



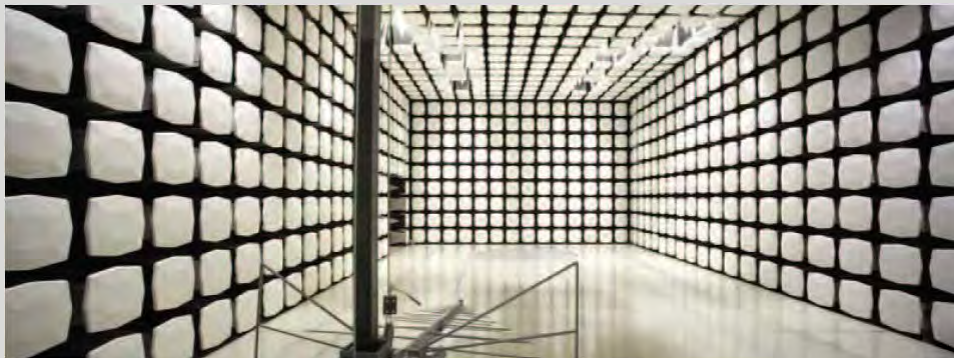
Microsoft Corporation

Model 1631

FCC 15.247:2014

FCC 15.207:2014

Report #: MCSO1698 PART 3 OF 7



Report Prepared By Northwest EMC Inc.

NORTHWEST EMC – (888) 364-2378 – www.nwemc.com

California – Minnesota – Oregon – New York – Washington

OCCUPIED BANDWIDTH

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 (mo.)
40GHz DC Block	Miteq	DCB4000	AMD	5/16/2013	12
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	7/30/2013	12
EV06 Direct Connect Cable	ESM Cable Corp.	TT	ECA	NCR	0
Power Meter	Gigatronics	8651A	SPM	11/26/2013	24
Power Sensor	Gigatronics	80701A	SPL	7/8/2011	36
Attenuator, 6dB	S.M. Electronics	18N-06	AWN	2/3/2014	12
MXG Analog Signal Generator	Agilent	N5181A	TIG	3/28/2014	36
Spectrum Analyzer	Agilent	E4446A	AAQ	1/21/2014	24

TEST DESCRIPTION

The 6dB occupied bandwidth was measured using 100 kHz resolution bandwidth and 300 kHz video bandwidth. The 99.9% (approximate 26 dB) emission bandwidth (EBW) was also measured at the same time.

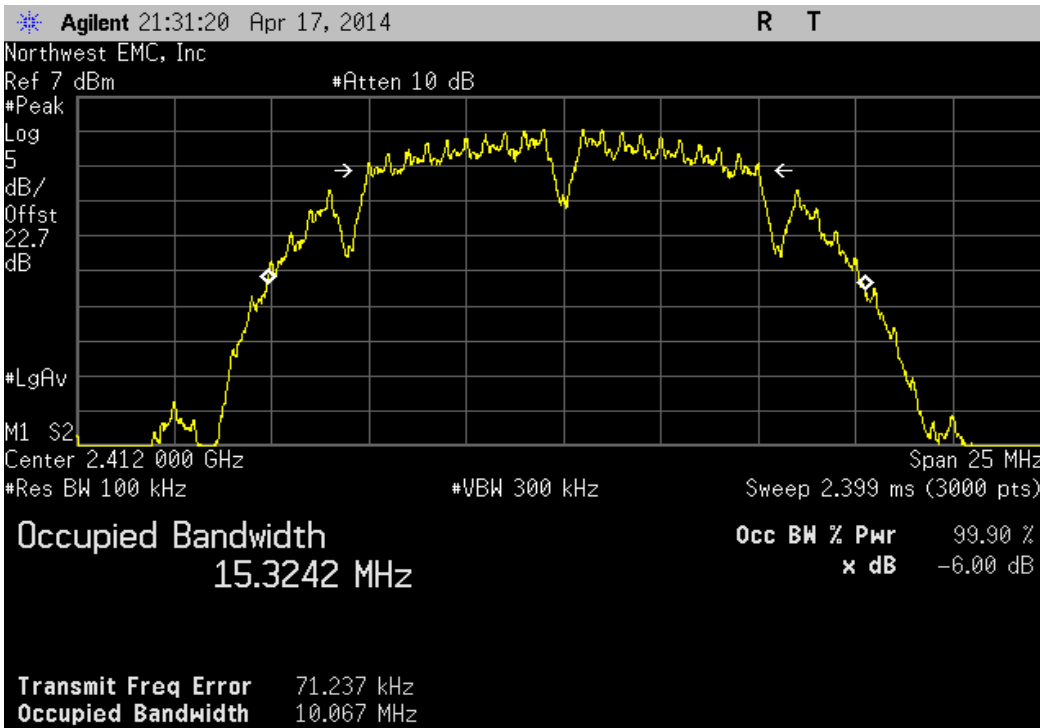
The EUT was set to low, medium and high transmit frequencies. The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer. The EUT was transmitting at the data rate(s) listed in the datasheet.

EUT: Model 1631		Work Order: MCSO1698	
Serial Number: 006840341053		Date: 04/18/14	
Customer: Microsoft Corporation		Temperature: 22.3°C	
Attendees: None		Humidity: 32%	
Project: None		Barometric Pres.: 1014	
Tested by: Jared Ison		Power: 110VAC/60Hz	
		Job Site: EV06	
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2014		ANSI C63.10:2009	
COMMENTS			
Modes of operation tested were client provided. Reference power level table for channel power setting.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	6	Signature 	

	Value	Limit	Result
20 MHz			
2400 MHz - 2483.5 MHz Band			
802.11(b) 1 Mbps			
Low Channel 1, 2412 MHz	10.067 MHz	> 500 kHz	Pass
Mid Channel 6, 2437 MHz	10.047 MHz	> 500 kHz	Pass
High Channel 11, 2462 MHz	10.086 MHz	> 500 kHz	Pass
802.11(b) 11 Mbps			
Low Channel 1, 2412 MHz	10.039 MHz	> 500 kHz	Pass
Mid Channel 6, 2437 MHz	9.68 MHz	> 500 kHz	Pass
High Channel 11, 2462 MHz	9.541 MHz	> 500 kHz	Pass
802.11(g) 6 Mbps			
Low Channel 1, 2412 MHz	16.388 MHz	> 500 kHz	Pass
Mid Channel 6, 2437 MHz	16.343 MHz	> 500 kHz	Pass
High Channel 11, 2462 MHz	16.353 MHz	> 500 kHz	Pass
802.11(g) 36 Mbps			
Low Channel 1, 2412 MHz	16.433 MHz	> 500 kHz	Pass
Mid Channel 6, 2437 MHz	16.437 MHz	> 500 kHz	Pass
High Channel 11, 2462 MHz	16.441 MHz	> 500 kHz	Pass
802.11(g) 54 Mbps			
Low Channel 1, 2412 MHz	16.438 MHz	> 500 kHz	Pass
Mid Channel 6, 2437 MHz	16.443 MHz	> 500 kHz	Pass
High Channel 11, 2462 MHz	16.451 MHz	> 500 kHz	Pass
802.11(n) MCS0			
Low Channel 1, 2412 MHz	17.068 MHz	> 500 kHz	Pass
Mid Channel 6, 2437 MHz	17.371 MHz	> 500 kHz	Pass
High Channel 11, 2462 MHz	17.545 MHz	> 500 kHz	Pass
802.11(n) MCS7			
Low Channel 1, 2412 MHz	17.581 MHz	> 500 kHz	Pass
Mid Channel 6, 2437 MHz	17.621 MHz	> 500 kHz	Pass
High Channel 11, 2462 MHz	17.594 MHz	> 500 kHz	Pass

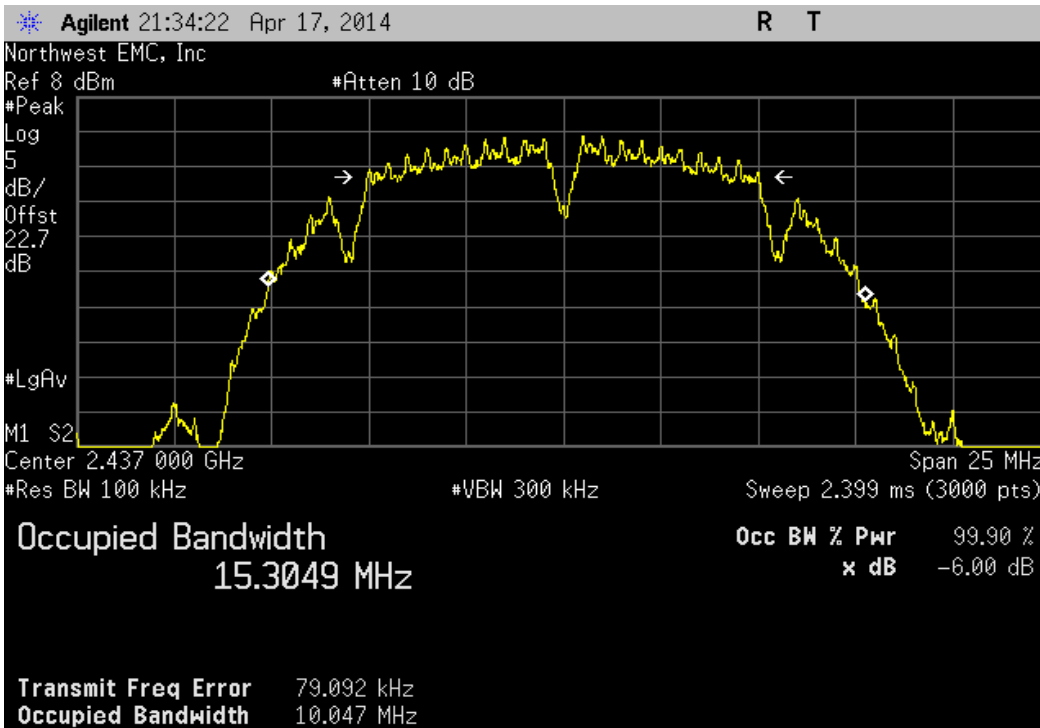
20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz

				Value	Limit	Result
				10.067 MHz	> 500 kHz	Pass



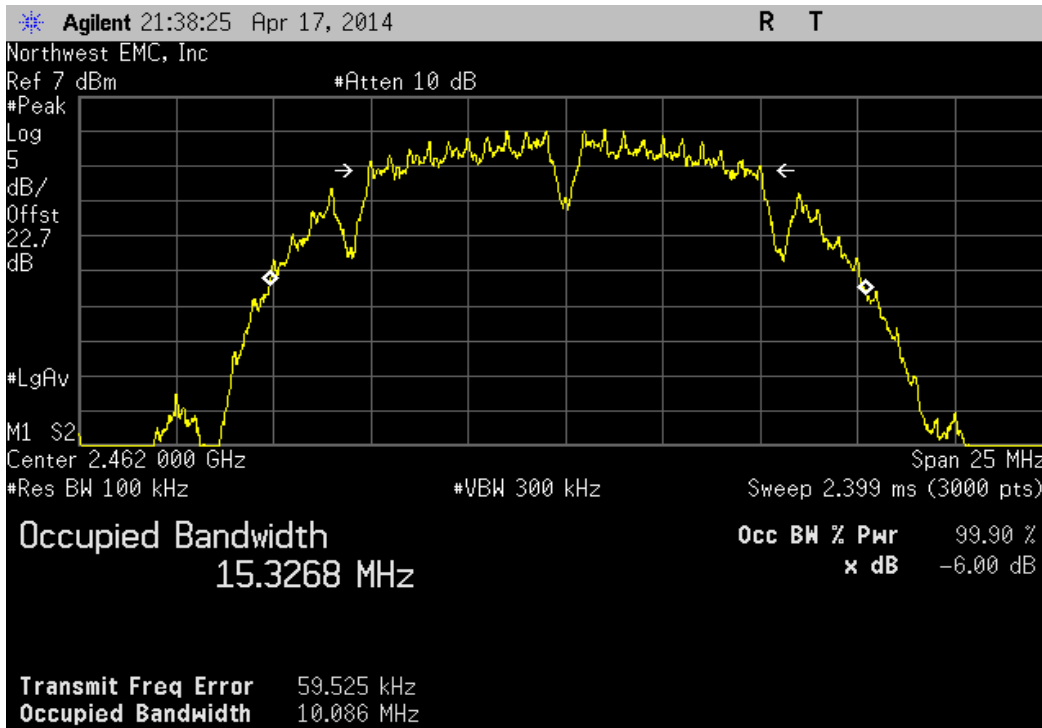
20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz

				Value	Limit	Result
				10.047 MHz	> 500 kHz	Pass



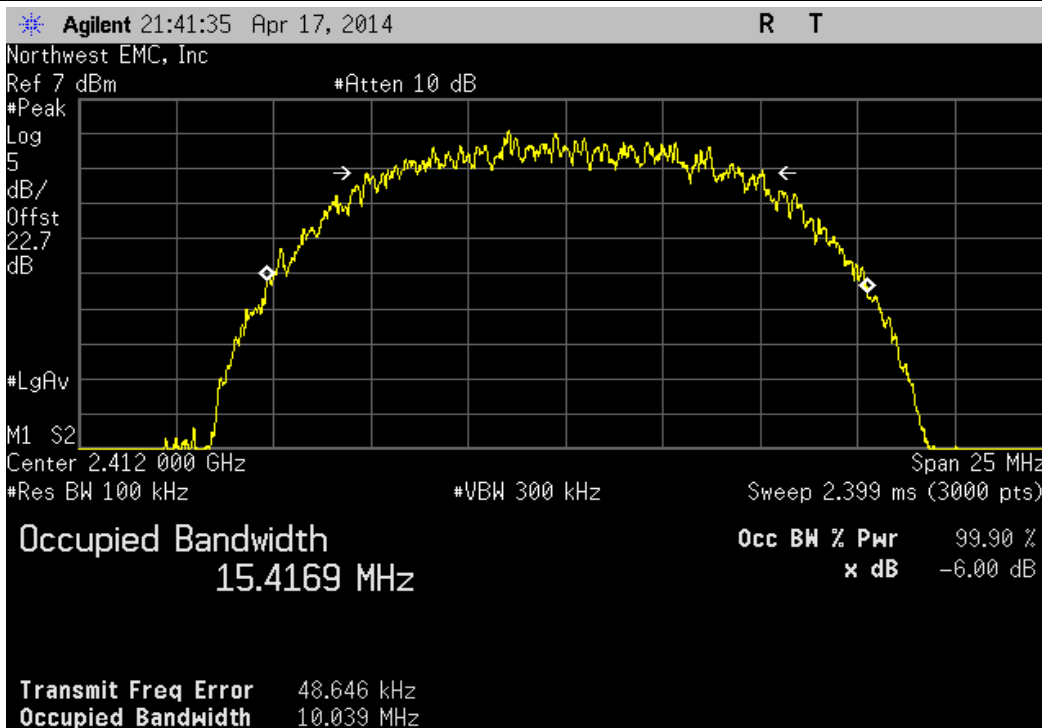
20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz

	Value	Limit	Result
	10.086 MHz	> 500 kHz	Pass



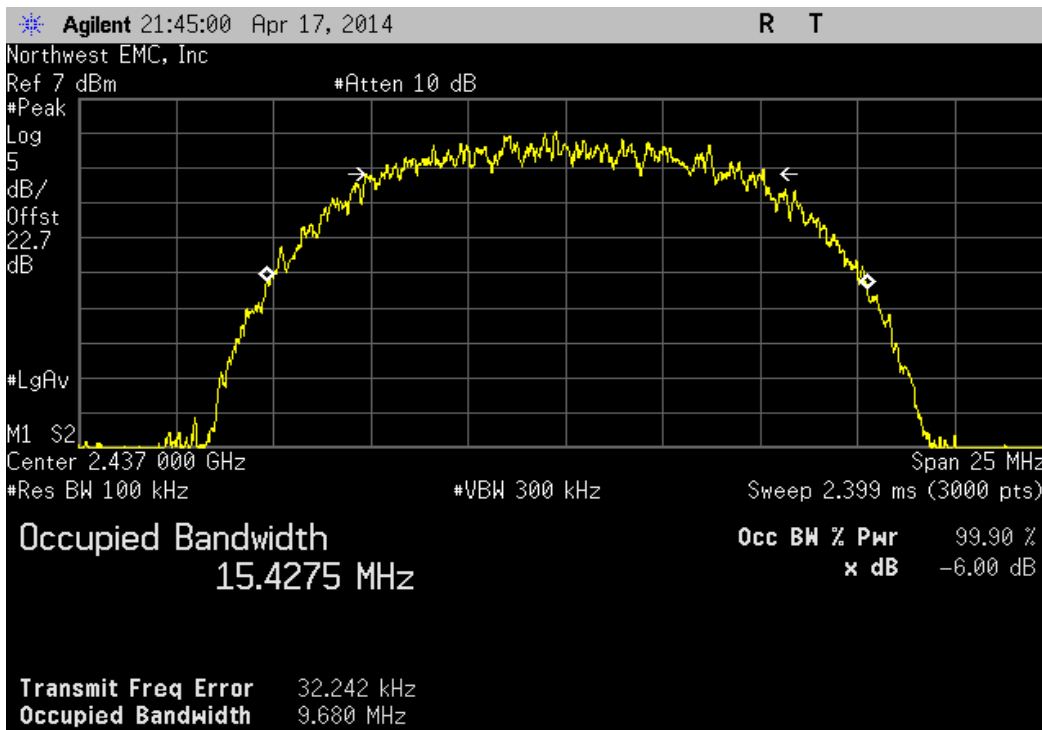
20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz

	Value	Limit	Result
	10.039 MHz	> 500 kHz	Pass



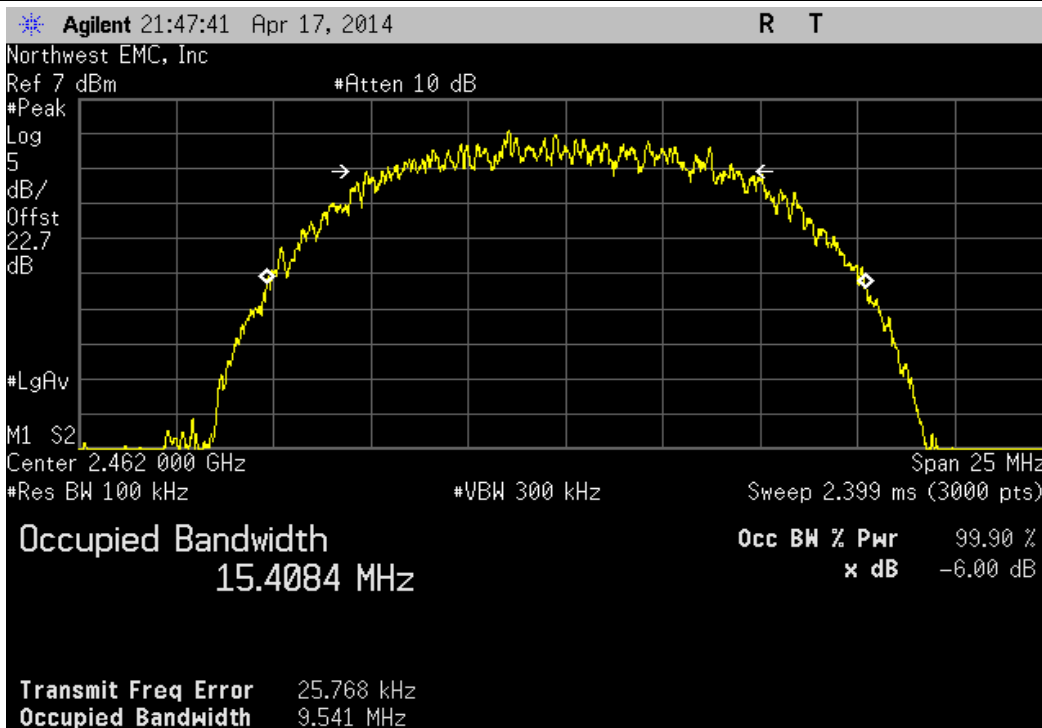
20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz

	Value	Limit	Result
	9.68 MHz	> 500 kHz	Pass



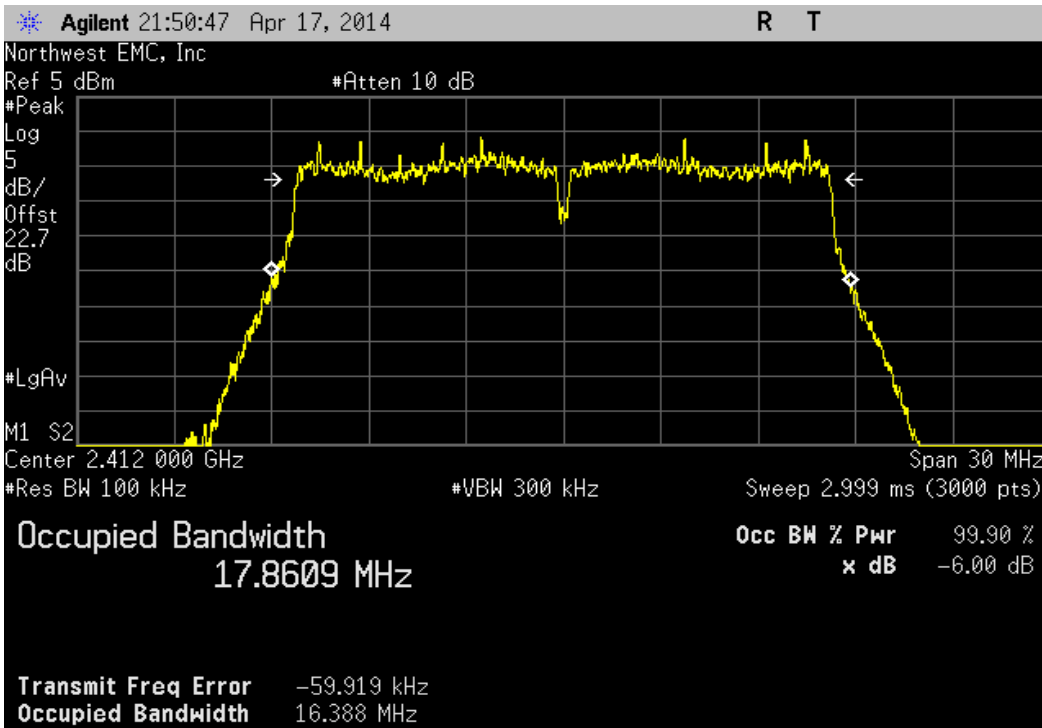
20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz

	Value	Limit	Result
	9.541 MHz	> 500 kHz	Pass



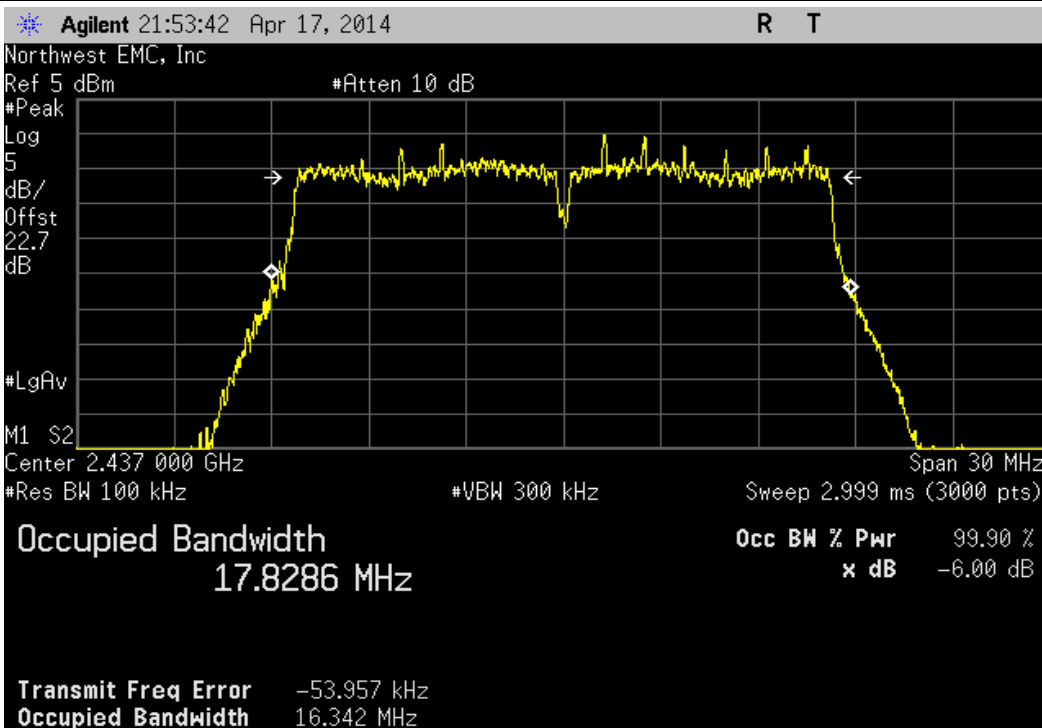
20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz

				Value	Limit	Result
				16.388 MHz	> 500 kHz	Pass



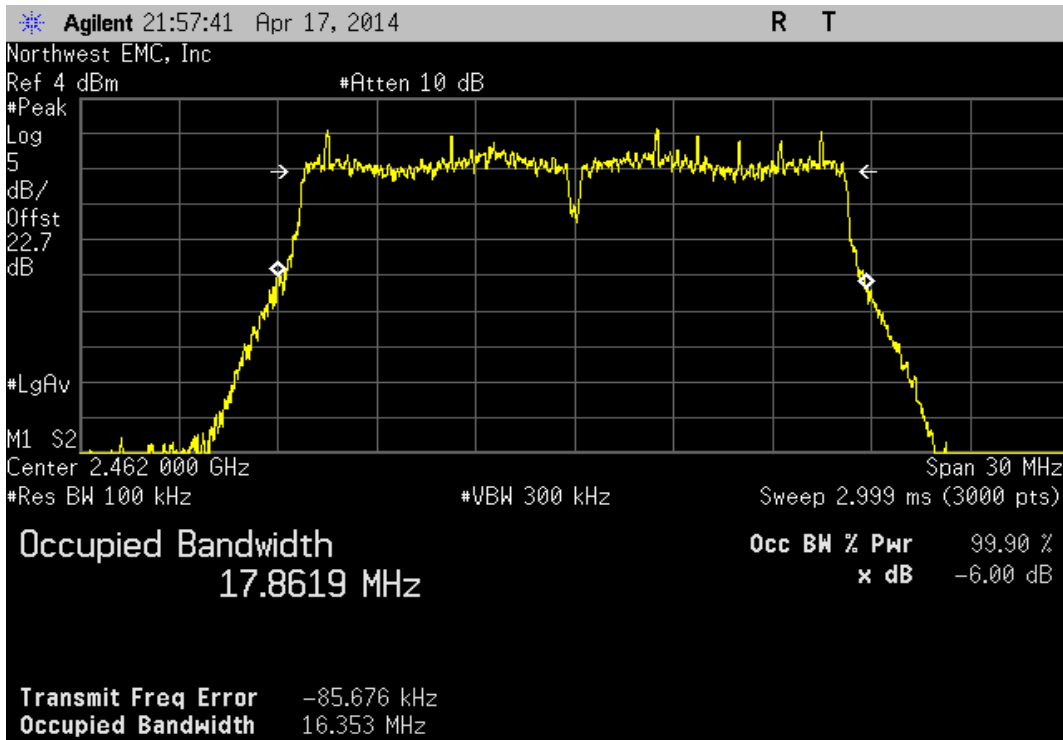
20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz

				Value	Limit	Result
				16.343 MHz	> 500 kHz	Pass



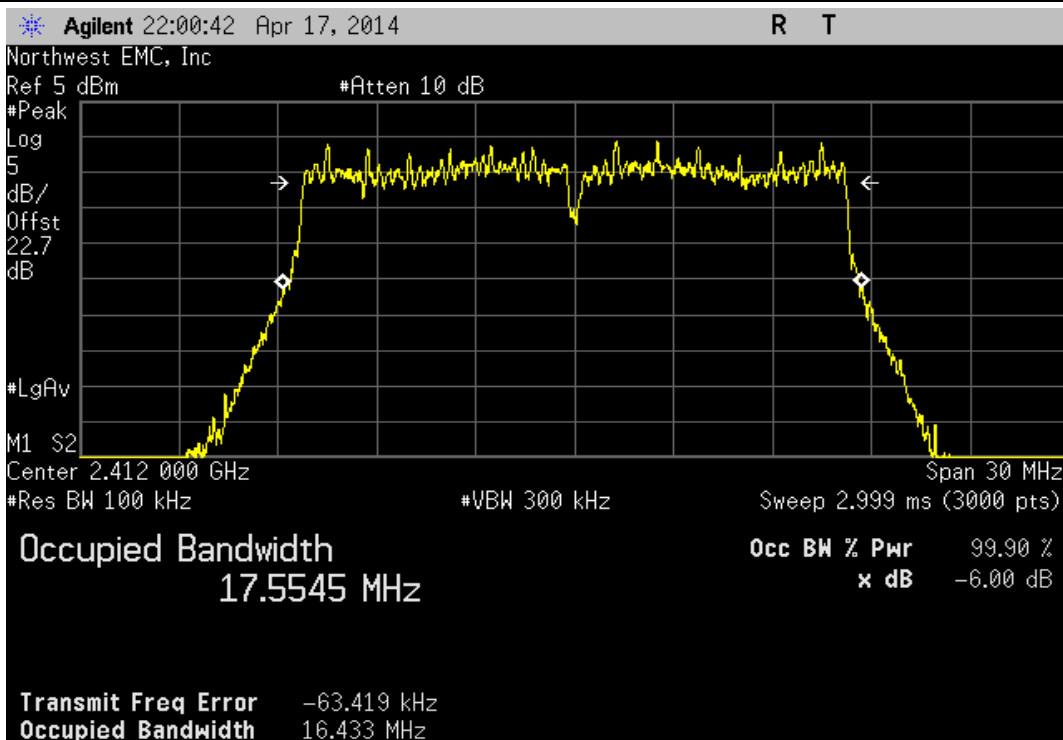
20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz

Value	Limit	Result
16.353 MHz	> 500 kHz	Pass



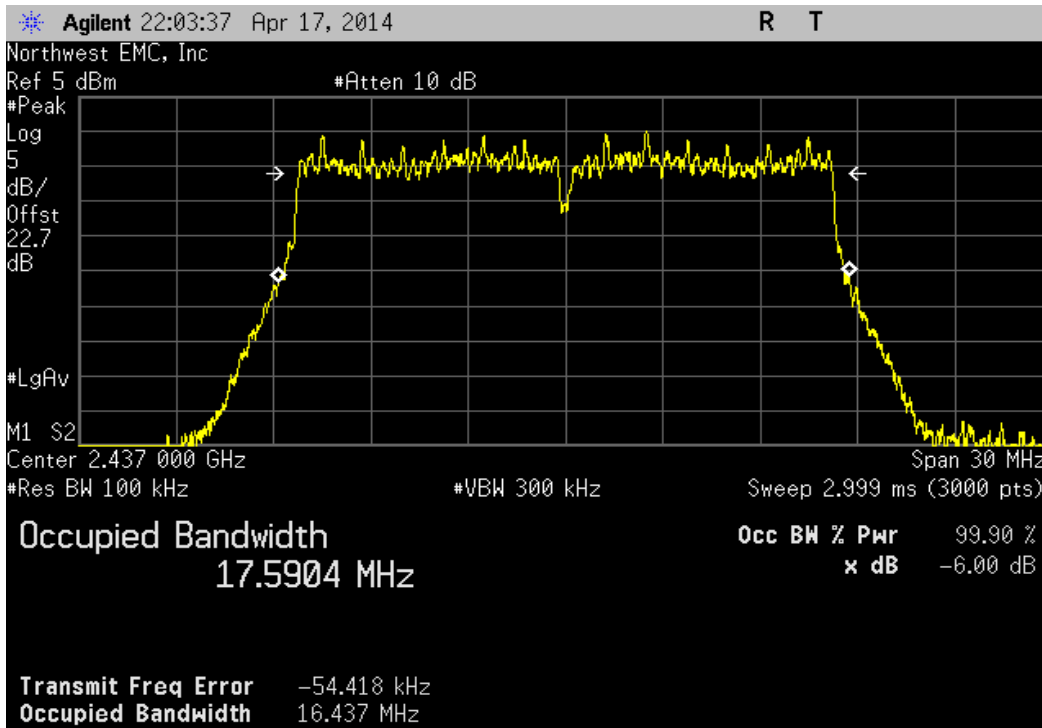
20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz

Value	Limit	Result
16.433 MHz	> 500 kHz	Pass



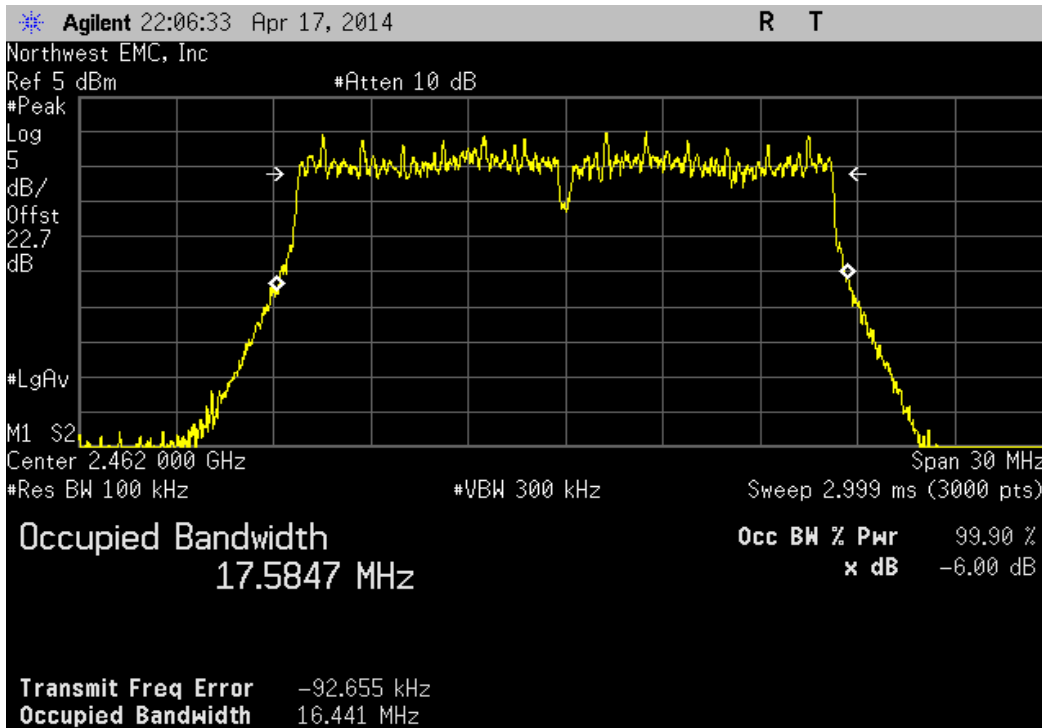
20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Mid Channel 6, 2437 MHz

	Value	Limit	Result
	16.437 MHz	> 500 kHz	Pass



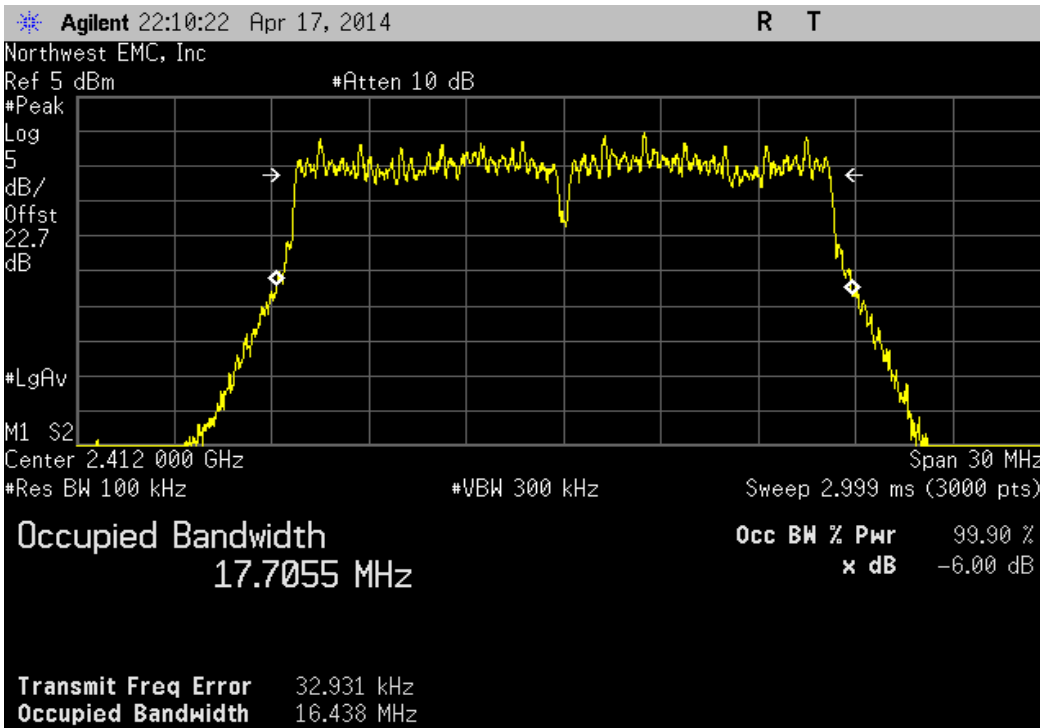
20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz

	Value	Limit	Result
	16.441 MHz	> 500 kHz	Pass



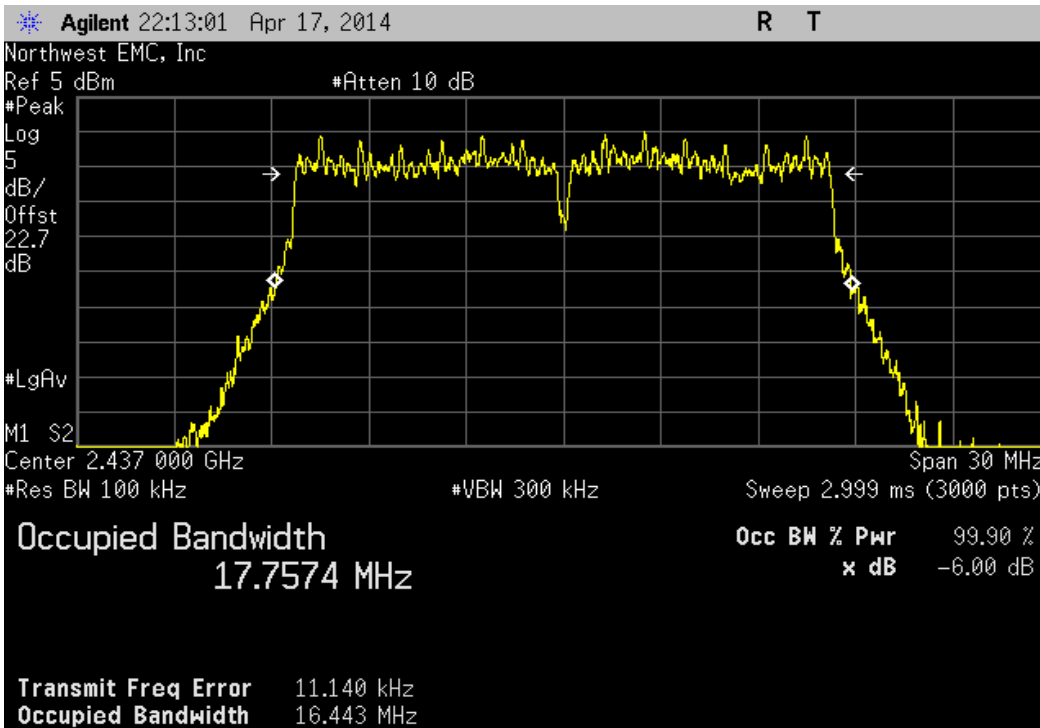
20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz

	Value	Limit	Result
	16.438 MHz	> 500 kHz	Pass



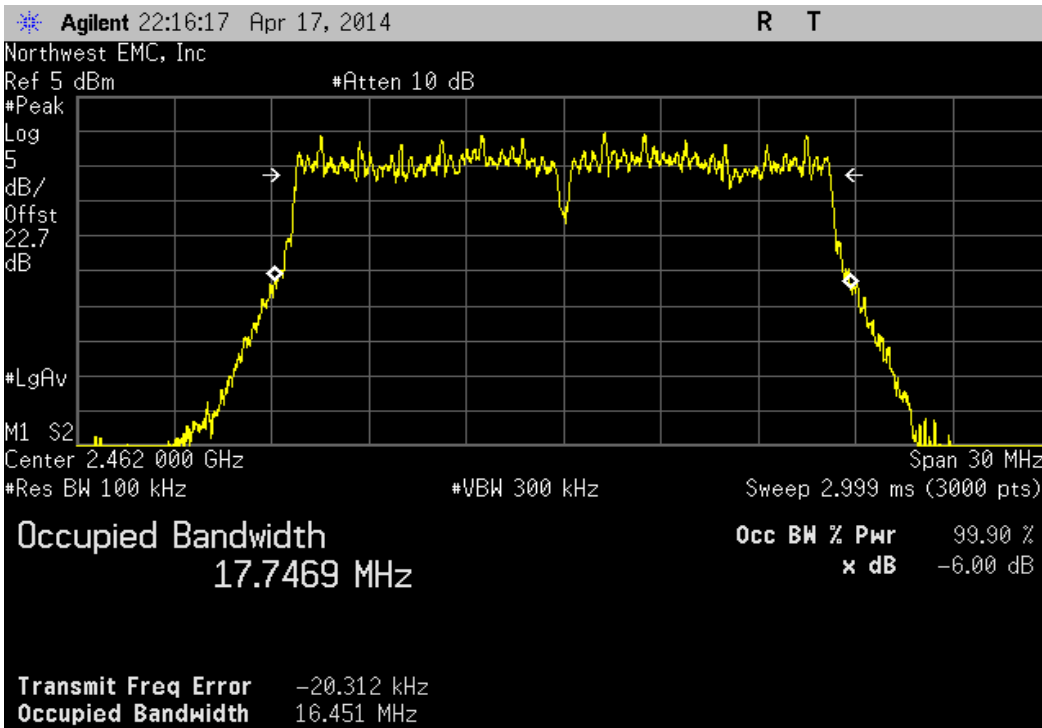
20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz

	Value	Limit	Result
	16.443 MHz	> 500 kHz	Pass



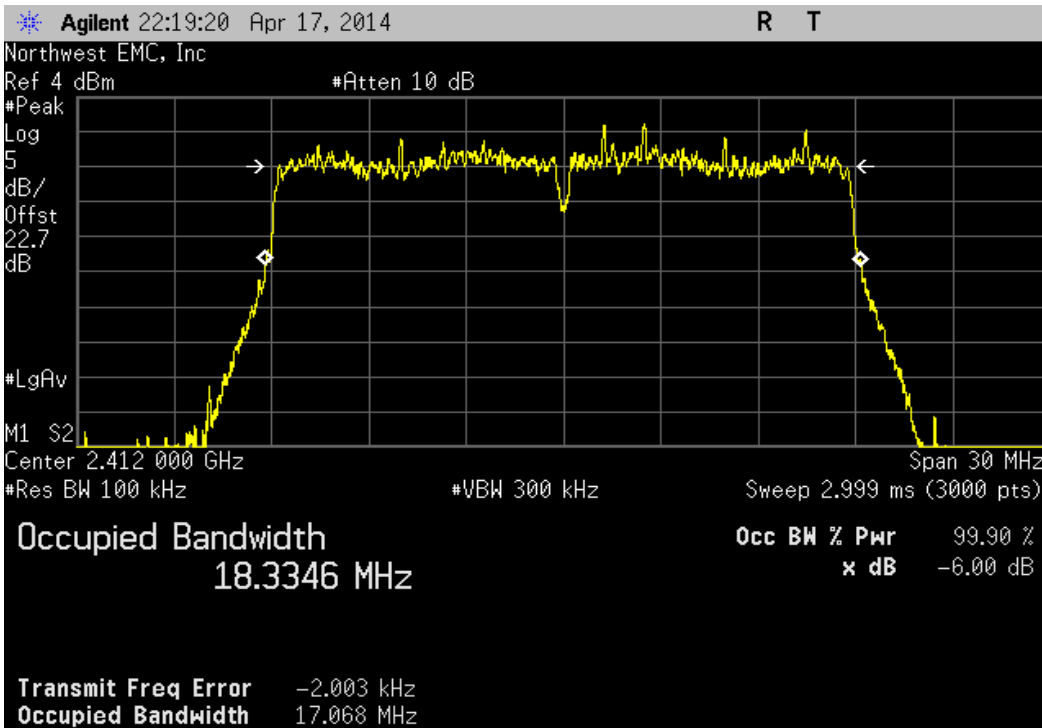
20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz

	Value	Limit	Result
	16.451 MHz	> 500 kHz	Pass

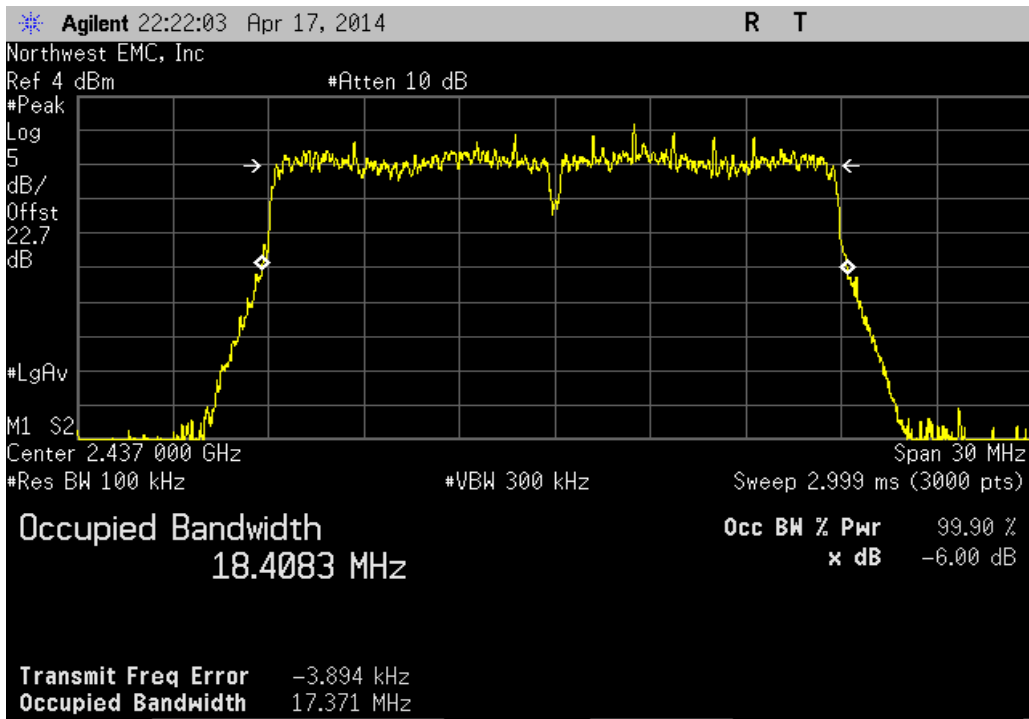


20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Low Channel 1, 2412 MHz

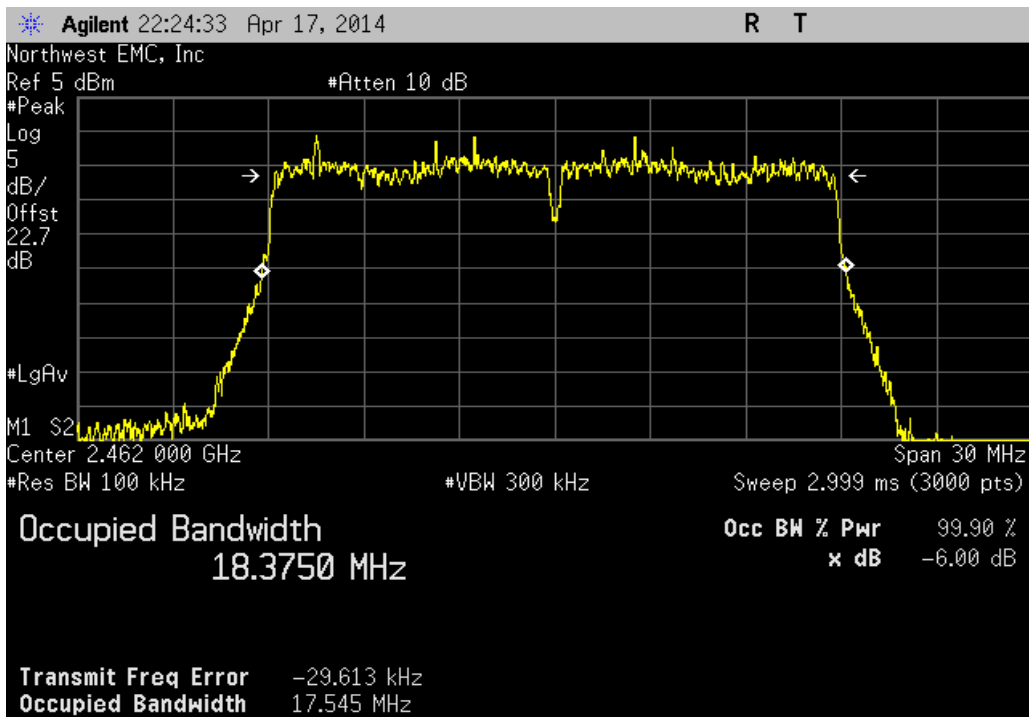
	Value	Limit	Result
	17.068 MHz	> 500 kHz	Pass



20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Mid Channel 6, 2437 MHz			
	Value	Limit	Result
	17.371 MHz	> 500 kHz	Pass

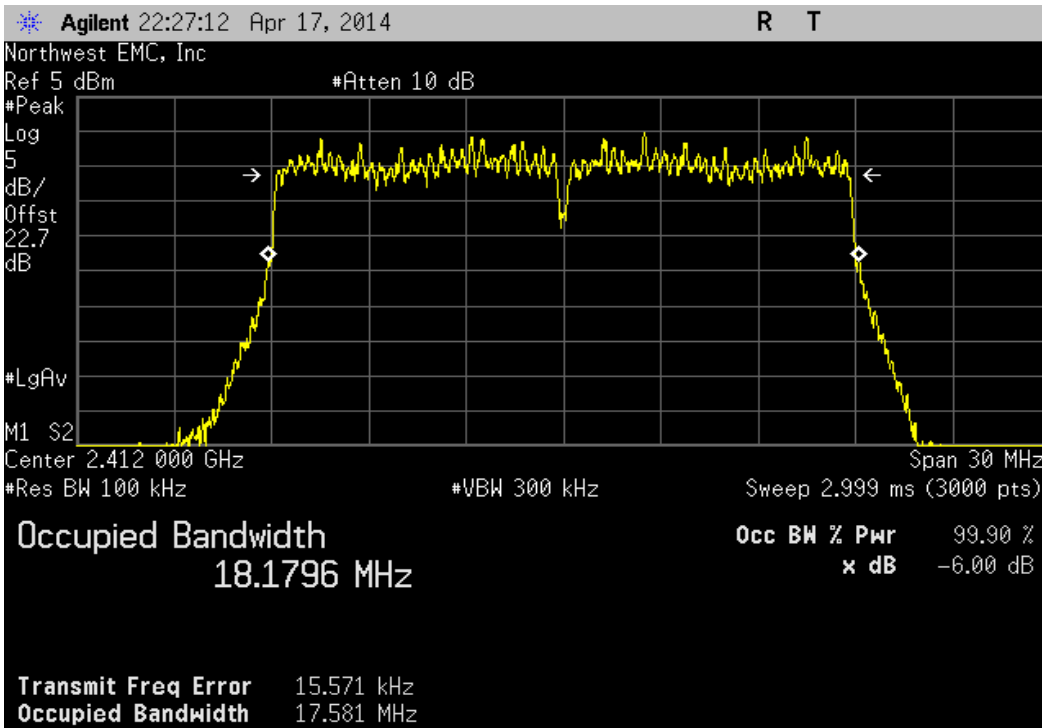


20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, High Channel 11, 2462 MHz			
	Value	Limit	Result
	17.545 MHz	> 500 kHz	Pass



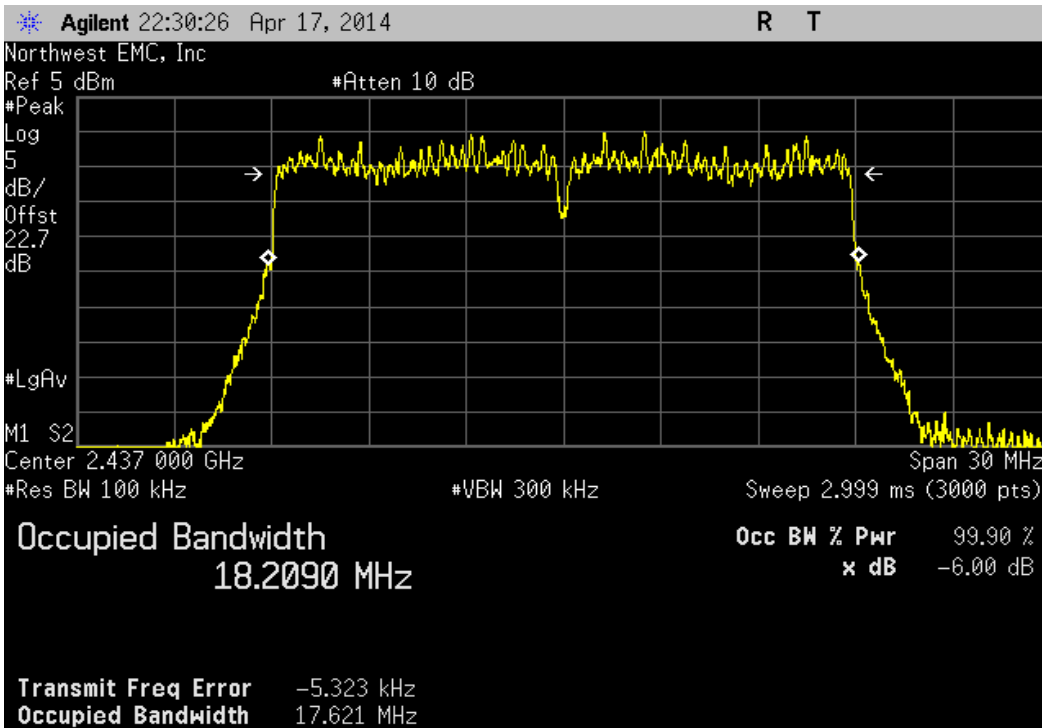
20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Low Channel 1, 2412 MHz

	Value	Limit	Result
	17.581 MHz	> 500 kHz	Pass



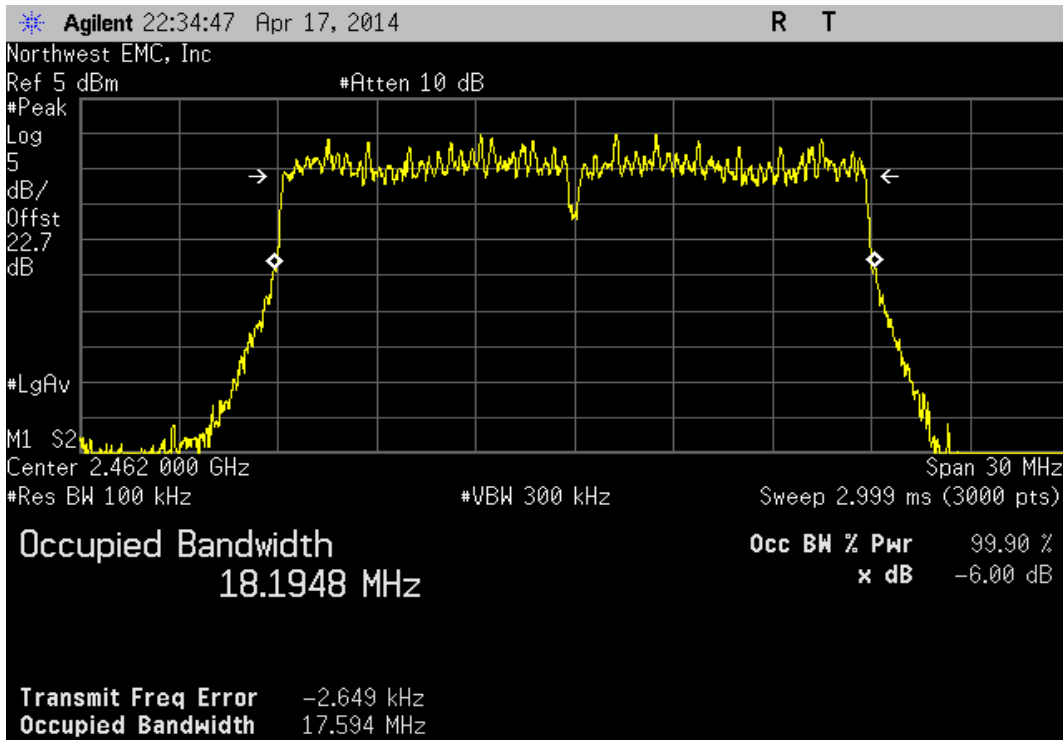
20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Mid Channel 6, 2437 MHz

	Value	Limit	Result
	17.621 MHz	> 500 kHz	Pass



20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, High Channel 11, 2462 MHz

				Value	Limit	Result
				17.594 MHz	> 500 kHz	Pass



OCCUPIED BANDWIDTH

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Description	Manufacturer	Model	ID	Last Cal.	Interval (mo.)
40GHz DC Block	Miteq	DCB4000	AMD	5/16/2013	12
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	7/30/2013	12
EV06 Direct Connect Cable	ESM Cable Corp.	TT	ECA	NCR	0
Attenuator, 6dB	S.M. Electronics	18N-06	AWN	2/3/2014	12
Power Meter	Agilent	N1913A	SQR	4/29/2013	36
Power Sensor	Agilent	E9300H	SQO	4/29/2013	36
MXG Analog Signal Generator	Agilent	N5181A	TIG	3/28/2014	36
Spectrum Analyzer	Agilent	E4446A	AAQ	1/21/2014	24

TEST DESCRIPTION

The 6dB occupied bandwidth was measured using 100 kHz resolution bandwidth and 300 kHz video bandwidth. The 99.9% (approximate 26 dB) emission bandwidth (EBW) was also measured at the same time.

The EUT was set to low, medium and high transmit frequencies. 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.

EUT: Model 1631	Work Order: MCSO1698
Serial Number: 006840341053	Date: 04/16/14
Customer: Microsoft Corporation	Temperature: 22.3°C
Attendees: None	Humidity: 32%
Project: None	Barometric Pres.: 1014
Tested by: Jared Ison	Power: 110VAC/60Hz
	Job Site: EV06

TEST SPECIFICATIONS	Test Method
FCC 15.247:2014	ANSI C63.10:2009

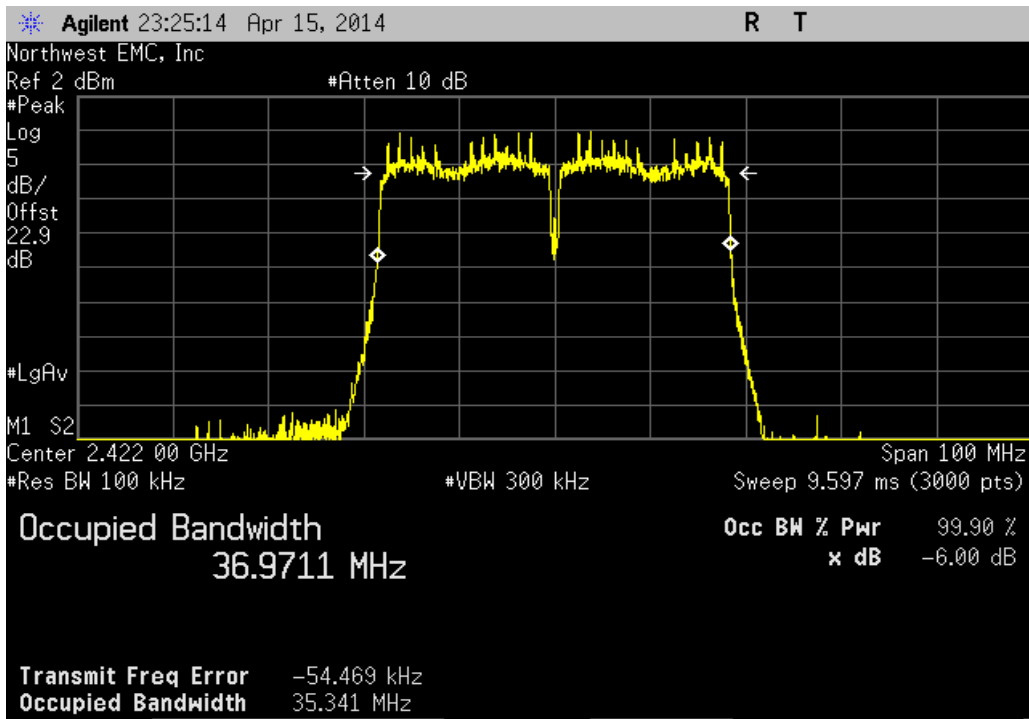
COMMENTS
Modes of operation tested were client provided. Reference power level table for channel power setting.

DEVIATIONS FROM TEST STANDARD
None

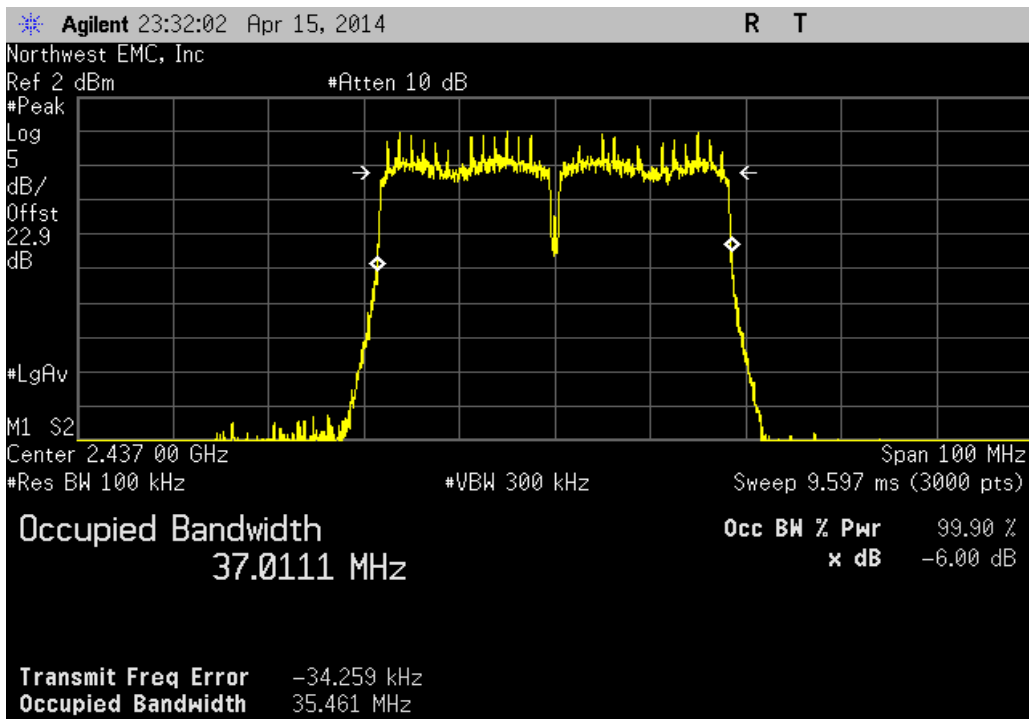
Configuration #	6	Signature 
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		Value	Limit	Result
40 MHz	2400 MHz - 2483.5 MHz Band			
	802.11(n) MCS0			
	1/5 Low Channel, 2422 MHz	35.341 MHz	> 500 kHz	Pass
	4/8 Mid Channel, 2437 MHz	35.461 MHz	> 500 kHz	Pass
	7/11 High Channel, 2452 MHz	35.308 MHz	> 500 kHz	Pass
	802.11(n) MCS7			
	1/5 Low Channel, 2422 MHz	35.99 MHz	> 500 kHz	Pass
	4/8 Mid Channel, 2437 MHz	35.975 MHz	> 500 kHz	Pass
	7/11 High Channel, 2452 MHz	35.846 MHz	> 500 kHz	Pass

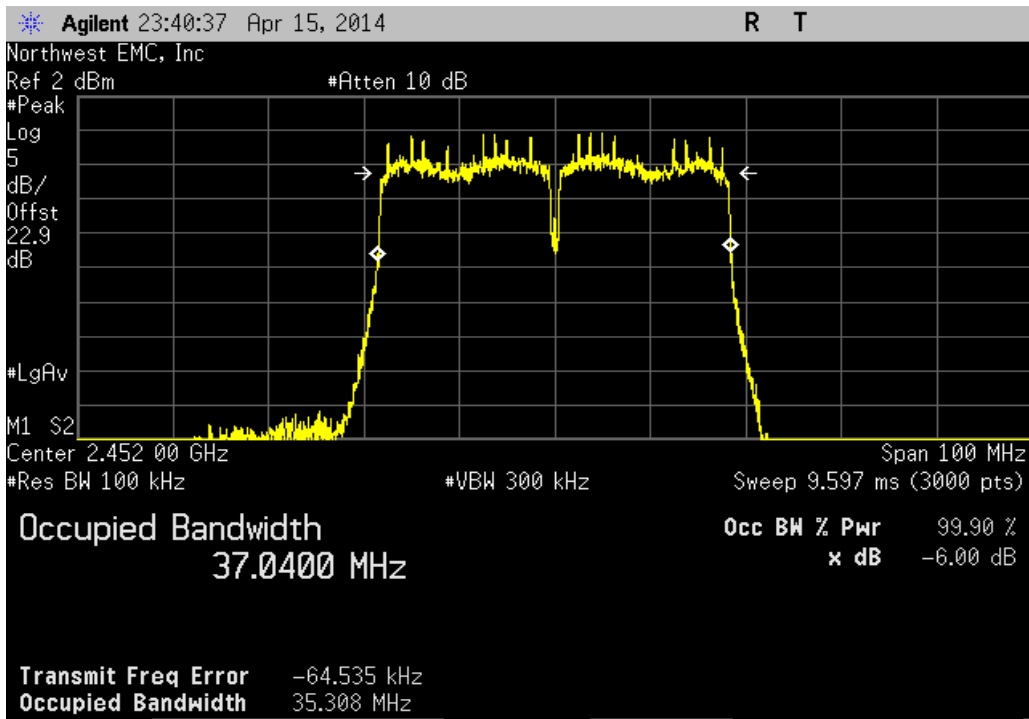
40 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, 1/5 Low Channel, 2422 MHz			
	Value	Limit	Result
	35.341 MHz	> 500 kHz	Pass



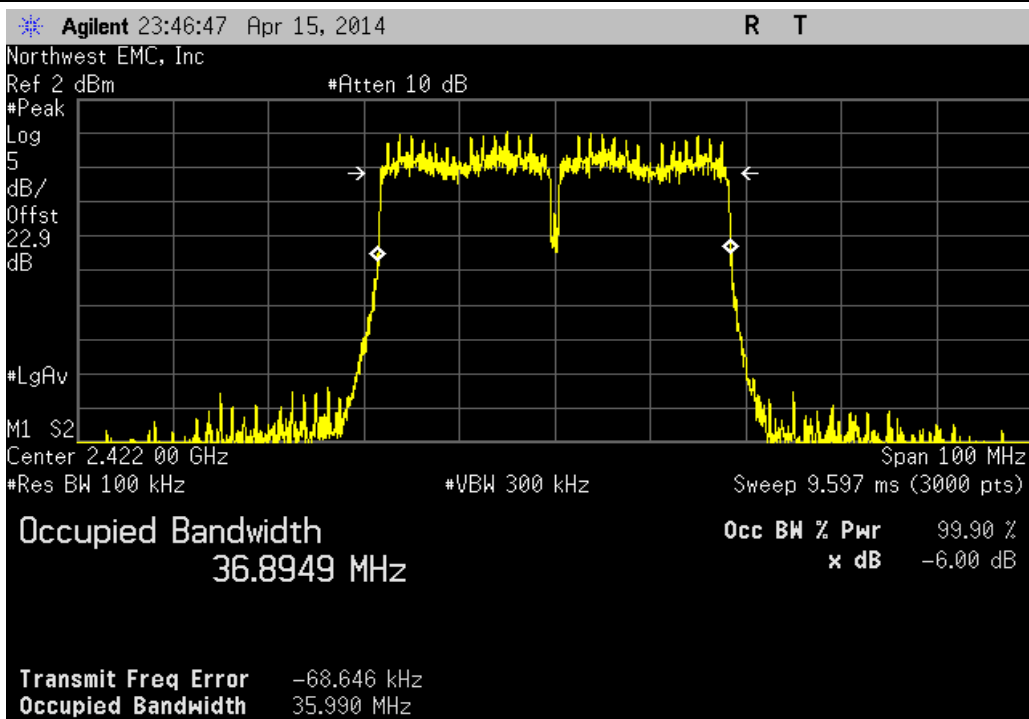
40 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, 4/8 Mid Channel, 2437 MHz			
	Value	Limit	Result
	35.461 MHz	> 500 kHz	Pass



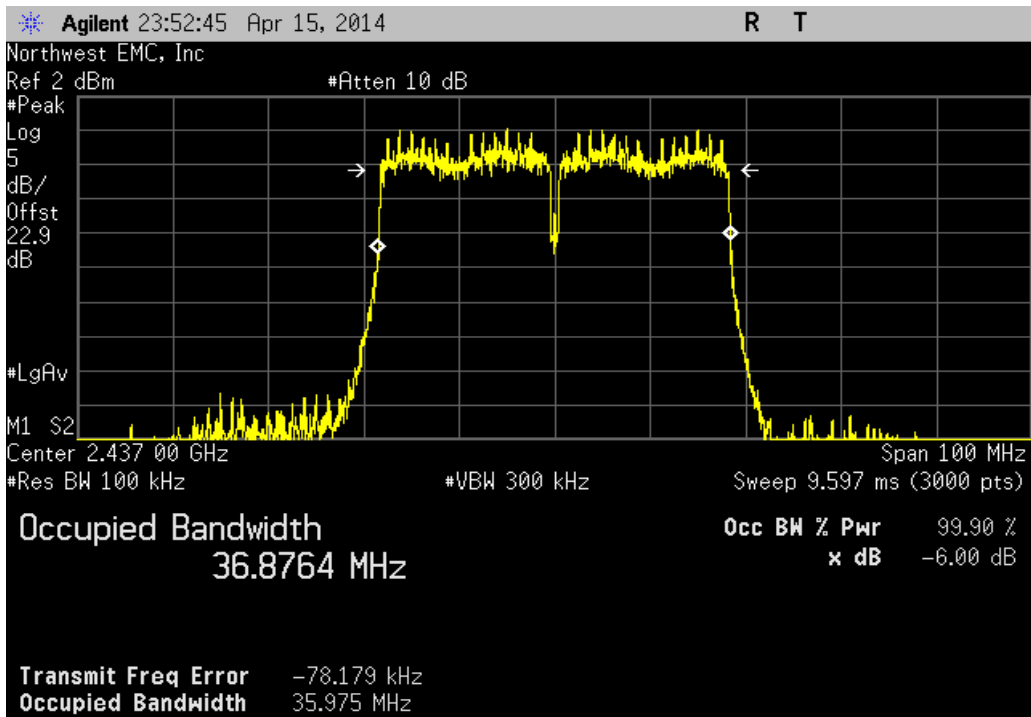
40 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, 7/11 High Channel, 2452 MHz			
	Value	Limit	Result
	35.308 MHz	> 500 kHz	Pass



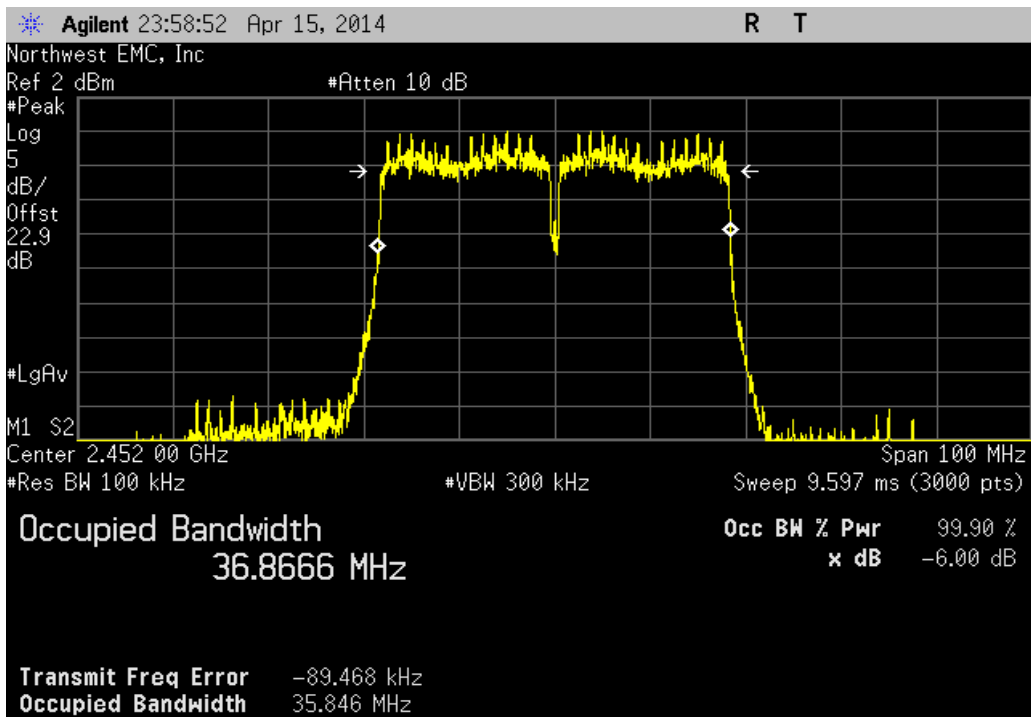
40 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, 1/5 Low Channel, 2422 MHz			
	Value	Limit	Result
	35.99 MHz	> 500 kHz	Pass



40 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, 4/8 Mid Channel, 2437 MHz			
	Value	Limit	Result
	35.975 MHz	> 500 kHz	Pass



40 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, 7/11 High Channel, 2452 MHz			
	Value	Limit	Result
	35.846 MHz	> 500 kHz	Pass



OCCUPIED BANDWIDTH

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Power Sensor	Gigatronics	80701A	SPL	7/8/2011	36
Attenuator, 6dB	S.M. Electronics	18N-06	AWN	2/3/2014	12
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OCCUPIED BANDWIDTH

XMI 2013.08.15
PsaTx 2013.10.23

EUT: Model 1631	Work Order: MCSO1698
Serial Number: 006840341053	Date: 04/18/14
Customer: Microsoft Corporation	Temperature: 22.3°C
Attendees: None	Humidity: 32%
Project: None	Barometric Pres.: 1014
Tested by: Jared Ison	Power: 110VAC/60Hz
	Job Site: EV06

TEST SPECIFICATIONS	Test Method
FCC 15.247:2014	ANSI C63.10:2009

COMMENTS
Modes of operation tested were client provided. Reference power level table for channel power setting.

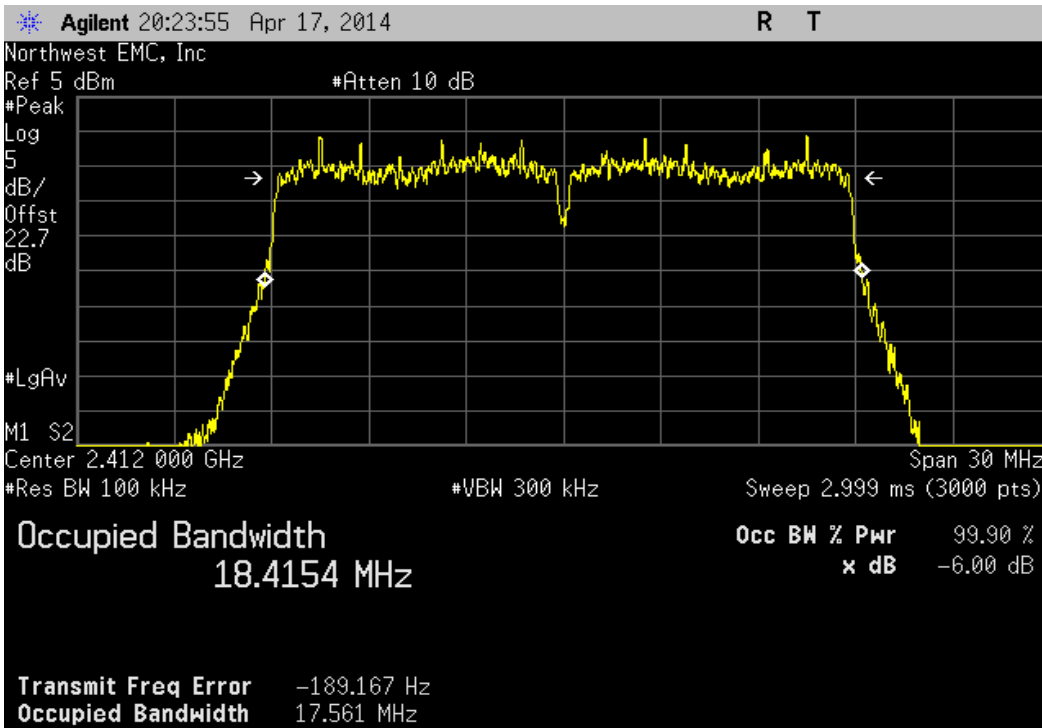
DEVIATIONS FROM TEST STANDARD
None

Configuration #	6	Signature 
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		Value	Limit	Result
Chain A	20 MHz			
	2400 MHz - 2483.5 MHz Band			
	802.11(n) MCS8			
	Low Channel 1, 2412 MHz	17.561 MHz	> 500 kHz	Pass
	Mid Channel 6, 2437 MHz	17.553 MHz	> 500 kHz	Pass
	High Channel 11, 2462 MF	17.461 MHz	> 500 kHz	Pass
	802.11(n) MCS15			
	Low Channel 1, 2412 MHz	17.564 MHz	> 500 kHz	Pass
	Mid Channel 6, 2437 MHz	17.546 MHz	> 500 kHz	Pass
	High Channel 11, 2462 MF	17.611 MHz	> 500 kHz	Pass
Chain B	20 MHz			
	2400 MHz - 2483.5 MHz Band			
	802.11(n) MCS8			
	Low Channel 1, 2412 MHz	17.552 MHz	> 500 kHz	Pass
	Mid Channel 6, 2437 MHz	17.558 MHz	> 500 kHz	Pass
	High Channel 11, 2462 MF	17.538 MHz	> 500 kHz	Pass
	802.11(n) MCS15			
	Low Channel 1, 2412 MHz	17.618 MHz	> 500 kHz	Pass
	Mid Channel 6, 2437 MHz	17.633 MHz	> 500 kHz	Pass
	High Channel 11, 2462 MF	17.646 MHz	> 500 kHz	Pass

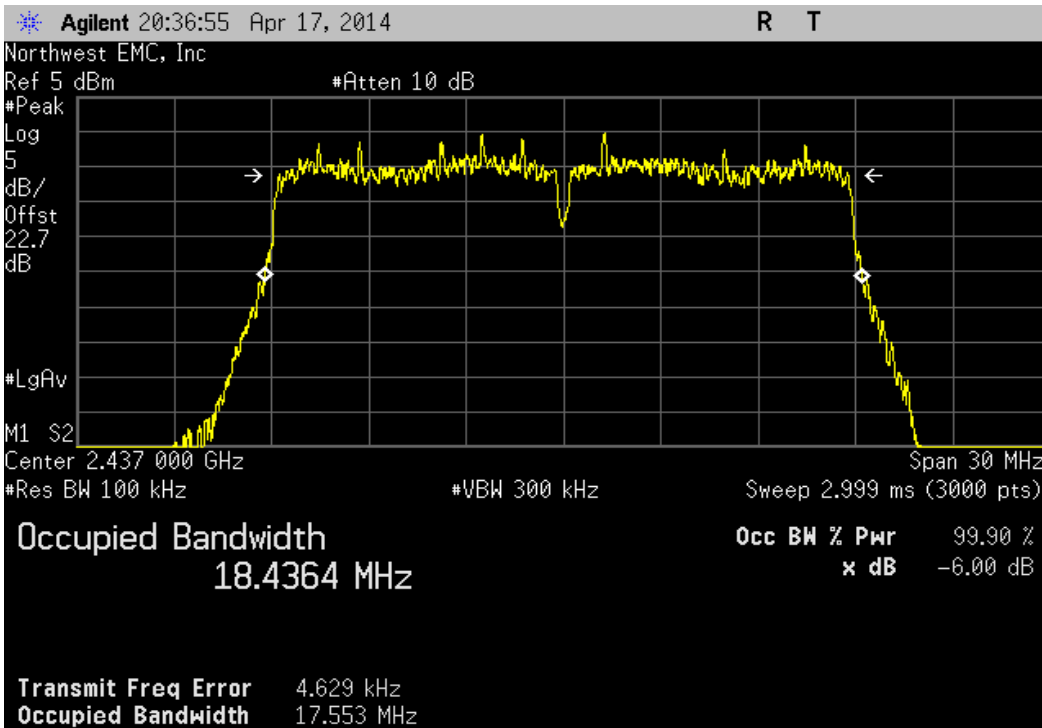
Chain A, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, Low Channel 1, 2412 MHz

	Value	Limit	Result
	17.561 MHz	> 500 kHz	Pass



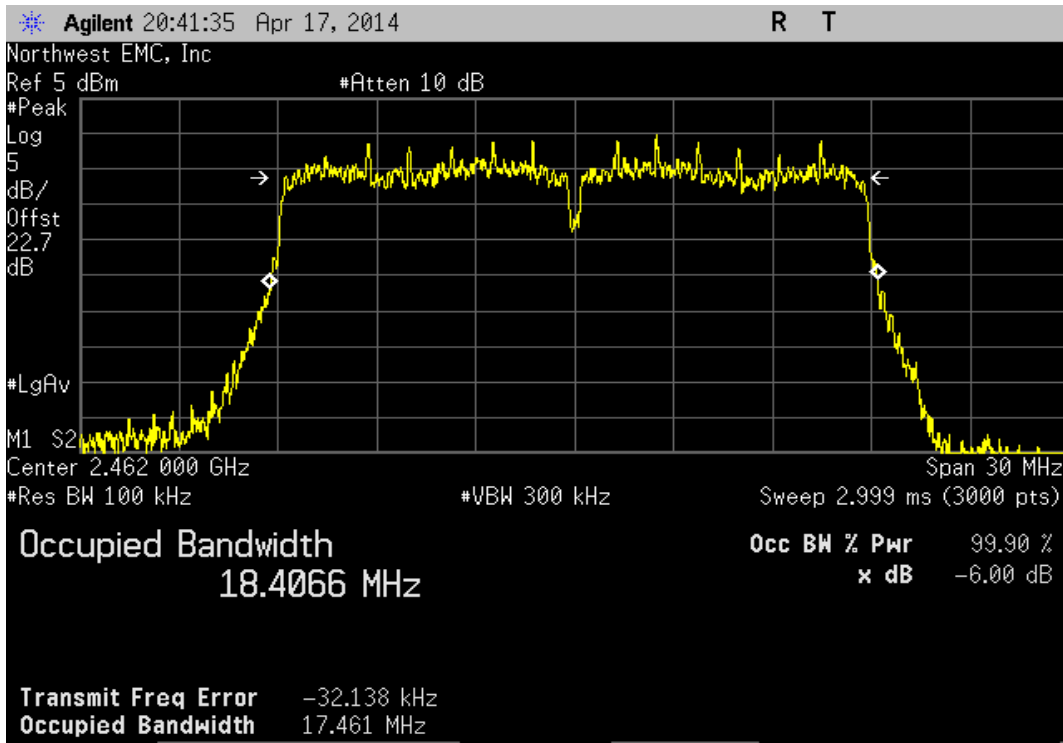
Chain A, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, Mid Channel 6, 2437 MHz

	Value	Limit	Result
	17.553 MHz	> 500 kHz	Pass



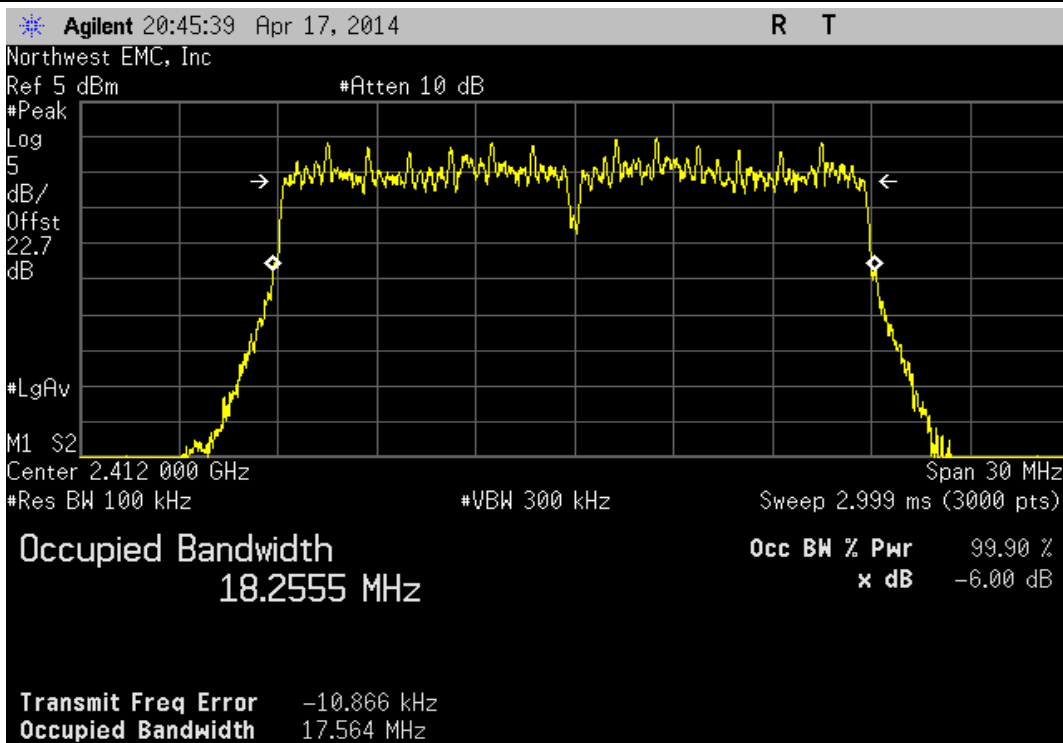
Chain A, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, High Channel 11, 2462 MHz

Value	Limit	Result
17.461 MHz	> 500 kHz	Pass

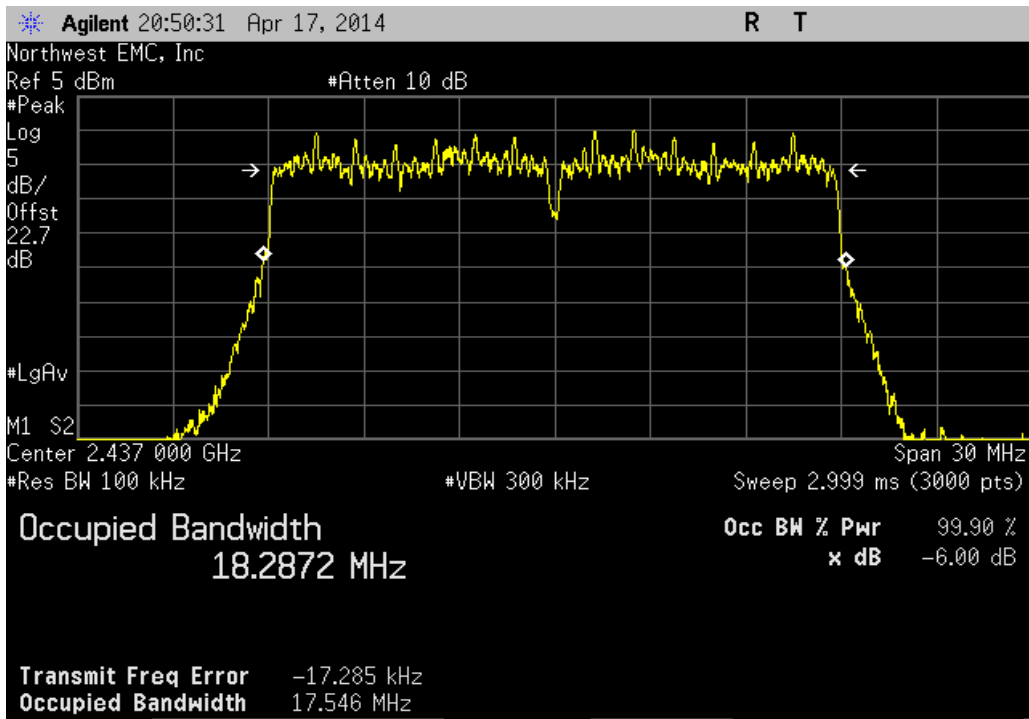


Chain A, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, Low Channel 1, 2412 MHz

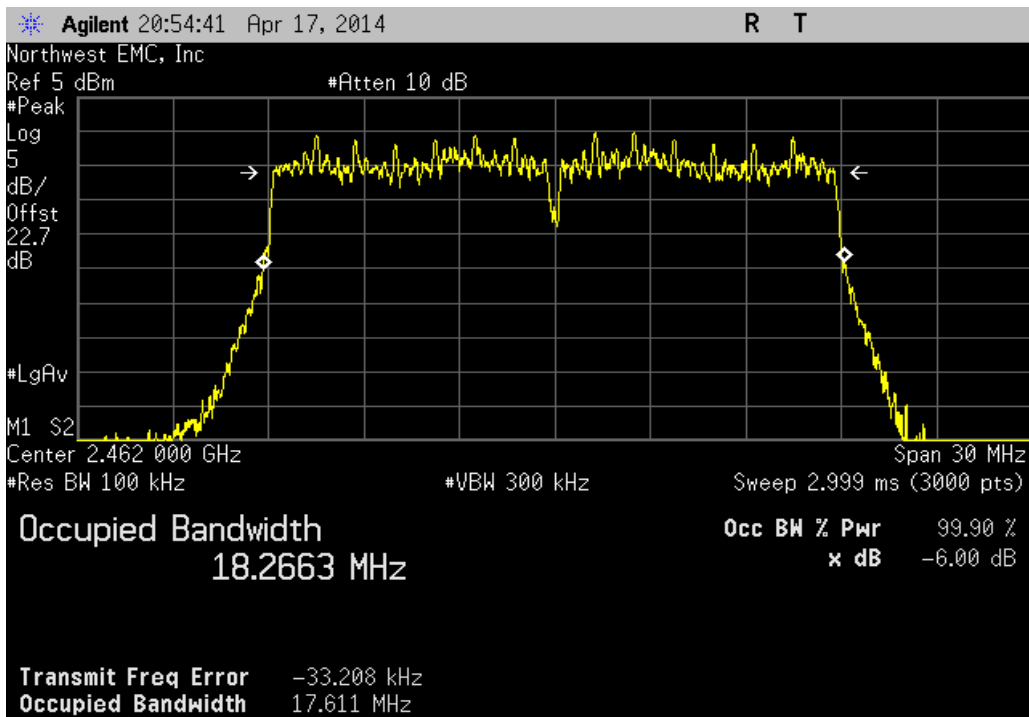
Value	Limit	Result
17.564 MHz	> 500 kHz	Pass



Chain A, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, Mid Channel 6, 2437 MHz			
	Value	Limit	Result
	17.546 MHz	> 500 kHz	Pass

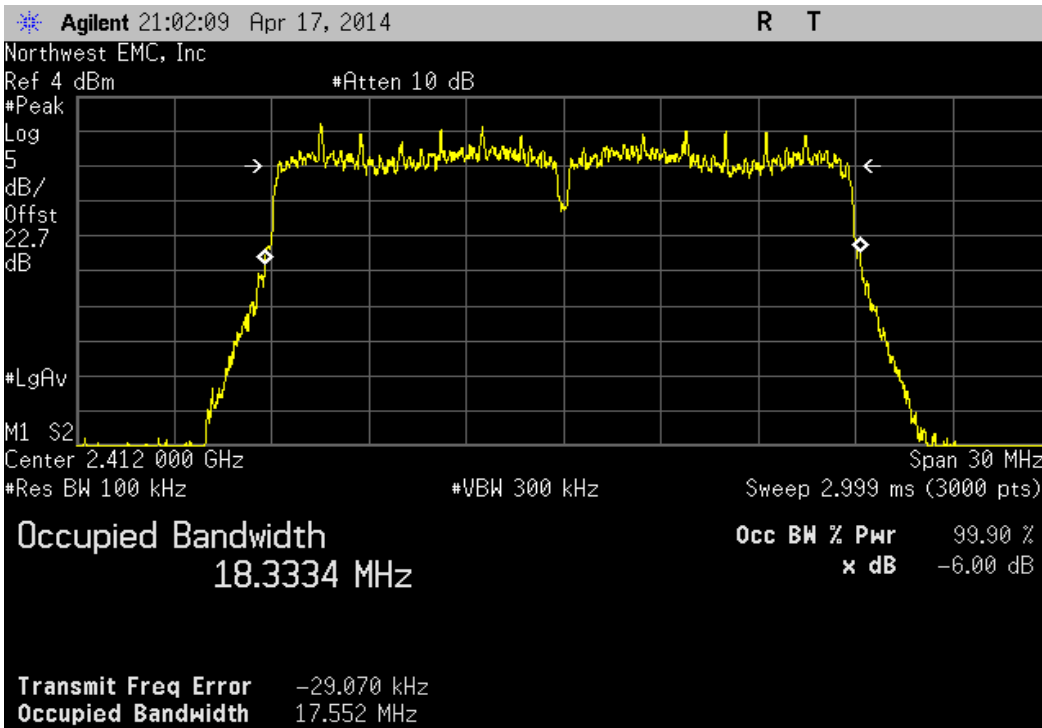


Chain A, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, High Channel 11, 2462 MHz			
	Value	Limit	Result
	17.611 MHz	> 500 kHz	Pass



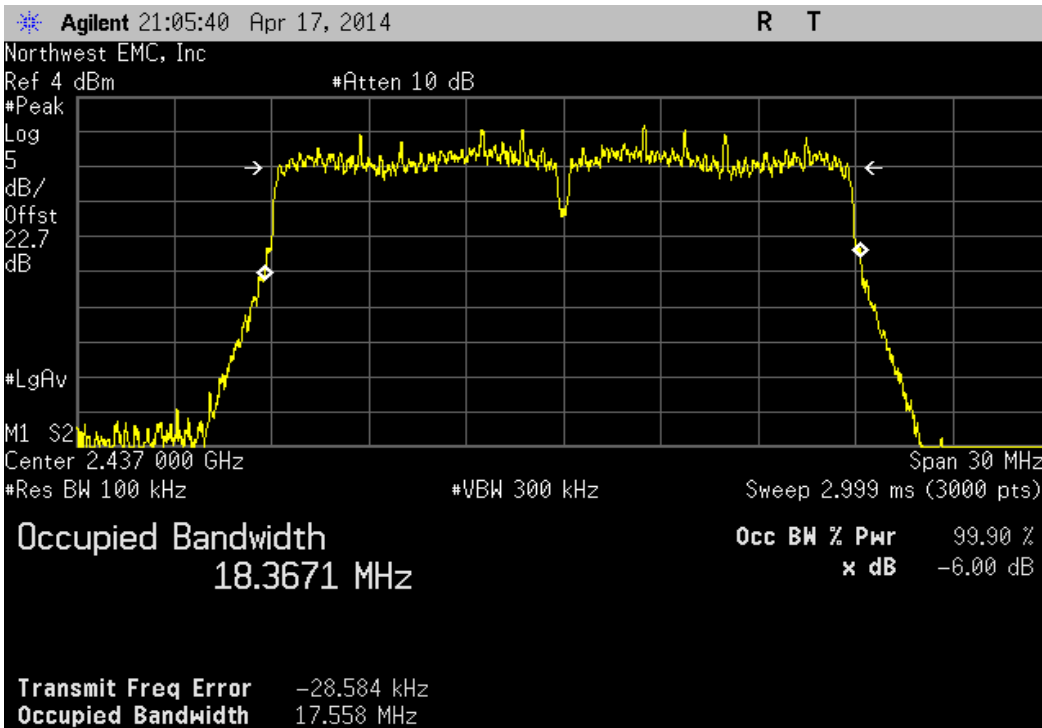
Chain B, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, Low Channel 1, 2412 MHz

	Value	Limit	Result
	17.552 MHz	> 500 kHz	Pass



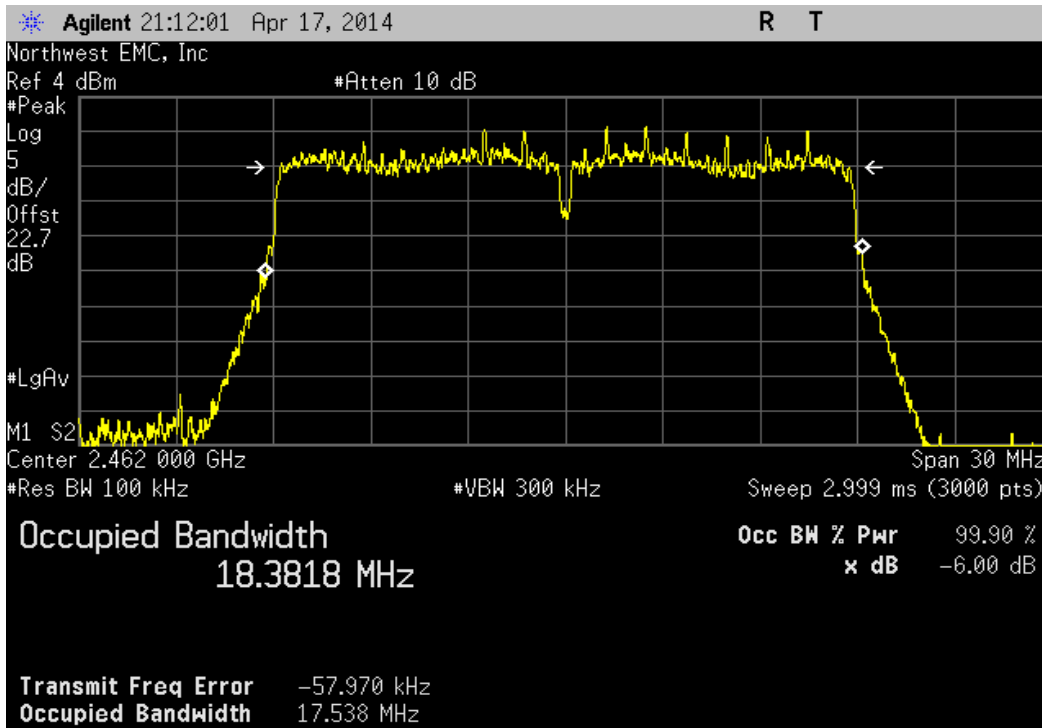
Chain B, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, Mid Channel 6, 2437 MHz

	Value	Limit	Result
	17.558 MHz	> 500 kHz	Pass



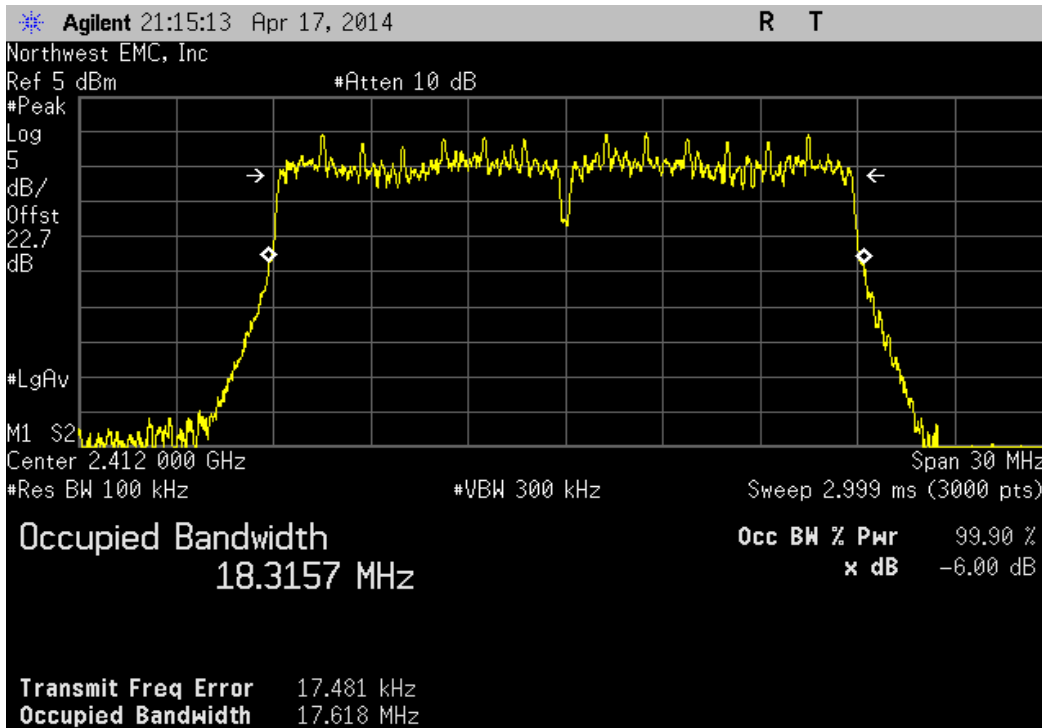
Chain B, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, High Channel 11, 2462 MHz

				Value	Limit	Result
				17.538 MHz	> 500 kHz	Pass



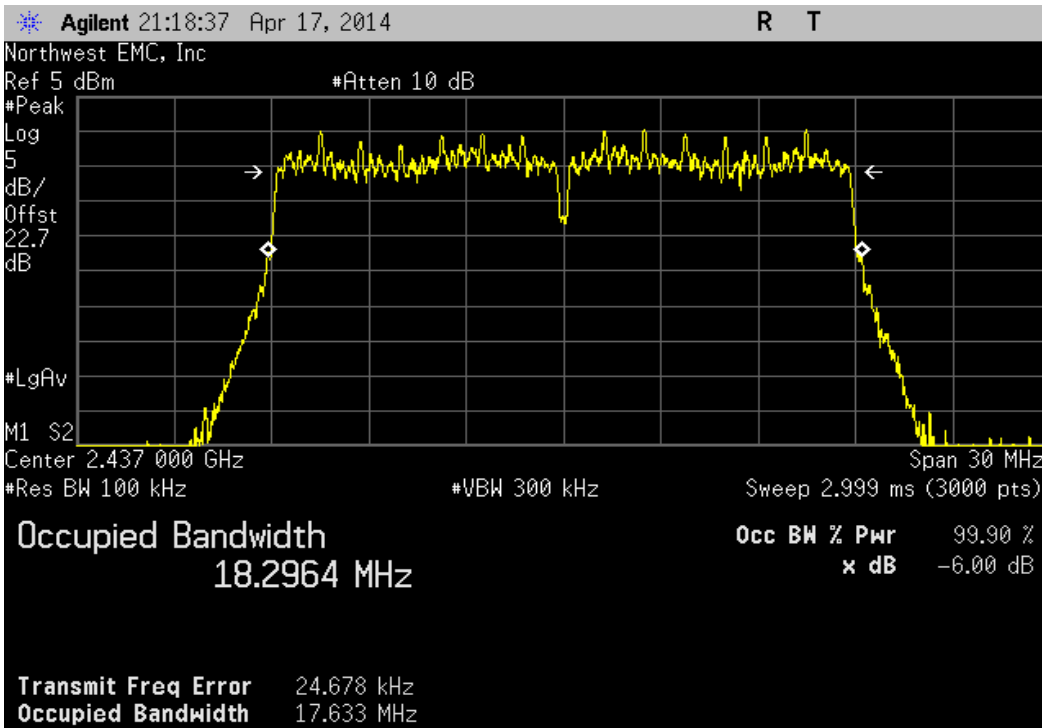
Chain B, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, Low Channel 1, 2412 MHz

				Value	Limit	Result
				17.618 MHz	> 500 kHz	Pass



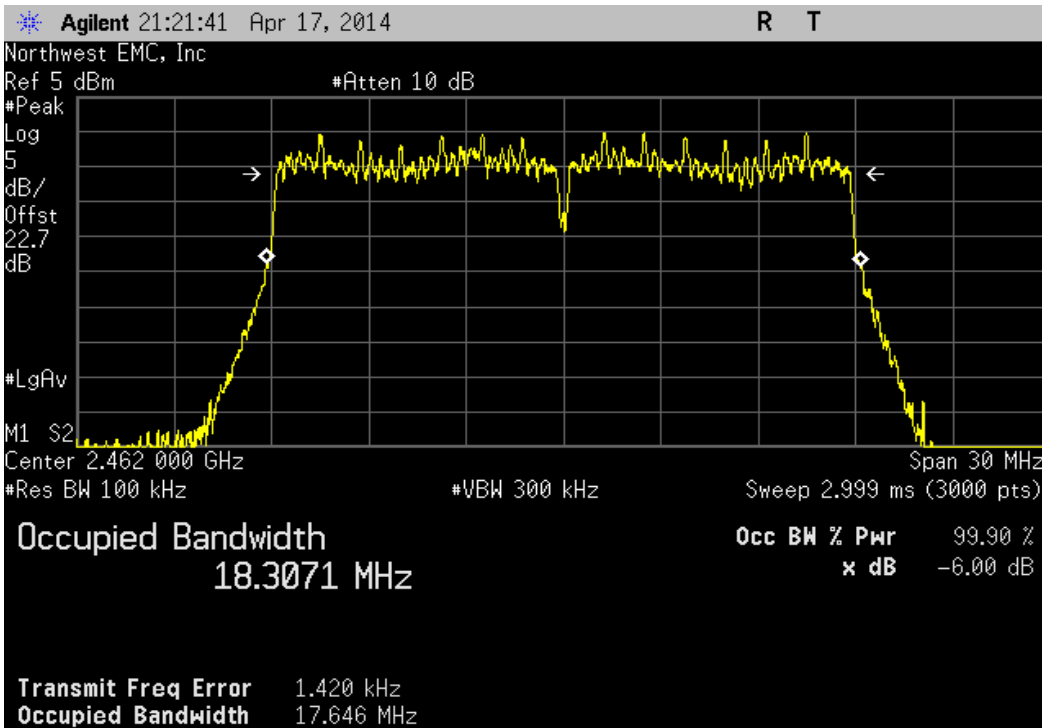
Chain B, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, Mid Channel 6, 2437 MHz

	Value	Limit	Result
	17.633 MHz	> 500 kHz	Pass



Chain B, 20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, High Channel 11, 2462 MHz

	Value	Limit	Result
	17.646 MHz	> 500 kHz	Pass



Occupied Bandwidth

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 (mo.)
40GHz DC Block	Miteq	DCB4000	AMD	5/16/2013	12
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	7/30/2013	12
EV06 Direct Connect Cable	ESM Cable Corp.	TT	ECA	NCR	0
Power Meter	Agilent	N1913A	SQR	4/29/2013	36
Power Sensor	Agilent	E9300H	SQO	4/29/2013	36
Attenuator, 6dB	S.M. Electronics	18N-06	AWN	2/3/2014	12
MXG Analog Signal Generator	Agilent	N5181A	TIG	3/28/2014	36
Spectrum Analyzer	Agilent	E4446A	AAQ	1/21/2014	24

TEST DESCRIPTION

The 6dB occupied bandwidth was measured using 100 kHz resolution bandwidth and 300 kHz video bandwidth. The 99.9% (approximate 26 dB) emission bandwidth (EBW) was also measured at the same time.

The EUT was set to low, medium and high transmit frequencies. 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.



Occupied Bandwidth

XMI 2013.08.15
PsaTx 2014.04.01

EUT: Model 1631	Work Order: MCSO1698
Serial Number: 006840341053	Date: 04/16/14
Customer: Microsoft Corporation	Temperature: 22.3°C
Attendees: None	Humidity: 32%
Project: None	Barometric Pres.: 1014
Tested by: Jared Ison	Power: 110VAC/60Hz
	Job Site: EV06

TEST SPECIFICATIONS	Test Method
FCC 15.247:2014	ANSI C63.10:2009

COMMENTS
Modes of operation tested were client provided. Reference power level table for channel power setting.

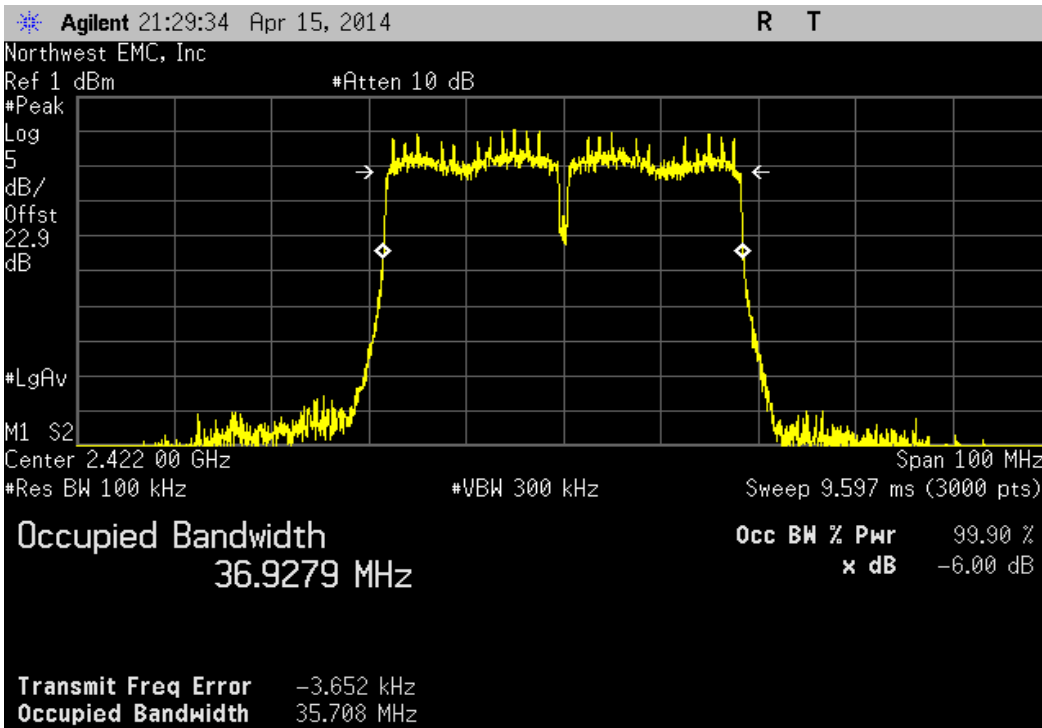
DEVIATIONS FROM TEST STANDARD
None

Configuration #	6	Signature 
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		Value	Limit	Result
Chain A	40 MHz			
	2400 MHz - 2483.5 MHz Band			
	802.11(n) MCS8			
	Low Channel 1/5, 2422 MHz	35.708 MHz	> 500 kHz	Pass
	Mid Channel 4/8, 2437 MHz	35.778 MHz	> 500 kHz	Pass
	High Channel 7/11, 2452 MHz	35.516 MHz	> 500 kHz	Pass
	802.11(n) MCS15			
	Low Channel 1/5, 2422 MHz	36.248 MHz	> 500 kHz	Pass
	Mid Channel 4/8, 2437 MHz	36.297 MHz	> 500 kHz	Pass
	High Channel 7/11, 2452 MHz	36.255 MHz	> 500 kHz	Pass
Chain B	40 MHz			
	2400 MHz - 2483.5 MHz Band			
	802.11(n) MCS8			
	Low Channel 1/5, 2422 MHz	35.317 MHz	> 500 kHz	Pass
	Mid Channel 4/8, 2437 MHz	35.632 MHz	> 500 kHz	Pass
	High Channel 7/11, 2452 MHz	35.345 MHz	> 500 kHz	Pass
	802.11(n) MCS15			
	Low Channel 1/5, 2422 MHz	36.306 MHz	> 500 kHz	Pass
	Mid Channel 4/8, 2437 MHz	35.66 MHz	> 500 kHz	Pass
	High Channel 7/11, 2452 MHz	35.982 MHz	> 500 kHz	Pass

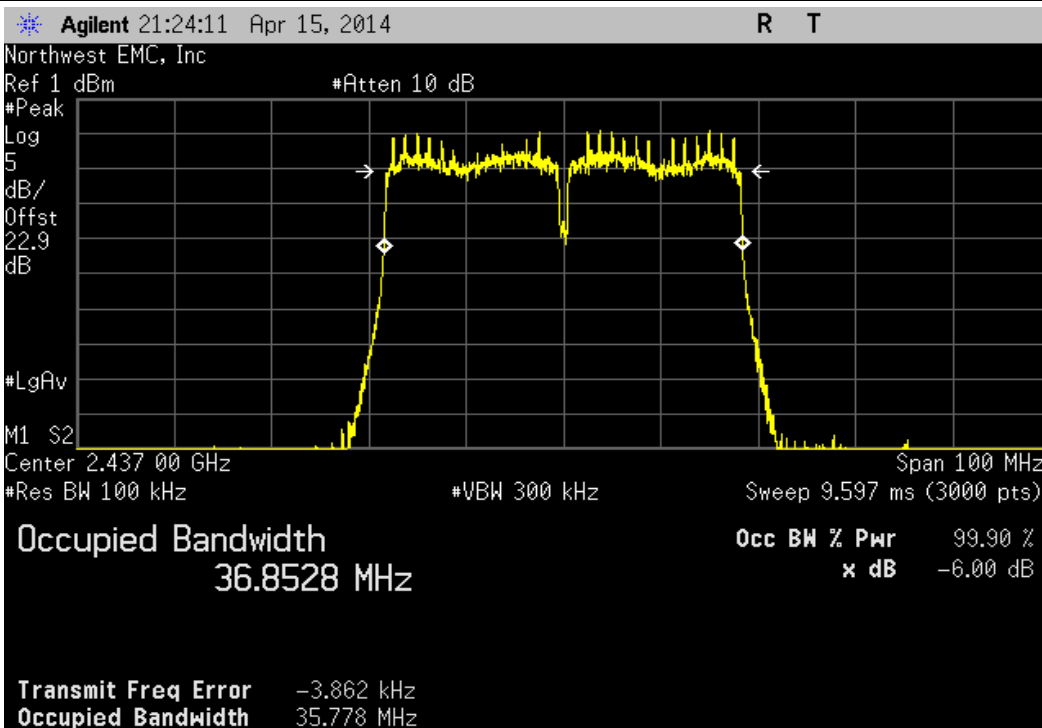
Chain A, 40 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, Low Channel 1/5, 2422 MHz

	Value	Limit	Result
	35.708 MHz	> 500 kHz	Pass



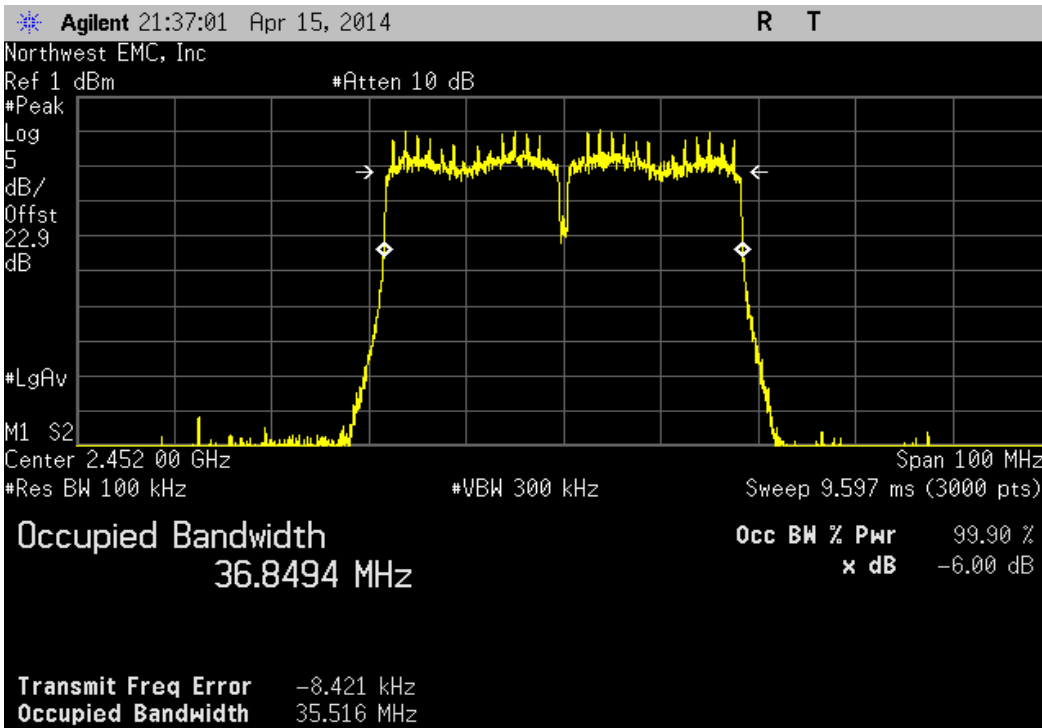
Chain A, 40 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, Mid Channel 4/8, 2437 MHz

	Value	Limit	Result
	35.778 MHz	> 500 kHz	Pass



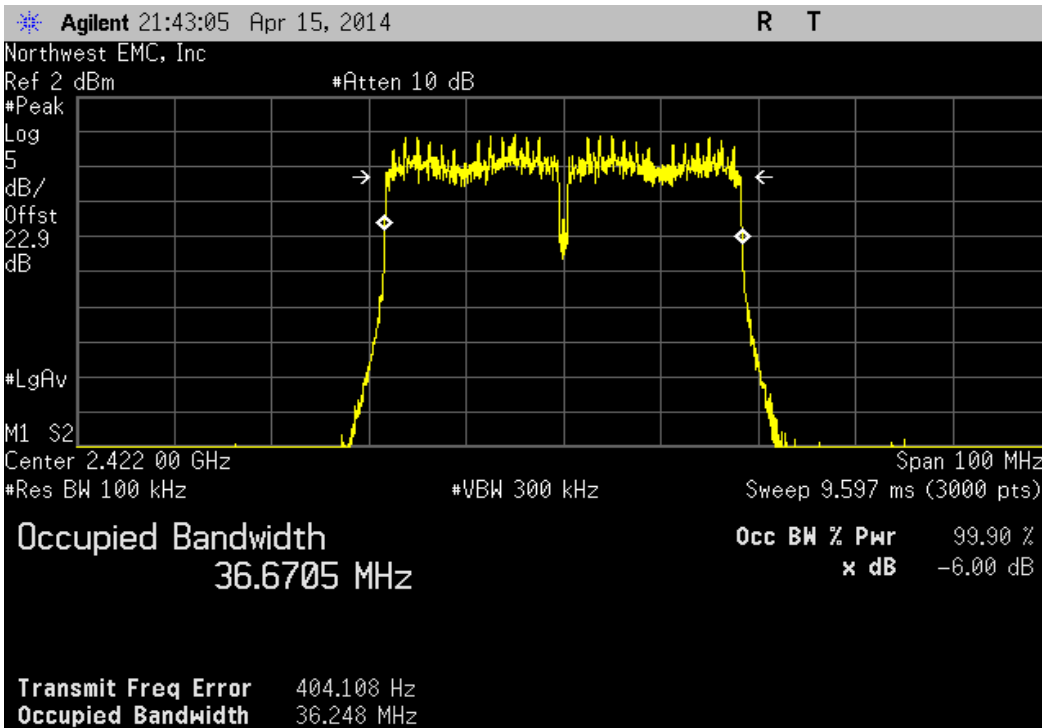
Chain A, 40 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, High Channel 7/11, 2452 MHz

	Value	Limit	Result
	35.516 MHz	> 500 kHz	Pass

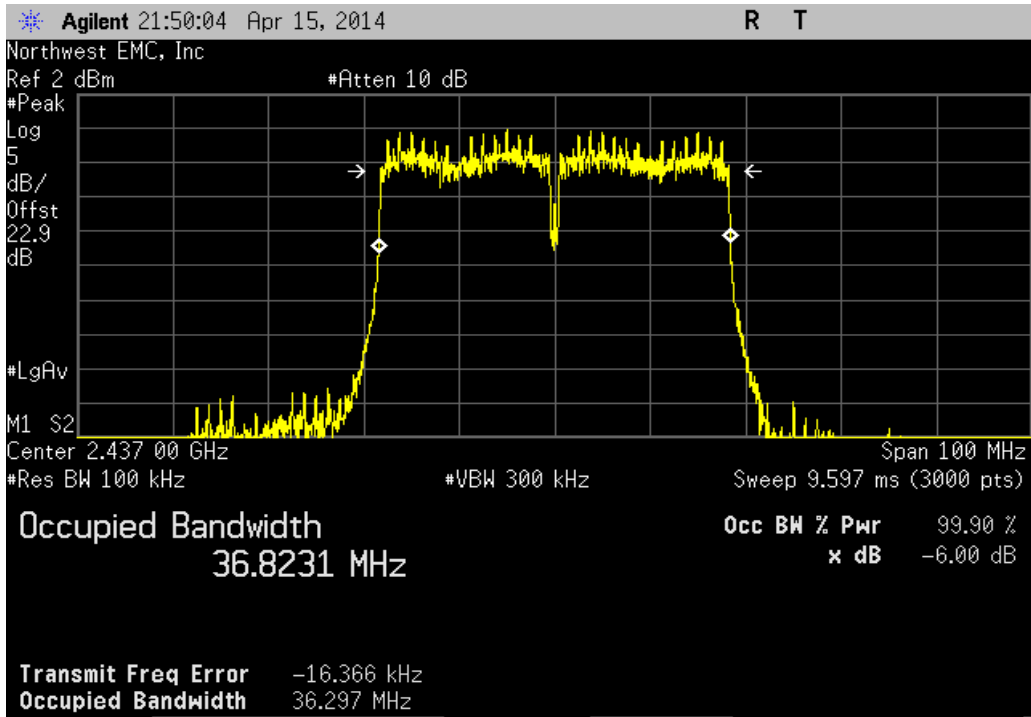


Chain A, 40 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, Low Channel 1/5, 2422 MHz

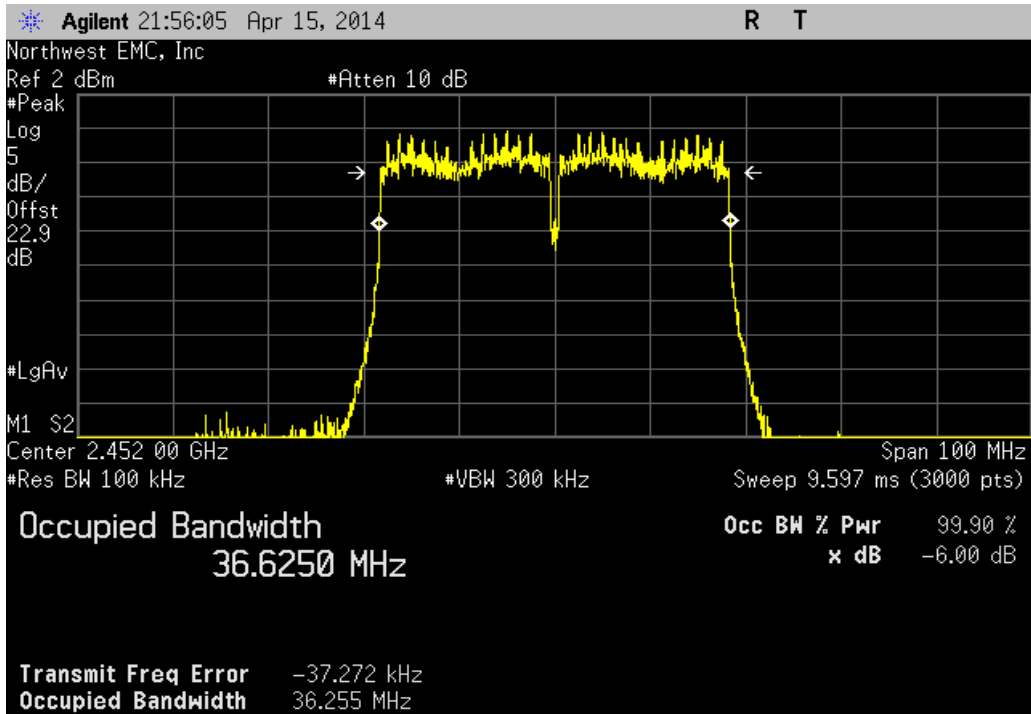
	Value	Limit	Result
	36.248 MHz	> 500 kHz	Pass



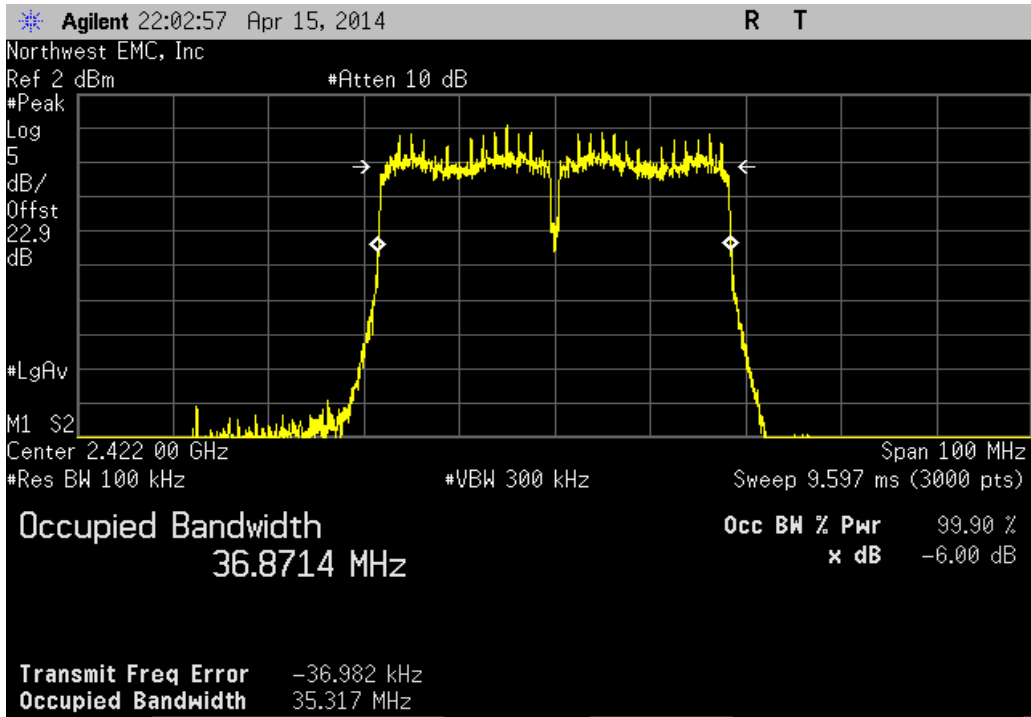
Chain A, 40 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, Mid Channel 4/8, 2437 MHz			
	Value	Limit	Result
	36.297 MHz	> 500 kHz	Pass



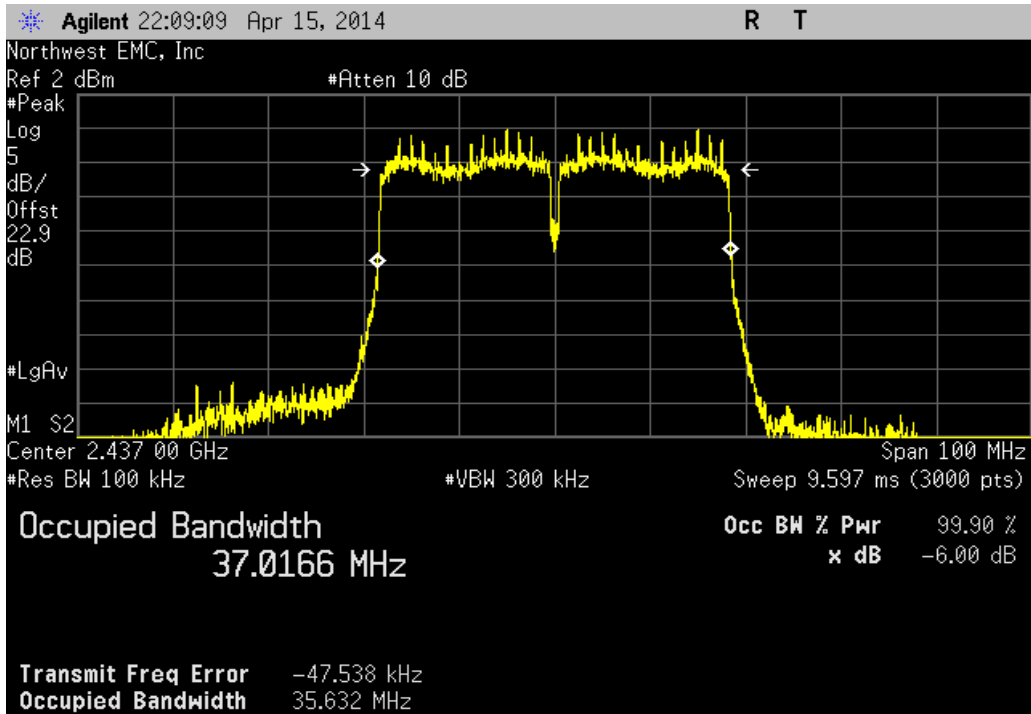
Chain A, 40 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, High Channel 7/11, 2452 MHz			
	Value	Limit	Result
	36.255 MHz	> 500 kHz	Pass



Chain B, 40 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, Low Channel 1/5, 2422 MHz			
	Value	Limit	Result
	35.317 MHz	> 500 kHz	Pass

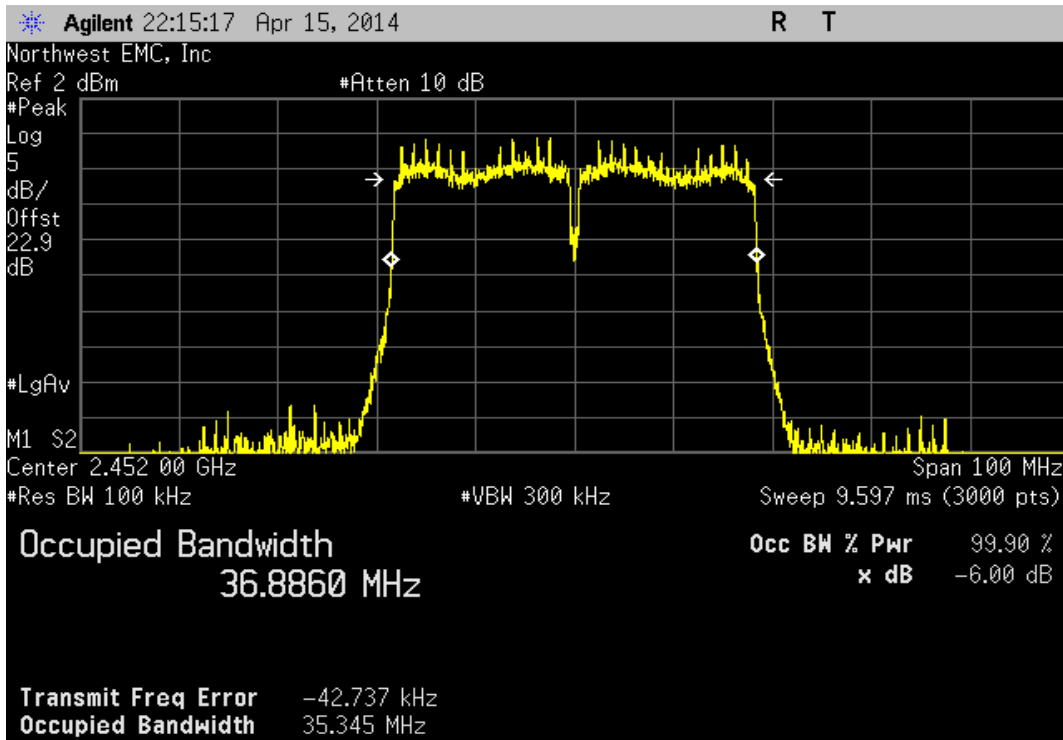


Chain B, 40 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, Mid Channel 4/8, 2437 MHz			
	Value	Limit	Result
	35.632 MHz	> 500 kHz	Pass



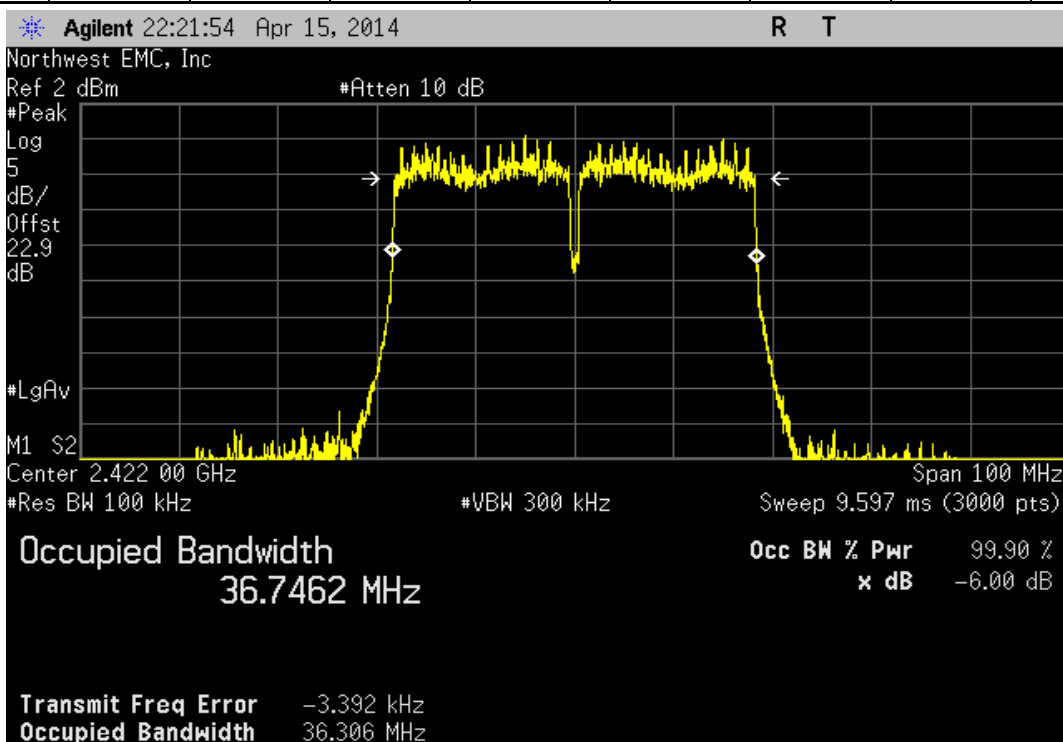
Chain B, 40 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS8, High Channel 7/11, 2452 MHz

Value	Limit	Result
35.345 MHz	> 500 kHz	Pass

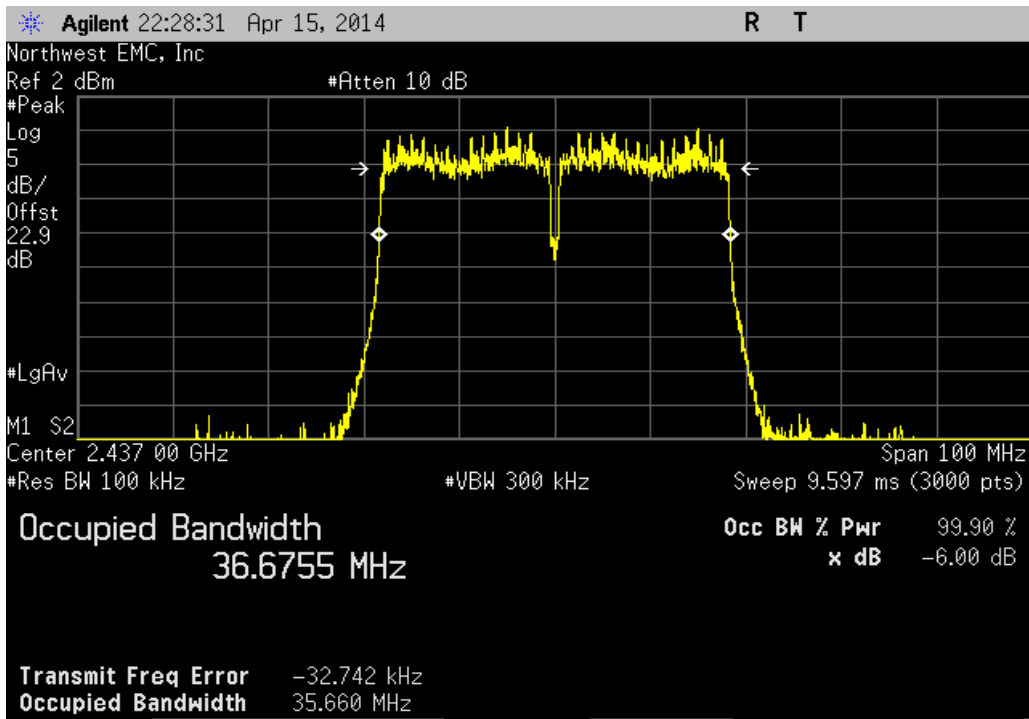


Chain B, 40 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, Low Channel 1/5, 2422 MHz

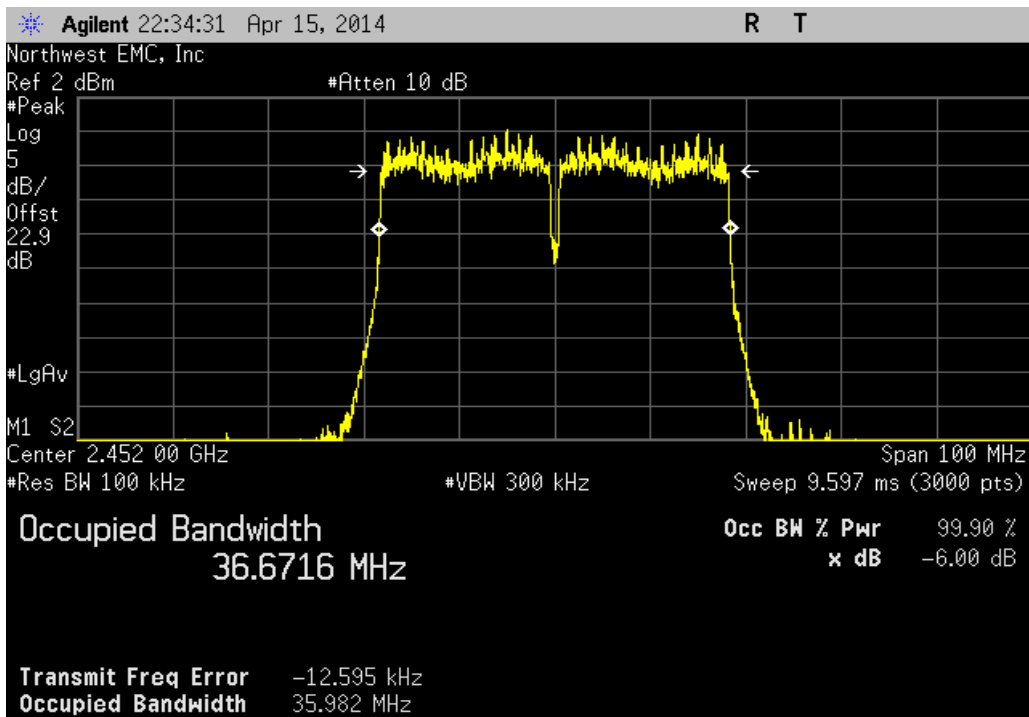
Value	Limit	Result
36.306 MHz	> 500 kHz	Pass



Chain B, 40 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, Mid Channel 4/8, 2437 MHz			
	Value	Limit	Result
	35.66 MHz	> 500 kHz	Pass



Chain B, 40 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS15, High Channel 7/11, 2452 MHz			
	Value	Limit	Result
	35.982 MHz	> 500 kHz	Pass



OCCUPIED BANDWIDTH

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 (mo.)
40GHz DC Block	Miteq	DCB4000	AMD	5/16/2013	12
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	7/30/2013	12
EV06 Direct Connect Cable	ESM Cable Corp.	TT	ECA	NCR	0
Power Meter	Gigatronics	8651A	SPM	11/26/2013	24
Power Sensor	Gigatronics	80701A	SPL	7/8/2011	36
Attenuator, 6dB	S.M. Electronics	18N-06	AWN	2/3/2014	12
MXG Analog Signal Generator	Agilent	N5181A	TIG	3/28/2014	36
Spectrum Analyzer	Agilent	E4446A	AAQ	1/21/2014	24

TEST DESCRIPTION

The 6dB occupied bandwidth was measured using 100 kHz resolution bandwidth and 300 kHz video bandwidth. The 99.9% (approximate 26 dB) emission bandwidth (EBW) was also measured at the same time.

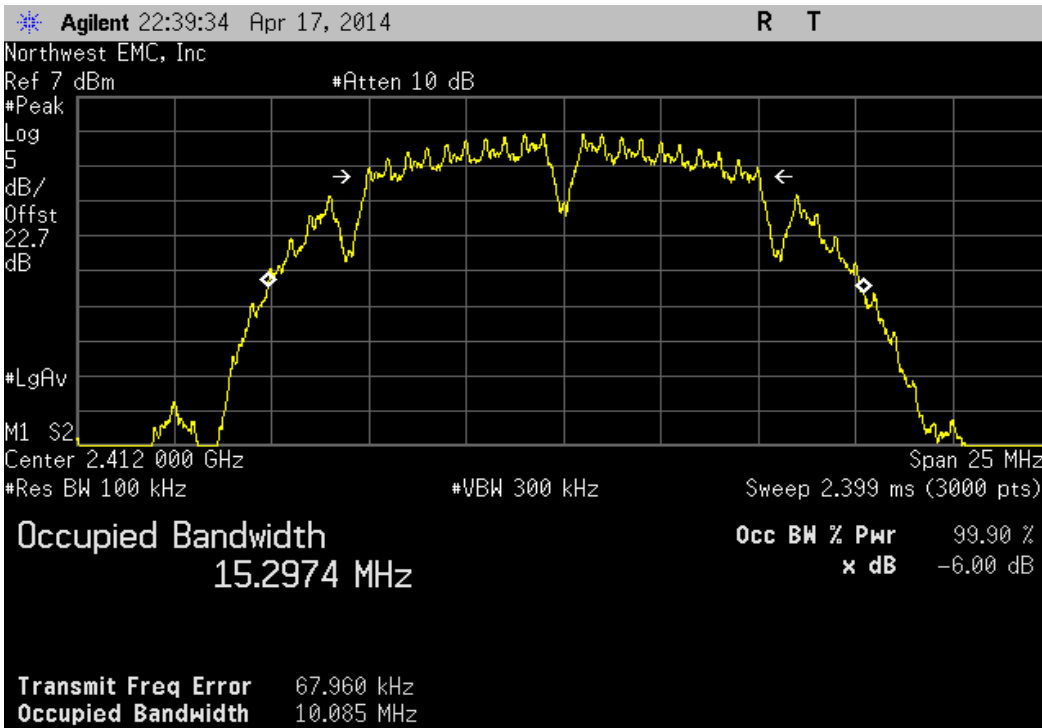
The EUT was set to low, medium and high transmit frequencies. The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer. The EUT was transmitting at the data rate(s) listed in the datasheet.

EUT: Model 1631		Work Order: MCSO1698	
Serial Number: 006840341053		Date: 04/18/14	
Customer: Microsoft Corporation		Temperature: 22.3°C	
Attendees: None		Humidity: 32%	
Project: None		Barometric Pres.: 1014	
Tested by: Jared Ison		Power: 110VAC/60Hz	
		Job Site: EV06	
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2014		ANSI C63.10:2009	
COMMENTS			
Modes of operation tested were client provided. Reference power level table for channel power setting.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	6	Signature 	

	Value	Limit	Result
20 MHz			
2400 MHz - 2483.5 MHz Band			
802.11(b) 1 Mbps			
Low Channel 1, 2412 MHz	10.085 MHz	> 500 kHz	Pass
Mid Channel 6, 2437 MHz	10.06 MHz	> 500 kHz	Pass
High Channel 11, 2462 MHz	10.079 MHz	> 500 kHz	Pass
802.11(b) 11 Mbps			
Low Channel 1, 2412 MHz	9.538 MHz	> 500 kHz	Pass
Mid Channel 6, 2437 MHz	9.239 MHz	> 500 kHz	Pass
High Channel 11, 2462 MHz	9.638 MHz	> 500 kHz	Pass
802.11(g) 6 Mbps			
Low Channel 1, 2412 MHz	16.364 MHz	> 500 kHz	Pass
Mid Channel 6, 2437 MHz	16.376 MHz	> 500 kHz	Pass
High Channel 11, 2462 MHz	16.35 MHz	> 500 kHz	Pass
802.11(g) 36 Mbps			
Low Channel 1, 2412 MHz	16.443 MHz	> 500 kHz	Pass
Mid Channel 6, 2437 MHz	16.449 MHz	> 500 kHz	Pass
High Channel 11, 2462 MHz	16.425 MHz	> 500 kHz	Pass
802.11(g) 54 Mbps			
Low Channel 1, 2412 MHz	16.447 MHz	> 500 kHz	Pass
Mid Channel 6, 2437 MHz	16.445 MHz	> 500 kHz	Pass
High Channel 11, 2462 MHz	16.458 MHz	> 500 kHz	Pass
802.11(n) MCS0			
Low Channel 1, 2412 MHz	17.578 MHz	> 500 kHz	Pass
Mid Channel 6, 2437 MHz	17.595 MHz	> 500 kHz	Pass
High Channel 11, 2462 MHz	17.584 MHz	> 500 kHz	Pass
802.11(n) MCS7			
Low Channel 1, 2412 MHz	17.622 MHz	> 500 kHz	Pass
Mid Channel 6, 2437 MHz	17.629 MHz	> 500 kHz	Pass
High Channel 11, 2462 MHz	17.532 MHz	> 500 kHz	Pass

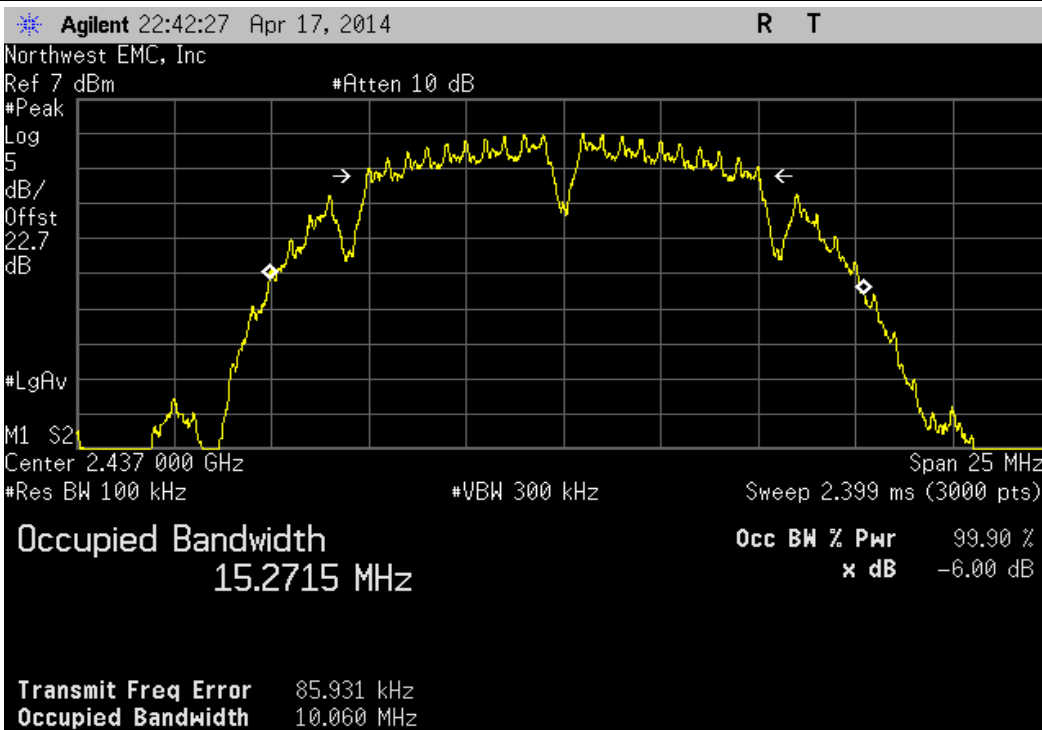
20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz

				Value	Limit	Result
				10.085 MHz	> 500 kHz	Pass



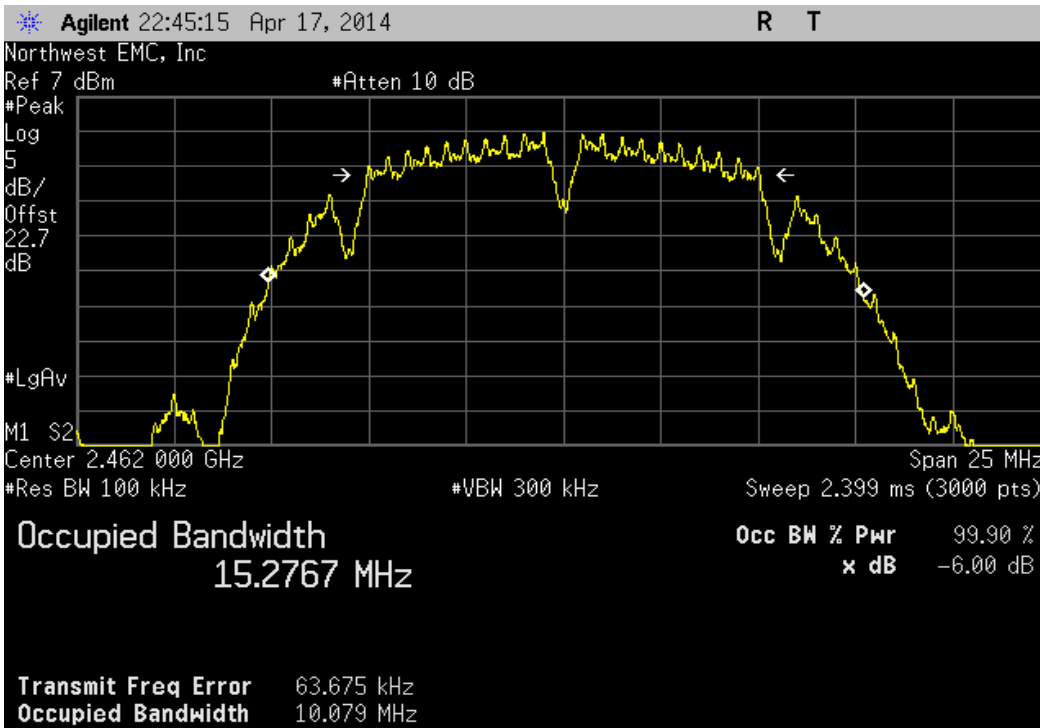
20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz

				Value	Limit	Result
				10.06 MHz	> 500 kHz	Pass



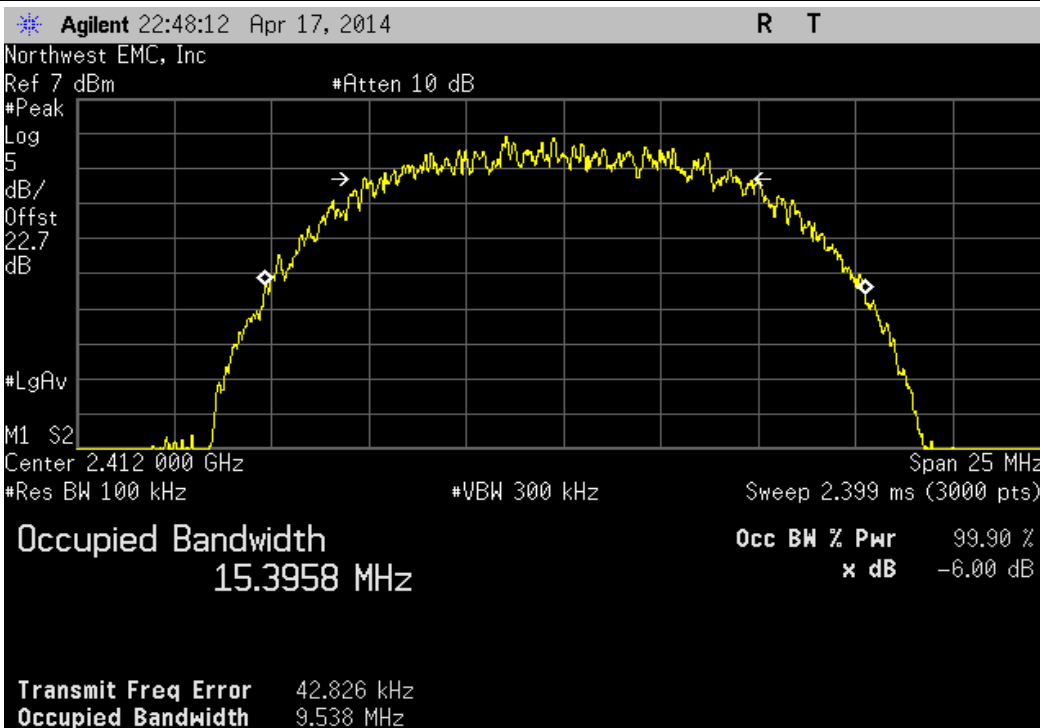
20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz

	Value	Limit	Result
	10.079 MHz	> 500 kHz	Pass



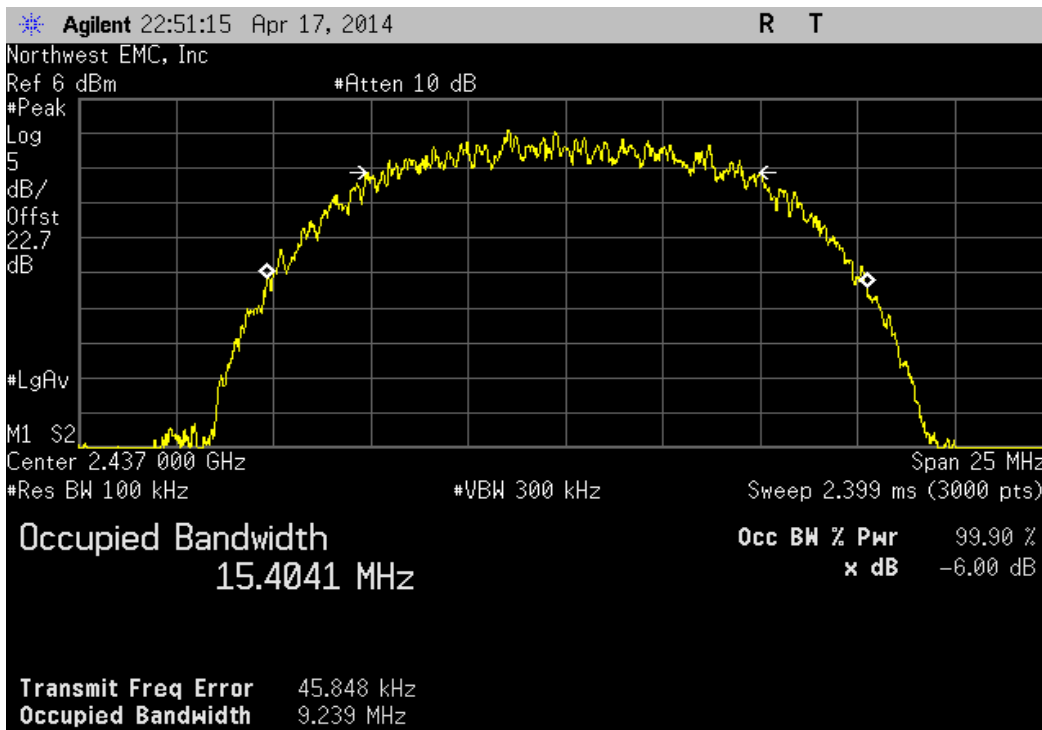
20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz

	Value	Limit	Result
	9.538 MHz	> 500 kHz	Pass



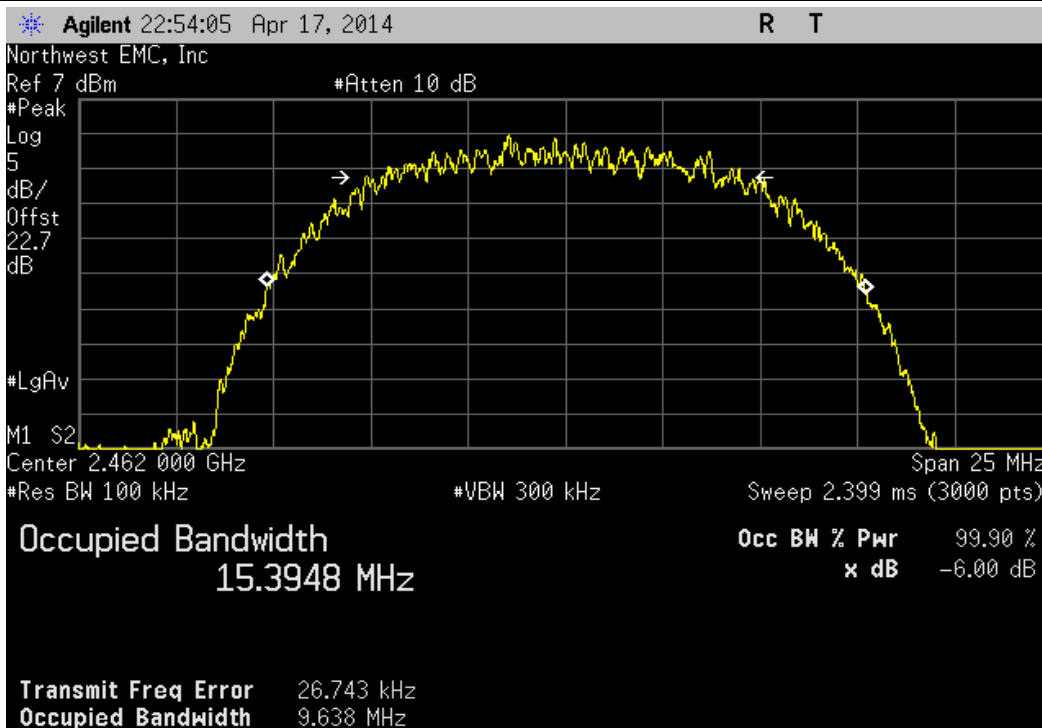
20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz

	Value	Limit	Result
	9.239 MHz	> 500 kHz	Pass



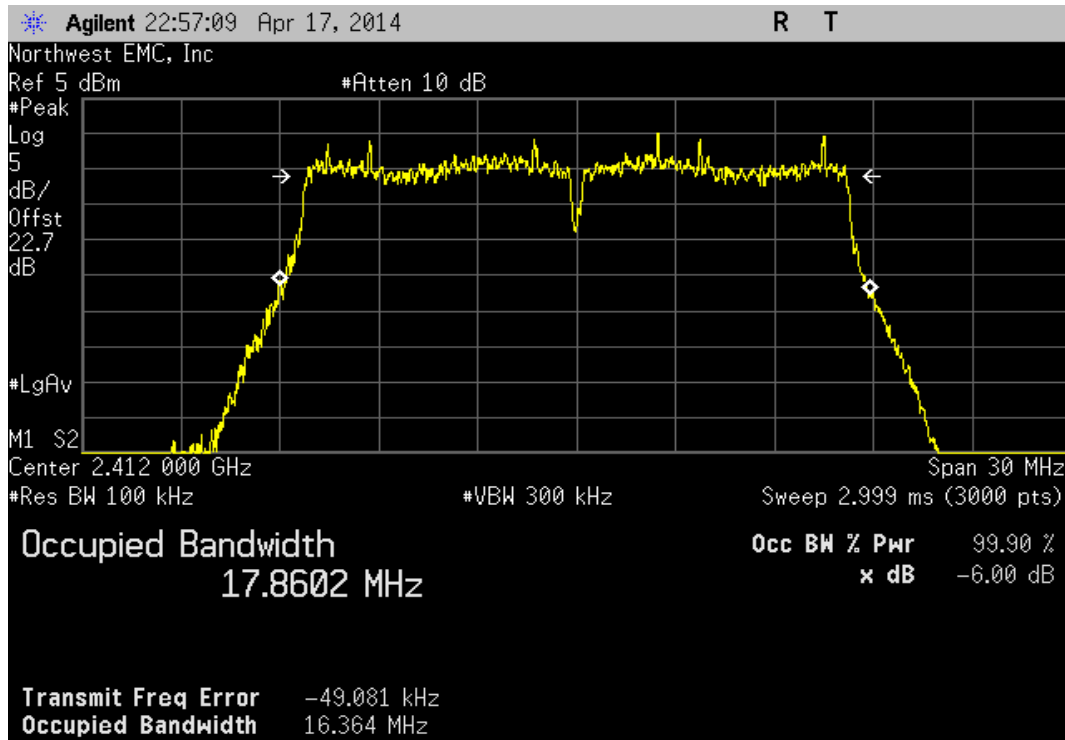
20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz

	Value	Limit	Result
	9.638 MHz	> 500 kHz	Pass



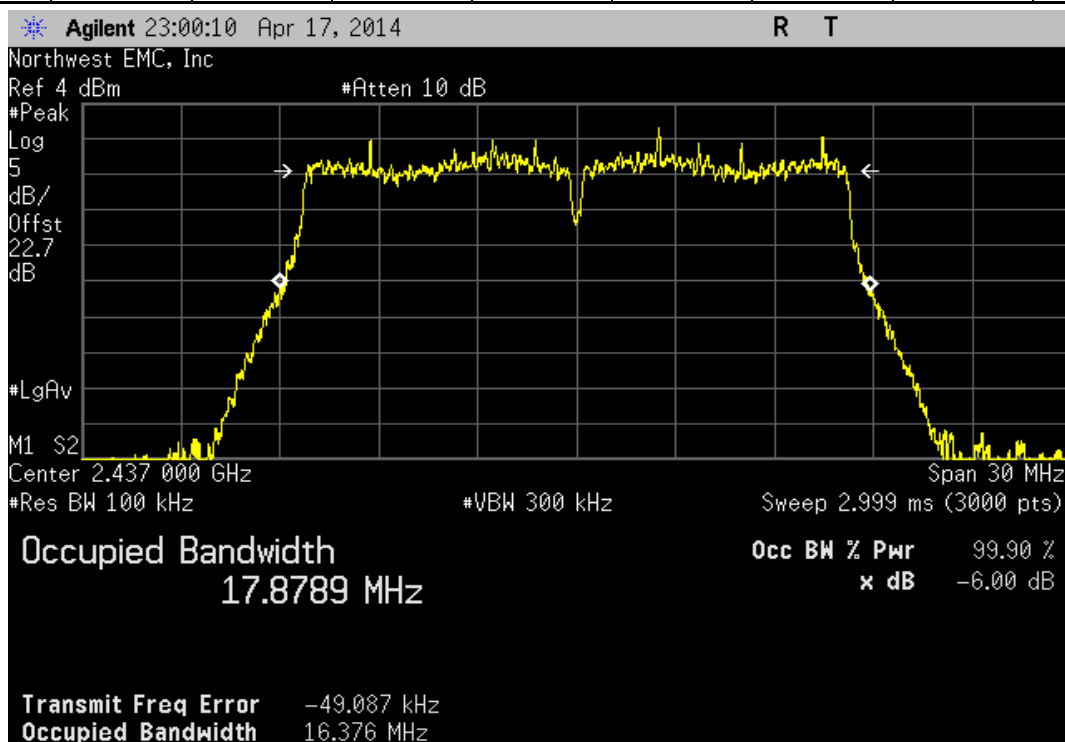
20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz

Value	Limit	Result
16.364 MHz	> 500 kHz	Pass



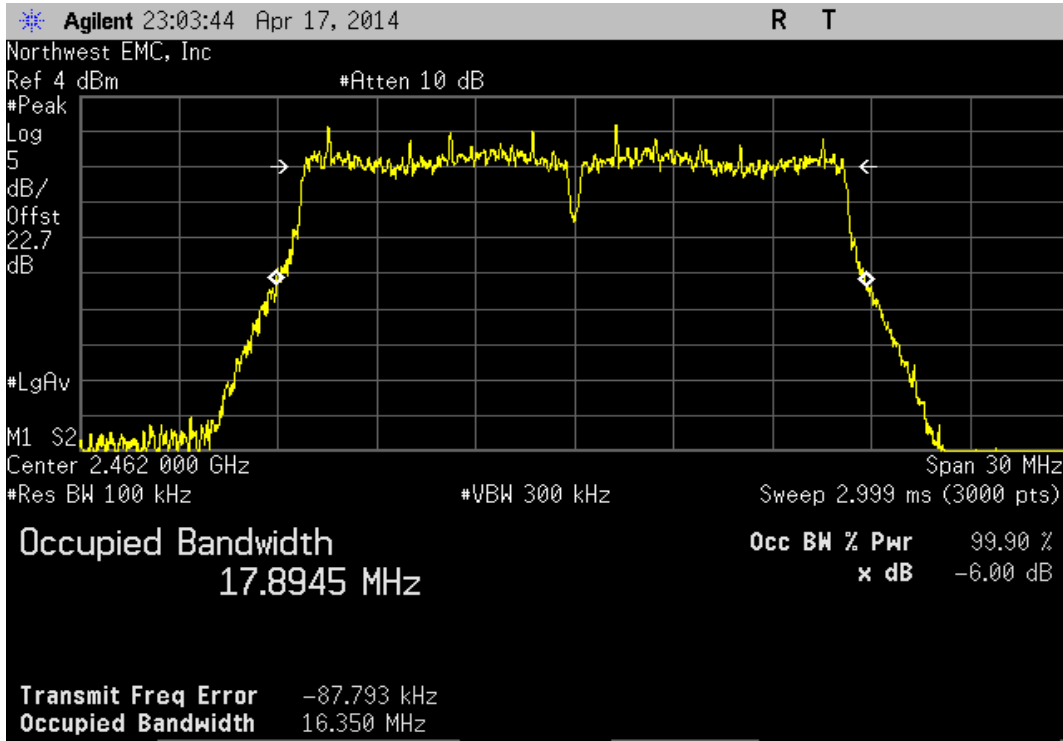
20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz

Value	Limit	Result
16.376 MHz	> 500 kHz	Pass



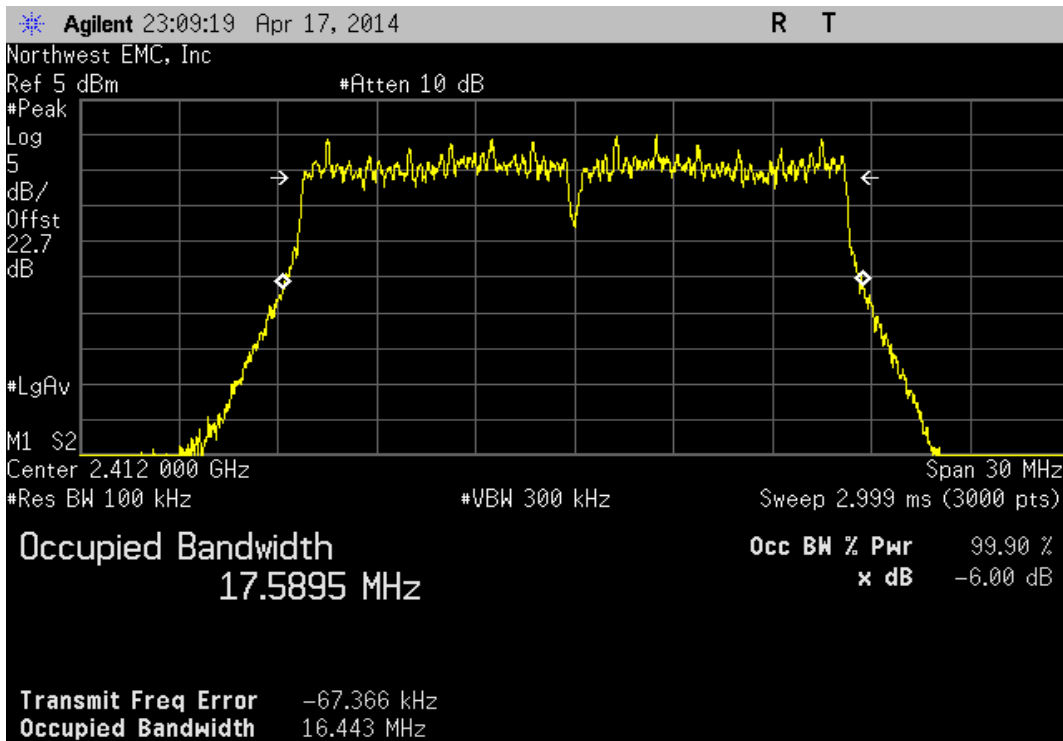
20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz

Value	Limit	Result
16.35 MHz	> 500 kHz	Pass

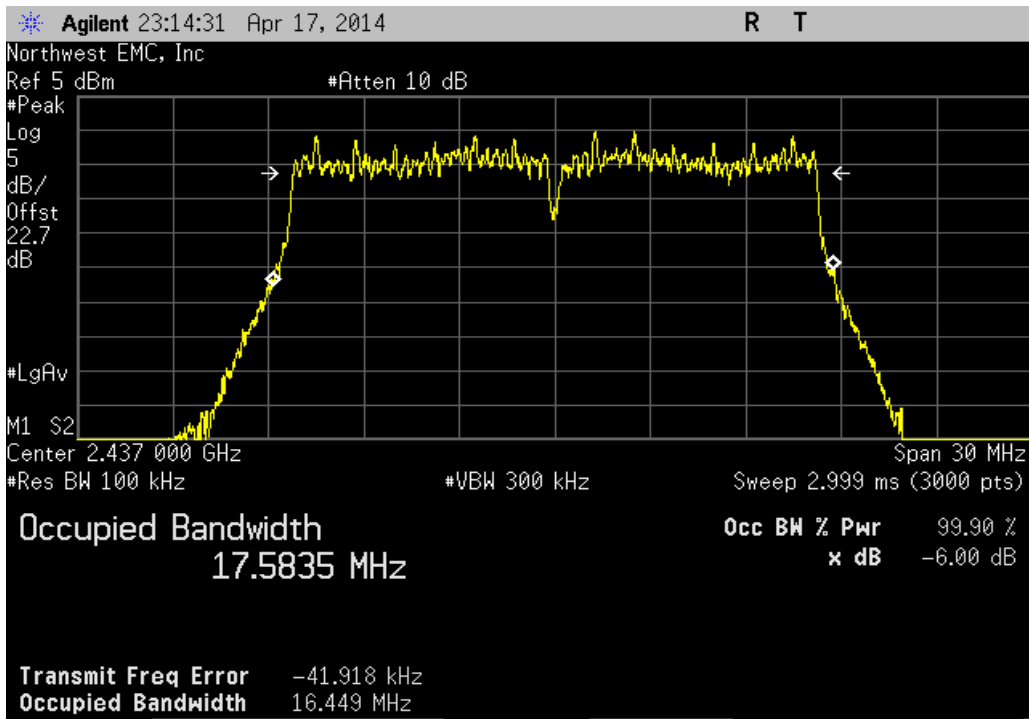


20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz

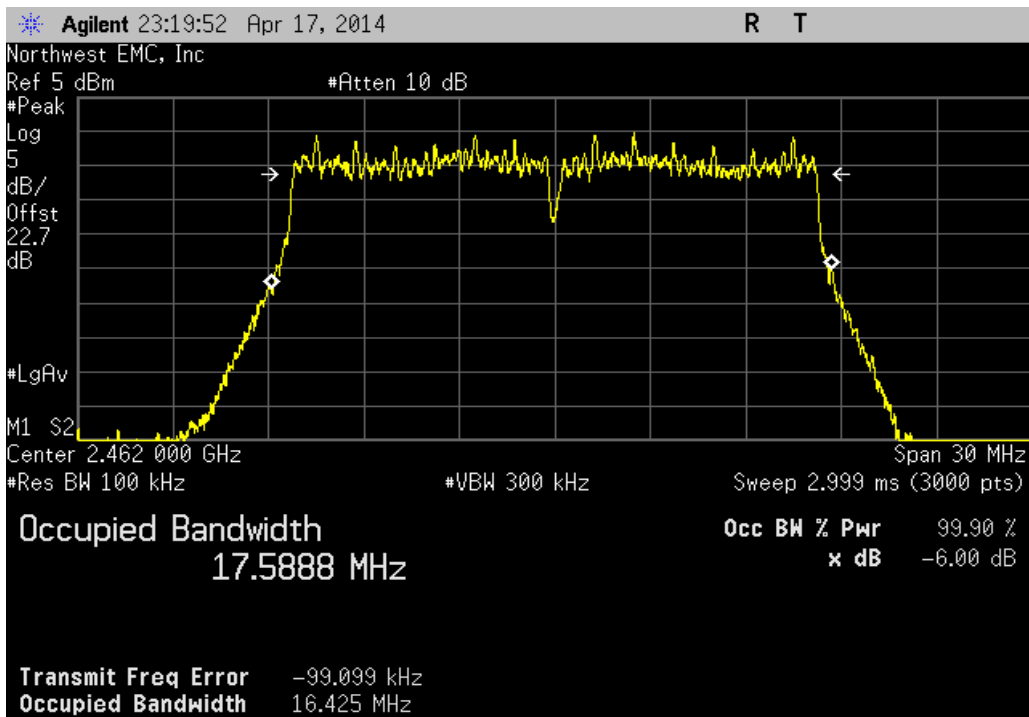
Value	Limit	Result
16.443 MHz	> 500 kHz	Pass



20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Mid Channel 6, 2437 MHz			
	Value	Limit	Result
	16.449 MHz	> 500 kHz	Pass

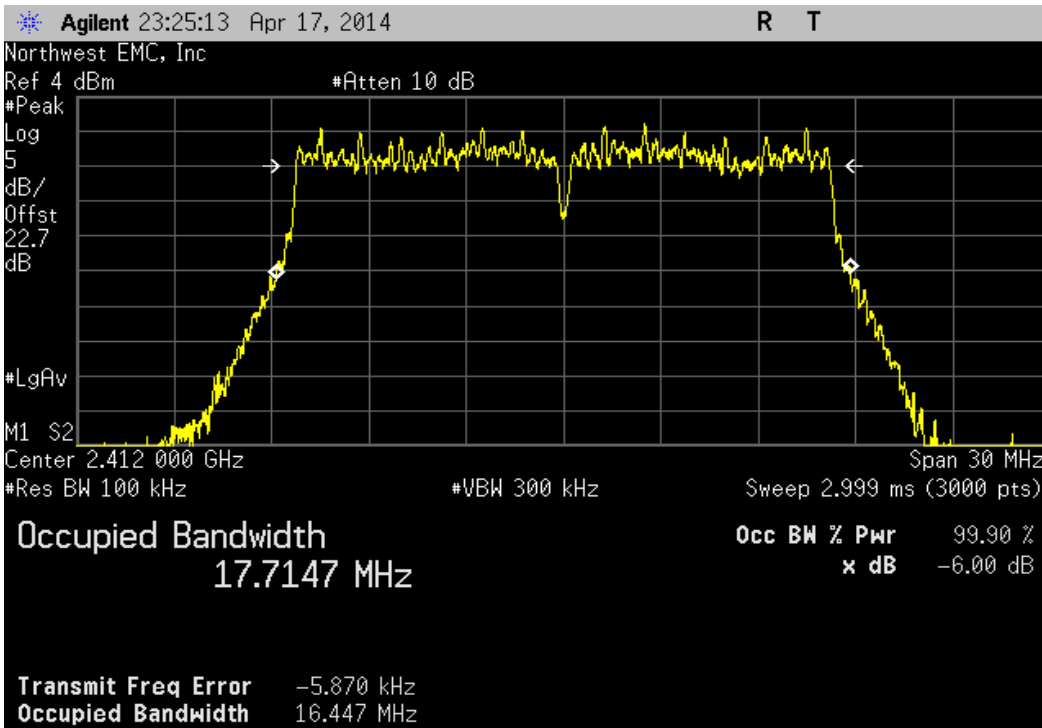


20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz			
	Value	Limit	Result
	16.425 MHz	> 500 kHz	Pass



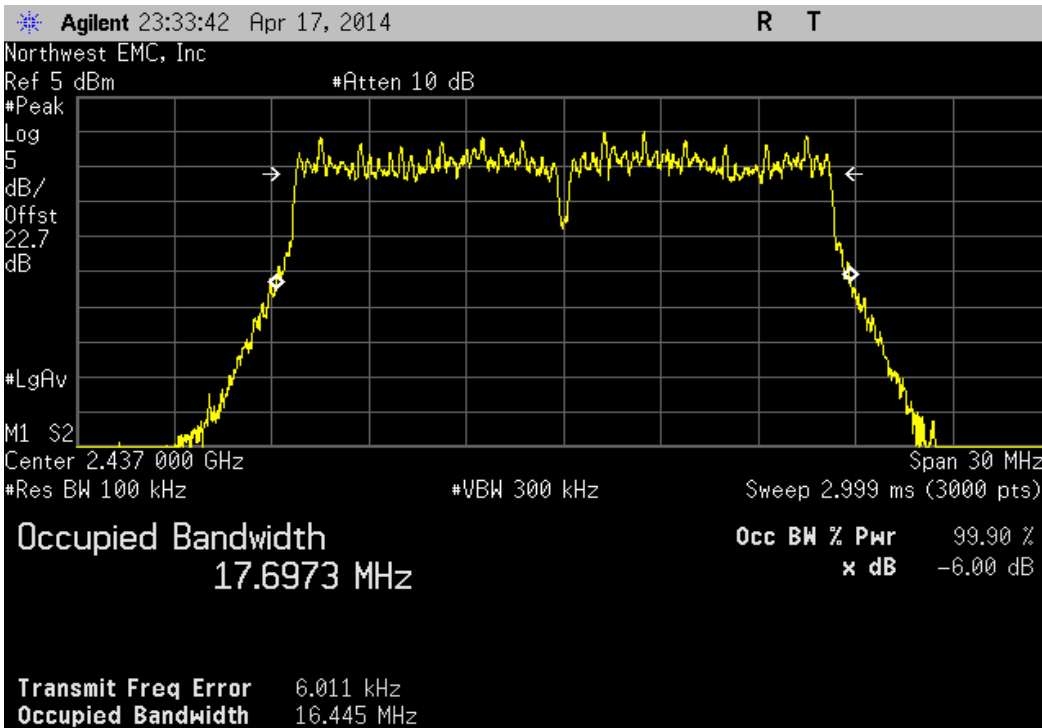
20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz

	Value	Limit	Result
	16.447 MHz	> 500 kHz	Pass



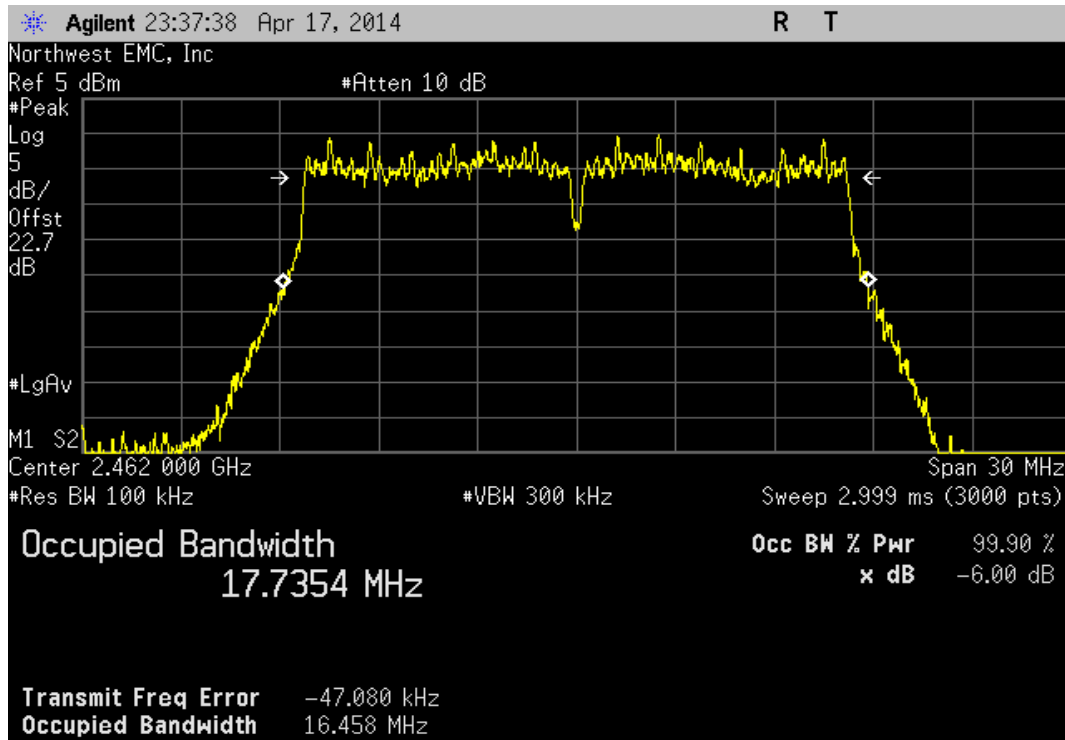
20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz

	Value	Limit	Result
	16.445 MHz	> 500 kHz	Pass



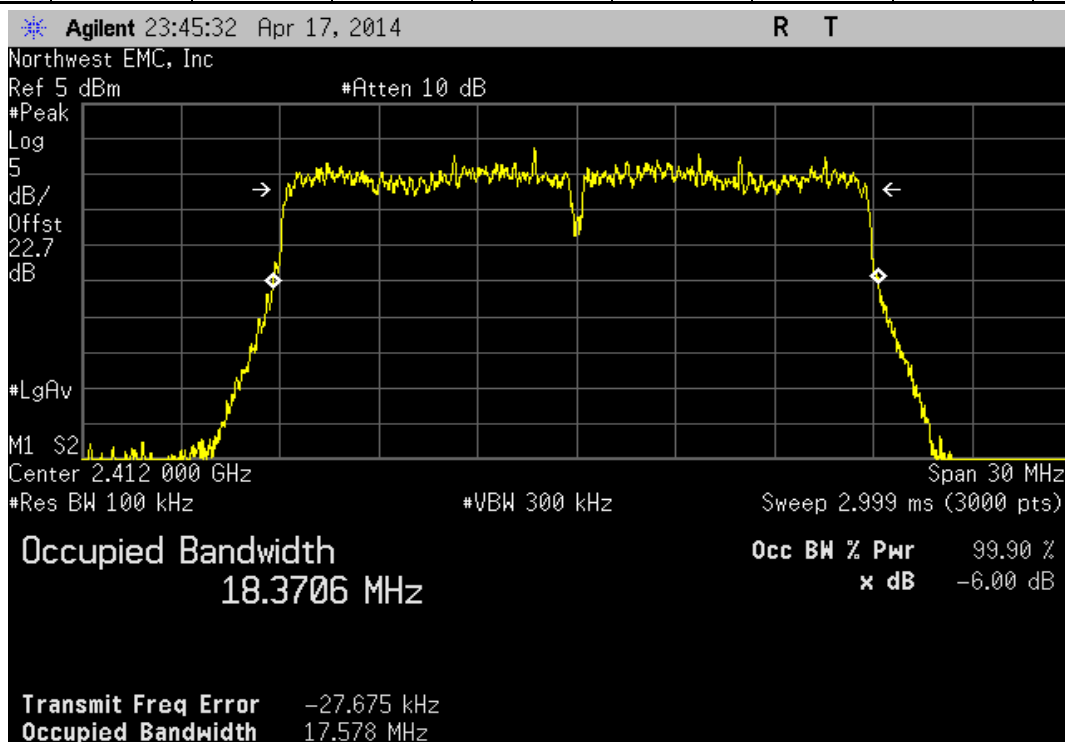
20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz

Value	Limit	Result
16.458 MHz	> 500 kHz	Pass



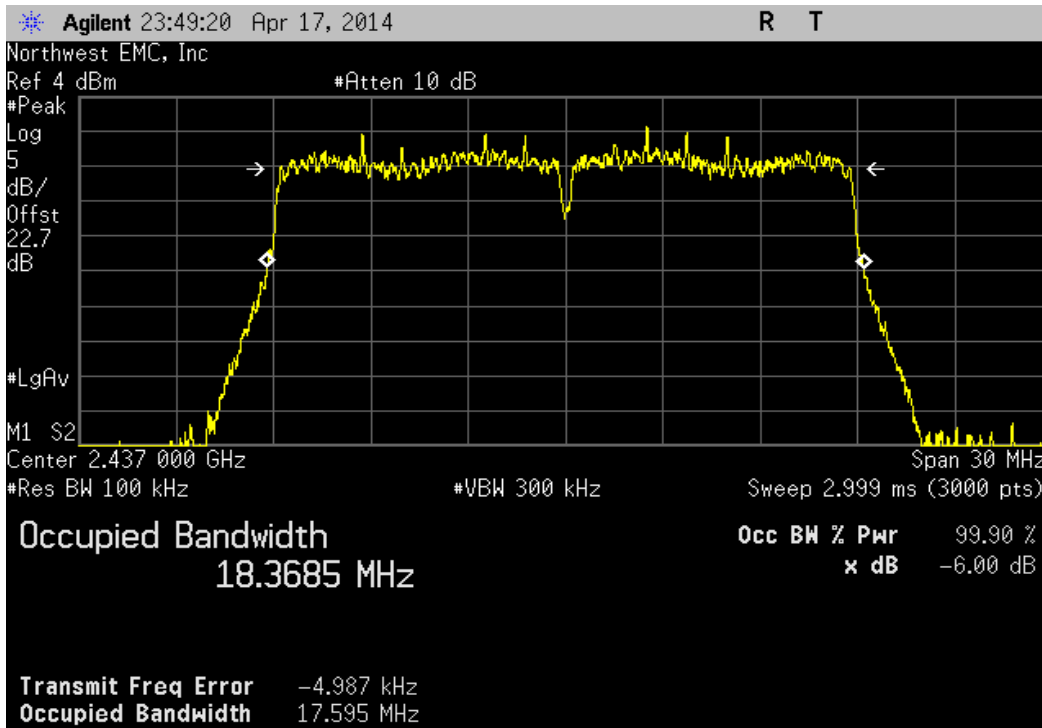
20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Low Channel 1, 2412 MHz

Value	Limit	Result
17.578 MHz	> 500 kHz	Pass



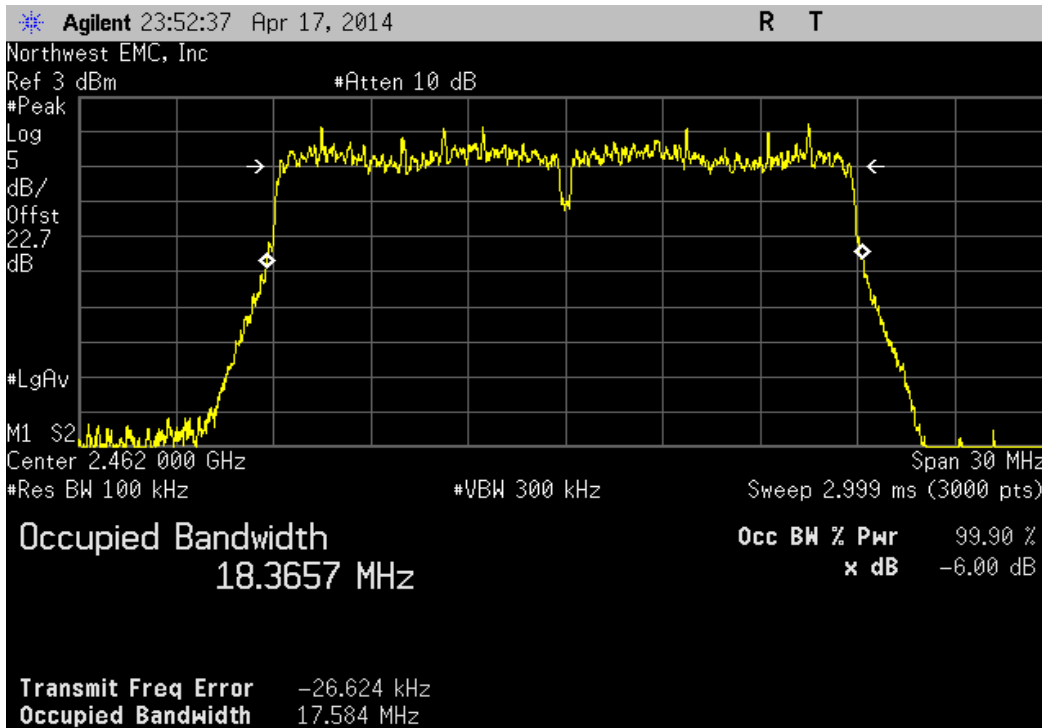
20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Mid Channel 6, 2437 MHz

				Value	Limit	Result
				17.595 MHz	> 500 kHz	Pass



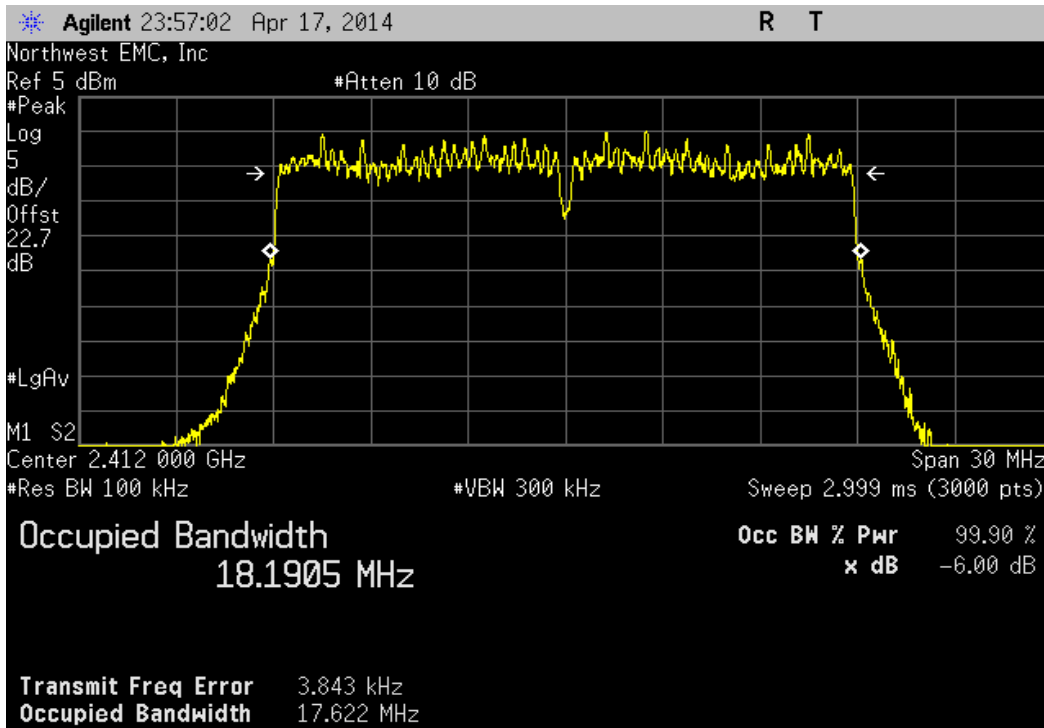
20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, High Channel 11, 2462 MHz

				Value	Limit	Result
				17.584 MHz	> 500 kHz	Pass



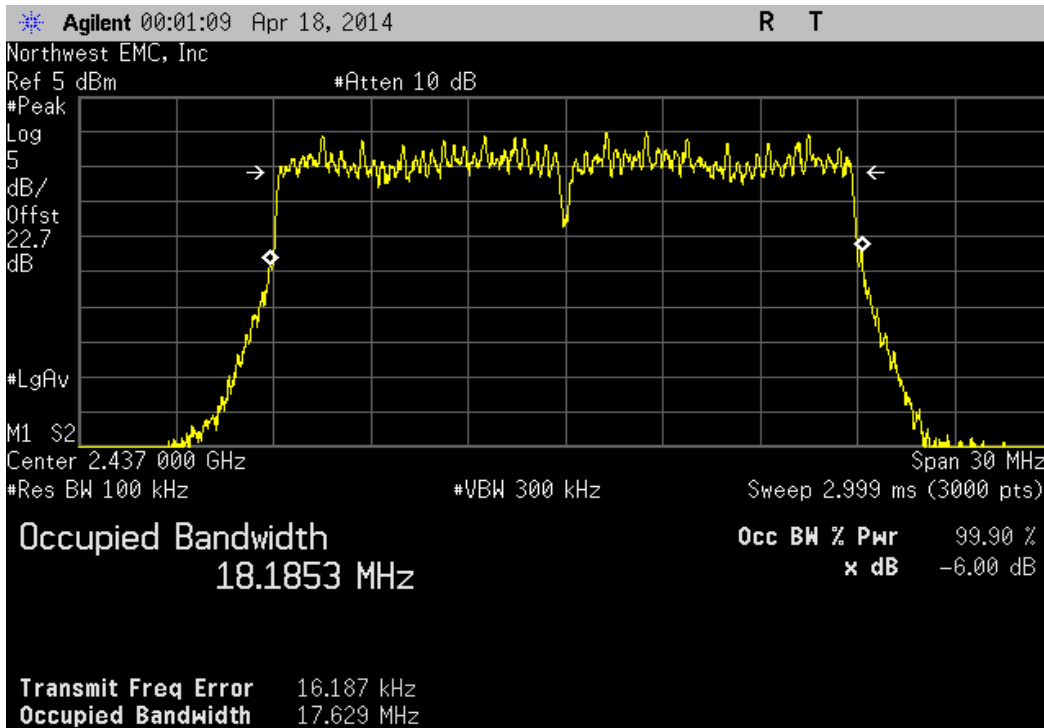
20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Low Channel 1, 2412 MHz

				Value	Limit	Result
				17.622 MHz	> 500 kHz	Pass



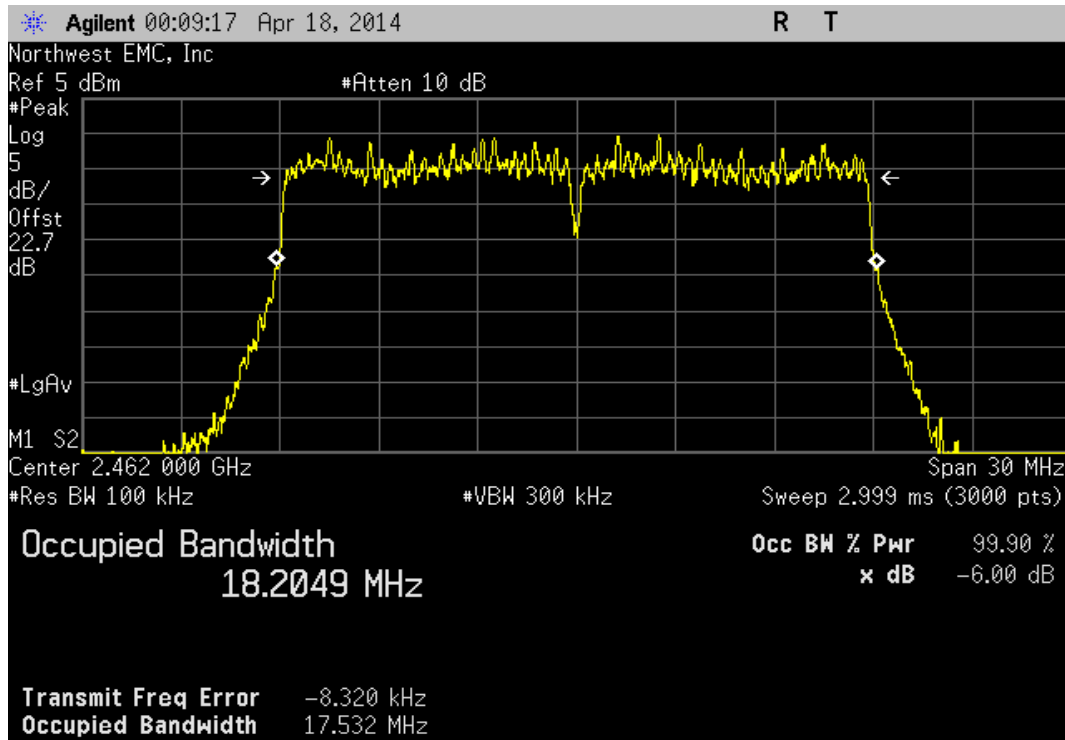
20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Mid Channel 6, 2437 MHz

				Value	Limit	Result
				17.629 MHz	> 500 kHz	Pass



20 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, High Channel 11, 2462 MHz

Value	Limit	Result
17.532 MHz	> 500 kHz	Pass



OCCUPIED BANDWIDTH

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 (mo.)
40GHz DC Block	Miteq	DCB4000	AMD	5/16/2013	12
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	7/30/2013	12
EV06 Direct Connect Cable	ESM Cable Corp.	TT	ECA	NCR	0
Power Meter	Agilent	N1913A	SQR	4/29/2013	36
Power Sensor	Agilent	E9300H	SQO	4/29/2013	36
Attenuator, 6dB	S.M. Electronics	18N-06	AWN	2/3/2014	12
MXG Analog Signal Generator	Agilent	N5181A	TIG	3/28/2014	36
Spectrum Analyzer	Agilent	E4446A	AAQ	1/21/2014	24

TEST DESCRIPTION

The 6dB occupied bandwidth was measured using 100 kHz resolution bandwidth and 300 kHz video bandwidth. The 99.9% (approximate 26 dB) emission bandwidth (EBW) was also measured at the same time.

The EUT was set to low, medium and high transmit frequencies. 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.

EUT: Model 1631	Work Order: MCSO1698
Serial Number: 006840341053	Date: 04/16/14
Customer: Microsoft Corporation	Temperature: 22.3°C
Attendees: None	Humidity: 32%
Project: None	Barometric Pres.: 1014
Tested by: Jared Ison	Power: 110VAC/60Hz
	Job Site: EV06

TEST SPECIFICATIONS	Test Method
FCC 15.247:2014	ANSI C63.10:2009

COMMENTS
Modes of operation tested were client provided. Reference power level table for channel power setting.

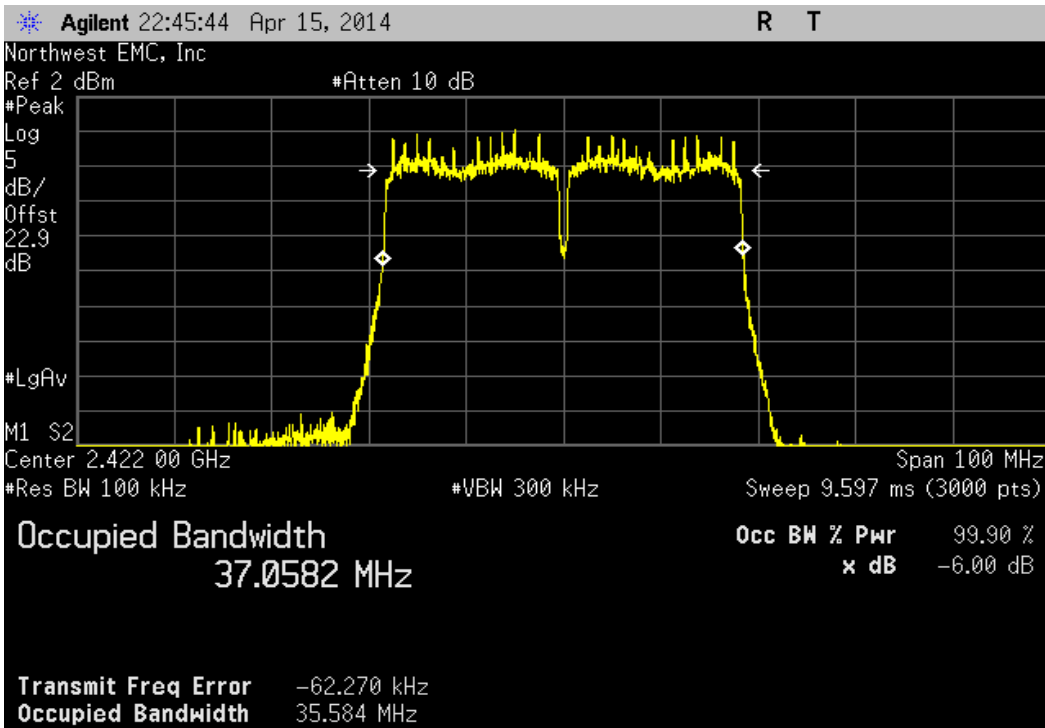
DEVIATIONS FROM TEST STANDARD
None

Configuration #	6	Signature 
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		Value	Limit	Result
40 MHz	2400 MHz - 2483.5 MHz Band			
	802.11(n) MCS0			
	1/5 Low Channel, 2422 MHz	35.584 MHz	> 500 kHz	Pass
	4/8 Mid Channel, 2437 MHz	35.481 MHz	> 500 kHz	Pass
	7/11 High Channel, 2452 MHz	35.199 MHz	> 500 kHz	Pass
	802.11(n) MCS7			
	1/5 Low Channel, 2422 MHz	35.968 MHz	> 500 kHz	Pass
	4/8 Mid Channel, 2437 MHz	36.023 MHz	> 500 kHz	Pass
	7/11 High Channel, 2452 MHz	35.952 MHz	> 500 kHz	Pass

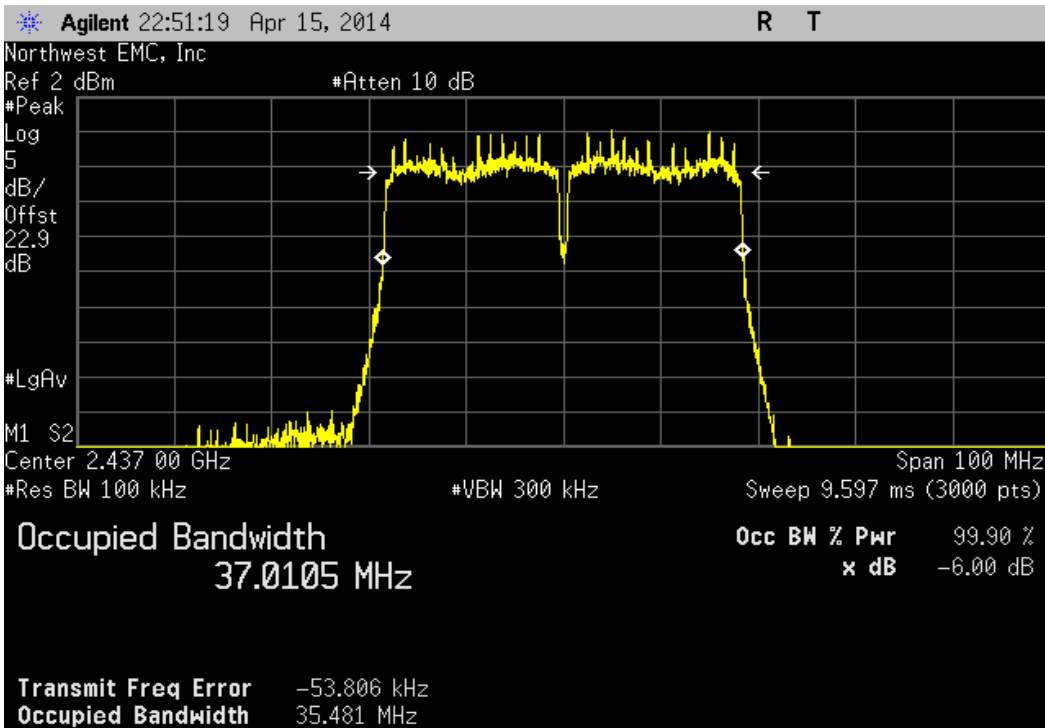
40 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, 1/5 Low Channel, 2422 MHz

	Value	Limit	Result
	35.584 MHz	> 500 kHz	Pass



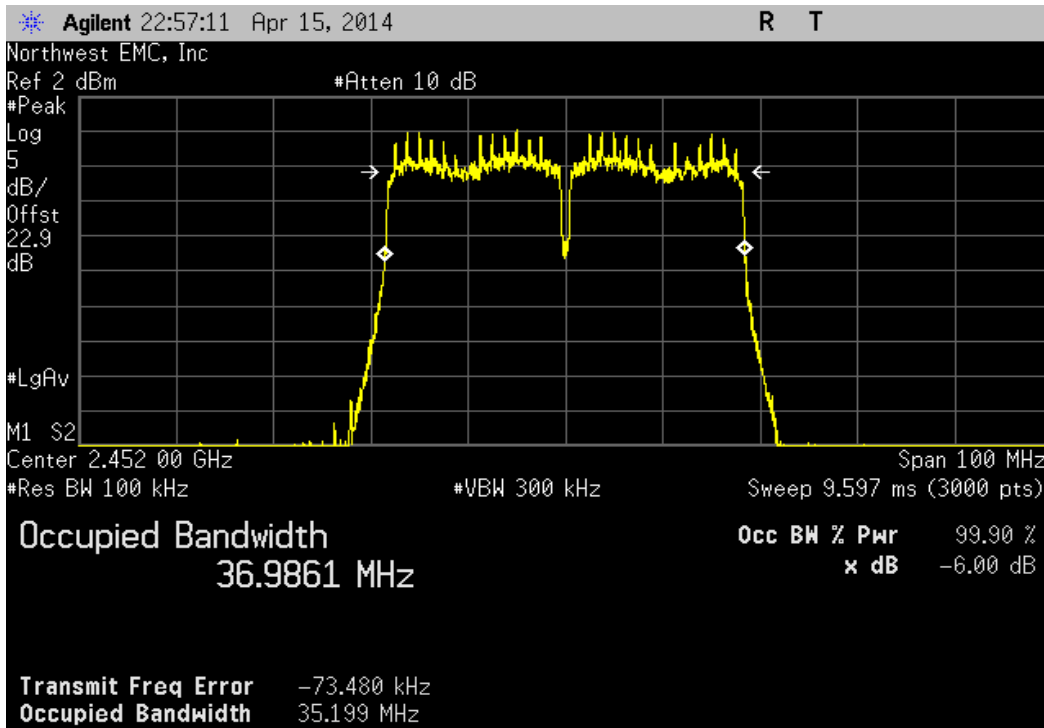
40 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, 4/8 Mid Channel, 2437 MHz

	Value	Limit	Result
	35.481 MHz	> 500 kHz	Pass



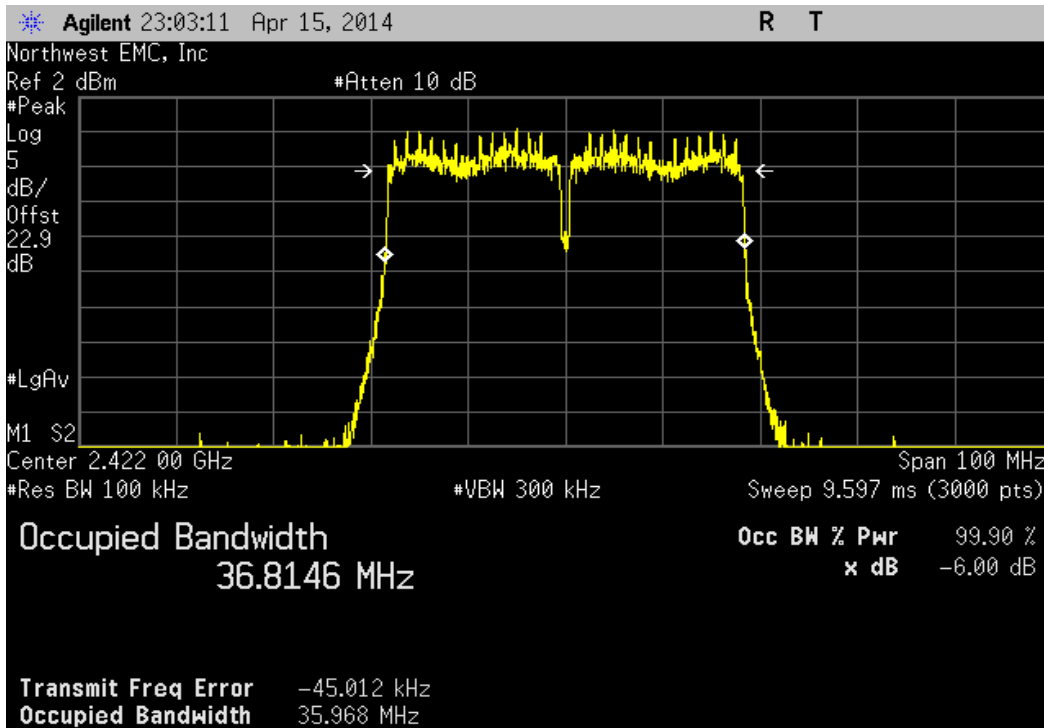
40 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, 7/11 High Channel, 2452 MHz

	Value	Limit	Result
	35.199 MHz	> 500 kHz	Pass



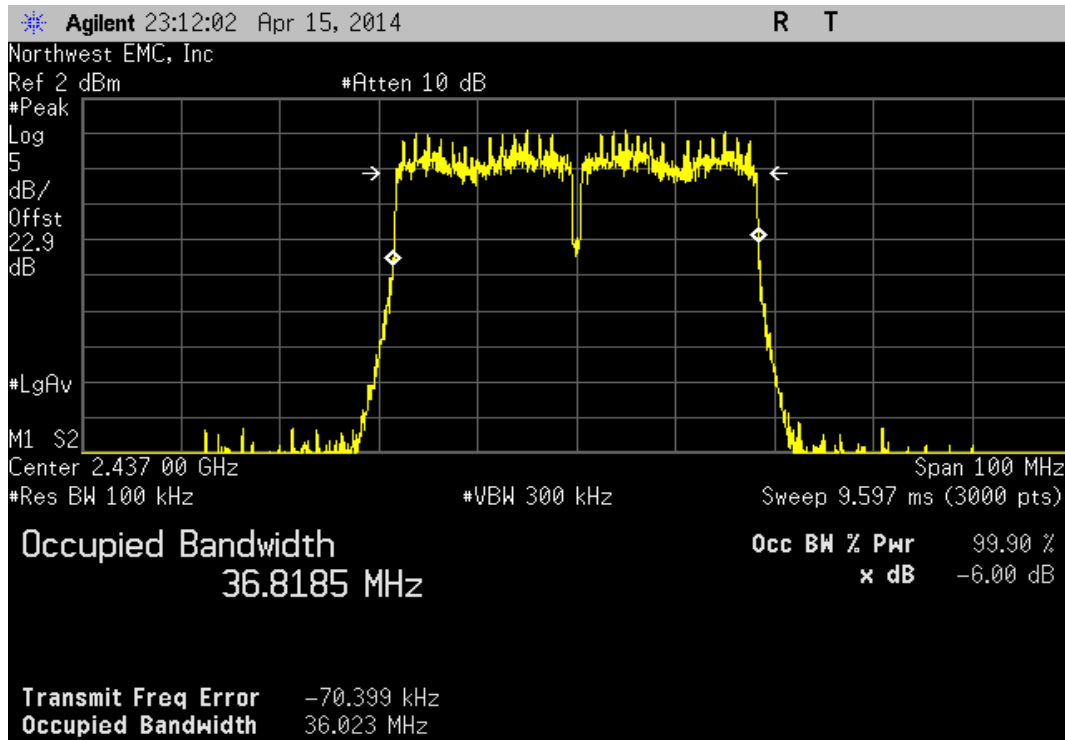
40 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, 1/5 Low Channel, 2422 MHz

	Value	Limit	Result
	35.968 MHz	> 500 kHz	Pass



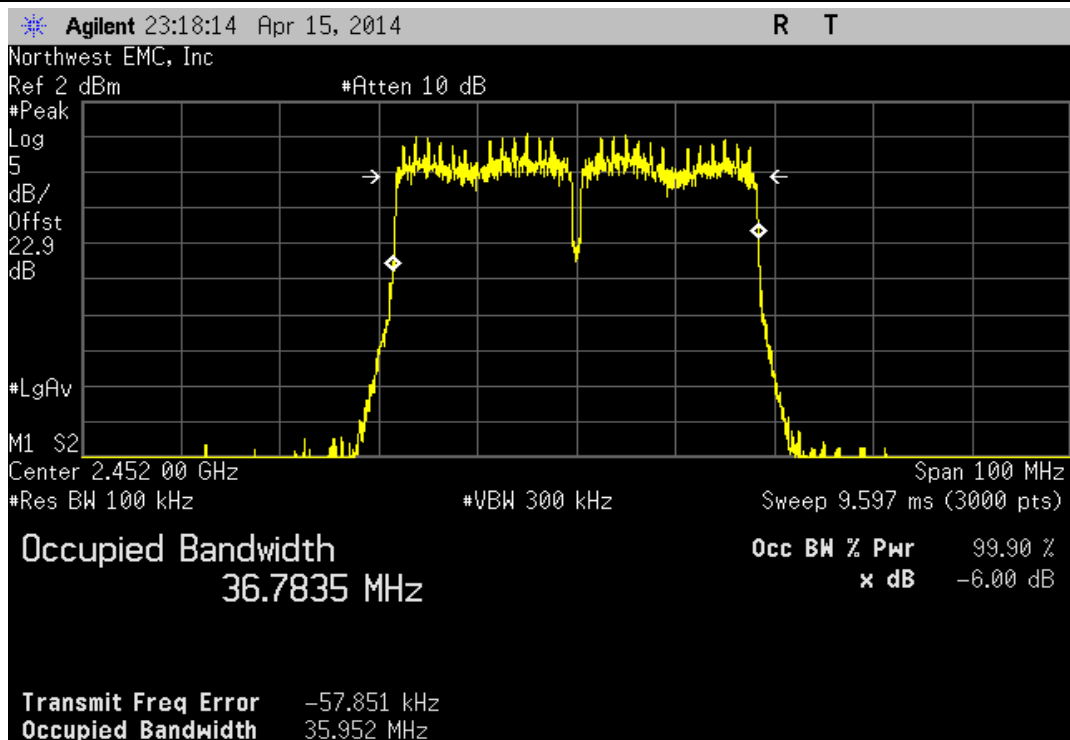
40 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, 4/8 Mid Channel, 2437 MHz

Value	Limit	Result
36.023 MHz	> 500 kHz	Pass



40 MHz, 2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, 7/11 High Channel, 2452 MHz

Value	Limit	Result
35.952 MHz	> 500 kHz	Pass



OCCUPIED BANDWIDTH

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 (mo.)
40GHz DC Block	Miteq	DCB4000	AMD	5/16/2013	12
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	7/30/2013	12
EV06 Direct Connect Cable	ESM Cable Corp.	TT	ECA	NCR	0
Power Meter	Gigatronics	8651A	SPM	11/26/2013	24
Power Sensor	Gigatronics	80701A	SPL	7/8/2011	36
Attenuator, 6dB	S.M. Electronics	18N-06	AWN	2/3/2014	12
MXG Analog Signal Generator	Agilent	N5181A	TIG	3/28/2014	36
Spectrum Analyzer	Agilent	E4446A	AAQ	1/21/2014	24

TEST DESCRIPTION

The 6dB occupied bandwidth was measured using 100 kHz resolution bandwidth and 300 kHz video bandwidth. The 99.9% (approximate 26 dB) emission bandwidth (EBW) was also measured at the same time.

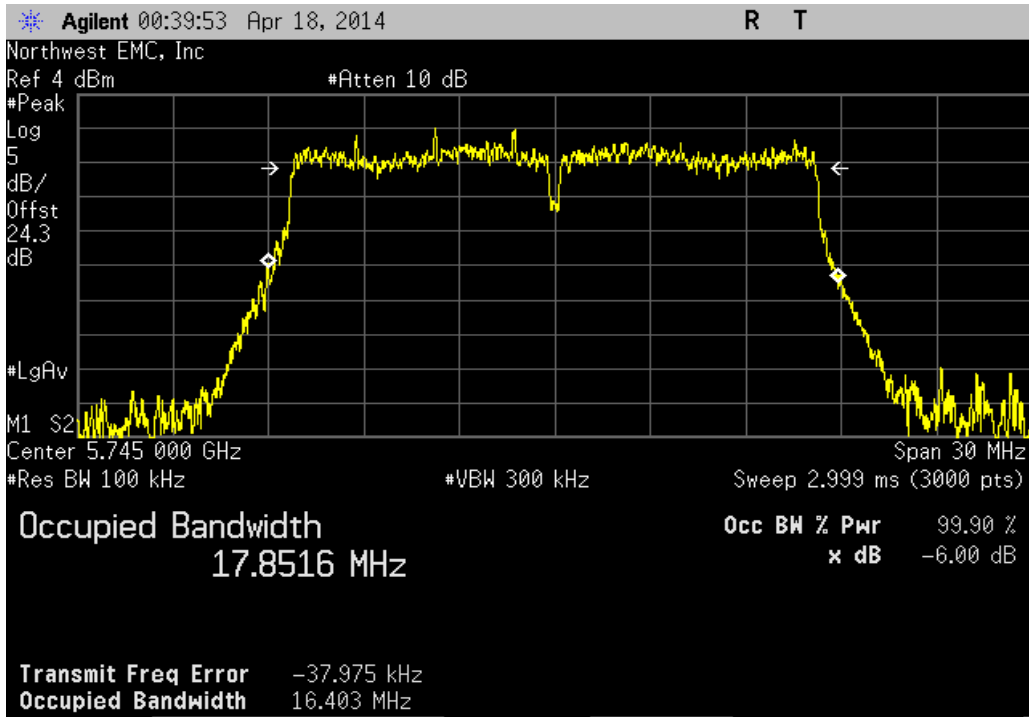
The EUT was set to low, medium and high transmit frequencies. The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer. The EUT was transmitting at the data rate(s) listed in the datasheet.

EUT: Model 1631		Work Order: MCSO1698	
Serial Number: 006840341053		Date: 04/23/14	
Customer: Microsoft Corporation		Temperature: 22.3°C	
Attendees: None		Humidity: 32%	
Project: None		Barometric Pres.: 1014	
Tested by: Jared Ison		Power: 110VAC/60Hz	
		Job Site: EV06	
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2014		ANSI C63.10:2009	
COMMENTS			
Modes of operation tested were client provided. Reference power level table for channel power setting.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	6	Signature 	

			Value	Limit	Result
IEEE 802.11(a)	20 MHz	5725 MHz - 5850 MHz Band			
		6 Mbps			
		Low Channel 149, 5745 M	16.403 MHz	> 500 kHz	Pass
		Mid Channel 157, 5785 M	16.496 MHz	> 500 kHz	Pass
		High Channel 165, 5825 M	16.381 MHz	> 500 kHz	Pass
		36 Mbps			
		Low Channel 149, 5745 M	16.425 MHz	> 500 kHz	Pass
		Mid Channel 157, 5785 M	16.437 MHz	> 500 kHz	Pass
		High Channel 165, 5825 M	16.414 MHz	> 500 kHz	Pass
		54 Mbps			
		Low Channel 149, 5745 M	16.423 MHz	> 500 kHz	Pass
		Mid Channel 157, 5785 M	16.459 MHz	> 500 kHz	Pass
		High Channel 165, 5825 M	16.441 MHz	> 500 kHz	Pass
IEEE 802.11(n)	20 MHz	5725 MHz - 5850 MHz Band			
		HT, MCS7			
		Low Channel 149, 5745 M	17.495 MHz	> 500 kHz	Pass
		Mid Channel 157, 5785 M	17.629 MHz	> 500 kHz	Pass
		High Channel 165, 5825 M	17.517 MHz	> 500 kHz	Pass
	40 MHz	5725 MHz - 5850 MHz Band			
		HT, MCS7			
		Low Channel 149/153, 5745 M	35.601 MHz	> 500 kHz	Pass
		High Channel 157/161, 5785 M	35.887 MHz	> 500 kHz	Pass
IEEE 802.11(ac)	20 MHz	5725 MHz - 5850 MHz Band			
		VHT, MCS0			
		Low Channel 149, 5745 M	17.36 MHz	> 500 kHz	Pass
		Mid Channel 157, 5785 M	17.335 MHz	> 500 kHz	Pass
		High Channel 165, 5825 M	17.602 MHz	> 500 kHz	Pass
		VHT, MCS8			
		Low Channel 149, 5745 M	17.572 MHz	> 500 kHz	Pass
		Mid Channel 157, 5785 M	17.516 MHz	> 500 kHz	Pass
		High Channel 165, 5825 M	17.502 MHz	> 500 kHz	Pass
	40 MHz	5725 MHz - 5850 MHz Band			
		VHT, MCS0			
		Low Channel 149/153, 5745 M	36.106 MHz	> 500 kHz	Pass
		High Channel 157/161, 5785 M	35.521 MHz	> 500 kHz	Pass
		VHT, MCS9			
		Low Channel 149/153, 5745 M	35.977 MHz	> 500 kHz	Pass
		High Channel 157/161, 5785 M	35.763 MHz	> 500 kHz	Pass
	80 MHz	5725 MHz - 5850 MHz Band			
		VHT, MCS0			
		Low Channel 149/153/157	76.369 MHz	> 500 kHz	Pass
		VHT, MCS9			
		Low Channel 149/153/157	76.336 MHz	> 500 kHz	Pass

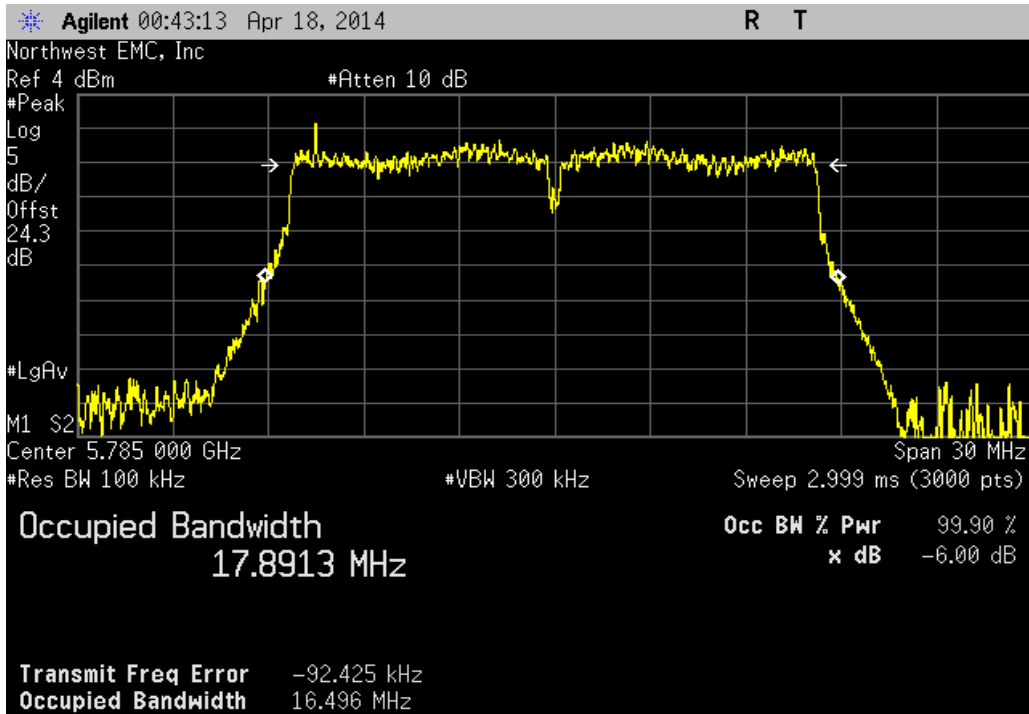
IEEE 802.11(a), 20 MHz, 5725 MHz - 5850 MHz Band, 6 Mbps, Low Channel 149, 5745 MHz

Value	Limit	Result
16.403 MHz	> 500 kHz	Pass



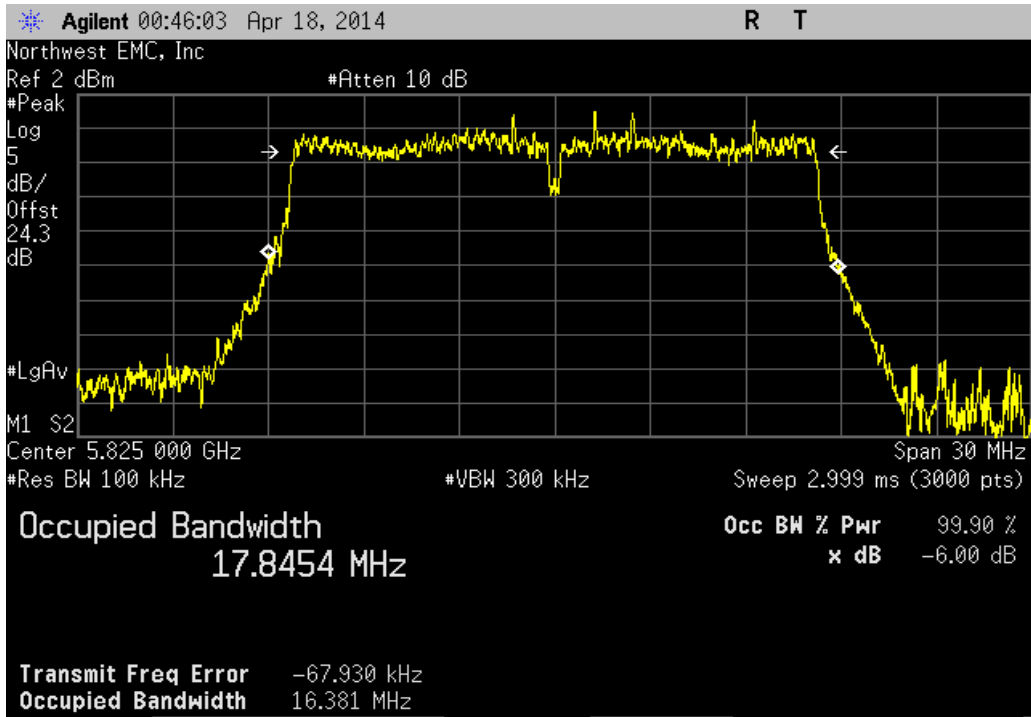
IEEE 802.11(a), 20 MHz, 5725 MHz - 5850 MHz Band, 6 Mbps, Mid Channel 157, 5785 MHz

Value	Limit	Result
16.496 MHz	> 500 kHz	Pass



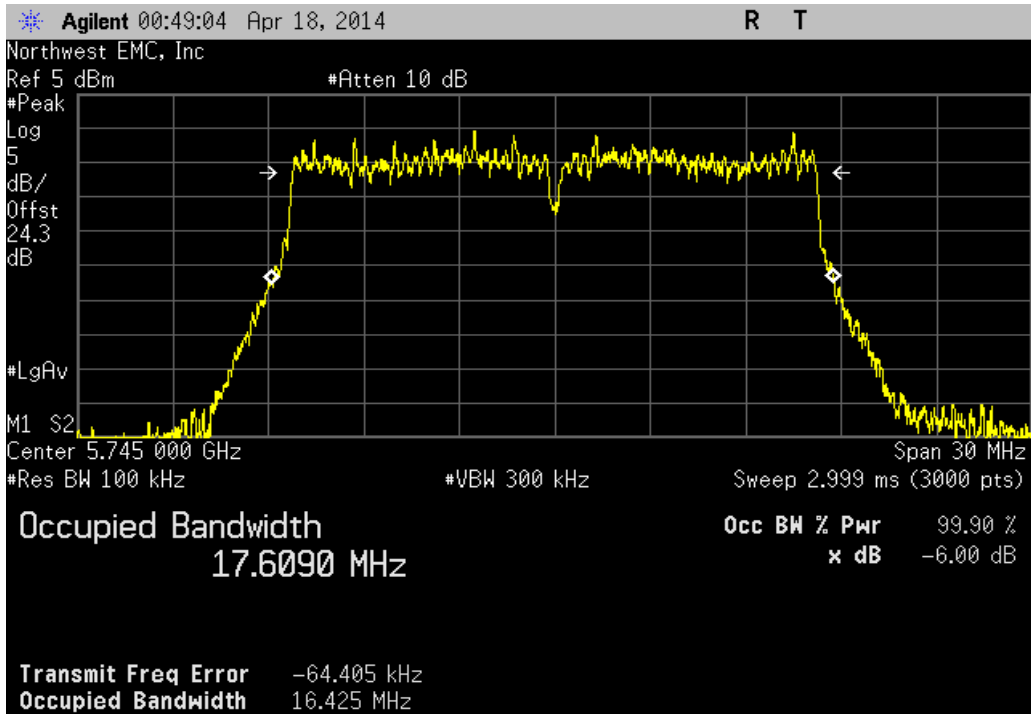
IEEE 802.11(a), 20 MHz, 5725 MHz - 5850 MHz Band, 6 Mbps, High Channel 165, 5825 MHz

Value	Limit	Result
16.381 MHz	> 500 kHz	Pass



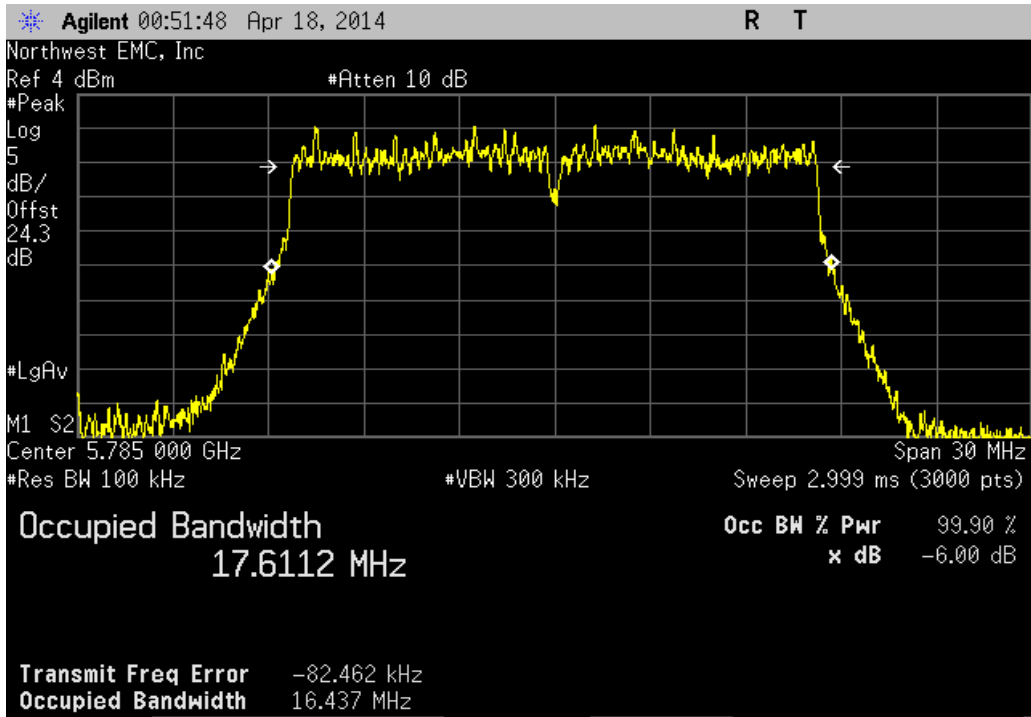
IEEE 802.11(a), 20 MHz, 5725 MHz - 5850 MHz Band, 36 Mbps, Low Channel 149, 5745 MHz

Value	Limit	Result
16.425 MHz	> 500 kHz	Pass



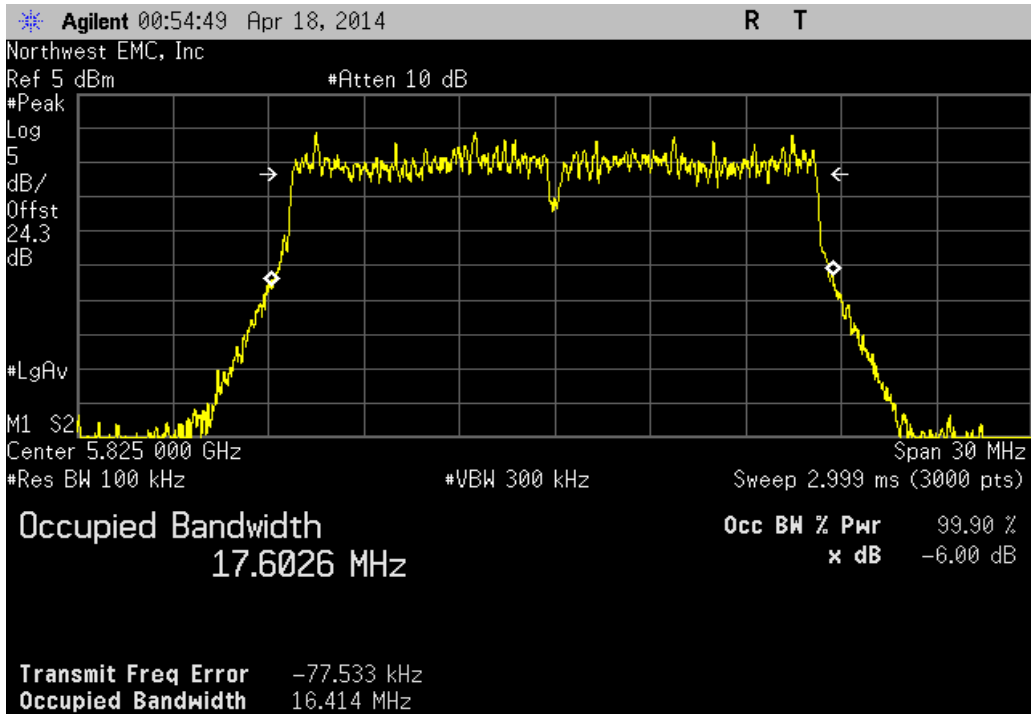
IEEE 802.11(a), 20 MHz, 5725 MHz - 5850 MHz Band, 36 Mbps, Mid Channel 157, 5785 MHz

	Value	Limit	Result
	16.437 MHz	> 500 kHz	Pass



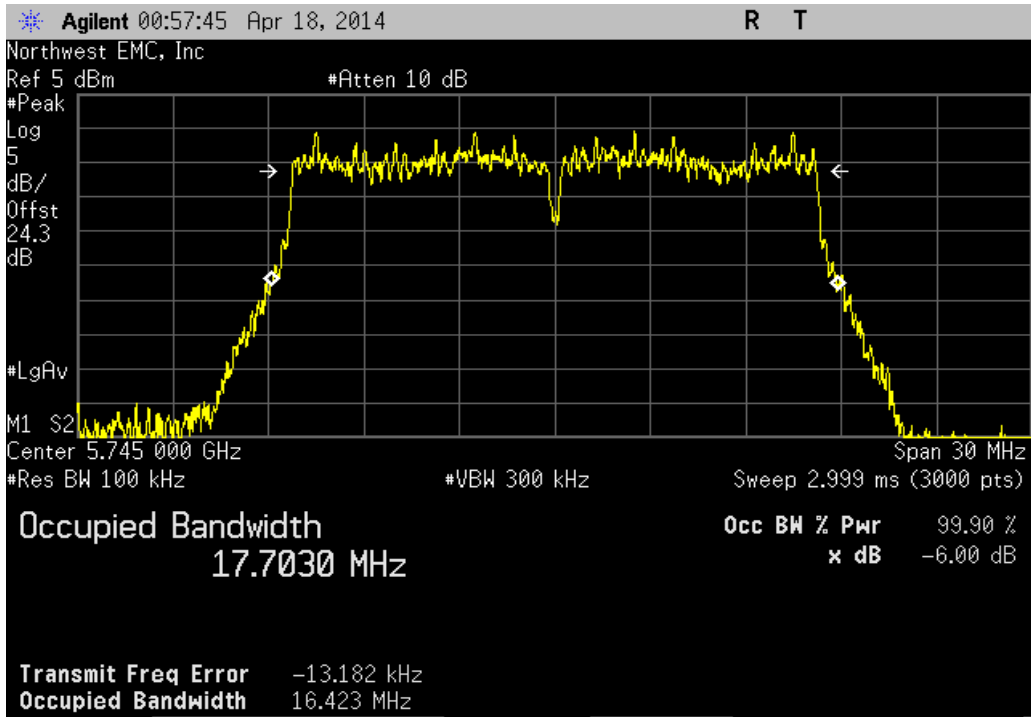
IEEE 802.11(a), 20 MHz, 5725 MHz - 5850 MHz Band, 36 Mbps, High Channel 165, 5825 MHz

	Value	Limit	Result
	16.414 MHz	> 500 kHz	Pass



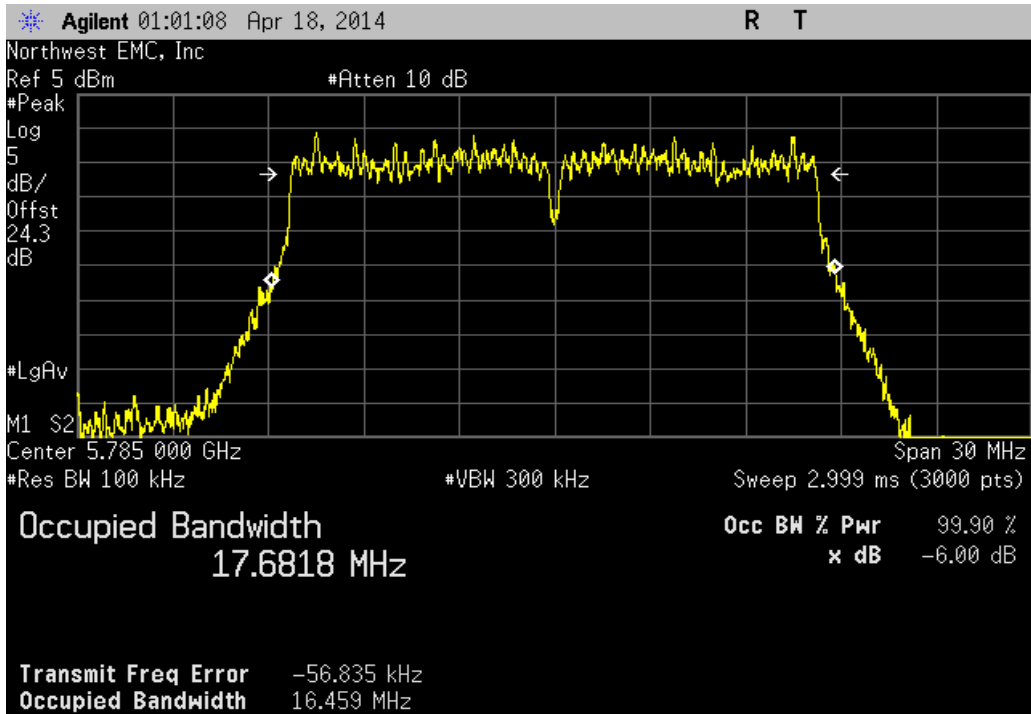
IEEE 802.11(a), 20 MHz, 5725 MHz - 5850 MHz Band, 54 Mbps, Low Channel 149, 5745 MHz

Value	Limit	Result
16.423 MHz	> 500 kHz	Pass



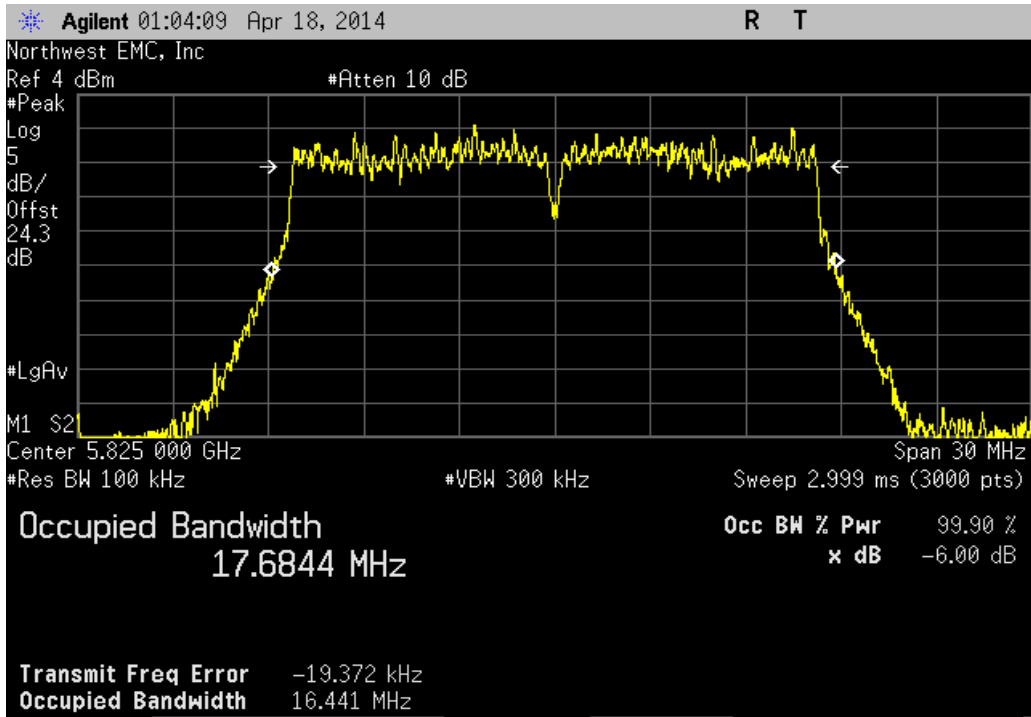
IEEE 802.11(a), 20 MHz, 5725 MHz - 5850 MHz Band, 54 Mbps, Mid Channel 157, 5785 MHz

Value	Limit	Result
16.459 MHz	> 500 kHz	Pass



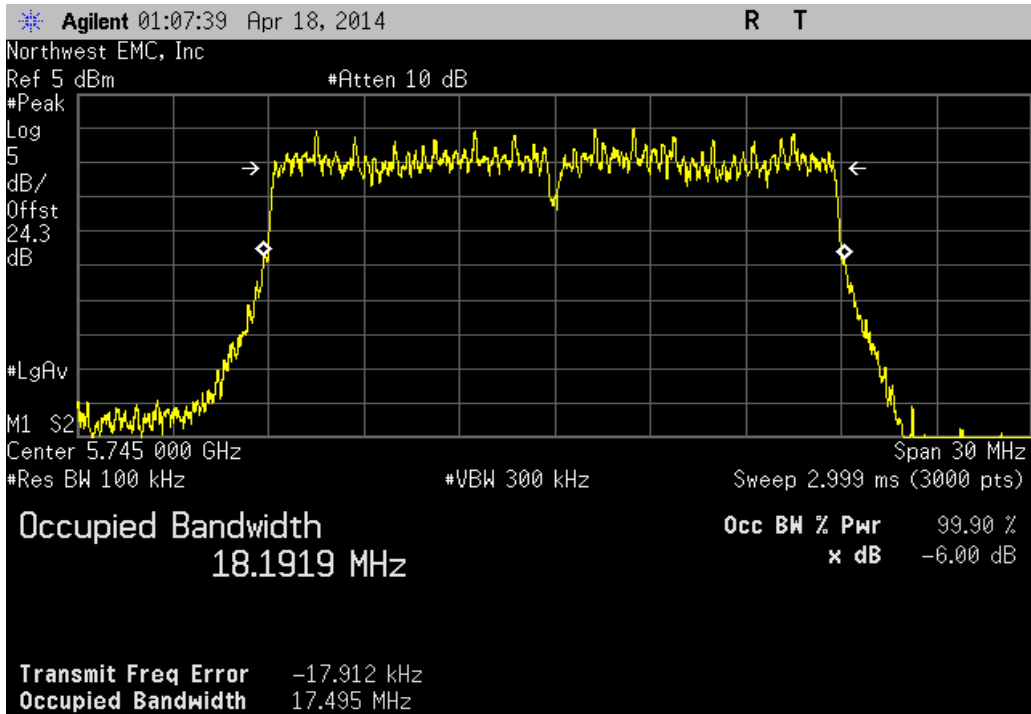
IEEE 802.11(a), 20 MHz, 5725 MHz - 5850 MHz Band, 54 Mbps, High Channel 165, 5825 MHz

	Value	Limit	Result
	16.441 MHz	> 500 kHz	Pass



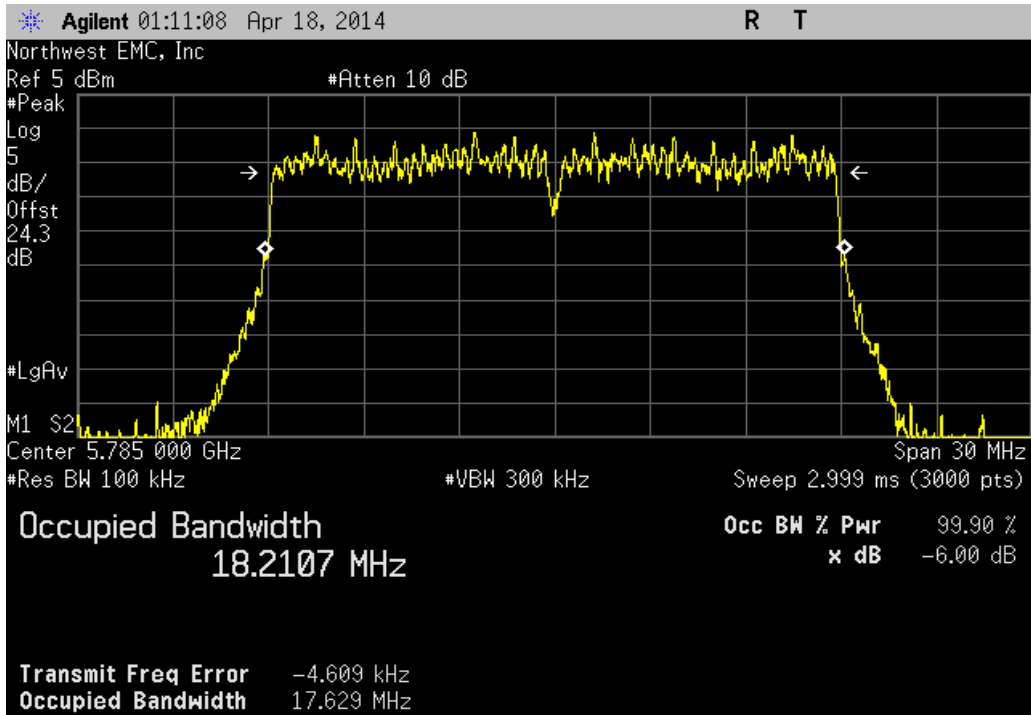
IEEE 802.11(n), 20 MHz, 5725 MHz - 5850 MHz Band, HT, MCS7, Low Channel 149, 5745 MHz

	Value	Limit	Result
	17.495 MHz	> 500 kHz	Pass



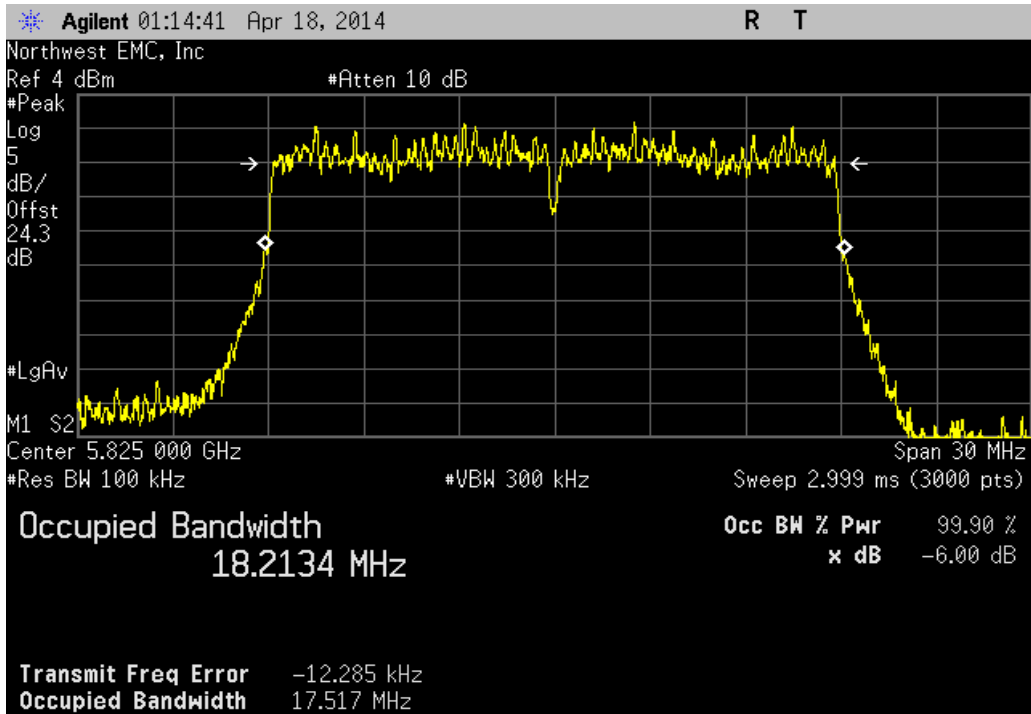
IEEE 802.11(n), 20 MHz, 5725 MHz - 5850 MHz Band, HT, MCS7, Mid Channel 157, 5785 MHz

Value	Limit	Result
17.629 MHz	> 500 kHz	Pass



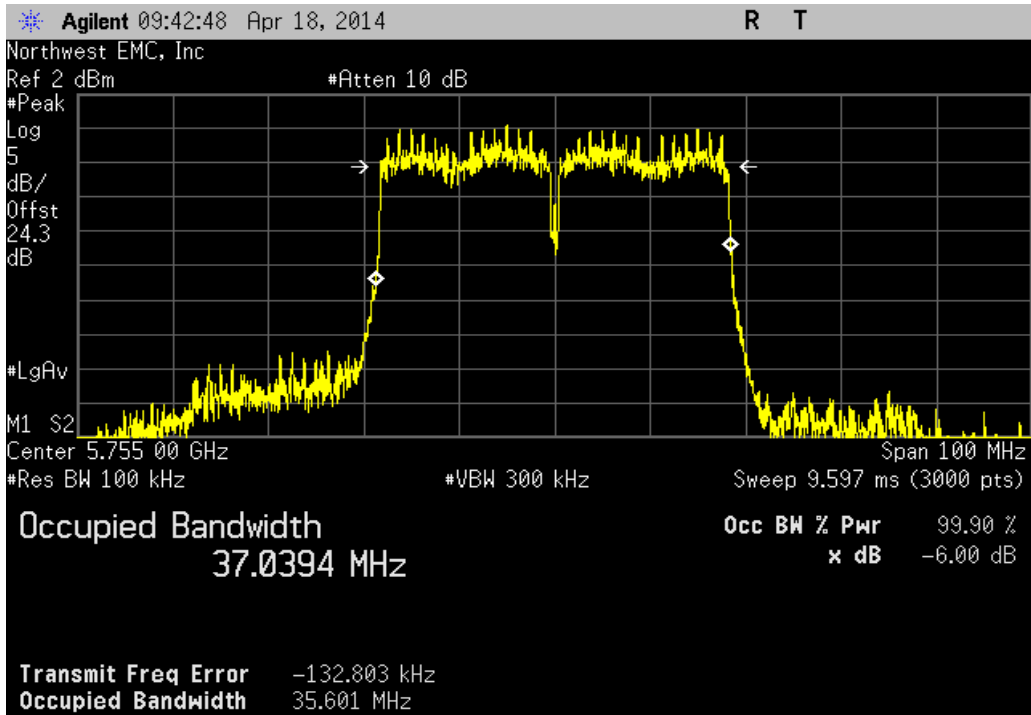
IEEE 802.11(n), 20 MHz, 5725 MHz - 5850 MHz Band, HT, MCS7, High Channel 165, 5825 MHz

Value	Limit	Result
17.517 MHz	> 500 kHz	Pass



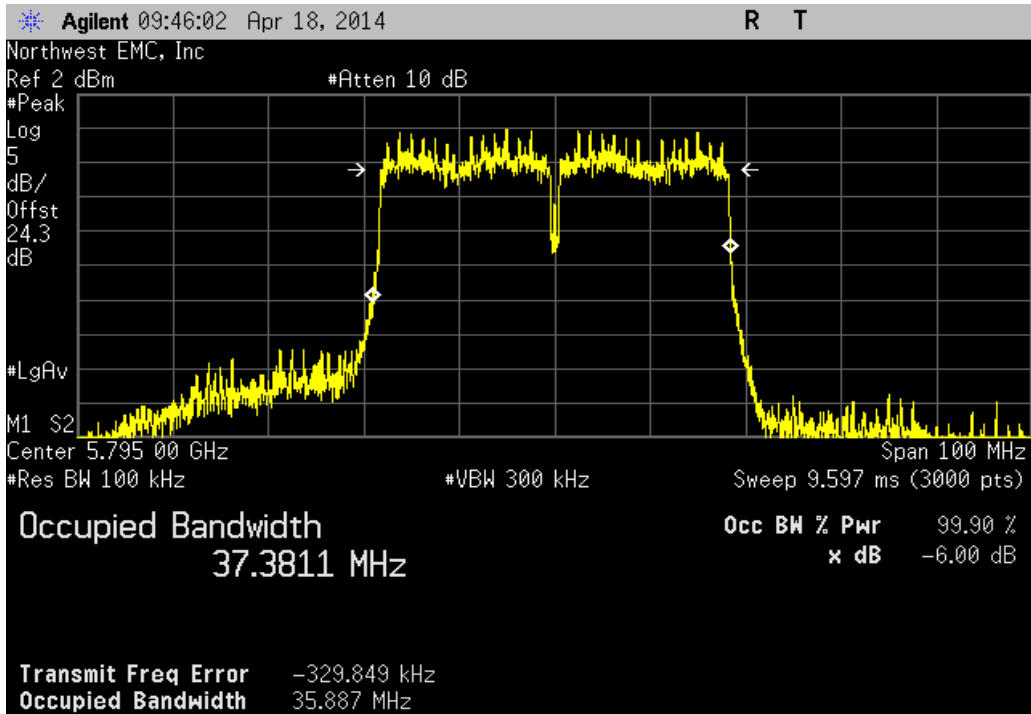
IEEE 802.11(n), 40 MHz, 5725 MHz - 5850 MHz Band, HT, MCS7, Low Channel 149/153, 5755 MHz

	Value	Limit	Result
	35.601 MHz	> 500 kHz	Pass



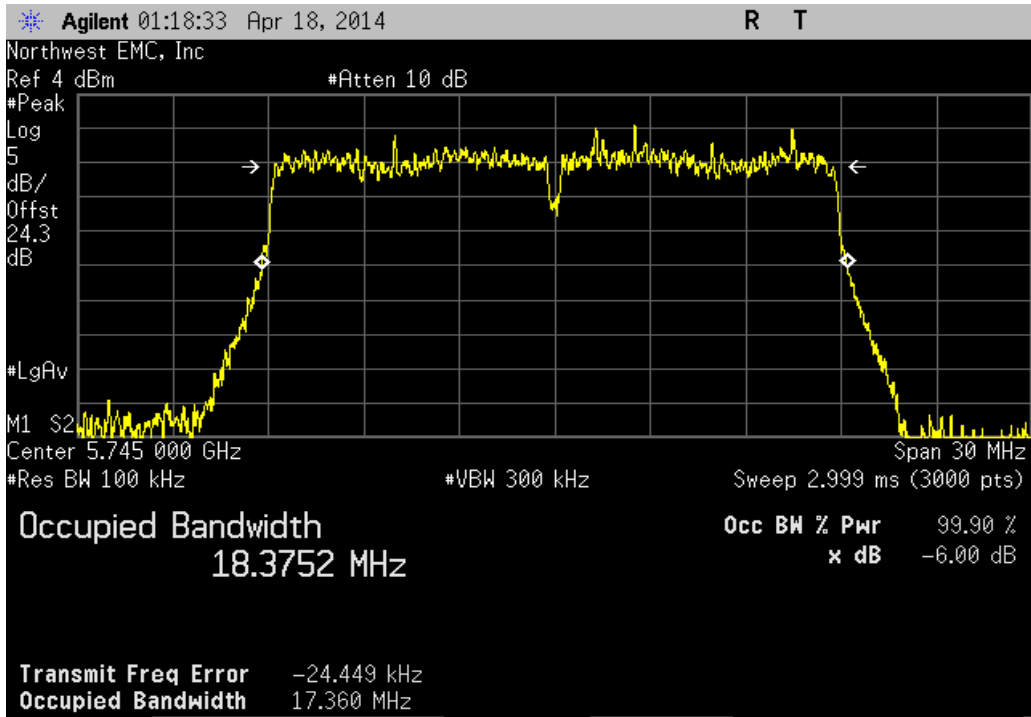
IEEE 802.11(n), 40 MHz, 5725 MHz - 5850 MHz Band, HT, MCS7, High Channel 157/161, 5795 MHz

	Value	Limit	Result
	35.887 MHz	> 500 kHz	Pass



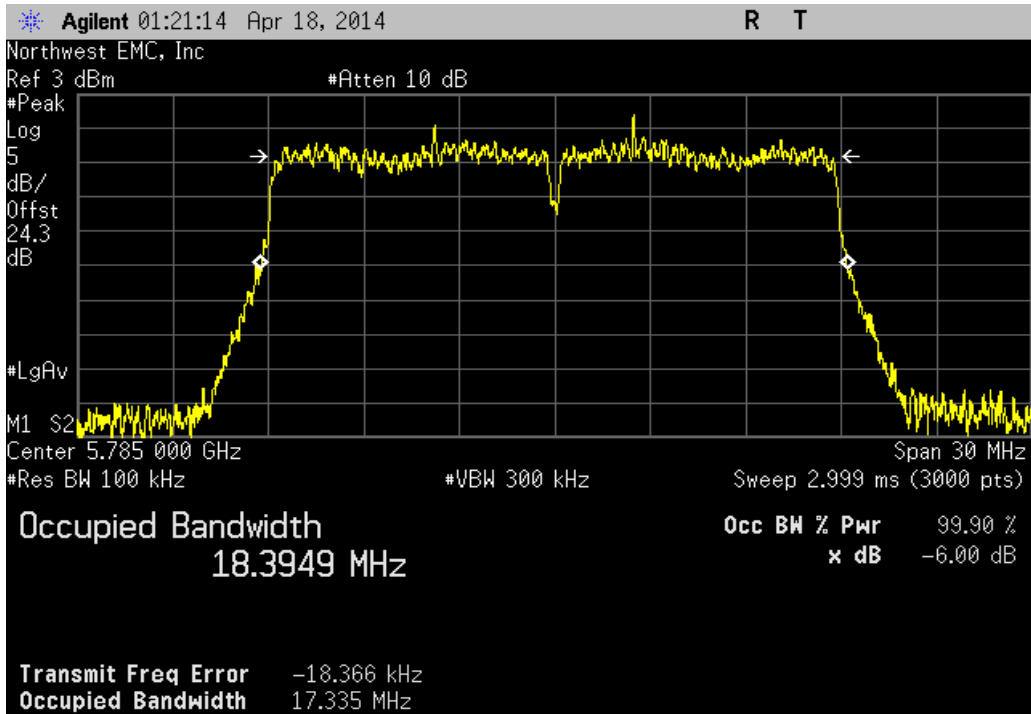
IEEE 802.11(ac), 20 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS0, Low Channel 149, 5745 MHz

Value	Limit	Result
17.36 MHz	> 500 kHz	Pass



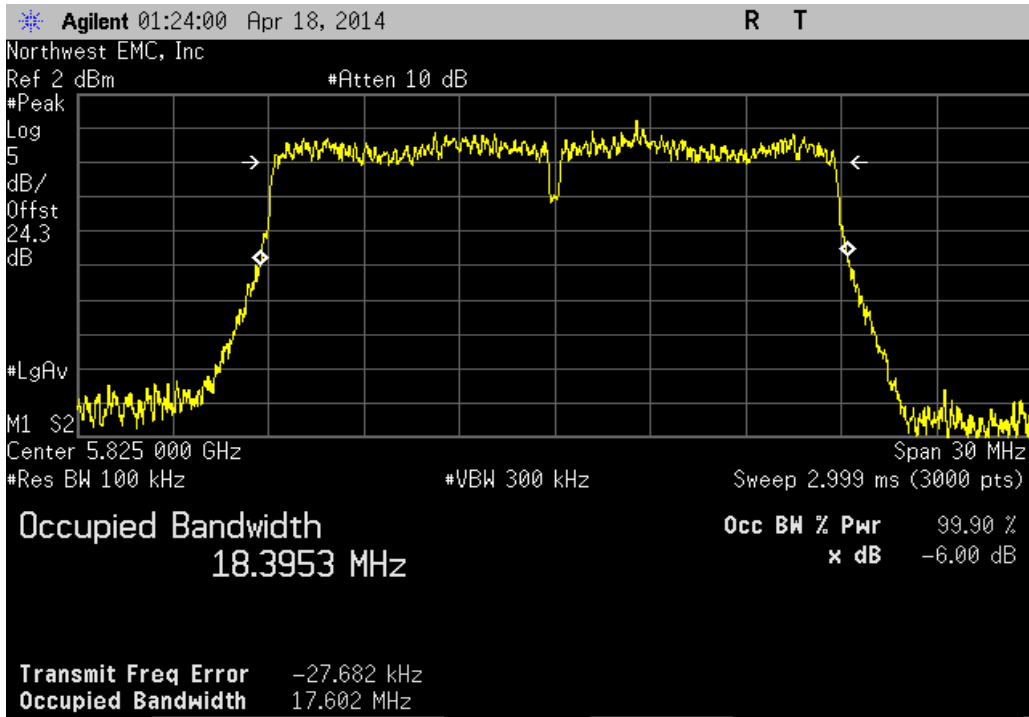
IEEE 802.11(ac), 20 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS0, Mid Channel 157, 5785 MHz

Value	Limit	Result
17.335 MHz	> 500 kHz	Pass



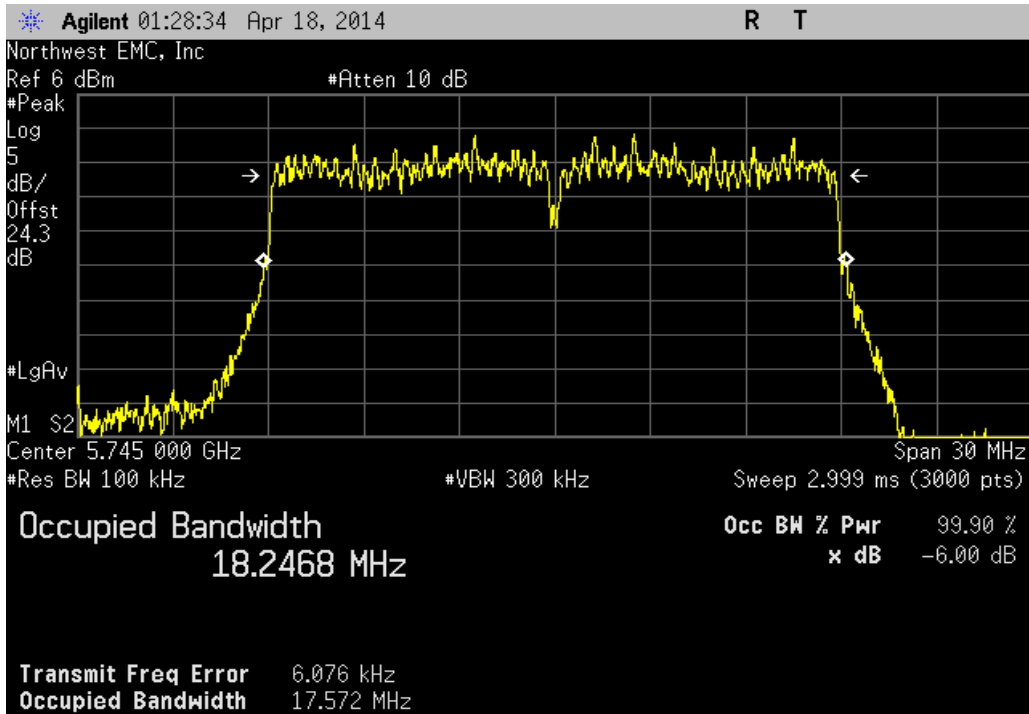
IEEE 802.11(ac), 20 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS0, High Channel 165, 5825 MHz

Value	Limit	Result
17.602 MHz	> 500 kHz	Pass



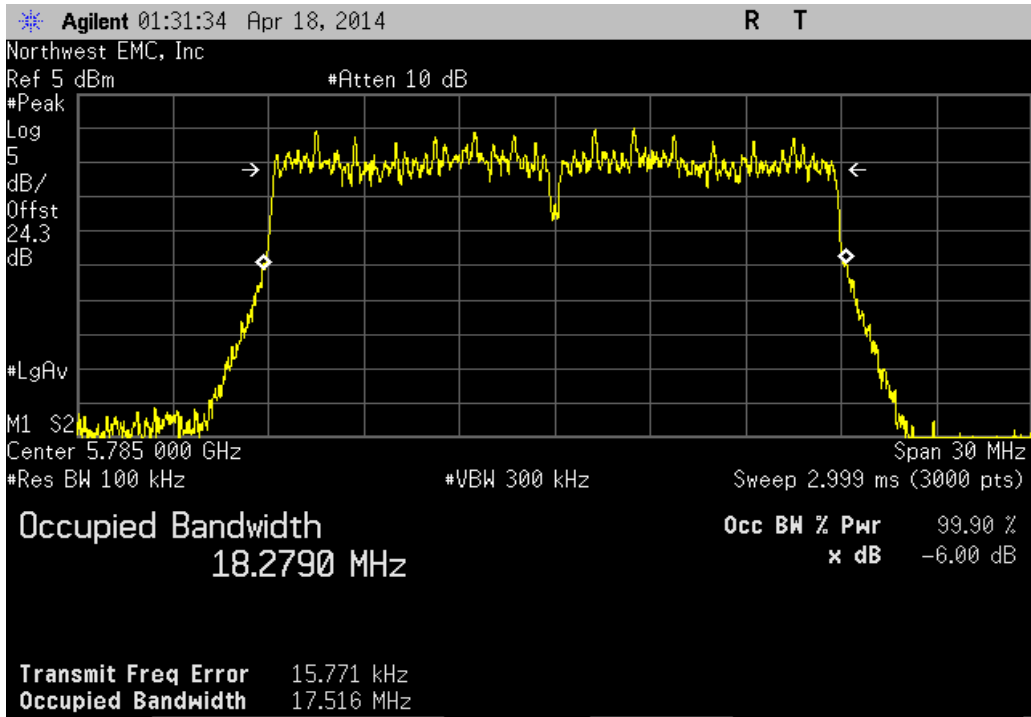
IEEE 802.11(ac), 20 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS8, Low Channel 149, 5745 MHz

Value	Limit	Result
17.572 MHz	> 500 kHz	Pass



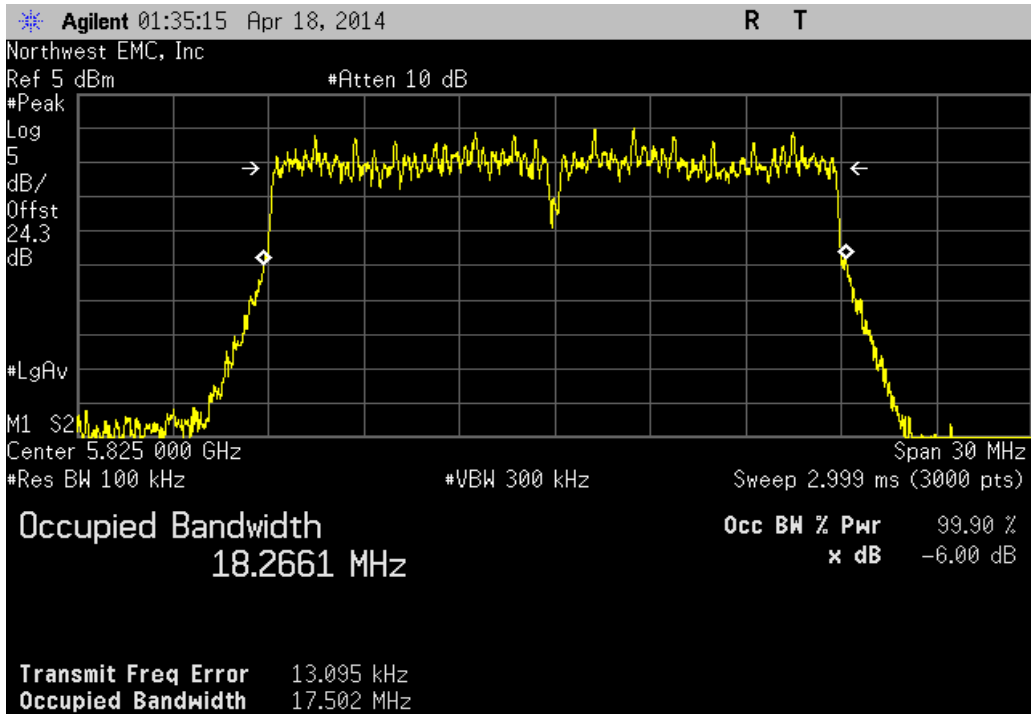
IEEE 802.11(ac), 20 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS8, Mid Channel 157, 5785 MHz

Value	Limit	Result
17.516 MHz	> 500 kHz	Pass



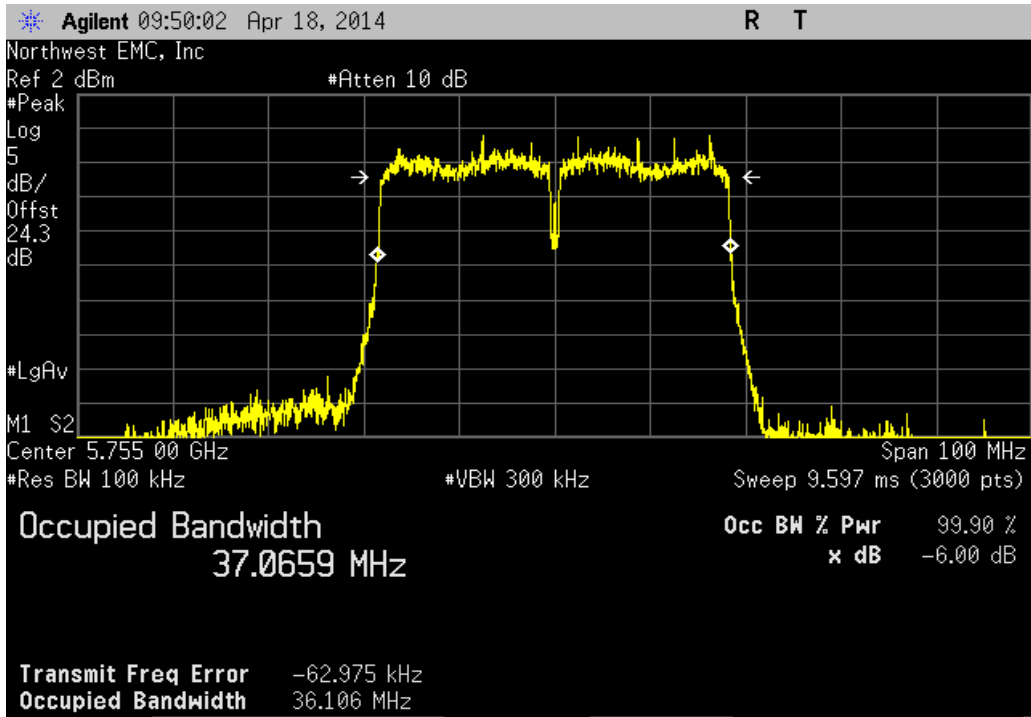
IEEE 802.11(ac), 20 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS8, High Channel 165, 5825 MHz

Value	Limit	Result
17.502 MHz	> 500 kHz	Pass



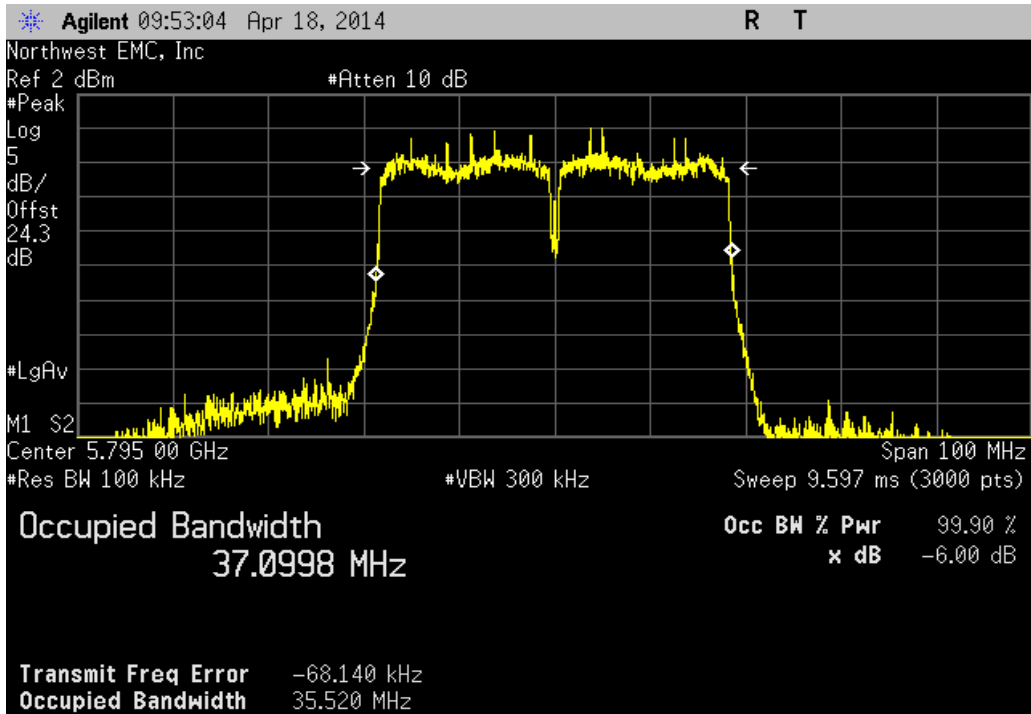
IEEE 802.11(ac), 40 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS0, Low Channel 149/153, 5755 MHz

	Value	Limit	Result
	36.106 MHz	> 500 kHz	Pass



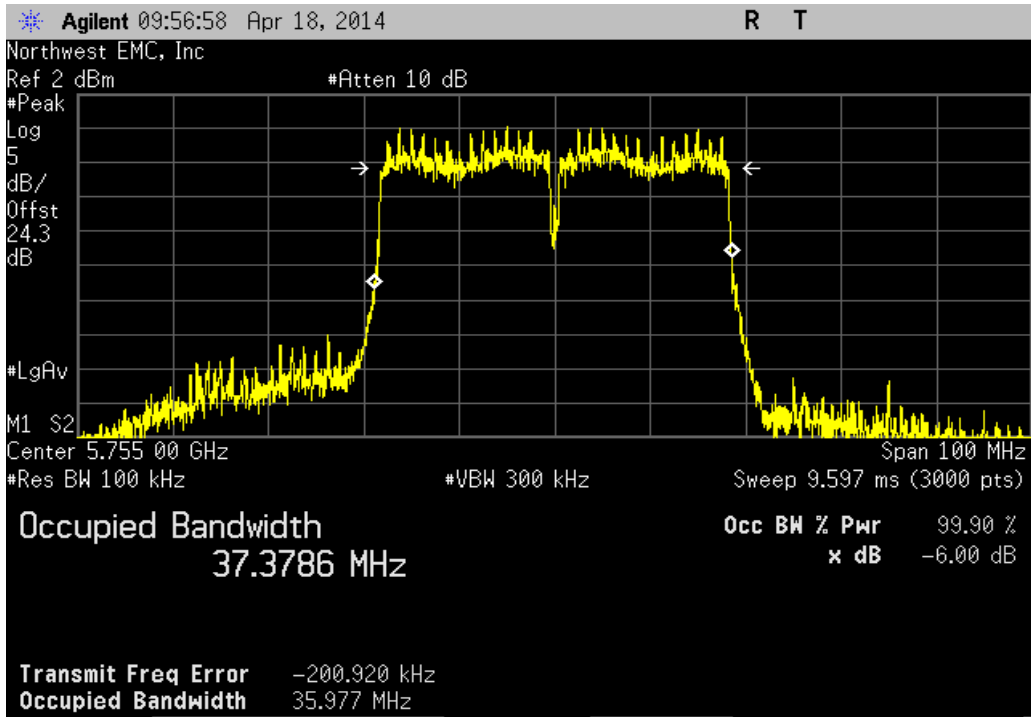
IEEE 802.11(ac), 40 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS0, High Channel 157/161, 5795 MHz

	Value	Limit	Result
	35.521 MHz	> 500 kHz	Pass



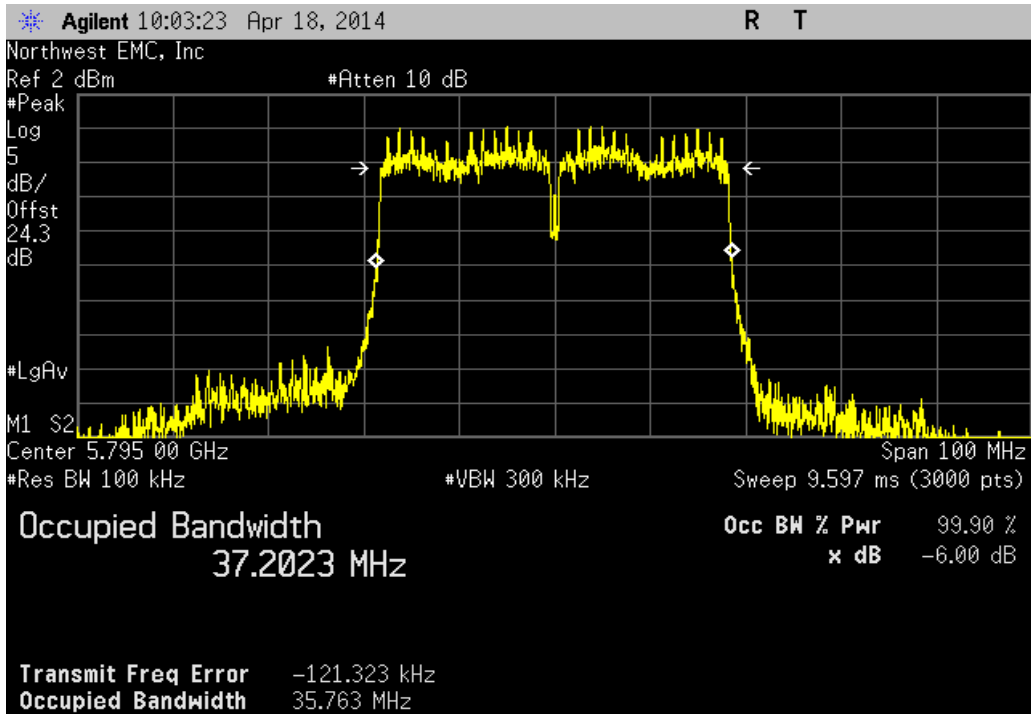
IEEE 802.11(ac), 40 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS9, Low Channel 149/153, 5755 MHz

	Value	Limit	Result
	35.977 MHz	> 500 kHz	Pass



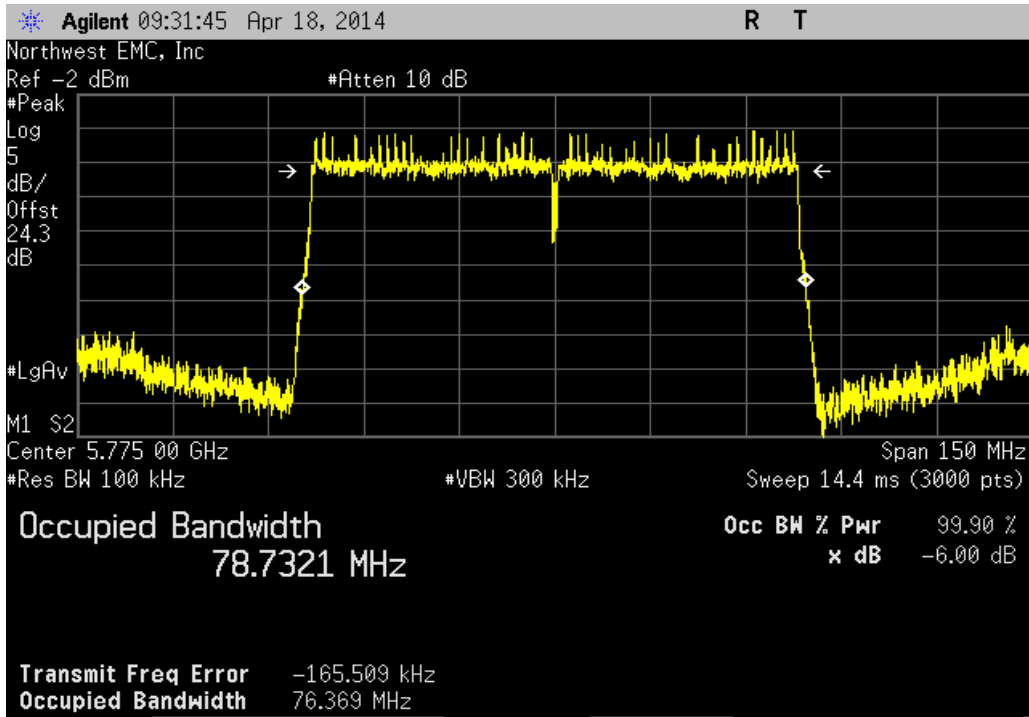
IEEE 802.11(ac), 40 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS9, High Channel 157/161, 5795 MHz

	Value	Limit	Result
	35.763 MHz	> 500 kHz	Pass



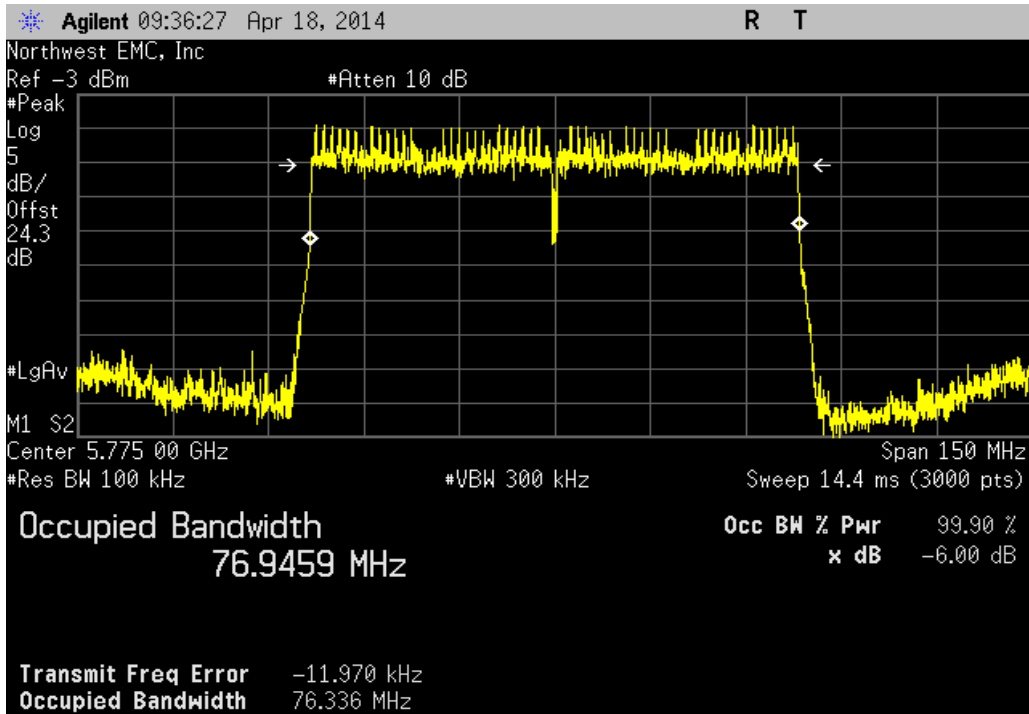
IEEE 802.11(ac), 80 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS0, Low Channel 149/153/157/161, 5775 MHz

Value	Limit	Result
76.369 MHz	> 500 kHz	Pass



IEEE 802.11(ac), 80 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS9, Low Channel 149/153/157/161, 5775 MHz

Value	Limit	Result
76.336 MHz	> 500 kHz	Pass



OCCUPIED BANDWIDTH

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 (mo.)
40GHz DC Block	Miteq	DCB4000	AMD	5/16/2013	12
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	7/30/2013	12
EV06 Direct Connect Cable	ESM Cable Corp.	TT	ECA	NCR	0
Power Meter	Gigatronics	8651A	SPM	11/26/2013	24
Power Sensor	Gigatronics	80701A	SPL	7/8/2011	36
Attenuator, 6dB	S.M. Electronics	18N-06	AWN	2/3/2014	12
MXG Analog Signal Generator	Agilent	N5181A	TIG	3/28/2014	36
Spectrum Analyzer	Agilent	E4446A	AAQ	1/21/2014	24

TEST DESCRIPTION

The 6dB occupied bandwidth was measured using 100 kHz resolution bandwidth and 300 kHz video bandwidth. The 99.9% (approximate 26 dB) emission bandwidth (EBW) was also measured at the same time.

The EUT was set to low, medium and high transmit frequencies. 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.



OCCUPIED BANDWIDTH

XMI 2013.08.15
PsaTx 2013.10.23

EUT: Model 1631	Work Order: MCSO1698
Serial Number: 006840341053	Date: 04/23/14
Customer: Microsoft Corporation	Temperature: 22.3°C
Attendees: None	Humidity: 32%
Project: None	Barometric Pres.: 1014
Tested by: Jared Ison	Power: 110VAC/60Hz
	Job Site: EV06
TEST SPECIFICATIONS	
FCC 15.247:2014	Test Method: ANSI C63.10:2009

COMMENTS
Modes of operation tested were client provided. Reference power level table for channel power setting.

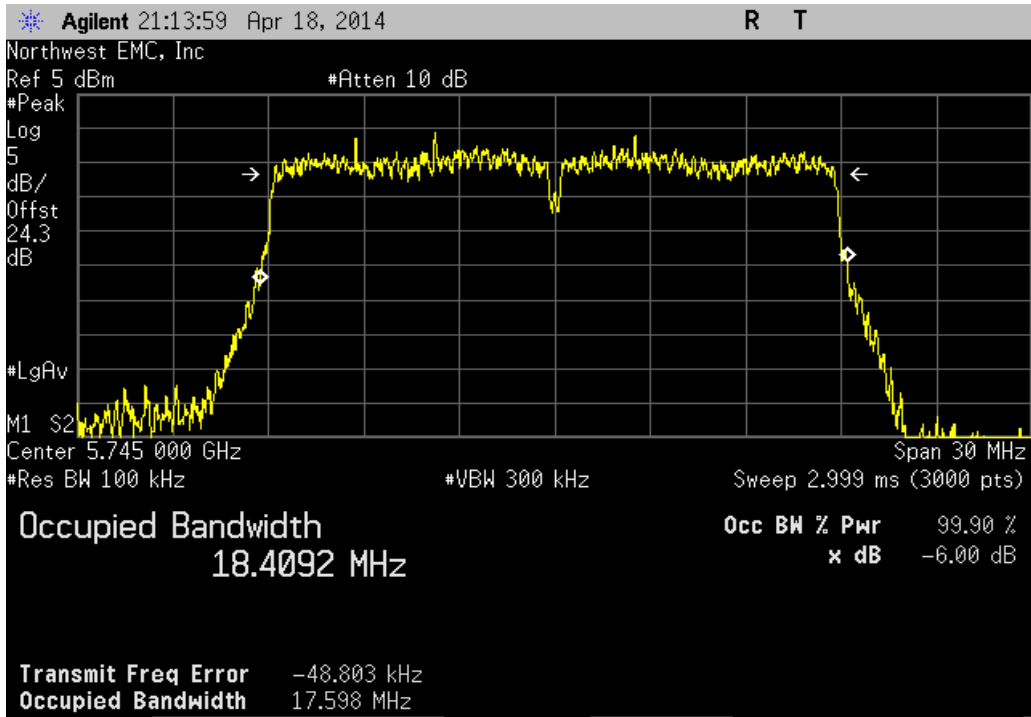
DEVIATIONS FROM TEST STANDARD
None

Configuration #	6	Signature 
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			Value	Limit	Result
A IEEE 802.11(n)					
20 MHz	5725 MHz - 5850 MHz Band				
	HT, MCS8	Low Channel 149, 5745 M	17.598 MHz	> 500 kHz	Pass
		Mid Channel 157, 5785 M	17.307 MHz	> 500 kHz	Pass
		High Channel 165, 5825 M	17.428 MHz	> 500 kHz	Pass
	HT, MCS15	Low Channel 149, 5745 M	17.312 MHz	> 500 kHz	Pass
		Mid Channel 157, 5785 M	17.337 MHz	> 500 kHz	Pass
		High Channel 165, 5825 M	17.43 MHz	> 500 kHz	Pass
40 MHz	5725 MHz - 5850 MHz Band				
	HT, MCS8	Low Channel 149/153, 57	35.475 MHz	> 500 kHz	Pass
		High Channel 157/161, 57	35.467 MHz	> 500 kHz	Pass
	HT, MCS15	Low Channel 149/153, 57	35.198 MHz	> 500 kHz	Pass
		High Channel 157/161, 57	35.863 MHz	> 500 kHz	Pass
A IEEE 802.11(ac)					
20 MHz	5725 MHz - 5850 MHz Band				
	VHT, MCS0	Low Channel 149, 5745 M	17.622 MHz	> 500 kHz	Pass
		Mid Channel 157, 5785 M	17.369 MHz	> 500 kHz	Pass
		High Channel 165, 5825 M	17.593 MHz	> 500 kHz	Pass
	VHT, MCS8	Low Channel 149, 5745 M	17.571 MHz	> 500 kHz	Pass
		Mid Channel 157, 5785 M	17.572 MHz	> 500 kHz	Pass
		High Channel 165, 5825 M	17.526 MHz	> 500 kHz	Pass
40 MHz	5725 MHz - 5850 MHz Band				
	VHT, MCS0	Low Channel 149/153, 57	34.788 MHz	> 500 kHz	Pass
		High Channel 157/161, 57	35.544 MHz	> 500 kHz	Pass
	VHT, MCS9	Low Channel 149/153, 57	35.643 MHz	> 500 kHz	Pass
		High Channel 157/161, 57	35.918 MHz	> 500 kHz	Pass
80 MHz	5725 MHz - 5850 MHz Band				
	VHT, MCS0	Low Channel 149/153/157	76.371 MHz	> 500 kHz	Pass
	VHT, MCS9	Low Channel 149/153/157	76.212 MHz	> 500 kHz	Pass
B IEEE 802.11(n)					
20 MHz	5725 MHz - 5850 MHz Band				
	HT, MCS8	Low Channel 149, 5745 M	17.574 MHz	> 500 kHz	Pass
		Mid Channel 157, 5785 M	17.489 MHz	> 500 kHz	Pass
		High Channel 165, 5825 M	17.551 MHz	> 500 kHz	Pass
	HT, MCS15	Low Channel 149, 5745 M	17.424 MHz	> 500 kHz	Pass
		Mid Channel 157, 5785 M	17.586 MHz	> 500 kHz	Pass
		High Channel 165, 5825 M	17.056 MHz	> 500 kHz	Pass
40 MHz	5725 MHz - 5850 MHz Band				
	HT, MCS8	Low Channel 149/153, 57	34.939 MHz	> 500 kHz	Pass
		High Channel 157/161, 57	35.063 MHz	> 500 kHz	Pass
	HT, MCS15	Low Channel 149/153, 57	35.396 MHz	> 500 kHz	Pass
		High Channel 157/161, 57	35.324 MHz	> 500 kHz	Pass
B IEEE 802.11(ac)					
20 MHz	5725 MHz - 5850 MHz Band				
	VHT, MCS0	Low Channel 149, 5745 M	17.465 MHz	> 500 kHz	Pass
		Mid Channel 157, 5785 M	17.645 MHz	> 500 kHz	Pass
		High Channel 165, 5825 M	17.591 MHz	> 500 kHz	Pass
	VHT, MCS8	Low Channel 149, 5745 M	17.571 MHz	> 500 kHz	Pass
		Mid Channel 157, 5785 M	17.464 MHz	> 500 kHz	Pass
		High Channel 165, 5825 M	17.548 MHz	> 500 kHz	Pass
40 MHz	5725 MHz - 5850 MHz Band				
	VHT, MCS0	Low Channel 149/153, 57	34.571 MHz	> 500 kHz	Pass
		High Channel 157/161, 57	35.336 MHz	> 500 kHz	Pass
	VHT, MCS9	Low Channel 149/153, 57	35.486 MHz	> 500 kHz	Pass
		High Channel 157/161, 57	35.324 MHz	> 500 kHz	Pass
80 MHz	5725 MHz - 5850 MHz Band				
	VHT, MCS0	Low Channel 149/153/157	76.335 MHz	> 500 kHz	Pass
	VHT, MCS9	Low Channel 149/153/157	75.219 MHz	> 500 kHz	Pass

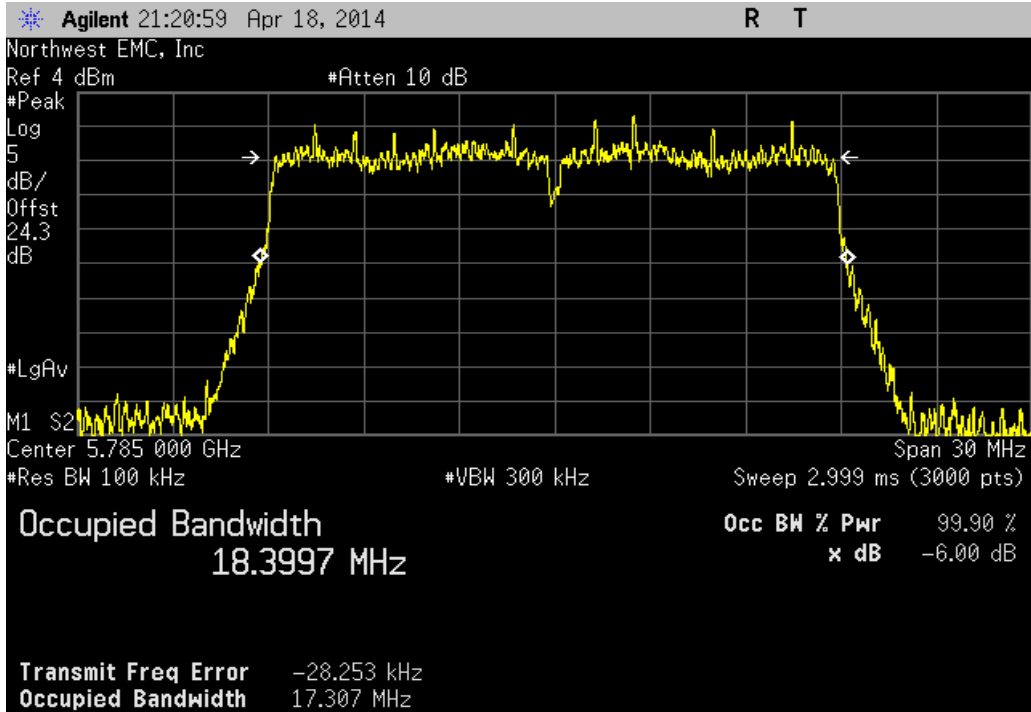
A IEEE 802.11(n), 20 MHz, 5725 MHz - 5850 MHz Band, HT, MCS8, Low Channel 149, 5745 MHz

Value	Limit	Result
17.598 MHz	> 500 kHz	Pass



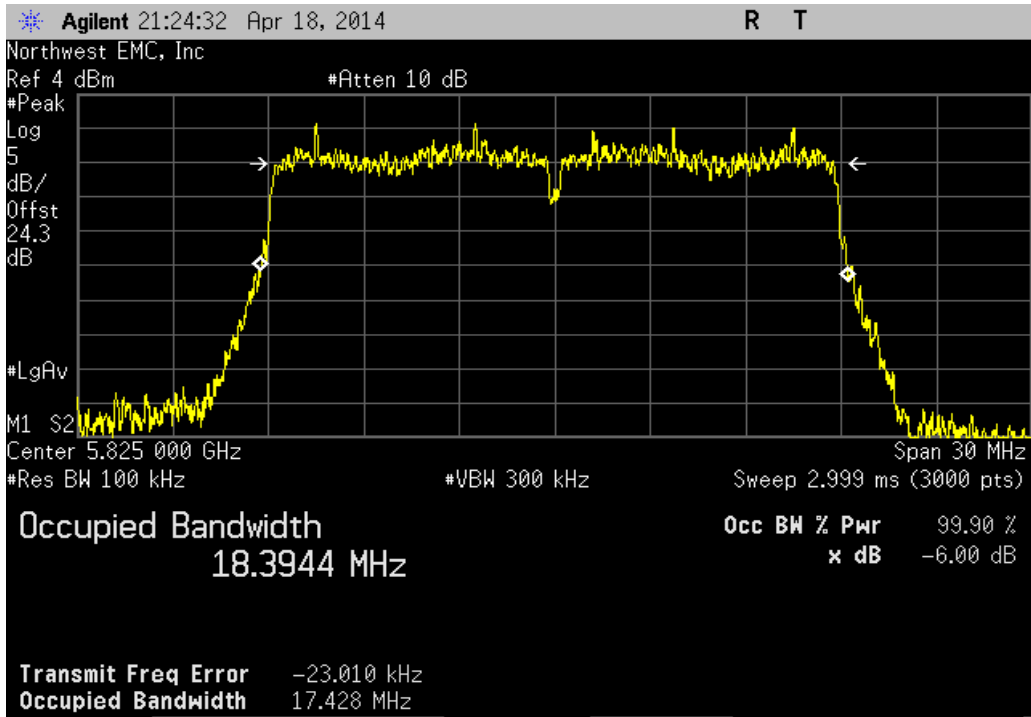
A IEEE 802.11(n), 20 MHz, 5725 MHz - 5850 MHz Band, HT, MCS8, Mid Channel 157, 5785 MHz

Value	Limit	Result
17.307 MHz	> 500 kHz	Pass



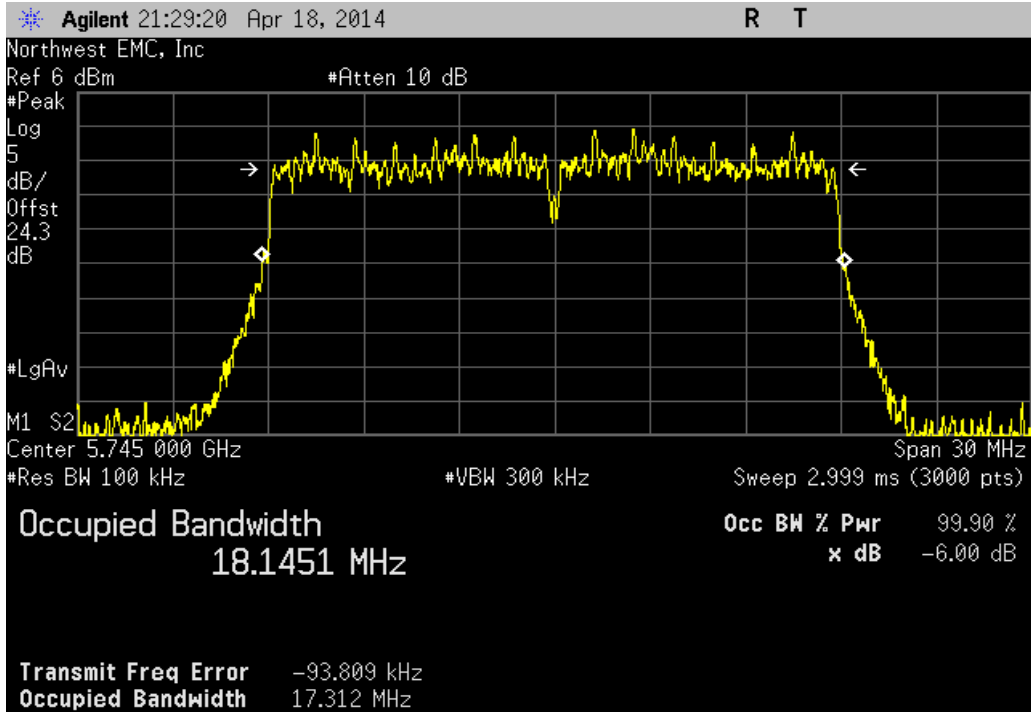
A IEEE 802.11(n), 20 MHz, 5725 MHz - 5850 MHz Band, HT, MCS8, High Channel 165, 5825 MHz

Value	Limit	Result
17.428 MHz	> 500 kHz	Pass



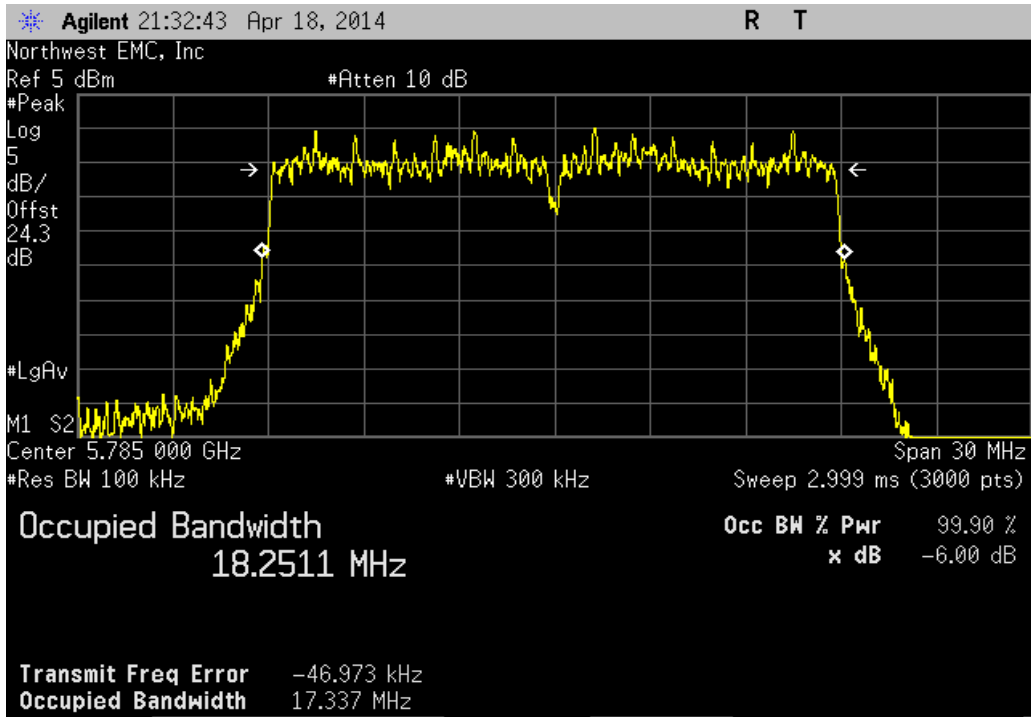
A IEEE 802.11(n), 20 MHz, 5725 MHz - 5850 MHz Band, HT, MCS15, Low Channel 149, 5745 MHz

Value	Limit	Result
17.312 MHz	> 500 kHz	Pass



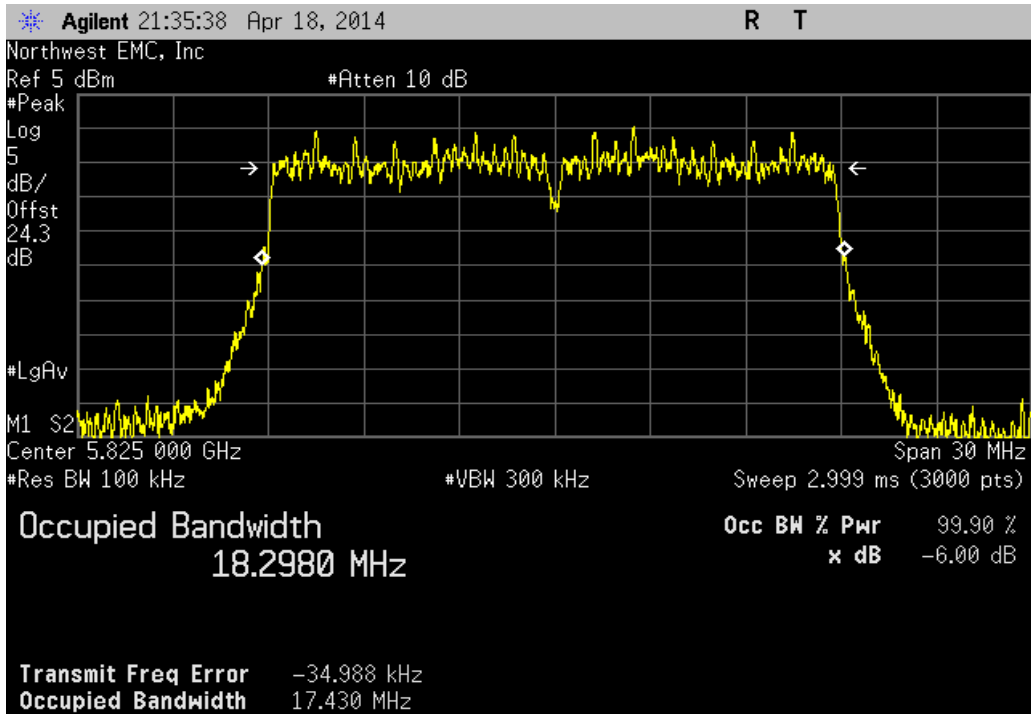
A IEEE 802.11(n), 20 MHz, 5725 MHz - 5850 MHz Band, HT, MCS15, Mid Channel 157, 5785 MHz

Value	Limit	Result
17.337 MHz	> 500 kHz	Pass



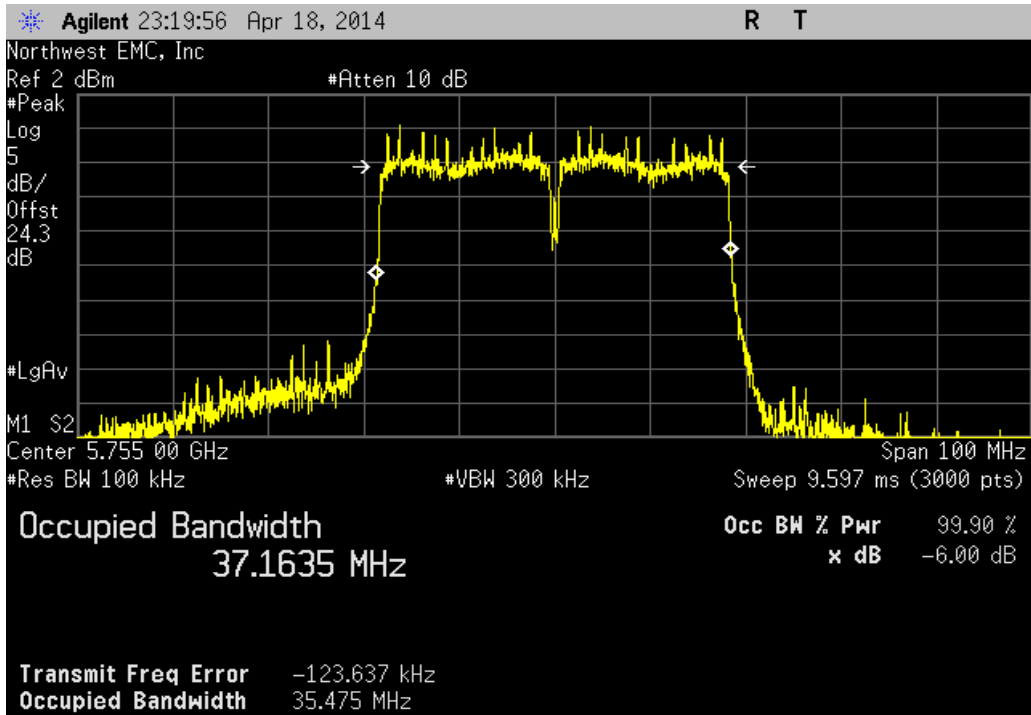
A IEEE 802.11(n), 20 MHz, 5725 MHz - 5850 MHz Band, HT, MCS15, High Channel 165, 5825 MHz

Value	Limit	Result
17.43 MHz	> 500 kHz	Pass



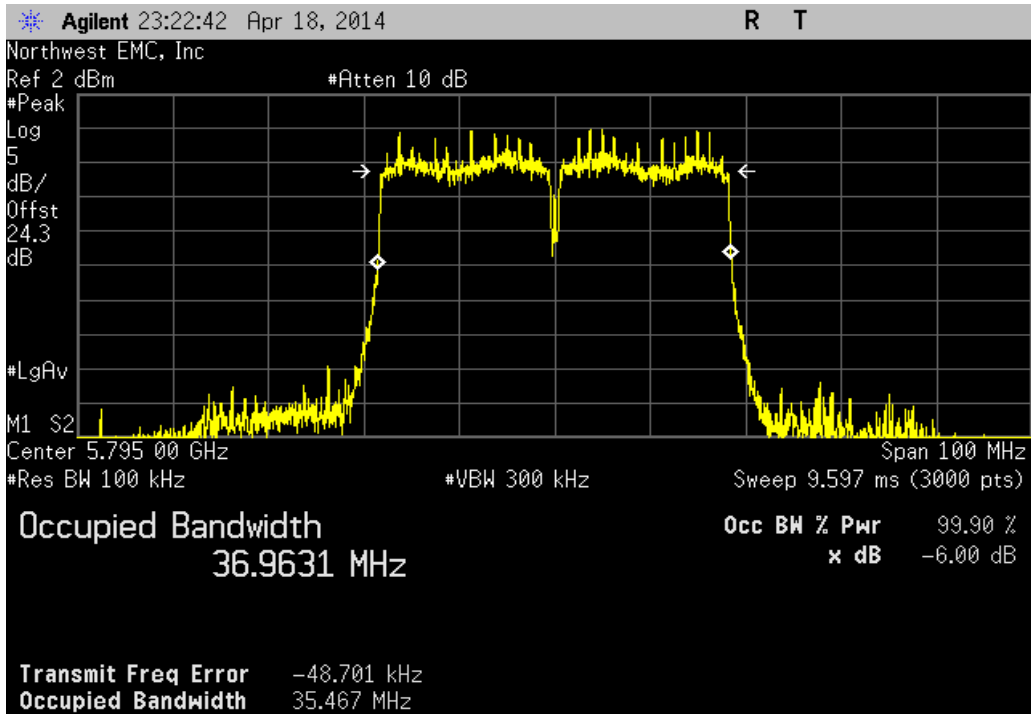
A IEEE 802.11(n), 40 MHz, 5725 MHz - 5850 MHz Band, HT, MCS8, Low Channel 149/153, 5755 MHz

	Value	Limit	Result
	35.475 MHz	> 500 kHz	Pass



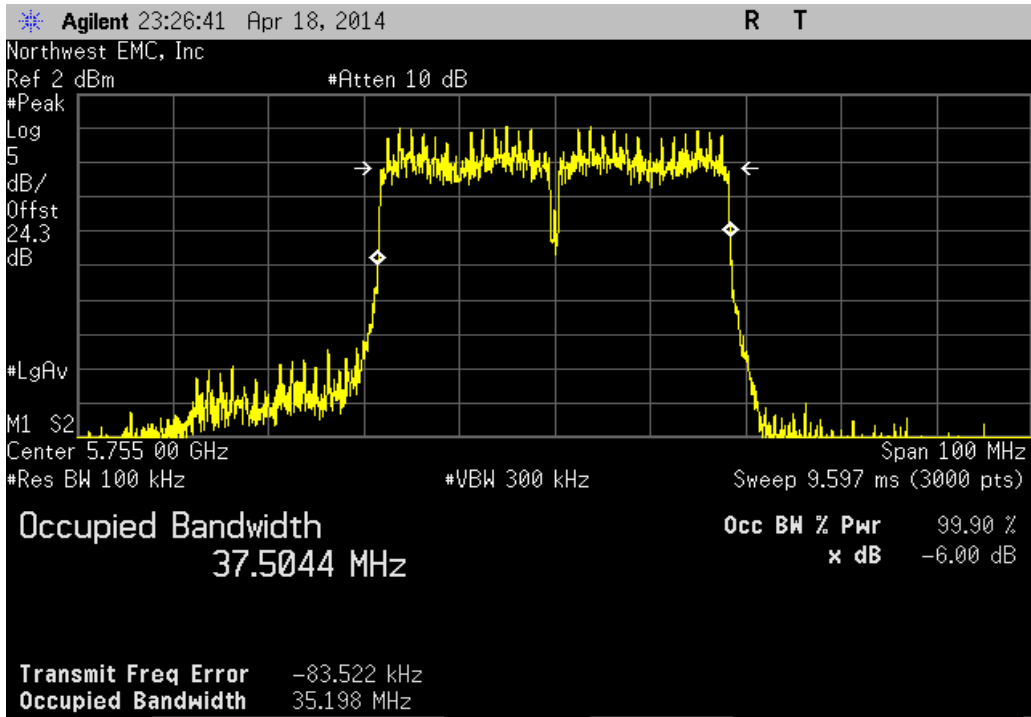
A IEEE 802.11(n), 40 MHz, 5725 MHz - 5850 MHz Band, HT, MCS8, High Channel 157/161, 5795 MHz

	Value	Limit	Result
	35.467 MHz	> 500 kHz	Pass



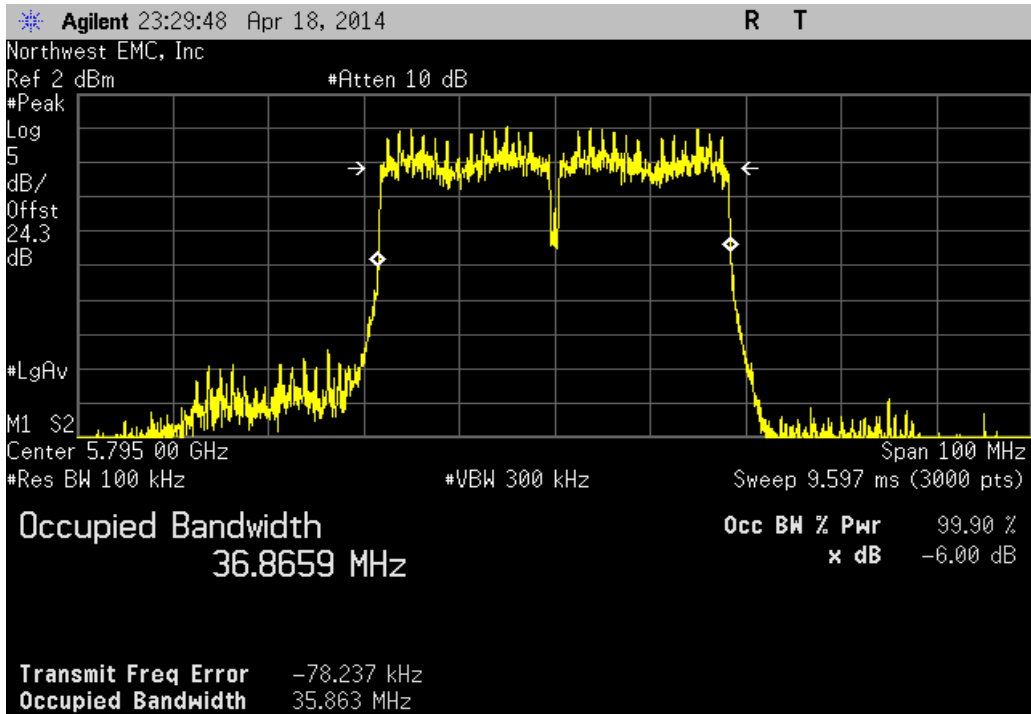
A IEEE 802.11(n), 40 MHz, 5725 MHz - 5850 MHz Band, HT, MCS15, Low Channel 149/153, 5755 MHz

	Value	Limit	Result
	35.198 MHz	> 500 kHz	Pass



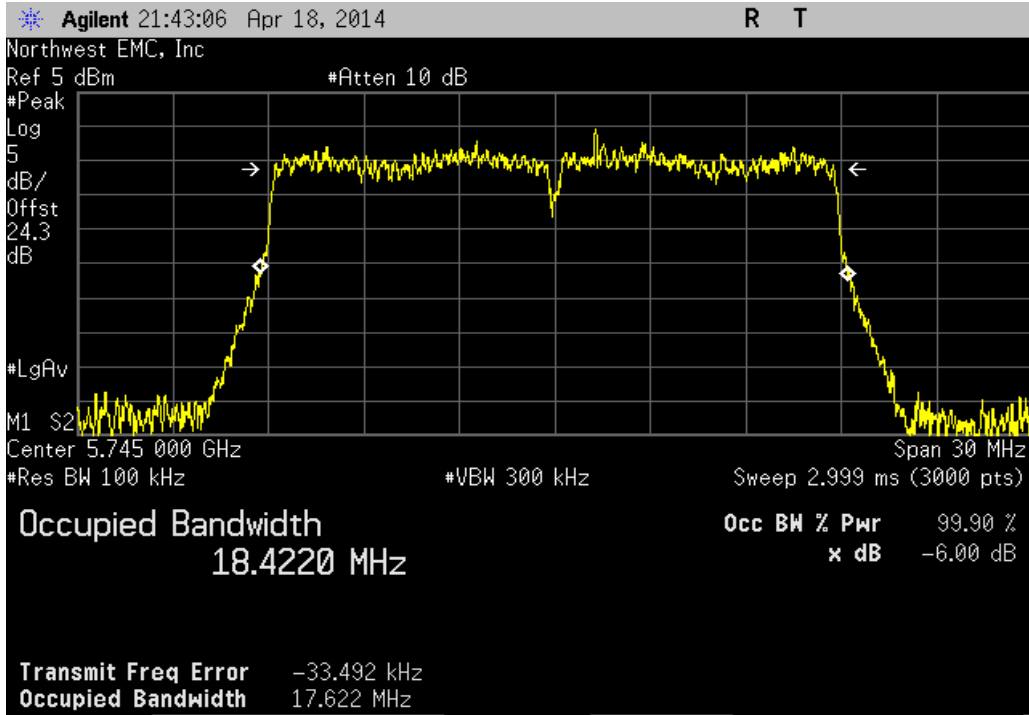
A IEEE 802.11(n), 40 MHz, 5725 MHz - 5850 MHz Band, HT, MCS15, High Channel 157/161, 5795 MHz

	Value	Limit	Result
	35.863 MHz	> 500 kHz	Pass



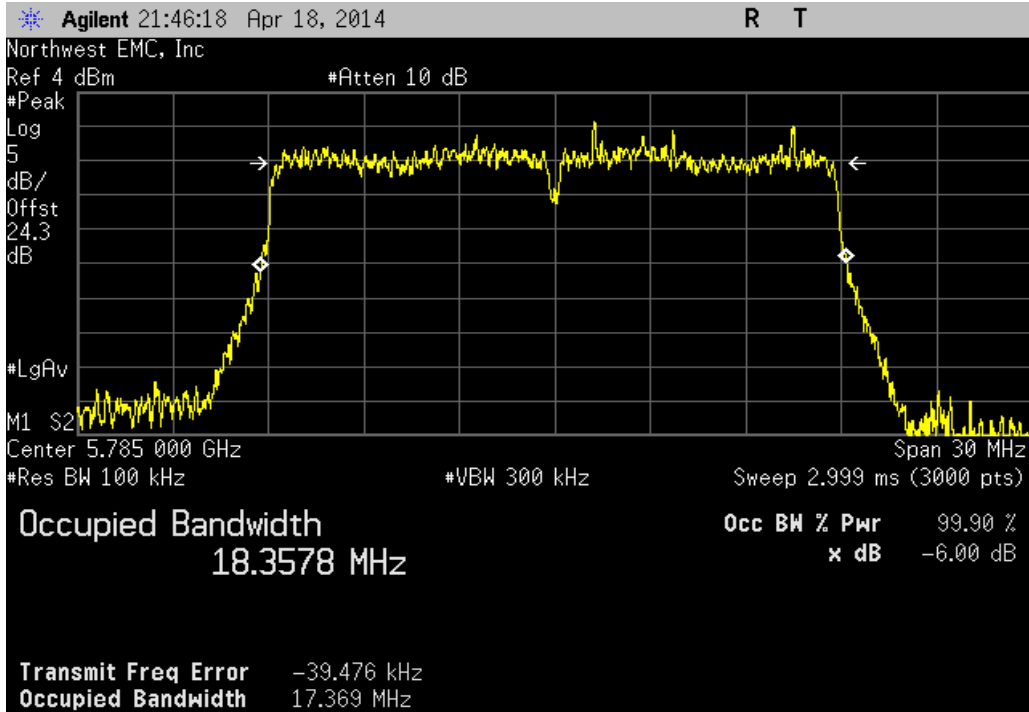
A IEEE 802.11(ac), 20 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS0, Low Channel 149, 5745 MHz

Value	Limit	Result
17.622 MHz	> 500 kHz	Pass



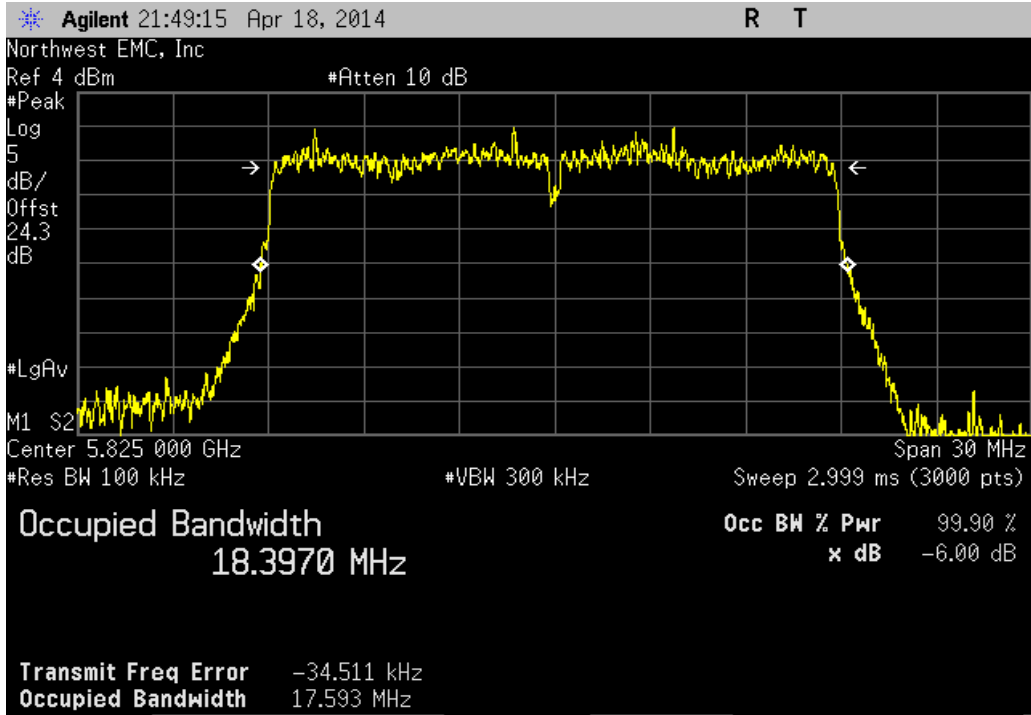
A IEEE 802.11(ac), 20 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS0, Mid Channel 157, 5785 MHz

Value	Limit	Result
17.369 MHz	> 500 kHz	Pass



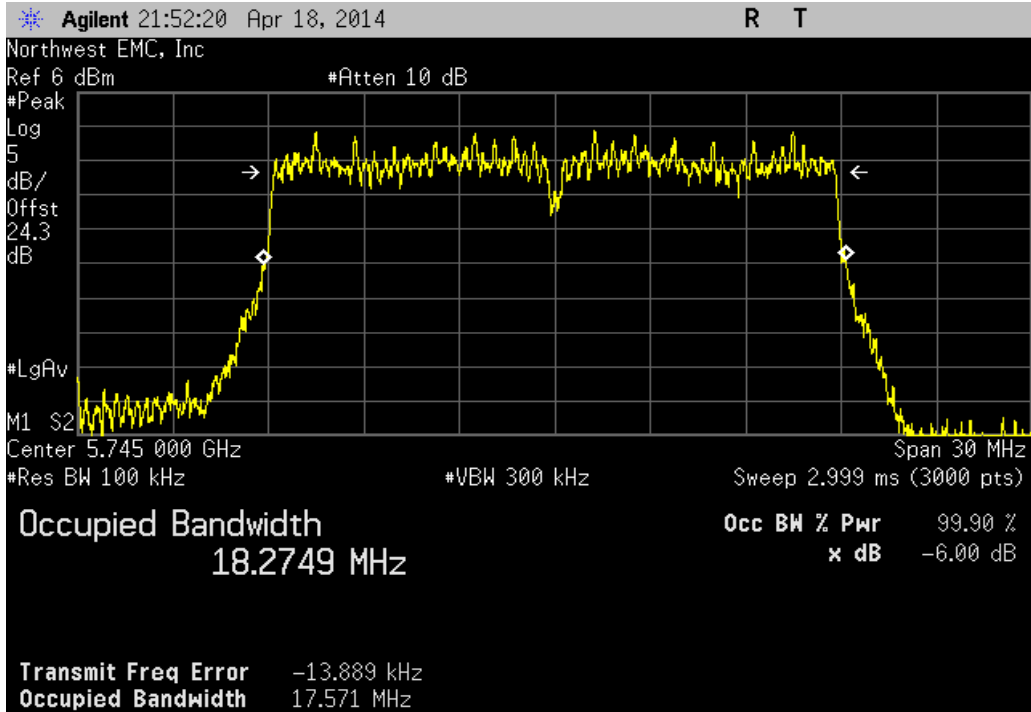
A IEEE 802.11(ac), 20 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS0, High Channel 165, 5825 MHz

Value	Limit	Result
17.593 MHz	> 500 kHz	Pass



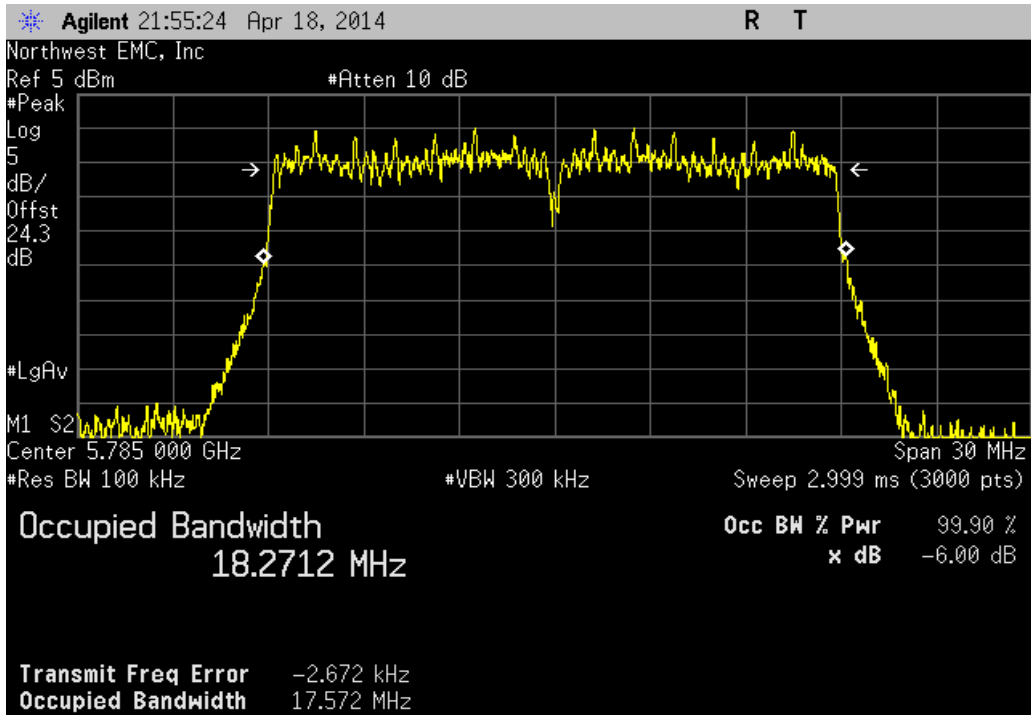
A IEEE 802.11(ac), 20 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS8, Low Channel 149, 5745 MHz

Value	Limit	Result
17.571 MHz	> 500 kHz	Pass



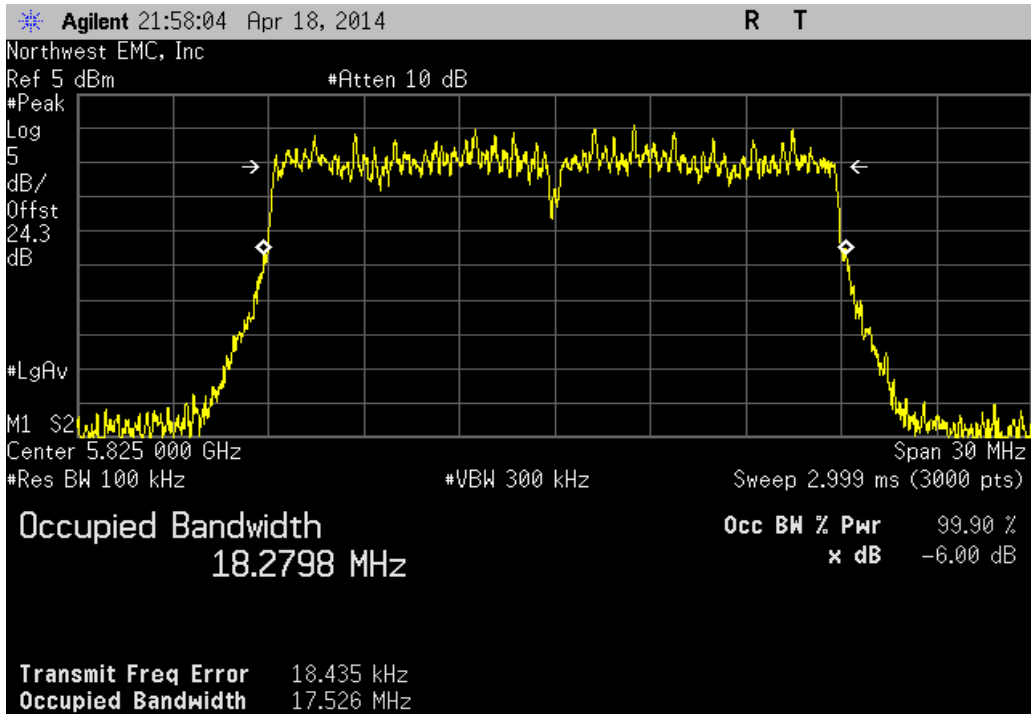
A IEEE 802.11(ac), 20 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS8, Mid Channel 157, 5785 MHz

	Value	Limit	Result
	17.572 MHz	> 500 kHz	Pass



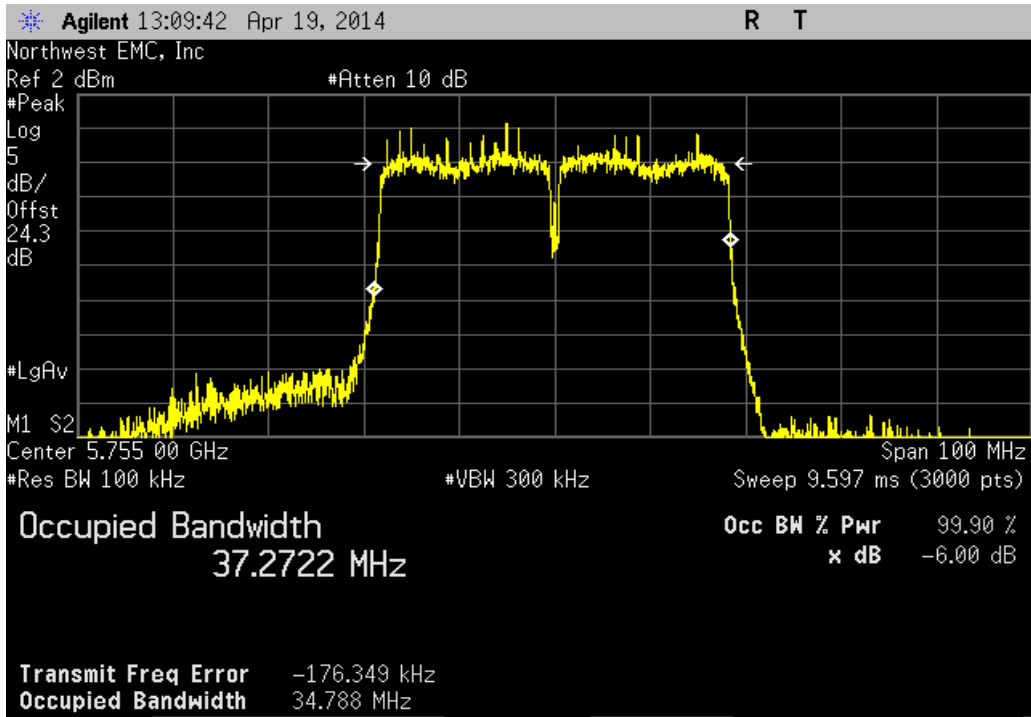
A IEEE 802.11(ac), 20 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS8, High Channel 165, 5825 MHz

	Value	Limit	Result
	17.526 MHz	> 500 kHz	Pass



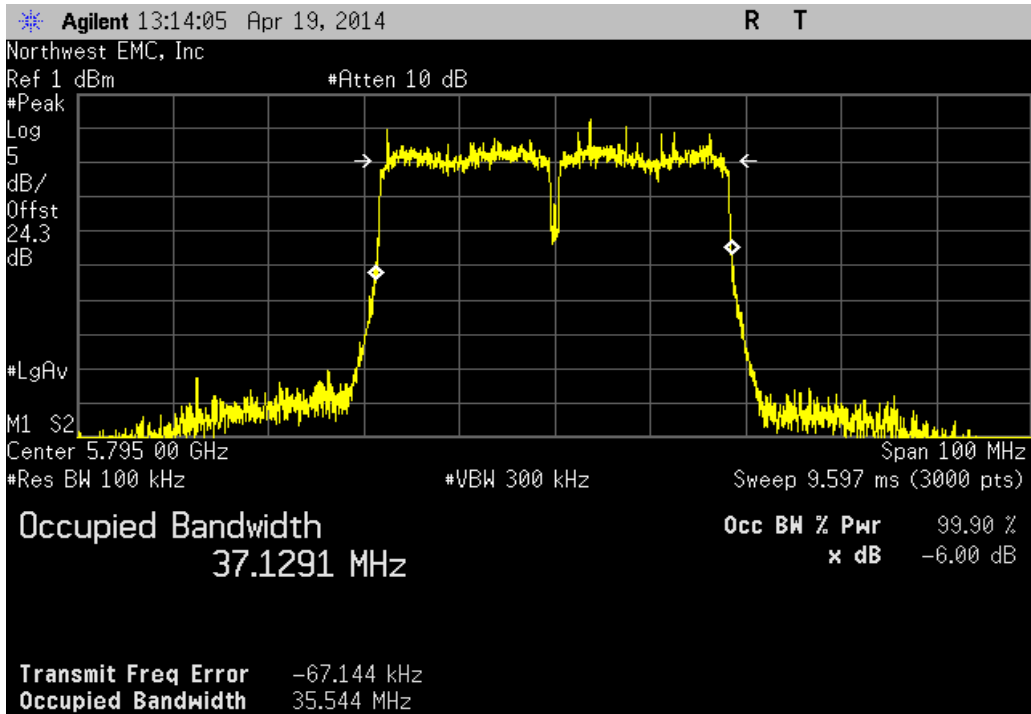
A IEEE 802.11(ac), 40 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS0, Low Channel 149/153, 5755 MHz

	Value	Limit	Result
	34.788 MHz	> 500 kHz	Pass



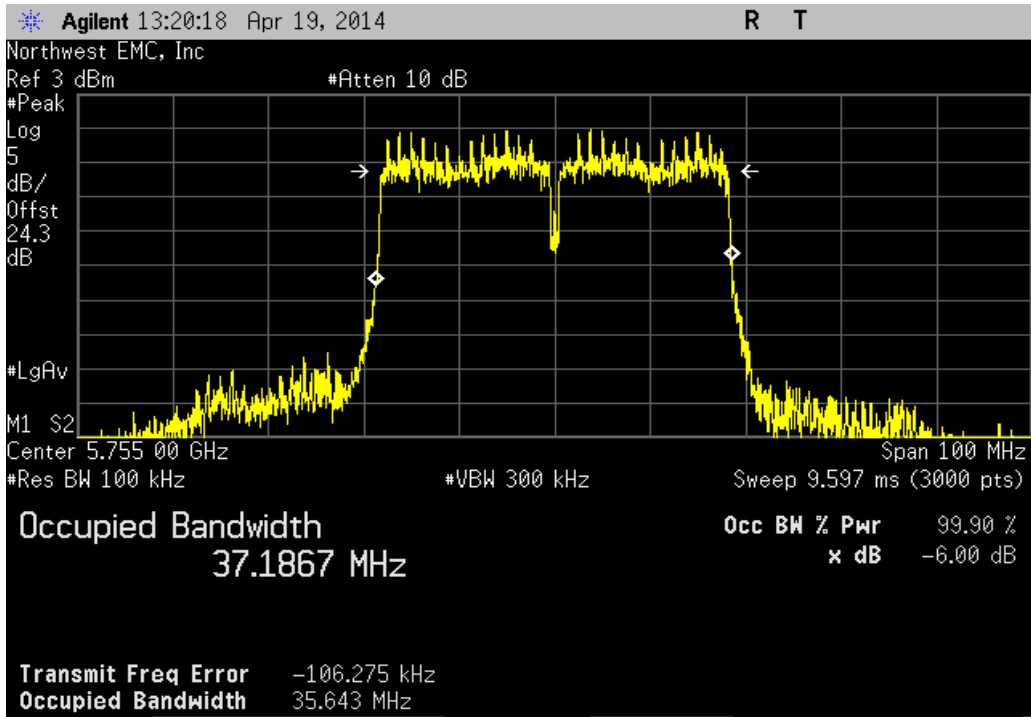
A IEEE 802.11(ac), 40 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS0, High Channel 157/161, 5795 MHz

	Value	Limit	Result
	35.544 MHz	> 500 kHz	Pass



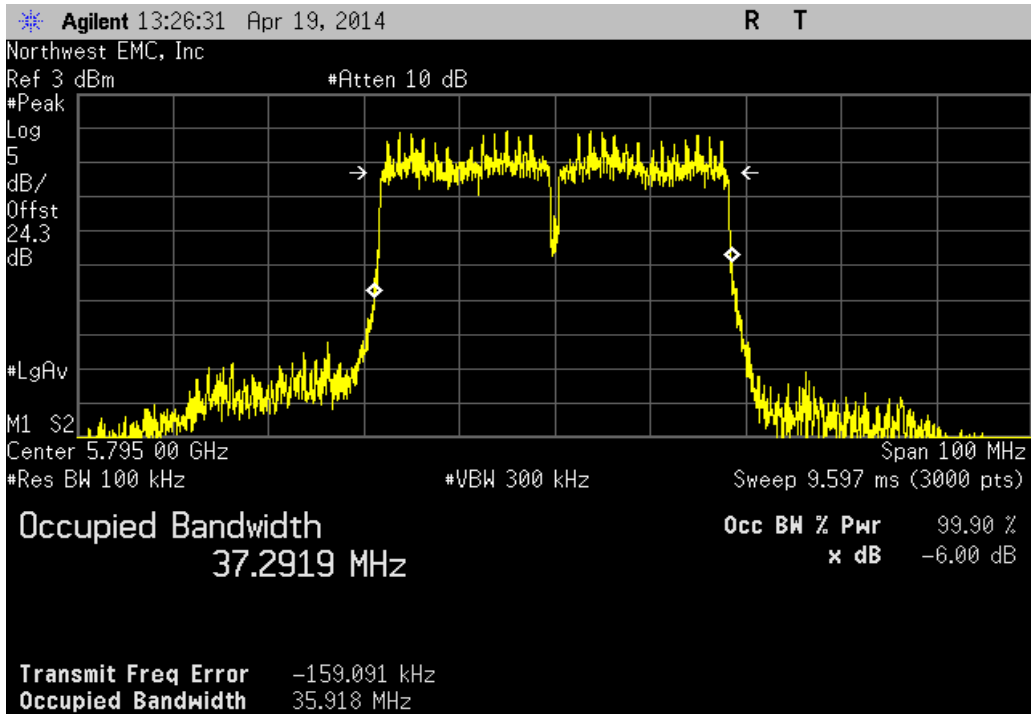
A IEEE 802.11(ac), 40 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS9, Low Channel 149/153, 5755 MHz

	Value	Limit	Result
	35.643 MHz	> 500 kHz	Pass



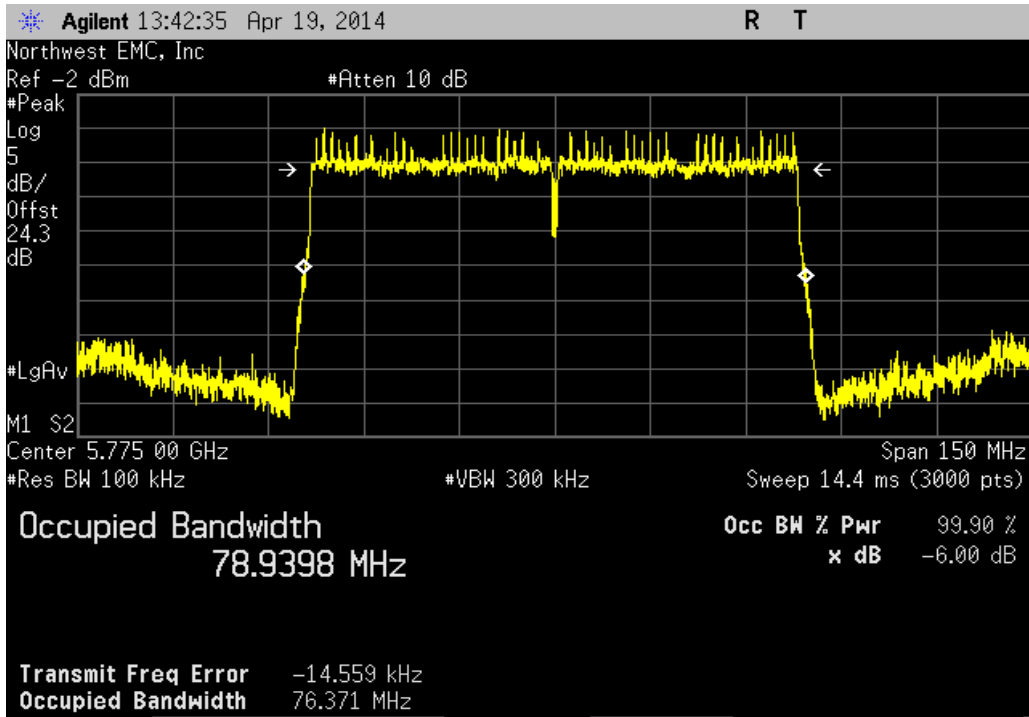
A IEEE 802.11(ac), 40 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS9, High Channel 157/161, 5795 MHz

	Value	Limit	Result
	35.918 MHz	> 500 kHz	Pass



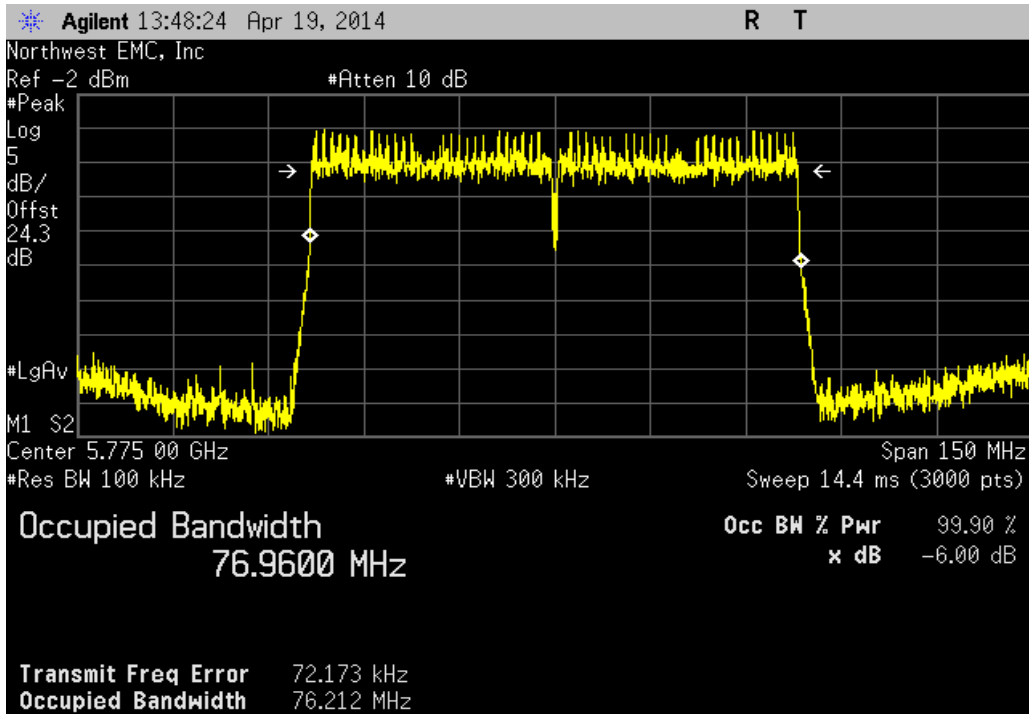
A IEEE 802.11(ac), 80 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS0, Low Channel 149/153/157/161, 5775 MHz

Value	Limit	Result
76.371 MHz	> 500 kHz	Pass



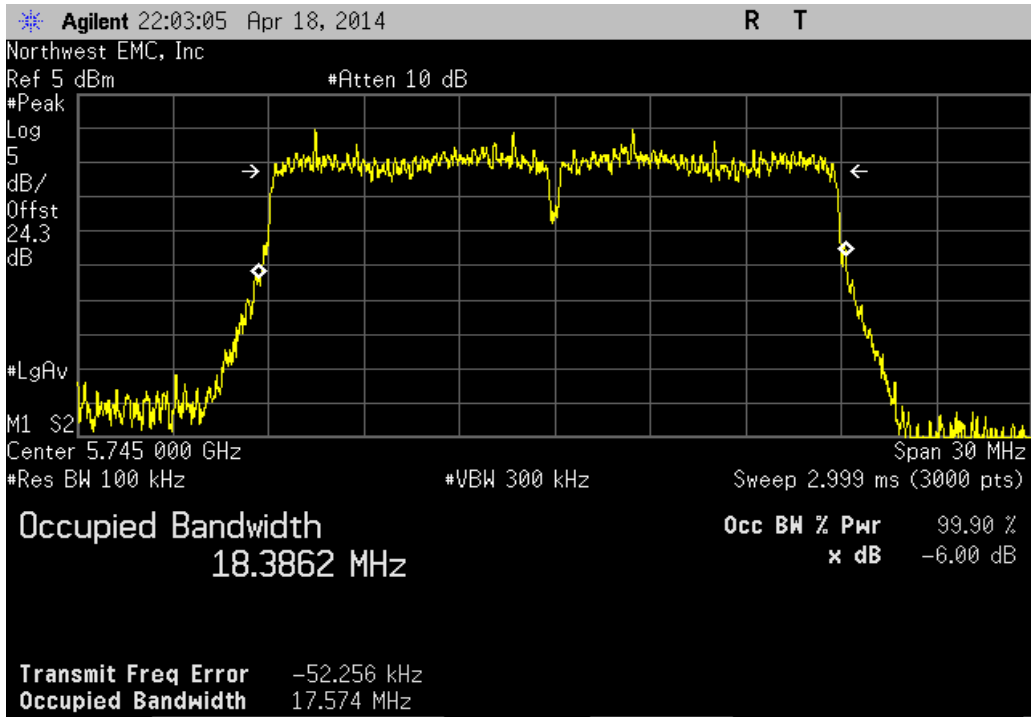
A IEEE 802.11(ac), 80 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS9, Low Channel 149/153/157/161, 5775 MHz

Value	Limit	Result
76.212 MHz	> 500 kHz	Pass



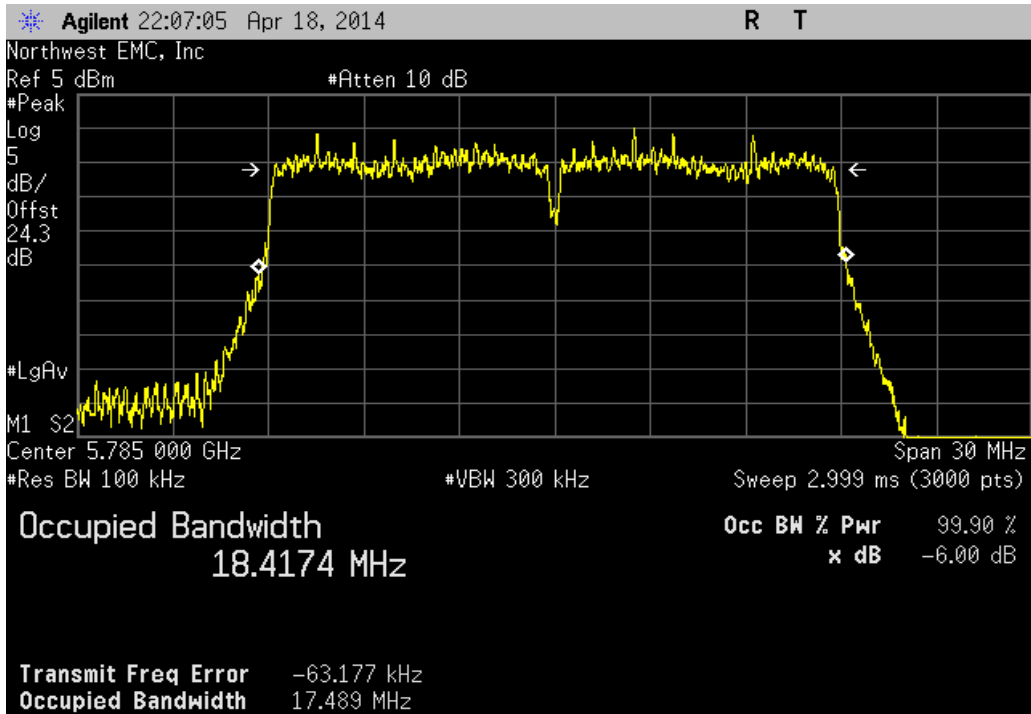
B IEEE 802.11(n), 20 MHz, 5725 MHz - 5850 MHz Band, HT, MCS8, Low Channel 149, 5745 MHz

Value	Limit	Result
17.574 MHz	> 500 kHz	Pass



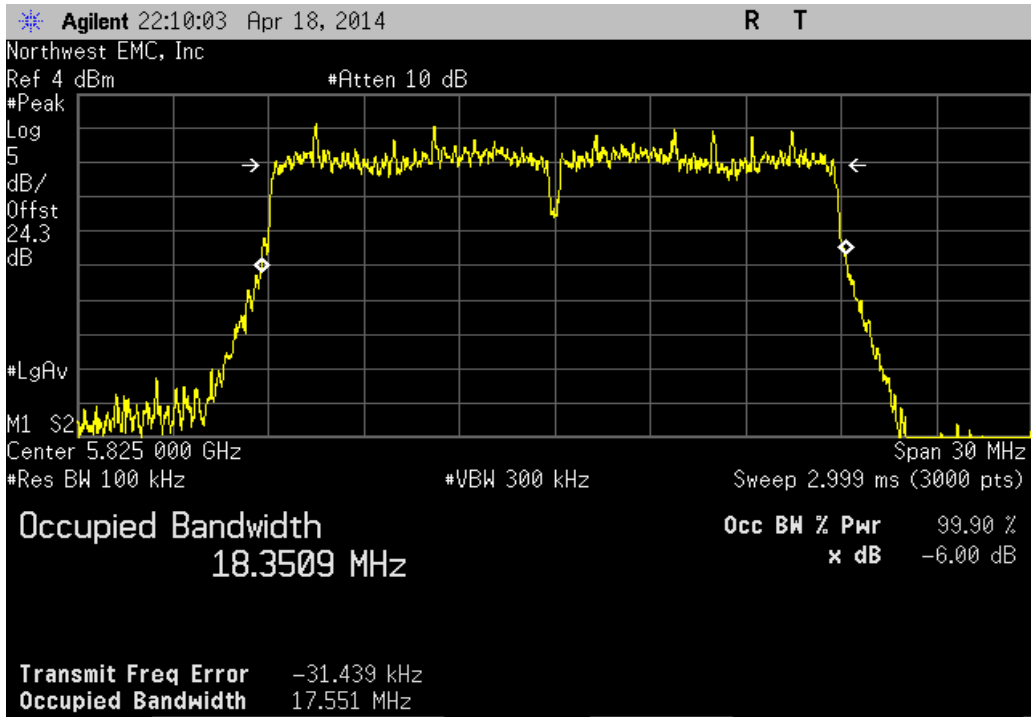
B IEEE 802.11(n), 20 MHz, 5725 MHz - 5850 MHz Band, HT, MCS8, Mid Channel 157, 5785 MHz

Value	Limit	Result
17.489 MHz	> 500 kHz	Pass



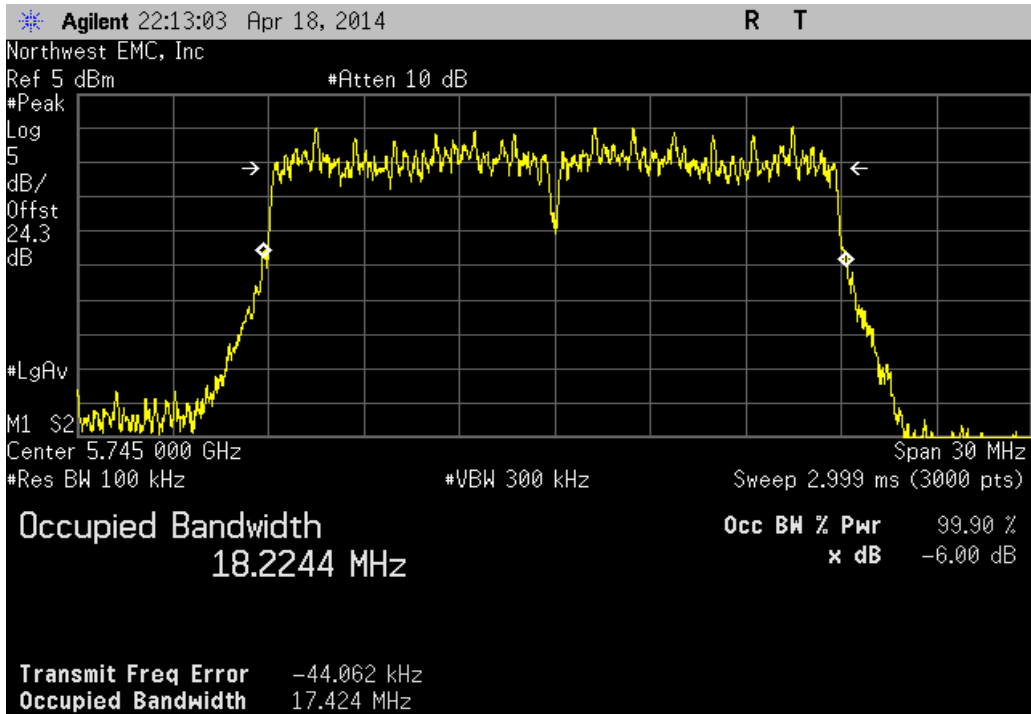
B IEEE 802.11(n), 20 MHz, 5725 MHz - 5850 MHz Band, HT, MCS8, High Channel 165, 5825 MHz

Value	Limit	Result
17.551 MHz	> 500 kHz	Pass



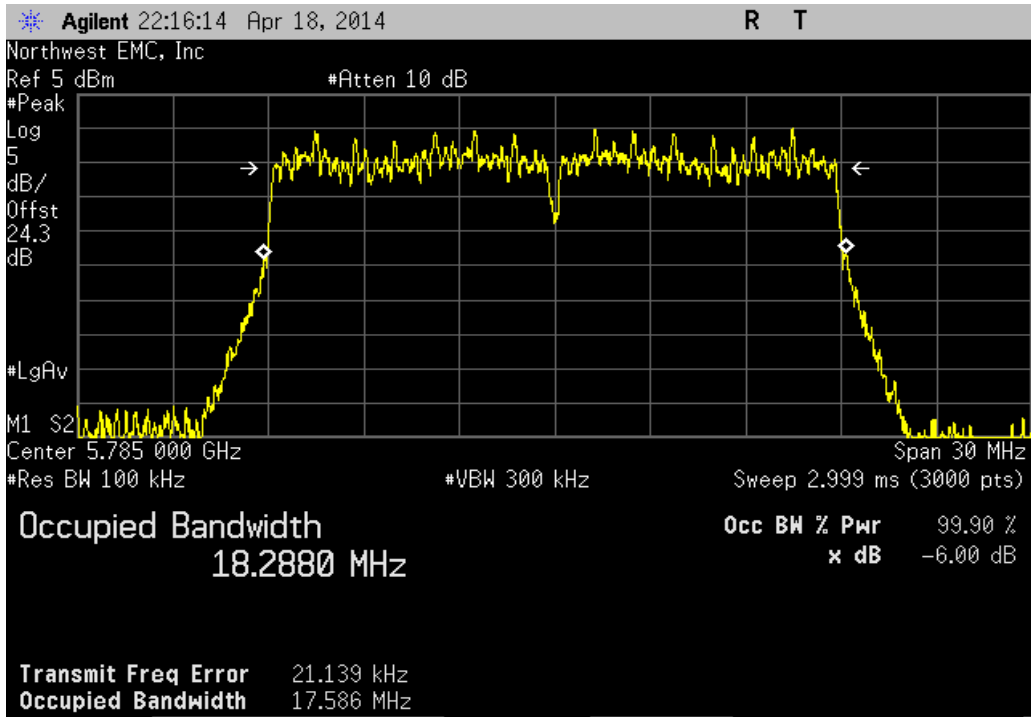
B IEEE 802.11(n), 20 MHz, 5725 MHz - 5850 MHz Band, HT, MCS15, Low Channel 149, 5745 MHz

Value	Limit	Result
17.424 MHz	> 500 kHz	Pass



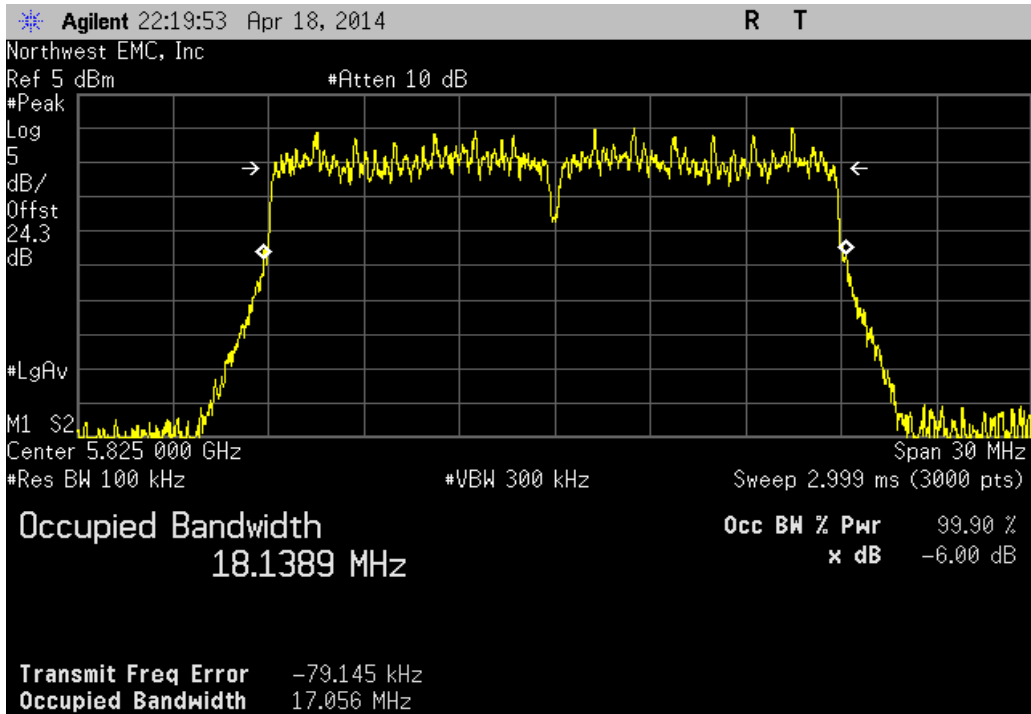
B IEEE 802.11(n), 20 MHz, 5725 MHz - 5850 MHz Band, HT, MCS15, Mid Channel 157, 5785 MHz

Value	Limit	Result
17.586 MHz	> 500 kHz	Pass



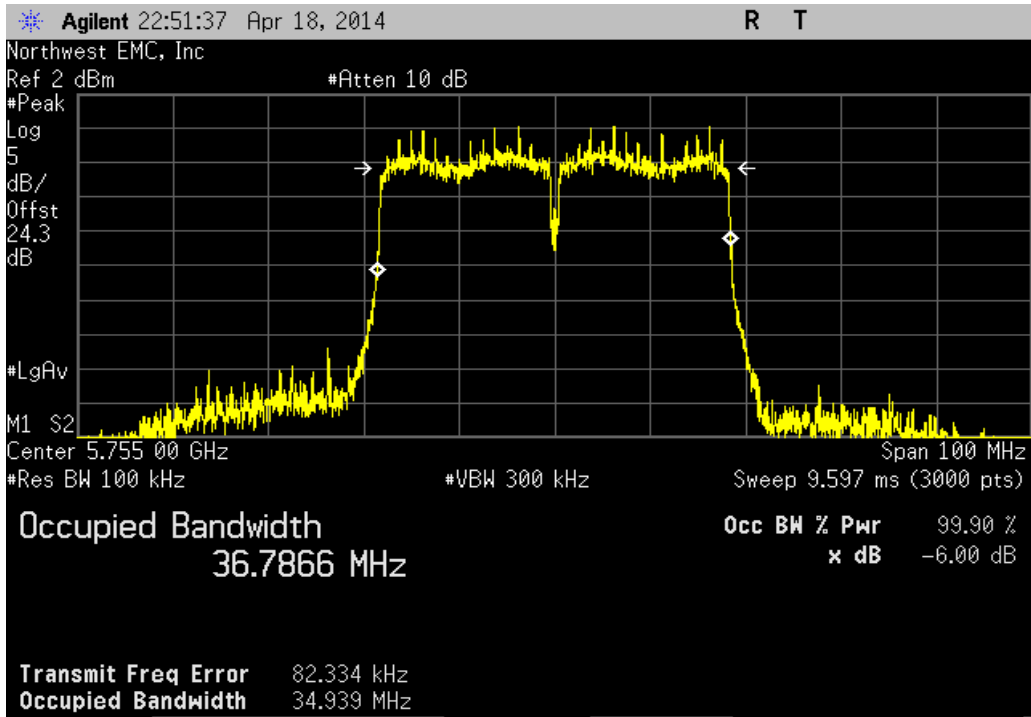
B IEEE 802.11(n), 20 MHz, 5725 MHz - 5850 MHz Band, HT, MCS15, High Channel 165, 5825 MHz

Value	Limit	Result
17.056 MHz	> 500 kHz	Pass



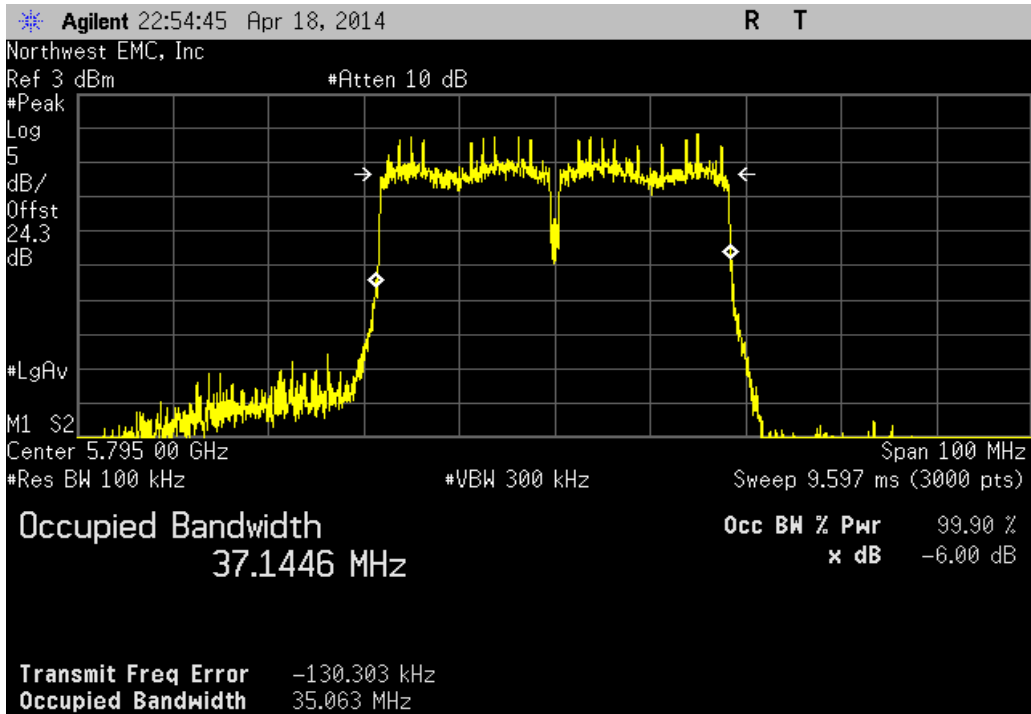
B IEEE 802.11(n), 40 MHz, 5725 MHz - 5850 MHz Band, HT, MCS8, Low Channel 149/153, 5755 MHz

Value	Limit	Result
34.939 MHz	> 500 kHz	Pass



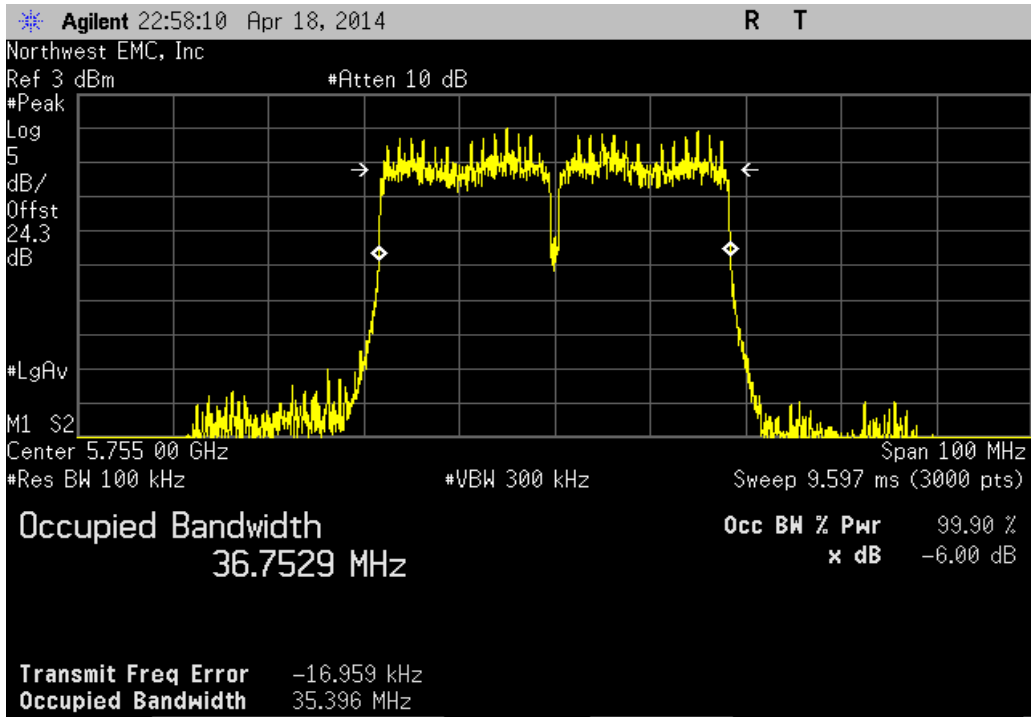
B IEEE 802.11(n), 40 MHz, 5725 MHz - 5850 MHz Band, HT, MCS8, High Channel 157/161, 5795 MHz

Value	Limit	Result
35.063 MHz	> 500 kHz	Pass



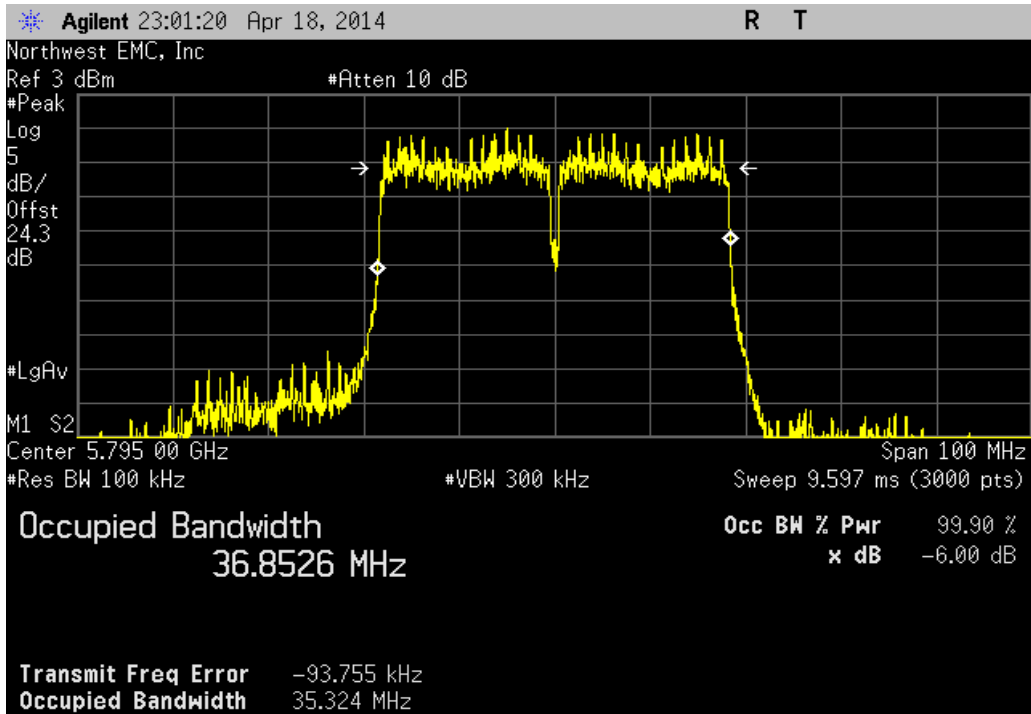
B IEEE 802.11(n), 40 MHz, 5725 MHz - 5850 MHz Band, HT, MCS15, Low Channel 149/153, 5755 MHz

	Value	Limit	Result
	35.396 MHz	> 500 kHz	Pass



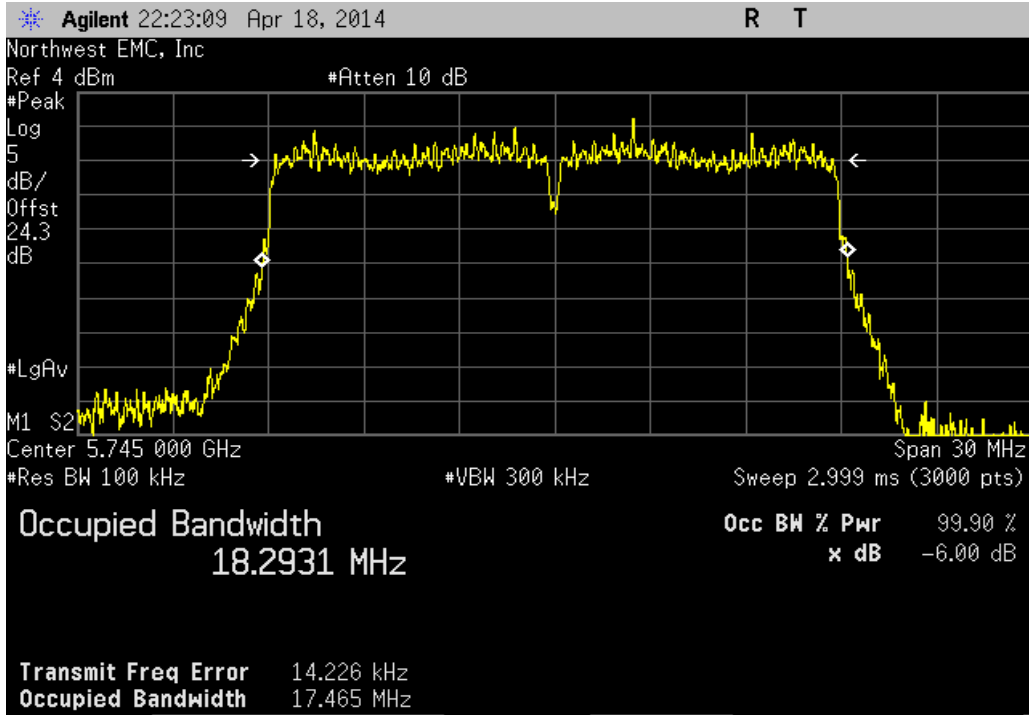
B IEEE 802.11(n), 40 MHz, 5725 MHz - 5850 MHz Band, HT, MCS15, High Channel 157/161, 5795 MHz

	Value	Limit	Result
	35.324 MHz	> 500 kHz	Pass



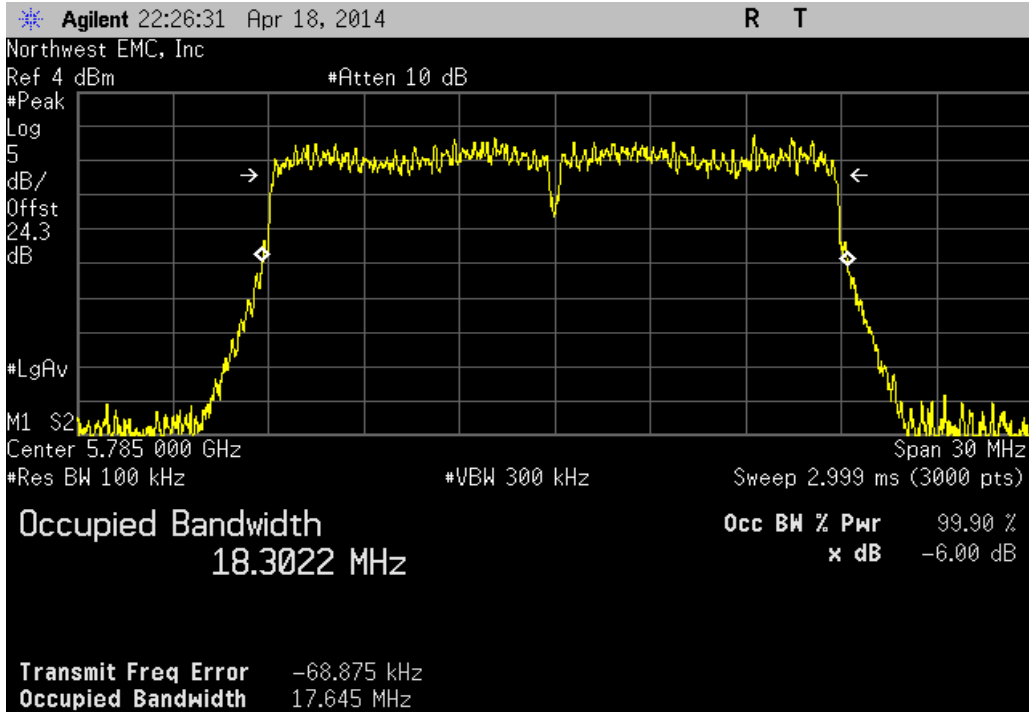
B IEEE 802.11(ac), 20 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS0, Low Channel 149, 5745 MHz

Value	Limit	Result
17.465 MHz	> 500 kHz	Pass



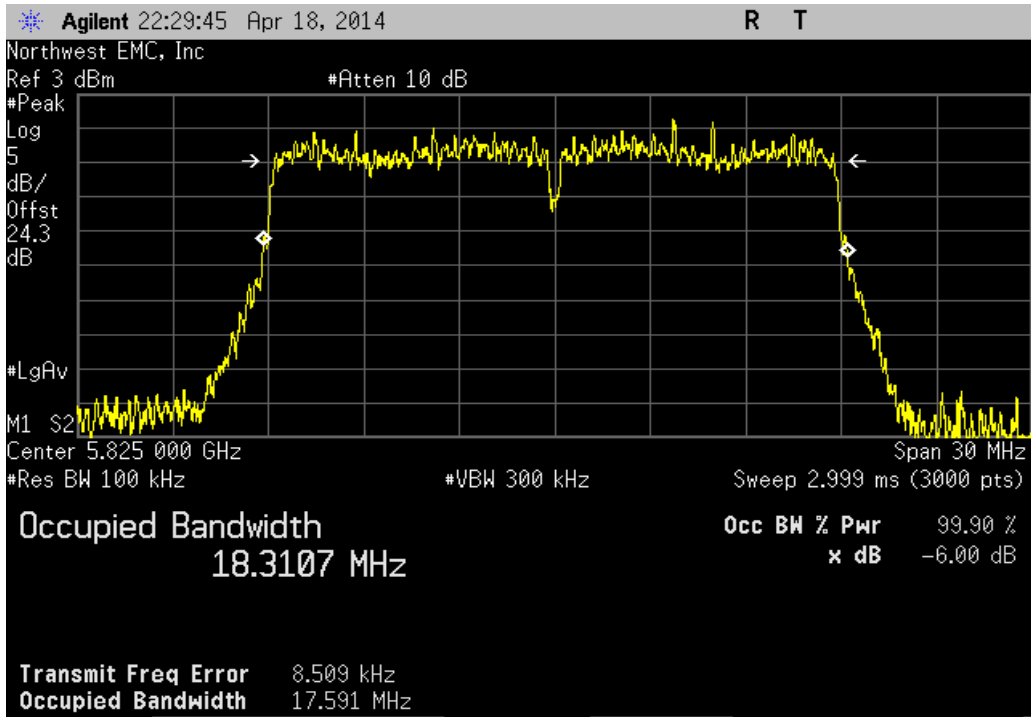
B IEEE 802.11(ac), 20 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS0, Mid Channel 157, 5785 MHz

Value	Limit	Result
17.645 MHz	> 500 kHz	Pass



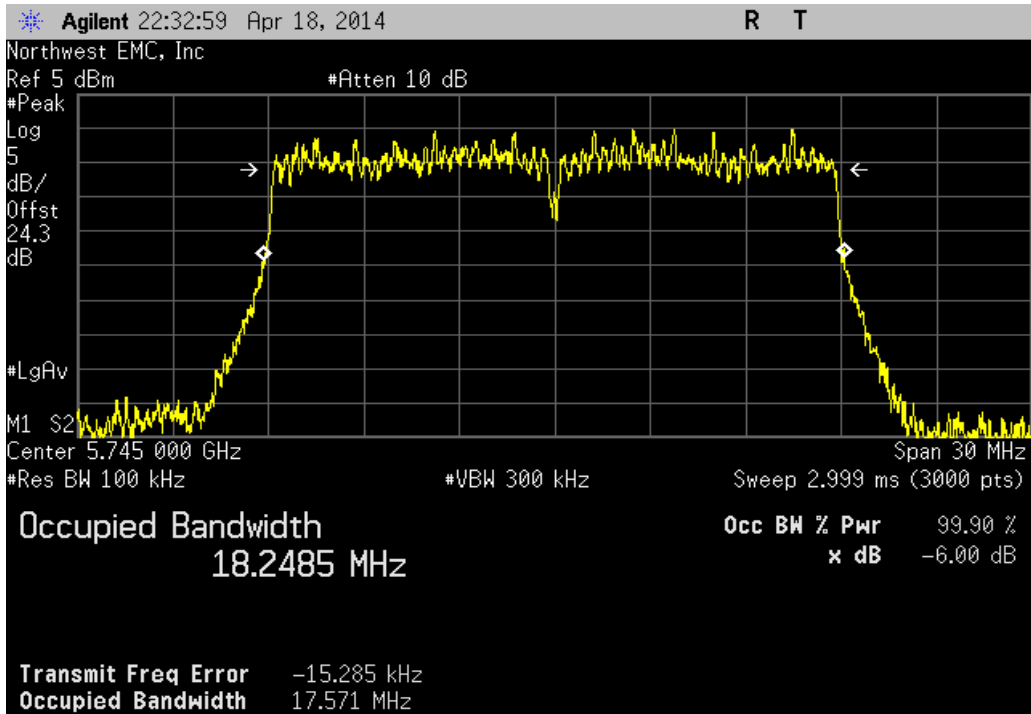
B IEEE 802.11(ac), 20 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS0, High Channel 165, 5825 MHz

Value	Limit	Result
17.591 MHz	> 500 kHz	Pass



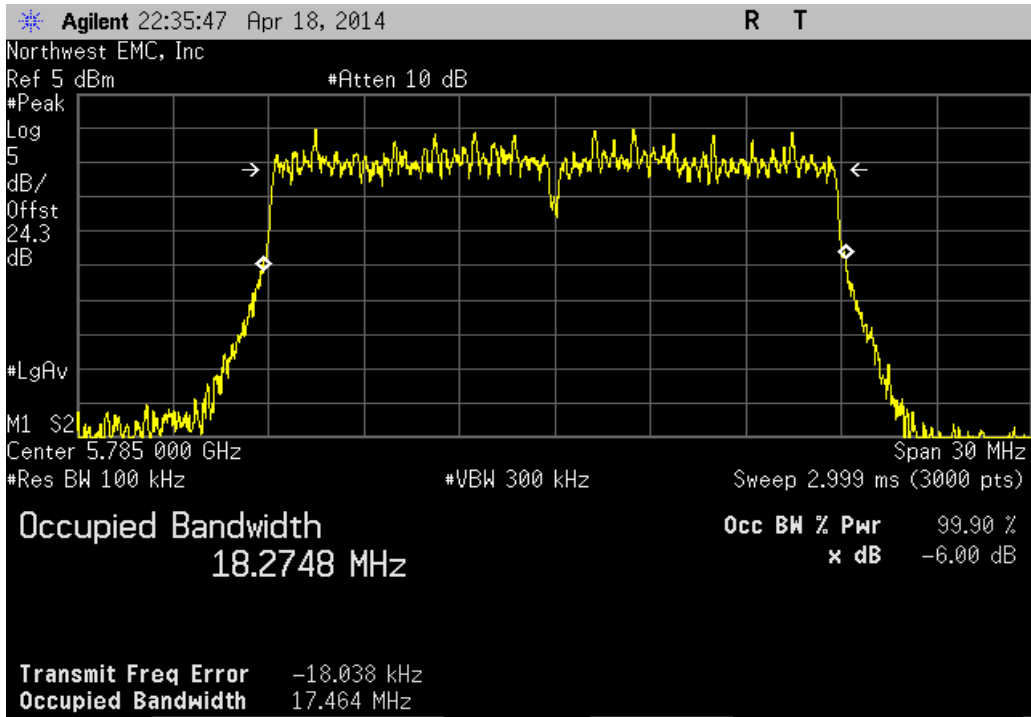
B IEEE 802.11(ac), 20 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS8, Low Channel 149, 5745 MHz

Value	Limit	Result
17.571 MHz	> 500 kHz	Pass



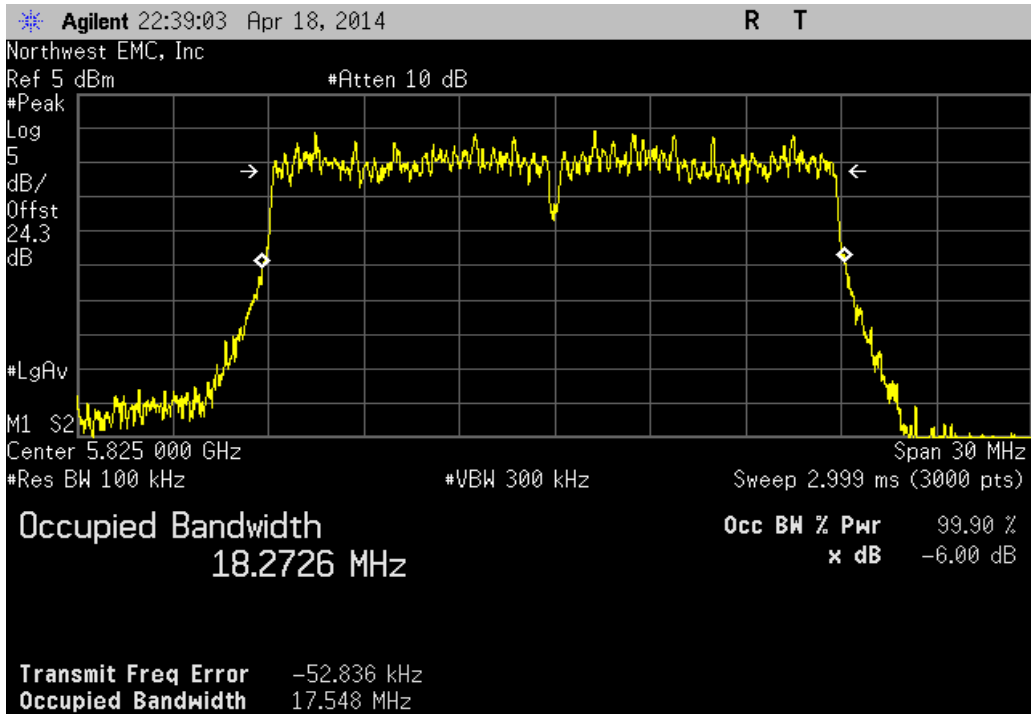
B IEEE 802.11(ac), 20 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS8, Mid Channel 157, 5785 MHz

Value	Limit	Result
17.464 MHz	> 500 kHz	Pass



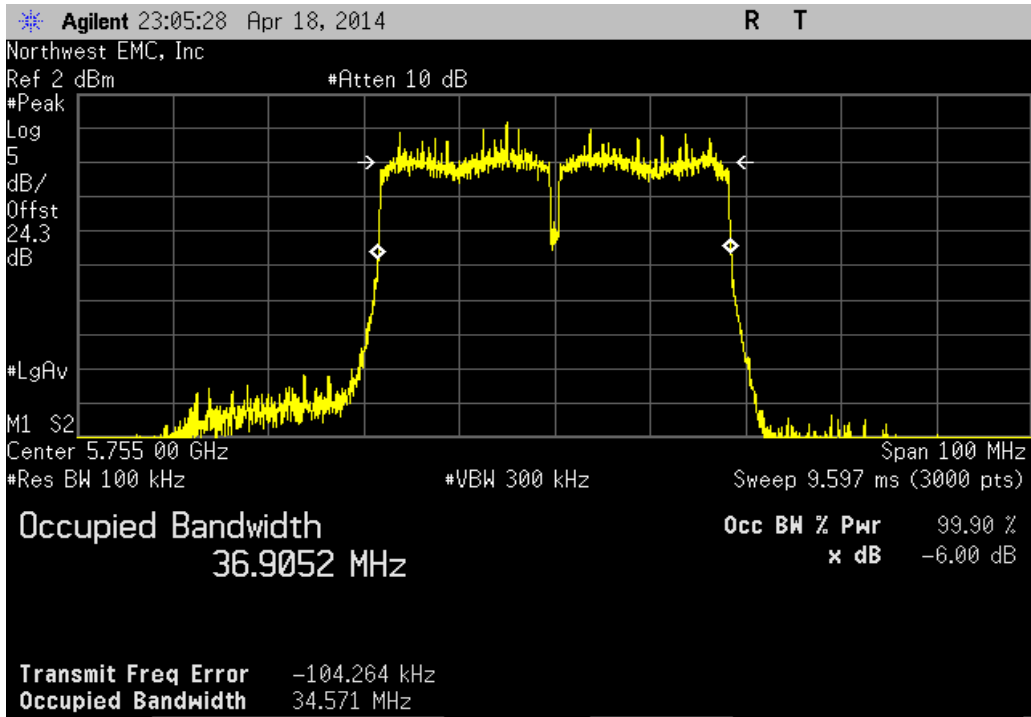
B IEEE 802.11(ac), 20 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS8, High Channel 165, 5825 MHz

Value	Limit	Result
17.548 MHz	> 500 kHz	Pass



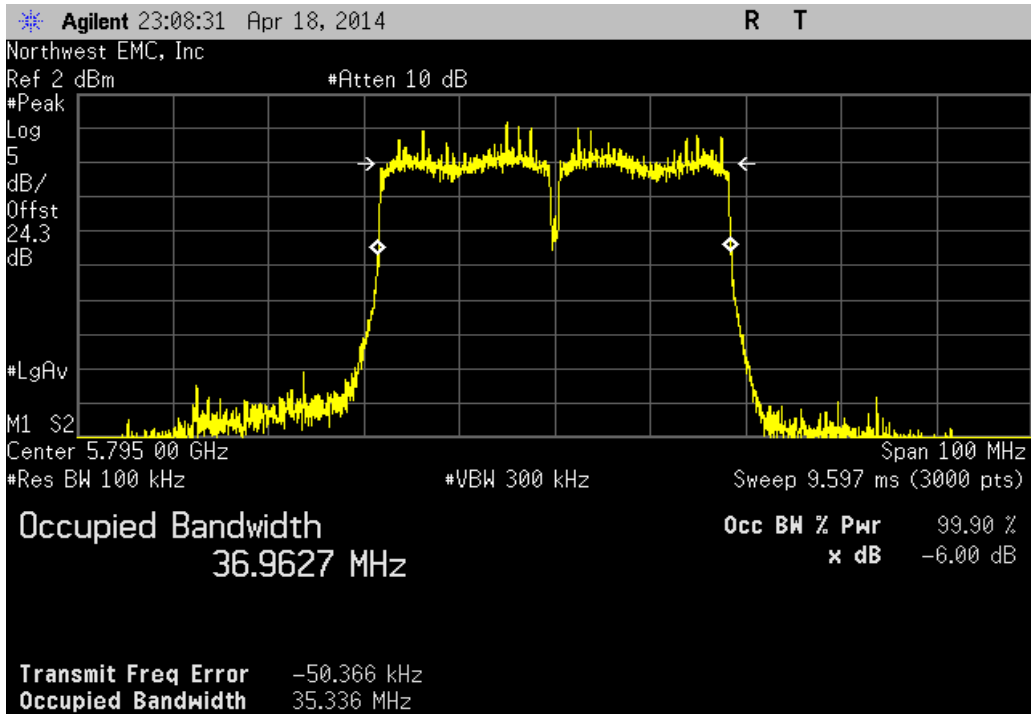
B IEEE 802.11(ac), 40 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS0, Low Channel 149/153, 5755 MHz

	Value	Limit	Result
	34.571 MHz	> 500 kHz	Pass



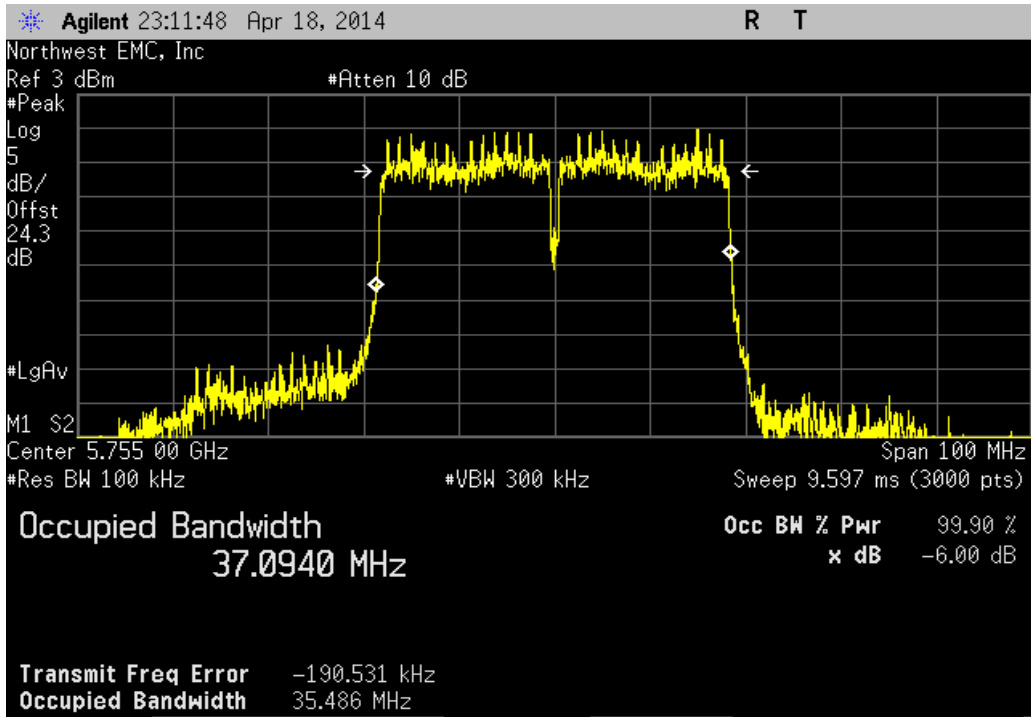
B IEEE 802.11(ac), 40 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS0, High Channel 157/161, 5795 MHz

	Value	Limit	Result
	35.336 MHz	> 500 kHz	Pass



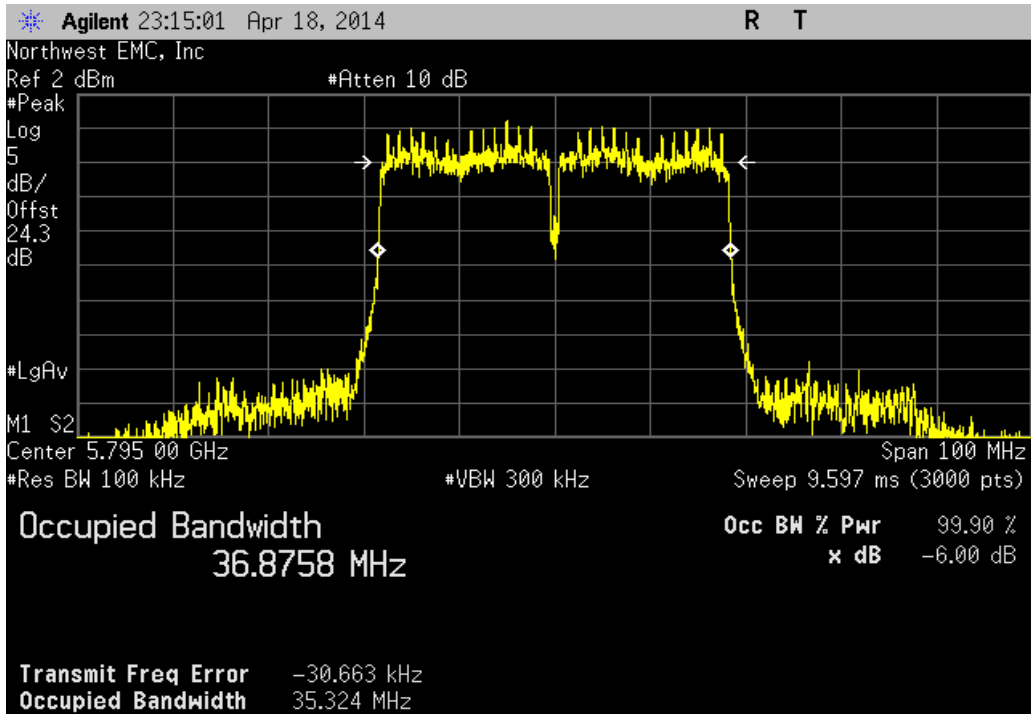
B IEEE 802.11(ac), 40 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS9, Low Channel 149/153, 5755 MHz

	Value	Limit	Result
	35.486 MHz	> 500 kHz	Pass



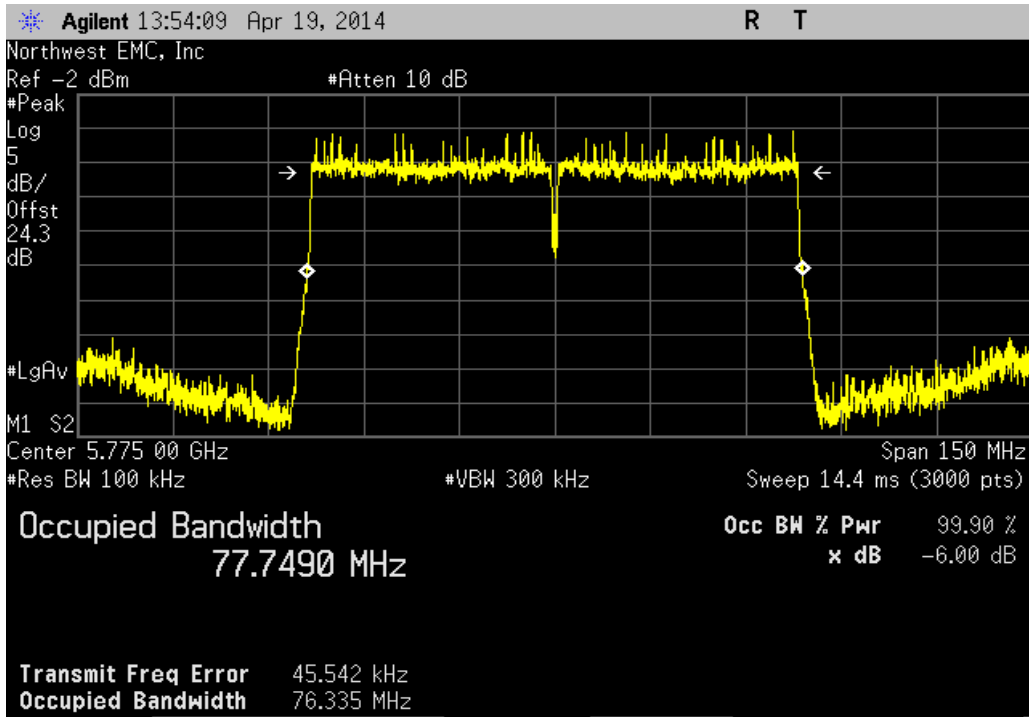
B IEEE 802.11(ac), 40 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS9, High Channel 157/161, 5795 MHz

	Value	Limit	Result
	35.324 MHz	> 500 kHz	Pass



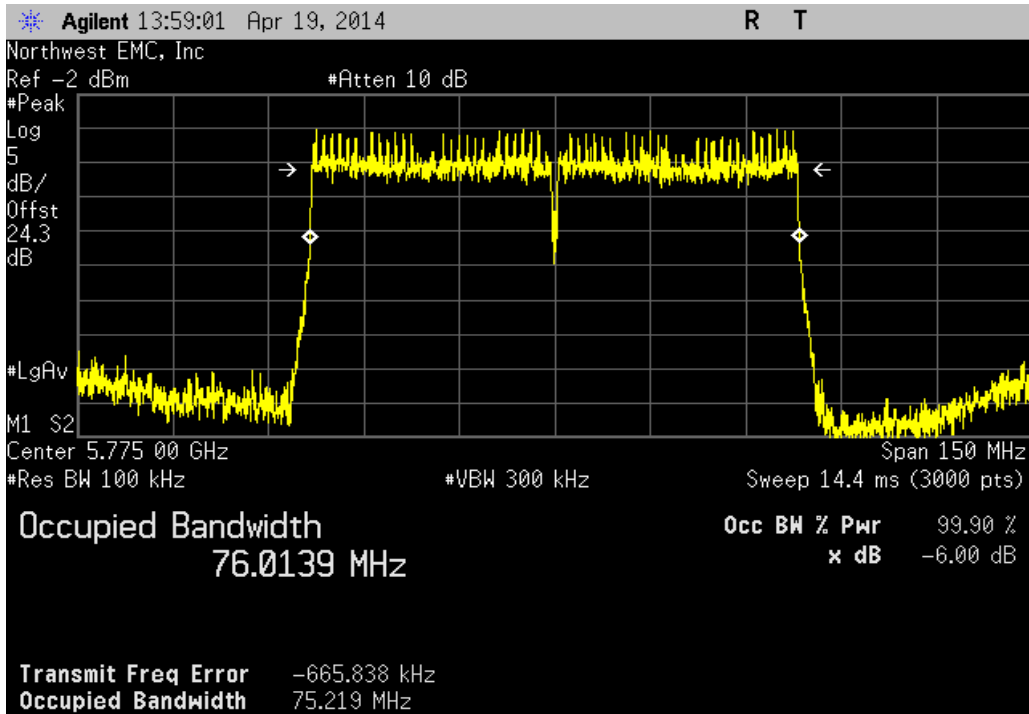
B IEEE 802.11(ac), 80 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS0, Low Channel 149/153/157/161, 5775 MHz

Value	Limit	Result
76.335 MHz	> 500 kHz	Pass



B IEEE 802.11(ac), 80 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS9, Low Channel 149/153/157/161, 5775 MHz

Value	Limit	Result
75.219 MHz	> 500 kHz	Pass



OCCUPIED BANDWIDTH

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 (mo.)
40GHz DC Block	Miteq	DCB4000	AMD	5/16/2013	12
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	7/30/2013	12
EV06 Direct Connect Cable	ESM Cable Corp.	TT	ECA	NCR	0
Power Meter	Gigatronics	8651A	SPM	11/26/2013	24
Power Sensor	Gigatronics	80701A	SPL	7/8/2011	36
Attenuator, 6dB	S.M. Electronics	18N-06	AWN	2/3/2014	12
MXG Analog Signal Generator	Agilent	N5181A	TIG	3/28/2014	36
Spectrum Analyzer	Agilent	E4446A	AAQ	1/21/2014	24

TEST DESCRIPTION

The 6dB occupied bandwidth was measured using 100 kHz resolution bandwidth and 300 kHz video bandwidth. The 99.9% (approximate 26 dB) emission bandwidth (EBW) was also measured at the same time.

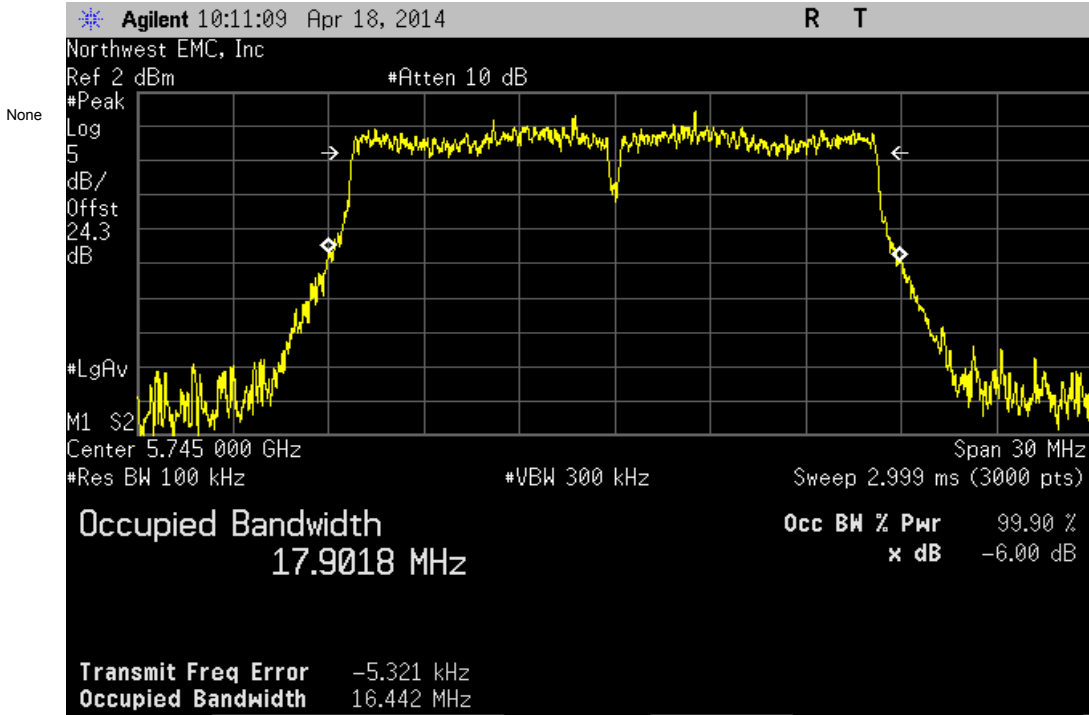
The EUT was set to low, medium and high transmit frequencies. The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer. The EUT was transmitting at the data rate(s) listed in the datasheet.

EUT: Model 1631		Work Order: MCSO1698	
Serial Number: 006840341053		Date: 04/23/14	
Customer: Microsoft Corporation		Temperature: 22.3°C	
Attendees: None		Humidity: 32%	
Project: None		Barometric Pres.: 1014	
Tested by: Jared Ison		Power: 110VAC/60Hz	
		Job Site: EV06	
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2014		ANSI C63.10:2009	
COMMENTS			
Modes of operation tested were client provided. Reference power level table for channel power setting.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	6	Signature 	

			Value	Limit	Result
IEEE 802.11(a)	20 MHz	5725 MHz - 5850 MHz Band			
		6 Mbps			
		Low Channel 149, 5745 M	16.442 MHz	> 500 kHz	Pass
		Mid Channel 157, 5785 M	16.457 MHz	> 500 kHz	Pass
		High Channel 165, 5825 M	16.526 MHz	> 500 kHz	Pass
		36 Mbps			
		Low Channel 149, 5745 M	16.429 MHz	> 500 kHz	Pass
		Mid Channel 157, 5785 M	16.359 MHz	> 500 kHz	Pass
		High Channel 165, 5825 M	16.341 MHz	> 500 kHz	Pass
		54 Mbps			
		Low Channel 149, 5745 M	16.445 MHz	> 500 kHz	Pass
		Mid Channel 157, 5785 M	16.4 MHz	> 500 kHz	Pass
		High Channel 165, 5825 M	16.368 MHz	> 500 kHz	Pass
IEEE 802.11(n)	20 MHz	5725 MHz - 5850 MHz Band			
		HT, MCS7			
		Low Channel 149, 5745 M	17.449 MHz	> 500 kHz	Pass
		Mid Channel 157, 5785 M	17.543 MHz	> 500 kHz	Pass
		High Channel 165, 5825 M	17.563 MHz	> 500 kHz	Pass
	40 MHz	5725 MHz - 5850 MHz Band			
		HT, MCS7			
		Low Channel 149/153, 575	35.814 MHz	> 500 kHz	Pass
		High Channel 157/161, 571	35.372 MHz	> 500 kHz	Pass
IEEE 802.11(ac)	20 MHz	5725 MHz - 5850 MHz Band			
		VHT, MCS0			
		Low Channel 149, 5745 M	17.409 MHz	> 500 kHz	Pass
		Mid Channel 157, 5785 M	17.506 MHz	> 500 kHz	Pass
		High Channel 165, 5825 M	17.589 MHz	> 500 kHz	Pass
		VHT, MCS8			
		Low Channel 149, 5745 M	17.575 MHz	> 500 kHz	Pass
		Mid Channel 157, 5785 M	17.521 MHz	> 500 kHz	Pass
		High Channel 165, 5825 M	17.497 MHz	> 500 kHz	Pass
	40 MHz	5725 MHz - 5850 MHz Band			
		VHT, MCS0			
		Low Channel 149/153, 575	35.395 MHz	> 500 kHz	Pass
		High Channel 157/161, 571	35.86 MHz	> 500 kHz	Pass
		VHT, MCS9			
		Low Channel 149/153, 575	35.692 MHz	> 500 kHz	Pass
		High Channel 157/161, 571	35.754 MHz	> 500 kHz	Pass
	80 MHz	5725 MHz - 5850 MHz Band			
		VHT, MCS0			
		Low Channel 149/153/157	76.292 MHz	> 500 kHz	Pass
		VHT, MCS9			
		Low Channel 149/153/157	76.266 MHz	> 500 kHz	Pass

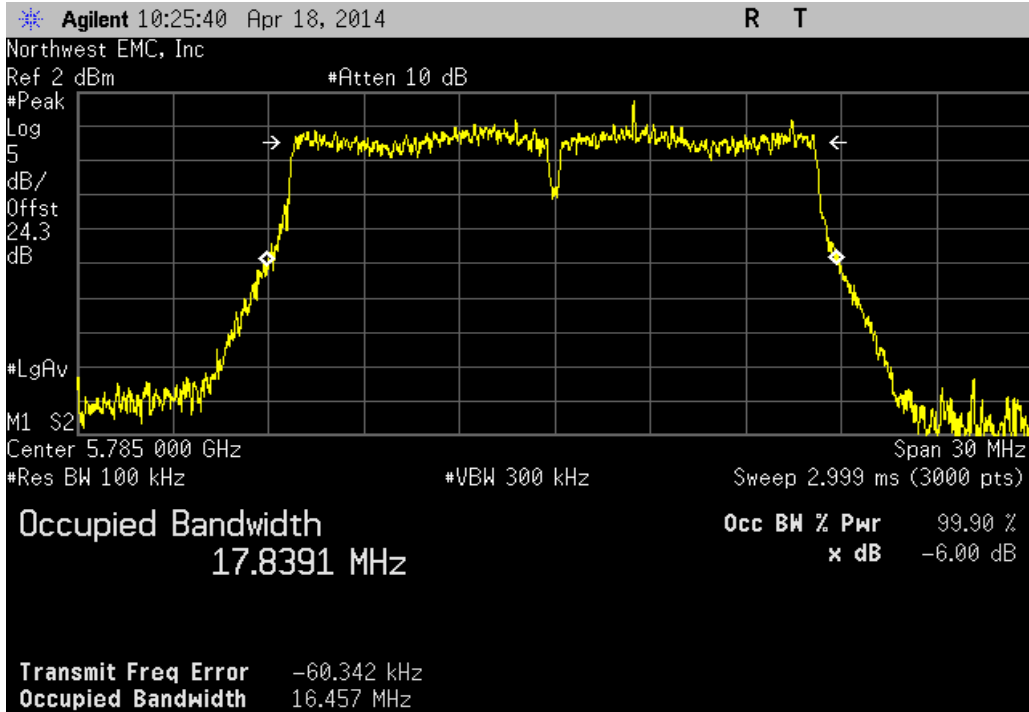
IEEE 802.11(a), 20 MHz, 5725 MHz - 5850 MHz Band, 6 Mbps, Low Channel 149, 5745 MHz

Value	Limit	Result
16.442 MHz	> 500 kHz	Pass



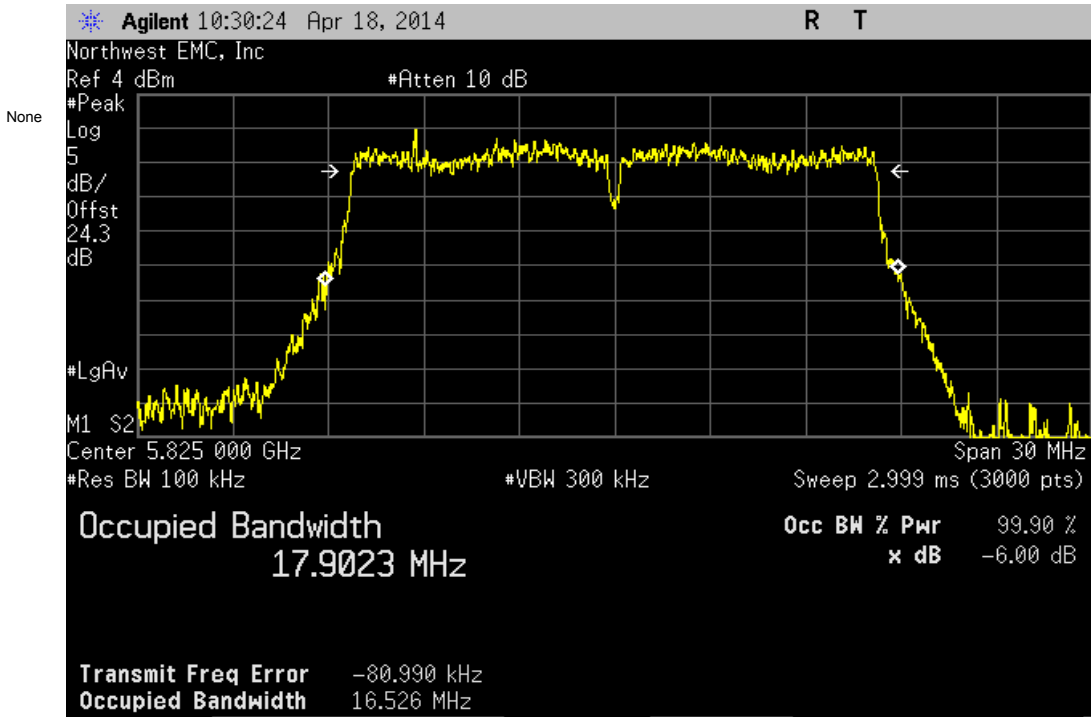
IEEE 802.11(a), 20 MHz, 5725 MHz - 5850 MHz Band, 6 Mbps, Mid Channel 157, 5785 MHz

Value	Limit	Result
16.457 MHz	> 500 kHz	Pass



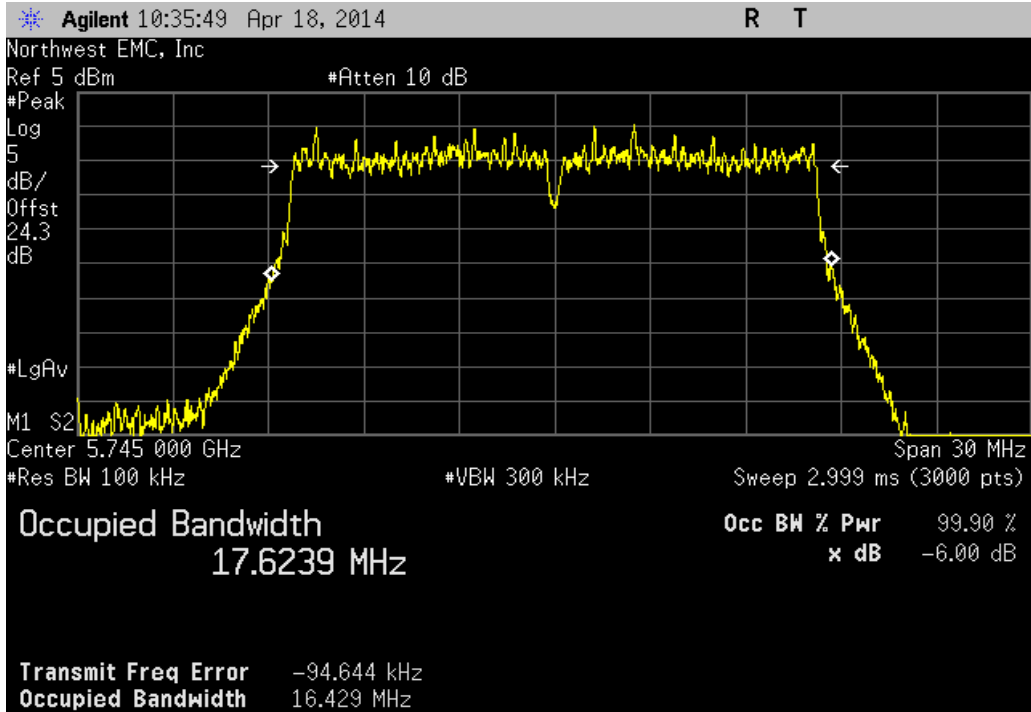
IEEE 802.11(a), 20 MHz, 5725 MHz - 5850 MHz Band, 6 Mbps, High Channel 165, 5825 MHz

Value	Limit	Result
16.526 MHz	> 500 kHz	Pass



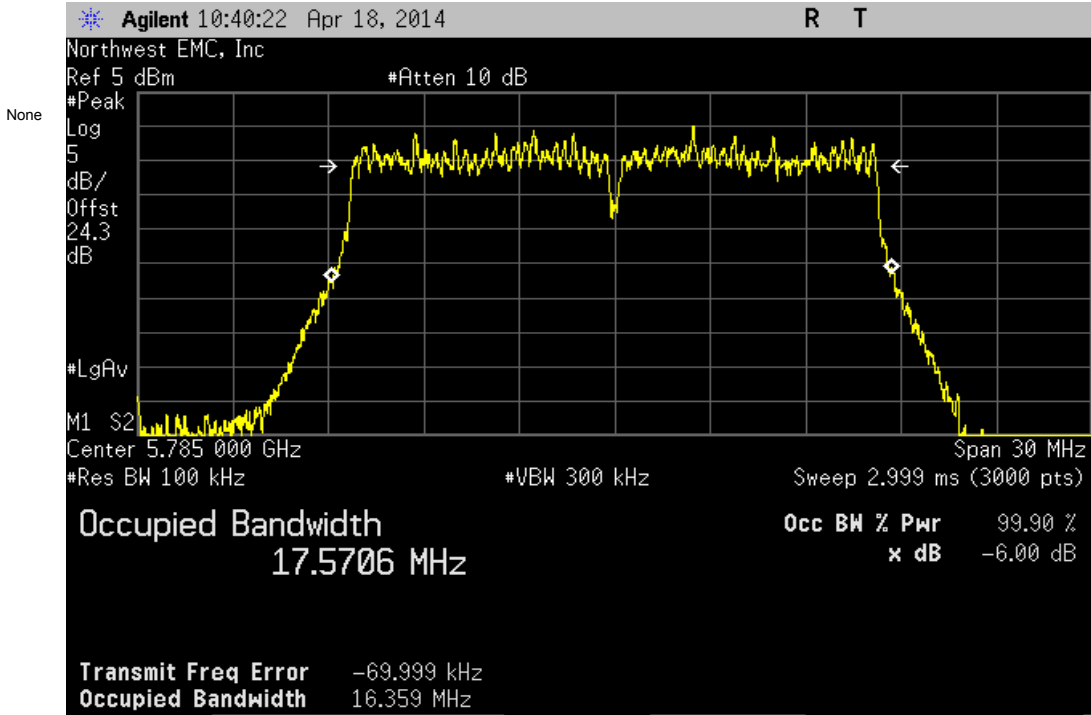
IEEE 802.11(a), 20 MHz, 5725 MHz - 5850 MHz Band, 36 Mbps, Low Channel 149, 5745 MHz

Value	Limit	Result
16.429 MHz	> 500 kHz	Pass



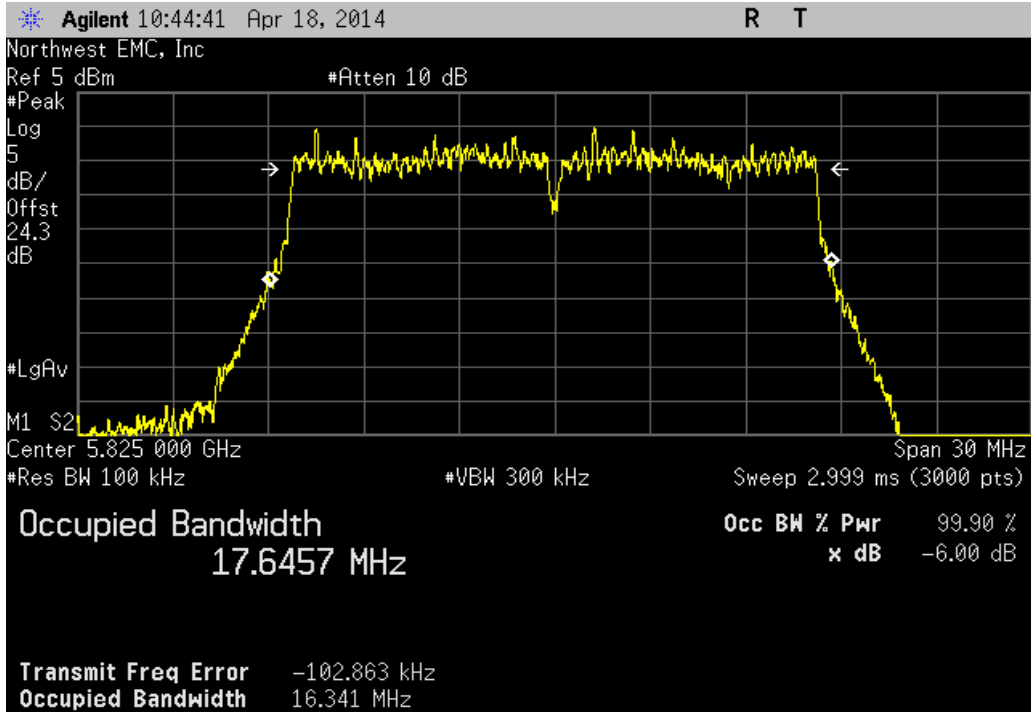
IEEE 802.11(a), 20 MHz, 5725 MHz - 5850 MHz Band, 36 Mbps, Mid Channel 157, 5785 MHz

	Value	Limit	Result
	16.359 MHz	> 500 kHz	Pass



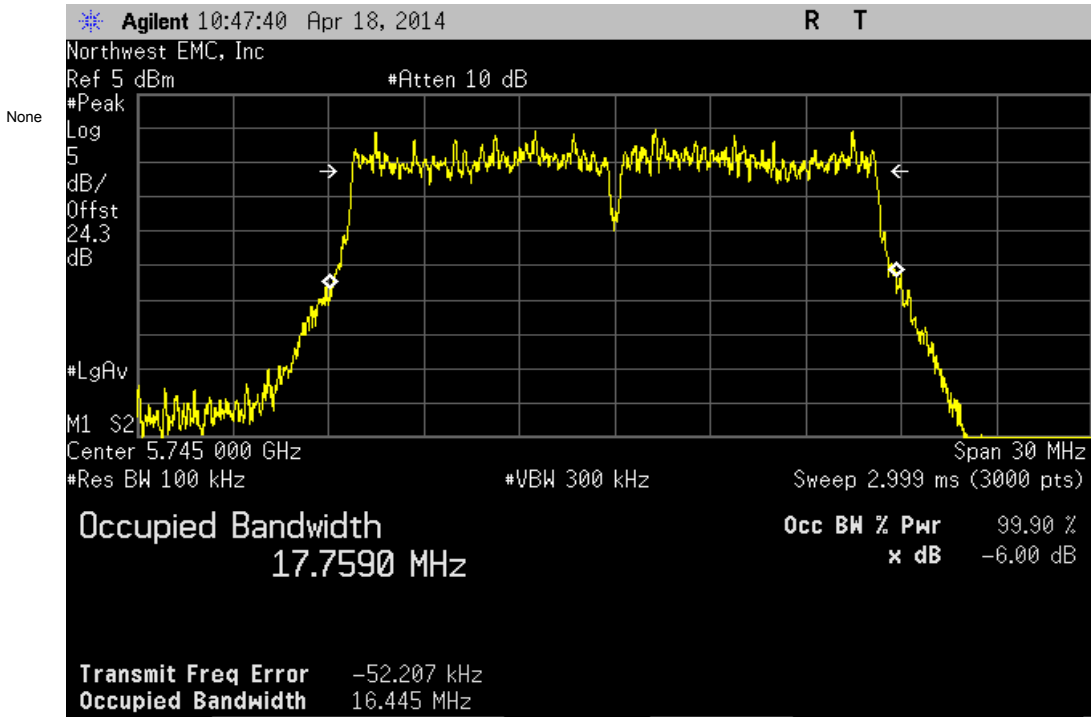
IEEE 802.11(a), 20 MHz, 5725 MHz - 5850 MHz Band, 36 Mbps, High Channel 165, 5825 MHz

	Value	Limit	Result
	16.341 MHz	> 500 kHz	Pass



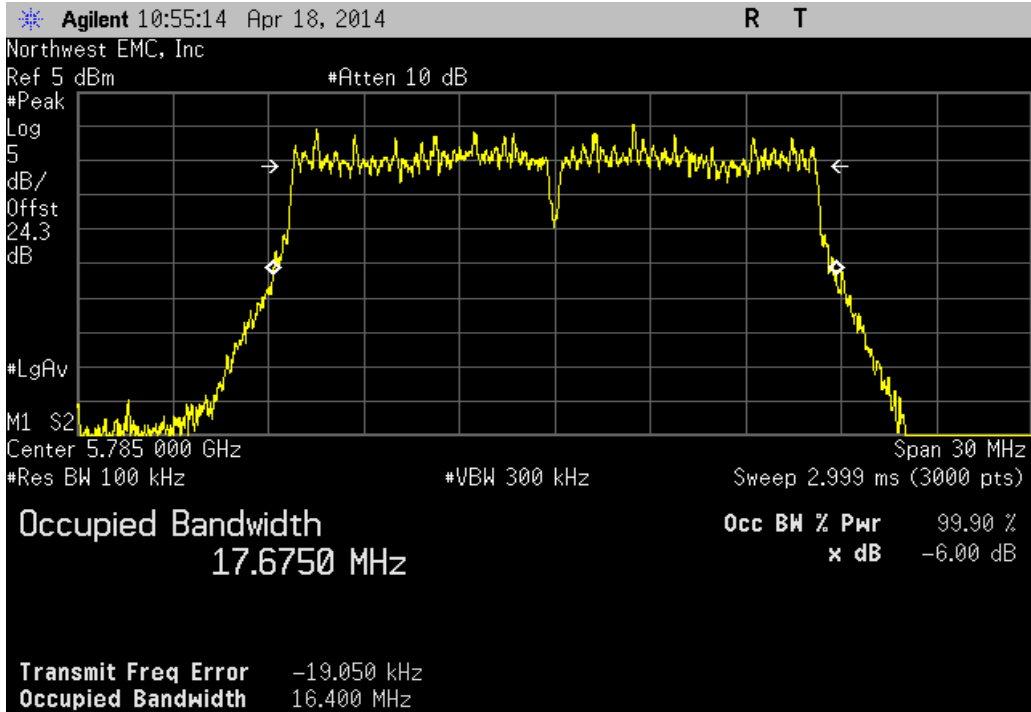
IEEE 802.11(a), 20 MHz, 5725 MHz - 5850 MHz Band, 54 Mbps, Low Channel 149, 5745 MHz

Value	Limit	Result
16.445 MHz	> 500 kHz	Pass



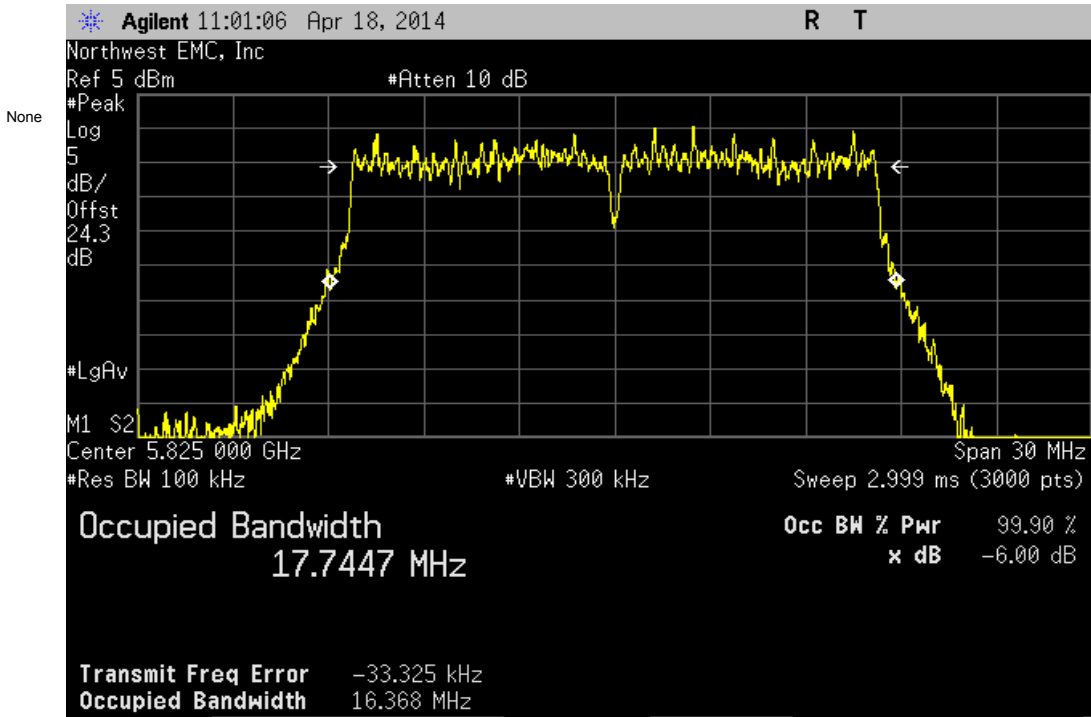
IEEE 802.11(a), 20 MHz, 5725 MHz - 5850 MHz Band, 54 Mbps, Mid Channel 157, 5785 MHz

Value	Limit	Result
16.4 MHz	> 500 kHz	Pass



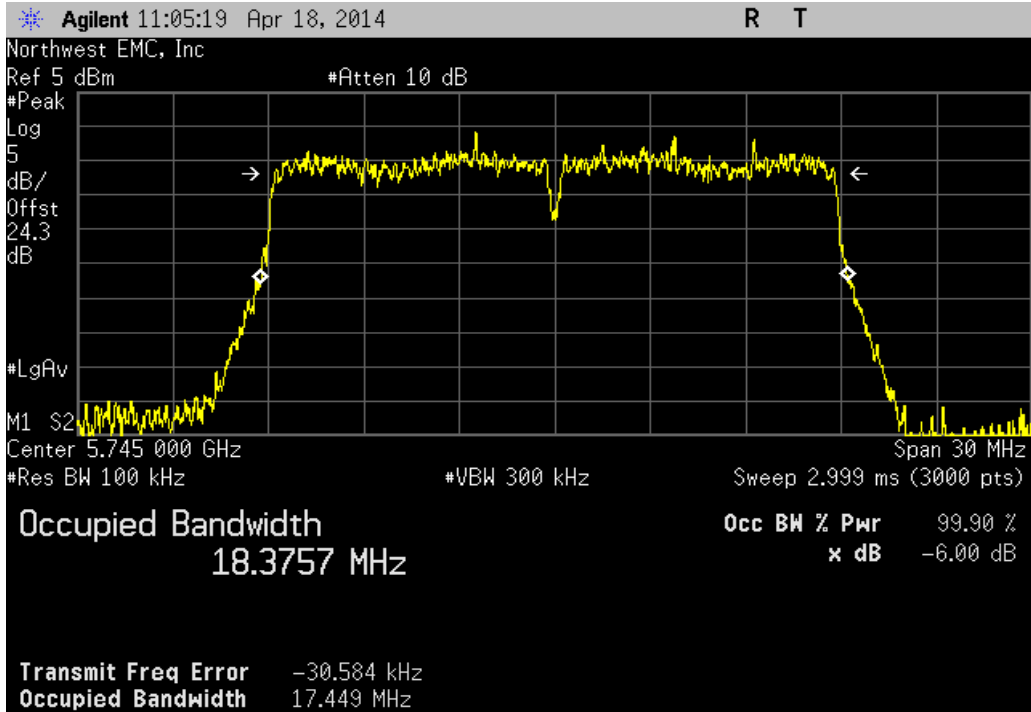
IEEE 802.11(a), 20 MHz, 5725 MHz - 5850 MHz Band, 54 Mbps, High Channel 165, 5825 MHz

Value	Limit	Result
16.368 MHz	> 500 kHz	Pass



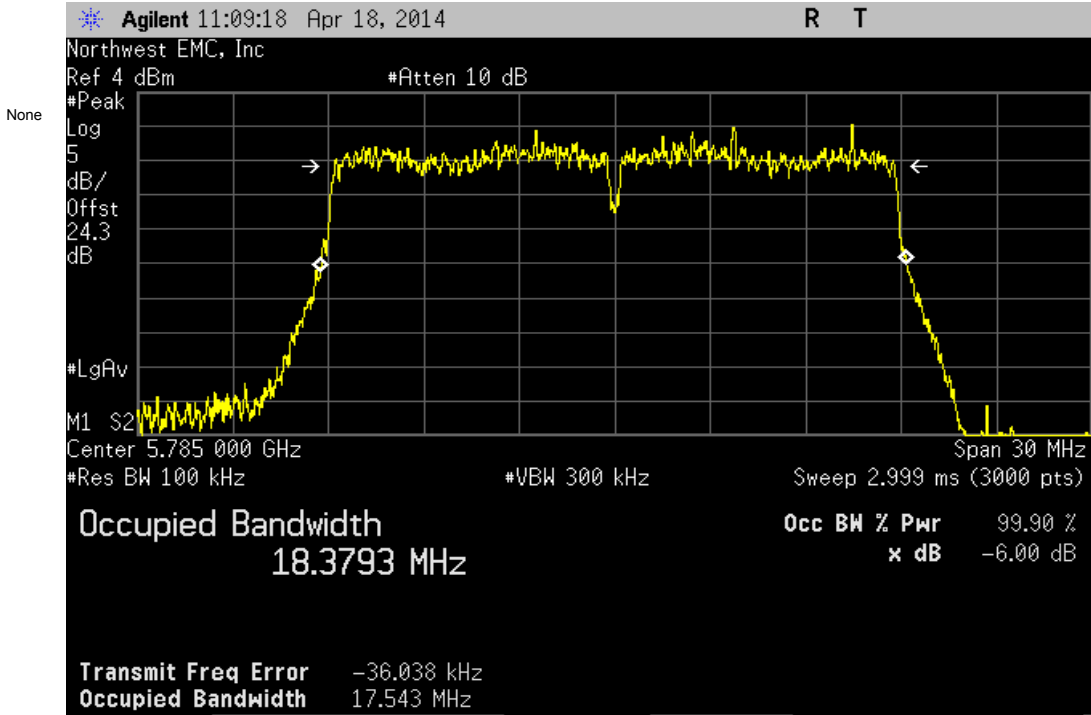
IEEE 802.11(n), 20 MHz, 5725 MHz - 5850 MHz Band, HT, MCS7, Low Channel 149, 5745 MHz

Value	Limit	Result
17.449 MHz	> 500 kHz	Pass



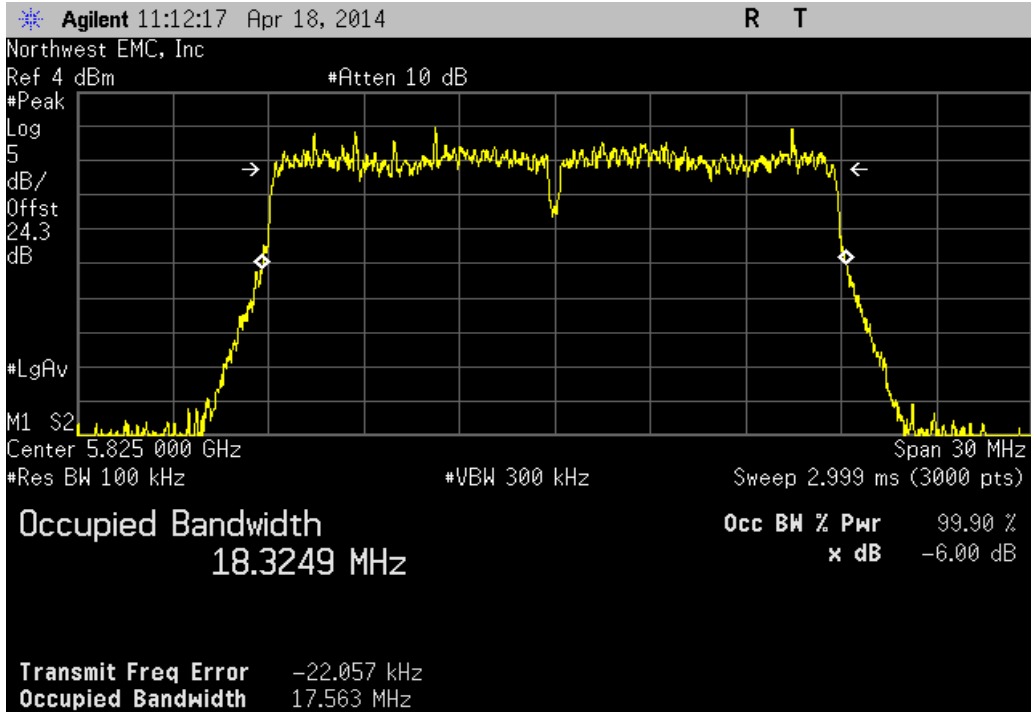
IEEE 802.11(n), 20 MHz, 5725 MHz - 5850 MHz Band, HT, MCS7, Mid Channel 157, 5785 MHz

Value	Limit	Result
17.543 MHz	> 500 kHz	Pass



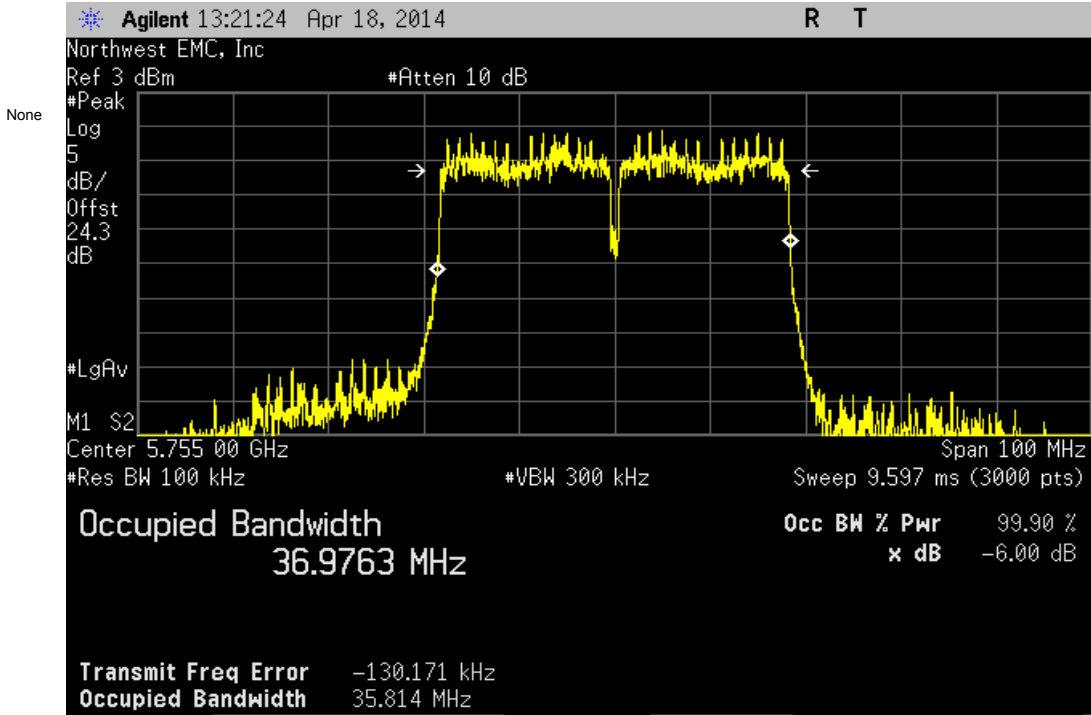
IEEE 802.11(n), 20 MHz, 5725 MHz - 5850 MHz Band, HT, MCS7, High Channel 165, 5825 MHz

Value	Limit	Result
17.563 MHz	> 500 kHz	Pass



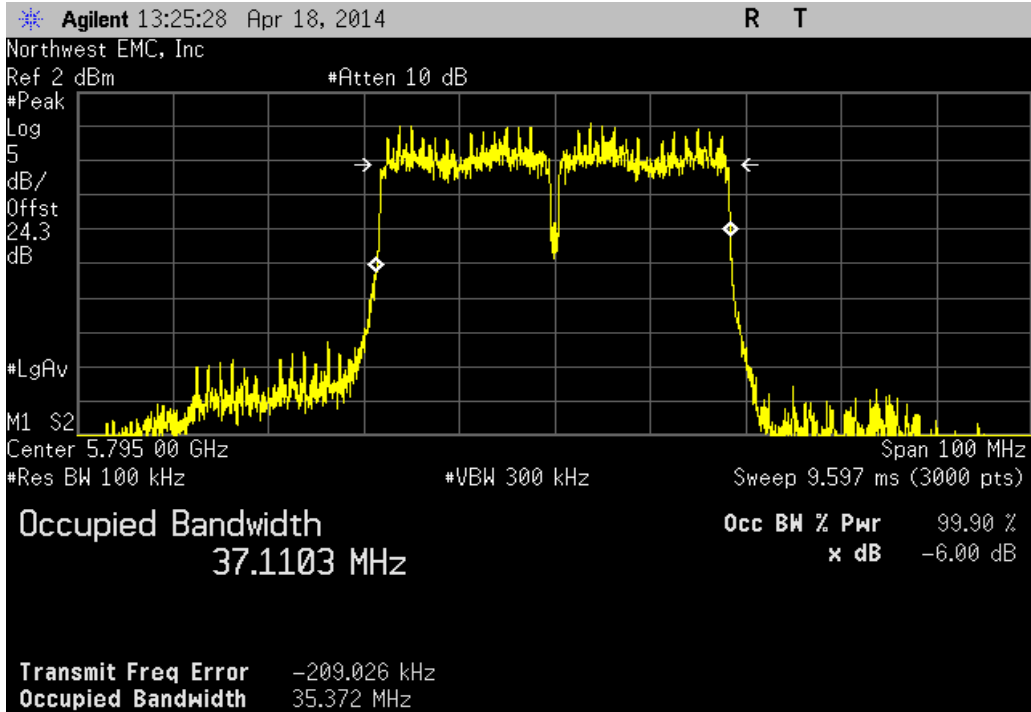
IEEE 802.11(n), 40 MHz, 5725 MHz - 5850 MHz Band, HT, MCS7, Low Channel 149/153, 5755 MHz

	Value	Limit	Result
	35.814 MHz	> 500 kHz	Pass



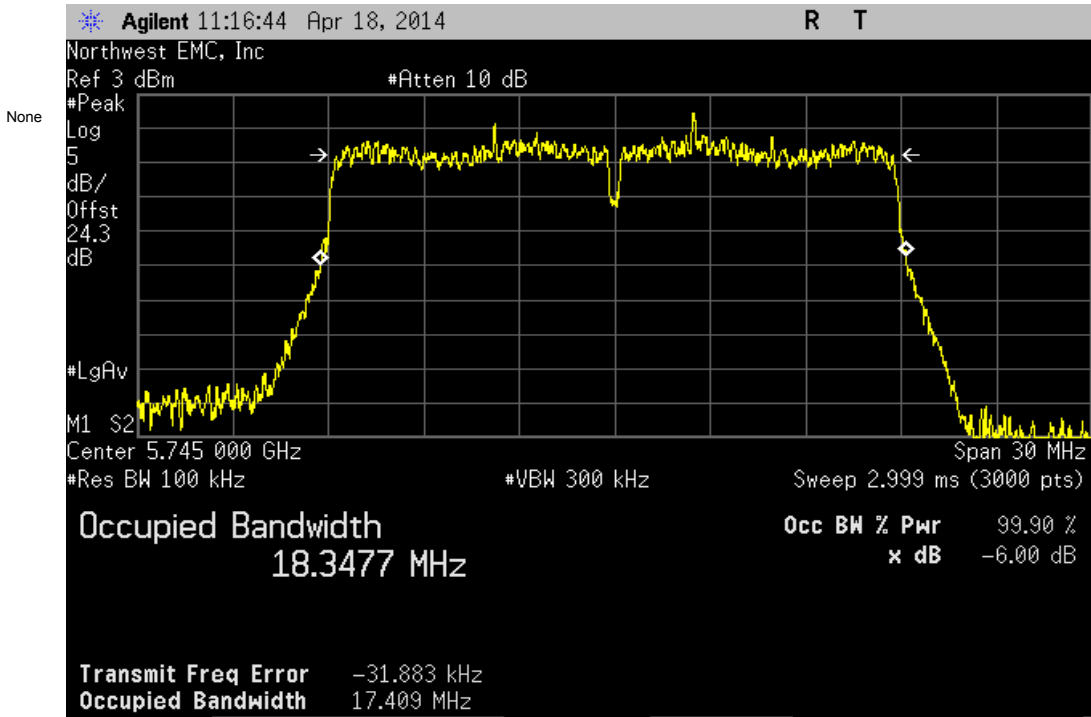
IEEE 802.11(n), 40 MHz, 5725 MHz - 5850 MHz Band, HT, MCS7, High Channel 157/161, 5795 MHz

	Value	Limit	Result
	35.372 MHz	> 500 kHz	Pass



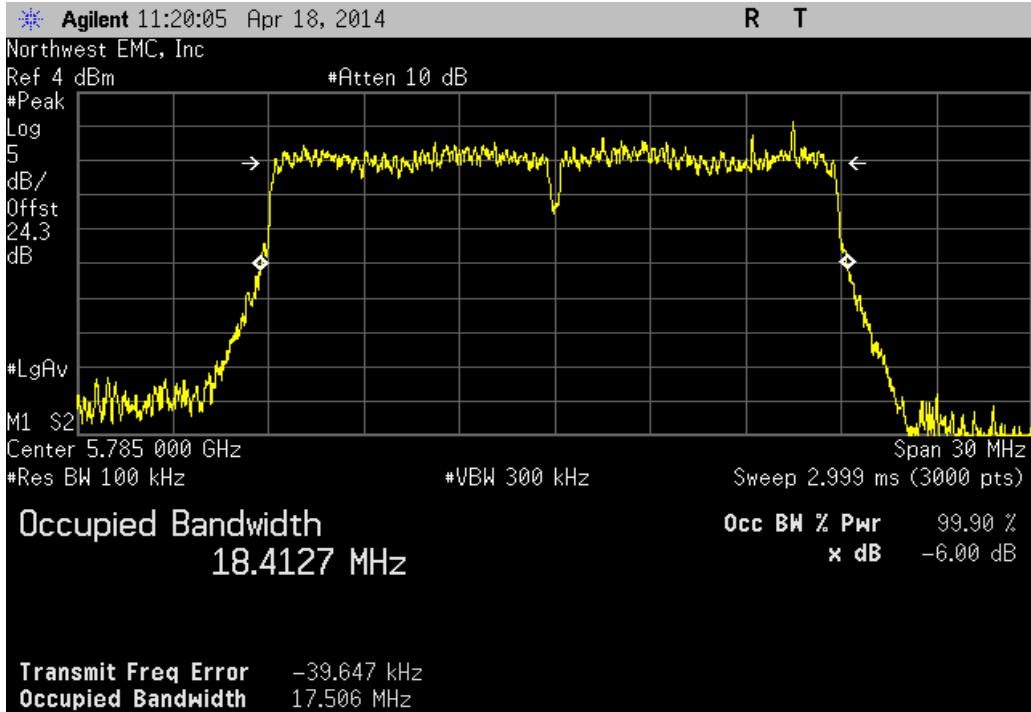
IEEE 802.11(ac), 20 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS0, Low Channel 149, 5745 MHz

Value	Limit	Result
17.409 MHz	> 500 kHz	Pass



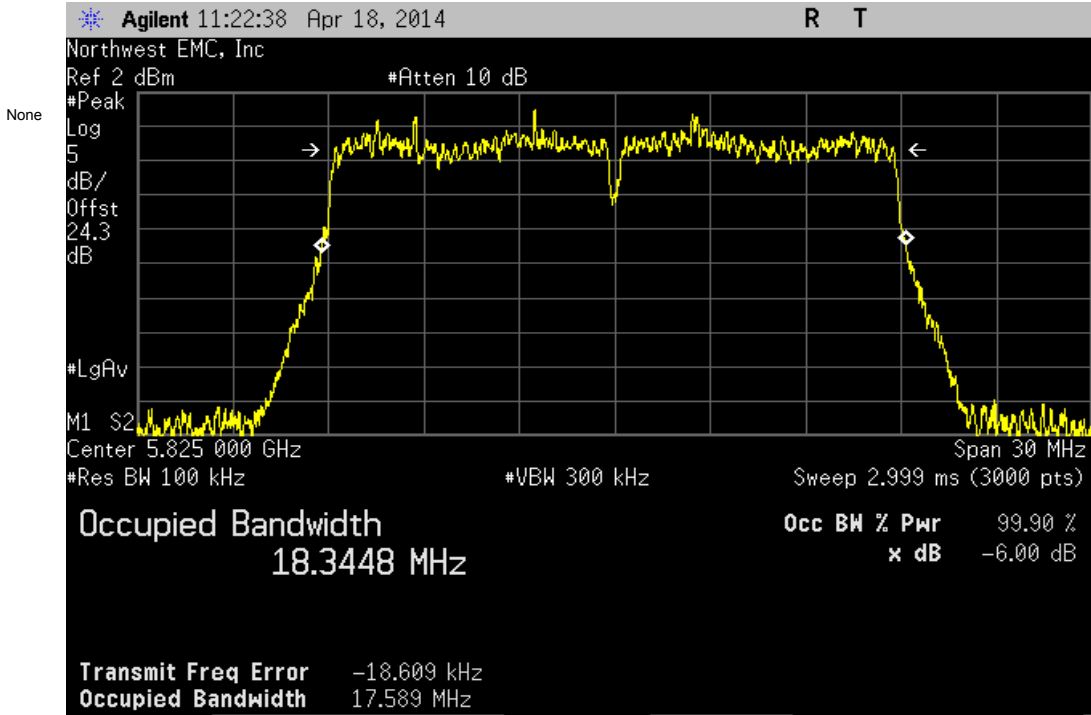
IEEE 802.11(ac), 20 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS0, Mid Channel 157, 5785 MHz

Value	Limit	Result
17.506 MHz	> 500 kHz	Pass



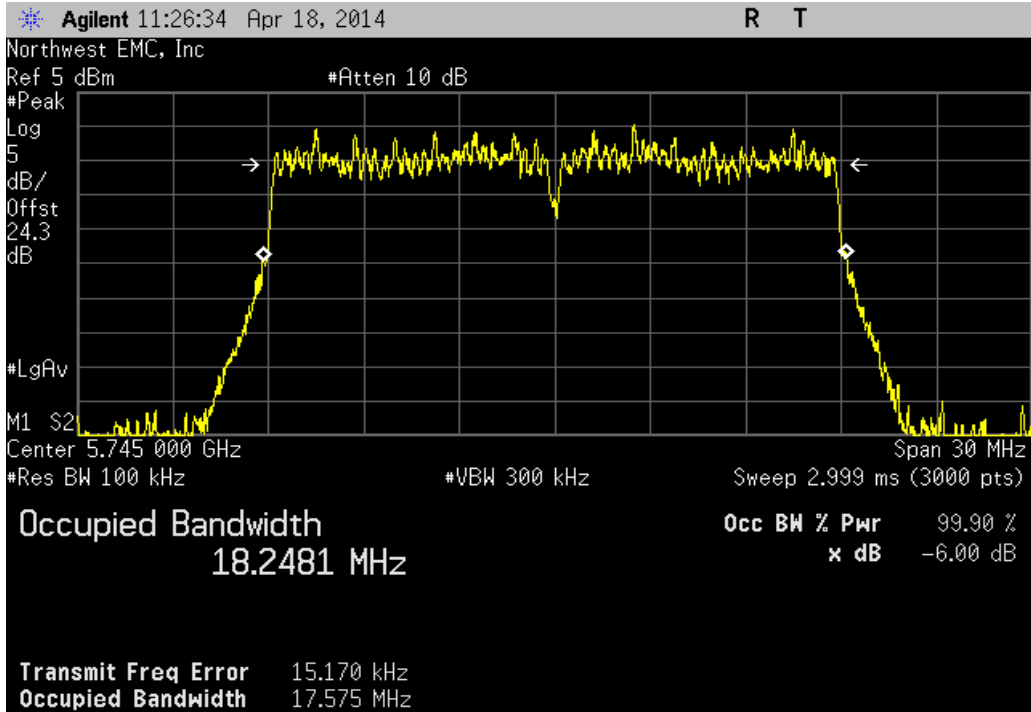
IEEE 802.11(ac), 20 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS0, High Channel 165, 5825 MHz

Value	Limit	Result
17.589 MHz	> 500 kHz	Pass



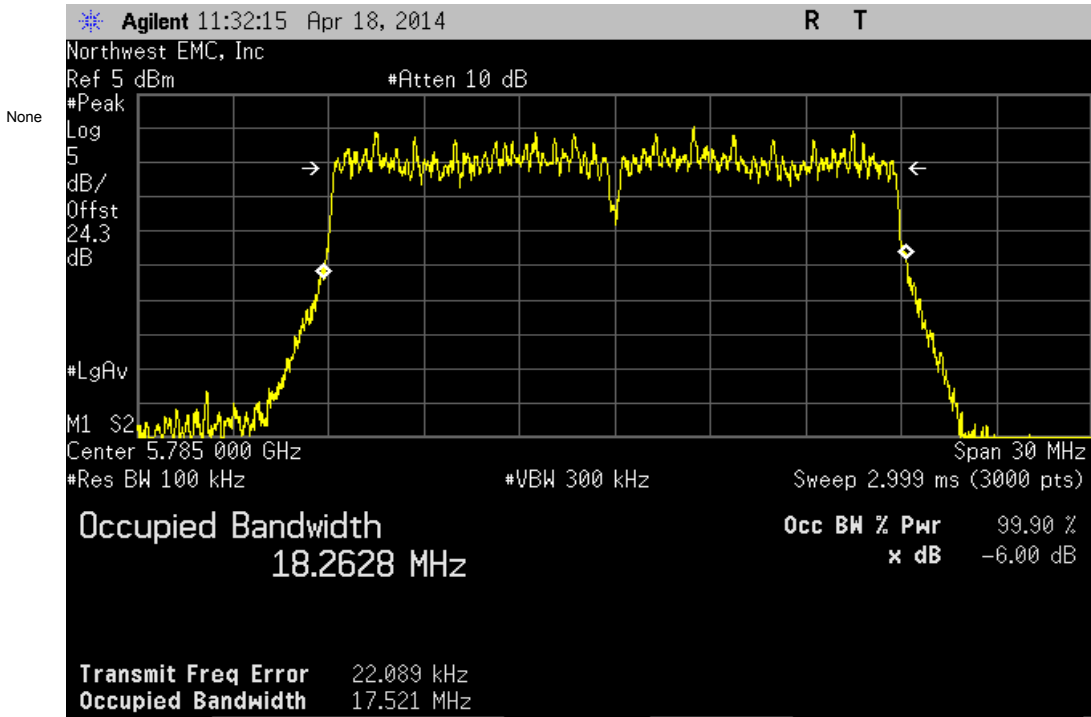
IEEE 802.11(ac), 20 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS8, Low Channel 149, 5745 MHz

Value	Limit	Result
17.575 MHz	> 500 kHz	Pass



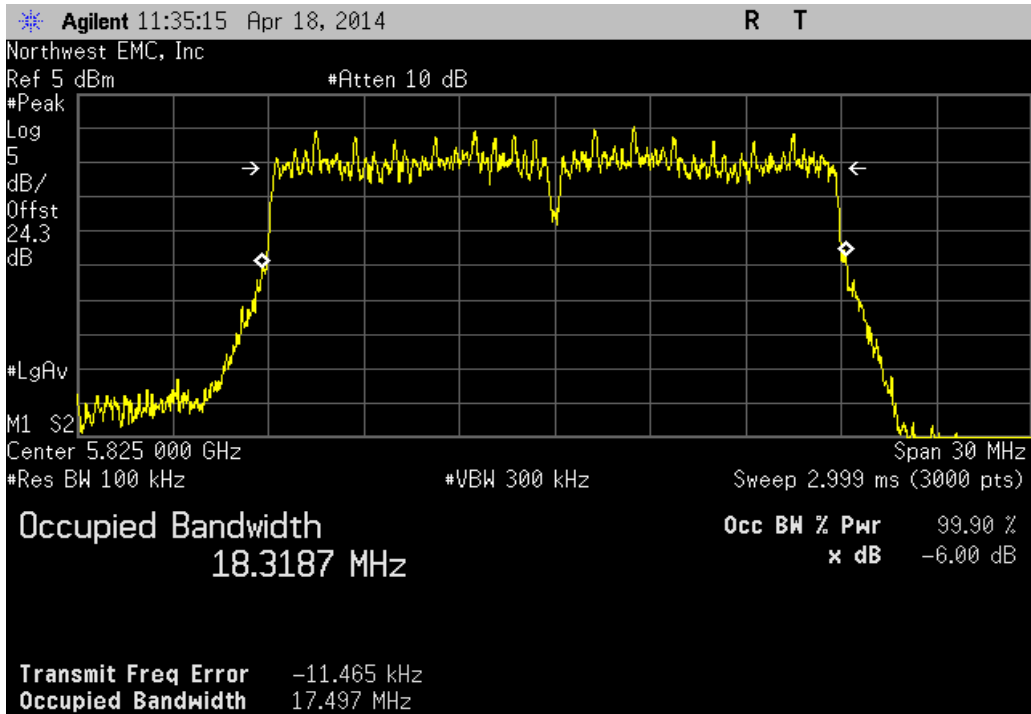
IEEE 802.11(ac), 20 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS8, Mid Channel 157, 5785 MHz

Value	Limit	Result
17.521 MHz	> 500 kHz	Pass



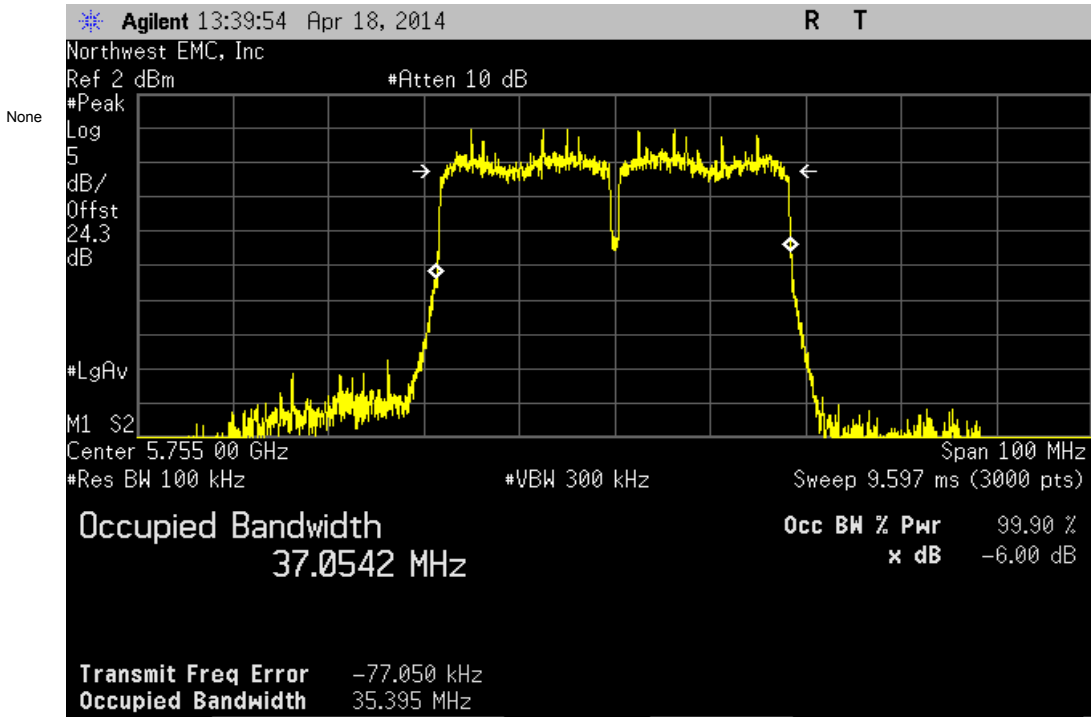
IEEE 802.11(ac), 20 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS8, High Channel 165, 5825 MHz

Value	Limit	Result
17.497 MHz	> 500 kHz	Pass



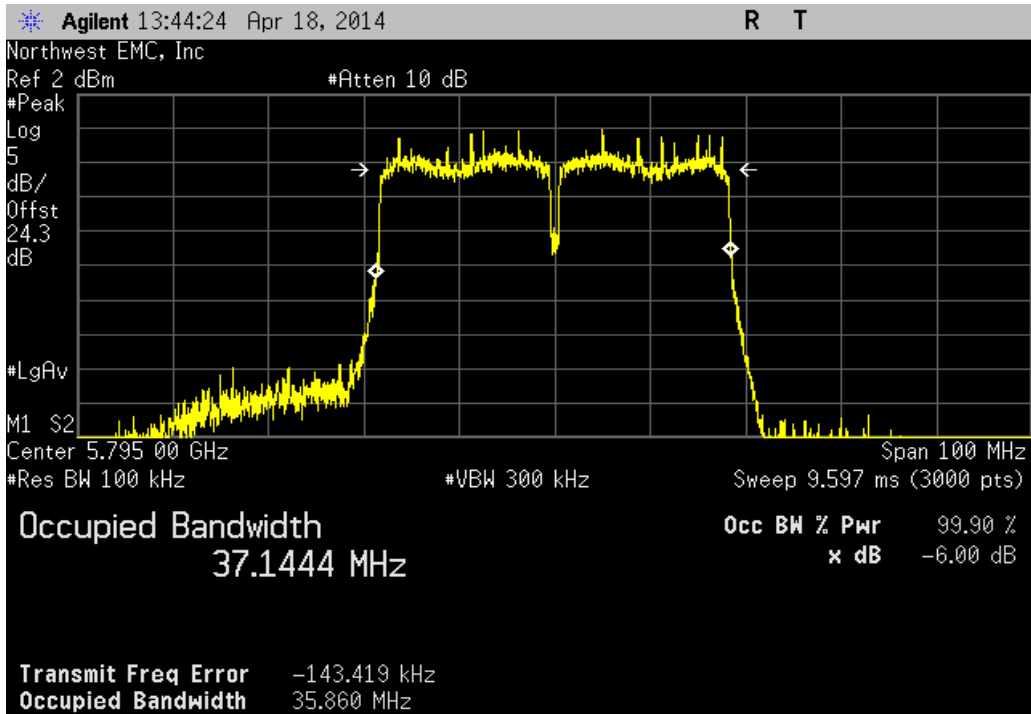
IEEE 802.11(ac), 40 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS0, Low Channel 149/153, 5755 MHz

	Value	Limit	Result
	35.395 MHz	> 500 kHz	Pass



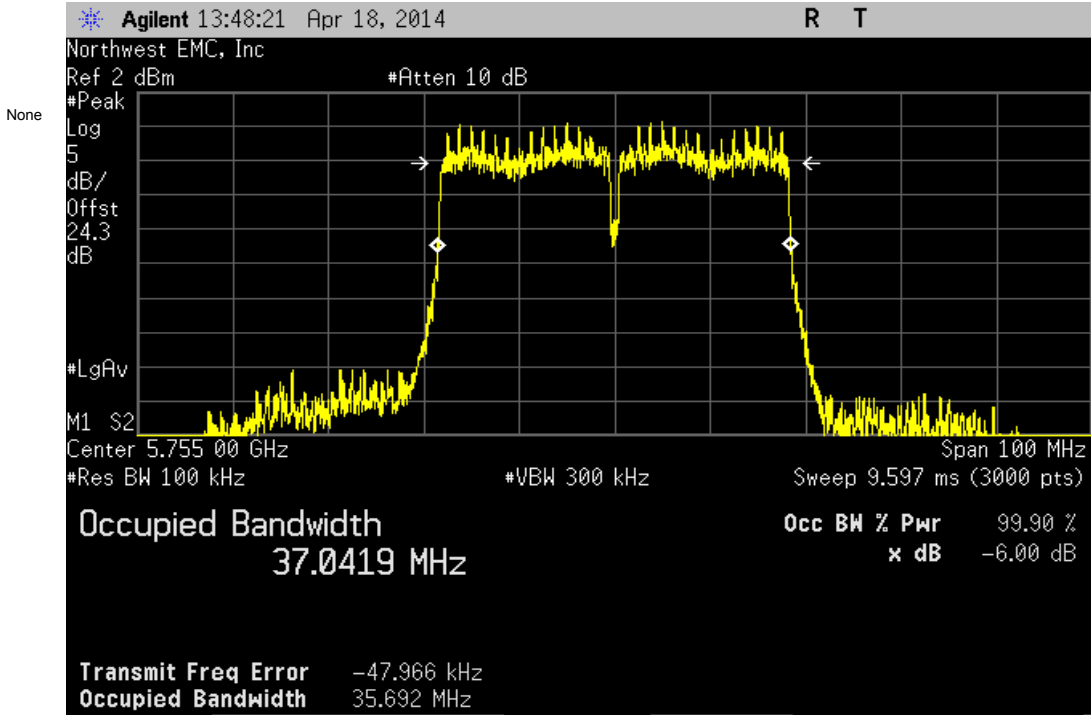
IEEE 802.11(ac), 40 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS0, High Channel 157/161, 5795 MHz

	Value	Limit	Result
	35.86 MHz	> 500 kHz	Pass



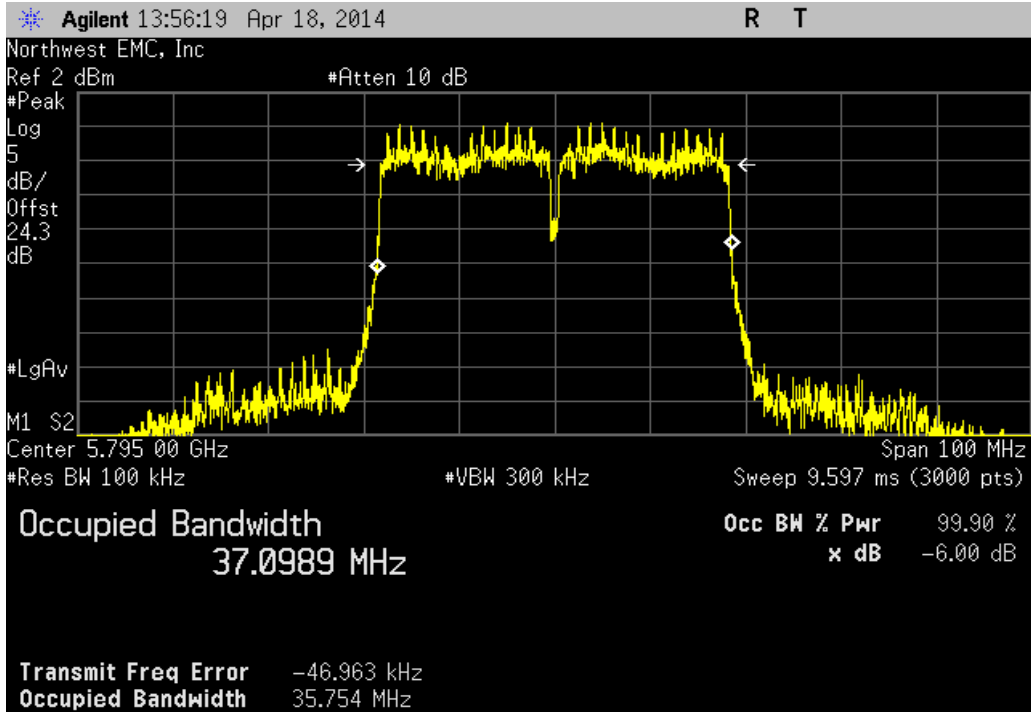
IEEE 802.11(ac), 40 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS9, Low Channel 149/153, 5755 MHz

	Value	Limit	Result
	35.692 MHz	> 500 kHz	Pass



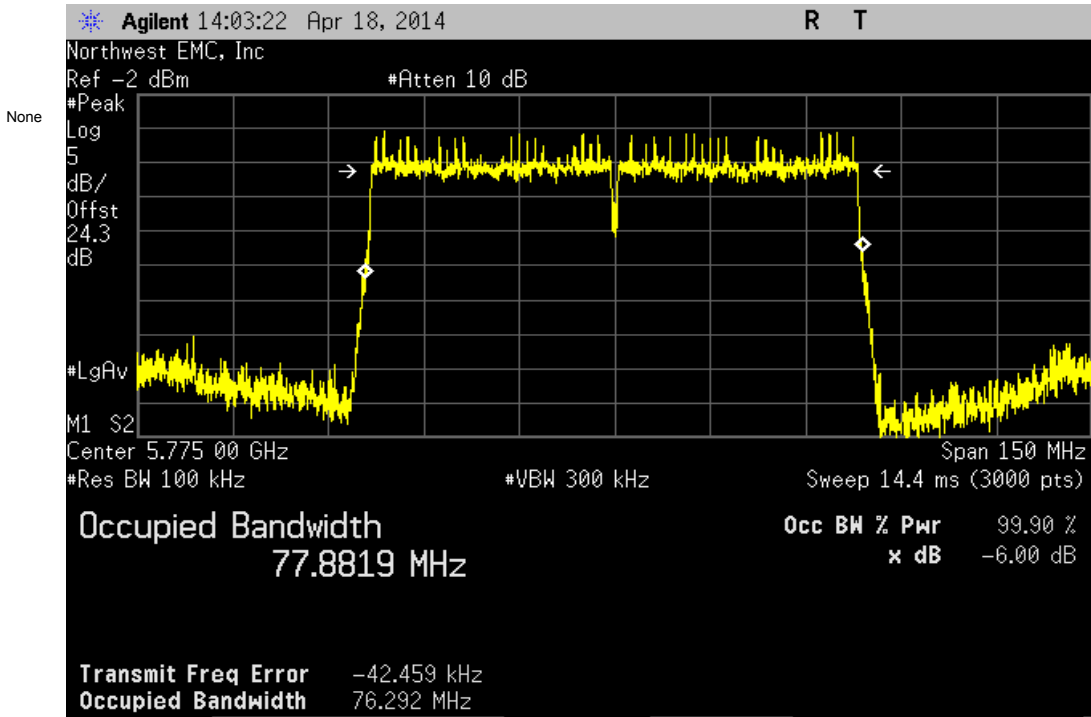
IEEE 802.11(ac), 40 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS9, High Channel 157/161, 5795 MHz

	Value	Limit	Result
	35.754 MHz	> 500 kHz	Pass



IEEE 802.11(ac), 80 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS0, Low Channel 149/153/157/161, 5775 MHz

Value	Limit	Result
76.292 MHz	> 500 kHz	Pass



IEEE 802.11(ac), 80 MHz, 5725 MHz - 5850 MHz Band, VHT, MCS9, Low Channel 149/153/157/161, 5775 MHz

Value	Limit	Result
76.266 MHz	> 500 kHz	Pass

