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

FCC RADIO TEST REPORT

Applicant's company	**Motorola, 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 C § 15.247
Test Freq. Range	2400 ~ 2483.5MHz / 5725 ~ 5850MHz
Received Date	Aug. 22, 2012
Final Test Date	Oct. 20, 2012
Submission Type	Class II Change

Statement

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

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

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

The measurements and test results shown in this test report were made in accordance with the procedures and found in compliance with the limit given in **ANSI C63.10-2009** and **47 CFR FCC Part 15 Subpart C** and KDB 558074 D01 v02 & KDB 662911 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
FR282211AA	Rev. 01	Initial issue of report	Nov. 23, 2012

Certificate No.: CB10110137

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 C § 15.247**

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 C				
Part	**Rule Section**	**Description of Test**	**Result**	**Under Limit**
4.1	15.207	AC Power Line Conducted Emissions	Complies	10.43 dB
4.2	15.247(b)(3)	Peak Output Power	Complies	0.02 dB
4.3	15.247(e)	Power Spectral Density	Complies	0.31 dB
4.4	15.247(a)(2)	6dB Spectrum Bandwidth	Complies	-
4.5	15.247(d)	Radiated Emissions	Complies	0.54 dB
4.6	15.247(d)	Band Edge Emissions	Complies	0.01 dB
4.7	15.203	Antenna Requirements	Complies	-

Test Items	Uncertainty	Remark
AC Power Line Conducted Emissions	±2.3dB	Confidence levels of 95%
Peak Output Power	±0.8dB	Confidence levels of 95%
Power Spectral Density	±0.5dB	Confidence levels of 95%
6dB Spectrum Bandwidth	$\pm 8.5\times10^{-8}$	Confidence levels of 95%
Radiated Emissions (9kHz~30MHz)	±0.8dB	Confidence levels of 95%
Radiated Emissions (30MHz~1000MHz)	±1.9dB	Confidence levels of 95%
Radiated / Band Edge Emissions (1GHz~18GHz)	±1.9dB	Confidence levels of 95%
Radiated Emissions (18GHz~40GHz)	±1.9dB	Confidence levels of 95%
Temperature	±0.7℃	Confidence levels of 95%
Humidity	±3.2%	Confidence levels of 95%
DC / AC Power Source	±1.4%	Confidence levels of 95%

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	For 2.4GHz Band: WLAN (2TX, 3RX) For 5GHz Band: 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	2400 ~ 2483.5MHz / 5725 ~ 5850MHz
Channel Number	For 2.4GHz Band: 11 for 20MHz bandwidth ; 7 for 40MHz bandwidth For 5GHz Band: 5 for 20MHz bandwidth ; 2 for 40MHz bandwidth
Channel Band Width (99%)	**For 2.4GHz Band:** **Ant. 1 :** MCS0 (20MHz): 17.76 MHz ; MCS0 (40MHz): 36.48 MHz ; MCS8 (20MHz): 17.68 MHz ; MCS8 (40MHz): 36.48 MHz **Ant. 2 :** MCS0 (20MHz): 18.64 MHz ; MCS0 (40MHz): 36.48 MHz ; MCS8 (20MHz): 17.76 MHz ; MCS8 (40MHz): 36.36 MHz **Ant. 3 :** MCS0 (20MHz): 17.76 MHz ; MCS0 (40MHz): 36.48 MHz ; MCS8 (20MHz): 17.76 MHz ; MCS8 (40MHz): 36.36 MHz **For 5GHz Band:** **Ant. 4 :** MCS0 (20MHz): 30.56 MHz ; MCS0 (40MHz): 50.08 MHz ; MCS8 (20MHz): 30.24 MHz ; MCS8 (40MHz): 49.76 MHz **Ant. 5 :** MCS0 (20MHz): 31.12 MHz ; MCS0 (40MHz): 66.40 MHz **Ant. 6 :** MCS0 (20MHz): 17.68 MHz ; MCS0 (40MHz): 36.48 MHz ; MCS8 (20MHz): 18.00 MHz ; MCS8 (40MHz): 40.96 MHz **Ant. 10:** MCS0 (20MHz): 30.56 MHz ; MCS0 (40MHz): 50.08 MHz ; MCS8 (20MHz): 30.24 MHz ; MCS8 (40MHz): 49.76 MHz

Peak Output Power	**For 2.4GHz Band:** **Ant. 1 :** MCS0 (20MHz): 17.96 dBm ; MCS0 (40MHz): 14.17 dBm ; MCS8 (20MHz): 17.59 dBm ; MCS8 (40MHz): 13.06 dBm **Ant. 2 :** MCS0 (20MHz): 23.57 dBm ; MCS0 (40MHz): 19.01 dBm ; MCS8 (20MHz): 22.53 dBm ; MCS8 (40MHz): 18.89 dBm **Ant. 3 :** MCS0 (20MHz): 20.06 dBm ; MCS0 (40MHz): 19.84 dBm ; MCS8 (20MHz): 22.98 dBm ; MCS8 (40MHz): 18.89 dBm **For 5GHz Band:** **Ant. 4 :** MCS0 (20MHz): 24.59 dBm ; MCS0 (40MHz): 23.86 dBm ; MCS8 (20MHz): 24.32 dBm ; MCS8 (40MHz): 23.69 dBm **Ant. 5 :** MCS0 (20MHz): 23.36 dBm ; MCS0 (40MHz): 23.40 dBm **Ant. 6 :** MCS0 (20MHz): 20.14 dBm ; MCS0 (40MHz): 20.38 dBm ; MCS8 (20MHz): 23.30 dBm ; MCS8 (40MHz): 23.35 dBm **Ant. 10:** MCS0 (20MHz): 24.59 dBm ; MCS0 (40MHz): 23.86 dBm ; MCS8 (20MHz): 24.32 dBm ; MCS8 (40MHz): 23.69 dBm
Carrier Frequencies	Please refer to section 3.4
Antenna	Please refer to section 3.3

IEEE 802.11a/b/g

Items	Description
Product Type	11b/g: WLAN (2TX, 3RX) 11a: WLAN (1/2TX, 3RX)
Radio Type	Intentional Transceiver
Power Type	From Host System
Modulation	DSSS for IEEE 802.11b ; OFDM for IEEE 802.11a/g
Data Modulation	DSSS (BPSK / QPSK / CCK) ; OFDM (BPSK / QPSK / 16QAM / 64QAM)
Data Rate (Mbps)	DSSS (1/ 2/ 5.5/11) ; OFDM (6/9/12/18/24/36/48/54)
Frequency Range	2400 ~ 2483.5MHz / 5725 ~ 5850MHz
Channel Number	11b/g: 11 ; 11a: 5
Channel Band Width (99%)	**Ant. 1 :** 11b: 15.52 MHz **Ant. 2 :** 11b: 15.52 MHz **Ant. 3 :** 11b: 15.76 MHz **Ant. 5 :** 11a: 31.20 MHz
Peak Output Power	**Ant. 1 :** 11b: 18.02 dBm ; 11g: 17.56 dBm **Ant. 2 :** 11b: 23.55 dBm ; 11g: 23.59 dBm **Ant. 3 :** 11b: 25.51 dBm ; 11g: 21.43 dBm **Ant. 4 :** 11a: 24.51 dBm **Ant. 5 :** 11a: 23.35 dBm **Ant. 6 :** 11a: 20.39 dBm **Ant. 10:** 11a: 24.51 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 802.11b	V	X	V	X
IEEE 802.11g	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 2.4GHz Band:>

For IEEE 802.11b/g/n mode (2TX, 3RX):

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

<For 5GHz Band:>

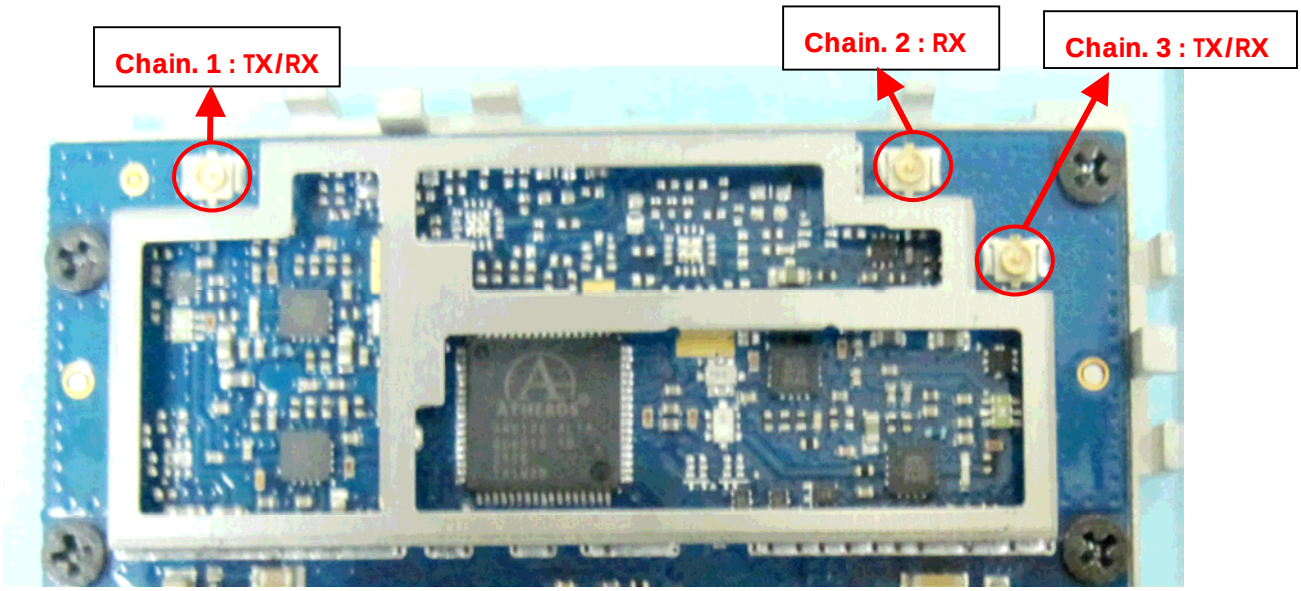
For IEEE 802.11a/n mode (1/2TX, 3RX):

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 2.4GHz Band:

For IEEE 802.11b/g, use Channel 1~Channel 11.

There are two bandwidth systems for IEEE 802.11n.

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

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

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

For 5GHz Band:

For IEEE 802.11a, use Channel 149, 153, 157, 161, 165.

There are two bandwidth systems for IEEE 802.11n.

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

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

Frequency Band	Channel No.	Frequency	Channel No.	Frequency
5725~5850 MHz Band 4	149	5745 MHz	159	5795 MHz
	151	5755 MHz	161	5805 MHz
	153	5765 MHz	165	5825 MHz
	157	5785 MHz	-	-

3.5. Table for Test Modes

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

For 2.4GHz Band

Test Items	Mode	Data Rate	Channel	Chain.
AC Power Line Conducted Emissions	CTX	Auto	-	-
Peak Output Power	MCS0/20MHz	6.5 Mbps	1/6/11	1/3
	MCS0/40MHz	13.5 Mbps	3/6/9	1/3
	MCS8/20MHz	13 Mbps	1/6/11	1/3
	MCS8/40MHz	27 Mbps	3/6/9	1/3
	11b/CCK	1 Mbps	1/6/11	1/3
	11g/BPSK	6 Mbps	1/6/11	1/3
Power Spectral Density	MCS0/20MHz	6.5 Mbps	1/6/11	1/3
	MCS0/40MHz	13.5 Mbps	3/6/9	1/3
	MCS8/20MHz	13 Mbps	1/6/11	1/3
	MCS8/40MHz	27 Mbps	3/6/9	1/3
	11b/CCK	1 Mbps	1/6/11	1/3
6dB Spectrum Bandwidth	MCS0/20MHz	6.5 Mbps	1/6/11	1/3
	MCS0/40MHz	13.5 Mbps	3/6/9	1/3
	MCS8/20MHz	13 Mbps	1/6/11	1/3
	MCS8/40MHz	27 Mbps	3/6/9	1/3
	11b/CCK	1 Mbps	1/6/11	1/3
Radiated Emissions Below 1GHz	CTX	Auto	-	-
Radiated Emissions Above 1GHz	MCS0/20MHz	6.5 Mbps	1/6/11	1/3
	MCS0/40MHz	13.5 Mbps	3/6/9	1/3
	MCS8/20MHz	13 Mbps	1/6/11	1/3
	MCS8/40MHz	27 Mbps	3/6/9	1/3
	11b/CCK	1 Mbps	1/6/11	1/3
Band Edge Emissions	MCS0/20MHz	6.5 Mbps	1/11	1/3
	MCS0/40MHz	13.5 Mbps	3/9	1/3
	MCS8/20MHz	13 Mbps	1/11	1/3
	MCS8/40MHz	27 Mbps	3/9	1/3
	11b/CCK	1 Mbps	1/11	1/3
	11g/BPSK	6 Mbps	1/11	1/3

For 5GHz Band

Test Items	Mode	Data Rate	Channel	Chain.
AC Power Line Conducted Emissions	CTX	Auto	-	-
Peak Output Power	MCS0/20MHz	6.5 Mbps	149/157/165	1/3
	MCS0/40MHz	13.5 Mbps	151/159	1/3
	MCS8/20MHz	13 Mbps	149/157/165	1/3
	MCS8/40MHz	27 Mbps	151/159	1/3
	11a/BPSK	6 Mbps	149/157/165	1/3
Power Spectral Density	MCS0/20MHz	6.5 Mbps	149/157/165	1/3
	MCS0/40MHz	13.5 Mbps	151/159	1/3
	MCS8/20MHz	13 Mbps	149/157/165	1/3
	MCS8/40MHz	27 Mbps	151/159	1/3
	11a/BPSK	6 Mbps	149/157/165	1
6dB Spectrum Bandwidth	MCS0/20MHz	6.5 Mbps	149/157/165	1/3
	MCS0/40MHz	13.5 Mbps	151/159	1/3
	MCS8/20MHz	13 Mbps	149/157/165	1/3
	MCS8/40MHz	27 Mbps	151/159	1/3
	11a/BPSK	6 Mbps	149/157/165	1
Radiated Emissions Below 1GHz	CTX	Auto	-	-
Radiated Emissions Above 1GHz	MCS0/20MHz	6.5 Mbps	149/157/165	1/3
	MCS0/40MHz	13.5 Mbps	151/159	1/3
	MCS8/20MHz	13 Mbps	149/157/165	1/3
	MCS8/40MHz	27 Mbps	151/159	1/3
	11a/BPSK	6 Mbps	149/157/165	1
Band Edge Emissions	MCS0/20MHz	6.5 Mbps	149/157/165	1/3
	MCS0/40MHz	13.5 Mbps	151/159	1/3
	MCS8/20MHz	13 Mbps	149/157/165	1/3
	MCS8/40MHz	27 Mbps	151/159	1/3
	11a/BPSK	6 Mbps	149/157/165	1/3

The following test modes were performed for all tests:

For Conducted Emission test:

Mode 1. EUT + Ant. 1

Mode 2. EUT + Ant. 6

For Radiated Emission Below 1GHz test:

Mode 1. EUT + Ant. 1

Mode 2. EUT + Ant. 6

For Radiated Emission Above 1GHz test:

Mode 1. EUT + Ant. 1

Mode 2. EUT + Ant. 2

Mode 3. EUT + Ant. 3

Mode 4. EUT + Ant. 4

Mode 5. EUT + Ant. 5

Mode 6. EUT + Ant. 6

Mode 7. EUT + Ant. 10

3.6. Table for Testing Locations

Test Site No.	Site Category	Location	FCC Reg. No.	IC File 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: FR972826AB

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. (Only for Ant. 5)	1. AC Power Line Conducted Emissions 2. Peak Output Power 3. Power Spectral Density 4. 6dB Spectrum Bandwidth 5. Radiated Emissions Below 1GHz 6. Radiated Emissions Above 1GHz 7. Band Edge Emissions

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.

For 2.4GHz Band

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

Test Software Version	ART		
Frequency	2412 MHz	2437 MHz	2462 MHz
MCS0 20MHz	12	15	11
MCS8 20MHz	12	16	11
Frequency	2422 MHz	2437 MHz	2452 MHz
MCS0 40MHz	8.5	12	8.5
MCS8 40MHz	8.5	12.5	8.5

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

Test Software Version	ART		
Frequency	2412 MHz	2437 MHz	2462 MHz
IEEE 802.11b	14.5	14.5	14
IEEE 802.11g	13.5	15	12

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

Test Software Version	ART		
Frequency	2412 MHz	2437 MHz	2462 MHz
MCS0 20MHz	16	20	14
MCS8 20MHz	16.5	19	14.5
Frequency	2422 MHz	2437 MHz	2452 MHz
MCS0 40MHz	13.5	15.5	11.5
MCS8 40MHz	13.5	15.5	11

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

Test Software Version	ART		
Frequency	2412 MHz	2437 MHz	2462 MHz
IEEE 802.11b	19.5	19	19
IEEE 802.11g	16.5	20	14.5

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

Test Software Version	ART		
Frequency	2412 MHz	2437 MHz	2462 MHz
MCS0 20MHz	16.5	16.5	15
MCS8 20MHz	15.5	19.5	14.5
Frequency	2422 MHz	2437 MHz	2452 MHz
MCS0 40MHz	11.5	16.5	12
MCS8 40MHz	12.5	15.5	12

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

Test Software Version	ART		
Frequency	2412 MHz	2437 MHz	2462 MHz
IEEE 802.11b	19.5	21.5	19
IEEE 802.11g	16	18	15.5

For 5GHz Band

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

Test Software Version	ART		
Frequency	5745 MHz	5785 MHz	5825 MHz
MCS0 20MHz	20.5	20	20
MCS8 20MHz	20.5	20	20
Frequency	5755 MHz		5795 MHz
MCS0 40MHz	20		20
MCS8 40MHz	20		20

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

Test Software Version	ART		
Frequency	5745 MHz	5785 MHz	5825 MHz
IEEE 802.11a	20.5	20.5	20

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

Test Software Version	ART		
Frequency	5745 MHz	5785 MHz	5825 MHz
MCS0 20MHz	22	22	22
Frequency	5755 MHz		5795 MHz
MCS0 40MHz	22		22

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

Test Software Version	ART		
Frequency	5745 MHz	5785 MHz	5825 MHz
IEEE 802.11a	22	22	22

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

Test Software Version	ART		
Frequency	5745 MHz	5785 MHz	5825 MHz
MCS0 20MHz	17.5	17	16
MCS8 20MHz	20	19.5	18.5
Frequency	5755 MHz		5795 MHz
MCS0 40MHz	17.5		16.5
MCS8 40MHz	19.5		19.5

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

Test Software Version	ART		
Frequency	5745 MHz	5785 MHz	5825 MHz
IEEE 802.11a	17.00	16.00	15.50

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

Test Software Version	ART		
Frequency	5745 MHz	5785 MHz	5825 MHz
MCS0 20MHz	20.5	20	20
MCS8 20MHz	20.5	20	20
Frequency	5755 MHz		5795 MHz
MCS0 40MHz	20		20
MCS8 40MHz	20		20

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

Test Software Version	ART		
Frequency	5745 MHz	5785 MHz	5825 MHz
IEEE 802.11a	20.5	20.5	20

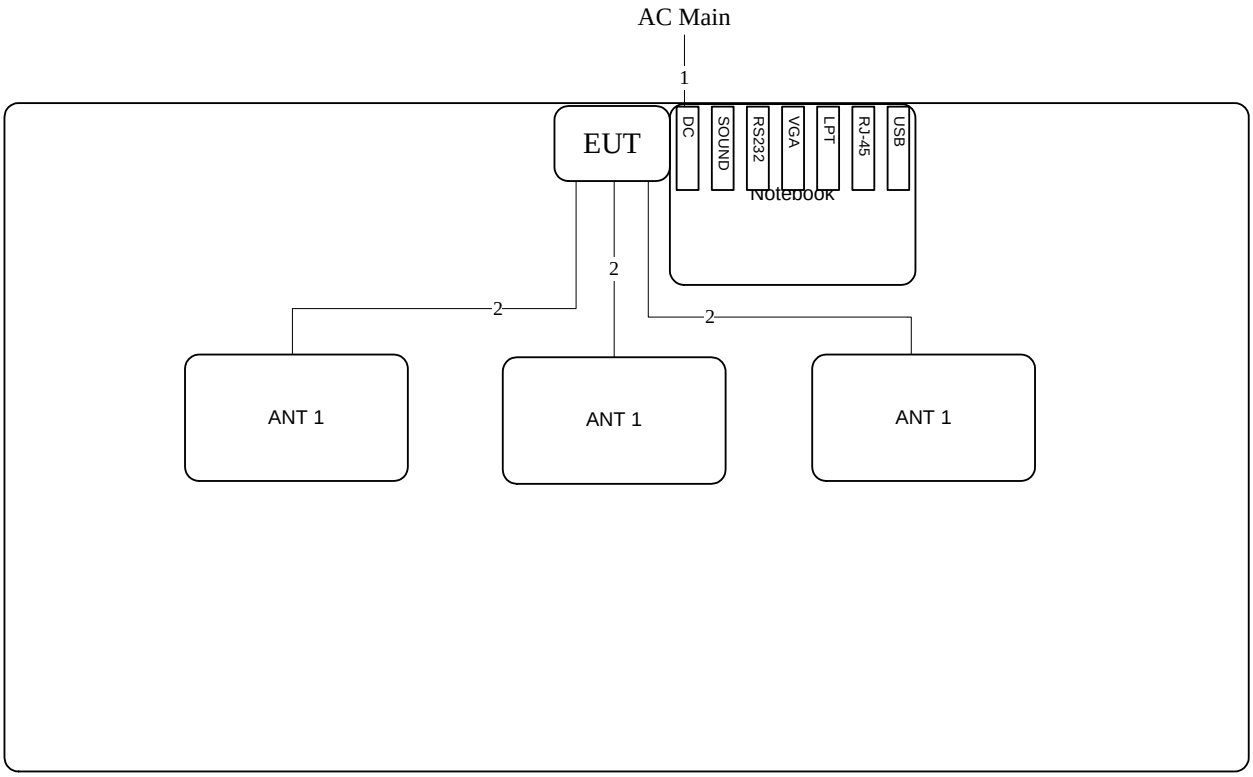
During the test, "ART" under WIN XP was executed the test program to control the EUT continuously transmit RF signal.

3.10. Test Configurations

3.10.1. Radiation Emissions Test Configuration

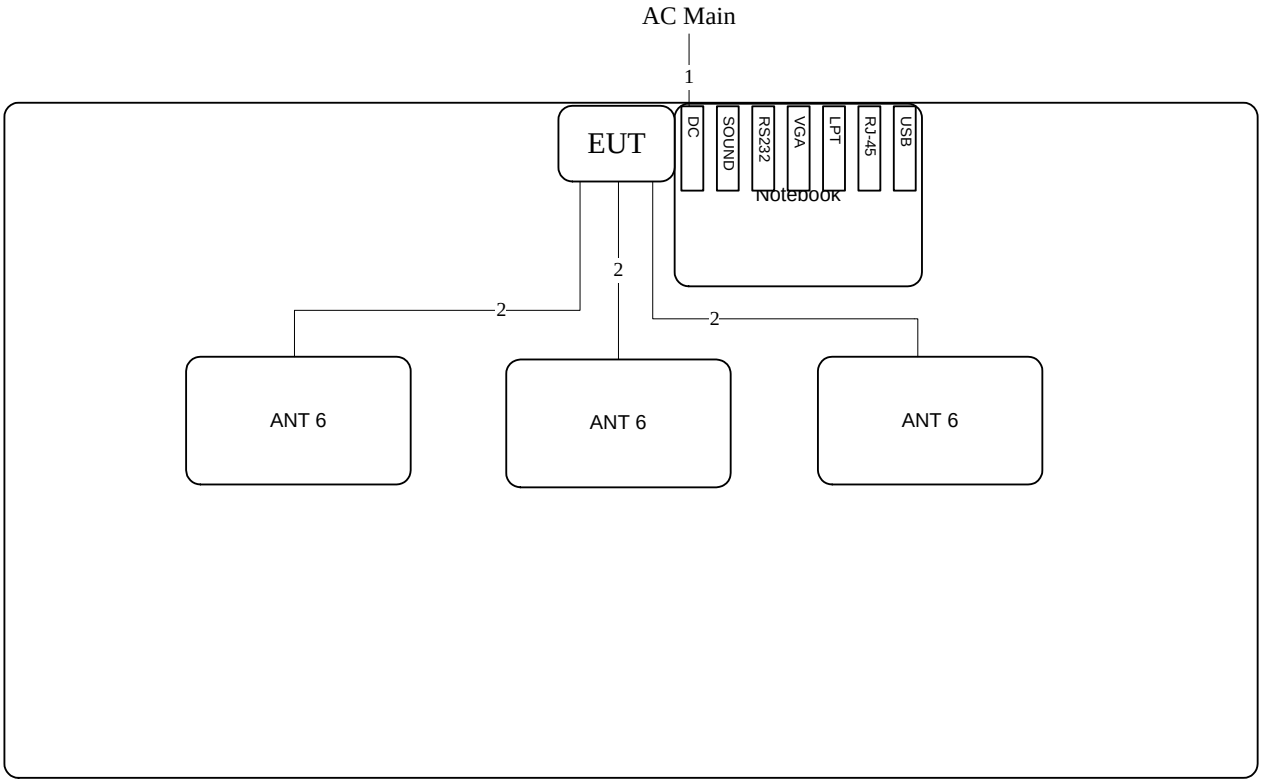
Test Configuration: 30MHz~1GHz

<For Ant. 1>:



Item	Connection	Shield	Length
1	Power Cable	No	2.6M
2	Ant Cable	Yes	0.3M

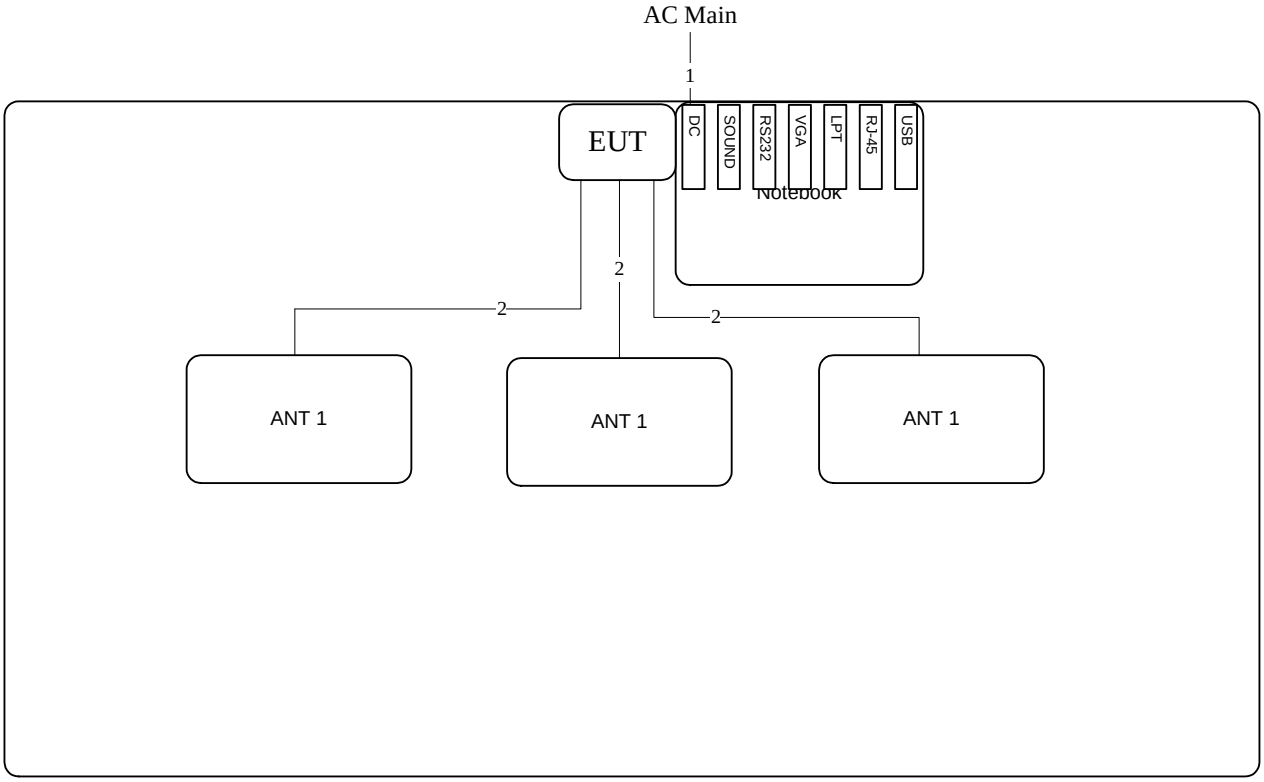
<For Ant. 6>:



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

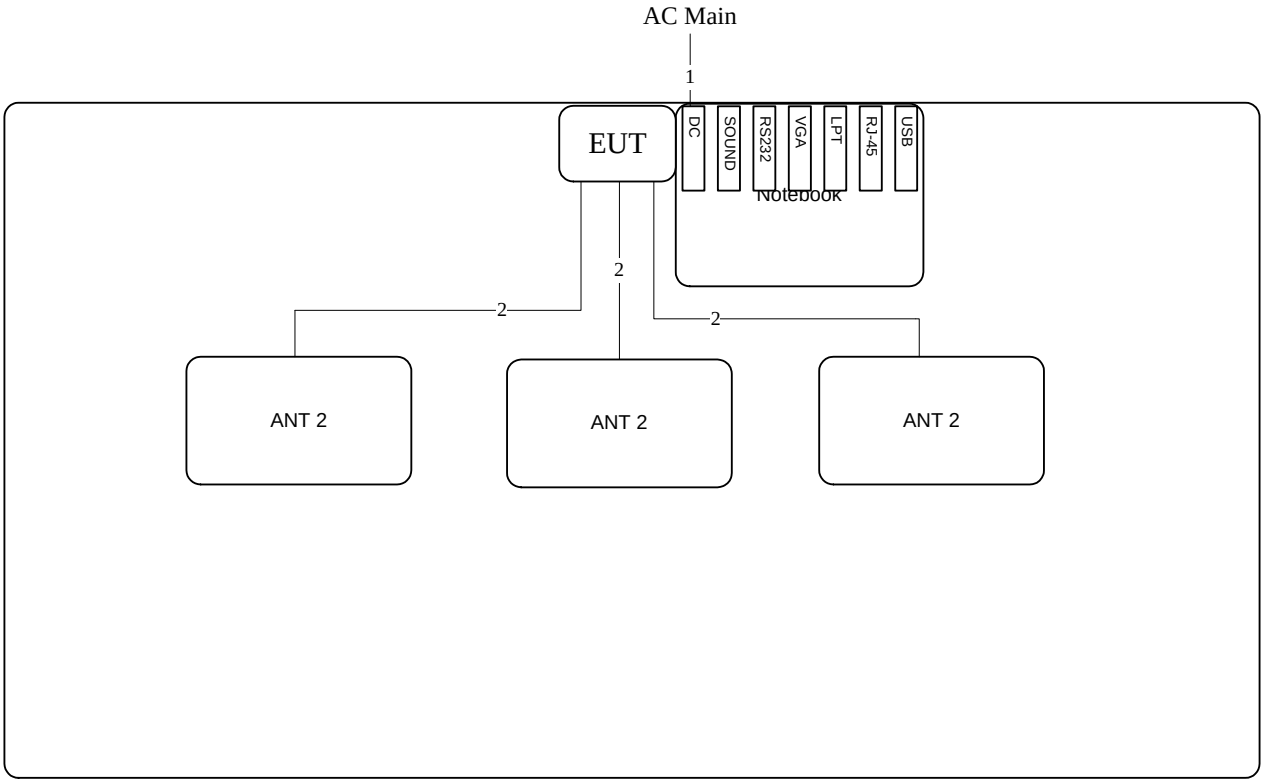
Test Configuration: above 1GHz

<For Ant. 1>:



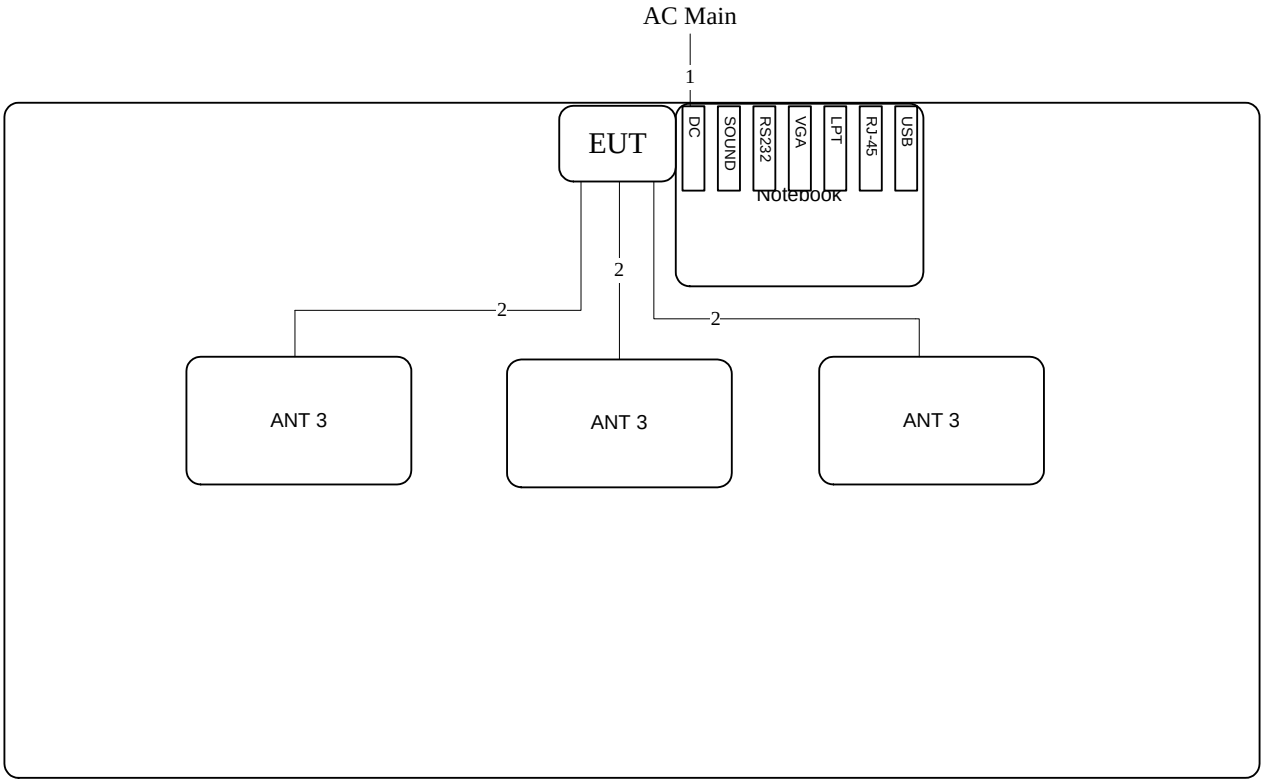
Item	Connection	Shield	Length
1	Power Cable	No	2.6M
2	Ant Cable	Yes	0.3M

<For Ant. 2>:



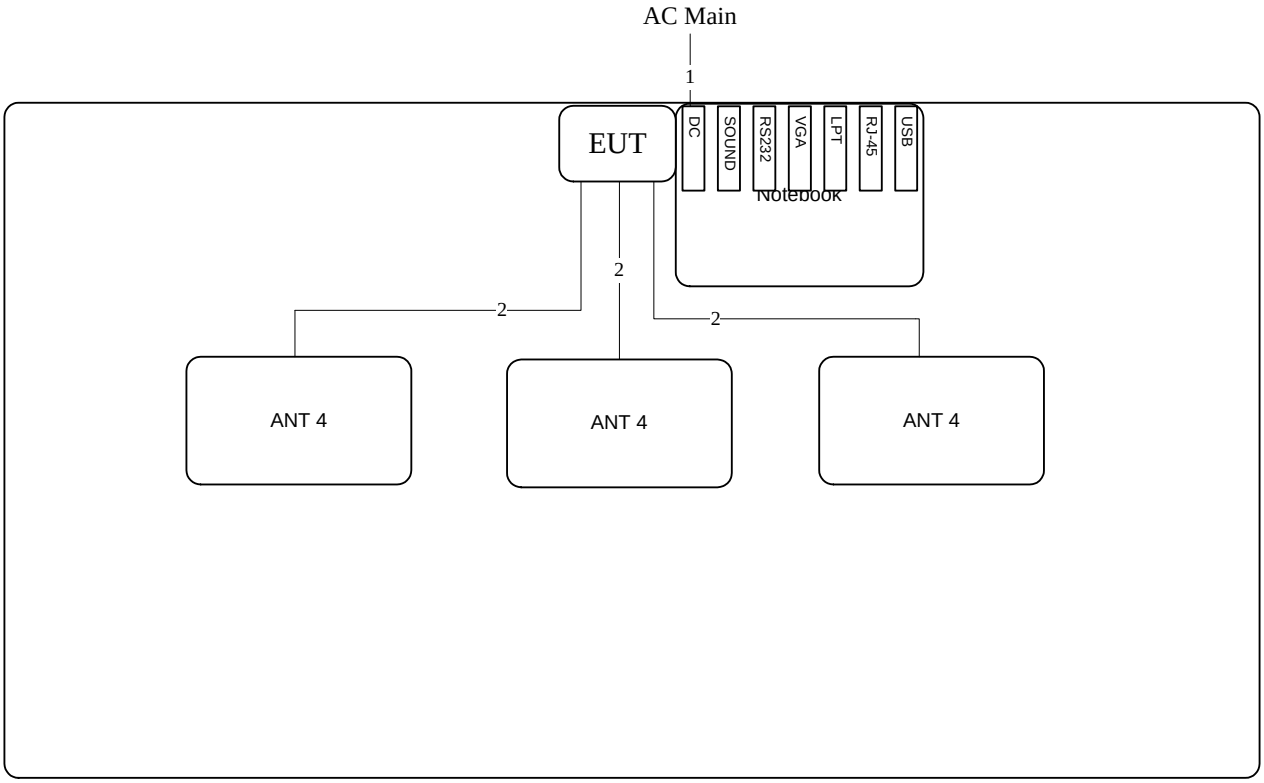
Item	Connection	Shield	Length
1	Power Cable	No	2.6M
2	Ant Cable	Yes	1M

<For Ant. 3>:



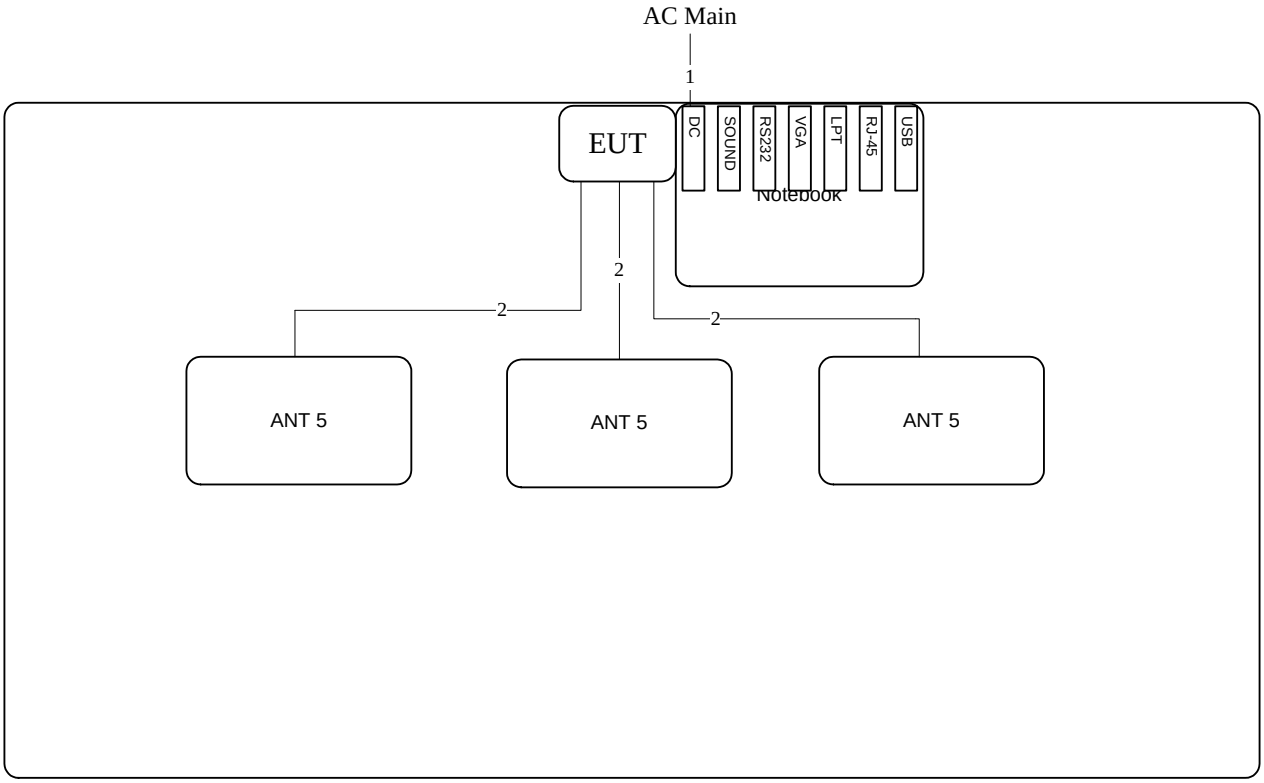
Item	Connection	Shield	Length
1	Power Cable	No	2.6M
2	Ant Cable	Yes	1.2M

<For Ant. 4>:



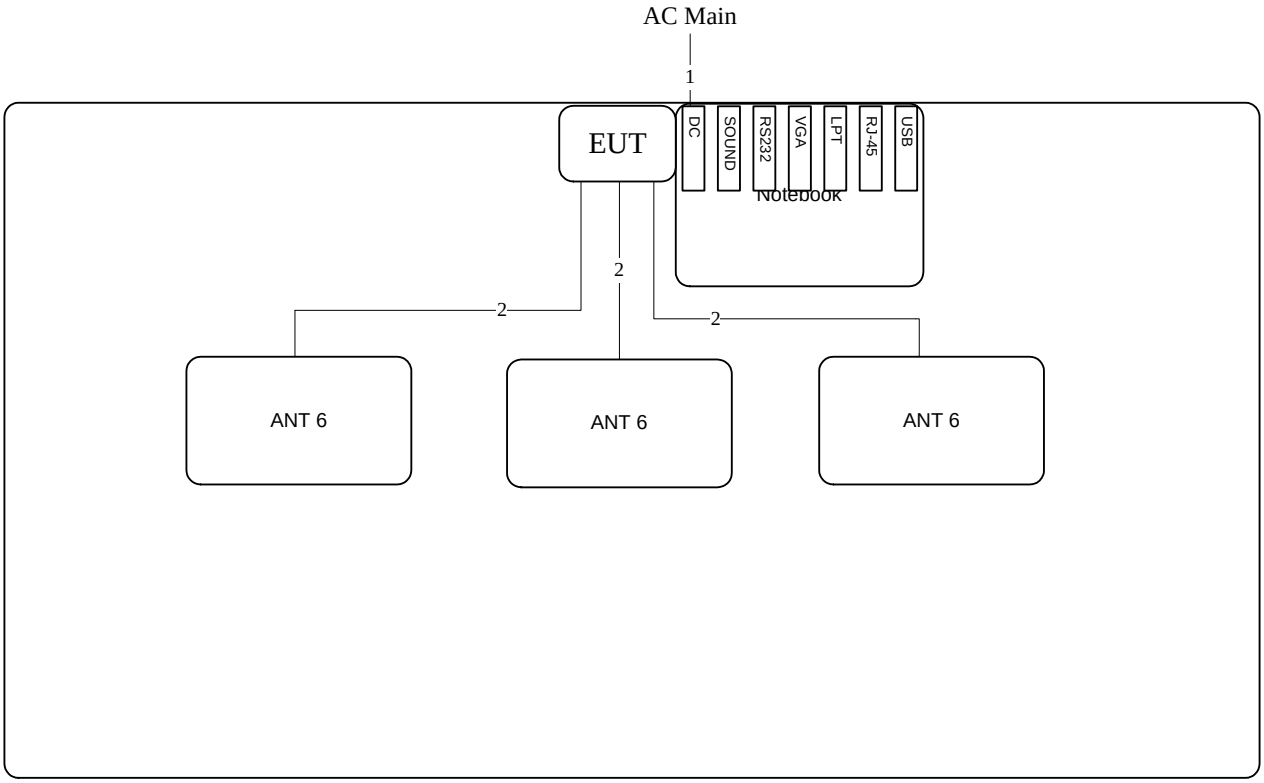
Item	Connection	Shield	Length
1	Power Cable	No	2.6M
2	Ant Cable	Yes	1M

<For Ant. 5>:



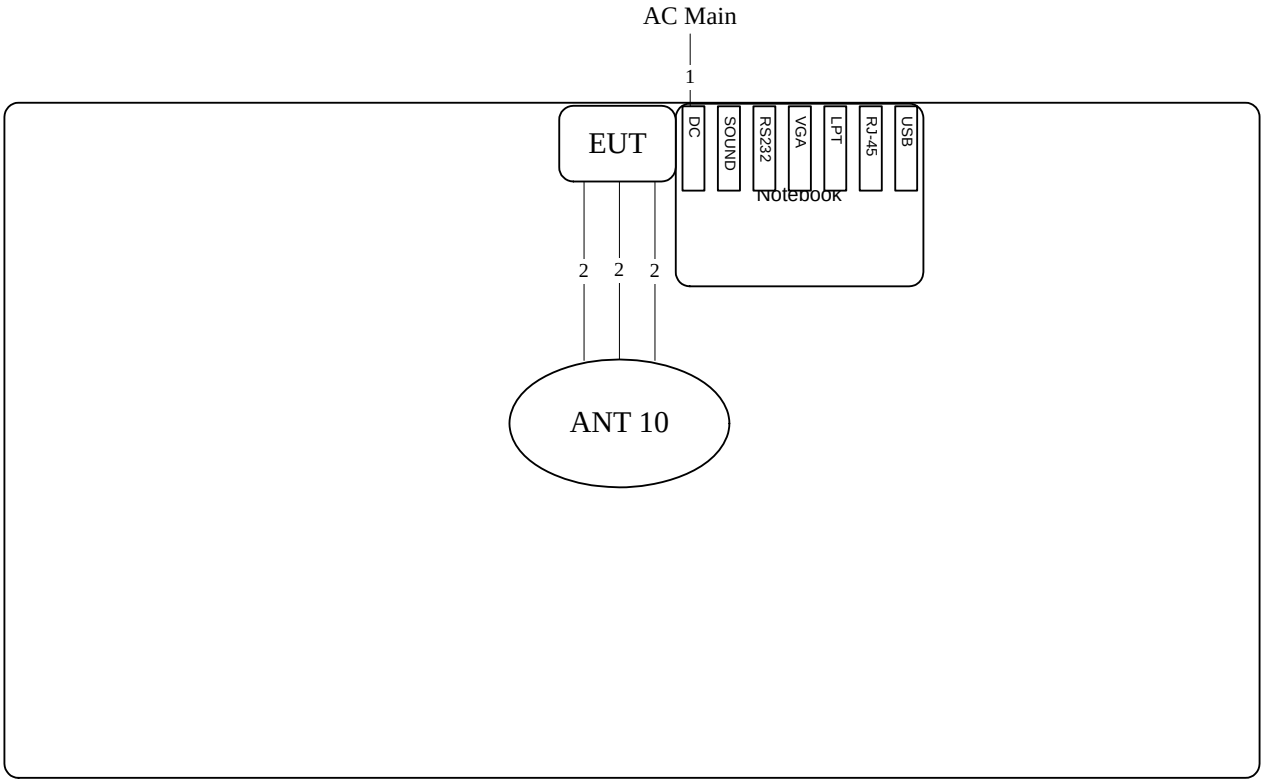
Item	Connection	Shield	Length
1	Power Cable	No	2.6M
2	Ant Cable	Yes	0.9M

<For Ant. 6>:



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

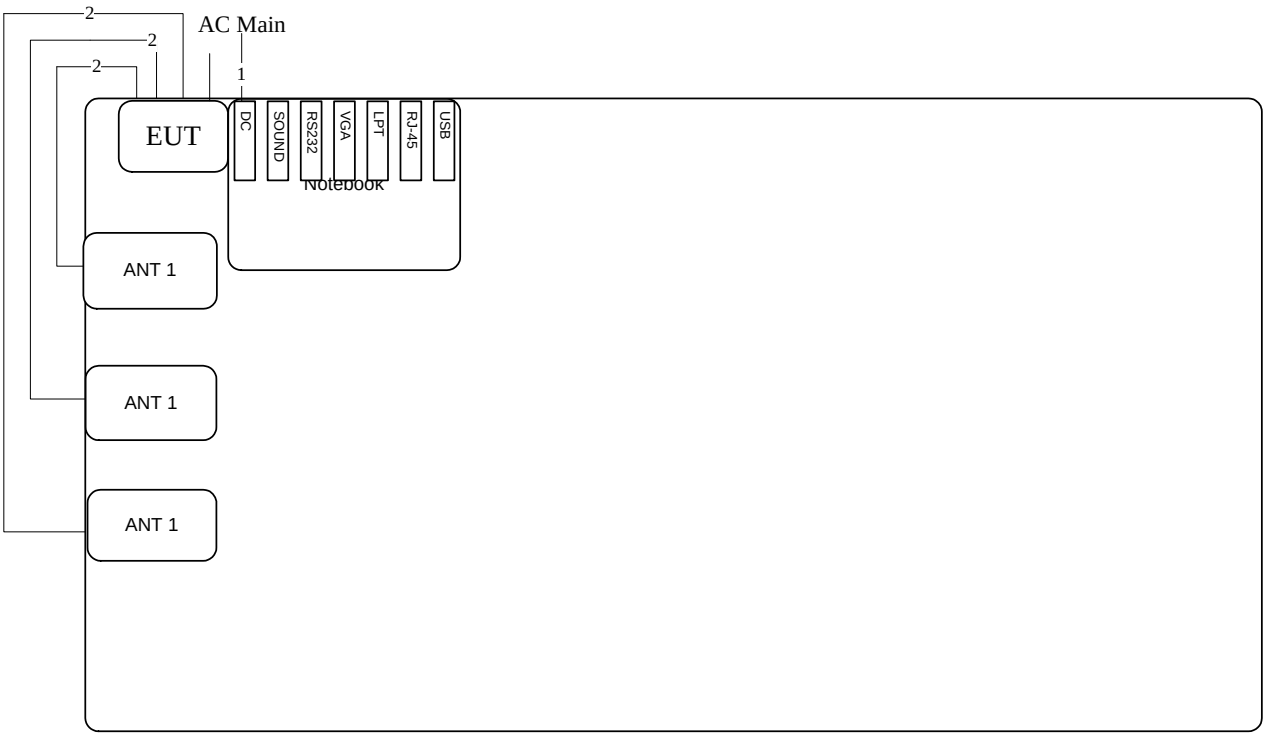
<For Ant. 10>:



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

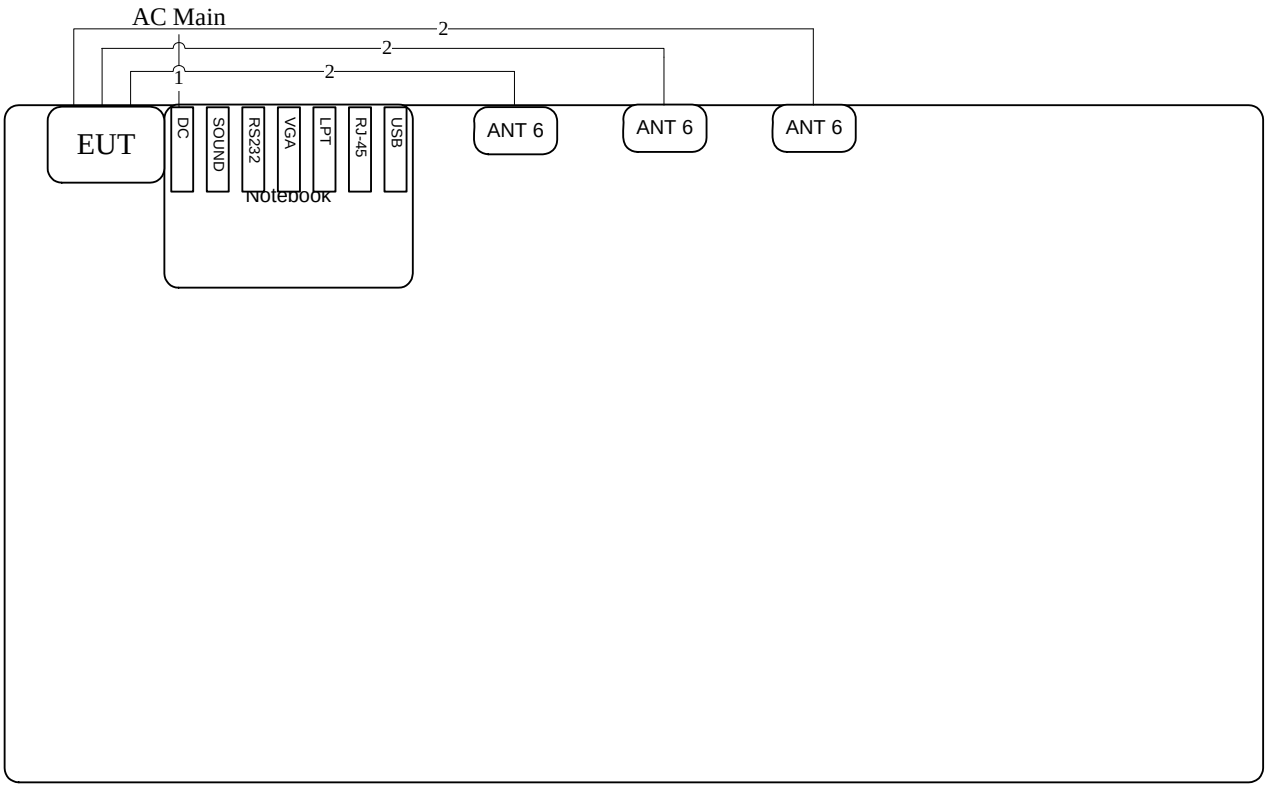
3.10.2. AC Power Line Conduction Emissions Test Configuration

<For Ant. 1>:



Item	Connection	Shield	Length
1	Power Cable	No	2.6M
2	Ant Cable	Yes	0.3M

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

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

4.1.2. Measuring Instruments and Setting

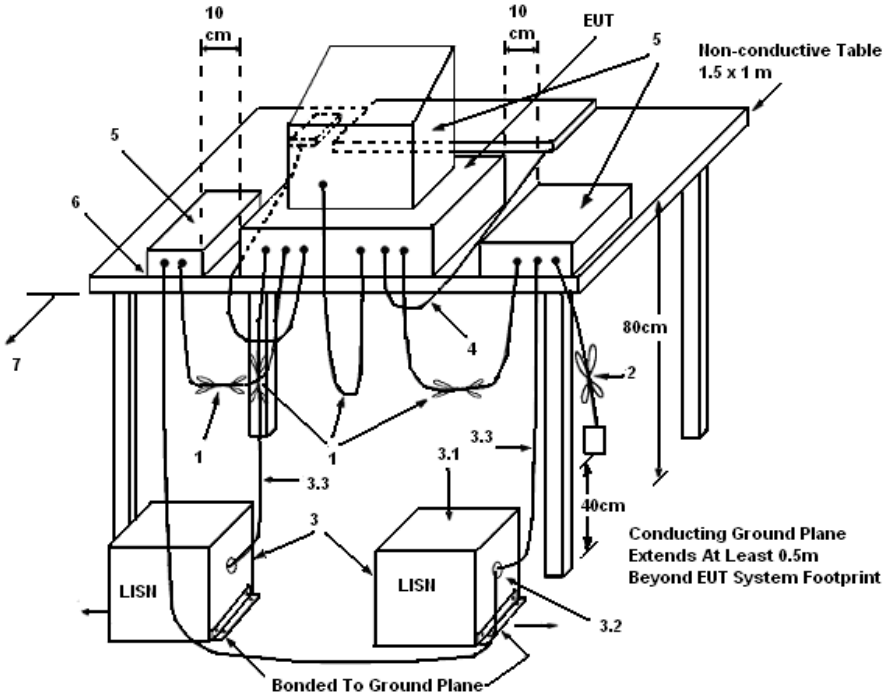
Please refer to section 5 of equipments list in this report. The following table is the setting of the receiver.

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

4.1.3. Test Procedures

1. Configure the EUT according to ANSI C63.10. 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

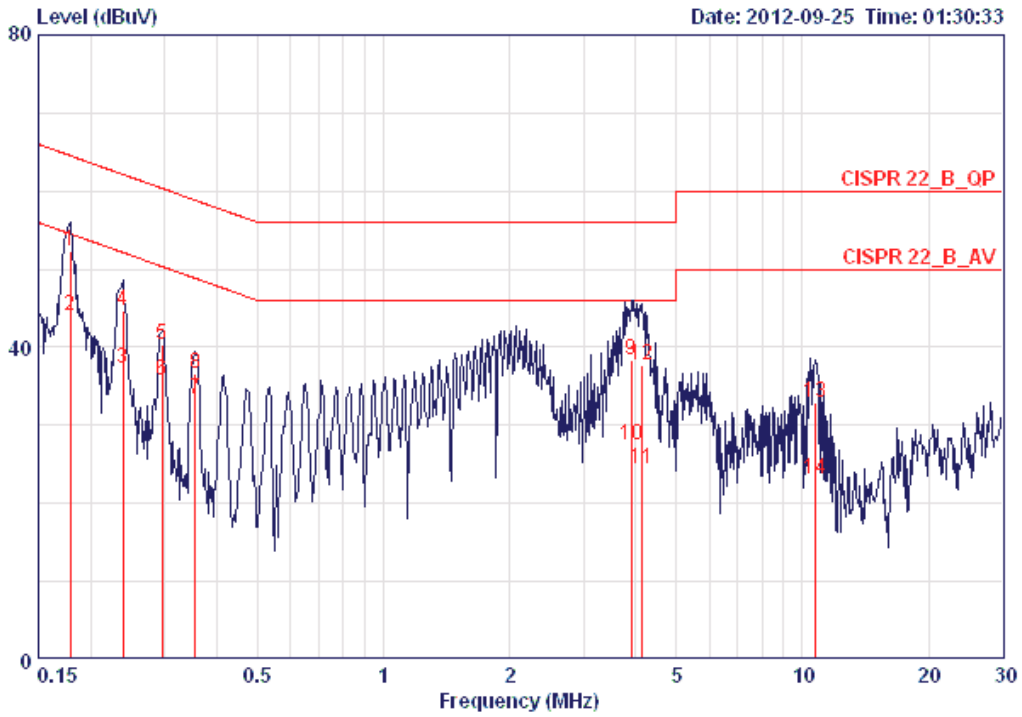
There is no deviation with the original standard.

4.1.6. EUT Operation during Test

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

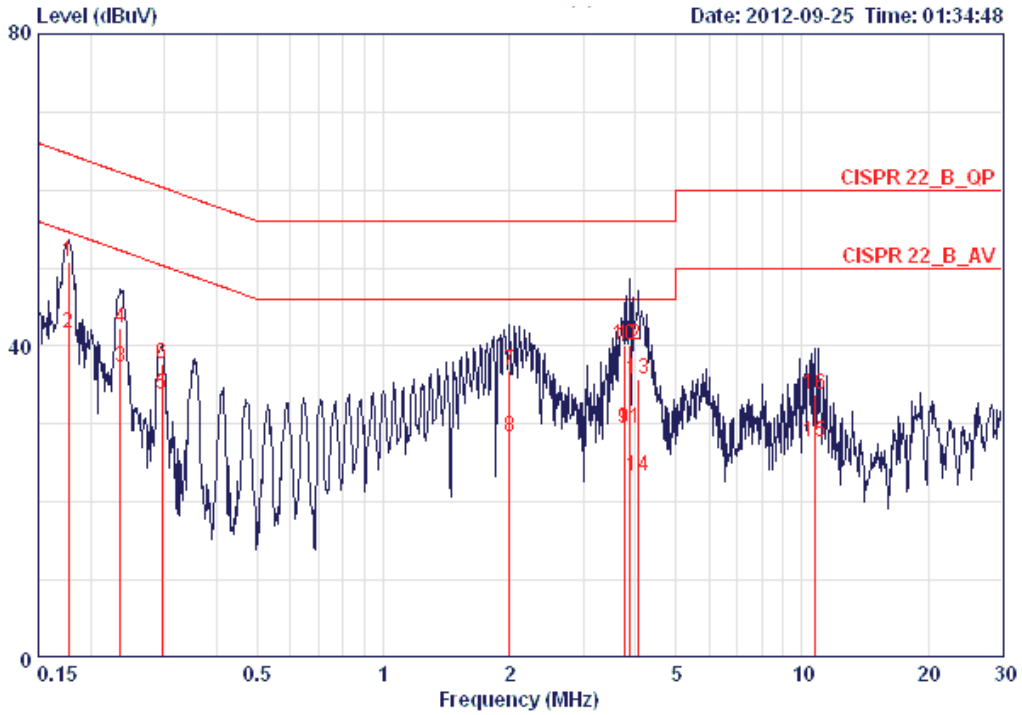
4.1.7. Results of AC Power Line Conducted Emissions Measurement

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



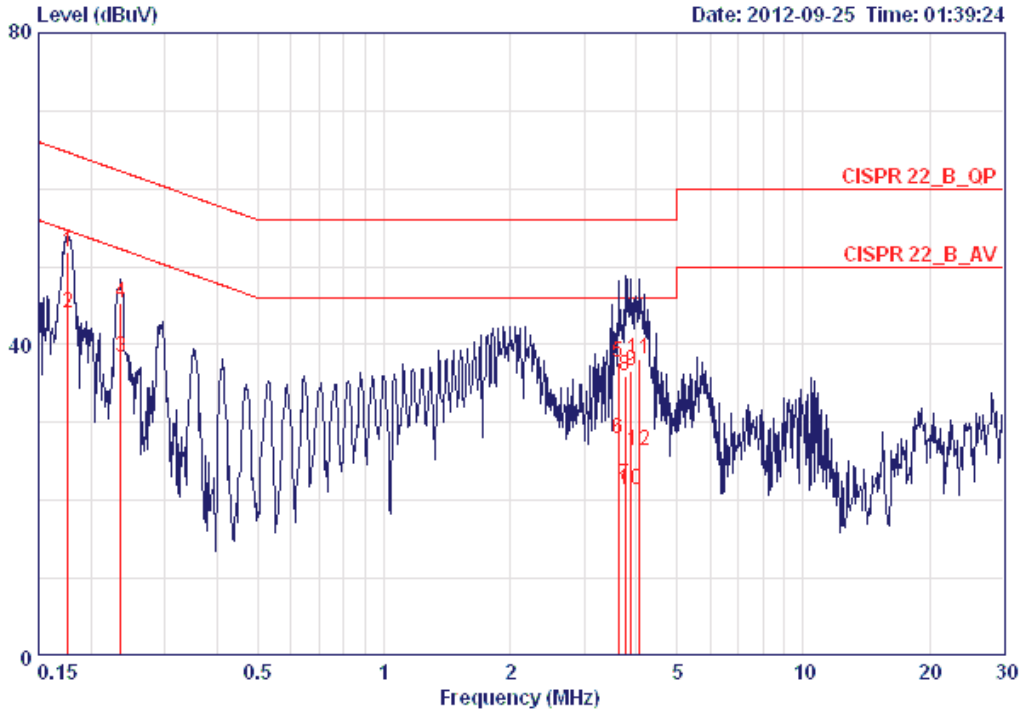
	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Pol/Phase	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.17866	52.31	-12.24	64.55	51.96	0.15	0.20	LINE	QP
2 @	0.17866	44.12	-10.43	54.55	43.77	0.15	0.20	LINE	AVERAGE
3	0.23910	37.38	-14.75	52.13	37.03	0.15	0.20	LINE	AVERAGE
4	0.23910	44.66	-17.47	62.13	44.31	0.15	0.20	LINE	QP
5	0.29555	40.32	-20.05	60.37	39.97	0.15	0.20	LINE	QP
6	0.29555	35.74	-14.63	50.37	35.39	0.15	0.20	LINE	AVERAGE
7	0.35576	33.46	-15.37	48.83	33.11	0.15	0.20	LINE	AVERAGE
8	0.35576	36.72	-22.11	58.83	36.37	0.15	0.20	LINE	QP
9	3.901	38.40	-17.60	56.00	37.88	0.22	0.30	LINE	QP
10	3.901	27.40	-18.60	46.00	26.88	0.22	0.30	LINE	AVERAGE
11	4.136	24.34	-21.66	46.00	23.82	0.22	0.30	LINE	AVERAGE
12	4.136	37.71	-18.29	56.00	37.19	0.22	0.30	LINE	QP
13	10.733	32.81	-27.19	60.00	32.06	0.35	0.40	LINE	QP
14	10.733	23.18	-26.82	50.00	22.43	0.35	0.40	LINE	AVERAGE

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



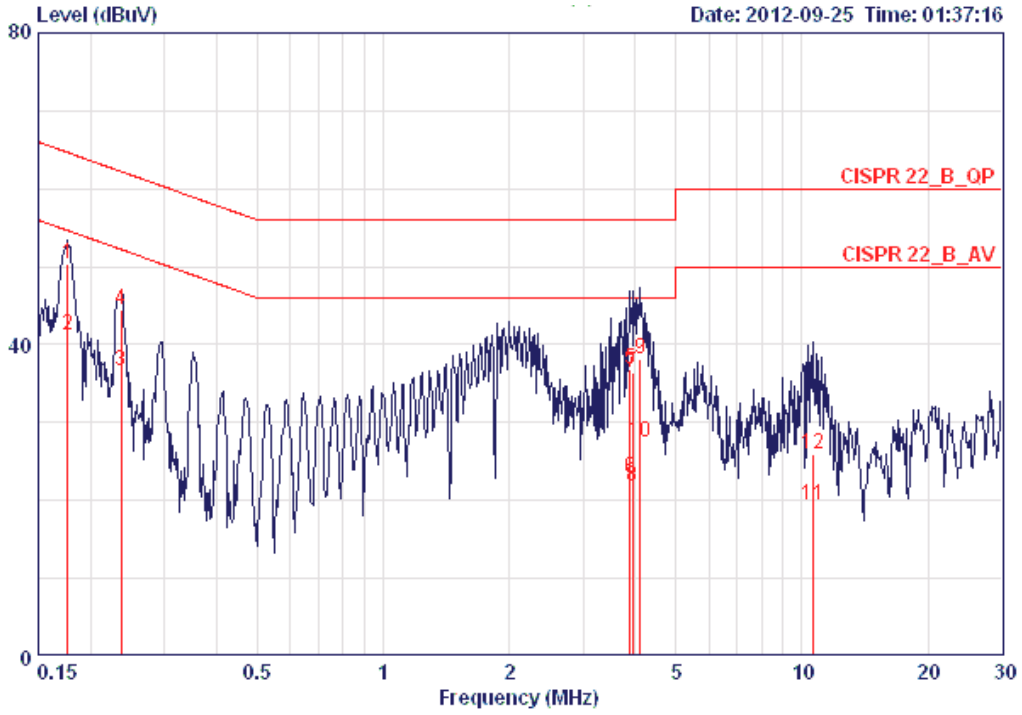
	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Pol/Phase	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.17678	50.78	-13.86	64.64	50.50	0.08	0.20	NEUTRAL	QP
2	0.17678	41.73	-12.91	54.64	41.45	0.08	0.20	NEUTRAL	AVERAGE
3	0.23533	37.31	-14.95	52.26	37.03	0.08	0.20	NEUTRAL	AVERAGE
4	0.23533	42.21	-20.05	62.26	41.93	0.08	0.20	NEUTRAL	QP
5	0.29555	33.79	-16.58	50.37	33.51	0.08	0.20	NEUTRAL	AVERAGE
6	0.29555	37.76	-22.61	60.37	37.48	0.08	0.20	NEUTRAL	QP
7	2.001	36.84	-19.16	56.00	36.53	0.11	0.20	NEUTRAL	QP
8	2.001	28.31	-17.69	46.00	28.00	0.11	0.20	NEUTRAL	AVERAGE
9	3.759	29.39	-16.61	46.00	28.96	0.13	0.30	NEUTRAL	AVERAGE
10	3.759	40.11	-15.89	56.00	39.68	0.13	0.30	NEUTRAL	QP
11	3.881	29.35	-16.65	46.00	28.92	0.13	0.30	NEUTRAL	AVERAGE
12	3.881	40.07	-15.93	56.00	39.64	0.13	0.30	NEUTRAL	QP
13	4.070	35.85	-20.15	56.00	35.42	0.13	0.30	NEUTRAL	QP
14	4.070	23.30	-22.70	46.00	22.87	0.13	0.30	NEUTRAL	AVERAGE
15	10.733	27.59	-22.41	50.00	26.94	0.25	0.40	NEUTRAL	AVERAGE
16	10.733	33.88	-26.12	60.00	33.23	0.25	0.40	NEUTRAL	QP

Temperature	23℃	Humidity	51%
Test Engineer	Sin Chang	Phase	Line
Configuration	CTX	Test Mode	Mode 2.



	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 2.



	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. Conducted Output Power Measurement

4.2.1. Limit

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

4.2.2. Measuring Instruments and Setting

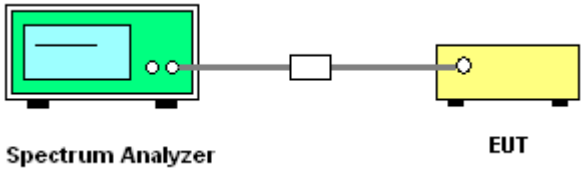
Please refer to section 5 of equipments list in this report. The following table is the setting of spectrum analyzer.

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

4.2.3. Test Procedures

1. The transmitter output (antenna port) was connected to the spectrum analyzer.
2. Test was performed in accordance with KDB 558074 Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS)Operating Under §15.247 section 5.2.2.2. 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.

4.2.4. 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 Conducted Output Power

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

For 2.4GHz Band

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

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain. 1	Chain. 3			
1	2412 MHz	11.77	12.22	15.01	18.14	**Complies**
6	2437 MHz	14.81	15.08	17.96	18.14	**Complies**
11	2462 MHz	10.42	11.05	13.76	18.14	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =17.86dBi > 6dBi, so the conducted power limit =30-(17.86-6)=18.14dBm.

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

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain. 1	Chain. 3			
1	2412 MHz	10.72	11.24	14.00	21.15	**Complies**
6	2437 MHz	14.47	14.69	17.59	21.15	**Complies**
11	2462 MHz	9.40	9.93	12.68	21.15	**Complies**

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

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain. 1	Chain. 3			
3	2422 MHz	7.79	7.83	10.82	18.14	**Complies**
6	2437 MHz	10.94	11.36	14.17	18.14	**Complies**
9	2452 MHz	7.48	8.01	10.76	18.14	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =17.86dBi > 6dBi, so the conducted power limit =30-(17.86-6)=18.14dBm.

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

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain. 1	Chain. 3			
3	2422 MHz	6.14	6.31	9.24	21.15	**Complies**
6	2437 MHz	9.76	10.33	13.06	21.15	**Complies**
9	2452 MHz	5.72	6.46	9.12	21.15	**Complies**

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

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain. 1	Chain. 3			
1	2412 MHz	16.32	16.38	19.36	23.64	**Complies**
6	2437 MHz	20.45	20.67	23.57	23.64	**Complies**
11	2462 MHz	14.32	14.71	17.53	23.64	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =12.36dBi > 6dBi, so the conducted power limit =30-(12.36-6)=23.64dBm.

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

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain. 1	Chain. 3			
1	2412 MHz	16.87	16.98	19.94	26.65	**Complies**
6	2437 MHz	19.28	19.75	22.53	26.65	**Complies**
11	2462 MHz	14.76	15.14	17.96	26.65	**Complies**

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

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain. 1	Chain. 3			
3	2422 MHz	13.39	14.02	16.73	23.64	**Complies**
6	2437 MHz	15.67	16.30	19.01	23.64	**Complies**
9	2452 MHz	11.60	12.16	14.90	23.64	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =12.36dBi > 6dBi, so the conducted power limit =30-(12.36-6)=23.64dBm.

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

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain. 1	Chain. 3			
3	2422 MHz	13.33	13.81	16.59	26.65	**Complies**
6	2437 MHz	15.61	16.13	18.89	26.65	**Complies**
9	2452 MHz	11.05	11.69	14.39	26.65	**Complies**

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

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain. 1	Chain. 3			
1	2412 MHz	16.95	17.15	20.06	26.14	**Complies**
6	2437 MHz	16.49	16.92	19.72	26.14	**Complies**
11	2462 MHz	15.27	15.70	18.50	26.14	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =9.86dBi > 6dBi, so the conducted power limit =30-(9.86-6)=26.14dBm.

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

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain. 1	Chain. 3			
1	2412 MHz	15.60	15.89	18.76	29.15	**Complies**
6	2437 MHz	19.87	20.07	22.98	29.15	**Complies**
11	2462 MHz	14.76	15.14	17.96	29.15	**Complies**

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

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain. 1	Chain. 3			
3	2422 MHz	11.70	12.49	15.12	26.14	**Complies**
6	2437 MHz	16.57	17.07	19.84	26.14	**Complies**
9	2452 MHz	12.06	12.66	15.38	26.14	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =9.86dBi > 6dBi, so the conducted power limit =30-(9.86-6)=26.14dBm.

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

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain. 1	Chain. 3			
3	2422 MHz	12.40	13.06	15.75	29.15	**Complies**
6	2437 MHz	15.61	16.13	18.89	29.15	**Complies**
9	2452 MHz	12.09	12.39	15.25	29.15	**Complies**

For 5GHz Band

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			
149	5745 MHz	21.53	21.62	24.59	24.91	**Complies**
157	5785 MHz	20.99	21.45	24.24	24.91	**Complies**
165	5825 MHz	21.74	21.28	24.53	24.91	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =11.09dBi > 6dBi, so the conducted power limit =30-(11.09-6)=24.91dBm.

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			
149	5745 MHz	21.54	20.95	24.27	27.92	**Complies**
157	5785 MHz	21.26	21.35	24.32	27.92	**Complies**
165	5825 MHz	21.45	21.07	24.27	27.92	**Complies**

Configuration IEEE 802.11n MCS0 40MHz

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain. 1	Chain. 3			
151	5755 MHz	20.13	21.43	23.84	24.91	**Complies**
159	5795 MHz	20.17	21.44	23.86	24.91	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =11.09dBi > 6dBi, so the conducted power limit =30-(11.09-6)=24.91dBm.

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			
151	5755 MHz	19.94	21.21	23.63	27.92	**Complies**
159	5795 MHz	20.06	21.23	23.69	27.92	**Complies**

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

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
149	5745 MHz	22.77	26.92	**Complies**
157	5785 MHz	23.36	26.92	**Complies**
165	5825 MHz	22.95	26.92	**Complies**

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

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
151	5755 MHz	23.32	26.92	**Complies**
159	5795 MHz	23.40	26.92	**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			
149	5745 MHz	16.96	16.89	19.94	20.41	**Complies**
157	5785 MHz	16.78	17.34	20.08	20.41	**Complies**
165	5825 MHz	16.87	17.37	20.14	20.41	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ = 15.59dBi > 6dBi, so the conducted power limit =30-(15.59-6)=20.41dBm.

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			
149	5745 MHz	19.36	19.41	22.40	23.42	**Complies**
157	5785 MHz	19.14	21.20	23.30	23.42	**Complies**
165	5825 MHz	18.80	21.09	23.10	23.42	**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			
151	5755 MHz	17.36	17.36	20.37	20.41	**Complies**
159	5795 MHz	16.44	17.08	19.78	20.41	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ = 15.59dBi > 6dBi, so the conducted power limit =30-(15.59-6)=20.41dBm.

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			
151	5755 MHz	19.70	20.90	23.35	23.42	**Complies**
159	5795 MHz	19.57	20.73	23.20	23.42	**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			
149	5745 MHz	21.53	21.62	24.59	29.41	**Complies**
157	5785 MHz	20.99	21.45	24.24	29.41	**Complies**
165	5825 MHz	21.74	21.28	24.53	29.41	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =6.59dBi > 6dBi, so the conducted power limit =30-(6.59-6)=29.41dBm.

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			
149	5745 MHz	21.54	20.95	24.27	30.00	**Complies**
157	5785 MHz	21.27	21.35	24.32	30.00	**Complies**
165	5825 MHz	21.45	21.07	24.27	30.00	**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			
151	5755 MHz	20.13	21.43	23.84	29.41	**Complies**
159	5795 MHz	20.17	21.44	23.86	29.41	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =6.59dBi > 6dBi, so the conducted power limit =30-(6.59-6)=29.41dBm.

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			
151	5755 MHz	19.94	21.21	23.63	30.00	**Complies**
159	5795 MHz	20.06	21.23	23.69	30.00	**Complies**

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

For 2.4GHz Band

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

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain. 1	Chain. 3			
1	2412 MHz	14.62	15.01	17.83	18.14	**Complies**
6	2437 MHz	14.97	15.05	18.02	18.14	**Complies**
11	2462 MHz	14.57	14.80	17.70	18.14	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =17.86dBi > 6dBi, so the conducted power limit =30-(17.86-6)=18.14dBm.

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

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain. 1	Chain. 3			
1	2412 MHz	13.54	13.89	16.73	18.14	**Complies**
6	2437 MHz	14.48	14.62	17.56	18.14	**Complies**
11	2462 MHz	11.66	12.18	14.94	18.14	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =17.86dBi > 6dBi, so the conducted power limit =30-(17.86-6)=18.14dBm.

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

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain. 1	Chain. 3			
1	2412 MHz	20.79	20.27	23.55	23.64	**Complies**
6	2437 MHz	20.07	20.10	23.10	23.64	**Complies**
11	2462 MHz	20.28	20.43	23.37	23.64	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =12.36dBi > 6dBi, so the conducted power limit =30-(12.36-6)=23.64dBm.

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

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain. 1	Chain. 3			
1	2412 MHz	17.01	17.15	20.09	23.64	**Complies**
6	2437 MHz	20.47	20.68	23.59	23.64	**Complies**
11	2462 MHz	14.86	15.11	18.00	23.64	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =12.36dBi > 6dBi, so the conducted power limit =30-(12.36-6)=23.64dBm.

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

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain. 1	Chain. 3			
1	2412 MHz	20.79	20.27	23.55	26.14	**Complies**
6	2437 MHz	22.48	22.52	25.51	26.14	**Complies**
11	2462 MHz	20.28	20.43	23.37	26.14	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =9.86dBi > 6dBi, so the conducted power limit =30-(9.86-6)=26.14dBm.

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

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain. 1	Chain. 3			
1	2412 MHz	16.25	16.50	19.39	26.14	**Complies**
6	2437 MHz	18.15	18.68	21.43	26.14	**Complies**
11	2462 MHz	15.87	16.32	19.11	26.14	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =9.86dBi > 6dBi, so the conducted power limit =30-(9.86-6)=26.14dBm.

For 5GHz Band

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			
149	5745 MHz	21.49	21.51	24.51	24.91	**Complies**
157	5785 MHz	21.50	21.31	24.42	24.91	**Complies**
165	5825 MHz	21.80	20.68	24.29	24.91	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =11.09dBi > 6dBi, so the conducted power limit =30-(11.09-6)=24.91dBm.

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

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
149	5745 MHz	21.64	26.92	**Complies**
157	5785 MHz	23.35	26.92	**Complies**
165	5825 MHz	23.03	26.92	**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			
149	5745 MHz	17.30	17.45	20.39	20.41	**Complies**
157	5785 MHz	16.95	17.33	20.15	20.41	**Complies**
165	5825 MHz	17.04	17.41	20.24	20.41	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =15.59dBi > 6dBi, so the conducted power limit =30-(15.59-6)=20.41dBm.

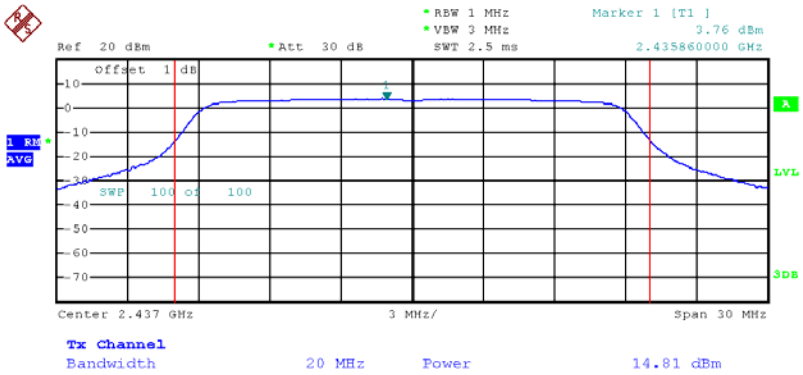
Configuration IEEE 802.11a / Ant. 10: Chain. 1 + Chain. 3 (2TX)

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain. 1	Chain. 3			
149	5745 MHz	21.49	21.51	24.51	29.41	**Complies**
157	5785 MHz	21.50	21.31	24.42	29.41	**Complies**
165	5825 MHz	21.80	20.68	24.29	29.41	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =6.59dBi > 6dBi, so the conducted power limit =30-(6.59-6)=29.41dBm.

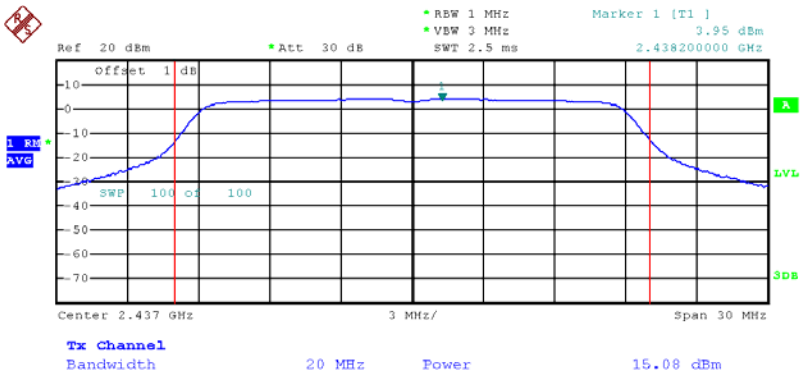
<For Ant. 1>:

Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 20MHz / 2437 MHz / Chain. 1 (2TX)



Date: 19.SEP.2012 01:46:55

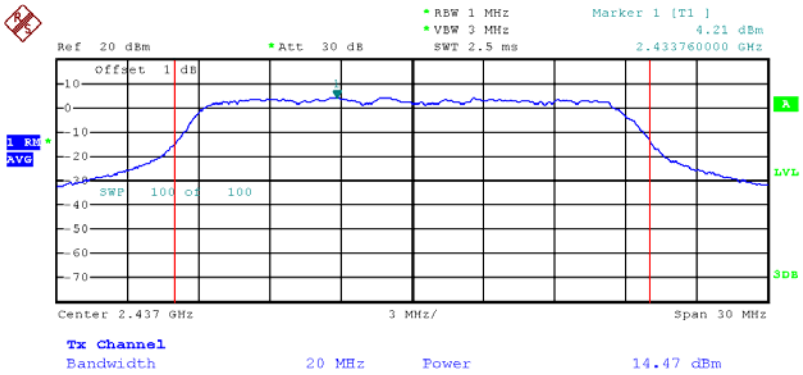
Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 20MHz / 2437 MHz / Chain. 3 (2TX)



Date: 19.SEP.2012 01:46:10

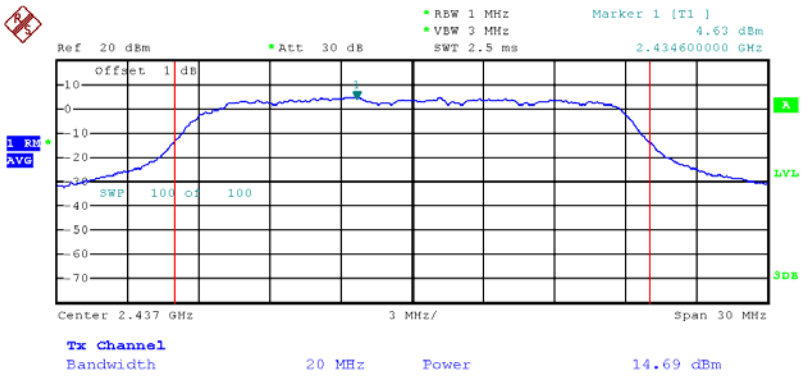
<For Ant. 1>:

Conducted Output Power Plot on Configuration IEEE 802.11n MCS8 20MHz / 2437 MHz / Chain. 1 (2TX)



Date: 18.SEP.2012 16:03:10

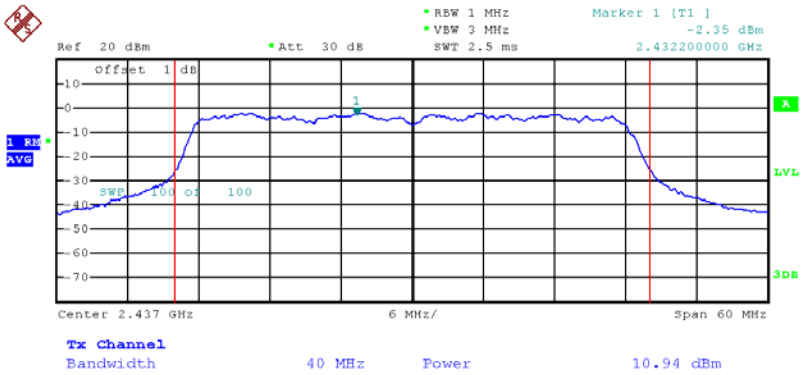
Conducted Output Power Plot on Configuration IEEE 802.11n MCS8 20MHz / 2437 MHz / Chain. 3 (2TX)



Date: 18.SEP.2012 16:04:26

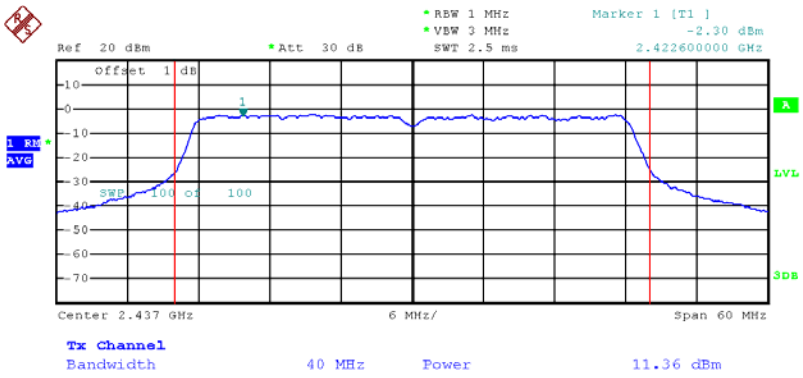
<For Ant. 1>:

Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 40MHz / 2437 MHz / Chain. 1 (2TX)



Date: 18.SEP.2012 16:14:59

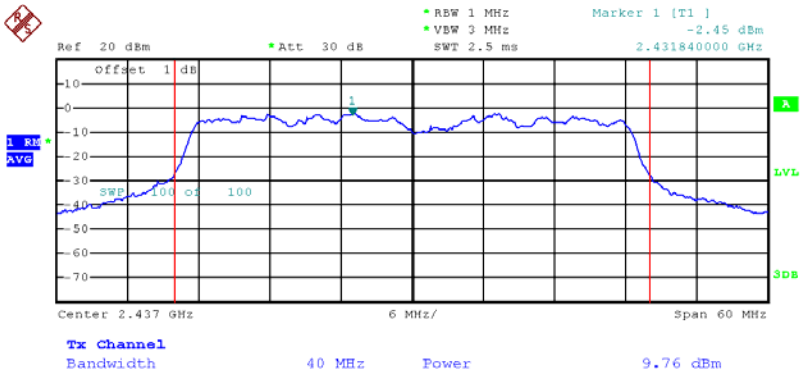
Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 40MHz / 2437 MHz / Chain. 3 (2TX)



Date: 18.SEP.2012 16:13:47

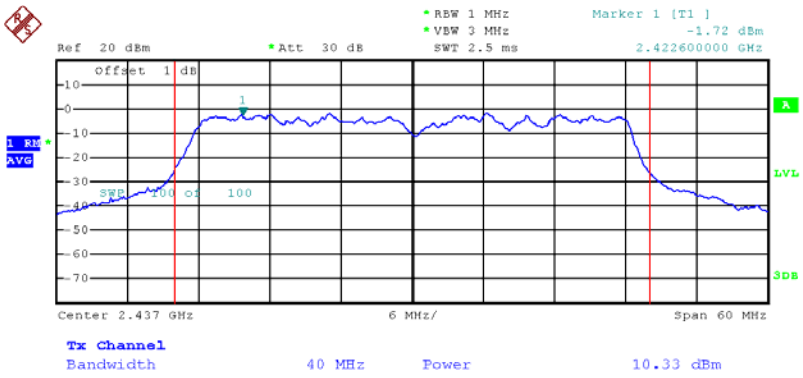
<For Ant. 1>:

Conducted Output Power Plot on Configuration IEEE 802.11n MCS8 40MHz / 2437 MHz / Chain. 1 (2TX)



Date: 18.SEP.2012 16:25:11

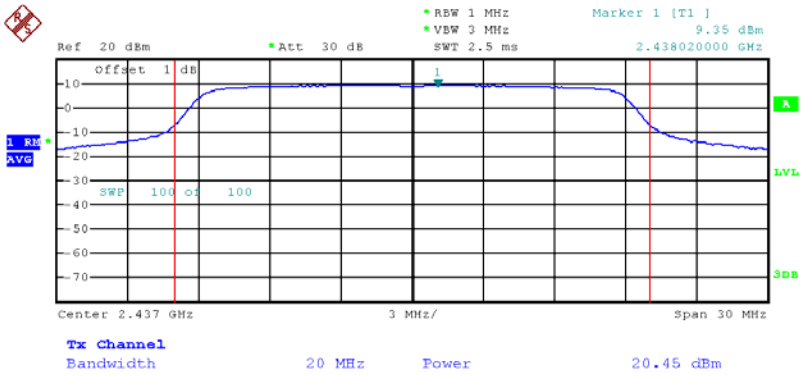
Conducted Output Power Plot on Configuration IEEE 802.11n MCS8 40MHz / 2437 MHz / Chain. 3 (2TX)



Date: 18.SEP.2012 16:24:09

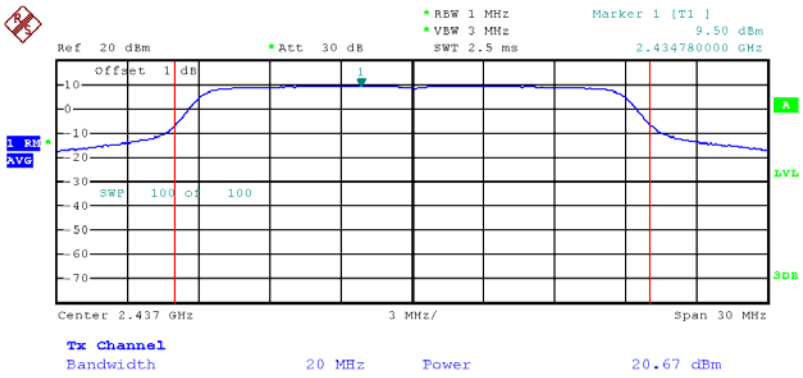
<For Ant. 2>:

Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 20MHz / 2437 MHz / Chain. 1 (2TX)



Date: 18.SEP.2012 18:25:39

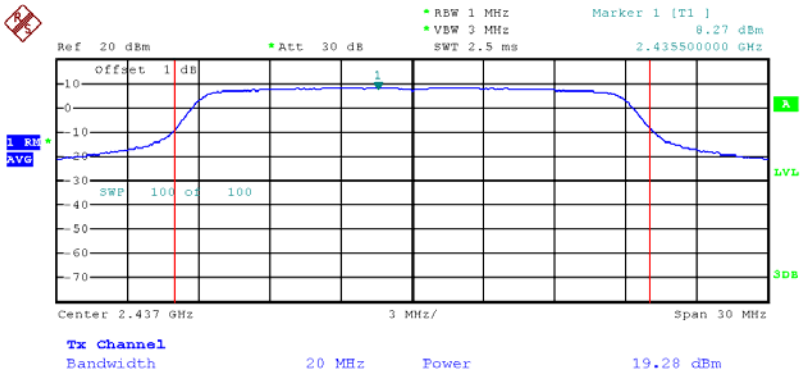
Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 20MHz / 2437 MHz / Chain. 3 (2TX)



Date: 18.SEP.2012 18:25:02

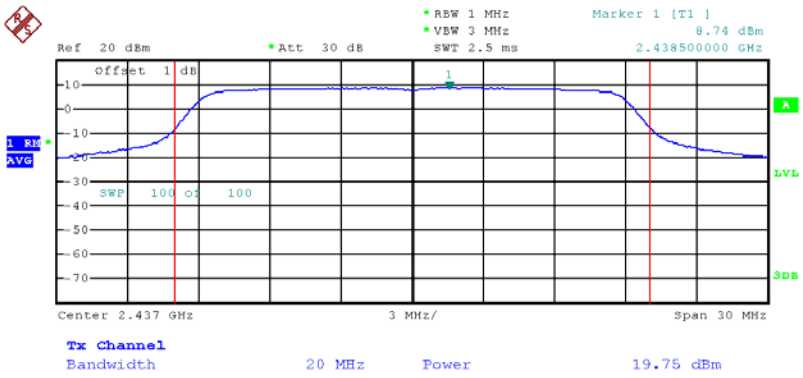
<For Ant. 2>:

Conducted Output Power Plot on Configuration IEEE 802.11n MCS8 20MHz / 2437 MHz / Chain. 1 (2TX)



Date: 18.SEP.2012 18:33:34

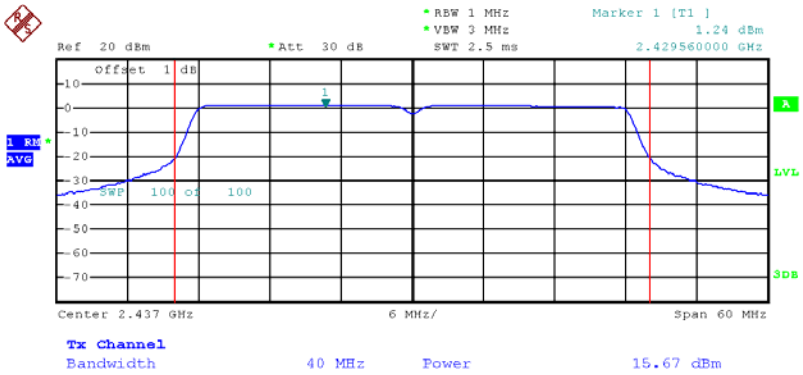
Conducted Output Power Plot on Configuration IEEE 802.11n MCS8 20MHz / 2437 MHz / Chain. 3 (2TX)



Date: 18.SEP.2012 18:33:01

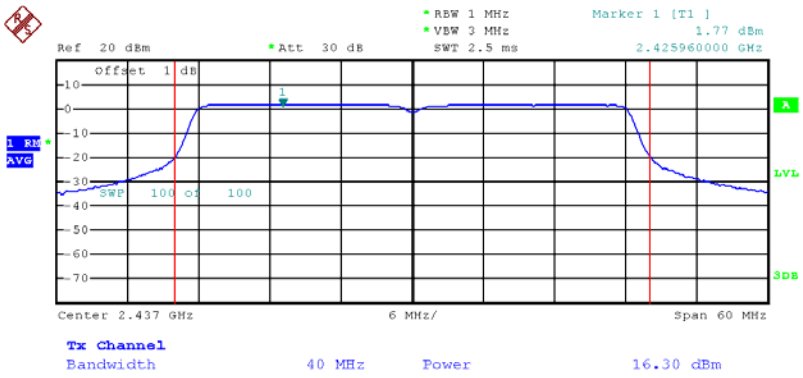
<For Ant. 2>:

Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 40MHz / 2437 MHz / Chain. 1 (2TX)



Date: 18.SEP.2012 18:56:10

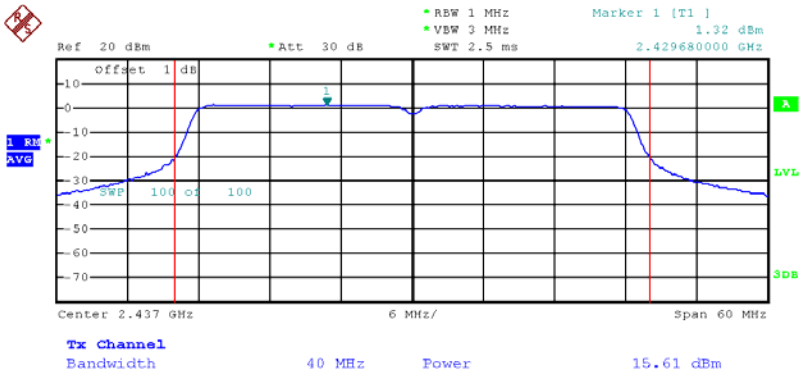
Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 40MHz / 2437 MHz / Chain. 3 (2TX)



Date: 18.SEP.2012 18:55:36

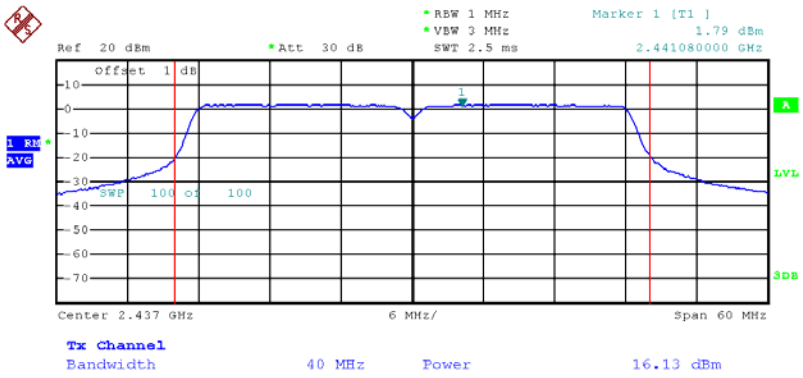
<For Ant. 2>:

Conducted Output Power Plot on Configuration IEEE 802.11n MCS8 40MHz / 2437 MHz / Chain. 1 (2TX)



Date: 18.SEP.2012 18:09:00

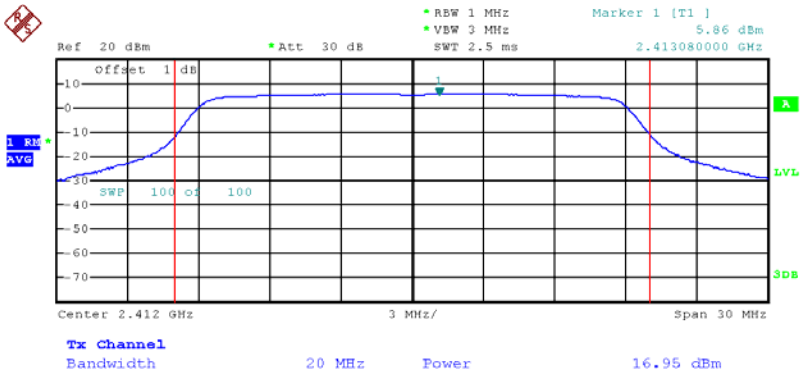
Conducted Output Power Plot on Configuration IEEE 802.11n MCS8 40MHz / 2437 MHz / Chain. 3 (2TX)



Date: 18.SEP.2012 18:08:22

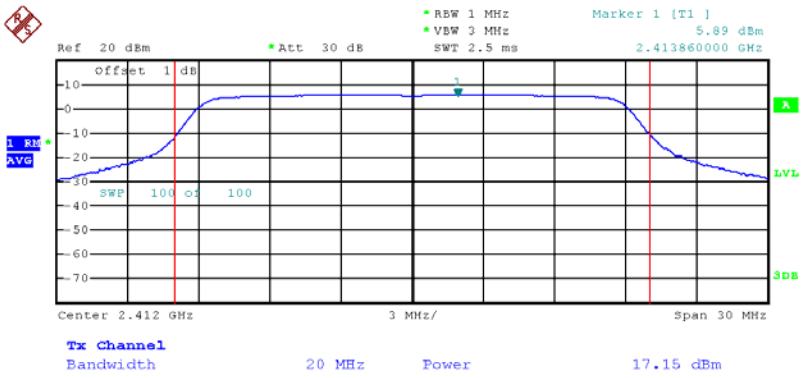
<For Ant. 3>:

Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 20MHz / 2412 MHz / Chain. 1 (2TX)



Date: 18.SEP.2012 18:22:42

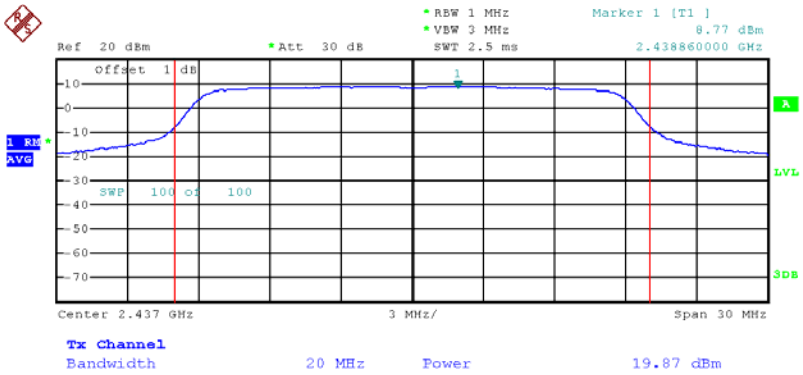
Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 20MHz / 2412 MHz / Chain. 3 (2TX)



Date: 18.SEP.2012 18:22:10

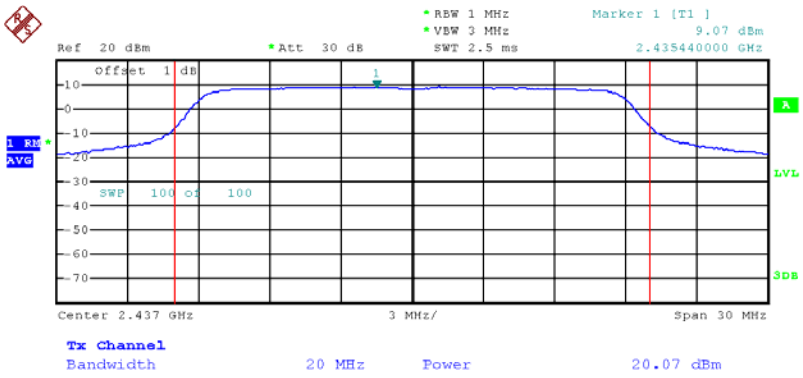
<For Ant. 3>:

Conducted Output Power Plot on Configuration IEEE 802.11n MCS8 20MHz / 2437 MHz / Chain. 1 (2TX)



Date: 18.SEP.2012 18:33:56

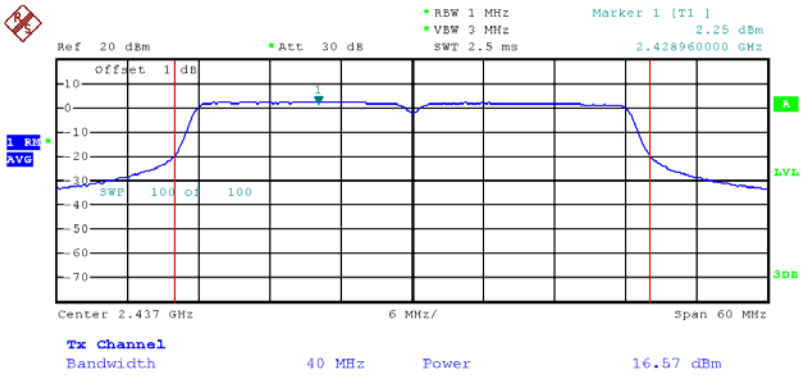
Conducted Output Power Plot on Configuration IEEE 802.11n MCS8 20MHz / 2437 MHz / Chain. 3 (2TX)



Date: 18.SEP.2012 18:34:30

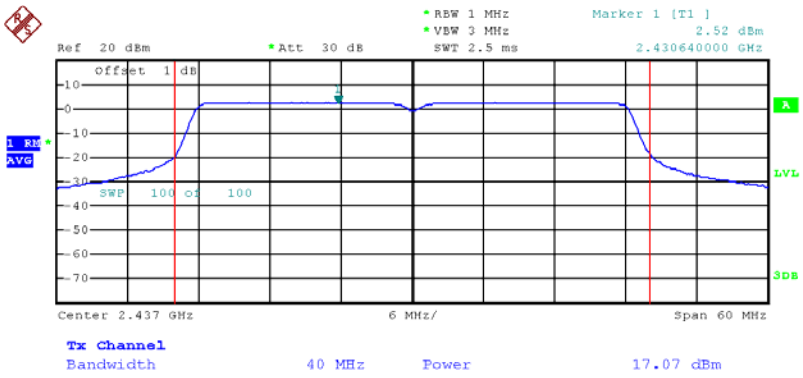
<For Ant. 3>:

Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 40MHz / 2437 MHz / Chain. 1 (2TX)



Date: 18.SEP.2012 18:56:42

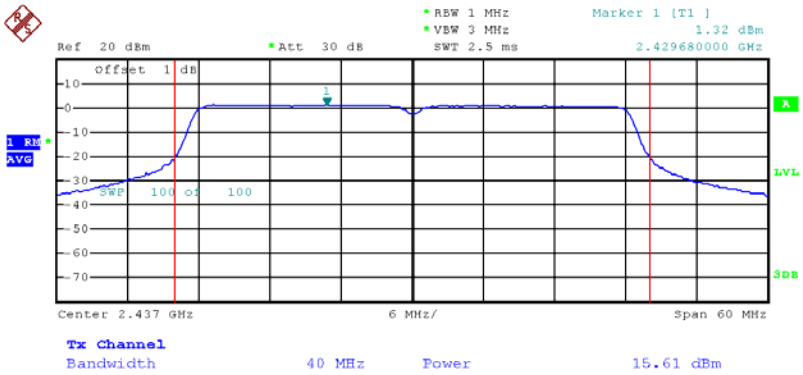
Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 40MHz / 2437 MHz / Chain. 3 (2TX)



Date: 18.SEP.2012 18:57:14

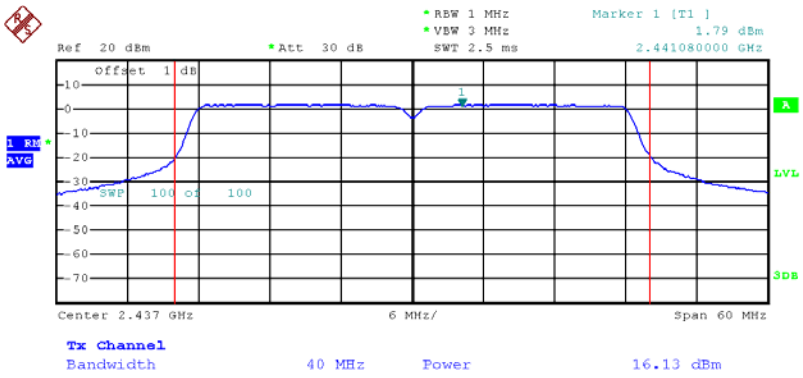
<For Ant. 3>:

Conducted Output Power Plot on Configuration IEEE 802.11n MCS8 40MHz / 2437 MHz / Chain. 1 (2TX)



Date: 18.SEP.2012 18:09:00

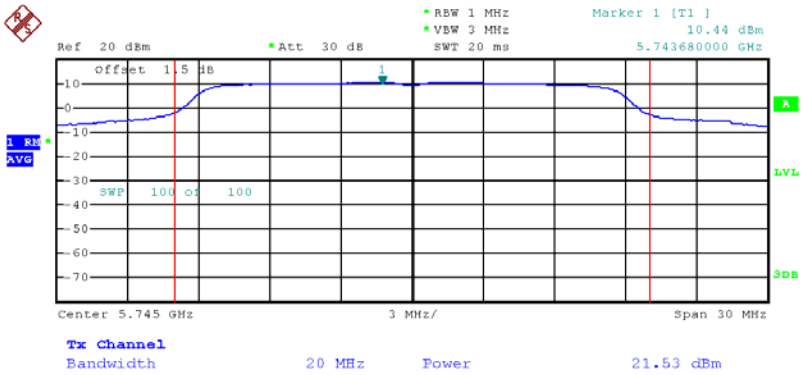
Conducted Output Power Plot on Configuration IEEE 802.11n MCS8 40MHz / 2437 MHz / Chain. 3 (2TX)



Date: 18.SEP.2012 18:08:22

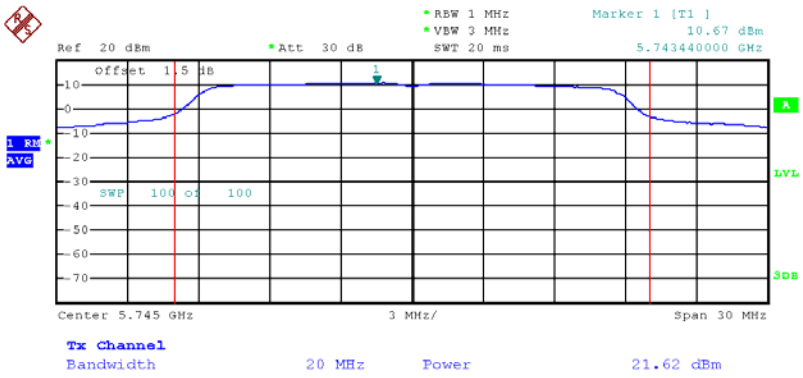
<For Ant. 4>:

Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 20MHz / 5745 MHz / Chain. 1 (2TX)



Date: 20.SEP.2012 01:03:36

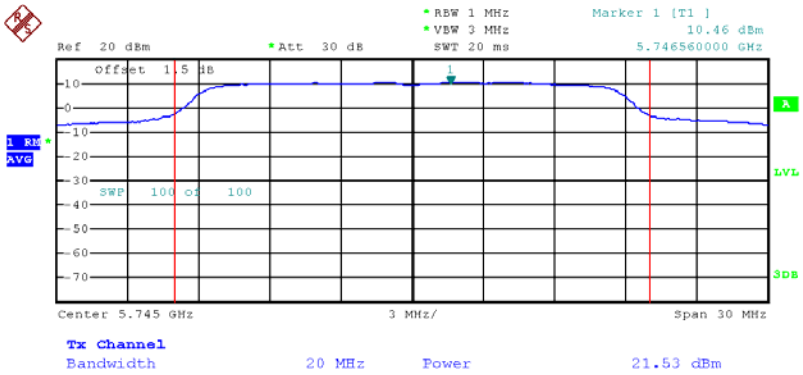
Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 20MHz / 5745 MHz / Chain. 3 (2TX)



Date: 20.SEP.2012 01:04:49

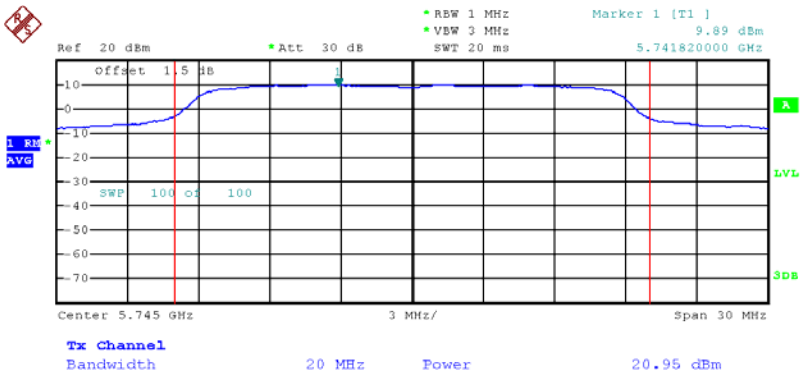
<For Ant. 4>:

Conducted Output Power Plot on Configuration IEEE 802.11n MCS8 20MHz / 5745 MHz / Chain. 1 (2TX)



Date: 20.SEP.2012 01:54:23

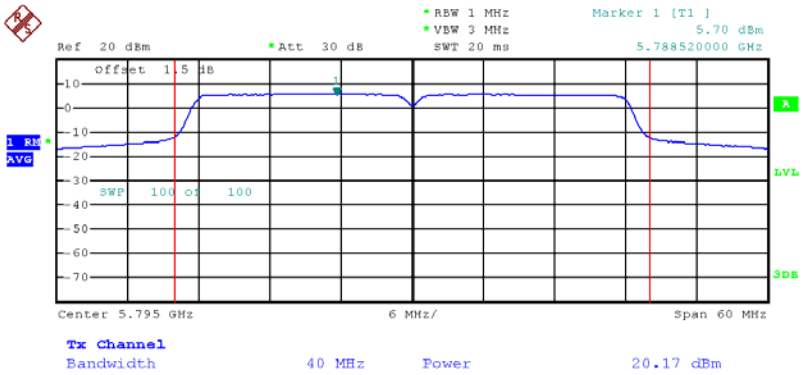
Conducted Output Power Plot on Configuration IEEE 802.11n MCS8 20MHz / 5745 MHz / Chain. 3 (2TX)



Date: 20.SEP.2012 01:55:06

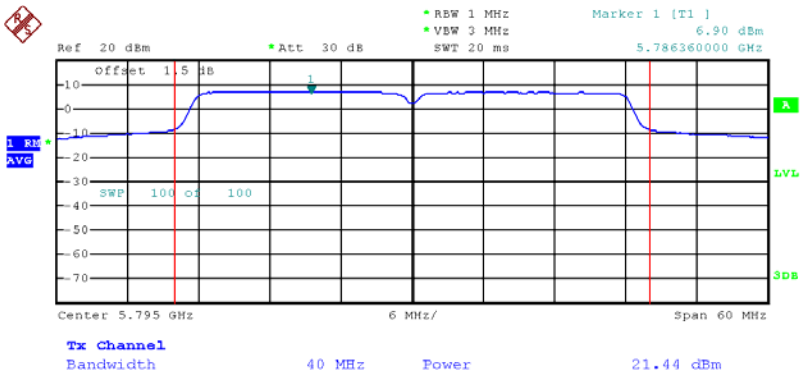
<For Ant. 4>:

Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 40MHz / 5795 MHz /Chain. 1 (2TX)



Date: 19.SEP.2012 13:48:45

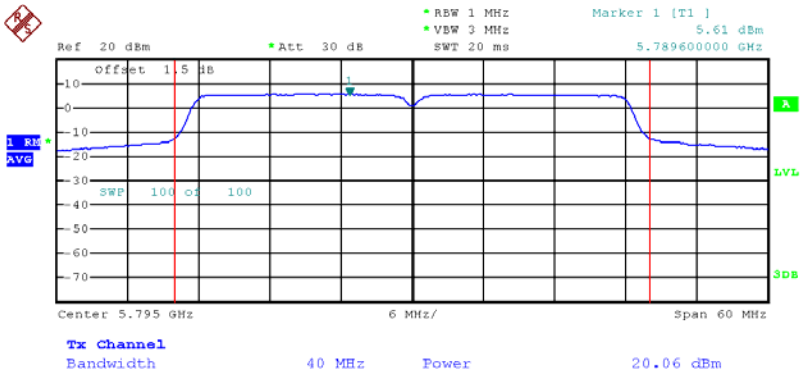
Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 40MHz / 5795 MHz /Chain. 3 (2TX)



Date: 19.SEP.2012 13:49:19

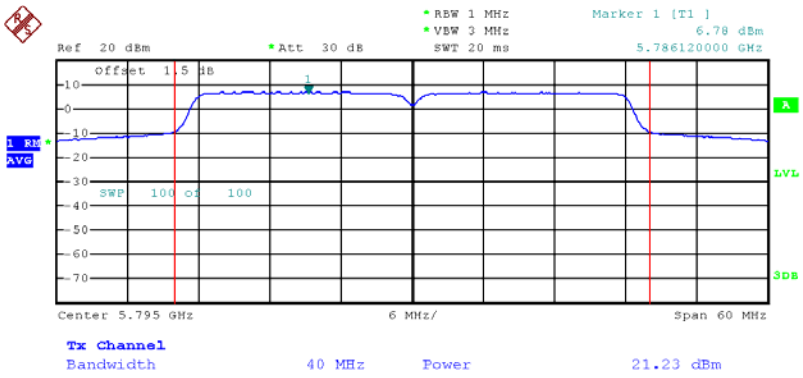
<For Ant. 4>:

Conducted Output Power Plot on Configuration IEEE 802.11n MCS8 40MHz / 5795 MHz / Chain. 1 (2TX)



Date: 19.SEP.2012 13:53:23

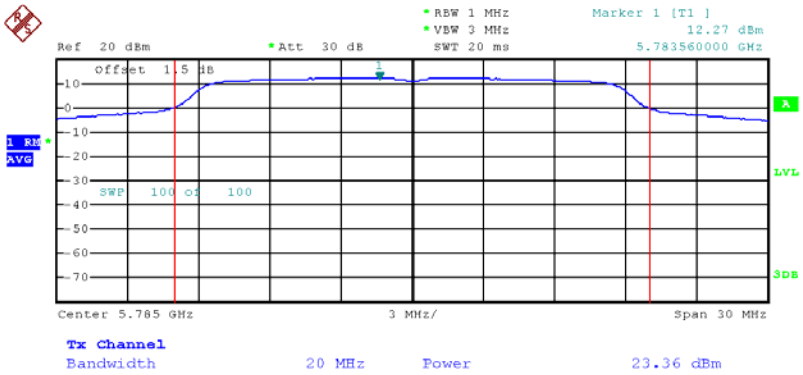
Conducted Output Power Plot on Configuration IEEE 802.11n MCS8 40MHz / 5795 MHz / Chain. 3 (2TX)



Date: 19.SEP.2012 13:54:01

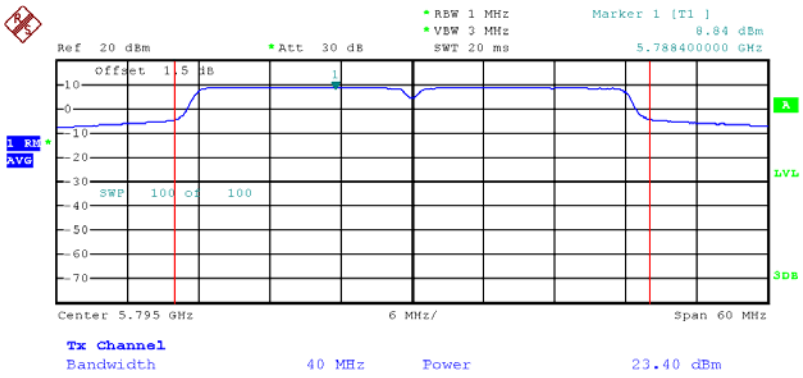
<For Ant. 5>:

Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 20MHz / 5785 MHz / Chain. 1 (1TX)



Date: 20.SEP.2012 03:26:10

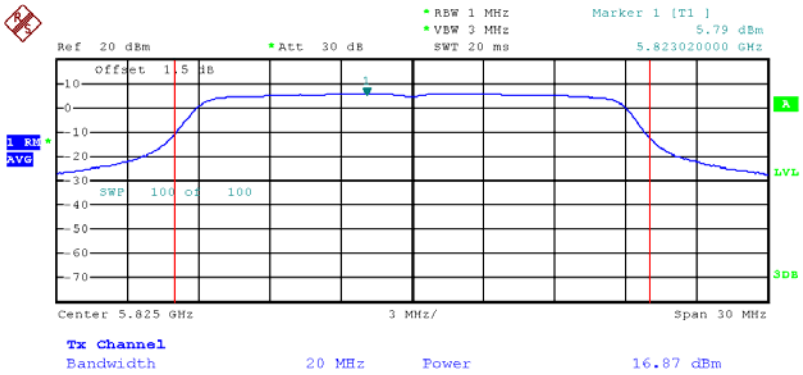
Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 40MHz / 5795 MHz / Chain. 1 (1TX)



Date: 20.SEP.2012 03:42:09

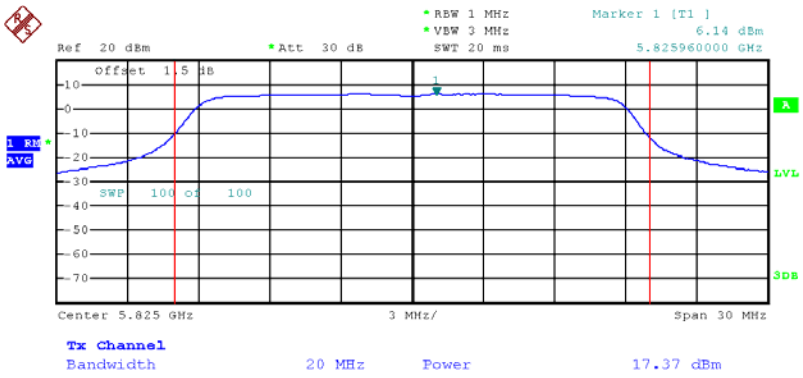
<For Ant. 6>:

Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 20MHz / 5825 MHz / Chain. 1 (2TX)



Date: 19.SEP.2012 13:20:30

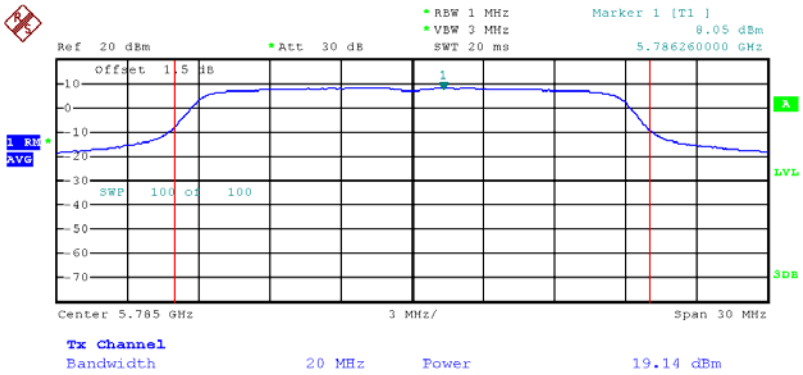
Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 20MHz / 5825 MHz / Chain. 3 (2TX)



Date: 19.SEP.2012 13:19:48

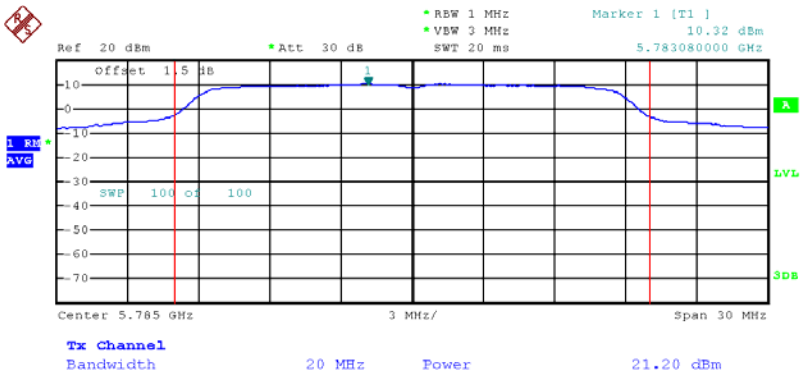
<For Ant. 6>:

Conducted Output Power Plot on Configuration IEEE 802.11n MCS8 20MHz / 5785 MHz / Chain. 1 (2TX)



Date: 19.SEP.2012 13:37:25

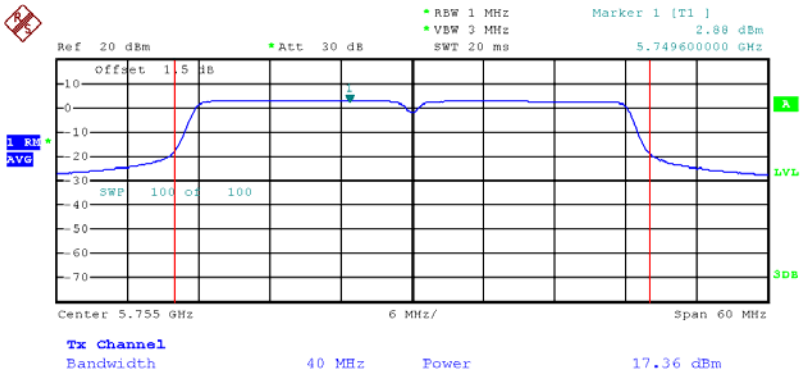
Conducted Output Power Plot on Configuration IEEE 802.11n MCS8 20MHz / 5785 MHz / Chain. 3 (2TX)



Date: 19.SEP.2012 13:36:28

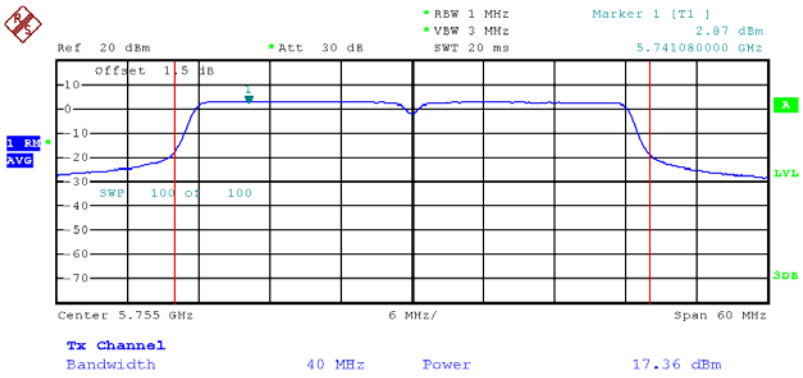
<For Ant. 6>:

Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 40MHz / 5755 MHz / Chain. 1 (2TX)



Date: 19.SEP.2012 13:46:57

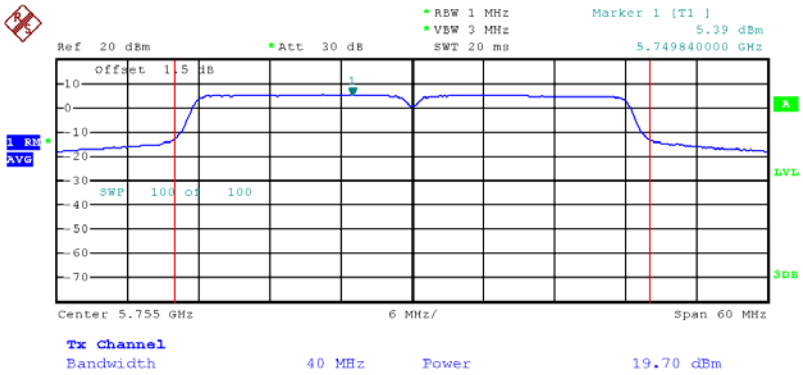
Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 40MHz / 5755 MHz / Chain. 3 (2TX)



Date: 19.SEP.2012 13:46:11

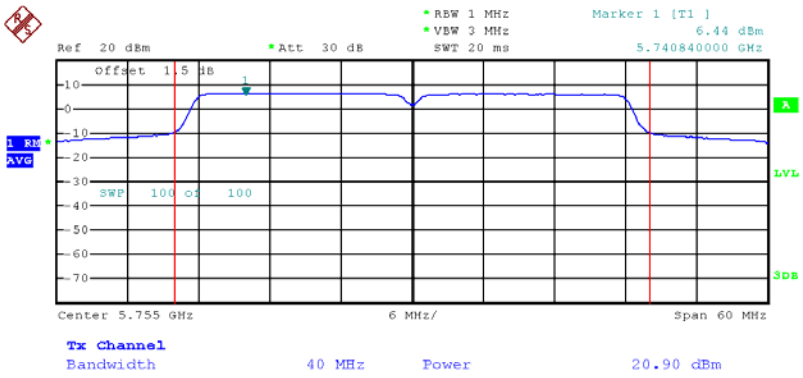
<For Ant. 6>:

Conducted Output Power Plot on Configuration IEEE 802.11n MCS8 40MHz / 5755 MHz / Chain. 1 (2TX)



Date: 19.SEP.2012 13:56:14

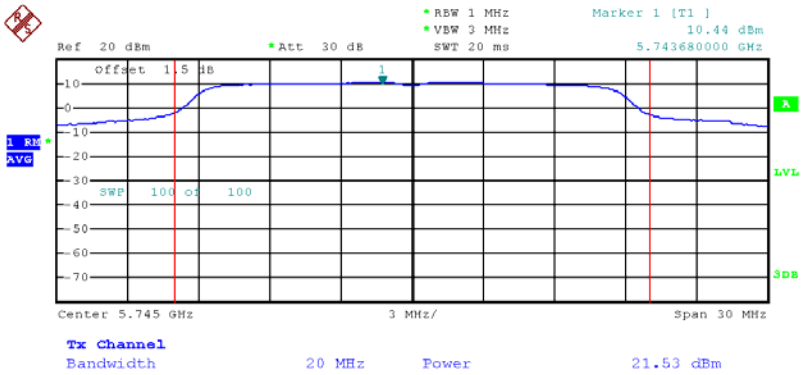
Conducted Output Power Plot on Configuration IEEE 802.11n MCS8 40MHz / 5755 MHz / Chain. 3 (2TX)



Date: 19.SEP.2012 13:56:45

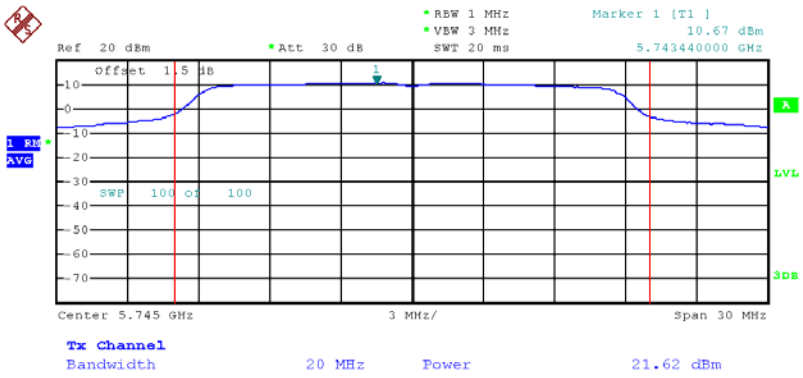
<For Ant. 10>:

Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 20MHz / 5745 MHz / Chain. 1 (2TX)



Date: 20.SEP.2012 01:03:36

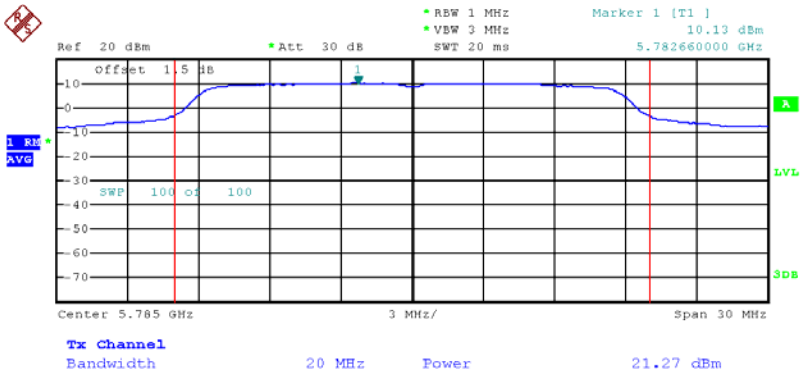
Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 20MHz / 5745 MHz / Chain. 3 (2TX)



Date: 20.SEP.2012 01:04:49

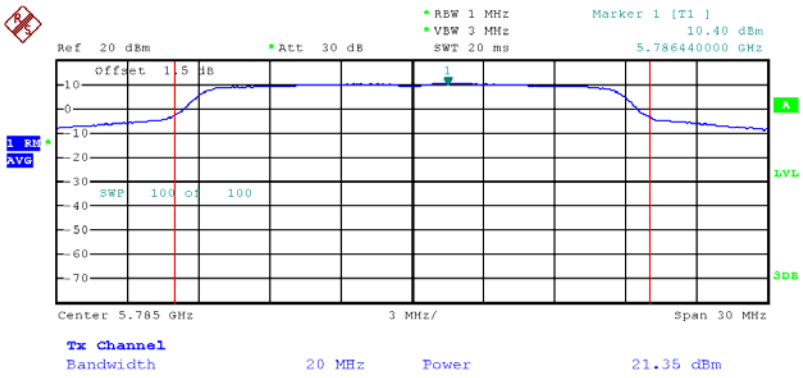
<For Ant. 10>:

Conducted Output Power Plot on Configuration IEEE 802.11n MCS8 20MHz / 5785 MHz / Chain. 1 (2TX)



Date: 20.SEP.2012 01:57:38

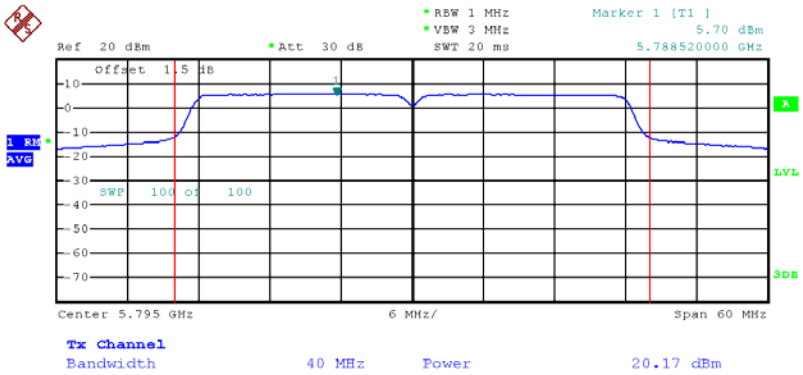
Conducted Output Power Plot on Configuration IEEE 802.11n MCS8 20MHz / 5785 MHz / Chain. 3 (2TX)



Date: 19.SEP.2012 13:34:51

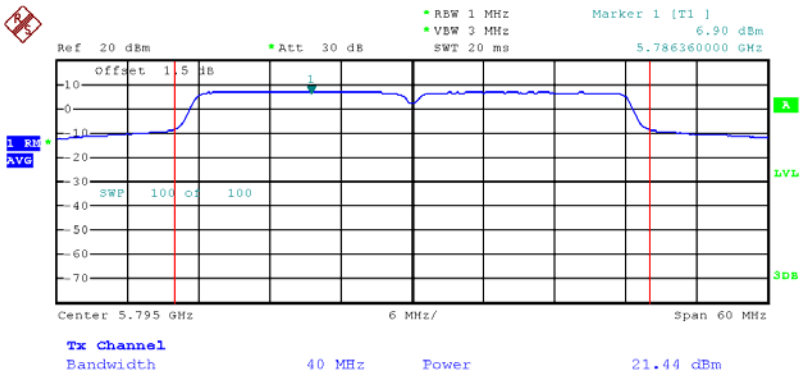
<For Ant. 10>:

Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 40MHz / 5795 MHz / Chain. 1 (2TX)



Date: 19.SEP.2012 13:48:45

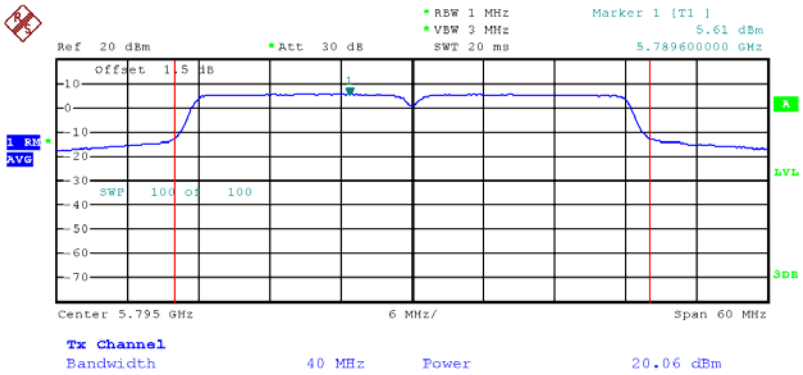
Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 40MHz / 5795 MHz / Chain. 3 (2TX)



Date: 19.SEP.2012 13:49:19

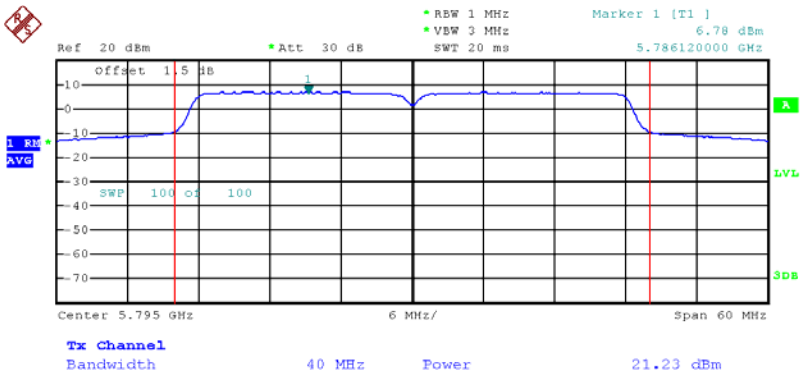
<For Ant. 10>:

Conducted Output Power Plot on Configuration IEEE 802.11n MCS8 40MHz / 5795 MHz / Chain. 1 (2TX)



Date: 19.SEP.2012 13:53:23

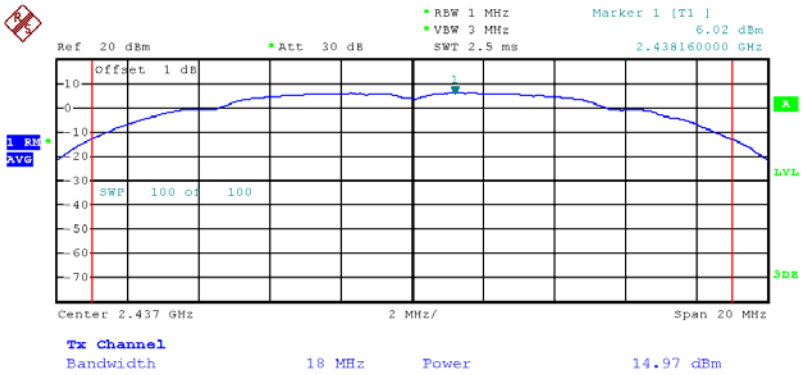
Conducted Output Power Plot on Configuration IEEE 802.11n MCS8 40MHz / 5795 MHz / Chain. 3 (2TX)



Date: 19.SEP.2012 13:54:01

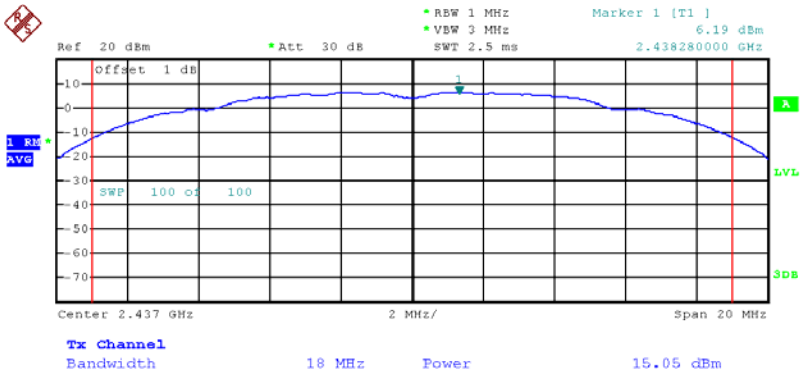
<For Ant. 1>:

Conducted Output Power Plot on Configuration IEEE 802.11b / 2437 MHz / Chain. 1 (2TX)



Date: 18.SEP.2012 13:42:32

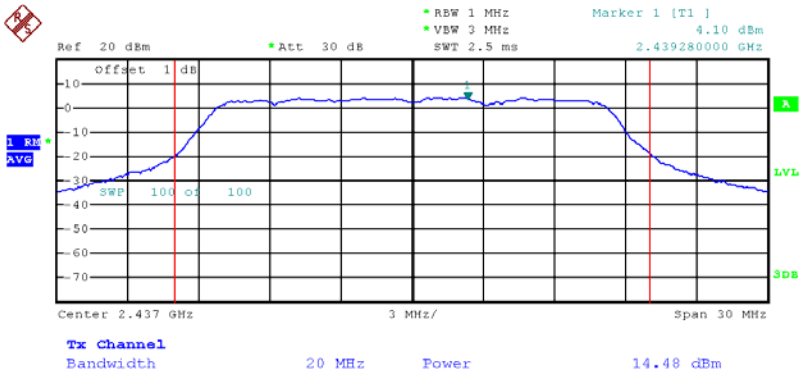
Conducted Output Power Plot on Configuration IEEE 802.11b / 2437 MHz / Chain. 3 (2TX)



Date: 18.SEP.2012 13:43:30

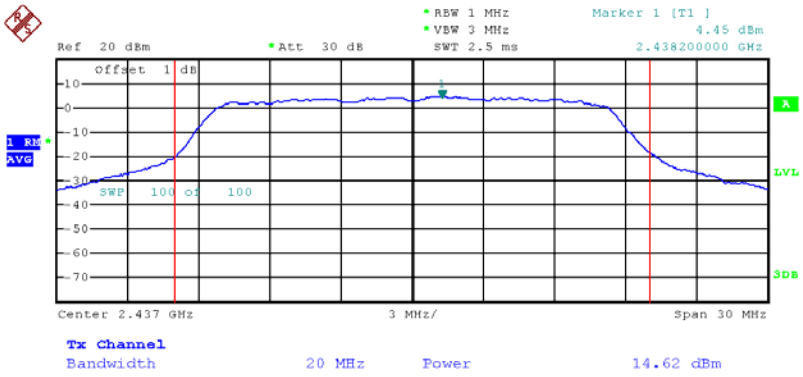
<For Ant. 1>:

Conducted Output Power Plot on Configuration IEEE 802.11g / 2437 MHz / Chain. 1 (2TX)



Date: 18.SEP.2012 13:59:14

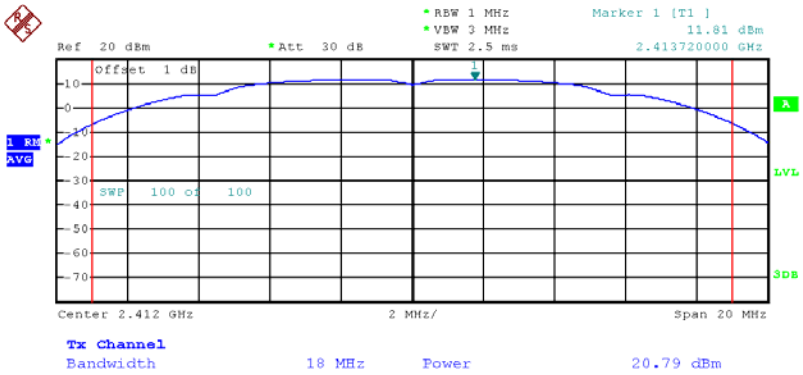
Conducted Output Power Plot on Configuration IEEE 802.11g / 2437 MHz / Chain. 3 (2TX)



Date: 18.SEP.2012 13:58:13

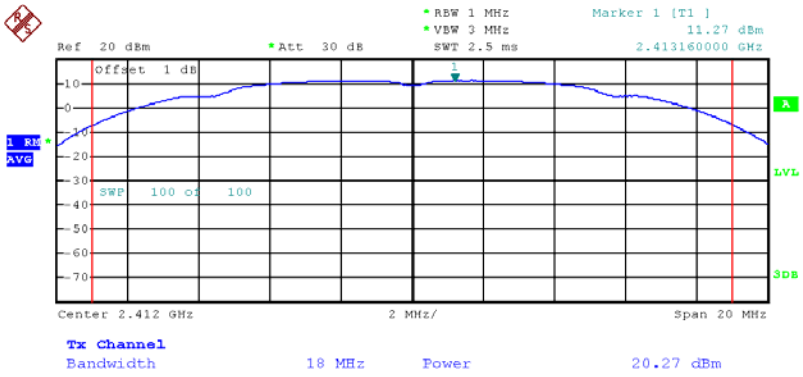
<For Ant. 2>:

Conducted Output Power Plot on Configuration IEEE 802.11b / 2412 MHz / Chain. 1 (2TX)



Date: 18.SEP.2012 19:14:40

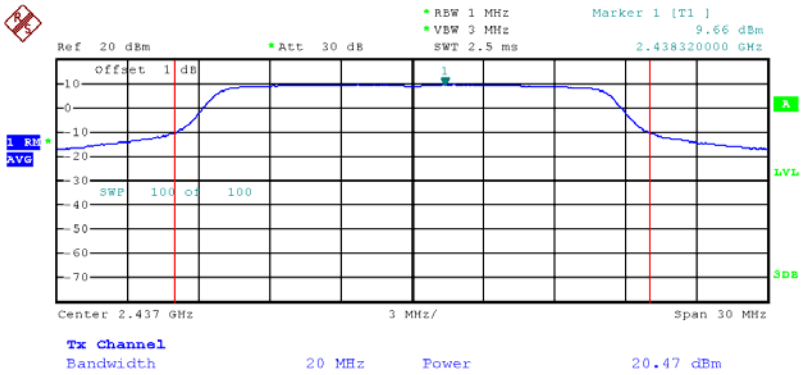
Conducted Output Power Plot on Configuration IEEE 802.11b / 2412 MHz / Chain. 3 (2TX)



Date: 18.SEP.2012 19:14:06

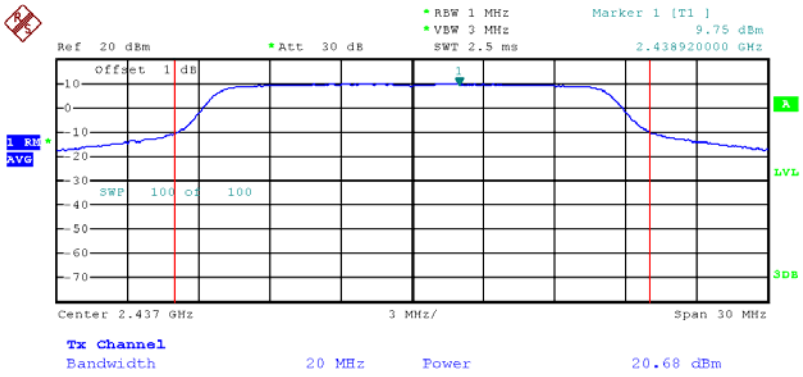
<For Ant. 2>:

Conducted Output Power Plot on Configuration IEEE 802.11g / 2437 MHz / Chain. 1 (2TX)



Date: 18.SEP.2012 18:43:22

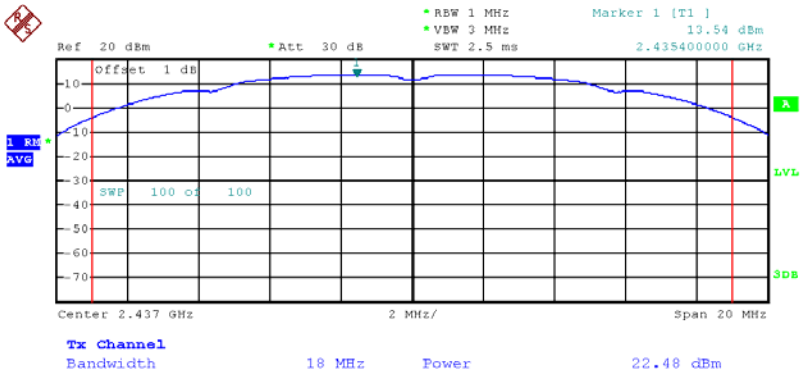
Conducted Output Power Plot on Configuration IEEE 802.11g / 2437 MHz / Chain. 3 (2TX)



Date: 18.SEP.2012 18:42:51

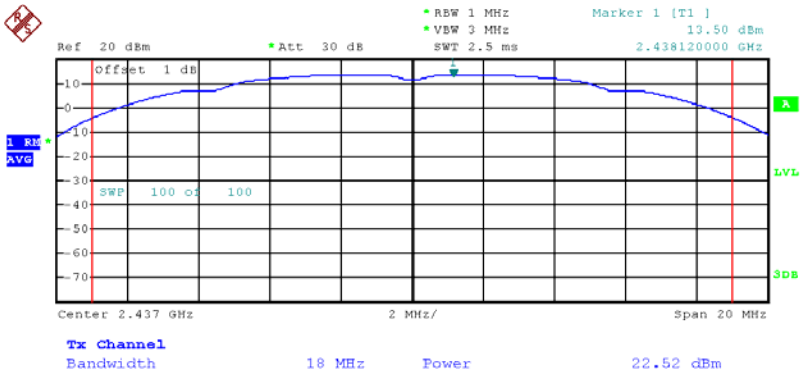
<For Ant. 3>:

Conducted Output Power Plot on Configuration IEEE 802.11b / 2437 MHz / Chain. 1 (2TX)



Date: 18.SEP.2012 17:57:37

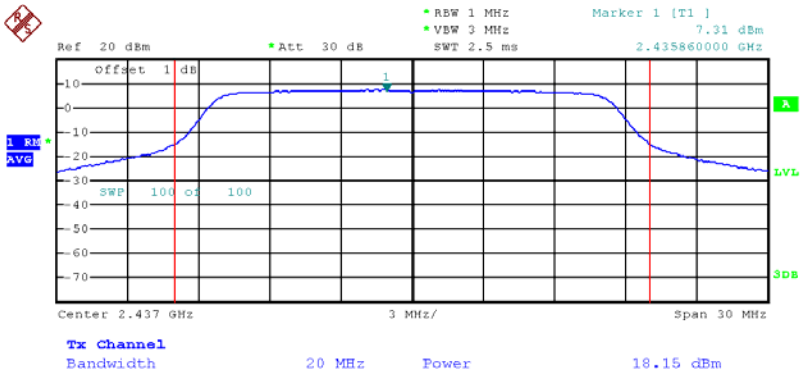
Conducted Output Power Plot on Configuration IEEE 802.11b / 2437 MHz / Chain. 3 (2TX)



Date: 18.SEP.2012 17:58:08

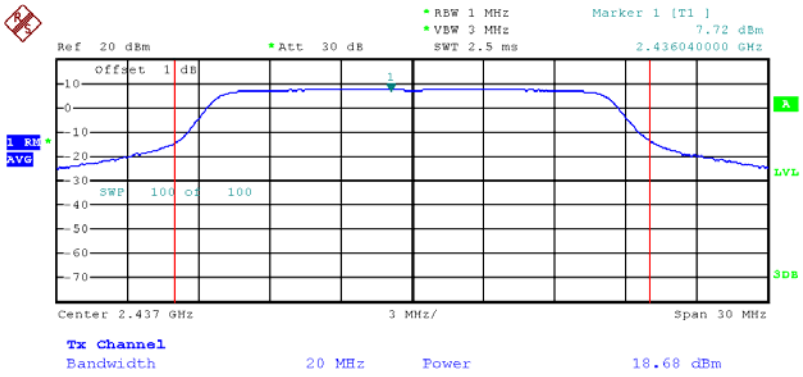
<For Ant. 3>:

Conducted Output Power Plot on Configuration IEEE 802.11g / 2437 MHz / Chain. 1 (2TX)



Date: 18.SEP.2012 18:43:58

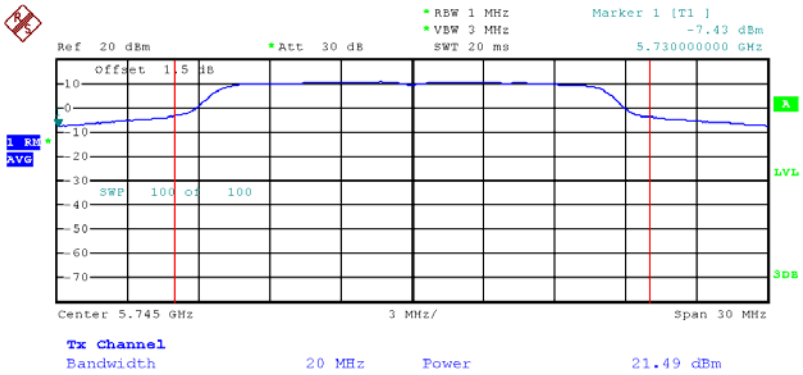
Conducted Output Power Plot on Configuration IEEE 802.11g / 2437 MHz / Chain. 3 (2TX)



Date: 18.SEP.2012 18:44:45

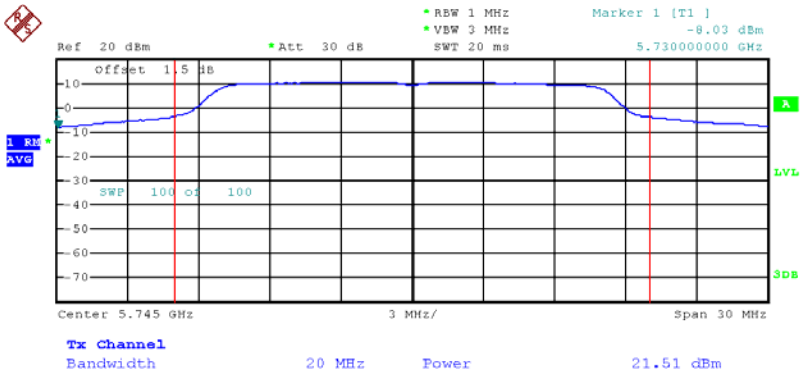
<For Ant. 4>:

Conducted Output Power Plot on Configuration IEEE 802.11a / 5745 MHz / Chain. 1 (2TX)



Date: 19.SEP.2012 23:58:24

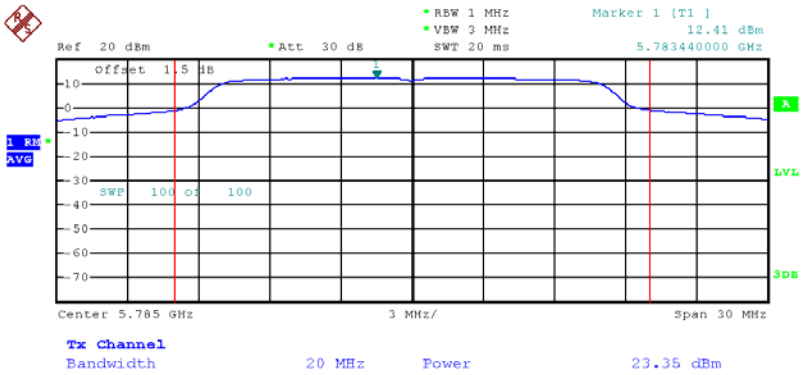
Conducted Output Power Plot on Configuration IEEE 802.11a / 5745 MHz / Chain. 3 (2TX)



Date: 19.SEP.2012 23:58:51

<For Ant. 5>:

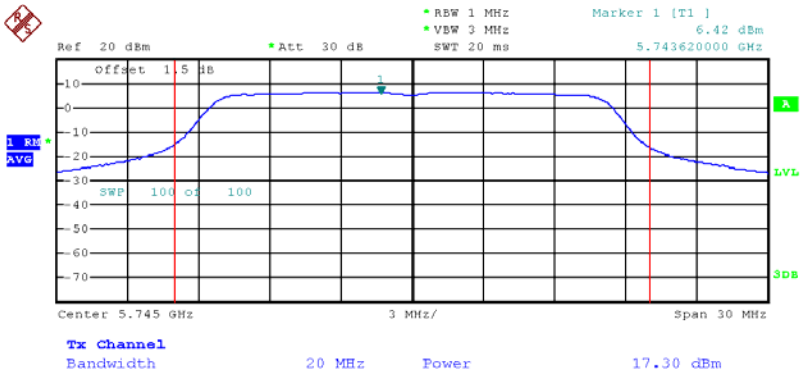
Conducted Output Power Plot on Configuration IEEE 802.11a/5785 MHz/Chain. 1 (1TX)



Date: 20.SEP.2012 03:24:09

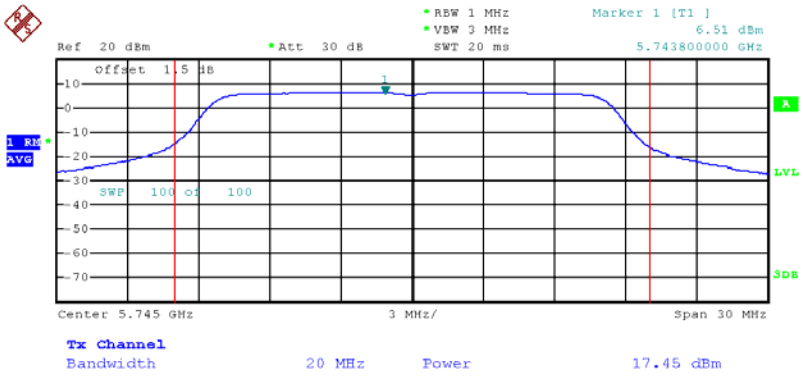
<For Ant. 6>:

Conducted Output Power Plot on Configuration IEEE 802.11a / 5745 MHz / Chain. 1 (2TX)



Date: 20.OCT.2012 09:27:52

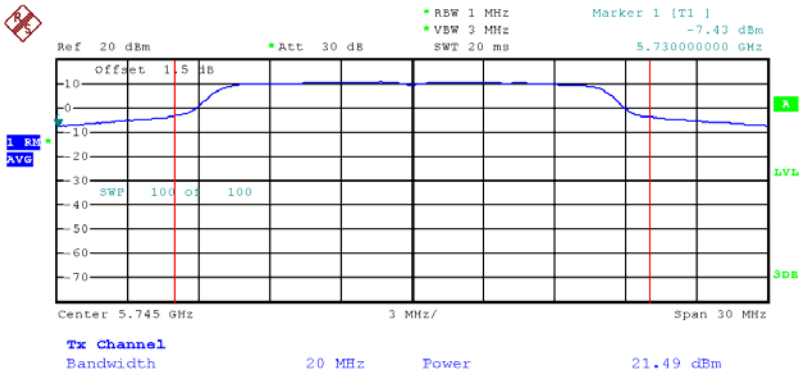
Conducted Output Power Plot on Configuration IEEE 802.11a / 5745 MHz / Chain. 3 (2TX)



Date: 20.OCT.2012 09:26:58

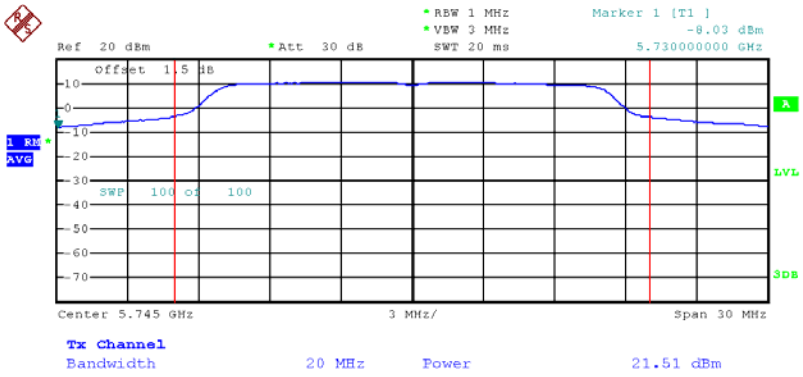
<For Ant. 10>:

Conducted Output Power Plot on Configuration IEEE 802.11a / 5745 MHz / Chain. 1 (2TX)



Date: 19.SEP.2012 23:58:24

Conducted Output Power Plot on Configuration IEEE 802.11a / 5745 MHz / Chain. 3 (2TX)



Date: 19.SEP.2012 23:58:51

4.3. Power Spectral Density Measurement

4.3.1. Limit

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

4.3.2. Measuring Instruments and Setting

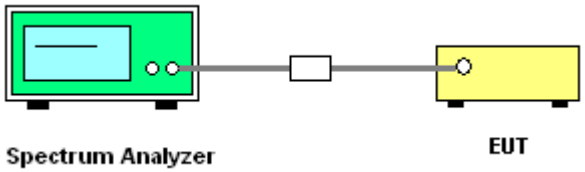
Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	5-30 % greater than the DTS channel bandwidth.
RB	≥ 3 kHz.
VB	≥ 3 x RBW.
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

4.3.3. Test Procedures

1. Test procedures refer KDB558074 v01 r02 section 9.1 option 1
2. spectrum analyzer must be capable of utilizing a number of measurement points in each sweep that is greater than or equal to twice the span/RBW in order to ensure bin-to-bin spacing of ≤ RBW/2 so that narrowband signals are not lost between frequency bins.
3. Use this procedure when the maximum conducted output power in the fundamental emission is used to demonstrate compliance. The EUT must be configured to transmit continuously at full power over the measurement duration.
4. Ensure that the number of measurement points in the sweep ≥ 2 x span/RBW (use of a greater number of measurement points than this minimum requirement is recommended).
5. Use the peak marker function to determine the maximum level in any 3 kHz band segment within the fundamental EBW.
6. The resulting PSD level must be ≤ 8 dBm.

4.3.4. Test Setup Layout



4.3.5. Test Deviation

There is no deviation with the original standard.

4.3.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.3.7. Test Result of Power Spectral Density

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

For 2.4GHz Band

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

Channel	Frequency	Power Density (dBm/3kHz)		Single Port. Limit (dBm/3kHz)	Result
		Chain. 1	Chain. 3		
1	2412 MHz	-12.57	-9.40	-6.87	**Complies**
6	2437 MHz	-9.78	-9.31	-6.87	**Complies**
11	2462 MHz	-11.09	-8.49	-6.87	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =17.86dBi > 6dBi, so the power density limit =8-(17.86-6)-(10log(2))=-6.87dBm.

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

Channel	Frequency	Power Density (dBm/3kHz)		Single Port. Limit (dBm/3kHz)	Result
		Chain. 1	Chain. 3		
1	2412 MHz	-13.51	-12.16	-3.86	**Complies**
6	2437 MHz	-6.94	-4.85	-3.86	**Complies**
11	2462 MHz	-13.55	-8.11	-3.86	**Complies**

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

Channel	Frequency	Power Density (dBm/3kHz)		Single Port. Limit (dBm/3kHz)	Result
		Chain. 1	Chain. 3		
3	2422 MHz	-12.92	-13.84	-6.87	**Complies**
6	2437 MHz	-13.77	-10.48	-6.87	**Complies**
9	2452 MHz	-10.41	-17.23	-6.87	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =17.86dBi > 6dBi, so the power density limit =8-(17.86-6)-(10log(2))=-6.87dBm.

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

Channel	Frequency	Power Density (dBm/3kHz)		Single Port. Limit (dBm/3kHz)	Result
		Chain. 1	Chain. 3		
3	2422 MHz	-12.76	-14.01	-3.86	**Complies**
6	2437 MHz	-15.55	-8.65	-3.86	**Complies**
9	2452 MHz	-14.93	-17.24	-3.86	**Complies**

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

Channel	Frequency	Power Density (dBm/3kHz)		Single Port. Limit (dBm/3kHz)	Result
		Chain. 1	Chain. 3		
1	2412 MHz	-8.63	-6.99	-1.37	**Complies**
6	2437 MHz	-3.89	-1.68	-1.37	**Complies**
11	2462 MHz	-7.80	-9.03	-1.37	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =12.36dBi > 6dBi, so the power density limit =8-(12.36-6)-(10log(2))=-1.37dBm.

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

Channel	Frequency	Power Density (dBm/3kHz)		Single Port. Limit (dBm/3kHz)	Result
		Chain. 1	Chain. 3		
1	2412 MHz	-8.28	-4.88	1.64	**Complies**
6	2437 MHz	-3.18	-2.86	1.64	**Complies**
11	2462 MHz	-10.65	-9.24	1.64	**Complies**

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

Channel	Frequency	Power Density (dBm/3kHz)		Single Port. Limit (dBm/3kHz)	Result
		Chain. 1	Chain. 3		
3	2422 MHz	-12.01	-14.28	-1.37	**Complies**
6	2437 MHz	-6.34	-9.41	-1.37	**Complies**
9	2452 MHz	-14.89	-15.82	-1.37	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =12.36dBi > 6dBi, so the power density limit =8-(12.36-6)-(10log(2))=-1.37dBm.

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

Channel	Frequency	Power Density (dBm/3kHz)		Single Port. Limit (dBm/3kHz)	Result
		Chain. 1	Chain. 3		
3	2422 MHz	-7.58	-13.31	1.64	**Complies**
6	2437 MHz	-12.13	-9.63	1.64	**Complies**
9	2452 MHz	-10.40	-9.47	1.64	**Complies**

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

Channel	Frequency	Power Density (dBm/3kHz)		Single Port. Limit (dBm/3kHz)	Result
		Chain. 1	Chain. 3		
1	2412 MHz	-8.05	-2.52	1.13	**Complies**
6	2437 MHz	-7.97	-6.27	1.13	**Complies**
11	2462 MHz	-7.92	-9.25	1.13	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =9.86dBi > 6dBi, so the power density limit =8-(9.86-6)-(10log(2))=1.13dBm.

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

Channel	Frequency	Power Density (dBm/3kHz)		Single Port. Limit (dBm/3kHz)	Result
		Chain. 1	Chain. 3		
1	2412 MHz	-9.43	-1.84	7.15	**Complies**
6	2437 MHz	-5.24	-2.20	7.15	**Complies**
11	2462 MHz	-10.65	-9.24	7.15	**Complies**

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

Channel	Frequency	Power Density (dBm/3kHz)		Single Port. Limit (dBm/3kHz)	Result
		Chain. 1	Chain. 3		
3	2422 MHz	-13.38	-8.44	1.13	**Complies**
6	2437 MHz	-2.83	-8.17	1.13	**Complies**
9	2452 MHz	-15.12	-9.85	1.13	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =9.86dBi > 6dBi, so the power density limit =8-(9.86-6)-(10log(2))=1.13dBm.

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

Channel	Frequency	Power Density (dBm/3kHz)		Single Port. Limit (dBm/3kHz)	Result
		Chain. 1	Chain. 3		
3	2422 MHz	-5.99	-8.76	7.15	**Complies**
6	2437 MHz	-12.13	-9.63	7.15	**Complies**
9	2452 MHz	-9.24	-7.38	7.15	**Complies**

For 5GHz Band

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

Channel	Frequency	Power Density (dBm/3kHz)		Single Port. Limit (dBm/3kHz)	Result
		Chain. 1	Chain. 3		
149	5745 MHz	-3.11	-3.84	-0.10	**Complies**
157	5785 MHz	-5.67	-3.22	-0.10	**Complies**
165	5825 MHz	-5.40	-2.74	-0.10	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =11.09dBi > 6dBi , so the power density limit =8-(11.09-6)-(10log(2))=-0.10dBm.

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

Channel	Frequency	Power Density (dBm/3kHz)		Single Port. Limit (dBm/3kHz)	Result
		Chain. 1	Chain. 3		
149	5745 MHz	-5.72	-3.06	5.92	**Complies**
157	5785 MHz	-5.52	-4.86	5.92	**Complies**
165	5825 MHz	-3.31	-1.90	5.92	**Complies**

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

Channel	Frequency	Power Density (dBm/3kHz)		Single Port. Limit (dBm/3kHz)	Result
		Chain. 1	Chain. 3		
151	5755 MHz	-8.61	-7.22	-0.10	**Complies**
159	5795 MHz	-6.89	-6.50	-0.10	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =11.09dBi > 6dBi , so the power density limit =8-(11.09-6)-(10log(2))=-0.10dBm.

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

Channel	Frequency	Power Density (dBm/3kHz)		Single Port. Limit (dBm/3kHz)	Result
		Chain. 1	Chain. 3		
151	5755 MHz	-9.17	-7.37	5.92	**Complies**
159	5795 MHz	-8.65	-7.07	5.92	**Complies**

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

Channel	Frequency	Power Density (dBm/3kHz)	Single Port. Limit (dBm/3kHz)	Result
149	5745 MHz	-4.24	4.92	**Complies**
157	5785 MHz	-4.52	4.92	**Complies**
165	5825 MHz	-4.30	4.92	**Complies**

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

Channel	Frequency	Power Density (dBm/3kHz)	Single Port. Limit (dBm/3kHz)	Result
151	5755 MHz	-5.66	4.92	**Complies**
159	5795 MHz	-5.78	4.92	**Complies**

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

Channel	Frequency	Power Density (dBm/3kHz)		Single Port. Limit (dBm/3kHz)	Result
		Chain. 1	Chain. 3		
149	5745 MHz	-7.44	-8.24	-4.60	**Complies**
157	5785 MHz	-8.02	-8.56	-4.60	**Complies**
165	5825 MHz	-9.65	-8.79	-4.60	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =15.59dBi > 6dBi, so the power density limit =8-(15.59-6)-(10log(2))=-4.60dBm.

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

Channel	Frequency	Power Density (dBm/3kHz)		Single Port. Limit (dBm/3kHz)	Result
		Chain. 1	Chain. 3		
149	5745 MHz	-4.91	-4.10	1.42	**Complies**
157	5785 MHz	-5.65	-4.89	1.42	**Complies**
165	5825 MHz	-6.49	-5.96	1.42	**Complies**

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

Channel	Frequency	Power Density (dBm/3kHz)		Single Port. Limit (dBm/3kHz)	Result
		Chain. 1	Chain. 3		
151	5755 MHz	-8.88	-10.04	-4.60	**Complies**
159	5795 MHz	-11.61	-9.74	-4.60	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =15.59dBi > 6dBi, so the power density limit =8-(15.59-6)-(10log(2))=-4.60dBm.

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

Channel	Frequency	Power Density (dBm/3kHz)		Single Port. Limit (dBm/3kHz)	Result
		Chain. 1	Chain. 3		
151	5755 MHz	-8.88	-8.02	1.42	**Complies**
159	5795 MHz	-8.20	-7.00	1.42	**Complies**

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

Channel	Frequency	Power Density (dBm/3kHz)		Single Port. Limit (dBm/3kHz)	Result
		Chain. 1	Chain. 3		
149	5745 MHz	-3.11	-3.84	4.40	**Complies**
157	5785 MHz	-5.67	-3.22	4.40	**Complies**
165	5825 MHz	-5.40	-2.74	4.40	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =6.59dBi > 6dBi, so the power density limit =8-(6.59-6)-(10log(2))=4.40dBm.

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

Channel	Frequency	Power Density (dBm/3kHz)		Single Port. Limit (dBm/3kHz)	Result
		Chain. 1	Chain. 3		
149	5745 MHz	-5.72	-3.06	8.00	**Complies**
157	5785 MHz	-5.52	-4.86	8.00	**Complies**
165	5825 MHz	-3.31	-1.90	8.00	**Complies**

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

Channel	Frequency	Power Density (dBm/3kHz)		Single Port. Limit (dBm/3kHz)	Result
		Chain. 1	Chain. 3		
151	5755 MHz	-8.61	-7.22	4.40	**Complies**
159	5795 MHz	-6.89	-6.50	4.40	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =6.59dBi > 6dBi, so the power density limit =8-(6.59-6)-(10log(2))=4.40dBm.

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

Channel	Frequency	Power Density (dBm/3kHz)		Single Port. Limit (dBm/3kHz)	Result
		Chain. 1	Chain. 3		
151	5755 MHz	-9.17	-7.37	8.00	**Complies**
159	5795 MHz	-8.65	-7.07	8.00	**Complies**

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

For 2.4GHz Band

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

Channel	Frequency	Power Density (dBm/3kHz)		Single Port. Limit (dBm/3kHz)	Result
		Chain. 1	Chain. 3		
1	2412 MHz	-8.92	-9.15	-6.87	**Complies**
6	2437 MHz	-8.77	-9.04	-6.87	**Complies**
11	2462 MHz	-9.18	-9.50	-6.87	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =17.86dBi > 6dBi, so the power density limit =8-(17.86-6)-(10log(2))=-6.87dBm.

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

Channel	Frequency	Power Density (dBm/3kHz)		Single Port. Limit (dBm/3kHz)	Result
		Chain. 1	Chain. 3		
1	2412 MHz	-3.15	-3.89	-1.37	**Complies**
6	2437 MHz	-4.57	-3.94	-1.37	**Complies**
11	2462 MHz	-3.67	-3.80	-1.37	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =12.36dBi > 6dBi , so the power density limit =8-(12.36-6)-(10log(2))=-1.37dBm.

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

Channel	Frequency	Power Density (dBm/3kHz)		Single Port. Limit (dBm/3kHz)	Result
		Chain. 1	Chain. 3		
1	2412 MHz	-3.15	-3.89	1.13	**Complies**
6	2437 MHz	-3.88	-2.13	1.13	**Complies**
11	2462 MHz	-3.67	-3.80	1.13	**Complies**

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =9.86dBi > 6dBi, so the power density limit =8-(9.86-6)-(10log(2))=1.13dBm.

For 5GHz Band

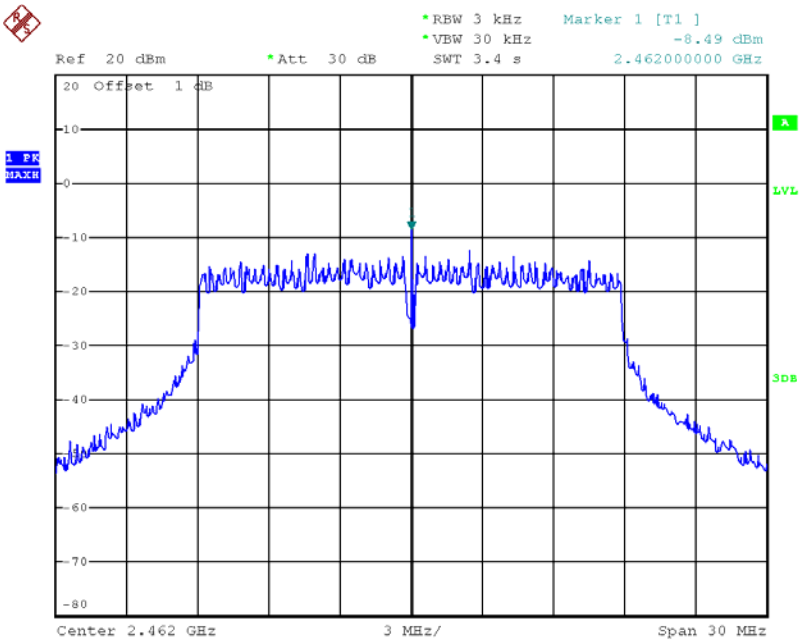
Configuration IEEE 802.11a / Ant. 5: Chain. 1 (1TX)

Channel	Frequency	Power Density (dBm/3kHz)	Single Port. Limit (dBm/3kHz)	Result
149	5745 MHz	-4.00	4.92	**Complies**
157	5785 MHz	-3.93	4.92	**Complies**
165	5825 MHz	-4.25	4.92	**Complies**

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

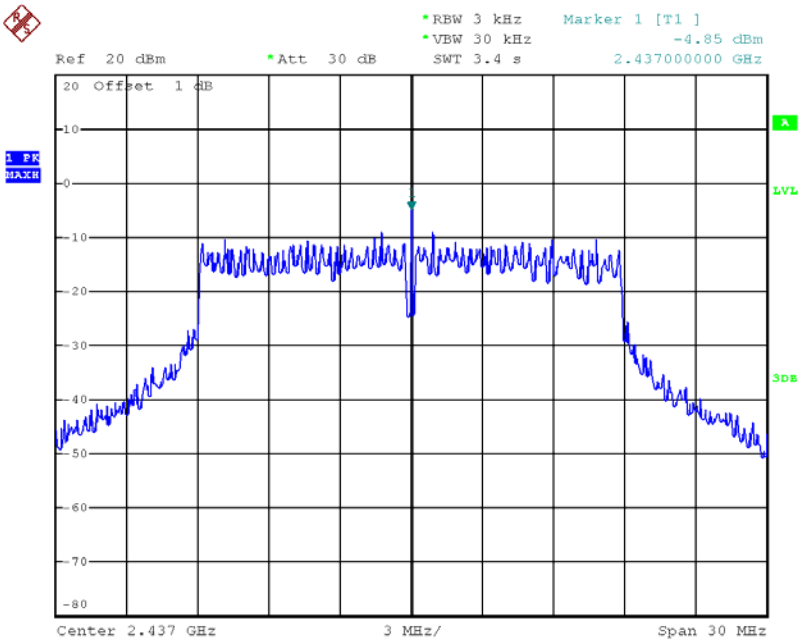
For plots, only the channel with maximum results was shown.

Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / 2462 MHz / Ant. 1: Chain. 3 (2TX)



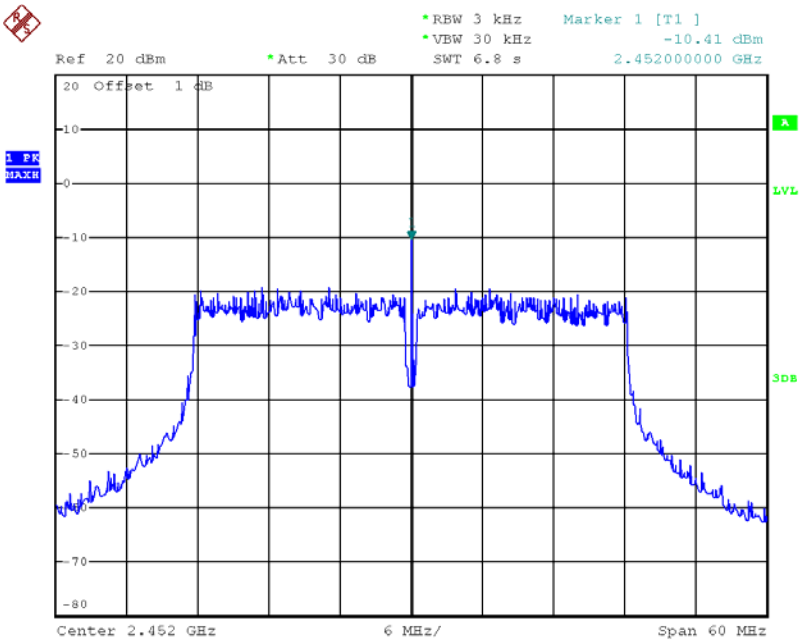
Date: 20.OCT.2012 11:31:16

Power Density Plot on Configuration IEEE 802.11n MCS8 20MHz / 2437MHz / Ant. 1: Chain. 3 (2TX)



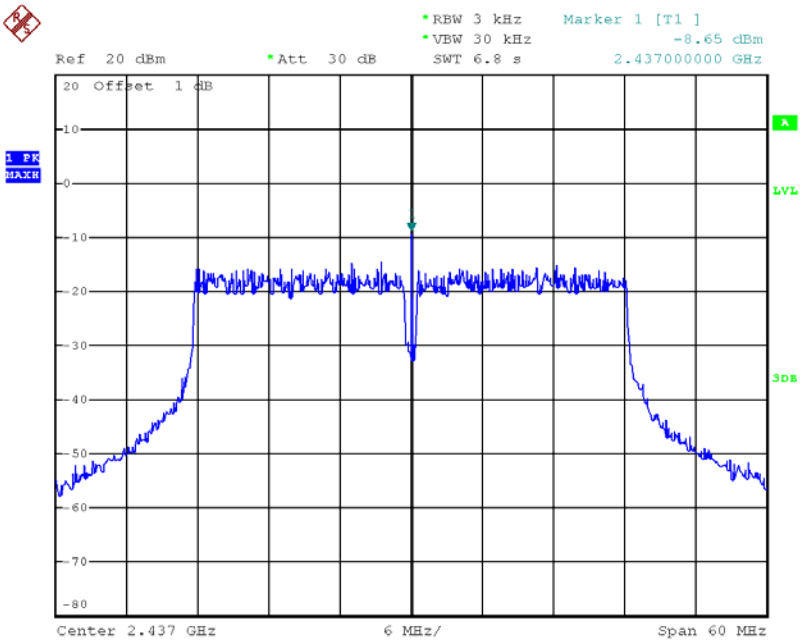
Date: 20.OCT.2012 11:41:03

Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / 2452 MHz / Ant. 1: Chain. 1 (2TX)



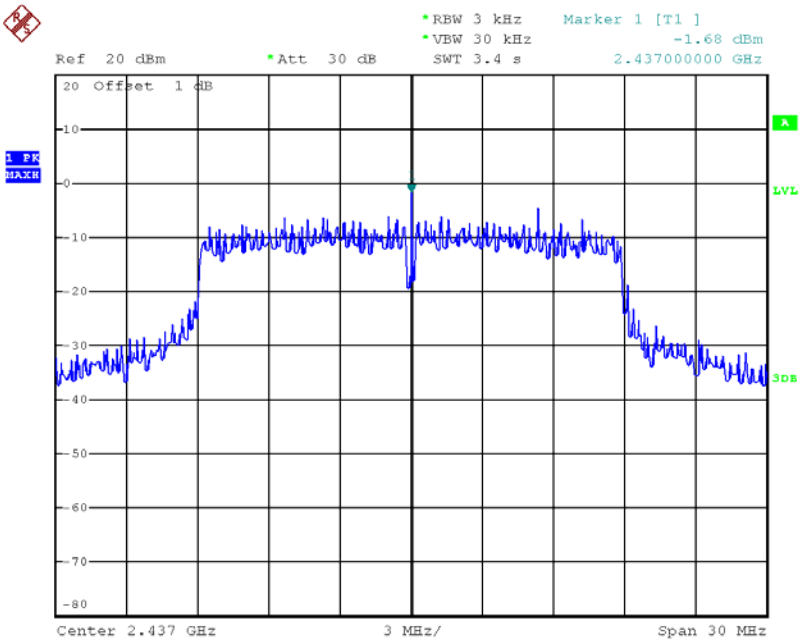
Date: 20.OCT.2012 11:54:53

Power Density Plot on Configuration IEEE 802.11n MCS8 40MHz / 2437MHz / Ant. 1: Chain. 3 (2TX)



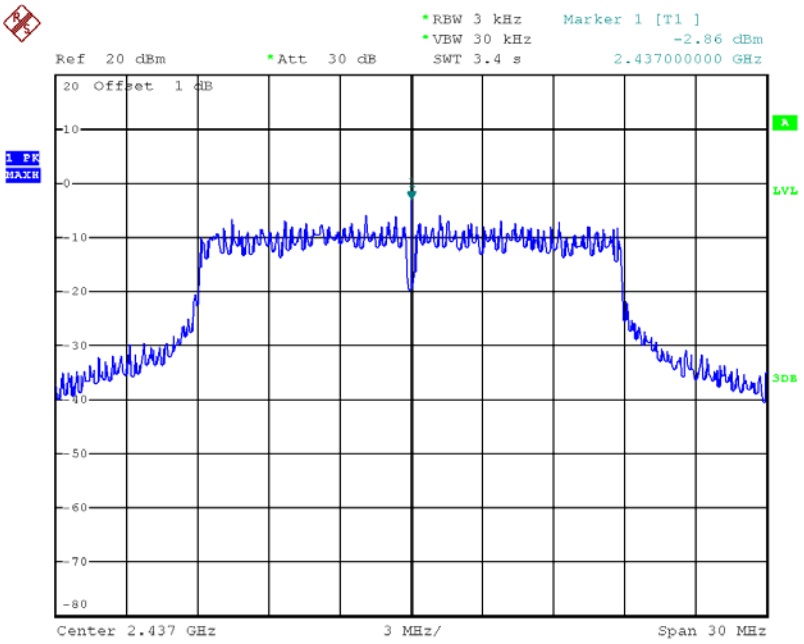
Date: 20.OCT.2012 11:46:06

Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / 2437MHz / Ant. 2: Chain. 3 (2TX)



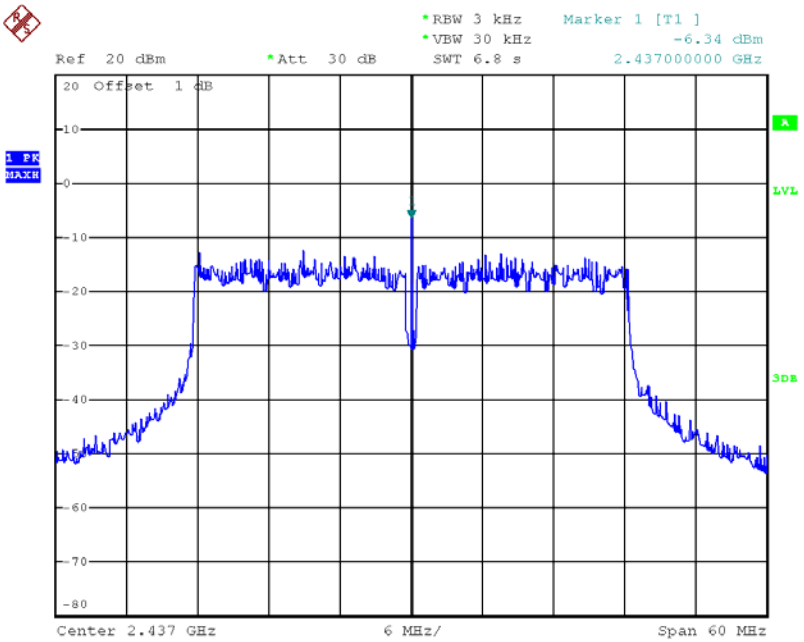
Date: 20.OCT.2012 13:08:17

Power Density Plot on Configuration IEEE 802.11n MCS8 20MHz / 2437MHz / Ant. 2: Chain. 3 (2TX)



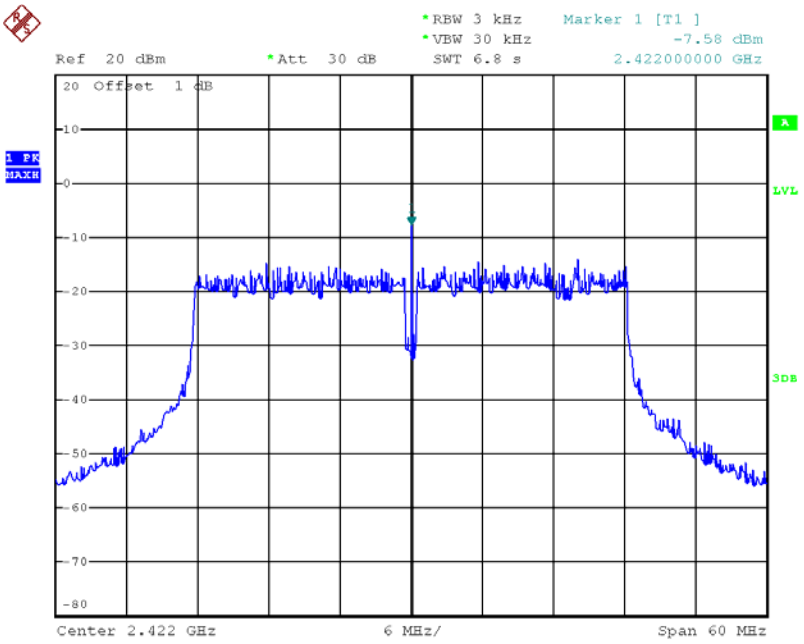
Date: 20.OCT.2012 12:59:38

Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / 2437MHz / Ant. 2: Chain. 1 (2TX)



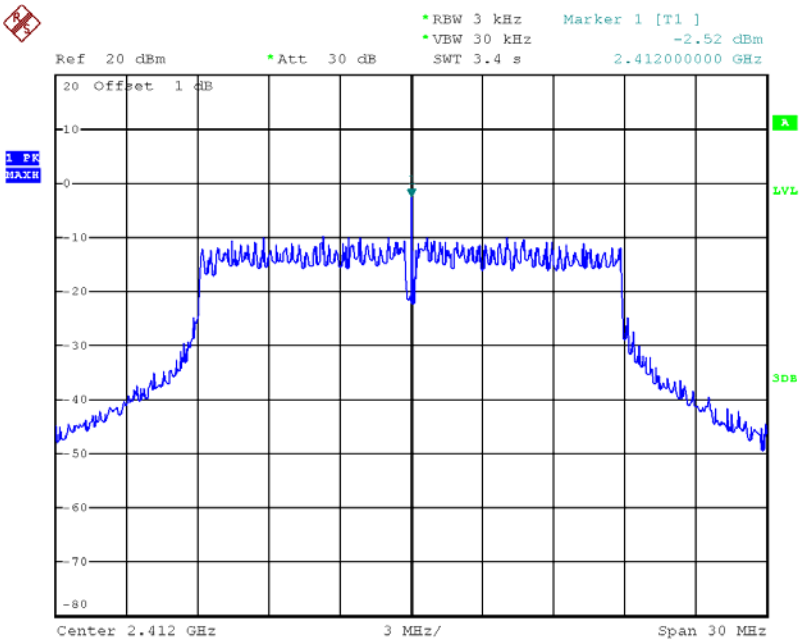
Date: 20.OCT.2012 12:44:08

Power Density Plot on Configuration IEEE 802.11n MCS8 40MHz / 2422MHz / Ant. 2: Chain. 1 (2TX)



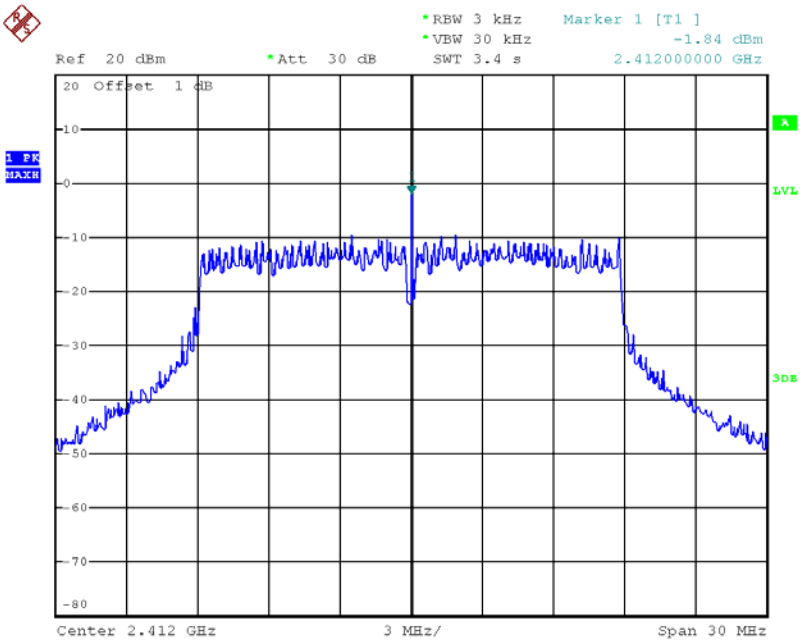
Date: 20.OCT.2012 12:49:43

Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / 2412MHz / Ant. 3: Chain. 3 (2TX)



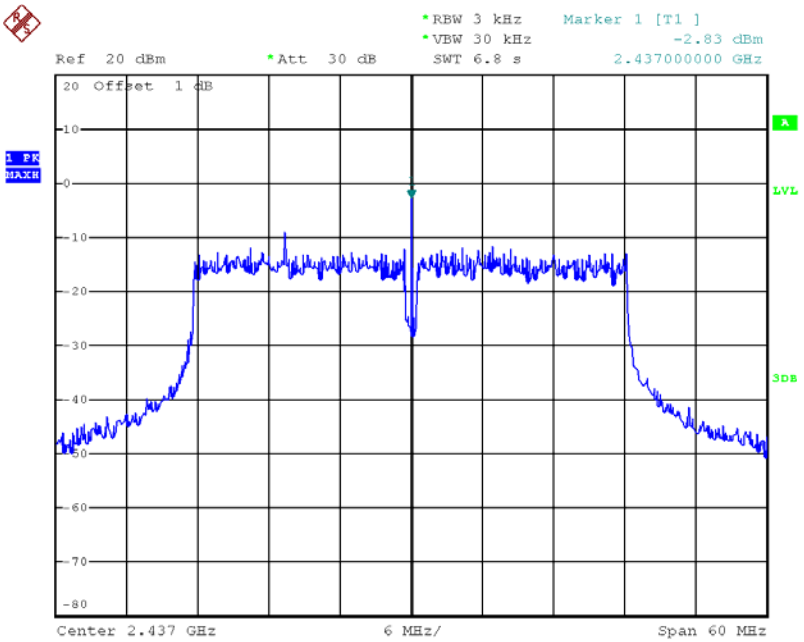
Date: 20.OCT.2012 13:20:53

Power Density Plot on Configuration IEEE 802.11n MCS8 20MHz / 2412MHz / Ant. 3: Chain. 3 (2TX)



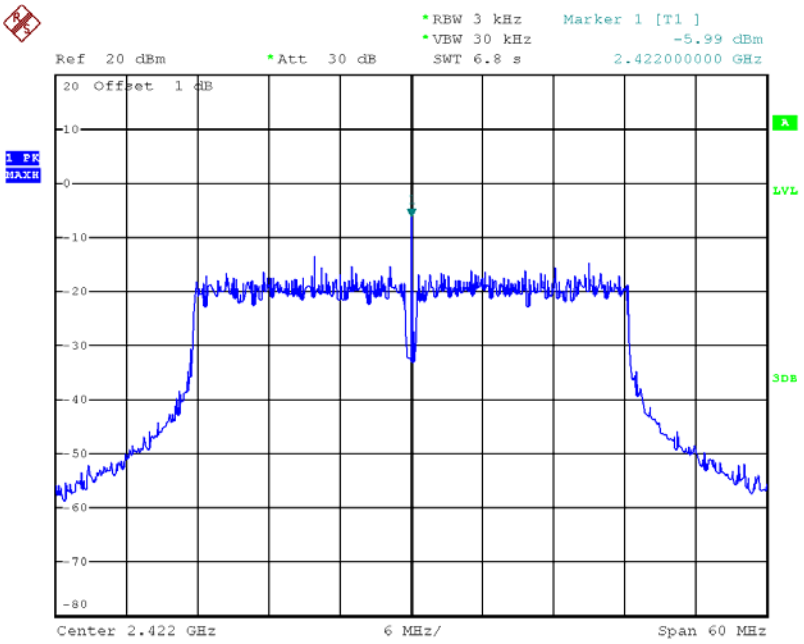
Date: 20.OCT.2012 13:28:48

Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / 2437MHz / Ant. 3: Chain. 1 (2TX)



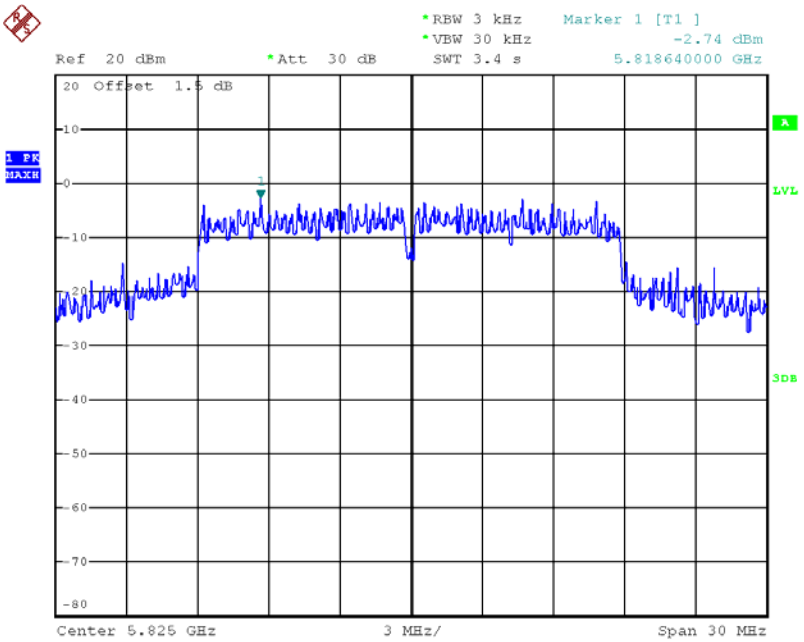
Date: 20.OCT.2012 13:41:40

Power Density Plot on Configuration IEEE 802.11n MCS8 40MHz / 2422MHz/ Ant. 3: Chain. 1 (2TX)



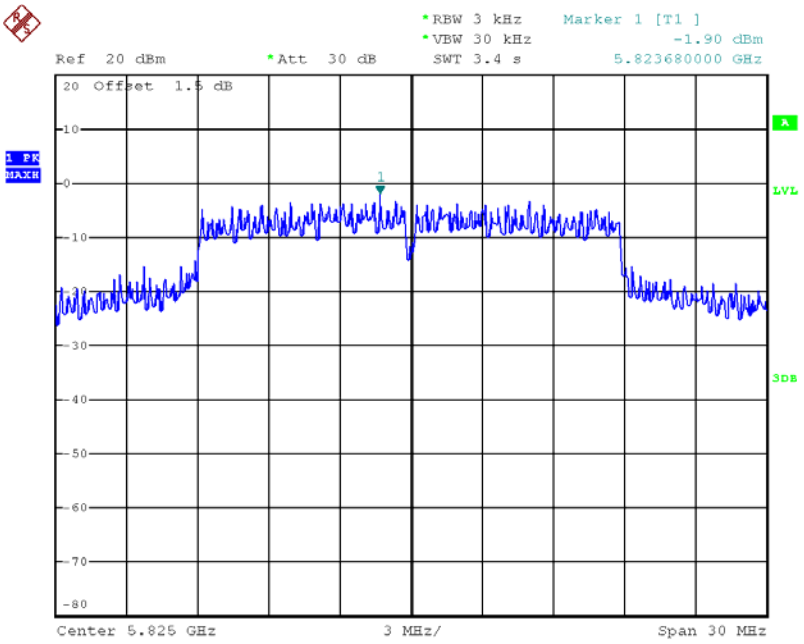
Date: 20.OCT.2012 13:32:31

Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / 5825MHz / Ant. 4: Chain. 3 (2TX)



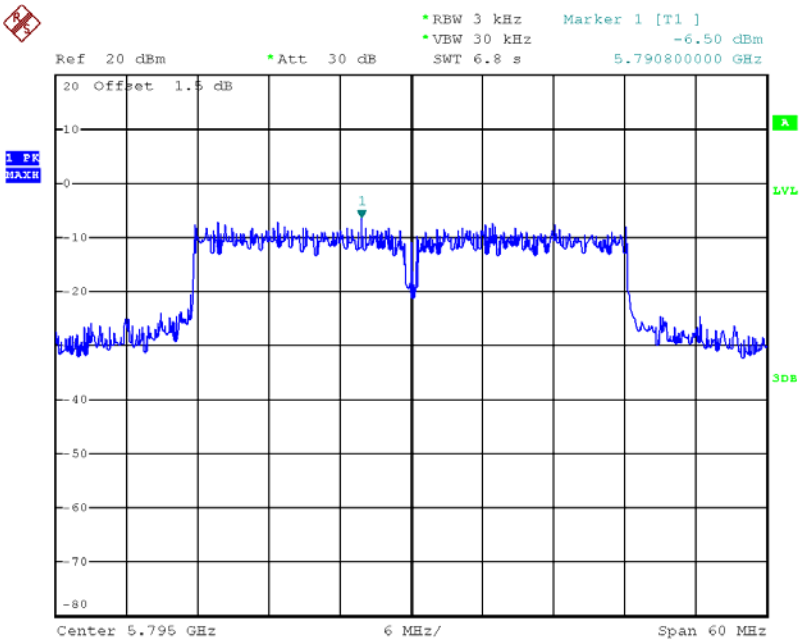
Date: 20.OCT.2012 14:46:42

Power Density Plot on Configuration IEEE 802.11n MCS8 20MHz / 5825MHz / Ant. 4: Chain. 3 (2TX)



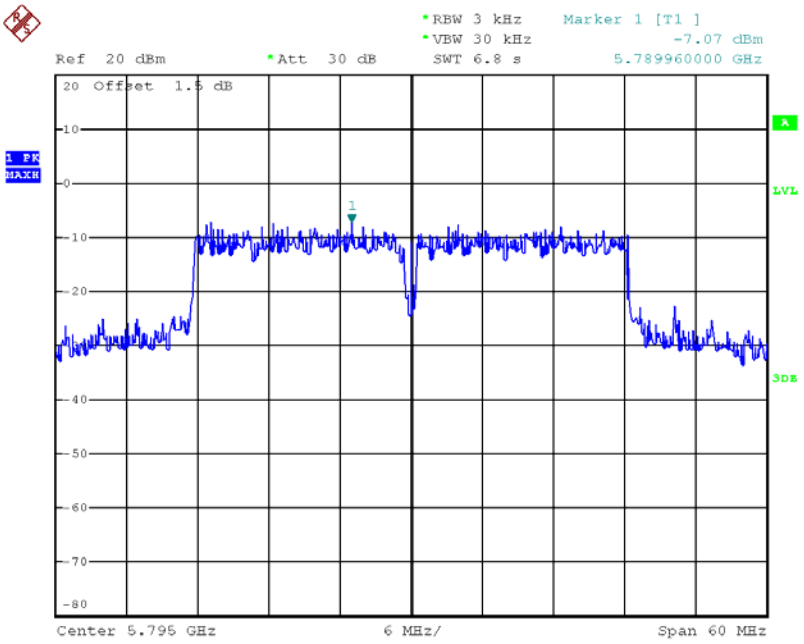
Date: 20.OCT.2012 14:45:30

Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / 5795 MHz / Ant. 4: Chain. 3 (2TX)



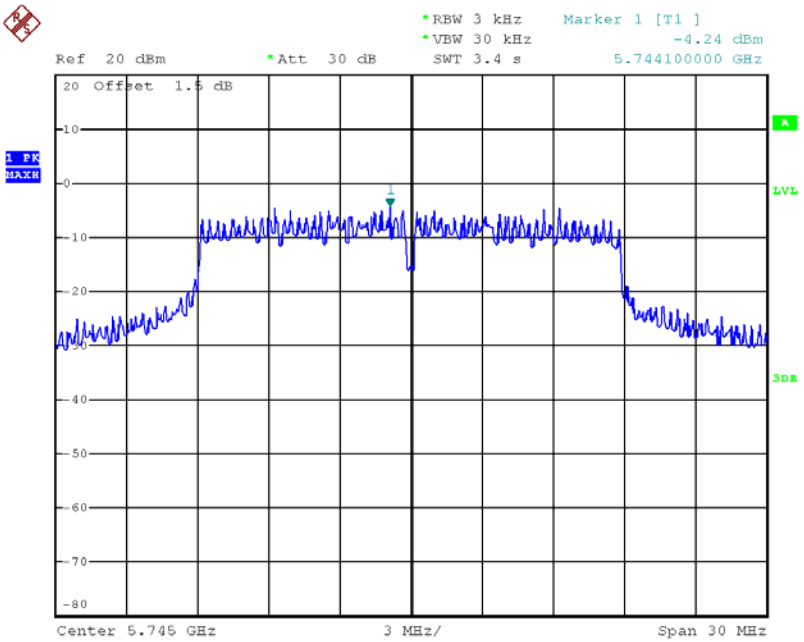
Date: 20.OCT.2012 14:35:57

Power Density Plot on Configuration IEEE 802.11n MCS8 40MHz / 5795 MHz / Ant. 4: Chain. 3 (2TX)



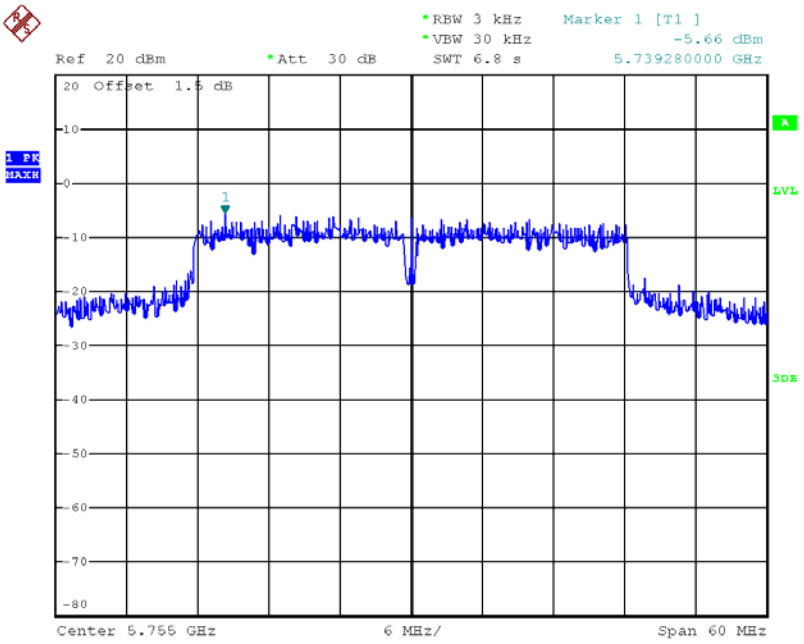
Date: 20.OCT.2012 14:39:03

Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / 5745MHz / Ant. 5: Chain. 1 (1TX)



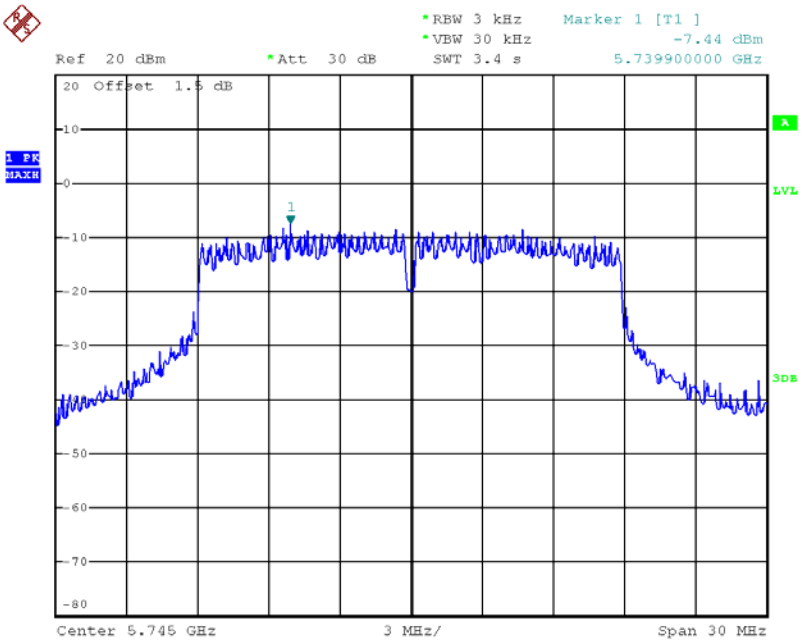
Date: 20.OCT.2012 14:07:53

Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / 5755MHz / Ant. 5: Chain. 1 (1TX)



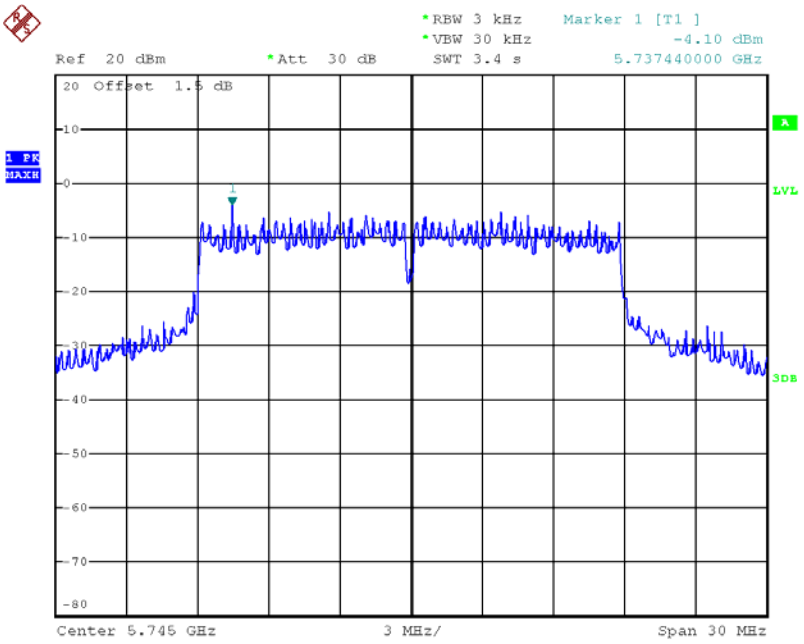
Date: 20.OCT.2012 14:11:44

Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / 5745MHz / Ant. 6: Chain. 1 (2TX)



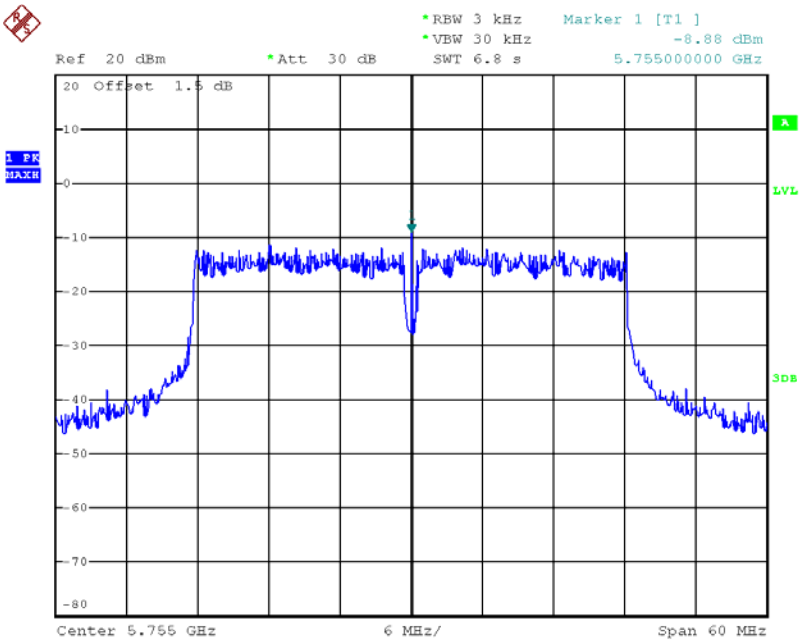
Date: 20.OCT.2012 14:14:46

Power Density Plot on Configuration IEEE 802.11n MCS8 20MHz / 5745MHz / Ant. 6: Chain. 3 (2TX)



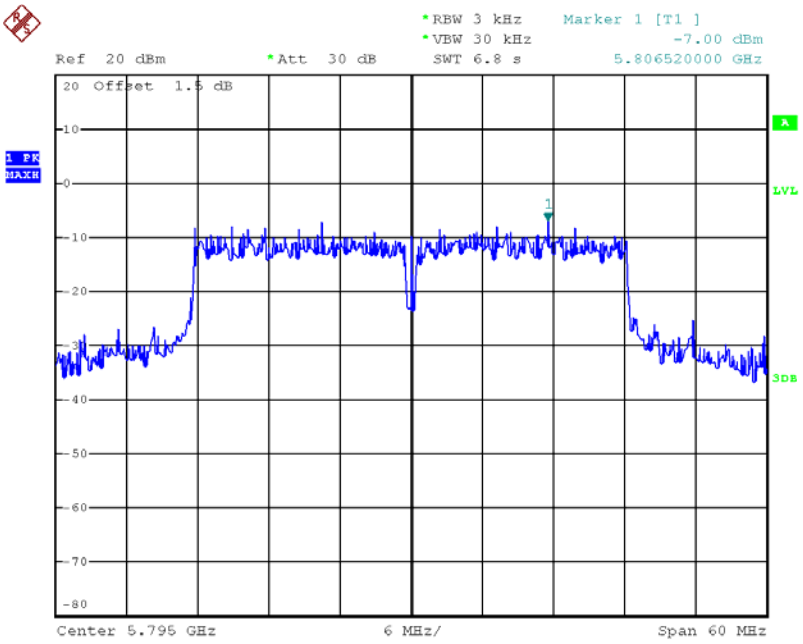
Date: 20.OCT.2012 14:23:42

Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / 5755 MHz / Ant. 6: Chain. 1 (2TX)



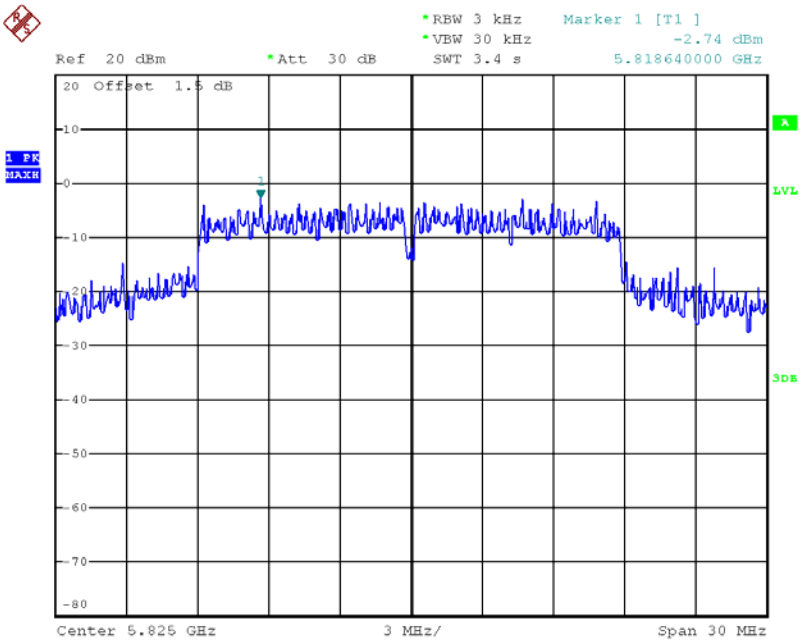
Date: 20.OCT.2012 14:31:43

Power Density Plot on Configuration IEEE 802.11n MCS8 40MHz / 5795 MHz / Ant. 6: Chain. 3 (2TX)



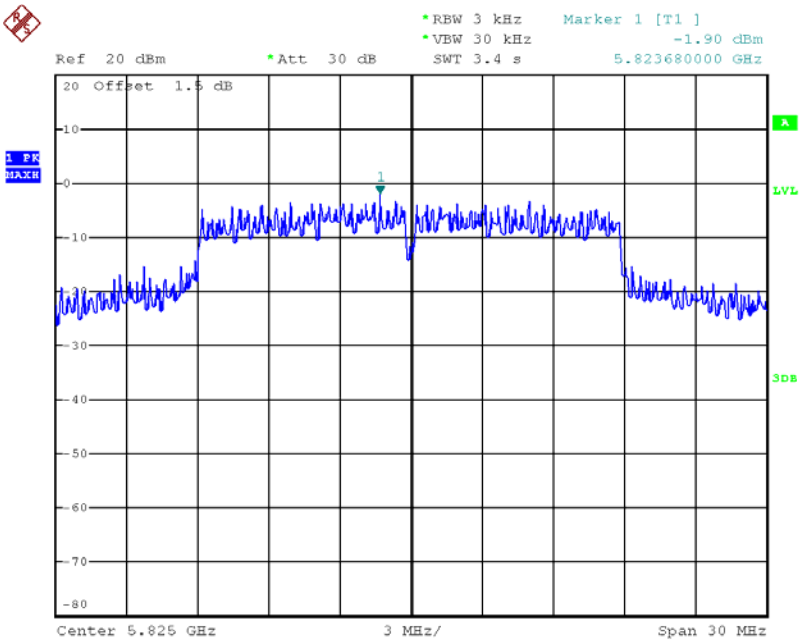
Date: 20.OCT.2012 14:27:11

Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / 5825MHz / Ant. 10: Chain. 3 (2TX)



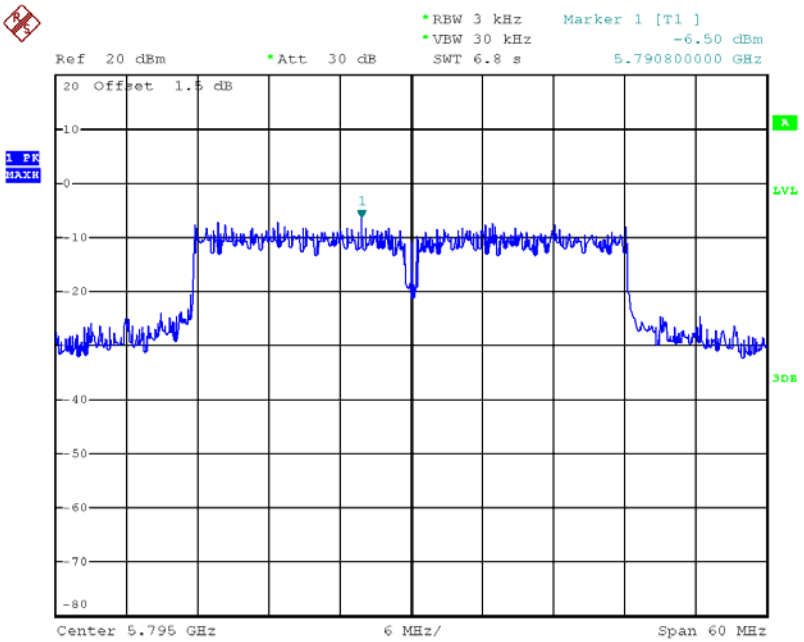
Date: 20.OCT.2012 14:46:42

Power Density Plot on Configuration IEEE 802.11n MCS8 20MHz / 5825MHz / Ant. 10: Chain. 3 (2TX)



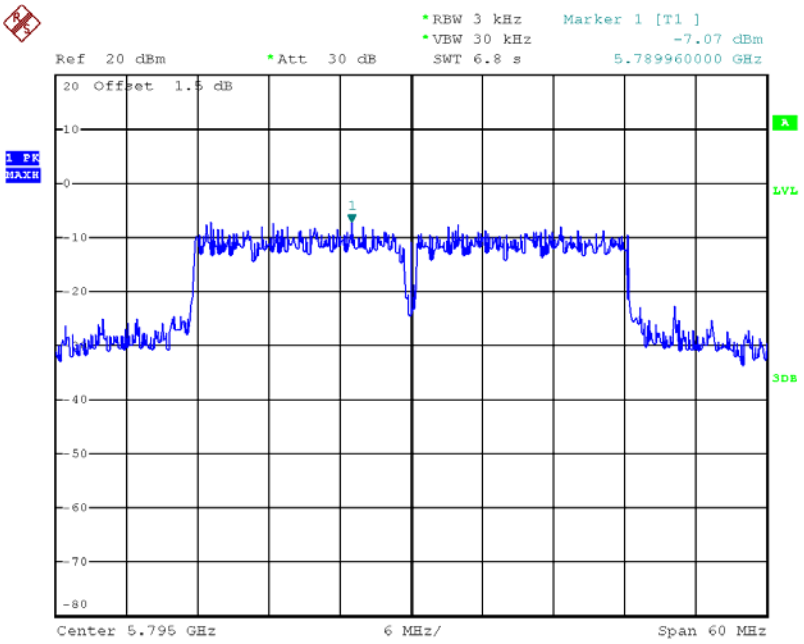
Date: 20.OCT.2012 14:45:30

Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / 5795 MHz / Ant. 10: Chain. 3 (2TX)



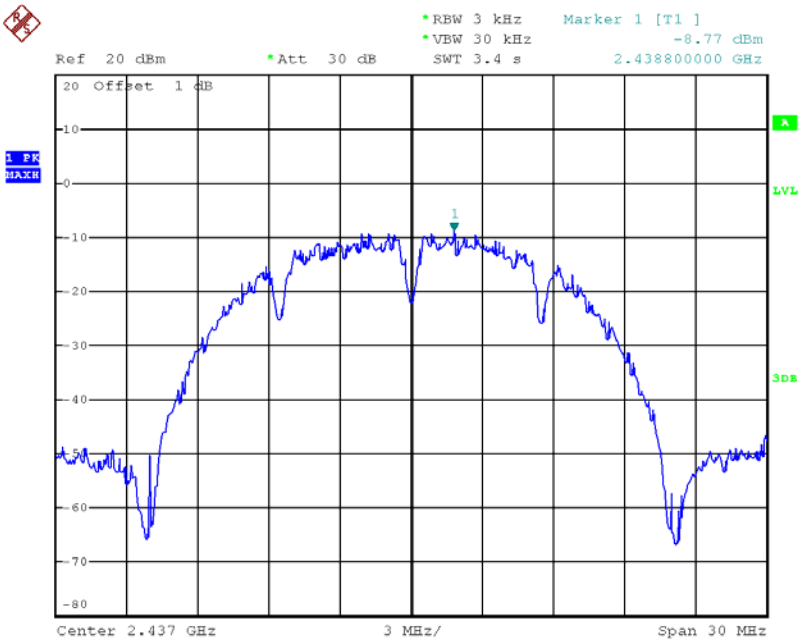
Date: 20.OCT.2012 14:35:57

Power Density Plot on Configuration IEEE 802.11n MCS8 40MHz / 5795 MHz / Ant. 10: Chain. 3 (2TX)



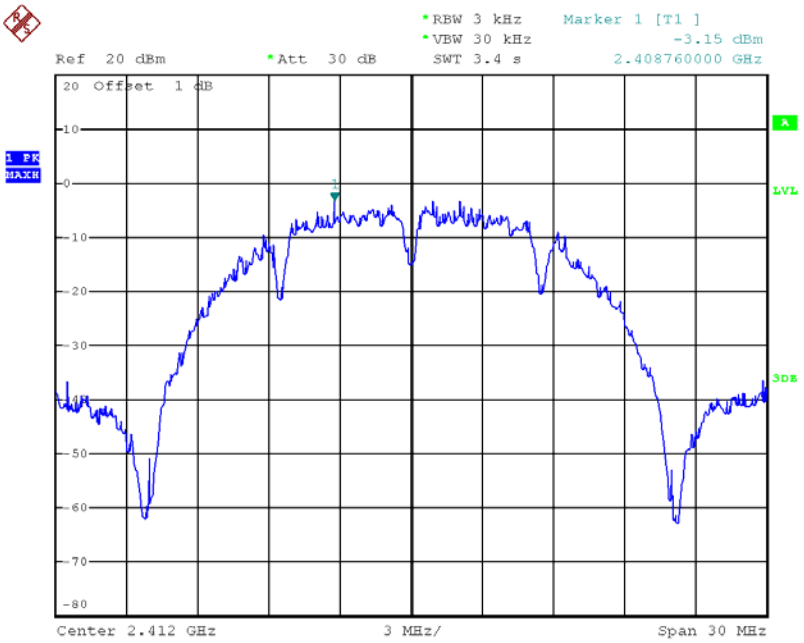
Date: 20.OCT.2012 14:39:03

Power Density Plot on Configuration IEEE 802.11b / 2437 MHz / Ant. 1: Chain. 1 (2TX)



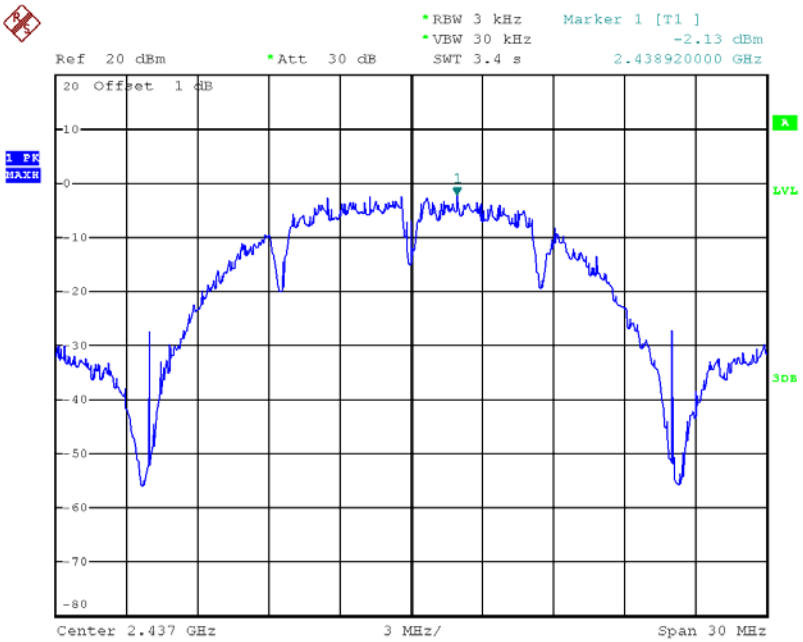
Date: 20.OCT.2012 11:23:38

Power Density Plot on Configuration IEEE 802.11b / 2412MHz / Ant. 2: Chain. 1 (2TX)



Date: 20.OCT.2012 13:10:46

Power Density Plot on Configuration IEEE 802.11b / 2437 MHz / Ant. 3: Chain. 3 (2TX)



Date: 20.OCT.2012 13:18:24

4.4. 6dB Spectrum Bandwidth Measurement

4.4.1. Limit

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

4.4.2. Measuring Instruments and Setting

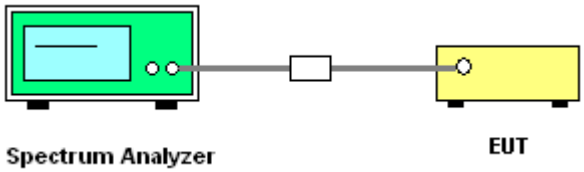
Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

Spectrum Parameters	Setting
Attenuation	Auto
Span Frequency	> 6dB Bandwidth
RB	1-5 % of the emission bandwidth (EBW)
VB	≥ 3 x RBW
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

4.4.3. Test Procedures

1. The transmitter output (antenna port) was connected to the spectrum analyzer in peak hold mode.
2. Test was performed in accordance with KDB 558074 Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS) Operating Under §15.247 section 5.1.1 EBW Measurement Procedure
3. Multiple antenna system was performed in accordance with KDB 662911 Emissions Testing of Transmitters with Multiple Outputs in the Same Band.
4. Measured the spectrum width with power higher than 6dB below carrier.

4.4.4. Test Setup Layout



4.4.5. Test Deviation

There is no deviation with the original standard.

4.4.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.4.7. Test Result of 6dB Spectrum Bandwidth

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

For 2.4GHz Band

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

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
1	2412 MHz	17.60	17.76	500.00	**Complies**
6	2437 MHz	17.60	17.76	500.00	**Complies**
11	2462 MHz	17.60	17.76	500.00	**Complies**

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

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
1	2412 MHz	17.60	17.68	500.00	**Complies**
6	2437 MHz	15.68	17.68	500.00	**Complies**
11	2462 MHz	16.00	17.60	500.00	**Complies**

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

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
3	2422 MHz	36.48	36.48	500.00	**Complies**
6	2437 MHz	36.48	36.48	500.00	**Complies**
9	2452 MHz	36.12	36.36	500.00	**Complies**

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

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
3	2422 MHz	35.76	36.48	500.00	**Complies**
6	2437 MHz	35.88	36.36	500.00	**Complies**
9	2452 MHz	35.76	36.36	500.00	**Complies**

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

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
1	2412 MHz	17.60	17.76	500.00	**Complies**
6	2437 MHz	17.60	18.64	500.00	**Complies**
11	2462 MHz	17.20	17.76	500.00	**Complies**

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

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
1	2412 MHz	16.00	17.60	500.00	**Complies**
6	2437 MHz	16.32	17.76	500.00	**Complies**
11	2462 MHz	15.68	17.60	500.00	**Complies**

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

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
3	2422 MHz	36.48	36.48	500.00	**Complies**
6	2437 MHz	36.24	36.36	500.00	**Complies**
9	2452 MHz	36.48	36.48	500.00	**Complies**

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

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
3	2422 MHz	35.28	36.36	500.00	**Complies**
6	2437 MHz	35.88	36.36	500.00	**Complies**
9	2452 MHz	35.88	36.36	500.00	**Complies**

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

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
1	2412 MHz	17.36	17.76	500.00	**Complies**
6	2437 MHz	16.96	17.76	500.00	**Complies**
11	2462 MHz	17.60	17.76	500.00	**Complies**

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

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
1	2412 MHz	15.68	17.68	500.00	**Complies**
6	2437 MHz	15.68	17.76	500.00	**Complies**
11	2462 MHz	15.68	17.60	500.00	**Complies**

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

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
3	2422 MHz	36.48	36.48	500.00	**Complies**
6	2437 MHz	36.48	36.48	500.00	**Complies**
9	2452 MHz	36.48	36.48	500.00	**Complies**

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

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
3	2422 MHz	35.28	36.36	500.00	**Complies**
6	2437 MHz	35.88	36.36	500.00	**Complies**
9	2452 MHz	35.76	36.36	500.00	**Complies**

For 5GHz Band

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

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
149	5745 MHz	13.68	18.08	500.00	**Complies**
157	5785 MHz	15.68	18.40	500.00	**Complies**
165	5825 MHz	15.36	30.56	500.00	**Complies**

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

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
149	5745 MHz	16.64	18.00	500.00	**Complies**
157	5785 MHz	15.12	18.08	500.00	**Complies**
165	5825 MHz	10.08	30.24	500.00	**Complies**

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

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
151	5755 MHz	34.88	43.84	500.00	**Complies**
159	5795 MHz	35.52	50.08	500.00	**Complies**

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

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
151	5755 MHz	35.84	43.52	500.00	**Complies**
159	5795 MHz	36.32	49.76	500.00	**Complies**

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

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
149	5745 MHz	13.44	30.96	500.00	**Complies**
157	5785 MHz	15.92	31.12	500.00	**Complies**
165	5825 MHz	13.44	30.80	500.00	**Complies**

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

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
151	5755 MHz	34.40	66.40	500.00	**Complies**
159	5795 MHz	35.04	64.32	500.00	**Complies**

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

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
149	5745 MHz	15.04	17.68	500.00	**Complies**
157	5785 MHz	15.60	17.68	500.00	**Complies**
165	5825 MHz	16.00	17.60	500.00	**Complies**

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

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
149	5745 MHz	16.64	18.00	500.00	**Complies**
157	5785 MHz	13.76	17.84	500.00	**Complies**
165	5825 MHz	16.72	17.76	500.00	**Complies**

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

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
151	5755 MHz	34.72	36.48	500.00	**Complies**
159	5795 MHz	35.68	36.48	500.00	**Complies**

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

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
151	5755 MHz	35.52	37.44	500.00	**Complies**
159	5795 MHz	35.04	40.96	500.00	**Complies**

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

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
149	5745 MHz	13.68	18.08	500.00	**Complies**
157	5785 MHz	15.68	18.40	500.00	**Complies**
165	5825 MHz	15.36	30.56	500.00	**Complies**

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

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
149	5745 MHz	16.64	18.00	500.00	**Complies**
157	5785 MHz	15.12	18.08	500.00	**Complies**
165	5825 MHz	10.08	30.24	500.00	**Complies**

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

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
151	5755 MHz	34.88	43.84	500.00	**Complies**
159	5795 MHz	35.52	50.08	500.00	**Complies**

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

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
151	5755 MHz	35.84	43.52	500.00	**Complies**
159	5795 MHz	36.32	49.76	500.00	**Complies**

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

For 2.4GHz Band

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

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
1	2412 MHz	9.60	15.44	500.00	**Complies**
6	2437 MHz	10.08	15.36	500.00	**Complies**
11	2462 MHz	10.08	15.52	500.00	**Complies**

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

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
1	2412 MHz	9.52	15.36	500.00	**Complies**
6	2437 MHz	11.04	15.52	500.00	**Complies**
11	2462 MHz	10.08	15.44	500.00	**Complies**

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

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
1	2412 MHz	9.52	15.36	500.00	**Complies**
6	2437 MHz	9.84	15.76	500.00	**Complies**
11	2462 MHz	10.08	15.44	500.00	**Complies**

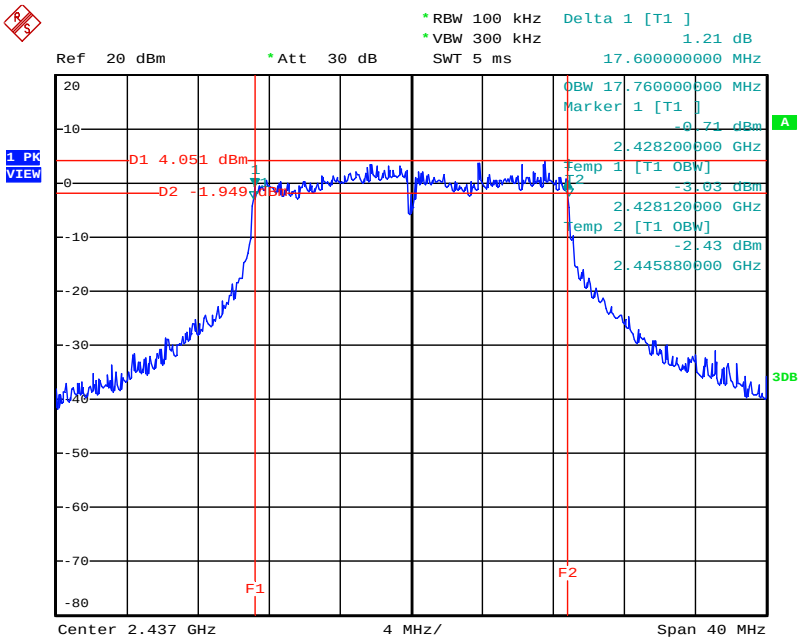
For 5GHz Band

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

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
149	5745 MHz	15.60	31.20	500.00	**Complies**
157	5785 MHz	15.04	31.20	500.00	**Complies**
165	5825 MHz	15.76	30.96	500.00	**Complies**

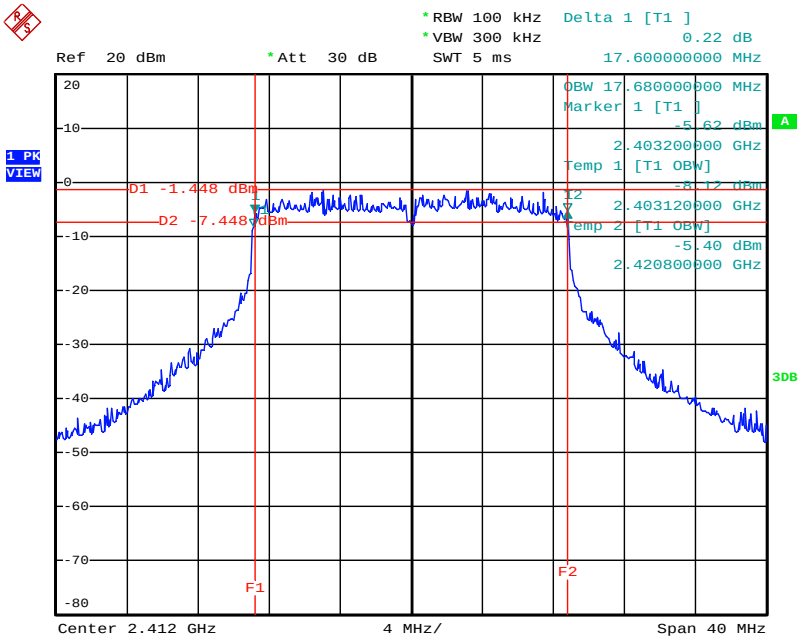
<For Ant. 1>:

6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz / 2437 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 19.OCT.2012 19:22:12

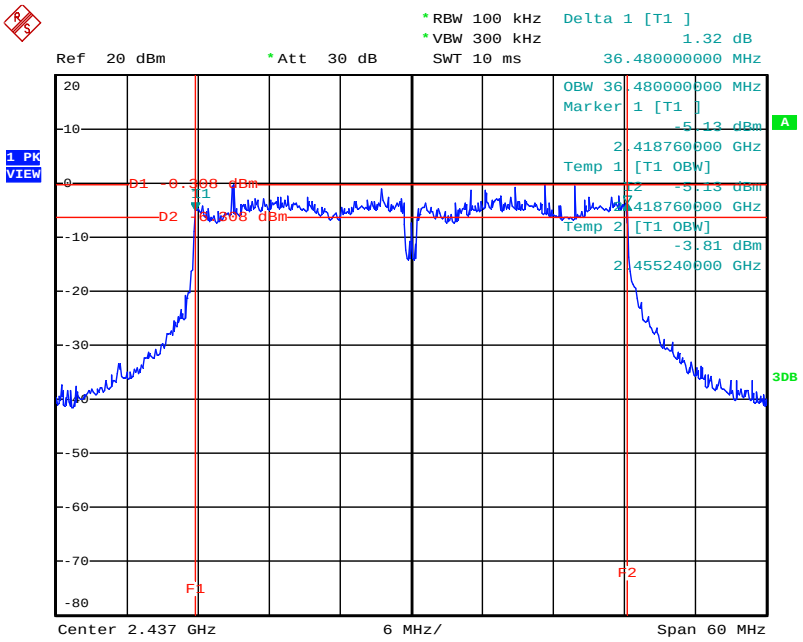
6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 20MHz / 2412MHz / Chain. 1 + Chain. 3 (2TX)



Date: 19.OCT.2012 19:25:07

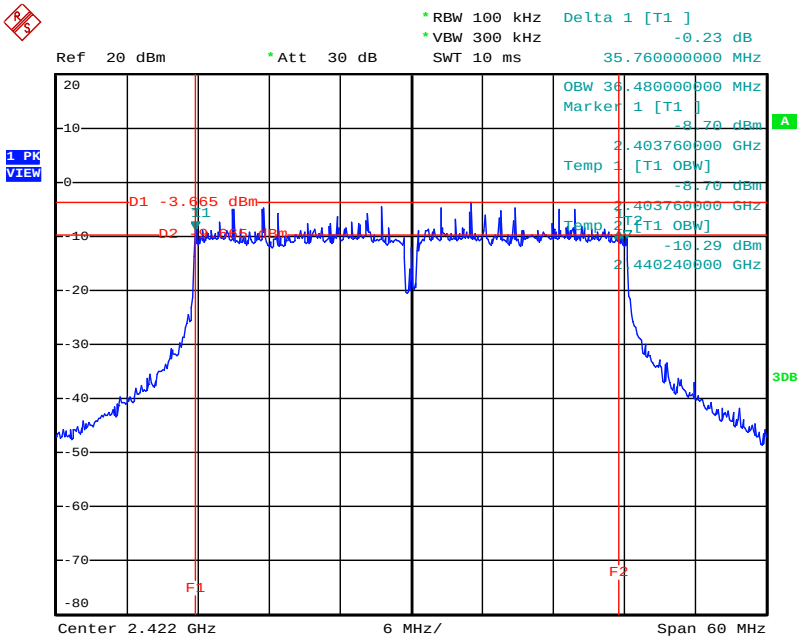
<For Ant. 1>:

6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz / 2437 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 19.OCT.2012 19:36:10

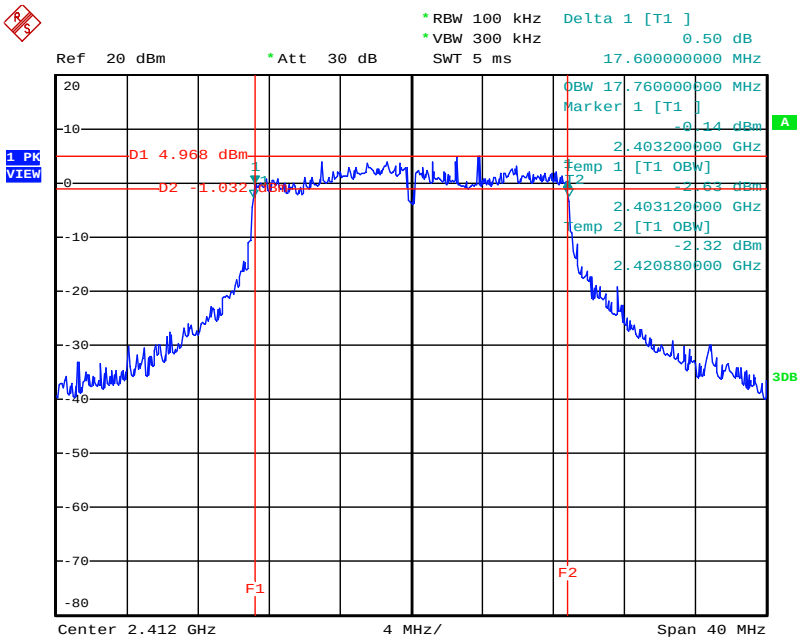
6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 40MHz / 2422MHz / Chain. 1 + Chain. 3 (2TX)



Date: 19.OCT.2012 19:33:24

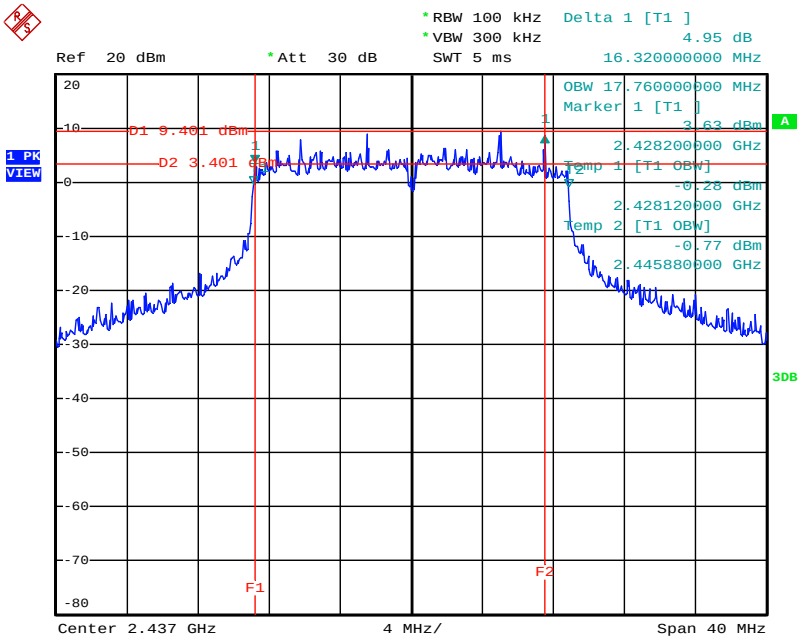
<For Ant. 2>:

6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz / 2412MHz / Chain. 1 + Chain. 3 (2TX)



Date: 19.OCT.2012 19:45:55

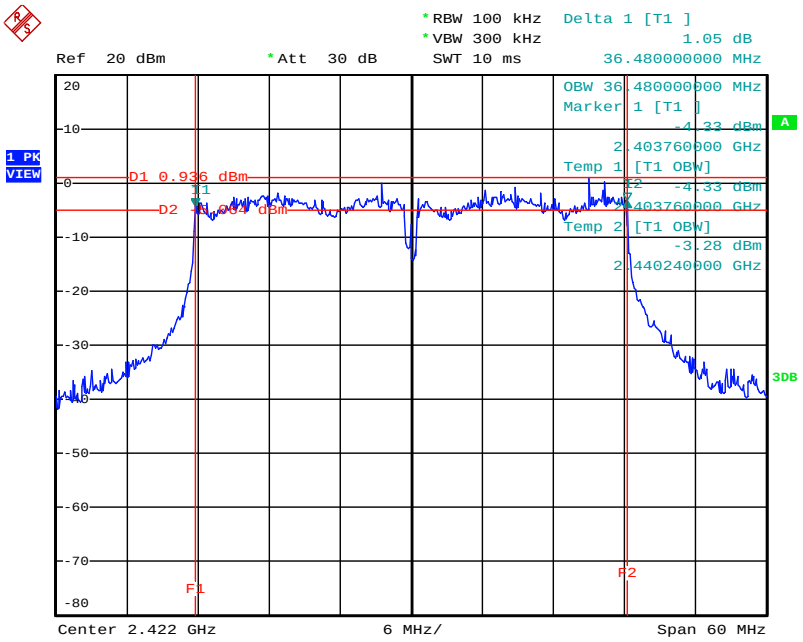
6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 20MHz / 2437MHz / Chain. 1 + Chain. 3 (2TX)



Date: 19.OCT.2012 19:48:41

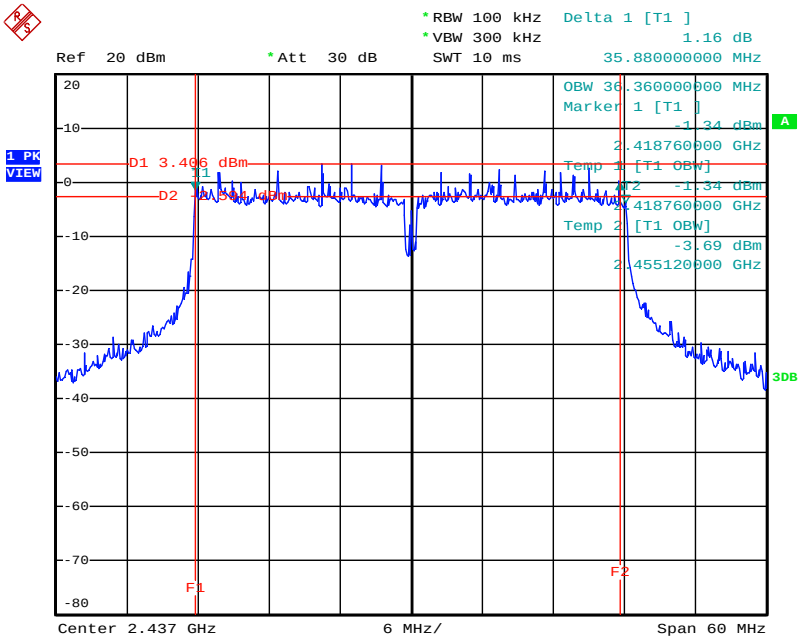
<For Ant. 2>:

6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz / 2422MHz / Chain. 1 + Chain. 3 (2TX)



Date: 19.OCT.2012 19:56:11

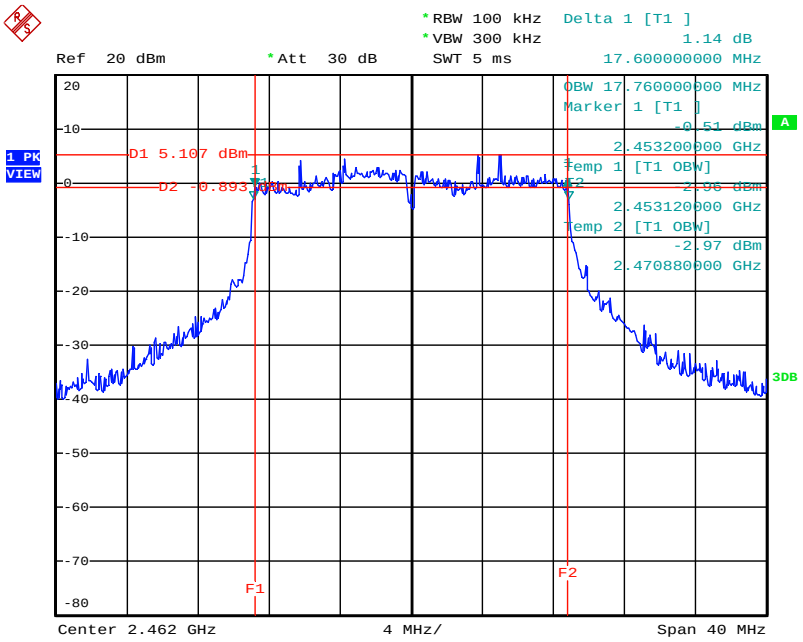
6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 40MHz / 2437MHz / Chain. 1 + Chain. 3 (2TX)



Date: 19.OCT.2012 19:52:17

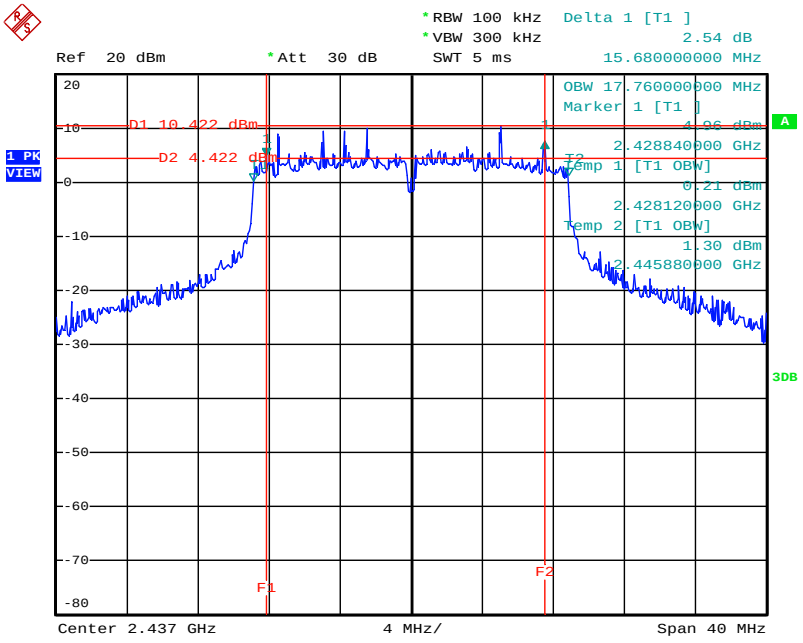
<For Ant. 3>:

6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz / 2462MHz / Chain. 1 + Chain. 3 (2TX)



Date: 19.OCT.2012 20:09:41

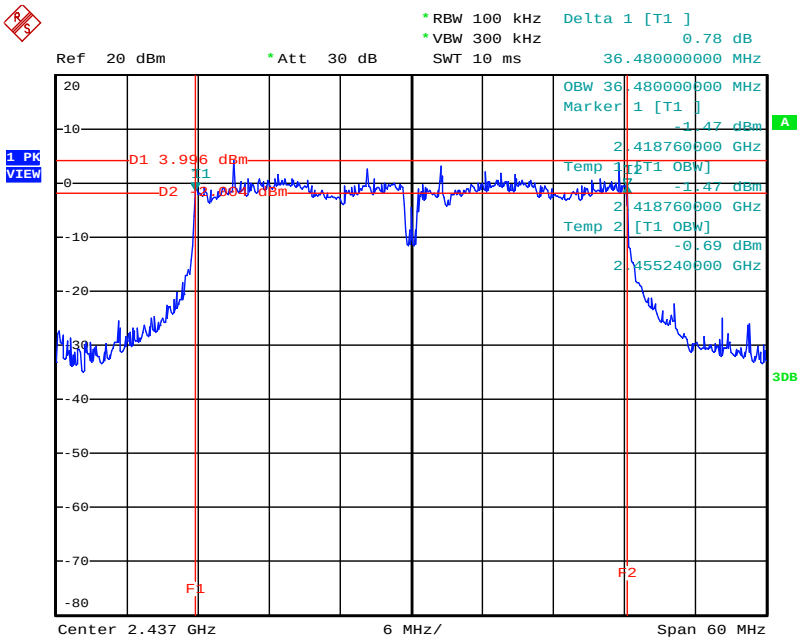
6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 20MHz / 2437MHz / Chain. 1 + Chain. 3 (2TX)



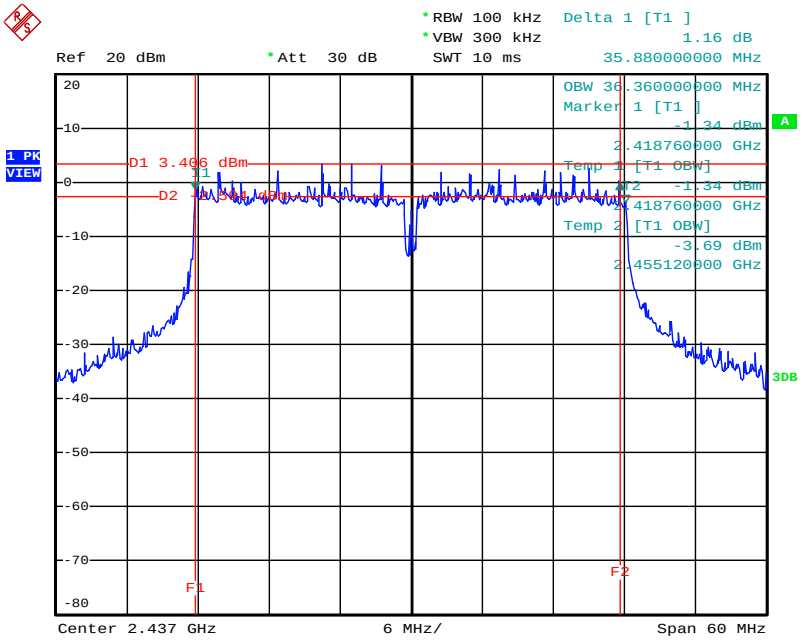
Date: 19.OCT.2012 20:12:55

<For Ant. 3>:

6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz / 2437MHz / Chain. 1 + Chain. 3 (2TX)

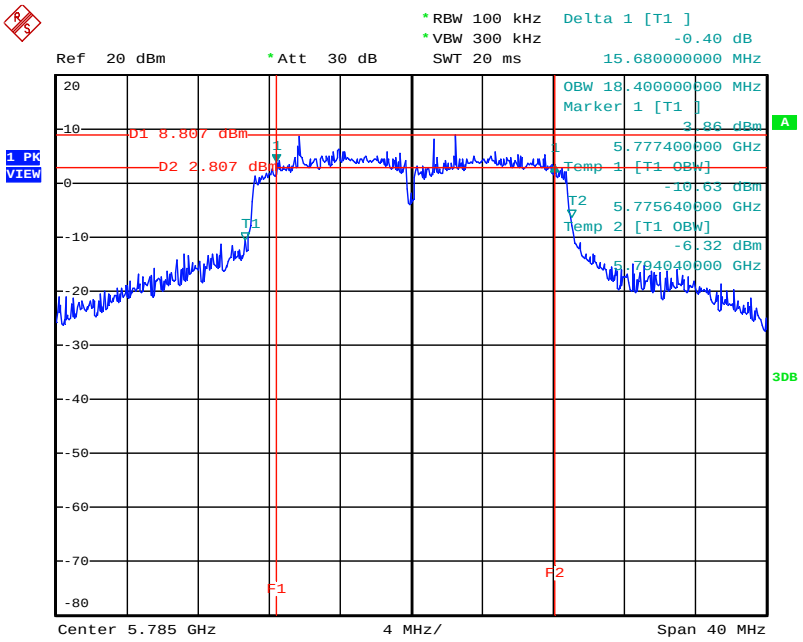


6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 40MHz / 2437MHz / Chain. 1 + Chain. 3 (2TX)



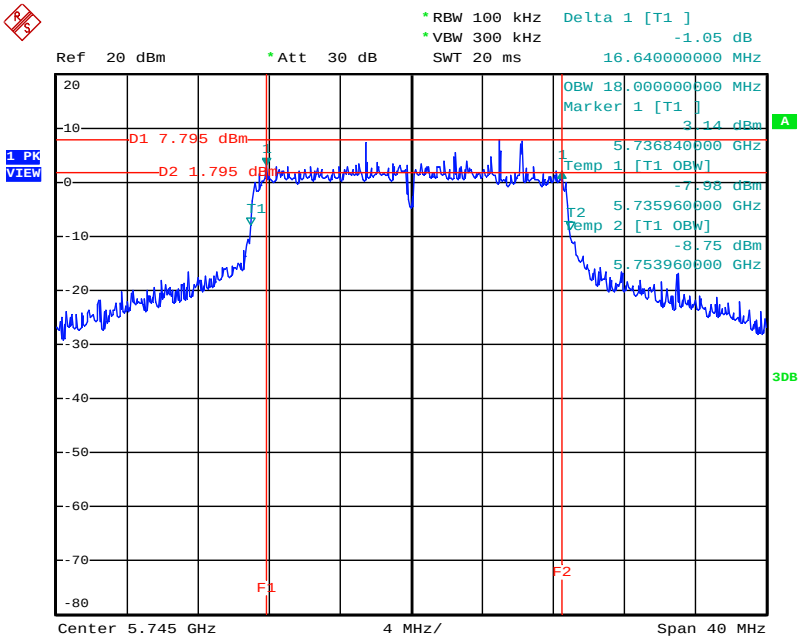
<For Ant. 4>:

6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz / 5785MHz / Chain. 1 + Chain. 3 (2TX)



Date: 19.OCT.2012 22:21:43

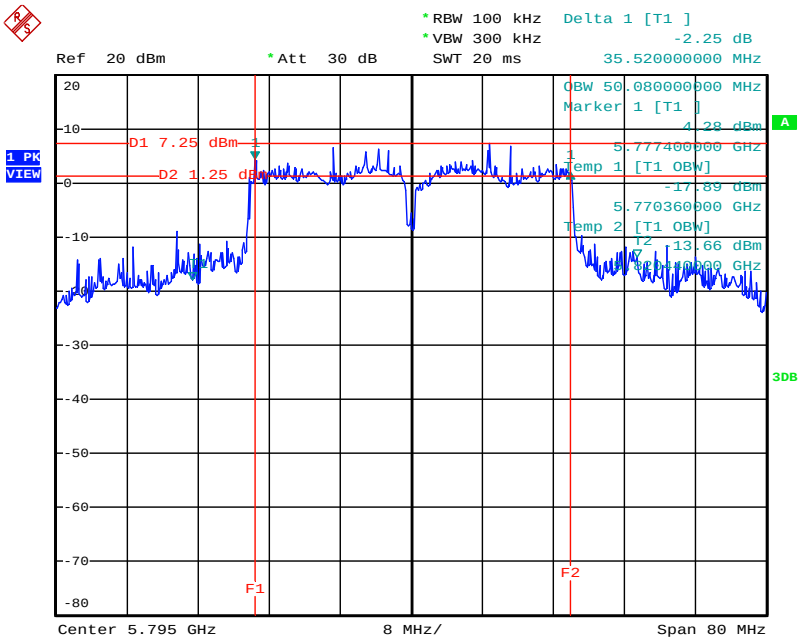
6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 20MHz / 5745MHz / Chain. 1 + Chain. 3 (2TX)



Date: 19.OCT.2012 22:23:46

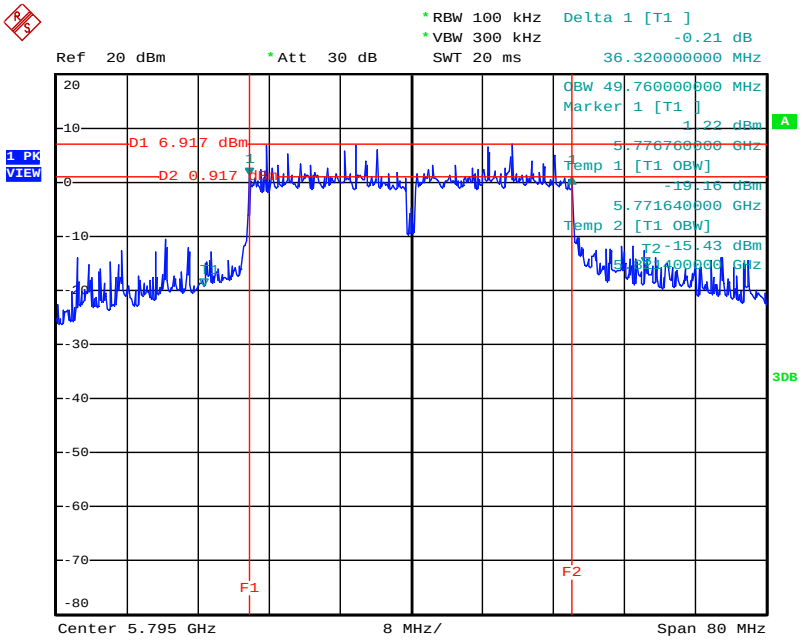
<For Ant. 4>:

6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz / 5795MHz / Chain. 1 + Chain. 3 (2TX)



Date: 19.OCT.2012 22:20:10

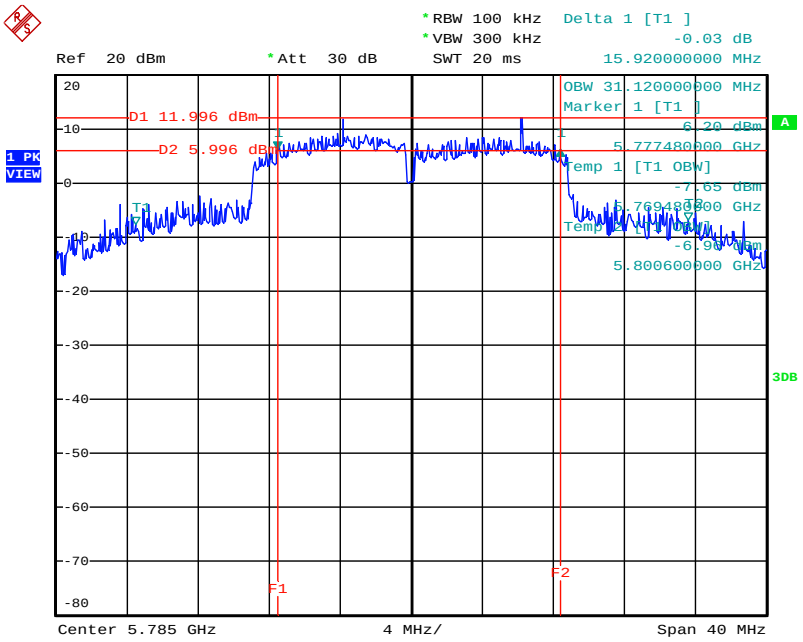
6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 40MHz / 5795MHz / Chain. 1 + Chain. 3 (2TX)



Date: 19.OCT.2012 22:19:20

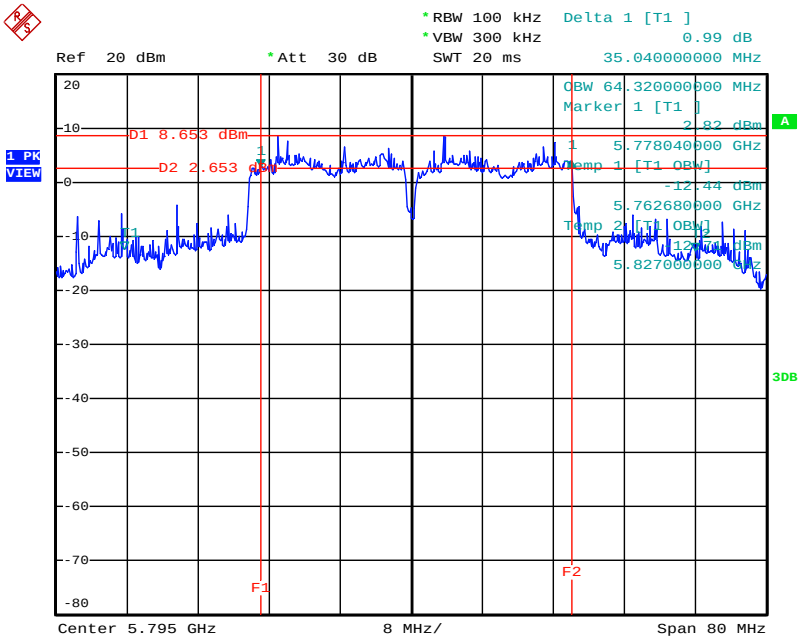
<For Ant. 5>:

6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz / 5785MHz / Chain. 1 (1TX)



Date: 19.OCT.2012 22:59:28

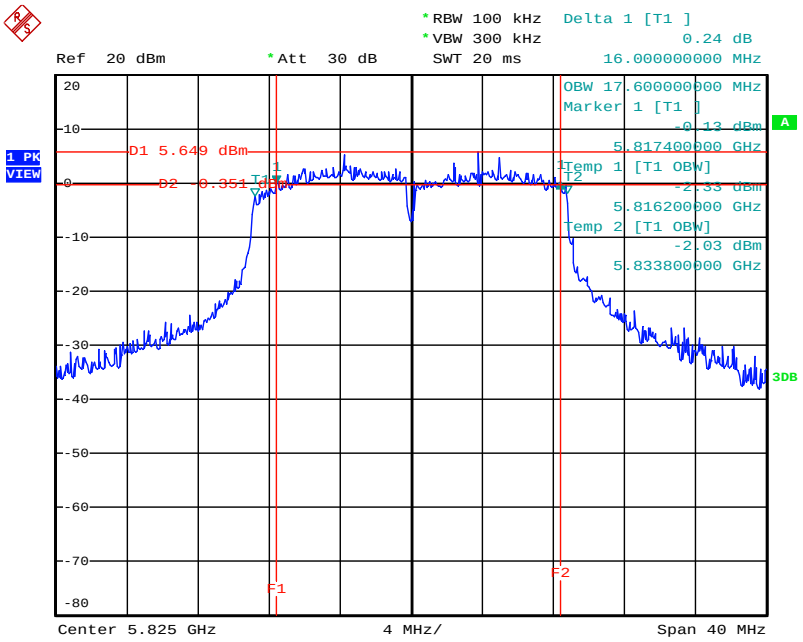
6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz / 5795MHz / Chain. 1 (1TX)



Date: 19.OCT.2012 23:00:58

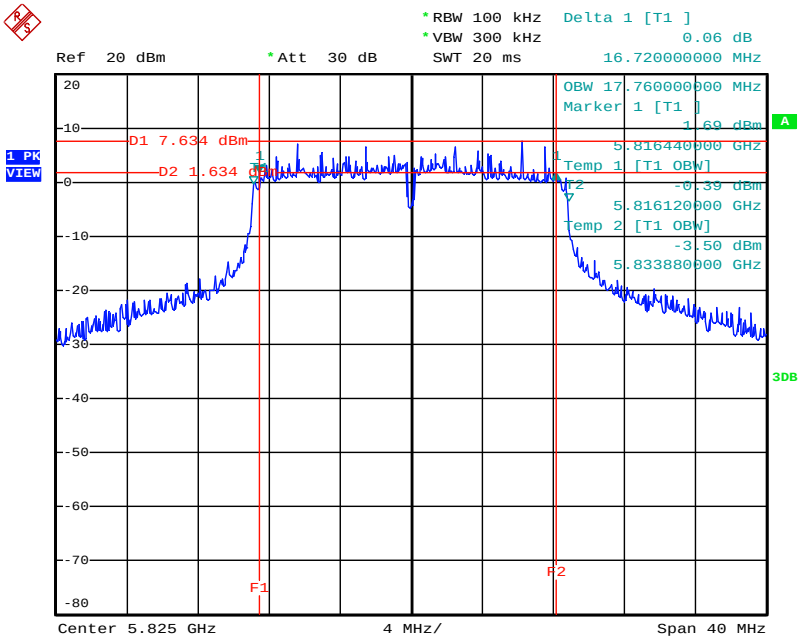
<For Ant. 6>:

6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz / 5825MHz / Chain. 1 + Chain. 3 (2TX)



Date: 19.OCT.2012 23:06:48

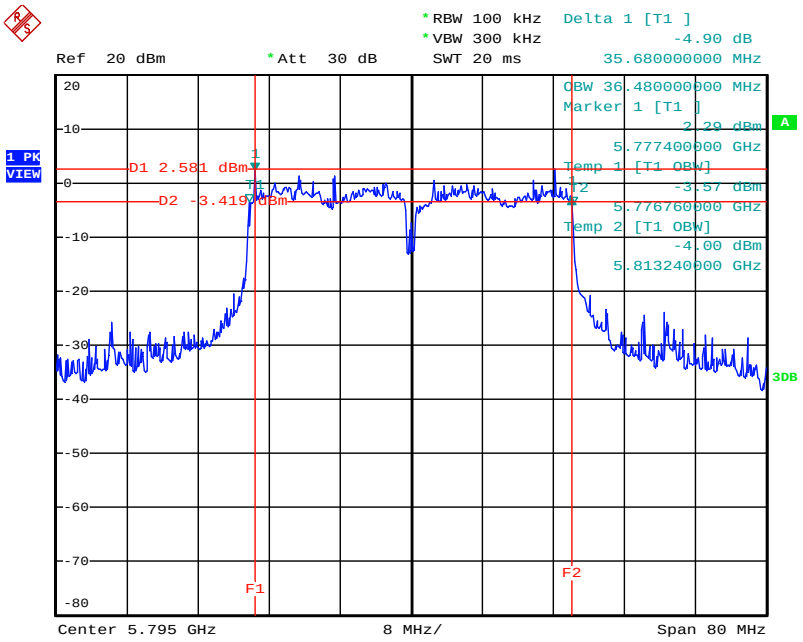
6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 20MHz / 5825MHz / Chain. 1 + Chain. 3 (2TX)



Date: 19.OCT.2012 23:09:29

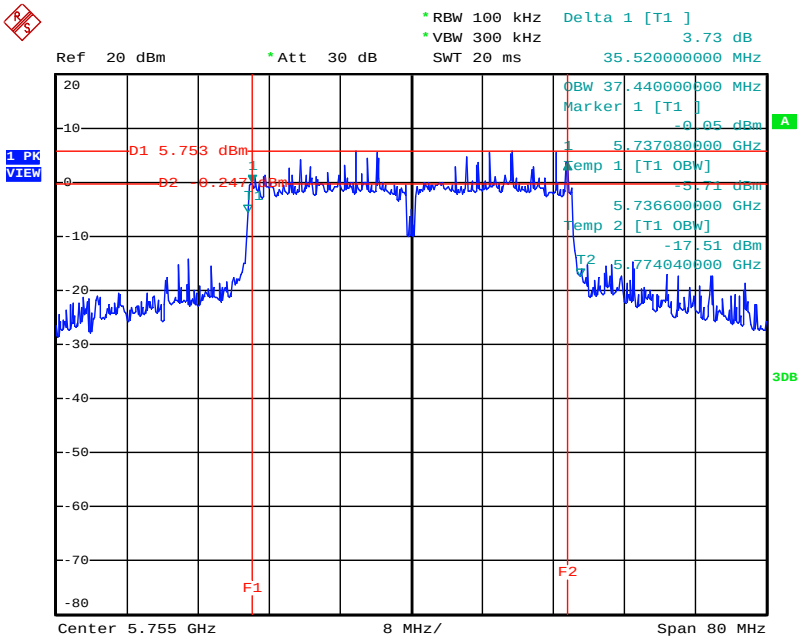
<For Ant. 6>:

6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz / 5795MHz / Chain. 1 + Chain. 3 (2TX)



Date: 19.OCT.2012 23:04:07

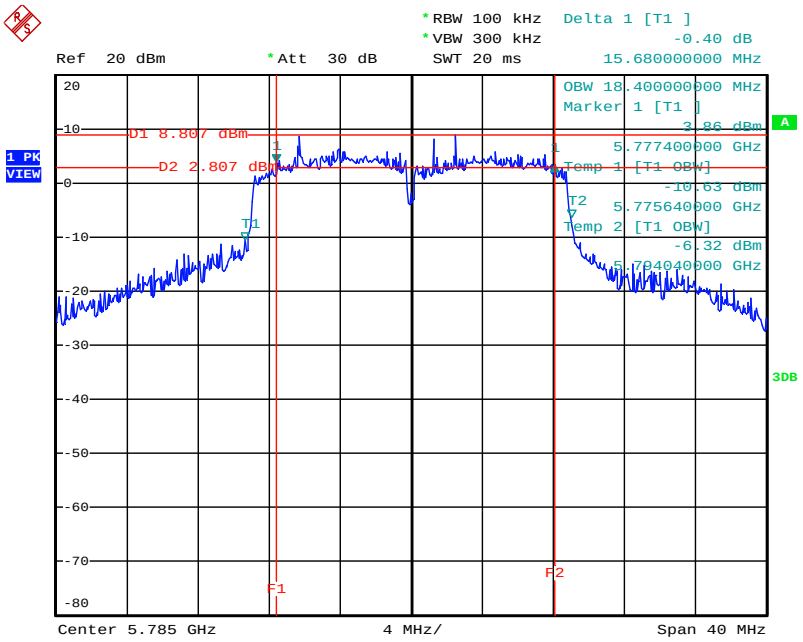
6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 40MHz / 5755MHz / Chain. 1 + Chain. 3 (2TX)



Date: 19.OCT.2012 23:05:16

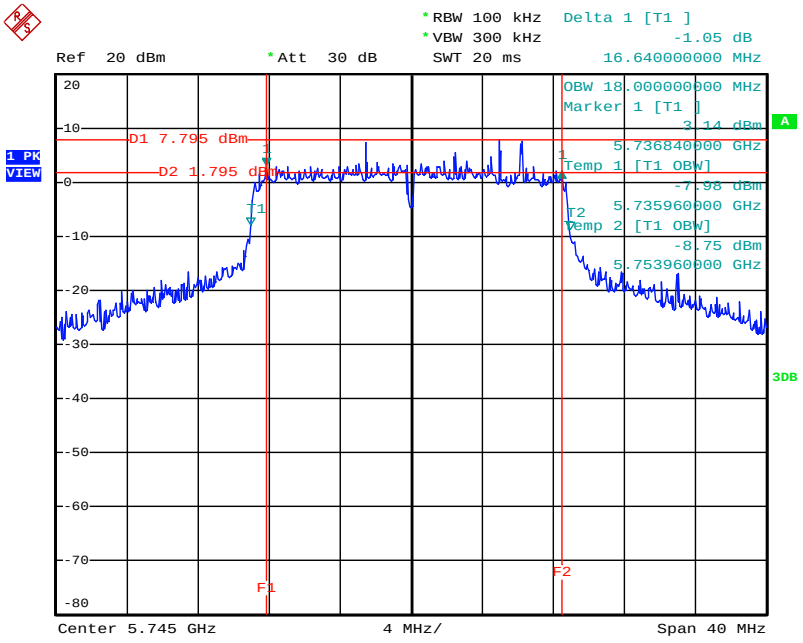
<For Ant. 10>:

6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 20MHz / 5785MHz / Chain. 1 + Chain. 3 (2TX)



Date: 19.OCT.2012 22:21:43

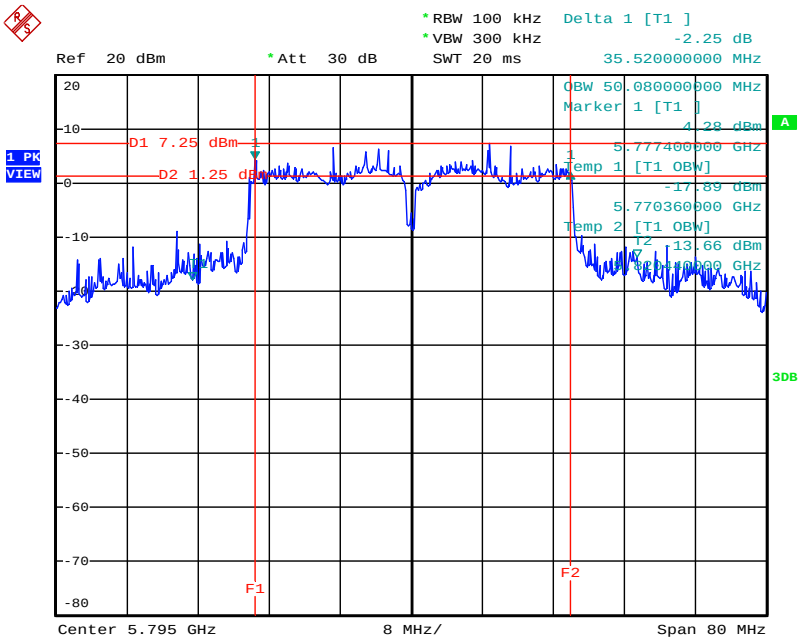
6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 20MHz / 5745MHz / Chain. 1 + Chain. 3 (2TX)



Date: 19.OCT.2012 22:23:46

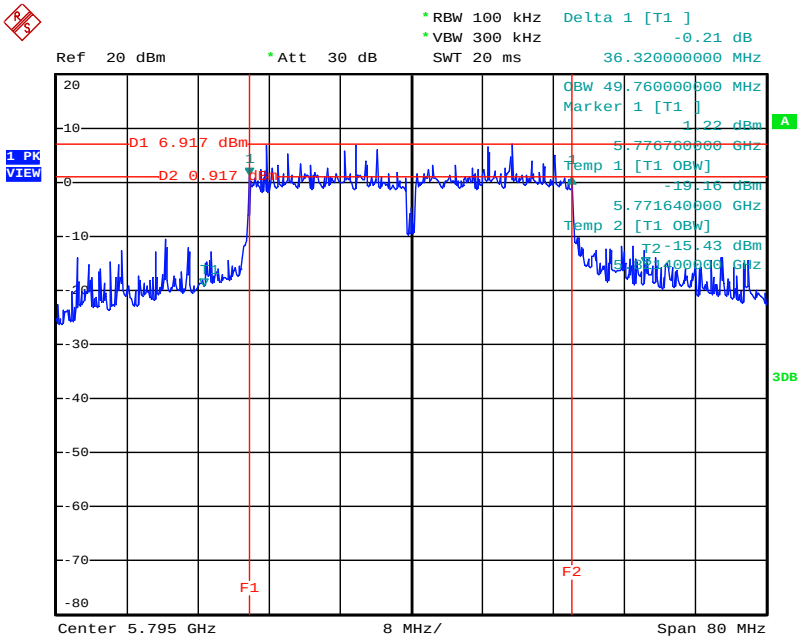
<For Ant. 10>:

6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 40MHz / 5795MHz / Chain. 1 + Chain. 3 (2TX)



Date: 19.OCT.2012 22:20:10

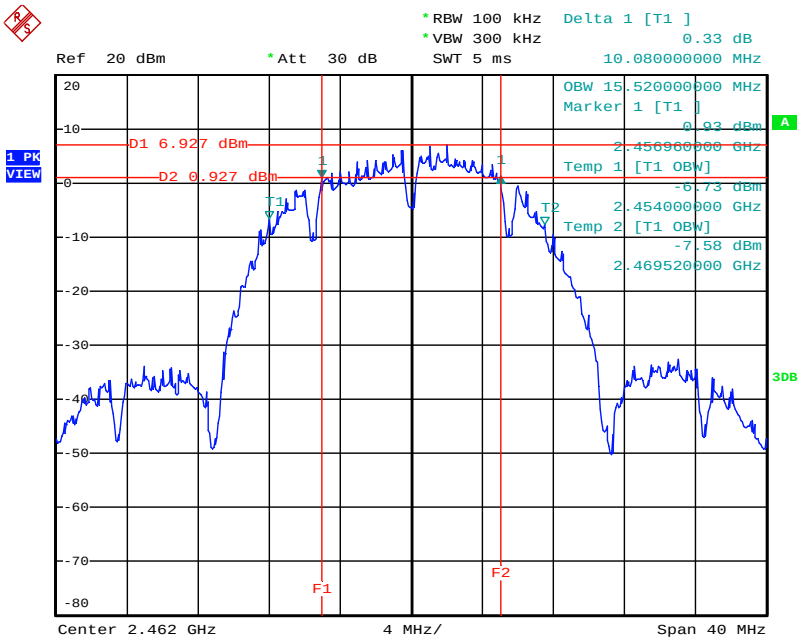
6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS8 40MHz / 5795MHz / Chain. 1 + Chain. 3 (2TX)



Date: 19.OCT.2012 22:19:20

<For Ant. 1>:

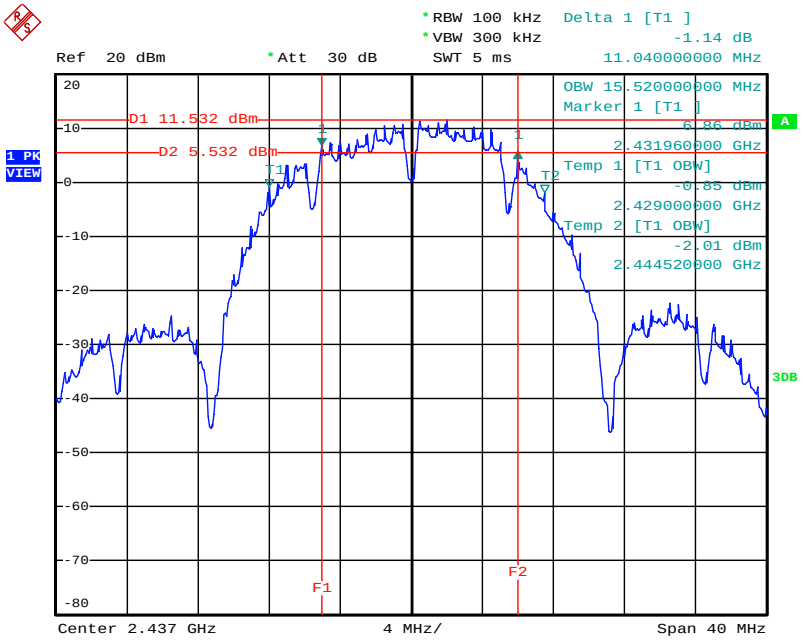
6 dB Bandwidth Plot on Configuration IEEE 802.11b / 2462 MHz / Chain. 1 + Chain. 3 (2TX)



Date: 19.OCT.2012 19:15:08

<For Ant. 2>:

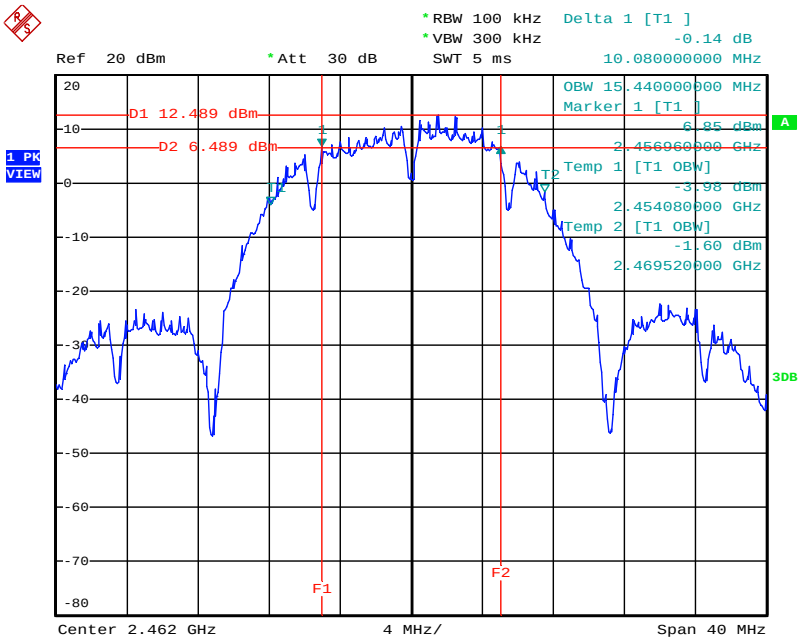
6 dB Bandwidth Plot on Configuration IEEE 802.11b / 2437MHz / Chain. 1 + Chain. 3 (2TX)



Date: 19.OCT.2012 19:44:32

<For Ant. 3>:

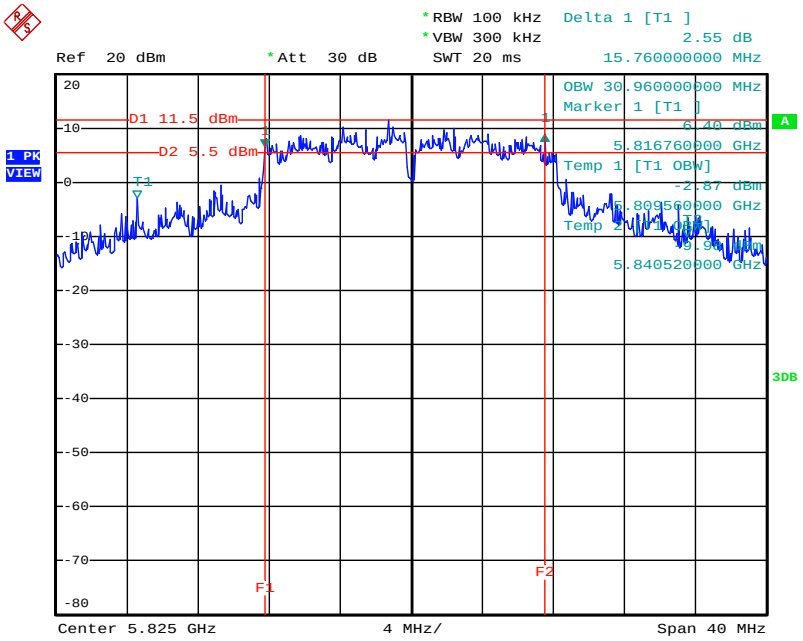
6 dB Bandwidth Plot on Configuration IEEE 802.11b / 2462MHz / Chain. 1 + Chain. 3 (2TX)



Date: 19.OCT.2012 19:43:45

<For Ant. 5>:

6 dB Bandwidth Plot on Configuration IEEE 802.11a / 5825MHz / Chain. 1 (1TX)



Date: 19.OCT.2012 22:58:23

4.5. Radiated Emissions Measurement

4.5.1. Limit

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

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

4.5.2. Measuring Instruments and Setting

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

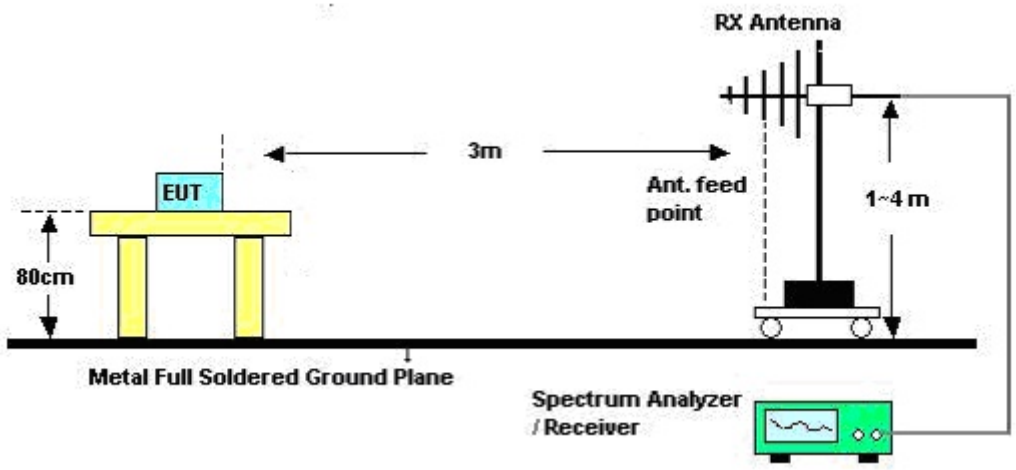
Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB / VB (Emission in restricted band)	1MHz / 3MHz for Peak, 1 MHz / 10Hz for Average
RB / VB (Emission in non-restricted band)	1MHz / 3MHz for peak

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

4.5.3. 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 3MHz RBW for peak reading. Then 1MHz RBW and 10Hz VBW for average reading in spectrum analyzer.
7. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value.
8. If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
9. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
10. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High – Low scan is not required in this case.

4.5.4. Test Setup Layout



4.5.5. Test Deviation

There is no deviation with the original standard.

4.5.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

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

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

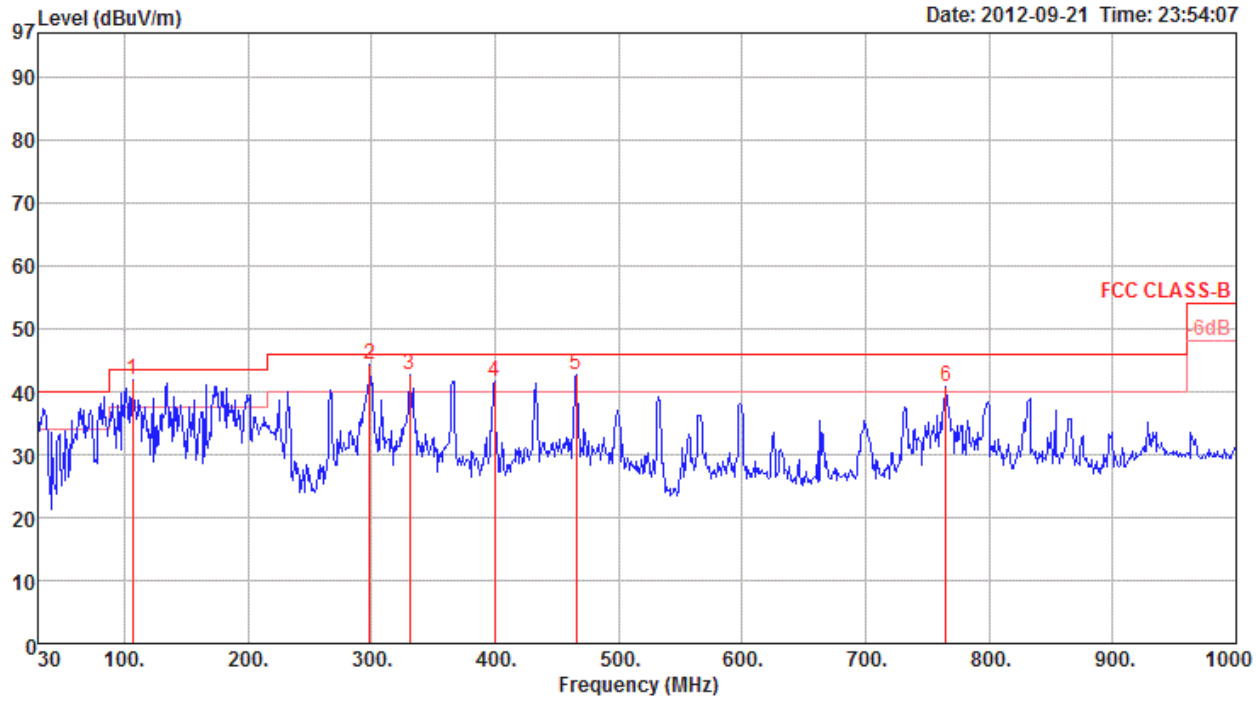
Distance extrapolation factor = 40 log (specific distance / test distance) (dB);

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

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

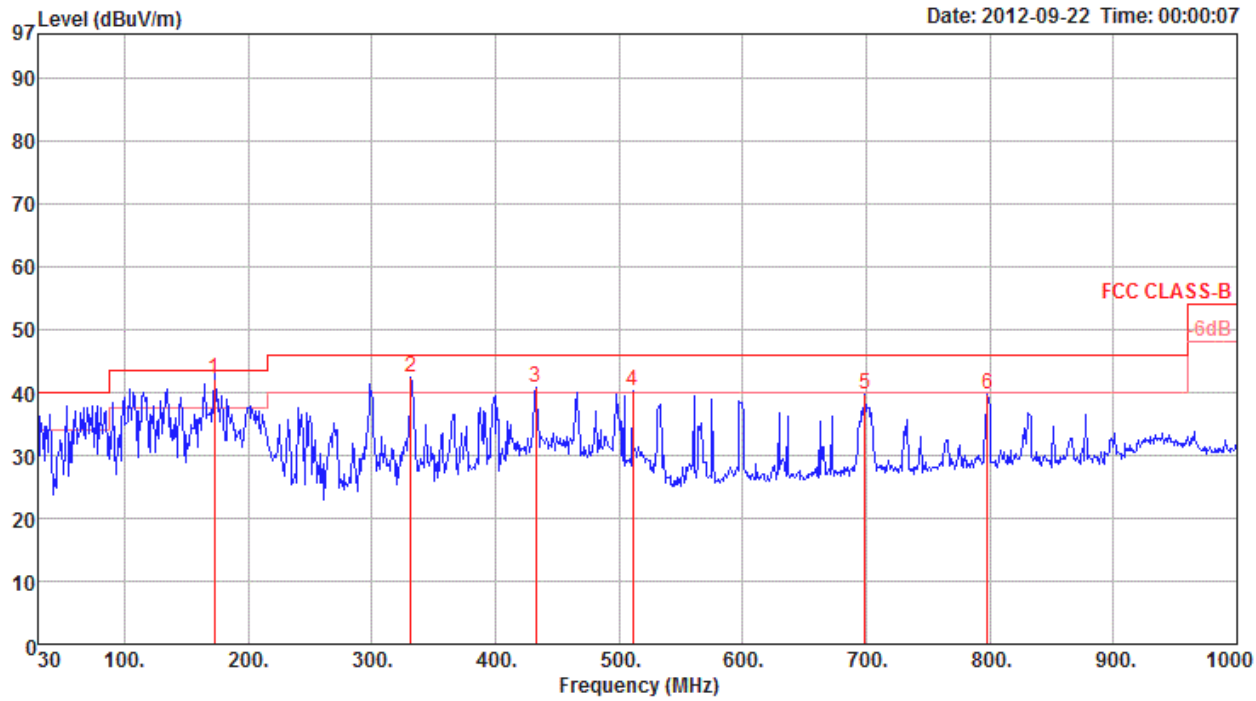
Temperature	21℃	Humidity	56.4%
Test Engineer	Sean Ku	Configurations	CTX
Test Mode	Mode 1.		

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 !	106.63	41.76	43.50	-1.74	55.73	1.55	27.76	12.24	QP	182	121	HORIZONTAL
2 q	298.69	44.35	46.00	-1.65	54.87	2.51	26.83	13.80	QP	65	100	HORIZONTAL
3 p	330.70	42.79	46.00	-3.21	52.34	2.69	26.96	14.72	Peak	0	400	HORIZONTAL
4 !	399.57	41.73	46.00	-4.27	49.70	2.99	27.46	16.50	Peak	0	400	HORIZONTAL
5 !	465.53	42.77	46.00	-3.23	50.10	3.28	27.86	17.25	Peak	0	400	HORIZONTAL
6 !	765.26	40.82	46.00	-5.18	43.24	4.25	27.05	20.38	Peak	0	400	HORIZONTAL

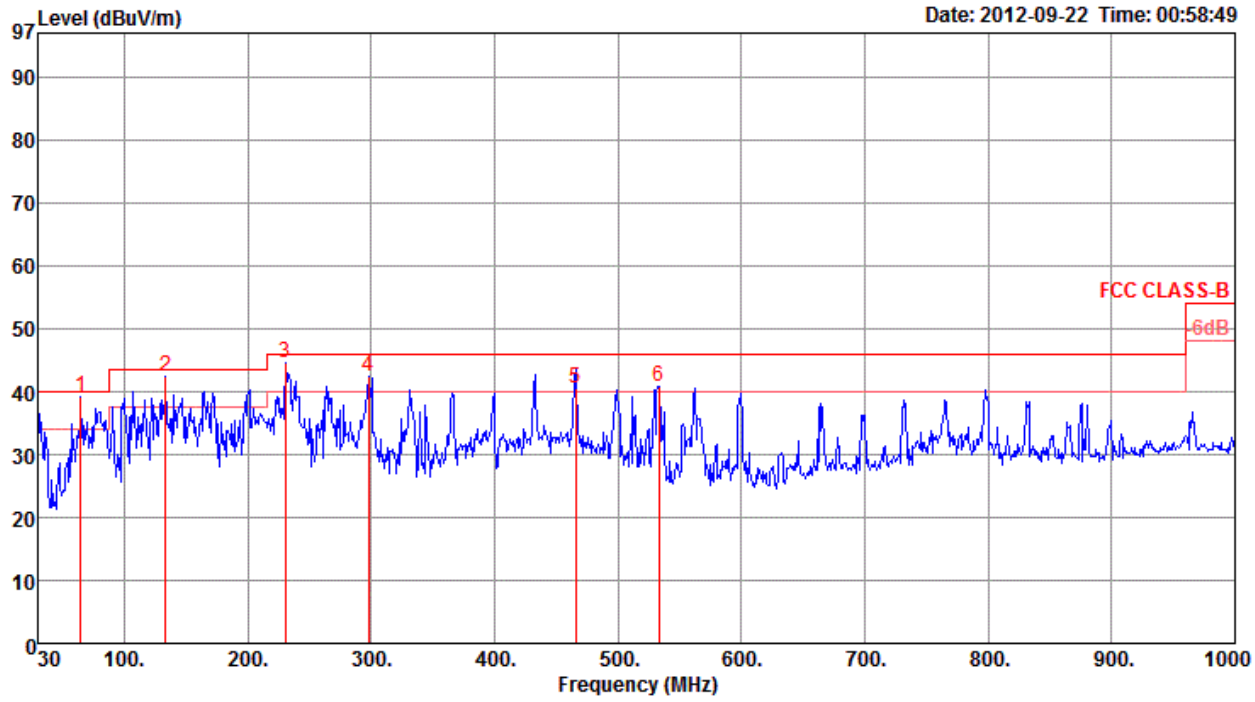
Vertical



	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 q	172.59	42.08	43.50	-1.42	57.33	1.96	27.40	10.19	QP	265	122	VERTICAL
2 p	331.67	42.35	46.00	-3.65	51.87	2.70	26.97	14.75	Peak	0	100	VERTICAL
3 !	432.55	40.87	46.00	-5.13	48.60	3.15	27.71	16.83	Peak	0	100	VERTICAL
4 !	511.12	40.38	46.00	-5.62	46.86	3.42	27.92	18.02	Peak	0	100	VERTICAL
5	699.30	39.68	46.00	-6.32	42.62	4.16	27.09	19.99	Peak	0	100	VERTICAL
6	798.24	39.60	46.00	-6.40	41.37	4.35	26.90	20.78	Peak	0	100	VERTICAL

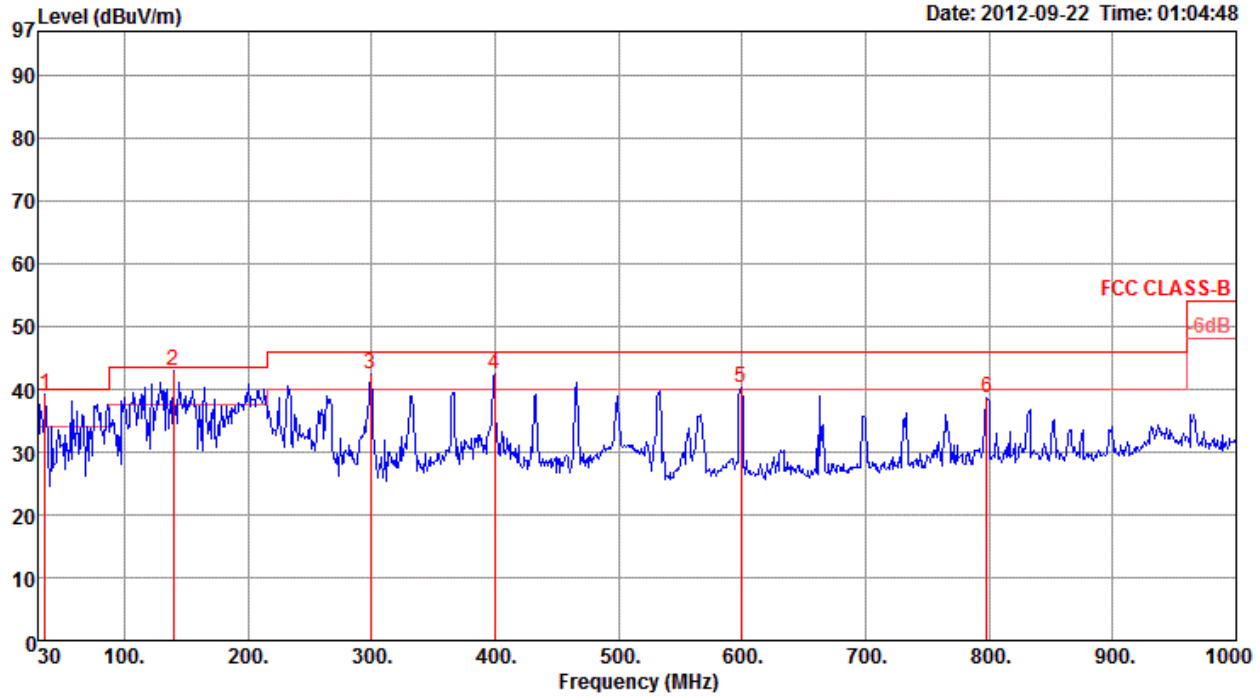
Temperature	21℃	Humidity	56.4%
Test Engineer	Sean Ku	Configurations	CTX
Test Mode	Mode 2.		

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.

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

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz Ch 1 / Ant. 1: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4825.88	29.26	54.00	-24.74	27.92	3.31	33.06	35.03	Average	100	194	HORIZONTAL
2	4826.72	40.02	74.00	-33.98	38.68	3.31	33.06	35.03	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	4814.88	27.98	54.00	-26.02	26.69	3.31	33.02	35.04	Average	100	281	VERTICAL
2	4815.84	40.61	74.00	-33.39	39.32	3.31	33.02	35.04	Peak	100	281	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz Ch 6 / Ant. 1: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4866.24	40.61	74.00	-33.39	39.19	3.33	33.12	35.03	Peak	100	10	HORIZONTAL
2	4873.88	28.43	54.00	-25.57	26.97	3.33	33.16	35.03	Average	100	10	HORIZONTAL
3	7304.92	31.10	54.00	-22.90	26.52	4.06	35.92	35.40	Average	100	214	HORIZONTAL
4	7307.76	43.48	74.00	-30.52	38.86	4.06	35.96	35.40	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	4873.20	40.31	74.00	-33.69	38.85	3.33	33.16	35.03	Peak	100	17	VERTICAL
2	4878.04	28.34	54.00	-25.66	26.88	3.33	33.16	35.03	Average	100	17	VERTICAL
3	7301.36	31.15	54.00	-22.85	26.57	4.06	35.92	35.40	Average	100	80	VERTICAL
4	7309.76	43.61	74.00	-30.39	38.99	4.06	35.96	35.40	Peak	100	80	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz Ch 11 / Ant. 1: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4914.92	28.30	54.00	-25.70	26.74	3.35	33.23	35.02	Average	100	253	HORIZONTAL
2	4919.52	41.10	74.00	-32.90	39.54	3.35	33.23	35.02	Peak	100	253	HORIZONTAL
3	7385.56	31.43	54.00	-22.57	26.68	4.06	36.09	35.40	Average	100	299	HORIZONTAL
4	7388.84	43.99	74.00	-30.01	39.24	4.06	36.09	35.40	Peak	100	299	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	4914.40	28.24	54.00	-25.76	26.68	3.35	33.23	35.02	Average	100	224	VERTICAL
2	4928.36	40.41	74.00	-33.59	38.81	3.35	33.26	35.01	Peak	100	224	VERTICAL
3	7395.00	31.56	54.00	-22.44	26.77	4.06	36.13	35.40	Average	100	352	VERTICAL
4	7395.88	44.79	74.00	-29.21	40.00	4.06	36.13	35.40	Peak	100	352	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 20MHz Ch 1 / Ant. 1: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4816.76	27.96	54.00	-26.04	26.67	3.31	33.02	35.04	Average	100	224	HORIZONTAL
2	4828.44	41.01	74.00	-32.99	39.67	3.31	33.06	35.03	Peak	100	224	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4814.92	27.92	54.00	-26.08	26.63	3.31	33.02	35.04	Average	100	307	VERTICAL
2	4816.20	40.29	74.00	-33.71	39.00	3.31	33.02	35.04	Peak	100	307	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 20MHz Ch 6 / Ant. 1: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4867.80	40.73	74.00	-33.27	39.31	3.33	33.12	35.03	Peak	100	62	HORIZONTAL
2	4876.32	28.13	54.00	-25.87	26.67	3.33	33.16	35.03	Average	100	62	HORIZONTAL
3	7302.64	43.08	74.00	-30.92	38.50	4.06	35.92	35.40	Peak	100	14	HORIZONTAL
4	7306.92	31.13	54.00	-22.87	26.55	4.06	35.92	35.40	Average	100	14	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	4874.44	40.54	74.00	-33.46	39.08	3.33	33.16	35.03	Peak	100	166	VERTICAL
2	4877.12	28.06	54.00	-25.94	26.60	3.33	33.16	35.03	Average	100	166	VERTICAL
3	7302.16	31.28	54.00	-22.72	26.70	4.06	35.92	35.40	Average	100	118	VERTICAL
4	7302.84	43.19	74.00	-30.81	38.61	4.06	35.92	35.40	Peak	100	118	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 20MHz Ch 11 / Ant. 1: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4914.16	28.19	54.00	-25.81	26.64	3.34	33.23	35.02	Average	100	34	HORIZONTAL
2	4919.08	41.15	74.00	-32.85	39.59	3.35	33.23	35.02	Peak	100	34	HORIZONTAL
3	7383.48	44.35	74.00	-29.65	39.60	4.06	36.09	35.40	Peak	100	94	HORIZONTAL
4	7389.88	31.36	54.00	-22.64	26.61	4.06	36.09	35.40	Average	100	94	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	4914.52	28.28	54.00	-25.72	26.72	3.35	33.23	35.02	Average	100	184	VERTICAL
2	4914.96	40.80	74.00	-33.20	39.24	3.35	33.23	35.02	Peak	100	184	VERTICAL
3	7387.84	31.32	54.00	-22.68	26.57	4.06	36.09	35.40	Average	100	215	VERTICAL
4	7394.24	43.88	74.00	-30.12	39.09	4.06	36.13	35.40	Peak	100	215	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 40MHz Ch 3 / Ant. 1: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4846.28	40.64	74.00	-33.36	39.26	3.32	33.09	35.03	Peak	100	169	HORIZONTAL
2	4849.64	28.34	54.00	-25.66	26.96	3.32	33.09	35.03	Average	100	169	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	4842.32	28.49	54.00	-25.51	27.11	3.32	33.09	35.03	Average	100	279	VERTICAL
2	4845.88	40.97	74.00	-33.03	39.59	3.32	33.09	35.03	Peak	100	279	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 40MHz Ch 6 / Ant. 1: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4872.20	27.65	54.00	-26.35	26.19	3.33	33.16	35.03	Average	100	64	HORIZONTAL
2	4873.60	39.00	74.00	-35.00	37.54	3.33	33.16	35.03	Peak	100	64	HORIZONTAL
3	7306.70	30.71	54.00	-23.29	26.13	4.06	35.92	35.40	Average	100	142	HORIZONTAL
4	7307.40	43.08	74.00	-30.92	38.50	4.06	35.92	35.40	Peak	100	142	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	4881.40	39.93	74.00	-34.07	38.47	3.33	33.16	35.03	Peak	100	189	VERTICAL
2	4881.72	28.37	54.00	-25.63	26.91	3.33	33.16	35.03	Average	100	189	VERTICAL
3	7309.68	30.61	74.00	-43.39	25.99	4.06	35.96	35.40	Peak	100	103	VERTICAL
4	7309.92	43.96	74.00	-30.04	39.34	4.06	35.96	35.40	Peak	100	103	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 40MHz Ch 9 / Ant. 1: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4900.20	42.29	74.00	-31.71	40.78	3.34	33.19	35.02	Peak	100	278	HORIZONTAL
2	4900.60	28.83	54.00	-25.17	27.32	3.34	33.19	35.02	Average	100	278	HORIZONTAL
3	7346.00	29.93	54.00	-24.07	25.25	4.06	36.02	35.40	Average	100	318	HORIZONTAL
4	7346.28	42.70	74.00	-31.30	38.02	4.06	36.02	35.40	Peak	100	318	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	4901.92	40.76	74.00	-33.24	39.25	3.34	33.19	35.02	Peak	100	151	VERTICAL
2	4902.12	29.08	54.00	-24.92	27.57	3.34	33.19	35.02	Average	100	151	VERTICAL
3	7355.68	42.72	74.00	-31.28	38.04	4.06	36.02	35.40	Peak	100	247	VERTICAL
4	7355.88	30.43	54.00	-23.57	25.75	4.06	36.02	35.40	Average	100	247	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 40MHz Ch 3 / Ant. 1: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4844.76	40.39	74.00	-33.61	39.01	3.32	33.09	35.03	Peak	100	85	HORIZONTAL
2	4851.92	28.51	54.00	-25.49	27.13	3.32	33.09	35.03	Average	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	4834.84	39.88	74.00	-34.12	38.54	3.31	33.06	35.03	Peak	100	198	VERTICAL
2	4846.96	28.38	54.00	-25.62	27.00	3.32	33.09	35.03	Average	100	198	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 40MHz Ch 6 / Ant. 1: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4870.56	40.72	74.00	-33.28	39.30	3.33	33.12	35.03	Peak	100	10	HORIZONTAL
2	4876.68	28.19	54.00	-25.81	26.73	3.33	33.16	35.03	Average	100	10	HORIZONTAL
3	7301.28	30.98	54.00	-23.02	26.40	4.06	35.92	35.40	Average	100	47	HORIZONTAL
4	7302.60	44.07	74.00	-29.93	39.49	4.06	35.92	35.40	Peak	100	47	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	4866.36	28.15	54.00	-25.85	26.73	3.33	33.12	35.03	Average	100	353	VERTICAL
2	4880.12	41.47	74.00	-32.53	40.01	3.33	33.16	35.03	Peak	100	353	VERTICAL
3	7301.88	31.04	54.00	-22.96	26.46	4.06	35.92	35.40	Average	100	182	VERTICAL
4	7309.40	43.41	74.00	-30.59	38.79	4.06	35.96	35.40	Peak	100	182	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 40MHz Ch 9 / Ant. 1: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4900.04	28.55	54.00	-25.45	27.04	3.34	33.19	35.02	Average	100	252	HORIZONTAL
2	4901.40	41.36	74.00	-32.64	39.85	3.34	33.19	35.02	Peak	100	252	HORIZONTAL
3	7363.52	43.98	74.00	-30.02	39.26	4.06	36.06	35.40	Peak	100	326	HORIZONTAL
4	7364.60	31.02	54.00	-22.98	26.30	4.06	36.06	35.40	Average	100	326	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	4902.16	28.66	54.00	-25.34	27.15	3.34	33.19	35.02	Average	100	307	VERTICAL
2	4907.84	41.89	74.00	-32.11	40.34	3.34	33.23	35.02	Peak	100	307	VERTICAL
3	7364.84	30.92	54.00	-23.08	26.20	4.06	36.06	35.40	Average	100	251	VERTICAL
4	7365.16	43.77	74.00	-30.23	39.05	4.06	36.06	35.40	Peak	100	251	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz Ch 1 / Ant. 2: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4815.75	41.19	74.00	-32.81	39.90	3.31	33.02	35.04	Peak	100	235	HORIZONTAL
2	4815.99	29.43	54.00	-24.57	28.14	3.31	33.02	35.04	Average	100	235	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	4813.76	40.03	74.00	-33.97	38.74	3.31	33.02	35.04	Peak	100	102	VERTICAL
2	4814.00	29.30	54.00	-24.70	28.01	3.31	33.02	35.04	Average	100	102	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz Ch 6 / Ant. 2: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4827.69	29.35	54.00	-24.65	28.01	3.31	33.06	35.03	Average	100	238	HORIZONTAL
2	4831.69	41.01	74.00	-32.99	39.67	3.31	33.06	35.03	Peak	100	238	HORIZONTAL
3	7338.24	43.80	74.00	-30.20	39.15	4.06	35.99	35.40	Peak	100	353	HORIZONTAL
4	7338.40	32.23	54.00	-21.77	27.58	4.06	35.99	35.40	Average	100	353	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	4851.32	40.51	74.00	-33.49	39.13	3.32	33.09	35.03	Peak	100	203	VERTICAL
2	4851.72	29.10	54.00	-24.90	27.72	3.32	33.09	35.03	Average	100	203	VERTICAL
3	7338.40	42.64	74.00	-31.36	37.99	4.06	35.99	35.40	Peak	100	225	VERTICAL
4	7339.53	33.27	54.00	-20.73	28.62	4.06	35.99	35.40	Average	100	225	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz Ch 11 / Ant. 2: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4968.71	39.63	74.00	-34.37	37.93	3.38	33.33	35.01	Peak	100	223	HORIZONTAL
2	4972.88	30.06	54.00	-23.94	28.36	3.38	33.33	35.01	Average	100	223	HORIZONTAL
3	7354.75	32.77	54.00	-21.23	28.09	4.06	36.02	35.40	Average	100	305	HORIZONTAL
4	7357.15	42.87	74.00	-31.13	38.19	4.06	36.02	35.40	Peak	100	305	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	4974.00	30.09	54.00	-23.91	28.35	3.38	33.37	35.01	Average	100	33	VERTICAL
2	4974.00	41.04	74.00	-32.96	39.30	3.38	33.37	35.01	Peak	100	33	VERTICAL
3	7338.08	32.77	54.00	-21.23	28.12	4.06	35.99	35.40	Average	100	155	VERTICAL
4	7339.53	43.79	74.00	-30.21	39.14	4.06	35.99	35.40	Peak	100	155	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 20MHz Ch 1 / Ant. 2: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4817.27	41.94	74.00	-32.06	40.65	3.31	33.02	35.04	Peak	100	145	HORIZONTAL
2	4817.91	29.25	54.00	-24.75	27.95	3.31	33.02	35.03	Average	100	145	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	4774.00	28.00	54.00	-26.00	26.81	3.28	32.95	35.04	Average	100	274	VERTICAL
2	4778.97	38.63	74.00	-35.37	37.44	3.28	32.95	35.04	Peak	100	274	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 20MHz Ch 6 / Ant. 2: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4896.28	39.77	74.00	-34.23	38.26	3.34	33.19	35.02	Peak	100	282	HORIZONTAL
2	4902.05	29.37	54.00	-24.63	27.86	3.34	33.19	35.02	Average	100	282	HORIZONTAL
3	7332.96	32.50	54.00	-21.50	27.85	4.06	35.99	35.40	Average	100	181	HORIZONTAL
4	7339.69	42.98	74.00	-31.02	38.33	4.06	35.99	35.40	Peak	100	181	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	4828.17	29.14	54.00	-24.86	27.80	3.31	33.06	35.03	Average	100	177	VERTICAL
2	4829.45	39.45	74.00	-34.55	38.11	3.31	33.06	35.03	Peak	100	177	VERTICAL
3	7261.00	31.73	54.00	-22.27	27.22	4.06	35.85	35.40	Average	100	49	VERTICAL
4	7265.49	41.16	74.00	-32.84	36.65	4.06	35.85	35.40	Peak	100	49	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 20MHz Ch 11 / Ant. 2: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4965.67	39.74	74.00	-34.26	38.04	3.38	33.33	35.01	Peak	100	217	HORIZONTAL
2	4973.36	29.91	54.00	-24.09	28.18	3.38	33.36	35.01	Average	100	217	HORIZONTAL
3	7368.37	32.21	54.00	-21.79	27.49	4.06	36.06	35.40	Average	100	301	HORIZONTAL
4	7371.10	43.09	74.00	-30.91	38.37	4.06	36.06	35.40	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	4874.00	28.86	54.00	-25.14	27.40	3.33	33.16	35.03	Average	100	95	VERTICAL
2	4876.72	39.10	74.00	-34.90	37.64	3.33	33.16	35.03	Peak	100	95	VERTICAL
3	7366.61	32.59	54.00	-21.41	27.87	4.06	36.06	35.40	Average	100	207	VERTICAL
4	7368.37	43.86	74.00	-30.14	39.14	4.06	36.06	35.40	Peak	100	207	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 40MHz Ch 3 / Ant. 2: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4826.61	39.72	74.00	-34.28	38.38	3.31	33.06	35.03	Peak	100	120	HORIZONTAL
2	4827.09	28.90	54.00	-25.10	27.56	3.31	33.06	35.03	Average	100	120	HORIZONTAL
3	7260.87	31.69	54.00	-22.31	27.18	4.06	35.85	35.40	Average	100	112	HORIZONTAL
4	7261.00	43.26	74.00	-30.74	38.75	4.06	35.85	35.40	Peak	100	112	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	4829.98	29.18	54.00	-24.82	27.84	3.31	33.06	35.03	Average	100	113	VERTICAL
2	4830.22	39.47	74.00	-34.53	38.13	3.31	33.06	35.03	Peak	100	113	VERTICAL
3	7260.39	31.97	54.00	-22.03	27.46	4.06	35.85	35.40	Average	100	180	VERTICAL
4	7260.87	43.64	74.00	-30.36	39.13	4.06	35.85	35.40	Peak	100	180	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 40MHz Ch 6 / Ant. 2: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4898.28	40.32	74.00	-33.68	38.81	3.34	33.19	35.02	Peak	100	22	HORIZONTAL
2	4899.00	29.13	54.00	-24.87	27.62	3.34	33.19	35.02	Average	100	22	HORIZONTAL
3	7325.66	43.46	74.00	-30.54	38.81	4.06	35.99	35.40	Peak	100	70	HORIZONTAL
4	7325.98	31.99	54.00	-22.01	27.34	4.06	35.99	35.40	Average	100	70	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	4851.40	29.31	54.00	-24.69	27.93	3.32	33.09	35.03	Average	100	210	VERTICAL
2	4853.09	40.44	74.00	-33.56	39.06	3.32	33.09	35.03	Peak	100	210	VERTICAL
3	7325.98	43.82	74.00	-30.18	39.17	4.06	35.99	35.40	Peak	100	142	VERTICAL
4	7326.55	32.31	54.00	-21.69	27.66	4.06	35.99	35.40	Average	100	142	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 40MHz Ch 9 / Ant. 2: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4902.88	40.24	74.00	-33.76	38.73	3.34	33.19	35.02	Peak	100	341	HORIZONTAL
2	4903.28	29.56	54.00	-24.44	28.05	3.34	33.19	35.02	Average	100	341	HORIZONTAL
3	7342.54	32.74	54.00	-21.26	28.06	4.06	36.02	35.40	Average	100	268	HORIZONTAL
4	7346.50	43.40	74.00	-30.60	38.72	4.06	36.02	35.40	Peak	100	268	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	4912.25	29.57	54.00	-24.43	28.02	3.34	33.23	35.02	Average	100	109	VERTICAL
2	4912.41	38.85	74.00	-35.15	37.30	3.34	33.23	35.02	Peak	100	109	VERTICAL
3	7331.00	32.00	54.00	-22.00	27.35	4.06	35.99	35.40	Average	100	194	VERTICAL
4	7331.40	42.90	74.00	-31.10	38.25	4.06	35.99	35.40	Peak	100	194	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 40MHz Ch 3 / Ant. 2: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4838.55	41.04	74.00	-32.96	39.66	3.32	33.09	35.03	Peak	100	224	HORIZONTAL
2	4840.31	29.08	54.00	-24.92	27.70	3.32	33.09	35.03	Average	100	224	HORIZONTAL
3	7257.12	31.61	54.00	-22.39	27.10	4.06	35.85	35.40	Average	100	155	HORIZONTAL
4	7257.23	42.79	74.00	-31.21	38.28	4.06	35.85	35.40	Peak	100	155	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	4843.00	29.09	54.00	-24.91	27.71	3.32	33.09	35.03	Average	100	85	VERTICAL
2	4847.37	41.78	74.00	-32.22	40.40	3.32	33.09	35.03	Peak	100	85	VERTICAL
3	7246.00	31.78	54.00	-22.22	27.30	4.06	35.82	35.40	Average	100	174	VERTICAL
4	7253.98	44.38	74.00	-29.62	39.90	4.06	35.82	35.40	Peak	100	174	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 40MHz Ch 6 / Ant. 2: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4882.65	28.76	54.00	-25.24	27.30	3.33	33.16	35.03	Average	100	118	HORIZONTAL
2	4884.65	40.23	74.00	-33.77	38.77	3.33	33.16	35.03	Peak	100	118	HORIZONTAL
3	7321.00	32.19	54.00	-21.81	27.57	4.06	35.96	35.40	Average	100	266	HORIZONTAL
4	7321.00	43.95	74.00	-30.05	39.33	4.06	35.96	35.40	Peak	100	266	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4865.83	40.71	74.00	-33.29	39.29	3.33	33.12	35.03	Peak	100	35	VERTICAL
2	4867.59	28.80	54.00	-25.20	27.38	3.33	33.12	35.03	Average	100	35	VERTICAL
3	7266.29	43.96	74.00	-30.04	39.45	4.06	35.85	35.40	Peak	100	152	VERTICAL
4	7266.61	31.70	54.00	-22.30	27.19	4.06	35.85	35.40	Average	100	152	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 40MHz Ch 9 / Ant. 2: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4929.00	28.85	54.00	-25.15	27.25	3.35	33.26	35.01	Average	100	65	HORIZONTAL
2	4933.23	42.43	74.00	-31.57	40.83	3.35	33.26	35.01	Peak	100	65	HORIZONTAL
3	7362.57	43.45	74.00	-30.55	38.73	4.06	36.06	35.40	Peak	100	134	HORIZONTAL
4	7363.21	32.13	54.00	-21.87	27.41	4.06	36.06	35.40	Average	100	134	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	4903.68	29.19	54.00	-24.81	27.68	3.34	33.19	35.02	Average	100	360	VERTICAL
2	4904.00	40.08	74.00	-33.92	38.57	3.34	33.19	35.02	Peak	100	360	VERTICAL
3	7359.00	32.04	54.00	-21.96	27.32	4.06	36.06	35.40	Average	100	254	VERTICAL
4	7363.21	45.38	74.00	-28.62	40.66	4.06	36.06	35.40	Peak	100	254	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz Ch 1 / Ant. 3: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4809.20	40.90	74.00	-33.10	39.63	3.29	33.02	35.04	Peak	100	262	HORIZONTAL
2	4815.00	28.62	54.00	-25.38	27.33	3.31	33.02	35.04	Average	100	262	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	4826.60	28.90	54.00	-25.10	27.56	3.31	33.06	35.03	Average	100	354	VERTICAL
2	4841.00	40.78	74.00	-33.22	39.40	3.32	33.09	35.03	Peak	100	354	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz Ch 6 / Ant. 3: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4867.40	41.05	74.00	-32.95	39.63	3.33	33.12	35.03	Peak	100	0	HORIZONTAL
2	4876.90	29.28	54.00	-24.72	27.82	3.33	33.16	35.03	Average	100	0	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	4866.40	28.94	54.00	-25.06	27.52	3.33	33.12	35.03	Average	100	115	VERTICAL
2	4874.40	41.02	74.00	-32.98	39.56	3.33	33.16	35.03	Peak	100	115	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz Ch 11 / Ant. 3: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4899.70	42.48	74.00	-31.52	40.97	3.34	33.19	35.02	Peak	100	242	HORIZONTAL
2	4901.40	28.49	54.00	-25.51	26.98	3.34	33.19	35.02	Average	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	4902.40	28.65	54.00	-25.35	27.14	3.34	33.19	35.02	Average	100	128	VERTICAL
2	4919.50	40.22	74.00	-33.78	38.66	3.35	33.23	35.02	Peak	100	128	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 20MHz Ch 1 / Ant. 3: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4816.20	40.85	74.00	-33.15	39.56	3.31	33.02	35.04	Peak	100	341	HORIZONTAL
2	4826.10	28.35	54.00	-25.65	27.01	3.31	33.06	35.03	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	4804.30	40.96	74.00	-33.04	39.69	3.29	33.02	35.04	Peak	100	204	VERTICAL
2	4843.60	28.24	54.00	-25.76	26.86	3.32	33.09	35.03	Average	100	204	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 20MHz Ch 6 / Ant. 3: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4860.90	41.01	74.00	-32.99	39.60	3.32	33.12	35.03	Peak	100	234	HORIZONTAL
2	4878.70	28.48	54.00	-25.52	27.02	3.33	33.16	35.03	Average	100	234	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4878.80	28.65	54.00	-25.35	27.19	3.33	33.16	35.03	Average	100	324	VERTICAL
2	4885.60	40.94	74.00	-33.06	39.48	3.33	33.16	35.03	Peak	100	324	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 20MHz Ch 11 / Ant. 3: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4904.60	40.98	74.00	-33.02	39.47	3.34	33.19	35.02	Peak	100	283	HORIZONTAL
2	4904.90	28.65	54.00	-25.35	27.10	3.34	33.23	35.02	Average	100	282	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	4899.90	40.56	74.00	-33.44	39.05	3.34	33.19	35.02	Peak	100	147	VERTICAL
2	4902.70	28.51	54.00	-25.49	27.00	3.34	33.19	35.02	Average	100	147	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 40MHz Ch 3 / Ant. 3: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4851.00	28.42	54.00	-25.58	27.04	3.32	33.09	35.03	Average	100	174	HORIZONTAL
2	4864.10	40.99	74.00	-33.01	39.57	3.33	33.12	35.03	Peak	100	174	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	4848.50	40.82	74.00	-33.18	39.44	3.32	33.09	35.03	Peak	100	217	VERTICAL
2	4849.90	28.31	54.00	-25.69	26.93	3.32	33.09	35.03	Average	100	217	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 40MHz Ch 6 / Ant. 3: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4849.30	28.39	54.00	-25.61	27.01	3.32	33.09	35.03	Average	100	127	HORIZONTAL
2	4876.30	41.10	74.00	-32.90	39.64	3.33	33.16	35.03	Peak	100	127	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	4850.60	28.60	54.00	-25.40	27.22	3.32	33.09	35.03	Average	100	15	VERTICAL
2	4877.10	40.68	74.00	-33.32	39.22	3.33	33.16	35.03	Peak	100	15	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 40MHz Ch 9 / Ant. 3: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4900.40	28.71	54.00	-25.29	27.20	3.34	33.19	35.02	Average	100	108	HORIZONTAL
2	4907.10	40.69	74.00	-33.31	39.14	3.34	33.23	35.02	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	4900.70	41.02	74.00	-32.98	39.51	3.34	33.19	35.02	Peak	100	201	VERTICAL
2	4902.00	28.83	54.00	-25.17	27.32	3.34	33.19	35.02	Average	100	201	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 40MHz Ch 3 / Ant. 3: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4842.36	28.63	54.00	-25.37	27.25	3.32	33.09	35.03	Average	100	146	HORIZONTAL
2	4842.88	41.05	74.00	-32.95	39.67	3.32	33.09	35.03	Peak	100	146	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	4847.72	41.69	74.00	-32.31	40.31	3.32	33.09	35.03	Peak	100	25	VERTICAL
2	4848.40	28.73	54.00	-25.27	27.35	3.32	33.09	35.03	Average	100	25	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 40MHz Ch 6 / Ant. 3: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4872.80	41.47	74.00	-32.53	40.01	3.33	33.16	35.03	Peak	100	343	HORIZONTAL
2	4883.40	28.43	54.00	-25.57	26.97	3.33	33.16	35.03	Average	100	343	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	4882.48	28.33	54.00	-25.67	26.87	3.33	33.16	35.03	Average	100	198	VERTICAL
2	4883.16	41.17	74.00	-32.83	39.71	3.33	33.16	35.03	Peak	100	198	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 40MHz Ch 9 / Ant. 3: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	4880.30	41.33	74.00	-32.67	39.87	3.33	33.16	35.03	Peak	100	79	HORIZONTAL
2	4903.90	28.68	54.00	-25.32	27.17	3.34	33.19	35.02	Average	100	79	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	4902.30	28.81	54.00	-25.19	27.30	3.34	33.19	35.02	Average	100	179	VERTICAL
2	4914.50	40.87	74.00	-33.13	39.31	3.35	33.23	35.02	Peak	100	179	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz CH 149 / Ant. 4: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11487.10	52.31	74.00	-21.69	43.70	5.11	38.78	35.28	Peak	100	114	HORIZONTAL
2	11487.20	40.88	54.00	-13.12	32.27	5.11	38.78	35.28	Average	100	114	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	11488.80	43.31	54.00	-10.69	34.70	5.11	38.78	35.28	Average	100	108	VERTICAL
2	11491.60	54.21	74.00	-19.79	45.60	5.11	38.78	35.28	Peak	100	108	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz CH 157 / Ant. 4: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11565.30	52.92	74.00	-21.08	44.27	5.13	38.82	35.30	Peak	103	119	HORIZONTAL
2	11575.20	41.95	54.00	-12.05	33.28	5.14	38.83	35.30	Average	103	119	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	11564.90	42.50	54.00	-11.50	33.85	5.13	38.82	35.30	Average	100	42	VERTICAL
2	11574.00	51.78	74.00	-22.22	43.11	5.14	38.83	35.30	Peak	100	42	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz CH 165 / Ant. 4: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11650.80	56.29	74.00	-17.71	47.57	5.16	38.86	35.30	Peak	100	114	HORIZONTAL
2	11655.30	44.41	54.00	-9.59	35.69	5.16	38.86	35.30	Average	100	114	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	11651.20	57.43	74.00	-16.57	48.71	5.16	38.86	35.30	Peak	112	84	VERTICAL
2	11656.20	44.60	54.00	-9.40	35.88	5.16	38.86	35.30	Average	112	84	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 20MHz CH 149 / Ant. 4: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11475.00	51.48	74.00	-22.52	42.88	5.11	38.77	35.28	Peak	100	91	HORIZONTAL
2	11487.30	40.32	54.00	-13.68	31.71	5.11	38.78	35.28	Average	100	91	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	11487.00	42.08	54.00	-11.92	33.47	5.11	38.78	35.28	Average	100	2	VERTICAL
2	11490.10	56.83	74.00	-17.17	48.22	5.11	38.78	35.28	Peak	100	2	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 20MHz CH 157 / Ant. 4: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11569.20	42.28	54.00	-11.72	33.62	5.13	38.83	35.30	Average	100	114	HORIZONTAL
2	11570.00	56.44	74.00	-17.56	47.77	5.14	38.83	35.30	Peak	100	114	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	11568.70	42.67	54.00	-11.33	34.01	5.13	38.83	35.30	Average	100	98	VERTICAL
2	11568.80	54.61	74.00	-19.39	45.95	5.13	38.83	35.30	Peak	100	98	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 20MHz CH 165 / Ant. 4: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11650.20	59.01	74.00	-14.99	50.29	5.16	38.86	35.30	Peak	100	114	HORIZONTAL
2	11650.40	44.14	54.00	-9.86	35.42	5.16	38.86	35.30	Average	100	114	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	11649.90	58.42	74.00	-15.58	49.70	5.16	38.86	35.30	Peak	100	104	VERTICAL
2	11650.90	44.54	54.00	-9.46	35.82	5.16	38.86	35.30	Average	100	104	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 40MHz CH 151 / Ant. 4: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11504.80	39.47	54.00	-14.53	30.84	5.12	38.79	35.28	Average	100	45	HORIZONTAL
2	11536.20	49.62	74.00	-24.38	40.97	5.13	38.81	35.29	Peak	100	45	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	11505.60	50.26	74.00	-23.74	41.63	5.12	38.79	35.28	Peak	100	171	VERTICAL
2	11505.80	38.77	54.00	-15.23	30.14	5.12	38.79	35.28	Average	100	171	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 40MHz CH 159 / Ant. 4: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11600.00	50.32	74.00	-23.68	41.64	5.15	38.83	35.30	Peak	100	269	HORIZONTAL
2	11631.40	37.91	54.00	-16.09	29.20	5.16	38.85	35.30	Average	100	269	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	11585.60	38.64	54.00	-15.36	29.97	5.14	38.83	35.30	Average	100	174	VERTICAL
2	11615.40	50.46	74.00	-23.54	41.77	5.15	38.84	35.30	Peak	100	174	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 40MHz CH 151 / Ant. 4: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11462.60	49.71	74.00	-24.29	41.12	5.11	38.75	35.27	Peak	100	127	HORIZONTAL
2	11496.40	37.82	54.00	-16.18	29.20	5.12	38.78	35.28	Average	100	127	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	11502.20	39.72	54.00	-14.28	31.09	5.12	38.79	35.28	Average	100	221	VERTICAL
2	11510.00	50.77	74.00	-23.23	42.14	5.12	38.79	35.28	Peak	100	221	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 40MHz CH 159 / Ant. 4: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11591.40	50.51	74.00	-23.49	41.84	5.14	38.83	35.30	Peak	100	99	HORIZONTAL
2	11591.80	38.46	54.00	-15.54	29.79	5.14	38.83	35.30	Average	100	99	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	11594.00	50.04	74.00	-23.96	41.37	5.14	38.83	35.30	Peak	100	287	VERTICAL
2	11607.20	38.18	54.00	-15.82	29.49	5.15	38.84	35.30	Average	100	287	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz CH 149 / Ant. 5: Chain. 1 (1TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11453.80	33.38	54.00	-20.62	24.79	5.11	38.75	35.27	Average	100	286	HORIZONTAL
2	11512.60	46.10	74.00	-27.90	37.47	5.12	38.79	35.28	Peak	100	286	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	11449.40	34.47	54.00	-19.53	25.88	5.11	38.75	35.27	Average	100	155	VERTICAL
2	11519.40	47.00	74.00	-27.00	38.36	5.13	38.80	35.29	Peak	100	155	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz CH 157 / Ant. 5: Chain. 1 (1TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11571.20	34.67	54.00	-19.33	26.00	5.14	38.83	35.30	Average	100	47	HORIZONTAL
2	11580.40	47.66	74.00	-26.34	38.99	5.14	38.83	35.30	Peak	100	47	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	11573.00	34.85	54.00	-19.15	26.18	5.14	38.83	35.30	Average	100	133	VERTICAL
2	11588.20	47.70	74.00	-26.30	39.03	5.14	38.83	35.30	Peak	100	133	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz CH 165 / Ant. 5: Chain. 1 (1TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11620.20	35.20	54.00	-18.80	26.50	5.15	38.85	35.30	Average	100	329	HORIZONTAL
2	11655.40	47.64	74.00	-26.36	38.92	5.16	38.86	35.30	Peak	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	11600.00	35.38	54.00	-18.62	26.70	5.15	38.83	35.30	Average	100	232	VERTICAL
2	11699.80	47.50	74.00	-26.50	38.74	5.18	38.88	35.30	Peak	100	232	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 40MHz CH 151 / Ant. 5: Chain. 1 (1TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11472.80	46.69	74.00	-27.31	38.09	5.11	38.77	35.28	Peak	100	248	HORIZONTAL
2	11544.60	33.64	54.00	-20.36	25.00	5.13	38.81	35.30	Average	100	248	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	11491.80	45.74	74.00	-28.26	37.13	5.11	38.78	35.28	Peak	100	141	VERTICAL
2	11544.40	33.76	54.00	-20.24	25.12	5.13	38.81	35.30	Average	100	141	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 40MHz CH 159 / Ant. 5: Chain. 1 (1TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11612.60	34.21	54.00	-19.79	25.52	5.15	38.84	35.30	Average	100	119	HORIZONTAL
2	11637.80	46.54	74.00	-27.46	37.82	5.16	38.86	35.30	Peak	100	119	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	11567.40	34.16	54.00	-19.84	25.51	5.13	38.82	35.30	Average	100	350	VERTICAL
2	11624.80	46.84	74.00	-27.16	38.13	5.16	38.85	35.30	Peak	100	350	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz CH 149 / Ant. 6: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11507.20	40.13	54.00	-13.87	31.50	5.12	38.79	35.28	Average	100	133	HORIZONTAL
2	11509.60	50.34	74.00	-23.66	41.71	5.12	38.79	35.28	Peak	100	133	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	11504.20	46.45	74.00	-27.55	37.82	5.12	38.79	35.28	Peak	100	260	VERTICAL
2	11507.40	37.47	54.00	-16.53	28.84	5.12	38.79	35.28	Average	100	260	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz CH 157 / Ant. 6: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11585.40	38.37	54.00	-15.63	29.70	5.14	38.83	35.30	Average	100	168	HORIZONTAL
2	11586.60	49.48	74.00	-24.52	40.81	5.14	38.83	35.30	Peak	100	168	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	11580.40	50.00	74.00	-24.00	41.33	5.14	38.83	35.30	Peak	100	12	VERTICAL
2	11584.80	38.99	54.00	-15.01	30.32	5.14	38.83	35.30	Average	100	12	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 20MHz CH 165 / Ant. 6: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11628.60	47.17	74.00	-26.83	38.46	5.16	38.85	35.30	Peak	100	43	HORIZONTAL
2	11664.60	38.22	54.00	-15.78	29.50	5.16	38.86	35.30	Average	100	44	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	11661.00	48.46	74.00	-25.54	39.74	5.16	38.86	35.30	Peak	100	360	VERTICAL
2	11662.80	36.78	54.00	-17.22	28.06	5.16	38.86	35.30	Average	100	360	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 20MHz CH 149 / Ant. 6: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11507.20	37.46	54.00	-16.54	28.83	5.12	38.79	35.28	Average	100	159	HORIZONTAL
2	11509.80	51.29	74.00	-22.71	42.66	5.12	38.79	35.28	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	11509.80	37.22	54.00	-16.78	28.59	5.12	38.79	35.28	Average	100	276	VERTICAL
2	11510.00	48.66	74.00	-25.34	40.03	5.12	38.79	35.28	Peak	100	276	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 20MHz CH 157 / Ant. 6: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11583.60	37.97	54.00	-16.03	29.30	5.14	38.83	35.30	Average	100	92	HORIZONTAL
2	11611.20	47.89	74.00	-26.11	39.20	5.15	38.84	35.30	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	11583.40	36.21	54.00	-17.79	27.54	5.14	38.83	35.30	Average	100	360	VERTICAL
2	11595.60	48.36	74.00	-25.64	39.68	5.15	38.83	35.30	Peak	100	360	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS8 20MHz CH 165 / Ant. 6: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11667.20	37.15	54.00	-16.85	28.43	5.16	38.86	35.30	Average	100	145	HORIZONTAL
2	11675.80	47.70	74.00	-26.30	38.96	5.17	38.87	35.30	Peak	100	145	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	11660.80	48.69	74.00	-25.31	39.97	5.16	38.86	35.30	Peak	100	261	VERTICAL
2	11667.80	37.15	54.00	-16.85	28.43	5.16	38.86	35.30	Average	100	261	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 40MHz CH 151 / Ant. 6: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11509.40	35.92	54.00	-18.08	27.29	5.12	38.79	35.28	Average	100	210	HORIZONTAL
2	11514.80	46.80	74.00	-27.20	38.18	5.12	38.79	35.29	Peak	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	11503.60	48.08	74.00	-25.92	39.45	5.12	38.79	35.28	Peak	100	55	VERTICAL
2	11512.60	36.27	54.00	-17.73	27.64	5.12	38.79	35.28	Average	100	55	VERTICAL

Temperature	25.6℃	Humidity	56%
Test Engineer	Will Tung	Configurations	IEEE 802.11n MCS0 40MHz CH 159 / Ant. 6: Chain. 1 + Chain. 3 (2TX)
Test Date	Sep. 07, 2012		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11578.20	47.87	74.00	-26.13	39.20	5.14	38.83	35.30	Peak	100	114	HORIZONTAL
2	11580.20	34.67	54.00	-19.33	26.00	5.14	38.83	35.30	Average	100	114	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	11579.20	49.90	74.00	-24.10	41.23	5.14	38.83	35.30	Peak	100	9	VERTICAL
2	11580.40	36.71	54.00	-17.29	28.04	5.14	38.83	35.30	Average	100	9	VERTICAL