

FCC RF Test Report

APPLICANT : Sony Corporation
EQUIPMENT : Tablet device
BRAND NAME : VAIO
MODEL NAME : SVJ202B15L
FCC ID : AK8SVJ202B15L
STANDARD : FCC Part 15 Subpart C §15.247
CLASSIFICATION : (DTS) Digital Transmission System

The product was received on Feb. 20, 2013 and completely tested on Mar. 04, 2013. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures 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.

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FCC ID : AK8SVJ202B15L

DTS v1.0

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TABLE OF CONTENTS

REVISION HISTORY 3

SUMMARY OF TEST RESULT 4

1 GENERAL DESCRIPTION 5

 1.1 Applicant 5

 1.2 Manufacturer 5

 1.3 Feature of Equipment Under Test 5

 1.4 Product Specification of Equipment Under Test 6

 1.5 Testing Site 8

 1.6 Applied Standards 8

2 TEST CONFIGURATION OF EQUIPMENT UNDER TEST 9

 2.1 Carrier Frequency and Channel 9

 2.2 Pre-Scanned RF Power 10

 2.3 Test Mode 13

 2.4 Connection Diagram of Test System 15

 2.5 Support Unit used in test configuration and system 16

 2.6 Description of RF Function Operation Test Setup 16

 2.7 Measurement Results Explanation Example 17

3 TEST RESULT 18

 3.1 6dB and 99% Bandwidth Measurement 18

 3.2 Peak Output Power Measurement 72

 3.3 Power Spectral Density Measurement 79

 3.4 Conducted Band Edges and Spurious Emission Measurement 132

 3.5 Radiated Band Edges and Spurious Emission Measurement 190

 3.6 AC Conducted Emission Measurement 281

 3.7 Antenna Requirements 285

4 LIST OF MEASURING EQUIPMENT 286

5 UNCERTAINTY OF EVALUATION 287

APPENDIX A. PHOTOGRAPHS OF EUT

APPENDIX B. SETUP PHOTOGRAPHS



SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	15.247(a)(2)	RSS-210 A8.2(a)	6dB Bandwidth	$\geq 0.5\text{MHz}$	Pass	-
3.1	-	RSS-Gen 4.6.1	99% Bandwidth	-	Pass	-
3.2	15.247(b)	RSS-210 A8.4	Power Output Measurement	$\leq 30\text{dBm}$	Pass	-
3.3	15.247(e)	RSS-210 A8.2(b)	Power Spectral Density	$\leq 8\text{dBm}/3\text{kHz}$	Pass	-
3.2.6	15.247(d)	RSS-210 A8.5	Conducted Band Edges	$\leq 20\text{dBc}$	Pass	
			Conducted Spurious Emission		Pass	
3.2.6	15.247(d)	RSS-210 A8.5	Radiated Band Edges and Radiated Spurious Emission	15.209(a) & 15.247(d)	Pass	Under limit 0.46 dB at 2389.900 MHz
3.6	15.207	RSS-Gen 7.2.4	AC Conducted Emission	15.207(a)	Pass	Under limit 8.90 dB at 0.158 MHz
3.6	15.203 & 15.247(b)	RSS-210 A8.4	Antenna Requirement	N/A	Pass	-

1 General Description

1.1 Applicant

Sony Corporation

1-7-1 Konan Minato-ku, Tokyo, 108-0075 JAPAN

1.2 Manufacturer

Foxconn

Foxconn Industrial District, Export Processing Zone, No. 50, Beijing Zhong Road, Yantai Economic And Technological Development Area, Shandong, P.R.China

1.3 Feature of Equipment Under Test

Product Feature	
Equipment	Tablet device
Brand Name	VAIO
Model Name	SVJ202B15L
Integrated Module	Brand Name: Intel Model Name: 6235ANHMW
FCC ID	AK8SVJ202B15L
EUT supports Radios application	WLAN 11abgn / Bluetooth 2.1/3.0/4.0/NFC
EUT Stage	Identical Prototype

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

1.4 Product Specification of Equipment Under Test

Product Specification subjective to this standard	
Tx/Rx Channel Frequency Range	802.11b/g/n : 2412 MHz ~ 2462 MHz 802.11a/n: 5745~5825MHz.
Maximum Output Power to Antenna	<p><2412 MHz ~ 2462 MHz></p> <p><Ant. 1> 802.11b : 17.68 dBm (0.0586 W) 802.11g : 22.29 dBm (0.1694 W)</p> <p><Ant. 2> 802.11b : 17.06 dBm (0.0508 W) 802.11g : 21.35 dBm (0.1365 W)</p> <p><SISO Ant. 1> 802.11n HT20 : 22.28 dBm (0.1690 W) 802.11n HT40 : 20.88 dBm (0.1225 W)</p> <p><SISO Ant. 2> 802.11n HT20 : 21.34 dBm (0.1361 W) 802.11n HT40 : 20.05 dBm (0.1012 W)</p> <p><MIMO Ant. 1+2> 802.11n HT20 : 23.28 dBm (0.2128 W) 802.11n HT40 : 22.44 dBm (0.1754 W)</p>
	<p><5745 MHz ~ 5825 MHz></p> <p><Ant. 1> 802.11a : 20.83 dBm (0.1211 W)</p> <p><Ant. 2> 802.11a : 21.66 dBm (0.1466 W)</p> <p><SISO Ant. 1> 802.11n HT20 : 20.86 dBm (0.1219 W) 802.11n HT40 : 20.41 dBm (0.1099 W)</p> <p><SISO Ant. 2> 802.11n HT20 : 21.77 dBm (0.1503 W) 802.11n HT40 : 21.46 dBm (0.1400 W)</p> <p><MIMO Ant. 1+2> 802.11n HT20 : 22.31 dBm (0.1702 W) 802.11n HT40 : 22.77 dBm (0.1892 W)</p>



Product Specification subjective to this standard																			
99% Occupied Bandwidth	<p><2412 MHz ~ 2462 MHz> <Ant. 1> 802.11b : 13.25MHz 802.11g : 17.65MHz <SISO Ant. 1> 802.11n HT20 : 18.60MHz 802.11n HT40 : 36.30MHz <MIMO Ant. 1+2(1)> 802.11n HT20 : 18.25MHz 802.11n HT40 : 36.40MHz <MIMO Ant. 1+2(2)> 802.11n HT20 : 18.20MHz 802.11n HT40 : 36.40MHz</p>																		
	<p><5745 MHz ~ 5825 MHz> <Ant. 2> 802.11a : 17.80MHz <SISO Ant. 2> 802.11n HT20 : 18.60MHz 802.11n HT40 : 36.50MHz <MIMO Ant. 1+2(1)> 802.11n HT20 : 18.55MHz 802.11n HT40 : 36.40MHz <MIMO Ant. 1+2(2)> 802.11n HT20 : 18.45MHz 802.11n HT40 : 36.30MHz</p>																		
Antenna Type	<p>Ant. 1 (Main Antenna): 802.11b/g/n : PIFA Antenna type with gain 2.06 dBi 802.11a/n : PIFA Antenna type with gain 2.82 dBi Ant. 2 (Aux. Antenna): 802.11b/g/n : PIFA Antenna type with gain 1.75 dBi 802.11a/n : PIFA Antenna type with gain 0.83 dBi</p>																		
Type of Modulation	<p>802.11b : DSSS (DBPSK / DQPSK / CCK) 802.11a/g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)</p>																		
Antenna Function for Transmitter	<table border="1"> <thead> <tr> <th></th> <th>Ant. 1</th> <th>Ant. 2</th> </tr> </thead> <tbody> <tr> <td>802.11 b</td> <td>V</td> <td>V</td> </tr> <tr> <td>802.11 g</td> <td>V</td> <td>V</td> </tr> <tr> <td>802.11 a</td> <td>V</td> <td>V</td> </tr> <tr> <td>802.11 n SISO</td> <td>V</td> <td>V</td> </tr> <tr> <td>802.11 n MIMO</td> <td>V</td> <td>V</td> </tr> </tbody> </table>		Ant. 1	Ant. 2	802.11 b	V	V	802.11 g	V	V	802.11 a	V	V	802.11 n SISO	V	V	802.11 n MIMO	V	V
		Ant. 1	Ant. 2																
802.11 b	V	V																	
802.11 g	V	V																	
802.11 a	V	V																	
802.11 n SISO	V	V																	
802.11 n MIMO	V	V																	
Note: MIMO mode is uncorrelated.																			

1.5 Testing Site

Test Site	SPORTON INTERNATIONAL INC.			
Test Site Location	No. 52, Hwa Ya 1 st 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.
	TH02-HY	CO05-HY	03CH06-HY	722060/4086B-1

The test site complies with ANSI C63.4 2003 requirement.

1.6 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 D01 DTS Meas. Guidance v02
- ♦ FCC KDB 662911 D01 Multiple Transmitter Output v01r02.
- ♦ ANSI C63.10-2009
- ♦ IC RSS-210 Issue 8
- ♦ IC RSS-Gen Issue 3
- ♦ NOTICE 2012-DRS0126

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. Per the section 2.2.3 of Notice of 2012-DRS0126, "Receivers Excluded from Industry Canada Requirements", only radiocommunication receivers operating in stand-alone mode within the band 30-960 MHz and scanner receivers are subject to Industry Canada requirements.

2 Test Configuration of Equipment Under Test

The EUT has been associated with peripherals 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) and radiated emission (9 KHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (X plane for Ant. 1(2.4GHz and 5GHz), Ant. 2 (2.4GHz), and MIMO Ant. 1+2 (2.4GHz and 5GHz); Y plane for Ant. 2 (5GHz)) were recorded in this report.

The final configuration from all the combinations and the worst-case data rates were investigated by measuring the maximum power across all the data rates and modulation modes under section 2.2.

Based on the worst configuration found above, the RF power setting is set individually to meet FCC compliance limit for the final conducted and radiated tests shown in section 2.3.

2.1 Carrier Frequency and Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
2400-2483.5 MHz	1	2412	7	2442
	2	2417	8	2447
	3	2422	9	2452
	4	2427	10	2457
	5	2432	11	2462
	6	2437		

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5725-5850 MHz Band 4	149	5745	159	5795
	151	5755	161	5805
	157	5785	165	5825

2.2 Pre-Scanned RF Power

Preliminary tests were performed in different data rate and antenna configurations as following table and the highest power data rates were chosen for full test in the following tables. Final Output Power equals to Measured Output Power adds the duty factor.

<Ant. 1>

802.11b				
Data Rate (MHz)	1M bps	2M bps	5.5M bps	11M bps
Peak Power (dBm)	17.68	17.62	17.64	17.65

802.11g								
Data Rate (MHz)	6M bps	9M bps	12M bps	18M bps	24M bps	36M bps	48M bps	54M bps
Peak Power (dBm)	22.29	22.21	22.24	22.23	22.26	22.21	22.25	22.23

802.11a								
Data Rate (MHz)	6M bps	9M bps	12M bps	18M bps	24M bps	36M bps	48M bps	54M bps
Peak Power (dBm)	20.83	20.79	20.77	20.76	20.76	20.77	20.81	20.82

<SISO Ant. 1>

2.4GHz 802.11n HT20								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Peak Power (dBm)	22.28	22.22	22.21	22.20	22.24	22.22	22.23	22.21

2.4GHz 802.11n HT40								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Peak Power (dBm)	20.88	20.63	20.68	20.73	20.81	20.84	20.71	20.69

5GHz 802.11n HT20								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Peak Power (dBm)	20.86	20.85	20.83	20.79	20.81	20.82	20.85	20.76

5GHz 802.11n HT40								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Peak Power (dBm)	20.41	20.26	20.32	20.31	20.27	20.25	20.36	20.20

<Ant. 2>

802.11b				
Data Rate (MHz)	1M bps	2M bps	5.5M bps	11M bps
Peak Power (dBm)	17.06	17.03	17.04	17.02

802.11g								
Data Rate (MHz)	6M bps	9M bps	12M bps	18M bps	24M bps	36M bps	48M bps	54M bps
Peak Power (dBm)	21.35	21.26	21.25	21.26	21.29	21.27	21.28	21.27

802.11a								
Data Rate (MHz)	6M bps	9M bps	12M bps	18M bps	24M bps	36M bps	48M bps	54M bps
Peak Power (dBm)	21.66	21.56	21.61	21.53	21.58	21.60	21.54	21.57

<SISO Ant. 2>

2.4GHz 802.11n HT20								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Peak Power (dBm)	21.34	21.28	21.27	21.25	21.24	21.26	21.23	21.28

2.4GHz 802.11n HT40								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Peak Power (dBm)	20.05	19.86	19.72	19.65	19.58	19.49	19.35	19.25

5GHz 802.11n HT20								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Peak Power (dBm)	21.77	21.61	21.59	21.64	21.62	21.65	21.66	21.64

5GHz 802.11n HT40								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Peak Power (dBm)	21.46	20.9	21.21	21.22	21.24	21.28	21.36	20.98



<MIMO Ant. 1+2>

2.4GHz 802.11n HT20								
Data Rate (MHz)	MCS8	MCS9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15
Peak Power (dBm)	23.28	23.18	23.17	23.25	23.22	23.21	23.18	23.16

2.4GHz 802.11n HT40								
Data Rate (MHz)	MCS8	MCS9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15
Peak Power (dBm)	22.44	22.23	22.25	22.41	22.36	22.38	22.40	22.34

5GHz 802.11n HT20								
Data Rate (MHz)	MCS8	MCS9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15
Peak Power (dBm)	22.31	22.19	22.29	22.27	22.01	21.80	21.82	21.85

5GHz 802.11n HT40								
Data Rate (MHz)	MCS8	MCS9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15
Peak Power (dBm)	22.77	22.48	22.48	22.50	22.57	22.54	22.54	22.59

Note: MIMO Ant. 1+2 is a calculated result from sum of the power MIMO Ant. 1 and MIMO Ant. 2.



2.3 Test Mode

Final results of test modes, data rates and test channels are shown as following table.

<2.4GHz>

Test Cases				
	Test Items	Mode	Data Rate	Test Channel
Conducted TCs	6dB and 99% BW Power Spectral Density	802.11b	1 Mbps	1/6/11
		802.11g	6 Mbps	1/6/11
		802.11n HT20	6.5 Mbps	1/6/11
		802.11n HT40	13.5 Mbps	3/6/9
	Output Power	802.11b	1 Mbps	1/6/11
		802.11g	6 Mbps	1/6/11
		802.11n HT20	6.5 Mbps	1/6/11
		802.11n HT40	13.5 Mbps	3/6/9
	Conducted Band EDGE	802.11b	1 Mbps	1/11
		802.11g	6 Mbps	1/11
		802.11n HT20	6.5 Mbps	1/11
		802.11n HT40	13.5 Mbps	3/9
	Conducted Spurious Emission	802.11b	1 Mbps	1/6/11
		802.11g	6 Mbps	1/6/11
		802.11n HT20	6.5 Mbps	1/6/11
		802.11n HT40	13.5 Mbps	3/6/9
Radiated TCs	Radiated Band EDGE	802.11b	1 Mbps	1/11
		802.11g	6 Mbps	1/11
		802.11n HT20	6.5 Mbps	1/11
		802.11n HT40	13.5 Mbps	3/9
	Radiated Spurious Emission	802.11b	1 Mbps	1/6/11
		802.11g	6 Mbps	1/6/11
		802.11n HT20	6.5 Mbps	1/6/11
		802.11n HT40	13.5 Mbps	3/6/9



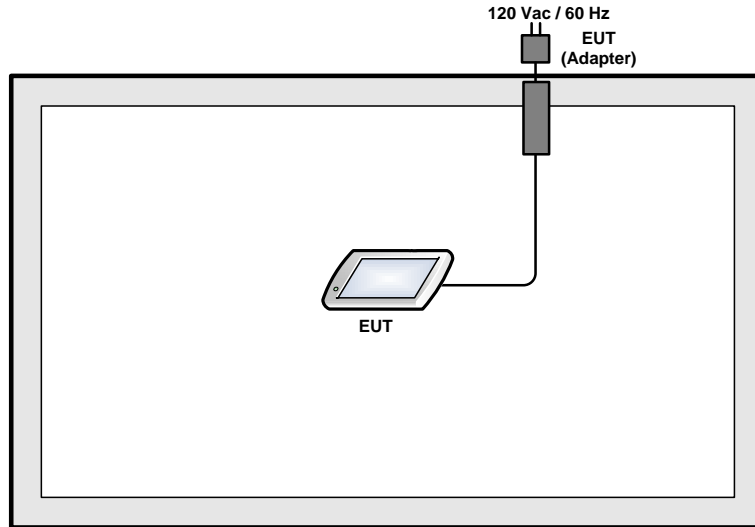
<5GHz>

Test Cases				
	Test Items	Mode	Data Rate	Test Channel
Conducted TCs	6dB and 99% BW Power Spectral Density	802.11a	6 Mbps	149/157/165
		802.11n HT20	6.5 Mbps	149/157/165
		802.11n HT40	13.5 Mbps	151/159
	Output Power	802.11a	6 Mbps	149/157/165
		802.11n HT20	6.5 Mbps	149/157/165
		802.11n HT40	13.5 Mbps	151/159
	Conducted Band EDGE	802.11a	6 Mbps	149/165
		802.11n HT20	6.5 Mbps	149/165
		802.11n HT40	13.5 Mbps	151/159
	Conducted Spurious Emission	802.11a	6 Mbps	149/157/165
		802.11n HT20	6.5 Mbps	149/157/165
		802.11n HT40	13.5 Mbps	151/159
Radiated TCs	Radiated Band EDGE	802.11a	6 Mbps	149/165
		802.11n HT20	6.5 Mbps	149/165
		802.11n HT40	13.5 Mbps	151/159
	Radiated Spurious Emission	802.11a	6 Mbps	149/157/165
		802.11n HT20	6.5 Mbps	149/157/165
		802.11n HT40	13.5 Mbps	151/159

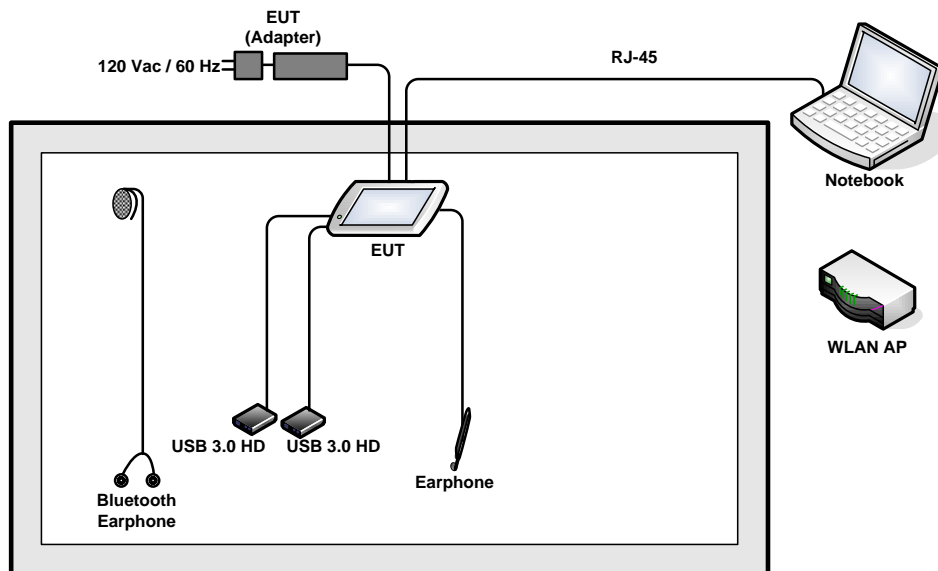
Test Cases	
AC Conducted Emission	Mode 1 : WLAN (2.4G) Link +Bluetooth Link + Camera + H Pattern + MPEG4 + Adapter + RJ-45 + USB 3.0 HD + SD Card + Earphne Mode 2 WLAN (5G) Link +Bluetooth Link + Camera + H Pattern + MPEG4 + Adapter + RJ-45 + USB 3.0 HD + SD Card + Earphne
Remark: The worst case of conducted emission is mode 2; only the test data of it was reported.	

2.4 Connection Diagram of Test System

<WLAN Tx Mode>



<AC Conducted Emission Mode>



2.5 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	WLAN AP	D-Link	DIR-628	KA2DIR628A2	N/A	Unshielded, 1.8 m
2.	Notebook	DELL	Latitude E6320	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
3.	Bluetooth Earphone	Sony Ericsson	MW600	PY7DDA-2029	N/A	N/A
4.	Earphone	Ergotech	ET-E200	FCC DoC	Unshielded, 1.8 m	N/A
5.	USB 3.0 HD	WD	WDBPCK5000ABK-PESN	FCC DoC	Shielded, 0.5 m	N/A
6.	SD Card	SanDisk	MicroSD HC	FCC DoC	N/A	N/A

2.6 Description of RF Function Operation Test Setup

The programmed RF utility "DRTU.exe", 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.



2.7 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 4.2 dB and 10dB attenuator.

Example :

$$\begin{aligned} \text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)}. \\ &= 4.2 + 10 = 14.2 \text{ (dB)} \end{aligned}$$

3 Test Result

3.1 6dB and 99% Bandwidth Measurement

3.1.1 Limit of 6dB and 99% Bandwidth

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

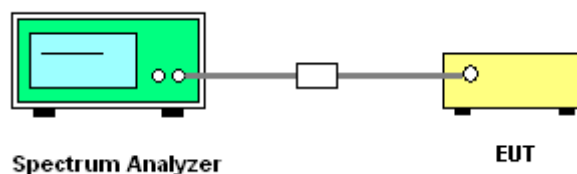
3.1.2 Measuring Instruments

See list of measuring instruments of this test report.

3.1.3 Test Procedures

1. The testing follows FCC KDB Publication No. 558074 DTS D01 Meas. Guidance v02.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 10 kHz. Set the Video bandwidth (VBW) = 30 kHz. In order to make an accurate measurement. The 6 dB bandwidth must be greater than 500 KHz.
5. For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) is set 10kHz and set the Video bandwidth (VBW) = 30kHz.
6. Measure and record the results in the test report.

3.1.4 Test Setup





3.1.5 Test Result of 6dB Bandwidth

Test Mode :	802.11b	Temperature :	24~26°C
Test Engineer :	Bill Kuo	Relative Humidity :	55~58%

Channel	Frequency (MHz)	802.11b 6dB Bandwidth (MHz)			6dB Bandwidth Min. Limit (MHz)	Pass/Fail
		Ant. 1				
01	2412	10.08			0.5	Pass
06	2437	10.08			0.5	Pass
11	2462	10.04			0.5	Pass

Test Mode :	802.11g	Temperature :	24~26°C
Test Engineer :	Bill Kuo	Relative Humidity :	55~58%

Channel	Frequency (MHz)	802.11g 6dB Bandwidth (MHz)			6dB Bandwidth Min. Limit (MHz)	Pass/Fail
		Ant. 1				
01	2412	15.08			0.5	Pass
06	2437	15.08			0.5	Pass
11	2462	15.08			0.5	Pass

Test Mode :	802.11n HT20	Temperature :	24~26°C
Test Engineer :	Bill Kuo	Relative Humidity :	55~58%

Channel	Frequency (MHz)	2.4GHz 802.11n HT20 6dB Bandwidth (MHz)			6dB Bandwidth Min. Limit (MHz)	Pass/Fail
		SISO Ant. 1	MIMO Ant. 1	MIMO Ant. 2		
01	2412	15.12	15.08	15.04	0.5	Pass
06	2437	15.12	15.08	15.08	0.5	Pass
11	2462	15.12	15.04	15.04	0.5	Pass



Test Mode :	802.11n HT40	Temperature :	24~26°C
Test Engineer :	Bill Kuo	Relative Humidity :	55~58%

Channel	Frequency (MHz)	2.4GHz 802.11n HT40 6dB Bandwidth (MHz)			6dB Bandwidth Min. Limit (MHz)	Pass/Fail
		SISO Ant. 1	MIMO Ant. 1	MIMO Ant. 2		
03	2422	35.04	36.08	35.52	0.5	Pass
06	2437	35.04	36.32	35.68	0.5	Pass
09	2452	35.12	36.24	36.36	0.5	Pass

Test Mode :	802.11a	Temperature :	24~26°C
Test Engineer :	Bill Kuo	Relative Humidity :	55~58%

Channel	Frequency (MHz)	802.11a 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
		Ant. 2		
149	5745	16.28	0.5	Pass
157	5785	16.30	0.5	Pass
165	5825	16.30	0.5	Pass

Test Mode :	802.11n HT20	Temperature :	24~26°C
Test Engineer :	Bill Kuo	Relative Humidity :	55~58%

Channel	Frequency (MHz)	5GHz 802.11n HT20 6dB Bandwidth (MHz)			6dB Bandwidth Min. Limit (MHz)	Pass/Fail
		SISO Ant. 2	MIMO Ant. 1	MIMO Ant. 2		
149	5745	17.04	17.56	17.56	0.5	Pass
157	5785	17.04	17.56	17.56	0.5	Pass
165	5825	17.04	17.58	17.54	0.5	Pass



Test Mode :	802.11n HT40	Temperature :	24~26°C
Test Engineer :	Bill Kuo	Relative Humidity :	55~58%

Channel	Frequency (MHz)	5GHz 802.11n HT40 6dB Bandwidth (MHz)			6dB Bandwidth Min. Limit (MHz)	Pass/Fail
		SISO Ant. 2	MIMO Ant. 1	MIMO Ant. 2		
151	5755	35.12	35.28	35.04	0.5	Pass
159	5795	35.12	35.28	35.04	0.5	Pass



3.1.6 Test Result of 99% Occupied Bandwidth

Test Mode :	802.11b	Temperature :	24~26°C
Test Engineer :	Bill Kuo	Relative Humidity :	55~58%

Channel	Frequency (MHz)	802.11b 99% Occupied Bandwidth (MHz)		Pass/Fail
		Ant. 1		
01	2412	13.15		Pass
06	2437	13.25		Pass
11	2462	13.25		Pass

Test Mode :	802.11g	Temperature :	24~26°C
Test Engineer :	Bill Kuo	Relative Humidity :	55~58%

Channel	Frequency (MHz)	802.11g 99% Occupied Bandwidth (MHz)		Pass/Fail
		Ant. 1		
01	2412	17.30		Pass
06	2437	17.65		Pass
11	2462	17.25		Pass

Test Mode :	802.11n HT20	Temperature :	24~26°C
Test Engineer :	Bill Kuo	Relative Humidity :	55~58%

Channel	Frequency (MHz)	2.4GHz 802.11n HT20 99% Occupied Bandwidth (MHz)			Pass/Fail
		SISO Ant. 1	MIMO Ant. 1	MIMO Ant. 2	
01	2412	18.05	18.20	18.20	Pass
06	2437	18.60	18.25	18.20	Pass
11	2462	18.15	18.25	18.20	Pass



Test Mode :	802.11n HT40	Temperature :	24~26°C
Test Engineer :	Bill Kuo	Relative Humidity :	55~58%

Channel	Frequency (MHz)	2.4GHz 802.11n HT40 99% Occupied Bandwidth (MHz)			Pass/Fail
		SISO Ant. 1	MIMO Ant. 1	MIMO Ant. 2	
03	2422	36.20	36.30	36.20	Pass
06	2437	36.30	36.40	36.40	Pass
09	2452	36.20	36.40	36.30	Pass

Test Mode :	802.11a	Temperature :	24~26°C
Test Engineer :	Bill Kuo	Relative Humidity :	55~58%

Channel	Frequency (MHz)	802.11a 99% Occupied Bandwidth (MHz)		Pass/Fail
		Ant. 2		
149	5745	17.70		Pass
157	5785	17.70		Pass
165	5825	17.80		Pass

Test Mode :	802.11n HT20	Temperature :	24~26°C
Test Engineer :	Bill Kuo	Relative Humidity :	55~58%

Channel	Frequency (MHz)	5GHz 802.11n HT20 99% Occupied Bandwidth (MHz)			Pass/Fail
		SISO Ant. 2	MIMO Ant. 1	MIMO Ant. 2	
149	5745	18.60	18.55	18.40	Pass
157	5785	18.55	18.45	18.35	Pass
165	5825	18.60	18.55	18.45	Pass

Test Mode :	802.11n HT40	Temperature :	24~26°C
Test Engineer :	Bill Kuo	Relative Humidity :	55~58%

Channel	Frequency (MHz)	5GHz 802.11n HT40 99% Occupied Bandwidth (MHz)			Pass/Fail
		SISO Ant. 2	MIMO Ant. 1	MIMO Ant. 2	
151	5755	36.50	36.40	36.30	Pass
159	5795	36.40	36.30	36.30	Pass

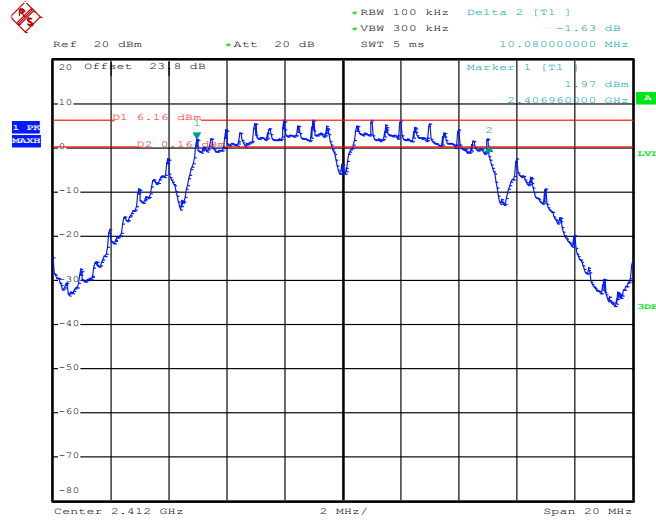


3.1.7 Test Result of 6dB Bandwidth Plots

<802.11b>

802.11b – Ant. 1

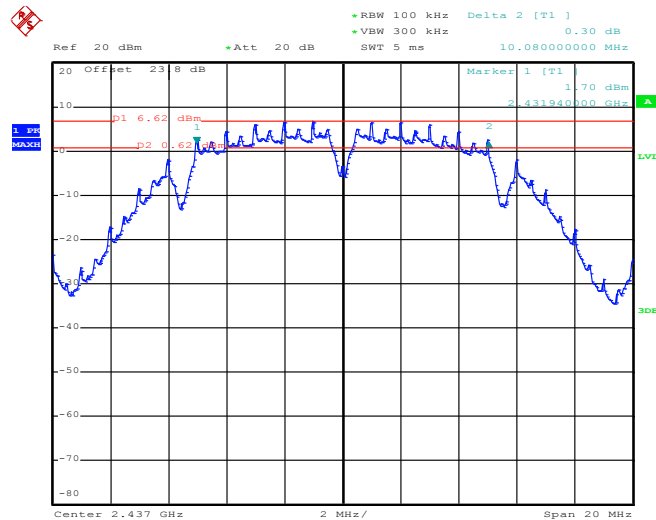
6 dB Bandwidth Plot on Channel 01



Date: 4.MAR.2013 20:09:16

802.11b – Ant. 1

6 dB Bandwidth Plot on Channel 06

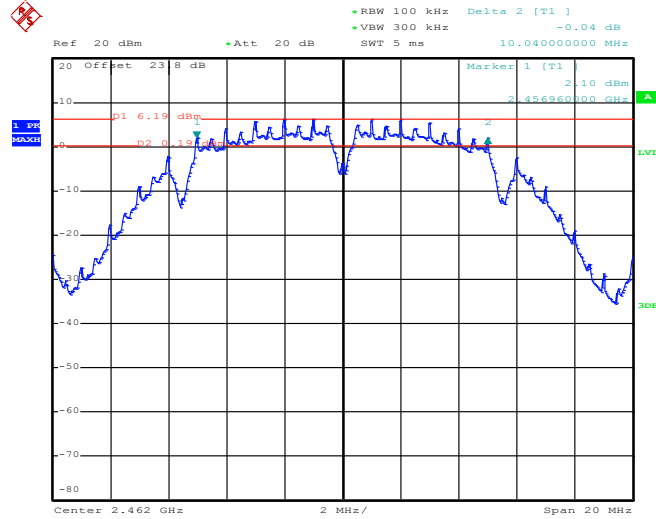


Date: 4.MAR.2013 20:27:01



802.11b – Ant. 1

6 dB Bandwidth Plot on Channel 11



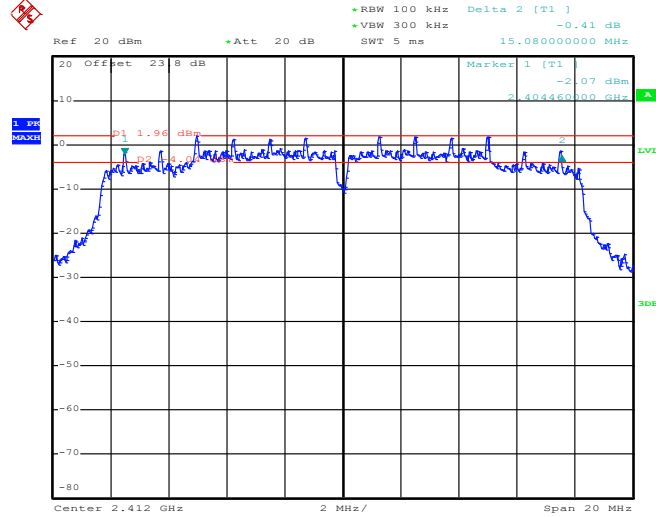
Date: 4.MAR.2013 20:30:32



<802.11g>

802.11g – Ant. 1

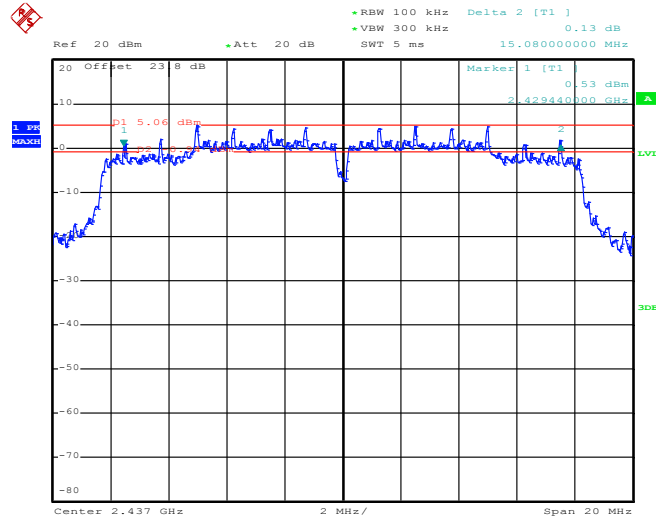
6 dB Bandwidth Plot on Channel 01



Date: 4.MAR.2013 20:34:07

802.11g – Ant. 1

6 dB Bandwidth Plot on Channel 06



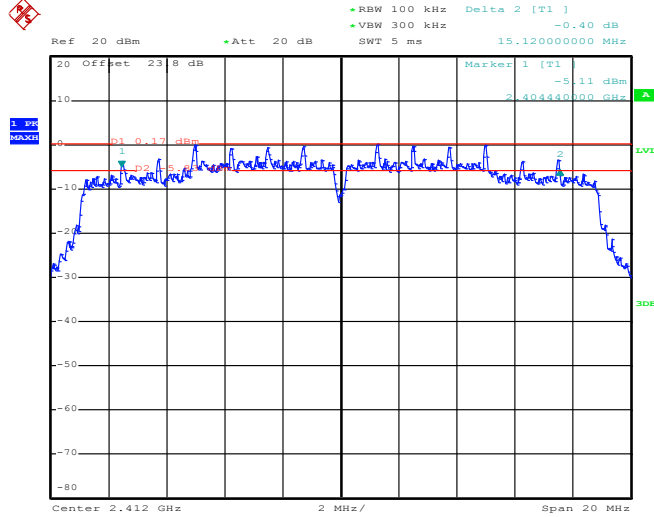
Date: 4.MAR.2013 20:36:56



<2.4GHz 802.11n HT20>

802.11n HT20 – SISO Ant. 1

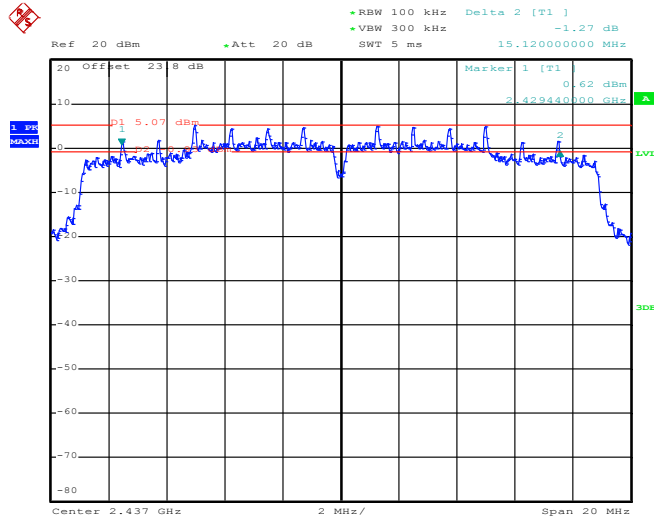
6 dB Bandwidth Plot on Channel 01



Date: 4.MAR.2013 20:55:31

802.11n HT20 – SISO Ant. 1

6 dB Bandwidth Plot on Channel 06

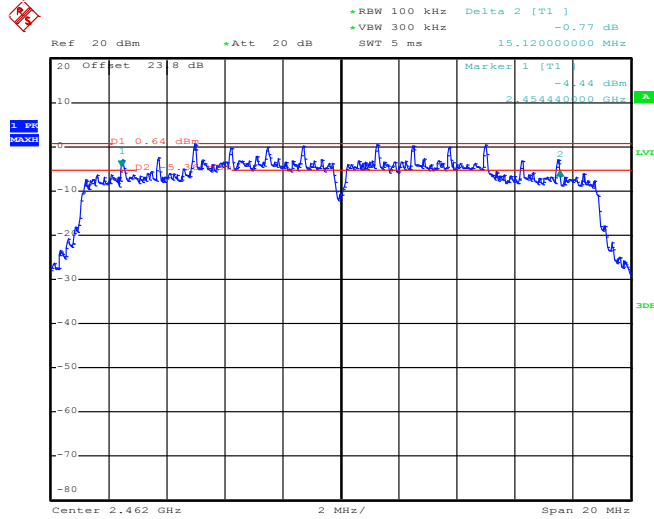


Date: 4.MAR.2013 20:52:36



802.11n HT20 – SISO Ant. 1

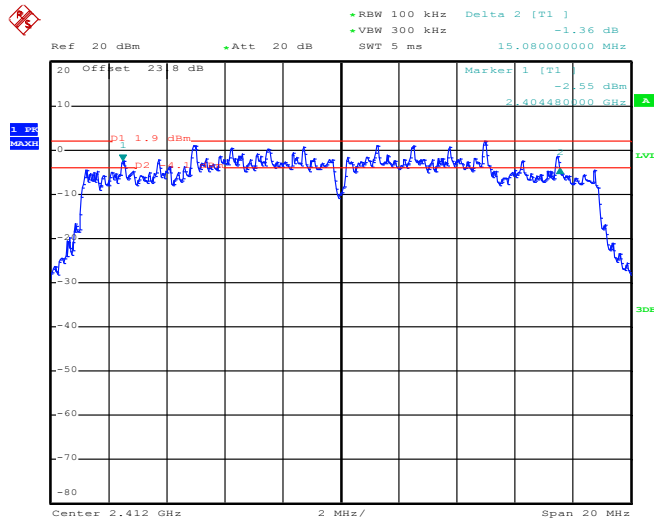
6 dB Bandwidth Plot on Channel 11



Date: 4.MAR.2013 20:44:31

802.11n HT20 – MIMO Ant. 1

6 dB Bandwidth Plot on Channel 01

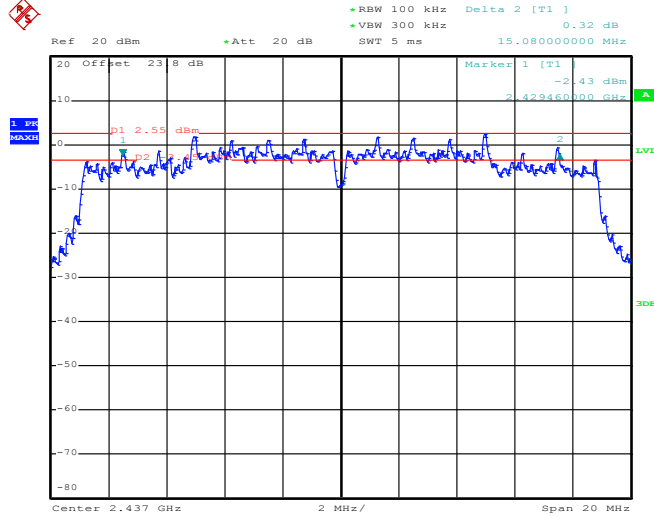


Date: 4.MAR.2013 20:59:44



802.11n HT20 – MIMO Ant. 1

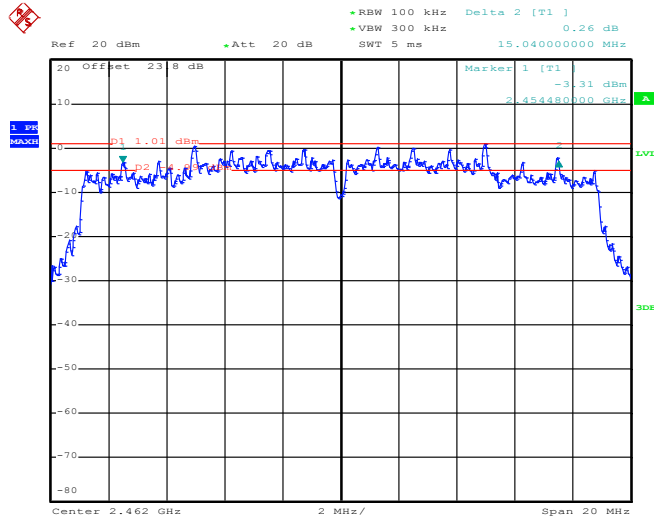
6 dB Bandwidth Plot on Channel 06



Date: 4.MAR.2013 21:11:55

802.11n HT20 – MIMO Ant. 1

6 dB Bandwidth Plot on Channel 11

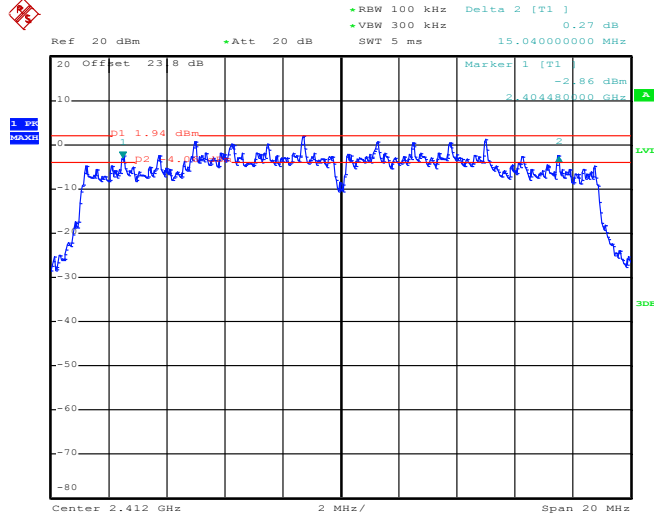


Date: 4.MAR.2013 21:15:05



802.11n HT20 – MIMO Ant. 2

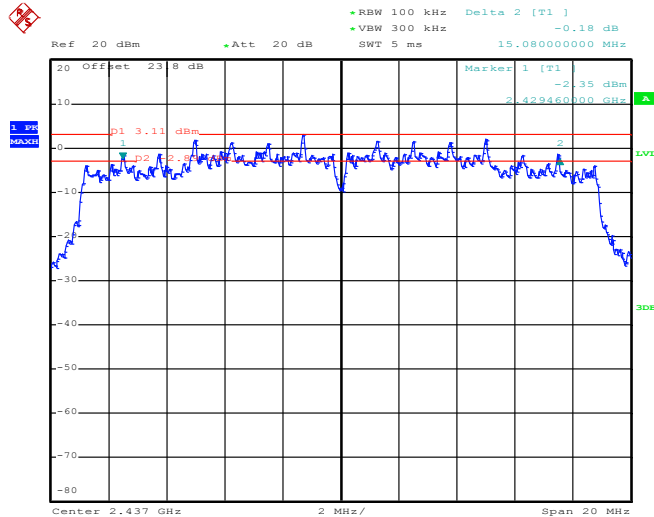
6 dB Bandwidth Plot on Channel 01



Date: 4.MAR.2013 21:05:13

802.11n HT20 – MIMO Ant. 2

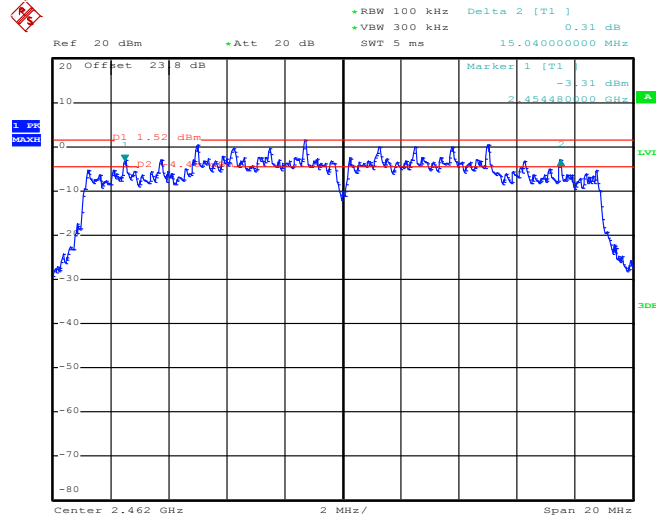
6 dB Bandwidth Plot on Channel 06



Date: 4.MAR.2013 21:08:29



802.11n HT20 – MIMO Ant. 2
6 dB Bandwidth Plot on Channel 11



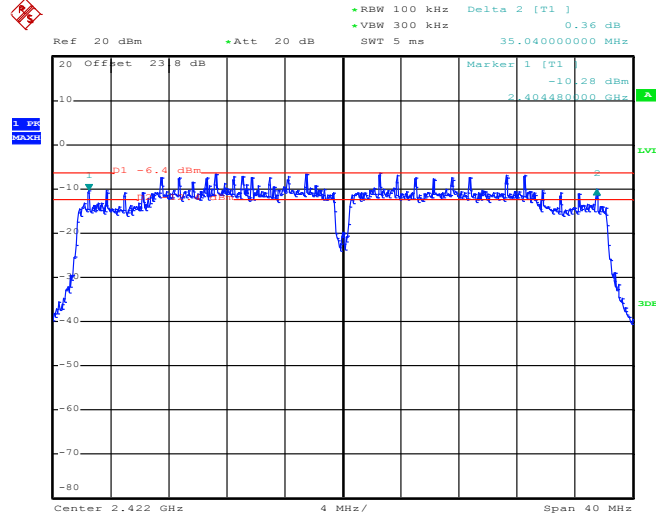
Date: 4.MAR.2013 21:17:57



<2.4GHz 802.11n HT40>

802.11n HT40 – SISO Ant. 1

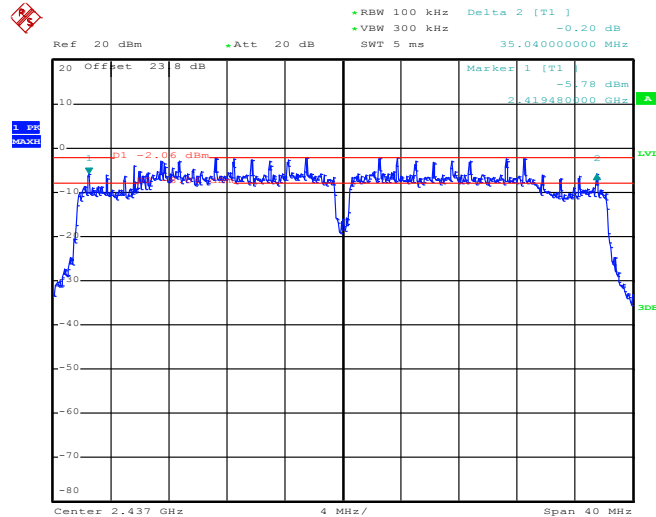
6 dB Bandwidth Plot on Channel 03



Date: 4.MAR.2013 21:26:11

802.11n HT40 – SISO Ant. 1

6 dB Bandwidth Plot on Channel 06

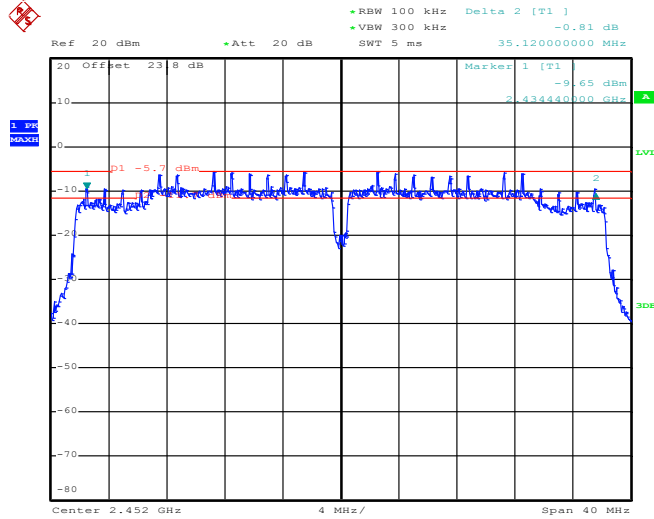


Date: 4.MAR.2013 21:29:24



802.11n HT40 – SISO Ant. 1

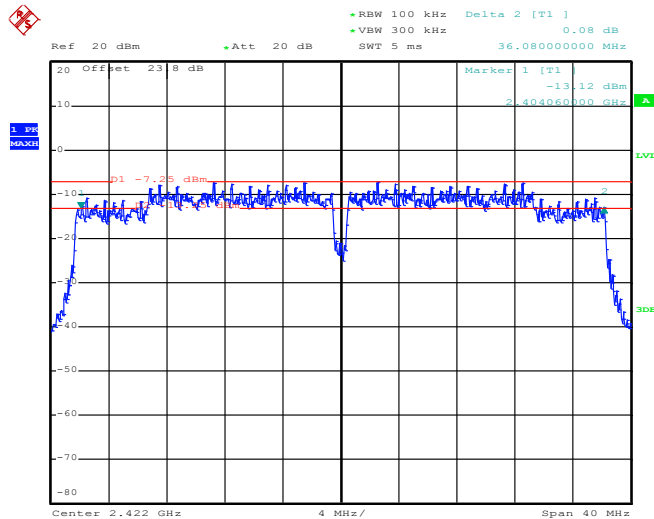
6 dB Bandwidth Plot on Channel 09



Date: 4.MAR.2013 21:32:38

802.11n HT40 – MIMO Ant. 1

6 dB Bandwidth Plot on Channel 03

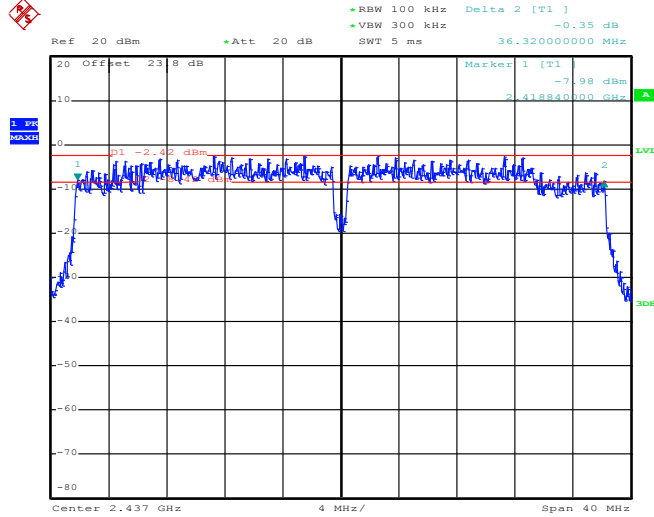


Date: 4.MAR.2013 21:39:31



802.11n HT40 – MIMO Ant. 1

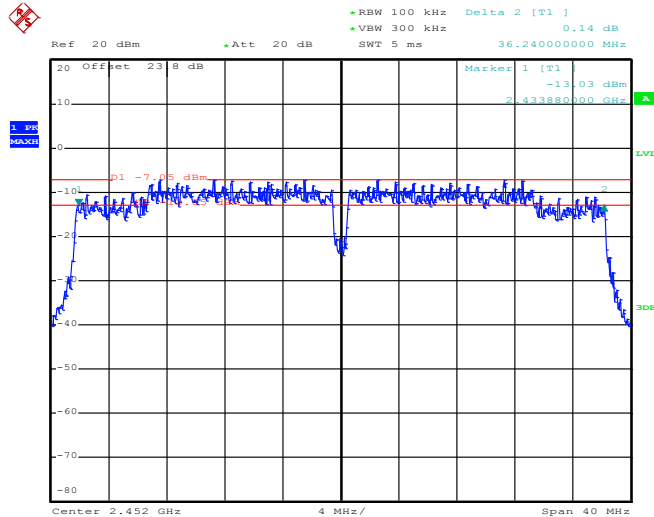
6 dB Bandwidth Plot on Channel 06



Date: 4.MAR.2013 21:48:10

802.11n HT40 – MIMO Ant. 1

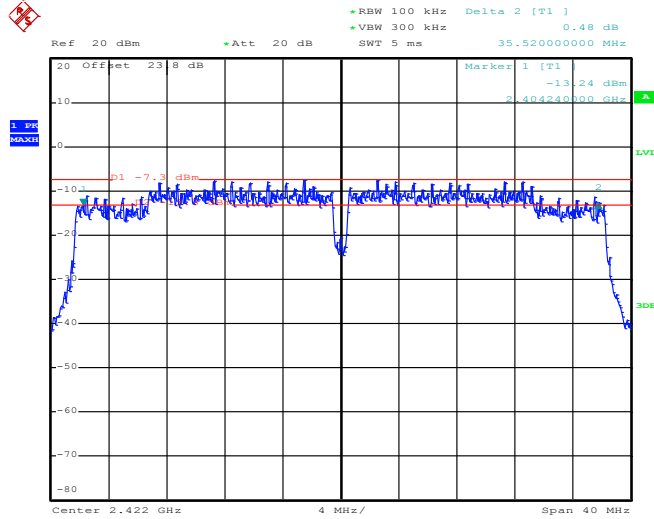
6 dB Bandwidth Plot on Channel 09



Date: 4.MAR.2013 21:51:55

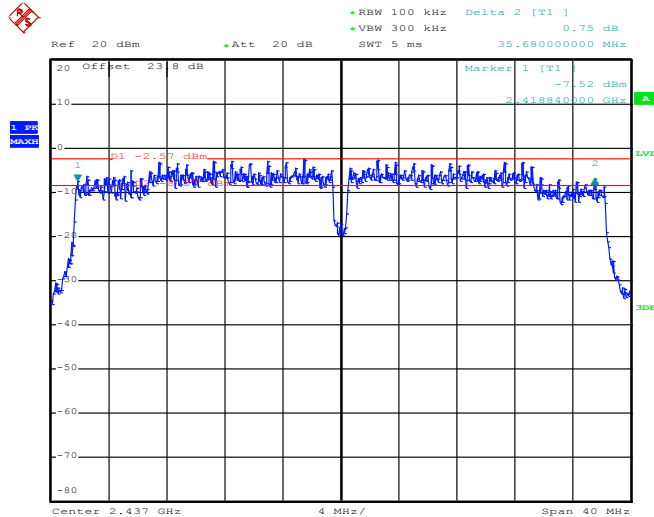


802.11n HT40 – MIMO Ant. 2
6 dB Bandwidth Plot on Channel 03



Date: 4.MAR.2013 21:42:36

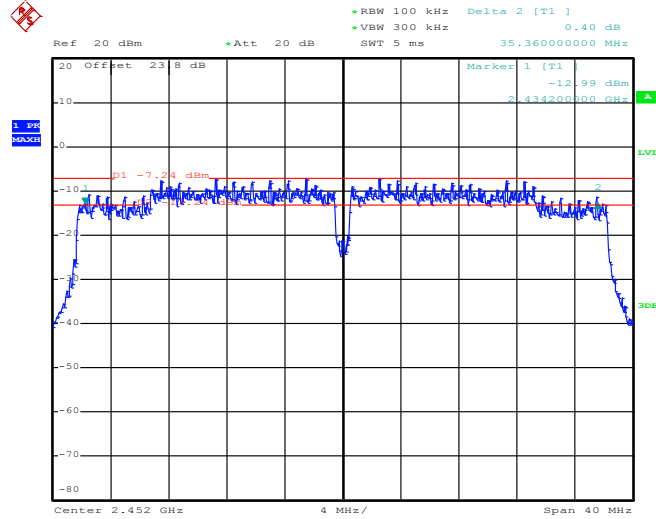
802.11n HT40 – MIMO Ant. 2
6 dB Bandwidth Plot on Channel 06



Date: 4.MAR.2013 21:45:28



802.11n HT40 – MIMO Ant. 2
6 dB Bandwidth Plot on Channel 09



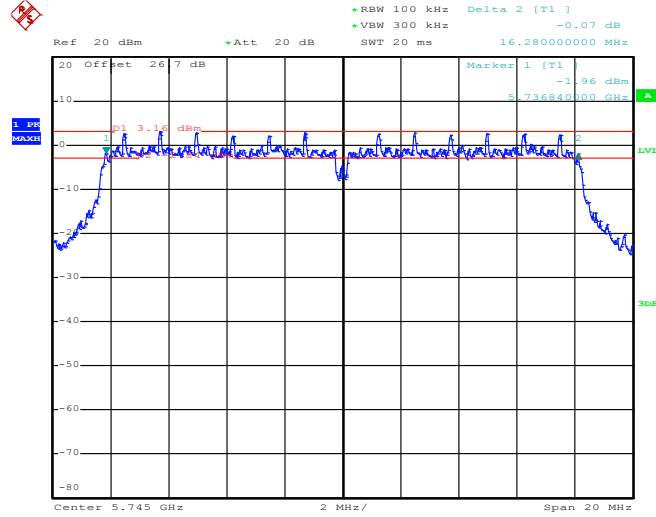
Date: 4.MAR.2013 21:55:14



<802.11a>

802.11a Ant. 2

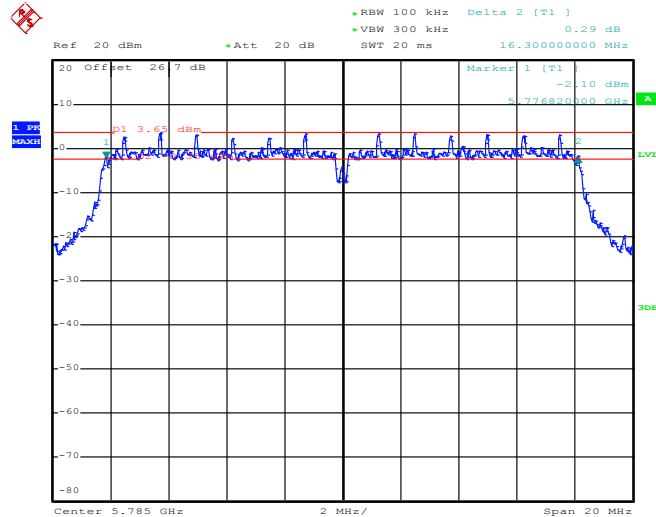
6 dB Bandwidth Plot on Channel 149



Date: 4.MAR.2013 22:34:33

802.11a Ant. 2

6 dB Bandwidth Plot on Channel 157

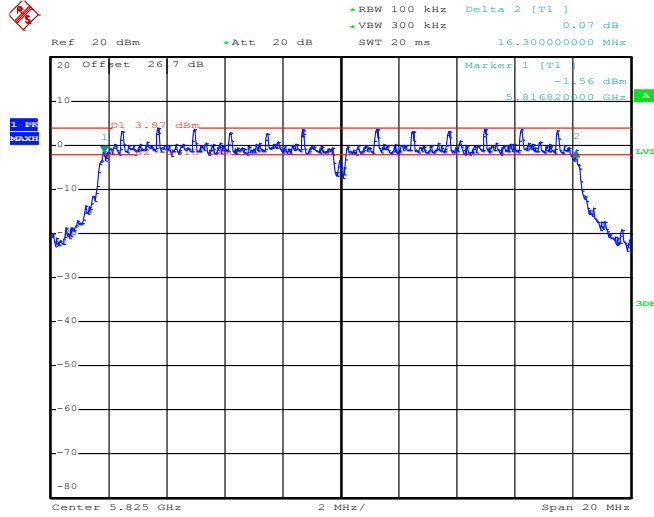


Date: 4.MAR.2013 22:38:39



802.11a Ant. 2

6 dB Bandwidth Plot on Channel 165



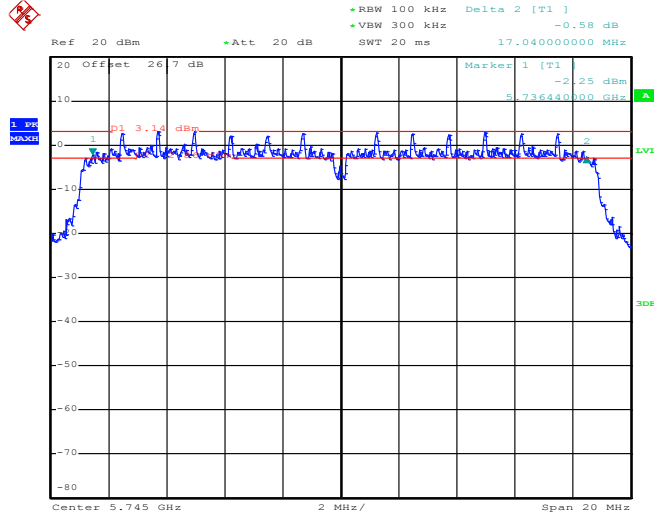
Date: 4.MAR.2013 22:42:15



<5GHz 802.11n HT20>

802.11n HT20 – SISO Ant. 2

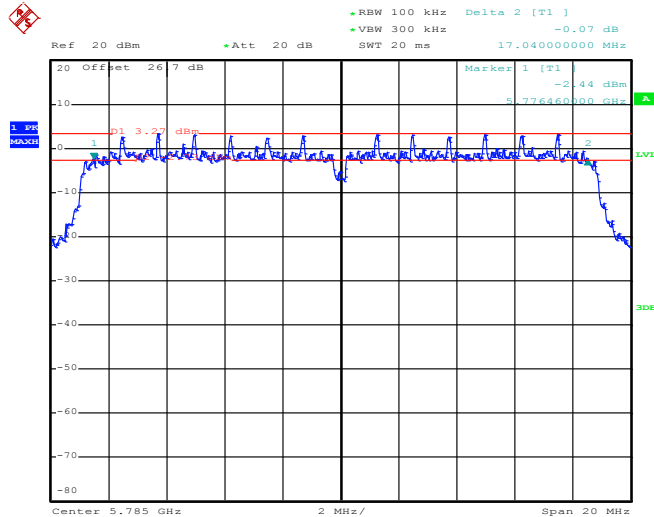
6 dB Bandwidth Plot on Channel 149



Date: 4.MAR.2013 22:52:13

802.11n HT20 – SISO Ant. 2

6 dB Bandwidth Plot on Channel 157

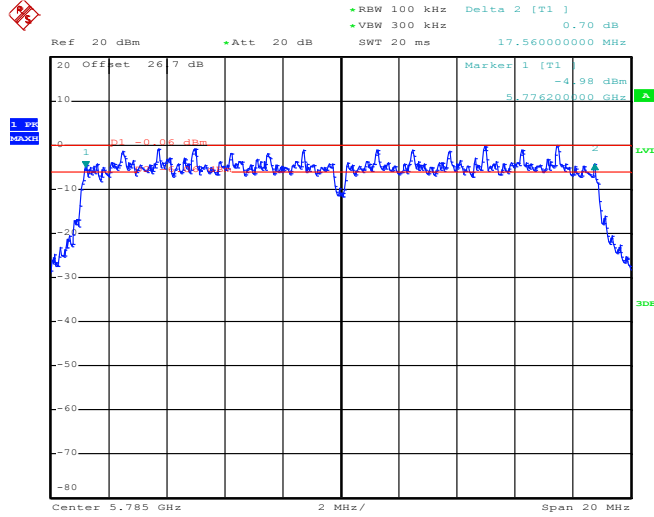


Date: 4.MAR.2013 22:49:34



802.11n HT20 – MIMO Ant. 1

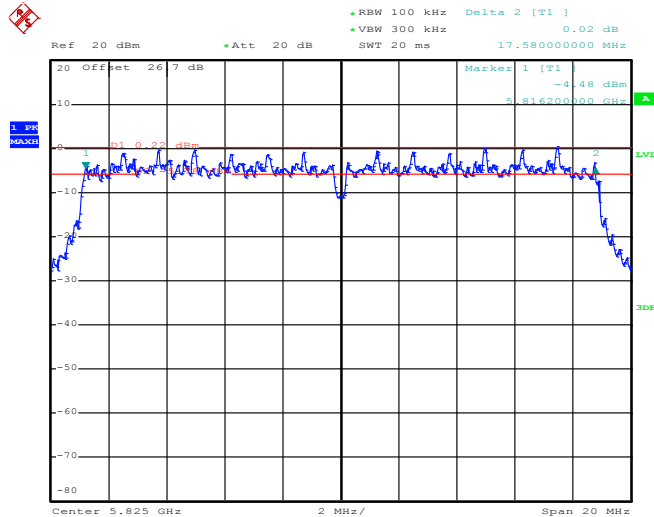
6 dB Bandwidth Plot on Channel 157



Date: 4.MAR.2013 23:03:35

802.11n HT20 – MIMO Ant. 1

6 dB Bandwidth Plot on Channel 165

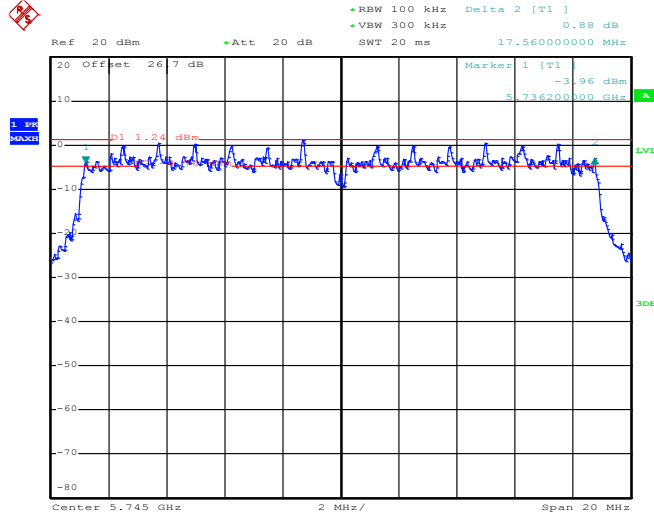


Date: 4.MAR.2013 23:11:31



802.11n HT20 – MIMO Ant. 2

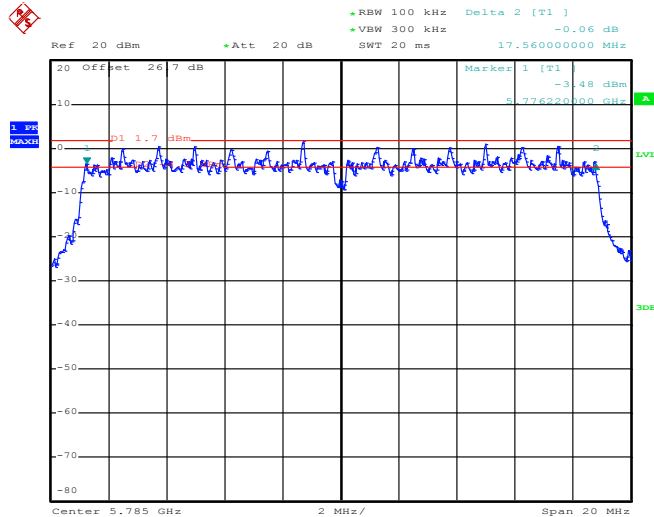
6 dB Bandwidth Plot on Channel 149



Date: 4.MAR.2013 22:57:38

802.11n HT20 – MIMO Ant. 2

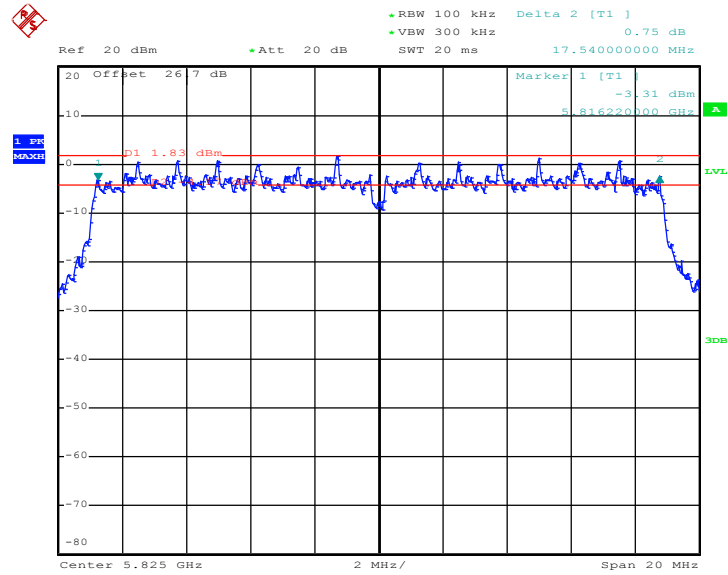
6 dB Bandwidth Plot on Channel 151



Date: 4.MAR.2013 23:06:07



802.11n HT20 – MIMO Ant. 2
6 dB Bandwidth Plot on Channel 165

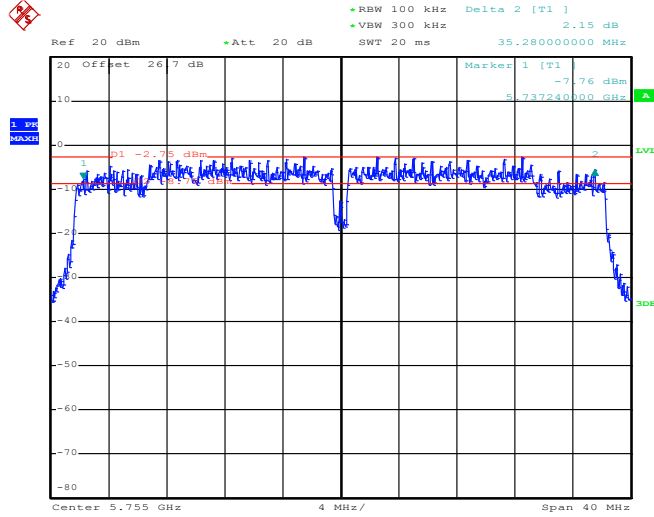


Date: 4.MAR.2013 23:08:38



802.11n HT40 – MIMO Ant. 1

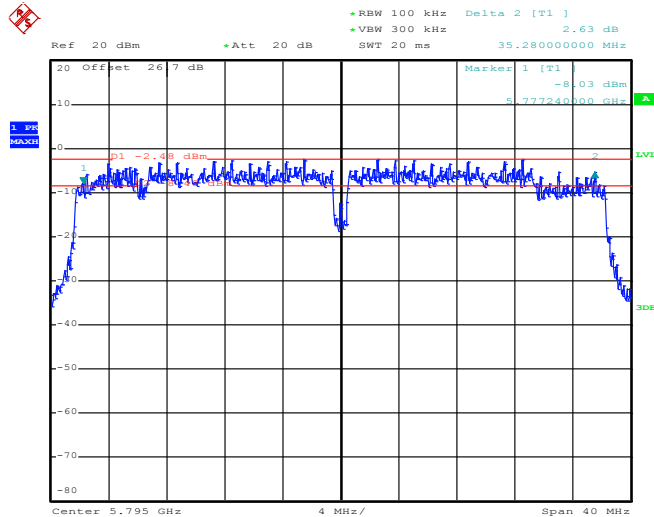
6 dB Bandwidth Plot on Channel 151



Date: 4.MAR.2013 23:31:31

802.11n HT40 – MIMO Ant. 1

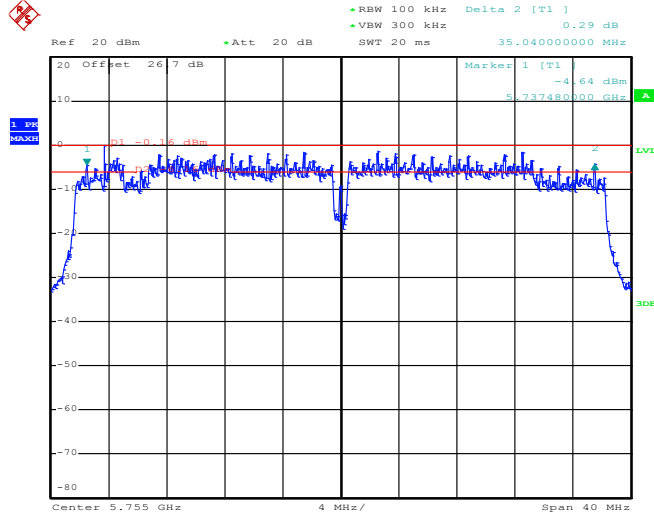
6 dB Bandwidth Plot on Channel 159



Date: 4.MAR.2013 23:28:10

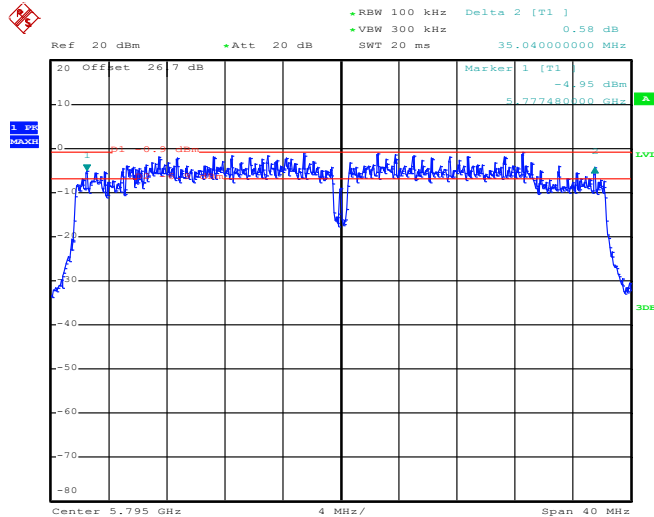


802.11n HT40 – MIMO Ant. 2
6 dB Bandwidth Plot on Channel 151



Date: 4.MAR.2013 23:34:58

802.11n HT40 – MIMO Ant. 2
6 dB Bandwidth Plot on Channel 159



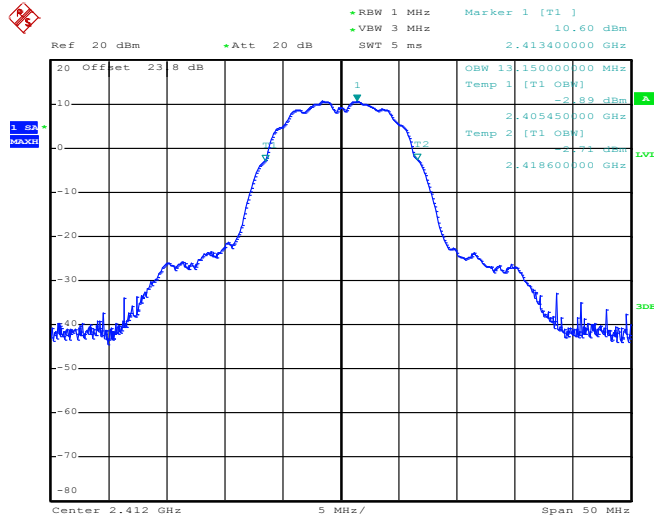
Date: 4.MAR.2013 23:25:31

3.1.8 Test Result of 99% Bandwidth Plots

<802.11b>

802.11b – Ant. 1

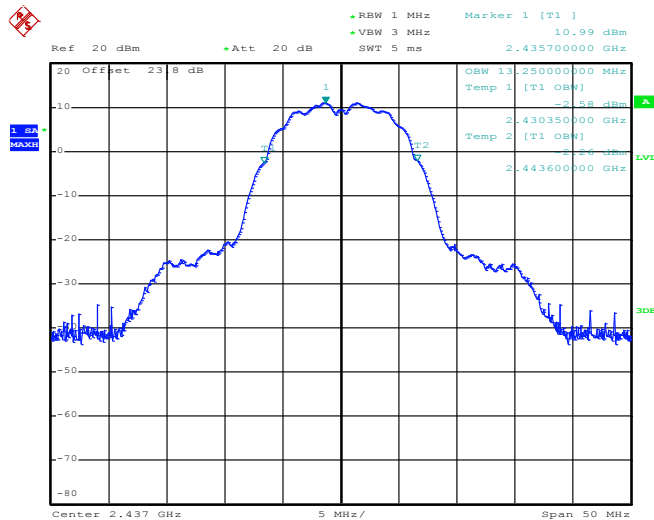
99% Occupied Bandwidth Plot on Channel 01



Date: 4.MAR.2013 20:10:48

802.11b – Ant. 1

99% Occupied Bandwidth Plot on Channel 06

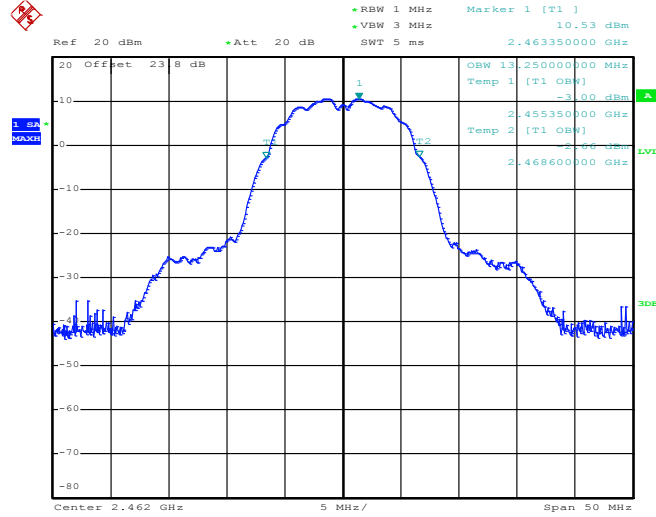


Date: 4.MAR.2013 20:28:20



802.11b – Ant. 1

99% Occupied Bandwidth Plot on Channel 11



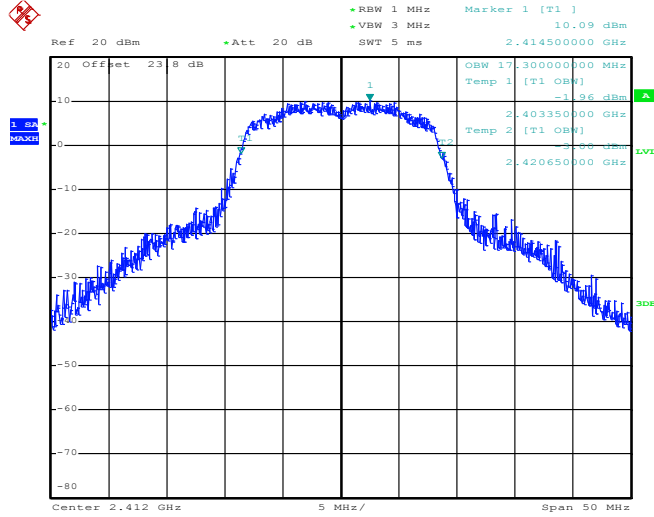
Date: 4.MAR.2013 20:32:04



<802.11g>

802.11g – Ant. 1

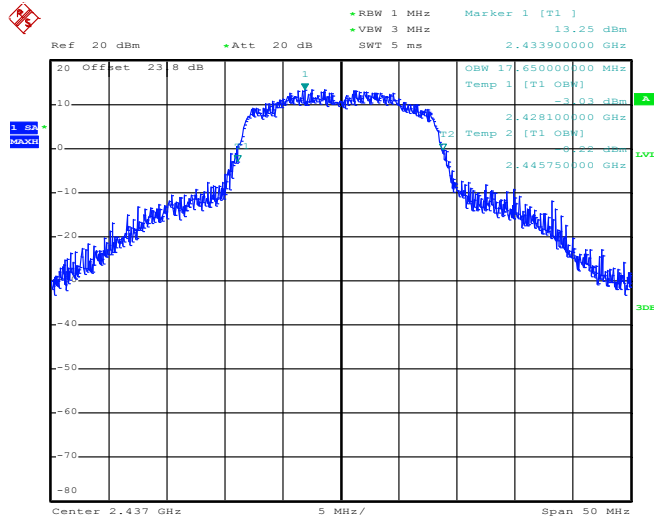
99% Occupied Bandwidth Plot on Channel 01



Date: 4.MAR.2013 20:35:40

802.11g – Ant. 1

99% Occupied Bandwidth Plot on Channel 06

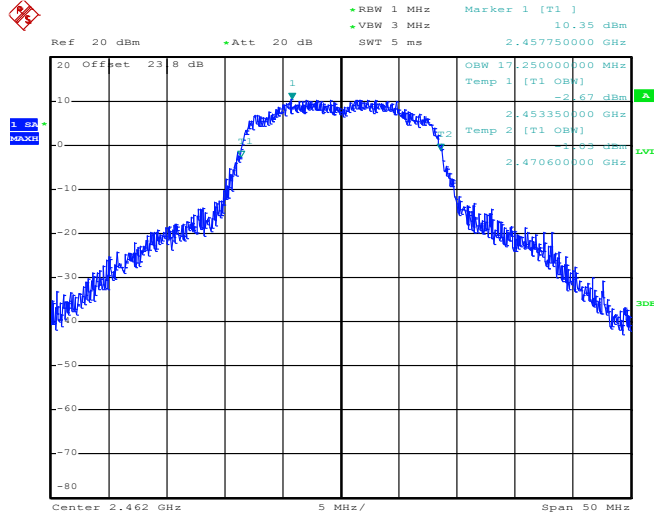


Date: 4.MAR.2013 20:38:15



802.11g – Ant. 1

99% Occupied Bandwidth Plot Channel 11



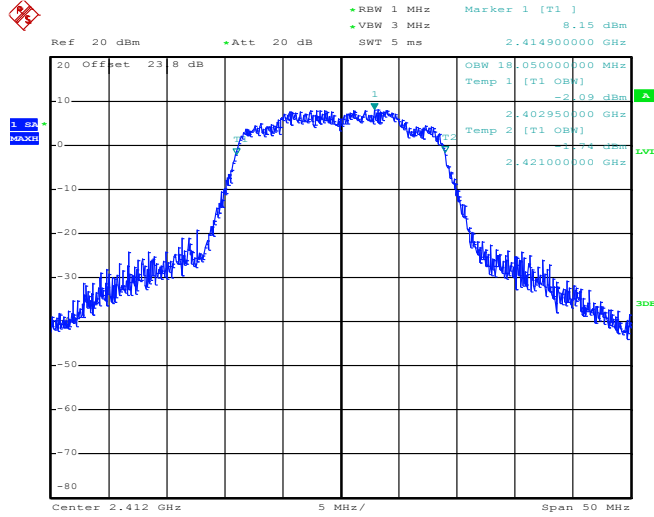
Date: 4.MAR.2013 20:41:15



<2.4GHz 802.11n HT20>

802.11n HT20 – SISO Ant. 1

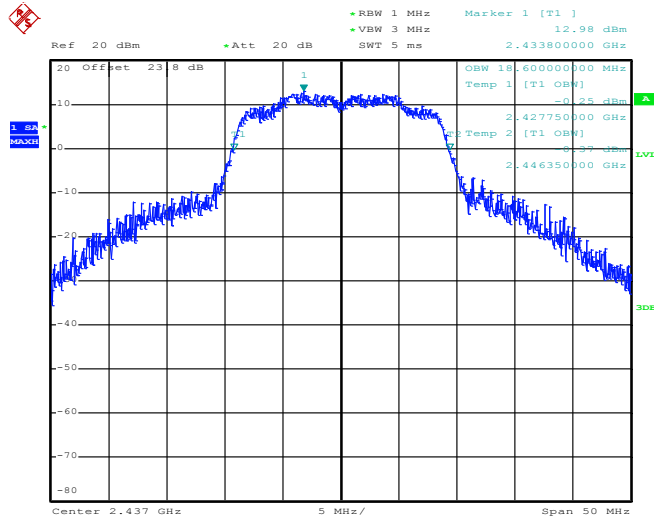
99% Occupied Bandwidth Plot on Channel 01



Date: 4.MAR.2013 20:57:04

802.11n HT20 – SISO Ant. 1

99% Occupied Bandwidth Plot on Channel 06

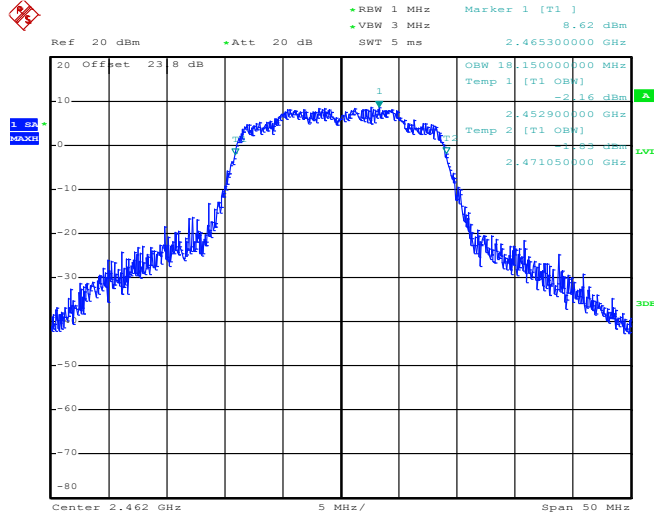


Date: 4.MAR.2013 20:53:56



802.11n HT20 – SISO Ant. 1

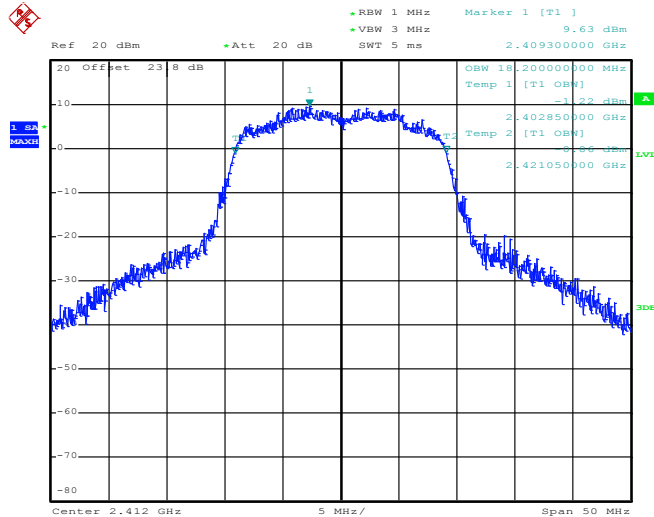
99% Occupied Bandwidth Plot on Channel 11



Date: 4.MAR.2013 20:46:05

802.11n HT20 – MIMO Ant. 1

99% Occupied Bandwidth Plot on Channel 01

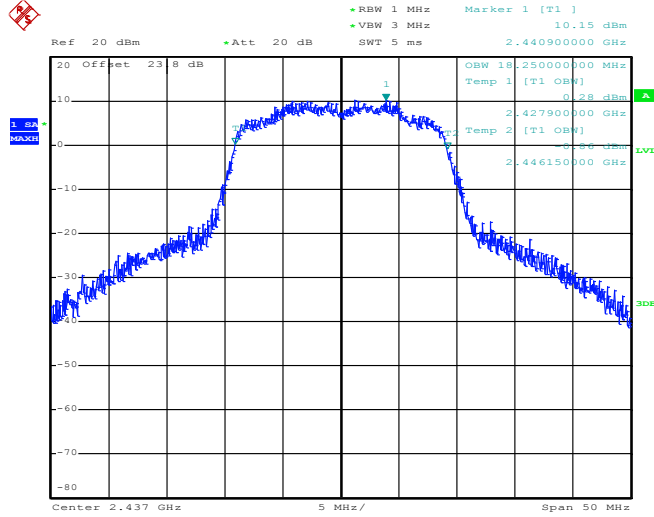


Date: 4.MAR.2013 21:01:16



802.11n HT20 – MIMO Ant. 1

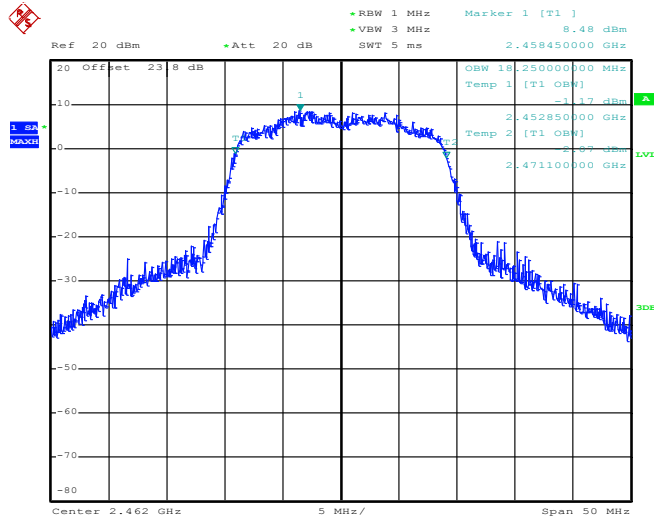
99% Occupied Bandwidth Plot on Channel 06



Date: 4.MAR.2013 21:13:15

802.11n HT20 – MIMO Ant. 1

99% Occupied Bandwidth Plot on Channel 11

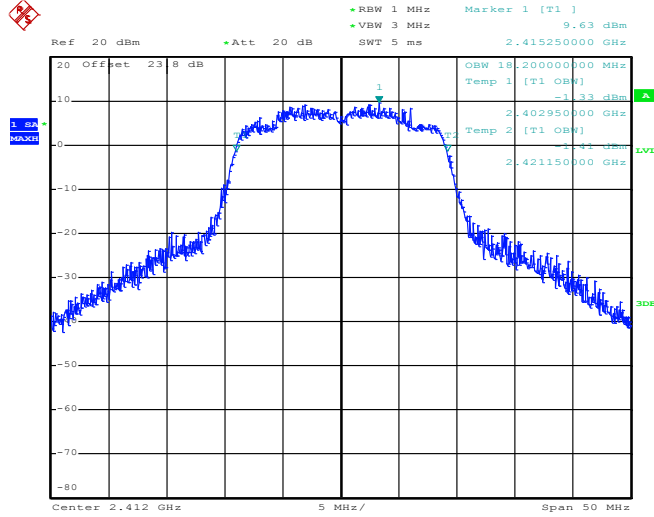


Date: 4.MAR.2013 21:16:38



802.11n HT20 – MIMO Ant. 2

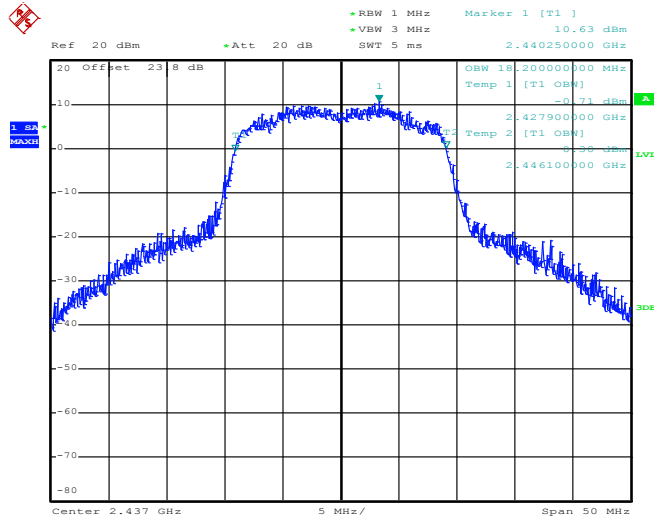
99% Occupied Bandwidth Plot on Channel 01



Date: 4.MAR.2013 21:06:46

802.11n HT20 – MIMO Ant. 2

99% Occupied Bandwidth Plot on Channel 06

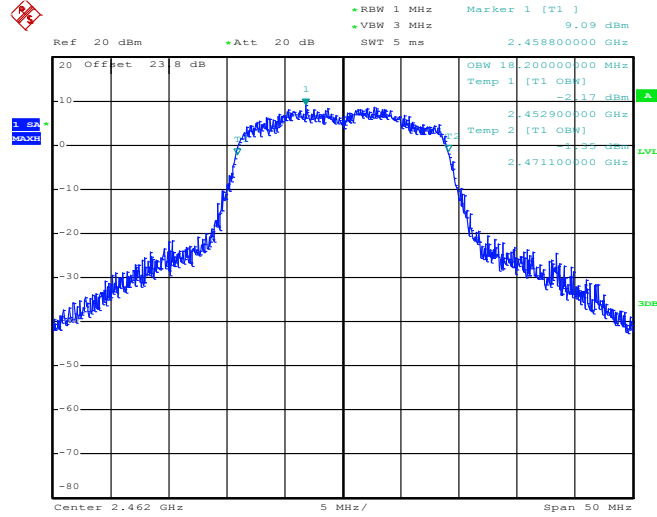


Date: 4.MAR.2013 21:09:49



802.11n HT20 – MIMO Ant. 2

99% Occupied Bandwidth Plot on Channel 11



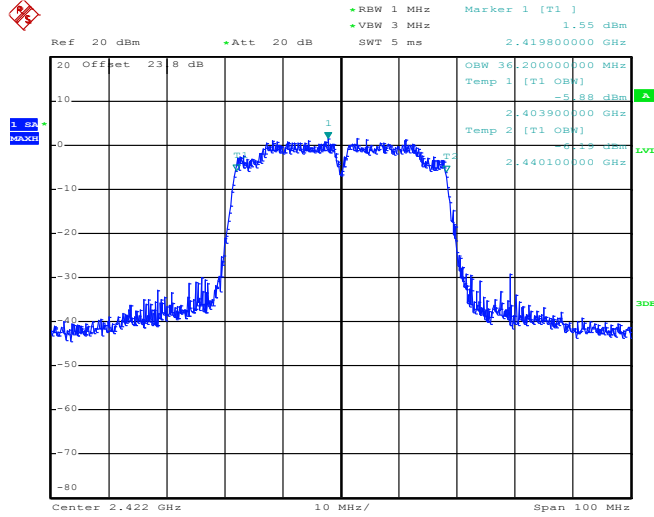
Date: 4.MAR.2013 21:19:30



<2.4GHz 802.11n HT40>

802.11n HT40 – SISO Ant. 1

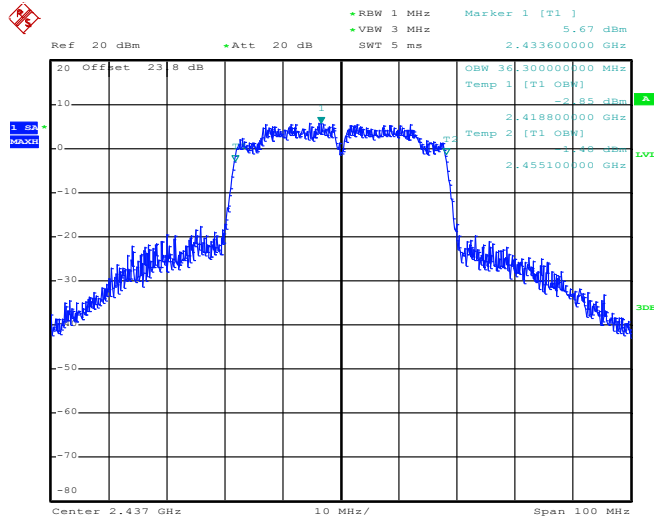
99% Occupied Bandwidth Plot on Channel 03



Date: 4.MAR.2013 21:27:48

802.11n HT40 – SISO Ant. 1

99% Occupied Bandwidth Plot on Channel 06

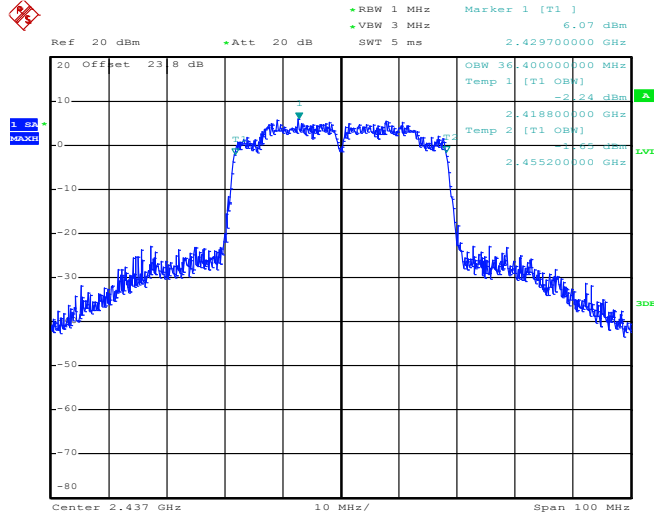


Date: 4.MAR.2013 21:31:04



802.11n HT40 – MIMO Ant. 1

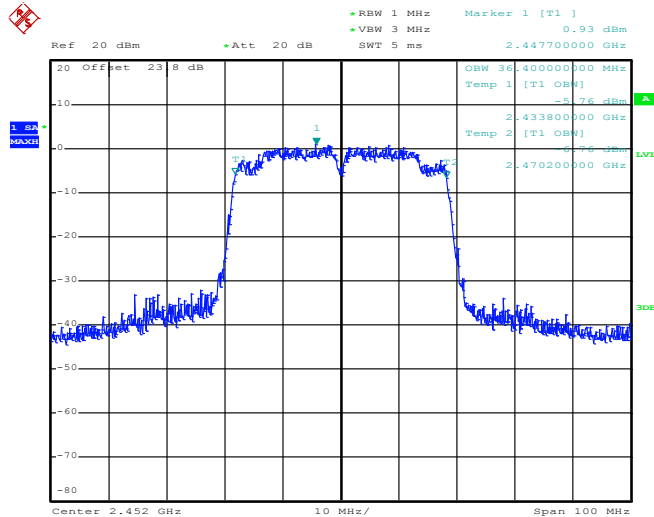
99% Occupied Bandwidth Plot on Channel 06



Date: 4.MAR.2013 21:49:34

802.11n HT40 – MIMO Ant. 1

99% Occupied Bandwidth Plot on Channel 09

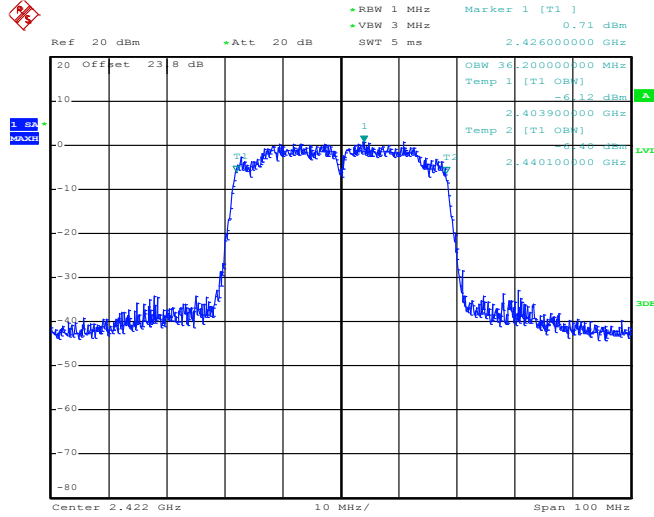


Date: 4.MAR.2013 21:53:32



802.11n HT40 – MIMO Ant. 2

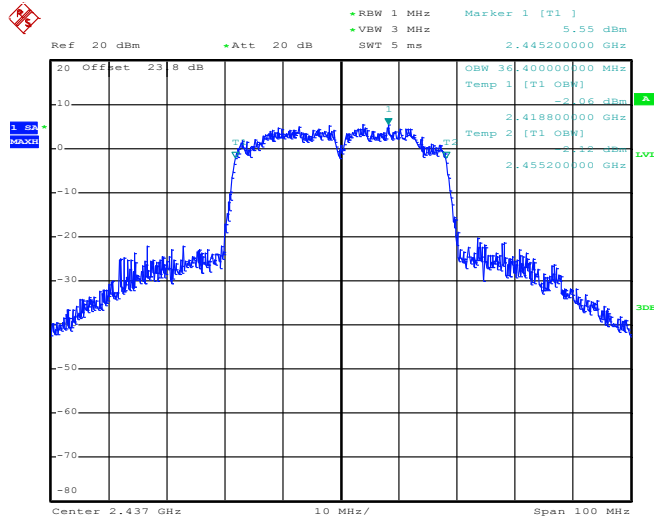
99% Occupied Bandwidth Plot on Channel 03



Date: 4.MAR.2013 21:44:13

802.11n HT40 – MIMO Ant. 2

99% Occupied Bandwidth Plot on Channel 06

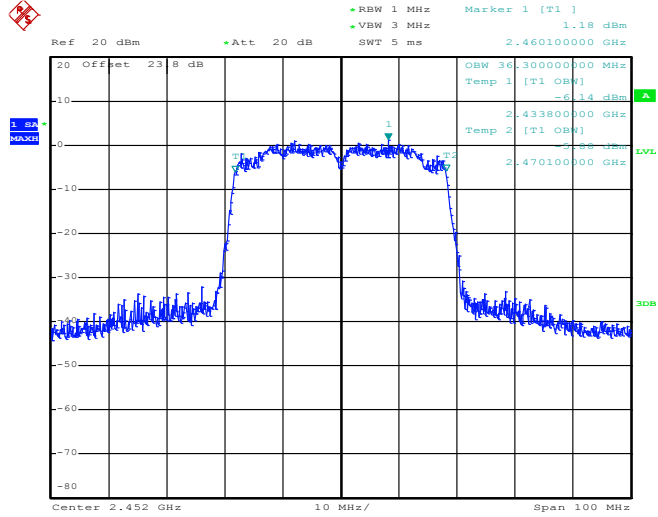


Date: 4.MAR.2013 21:46:51



802.11n HT40 – MIMO Ant. 2

99% Occupied Bandwidth Plot on Channel 09



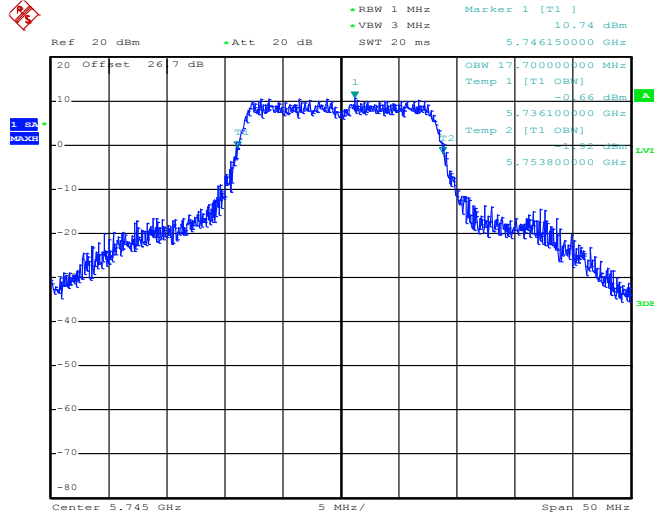
Date: 4.MAR.2013 21:56:51



<802.11a>

802.11a Ant. 2

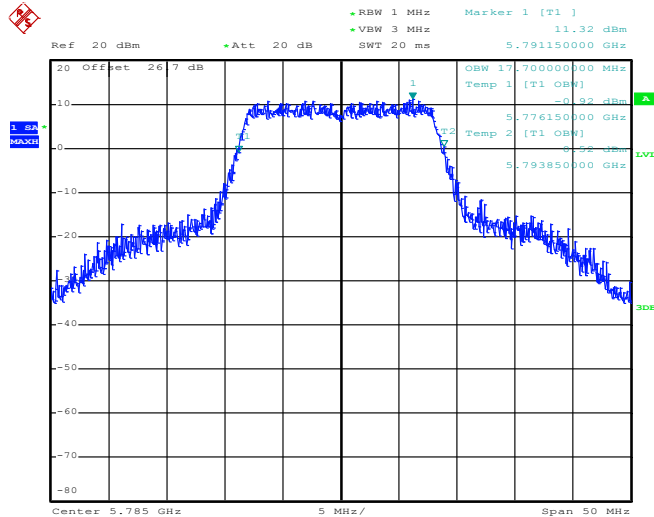
99% Occupied Bandwidth Plot on Channel 149



Date: 4.MAR.2013 22:35:46

802.11a Ant. 2

99% Occupied Bandwidth Plot on Channel 157

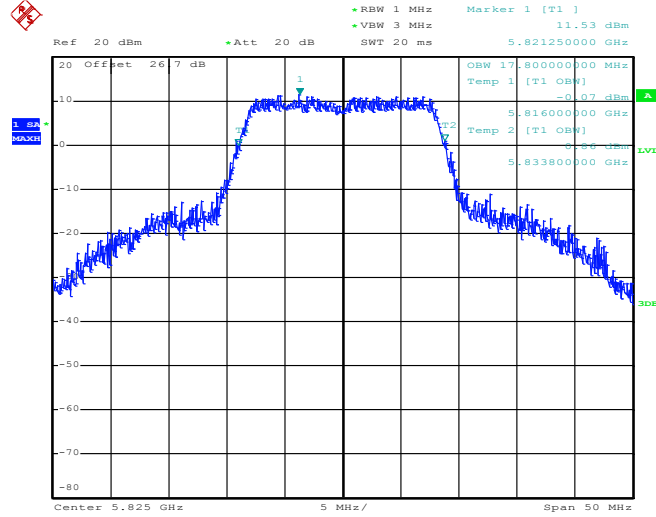


Date: 4.MAR.2013 22:39:58



802.11a Ant. 2

99% Occupied Bandwidth Plot on Channel 165



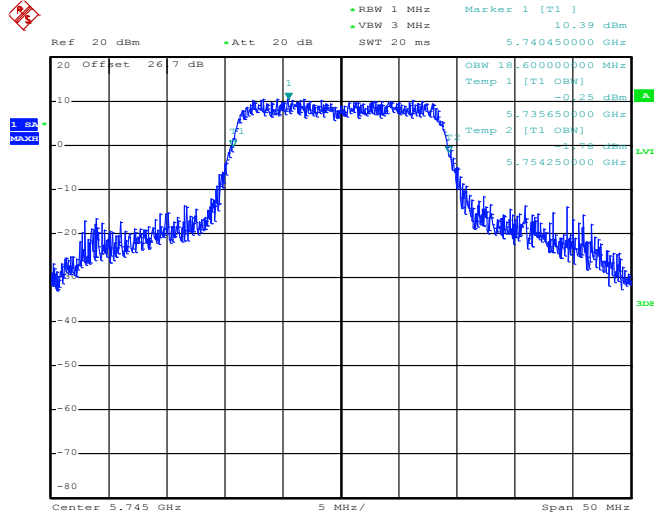
Date: 4.MAR.2013 22:43:48



<5GHz 802.11n HT20>

802.11n HT20 – SISO Ant. 2

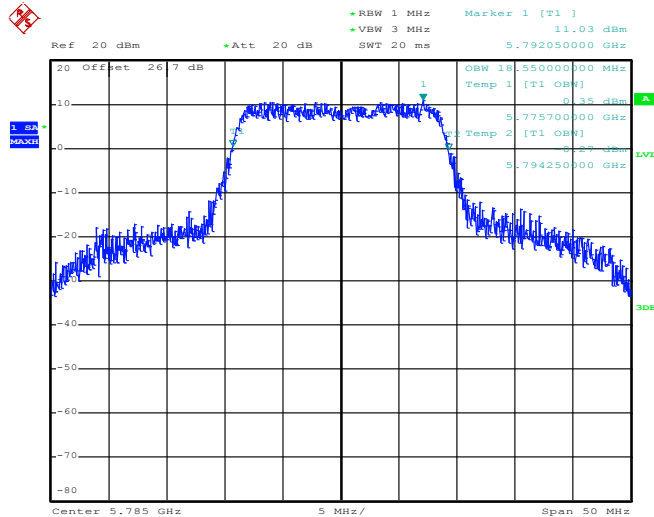
99% Occupied Bandwidth Plot on Channel 149



Date: 4.MAR.2013 22:53:47

802.11n HT20 – SISO Ant. 2

99% Occupied Bandwidth Plot on Channel 157

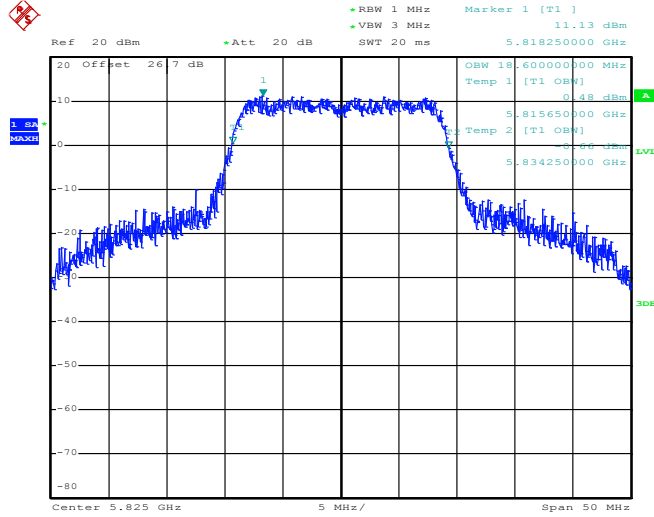


Date: 4.MAR.2013 22:50:54



802.11n HT20 – SISO Ant. 2

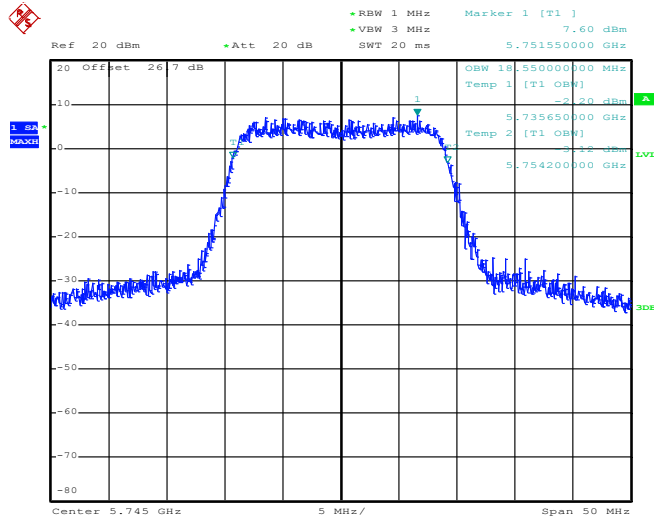
99% Occupied Bandwidth Plot on Channel 165



Date: 4.MAR.2013 22:48:30

802.11n HT20 – MIMO Ant. 1

99% Occupied Bandwidth Plot on Channel 149

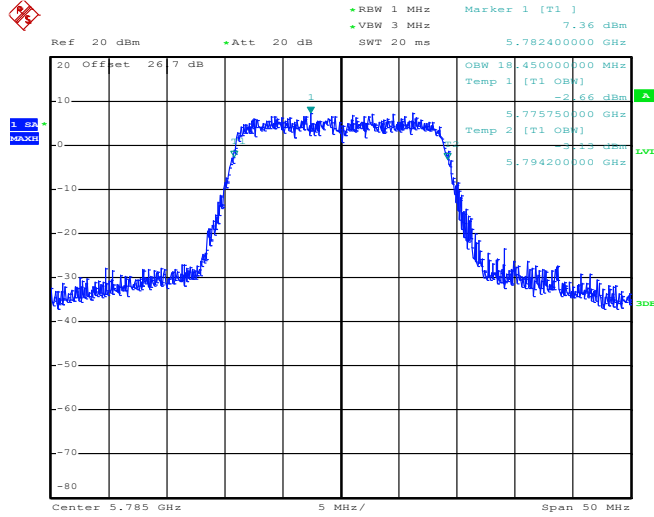


Date: 4.MAR.2013 23:02:19



802.11n HT20 – MIMO Ant. 1

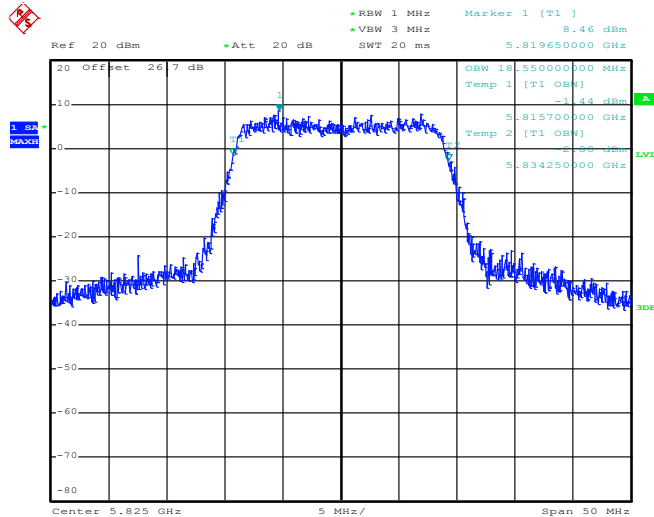
99% Occupied Bandwidth Plot on Channel 157



Date: 4.MAR.2013 23:04:55

802.11n HT20 – MIMO Ant. 1

99% Occupied Bandwidth Plot on Channel 165

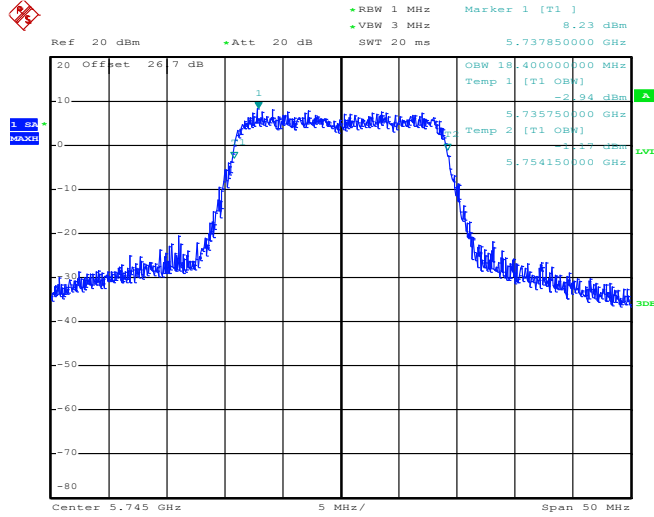


Date: 4.MAR.2013 23:13:05



802.11n HT20 – MIMO Ant. 2

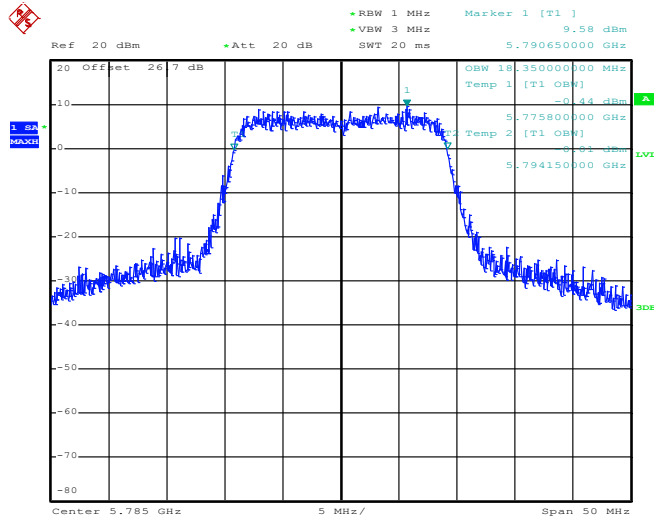
99% Occupied Bandwidth Plot on Channel 149



Date: 4.MAR.2013 22:59:12

802.11n HT20 – MIMO Ant. 2

99% Occupied Bandwidth Plot on Channel 151

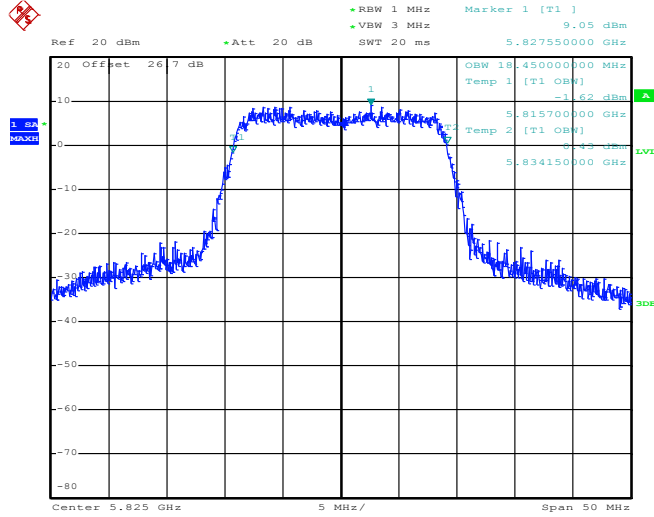


Date: 4.MAR.2013 23:07:27



802.11n HT20 – MIMO Ant. 2

99% Occupied Bandwidth Plot on Channel 165



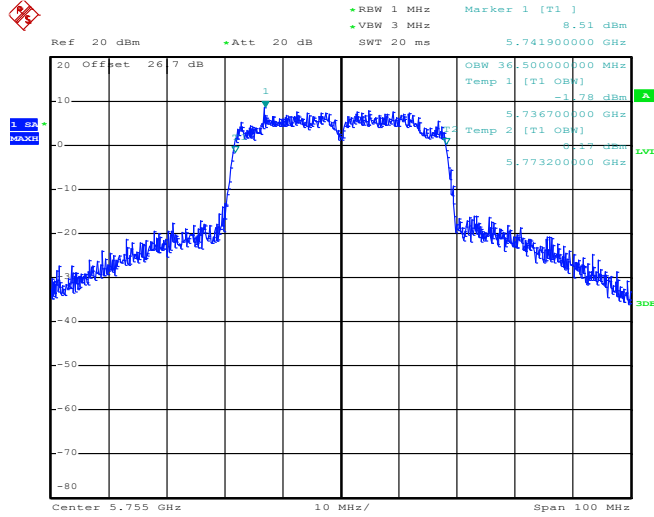
Date: 4.MAR.2013 23:10:12



<5GHz 802.11n HT40>

802.11n HT40 – SISO Ant. 2

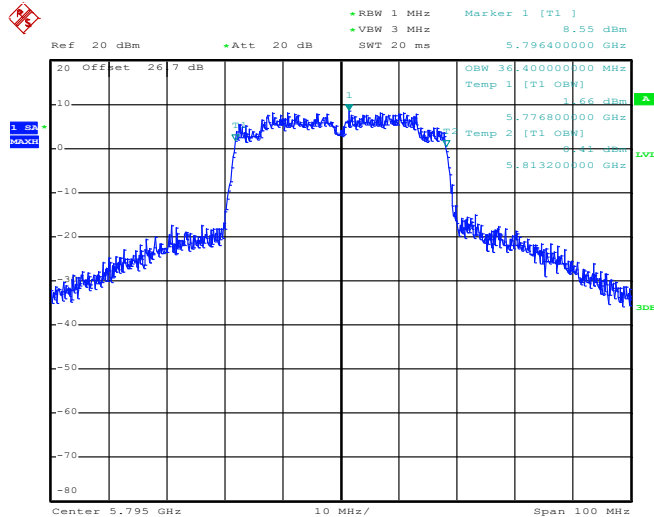
99% Occupied Bandwidth Plot on Channel 151



Date: 4.MAR.2013 23:17:22

802.11n HT40 – SISO Ant. 2

99% Occupied Bandwidth Plot on Channel 159

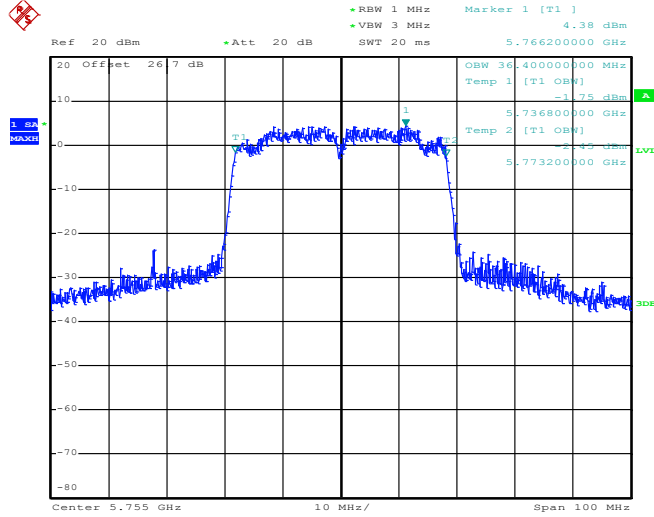


Date: 4.MAR.2013 23:20:14



802.11n HT40 – MIMO Ant. 1

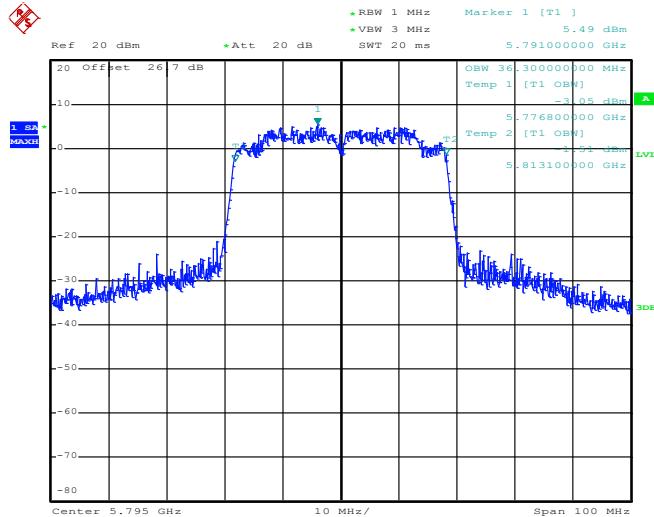
99% Occupied Bandwidth Plot on Channel 151



Date: 4.MAR.2013 23:33:08

802.11n HT40 – MIMO Ant. 1

99% Occupied Bandwidth Plot on Channel 159

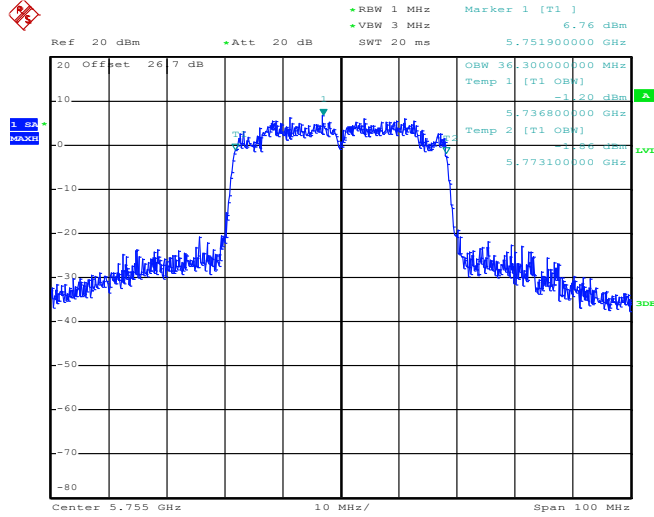


Date: 4.MAR.2013 23:29:46



802.11n HT40 – MIMO Ant. 2

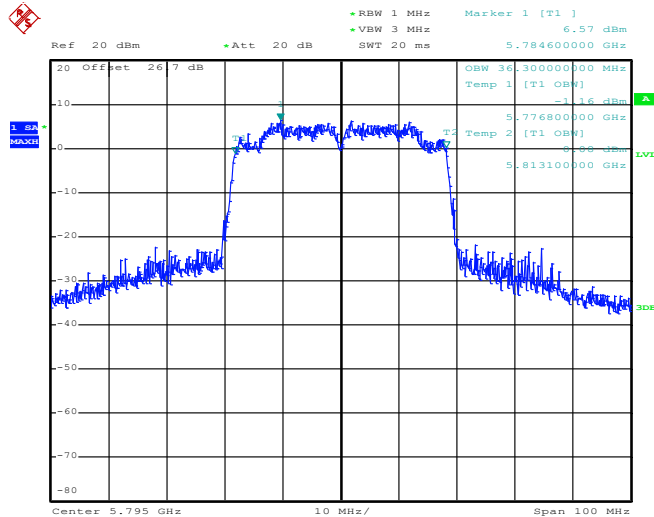
99% Occupied Bandwidth Plot on Channel 151



Date: 4.MAR.2013 23:36:34

802.11n HT40 – MIMO Ant. 2

99% Occupied Bandwidth Plot on Channel 159



Date: 4.MAR.2013 23:27:07

3.2 Peak Output Power Measurement

3.2.1 Limit of Peak 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 with directional gain greater than 6dBi is 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.

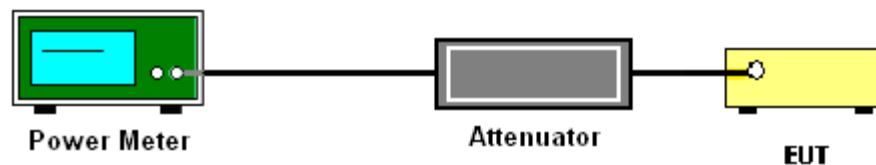
3.2.2 Measuring Instruments

See list of measuring instruments of this test report.

3.2.3 Test Procedures

1. The testing follows the Measurement Procedure of FCC KDB No. 558074 DTS D01 Meas. Guidance v02.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Measure the conducted output power and record the results in the test report.
5. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v01r02.

3.2.4 Test Setup



3.2.5 Test Result of Peak Output Power

Test Mode :	802.11b	Temperature :	24~26°C
Test Engineer :	Bill Kuo	Relative Humidity :	55~58%

Channel	Frequency (MHz)	802.11b Peak Output Power (dBm)		Max. Limits (dBm)	Pass/Fail
		Ant. 1	Ant. 2		
01	2412	16.68	16.58	30	Pass
06	2437	17.68	17.06	30	Pass
11	2462	17.22	16.89	30	Pass

Test Mode :	802.11g	Temperature :	24~26°C
Test Engineer :	Bill Kuo	Relative Humidity :	55~58%

Channel	Frequency (MHz)	802.11g Peak Output Power (dBm)		Max. Limits (dBm)	Pass/Fail
		Ant. 1	Ant. 2		
01	2412	20.93	20.51	30	Pass
06	2437	22.29	21.35	30	Pass
11	2462	21.21	20.29	30	Pass

Test Mode :	802.11n HT20	Temperature :	24~26°C
Test Engineer :	Bill Kuo	Relative Humidity :	55~58%

Channel	Frequency (MHz)	802.11n HT20 Peak Output Power (dBm)					Max. Limits (dBm)	Pass/Fail
		SISO Ant. 1	SISO Ant. 2	MIMO Ant. 1	MIMO Ant. 2	MIMO Ant. 1+2		
01	2412	19.32	20.07	20.15	19.17	22.70	30	Pass
06	2437	22.28	21.34	20.59	19.92	23.28	30	Pass
11	2462	20.32	19.66	18.91	18.79	21.86	30	Pass

Note: MIMO Ant. 1+2 is a calculated result from sum of the power MIMO Ant. 1 and MIMO Ant. 2.



Test Mode :	802.11n HT40	Temperature :	24~26°C
Test Engineer :	Bill Kuo	Relative Humidity :	55~58%

Channel	Frequency (MHz)	802.11n HT40 Peak Output Power (dBm)					Max. Limits (dBm)	Pass/Fail
		SISO Ant. 1	SISO Ant. 2	MIMO Ant. 1	MIMO Ant. 2	MIMO Ant. 1+2		
03	2422	17.14	17.33	16.46	15.24	18.90	30	Pass
06	2437	20.88	20.05	19.93	18.86	22.44	30	Pass
09	2452	18.31	17.23	16.73	15.46	19.15	30	Pass

Note: MIMO Ant. 1+2 is a calculated result from sum of the power MIMO Ant. 1 and MIMO Ant. 2.

Test Mode :	802.11a	Temperature :	24~26°C
Test Engineer :	Bill Kuo	Relative Humidity :	55~58%

Channel	Frequency (MHz)	802.11a Measured Output Power (dBm)		Max. Limits (dBm)	Pass/Fail
		Ant. 1	Ant. 2		
149	5745	20.83	21.61	30	Pass
157	5785	20.51	21.55	30	Pass
165	5825	20.43	21.66	30	Pass

Test Mode :	802.11n HT20	Temperature :	24~26°C
Test Engineer :	Bill Kuo	Relative Humidity :	55~58%

Channel	Frequency (MHz)	802.11n HT20 Peak Output Power (dBm)					Max. Limits (dBm)	Pass/Fail
		SISO Ant. 1	SISO Ant. 2	MIMO Ant. 1	MIMO Ant. 2	MIMO Ant. 1+2		
149	5745	20.86	21.67	18.72	19.43	22.10	30	Pass
157	5785	20.65	21.64	18.44	19.71	22.13	30	Pass
165	5825	20.59	21.77	18.61	19.89	22.31	30	Pass

Note: MIMO Ant. 1+2 is a calculated result from sum of the power MIMO Ant. 1 and MIMO Ant. 2.



Test Mode :	802.11n HT40	Temperature :	24~26°C
Test Engineer :	Bill Kuo	Relative Humidity :	55~58%

Channel	Frequency (MHz)	802.11n HT40 Peak Output Power (dBm)					Max. Limits (dBm)	Pass/Fail
		SISO Ant. 1	SISO Ant. 2	MIMO Ant. 1	MIMO Ant. 2	MIMO Ant. 1+2		
151	5755	20.34	21.26	19.21	19.63	22.44	30	Pass
159	5795	20.41	21.46	19.31	20.16	22.77	30	Pass

Note: MIMO Ant. 1+2 is a calculated result from sum of the power MIMO Ant. 1 and MIMO Ant. 2.

3.2.6 Test Result of Average output Power (Reporting Only)

Test Mode :	802.11b	Temperature :	24~26°C
Test Engineer :	Bill Kuo	Relative Humidity :	55~58%
Duty Cycle:	98.99% for Ant. 1 98.99% for Ant. 2	Duty Factor:	0.04dB for Ant. 1 0.04dB for Ant. 2

Channel	Frequency (MHz)	802.11b Average Output Power (dBm)	
		Ant. 1	Ant. 2
01	2412	13.64	13.52
06	2437	14.65	14.11
11	2462	14.19	13.92

Test Mode :	802.11g	Temperature :	24~26°C
Test Engineer :	Bill Kuo	Relative Humidity :	55~58%
Duty Cycle:	98.86% for Ant. 1 98.70% for Ant. 2	Duty Factor:	0.05dB for Ant. 1 0.06dB for Ant. 2

Channel	Frequency (MHz)	802.11g Average Output Power (dBm)	
		Ant. 1	Ant. 2
01	2412	11.76	11.84
06	2437	15.25	14.74
11	2462	12.31	11.89

Test Mode :	802.11n HT20	Temperature :	24~26°C
Test Engineer :	Bill Kuo	Relative Humidity :	55~58%
Duty Cycle:	98.77% for SISO Ant. 1 98.77% for SISO Ant. 2 98.09% for MIMO Ant. 1 98.11% for MIMO Ant. 2	Duty Factor:	0.05dB for SISO Ant. 1 0.05dB for SISO Ant. 2 0.08dB for MIMO Ant. 1 0.08dB for MIMO Ant. 2

Channel	Frequency (MHz)	802.11n HT20 Average Output Power (dBm)				
		SISO Ant. 1	SISO Ant. 2	MIMO Ant. 1	MIMO Ant. 2	MIMO Ant. 1+2
01	2412	9.68	10.12	10.93	10.20	13.59
06	2437	15.12	14.56	12.09	11.77	14.95
11	2462	11.04	10.62	10.10	9.87	13.00



Test Mode :	802.11n HT40	Temperature :	24~26°C
Test Engineer :	Bill Kuo	Relative Humidity :	55~58%
Duty Cycle:	97.35% for SISO Ant. 1 97.55% for SISO Ant. 2 94.57% for MIMO Ant. 1 93.97% for MIMO Ant. 2	Duty Factor:	0.12dB for SISO Ant. 1 0.11dB for SISO Ant. 2 0.24dB for MIMO Ant. 1 0.27dB for MIMO Ant. 2

Channel	Frequency (MHz)	802.11n HT40 Average Output Power (dBm)				
		SISO Ant. 1	SISO Ant. 2	MIMO Ant. 1	MIMO Ant. 2	MIMO Ant. 1+2
03	2422	6.67	6.65	5.87	5.79	8.84
06	2437	11.36	11.16	11.37	10.78	14.10
09	2452	6.89	6.88	6.17	6.16	9.18

Note :

1. MIMO Ant. 1+2 is a calculated result from sum of the power MIMO Ant. 1 and MIMO Ant. 2.
2. The average power is measured by power meter with average power sensor and is reporting only.

Test Mode :	802.11a	Temperature :	24~26°C
Test Engineer :	Bill Kuo	Relative Humidity :	55~58%
Duty Cycle:	98.48% for Ant. 1 98.70% for Ant. 2	Duty Factor:	0.07dB for Ant. 1 0.06dB for Ant. 2

Channel	Frequency (MHz)	802.11a Average Output Power (dBm)	
		Ant. 1	Ant. 2
149	5745	14.52	14.36
157	5785	14.19	14.32
165	5825	14.18	14.40



Test Mode :	802.11n HT20	Temperature :	24~26°C
Test Engineer :	Bill Kuo	Relative Humidity :	55~58%
Duty Cycle:	98.61% for SISO Ant. 1 98.61% for SISO Ant. 2 97.65% for MIMO Ant. 1 97.46% for MIMO Ant. 2	Duty Factor:	0.06dB for SISO Ant. 1 0.06dB for SISO Ant. 2 0.10dB for MIMO Ant. 1 0.11dB for MIMO Ant. 2

Channel	Frequency (MHz)	802.11n HT20 Average Output Power (dBm)				
		SISO Ant. 1	SISO Ant. 2	MIMO Ant. 1	MIMO Ant. 2	MIMO Ant. 1+2
149	5745	14.49	14.21	9.81	11.12	13.53
157	5785	14.28	14.19	9.59	11.09	13.42
165	5825	14.27	14.41	9.73	11.29	13.59

Test Mode :	802.11n HT40	Temperature :	24~26°C
Test Engineer :	Bill Kuo	Relative Humidity :	55~58%
Duty Cycle:	97.55% for SISO Ant. 1 97.05% for SISO Ant. 2 94.55% for MIMO Ant. 1 95.39% for MIMO Ant. 2	Duty Factor:	0.11dB for SISO Ant. 1 0.13dB for SISO Ant. 2 0.24dB for MIMO Ant. 1 0.20dB for MIMO Ant. 2

Channel	Frequency (MHz)	802.11n HT40 Average Output Power (dBm)				
		SISO Ant. 1	SISO Ant. 2	MIMO Ant. 1	MIMO Ant. 2	MIMO Ant. 1+2
151	5755	14.34	14.30	10.30	11.78	14.12
159	5795	14.44	14.39	10.47	11.94	14.28

Note :

1. MIMO Ant. 1+2 is a calculated result from sum of the power MIMO Ant. 1 and MIMO Ant. 2.
2. The average power is measured by power meter with average power sensor and is reporting only.

3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

The peak power spectral density shall not be greater than 8dBm in any 3KHz band at any time interval of continuous transmission.

3.3.2 Measuring Instruments

See list of measuring instruments of this test report.

3.3.3 Test Procedures

1. The testing follows Measurement Procedure 9.1 Option 1 of FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v02
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 3 kHz. Video bandwidth VBW = 10 kHz In order to make an accurate measurement, set the span to 1.5 times DTS Channel Bandwidth. (6dB BW)
5. Detector = peak, Sweep time = auto couple, Trace mode = max hold, Allow trace to fully stabilize. Use the peak marker function to determine the maximum power level.
6. Measure and record the results in the test report.
7. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v01r02.

If measurements performed using method (2) plus $10 \log(N)$ exceeds the emission limit, the test should choose method (1) before declaring that the device fails the emission limit.

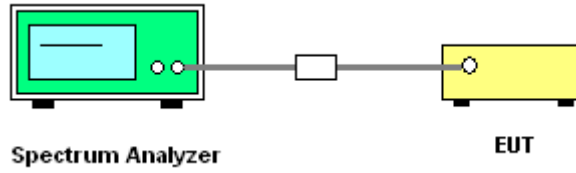
Method (1): Measure and sum the spectra across the outputs.

The total final Power Spectral Density is from a device with 2 transmitter outputs. The spectrum measurements of the individual outputs are all performed with the same span and number of points, the spectrum value in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 to obtain the value for the first frequency bin of the summed spectrum.

Method (2): Measure and add $10 \log(N)$ dB, where N is the number of outputs. (N=2)

8. The Measured power density (dBm)/ 100KHz is a reference level and used as 20dBc down limit line for Conducted Band Edges and Conducted Spurious Emission.

3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Test Mode :	802.11b	Temperature :	24~26°C
Test Engineer :	Bill Kuo	Relative Humidity :	55~58%

Channel	Frequency (MHz)	802.11b Power Density		Max. Limits (dBm/3kHz)	Pass /Fail
		Ant. 1			
		PSD/100kHz (dBm)	PSD/3kHz (dBm)		
01	2412	5.20	-9.37	8	Pass
06	2437	4.89	-9.95	8	Pass
11	2462	4.63	-8.48	8	Pass

Test Mode :	802.11g	Temperature :	24~26°C
Test Engineer :	Bill Kuo	Relative Humidity :	55~58%

Channel	Frequency (MHz)	802.11g Power Density		Max. Limits (dBm/3kHz)	Pass /Fail
		Ant. 1			
		PSD/100kHz (dBm)	PSD/3kHz (dBm)		
01	2412	1.73	-13.76	8	Pass
06	2437	4.27	-10.08	8	Pass
11	2462	2.38	-12.59	8	Pass

Test Mode :	802.11n HT20	Temperature :	24~26°C
Test Engineer :	Bill Kuo	Relative Humidity :	55~58%

Ch.	Freq. (MHz)	802.11n HT20 Power Density								Max. Limits (dBm/3kHz)	Pass /Fail
		SISO Ant. 1		MIMO Ant. 1			MIMO Ant. 2				
		PSD 100kHz (dBm)	PSD 3kHz (dBm)	PSD 100kHz (dBm)	PSD 3kHz (dBm)	PSD 3kHz (dBm) +10log2	PSD 100kHz (dBm)	PSD 3kHz (dBm)	PSD 3kHz (dBm) +10log2		
01	2412	-0.05	-15.38	1.70	-13.32	-10.31	1.86	-14.56	-11.55	8	Pass
06	2437	4.45	-10.53	2.23	-13.42	-10.41	2.87	-14.00	-10.99	8	Pass
11	2462	0.43	-15.57	0.93	-15.44	-12.43	1.46	-14.92	-11.91	8	Pass



Test Mode :	802.11n HT40	Temperature :	24~26°C
Test Engineer :	Bill Kuo	Relative Humidity :	55~58%

Ch.	Freq. (MHz)	802.11n HT40 Power Density								Max. Limits (dBm/3kHz)	Pass /Fail
		SISO Ant. 1		MIMO Ant. 1			MIMO Ant. 2				
		PSD 100kHz (dBm)	PSD 3kHz (dBm)	PSD 100kHz (dBm)	PSD 3kHz (dBm)	PSD 3kHz (dBm) +10log2	PSD 100kHz (dBm)	PSD 3kHz (dBm)	PSD 3kHz (dBm) +10log2		
03	2422	-6.51	-21.88	-7.59	-21.46	-18.45	-7.44	-21.93	-18.92	8	Pass
06	2437	-2.22	-17.03	-2.44	-16.04	-13.03	-2.83	-16.64	-13.63	8	Pass
09	2452	-5.99	-21.46	-7.25	-21.98	-18.97	-7.19	-21.98	-18.97	8	Pass

Test Mode :	802.11a	Temperature :	24~26°C
Test Engineer :	Bill Kuo	Relative Humidity :	55~58%

Channel	Frequency (MHz)	802.11a Power Density		Max. Limits (dBm/3kHz)	Pass /Fail
		Ant. 2			
		PSD/100kHz (dBm)	PSD/3kHz (dBm)		
149	5745	3.03	-11.71	8	Pass
157	5785	3.23	-11.72	8	Pass
165	5825	3.59	-11.10	8	Pass

Test Mode :	802.11n HT20	Temperature :	24~26°C
Test Engineer :	Bill Kuo	Relative Humidity :	55~58%

Ch.	Freq. (MHz)	802.11n HT20 Power Density								Max. Limits (dBm/3kHz)	Pass /Fail
		SISO Ant. 2		MIMO Ant. 1			MIMO Ant. 2				
		PSD 100kHz (dBm)	PSD 3kHz (dBm)	PSD 100kHz (dBm)	PSD 3kHz (dBm)	PSD 3kHz (dBm) +10log2	PSD 100kHz (dBm)	PSD 3kHz (dBm)	PSD 3kHz (dBm) +10log2		
149	5745	3.12	-11.87	-0.49	-16.06	-13.05	0.97	-13.20	-10.19	8	Pass
157	5785	3.21	-11.29	-0.26	-16.47	-13.46	1.54	-13.15	-10.14	8	Pass
165	5825	3.32	-11.54	0.12	-15.84	-12.83	1.51	-13.43	-10.42	8	Pass



Test Mode :	802.11n HT40	Temperature :	24~26°C
Test Engineer :	Bill Kuo	Relative Humidity :	55~58%

Ch.	Freq. (MHz)	802.11n HT40 Power Density								Max. Limits (dBm/3kHz)	Pass /Fail
		SISO Ant. 2		MIMO Ant. 1			MIMO Ant. 2				
		PSD 100kHz (dBm)	PSD 3kHz (dBm)	PSD 100kHz (dBm)	PSD 3kHz (dBm)	PSD 3kHz (dBm) +10log2	PSD 100kHz (dBm)	PSD 3kHz (dBm)	PSD 3kHz (dBm) +10log2		
151	5755	0.78	-10.91	-3.10	-16.93	-13.92	-1.62	-11.22	-8.21	8	Pass
159	5795	1.18	-10.51	-2.65	-16.96	-13.95	-1.36	-11.11	-8.10	8	Pass

Note:

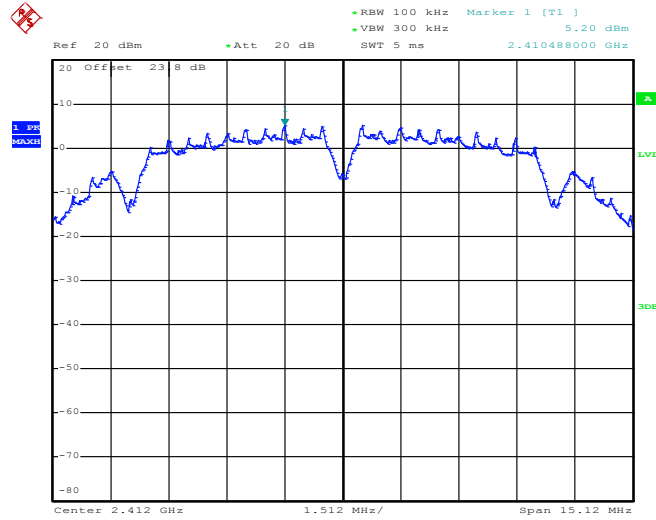
1. Measured power density (dBm) has offset with cable loss.
2. The Measured power density (dBm)/ 100kHz is reference level and used as 20dBc down for Conducted Band Edges and Conducted Spurious Emission limit line.
3. MIMO Power Density/ 3kHz (dBm)= Measured power density/ 3kHz (dBm) + 10LOG(N=2), where N=2 transmitters.

3.3.6 Test Result of Power Spectral Density Plots (100kHz)

<802.11b>

802.11b – Ant. 1

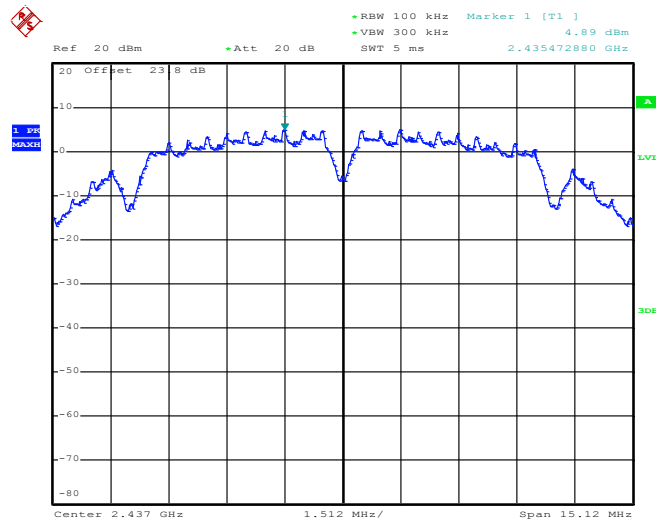
PSD 100kHz Plot on Channel 01



Date: 4.MAR.2013 20:09:46

802.11b – Ant. 1

PSD 100kHz Plot on Channel 06

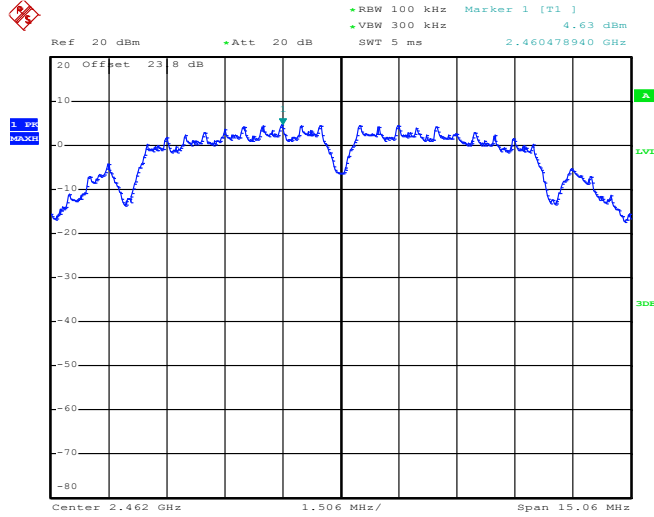


Date: 4.MAR.2013 20:27:31



802.11b – Ant. 1

PSD 100kHz Plot on Channel 11



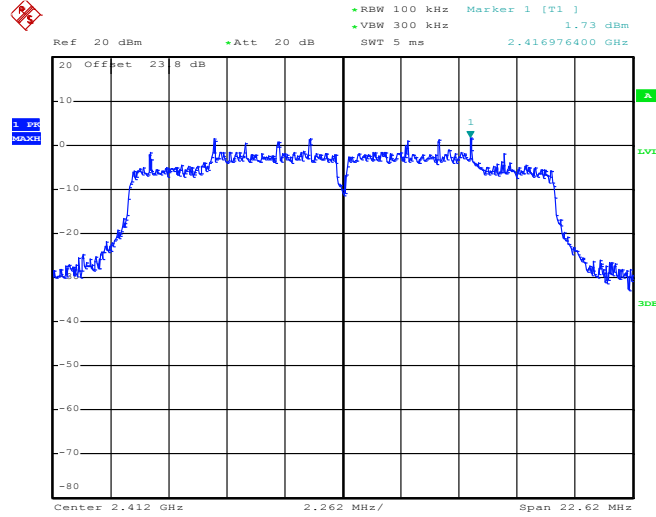
Date: 4.MAR.2013 20:31:02



<802.11g>

802.11g – Ant. 1

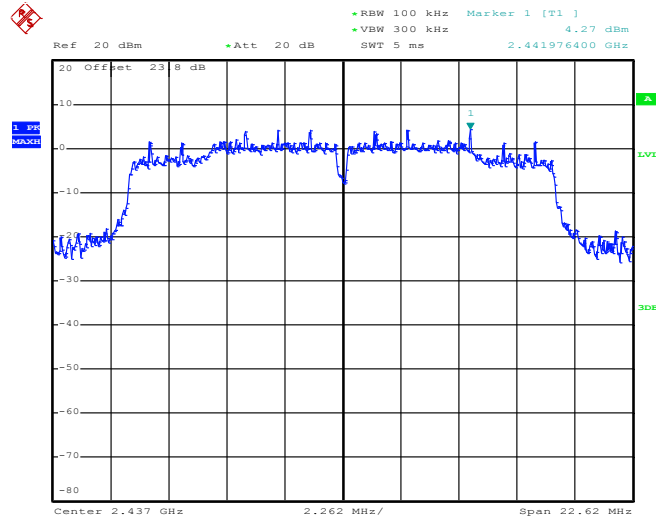
PSD 100kHz Plot on Channel 01



Date: 4.MAR.2013 20:34:37

802.11g – Ant. 1

PSD 100kHz Plot on Channel 06

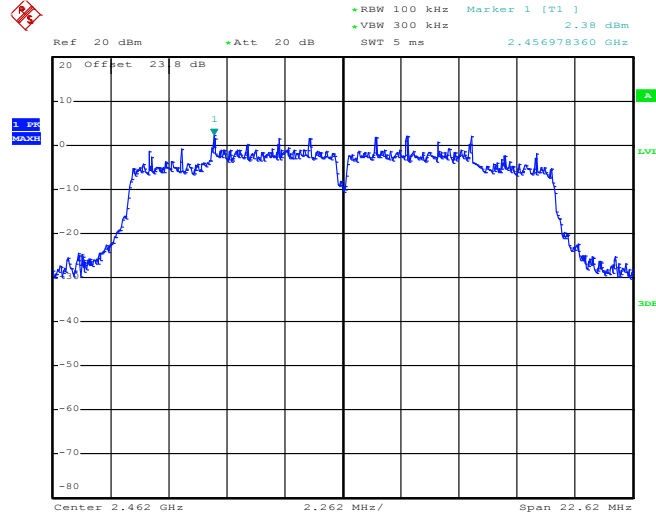


Date: 4.MAR.2013 20:37:26



802.11g – Ant. 1

PSD 100kHz Plot on Channel 11



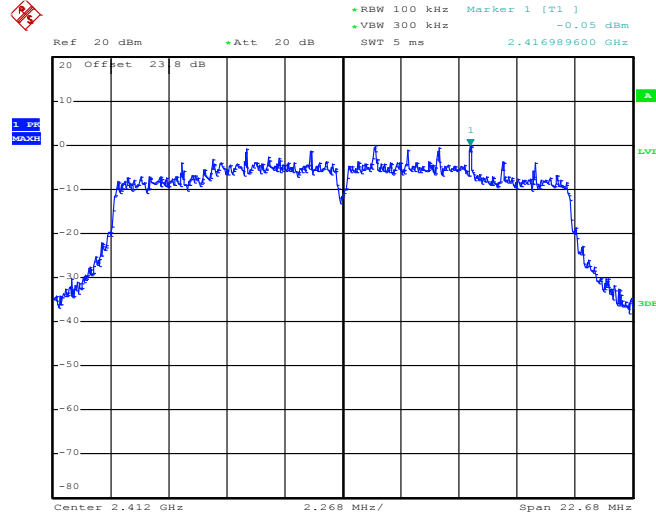
Date: 4.MAR.2013 20:40:12



<2.4GHz 802.11n HT20>

802.11n HT20 – SISO Ant. 1

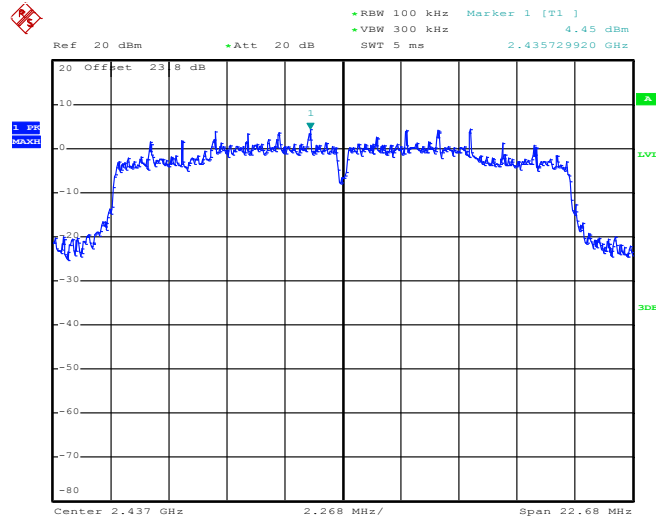
PSD 100kHz Plot on Channel 01



Date: 4.MAR.2013 20:56:01

802.11n HT20 – SISO Ant. 1

PSD 100kHz Plot on Channel 06

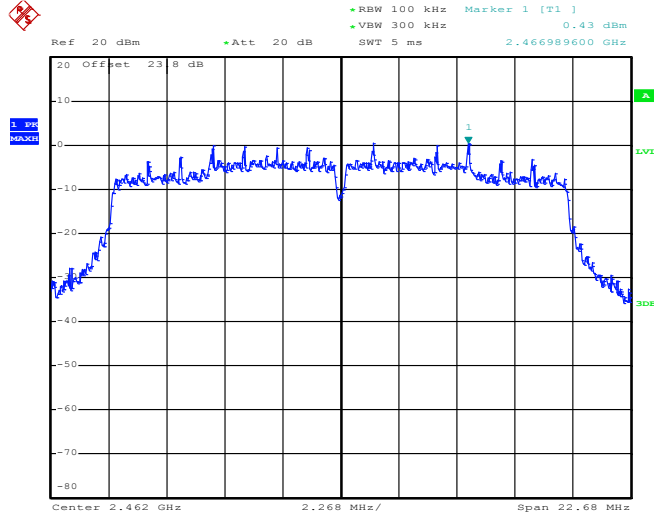


Date: 4.MAR.2013 20:53:07



802.11n HT20 – SISO Ant. 1

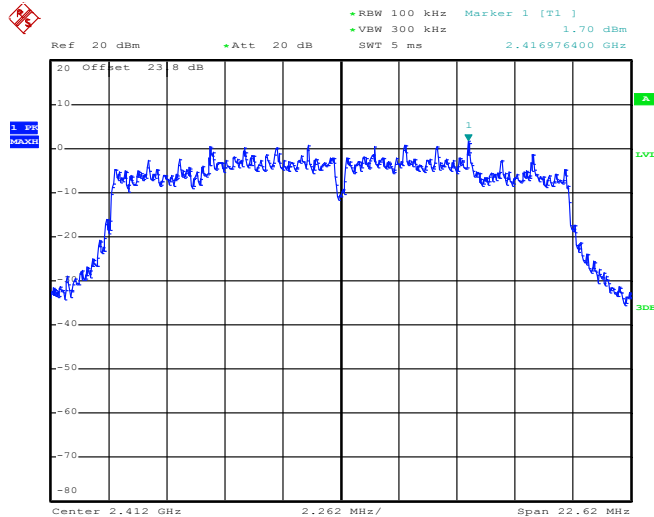
PSD 100kHz Plot on Channel 11



Date: 4.MAR.2013 20:45:02

802.11n HT20 – MIMO Ant. 1

PSD 100kHz Plot on Channel 01

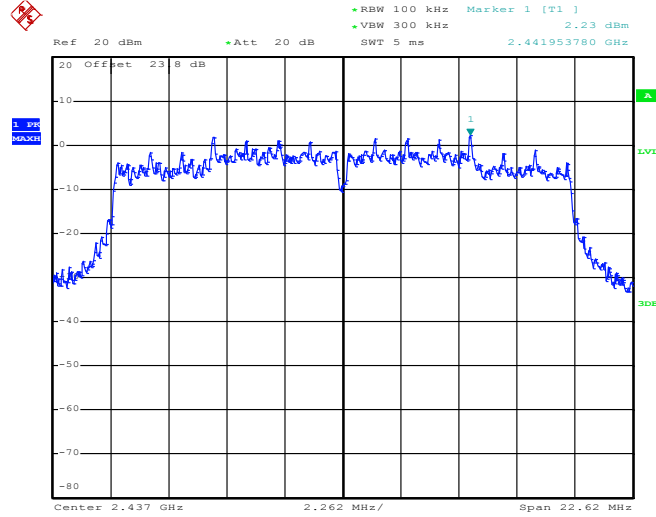


Date: 4.MAR.2013 21:00:14



802.11n HT20 – MIMO Ant. 1

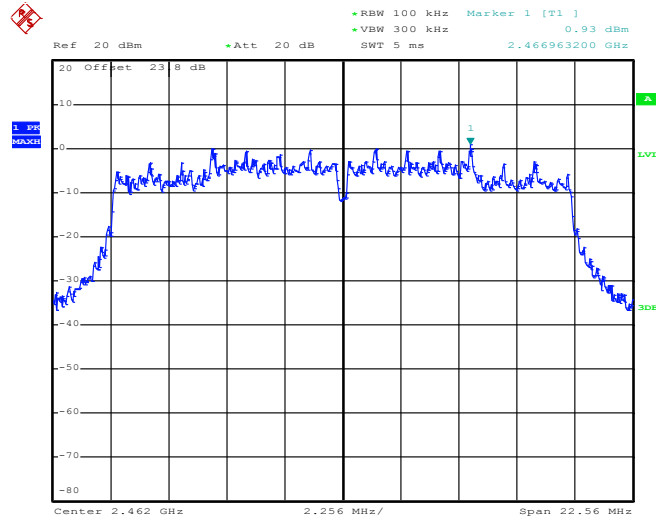
PSD 100kHz Plot on Channel 06



Date: 4.MAR.2013 21:12:26

802.11n HT20 – MIMO Ant. 1

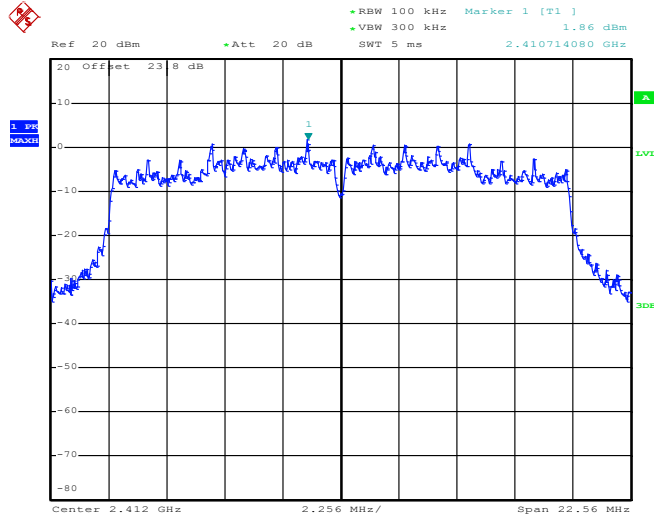
PSD 100kHz Plot on Channel 11



Date: 4.MAR.2013 21:15:35

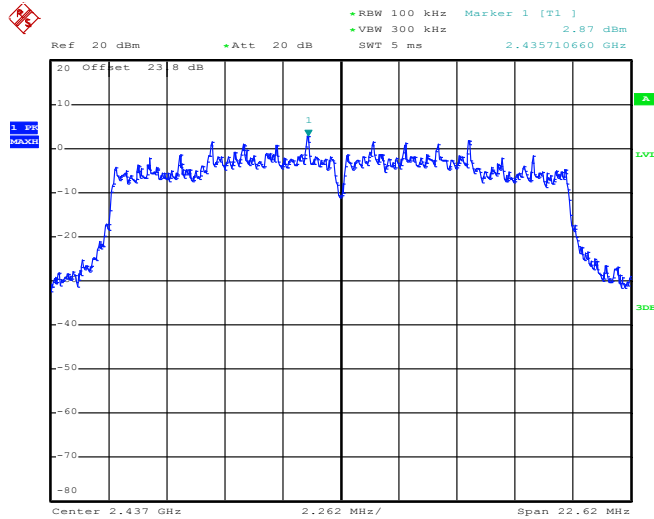


802.11n HT20 – MIMO Ant. 2
PSD 100kHz Plot on Channel 01



Date: 4.MAR.2013 21:05:44

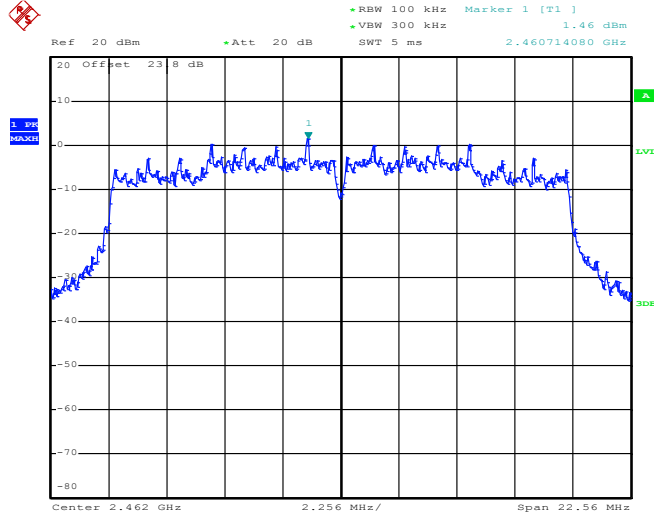
802.11n HT20 – MIMO Ant. 2
PSD 100kHz Plot on Channel 06



Date: 4.MAR.2013 21:09:00



802.11n HT20 – MIMO Ant. 2
PSD 100kHz Plot on Channel 11



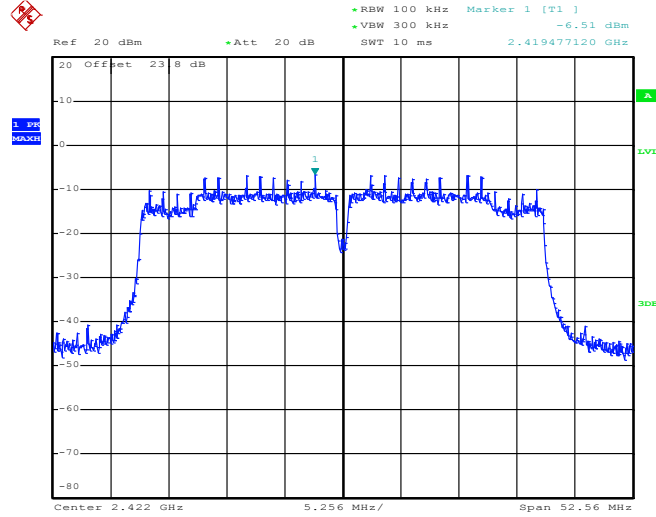
Date: 4.MAR.2013 21:18:27



<2.4GHz 802.11n HT40>

802.11n HT40 – SISO Ant. 1

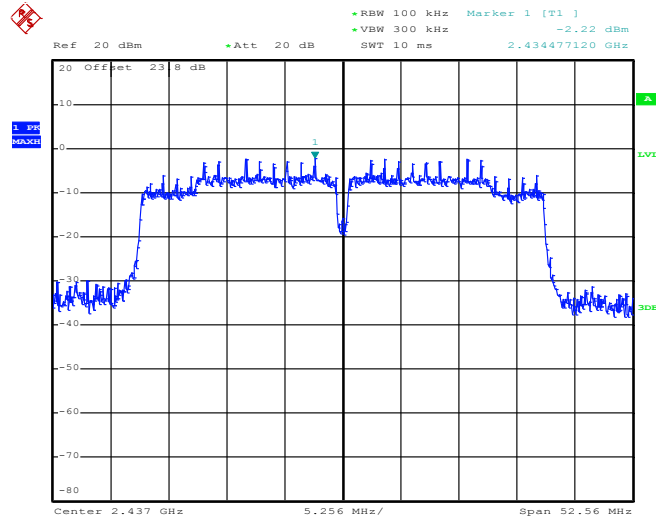
PSD 100kHz Plot on Channel 03



Date: 4.MAR.2013 21:26:45

802.11n HT40 – SISO Ant. 1

PSD 100kHz Plot on Channel 06

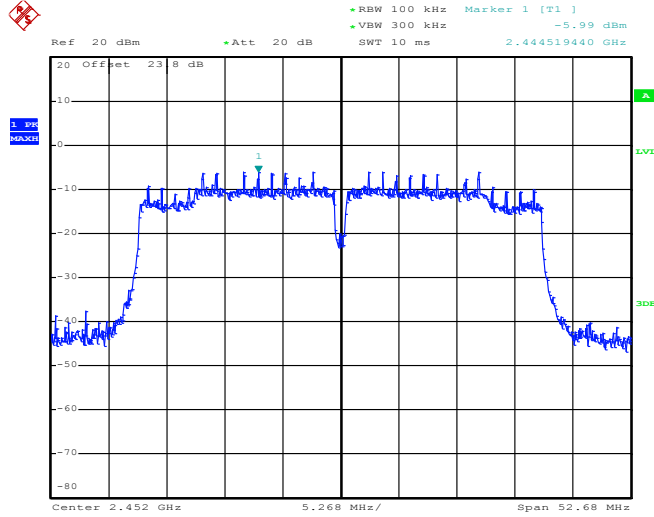


Date: 4.MAR.2013 21:29:58



802.11n HT40 – SISO Ant. 1

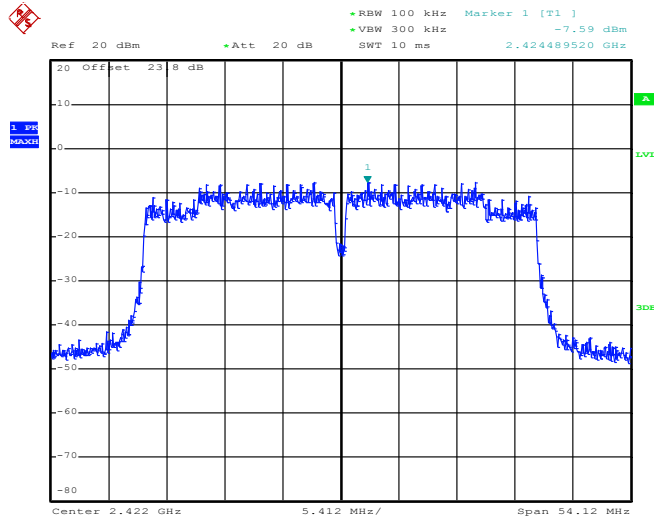
PSD 100kHz Plot on Channel 09



Date: 4.MAR.2013 21:33:12

802.11n HT40 – MIMO Ant. 1

PSD 100kHz Plot on Channel 03

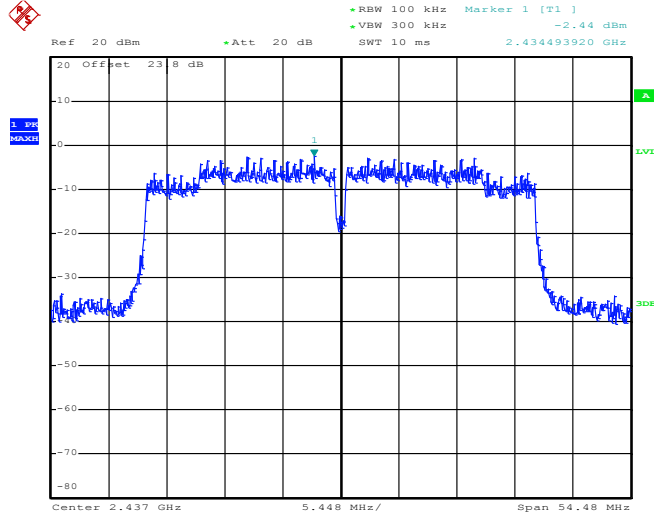


Date: 4.MAR.2013 21:40:06



802.11n HT40 – MIMO Ant. 1

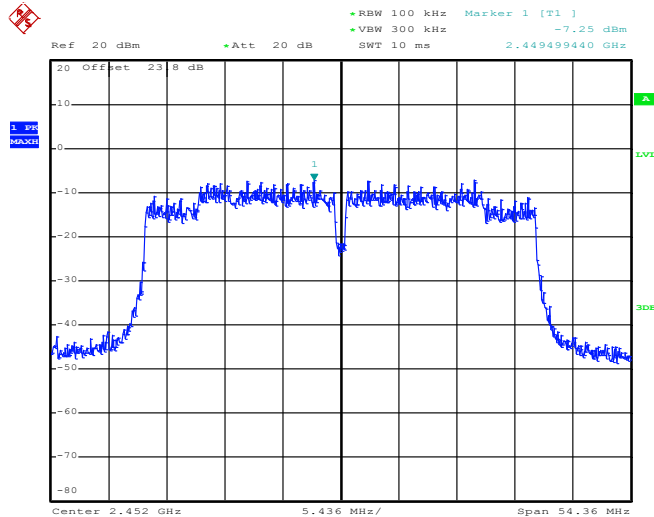
PSD 100kHz Plot on Channel 06



Date: 4.MAR.2013 21:48:45

802.11n HT40 – MIMO Ant. 1

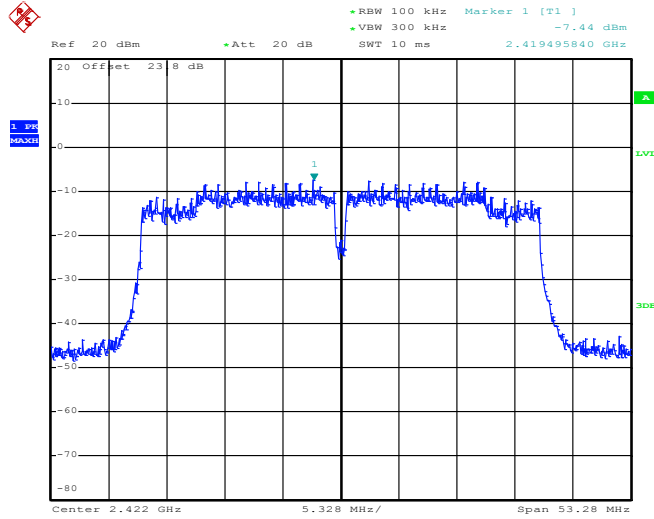
PSD 100kHz Plot on Channel 09



Date: 4.MAR.2013 21:52:29

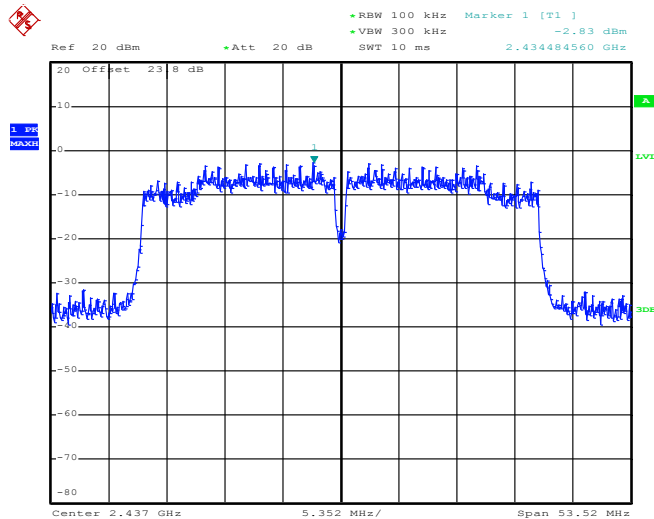


802.11n HT40 – MIMO Ant. 2
PSD 100kHz Plot on Channel 03



Date: 4.MAR.2013 21:43:10

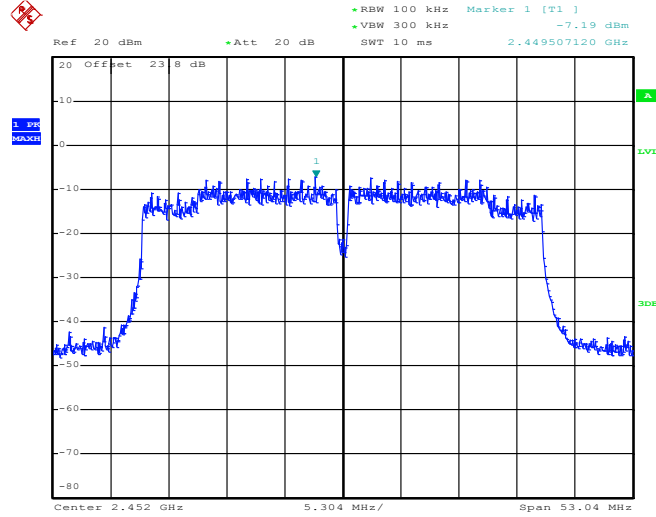
802.11n HT40 – MIMO Ant. 2
PSD 100kHz Plot on Channel 06



Date: 4.MAR.2013 21:46:02



802.11n HT40 – MIMO Ant. 2
PSD 100kHz Plot on Channel 09



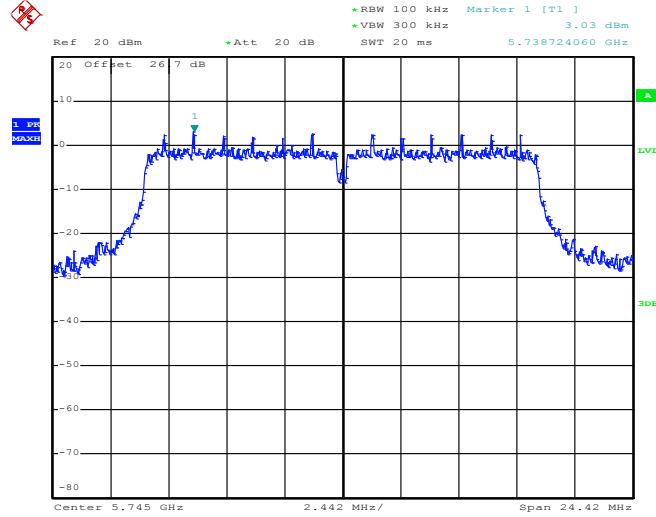
Date: 4.MAR.2013 21:55:48



<802.11a>

802.11a Ant. 2

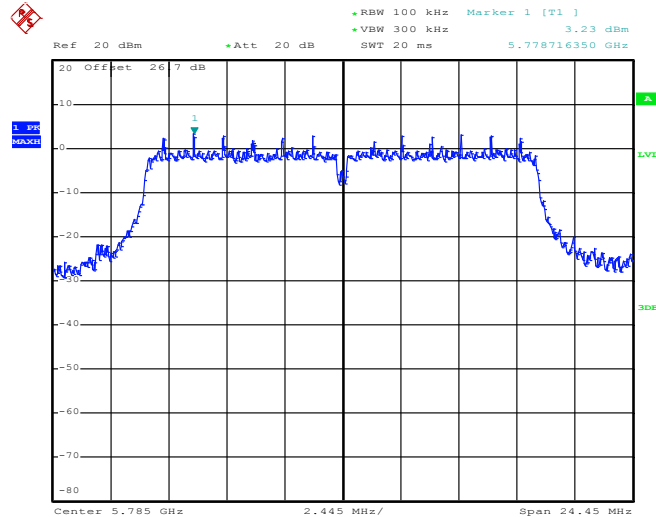
PSD 100kHz Plot on Channel 149



Date: 4.MAR.2013 22:34:44

802.11a Ant. 2

PSD 100kHz Plot on Channel 157

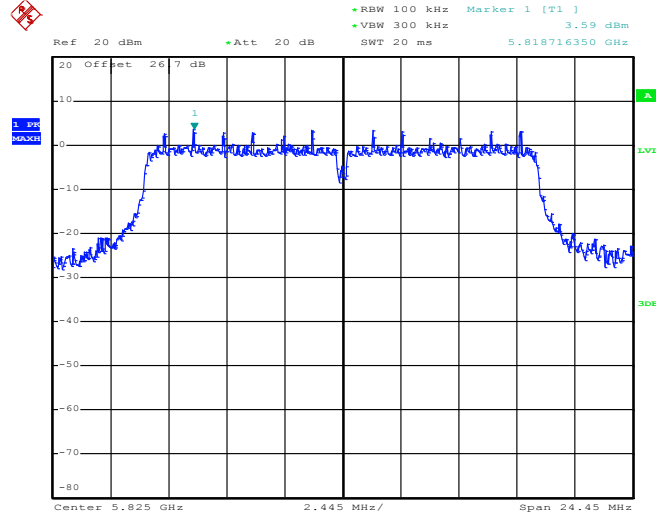


Date: 4.MAR.2013 22:39:09



802.11a Ant. 2

PSD 100kHz Plot on Channel 165



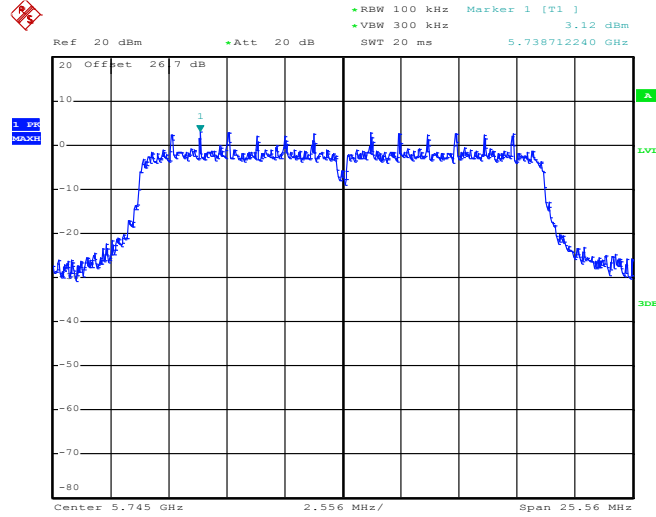
Date: 4.MAR.2013 22:42:46



<5GHz 802.11n HT20>

802.11n HT20 – SISO Ant. 2

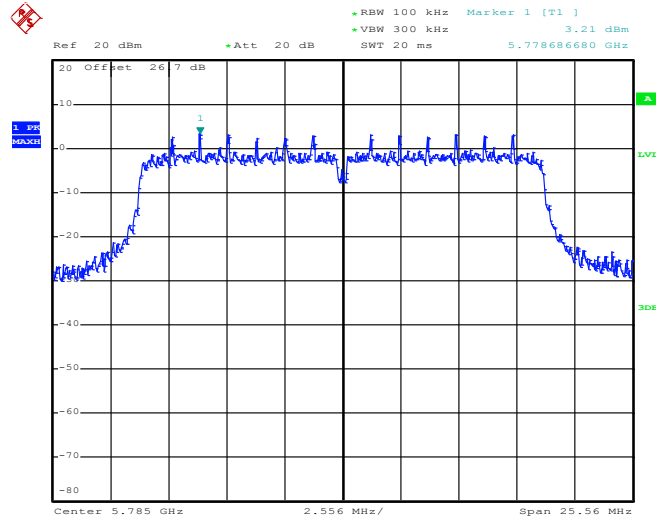
PSD 100kHz Plot on Channel 149



Date: 4.MAR.2013 22:52:44

802.11n HT20 – SISO Ant. 2

PSD 100kHz Plot on Channel 157

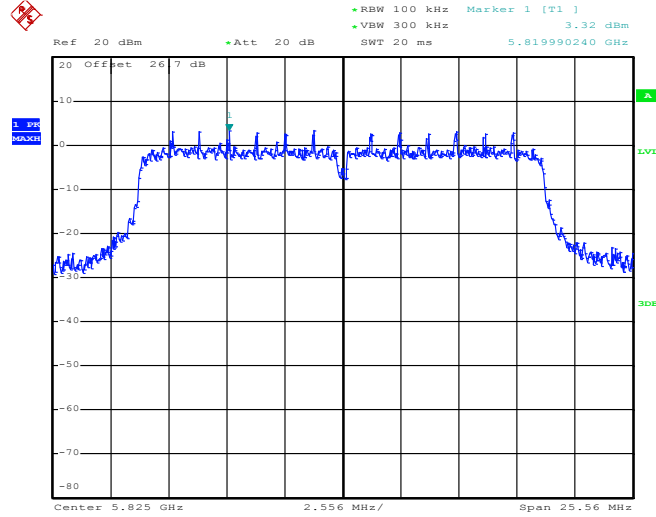


Date: 4.MAR.2013 22:50:05



802.11n HT20 – SISO Ant. 2

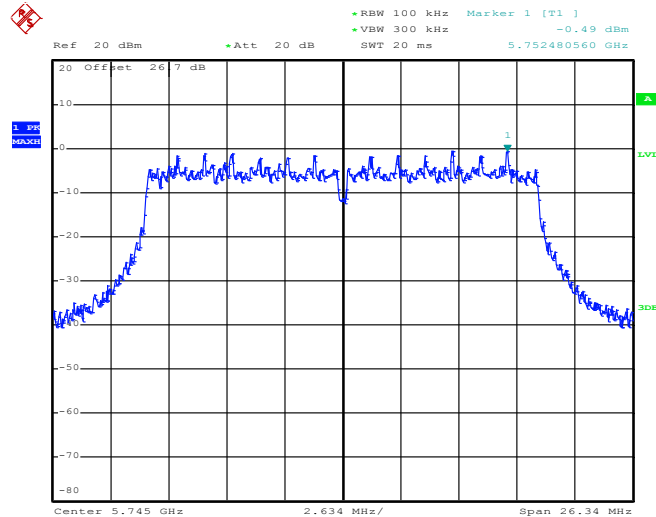
PSD 100kHz Plot on Channel 165



Date: 4.MAR.2013 22:47:28

802.11n HT20 – MIMO Ant. 1

PSD 100kHz Plot on Channel 149

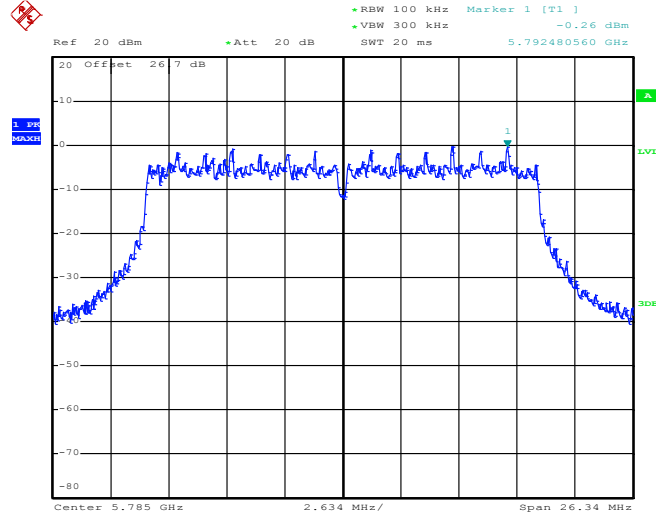


Date: 4.MAR.2013 23:01:17



802.11n HT20 – MIMO Ant. 1

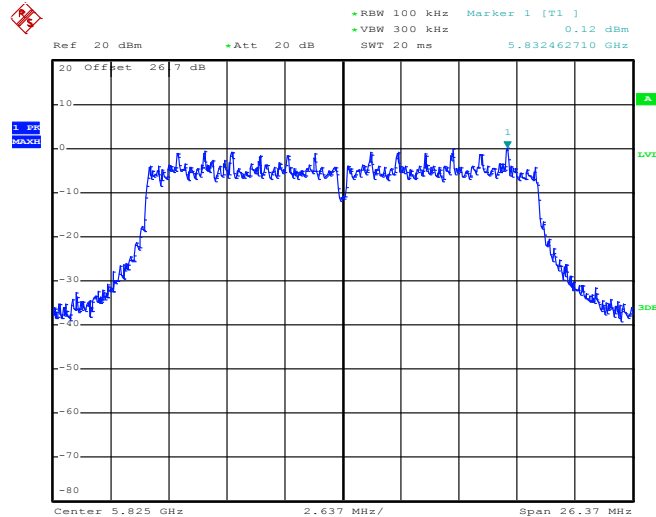
PSD 100kHz Plot on Channel 157



Date: 4.MAR.2013 23:04:06

802.11n HT20 – MIMO Ant. 1

PSD 100kHz Plot on Channel 165

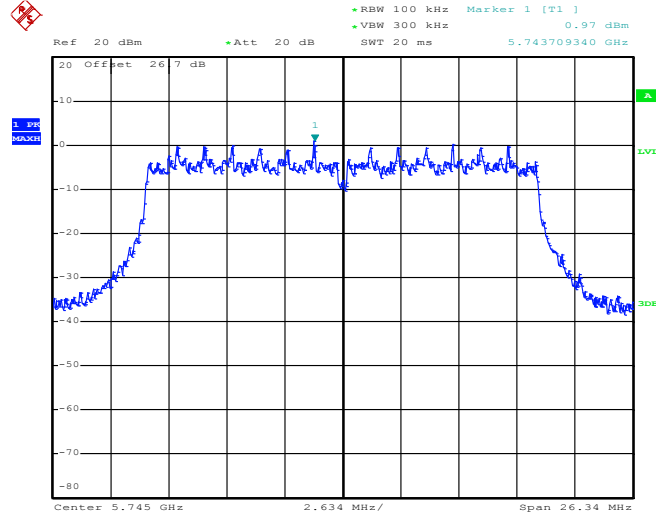


Date: 4.MAR.2013 23:12:02



802.11n HT20 – MIMO Ant. 2

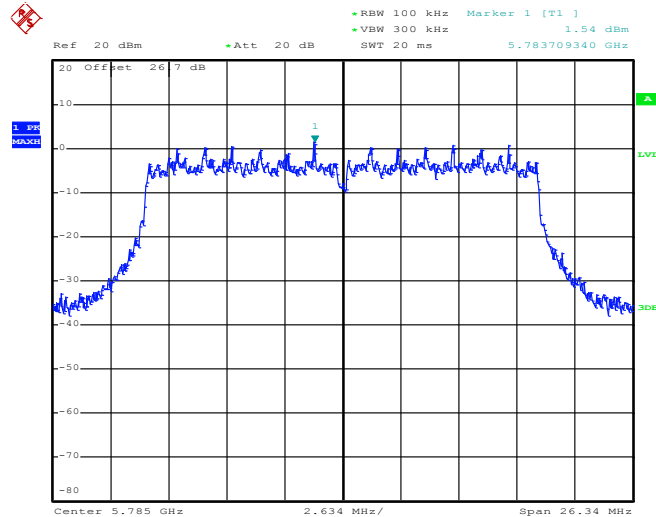
PSD 100kHz Plot on Channel 149



Date: 4.MAR.2013 22:58:09

802.11n HT20 – MIMO Ant. 2

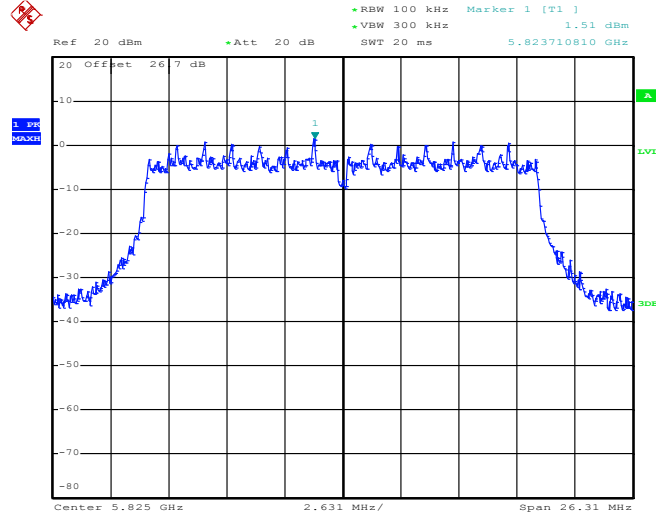
PSD 100kHz Plot on Channel 157



Date: 4.MAR.2013 23:06:38



802.11n HT20 – MIMO Ant. 2
PSD 100kHz Plot on Channel 165



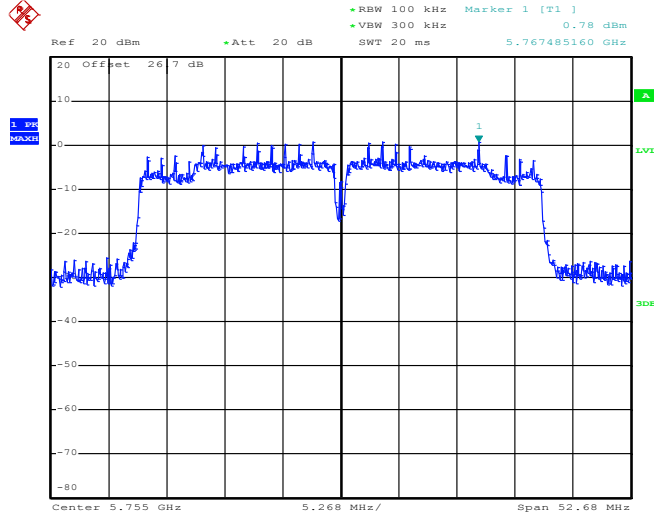
Date: 4.MAR.2013 23:09:09



<5GHz 802.11n HT40>

802.11n HT40 – SISO Ant. 2

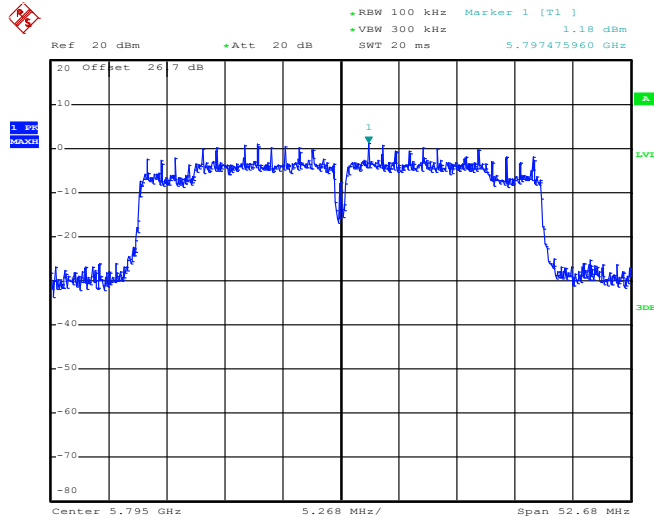
PSD 100kHz Plot on Channel 151



Date: 4.MAR.2013 23:16:19

802.11n HT40 – SISO Ant. 2

PSD 100kHz Plot on Channel 159

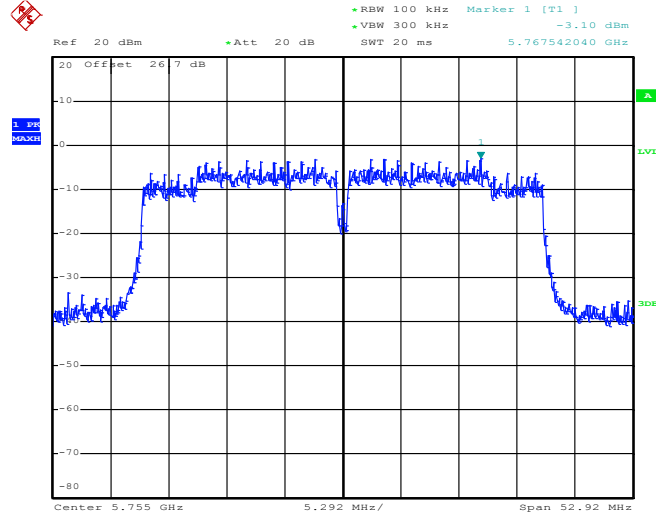


Date: 4.MAR.2013 23:19:11



802.11n HT40 – MIMO Ant. 1

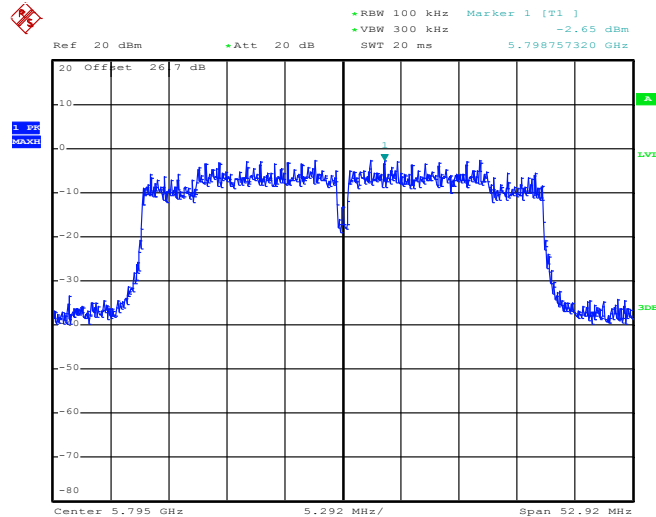
PSD 100kHz Plot on Channel 151



Date: 4.MAR.2013 23:32:06

802.11n HT40 – MIMO Ant. 1

PSD 100kHz Plot on Channel 159

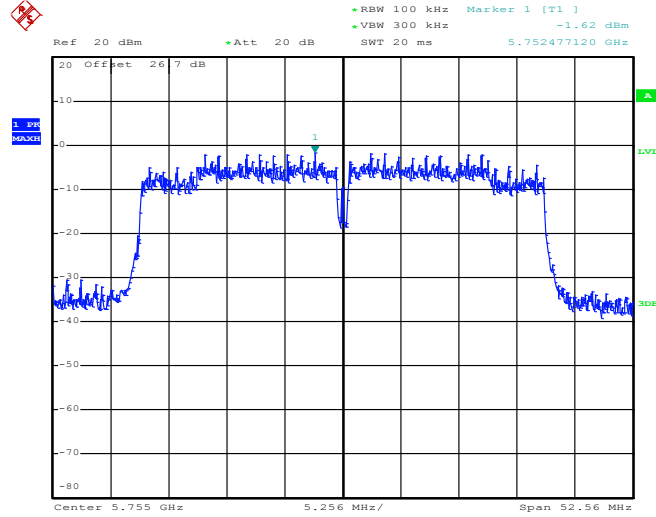


Date: 4.MAR.2013 23:28:44



802.11n HT40 – MIMO Ant. 2

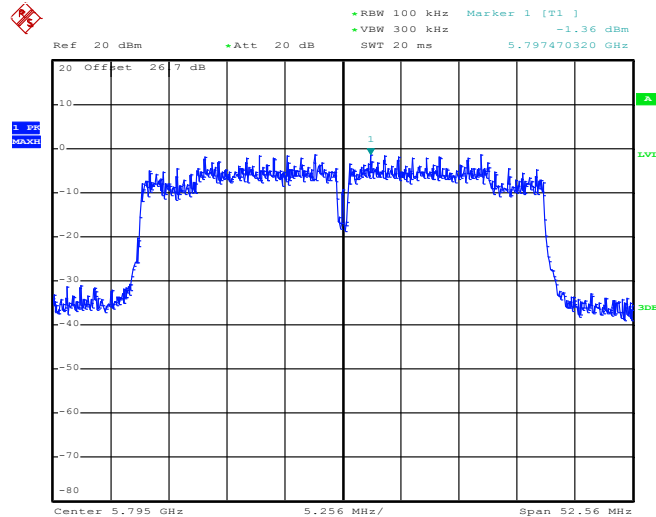
PSD 100kHz Plot on Channel 151



Date: 4.MAR.2013 23:35:32

802.11n HT40 – MIMO Ant. 2

PSD 100kHz Plot on Channel 159



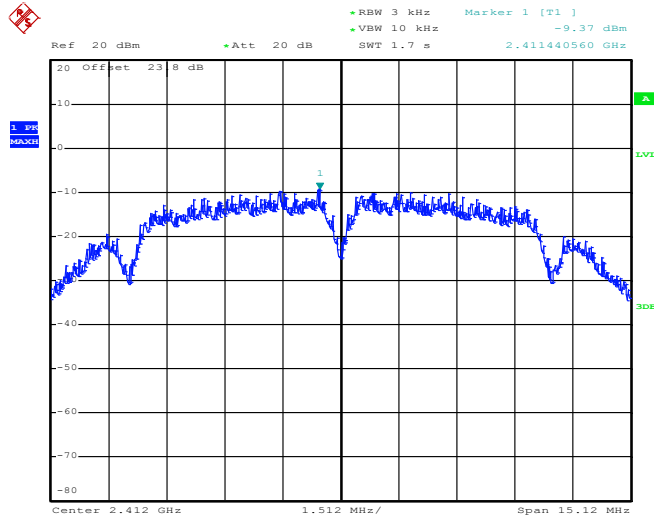
Date: 4.MAR.2013 23:26:05

3.3.7 Test Result of Power Spectral Density Plots (3kHz)

<802.11b>

802.11b – Ant. 1

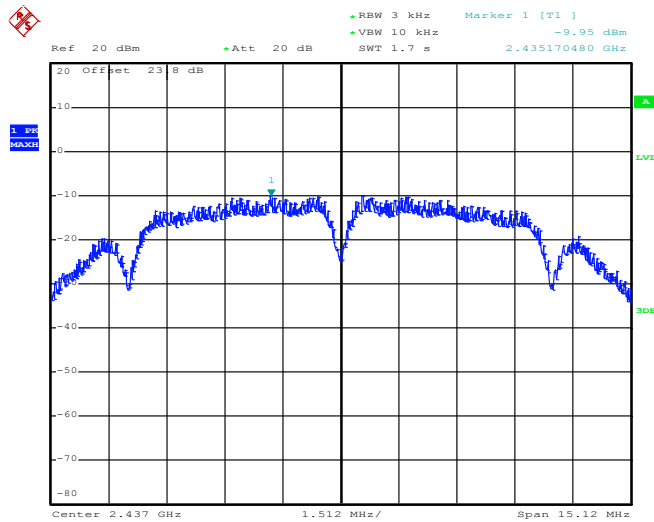
PSD 3kHz Plot on Channel 01



Date: 4.MAR.2013 20:09:37

802.11b – Ant. 1

PSD 3kHz Plot on Channel 06

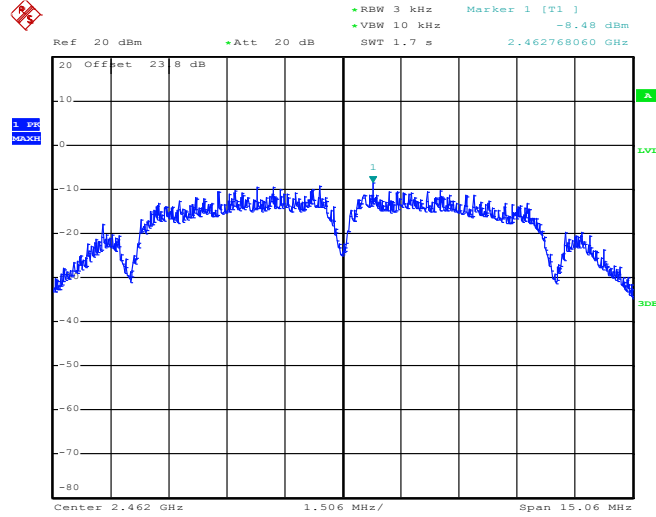


Date: 4.MAR.2013 20:27:23



802.11b – Ant. 1

PSD 3kHz Plot on Channel 11



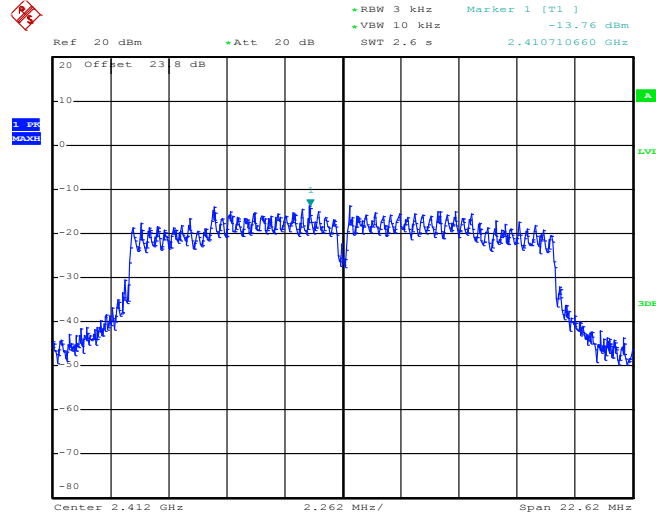
Date: 4.MAR.2013 20:30:53



<802.11g>

802.11g – Ant. 1

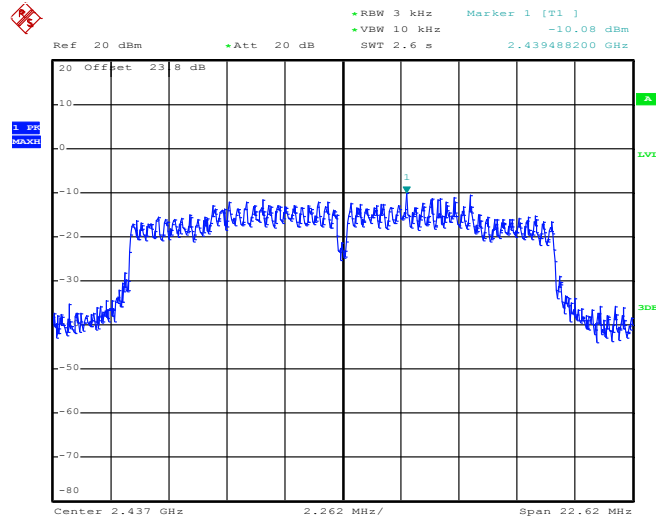
PSD 3kHz Plot on Channel 01



Date: 4.MAR.2013 20:34:29

802.11g – Ant. 1

PSD 3kHz Plot on Channel 06

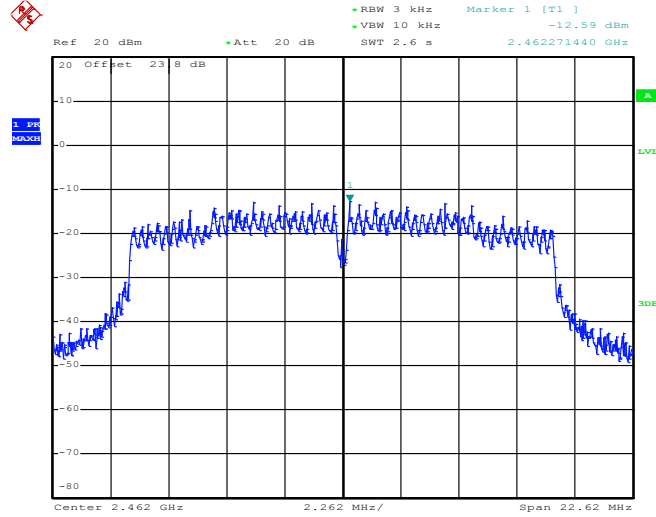


Date: 4.MAR.2013 20:37:17



802.11g – Ant. 1

PSD 3kHz Plot on Channel 11



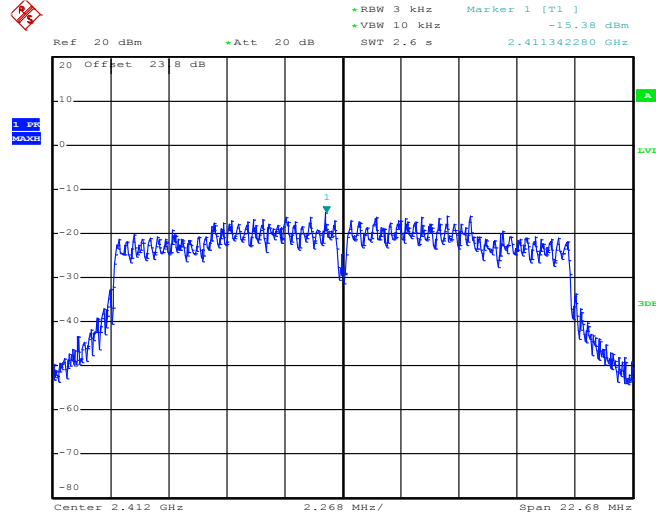
Date: 4.MAR.2013 20:40:04



<2.4GHz 802.11n HT20>

802.11n HT20 – SISO Ant. 1

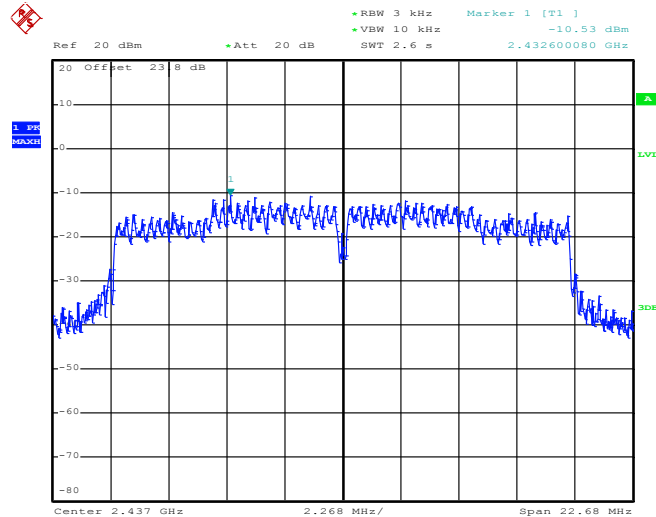
PSD 3kHz Plot on Channel 01



Date: 4.MAR.2013 20:55:53

802.11n HT20 – SISO Ant. 1

PSD 3kHz Plot on Channel 06

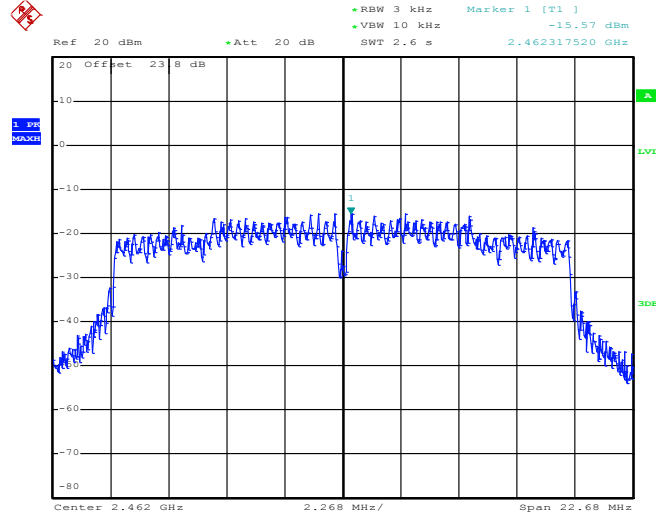


Date: 4.MAR.2013 20:52:58



802.11n HT20 – SISO Ant. 1

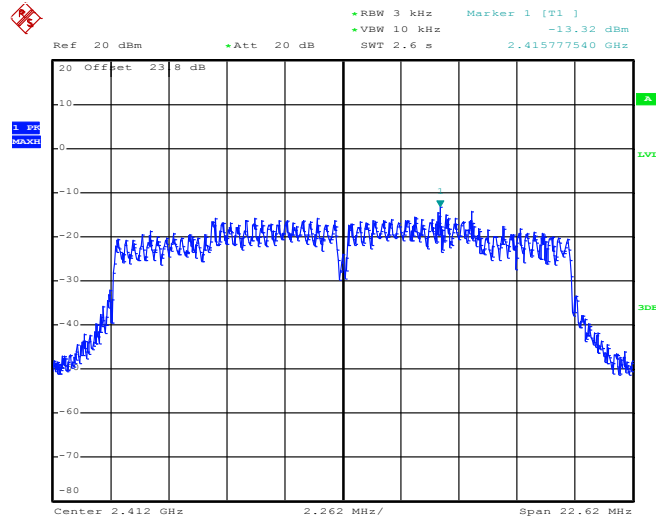
PSD 3kHz Plot on Channel 11



Date: 4.MAR.2013 20:44:54

802.11n HT20 – MIMO Ant. 1

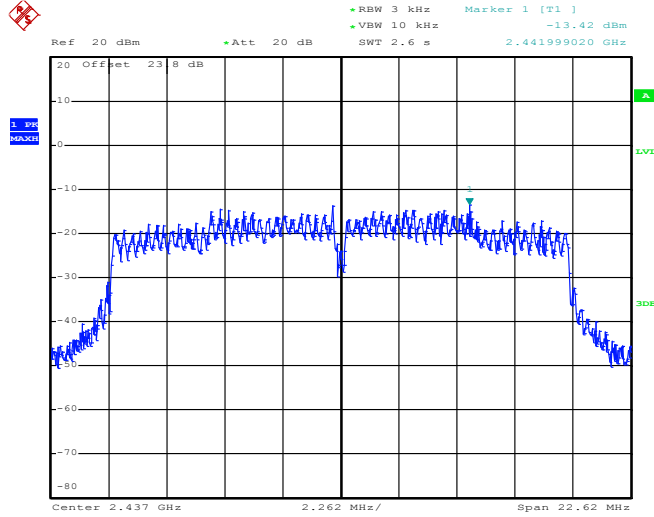
PSD 3kHz Plot on Channel 01



Date: 4.MAR.2013 21:00:05

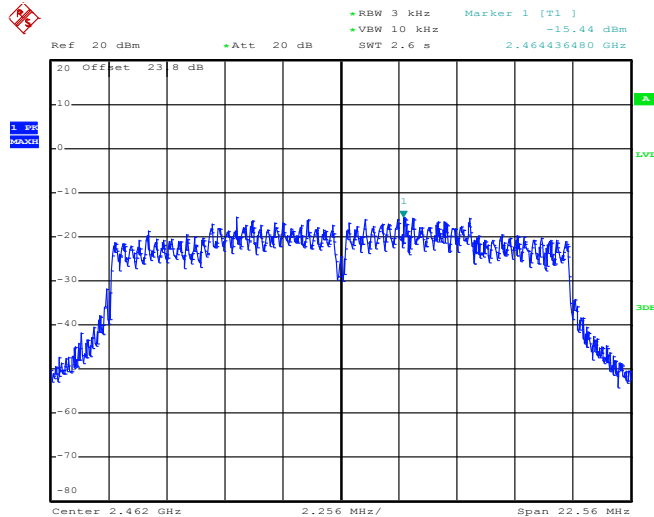


802.11n HT20 – MIMO Ant. 1
PSD 3kHz Plot on Channel 06



Date: 4.MAR.2013 21:12:17

802.11n HT20 – MIMO Ant. 1
PSD 3kHz Plot on Channel 11

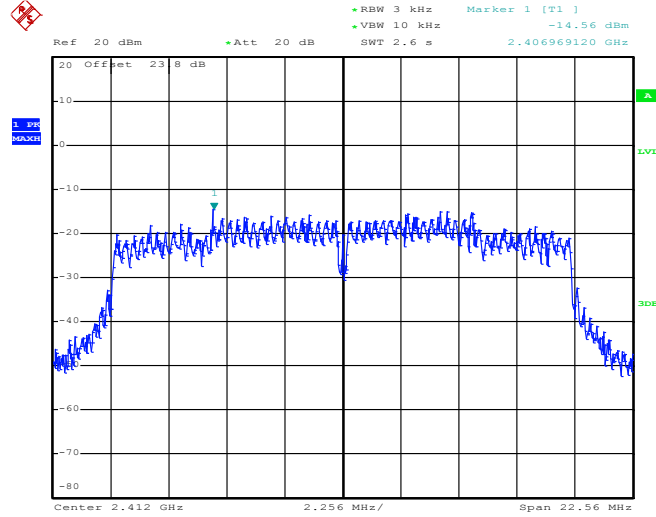


Date: 4.MAR.2013 21:15:27



802.11n HT20 – MIMO Ant. 2

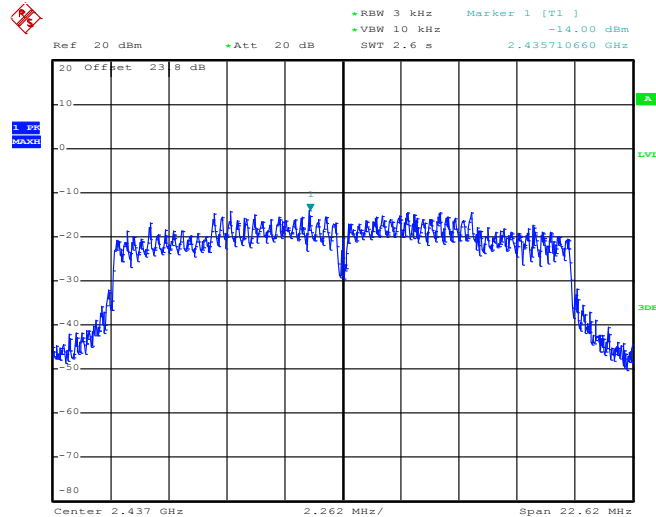
PSD 3kHz Plot on Channel 01



Date: 4.MAR.2013 21:05:35

802.11n HT20 – MIMO Ant. 2

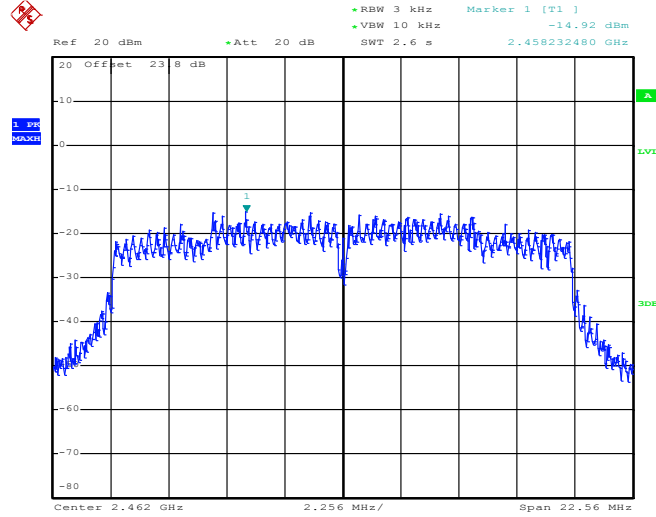
PSD 3kHz Plot on Channel 06



Date: 4.MAR.2013 21:08:51



802.11n HT20 – MIMO Ant. 2
PSD 3kHz Plot on Channel 11



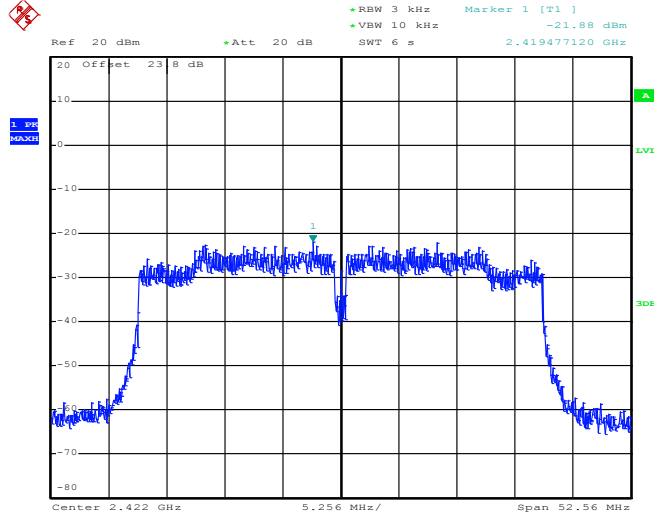
Date: 4.MAR.2013 21:18:19



<2.4GHz 802.11n HT40>

802.11n HT40 – SISO Ant. 1

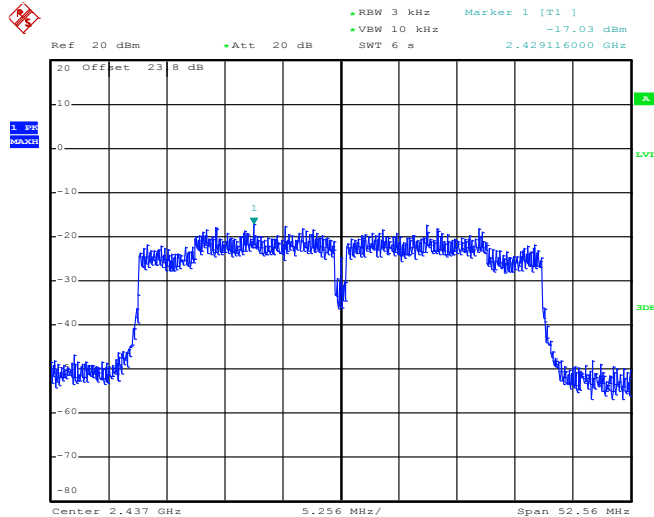
PSD 3kHz Plot on Channel 03



Date: 4.MAR.2013 21:26:37

802.11n HT40 – SISO Ant. 1

PSD 3kHz Plot on Channel 06

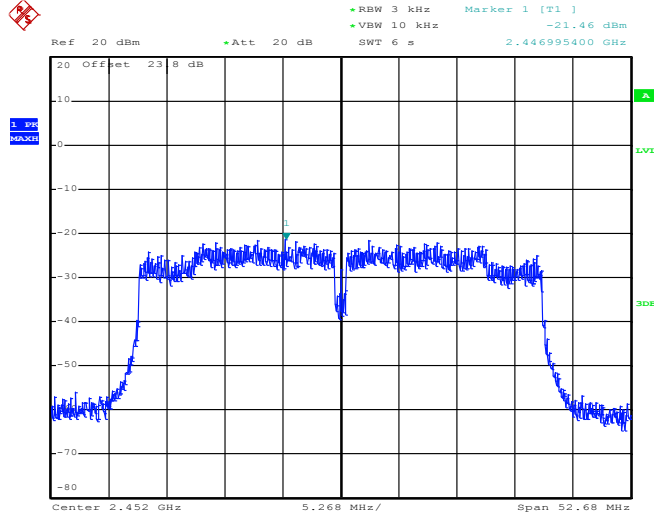


Date: 4.MAR.2013 21:29:49



802.11n HT40 – SISO Ant. 1

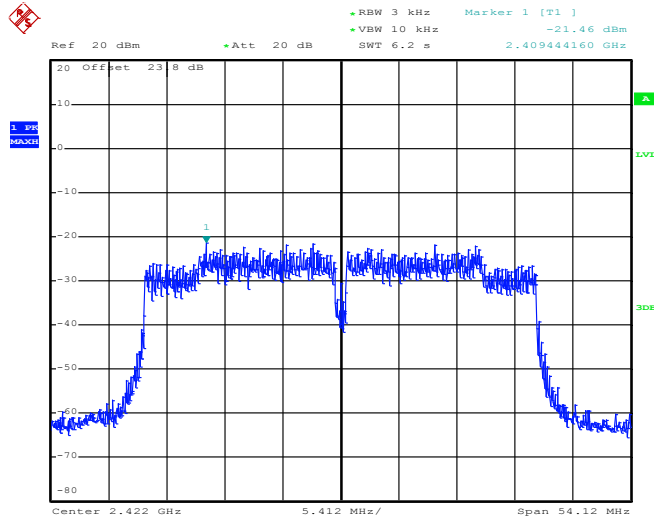
PSD 3kHz Plot on Channel 09



Date: 4.MAR.2013 21:33:03

802.11n HT40 – MIMO Ant. 1

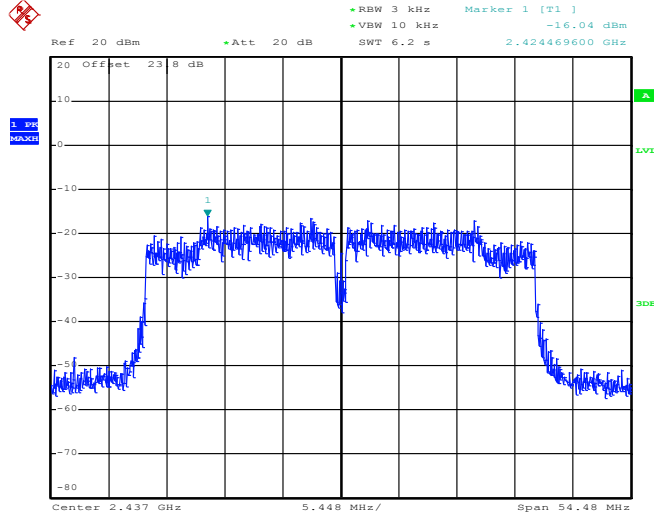
PSD 3kHz Plot on Channel 03



Date: 4.MAR.2013 21:39:57

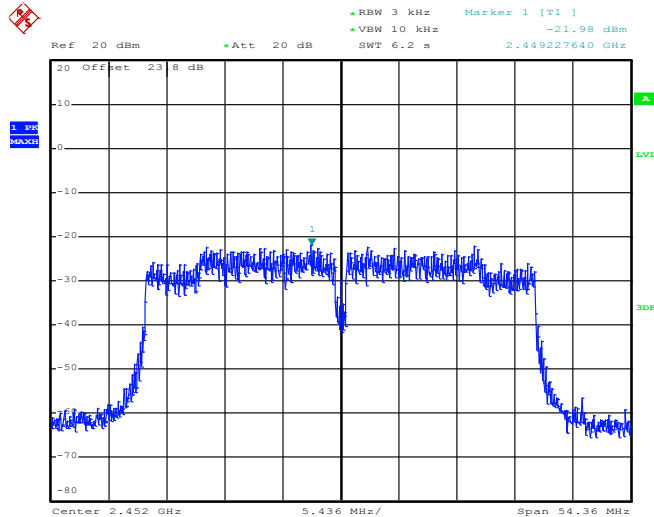


802.11n HT40 – MIMO Ant. 1
PSD 3kHz Plot on Channel 06



Date: 4.MAR.2013 21:48:36

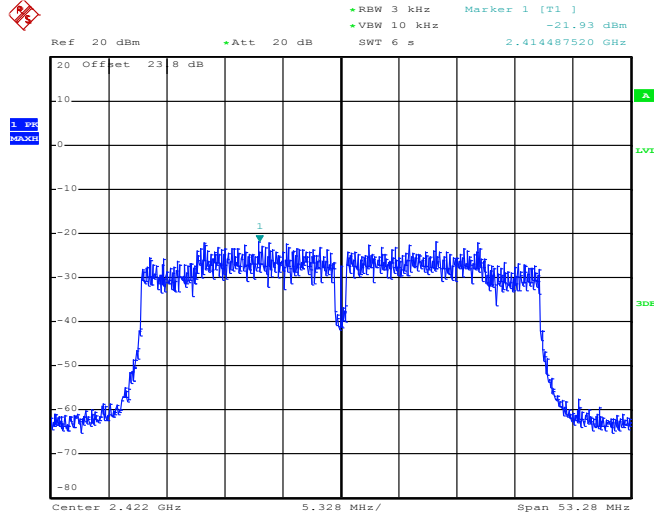
802.11n HT40 – MIMO Ant. 1
PSD 3kHz Plot on Channel 09



Date: 4.MAR.2013 21:52:20

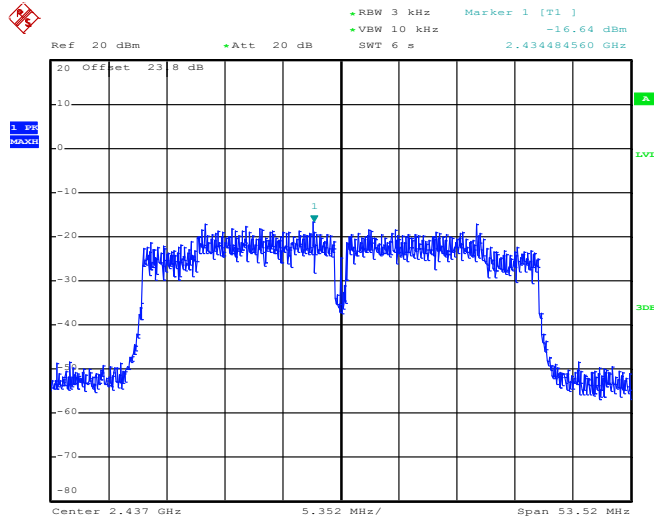


802.11n HT40 – MIMO Ant. 2
PSD 3kHz Plot on Channel 03



Date: 4.MAR.2013 21:43:01

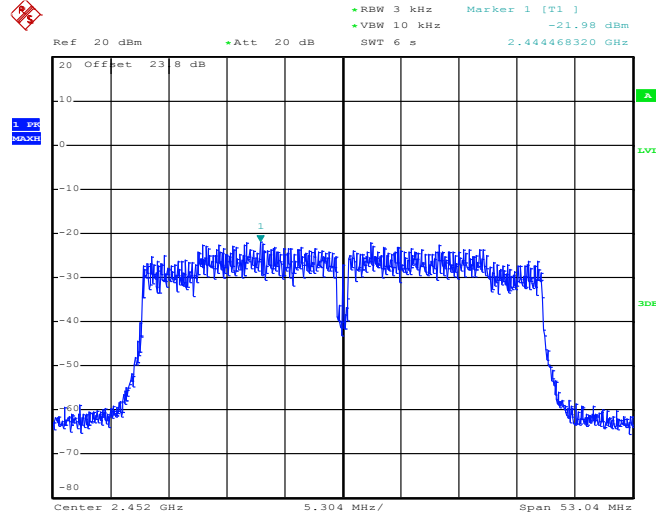
802.11n HT40 – MIMO Ant. 2
PSD 3kHz Plot on Channel 06



Date: 4.MAR.2013 21:45:53



802.11n HT40 – MIMO Ant. 2
PSD 3kHz Plot on Channel 09



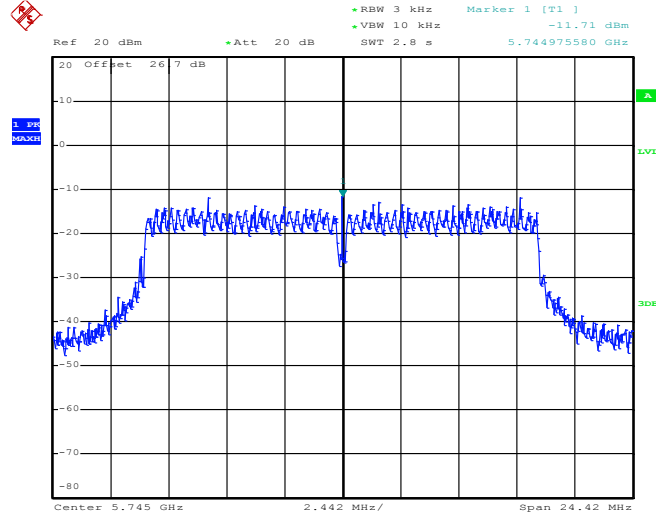
Date: 4.MAR.2013 21:55:40



<802.11a>

802.11a Ant. 2

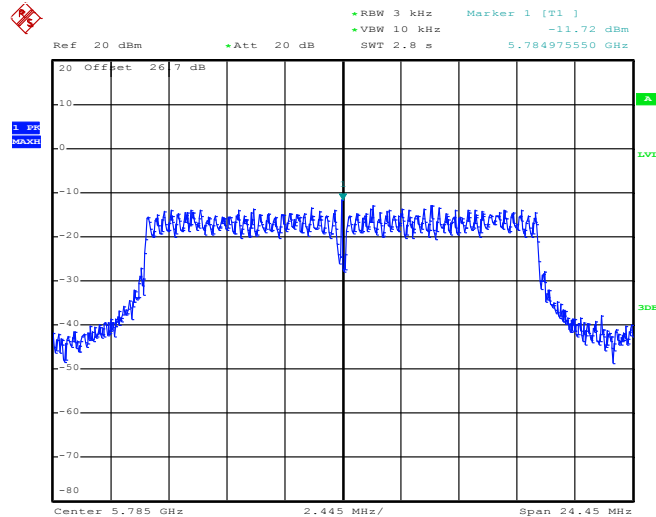
PSD 3kHz Plot on Channel 149



Date: 4.MAR.2013 22:36:17

802.11a Ant. 2

PSD 3kHz Plot on Channel 157

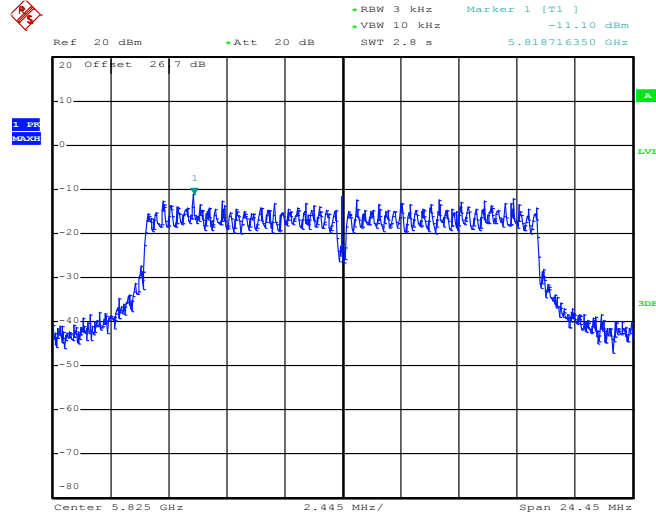


Date: 4.MAR.2013 22:39:01



802.11a Ant. 2

PSD 3kHz Plot on Channel 165



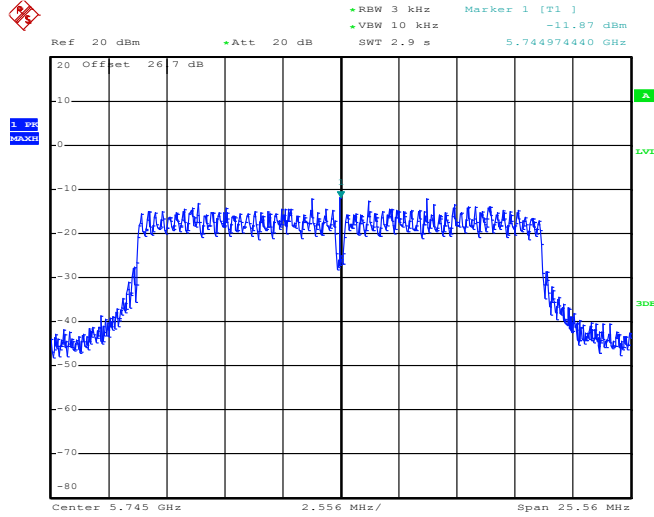
Date: 4.MAR.2013 22:42:37



<5GHz 802.11n HT20>

802.11n HT20 – SISO Ant. 2

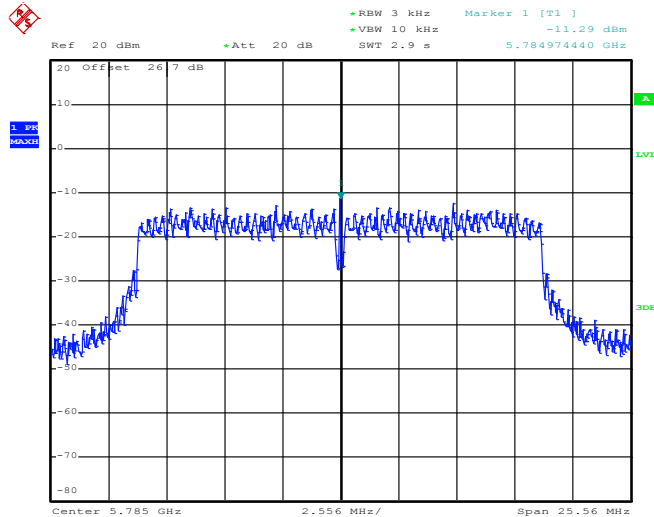
PSD 3kHz Plot on Channel 149



Date: 4.MAR.2013 22:52:36

802.11n HT20 – SISO Ant. 2

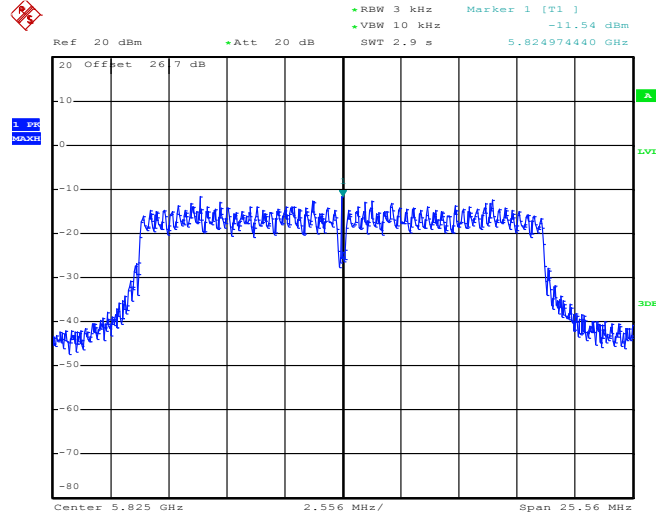
PSD 3kHz Plot on Channel 157



Date: 4.MAR.2013 22:49:57

802.11n HT20 – SISO Ant. 2

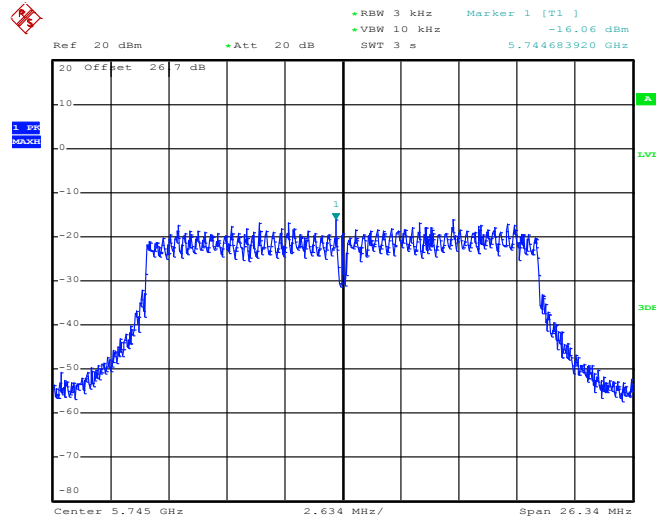
PSD 3kHz Plot on Channel 165



Date: 4.MAR.2013 22:47:19

802.11n HT20 – MIMO Ant. 1

PSD 3kHz Plot on Channel 149

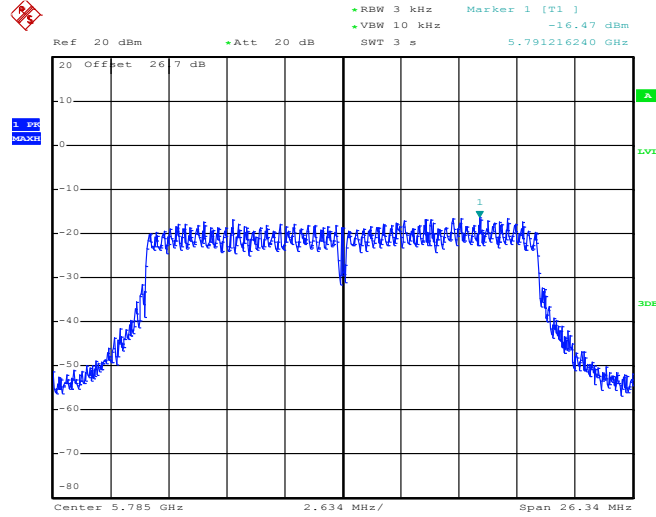


Date: 4.MAR.2013 23:01:08



802.11n HT20 – MIMO Ant. 1

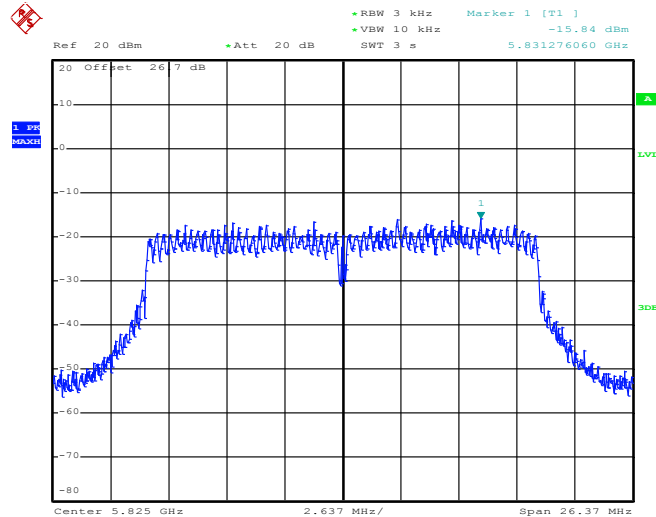
PSD 3kHz Plot on Channel 157



Date: 4.MAR.2013 23:03:57

802.11n HT20 – MIMO Ant. 1

PSD 3kHz Plot on Channel 165

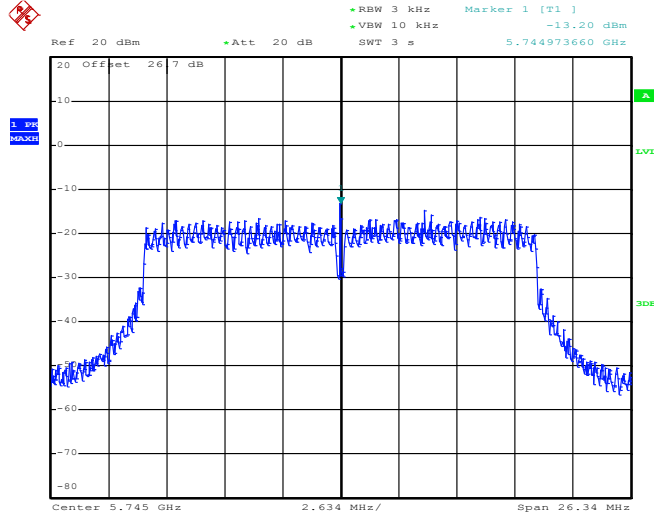


Date: 4.MAR.2013 23:11:54



802.11n HT20 – MIMO Ant. 2

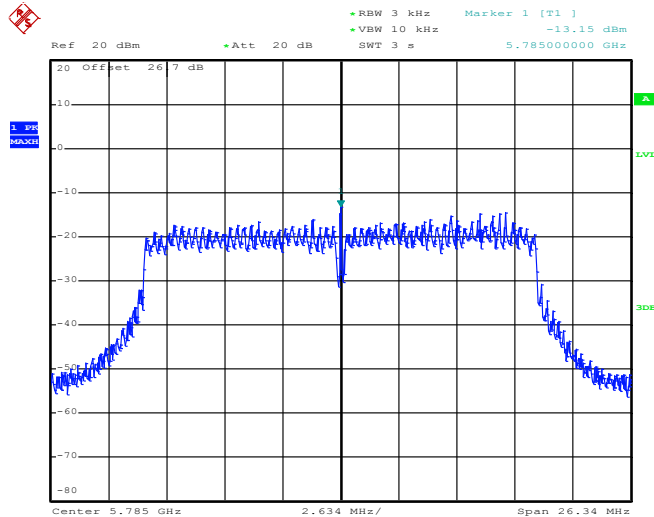
PSD 3kHz Plot on Channel 149



Date: 4.MAR.2013 22:58:00

802.11n HT20 – MIMO Ant. 2

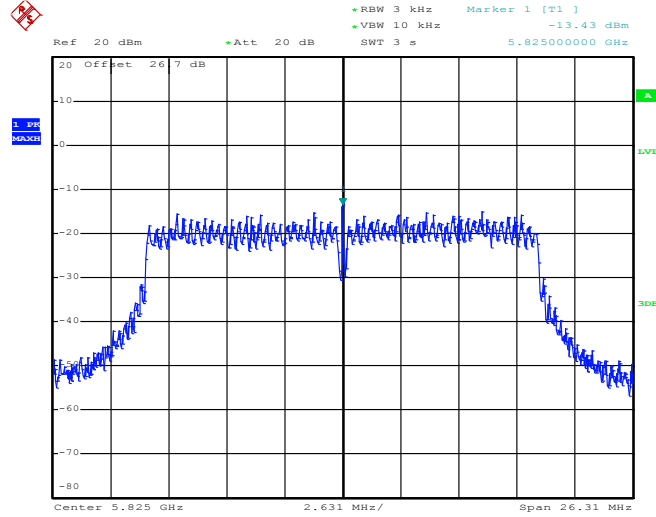
PSD 3kHz Plot on Channel 157



Date: 4.MAR.2013 23:06:29



802.11n HT20 – MIMO Ant. 2
PSD 3kHz Plot on Channel 165



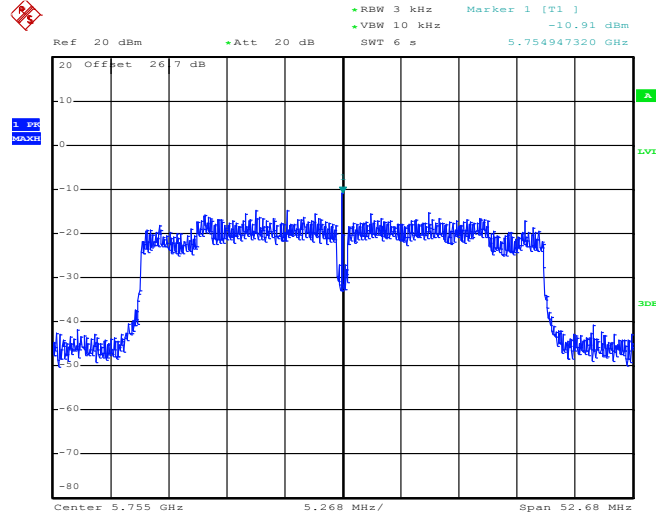
Date: 4.MAR.2013 23:09:00



<5GHz 802.11n HT40>

802.11n HT40 – SISO Ant. 2

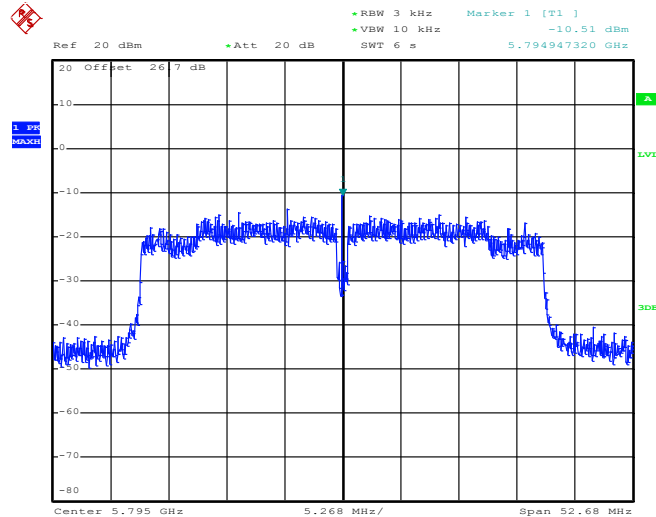
PSD 3kHz Plot on Channel 151



Date: 4.MAR.2013 23:16:10

802.11n HT40 – SISO Ant. 2

PSD 3kHz Plot on Channel 159

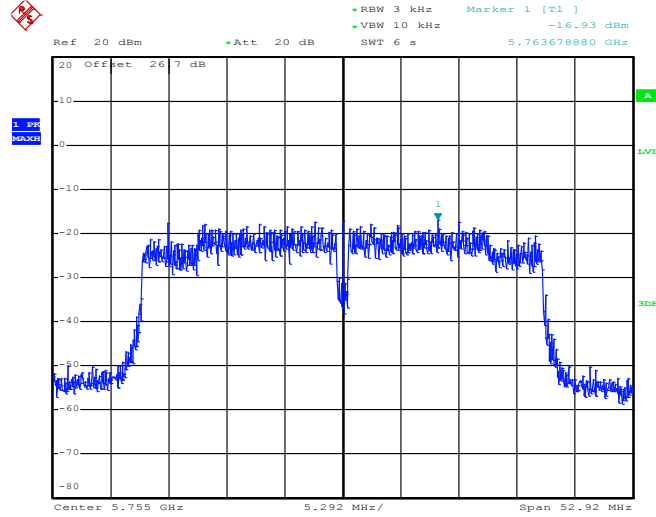


Date: 4.MAR.2013 23:19:03



802.11n HT40 – MIMO Ant. 1

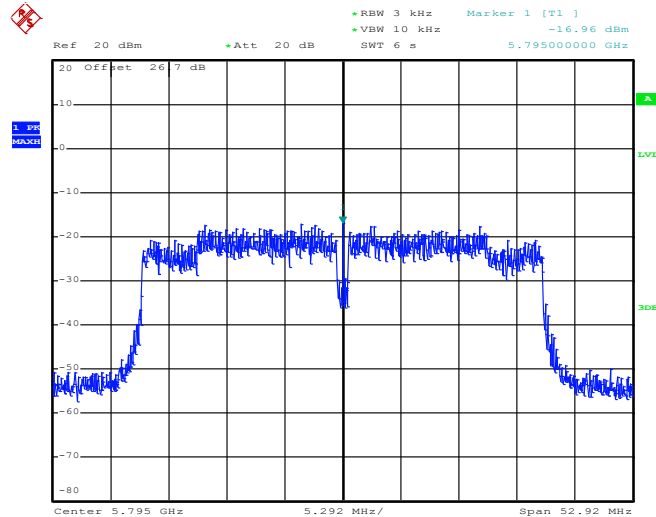
PSD 3kHz Plot on Channel 151



Date: 4.MAR.2013 23:31:57

802.11n HT40 – MIMO Ant. 1

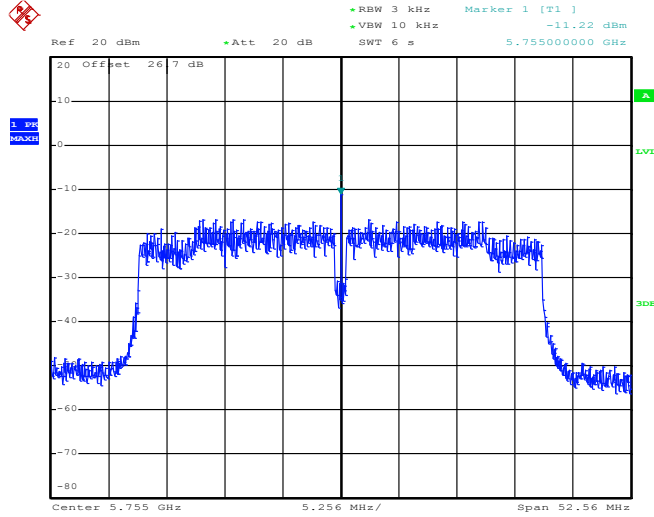
PSD 3kHz Plot on Channel 159



Date: 4.MAR.2013 23:28:35

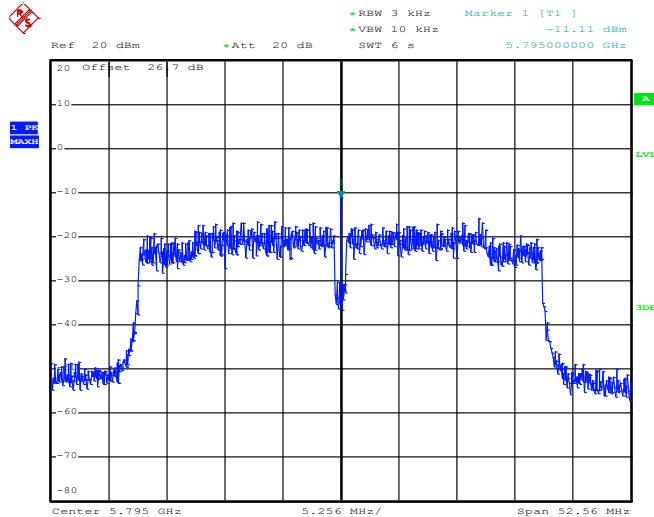


802.11n HT40 – MIMO Ant. 2
PSD 3kHz Plot on Channel 151



Date: 4.MAR.2013 23:35:23

802.11n HT40 – MIMO Ant. 2
PSD 3kHz Plot on Channel 159



Date: 4.MAR.2013 23:25:56