 20.SEP.2012 22:46:15

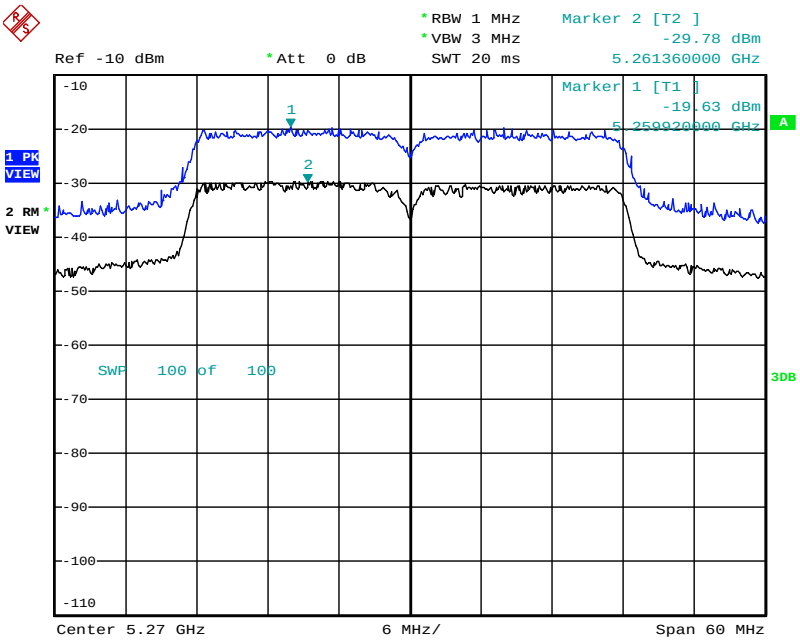
Peak Excursion Plot on Configuration IEEE 802.11n MCS0 20MHz / 5700MHz / Chain. 1 (1TX)



Date: 20.SEP.2012 22:48:51

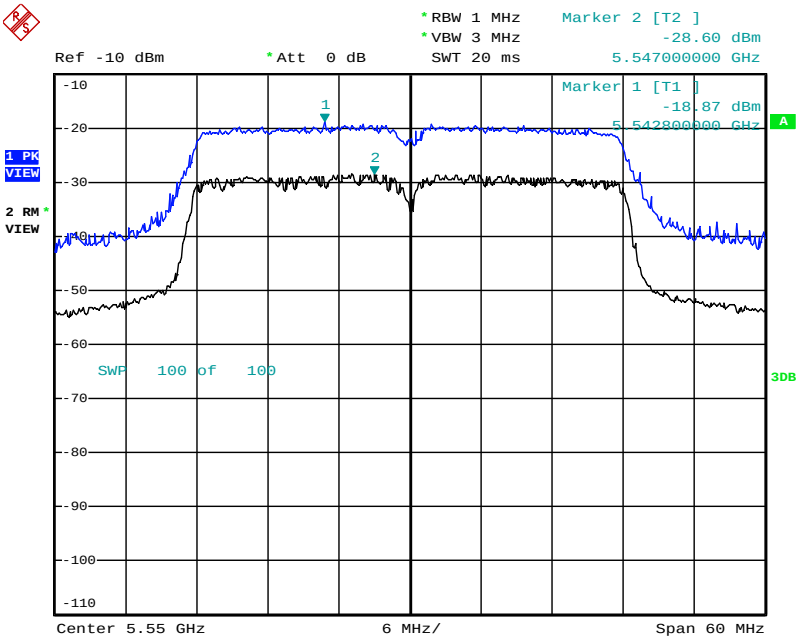
<For Ant. 5>:

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 40MHz / 5270MHz / Chain. 1 (1TX)



Date: 20.SEP.2012 22:32:09

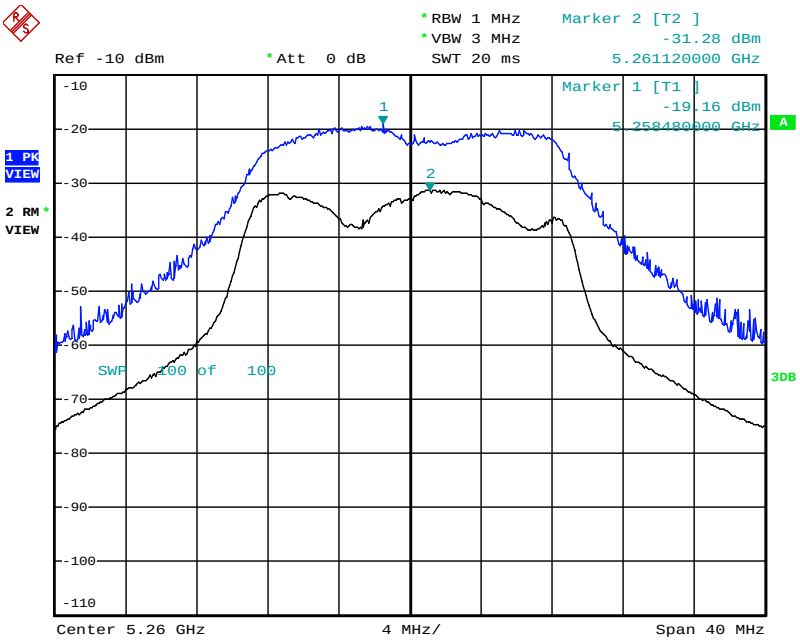
Peak Excursion Plot on Configuration IEEE 802.11n MCS0 40MHz / 5550MHz / Chain. 1 (1TX)



Date: 20.SEP.2012 22:35:01

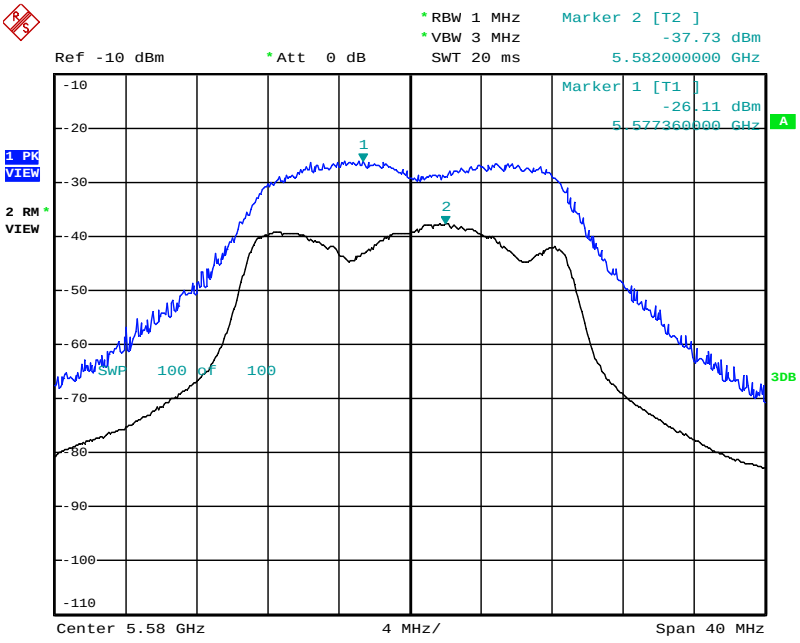
<For Ant. 6>:

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 20MHz / 5260MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 21:31:46

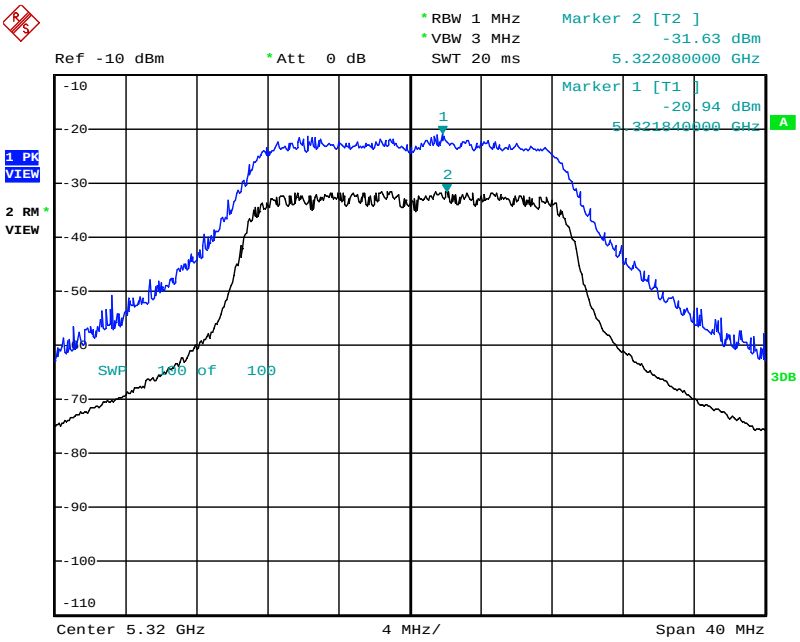
Peak Excursion Plot on Configuration IEEE 802.11n MCS0 20MHz / 5580MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 21:37:50

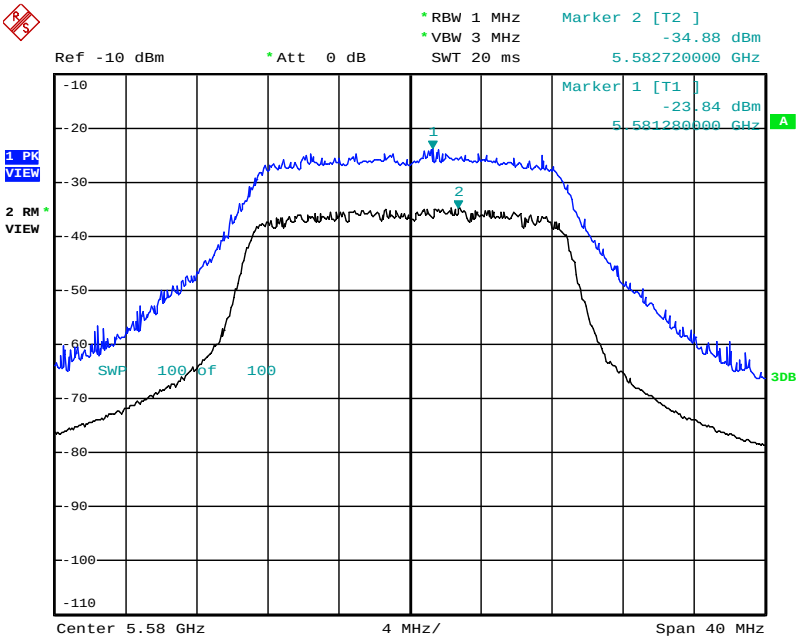
<For Ant. 6>:

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 20MHz / 5320MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 21:45:41

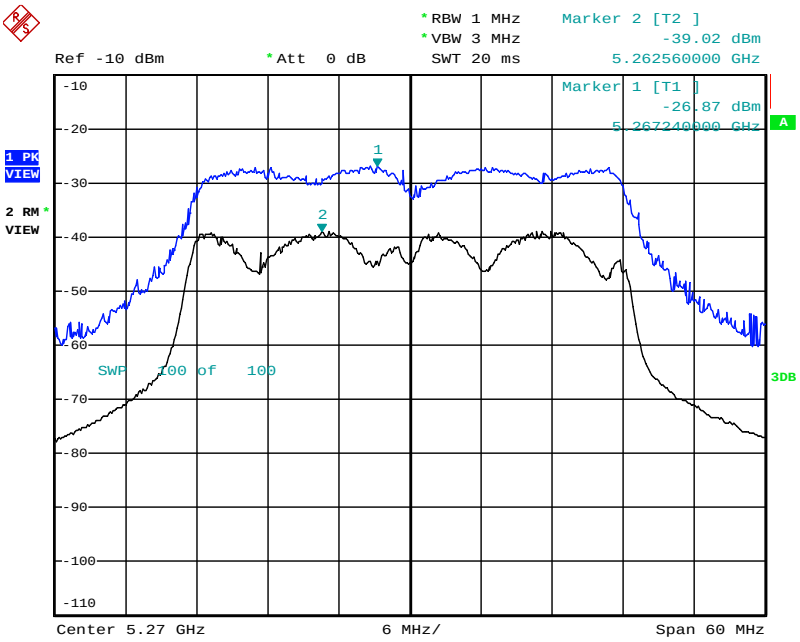
Peak Excursion Plot on Configuration IEEE 802.11n MCS8 20MHz / 5580MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 21:42:52

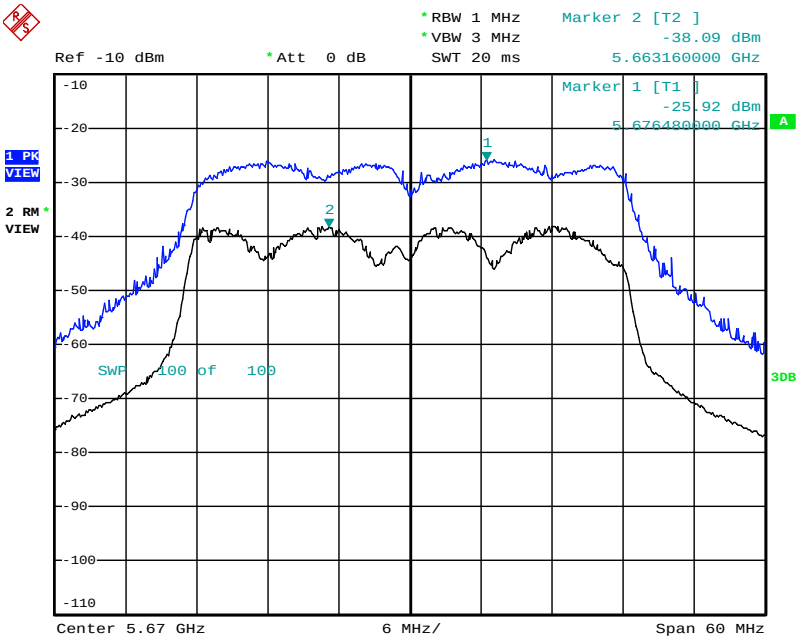
<For Ant. 6>:

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 40MHz / 5270MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 22:18:55

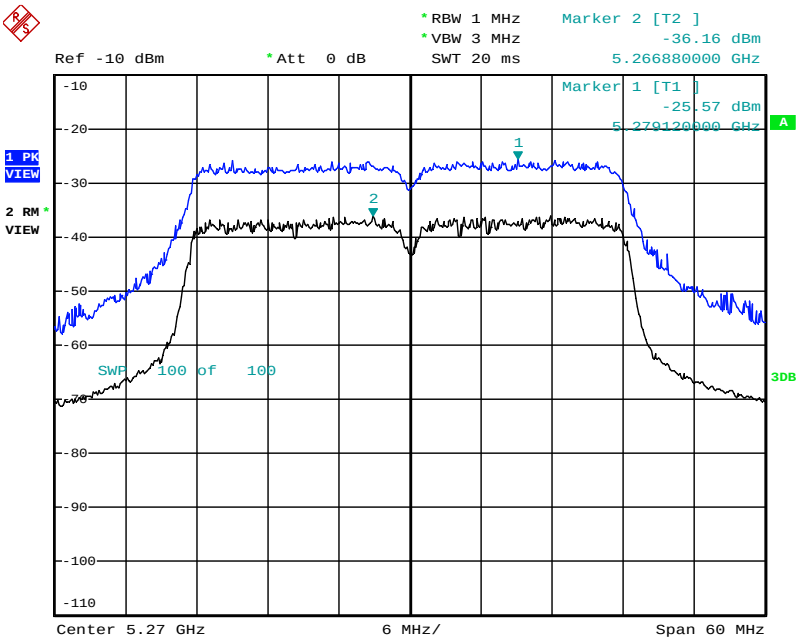
Peak Excursion Plot on Configuration IEEE 802.11n MCS0 40MHz / 5670MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 22:11:29

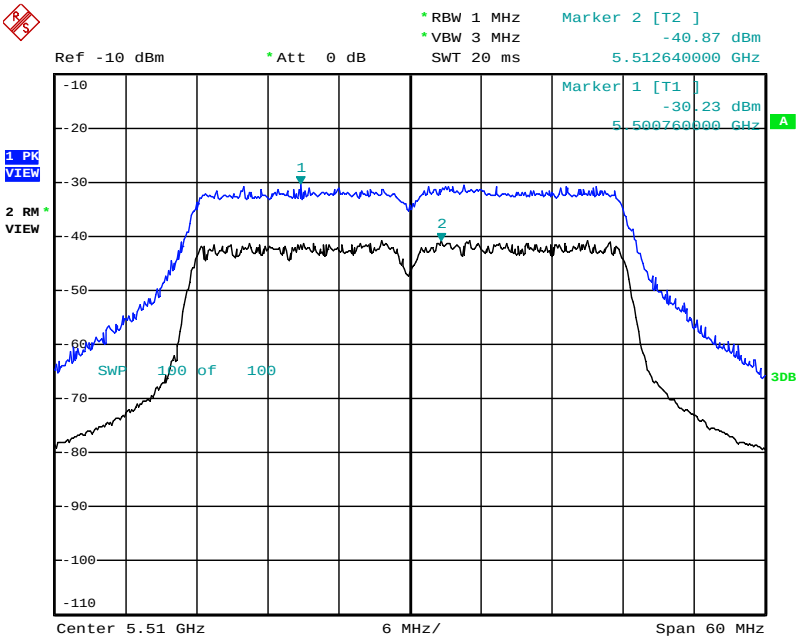
<For Ant. 6>:

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 40MHz / 5270MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 22:03:34

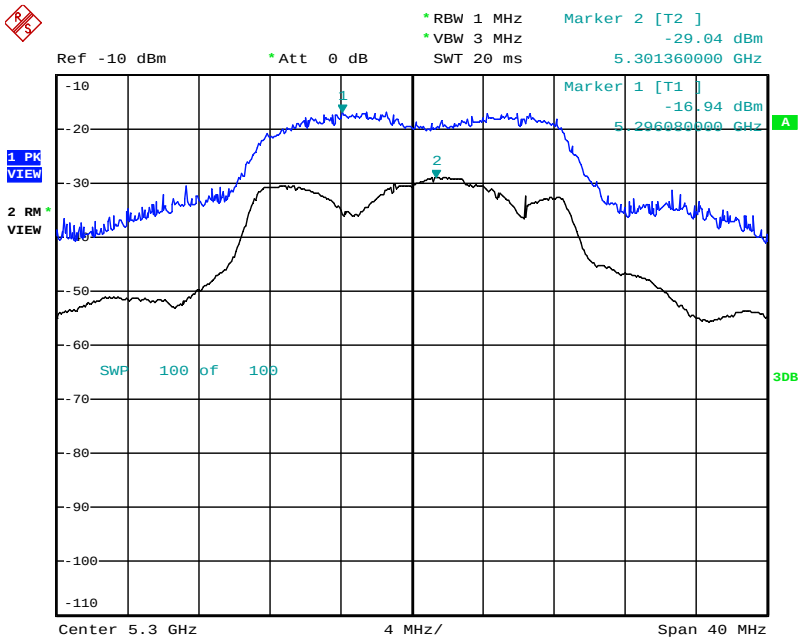
Peak Excursion Plot on Configuration IEEE 802.11n MCS8 40MHz / 5510MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 22:07:17

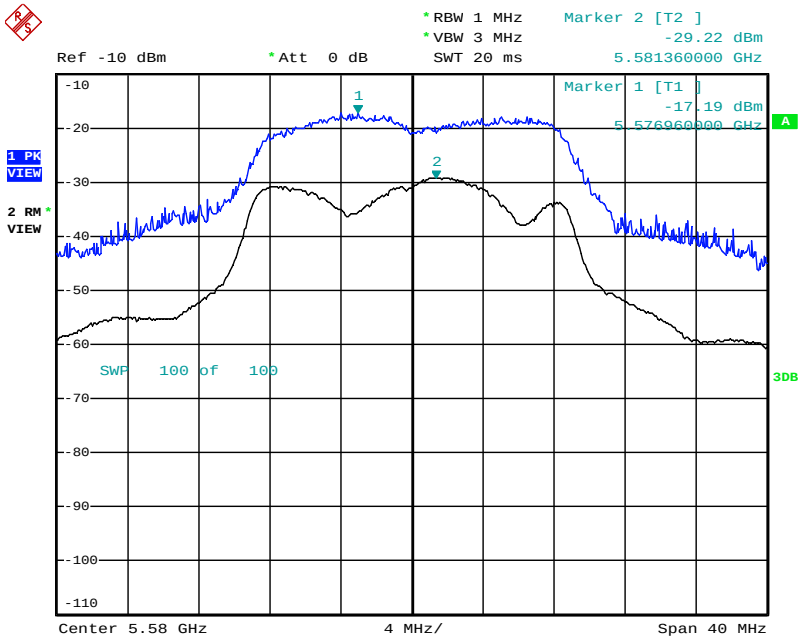
<For Ant. 10>:

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 20MHz / 5300MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 21:33:32

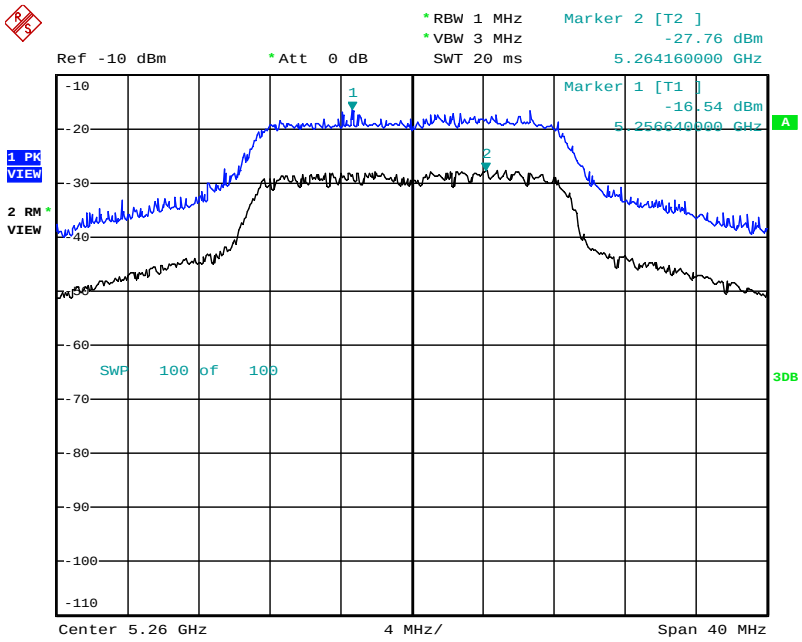
Peak Excursion Plot on Configuration IEEE 802.11n MCS0 20MHz / 5580MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 21:38:27

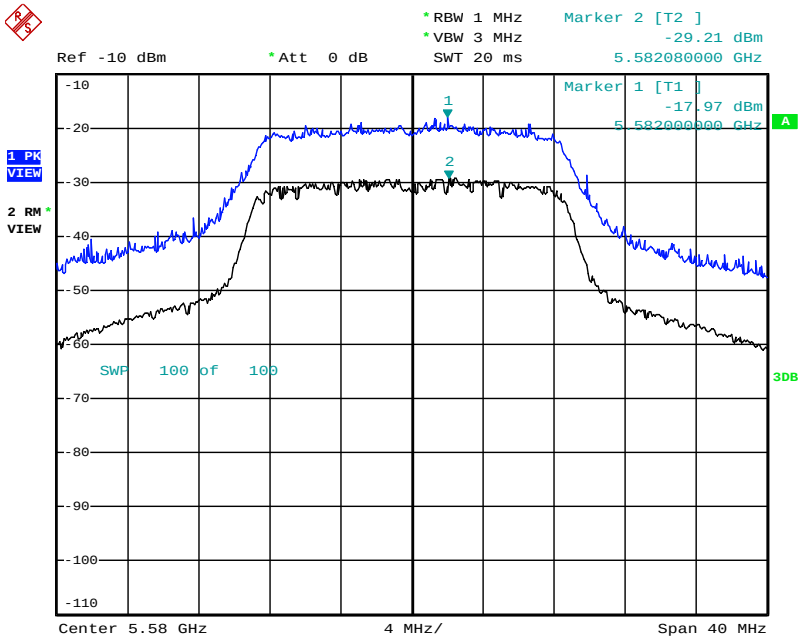
<For Ant. 10>:

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 20MHz / 5260MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 21:48:42

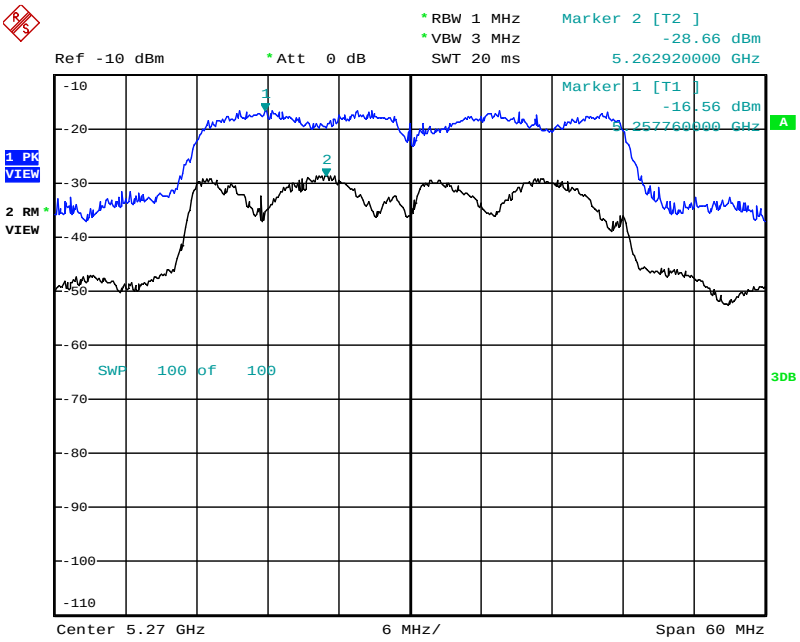
Peak Excursion Plot on Configuration IEEE 802.11n MCS8 20MHz / 5580MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 21:42:16

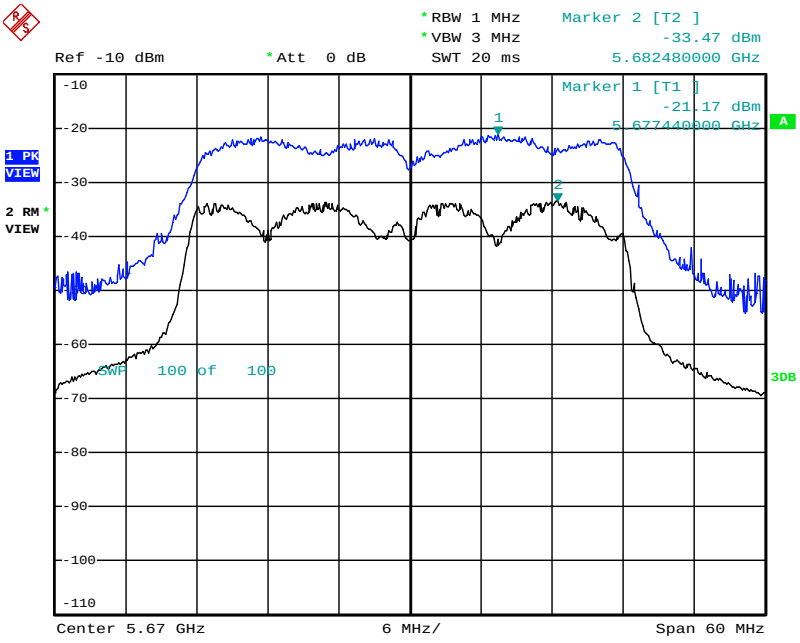
<For Ant. 10>:

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 40MHz / 5270MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 22:21:46

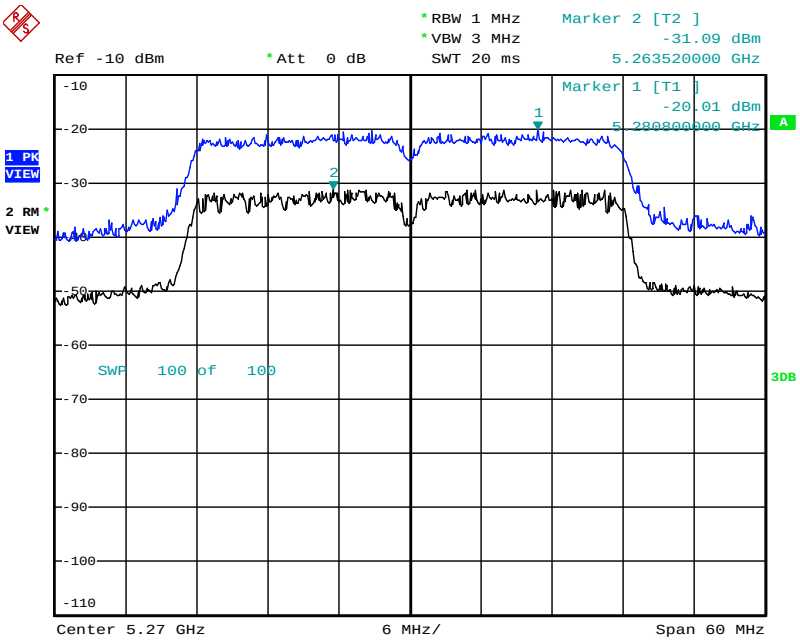
Peak Excursion Plot on Configuration IEEE 802.11n MCS0 40MHz / 5670MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 22:12:16

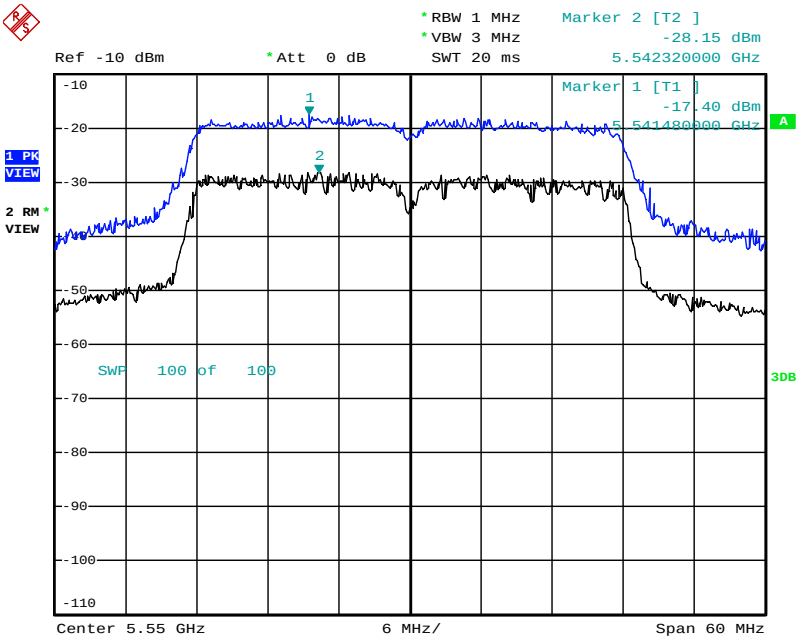
<For Ant. 10>:

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 40MHz / 5270MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 22:03:00

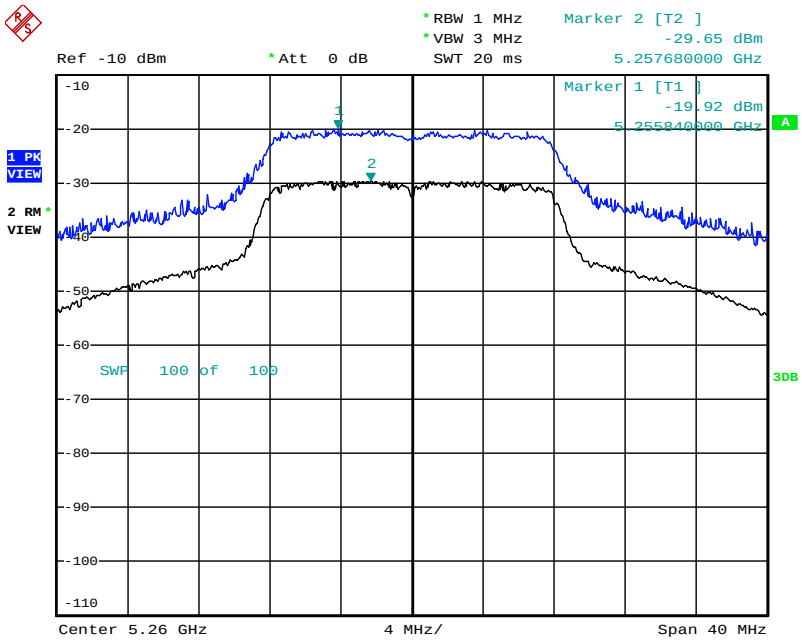
Peak Excursion Plot on Configuration IEEE 802.11n MCS8 40MHz / 5550MHz / Chain. 1 + Chain. 3 (2TX)



Date: 20.SEP.2012 22:08:57

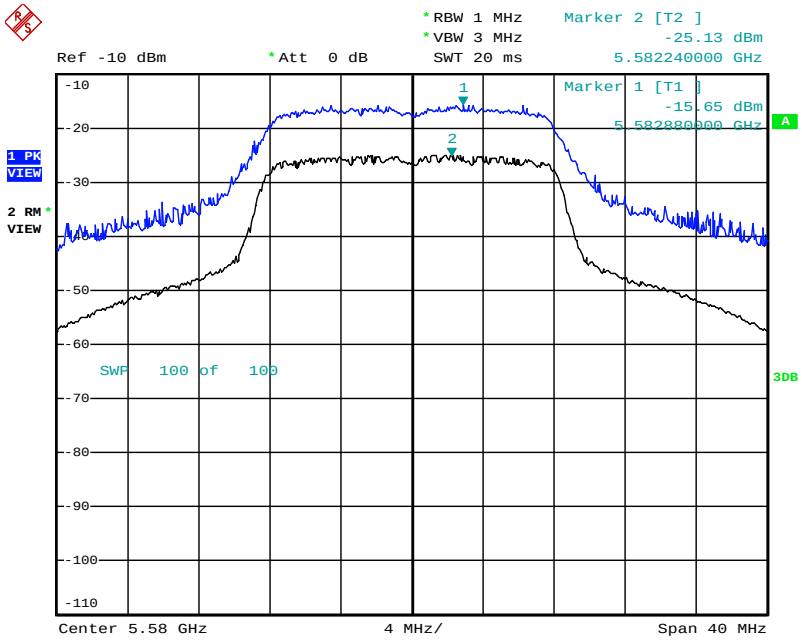
<For Ant. 5>:

Peak Excursion Plot on Configuration IEEE 802.11a / 5260MHz / Chain. 1 (1TX)



Date: 20.SEP.2012 22:40:55

Peak Excursion Plot on Configuration IEEE 802.11a/ 5580MHz / Chain. 1 (1TX)



Date: 20.SEP.2012 22:37:58

4.6. Radiated Emissions Measurement

4.6.1. Limit

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 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.

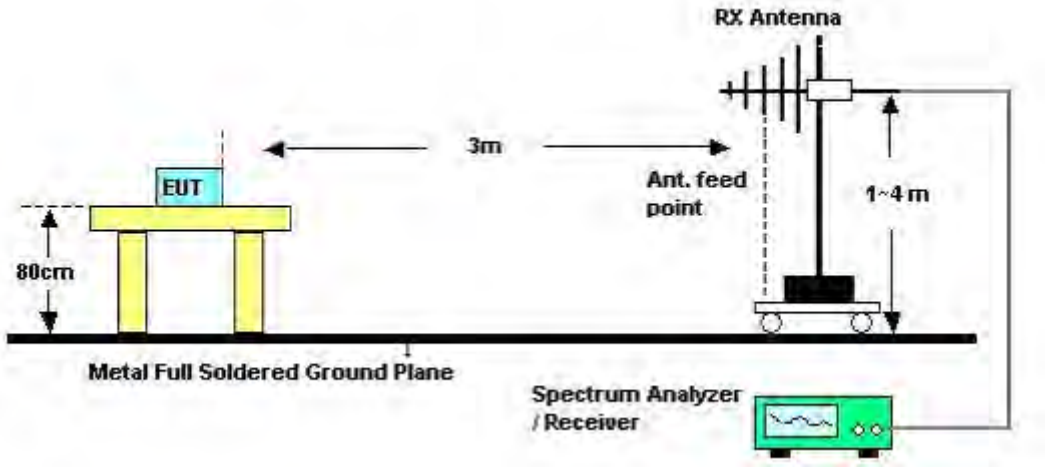
Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	40 GHz
RB / VB (Emission in restricted band)	1MHz / 3MHz for Peak, 1 MHz / 10Hz for Average
RB / VB (Emission in non-restricted band)	1MHz / 3MHz for peak

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



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	21℃	Humidity	56.4%
Test Engineer	Sean Ku	Configurations	CTX
Test Date	Sep. 22, 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.

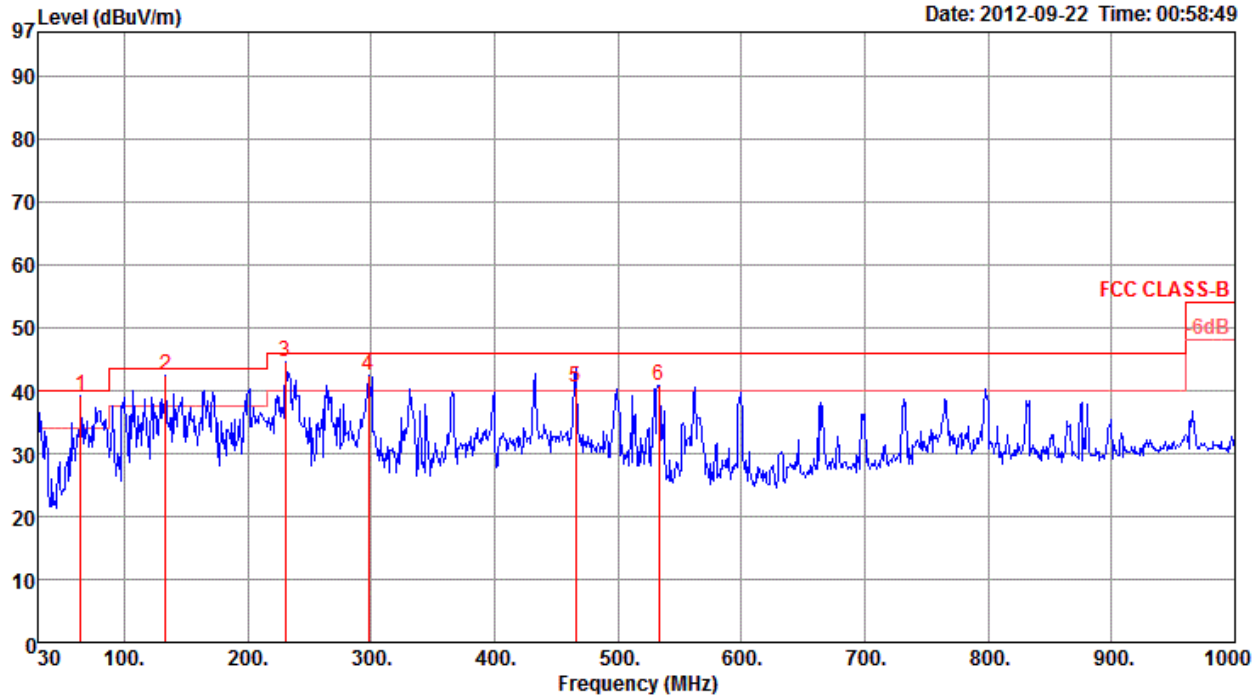
Distance extrapolation factor = 40 log (specific distance / test distance) (dB);

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

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

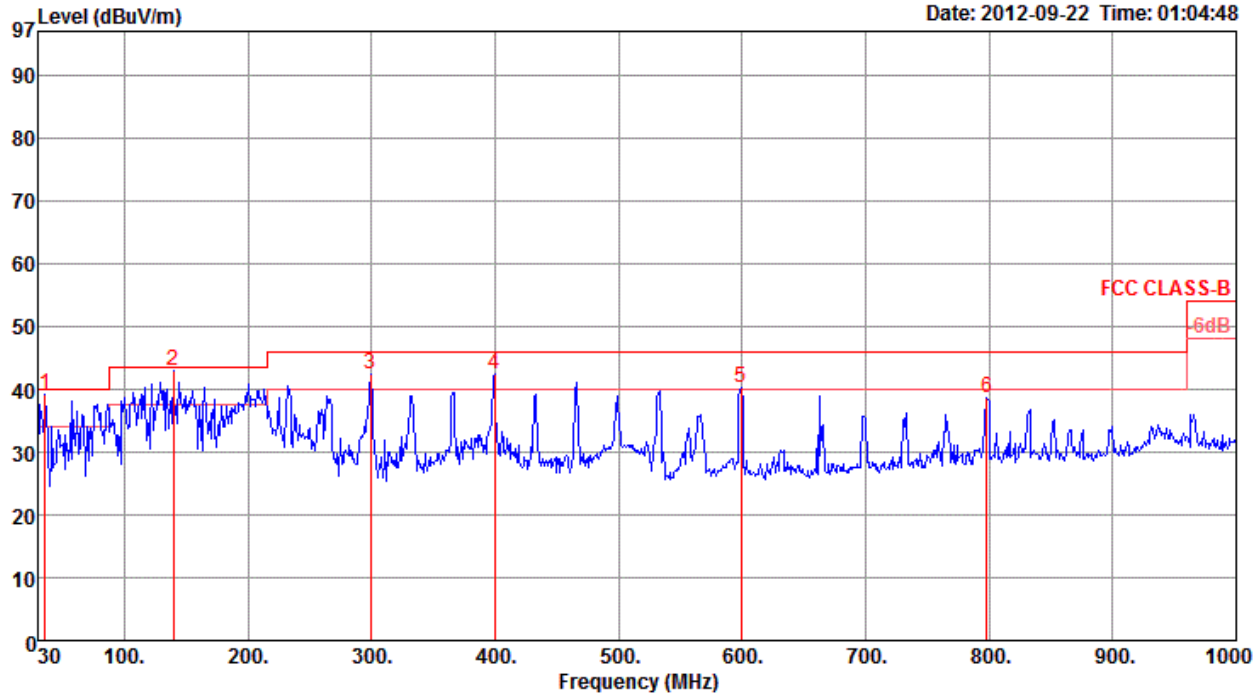
Temperature	21℃	Humidity	56.4%
Test Engineer	Sean Ku	Configurations	CTX
Test Mode	Mode 2.		

Horizontal



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	Remark	T/Pos	A/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m		deg	cm	
1 q	64.92	39.30	40.00	-0.70	59.21	1.20	27.96	6.85	QP	135	125	HORIZONTAL
2 !	133.79	42.43	43.50	-1.07	55.82	1.69	27.60	12.52	QP	185	100	HORIZONTAL
3 !	230.79	44.57	46.00	-1.43	57.93	2.29	27.03	11.38	QP	85	100	HORIZONTAL
4 p	297.72	42.30	46.00	-3.70	52.82	2.51	26.83	13.80	Peak	0	400	HORIZONTAL
5 !	465.53	40.44	46.00	-5.56	47.77	3.28	27.86	17.25	Peak	0	400	HORIZONTAL
6 !	533.43	40.90	46.00	-5.10	46.84	3.49	27.90	18.47	Peak	0	400	HORIZONTAL

Vertical



		Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	Remark	T/Pos	A/Pos	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m		deg	cm	
1	!	35.82	39.08	40.00	-0.92	49.89	0.93	28.00	16.26	QP	265	100	VERTICAL
2	q	139.61	42.96	43.50	-0.54	56.71	1.71	27.56	12.10	QP	65	115	VERTICAL
3	!	299.66	42.35	46.00	-3.65	52.87	2.51	26.83	13.80	Peak	0	100	VERTICAL
4	p	399.57	42.52	46.00	-3.48	50.49	2.99	27.46	16.50	Peak	0	100	VERTICAL
5	!	599.39	40.23	46.00	-5.77	44.82	3.73	27.61	19.29	Peak	0	100	VERTICAL
6		798.24	38.63	46.00	-7.37	40.40	4.35	26.90	20.78	Peak	0	100	VERTICAL

Note:

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

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

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

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

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz Ch 52 / Ant. 4: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	15779.80	40.83	54.00	-13.17	32.70	6.14	37.41	35.42	Average	100	185	HORIZONTAL
2	15781.80	52.23	74.00	-21.77	44.10	6.14	37.41	35.42	Peak	100	185	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	15766.00	52.62	74.00	-21.38	44.47	6.14	37.42	35.41	Peak	100	16	VERTICAL
2	15781.00	40.78	54.00	-13.22	32.65	6.14	37.41	35.42	Average	100	16	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz Ch 60 / Ant. 4: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	10588.20	52.80	68.30	-15.50	44.85	5.01	38.38	35.44	Peak	100	295	HORIZONTAL
2	10598.60	41.24	68.30	-27.06	33.27	5.01	38.38	35.42	Average	100	295	HORIZONTAL
3	15934.60	52.60	74.00	-21.40	44.64	6.15	37.25	35.44	Peak	100	117	HORIZONTAL
4	15944.40	40.52	54.00	-13.48	32.56	6.15	37.25	35.44	Average	100	117	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	10600.40	47.20	54.00	-6.80	39.23	5.01	38.38	35.42	Average	100	100	VERTICAL
2	10602.00	57.83	74.00	-16.17	49.86	5.01	38.38	35.42	Peak	100	100	VERTICAL
3	15904.60	40.90	54.00	-13.10	32.90	6.15	37.29	35.44	Average	100	227	VERTICAL
4	15944.20	52.68	74.00	-21.32	44.72	6.15	37.25	35.44	Peak	100	227	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz Ch 64 / Ant. 4: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	10635.20	39.05	54.00	-14.95	31.06	5.01	38.37	35.39	Average	100	108	HORIZONTAL
2	10645.00	50.21	74.00	-23.79	42.22	5.01	38.37	35.39	Peak	100	108	HORIZONTAL
3	15953.80	40.59	54.00	-13.41	32.65	6.15	37.23	35.44	Average	100	337	HORIZONTAL
4	15972.20	53.16	74.00	-20.84	45.22	6.15	37.22	35.43	Peak	100	337	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	10639.20	42.87	54.00	-11.13	34.88	5.01	38.37	35.39	Average	100	10	VERTICAL
2	10644.80	55.47	74.00	-18.53	47.48	5.01	38.37	35.39	Peak	100	10	VERTICAL
3	15953.40	40.91	54.00	-13.09	32.97	6.15	37.23	35.44	Average	100	178	VERTICAL
4	15962.40	52.56	74.00	-21.44	44.62	6.15	37.23	35.44	Peak	100	178	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz Ch 100 / Ant. 4: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	10997.20	37.34	54.00	-16.66	29.11	5.01	38.32	35.10	Average	100	121	HORIZONTAL
2	11037.80	50.30	74.00	-23.70	42.06	5.02	38.34	35.12	Peak	100	121	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	10975.20	50.77	74.00	-23.23	42.58	5.01	38.30	35.12	Peak	100	295	VERTICAL
2	11001.40	39.35	54.00	-14.65	31.14	5.01	38.30	35.10	Average	100	295	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz Ch 116 / Ant. 4: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	11158.60	43.65	54.00	-10.35	35.31	5.04	38.47	35.17	Average	100	108	HORIZONTAL
2	11159.40	55.51	74.00	-18.49	47.17	5.04	38.47	35.17	Peak	100	108	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	11153.00	56.59	74.00	-17.41	48.26	5.04	38.45	35.16	Peak	100	332	VERTICAL
2	11157.60	45.50	54.00	-8.50	37.17	5.04	38.45	35.16	Average	100	332	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz Ch 140 / Ant. 4: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	11399.90	50.96	74.00	-23.04	42.41	5.10	38.70	35.25	Peak	100	197	HORIZONTAL
2	11401.20	38.12	54.00	-15.88	29.57	5.10	38.70	35.25	Average	100	197	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	11398.60	53.01	74.00	-20.99	44.46	5.10	38.70	35.25	Peak	100	360	VERTICAL
2	11399.20	39.56	54.00	-14.44	31.01	5.10	38.70	35.25	Average	100	360	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 20MHz Ch 52 / Ant. 4: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	15777.80	40.31	54.00	-13.69	32.18	6.14	37.41	35.42	Average	100	176	HORIZONTAL
2	15791.60	51.65	74.00	-22.35	43.52	6.14	37.41	35.42	Peak	100	176	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	15776.40	40.48	54.00	-13.52	32.35	6.14	37.41	35.42	Average	100	41	VERTICAL
2	15782.00	53.11	74.00	-20.89	44.98	6.14	37.41	35.42	Peak	100	41	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 20MHz Ch 60 / Ant. 4: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	10597.00	43.12	68.30	-25.18	35.17	5.01	38.38	35.44	Average	100	103	HORIZONTAL
2	10600.10	55.22	74.00	-18.78	47.25	5.01	38.38	35.42	Peak	100	103	HORIZONTAL
3	15919.20	40.05	54.00	-13.95	32.07	6.15	37.27	35.44	Average	100	334	HORIZONTAL
4	15921.00	52.52	74.00	-21.48	44.54	6.15	37.27	35.44	Peak	100	334	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	10599.80	59.42	68.30	-8.88	51.45	5.01	38.38	35.42	Peak	100	93	VERTICAL
2	10601.90	47.95	54.00	-6.05	39.98	5.01	38.38	35.42	Average	100	93	VERTICAL
3	15905.30	40.31	54.00	-13.69	32.31	6.15	37.29	35.44	Average	100	336	VERTICAL
4	15923.60	52.69	74.00	-21.31	44.71	6.15	37.27	35.44	Peak	100	336	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 20MHz Ch 64 / Ant. 4: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	10636.50	50.37	74.00	-23.63	42.38	5.01	38.37	35.39	Peak	100	304	HORIZONTAL
2	10636.90	38.59	54.00	-15.41	30.60	5.01	38.37	35.39	Average	100	304	HORIZONTAL
3	15946.80	53.22	74.00	-20.78	45.28	6.15	37.23	35.44	Peak	100	128	HORIZONTAL
4	15954.40	40.55	54.00	-13.45	32.61	6.15	37.23	35.44	Average	100	128	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	10640.20	43.86	54.00	-10.14	35.87	5.01	38.37	35.39	Average	100	91	VERTICAL
2	10641.10	55.25	74.00	-18.75	47.26	5.01	38.37	35.39	Peak	100	91	VERTICAL
3	15952.40	40.45	54.00	-13.55	32.51	6.15	37.23	35.44	Average	100	47	VERTICAL
4	15956.00	53.07	74.00	-20.93	45.13	6.15	37.23	35.44	Peak	100	47	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 20MHz Ch 100 / Ant. 4: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	10993.60	49.87	74.00	-24.13	41.64	5.01	38.32	35.10	Peak	100	198	HORIZONTAL
2	10999.00	37.55	54.00	-16.45	29.32	5.01	38.32	35.10	Average	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	10998.90	42.01	54.00	-11.99	33.80	5.01	38.30	35.10	Average	100	355	VERTICAL
2	10999.80	54.92	74.00	-19.08	46.71	5.01	38.30	35.10	Peak	100	355	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 20MHz Ch 116 / Ant. 4: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	11150.90	50.63	74.00	-23.37	42.30	5.04	38.45	35.16	Peak	100	254	HORIZONTAL
2	11160.40	38.78	54.00	-15.22	30.44	5.04	38.47	35.17	Average	100	254	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	11156.90	56.46	74.00	-17.54	48.13	5.04	38.45	35.16	Peak	100	352	VERTICAL
2	11159.80	44.71	54.00	-9.29	36.37	5.04	38.47	35.17	Average	100	352	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 20MHz Ch 140 / Ant. 4: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	11400.70	38.19	54.00	-15.81	29.64	5.10	38.70	35.25	Average	100	157	HORIZONTAL
2	11413.70	50.96	74.00	-23.04	42.42	5.10	38.70	35.26	Peak	100	157	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	11391.50	50.51	74.00	-23.49	41.98	5.10	38.68	35.25	Peak	100	278	VERTICAL
2	11401.30	38.19	54.00	-15.81	29.64	5.10	38.70	35.25	Average	100	278	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 40MHz Ch 54 / Ant. 4: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	15795.30	52.13	74.00	-21.87	44.03	6.14	37.39	35.43	Peak	100	327	HORIZONTAL
2	15796.70	39.54	54.00	-14.46	31.44	6.14	37.39	35.43	Average	100	327	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	15800.70	39.81	54.00	-14.19	31.71	6.14	37.39	35.43	Average	100	165	VERTICAL
2	15803.40	51.85	74.00	-22.15	43.75	6.14	37.39	35.43	Peak	100	165	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 40MHz Ch 62 / Ant. 4: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	10620.40	37.36	54.00	-16.64	29.39	5.01	38.38	35.42	Average	100	75	HORIZONTAL
2	10622.40	50.46	74.00	-23.54	42.49	5.01	38.38	35.42	Peak	100	75	HORIZONTAL
3	15926.20	52.35	74.00	-21.65	44.37	6.15	37.27	35.44	Peak	100	150	HORIZONTAL
4	15943.70	40.50	54.00	-13.50	32.54	6.15	37.25	35.44	Average	100	150	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	10625.20	38.20	54.00	-15.80	30.20	5.01	38.38	35.39	Average	100	354	VERTICAL
2	10640.10	50.43	74.00	-23.57	42.44	5.01	38.37	35.39	Peak	100	354	VERTICAL
3	15947.60	53.16	74.00	-20.84	45.22	6.15	37.23	35.44	Peak	100	234	VERTICAL
4	15947.80	40.44	54.00	-13.56	32.50	6.15	37.23	35.44	Average	100	234	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 40MHz Ch 102 / Ant. 4: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	11030.70	49.96	74.00	-24.04	41.71	5.02	38.34	35.11	Peak	100	341	HORIZONTAL
2	11043.90	37.11	54.00	-16.89	28.85	5.02	38.36	35.12	Average	100	341	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	11043.10	37.29	54.00	-16.71	29.04	5.02	38.35	35.12	Average	100	233	VERTICAL
2	11044.00	49.81	74.00	-24.19	41.56	5.02	38.35	35.12	Peak	100	233	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 40MHz Ch 110 / Ant. 4: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	11098.10	38.19	54.00	-15.81	29.90	5.03	38.40	35.14	Average	100	203	HORIZONTAL
2	11121.40	50.45	74.00	-23.55	42.14	5.04	38.42	35.15	Peak	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	11102.30	39.22	54.00	-14.78	30.93	5.03	38.40	35.14	Average	100	58	VERTICAL
2	11102.30	50.24	74.00	-23.76	41.95	5.03	38.40	35.14	Peak	100	58	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 40MHz Ch 134 / Ant. 4: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	11341.10	38.19	54.00	-15.81	29.71	5.09	38.63	35.24	Average	100	113	HORIZONTAL
2	11342.50	50.44	74.00	-23.56	41.96	5.09	38.63	35.24	Peak	100	113	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	11317.00	50.30	74.00	-23.70	41.83	5.08	38.62	35.23	Peak	100	57	VERTICAL
2	11358.10	39.73	54.00	-14.27	31.23	5.09	38.65	35.24	Average	100	57	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 40MHz Ch 54 / Ant. 4: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	15796.60	39.70	54.00	-14.30	31.60	6.14	37.39	35.43	Average	100	227	HORIZONTAL
2	15809.60	51.92	74.00	-22.08	43.82	6.14	37.39	35.43	Peak	100	227	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	15786.50	51.81	74.00	-22.19	43.68	6.14	37.41	35.42	Peak	100	103	VERTICAL
2	15794.80	39.71	54.00	-14.29	31.61	6.14	37.39	35.43	Average	100	103	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 40MHz Ch 62 / Ant. 4: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	10611.10	50.42	74.00	-23.58	42.45	5.01	38.38	35.42	Peak	100	190	HORIZONTAL
2	10625.20	37.17	54.00	-16.83	29.17	5.01	38.38	35.39	Average	100	190	HORIZONTAL
3	15942.40	40.51	54.00	-13.49	32.55	6.15	37.25	35.44	Average	100	159	HORIZONTAL
4	15950.40	53.63	74.00	-20.37	45.69	6.15	37.23	35.44	Peak	100	159	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	10624.90	37.38	54.00	-16.62	29.38	5.01	38.38	35.39	Average	100	10	VERTICAL
2	10624.90	49.09	74.00	-24.91	41.09	5.01	38.38	35.39	Peak	100	10	VERTICAL
3	15924.20	52.76	74.00	-21.24	44.78	6.15	37.27	35.44	Peak	100	41	VERTICAL
4	15947.50	40.35	54.00	-13.65	32.41	6.15	37.23	35.44	Average	100	41	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 40MHz Ch 102 / Ant. 4: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	11040.80	37.32	54.00	-16.68	29.06	5.02	38.36	35.12	Average	100	316	HORIZONTAL
2	11042.10	50.17	74.00	-23.83	41.91	5.02	38.36	35.12	Peak	100	316	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	11037.40	50.55	74.00	-23.45	42.32	5.02	38.33	35.12	Peak	100	272	VERTICAL
2	11042.40	37.20	54.00	-16.80	28.95	5.02	38.35	35.12	Average	100	272	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 40MHz Ch 110 / Ant. 4: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	11087.60	50.46	74.00	-23.54	42.19	5.03	38.38	35.14	Peak	100	111	HORIZONTAL
2	11106.40	38.15	54.00	-15.85	29.86	5.03	38.40	35.14	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	11091.00	51.34	74.00	-22.66	43.05	5.03	38.40	35.14	Peak	100	6	VERTICAL
2	11104.20	39.66	54.00	-14.34	31.37	5.03	38.40	35.14	Average	100	6	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 40MHz Ch 134 / Ant. 4: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	11318.90	37.81	54.00	-16.19	29.34	5.08	38.62	35.23	Average	100	156	HORIZONTAL
2	11349.60	50.16	74.00	-23.84	41.66	5.09	38.65	35.24	Peak	100	156	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	11319.80	51.51	74.00	-22.49	43.04	5.08	38.62	35.23	Peak	100	288	VERTICAL
2	11328.60	38.15	54.00	-15.85	29.68	5.08	38.62	35.23	Average	100	288	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz Ch 52 / Ant. 5: Chain. 1 (1TX)
Test Date	Sep. 10, 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	3265.60	59.08	74.00	-14.92	61.74	2.68	30.00	35.34	Peak	100	318	HORIZONTAL
2	3267.00	43.07	54.00	-10.93	45.73	2.68	30.00	35.34	Average	100	318	HORIZONTAL
3	15787.90	37.71	74.00	-36.29	29.58	6.14	37.41	35.42	Peak	100	214	HORIZONTAL
4	15789.00	52.33	74.00	-21.67	44.20	6.14	37.41	35.42	Peak	100	214	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	3266.00	65.29	74.00	-8.71	67.95	2.68	30.00	35.34	Peak	120	252	VERTICAL
2	3266.80	48.48	54.00	-5.52	51.14	2.68	30.00	35.34	Average	120	252	VERTICAL
3	15767.80	50.59	74.00	-23.41	42.45	6.14	37.42	35.42	Peak	100	260	VERTICAL
4	15768.60	38.37	54.00	-15.63	30.23	6.14	37.42	35.42	Average	100	260	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz Ch 60 / Ant. 5: Chain. 1 (1TX)
Test Date	Sep. 10, 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	10603.08	46.20	74.00	-27.80	38.23	5.01	38.38	35.42	Peak	100	72	HORIZONTAL
2	10607.16	34.52	54.00	-19.48	26.55	5.01	38.38	35.42	Average	100	72	HORIZONTAL
3	15895.12	36.17	54.00	-17.83	28.16	6.15	37.30	35.44	Average	100	347	HORIZONTAL
4	15895.72	48.94	74.00	-25.06	40.94	6.15	37.29	35.44	Peak	100	347	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	10603.28	34.19	54.00	-19.81	26.22	5.01	38.38	35.42	Average	100	58	VERTICAL
2	10605.20	48.45	74.00	-25.55	40.48	5.01	38.38	35.42	Peak	100	58	VERTICAL
3	15904.80	48.88	74.00	-25.12	40.88	6.15	37.29	35.44	Peak	100	253	VERTICAL
4	15905.44	36.45	54.00	-17.55	28.45	6.15	37.29	35.44	Average	100	253	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz Ch 64 / Ant. 5: Chain. 1 (1TX)
Test Date	Sep. 10, 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	10637.40	45.96	74.00	-28.04	37.97	5.01	38.37	35.39	Peak	100	129	HORIZONTAL
2	10645.20	34.23	54.00	-19.77	26.24	5.01	38.37	35.39	Average	100	129	HORIZONTAL
3	15954.56	48.70	74.00	-25.30	40.76	6.15	37.23	35.44	Peak	100	73	HORIZONTAL
4	15957.64	35.20	54.00	-18.80	27.26	6.15	37.23	35.44	Average	100	73	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	10630.16	45.93	74.00	-28.07	37.93	5.01	38.38	35.39	Peak	100	310	VERTICAL
2	10649.72	33.77	54.00	-20.23	25.76	5.01	38.37	35.37	Average	100	310	VERTICAL
3	15952.12	48.12	74.00	-25.88	40.18	6.15	37.23	35.44	Peak	100	214	VERTICAL
4	15961.72	35.26	54.00	-18.74	27.32	6.15	37.23	35.44	Average	100	214	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz Ch 100 / Ant. 5: Chain. 1 (1TX)
Test Date	Sep. 10, 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	11007.10	46.28	74.00	-27.72	38.05	5.01	38.33	35.11	Peak	100	204	HORIZONTAL
2	11014.80	34.95	54.00	-19.05	26.71	5.02	38.33	35.11	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	10982.20	34.73	54.00	-19.27	26.52	5.01	38.30	35.10	Average	100	337	VERTICAL
2	11017.20	47.39	74.00	-26.61	39.16	5.02	38.32	35.11	Peak	100	337	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz Ch 116 / Ant. 5: Chain. 1 (1TX)
Test Date	Sep. 10, 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	11135.00	33.41	54.00	-20.59	25.10	5.04	38.43	35.16	Average	100	154	HORIZONTAL
2	11150.50	45.13	74.00	-28.87	36.80	5.04	38.45	35.16	Peak	100	154	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	11165.10	46.09	74.00	-27.91	37.74	5.05	38.47	35.17	Peak	100	20	VERTICAL
2	11173.50	34.27	54.00	-19.73	25.92	5.05	38.47	35.17	Average	100	19	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz Ch 140 / Ant. 5: Chain. 1 (1TX)
Test Date	Sep. 10, 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	11419.40	35.60	54.00	-18.40	27.04	5.10	38.72	35.26	Average	100	63	HORIZONTAL
2	11420.00	47.36	74.00	-26.64	38.80	5.10	38.72	35.26	Peak	100	63	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	11419.00	35.63	54.00	-18.37	27.07	5.10	38.72	35.26	Average	100	239	VERTICAL
2	11423.70	47.43	74.00	-26.57	38.87	5.10	38.72	35.26	Peak	100	239	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 40MHz Ch 54 / Ant. 5: Chain. 1 (1TX)
Test Date	Sep. 10, 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	3280.60	55.24	74.00	-18.76	57.90	2.68	30.00	35.34	Peak	100	337	HORIZONTAL
2	3282.20	43.43	54.00	-10.57	46.09	2.68	30.00	35.34	Average	100	337	HORIZONTAL
3	15805.60	37.92	54.00	-16.08	29.82	6.14	37.39	35.43	Average	100	13	HORIZONTAL
4	15809.60	50.50	74.00	-23.50	42.40	6.14	37.39	35.43	Peak	100	12	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	3276.40	62.12	74.00	-11.88	64.78	2.68	30.00	35.34	Peak	100	329	VERTICAL
2	3278.80	48.91	54.00	-5.09	51.57	2.68	30.00	35.34	Average	100	329	VERTICAL
3	15809.70	38.24	54.00	-15.76	30.14	6.14	37.39	35.43	Average	100	57	VERTICAL
4	15818.40	51.57	74.00	-22.43	43.50	6.14	37.37	35.44	Peak	100	57	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 40MHz Ch 62 / Ant. 5: Chain. 1 (1TX)
Test Date	Sep. 10, 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	10603.70	46.83	74.00	-27.17	38.86	5.01	38.38	35.42	Peak	100	287	HORIZONTAL
2	10604.70	34.49	54.00	-19.51	26.52	5.01	38.38	35.42	Average	100	287	HORIZONTAL
3	15912.30	36.35	54.00	-17.65	28.35	6.15	37.29	35.44	Average	100	89	HORIZONTAL
4	15949.90	49.38	74.00	-24.62	41.44	6.15	37.23	35.44	Peak	100	89	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	10603.00	34.60	54.00	-19.40	26.63	5.01	38.38	35.42	Average	100	309	VERTICAL
2	10609.60	47.10	74.00	-26.90	39.13	5.01	38.38	35.42	Peak	100	309	VERTICAL
3	15905.10	36.61	54.00	-17.39	28.61	6.15	37.29	35.44	Average	100	214	VERTICAL
4	15935.40	49.38	74.00	-24.62	41.42	6.15	37.25	35.44	Peak	100	214	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 40MHz Ch 102 / Ant. 5: Chain. 1 (1TX)
Test Date	Sep. 10, 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	10924.80	35.35	54.00	-18.65	27.19	5.01	38.31	35.16	Average	100	324	HORIZONTAL
2	11102.80	48.29	74.00	-25.71	40.00	5.03	38.40	35.14	Peak	100	324	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	10924.80	35.46	54.00	-18.54	27.30	5.01	38.31	35.16	Average	100	280	VERTICAL
2	11090.80	47.07	74.00	-26.93	38.78	5.03	38.40	35.14	Peak	100	280	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 40MHz Ch 110 / Ant. 5: Chain. 1 (1TX)
Test Date	Sep. 10, 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	11050.20	35.62	54.00	-18.38	27.36	5.02	38.36	35.12	Average	100	301	HORIZONTAL
2	11112.00	47.86	74.00	-26.14	39.55	5.04	38.42	35.15	Peak	100	301	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	11095.80	35.83	54.00	-18.17	27.54	5.03	38.40	35.14	Average	100	197	VERTICAL
2	11116.00	48.21	74.00	-25.79	39.90	5.04	38.42	35.15	Peak	100	198	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 40MHz Ch 134 / Ant. 5: Chain. 1 (1TX)
Test Date	Sep. 10, 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	11434.00	36.01	54.00	-17.99	27.44	5.10	38.73	35.26	Average	100	131	HORIZONTAL
2	11434.00	48.12	74.00	-25.88	39.55	5.10	38.73	35.26	Peak	100	131	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	11390.40	49.02	74.00	-24.98	40.50	5.09	38.68	35.25	Peak	100	84	VERTICAL
2	11404.40	35.79	54.00	-18.21	27.24	5.10	38.70	35.25	Average	100	84	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz Ch 52 / Ant. 6: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	15756.90	35.74	54.00	-18.26	27.57	6.14	37.44	35.41	Average	100	194	HORIZONTAL
2	15761.80	48.13	74.00	-25.87	39.98	6.14	37.42	35.41	Peak	100	194	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	15758.50	48.29	74.00	-25.71	40.12	6.14	37.44	35.41	Peak	100	72	VERTICAL
2	15772.50	35.70	54.00	-18.30	27.56	6.14	37.42	35.42	Average	100	72	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz Ch 60 / Ant. 6: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	10614.90	48.35	74.00	-25.65	40.38	5.01	38.38	35.42	Peak	100	299	HORIZONTAL
2	10616.90	35.73	54.00	-18.27	27.76	5.01	38.38	35.42	Average	100	299	HORIZONTAL
3	15876.50	35.29	54.00	-18.71	27.27	6.14	37.32	35.44	Average	100	194	HORIZONTAL
4	15888.40	47.34	74.00	-26.66	39.33	6.15	37.30	35.44	Peak	100	193	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	10610.20	48.03	74.00	-25.97	40.06	5.01	38.38	35.42	Peak	100	107	VERTICAL
2	10620.30	36.56	54.00	-17.44	28.59	5.01	38.38	35.42	Average	100	107	VERTICAL
3	15899.40	47.81	74.00	-26.19	39.81	6.15	37.29	35.44	Peak	100	71	VERTICAL
4	15903.30	35.18	54.00	-18.82	27.18	6.15	37.29	35.44	Average	100	71	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz Ch 64 / Ant. 6: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	10649.30	47.70	74.00	-26.30	39.69	5.01	38.37	35.37	Peak	100	342	HORIZONTAL
2	10659.30	35.92	54.00	-18.08	27.91	5.01	38.37	35.37	Average	100	342	HORIZONTAL
3	15935.00	34.97	54.00	-19.03	27.01	6.15	37.25	35.44	Average	100	147	HORIZONTAL
4	15947.30	47.45	74.00	-26.55	39.51	6.15	37.23	35.44	Peak	100	147	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	10643.60	46.33	74.00	-27.67	38.34	5.01	38.37	35.39	Peak	100	259	VERTICAL
2	10660.70	35.20	54.00	-18.80	27.19	5.01	38.37	35.37	Average	100	259	VERTICAL
3	15955.60	47.07	74.00	-26.93	39.13	6.15	37.23	35.44	Peak	100	315	VERTICAL
4	15966.00	34.85	54.00	-19.15	26.92	6.15	37.22	35.44	Average	100	315	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz Ch 100 / Ant. 6: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	10982.40	47.35	74.00	-26.65	39.14	5.01	38.30	35.10	Peak	100	75	HORIZONTAL
2	10982.80	33.65	54.00	-20.35	25.44	5.01	38.30	35.10	Average	100	75	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	10982.60	46.84	74.00	-27.16	38.63	5.01	38.30	35.10	Peak	100	204	VERTICAL
2	10982.90	33.55	54.00	-20.45	25.34	5.01	38.30	35.10	Average	100	204	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz Ch 116 / Ant. 6: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	11180.70	37.63	54.00	-16.37	29.27	5.05	38.48	35.17	Average	100	137	HORIZONTAL
2	11180.80	51.73	74.00	-22.27	43.37	5.05	38.48	35.17	Peak	100	137	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	11178.40	36.81	54.00	-17.19	28.45	5.05	38.48	35.17	Average	100	349	VERTICAL
2	11180.00	48.64	74.00	-25.36	40.28	5.05	38.48	35.17	Peak	100	349	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz Ch 140 / Ant. 6: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	11375.40	34.17	54.00	-19.83	25.66	5.09	38.67	35.25	Average	100	323	HORIZONTAL
2	11385.70	46.85	74.00	-27.15	38.33	5.09	38.68	35.25	Peak	100	323	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	11375.60	33.93	54.00	-20.07	25.42	5.09	38.67	35.25	Average	100	116	VERTICAL
2	11393.80	46.77	74.00	-27.23	38.24	5.10	38.68	35.25	Peak	100	116	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 20MHz Ch 52 / Ant. 6: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	15730.00	36.31	54.00	-17.69	28.10	6.14	37.46	35.39	Average	100	209	HORIZONTAL
2	15783.20	48.95	74.00	-25.05	40.82	6.14	37.41	35.42	Peak	100	209	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	15730.40	36.14	54.00	-17.86	27.93	6.14	37.46	35.39	Average	100	323	VERTICAL
2	15812.60	48.63	74.00	-25.37	40.55	6.14	37.37	35.43	Peak	100	323	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 20MHz Ch 60 / Ant. 6: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	10564.60	48.19	68.30	-20.11	40.25	5.01	38.39	35.46	Peak	100	15	HORIZONTAL
2	10615.80	39.11	54.00	-14.89	31.14	5.01	38.38	35.42	Average	100	15	HORIZONTAL
3	15865.20	35.69	54.00	-18.31	27.68	6.14	37.32	35.45	Average	100	306	HORIZONTAL
4	15869.60	48.21	74.00	-25.79	40.19	6.14	37.32	35.44	Peak	100	306	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	10617.80	52.30	74.00	-21.70	44.33	5.01	38.38	35.42	Peak	100	33	VERTICAL
2	10620.00	42.01	54.00	-11.99	34.04	5.01	38.38	35.42	Average	100	33	VERTICAL
3	15884.80	48.32	74.00	-25.68	40.31	6.15	37.30	35.44	Peak	100	168	VERTICAL
4	15925.80	35.69	54.00	-18.31	27.71	6.15	37.27	35.44	Average	100	168	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 20MHz Ch 64 / Ant. 6: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	10633.00	33.83	54.00	-20.17	25.84	5.01	38.37	35.39	Average	100	207	HORIZONTAL
2	10633.00	45.16	74.00	-28.84	37.17	5.01	38.37	35.39	Peak	100	207	HORIZONTAL
3	15912.00	35.61	54.00	-18.39	27.61	6.15	37.29	35.44	Average	100	236	HORIZONTAL
4	15920.00	49.30	74.00	-24.70	41.32	6.15	37.27	35.44	Peak	100	236	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	10639.40	47.19	74.00	-26.81	39.20	5.01	38.37	35.39	Peak	100	360	VERTICAL
2	10660.00	34.75	54.00	-19.25	26.74	5.01	38.37	35.37	Average	100	360	VERTICAL
3	15912.00	35.61	54.00	-18.39	27.61	6.15	37.29	35.44	Average	100	274	VERTICAL
4	15985.20	48.40	74.00	-25.60	40.45	6.15	37.23	35.43	Peak	100	275	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 20MHz Ch 100 / Ant. 6: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	10982.60	33.69	54.00	-20.31	25.48	5.01	38.30	35.10	Average	100	153	HORIZONTAL
2	11006.80	45.57	74.00	-28.43	37.34	5.01	38.33	35.11	Peak	100	153	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	10982.80	33.79	54.00	-20.21	25.58	5.01	38.30	35.10	Average	100	263	VERTICAL
2	11032.40	46.87	74.00	-27.13	38.64	5.02	38.33	35.12	Peak	100	263	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 20MHz Ch 116 / Ant. 6: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	11177.40	36.69	54.00	-17.31	28.33	5.05	38.48	35.17	Average	100	300	HORIZONTAL
2	11177.80	47.86	74.00	-26.14	39.50	5.05	38.48	35.17	Peak	100	300	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	11175.60	50.69	74.00	-23.31	42.33	5.05	38.48	35.17	Peak	100	34	VERTICAL
2	11178.40	38.47	54.00	-15.53	30.11	5.05	38.48	35.17	Average	100	34	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 20MHz Ch 140 / Ant. 6: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	11375.00	34.23	54.00	-19.77	25.72	5.09	38.67	35.25	Average	100	23	HORIZONTAL
2	11416.20	46.68	74.00	-27.32	38.12	5.10	38.72	35.26	Peak	100	23	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	11392.90	46.26	74.00	-27.74	37.73	5.10	38.68	35.25	Peak	100	158	VERTICAL
2	11408.60	34.26	54.00	-19.74	25.71	5.10	38.70	35.25	Average	100	158	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 40MHz Ch 54 / Ant. 6: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	15788.10	35.92	54.00	-18.08	27.79	6.14	37.41	35.42	Average	100	345	HORIZONTAL
2	15829.00	47.80	74.00	-26.20	39.74	6.14	37.36	35.44	Peak	100	345	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	15806.70	48.31	74.00	-25.69	40.21	6.14	37.39	35.43	Peak	100	186	VERTICAL
2	15833.70	35.71	54.00	-18.29	27.65	6.14	37.36	35.44	Average	100	186	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 40MHz Ch 62 / Ant. 6: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	10604.10	34.96	54.00	-19.04	26.99	5.01	38.38	35.42	Average	100	113	HORIZONTAL
2	10641.30	46.91	74.00	-27.09	38.92	5.01	38.37	35.39	Peak	100	113	HORIZONTAL
3	15917.00	35.90	54.00	-18.10	27.92	6.15	37.27	35.44	Average	100	30	HORIZONTAL
4	15924.90	47.47	74.00	-26.53	39.49	6.15	37.27	35.44	Peak	100	30	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	34.37	54.00	-19.63	26.40	5.01	38.38	35.42	Average	100	107	VERTICAL
2	10601.00	46.39	74.00	-27.61	38.42	5.01	38.38	35.42	Peak	100	107	VERTICAL
3	15905.20	35.80	54.00	-18.20	27.80	6.15	37.29	35.44	Average	100	70	VERTICAL
4	15932.10	47.64	74.00	-26.36	39.68	6.15	37.25	35.44	Peak	100	70	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 40MHz Ch 102 / Ant. 6: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	11006.70	47.30	74.00	-26.70	39.07	5.01	38.33	35.11	Peak	100	355	HORIZONTAL
2	11007.00	33.54	54.00	-20.46	25.31	5.01	38.33	35.11	Average	100	355	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	11011.20	46.38	74.00	-27.62	38.15	5.02	38.32	35.11	Peak	100	296	VERTICAL
2	11012.00	33.28	54.00	-20.72	25.05	5.02	38.32	35.11	Average	100	296	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 40MHz Ch 110 / Ant. 6: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	11100.70	46.53	74.00	-27.47	38.24	5.03	38.40	35.14	Peak	100	139	HORIZONTAL
2	11100.90	34.57	54.00	-19.43	26.28	5.03	38.40	35.14	Average	100	139	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	11089.80	47.65	74.00	-26.35	39.38	5.03	38.38	35.14	Peak	100	20	VERTICAL
2	11100.20	35.20	54.00	-18.80	26.91	5.03	38.40	35.14	Average	100	20	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 40MHz Ch 134 / Ant. 6: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	11320.00	33.97	54.00	-20.03	25.50	5.08	38.62	35.23	Average	100	352	HORIZONTAL
2	11378.20	48.55	74.00	-25.45	40.04	5.09	38.67	35.25	Peak	100	352	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	11338.10	35.84	54.00	-18.16	27.37	5.08	38.63	35.24	Average	100	203	VERTICAL
2	11338.20	48.19	74.00	-25.81	39.72	5.08	38.63	35.24	Peak	100	203	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 40MHz Ch 54 / Ant. 6: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	15805.28	35.73	54.00	-18.27	27.63	6.14	37.39	35.43	Average	100	355	HORIZONTAL
2	15814.40	48.80	74.00	-25.20	40.72	6.14	37.37	35.43	Peak	100	355	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	15806.60	49.16	74.00	-24.84	41.06	6.14	37.39	35.43	Peak	100	230	VERTICAL
2	15807.76	35.88	54.00	-18.12	27.78	6.14	37.39	35.43	Average	100	230	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 40MHz Ch 62 / Ant. 6: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	10611.72	34.60	54.00	-19.40	26.63	5.01	38.38	35.42	Average	100	134	HORIZONTAL
2	10622.28	46.37	74.00	-27.63	38.40	5.01	38.38	35.42	Peak	100	134	HORIZONTAL
3	15920.16	35.47	54.00	-18.53	27.49	6.15	37.27	35.44	Average	100	320	HORIZONTAL
4	15931.76	48.22	74.00	-25.78	40.26	6.15	37.25	35.44	Peak	100	320	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	10611.48	34.37	54.00	-19.63	26.40	5.01	38.38	35.42	Average	100	33	VERTICAL
2	10611.76	46.40	74.00	-27.60	38.43	5.01	38.38	35.42	Peak	100	33	VERTICAL
3	15920.00	35.63	54.00	-18.37	27.65	6.15	37.27	35.44	Average	100	301	VERTICAL
4	15931.84	48.02	74.00	-25.98	40.06	6.15	37.25	35.44	Peak	100	302	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 40MHz Ch 102 / Ant. 6: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	11011.68	33.79	54.00	-20.21	25.55	5.02	38.33	35.11	Average	100	140	HORIZONTAL
2	11019.92	47.41	74.00	-26.59	39.17	5.02	38.33	35.11	Peak	100	140	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	11010.92	46.54	74.00	-27.46	38.31	5.02	38.32	35.11	Peak	100	352	VERTICAL
2	11012.20	33.88	54.00	-20.12	25.65	5.02	38.32	35.11	Average	100	352	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 40MHz Ch 110 / Ant. 6: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	11096.88	47.13	74.00	-26.87	38.84	5.03	38.40	35.14	Peak	100	360	HORIZONTAL
2	11101.12	34.53	54.00	-19.47	26.24	5.03	38.40	35.14	Average	100	360	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	11102.24	47.52	74.00	-26.48	39.23	5.03	38.40	35.14	Peak	100	175	VERTICAL
2	11112.48	34.40	54.00	-19.60	26.09	5.04	38.42	35.15	Average	100	175	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 40MHz Ch 134 / Ant. 6: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	11320.72	33.84	54.00	-20.16	25.37	5.08	38.62	35.23	Average	100	85	HORIZONTAL
2	11322.48	47.64	74.00	-26.36	39.17	5.08	38.62	35.23	Peak	100	85	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	11338.40	34.02	54.00	-19.98	25.55	5.08	38.63	35.24	Average	100	21	VERTICAL
2	11339.04	47.00	74.00	-27.00	38.53	5.08	38.63	35.24	Peak	100	21	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz Ch 52 / Ant. 10: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	15782.40	38.41	54.00	-15.59	30.28	6.14	37.41	35.42	Average	100	78	HORIZONTAL
2	15868.80	50.42	74.00	-23.58	42.41	6.14	37.32	35.45	Peak	100	78	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	15735.20	51.16	74.00	-22.84	42.95	6.14	37.46	35.39	Peak	100	189	VERTICAL
2	15774.40	39.71	54.00	-14.29	31.57	6.14	37.42	35.42	Average	100	189	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz Ch 60 / Ant. 10: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	10598.90	46.59	68.30	-21.71	38.62	5.01	38.38	35.42	Peak	100	130	HORIZONTAL
2	10603.20	38.34	54.00	-15.66	30.37	5.01	38.38	35.42	Average	100	130	HORIZONTAL
3	15896.80	37.04	54.00	-16.96	29.04	6.15	37.29	35.44	Average	100	348	HORIZONTAL
4	15896.90	49.58	74.00	-24.42	41.58	6.15	37.29	35.44	Peak	100	348	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	41.57	54.00	-12.43	33.60	5.01	38.38	35.42	Average	100	30	VERTICAL
2	10600.00	53.00	74.00	-21.00	45.03	5.01	38.38	35.42	Peak	100	30	VERTICAL
3	15885.00	49.75	74.00	-24.25	41.74	6.15	37.30	35.44	Peak	100	188	VERTICAL
4	15904.70	37.60	54.00	-16.40	29.60	6.15	37.29	35.44	Average	100	188	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz Ch 64 / Ant. 10: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	10626.10	47.46	74.00	-26.54	39.46	5.01	38.38	35.39	Peak	100	254	HORIZONTAL
2	10640.30	37.09	54.00	-16.91	29.10	5.01	38.37	35.39	Average	100	254	HORIZONTAL
3	15946.20	48.36	74.00	-25.64	40.40	6.15	37.25	35.44	Peak	100	75	HORIZONTAL
4	15962.50	35.80	54.00	-18.20	27.86	6.15	37.23	35.44	Average	100	75	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	10637.80	50.47	74.00	-23.53	42.48	5.01	38.37	35.39	Peak	100	249	VERTICAL
2	10641.40	42.32	54.00	-11.68	34.33	5.01	38.37	35.39	Average	100	249	VERTICAL
3	15961.60	36.96	54.00	-17.04	29.02	6.15	37.23	35.44	Average	100	13	VERTICAL
4	15975.00	49.34	74.00	-24.66	41.40	6.15	37.22	35.43	Peak	100	14	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz Ch 100 / Ant. 10: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	11003.30	34.69	54.00	-19.31	26.46	5.01	38.32	35.10	Average	100	195	HORIZONTAL
2	11020.50	46.80	74.00	-27.20	38.56	5.02	38.33	35.11	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	10999.90	36.87	54.00	-17.13	28.66	5.01	38.30	35.10	Average	100	59	VERTICAL
2	11000.60	46.73	74.00	-27.27	38.52	5.01	38.30	35.10	Peak	100	59	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz Ch 116 / Ant. 10: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	11141.00	47.35	74.00	-26.65	39.04	5.04	38.43	35.16	Peak	100	206	HORIZONTAL
2	11159.10	36.97	54.00	-17.03	28.63	5.04	38.47	35.17	Average	100	206	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	11160.60	39.54	54.00	-14.46	31.20	5.04	38.47	35.17	Average	100	306	VERTICAL
2	11161.70	47.77	74.00	-26.23	39.43	5.04	38.47	35.17	Peak	100	306	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz Ch 140 / Ant. 10: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	11377.20	45.96	74.00	-28.04	37.45	5.09	38.67	35.25	Peak	100	115	HORIZONTAL
2	11401.10	35.75	54.00	-18.25	27.20	5.10	38.70	35.25	Average	100	115	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	11399.40	38.19	54.00	-15.81	29.64	5.10	38.70	35.25	Average	100	144	VERTICAL
2	11399.70	48.01	74.00	-25.99	39.46	5.10	38.70	35.25	Peak	100	144	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 20MHz Ch 52 / Ant. 10: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	15757.90	48.93	74.00	-25.07	40.76	6.14	37.44	35.41	Peak	100	250	HORIZONTAL
2	15773.60	37.32	54.00	-16.68	29.18	6.14	37.42	35.42	Average	100	250	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	15773.70	49.71	74.00	-24.29	41.57	6.14	37.42	35.42	Peak	100	329	VERTICAL
2	15774.50	37.36	54.00	-16.64	29.22	6.14	37.42	35.42	Average	100	330	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 20MHz Ch 60 / Ant. 10: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	10601.00	36.30	54.00	-17.70	28.33	5.01	38.38	35.42	Average	100	180	HORIZONTAL
2	10602.90	46.94	74.00	-27.06	38.97	5.01	38.38	35.42	Peak	100	180	HORIZONTAL
3	15890.00	49.40	74.00	-24.60	41.39	6.15	37.30	35.44	Peak	100	121	HORIZONTAL
4	15897.40	36.30	54.00	-17.70	28.30	6.15	37.29	35.44	Average	100	121	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	10598.70	49.93	68.30	-18.37	41.96	5.01	38.38	35.42	Peak	100	124	VERTICAL
2	10600.20	41.12	54.00	-12.88	33.15	5.01	38.38	35.42	Average	100	124	VERTICAL
3	15894.40	36.24	54.00	-17.76	28.23	6.15	37.30	35.44	Average	100	87	VERTICAL
4	15921.80	48.93	74.00	-25.07	40.95	6.15	37.27	35.44	Peak	100	87	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 20MHz Ch 64 / Ant. 10: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	10640.00	35.33	54.00	-18.67	27.34	5.01	38.37	35.39	Average	100	332	HORIZONTAL
2	10658.20	46.62	74.00	-27.38	38.61	5.01	38.37	35.37	Peak	100	332	HORIZONTAL
3	15968.10	36.34	54.00	-17.66	28.41	6.15	37.22	35.44	Average	100	335	HORIZONTAL
4	15972.10	49.58	74.00	-24.42	41.64	6.15	37.22	35.43	Peak	100	335	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	10640.00	50.49	74.00	-23.51	42.50	5.01	38.37	35.39	Peak	100	0	VERTICAL
2	10643.60	39.85	54.00	-14.15	31.86	5.01	38.37	35.39	Average	100	0	VERTICAL
3	15937.70	36.36	54.00	-17.64	28.40	6.15	37.25	35.44	Average	100	360	VERTICAL
4	15967.70	50.25	74.00	-23.75	42.32	6.15	37.22	35.44	Peak	100	360	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 20MHz Ch 100 / Ant. 10: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	11005.30	47.90	74.00	-26.10	39.66	5.01	38.33	35.10	Peak	100	273	HORIZONTAL
2	11006.20	34.54	54.00	-19.46	26.31	5.01	38.33	35.11	Average	100	273	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	10999.40	37.85	54.00	-16.15	29.64	5.01	38.30	35.10	Average	100	298	VERTICAL
2	11002.70	47.86	74.00	-26.14	39.65	5.01	38.30	35.10	Peak	100	298	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 20MHz Ch 116 / Ant. 10: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	11156.60	48.02	74.00	-25.98	39.69	5.04	38.45	35.16	Peak	100	252	HORIZONTAL
2	11160.70	36.02	54.00	-17.98	27.68	5.04	38.47	35.17	Average	100	252	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	11156.50	40.66	54.00	-13.34	32.33	5.04	38.45	35.16	Average	100	157	VERTICAL
2	11158.90	48.91	74.00	-25.09	40.57	5.04	38.47	35.17	Peak	100	157	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 20MHz Ch 140 / Ant. 10: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	11397.90	35.26	54.00	-18.74	26.71	5.10	38.70	35.25	Average	100	242	HORIZONTAL
2	11400.60	47.23	74.00	-26.77	38.68	5.10	38.70	35.25	Peak	100	242	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	11402.40	37.79	54.00	-16.21	29.24	5.10	38.70	35.25	Average	100	325	VERTICAL
2	11417.70	48.13	74.00	-25.87	39.57	5.10	38.72	35.26	Peak	100	325	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 40MHz Ch 54 / Ant. 10: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	15819.10	35.66	54.00	-18.34	27.59	6.14	37.37	35.44	Average	100	206	HORIZONTAL
2	15828.80	48.83	74.00	-25.17	40.77	6.14	37.36	35.44	Peak	100	206	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	15795.00	35.67	54.00	-18.33	27.57	6.14	37.39	35.43	Average	100	300	VERTICAL
2	15801.80	48.02	74.00	-25.98	39.92	6.14	37.39	35.43	Peak	100	300	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 40MHz Ch 62 / Ant. 10: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	10608.20	33.93	54.00	-20.07	25.96	5.01	38.38	35.42	Average	100	27	HORIZONTAL
2	10609.30	46.09	74.00	-27.91	38.12	5.01	38.38	35.42	Peak	100	27	HORIZONTAL
3	15918.90	35.98	54.00	-18.02	28.00	6.15	37.27	35.44	Average	100	92	HORIZONTAL
4	15924.10	47.67	74.00	-26.33	39.69	6.15	37.27	35.44	Peak	100	92	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	10607.30	46.24	74.00	-27.76	38.27	5.01	38.38	35.42	Peak	100	326	VERTICAL
2	10617.80	34.55	54.00	-19.45	26.58	5.01	38.38	35.42	Average	100	326	VERTICAL
3	15917.80	36.05	54.00	-17.95	28.07	6.15	37.27	35.44	Average	100	288	VERTICAL
4	15919.10	48.67	74.00	-25.33	40.69	6.15	37.27	35.44	Peak	100	288	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 40MHz Ch 102 / Ant. 10: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	11011.20	34.30	54.00	-19.70	26.06	5.02	38.33	35.11	Average	100	211	HORIZONTAL
2	11027.70	46.76	74.00	-27.24	38.51	5.02	38.34	35.11	Peak	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	11019.90	34.83	54.00	-19.17	26.60	5.02	38.32	35.11	Average	100	221	VERTICAL
2	11027.90	46.93	74.00	-27.07	38.69	5.02	38.33	35.11	Peak	100	221	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 40MHz Ch 110 / Ant. 10: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	11105.80	47.28	74.00	-26.72	38.99	5.03	38.40	35.14	Peak	100	308	HORIZONTAL
2	11106.00	35.65	54.00	-18.35	27.36	5.03	38.40	35.14	Average	100	308	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	11084.90	47.49	74.00	-26.51	39.22	5.03	38.38	35.14	Peak	100	59	VERTICAL
2	11095.90	37.44	54.00	-16.56	29.15	5.03	38.40	35.14	Average	100	59	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 40MHz Ch 134 / Ant. 10: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	11324.20	47.13	74.00	-26.87	38.66	5.08	38.62	35.23	Peak	100	258	HORIZONTAL
2	11360.20	34.76	54.00	-19.24	26.26	5.09	38.65	35.24	Average	100	258	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	11336.30	35.38	54.00	-18.62	26.90	5.08	38.63	35.23	Average	100	36	VERTICAL
2	11342.30	48.41	74.00	-25.59	39.93	5.09	38.63	35.24	Peak	100	36	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 40MHz Ch 54 / Ant. 10: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	15797.80	35.59	54.00	-18.41	27.49	6.14	37.39	35.43	Average	100	331	HORIZONTAL
2	15813.10	48.15	74.00	-25.85	40.07	6.14	37.37	35.43	Peak	100	331	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	15789.00	48.49	74.00	-25.51	40.36	6.14	37.41	35.42	Peak	100	129	VERTICAL
2	15830.80	35.58	54.00	-18.42	27.52	6.14	37.36	35.44	Average	100	129	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 40MHz Ch 62 / Ant. 10: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	34.46	54.00	-19.54	26.49	5.01	38.38	35.42	Average	100	117	HORIZONTAL
2	10619.00	46.78	74.00	-27.22	38.81	5.01	38.38	35.42	Peak	100	117	HORIZONTAL
3	15916.30	36.00	54.00	-18.00	28.02	6.15	37.27	35.44	Average	100	250	HORIZONTAL
4	15921.10	47.98	74.00	-26.02	40.00	6.15	37.27	35.44	Peak	100	250	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	10603.70	47.14	74.00	-26.86	39.17	5.01	38.38	35.42	Peak	100	160	VERTICAL
2	10609.20	34.28	54.00	-19.72	26.31	5.01	38.38	35.42	Average	100	160	VERTICAL
3	15910.30	48.86	74.00	-25.14	40.86	6.15	37.29	35.44	Peak	100	73	VERTICAL
4	15913.70	35.93	54.00	-18.07	27.95	6.15	37.27	35.44	Average	100	73	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 40MHz Ch 102 / Ant. 10: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	11011.20	34.70	54.00	-19.30	26.46	5.02	38.33	35.11	Average	100	211	HORIZONTAL
2	11027.70	47.16	74.00	-26.84	38.91	5.02	38.34	35.11	Peak	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	11019.90	35.11	54.00	-18.89	26.88	5.02	38.32	35.11	Average	100	221	VERTICAL
2	11027.90	46.93	74.00	-27.07	38.69	5.02	38.33	35.11	Peak	100	221	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 40MHz Ch 110 / Ant. 10: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	11088.40	46.93	74.00	-27.07	38.66	5.03	38.38	35.14	Peak	100	238	HORIZONTAL
2	11096.30	34.90	54.00	-19.10	26.61	5.03	38.40	35.14	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	11088.40	48.36	74.00	-25.64	40.09	5.03	38.38	35.14	Peak	100	107	VERTICAL
2	11096.40	36.92	54.00	-17.08	28.63	5.03	38.40	35.14	Average	100	107	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 40MHz Ch 134 / Ant. 10: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	11319.20	47.22	74.00	-26.78	38.75	5.08	38.62	35.23	Peak	100	265	HORIZONTAL
2	11326.80	34.75	54.00	-19.25	26.28	5.08	38.62	35.23	Average	100	265	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	11333.60	35.81	54.00	-18.19	27.33	5.08	38.63	35.23	Average	100	129	VERTICAL
2	11343.20	46.80	74.00	-27.20	38.32	5.09	38.63	35.24	Peak	100	129	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.

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11a Ch 52 / Ant. 5: Chain. 1 (1TX)
Test Date	Sep. 10, 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	3266.92	60.21	74.00	-13.79	62.87	2.68	30.00	35.34	Peak	100	168	HORIZONTAL
2	3266.94	45.57	54.00	-8.43	48.23	2.68	30.00	35.34	Average	100	168	HORIZONTAL
3	15777.50	37.04	54.00	-16.96	28.91	6.14	37.41	35.42	Average	100	149	HORIZONTAL
4	15779.30	49.87	74.00	-24.13	41.74	6.14	37.41	35.42	Peak	100	149	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	3266.40	69.48	74.00	-4.52	72.14	2.68	30.00	35.34	Peak	118	58	VERTICAL
2	3266.80	51.04	54.00	-2.96	53.70	2.68	30.00	35.34	Average	118	58	VERTICAL
3	15774.16	37.21	54.00	-16.79	29.07	6.14	37.42	35.42	Average	100	230	VERTICAL
4	15774.60	51.46	74.00	-22.54	43.32	6.14	37.42	35.42	Peak	100	230	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11a Ch 60 / Ant. 5: Chain. 1 (1TX)
Test Date	Sep. 10, 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	10599.70	36.22	68.30	-32.08	28.25	5.01	38.38	35.42	Average	100	167	HORIZONTAL
2	10601.30	46.58	74.00	-27.42	38.61	5.01	38.38	35.42	Peak	100	167	HORIZONTAL
3	15899.60	51.20	74.00	-22.80	43.20	6.15	37.29	35.44	Peak	100	344	HORIZONTAL
4	15900.40	38.75	54.00	-15.25	30.75	6.15	37.29	35.44	Average	100	344	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	3266.70	60.38	74.00	-13.62	63.04	2.68	30.00	35.34	Peak	100	95	VERTICAL
2	3267.00	34.22	54.00	-19.78	36.88	2.68	30.00	35.34	Average	100	95	VERTICAL
3	10602.70	46.95	74.00	-27.05	38.98	5.01	38.38	35.42	Peak	100	302	VERTICAL
4	10603.90	36.68	54.00	-17.32	28.71	5.01	38.38	35.42	Average	100	302	VERTICAL
5	15899.70	38.93	54.00	-15.07	30.93	6.15	37.29	35.44	Average	100	113	VERTICAL
6	15900.40	49.42	74.00	-24.58	41.42	6.15	37.29	35.44	Peak	100	113	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11a Ch 64 / Ant. 5: Chain. 1 (1TX)
Test Date	Sep. 10, 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	10671.00	34.38	54.00	-19.62	26.37	5.01	38.37	35.37	Average	100	104	HORIZONTAL
2	10677.00	47.55	74.00	-26.45	39.52	5.01	38.37	35.35	Peak	100	104	HORIZONTAL
3	15975.80	49.88	74.00	-24.12	41.94	6.15	37.22	35.43	Peak	100	252	HORIZONTAL
4	15977.00	38.03	54.00	-15.97	30.09	6.15	37.22	35.43	Average	100	252	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	10630.80	47.39	74.00	-26.61	39.40	5.01	38.37	35.39	Peak	100	303	VERTICAL
2	10638.00	33.77	54.00	-20.23	25.78	5.01	38.37	35.39	Average	100	303	VERTICAL
3	15976.80	38.46	54.00	-15.54	30.52	6.15	37.22	35.43	Average	100	117	VERTICAL
4	15977.00	50.41	74.00	-23.59	42.47	6.15	37.22	35.43	Peak	100	117	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11a Ch 100 / Ant. 5: Chain. 1 (1TX)
Test Date	Sep. 10, 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	11008.40	46.49	74.00	-27.51	38.26	5.01	38.33	35.11	Peak	100	37	HORIZONTAL
2	11009.40	34.38	54.00	-19.62	26.14	5.02	38.33	35.11	Average	100	37	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	10991.22	44.52	74.00	-29.48	36.31	5.01	38.30	35.10	Peak	100	227	VERTICAL
2	10991.38	33.99	54.00	-20.01	25.78	5.01	38.30	35.10	Average	100	227	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11a Ch 116 / Ant. 5: Chain. 1 (1TX)
Test Date	Sep. 10, 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	11159.04	47.36	74.00	-26.64	39.02	5.04	38.47	35.17	Peak	100	210	HORIZONTAL
2	11159.44	35.47	54.00	-18.53	27.13	5.04	38.47	35.17	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	11160.52	36.52	54.00	-17.48	28.18	5.04	38.47	35.17	Average	100	290	VERTICAL
2	11160.68	48.24	74.00	-25.76	39.90	5.04	38.47	35.17	Peak	100	290	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11a Ch 140 / Ant. 5: Chain. 1 (1TX)
Test Date	Sep. 10, 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	11414.80	48.82	74.00	-25.18	40.26	5.10	38.72	35.26	Peak	100	337	HORIZONTAL
2	11417.00	36.93	54.00	-17.07	28.37	5.10	38.72	35.26	Average	100	337	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	11400.80	36.53	54.00	-17.47	27.98	5.10	38.70	35.25	Average	100	0	VERTICAL
2	11407.20	48.89	74.00	-25.11	40.34	5.10	38.70	35.25	Peak	100	0	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 5.25-5.35 GHz band: all emissions outside of the 5.25-5.35 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).

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	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz Ch 52, 60, 64 / Ant. 4: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	5144.23	51.16	54.00	-2.84	14.06	3.43	33.67	0.00	Average	100	53	VERTICAL
2	5147.12	69.49	74.00	-4.51	32.39	3.43	33.67	0.00	Peak	100	53	VERTICAL
3	5263.37	121.81				3.46	33.88	0.00	Peak	100	53	VERTICAL
4	5264.81	110.20				3.46	33.88	0.00	Average	100	53	VERTICAL
5	5350.00	53.80	54.00	-0.20	16.28	3.49	34.03	0.00	Average	100	53	VERTICAL
6	5354.33	72.89	74.00	-1.11	35.37	3.49	34.03	0.00	Peak	100	53	VERTICAL

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	5293.91	119.72				3.47	33.91	0.00	Peak	112	210	VERTICAL
2	5295.83	108.03				3.47	33.91	0.00	Average	112	210	VERTICAL
3	5350.00	53.31	54.00	-0.69	15.79	3.49	34.03	0.00	Average	112	210	VERTICAL
4	5351.92	68.96	74.00	-5.04	31.44	3.49	34.03	0.00	Peak	112	210	VERTICAL

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	5317.28	116.05				3.48	33.97	0.00	Peak	107	48	VERTICAL
2	5318.88	105.56				3.48	33.97	0.00	Average	107	48	VERTICAL
3	5351.76	53.10	54.00	-0.90	15.58	3.49	34.03	0.00	Average	107	48	VERTICAL
4	5354.49	69.60	74.00	-4.40	32.08	3.49	34.03	0.00	Peak	107	48	VERTICAL

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

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz Ch 100, 140 / Ant. 4: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	5459.40	61.80	74.00	-12.20	24.07	3.52	34.21	0.00	Peak	107	334	VERTICAL
2	5460.00	46.51	54.00	-7.49	8.78	3.52	34.21	0.00	Average	107	334	VERTICAL
3	5464.60	67.81	68.30	-0.49	30.08	3.52	34.21	0.00	Peak	107	334	VERTICAL
4	5501.40	105.78				3.54	34.28	0.00	Average	107	334	VERTICAL
5	5503.40	118.23				3.54	34.28	0.00	Peak	107	334	VERTICAL

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	5701.40	101.60				3.59	34.34	0.00	Average	100	361	VERTICAL
2	5702.40	113.95				3.59	34.34	0.00	Peak	100	361	VERTICAL
3	5725.20	68.23	68.30	-0.07	30.29	3.60	34.34	0.00	Peak	100	361	VERTICAL

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

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 20MHz Ch 52, 60, 64 / Ant. 4: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	5146.40	66.39	74.00	-7.61	29.29	3.43	33.67	0.00	Peak	100	39	VERTICAL
2	5147.00	50.11	54.00	-3.89	13.01	3.43	33.67	0.00	Average	100	39	VERTICAL
3	5262.40	109.00				3.46	33.85	0.00	Average	100	39	VERTICAL
4	5264.20	121.99				3.46	33.88	0.00	Peak	100	39	VERTICAL
5	5350.00	53.79	54.00	-0.21	16.27	3.49	34.03	0.00	Average	100	39	VERTICAL
6	5350.00	71.39	74.00	-2.61	33.87	3.49	34.03	0.00	Peak	100	39	VERTICAL

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	5295.20	118.85				3.47	33.91	0.00	Peak	108	199	VERTICAL
2	5297.20	107.80				3.48	33.94	0.00	Average	108	199	VERTICAL
3	5350.00	52.75	54.00	-1.25	15.23	3.49	34.03	0.00	Average	108	199	VERTICAL
4	5352.00	69.99	74.00	-4.01	32.47	3.49	34.03	0.00	Peak	108	199	VERTICAL

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	5317.00	117.13				3.48	33.97	0.00	Peak	100	40	VERTICAL
2	5321.20	104.32				3.48	33.97	0.00	Average	100	40	VERTICAL
3	5350.20	53.65	54.00	-0.35	16.13	3.49	34.03	0.00	Average	100	40	VERTICAL
4	5350.60	71.96	74.00	-2.04	34.44	3.49	34.03	0.00	Peak	100	40	VERTICAL

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

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 20MHz Ch 100, 140 / Ant. 4: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	5459.60	64.89	74.00	-9.11	27.16	3.52	34.21	0.00	Peak	100	95	VERTICAL
2	5460.00	48.34	54.00	-5.66	10.61	3.52	34.21	0.00	Average	100	95	VERTICAL
3	5464.60	67.61	68.30	-0.69	29.88	3.52	34.21	0.00	Peak	100	95	VERTICAL
4	5499.00	106.40				3.53	34.26	0.00	Average	100	95	VERTICAL
5	5501.00	118.94				3.54	34.26	0.00	Peak	100	95	VERTICAL

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	101.69				3.59	34.34	0.00	Average	100	0	VERTICAL
2	5701.20	115.40				3.59	34.34	0.00	Peak	100	0	VERTICAL
3	5725.00	67.24	68.30	-1.06	29.30	3.60	34.34	0.00	Peak	100	0	VERTICAL

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

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 40MHz Ch 54, 62 / Ant. 4: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 2012		

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	5273.20	104.84				3.47	33.88	0.00	Average	111	102	VERTICAL
2	5276.00	117.77				3.47	33.88	0.00	Peak	111	102	VERTICAL
3	5351.60	53.12	54.00	-0.88	15.60	3.49	34.03	0.00	Average	111	102	VERTICAL
4	5353.20	72.76	74.00	-1.24	35.24	3.49	34.03	0.00	Peak	111	102	VERTICAL

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

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	5292.40	96.47				3.47	33.91	0.00	Average	108	198	VERTICAL
2	5293.60	109.61				3.47	33.91	0.00	Peak	108	198	VERTICAL
3	5350.00	53.12	54.00	-0.88	15.60	3.49	34.03	0.00	Average	108	198	VERTICAL
4	5353.60	72.65	74.00	-1.35	35.13	3.49	34.03	0.00	Peak	108	198	VERTICAL

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

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 40MHz Ch 102, 110, 134 / Ant. 4: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 2012		

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	46.38	54.00	-7.62	8.65	3.52	34.21	0.00	Average	100	89	VERTICAL
2	5460.00	62.03	74.00	-11.97	24.30	3.52	34.21	0.00	Peak	100	89	VERTICAL
3	5464.00	67.89	68.30	-0.41	30.16	3.52	34.21	0.00	Peak	100	89	VERTICAL
4	5513.20	111.79				3.54	34.28	0.00	Peak	100	89	VERTICAL
5	5514.80	98.71				3.54	34.28	0.00	Average	100	89	VERTICAL

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

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	61.47	74.00	-12.53	23.74	3.52	34.21	0.00	Peak	103	352	VERTICAL
2	5460.00	44.72	54.00	-9.28	6.99	3.52	34.21	0.00	Average	103	352	VERTICAL
3	5466.40	66.71	68.30	-1.59	28.98	3.52	34.21	0.00	Peak	103	352	VERTICAL
4	5537.20	115.95				3.55	34.31	0.00	Peak	103	352	VERTICAL
5	5537.60	104.10				3.55	34.31	0.00	Average	103	352	VERTICAL

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

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	5660.80	99.56				3.59	34.33	0.00	Average	100	275	VERTICAL
2	5662.00	112.26				3.59	34.33	0.00	Peak	100	275	VERTICAL
3	5731.00	67.64	68.30	-0.66	29.69	3.61	34.34	0.00	Peak	100	275	VERTICAL

Item 1, 2 are the fundamental frequency at 5670 MHz.

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 40MHz Ch 54, 62 / Ant. 4: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 2012		

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	5267.60	103.47				3.46	33.88	0.00	Average	100	28	VERTICAL
2	5276.00	116.34				3.47	33.88	0.00	Peak	100	28	VERTICAL
3	5352.40	50.38	54.00	-3.62	12.86	3.49	34.03	0.00	Average	100	28	VERTICAL
4	5353.60	66.73	74.00	-7.27	29.21	3.49	34.03	0.00	Peak	100	28	VERTICAL

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

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	5294.80	108.82				3.47	33.91	0.00	Peak	100	33	VERTICAL
2	5296.00	95.99				3.47	33.91	0.00	Average	100	33	VERTICAL
3	5350.00	53.01	54.00	-0.99	15.49	3.49	34.03	0.00	Average	100	33	VERTICAL
4	5351.20	68.86	74.00	-5.14	31.34	3.49	34.03	0.00	Peak	100	33	VERTICAL

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

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 40MHz Ch 102, 110, 134 / Ant. 4: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 2012		

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	47.95	54.00	-6.05	10.22	3.52	34.21	0.00	Average	103	83	VERTICAL
2	5460.00	65.18	74.00	-8.82	27.45	3.52	34.21	0.00	Peak	103	83	VERTICAL
3	5467.60	67.65	68.30	-0.65	29.89	3.52	34.24	0.00	Peak	103	83	VERTICAL
4	5512.40	98.48				3.54	34.28	0.00	Average	103	83	VERTICAL
5	5515.60	111.40				3.54	34.28	0.00	Peak	103	83	VERTICAL

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

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	5457.20	67.99	74.00	-6.01	30.26	3.52	34.21	0.00	Peak	100	13	VERTICAL
2	5460.00	51.05	54.00	-2.95	13.32	3.52	34.21	0.00	Average	100	13	VERTICAL
3	5460.40	67.21	68.30	-1.09	29.48	3.52	34.21	0.00	Peak	100	13	VERTICAL
4	5532.40	116.60				3.55	34.30	0.00	Peak	100	13	VERTICAL
5	5533.60	103.46				3.55	34.30	0.00	Average	100	13	VERTICAL

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

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	5658.40	99.56				3.59	34.33	0.00	Average	111	273	VERTICAL
2	5658.80	112.52				3.59	34.33	0.00	Peak	111	273	VERTICAL
3	5726.60	67.87	68.30	-0.43	29.93	3.60	34.34	0.00	Peak	111	273	VERTICAL

Item 1, 2 are the fundamental frequency at 5670 MHz.

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz Ch 52, 60, 64 / Ant. 5: Chain. 1 (1TX)
Test Date	Sep. 10, 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	41.48	54.00	-12.52	4.38	3.43	33.67	0.00	Average	117	346	VERTICAL
2	5150.00	53.35	74.00	-20.65	16.25	3.43	33.67	0.00	Peak	117	346	VERTICAL
3	5257.60	104.08				3.46	33.85	0.00	Average	117	346	VERTICAL
4	5263.00	114.95				3.46	33.88	0.00	Peak	117	346	VERTICAL
5	5350.00	42.67	54.00	-11.33	5.15	3.49	34.03	0.00	Average	117	346	VERTICAL
6	5358.40	55.51	74.00	-18.49	17.99	3.49	34.03	0.00	Peak	117	346	VERTICAL

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	5302.80	104.01				3.48	33.94	0.00	Average	103	341	VERTICAL
2	5304.80	115.29				3.48	33.94	0.00	Peak	103	341	VERTICAL
3	5350.00	52.06	54.00	-1.94	14.54	3.49	34.03	0.00	Average	103	341	VERTICAL
4	5350.00	73.03	74.00	-0.97	35.51	3.49	34.03	0.00	Peak	103	341	VERTICAL

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	5321.20	103.00				3.48	33.97	0.00	Average	117	340	VERTICAL
2	5323.60	113.70				3.49	33.97	0.00	Peak	117	340	VERTICAL
3	5350.00	52.88	54.00	-1.12	15.36	3.49	34.03	0.00	Average	117	340	VERTICAL
4	5350.20	73.16	74.00	-0.84	35.64	3.49	34.03	0.00	Peak	117	340	VERTICAL

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

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz Ch 100, 140 / Ant. 5: Chain. 1 (1TX)
Test Date	Sep. 10, 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	5459.60	60.81	74.00	-13.19	23.08	3.52	34.21	0.00	Peak	100	339	VERTICAL
2	5460.00	42.93	54.00	-11.07	5.20	3.52	34.21	0.00	Average	100	339	VERTICAL
3	5468.60	67.37	68.30	-0.93	29.61	3.52	34.24	0.00	Peak	100	339	VERTICAL
4	5498.60	98.38				3.53	34.26	0.00	Average	100	339	VERTICAL
5	5498.80	109.77				3.53	34.26	0.00	Peak	100	339	VERTICAL

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	5698.00	99.49				3.59	34.34	0.00	Average	107	330	VERTICAL
2	5703.00	110.37				3.59	34.34	0.00	Peak	107	330	VERTICAL
3	5725.40	68.04	68.30	-0.26	30.10	3.60	34.34	0.00	Peak	107	330	VERTICAL

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

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 40MHz Ch 54, 62 / Ant. 5: Chain. 1 (1TX)
Test Date	Sep. 10, 2012		

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	5252.80	110.18				3.46	33.85	0.00	Peak	119	329	VERTICAL
2	5257.60	99.74				3.46	33.85	0.00	Average	119	329	VERTICAL
3	5350.00	53.42	54.00	-0.58	15.90	3.49	34.03	0.00	Average	119	329	VERTICAL
4	5355.20	73.87	74.00	-0.13	36.35	3.49	34.03	0.00	Peak	119	329	VERTICAL

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

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	5318.40	105.48				3.48	33.97	0.00	Peak	133	332	VERTICAL
2	5326.00	94.27				3.49	33.97	0.00	Average	133	332	VERTICAL
3	5350.00	52.30	54.00	-1.70	14.78	3.49	34.03	0.00	Average	133	332	VERTICAL
4	5356.00	72.82	74.00	-1.18	35.30	3.49	34.03	0.00	Peak	133	332	VERTICAL

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

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 40MHz Ch 102, 110, 134 / Ant. 5: Chain. 1 (1TX)
Test Date	Sep. 10, 2012		

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	5458.40	58.11	74.00	-15.89	20.38	3.52	34.21	0.00	Peak	115	337	VERTICAL
2	5460.00	42.66	54.00	-11.34	4.93	3.52	34.21	0.00	Average	115	337	VERTICAL
3	5469.60	68.01	68.30	-0.29	30.25	3.52	34.24	0.00	Peak	115	337	VERTICAL
4	5498.80	89.78				3.53	34.26	0.00	Average	115	337	VERTICAL
5	5499.60	100.64				3.53	34.26	0.00	Peak	115	337	VERTICAL

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

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	5458.80	62.98	74.00	-11.02	25.25	3.52	34.21	0.00	Peak	113	334	VERTICAL
2	5460.00	45.26	54.00	-8.74	7.53	3.52	34.21	0.00	Average	113	334	VERTICAL
3	5469.20	67.74	68.30	-0.56	29.98	3.52	34.24	0.00	Peak	113	334	VERTICAL
4	5557.60	96.62				3.55	34.31	0.00	Average	113	334	VERTICAL
5	5557.60	108.24				3.55	34.31	0.00	Peak	113	334	VERTICAL

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

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	5683.20	106.40				3.59	34.33	0.00	Peak	122	329	VERTICAL
2	5685.20	95.27				3.59	34.33	0.00	Average	122	329	VERTICAL
3	5728.20	67.14	68.30	-1.16	29.20	3.60	34.34	0.00	Peak	122	329	VERTICAL

Item 1, 2 are the fundamental frequency at 5670 MHz.

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz Ch 52, 60, 64 / Ant. 6: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	5111.00	49.38	54.00	-4.62	12.35	3.42	33.61	0.00	Average	101	321	VERTICAL
2	5143.00	66.02	74.00	-7.98	28.95	3.43	33.64	0.00	Peak	101	321	VERTICAL
3	5259.00	114.34				3.46	33.85	0.00	Average	101	321	VERTICAL
4	5261.00	125.36				3.46	33.85	0.00	Peak	101	321	VERTICAL
5	5350.00	49.79	54.00	-4.21	12.27	3.49	34.03	0.00	Average	101	321	VERTICAL
6	5356.00	65.22	74.00	-8.78	27.70	3.49	34.03	0.00	Peak	101	321	VERTICAL

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	5297.20	113.52				3.48	33.94	0.00	Average	100	314	VERTICAL
2	5297.60	125.42				3.48	33.94	0.00	Peak	100	314	VERTICAL
3	5350.00	53.14	54.00	-0.86	15.62	3.49	34.03	0.00	Average	100	314	VERTICAL
4	5350.40	71.93	74.00	-2.07	34.41	3.49	34.03	0.00	Peak	100	314	VERTICAL

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	5318.00	110.36				3.48	33.97	0.00	Average	100	318	VERTICAL
2	5318.80	121.47				3.48	33.97	0.00	Peak	100	318	VERTICAL
3	5350.00	53.46	54.00	-0.54	15.94	3.49	34.03	0.00	Average	100	318	VERTICAL
4	5350.40	71.74	74.00	-2.26	34.22	3.49	34.03	0.00	Peak	100	318	VERTICAL

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

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz Ch 100, 140 / Ant. 6: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	5460.00	50.75	54.00	-3.25	13.02	3.52	34.21	0.00	Average	100	349	VERTICAL
2	5460.00	62.17	74.00	-11.83	24.44	3.52	34.21	0.00	Peak	100	349	VERTICAL
3	5466.15	67.77	68.30	-0.53	30.04	3.52	34.21	0.00	Peak	100	349	VERTICAL
4	5497.44	119.29				3.53	34.26	0.00	Peak	100	349	VERTICAL
5	5498.24	107.53				3.53	34.26	0.00	Average	100	349	VERTICAL

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	5698.88	115.69				3.59	34.34	0.00	Peak	100	2	VERTICAL
2	5699.52	104.30				3.59	34.34	0.00	Average	100	2	VERTICAL
3	5725.00	67.83	68.30	-0.47	29.89	3.60	34.34	0.00	Peak	100	2	VERTICAL

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

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 20MHz Ch 52, 60, 64 / Ant. 6: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	51.72	54.00	-2.28	14.65	3.43	33.64	0.00	Average	106	356	VERTICAL
2	5149.52	61.70	74.00	-12.30	24.60	3.43	33.67	0.00	Peak	106	356	VERTICAL
3	5263.85	110.94				3.46	33.88	0.00	Average	106	356	VERTICAL
4	5266.25	123.34				3.46	33.88	0.00	Peak	106	356	VERTICAL
5	5373.56	51.53	54.00	-2.47	13.97	3.50	34.06	0.00	Average	106	356	VERTICAL
6	5374.04	62.29	74.00	-11.71	24.73	3.50	34.06	0.00	Peak	106	356	VERTICAL

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	5301.28	110.63				3.48	33.94	0.00	Average	107	1	VERTICAL
2	5301.28	121.87				3.48	33.94	0.00	Peak	107	1	VERTICAL
3	5350.00	53.75	54.00	-0.25	16.23	3.49	34.03	0.00	Average	107	1	VERTICAL
4	5350.00	66.82	74.00	-7.18	29.30	3.49	34.03	0.00	Peak	107	1	VERTICAL

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	5318.08	107.32				3.48	33.97	0.00	Average	104	355	VERTICAL
2	5322.24	119.64				3.48	33.97	0.00	Peak	104	355	VERTICAL
3	5350.00	53.29	54.00	-0.71	15.77	3.49	34.03	0.00	Average	104	355	VERTICAL
4	5350.96	69.49	74.00	-4.51	31.97	3.49	34.03	0.00	Peak	104	355	VERTICAL

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

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 20MHz Ch 100, 140 / Ant. 6: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	5460.00	50.87	54.00	-3.13	13.14	3.52	34.21	0.00	Average	100	349	VERTICAL
2	5460.00	61.26	74.00	-12.74	23.53	3.52	34.21	0.00	Peak	100	349	VERTICAL
3	5469.68	67.36	68.30	-0.94	29.60	3.52	34.24	0.00	Peak	100	349	VERTICAL
4	5501.76	119.21				3.54	34.28	0.00	Peak	100	349	VERTICAL
5	5503.37	105.85				3.54	34.28	0.00	Average	100	349	VERTICAL

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	5696.15	116.90				3.59	34.34	0.00	Peak	100	351	VERTICAL
2	5696.47	104.09				3.59	34.34	0.00	Average	100	351	VERTICAL
3	5725.64	67.90	68.30	-0.40	29.96	3.60	34.34	0.00	Peak	100	351	VERTICAL

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

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 40MHz Ch 54, 62 / Ant. 6: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 2012		

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	5276.41	107.44				3.47	33.88	0.00	Average	102	346	VERTICAL
2	5278.65	120.31				3.47	33.88	0.00	Peak	102	346	VERTICAL
3	5350.00	53.47	54.00	-0.53	15.95	3.49	34.03	0.00	Average	102	346	VERTICAL
4	5350.32	70.90	74.00	-3.10	33.38	3.49	34.03	0.00	Peak	102	346	VERTICAL

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

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	5305.19	99.32				3.48	33.94	0.00	Average	102	347	VERTICAL
2	5312.24	111.61				3.48	33.94	0.00	Peak	102	347	VERTICAL
3	5350.00	53.89	54.00	-0.11	16.37	3.49	34.03	0.00	Average	102	347	VERTICAL
4	5351.60	71.01	74.00	-2.99	33.49	3.49	34.03	0.00	Peak	102	347	VERTICAL

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

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 40MHz Ch 102, 110, 134 / Ant. 6: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 2012		

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	51.06	54.00	-2.94	13.33	3.52	34.21	0.00	Average	100	351	VERTICAL
2	5460.00	61.50	74.00	-12.50	23.77	3.52	34.21	0.00	Peak	100	351	VERTICAL
3	5470.00	68.28	68.30	-0.02	30.52	3.52	34.24	0.00	Peak	100	351	VERTICAL
4	5500.71	97.26				3.53	34.26	0.00	Average	100	351	VERTICAL
5	5519.62	110.28				3.54	34.30	0.00	Peak	100	351	VERTICAL

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

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	5457.60	64.23	74.00	-9.77	26.50	3.52	34.21	0.00	Peak	100	357	VERTICAL
2	5460.00	47.97	54.00	-6.03	10.24	3.52	34.21	0.00	Average	100	357	VERTICAL
3	5470.00	67.78	68.30	-0.52	30.02	3.52	34.24	0.00	Peak	100	357	VERTICAL
4	5540.40	104.59				3.55	34.31	0.00	Average	100	357	VERTICAL
5	5540.40	117.59				3.55	34.31	0.00	Peak	100	357	VERTICAL

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

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	5657.60	114.75				3.59	34.33	0.00	Peak	100	355	VERTICAL
2	5660.00	101.78				3.59	34.33	0.00	Average	100	355	VERTICAL
3	5725.00	67.93	68.30	-0.37	29.99	3.60	34.34	0.00	Peak	100	355	VERTICAL

Item 1, 2 are the fundamental frequency at 5670 MHz.

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 40MHz Ch 54, 62 / Ant. 6: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 2012		

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	5253.60	104.87				3.46	33.85	0.00	Average	107	352	VERTICAL
2	5276.80	116.99				3.47	33.88	0.00	Peak	107	352	VERTICAL
3	5353.60	52.19	54.00	-1.81	14.67	3.49	34.03	0.00	Average	107	352	VERTICAL
4	5354.40	71.60	74.00	-2.40	34.08	3.49	34.03	0.00	Peak	107	352	VERTICAL

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

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	5318.40	96.51				3.48	33.97	0.00	Average	100	351	VERTICAL
2	5326.40	109.15				3.49	33.97	0.00	Peak	100	351	VERTICAL
3	5350.00	53.40	54.00	-0.60	15.88	3.49	34.03	0.00	Average	100	351	VERTICAL
4	5350.00	70.81	74.00	-3.19	33.29	3.49	34.03	0.00	Peak	100	351	VERTICAL

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

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 40MHz Ch 102, 110, 134 / Ant. 6: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 2012		

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	46.40	54.00	-7.60	8.67	3.52	34.21	0.00	Average	100	355	VERTICAL
2	5460.00	60.51	74.00	-13.49	22.78	3.52	34.21	0.00	Peak	100	355	VERTICAL
3	5467.20	67.52	68.30	-0.78	29.76	3.52	34.24	0.00	Peak	100	355	VERTICAL
4	5497.60	96.09				3.53	34.26	0.00	Average	100	355	VERTICAL
5	5520.00	109.01				3.54	34.30	0.00	Peak	100	355	VERTICAL

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

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	5457.60	64.23	74.00	-9.77	26.50	3.52	34.21	0.00	Peak	100	357	VERTICAL
2	5460.00	47.97	54.00	-6.03	10.24	3.52	34.21	0.00	Average	100	357	VERTICAL
3	5470.00	67.78	68.30	-0.52	30.02	3.52	34.24	0.00	Peak	100	357	VERTICAL
4	5540.40	104.59				3.55	34.31	0.00	Average	100	357	VERTICAL
5	5540.40	117.59				3.55	34.31	0.00	Peak	100	357	VERTICAL

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

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	5657.60	114.75				3.59	34.33	0.00	Peak	100	355	VERTICAL
2	5660.00	101.78				3.59	34.33	0.00	Average	100	355	VERTICAL
3	5725.00	67.93	68.30	-0.37	29.99	3.60	34.34	0.00	Peak	100	355	VERTICAL

Item 1, 2 are the fundamental frequency at 5670 MHz.

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz Ch 52, 60, 64 / Ant. 10: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	5149.40	67.70	74.00	-6.30	30.60	3.43	33.67	0.00	Peak	136	315	HORIZONTAL
2	5150.00	46.84	54.00	-7.16	9.74	3.43	33.67	0.00	Average	136	315	HORIZONTAL
3	5258.20	103.26				3.46	33.85	0.00	Average	136	315	HORIZONTAL
4	5258.20	115.66				3.46	33.85	0.00	Peak	136	315	HORIZONTAL
5	5350.60	49.47	54.00	-4.53	11.95	3.49	34.03	0.00	Average	136	315	HORIZONTAL
6	5354.20	70.21	74.00	-3.79	32.69	3.49	34.03	0.00	Peak	136	315	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	5298.00	112.87				3.48	33.94	0.00	Peak	138	316	HORIZONTAL
2	5298.80	102.58				3.48	33.94	0.00	Average	138	316	HORIZONTAL
3	5350.00	48.07	54.00	-5.93	10.55	3.49	34.03	0.00	Average	138	316	HORIZONTAL
4	5352.00	65.53	74.00	-8.47	28.01	3.49	34.03	0.00	Peak	138	316	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	5320.60	101.17				3.48	33.97	0.00	Average	153	309	HORIZONTAL
2	5321.20	112.70				3.48	33.97	0.00	Peak	153	309	HORIZONTAL
3	5350.00	50.78	54.00	-3.22	13.26	3.49	34.03	0.00	Average	153	309	HORIZONTAL
4	5350.00	72.54	74.00	-1.46	35.02	3.49	34.03	0.00	Peak	153	309	HORIZONTAL

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

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz Ch 100, 140 / Ant. 10: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	5459.60	62.80	74.00	-11.20	25.09	3.52	34.19	0.00	Peak	100	297	HORIZONTAL
2	5460.00	42.80	54.00	-11.20	5.09	3.52	34.19	0.00	Average	100	297	HORIZONTAL
3	5469.20	67.49	68.30	-0.81	29.76	3.52	34.21	0.00	Peak	100	297	HORIZONTAL
4	5497.80	111.33				3.53	34.23	0.00	Peak	100	297	HORIZONTAL
5	5498.80	100.02				3.53	34.23	0.00	Average	100	297	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	5701.80	99.98				3.59	34.34	0.00	Average	144	285	HORIZONTAL
2	5702.80	110.98				3.59	34.34	0.00	Peak	144	285	HORIZONTAL
3	5725.00	67.89	68.30	-0.41	29.95	3.60	34.34	0.00	Peak	144	285	HORIZONTAL

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

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 20MHz Ch 52, 60, 64 / Ant. 10: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	5147.60	46.19	54.00	-7.81	9.09	3.43	33.67	0.00	Average	100	323	HORIZONTAL
2	5148.20	62.51	74.00	-11.49	25.41	3.43	33.67	0.00	Peak	100	323	HORIZONTAL
3	5255.80	114.57				3.46	33.85	0.00	Peak	100	323	HORIZONTAL
4	5256.40	101.48				3.46	33.85	0.00	Average	100	323	HORIZONTAL
5	5351.80	48.04	54.00	-5.96	10.52	3.49	34.03	0.00	Average	100	323	HORIZONTAL
6	5352.40	62.36	74.00	-11.64	24.84	3.49	34.03	0.00	Peak	100	323	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	5295.60	112.56				3.47	33.91	0.00	Peak	100	297	HORIZONTAL
2	5298.80	100.80				3.48	33.94	0.00	Average	100	297	HORIZONTAL
3	5350.00	48.07	54.00	-5.93	10.55	3.49	34.03	0.00	Average	100	297	HORIZONTAL
4	5350.80	63.61	74.00	-10.39	26.09	3.49	34.03	0.00	Peak	100	297	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	5317.80	98.77				3.48	33.97	0.00	Average	100	323	HORIZONTAL
2	5322.60	110.82				3.49	33.97	0.00	Peak	100	323	HORIZONTAL
3	5350.00	53.36	54.00	-0.64	15.84	3.49	34.03	0.00	Average	100	323	HORIZONTAL
4	5350.60	71.74	74.00	-2.26	34.22	3.49	34.03	0.00	Peak	100	323	HORIZONTAL

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

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 20MHz Ch 100, 140 / Ant. 10: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	5459.00	56.75	74.00	-17.25	19.02	3.52	34.21	0.00	Peak	100	1	VERTICAL
2	5460.00	43.59	54.00	-10.41	5.86	3.52	34.21	0.00	Average	100	1	VERTICAL
3	5469.80	68.13	68.30	-0.17	30.37	3.52	34.24	0.00	Peak	100	1	VERTICAL
4	5495.60	96.30				3.53	34.26	0.00	Average	100	1	VERTICAL
5	5497.00	109.25				3.53	34.26	0.00	Peak	100	1	VERTICAL

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	5696.00	97.82				3.59	34.34	0.00	Average	144	280	HORIZONTAL
2	5697.00	111.21				3.59	34.34	0.00	Peak	144	280	HORIZONTAL
3	5725.00	67.86	68.30	-0.44	29.92	3.60	34.34	0.00	Peak	144	280	HORIZONTAL

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

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 40MHz Ch 54, 62 / Ant. 10: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 2012		

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	5253.60	109.30				3.46	33.85	0.00	Peak	100	327	HORIZONTAL
2	5262.40	98.84				3.46	33.85	0.00	Average	100	327	HORIZONTAL
3	5350.00	51.01	54.00	-2.99	13.49	3.49	34.03	0.00	Average	100	327	HORIZONTAL
4	5350.00	69.88	74.00	-4.12	32.36	3.49	34.03	0.00	Peak	100	327	HORIZONTAL

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

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	5297.20	93.29				3.48	33.94	0.00	Average	148	317	HORIZONTAL
2	5298.00	105.65				3.48	33.94	0.00	Peak	148	317	HORIZONTAL
3	5350.00	52.13	54.00	-1.87	14.61	3.49	34.03	0.00	Average	148	317	HORIZONTAL
4	5355.60	73.33	74.00	-0.67	35.81	3.49	34.03	0.00	Peak	148	317	HORIZONTAL

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

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 40MHz Ch 102, 110, 134 / Ant. 10: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 2012		

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	42.33	54.00	-11.67	4.62	3.52	34.19	0.00	Average	100	304	HORIZONTAL
2	5460.00	56.38	74.00	-17.62	18.67	3.52	34.19	0.00	Peak	100	304	HORIZONTAL
3	5469.20	67.66	68.30	-0.64	29.93	3.52	34.21	0.00	Peak	100	304	HORIZONTAL
4	5502.00	90.83				3.54	34.25	0.00	Average	100	304	HORIZONTAL
5	5504.80	103.03				3.54	34.25	0.00	Peak	100	304	HORIZONTAL

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

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	5459.60	61.81	74.00	-12.19	24.10	3.52	34.19	0.00	Peak	101	308	HORIZONTAL
2	5460.00	44.04	54.00	-9.96	6.33	3.52	34.19	0.00	Average	101	308	HORIZONTAL
3	5469.20	67.01	68.30	-1.29	29.28	3.52	34.21	0.00	Peak	101	308	HORIZONTAL
4	5553.20	97.64				3.55	34.31	0.00	Average	101	308	HORIZONTAL
5	5553.60	110.28				3.55	34.31	0.00	Peak	101	308	HORIZONTAL

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

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	5673.60	108.00				3.59	34.33	0.00	Peak	138	297	HORIZONTAL
2	5681.20	95.40				3.59	34.33	0.00	Average	138	297	HORIZONTAL
3	5727.80	68.09	68.30	-0.21	30.15	3.60	34.34	0.00	Peak	138	297	HORIZONTAL

Item 1, 2 are the fundamental frequency at 5670 MHz.

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 40MHz Ch 54, 62 / Ant. 10: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 2012		

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	5254.80	96.66				3.46	33.85	0.00	Average	151	293	HORIZONTAL
2	5256.80	109.84				3.46	33.85	0.00	Peak	151	293	HORIZONTAL
3	5350.00	51.74	54.00	-2.26	14.22	3.49	34.03	0.00	Average	151	293	HORIZONTAL
4	5350.40	71.94	74.00	-2.06	34.42	3.49	34.03	0.00	Peak	151	293	HORIZONTAL

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

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	5297.60	91.77				3.48	33.94	0.00	Average	146	295	HORIZONTAL
2	5300.00	105.41				3.48	33.94	0.00	Peak	146	295	HORIZONTAL
3	5350.00	52.85	54.00	-1.15	15.33	3.49	34.03	0.00	Average	146	295	HORIZONTAL
4	5350.00	70.46	74.00	-3.54	32.94	3.49	34.03	0.00	Peak	146	295	HORIZONTAL

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

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 40MHz Ch 102, 110, 134 / Ant. 10: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 2012		

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	5458.80	61.26	74.00	-12.74	23.55	3.52	34.19	0.00	Peak	100	304	HORIZONTAL
2	5460.00	45.31	54.00	-8.69	7.60	3.52	34.19	0.00	Average	100	304	HORIZONTAL
3	5470.00	67.70	68.30	-0.60	29.97	3.52	34.21	0.00	Peak	100	304	HORIZONTAL
4	5505.20	91.83				3.54	34.25	0.00	Average	100	304	HORIZONTAL
5	5505.60	104.07				3.54	34.25	0.00	Peak	100	304	HORIZONTAL

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

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	5454.00	64.11	74.00	-9.89	26.40	3.52	34.19	0.00	Peak	111	304	HORIZONTAL
2	5460.00	48.11	54.00	-5.89	10.40	3.52	34.19	0.00	Average	111	304	HORIZONTAL
3	5470.00	67.34	68.30	-0.96	29.61	3.52	34.21	0.00	Peak	111	304	HORIZONTAL
4	5556.40	97.73				3.55	34.31	0.00	Average	111	304	HORIZONTAL
5	5557.60	110.48				3.55	34.31	0.00	Peak	111	304	HORIZONTAL

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

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	5681.20	109.12				3.59	34.33	0.00	Peak	148	293	HORIZONTAL
2	5684.80	96.15				3.59	34.33	0.00	Average	148	293	HORIZONTAL
3	5727.40	67.99	68.30	-0.31	30.05	3.60	34.34	0.00	Peak	148	293	HORIZONTAL

Item 1, 2 are the fundamental frequency at 5670 MHz.

Note:

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

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

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11a Ch 52, 60, 64 / Ant. 4: Chain. 1 + Chain. 3 (2TX)
Test Date	Oct. 19, 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	5133.65	45.20	54.00	-8.80	8.13	3.43	33.64	0.00	Average	110	163	VERTICAL
2	5134.14	59.01	74.00	-14.99	21.94	3.43	33.64	0.00	Peak	110	163	VERTICAL
3	5253.75	119.65				3.46	33.85	0.00	Peak	110	163	VERTICAL
4	5257.12	107.77				3.46	33.85	0.00	Average	110	163	VERTICAL
5	5350.00	45.97	54.00	-8.03	8.45	3.49	34.03	0.00	Average	110	163	VERTICAL
6	5350.00	59.25	74.00	-14.75	21.73	3.49	34.03	0.00	Peak	110	163	VERTICAL

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	5296.80	118.58				3.48	33.94	0.00	Peak	101	226	VERTICAL
2	5297.76	107.79				3.48	33.94	0.00	Average	101	226	VERTICAL
3	5350.00	51.56	54.00	-2.44	14.04	3.49	34.03	0.00	Average	101	226	VERTICAL
4	5350.64	71.57	74.00	-2.43	34.05	3.49	34.03	0.00	Peak	101	226	VERTICAL

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	5316.31	105.75				3.48	33.97	0.00	Average	100	175	VERTICAL
2	5318.72	116.90				3.48	33.97	0.00	Peak	100	175	VERTICAL
3	5350.00	53.29	54.00	-0.71	15.77	3.49	34.03	0.00	Average	100	175	VERTICAL
4	5350.80	70.83	74.00	-3.17	33.31	3.49	34.03	0.00	Peak	100	175	VERTICAL

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

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11a Ch 100, 140 / Ant. 4: Chain. 1 + Chain. 3 (2TX)
Test Date	Oct. 19, 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	5456.96	63.26	74.00	-10.74	25.53	3.52	34.21	0.00	Peak	100	151	VERTICAL
2	5459.68	45.54	54.00	-8.46	7.81	3.52	34.21	0.00	Average	100	151	VERTICAL
3	5470.00	67.90	68.30	-0.40	30.14	3.52	34.24	0.00	Peak	100	151	VERTICAL
4	5496.47	105.21				3.53	34.26	0.00	Average	100	151	VERTICAL
5	5498.88	116.57				3.53	34.26	0.00	Peak	100	151	VERTICAL

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	5694.39	114.19				3.59	34.34	0.00	Peak	112	138	VERTICAL
2	5701.92	103.00				3.59	34.34	0.00	Average	112	138	VERTICAL
3	5725.64	67.95	68.30	-0.35	30.01	3.60	34.34	0.00	Peak	112	138	VERTICAL

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

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11a Ch 52, 60, 64 / Ant. 5: Chain. 1 (1TX)
Test Date	Sep. 10, 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	5148.80	51.47	74.00	-22.53	14.37	3.43	33.67	0.00	Peak	130	275	VERTICAL
2	5150.00	39.71	54.00	-14.29	2.61	3.43	33.67	0.00	Average	130	275	VERTICAL
3	5254.60	99.61				3.46	33.85	0.00	Average	130	275	VERTICAL
4	5255.80	110.31				3.46	33.85	0.00	Peak	130	275	VERTICAL
5	5350.00	40.30	54.00	-13.70	2.78	3.49	34.03	0.00	Average	130	275	VERTICAL
6	5351.20	51.67	74.00	-22.33	14.15	3.49	34.03	0.00	Peak	130	275	VERTICAL

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	5297.60	117.79				3.48	33.94	0.00	Peak	104	349	VERTICAL
2	5301.60	106.32				3.48	33.94	0.00	Average	104	349	VERTICAL
3	5350.00	52.18	54.00	-1.82	14.66	3.49	34.03	0.00	Average	104	349	VERTICAL
4	5350.40	73.40	74.00	-0.60	35.88	3.49	34.03	0.00	Peak	104	349	VERTICAL

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	5318.80	103.82				3.48	33.97	0.00	Average	116	346	VERTICAL
2	5326.40	114.60				3.49	33.97	0.00	Peak	116	346	VERTICAL
3	5350.00	52.99	54.00	-1.01	15.47	3.49	34.03	0.00	Average	116	346	VERTICAL
4	5350.40	72.75	74.00	-1.25	35.23	3.49	34.03	0.00	Peak	116	346	VERTICAL

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

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11a Ch 100, 140 / Ant. 5: Chain. 1 (1TX)
Test Date	Sep. 10, 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	5457.40	60.64	74.00	-13.36	22.91	3.52	34.21	0.00	Peak	100	360	VERTICAL
2	5460.00	43.17	54.00	-10.83	5.44	3.52	34.21	0.00	Average	100	360	VERTICAL
3	5469.80	66.65	68.30	-1.65	28.89	3.52	34.24	0.00	Peak	100	360	VERTICAL
4	5497.60	98.49				3.53	34.26	0.00	Average	100	360	VERTICAL
5	5498.20	109.66				3.53	34.26	0.00	Peak	100	360	VERTICAL

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	5702.80	101.56				3.59	34.34	0.00	Average	123	351	VERTICAL
2	5703.00	112.68				3.59	34.34	0.00	Peak	123	351	VERTICAL
3	5725.00	67.18	68.30	-1.12	29.24	3.60	34.34	0.00	Peak	123	351	VERTICAL

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

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11a Ch 52, 60, 64 / Ant. 6: Chain. 1 + Chain. 3 (2TX)
Test Date	Oct. 19, 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	47.62	54.00	-6.38	10.55	3.43	33.64	0.00	Average	132	0	VERTICAL
2	5140.39	59.95	74.00	-14.05	22.88	3.43	33.64	0.00	Peak	132	0	VERTICAL
3	5261.92	124.01				3.46	33.85	0.00	Peak	132	0	VERTICAL
4	5264.33	112.82				3.46	33.88	0.00	Average	132	0	VERTICAL
5	5373.56	46.18	54.00	-7.82	8.62	3.50	34.06	0.00	Average	132	0	VERTICAL
6	5374.52	58.33	74.00	-15.67	20.77	3.50	34.06	0.00	Peak	132	0	VERTICAL

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	5297.12	111.43				3.48	33.94	0.00	Average	127	0	VERTICAL
2	5304.49	122.39				3.48	33.94	0.00	Peak	127	0	VERTICAL
3	5350.00	53.08	54.00	-0.92	15.56	3.49	34.03	0.00	Average	127	0	VERTICAL
4	5352.89	69.47	74.00	-4.53	31.95	3.49	34.03	0.00	Peak	127	0	VERTICAL

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	5315.19	120.59				3.48	33.97	0.00	Peak	130	1	VERTICAL
2	5322.40	108.42				3.49	33.97	0.00	Average	130	1	VERTICAL
3	5350.00	50.64	54.00	-3.36	13.12	3.49	34.03	0.00	Average	130	1	VERTICAL
4	5350.32	73.16	74.00	-0.84	35.64	3.49	34.03	0.00	Peak	130	1	VERTICAL

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

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11a Ch 100, 140 / Ant. 6: Chain. 1 + Chain. 3 (2TX)
Test Date	Oct. 19, 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	5459.36	62.31	74.00	-11.69	24.58	3.52	34.21	0.00	Peak	124	3	VERTICAL
2	5459.84	45.72	54.00	-8.28	7.99	3.52	34.21	0.00	Average	124	3	VERTICAL
3	5469.04	67.53	68.30	-0.77	29.77	3.52	34.24	0.00	Peak	124	3	VERTICAL
4	5497.12	120.15				3.53	34.26	0.00	Peak	124	3	VERTICAL
5	5501.76	108.98				3.54	34.28	0.00	Average	124	3	VERTICAL

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	105.82				3.59	34.34	0.00	Average	133	5	VERTICAL
2	5705.45	117.71				3.60	34.34	0.00	Peak	133	5	VERTICAL
3	5725.96	68.10	68.30	-0.20	30.16	3.60	34.34	0.00	Peak	133	5	VERTICAL

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

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11a Ch 52, 60, 64 / Ant. 10: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	5141.00	65.27	74.00	-8.73	28.20	3.43	33.64	0.00	Peak	100	321	HORIZONTAL
2	5150.00	44.88	54.00	-9.12	7.78	3.43	33.67	0.00	Average	100	321	HORIZONTAL
3	5254.60	103.43				3.46	33.85	0.00	Average	100	321	HORIZONTAL
4	5255.80	116.27				3.46	33.85	0.00	Peak	100	321	HORIZONTAL
5	5351.20	46.50	54.00	-7.50	8.98	3.49	34.03	0.00	Average	100	321	HORIZONTAL
6	5352.40	68.20	74.00	-5.80	30.68	3.49	34.03	0.00	Peak	100	321	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	5296.80	114.01				3.48	33.94	0.00	Peak	145	314	HORIZONTAL
2	5297.20	103.61				3.48	33.94	0.00	Average	145	314	HORIZONTAL
3	5350.00	46.66	54.00	-7.34	9.14	3.49	34.03	0.00	Average	145	314	HORIZONTAL
4	5351.60	64.40	74.00	-9.60	26.88	3.49	34.03	0.00	Peak	145	314	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	5318.40	101.68				3.48	33.97	0.00	Average	145	293	HORIZONTAL
2	5321.40	113.12				3.48	33.97	0.00	Peak	145	293	HORIZONTAL
3	5350.20	73.42	74.00	-0.58	35.90	3.49	34.03	0.00	Peak	145	293	HORIZONTAL
4	5350.40	51.13	54.00	-2.87	13.61	3.49	34.03	0.00	Average	145	293	HORIZONTAL

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

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11a Ch 100, 140 / Ant. 10: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 10, 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	5457.00	58.65	74.00	-15.35	20.94	3.52	34.19	0.00	Peak	100	301	HORIZONTAL
2	5460.00	42.31	54.00	-11.69	4.60	3.52	34.19	0.00	Average	100	301	HORIZONTAL
3	5469.20	67.86	68.30	-0.44	30.13	3.52	34.21	0.00	Peak	100	301	HORIZONTAL
4	5501.40	111.57				3.54	34.25	0.00	Peak	100	301	HORIZONTAL
5	5503.60	100.79				3.54	34.25	0.00	Average	100	301	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	5696.00	99.34				3.59	34.34	0.00	Average	147	285	HORIZONTAL
2	5698.00	110.92				3.59	34.34	0.00	Peak	147	285	HORIZONTAL
3	5725.40	67.26	68.30	-1.04	29.32	3.60	34.34	0.00	Peak	147	285	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

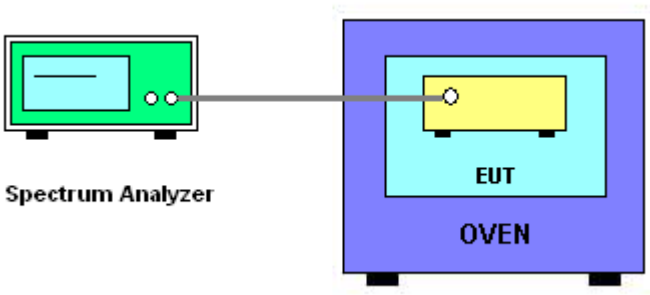
Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

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)	**5300**
126.50	5299.9647
110.00	5299.9646
93.50	5299.9641
Max. Deviation (MHz)	**0.035900**
Max. Deviation (ppm)	**6.77**

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)
(°C)	**5300**
-30	5299.9656
-20	5299.9648
-10	5299.9660
0	5299.9646
10	5299.9675
20	5299.9645
30	5299.9668
40	5299.9664
50	5299.9666
Max. Deviation (MHz)	**0.035500**
Max. Deviation (ppm)	**6.6981**

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, 2012	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	4083	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	1	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	8449B	3008A02310	1GHz ~ 26.5GHz	Nov. 29, 2011	Radiation (03CH01-CB)
Pre-Amplifier	WM	TF-130N-R1	923365	26.5GHz ~ 40GHz	Jul. 31, 2012	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSP40	100056	9KHz~40GHz	Nov. 03, 2011	Radiation (03CH01-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, 2012*	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, 2012	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, 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)
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