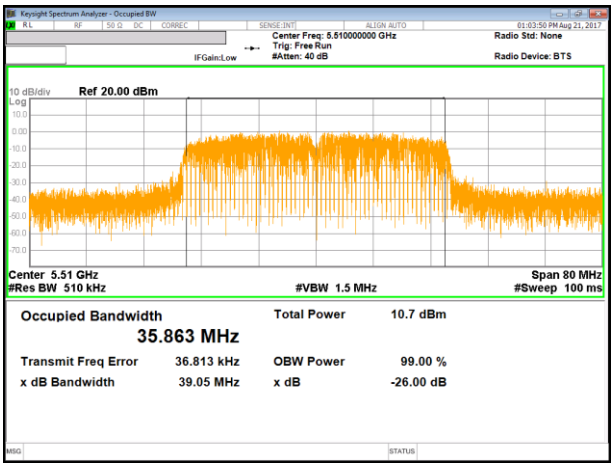
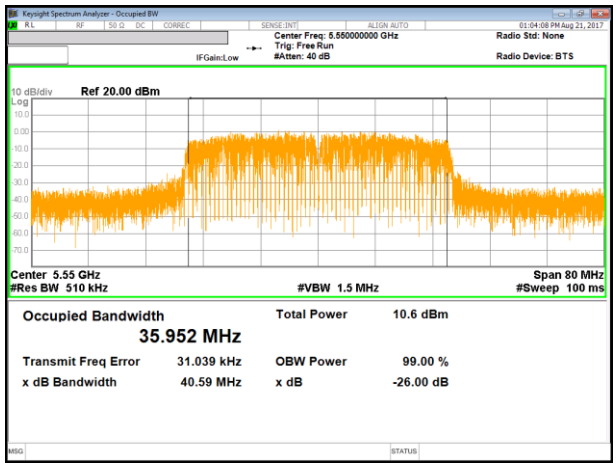
UNII 5.5 GHz IEEE 802.11n HT40 mode

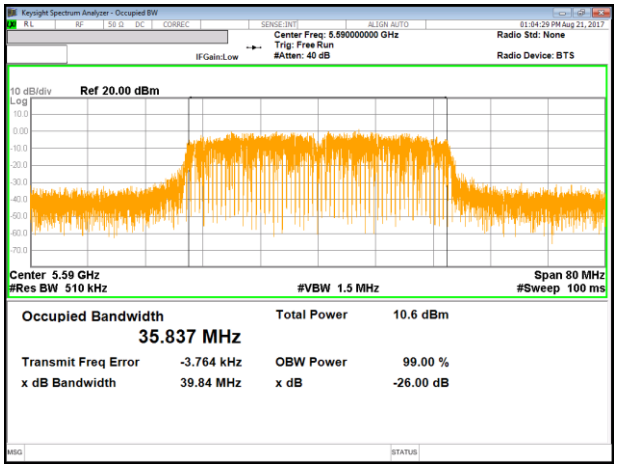
11n HT40 Mode Low Channel



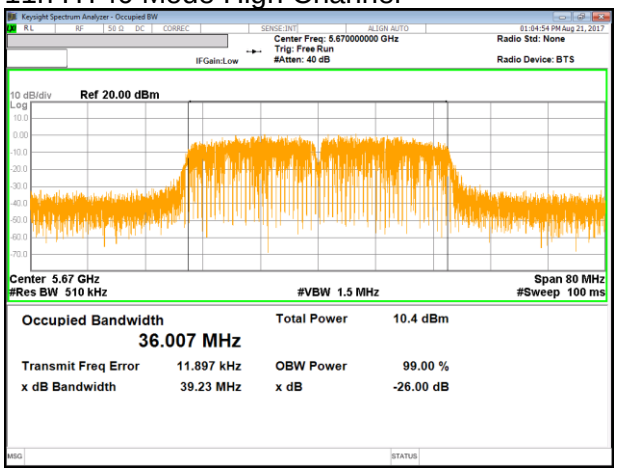
11n HT40 Mode Middle Channel



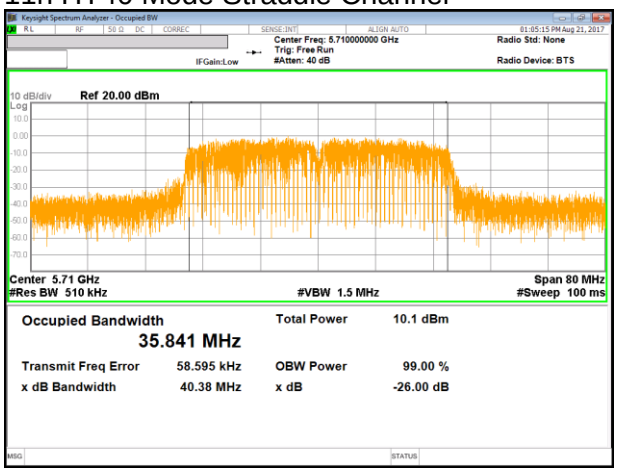
11n HT40 Mode Middle Channel



11n HT40 Mode High Channel



11n HT40 Mode Straddle Channel



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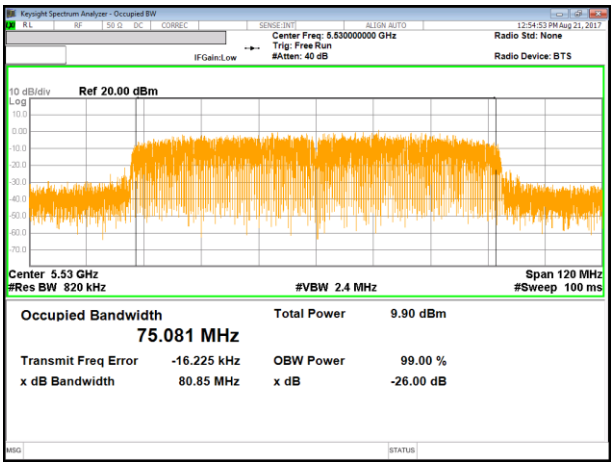
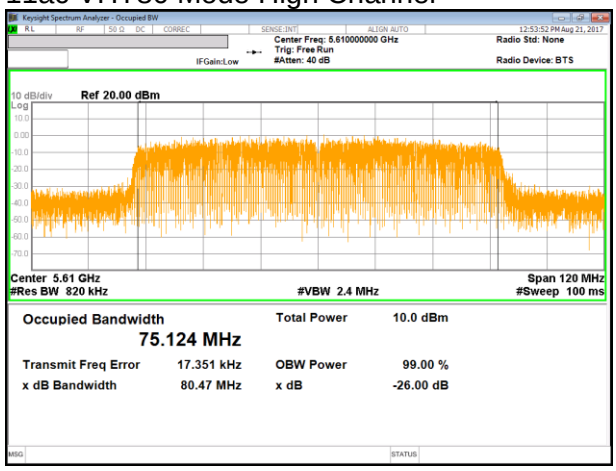
UNII 5.5 GHz IEEE 802.11ac VHT80 mode

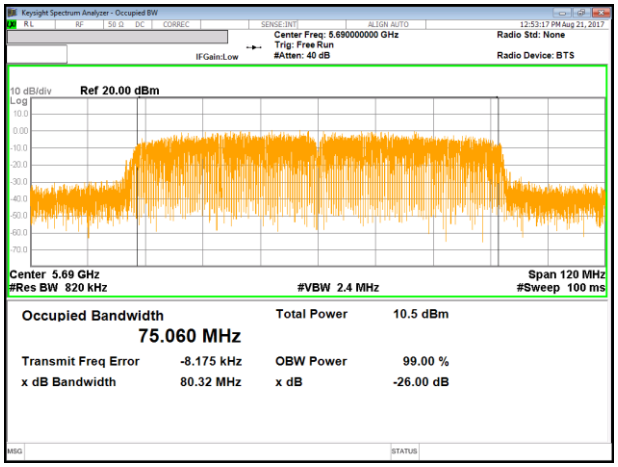
11ac VHT80 Mode Low Channel



11ac VHT80 Mode High Channel



11ac VHT80 Mode Straddle Channel



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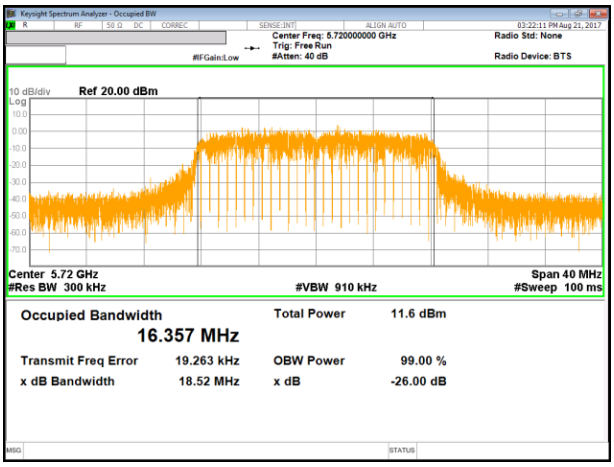
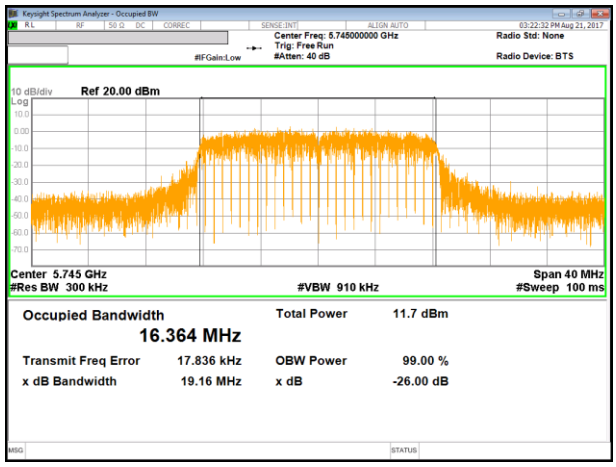
UNII 5.8 GHz IEEE 802.11a mode

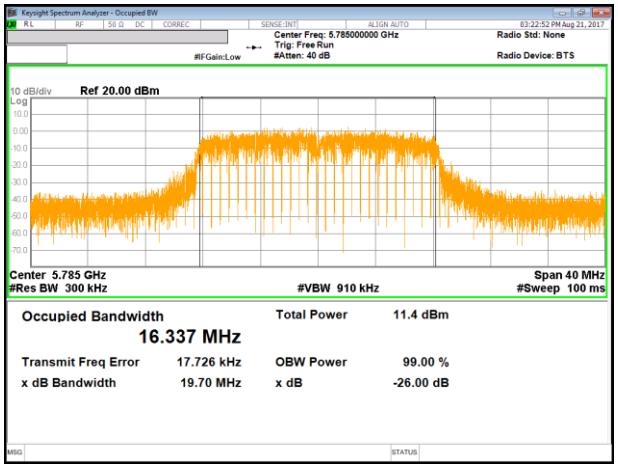
11a Mode Straddle Channel



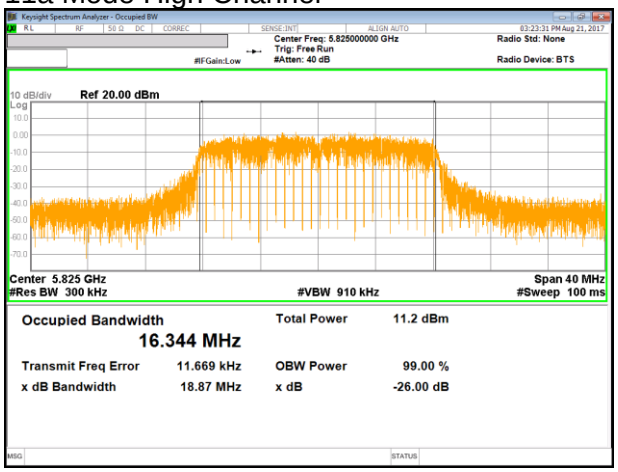
11a Mode Low Channel



11a Mode Middle Channel



11a Mode High Channel



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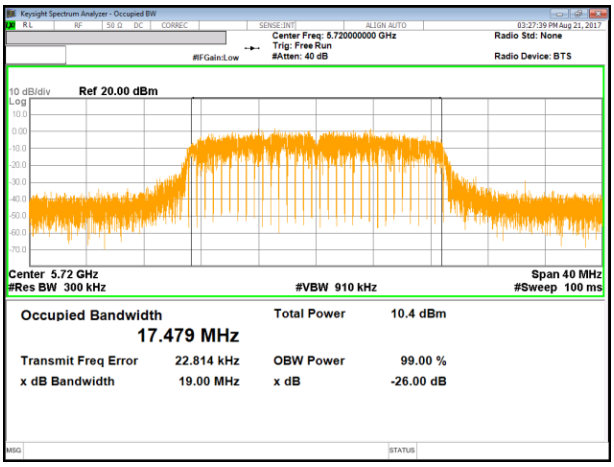
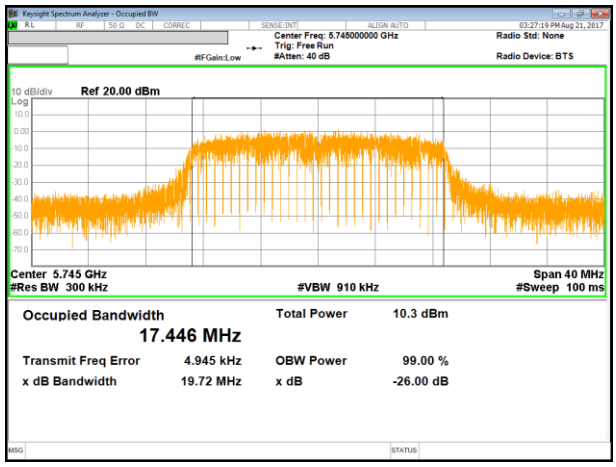
UNII 5.8 GHz IEEE 802.11n HT20 mode

11n HT20 Mode Straddle Channel

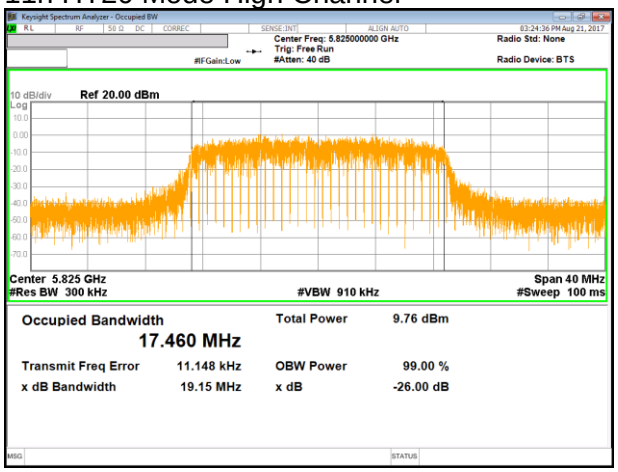


11n HT20 Mode Low Channel



11n HT20 Mode Middle Channel

11n HT20 Mode High Channel



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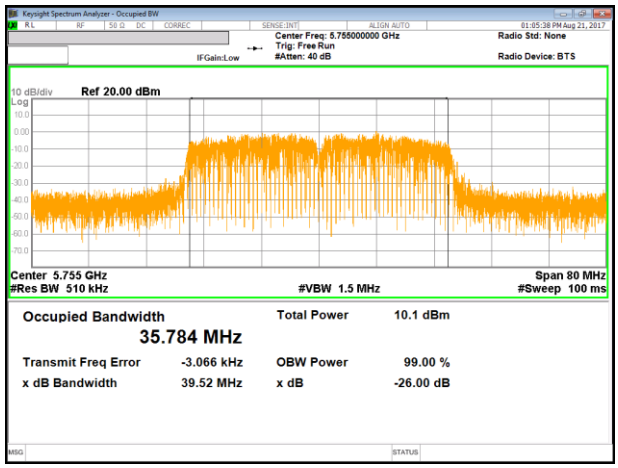
UNII 5.8 GHz IEEE 802.11n HT40 mode

11n HT40 Mode Straddle Channel

11n HT40 Mode Low Channel



11n HT40 Mode Middle Channel

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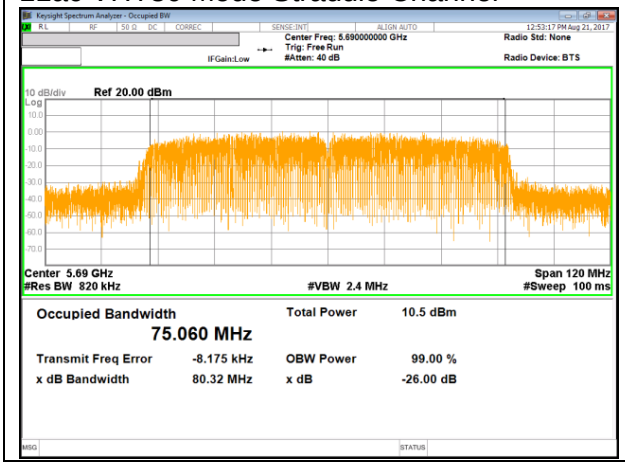
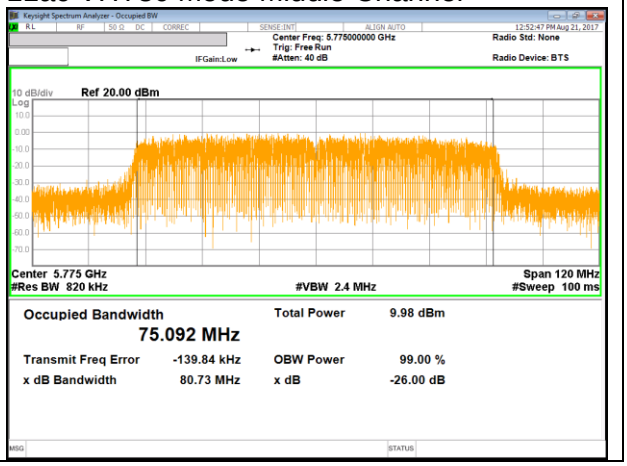
UNII 5.8 GHz IEEE 802.11ac VHT80 mode

11ac VHT80 Mode Straddle Channel



11ac VHT80 Mode Middle Channel



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9. ANTENNA PORT TEST RESULTS

9.1. 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 v01r04: 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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9.1.1. 802.11a MODE IN THE 5.8 GHz BAND

Channel	Frequency [MHz]	6 dB Bandwidth [MHz]	Minimum Limit [MHz]
Straddle	5720	2.350	0.5
Low	5745	15.030	0.5
Mid	5785	15.090	0.5
High	5825	15.110	0.5
Worst		2.350	

9.1.2. 802.11n HT20 MODE IN THE 5.8 GHz BAND

Channel	Frequency [MHz]	6 dB Bandwidth [MHz]	Minimum Limit [MHz]
Straddle	5720	2.545	0.5
Low	5745	15.100	0.5
Mid	5785	14.640	0.5
High	5825	15.050	0.5
Worst		2.545	

9.1.3. 802.11n HT40 MODE IN THE 5.8 GHz BAND

Channel	Frequency [MHz]	6 dB Bandwidth [MHz]	Minimum Limit [MHz]
Straddle	5710	2.550	0.5
Low	5755	35.040	0.5
High	5795	35.060	0.5
Worst		2.550	

9.1.4. 802.11n VHT80 MODE IN THE 5.8 GHz BAND

Channel	Frequency	6 dB Bandwidth [MHz]	Minimum Limit
Straddle	5690	2.530	0.5
Middle	5775	72.580	0.5
Worst		2.530	

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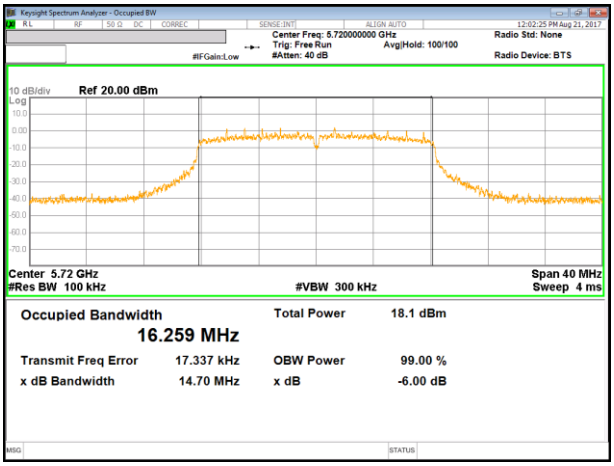
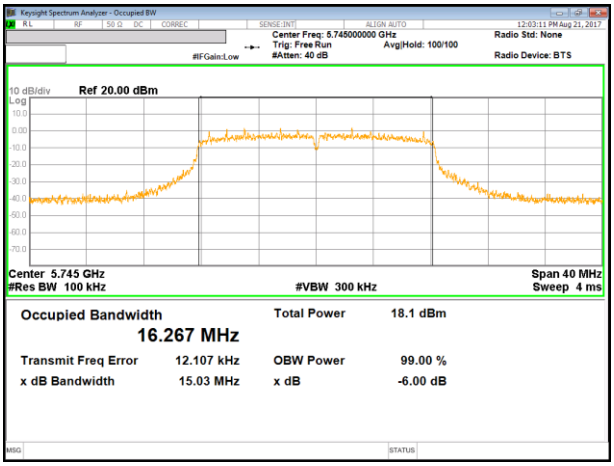
9.1.5. 6 dB BANDWIDTH PLOTS

UNII 5.8 GHz IEEE 802.11a mode

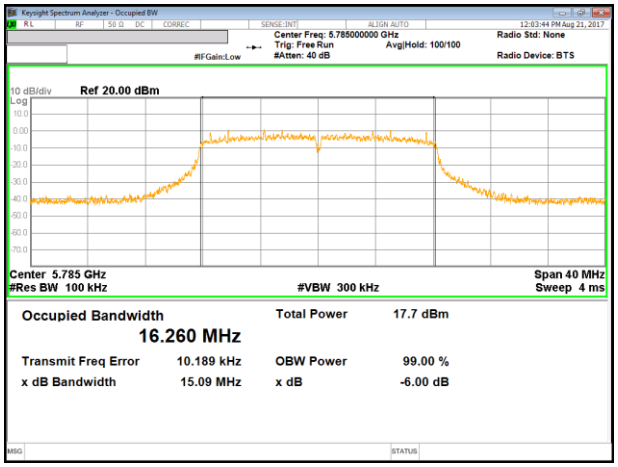
11a Mode Straddle Channel



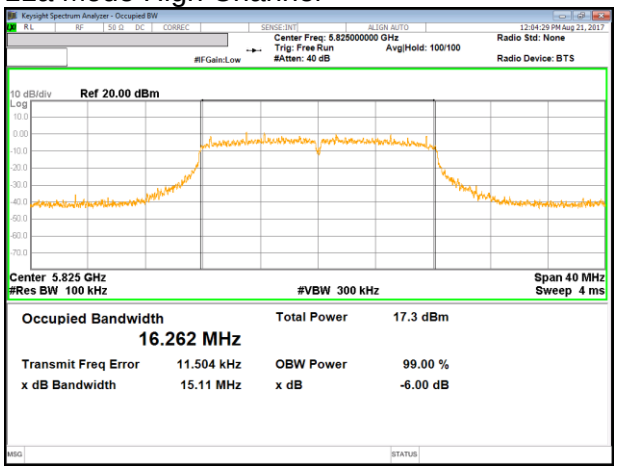
11a Mode Low Channel



11a Mode Middle Channel



11a Mode High Channel



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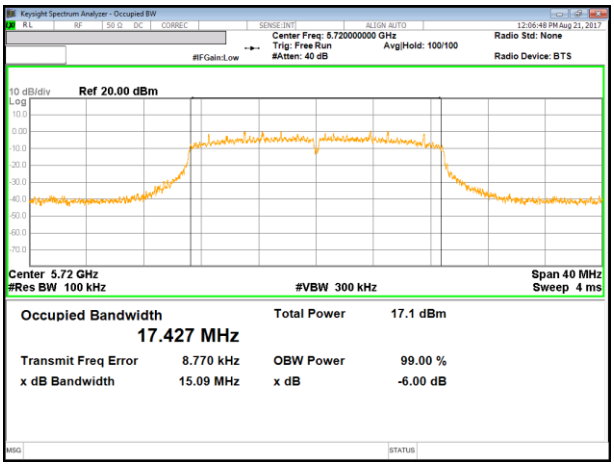
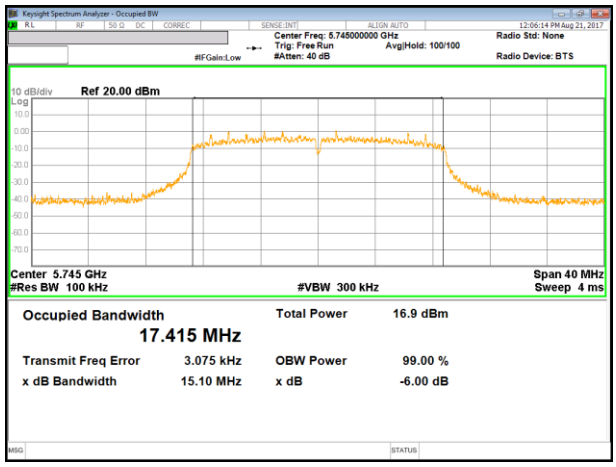
UNII 5.8 GHz IEEE 802.11n HT20 mode

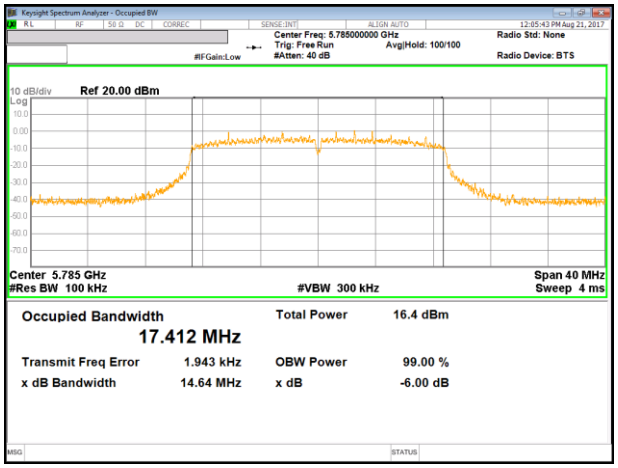
11n HT20 Mode Straddle Channel



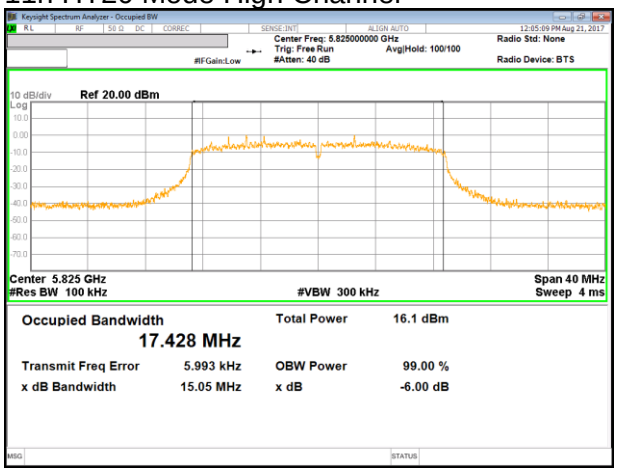
11n HT20 Mode Low Channel



11n HT20 Mode Middle Channel



11n HT20 Mode High Channel



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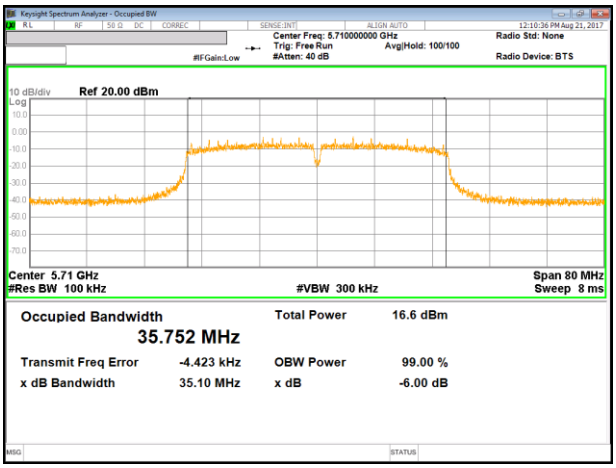
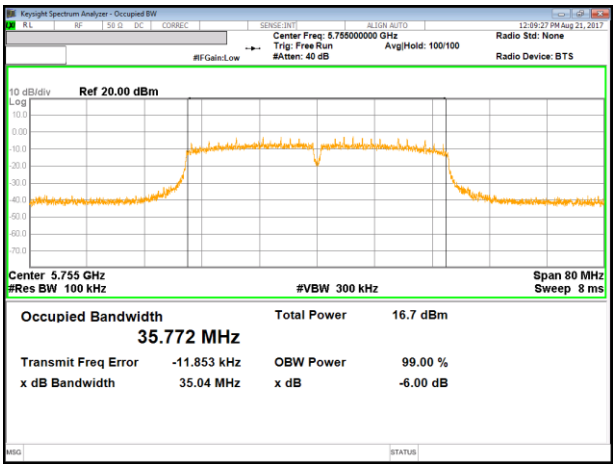
UNII 5.8 GHz IEEE 802.11n HT40 mode

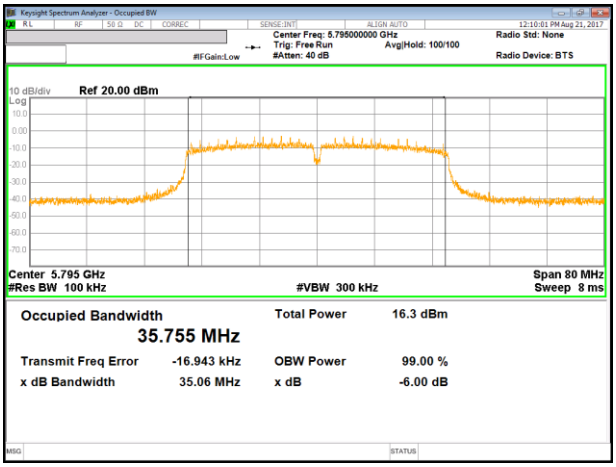
11n HT40 Mode Straddle Channel



11n HT40 Mode Low Channel



11n HT40 Mode Middle Channel



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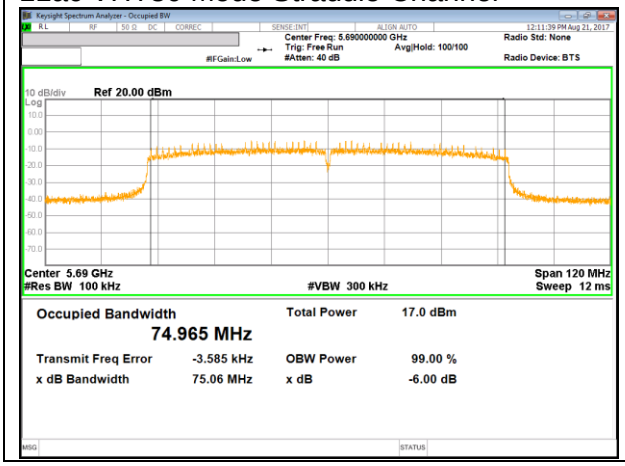
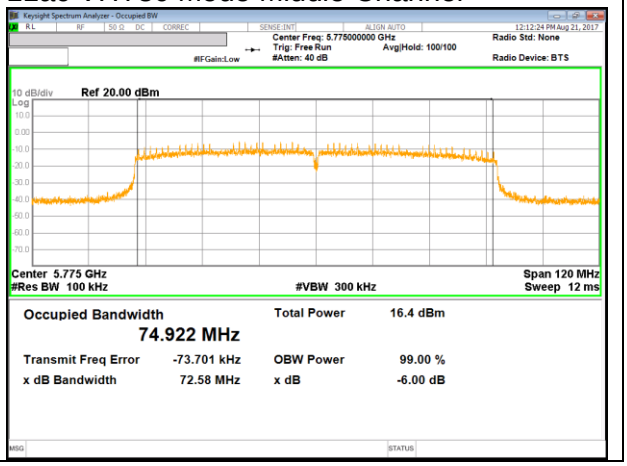
UNII 5.8 GHz IEEE 802.11ac VHT80 mode

11ac VHT80 Mode Straddle Channel



11ac VHT80 Mode Middle Channel



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9.2. 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	-0.70
5250 - 5350	-0.50
5470 - 5725	-0.10
5725 - 5850	-0.10

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RESULTS

9.2.1. 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	18.78	-0.70	-0.70
Mid	5200	19.60	-0.70	-0.70
High	5240	19.10	-0.70	-0.70

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]
Low	5180	23.74	23.74	11.00
Mid	5200	23.92	23.92	11.00
High	5240	23.81	23.81	11.00

Duty Cycle CF [dB]	0.27	**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	11.55	11.82	23.74	-11.92
Mid	5200	11.82	12.09	23.92	-11.83
High	5240	11.52	11.79	23.81	-12.02

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5180	1.76	2.02	11.00	-8.98
Mid	5200	1.85	2.11	11.00	-8.89
High	5240	1.41	1.68	11.00	-9.32

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9.2.2. 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	19.58	-0.70	-0.70
Mid	5200	19.53	-0.70	-0.70
High	5240	19.65	-0.70	-0.70

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]
Low	5180	23.92	23.92	11.00
Mid	5200	23.91	23.91	11.00
High	5240	23.93	23.93	11.00

Duty Cycle CF [dB]	0.30	**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	10.32	10.62	23.92	-13.30
Mid	5200	10.46	10.76	23.91	-13.15
High	5240	10.36	10.66	23.93	-13.28

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5180	0.08	0.37	11.00	-10.63
Mid	5200	0.29	0.59	11.00	-10.41
High	5240	0.45	0.75	11.00	-10.25

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9.2.3. 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	40.59	-0.70	-0.70
High	5230	40.78	-0.70	-0.70

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]	0.56	**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	10.77	11.33	24.00	-12.67
High	5230	10.80	11.36	24.00	-12.64

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5190	-2.28	-1.73	11.00	-12.73
High	5230	-2.26	-1.71	11.00	-12.71

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9.2.4. 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	82.18	-0.70	-0.70

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]	1.04	**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	10.29	11.33	24.00	-12.67

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Middle	5210	-6.19	-5.15	11.00	-16.15

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9.2.5. 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	18.88	-0.50	-0.50
Mid	5300	18.66	-0.50	-0.50
High	5320	18.88	-0.50	-0.50

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]
Low	5260	23.76	23.76	11.00
Mid	5300	23.71	23.71	11.00
High	5320	23.76	23.76	11.00

Duty Cycle CF [dB]	0.27	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	11.80	12.06	23.76	-11.70
Mid	5300	11.39	11.65	23.71	-12.05
High	5320	11.40	11.67	23.76	-12.09

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5260	1.62	1.89	11.00	-9.11
Mid	5300	1.64	1.91	11.00	-9.09
High	5320	1.38	1.65	11.00	-9.35

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9.2.6. 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	19.84	-0.50	-0.50
Mid	5300	19.88	-0.50	-0.50
High	5320	19.66	-0.50	-0.50

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]
Low	5260	23.98	23.98	11.00
Mid	5300	23.98	23.98	11.00
High	5320	23.94	23.94	11.00

Duty Cycle CF [dB]	0.30	**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	10.40	10.70	23.98	-13.28
Mid	5300	10.27	10.57	23.98	-13.41
High	5320	10.30	10.60	23.94	-13.34

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5260	0.28	0.57	11.00	-10.43
Mid	5300	0.17	0.47	11.00	-10.53
High	5320	0.00	0.30	11.00	-10.70

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9.2.7. 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	40.33	-0.50	-0.50
High	5310	39.89	-0.50	-0.50

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]	0.56	**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	9.98	10.54	24.00	-13.46
High	5310	10.72	11.28	24.00	-12.72

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5270	-3.25	-2.69	11.00	-13.69
High	5310	-2.64	-2.08	11.00	-13.08

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9.2.8. 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	83.16	-0.50	-0.50

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]	1.04	**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	9.50	10.54	24.00	-13.46

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Middle	5290	-6.82	-5.78	11.00	-16.78

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9.2.9. 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	19.33	-0.10	-0.10
Mid	5580	19.05	-0.10	-0.10
High	5700	19.20	-0.10	-0.10

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]
Low	5500	23.86	23.86	11.00
Mid	5580	23.80	23.80	11.00
High	5700	23.83	23.83	11.00

Duty Cycle CF [dB]	0.27	**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	11.74	12.00	23.86	-11.86
Mid	5580	11.44	11.70	23.80	-12.10
High	5700	10.68	10.95	23.83	-12.88

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5500	1.60	1.87	11.00	-9.13
Mid	5580	1.35	1.62	11.00	-9.38
High	5700	0.95	1.21	11.00	-9.79

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9.2.10. 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	20.09	-0.10	-0.10
Mid	5580	19.83	-0.10	-0.10
High	5700	19.88	-0.10	-0.10

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	23.97	23.97	11.00
High	5700	23.98	23.98	11.00

Duty Cycle CF [dB]	0.30	**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	10.27	10.57	24.00	-13.43
Mid	5580	10.20	10.50	23.97	-13.48
High	5700	9.53	9.83	23.98	-14.16

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5500	0.12	0.42	11.00	-10.58
Mid	5580	0.03	0.33	11.00	-10.67
High	5700	-0.87	-0.58	11.00	-11.58

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9.2.11. 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	40.06	-0.10	-0.10
Mid	5550	40.54	-0.10	-0.10
Mid	5590	40.93	-0.10	-0.10
High	5670	41.28	-0.10	-0.10

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]
Low	5510	24.00	24.00	11.00
Mid	5550	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]	0.56	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	10.58	11.14	24.00	-12.86
Mid	5550	10.46	11.02	24.00	-12.98
Mid	5590	10.18	10.73	24.00	-13.27
High	5670	10.33	10.88	24.00	-13.12

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5510	-2.78	-2.22	11.00	-13.22
Mid	5550	-2.71	-2.16	11.00	-13.16
Mid	5590	-2.81	-2.25	11.00	-13.25
High	5670	-2.73	-2.18	11.00	-13.18

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9.2.12. 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	83.35	-0.10	-0.10
High	5610	88.43	-0.10	-0.10

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]	1.04	**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	9.84	10.89	24.00	-13.11
High	5610	9.73	10.77	24.00	-13.23

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5530	-6.63	-5.58	11.00	-16.58
High	5610	-6.36	-5.31	11.00	-16.31

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9.2.13. 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	18.90	-0.10	-0.10
Mid	5785	19.62	-0.10	-0.10
High	5825	18.49	-0.10	-0.10

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]
Low	5745	23.76	23.76	30.00
Mid	5785	23.93	23.93	30.00
High	5825	23.67	23.67	30.00

Duty Cycle CF [dB]	0.27	**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	11.97	12.24	23.76	-11.53
Mid	5785	11.87	12.14	23.93	-11.79
High	5825	11.72	11.99	23.67	-11.68

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5745	-1.10	-0.83	30.00	-30.83
Mid	5785	-1.15	-0.89	30.00	-30.89
High	5825	-1.20	-0.94	30.00	-30.94

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9.2.14. 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	19.73	-0.10	-0.10
Mid	5785	19.78	-0.10	-0.10
High	5825	19.45	-0.10	-0.10

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]
Low	5745	23.95	23.95	30.00
Mid	5785	23.96	23.96	30.00
High	5825	23.89	23.89	30.00

Duty Cycle CF [dB]	0.30	**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	10.62	10.92	23.95	-13.03
Mid	5785	10.63	10.92	23.96	-13.04
High	5825	10.40	10.70	23.89	-13.19

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5745	-2.21	-1.91	30.00	-31.91
Mid	5785	-2.71	-2.41	30.00	-32.41
High	5825	-2.80	-2.50	30.00	-32.50

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9.2.15. 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	40.31	-0.10	-0.10
High	5795	40.33	-0.10	-0.10

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]
Low	5755	24.00	24.00	30.00
High	5795	24.00	24.00	30.00

Duty Cycle CF [dB]	0.56	**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	10.23	10.78	24.00	-13.22
High	5795	10.15	10.71	24.00	-13.29

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Low	5755	-6.14	-5.58	30.00	-35.58
High	5795	-5.88	-5.33	30.00	-35.33

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9.2.16. 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	83.49	-0.10	-0.10

Limits

Channel	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]
Middle	5775	24.00	24.00	30.00

Duty Cycle CF [dB]	1.04	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	10.36	11.40	24.00	-12.60

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
Middle	5775	-8.74	-7.70	30.00	-37.70

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9.2.17. 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	14.58	-0.10	-0.10
UNII-3	5720	4.58	-0.10	-0.10
Whole	5720	19.16	-0.10	-0.10

Limits

Portion	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]
UNII-2C	5720	22.64	22.64	11.00
UNII-3	5720	17.61	17.61	11.00
Whole	5720	23.82	23.82	11.00

Duty Cycle CF [dB]	0.27	**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	10.97	11.24	22.64	-11.40
UNII-3	5720	3.60	3.87	17.61	-13.74
Whole	5720	11.70	11.97	23.82	-11.85

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
144	5720	1.84	2.11	11.00	-8.89

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9.2.18. 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	14.73	-0.10	-0.10
UNII-3	5720	4.73	-0.10	-0.10
Whole	5720	19.45	-0.10	-0.10

Limits

Portion	Frequency [MHz]	FCC Power Limit [dBm]	Power Limit [dBm]	FCC PPSD Limit [dBm]
UNII-2C	5720	22.68	22.68	11.00
UNII-3	5720	17.74	17.74	11.00
Whole	5720	23.89	23.89	11.00

Duty Cycle CF [dB]	0.30	**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	9.78	10.07	22.68	-12.61
UNII-3	5720	2.72	3.02	17.74	-14.73
Whole	5720	10.56	10.85	23.89	-13.04

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
144	5720	0.47	0.77	11.00	-10.23

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9.2.19. 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	34.86	-0.10	-0.10
UNII-3	5710	4.86	-0.10	-0.10
Whole	5710	39.73	-0.10	-0.10

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	17.87	17.87	11.00
Whole	5710	24.00	24.00	11.00

Duty Cycle CF [dB]	0.56	**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	9.83	10.39	24.00	-13.61
UNII-3	5710	-2.89	-2.34	17.87	-20.21
Whole	5710	10.06	10.61	24.00	-13.39

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
142	5710	-3.09	-2.53	11.00	-13.53

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9.2.20. 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	76.74	-0.10	-0.10
UNII-3	5690	6.74	-0.10	-0.10
Whole	5690	83.49	-0.10	-0.10

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	19.29	19.29	11.00
Whole	5690	24.00	24.00	11.00

Duty Cycle CF [dB]	1.04	**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	10.19	11.23	24.00	-12.77
UNII-3	5690	-6.58	-5.54	19.29	-24.83
Whole	5690	10.28	11.32	24.00	-12.68

PPSD Results

Channel	Frequency [MHz]	Meas PPSD [dBm]	Total Corr'd PPSD [dBm]	PPSD Limit [dBm]	PPSD Margin [dB]
138	5690	-5.68	-4.64	11.00	-15.64

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218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675 Korea TEL: (031) 337-9902,FAX: (031) 213-5433
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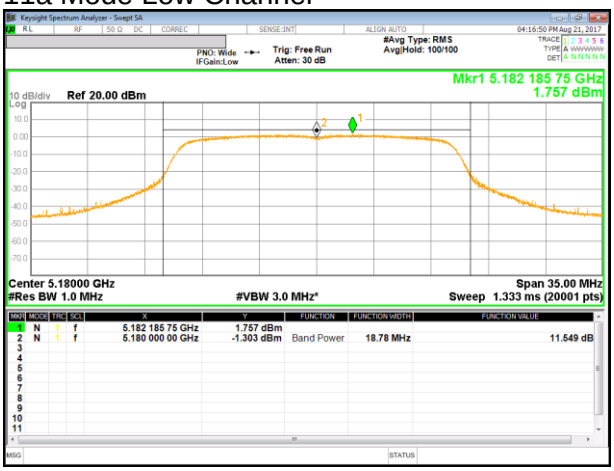
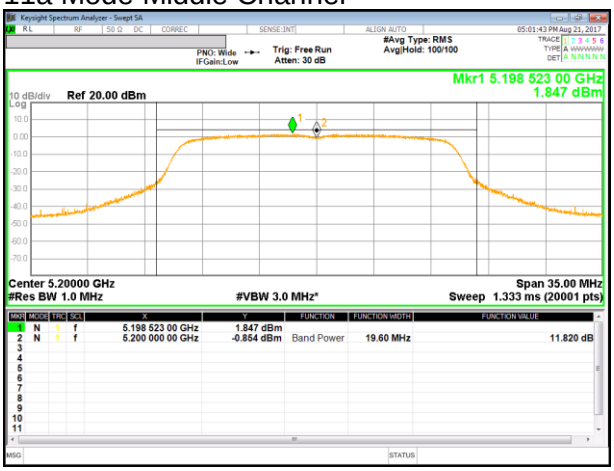
9.2.21. OUTPUT POWER AND PPSD PLOTS

UNII 5.2 GHz IEEE 802.11a mode

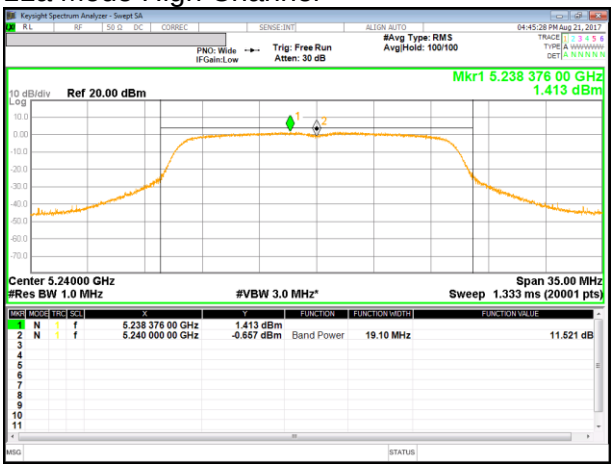
11a Mode Low Channel



11a Mode Middle Channel



11a Mode High Channel



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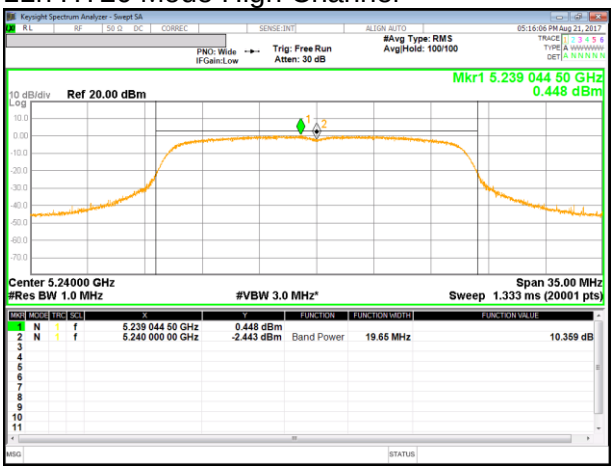
UNII 5.2 GHz IEEE 802.11n HT20 mode

11n HT20 Mode Low Channel

11n HT20 Mode Middle Channel

11n HT20 Mode High Channel



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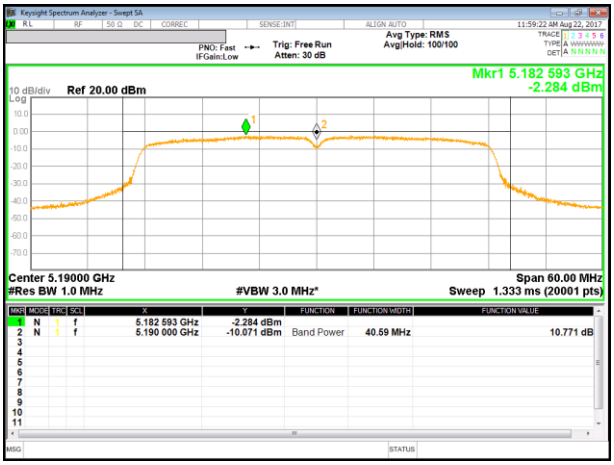
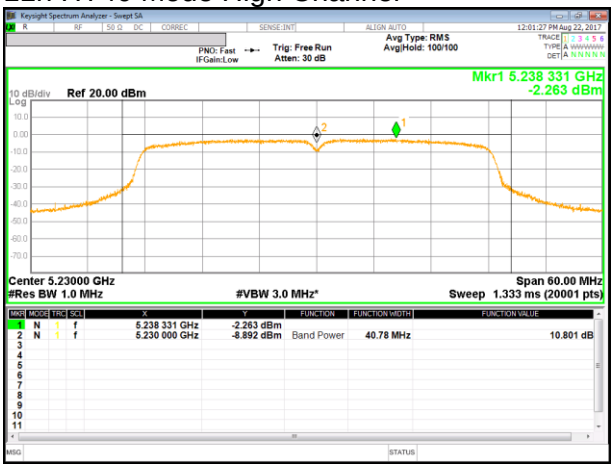
UNII 5.2 GHz IEEE 802.11n HT40 mode

11n HT40 Mode Low Channel

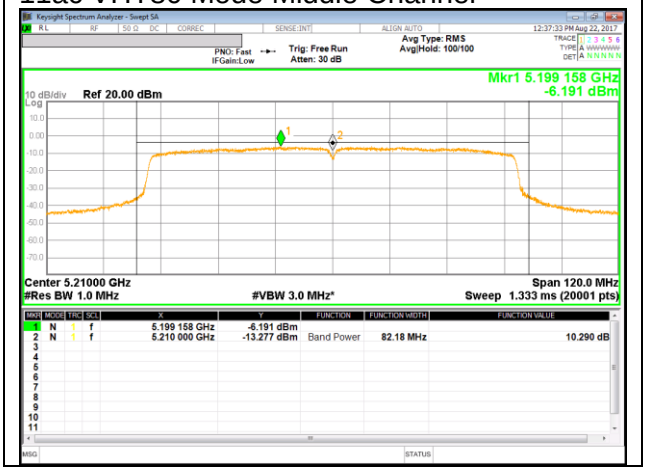


11n HT40 Mode High Channel



UNII 5.2 GHz IEEE 802.11ac VHT80 mode

11ac VHT80 Mode Middle Channel



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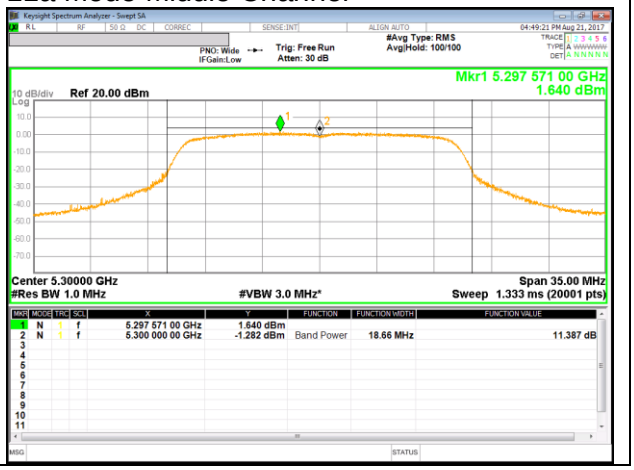
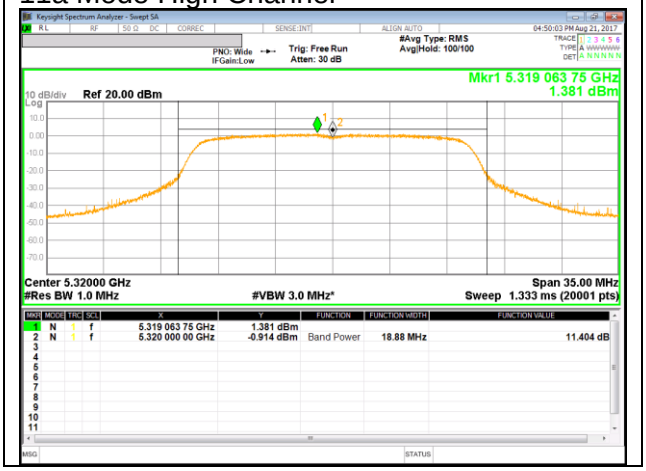
UNII 5.3 GHz IEEE 802.11a mode

11a Mode Low Channel

11a Mode Middle Channel



11a Mode High Channel



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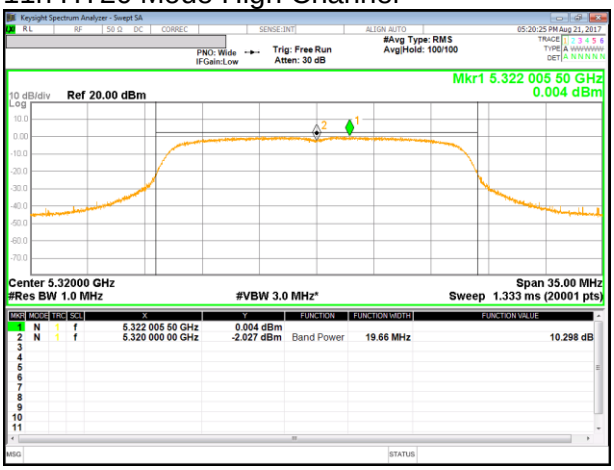
UNII 5.3 GHz IEEE 802.11n HT20 mode

11n HT20 Mode Low Channel

11n HT20 Mode Middle Channel

11n HT20 Mode High Channel



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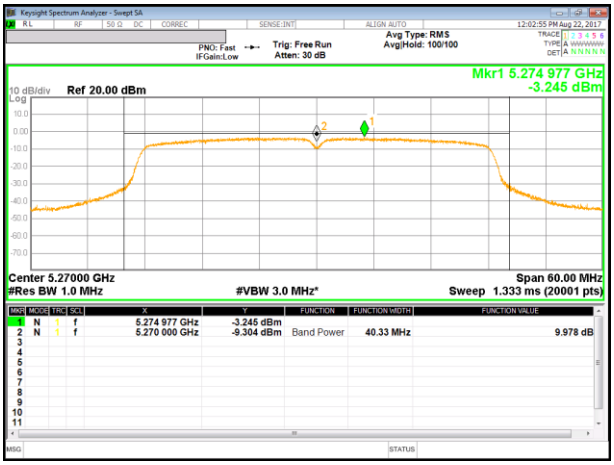
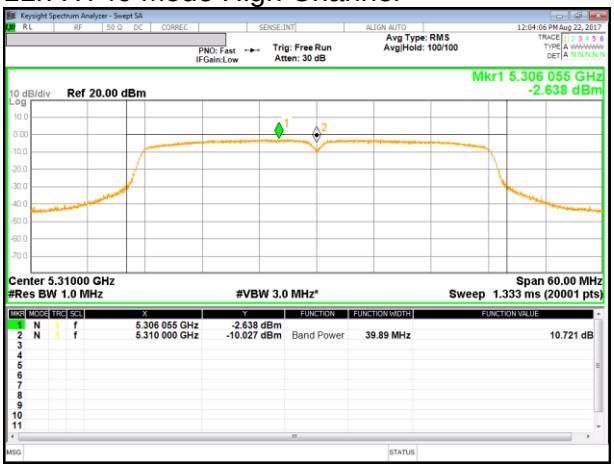
UNII 5.3 GHz IEEE 802.11n HT40 mode

11n HT40 Mode Low Channel

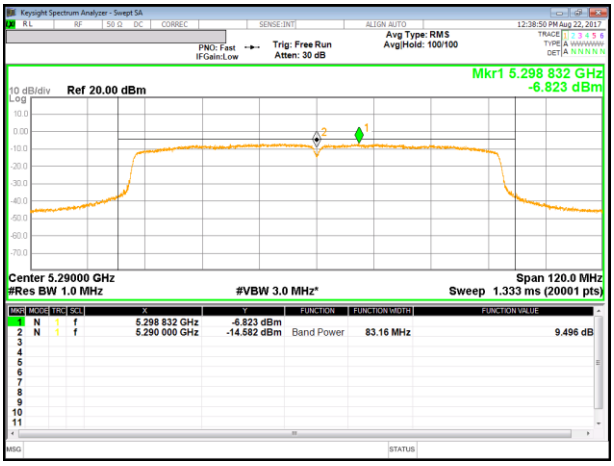


11n HT40 Mode High Channel



UNII 5.3 GHz IEEE 802.11ac VHT80 mode

11ac VHT80 Mode Middle Channel



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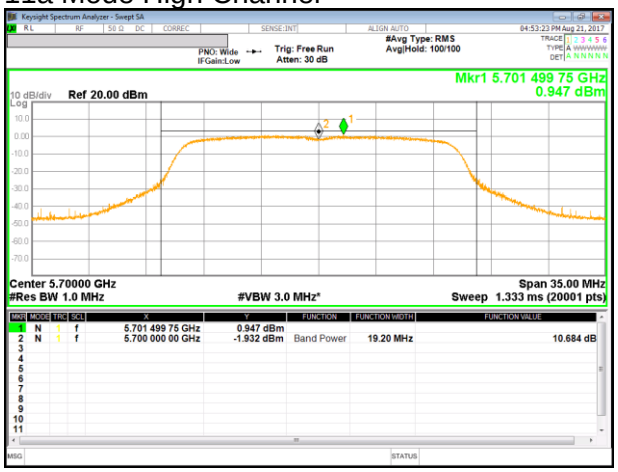
UNII 5.5 GHz IEEE 802.11a mode

11a Mode Low Channel

11a Mode Middle Channel

11a Mode High Channel



11a Mode Straddle Channel

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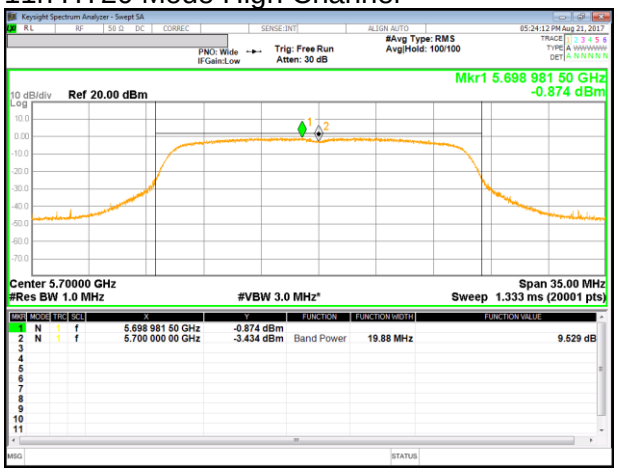
UNII 5.5 GHz IEEE 802.11n HT20 mode

11n HT20 Mode Low Channel

11n HT20 Mode Middle Channel

11n HT20 Mode High Channel



11n HT20 Mode Straddle Channel

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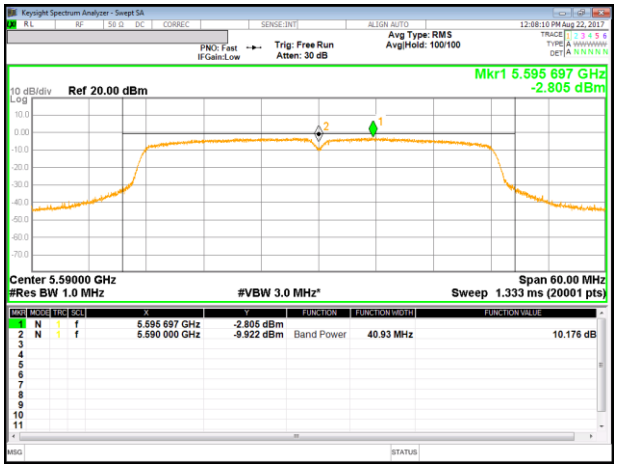
UNII 5.5 GHz IEEE 802.11n HT40 mode

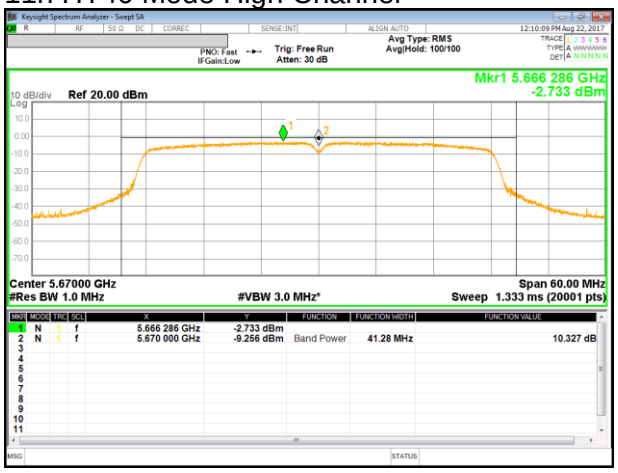
11n HT40 Mode Low Channel

11n HT40 Mode Middle Channel

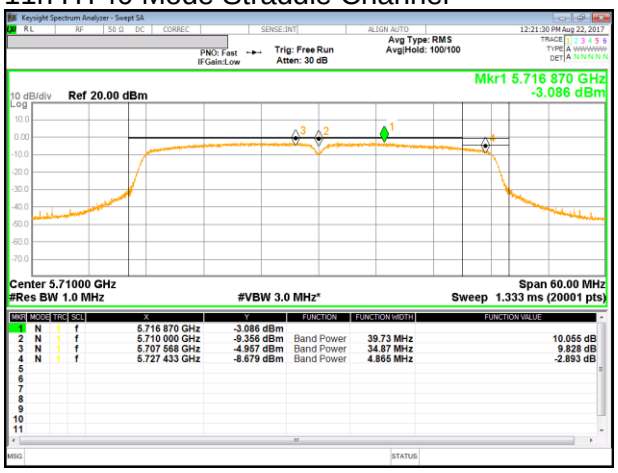
11n HT40 Mode Middle Channel



11n HT40 Mode High Channel



11n HT40 Mode Straddle Channel



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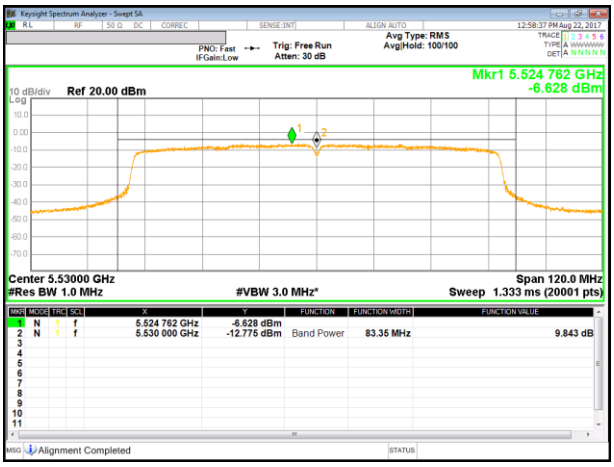
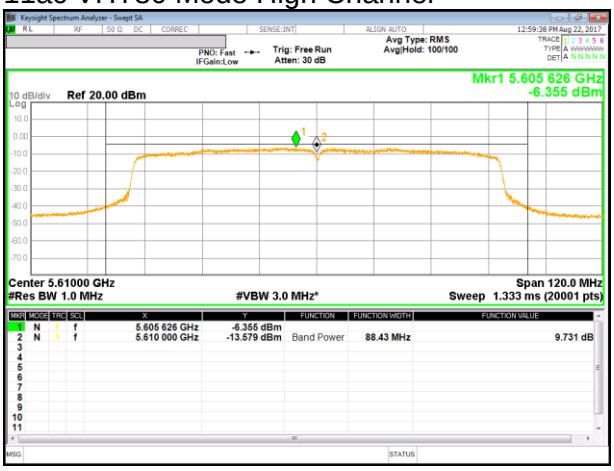
UNII 5.5 GHz IEEE 802.11ac VHT80 mode

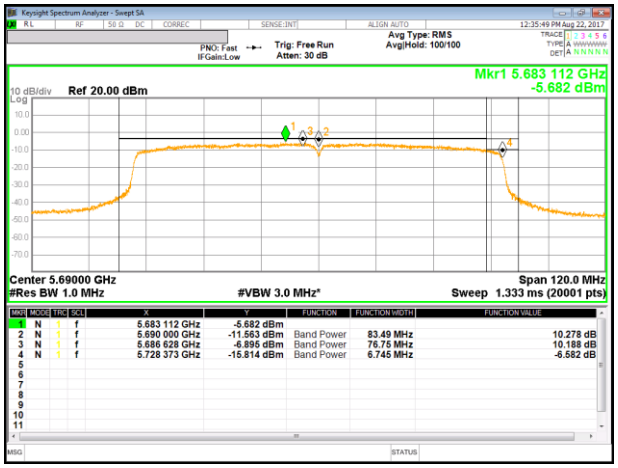
11ac VHT80 Mode Low Channel



11ac VHT80 Mode High Channel



11ac VHT80 Mode Straddle Channel



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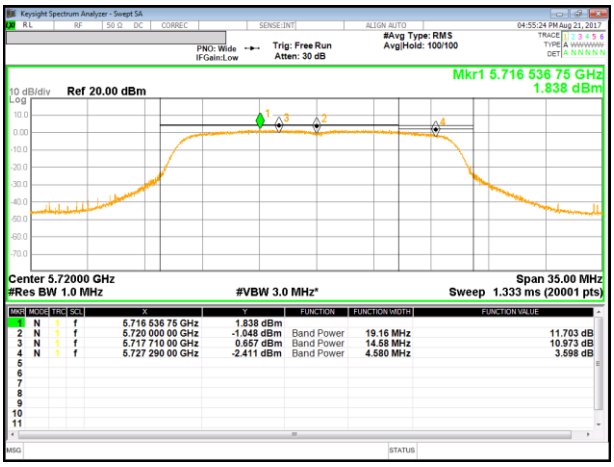
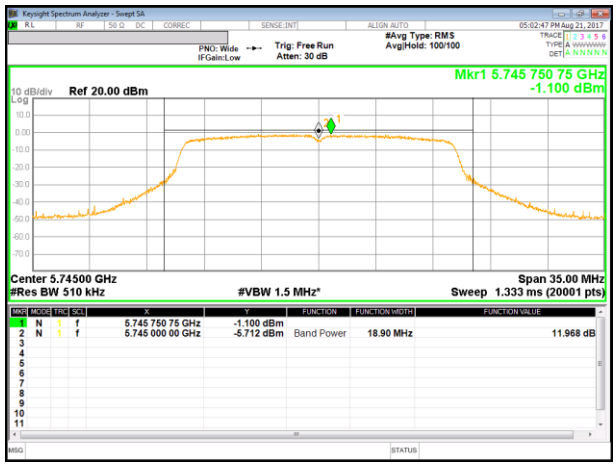
UNII 5.8 GHz IEEE 802.11a mode

11a Mode Straddle Channel

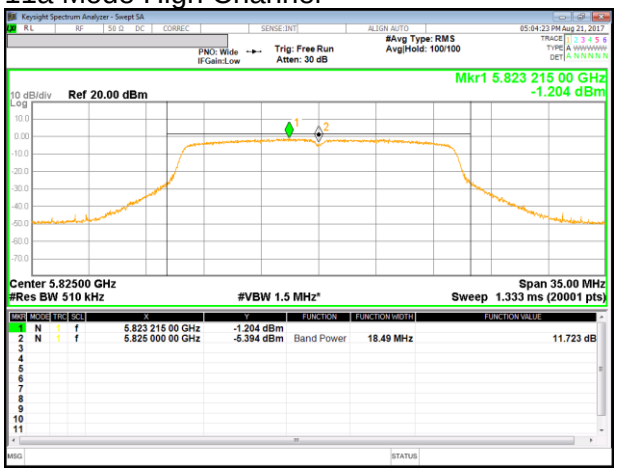


11a Mode Low Channel



11a Mode Middle Channel

11a Mode High Channel



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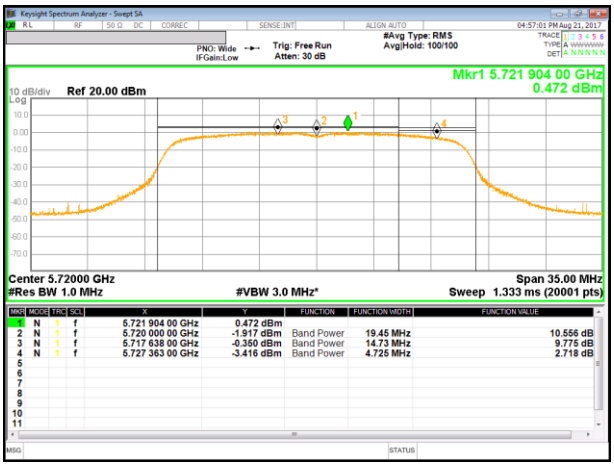
UNII 5.8 GHz IEEE 802.11n HT20 mode

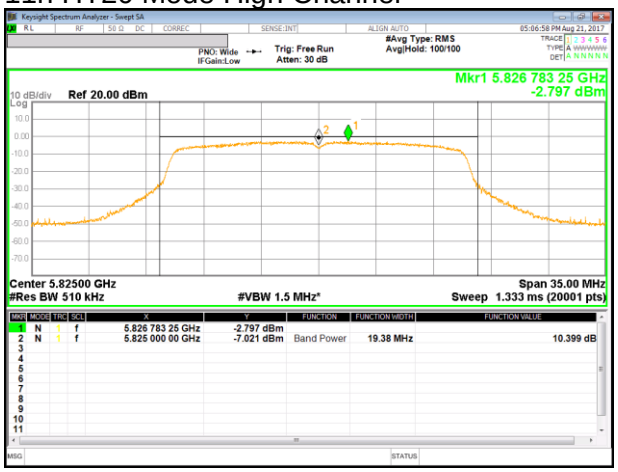
11n HT20 Mode Straddle Channel



11n HT20 Mode Low Channel

11n HT20 Mode Middle Channel

11n HT20 Mode High Channel



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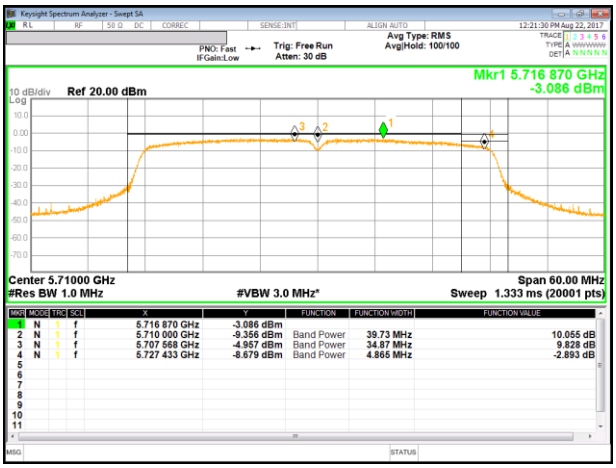
UNII 5.8 GHz IEEE 802.11n HT40 mode

11n HT40 Mode Straddle Channel



11n HT40 Mode Low Channel

11n HT40 Mode Middle Channel

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