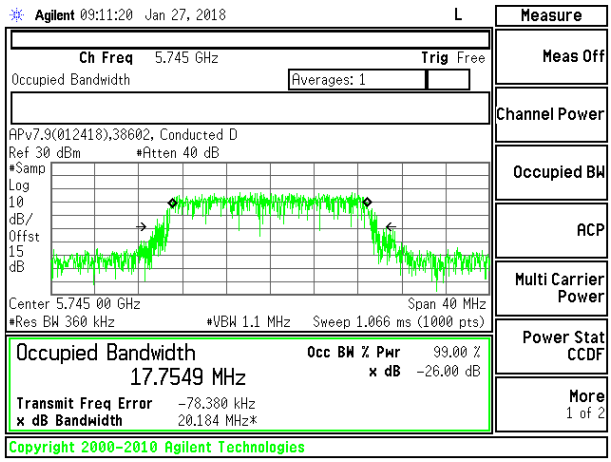
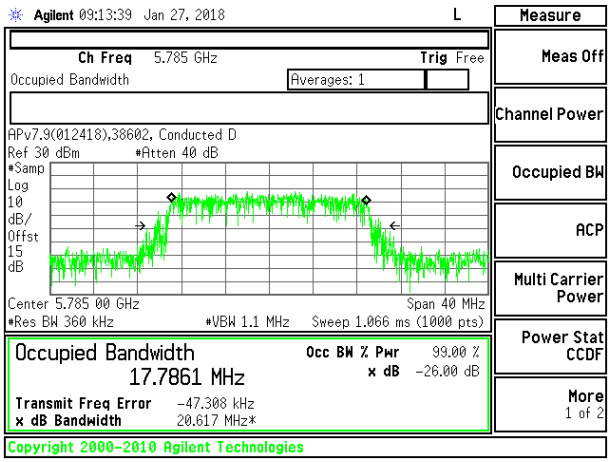
8.3.10. 802.11n HT20 MODE IN THE 5.8 GHz BAND

1TX Antenna 6 MODE

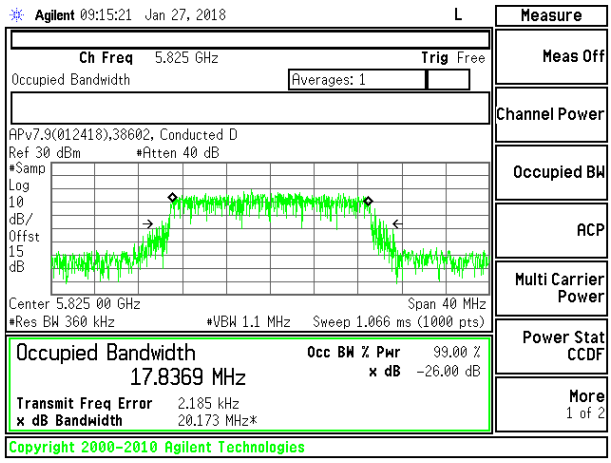
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5745	17.755
Mid	5785	17.786
High	5825	17.837



LOW CHANNEL



MID CHANNEL



HIGH CHANNEL

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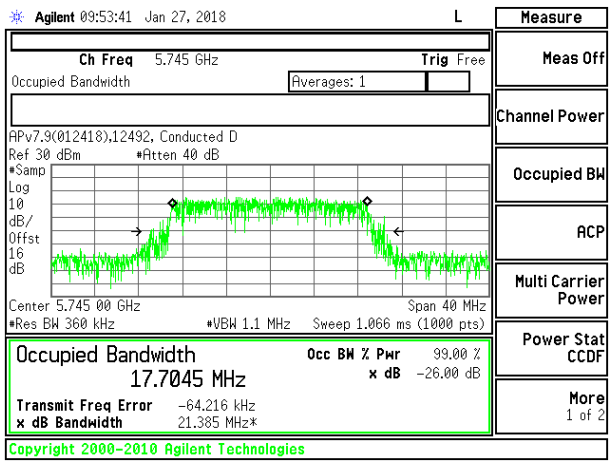
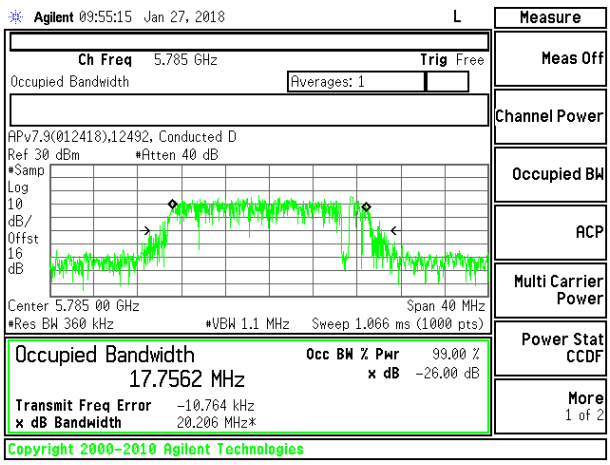
1TX Antenna 5 MODE

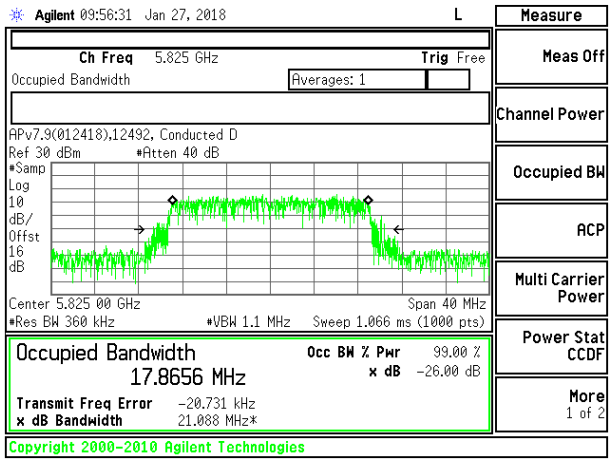
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5745	17.704
Mid	5785	17.756
High	5825	17.866



LOW CHANNEL



MID CHANNEL



HIGH CHANNEL

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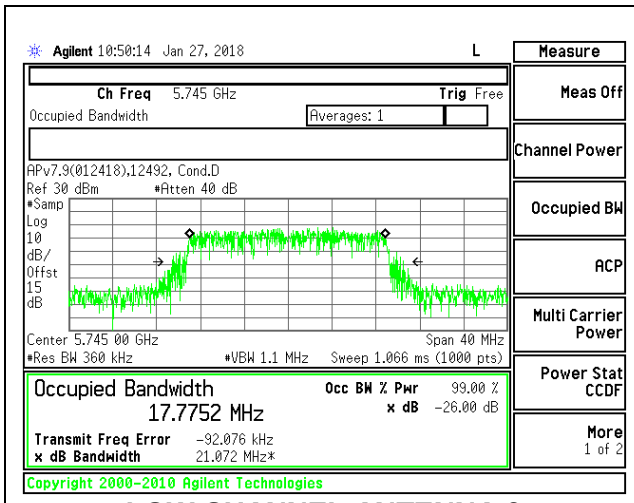
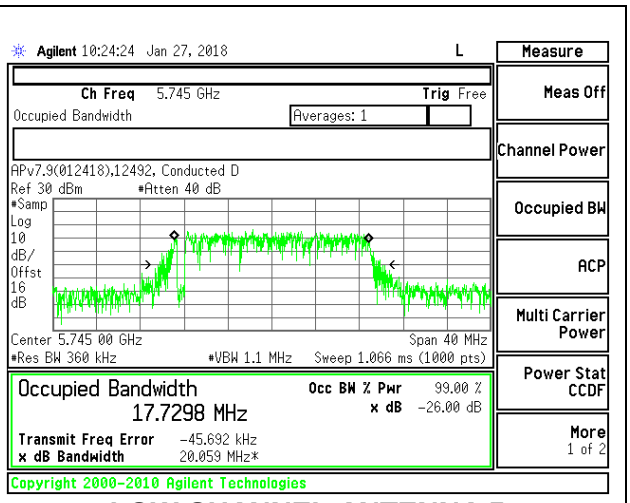
2TX Antenna 6 + Antenna 5 CDD MODE

Channel	Frequency (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Low	5745	17.775	17.730
Mid	5785	17.622	17.697
High	5825	17.661	17.737

LOW CHANNEL

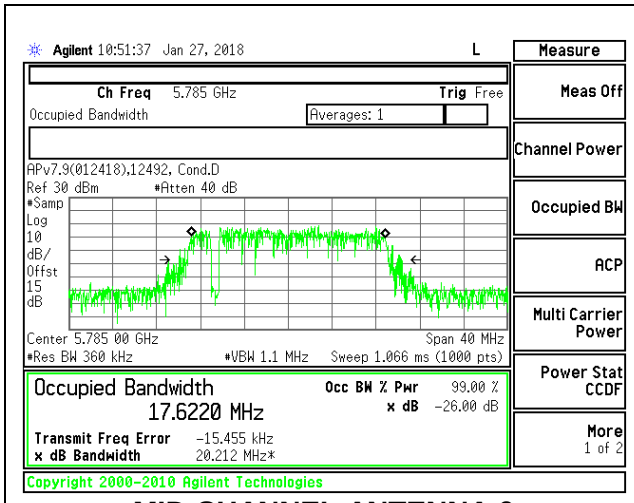


LOW CHANNEL ANTENNA 6

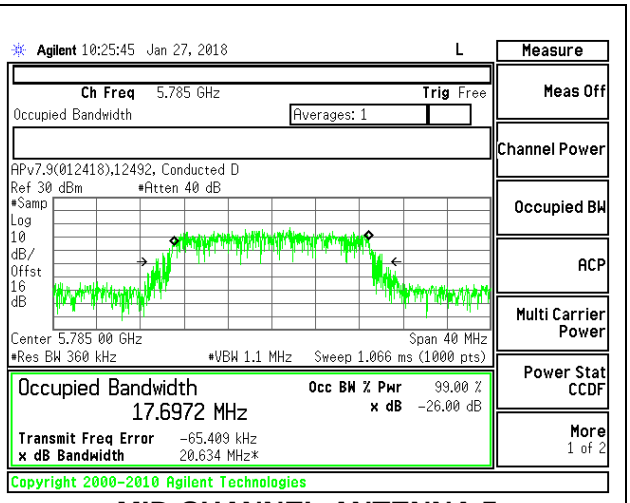


LOW CHANNEL ANTENNA 5

MID CHANNEL



MID CHANNEL ANTENNA 6



MID CHANNEL ANTENNA 5

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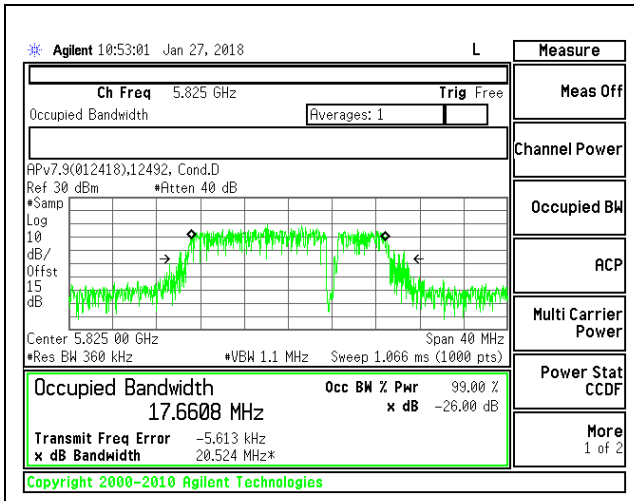
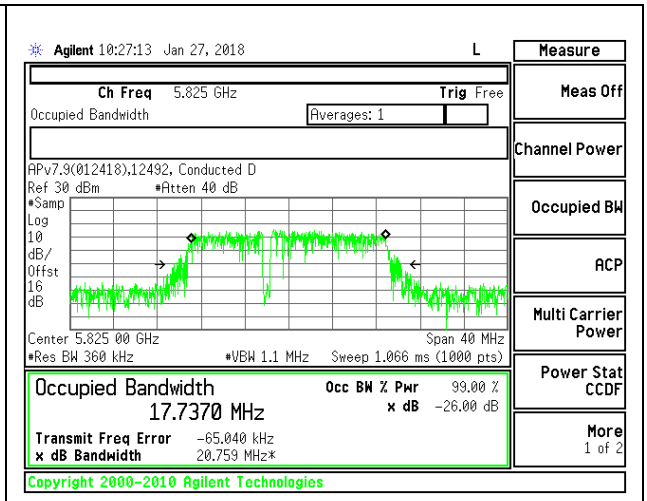
HIGH CHANNEL



HIGH CHANNEL ANTENNA 6



HIGH CHANNEL ANTENNA 5

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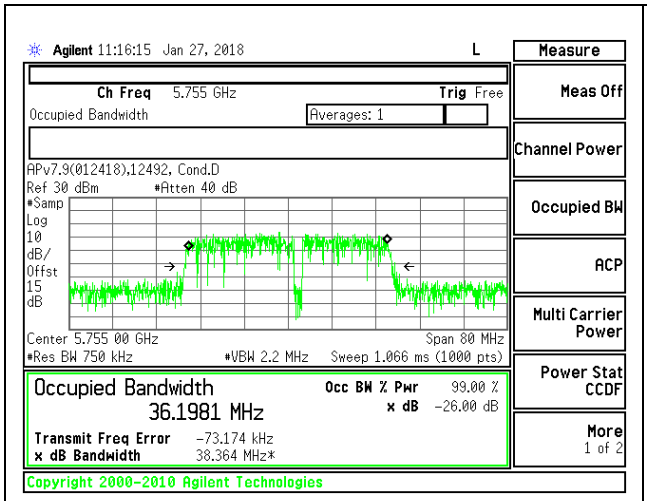
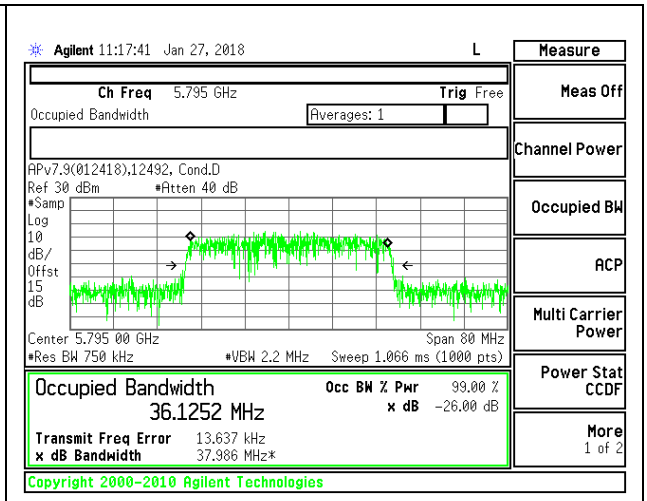
8.3.11. 802.11n HT40 MODE IN THE 5.8 GHz BAND

1TX Antenna 6 MODE

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5755	36.198
High	5795	36.125



LOW CHANNEL



HIGH CHANNEL

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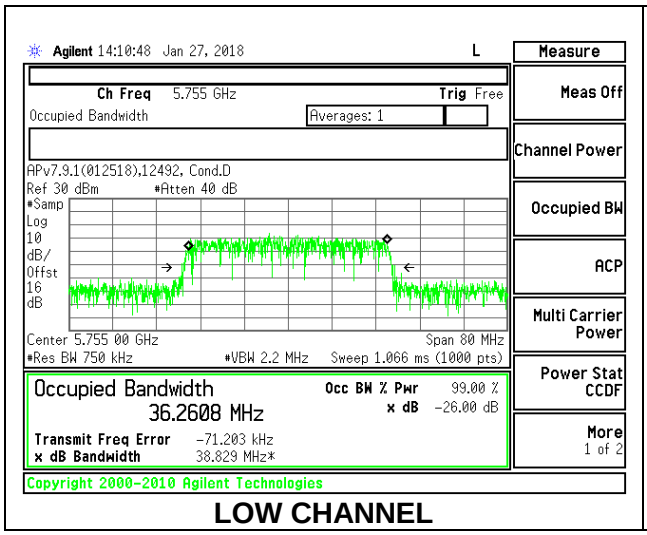
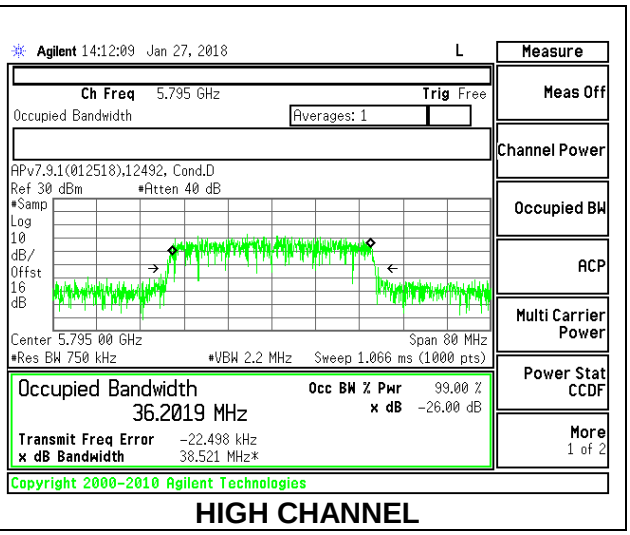
1TX Antenna 5 MODE

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5755	36.261
High	5795	36.202



LOW CHANNEL



HIGH CHANNEL

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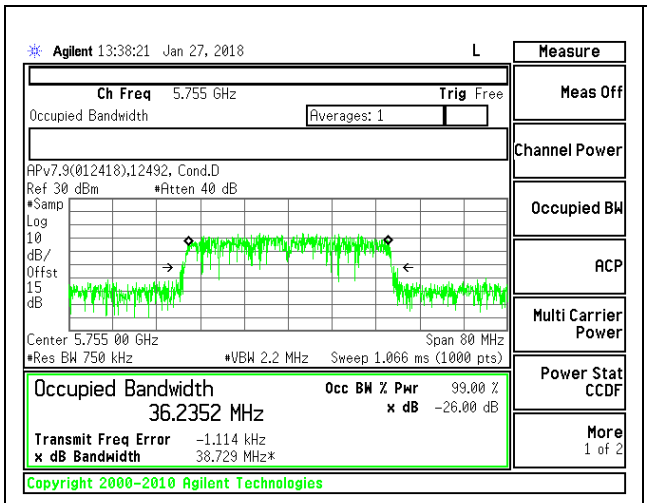
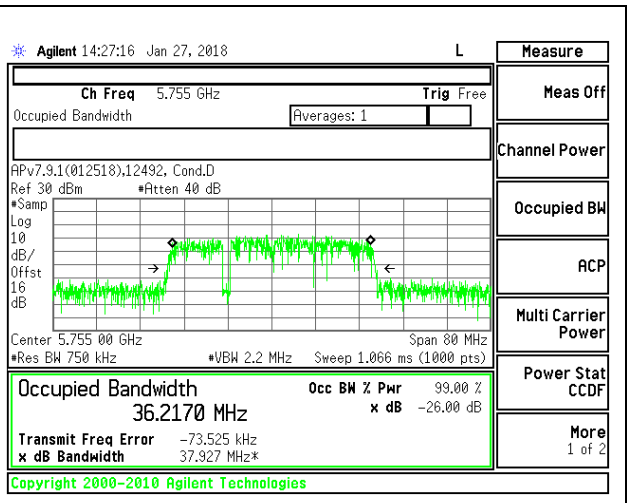
2TX Antenna 6 + Antenna 5 CDD MODE

Channel	Frequency (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Low	5755	36.235	36.217
High	5795	36.207	36.195

LOW CHANNEL

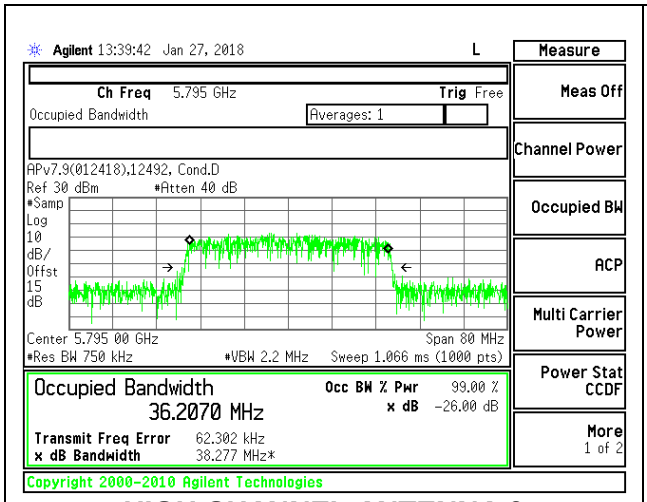


LOW CHANNEL ANTENNA 6

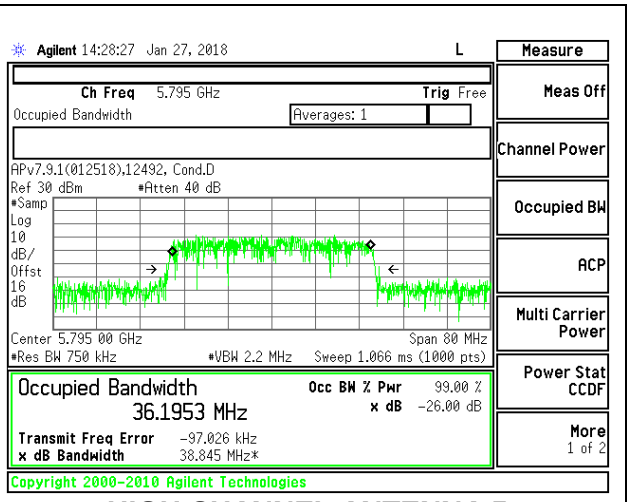


LOW CHANNEL ANTENNA 5

HIGH CHANNEL



HIGH CHANNEL ANTENNA 6



HIGH CHANNEL ANTENNA 5

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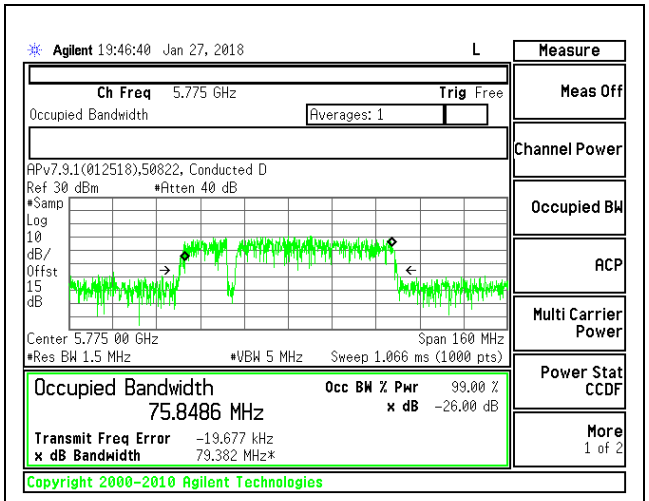
8.3.12. 802.11ac VHT80 MODE IN THE 5.8 GHz BAND

1TX Antenna 6 MODE

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Mid	5775	75.849



MID CHANNEL

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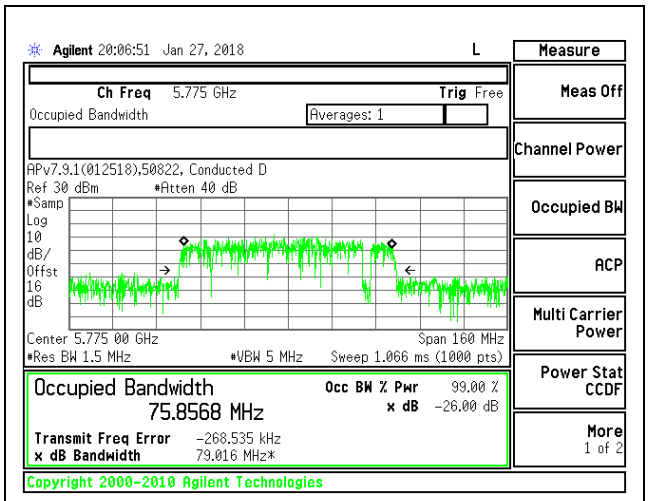
1TX Antenna 5 MODE

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Mid	5775	75.857



MID CHANNEL

UL VERIFICATION SERVICES INC.
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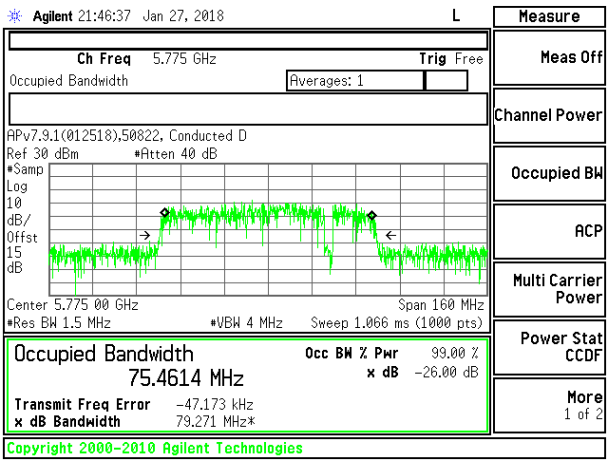
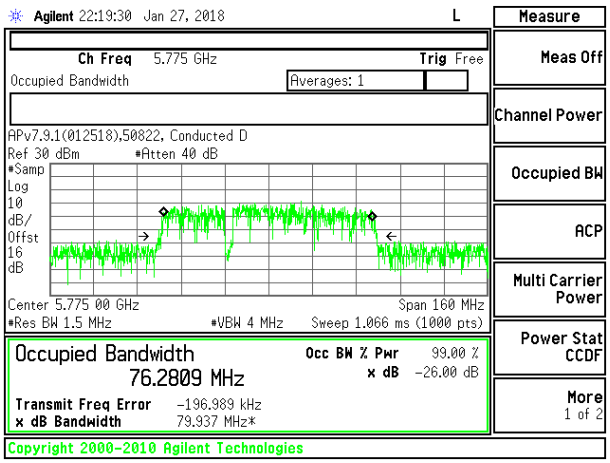
2TX Antenna 6 + Antenna 5 CDD MODE

Channel	Frequency (MHz)	99% Bandwidth Antenna 6 (MHz)	99% Bandwidth Antenna 5 (MHz)
Mid	5775	75.461	76.281

MID CHANNEL



MID CHANNEL ANTENNA 6



MID CHANNEL ANTENNA 5

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8.4. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

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

RESULTS

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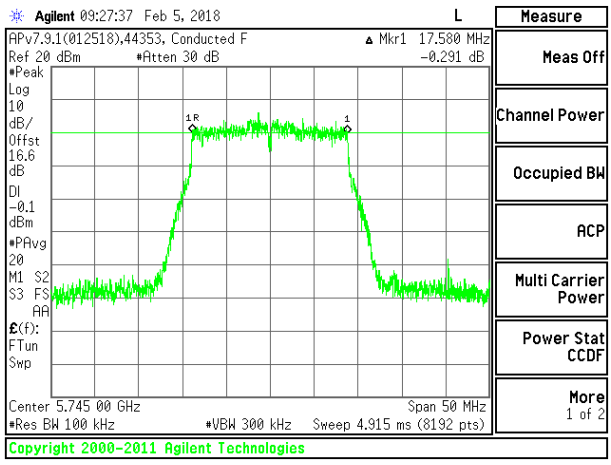
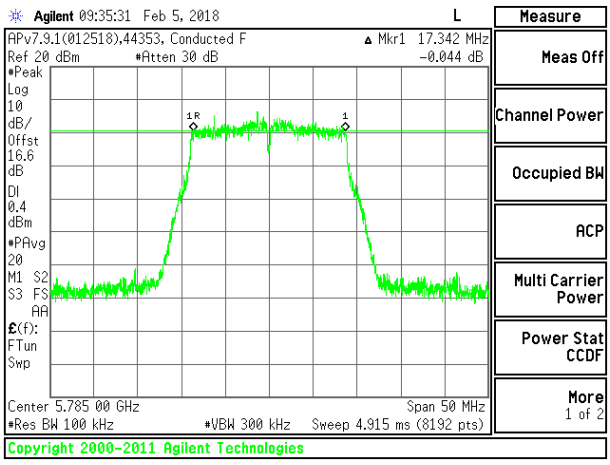
8.4.1. 802.11n HT20 MODE IN THE 5.8 GHz BAND

1TX Antenna 6 MODE

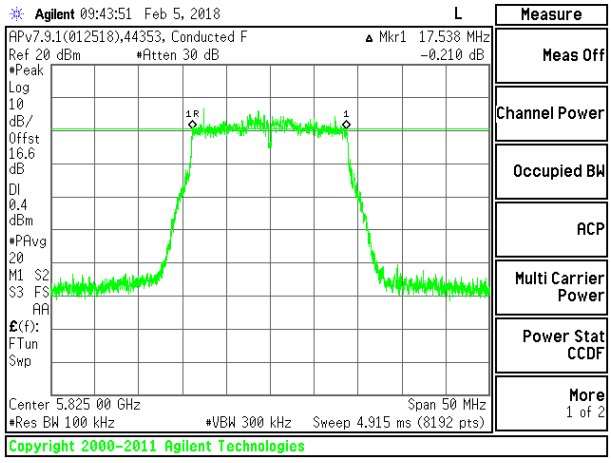
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5745	17.580	0.5
Mid	5785	17.342	0.5
High	5825	17.538	0.5
144	5720	3.735	0.5



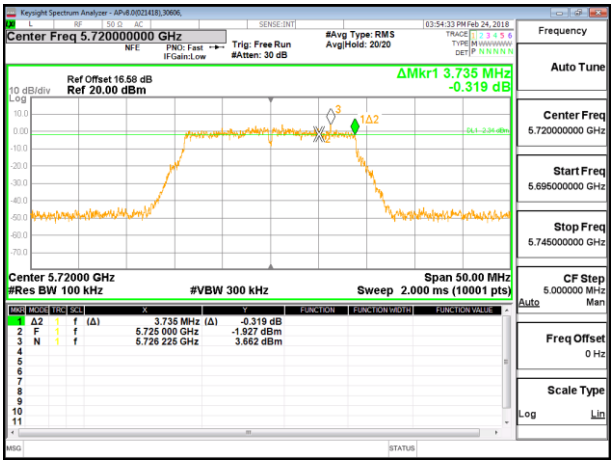
LOW CHANNEL



MID CHANNEL



HIGH CHANNEL



CHANNEL 144

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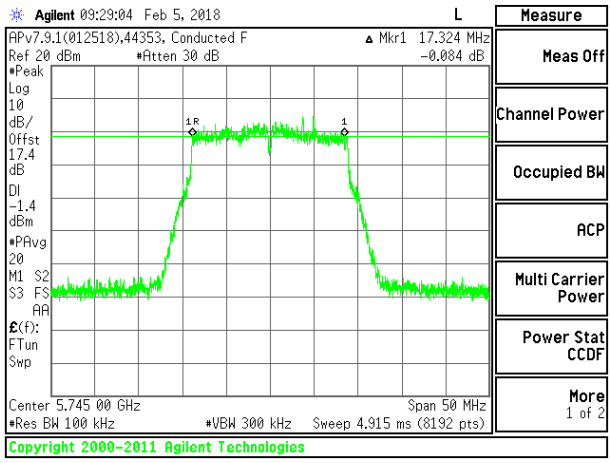
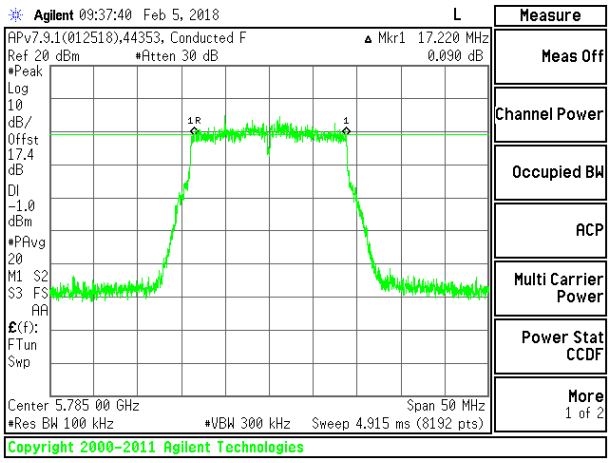
1TX Antenna 5 MODE

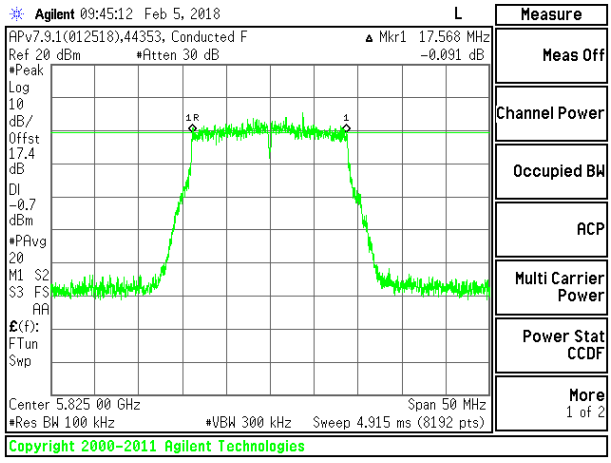
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5745	17.324	0.5
Mid	5785	17.220	0.5
High	5825	17.568	0.5
144	5720	3.860	0.5



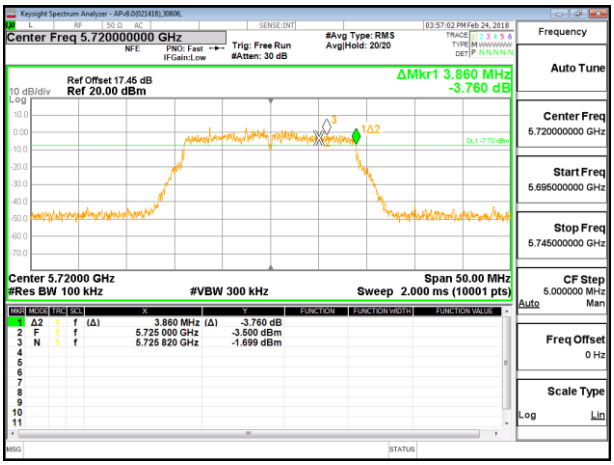
LOW CHANNEL



MID CHANNEL



HIGH CHANNEL



CHANNEL 144

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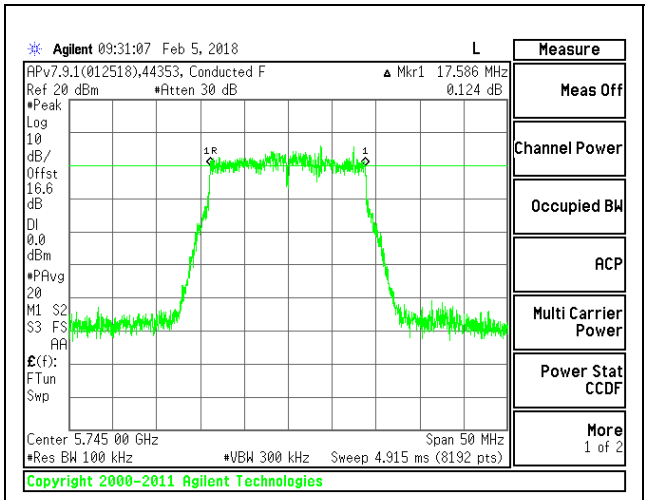
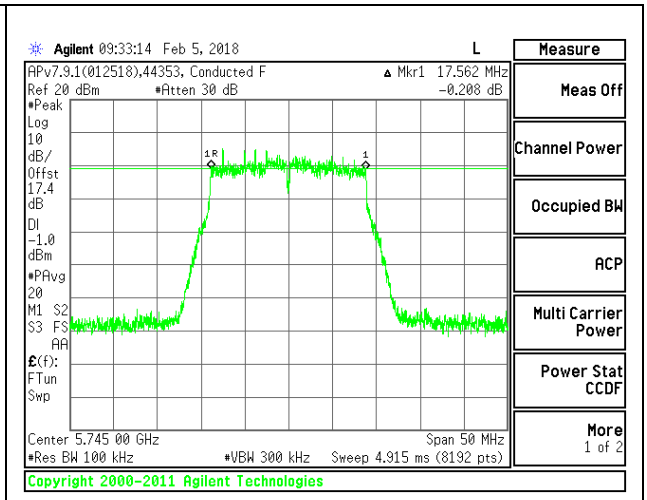
2TX Antenna 6 + Antenna 5 CDD MODE

Channel	Frequency (MHz)	6 dB BW Antenna 6 (MHz)	6 dB BW Antenna 5 (MHz)	Minimum Limit (MHz)
Low	5745	17.586	17.562	0.5
Mid	5785	17.525	17.586	0.5
High	5825	17.556	17.513	0.5
144	5720	3.845	3.825	0.5

LOW CHANNEL

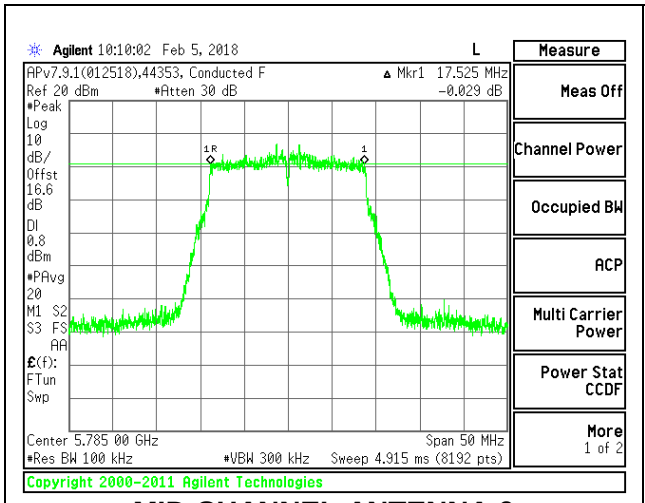


LOW CHANNEL ANTENNA 6

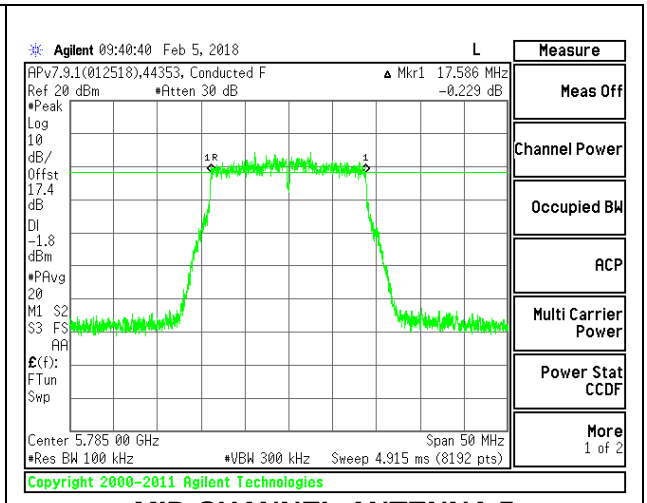


LOW CHANNEL ANTENNA 5

MID CHANNEL



MID CHANNEL ANTENNA 6



MID CHANNEL ANTENNA 5

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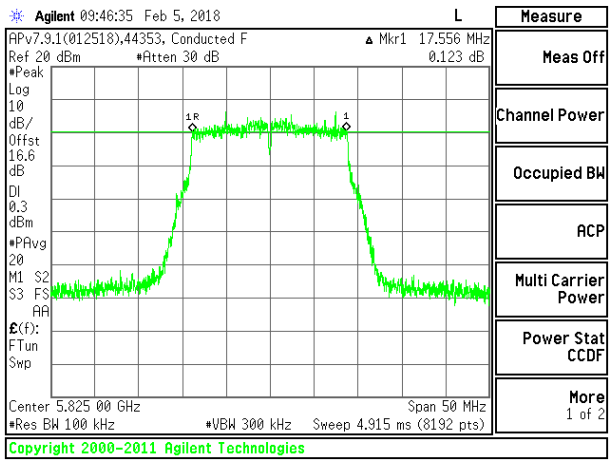
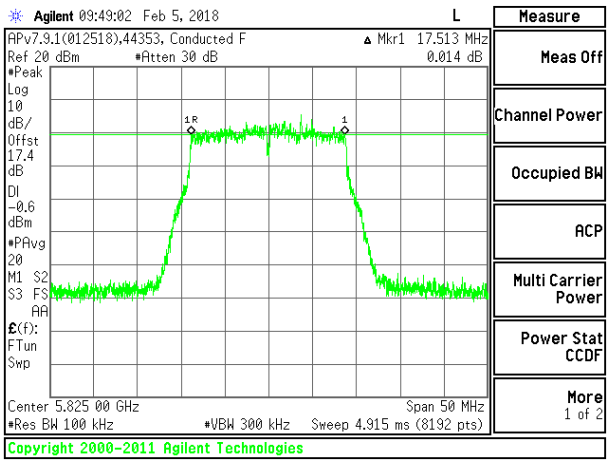
HIGH CHANNEL

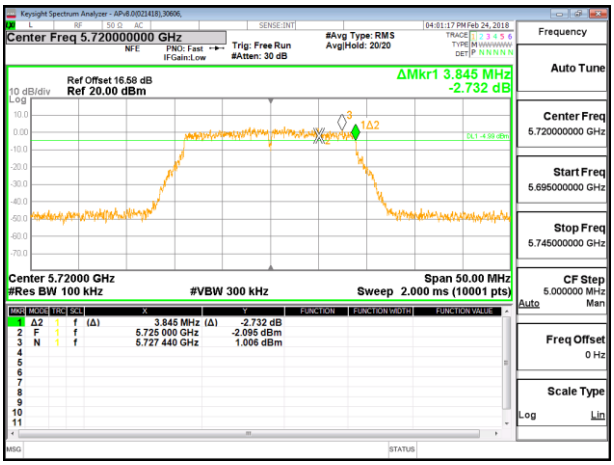


HIGH CHANNEL ANTENNA 6

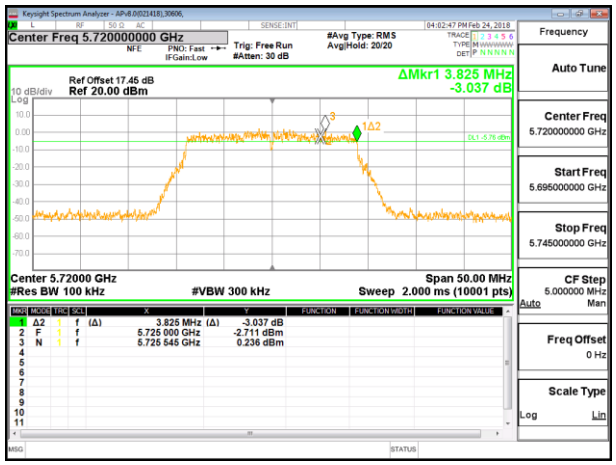


HIGH CHANNEL ANTENNA 5

CHANNEL 144



CHANNEL 144 ANTENNA 6



CHANNEL 144 ANTENNA 5

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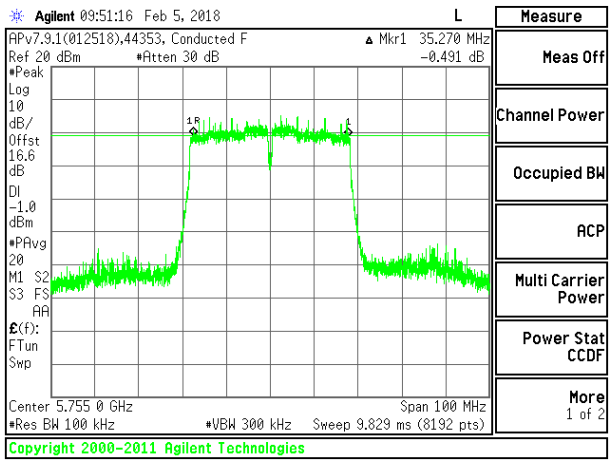
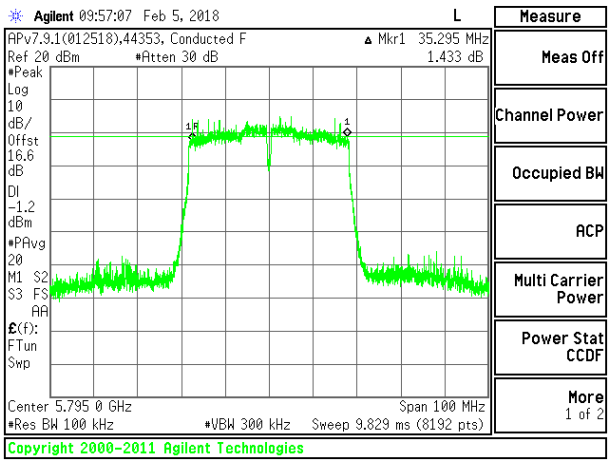
8.4.2. 802.11n HT40 MODE IN THE 5.8 GHz BAND

1TX Antenna 6 MODE

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5755	35.270	0.5
High	5795	35.295	0.5
142	5710	3.150	0.5



LOW CHANNEL



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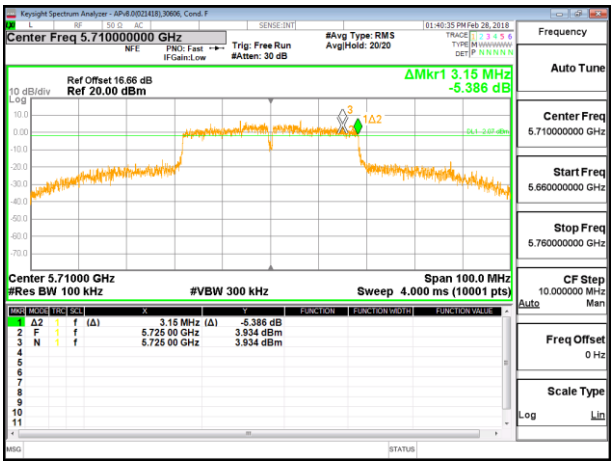

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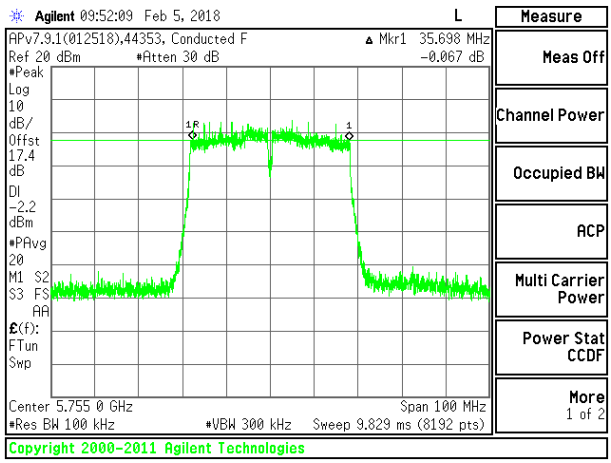
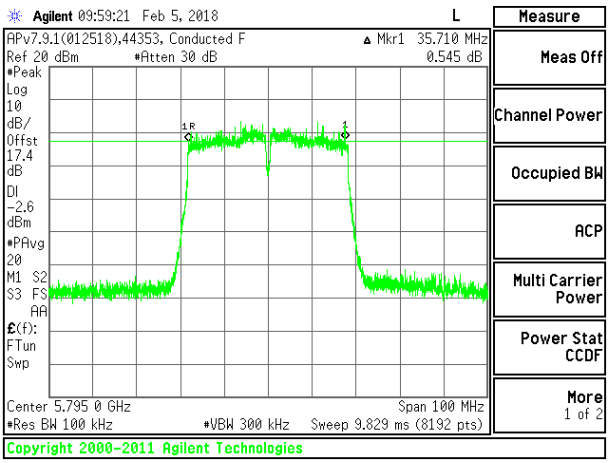
1TX Antenna 5 MODE

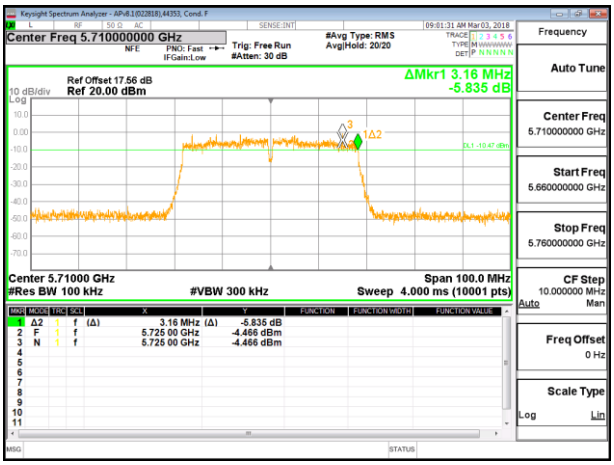
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5755	35.698	0.5
High	5795	35.710	0.5
142	5710	3.160	0.5



LOW CHANNEL



HIGH CHANNEL



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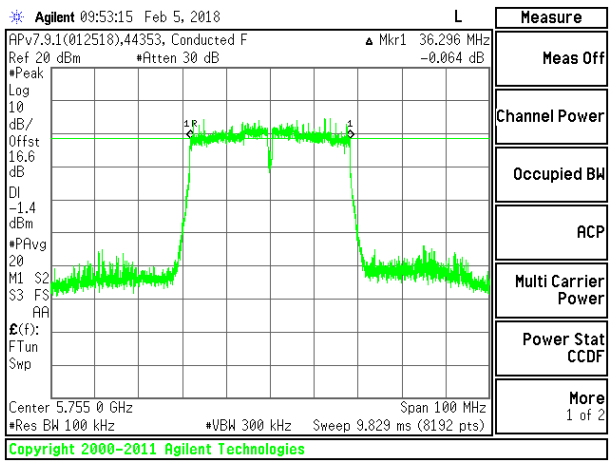
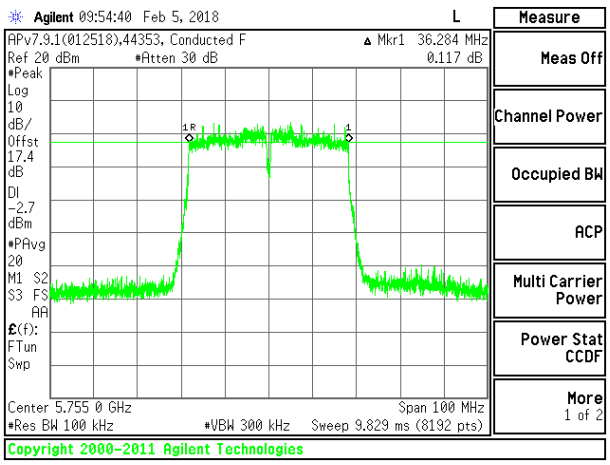
2TX Antenna 6 + Antenna 5 CDD MODE

Channel	Frequency (MHz)	6 dB BW Antenna 6 (MHz)	6 dB BW Antenna 5 (MHz)	Minimum Limit (MHz)
Low	5755	36.296	36.284	0.5
High	5795	35.649	35.124	0.5
142	5710	3.210	3.200	0.5

LOW CHANNEL

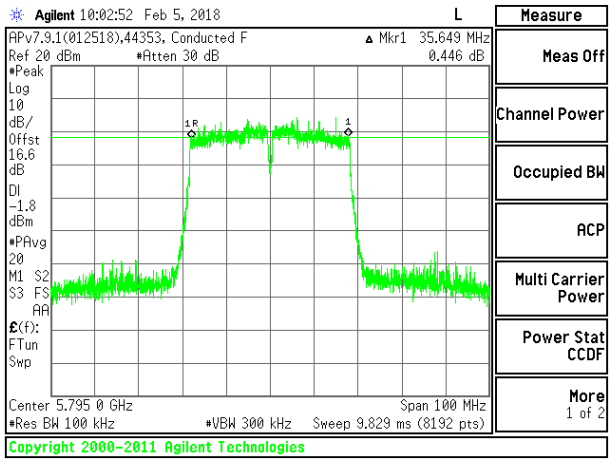


LOW CHANNEL ANTENNA 6



LOW CHANNEL ANTENNA 5

HIGH CHANNEL



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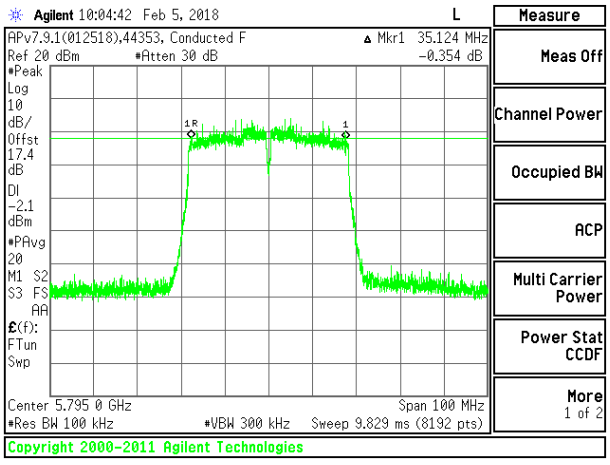

HIGH CHANNEL ANTENNA 5

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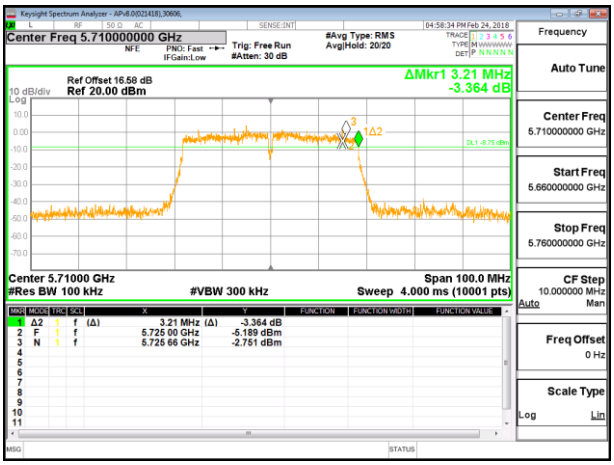
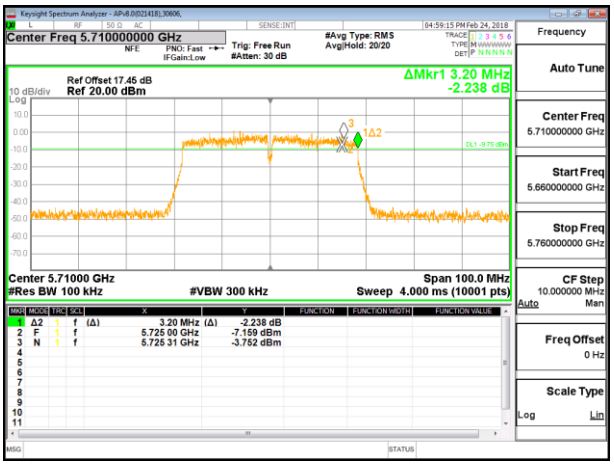
CHANNEL 142



CHANNEL 142 ANTENNA 6



CHANNEL 142 ANTENNA 5

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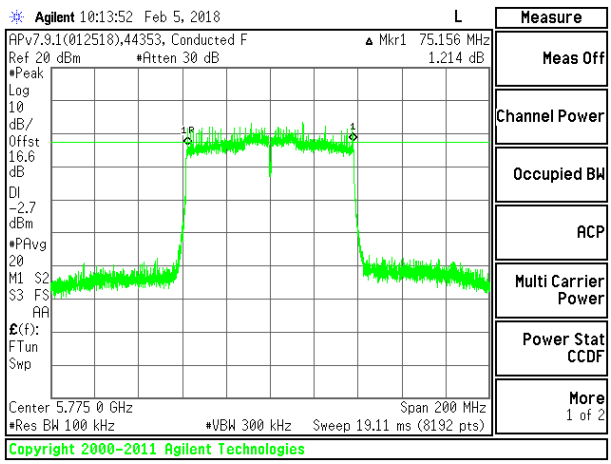
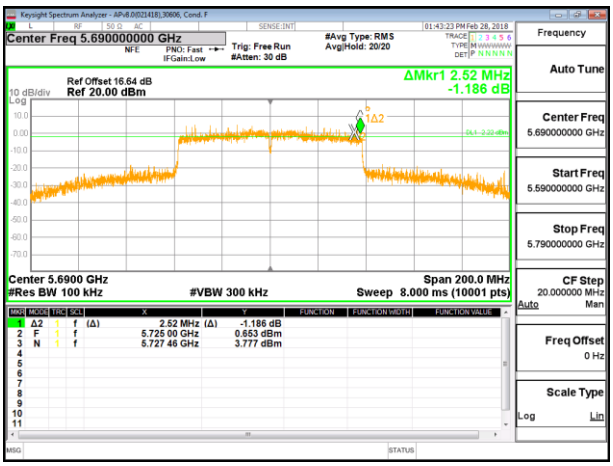
8.4.3. 802.11ac VHT80 MODE IN THE 5.8 GHz BAND

1TX Antenna 6 MODE

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Mid	5775	75.156	0.5
138	5690	2.520	0.5



MID CHANNEL



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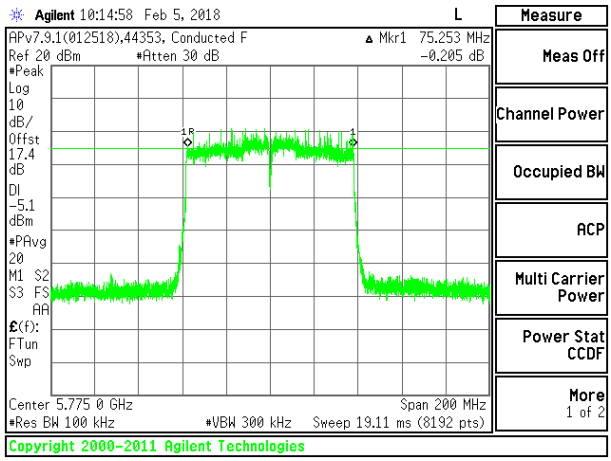
1TX Antenna 5 MODE

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Mid	5775	75.253	0.5
138	5690	3.120	0.5



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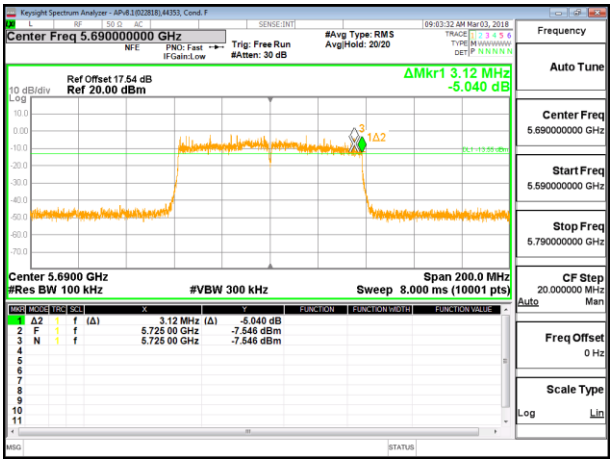

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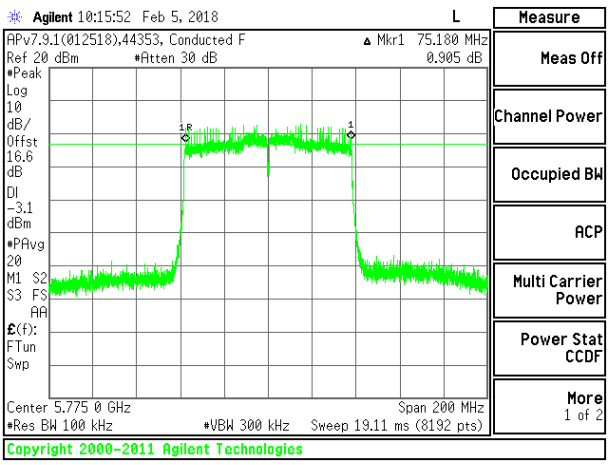
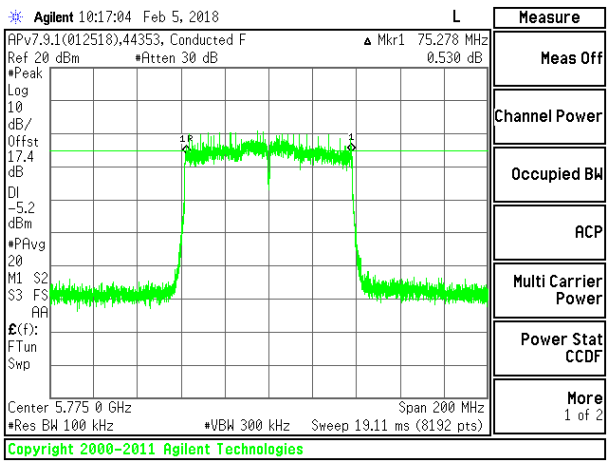
2TX Antenna 6 + Antenna 5 CDD MODE

Channel	Frequency (MHz)	6 dB BW Antenna 6 (MHz)	6 dB BW Antenna 5 (MHz)	Minimum Limit (MHz)
Mid	5775	75.180	75.278	0.5
138	5690	3.200	2.860	0.5

MID CHANNEL



MID CHANNEL ANTENNA 6



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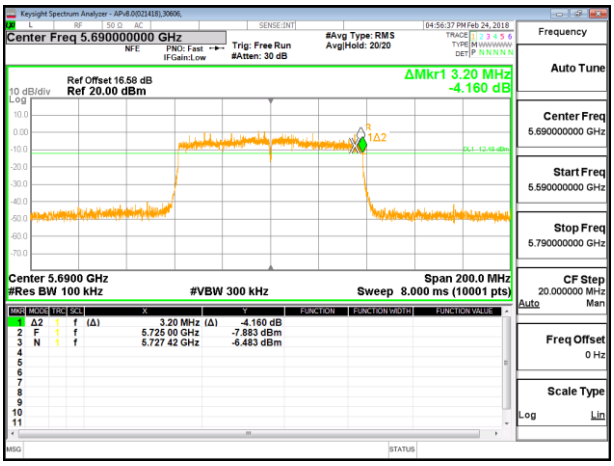
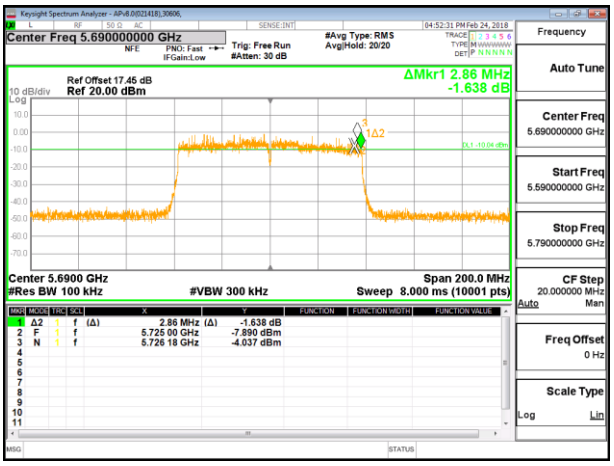
CHANNEL 138



CHANNEL 138 ANTENNA 6



CHANNEL 138 ANTENNA 5

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8.5. OUTPUT POWER AND PSD

LIMITS

FCC §15.407

Band 5.15–5.25 GHz

(iv) For mobile and portable client devices in the 5.15-5.25 GHz band, 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.

Bands 5.25-5.35 GHz and 5.47-5.725 GHz
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.

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. 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. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information.

TEST PROCEDURE

The measurement method used for output power is KDB 789033 D02 v02r01, Section E.3.b (Method PM-G), and for straddles channels KDB 789033 D02 v02r01, Section E.2.b (Method SA-2) were used.

The measurement method used for power spectral density is KDB 789033 D02 v02r01, Section F

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DIRECTIONAL ANTENNA GAIN

For 1 TX:

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

For 2 TX:

Tx chains are uncorrelated for power and correlated for PSD due to the device supporting CDD in all MIMO modes. The directional gains are as follows:

Band (GHz)	Ant 6 Antenna Gain (dBi)	Ant 5 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)	Correlated Chains Directional Gain (dBi)
5.2	-5.7	-5.6	-5.65	-2.64
5.3	-4.5	-5.0	-4.74	-1.74
5.6	-1.8	-5.0	-3.11	-0.24
5.8	-2.2	-5.7	-3.61	-0.76

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RESULTS

8.5.1. 802.11n HT20 MODE IN THE 5.2 GHz BAND

1TX Antenna 6 MODE

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 1MHz)
Low	5180	-5.70	24.00	11.00
Mid	5200	-5.70	24.00	11.00
High	5240	-5.70	24.00	11.00

Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Ant 6 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5180	19.77	19.77	24.00	-4.23
Mid	5200	20.81	20.81	24.00	-3.19
High	5240	20.76	20.76	24.00	-3.24

PSD Results

Channel	Frequency (MHz)	Ant 6 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5180	9.15	9.15	11.00	-1.85
Mid	5200	10.60	10.60	11.00	-0.40
High	5240	10.50	10.50	11.00	-0.50

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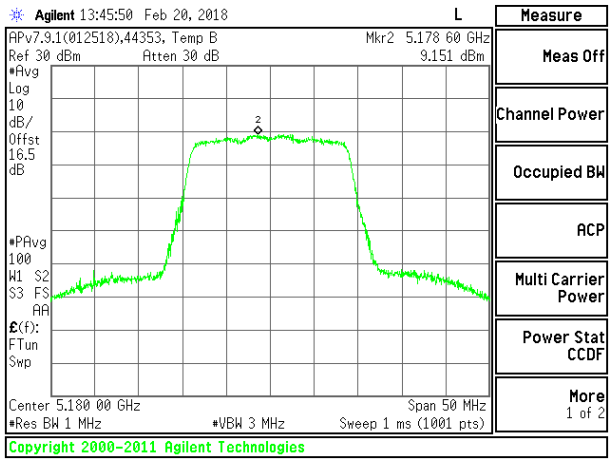
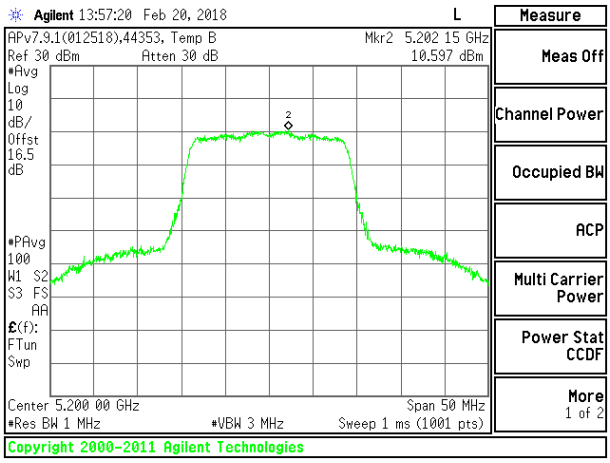
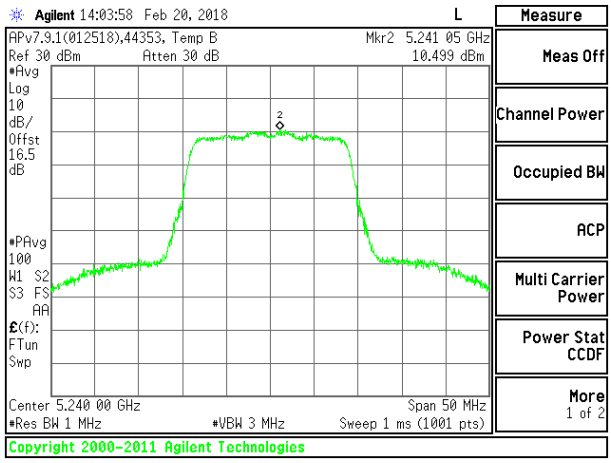


LOW CHANNEL



MID CHANNEL



HIGH CHANNEL

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1TX Antenna 5 MODE

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 1MHz)
Low	5180	-5.60	24.00	11.00
Mid	5200	-5.60	24.00	11.00
High	5240	-5.60	24.00	11.00

Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Ant 5 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5180	19.80	19.80	24.00	-4.20
Mid	5200	20.84	20.84	24.00	-3.16
High	5240	20.81	20.81	24.00	-3.19

PSD Results

Channel	Frequency (MHz)	Ant 5 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5180	9.50	9.50	11.00	-1.50
Mid	5200	10.10	10.10	11.00	-0.90
High	5240	10.53	10.53	11.00	-0.47

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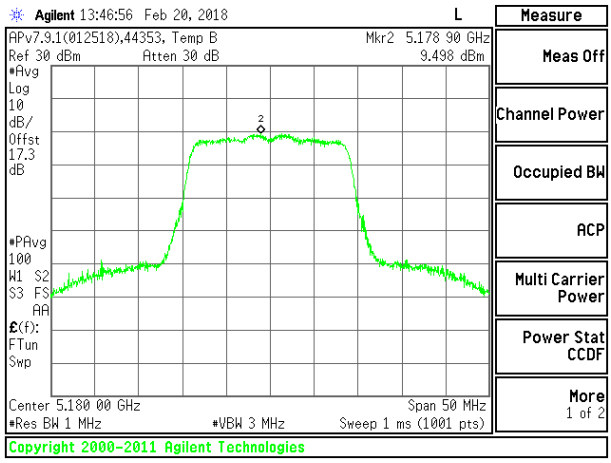
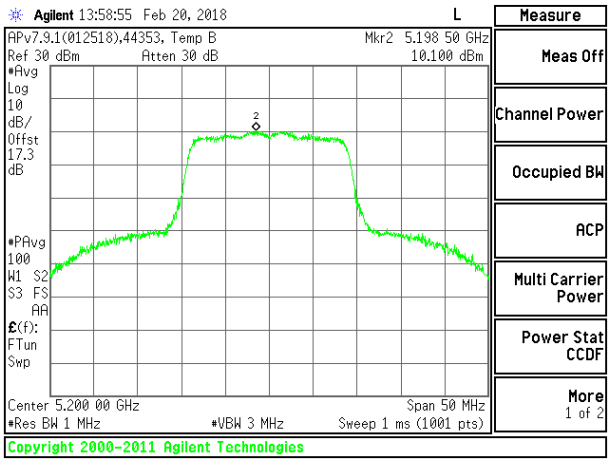
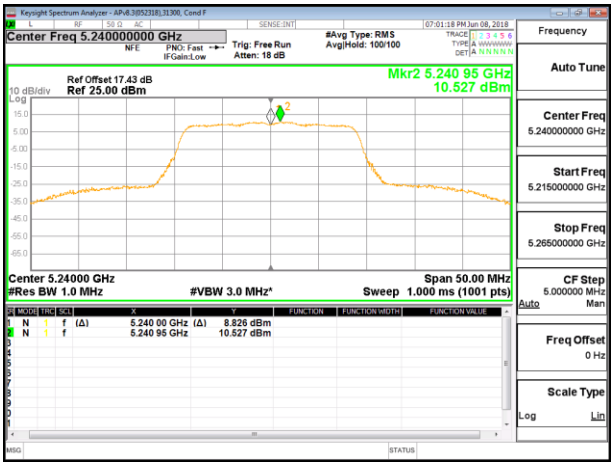


LOW CHANNEL



MID CHANNEL



HIGH CHANNEL

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2TX Antenna 6 + Antenna 5 CDD MODE

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 1MHz)
Low	5180	-5.65	-2.64	24.00	11.00
Mid	5200	-5.65	-2.64	24.00	11.00
High	5240	-5.65	-2.64	24.00	11.00

Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Ant 6 Meas Power (dBm)	Ant 5 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5180	17.87	17.81	20.85	24.00	-3.15
Mid	5200	17.80	17.84	20.83	24.00	-3.17
High	5240	17.91	17.87	20.90	24.00	-3.10

PSD Results

Channel	Frequency (MHz)	Ant 6 Meas PSD (dBm/1MHz)	Ant 5 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5180	7.42	7.67	10.56	11.00	-0.44
Mid	5200	7.33	7.78	10.57	11.00	-0.43
High	5240	7.61	7.65	10.64	11.00	-0.36

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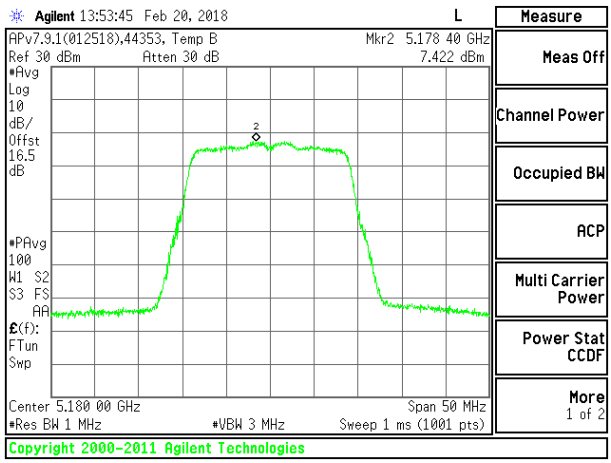
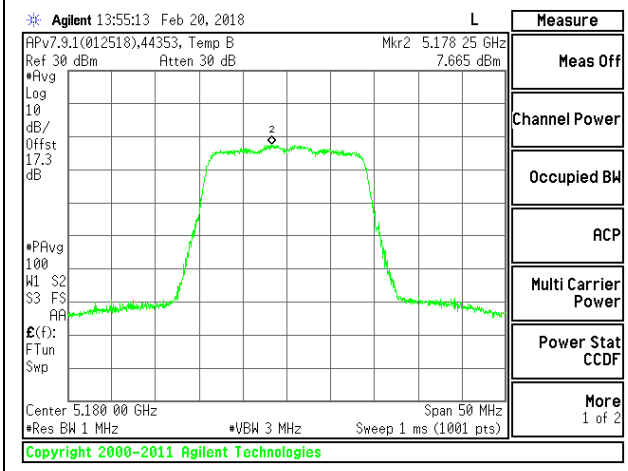
LOW CHANNEL

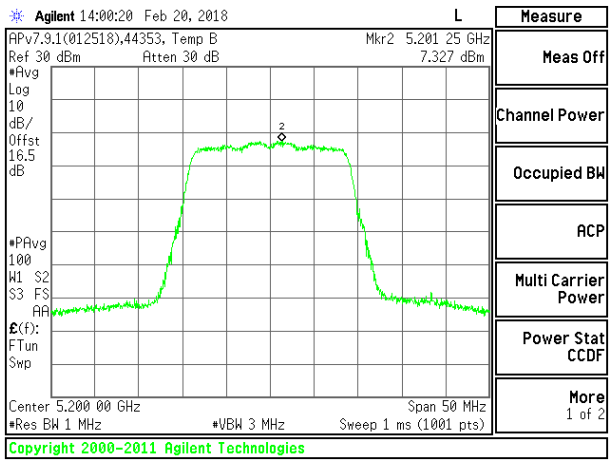


LOW CHANNEL ANTENNA 6



LOW CHANNEL ANTENNA 5

MID CHANNEL



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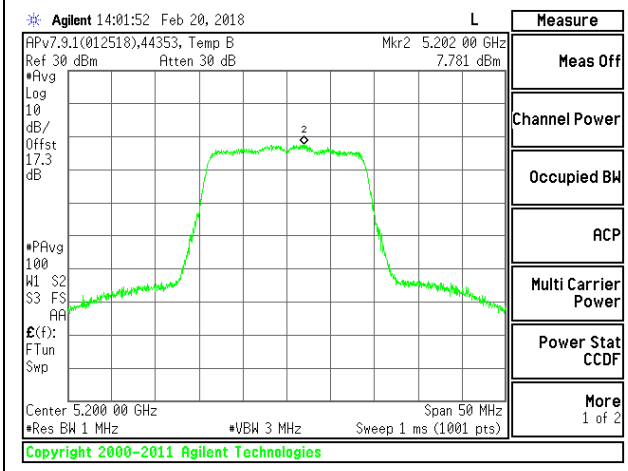
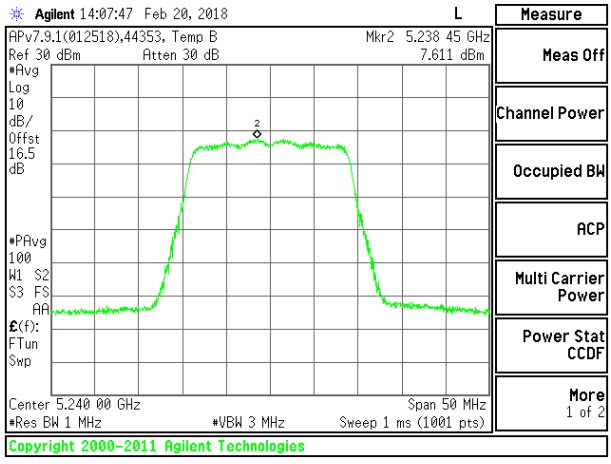
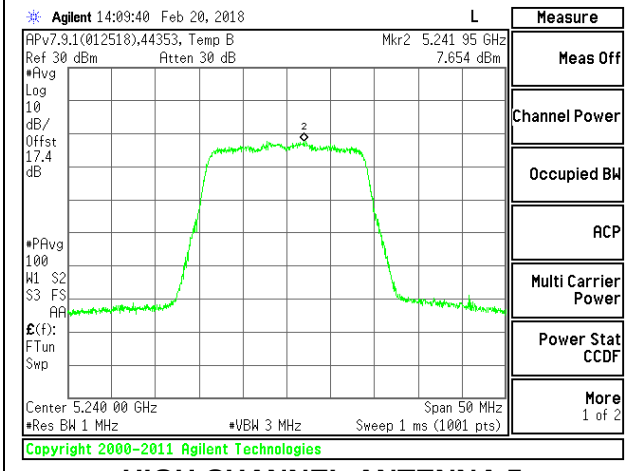


MID CHANNEL ANTENNA 5

HIGH CHANNEL



HIGH CHANNEL ANTENNA 6



HIGH CHANNEL ANTENNA 5

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8.5.2. 802.11n HT40 MODE IN THE 5.2 GHz BAND

1TX Antenna 6 MODE

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 1MHz)
Low	5190	-5.70	24.00	11.00
High	5230	-5.70	24.00	11.00

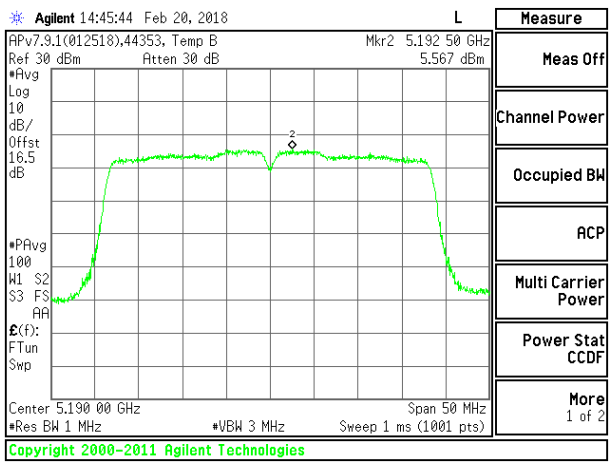
Duty Cycle CF (dB)	0.09	Included in Calculations of Corr'd PSD

Output Power Results

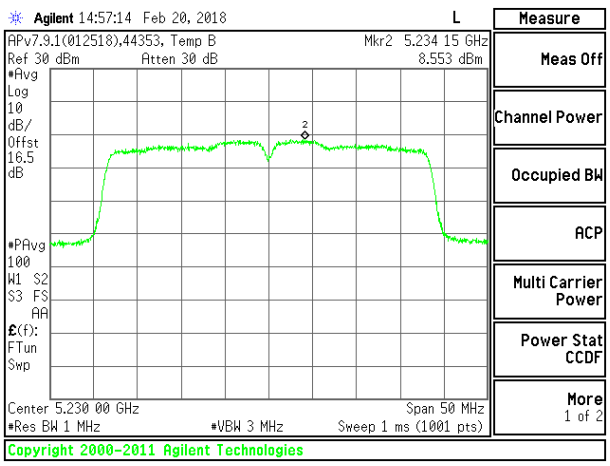
Channel	Frequency (MHz)	Ant 6 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5190	18.43	18.43	24.00	-5.57
High	5230	21.84	21.84	24.00	-2.16

PSD Results

Channel	Frequency (MHz)	Ant 6 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5190	5.57	5.66	11.00	-5.34
High	5230	8.55	8.64	11.00	-2.36



LOW CHANNEL



HIGH CHANNEL

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1TX Antenna 5 MODE

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 1MHz)
Low	5190	-5.60	24.00	11.00
High	5230	-5.60	24.00	11.00

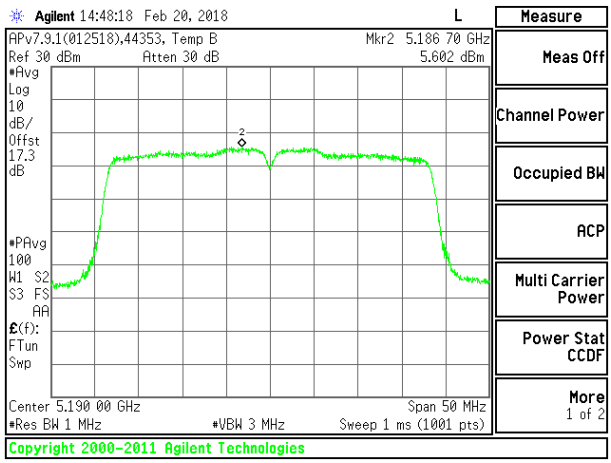
Duty Cycle CF (dB)	0.09	Included in Calculations of Corr'd PSD

Output Power Results

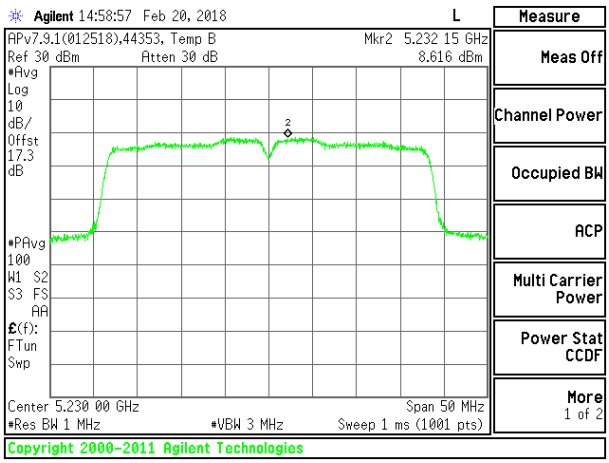
Channel	Frequency (MHz)	Ant 5 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5190	18.40	18.40	24.00	-5.60
High	5230	21.79	21.79	24.00	-2.21

PSD Results

Channel	Frequency (MHz)	Ant 5 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5190	5.60	5.69	11.00	-5.31
High	5230	8.62	8.71	11.00	-2.29



LOW CHANNEL



HIGH CHANNEL

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2TX Antenna 6 + Antenna 5 CDD MODE

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 1MHz)
Low	5190	-5.65	-2.64	24.00	11.00
High	5230	-5.65	-2.64	24.00	11.00

Duty Cycle CF (dB)	0.09	Included in Calculations of Corr'd PSD

Output Power Results

Channel	Frequency (MHz)	Ant 6 Meas Power (dBm)	Ant 5 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5190	17.79	17.83	20.82	24.00	-3.18
High	5230	19.83	19.81	22.83	24.00	-1.17

PSD Results

Channel	Frequency (MHz)	Ant 6 Meas PSD (dBm/ 1MHz)	Ant 5 Meas PSD (dBm/ 1MHz)	Total Corr'd PSD (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5190	4.52	4.75	7.74	11.00	-3.26
High	5230	6.67	6.62	9.74	11.00	-1.26

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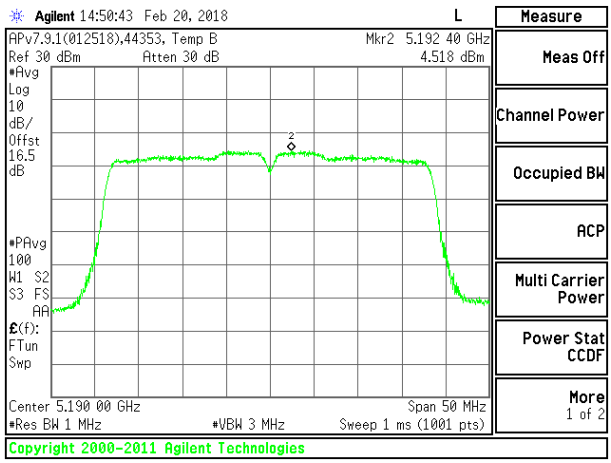
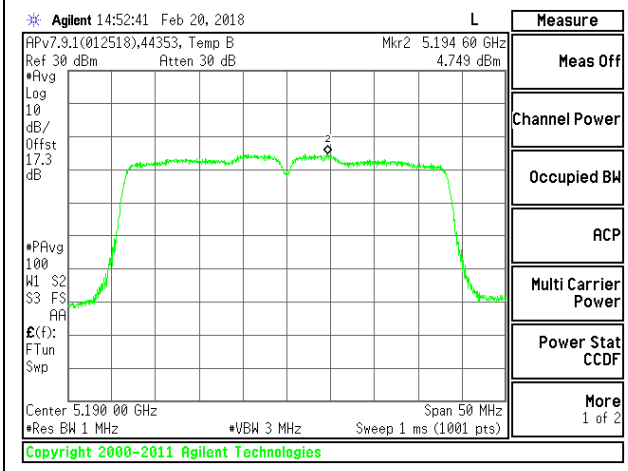
LOW CHANNEL

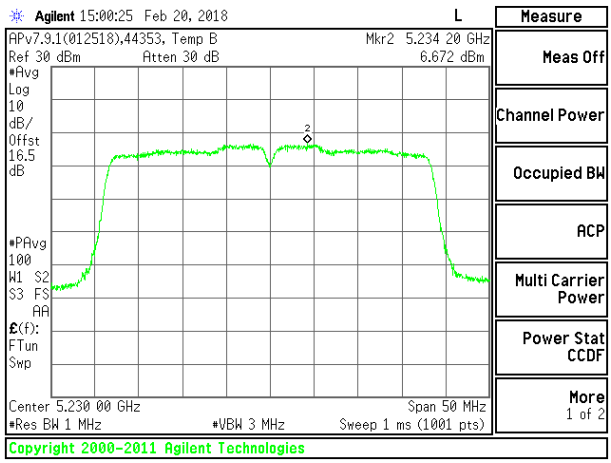


LOW CHANNEL ANTENNA 6



LOW CHANNEL ANTENNA 5

HIGH CHANNEL



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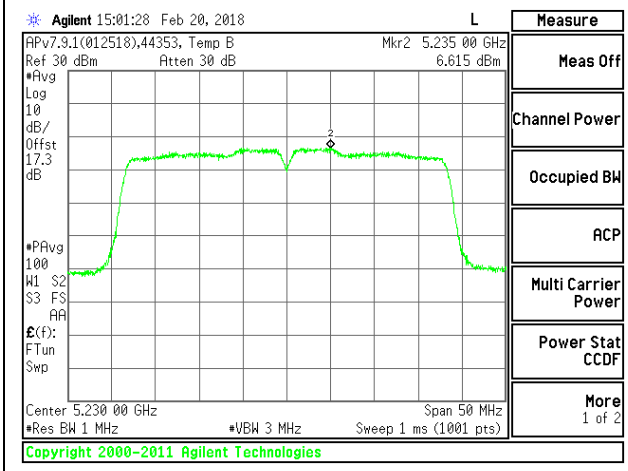

HIGH CHANNEL ANTENNA 5

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8.5.3. 802.11ac VHT80 MODE IN THE 5.2 GHz BAND

1TX Antenna 6 MODE

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 1MHz)
Mid	5210	-5.70	24.00	11.00

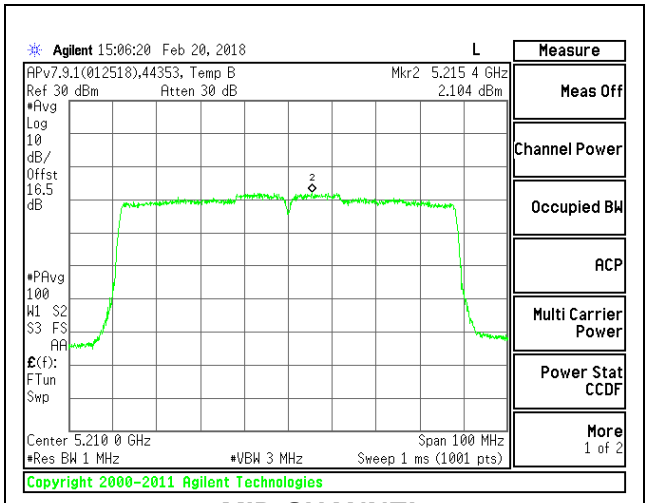
Duty Cycle CF (dB)	0.19	Included in Calculations of Corr'd PSD

Output Power Results

Channel	Frequency (MHz)	Ant 6 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid	5210	17.39	17.39	24.00	-6.61

PSD Results

Channel	Frequency (MHz)	Ant 6 Meas PSD (dBm/ 1MHz)	Total Corr'd PSD (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Mid	5210	2.10	2.29	11.00	-8.71



MID CHANNEL

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1TX Antenna 5 MODE

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 1MHz)
Mid	5210	-5.60	24.00	11.00

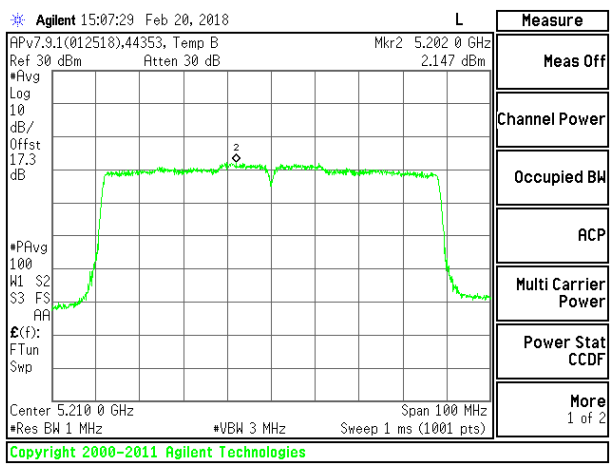
Duty Cycle CF (dB)	0.19	Included in Calculations of Corr'd PSD

Output Power Results

Channel	Frequency (MHz)	Ant 5 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid	5210	17.37	17.37	24.00	-6.63

PSD Results

Channel	Frequency (MHz)	Ant 5 Meas PSD (dBm/ 1MHz)	Total Corr'd PSD (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Mid	5210	2.15	2.34	11.00	-8.66



MID CHANNEL

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2TX Antenna 6 + Antenna 5 CDD MODE

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 1MHz)
Mid	5210	-5.65	-2.64	24.00	11.00

Duty Cycle CF (dB)	0.19	Included in Calculations of Corr'd PSD

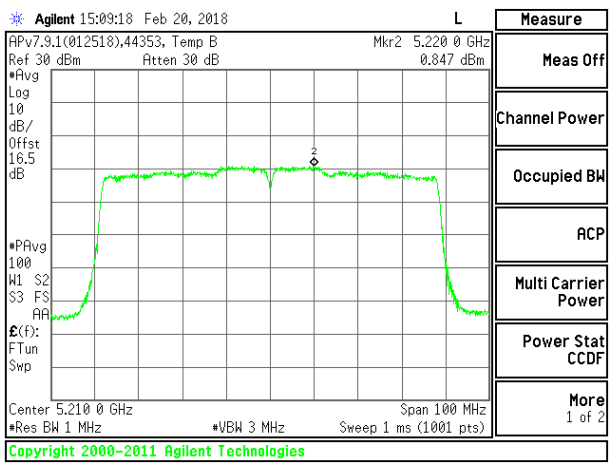
Output Power Results

Channel	Frequency (MHz)	Ant 6 Meas Power (dBm)	Ant 5 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid	5210	17.34	17.38	20.37	24.00	-3.63

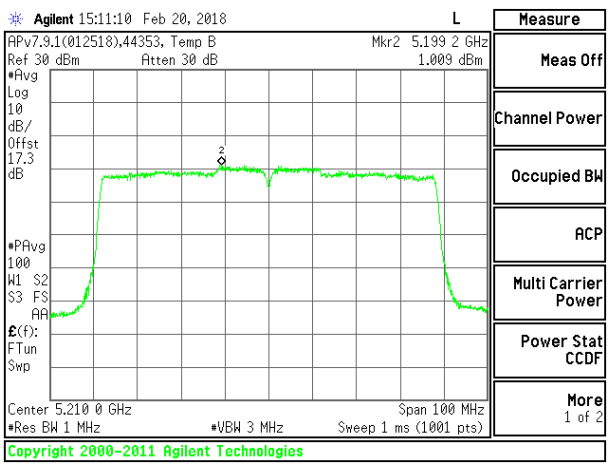
PSD Results

Channel	Frequency (MHz)	Ant 6 Meas PSD (dBm/ 1MHz)	Ant 5 Meas PSD (dBm/ 1MHz)	Total Corr'd PSD (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Mid	5210	0.85	1.01	4.13	11.00	-6.87

MID CHANNEL



MID CHANNEL ANTENNA 6



MID CHANNEL ANTENNA 5

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8.5.4. 802.11n HT20 MODE IN THE 5.3 GHz BAND

1TX Antenna 6 MODE

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/1MHz)
Low	5260	22.10	-4.50	24.00	11.00
Mid	5300	21.90	-4.50	24.00	11.00
High	5320	22.05	-4.50	24.00	11.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD

Output Power Results

Channel	Frequency (MHz)	Ant 6 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5260	20.82	20.82	24.00	-3.18
Mid	5300	20.90	20.90	24.00	-3.10
High	5320	18.78	18.78	24.00	-5.22

PSD Results

Channel	Frequency (MHz)	Ant 6 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/1MHz)	PSD Margin (dB)
Low	5260	10.54	10.54	11.00	-0.46
Mid	5300	10.58	10.58	11.00	-0.42
High	5320	9.44	9.44	11.00	-1.56

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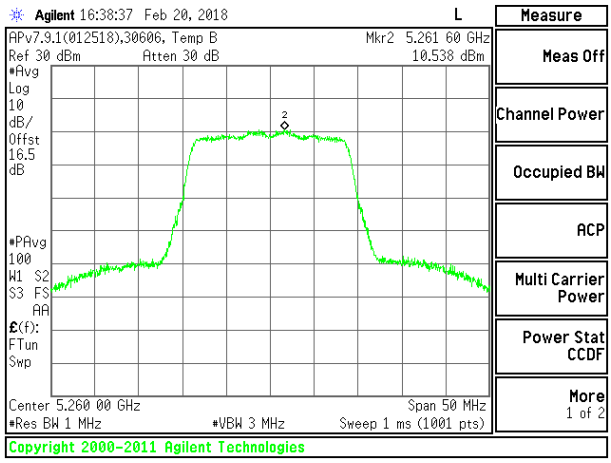

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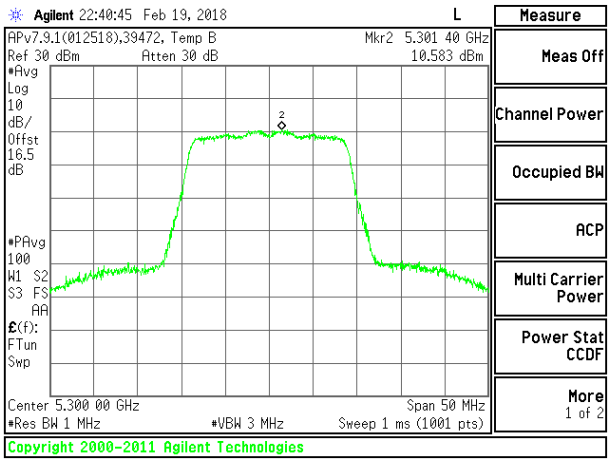

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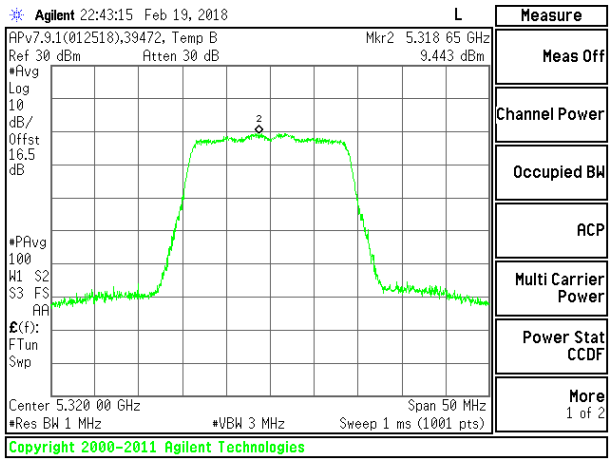

HIGH CHANNEL

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1TX Antenna 5 MODE

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/1MHz)
Low	5260	21.95	-5.00	24.00	11.00
Mid	5300	21.95	-5.00	24.00	11.00
High	5320	22.05	-5.00	24.00	11.00

Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Ant 5 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5260	20.84	20.84	24.00	-3.16
Mid	5300	20.91	20.91	24.00	-3.09
High	5320	18.87	18.87	24.00	-5.13

PSD Results

Channel	Frequency (MHz)	Ant 5 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/1MHz)	PSD Margin (dB)
Low	5260	10.60	10.60	11.00	-0.40
Mid	5300	10.69	10.69	11.00	-0.31
High	5320	9.71	9.71	11.00	-1.29

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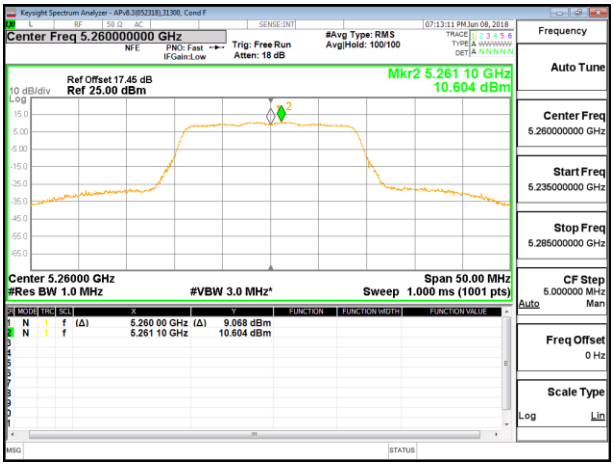
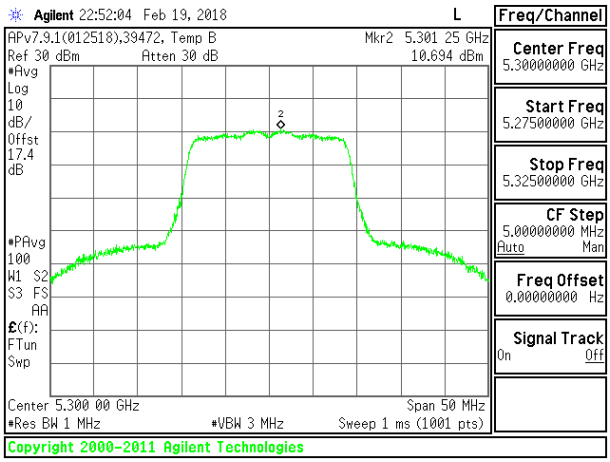


LOW CHANNEL



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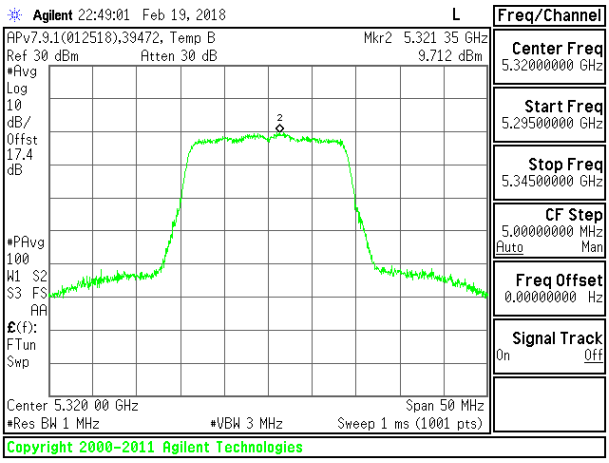

HIGH CHANNEL

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2TX Antenna 6 + Antenna 5 CDD MODE

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm/1MHz)
Low	5260	22.60	-4.74	-1.74	24.00	11.00
Mid	5300	22.05	-4.74	-1.74	24.00	11.00
High	5320	21.80	-4.74	-1.74	24.00	11.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD

Output Power Results

Channel	Frequency (MHz)	Ant 6 Meas Power (dBm)	Ant 5 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5260	17.93	17.79	20.87	24.00	-3.13
Mid	5300	17.87	17.95	20.92	24.00	-3.08
High	5320	17.88	17.76	20.83	24.00	-3.17

PSD Results

Channel	Frequency (MHz)	Ant 6 Meas PSD (dBm/1MHz)	Ant 5 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/1MHz)	PSD Margin (dB)
Low	5260	7.76	7.68	10.73	11.00	-0.27
Mid	5300	7.56	7.88	10.73	11.00	-0.27
High	5320	7.72	7.49	10.62	11.00	-0.38

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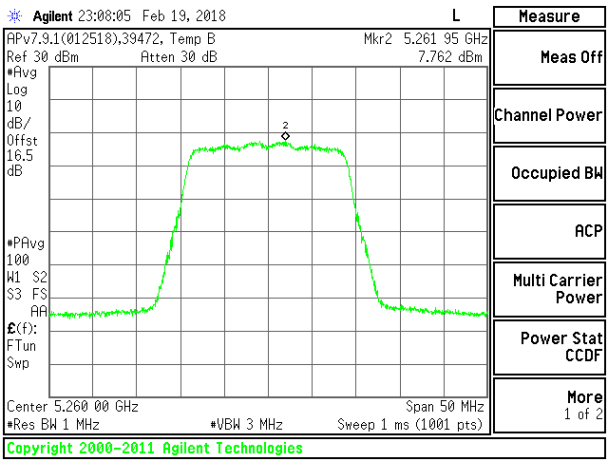
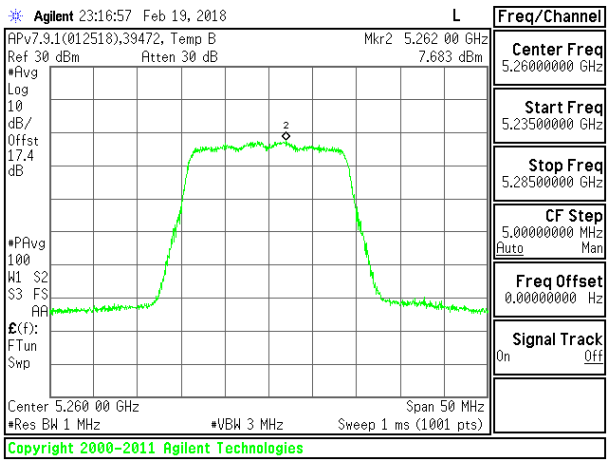
LOW CHANNEL

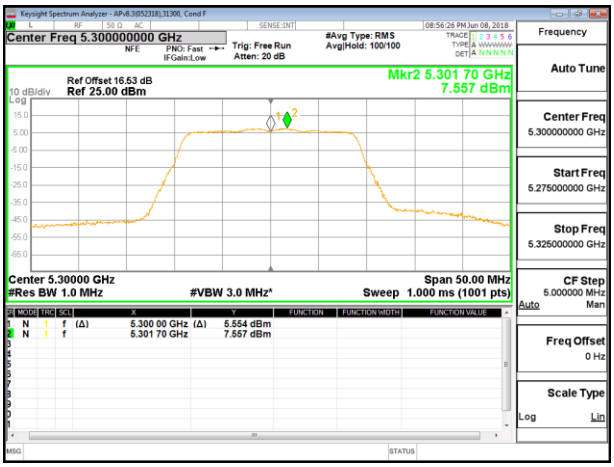


LOW CHANNEL ANTENNA 6

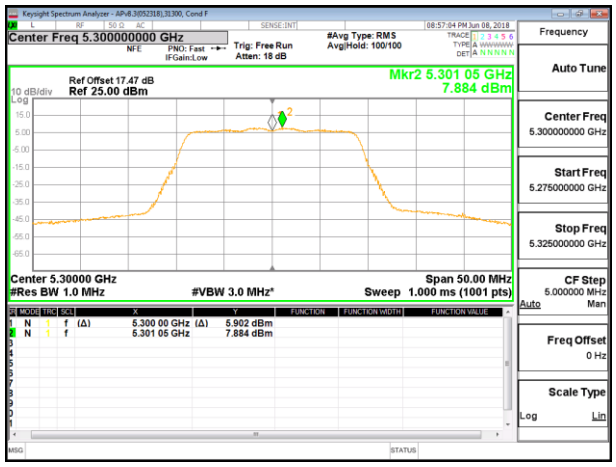


LOW CHANNEL ANTENNA 5

MID CHANNEL

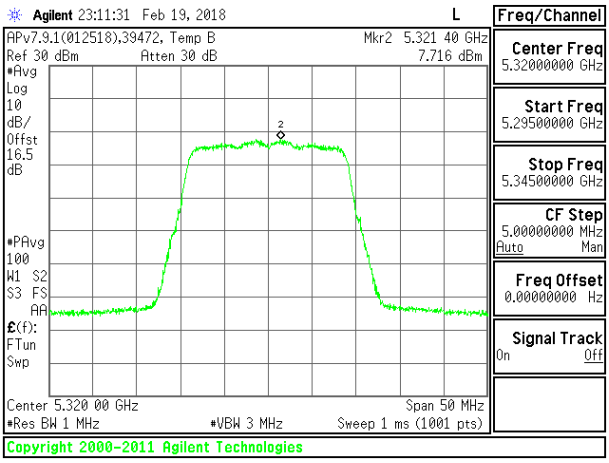


MID CHANNEL ANTENNA 6

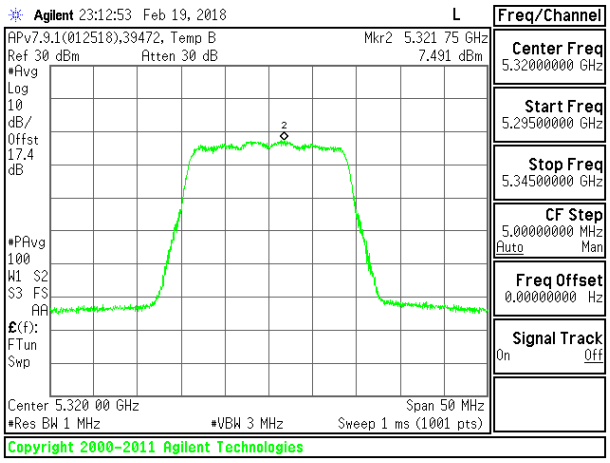


MID CHANNEL ANTENNA 5

HIGH CHANNEL



HIGH CHANNEL ANTENNA 6



HIGH CHANNEL ANTENNA 5

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8.5.5. 802.11n HT40 MODE IN THE 5.3 GHz BAND

1TX Antenna 6 MODE

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/1MHz)
Low	5270	40.60	-4.50	24.00	11.00
High	5310	40.60	-4.50	24.00	11.00

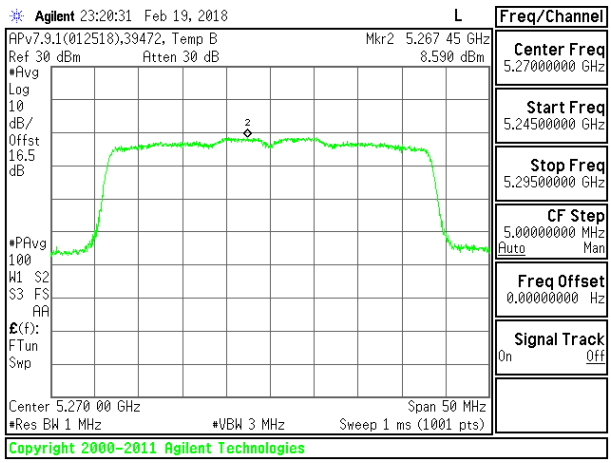
Duty Cycle CF (dB)	0.09	Included in Calculations of Corr'd PSD

Output Power Results

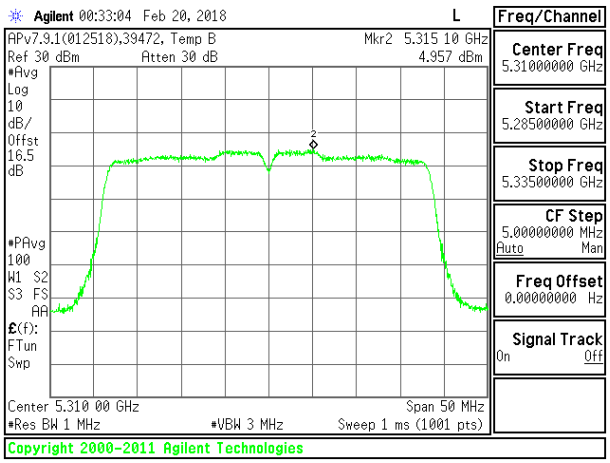
Channel	Frequency (MHz)	Ant 6 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5270	20.83	20.83	24.00	-3.17
High	5310	17.26	17.26	24.00	-6.74

PSD Results

Channel	Frequency (MHz)	Ant 6 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/1MHz)	PSD Margin (dB)
Low	5270	8.59	8.68	11.00	-2.32
High	5310	4.96	5.05	11.00	-5.95



LOW CHANNEL



HIGH CHANNEL

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1TX Antenna 5 MODE

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/1MHz)
Low	5270	40.70	-5.00	24.00	11.00
High	5310	40.60	-5.00	24.00	11.00

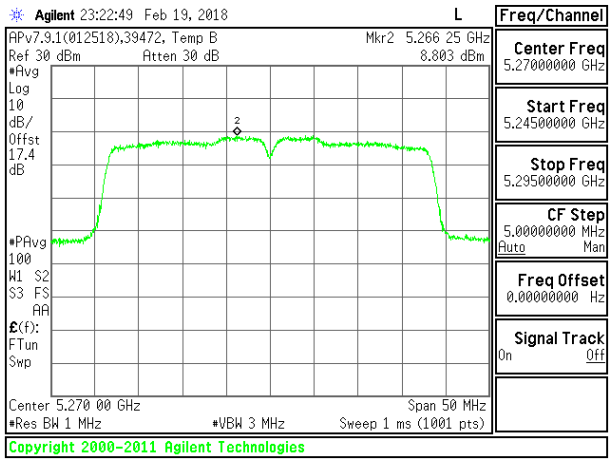
Duty Cycle CF (dB)	0.09	Included in Calculations of Corr'd PSD

Output Power Results

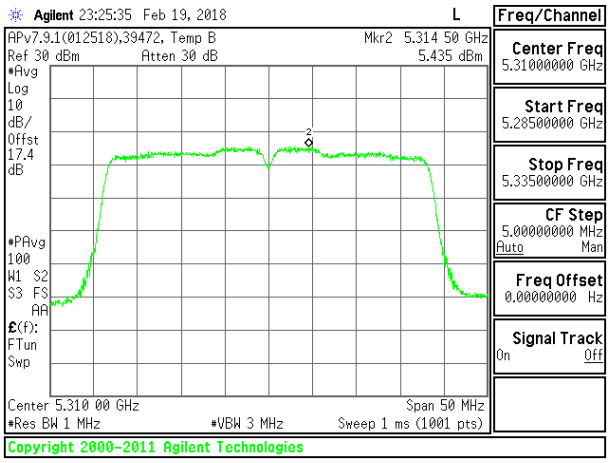
Channel	Frequency (MHz)	Ant 5 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5270	21.82	21.82	24.00	-2.18
High	5310	17.31	17.31	24.00	-6.69

PSD Results

Channel	Frequency (MHz)	Ant 5 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/1MHz)	PSD Margin (dB)
Low	5270	8.80	8.89	11.00	-2.11
High	5310	5.44	5.53	11.00	-5.48



LOW CHANNEL



HIGH CHANNEL

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2TX Antenna 6 + Antenna 5 CDD MODE

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm/1MHz)
Low	5270	40.50	-4.74	-1.74	24.00	11.00
High	5310	40.20	-4.74	-1.74	24.00	11.00

Duty Cycle CF (dB)	0.09	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Ant 6 Meas Power (dBm)	Ant 5 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5270	19.81	19.90	22.87	24.00	-1.13
High	5310	16.89	16.77	19.84	24.00	-4.16

PSD Results

Channel	Frequency (MHz)	Ant 6 Meas PSD (dBm/1MHz)	Ant 5 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/1MHz)	PSD Margin (dB)
Low	5270	6.74	7.35	10.15	11.00	-0.85
High	5310	3.90	3.59	6.84	11.00	-4.16

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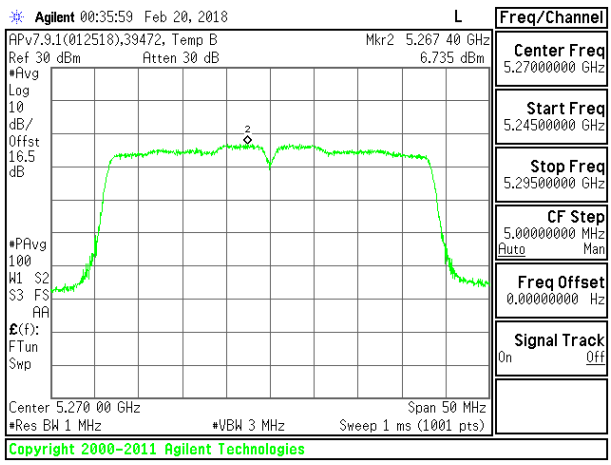
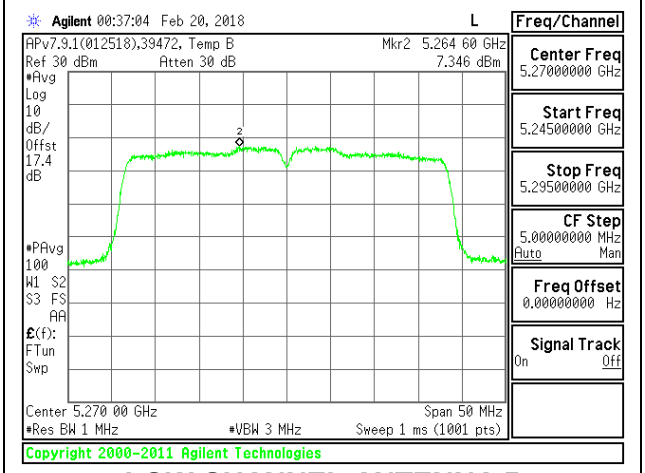
LOW CHANNEL

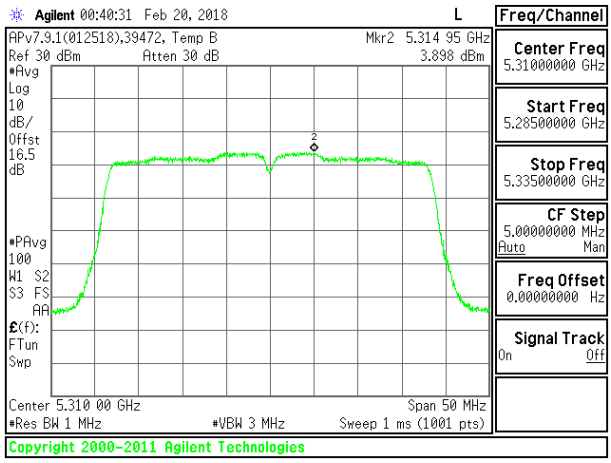


LOW CHANNEL ANTENNA 6



LOW CHANNEL ANTENNA 5

HIGH CHANNEL



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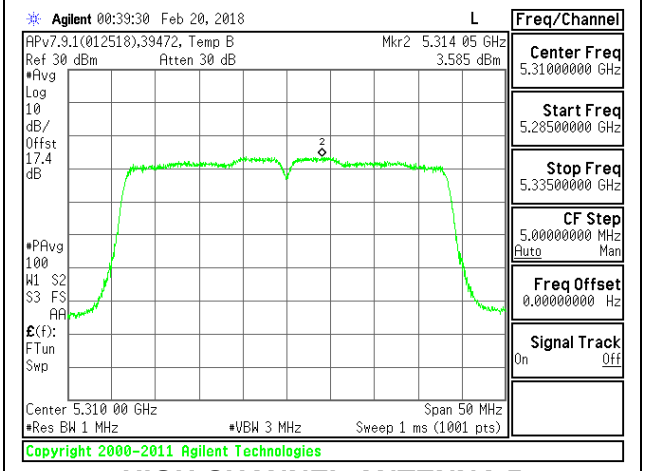

HIGH CHANNEL ANTENNA 5

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8.5.6. 802.11ac VHT80 MODE IN THE 5.3 GHz BAND

1TX Antenna 6 MODE

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/1MHz)
Mid	5290	82.80	-4.50	24.00	11.00

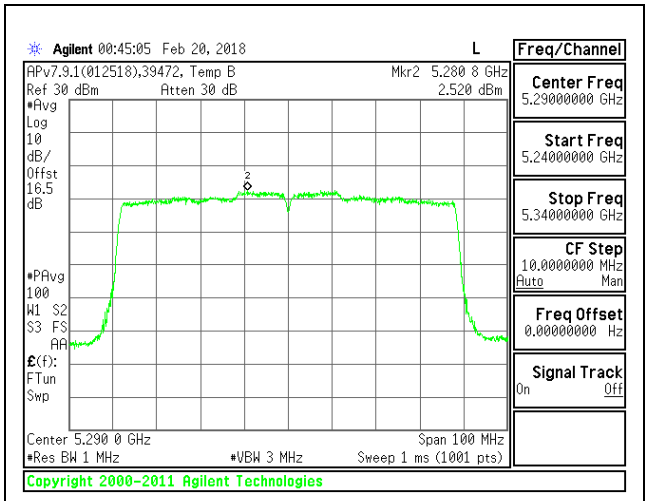
Duty Cycle CF (dB)	0.19	Included in Calculations of Corr'd PSD

Output Power Results

Channel	Frequency (MHz)	Ant 6 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid	5290	17.33	17.33	24.00	-6.67

PSD Results

Channel	Frequency (MHz)	Ant 6 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/1MHz)	PSD Margin (dB)
Mid	5290	2.52	2.71	11.00	-8.29



MID CHANNEL

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1TX Antenna 5 MODE

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/1MHz)
Mid	5290	82.80	-5.00	24.00	11.00

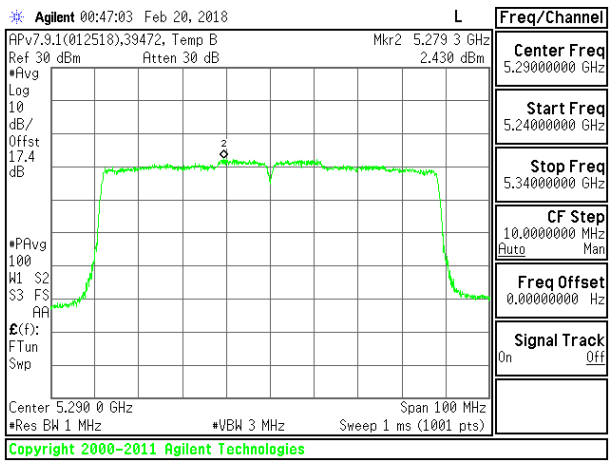
Duty Cycle CF (dB)	0.19	Included in Calculations of Corr'd PSD

Output Power Results

Channel	Frequency (MHz)	Ant 5 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid	5290	17.35	17.35	24.00	-6.65

PSD Results

Channel	Frequency (MHz)	Ant 5 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/1MHz)	PSD Margin (dB)
Mid	5290	2.43	2.62	11.00	-8.38



MID CHANNEL

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2TX Antenna 6 + Antenna 5 CDD MODE

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm/1MHz)
Mid	5290	82.80	-4.74	-1.74	24.00	11.00

Duty Cycle CF (dB)	0.19	Included in Calculations of Corr'd PSD

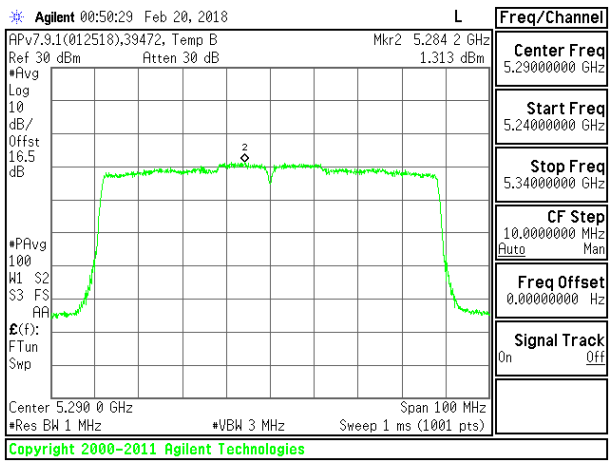
Output Power Results

Channel	Frequency (MHz)	Ant 6 Meas Power (dBm)	Ant 5 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid	5290	16.31	16.41	19.37	24.00	-4.63

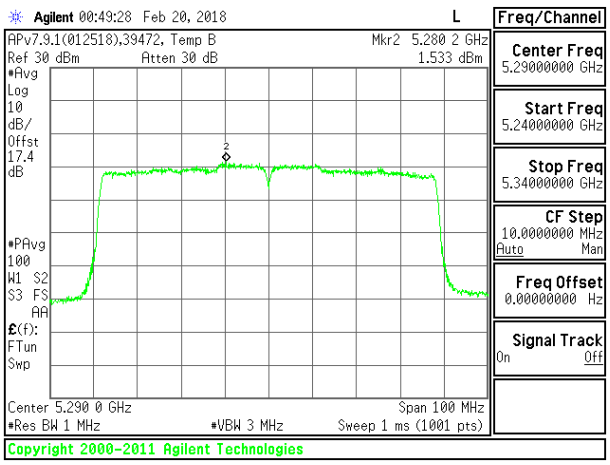
PSD Results

Channel	Frequency (MHz)	Ant 6 Meas PSD (dBm/1MHz)	Ant 5 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/1MHz)	PSD Margin (dB)
Mid	5290	1.31	1.53	4.62	11.00	-6.38

MID CHANNEL



MID CHANNEL ANTENNA 6



MID CHANNEL ANTENNA 5

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8.5.7. 802.11n HT20 MODE IN THE 5.6 GHz BAND

1TX Antenna 6 MODE

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26dB BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 1MHz)
Low	5500	22.100	-1.80	24.00	11.00
Mid	5580	22.050	-1.80	24.00	11.00
High	5700	22.050	-1.80	24.00	11.00
144	5720	21.950	-1.80	24.00	11.00

Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd Power (CH 144) & PSD**

Output Power Results

Channel	Frequency (MHz)	Ant 6 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	18.83	18.83	24.00	-5.17
Mid	5580	19.44	19.44	24.00	-4.56
High	5700	18.79	18.79	24.00	-5.21
144	5720	18.35	18.35	24.00	-5.65

PSD Results

Channel	Frequency (MHz)	Ant 6 Meas PSD (dBm/ 1MHz)	Total Corr'd PSD (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5500	9.64	9.64	11.00	-1.36
Mid	5580	10.26	10.26	11.00	-0.74
High	5700	9.24	9.24	11.00	-1.76
144	5720	8.91	8.91	11.00	-2.09

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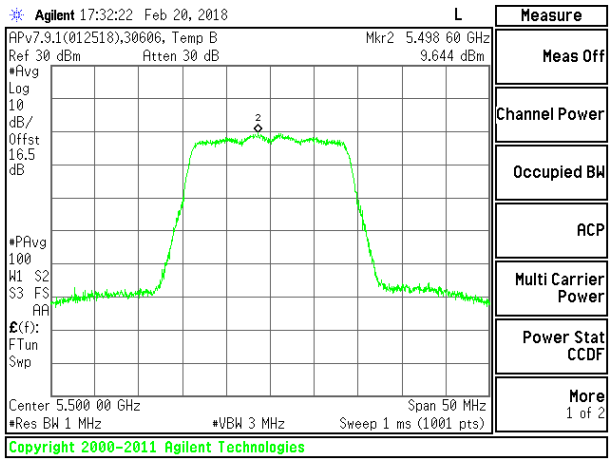
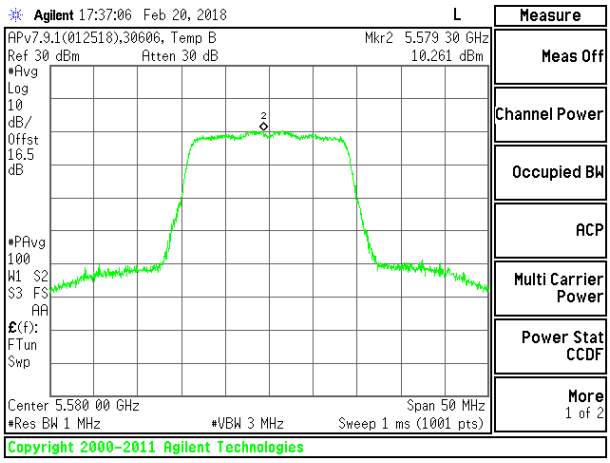
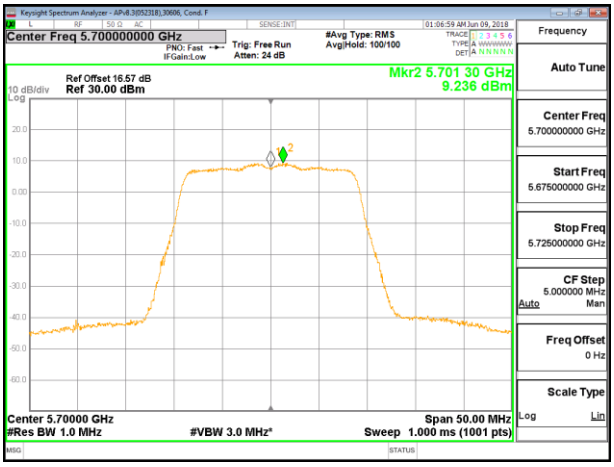


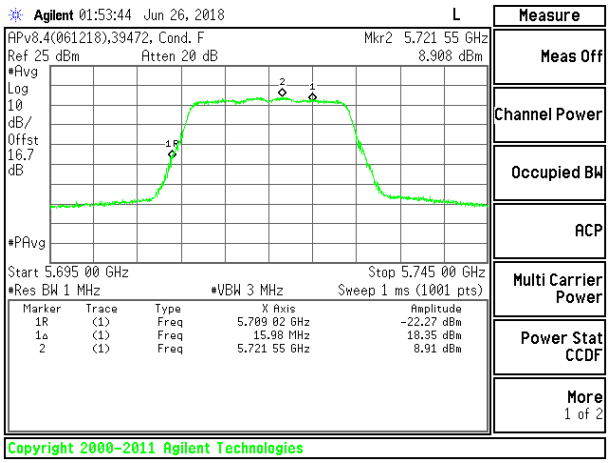
LOW CHANNEL



MID CHANNEL



HIGH CHANNEL



CHANNEL 144

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1TX Antenna 5 MODE

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 1MHz)
Low	5500	22.10	-5.00	24.00	11.00
Mid	5580	22.05	-5.00	24.00	11.00
High	5700	22.05	-5.00	24.00	11.00
144	5720	21.95	-5.00	24.00	11.00

Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd Power (CH 144) & PSD**

Output Power Results

Channel	Frequency (MHz)	Ant 5 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	18.84	18.84	24.00	-5.16
Mid	5580	20.83	20.83	24.00	-3.17
High	5700	18.82	18.82	24.00	-5.18
144	5720	19.65	19.65	24.00	-4.36

PSD Results

Channel	Frequency (MHz)	Ant 5 Meas PSD (dBm/ 1MHz)	Total Corr'd PSD (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5500	9.47	9.47	11.00	-1.53
Mid	5580	10.22	10.22	11.00	-0.78
High	5700	9.44	9.44	11.00	-1.56
144	5720	9.88	9.88	11.00	-1.12

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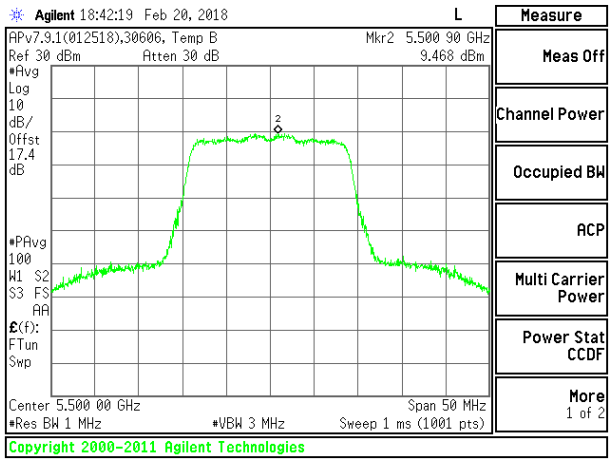
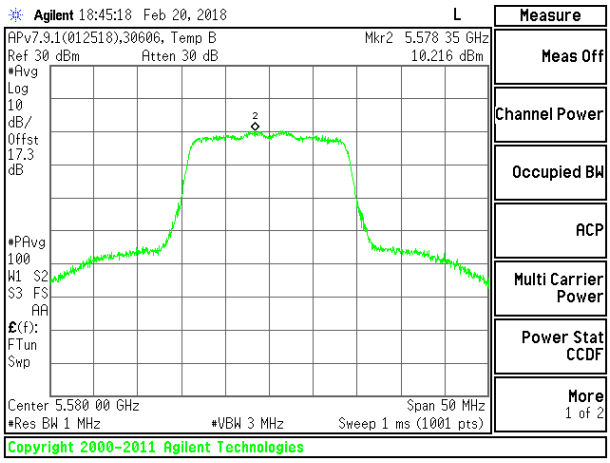


LOW CHANNEL



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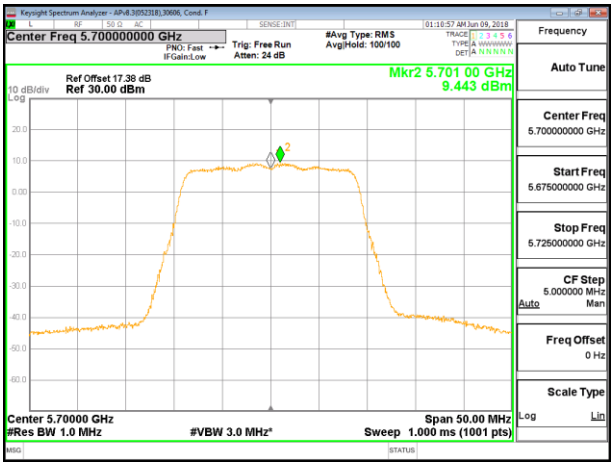

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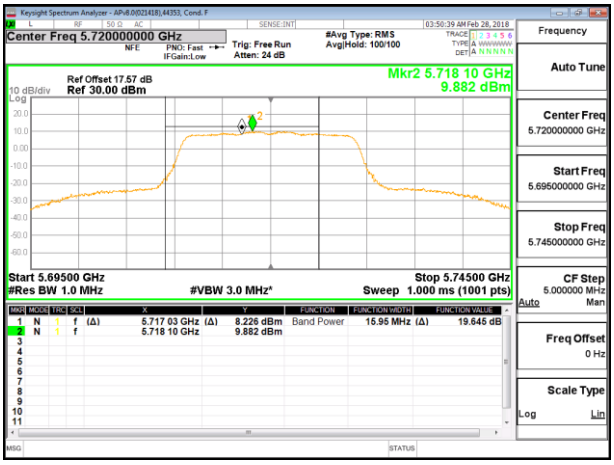

CHANNEL 144

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2TX Antenna 6 + Antenna 5 CDD MODE

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 1MHz)
Low	5500	21.75	-3.11	-0.24	24.00	11.00
Mid	5580	21.60	-3.11	-0.24	24.00	11.00
High	5700	21.75	-3.11	-0.24	24.00	11.00
144	5720	21.90	-3.11	-0.24	24.00	11.00

Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd Power (CH 144) & PSD**

Output Power Results

Channel	Frequency (MHz)	Ant 6 Meas Power (dBm)	Ant 5 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	17.85	17.81	20.84	24.00	-3.16
Mid	5580	17.83	17.83	20.84	24.00	-3.16
High	5700	17.78	17.76	20.78	24.00	-3.22
144	5720	16.53	16.69	19.62	24.00	-4.38

PSD Results

Channel	Frequency (MHz)	Ant 6 Meas PSD (dBm/ 1MHz)	Ant 5 Meas PSD (dBm/ 1MHz)	Total Corr'd PSD (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5500	7.33	7.32	10.34	11.00	-0.66
Mid	5580	7.34	7.32	10.34	11.00	-0.66
High	5700	7.29	7.19	10.25	11.00	-0.75
144	5720	7.15	6.92	10.05	11.00	-0.95

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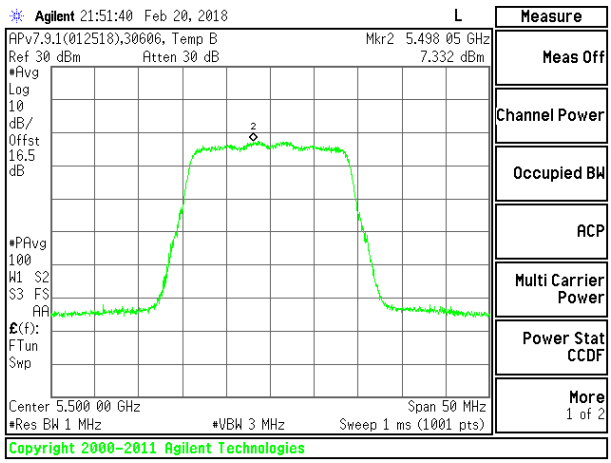
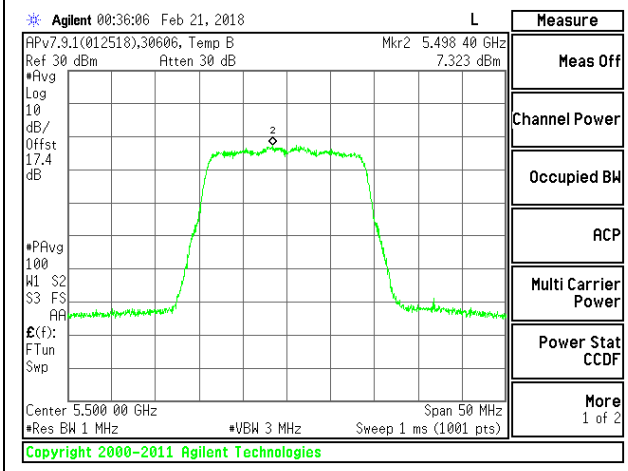
LOW CHANNEL

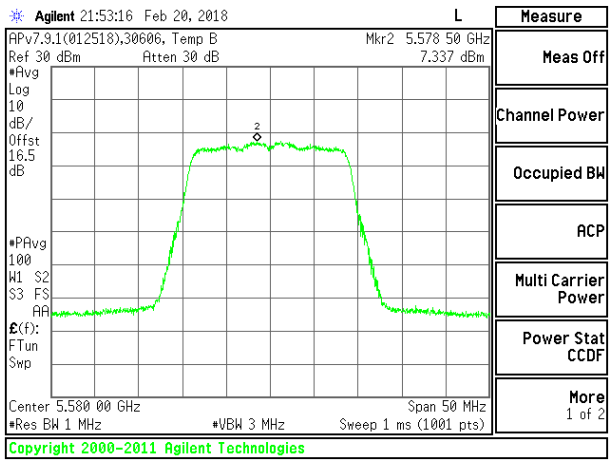


LOW CHANNEL ANTENNA 6



LOW CHANNEL ANTENNA 5

MID CHANNEL



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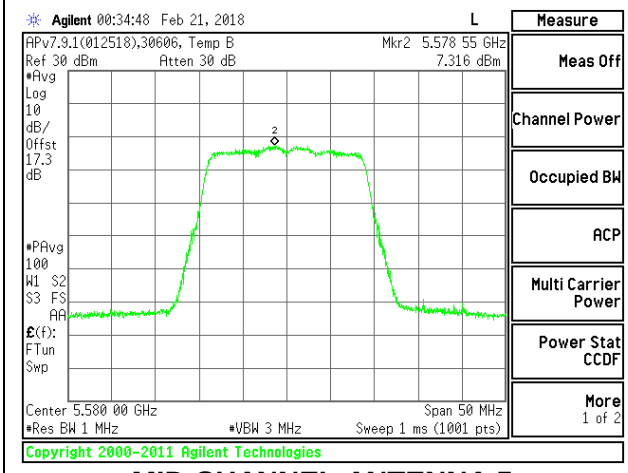
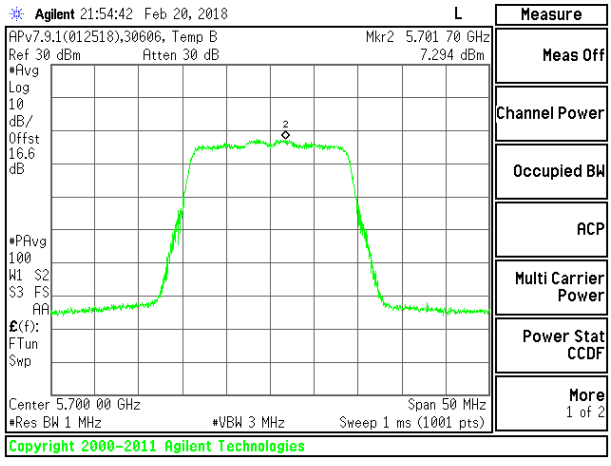
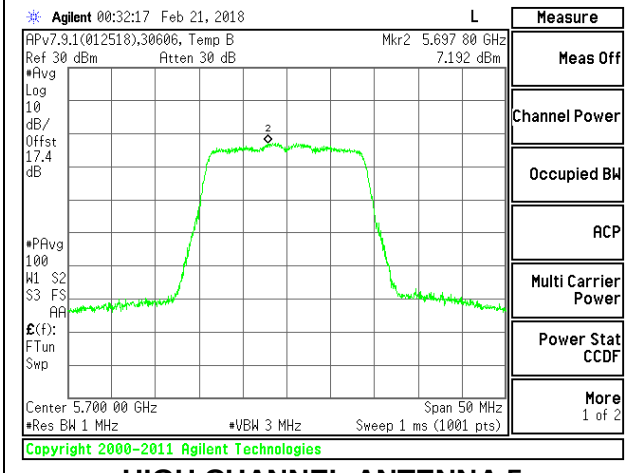


MID CHANNEL ANTENNA 5

HIGH CHANNEL



HIGH CHANNEL ANTENNA 6



HIGH CHANNEL ANTENNA 5

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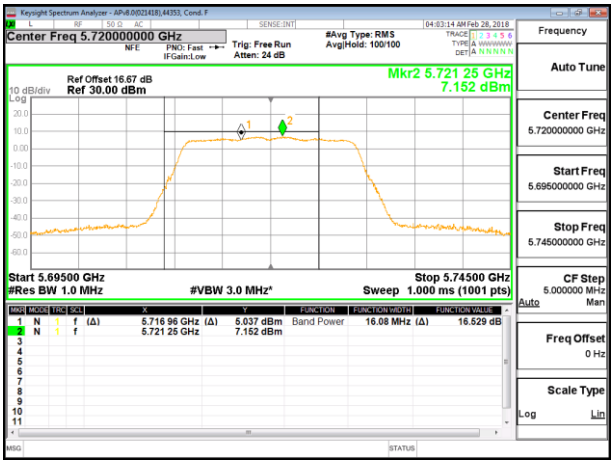
CHANNEL 144



CHANNEL 144 ANTENNA 6

CHANNEL 144 ANTENNA 5

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8.5.8. 802.11n HT40 MODE IN THE 5.6 GHz BAND

1TX Antenna 6 MODE

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 1MHz)
Low	5510	40.70	-1.80	24.00	11.00
Mid	5550	40.80	-1.80	24.00	11.00
High	5670	40.70	-1.80	24.00	11.00
142	5710	40.90	-1.80	24.00	11.00

Duty Cycle CF (dB)	0.09	**Included in Calculations of Corr'd Power (CH 142) & PSD**

Output Power Results

Channel	Frequency (MHz)	Ant 6 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5510	17.27	17.27	24.00	-6.73
Mid	5550	19.44	19.44	24.00	-4.56
High	5670	19.39	19.39	24.00	-4.61
142	5710	19.12	19.21	24.00	-4.79

PSD Results

Channel	Frequency (MHz)	Ant 6 Meas PSD (dBm/ 1MHz)	Total Corr'd PSD (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5510	4.39	4.48	11.00	-6.52
Mid	5550	8.98	9.07	11.00	-1.93
High	5670	8.78	8.87	11.00	-2.13
142	5710	6.26	6.35	11.00	-4.65

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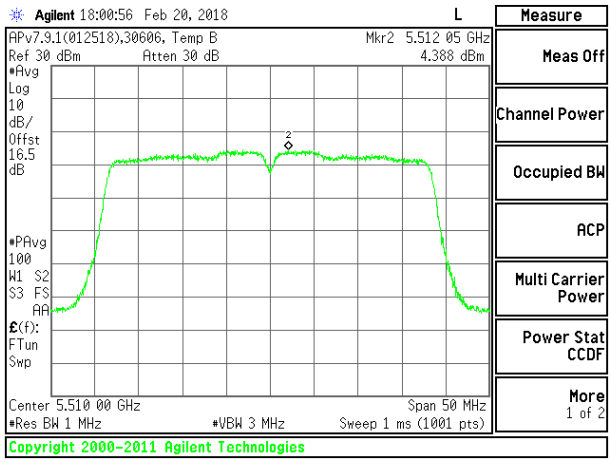
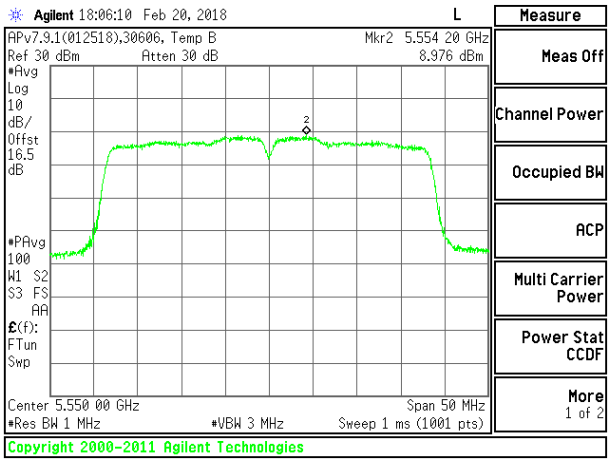
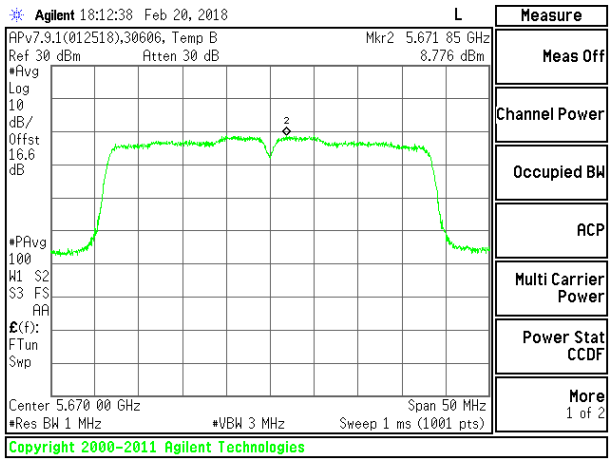


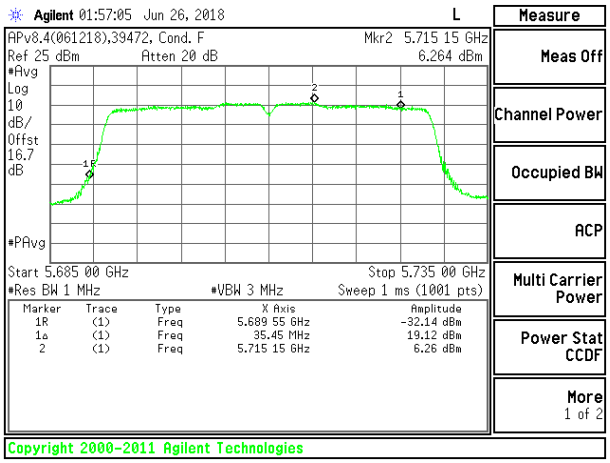
LOW CHANNEL



MID CHANNEL



HIGH CHANNEL



CHANNEL 142

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1TX Antenna 5 MODE

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 1MHz)
Low	5510	40.20	-5.00	24.00	11.00
Mid	5550	40.10	-5.00	24.00	11.00
High	5670	40.10	-5.00	24.00	11.00
142	5710	40.20	-5.00	24.00	11.00

Duty Cycle CF (dB)	0.09	Included in Calculations of Corr'd Power (CH 142) & PSD

Output Power Results

Channel	Frequency (MHz)	Ant 5 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5510	17.34	17.34	24.00	-6.66
Mid	5550	21.95	21.95	24.00	-2.05
High	5670	21.77	21.77	24.00	-2.23
142	5710	21.29	21.38	24.00	-2.62

PSD Results

Channel	Frequency (MHz)	Ant 5 Meas PSD (dBm/ 1MHz)	Total Corr'd PSD (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5510	4.48	4.57	11.00	-6.44
Mid	5550	9.22	9.31	11.00	-1.70
High	5670	8.70	8.79	11.00	-2.21
142	5710	8.22	8.31	11.00	-2.69

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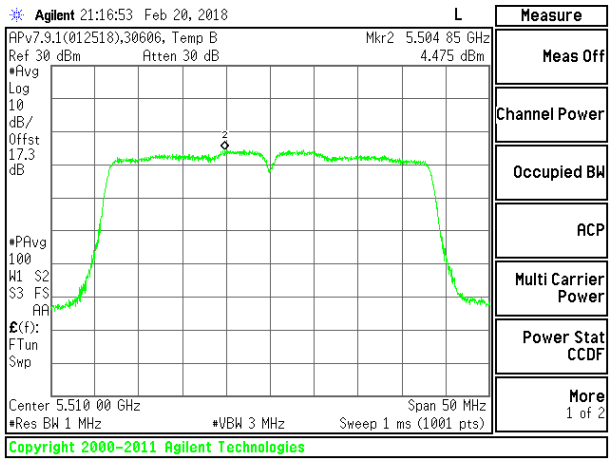
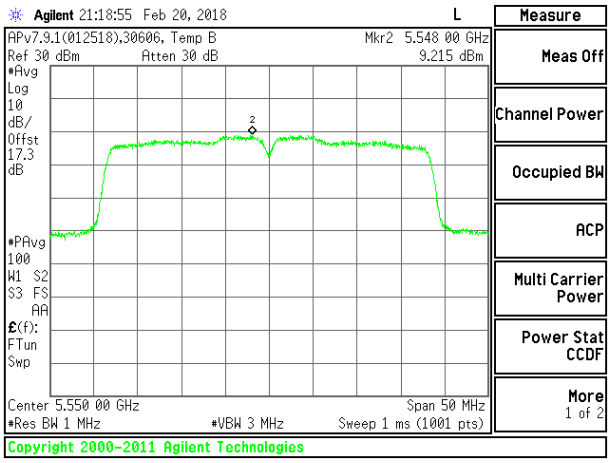
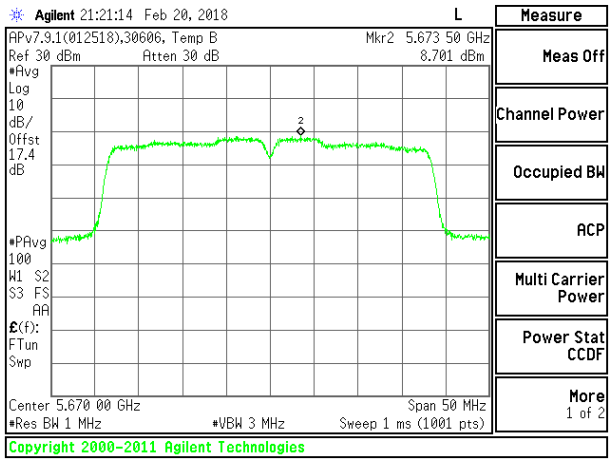


LOW CHANNEL



MID CHANNEL



HIGH CHANNEL

CHANNEL 142

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2TX Antenna 6 + Antenna 5 CDD MODE

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 1MHz)
Low	5510	40.20	-3.11	-0.24	24.00	11.00
Mid	5550	40.10	-3.11	-0.24	24.00	11.00
High	5670	40.10	-3.11	-0.24	24.00	11.00
142	5710	40.20	-3.11	-0.24	24.00	11.00

Duty Cycle CF (dB)	0.09	**Included in Calculations of Corr'd Power (CH 142) & PSD**

Output Power Results

Channel	Frequency (MHz)	Ant 6 Meas Power (dBm)	Ant 5 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5510	16.83	16.80	19.83	24.00	-4.17
Mid	5550	19.46	19.93	22.71	24.00	-1.29
High	5670	19.37	19.84	22.62	24.00	-1.38
142	5710	19.12	19.21	22.27	24.00	-1.73

PSD Results

Channel	Frequency (MHz)	Ant 6 Meas PSD (dBm/ 1MHz)	Ant 5 Meas PSD (dBm/ 1MHz)	Total Corr'd PSD (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5510	3.88	3.84	6.96	11.00	-4.04
Mid	5550	6.27	6.64	9.56	11.00	-1.44
High	5670	6.60	6.55	9.67	11.00	-1.33
142	5710	5.99	6.03	9.11	11.00	-1.89

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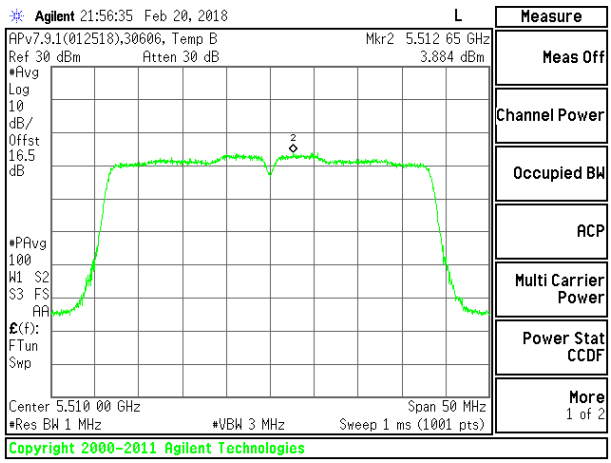
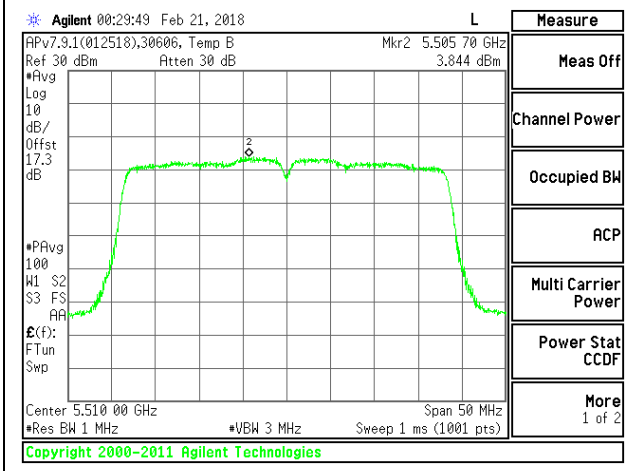
LOW CHANNEL

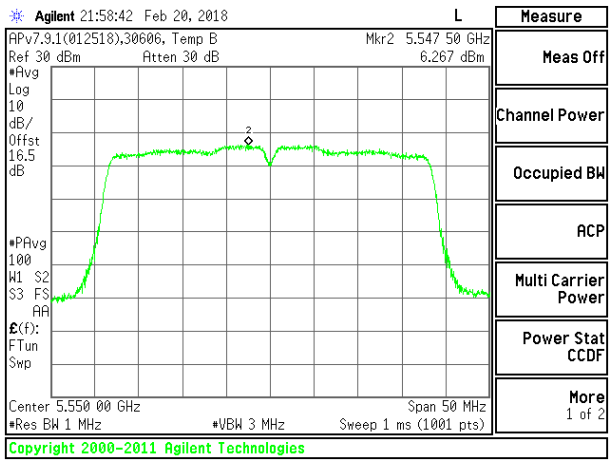


LOW CHANNEL ANTENNA 6



LOW CHANNEL ANTENNA 5

MID CHANNEL



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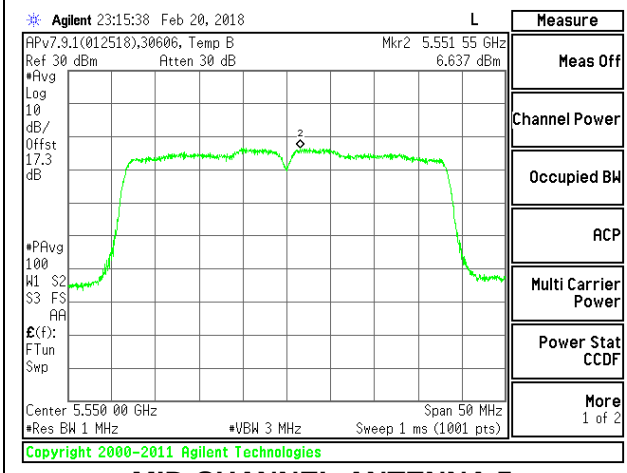
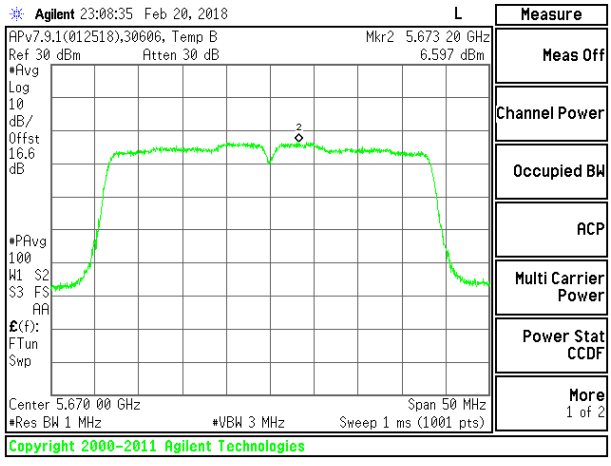


MID CHANNEL ANTENNA 5

HIGH CHANNEL



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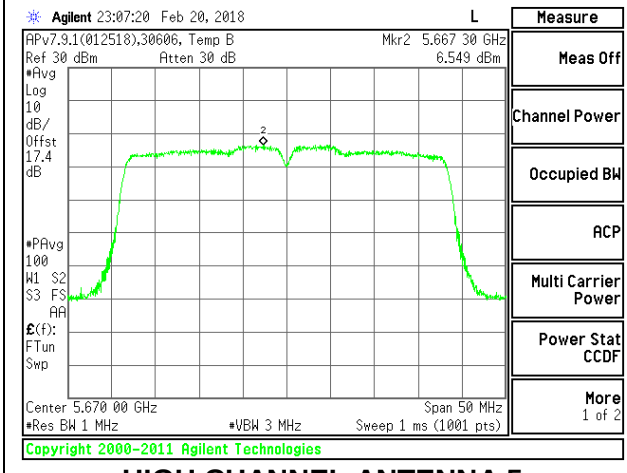

HIGH CHANNEL ANTENNA 5

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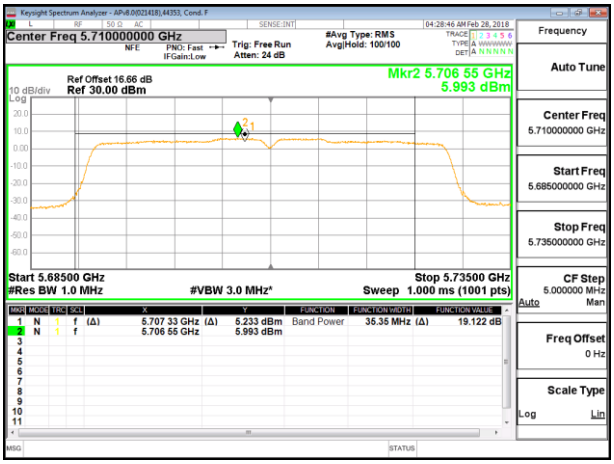

CHANNEL 142 ANTENNA 6

CHANNEL 142 ANTENNA 5

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8.5.9. 802.11ac VHT80 MODE IN THE 5.6 GHz BAND

1TX Antenna 6 MODE

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 1MHz)
Low	5530	82.60	-1.80	24.00	11.00
High	5610	82.60	-1.80	24.00	11.00
138	5690	82.80	-1.80	24.00	11.00

Duty Cycle CF (dB)	0.19	**Included in Calculations of Corr'd Power (CH138) & PSD**

Output Power Results

Channel	Frequency (MHz)	Ant 6 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5530	17.34	17.34	24.00	-6.66
High	5610	19.32	19.32	24.00	-4.68
138	5690	18.81	19.00	24.00	-5.00

PSD Results

Channel	Frequency (MHz)	Ant 6 Meas PSD (dBm/ 1MHz)	Total Corr'd PSD (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5530	2.13	2.32	11.00	-8.69
High	5610	5.39	5.58	11.00	-5.42
138	5690	2.47	2.66	11.00	-8.34

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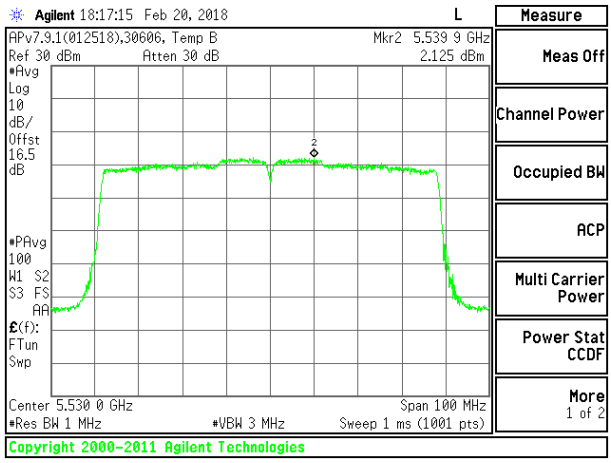
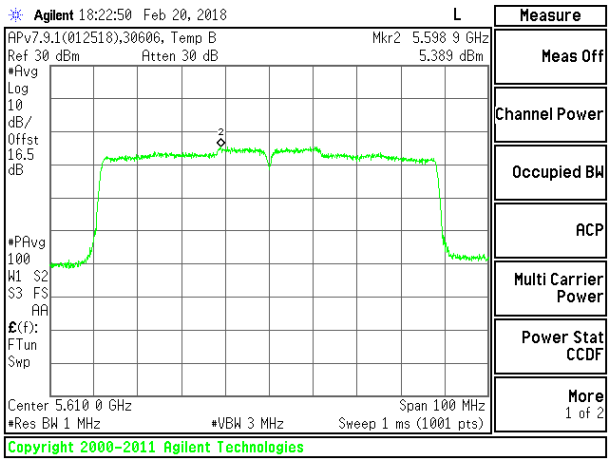
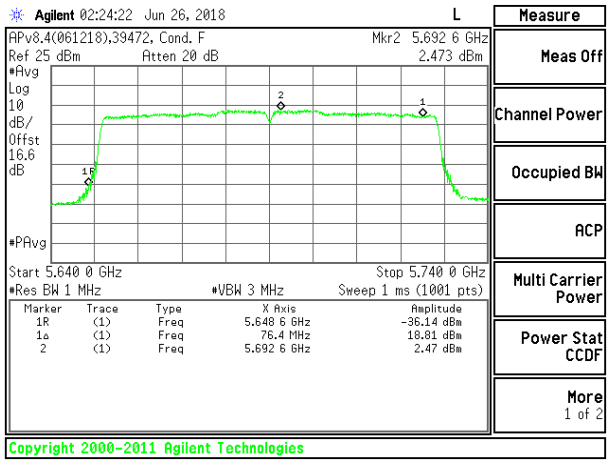


LOW CHANNEL



HIGH CHANNEL



CHANNEL 138

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1TX Antenna 5 MODE

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 1MHz)
Low	5530	82.80	-5.00	24.00	11.00
High	5610	82.80	-5.00	24.00	11.00
138	5690	83.00	-5.00	24.00	11.00

Duty Cycle CF (dB)	0.19	**Included in Calculations of Corr'd Power (CH 138) & PSD**

Output Power Results

Channel	Frequency (MHz)	Ant 5 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5530	17.37	17.37	24.00	-6.63
High	5610	21.81	21.81	24.00	-2.19
138	5690	21.53	21.72	24.00	-2.28

PSD Results

Channel	Frequency (MHz)	Ant 5 Meas PSD (dBm/ 1MHz)	Total Corr'd PSD (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5530	2.16	2.35	11.00	-8.65
High	5610	5.21	5.40	11.00	-5.60
138	5690	5.28	5.47	11.00	-5.53

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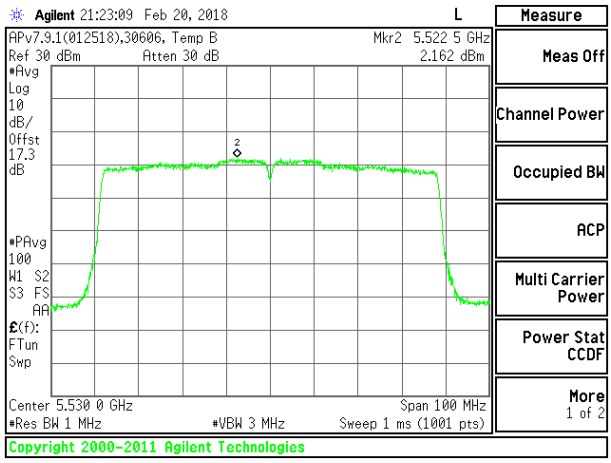
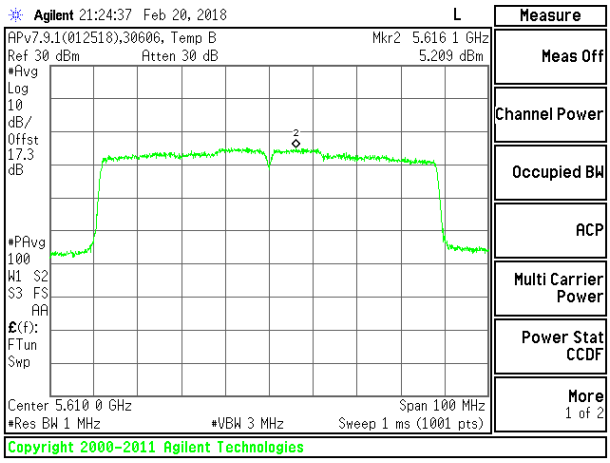


LOW CHANNEL



HIGH CHANNEL

CHANNEL 138

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2TX Antenna 6 + Antenna 5 CDD MODE

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 1MHz)
Low	5530	82.80	-3.11	-0.24	24.00	11.00
High	5610	82.60	-3.11	-0.24	24.00	11.00
138	5690	82.00	-3.11	-0.24	24.00	11.00

Duty Cycle CF (dB)	0.19	**Included in Calculations of Corr'd Power (CH 138) & PSD**

Output Power Results

Channel	Frequency (MHz)	Ant 6 Meas Power (dBm)	Ant 5 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5530	16.31	16.28	19.31	24.00	-4.69
High	5610	19.36	19.93	22.66	24.00	-1.34
138	5690	19.00	19.67	22.55	24.00	-1.45

PSD Results

Channel	Frequency (MHz)	Ant 6 Meas PSD (dBm/ 1MHz)	Ant 5 Meas PSD (dBm/ 1MHz)	Total Corr'd PSD (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5530	0.93	0.80	4.07	11.00	-6.93
High	5610	5.01	5.33	8.37	11.00	-2.63
138	5690	2.82	3.69	6.48	11.00	-4.52

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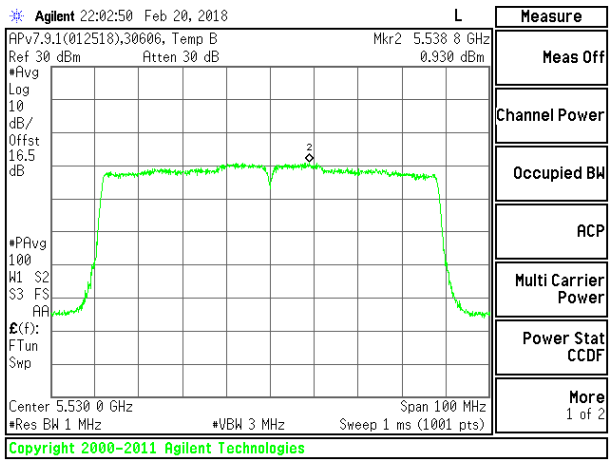
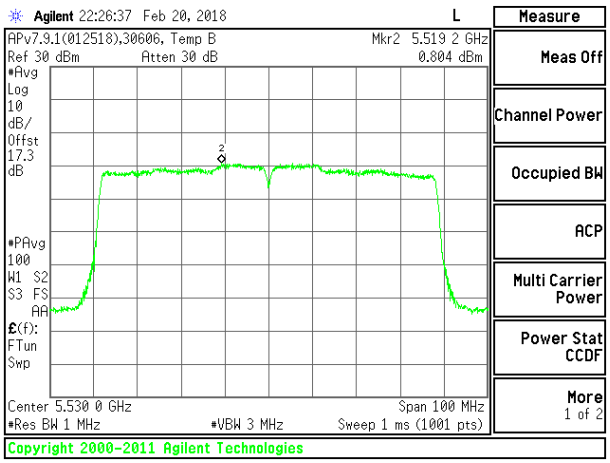
LOW CHANNEL

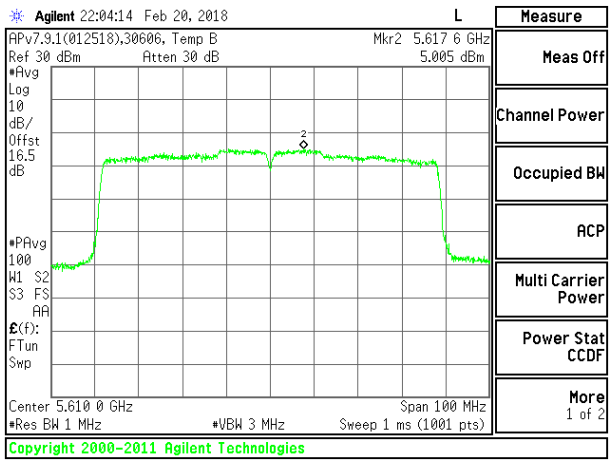


LOW CHANNEL ANTENNA 6

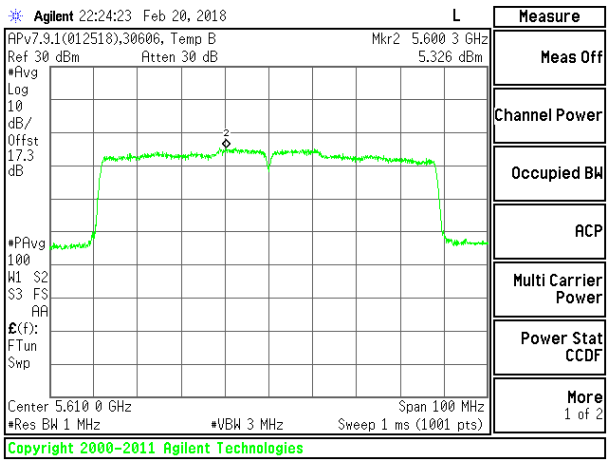


LOW CHANNEL ANTENNA 5

HIGH CHANNEL

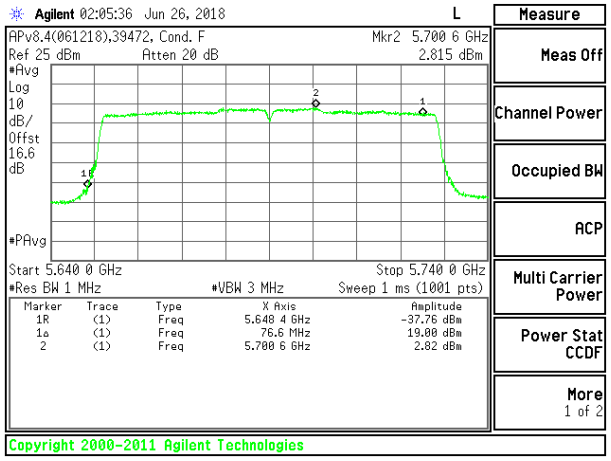


HIGH CHANNEL ANTENNA 6

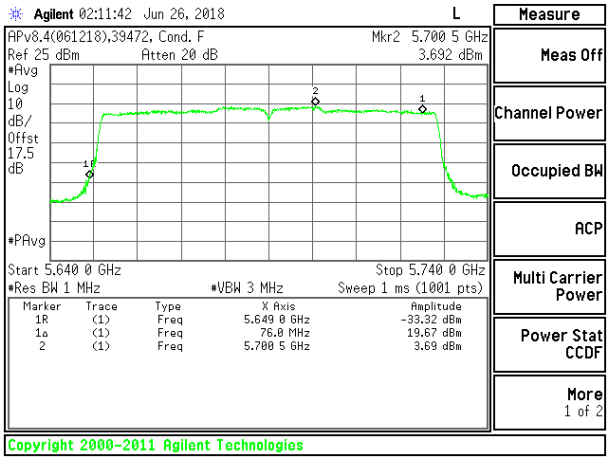


HIGH CHANNEL ANTENNA 5

CHANNEL 138



CHANNEL 138 ANTENNA 6



CHANNEL 138 ANTENNA 5

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