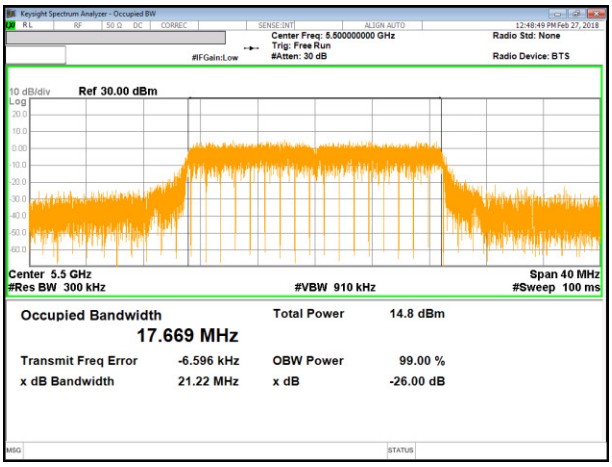
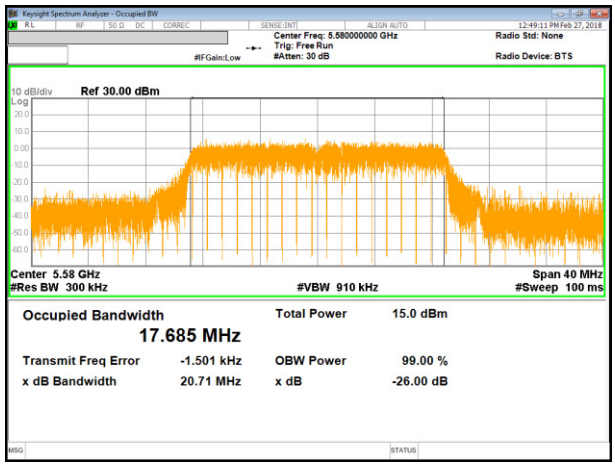
UNII 5.5 GHz IEEE 802.11n HT20 mode

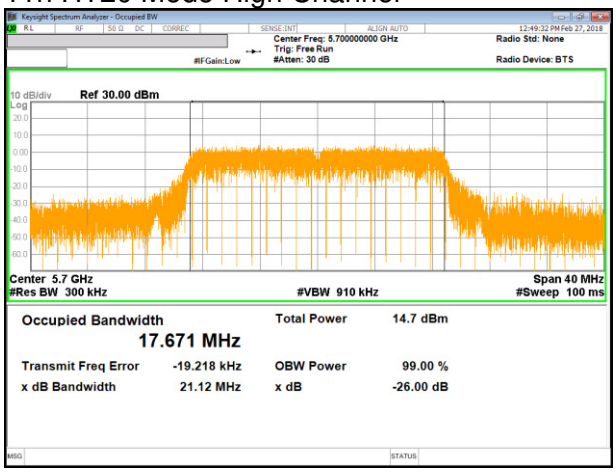
11n HT20 Mode Low Channel



11n HT20 Mode Middle Channel



11n HT20 Mode High Channel



11n HT20 Mode Straddle Channel

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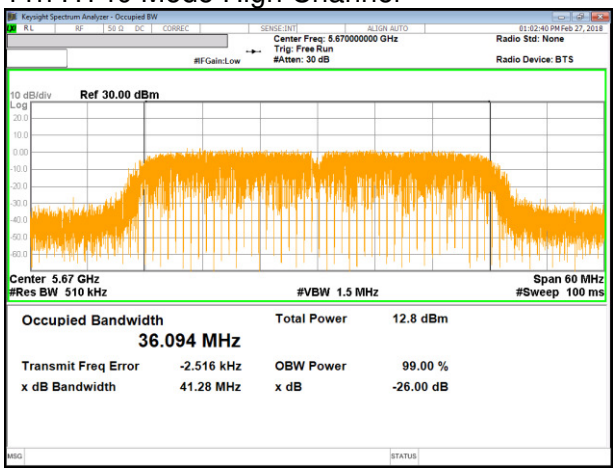
UNII 5.5 GHz IEEE 802.11n HT40 mode

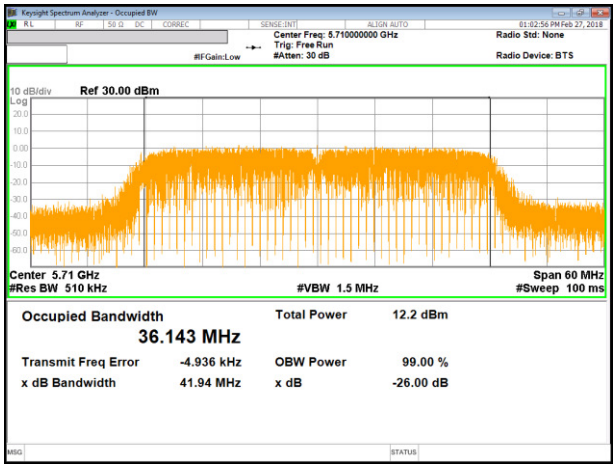
11n HT40 Mode Low Channel

11n HT40 Mode Middle Channel

11n HT40 Mode High Channel



11n HT40 Mode Straddle Channel



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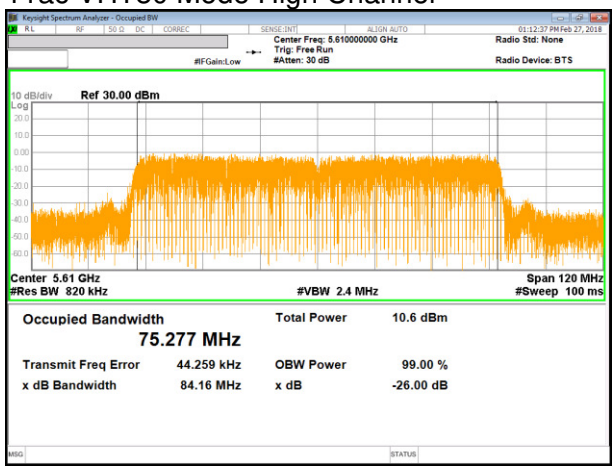
UNII 5.5 GHz IEEE 802.11ac VHT80 mode

11ac VHT80 Mode Low Channel

11ac VHT80 Mode High Channel



11ac VHT80 Mode Straddle Channel

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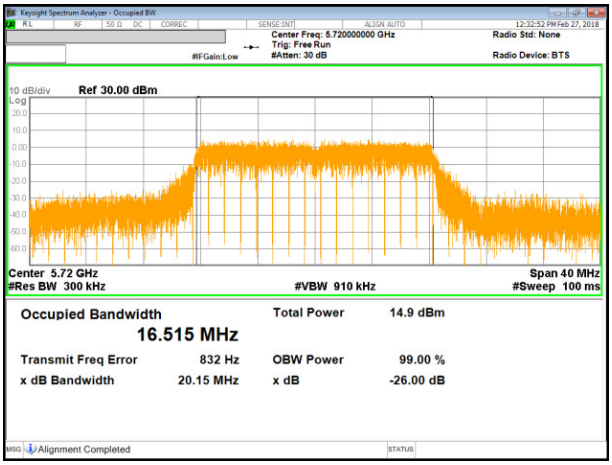
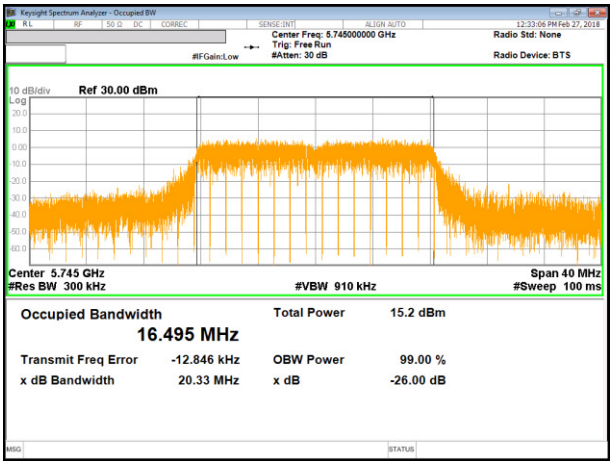
UNII 5.8 GHz IEEE 802.11a mode

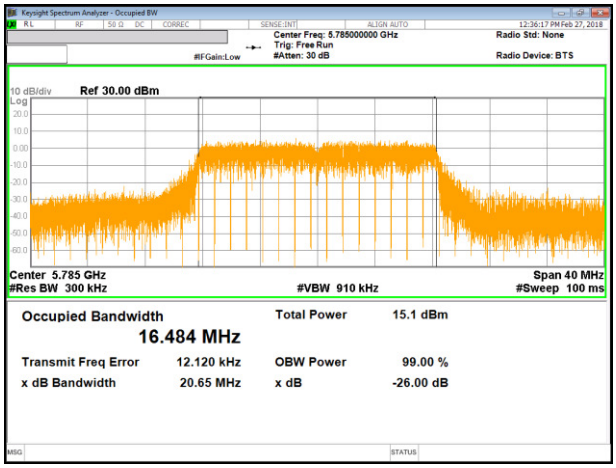
11a Mode Straddle Channel



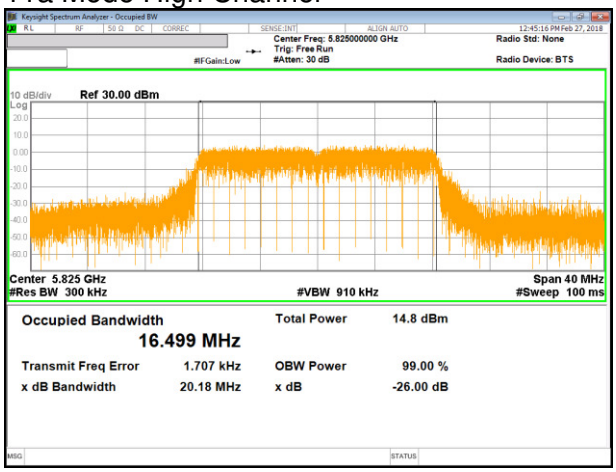
11a Mode Low Channel



11a Mode Middle Channel



11a Mode High Channel



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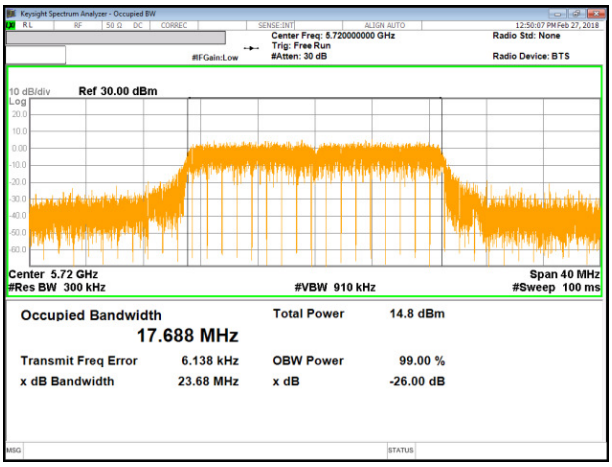
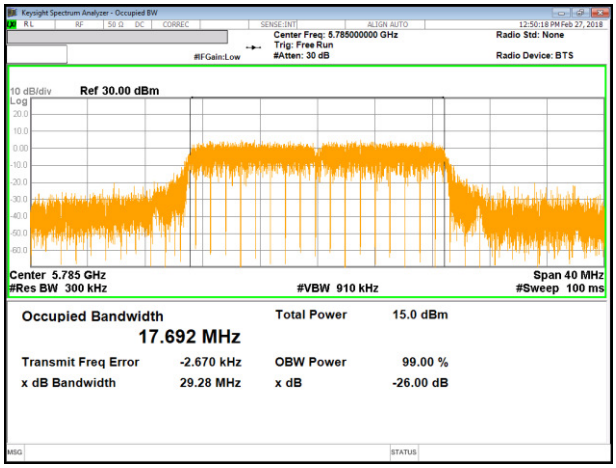
UNII 5.8 GHz IEEE 802.11n HT20 mode

11n HT20 Mode Straddle Channel

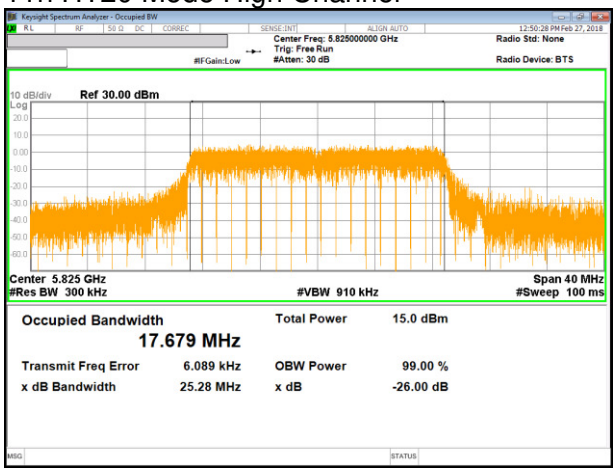


11n HT20 Mode Low Channel

11n HT20 Mode Middle Channel



11n HT20 Mode High Channel



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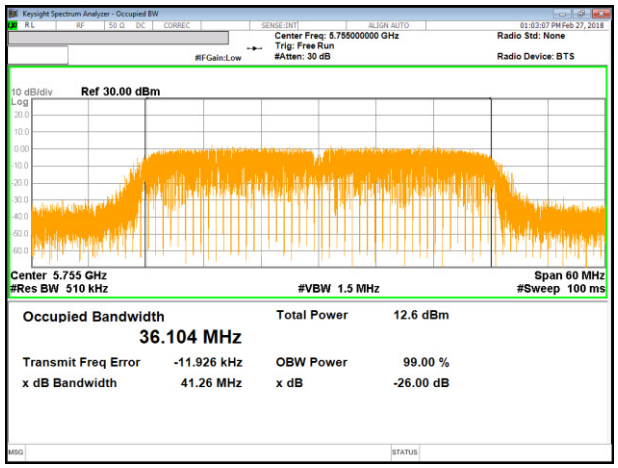
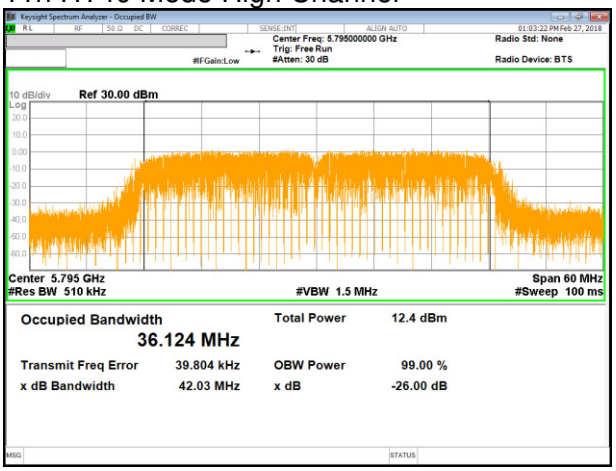
UNII 5.8 GHz IEEE 802.11n HT40 mode

11n HT40 Mode Straddle Channel

11n HT40 Mode Low Channel



11n HT40 Mode High Channel



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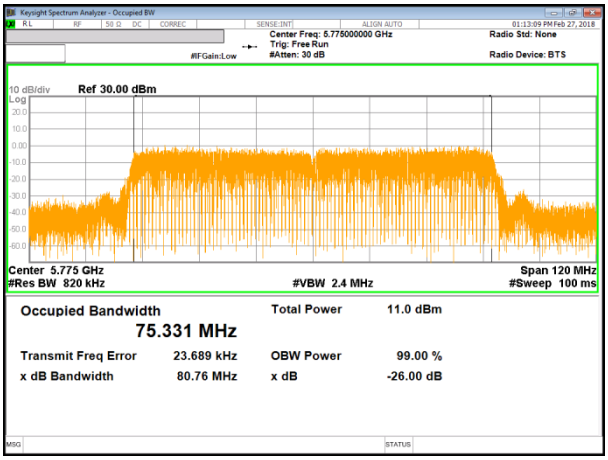
UNII 5.8 GHz IEEE 802.11ac VHT80 mode

11ac VHT80 Mode Straddle Channel

11ac VHT80 Mode Middle Channel



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10. ANTENNA PORT TEST RESULTS

10.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

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

TEST PROCEDURE

Reference to 789033 D02 General UNII Test Procedures New Rules v02r01: The transmitter output is connected to a spectrum analyzer with the RBW set to100KHz, the VBW >= 3 x RBW, peak detector and max hold.

NOTE

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

ex) Fundamental frequency : 5720MHz
  - 6dB BW : 16.350MHz
  - Starting Frequency of UNII-3 band : 5725MHz
  - 6dB Bandwidth of UNII-3 band Portion
    = (5720 + (16.350 / 2) -5725) = 3.175 MHz

RESULTS

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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	3.175	0.5
Low	5745	16.330	0.5
Mid	5785	16.330	0.5
High	5825	16.340	0.5
Worst		3.175	

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	3.785	0.5
Low	5745	17.540	0.5
Mid	5785	17.550	0.5
High	5825	17.540	0.5
Worst		3.785	

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	2.535	0.5
Low	5755	35.070	0.5
High	5795	34.990	0.5
Worst		2.535	

10.1.4. 802.11ac VHT80 MODE IN THE 5.8 GHz BAND

Channel	Frequency	6 dB Bandwidth [MHz]	Minimum Limit
Straddle	5690	2.570	0.5
Middle	5775	75.140	0.5
Worst		2.570	

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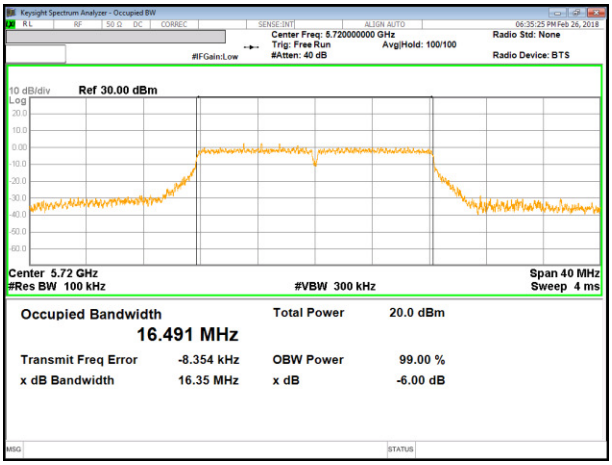
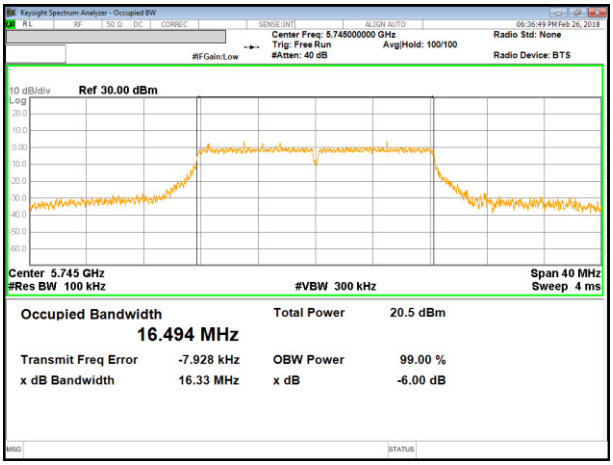
10.1.5. 6 dB BANDWIDTH PLOTS

UNII 5.8 GHz IEEE 802.11a mode

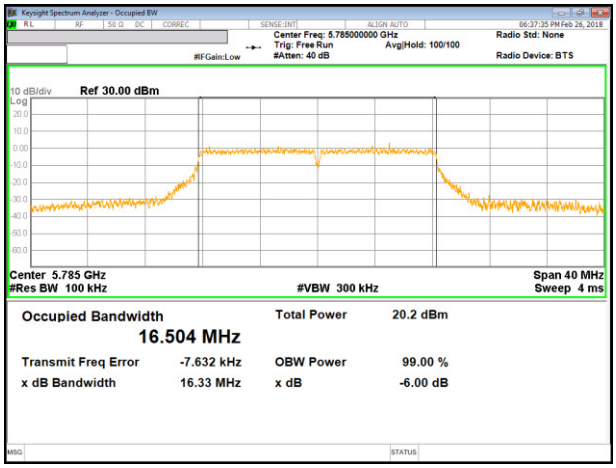
11a Mode Straddle Channel



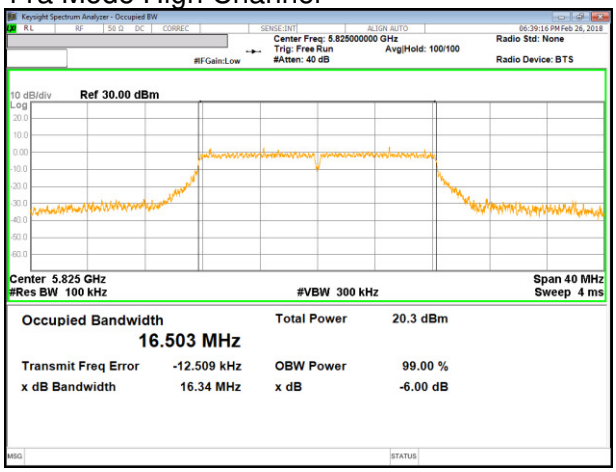
11a Mode Low Channel



11a Mode Middle Channel



11a Mode High Channel



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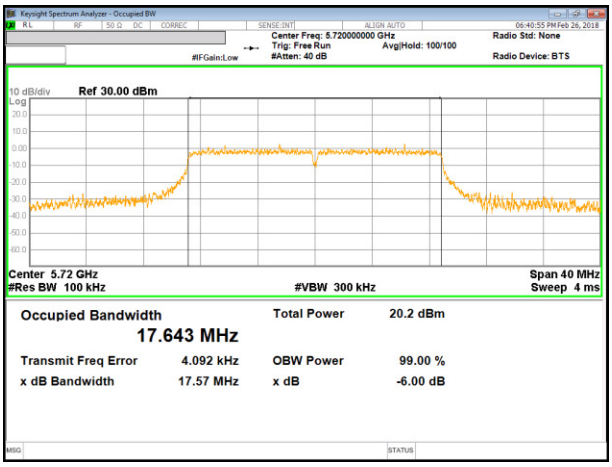
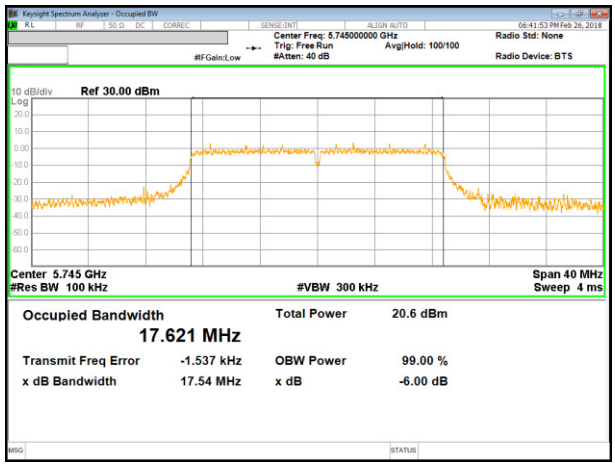
UNII 5.8 GHz IEEE 802.11n HT20 mode

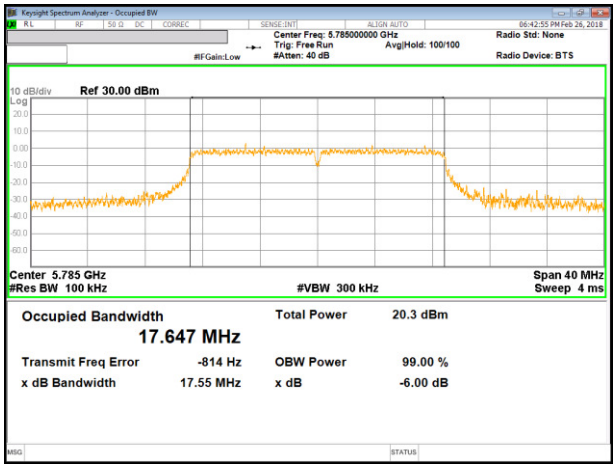
11n HT20 Mode Straddle Channel



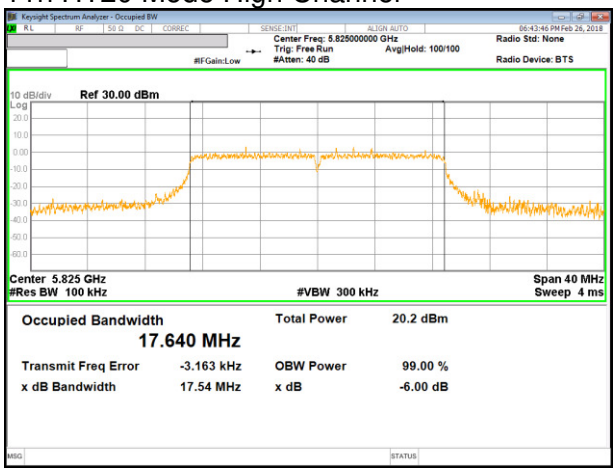
11n HT20 Mode Low Channel



11n HT20 Mode Middle Channel



11n HT20 Mode High Channel



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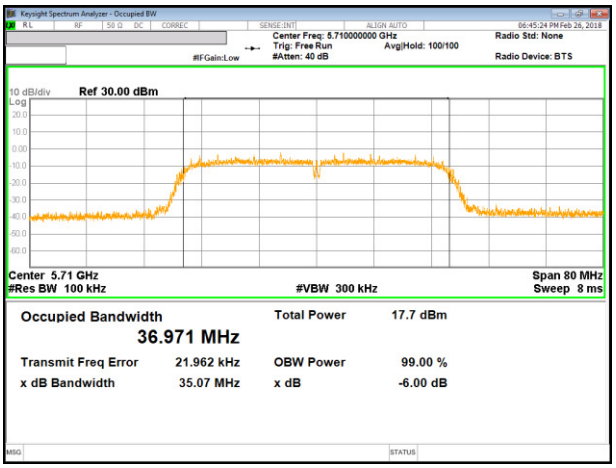
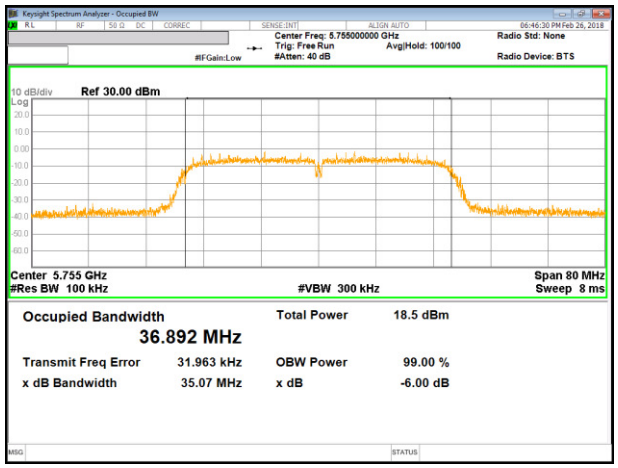
UNII 5.8 GHz IEEE 802.11n HT40 mode

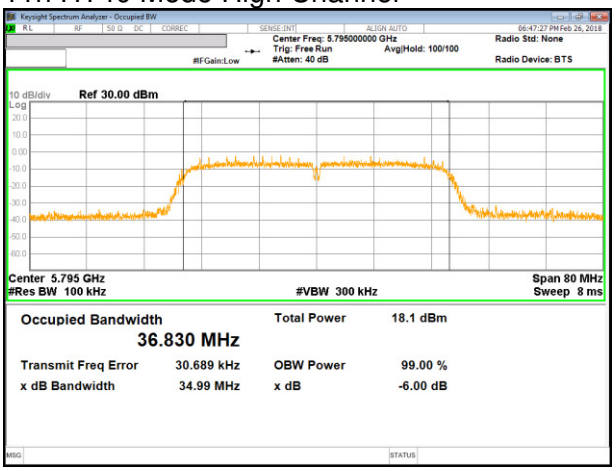
11n HT40 Mode Straddle Channel



11n HT40 Mode Low Channel



11n HT40 Mode High Channel



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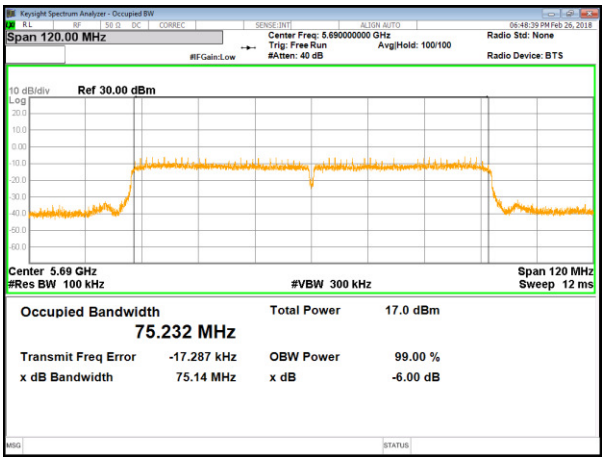
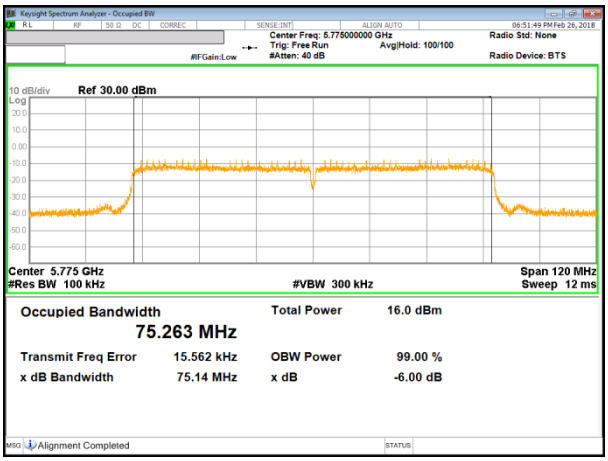
UNII 5.8 GHz IEEE 802.11ac VHT80 mode

11ac VHT80 Mode Straddle Channel



11ac VHT80 Mode Middle Channel



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10.2. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (1) (2) (3)

For the band 5.15–5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band.

TEST PROCEDURE

The Duty Cycle is less than 98% and consistent therefore KDB 789033 Method SA-2 is used for power and PPSD. RBW set to1MHz(500kHz for the band 5.725-5.85 GHz, the VBW >= 3 x RBW, RMS detector and trace averaging). Band power function used for power and peak marker value of the spectrum is used for PSD. Add duty cycle correction factor.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

5 GHz

Frequency Band [MHz]	Antenna Gain [dBi]
5150 - 5250	2.84
5250 - 5350	2.84
5470 - 5725	-0.55
5725 - 5850	-0.51

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RESULTS

10.2.1. 802.11a MODE IN THE 5.2 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Low	5180	20.57	2.84	2.84
Mid	5200	20.93	2.84	2.84
High	5240	20.47	2.84	2.84

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]
Low	5180	24.00	24.00	11.00
Mid	5200	24.00	24.00	11.00
High	5240	24.00	24.00	11.00

Duty Cycle CF [dB]	0.12	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency [MHz]	Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5180	14.43	14.55	24.00	-9.45
Mid	5200	14.67	14.79	24.00	-9.21
High	5240	14.56	14.68	24.00	-9.32

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5180	3.88	4.00	11.00	-7.00
Mid	5200	4.10	4.22	11.00	-6.78
High	5240	3.96	4.08	11.00	-6.92

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10.2.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Low	5180	23.79	2.84	2.84
Mid	5200	24.51	2.84	2.84
High	5240	23.29	2.84	2.84

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]
Low	5180	24.00	24.00	11.00
Mid	5200	24.00	24.00	11.00
High	5240	24.00	24.00	11.00

Duty Cycle CF [dB]	0.13	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency [MHz]	Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5180	14.55	14.67	24.00	-9.33
Mid	5200	14.61	14.74	24.00	-9.26
High	5240	14.61	14.74	24.00	-9.26

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5180	3.78	3.91	11.00	-7.09
Mid	5200	3.67	3.80	11.00	-7.20
High	5240	3.77	3.90	11.00	-7.10

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10.2.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Low	5190	42.21	2.84	2.84
High	5230	42.77	2.84	2.84

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]
Low	5190	24.00	24.00	11.00
High	5230	24.00	24.00	11.00

Duty Cycle CF [dB]	0.24	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency [MHz]	Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5190	12.19	12.42	24.00	-11.58
High	5230	12.34	12.58	24.00	-11.42

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5190	-1.56	-1.32	11.00	-12.32
High	5230	-1.46	-1.22	11.00	-12.22

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10.2.4. 802.11ac VHT80 MODE IN THE 5.2 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Middle	5210	99.44	2.84	2.84

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]
Middle	5210	24.00	24.00	11.00

Duty Cycle CF [dB]	0.48	**Included in Calculations of Corr'd Power & PPSD**

Output Power Results

Channel	Frequency [MHz]	Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Middle	5210	10.449	10.93	24.00	-13.07

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Middle	5210	-6.25	-5.77	11.00	-16.77

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10.2.5. 802.11a MODE IN THE 5.3 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Low	5260	20.19	2.84	2.84
Mid	5300	20.87	2.84	2.84
High	5320	20.43	2.84	2.84

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]
Low	5260	24.00	24.00	11.00
Mid	5300	24.00	24.00	11.00
High	5320	24.00	24.00	11.00

Duty Cycle CF [dB]	0.12	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency [MHz]	Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5260	14.84	14.96	24.00	-9.04
Mid	5300	15.06	15.18	24.00	-8.82
High	5320	14.93	15.05	24.00	-8.95

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5260	4.29	4.41	11.00	-6.59
Mid	5300	4.67	4.79	11.00	-6.21
High	5320	4.45	4.57	11.00	-6.43

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10.2.6. 802.11n HT20 MODE IN THE 5.3 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Low	5260	26.13	2.84	2.84
Mid	5300	26.47	2.84	2.84
High	5320	23.47	2.84	2.84

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]
Low	5260	24.00	24.00	11.00
Mid	5300	24.00	24.00	11.00
High	5320	24.00	24.00	11.00

Duty Cycle CF [dB]	0.13	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency [MHz]	Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5260	14.66	14.79	24.00	-9.21
Mid	5300	14.74	14.87	24.00	-9.13
High	5320	14.82	14.95	24.00	-9.05

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5260	3.97	4.10	11.00	-6.90
Mid	5300	3.72	3.85	11.00	-7.15
High	5320	3.93	4.06	11.00	-6.94

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10.2.7. 802.11n HT40 MODE IN THE 5.3 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Low	5270	42.11	2.84	2.84
High	5310	42.10	2.84	2.84

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]
Low	5270	24.00	24.00	11.00
High	5310	24.00	24.00	11.00

Duty Cycle CF [dB]	0.24	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency [MHz]	Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5270	12.46	12.70	24.00	-11.30
High	5310	12.46	12.69	24.00	-11.31

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5270	-1.24	-1.00	11.00	-12.00
High	5310	-1.00	-0.77	11.00	-11.77

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10.2.8. 802.11ac VHT80 MODE IN THE 5.3 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Middle	5290	105.20	2.84	2.84

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	PPSD Limit [dBm]
Middle	5290	24.00	24.00	11.00

Duty Cycle CF [dB]	0.48	**Included in Calculations of Corr'd Power & PPSD**

Output Power Results

Channel	Frequency [MHz]	Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Middle	5290	10.74	11.21	24.00	-12.79

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Middle	5290	-5.85	-5.37	11.00	-16.37

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10.2.9. 802.11a MODE IN THE 5.5 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Low	5500	20.53	-0.55	-0.55
Mid	5580	20.57	-0.55	-0.55
High	5700	20.50	-0.55	-0.55

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]
Low	5500	24.00	24.00	11.00
Mid	5580	24.00	24.00	11.00
High	5700	24.00	24.00	11.00

Duty Cycle CF [dB]	0.12	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency [MHz]	Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5500	15.02	15.14	24.00	-8.86
Mid	5580	14.90	15.02	24.00	-8.98
High	5700	14.76	14.88	24.00	-9.12

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5500	4.39	4.51	11.00	-6.49
Mid	5580	4.22	4.34	11.00	-6.66
High	5700	4.28	4.40	11.00	-6.60

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10.2.10. 802.11n HT20 MODE IN THE 5.5 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Low	5500	24.87	-0.55	-0.55
Mid	5580	21.77	-0.55	-0.55
High	5700	21.22	-0.55	-0.55

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]
Low	5500	24.00	24.00	11.00
Mid	5580	24.00	24.00	11.00
High	5700	24.00	24.00	11.00

Duty Cycle CF [dB]	0.13	**Included in Calculations of Corr'd Power & PPSD**

Output Power Results

Channel	Frequency [MHz]	Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5500	14.77	14.90	24.00	-9.10
Mid	5580	14.97	15.09	24.00	-8.91
High	5700	14.98	15.11	24.00	-8.89

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5500	3.82	3.95	11.00	-7.05
Mid	5580	4.02	4.15	11.00	-6.85
High	5700	4.58	4.71	11.00	-6.29

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10.2.11. 802.11n HT40 MODE IN THE 5.5 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Low	5510	41.85	-0.55	-0.55
Mid	5590	41.94	-0.51	-0.51
High	5670	41.76	-0.55	-0.55

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]
Low	5510	24.00	24.00	11.00
Mid	5590	24.00	24.00	11.00
High	5670	24.00	24.00	11.00

Duty Cycle CF [dB]	0.24	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency [MHz]	Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5510	12.66	12.90	24.00	-11.10
Mid	5590	12.70	12.94	24.00	-11.06
High	5670	12.64	12.88	24.00	-11.12

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5510	-0.93	-0.69	11.00	-11.69
Mid	5590	-0.53	-0.29	11.00	-11.29
High	5670	-0.80	-0.56	11.00	-11.56

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10.2.12. 802.11ac VHT80 MODE IN THE 5.5 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Low	5530	85.88	-0.55	-0.55
High	5610	103.20	-0.55	-0.55

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]
Low	5530	24.00	24.00	11.00
High	5610	24.00	24.00	11.00

Duty Cycle CF [dB]	0.48	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency [MHz]	Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5530	9.90	10.38	24.00	-13.62
High	5610	10.90	11.38	24.00	-12.62

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5530	-6.21	-5.74	11.00	-16.74
High	5610	-5.80	-5.33	11.00	-16.33

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10.2.13. 802.11a MODE IN THE 5.8 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Low	5745	20.34	-0.51	-0.51
Mid	5785	20.40	-0.51	-0.51
High	5825	21.96	-0.51	-0.51

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]
Low	5745	30.00	30.00	30.00
Mid	5785	30.00	30.00	30.00
High	5825	30.00	30.00	30.00

Duty Cycle CF [dB]	0.12	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency [MHz]	Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5745	15.05	15.17	30.00	-14.83
Mid	5785	15.07	15.19	30.00	-14.81
High	5825	15.02	15.14	30.00	-14.86

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5745	1.53	1.65	30.00	-28.35
Mid	5785	1.53	1.65	30.00	-28.35
High	5825	1.73	1.85	30.00	-28.15

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10.2.14. 802.11n HT20 MODE IN THE 5.8 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Low	5745	21.99	-0.51	-0.51
Mid	5785	24.73	-0.51	-0.51
High	5825	22.72	-0.51	-0.51

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]
Low	5745	30.00	30.00	30.00
Mid	5785	30.00	30.00	30.00
High	5825	30.00	30.00	30.00

Duty Cycle CF [dB]	0.13	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency [MHz]	Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5745	14.98	15.11	30.00	-14.89
Mid	5785	15.05	15.18	30.00	-14.82
High	5825	15.02	15.15	30.00	-14.85

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5745	1.70	1.82	30.00	-28.18
Mid	5785	1.51	1.64	30.00	-28.36
High	5825	1.51	1.64	30.00	-28.36

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10.2.15. 802.11n HT40 MODE IN THE 5.8 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Low	5755	42.34	-0.51	-0.51
High	5795	42.33	-0.51	-0.51

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]
Low	5755	30.00	30.00	30.00
High	5795	30.00	30.00	30.00

Duty Cycle CF [dB]	0.24	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency [MHz]	Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Low	5755	12.84	13.08	30.00	-16.92
High	5795	12.48	12.72	30.00	-17.28

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5755	-2.49	-2.25	30.00	-32.25
High	5795	-3.23	-2.99	30.00	-32.99

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10.2.16. 802.11ac VHT80 MODE IN THE 5.8 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency [MHz]	Min 26 dB BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
Middle	5775	105.70	-0.51	-0.51

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]
Middle	5775	30.00	30.00	30.00

Duty Cycle CF [dB]	0.48	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency [MHz]	Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
Middle	5775	10.06	10.53	30.00	-19.47

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Middle	5775	-7.70	-7.22	30.00	-37.22

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10.2.17. 802.11a MODE AT STRADDLE CHANNEL

Bandwidth and Antenna Gain

Portion	Frequency [MHz]	Min 26 dB BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
UNII-2C	5720	15.42	-0.55	-0.55
UNII-3	5720	5.41	-0.55	-0.55
Whole	5720	20.83	-0.55	-0.55

Limits

Portion	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]
UNII-2C	5720	22.88	22.88	11.00
UNII-3	5720	30.00	30.00	11.00
Whole	5720	24.00	24.00	11.00

Duty Cycle CF [dB]	0.12	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Portion	Frequency [MHz]	Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
UNII-2C	5720	14.15	14.27	22.88	-8.61
UNII-3	5720	8.15	8.27	30.00	-21.73
Whole	5720	15.12	15.24	24.00	-8.76

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
UNII-2C	5720	4.60	4.72	11.00	-6.28
UNII-3	5720	1.77	1.89	30.00	-28.11

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10.2.18. 802.11n HT20 MODE AT STRADDLE CHANNEL

Bandwidth and Antenna Gain

Portion	Frequency [MHz]	Min 26 dB BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
UNII-2C	5720	17.37	-0.55	-0.55
UNII-3	5720	7.37	-0.55	-0.55
Whole	5720	24.74	-0.55	-0.55

Limits

Portion	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]
UNII-2C	5720	23.40	23.40	11.00
UNII-3	5720	30.00	30.00	11.00
Whole	5720	24.00	24.00	11.00

Duty Cycle CF [dB]	0.13	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Portion	Frequency [MHz]	Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
UNII-2C	5720	14.05	14.18	23.40	-9.22
UNII-3	5720	8.42	8.55	30.00	-21.45
Whole	5720	15.10	15.23	24.00	-8.77

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
UNII-2C	5720	4.20	4.20	11.00	-6.80
UNII-3	5720	1.18	1.18	30.00	-28.82

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10.2.19. 802.11n HT40 MODE AT STRADDLE CHANNEL

Bandwidth and Antenna Gain

Portion	Frequency [MHz]	Min 26 dB BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
UNII-2C	5710	35.90	-0.55	-0.55
UNII-3	5710	5.90	-0.55	-0.55
Whole	5710	41.79	-0.55	-0.55

Limits

Portion	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]
UNII-2C	5710	24.00	24.00	11.00
UNII-3	5710	30.00	30.00	11.00
Whole	5710	24.00	24.00	11.00

Duty Cycle CF [dB]	0.24	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Portion	Frequency [MHz]	Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
UNII-2C	5710	12.03	12.27	24.00	-11.73
UNII-3	5710	0.37	0.61	30.00	-29.39
Whole	5710	12.32	12.56	24.00	-11.44

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
UNII-2C	5710	-0.39	-0.39	11.00	-11.39
UNII-3	5710	-5.49	-5.49	30.00	-35.49

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10.2.20. 802.11ac80 VHT80 MODE AT STRADDLE CHANNEL

Bandwidth and Antenna Gain

Portion	Frequency [MHz]	Min 26 dB BW [MHz]	Directional Gain for Power [dBi]	Directional Gain for PPSD [dBi]
UNII-2C	5690	87.85	-0.55	-0.55
UNII-3	5690	17.85	-0.55	-0.55
Whole	5690	105.70	-0.55	-0.55

Limits

Portion	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]
UNII-2C	5690	24.00	24.00	11.00
UNII-3	5690	30.00	30.00	11.00
Whole	5690	24.00	24.00	11.00

Duty Cycle CF [dB]	0.48	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Portion	Frequency [MHz]	Meas Power [dBm]	Total Corr'd Power [dBm]	Power Limit [dBm]	Power Margin [dB]
UNII-2C	5690	10.63	11.11	24.00	-12.89
UNII-3	5690	-3.55	-3.07	30.00	-33.07
Whole	5690	10.79	11.27	24.00	-12.73

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
UNII-2C	5690	-4.77	-4.29	11.00	-15.29
UNII-3	5690	-9.24	-8.77	11.00	-19.77

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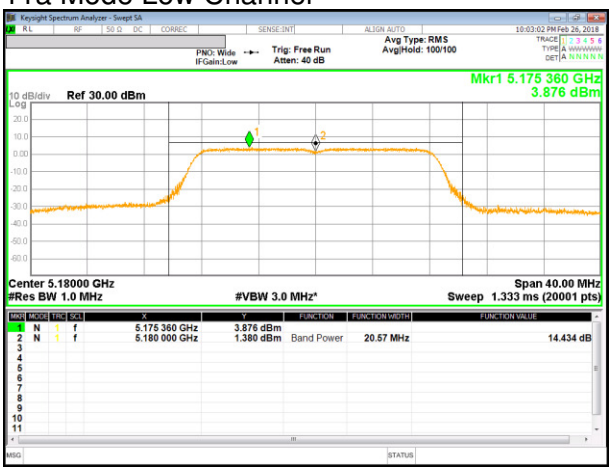
10.2.21. OUTPUT POWER AND PPSD PLOTS

UNII 5.2 GHz IEEE 802.11a mode

11a Mode Low Channel



11a Mode Middle Channel

11a Mode High Channel

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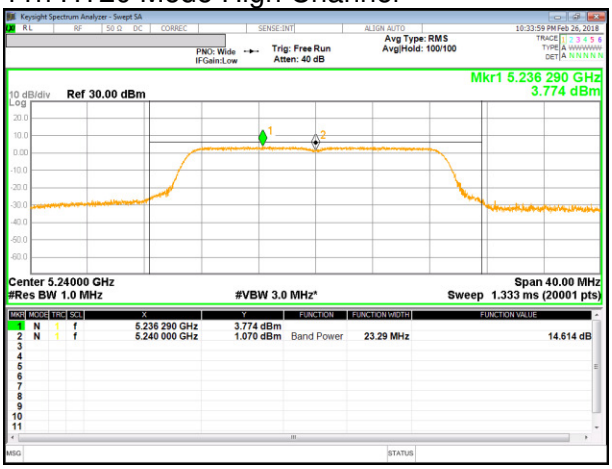
UNII 5.2 GHz IEEE 802.11n HT20 mode

11n HT20 Mode Low Channel

11n HT20 Mode Middle Channel

11n HT20 Mode High Channel



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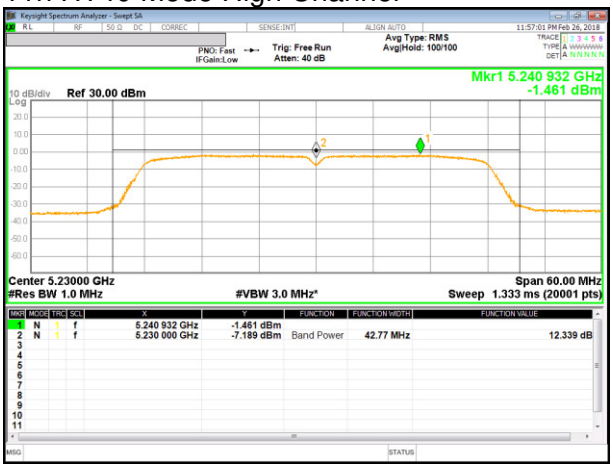
UNII 5.2 GHz IEEE 802.11n HT40 mode

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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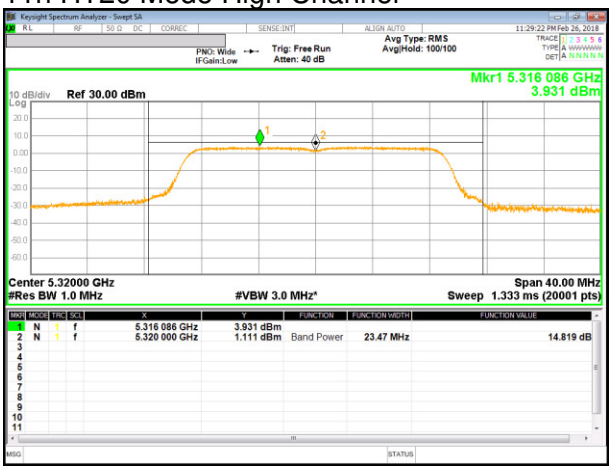
UNII 5.3 GHz IEEE 802.11n HT20 mode

11n HT20 Mode Low Channel

11n HT20 Mode Middle Channel

11n HT20 Mode High Channel



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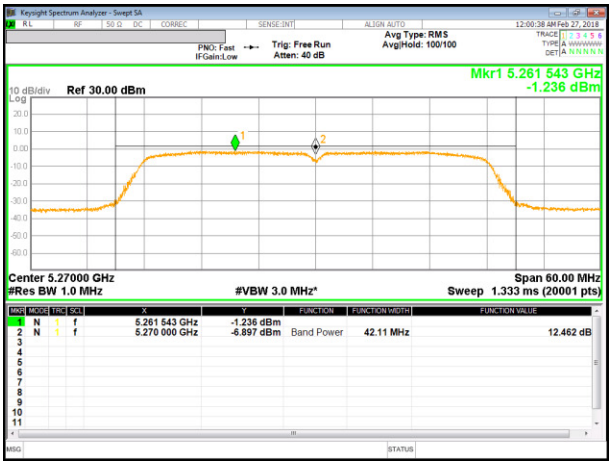
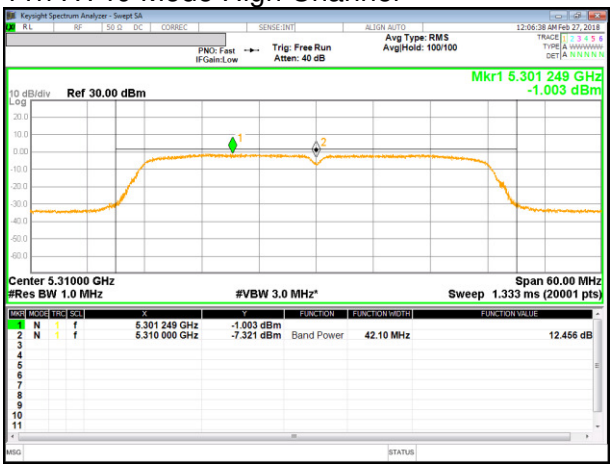
UNII 5.3 GHz IEEE 802.11n HT40 mode

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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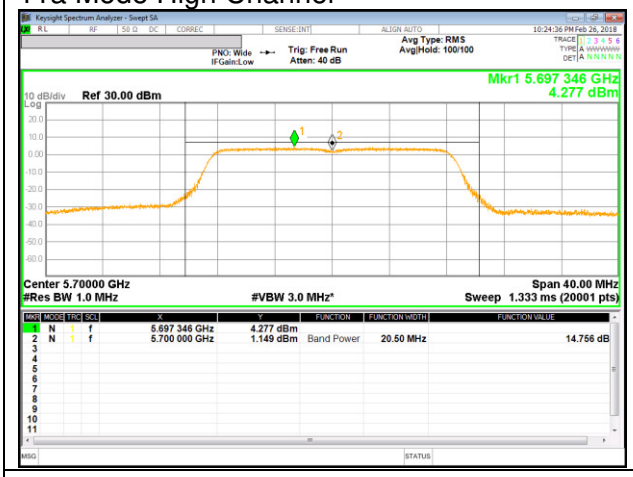
UNII 5.5 GHz IEEE 802.11a mode

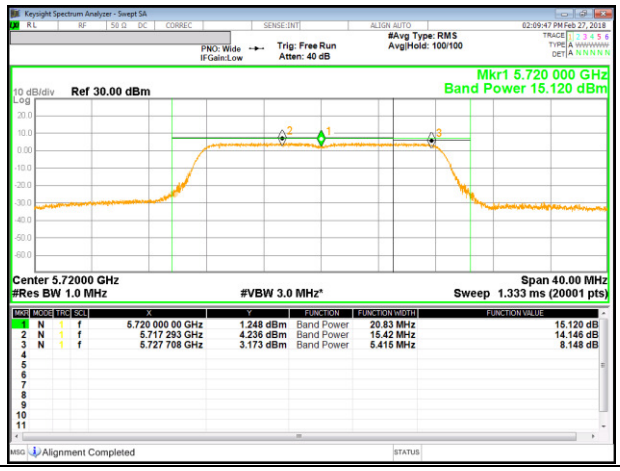
11a Mode Low Channel

11a Mode Middle Channel

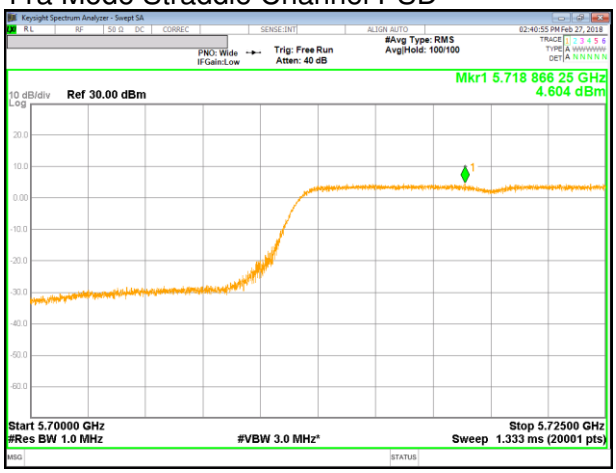
11a Mode High Channel



11a Mode Straddle Channel Power



11a Mode Straddle Channel PSD



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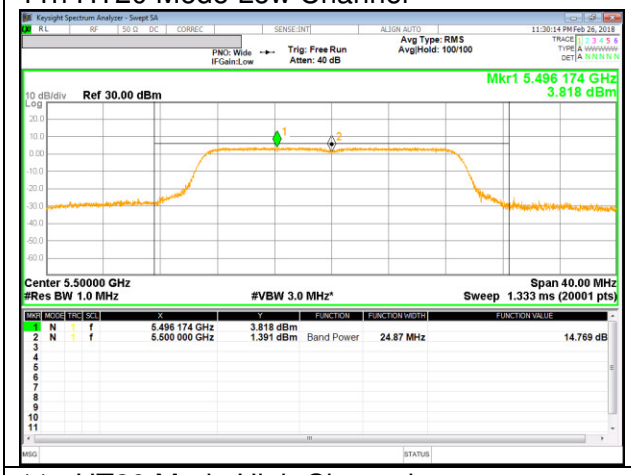
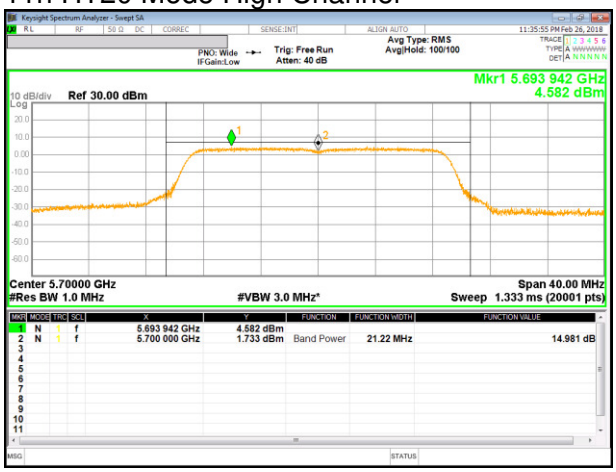
UNII 5.5 GHz IEEE 802.11n HT20 mode

11n HT20 Mode Low Channel

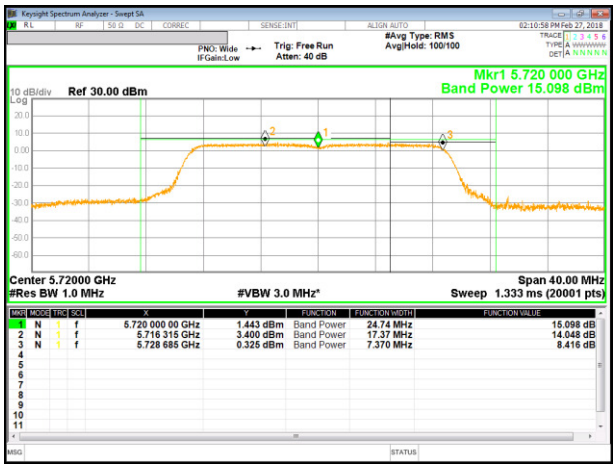


11n HT20 Mode Middle Channel

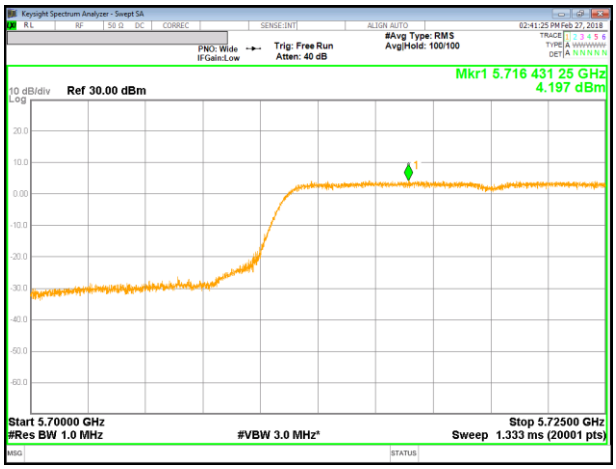
11n HT20 Mode High Channel



11n HT20 Mode Straddle Channel Power



11n HT20 Mode Straddle Channel PSD



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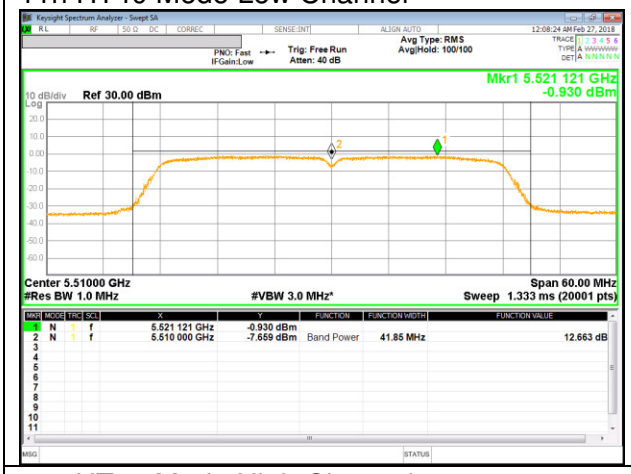
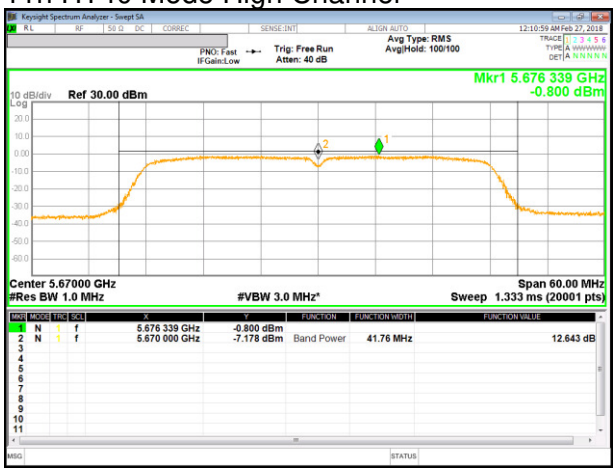
UNII 5.5 GHz IEEE 802.11n HT40 mode

11n HT40 Mode Low Channel

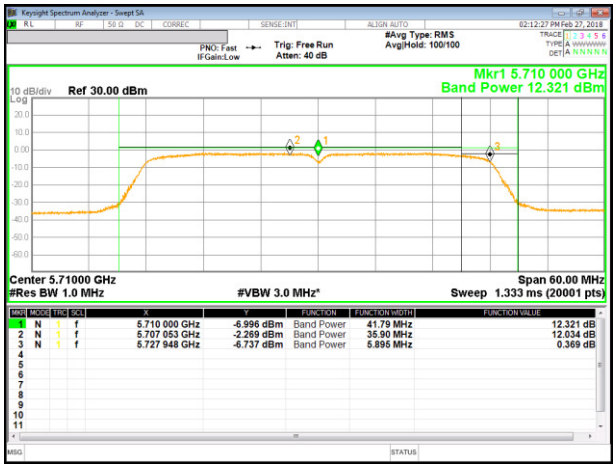


11n HT40 Mode Middle Channel

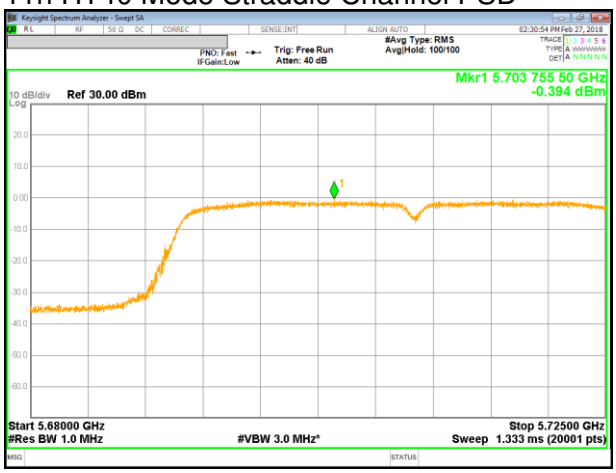
11n HT40 Mode High Channel



11n HT40 Mode Straddle Channel Power



11n HT40 Mode Straddle Channel PSD



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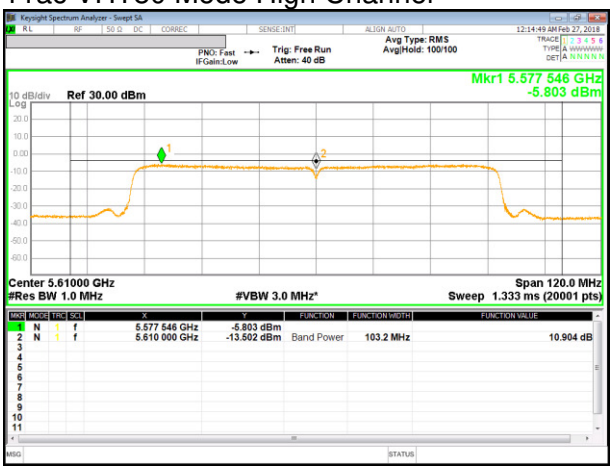
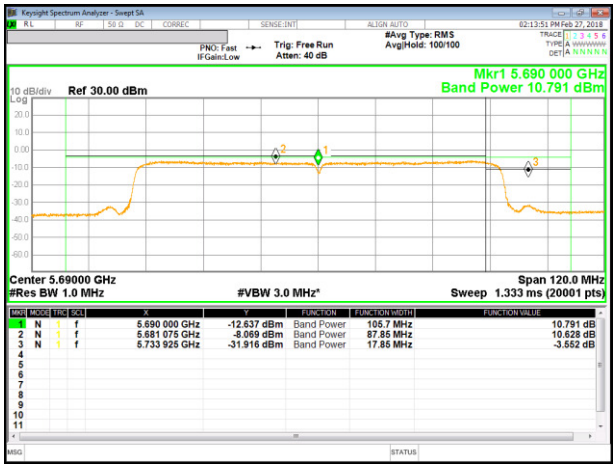
UNII 5.5 GHz IEEE 802.11ac VHT80 mode

11ac VHT80 Mode Low Channel

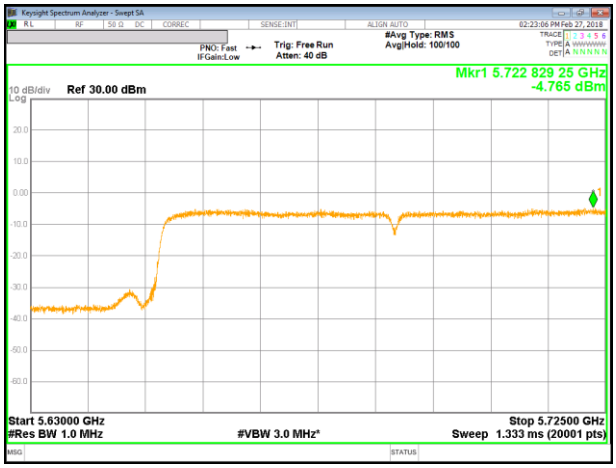
11ac VHT80 Mode High Channel



11ac VHT80 Mode Straddle Channel Power



11ac VHT80 Mode Straddle Channel PSD



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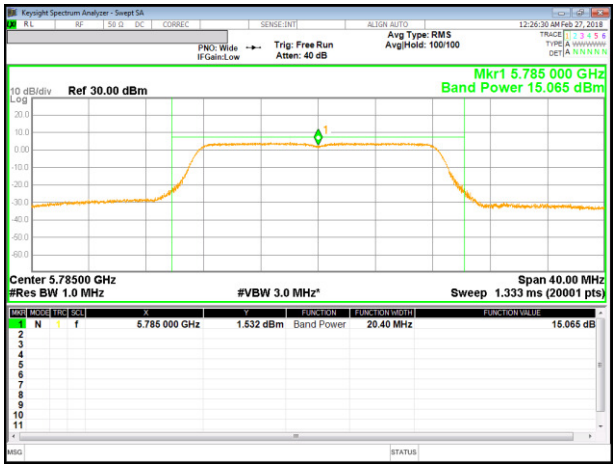
UNII 5.8 GHz IEEE 802.11a mode for POWER

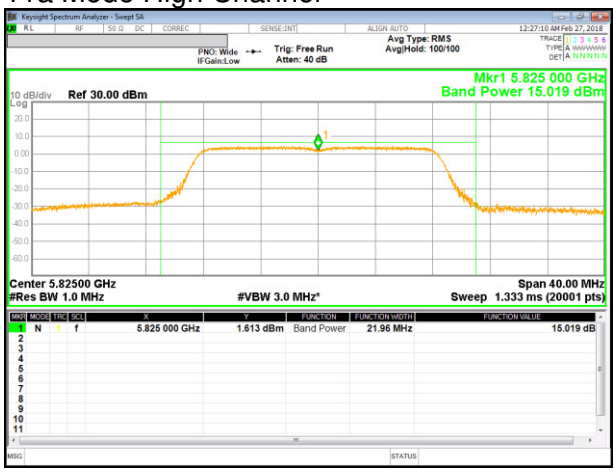
11a Mode Straddle Channel

11a Mode Low Channel

11a Mode Middle Channel



11a Mode High Channel



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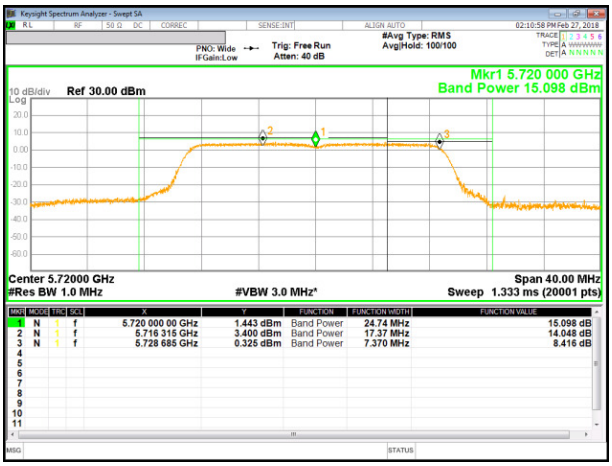
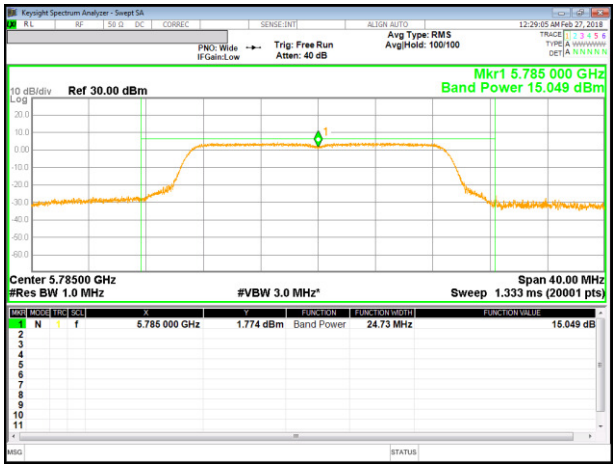
UNII 5.8 GHz IEEE 802.11n HT20 mode for POWER

11n HT20 Mode Straddle Channel

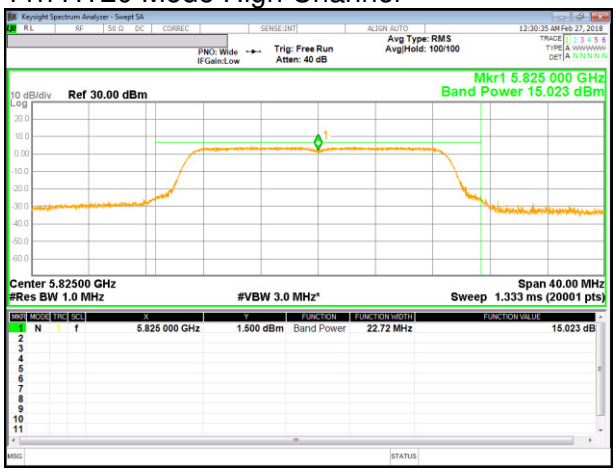


11n HT20 Mode Low Channel

11n HT20 Mode Middle Channel



11n HT20 Mode High Channel



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