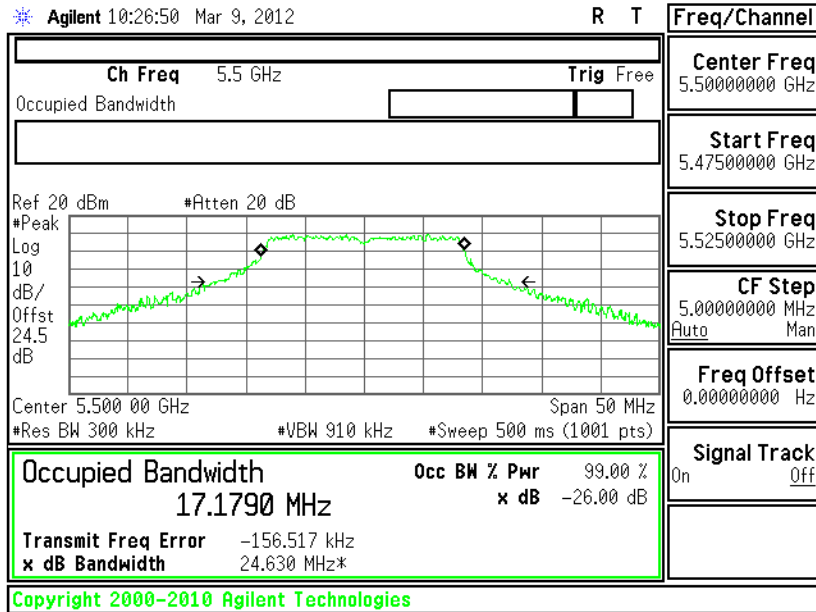
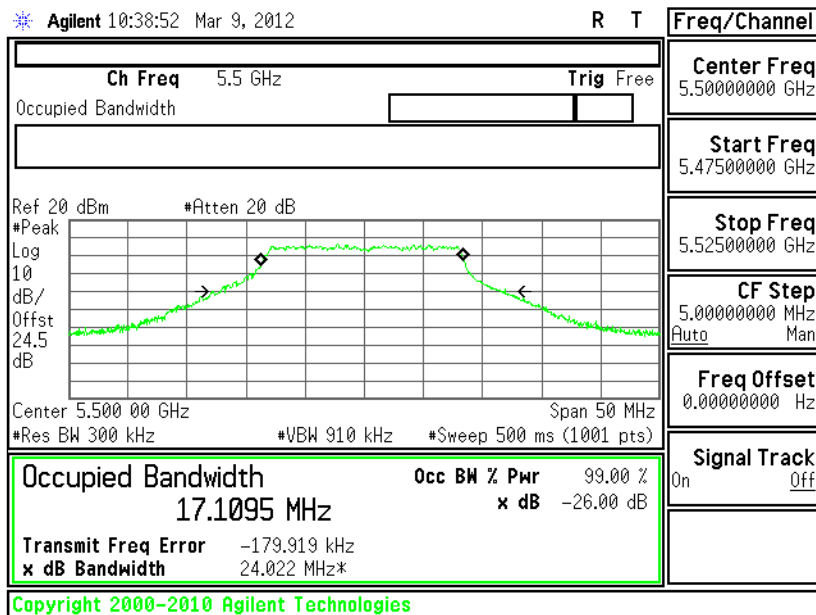




26 dB Bandwidth Plot on 802.11a Channel 100 - Chain B

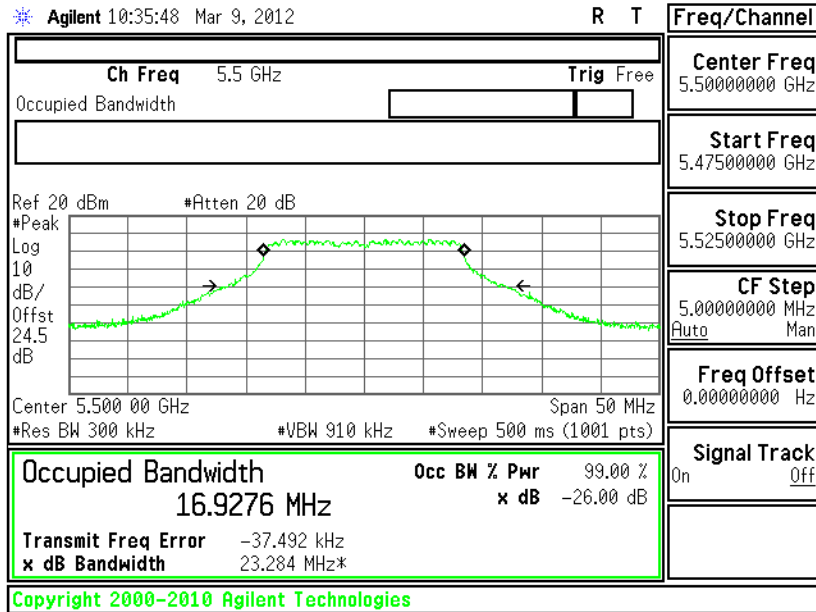


26 dB Bandwidth Plot on 802.11a Channel 100 - Chain A+B(A)

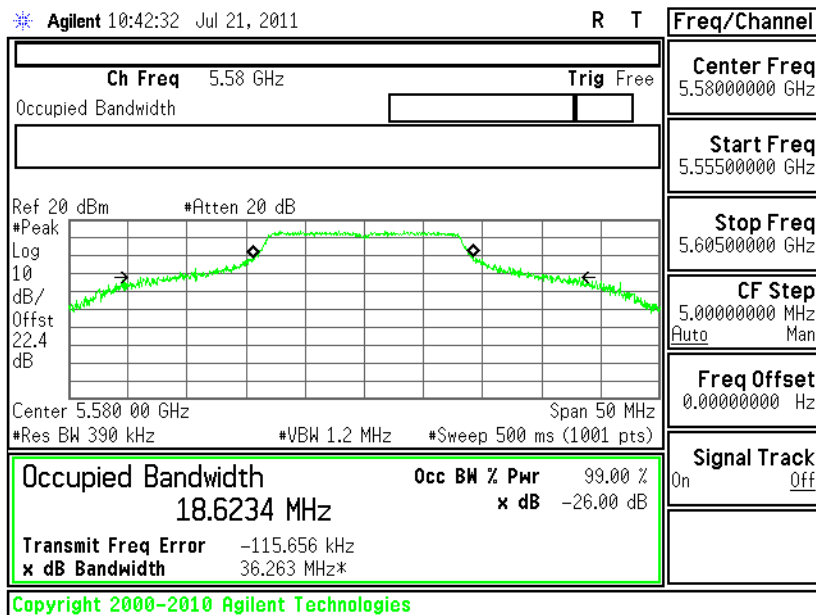




26 dB Bandwidth Plot on 802.11a Channel 100 - Chain A+B(B)

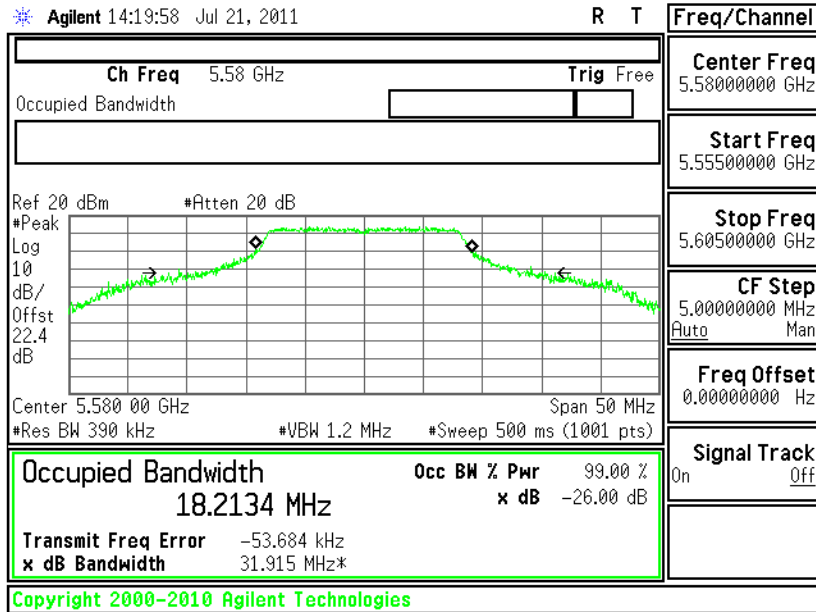


26 dB Bandwidth Plot on 802.11a Channel 116 - Chain A

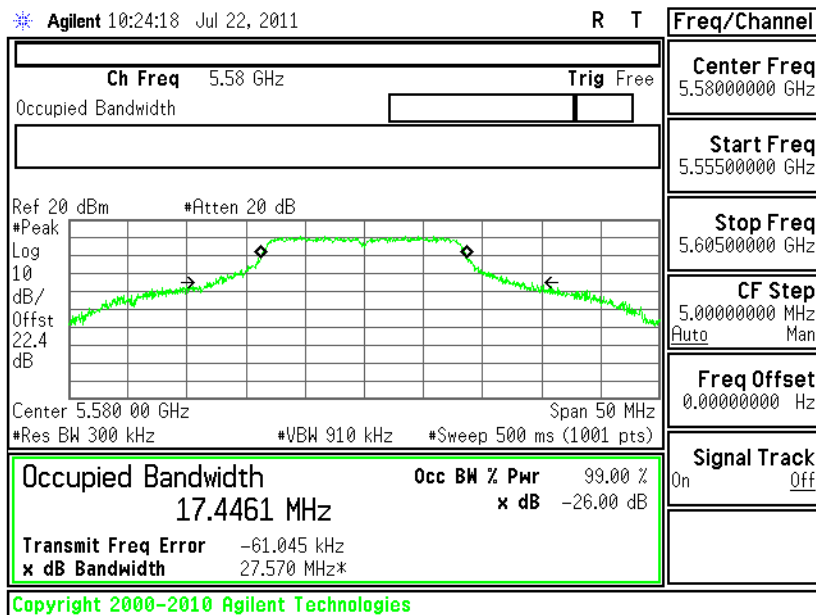




26 dB Bandwidth Plot on 802.11a Channel 116 - Chain B

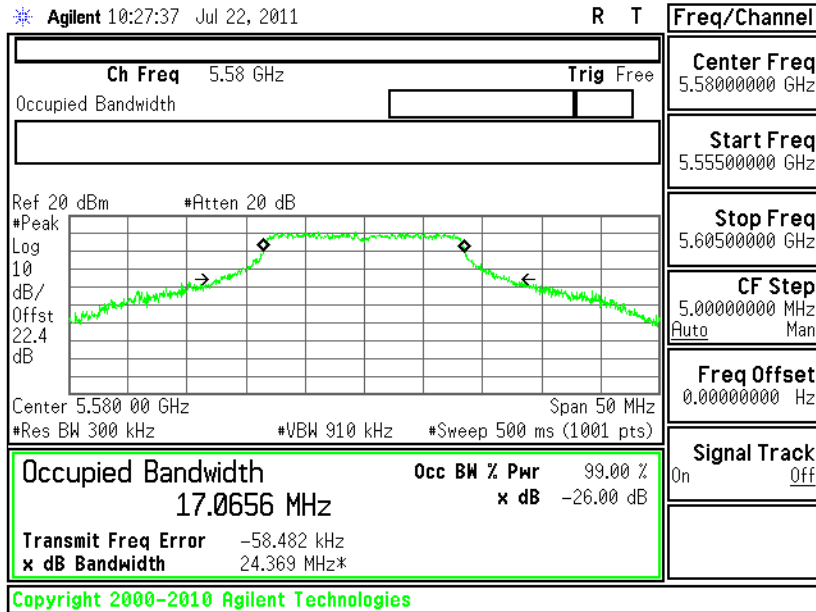


26 dB Bandwidth Plot on 802.11a Channel 116 - Chain A+B(A)

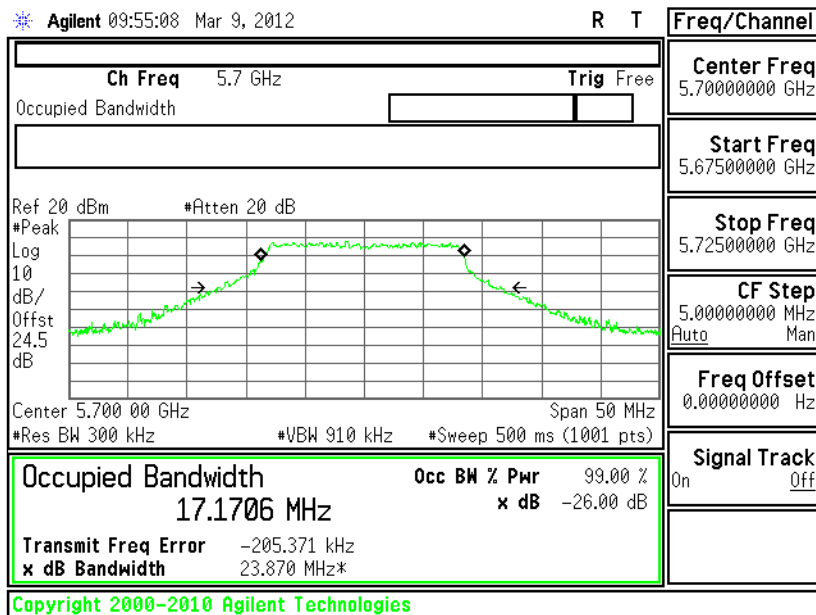




26 dB Bandwidth Plot on 802.11a Channel 116 - Chain A+B(B)

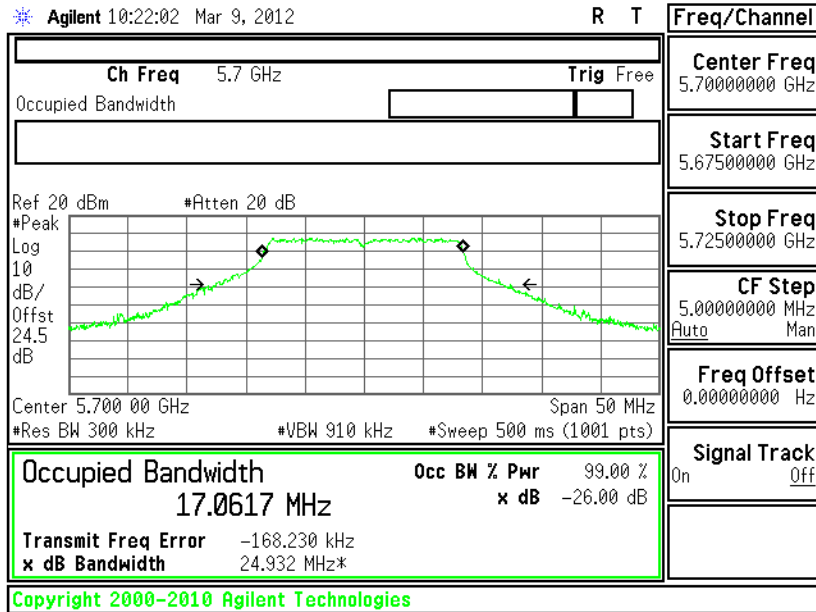


26 dB Bandwidth Plot on 802.11a Channel 140 - Chain A

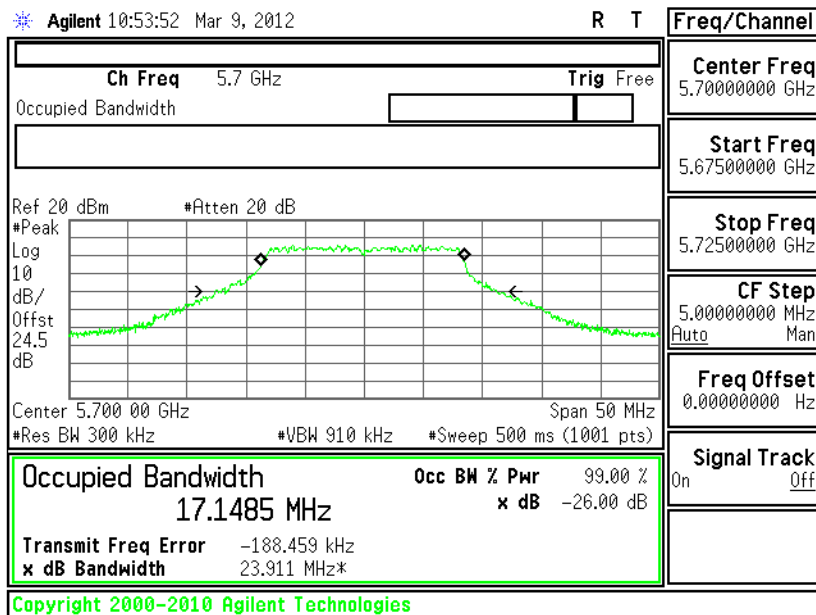




26 dB Bandwidth Plot on 802.11a Channel 140 - Chain B

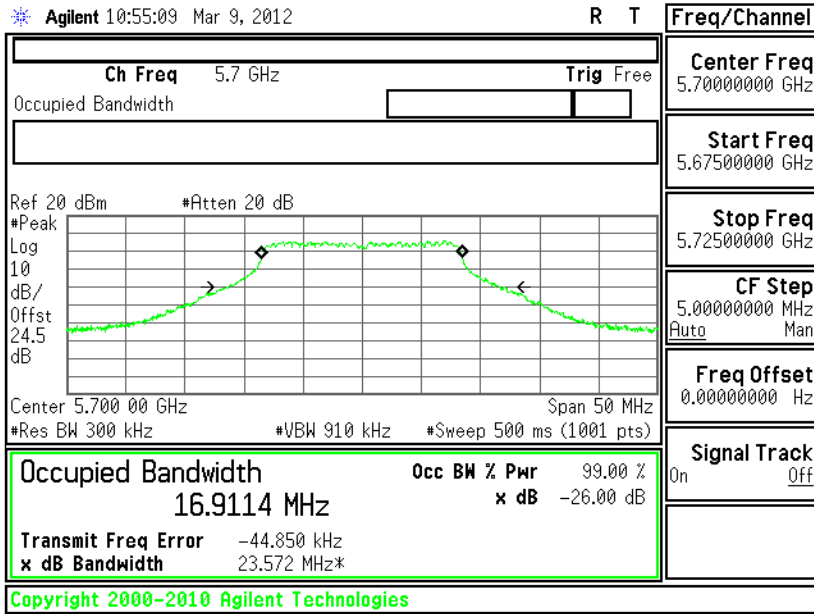


26 dB Bandwidth Plot on 802.11a Channel 140 - Chain A+B(A)





26 dB Bandwidth Plot on 802.11a Channel 140 - Chain A+B(B)



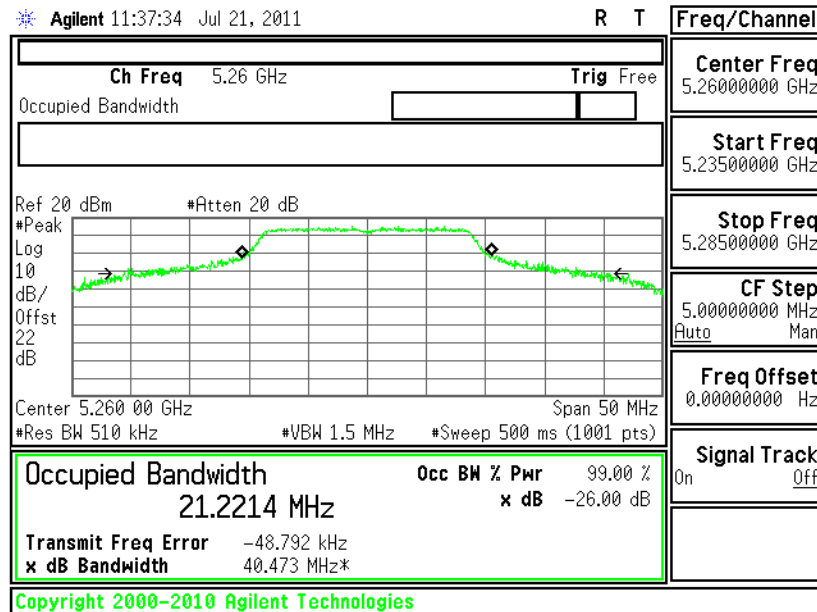


Test Mode :	Mode 7~12	Temperature :	23~25°C
Test Engineer :	Hank Yu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11n (BW 20MHz) 26dB Bandwidth (MHz)				Pass/Fail
		SISO		MIMO (2Tx)		
		Chain A	Chain B	Chain A+B(A)	Chain A+B(B)	
52	5260	40.473	37.456	28.554	25.737	N/A
60	5300	35.843	31.119	28.707	25.957	N/A
64	5320	27.214	25.841	25.383	25.581	N/A
100	5500	24.745	25.331	23.557	24.682	N/A
116	5580	36.765	33.604	27.262	27.116	N/A
140	5700	24.951	25.810	23.523	24.681	N/A

26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 52

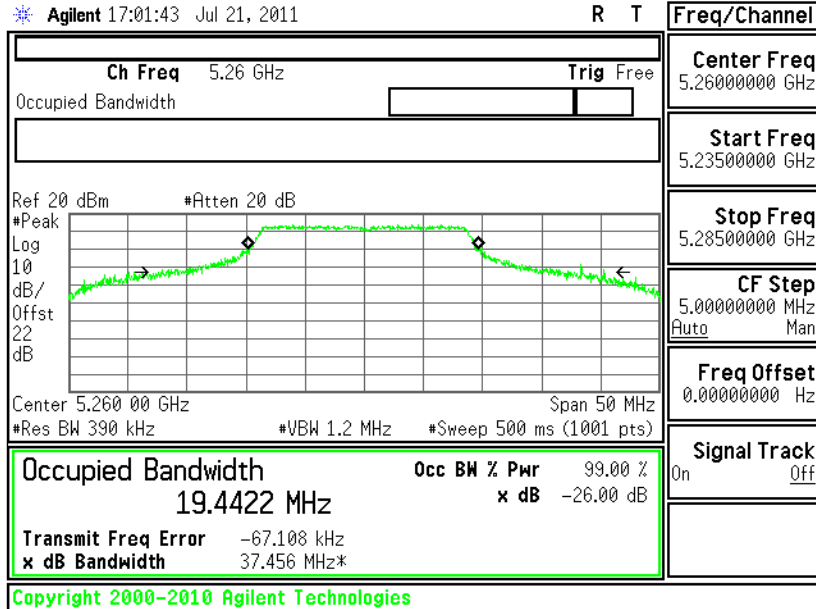
- Chain A





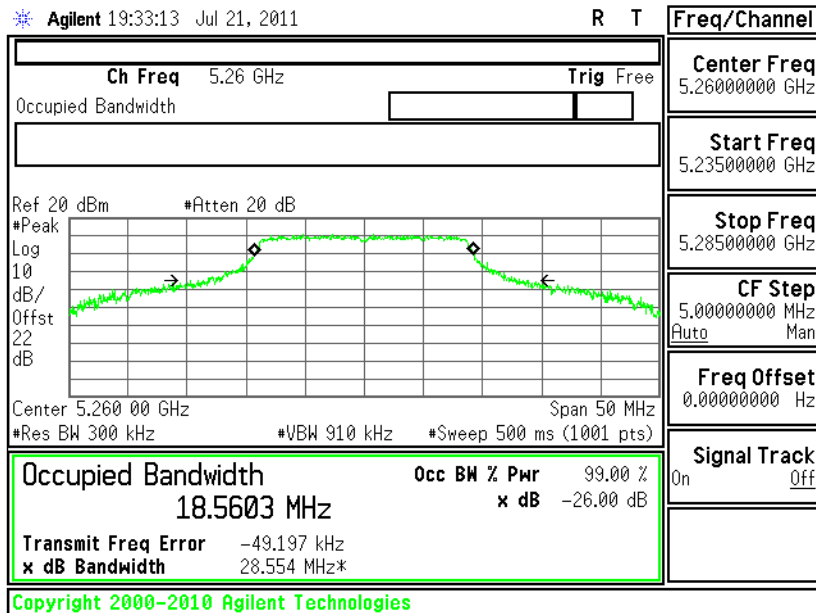
26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 52

- Chain B



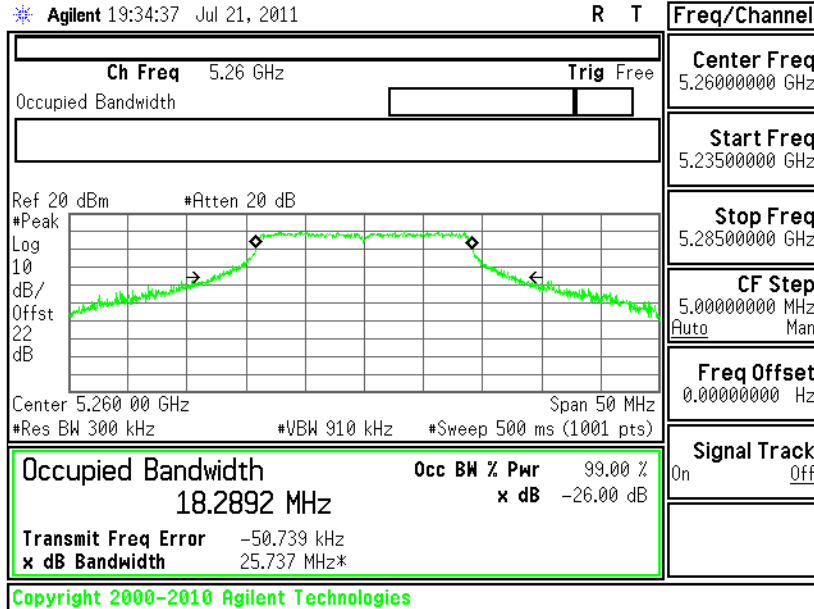
26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 52 - Chain

A+B(A)

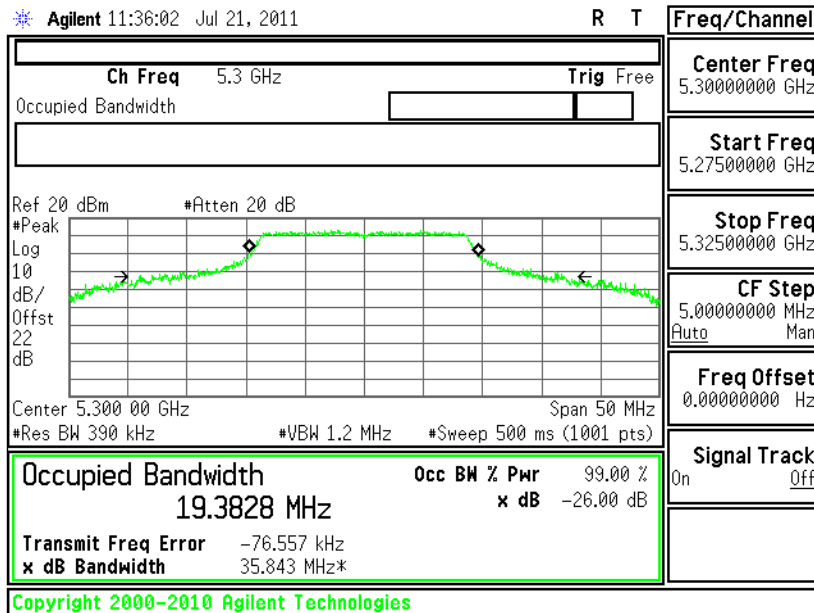




26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 52 - Chain A+B(B)



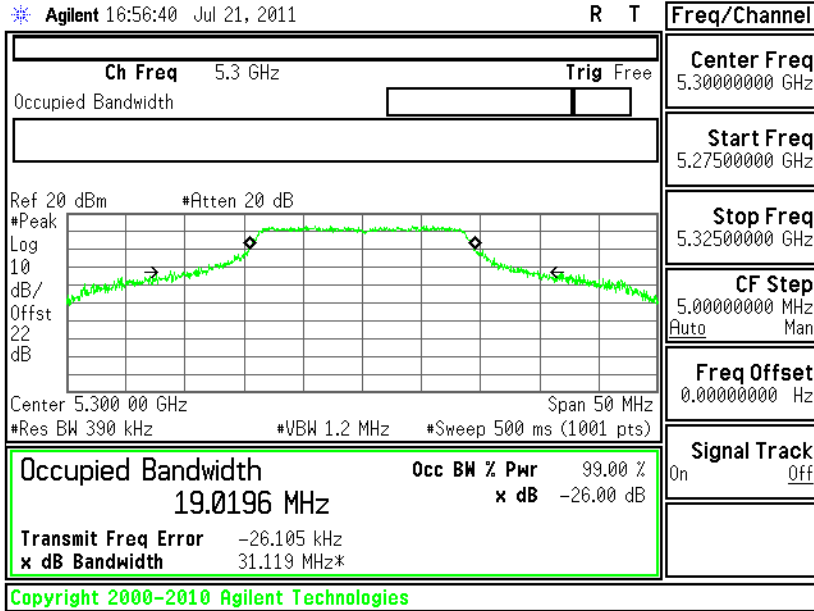
26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 60 - Chain A





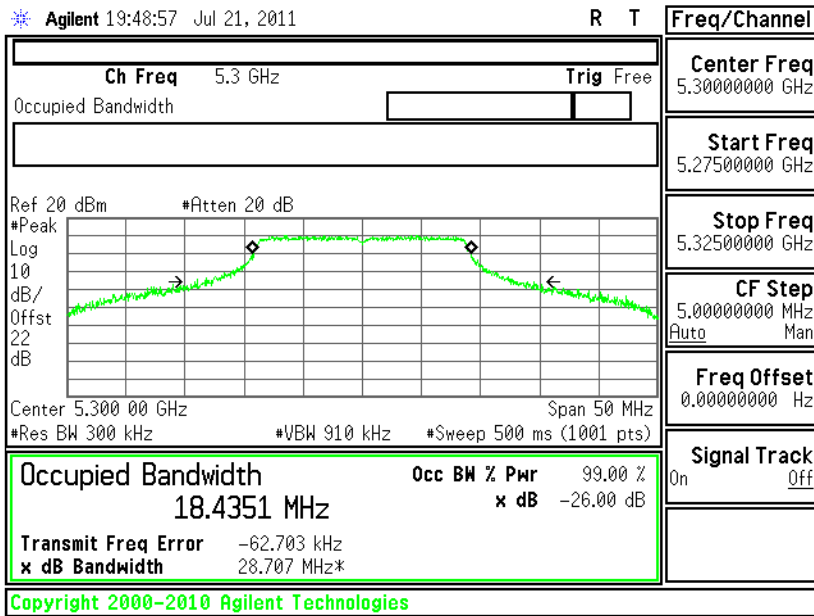
26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 60

- Chain B



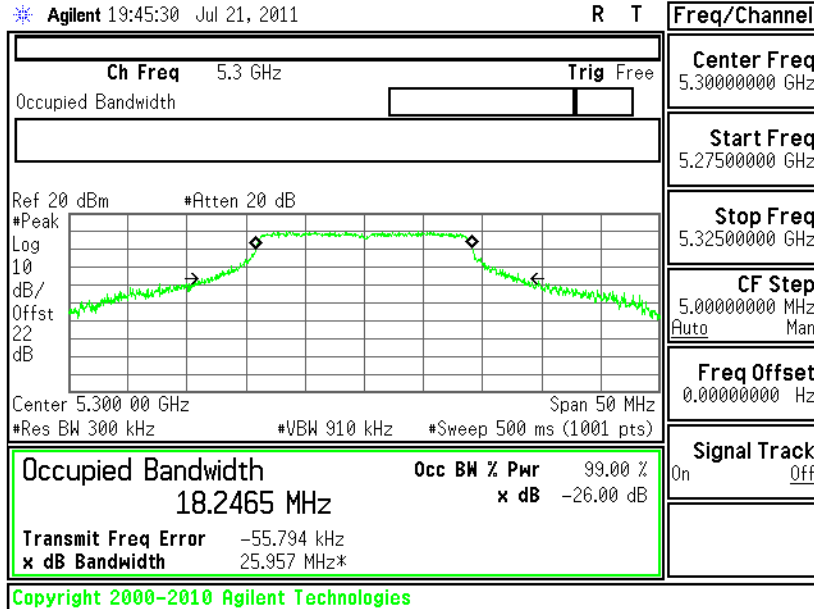
26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 60 - Chain

A+B(A)

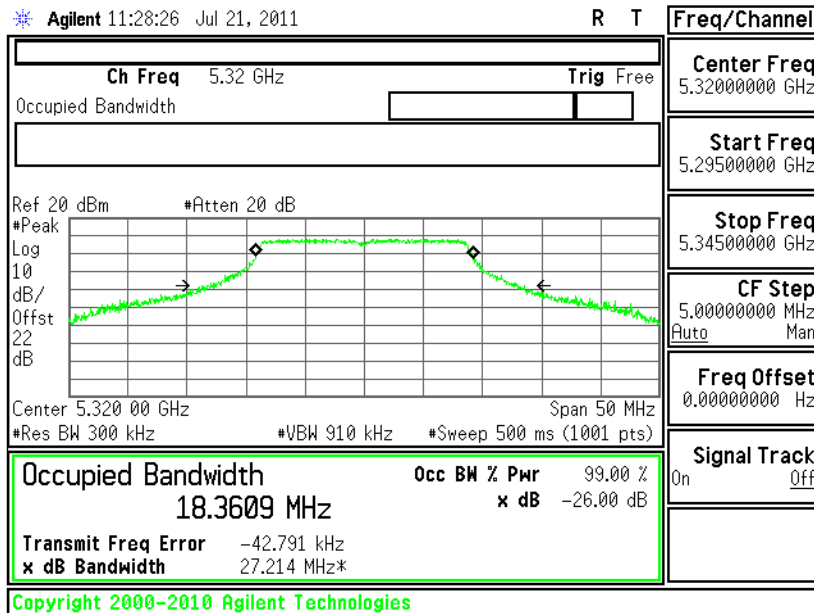




26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 60 - Chain A+B(B)



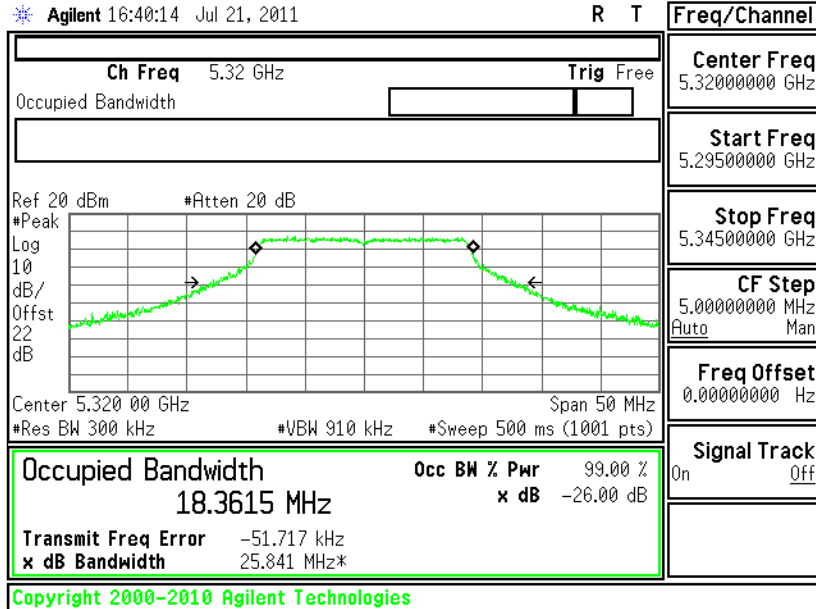
26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 64 - Chain A





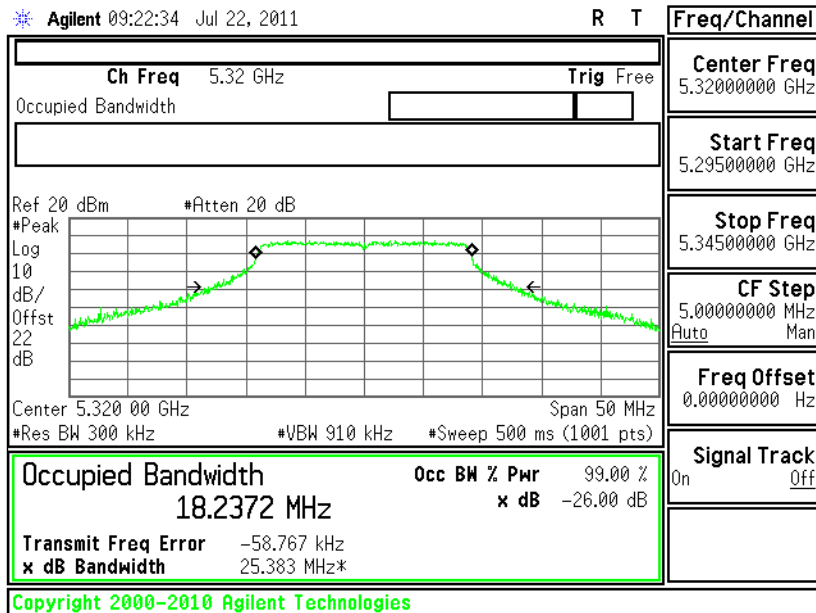
26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 64

- Chain B



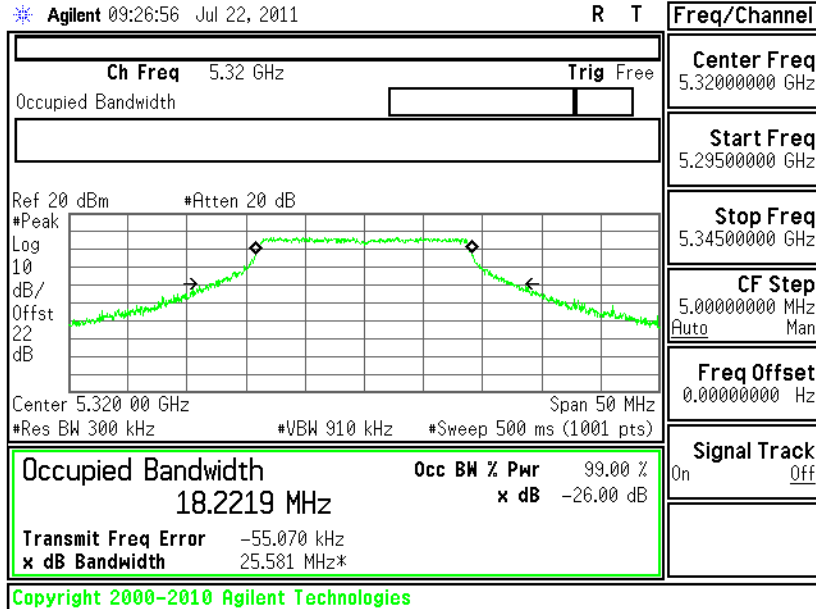
26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 64 - of

Chain A+B(A)

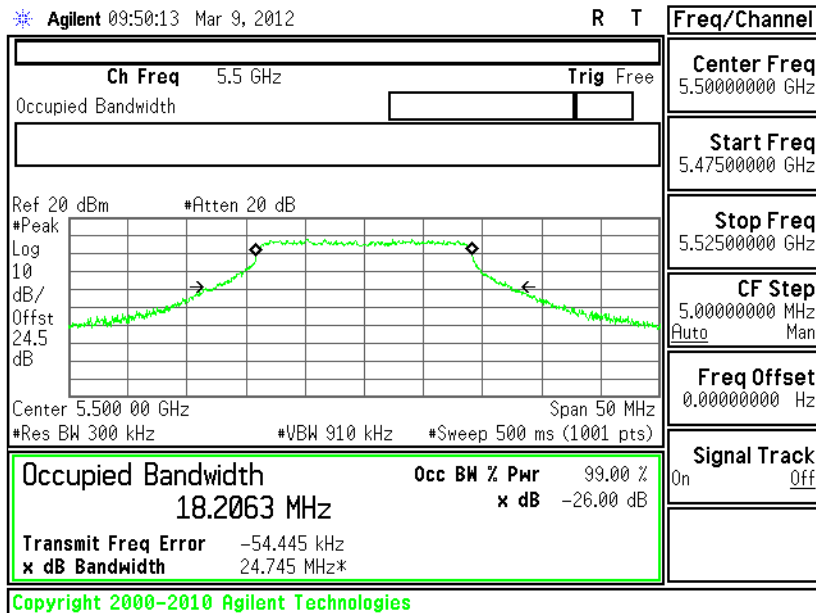




26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 64 - of Chain A+B(B)



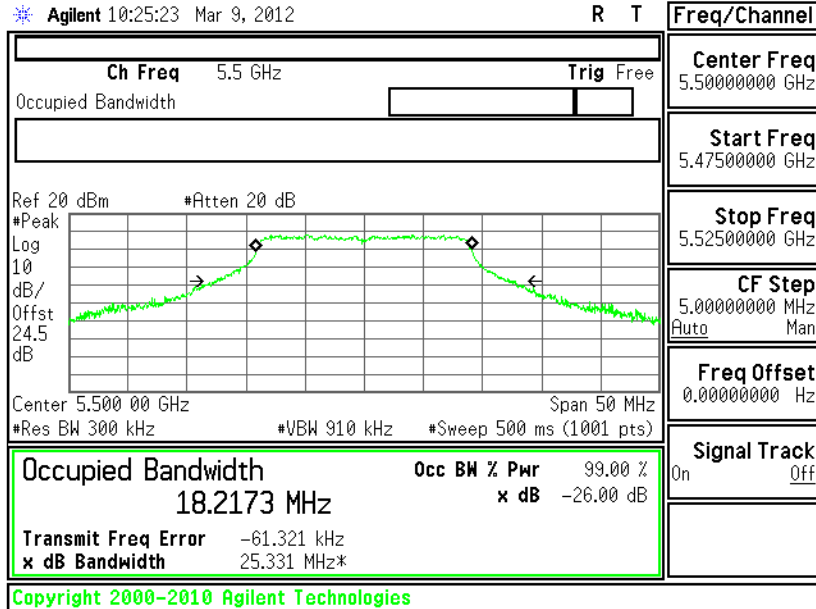
26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 100 - Chain A





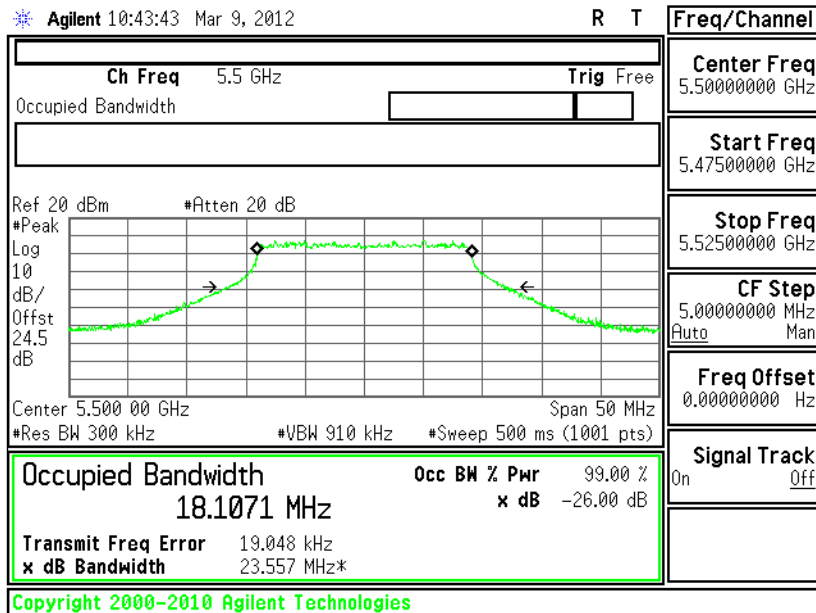
26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 100

- Chain B



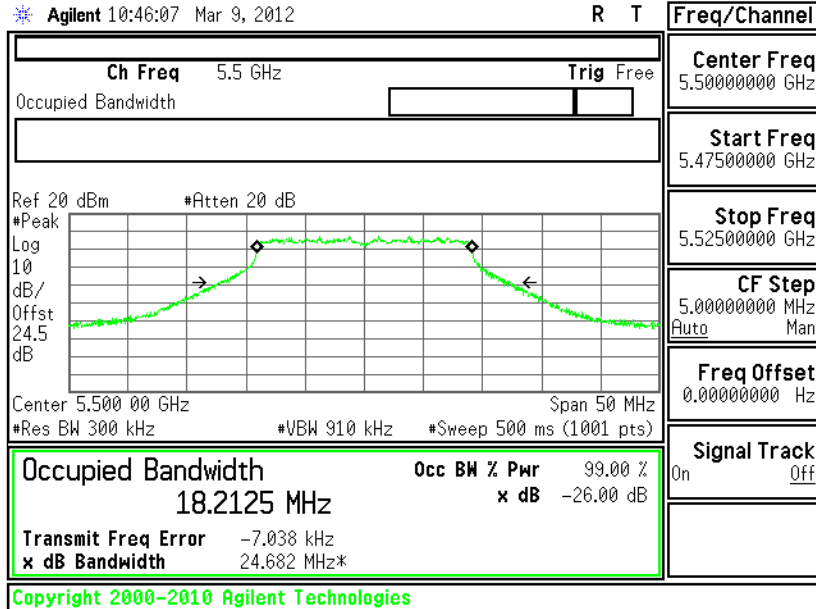
26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 100 -

Chain A+B(A)

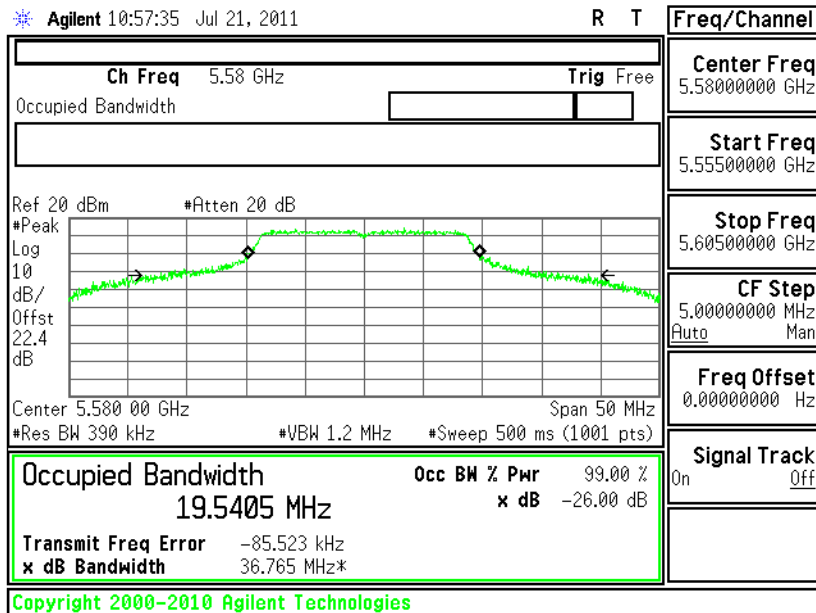




26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 100 - Chain A+B(B)



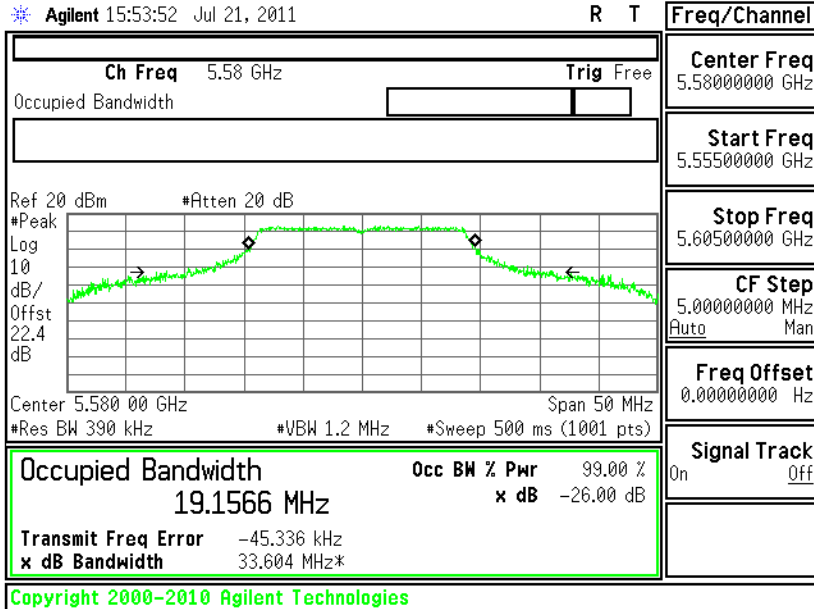
26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 116 - Chain A





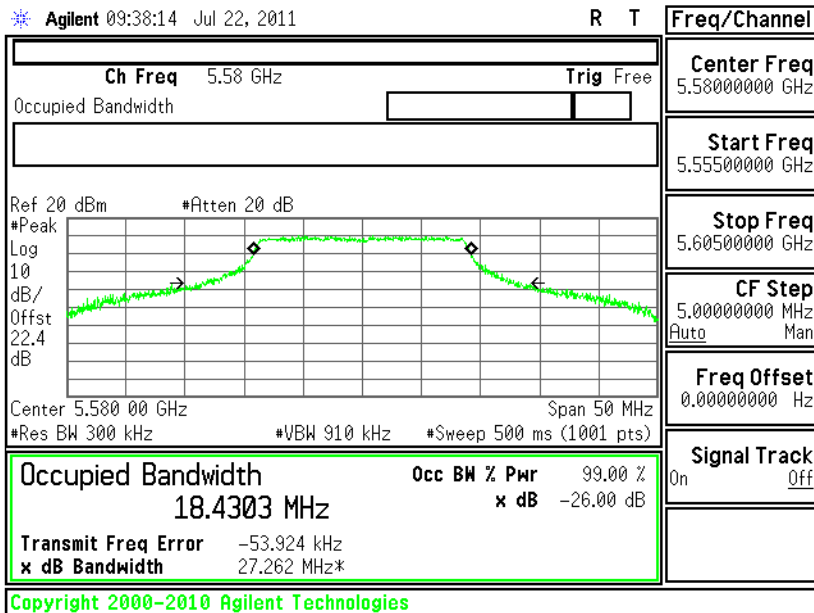
26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 116

- Chain B



26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 116 -

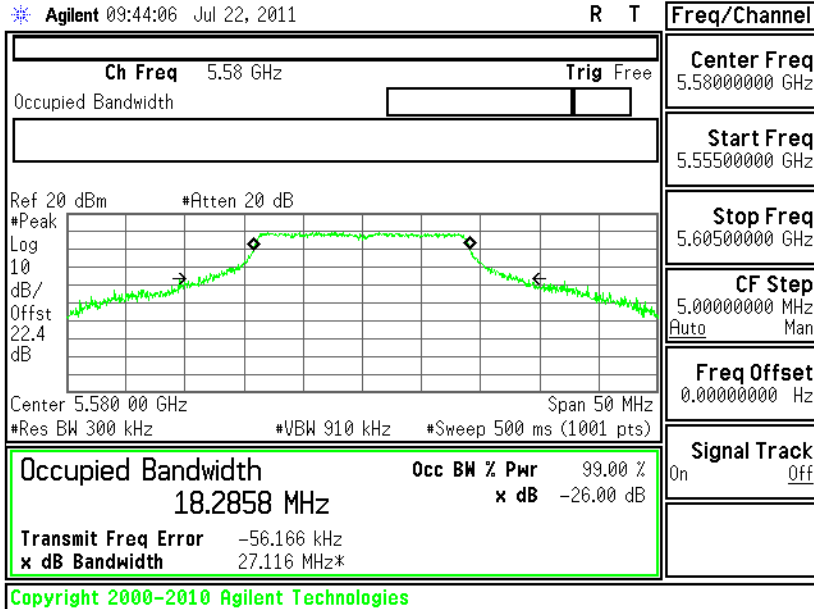
Chain A+B(A)





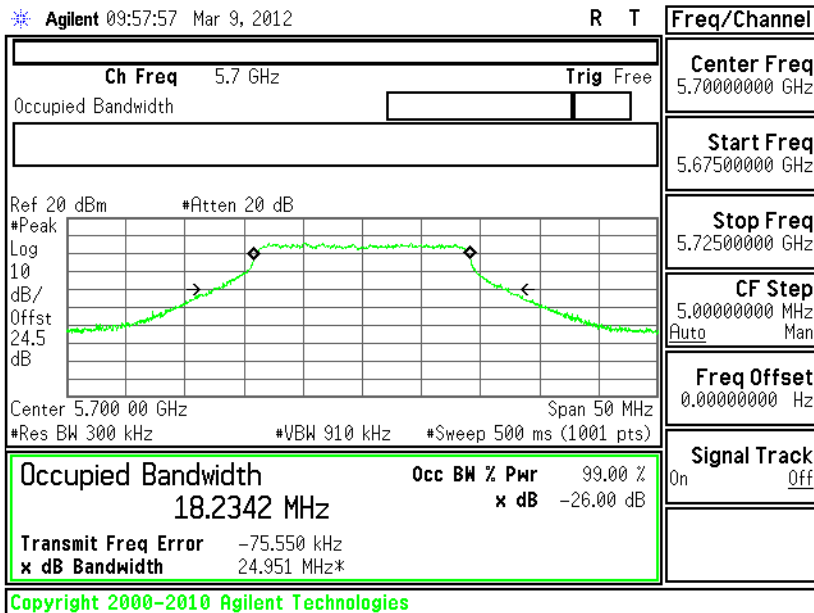
26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 116 -

Chain A+B(B)



26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 140

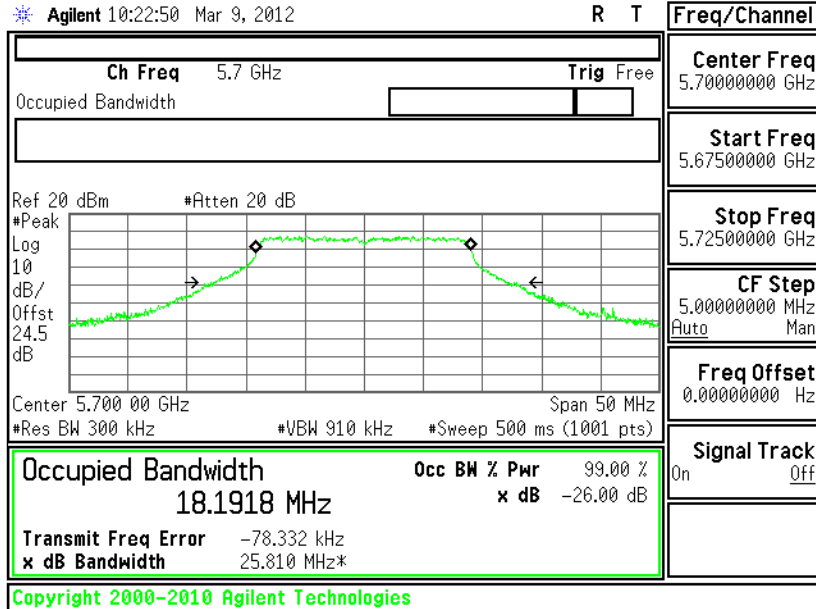
- Chain A





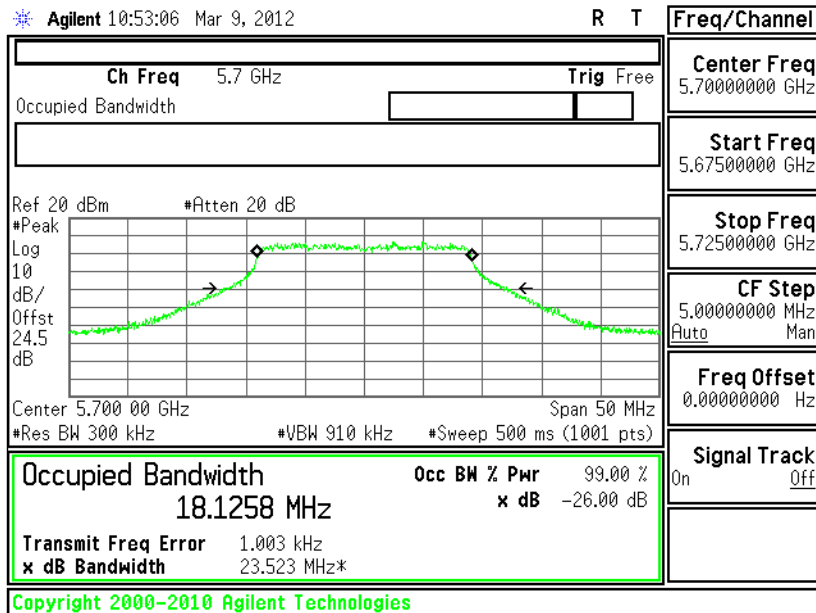
26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 140

- Chain B



26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 140 -

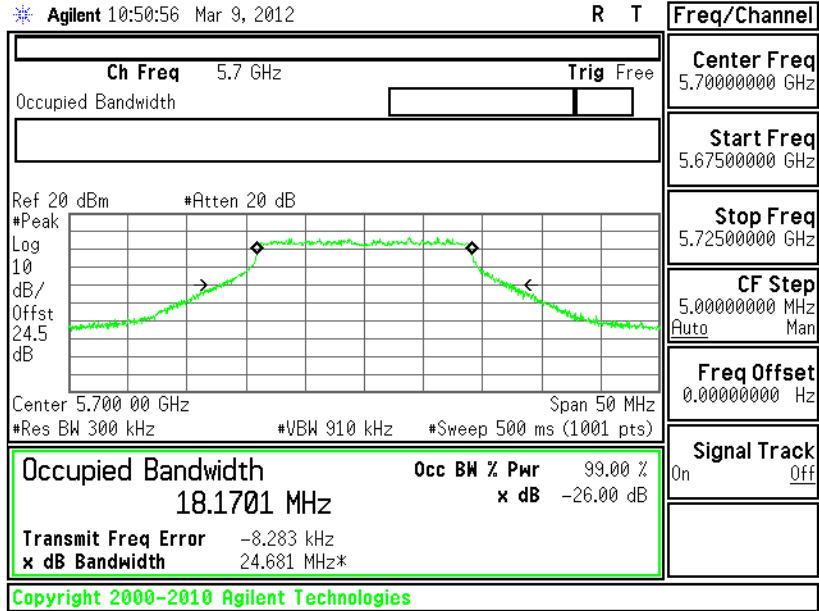
Chain A+B(A)





26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 140 -

Chain A+B(B)



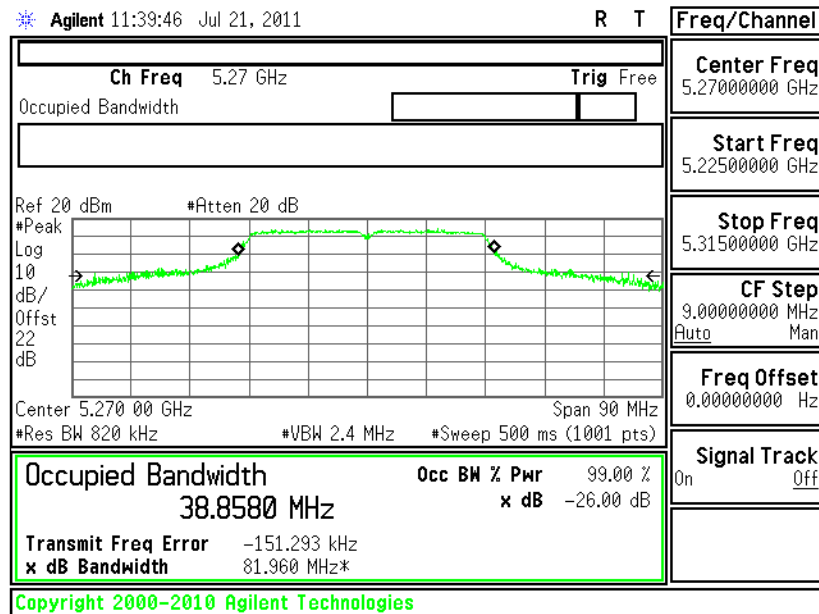


Test Mode :	Mode 13~17	Temperature :	23~25°C
Test Engineer :	Hank Yu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11n (BW 40MHz) 26dB Bandwidth (MHz)				Pass/Fail
		SISO		MIMO (2Tx)		
		Chain A	Chain B	Chain A+B(A)	Chain A+B(B)	
54	5270	81.960	69.710	77.769	79.783	N/A
62	5310	48.734	51.883	48.832	51.608	N/A
102	5510	51.537	52.054	48.716	47.577	N/A
110	5550	69.962	69.888	70.367	58.508	N/A
134	5670	52.908	50.580	49.024	48.087	N/A

26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 54

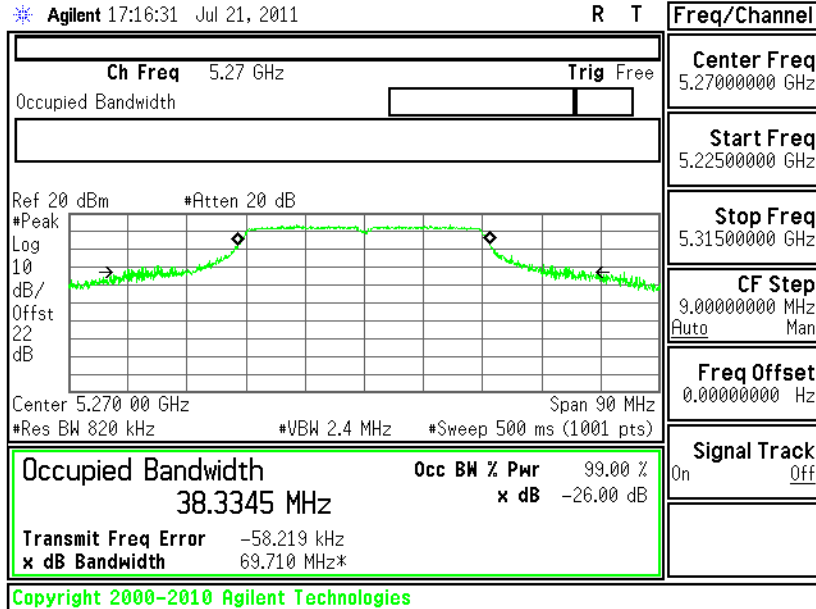
- Chain A





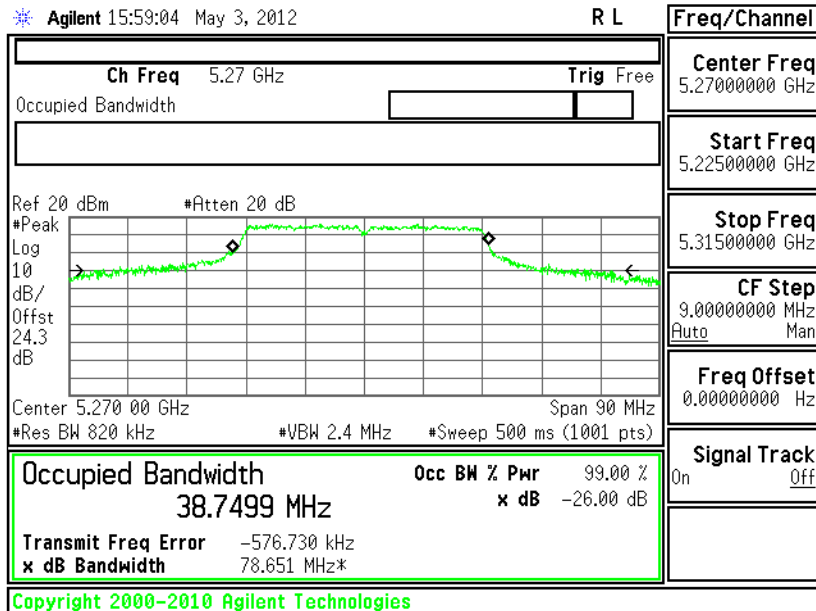
26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 54

- Chain B



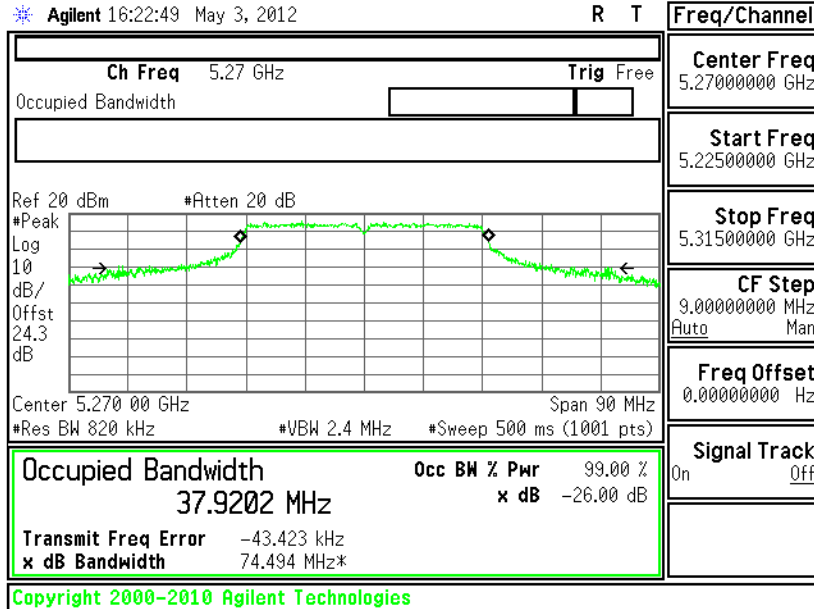
26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 54 - Chain

A+B(A)

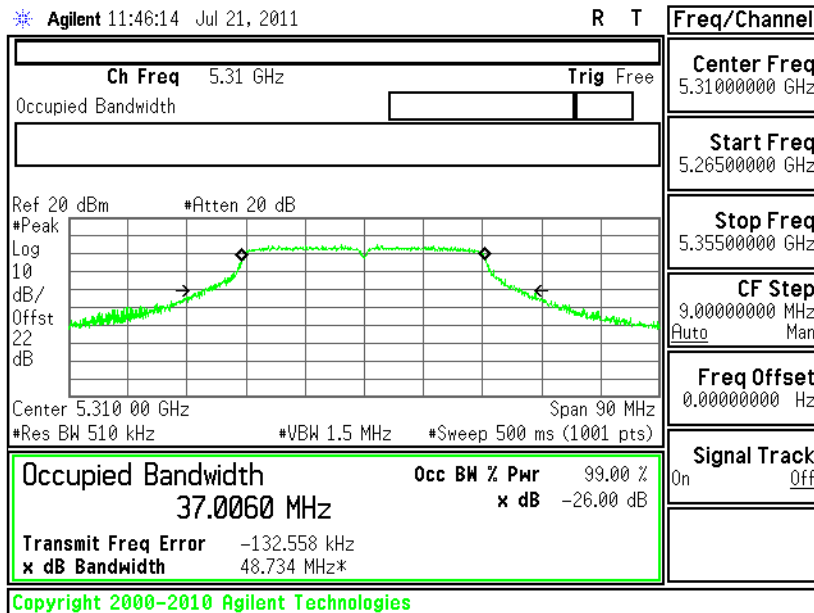




26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 54 - Chain A+B(B)



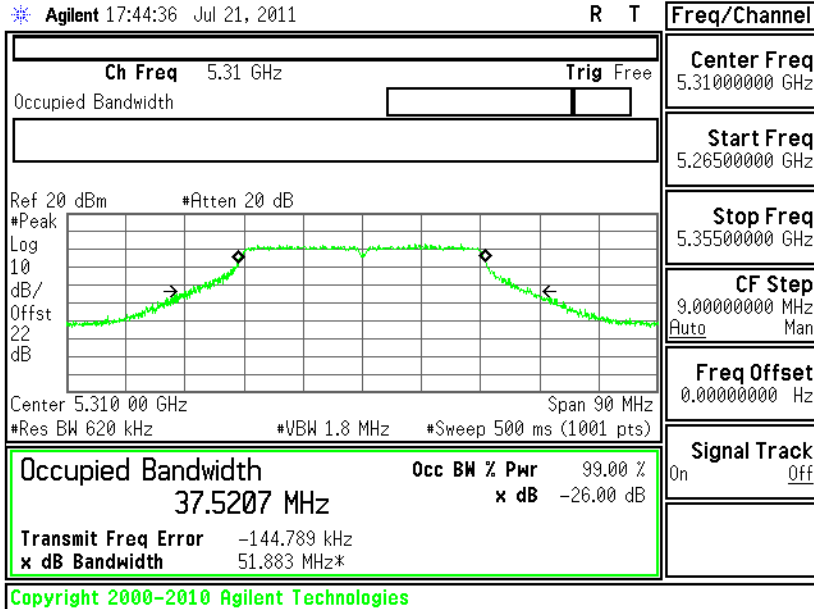
26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 62 - Chain A





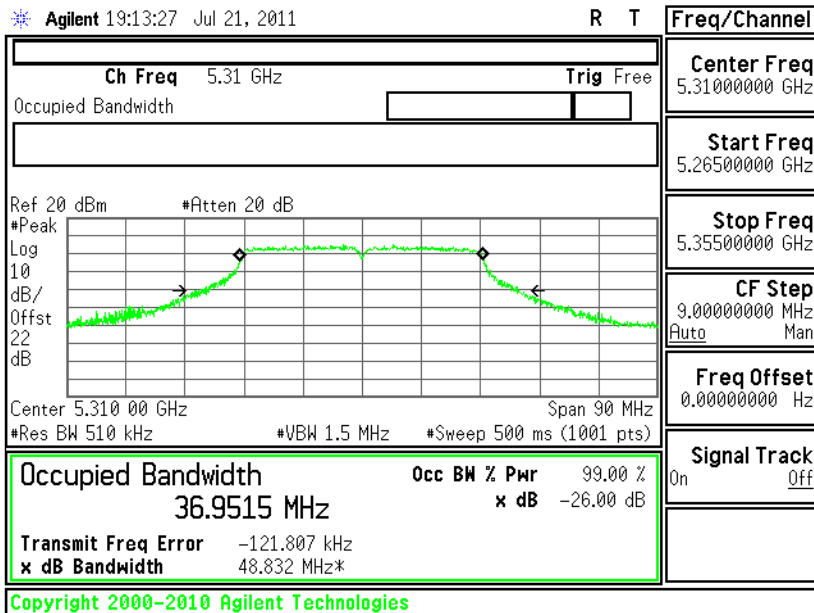
26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 62

- Chain B



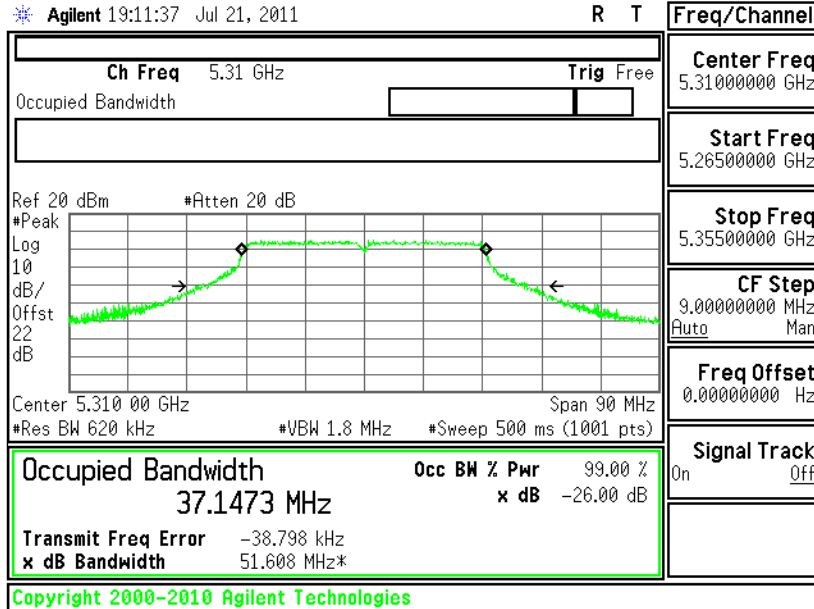
26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 62 - Chain

A+B(A)

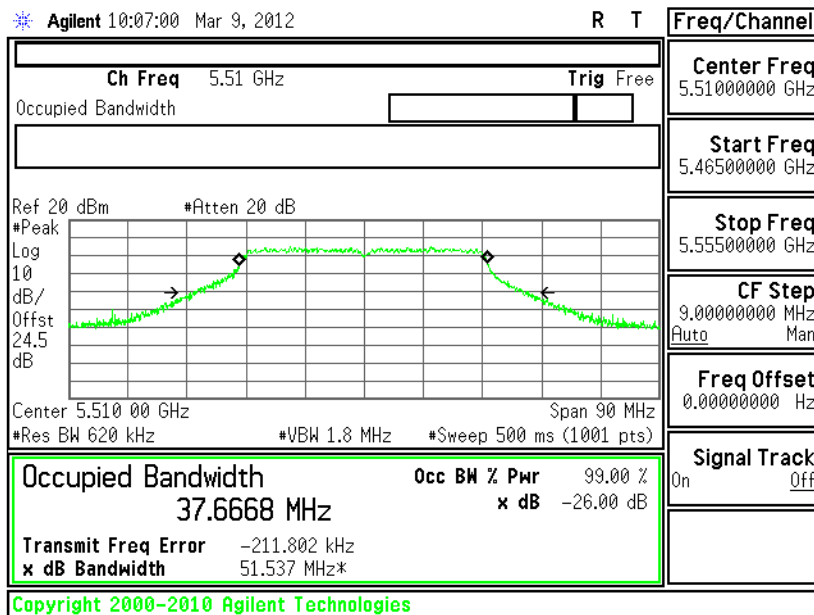




26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 62 - Chain A+B(B)



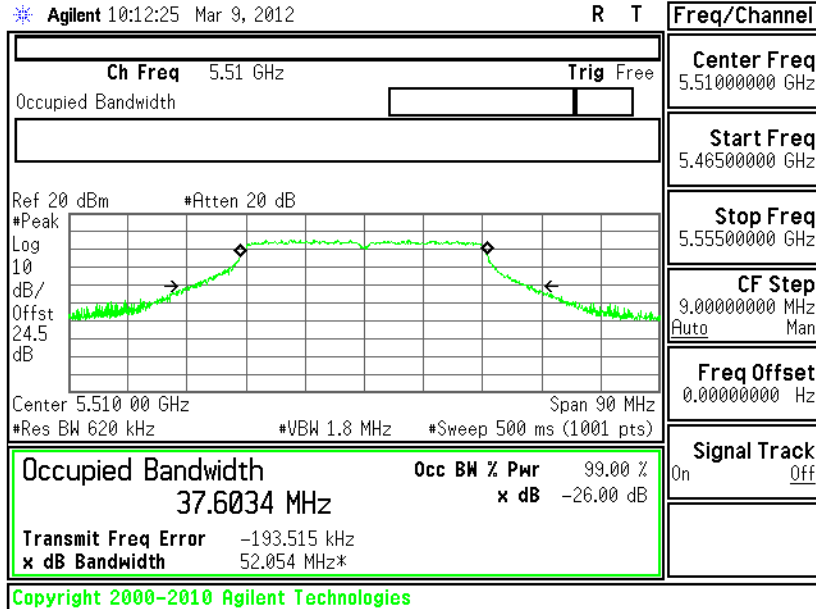
26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 102 - Chain A





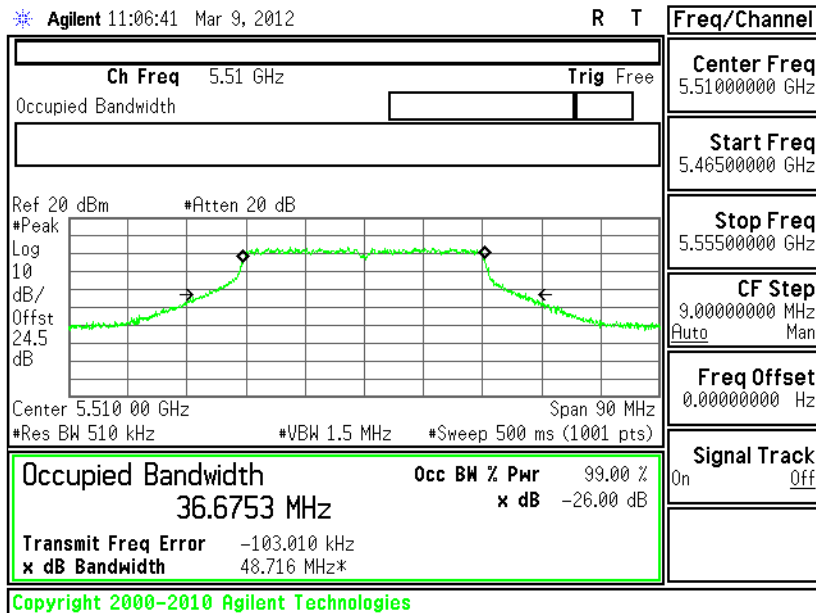
26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 102 -

Chain B



26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 102 -

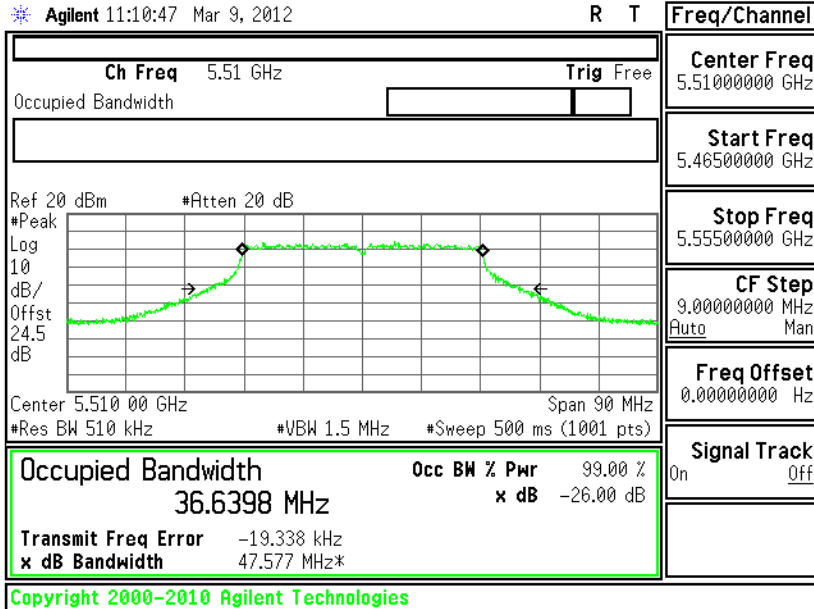
Chain A+B(A)





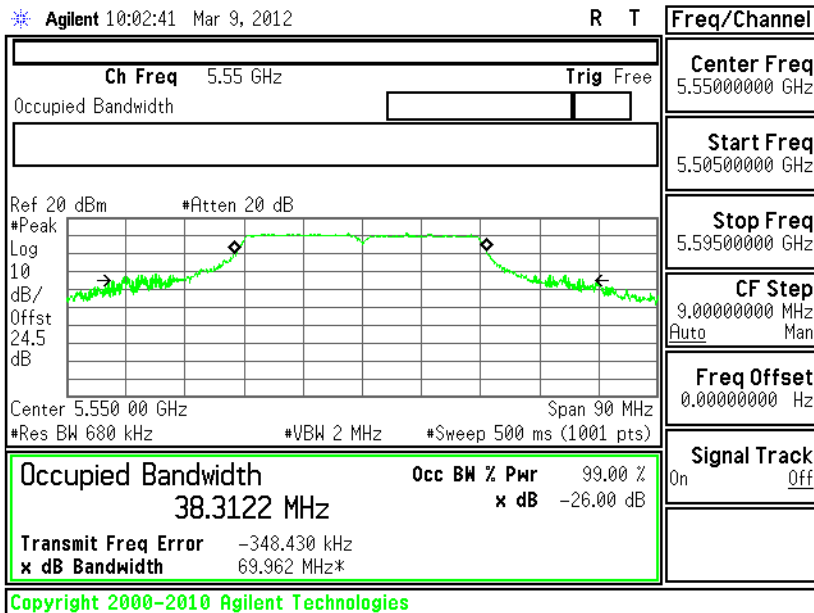
26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 102 -

Chain A+B(B)



26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 110 -

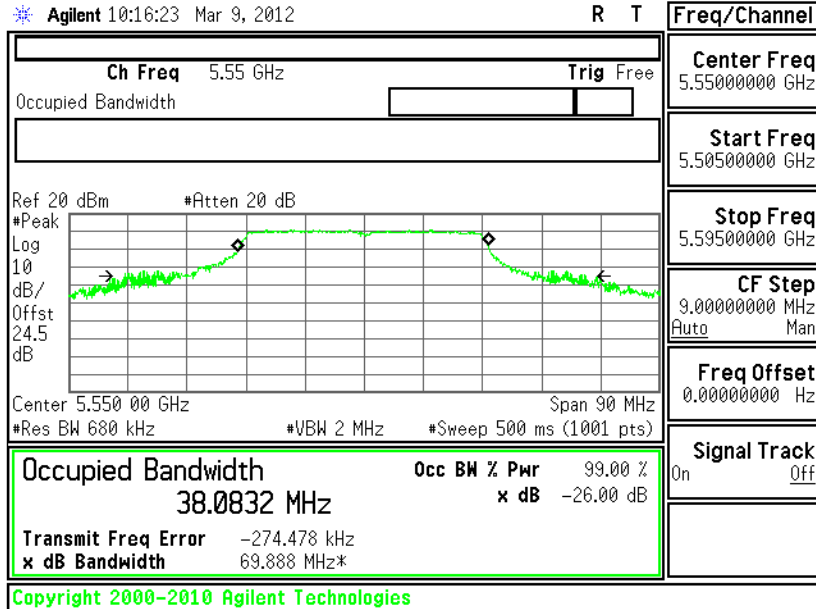
Chain A





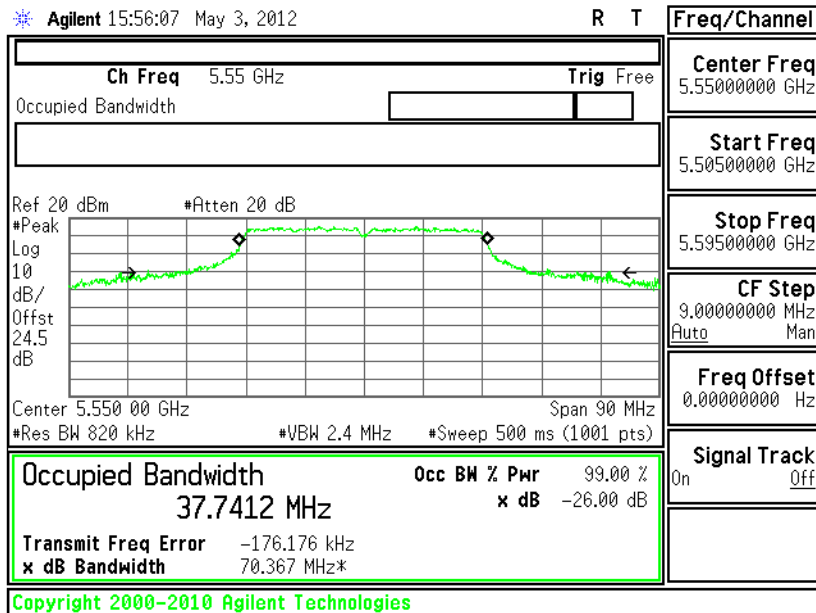
26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 110 -

Chain B



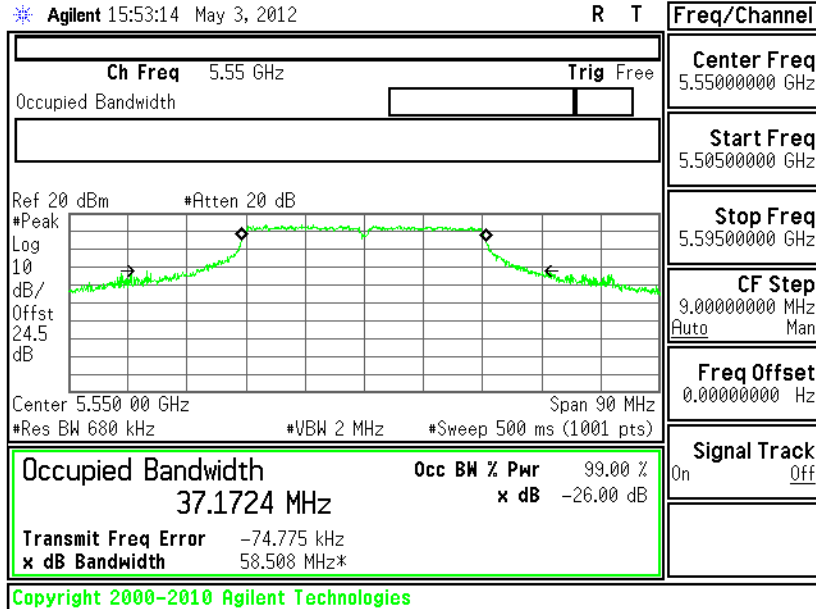
26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 110 -

Chain A+B(A)

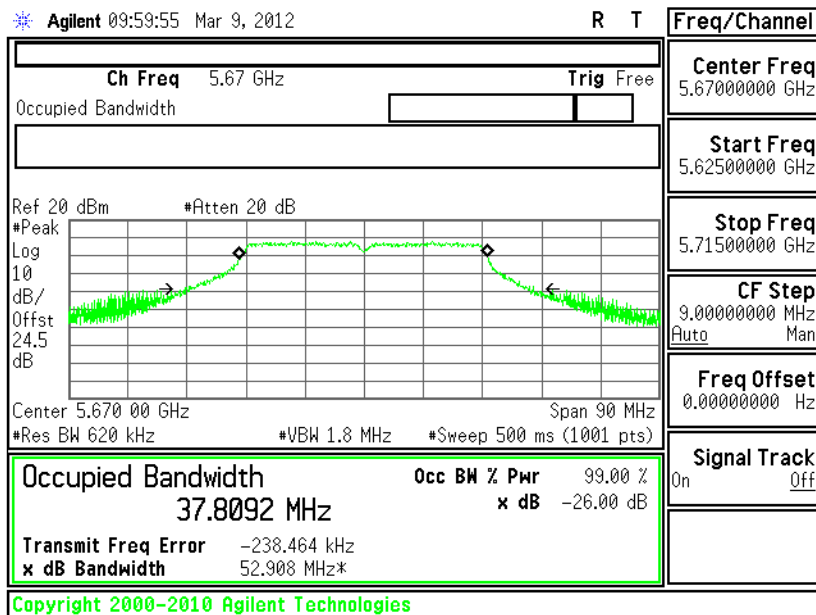




26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 110 -
Chain A+B(B)



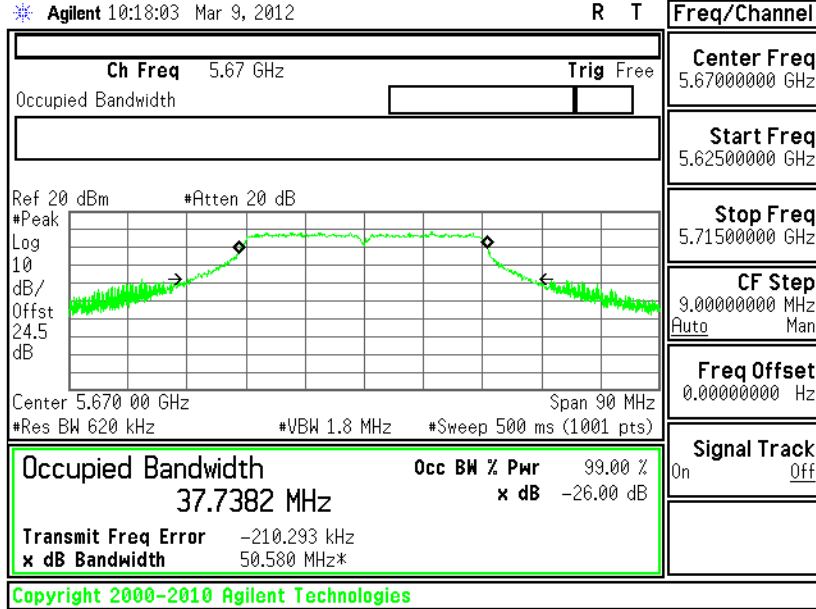
26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 134 -
Chain A





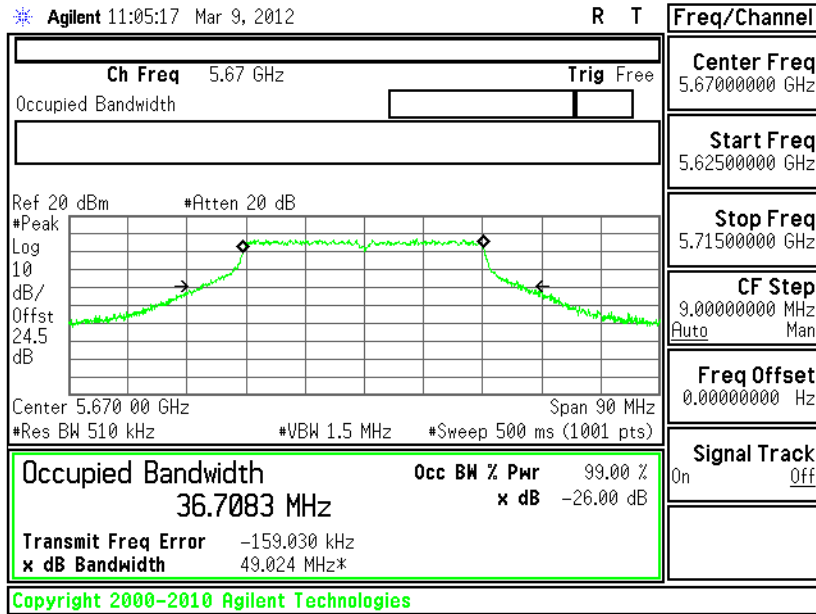
26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 134 -

Chain B



26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 134 -

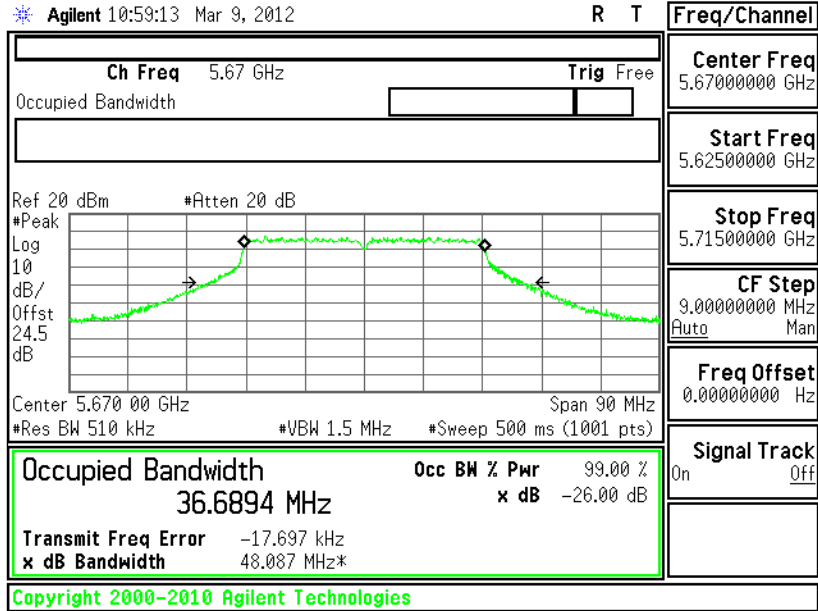
Chain A+B(A)





26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 134 -

Chain A+B(B)



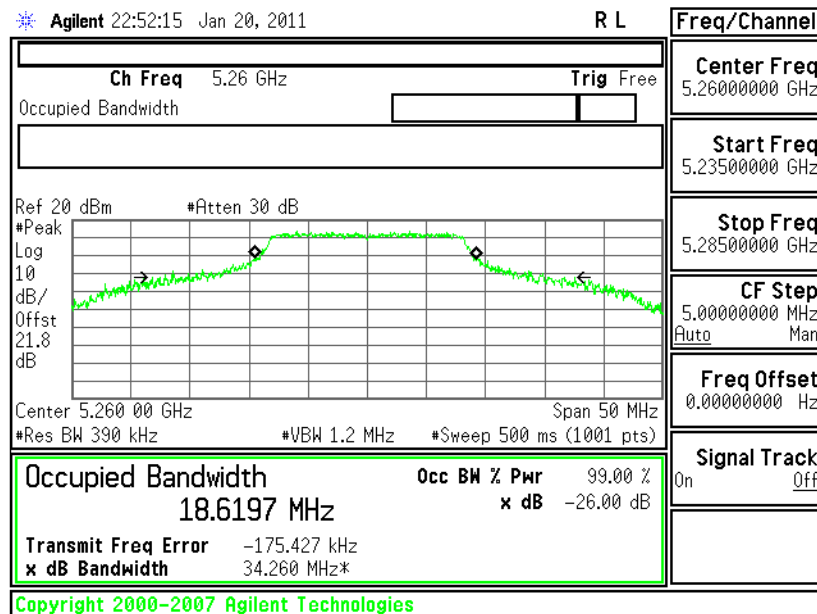


<Antenna 5 for 3.3V>

Test Mode :	Mode 1~6	Temperature :	23~25°C
Test Engineer :	Hank Yu	Relative Humidity :	50~53%

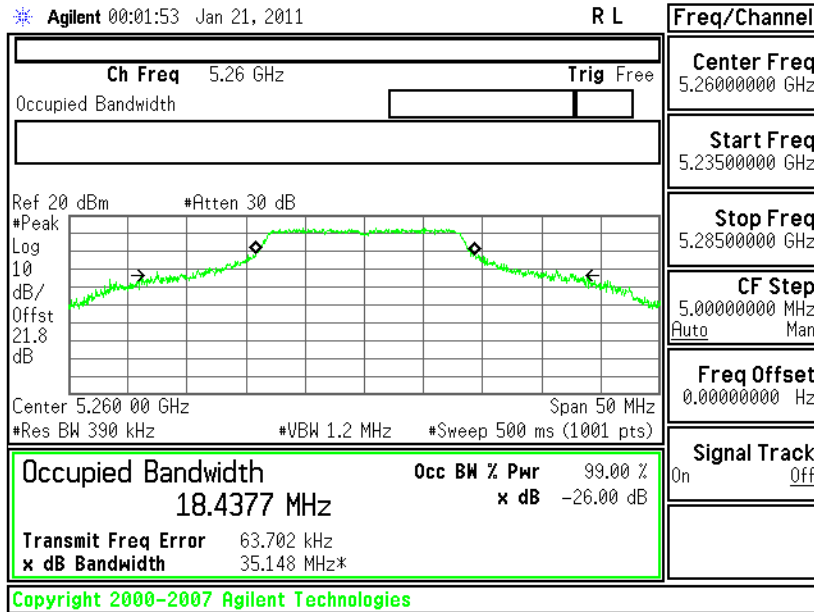
Channel	Frequency (MHz)	802.11a 26dB Bandwidth (MHz)				Pass/Fail
		SISO		MIMO (2Tx)		
		Chain A	Chain B	Chain A+B (A)	Chain A+B (B)	
52	5260	34.260	35.148	35.315	32.970	N/A
60	5300	33.662	35.476	34.568	34.578	N/A
64	5320	34.902	36.503	29.563	30.103	N/A
100	5500	25.212	25.756	24.918	23.374	N/A
116	5580	42.055	39.014	43.411	36.927	N/A
140	5700	24.342	24.385	24.042	23.523	N/A

26 dB Bandwidth Plot on 802.11a Channel 52 - Chain A

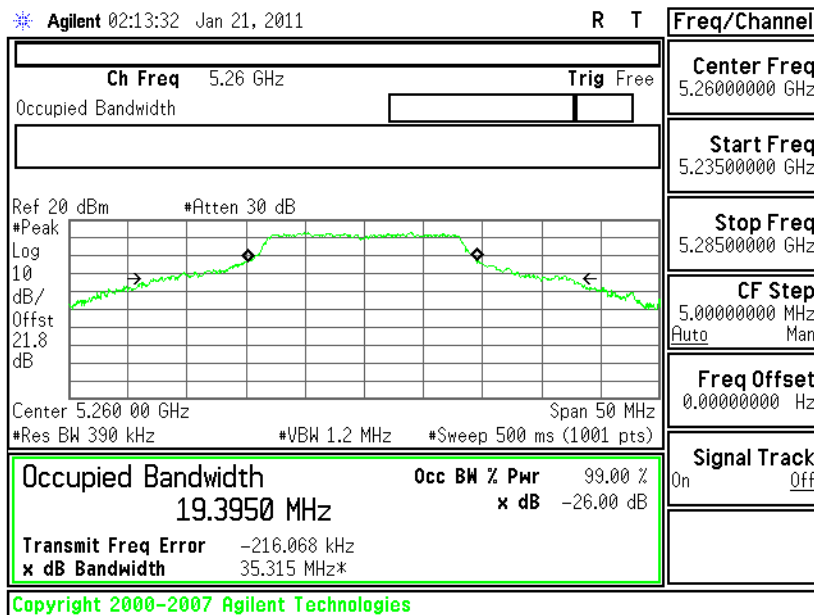




26 dB Bandwidth Plot on 802.11a Channel 52 - Chain B

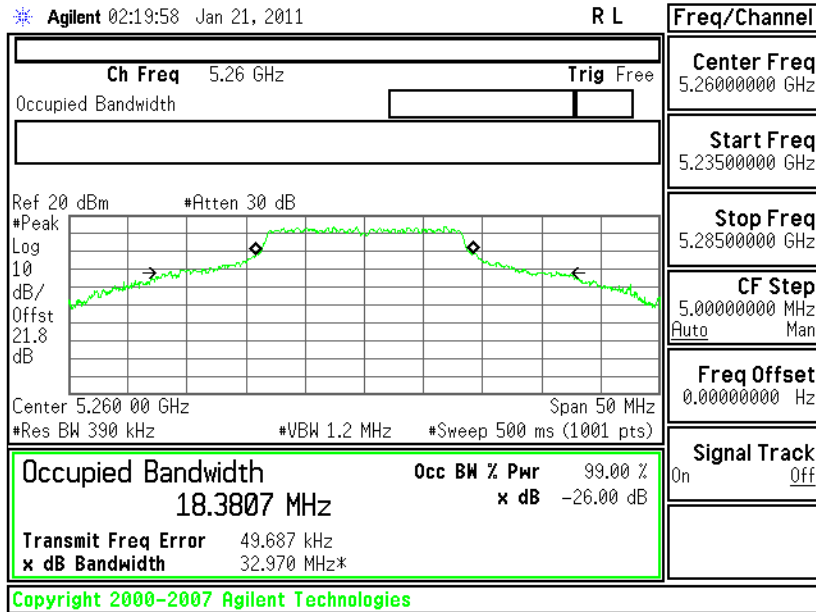


26 dB Bandwidth Plot on 802.11a Channel 52 - Chain A+B(A)

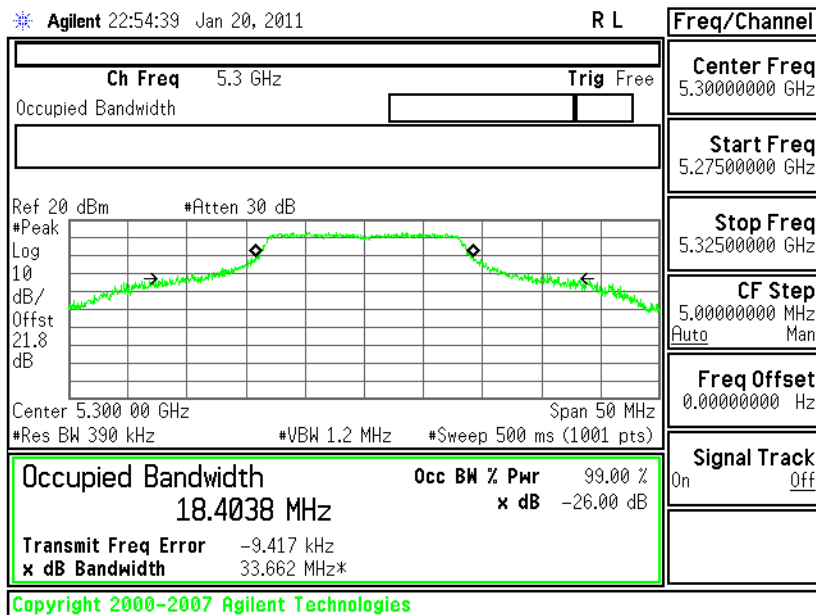




26 dB Bandwidth Plot on 802.11a Channel 52 - Chain A+B(B)

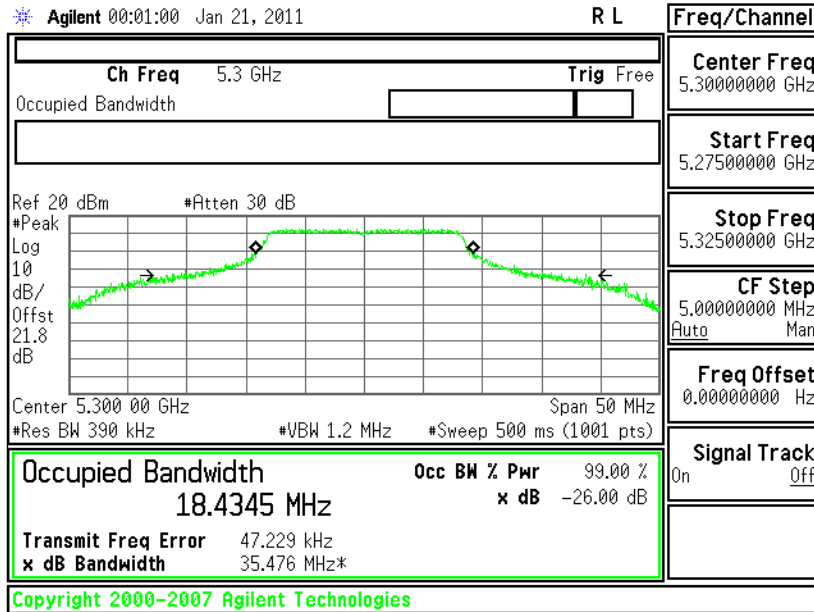


26 dB Bandwidth Plot on 802.11a Channel 60 - Chain A

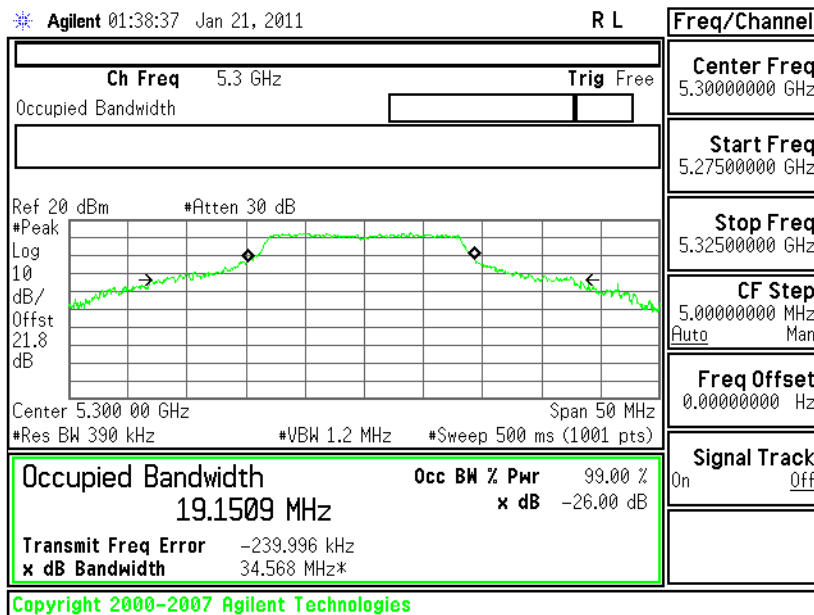




26 dB Bandwidth Plot on 802.11a Channel 60 - Chain B

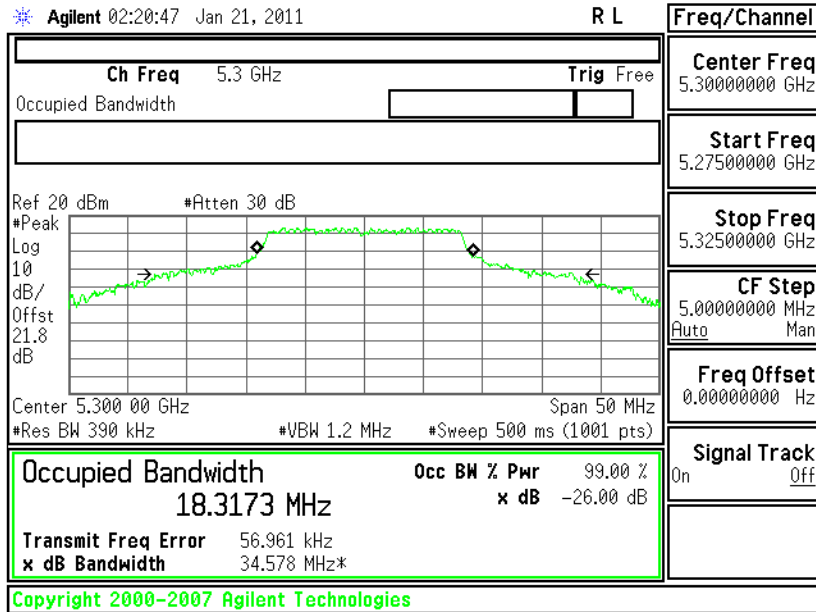


26 dB Bandwidth Plot on 802.11a Channel 60 - Chain A+B(A)

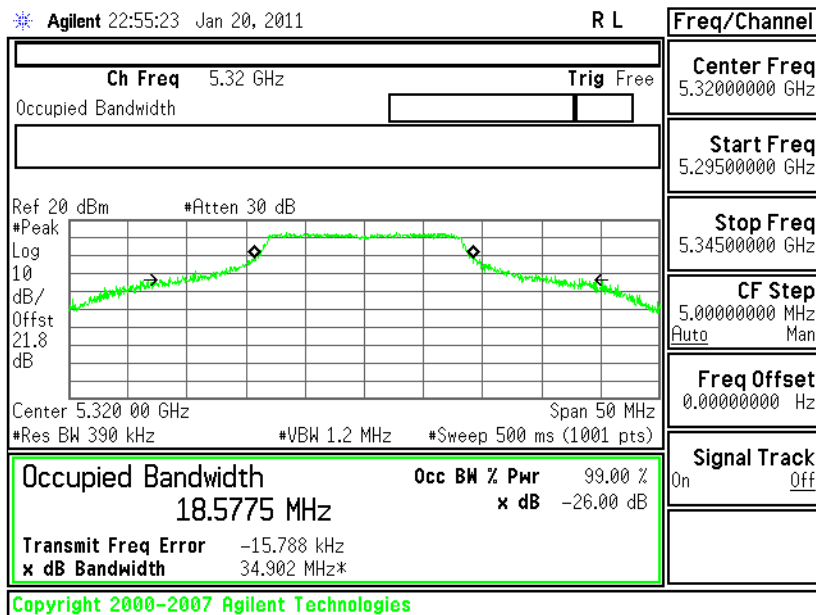




26 dB Bandwidth Plot on 802.11a Channel 60 - Chain A+B(B)

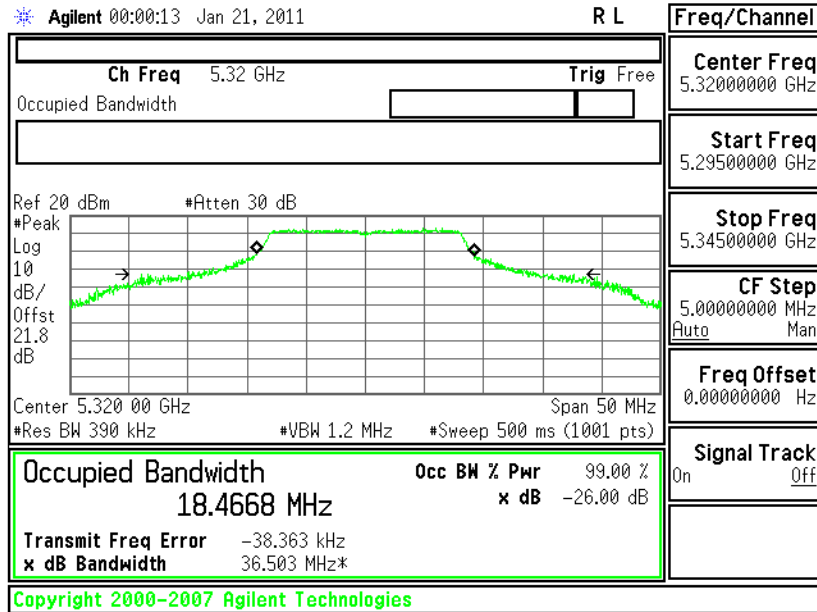


26 dB Bandwidth Plot on 802.11a Channel 64 - Chain A

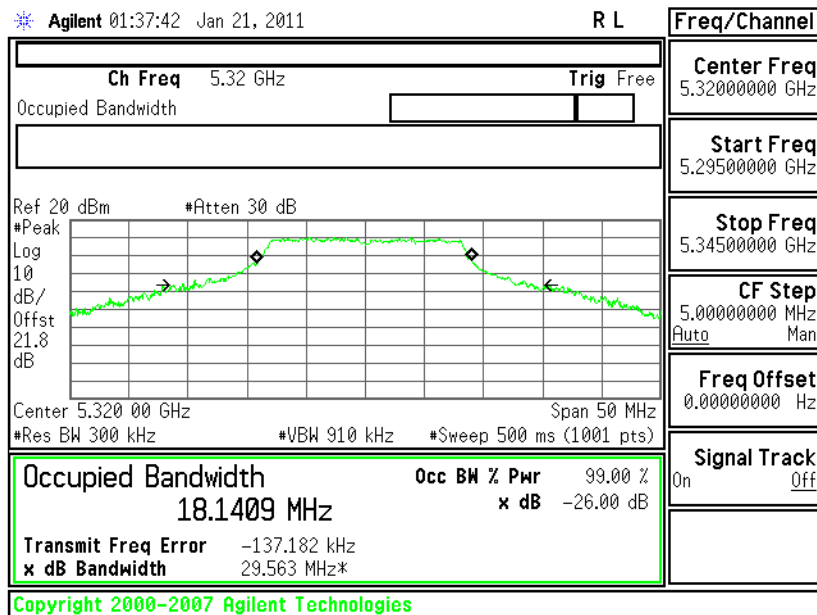




26 dB Bandwidth Plot on 802.11a Channel 64 - Chain B

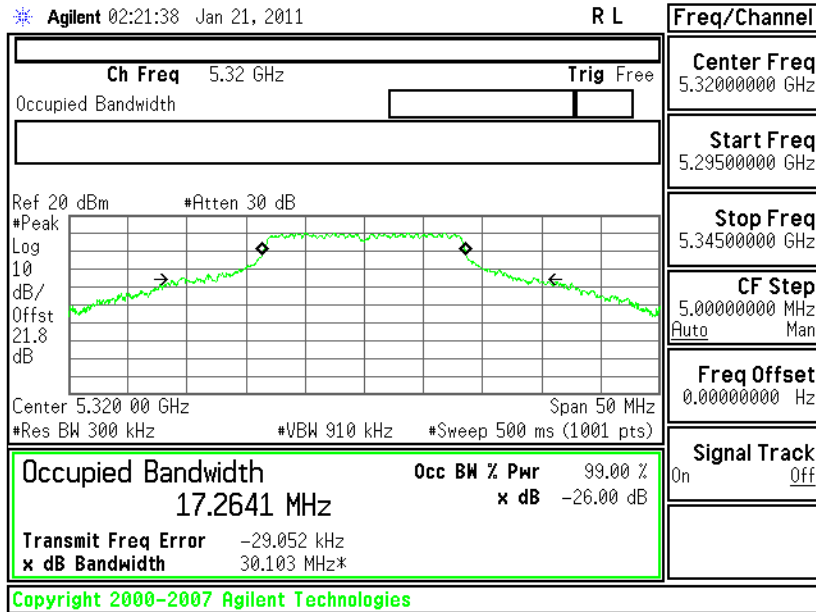


26 dB Bandwidth Plot on 802.11a Channel 64 - Chain A+B(A)

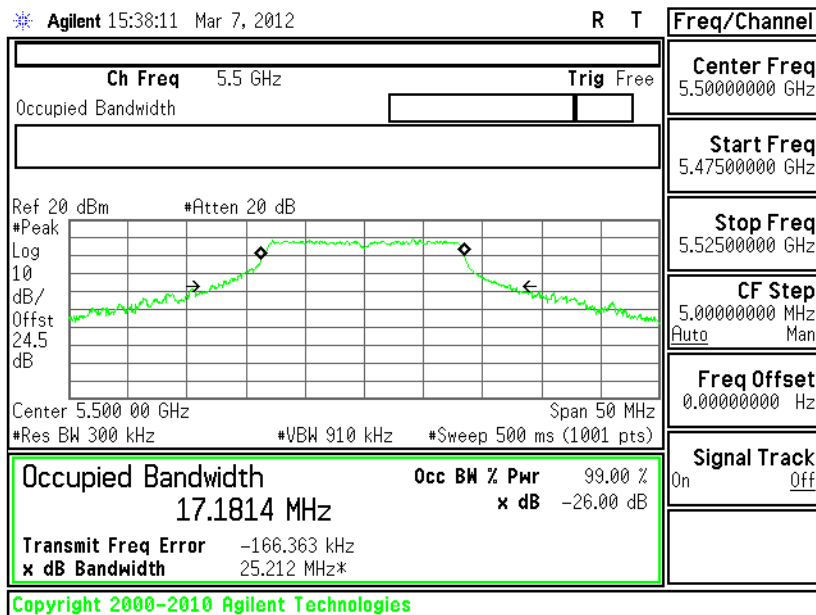




26 dB Bandwidth Plot on 802.11a Channel 64 - Chain A+B(B)

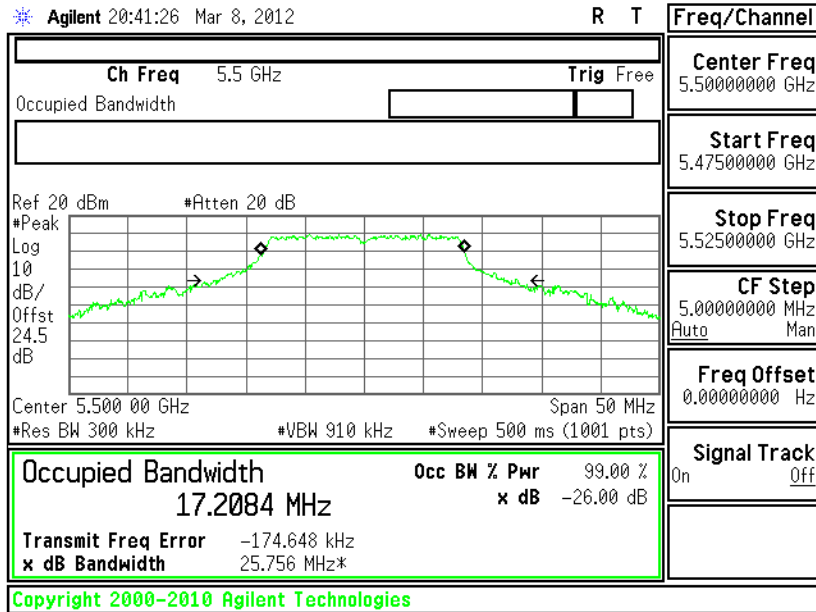


26 dB Bandwidth Plot on 802.11a Channel 100 - Chain A

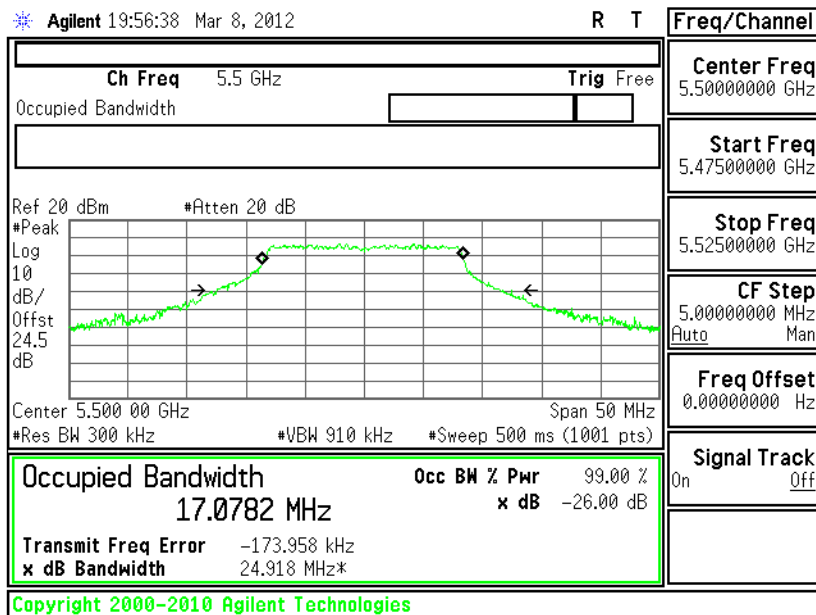




26 dB Bandwidth Plot on 802.11a Channel 100 - Chain B

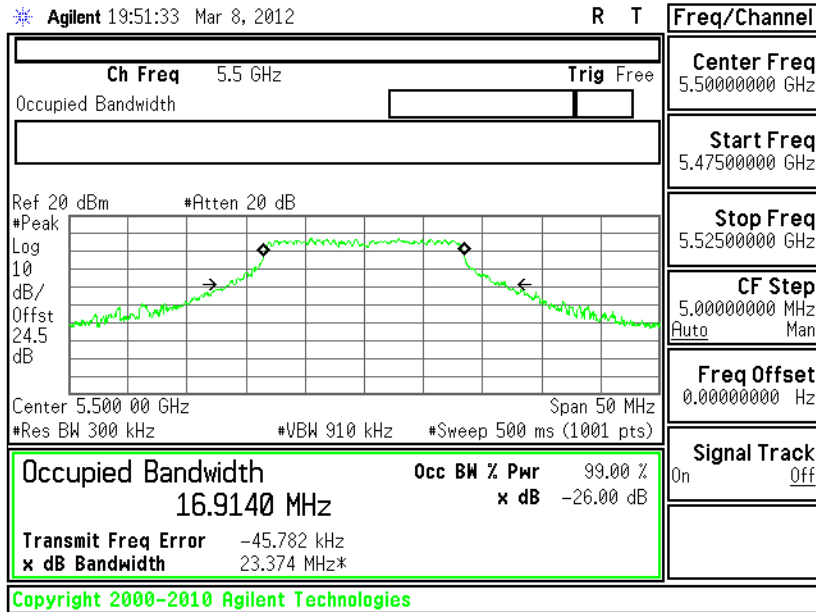


26 dB Bandwidth Plot on 802.11a Channel 100 - Chain A+B(A)

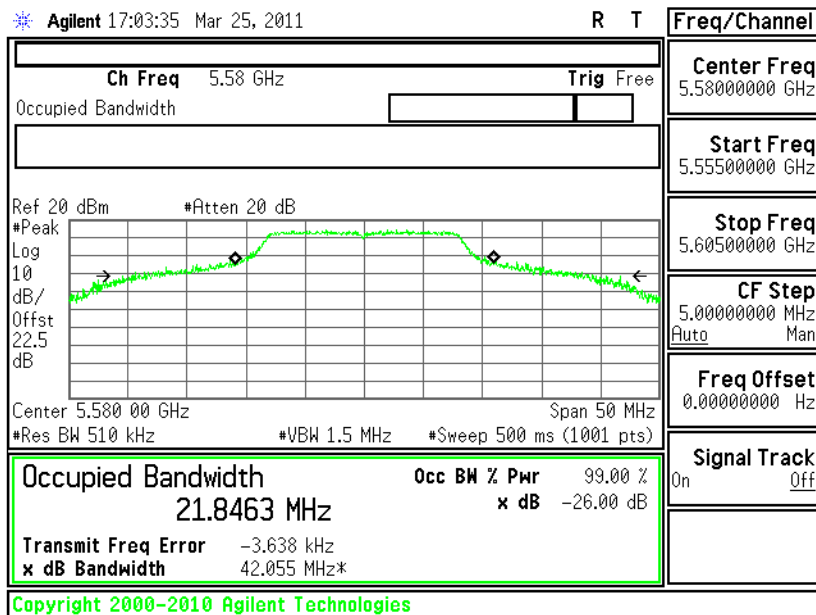




26 dB Bandwidth Plot on 802.11a Channel 100 - Chain A+B(B)

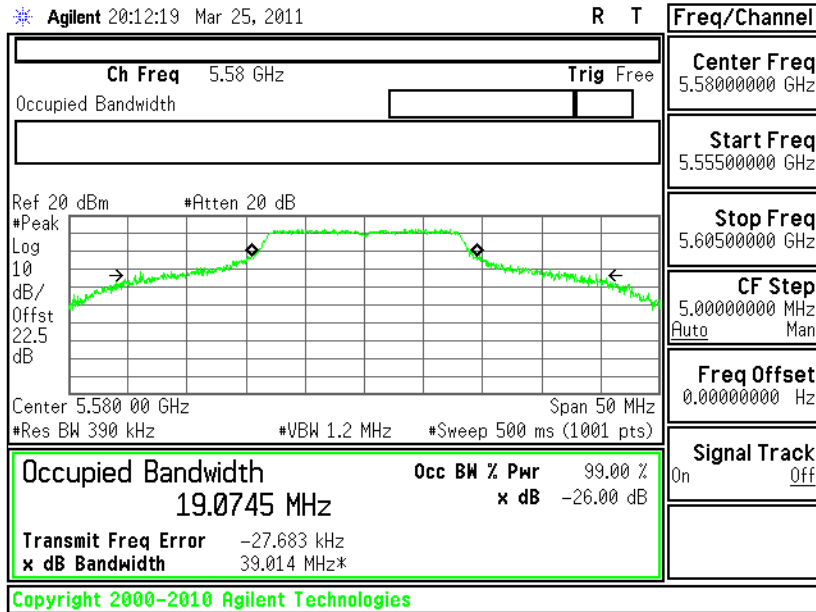


26 dB Bandwidth Plot on 802.11a Channel 116 - Chain A

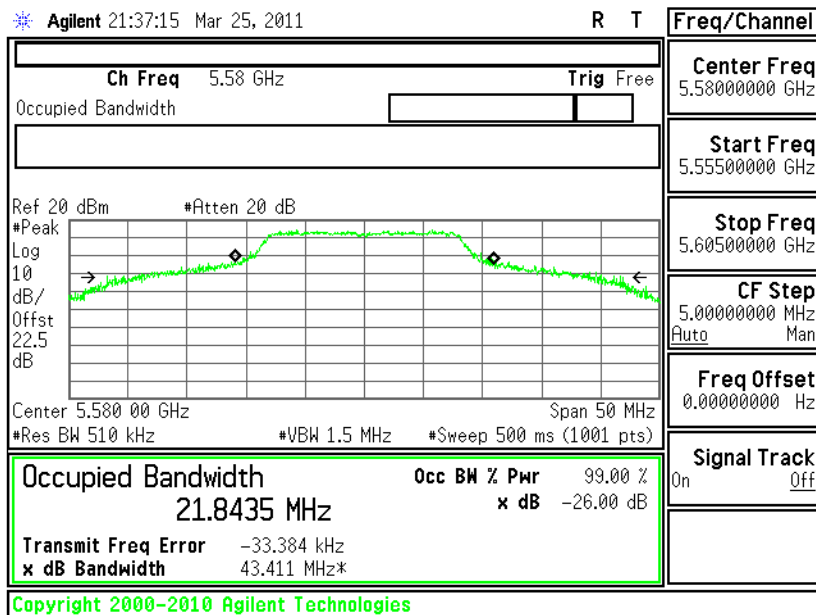




26 dB Bandwidth Plot on 802.11a Channel 116 - Chain B

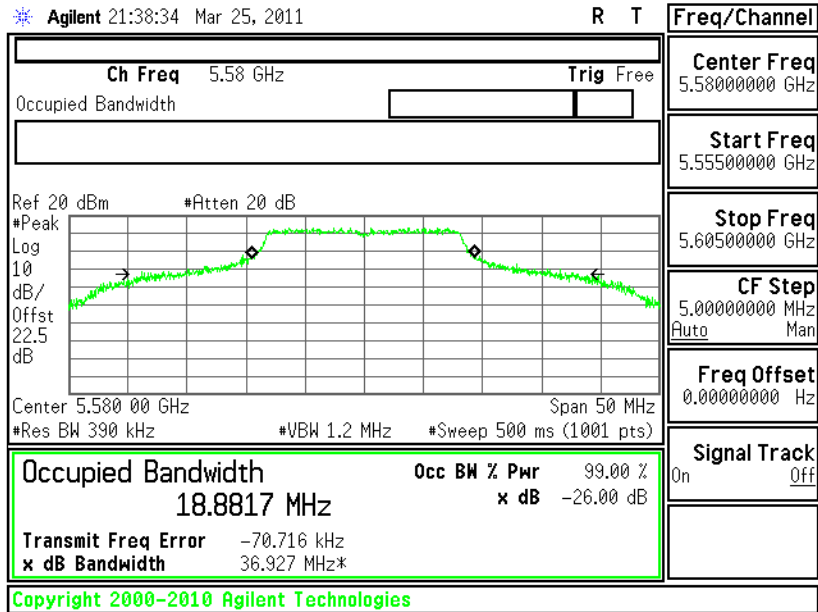


26 dB Bandwidth Plot on 802.11a Channel 116 - Chain A+B(A)

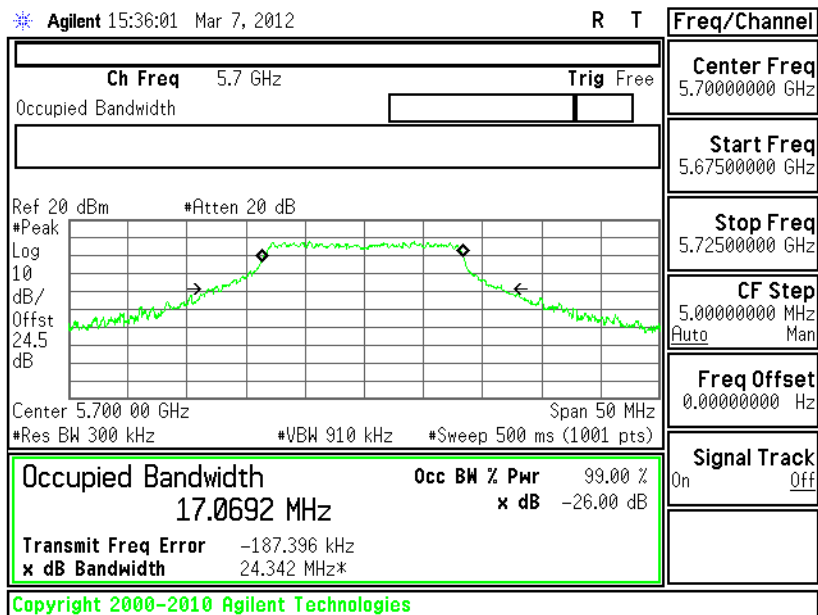




26 dB Bandwidth Plot on 802.11a Channel 116 - Chain A+B(B)

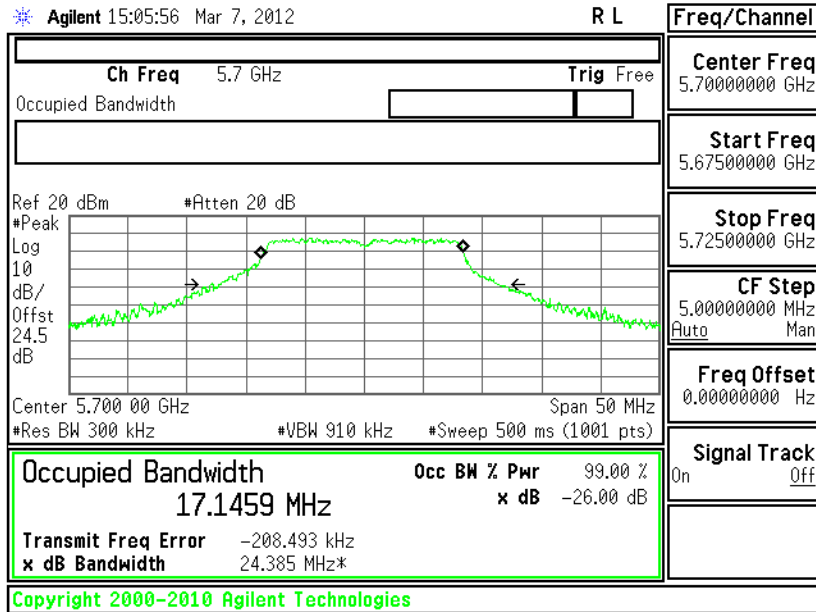


26 dB Bandwidth Plot on 802.11a Channel 140 - Chain A

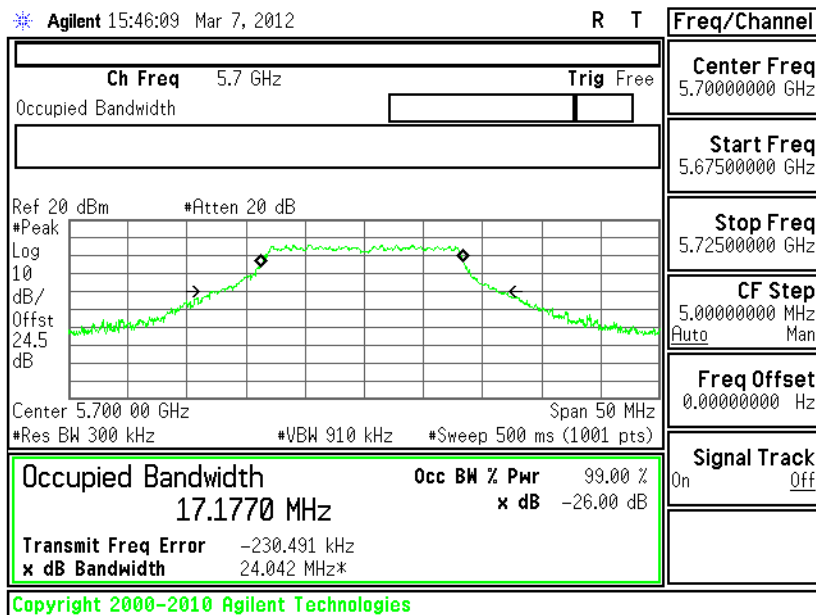




26 dB Bandwidth Plot on 802.11a Channel 140 - Chain B

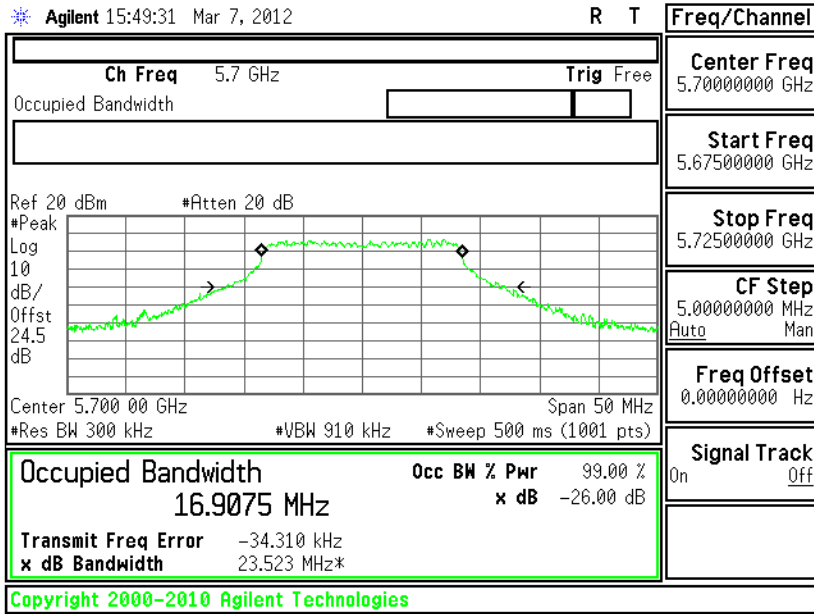


26 dB Bandwidth Plot on 802.11a Channel 140 - Chain A+B(A)





26 dB Bandwidth Plot on 802.11a Channel 140 - Chain A+B(B)



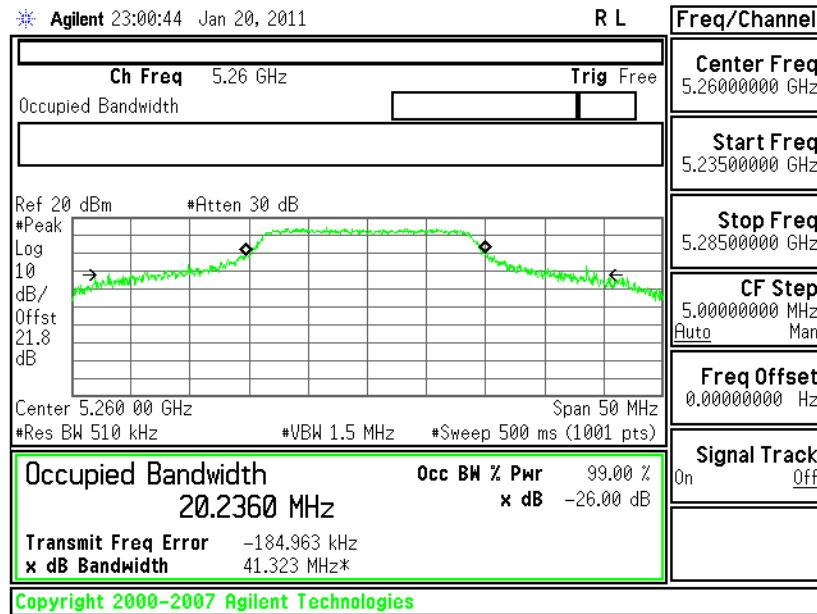


Test Mode :	Mode 7~12	Temperature :	23~25°C
Test Engineer :	Hank Yu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11n (BW 20MHz) 26dB Bandwidth (MHz)				Pass/Fail
		SISO		MIMO (2Tx)		
		Chain A	Chain B	Chain A+B(A)	Chain A+B(B)	
52	5260	41.323	41.745	40.982	38.98	N/A
60	5300	37.184	38.582	41.758	38.914	N/A
64	5320	36.175	33.372	33.477	31.978	N/A
100	5500	26.07	26.397	23.621	24.331	N/A
116	5580	42.334	41.171	43.615	40.774	N/A
140	5700	24.721	24.833	24.798	25.002	N/A

26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 52

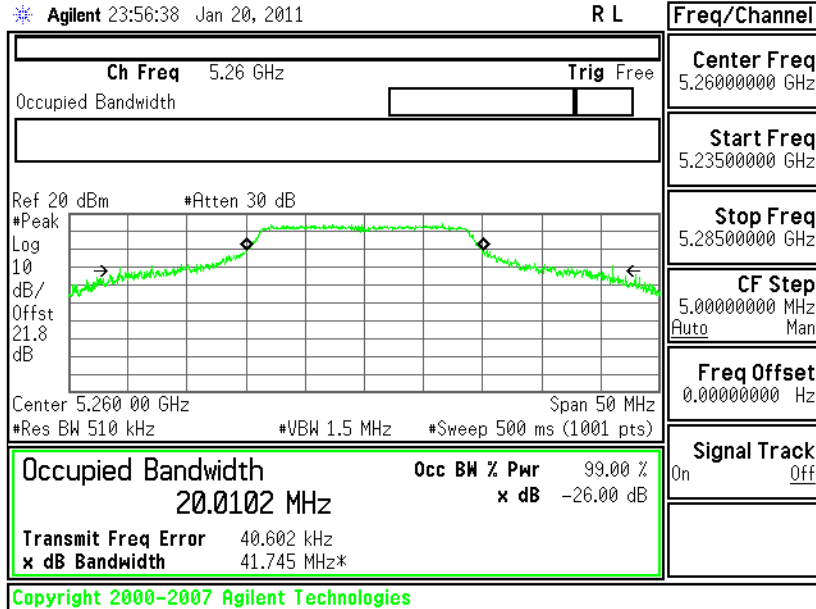
- Chain A





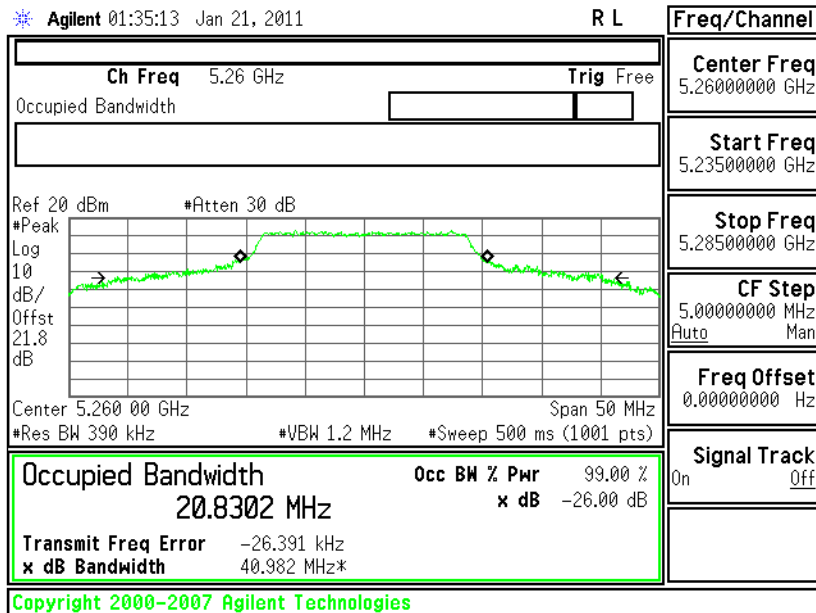
26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 52

- Chain B



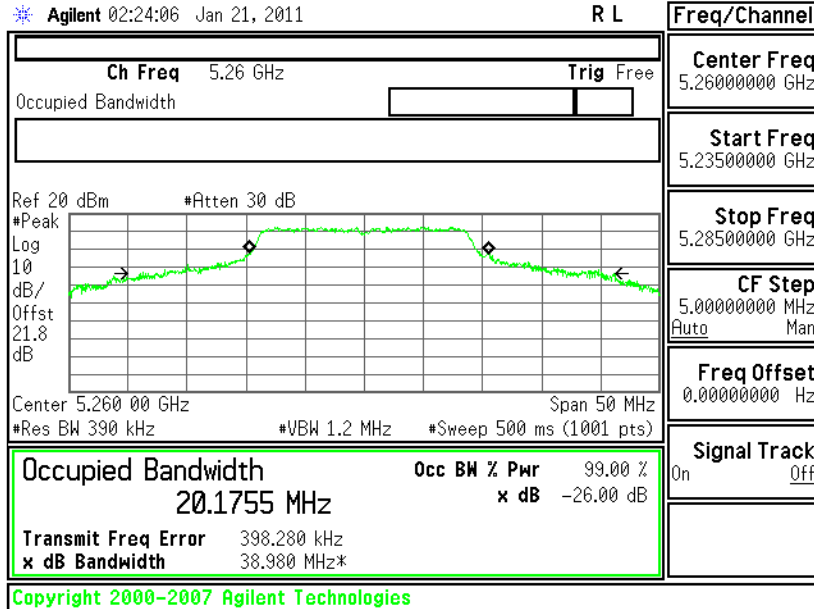
26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 52 - Chain

A+B(A)

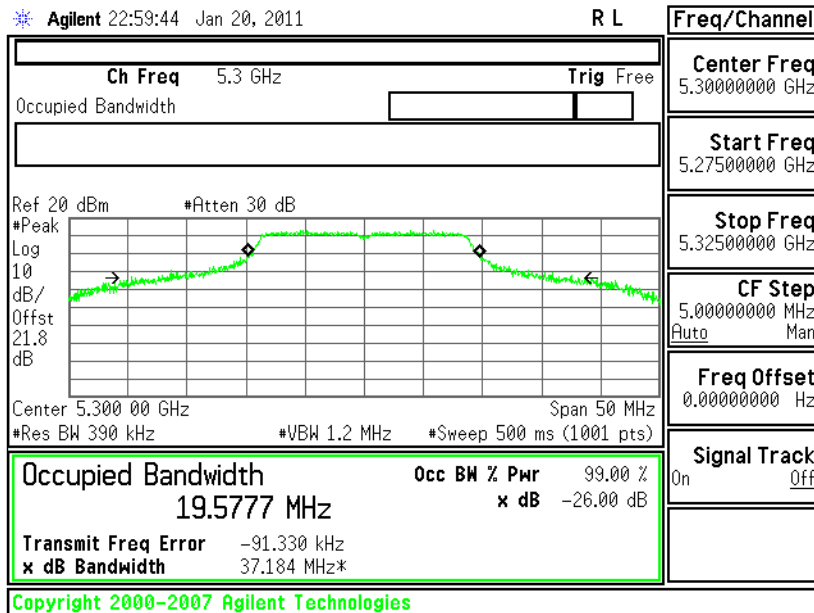




26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 52 - Chain A+B(B)



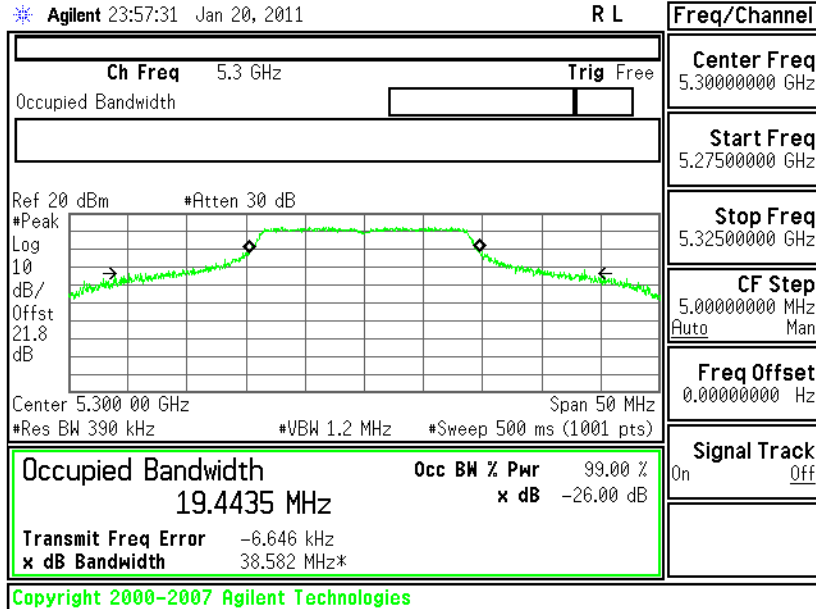
26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 60 - Chain A





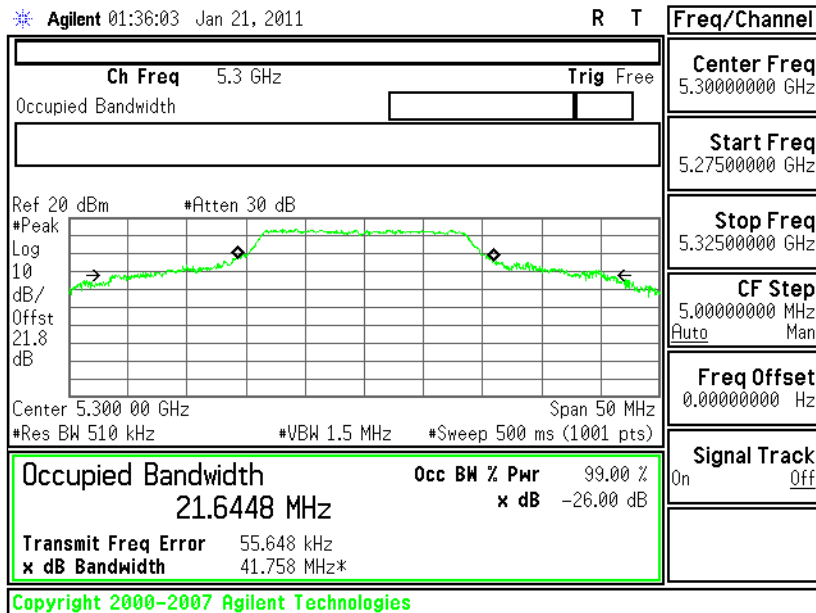
26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 60

- Chain B



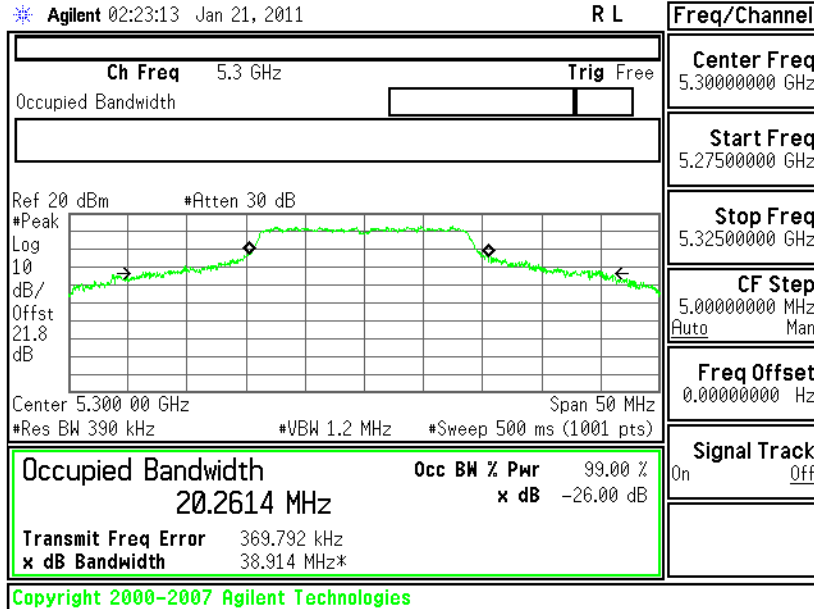
26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 60 - Chain

A+B(A)

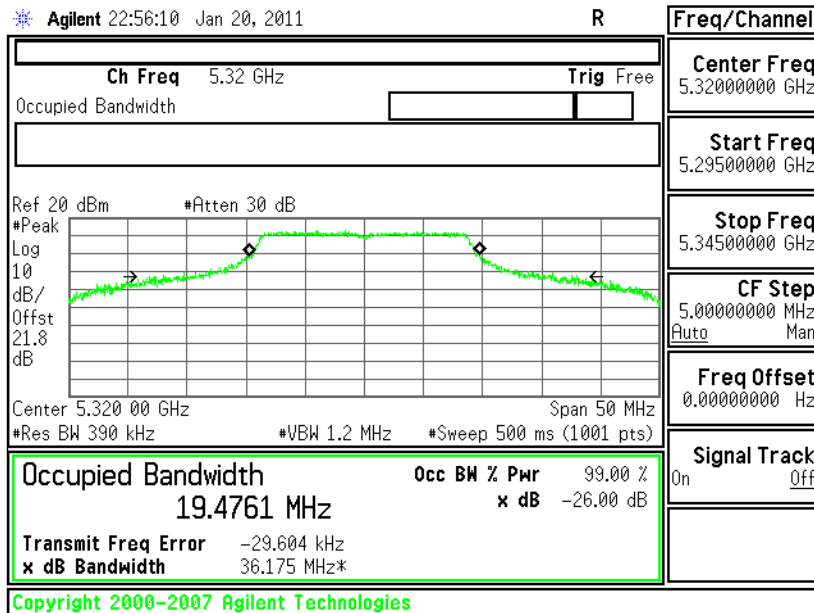




26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 60 - Chain A+B(B)



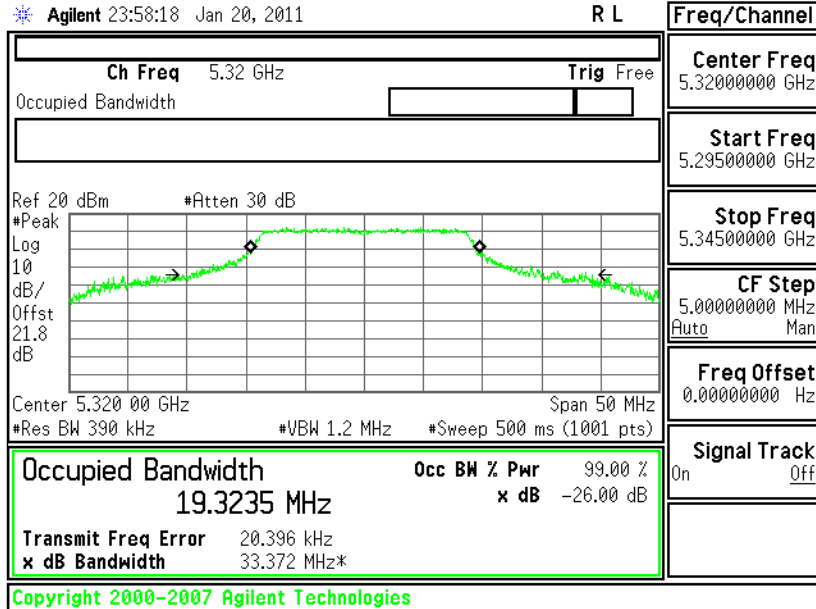
26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 64 - Chain A





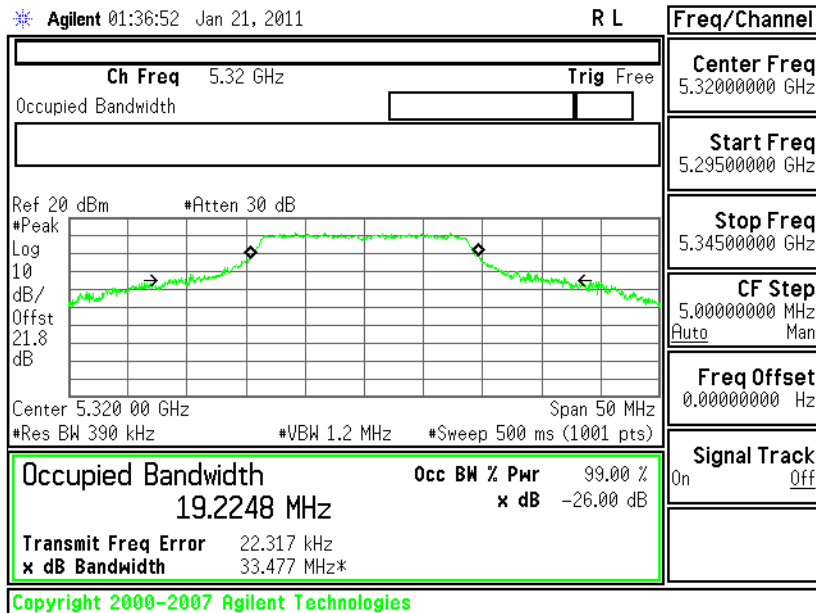
26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 64

- Chain B



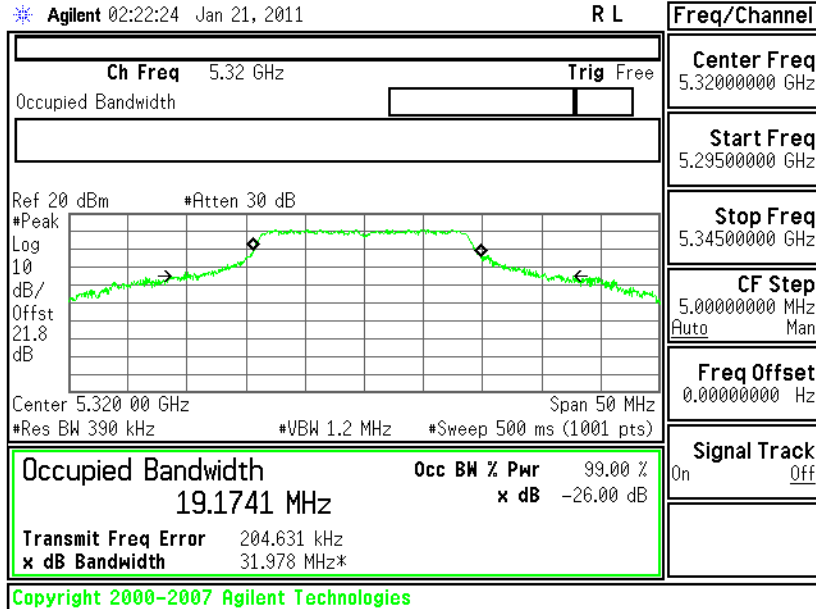
26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 64 - of

Chain A+B(A)

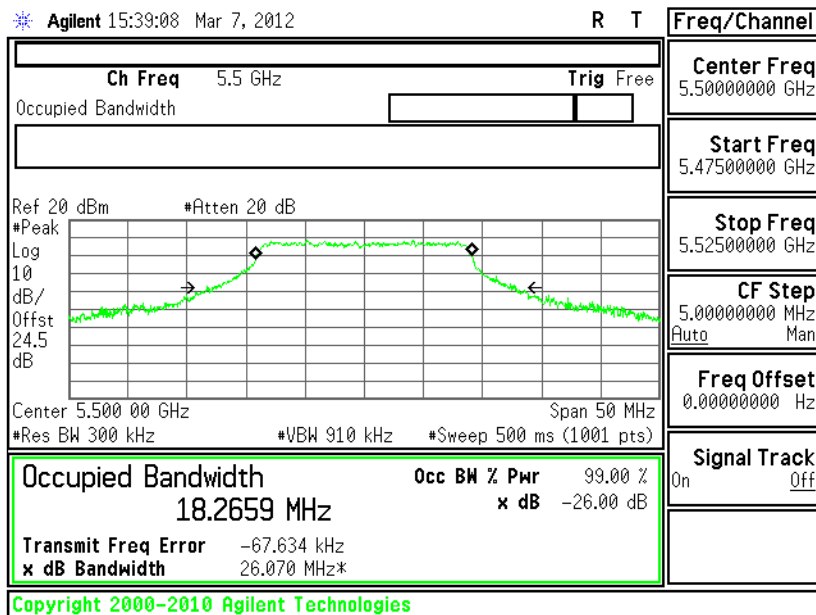




26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 64 - of Chain A+B(B)



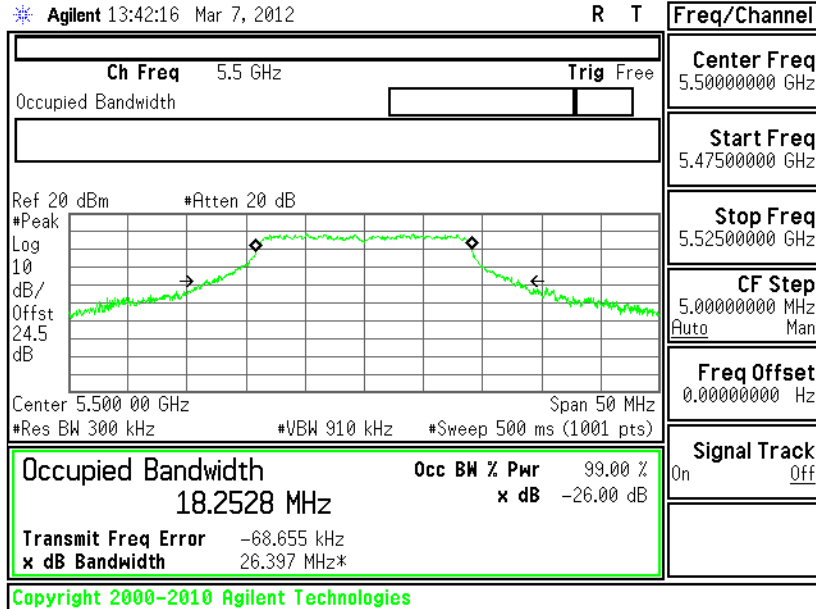
26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 100 - Chain A





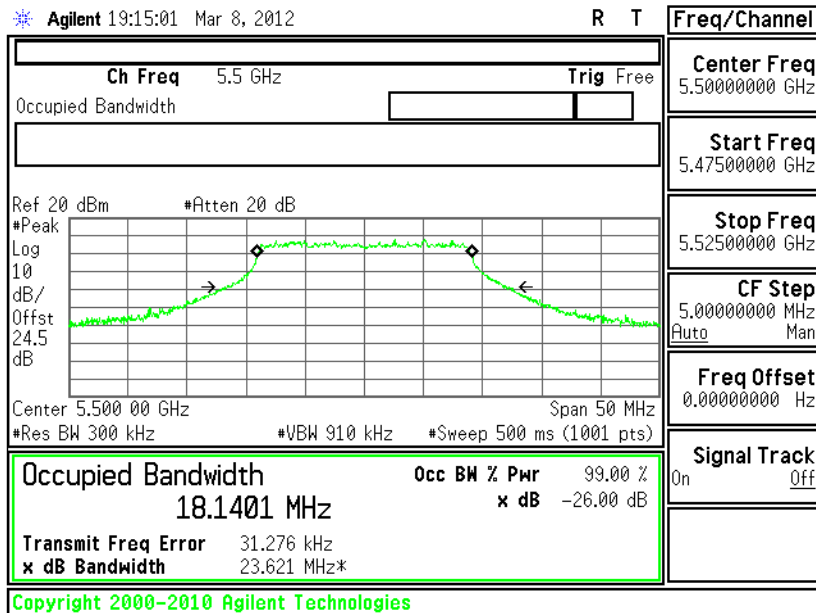
26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 100

- Chain B



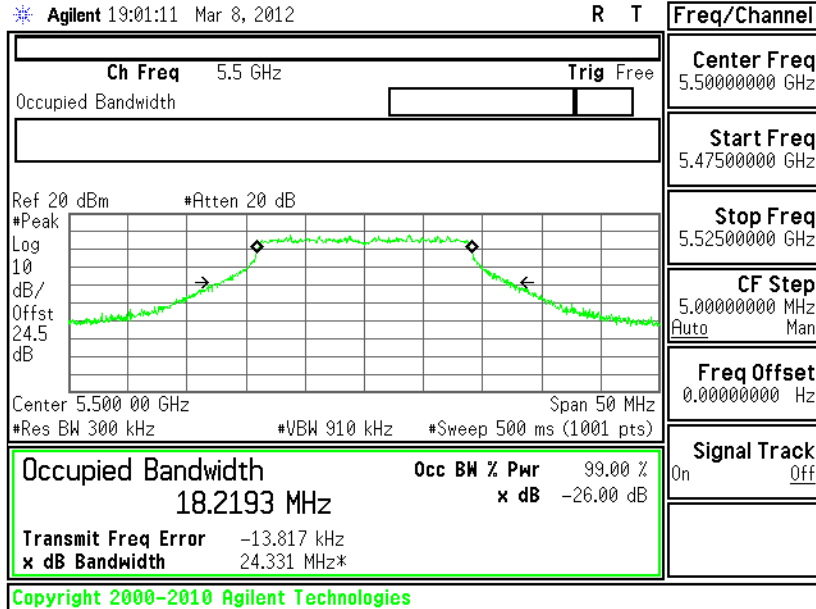
26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 100 -

Chain A+B(A)

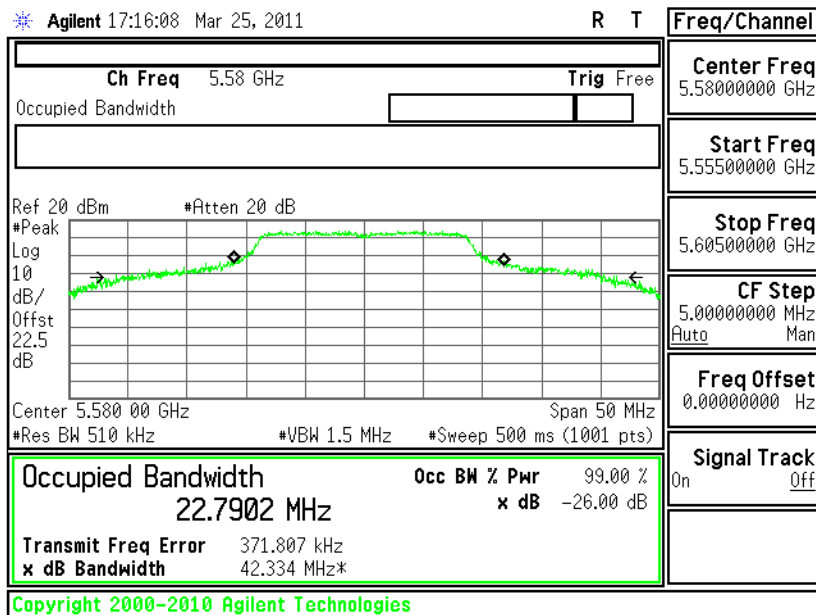




26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 100 - Chain A+B(B)



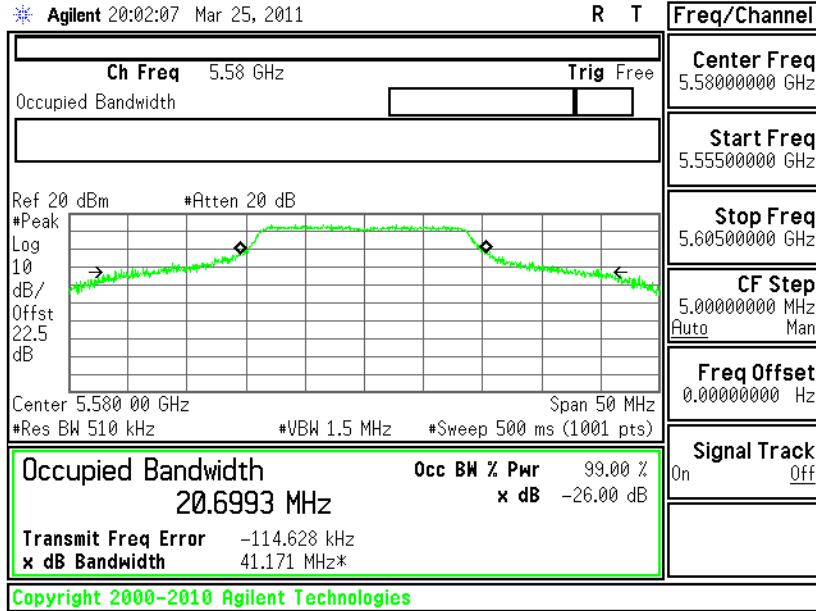
26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 116 - Chain A





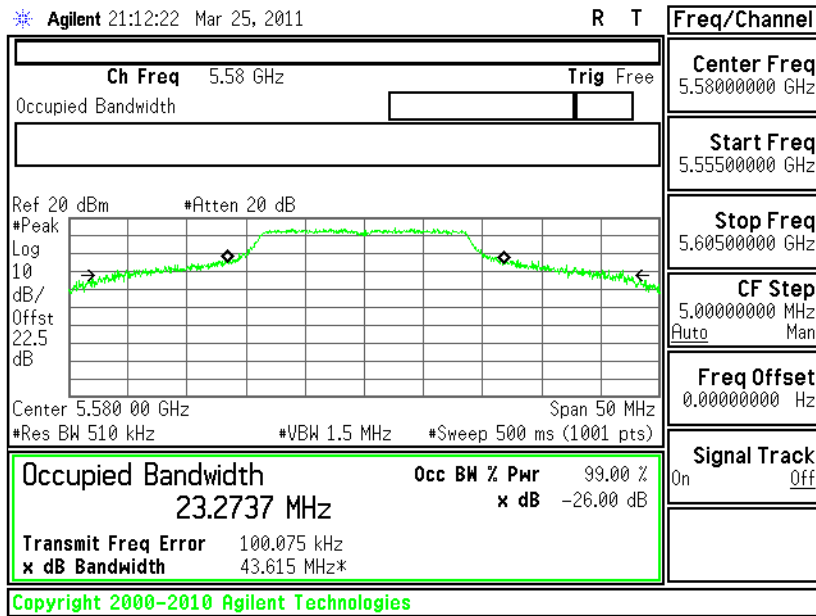
26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 116

- Chain B



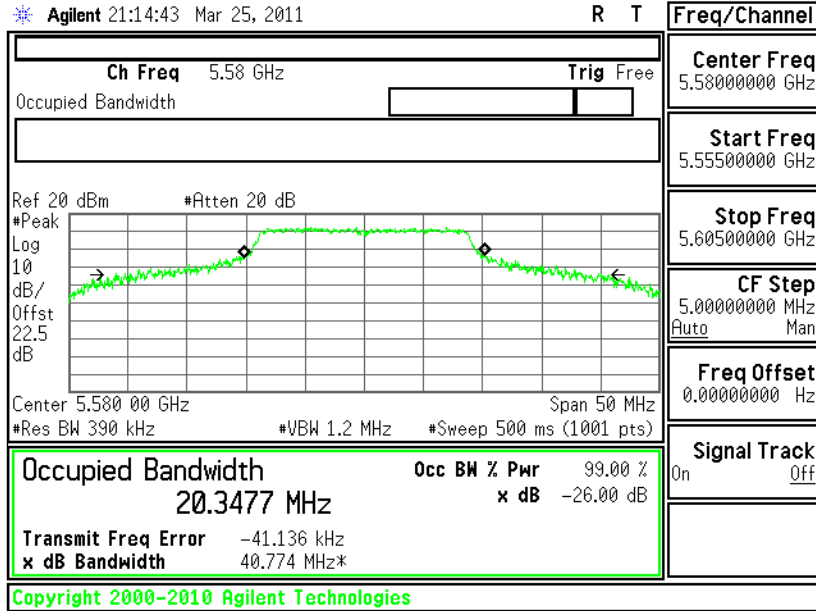
26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 116 -

Chain A+B(A)

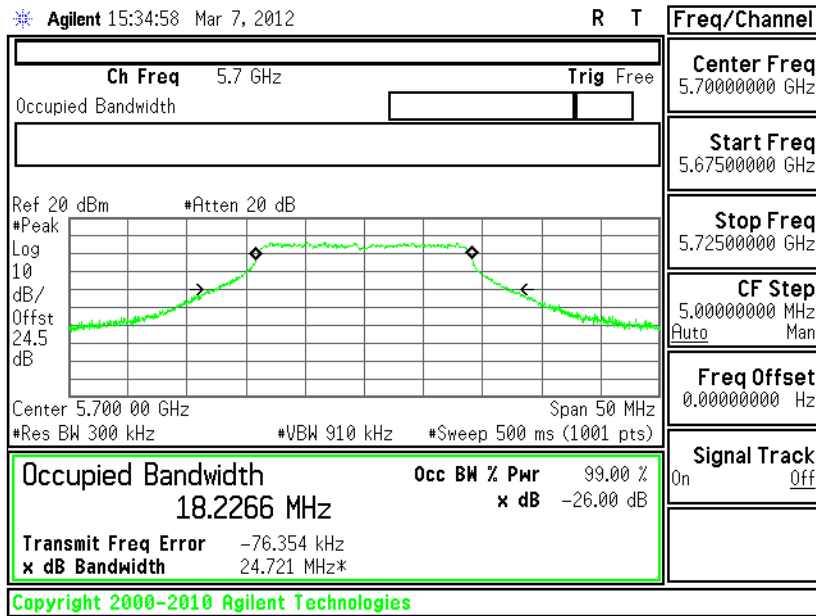




26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 116 -
Chain A+B(B)



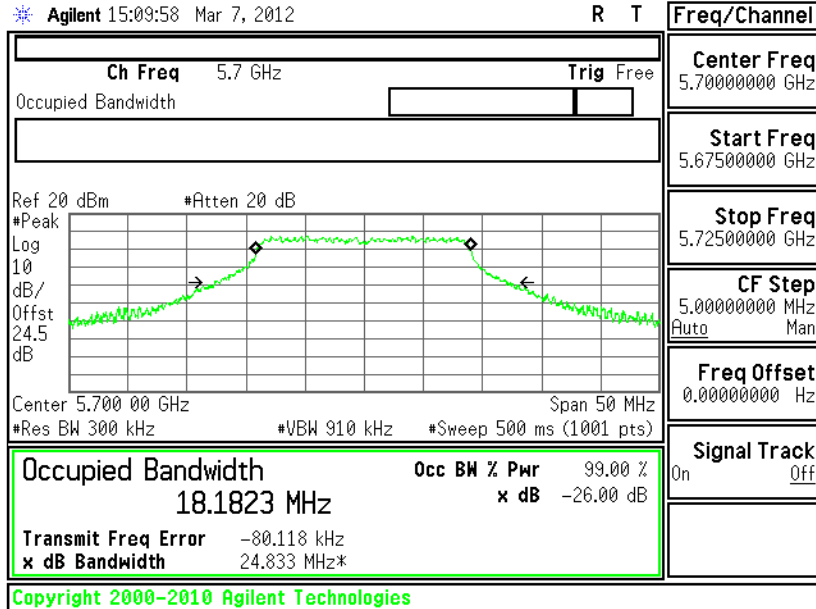
26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 140
- Chain A





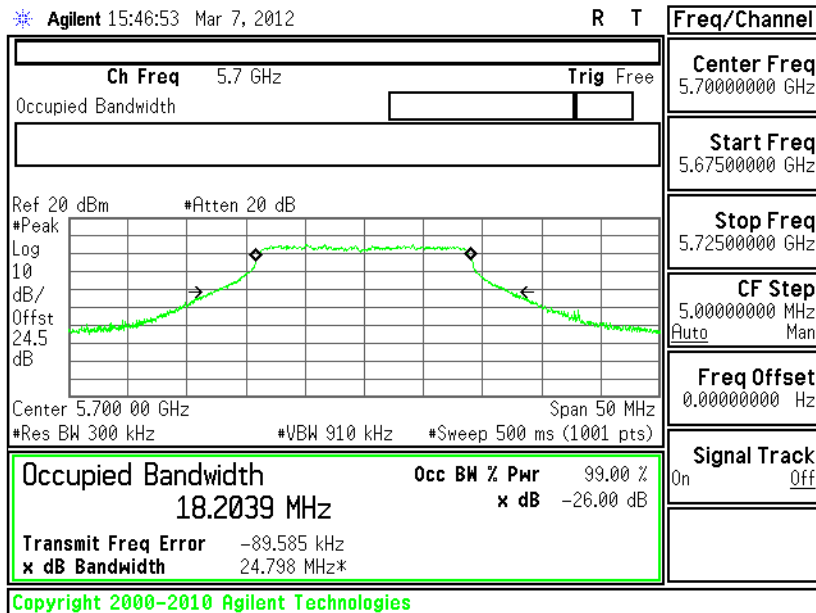
26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 140

- Chain B



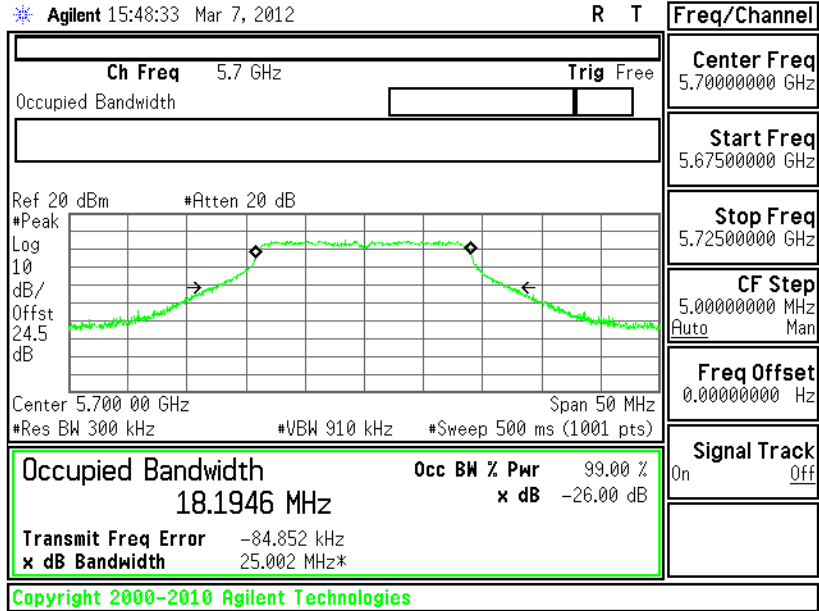
26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 140 -

Chain A+B(A)





26 dB Bandwidth Plot on 802.11n (BW 20MHz) Channel 140 -
Chain A+B(B)



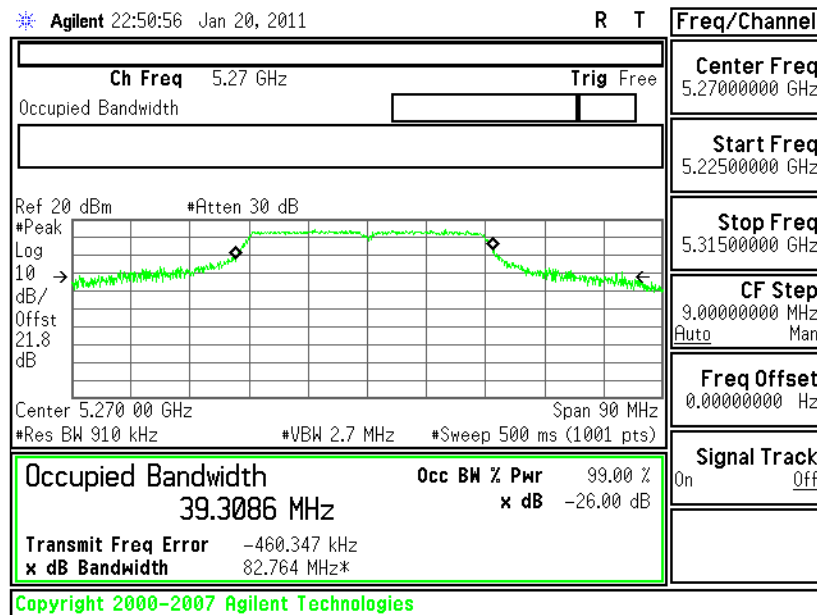


Test Mode :	Mode 13~17	Temperature :	23~25°C
Test Engineer :	Hank Yu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11n (BW 40MHz) 26dB Bandwidth (MHz)				Pass/Fail
		SISO		MIMO (2Tx)		
		Chain A	Chain B	Chain A+B(A)	Chain A+B(B)	
54	5270	82.764	76.208	81.152	77.210	N/A
62	5310	58.582	51.525	49.100	49.849	N/A
102	5510	51.051	50.682	53.409	48.811	N/A
110	5550	73.588	71.433	85.627	82.685	N/A
134	5670	69.577	69.610	48.439	48.287	N/A

26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 54

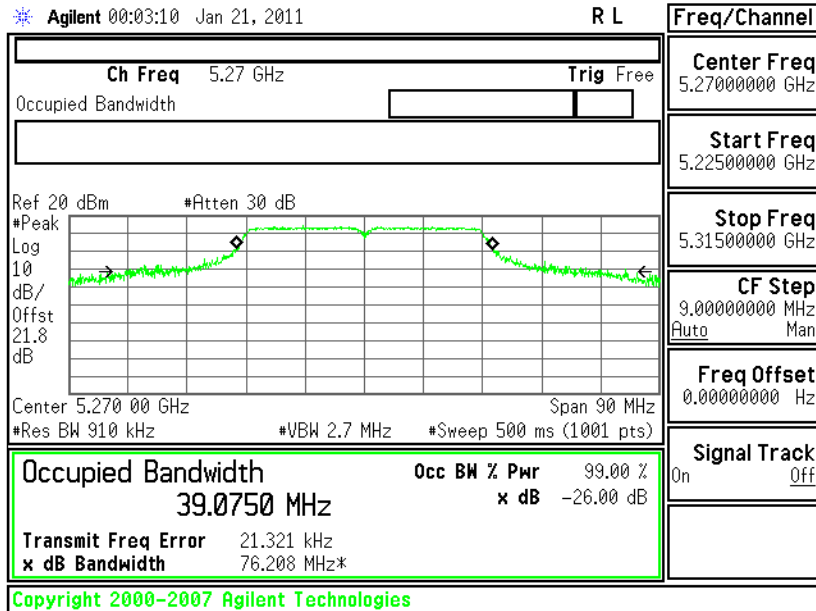
- Chain A





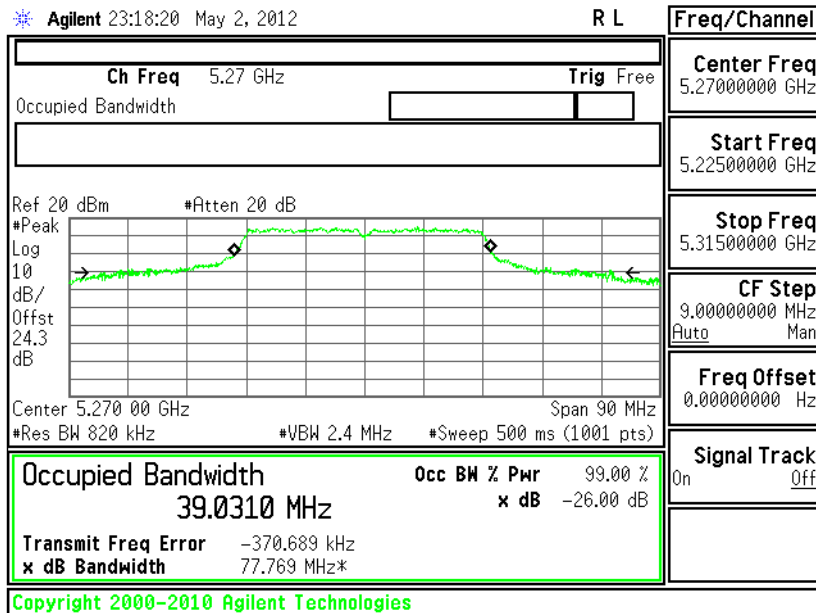
26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 54

- Chain B



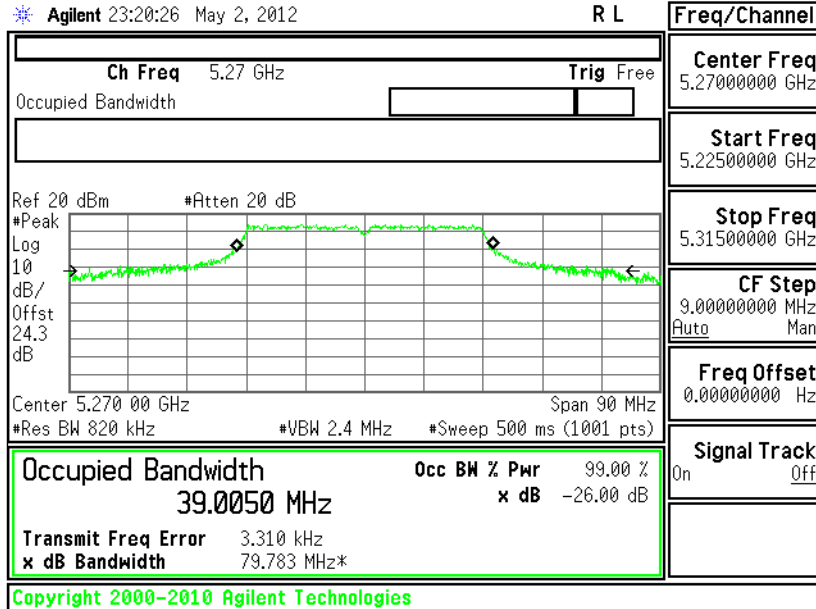
26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 54 - Chain

A+B(A)

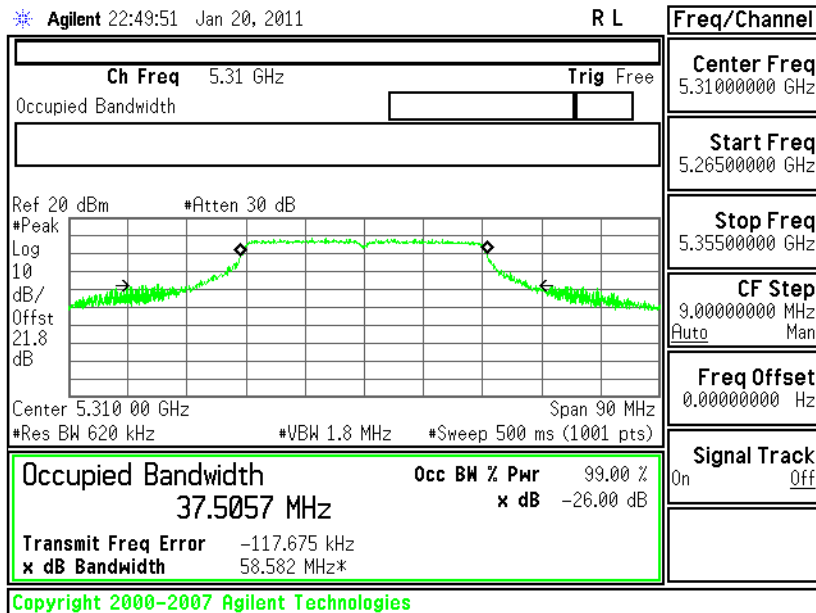




26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 54 - Chain A+B(B)



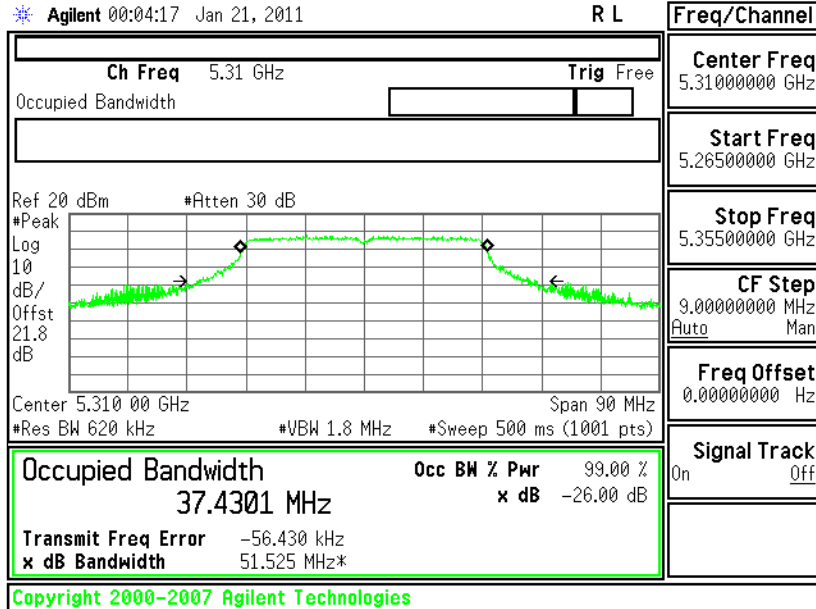
26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 62 - Chain A





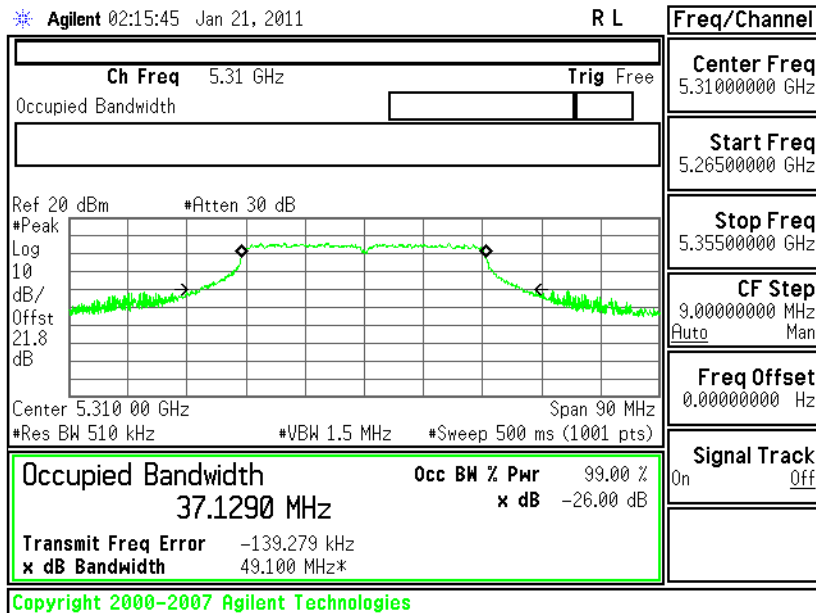
26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 62

- Chain B



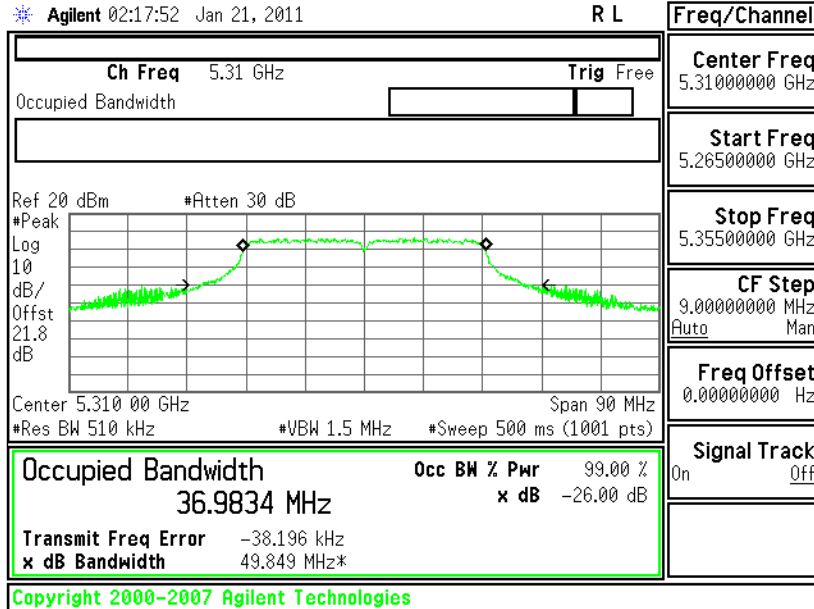
26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 62 - Chain

A+B(A)

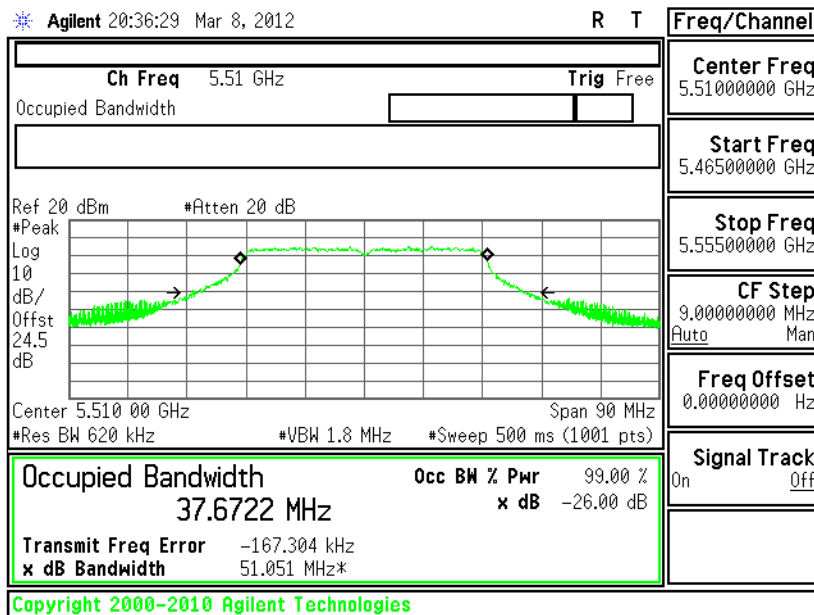




26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 62 - Chain A+B(B)



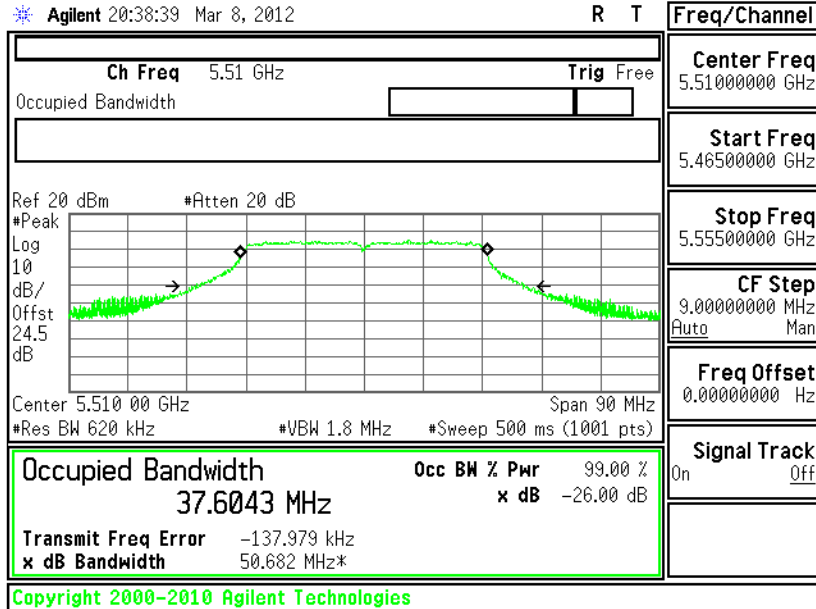
26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 102 - Chain A





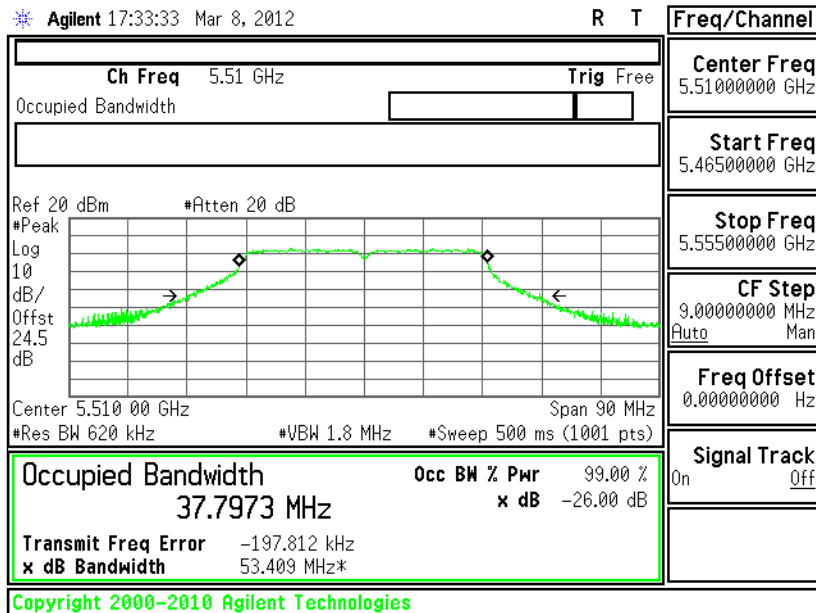
26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 102 -

Chain B



26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 102 -

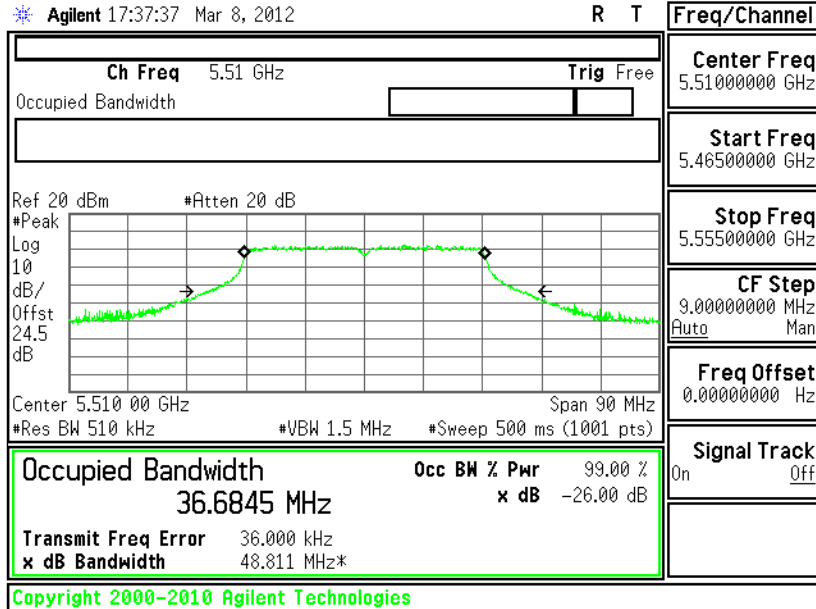
Chain A+B(A)





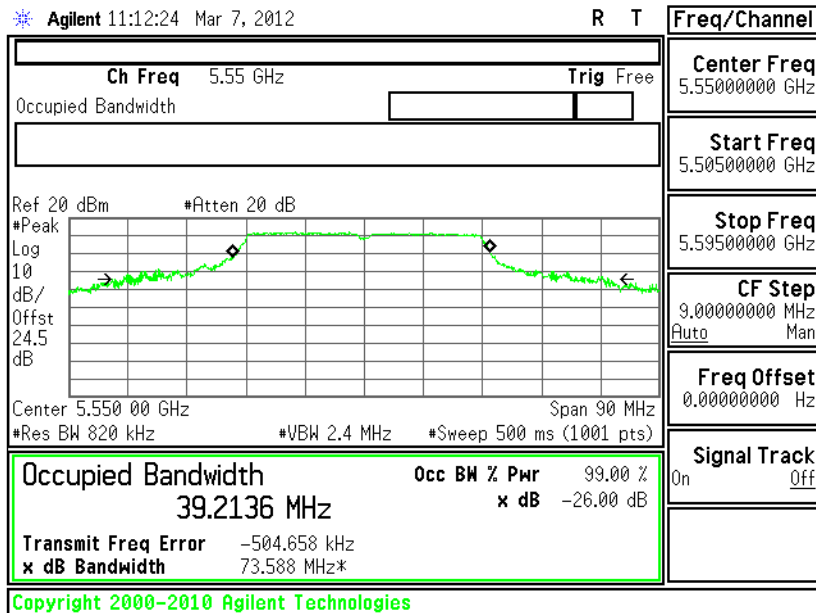
26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 102 -

Chain A+B(B)



26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 110 -

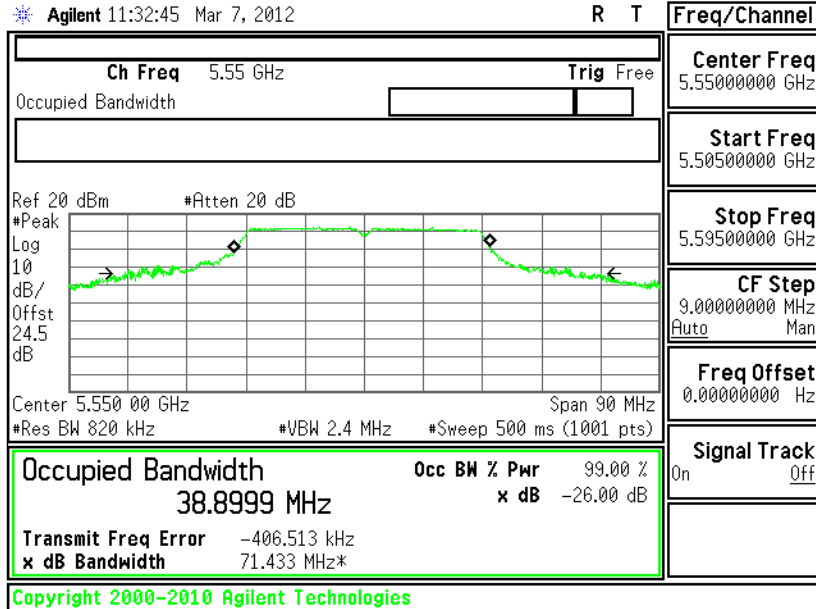
Chain A





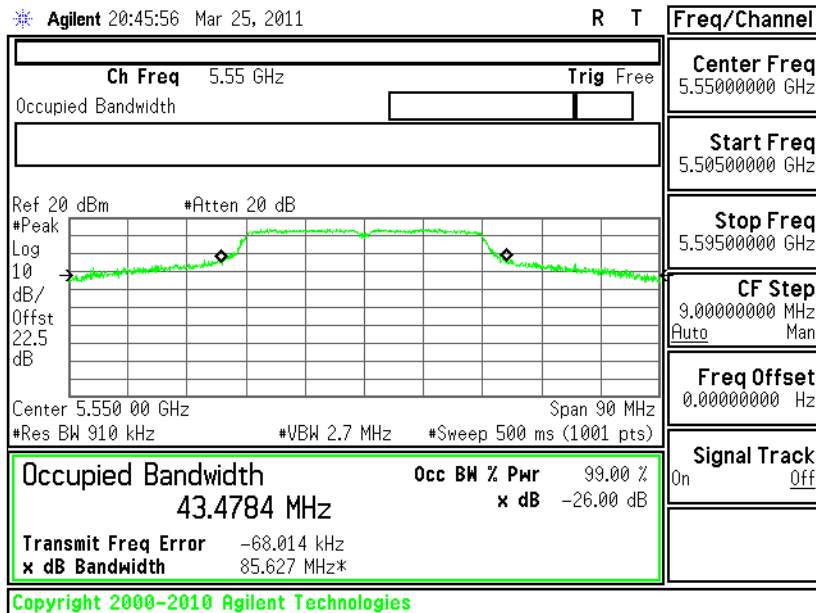
26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 110 -

Chain B



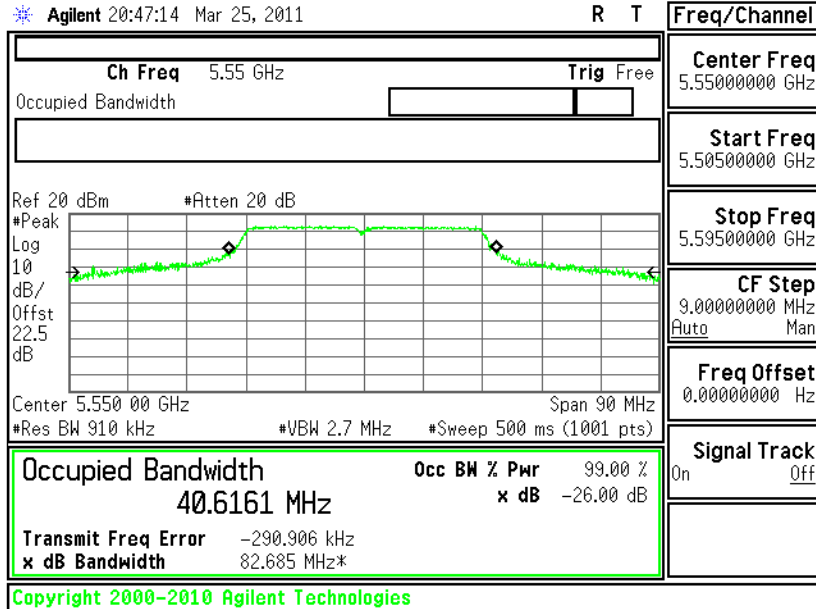
26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 110 -

Chain A+B(A)

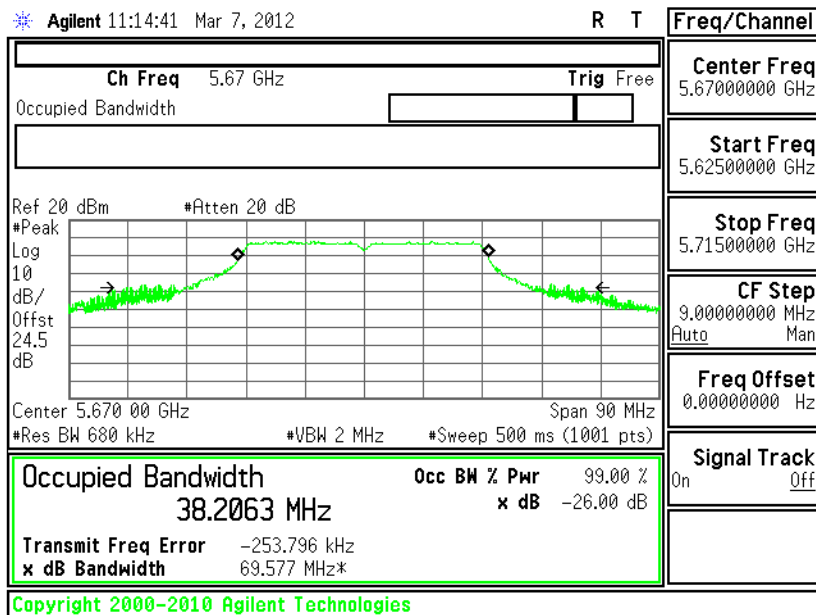




26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 110 -
Chain A+B(B)



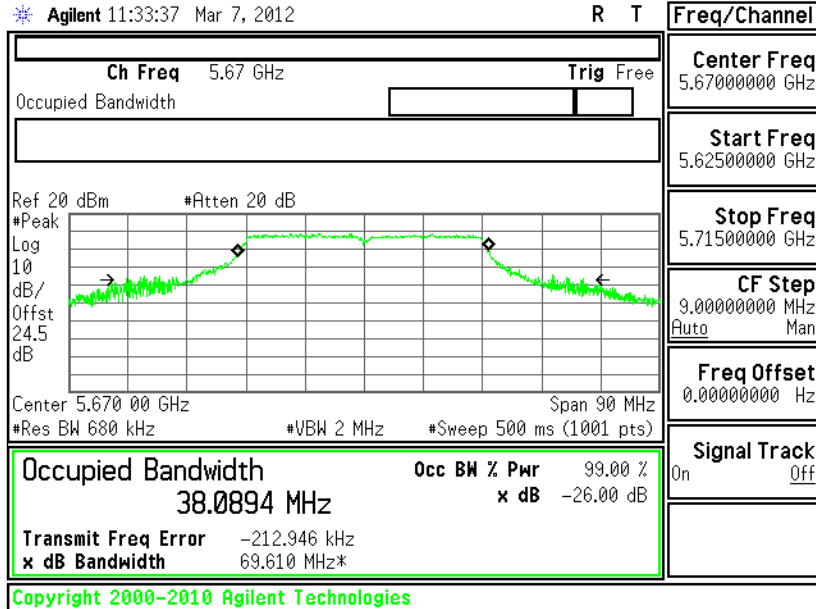
26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 134 -
Chain A





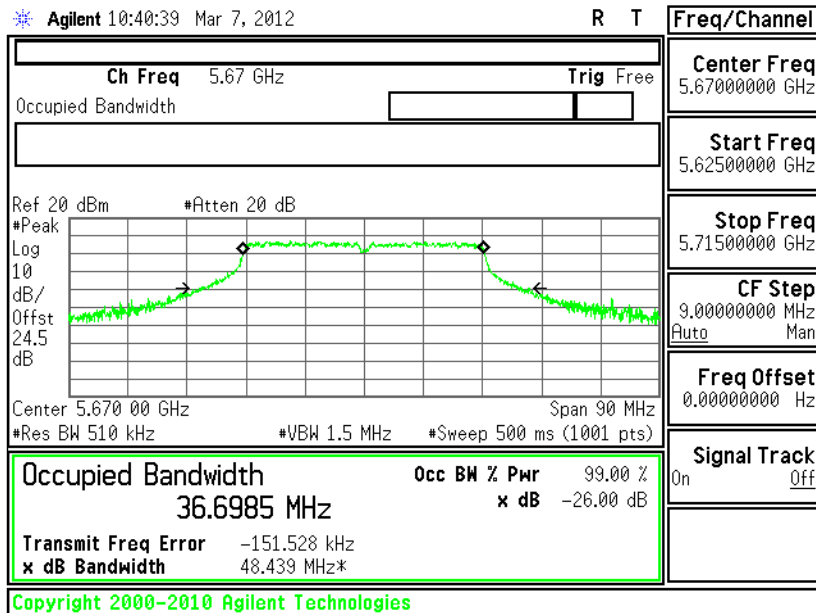
26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 134 -

Chain B



26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 134 -

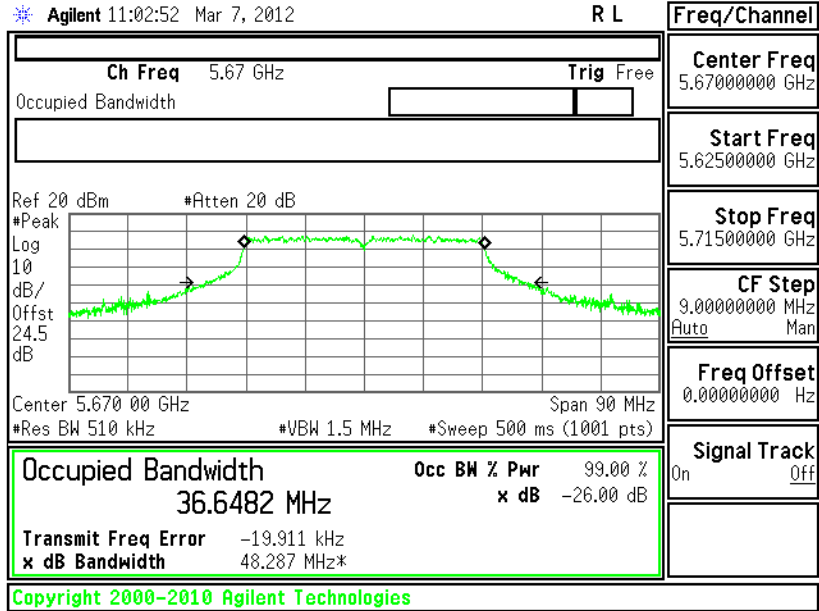
Chain A+B(A)





26 dB Bandwidth Plot on 802.11n (BW 40MHz) Channel 134 -

Chain A+B(B)





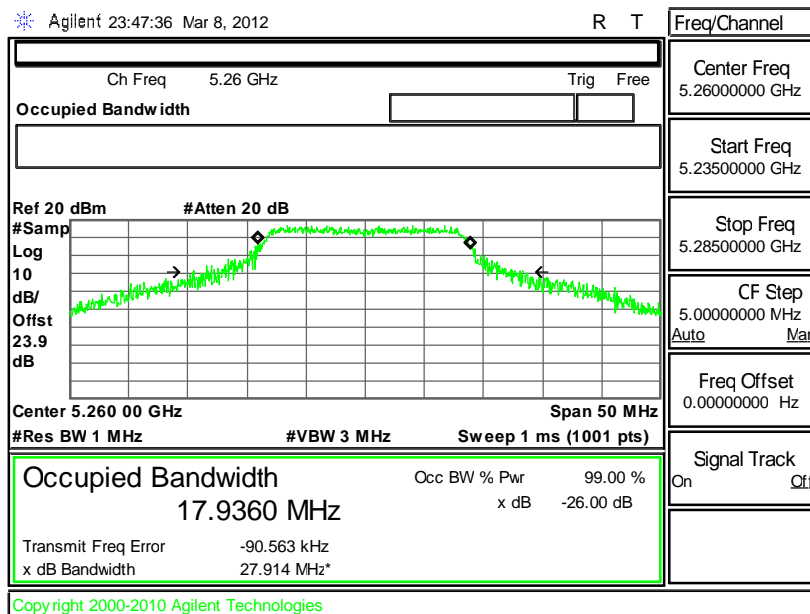
3.1.6 Test Result of 99% Occupied Bandwidth

<Antenna 3 for 4.5V>

Test Mode :	Mode 1~6	Temperature :	23~25°C
Test Engineer :	Hank Yu	Relative Humidity :	50~53%

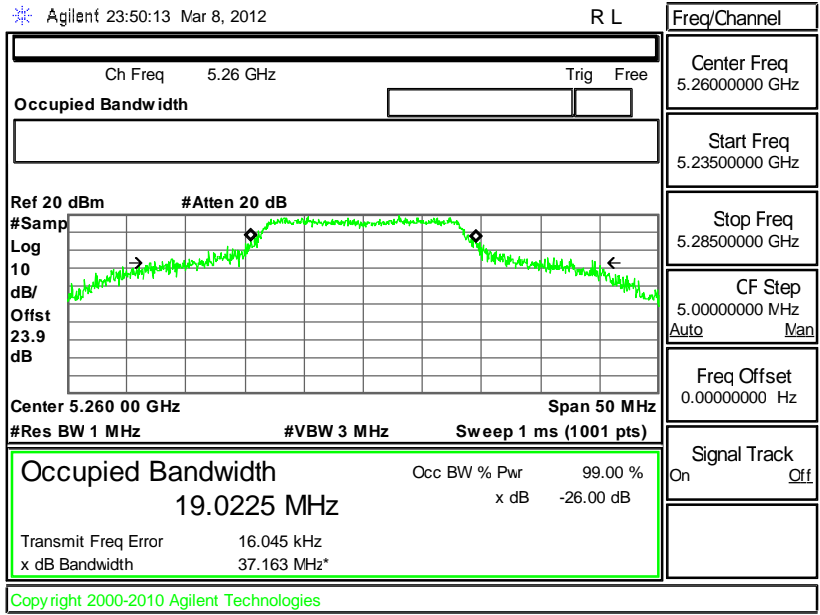
Channel	Frequency (MHz)	802.11a 99% Occupied Bandwidth (MHz)		Pass/Fail
		SISO		
		Chain A	Chain B	
52	5260	17.9360	19.0225	N/A
60	5300	18.9794	18.8728	N/A
64	5320	18.1301	18.0231	N/A
100	5500	17.9857	17.9932	N/A
116	5580	18.2165	17.8433	N/A
140	5700	17.8917	17.4982	N/A

99% Occupied Bandwidth Plot on 802.11a Channel 52 - Chain A

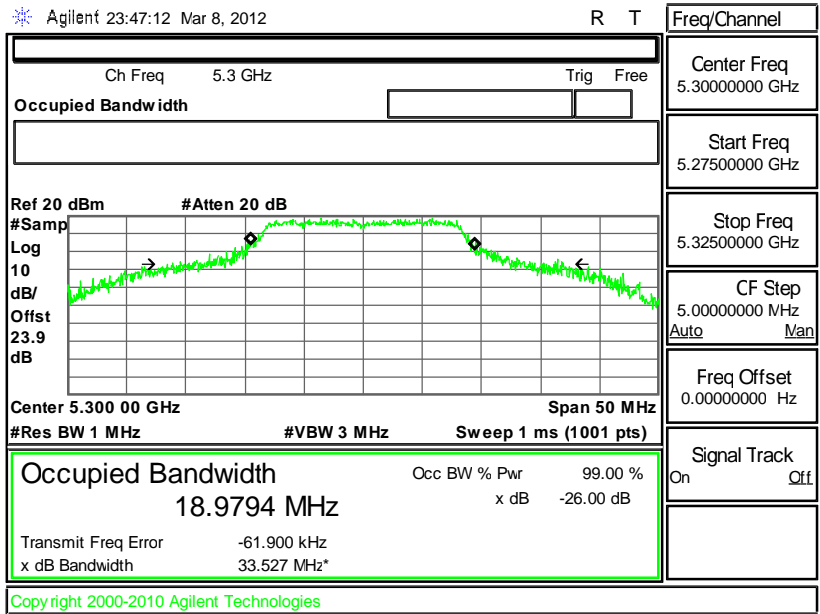




99% Occupied Bandwidth Plot on 802.11a Channel 52 - Chain B

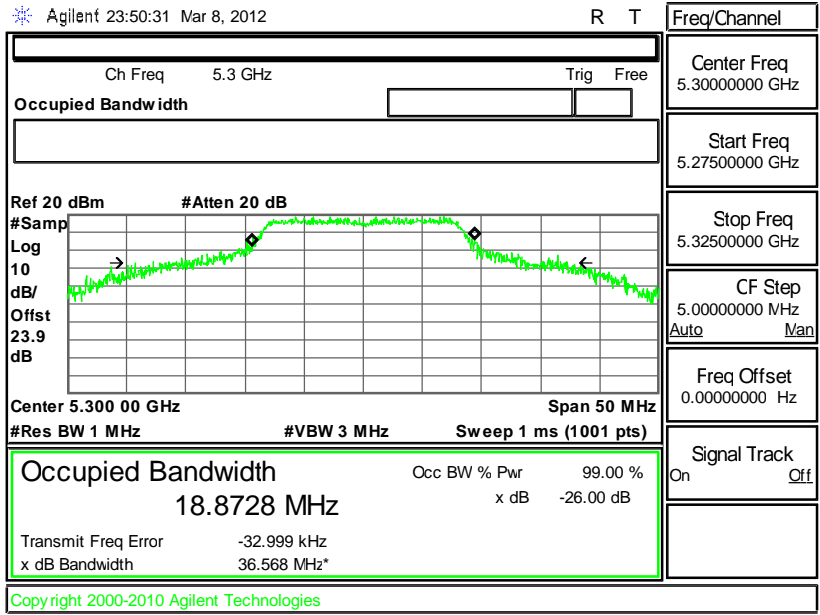


99% Occupied Bandwidth Plot on 802.11a Channel 60 - Chain A

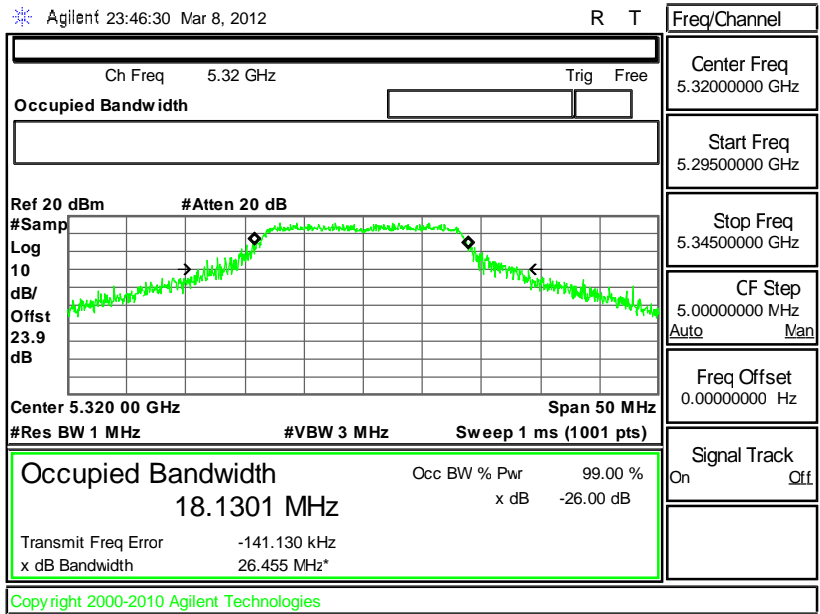




99% Occupied Bandwidth Plot on 802.11a Channel 60 - Chain B

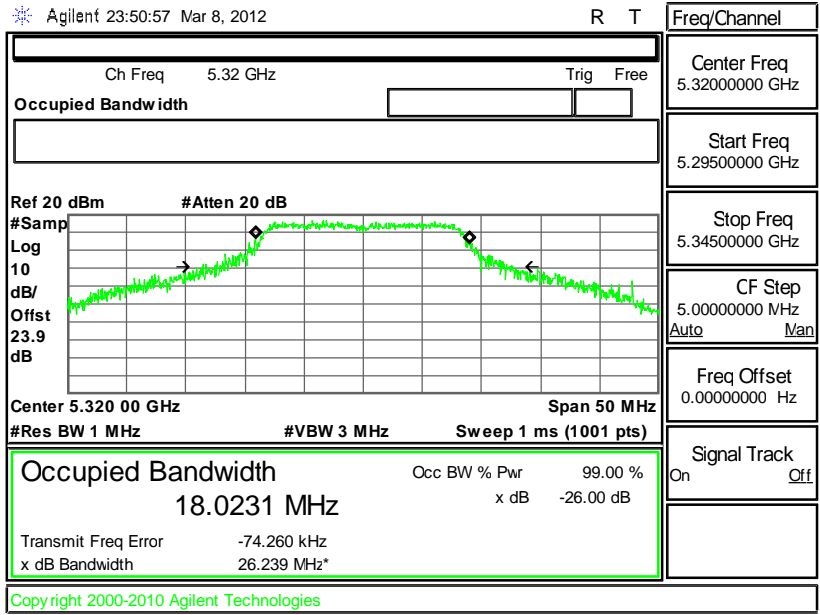


99% Occupied Bandwidth Plot on 802.11a Channel 64 - Chain A

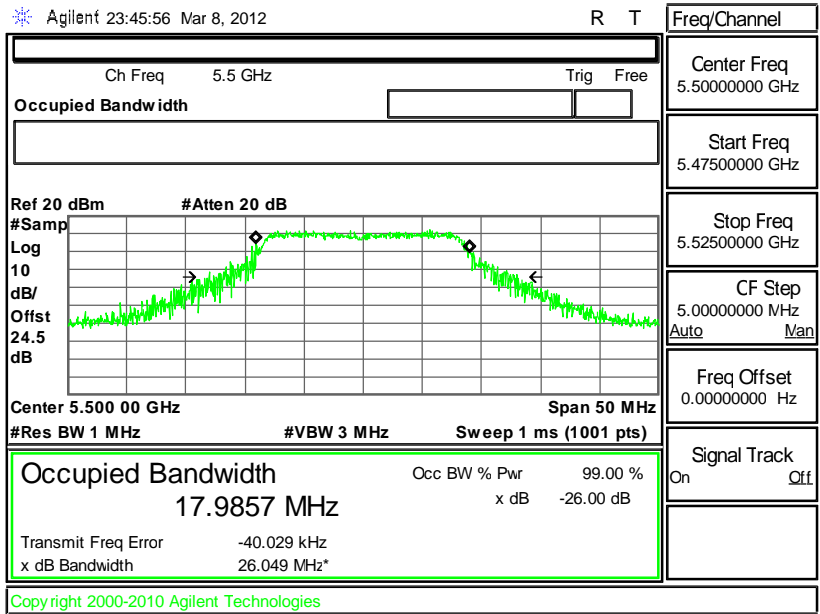




99% Occupied Bandwidth Plot on 802.11a Channel 64 - Chain B

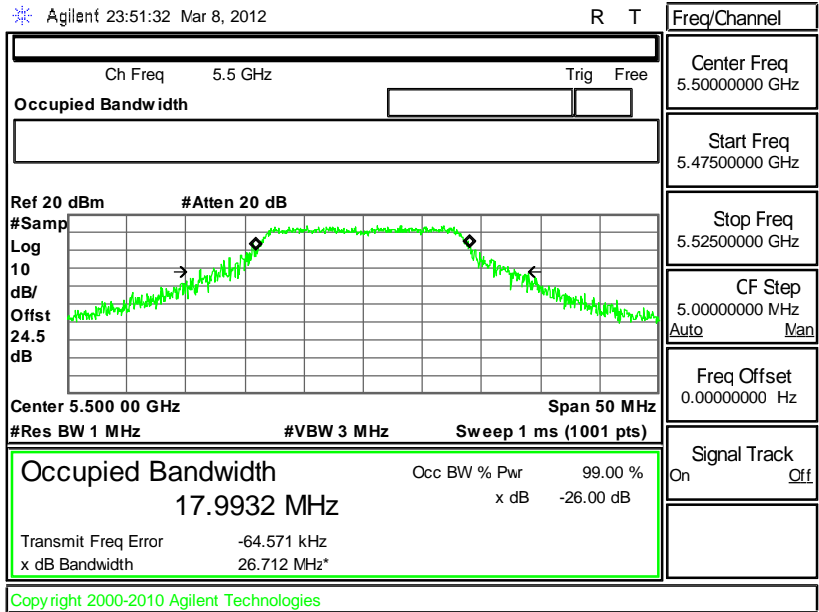


99% Occupied Bandwidth Plot on 802.11a Channel 100 - Chain A

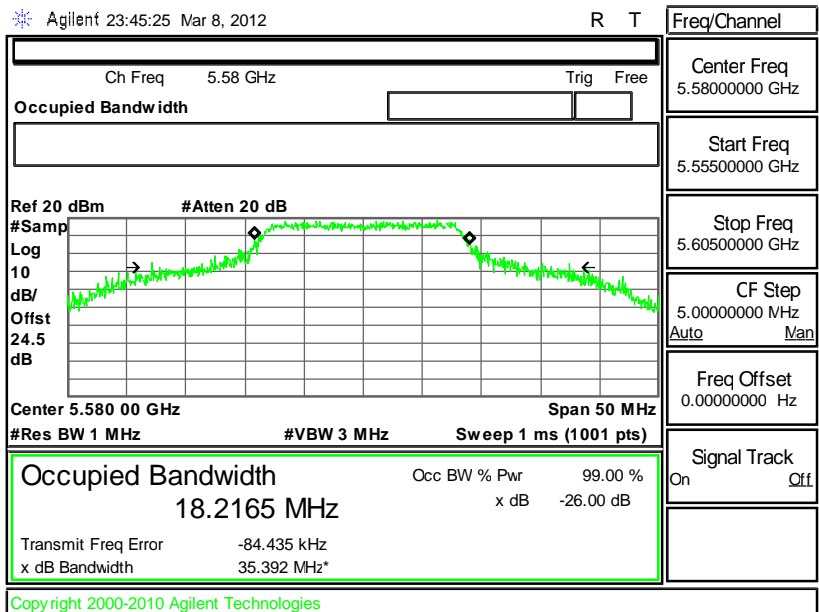




99% Occupied Bandwidth Plot on 802.11a Channel 100 - Chain B

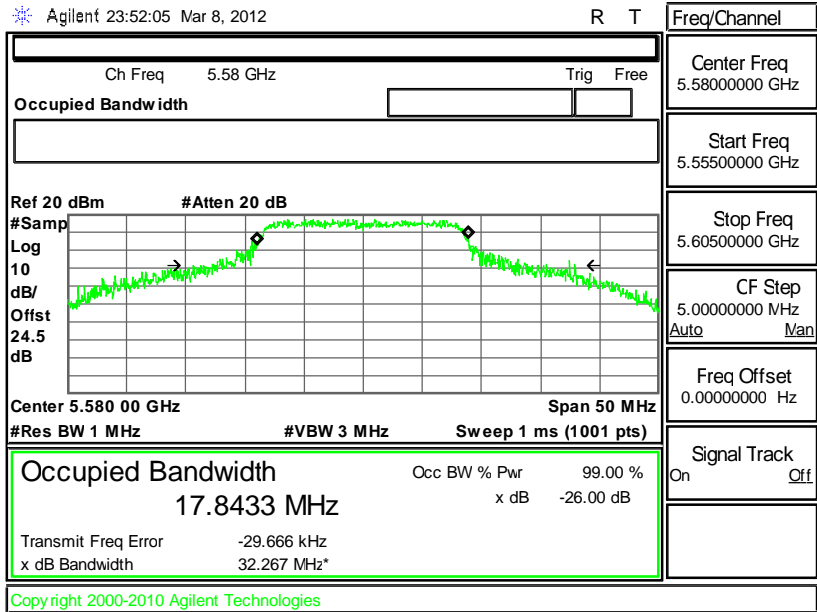


99% Occupied Bandwidth Plot on 802.11a Channel 116 - Chain A

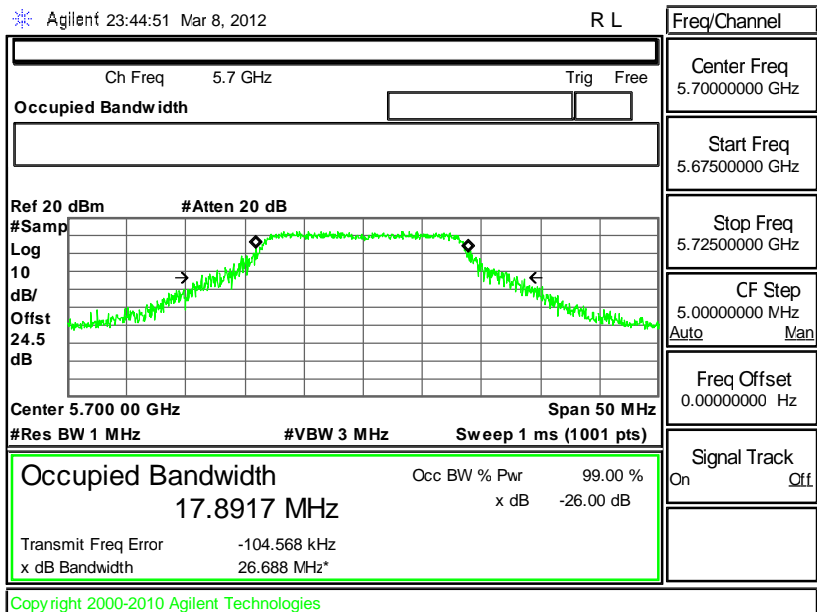




99% Occupied Bandwidth Plot on 802.11a Channel 116 - Chain B

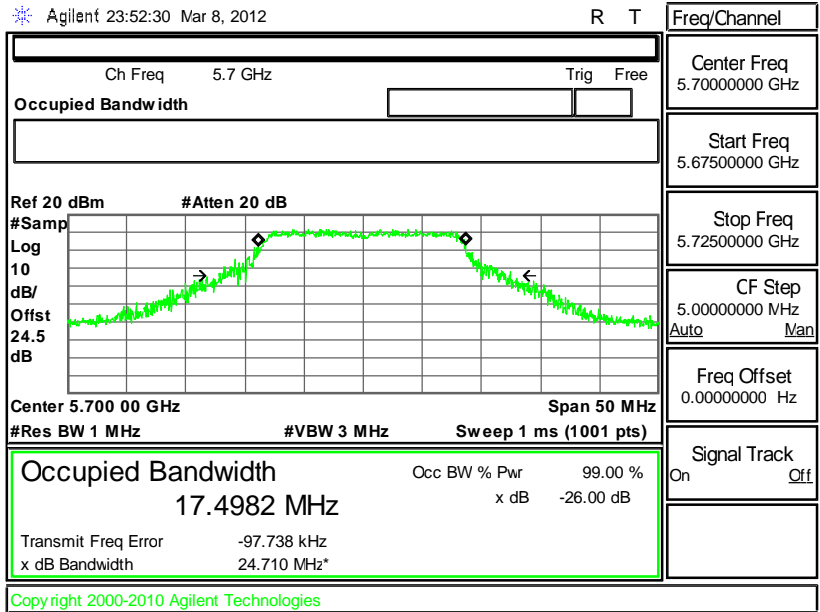


99% Occupied Bandwidth Plot on 802.11a Channel 140 - Chain A





99% Occupied Bandwidth Plot on 802.11a Channel 140 - Chain B



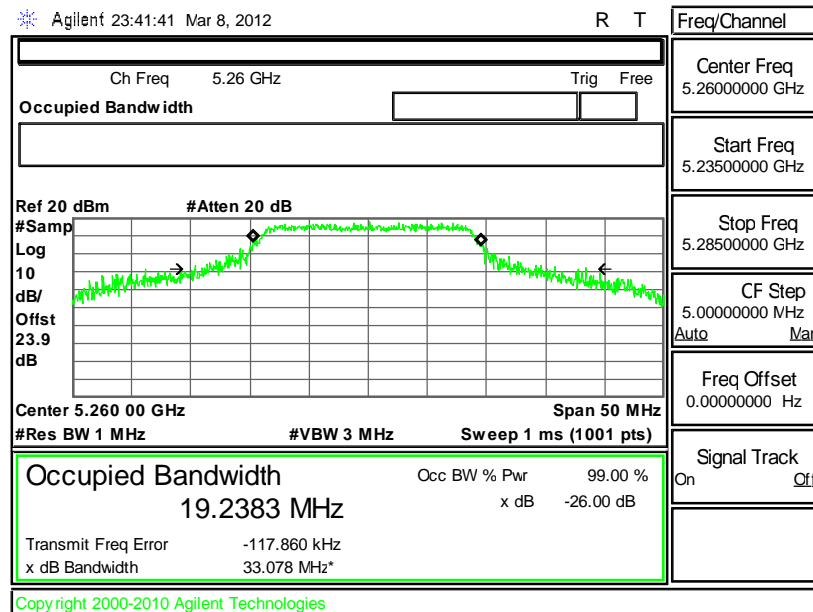


Test Mode :	Mode 7~12	Temperature :	23~25°C
Test Engineer :	Hank Yu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11n (BW 20MHz) 99% Occupied Bandwidth (MHz)		Pass/Fail
		SISO		
		Chain A	Chain B	
52	5260	19.2383	19.1573	N/A
60	5300	18.9919	19.4962	N/A
64	5320	19.0219	19.0281	N/A
100	5500	18.7831	18.7533	N/A
116	5580	18.9741	18.8381	N/A
140	5700	18.8300	18.7250	N/A

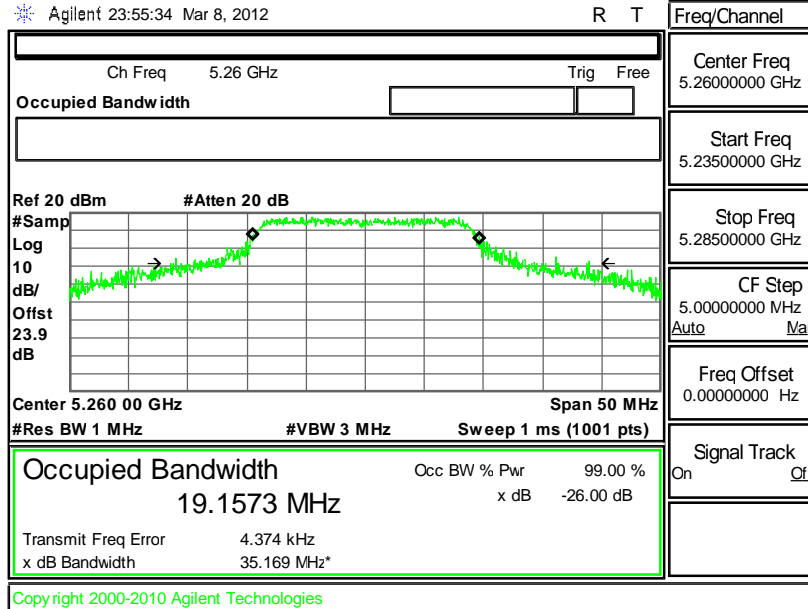
99% Occupied Bandwidth Plot on 802.11n (BW 20MHz) Channel

52 - Chain A

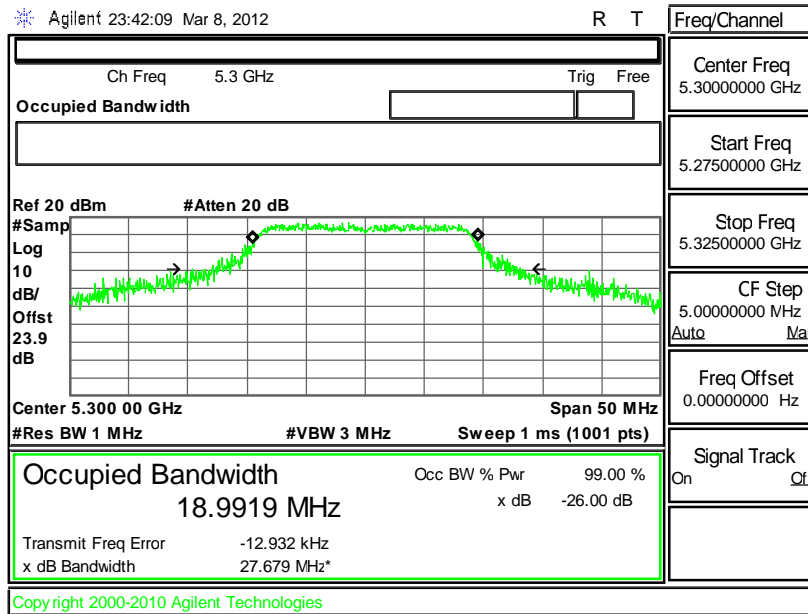




99% Occupied Bandwidth Plot on 802.11n (BW 20MHz) Channel
52 - Chain B



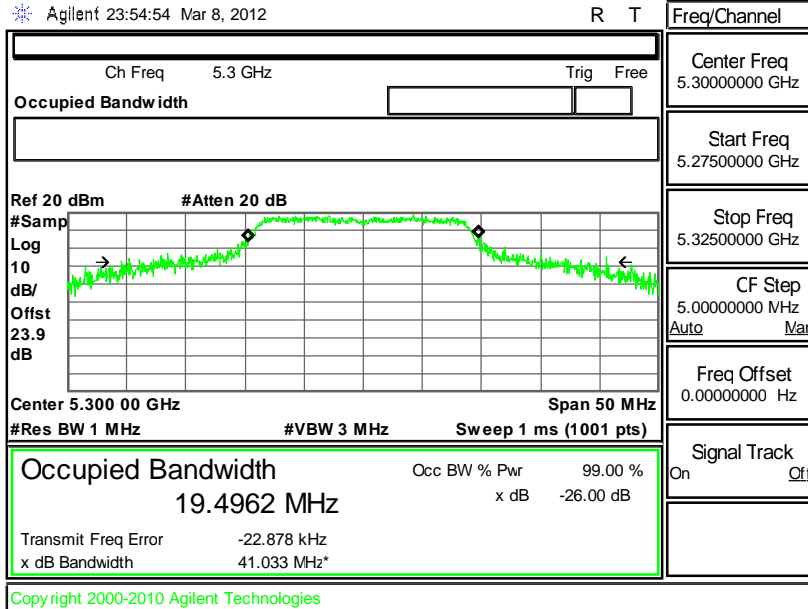
99% Occupied Bandwidth Plot on 802.11n (BW 20MHz) Channel
60 - Chain A





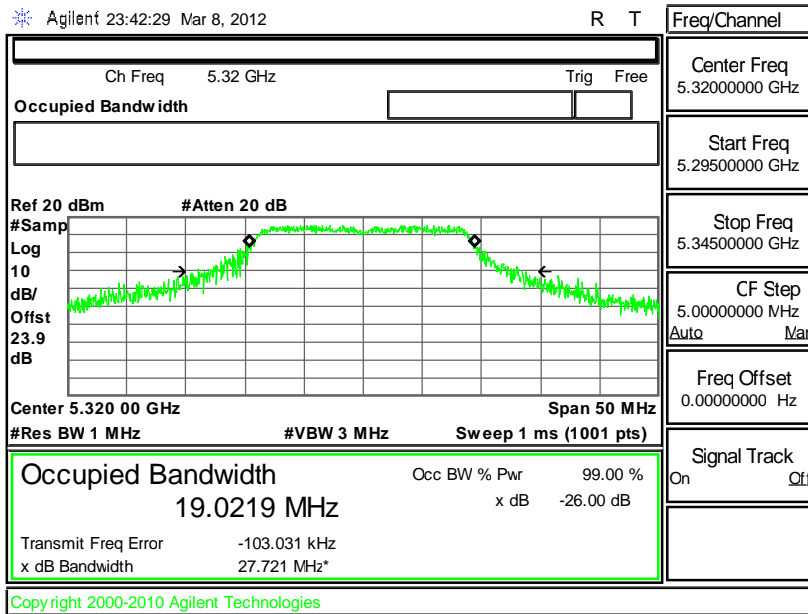
99% Occupied Bandwidth Plot on 802.11n (BW 20MHz) Channel

60 - Chain B



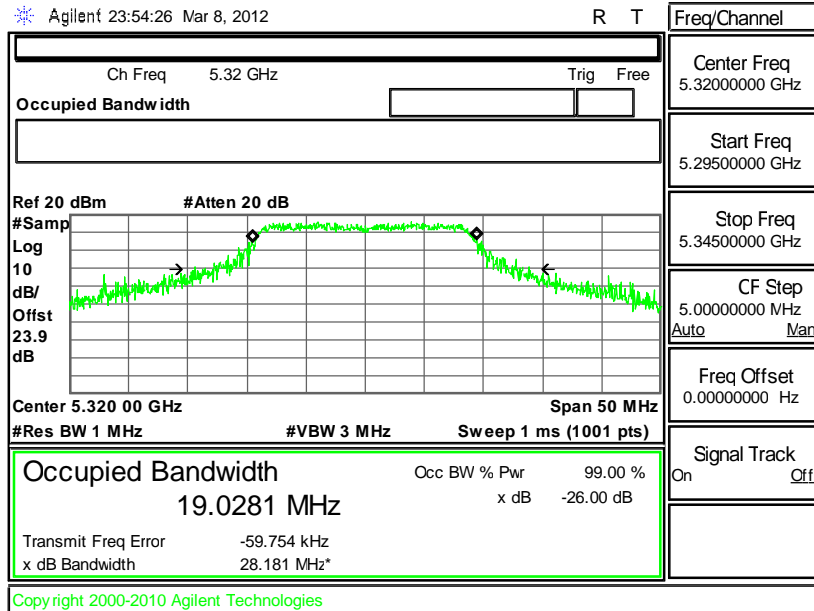
99% Occupied Bandwidth Plot on 802.11n (BW 20MHz) Channel

64 - Chain A

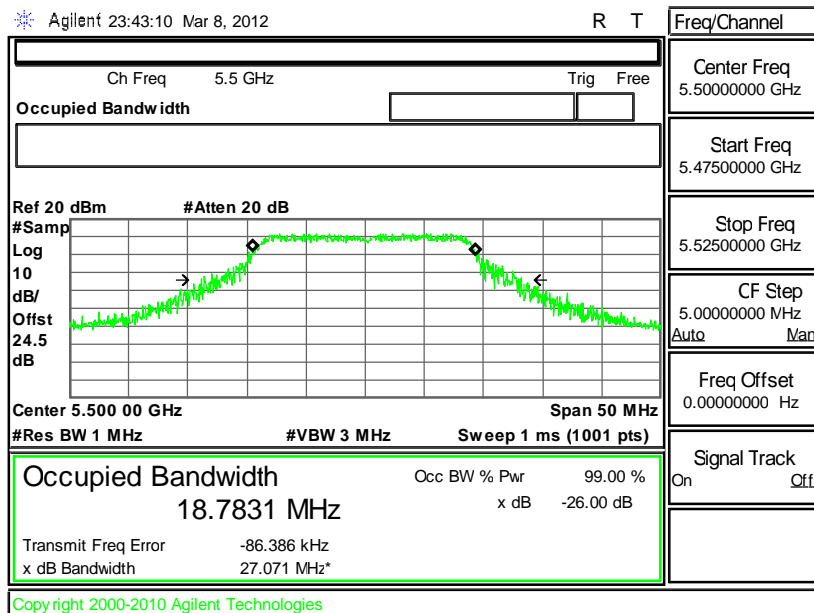




**99% Occupied Bandwidth Plot on 802.11n (BW 20MHz) Channel
64 - Chain B**

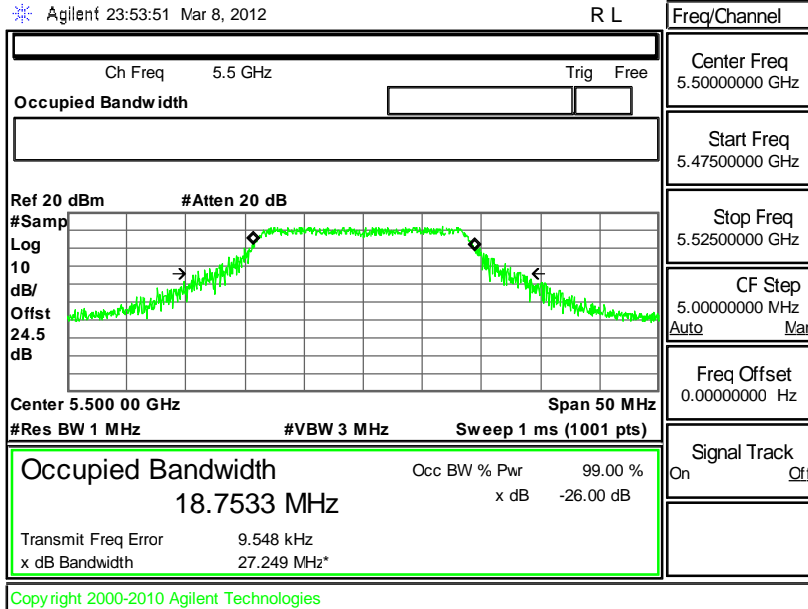


**99% Occupied Bandwidth Plot on 802.11n (BW 20MHz) Channel
100 - Chain A**

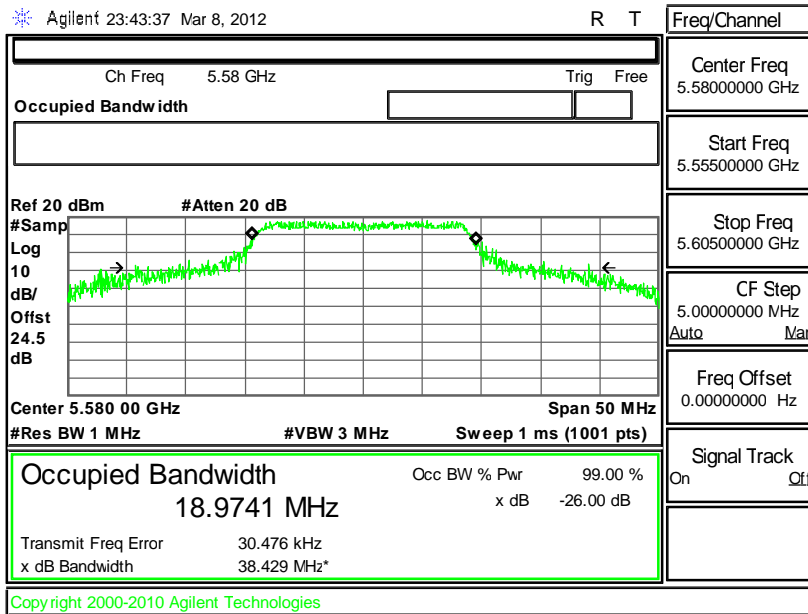




**99% Occupied Bandwidth Plot on 802.11n (BW 20MHz) Channel
100 - Chain B**

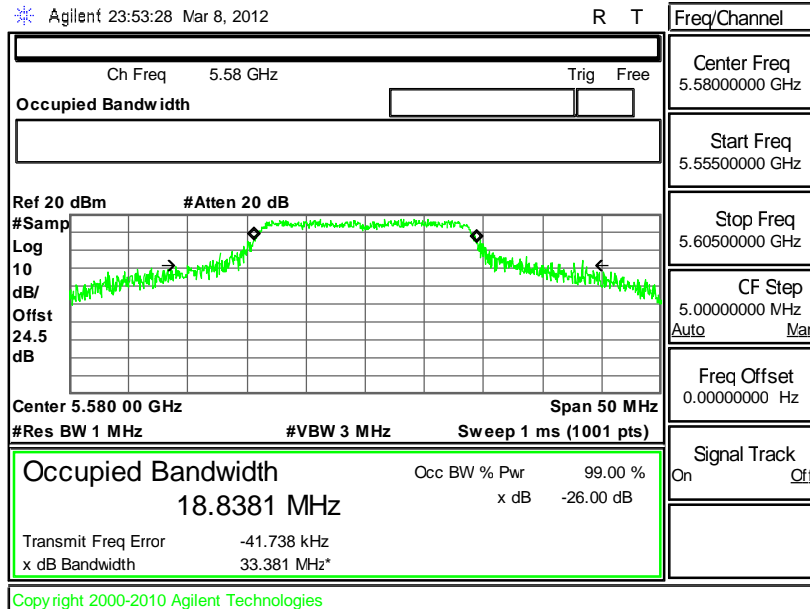


**99% Occupied Bandwidth Plot on 802.11n (BW 20MHz) Channel
116 - Chain A**

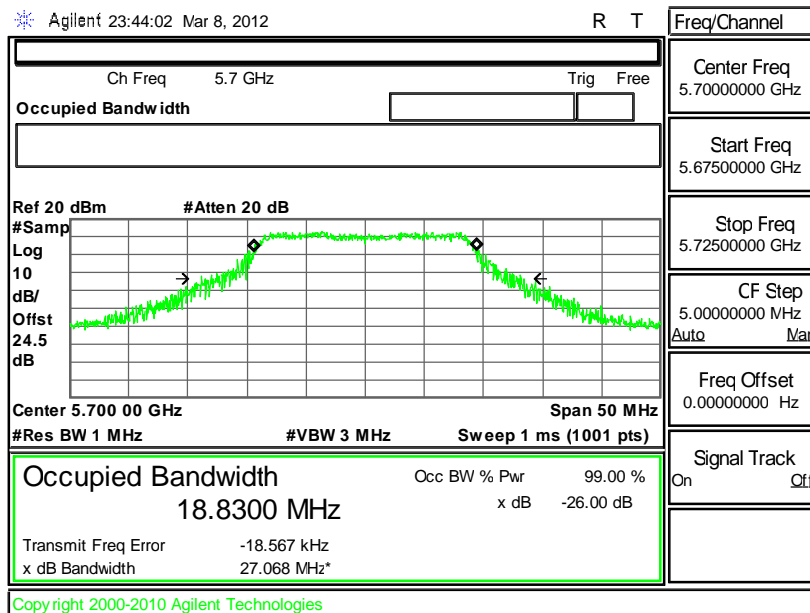




99% Occupied Bandwidth Plot on 802.11n (BW 20MHz) Channel
116 - Chain B

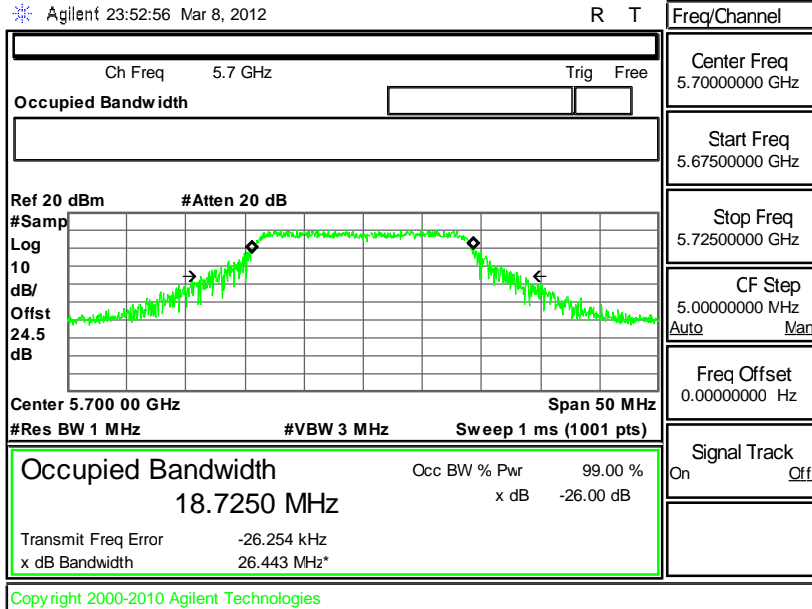


99% Occupied Bandwidth Plot on 802.11n (BW 20MHz) Channel
140 - Chain A





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



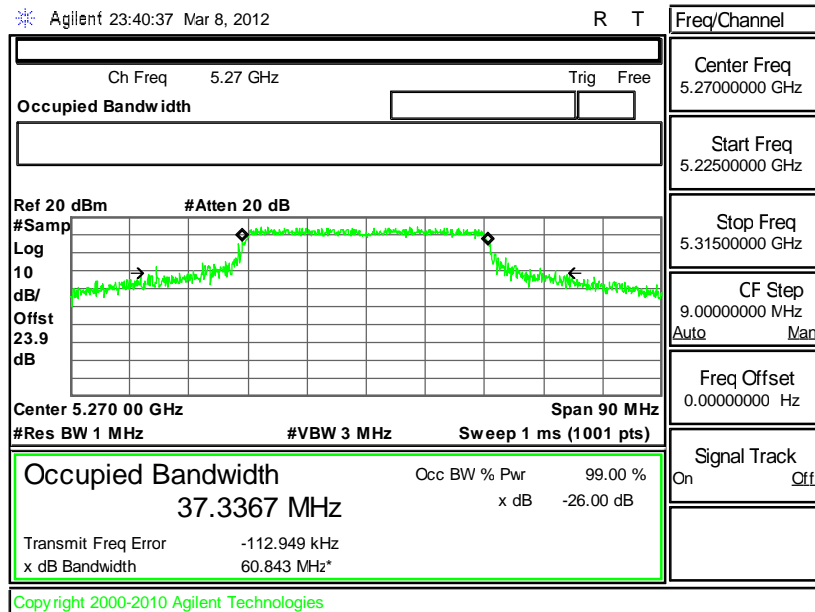


Test Mode :	Mode 13~17	Temperature :	23~25°C
Test Engineer :	Hank Yu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11n (BW 40MHz) 99% Occupied Bandwidth (MHz)		Pass/Fail
		SISO		
		Chain A	Chain B	
54	5270	37.3367	39.7028	N/A
62	5310	36.8222	36.8410	N/A
102	5510	36.7379	36.8956	N/A
110	5550	47.2826	37.2410	N/A
134	5670	36.9816	37.0869	N/A

99% Occupied Bandwidth Plot on 802.11n (BW 40MHz) Channel

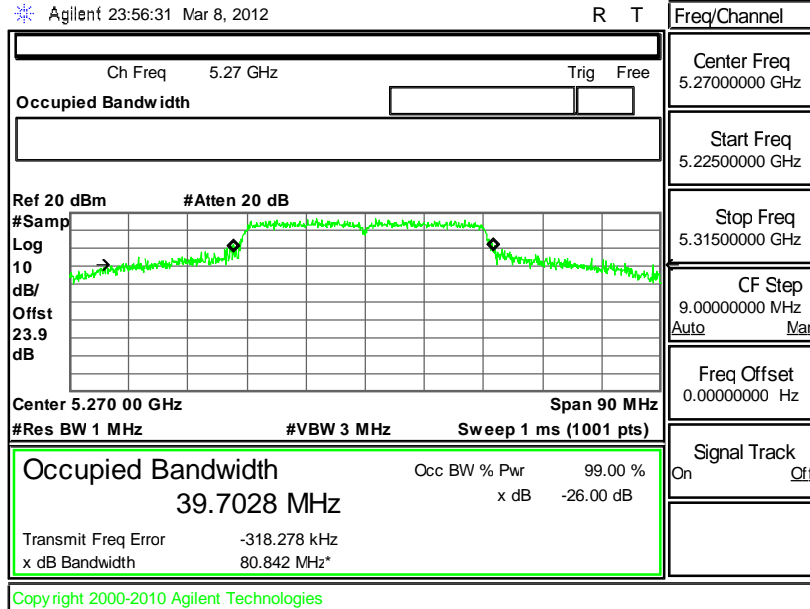
54 - Chain A





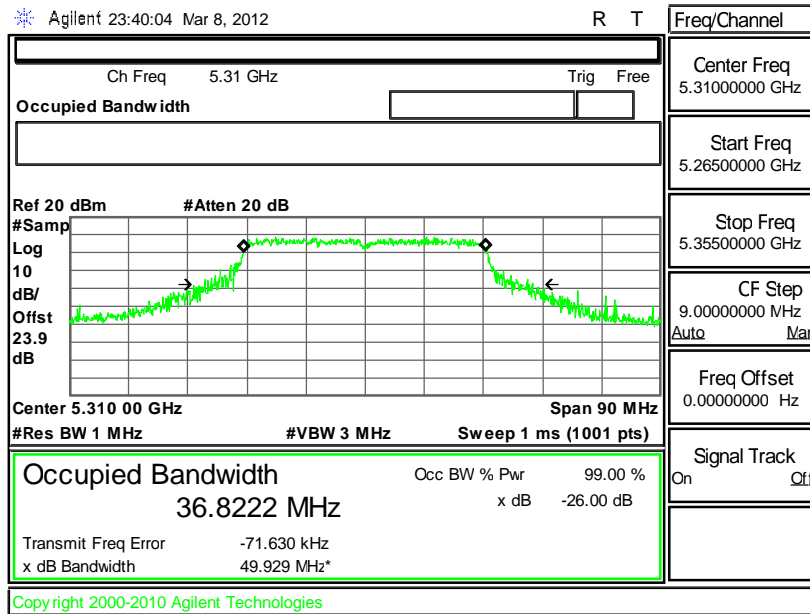
99% Occupied Bandwidth Plot on 802.11n (BW 40MHz) Channel

54 - Chain B



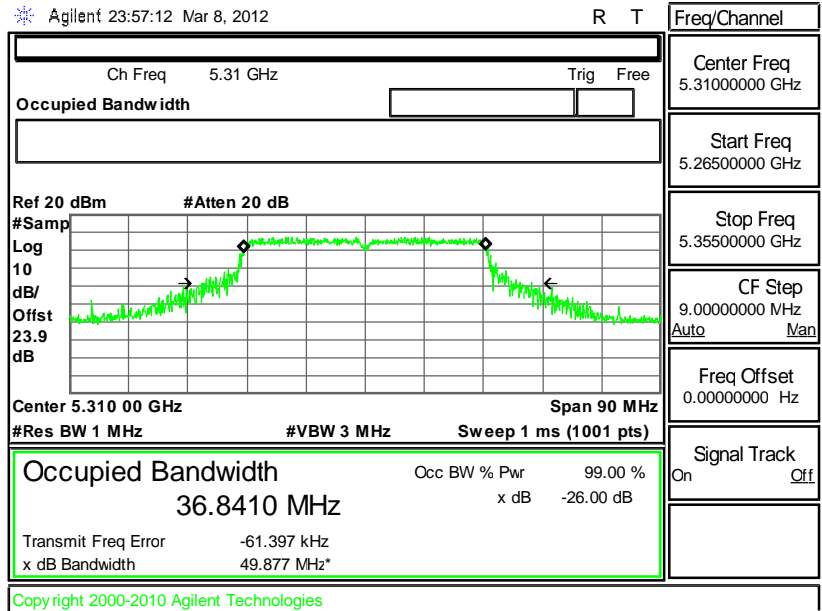
99% Occupied Bandwidth Plot on 802.11n (BW 40MHz) Channel

62 - Chain A

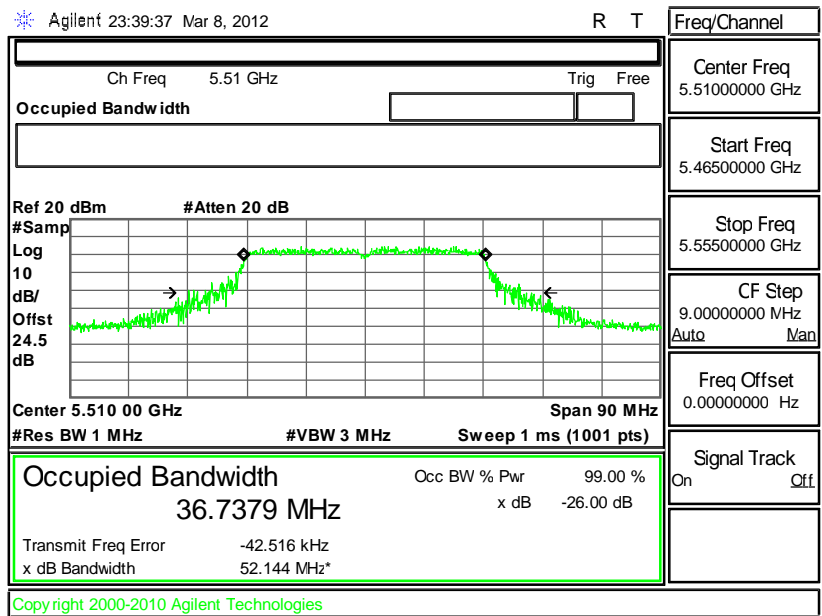




**99% Occupied Bandwidth Plot on 802.11n (BW 40MHz) Channel
62 - Chain B**

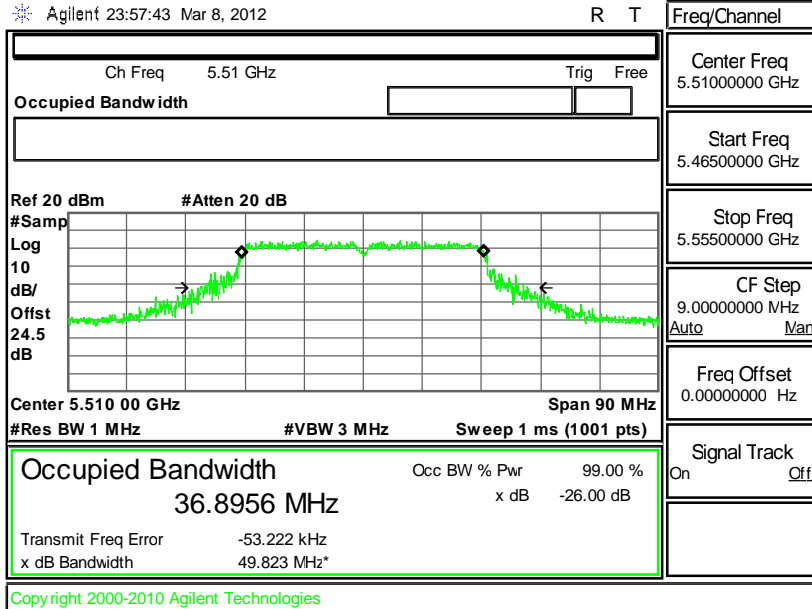


**99% Occupied Bandwidth Plot on 802.11n (BW 40MHz) Channel
102 - Chain A**

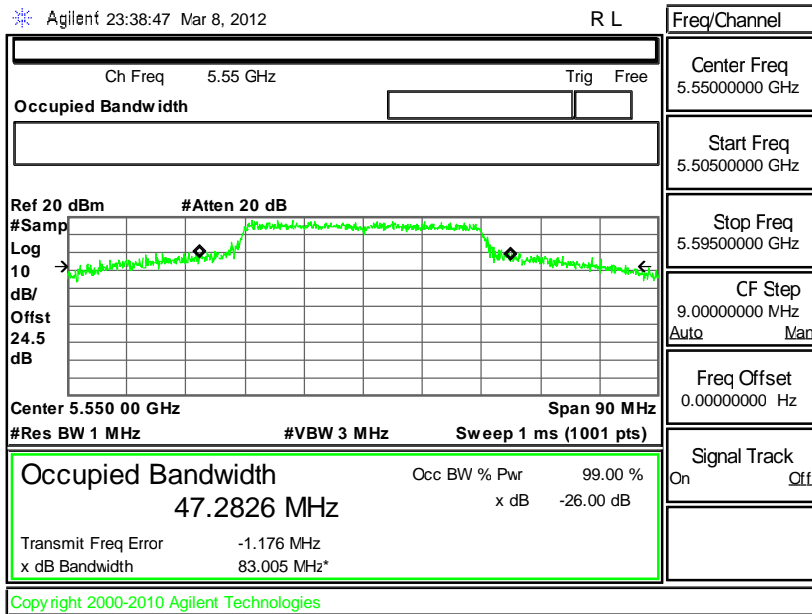




**99% Occupied Bandwidth Plot on 802.11n (BW 40MHz) Channel
102 - Chain B**

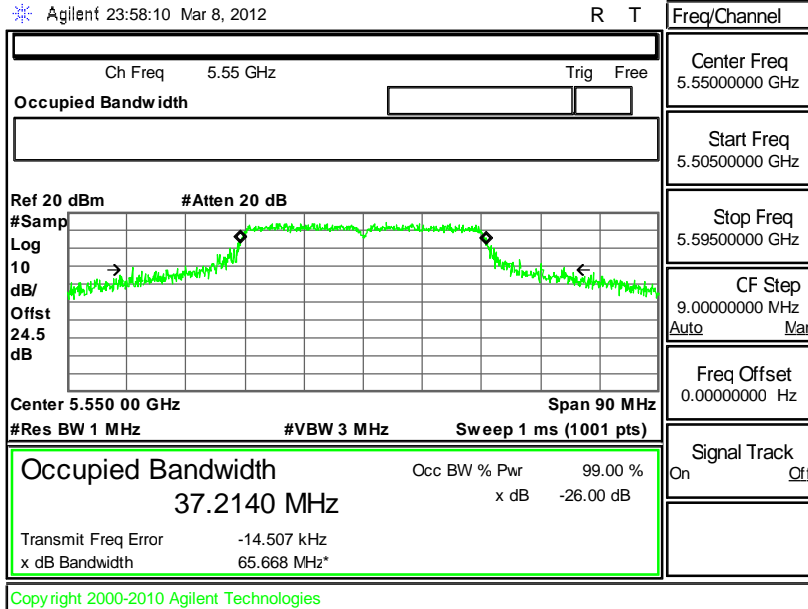


**99% Occupied Bandwidth Plot on 802.11n (BW 40MHz) Channel
110 - Chain A**

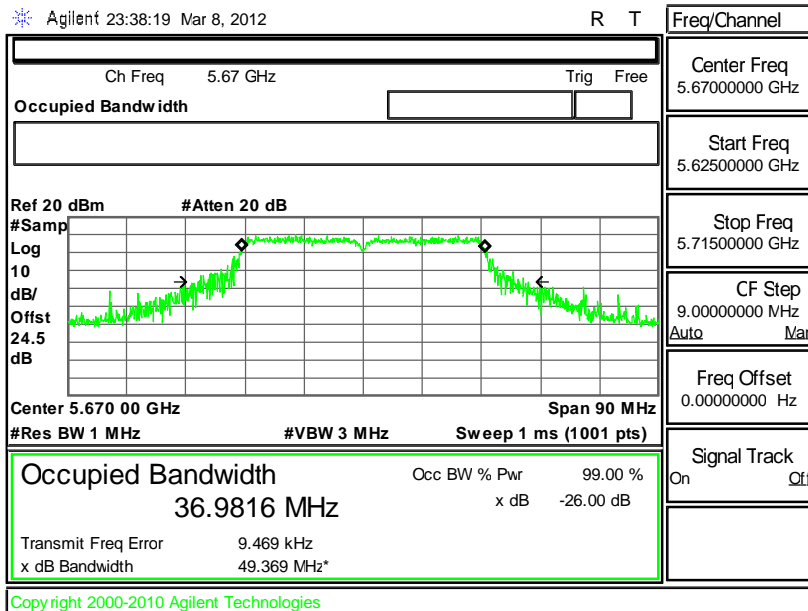




**99% Occupied Bandwidth Plot on 802.11n (BW 40MHz) Channel
110 - Chain B**

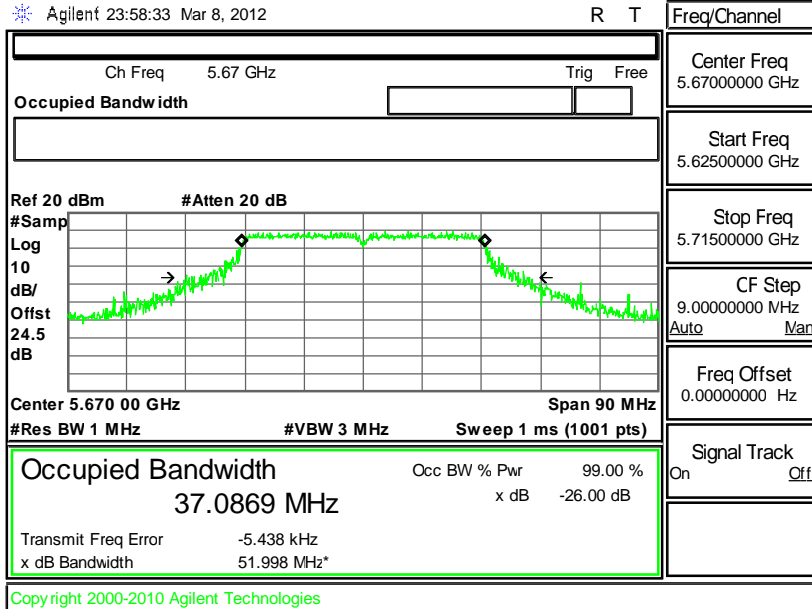


**99% Occupied Bandwidth Plot on 802.11n (BW 40MHz) Channel
134 - Chain A**





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



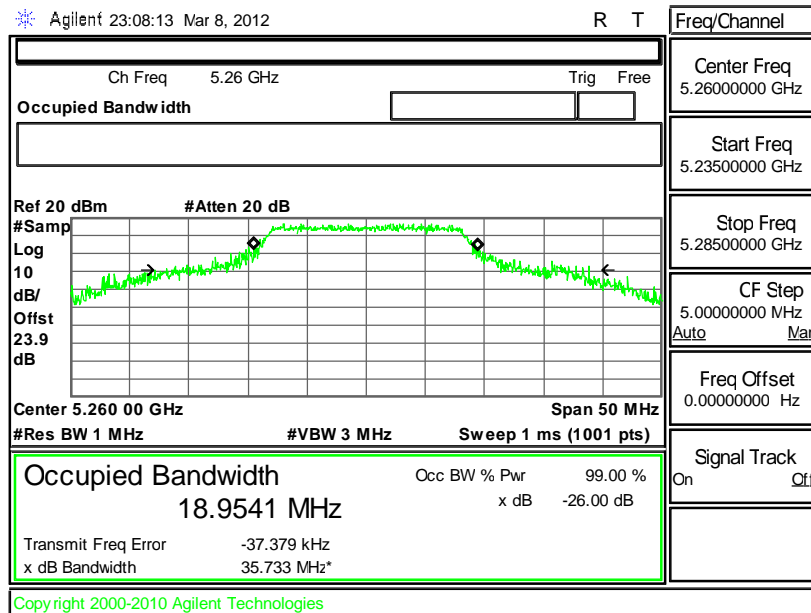


<Antenna 4 for 3.3V>

Test Mode :	Mode 1~6	Temperature :	23~25°C
Test Engineer :	Hank Yu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11a 99% Occupied Bandwidth (MHz)		Pass/Fail
		MIMO (2Tx)		
		Chain A+B(A)	Chain A+B(B)	
52	5260	18.9541	19.7425	N/A
60	5300	18.8785	19.4248	N/A
64	5320	17.8198	17.7515	N/A
100	5500	17.8514	17.8907	N/A
116	5580	18.3131	18.0222	N/A
140	5700	17.7711	17.6155	N/A

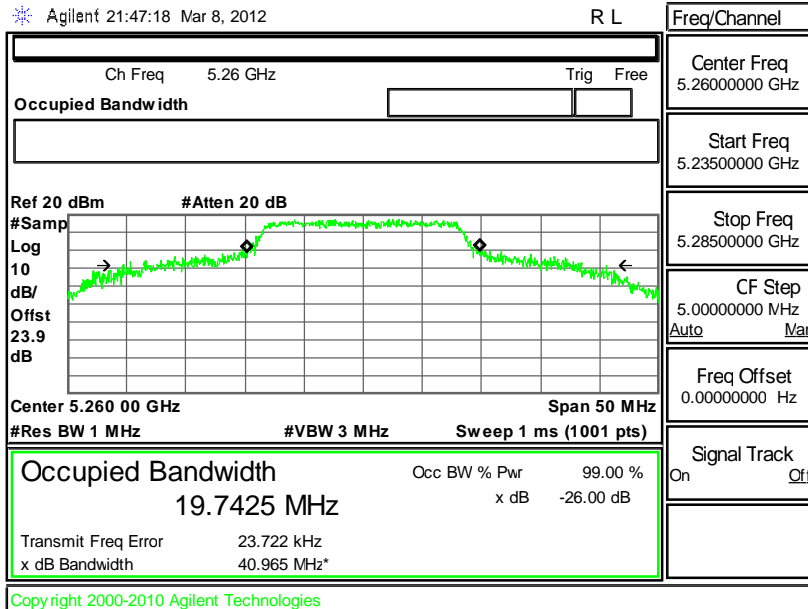
99% Occupied Bandwidth Plot on 802.11a Channel 52 - Chain A+B(A)





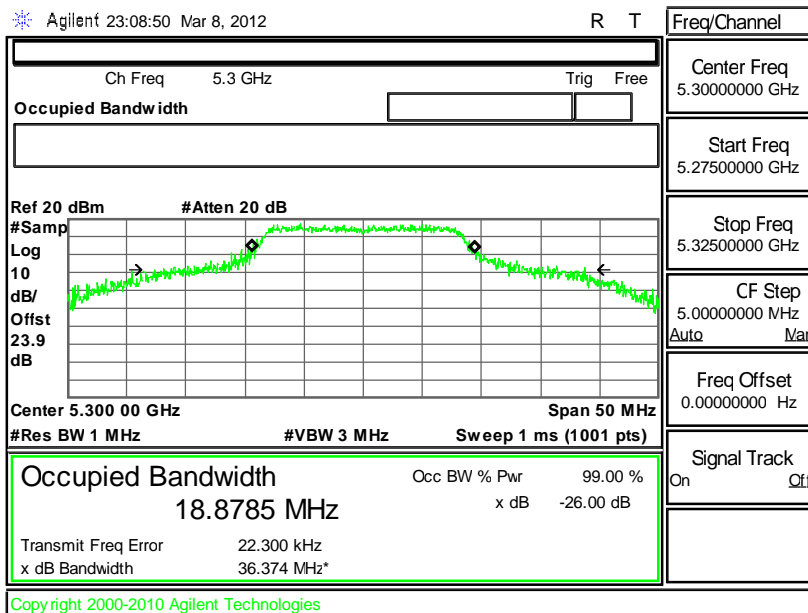
99% Occupied Bandwidth Plot on 802.11a Channel 52 - Chain

A+B(B)



99% Occupied Bandwidth Plot on 802.11a Channel 60 - Chain

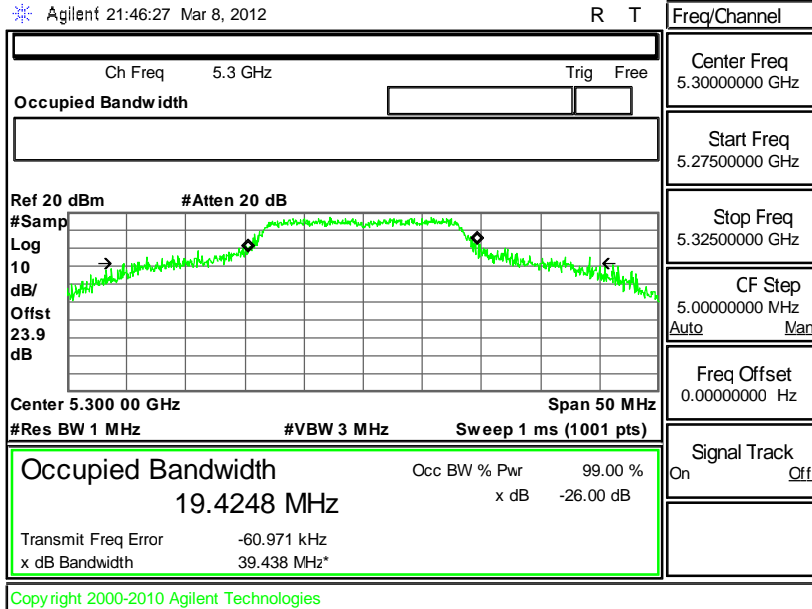
A+B(A)





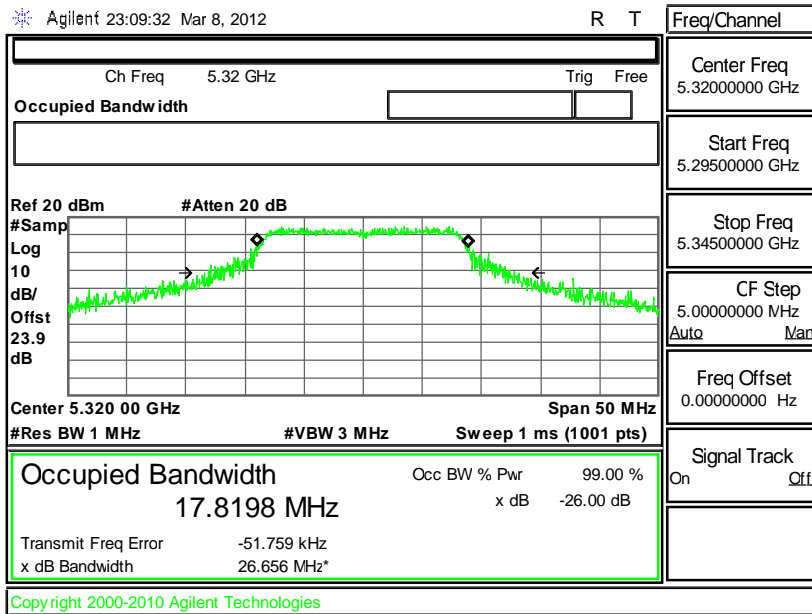
99% Occupied Bandwidth Plot on 802.11a Channel 60 - Chain

A+B(B)



99% Occupied Bandwidth Plot on 802.11a Channel 64 - Chain

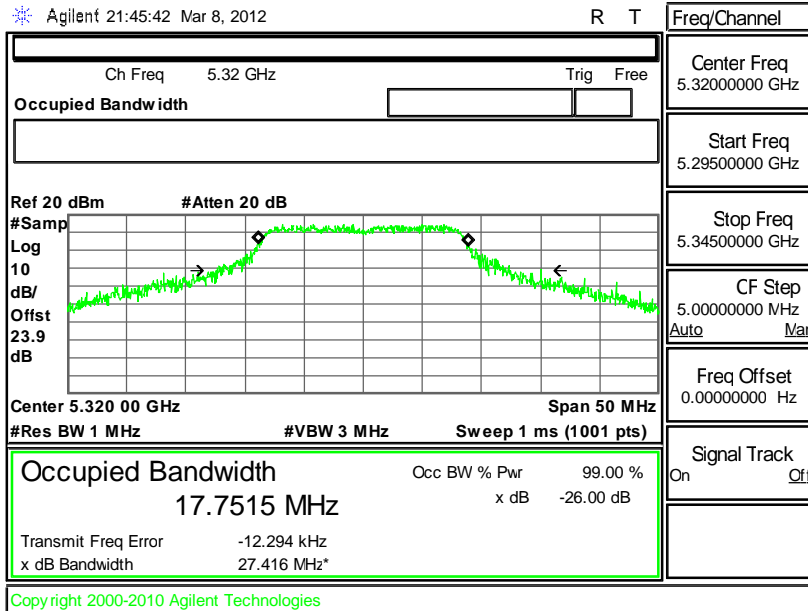
A+B(A)





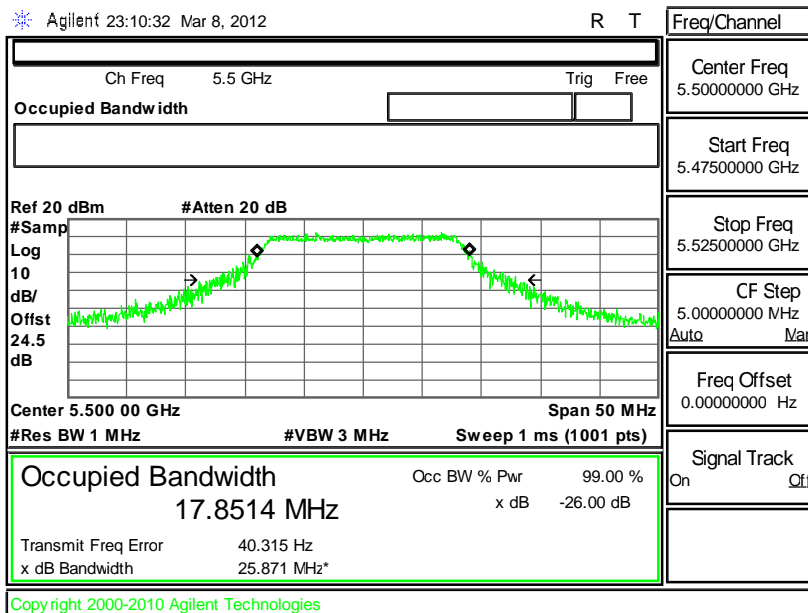
99% Occupied Bandwidth Plot on 802.11a Channel 64 - Chain

A+B(B)



99% Occupied Bandwidth Plot on 802.11a Channel 100 - Chain

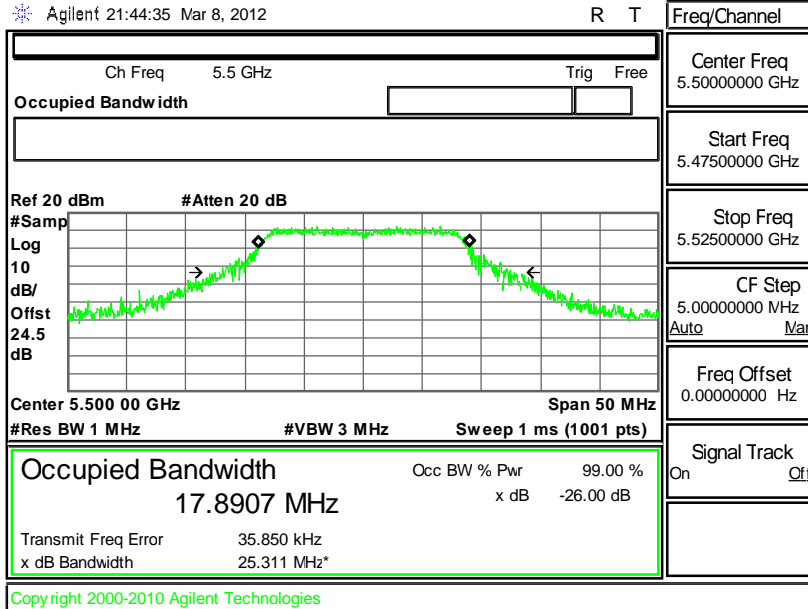
A+B(A)





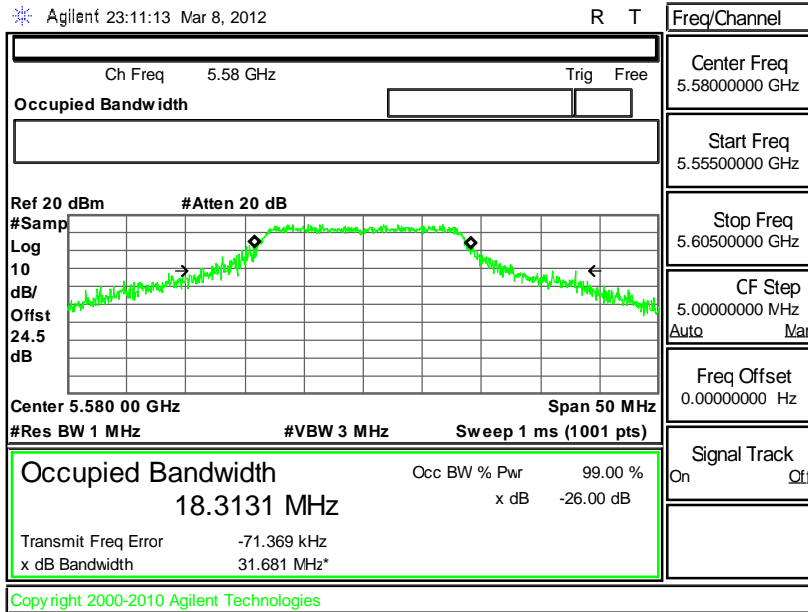
99% Occupied Bandwidth Plot on 802.11a Channel 100 - Chain

A+B(B)



99% Occupied Bandwidth Plot on 802.11a Channel 116 - Chain

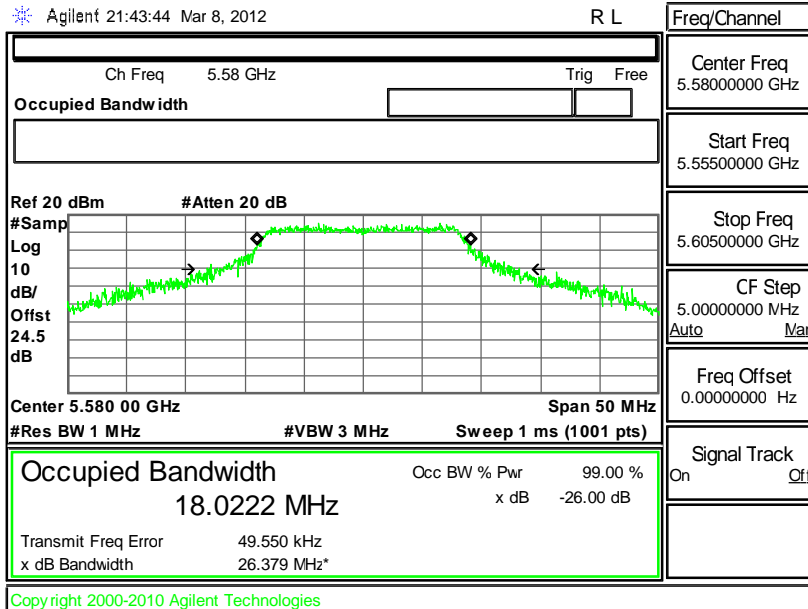
A+B(A)





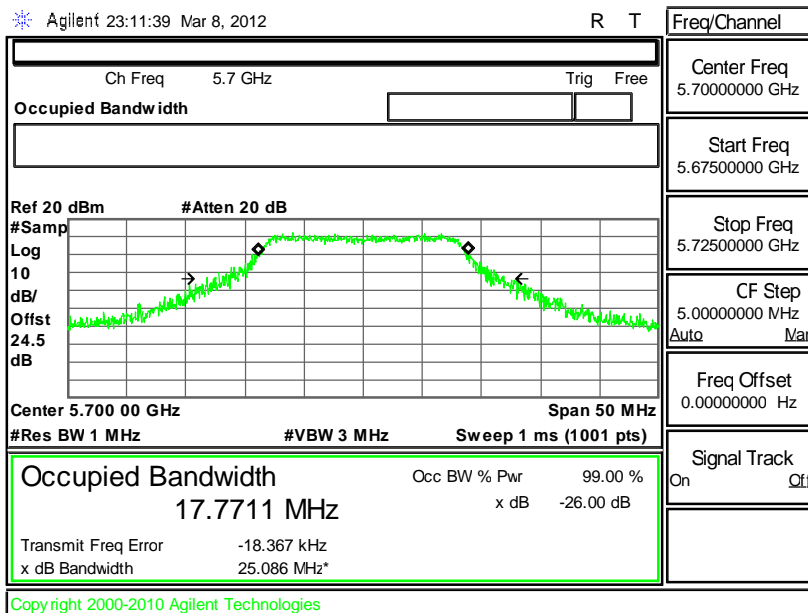
99% Occupied Bandwidth Plot on 802.11a Channel 116 - Chain

A+B(B)



99% Occupied Bandwidth Plot on 802.11a Channel 140 - Chain

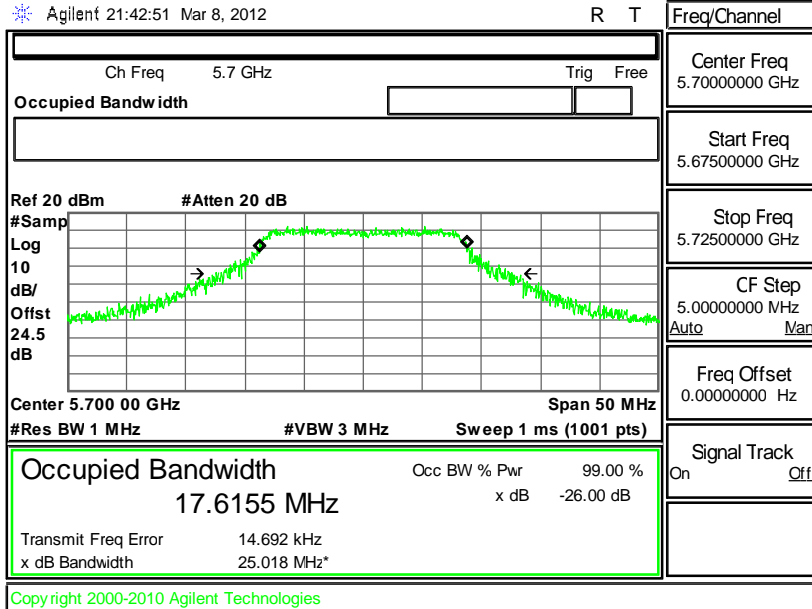
A+B(A)





99% Occupied Bandwidth Plot on 802.11a Channel 140 - Chain

A+B(B)



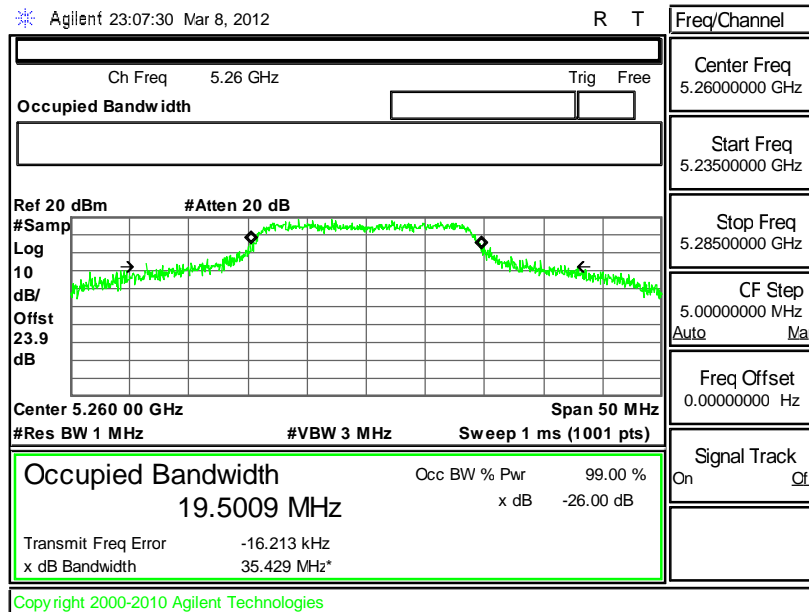


Test Mode :	Mode 7~12	Temperature :	23~25°C
Test Engineer :	Hank Yu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11n (BW 20MHz) 99% Occupied Bandwidth (MHz)		Pass/Fail
		MIMO (2Tx)		
		Chain A+B(A)	Chain A+B(B)	
52	5260	19.5009	19.8839	N/A
60	5300	19.1816	19.2387	N/A
64	5320	18.6972	18.6347	N/A
100	5500	18.8217	18.7214	N/A
116	5580	18.7570	18.8682	N/A
140	5700	18.7026	18.5304	N/A

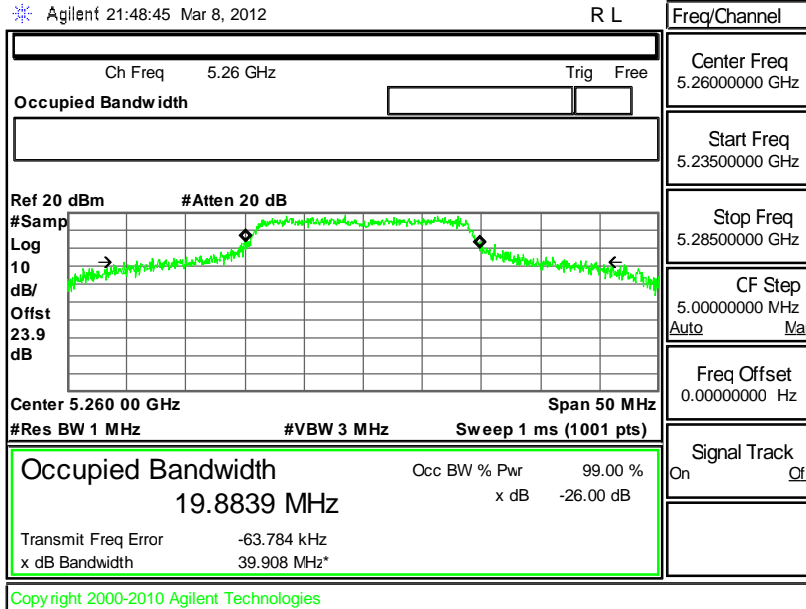
99% Occupied Bandwidth Plot on 802.11n (BW 20MHz) Channel

52 - Chain A+B(A)

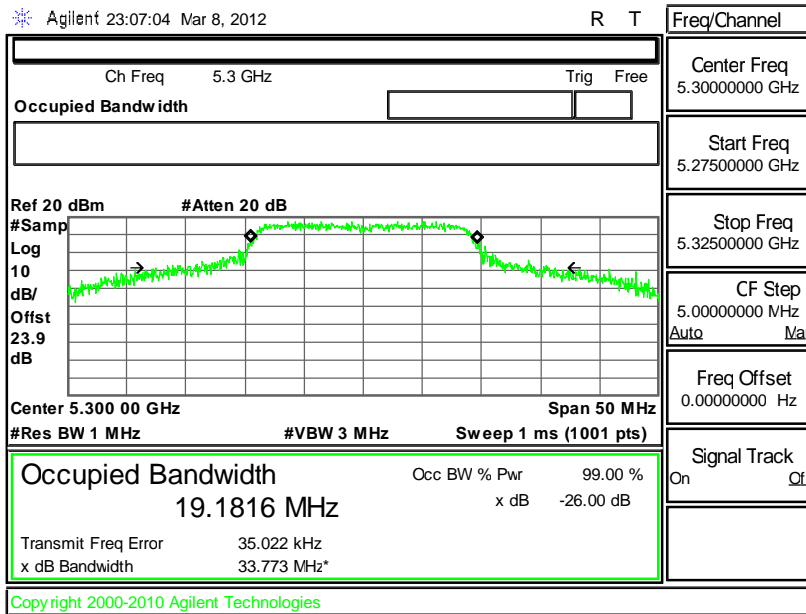




**99% Occupied Bandwidth Plot on 802.11n (BW 20MHz) Channel
52 - Chain A+B(B)**

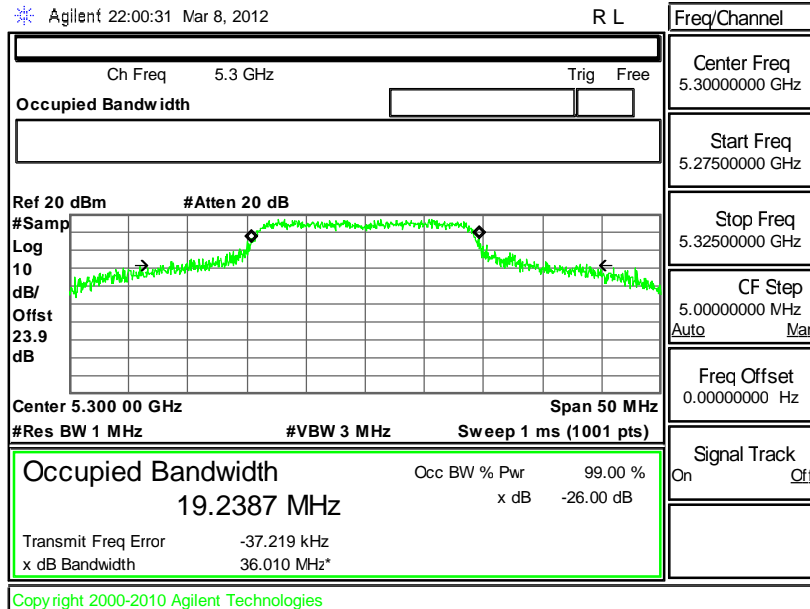


**99% Occupied Bandwidth Plot on 802.11n (BW 20MHz) Channel
60 - Chain A+B(A)**

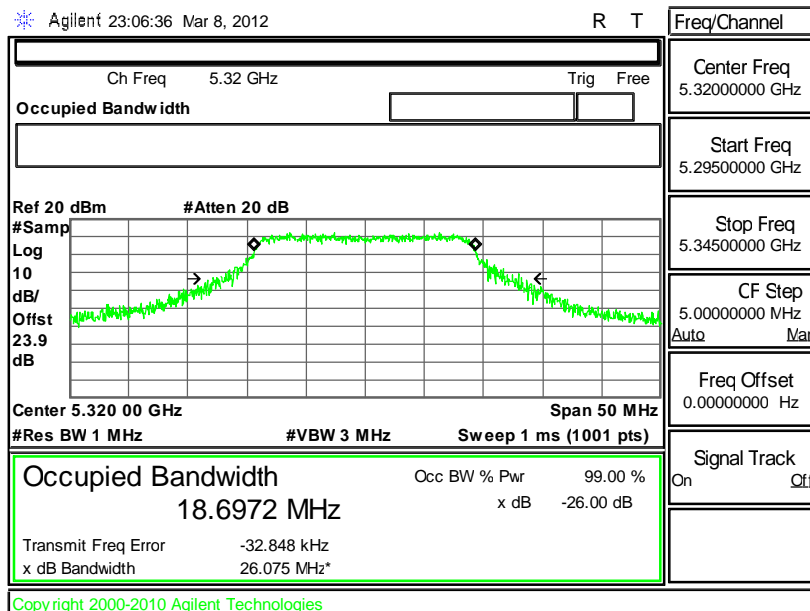




**99% Occupied Bandwidth Plot on 802.11n (BW 20MHz) Channel
60 - Chain A+B(B)**

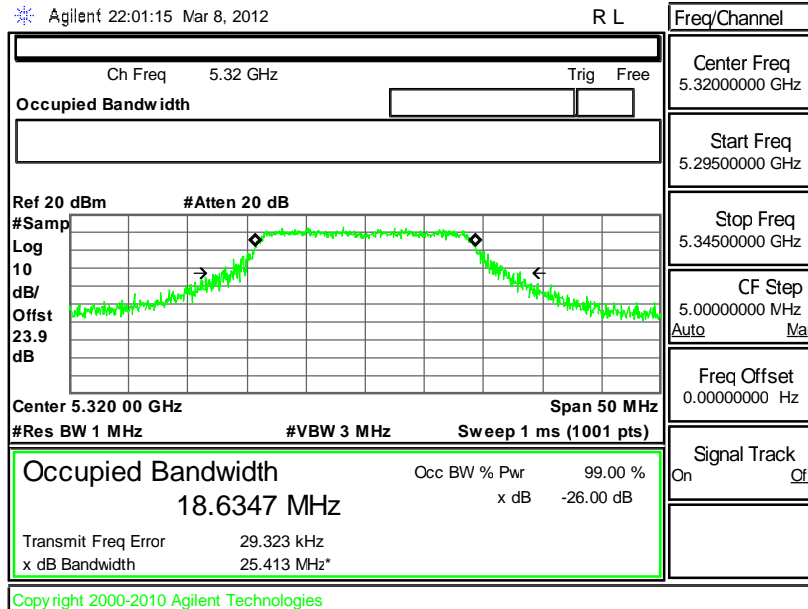


**99% Occupied Bandwidth Plot on 802.11n (BW 20MHz) Channel
64 - Chain A+B(A)**

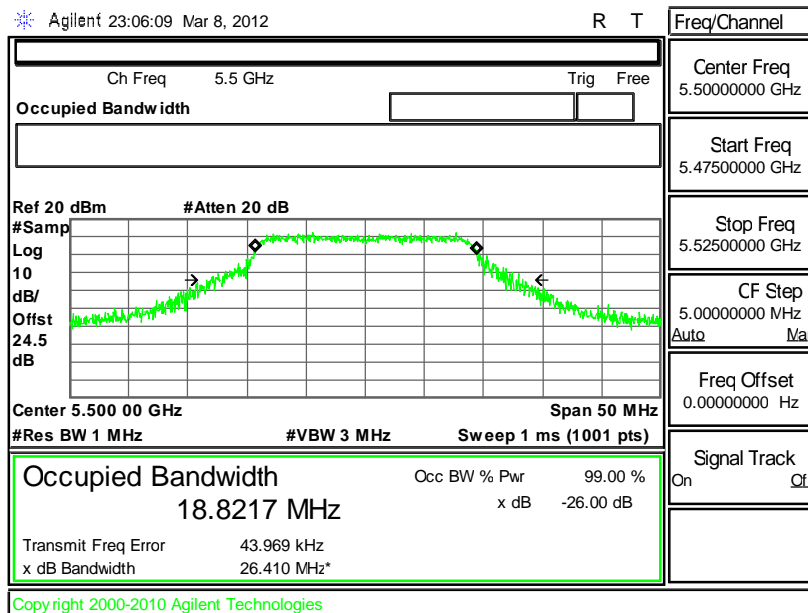




99% Occupied Bandwidth Plot on 802.11n (BW 20MHz) Channel
64 - Chain A+B(B)

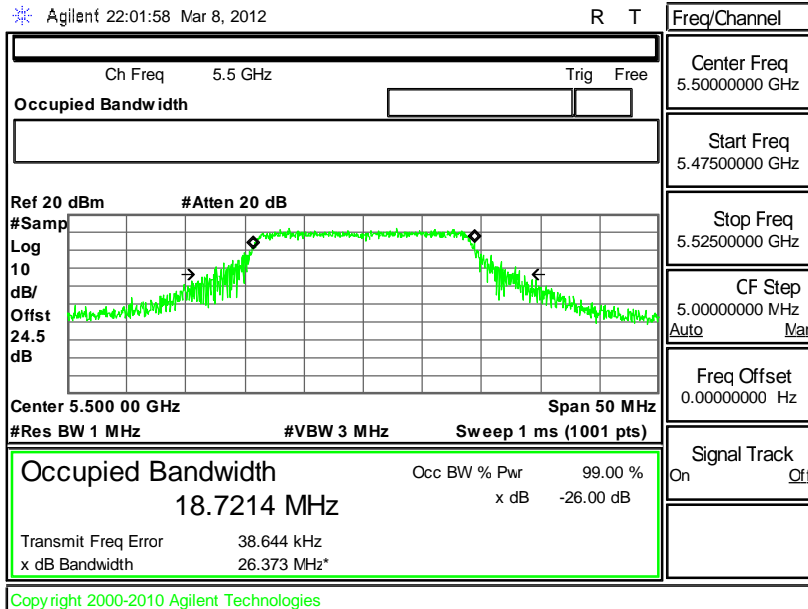


99% Occupied Bandwidth Plot on 802.11n (BW 20MHz) Channel
100 - Chain A+B(A)

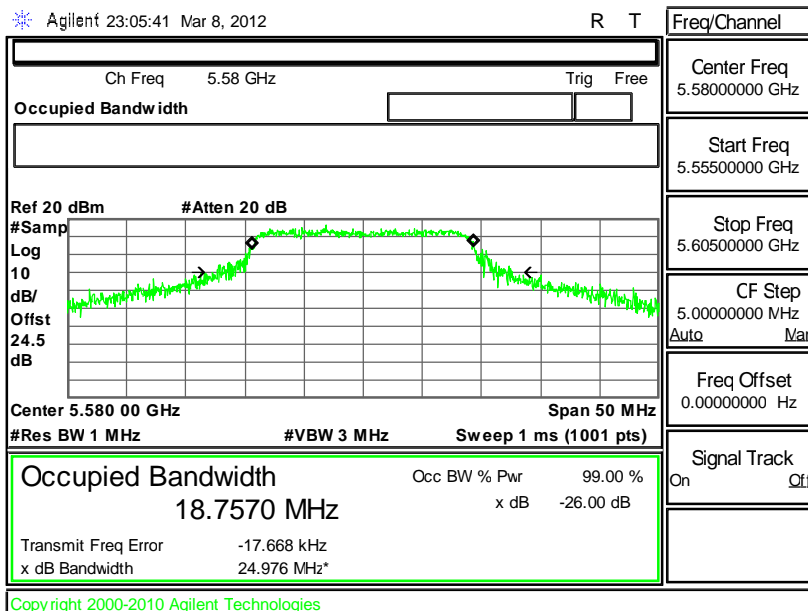




**99% Occupied Bandwidth Plot on 802.11n (BW 20MHz) Channel
100 - Chain A+B(B)**

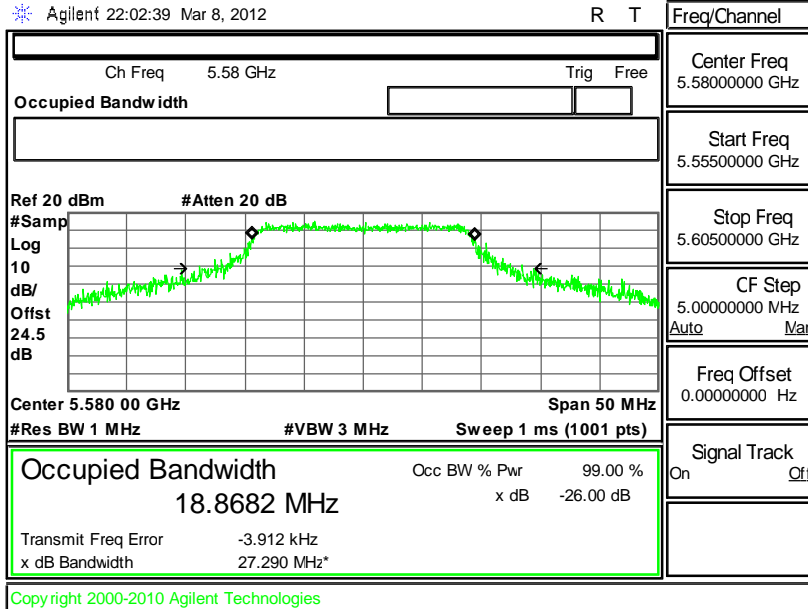


**99% Occupied Bandwidth Plot on 802.11n (BW 20MHz) Channel
116 - Chain A+B(A)**

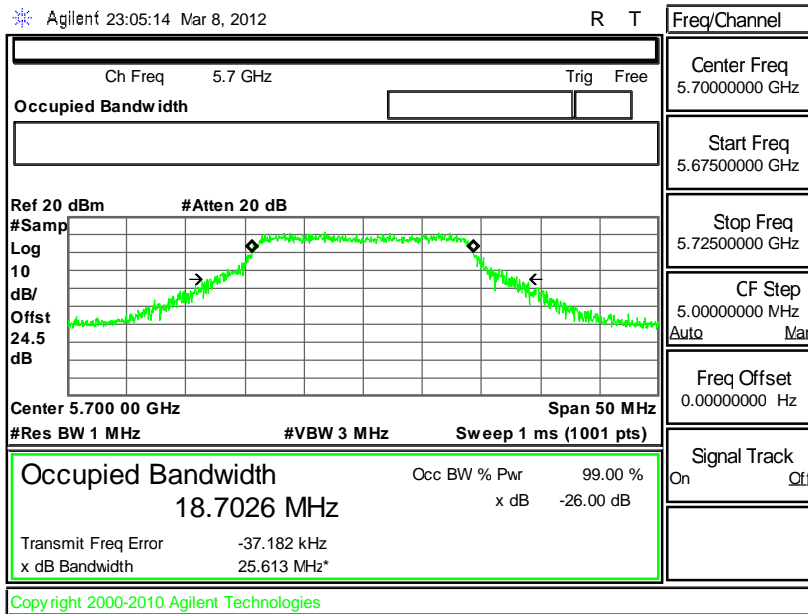




99% Occupied Bandwidth Plot on 802.11n (BW 20MHz) Channel 116 - Chain A+B(B)

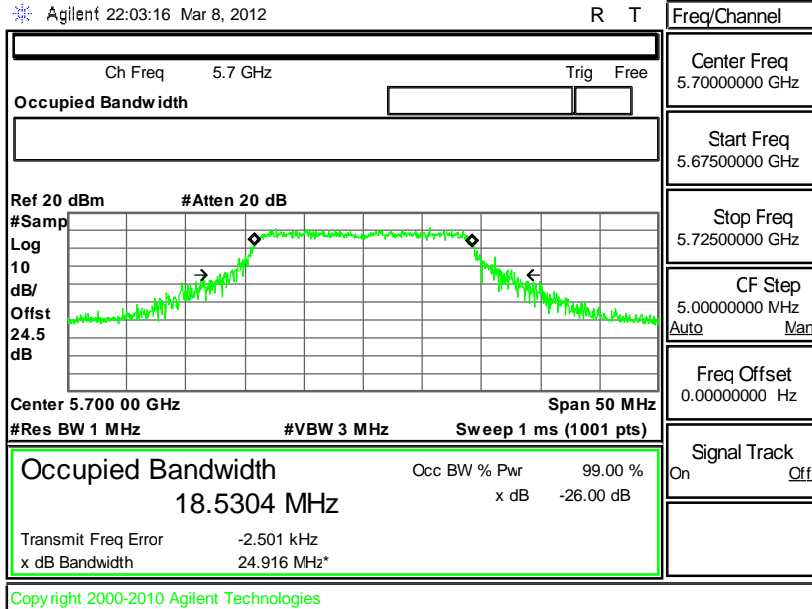


99% Occupied Bandwidth Plot on 802.11n (BW 20MHz) Channel 140 - Chain A+B(A)





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



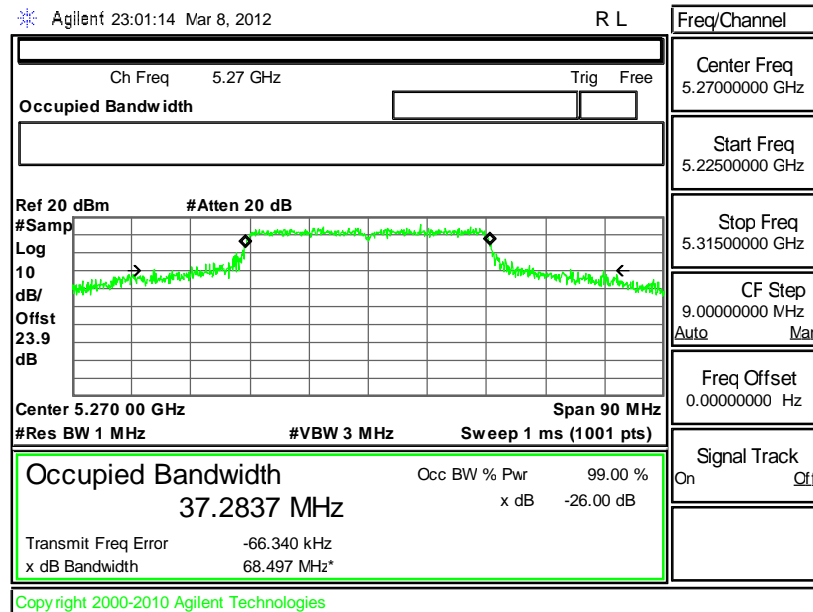


Test Mode :	Mode 13~17	Temperature :	23~25°C
Test Engineer :	Hank Yu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11n (BW 40MHz) 99% Occupied Bandwidth (MHz)		Pass/Fail
		MIMO (2Tx)		
		Chain A+B(A)	Chain A+B(B)	
54	5270	37.2837	38.0831	N/A
62	5310	36.7694	36.8604	N/A
102	5510	37.0564	36.8627	N/A
110	5550	37.4369	37.1528	N/A
134	5670	36.7250	36.7149	N/A

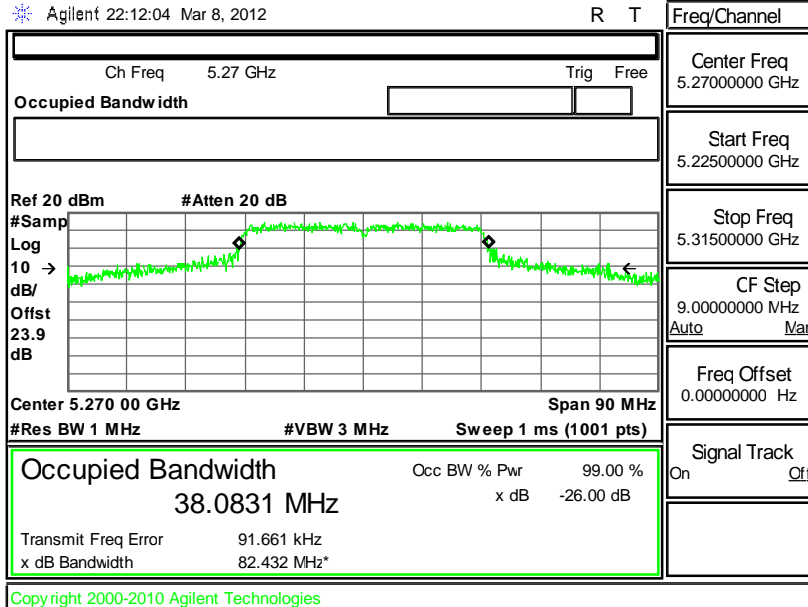
99% Occupied Bandwidth Plot on 802.11n (BW 40MHz) Channel

54 - Chain A+B(A)

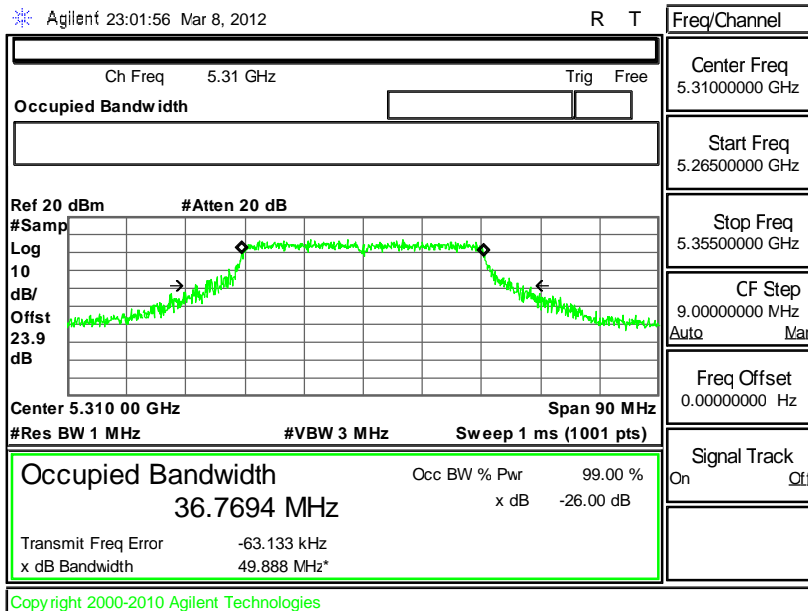




**99% Occupied Bandwidth Plot on 802.11n (BW 40MHz) Channel
54 - Chain A+B(B)**

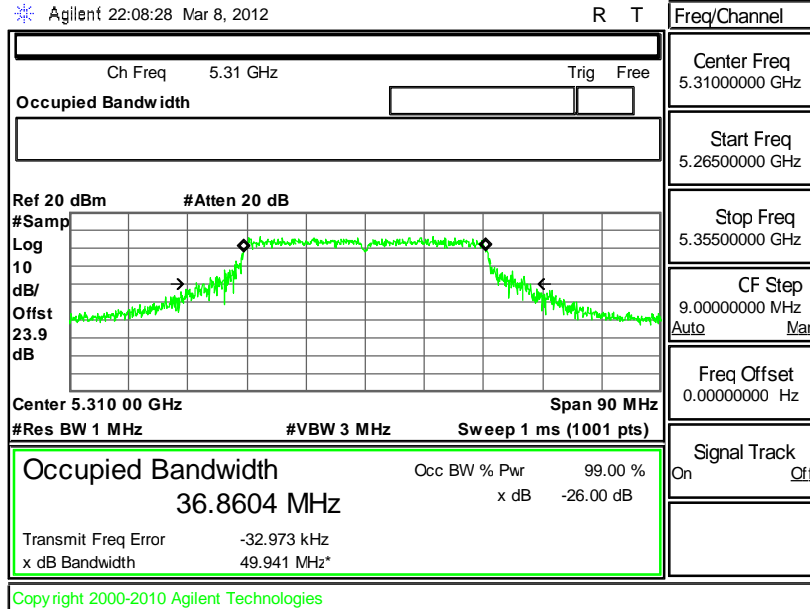


**99% Occupied Bandwidth Plot on 802.11n (BW 40MHz) Channel
62 - Chain A+B(A)**

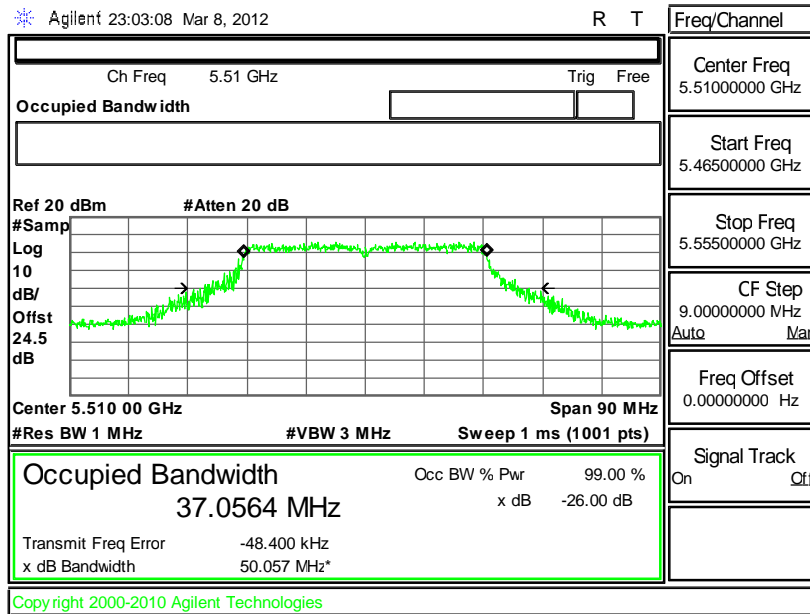




**99% Occupied Bandwidth Plot on 802.11n (BW 40MHz) Channel
62 - Chain A+B(B)**

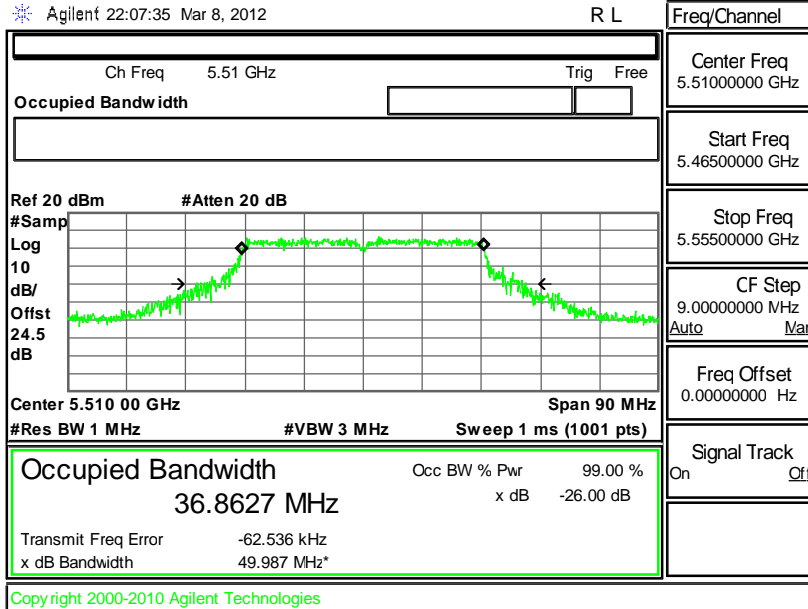


**99% Occupied Bandwidth Plot on 802.11n (BW 40MHz) Channel
102 - Chain A+B(A)**

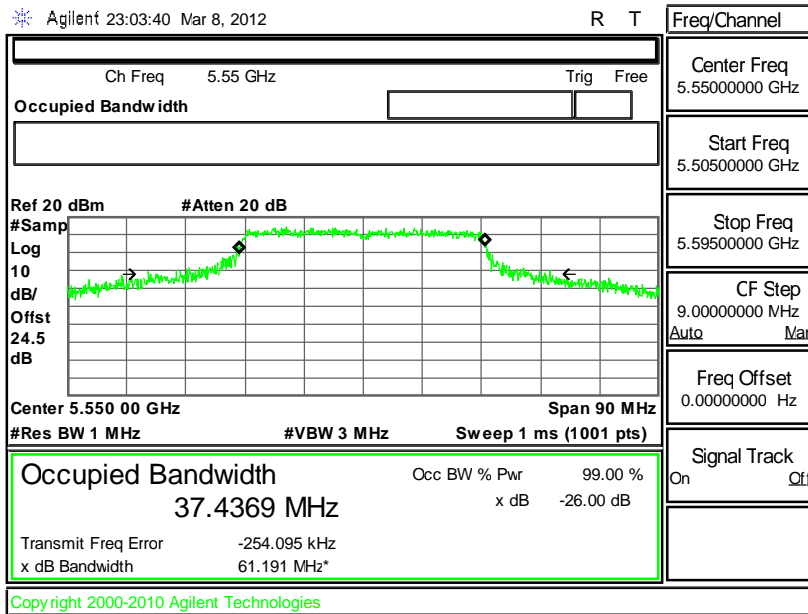




**99% Occupied Bandwidth Plot on 802.11n (BW 40MHz) Channel
102 - Chain A+B(B)**

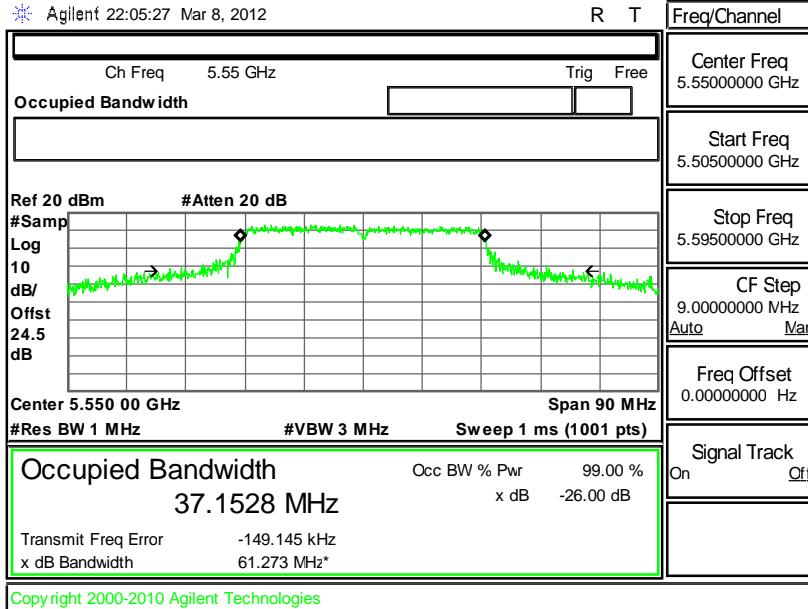


**99% Occupied Bandwidth Plot on 802.11n (BW 40MHz) Channel
110 - Chain A+B(A)**

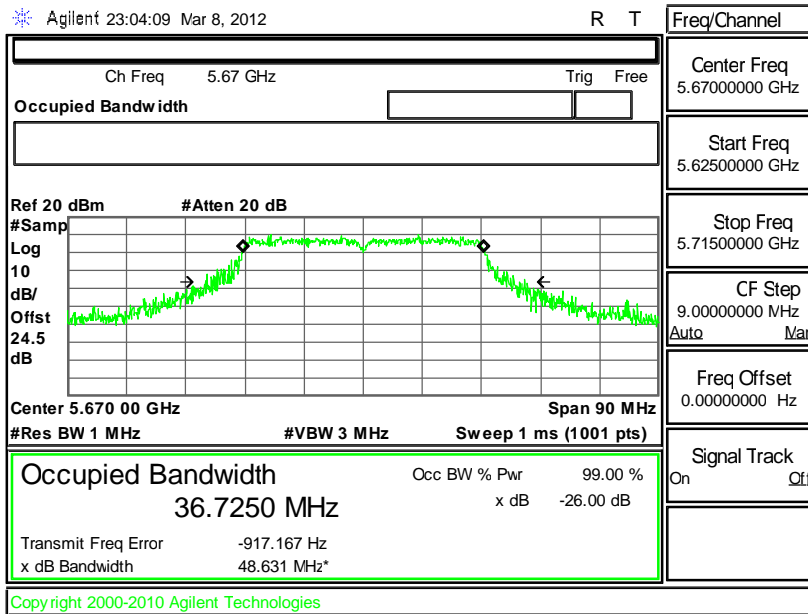




**99% Occupied Bandwidth Plot on 802.11n (BW 40MHz) Channel
110 - Chain A+B(B)**

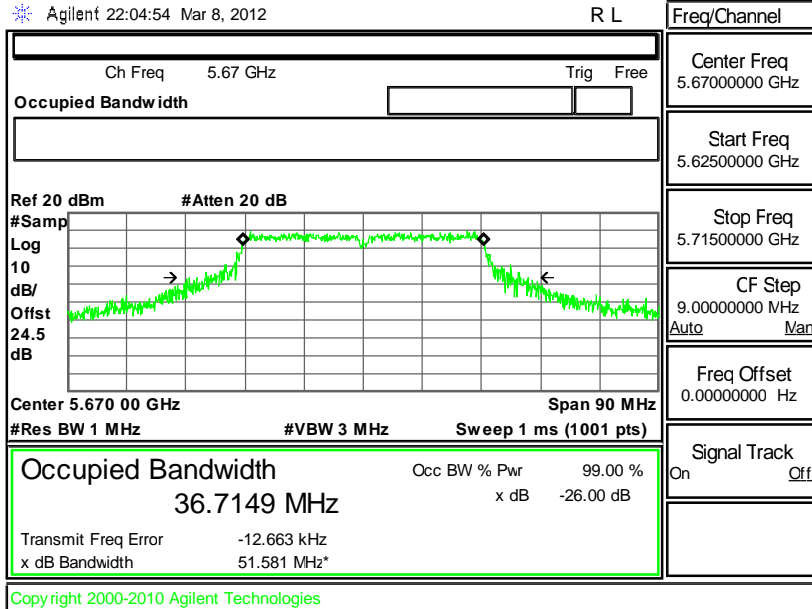


**99% Occupied Bandwidth Plot on 802.11n (BW 40MHz) Channel
134 - Chain A+B(A)**





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



3.2 Maximum Conducted Output Power Measurement

3.2.1 Limit of Maximum Conducted Output Power

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power shall not exceed the lesser of 250 mW (24dBm) or $11 \text{ dBm} + 10\log_{10} B$. If transmitting antenna directional gain is greater than 6 dBi, the peak output power and power density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.2.2 Measuring Instruments

See list of measuring instruments of this test report.

3.2.3 Test Procedures

The duty cycle of WLAN 802.11a/n Signal Mode Chain A was 95.92 % for 802.11a, Chain B was 96.83 % for 802.11a, Chain A was 96.64 % for 802.11n (BW 20MHz), Chain B was 96.83 % for 802.11n (BW 20MHz), Chain A was 91.89 % for 802.11n (BW 40MHz), and Chain B was 93.33 % for 802.11n (BW 40MHz).

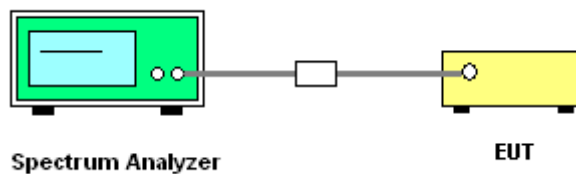
The duty cycle of WLAN 802.11a/n Dual Mode for Chain A were 98.00 % for 802.11a, 97.75 % for 802.11n (BW 20MHz), and 95.15% for 802.11n (BW 40MHz).

The duty cycle of WLAN 802.11a/n Dual Mode for Chain B were 98.01 % for 802.11a, 97.69 % for 802.11n (BW 20MHz), and 94.96% for 802.11n (BW 40MHz).

1. The testing follows Method SA-2 of FCC KDB 789033 D01 General UNII Test Procedures v01r01.
 - Measure the duty cycle.
 - Set span to encompass the entire emission bandwidth (EBW) of the signal.
 - Set RBW = 1 MHz.
 - Set VBW \geq 3 MHz.
 - Number of points in sweep \geq 2 Span / RBW.
 - Sweep time = auto.
 - Detector = sample detector
 - Trace average at least 100 traces in power averaging mode.
 - Compute power by integrating the spectrum across the 26 dB EBW of the signal using the spectrum analyzer's band power measurement function with band limits set equal to the EBW band edges. If the spectrum analyzer does not have a band power function, sum the spectrum levels at 1 MHz intervals extending across the 26 dB EBW of the spectrum.

- Add $10 \log(1/x)$, where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times. For example, add $10 \log(1/0.25) = 6$ dB if the duty cycle is 25 percent.
2. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
 3. The cable loss and attenuator loss are offset / entered in to the Spectrum Analyzer as below examples,
 - (1) For SISO mode, only chain A or chain B transmits signals at a time,
<Antenna 1 for 4.5V>: For 802.11a Channel 52 Chain A, the measured power is 22.56 dBm which is the reading of spectrum analyzer with offset cable loss, and attenuator loss. The duty factor (95.92% / 0.18dB) is also added, so the final result comes to 22.74 dBm.
 - (2) For MIMO mode, each chain was tested and measured individually and calculated with the formula of $10 \cdot \text{LOG} (10^{(A/10)} + 10^{(B/10)})$.
<Antenna 1 for 4.5V>: For 802.11a Channel 52 Chain A+B: the total final power is 22.02 dBm from the formula $10 \cdot \text{LOG} (10^{(19.03 \text{ dBm}/10)} + 10^{(19.00 \text{ dBm}/10)})$. The duty factor (98.00% / 0.09dB for chain A and 98.01% / 0.09dB for chain B) is also added.
 - (a) Plot: Conducted Output Power on 802.11a Channel 52 - Chain A+B (A): 18.94 dBm
 - (b) Plot: Conducted Output Power on 802.11a Channel 52 - Chain A+B (B): 18.91 dBm.
- Each plots has already offset with cable loss (1.8 dB), and attenuator loss (20 dB).

3.2.4 Test Setup



3.2.5 Test Result of Maximum Conducted Output Power
<Antenna 1 for 4.5V>

Test Mode :	Mode 1~6	Temperature :	23~25°C
Test Engineer :	Hank Yu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11a Measured Output Power (dBm)					Max. Limits (dBm)	Pass/Fail
		SISO		MIMO (2Tx)				
		Chain A	Chain B	Chain A+B(A)	Chain A+B(B)	Total		
52	5260	22.74	23.18	19.03	19.00	22.02	24	Pass
60	5300	22.36	23.12	20.86	20.79	23.83	24	Pass
64	5320	20.48	22.46	17.33	17.44	20.39	24	Pass
100	5500	16.60	16.48	12.05	12.59	15.34	24	Pass
116	5580	22.51	22.16	20.70	20.34	23.53	24	Pass
140	5700	16.41	16.37	14.46	14.90	17.69	24	Pass

Test Mode :	Mode 7~12	Temperature :	23~25°C
Test Engineer :	Hank Yu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11n (BW 20MHz) Measured Output Power (dBm)					Max. Limits (dBm)	Pass/Fail
		SISO		MIMO (2Tx)				
		Chain A	Chain B	Chain A+B(A)	Chain A+B(B)	Total		
52	5260	22.55	23.18	18.71	18.35	21.54	24	Pass
60	5300	20.62	23.05	20.53	20.48	23.52	24	Pass
64	5320	20.42	19.39	18.42	18.13	21.29	24	Pass
100	5500	15.70	16.01	12.67	12.96	15.83	24	Pass
116	5580	22.31	22.82	21.07	20.58	23.84	24	Pass
140	5700	15.32	15.66	13.91	13.51	16.73	24	Pass

Test Mode :	Mode 13~17	Temperature :	23~25°C
Test Engineer :	Hank Yu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11n (BW 40MHz) Measured Output Power (dBm)					Max. Limits (dBm)	Pass/Fail
		SISO		MIMO (2Tx)				
		Chain A	Chain B	Chain A+B(A)	Chain A+B(B)	Total		
54	5270	23.32	23.54	19.58	19.25	22.43	24	Pass
62	5310	16.77	15.21	14.16	14.22	17.20	24	Pass
102	5510	12.91	11.83	9.72	9.75	12.75	24	Pass
110	5550	20.86	19.48	19.45	19.15	22.31	24	Pass
134	5670	15.21	17.29	15.55	15.24	18.41	24	Pass

Note:

- Each chain was measured individually and calculated with the formula of $10 \cdot \text{LOG} (10^A (A/10) + 10^B (B/10))$.
- The Chain A+B (A) means that the result was measured at Chain A and well terminated by 50 ohm load at Chain B under MIMO mode. It is same concept for Chain A + B (B), measured at Chain B, and well terminated at Chain A under MIMO condition.
- The EUT is completely uncorrelated category, and the directional antenna gain is the gain of an individual antenna.

	Mode	Data rate	Duty Cycle (%)	Duty Factor (dB)
Chain A	11a	6M	95.9	0.18
	11n (BW 20MHz)	MCS0	96.6	0.15
	11n (BW 40MHz)	MCS0	91.9	0.37
Chain B	11a	6M	96.8	0.14
	11n (BW 20MHz)	MCS0	96.8	0.14
	11n (BW 40MHz)	MCS0	93.3	0.30
Chain A+B (A)	11a	6M	98.0	0.09
	11n (BW 20MHz)	MCS8	97.8	0.10
	11n (BW 40MHz)	MCS8	95.0	0.22
Chain A+B (B)	11a	6M	98.0	0.09
	11n (BW 20MHz)	MCS8	97.7	0.10
	11n (BW 40MHz)	MCS8	95.1	0.22

Note: The duty factor is also added to all the final result.



<Antenna 1 for 3.3V>

Test Mode :	Mode 1~6	Temperature :	23~25°C
Test Engineer :	Hank Yu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11a Measured Output Power (dBm)					Max. Limits (dBm)	Pass/Fail
		SISO		MIMO (2Tx)				
		Chain A	Chain B	Chain A+B(A)	Chain A+B(B)	Total		
52	5260	20.47	20.96	19.41	18.96	22.20	24	Pass
60	5300	20.41	20.25	20.97	20.74	23.86	24	Pass
64	5320	20.91	20.26	17.12	16.82	19.98	24	Pass
100	5500	16.29	16.19	12.23	12.40	15.32	24	Pass
116	5580	21.34	20.51	20.81	20.33	23.58	24	Pass
140	5700	16.06	16.34	14.35	14.17	17.27	24	Pass

Test Mode :	Mode 7~12	Temperature :	23~25°C
Test Engineer :	Hank Yu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11n (BW 20MHz) Measured Output Power (dBm)					Max. Limits (dBm)	Pass/Fail
		SISO		MIMO (2Tx)				
		Chain A	Chain B	Chain A+B(A)	Chain A+B(B)	Total		
52	5260	20.50	20.38	15.82	16.25	19.05	24	Pass
60	5300	19.61	20.38	18.32	17.91	21.13	24	Pass
64	5320	19.54	18.36	16.11	16.23	19.18	24	Pass
100	5500	15.56	15.82	12.24	12.54	15.40	24	Pass
116	5580	21.34	20.65	20.80	20.38	23.61	24	Pass
140	5700	15.07	15.39	13.30	13.03	16.18	24	Pass

Test Mode :	Mode 13~17	Temperature :	23~25°C
Test Engineer :	Hank Yu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11n (BW 40MHz) Measured Output Power (dBm)					Max. Limits (dBm)	Pass/Fail
		SISO		MIMO (2Tx)				
		Chain A	Chain B	Chain A+B(A)	Chain A+B(B)	Total		
54	5270	20.80	21.29	19.26	18.89	22.09	24	Pass
62	5310	16.53	14.99	13.96	13.93	16.96	24	Pass
102	5510	12.85	11.70	8.93	9.01	11.98	24	Pass
110	5550	20.58	19.16	18.95	18.92	21.95	24	Pass
134	5670	14.74	16.67	15.15	15.15	18.16	24	Pass

Note:

- Each chain was measured individually and calculated with the formula of $10 \cdot \text{LOG} (10^A (A/10) + 10^B (B/10))$.
- The Chain A+B (A) means that the result was measured at Chain A and well terminated by 50 ohm load at Chain B under MIMO mode. It is same concept for Chain A + B (B), measured at Chain B, and well terminated at Chain A under MIMO condition.
- The EUT is completely uncorrelated category, and the directional antenna gain is the gain of an individual antenna.

	Mode	Data rate	Duty Cycle (%)	Duty Factor (dB)
Chain A	11a	6M	95.9	0.18
	11n (BW 20MHz)	MCS0	96.6	0.15
	11n (BW 40MHz)	MCS0	91.9	0.37
Chain B	11a	6M	96.8	0.14
	11n (BW 20MHz)	MCS0	96.8	0.14
	11n (BW 40MHz)	MCS0	93.3	0.30
Chain A+B (A)	11a	6M	98.0	0.09
	11n (BW 20MHz)	MCS8	97.8	0.10
	11n (BW 40MHz)	MCS8	95.0	0.22
Chain A+B (B)	11a	6M	98.0	0.09
	11n (BW 20MHz)	MCS8	97.7	0.10
	11n (BW 40MHz)	MCS8	95.1	0.22

Note: The duty factor is also added to all the final result.



<Antenna 2 for 4.5V>

Test Mode :	Mode 1~6	Temperature :	23~25°C
Test Engineer :	Hank Yu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11a Measured Output Power (dBm)					Max. Limits (dBm)	Pass/Fail
		SISO		MIMO (2Tx)				
		Chain A	Chain B	Chain A+B(A)	Chain A+B(B)	Total		
52	5260	18.59	18.85	15.39	15.73	18.57	24	Pass
60	5300	18.56	19.42	16.78	17.03	19.91	24	Pass
64	5320	20.90	19.85	17.24	17.46	20.36	24	Pass
100	5500	14.37	15.85	12.42	12.66	15.55	24	Pass
116	5580	19.80	19.53	17.64	17.55	20.60	24	Pass
140	5700	15.44	16.22	14.78	15.09	17.95	24	Pass

Test Mode :	Mode 7~12	Temperature :	23~25°C
Test Engineer :	Hank Yu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11n (BW 20MHz) Measured Output Power (dBm)					Max. Limits (dBm)	Pass/Fail
		SISO		MIMO (2Tx)				
		Chain A	Chain B	Chain A+B(A)	Chain A+B(B)	Total		
52	5260	18.55	18.98	15.61	15.95	18.79	24	Pass
60	5300	17.94	18.72	17.99	17.80	20.91	24	Pass
64	5320	20.14	18.82	19.55	19.18	22.38	24	Pass
100	5500	14.28	16.15	11.77	11.83	14.81	24	Pass
116	5580	21.43	18.27	19.75	19.23	22.51	24	Pass
140	5700	15.75	15.00	14.10	13.55	16.84	24	Pass

Test Mode :	Mode 13~17	Temperature :	23~25°C
Test Engineer :	Hank Yu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11n (BW 40MHz) Measured Output Power (dBm)					Max. Limits (dBm)	Pass/Fail
		SISO		MIMO (2Tx)				
		Chain A	Chain B	Chain A+B(A)	Chain A+B(B)	Total		
54	5270	22.17	22.11	14.57	14.75	17.67	24	Pass
62	5310	15.76	15.92	13.69	13.87	16.79	24	Pass
102	5510	11.93	10.76	9.22	9.22	12.23	24	Pass
110	5550	19.61	17.37	16.99	16.94	19.98	24	Pass
134	5670	15.22	15.04	15.04	15.10	18.08	24	Pass

Note:

- Each chain was measured individually and calculated with the formula of $10 \cdot \text{LOG} (10^{A/10} + 10^{B/10})$.
- The Chain A+B (A) means that the result was measured at Chain A and well terminated by 50 ohm load at Chain B under MIMO mode. It is same concept for Chain A + B (B), measured at Chain B, and well terminated at Chain A under MIMO condition.
- The EUT is completely uncorrelated category, and the directional antenna gain is the gain of an individual antenna.

	Mode	Data rate	Duty Cycle (%)	Duty Factor (dB)
Chain A	11a	6M	95.9	0.18
	11n (BW 20MHz)	MCS0	96.6	0.15
	11n (BW 40MHz)	MCS0	91.9	0.37
Chain B	11a	6M	96.8	0.14
	11n (BW 20MHz)	MCS0	96.8	0.14
	11n (BW 40MHz)	MCS0	93.3	0.30
Chain A+B (A)	11a	6M	98.0	0.09
	11n (BW 20MHz)	MCS8	97.8	0.10
	11n (BW 40MHz)	MCS8	95.0	0.22
Chain A+B (B)	11a	6M	98.0	0.09
	11n (BW 20MHz)	MCS8	97.7	0.10
	11n (BW 40MHz)	MCS8	95.1	0.22

Note: The duty factor is also added to all the final result.



<Antenna 2 for 3.3V>

Test Mode :	Mode 1~6	Temperature :	23~25°C
Test Engineer :	Hank Yu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11a Measured Output Power (dBm)					Max. Limits (dBm)	Pass/Fail
		SISO		MIMO (2Tx)				
		Chain A	Chain B	Chain A+B(A)	Chain A+B(B)	Total		
52	5260	18.87	18.89	15.29	15.79	18.55	24	Pass
60	5300	18.76	18.92	16.76	16.55	19.66	24	Pass
64	5320	20.07	19.58	16.58	16.52	19.56	24	Pass
100	5500	14.20	15.63	11.90	12.17	15.04	24	Pass
116	5580	19.59	19.08	17.14	16.88	20.02	24	Pass
140	5700	14.78	15.82	14.85	14.77	17.82	24	Pass

Test Mode :	Mode 7~12	Temperature :	23~25°C
Test Engineer :	Hank Yu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11n (BW 20MHz) Measured Output Power (dBm)					Max. Limits (dBm)	Pass/Fail
		SISO		MIMO (2Tx)				
		Chain A	Chain B	Chain A+B(A)	Chain A+B(B)	Total		
52	5260	18.40	18.48	15.27	15.85	18.58	24	Pass
60	5300	17.72	18.48	17.75	17.49	20.63	24	Pass
64	5320	19.67	18.35	19.20	18.87	22.05	24	Pass
100	5500	14.21	15.78	11.52	11.20	14.37	24	Pass
116	5580	20.96	17.85	19.07	19.22	22.16	24	Pass
140	5700	15.20	14.55	13.33	13.60	16.48	24	Pass



Test Mode :	Mode 13~17	Temperature :	23~25°C
Test Engineer :	Hank Yu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11n (BW 40MHz) Measured Output Power (dBm)					Max. Limits (dBm)	Pass/Fail
		SISO		MIMO (2Tx)				
		Chain A	Chain B	Chain A+B(A)	Chain A+B(B)	Total		
54	5270	21.31	21.75	14.38	14.65	17.53	24	Pass
62	5310	15.49	15.57	13.62	13.57	16.61	24	Pass
102	5510	11.83	10.43	8.83	9.32	12.09	24	Pass
110	5550	19.46	17.30	16.54	16.93	19.75	24	Pass
134	5670	14.97	14.70	14.47	14.57	17.53	24	Pass

Note:

1. Each chain was measured individually and calculated with the formula of $10 \cdot \text{LOG} (10^A (A/10) + 10^B (B/10))$.
2. The Chain A+B (A) means that the result was measured at Chain A and well terminated by 50 ohm load at Chain B under MIMO mode. It is same concept for Chain A + B (B), measured at Chain B, and well terminated at Chain A under MIMO condition.
3. The EUT is completely uncorrelated category, and the directional antenna gain is the gain of an individual antenna.

	Mode	Data rate	Duty Cycle (%)	Duty Factor (dB)
Chain A	11a	6M	95.9	0.18
	11n (BW 20MHz)	MCS0	96.6	0.15
	11n (BW 40MHz)	MCS0	91.9	0.37
Chain B	11a	6M	96.8	0.14
	11n (BW 20MHz)	MCS0	96.8	0.14
	11n (BW 40MHz)	MCS0	93.3	0.30
Chain A+B (A)	11a	6M	98.0	0.09
	11n (BW 20MHz)	MCS8	97.8	0.10
	11n (BW 40MHz)	MCS8	95.0	0.22
Chain A+B (B)	11a	6M	98.0	0.09
	11n (BW 20MHz)	MCS8	97.7	0.10
	11n (BW 40MHz)	MCS8	95.1	0.22

Note: The duty factor is also added to all the final result.



<Antenna 3 for 4.5V>

Test Mode :	Mode 1~6	Temperature :	23~25°C
Test Engineer :	Hank Yu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11a Measured Output Power (dBm)					Max. Limits (dBm)	Pass/Fail
		SISO		MIMO (2Tx)				
		Chain A	Chain B	Chain A+B(A)	Chain A+B(B)	Total		
52	5260	19.83	21.39	18.05	17.43	20.76	24	Pass
60	5300	21.83	21.38	18.01	17.45	20.75	24	Pass
64	5320	19.12	19.44	18.42	18.18	21.31	24	Pass
100	5500	14.93	17.14	14.14	14.76	17.47	24	Pass
116	5580	21.35	21.21	20.64	20.46	23.56	24	Pass
140	5700	15.96	15.11	12.52	12.15	15.35	24	Pass

Test Mode :	Mode 7~12	Temperature :	23~25°C
Test Engineer :	Hank Yu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11n (BW 20MHz) Measured Output Power (dBm)					Max. Limits (dBm)	Pass/Fail
		SISO		MIMO (2Tx)				
		Chain A	Chain B	Chain A+B(A)	Chain A+B(B)	Total		
52	5260	20.67	20.57	17.12	17.43	20.29	24	Pass
60	5300	19.55	21.34	17.22	17.37	20.31	24	Pass
64	5320	19.13	18.68	16.15	16.23	19.20	24	Pass
100	5500	14.78	15.20	13.31	13.80	16.57	24	Pass
116	5580	21.50	21.20	21.10	20.74	23.93	24	Pass
140	5700	15.86	13.73	12.45	12.15	15.31	24	Pass

Test Mode :	Mode 13~17	Temperature :	23~25°C
Test Engineer :	Hank Yu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11n (BW 40MHz) Measured Output Power (dBm)					Max. Limits (dBm)	Pass/Fail
		SISO		MIMO (2Tx)				
		Chain A	Chain B	Chain A+B(A)	Chain A+B(B)	Total		
54	5270	20.99	22.14	15.49	15.78	18.65	24	Pass
62	5310	15.24	14.44	12.66	12.86	15.77	24	Pass
102	5510	10.72	10.76	7.93	8.22	11.09	24	Pass
110	5550	23.24	20.11	20.17	19.87	23.03	24	Pass
134	5670	16.15	16.48	15.51	15.60	18.57	24	Pass

Note:

- Each chain was measured individually and calculated with the formula of $10^{\ast}\text{LOG}(10^{\wedge}(A/10) + 10^{\wedge}(B/10))$.
- The Chain A+B (A) means that the result was measured at Chain A and well terminated by 50 ohm load at Chain B under MIMO mode. It is same concept for Chain A + B (B), measured at Chain B, and well terminated at Chain A under MIMO condition.
- The EUT is completely uncorrelated category, and the directional antenna gain is the gain of an individual antenna.

	Mode	Data rate	Duty Cycle (%)	Duty Factor (dB)
Chain A	11a	6M	95.9	0.18
	11n (BW 20MHz)	MCS0	96.6	0.15
	11n (BW 40MHz)	MCS0	91.9	0.37
Chain B	11a	6M	96.8	0.14
	11n (BW 20MHz)	MCS0	96.8	0.14
	11n (BW 40MHz)	MCS0	93.3	0.30
Chain A+B (A)	11a	6M	98.0	0.09
	11n (BW 20MHz)	MCS8	97.8	0.10
	11n (BW 40MHz)	MCS8	95.0	0.22
Chain A+B (B)	11a	6M	98.0	0.09
	11n (BW 20MHz)	MCS8	97.7	0.10
	11n (BW 40MHz)	MCS8	95.1	0.22

Note: The duty factor is also added to all the final result.



<Antenna 3 for 3.3V>

Test Mode :	Mode 1~6	Temperature :	23~25°C
Test Engineer :	Hank Yu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11a Measured Output Power (dBm)					Max. Limits (dBm)	Pass/Fail
		SISO		MIMO (2Tx)				
		Chain A	Chain B	Chain A+B(A)	Chain A+B(B)	Total		
52	5260	20.63	21.04	17.94	17.38	20.68	24	Pass
60	5300	20.43	20.29	17.17	16.80	20.00	24	Pass
64	5320	18.72	18.88	18.21	17.80	21.02	24	Pass
100	5500	14.76	16.70	13.98	14.30	17.15	24	Pass
116	5580	20.94	20.81	20.80	20.36	23.59	24	Pass
140	5700	15.69	14.75	12.06	12.11	15.09	24	Pass

Test Mode :	Mode 7~12	Temperature :	23~25°C
Test Engineer :	Hank Yu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11n (BW 20MHz) Measured Output Power (dBm)					Max. Limits (dBm)	Pass/Fail
		SISO		MIMO (2Tx)				
		Chain A	Chain B	Chain A+B(A)	Chain A+B(B)	Total		
52	5260	20.55	20.37	17.24	16.71	19.99	24	Pass
60	5300	20.04	20.44	17.23	16.82	20.04	24	Pass
64	5320	19.13	17.86	16.10	16.10	19.11	24	Pass
100	5500	14.54	14.86	13.24	13.61	16.44	24	Pass
116	5580	20.99	20.43	20.85	20.37	23.63	24	Pass
140	5700	15.28	13.43	11.95	12.55	15.27	24	Pass

Test Mode :	Mode 13~17	Temperature :	23~25°C
Test Engineer :	Hank Yu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11n (BW 40MHz) Measured Output Power (dBm)					Max. Limits (dBm)	Pass/Fail
		SISO		MIMO (2Tx)				
		Chain A	Chain B	Chain A+B(A)	Chain A+B(B)	Total		
54	5270	19.67	20.46	15.47	15.51	18.50	24	Pass
62	5310	13.68	14.16	12.24	12.14	15.20	24	Pass
102	5510	10.58	10.46	7.70	8.15	10.94	24	Pass
110	5550	20.59	19.95	20.19	19.83	23.02	24	Pass
134	5670	16.09	16.43	15.05	15.18	18.13	24	Pass

Note:

1. Each chain was measured individually and calculated with the formula of $10 \cdot \text{LOG} (10^A (A/10) + 10^B (B/10))$.
2. The Chain A+B (A) means that the result was measured at Chain A and well terminated by 50 ohm load at Chain B under MIMO mode. It is same concept for Chain A + B (B), measured at Chain B, and well terminated at Chain A under MIMO condition.
3. The EUT is completely uncorrelated category, and the directional antenna gain is the gain of an individual antenna.

	Mode	Data rate	Duty Cycle (%)	Duty Factor (dB)
Chain A	11a	6M	95.9	0.18
	11n (BW 20MHz)	MCS0	96.6	0.15
	11n (BW 40MHz)	MCS0	91.9	0.37
Chain B	11a	6M	96.8	0.14
	11n (BW 20MHz)	MCS0	96.8	0.14
	11n (BW 40MHz)	MCS0	93.3	0.30
Chain A+B (A)	11a	6M	98.0	0.09
	11n (BW 20MHz)	MCS8	97.8	0.10
	11n (BW 40MHz)	MCS8	95.0	0.22
Chain A+B (B)	11a	6M	98.0	0.09
	11n (BW 20MHz)	MCS8	97.7	0.10
	11n (BW 40MHz)	MCS8	95.1	0.22

Note: The duty factor is also added to all the final result.



<Antenna 4 for 3.3V>

Test Mode :	Mode 1~6	Temperature :	23~25°C
Test Engineer :	Hank Yu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11a Measured Output Power (dBm)					Max. Limits (dBm)	Pass/Fail
		SISO		MIMO (2Tx)				
		Chain A	Chain B	Chain A+B(A)	Chain A+B(B)	Total		
52	5260	20.76	20.48	20.54	20.38	23.47	24	Pass
60	5300	19.85	20.42	20.52	20.30	23.42	24	Pass
64	5320	18.22	15.69	17.69	17.37	20.54	24	Pass
100	5500	17.88	16.91	15.06	14.97	18.02	24	Pass
116	5580	20.53	20.08	18.61	18.61	21.62	24	Pass
140	5700	16.26	16.40	14.50	14.96	17.74	24	Pass

Test Mode :	Mode 7~12	Temperature :	23~25°C
Test Engineer :	Hank Yu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11n (BW 20MHz) Measured Output Power (dBm)					Max. Limits (dBm)	Pass/Fail
		SISO		MIMO (2Tx)				
		Chain A	Chain B	Chain A+B(A)	Chain A+B(B)	Total		
52	5260	20.57	20.46	20.59	20.23	23.42	24	Pass
60	5300	19.65	19.49	20.41	20.27	23.35	24	Pass
64	5320	17.17	15.26	15.03	15.13	18.09	24	Pass
100	5500	16.84	16.50	15.26	15.20	18.24	24	Pass
116	5580	20.65	20.09	18.78	18.51	21.66	24	Pass
140	5700	15.81	15.82	14.31	14.17	17.25	24	Pass

Test Mode :	Mode 13~17	Temperature :	23~25°C
Test Engineer :	Hank Yu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11n (BW 40MHz) Measured Output Power (dBm)					Max. Limits (dBm)	Pass/Fail
		SISO		MIMO (2Tx)				
		Chain A	Chain B	Chain A+B(A)	Chain A+B(B)	Total		
54	5270	20.18	19.85	20.86	20.84	23.86	24	Pass
62	5310	12.87	10.59	12.64	12.74	15.70	24	Pass
102	5510	12.71	12.21	12.06	12.67	15.39	24	Pass
110	5550	21.10	21.67	20.02	19.80	22.92	24	Pass
134	5670	16.68	17.34	15.40	15.76	18.59	24	Pass

Note:

- Each chain was measured individually and calculated with the formula of $10 \cdot \text{LOG} (10^A (A/10) + 10^B (B/10))$.
- The Chain A+B (A) means that the result was measured at Chain A and well terminated by 50 ohm load at Chain B under MIMO mode. It is same concept for Chain A + B (B), measured at Chain B, and well terminated at Chain A under MIMO condition.
- The EUT is completely uncorrelated category, and the directional antenna gain is the gain of an individual antenna.

	Mode	Data rate	Duty Cycle (%)	Duty Factor (dB)
Chain A	11a	6M	95.9	0.18
	11n (BW 20MHz)	MCS0	96.6	0.15
	11n (BW 40MHz)	MCS0	91.9	0.37
Chain B	11a	6M	96.8	0.14
	11n (BW 20MHz)	MCS0	96.8	0.14
	11n (BW 40MHz)	MCS0	93.3	0.30
Chain A+B (A)	11a	6M	98.0	0.09
	11n (BW 20MHz)	MCS8	97.8	0.10
	11n (BW 40MHz)	MCS8	95.0	0.22
Chain A+B (B)	11a	6M	98.0	0.09
	11n (BW 20MHz)	MCS8	97.7	0.10
	11n (BW 40MHz)	MCS8	95.1	0.22

Note: The duty factor is also added to all the final result.



<Antenna 5 for 4.5V>

Test Mode :	Mode 1~6	Temperature :	23~25°C
Test Engineer :	Hank Yu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11a Measured Output Power (dBm)					Max. Limits (dBm)	Pass/Fail
		SISO		MIMO (2Tx)				
		Chain A	Chain B	Chain A+B(A)	Chain A+B(B)	Total		
52	5260	21.78	21.57	19.10	18.36	21.75	24	Pass
60	5300	20.87	21.47	19.00	18.30	21.67	24	Pass
64	5320	19.25	16.71	18.97	18.28	21.65	24	Pass
100	5500	17.68	17.85	15.13	15.10	18.12	24	Pass
116	5580	21.55	21.28	19.29	18.96	22.14	24	Pass
140	5700	16.22	16.57	14.30	14.29	17.30	24	Pass

Test Mode :	Mode 7~12	Temperature :	23~25°C
Test Engineer :	Hank Yu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11n (BW 20MHz) Measured Output Power (dBm)					Max. Limits (dBm)	Pass/Fail
		SISO		MIMO (2Tx)				
		Chain A	Chain B	Chain A+B(A)	Chain A+B(B)	Total		
52	5260	21.61	21.63	19.53	18.93	22.25	24	Pass
60	5300	20.70	20.64	19.41	18.96	22.20	24	Pass
64	5320	18.24	16.30	16.24	15.91	19.09	24	Pass
100	5500	16.92	17.45	14.90	14.98	17.95	24	Pass
116	5580	21.68	21.09	19.11	18.97	22.05	24	Pass
140	5700	15.25	16.09	14.00	13.92	16.97	24	Pass

Test Mode :	Mode 13~17	Temperature :	23~25°C
Test Engineer :	Hank Yu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11n (BW 40MHz) Measured Output Power (dBm)					Max. Limits (dBm)	Pass/Fail
		SISO		MIMO (2Tx)				
		Chain A	Chain B	Chain A+B(A)	Chain A+B(B)	Total		
54	5270	21.19	20.86	20.81	20.58	23.71	24	Pass
62	5310	14.05	11.63	14.19	13.85	17.03	24	Pass
102	5510	13.64	14.35	11.69	11.75	14.73	24	Pass
110	5550	19.56	19.68	20.76	20.30	23.55	24	Pass
134	5670	16.93	17.08	15.18	15.22	18.21	24	Pass

Note:

- Each chain was measured individually and calculated with the formula of $10 \cdot \text{LOG} (10^A (A/10) + 10^B (B/10))$.
- The Chain A+B (A) means that the result was measured at Chain A and well terminated by 50 ohm load at Chain B under MIMO mode. It is same concept for Chain A + B (B), measured at Chain B, and well terminated at Chain A under MIMO condition.
- The EUT is completely uncorrelated category, and the directional antenna gain is the gain of an individual antenna.

	Mode	Data rate	Duty Cycle (%)	Duty Factor (dB)
Chain A	11a	6M	95.9	0.18
	11n (BW 20MHz)	MCS0	96.6	0.15
	11n (BW 40MHz)	MCS0	91.9	0.37
Chain B	11a	6M	96.8	0.14
	11n (BW 20MHz)	MCS0	96.8	0.14
	11n (BW 40MHz)	MCS0	93.3	0.30
Chain A+B (A)	11a	6M	98.0	0.09
	11n (BW 20MHz)	MCS8	97.8	0.10
	11n (BW 40MHz)	MCS8	95.0	0.22
Chain A+B (B)	11a	6M	98.0	0.09
	11n (BW 20MHz)	MCS8	97.7	0.10
	11n (BW 40MHz)	MCS8	95.1	0.22

Note: The duty factor is also added to all the final result.



<Antenna 5 for 3.3V>

Test Mode :	Mode 1~6	Temperature :	23~25°C
Test Engineer :	Hank Yu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11a Measured Output Power (dBm)					Max. Limits (dBm)	Pass/Fail
		SISO		MIMO (2Tx)				
		Chain A	Chain B	Chain A+B(A)	Chain A+B(B)	Total		
52	5260	20.70	20.44	20.57	20.43	23.51	24	Pass
60	5300	20.45	20.32	20.46	20.42	23.45	24	Pass
64	5320	20.53	20.28	19.24	19.12	22.19	24	Pass
100	5500	17.87	18.16	15.24	15.39	18.32	24	Pass
116	5580	20.44	20.10	20.31	19.94	23.14	24	Pass
140	5700	16.30	16.63	14.61	14.48	17.55	24	Pass

Test Mode :	Mode 7~12	Temperature :	23~25°C
Test Engineer :	Hank Yu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11n (BW 20MHz) Measured Output Power (dBm)					Max. Limits (dBm)	Pass/Fail
		SISO		MIMO (2Tx)				
		Chain A	Chain B	Chain A+B(A)	Chain A+B(B)	Total		
52	5260	20.57	20.39	20.63	20.48	23.57	24	Pass
60	5300	20.58	20.35	20.42	20.36	23.40	24	Pass
64	5320	20.39	19.96	19.24	19.08	22.17	24	Pass
100	5500	17.36	17.62	14.96	15.29	18.14	24	Pass
116	5580	20.65	20.07	20.49	19.89	23.21	24	Pass
140	5700	15.50	16.27	14.16	13.95	17.07	24	Pass

Test Mode :	Mode 13~17	Temperature :	23~25°C
Test Engineer :	Hank Yu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11n (BW 40MHz) Measured Output Power (dBm)					Max. Limits (dBm)	Pass/Fail
		SISO		MIMO (2Tx)				
		Chain A	Chain B	Chain A+B(A)	Chain A+B(B)	Total		
54	5270	20.97	20.84	20.57	20.51	23.55	24	Pass
62	5310	17.21	16.60	15.96	16.19	19.09	24	Pass
102	5510	13.90	14.45	12.13	11.95	15.05	24	Pass
110	5550	19.81	19.82	20.22	19.95	23.10	24	Pass
134	5670	16.98	17.21	15.42	15.65	18.55	24	Pass

Note:

1. Each chain was measured individually and calculated with the formula of $10 \cdot \text{LOG} (10^{A/10} + 10^{B/10})$.
2. The Chain A+B (A) means that the result was measured at Chain A and well terminated by 50 ohm load at Chain B under MIMO mode. It is same concept for Chain A + B (B), measured at Chain B, and well terminated at Chain A under MIMO condition.
3. The EUT is completely uncorrelated category, and the directional antenna gain is the gain of an individual antenna.

	Mode	Data rate	Duty Cycle (%)	Duty Factor (dB)
Chain A	11a	6M	95.9	0.18
	11n (BW 20MHz)	MCS0	96.6	0.15
	11n (BW 40MHz)	MCS0	91.9	0.37
Chain B	11a	6M	96.8	0.14
	11n (BW 20MHz)	MCS0	96.8	0.14
	11n (BW 40MHz)	MCS0	93.3	0.30
Chain A+B (A)	11a	6M	98.0	0.09
	11n (BW 20MHz)	MCS8	97.8	0.10
	11n (BW 40MHz)	MCS8	95.0	0.22
Chain A+B (B)	11a	6M	98.0	0.09
	11n (BW 20MHz)	MCS8	97.7	0.10
	11n (BW 40MHz)	MCS8	95.1	0.22

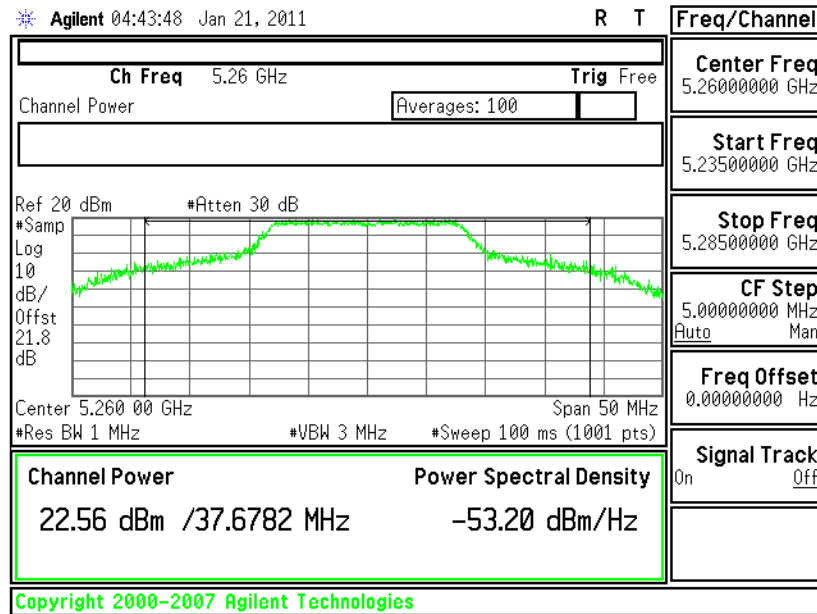
Note: The duty factor is also added to all the final result.



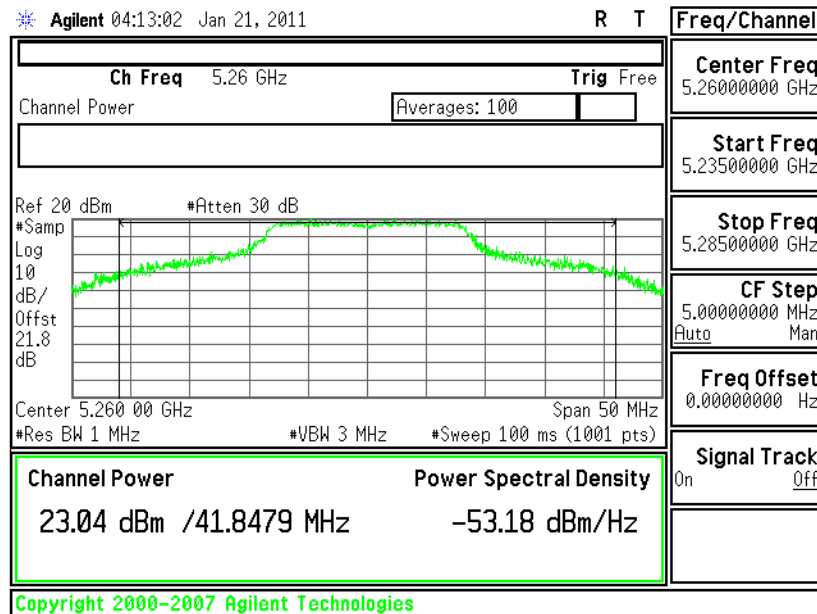
3.2.6 Test Result of Power Output Plots

<Antenna 1 for 4.5V>

Conducted Output Power on 802.11a Channel 52 - Chain A

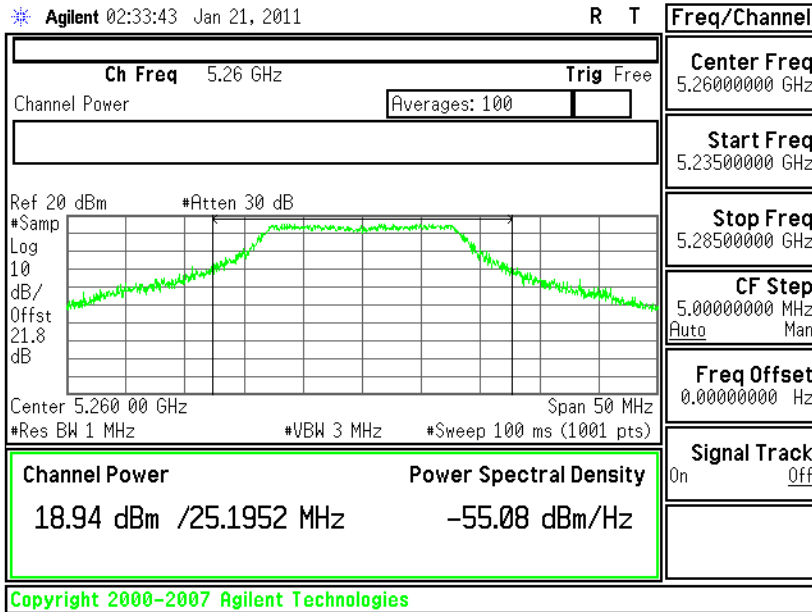


Conducted Output Power on 802.11a Channel 52 - Chain B

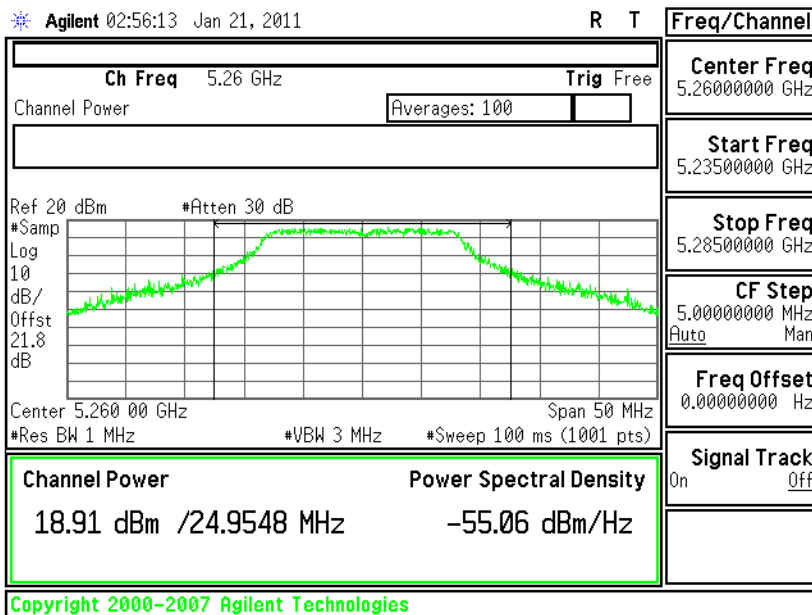




Conducted Output Power on 802.11a Channel 52 - Chain A+B(A)

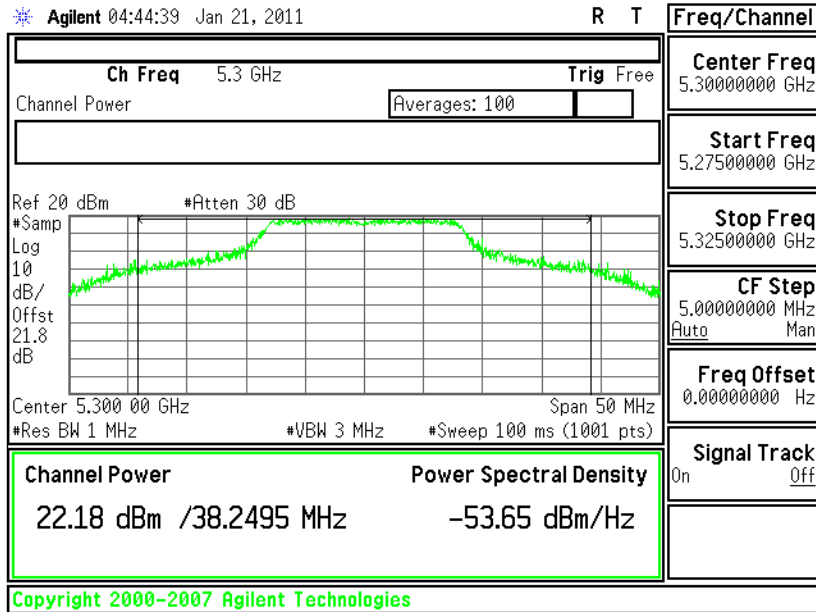


Conducted Output Power on 802.11a Channel 52 - Chain A+B(B)

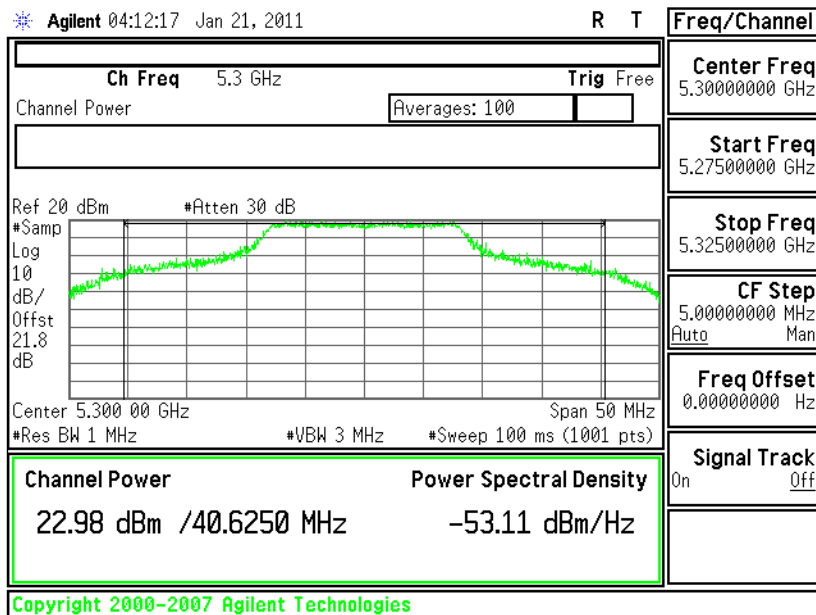




Conducted Output Power on 802.11a Channel 60 - Chain A

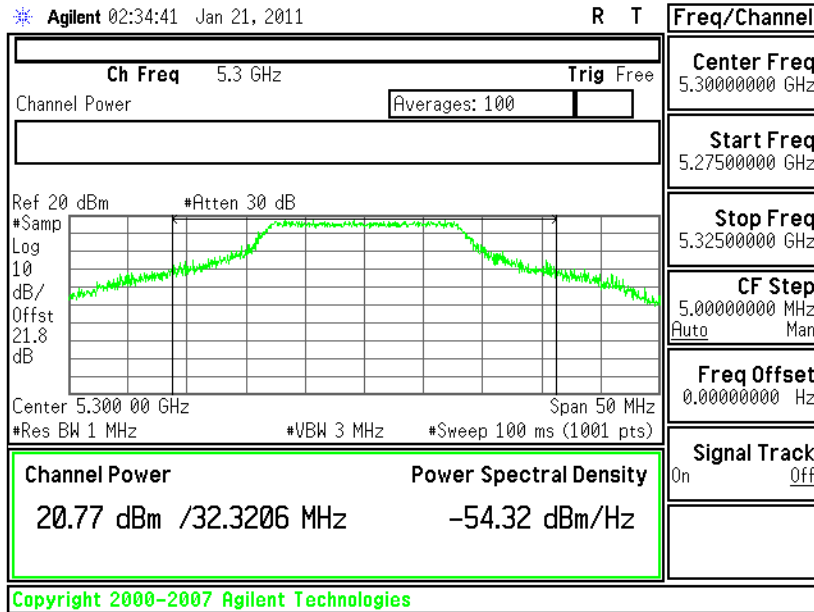


Conducted Output Power on 802.11a Channel 60 - Chain B

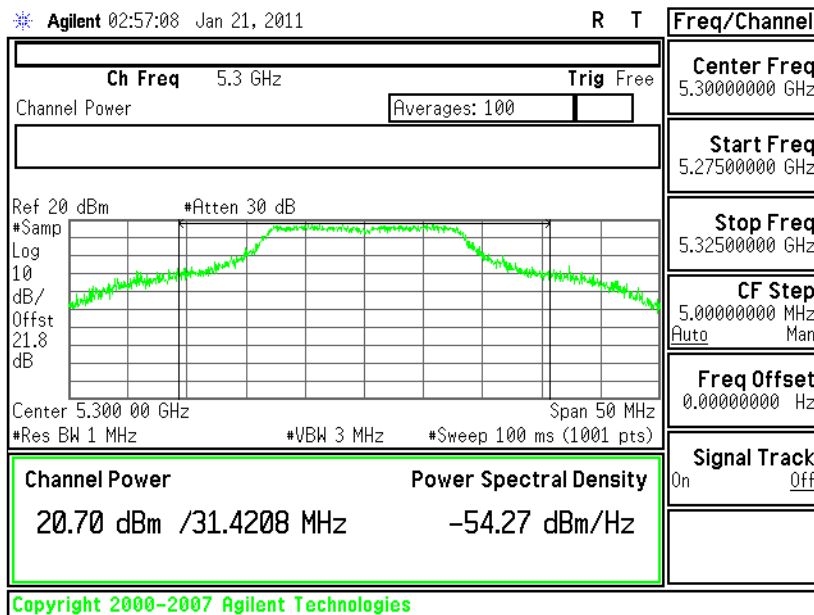




Conducted Output Power on 802.11a Channel 60 - Chain A+B(A)

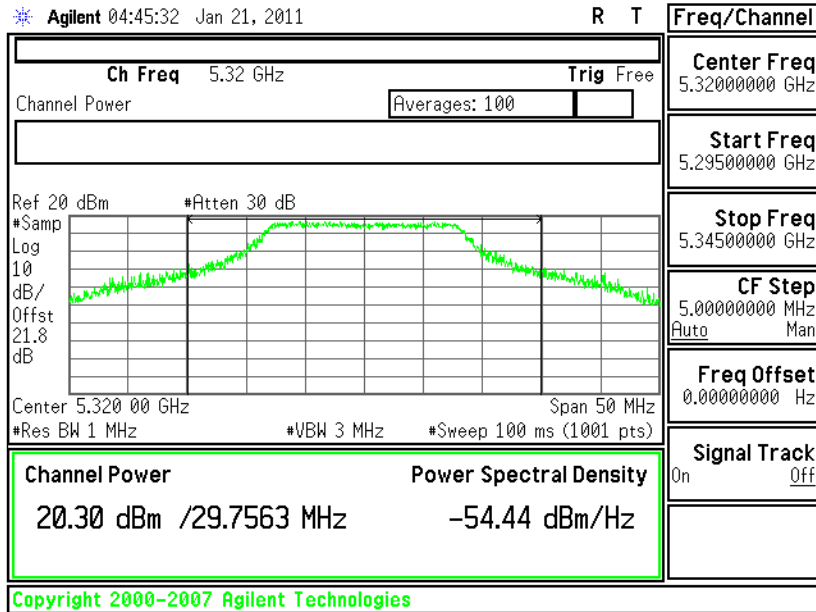


Conducted Output Power on 802.11a Channel 60 - Chain A+B(B)

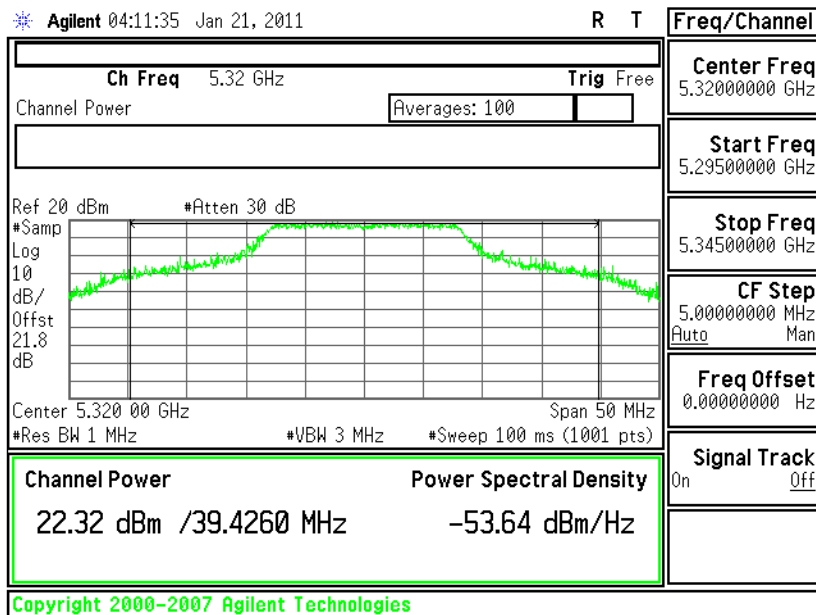




Conducted Output Power on 802.11a Channel 64 - Chain A

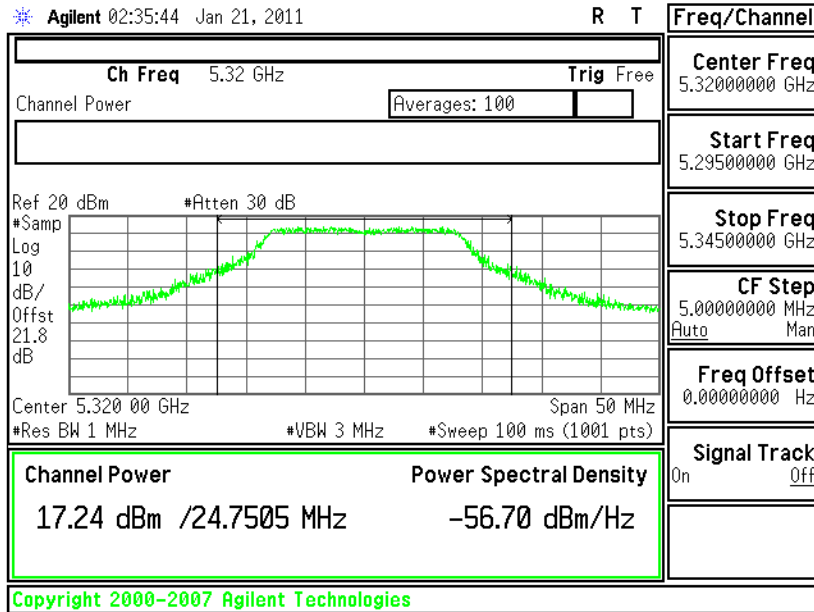


Conducted Output Power on 802.11a Channel 64 - Chain B

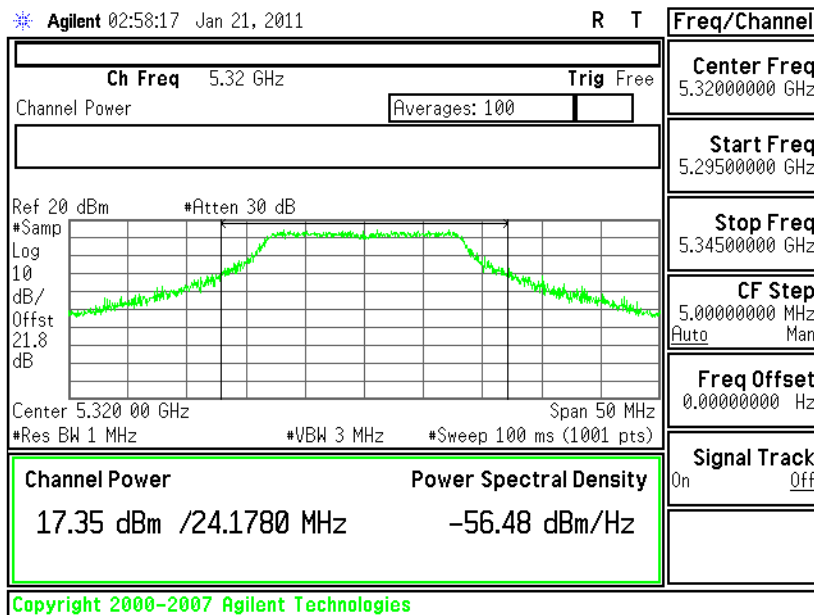




Conducted Output Power on 802.11a Channel 64 - Chain A+B(A)

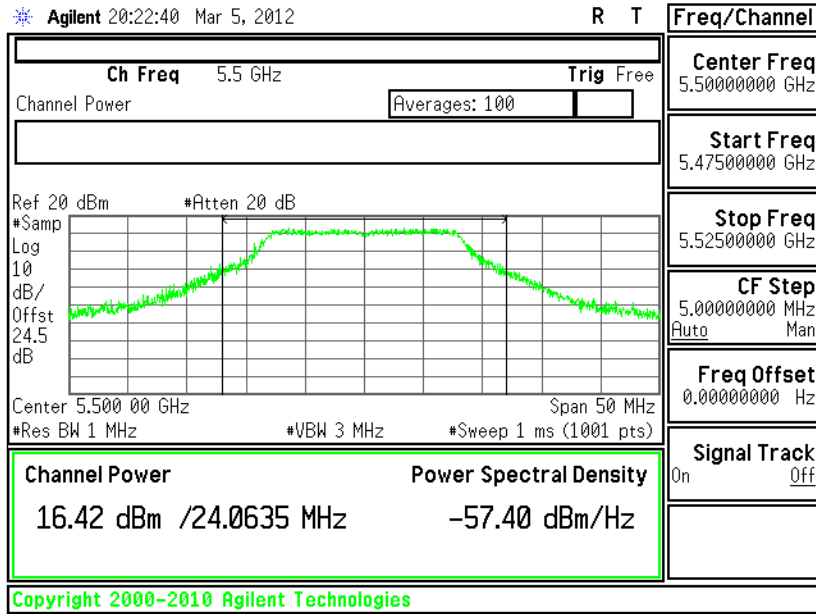


Conducted Output Power on 802.11a Channel 64 - Chain A+B(B)

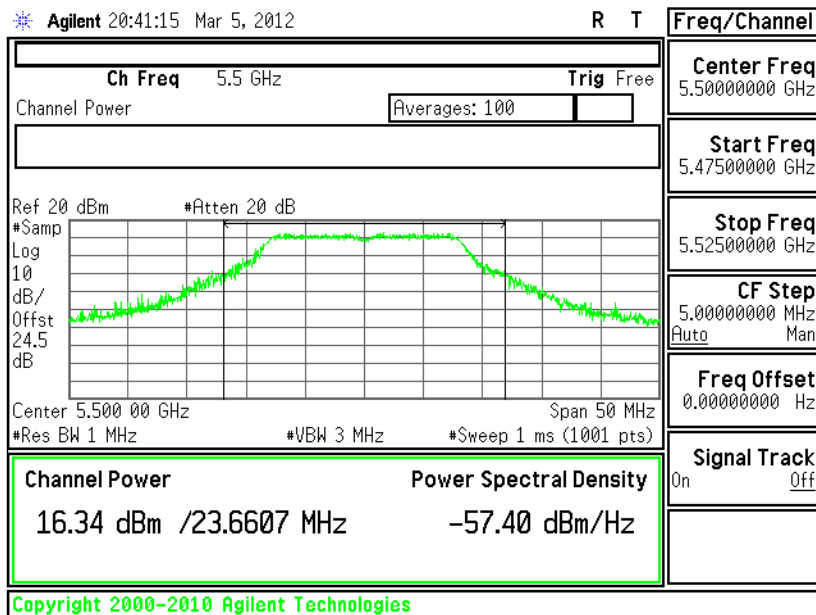




Conducted Output Power on 802.11a Channel 100 - Chain A

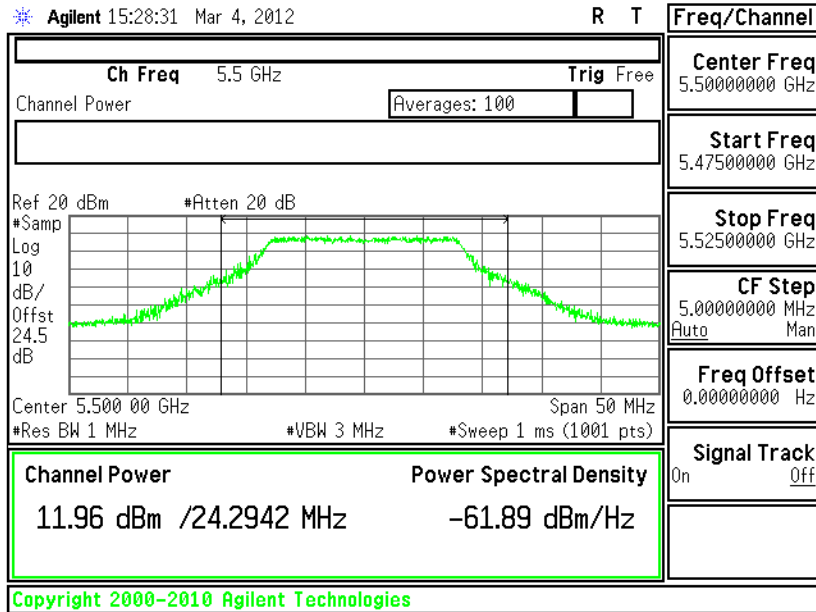


Conducted Output Power on 802.11a Channel 100 - Chain B

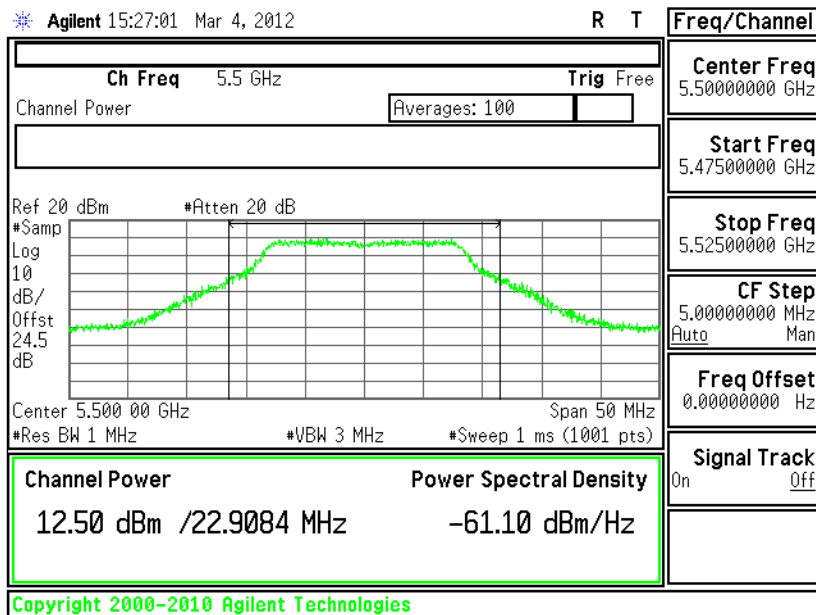




Conducted Output Power on 802.11a Channel 100 - Chain A+B(A)

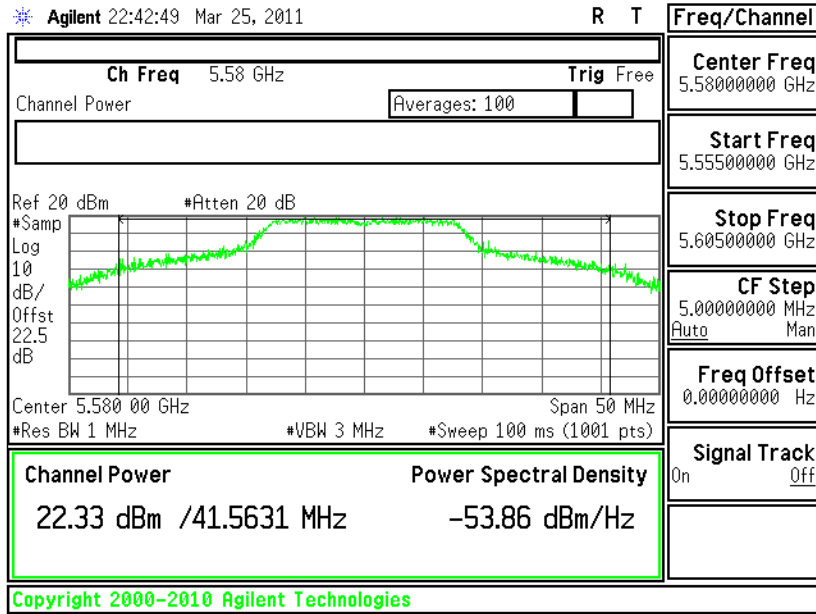


Conducted Output Power on 802.11a Channel 100 - Chain A+B(B)

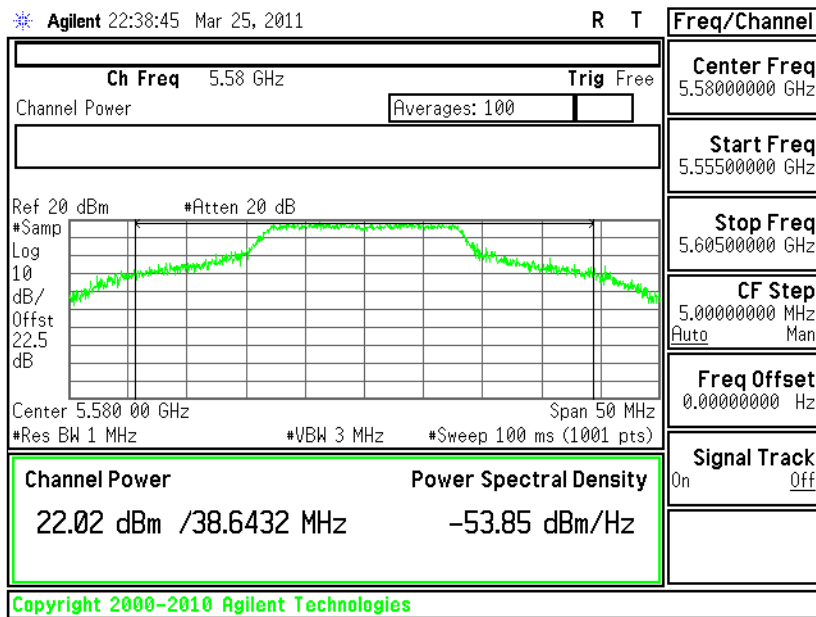




Conducted Output Power on 802.11a Channel 116 - Chain A

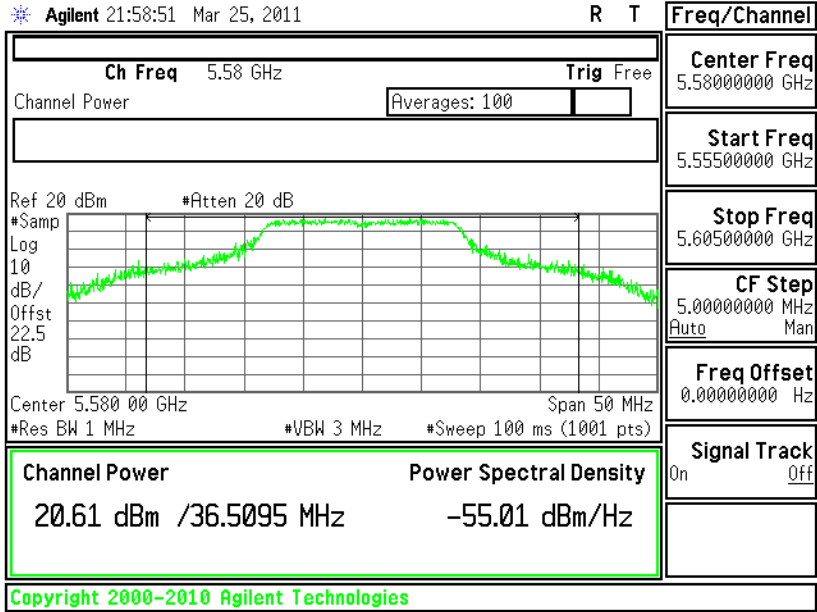


Conducted Output Power on 802.11a Channel 116 - Chain B

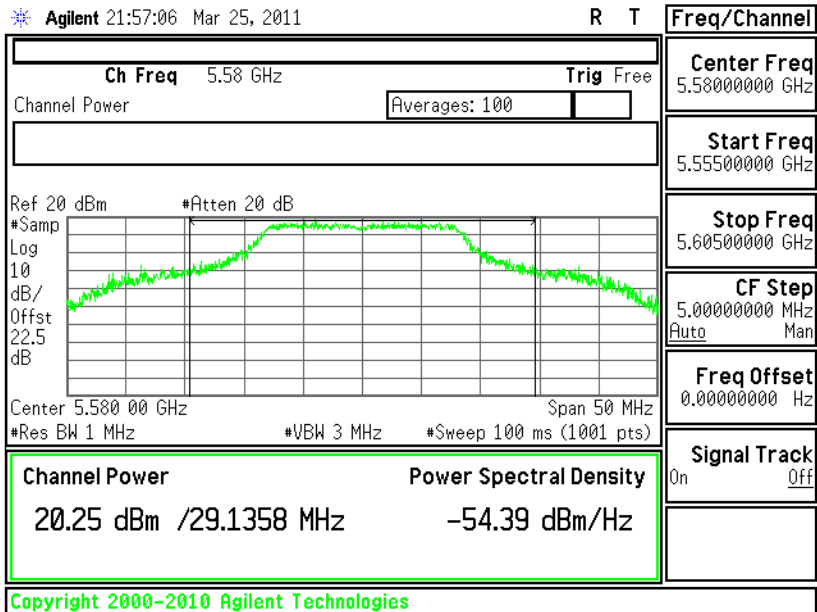




Conducted Output Power on 802.11a Channel 116 - Chain A+B(A)

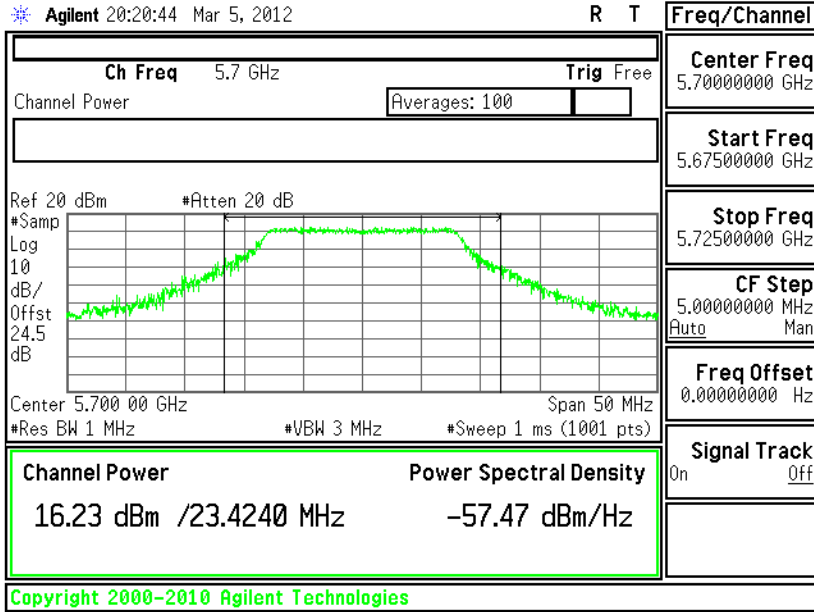


Conducted Output Power on 802.11a Channel 116 - Chain A+B(B)

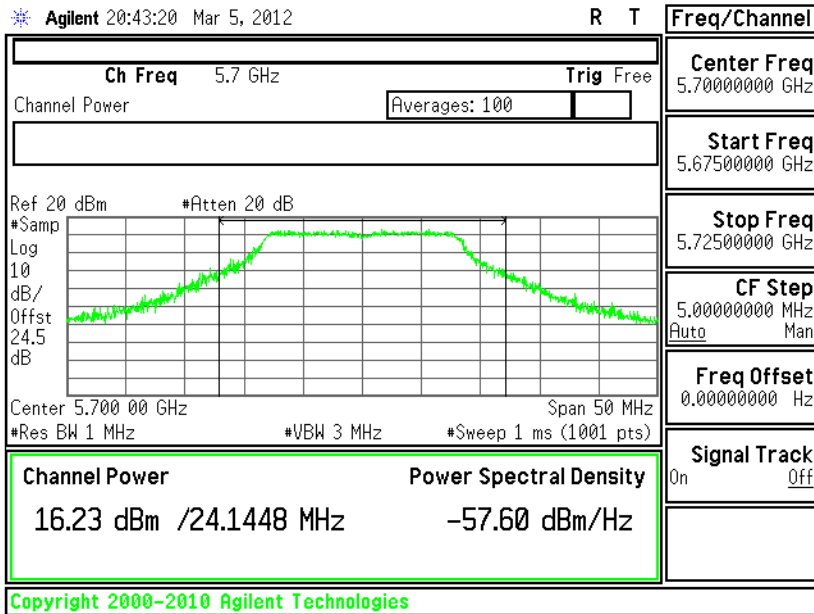




Conducted Output Power on 802.11a Channel 140 - Chain A

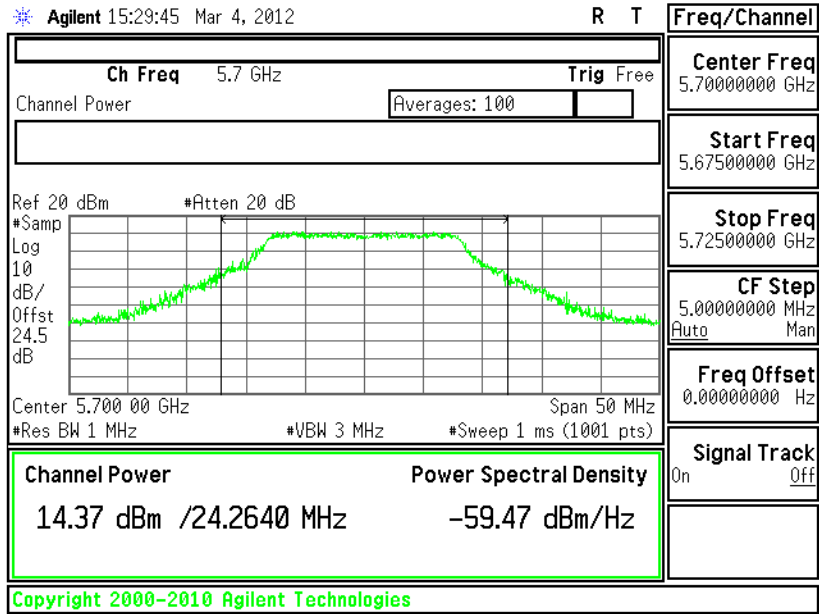


Conducted Output Power on 802.11a Channel 140 - Chain B

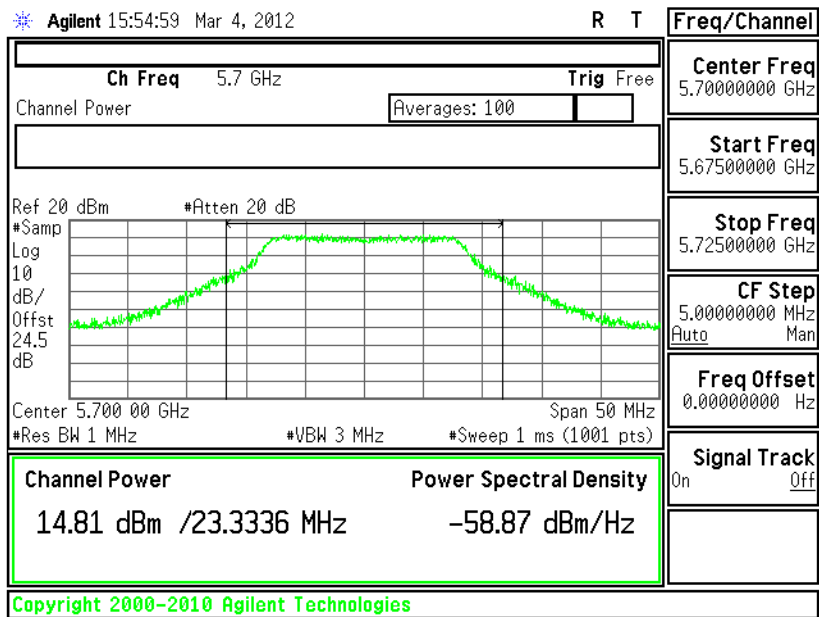




Conducted Output Power on 802.11a Channel 140 - Chain A+B(A)



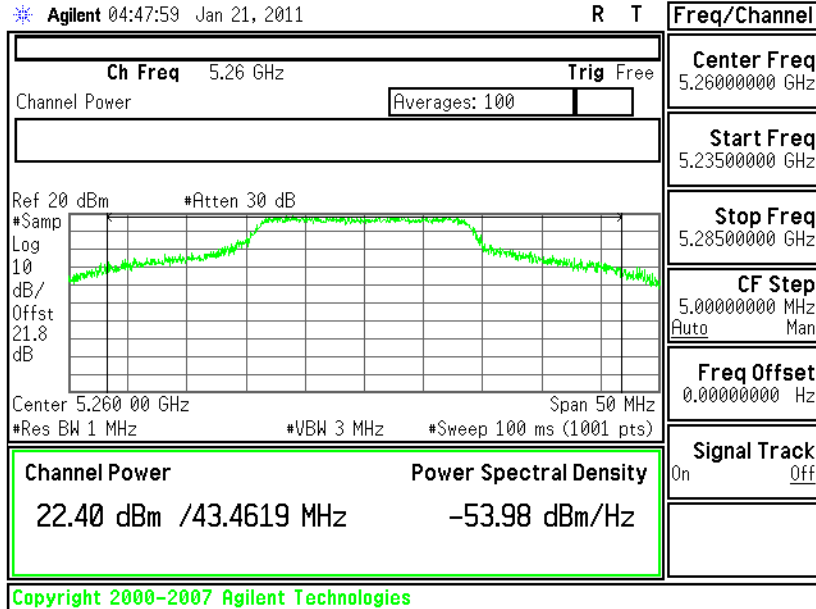
Conducted Output Power on 802.11a Channel 140 - Chain A+B(B)





Conducted Output Power on 802.11n (BW 20MHz) Channel 52 -

Chain A



Conducted Output Power on 802.11n (BW 20MHz) Channel 52 -

Chain B

