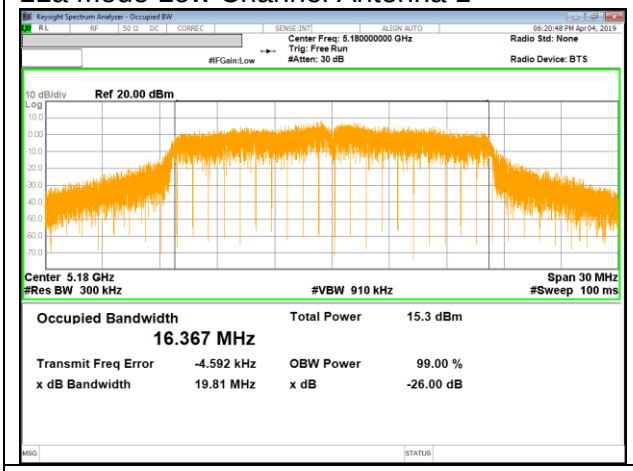
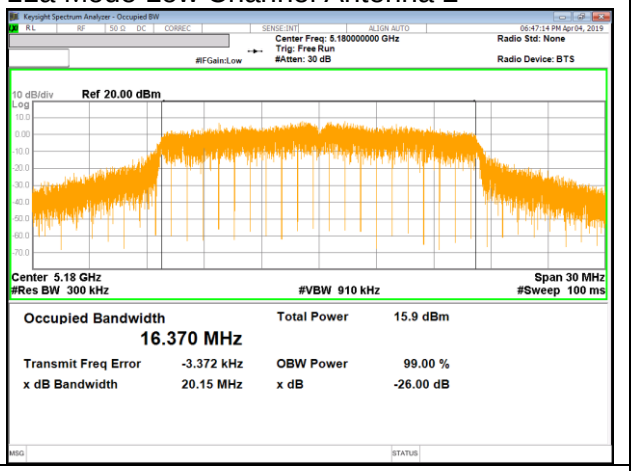
9.4.17. 99% BANDWIDTH PLOTS

UNII 5.2 GHz IEEE 802.11a mode

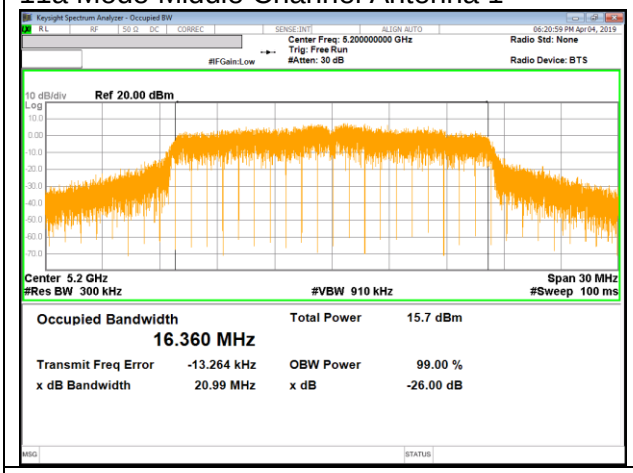
11a Mode Low Channel Antenna 1



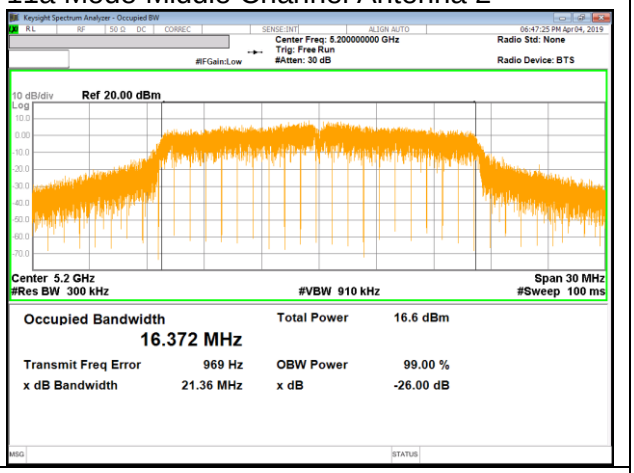
11a Mode Low Channel Antenna 2



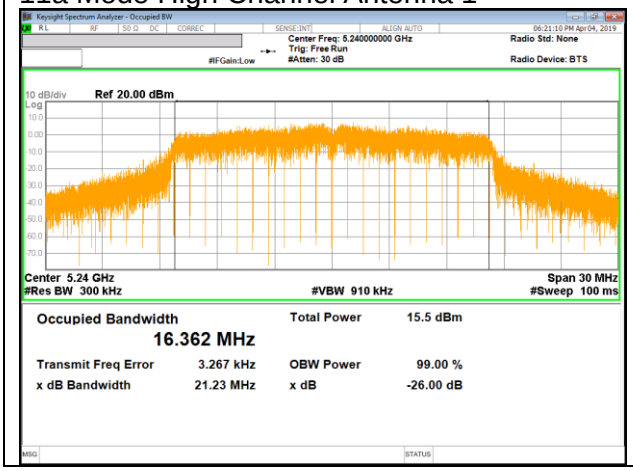
11a Mode Middle Channel Antenna 1



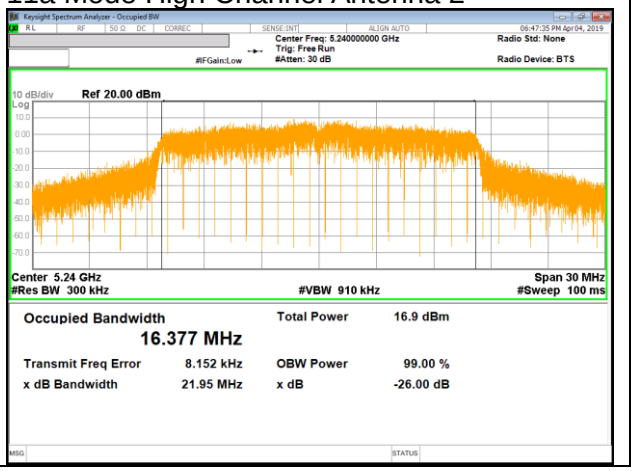
11a Mode Middle Channel Antenna 2



11a Mode High Channel Antenna 1



11a Mode High Channel Antenna 2



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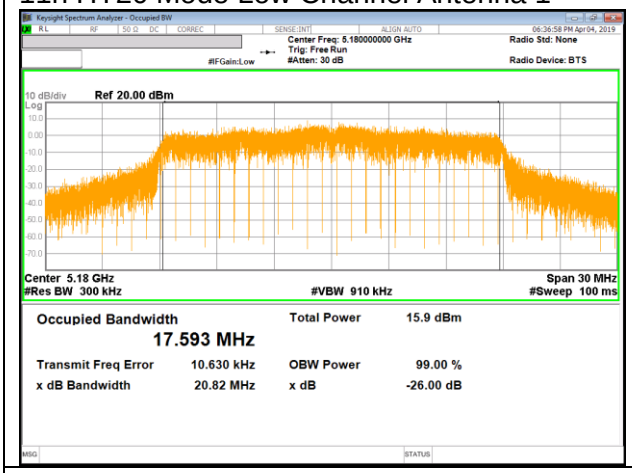
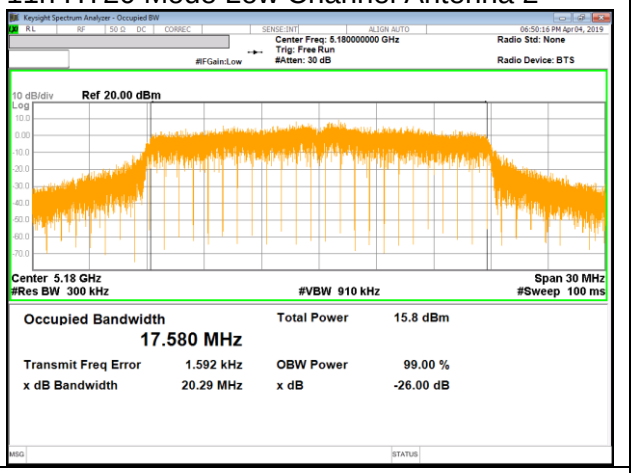
UNII 5.2 GHz IEEE 802.11n HT20 mode

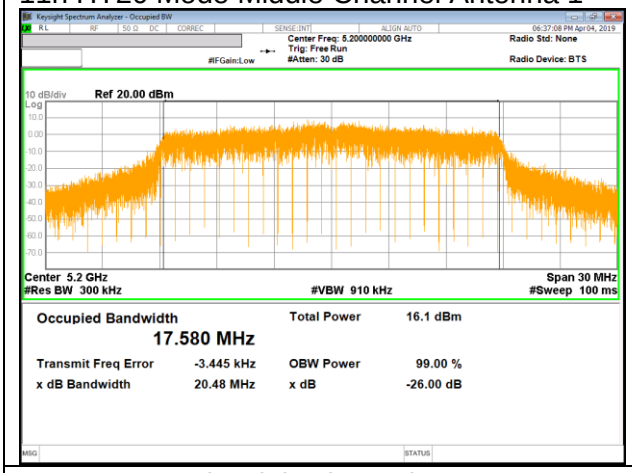
11n HT20 Mode Low Channel Antenna 1



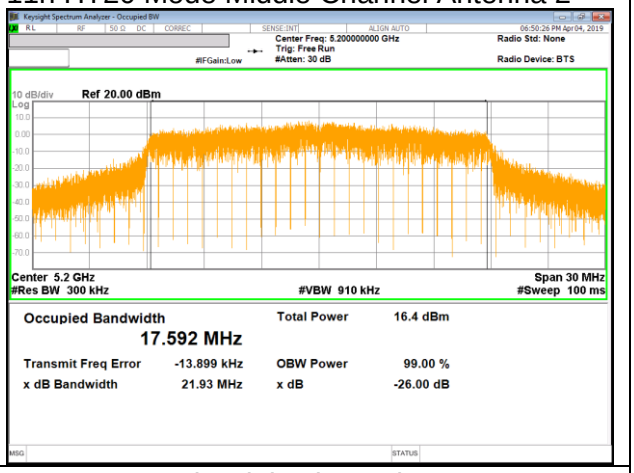
11n HT20 Mode Low Channel Antenna 2



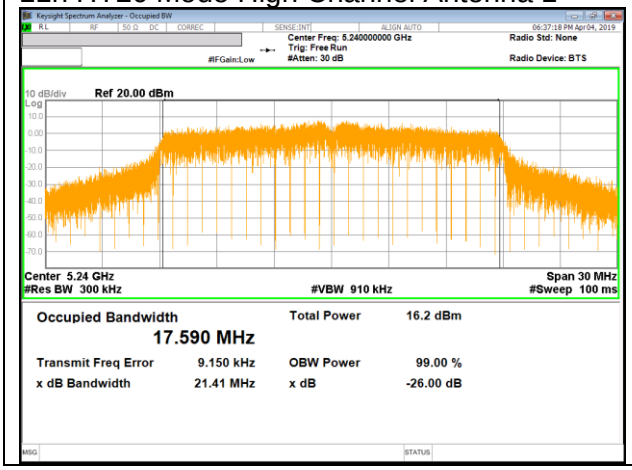
11n HT20 Mode Middle Channel Antenna 1



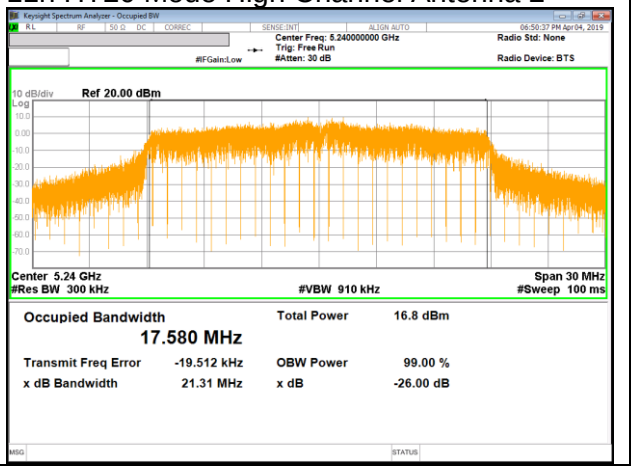
11n HT20 Mode Middle Channel Antenna 2



11n HT20 Mode High Channel Antenna 1



11n HT20 Mode High Channel Antenna 2



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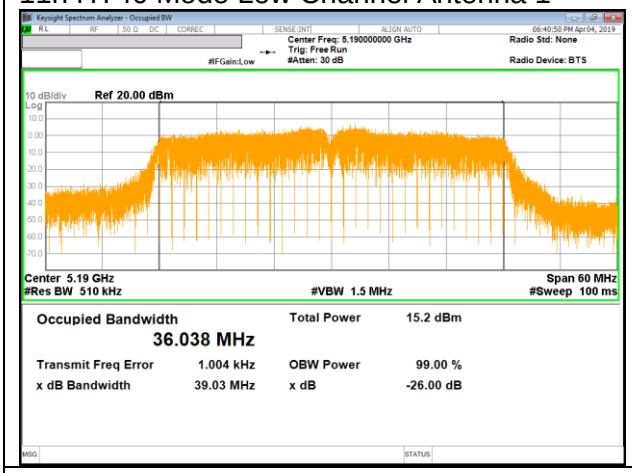
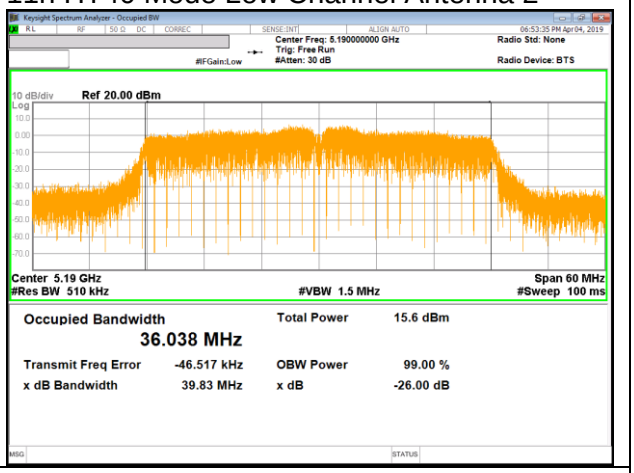
UNII 5.2 GHz IEEE 802.11n HT40 mode

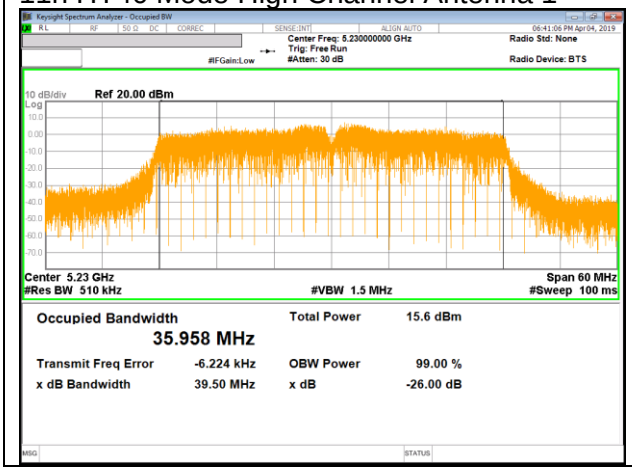
11n HT40 Mode Low Channel Antenna 1



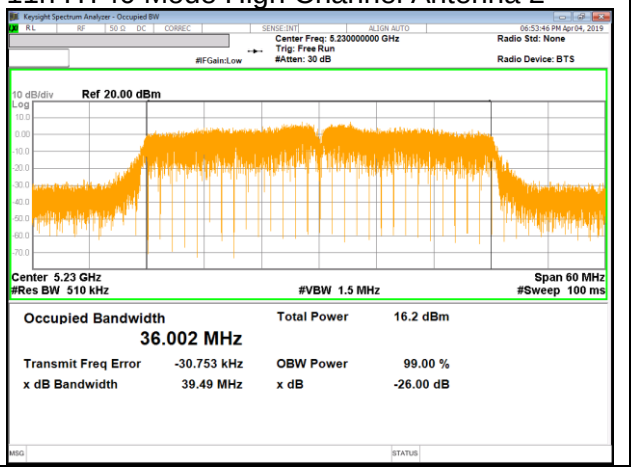
11n HT40 Mode Low Channel Antenna 2



11n HT40 Mode High Channel Antenna 1

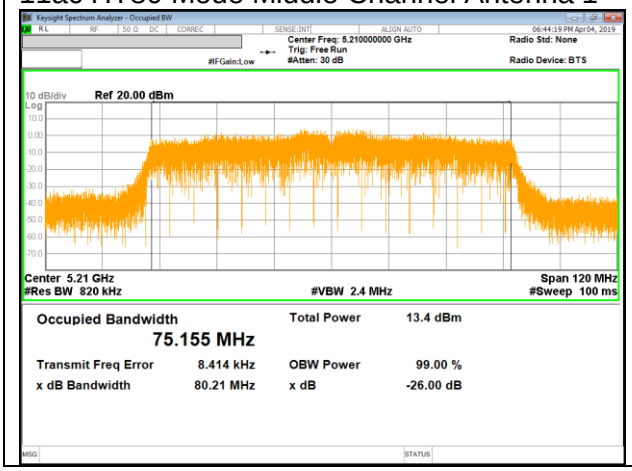


11n HT40 Mode High Channel Antenna 2

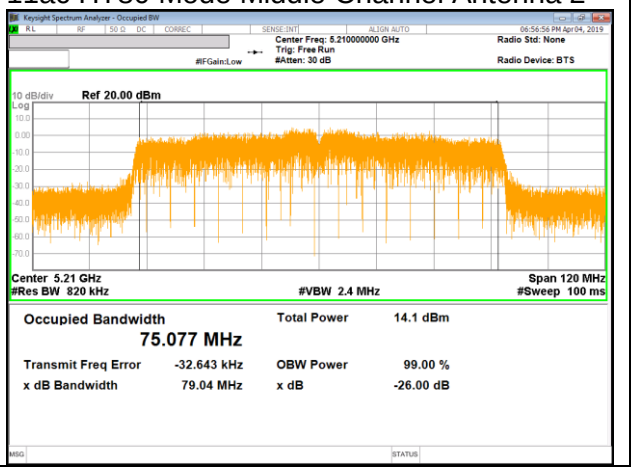


UNII 5.2 GHz IEEE 802.11ac VHT80 mode

11ac HT80 Mode Middle Channel Antenna 1



11ac HT80 Mode Middle Channel Antenna 2



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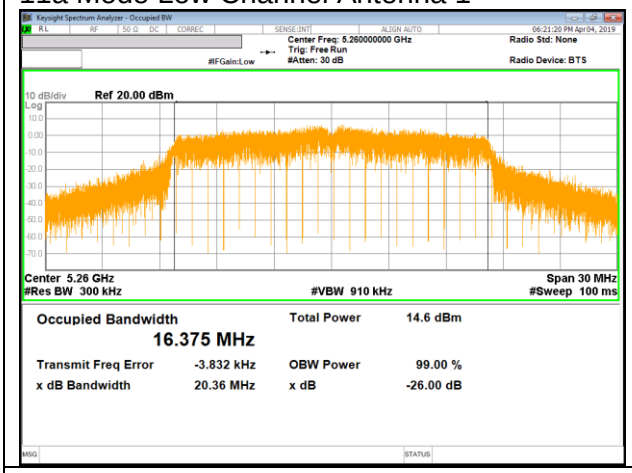
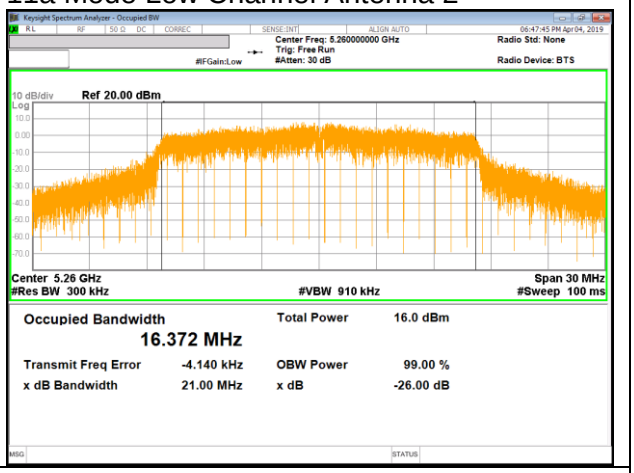
UNII 5.3 GHz IEEE 802.11a mode

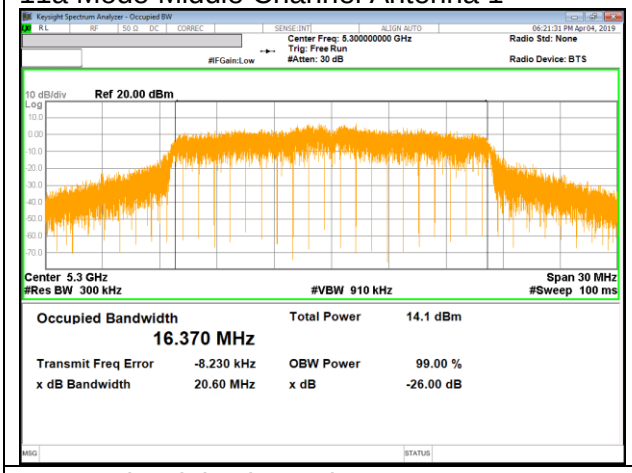
11a Mode Low Channel Antenna 1



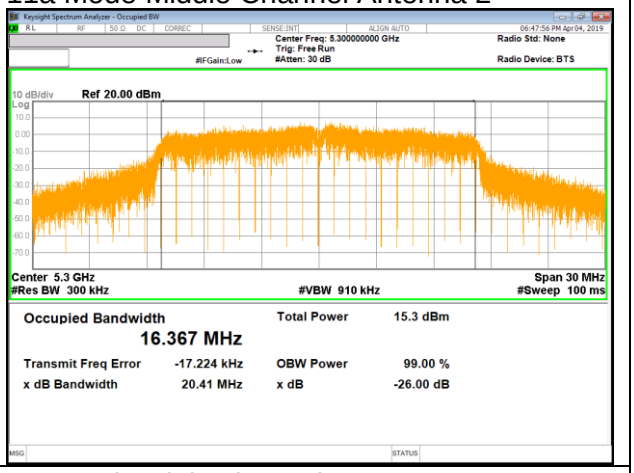
11a Mode Low Channel Antenna 2



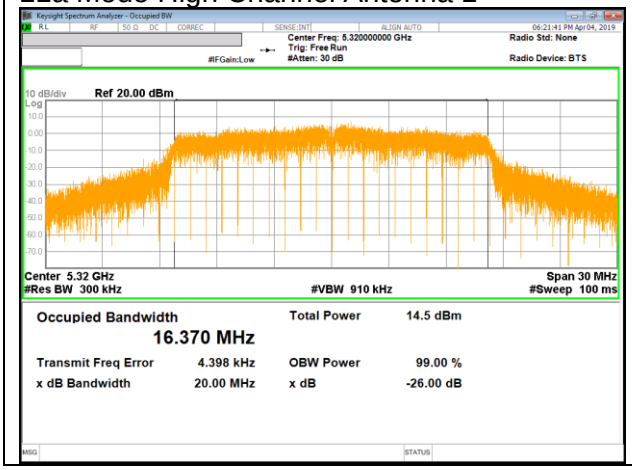
11a Mode Middle Channel Antenna 1



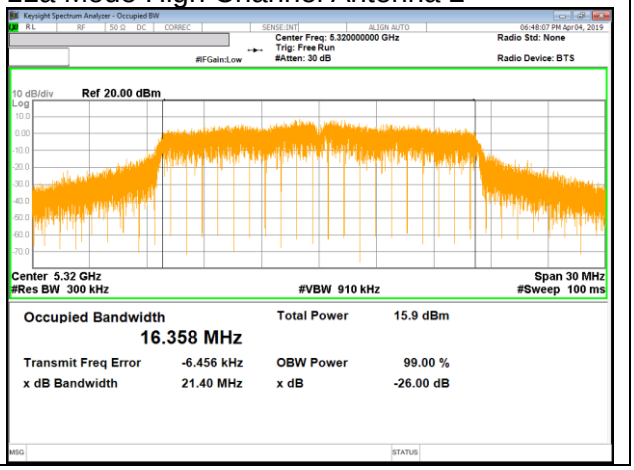
11a Mode Middle Channel Antenna 2



11a Mode High Channel Antenna 1



11a Mode High Channel Antenna 2



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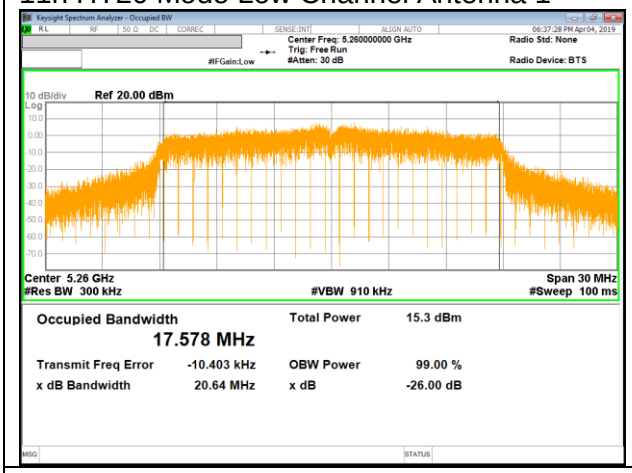
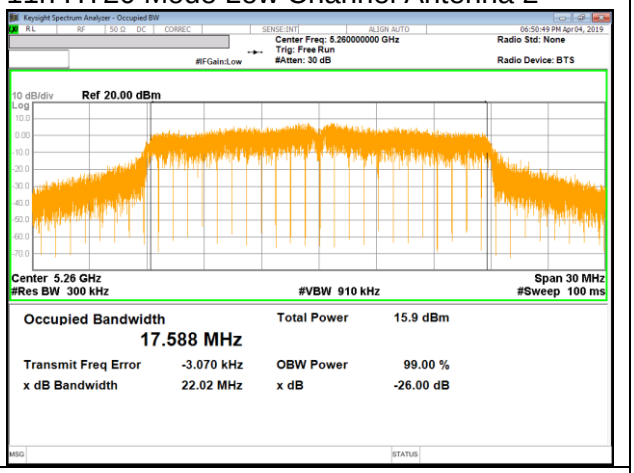
UNII 5.3 GHz IEEE 802.11n HT20 mode

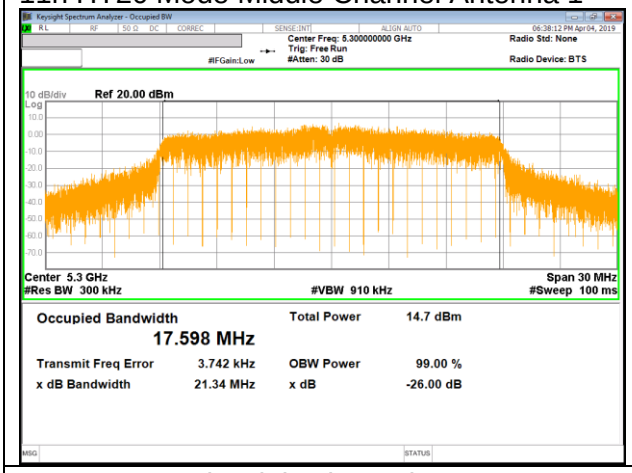
11n HT20 Mode Low Channel Antenna 1



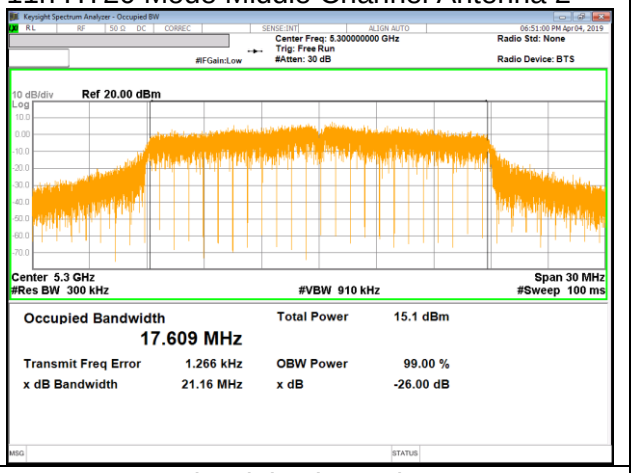
11n HT20 Mode Low Channel Antenna 2



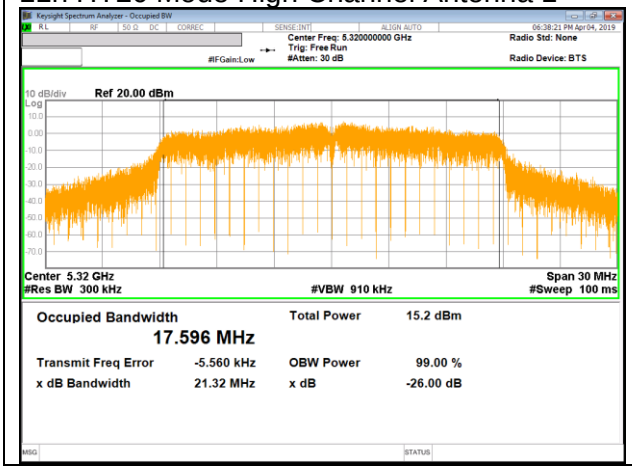
11n HT20 Mode Middle Channel Antenna 1



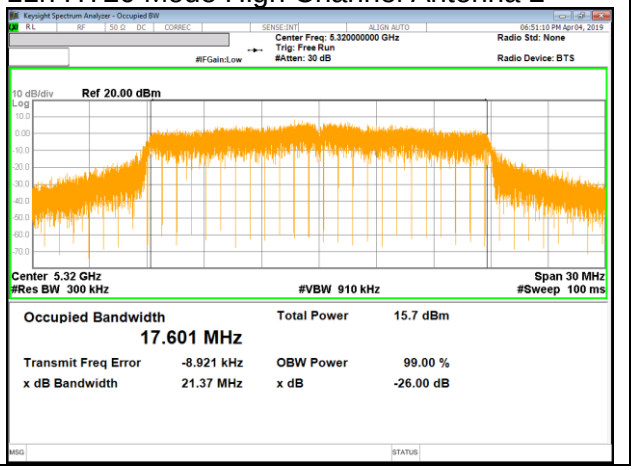
11n HT20 Mode Middle Channel Antenna 2



11n HT20 Mode High Channel Antenna 1



11n HT20 Mode High Channel Antenna 2



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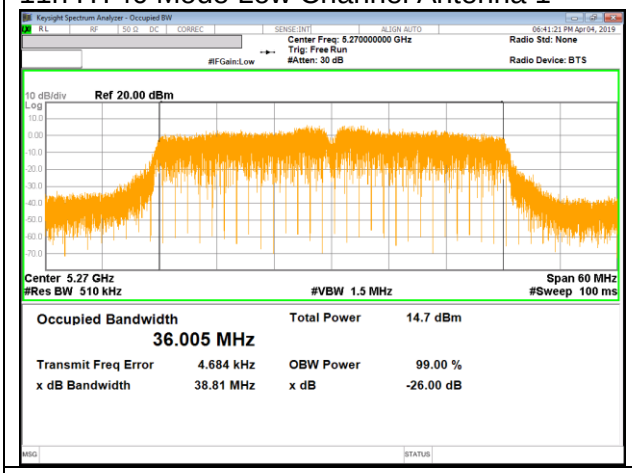
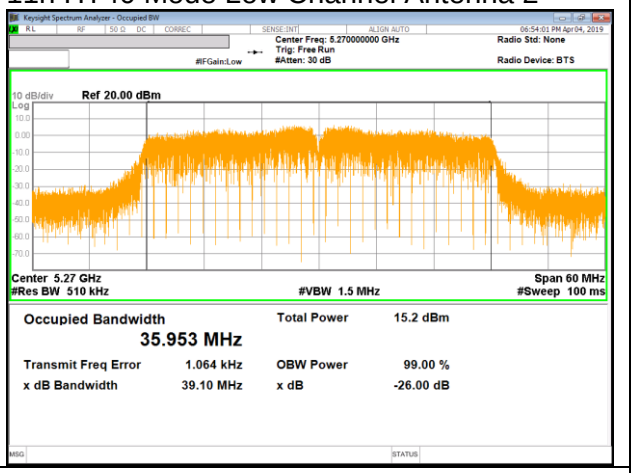
UNII 5.3 GHz IEEE 802.11n HT40 mode

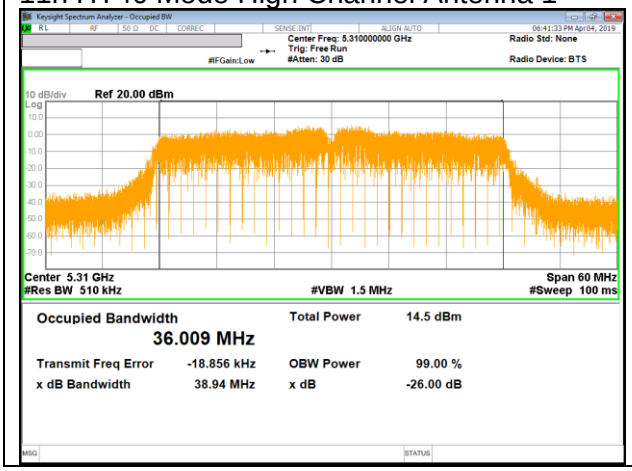
11n HT40 Mode Low Channel Antenna 1



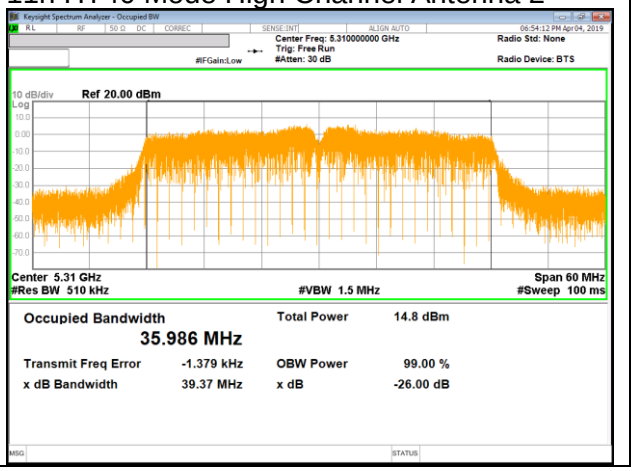
11n HT40 Mode Low Channel Antenna 2



11n HT40 Mode High Channel Antenna 1

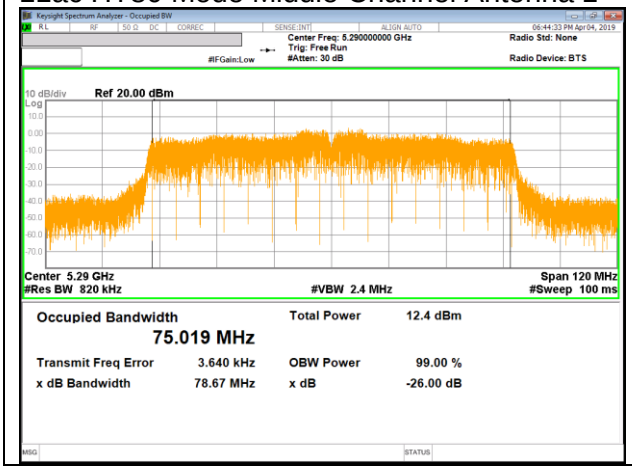


11n HT40 Mode High Channel Antenna 2

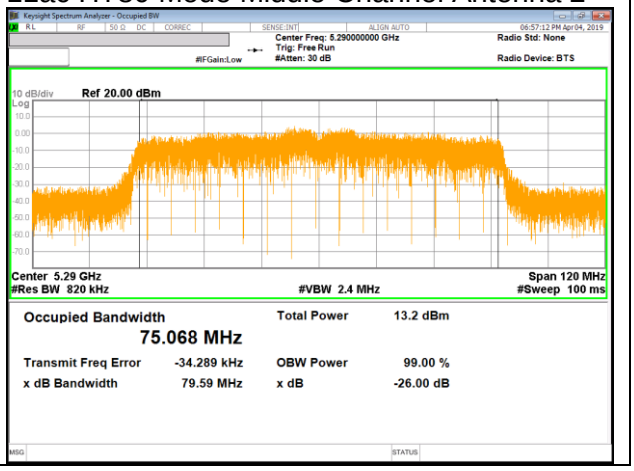


UNII 5.3 GHz IEEE 802.11ac VHT80 mode

11ac HT80 Mode Middle Channel Antenna 1



11ac HT80 Mode Middle Channel Antenna 2



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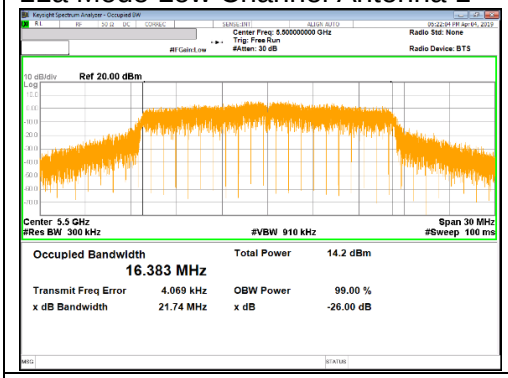
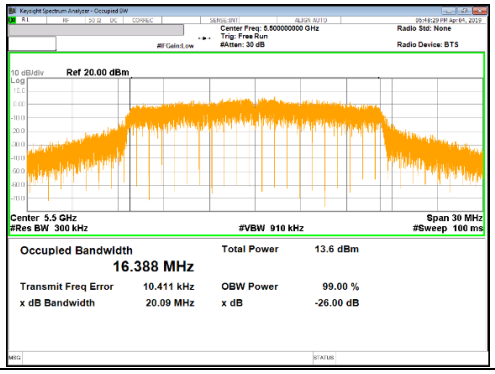
UNII 5.5 GHz IEEE 802.11a mode

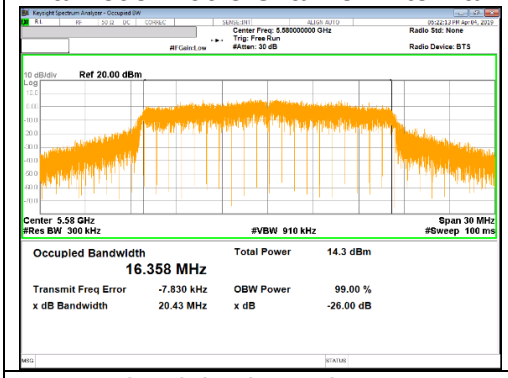
11a Mode Low Channel Antenna 1



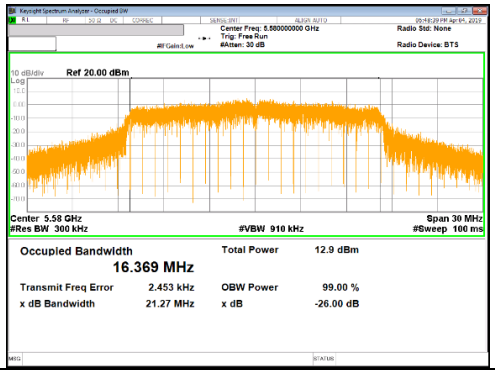
11a Mode Low Channel Antenna 2



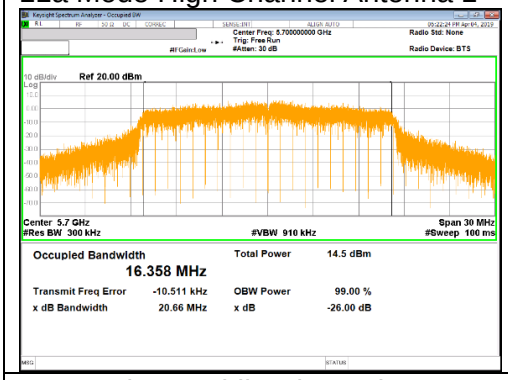
11a Mode Middle Channel Antenna 1



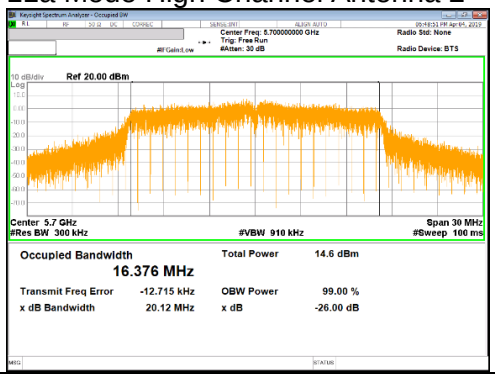
11a Mode Middle Channel Antenna 2



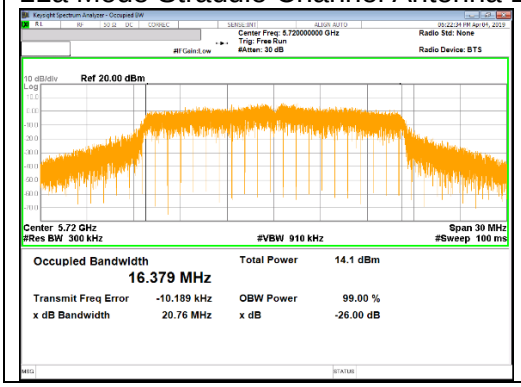
11a Mode High Channel Antenna 1



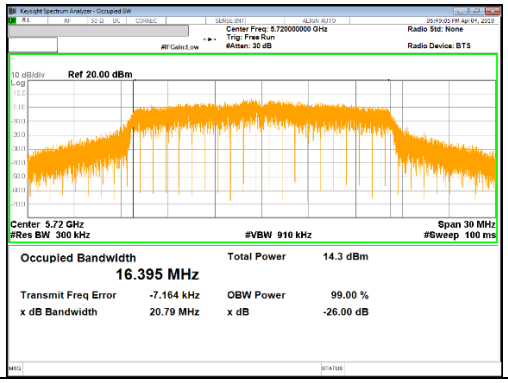
11a Mode High Channel Antenna 2



11a Mode Straddle Channel Antenna 1



11a Mode Straddle Channel Antenna 2



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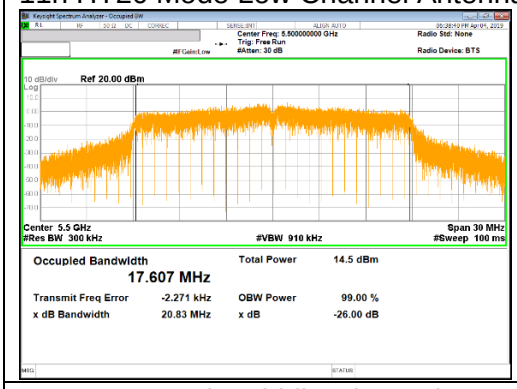
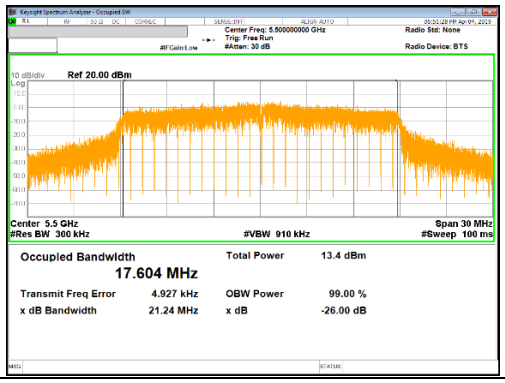
UNII 5.5 GHz IEEE 802.11n HT20 mode

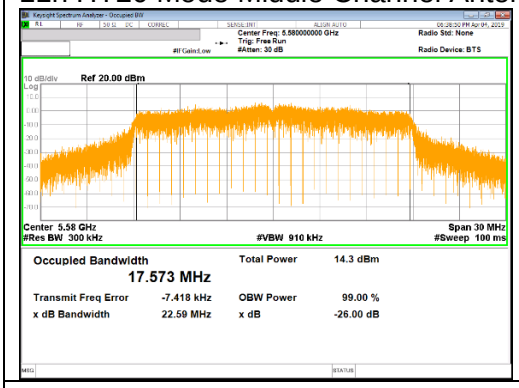
11n HT20 Mode Low Channel Antenna 1



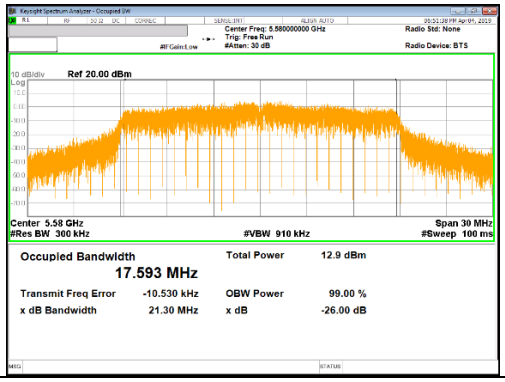
11n HT20 Mode Low Channel Antenna 2



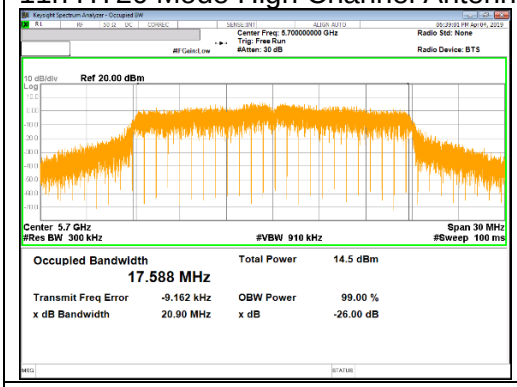
11n HT20 Mode Middle Channel Antenna 1



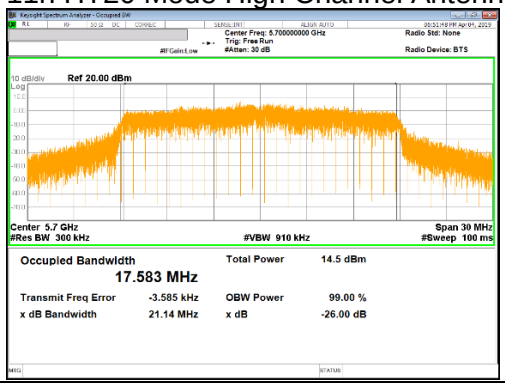
11n HT20 Mode Middle Channel Antenna 2



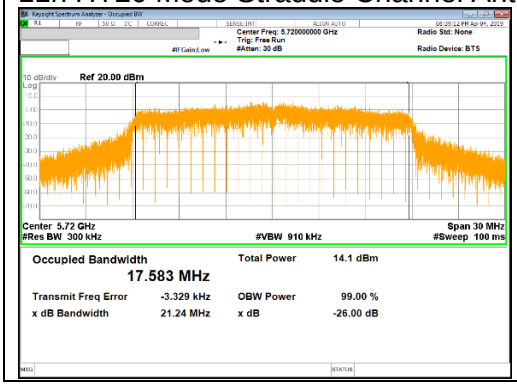
11n HT20 Mode High Channel Antenna 1



11n HT20 Mode High Channel Antenna 2



11n HT20 Mode Straddle Channel Antenna 1



11n HT20 Mode Straddle Channel Antenna 2

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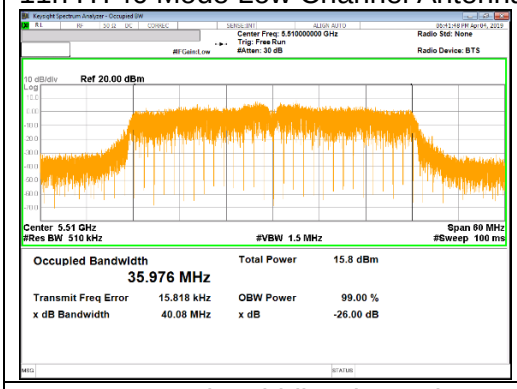
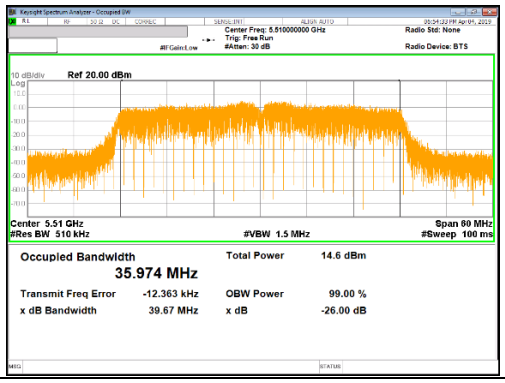
UNII 5.5 GHz IEEE 802.11n HT40 mode

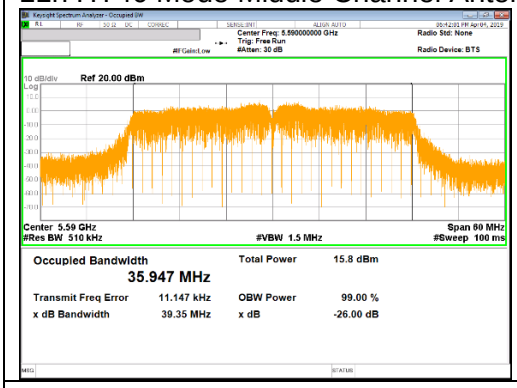
11n HT40 Mode Low Channel Antenna 1



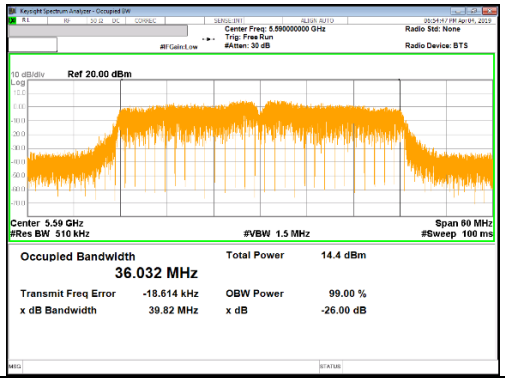
11n HT40 Mode Low Channel Antenna 2



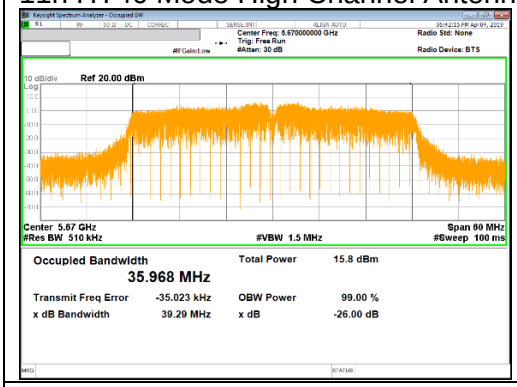
11n HT40 Mode Middle Channel Antenna 1



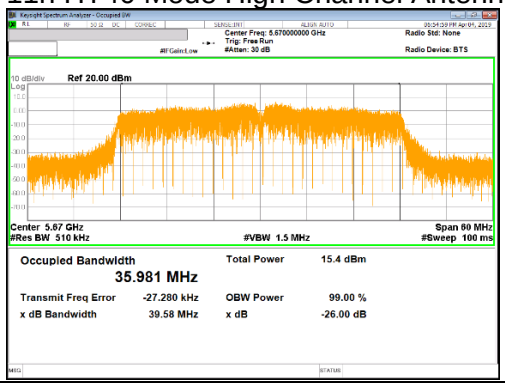
11n HT40 Mode Middle Channel Antenna 2



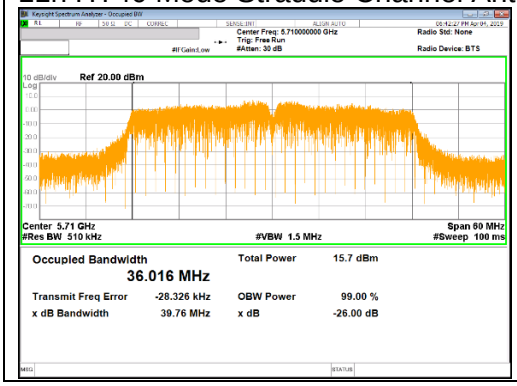
11n HT40 Mode High Channel Antenna 1



11n HT40 Mode High Channel Antenna 2



11n HT40 Mode Straddle Channel Antenna 1



11n HT40 Mode Straddle Channel Antenna 2

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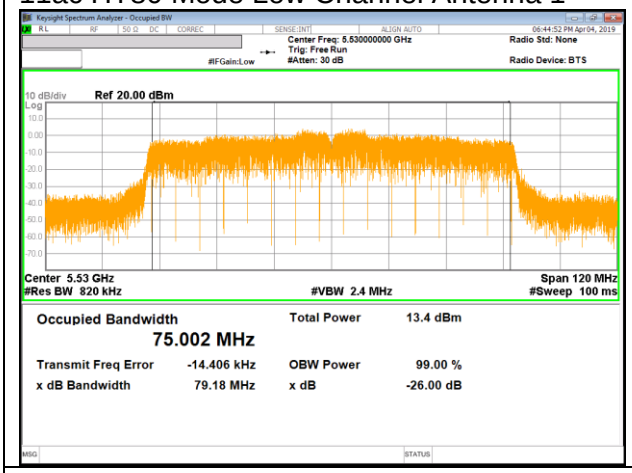
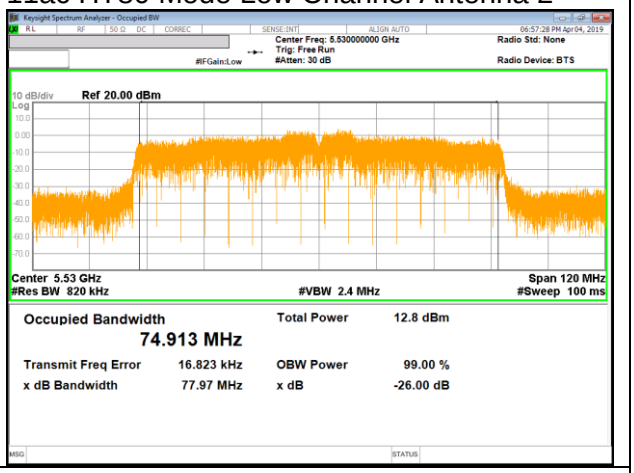
UNII 5.5 GHz IEEE 802.11ac VHT80 mode

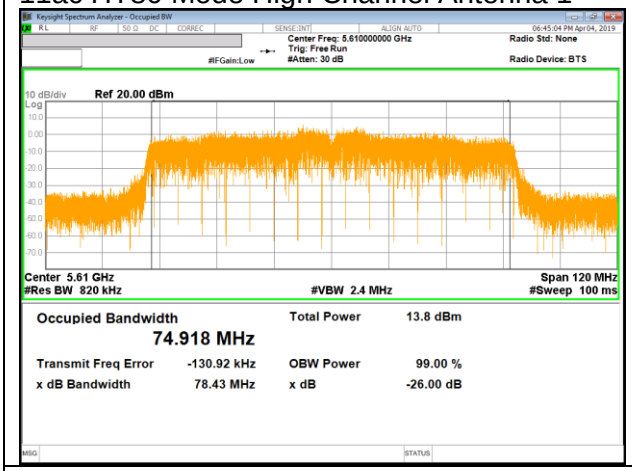
11ac HT80 Mode Low Channel Antenna 1



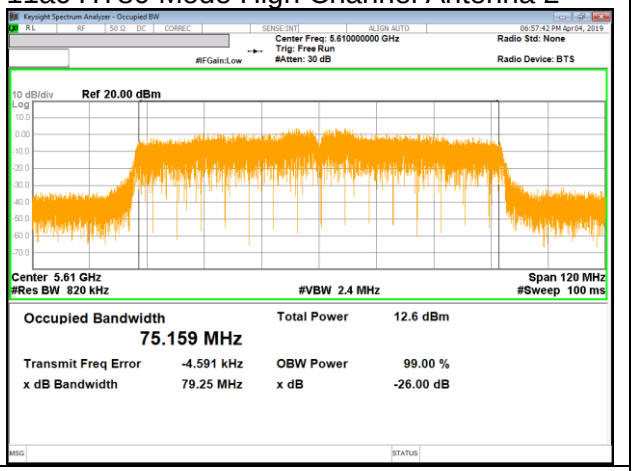
11ac HT80 Mode Low Channel Antenna 2



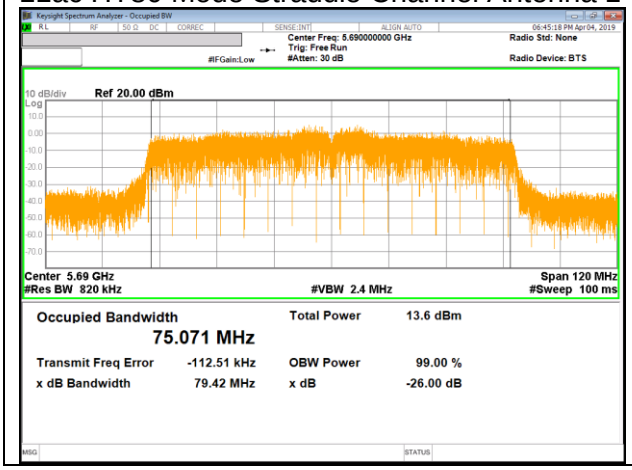
11ac HT80 Mode High Channel Antenna 1



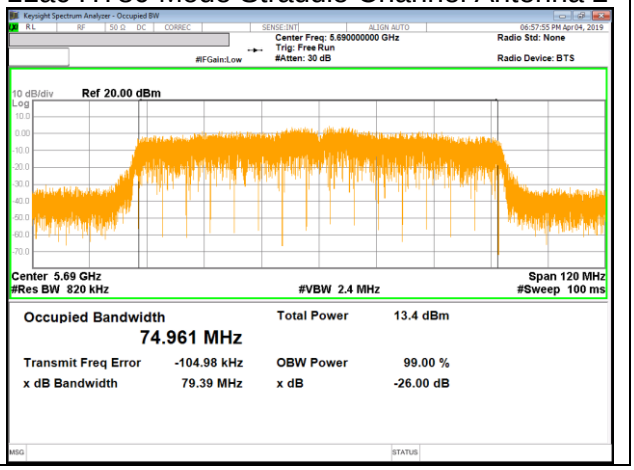
11ac HT80 Mode High Channel Antenna 2



11ac HT80 Mode Straddle Channel Antenna 1



11ac HT80 Mode Straddle Channel Antenna 2



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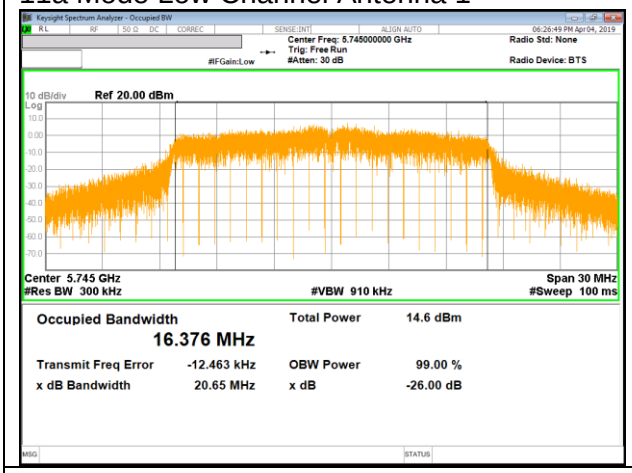
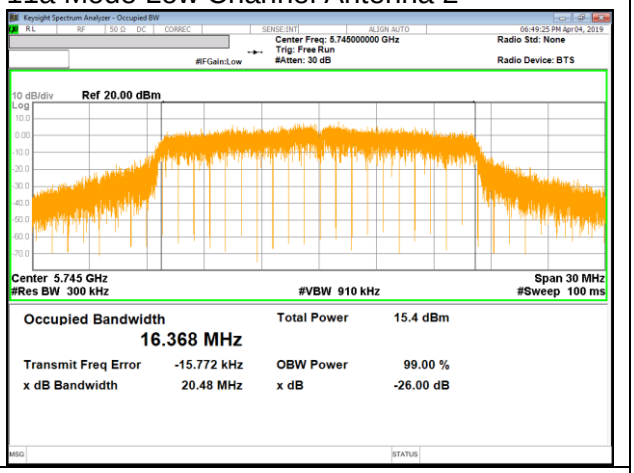
UNII 5.8 GHz IEEE 802.11a mode

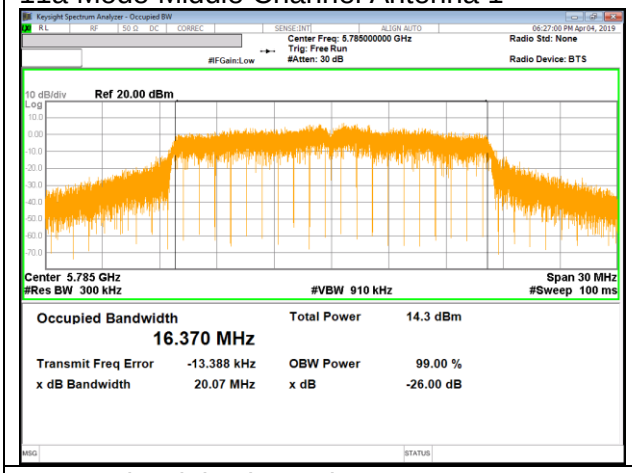
11a Mode Low Channel Antenna 1



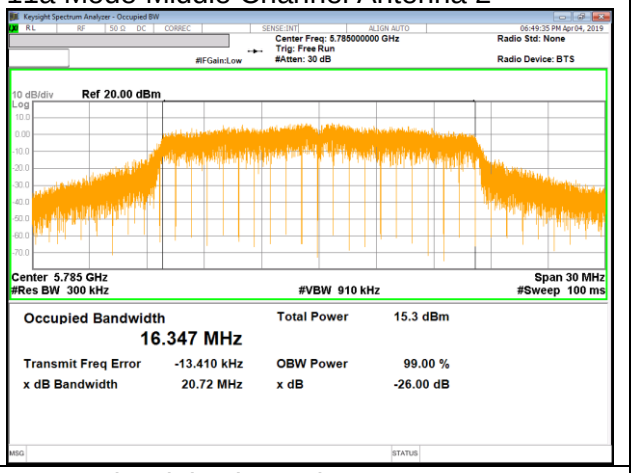
11a Mode Low Channel Antenna 2



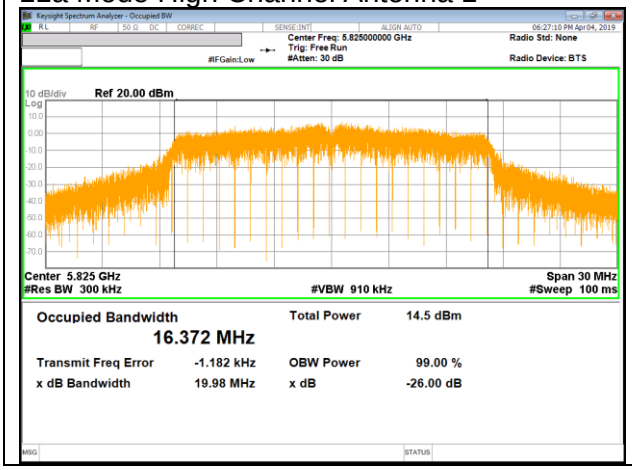
11a Mode Middle Channel Antenna 1



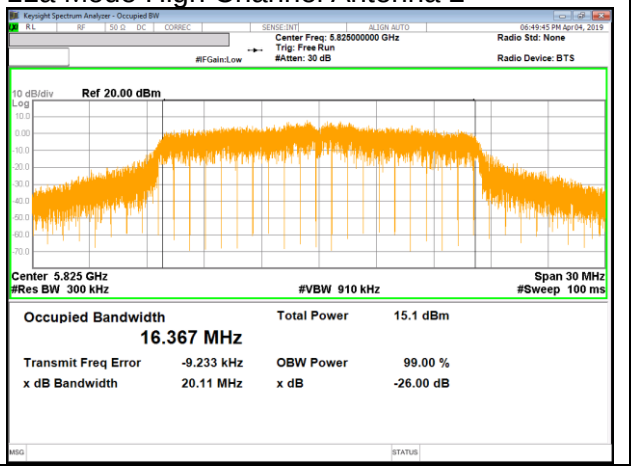
11a Mode Middle Channel Antenna 2



11a Mode High Channel Antenna 1



11a Mode High Channel Antenna 2



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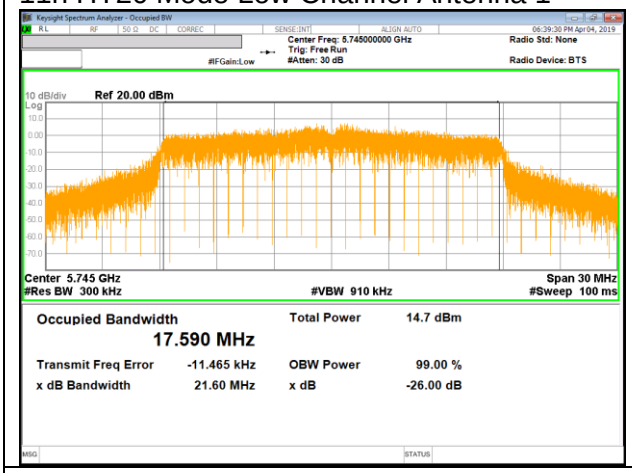
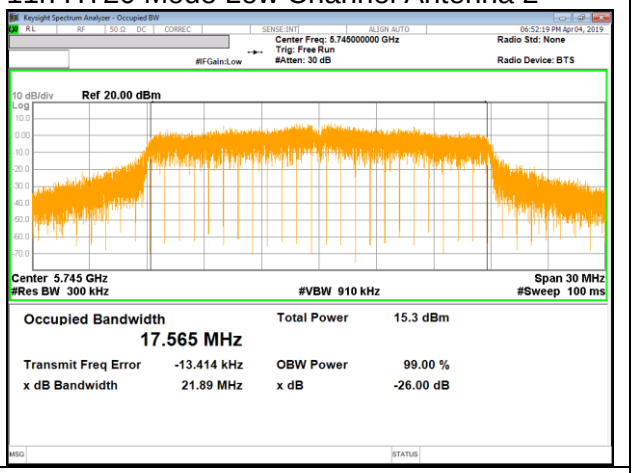
UNII 5.8 GHz IEEE 802.11n HT20 mode

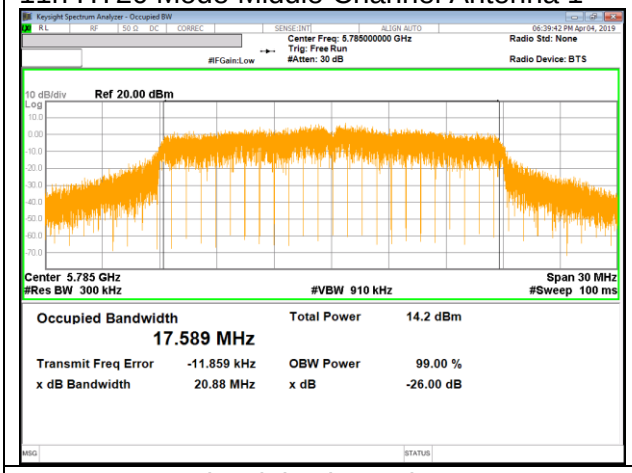
11n HT20 Mode Low Channel Antenna 1



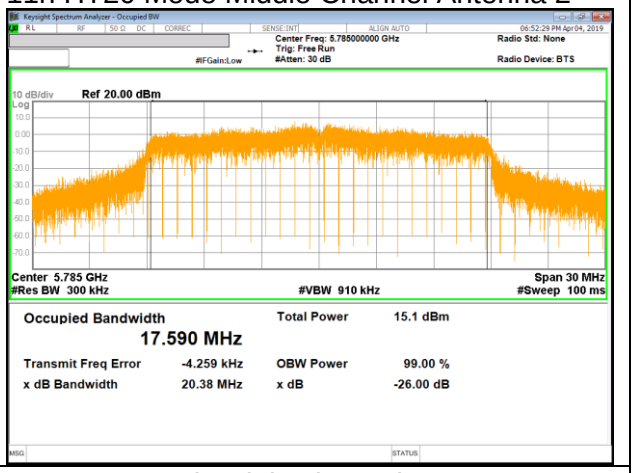
11n HT20 Mode Low Channel Antenna 2



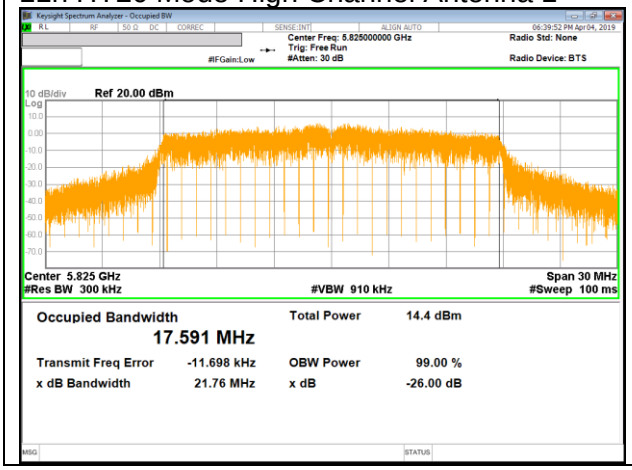
11n HT20 Mode Middle Channel Antenna 1



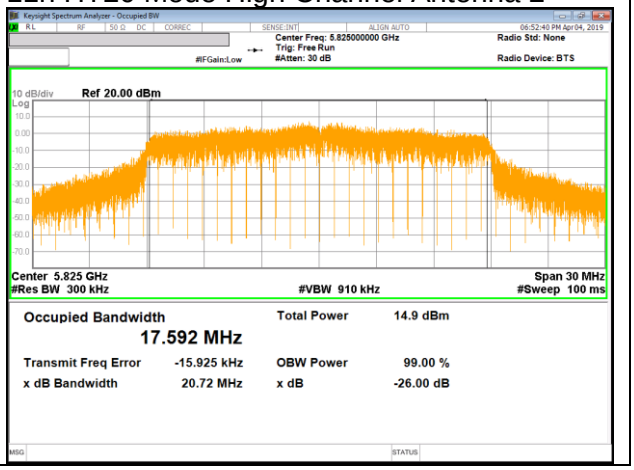
11n HT20 Mode Middle Channel Antenna 2



11n HT20 Mode High Channel Antenna 1



11n HT20 Mode High Channel Antenna 2



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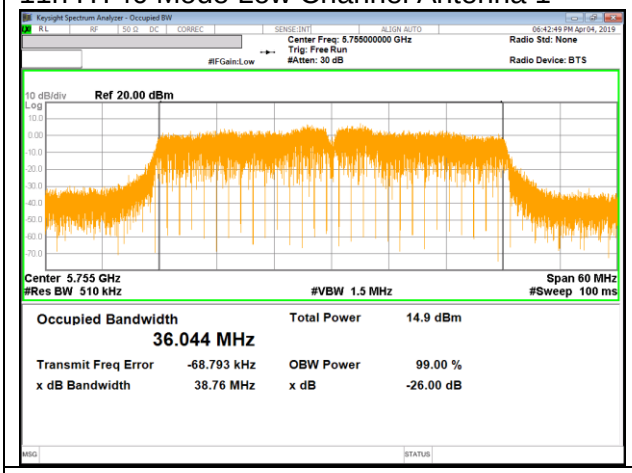
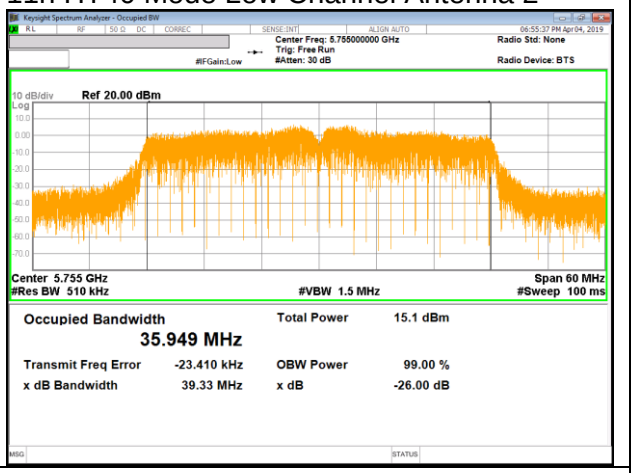
UNII 5.8 GHz IEEE 802.11n HT40 mode

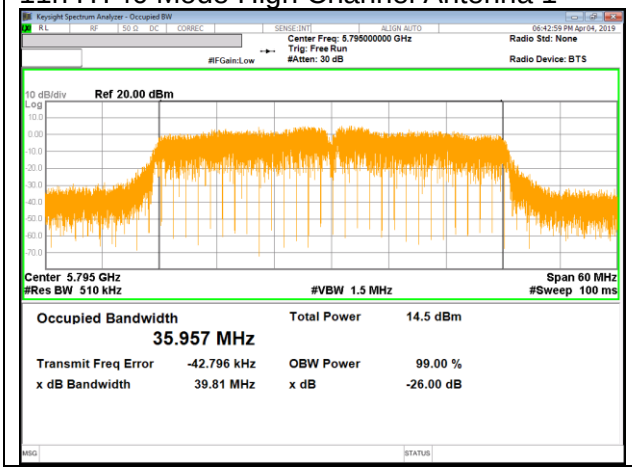
11n HT40 Mode Low Channel Antenna 1



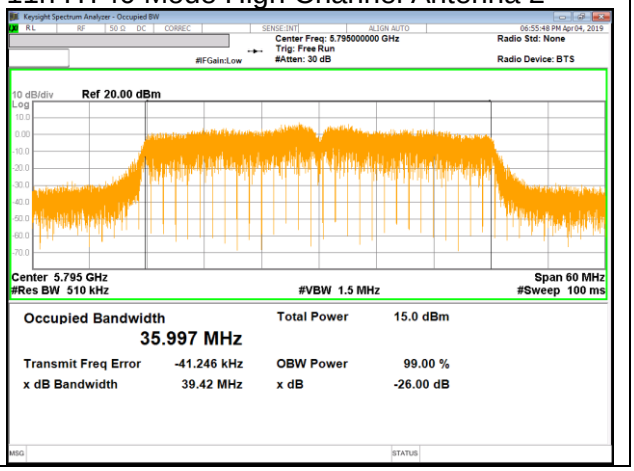
11n HT40 Mode Low Channel Antenna 2



11n HT40 Mode High Channel Antenna 1

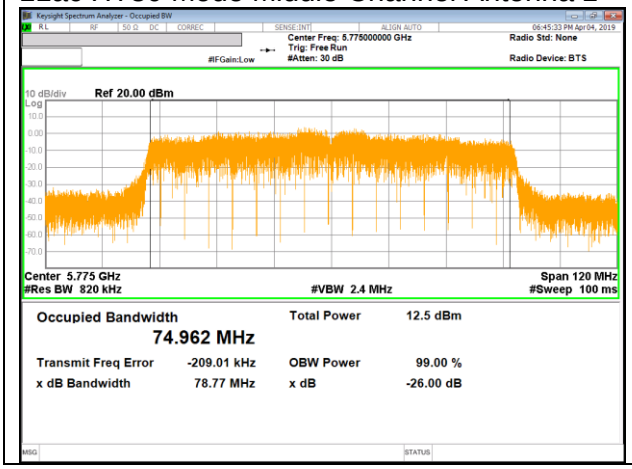


11n HT40 Mode High Channel Antenna 2

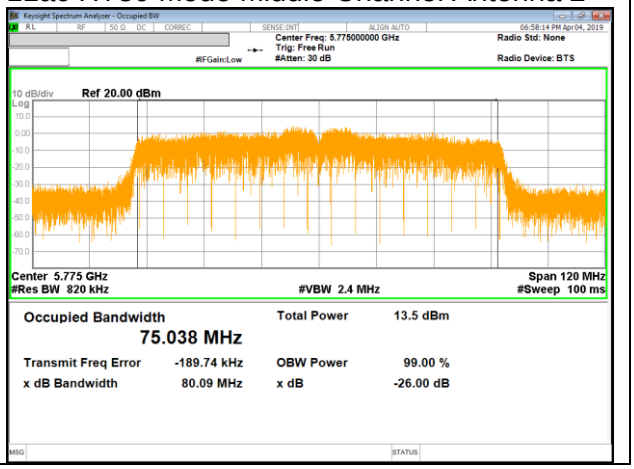


UNII 5.8 GHz IEEE 802.11ac VHT80 mode

11ac HT80 Mode Middle Channel Antenna 1



11ac HT80 Mode Middle Channel Antenna 2



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10. ANTENNA PORT TEST RESULTS

10.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407

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]
		Antenna 1	Antenna 2	
Straddle	5720	2.325	2.715	0.5
Low	5745	10.130	14.040	0.5
Mid	5785	10.040	13.140	0.5
High	5825	13.110	13.530	0.5
Worst		3.170		

10.1.2. 802.11n HT20 MODE IN THE 5.8 GHz BAND

Channel	Frequency [MHz]	6 dB Bandwidth [MHz]		Minimum Limit [MHz]
		Antenna 1	Antenna 2	
Straddle	5720	3.200	2.520	0.5
Low	5745	15.040	15.900	0.5
Mid	5785	10.010	13.860	0.5
High	5825	12.550	15.630	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]
		Antenna 1	Antenna 2	
Straddle	5710	0.035	1.250	0.5
Low	5755	35.860	31.250	0.5
High	5795	35.890	32.590	0.5
Worst		3.145		

10.1.4. 802.11n VHT80 MODE IN THE 5.8 GHz BAND

Channel	Frequency [MHz]	6 dB Bandwidth [MHz]		Minimum Limit [MHz]
		Antenna 1	Antenna 2	
Straddle	5690	2.520	0.035	0.5
Middle	5775	71.290	71.360	0.5
Worst		21.000		

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