

# FCC RF Test Report

**APPLICANT** : Motorola, Inc.  
**EQUIPMENT** : Access Point, Radio Module 6  
**BRAND NAME** : Motorola  
**MODEL NAME** : AP-6  
**FCC ID** : UZ7AP6  
**STANDARD** : FCC Part 15 Subpart E  
**CLASSIFICATION** : Unlicensed National Information Infrastructure (UNII)

The product was received on Sep. 23, 2010 and completely tested on Jan. 20, 2011. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures given in FCC Public Notice DA 02-2138 and shown 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:



Anderson Chiu / Deputy Manager



**SPORTON INTERNATIONAL INC.**

No. 52, Hwa Ya 1<sup>st</sup> 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
FR092308B	Rev. 01	Initial issue of report	Dec. 17, 2010
FR092308B	Rev. 02	Update the test data of 26dB Bandwidth and conducted output power	Jan. 24, 2011

## SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	15.403(i)	A9.2	26dB & 99% Bandwidth	-	-	-
3.2	15.407(a)	A9.2	Maximum Conducted Output Power	$\leq 17, 24, 30$ dBm (depend on band)	Pass	-
3.3	15.407(a)	A9.2	Power Spectral Density	$\leq 4, 11, 17$ dBm (depend on band)	Pass	-
3.4	15.407(b)	A9.3	Frequency Band Edges	$\leq -17, -27$ dBm (depend on band)&15.209(a)	Pass	-
3.5	15.207	Gen 7.2.2	AC Conducted Emission	15.207(a)	Pass	Under limit 15.5 dB at 0.198 MHz
3.6	15.407(b)	A9.3	Transmitter Radiated Emission	$\leq -17, -27$ dBm (depend on band)&15.209(a)	Pass	Under limit 1.02 dB at 5150 MHz
3.7	15.407(b)	A9.3	Peak Excursion Ratio	$\leq 13$ dB	Pass	-
3.8	15.407(c)	A9.5	Automatically Discontinue Transmission	Discontinue Transmission	Pass	-
3.9	15.407(g)	A9.5	Frequency Stability	Within Operation Band	Pass	-
3.10	15.203 & 15.407(a)	A9.2	Antenna Requirement	N/A	Pass	-

# 1 General Description

## 1.1 Applicant

Motorola, Inc.

One Motorola Plaza, Holtsville, NY 11742-1300 USA

## 1.2 Manufacturer

Universal Scientific Industrial (Shanghai)

No. 1558, Zhang Dong Road, Zhangjiang Hi-Tech Park, Shanghai 201203, P.R. China

## 1.3 Feature of Equipment Under Test

Product Feature & Specification	
Equipment	Access Point, Radio Module 6
Brand Name	Motorola
Model Name	AP-6
FCC ID	UZ7AP6
Tx/Rx Frequency Range	5150 MHz ~ 5250 MHz
Maximum Output Power to Antenna	802.11a : 15.54 dBm / 0.036 W 802.11n (BW 20MHz) : 16.86 dBm / 0.049 W 802.11n (BW 40MHz) : 16.94 dBm / 0.049 W
HW Version	DVT
SW Version	ART Rev 0.9 Build #16
Type of Modulation	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 Unlicensed National Information Infrastructure (UNII).
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	Model Number	2.4GHz				Note
		Peak Gain	Cable Loss (external)	Cable Loss (internal)	Net Peak Gain	
Dipole	ML-2452-APA2-01	7	0	1.3	5.7	Antenna 1
	ML-2452-HPA5-036	2.9	0.8	1.3	0.8	
	ML-5299-APA1-01R	N/A				
	ML-5299-HPA1-01R	N/A				
	ML-2499-HPA3-01R	4.6	1.3	1.3	2	
	ML-2499-APA2-01R	2	0	1.3	0.7	
	ML-2452-APA2GA1-01	2	0	1.3	0.7	
Panel	ML-2452-PNA5-01R	4.50	0.31	1.3	2.89	Antenna 2
Patch	ML-2452-PTA3M3-036	4.92	0.92	1.3	2.7	Antenna 3
	ML-5299-PTA1-0R	N/A				
	ML-2499-SD3-01R	4.8	1.3	1.3	2.2	
PIFA_MCN	MCN PIFA	2	0	0	2	Antenna 4
PIFA_NCAP	NCAP PIFA	3	0	0	3	Antenna 5

Type	Model Number	5GHz				Note
		Peak Gain	Cable Loss (external)	Cable Loss (internal)	Net Peak Gain	
Dipole	ML-2452-APA2-01	7	0	1.5	5.5	Antenna 1
	ML-2452-HPA5-036	4.9	1.1	1.5	2.3	
	ML-5299-APA1-01R	2	0	1.5	0.5	
	ML-5299-HPA1-01R	5	0.84	1.5	2.66	
	ML-2499-HPA3-01R	N/A				
	ML-2499-APA2-01R	N/A				
	ML-2452-APA2GA1-01	1	0	1.5	-0.5	
Panel	ML-2452-PNA5-01R	5.00	0.60	1.5	2.90	Antenna 2
Patch	ML-2452-PTA3M3-036	8.97	1.97	1.5	5.5	Antenna 3
	ML-5299-PTA1-0R	5	2	1.5	1.5	
	ML-2499-SD3-01R	N/A				
PIFA_MCN	MCN PIFA	4.5	0	0	4.5	Antenna 4
PIFA_NCAP	NCAP PIFA	6	0	0	6	Antenna 5

## 1.4 Testing Site

<b>Test Site</b>	SPORTON INTERNATIONAL INC.		
<b>Test Site Location</b>	No. 52, Hwa Ya 1 <sup>st</sup> Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL: +886-3-3273456 / FAX: +886-3-3284978		
<b>Test Site No.</b>	<b>Sporton Site No.</b>		<b>FCC/IC Registration No.</b>
	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 E
- FCC Public Notice DA 02-2138, (Measurement Guidelines of UNII)
- ANSI C63.4-2003
- IC RSS-210 Issued 7

### 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.	WLAN AP	D-Link	DIR-628	KA2DIR628A2	N/A	Unshielded, 1.8 m
2.	Notebook	DELL	Vostro 1510	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
3.	LCD Monitor	Lenovo	6135-AB1	FCC DoC	Shielded, 1.6 m	Unshielded, 1.8 m
4.	DC Power Supply	GW	GPC-60300	N/A	N/A	Unshielded, 1.8 m
5.	iPod	Apple	A1285	FCC DoC	Shielded, 1.0 m	N/A

## 2 Test Configuration of Equipment Under Test

### 2.1 Carrier Frequency Channel

802.11a Carrier Frequency Channel							
Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)
36	5180	40	5200	44	5220	48	5240

802.11n (BW 20MHz) Carrier Frequency Channel							
Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)
36	5180	40	5200	44	5220	48	5240

802.11n (BW 40MHz) Carrier Frequency Channel			
Channel	Freq. (MHz)	Channel	Freq. (MHz)
38	5190	46	5230





## 2.2 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: conduction (150 kHz to 30 MHz), radiation (9 kHz 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:

802.11a mode, 20 MHz Channel Bandwidth, 6 Mb/s, OFDM Modulation

802.11n HT20 mode, 20 MHz Channel Bandwidth, 6.5 Mb/s, OFDM Modulation

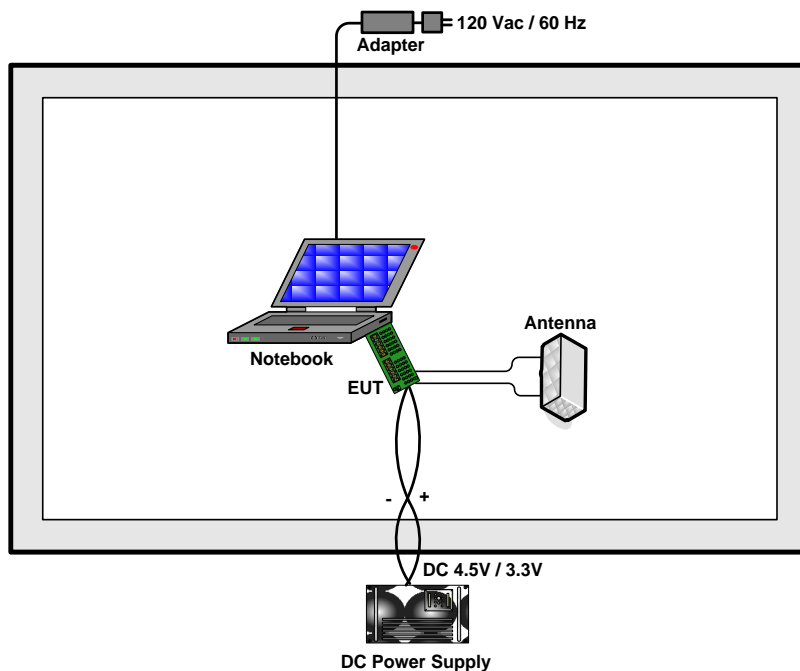
802.11n HT40 mode, 40 MHz Channel Bandwidth, 13.5 Mb/s, OFDM Modulation

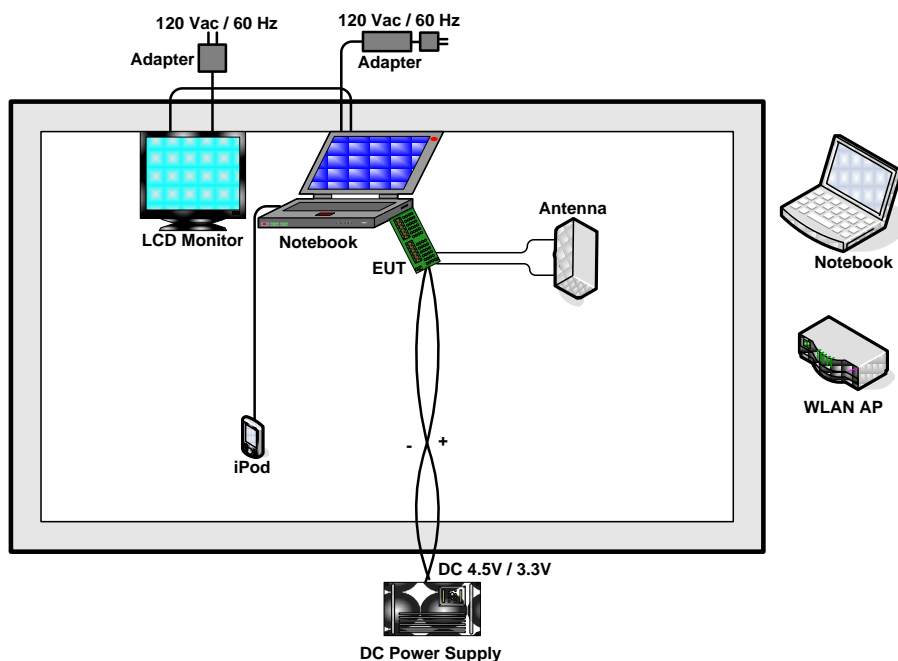
The following tables are showing the test modes as the worst cases and recorded in this report.

Test Cases	
Test Item	802.11a/n (Modulation : OFDM)
Conducted TCs	<ul style="list-style-type: none"> <li>■ Mode 1: 802.11a_CH36_5180 MHz</li> <li>■ Mode 2: 802.11a_CH44_5220 MHz</li> <li>■ Mode 3: 802.11a_CH48_5240 MHz</li> <li>■ Mode 4: 802.11a_CH36_5180 MHz (BW 20M)</li> <li>■ Mode 5: 802.11a_CH44_5220 MHz (BW 20M)</li> <li>■ Mode 6: 802.11a_CH48_5240 MHz (BW 20M)</li> <li>■ Mode 7: 802.11n_CH38_5190 MHz (BW 40M)</li> <li>■ Mode 8: 802.11n_CH46_5230 MHz (BW 40M)</li> </ul>
AC Conducted Emission	Mode 1 : WLAN (5G) Link

## 2.3 Connection Diagram of Test System

<WLAN Tx Mode>



**<AC Conducted Emission Mode>**


## 2.4 RF Utility

The programmed RF Utility "ART", is installed in notebook to provide channel selection, power level, data rate and the application type. RF Utility can send transmitting signal for all testing. The EUT was set to the maximum obtainable power level and was tested at that power level.

### 3 Test Result

#### 3.1 26dB & 99% Bandwidth Measurement

##### 3.1.1 Limit of 26dB & 99% Bandwidth

There is no restriction limits for bandwidth. The maximum conducted output power can be limited by measured emission bandwidth (B). For the band 5.15~5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 50 mW (17dBm) or 4 dBm + 10log B. For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW (24dBm) or 11 dBm + 10log B. For the band 5.725-5.825 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 1 W (30dBm) or 17 dBm + 10log B.

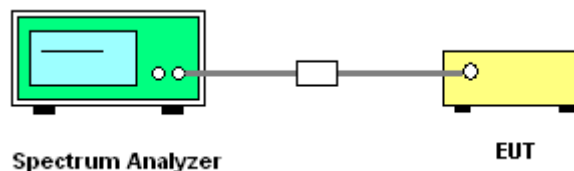
##### 3.1.2 Measuring Instruments

See list of measuring instruments of this test report.

##### 3.1.3 Test Procedures

1. The testing follows FCC Public Notice DA 02-2138 (Measurement Guidelines of UNII).
2. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
3. Read RBW and repeat measurement as needed until the RBW/BW ratio is approximately 1%.
4. Use a RBW = approximately 1% of the emission bandwidth; Set the VBW > RBW; Use a peak detector.
5. Measure the maximum width of the emission that is 26 dB relative to the peak of the emission and 99% occupied bandwidth.

##### 3.1.4 Test Setup



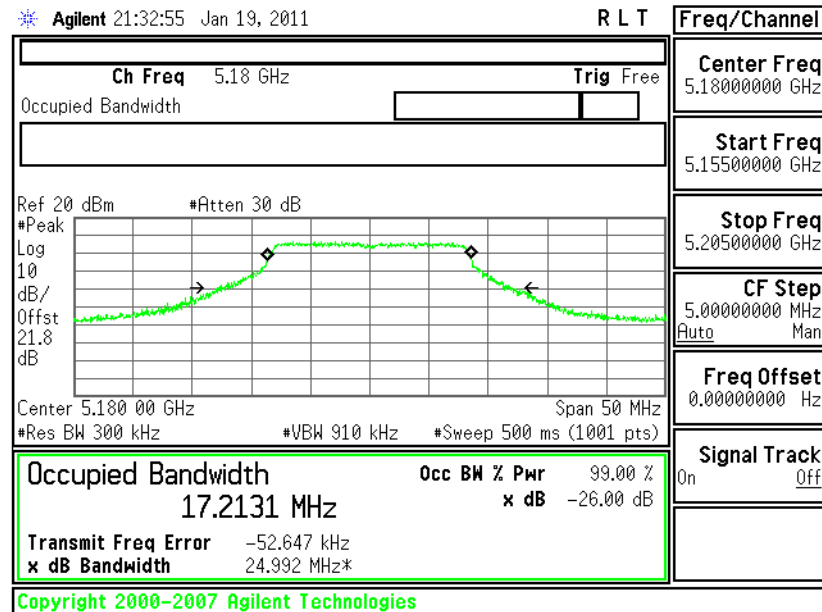


## 3.1.5 Test Result of 26dB &amp; 99% Bandwidth

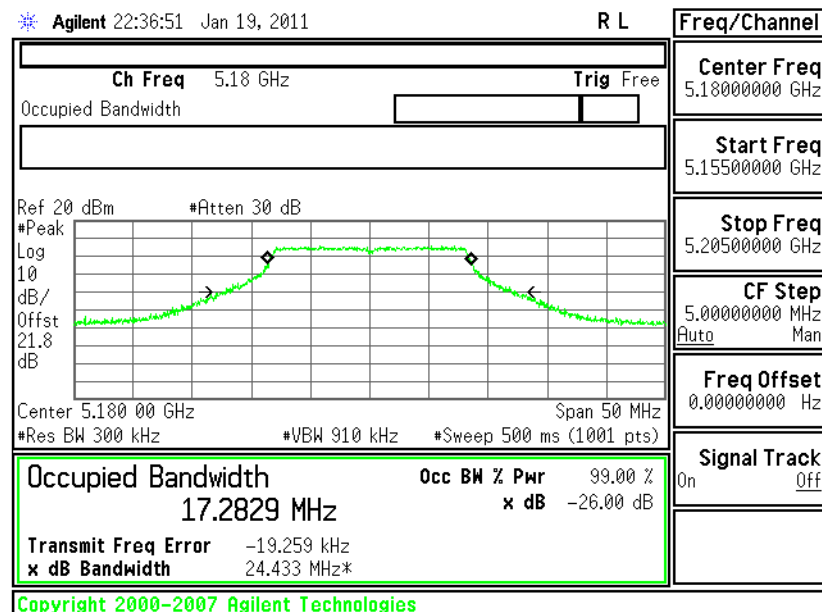
Test Mode :	Mode 1~8	Temperature :	24~26°C
Test Engineer :	Ken Hsu	Relative Humidity :	52~55%

&lt;Antenna 1 for 4.5V&gt;

## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 36 - Chain A



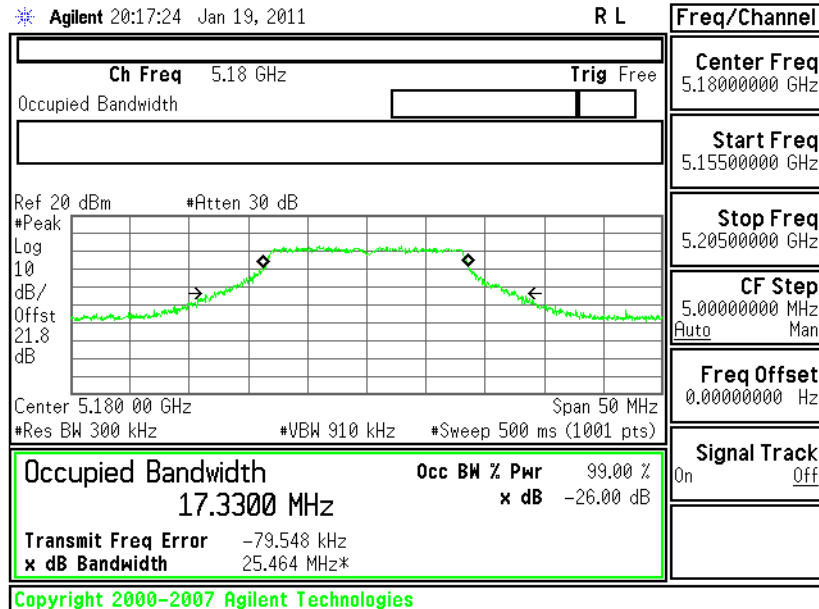
## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 36 - Chain B





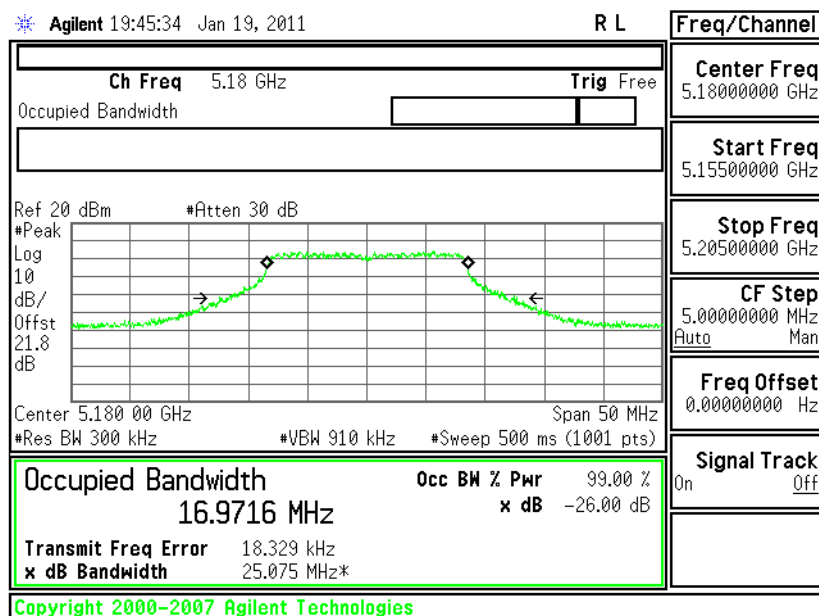
## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 36 - Chain

## A+B(A)



## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 36 - Chain

## A+B(B)

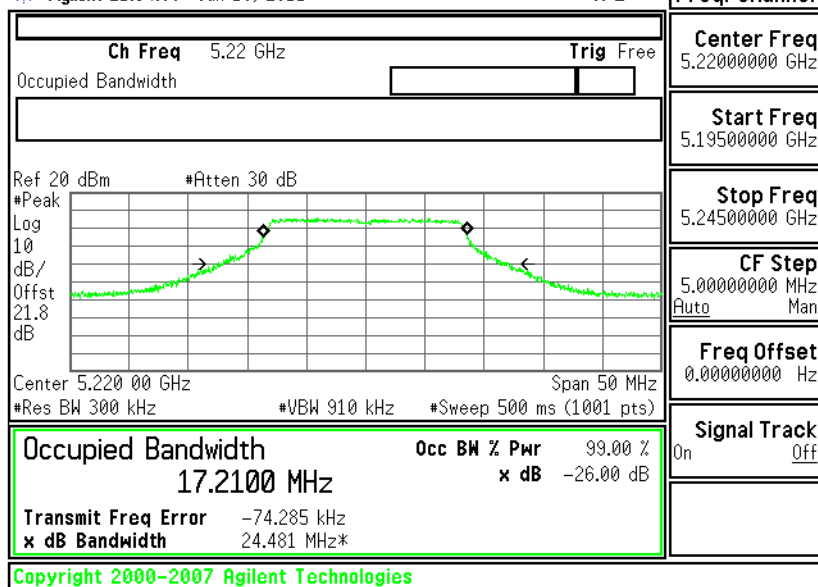




## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 44 - Chain A

Agilent 21:34:06 Jan 19, 2011

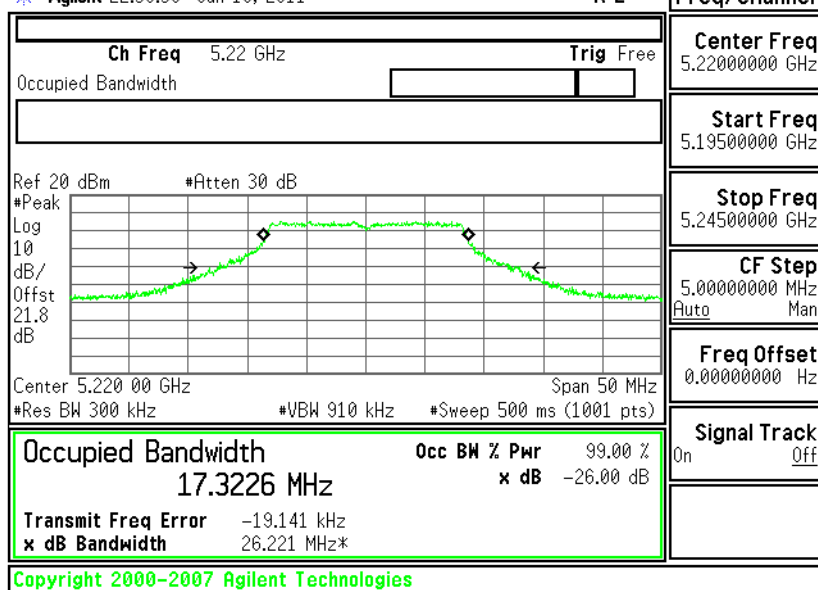
R L



## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 44 - Chain B

Agilent 22:38:38 Jan 19, 2011

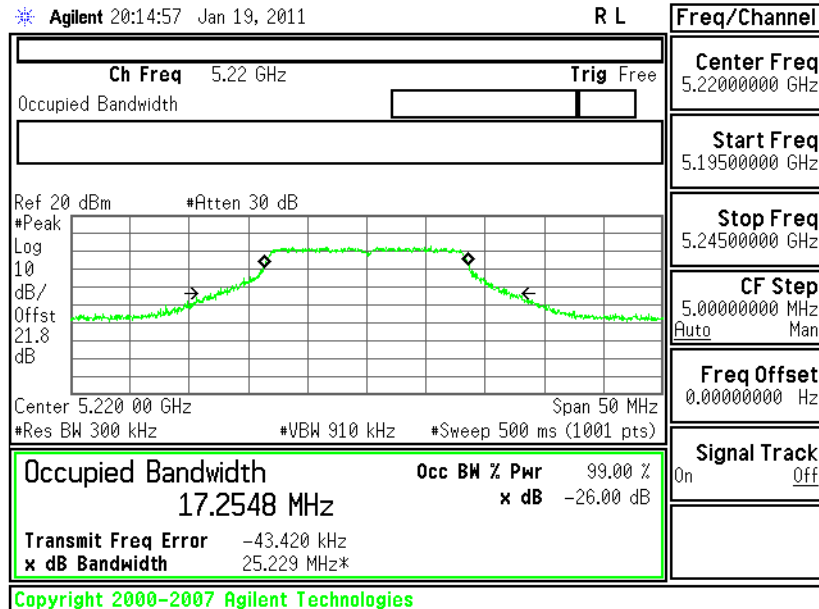
R L





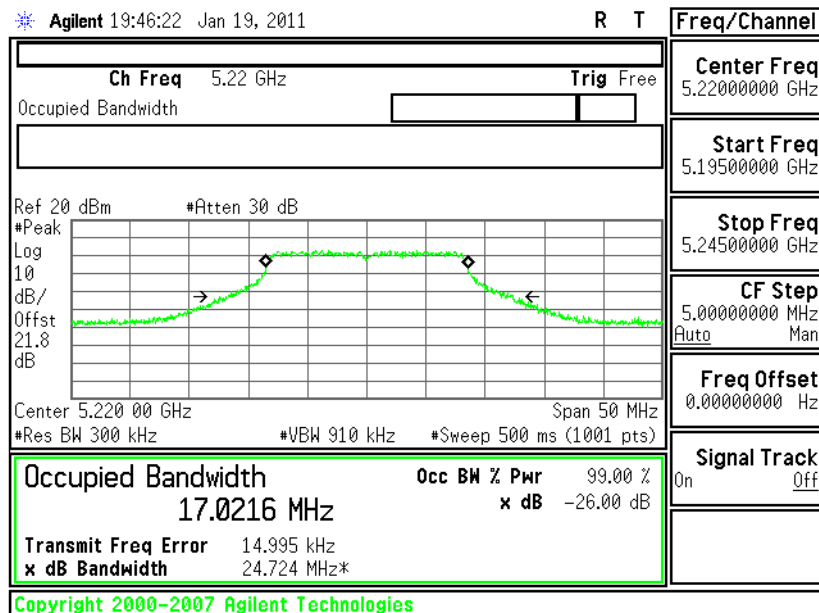
## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 44 - Chain

## A+B(A)



## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 44 - Chain

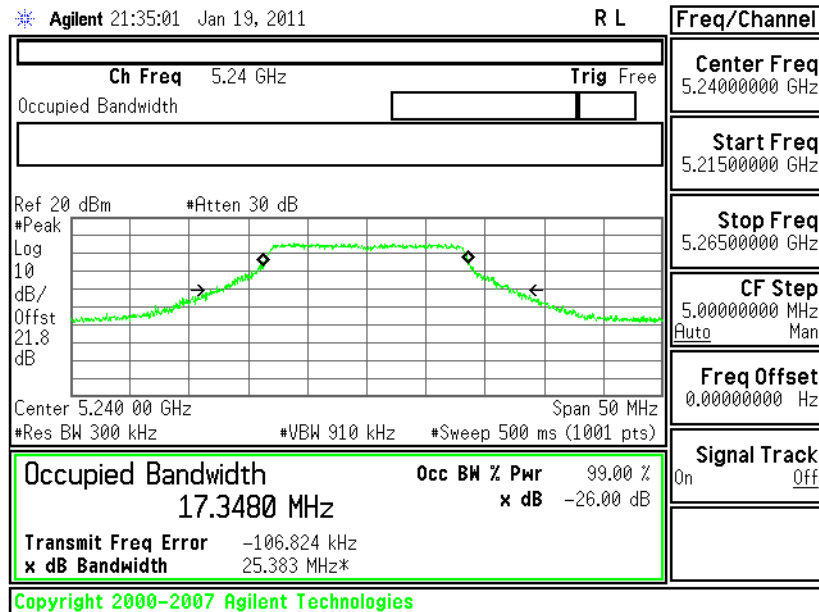
## A+B(B)



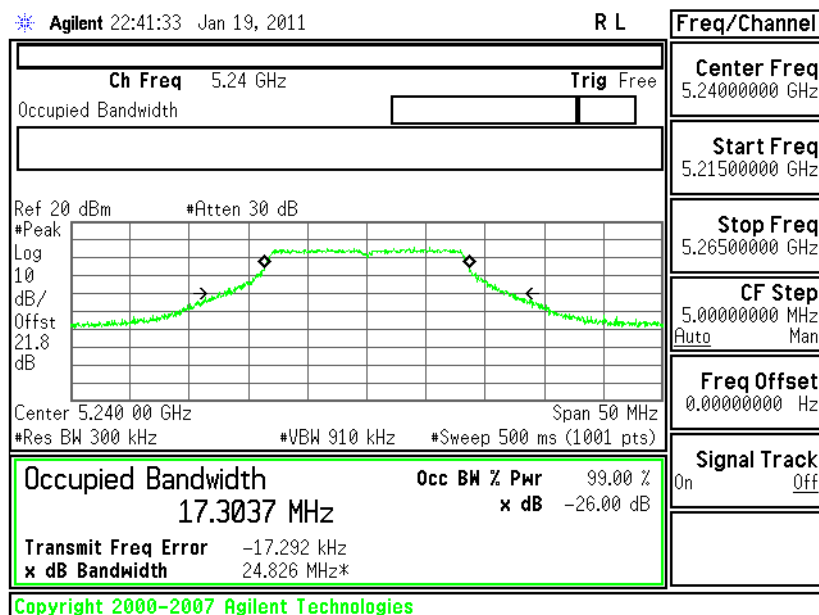




## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 48 - Chain A



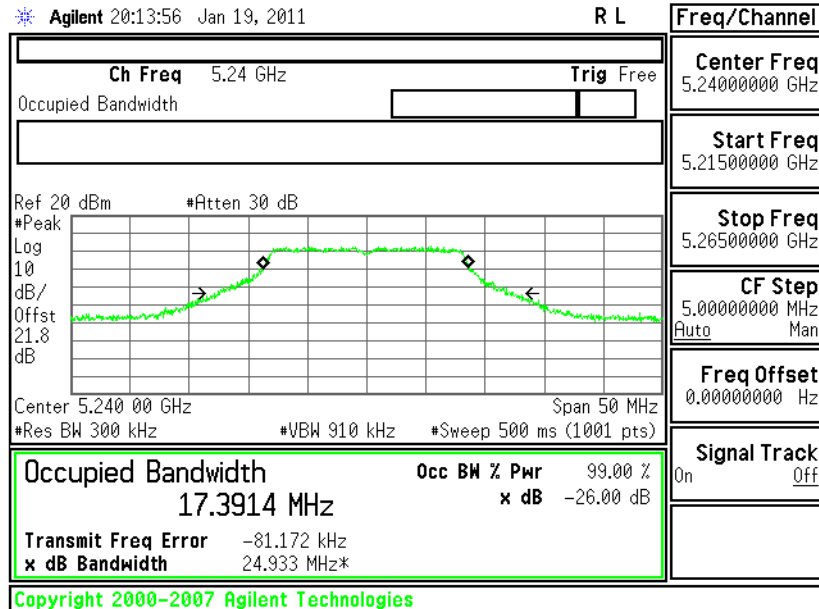
## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 48 - Chain B





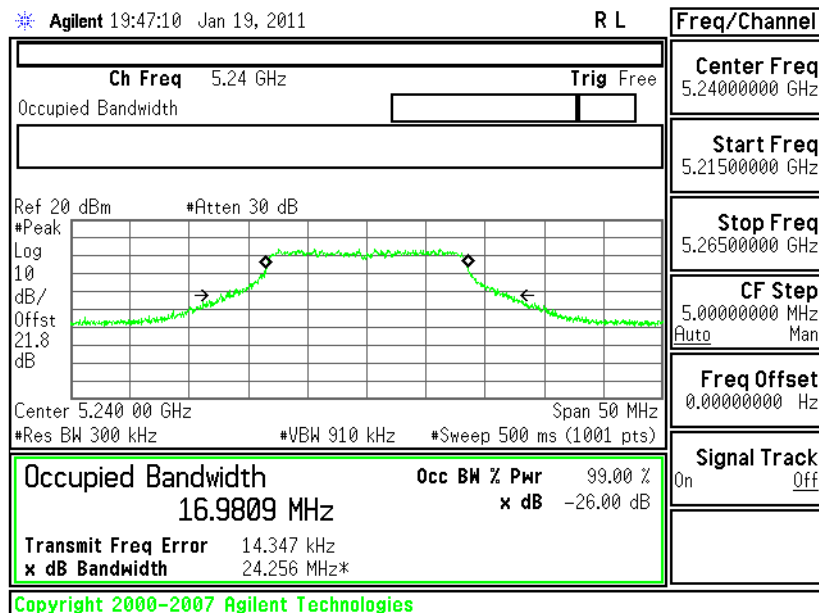
## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 48 - Chain

## A+B(A)



## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 48 - Chain

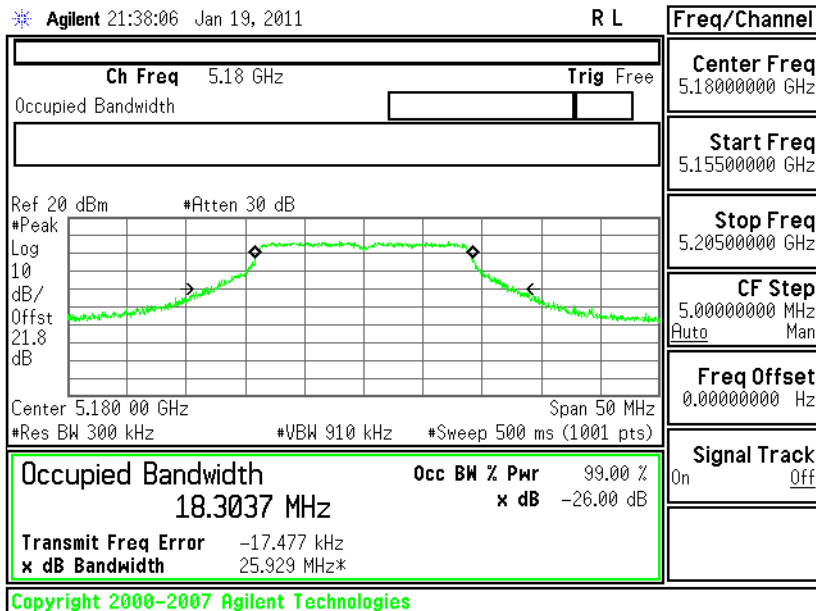
## A+B(B)





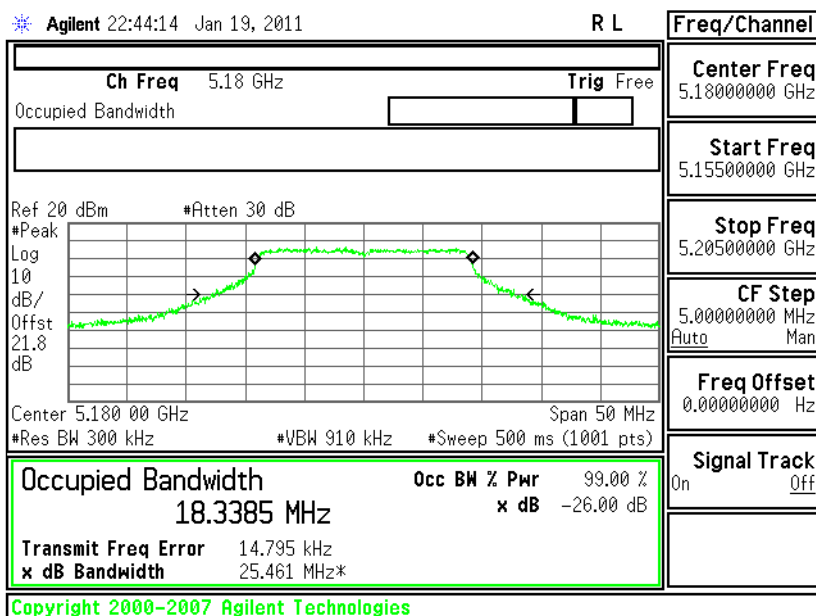
## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 36

## - Chain A



## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 36

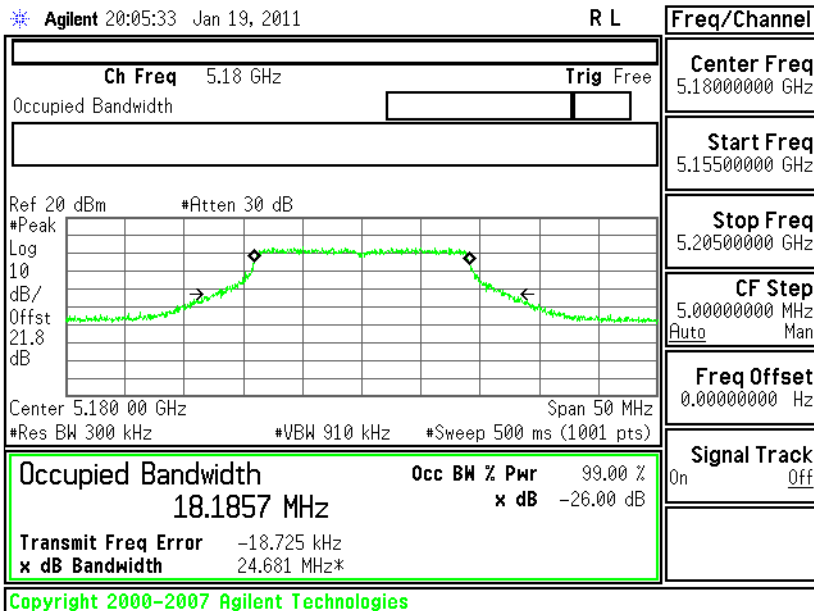
## - Chain B





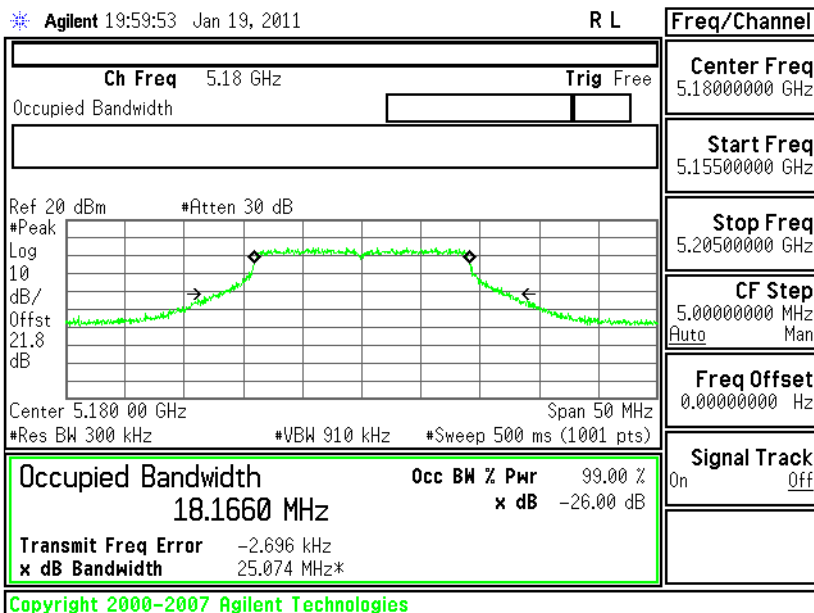
## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 36

## - Chain A+B(A)



## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 36

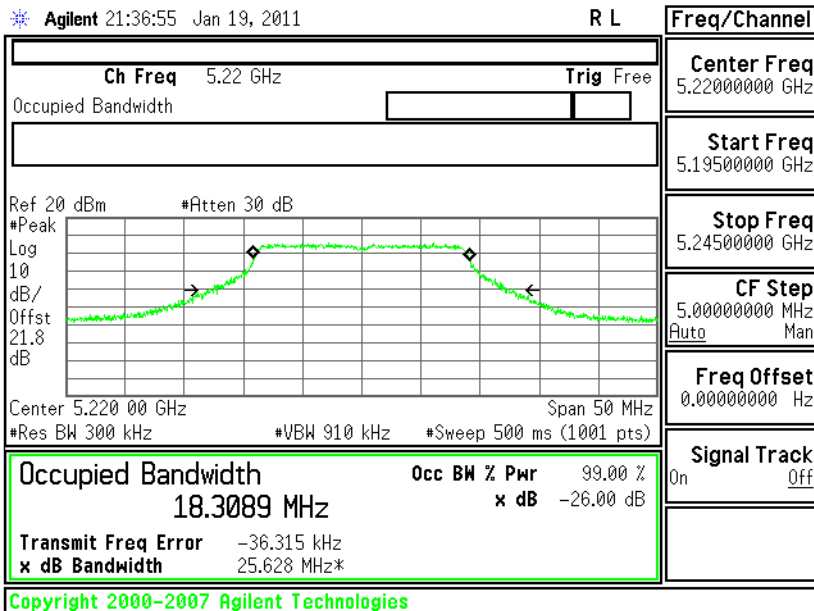
## - Chain A+B(B)





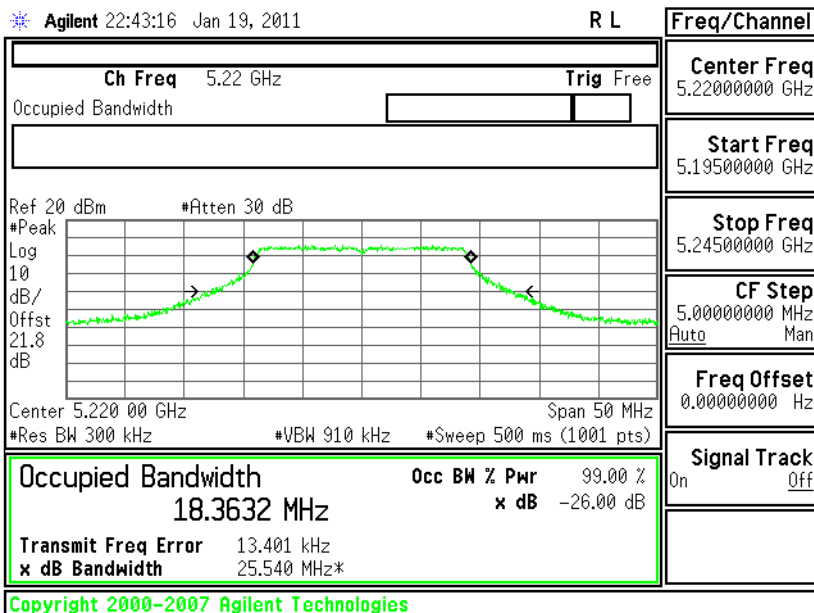
## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 44

## - Chain A



## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 44

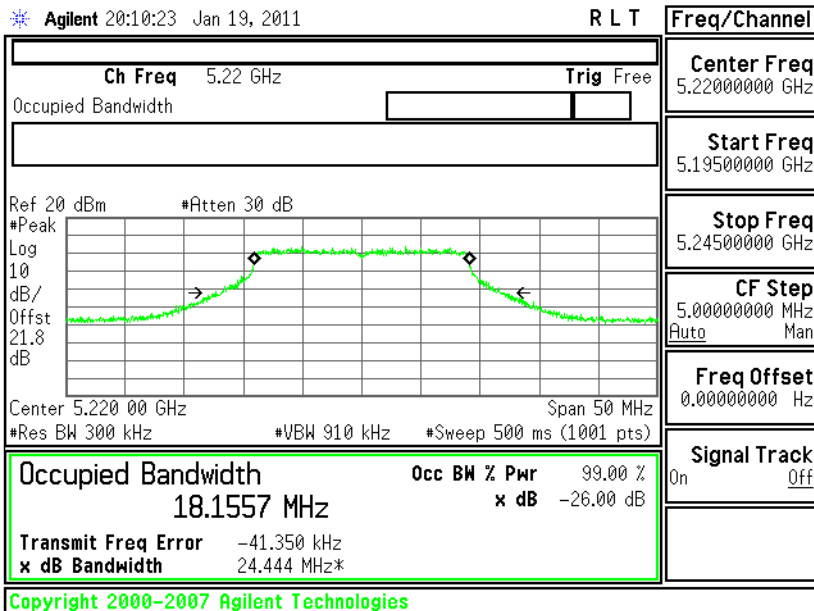
## - Chain B





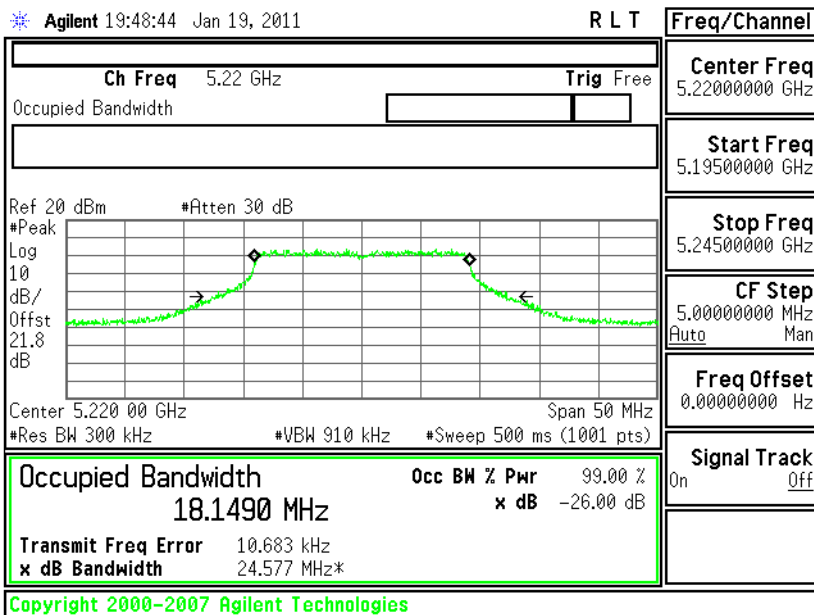
## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 44

## - Chain A+B(A)



## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 44

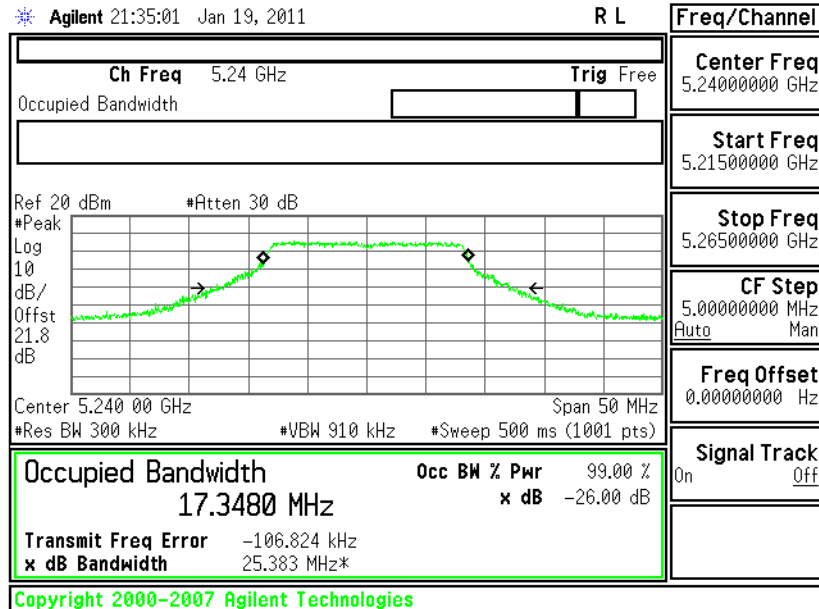
## - Chain A+B(B)





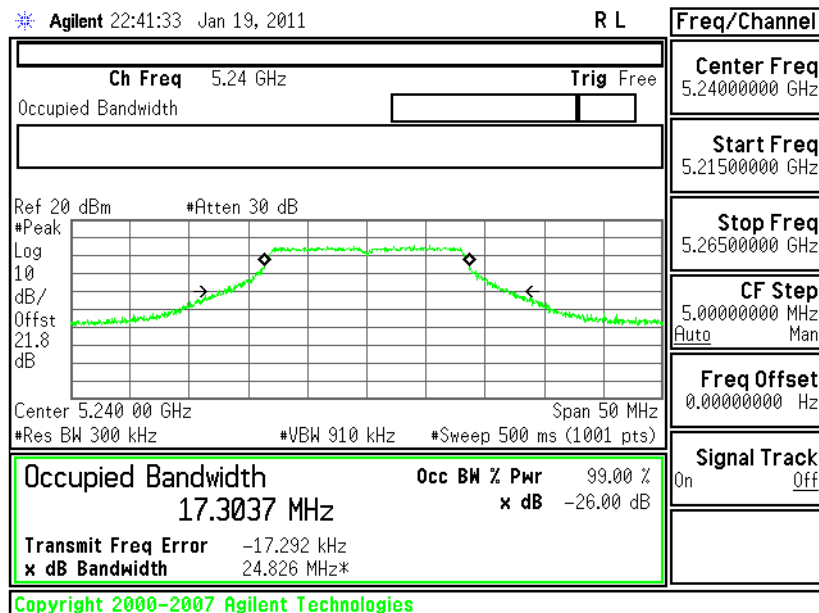
## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 48

## - Chain A



## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 48

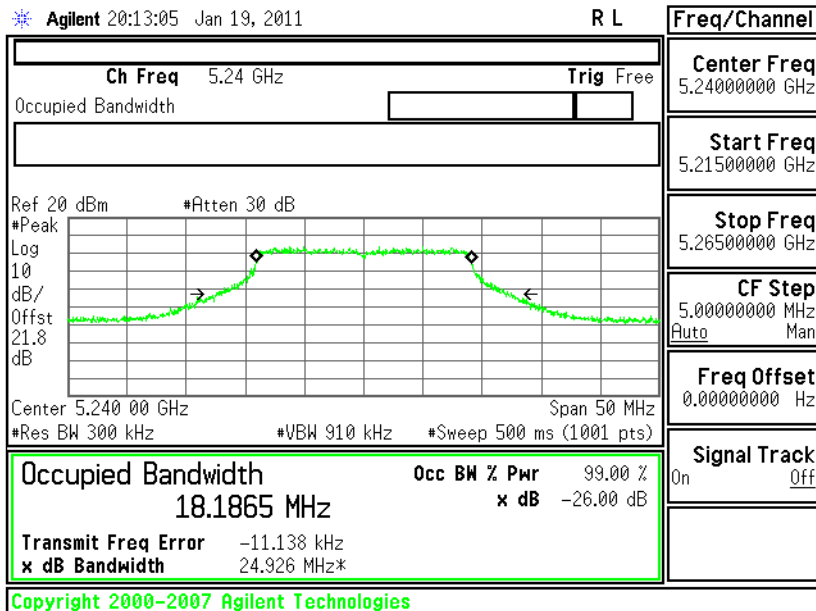
## - Chain B





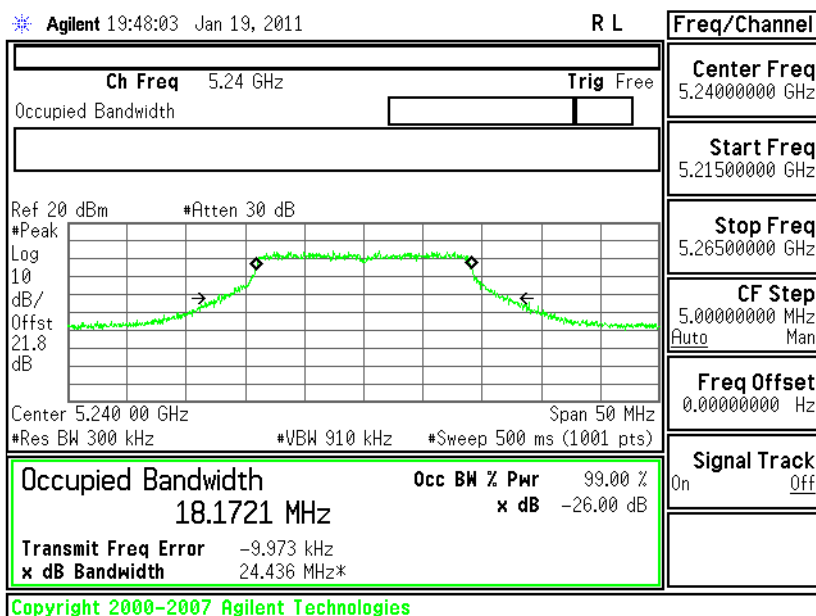
## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 48

## - Chain A+B(A)

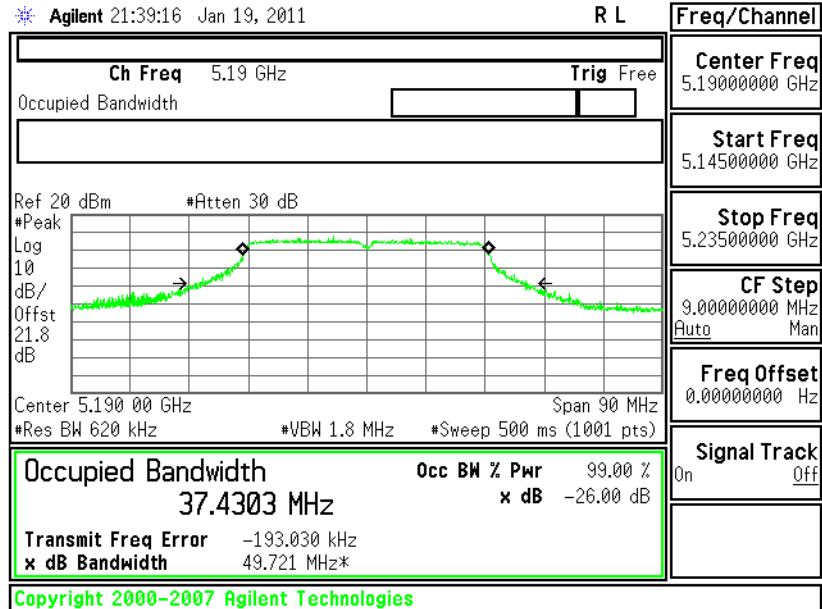
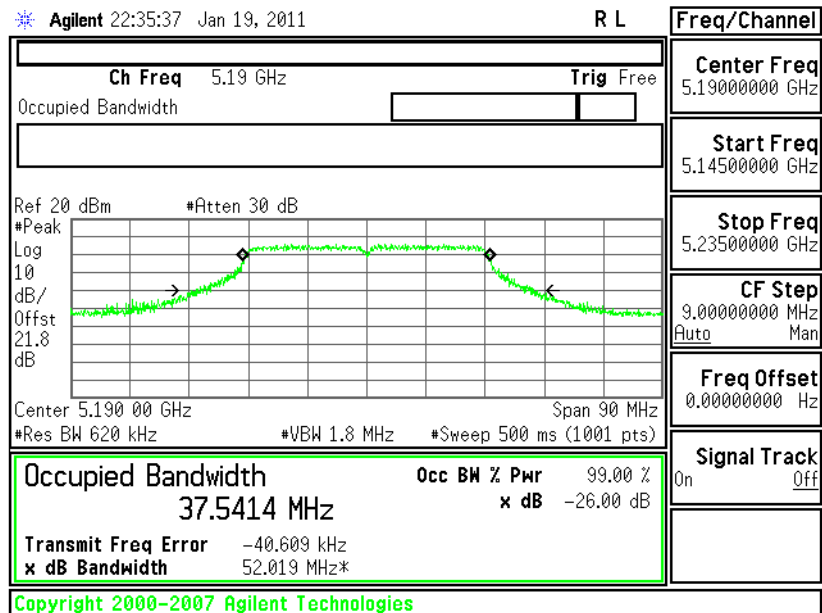


## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 48

## - Chain A+B(B)



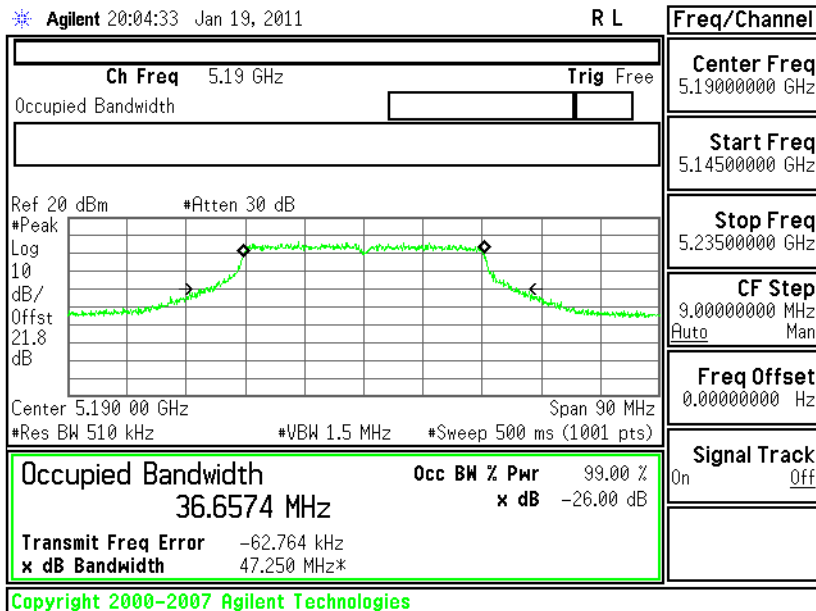


**26 dB & 99% Bandwidth Plot on 802.11n (BW 40MHz) Channel 38****- Chain A****26 dB & 99% Bandwidth Plot on 802.11n (BW 40MHz) Channel 38****- Chain B**



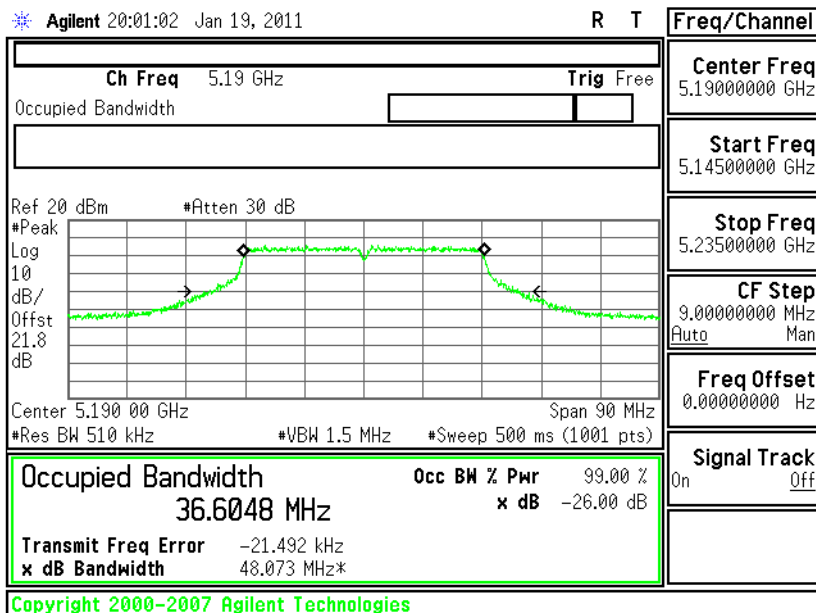
## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 40MHz) Channel 38

## - Chain A+B(A)



## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 40MHz) Channel 38

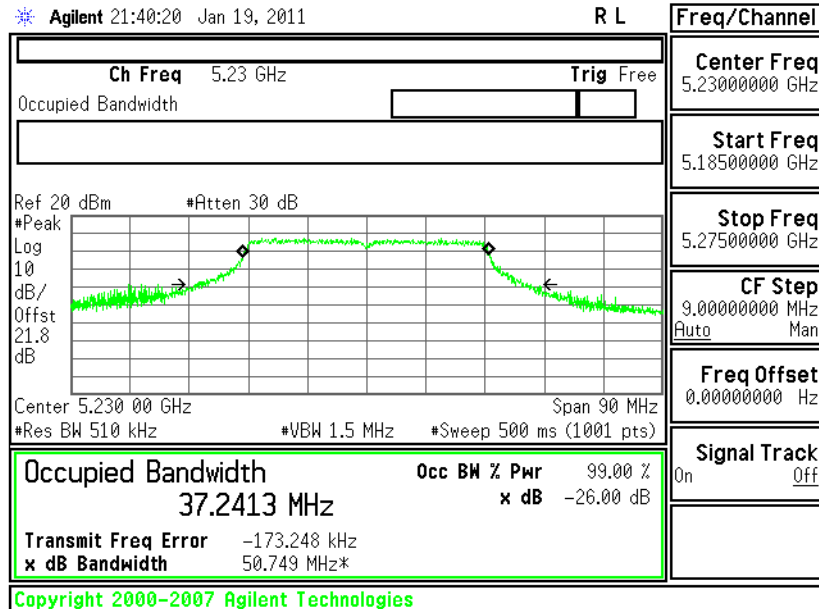
## - Chain A+B(B)





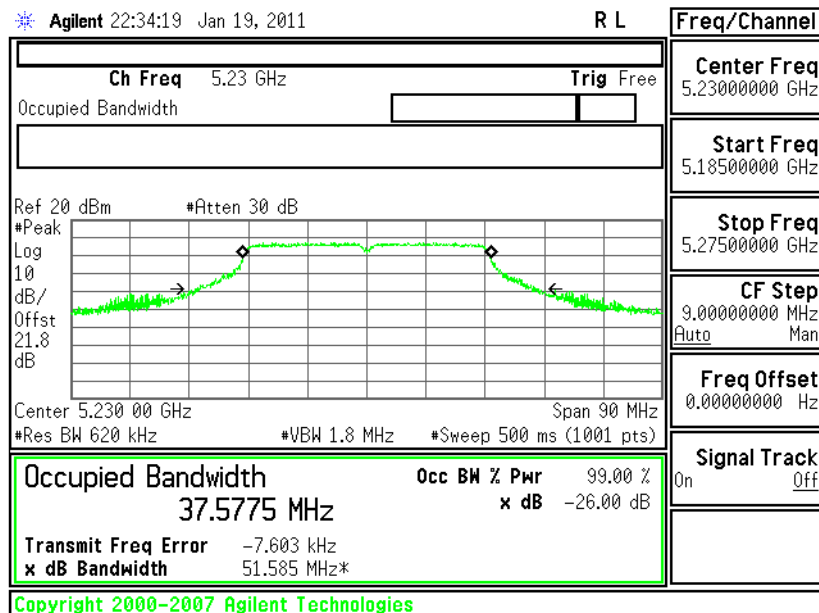
## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 40MHz) Channel 46

## - Chain A



## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 40MHz) Channel 46

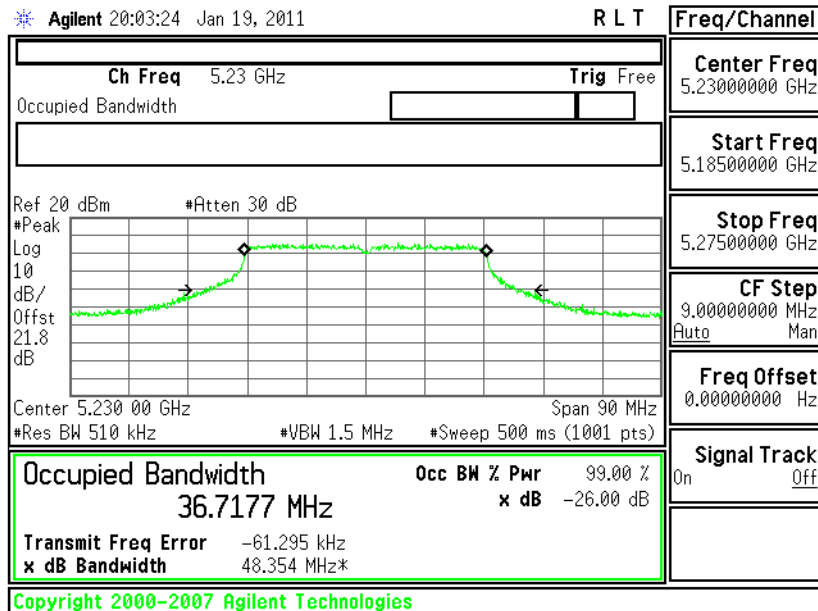
## - Chain B





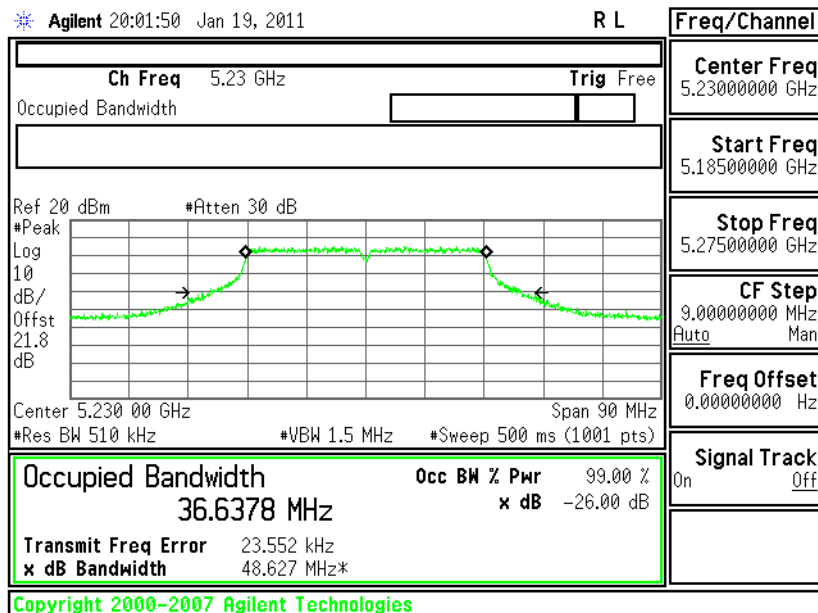
## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 40MHz) Channel 46

## - Chain A+B(A)



## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 40MHz) Channel 46

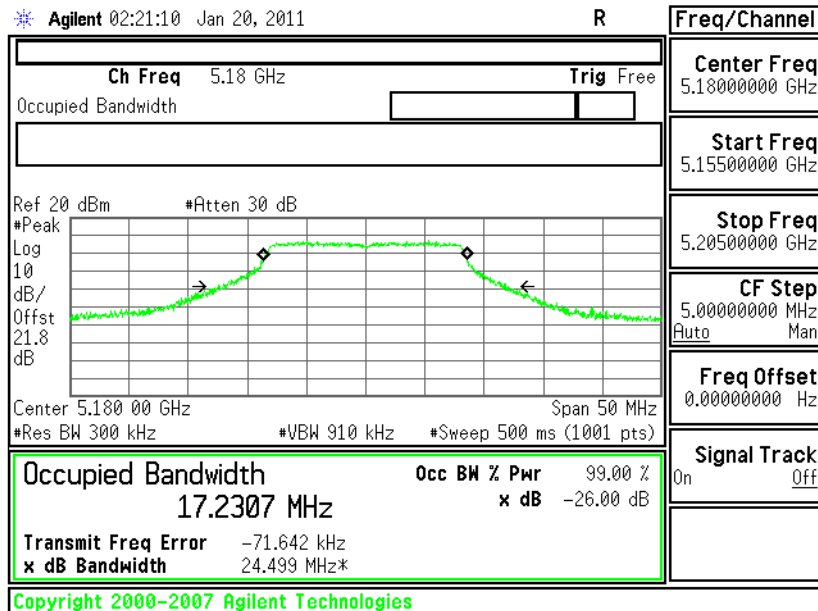
## - Chain A+B(B)



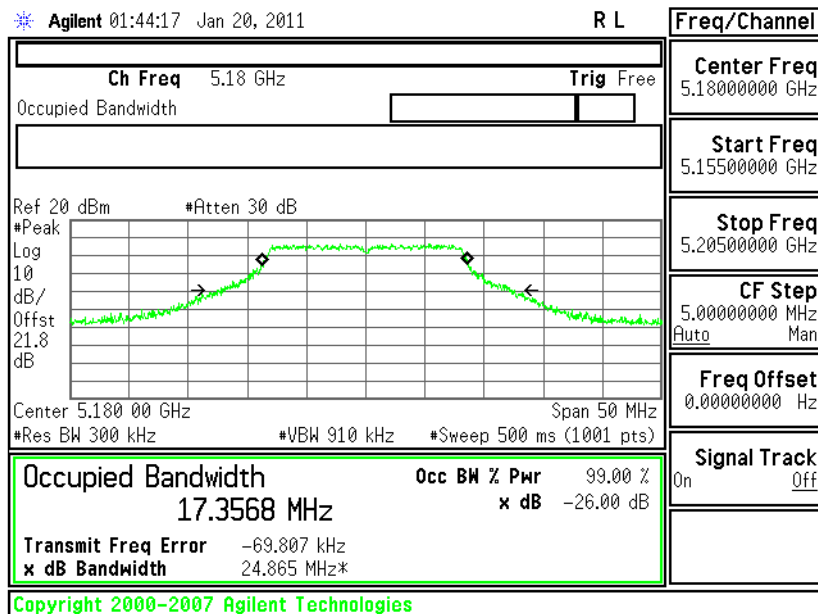


## &lt;Antenna 1 for 3.3V&gt;

## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 36 - Chain A



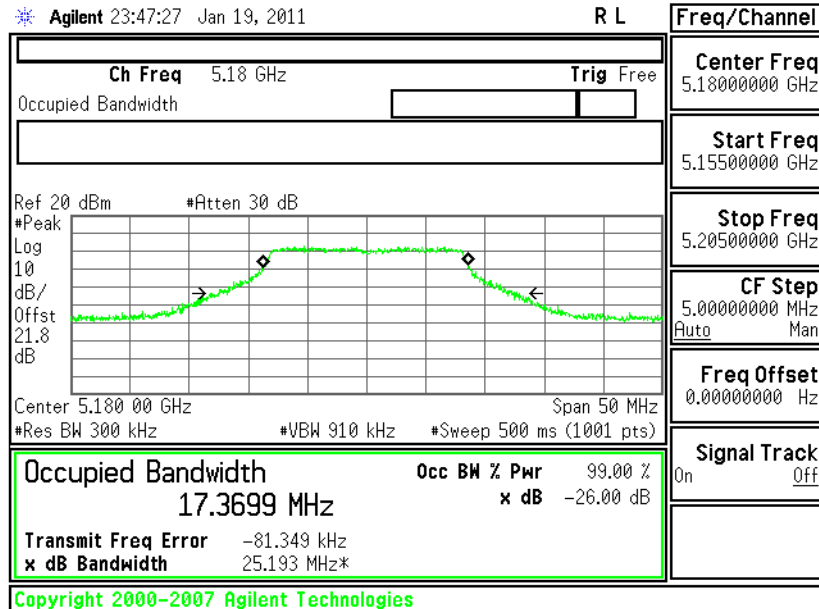
## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 36 - Chain B





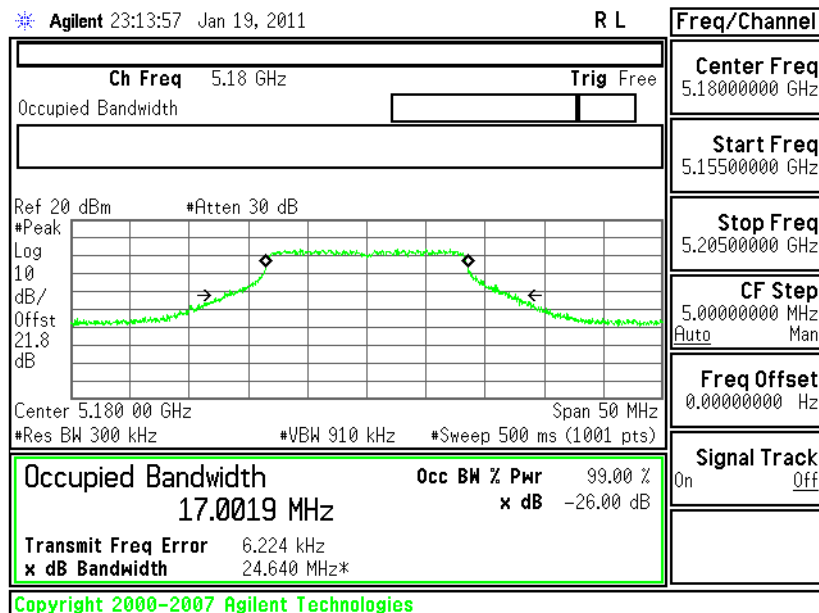
## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 36 - Chain

## A+B(A)



## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 36 - Chain

## A+B(B)

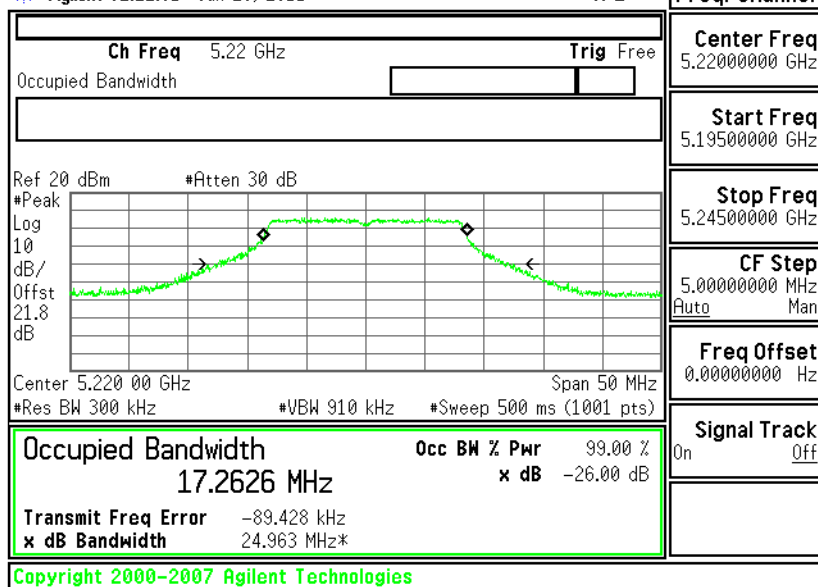




## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 44 - Chain A

Agilent 02:22:01 Jan 20, 2011

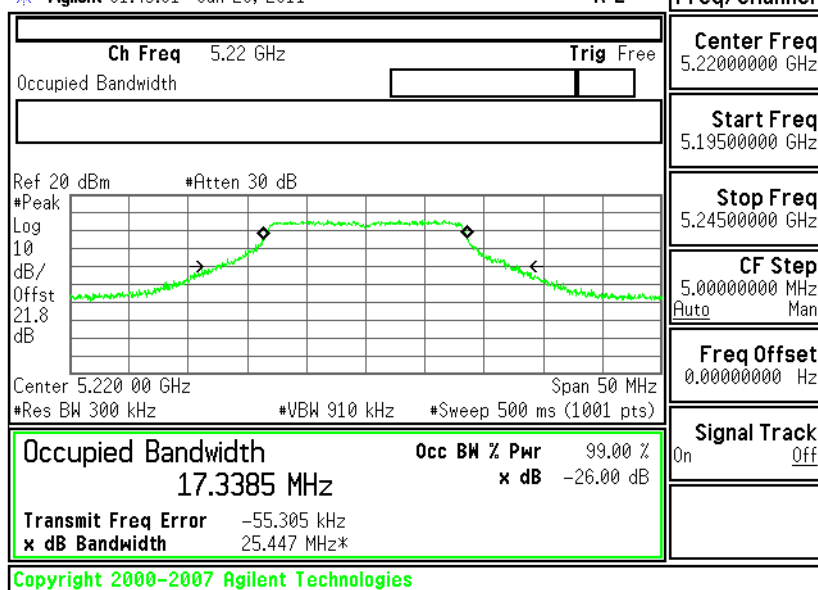
R L



## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 44 - Chain B

Agilent 01:43:01 Jan 20, 2011

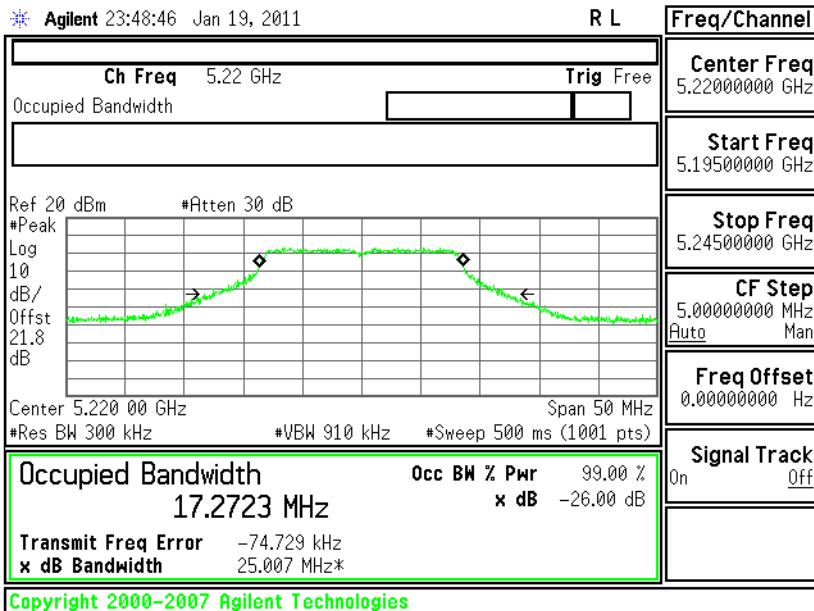
R L





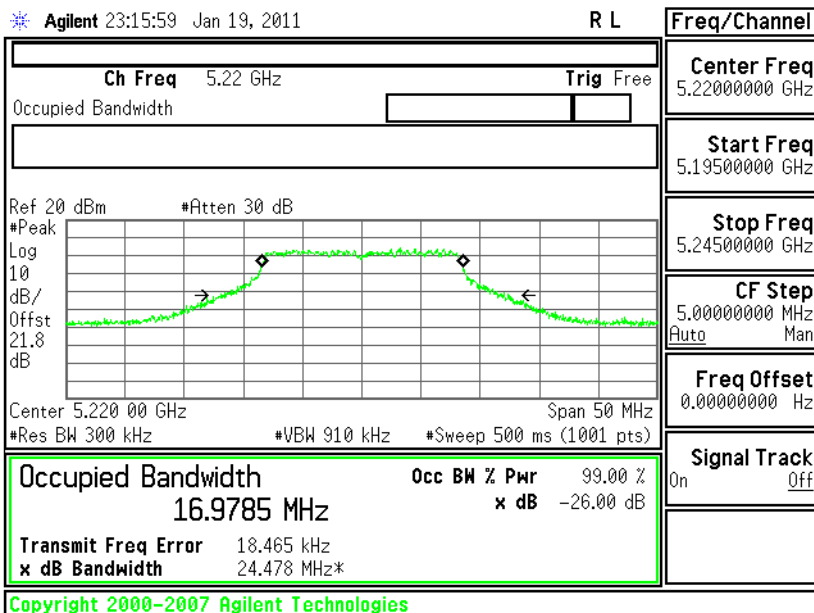
## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 44 - Chain

## A+B(A)



## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 44 - Chain

## A+B(B)



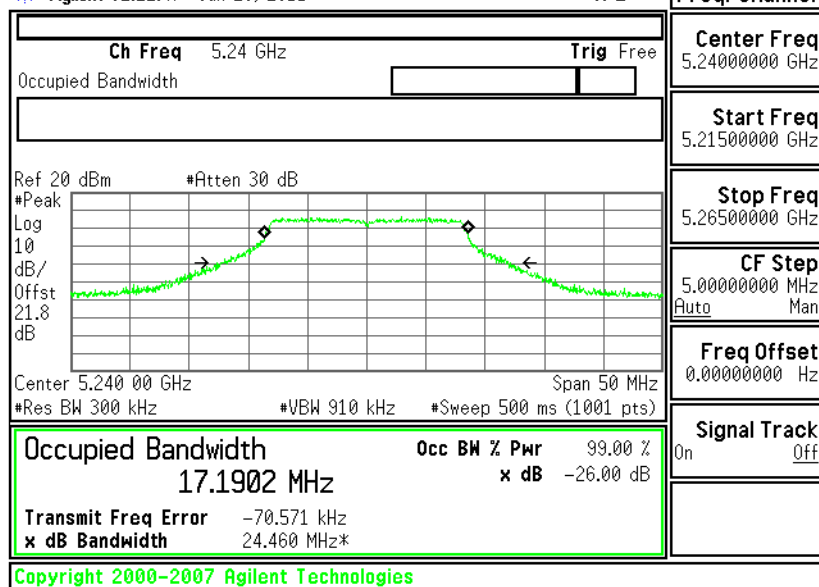




## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 48 - Chain A

Agilent 02:22:47 Jan 20, 2011

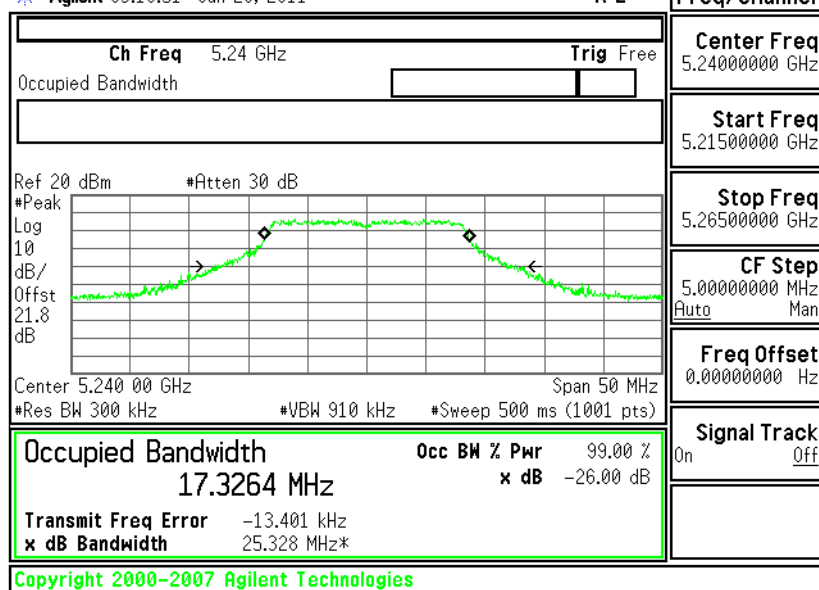
R L



## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 48 - Chain B

Agilent 03:16:51 Jan 20, 2011

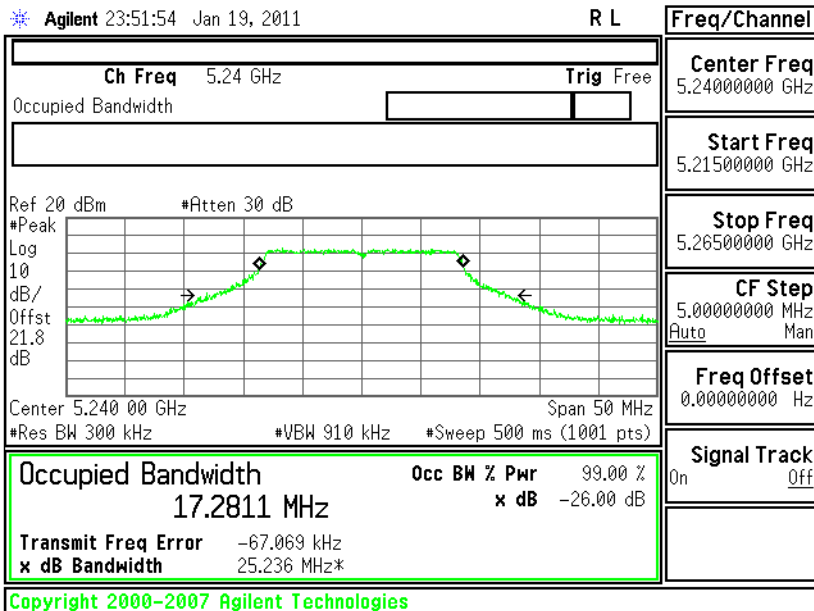
R L





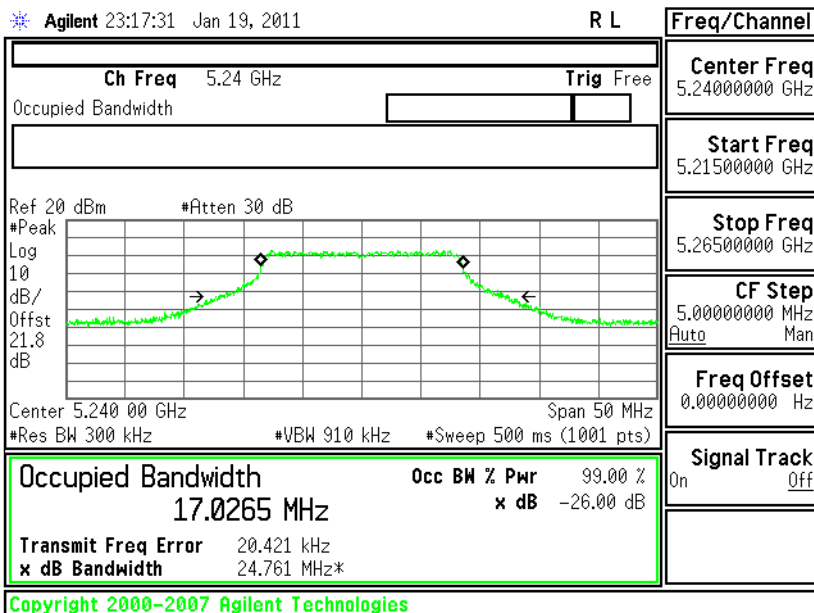
## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 48 - Chain

## A+B(A)



## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 48 - Chain

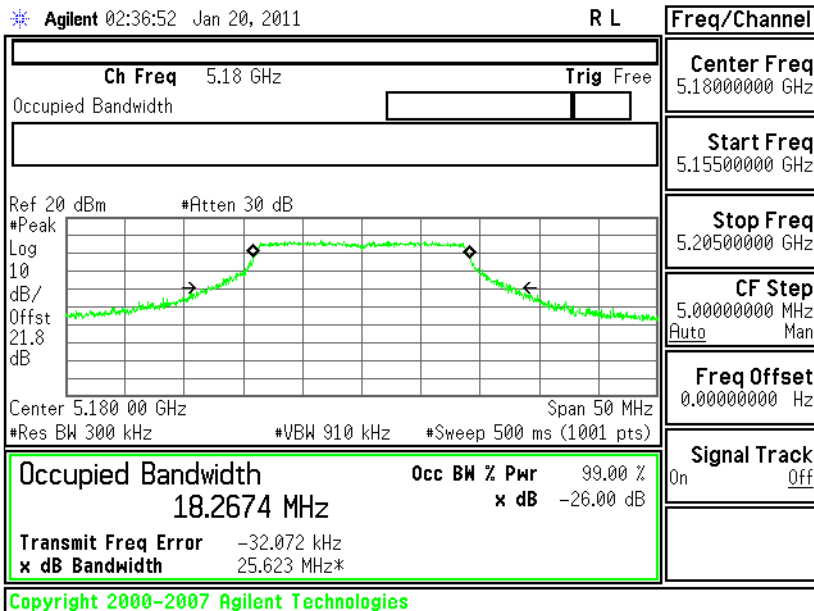
## A+B(B)





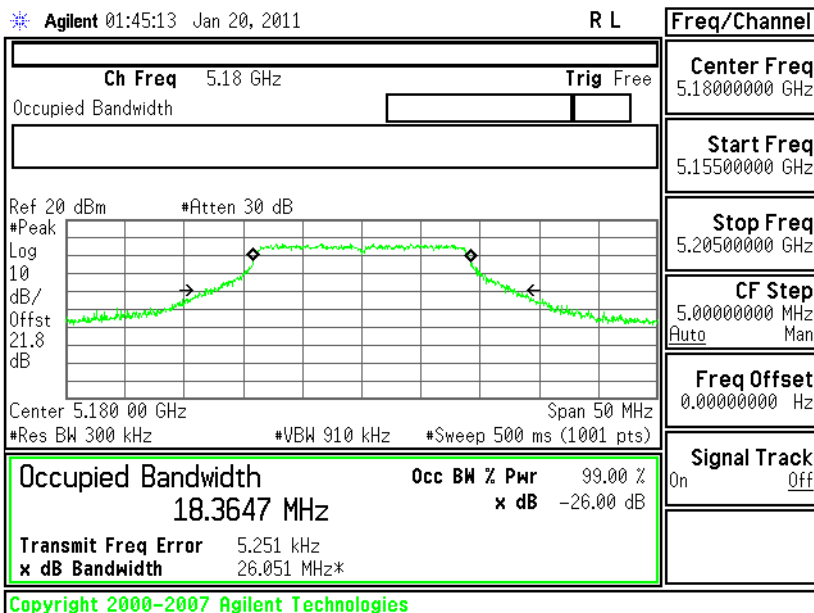
## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 36

## - Chain A



## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 36

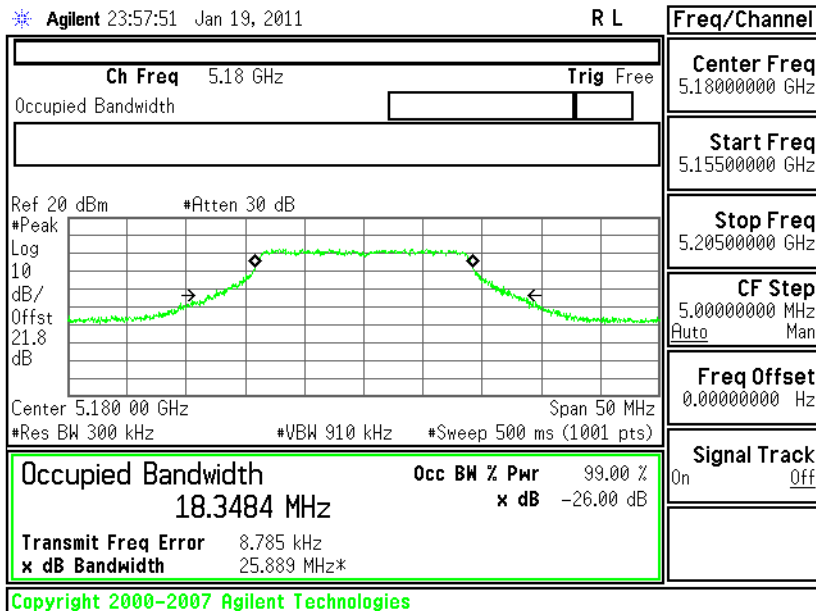
## - Chain B





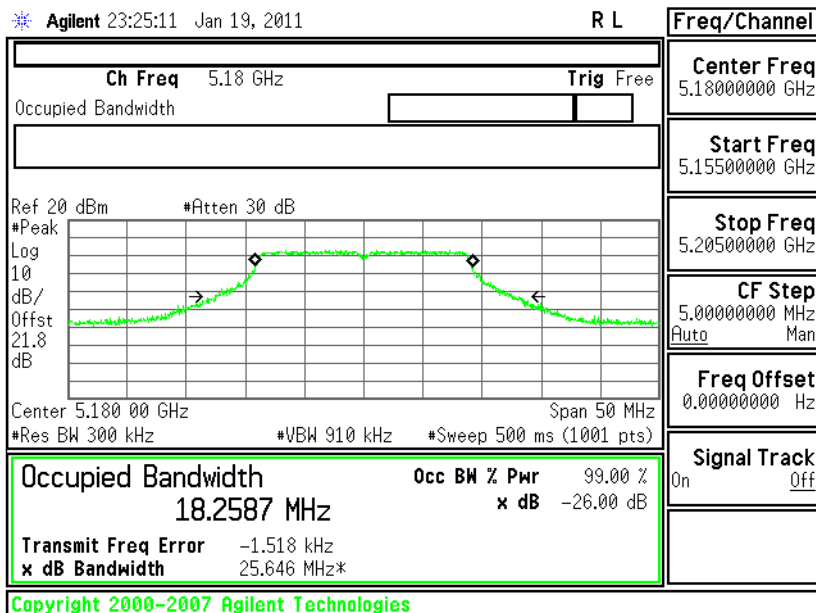
## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 36

## - Chain A+B(A)



## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 36

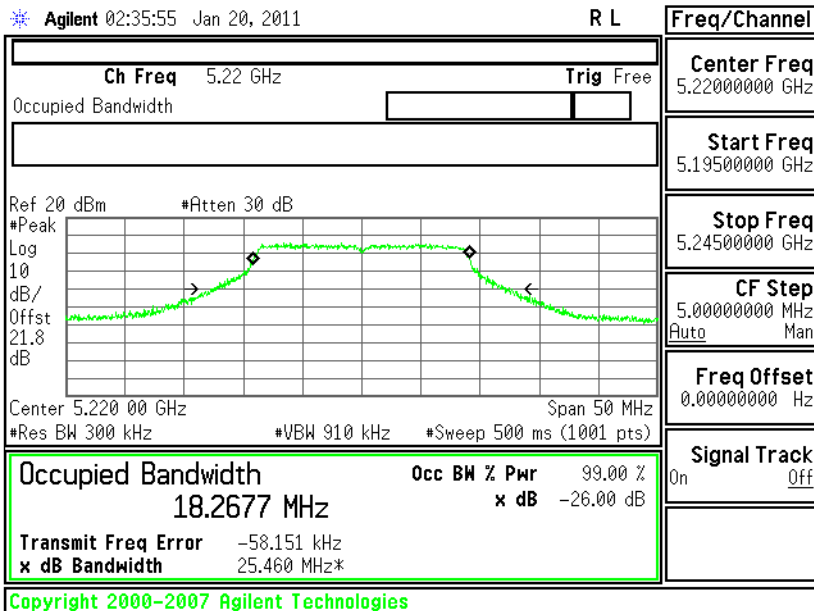
## - Chain A+B(B)





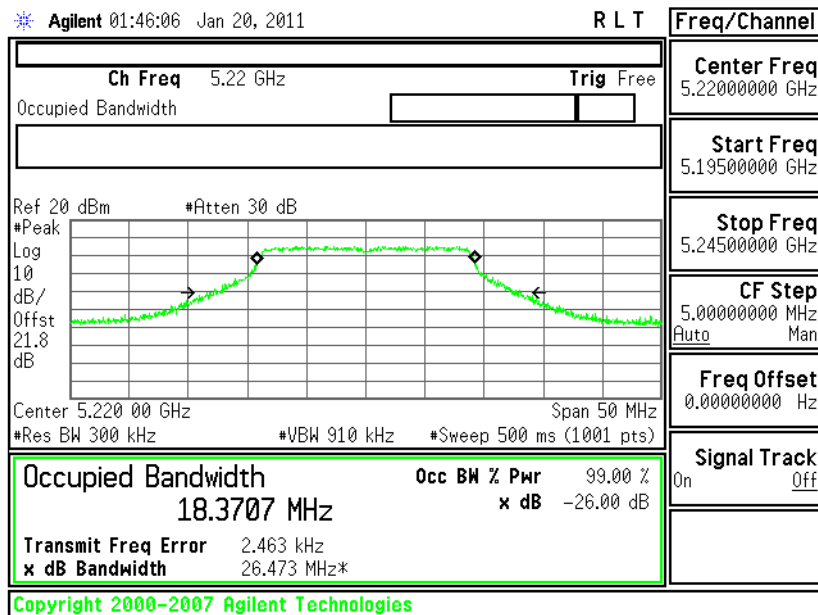
## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 44

## - Chain A



## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 44

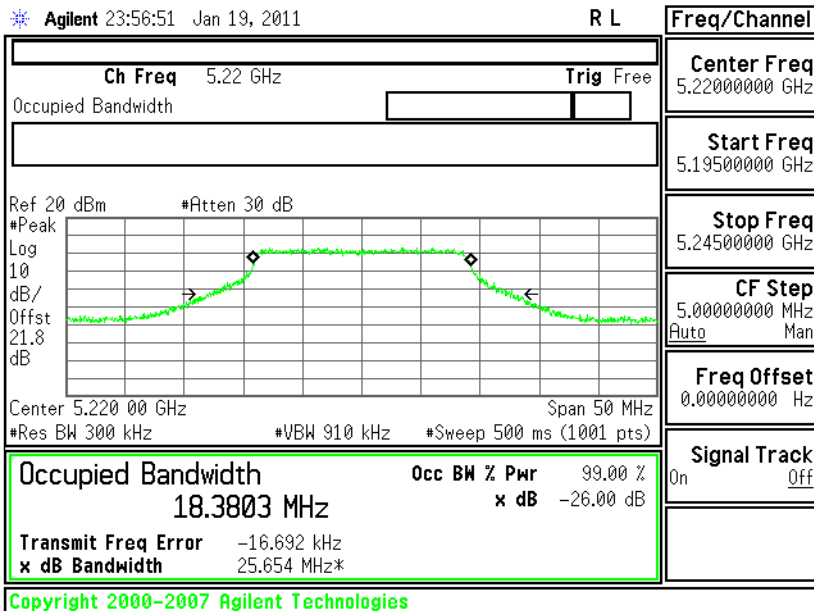
## - Chain B





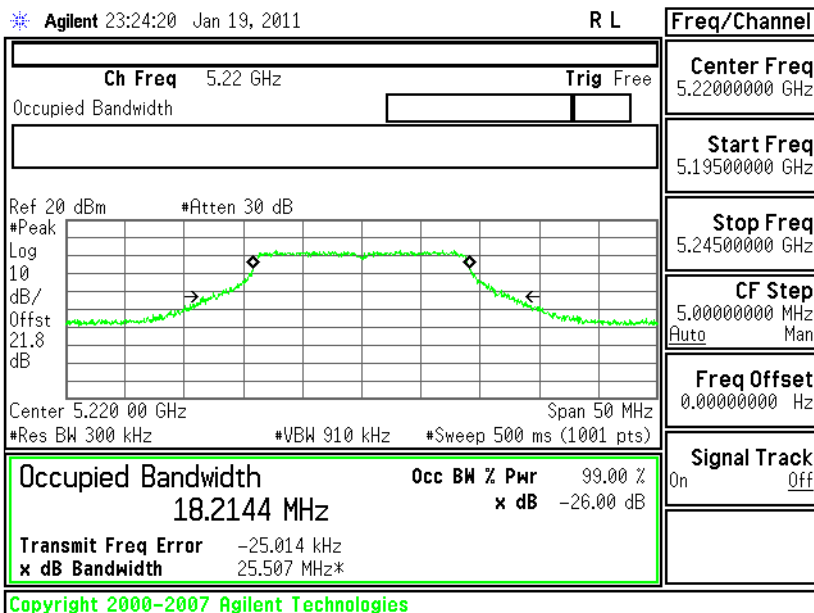
## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 44

## - Chain A+B(A)



## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 44

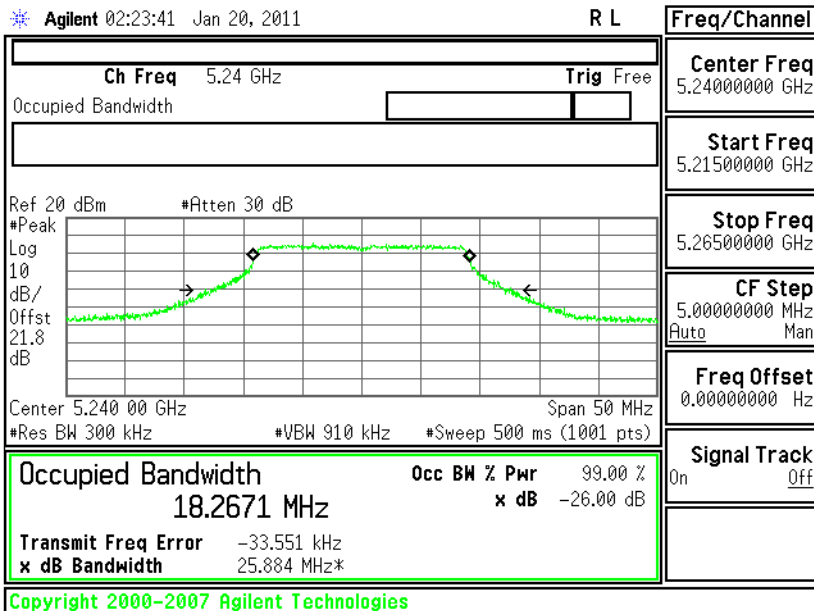
## - Chain A+B(B)





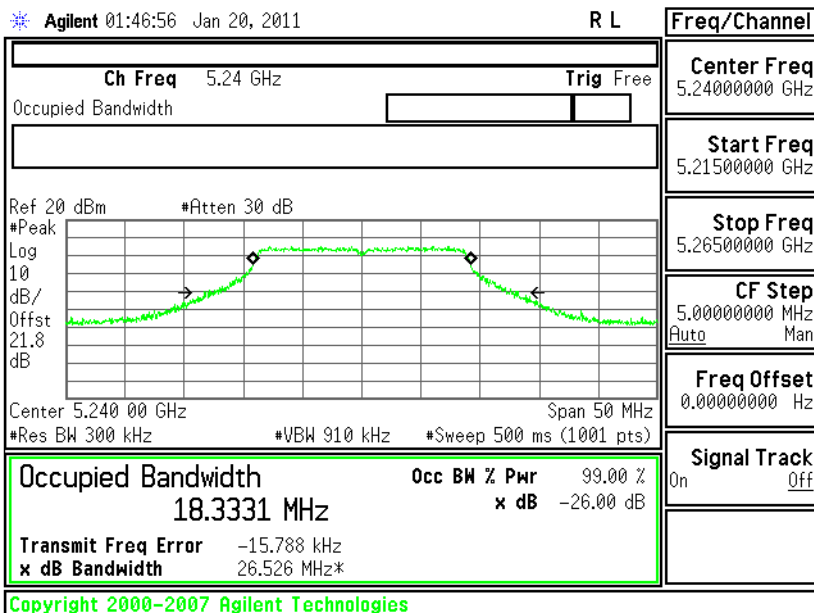
## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 48

## - Chain A



## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 48

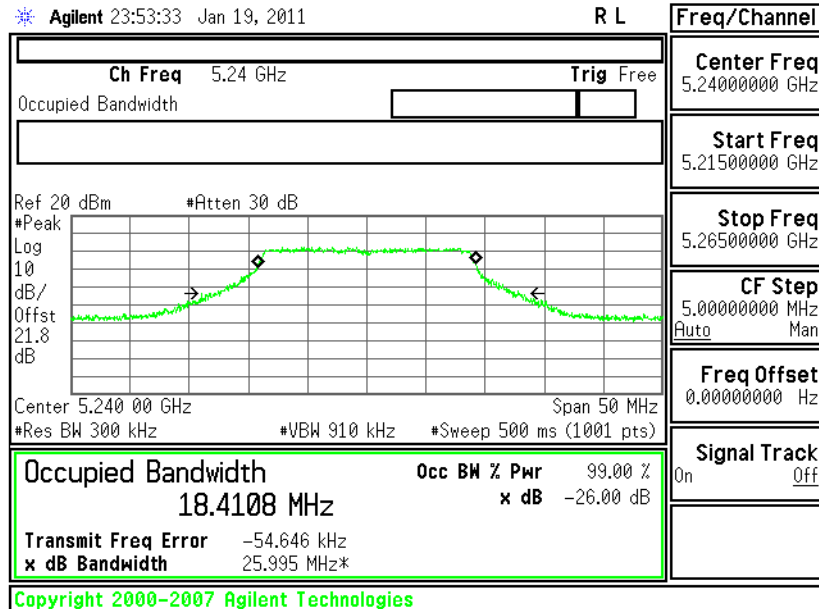
## - Chain B





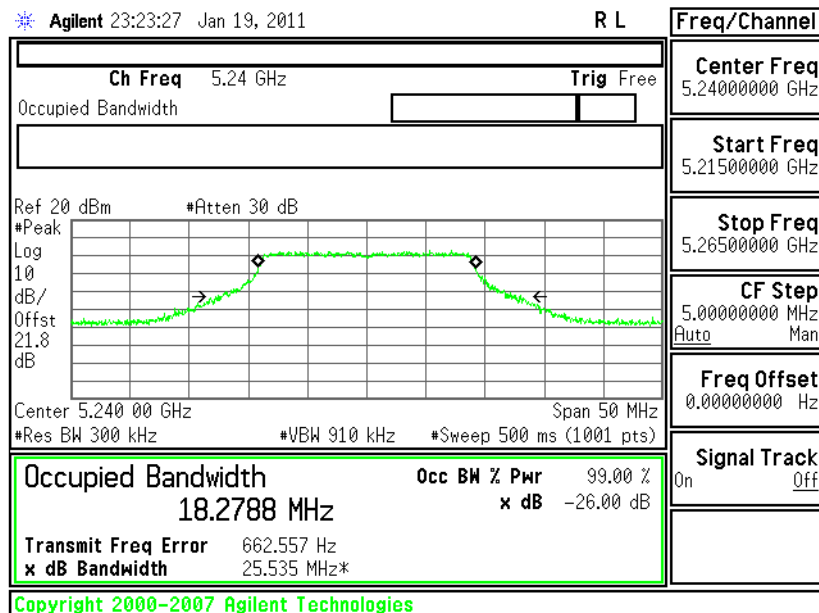
## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 48

## - Chain A+B(A)

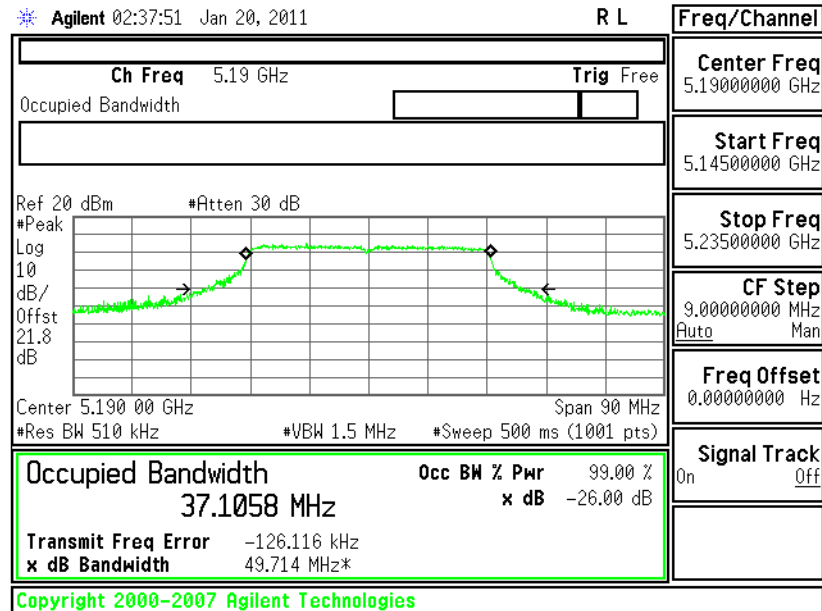
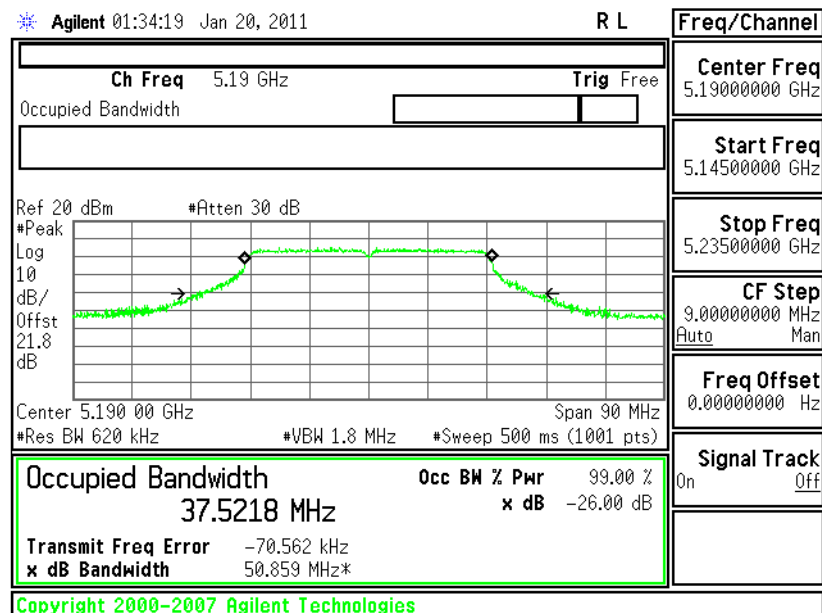


## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 48

## - Chain A+B(B)



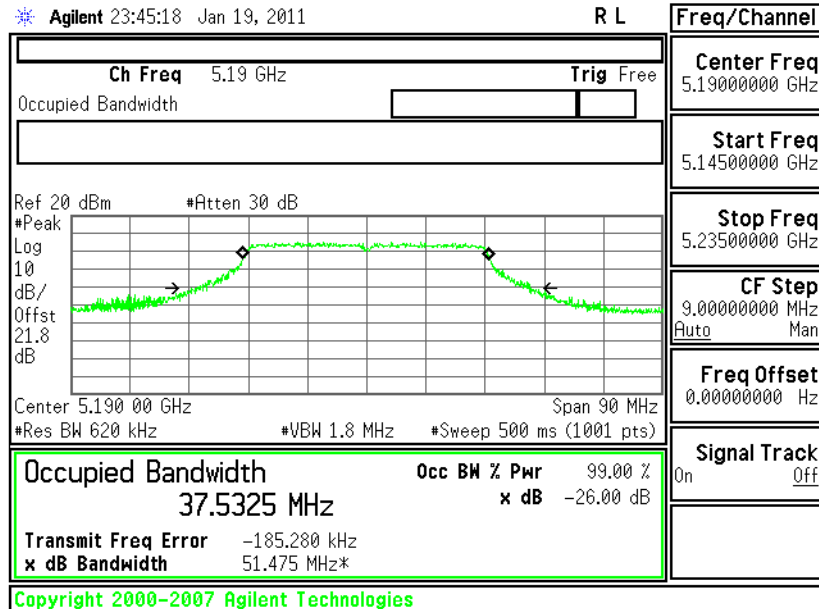


**26 dB & 99% Bandwidth Plot on 802.11n (BW 40MHz) Channel 38****- Chain A****26 dB & 99% Bandwidth Plot on 802.11n (BW 40MHz) Channel 38****- Chain B**



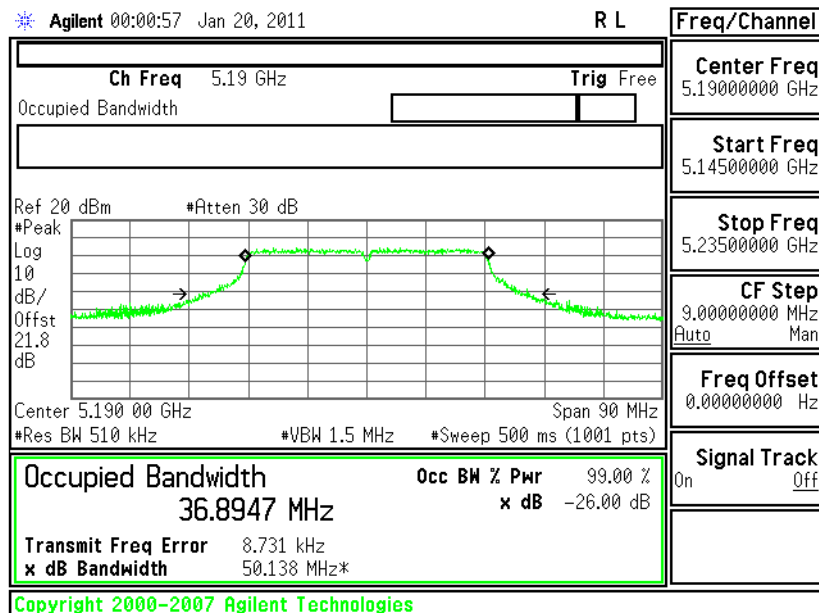
## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 40MHz) Channel 38

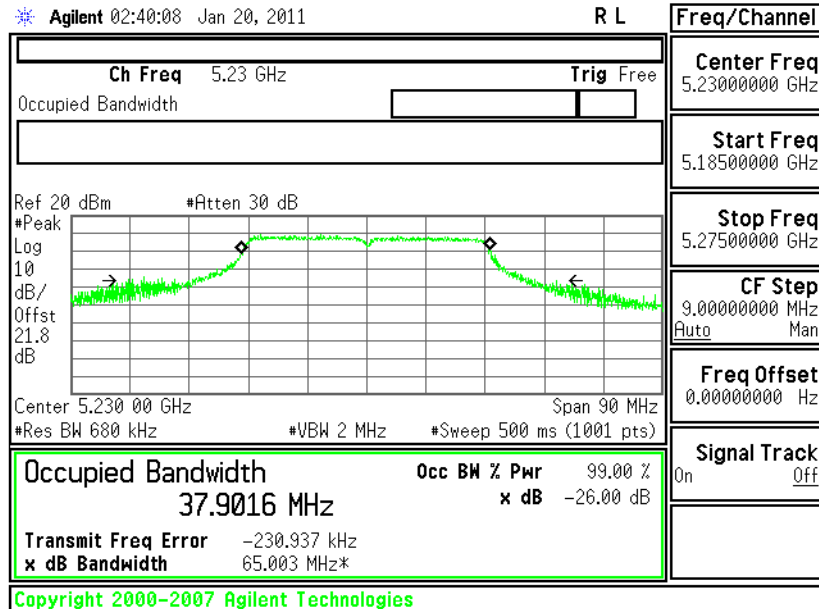
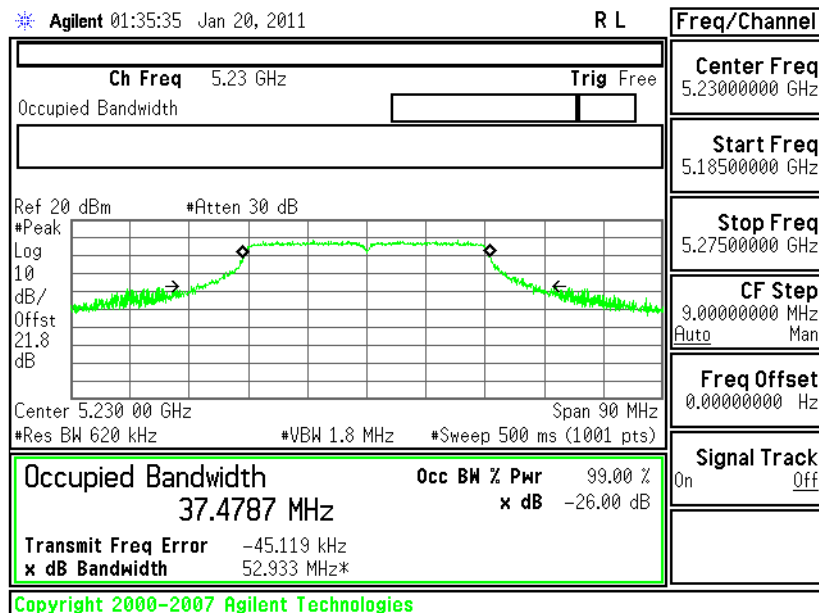
## - Chain A+B(A)

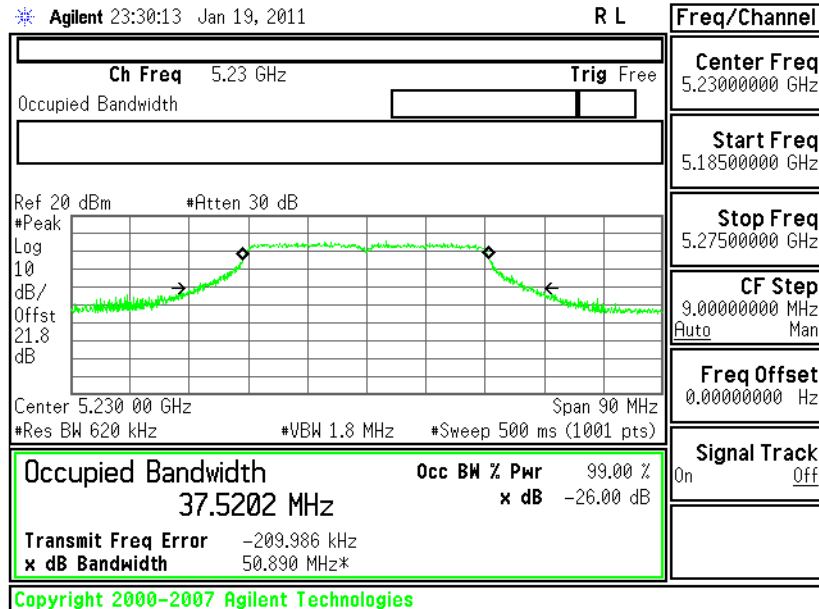
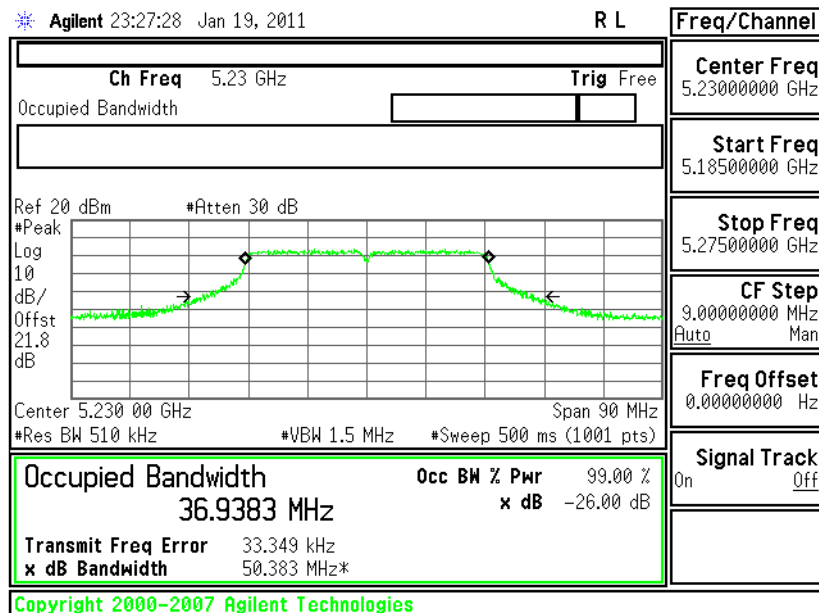


## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 40MHz) Channel 38

## - Chain A+B(B)



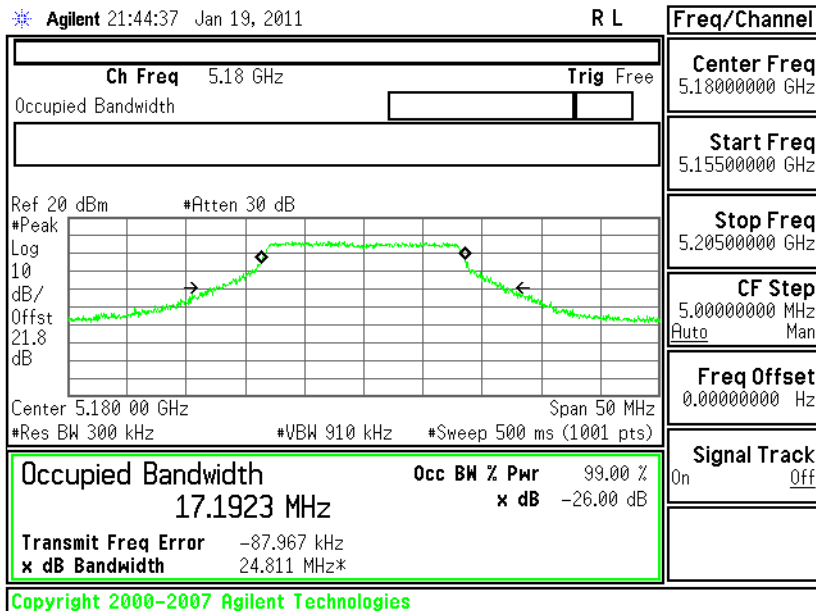
**26 dB & 99% Bandwidth Plot on 802.11n (BW 40MHz) Channel 46****- Chain A****26 dB & 99% Bandwidth Plot on 802.11n (BW 40MHz) Channel 46****- Chain B**

**26 dB & 99% Bandwidth Plot on 802.11n (BW 40MHz) Channel 46****- Chain A+B(A)****26 dB & 99% Bandwidth Plot on 802.11n (BW 40MHz) Channel 46****- Chain A+B(B)**

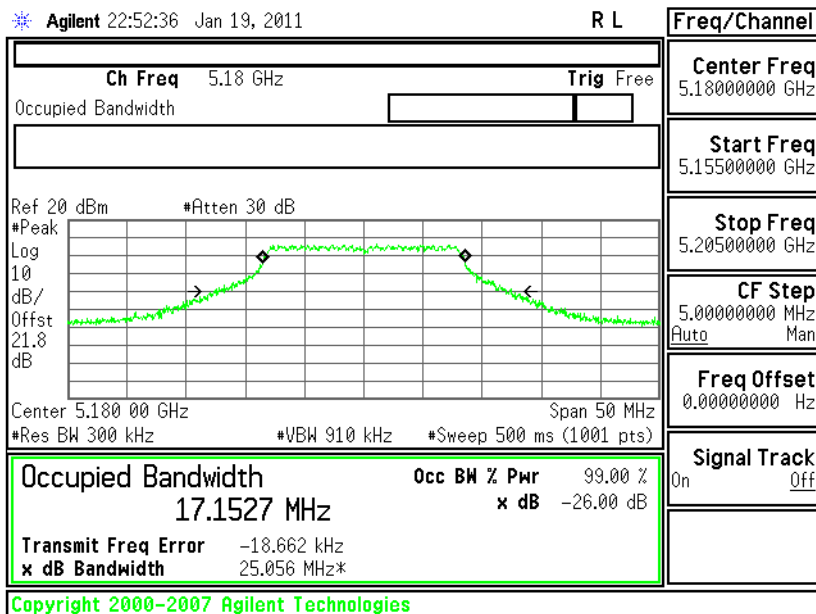


## &lt;Antenna 2 for 4.5V&gt;

## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 36 - Chain A



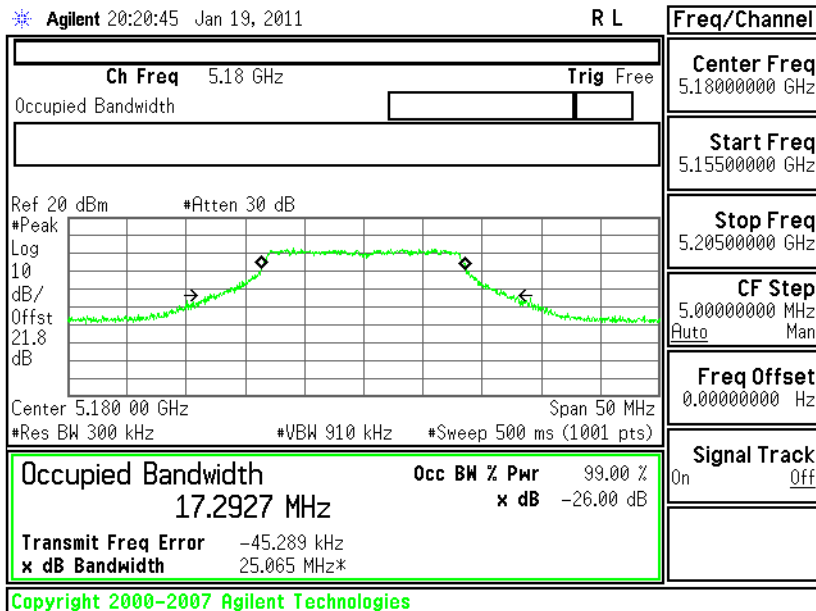
## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 36 - Chain B





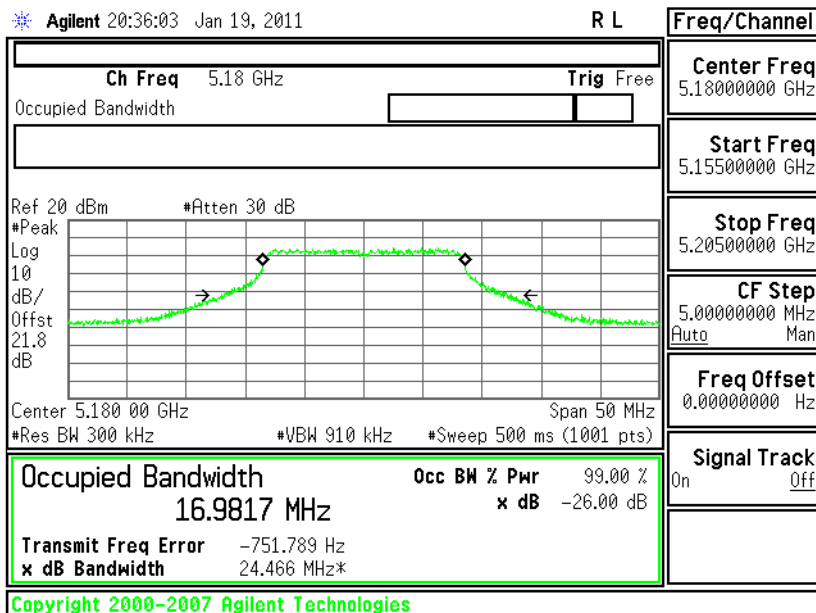
## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 36 - Chain

## A+B(A)



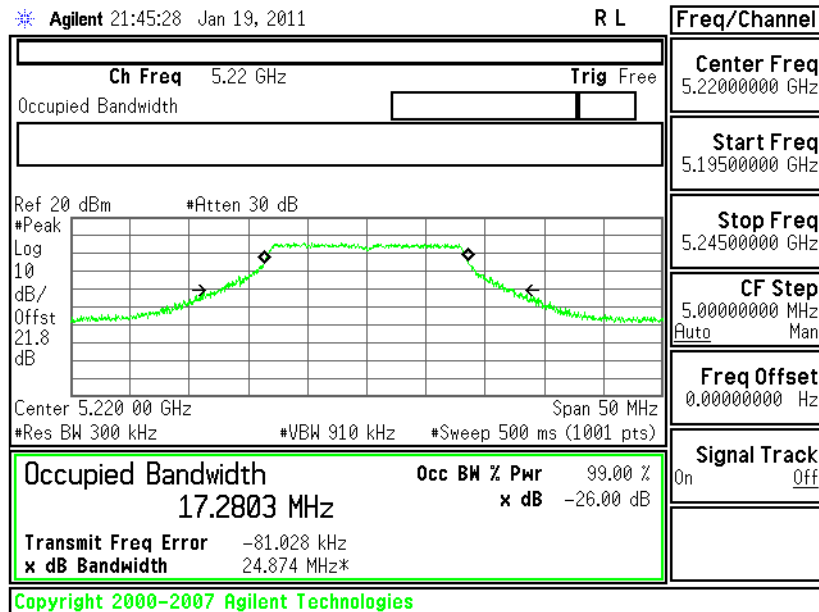
## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 36 - Chain

## A+B(B)

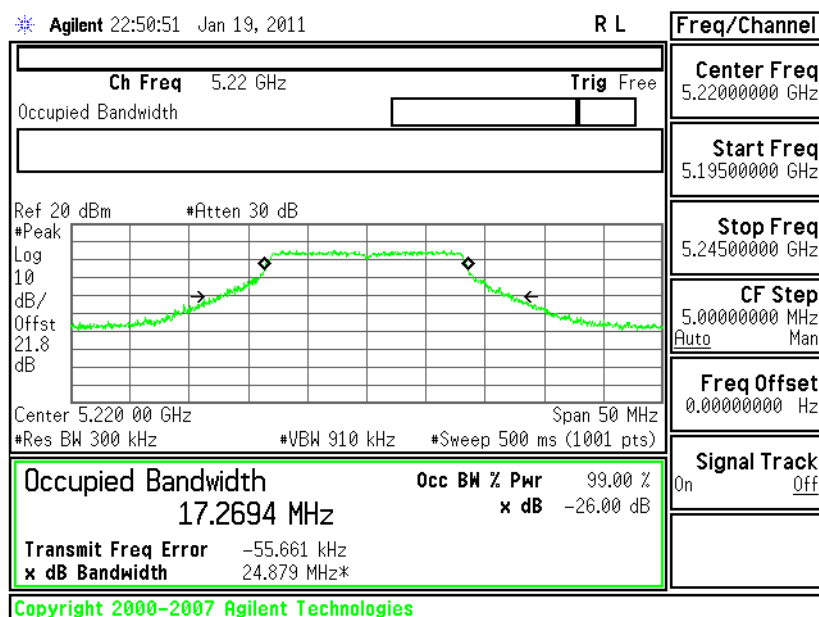




## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 44 - Chain A



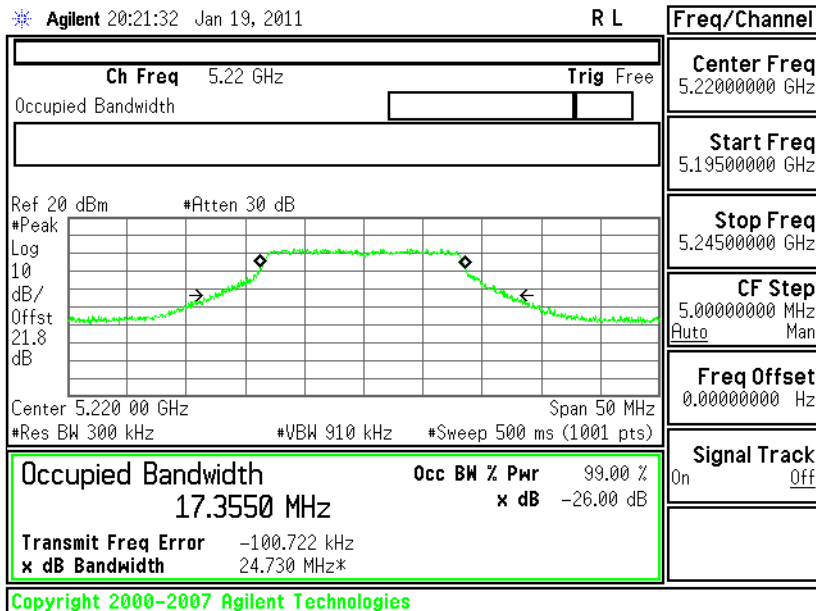
## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 44 - Chain B





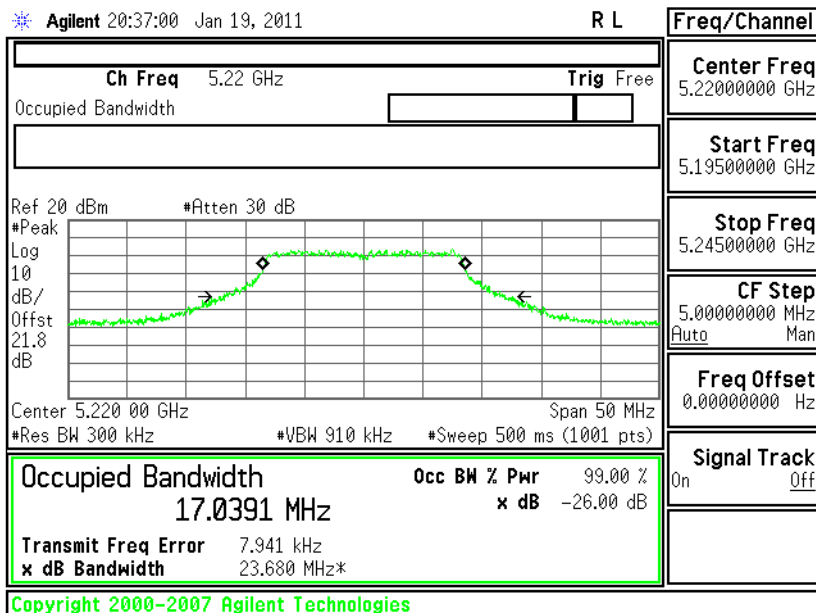
## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 44 - Chain

## A+B(A)



## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 44 - Chain

## A+B(B)



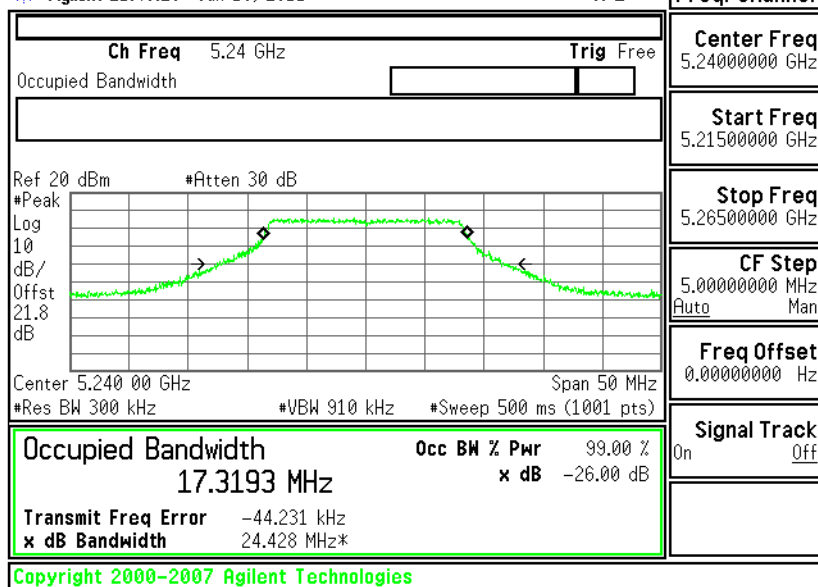




## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 48 - Chain A

Agilent 21:46:20 Jan 19, 2011

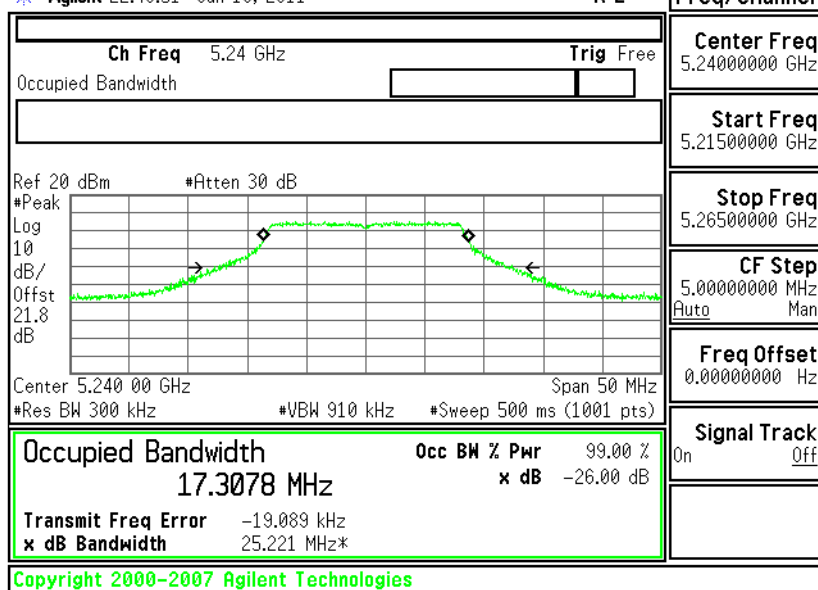
R L



## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 48 - Chain B

Agilent 22:48:51 Jan 19, 2011

R L



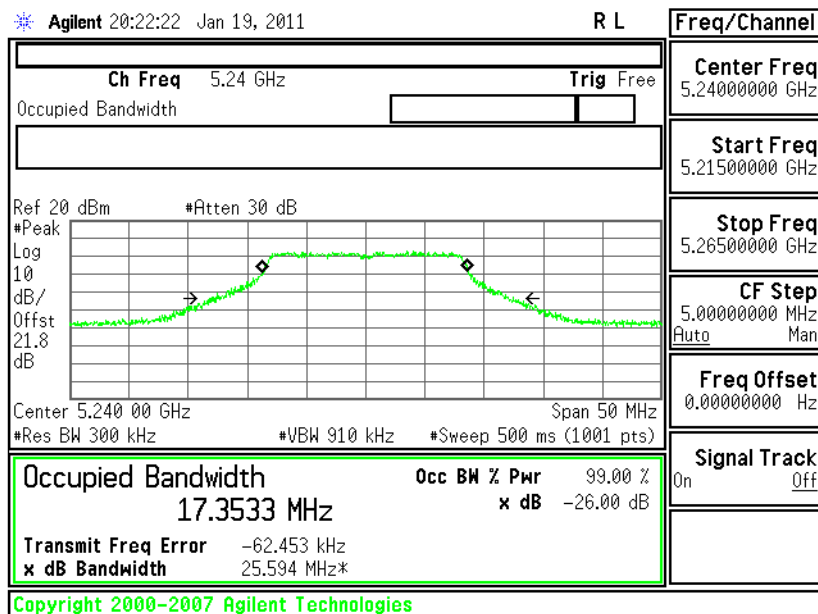


## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 48 - Chain

## A+B(A)

Agilent 20:22:22 Jan 19, 2011

R L

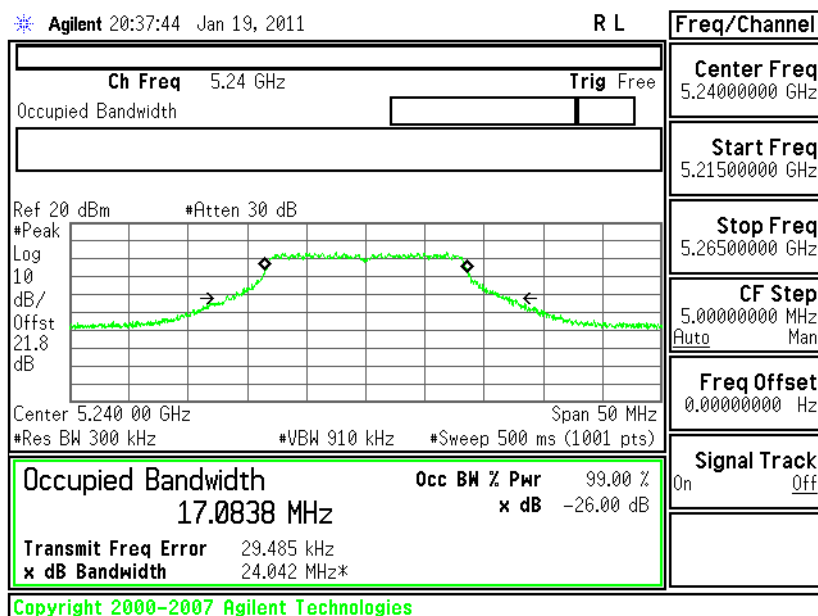


## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 48 - Chain

## A+B(B)

Agilent 20:37:44 Jan 19, 2011

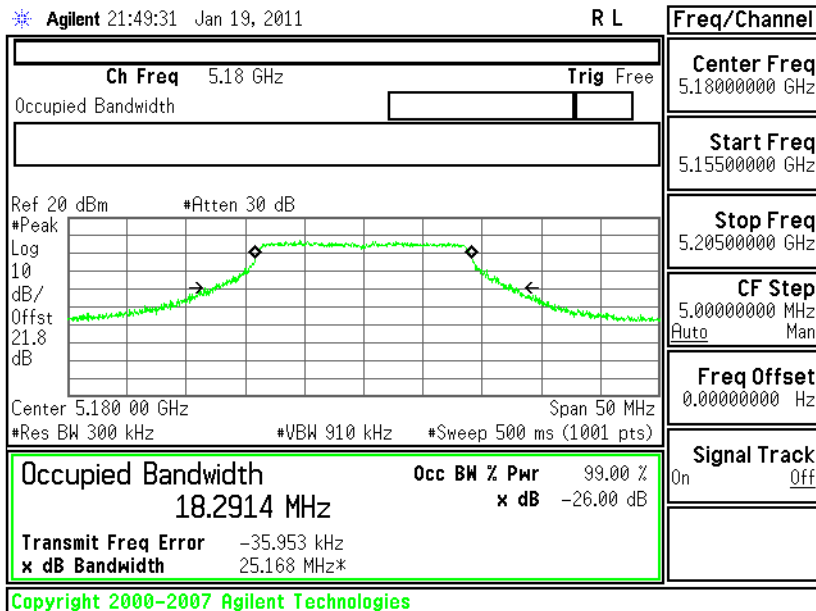
R L





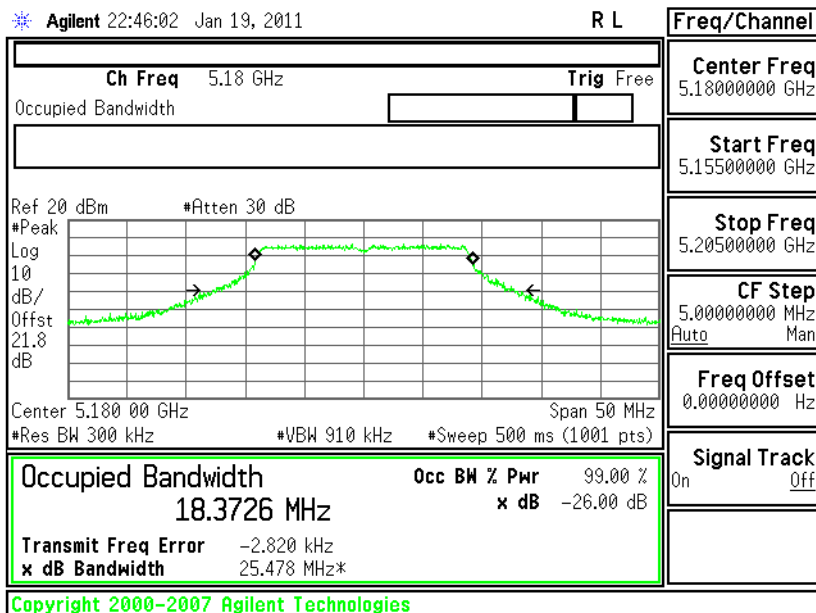
## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 36

## - Chain A



## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 36

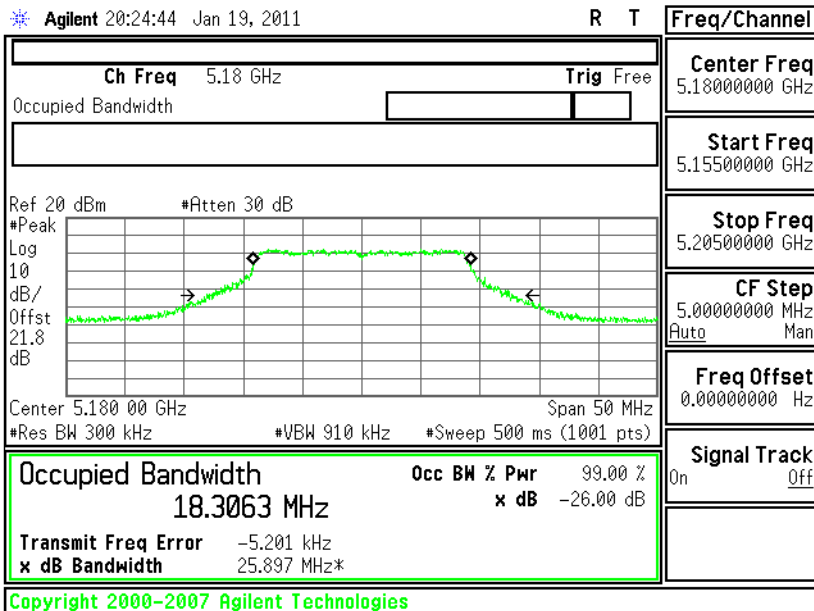
## - Chain B





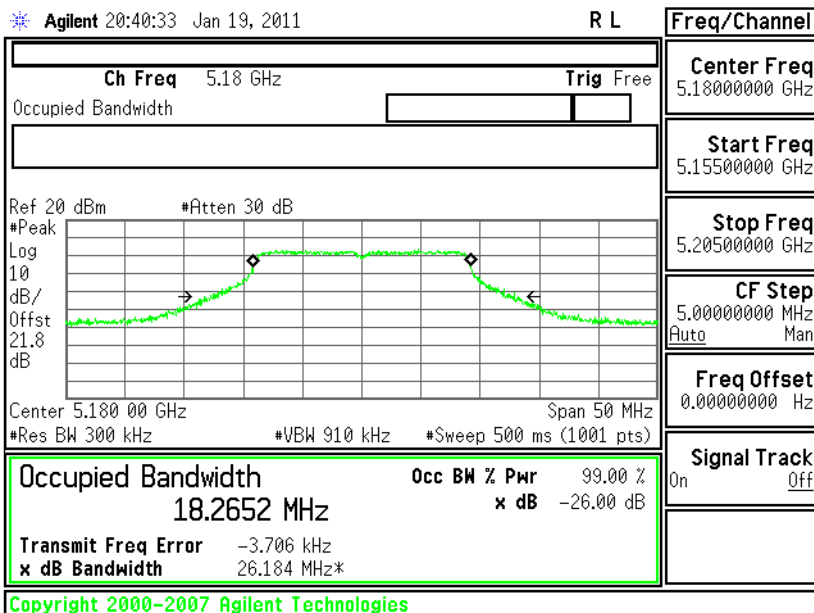
## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 36

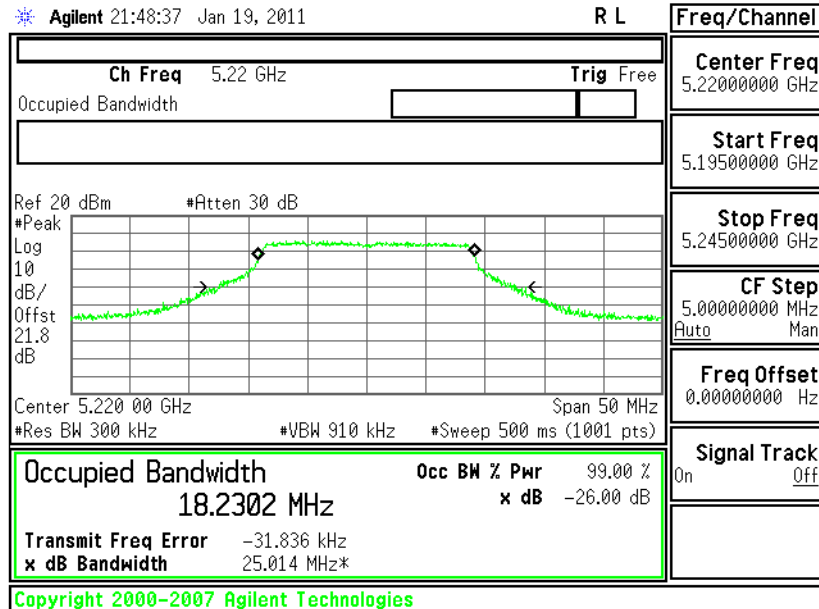
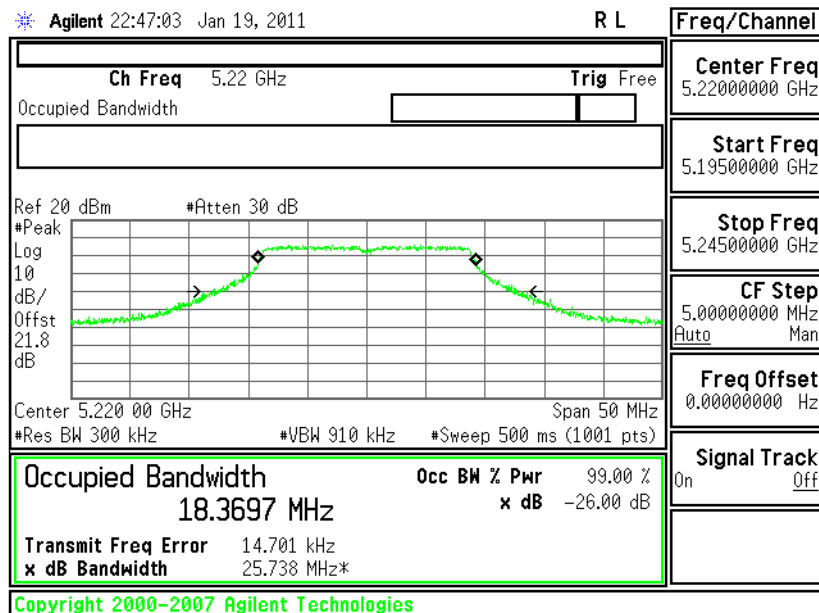
## - Chain A+B(A)



## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 36

## - Chain A+B(B)

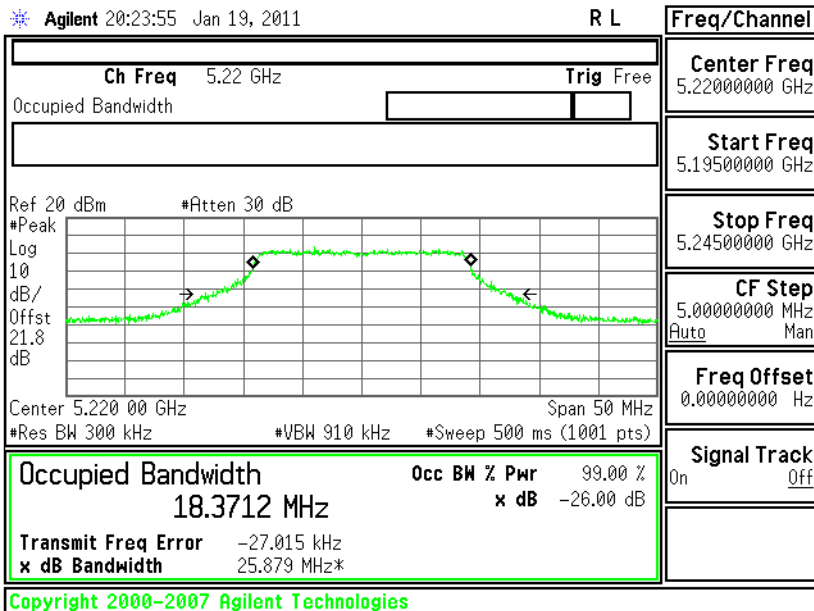


**26 dB & 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 44****- Chain A****26 dB & 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 44****- Chain B**



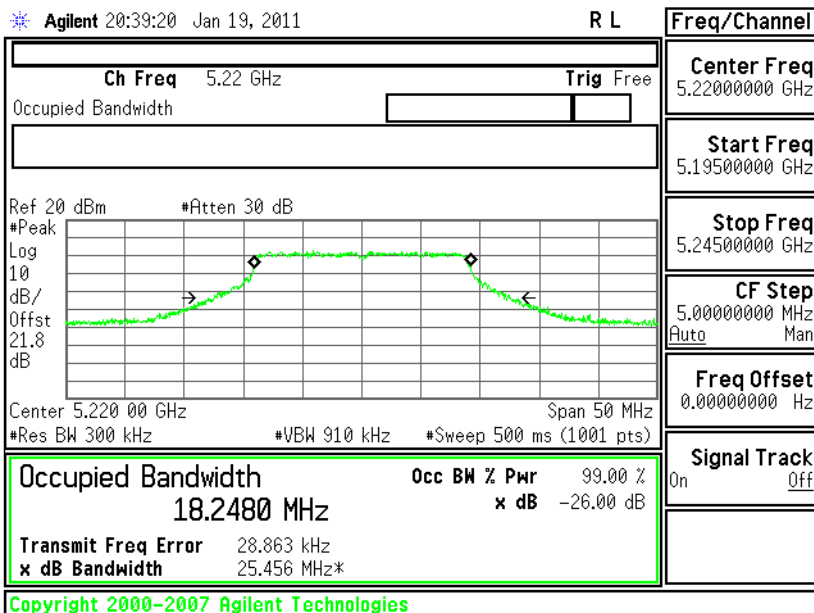
## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 44

## - Chain A+B(A)



## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 44

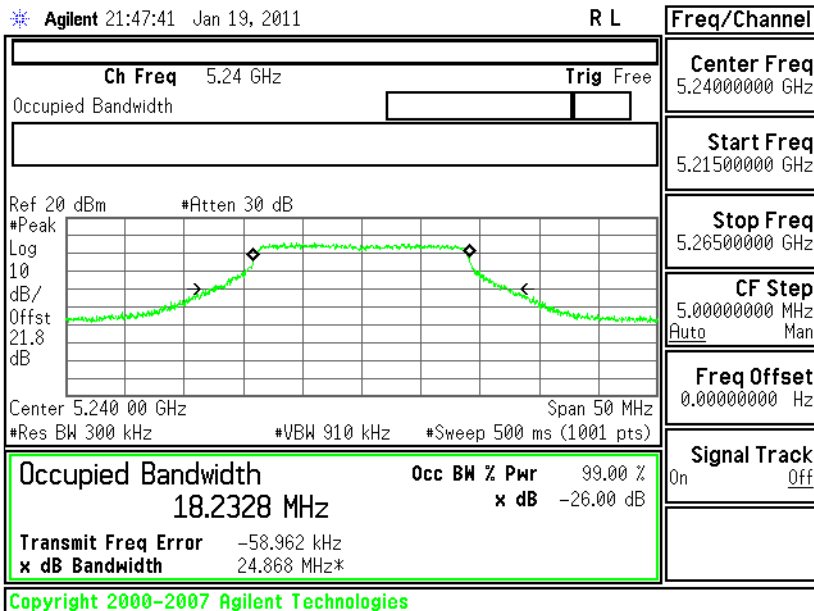
## - Chain A+B(B)





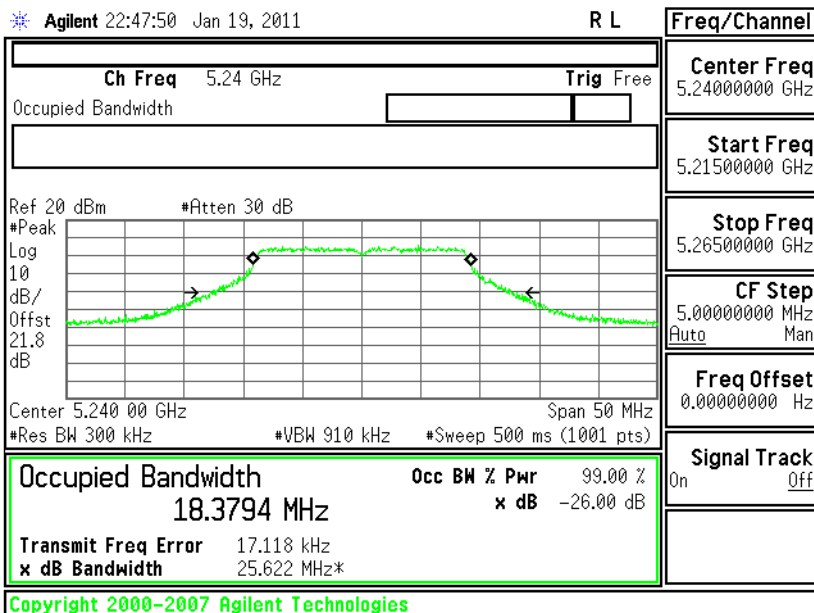
## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 48

## - Chain A



## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 48

## - Chain B



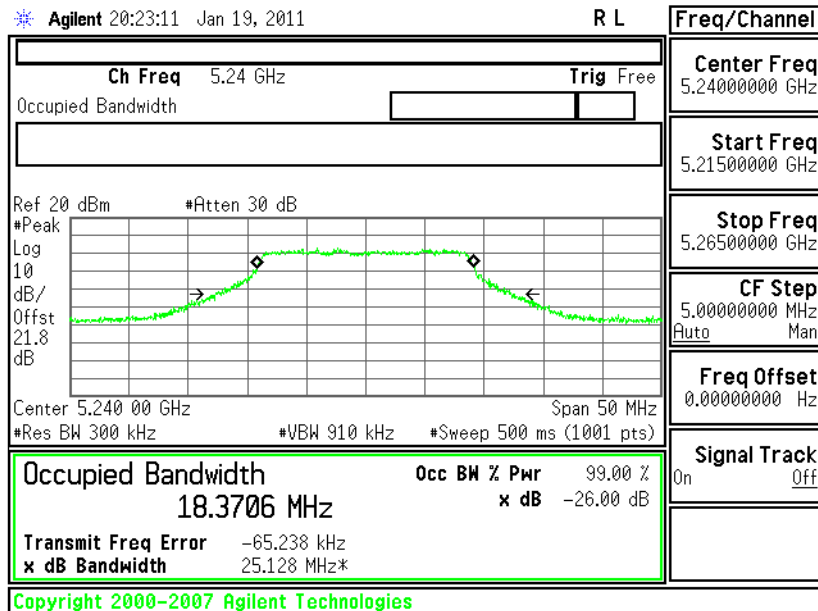


## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 48

## - Chain A+B(A)

Agilent 20:23:11 Jan 19, 2011

R L

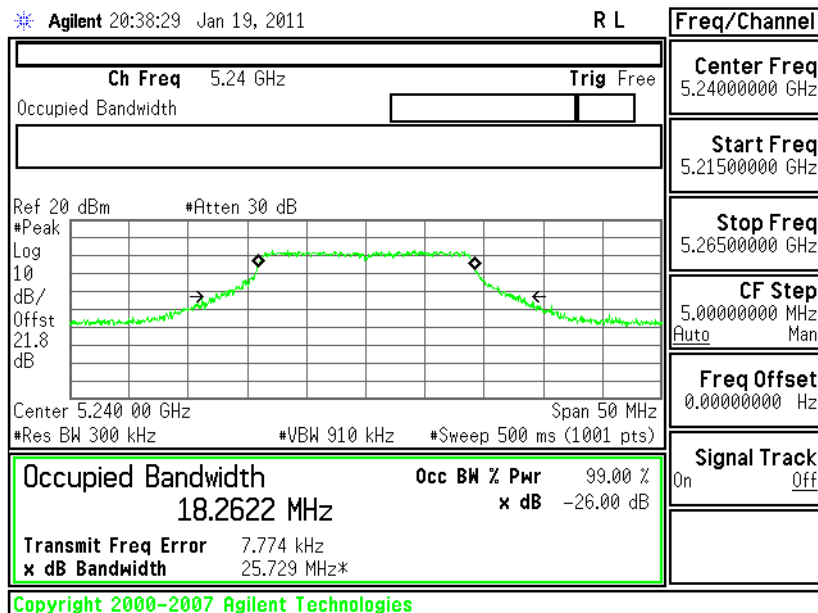


## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 48

## - Chain A+B(B)

Agilent 20:38:29 Jan 19, 2011

R L

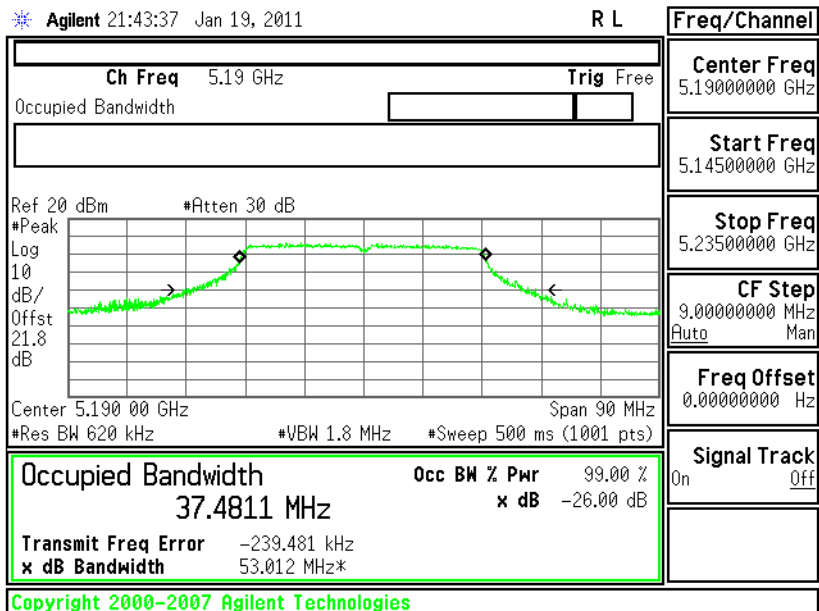






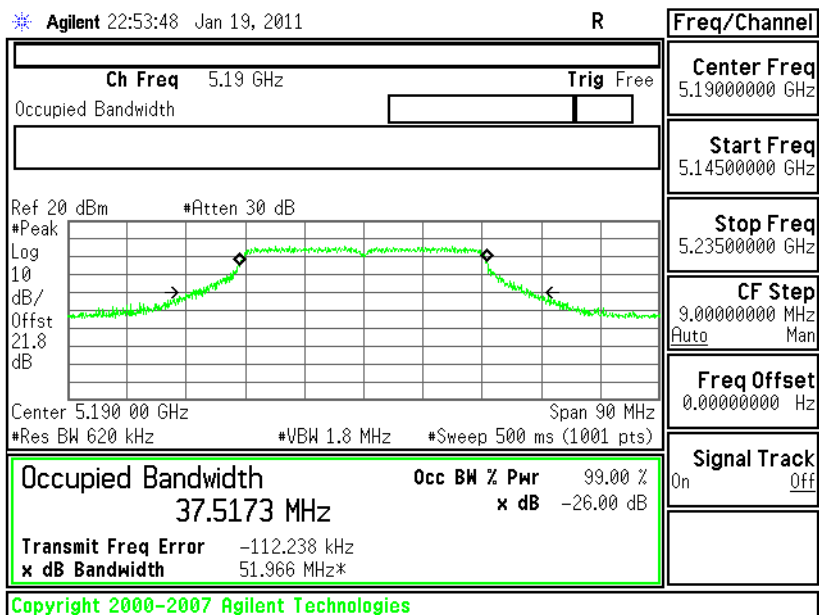
## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 40MHz) Channel 38

## - Chain A



## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 40MHz) Channel 38

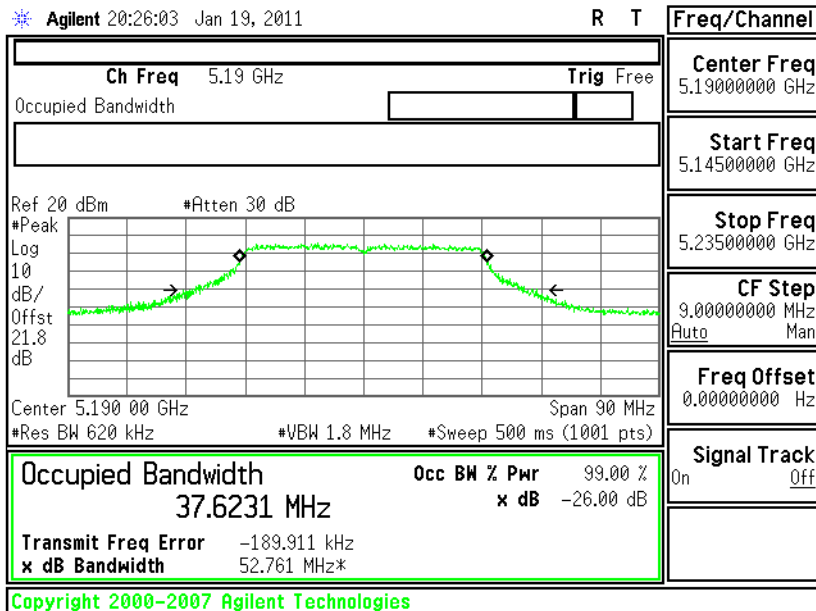
## - Chain B





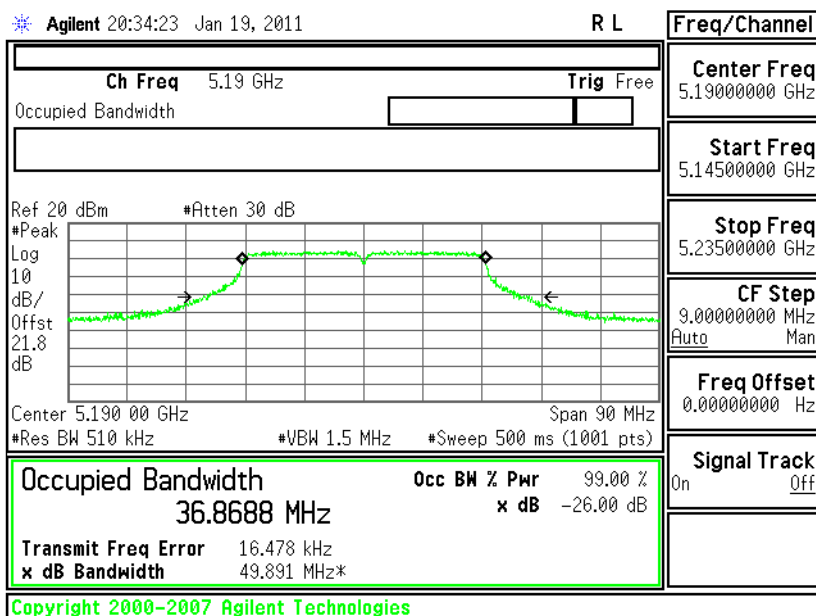
## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 40MHz) Channel 38

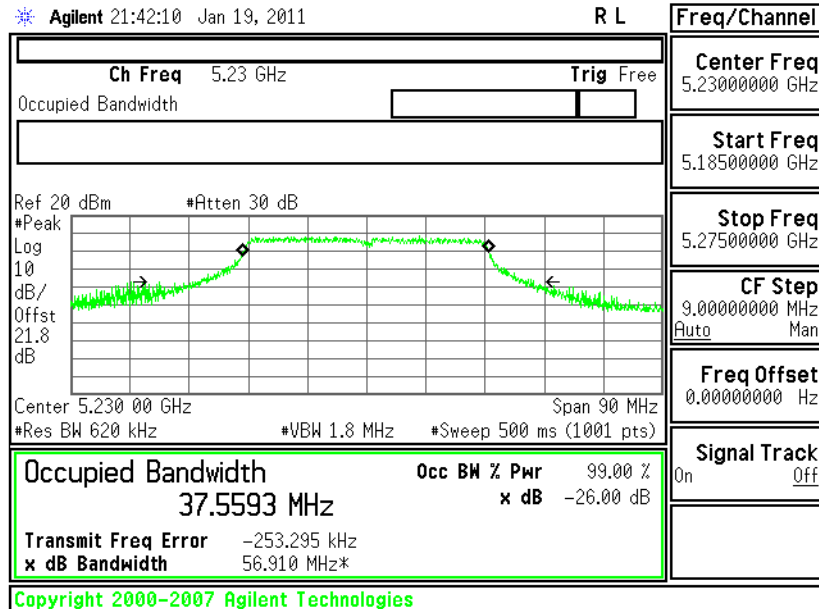
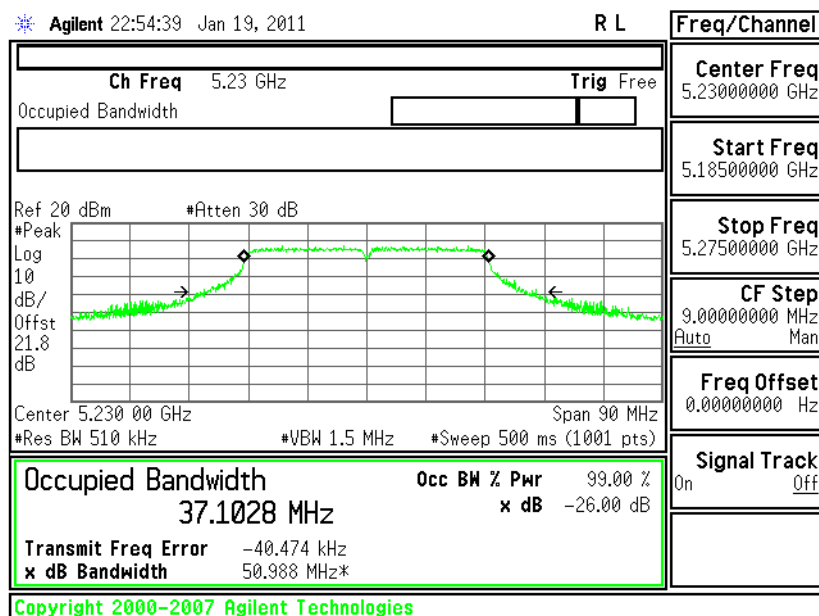
## - Chain A+B(A)



## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 40MHz) Channel 38

## - Chain A+B(B)

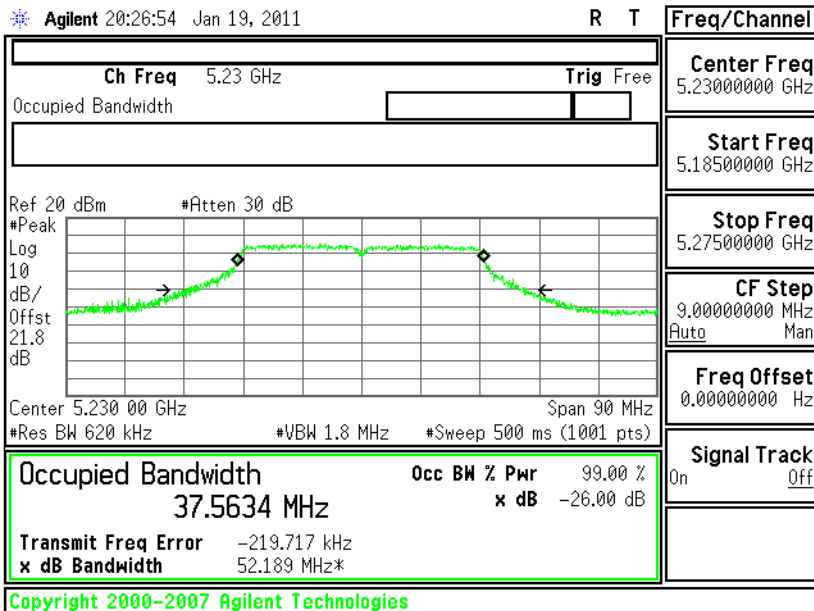


**26 dB & 99% Bandwidth Plot on 802.11n (BW 40MHz) Channel 46****- Chain A****26 dB & 99% Bandwidth Plot on 802.11n (BW 40MHz) Channel 46****- Chain B**



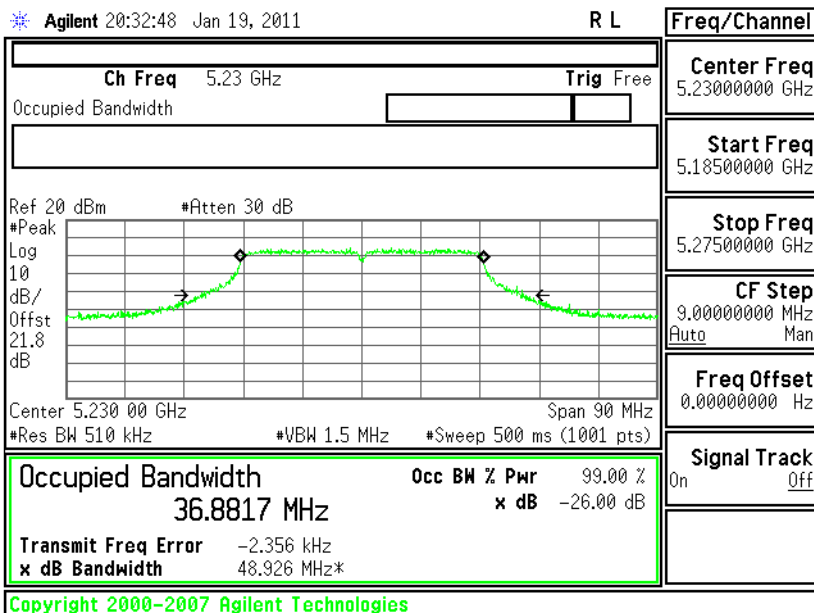
## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 40MHz) Channel 46

## - Chain A+B(A)



## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 40MHz) Channel 46

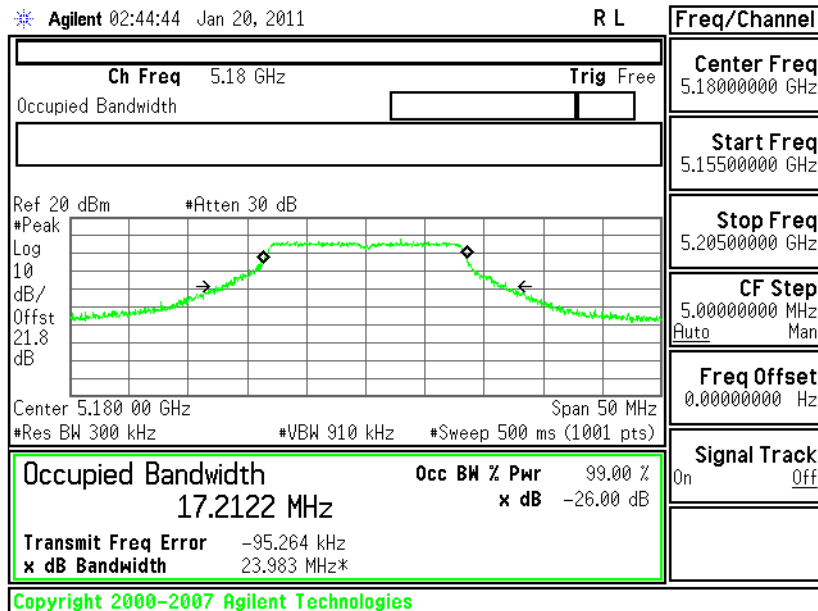
## - Chain A+B(B)



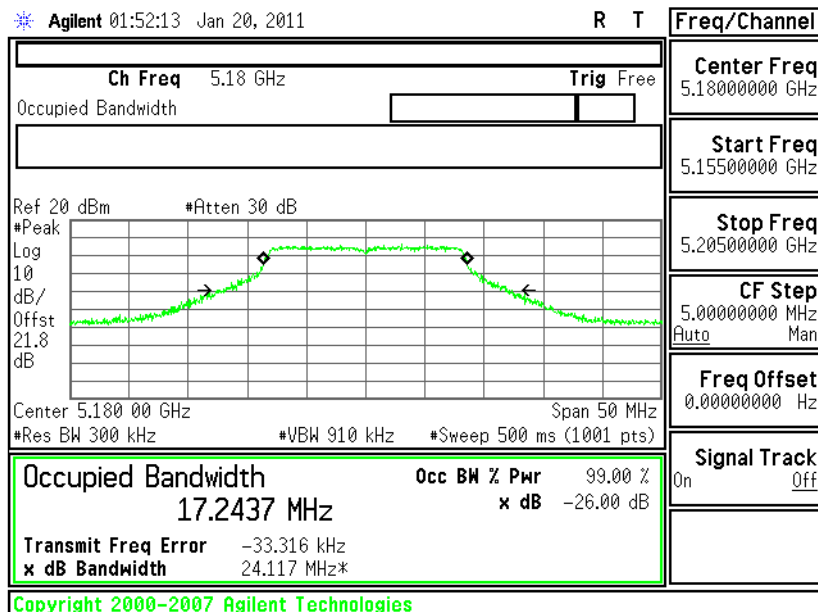


## &lt;Antenna 2 for 3.3V&gt;

## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 36 - Chain A



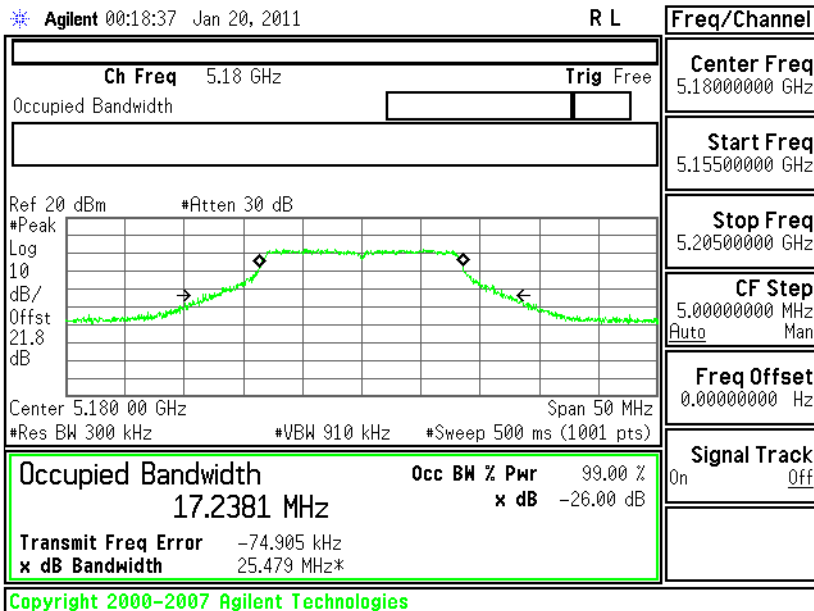
## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 36 - Chain B





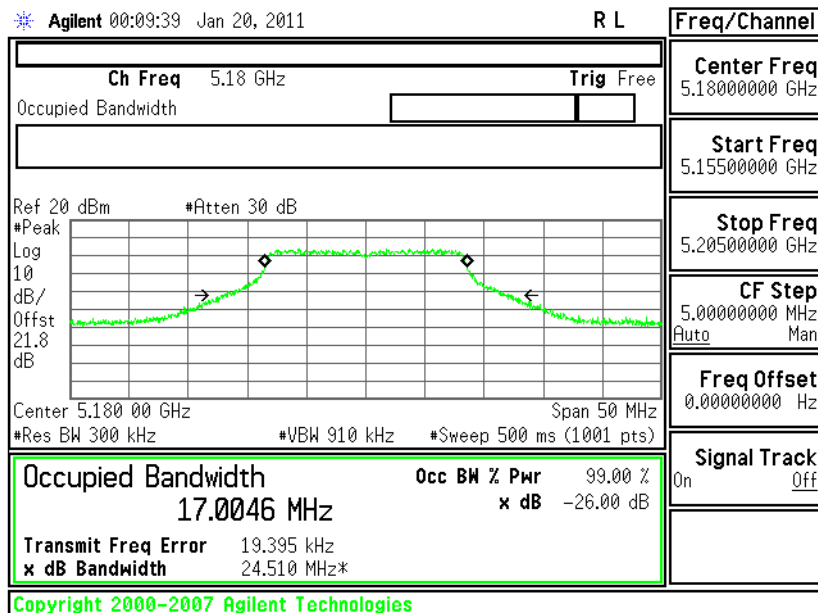
## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 36 - Chain

## A+B(A)



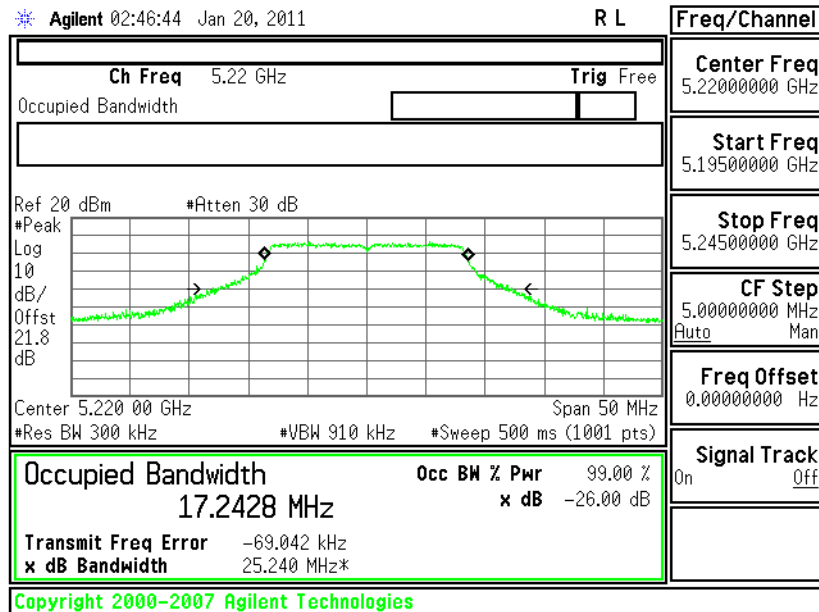
## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 36 - Chain

## A+B(B)

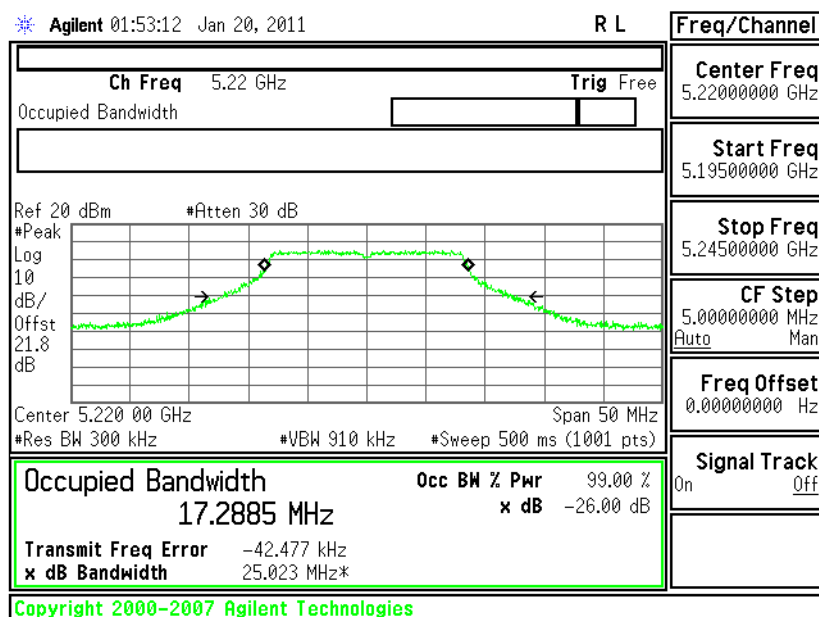




## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 44 - Chain A



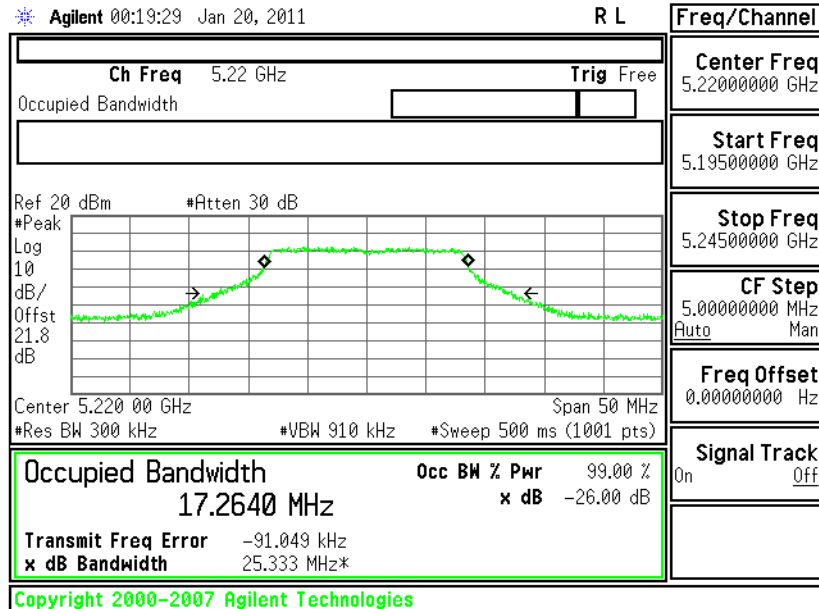
## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 44 - Chain B





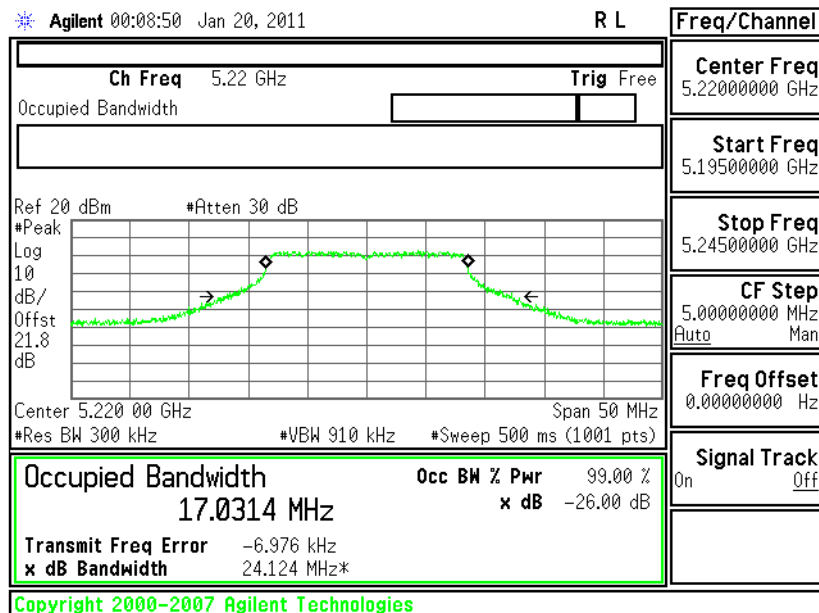
## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 44 - Chain

## A+B(A)



## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 44 - Chain

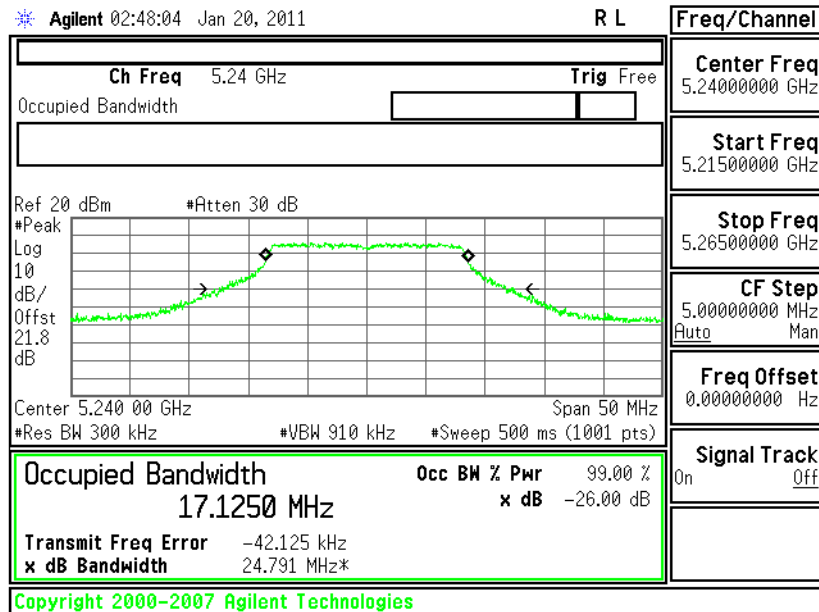
## A+B(B)



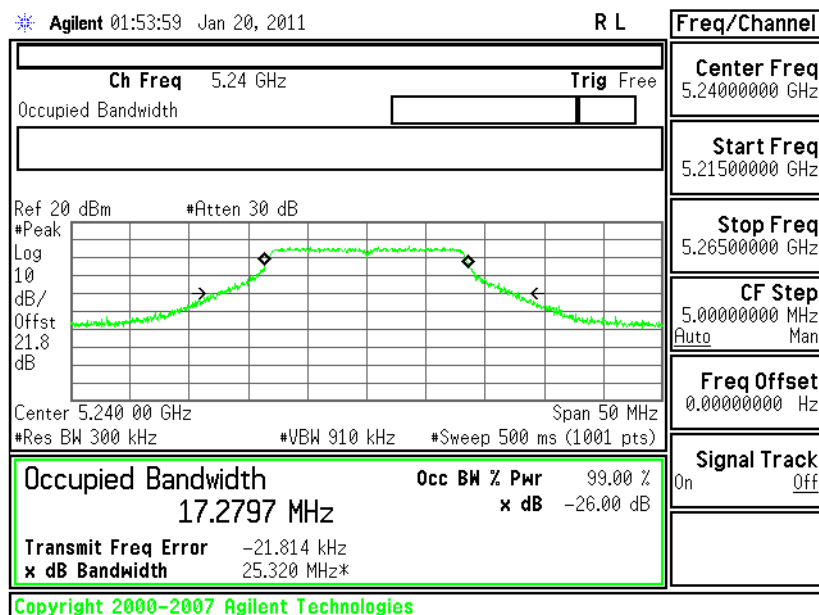




## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 48 - Chain A



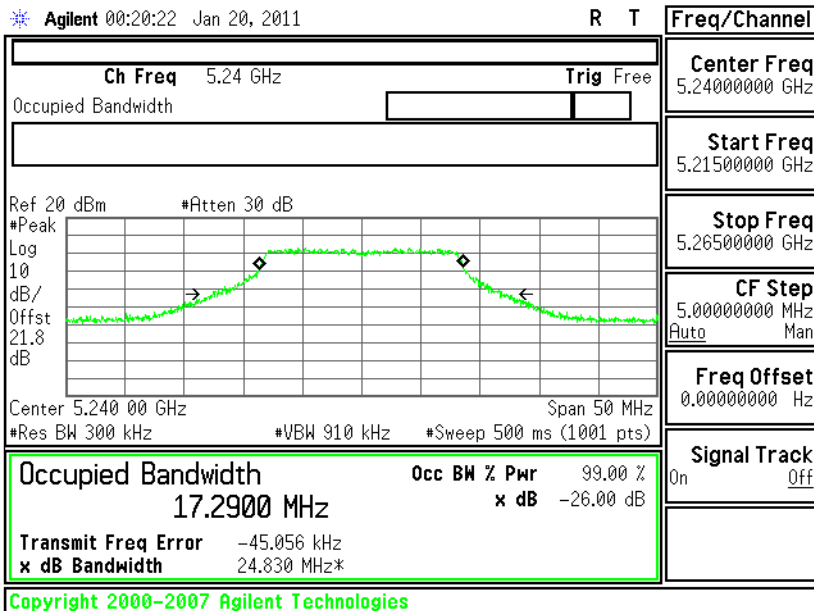
## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 48 - Chain B





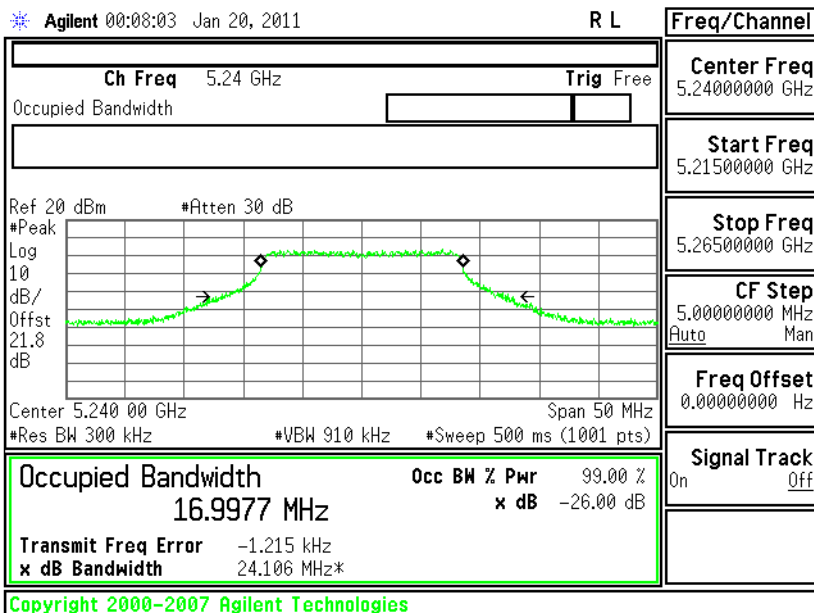
## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 48 - Chain

## A+B(A)



## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 48 - Chain

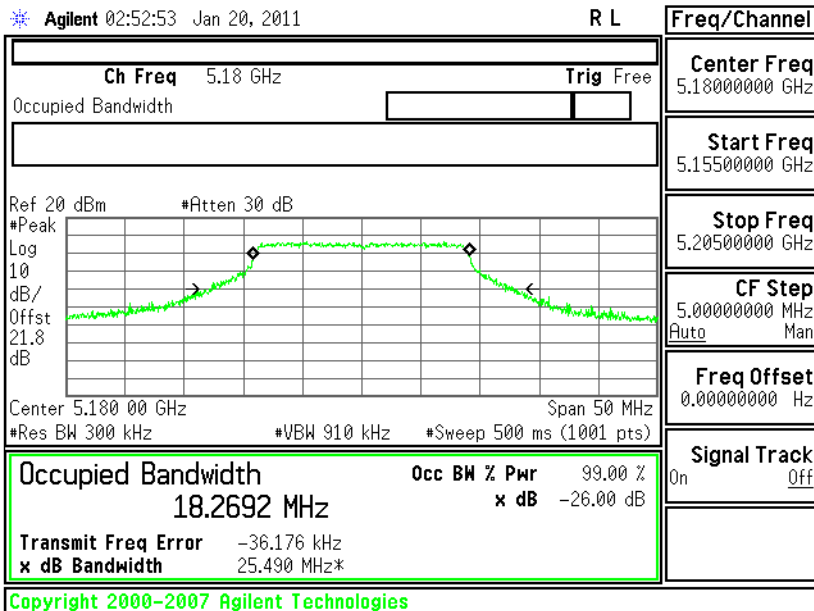
## A+B(B)





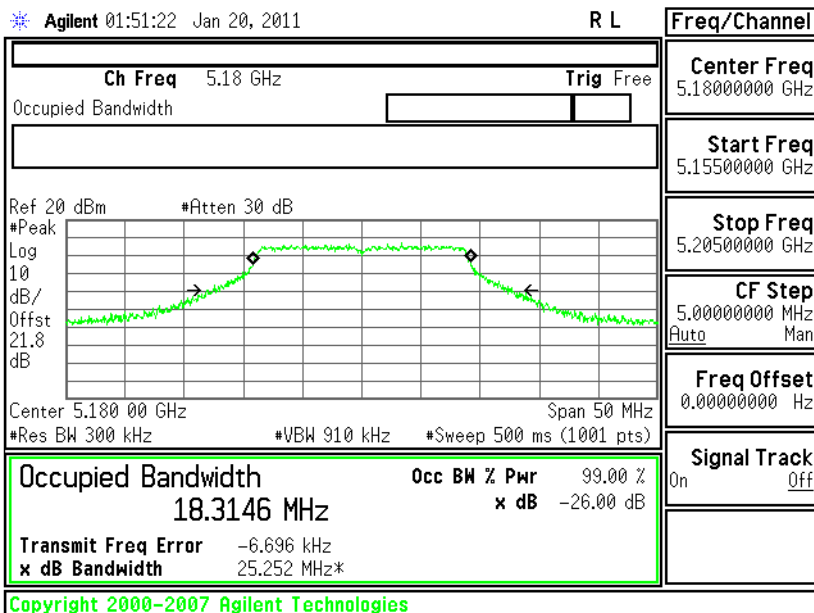
## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 36

## - Chain A



## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 36

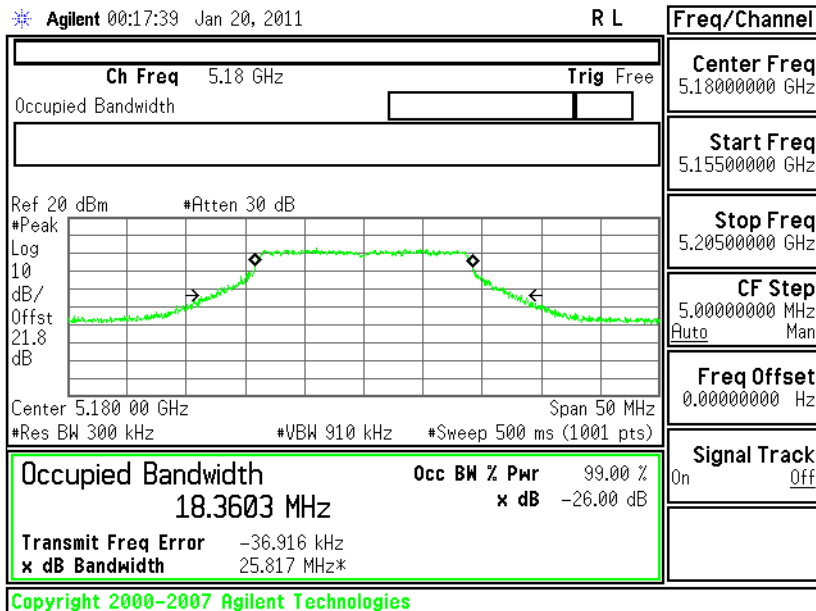
## - Chain B





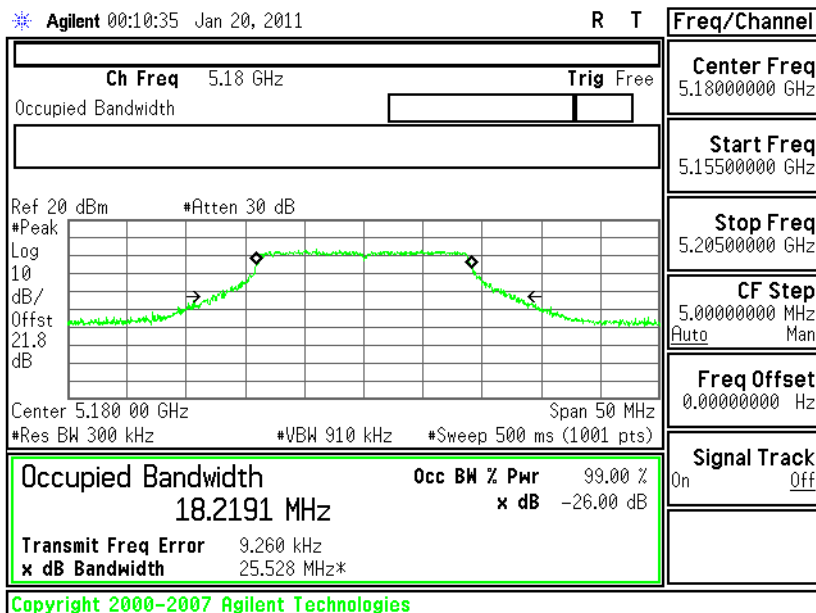
## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 36

## - Chain A+B(A)



## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 36

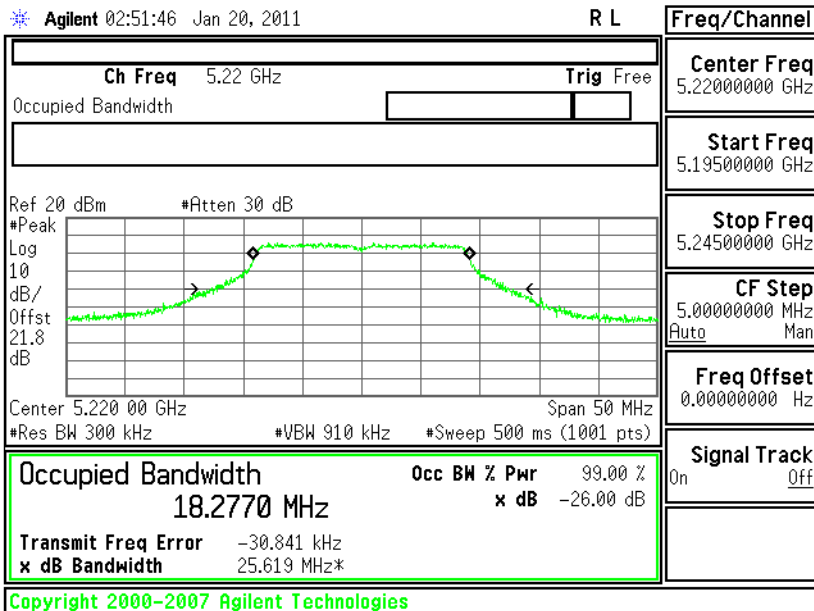
## - Chain A+B(B)





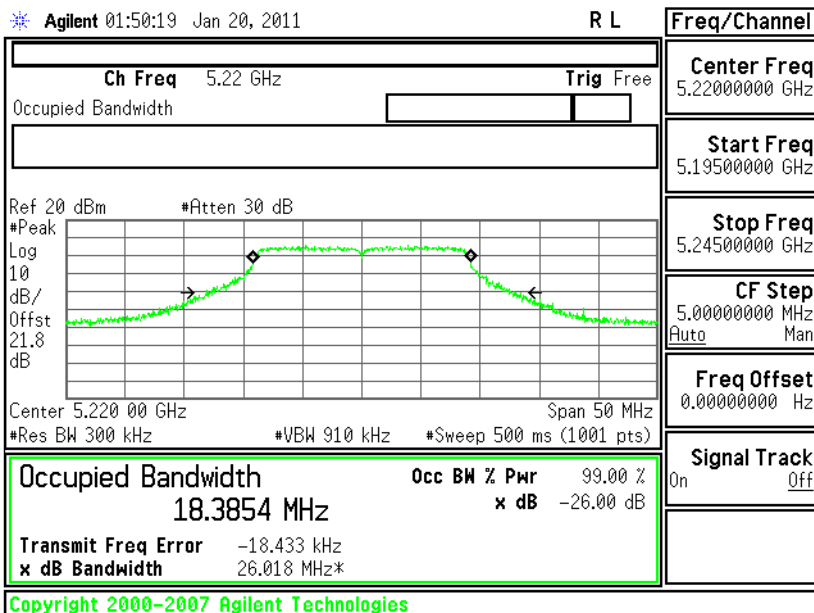
## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 44

## - Chain A



## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 44

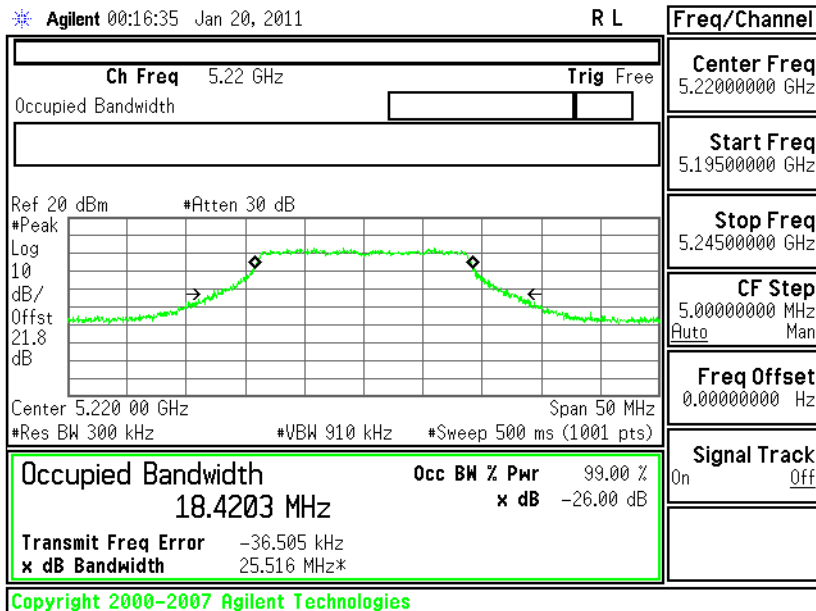
## - Chain B





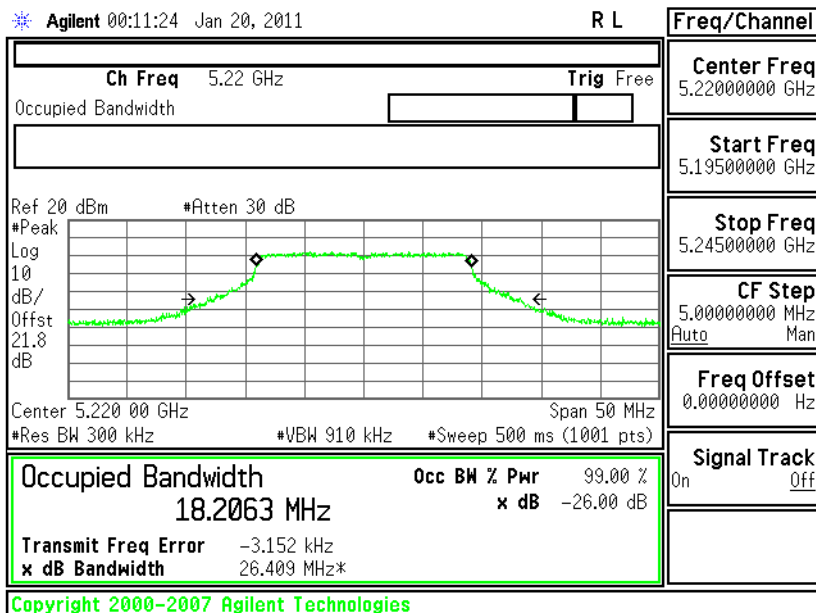
## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 44

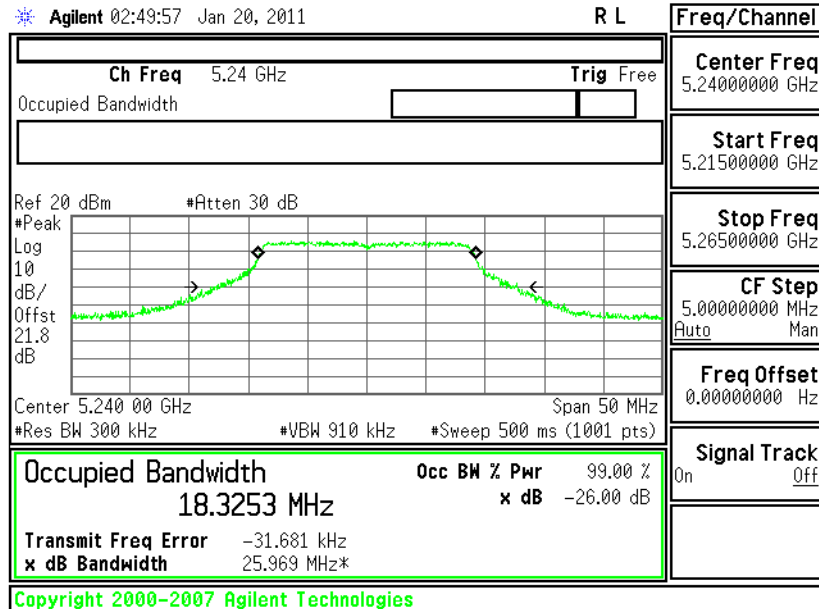
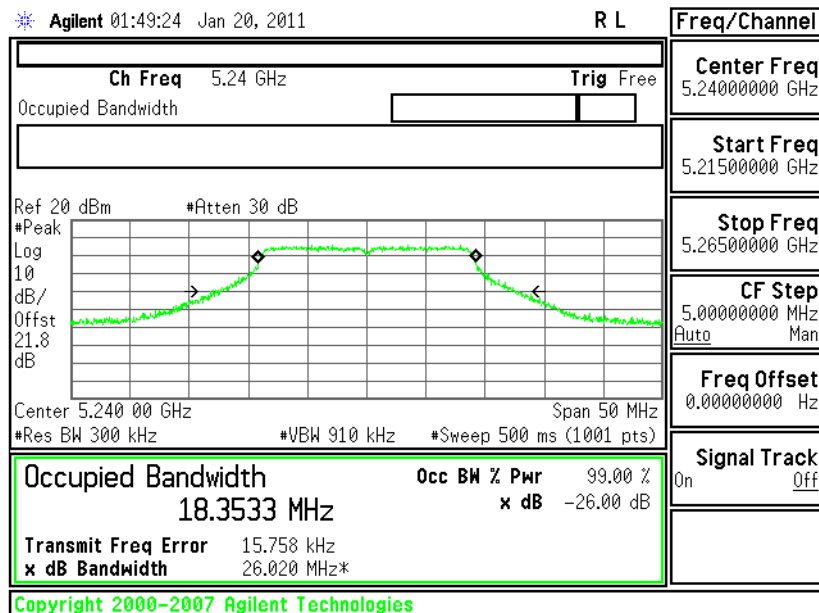
## - Chain A+B(A)



## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 44

## - Chain A+B(B)

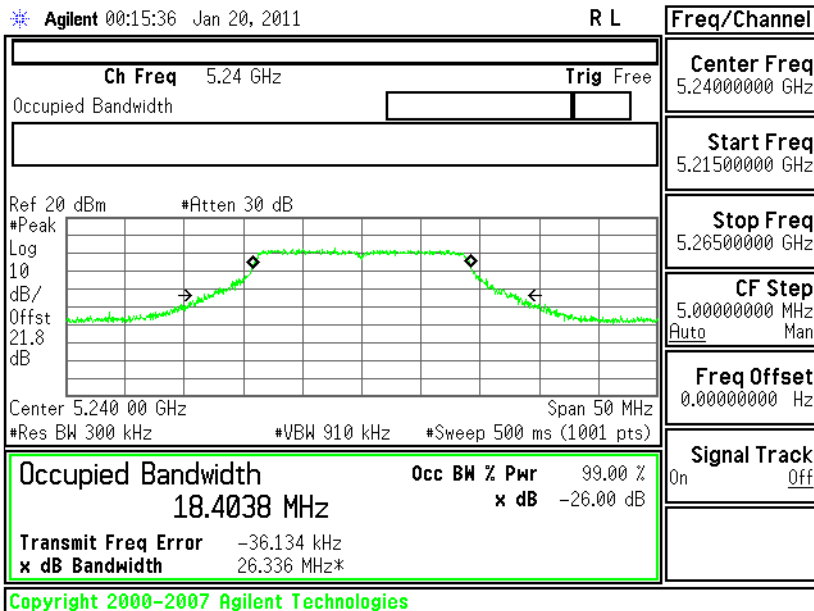


**26 dB & 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 48****- Chain A****26 dB & 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 48****- Chain B**



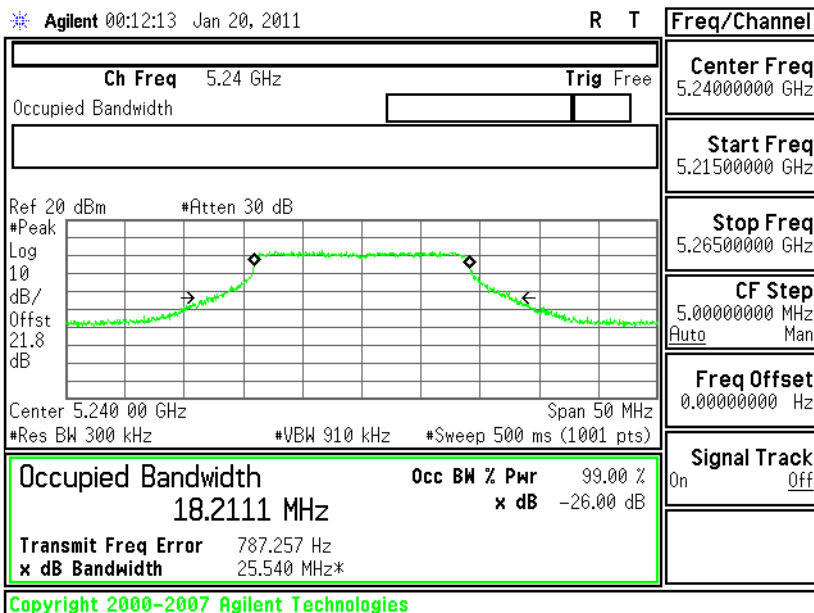
## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 48

## - Chain A+B(A)



## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 48

## - Chain A+B(B)

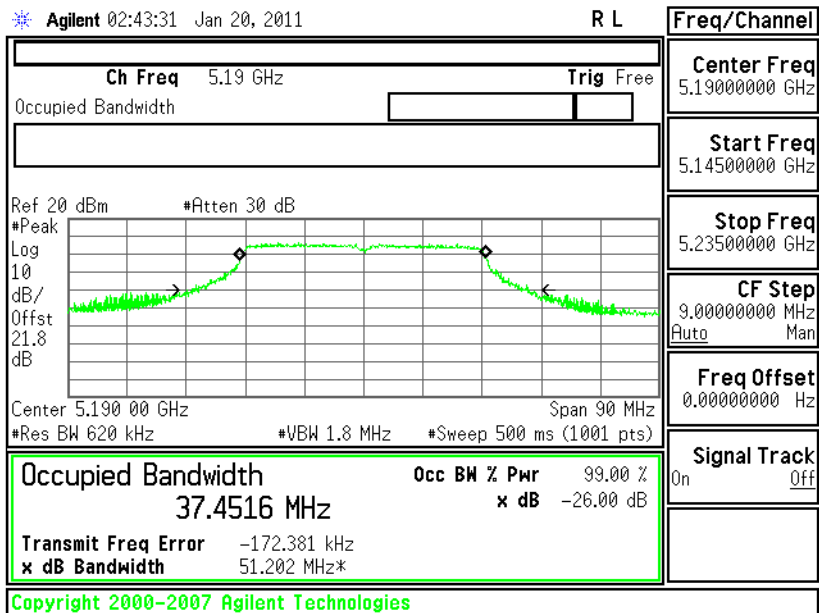






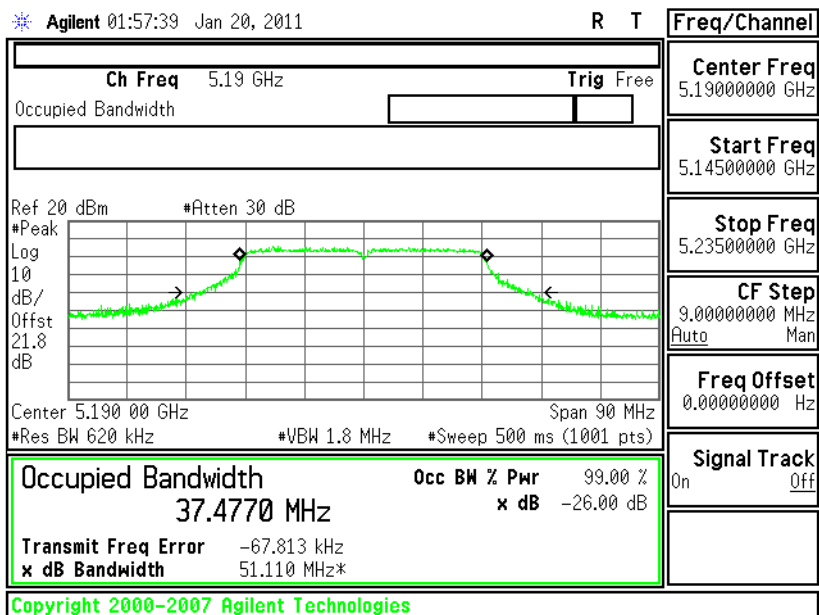
## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 40MHz) Channel 38

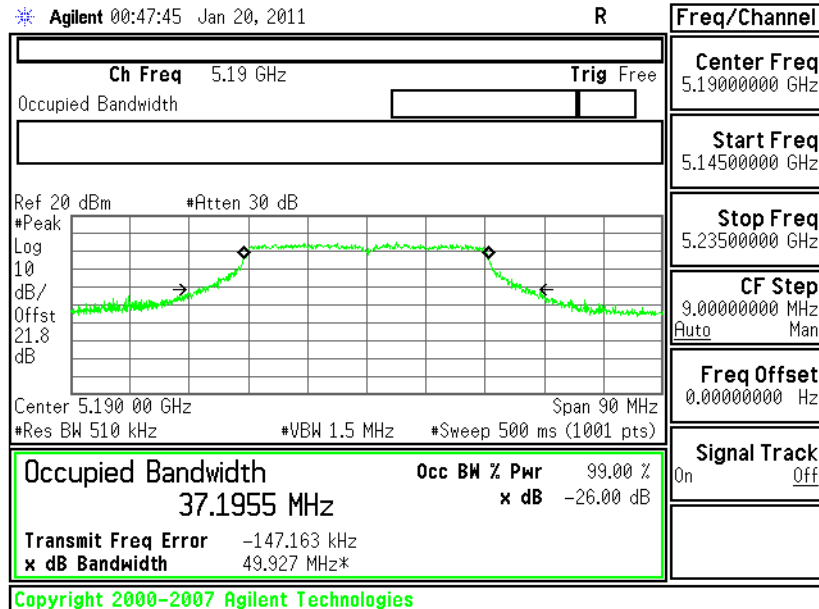
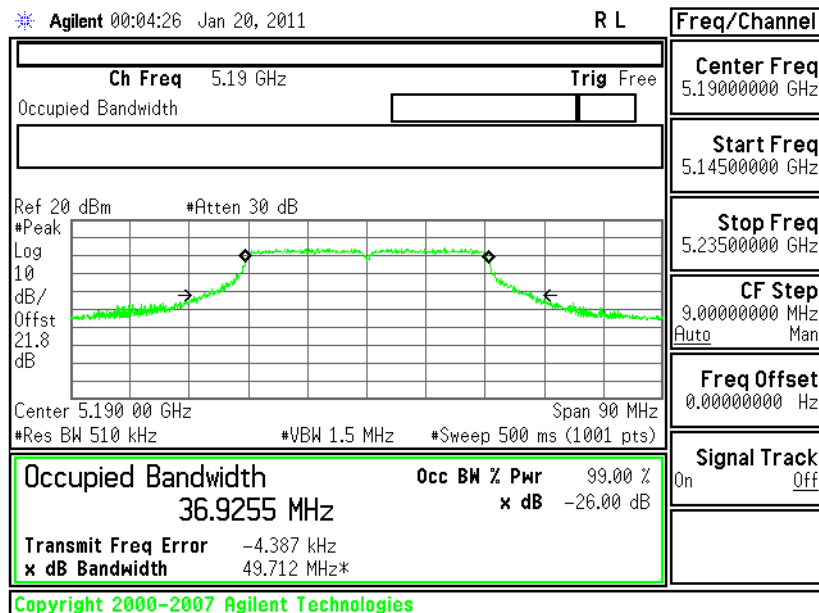
## - Chain A



## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 40MHz) Channel 38

## - Chain B

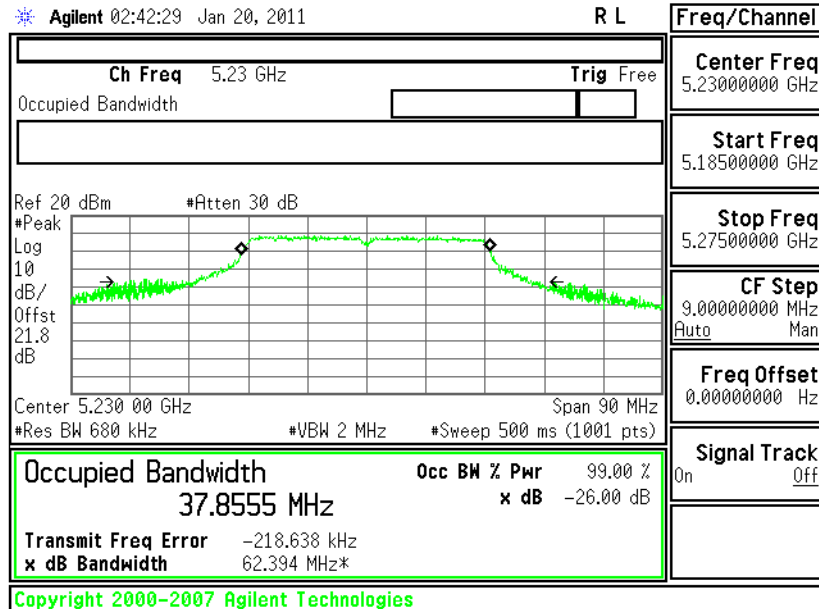


**26 dB & 99% Bandwidth Plot on 802.11n (BW 40MHz) Channel 38****- Chain A+B(A)****26 dB & 99% Bandwidth Plot on 802.11n (BW 40MHz) Channel 38****- Chain A+B(B)**



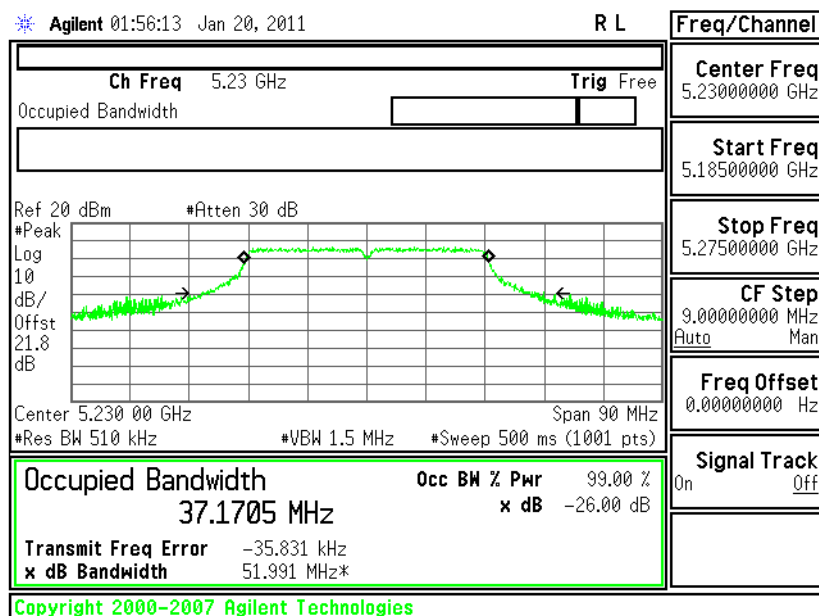
## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 40MHz) Channel 46

## - Chain A



## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 40MHz) Channel 46

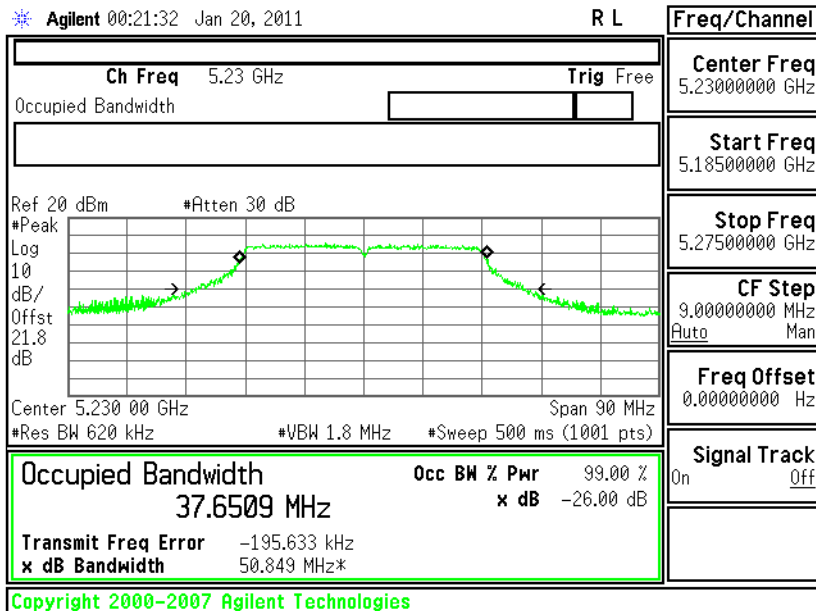
## - Chain B





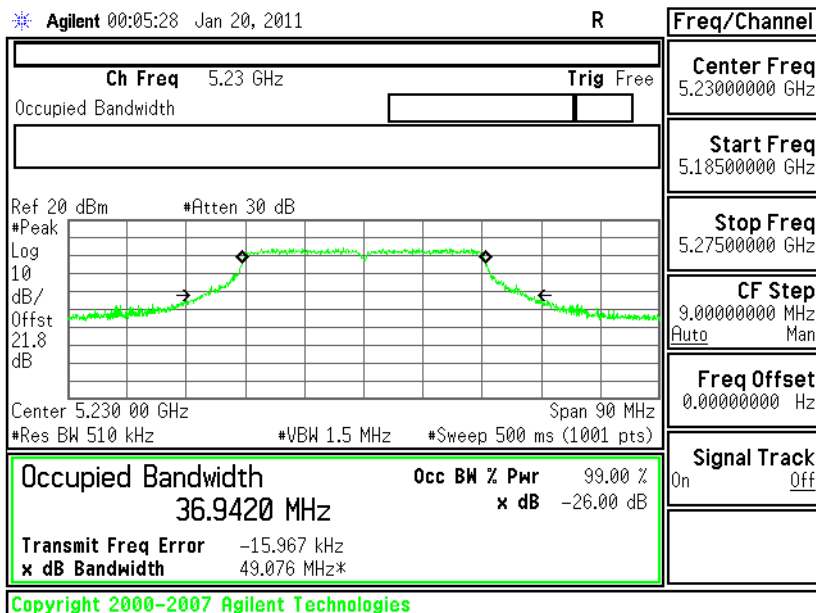
## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 40MHz) Channel 46

## - Chain A+B(A)



## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 40MHz) Channel 46

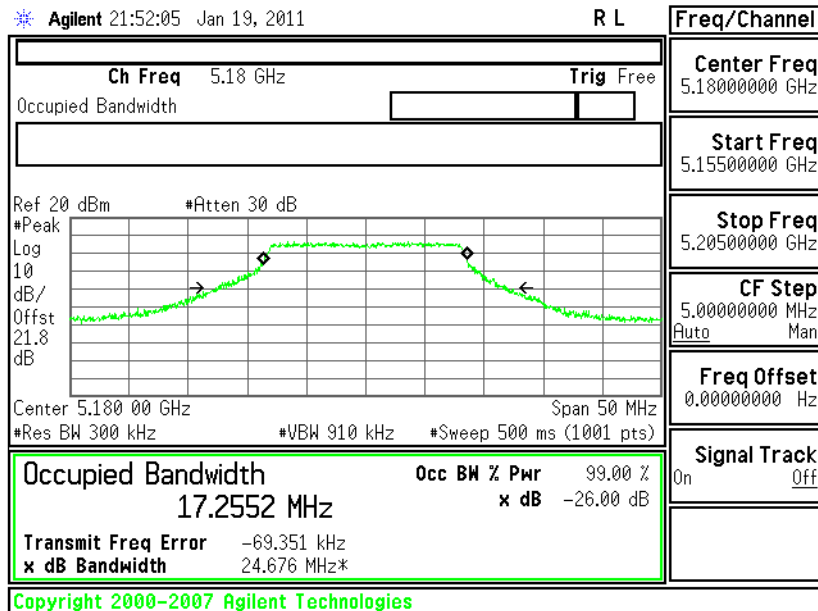
## - Chain A+B(B)



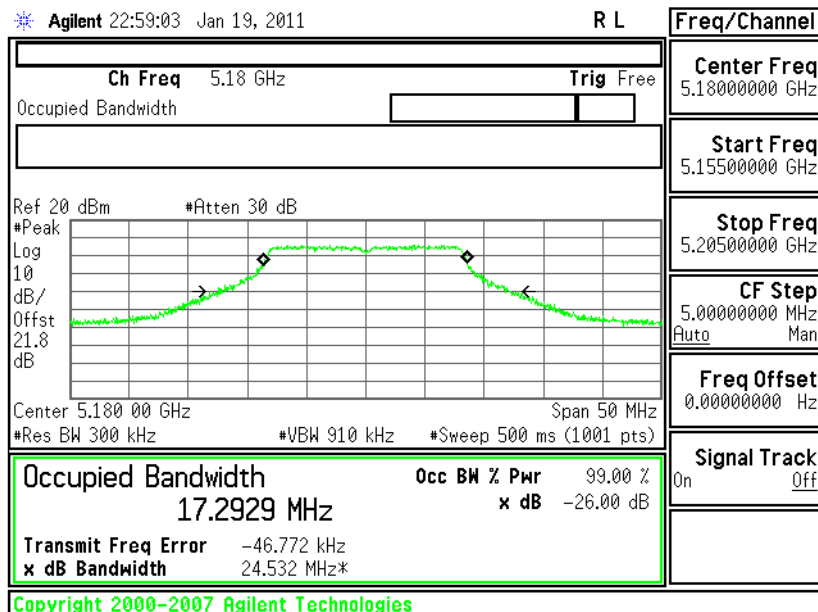


## &lt;Antenna 3 for 4.5V&gt;

## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 36 - Chain A



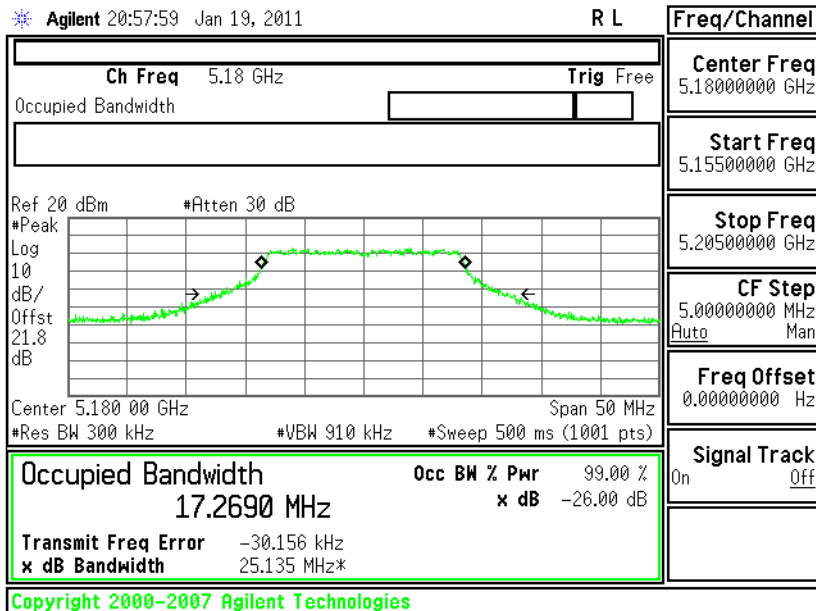
## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 36 - Chain B





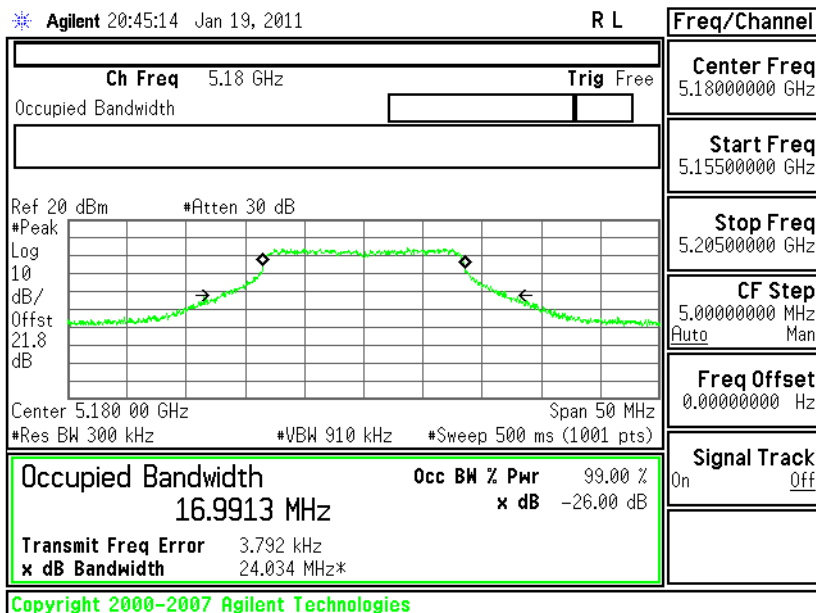
## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 36 - Chain

## A+B(A)



## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 36 - Chain

## A+B(B)

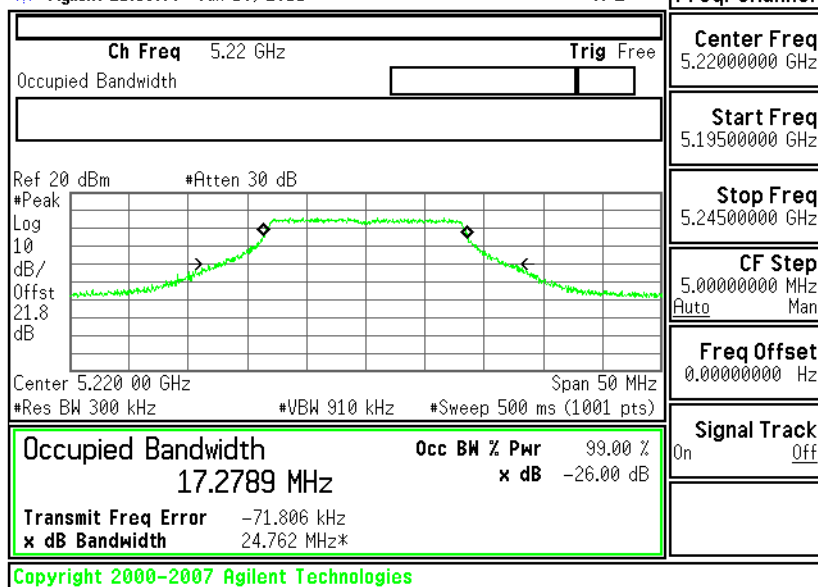




## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 44 - Chain A

Agilent 21:53:00 Jan 19, 2011

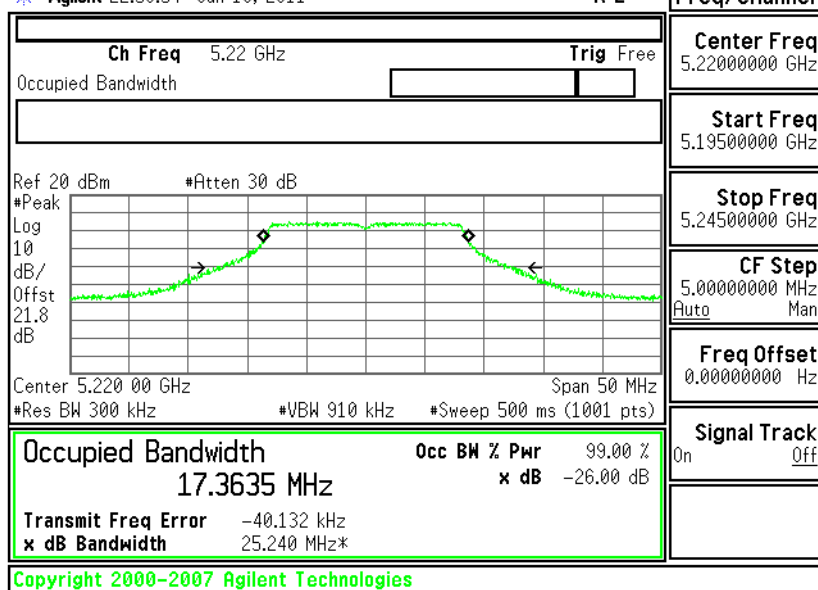
R L



## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 44 - Chain B

Agilent 22:59:54 Jan 19, 2011

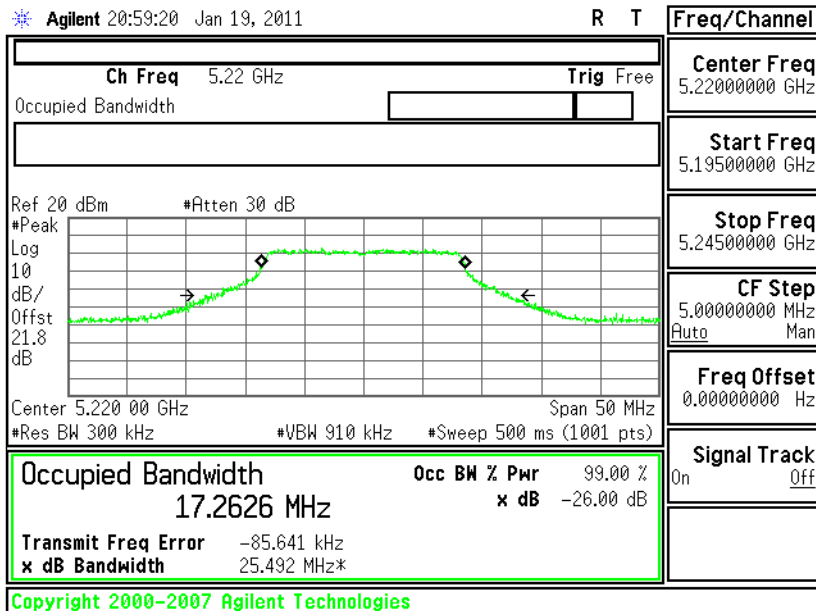
R L





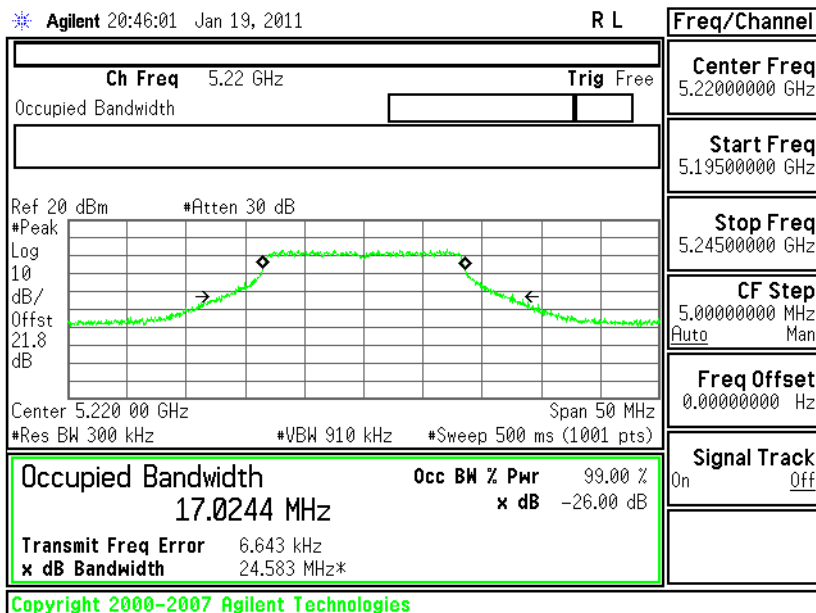
## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 44 - Chain

## A+B(A)



## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 44 - Chain

## A+B(B)



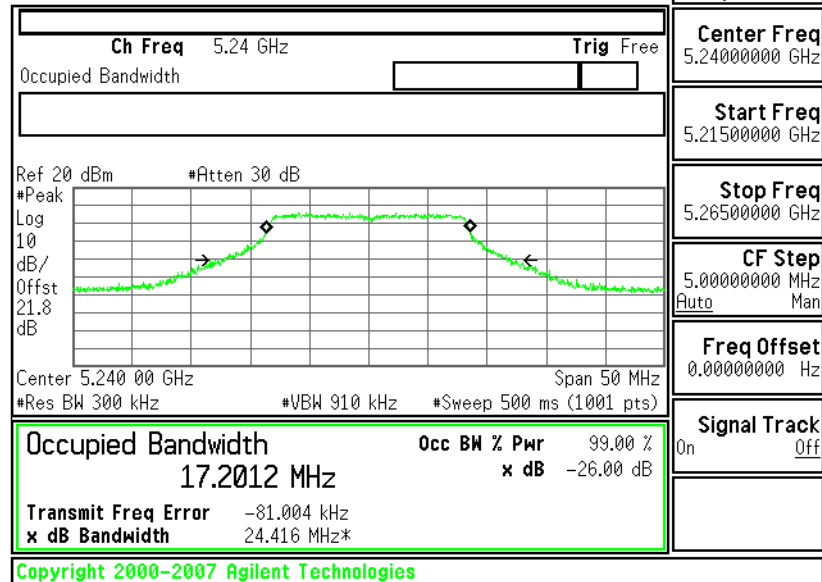




## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 48 - Chain A

Agilent 21:55:53 Jan 19, 2011

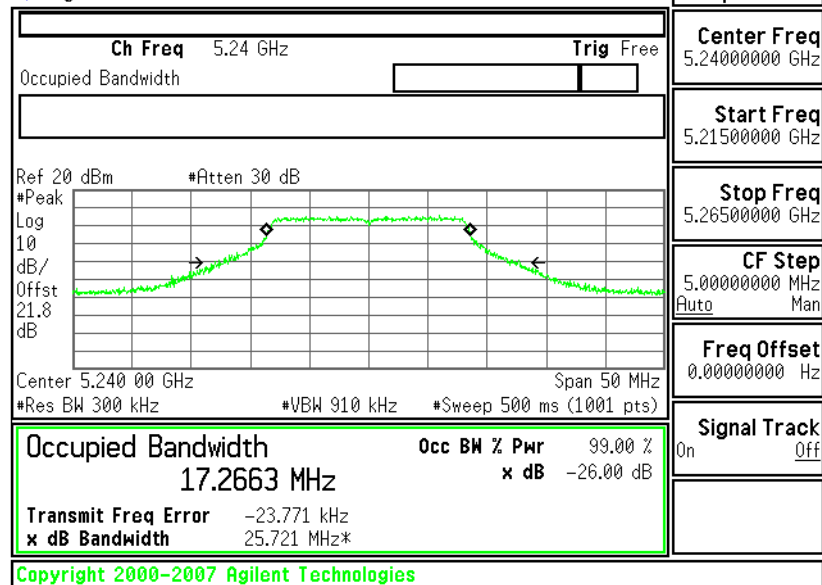
R L



## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 48 - Chain B

Agilent 23:00:49 Jan 19, 2011

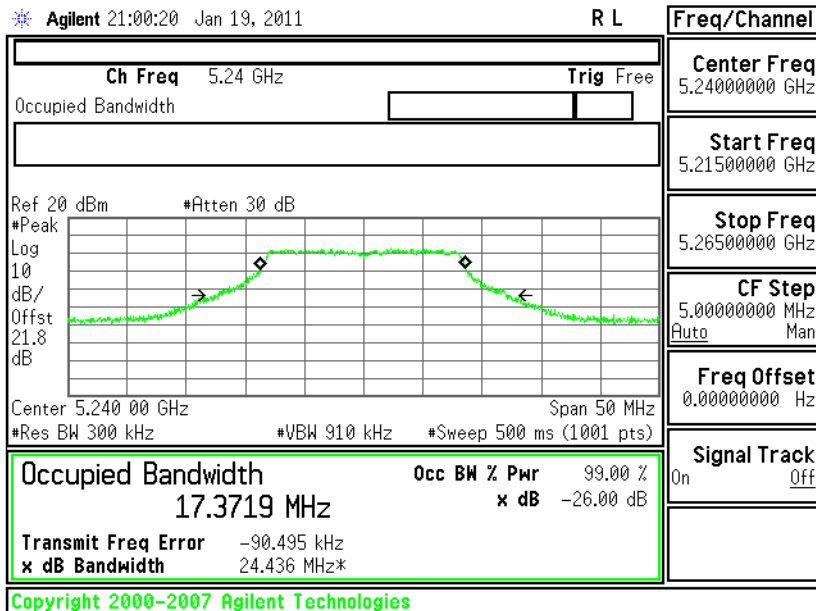
R L





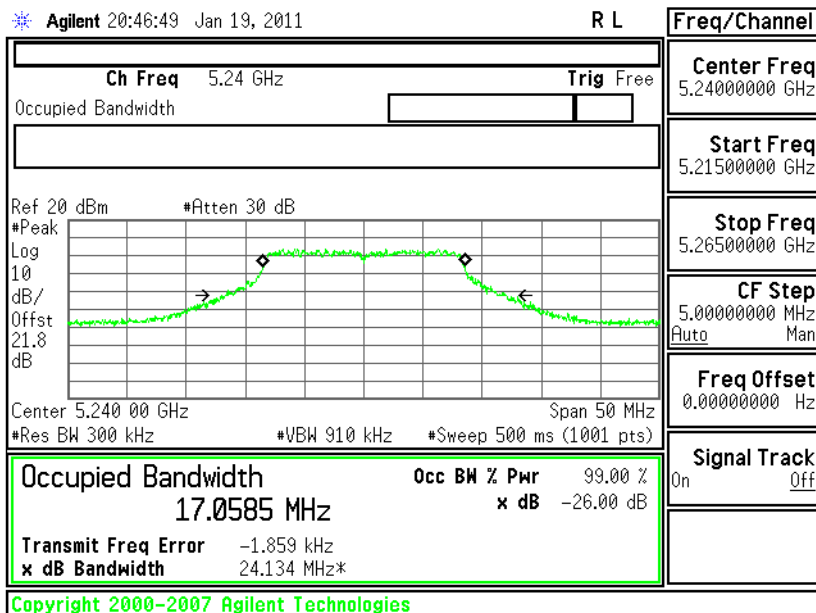
## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 48 - Chain

## A+B(A)



## 26 dB &amp; 99% Bandwidth Plot on 802.11a Channel 48 - Chain

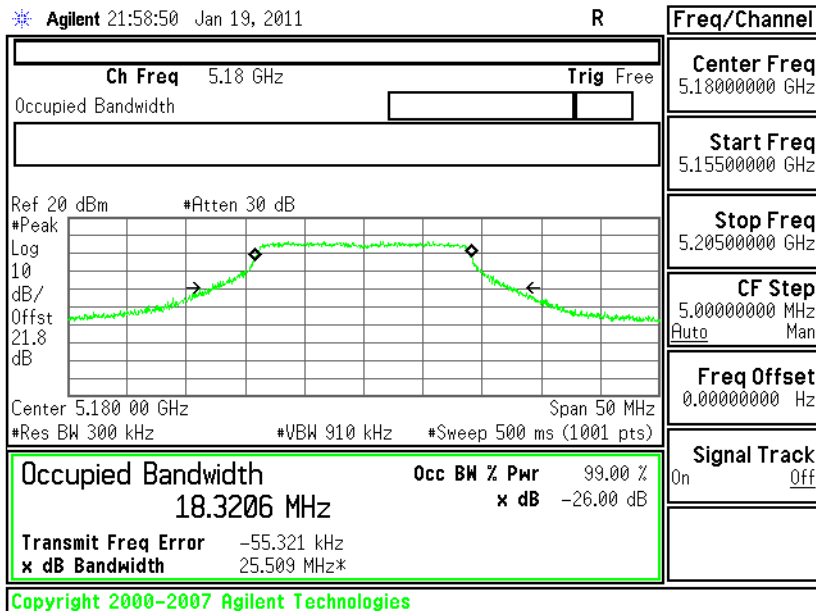
## A+B(B)





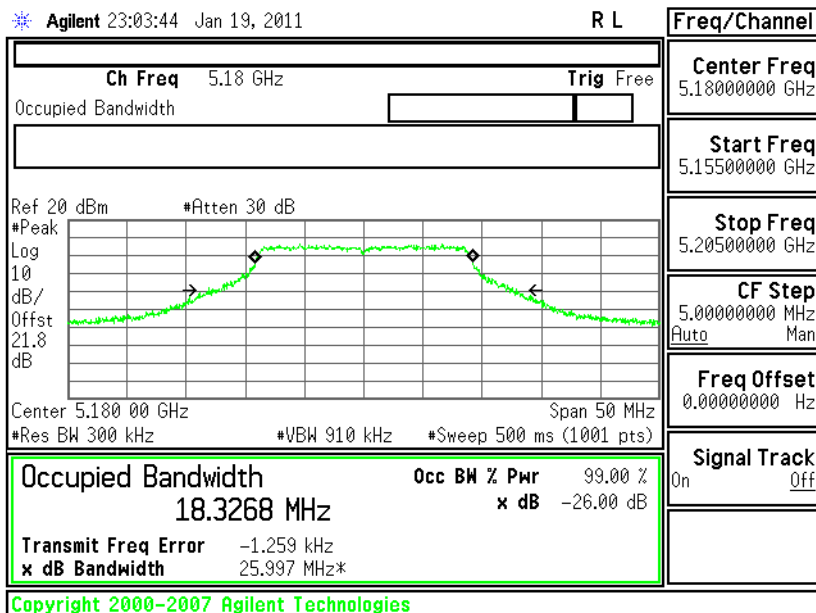
## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 36

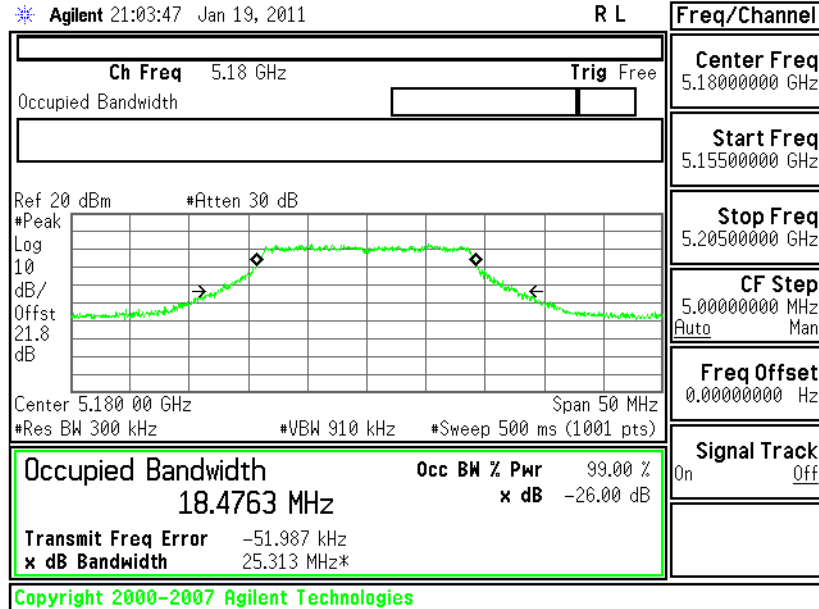
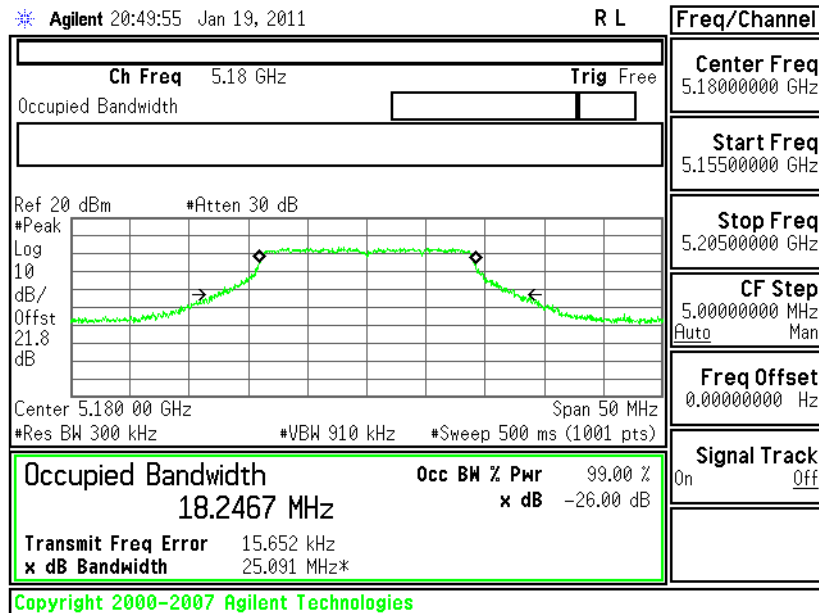
## - Chain A



## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 36

## - Chain B

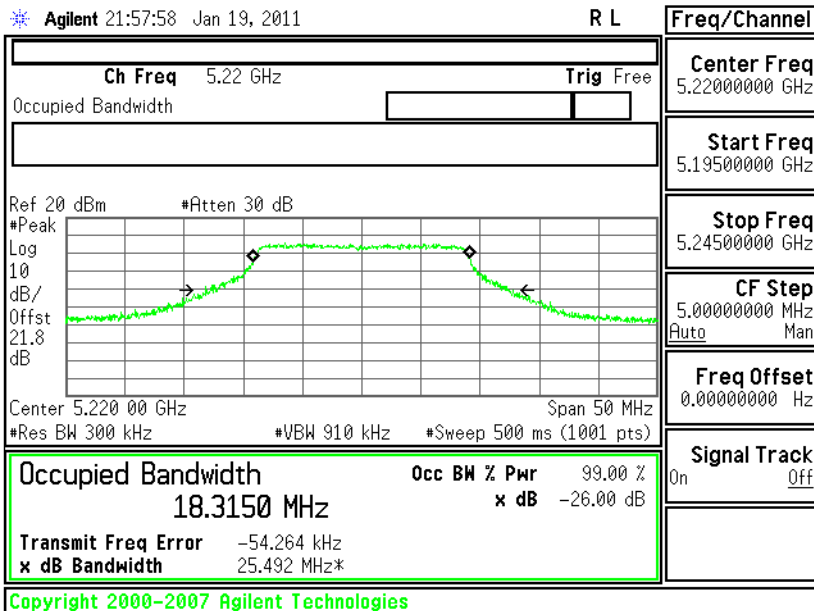


**26 dB & 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 36****- Chain A+B(A)****26 dB & 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 36****- Chain A+B(B)**



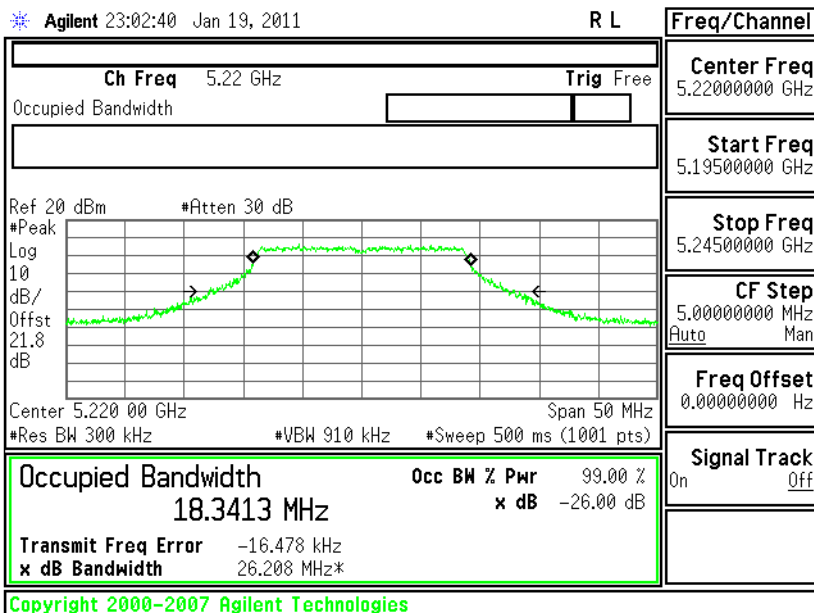
## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 44

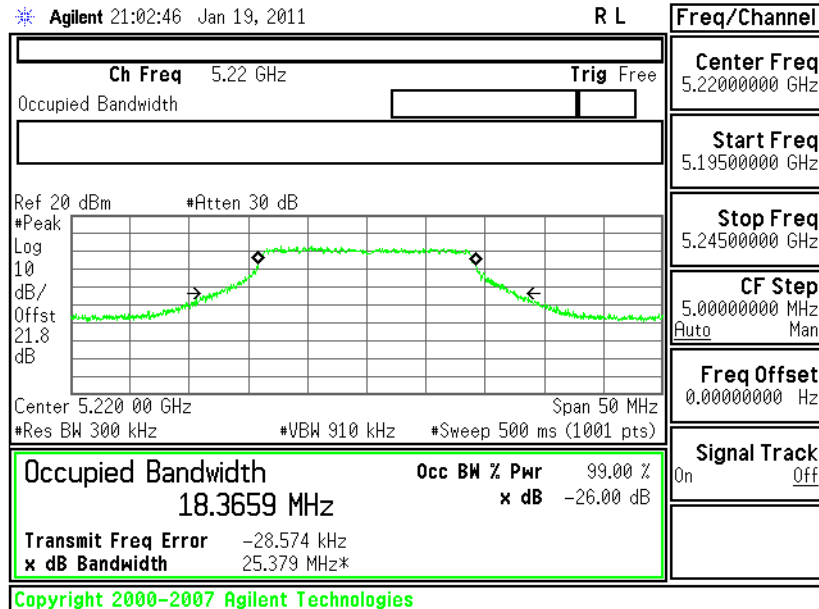
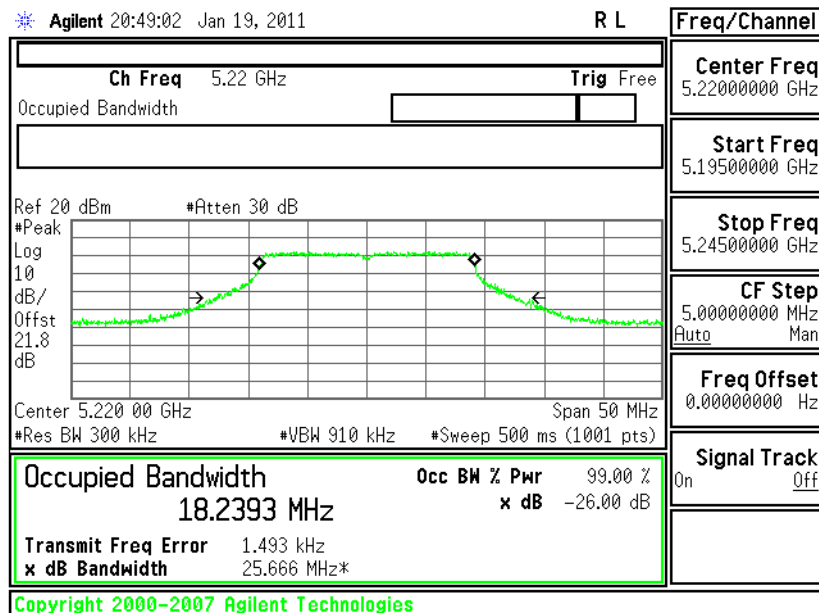
## - Chain A



## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 44

## - Chain B

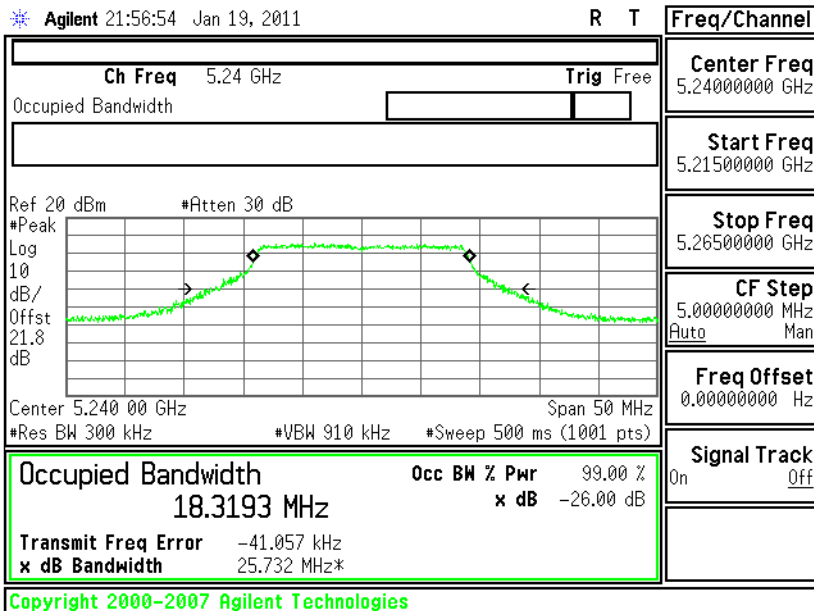


**26 dB & 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 44****- Chain A+B(A)****26 dB & 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 44****- Chain A+B(B)**



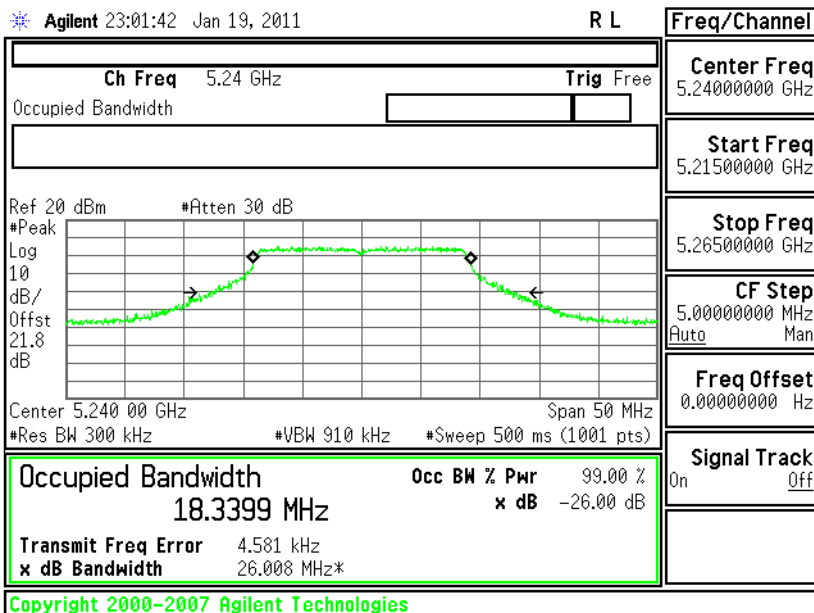
## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 48

## - Chain A



## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 48

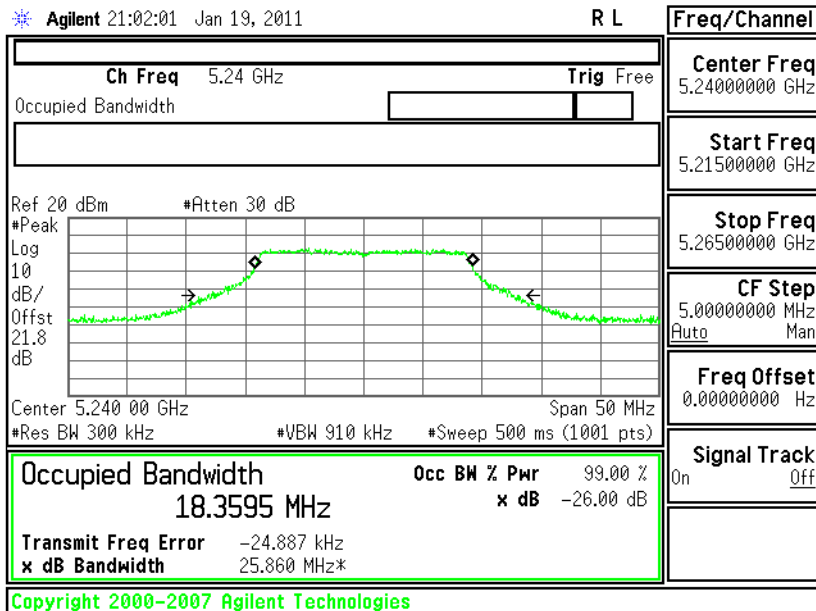
## - Chain B





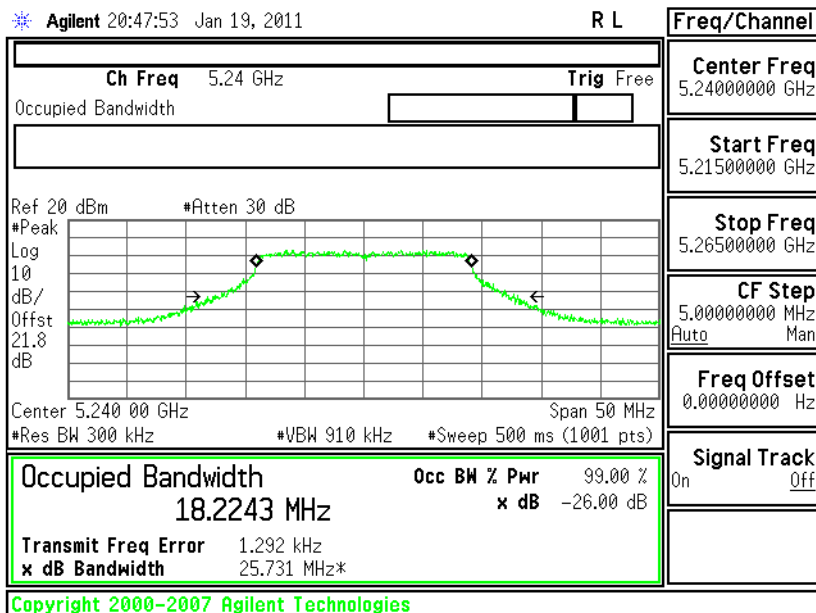
## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 48

## - Chain A+B(A)



## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 20MHz) Channel 48

## - Chain A+B(B)

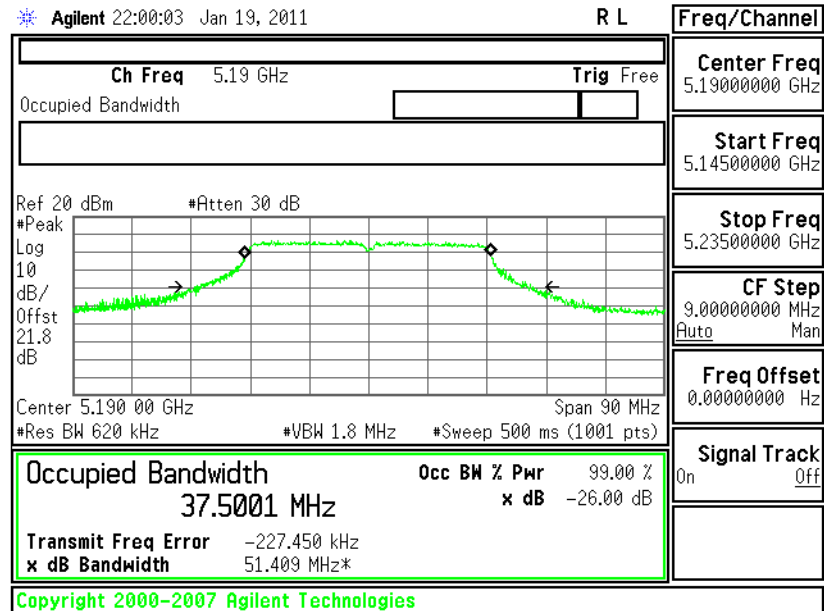






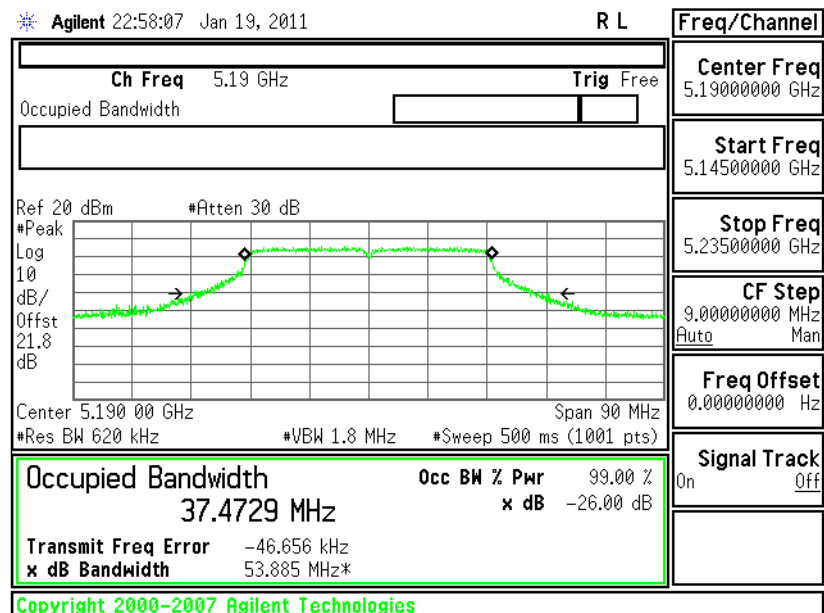
## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 40MHz) Channel 38

## - Chain A



## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 40MHz) Channel 38

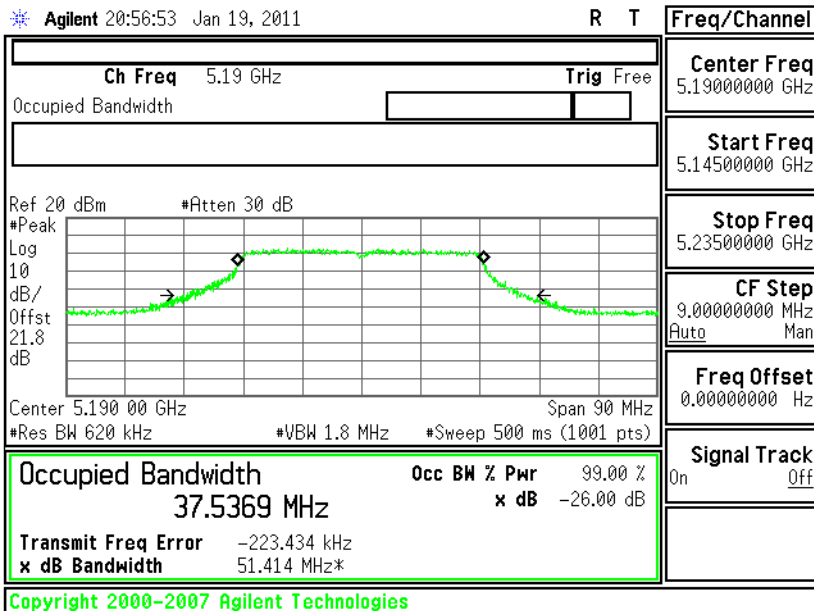
## - Chain B





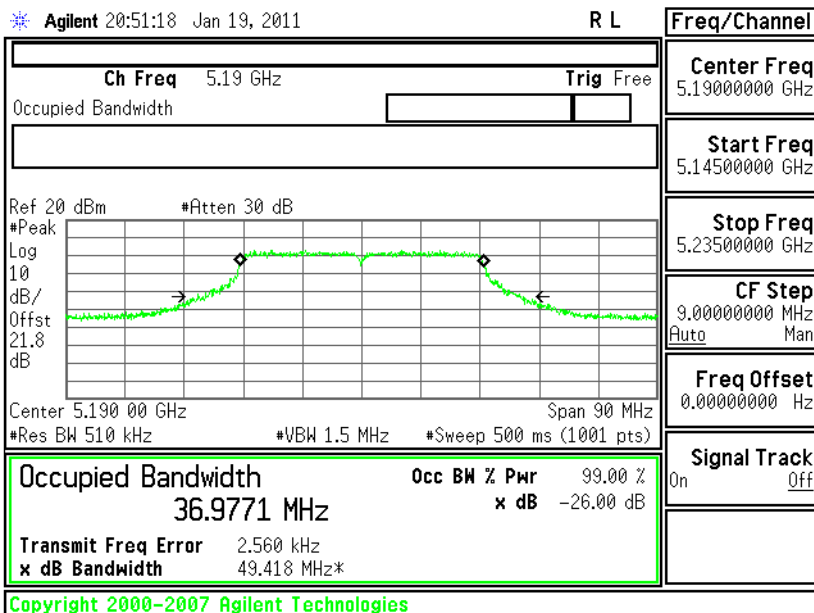
## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 40MHz) Channel 38

## - Chain A+B(A)



## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 40MHz) Channel 38

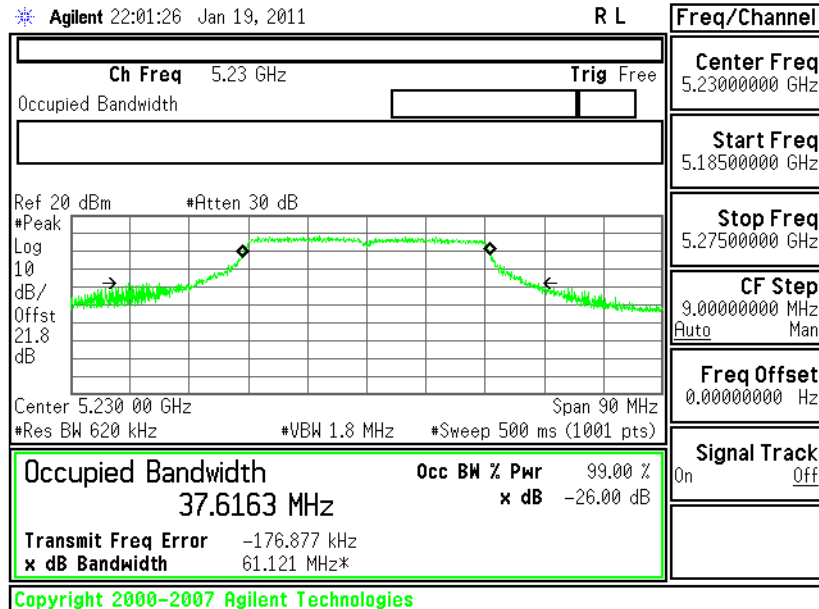
## - Chain A+B(B)





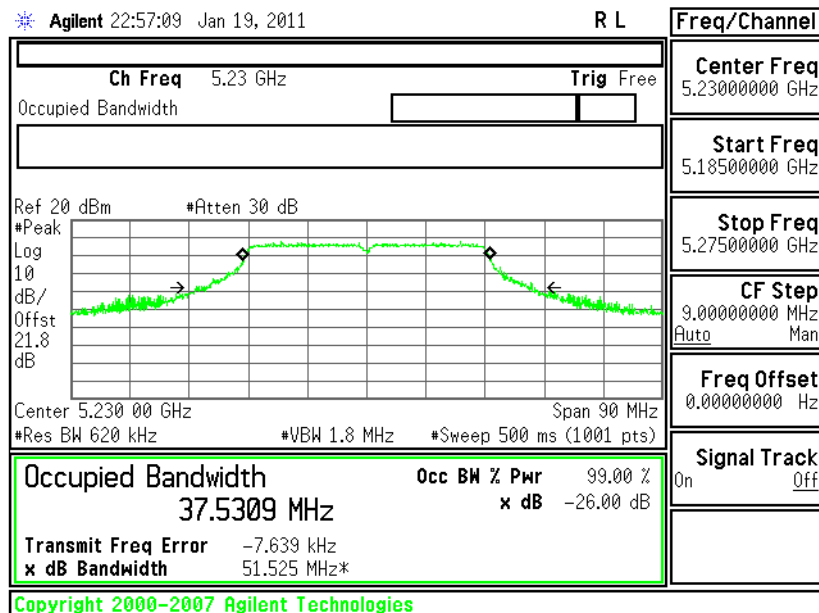
## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 40MHz) Channel 46

## - Chain A



## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 40MHz) Channel 46

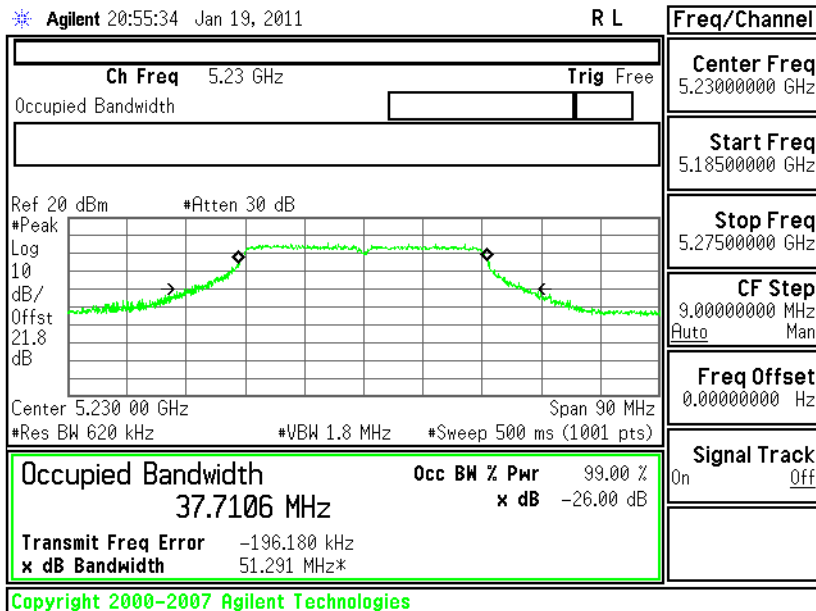
## - Chain B





## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 40MHz) Channel 46

## - Chain A+B(A)



## 26 dB &amp; 99% Bandwidth Plot on 802.11n (BW 40MHz) Channel 46

## - Chain A+B(B)

