FCC 47 CFR PART 15 SUBPART E
INDUSTRY CANADA RSS-247 ISSUE 1

UNII

CERTIFICATION TEST REPORT

FOR

Bluetooth/BLE, DTS/UNII a/b/g/n/ac and ANT+ Tablet

MODEL NUMBER : SM-T670

FCC ID: A3LSMT670
IC ID: 649E-SMT670

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Prepared for
SAMSUNG ELECTRONICS CO., LTD.
129 SAMSUNG-RO, YEONGTONG-GU, SUWON-SI,
GYEONGGI-DO, 16677, KOREA

Prepared by
UL Korea, Ltd. Suwon Laboratory
218 Maeyeong-ro, Yeongtong-gu,
Suwon-si, Gyeonggi-do, 16675, Korea
TEL: (031) 337-9902
FAX: (031) 213-5433

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UL Korea, Ltd. Suwon Laboratory FORM ID: FCC_15E
218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea
TEL: (031) 337-9902 FAX: (031) 213-5433
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218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea
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218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea
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1. ATTESTATION OF TEST RESULTS

COMPANY NAME:	SAMSUNG ELECTRONICS CO., LTD.
EUT DESCRIPTION:	Bluetooth/BLE, DTS/UNII a/b/g/n/ac and ANT+ Tablet
MODEL NUMBER:	SM-T670
SERIAL NUMBER:	R32G8008T9F (RADIATED); R32G800900V (CONDUCTED)
DATE TESTED:	AUG 21, 2015 - SEP 08, 2015

APPLICABLE STANDARDS

STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart E	Pass
INDUSTRY CANADA RSS-247 Issue 1	Pass
INDUSTRY CANADA RSS-GEN Issue 4	Pass

UL Korea, Ltd. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL Korea, Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL Korea, Ltd. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Korea, Ltd. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by IAS, any agency of the Federal Government, or any agency of any government.

Approved & Released For
UL Korea, Ltd. By:

CY Choi
Suwon Lab Engineer
UL Korea, Ltd.

Tested By:

Junwhan Lee
Suwon Lab Engineer
UL Korea, Ltd.

UL Korea, Ltd. Suwon Laboratory FORM ID: FCC_15E
218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea
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2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 15, FCC 06-96, FCC KDB 789033 D02 v01, ANSI C63.10-2009 for FCC and RSS-247 Issue 1, RSS-GEN Issue 4 and ANSI C63.10-2013 for IC.

ANSI C63.10-2009 Deviation
Radiated spurious emission above 1GHz EUT height is 1.5m not 0.8m.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea. Line conducted emissions are measured only at the 218 address. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

218 Maeyeong-ro
☒ Chamber 1
☒ Chamber 2

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4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)
36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

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4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	2.32 dB
Radiated Disturbance, Below 1GHz	4.14 dB
Radiated Disturbance, Above 1 GHz	5.97 dB

Uncertainty figures are valid to a confidence level of 95%.

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5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a Bluetooth/BLE, DTS/UNII a/b/g/n/ac and ANT+ Tablet.
This test report addresses the NII (UNII) operational mode.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum total conducted average output power as follows:

Frequency Range [MHz]	Mode	Output Power [dBm]	Output Power [mW]
5180 - 5240	802.11a	10.85	12.16
	802.11n HT20	11.28	13.42
5190 - 5230	802.11n HT40	10.28	10.68
5210	802.11ac VHT80	9.44	8.80
5260 - 5320	802.11a	10.74	11.85
	802.11n HT20	11.16	13.07
5270 - 5310	802.11n HT40	10.38	10.92
5290	802.11ac VHT80	9.21	8.34
5500 - 5720	802.11a	11.15	13.04
	802.11n HT20	11.25	13.34
5510 - 5710	802.11n HT40	10.42	11.01
5530 - 5690	802.11ac VHT80	9.47	8.84
5745 - 5825	802.11a	11.34	13.62
	802.11n HT20	11.10	12.87
5755 - 5795	802.11n HT40	10.08	10.18
5775	802.11ac VHT80	9.10	8.12

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5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an FPCB antenna, with a maximum gain of:

Frequency Range [MHz]		Antenna Gain [dBi]
UNII 1 5150 – 5250	5150	-1.52
UNII 2A 5250 – 5350	5285	-0.08
UNII 2C 5470 – 5725	5555	-1.23
	5690	-1.50
UNII 3 5725 – 5825	5825	-2.00

5.4. WORST-CASE CONFIGURATION AND MODE

Radiated emission and power line conducted emission were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario.

The fundamental of the EUT was investigated in three orthogonal orientations X,Y,Z, it was determined that the X orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in the X orientation.

Based on the baseline scan, the worst-case data rates were:

802.11a mode: 6 Mbps
802.11n HT20mode: MCS0
802.11n HT40mode: MCS0
802.11ac VHT80mode: MCS0

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5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
Charger	SAMSUNG	KSAS0501900200HU	R37G819A01R0KT3	N/A
Data Cable	SAMSUNG	EP-DG925UWE	N/A	N/A
Earphone	SAMSUNG	GH59-13967A	N/A	N/A

I/O CABLES

I/O Cable List						
Cable No	**Port**	**# of identical ports**	**Connector Type**	**Cable Type**	**Cable Length (m)**	**Remarks**
1	DC Power	1	Mini-USB	Shielded	0.8m	N/A
2	Audio	1	Mini-Jack	Unshielded	1.0m	N/A

TEST SETUP

The EUT is a stand-alone unit during the tests. Test software exercised the radio card.

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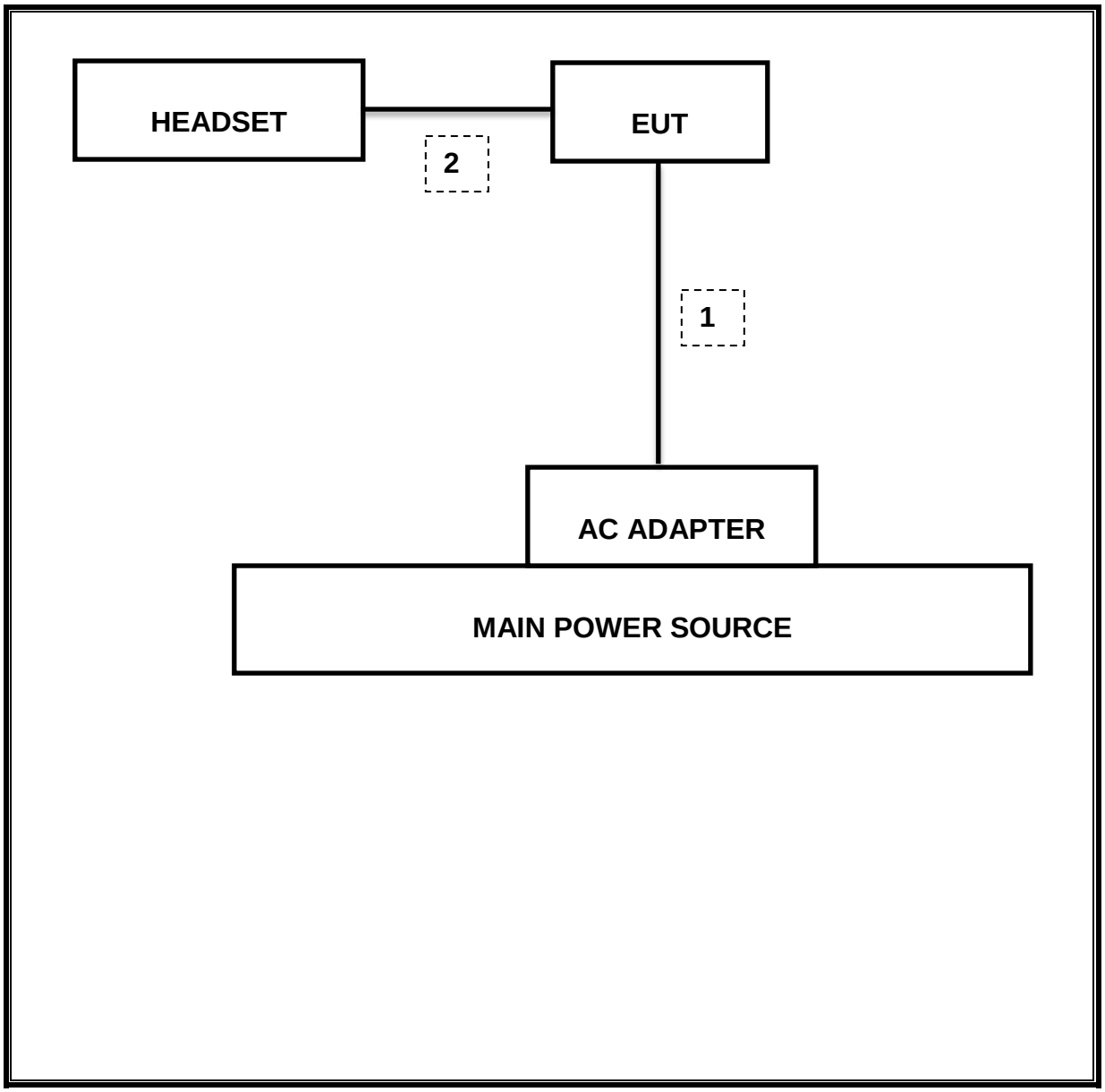
SETUP DIAGRAM FOR TESTS



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6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

Test Equipment List				
Description	**Manufacturer**	**Model**	**S/N**	**Cal Due**
Antenna, Bilog, 30MHz-1GHz	SCHWARZBECK	VULB9163	750	11-17-15
Antenna, Bilog, 30MHz-1GHz	SCHWARZBECK	VULB9163	749	04-25-16
Antenna, Horn, 18 GHz	ETS	3115	00167211	09-20-15
Antenna, Horn, 18 GHz	ETS	3115	00161451	05-17-16
Antenna, Horn, 18 GHz	ETS	3117	00168724	06-17-16
Antenna, Horn, 18 GHz	ETS	3117	00168717	06-17-16
Antenna, Horn, 40 GHz	ETS	3116C	00166255	09-23-15
Antenna, Horn, 40 GHz	ETS	3116C-PA	00168841	09-29-15
Preamplifier, 1000 MHz	Sonoma	310N	341282	08-18-16
Preamplifier, 1000 MHz	Sonoma	310N	351741	08-18-16
Preamplifier, 18 GHz	Miteq	AFS42-00101800-25-S-42	1876511	08-18-16
Preamplifier, 18 GHz	Miteq	AFS42-00101800-25-S-42	1896138	08-18-16
Spectrum Analyzer, 44 GHz	Agilent / HP	N9030A	MY54170614	08-19-16
Spectrum Analyzer, 44 GHz	Agilent / HP	N9030A	MY54490312	08-19-16
Bluetooth Tester	TESCOM	TC-3000C	3000C000546	08-18-16
Average Power Sensor	R&S	NRZ-Z91	102681	08-18-16
Average Power Sensor	Agilent / HP	U2000	MY54270007	08-18-16
EMI Test Receive, 40 GHz	R&S	ESU40	100439	08-19-16
EMI Test Receive, 40 GHz	R&S	ESU40	100457	08-19-16
EMI Test Receive, 3 GHz	R&S	ESR3	101832	08-19-16
Attenuator / Switch driver	HP	11713A	3748A04272	N/A
Low Pass Filter 3GHz	Micro-Tronics	LPS17541	009	08-18-16
Low Pass Filter 3GHz	Micro-Tronics	LPS17541	015	08-18-16
High Pass Filter 5GHz	Micro-Tronics	HPS17542	009	08-18-16
High Pass Filter 6GHz	Micro-Tronics	HPM17543	010	08-18-16
High Pass Filter 5GHz	Micro-Tronics	HPS17542	016	08-18-16
High Pass Filter 6GHz	Micro-Tronics	HPM17543	015	08-18-16
LISN	R&S	ENV-216	101836	08-19-16
LISN	R&S	ENV-216	101837	08-19-16

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7. SUMMARY TABLE

FCC Part Section	IC Section	Test Description	Test Limit	Test Condition	Test Result	Worst Case
15.407 (a)	-	Occupied Band width (26dB)	N/A	Conducted	Pass	81.08 MHz
15.407	RSS-247 6.4.1(1)	6dB Band width (5.8Ghz)	500KHz		Pass	2.573 MHz (Straddle Ch.)
15.407 (a)(2)	RSS-247 6.2.1(2) 6.2.2(2) 6.2.3(2)	TX Cond. Power5.15-2.25, 5.25-5.35 & 5.47-5.725	<24dBm or 11+10Log(OBW)		Pass	11.28 dBm (AV)
15.407 (a)(3)	RSS-247 6.2.4(2)	TX Cond. Power 5.725-5.825	< 30dBm or 17+10Log(OBW)		Pass	11.34 dBm (AV)
15.407 (a)(5)	RSS-247 6.2.1(2) 6.2.2(2) 6.2.3(2)	PSD (5.2,5.3,5.5GHz)	<11dBm		Pass	1.039 dBm (AV)
15.407 (a)(5)	RSS-247 6.2.4(2)	PSD (5.8GHz)	30dBm per 500kHz		Pass	1.168 dBm (AV)
15.207 (a)	RSS-GEN Clause 8.8	AC Power Line conducted emissions	Section 10	Radiated	Pass	54.56 dBuV at 150kHz (QP)
15.407 (b) & 15.209	RSS-GEN Clause 7 & 8.9	Radiated Spurious Emission	< 54dBuV/m		Pass	66.02 dBuV/m (PK)
15.407 (h)(2)	RSS-247 6.3	Dynamic Frequency Selection	N/A	Radiated / Condcuted	Pass	N/A

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8. ON TIME, DUTY CYCLE AND MEASUREMENT METHODS

LIMITS

None; for reporting purposes only.

8.1. ON TIME AND DUTY CYCLE RESULTS

Mode	ON Time B [msec)	Period [msec]	Duty Cycle x [linear]	Duty Cycle [%]	Duty Cycle Correction Factor [dB]	1/T Minimum VBW [kHz]
802.11a	1.428	1.530	0.933	93.3%	0.30	0.700
802.11n HT20	1.335	1.438	0.928	92.8%	0.32	0.749
802.11n HT40	0.664	0.765	0.867	86.7%	0.62	1.507
802.11ac VHT80	0.332	0.433	0.766	76.6%	1.16	3.012

8.2. DUTY CYCLE PLOTS

DUTY CYCLE 802.11a MODE

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DUTY CYCLE 802.11n HT20 MODE

DUTY CYCLE 802.11n HT40 MODE

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DUTY CYCLE 802.11ac VHT80 MODE

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9. MEASUREMENT METHOD

KDB 789033 D02 General UNII Test Procedures New Rules v01
KDB 905462 D03 Clients Without Radar Detection New Rules v01r01

The Duty Cycle is less than 98% and consistent therefore KDB 789033 Method SA-2 is used for power and PPSD

The Duty Cycle is less than 98% and consistent, KDB 789033 Method AD with Power RMS Averaging and duty cycle correction is used.

Straddle Channels: KDB 644545 D03 v01

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10. ANTENNA PORT TEST RESULTS

10.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407
RSS-247 §6.2.4 (1)

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

TEST PROCEDURE

Reference to 789033 D02 General UNII Test Procedures New Rules v01: The transmitter output is connected to a spectrum analyzer with the RBW set to100KHz, the VBW >= 3 x RBW, peak detector and max hold.

RESULTS

- Calculation for 6dB Bandwidth of UNII-3 Straddle Channel

ex) 802.11a mode
- Fundamental frequency : 5720MHz
- 6dB BW : 16.313MHz
- Starting Frequency of UNII-3 band : 5725MHz
- 6dB Bandwidth of UNII-3 band Portion
  = (5720 + (16.313 / 2) -5725) = 3.156 MHz

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10.1.1. 802.11a MODE IN THE 5.8 GHz BAND

Channel	Frequency [MHz]	6 dB Bandwidth [MHz]	Minimum Limit [MHz]
Straddle	5720	3.156	0.5
Low	5745	16.313	0.5
Mid	5785	16.323	0.5
High	5825	16.296	0.5
Worst		3.156	

10.1.2. 802.11n HT20 MODE IN THE 5.8 GHz BAND

Channel	Frequency [MHz]	6 dB Bandwidth [MHz]	Minimum Limit [MHz]
Straddle	5720	3.639	0.5
Low	5745	17.555	0.5
Mid	5785	17.499	0.5
High	5825	17.531	0.5
Worst		3.639	

10.1.3. 802.11n HT40 MODE IN THE 5.8 GHz BAND

Channel	Frequency [MHz]	6 dB Bandwidth [MHz]	Minimum Limit [MHz]
Straddle	5710	2.645	0.5
Low	5765	35.385	0.5
High	5795	36.278	0.5
Worst		2.645	

10.1.4. 802.11n VHT80 MODE IN THE 5.8 GHz BAND

Channel	Frequency [MHz]	6 dB Bandwidth [MHz]	Minimum Limit [MHz]
Straddle	5690	2.573	0.5
Middle	5775	75.165	0.5
Worst		2.573	

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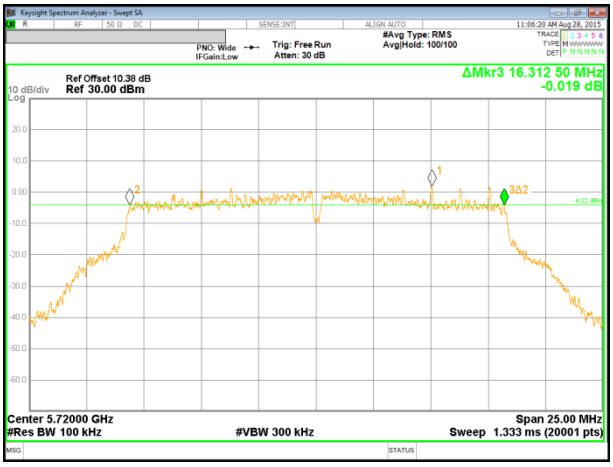
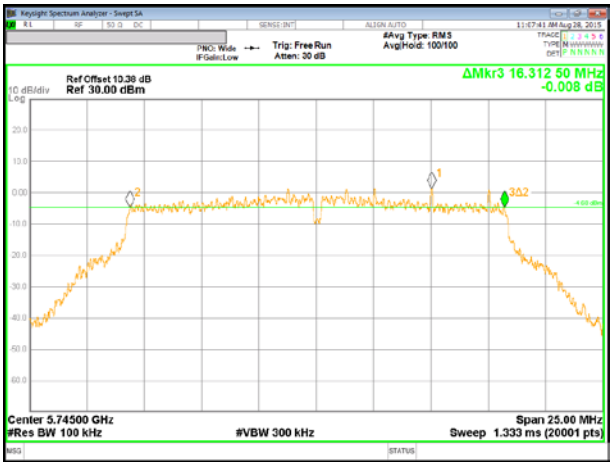
10.1.5. 6 dB BANDWIDTH PLOTS

IEEE 802.11a mode

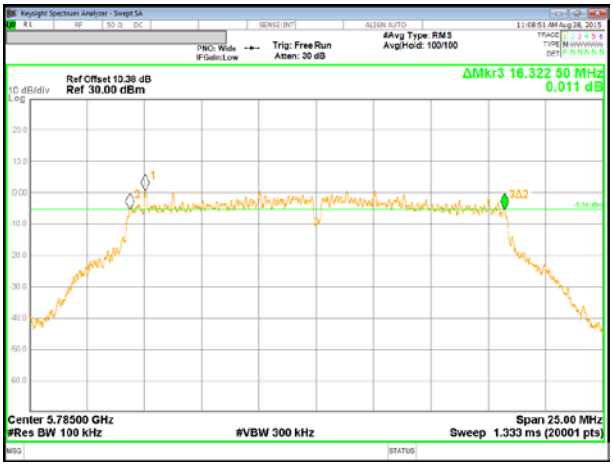
11a Mode Straddle Channel



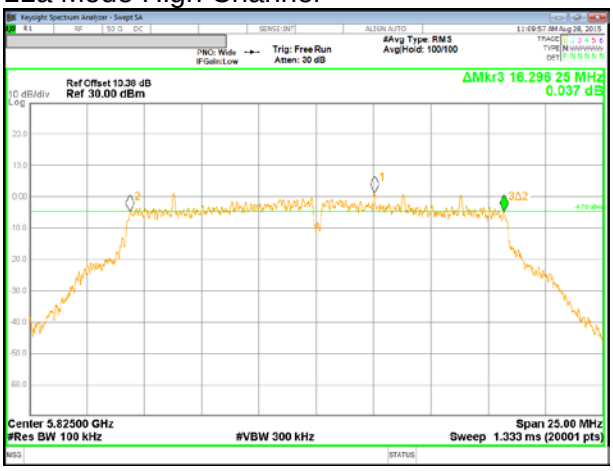
11a Mode Low Channel



11a Mode Middle Channel



11a Mode High Channel



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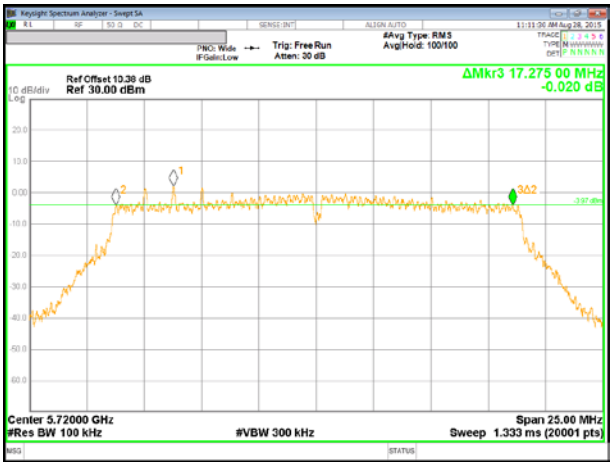
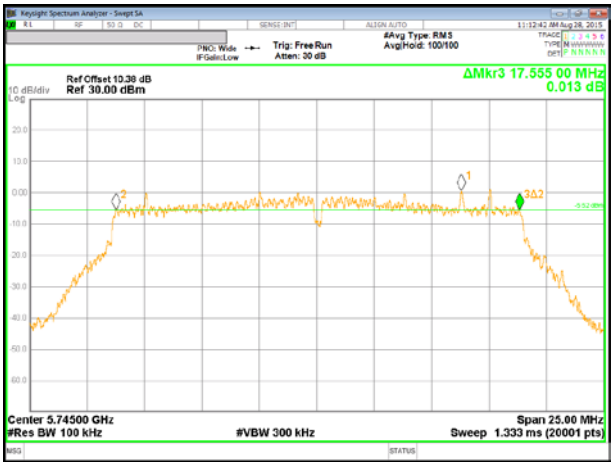
IEEE 802.11n HT20 mode

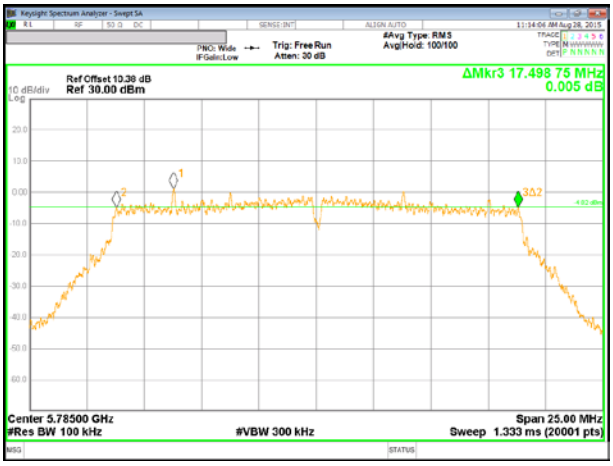
11n HT20 Mode Straddle Channel



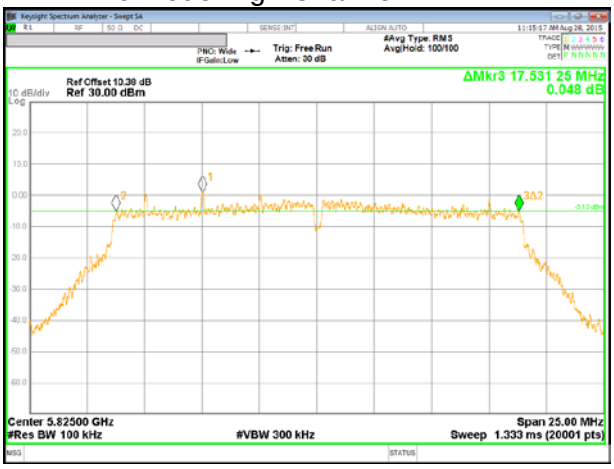
11n HT20 Mode Low Channel



11n HT20 Mode Middle Channel



11n HT20 Mode High Channel



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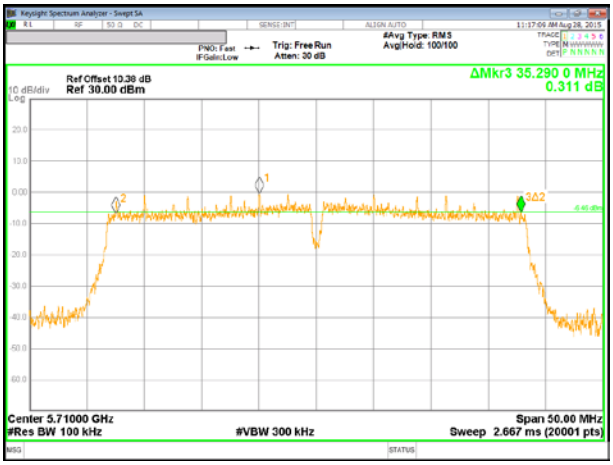
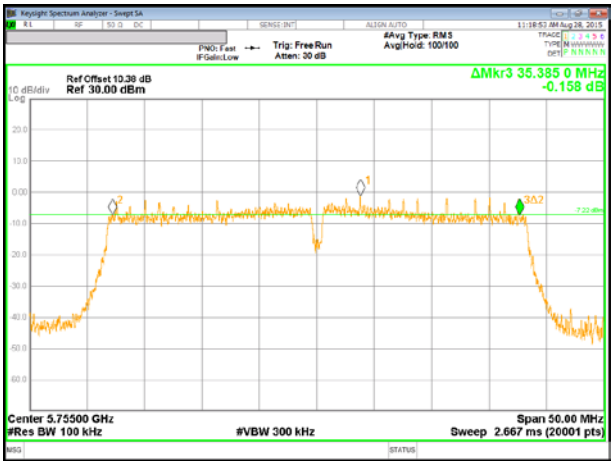
IEEE 802.11n HT40 mode

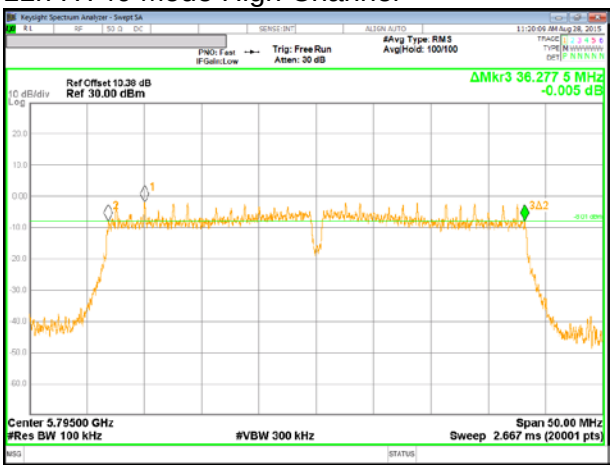
11n HT40 Mode Straddle Channel



11n HT40 Mode Low Channel



11n HT40 Mode High Channel



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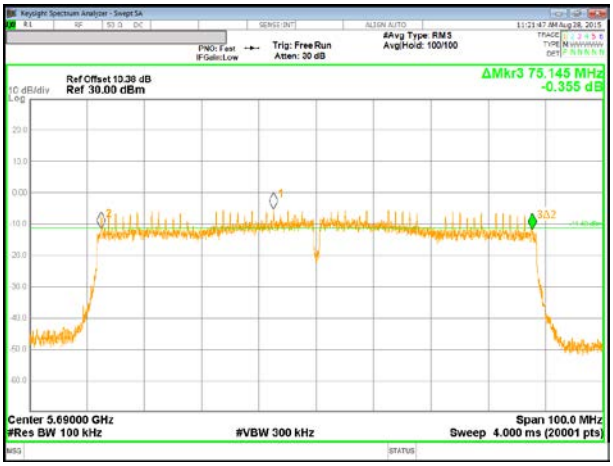
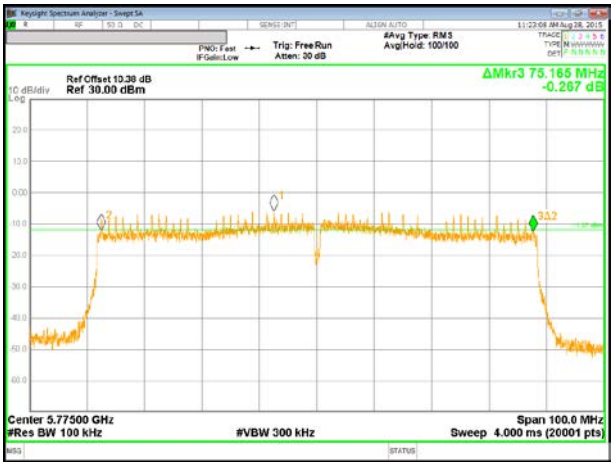
IEEE 802.11ac VHT80 mode

11ac VHT80 Mode Straddle Channel 	11ac VHT80 Mode Middle Channel 

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10.2. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

- Calculation for 26dB Bandwidth of UNII-2C and UNII-3 Straddle Channel

ex) 802.11a mode
- Fundamental frequency : 5720MHz
- 26dB BW : 21.10MHz
- Turning Frequency : 5725MHz
- 26dB Bandwidth of UNII-2C band Portion
  = (5725 – (5720 - (21.10 / 2)) = 15.55 MHz
- 26dB Bandwidth of UNII-3 band Portion
  = (5720 + (21.10 / 2) -5725) = 5.55 MHz

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10.2.1. 802.11a MODE IN THE 5.2 GHz BAND

Channel	Frequency [MHz]	26 dB Bandwidth [MHz]
Low	5180	20.79
Mid	5200	20.74
High	5240	20.99
Worst		20.99

10.2.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

Channel	Frequency [MHz]	26 dB Bandwidth [MHz]
Low	5180	21.30
Mid	5200	21.12
High	5240	21.17
Worst		21.30

10.2.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

Channel	Frequency [MHz]	26 dB Bandwidth [MHz]
Low	5190	39.80
High	5230	39.17
Worst		39.80

10.2.4. 802.11ac VHT80 MODE IN THE 5.2 GHz BAND

Channel	Frequency [MHz]	26 dB Bandwidth [MHz]
Middle	5210	80.93
Worst		80.93

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10.2.5. 802.11a MODE IN THE 5.3 GHz BAND

Channel	Frequency [MHz]	26 dB Bandwidth [MHz]
Low	5260	21.10
Mid	5300	20.92
High	5320	20.88
Worst		21.10

10.2.6. 802.11n HT20 MODE IN THE 5.3 GHz BAND

Channel	Frequency [MHz]	26 dB Bandwidth [MHz]
Low	5260	21.07
Mid	5300	21.27
High	5320	21.40
Worst		21.40

10.2.7. 802.11n HT40 MODE IN THE 5.3 GHz BAND

Channel	Frequency [MHz]	26 dB Bandwidth [MHz]
Low	5270	39.51
High	5310	39.32
Worst		39.51

10.2.8. 802.11ac VHT80 MODE IN THE 5.3 GHz BAND

Channel	Frequency [MHz]	26 dB Bandwidth [MHz]
Middle	5290	80.93
Worst		80.93

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10.2.9. 802.11a MODE IN THE 5.5 GHz BAND

Channel	Frequency [MHz]	26 dB Bandwidth [MHz]
Low	5500	20.90
Mid	5580	20.90
High	5700	20.97
Straddle	5720	15.55
Worst		20.97

10.2.10. 802.11n HT20 MODE IN THE 5.5 GHz BAND

Channel	Frequency [MHz]	26 dB Bandwidth [MHz]
Low	5500	21.08
Mid	5580	21.29
High	5700	21.22
Straddle	5720	15.54
Worst		21.29

10.2.11. 802.11n HT40 MODE IN THE 5.5 GHz BAND

Channel	Frequency [MHz]	26 dB Bandwidth [MHz]
Low	5510	39.51
Mid	5550	39.54
High	5670	39.55
Straddle	5710	34.86
Worst		39.55

10.2.12. 802.11ac VHT80 MODE IN THE 5.5 GHz BAND

Channel	Frequency [MHz]	26 dB Bandwidth [MHz]
Low	5530	80.58
High	5610	81.08
Straddle	5690	75.83
Worst		81.08

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10.2.13. 802.11a MODE IN THE 5.8 GHz BAND

Channel	Frequency [MHz]	26 dB Bandwidth [MHz]
Straddle	5720	5.55
Low	5745	20.90
Mid	5785	21.01
High	5825	20.89
Worst		21.01

10.2.14. 802.11n HT20 MODE IN THE 5.8 GHz BAND

Channel	Frequency [MHz]	26 dB Bandwidth [MHz]
Straddle	5720	5.54
Low	5745	21.21
Mid	5785	21.01
High	5825	21.06
Worst		21.21

10.2.15. 802.11n HT40 MODE IN THE 5.8 GHz BAND

Channel	Frequency [MHz]	26 dB Bandwidth [MHz]
Straddle	5710	4.86
Low	5755	39.41
High	5795	39.41
Worst		39.41

10.2.16. 802.11ac VHT80 MODE IN THE 5.8 GHz BAND

Channel	Frequency [MHz]	26 dB Bandwidth [MHz]
Straddle	5690	5.83
Middle	5775	81.05
Worst		81.05

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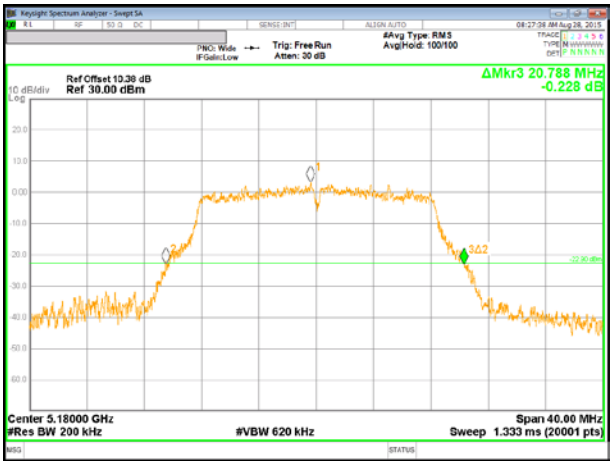
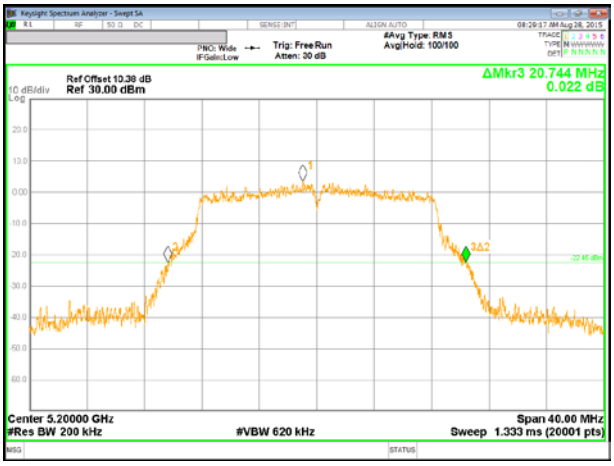
10.2.17. 26 dB BANDWIDTH PLOTS

UNII 5.2 GHz IEEE 802.11a mode

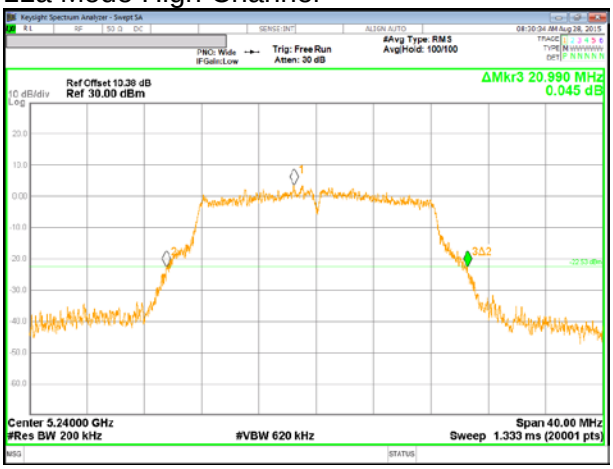
11a Mode Low Channel



11a Mode Middle Channel



11a Mode High Channel



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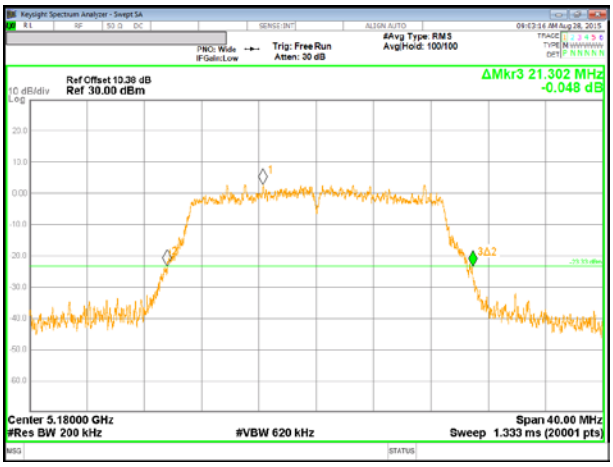
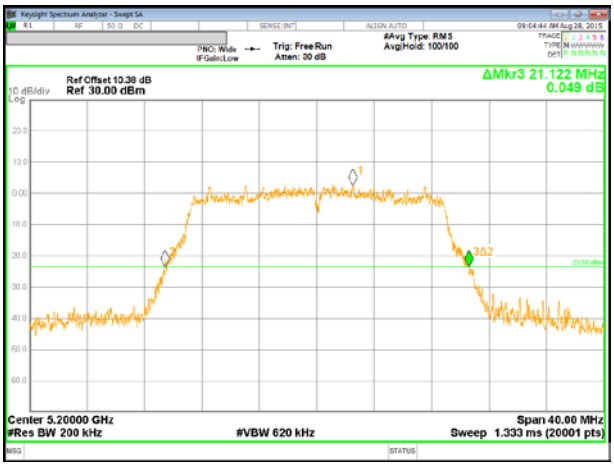
UNII 5.2 GHz IEEE 802.11n HT20 mode

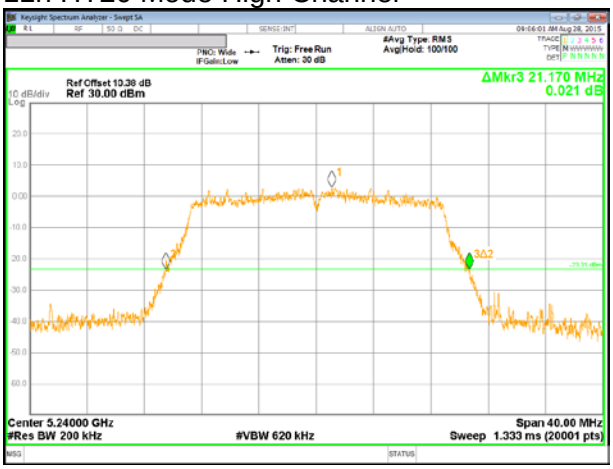
11n HT20 Mode Low Channel



11n HT20 Mode Middle Channel



11n HT20 Mode High Channel



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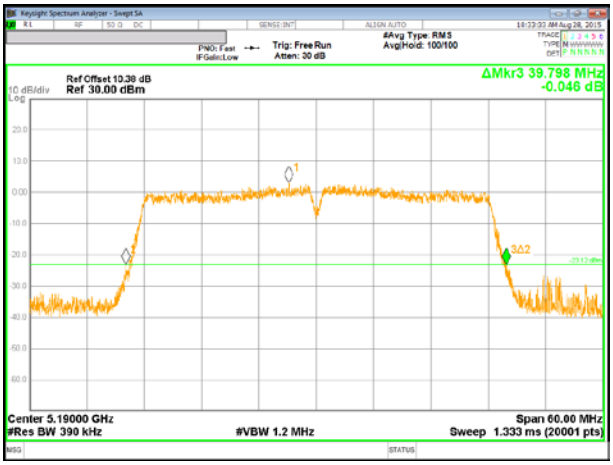
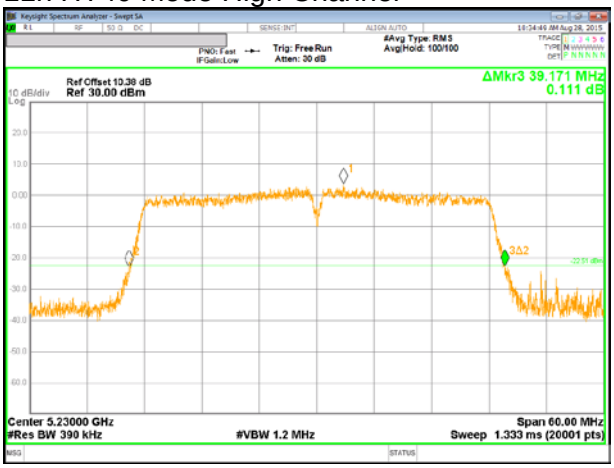
UNII 5.2 GHz IEEE 802.11n HT40 mode

11n HT40 Mode Low Channel

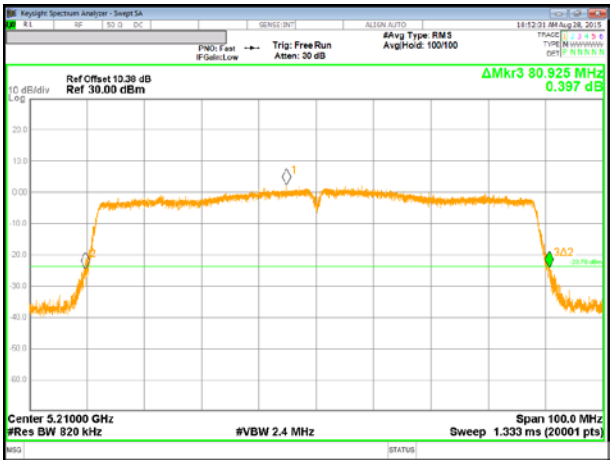


11n HT40 Mode High Channel



UNII 5.2 GHz IEEE 802.11ac VHT80 mode

11ac VHT80 Mode Middle Channel



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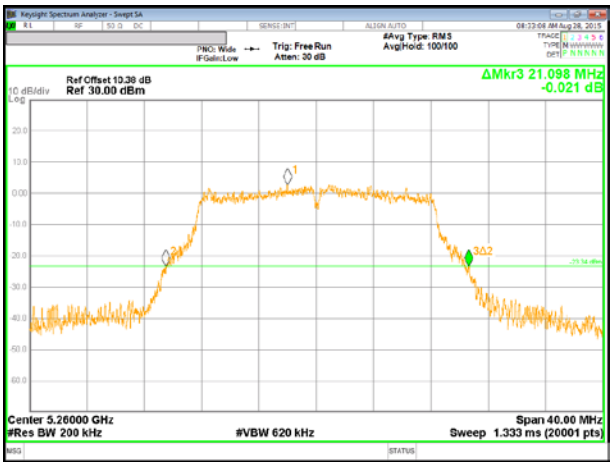
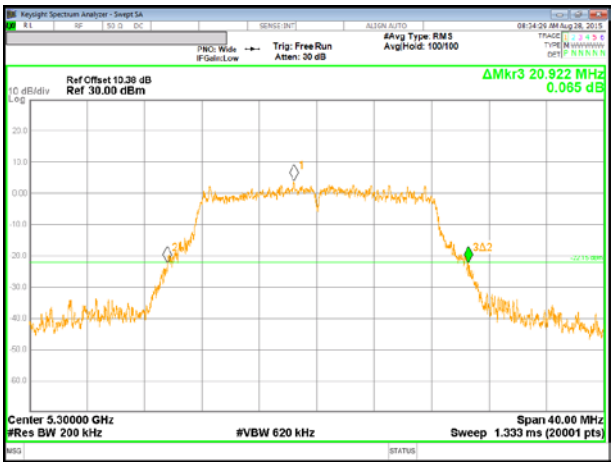
UNII 5.3 GHz IEEE 802.11a mode

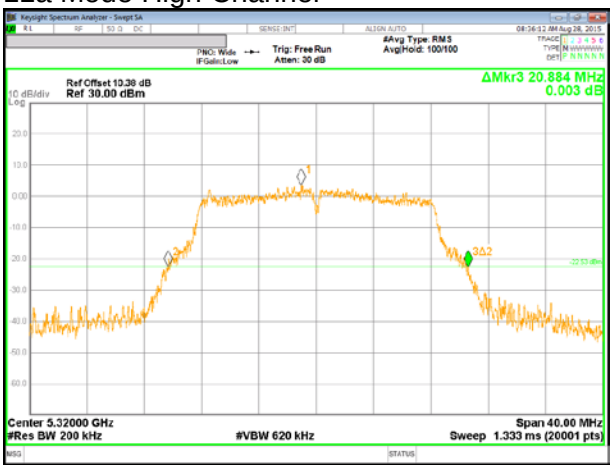
11a Mode Low Channel



11a Mode Middle Channel



11a Mode High Channel



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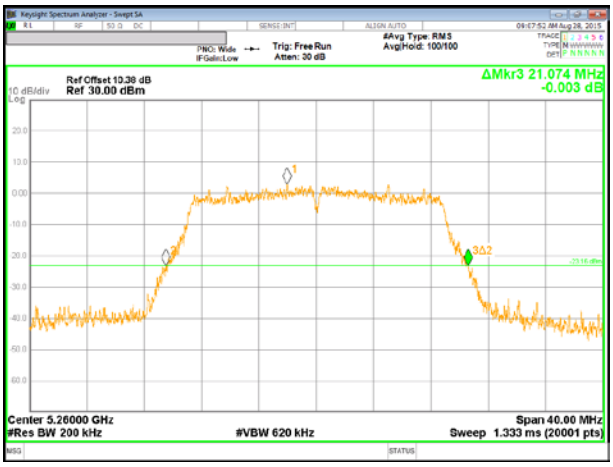
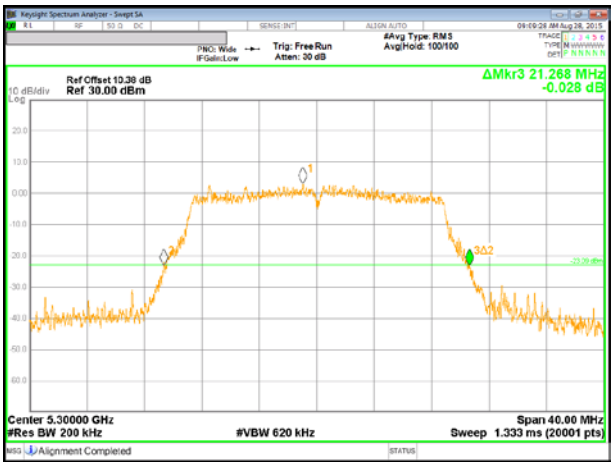
UNII 5.3 GHz IEEE 802.11n HT20 mode

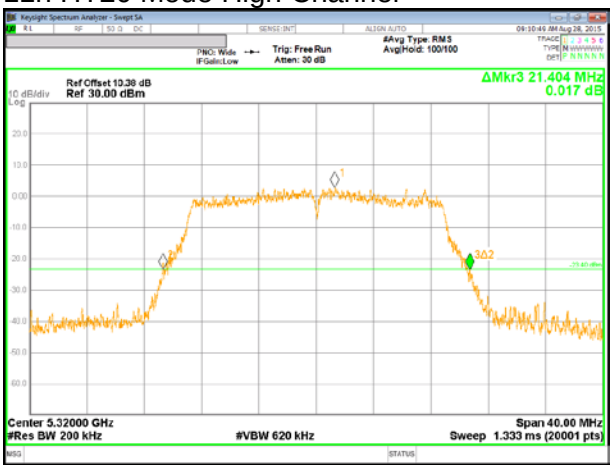
11n HT20 Mode Low Channel



11n HT20 Mode Middle Channel



11n HT20 Mode High Channel



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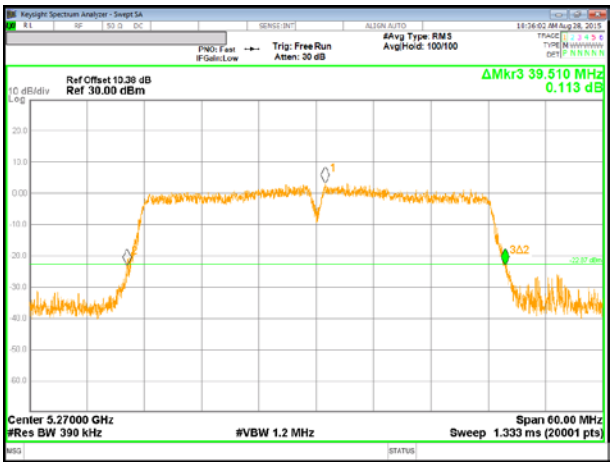
UNII 5.3 GHz IEEE 802.11n HT40 mode

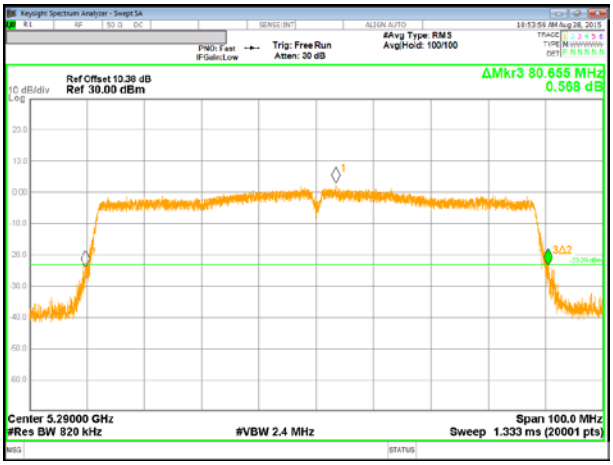
11n HT40 Mode Low Channel



11n HT40 Mode High Channel

UNII 5.3 GHz IEEE 802.11ac VHT80 mode

11ac VHT80 Mode Middle Channel



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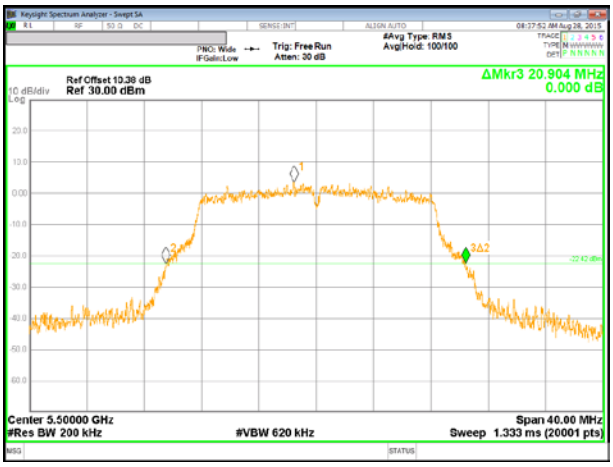
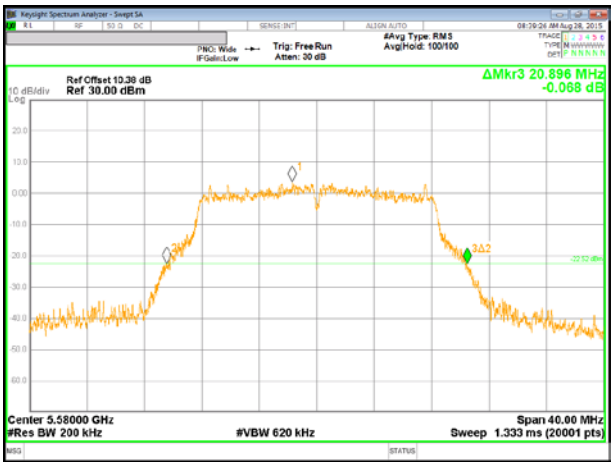
UNII 5.5 GHz IEEE 802.11a mode

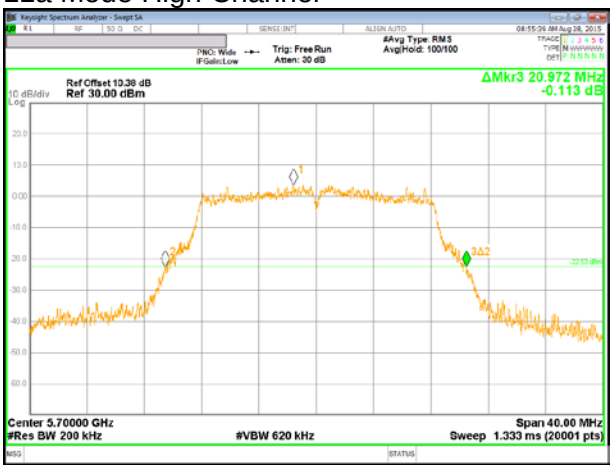
11a Mode Low Channel



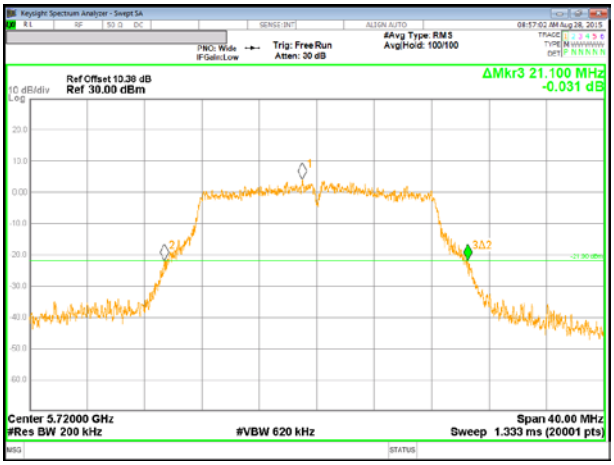
11a Mode Middle Channel



11a Mode High Channel



11a Mode Straddle Channel



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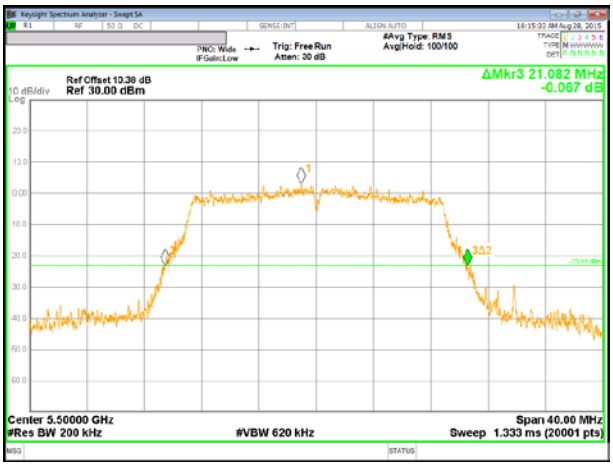
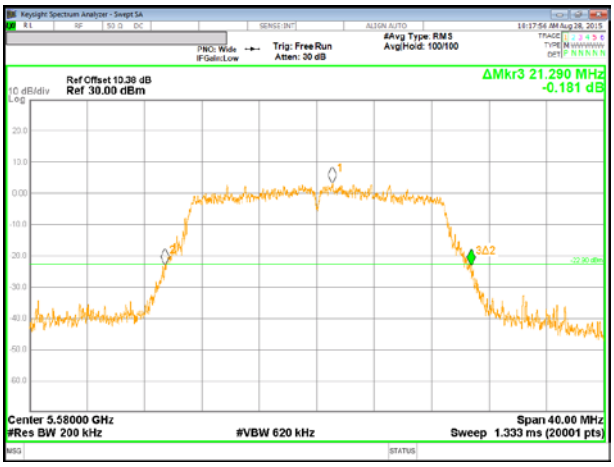
UNII 5.5 GHz IEEE 802.11n HT20 mode

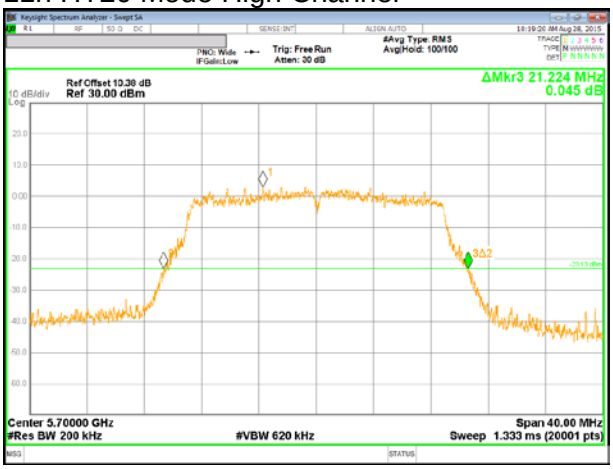
11n HT20 Mode Low Channel



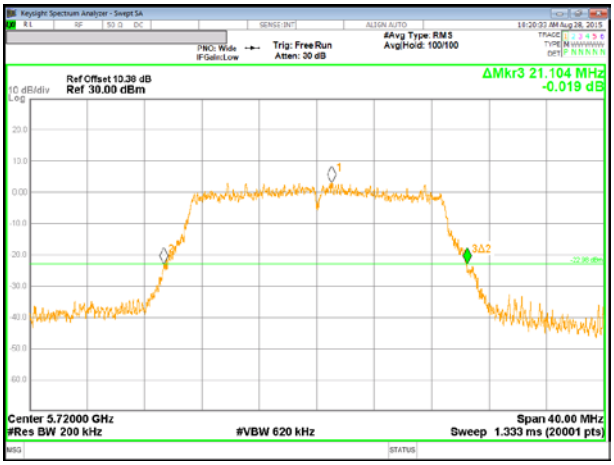
11n HT20 Mode Middle Channel



11n HT20 Mode High Channel



11n HT20 Mode Straddle Channel



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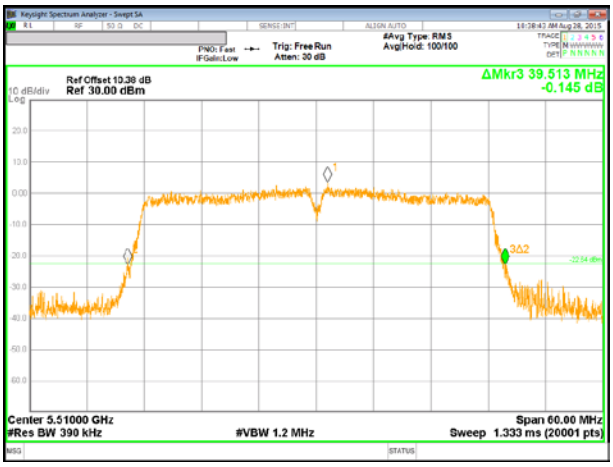
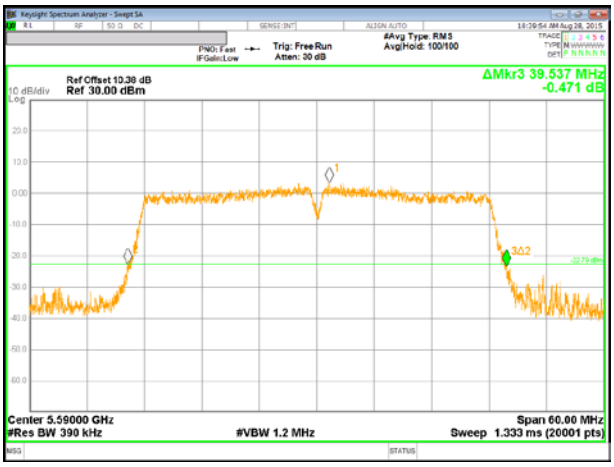
UNII 5.5 GHz IEEE 802.11n HT40 mode

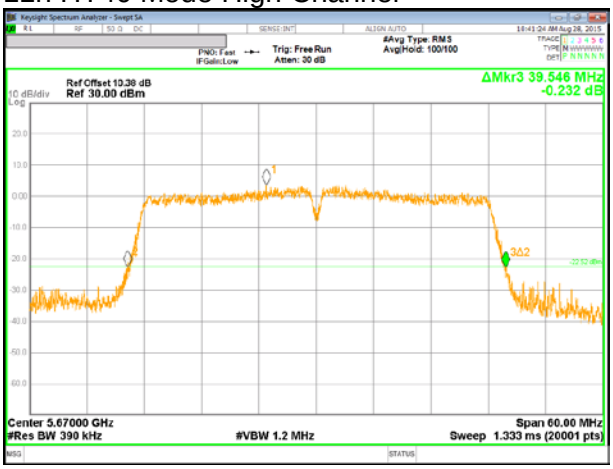
11n HT40 Mode Low Channel



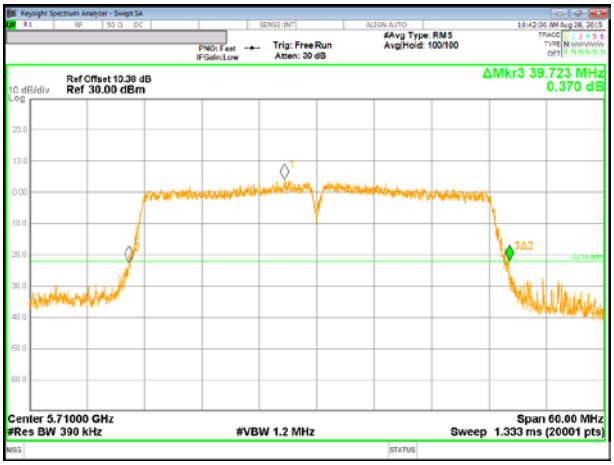
11n HT40 Mode Middle Channel



11n HT40 Mode High Channel



11n HT40 Mode Straddle Channel



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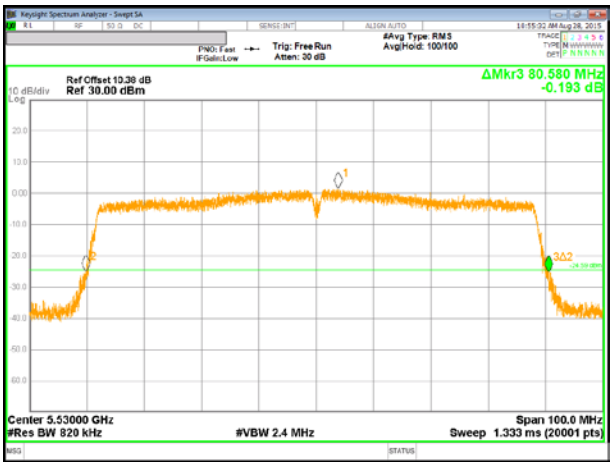
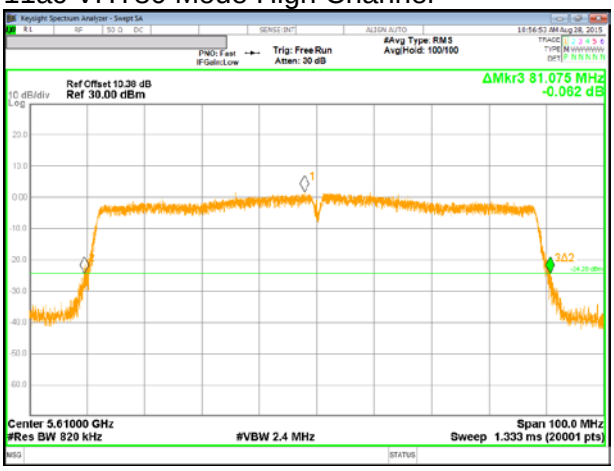
UNII 5.5 GHz IEEE 802.11ac VHT80 mode

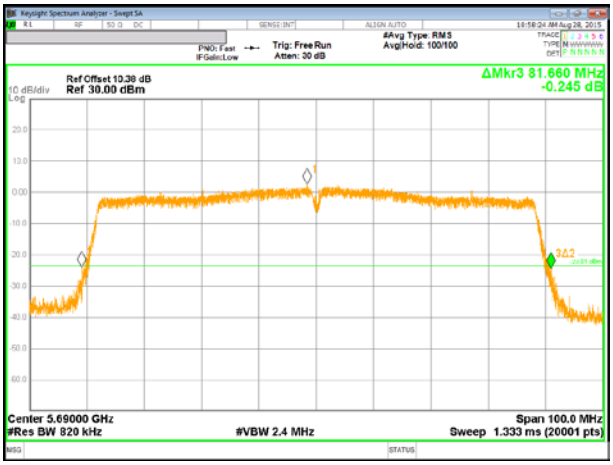
11ac VHT80 Mode Low Channel



11ac VHT80 Mode High Channel



11ac VHT80 Mode Straddle Channel



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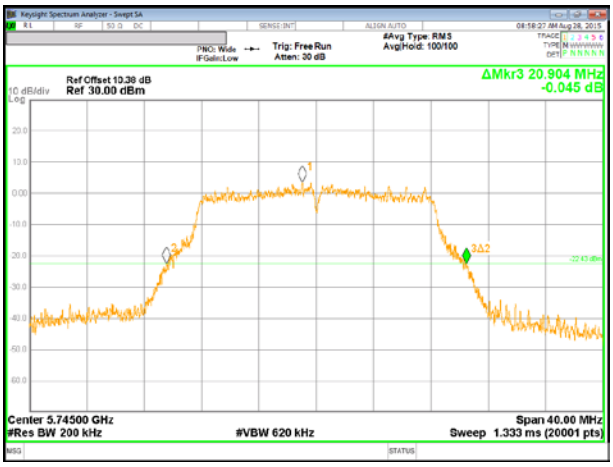
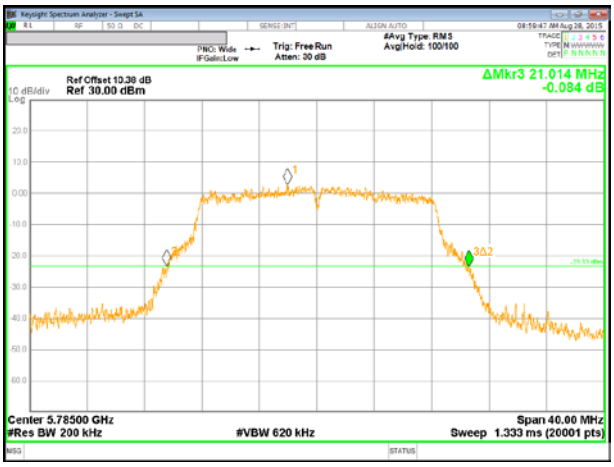
UNII 5.8 GHz IEEE 802.11a mode

11a Mode Low Channel



11a Mode Middle Channel



11a Mode High Channel

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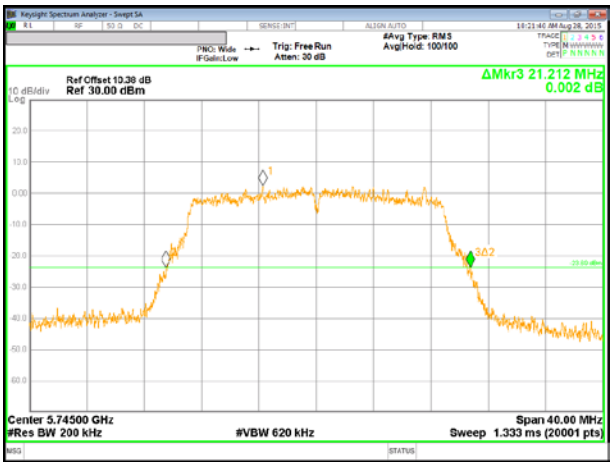
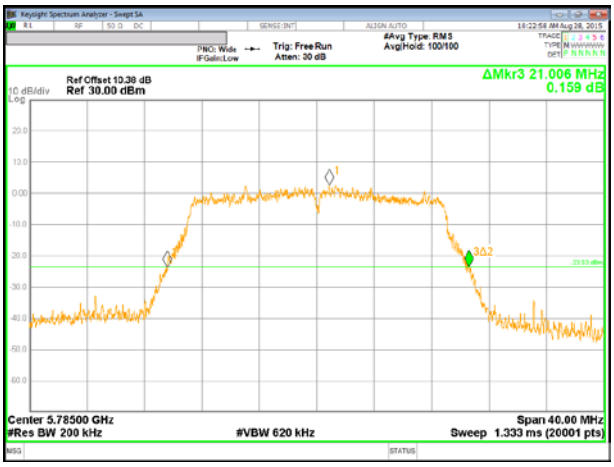
UNII 5.8 GHz IEEE 802.11n HT20 mode

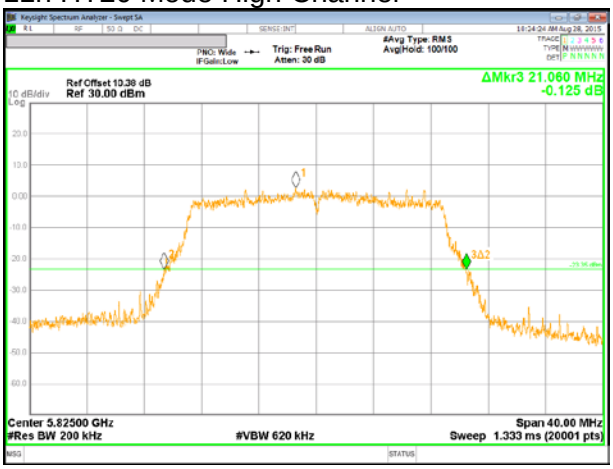
11n HT20 Mode Low Channel



11n HT20 Mode Middle Channel



11n HT20 Mode High Channel



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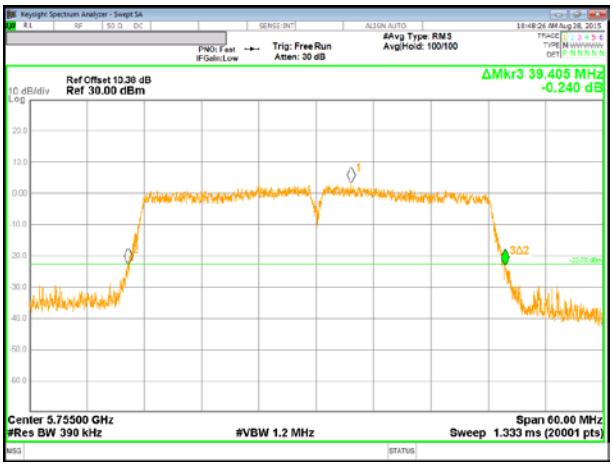
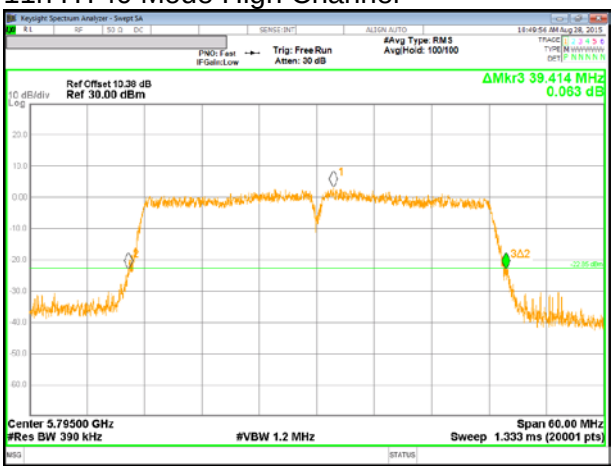
UNII 5.8 GHz IEEE 802.11n HT40 mode

11n HT40 Mode Low Channel

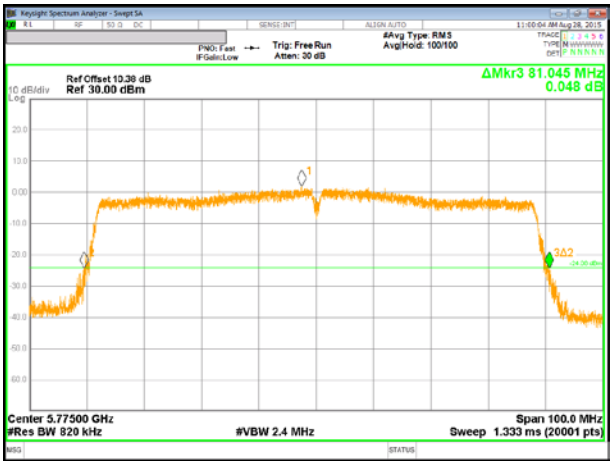


11n HT40 Mode High Channel



UNII 5.8 GHz IEEE 802.11ac VHT80 mode

11ac VHT80 Mode Middle Channel



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10.3. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

- Calculation for 99% Bandwidth of UNII-2C and UNII-3 Straddle Channel

ex) 802.11a mode
- Fundamental frequency : 5720MHz
- 99% BW : 16.484MHz
- Turning Frequency : 5725MHz
- 99% Bandwidth of UNII-2C band Portion
  = (5725 – (5720 - (16.484 / 2)) = 13.242 MHz
- 99% Bandwidth of UNII-3 band Portion
  = (5720 + (16.484 / 2) -5725) = 3.242 MHz

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10.3.1. 802.11a MODE IN THE 5.2 GHz BAND

Channel	Frequency [MHz]	99% Bandwidth [MHz]
Low	5180	16.493
Mid	5200	16.425
High	5240	16.483
Worst		16.493

10.3.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

Channel	Frequency [MHz]	99% Bandwidth [MHz]
Low	5180	17.680
Mid	5200	17.683
High	5240	17.681
Worst		17.683

10.3.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

Channel	Frequency [MHz]	99% Bandwidth [MHz]
Low	5190	36.199
High	5230	36.110
Worst		36.199

10.3.4. 802.11ac VHT80 MODE IN THE 5.2 GHz BAND

Channel	Frequency [MHz]	99% Bandwidth [MHz]
Middle	5210	75.474
Worst		75.474

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10.3.5. 802.11a MODE IN THE 5.3 GHz BAND

Channel	Frequency [MHz]	99% Bandwidth [MHz]
Low	5260	16.439
Mid	5300	16.487
High	5320	16.484
Worst		16.487

10.3.6. 802.11n HT20 MODE IN THE 5.3 GHz BAND

Channel	Frequency [MHz]	99% Bandwidth [MHz]
Low	5260	17.663
Mid	5300	17.672
High	5320	17.688
Worst		17.688

10.3.7. 802.11n HT40 MODE IN THE 5.3 GHz BAND

Channel	Frequency [MHz]	99% Bandwidth [MHz]
Low	5270	36.135
High	5310	36.097
Worst		36.135

10.3.8. 802.11ac VHT80 MODE IN THE 5.3 GHz BAND

Channel	Frequency [MHz]	99% Bandwidth [MHz]
Middle	5290	75.474
Worst		75.474

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10.3.9. 802.11a MODE IN THE 5.5 GHz BAND

Channel	Frequency [MHz]	99% Bandwidth [MHz]
Low	5500	16.491
Mid	5580	16.433
High	5700	16.493
Straddle	5720	13.242
Worst		16.493

10.3.10. 802.11n HT20 MODE IN THE 5.5 GHz BAND

Channel	Frequency [MHz]	99% Bandwidth [MHz]
Low	5500	17.674
Mid	5580	17.695
High	5700	17.702
Straddle	5720	13.844
Worst		17.702

10.3.11. 802.11n HT40 MODE IN THE 5.5 GHz BAND

Channel	Frequency [MHz]	99% Bandwidth [MHz]
Low	5510	36.183
Mid	5550	36.167
High	5670	36.196
Straddle	5710	33.097
Worst		36.196

10.3.12. 802.11ac VHT80 MODE IN THE 5.5 GHz BAND

Channel	Frequency [MHz]	99% Bandwidth [MHz]
Low	5530	75.618
High	5610	75.479
Straddle	5690	72.773
Worst		75.618

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10.3.13. 802.11a MODE IN THE 5.8 GHz BAND

Channel	Frequency [MHz]	99% Bandwidth [MHz]
Straddle	5720	3.242
Low	5745	16.479
Mid	5785	16.489
High	5825	16.499
Worst		16.499

10.3.14. 802.11n HT20 MODE IN THE 5.8 GHz BAND

Channel	Frequency [MHz]	99% Bandwidth [MHz]
Straddle	5720	3.843
Low	5745	17.692
Mid	5785	17.683
High	5825	17.685
Worst		17.692

10.3.15. 802.11n HT40 MODE IN THE 5.8 GHz BAND

Channel	Frequency [MHz]	99% Bandwidth [MHz]
Straddle	5710	3.096
Low	5755	36.180
High	5795	36.174
Worst		36.180

10.3.16. 802.11ac VHT80 MODE IN THE 5.8 GHz BAND

Channel	Frequency [MHz]	99% Bandwidth [MHz]
Straddle	5690	2.773
Middle	5775	75.492
Worst		75.492

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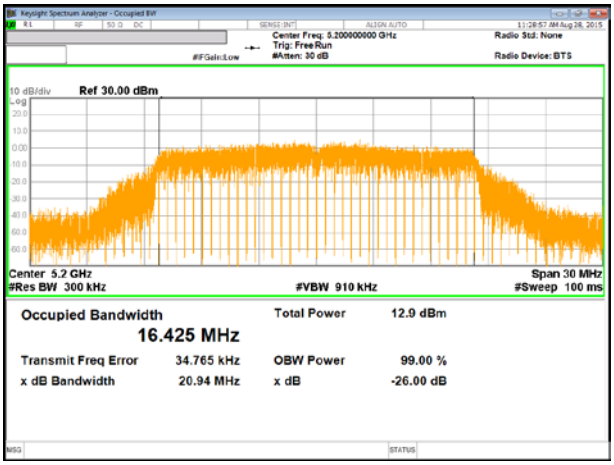
10.3.17. 99% BANDWIDTH PLOTS

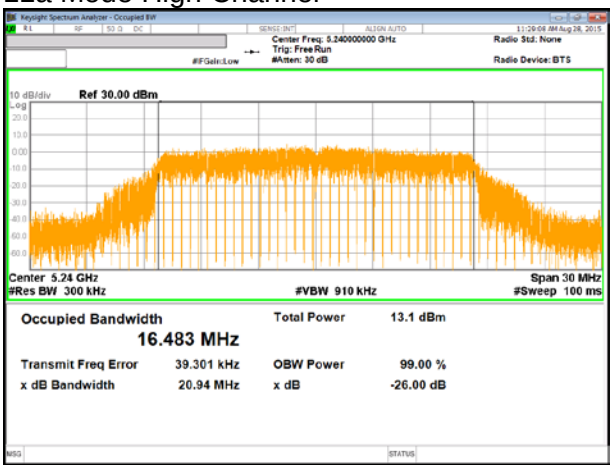
UNII 5.2 GHz IEEE 802.11a mode

11a Mode Low Channel

11a Mode Middle Channel



11a Mode High Channel



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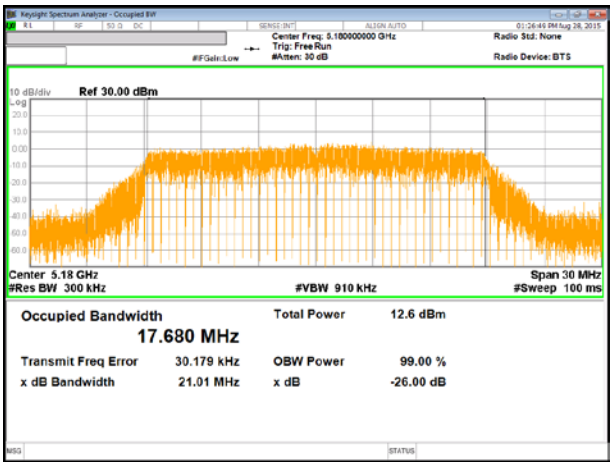
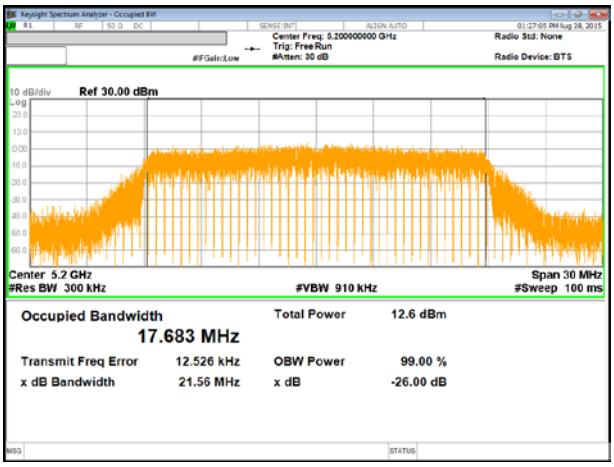
UNII 5.2 GHz IEEE 802.11n HT20 mode

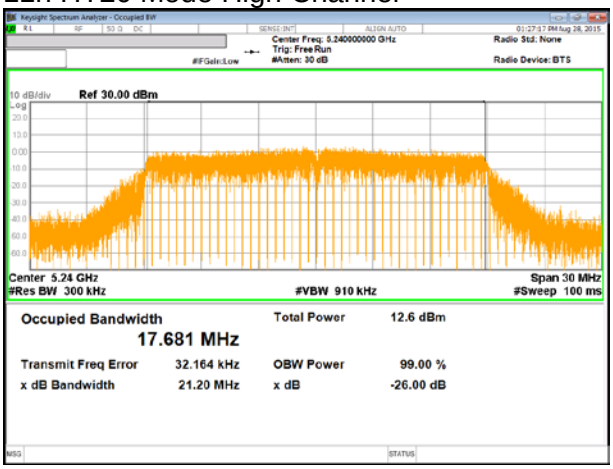
11n HT20 Mode Low Channel



11n HT20 Mode Middle Channel



11n HT20 Mode High Channel



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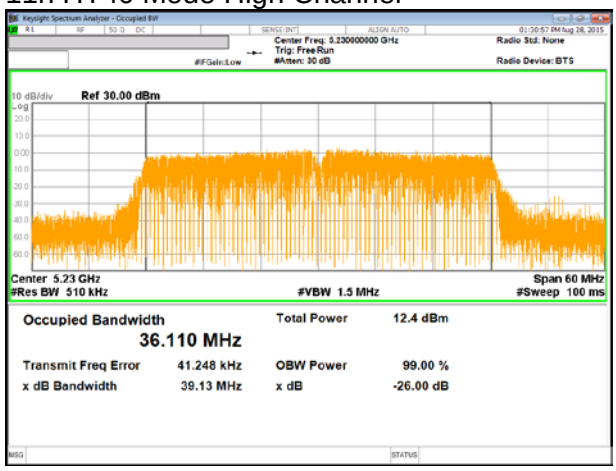
UNII 5.2 GHz IEEE 802.11n HT40 mode

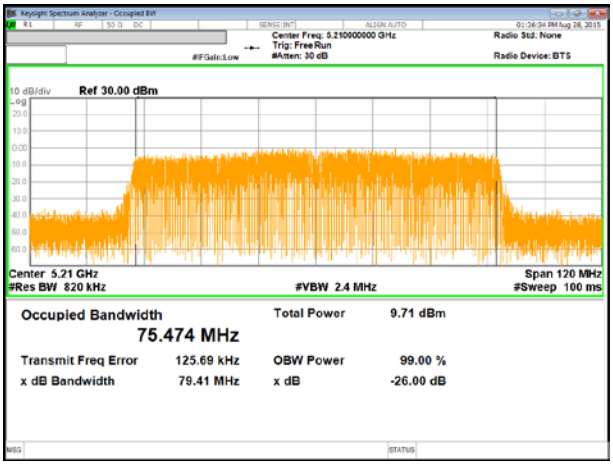
11n HT40 Mode Low Channel

11n HT40 Mode High Channel



UNII 5.2 GHz IEEE 802.11ac VHT80 mode

11ac VHT80 Mode Middle Channel



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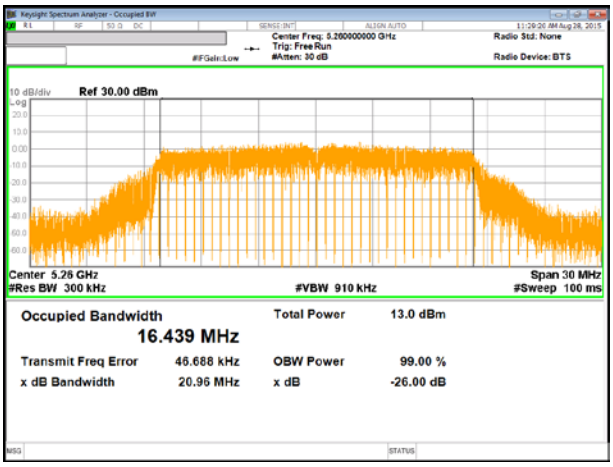
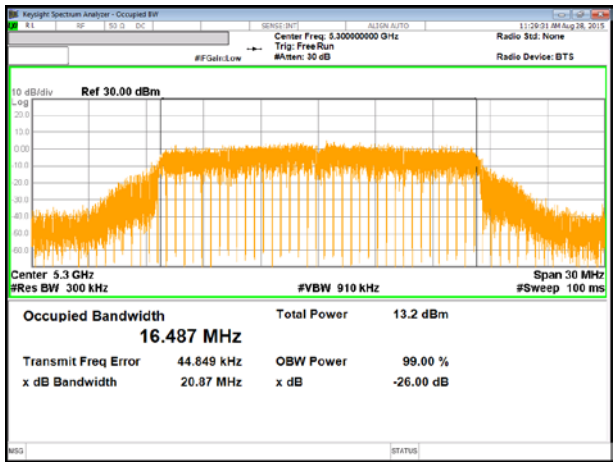
UNII 5.3 GHz IEEE 802.11a mode

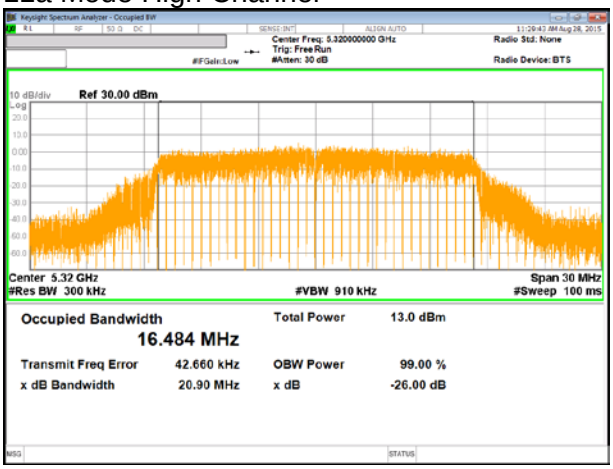
11a Mode Low Channel



11a Mode Middle Channel



11a Mode High Channel



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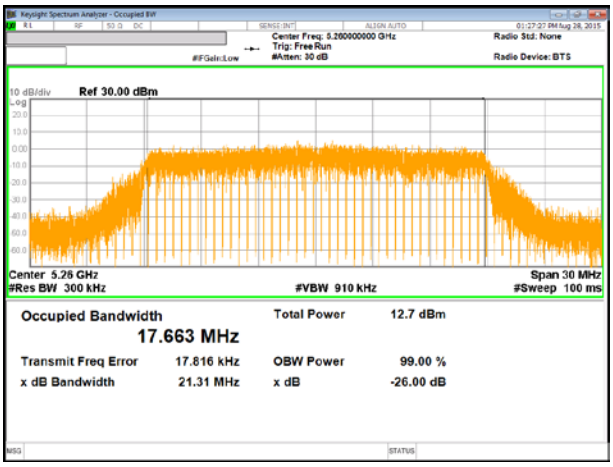
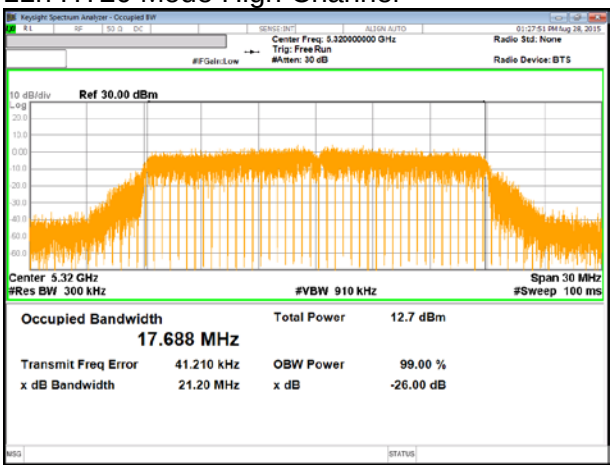
UNII 5.3 GHz IEEE 802.11n HT20 mode

11n HT20 Mode Low Channel



11n HT20 Mode Middle Channel

11n HT20 Mode High Channel



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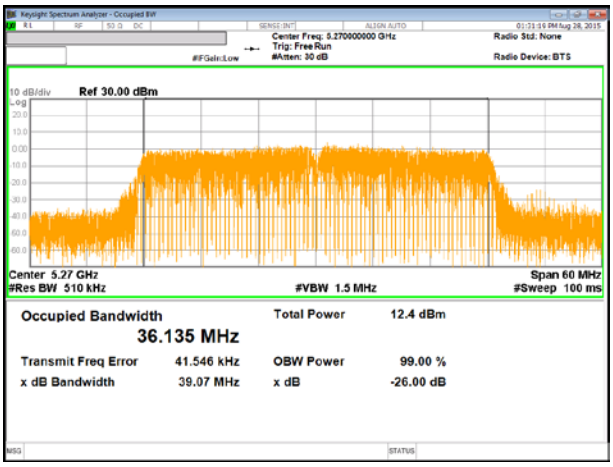
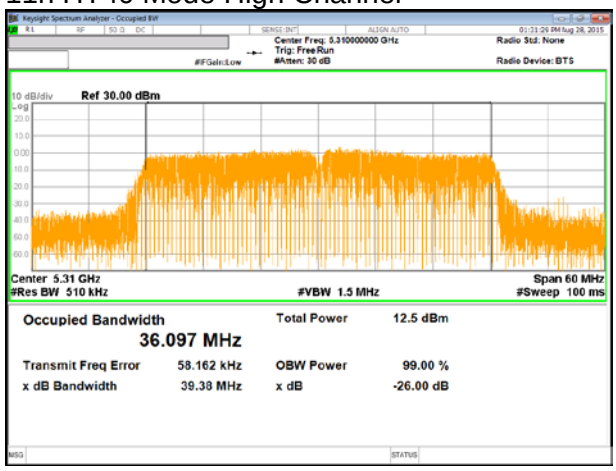
UNII 5.3 GHz IEEE 802.11n HT40 mode

11n HT40 Mode Low Channel

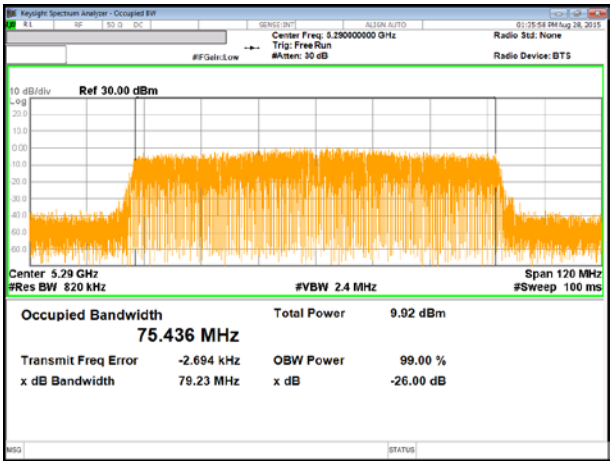


11n HT40 Mode High Channel



UNII 5.3 GHz IEEE 802.11ac VHT80 mode

11ac VHT80 Mode Middle Channel



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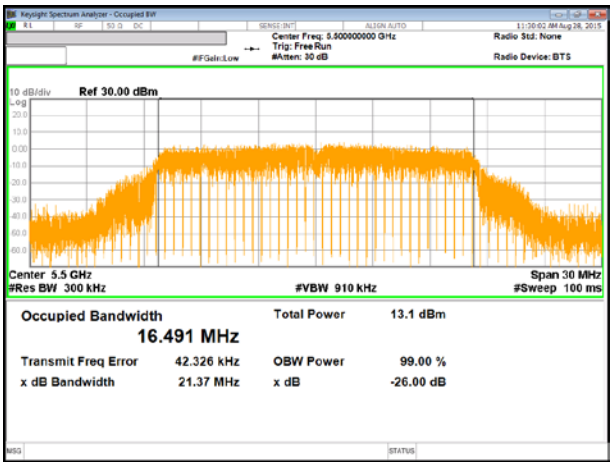
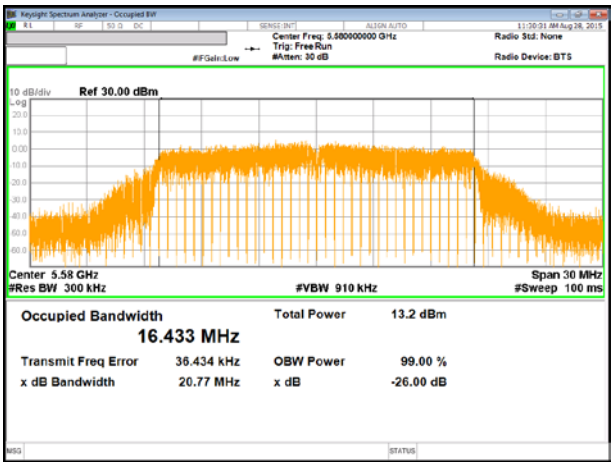
UNII 5.5 GHz IEEE 802.11a mode

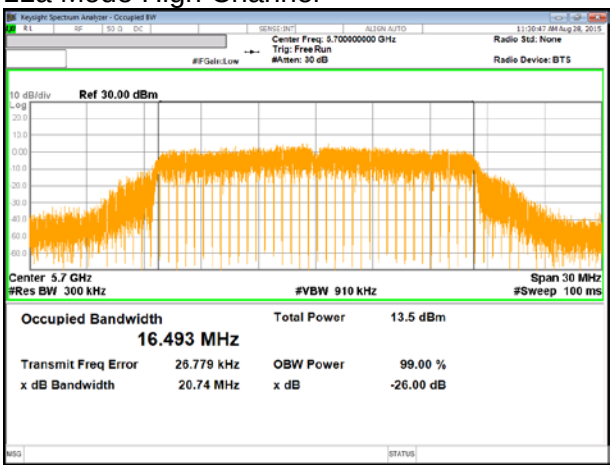
11a Mode Low Channel



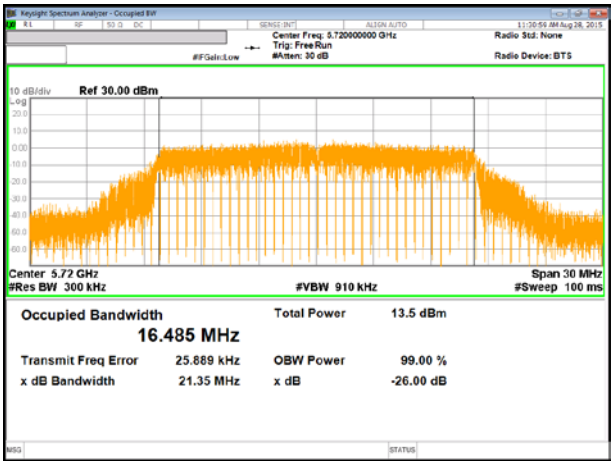
11a Mode Middle Channel



11a Mode High Channel



11a Mode Straddle Channel



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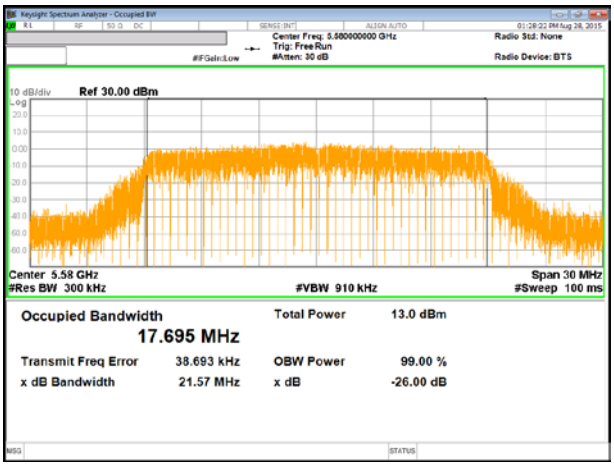
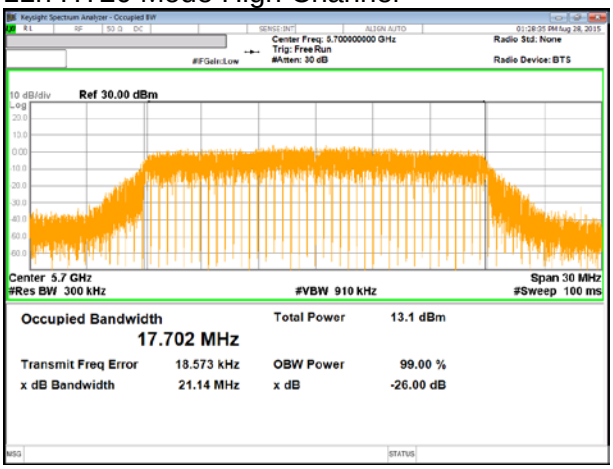
UNII 5.5 GHz IEEE 802.11n HT20 mode

11n HT20 Mode Low Channel

11n HT20 Mode Middle Channel



11n HT20 Mode High Channel



11n HT20 Mode Straddle Channel

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