

BAND EDGE COMPLIANCE

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval (mos)
Spectrum Analyzer	Agilent	N9010A	AFL	9/20/2014	12
DC Block, 40 GHz	Fairview Microwave	SD3379	AMM	2/27/2015	12
Attenuator, 20dB, 40 GHz	Fairview Microwave	SA4018-20	TQY	2/27/2015	12
Signal Generator, 40 GHz	Agilent	N5173B	TIW	7/15/2014	36

TEST DESCRIPTION

The spurious RF conducted emissions at the edges of the authorized bands were measured with the EUT set to low and high transmit frequencies in each available band. The channels closest to the band edges were selected. The EUT was transmitting at the data rate(s) listed in the datasheet.

The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer. The reference level offset on the spectrum analyzer was adjusted to compensate for cable loss and the external attenuation used between the RF output and the spectrum analyzer input.

The spectrum was scanned below the lower band edge and above the higher band edge.

BAND EDGE COMPLIANCE



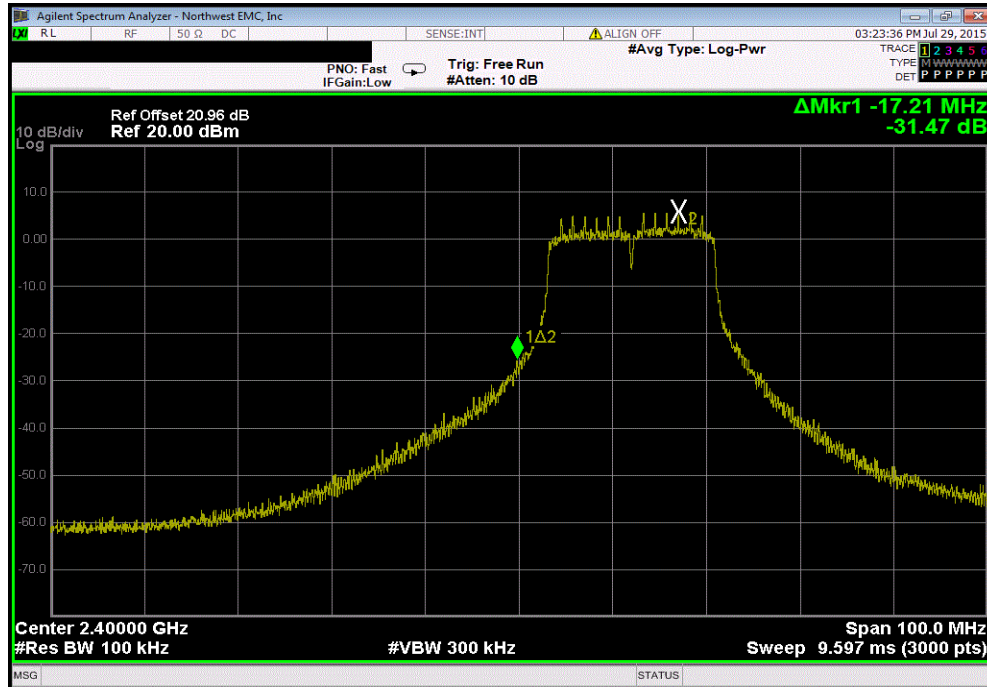
XMR 2015.01.14

EUT: Firebox T50-W (BS5AE7W)		Work Order: VDEI0009	
Serial Number: 70AF00069-3EB6		Date: 07/29/15	
Customer: WatchGuard Technologies, Inc.		Temperature: 24.9°C	
Attendees: None		Humidity: 47%	
Project: None		Barometric Pres.: 1014 mbar	
Tested by: Jonathan Kiefer	Power: 110VAC/60Hz	Job Site: TX09	
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2015		ANSI C63.10:2013	
COMMENTS			
3x3 MIMO mode, Chain ABC (Chains 0, 1, and 2). Tested the modulation that produced the highest conducted output power. Transmit power setting 17.0.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	1	Signature <i>Jonathan Kiefer</i>	
		Value (dBc)	Limit ≤ (dBc) Result
Chain A	20 MHz		
	2400 MHz - 2483.5 MHz Band		
	802.11(n) MCS16		
	Low Channel 1, 2412 MHz	-31.47	-20 Pass
	High Channel 11, 2462 MHz	-44.38	-20 Pass
Chain B	20 MHz		
	2400 MHz - 2483.5 MHz Band		
	802.11(n) MCS16		
	Low Channel 1, 2412 MHz	-32.71	-20 Pass
	High Channel 11, 2462 MHz	-48.29	-20 Pass
Chain C	20 MHz		
	2400 MHz - 2483.5 MHz Band		
	802.11(n) MCS16		
	Low Channel 1, 2412 MHz	-29.4	-20 Pass
	High Channel 11, 2462 MHz	-49.37	-20 Pass

BAND EDGE COMPLIANCE

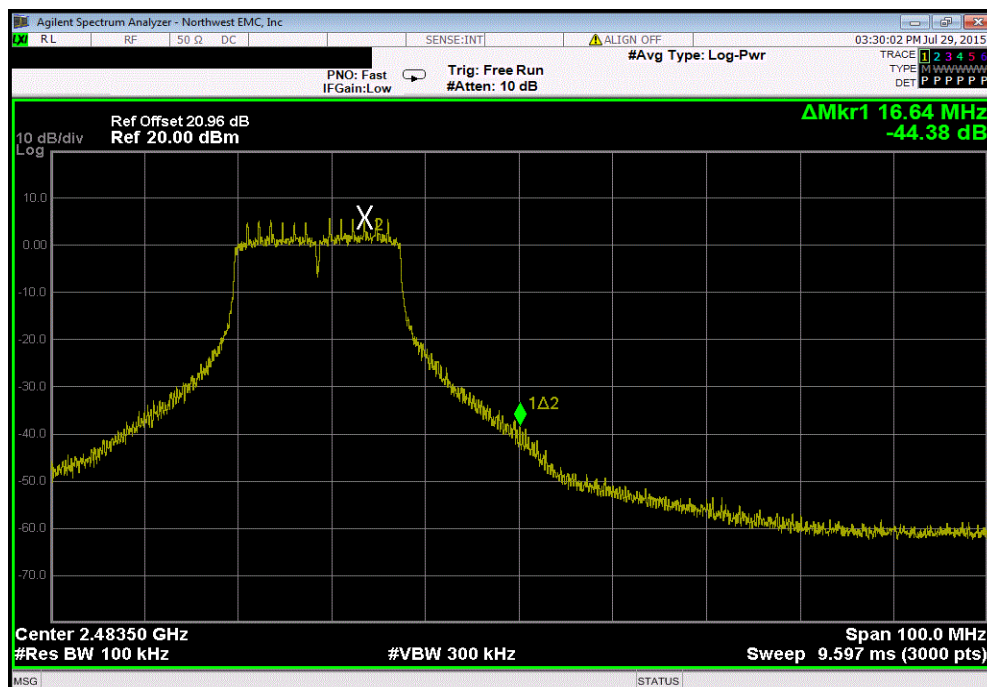
Chain A, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS16, Low Channel 1, 2412 MHz

				Value (dBc)	Limit ≤ (dBc)	Result
				-31.47	-20	Pass



Chain A, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS16, High Channel 11, 2462 MHz

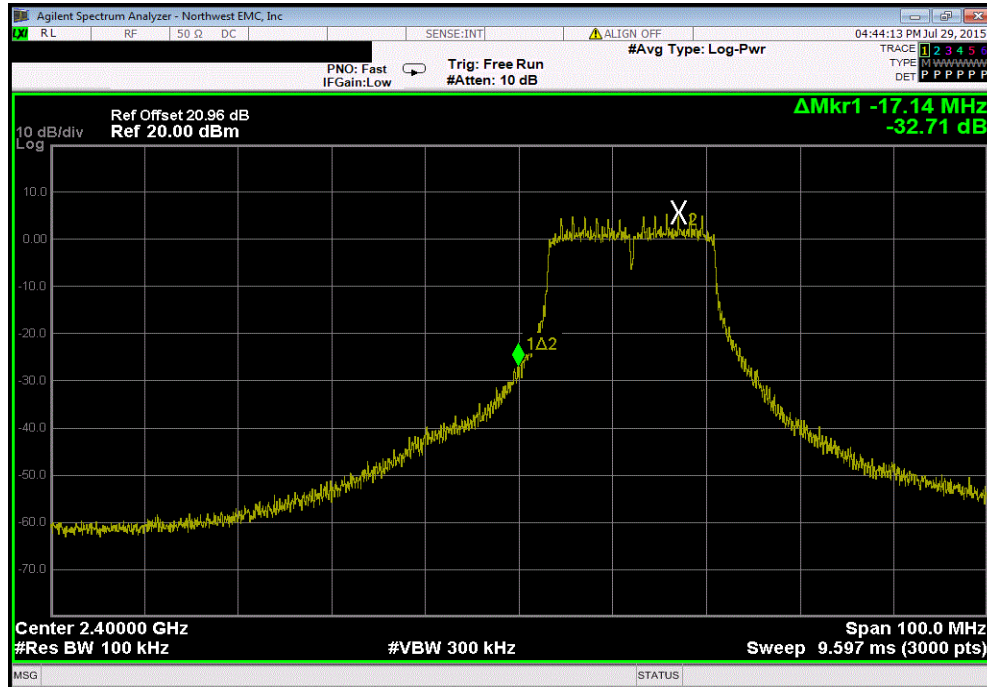
				Value (dBc)	Limit ≤ (dBc)	Result
				-44.38	-20	Pass



BAND EDGE COMPLIANCE

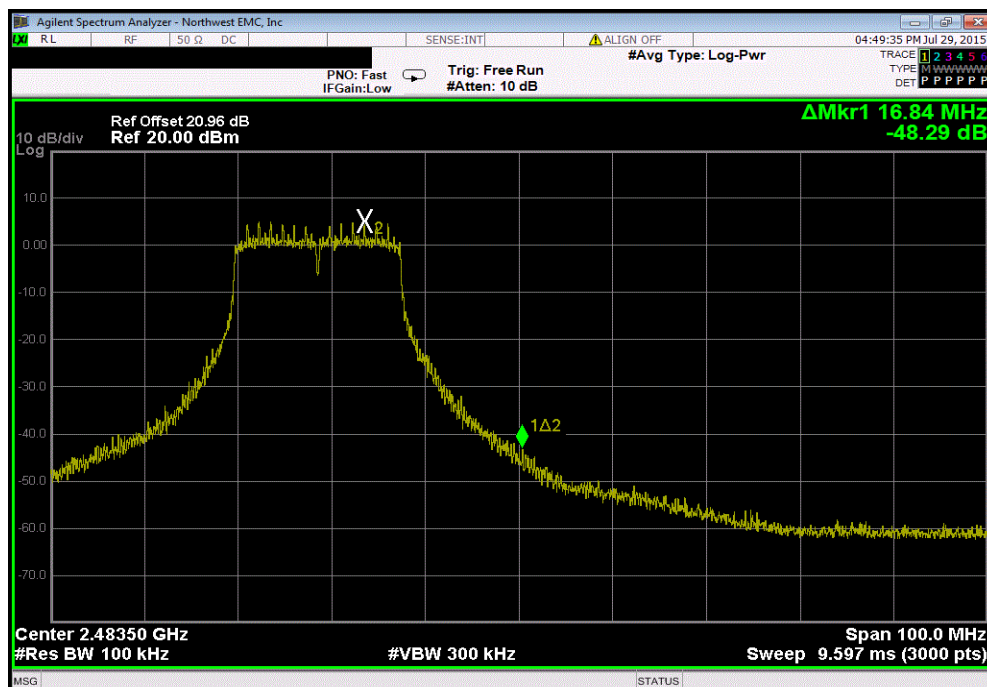
Chain B, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS16, Low Channel 1, 2412 MHz

				Value (dBc)	Limit ≤ (dBc)	Result
				-32.71	-20	Pass



Chain B, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS16, High Channel 11, 2462 MHz

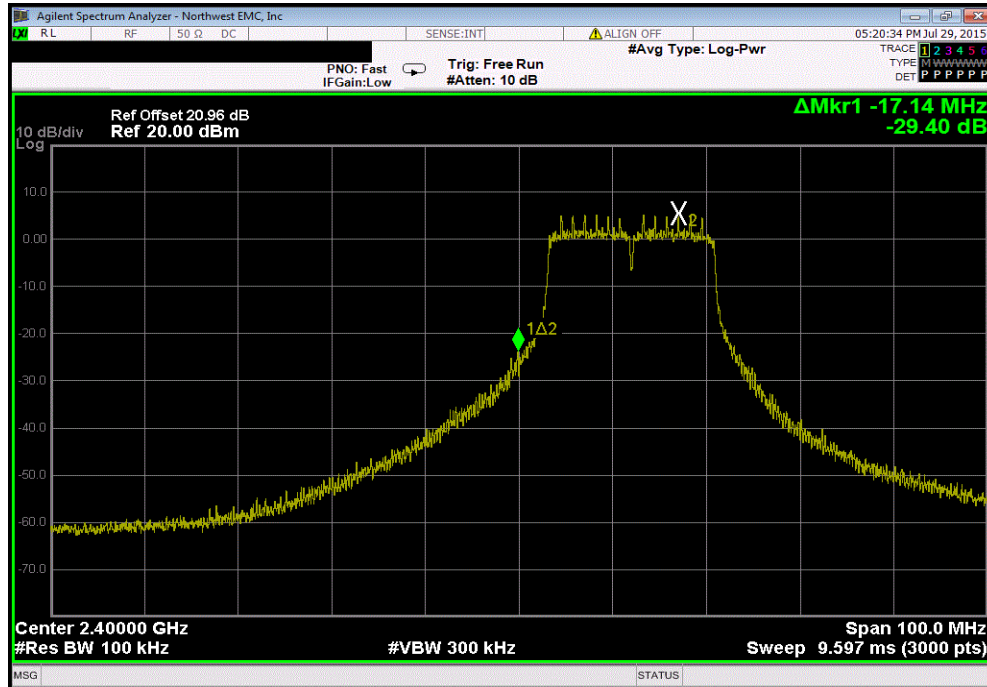
				Value (dBc)	Limit ≤ (dBc)	Result
				-48.29	-20	Pass



BAND EDGE COMPLIANCE

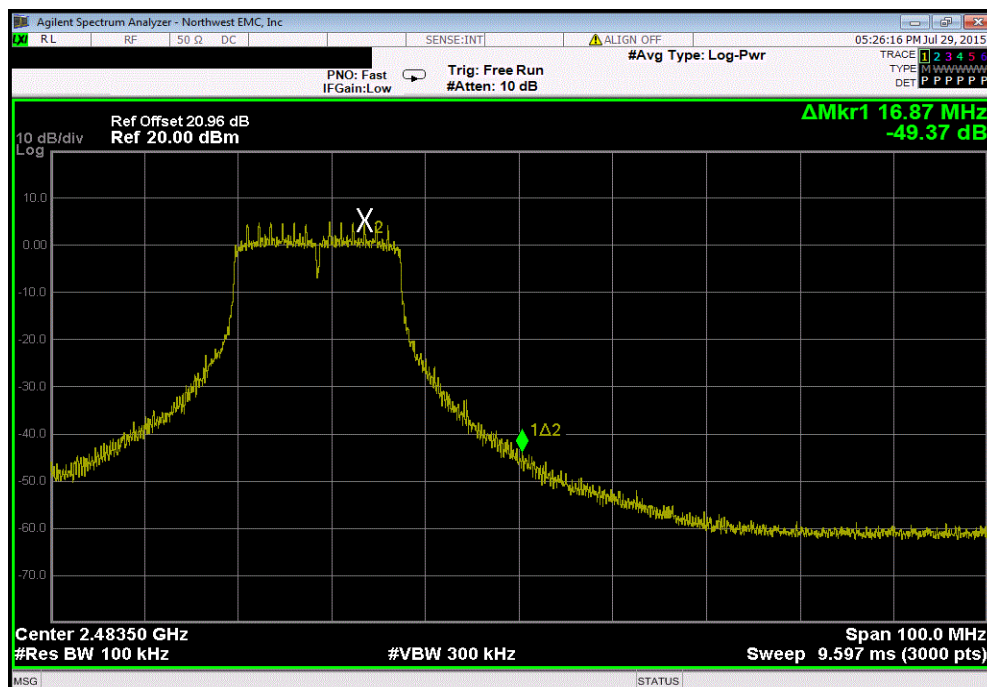
Chain C, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS16, Low Channel 1, 2412 MHz

				Value (dBc)	Limit ≤ (dBc)	Result
				-29.4	-20	Pass



Chain C, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS16, High Channel 11, 2462 MHz

				Value (dBc)	Limit ≤ (dBc)	Result
				-49.37	-20	Pass



BAND EDGE COMPLIANCE

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval (mos)
Attenuator, 20dB, 40 GHz	Fairview Microwave	SA4018-20	TQY	2/27/2015	12
Signal Generator, 40 GHz	Agilent	N5173B	TIW	7/15/2014	36
DC Block, 40 GHz	Fairview Microwave	SD3379	AMM	2/27/2015	12
Spectrum Analyzer	Agilent	N9010A	AFL	9/20/2014	12

TEST DESCRIPTION

The spurious RF conducted emissions at the edges of the authorized bands were measured with the EUT set to low and high transmit frequencies in each available band. The channels closest to the band edges were selected. The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer. The EUT was transmitting at the data rate(s) listed in the datasheet.

The spectrum was scanned below the lower band edge and above the higher band edge.

BAND EDGE COMPLIANCE



XMR 2015.01.14

EUT: Firebox T50-W (BS5AE7W)		Work Order: VDEI0009	
Serial Number: 70AF00069-3EB6		Date: 07/28/15	
Customer: WatchGuard Technologies, Inc.		Temperature: 24.7°C	
Attendees: None		Humidity: 44%	
Project: None		Barometric Pres.: 1014 mbar	
Tested by: Jonathan Kiefer		Power: 110VAC/60Hz	Job Site: TX09
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2015		ANSI C63.10:2013	
COMMENTS			
Tested the modulation that produced the highest conducted output power for b, g, and n modes for each chain. Reference power level table for channel power setting. Chains A, B, and C, correspond to Chains 0, 1, and 2, respectively.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	1	Signature <i>Jonathan Kiefer</i>	
		Value (dBc)	Limit ≤ (dBc) Result
Chain A			
	20 MHz		
	2400 MHz - 2483.5 MHz Band		
	802.11(b) 1 Mbps		
	Low Channel 1, 2412 MHz	-42.52	-20 Pass
	High Channel 11, 2462 MHz	-55.9	-20 Pass
	802.11(b) 11 Mbps		
	Low Channel 1, 2412 MHz	-43.69	-20 Pass
	High Channel 11, 2462 MHz	-55.75	-20 Pass
	802.11(g) 6 Mbps		
	Low Channel 1, 2412 MHz	-33.58	-20 Pass
	High Channel 11, 2462 MHz	-47.76	-20 Pass
	802.11(g) 36 Mbps		
	Low Channel 1, 2412 MHz	-36.23	-20 Pass
	High Channel 11, 2462 MHz	-49.73	-20 Pass
	802.11(g) 54 Mbps		
	Low Channel 1, 2412 MHz	-33.69	-20 Pass
	High Channel 11, 2462 MHz	-46.2	-20 Pass
	802.11(n) MCS0		
	Low Channel 1, 2412 MHz	-33.16	-20 Pass
	High Channel 11, 2462 MHz	-41.07	-30 Pass
	802.11(n) MCS7		
	Low Channel 1, 2412 MHz	-32.61	-20 Pass
	High Channel 11, 2462 MHz	-46.4	-20 Pass
Chain B			
	20 MHz		
	2400 MHz - 2483.5 MHz Band		
	802.11(b) 1 Mbps		
	Low Channel 1, 2412 MHz	-42.88	-20 Pass
	High Channel 11, 2462 MHz	-57.7	-20 Pass
	802.11(g) 36 Mbps		
	Low Channel 1, 2412 MHz	-36.13	-20 Pass
	High Channel 11, 2462 MHz	-52.23	-20 Pass
	802.11(n) MCS0		
	Low Channel 1, 2412 MHz	-32.37	-20 Pass
	High Channel 11, 2462 MHz	-47.29	-20 Pass
Chain C			
	20 MHz		
	2400 MHz - 2483.5 MHz Band		
	802.11(b) 1 Mbps		
	Low Channel 1, 2412 MHz	-41.07	-20 Pass
	High Channel 11, 2462 MHz	-59.06	-20 Pass
	802.11(g) 6 Mbps		
	Low Channel 1, 2412 MHz	-32	-20 Pass
	High Channel 11, 2462 MHz	-50.17	-20 Pass
	802.11(n) MCS0		
	Low Channel 1, 2412 MHz	-31.92	-20 Pass
	High Channel 11, 2462 MHz	-49.6	-20 Pass

BAND EDGE COMPLIANCE

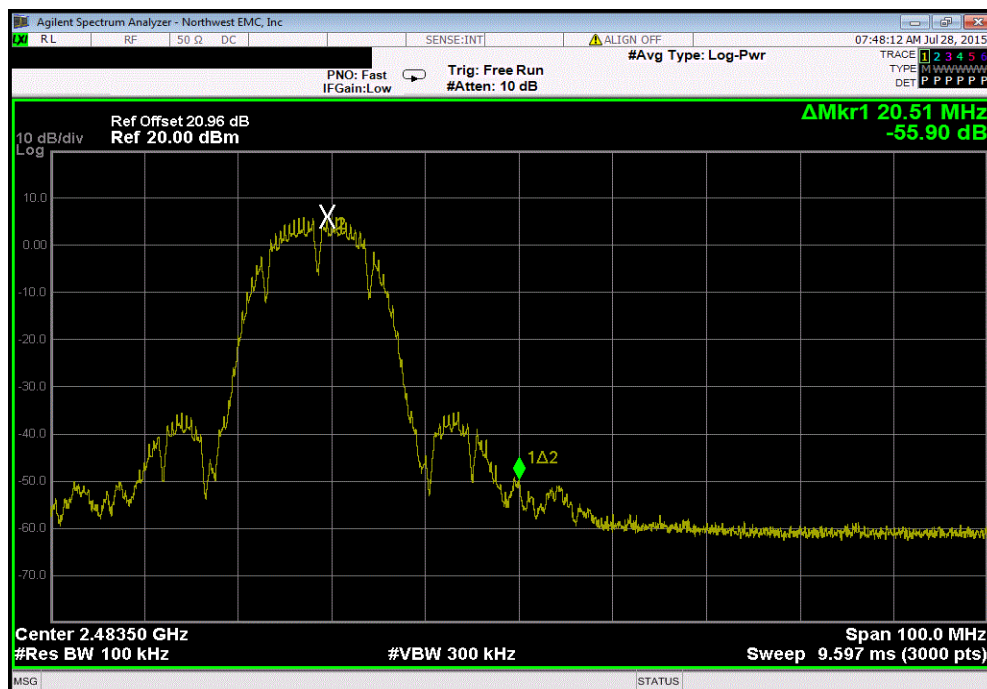
Chain A, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz

				Value (dBc)	Limit ≤ (dBc)	Result
				-42.52	-20	Pass



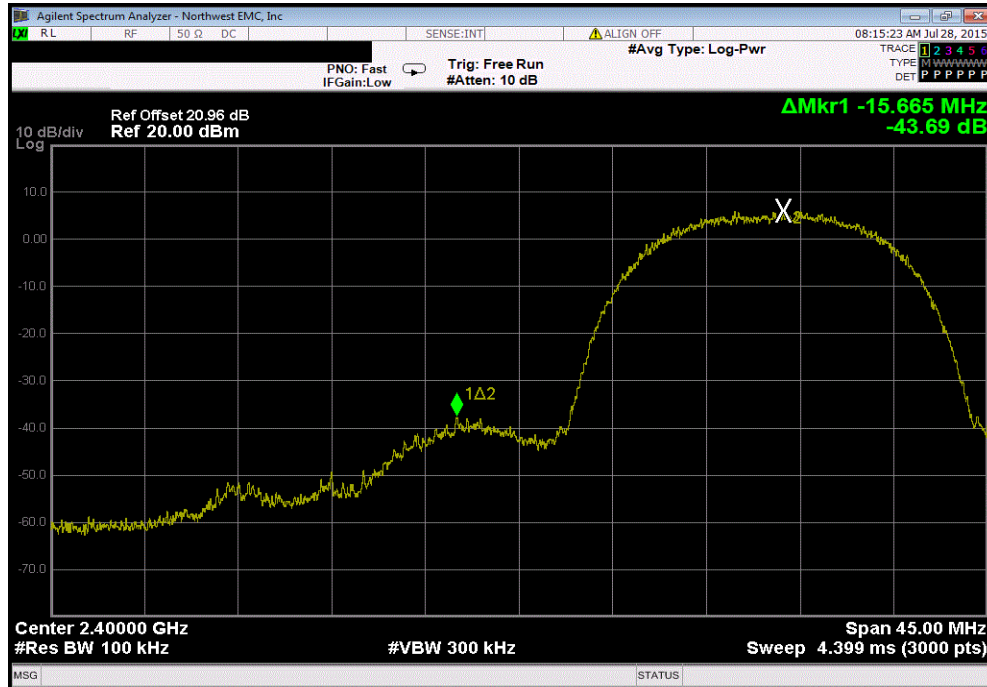
Chain A, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz

				Value (dBc)	Limit ≤ (dBc)	Result
				-55.9	-20	Pass

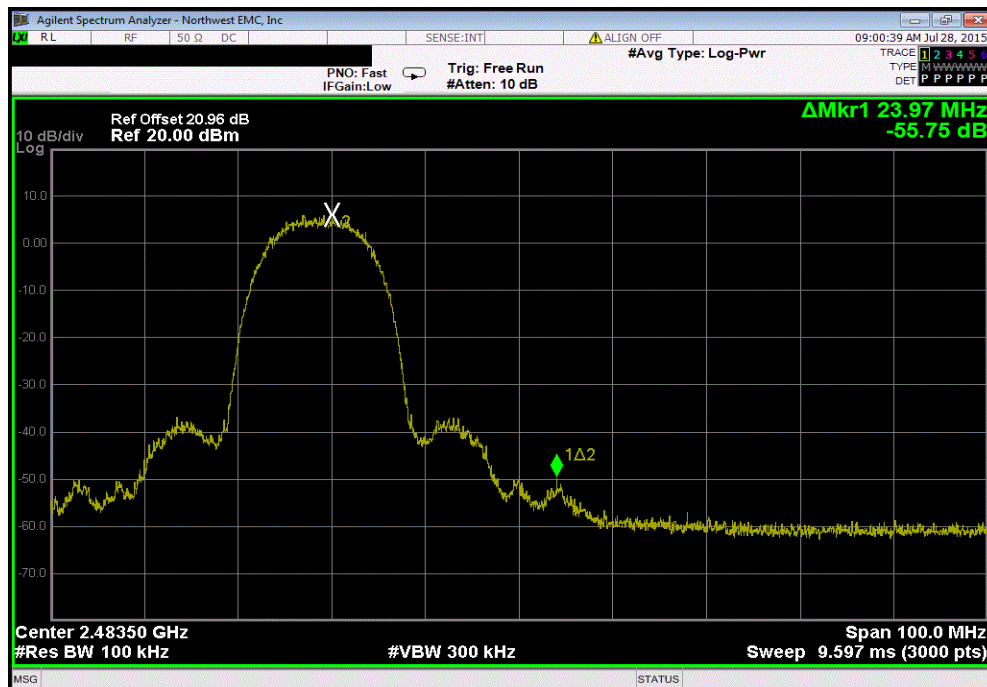


BAND EDGE COMPLIANCE

Chain A, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-43.69	-20	Pass



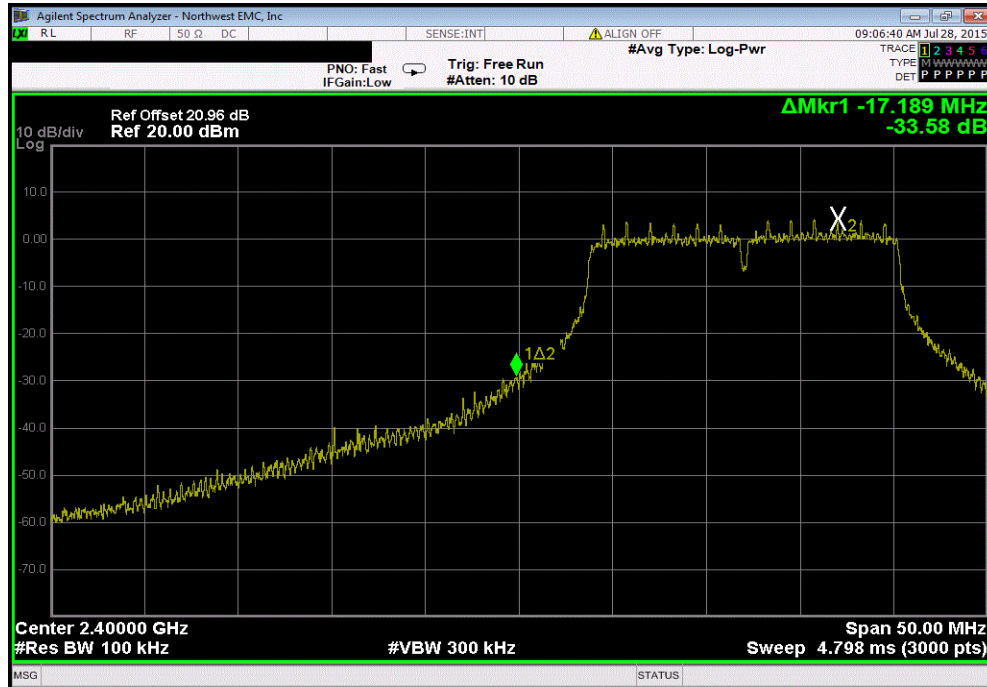
Chain A, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-55.75	-20	Pass



BAND EDGE COMPLIANCE

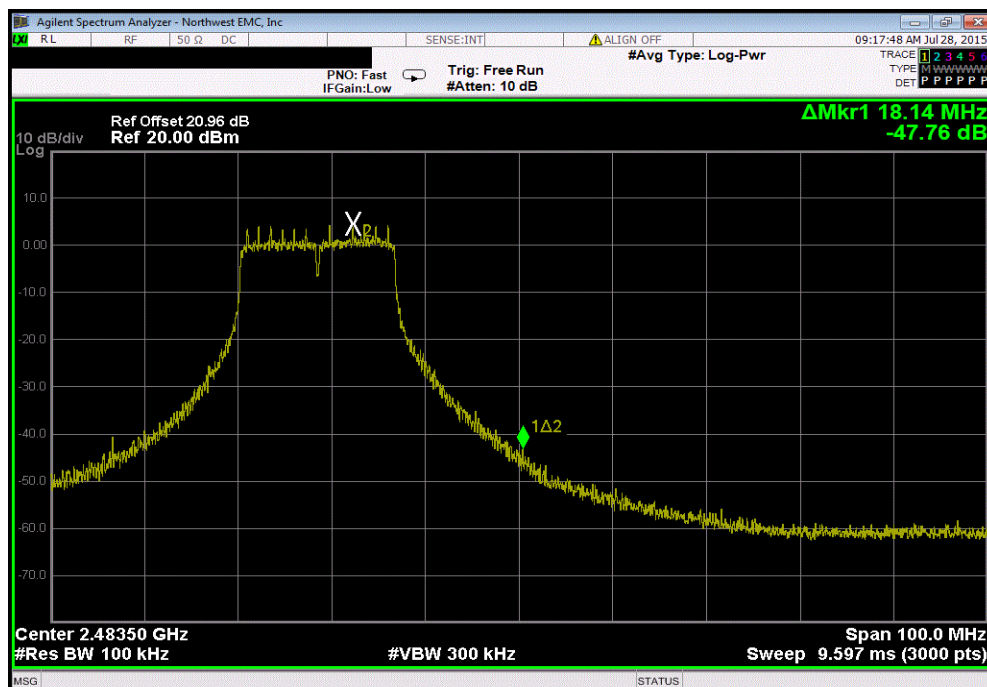
Chain A, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz

	Value (dBc)	Limit ≤ (dBc)	Result
	-33.58	-20	Pass



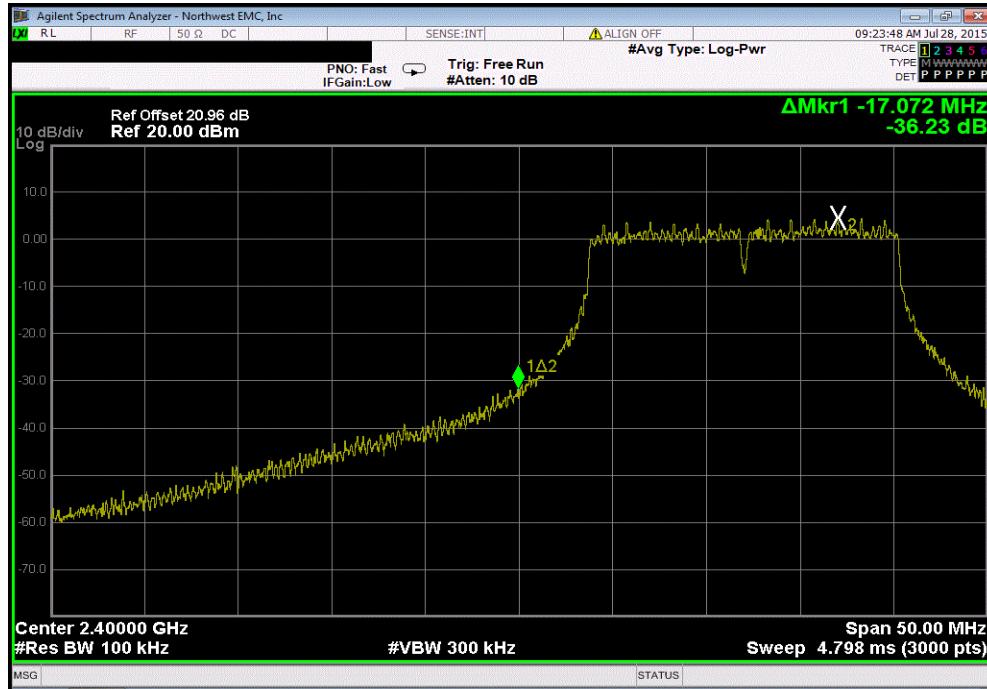
Chain A, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz

	Value (dBc)	Limit ≤ (dBc)	Result
	-47.76	-20	Pass

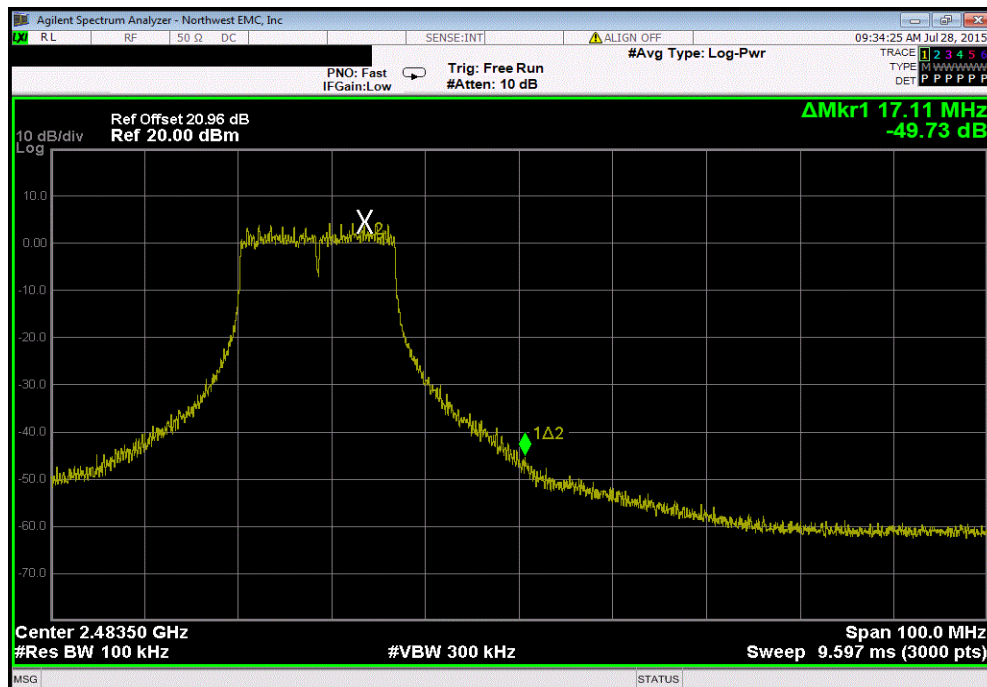


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Chain A, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-36.23	-20	Pass

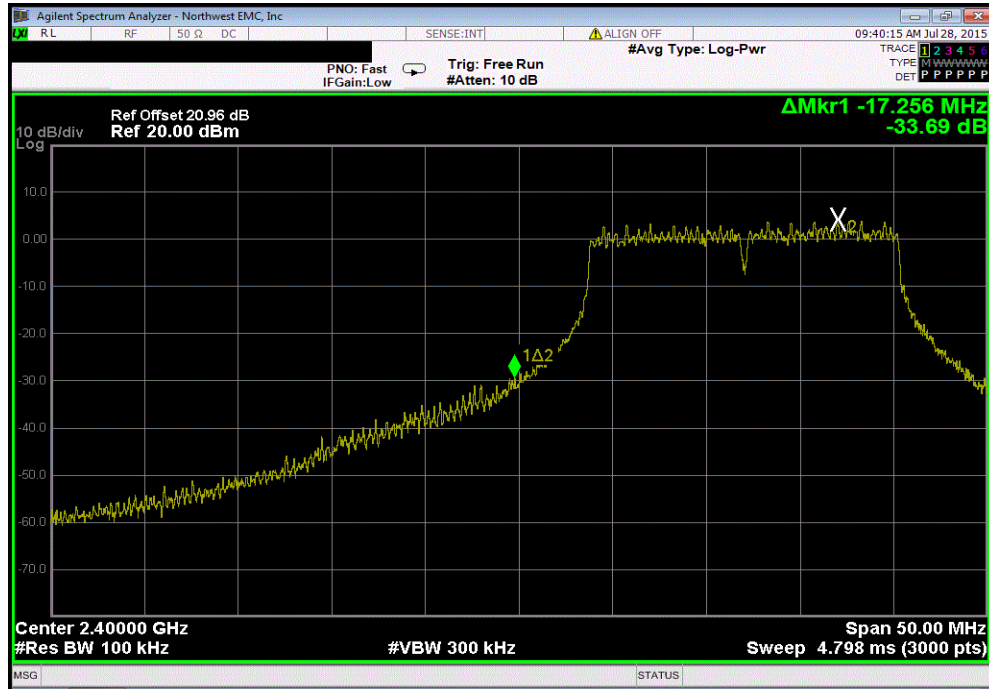


Chain A, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-49.73	-20	Pass

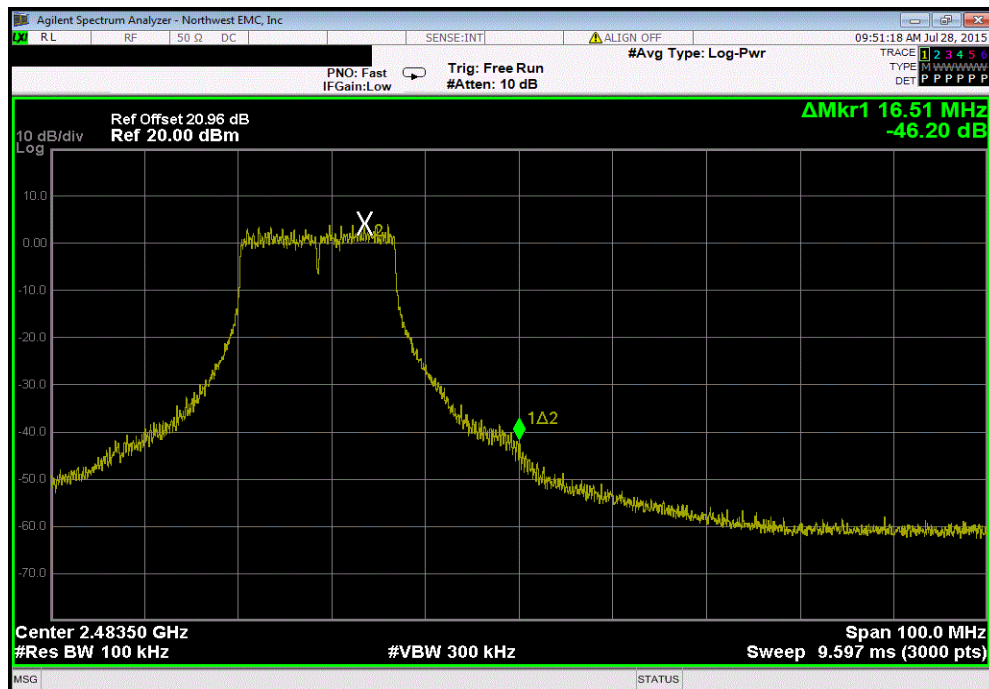


BAND EDGE COMPLIANCE

Chain A, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz						
	Value (dBc)	Limit ≤ (dBc)	Result			
	-33.69	-20	Pass			

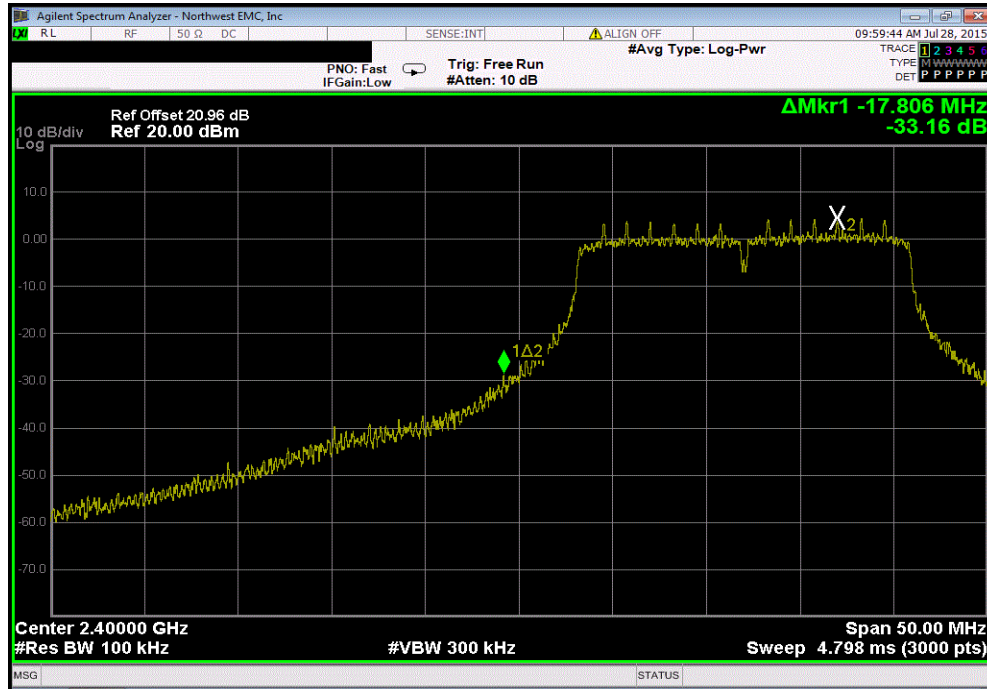


Chain A, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz						
	Value (dBc)	Limit ≤ (dBc)	Result			
	-46.2	-20	Pass			

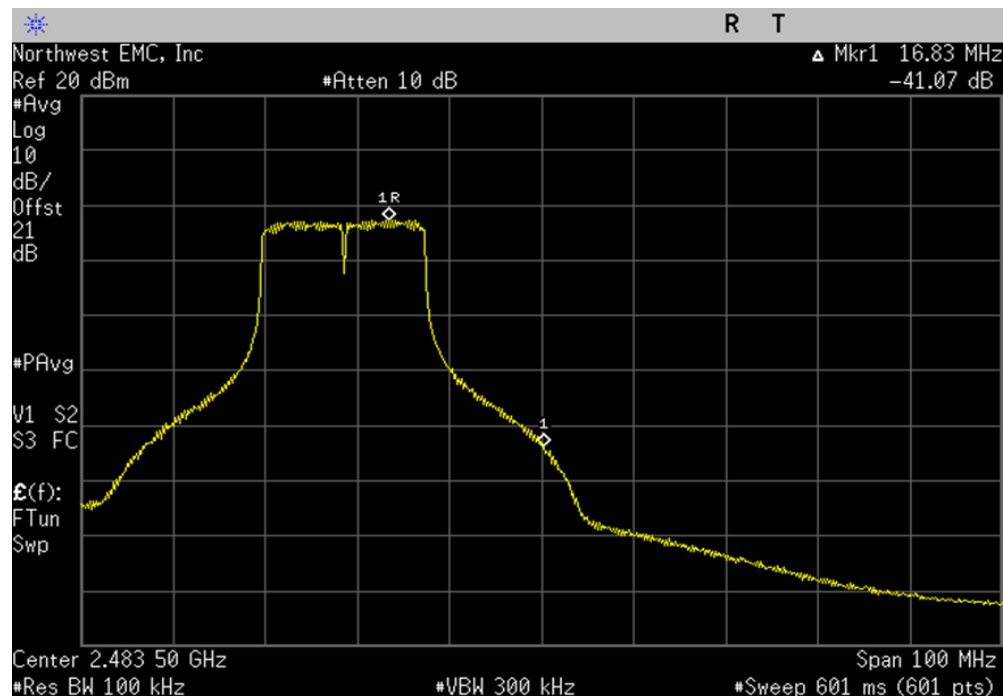


BAND EDGE COMPLIANCE

Chain A, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Low Channel 1, 2412 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-33.16	-20	Pass

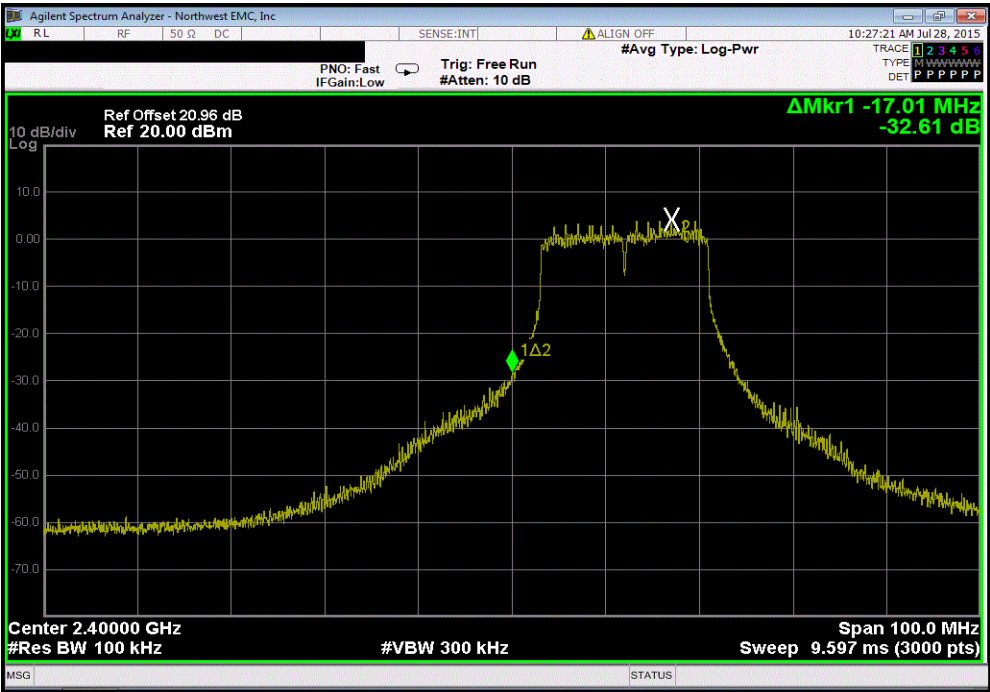


Chain A, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, High Channel 11, 2462 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-41.07	-30	Pass

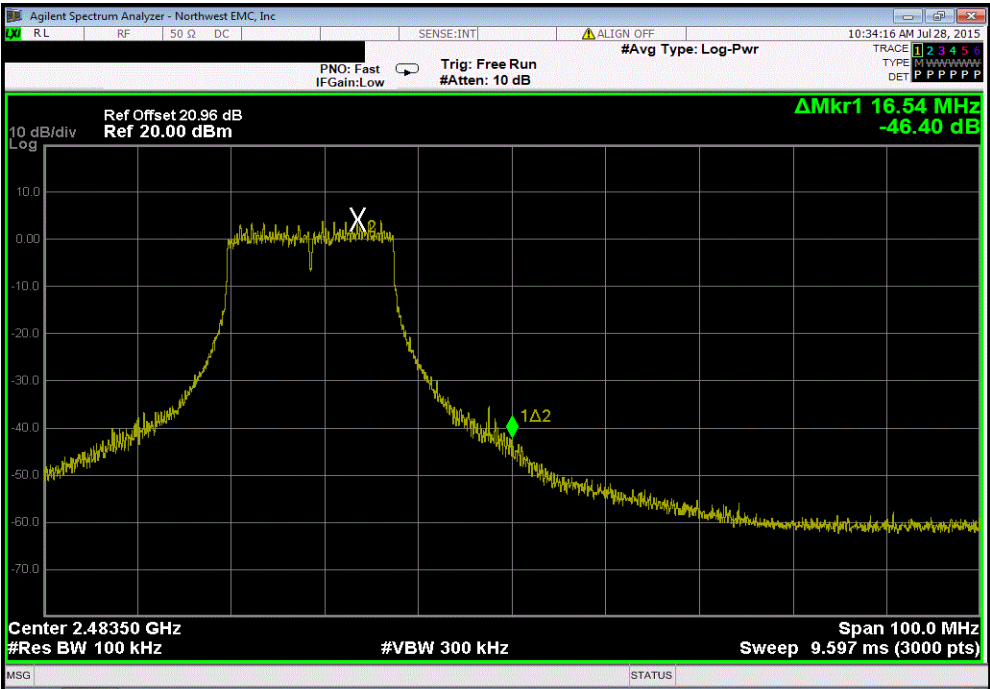


BAND EDGE COMPLIANCE

Chain A, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Low Channel 1, 2412 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-32.61	-20	Pass



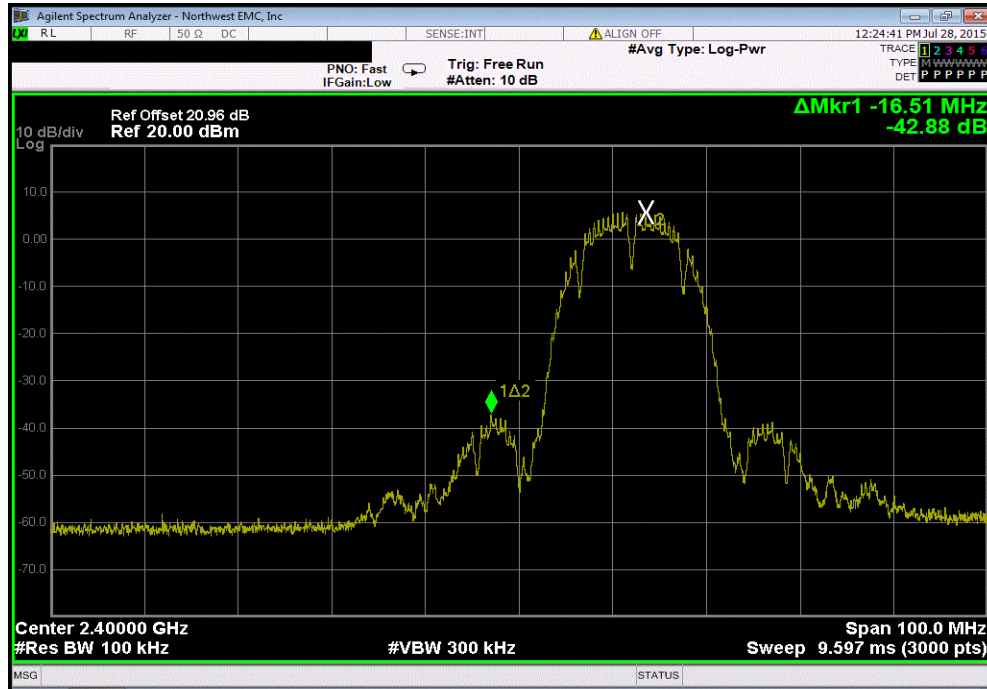
Chain A, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, High Channel 11, 2462 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-46.4	-20	Pass



BAND EDGE COMPLIANCE

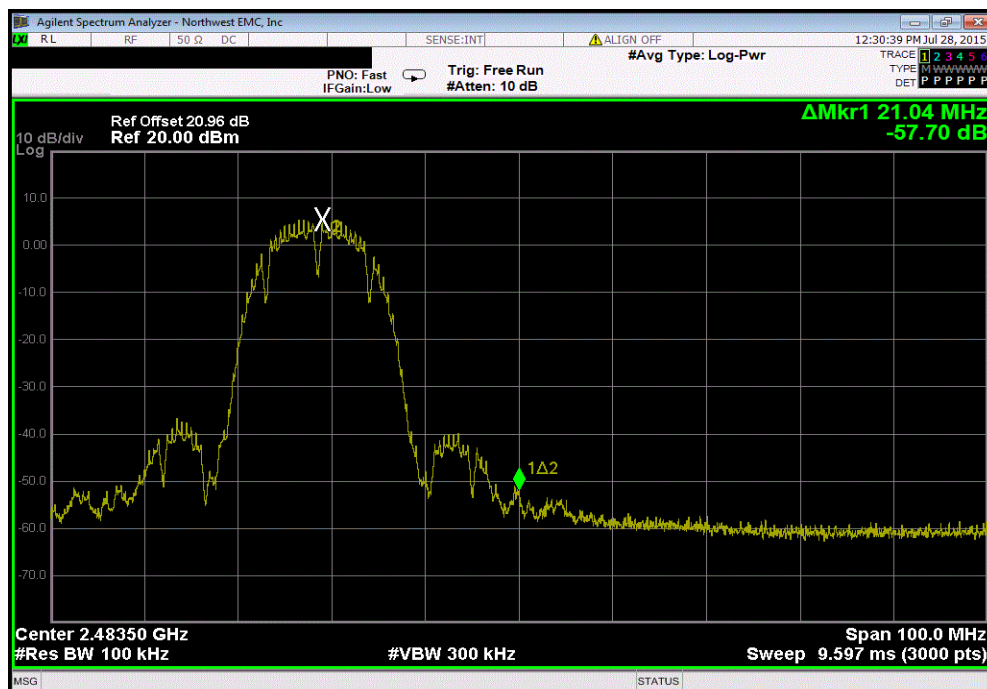
Chain B, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz

				Value (dBc)	Limit ≤ (dBc)	Result
				-42.88	-20	Pass



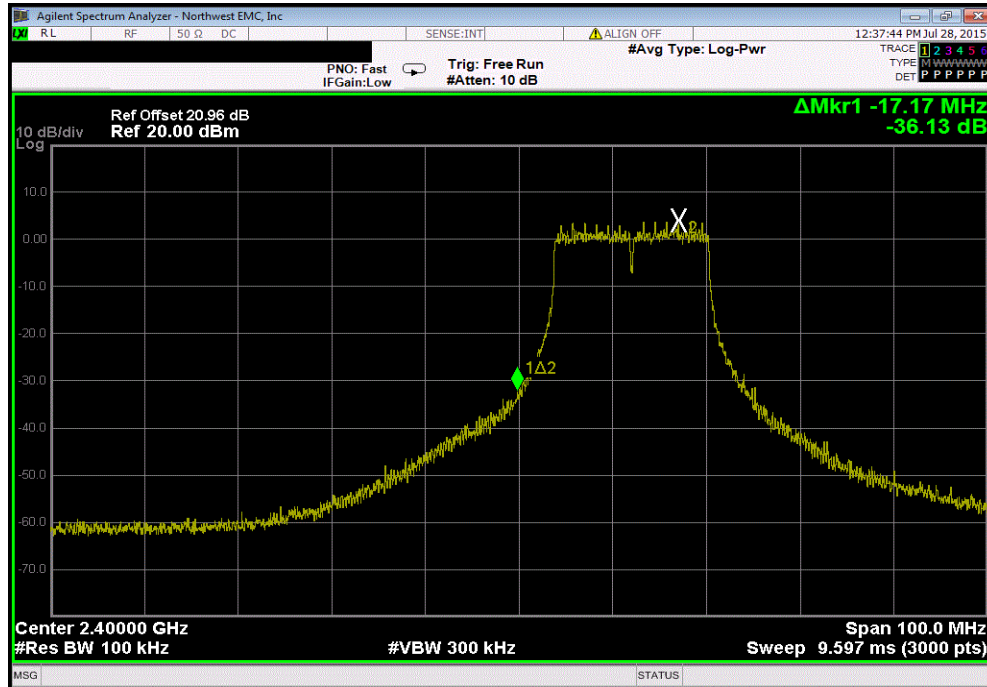
Chain B, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz

				Value (dBc)	Limit ≤ (dBc)	Result
				-57.7	-20	Pass

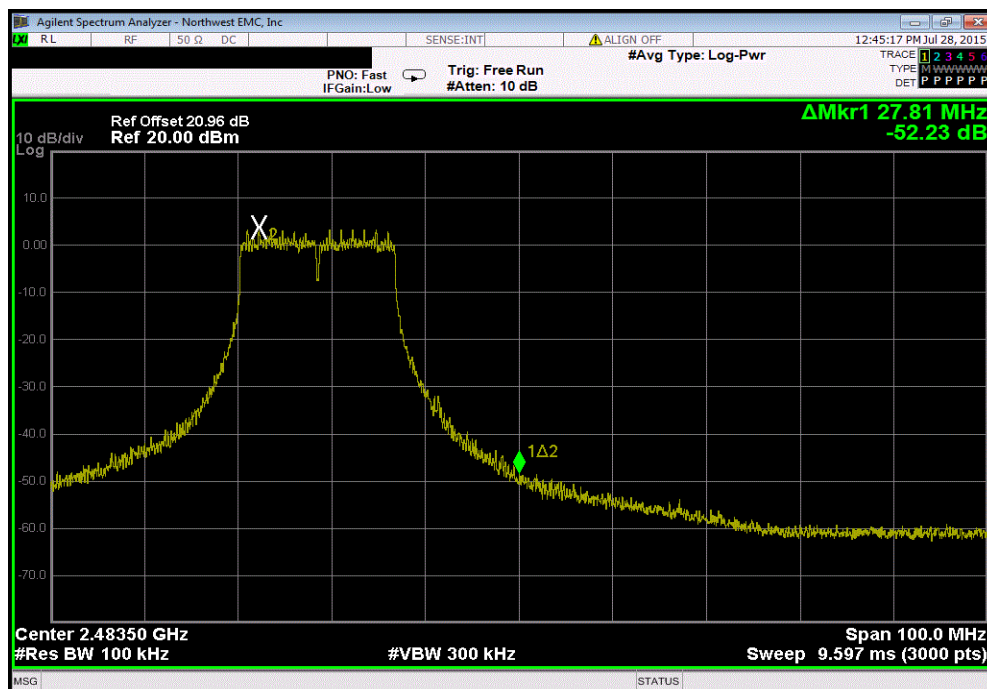


BAND EDGE COMPLIANCE

Chain B, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-36.13	-20	Pass

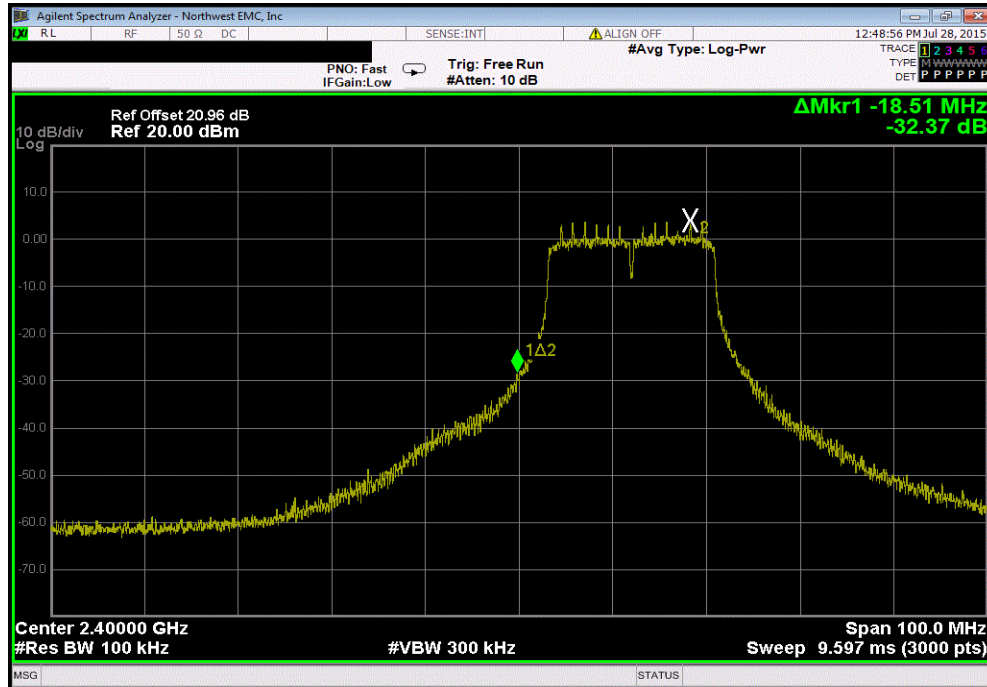


Chain B, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-52.23	-20	Pass

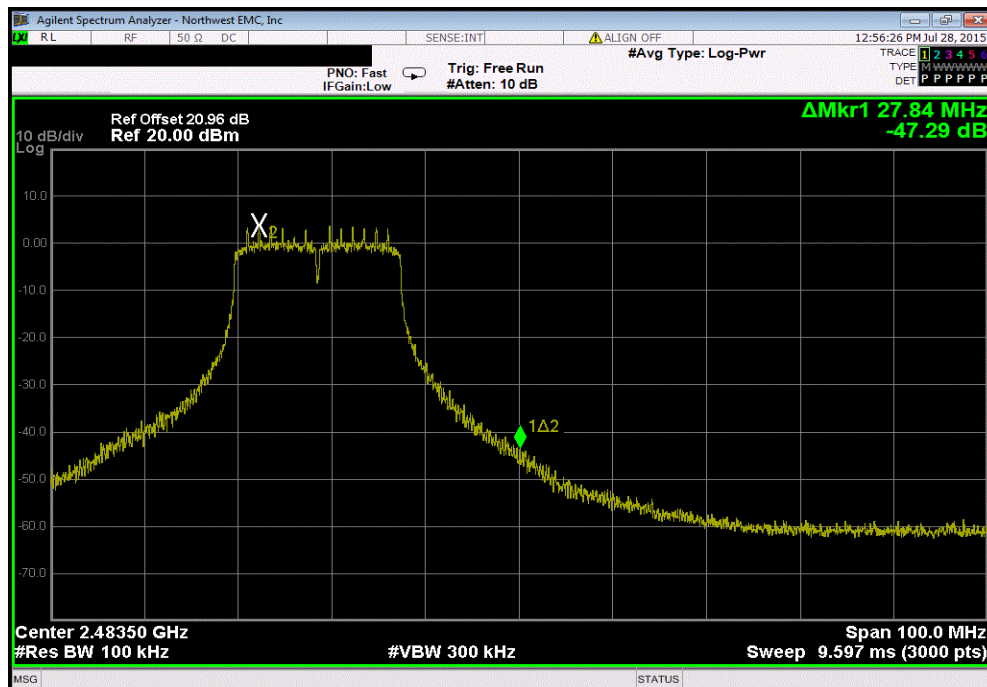


BAND EDGE COMPLIANCE

Chain B, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Low Channel 1, 2412 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-32.37	-20	Pass



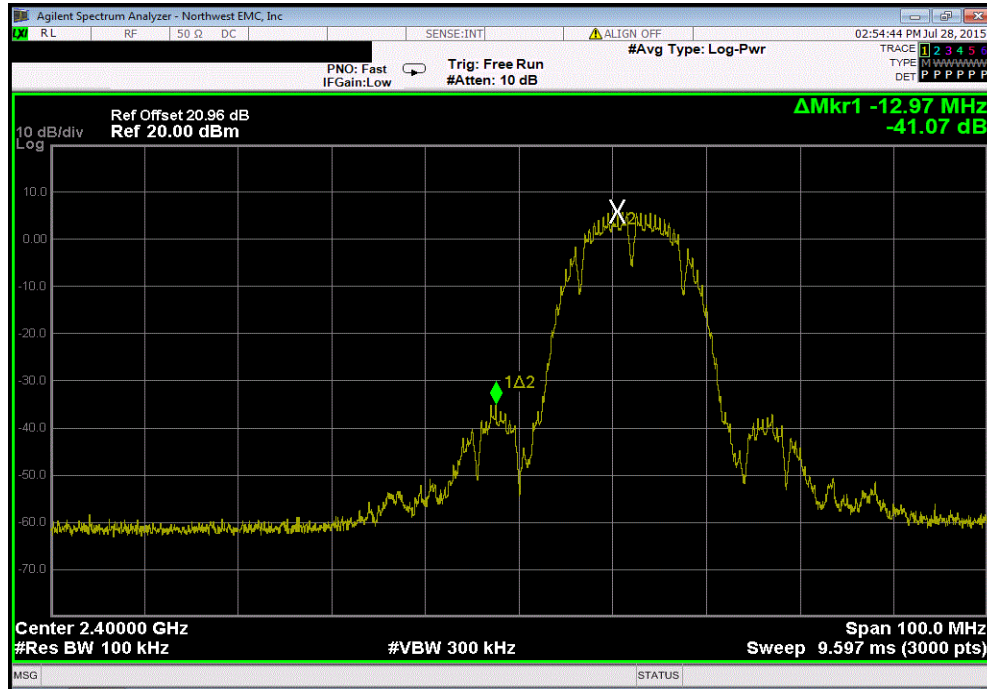
Chain B, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, High Channel 11, 2462 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-47.29	-20	Pass



BAND EDGE COMPLIANCE

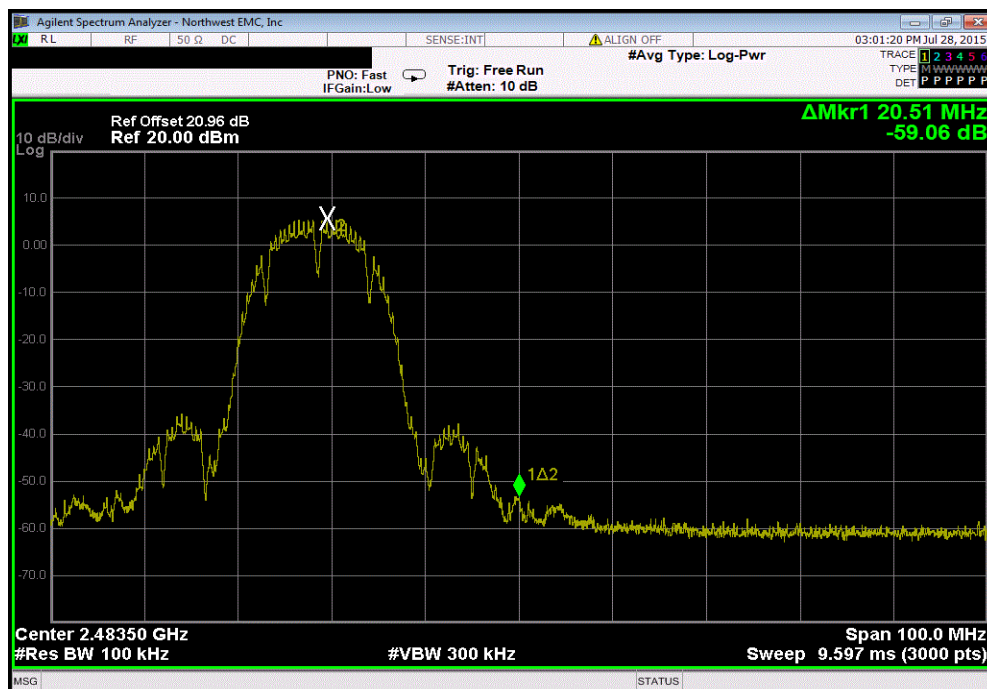
Chain C, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz

				Value (dBc)	Limit ≤ (dBc)	Result
				-41.07	-20	Pass



Chain C, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz

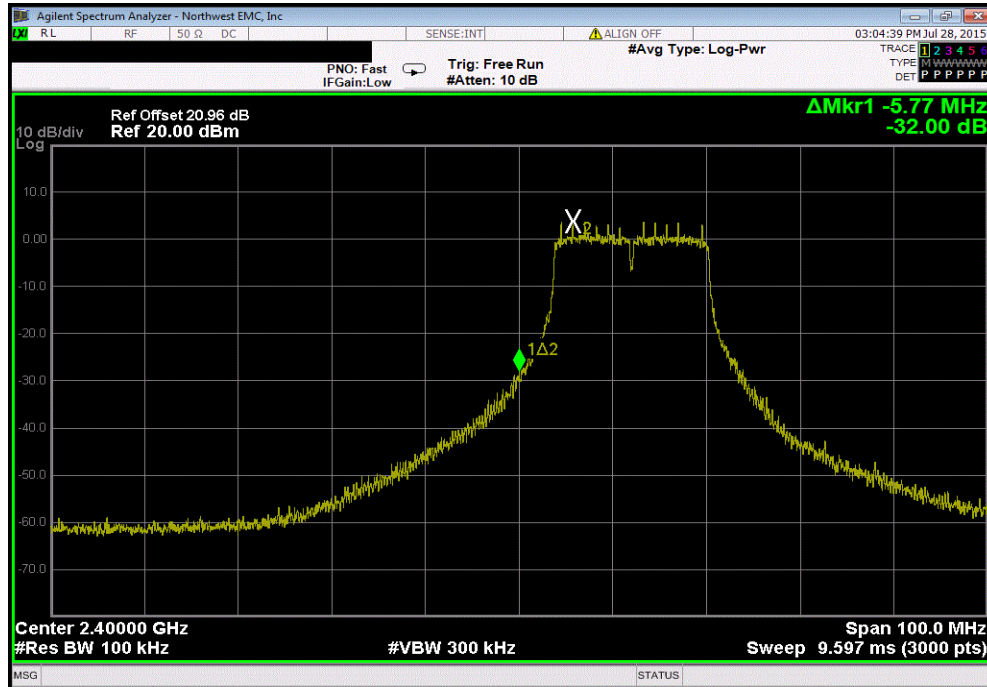
				Value (dBc)	Limit ≤ (dBc)	Result
				-59.06	-20	Pass



BAND EDGE COMPLIANCE

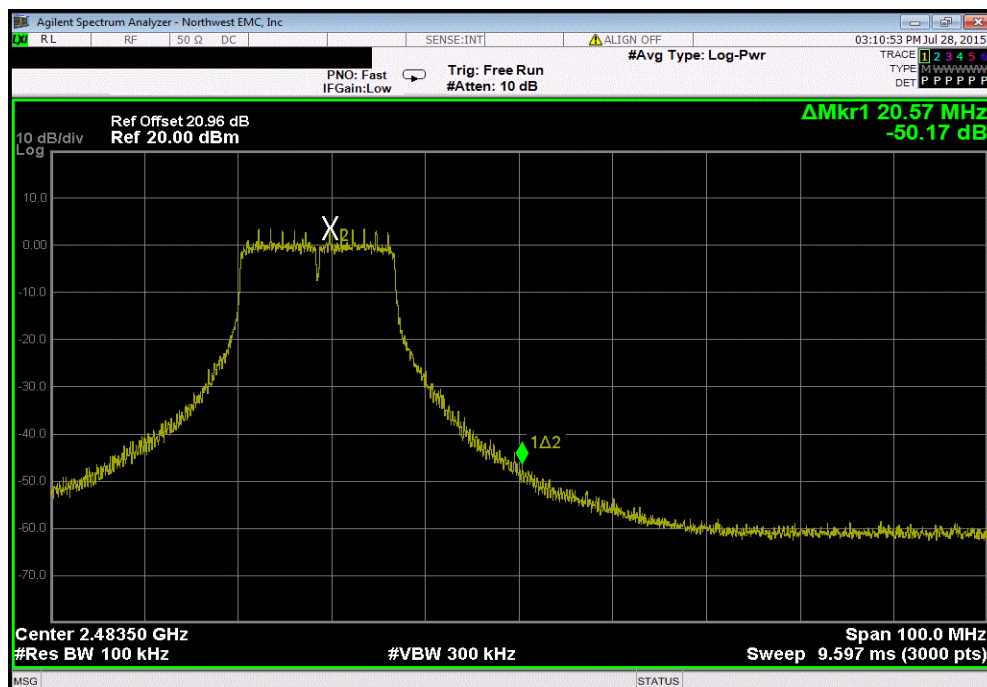
Chain C, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz

	Value (dBc)	Limit ≤ (dBc)	Result
	-32	-20	Pass



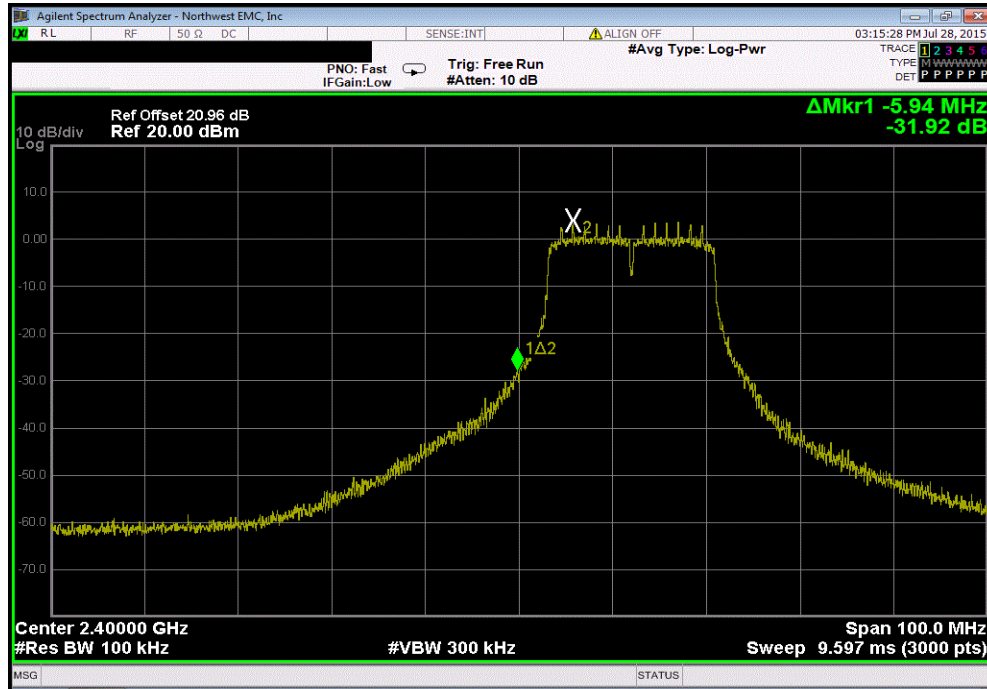
Chain C, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz

	Value (dBc)	Limit ≤ (dBc)	Result
	-50.17	-20	Pass

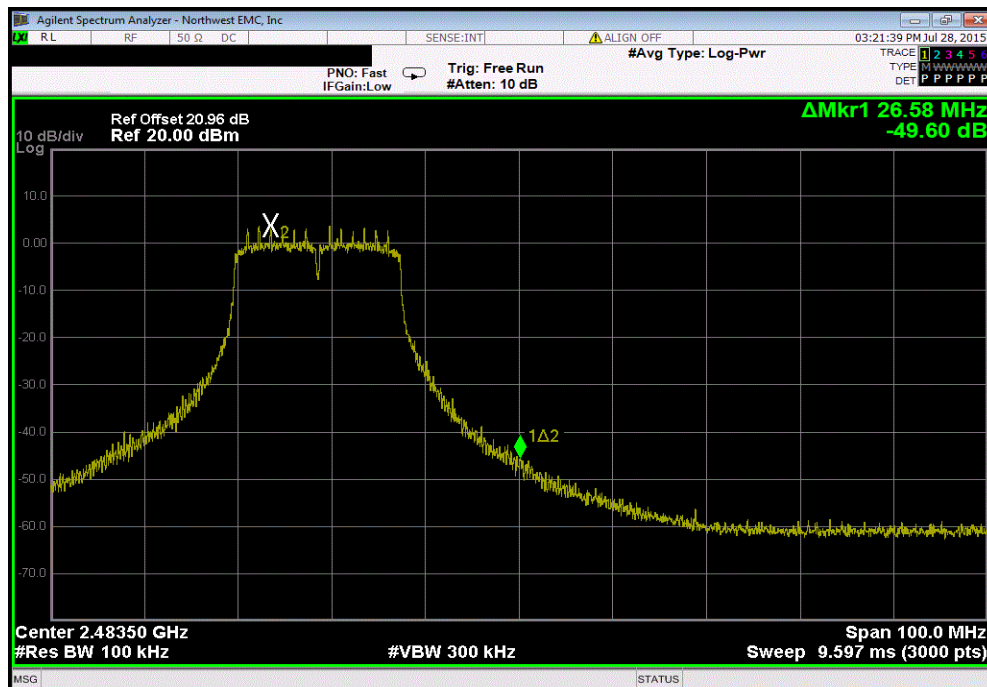


BAND EDGE COMPLIANCE

Chain C, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Low Channel 1, 2412 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-31.92	-20	Pass



Chain C, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, High Channel 11, 2462 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-49.6	-20	Pass



DUTY CYCLE

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval (mos)
Spectrum Analyzer	Agilent	N9010A	AFL	9/20/2014	12
DC Block, 40 GHz	Fairview Microwave	SD3379	AMM	2/27/2015	12
Attenuator, 20dB, 40 GHz	Fairview Microwave	SA4018-20	TQY	2/27/2015	12
Signal Generator, 40 GHz	Agilent	N5173B	TIW	7/15/2014	36

TEST DESCRIPTION

The Duty Cycle (x) of the single channel operation of the radio as controlled by the provided test software was measured for each of the EUT operating modes.

The measurements were made using a zero span on the spectrum analyzer to see the pulses in the time domain. A direct connection was made between the RF output of the EUT and a spectrum analyzer. Attenuation and a DC block were used. The reference level offset on the spectrum analyzer was adjusted to compensate for cable loss and the external attenuation used between the RF output and the spectrum analyzer input.

The duty cycle was calculated by dividing the transmission pulse duration (T) by the total period of a single on and total off time.

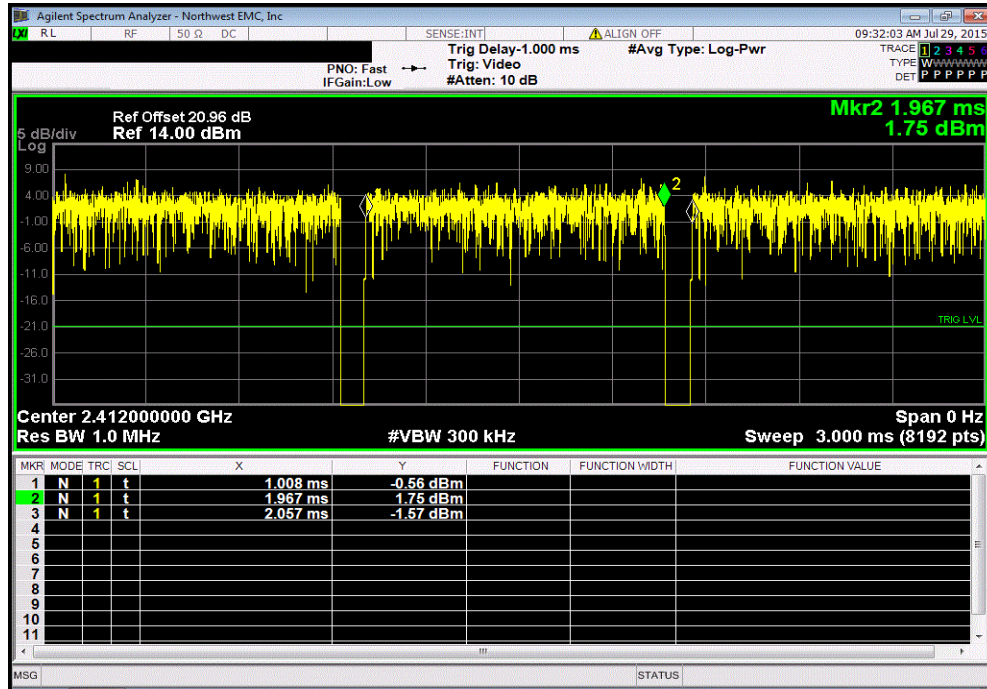
If the transmit duty cycle < 98 percent, burst gating was used during some of the other tests in this report to only measure during the burst duration.

DUTY CYCLE

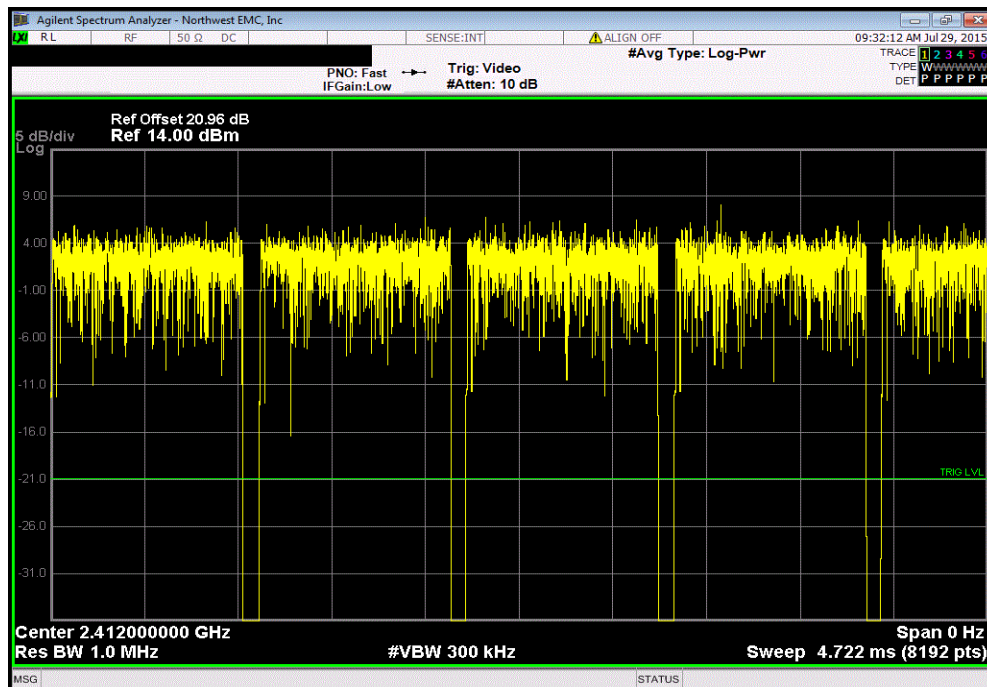
EUT: Firebox T50-W (BS5AE7W)		Work Order: VDEI0009					
Serial Number: 70AF00069-3EB6		Date: 07/29/15					
Customer: WatchGuard Technologies, Inc.		Temperature: 24.9°C					
Attendees: None		Humidity: 47%					
Project: None		Barometric Pres.: 1014 mbar					
Tested by: Jonathan Kiefer		Power: 110VAC/60Hz	Job Site: TX09				
TEST SPECIFICATIONS		Test Method					
FCC 15.247:2015		ANSI C63.10:2013					
COMMENTS							
2x2 MIMO mode, Chain AB (Chains 0 and 1). Transmit power setting 17.0.							
DEVIATIONS FROM TEST STANDARD							
None							
Configuration #	1	Signature 					
		Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
Chain A							
20 MHz							
2400 MHz - 2483.5 MHz Band							
802.11(n) MCS8							
Low Channel 1, 2412 MHz		959.6 us	1.049 ms	1	91.5	N/A	N/A
Low Channel 1, 2412 MHz		N/A	N/A	5	N/A	N/A	N/A
Mid Channel 6, 2437 MHz		958.14 us	1.042 ms	1	91.9	N/A	N/A
Mid Channel 6, 2437 MHz		N/A	N/A	5	N/A	N/A	N/A
High Channel 11, 2462 MHz		959.23 us	1.05 ms	1	91.4	N/A	N/A
High Channel 11, 2462 MHz		N/A	N/A	6	N/A	N/A	N/A
802.11(n) MCS15							
Low Channel 1, 2412 MHz		127.379 us	210.2 us	1	60.6	N/A	N/A
Low Channel 1, 2412 MHz		N/A	N/A	5	N/A	N/A	N/A
Mid Channel 6, 2437 MHz		127.379 us	210.2 us	1	60.6	N/A	N/A
Mid Channel 6, 2437 MHz		N/A	N/A	5	N/A	N/A	N/A
High Channel 11, 2462 MHz		127.967 us	293 us	1	43.7	N/A	N/A
High Channel 11, 2462 MHz		N/A	N/A	7	N/A	N/A	N/A
Chain B							
20 MHz							
2400 MHz - 2483.5 MHz Band							
802.11(n) MCS8							
Low Channel 1, 2412 MHz		959.57 us	1.043 ms	1	92	N/A	N/A
Low Channel 1, 2412 MHz		N/A	N/A	5	N/A	N/A	N/A
Mid Channel 6, 2437 MHz		958.93 us	1.048 ms	1	91.5	N/A	N/A
Mid Channel 6, 2437 MHz		N/A	N/A	5	N/A	N/A	N/A
High Channel 11, 2462 MHz		958.15 us	1.042 ms	1	91.9	N/A	N/A
High Channel 11, 2462 MHz		N/A	N/A	5	N/A	N/A	N/A
802.11(n) MCS15							
Low Channel 1, 2412 MHz		126.779 us	214.6 us	1	59.1	N/A	N/A
Low Channel 1, 2412 MHz		N/A	N/A	5	N/A	N/A	N/A
Mid Channel 6, 2437 MHz		126.291 us	210.3 us	1	60.1	N/A	N/A
Mid Channel 6, 2437 MHz		N/A	N/A	5	N/A	N/A	N/A
High Channel 11, 2462 MHz		127.267 us	211 us	1	60.3	N/A	N/A
High Channel 11, 2462 MHz		N/A	N/A	5	N/A	N/A	N/A

DUTY CYCLE

Chain A, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, Low Channel 1, 2412 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
959.6 us	1.049 ms	1	91.5	N/A	N/A	

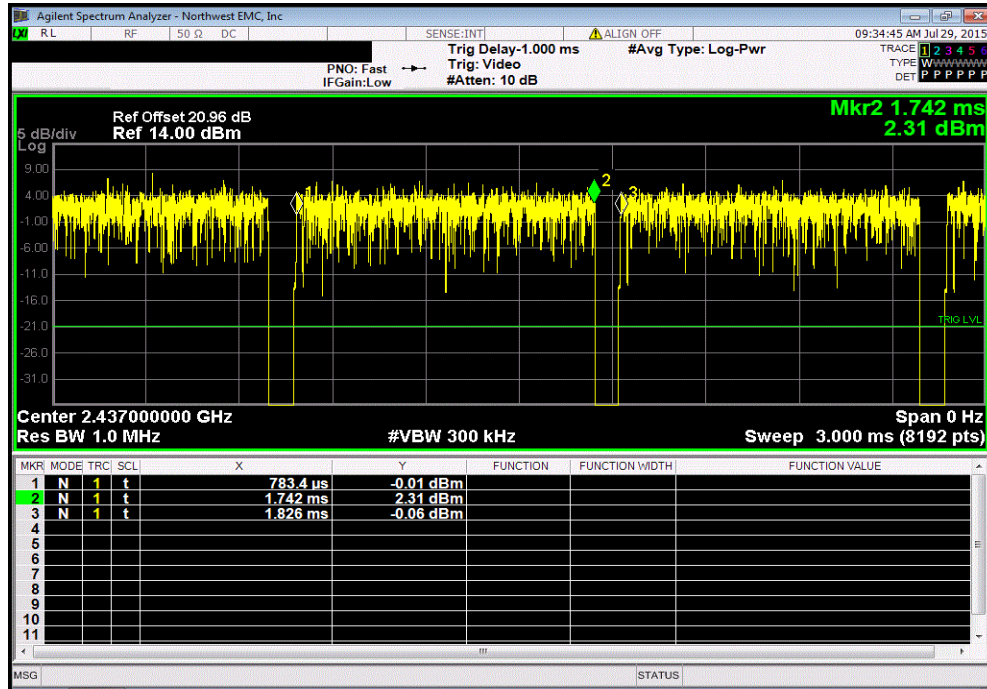


Chain A, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, Low Channel 1, 2412 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	

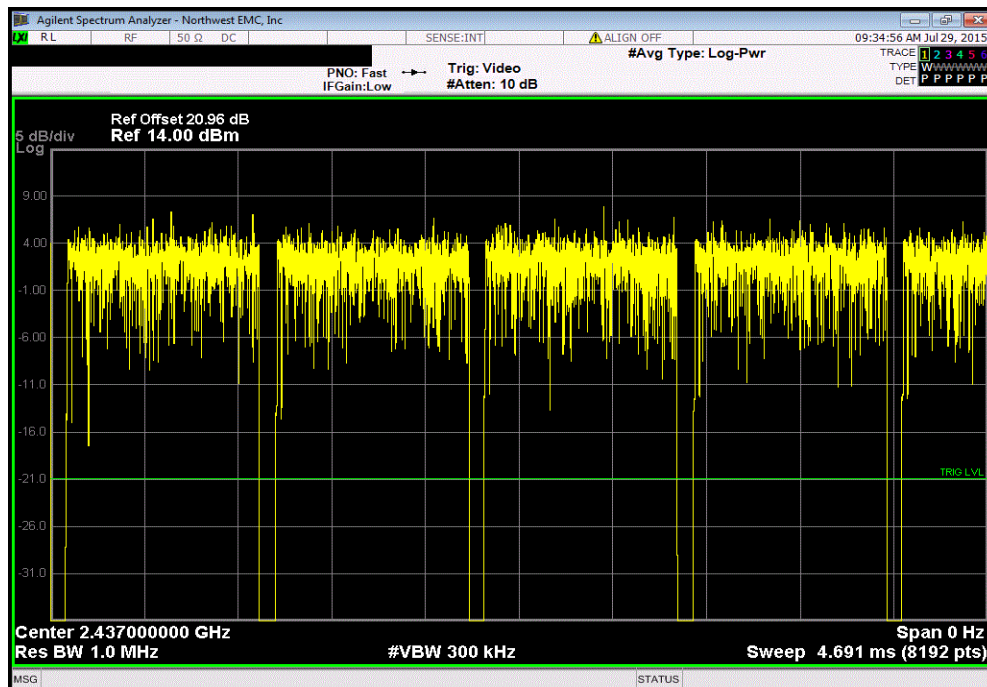


DUTY CYCLE

Chain A, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, Mid Channel 6, 2437 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
958.14 us	1.042 ms	1	91.9	N/A	N/A	

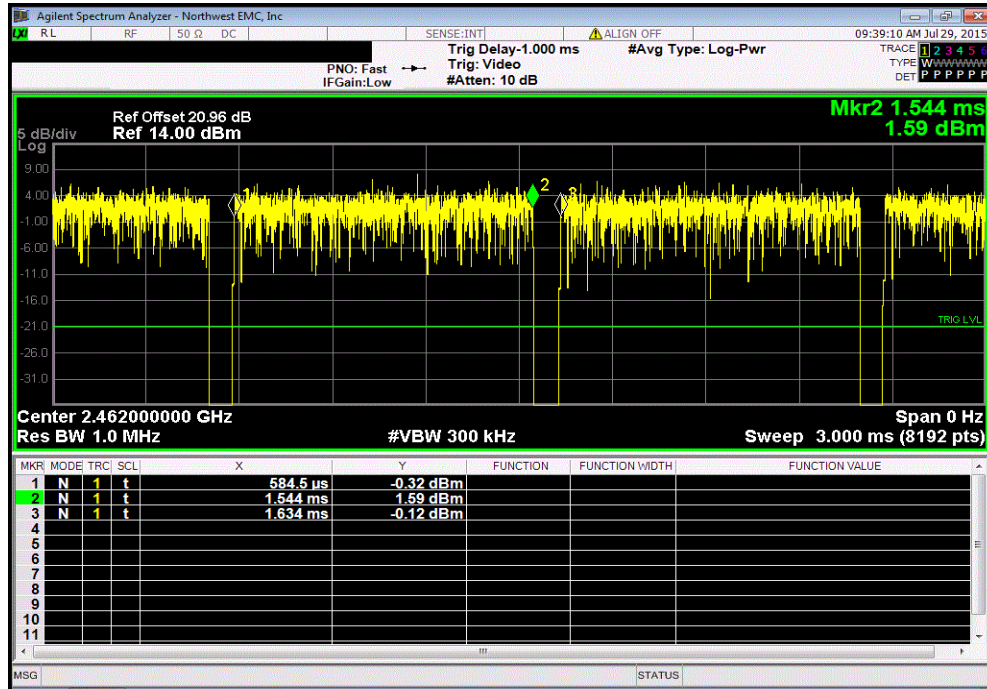


Chain A, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, Mid Channel 6, 2437 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	

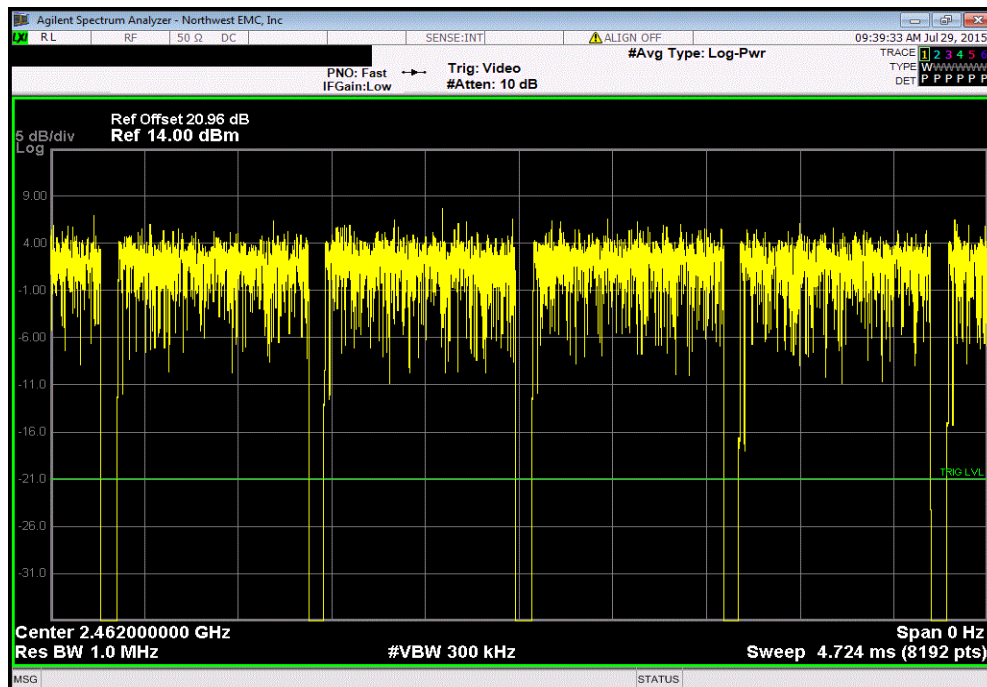


DUTY CYCLE

Chain A, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, High Channel 11, 2462 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
959.23 us	1.05 ms	1	91.4	N/A	N/A	

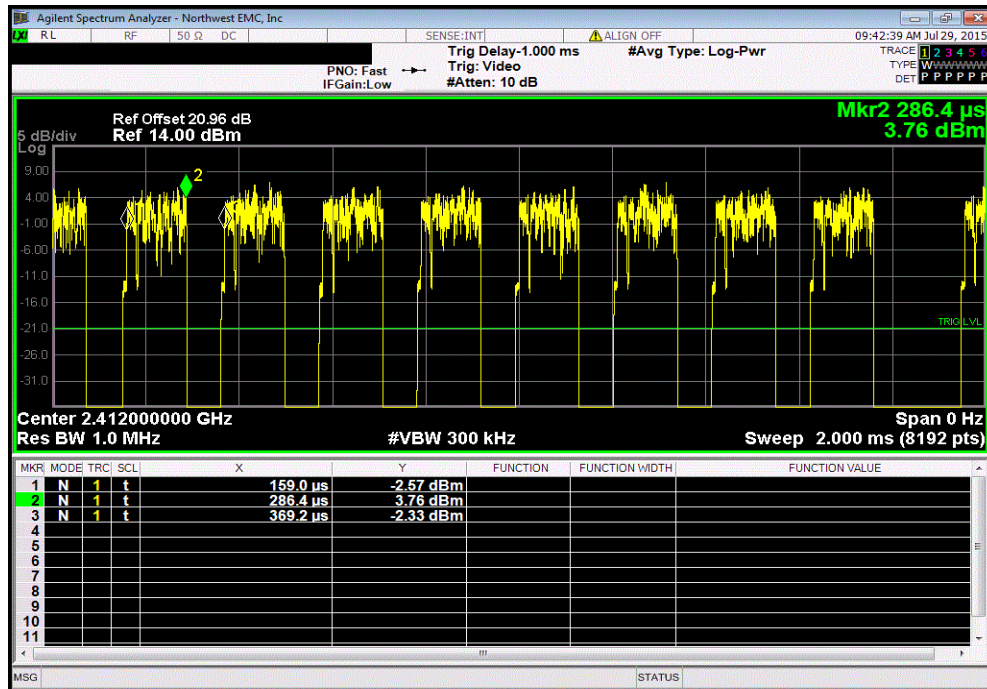


Chain A, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, High Channel 11, 2462 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	6	N/A	N/A	N/A	

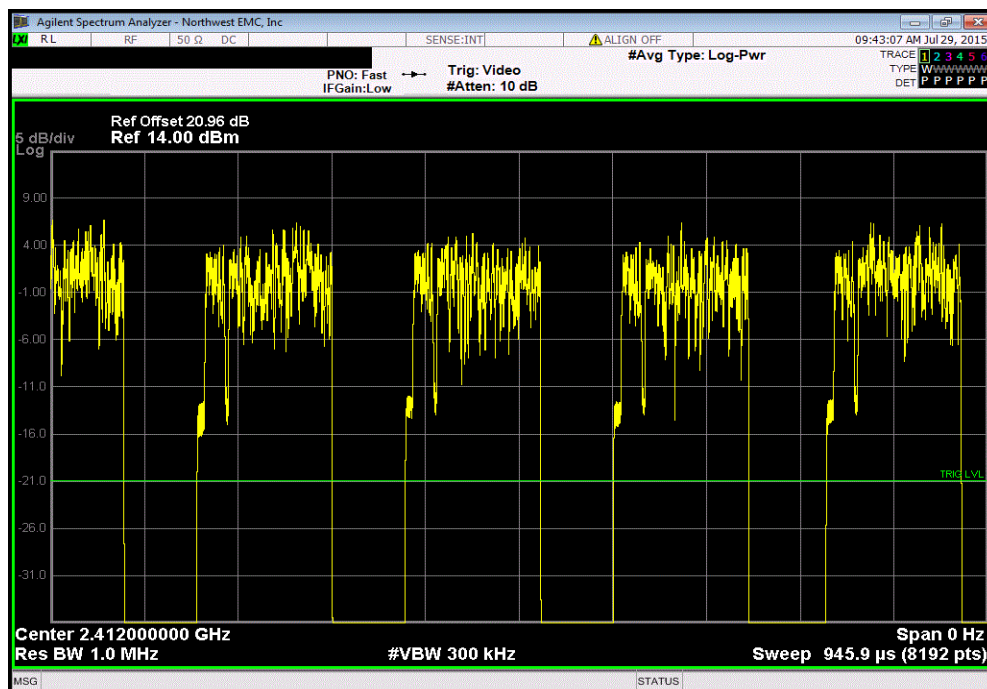


DUTY CYCLE

Chain A, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, Low Channel 1, 2412 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
127.379 us	210.2 us	1	60.6	N/A	N/A	

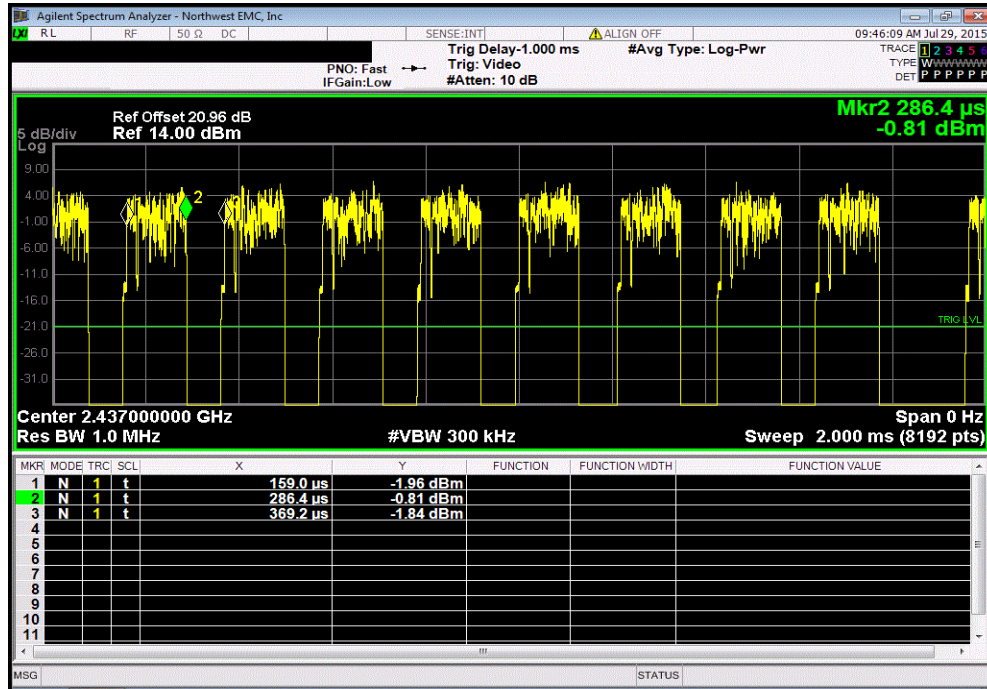


Chain A, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, Low Channel 1, 2412 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	

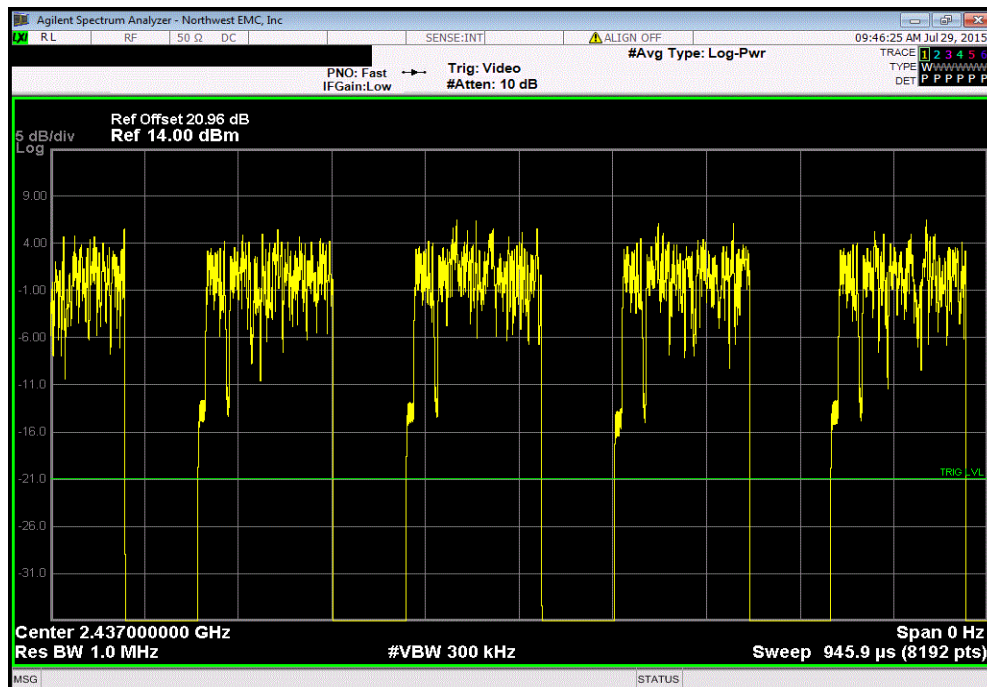


DUTY CYCLE

Chain A, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, Mid Channel 6, 2437 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
127.379 us	210.2 us	1	60.6	N/A	N/A	

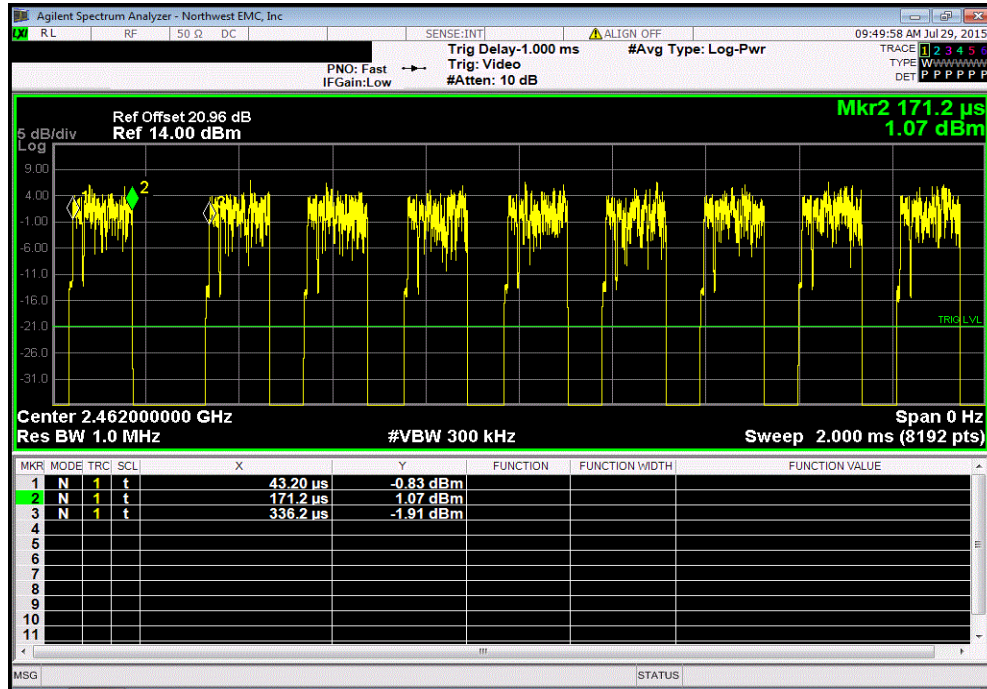


Chain A, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, Mid Channel 6, 2437 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	

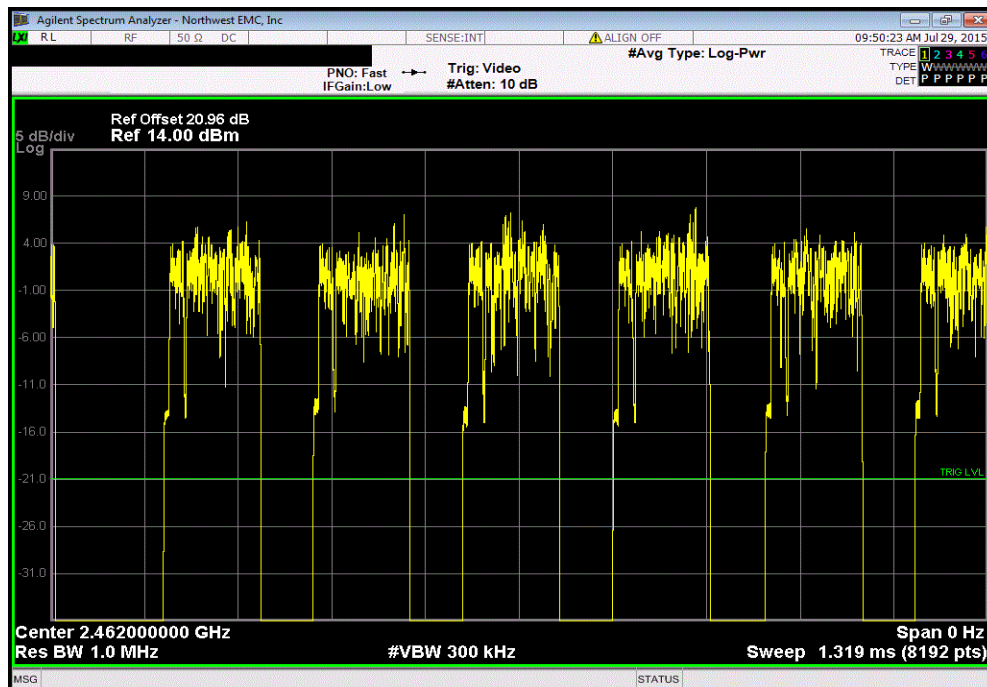


DUTY CYCLE

Chain A, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, High Channel 11, 2462 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
127.967 us	293 us	1	43.7	N/A	N/A	

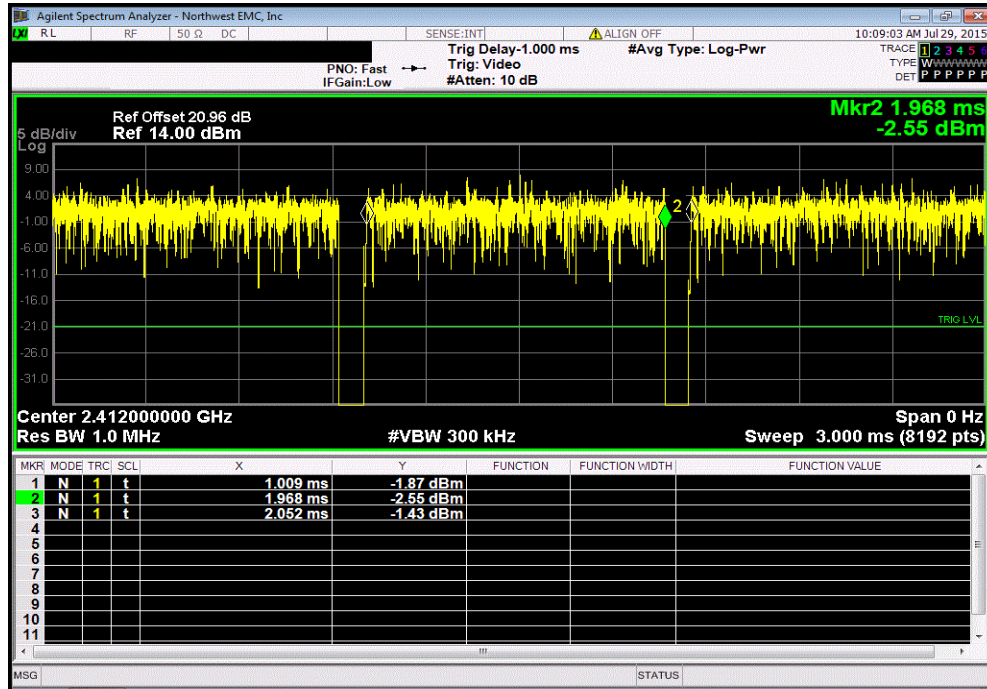


Chain A, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, High Channel 11, 2462 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	7	N/A	N/A	N/A	

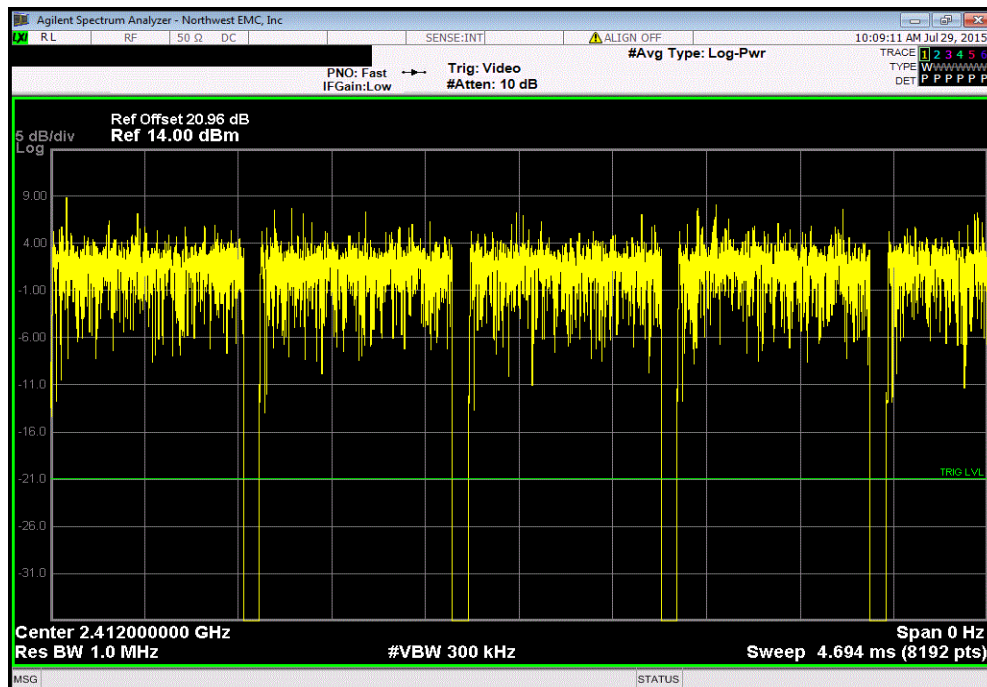


DUTY CYCLE

Chain B, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, Low Channel 1, 2412 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
959.57 us	1.043 ms	1	92	N/A	N/A	

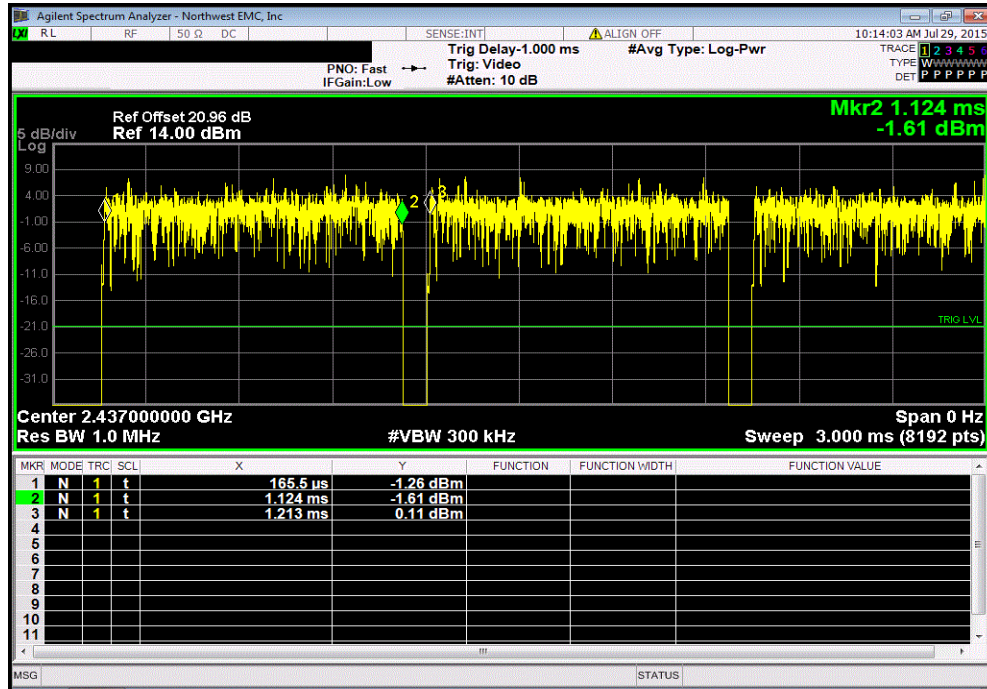


Chain B, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, Low Channel 1, 2412 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	

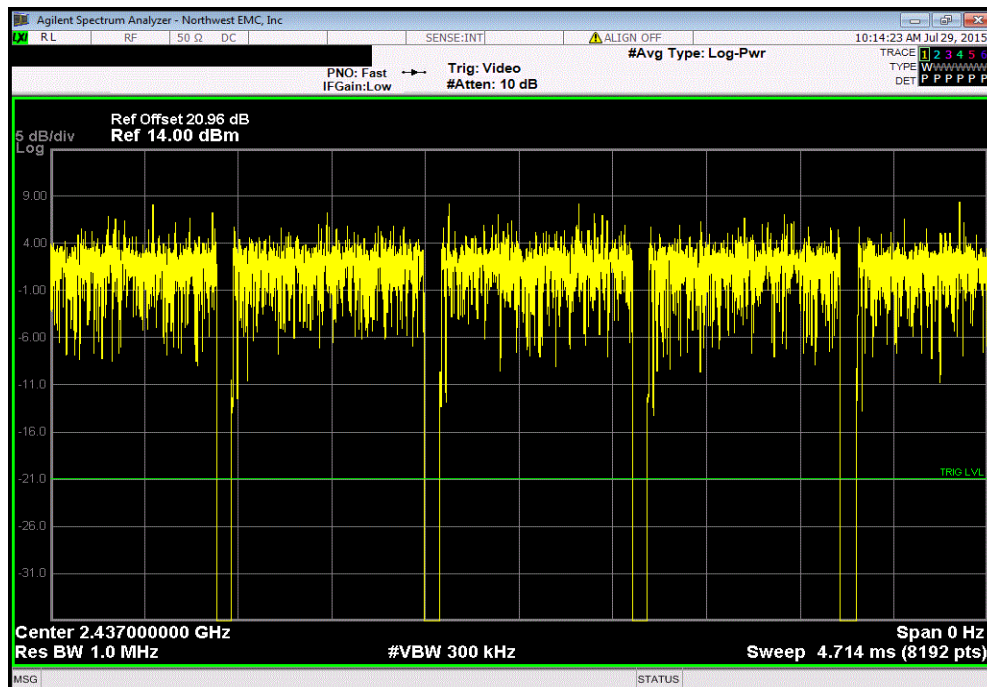


DUTY CYCLE

Chain B, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, Mid Channel 6, 2437 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
958.93 us	1.048 ms	1	91.5	N/A	N/A	

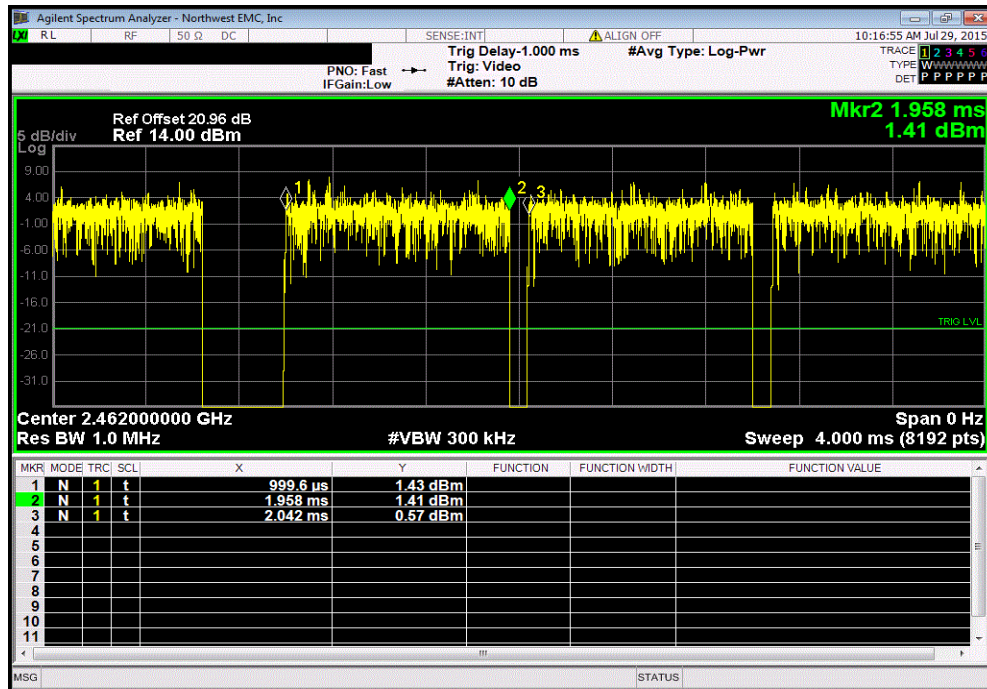


Chain B, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, Mid Channel 6, 2437 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	

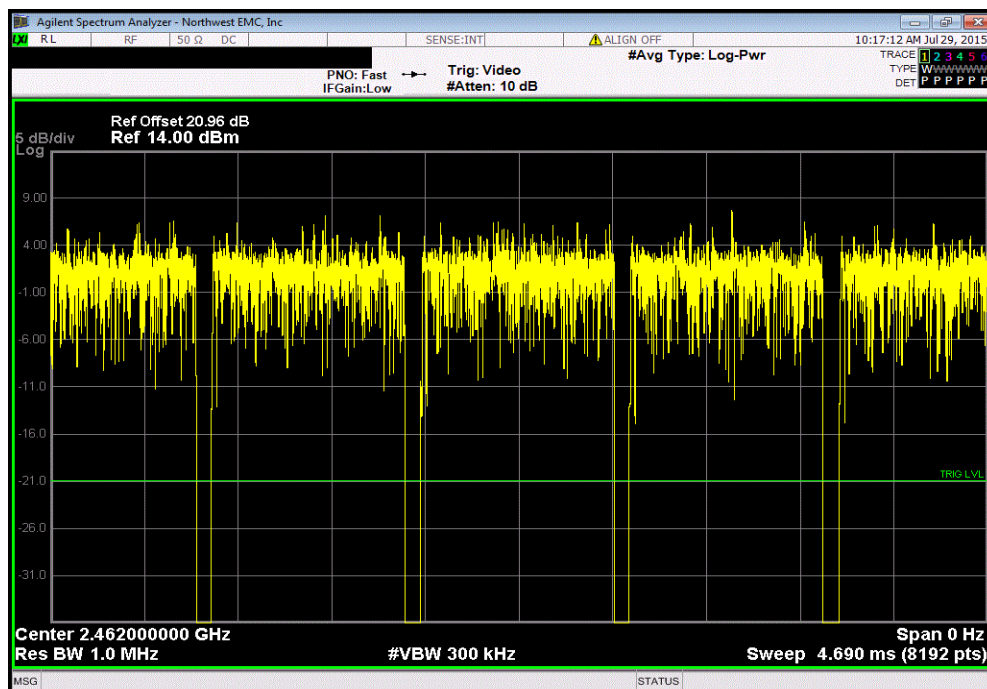


DUTY CYCLE

Chain B, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, High Channel 11, 2462 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
958.15 us	1.042 ms	1	91.9	N/A	N/A	

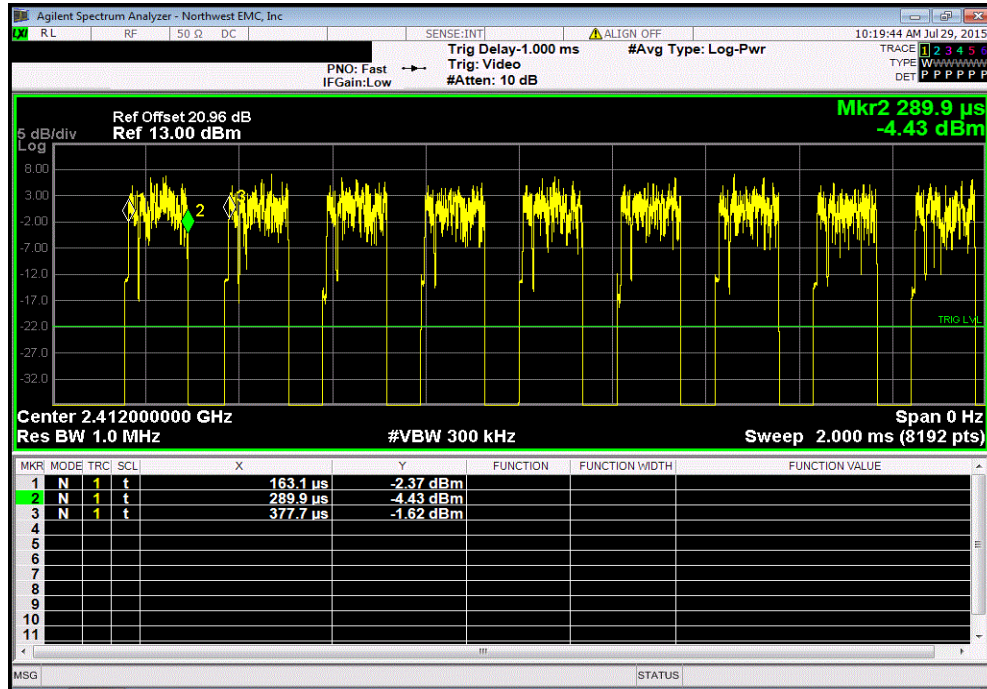


Chain B, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, High Channel 11, 2462 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	

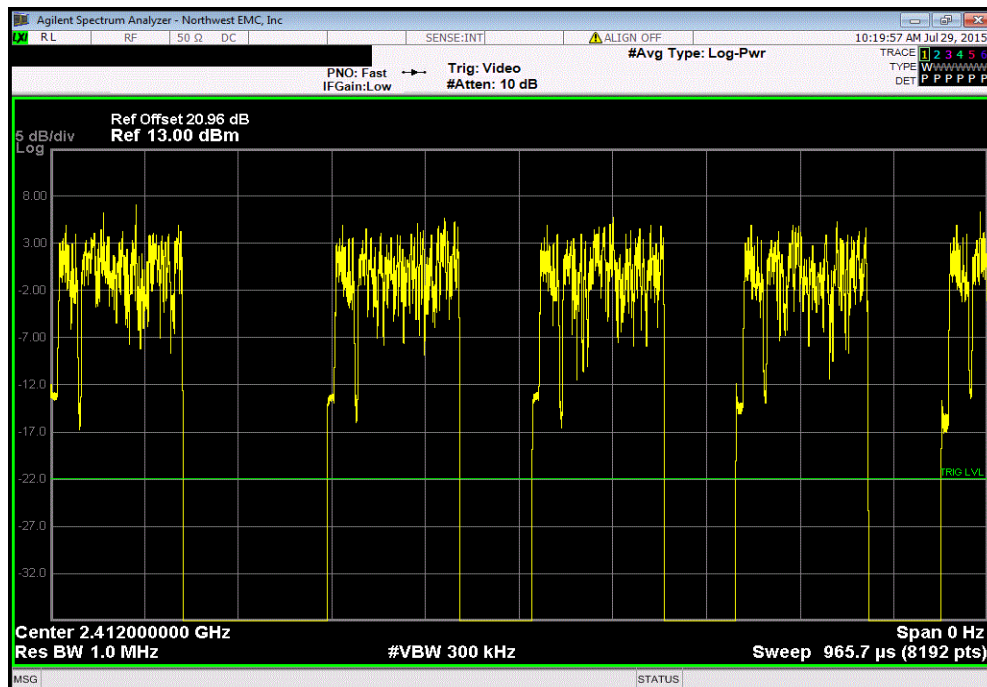


DUTY CYCLE

Chain B, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, Low Channel 1, 2412 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
126.779 μ s	214.6 μ s	1	59.1	N/A	N/A	

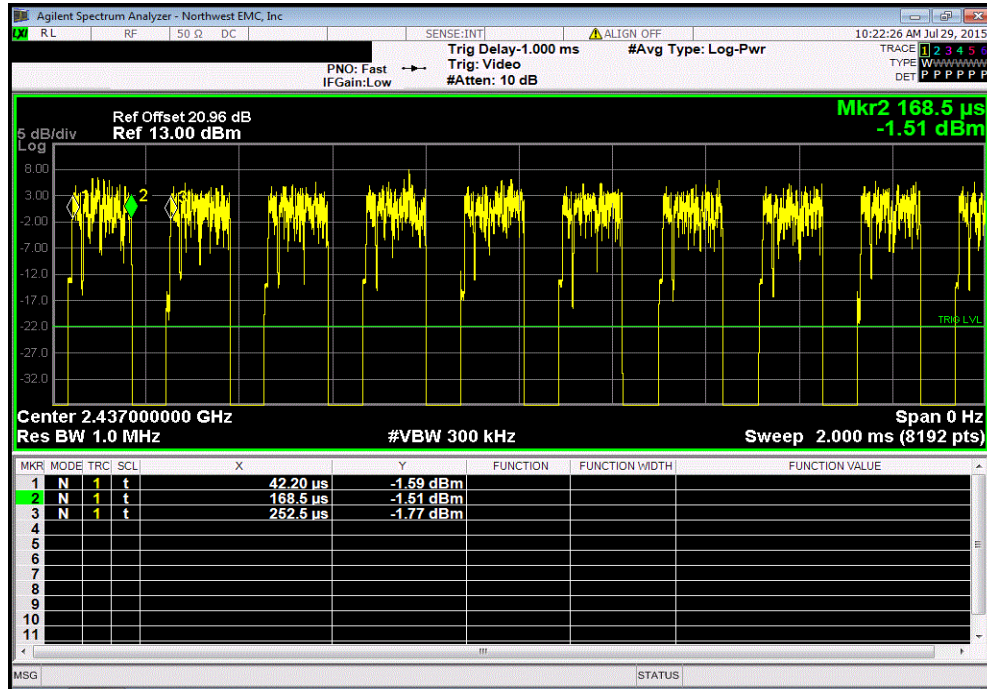


Chain B, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, Low Channel 1, 2412 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	

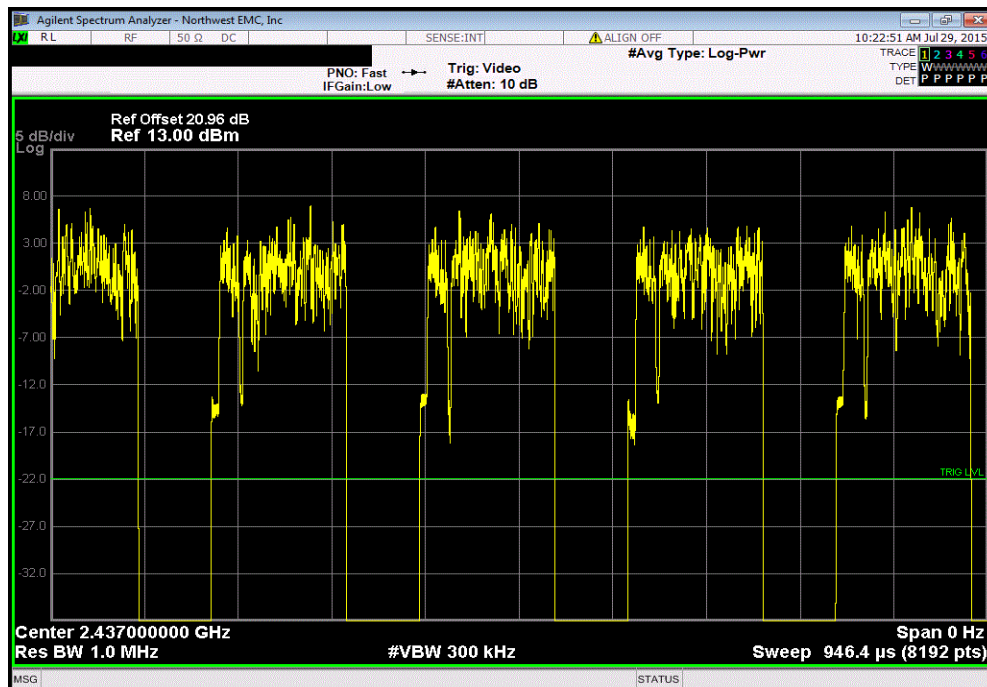


DUTY CYCLE

Chain B, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, Mid Channel 6, 2437 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
126.291 us	210.3 us	1	60.1	N/A	N/A	

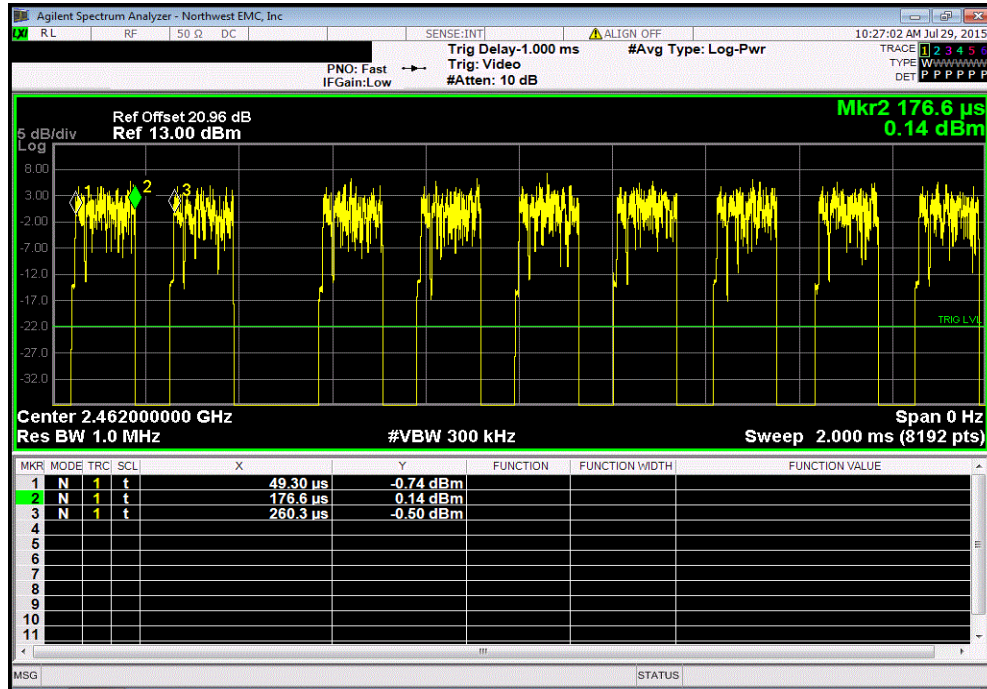


Chain B, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, Mid Channel 6, 2437 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	

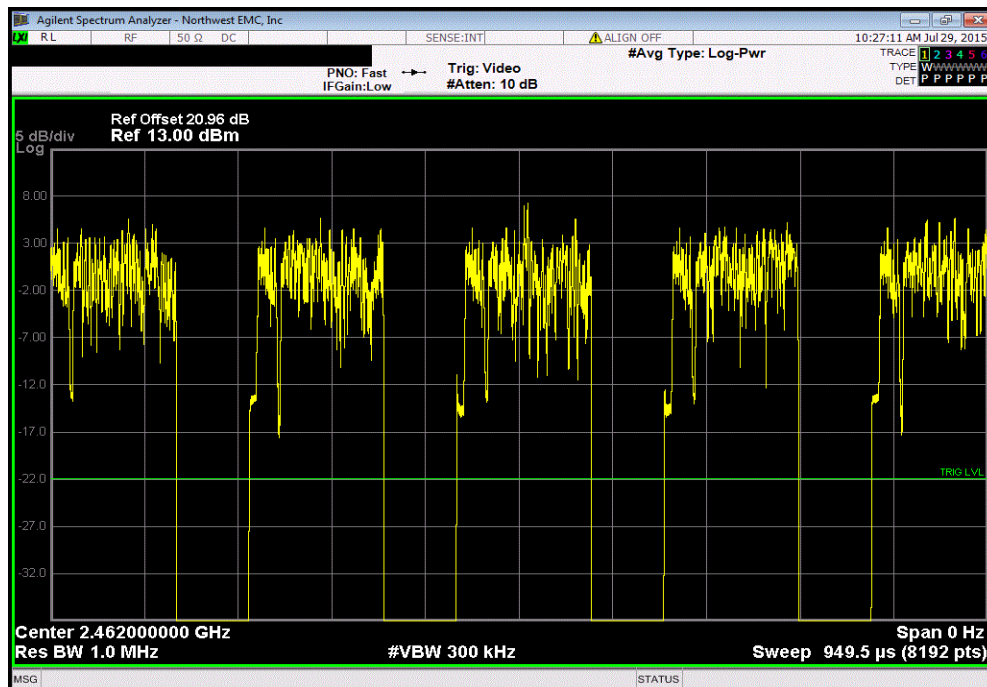


DUTY CYCLE

Chain B, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, High Channel 11, 2462 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
127.267 μ s	211 μ s	1	60.3	N/A	N/A	



Chain B, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, High Channel 11, 2462 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	



DUTY CYCLE

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval (mos)
Spectrum Analyzer	Agilent	N9010A	AFL	9/20/2014	12
DC Block, 40 GHz	Fairview Microwave	SD3379	AMM	2/27/2015	12
Attenuator, 20dB, 40 GHz	Fairview Microwave	SA4018-20	TQY	2/27/2015	12
Signal Generator, 40 GHz	Agilent	N5173B	TIW	7/15/2014	36

TEST DESCRIPTION

The Duty Cycle (x) of the single channel operation of the radio as controlled by the provided test software was measured for each of the EUT operating modes.

The measurements were made using a zero span on the spectrum analyzer to see the pulses in the time domain. A direct connection was made between the RF output of the EUT and a spectrum analyzer. Attenuation and a DC block were used. The reference level offset on the spectrum analyzer was adjusted to compensate for cable loss and the external attenuation used between the RF output and the spectrum analyzer input.

The duty cycle was calculated by dividing the transmission pulse duration (T) by the total period of a single on and total off time.

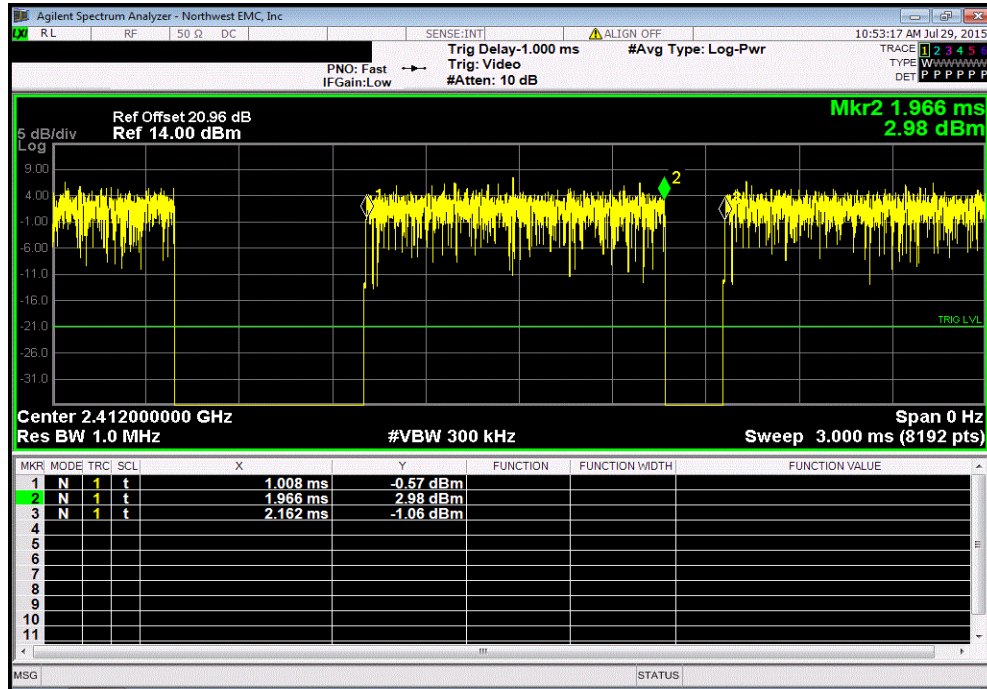
If the transmit duty cycle < 98 percent, burst gating was used during some of the other tests in this report to only measure during the burst duration.

DUTY CYCLE

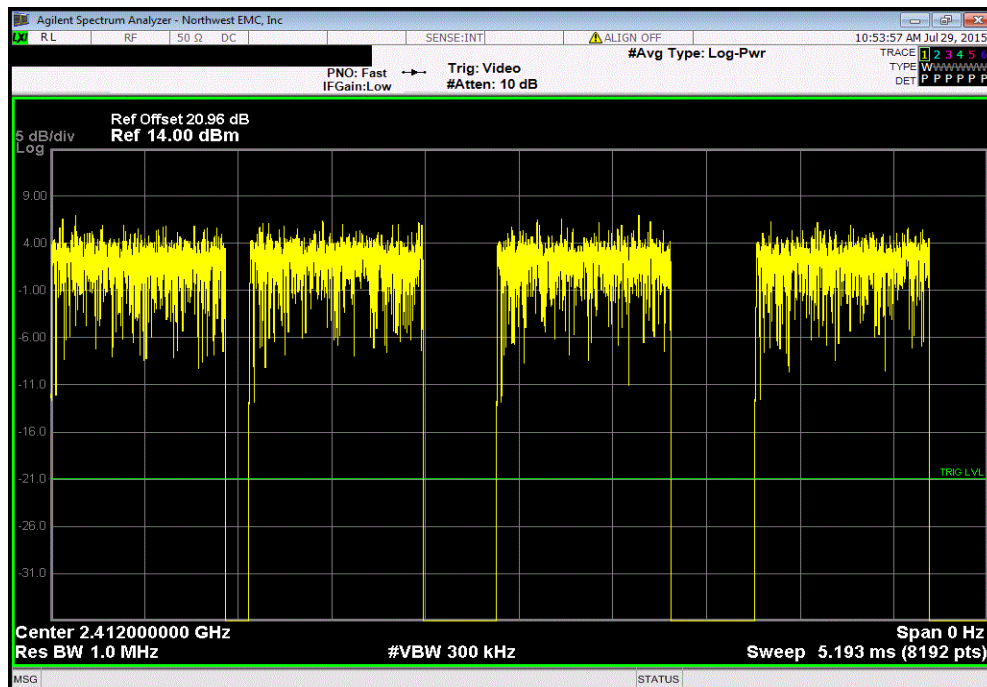
EUT: Firebox T50-W (BS5AE7W)		Work Order: VDEI0009					
Serial Number: 70AF00069-3EB6		Date: 07/29/15					
Customer: WatchGuard Technologies, Inc.		Temperature: 24.9°C					
Attendees: None		Humidity: 47%					
Project: None		Barometric Pres.: 1014 mbar					
Tested by: Jonathan Kiefer		Power: 110VAC/60Hz	Job Site: TX09				
TEST SPECIFICATIONS		Test Method					
FCC 15.247:2015		ANSI C63.10:2013					
COMMENTS							
2x2 MIMO mode, Chain AC (Chains 0 and 2). Transmit power setting 17.0.							
DEVIATIONS FROM TEST STANDARD							
None							
Configuration #	1	Signature 					
		Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
Chain A							
20 MHz							
2400 MHz - 2483.5 MHz Band							
802.11(n) MCS8							
Low Channel 1, 2412 MHz		958.5 us	1.154 ms	1	83.1	N/A	N/A
Low Channel 1, 2412 MHz		N/A	N/A	4	N/A	N/A	N/A
Mid Channel 6, 2437 MHz		960.27 us	1.187 ms	1	80.9	N/A	N/A
Mid Channel 6, 2437 MHz		N/A	N/A	5	N/A	N/A	N/A
High Channel 11, 2462 MHz		959.6 us	1.419 ms	1	67.6	N/A	N/A
High Channel 11, 2462 MHz		N/A	N/A	7	N/A	N/A	N/A
802.11(n) MCS15							
Low Channel 1, 2412 MHz		127.967 us	329.6 us	1	38.8	N/A	N/A
Low Channel 1, 2412 MHz		N/A	N/A	5	N/A	N/A	N/A
Mid Channel 6, 2437 MHz		125.958 us	621.9 us	1	20.3	N/A	N/A
Mid Channel 6, 2437 MHz		N/A	N/A	6	N/A	N/A	N/A
High Channel 11, 2462 MHz		127.423 us	596.3 us	1	21.4	N/A	N/A
High Channel 11, 2462 MHz		N/A	N/A	12	N/A	N/A	N/A
Chain C							
20 MHz							
2400 MHz - 2483.5 MHz Band							
802.11(n) MCS8							
Low Channel 1, 2412 MHz		959.93 us	1.158 ms	1	82.9	N/A	N/A
Low Channel 1, 2412 MHz		N/A	N/A	5	N/A	N/A	N/A
Mid Channel 6, 2437 MHz		959.93 us	1.197 ms	1	80.2	N/A	N/A
Mid Channel 6, 2437 MHz		N/A	N/A	5	N/A	N/A	N/A
High Channel 11, 2462 MHz		961.11 us	1.2 ms	1	80.1	N/A	N/A
High Channel 11, 2462 MHz		N/A	N/A	4	N/A	N/A	N/A
802.11(n) MCS15							
Low Channel 1, 2412 MHz		134.267 us	209.9 us	1	64	N/A	N/A
Low Channel 1, 2412 MHz		N/A	N/A	5	N/A	N/A	N/A
Mid Channel 6, 2437 MHz		129.095 us	494.887 us	1	26.1	N/A	N/A
Mid Channel 6, 2437 MHz		N/A	N/A	4	N/A	N/A	N/A
High Channel 11, 2462 MHz		131.597 us	329.55 us	1	39.9	N/A	N/A
High Channel 11, 2462 MHz		N/A	N/A	4	N/A	N/A	N/A

DUTY CYCLE

Chain A, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, Low Channel 1, 2412 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
958.5 us	1.154 ms	1	83.1	N/A	N/A	

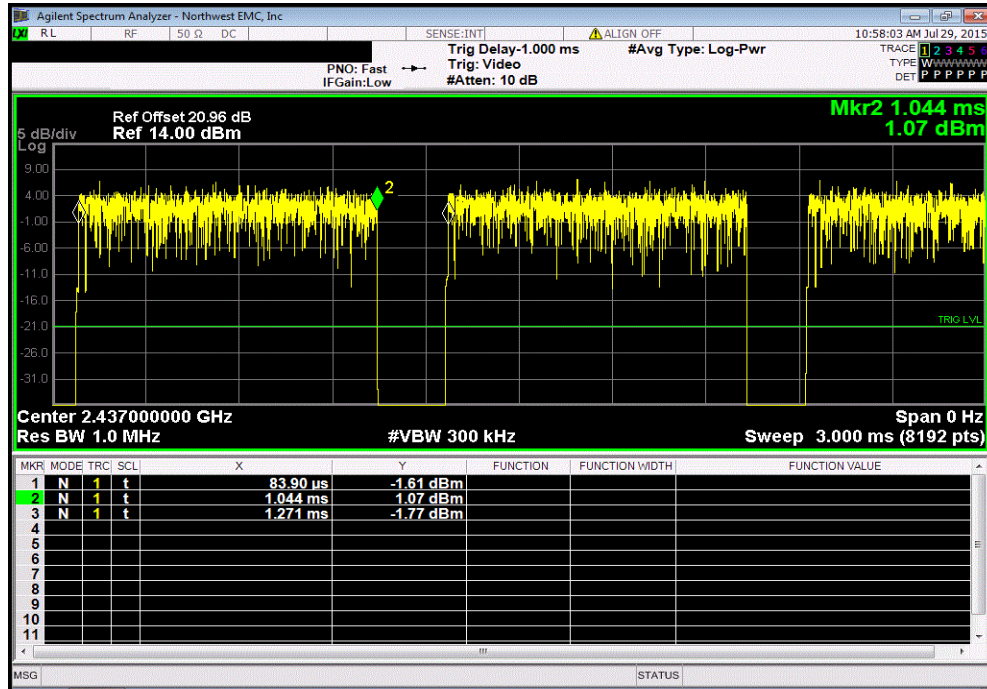


Chain A, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, Low Channel 1, 2412 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	4	N/A	N/A	N/A	

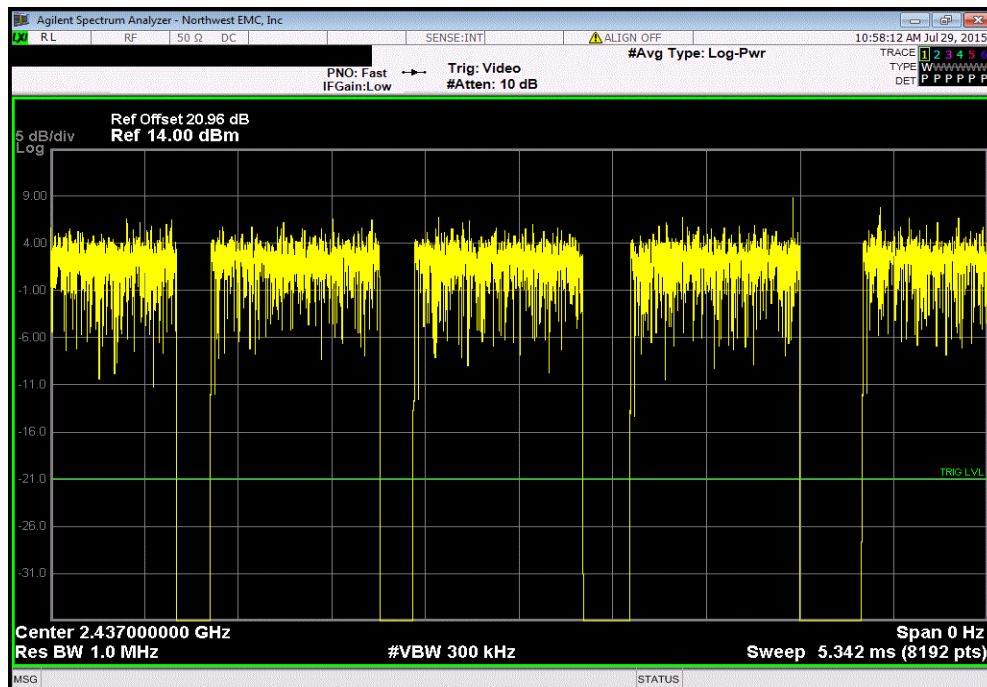


DUTY CYCLE

Chain A, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, Mid Channel 6, 2437 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
960.27 us	1.187 ms	1	80.9	N/A	N/A	

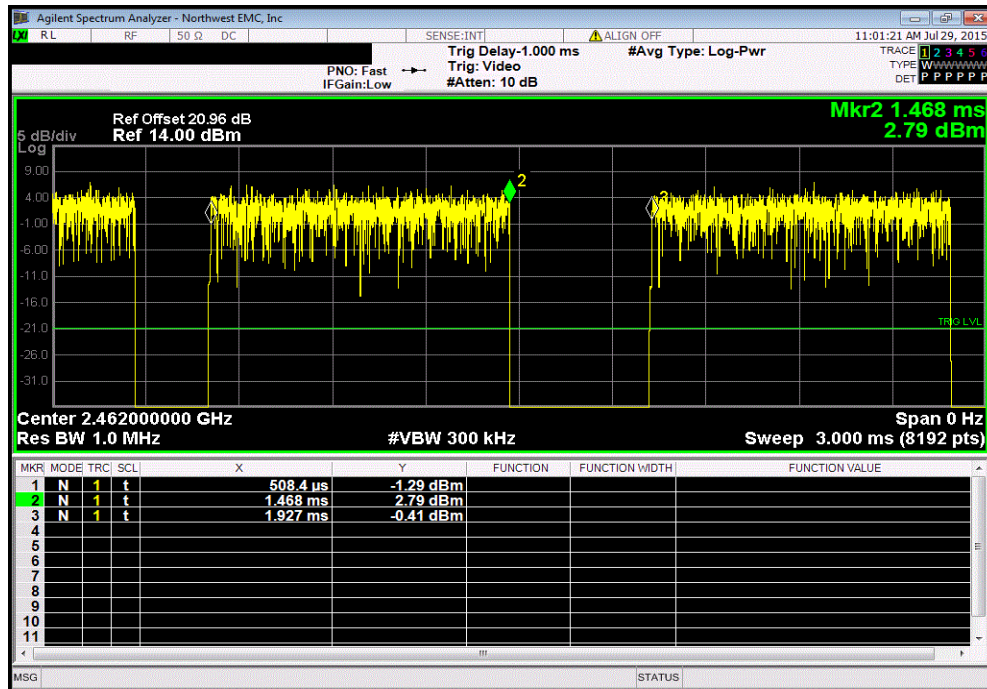


Chain A, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, Mid Channel 6, 2437 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	

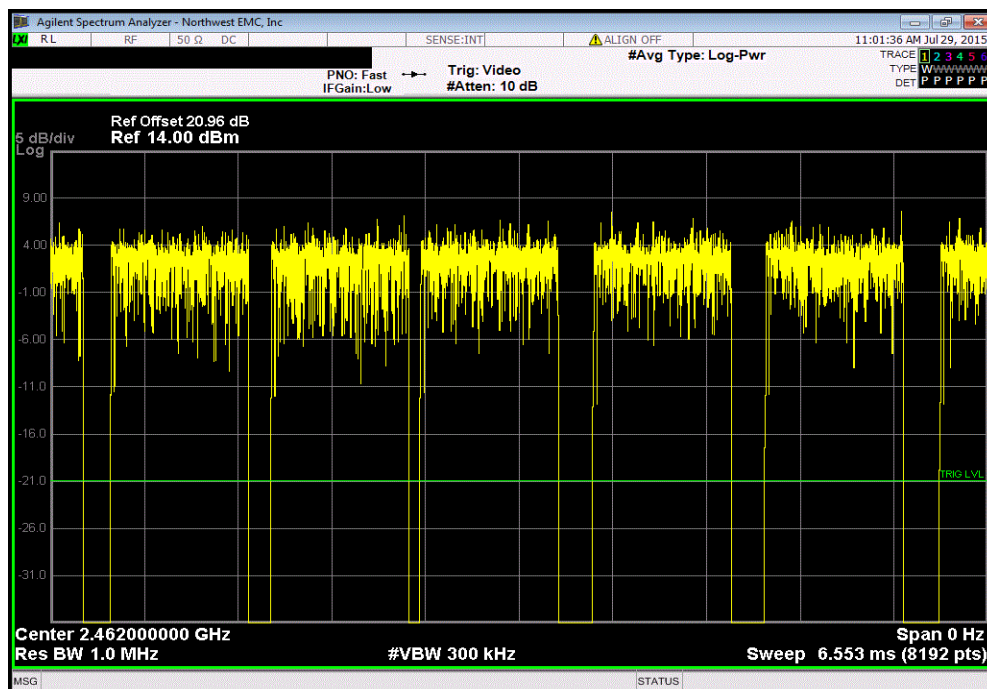


DUTY CYCLE

Chain A, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, High Channel 11, 2462 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
959.6 μ s	1.419 ms	1	67.6	N/A	N/A	

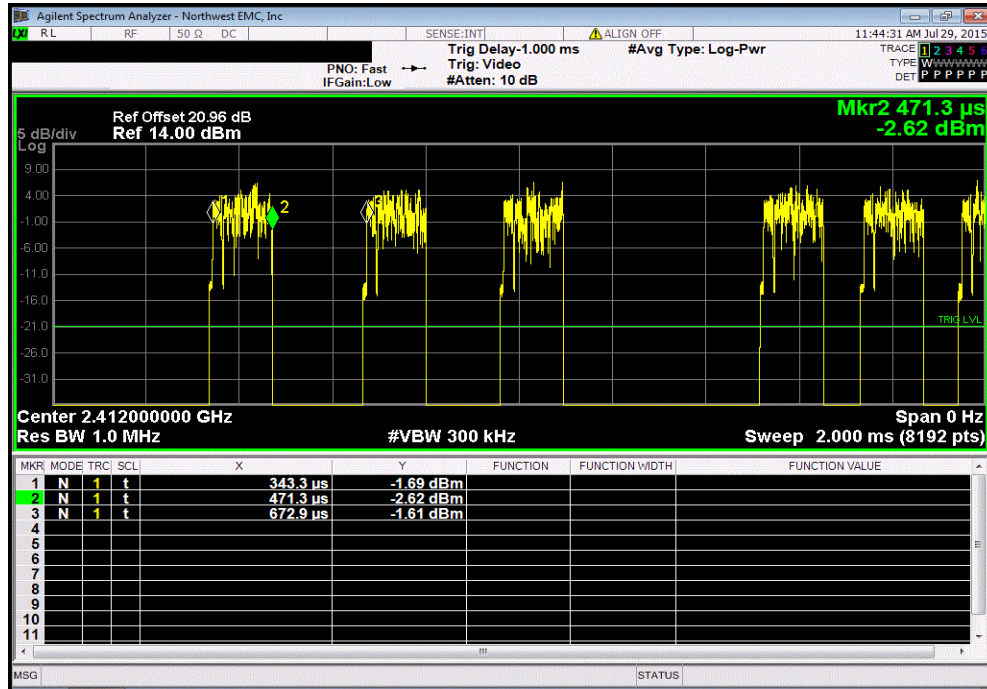


Chain A, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, High Channel 11, 2462 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	7	N/A	N/A	N/A	

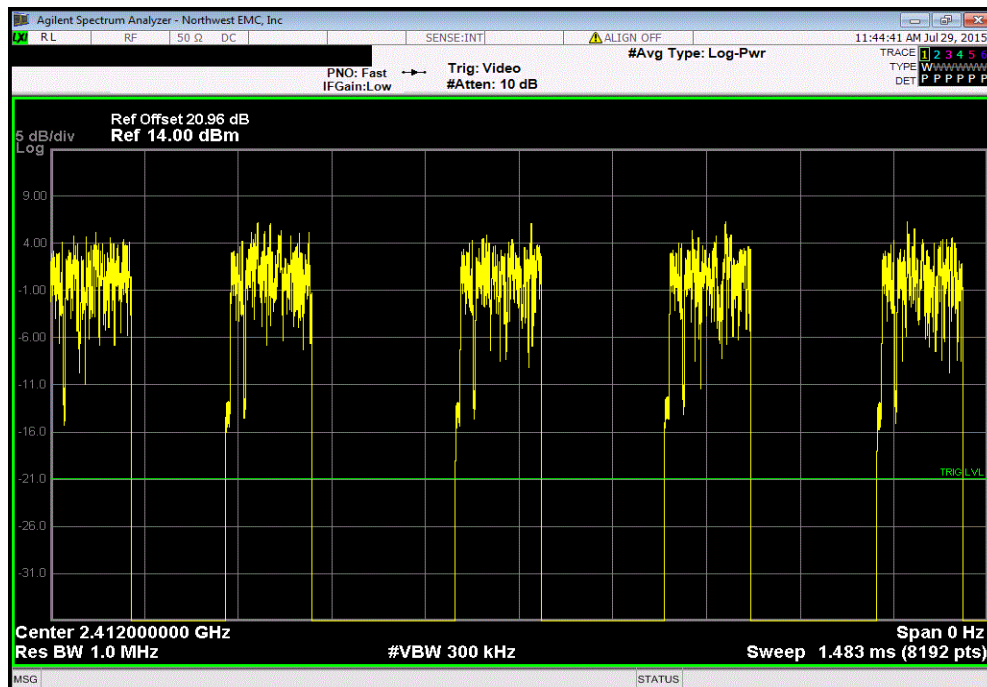


DUTY CYCLE

Chain A, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, Low Channel 1, 2412 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
127.967 us	329.6 us	1	38.8	N/A	N/A	

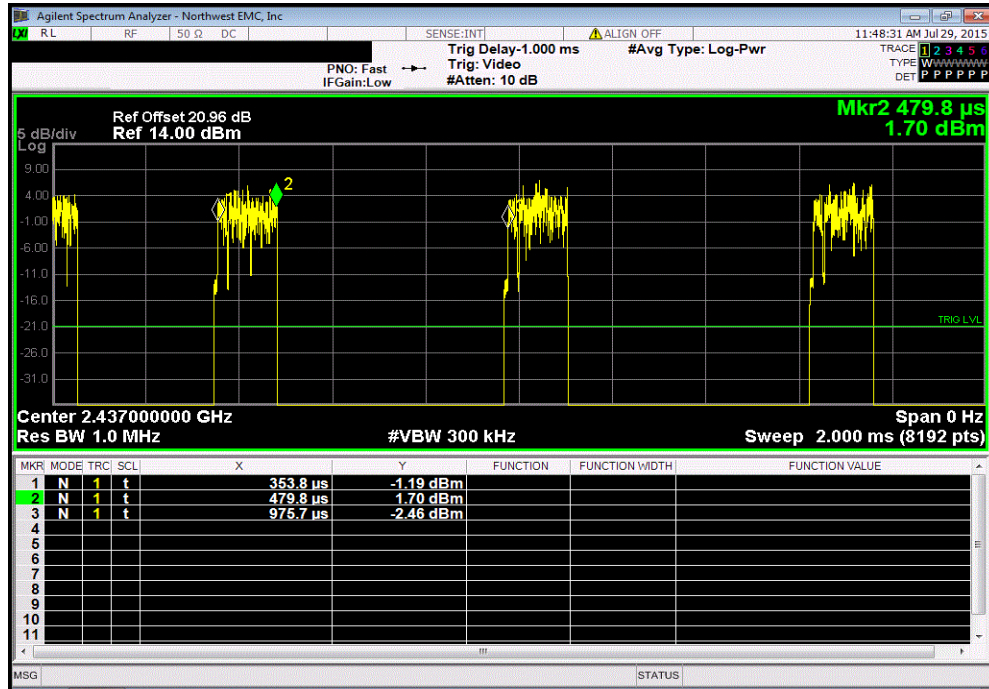


Chain A, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, Low Channel 1, 2412 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	

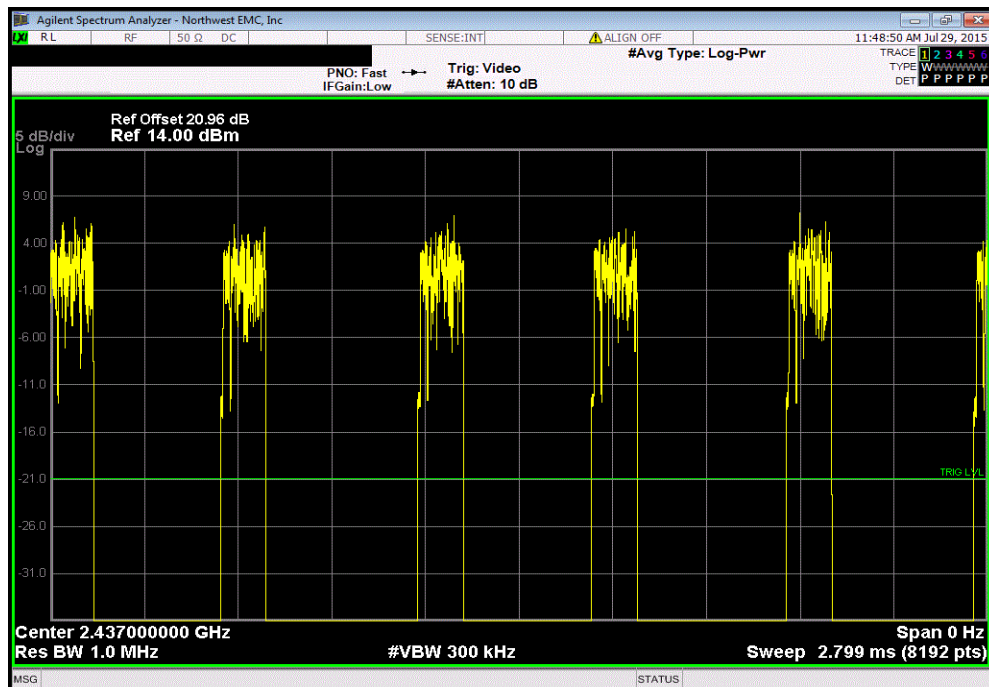


DUTY CYCLE

Chain A, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, Mid Channel 6, 2437 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
125.958 us	621.9 us	1	20.3	N/A	N/A	

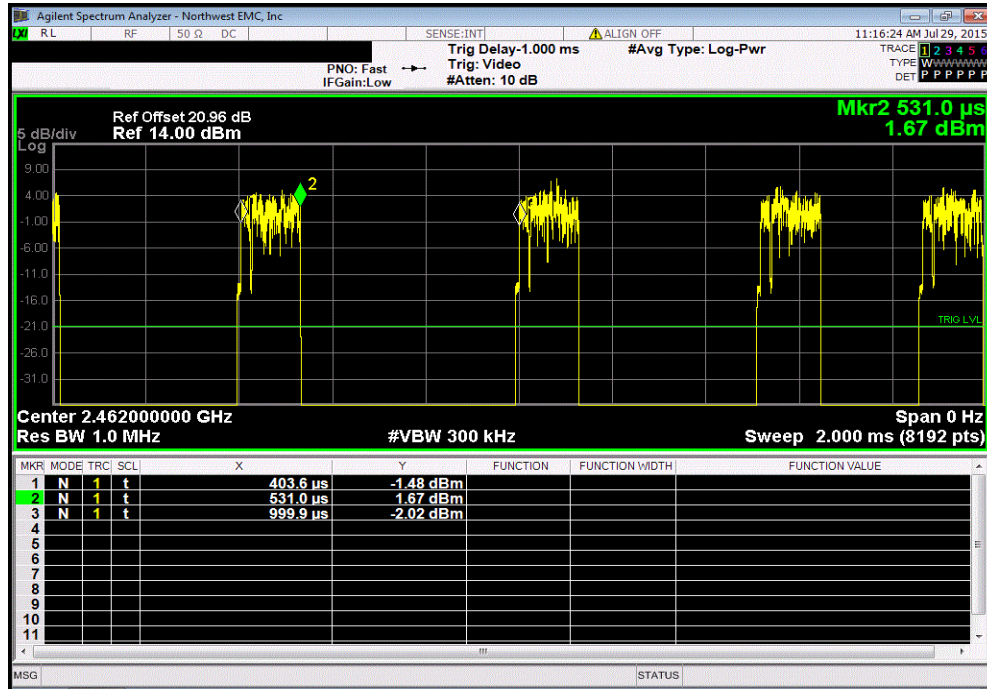


Chain A, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, Mid Channel 6, 2437 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	6	N/A	N/A	N/A	

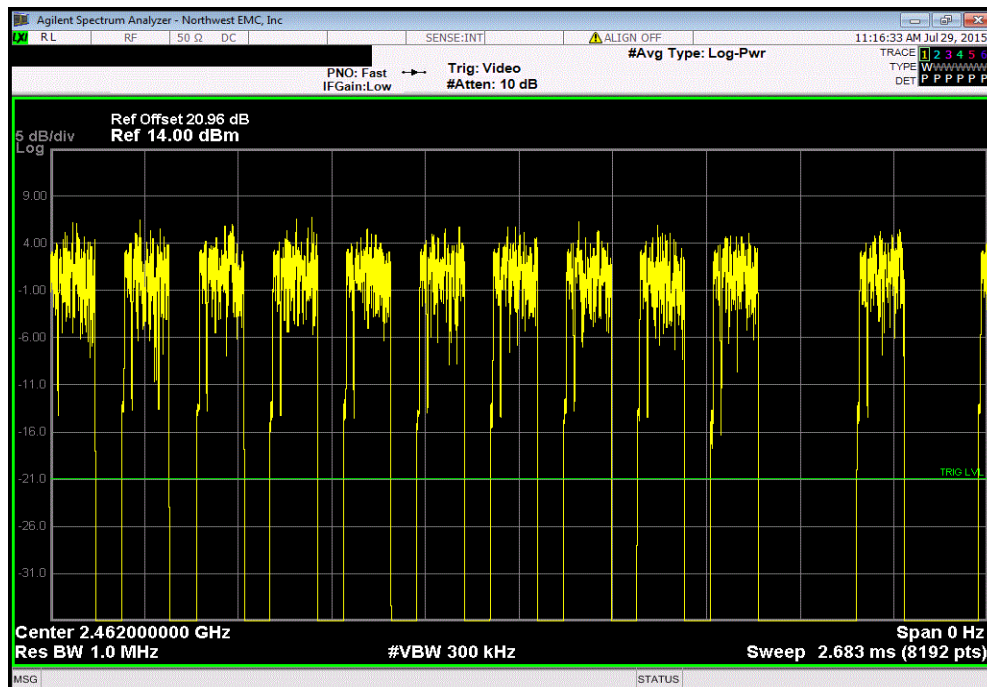


DUTY CYCLE

Chain A, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, High Channel 11, 2462 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
127.423 us	596.3 us	1	21.4	N/A	N/A	

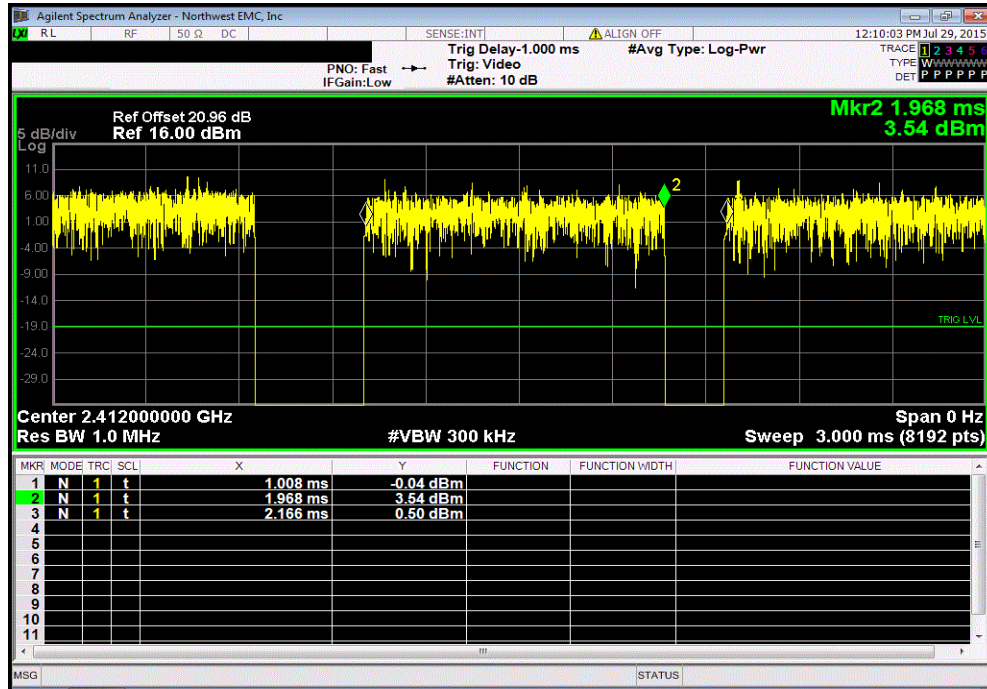


Chain A, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, High Channel 11, 2462 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	12	N/A	N/A	N/A	

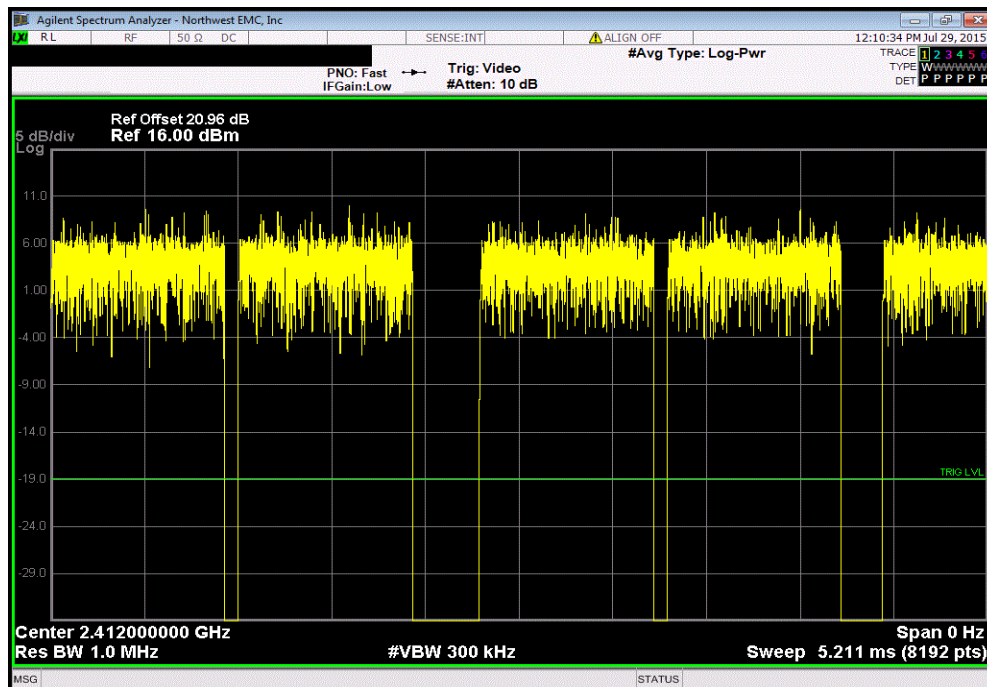


DUTY CYCLE

Chain C, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, Low Channel 1, 2412 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
959.93 us	1.158 ms	1	82.9	N/A	N/A	

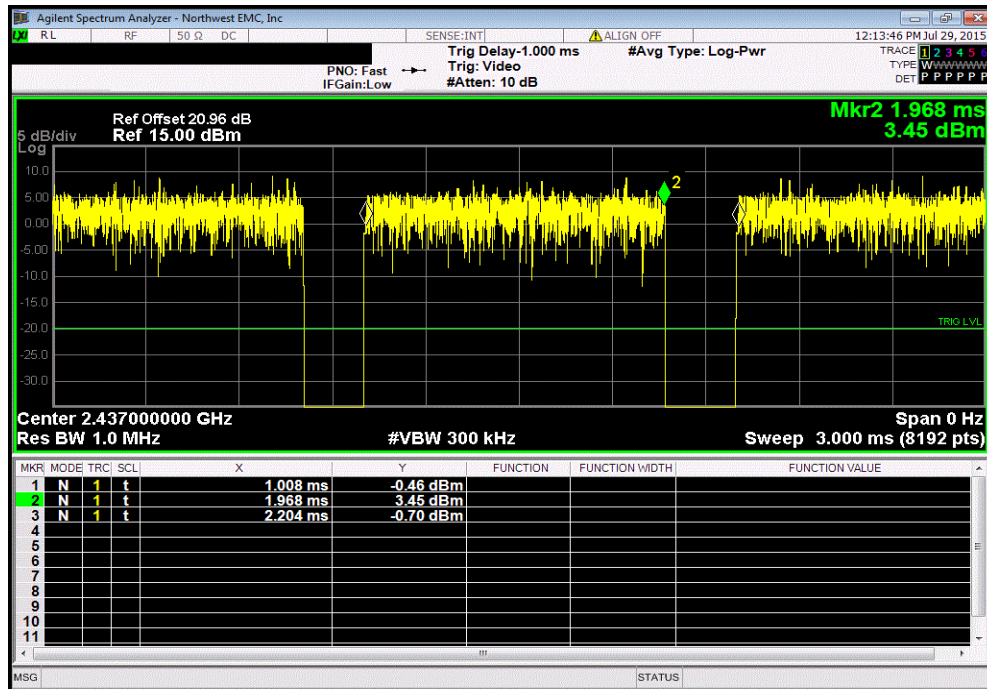


Chain C, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, Low Channel 1, 2412 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	

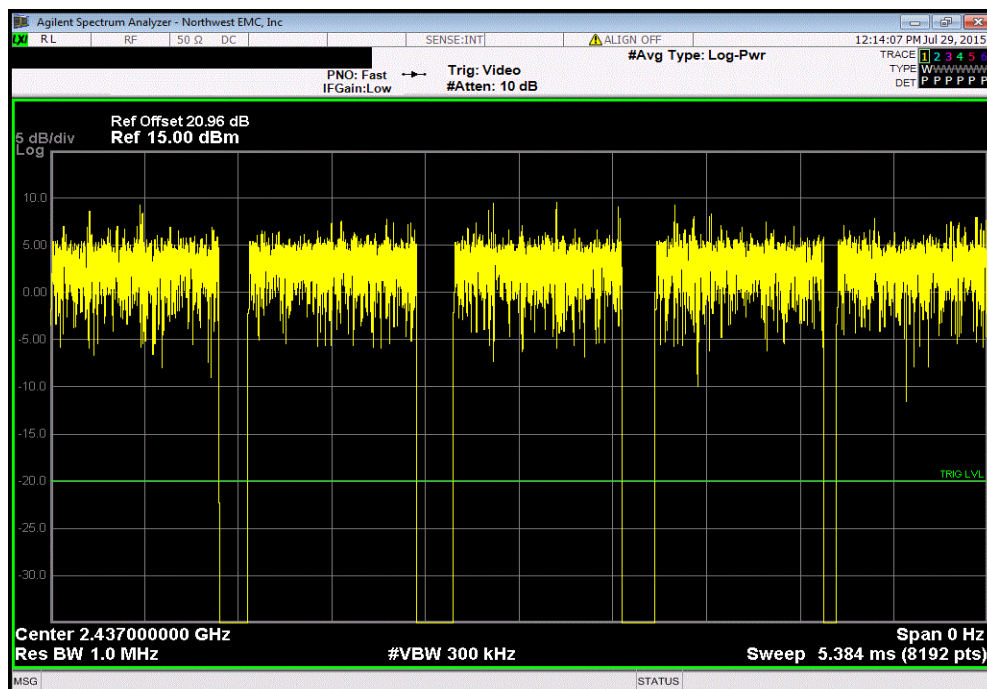


DUTY CYCLE

Chain C, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, Mid Channel 6, 2437 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
959.93 us	1.197 ms	1	80.2	N/A	N/A	

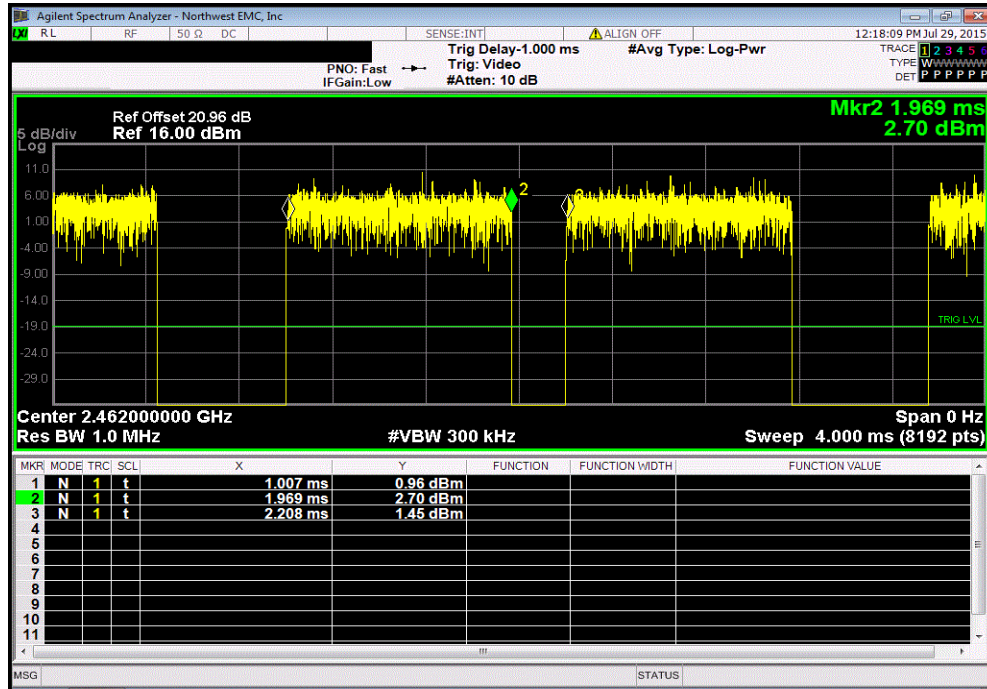


Chain C, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, Mid Channel 6, 2437 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	

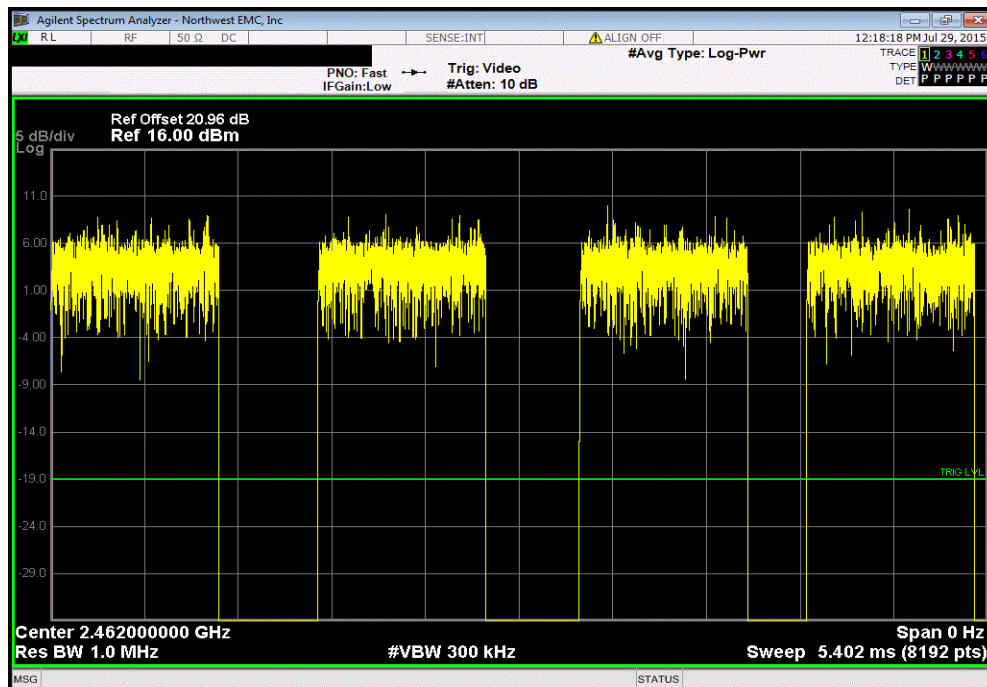


DUTY CYCLE

Chain C, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, High Channel 11, 2462 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
961.11 us	1.2 ms	1	80.1	N/A	N/A	

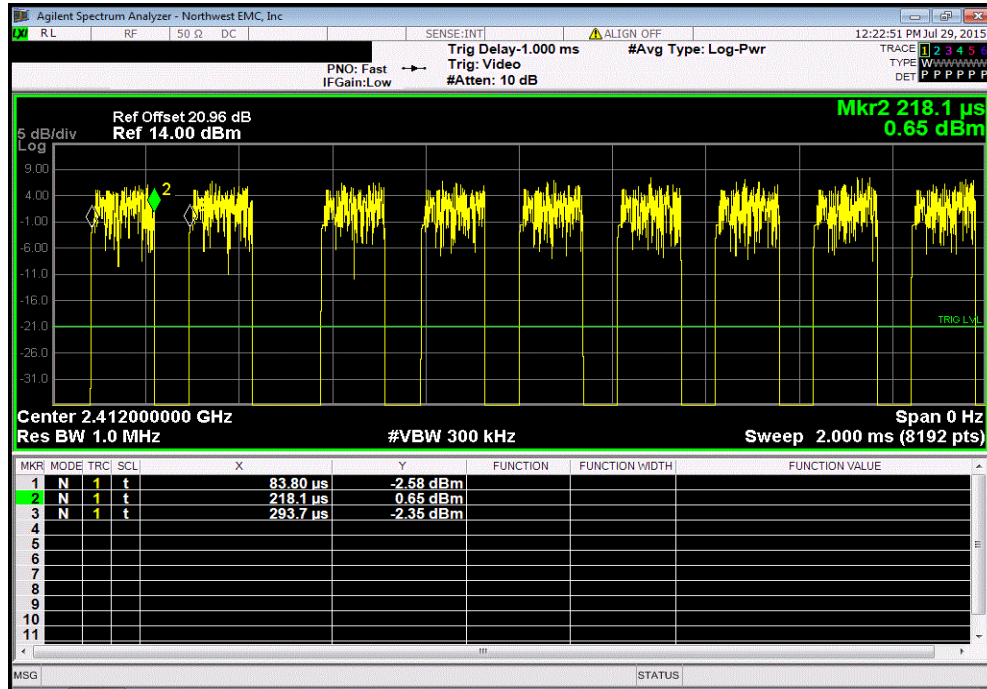


Chain C, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, High Channel 11, 2462 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	4	N/A	N/A	N/A	

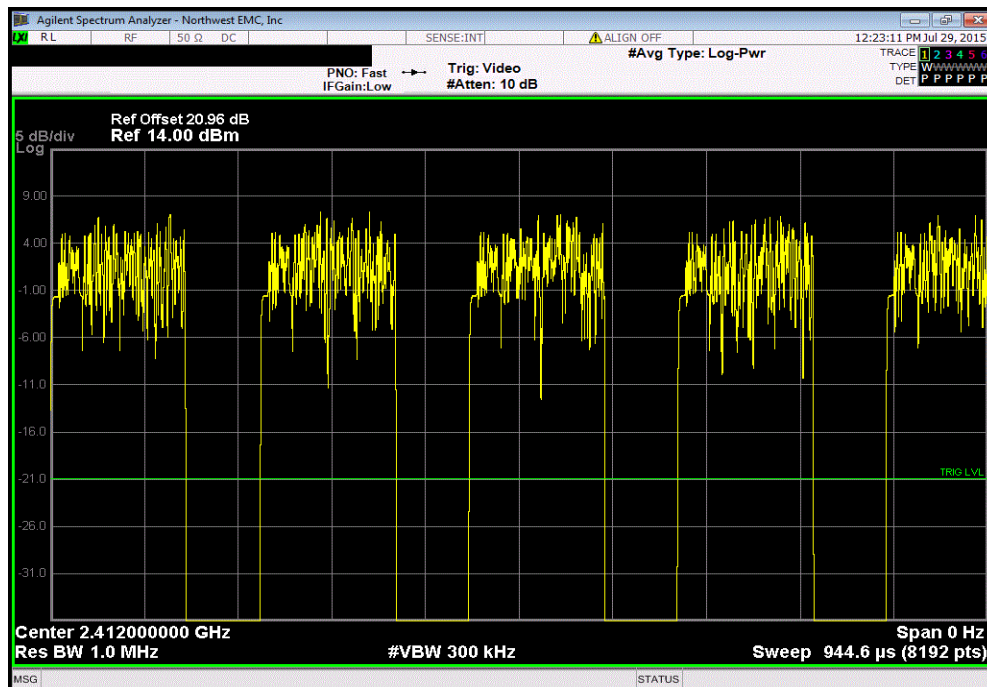


DUTY CYCLE

Chain C, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, Low Channel 1, 2412 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
134.267 μ s	209.9 μ s	1	64	N/A	N/A	

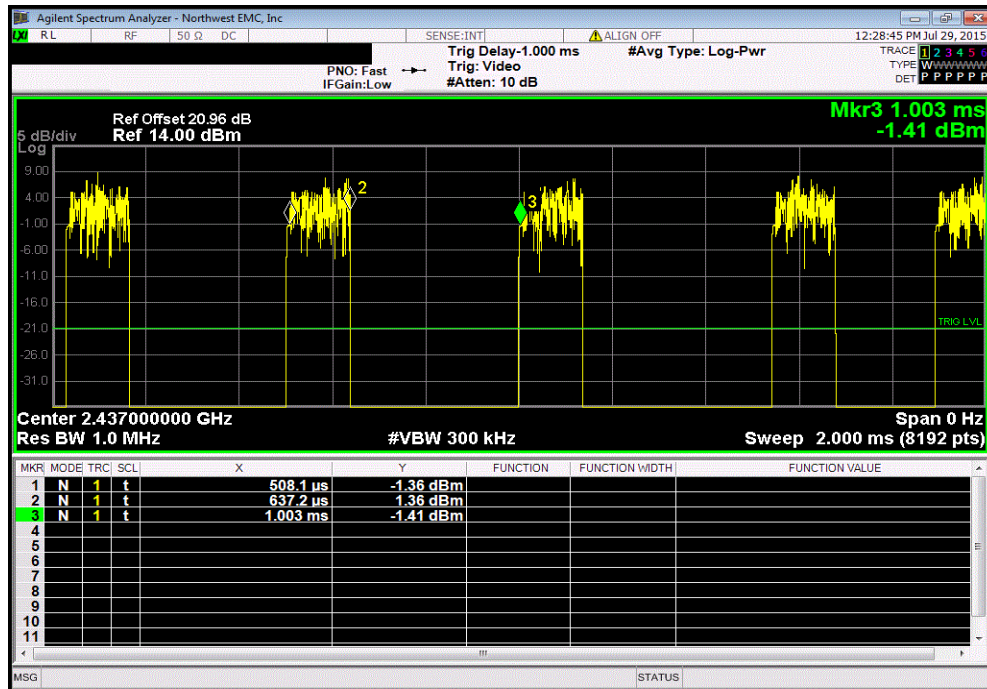


Chain C, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, Low Channel 1, 2412 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	

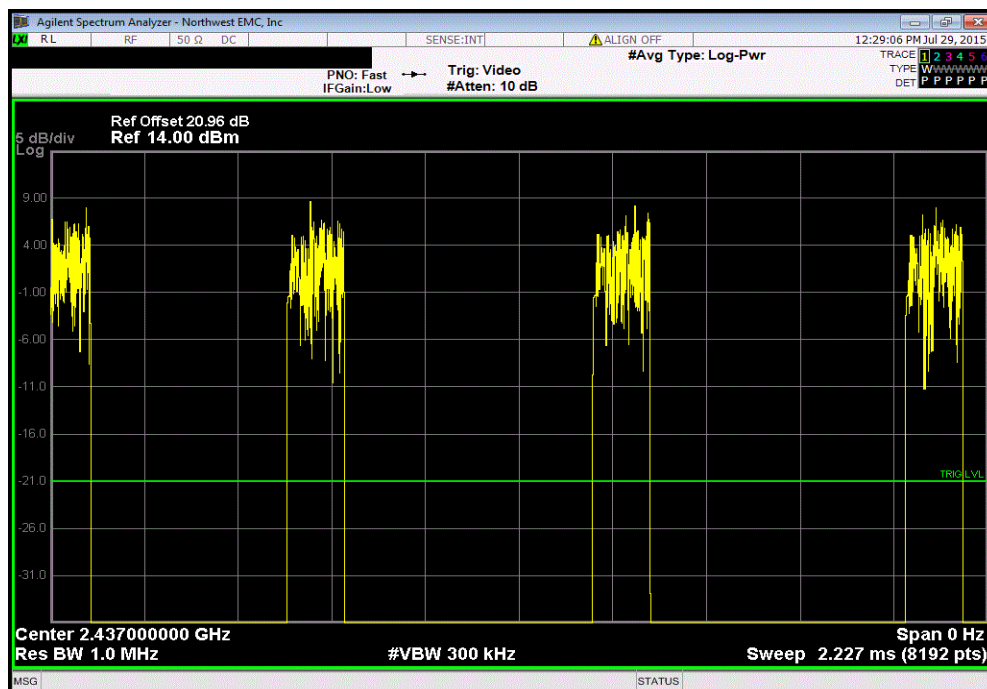


DUTY CYCLE

Chain C, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, Mid Channel 6, 2437 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
129.095 us	494.887 us	1	26.1	N/A	N/A	

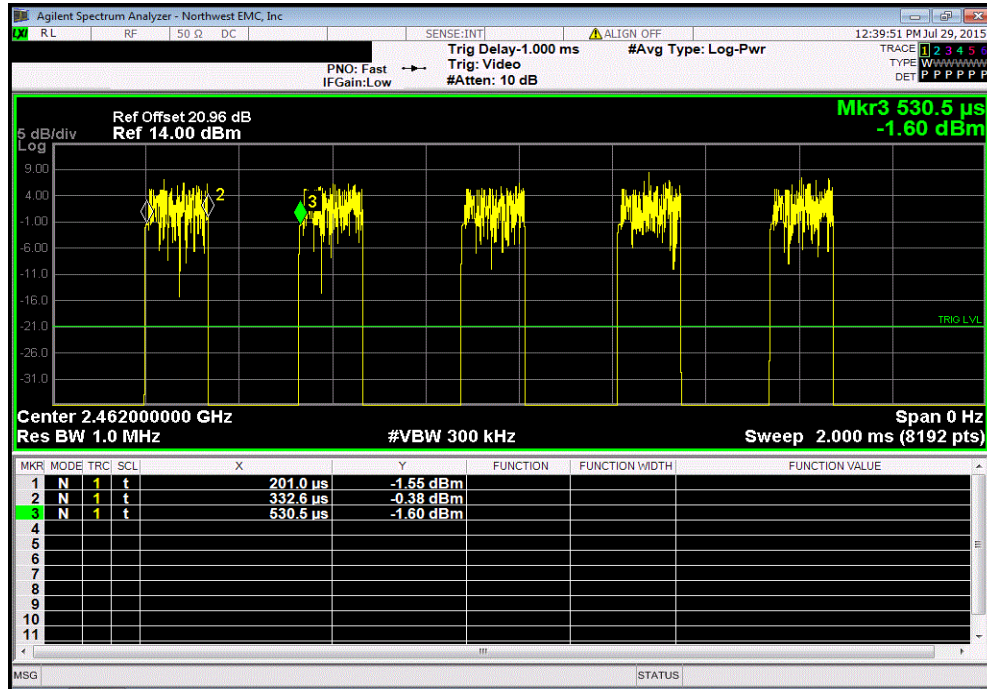


Chain C, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, Mid Channel 6, 2437 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	4	N/A	N/A	N/A	

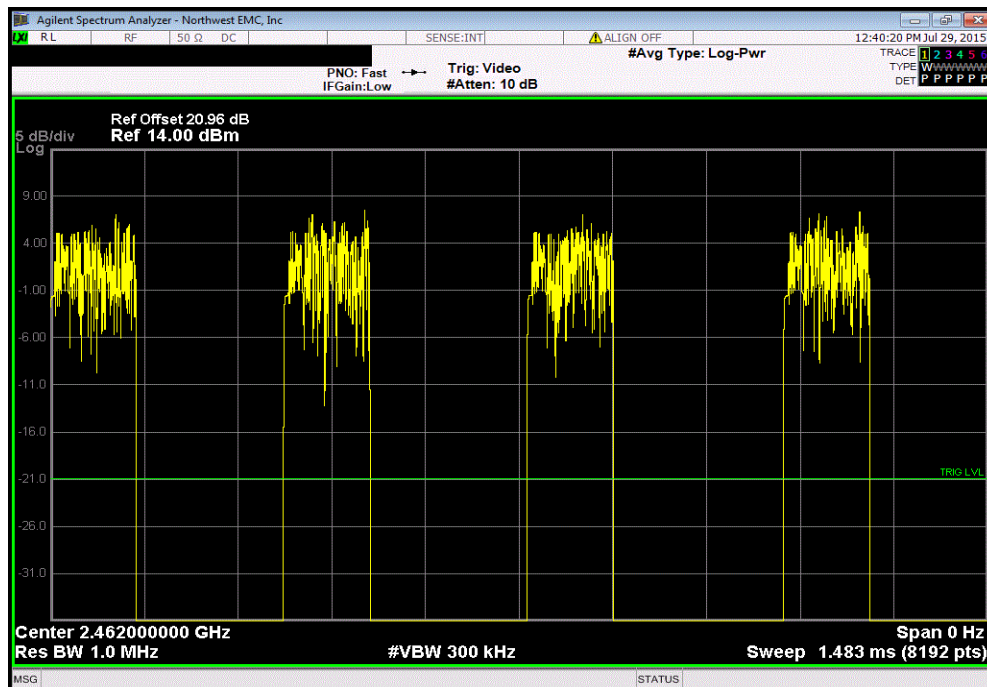


DUTY CYCLE

Chain C, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, High Channel 11, 2462 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
131.597 us	329.55 us	1	39.9	N/A	N/A	



Chain C, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, High Channel 11, 2462 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	4	N/A	N/A	N/A	



DUTY CYCLE

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval (mos)
Spectrum Analyzer	Agilent	N9010A	AFL	9/20/2014	12
DC Block, 40 GHz	Fairview Microwave	SD3379	AMM	2/27/2015	12
Attenuator, 20dB, 40 GHz	Fairview Microwave	SA4018-20	TQY	2/27/2015	12
Signal Generator, 40 GHz	Agilent	N5173B	TIW	7/15/2014	36

TEST DESCRIPTION

The Duty Cycle (x) of the single channel operation of the radio as controlled by the provided test software was measured for each of the EUT operating modes.

The measurements were made using a zero span on the spectrum analyzer to see the pulses in the time domain. A direct connection was made between the RF output of the EUT and a spectrum analyzer. Attenuation and a DC block were used. The reference level offset on the spectrum analyzer was adjusted to compensate for cable loss and the external attenuation used between the RF output and the spectrum analyzer input.

The duty cycle was calculated by dividing the transmission pulse duration (T) by the total period of a single on and total off time.

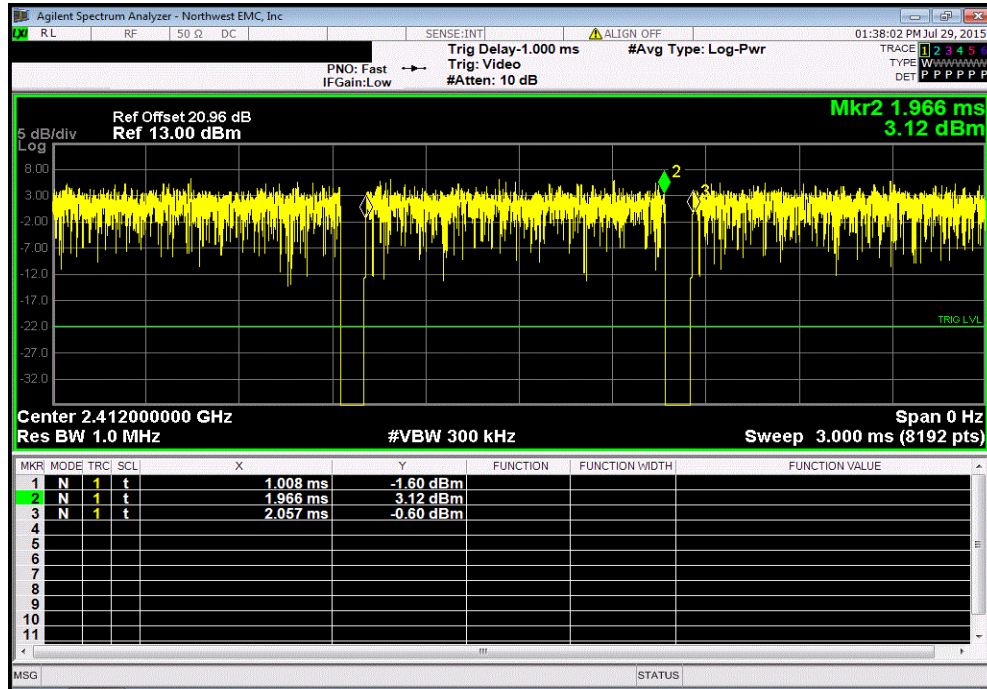
If the transmit duty cycle < 98 percent, burst gating was used during some of the other tests in this report to only measure during the burst duration.

DUTY CYCLE

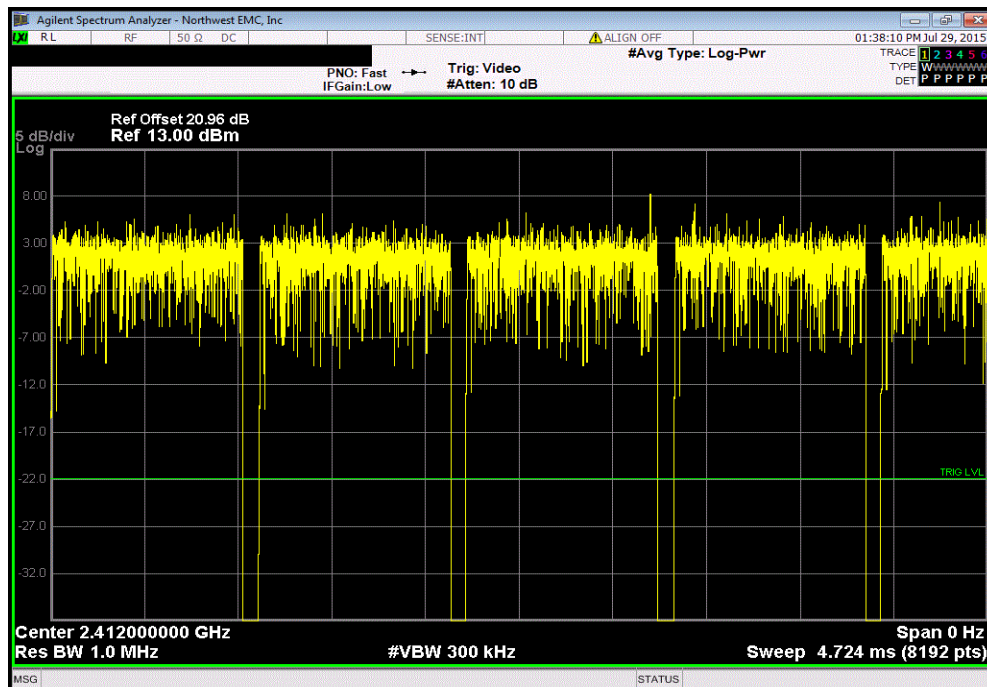
EUT: Firebox T50-W (BS5AE7W)		Work Order: VDEI0009					
Serial Number: 70AF00069-3EB6		Date: 07/29/15					
Customer: WatchGuard Technologies, Inc.		Temperature: 24.9°C					
Attendees: None		Humidity: 47%					
Project: None		Barometric Pres.: 1014 mbar					
Tested by: Jonathan Kiefer		Power: 110VAC/60Hz	Job Site: TX09				
TEST SPECIFICATIONS		Test Method					
FCC 15.247:2015		ANSI C63.10:2013					
COMMENTS							
2x2 MIMO mode, Chain BC (Chains 1 and 2). Transmit power setting 17.0.							
DEVIATIONS FROM TEST STANDARD							
None							
Configuration #	1	Signature 					
		Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
Chain B							
20 MHz							
2400 MHz - 2483.5 MHz Band							
802.11(n) MCS8							
Low Channel 1, 2412 MHz		958.44 us	1.05 ms	1	91.3	N/A	N/A
Low Channel 1, 2412 MHz		N/A	N/A	5	N/A	N/A	N/A
Mid Channel 6, 2437 MHz		958.14 us	1.043 ms	1	91.9	N/A	N/A
Mid Channel 6, 2437 MHz		N/A	N/A	6	N/A	N/A	N/A
High Channel 11, 2462 MHz		959.6 us	1.043 ms	1	92	N/A	N/A
High Channel 11, 2462 MHz		N/A	N/A	5	N/A	N/A	N/A
802.11(n) MCS15							
Low Channel 1, 2412 MHz		127.723 us	210.2 us	1	60.8	N/A	N/A
Low Channel 1, 2412 MHz		N/A	N/A	5	N/A	N/A	N/A
Mid Channel 6, 2437 MHz		122.64 us	210.3 us	1	58.3	N/A	N/A
Mid Channel 6, 2437 MHz		N/A	N/A	5	N/A	N/A	N/A
High Channel 11, 2462 MHz		127.767 us	210.3 us	1	60.8	N/A	N/A
High Channel 11, 2462 MHz		N/A	N/A	5	N/A	N/A	N/A
Chain C							
20 MHz							
2400 MHz - 2483.5 MHz Band							
802.11(n) MCS8							
Low Channel 1, 2412 MHz		957.34 us	1.043 ms	1	91.8	N/A	N/A
Low Channel 1, 2412 MHz		N/A	N/A	5	N/A	N/A	N/A
Mid Channel 6, 2437 MHz		959.27 us	1.049 ms	1	91.4	N/A	N/A
Mid Channel 6, 2437 MHz		N/A	N/A	5	N/A	N/A	N/A
High Channel 11, 2462 MHz		959.27 us	1.049 ms	1	91.4	N/A	N/A
High Channel 11, 2462 MHz		N/A	N/A	5	N/A	N/A	N/A
802.11(n) MCS15							
Low Channel 1, 2412 MHz		126.979 us	210.2 us	1	60.4	N/A	N/A
Low Channel 1, 2412 MHz		N/A	N/A	5	N/A	N/A	N/A
Mid Channel 6, 2437 MHz		127.023 us	218.3 us	1	58.2	N/A	N/A
Mid Channel 6, 2437 MHz		N/A	N/A	5	N/A	N/A	N/A
High Channel 11, 2462 MHz		127.212 us	210.2 us	1	60.5	N/A	N/A
High Channel 11, 2462 MHz		N/A	N/A	5	N/A	N/A	N/A

DUTY CYCLE

Chain B, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, Low Channel 1, 2412 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
958.44 us	1.05 ms	1	91.3	N/A	N/A	

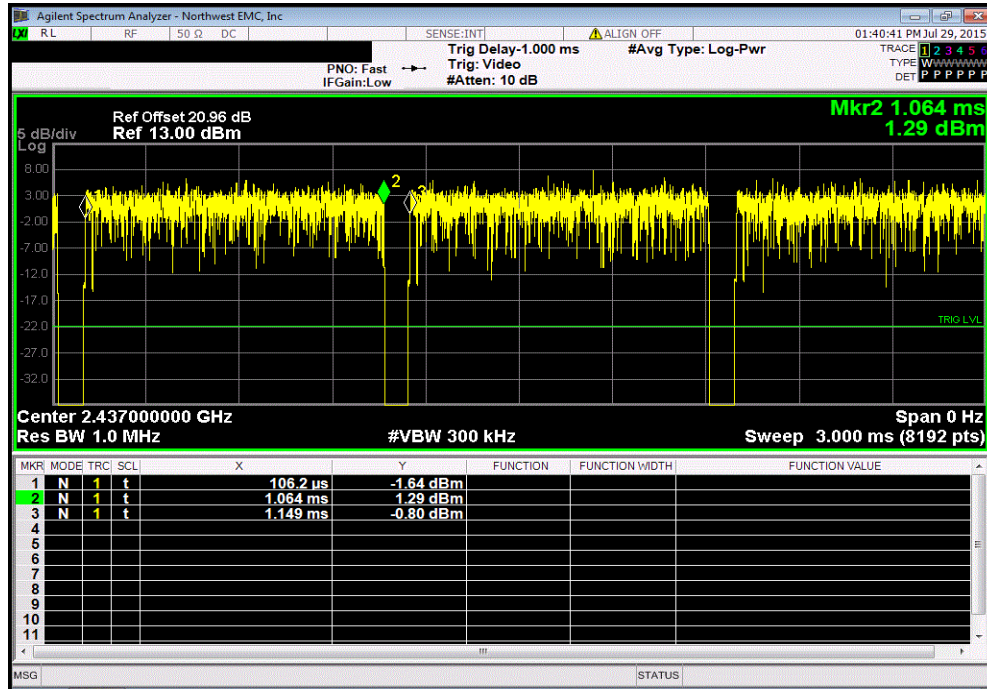


Chain B, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, Low Channel 1, 2412 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	

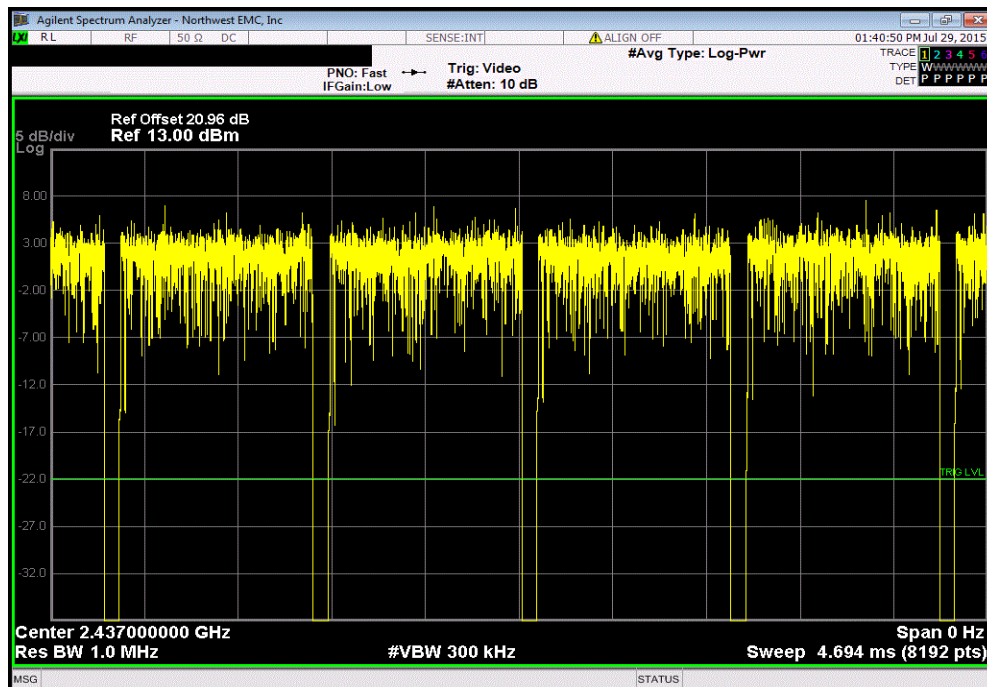


DUTY CYCLE

Chain B, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, Mid Channel 6, 2437 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
958.14 us	1.043 ms	1	91.9	N/A	N/A	

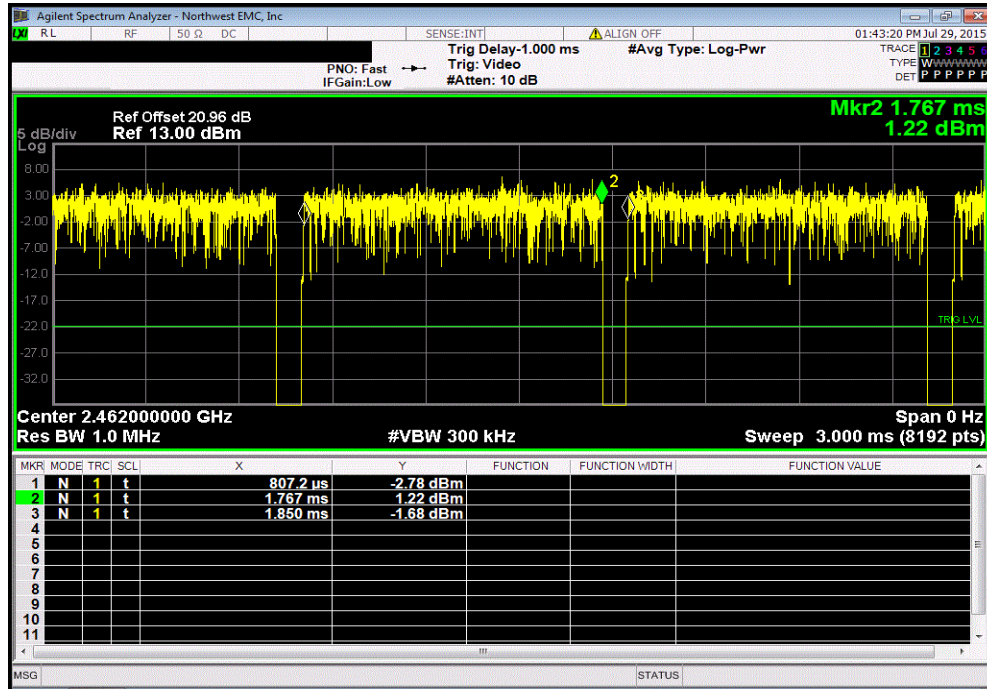


Chain B, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, Mid Channel 6, 2437 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	6	N/A	N/A	N/A	

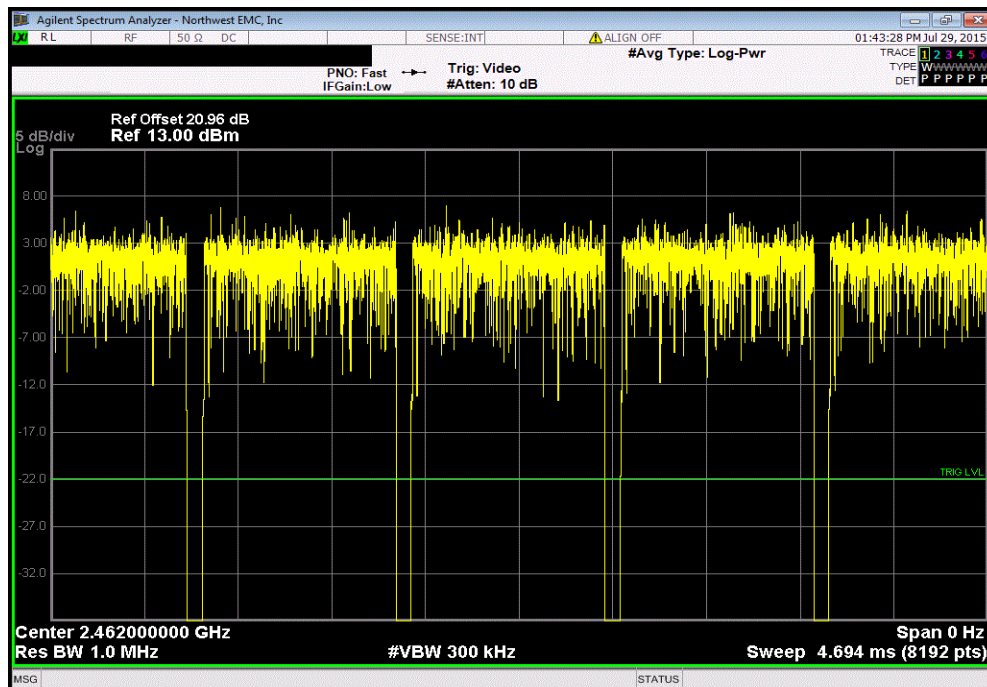


DUTY CYCLE

Chain B, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, High Channel 11, 2462 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
959.6 μ s	1.043 ms	1	92	N/A	N/A	

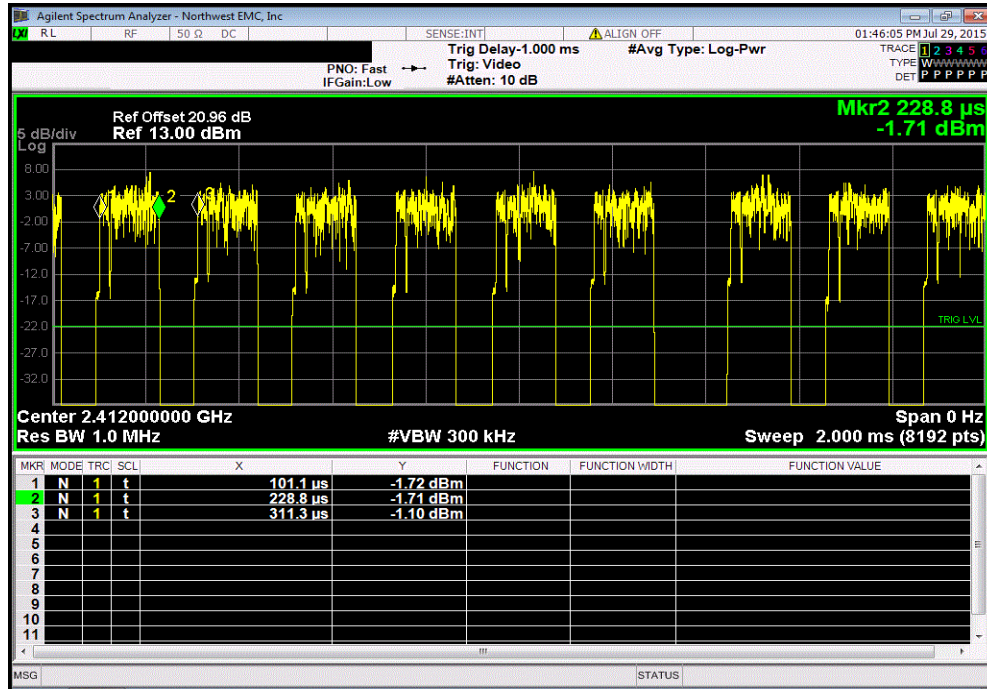


Chain B, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, High Channel 11, 2462 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	

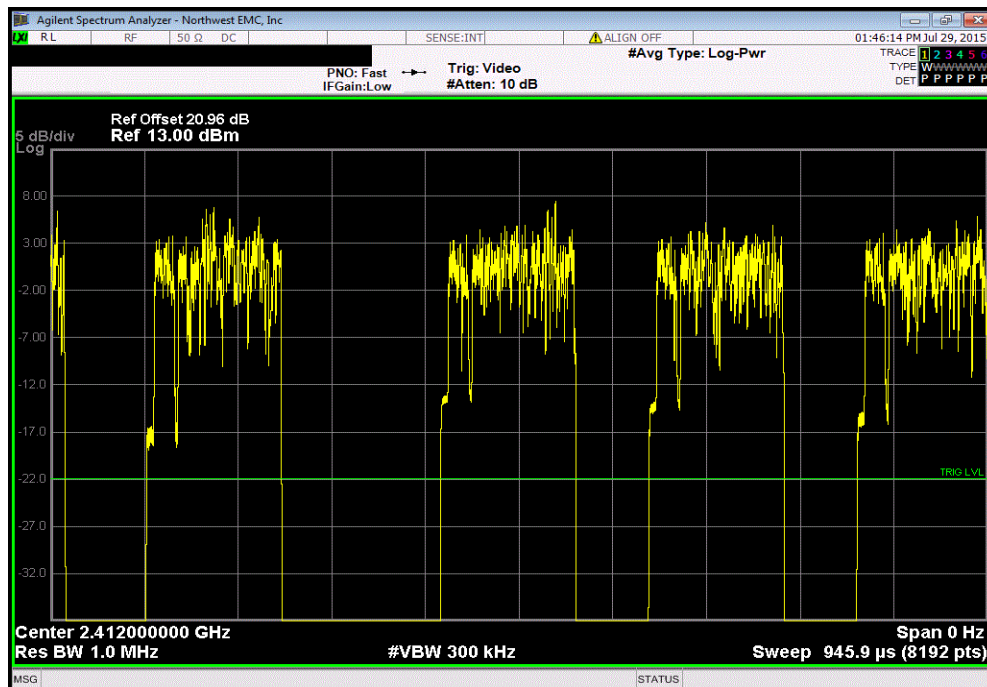


DUTY CYCLE

Chain B, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, Low Channel 1, 2412 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
127.723 us	210.2 us	1	60.8	N/A	N/A	

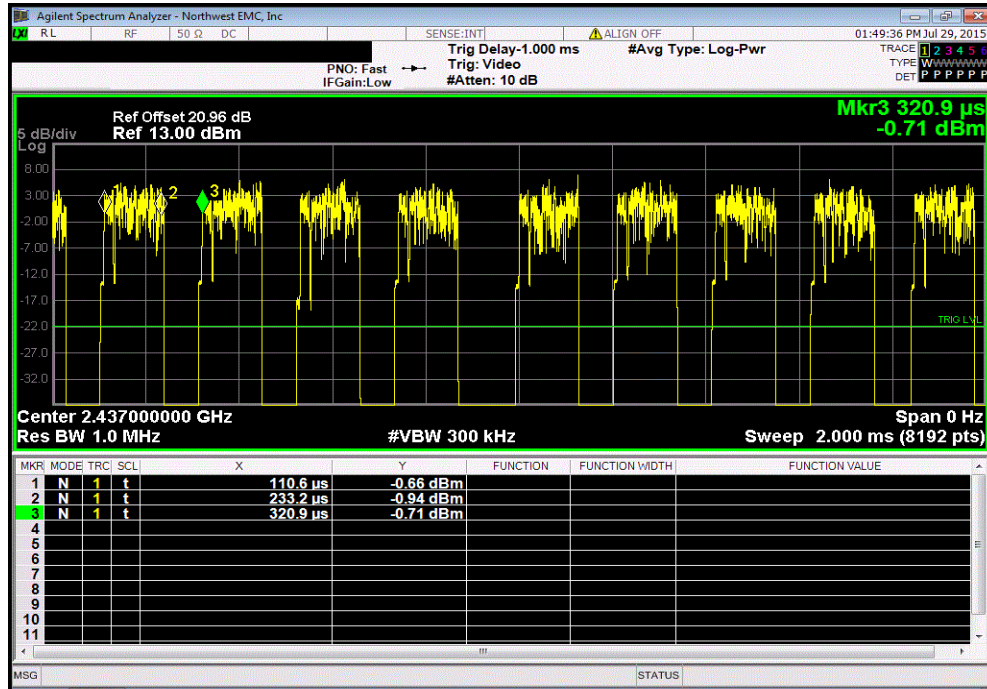


Chain B, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, Low Channel 1, 2412 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	

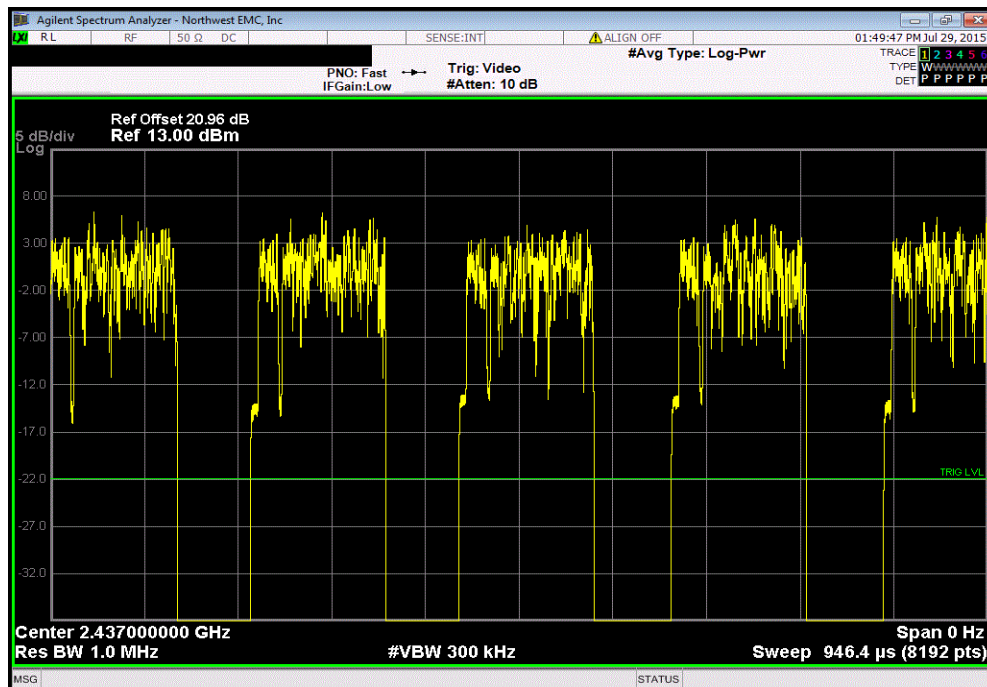


DUTY CYCLE

Chain B, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, Mid Channel 6, 2437 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
122.64 μ s	210.3 μ s	1	58.3	N/A	N/A	

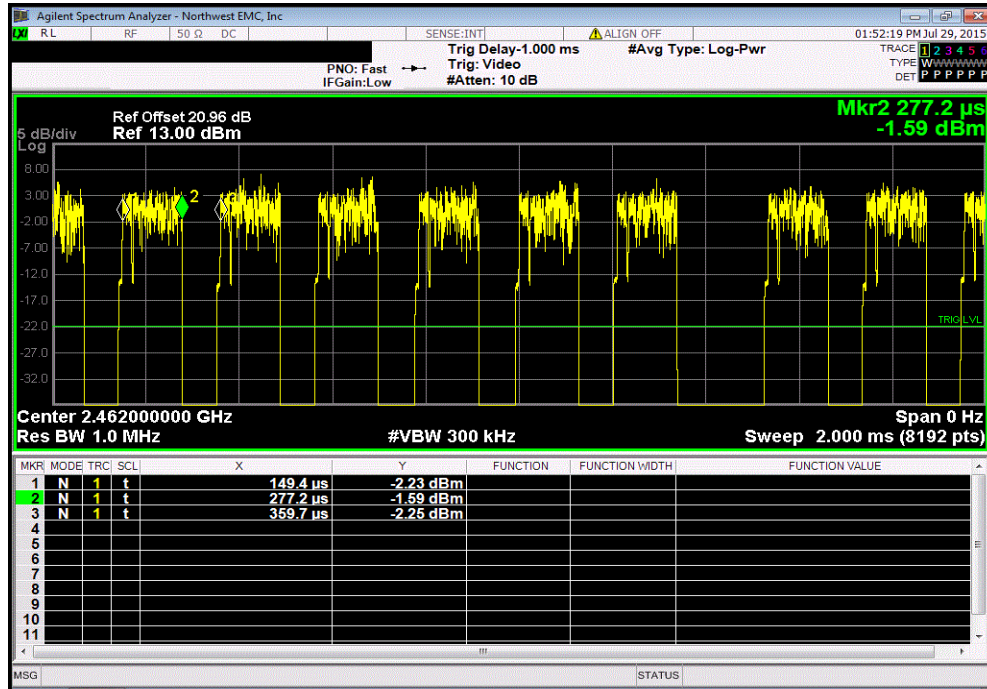


Chain B, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, Mid Channel 6, 2437 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	

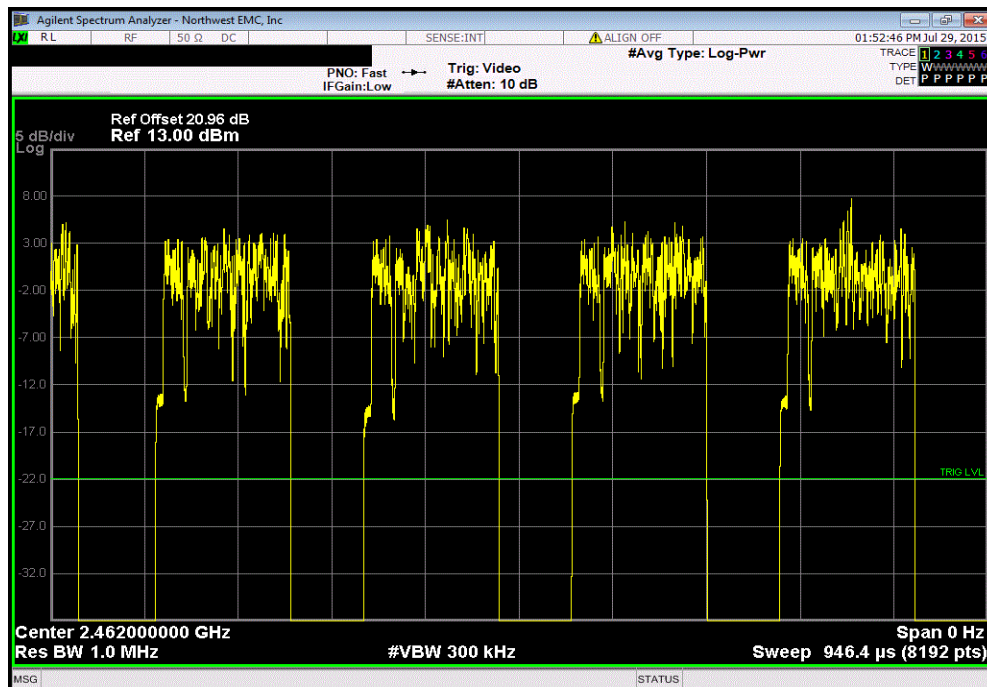


DUTY CYCLE

Chain B, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, High Channel 11, 2462 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
127.767 us	210.3 us	1	60.8	N/A	N/A	

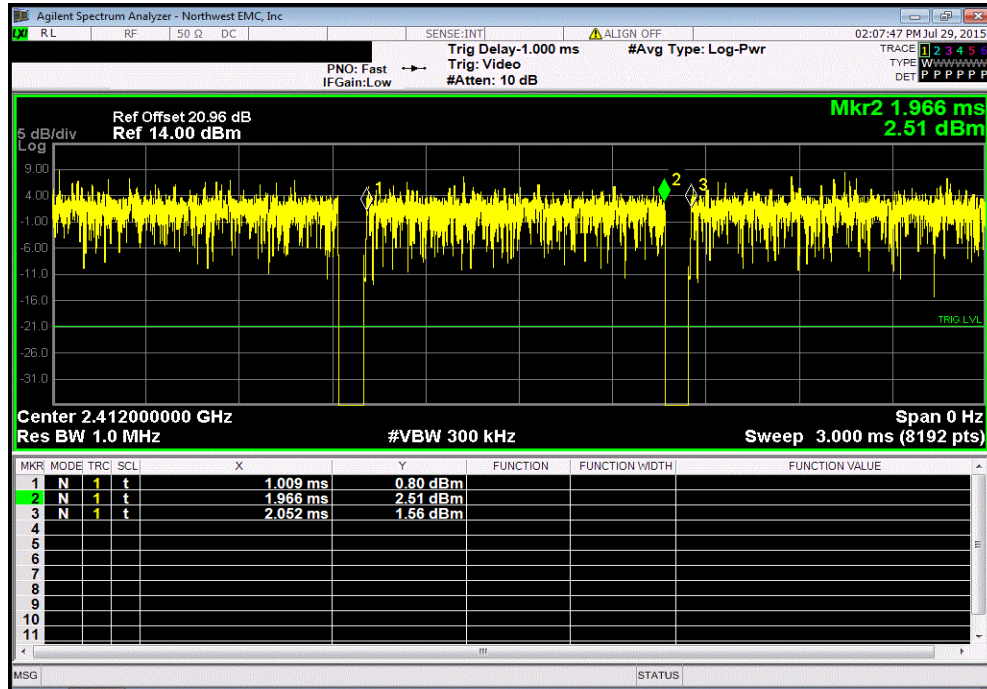


Chain B, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, High Channel 11, 2462 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	

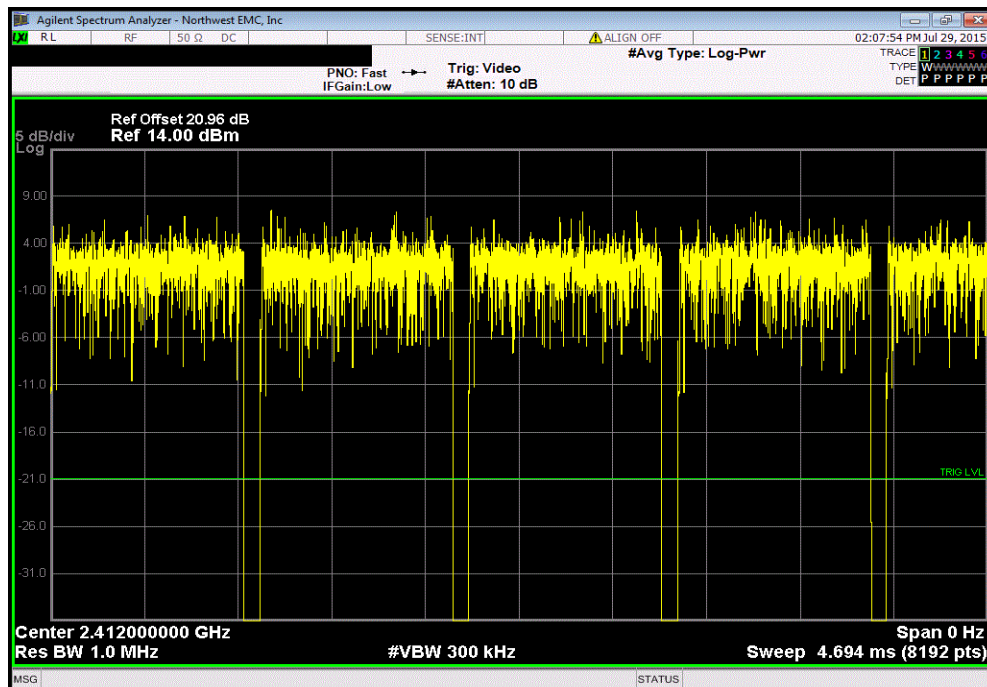


DUTY CYCLE

Chain C, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, Low Channel 1, 2412 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
957.34 us	1.043 ms	1	91.8	N/A	N/A	

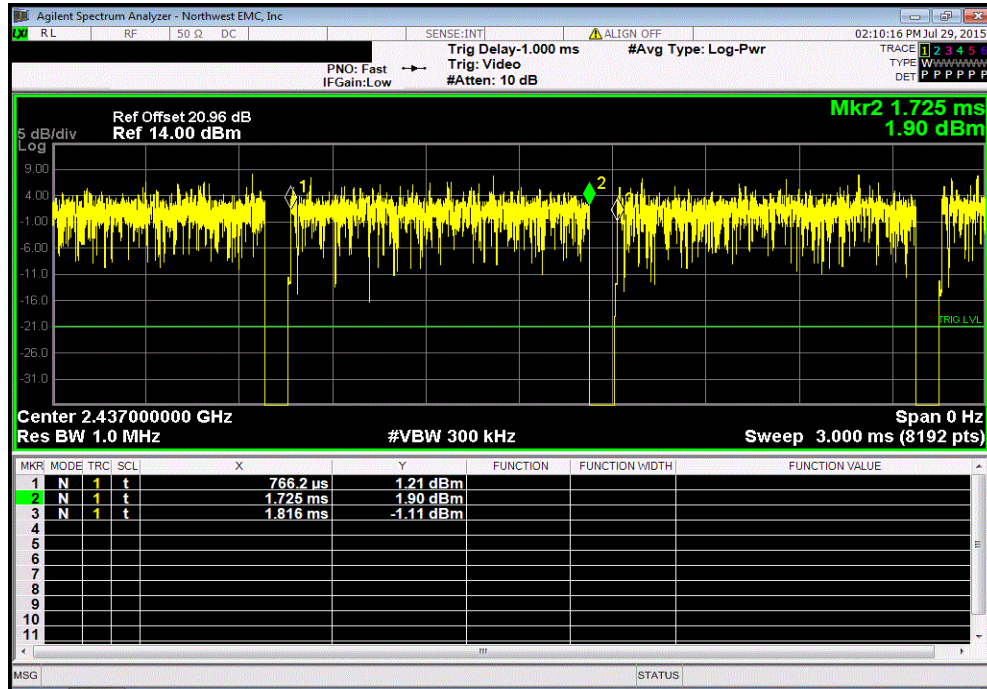


Chain C, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, Low Channel 1, 2412 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	

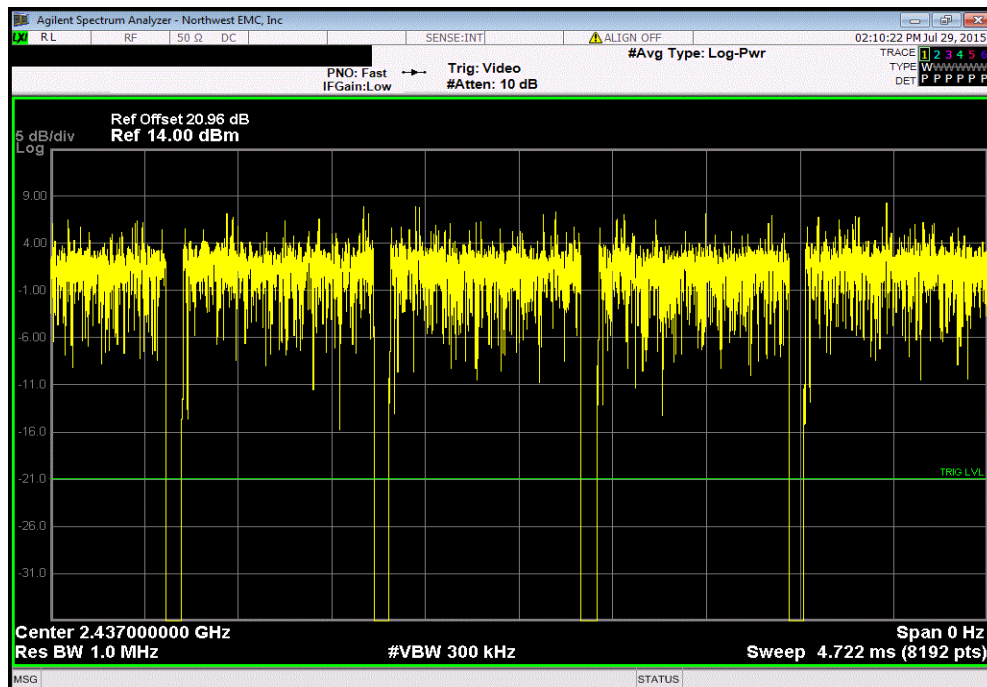


DUTY CYCLE

Chain C, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, Mid Channel 6, 2437 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
959.27 us	1.049 ms	1	91.4	N/A	N/A	

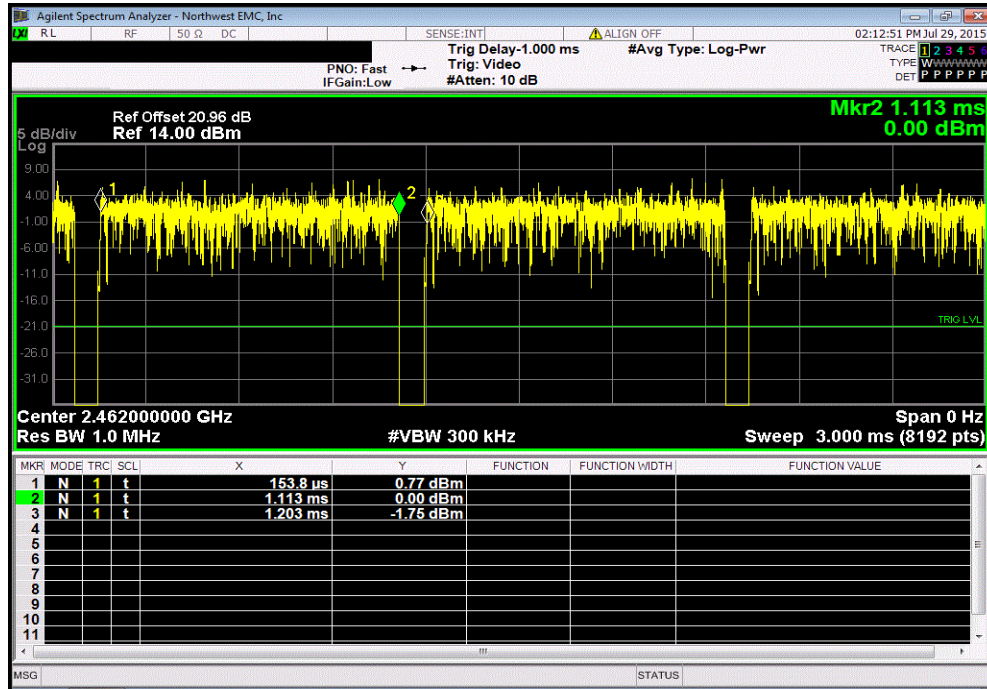


Chain C, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, Mid Channel 6, 2437 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	

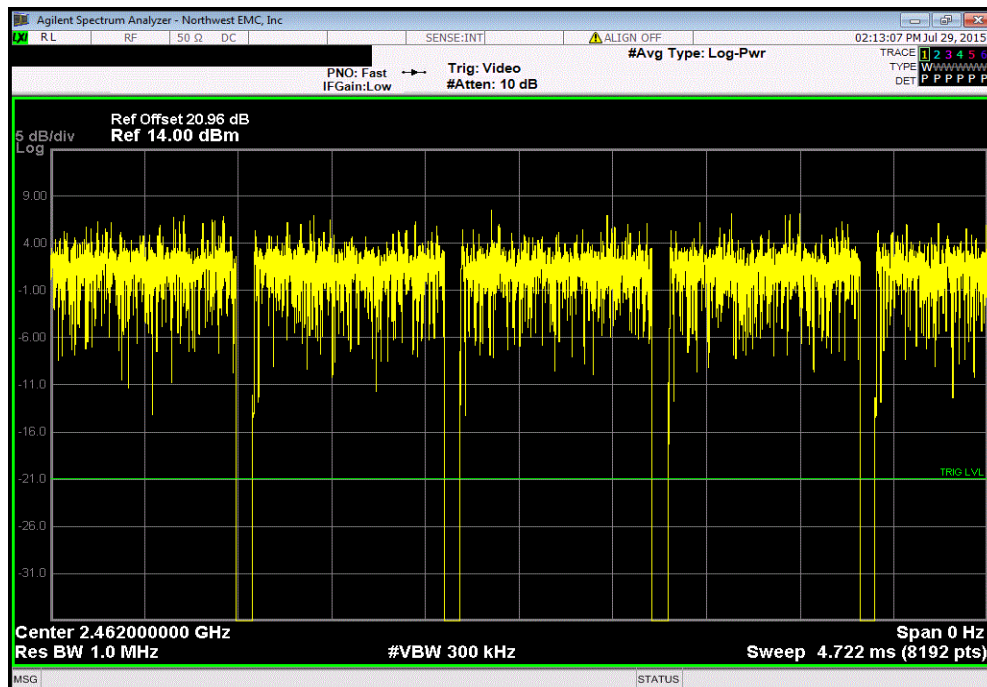


DUTY CYCLE

Chain C, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, High Channel 11, 2462 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
959.27 us	1.049 ms	1	91.4	N/A	N/A	

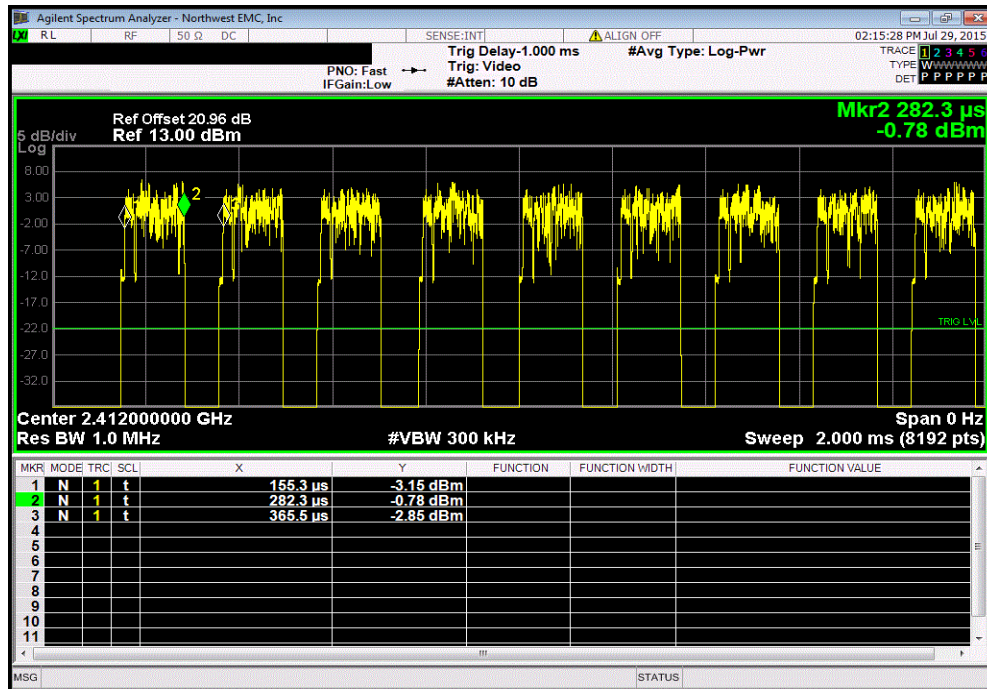


Chain C, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, High Channel 11, 2462 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	

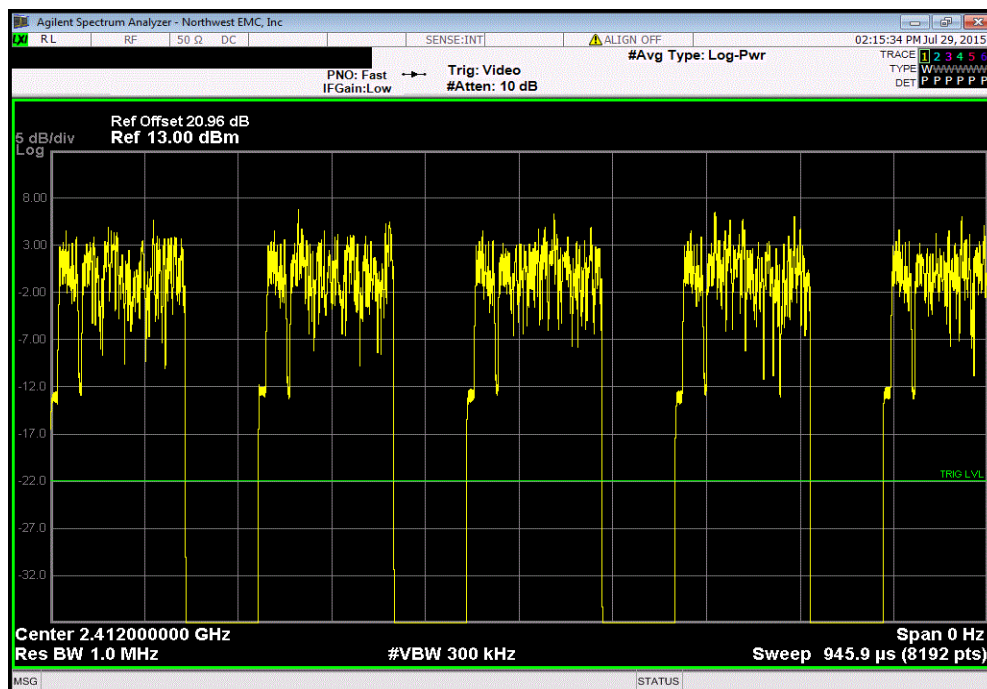


DUTY CYCLE

Chain C, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, Low Channel 1, 2412 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
126.979 us	210.2 us	1	60.4	N/A	N/A	

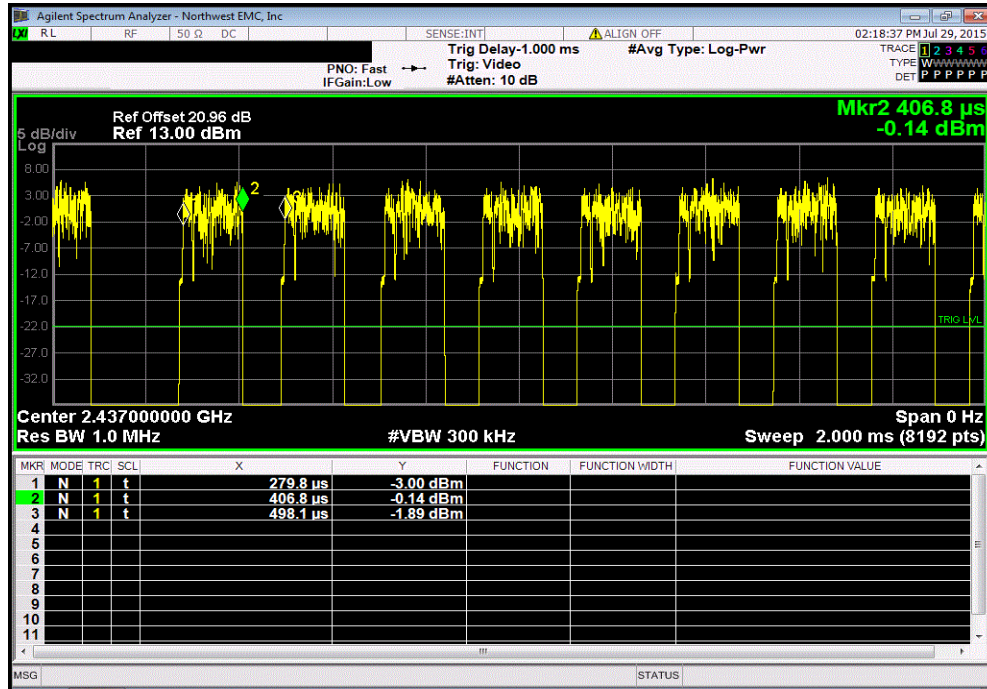


Chain C, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, Low Channel 1, 2412 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	

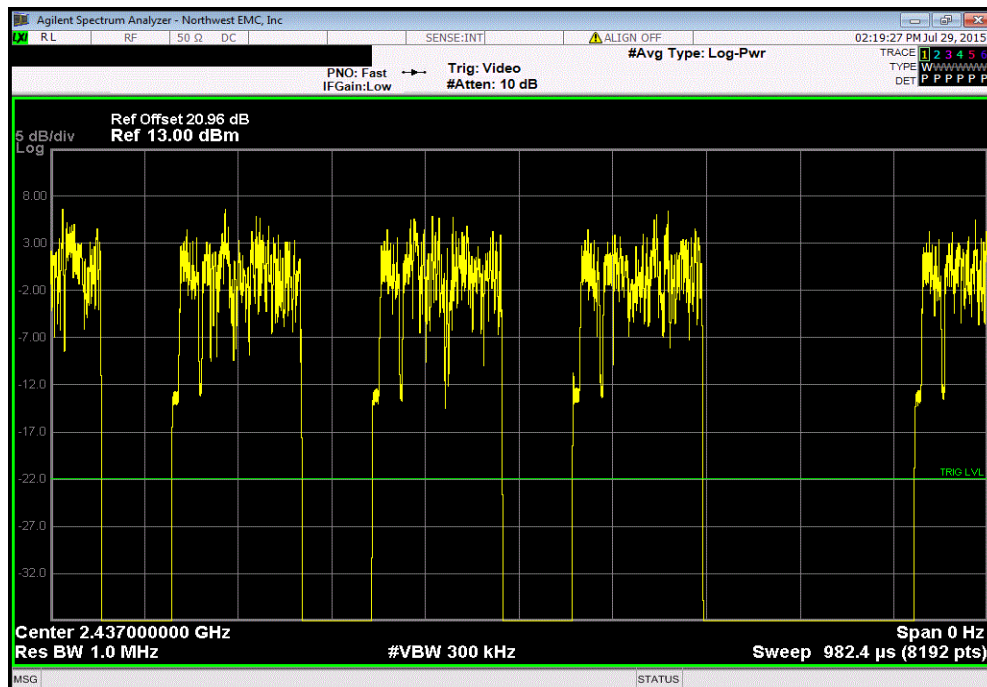


DUTY CYCLE

Chain C, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, Mid Channel 6, 2437 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
127.023 μ s	218.3 μ s	1	58.2	N/A	N/A	

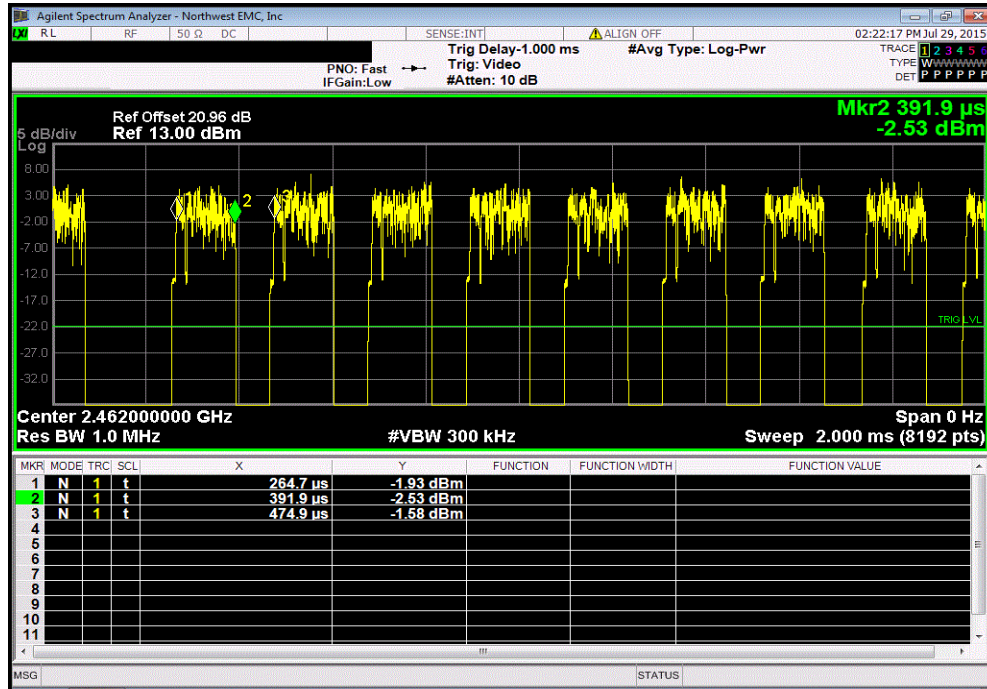


Chain C, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, Mid Channel 6, 2437 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	



DUTY CYCLE

Chain C, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, High Channel 11, 2462 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
127.212 us	210.2 us	1	60.5	N/A	N/A	



Chain C, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, High Channel 11, 2462 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	

