FCC RF Test Report

APPLICANT	:	Meru Networks Inc.
EQUIPMENT	:	IEEE 802.11n Access point
BRAND NAME	:	Meru Networks Inc.
MODEL NAME	:	AP433e
FCC ID	:	RE7-AP433E
STANDARD	:	FCC Part 15 Subpart C §15.247
CLASSIFICATION	:	Digital Transmission System (DTS)

The product was received on Apr. 11, 2011 and completely tested on Apr. 22, 2011. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures given in FCC KDB Publication No. 558074 and shown the compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

Reviewed by:

Roy Wu / Manager

Testing Laboratory
1190

SPORTON INTERNATIONAL INC.
No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR141108A	Rev. 01	Initial issue of report	May 12, 2011

SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	15.247(a)(2)	A8.2(a)	6dB Bandwidth	≥ 0.5MHz	Pass	-
3.1	-	Gen 4.4.1	99% Bandwidth	-	-	-
3.2	15.247(b)	A8.4	Power Output Measurement	≤ 30dBm	Pass	-
3.3	15.247(d)	A8.5	Frequency Band Edges	≤ 20dBc	Pass	-
3.4	15.247(d)	A8.5	Spurious Emission	< 20 dBc	Pass	-
3.5	15.247(e)	A8.2(b)	Power Spectral Density	≤ 8dBm	Pass	-
3.6	15.207	Gen 7.2.2	AC Conducted Emission	15.207(a)	Pass	Under limit 4.2 dB at 11.10 MHz
3.7	15.247(d)	A8.5	Transmitter Radiated Emission	15.209(a) & 15.247(d)	Pass	Under limit 1.00 dB at 2388.85 MHz
3.8	15.203 & 15.247(b)	A8.4	Antenna Requirement	N/A	Pass	-

1 General Description

1.1 Applicant

Meru Networks Inc.
894 Ross Drive Sunnyvale, CA 94089 USA

1.2 Manufacturer

Meru Networks Inc.
894 Ross Drive Sunnyvale, CA 94089 USA

1.3 Feature of Equipment Under Test

Product Feature & Specification	
Equipment	IEEE 802.11n Access point
Brand Name	Meru Networks Inc.
Model Name	AP433e
FCC ID	RE7-AP433E
Tx/Rx Frequency Range	802.11b/g/n : 2400 MHz ~ 2483.5 MHz 802.11a/n : 5725 MHz ~ 5850 MHz
Channel Spacing	802.11b/g : 5 MHz 802.11a : 20 MHz
Maximum Output Power to Antenna	**<2400 MHz ~ 2483.5 MHz>** 802.11b : 23.13 dBm (0.21 W) 802.11g : 25.05 dBm (0.32 W) 802.11n (BW 20MHz) : 28.94 dBm (0.78 W) 802.11n (BW 40MHz) : 27.57 dBm (0.57 W) **<5725 MHz ~ 5850 MHz>** 802.11a : 22.32 dBm (0.17 W) 802.11n (BW 20MHz) : 27.15 dBm (0.52 W) 802.11n (BW 40MHz) : 26.95 dBm (0.50 W)
HW Version	Teton_MB_v21_D1
SW Version	rfs-8378-TETON-e1.0-V0.1.0-20101108
Type of Modulation	802.11b : DSSS (BPSK / QPSK / CCK) 802.11a/g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)
EUT Stage	Production Unit

Remark:

1. For other wireless features of this EUT, test report will be issued separately.

2. This test report recorded only product characteristics and test results of Digital Transmission System (DTS).

3. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

<Antenna Information>

Type	Manufacturer	Model Number	Gain (dBi)	Gain (dBi)	Note
			2.4GHz	5 GHz	
Dipole	Terrawave	M6060060MO13620O	6	6	Antenna 1
	Terrawave	M6025040MO1D3620P	2.5	4	Antenna 5
	SOCAA	AS123-F	2	3	Antenna 3
	SOCAA	AS123-F-4	2	3	Antenna 4
Panel	Laird	S24493TS	3	4	Antenna 2

1.4 Testing Site

Test Site	SPORTON INTERNATIONAL INC.		
Test Site Location	No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL: +886-3-3273456 / FAX: +886-3-3284978		
Test Site No.	Sporton Site No.		FCC/IC Registration No.
	CO05-HY	03CH07-HY	722060/4086B-1

1.5 Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15 Subpart C §15.247
- FCC KDB Publication No. 558074 (Measurement Guidelines of DTS)
- ANSI C63.4-2003
- IC RSS-210 Issue 8

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B (DoC), recorded in a separate test report.

1.6 Ancillary Equipment List

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Notebook	DELL	Vostro 1510	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
2.	USB Dongle	Transcend	D33193	FCC DoC	N/A	N/A
3.	iPod	Apple	A1285	FCC DoC	Shielded, 1.0 m	N/A
4.	POE	PowerDsine	PD-3501G/AC	N/A	N/A	N/A

2 Test Configuration of Equipment Under Test

2.1 Test Mode

The EUT has been associated with peripherals pursuant to ANSI C63.4-2003 and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conducted emission (150 kHz to 30 MHz), radiated emission (30 MHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).
Pre-scanned tests were conducted to determine the final configuration from all possible combinations.

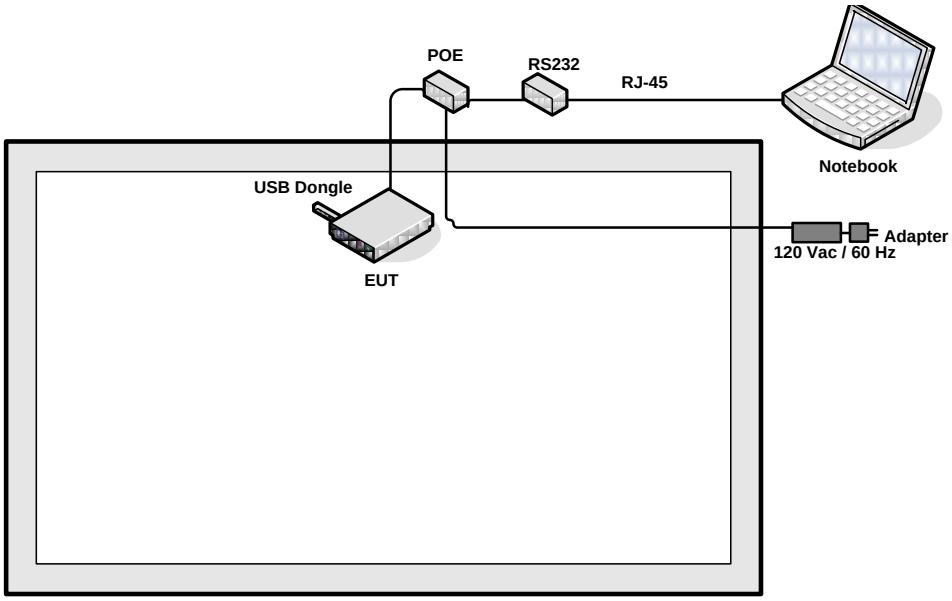
WORST-CASE CONFIGURATION AND MODE:
The worst-case data rates are determined to be as follows for each mode, based on the investigations by measuring the average power, peak power and PPSD across all the data rates, bandwidths, modulations and spatial stream modes.
Thus all tests were made with following data rates:
802.11b mode, 20 MHz Channel Bandwidth, 1 Mb/s, CCK Modulation
802.11g mode, 20 MHz Channel Bandwidth, 6 Mb/s, OFDM Modulation
802.11a mode, 20 MHz Channel Bandwidth, 6 Mb/s, OFDM Modulation
802.11n HT20 mode, 20 MHz Channel Bandwidth, MCS16, OFDM Modulation
802.11n HT40 mode, 40 MHz Channel Bandwidth, MCS16, OFDM Modulation

The following table is showing the total pre-scanned test modes, and the worst modes are recorded in this report only.

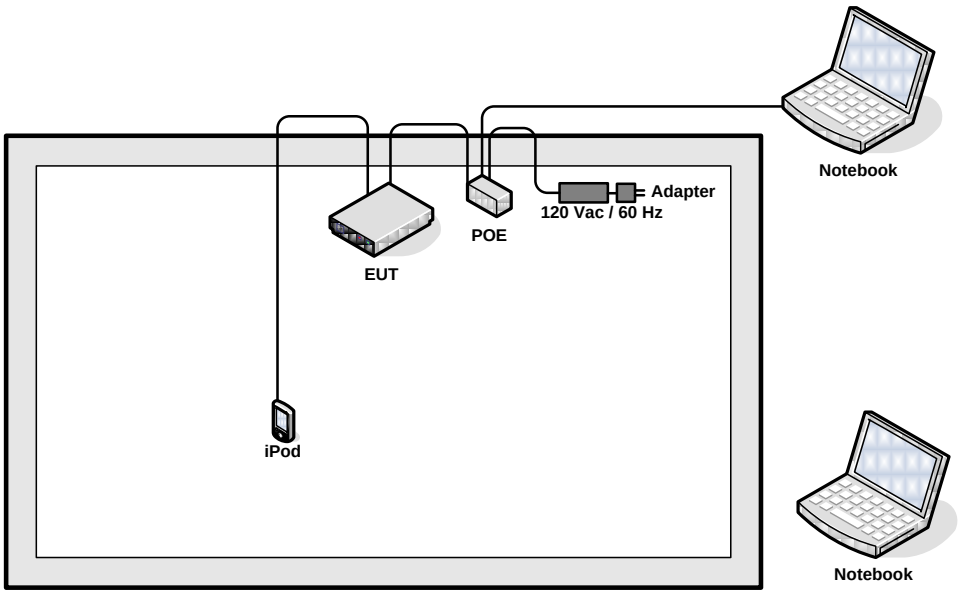
Test Cases	
Test Item	**802.11b (Modulation : DSSS)** **802.11a/g/n (Modulation : OFDM)**
Conducted TCs	Mode 1: 802.11b_CH01_2412 MHz Mode 2: 802.11b_CH06_2437 MHz Mode 3: 802.11b_CH11_2462 MHz Mode 4: 802.11g_CH01_2412 MHz Mode 5: 802.11g_CH06_2437 MHz Mode 6: 802.11g_CH11_2462 MHz Mode 7: 802.11n_CH01_2412 MHz (BW 20M) Mode 8: 802.11n_CH06_2437 MHz (BW 20M) Mode 9: 802.11n_CH11_2462 MHz (BW 20M) Mode 10: 802.11n_CH03_2422 MHz (BW 40M) Mode 11: 802.11n_CH06_2437 MHz (BW 40M) Mode 12: 802.11n_CH09_2452 MHz (BW 40M) Mode 13: 802.11a_CH149_5745 MHz) Mode 14: 802.11a_CH157_5785 MHz Mode 15: 802.11a_CH165_5825 MHz Mode 16: 802.11a_CH149_5745 MHz (BW 20M) Mode 17: 802.11a_CH157_5785 MHz (BW 20M) Mode 18: 802.11a_CH165_5825 MHz (BW 20M) Mode 19: 802.11n_CH151_5755 MHz (BW 40M) Mode 20: 802.11n_CH159_5795 MHz (BW 40M)
AC Conducted Emission	Mode 1 : WLAN (2.4G) Link + USB Cable with iPod + PoE for Antenna 3

2.2 Connection Diagram of Test System

<WLAN Tx Mode>



<AC Conducted Emission Mode>



2.3 RF Utility

The programmed RF utility, is installed in EUT to provide channel selection, power level, data rate and the application type. RF Utility can send transmitting signal for all testing. 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.

3 Test Result

3.1 6dB and 99% Bandwidth Measurement

3.1.1 Limit of 6dB Bandwidth

The minimum 6 dB bandwidth shall be at least 500 kHz.

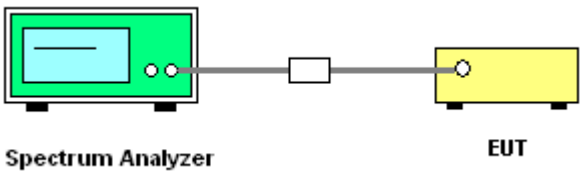
3.1.2 Measuring Instruments

See list of measuring instruments of this test report.

3.1.3 Test Procedures

1. The testing follows FCC KDB Publication No. 558074 (Measurement Guidelines of DTS).
2. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
3. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. In order to make an accurate measurement, set the span greater than RBW. The 6 dB bandwidth must be greater than 500 kHz.
4. The marker-delta reading at this point is the 6 dB bandwidth of the emission.

3.1.4 Test Setup



3.1.5 Test Result of 6dB Bandwidth

Test Mode :	Mode 1~3	Temperature :	24~26℃
Test Engineer :	Alan Liu	Relative Humidity :	40~44%

Channel	Frequency (MHz)	802.11b 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
		Chain A		
01	2412	10.08	0.5	Pass
06	2437	10.08	0.5	Pass
11	2462	10.04	0.5	Pass

Test Mode :	Mode 4~6	Temperature :	24~26℃
Test Engineer :	Alan Liu	Relative Humidity :	40~44%

Channel	Frequency (MHz)	802.11g 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
		Chain A		
01	2412	16.32	0.5	Pass
06	2437	16.32	0.5	Pass
11	2462	16.32	0.5	Pass

Test Mode :	Mode 7~9	Temperature :	24~26℃
Test Engineer :	Alan Liu	Relative Humidity :	40~44%

Channel	Frequency (MHz)	802.11n (BW 20MHz) 6dB Bandwidth (MHz)			6dB Bandwidth Min. Limit (MHz)	Pass/Fail
		Chain A	Chain B	Chain C		
01	2412	17.56	17.56	17.56	0.5	Pass
06	2437	17.54	17.56	17.56	0.5	Pass
10	2457	17.56	17.56	17.56	0.5	Pass

Test Mode :	Mode 10~12	Temperature :	24~26℃
Test Engineer :	Alan Liu	Relative Humidity :	40~44%

Channel	Frequency (MHz)	802.11n (BW 40MHz) 6dB Bandwidth (MHz)			6dB Bandwidth Min. Limit (MHz)	Pass/Fail
		Chain A	Chain B	Chain C		
03	2422	36.36	36.36	36.40	0.5	Pass
06	2437	36.36	36.40	36.40	0.5	Pass
09	2452	36.08	36.40	36.36	0.5	Pass

Test Mode :	Mode 13~15	Temperature :	24~26℃
Test Engineer :	Alan Liu	Relative Humidity :	40~44%

Channel	Frequency (MHz)	802.11a 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
		Chain A		
149	5745	16.35	0.5	Pass
157	5785	16.30	0.5	Pass
165	5825	16.35	0.5	Pass

Test Mode :	Mode 16~18	Temperature :	24~26℃
Test Engineer :	Alan Liu	Relative Humidity :	40~44%

Channel	Frequency (MHz)	802.11n (BW 20MHz) 6dB Bandwidth (MHz)			6dB Bandwidth Min. Limit (MHz)	Pass/Fail
		Chain A	Chain B	Chain C		
149	5745	17.55	17.60	17.60	0.5	Pass
157	5785	17.60	17.60	17.60	0.5	Pass
165	5825	17.55	17.60	17.60	0.5	Pass

Test Mode :	Mode 19~20	Temperature :	24~26℃
Test Engineer :	Alan Liu	Relative Humidity :	40~44%

Channel	Frequency (MHz)	802.11n (BW 40MHz) 6dB Bandwidth (MHz)			6dB Bandwidth Min. Limit (MHz)	Pass/Fail
		Chain A	Chain B	Chain C		
151	5755	36.36	36.36	36.18	0.5	Pass
159	5795	36.00	35.73	36.45	0.5	Pass

3.1.6 Test Result of 99% Occupied Bandwidth

Test Mode :	Mode 1~3	Temperature :	24~26℃
Test Engineer :	Alan Liu	Relative Humidity :	40~44%

Channel	Frequency (MHz)	802.11b 99% Occupied Bandwidth (MHz)	Pass/Fail
		Chain A	
01	2412	13.88	Pass
06	2437	14.52	Pass
11	2462	14.04	Pass

Test Mode :	Mode 4~6	Temperature :	24~26℃
Test Engineer :	Alan Liu	Relative Humidity :	40~44%

Channel	Frequency (MHz)	802.11g 99% Occupied Bandwidth (MHz)	Pass/Fail
		Chain A	
01	2412	17.32	Pass
06	2437	20.88	Pass
11	2462	17.28	Pass

Test Mode :	Mode 7~9	Temperature :	24~26℃
Test Engineer :	Alan Liu	Relative Humidity :	40~44%

Channel	Frequency (MHz)	802.11n (BW 20MHz) 99% Occupied Bandwidth (MHz)			Pass/Fail
		Chain A	Chain B	Chain C	
01	2412	18.32	17.96	18.00	Pass
06	2437	18.40	18.08	18.08	Pass
10	2457	18.32	17.92	18.04	Pass

Test Mode :	Mode 10~12	Temperature :	24~26℃
Test Engineer :	Alan Liu	Relative Humidity :	40~44%

Channel	Frequency (MHz)	802.11n (BW 40MHz) 99% Occupied Bandwidth (MHz)			Pass/Fail
		Chain A	Chain B	Chain C	
03	2422	39.20	38.10	38.30	Pass
06	2437	38.60	38.20	38.50	Pass
09	2452	38.70	38.20	38.20	Pass

Test Mode :	Mode 13~15	Temperature :	24~26℃
Test Engineer :	Alan Liu	Relative Humidity :	40~44%

Channel	Frequency (MHz)	802.11a 99% Occupied Bandwidth (MHz)	Pass/Fail
		Chain A	
149	5745	20.90	Pass
157	5785	29.60	Pass
165	5825	28.85	Pass

Test Mode :	Mode 16~18	Temperature :	24~26℃
Test Engineer :	Alan Liu	Relative Humidity :	40~44%

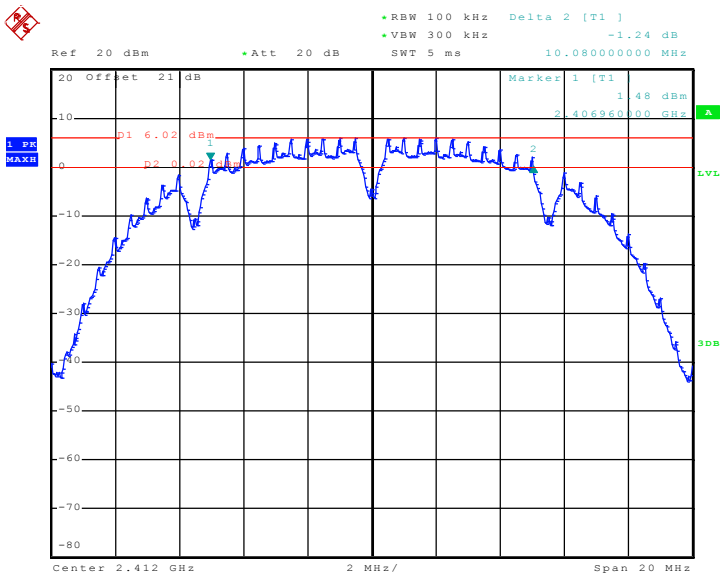
Channel	Frequency (MHz)	802.11n (BW 20MHz) 99% Occupied Bandwidth (MHz)			Pass/Fail
		Chain A	Chain B	Chain C	
149	5745	18.70	18.15	18.30	Pass
157	5785	18.70	18.25	18.30	Pass
165	5825	18.65	18.35	18.50	Pass

Test Mode :	Mode 19~20	Temperature :	24~26℃
Test Engineer :	Alan Liu	Relative Humidity :	40~44%

Channel	Frequency (MHz)	802.11n (BW 40MHz) 99% Occupied Bandwidth (MHz)			Pass/Fail
		Chain A	Chain B	Chain C	
151	5755	39.51	38.34	38.43	Pass
159	5795	39.69	38.52	38.52	Pass

3.1.7 Test Result of 6dB Bandwidth Plots

6 dB Bandwidth Plot on 802.11b Channel 01 - Chain A



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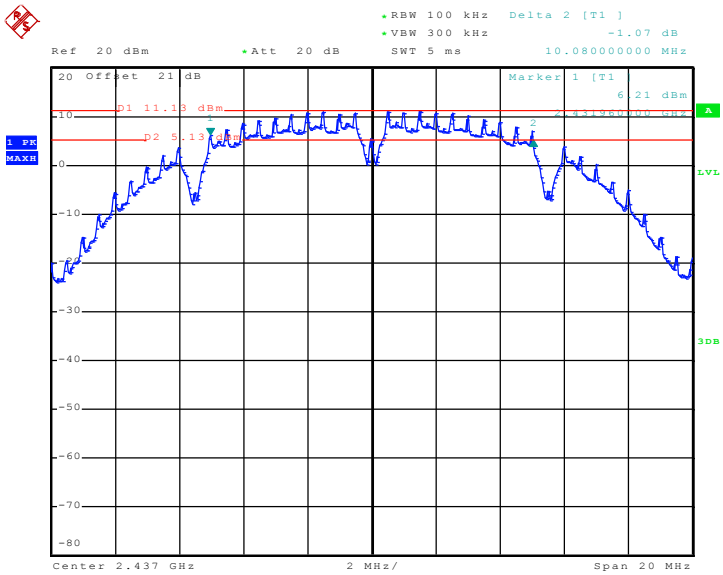
6 dB Bandwidth Plot on 802.11b Channel 06 - Chain A



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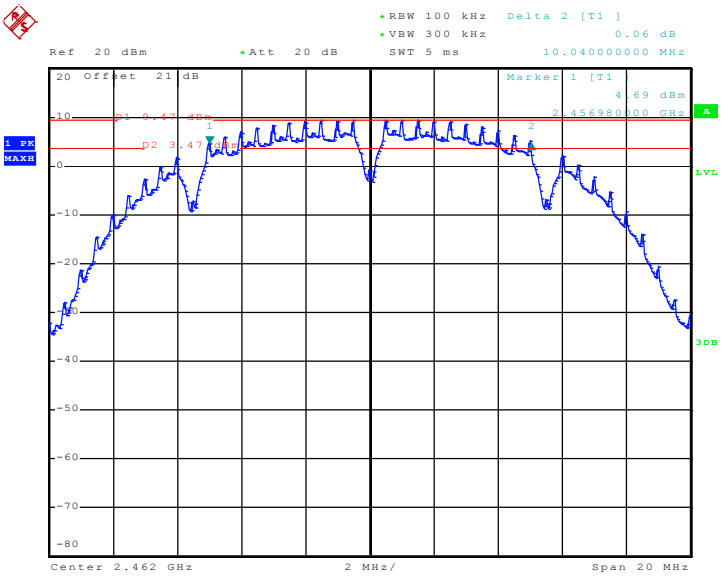
6 dB Bandwidth Plot on 802.11b Channel 11 - Chain A



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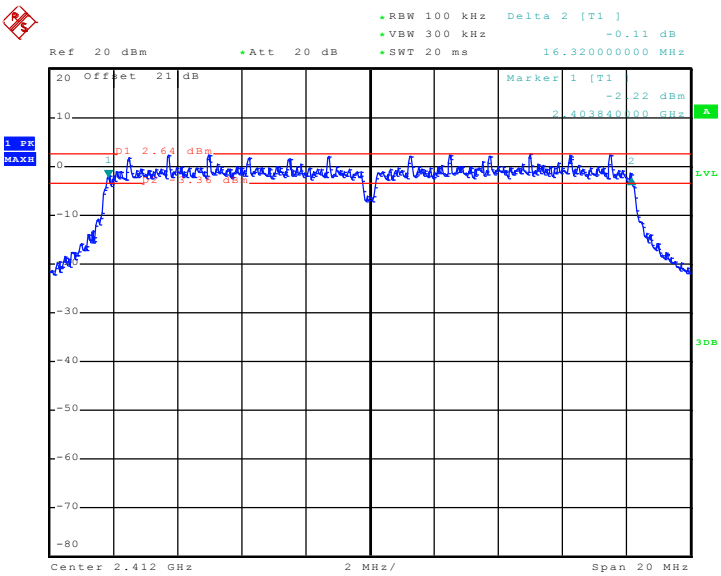
6 dB Bandwidth Plot on 802.11g Channel 01 - Chain A



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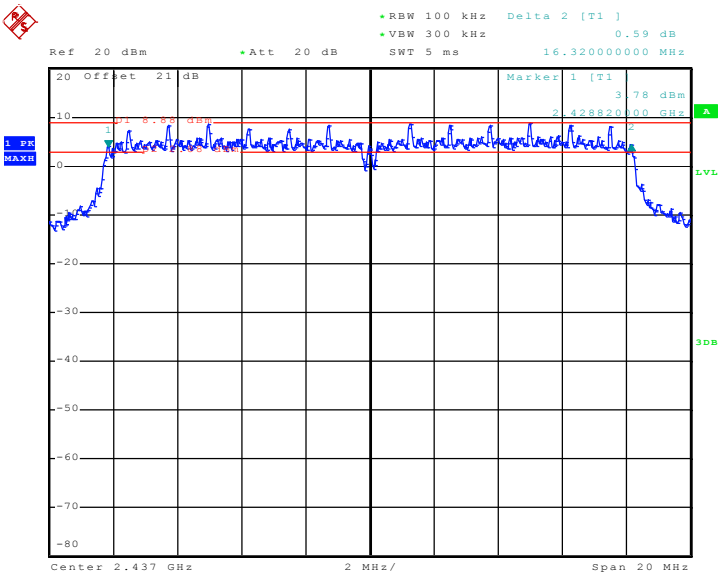
6 dB Bandwidth Plot on 802.11g Channel 06 - Chain A



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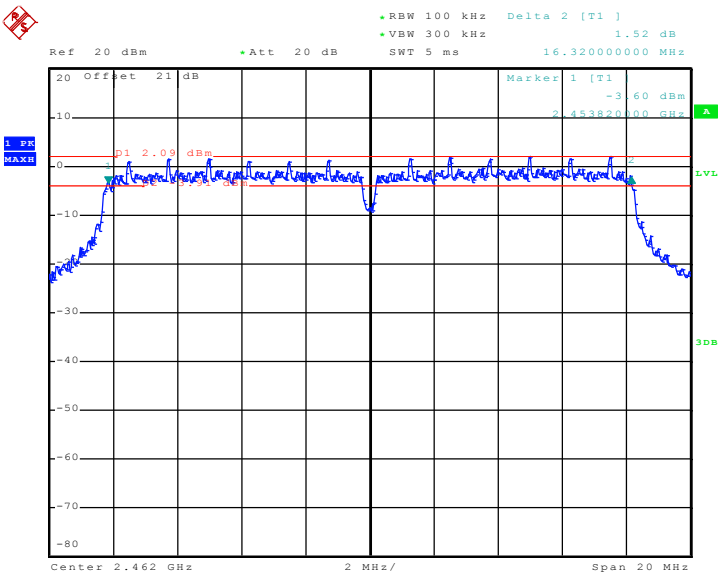

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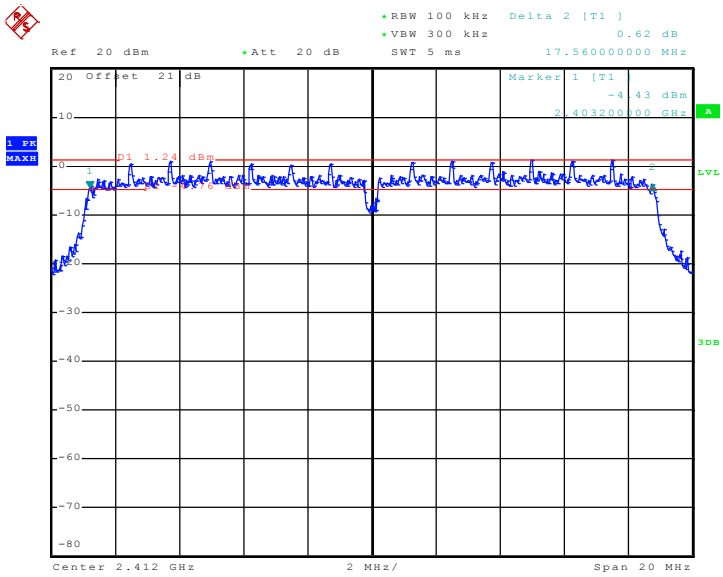
6 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 01 - Chain A



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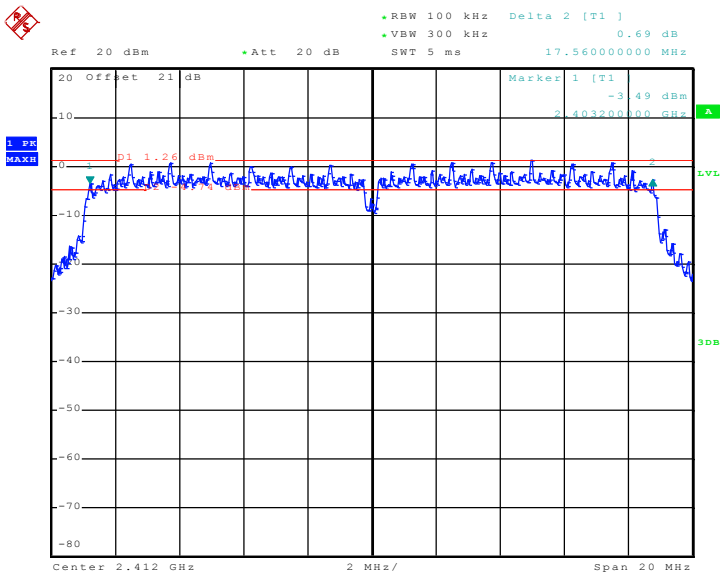
6 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 01 - Chain B



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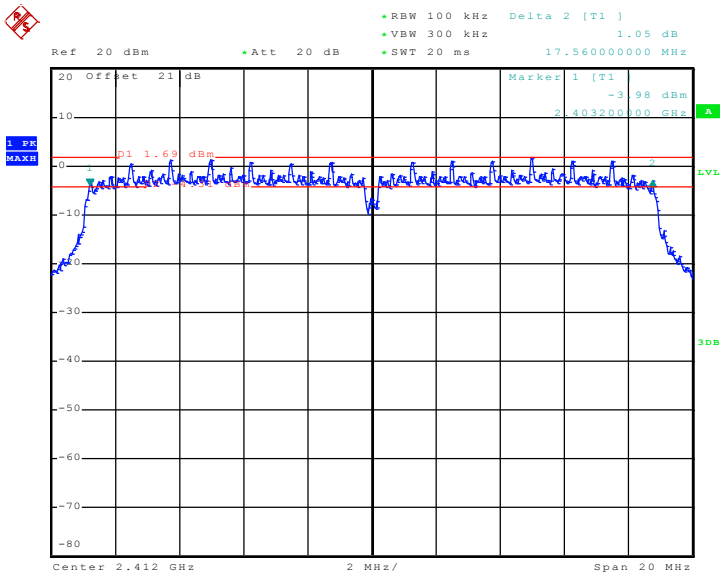
6 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 01 - Chain C



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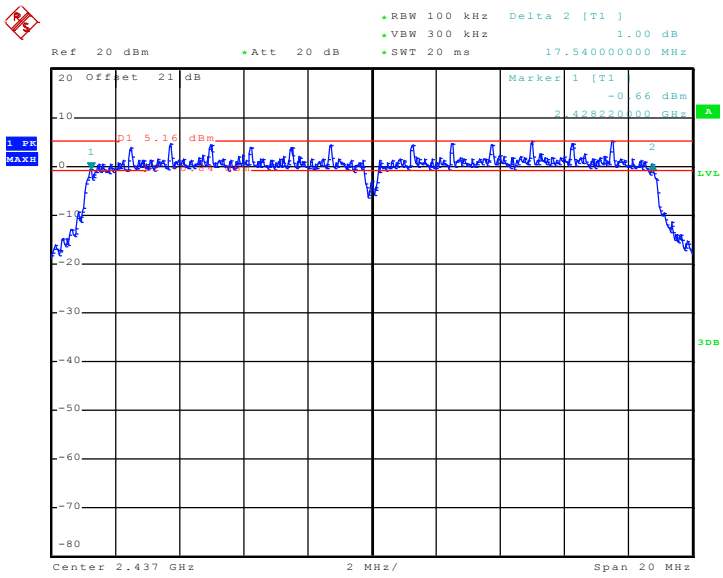
6 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 06 - Chain A



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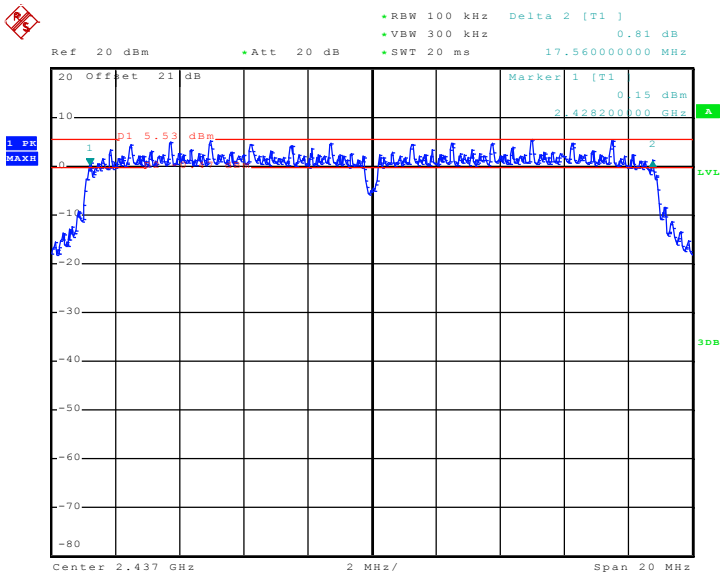
6 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 06 - Chain B



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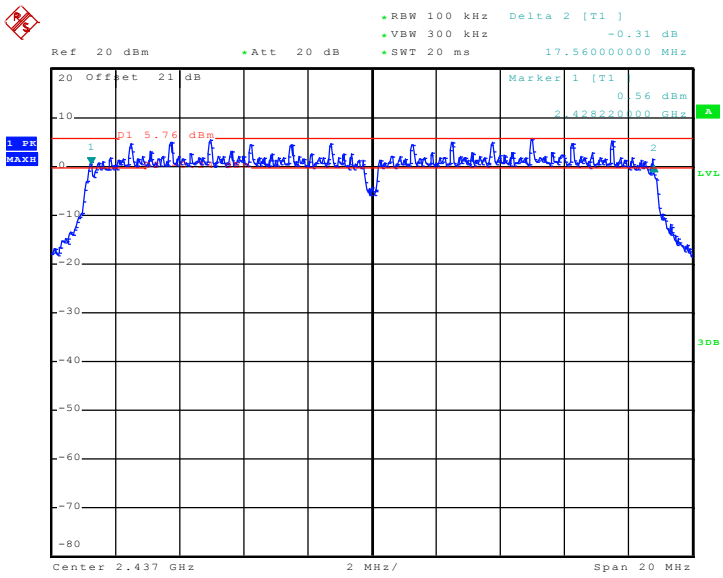
6 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 06 - Chain C



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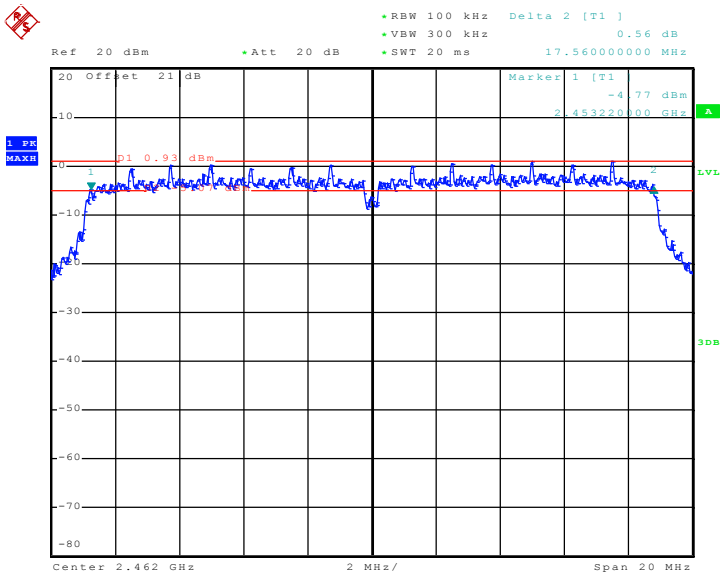
6 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 11 - Chain A



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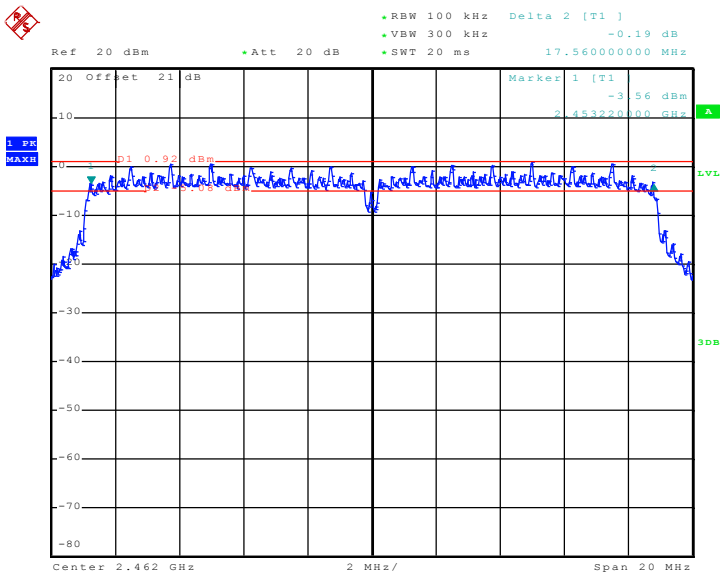
6 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 11 - Chain B



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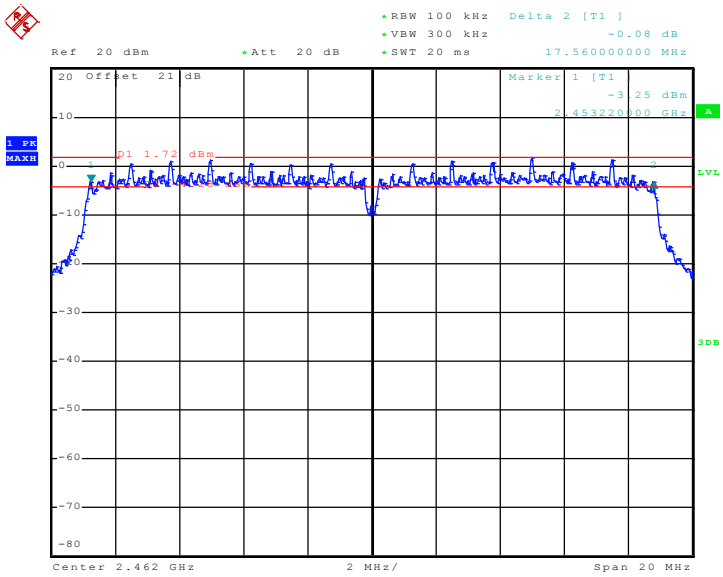
6 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 11 - Chain C



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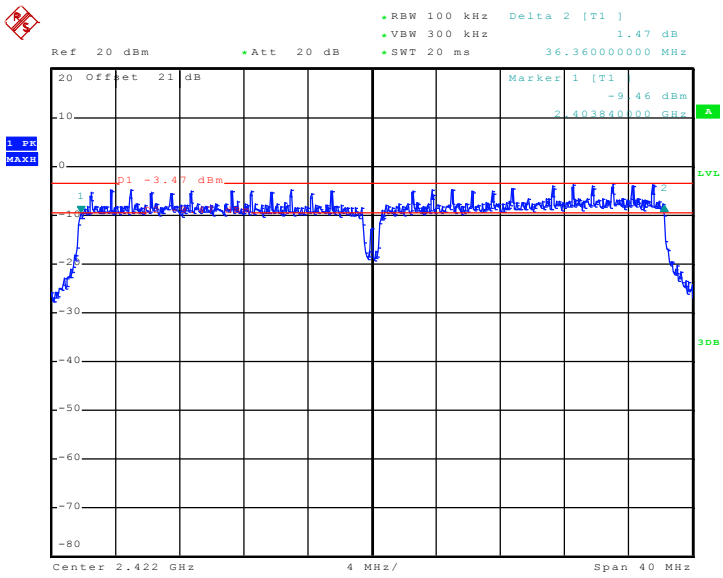
6 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 03 - Chain A



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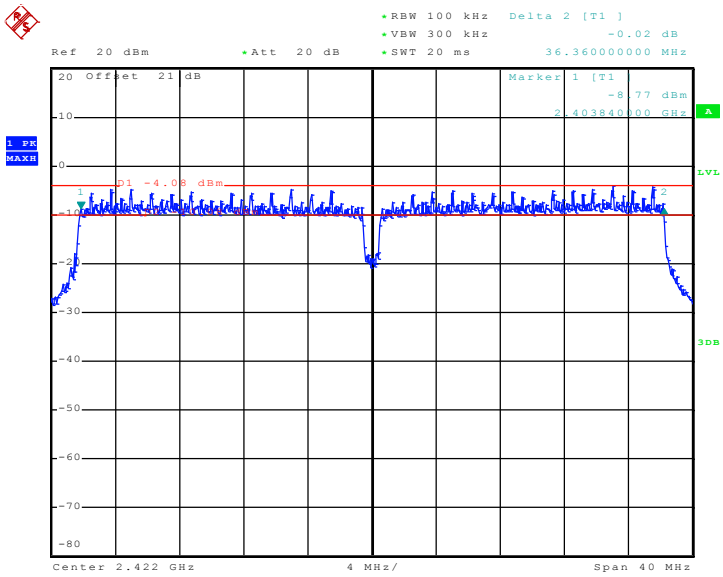
6 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 03 - Chain B



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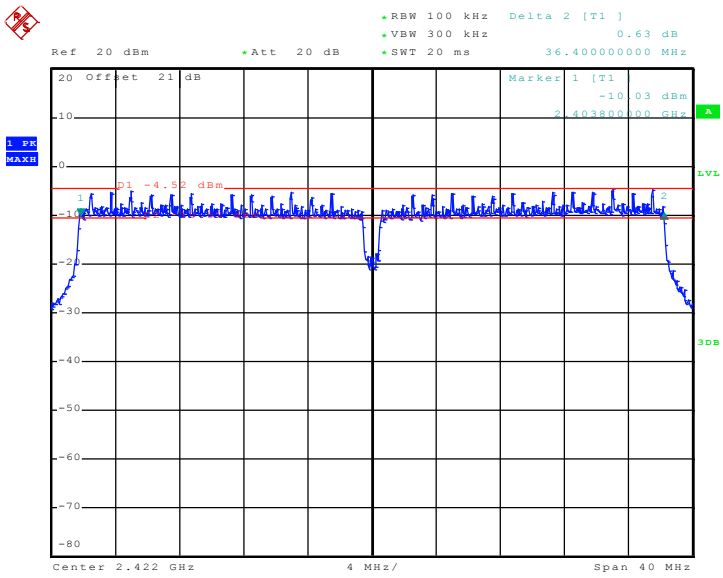
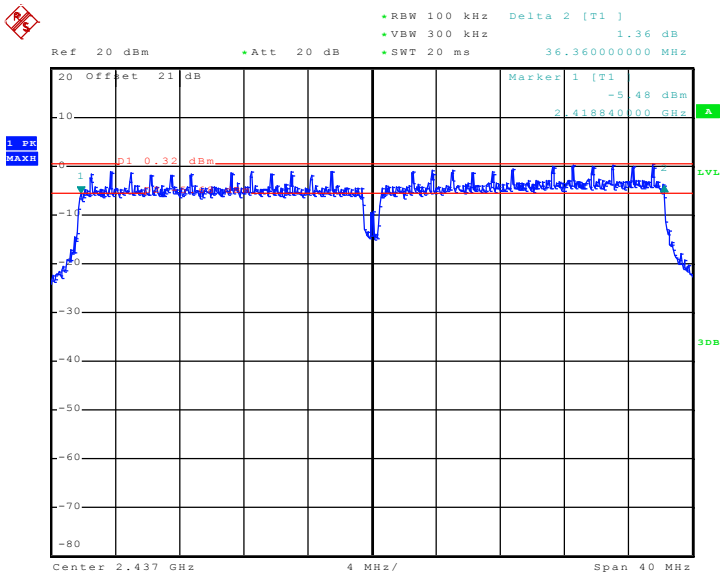
6 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 03 - Chain C



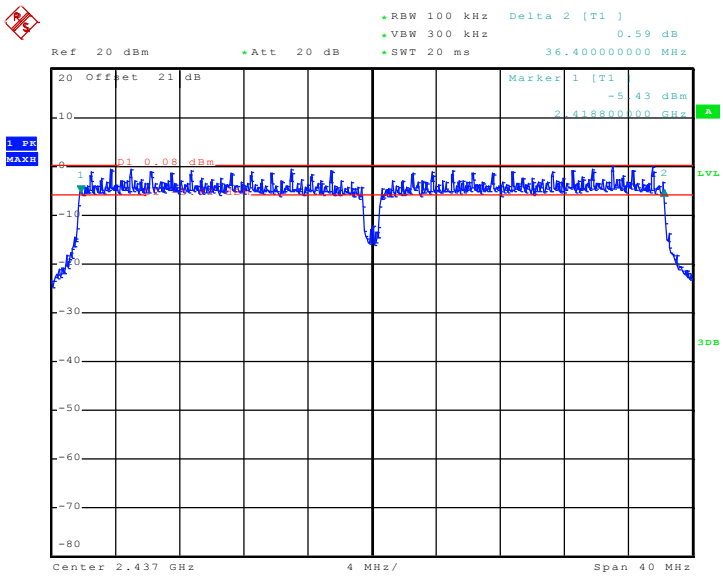
Date: 22.APR.2011 23:37:45

6 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 06 - Chain A



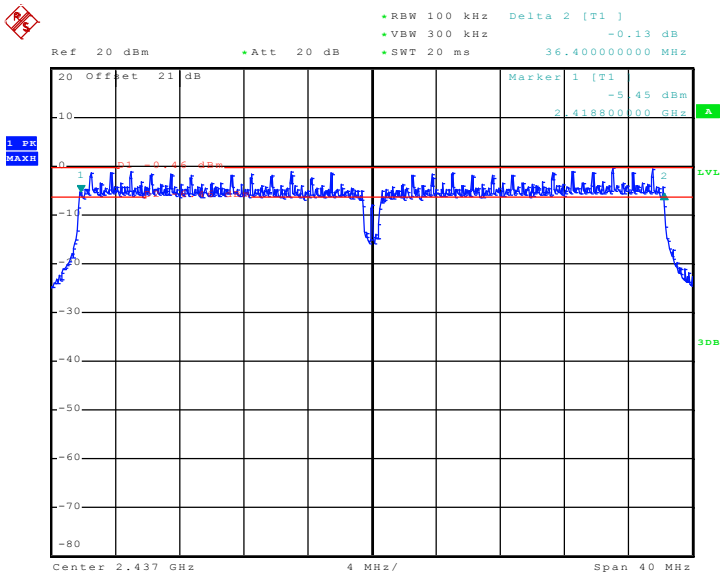
Date: 22.APR.2011 20:51:18

6 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 06 - Chain B



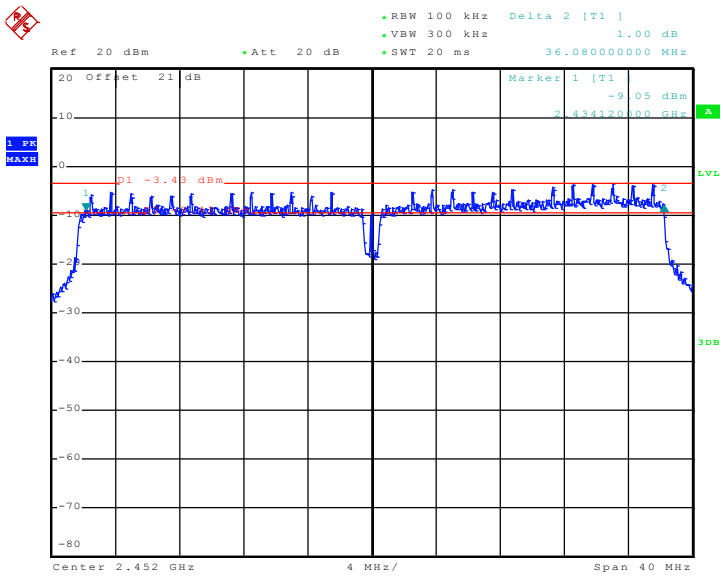
Date: 22.APR.2011 21:04:46

6 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 06 - Chain C



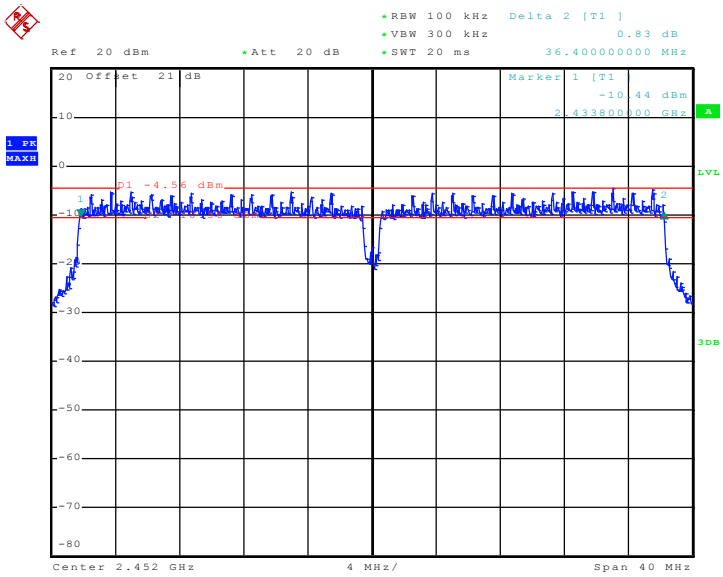
Date: 22.APR.2011 21:25:22

6 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 09 - Chain A



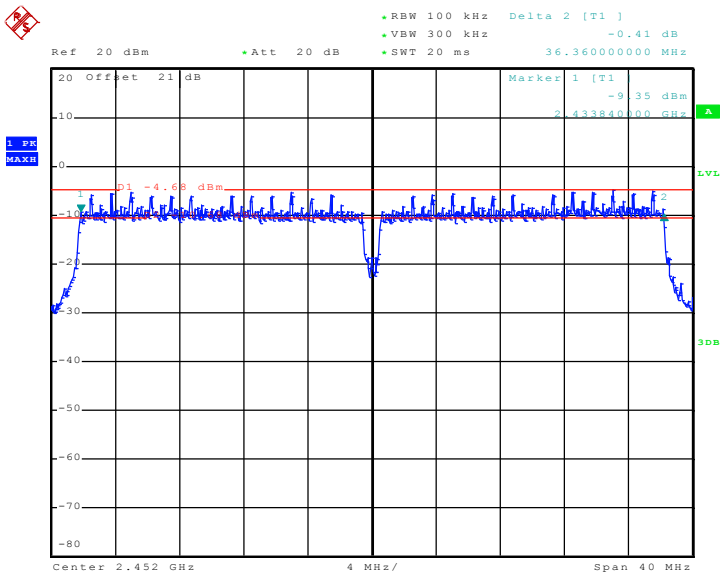
Date: 22.APR.2011 23:45:36

6 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 09 - Chain B



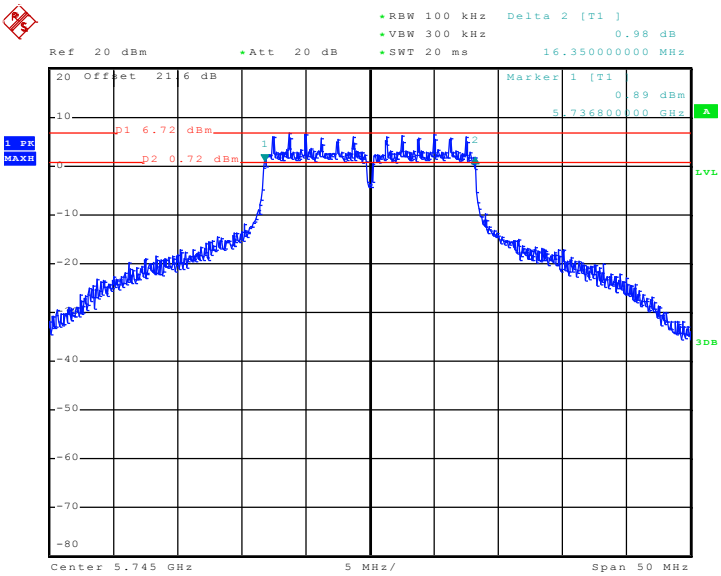
Date: 22.APR.2011 23:07:35

6 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 09 - Chain C



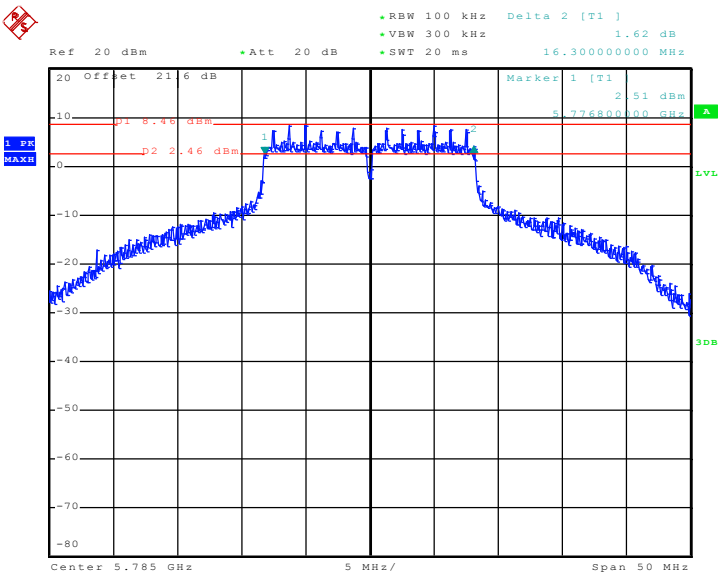
Date: 22.APR.2011 21:46:47

6 dB Bandwidth Plot on 802.11a Channel 149 - Chain A



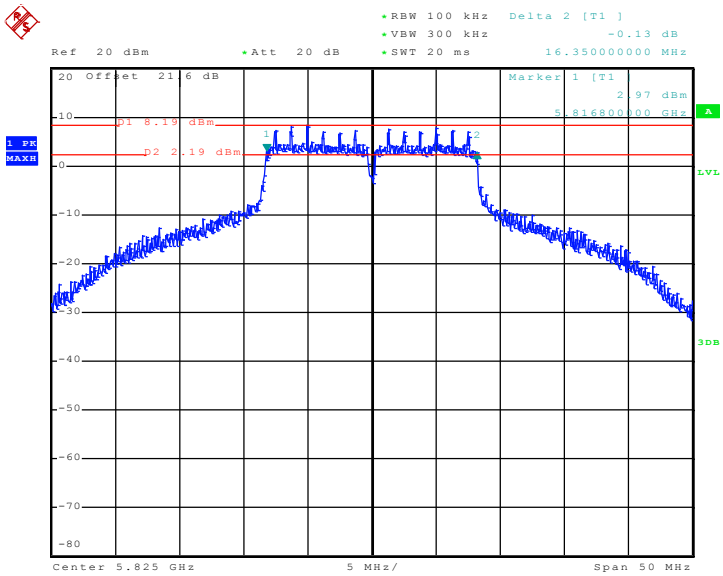
Date: 23.APR.2011 13:15:34

6 dB Bandwidth Plot on 802.11a Channel 157 - Chain A



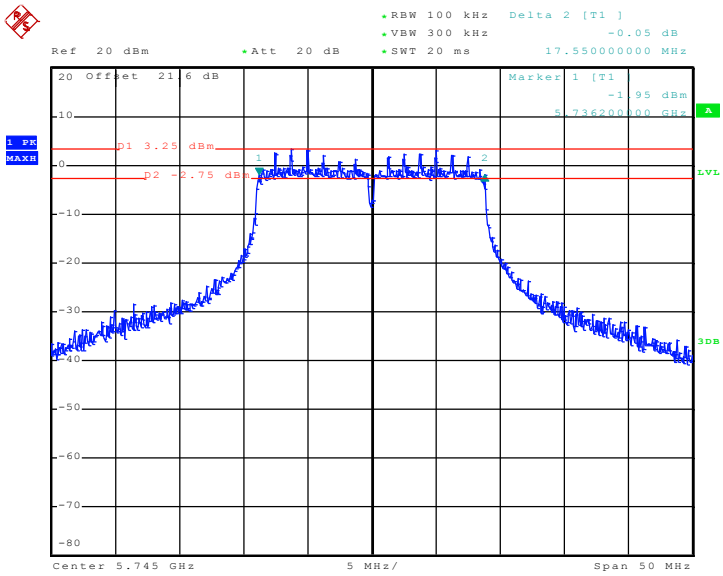
Date: 23.APR.2011 13:28:11

6 dB Bandwidth Plot on 802.11a Channel 165 - Chain A



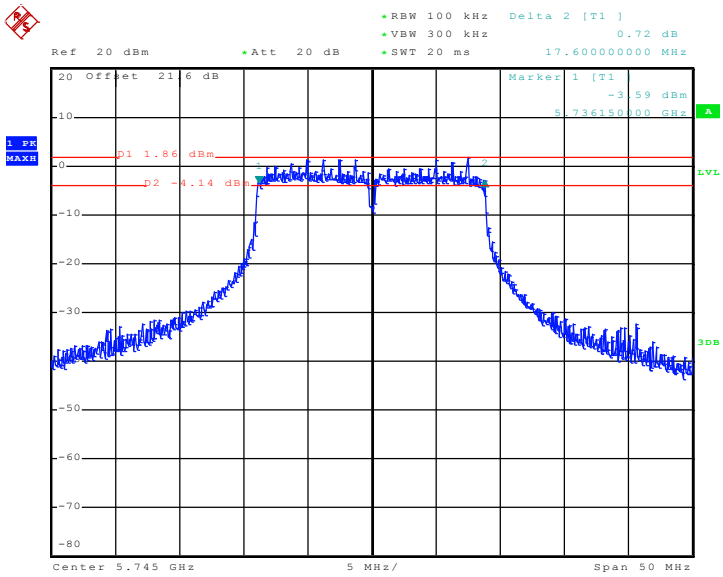
Date: 23.APR.2011 13:53:15

6 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 149 - Chain A



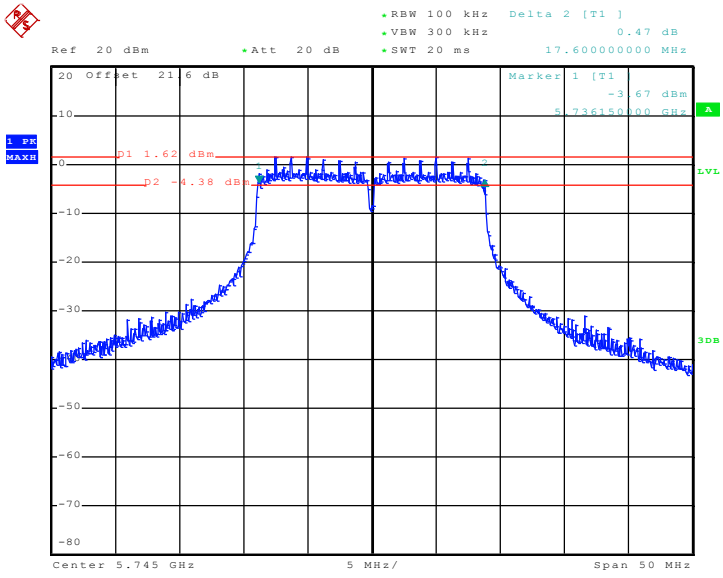
Date: 23.APR.2011 14:59:58

6 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 149 - Chain B



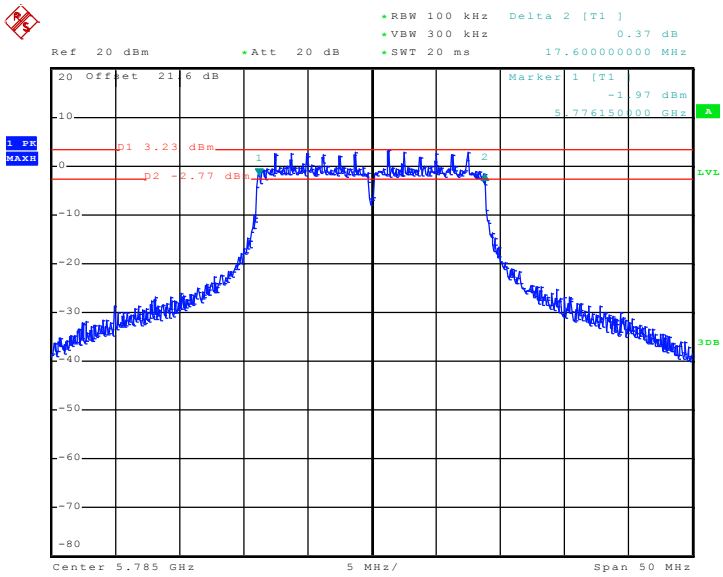
Date: 23.APR.2011 15:20:23

6 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 149 - Chain C



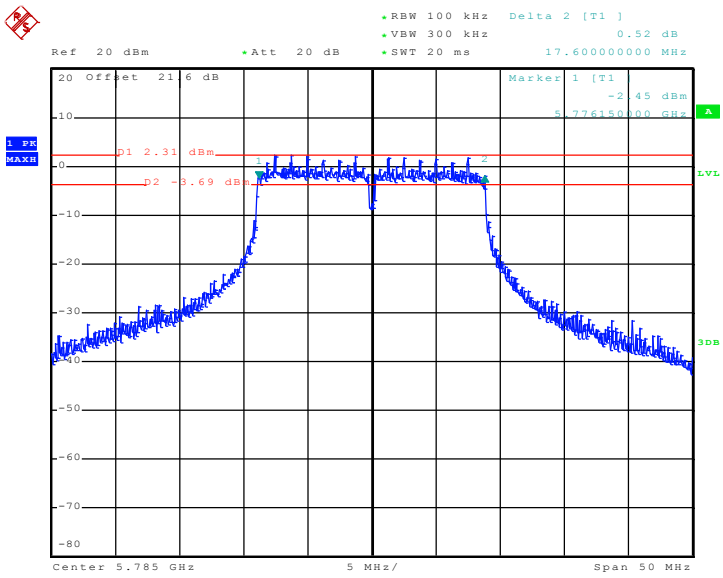
Date: 23.APR.2011 15:38:12

6 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 157 - Chain A



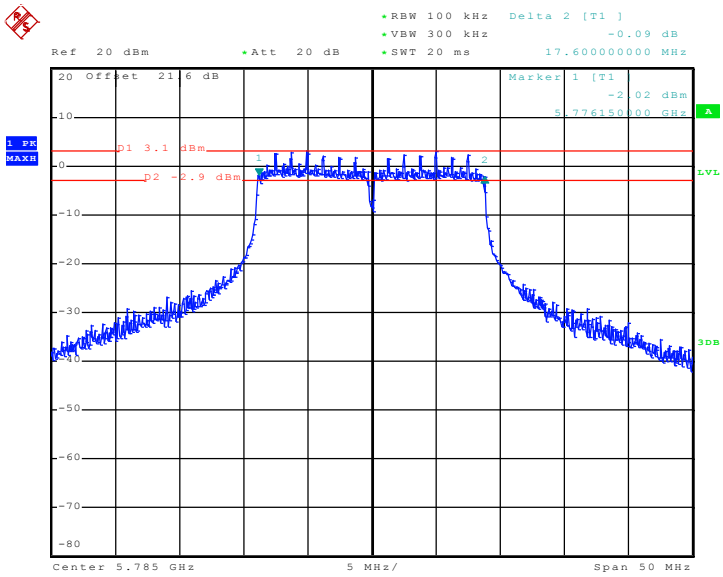
Date: 23.APR.2011 16:51:30

6 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 157 - Chain B



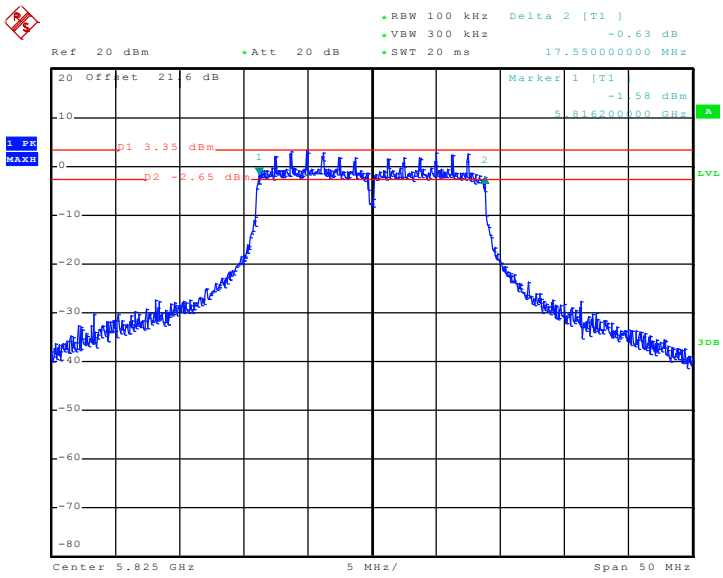
Date: 23.APR.2011 16:29:13

6 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 157 - Chain C



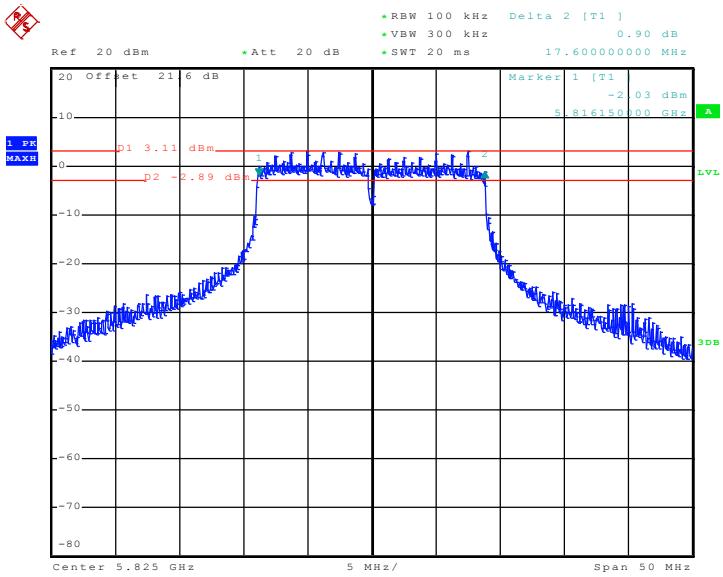
Date: 23.APR.2011 16:04:58

6 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 165 - Chain A



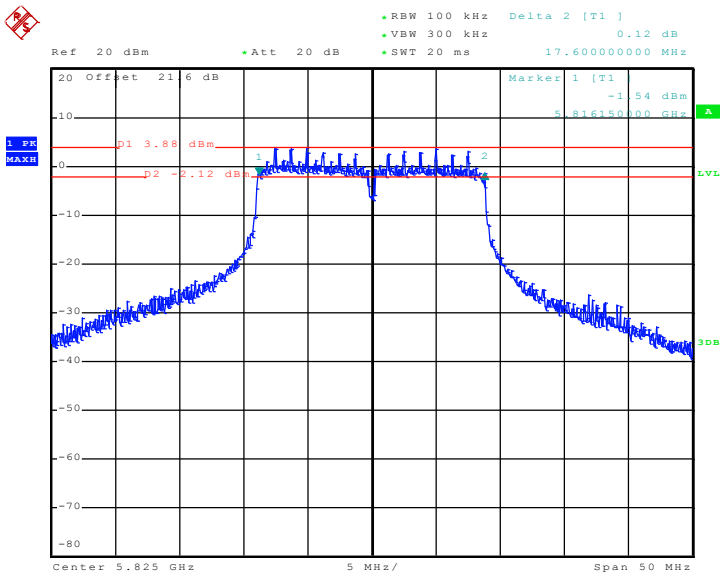
Date: 23.APR.2011 17:11:12

6 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 165 - Chain B



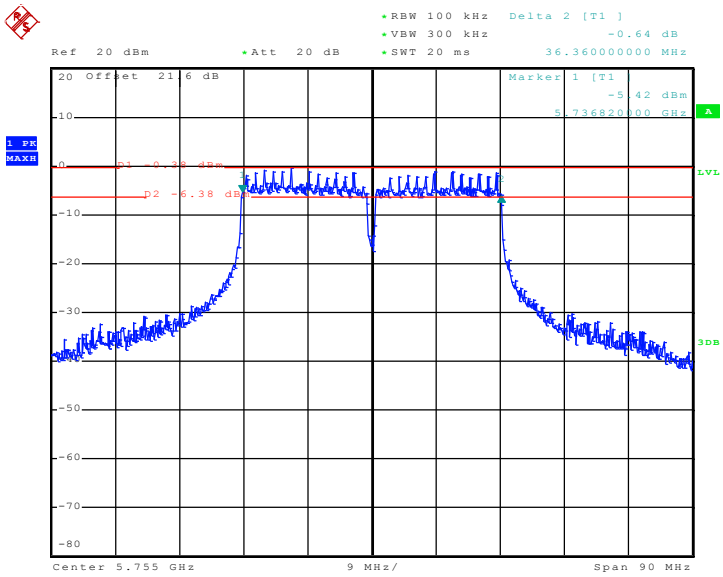
Date: 23.APR.2011 17:34:19

6 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 165 - Chain C



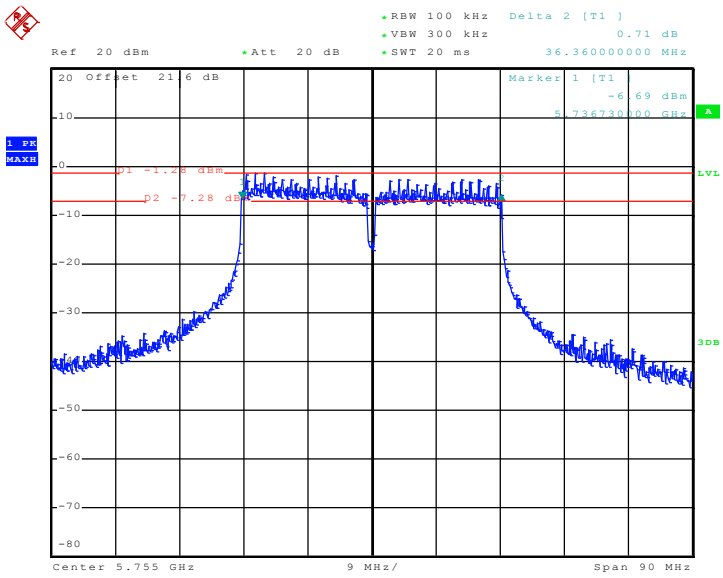
Date: 23.APR.2011 21:09:09

6 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 151 - Chain A



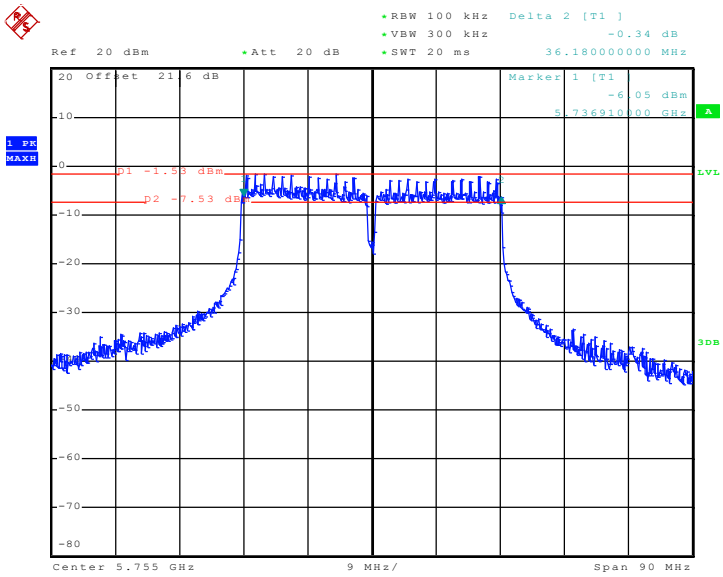
Date: 23.APR.2011 19:40:27

6 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 151 - Chain B



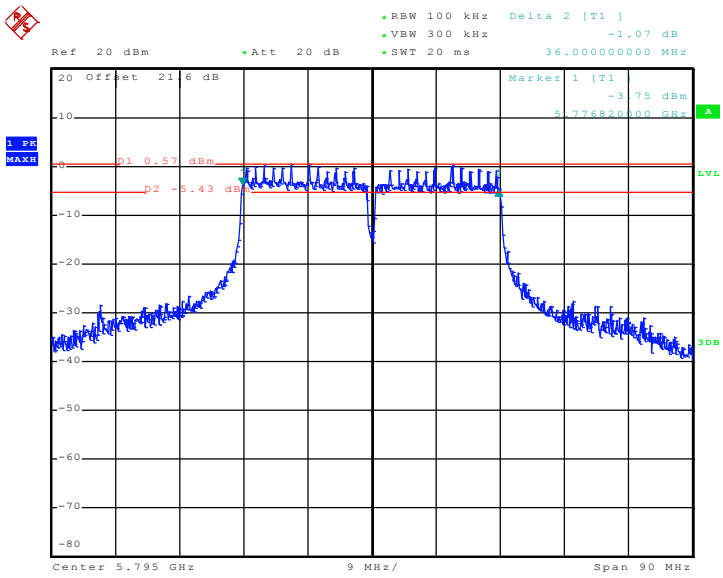
Date: 23.APR.2011 19:14:42

6 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 151 - Chain C



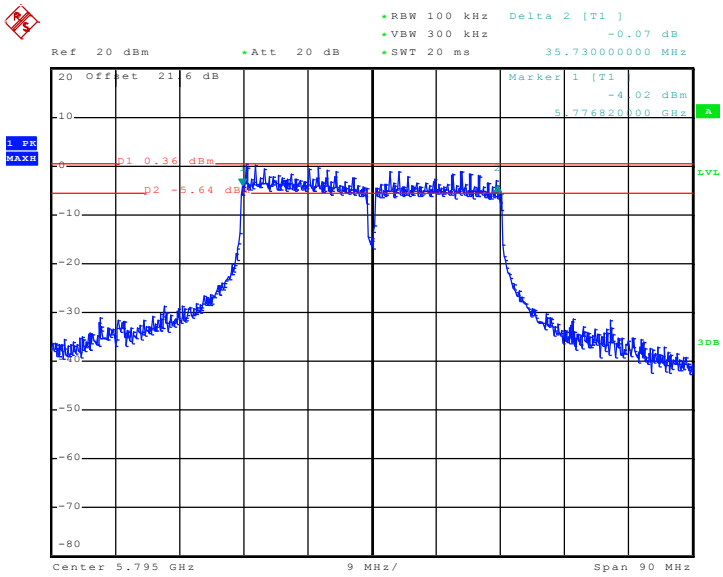
Date: 23.APR.2011 18:53:34

6 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 159 - Chain A



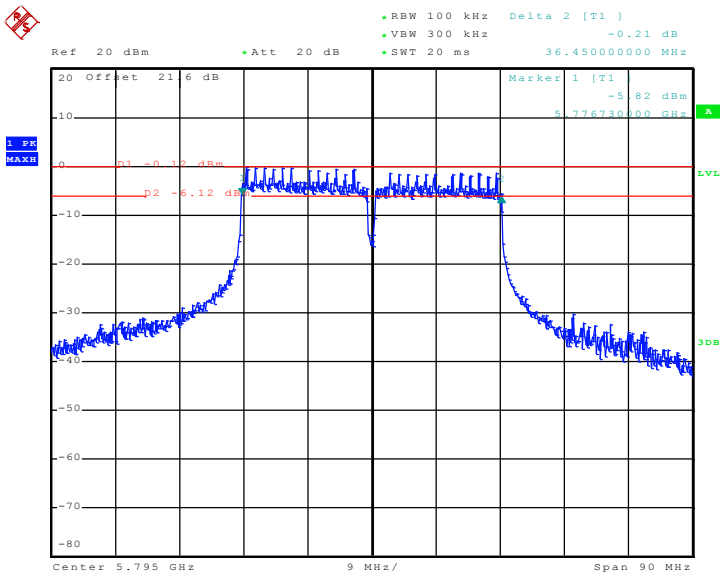
Date: 23.APR.2011 20:05:21

6 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 159 - Chain B



Date: 23.APR.2011 20:26:35

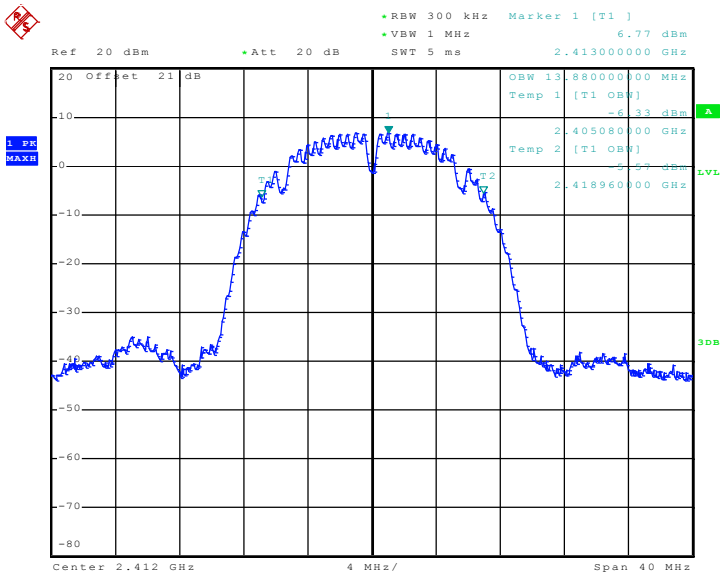
6 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 159 - Chain C



Date: 23.APR.2011 20:49:59

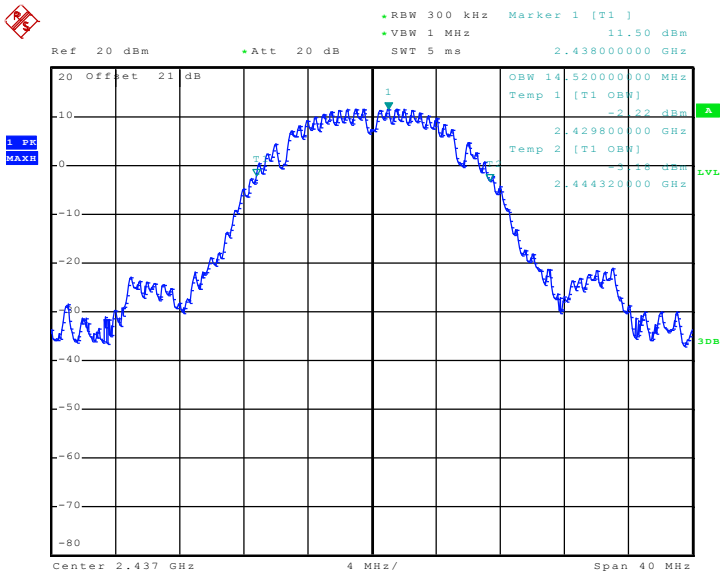
3.1.8 Test Result of 99% Bandwidth Plots

99% Occupied Bandwidth Plot on 802.11b Channel 01 - Chain A



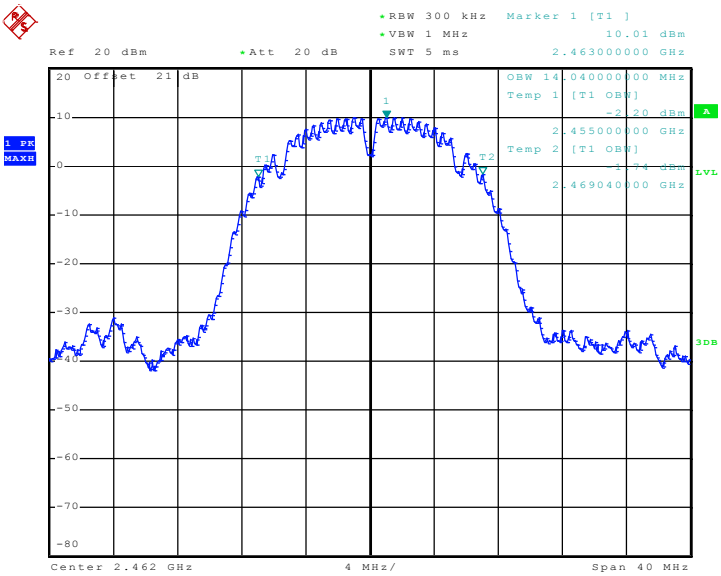
Date: 16.APR.2011 18:49:30

99% Occupied Bandwidth Plot on 802.11b Channel 06 - Chain A



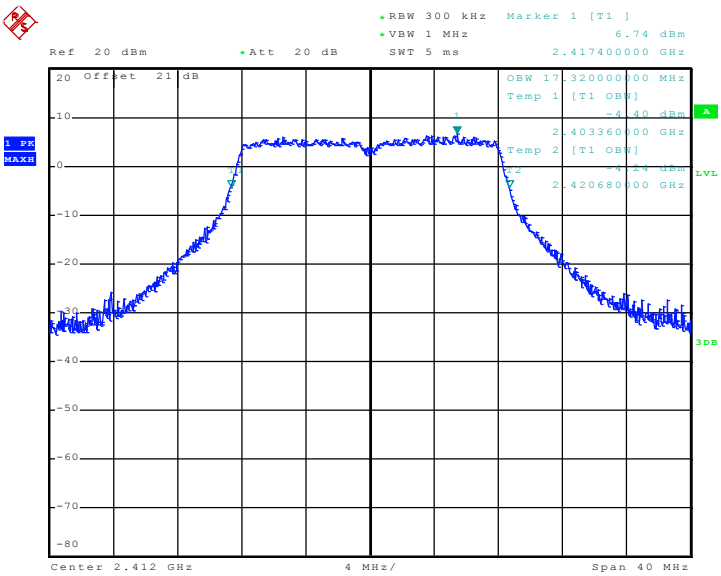
Date: 16.APR.2011 19:33:54

99% Occupied Bandwidth Plot on 802.11b Channel 11 - Chain A



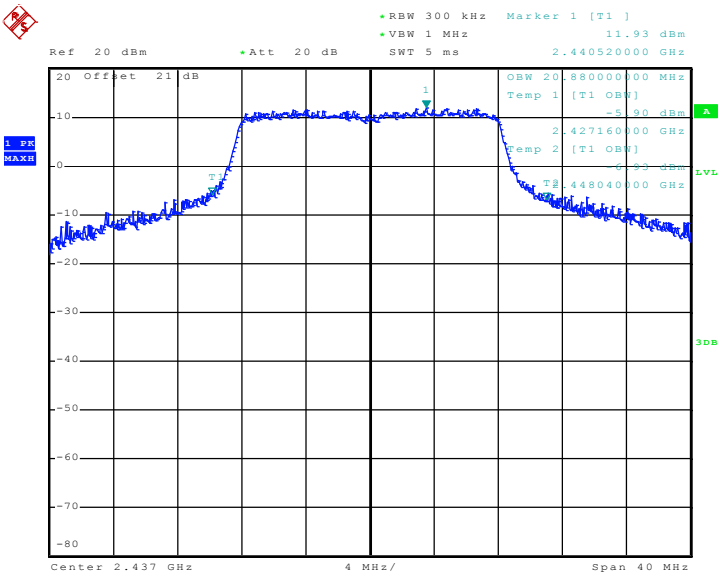
Date: 16.APR.2011 20:05:19

99% Occupied Bandwidth Plot on 802.11g Channel 01 - Chain A



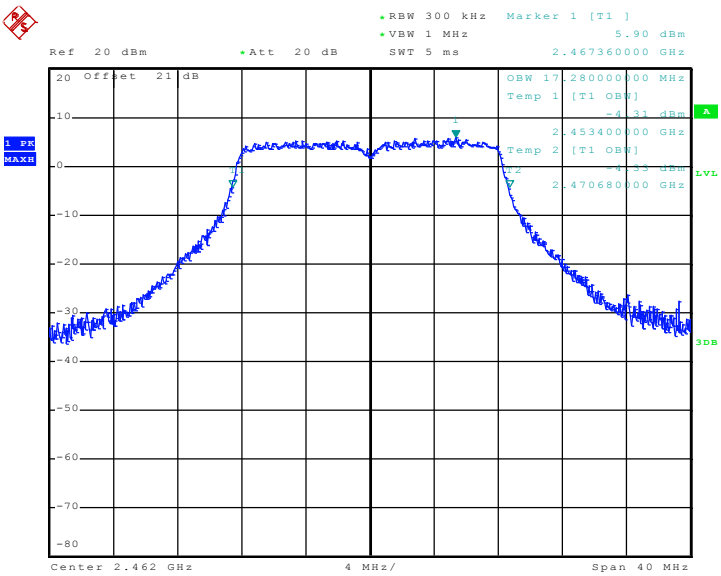
Date: 16.APR.2011 20:51:53

99% Occupied Bandwidth Plot on 802.11g Channel 06 - Chain A



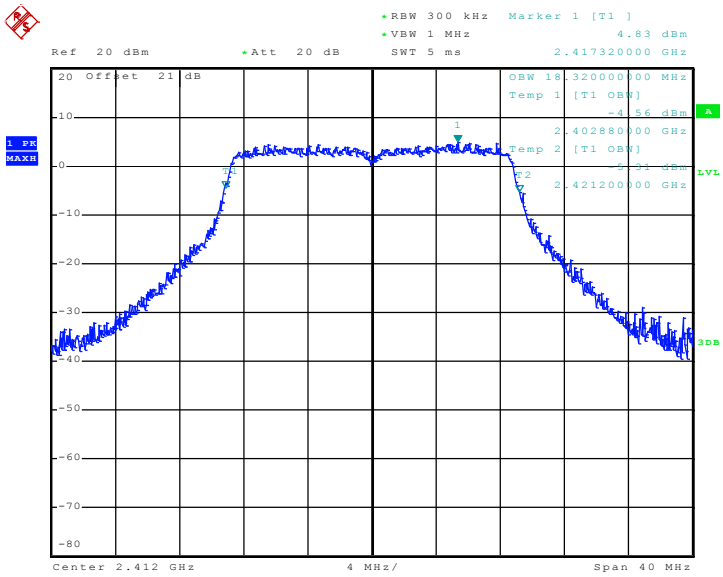
Date: 16.APR.2011 20:32:43

99% Occupied Bandwidth Plot on 802.11g Channel 11 - Chain A



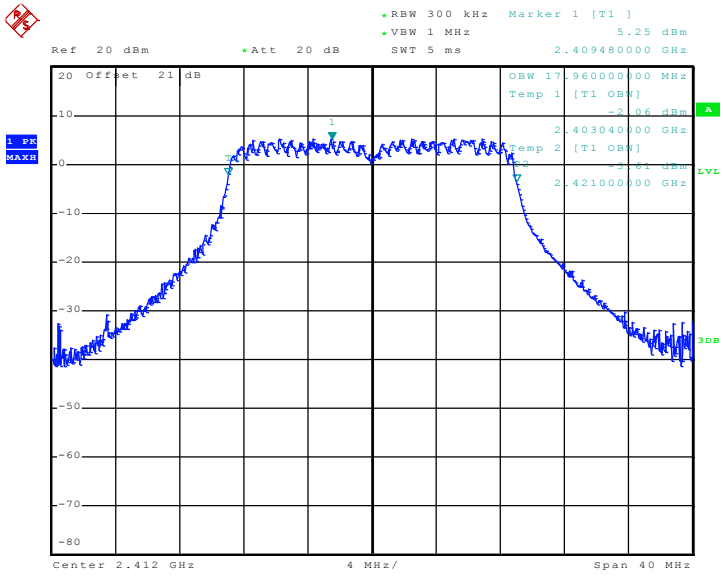
Date: 16.APR.2011 20:12:18

99% Occupied Bandwidth Plot on 802.11n (BW 20MHz) Channel 01 - Chain A



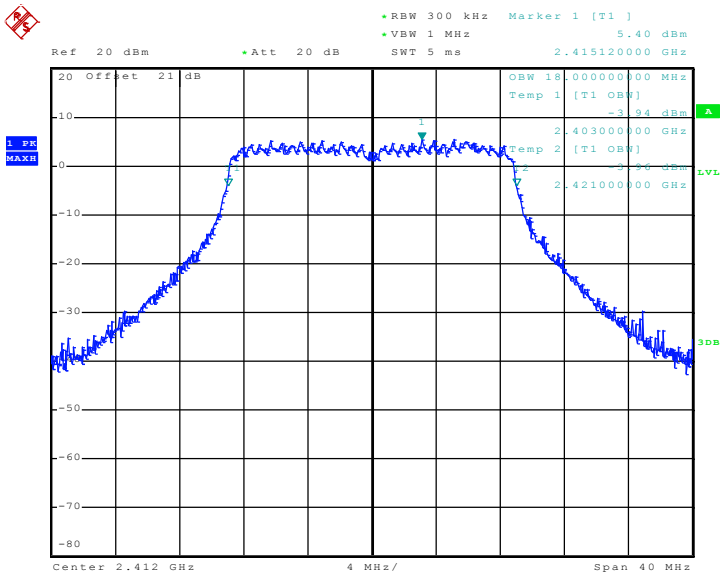
Date: 16.APR.2011 21:09:29

99% Occupied Bandwidth Plot on 802.11n (BW 20MHz) Channel 01 - Chain B



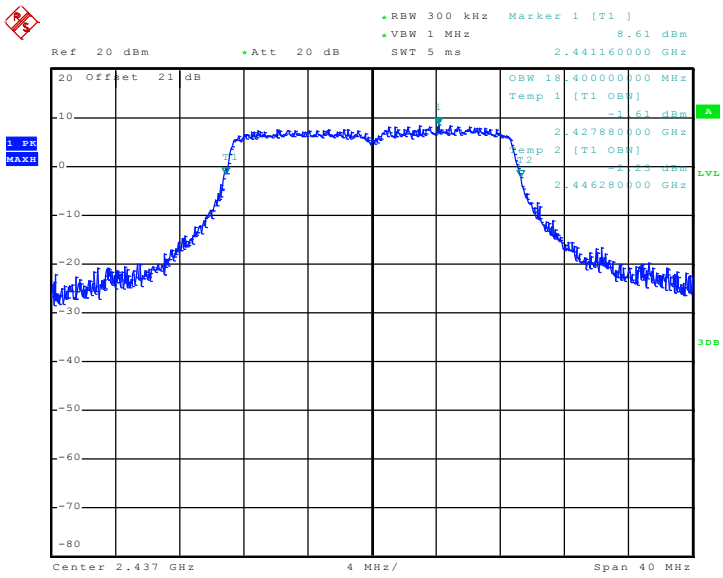
Date: 16.APR.2011 21:25:43

99% Occupied Bandwidth Plot on 802.11n (BW 20MHz) Channel 01 - Chain C



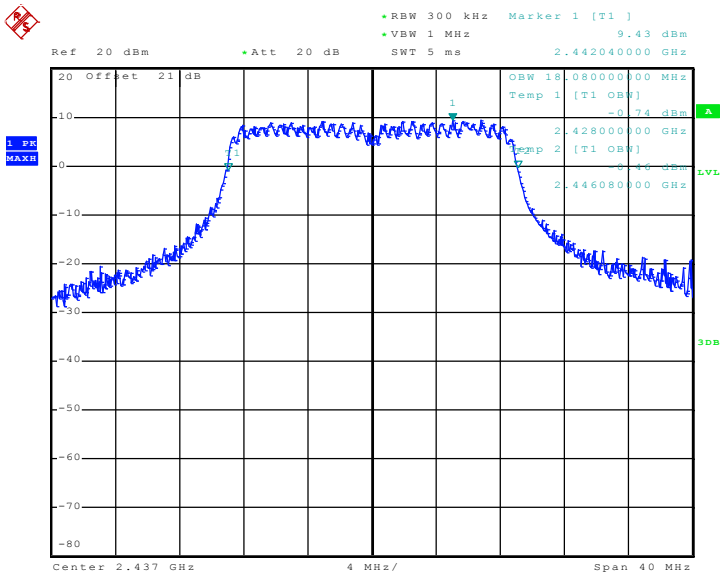
Date: 21.APR.2011 22:33:16

99% Occupied Bandwidth Plot on 802.11n (BW 20MHz) Channel 06 - Chain A



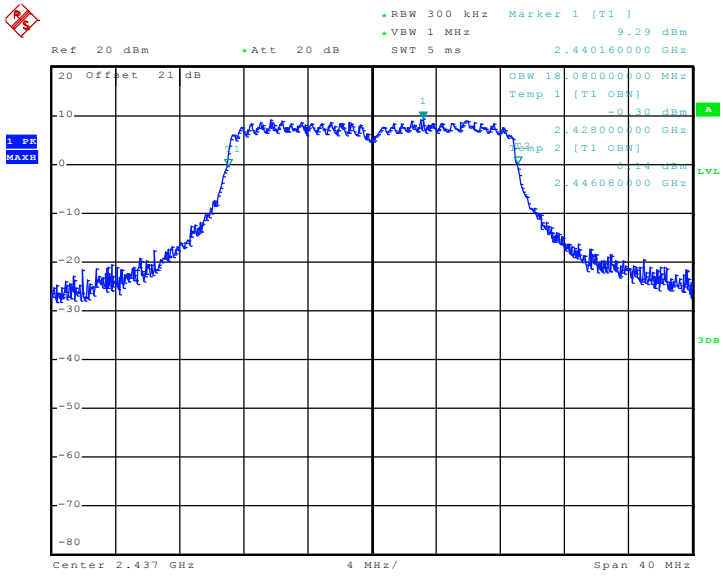
Date: 21.APR.2011 23:18:29

99% Occupied Bandwidth Plot on 802.11n (BW 20MHz) Channel 06 - Chain B



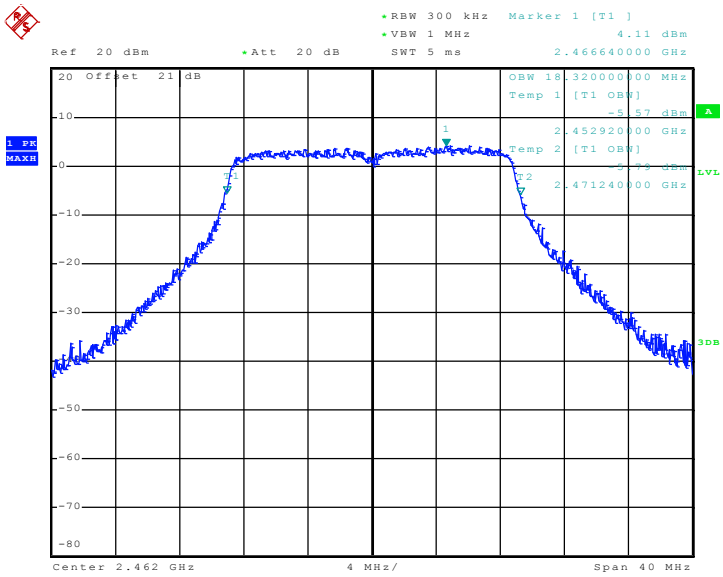
Date: 21.APR.2011 23:05:06

99% Occupied Bandwidth Plot on 802.11n (BW 20MHz) Channel 06 - Chain C



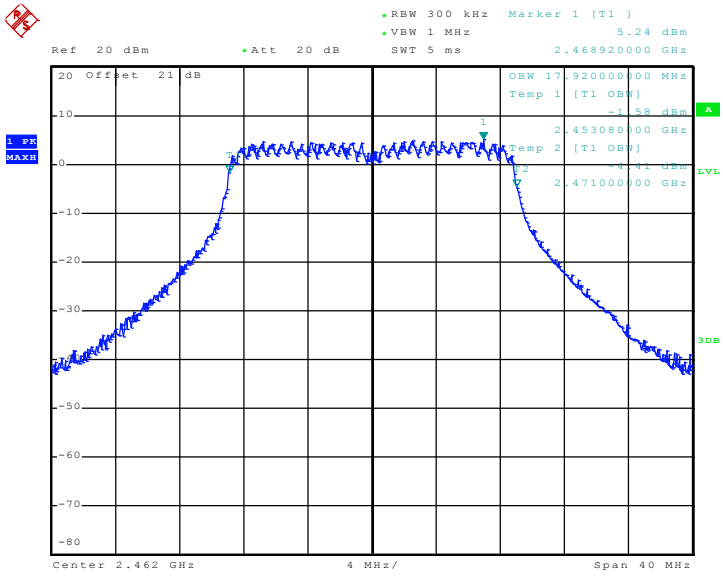
Date: 21.APR.2011 22:52:24

99% Occupied Bandwidth Plot on 802.11n (BW 20MHz) Channel 11 - Chain A



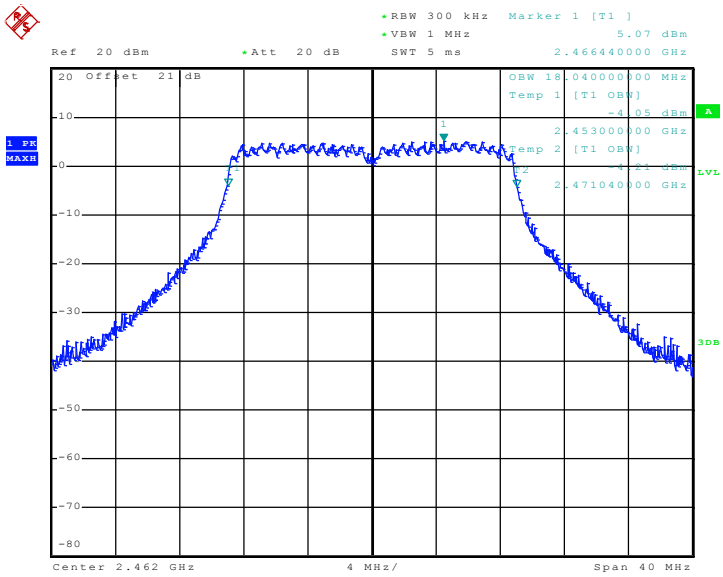
Date: 21.APR.2011 23:35:01

99% Occupied Bandwidth Plot on 802.11n (BW 20MHz) Channel 11 - Chain B



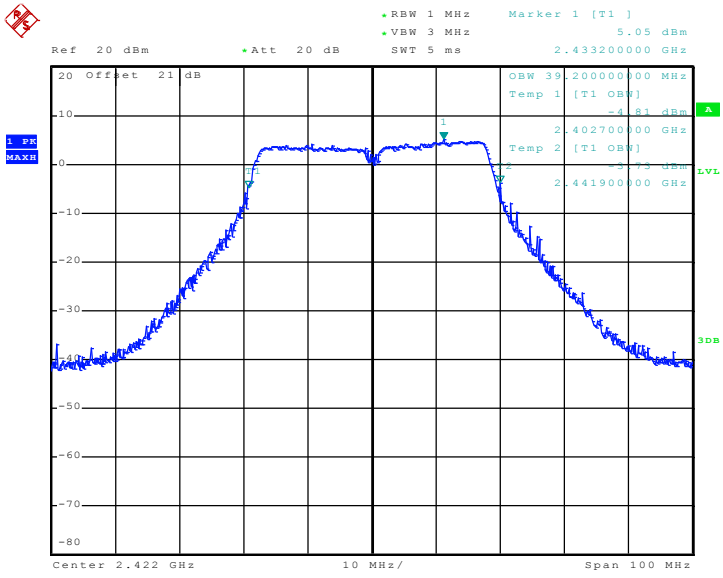
Date: 21.APR.2011 23:47:28

99% Occupied Bandwidth Plot on 802.11n (BW 20MHz) Channel 11 - Chain C



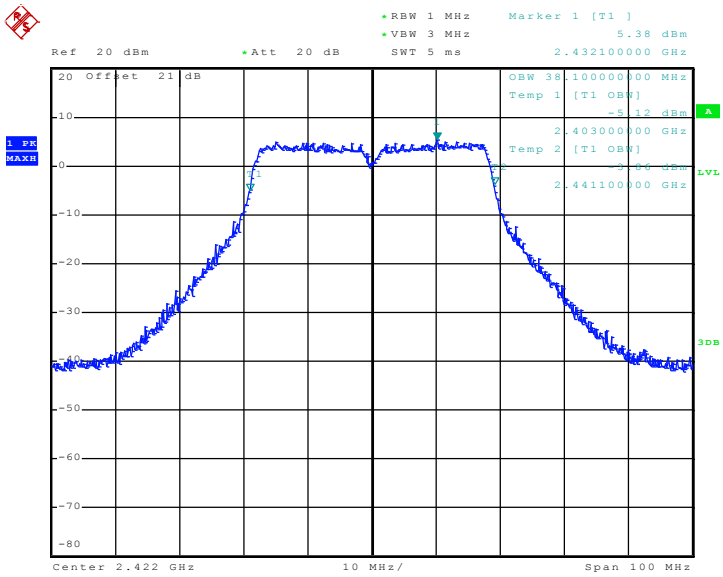
Date: 22.APR.2011 00:01:06

99% Occupied Bandwidth Plot on 802.11n (BW 40MHz) Channel 03 - Chain A



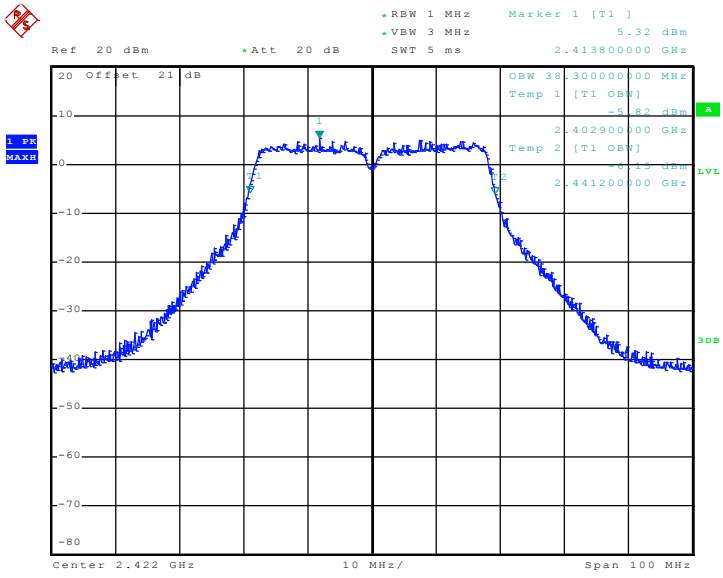
Date: 22.APR.2011 20:18:17

99% Occupied Bandwidth Plot on 802.11n (BW 40MHz) Channel 03 - Chain B



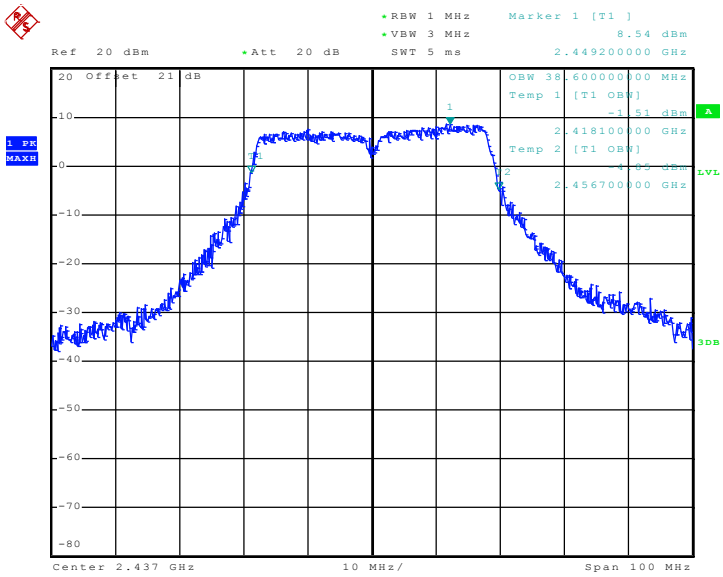
Date: 22.APR.2011 19:41:40

99% Occupied Bandwidth Plot on 802.11n (BW 40MHz) Channel 03 - Chain C



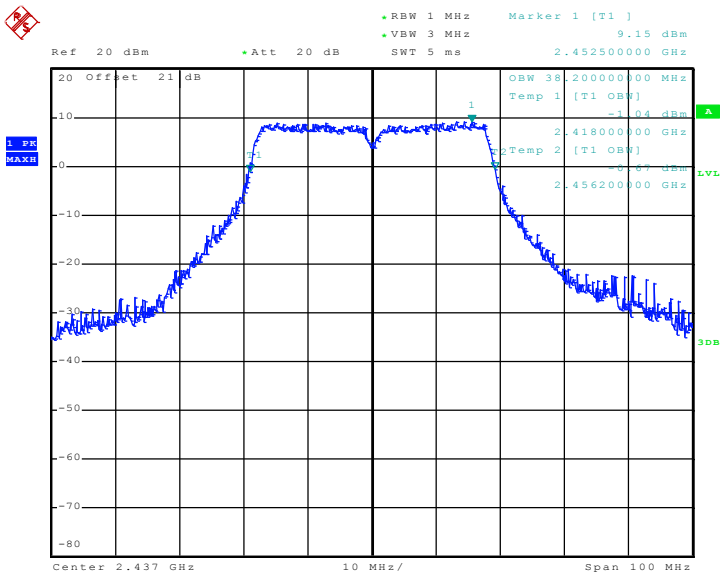
Date: 22.APR.2011 00:16:05

99% Occupied Bandwidth Plot on 802.11n (BW 40MHz) Channel 06 - Chain A



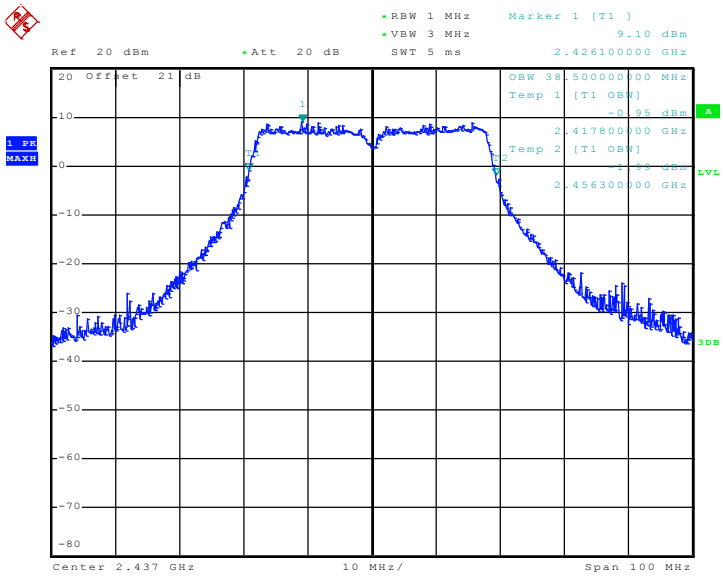
Date: 22.APR.2011 20:52:11

99% Occupied Bandwidth Plot on 802.11n (BW 40MHz) Channel 06 - Chain B



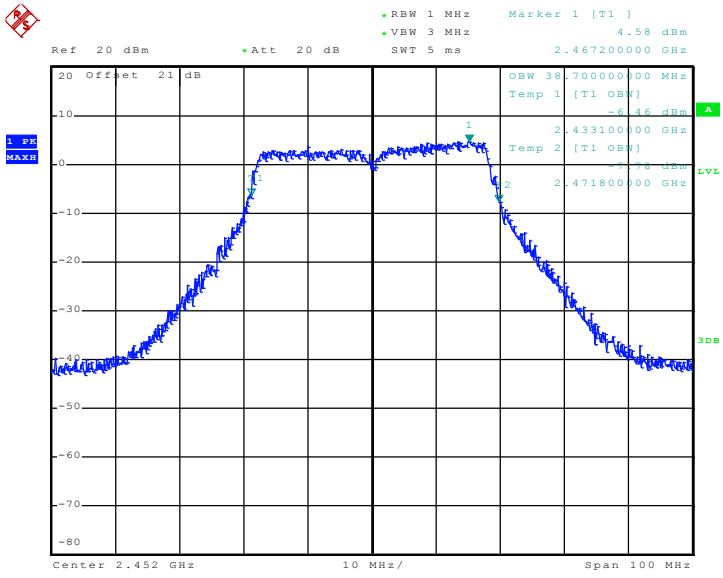
Date: 22.APR.2011 21:05:27

6 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 06 - Chain C



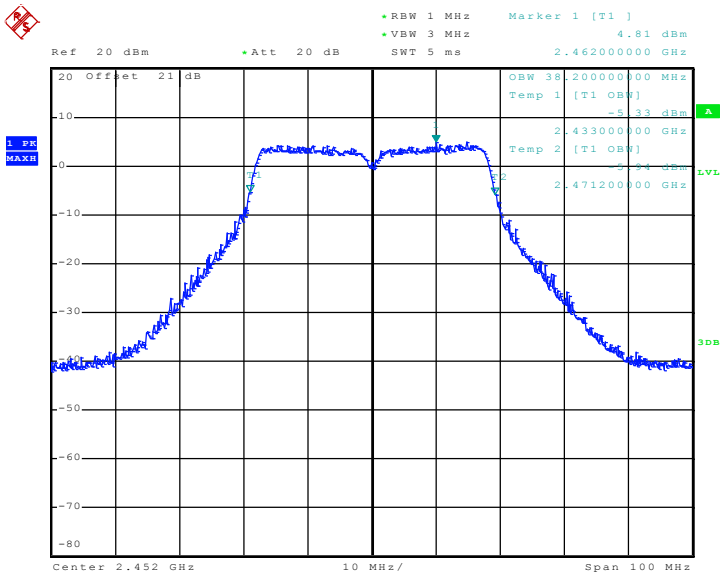
Date: 22.APR.2011 21:25:48

99% Occupied Bandwidth Plot on 802.11n (BW 40MHz) Channel 09 - Chain A



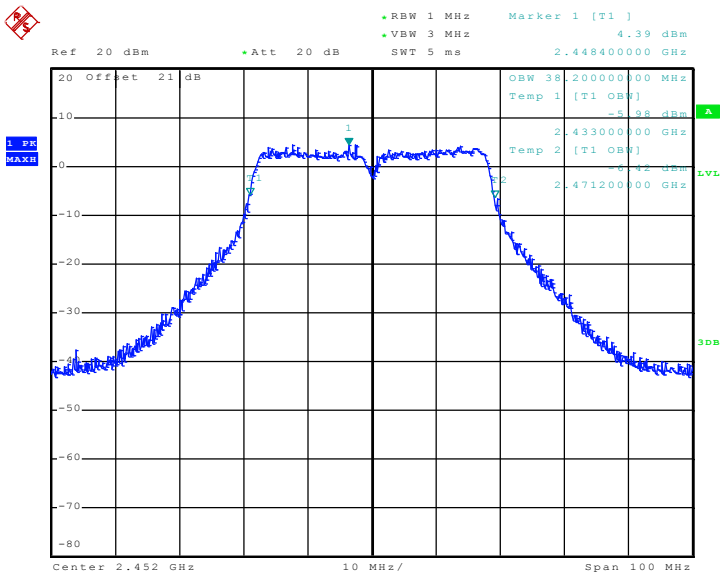
Date: 22.APR.2011 23:47:32

99% Occupied Bandwidth Plot on 802.11n (BW 40MHz) Channel 09 - Chain B



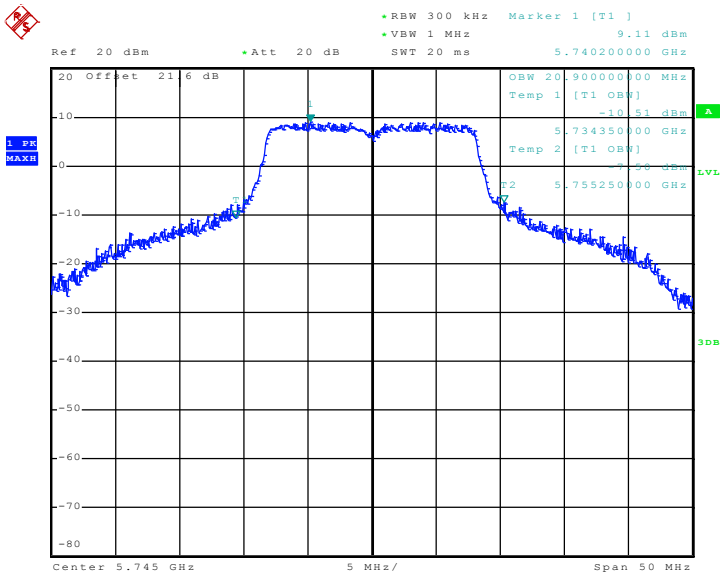
Date: 22.APR.2011 23:08:44

99% Occupied Bandwidth Plot on 802.11n (BW 40MHz) Channel 09 - Chain C



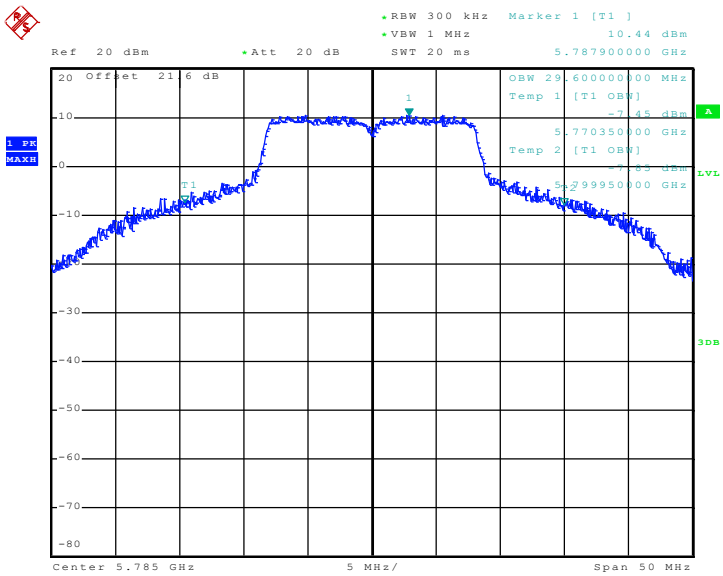
Date: 22.APR.2011 21:48:32

99% Occupied Bandwidth Plot on 802.11a Channel 149 - Chain A



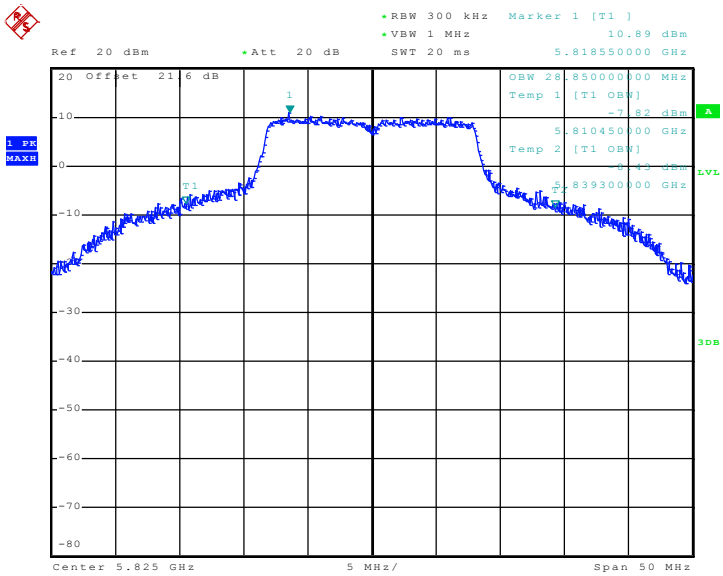
Date: 23.APR.2011 13:16:36

99% Occupied Bandwidth Plot on 802.11a Channel 157 - Chain A



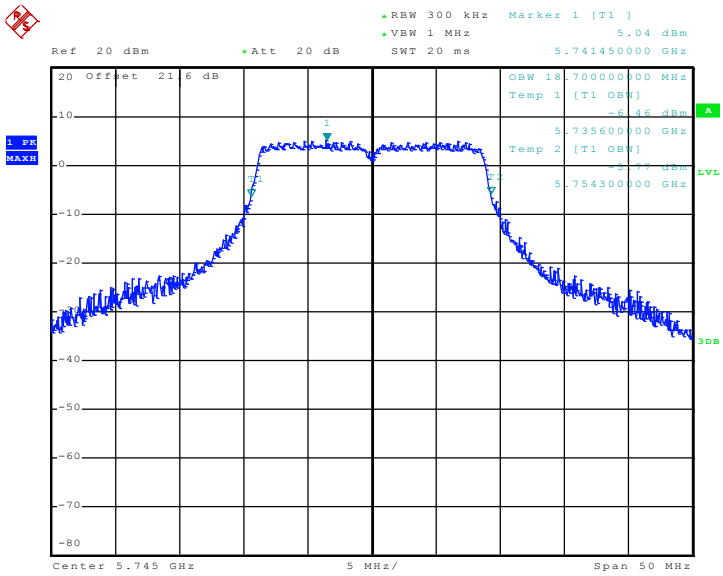
Date: 23.APR.2011 13:28:41

99% Occupied Bandwidth Plot on 802.11a Channel 165 - Chain A



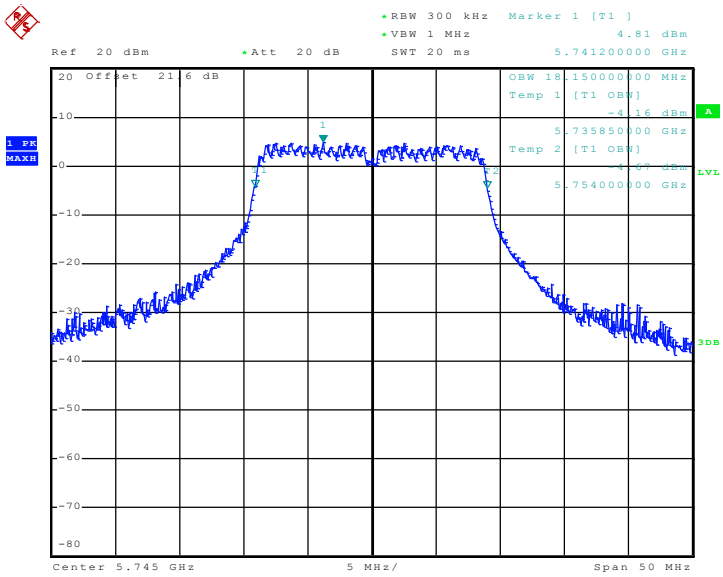
Date: 23.APR.2011 13:54:09

99% Occupied Bandwidth Plot on 802.11n (BW 20MHz) Channel 149 - Chain A



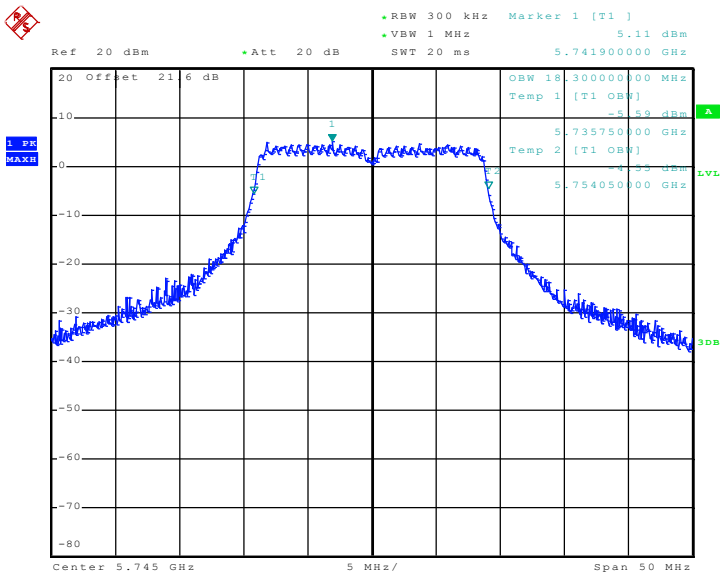
Date: 23.APR.2011 14:40:46

99% Occupied Bandwidth Plot on 802.11n (BW 20MHz) Channel 149 - Chain B



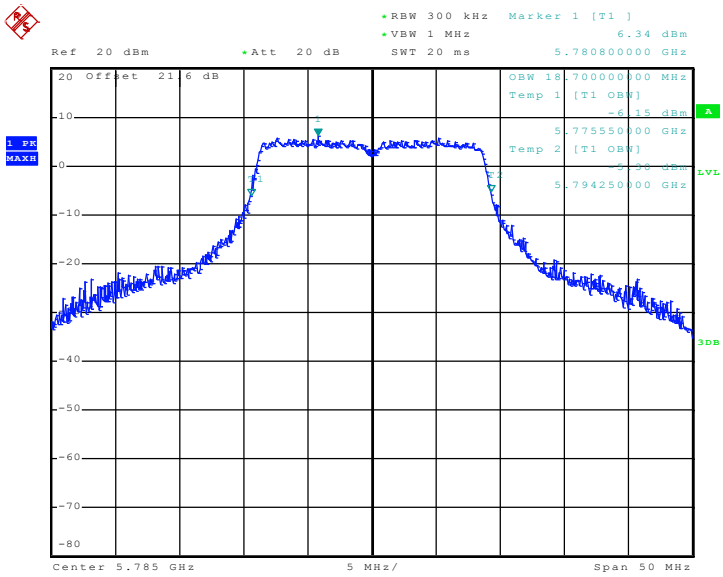
Date: 23.APR.2011 15:21:20

99% Occupied Bandwidth Plot on 802.11n (BW 20MHz) Channel 149 - Chain C



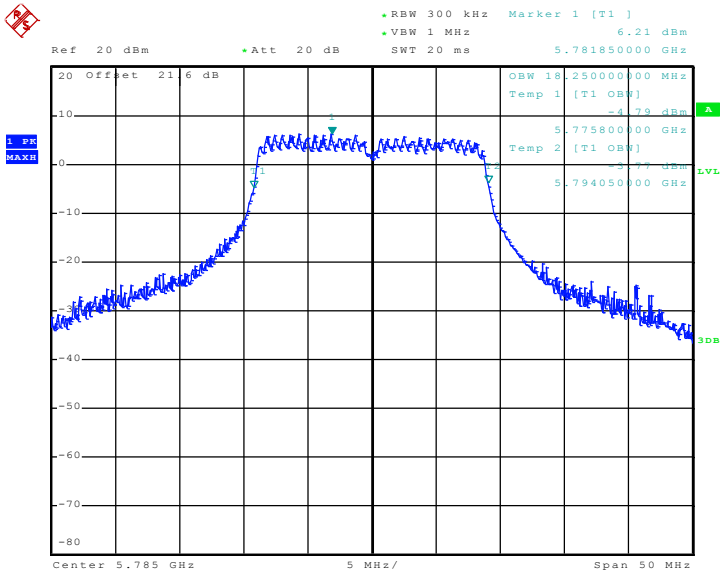
Date: 23.APR.2011 15:39:31

99% Occupied Bandwidth Plot on 802.11n (BW 20MHz) Channel 157 - Chain A



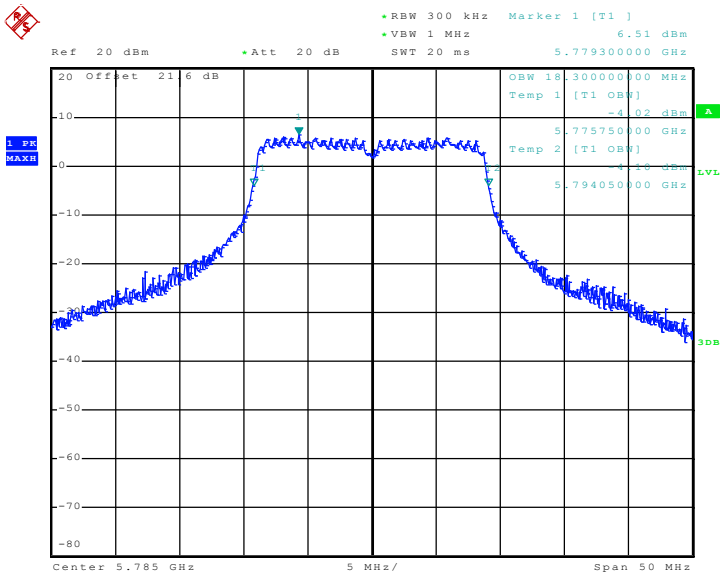
Date: 23.APR.2011 16:51:54

99% Occupied Bandwidth Plot on 802.11n (BW 20MHz) Channel 157 - Chain B



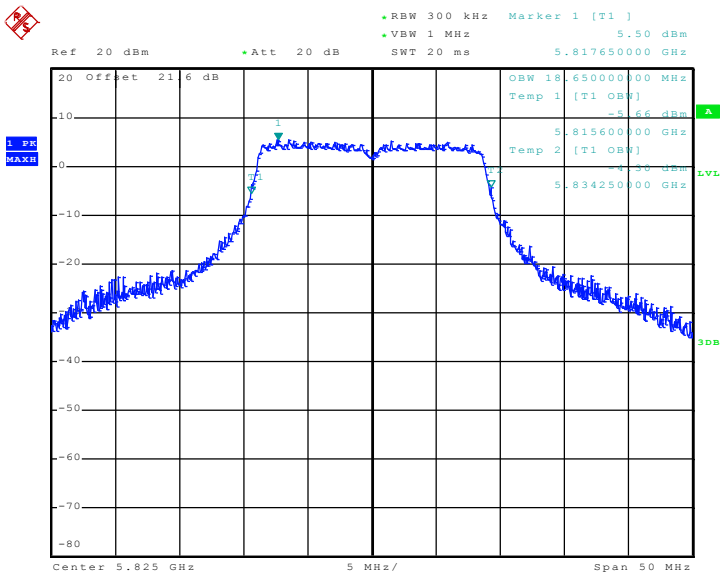
Date: 23.APR.2011 16:29:39

6 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 157 - Chain C



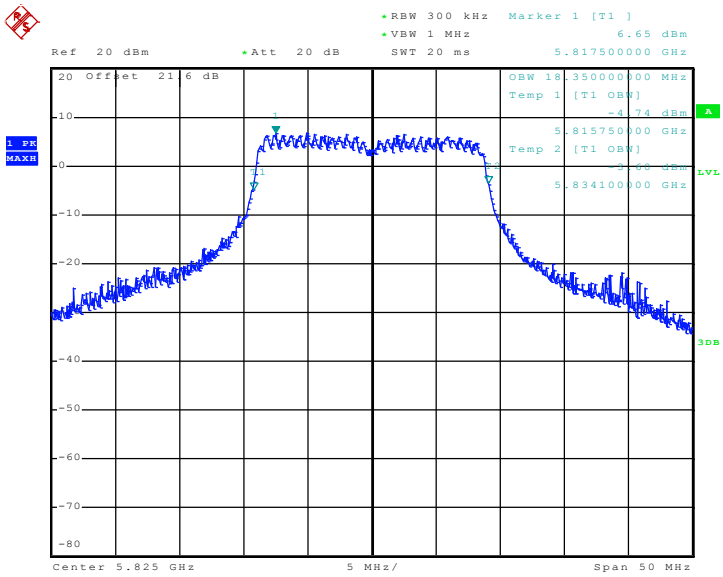
Date: 23.APR.2011 16:05:28

99% Occupied Bandwidth Plot on 802.11n (BW 20MHz) Channel 165 - Chain A



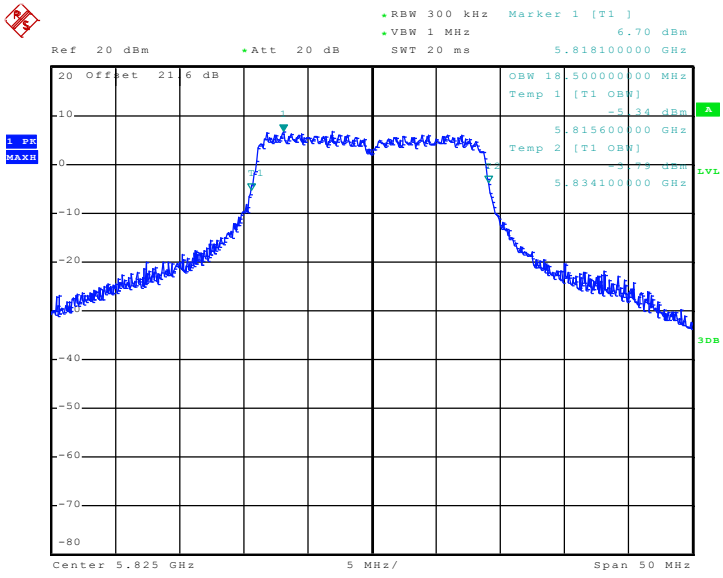
Date: 23.APR.2011 17:12:03

99% Occupied Bandwidth Plot on 802.11n (BW 20MHz) Channel 165 - Chain B



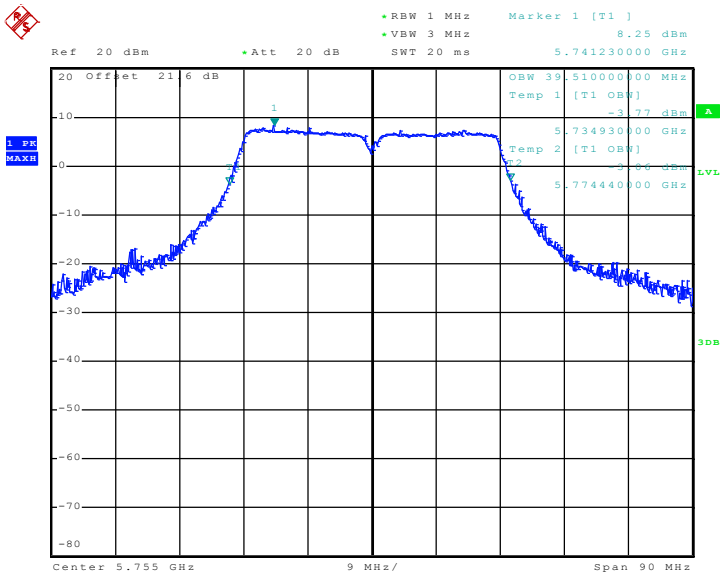
Date: 23.APR.2011 17:36:23

99% Occupied Bandwidth Plot on 802.11n (BW 20MHz) Channel 165 - Chain C



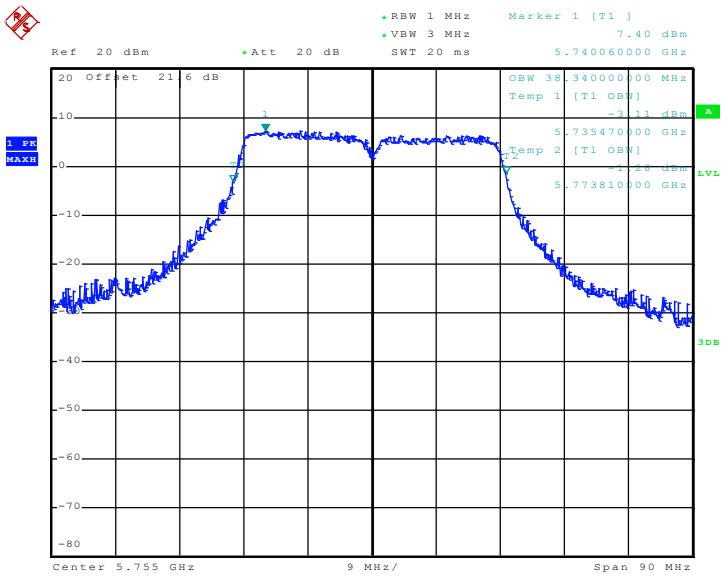
Date: 23.APR.2011 18:00:45

99% Occupied Bandwidth Plot on 802.11n (BW 40MHz) Channel 151 - Chain A



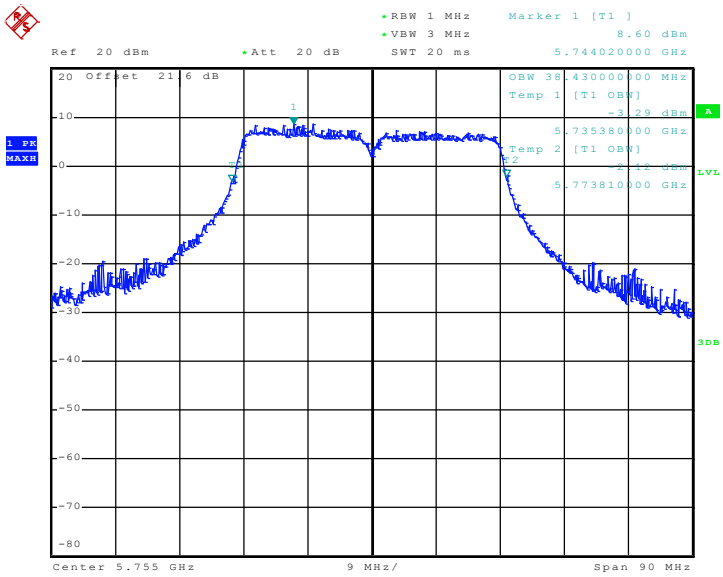
Date: 23.APR.2011 19:41:26

99% Occupied Bandwidth Plot on 802.11n (BW 40MHz) Channel 151 - Chain B



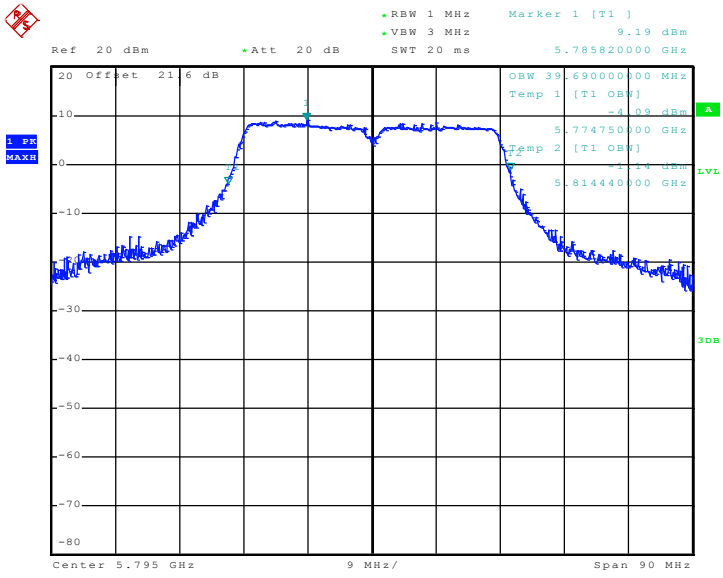
Date: 23.APR.2011 19:15:35

99% Occupied Bandwidth Plot on 802.11n (BW 40MHz) Channel 151 - Chain C



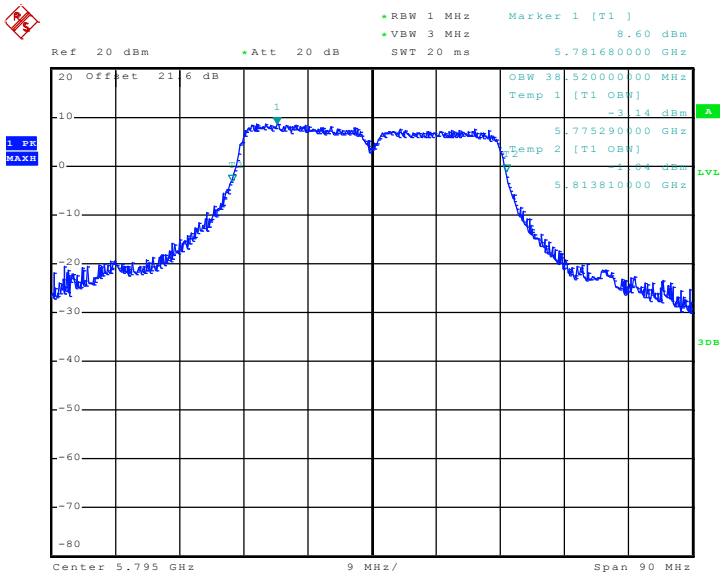
Date: 23.APR.2011 18:55:02

99% Occupied Bandwidth Plot on 802.11n (BW 40MHz) Channel 159 - Chain A



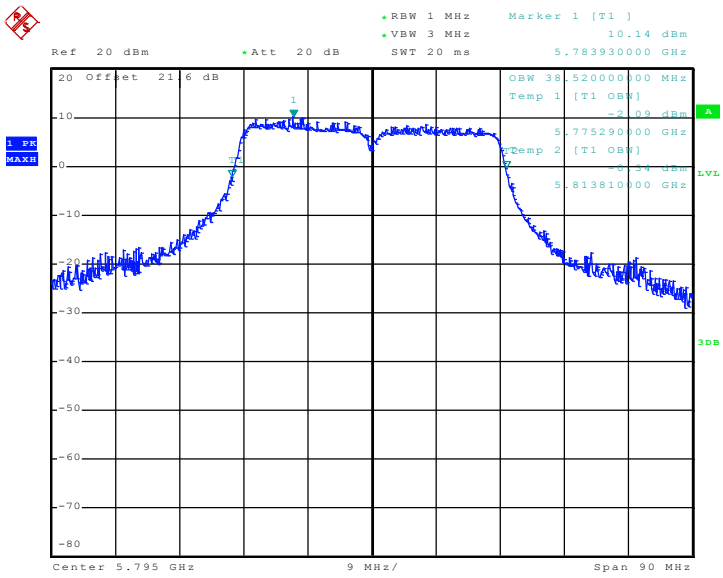
Date: 23.APR.2011 20:06:37

99% Occupied Bandwidth Plot on 802.11n (BW 40MHz) Channel 159 - Chain B



Date: 23.APR.2011 20:27:37

99% Occupied Bandwidth Plot on 802.11n (BW 40MHz) Channel 159 - Chain C



Date: 23.APR.2011 20:51:39

3.2 Output Power Measurement

3.2.1 Limit of Output Power

For systems using digital modulation in the 2400-2483.5MHz and 5725-5850MHz, the limit for peak output power is 30dBm. If transmitting antenna of directional gain greater than 6dBi are used the peak output power from the intentional radiator shall be reduced below the above stated value by the amount in dB that the directional gain of the antenna exceeds 6 dBi. 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.

3.2.2 Measuring Instruments

See list of measuring instruments of this test report.

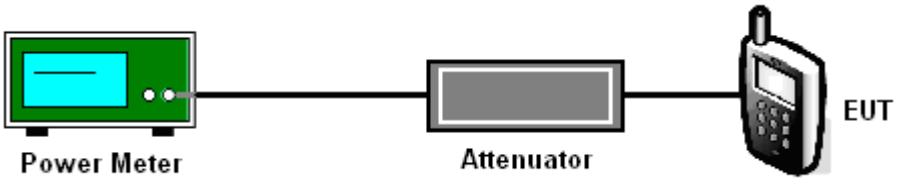
3.2.3 Test Procedures

1. The testing follows FCC KDB Publication No. 558074 (Measurement Guidelines of DTS).
2. The RF output of EUT was connected to the power meter by a low loss cable.
3. Power sensor will link with the power meter before we start the testing. We will check the zero and calibration of power sensor and make sure the correction factor of power meter and power sensor. The path Loss in 2400~2483.5MHz is 19.5dB and in 5725~5850MHz is 22.2dB.
4. Measure the power by power meter and power sensor (Peak and Average).
5. The cable loss (0.5 dB) and attenuator loss (19 dB) are normalized / entered in to the power meter as an offset as below examples,
   (1) For SISO mode,
   <Antenna 1 for 4.5V>: For 802.11b Channel 01 Chain A, the final power in test report is 26.29 dBm which is the reading of Power Meter with offseted cable loss (0.5 dB), and attenuator loss (19 dB).

(2) For MIMO mode, each chain was measured individually and calculated with the formula of 10*LOG (10^ (chain A/10) + 10^ (chain B/10)).
<Antenna 1 for 4.5V>: For 802.11b Channel 01 Chain A+B: the total final power is 26.61 dBm from the formula of 10*LOG (10^ (23.60 dBm/10) + 10^ (23.59 dBm/10)).
(a) Conducted Output Power on 802.11b Channel 01 - Chain A+B (A): 23.60 dBm
(b) Conducted Output Power on 802.11b Channel 01 - Chain A+B (B): 23.59 dBm.
All results has already offseted with cable loss (0.5 dB), and attenuator loss (19 dB).

6. When the radio transmitter enables both transmit chains, the power on each chain is reduced below when only chain A or chain B is enabled.

3.2.4 Test Setup



3.2.5 Test Result of Output Power

<Antenna 1>

Test Mode :	Mode 1~3	Temperature :	24~26℃
Test Engineer :	Alan Liu	Relative Humidity :	40~44%

Channel	Frequency (MHz)	Date Rate	Power Setting	802.11b (Chain A) Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
				Peak		
01	2412	1	15.5	17.13	30	Pass
06	2437	1	21.5	23.13	30	Pass
11	2462	1	19.5	21.11	30	Pass

Test Mode :	Mode 4~6	Temperature :	24~26℃
Test Engineer :	Alan Liu	Relative Humidity :	40~44%

Channel	Frequency (MHz)	Date Rate	Power Setting	802.11g (Chain A) Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
				Peak		
01	2412	6	14.5	22.92	30	Pass
06	2437	6	21	25.05	30	Pass
11	2462	6	14	22.60	30	Pass

Test Mode :	Mode 7~9	Temperature :	24~26℃
Test Engineer :	Alan Liu	Relative Humidity :	40~44%

Channel	Frequency (MHz)	Date Rate	Power Setting	802.11n (BW 20MHz, Chain A+B+C) Measured Output Power (dBm)				Max. Limits (dBm)	Pass/Fail
				Peak					
				Chain A	Chain B	Chain C	Total Power		
01	2412	MCS16	13	22.13	22.28	22.38	27.04	30	Pass
06	2437	MCS16	17	24.29	23.97	24.23	28.94	30	Pass
11	2462	MCS16	12	21.90	21.48	22.22	26.65	30	Pass

Test Mode :	Mode 10~12	Temperature :	24~26℃
Test Engineer :	Alan Liu	Relative Humidity :	40~44%

Channel	Frequency (MHz)	Date Rate	Power Setting	802.11n (BW 40MHz, Chain A+B+C) Measured Output Power (dBm)				Max. Limits (dBm)	Pass/Fail
				Peak					
				Chain A	Chain B	Chain C	Total Power		
03	2422	MCS16	9.5	19.70	20.07	20.85	25.00	30	Pass
06	2437	MCS16	13.5	21.75	22.10	22.12	26.76	30	Pass
09	2452	MCS16	9	20.83	19.50	20.22	24.99	30	Pass

Test Mode :	Mode 13~15	Temperature :	24~26℃
Test Engineer :	Alan Liu	Relative Humidity :	40~44%

Channel	Frequency (MHz)	Date Rate	Power Setting	802.11a (Chain A) Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
				Peak		
149	5745	6	19.5	22.32	30	Pass
157	5785	6	21.5	22.20	30	Pass
165	5825	6	21.5	21.93	30	Pass

Test Mode :	Mode 16~18	Temperature :	24~26℃
Test Engineer :	Alan Liu	Relative Humidity :	40~44%

Channel	Frequency (MHz)	Date Rate	Power Setting	802.11n (BW 20MHz, Chain A+B+C) Measured Output Power (dBm)				Max. Limits (dBm)	Pass/Fail
				Peak					
				Chain A	Chain B	Chain C	Total Power		
149	5745	MCS16	13.5	21.43	21.12	21.66	26.18	30	Pass
157	5785	MCS16	14.5	21.70	22.10	22.23	26.79	30	Pass
165	5825	MCS16	14.5	21.31	22.22	22.28	26.73	30	Pass

Test Mode :	Mode 19~20	Temperature :	24~26℃
Test Engineer :	Alan Liu	Relative Humidity :	40~44%

Channel	Frequency (MHz)	Date Rate	Power Setting	802.11n (BW 20MHz, Chain A+B+C) Measured Output Power (dBm)				Max. Limits (dBm)	Pass/Fail
				Peak					
				Chain A	Chain B	Chain C	Total Power		
151	5755	MCS16	13.5	21.73	21.31	21.80	26.39	30	Pass
159	5795	MCS16	14.5	21.90	21.70	22.00	26.64	30	Pass

<Antenna 2>

Test Mode :	Mode 1~3	**Temperature :**	24~26℃
Test Engineer :	Alan Liu	**Relative Humidity :**	40~44%

Channel	Frequency (MHz)	Date Rate	Power Setting	802.11b (Chain A) Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
				Peak		
01	2412	1	15.5	17.13	30	Pass
06	2437	1	21.5	23.13	30	Pass
11	2462	1	20	21.46	30	Pass

Test Mode :	Mode 4~6	**Temperature :**	24~26℃
Test Engineer :	Alan Liu	**Relative Humidity :**	40~44%

Channel	Frequency (MHz)	Date Rate	Power Setting	802.11g (Chain A) Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
				Peak		
01	2412	6	15	23.16	30	Pass
06	2437	6	21	25.05	30	Pass
11	2462	6	14.5	22.96	30	Pass

Test Mode :	Mode 7~9	**Temperature :**	24~26℃
Test Engineer :	Alan Liu	**Relative Humidity :**	40~44%

Channel	Frequency (MHz)	Date Rate	Power Setting	802.11n (BW 20MHz, Chain A+B+C) Measured Output Power (dBm)				Max. Limits (dBm)	Pass/Fail
				Peak					
				Chain A	Chain B	Chain C	Total Power		
01	2412	MCS16	13.5	22.30	22.45	22.92	27.34	30	Pass
06	2437	MCS16	17	24.29	23.97	24.23	28.94	30	Pass
11	2462	MCS16	12.5	22.19	22.15	22.57	27.08	30	Pass

Test Mode :	Mode 10~12	Temperature :	24~26℃
Test Engineer :	Alan Liu	Relative Humidity :	40~44%

Channel	Frequency (MHz)	Date Rate	Power Setting	802.11n (BW 40MHz, Chain A+B+C) Measured Output Power (dBm)				Max. Limits (dBm)	Pass/Fail
				Peak					
				Chain A	Chain B	Chain C	Total Power		
03	2422	MCS16	10	20.26	20.09	21.30	25.35	30	Pass
06	2437	MCS16	13.5	21.75	22.10	22.12	26.76	30	Pass
09	2452	MCS16	9.5	21.42	20.02	21.24	25.71	30	Pass

Test Mode :	Mode 13~15	Temperature :	24~26℃
Test Engineer :	Alan Liu	Relative Humidity :	40~44%

Channel	Frequency (MHz)	Date Rate	Power Setting	802.11a (Chain A) Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
				Peak		
149	5745	6	19.5	22.32	30	Pass
157	5785	6	21.5	22.20	30	Pass
165	5825	6	21.5	21.93	30	Pass

Test Mode :	Mode 16~18	Temperature :	24~26℃
Test Engineer :	Alan Liu	Relative Humidity :	40~44%

Channel	Frequency (MHz)	Date Rate	Power Setting	802.11n (BW 20MHz, Chain A+B+C) Measured Output Power (dBm)				Max. Limits (dBm)	Pass/Fail
				Peak					
				Chain A	Chain B	Chain C	Total Power		
149	5745	MCS16	14	21.61	21.40	21.74	26.36	30	Pass
157	5785	MCS16	15	21.82	22.32	22.35	26.94	30	Pass
165	5825	MCS16	15	21.64	22.48	22.43	26.97	30	Pass

Test Mode :	Mode 19~20	Temperature :	24~26℃
Test Engineer :	Alan Liu	Relative Humidity :	40~44%

Channel	Frequency (MHz)	Date Rate	Power Setting	802.11n (BW 20MHz, Chain A+B+C) Measured Output Power (dBm)				Max. Limits (dBm)	Pass/Fail
				Peak					
				Chain A	Chain B	Chain C	Total Power		
151	5755	MCS16	14	21.77	21.46	21.84	26.46	30	Pass
159	5795	MCS16	15	22.05	21.83	22.12	26.77	30	Pass

<Antenna 3>

Test Mode :	Mode 1~3	**Temperature :**	24~26℃
Test Engineer :	Alan Liu	**Relative Humidity :**	40~44%

Channel	Frequency (MHz)	Date Rate	Power Setting	802.11b (Chain A) Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
				Peak		
01	2412	1	16.5	18.20	30	Pass
06	2437	1	21.5	23.13	30	Pass
11	2462	1	20	21.46	30	Pass

Test Mode :	Mode 4~6	**Temperature :**	24~26℃
Test Engineer :	Alan Liu	**Relative Humidity :**	40~44%

Channel	Frequency (MHz)	Date Rate	Power Setting	802.11g (Chain A) Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
				Peak		
01	2412	6	15	23.16	30	Pass
06	2437	6	21	25.05	30	Pass
11	2462	6	14.5	22.96	30	Pass

Test Mode :	Mode 7~9	**Temperature :**	24~26℃
Test Engineer :	Alan Liu	**Relative Humidity :**	40~44%

Channel	Frequency (MHz)	Date Rate	Power Setting	802.11n (BW 20MHz, Chain A+B+C) Measured Output Power (dBm)				Max. Limits (dBm)	Pass/Fail
				Peak					
				Chain A	Chain B	Chain C	Total Power		
01	2412	MCS16	13.5	22.30	22.45	22.92	27.34	30	Pass
06	2437	MCS16	17	24.29	23.97	24.23	28.94	30	Pass
11	2462	MCS16	12.5	22.19	22.15	22.57	27.08	30	Pass

Test Mode :	Mode 10~12	Temperature :	24~26℃
Test Engineer :	Alan Liu	Relative Humidity :	40~44%

Channel	Frequency (MHz)	Date Rate	Power Setting	802.11n (BW 40MHz, Chain A+B+C) Measured Output Power (dBm)				Max. Limits (dBm)	Pass/Fail
				Peak					
				Chain A	Chain B	Chain C	Total Power		
03	2422	MCS16	10	20.26	20.09	21.30	25.35	30	Pass
06	2437	MCS16	14	22.61	22.94	22.83	27.57	30	Pass
09	2452	MCS16	9.5	21.42	20.02	21.24	25.71	30	Pass

Test Mode :	Mode 13~15	Temperature :	24~26℃
Test Engineer :	Alan Liu	Relative Humidity :	40~44%

Channel	Frequency (MHz)	Date Rate	Power Setting	802.11a (Chain A) Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
				Peak		
149	5745	6	19.5	22.32	30	Pass
157	5785	6	21.5	22.20	30	Pass
165	5825	6	21.5	21.93	30	Pass

Test Mode :	Mode 16~18	Temperature :	24~26℃
Test Engineer :	Alan Liu	Relative Humidity :	40~44%

Channel	Frequency (MHz)	Date Rate	Power Setting	802.11n (BW 20MHz, Chain A+B+C) Measured Output Power (dBm)				Max. Limits (dBm)	Pass/Fail
				Peak					
				Chain A	Chain B	Chain C	Total Power		
149	5745	MCS16	14.5	21.73	21.55	21.99	26.53	30	Pass
157	5785	MCS16	15.5	22.03	22.29	22.58	27.08	30	Pass
165	5825	MCS16	15.5	21.75	22.60	22.72	27.15	30	Pass

Test Mode :	Mode 19~20	Temperature :	24~26℃
Test Engineer :	Alan Liu	Relative Humidity :	40~44%

Channel	Frequency (MHz)	Date Rate	Power Setting	802.11n (BW 20MHz, Chain A+B+C) Measured Output Power (dBm)				Max. Limits (dBm)	Pass/Fail
				Peak					
				Chain A	Chain B	Chain C	Total Power		
151	5755	MCS16	14.5	21.90	21.52	22.05	26.60	30	Pass
159	5795	MCS16	15.5	22.15	22.07	22.32	26.95	30	Pass

3.3 Band Edges Measurement

3.3.1 Limit of Band Edges

In any 100 kHz bandwidth outside the intentional radiation frequency band, the radio frequency power shall be at least 20 dB below the highest level of the radiated power. If the output power of this device was measured by spectrum analyzer, the attenuation under this paragraph shall be 30 dB instead of 20 dB.

3.3.2 Measuring Instruments

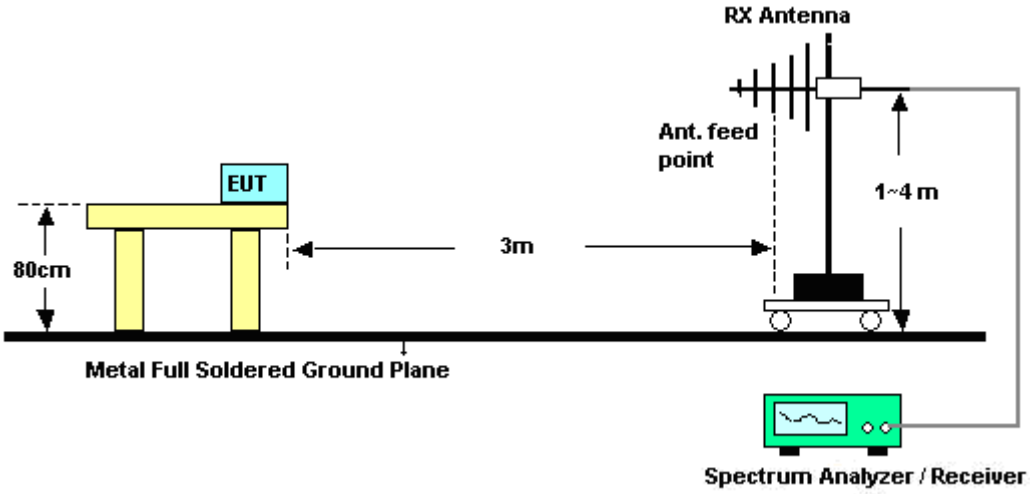
See list of measuring instruments of this test report.

3.3.3 Test Procedures

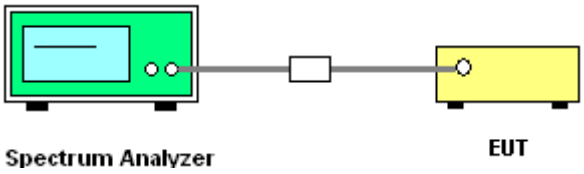
1. The testing follows the guidelines in FCC KDB Publication No. 558074 and FCC KDB Publication No. 558074 (Measurement Guidelines of DTS).
2. Conducted emission test: Set RBW ≥ 1% of the span, Video bandwidth (VBW) > RBW. Band edge emissions must be at least 20 dB below the highest emission level within the authorized band as measured with a 100 kHz RBW. Note: If the output power of this device was measured by power meter, the attenuation under this paragraph shall be 30 dB instead of 20 dB.
3. Radiated emission test: Apply to band edge emissions that fall in the restricted bands listed in FCC Section 15.205. The maximum permitted average field strength is listed in FCC Section 15.209. A pre-amp is necessary for this measurement. For measurements above 1 GHz, set RBW = 1MHz, VBW = 10 Hz, Sweep=Auto. If the emission is pulsed, modify the unit for continuous operation; use the settings shown above, then correct the reading by subtracting the peak-average correction factor, derived from the appropriate duty cycle calculation as in FCC Section 15.35(b) and (c).

3.3.4 Test Setup

<Radiated Band Edges>



<Conducted Band Edges>



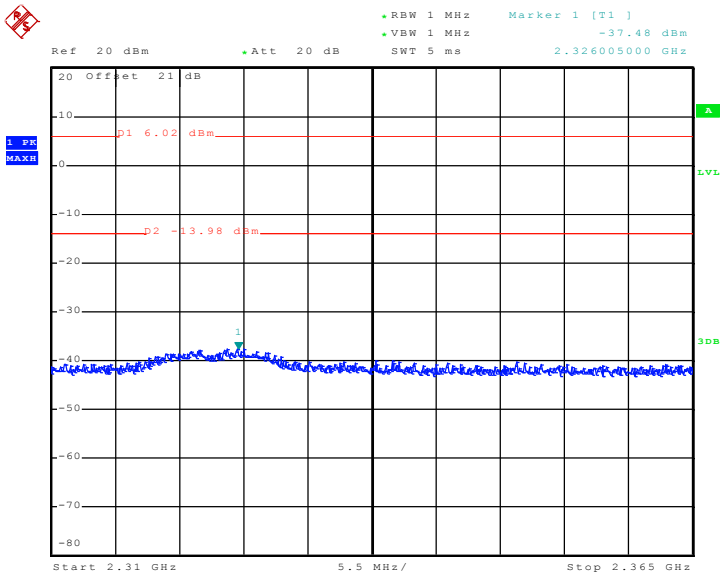
3.3.5 Test Result of Radiated Band Edges

Please refer to Appendix A to C.

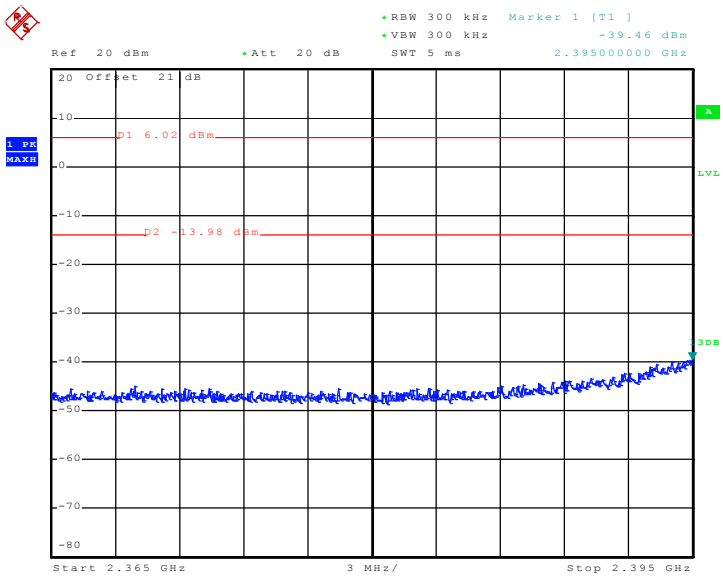
3.3.6 Test Result of Conducted Band Edges

Test Mode :	Mode 1 and 3	Temperature :	24~26℃
Test Band :	802.11b	Relative Humidity :	40~44%
Test Channel :	01 and 11	Test Engineer :	Alan Liu

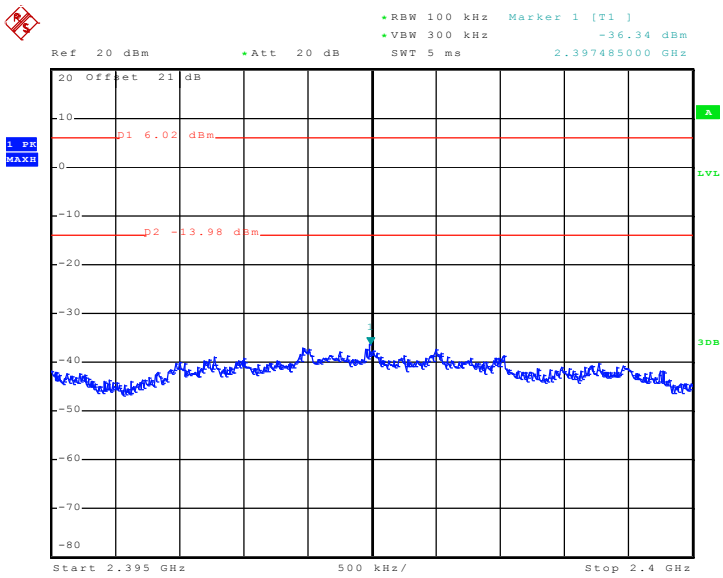
Low Band Edge Plot on 802.11b Channel 01 - Chain A



Date: 16.APR.2011 18:48:17

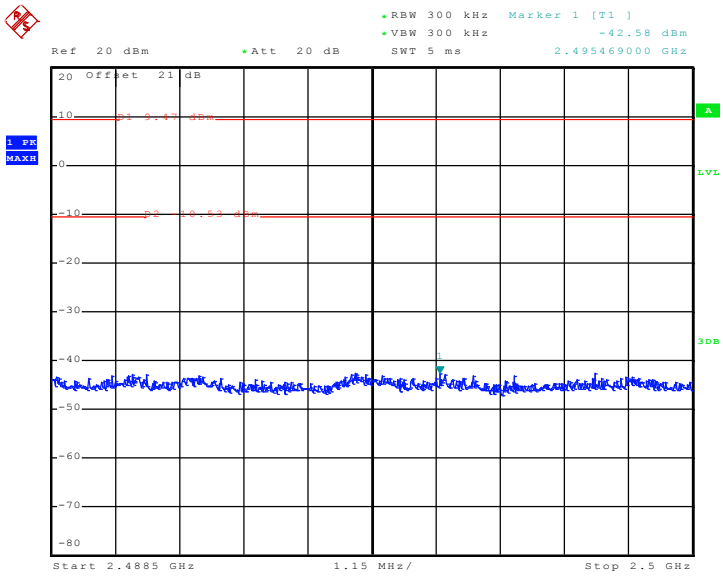


Date: 16.APR.2011 18:48:40

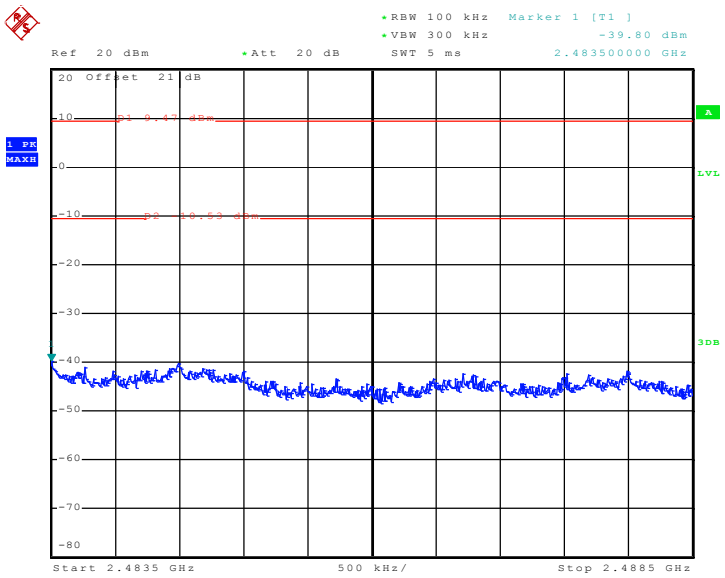


Date: 16.APR.2011 18:49:03

High Band Edge Plot on 802.11b Channel 11 - Chain A



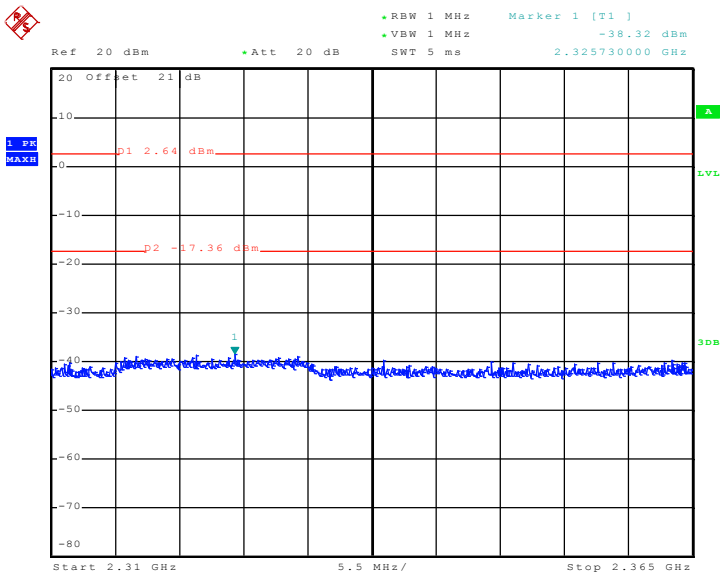
Date: 16.APR.2011 19:52:28



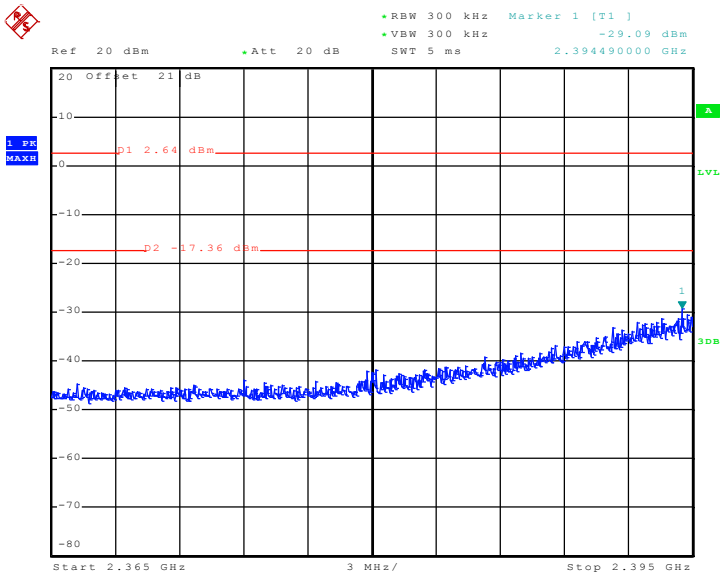
Date: 16.APR.2011 19:52:49

Test Mode :	Mode 4 and6	Temperature :	24~26℃
Test Band :	802.11g	Relative Humidity :	40~44%
Test Channel :	01 and 11	Test Engineer :	Alan Liu

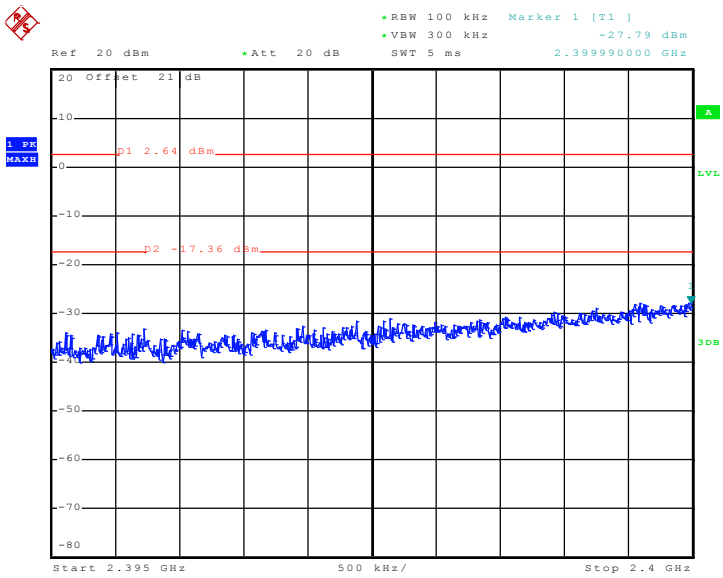
Low Band Edge Plot on 802.11g Channel 01 - Chain A



Date: 23.APR.2011 15:10:26

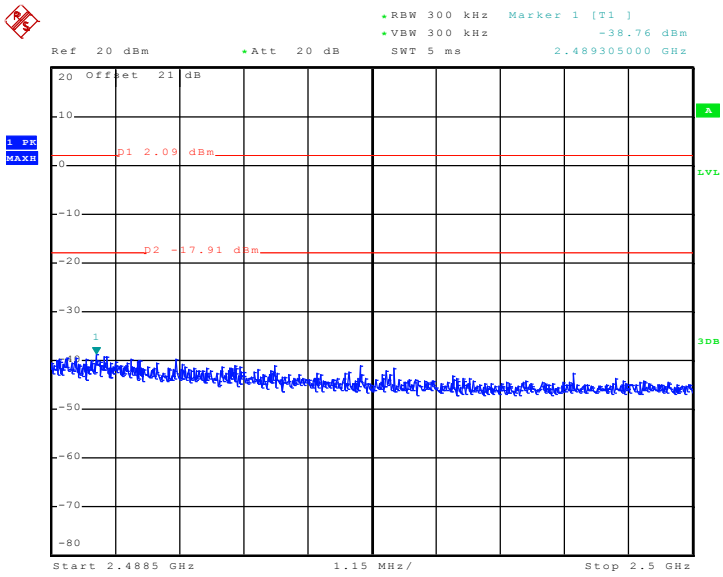


Date: 23.APR.2011 15:10:47

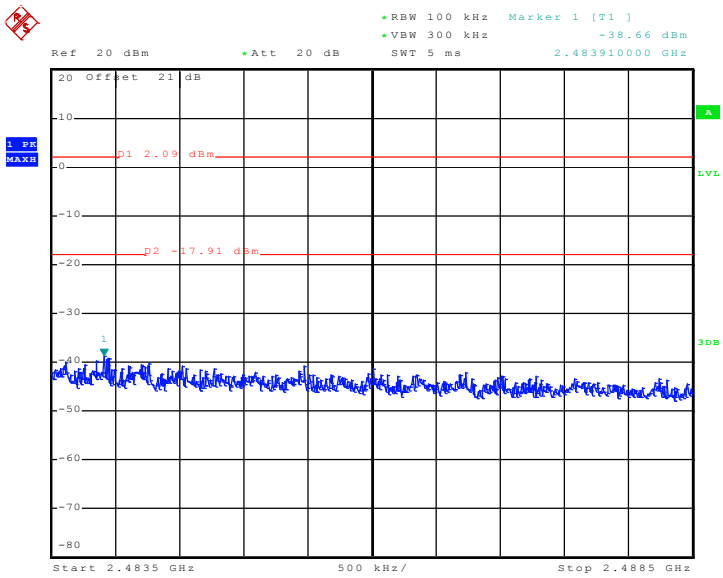


Date: 23.APR.2011 15:11:08

High Band Edge Plot on 802.11g Channel 11 - Chain A



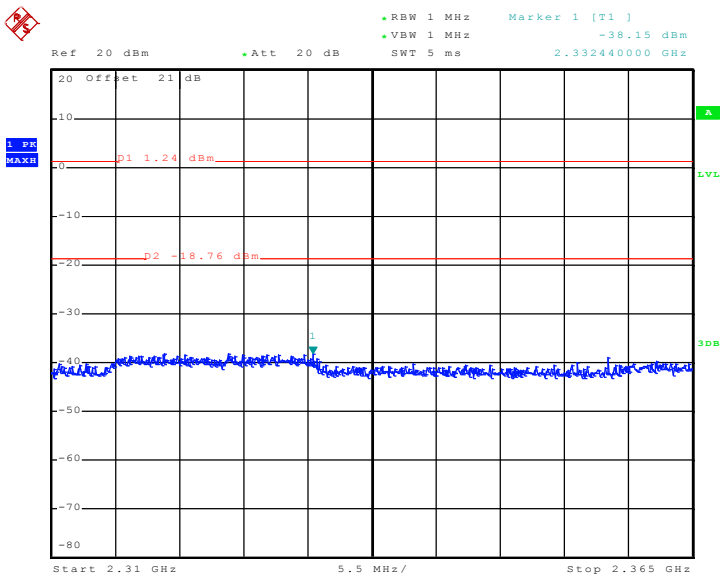
Date: 16.APR.2011 20:11:26



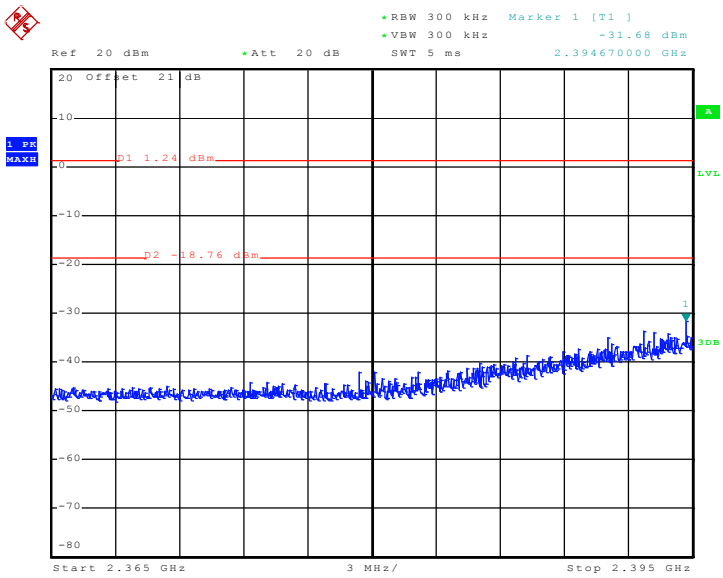
Date: 16.APR.2011 20:11:47

Test Mode :	Mode 7 and 9	Temperature :	24~26℃
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	40~44%
Test Channel :	01 and 11	Test Engineer :	Alan Liu

Low Band Edge Plot on 802.11n (BW 20MHz) Channel 01 - Chain A



Date: 16.APR.2011 21:08:17



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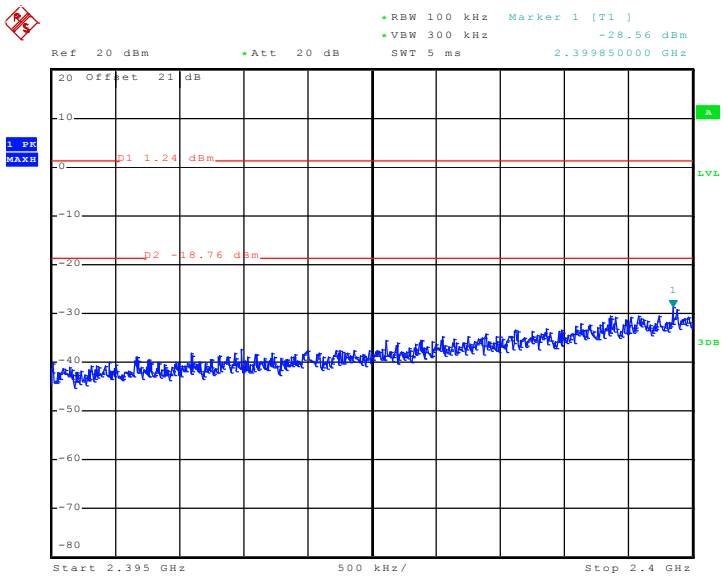
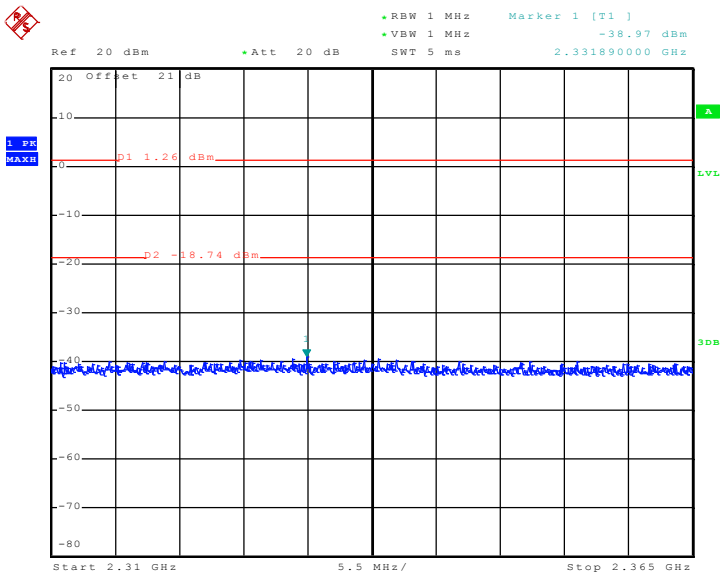
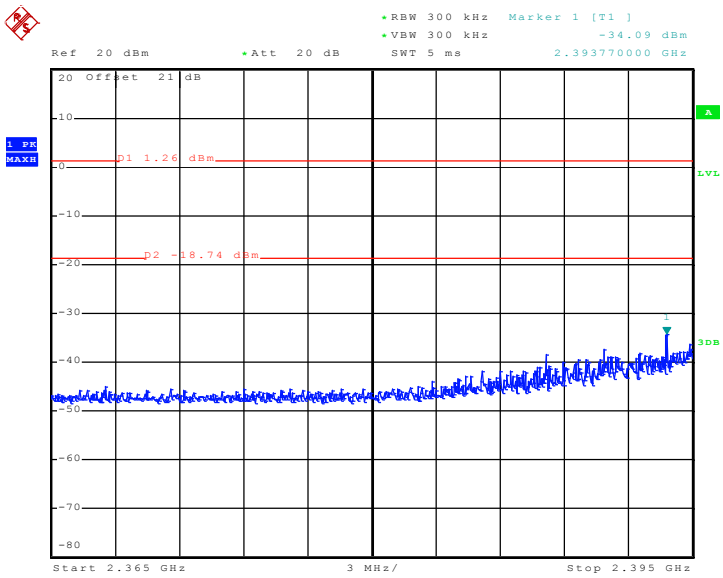


Date: 16.APR.2011 21:09:02

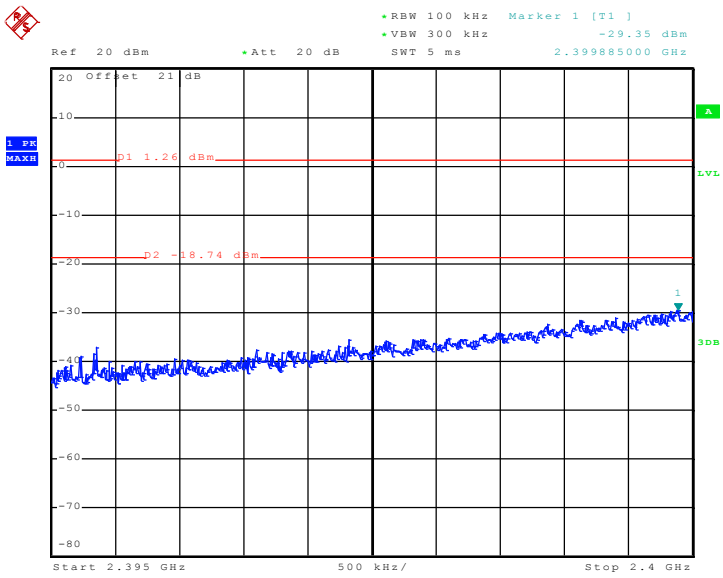
Low Band Edge Plot on 802.11n (BW 20MHz) Channel 01 - Chain B



Date: 16.APR.2011 21:24:30

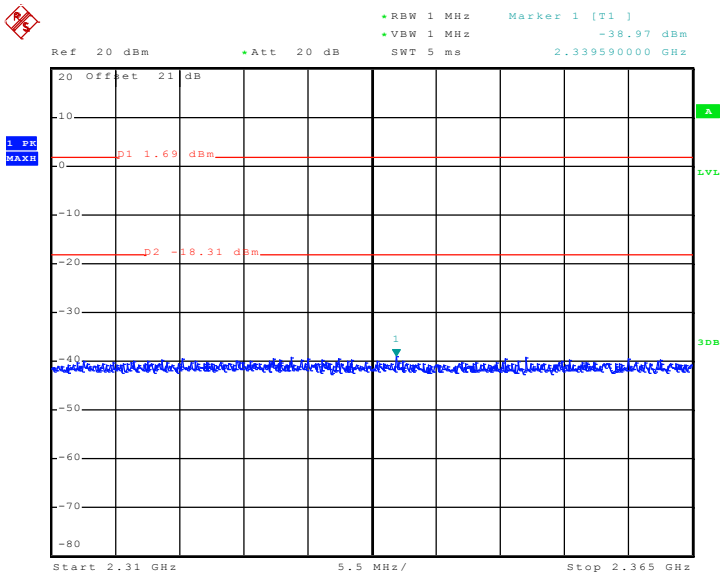


Date: 16.APR.2011 21:24:53

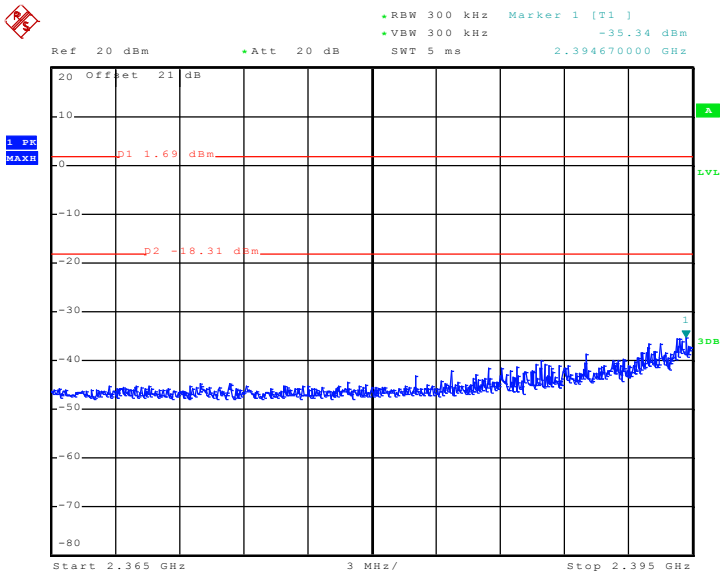


Date: 16.APR.2011 21:25:15

Low Band Edge Plot on 802.11n (BW 20MHz) Channel 01 - Chain C



Date: 21.APR.2011 22:32:10



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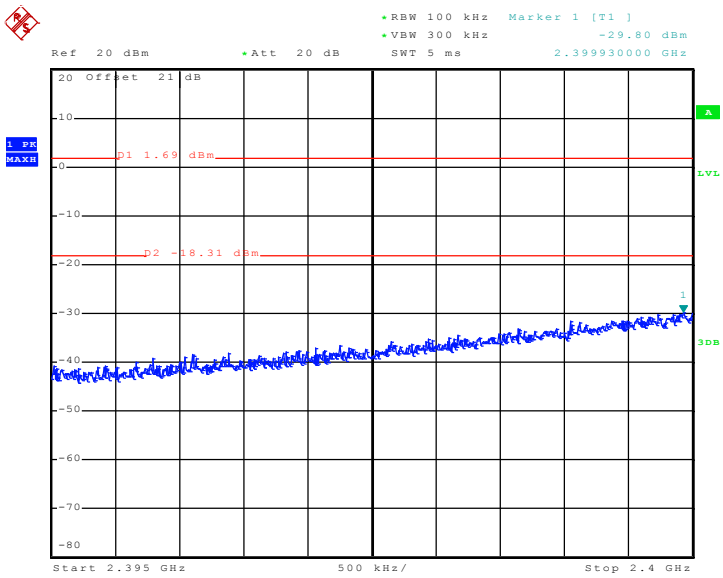
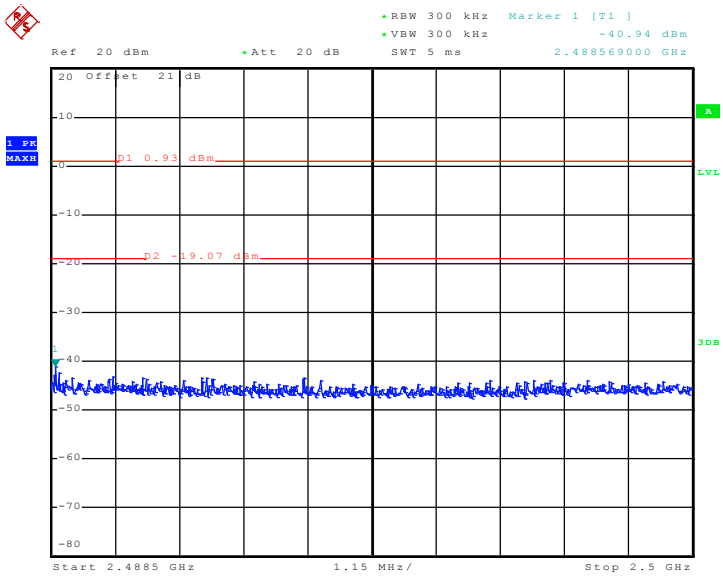
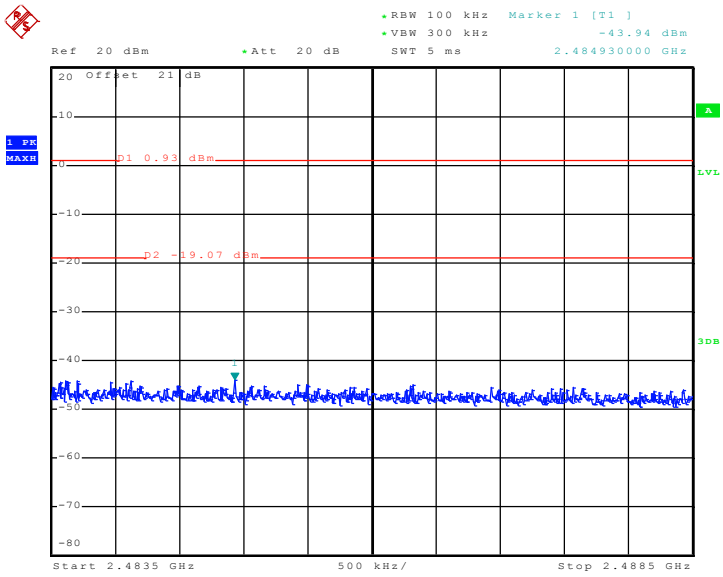


Date: 21.APR.2011 22:32:52

High Band Edge Plot on 802.11n (BW 20MHz) Channel 11 - Chain A

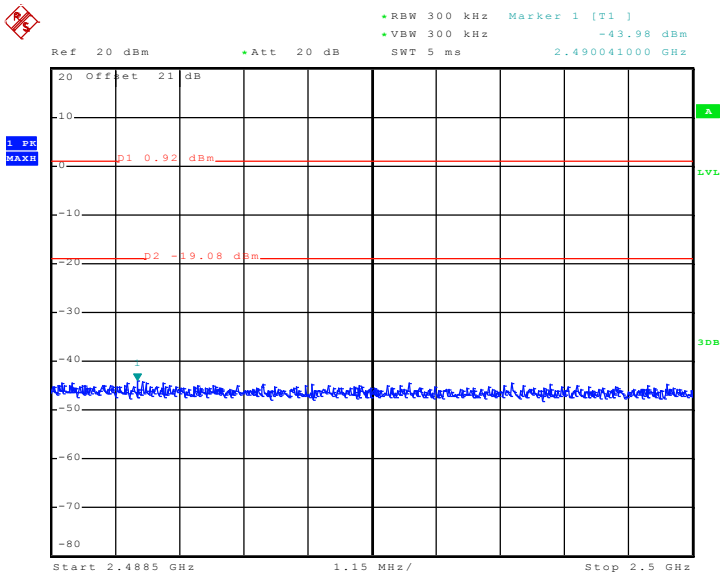


Date: 21.APR.2011 23:34:16

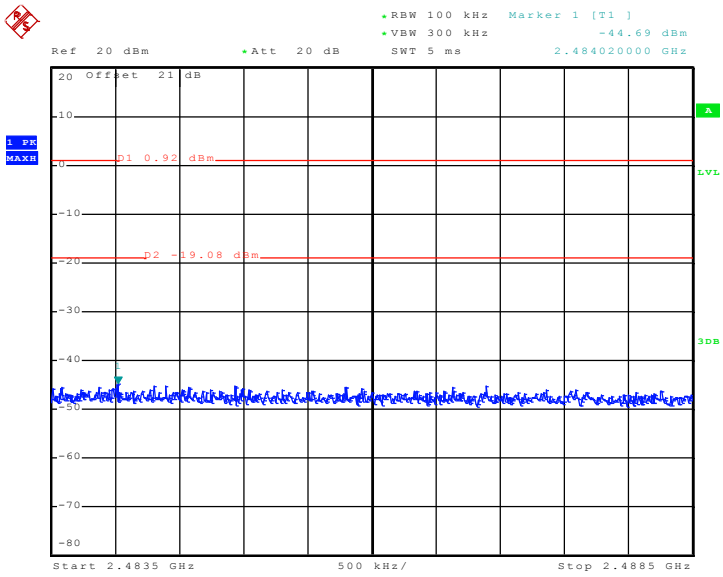


Date: 21.APR.2011 23:34:37

High Band Edge Plot on 802.11n (BW 20MHz) Channel 11 - Chain B

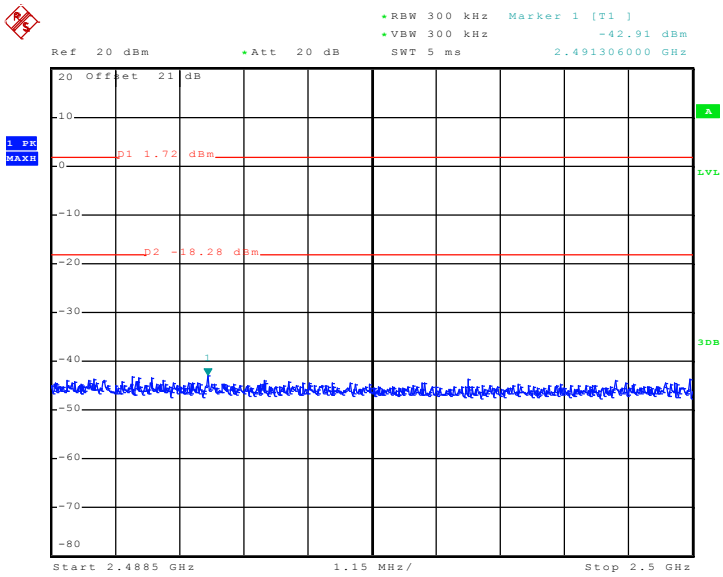


Date: 21.APR.2011 23:46:43

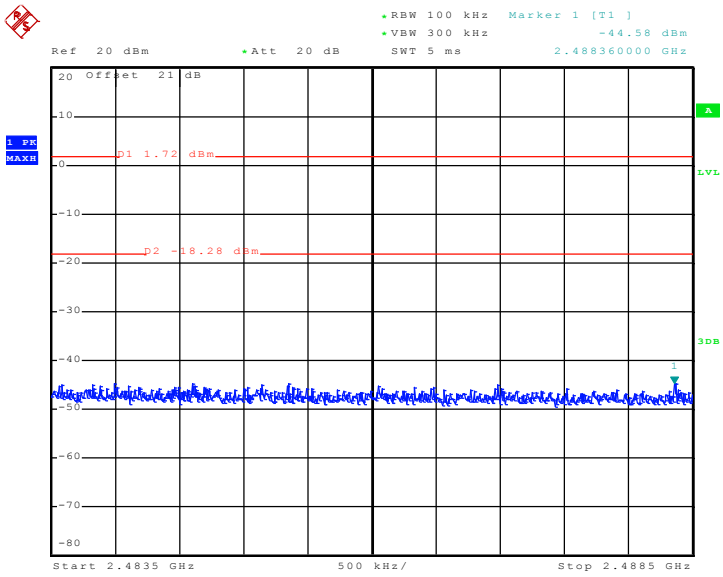


Date: 21.APR.2011 23:47:04

High Band Edge Plot on 802.11n (BW 20MHz) Channel 11 - Chain C



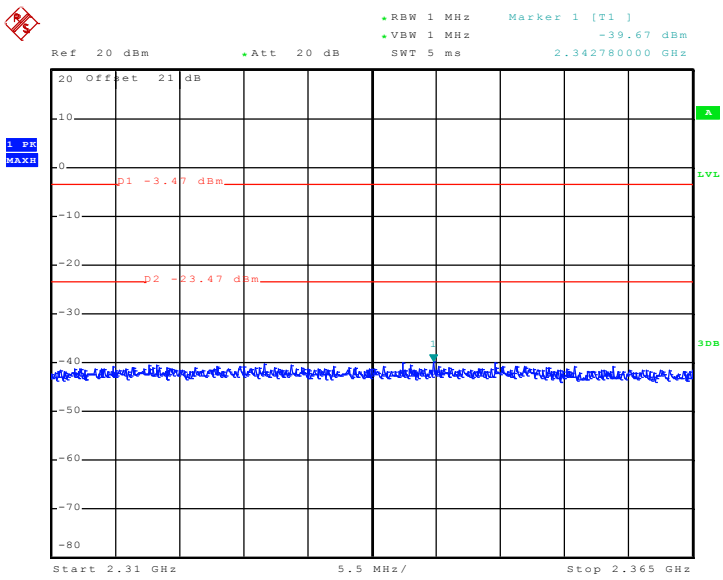
Date: 22.APR.2011 00:00:20



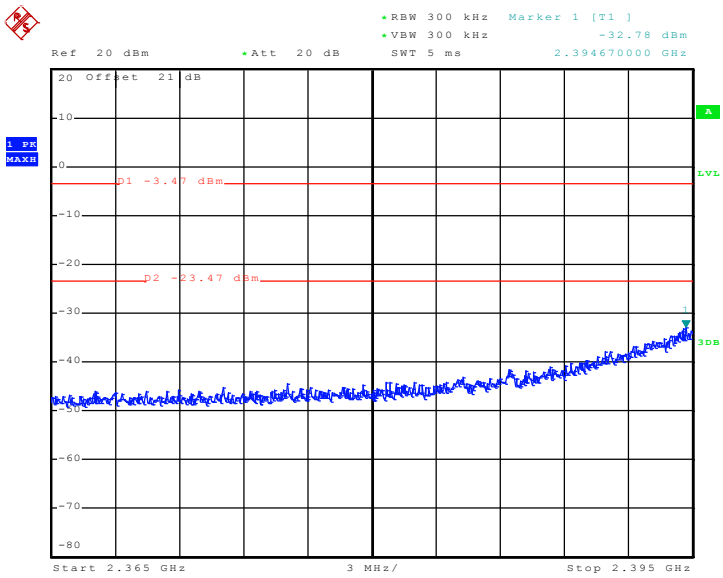
Date: 22.APR.2011 00:00:41

Test Mode :	Mode 10 and 12	Temperature :	24~26℃
Test Band :	802.11n (BW 40MHz)	Relative Humidity :	40~44%
Test Channel :	03 and 09	Test Engineer :	Alan Liu

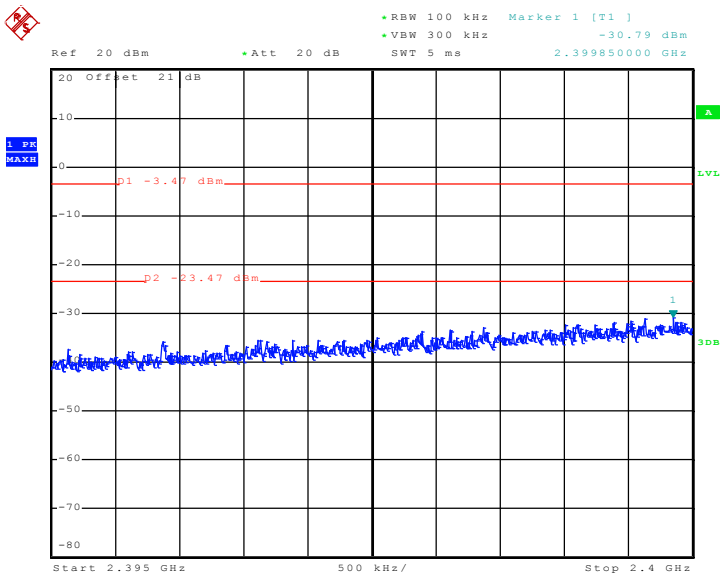
Low Band Edge Plot on 802.11n (BW 40MHz) Channel 03 - Chain A



Date: 22.APR.2011 20:17:10

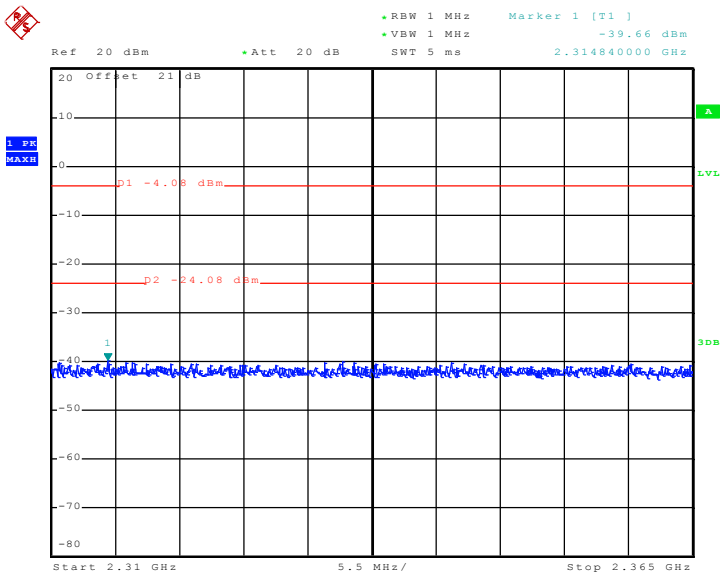


Date: 22.APR.2011 20:17:31

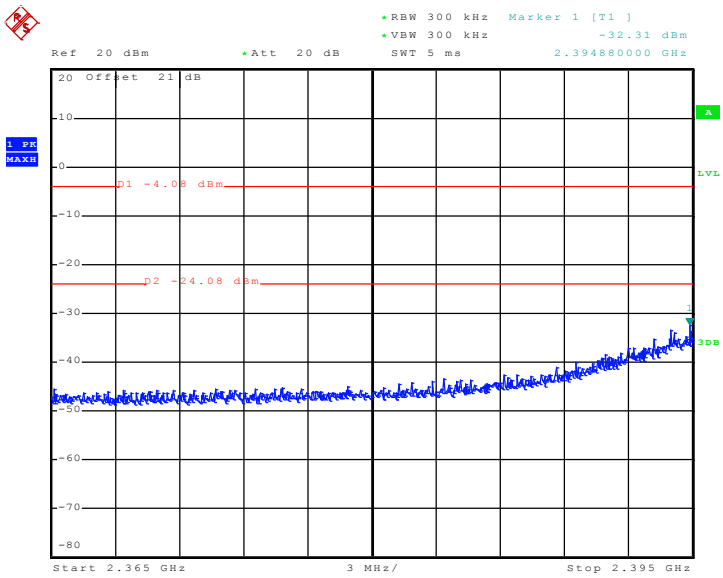


Date: 22.APR.2011 20:17:52

Low Band Edge Plot on 802.11n (BW 40MHz) Channel 03 - Chain B



Date: 22.APR.2011 19:40:30



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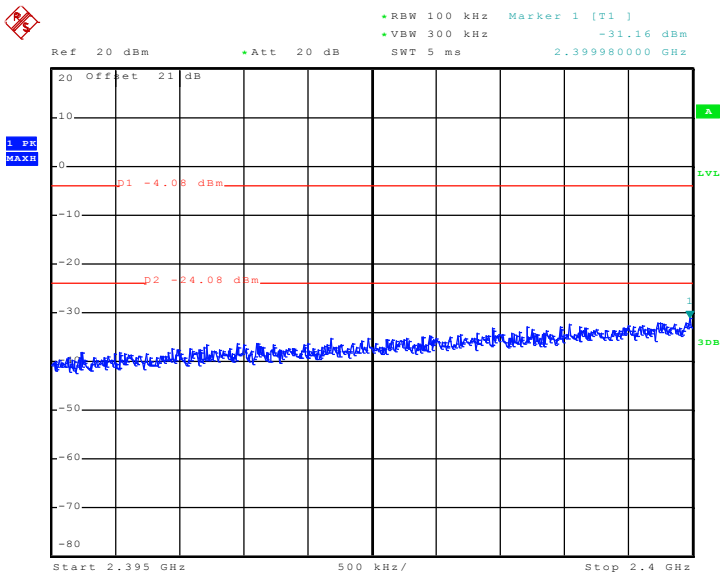
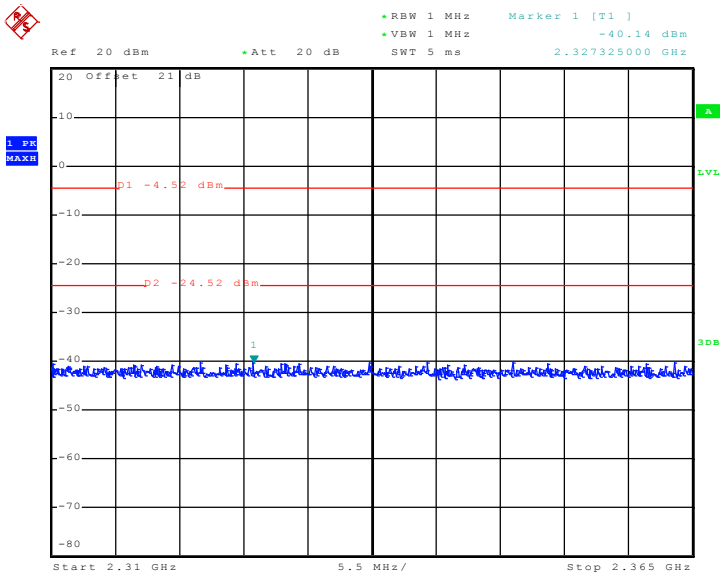
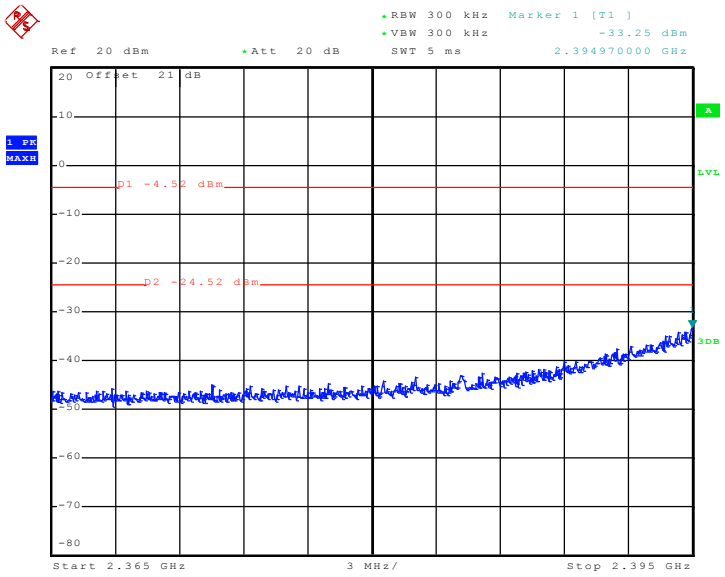


Date: 22.APR.2011 19:41:12

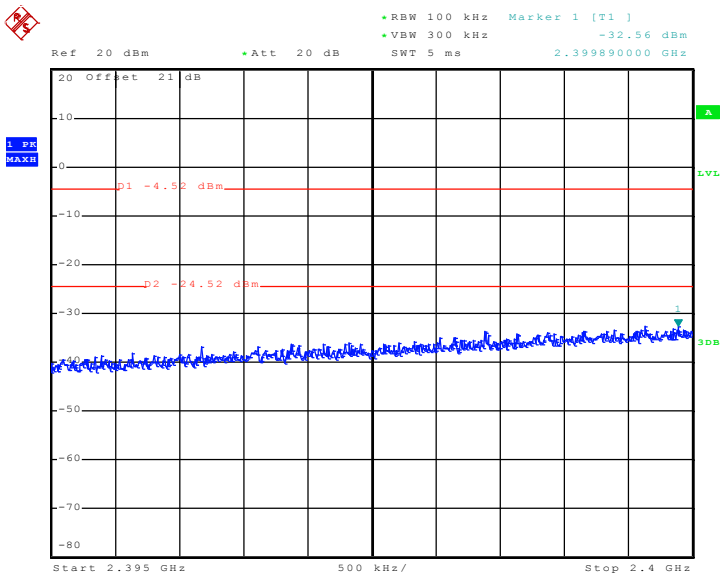
Low Band Edge Plot on 802.11n (BW 40MHz) Channel 03 - Chain C



Date: 22.APR.2011 23:38:11

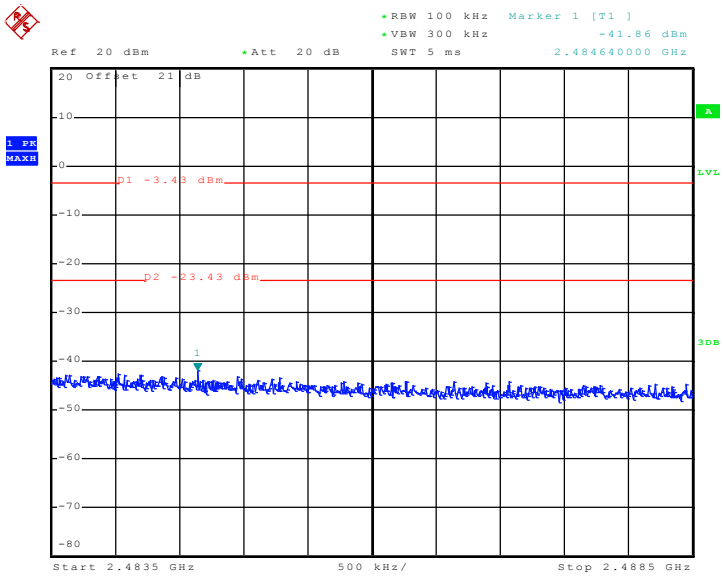


Date: 22.APR.2011 23:38:32

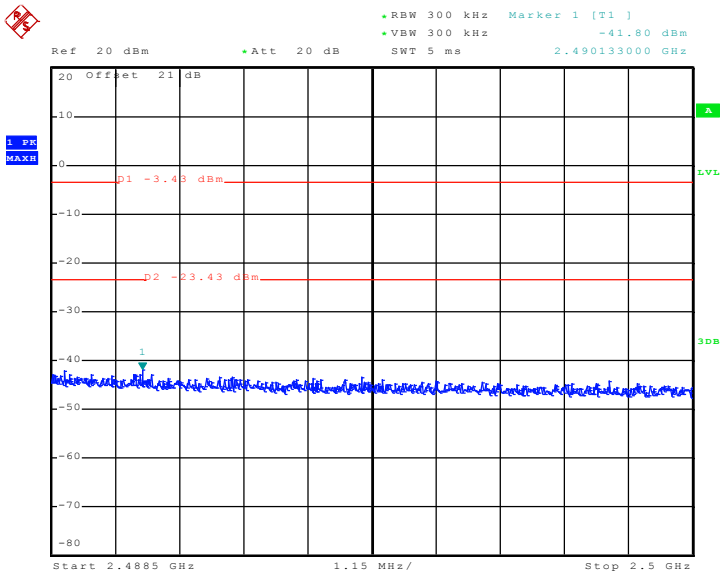


Date: 22.APR.2011 23:38:54

High Band Edge Plot on 802.11n (BW 40MHz) Channel 09 - Chain A



Date: 22.APR.2011 23:46:15



Date: 22.APR.2011 23:46:36