8.24. 11n HT40 2TX CDD MIMO MODE IN THE 5.6GHz BAND

8.24.1. 26 dB BANDWIDTH

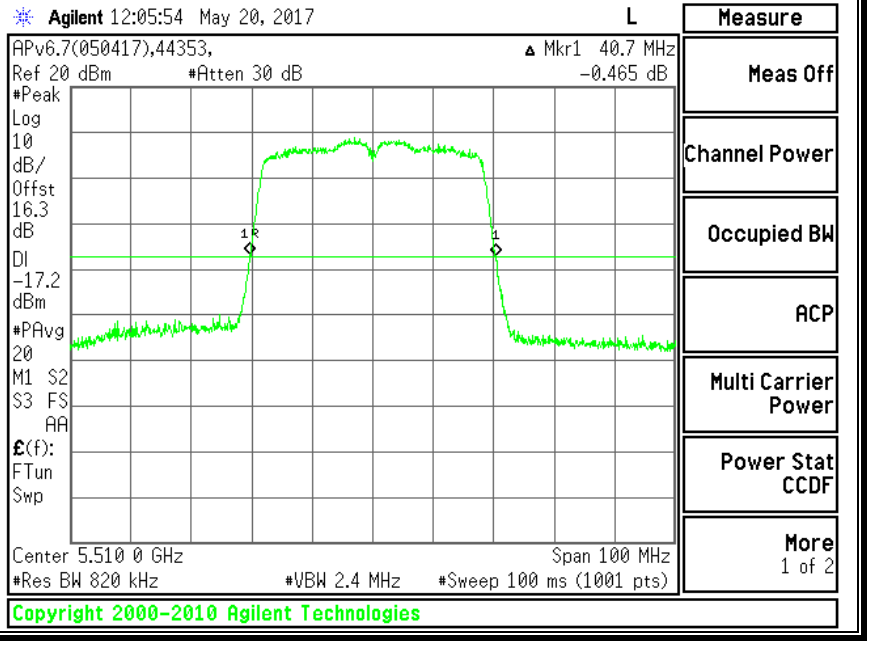
LIMITS

None; for reporting purposes only.

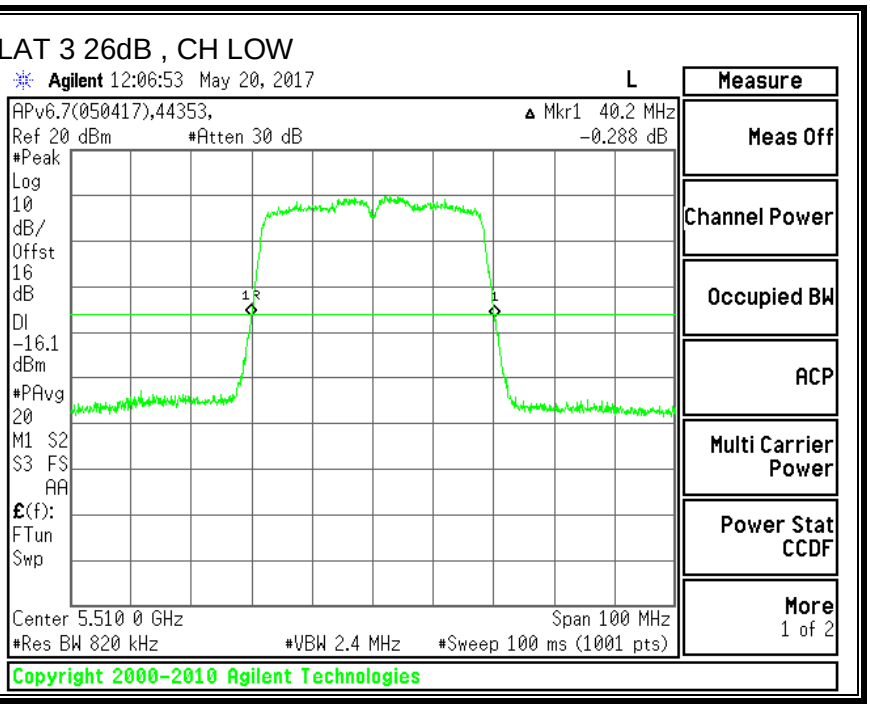
RESULTS

Channel	Frequency	26 dB BW UAT 2 (MHz)	26 dB BW LAT 3 (MHz)
Low	5510	40.7	40.2
Mid	5550	40.6	40.0
High	5670	40.5	40.1
142	5710	40.6	40.2

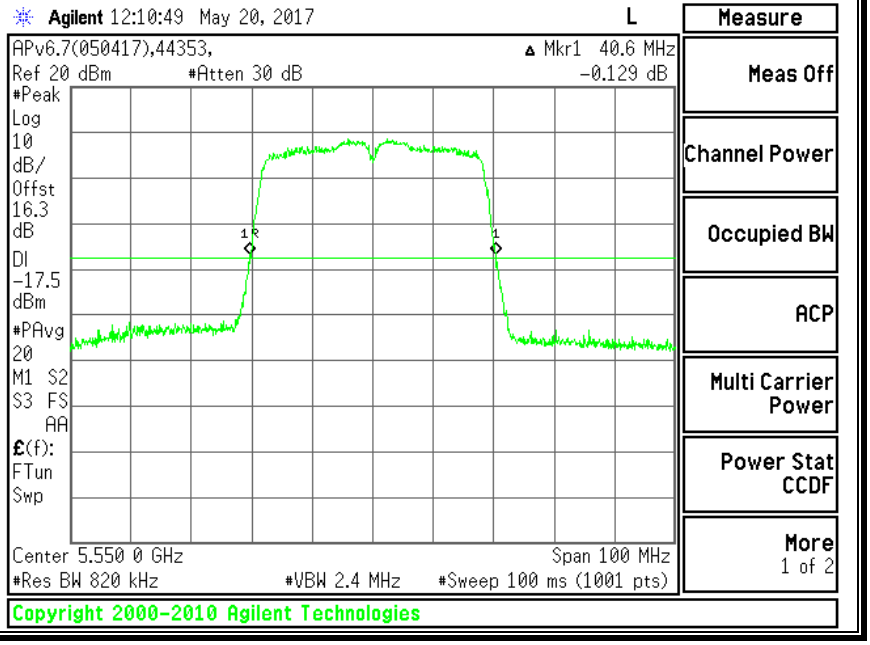
UAT 2 26dB , CH LOW



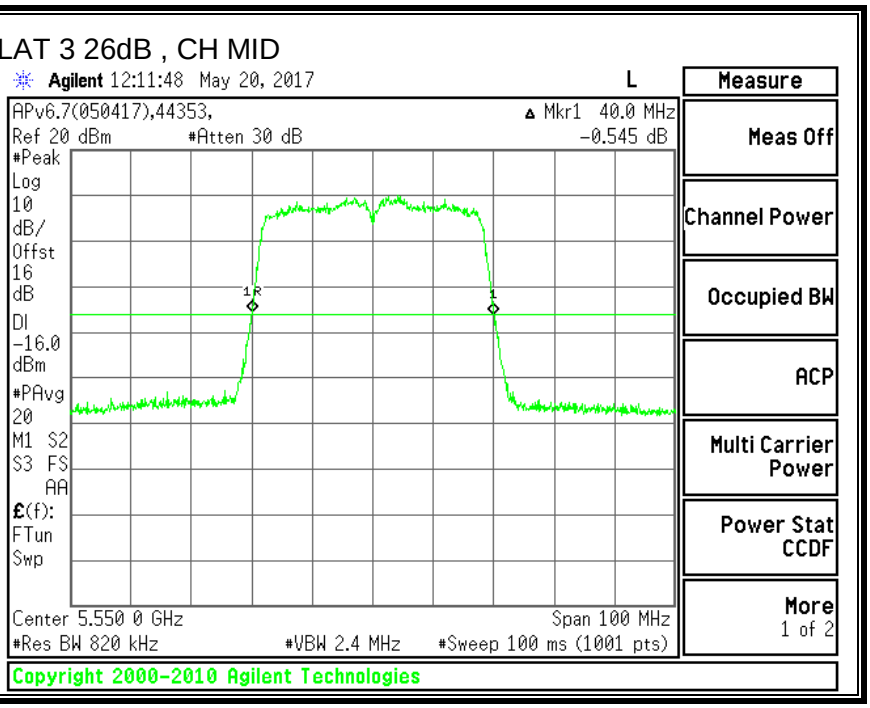
LAT 3 26dB , CH LOW



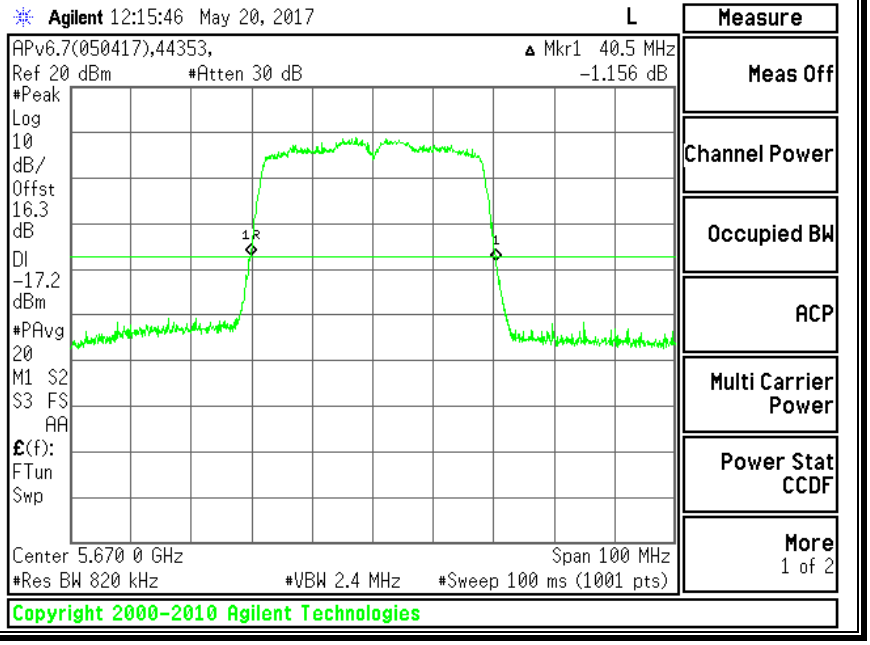
UAT 2 26dB , CH MID



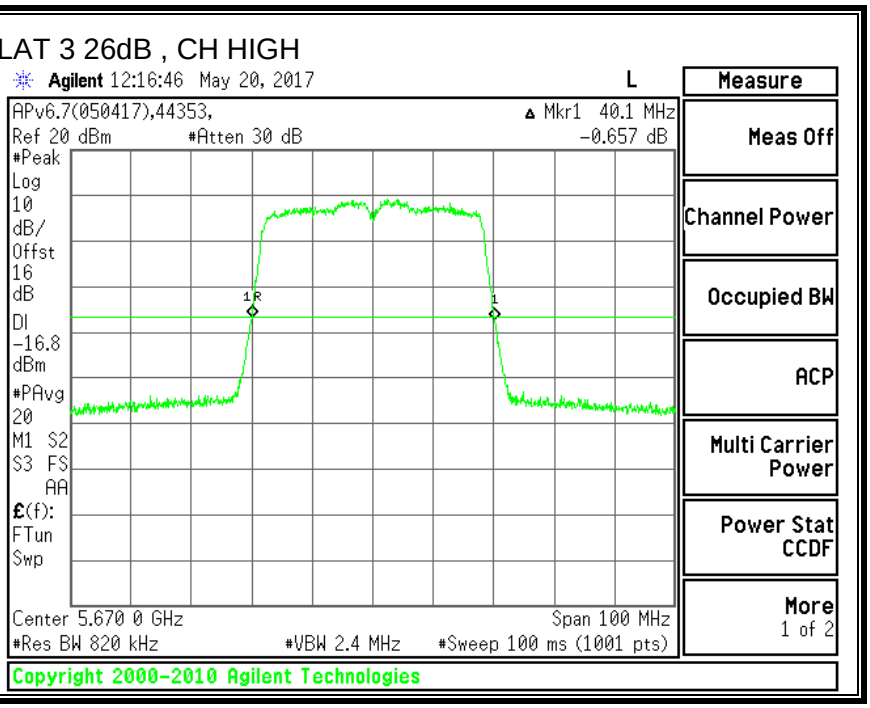
LAT 3 26dB , CH MID



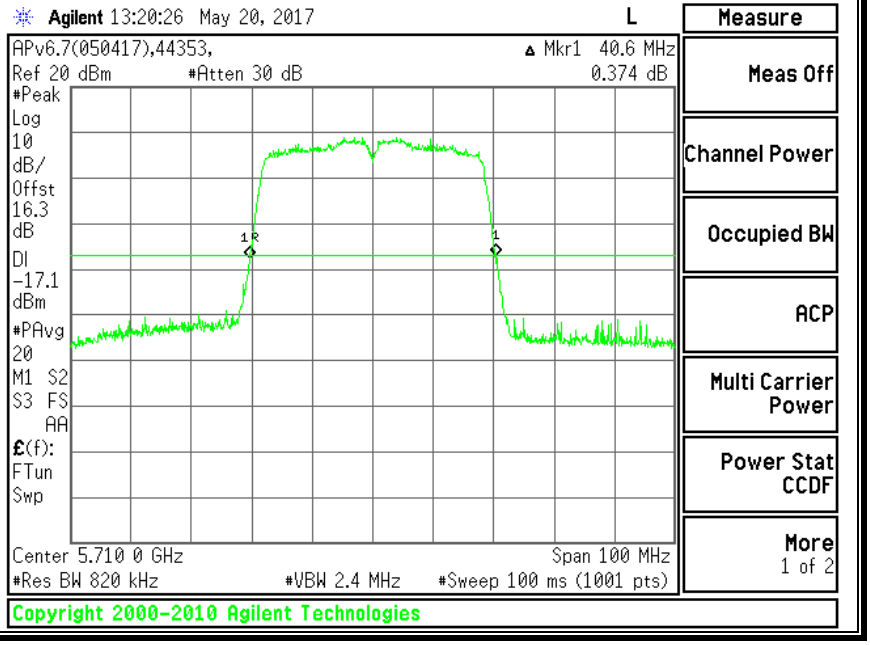
UAT 2 26dB , CH HIGH



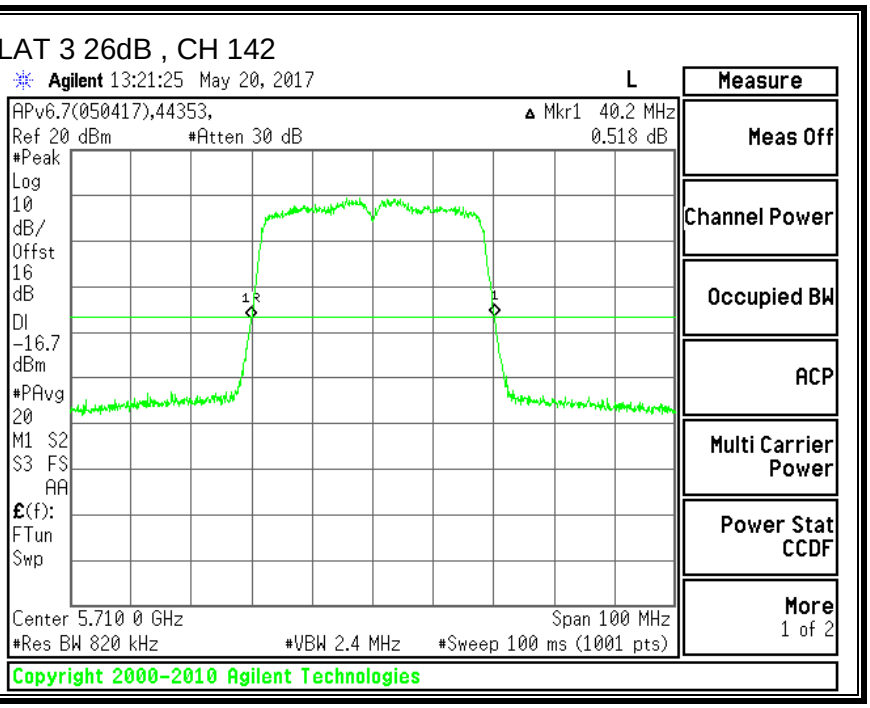
LAT 3 26dB , CH HIGH



UAT 2 26dB , CH 142



LAT 3 26dB , CH 142



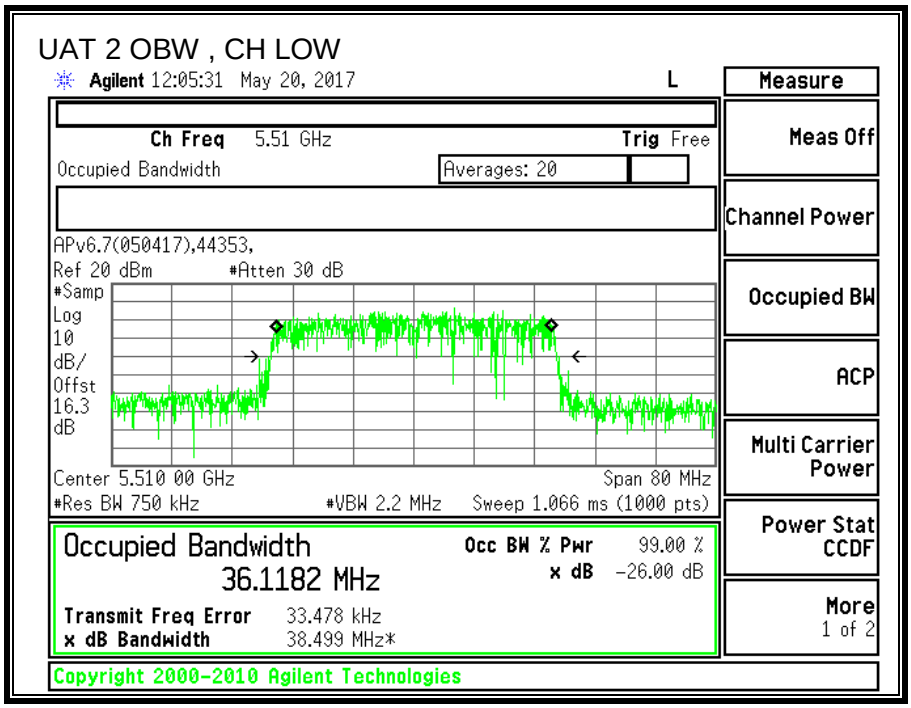
8.24.2. 99% BANDWIDTH

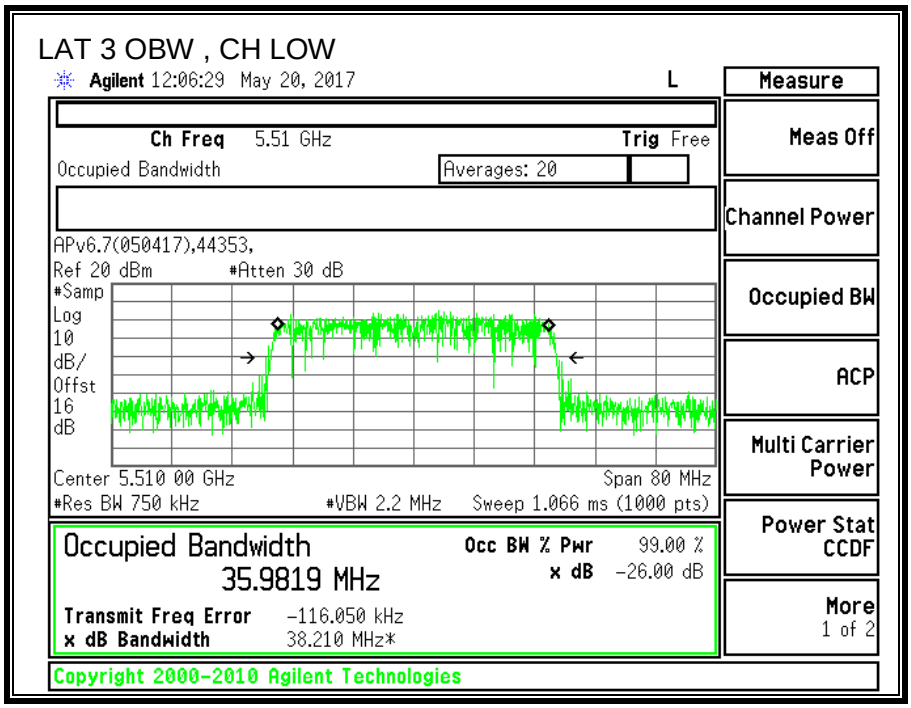
LIMITS

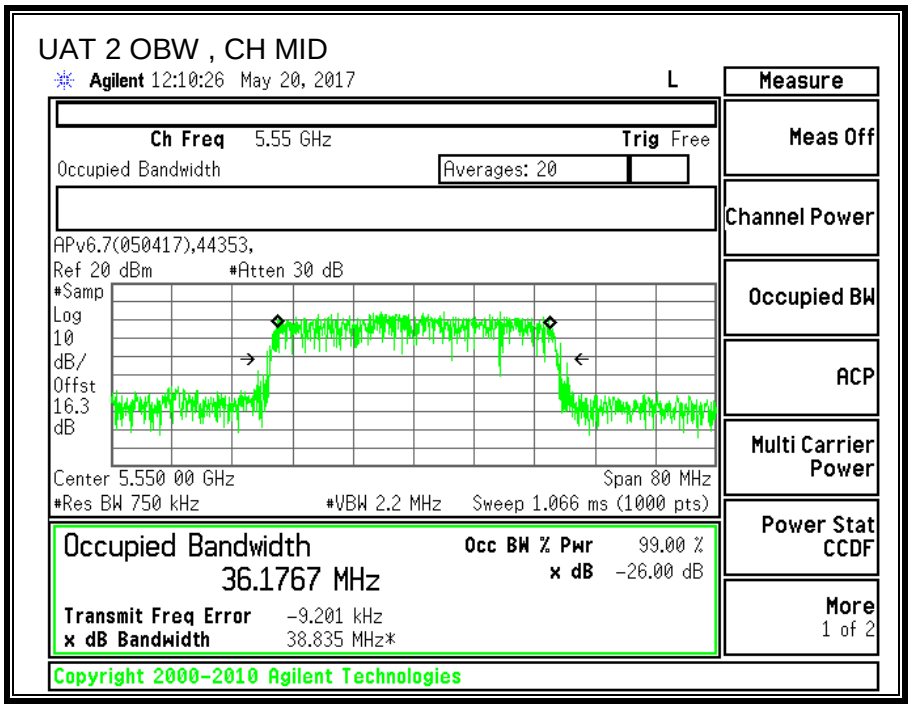
None; for reporting purposes only.

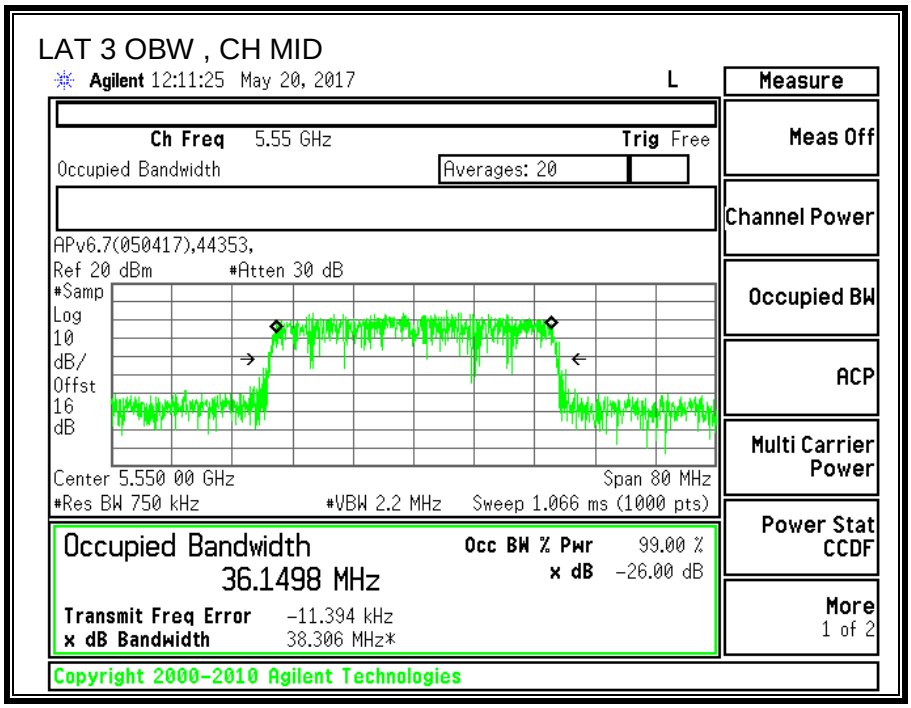
RESULTS

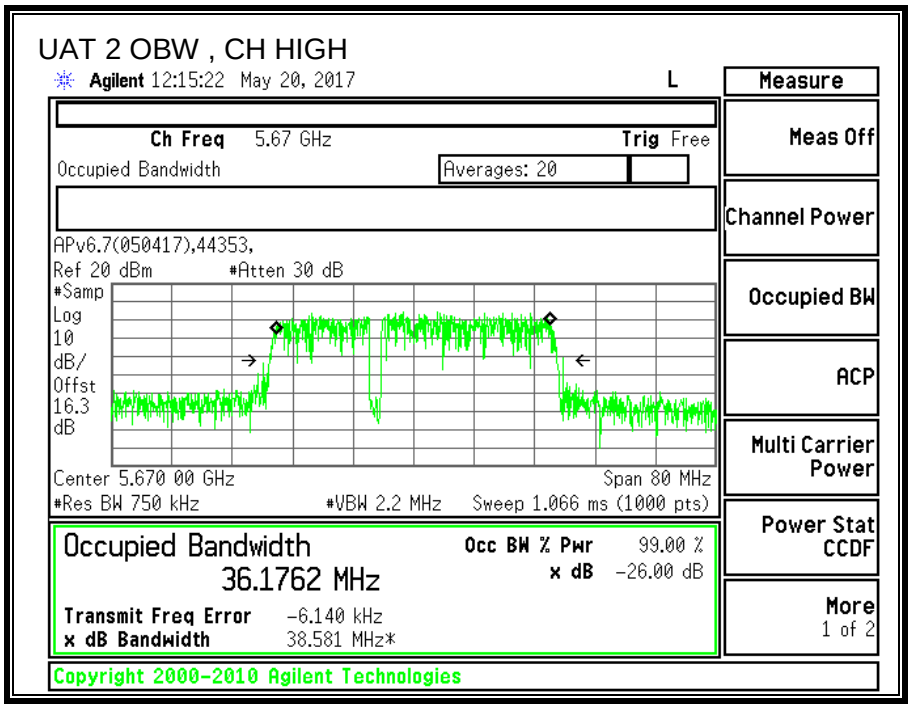
Channel	Frequency	99% BW UAT 2 (MHz)	99% BW LAT 3 (MHz)
Low	5510	36.1182	35.9819
Mid	5550	36.1767	36.1498
High	5670	36.1762	36.1645
142	5710	36.1068	36.1822

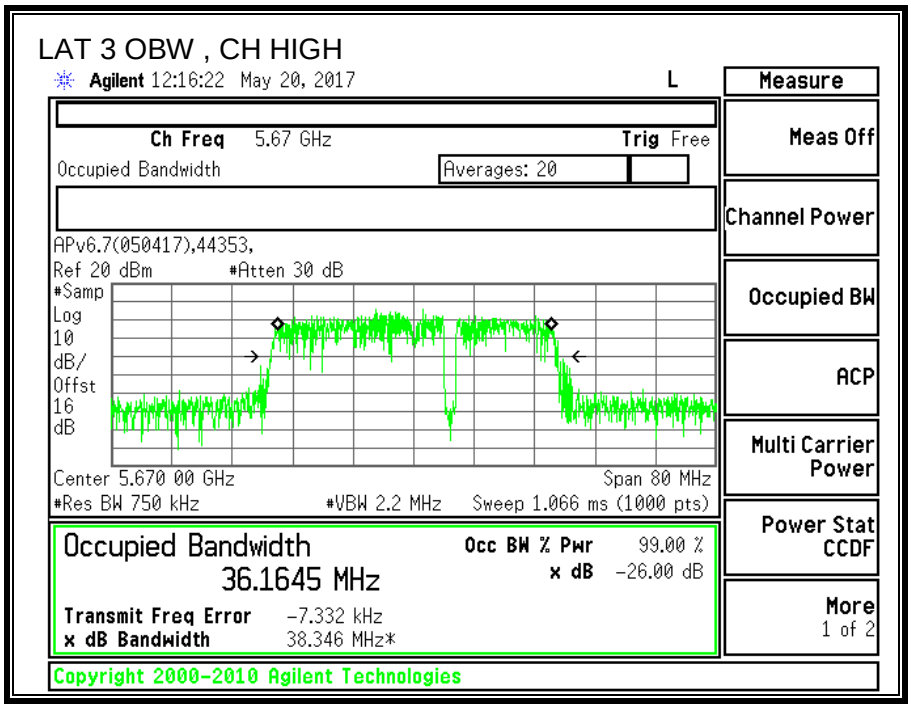


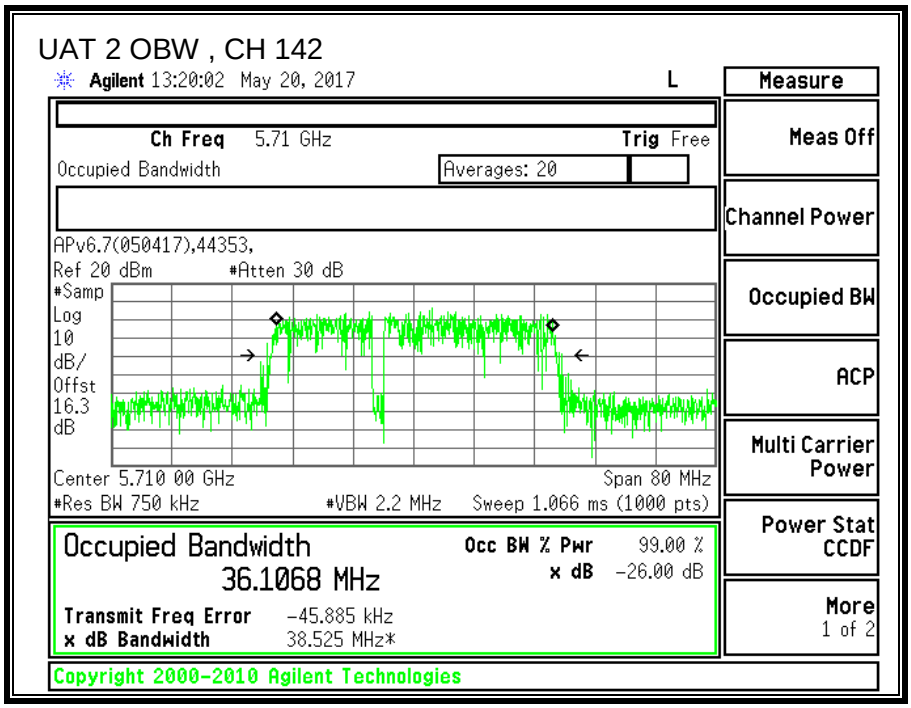


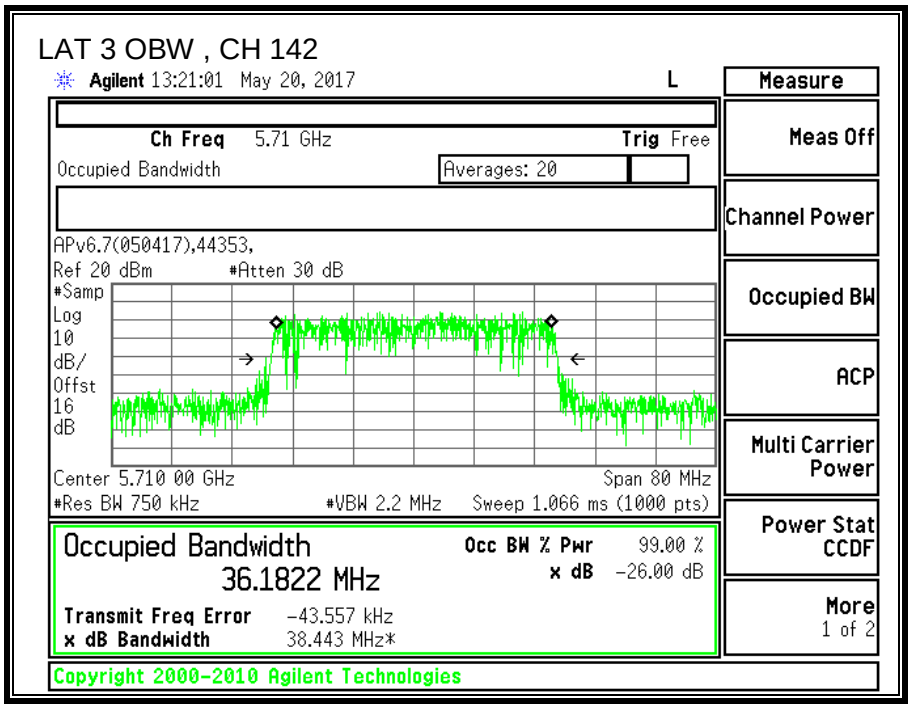












8.24.3. AVERAGE POWER

ID:	30554	Date:	08/04/2017

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

Average Power Results

Channel	Frequency (MHz)	UAT 2 Power (dBm)	LAT 3 Power (dBm)	Total Power (dBm)
Low	5510	16.94	16.87	19.92
Mid	5550	19.45	19.40	22.44
High	5670	19.47	19.43	22.46
142	5710	19.36	19.33	22.36

8.24.4. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.47–5.725 GHz, the maximum conducted output power over the frequency band 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 MHz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1–MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

PSD test procedure: KDB 789033 D02 v01r04, Section F (Method SA-2).

Straddle channel power is measured using PXA spectrum analyzer, duty cycle correction factor is required.

DIRECTIONAL ANTENNA GAIN

For Power used uncorrelated gain: The TX chains are uncorrelated and the antenna gain is unequal among the chains. The directional gain is:

UAT 2 Antenna Gain (dBi)	LAT 3 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
-2.13	-7.97	-4.13

For PSD used correlated gain: The TX chains are correlated and the antenna gain is unequal among the chains. The directional gain is:

UAT 2 Antenna Gain (dBi)	LAT 3 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
-2.13	-7.97	-1.56

RESULTS

Bandwidth, Antenna Gain and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Low	5510	40.20	35.982	-4.13	-1.56	24.00	11.00
Mid	5550	40.00	36.15	-4.13	-1.56	24.00	11.00
High	5670	40.10	36.164	-4.13	-1.56	24.00	11.00

Duty Cycle CF (dB)	0.10	Included in Calculations of Corr'd PSD

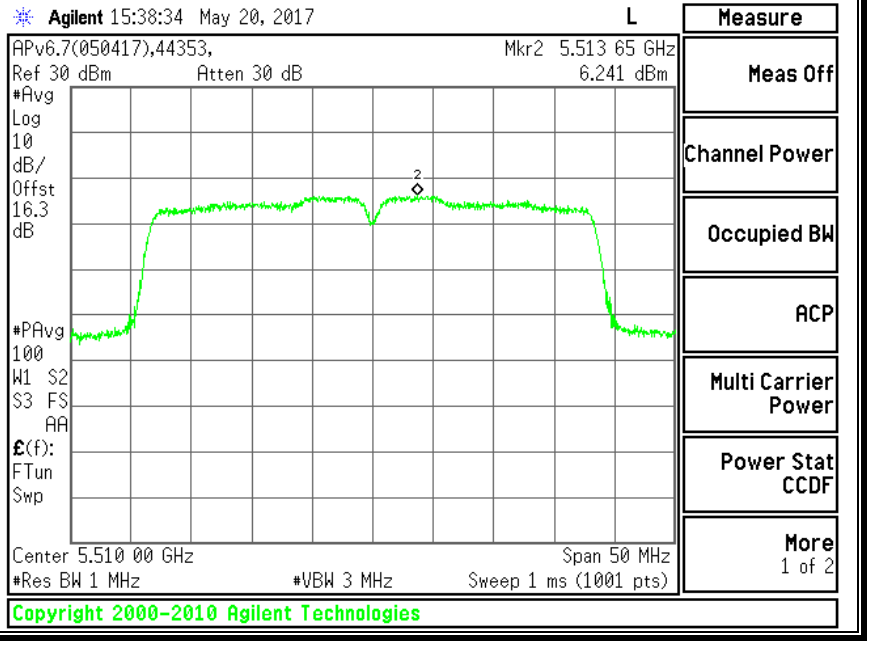
Output Power Results

Channel	Frequency (MHz)	UAT 2 Meas Power (dBm)	LAT 3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5510	16.94	16.87	19.92	24.00	-4.08
Mid	5550	19.45	19.40	22.44	24.00	-1.56
High	5670	19.47	19.43	22.46	24.00	-1.54

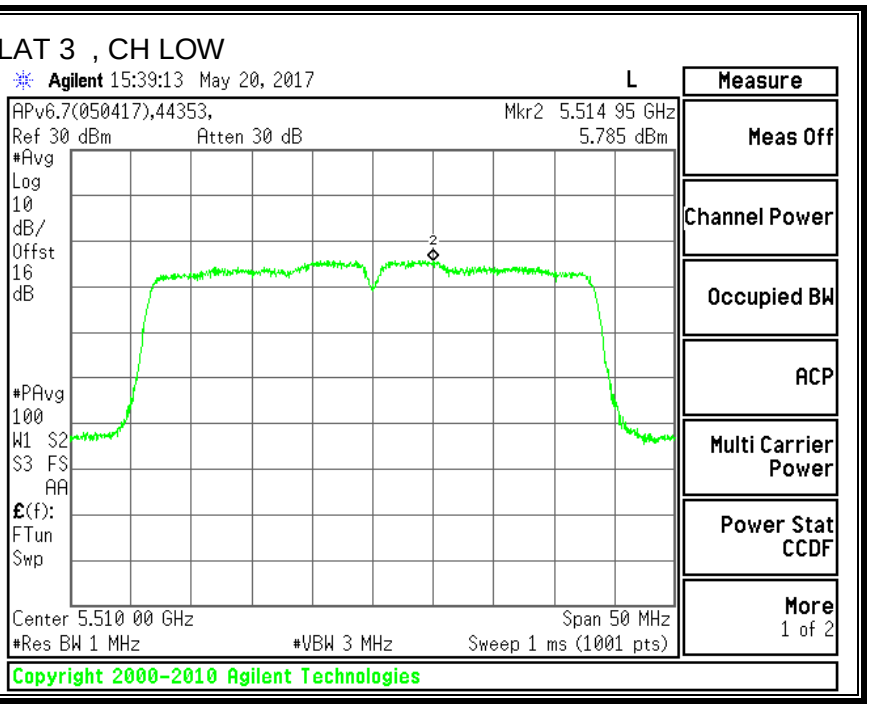
PSD Results

Channel	Frequency (MHz)	UAT 2 Meas PSD (dBm)	LAT 3 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5510	6.241	5.785	9.13	11.00	-1.87
Mid	5550	6.232	5.753	9.11	11.00	-1.89
High	5670	6.606	6.225	9.53	11.00	-1.47

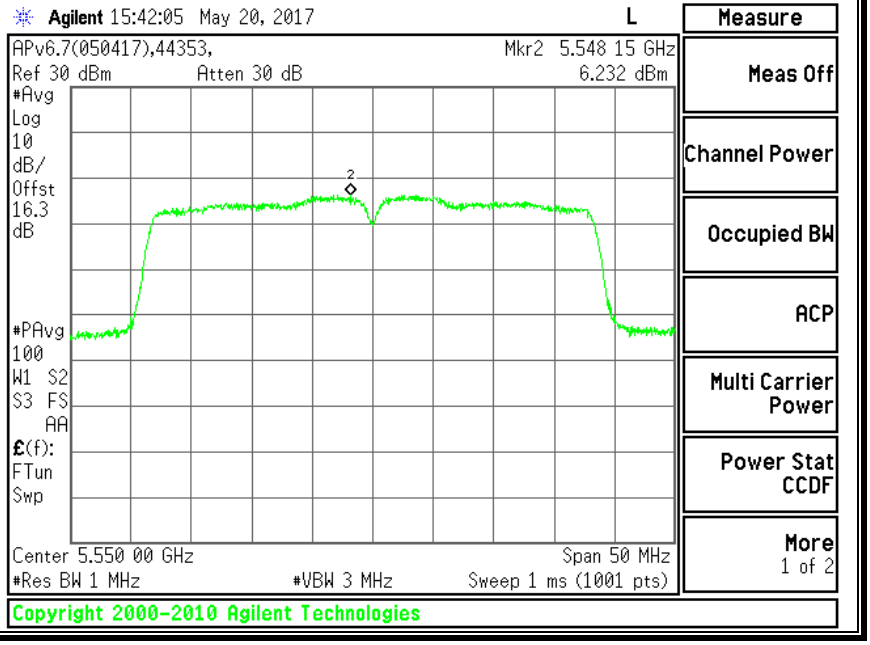
UAT 2 , CH LOW



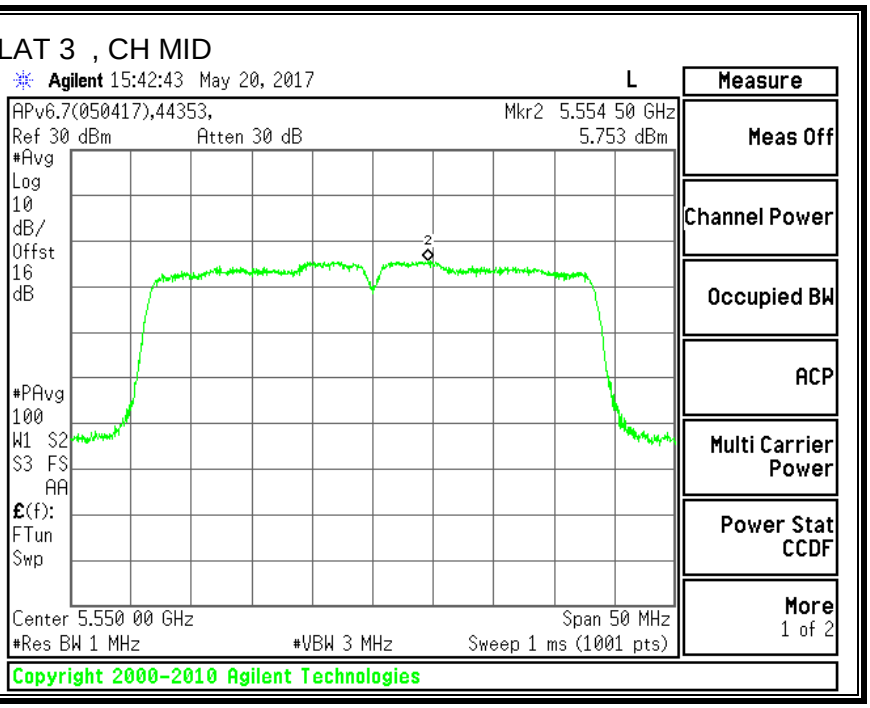
LAT 3 , CH LOW



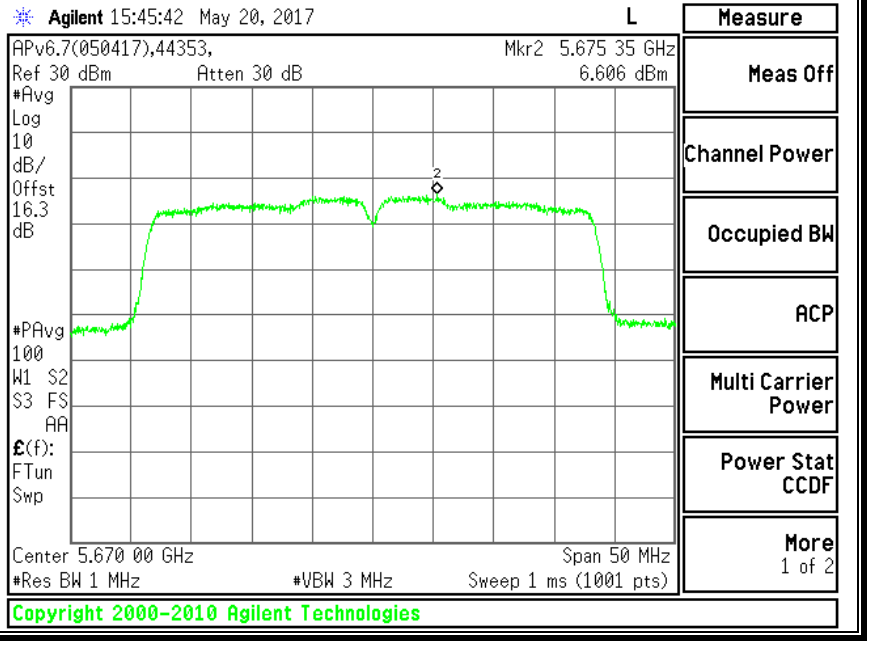
UAT 2 , CH MID



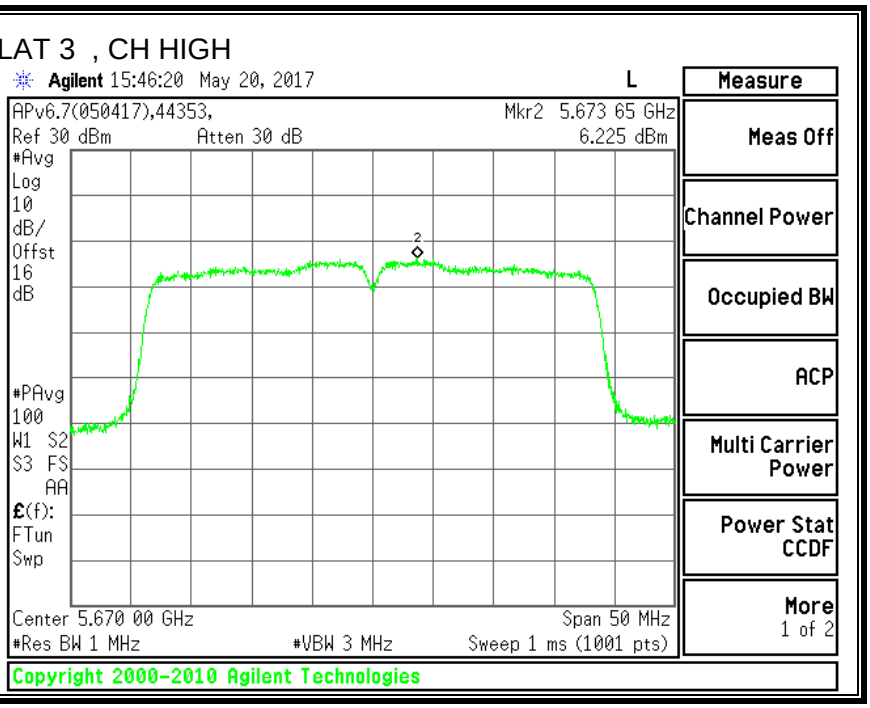
LAT 3 , CH MID



UAT 2 , CH HIGH



LAT 3 , CH HIGH



8.24.5. 11ac HT40 2TX CDD MIMO STRADDLE CHANNEL 142

UNII-2C BAND

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)
142	5710	40.20	-4.13	-1.56	24.00	11.00

Duty Cycle CF (dB)	0.10	Included in Calculations of Corr'd Power & PSD

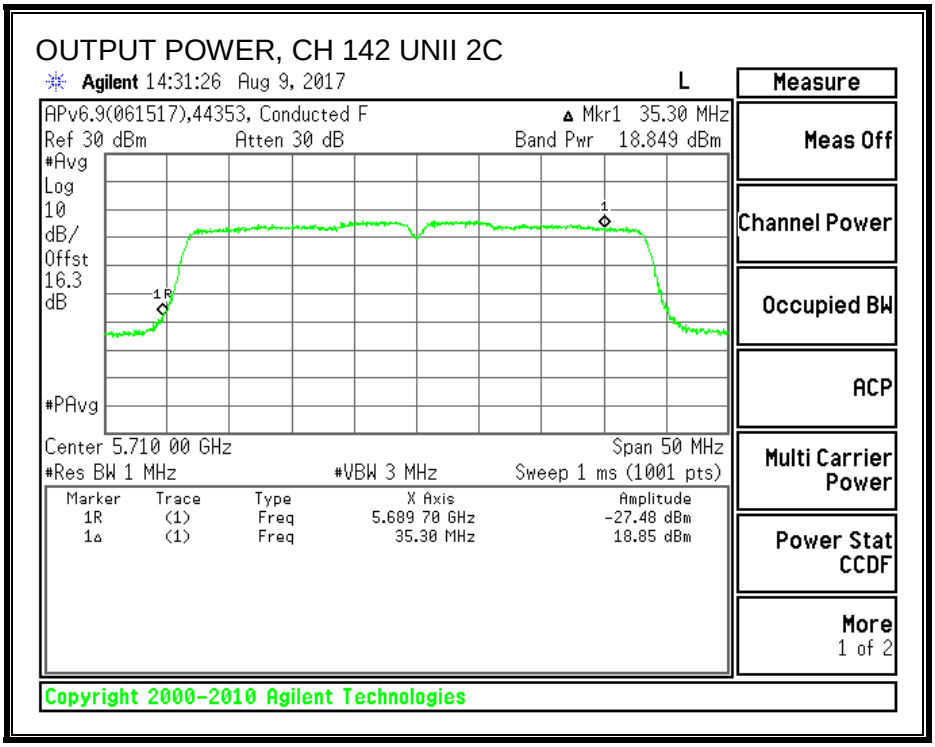
Output Power Results

Channel	Frequency (MHz)	UAT 2 Meas Power (dBm)	LAT 3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
142	5710	18.85	19.03	22.05	24.00	-1.95

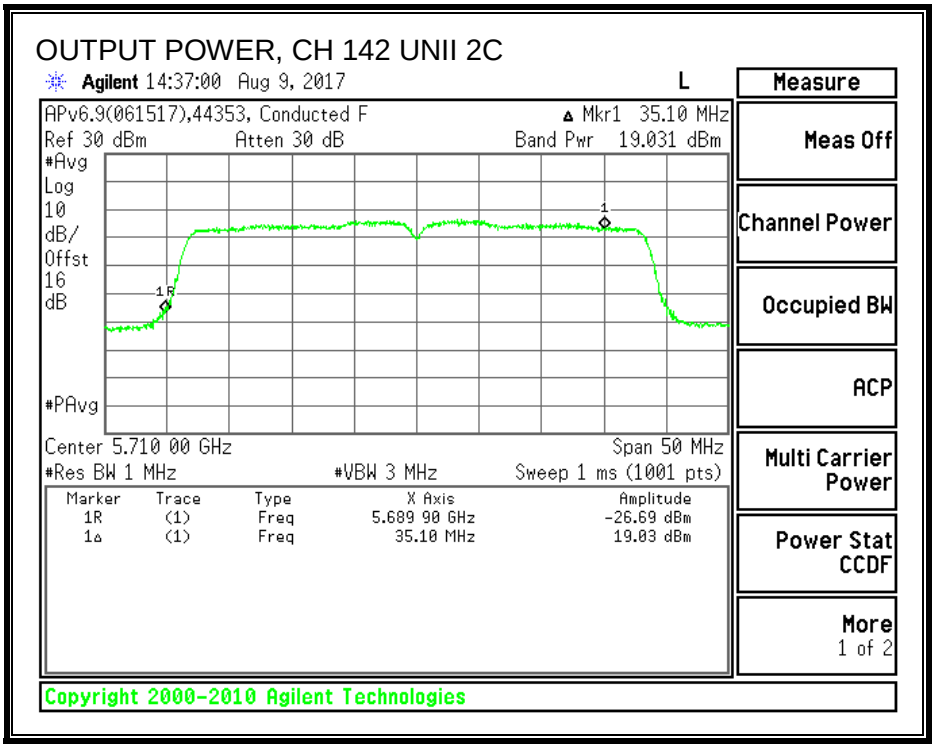
PSD Results

Channel	Frequency (MHz)	UAT 2 Meas PSD (dBm)	LAT 3 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
142	5710	5.90	6.36	9.24	11.00	-1.76

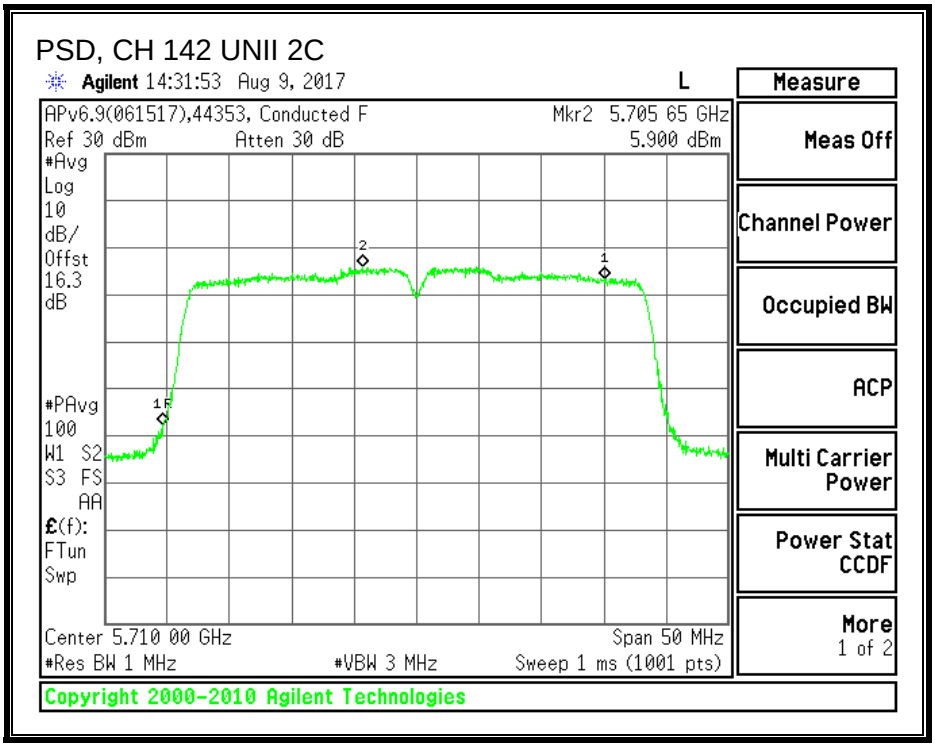
OUTPUT POWER, UAT 2



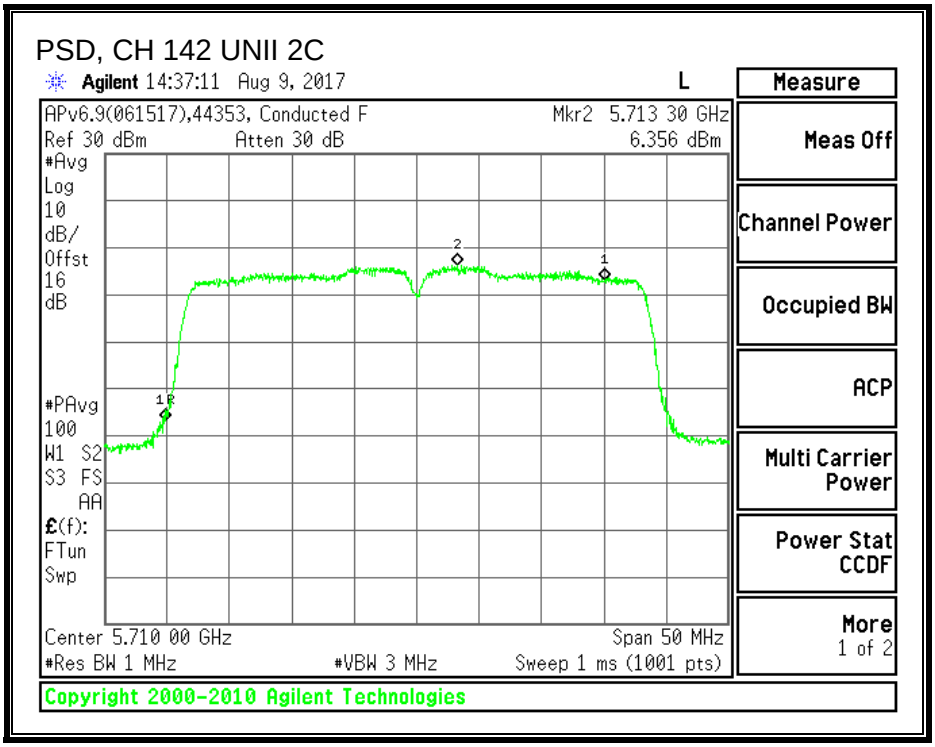
OUTPUT POWER, LAT 3



PSD, UAT 2



PSD, LAT 3



UNII-3 BAND

Antenna Gain and Limit

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain For Power (dBi)	Directional Gain For PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
142	5710	40.20	-4.52	-1.83	30.00	30.00

Duty Cycle CF (dB)	0.10	Included in Calculations of Corr'd Power & PSD

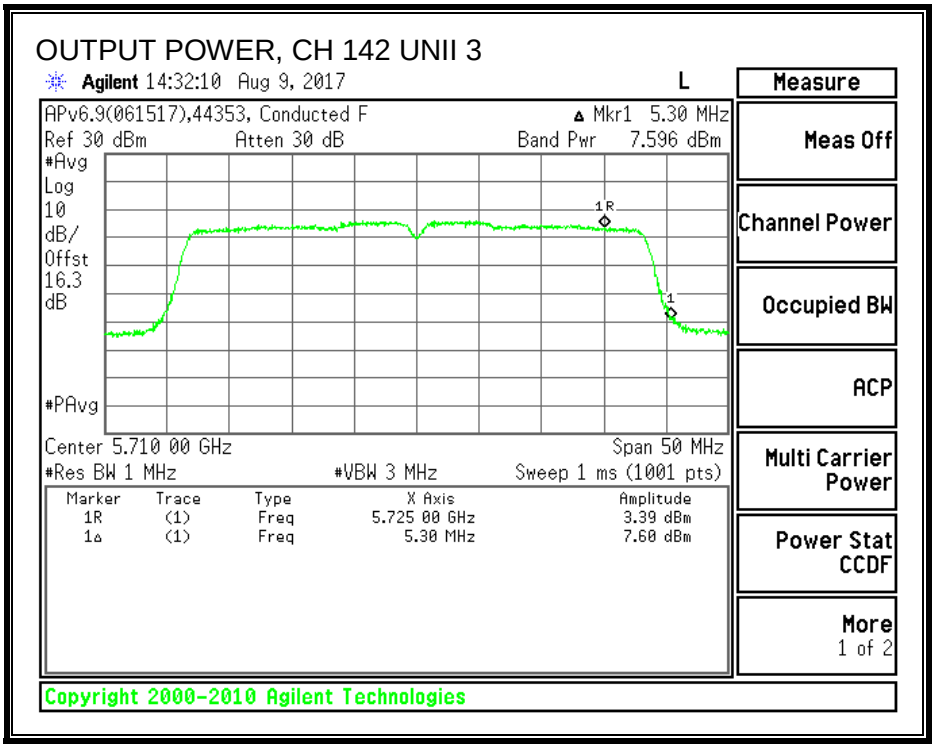
Output Power Results

Channel	Frequency (MHz)	UAT 2 Meas Power (dBm)	LAT 3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
142	5710	7.60	7.82	10.82	30.00	-19.18

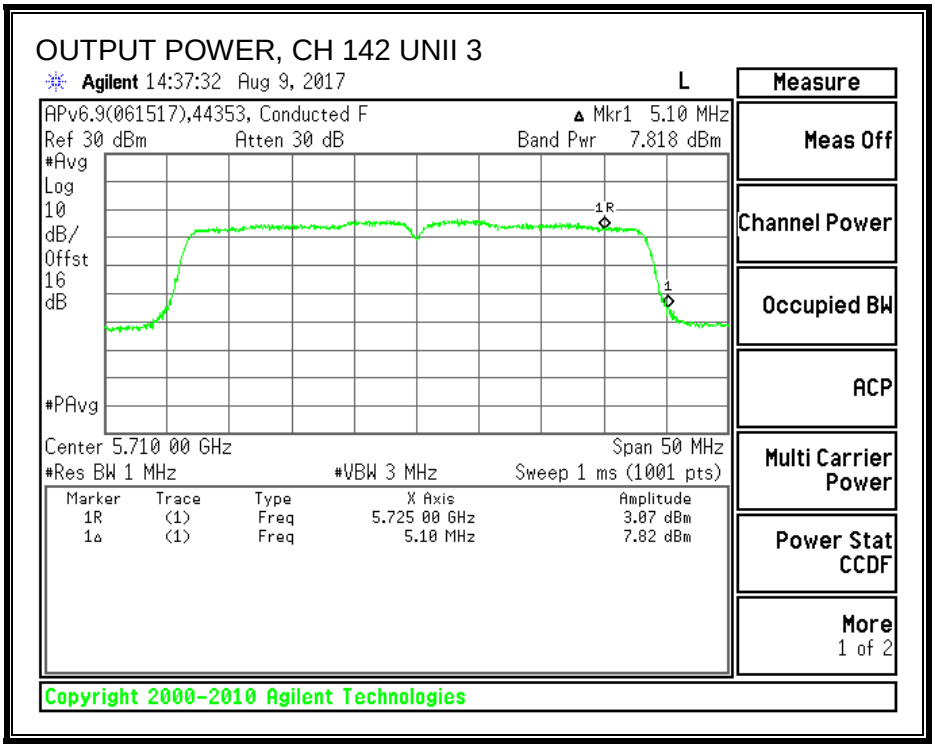
PSD Results

Channel	Frequency (MHz)	UAT 2 Meas PSD (dBm)	LAT 3 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
142	5710	0.75	0.89	3.93	30.00	-26.07

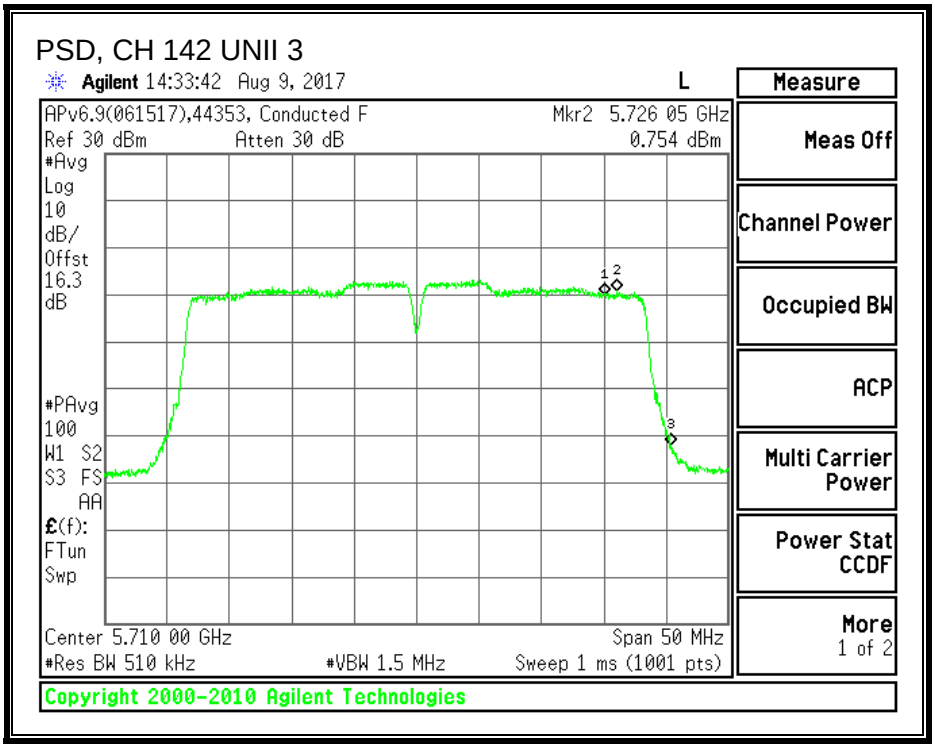
OUTPUT POWER, UAT 2



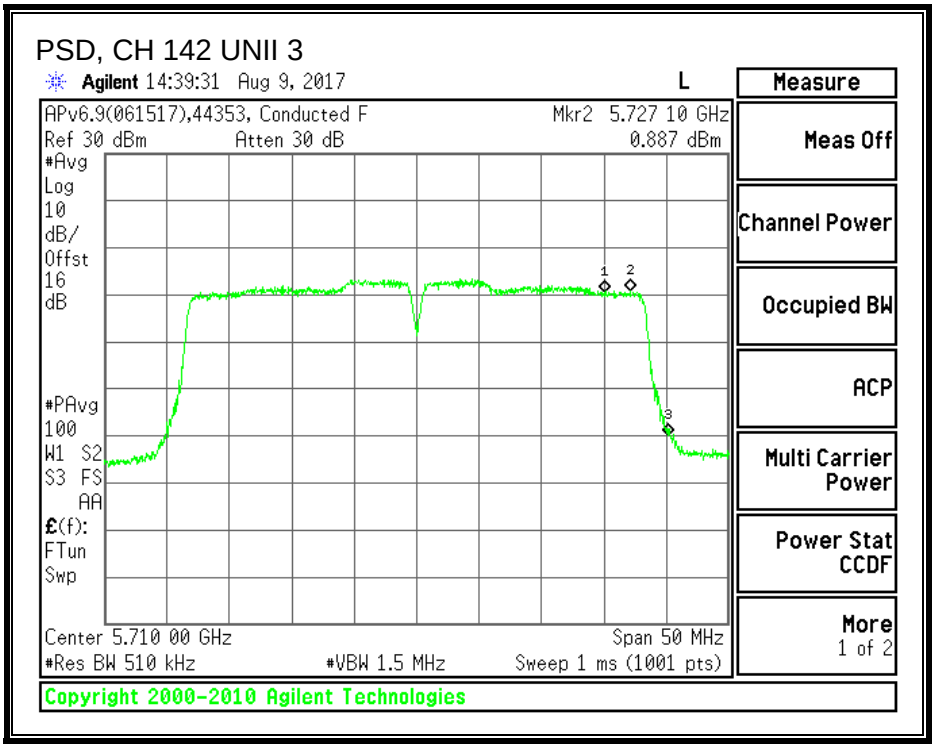
OUTPUT POWER, LAT 3



PSD, UAT 2



PSD, LAT 3



8.24.6. 6 dB BANDWIDTH

LIMITS

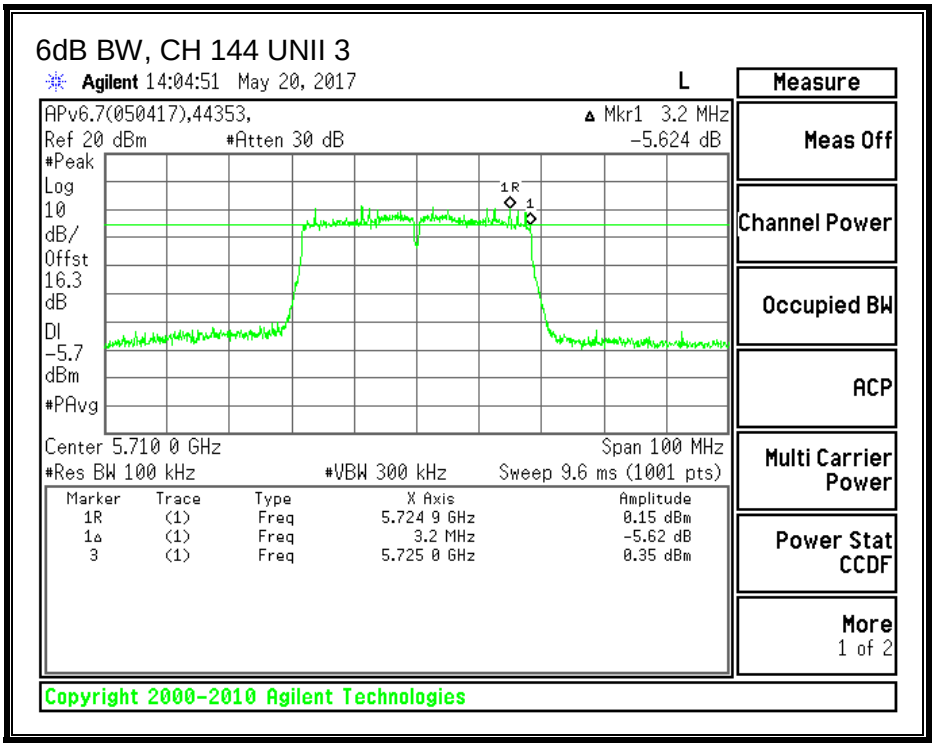
FCC §15.407 (e)

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

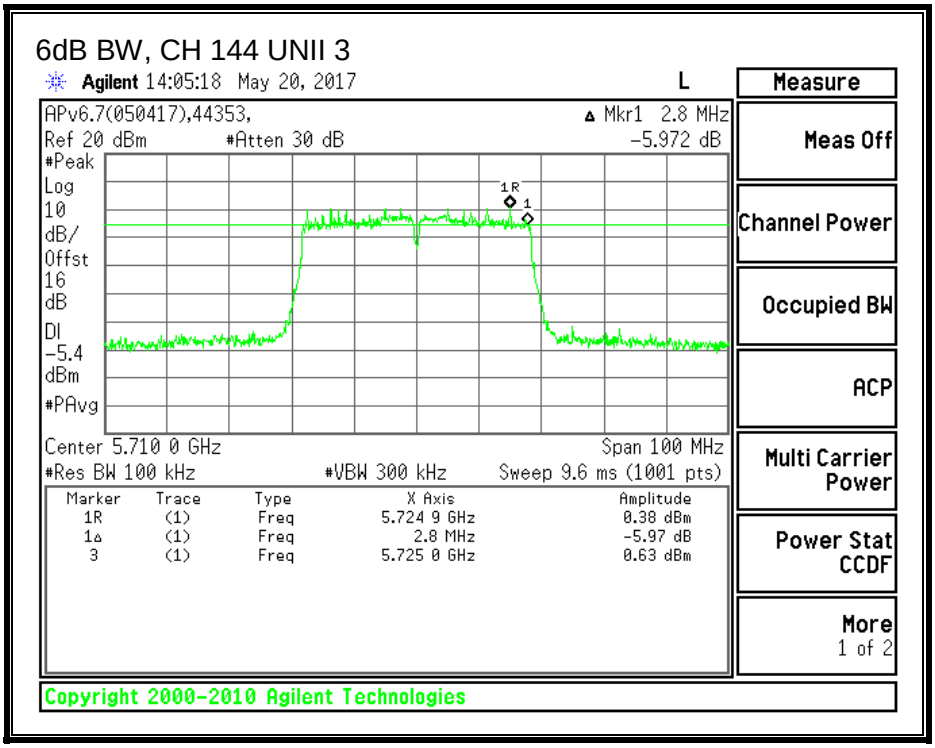
RESULTS

Channel	Frequency (MHz)	6 dB BW UAT 2 (MHz)	6 dB BW LAT 3 (MHz)
142	5710	3.20	2.80

UAT 2



LAT 3



8.25. 11ac HT80 UAT 2 SISO MODE IN THE 5.6GHz BAND

8.25.1. 26 dB BANDWIDTH

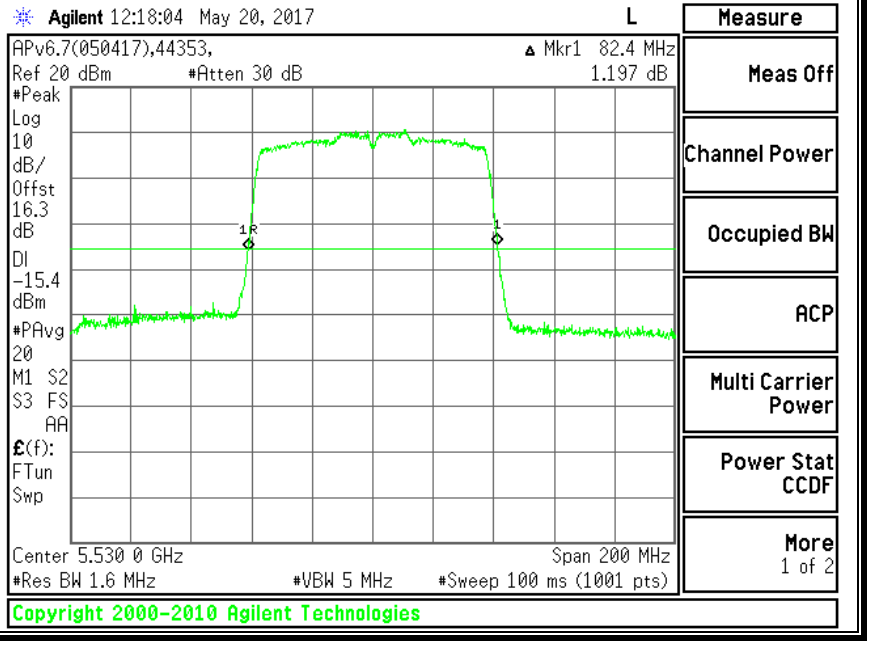
LIMITS

None; for reporting purposes only.

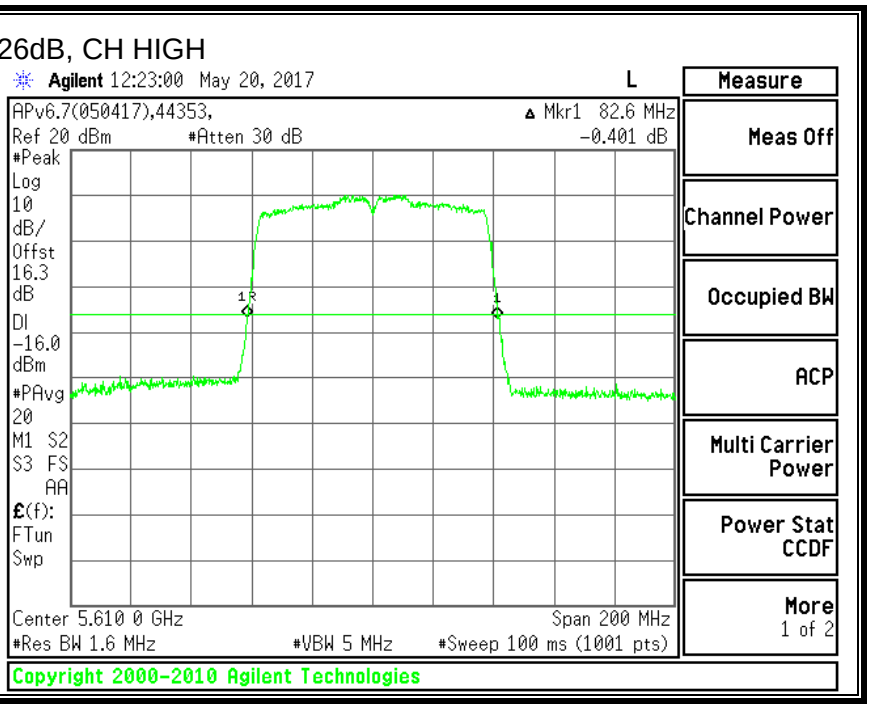
RESULTS

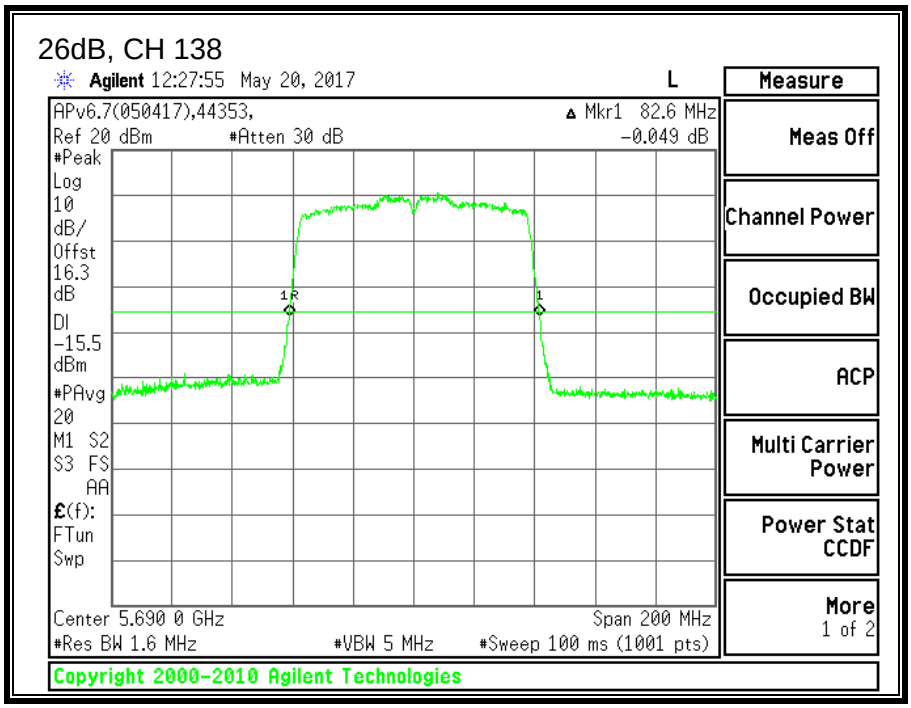
Channel	Frequency	26 dB BW UAT 2 (MHz)
Low	5530	82.4
High	5610	82.6
138	5690	82.6

26dB, CH LOW



26dB, CH HIGH





8.25.2. 99% BANDWIDTH

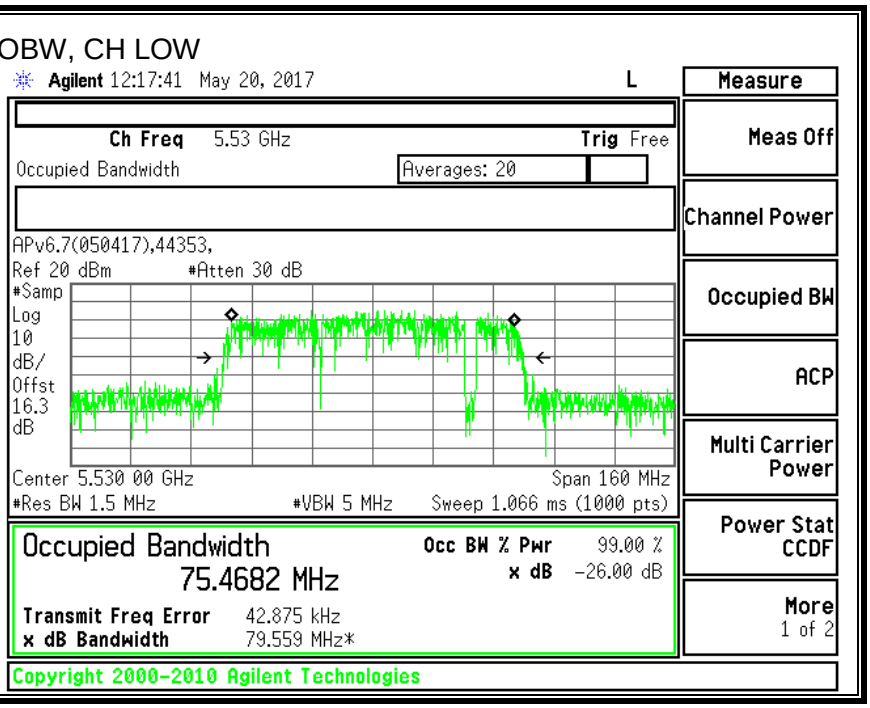
LIMITS

None; for reporting purposes only.

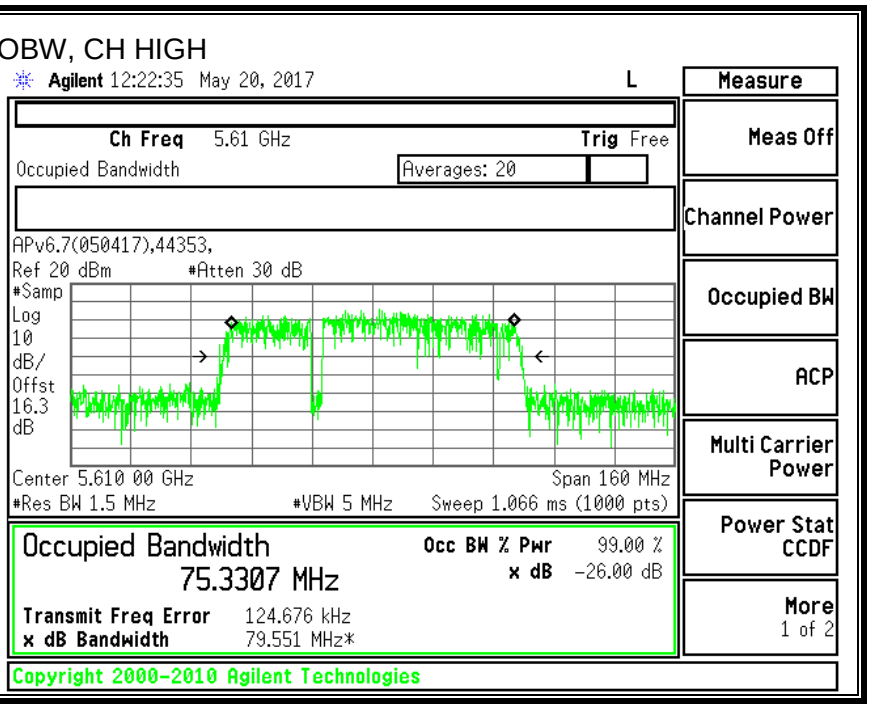
RESULTS

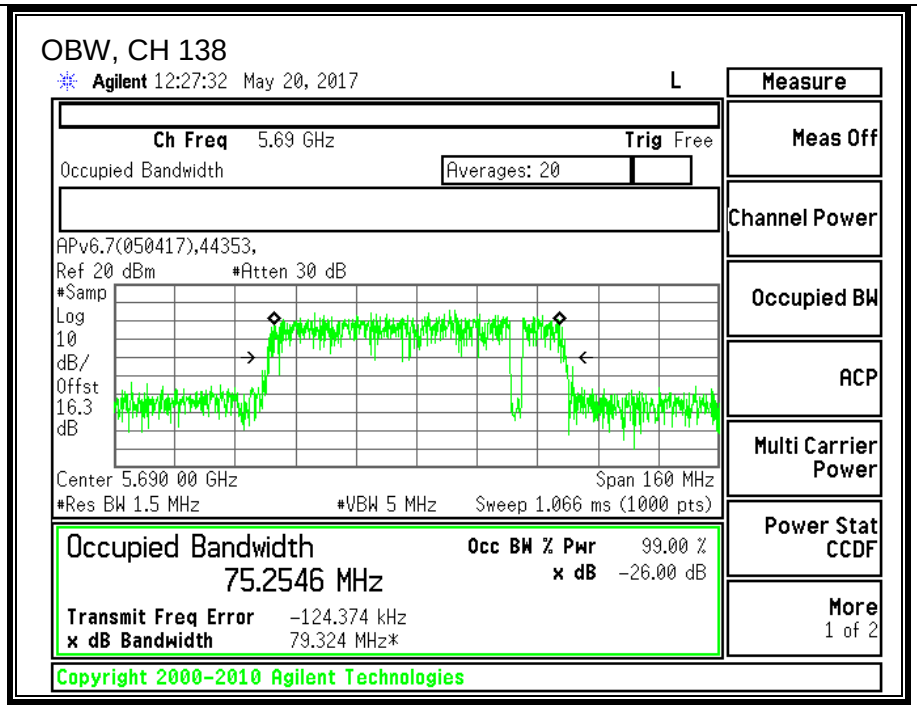
Channel	Frequency	99% BW UAT 2 (MHz)
Low	5530	75.4682
High	5610	75.3307
138	5690	75.2546

OBW, CH LOW



OBW, CH HIGH





8.25.3. AVERAGE POWER

ID:	30554	Date:	08/04/2017

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

Channel	Frequency	Power UAT 2 (dBm)
Low	5530	17.36
High	5610	19.44
138	5690	19.38

8.25.4. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.47–5.725 GHz, the maximum conducted output power over the frequency band 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 MHz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1–MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

PSD test procedure: KDB 789033 D02 v01r04, Section F (Method SA-2).

Straddle channel power is measured using PXA spectrum analyzer, duty cycle correction factor is required.

DIRECTIONAL ANTENNA GAIN

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

RESULTS

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Low	5530	82.40	75.47	-2.13	24.00	11.00
Mid	5610	82.60	75.33	-2.13	24.00	11.00

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

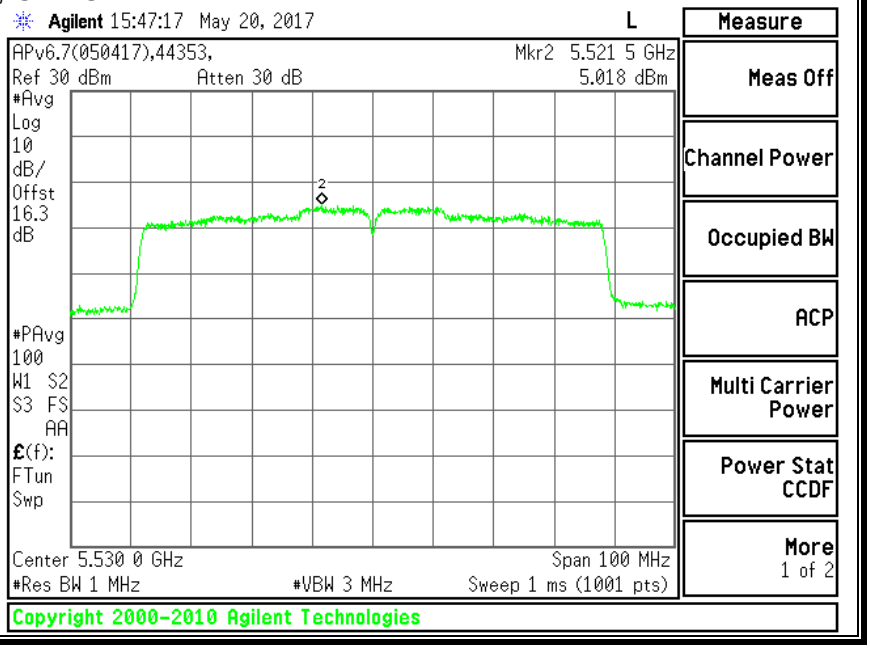
Output Power Results

Channel	Frequency (MHz)	UAT 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5530	17.36	17.36	24.00	-6.64
Mid	5610	19.44	19.44	24.00	-4.56

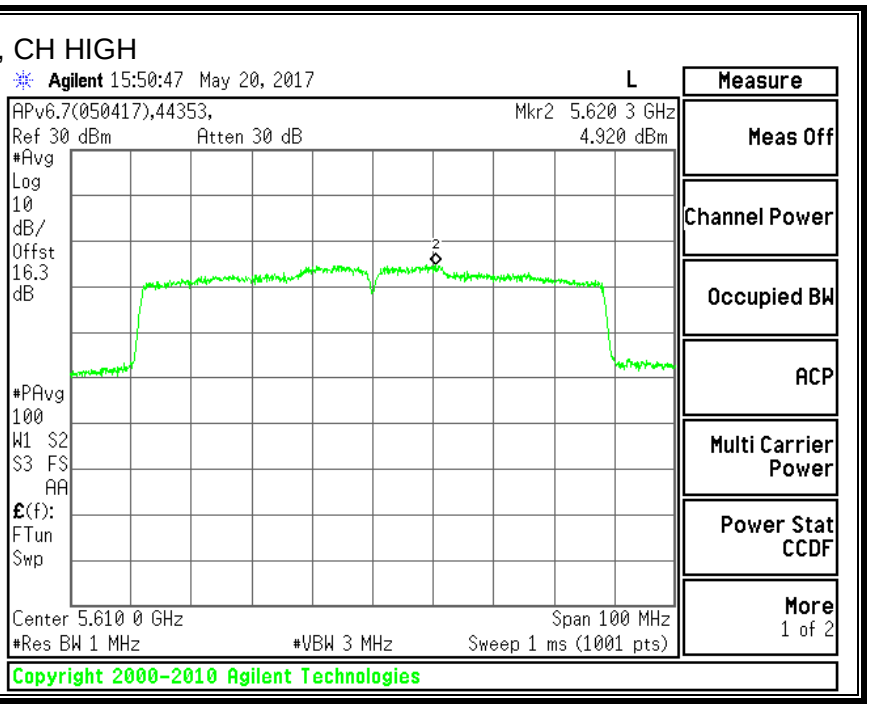
PSD Results

Channel	Frequency (MHz)	UAT 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5530	5.018	5.21	11.00	-5.79
Mid	5610	4.920	5.11	11.00	-5.89

, CH LOW



, CH HIGH



8.25.5. STRADDLE CHANNEL 138 RESULTS

UNII-2C BAND

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)
138	5690	82.60	-2.13	-2.13	24.00	11.00

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

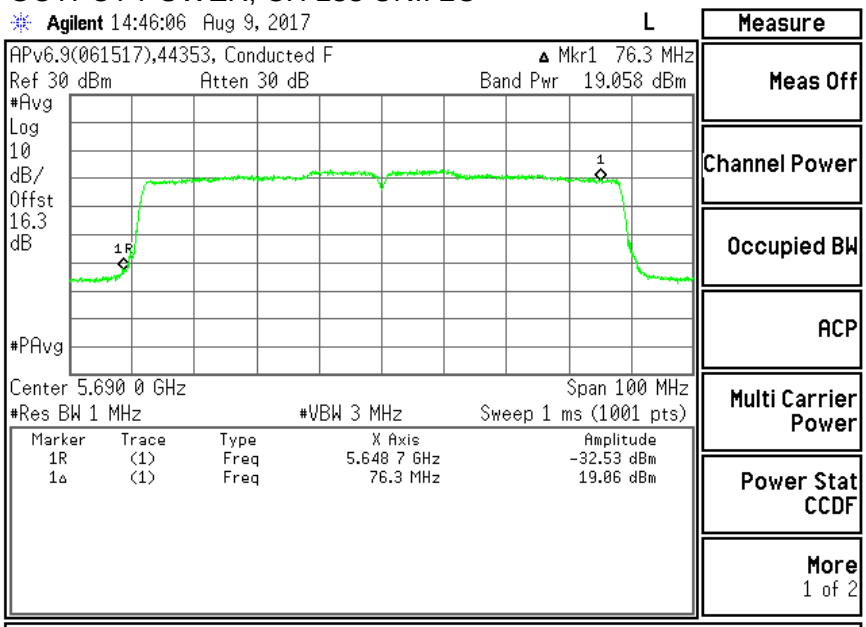
Output Power Results

Channel	Frequency (MHz)	UAT 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	19.06	19.25	24.00	-4.75

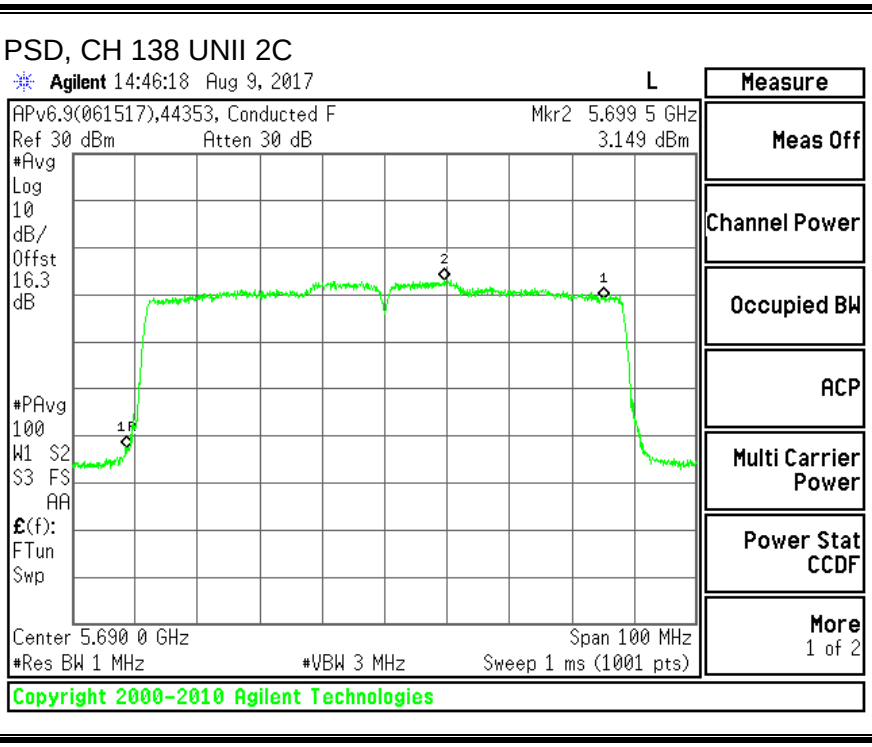
PSD Results

Channel	Frequency (MHz)	UAT 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	3.15	3.34	11.00	-7.66

OUTPUT POWER, CH 138 UNII 2C



PSD, CH 138 UNII 2C



UNII-3 BAND

Antenna Gain and Limit

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm)
138	5690	82.60	-2.71	30.00	30.00

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

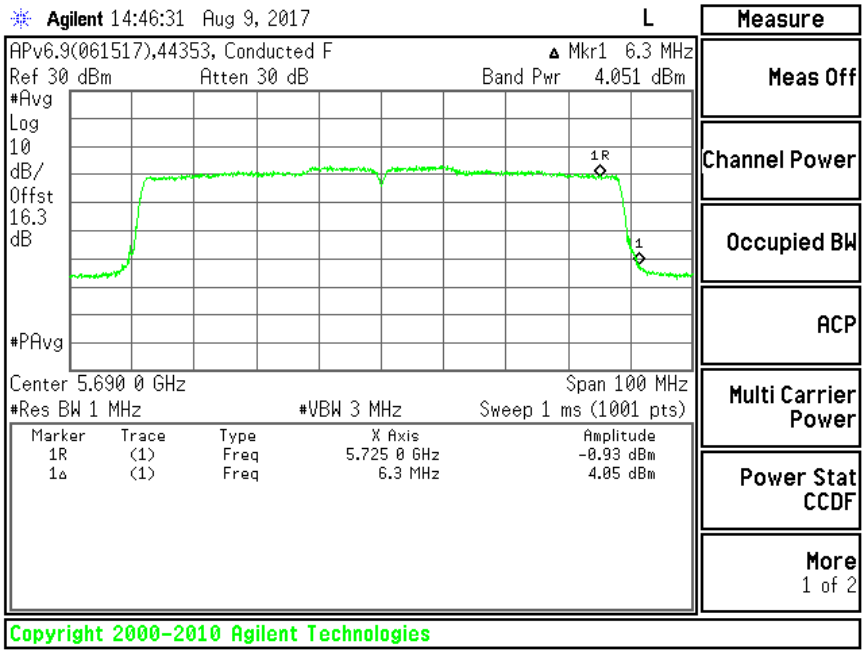
Output Power Results

Channel	Frequency (MHz)	UAT 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	4.05	4.24	30.00	-25.76

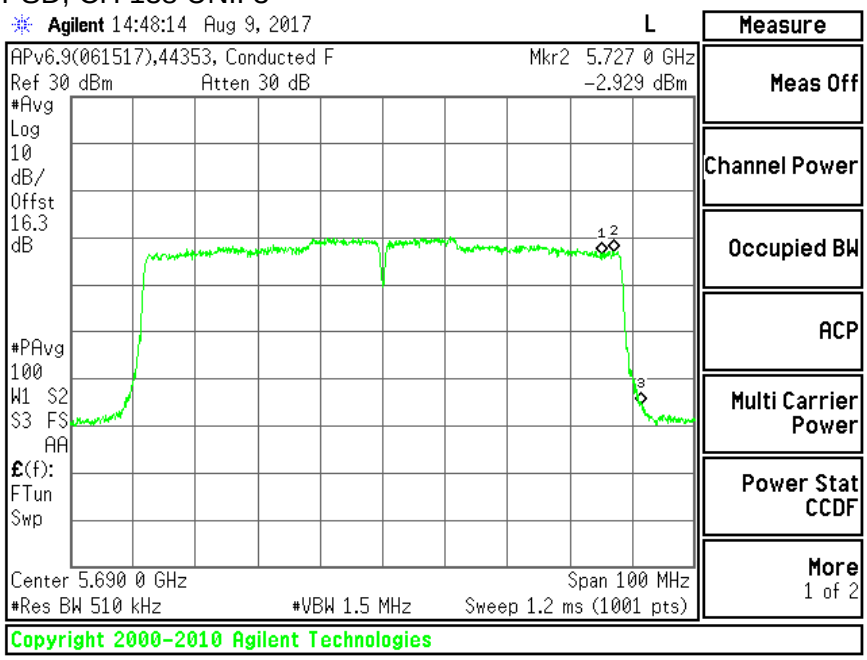
PSD Results

Channel	Frequency (MHz)	UAT 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	-2.93	-2.74	30.00	-32.74

OUTPUT POWER, CH 138 UNII 3



PSD, CH 138 UNII 3



8.25.6. 6 dB BANDWIDTH

LIMITS

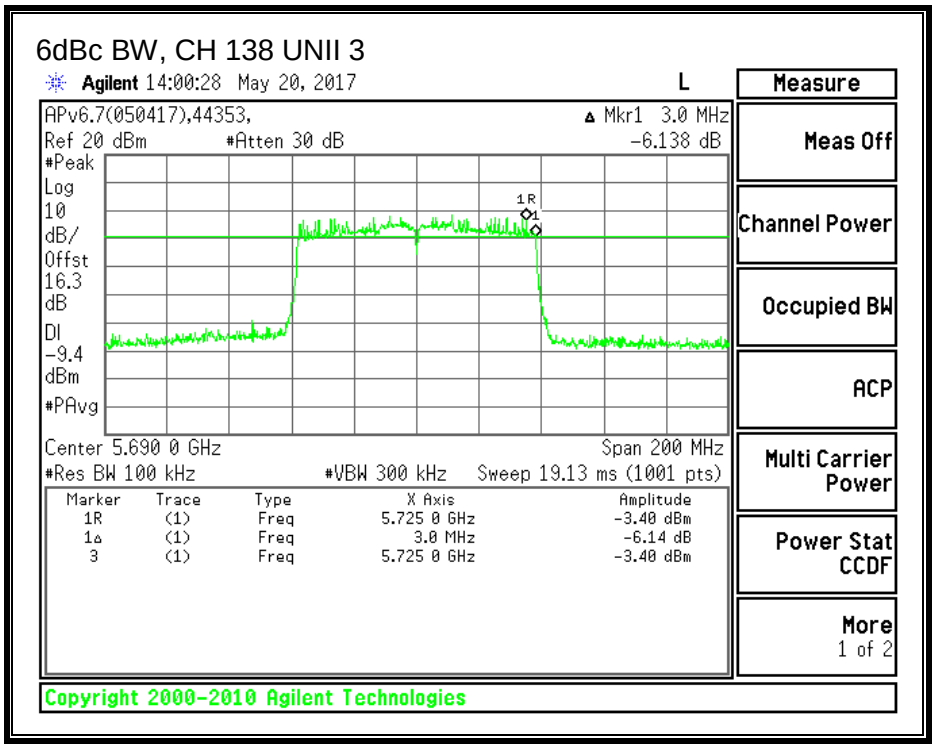
FCC §15.407 (e)

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

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)
High	5690	3.00

6 dB BANDWIDTH



8.26. 11ac HT80 LAT 3 SISO MODE IN THE 5.6GHz BAND

8.26.1. 26 dB BANDWIDTH

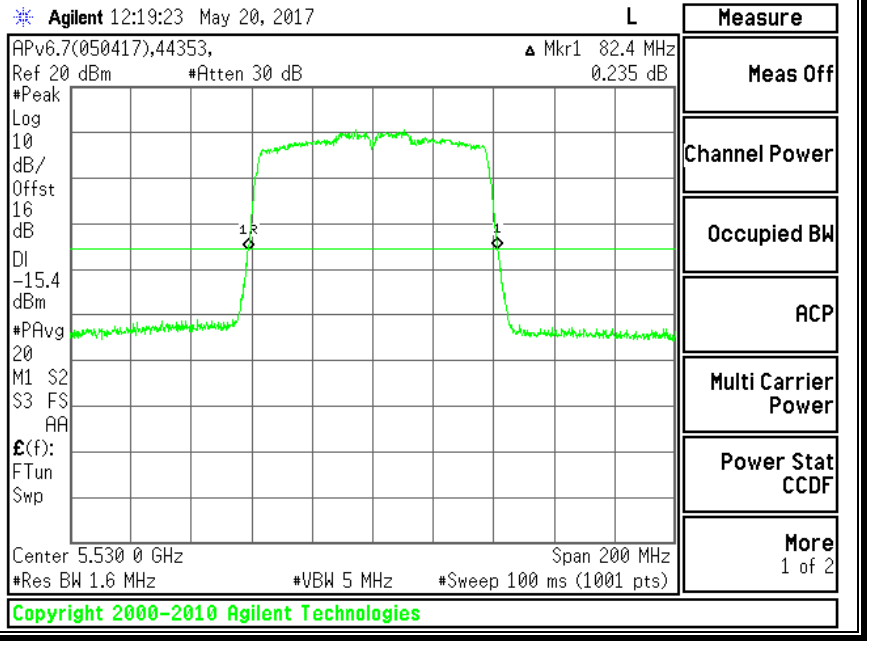
LIMITS

None; for reporting purposes only.

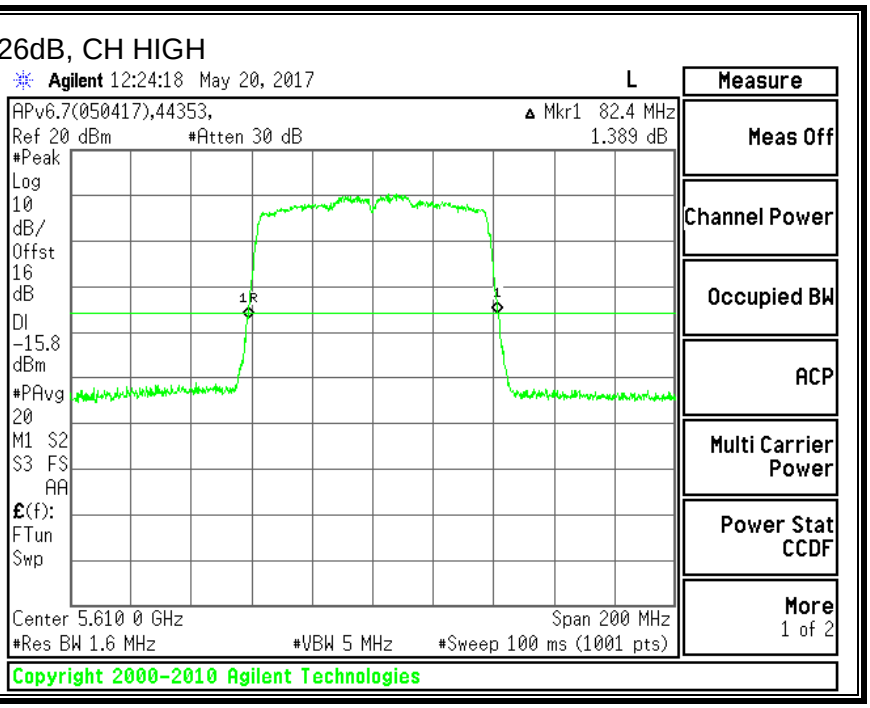
RESULTS

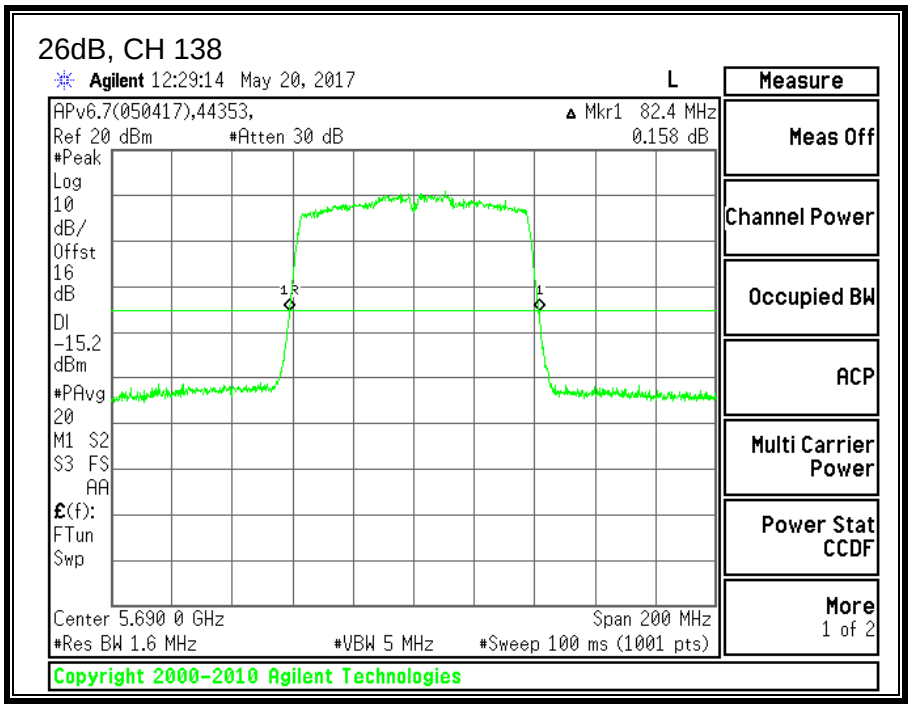
Channel	Frequency	26 dB BW LAT 3 (MHz)
Low	5530	82.4
High	5610	82.4
138	5690	82.4

26dB, CH LOW



26dB, CH HIGH





8.26.2. 99% BANDWIDTH

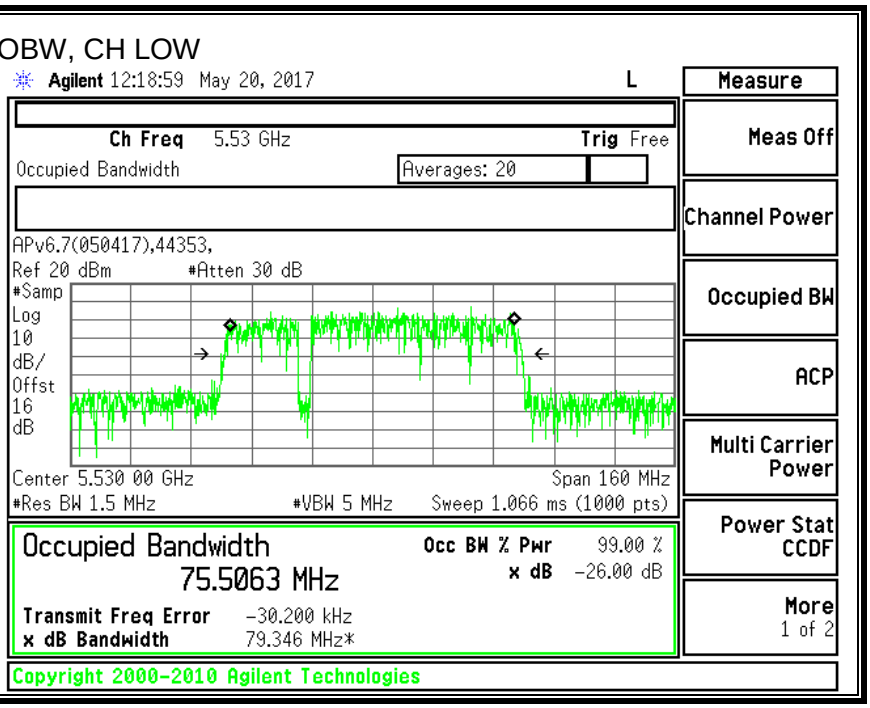
LIMITS

None; for reporting purposes only.

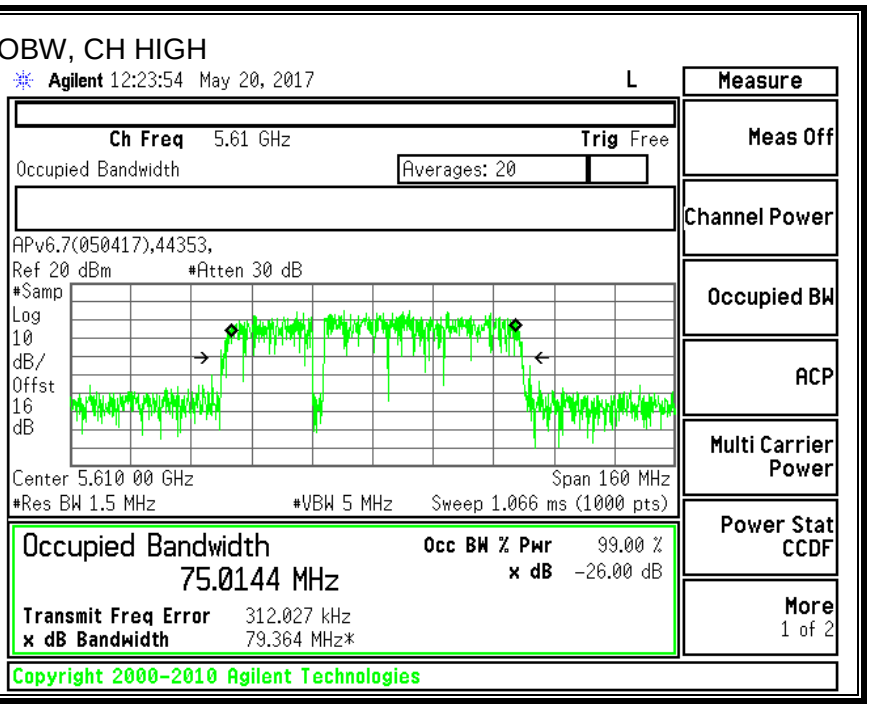
RESULTS

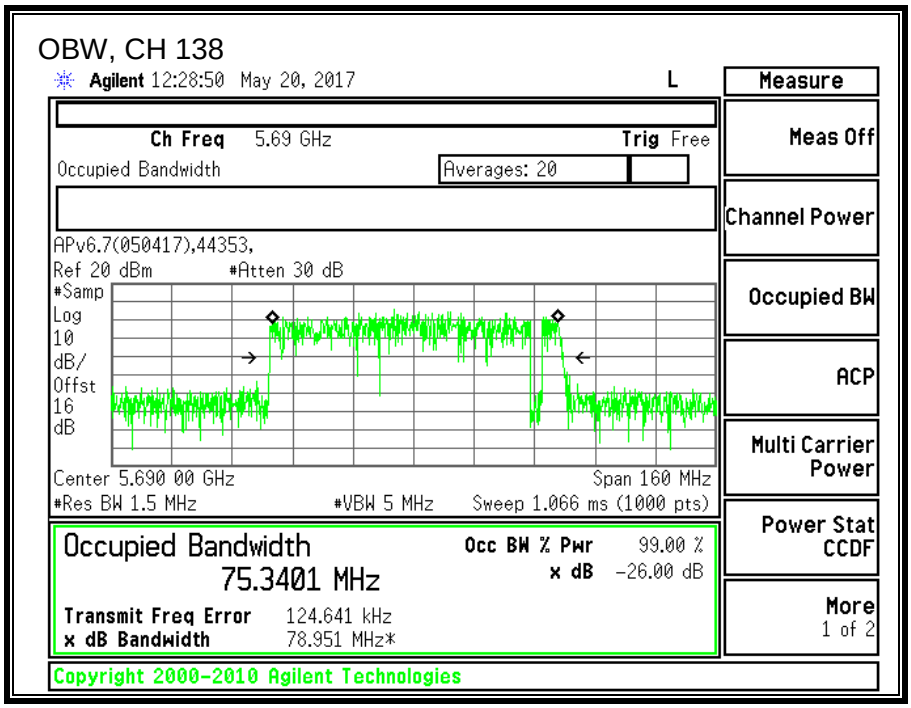
Channel	Frequency	99% BW LAT 3 (MHz)
Low	5530	75.5063
High	5610	75.0144
138	5690	75.3401

OBW, CH LOW



OBW, CH HIGH





8.26.3. AVERAGE POWER

ID:	30554	Date:	08/04/2017

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

Channel	Frequency	Power LAT 3 (dBm)
Low	5530	17.33
High	5610	19.41
138	5690	19.36

8.26.4. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.47–5.725 GHz, the maximum conducted output power over the frequency band 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 MHz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1–MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

PSD test procedure: KDB 789033 D02 v01r04, Section F (Method SA-2).

Straddle channel power is measured using PXA spectrum analyzer, duty cycle correction factor is required.

DIRECTIONAL ANTENNA GAIN

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

RESULTS

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Low	5530	82.40	75.51	-7.97	24.00	11.00
Mid	5610	82.40	75.01	-7.97	24.00	11.00

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

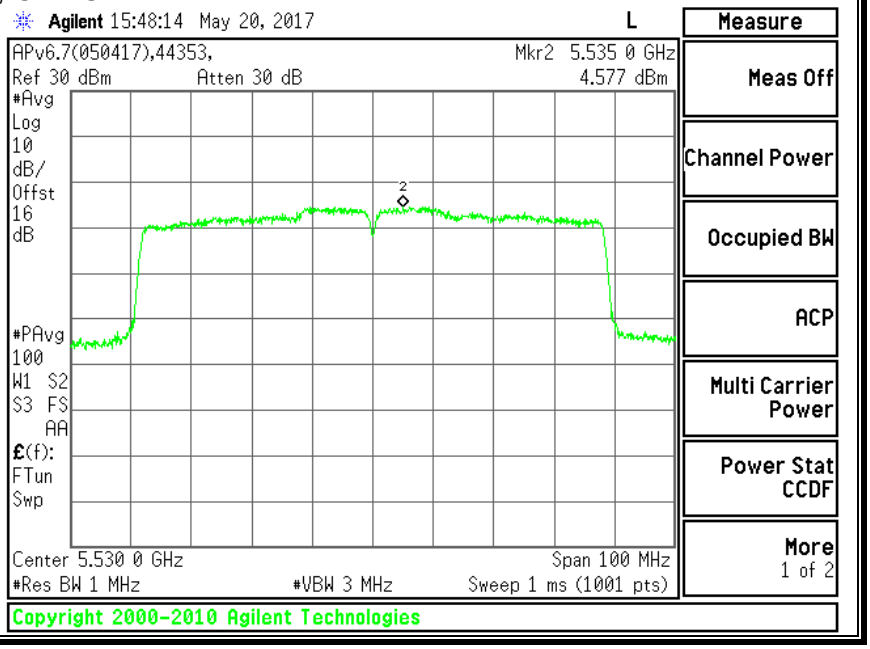
Output Power Results

Channel	Frequency (MHz)	LAT 3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5530	17.33	17.33	24.00	-6.67
Mid	5610	19.41	19.41	24.00	-4.59

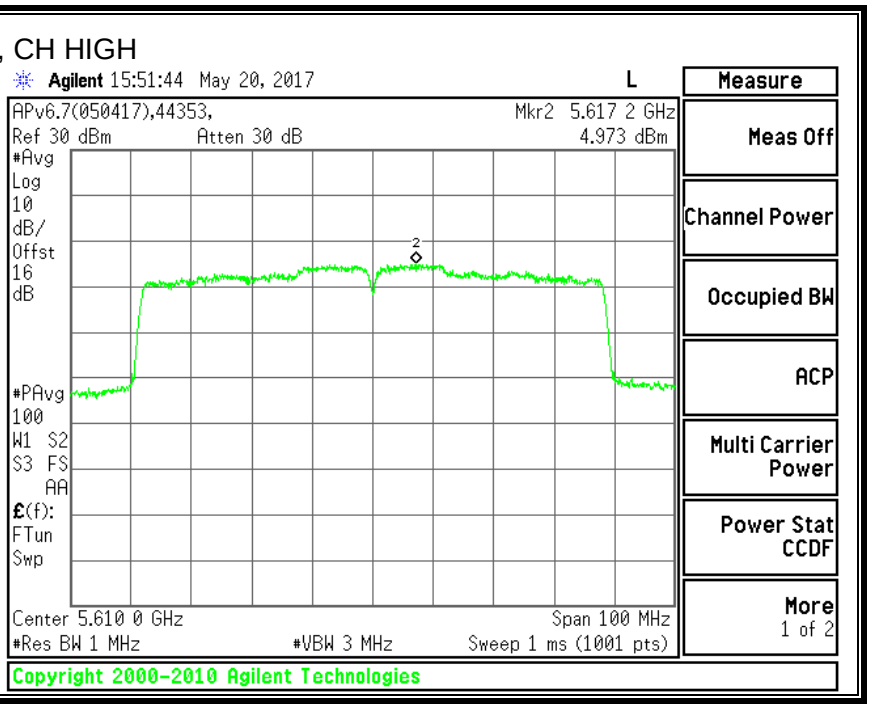
PSD Results

Channel	Frequency (MHz)	LAT 3 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5530	4.577	4.77	11.00	-6.23
Mid	5610	4.973	5.16	11.00	-5.84

, CH LOW



, CH HIGH



8.26.5. STRADDLE CHANNEL 138 RESULTS

UNII-2C BAND

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)
138	5690	82.4	-7.97	-7.97	24.00	11.00

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

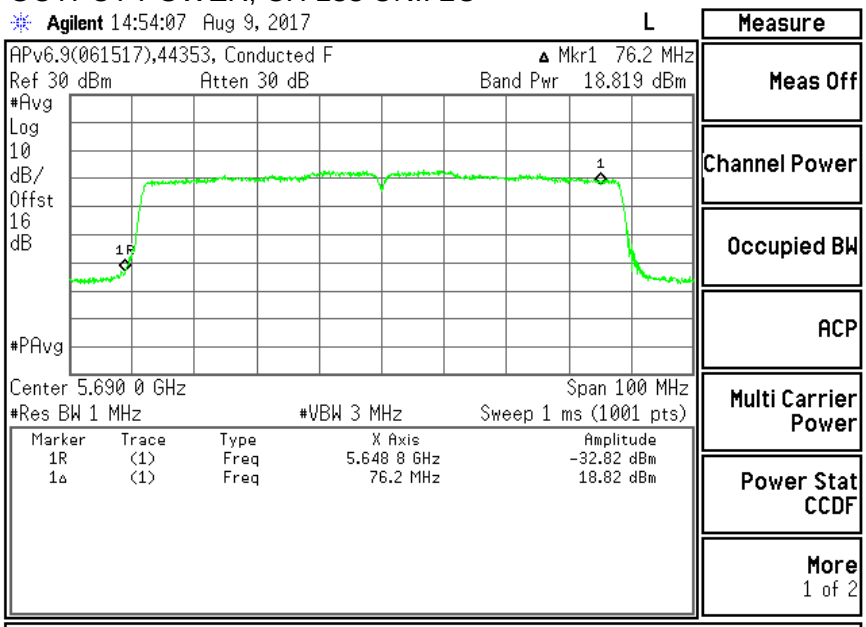
Output Power Results

Channel	Frequency (MHz)	LAT 3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	18.82	19.01	24.00	-4.99

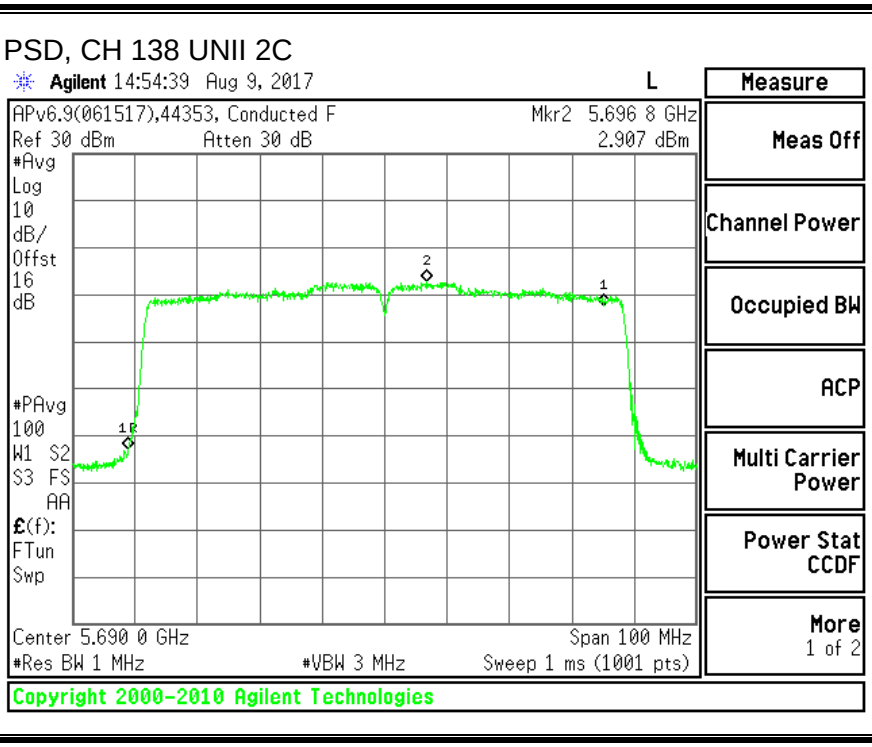
PSD Results

Channel	Frequency (MHz)	LAT 3 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	2.91	3.10	11.00	-7.90

OUTPUT POWER, CH 138 UNII 2C



PSD, CH 138 UNII 2C



UNII-3 BAND

Antenna Gain and Limit

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm)
138	5690	82.40	-7.67	30.00	30.00

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

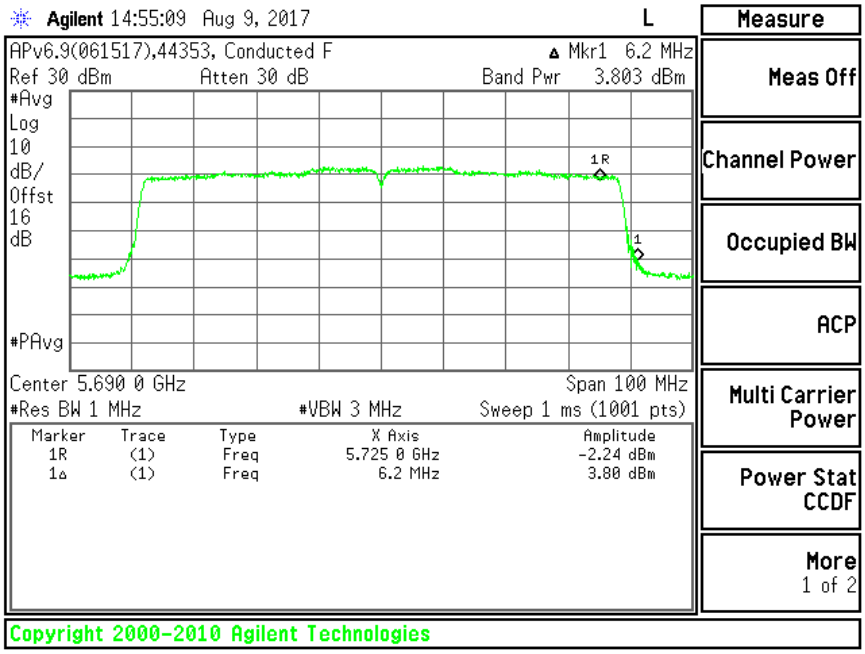
Output Power Results

Channel	Frequency (MHz)	LAT 3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	3.80	3.99	30.00	-26.01

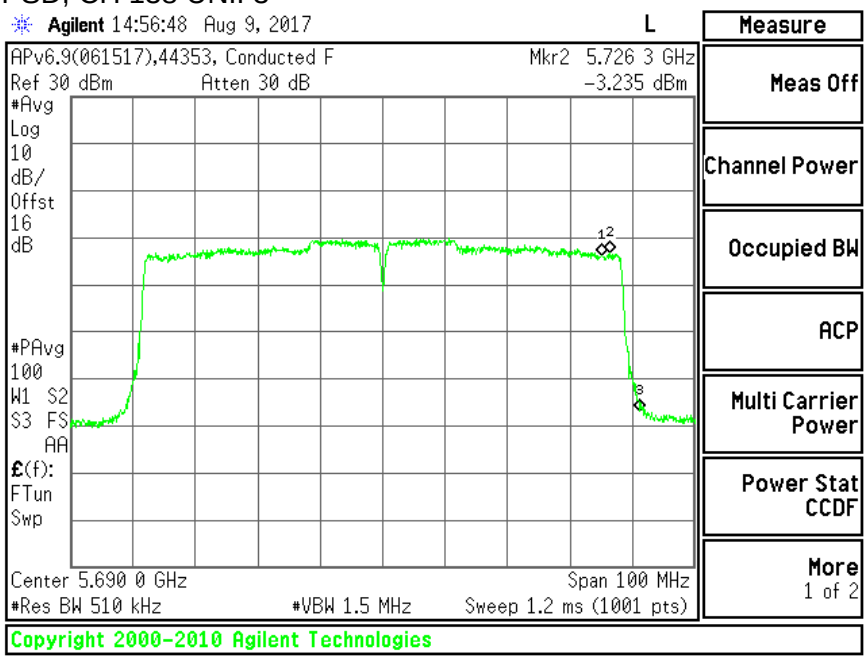
PSD Results

Channel	Frequency (MHz)	LAT 3 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	-3.24	-3.05	30.00	-33.05

OUTPUT POWER, CH 138 UNII 3



PSD, CH 138 UNII 3



8.26.6. 6 dB BANDWIDTH

LIMITS

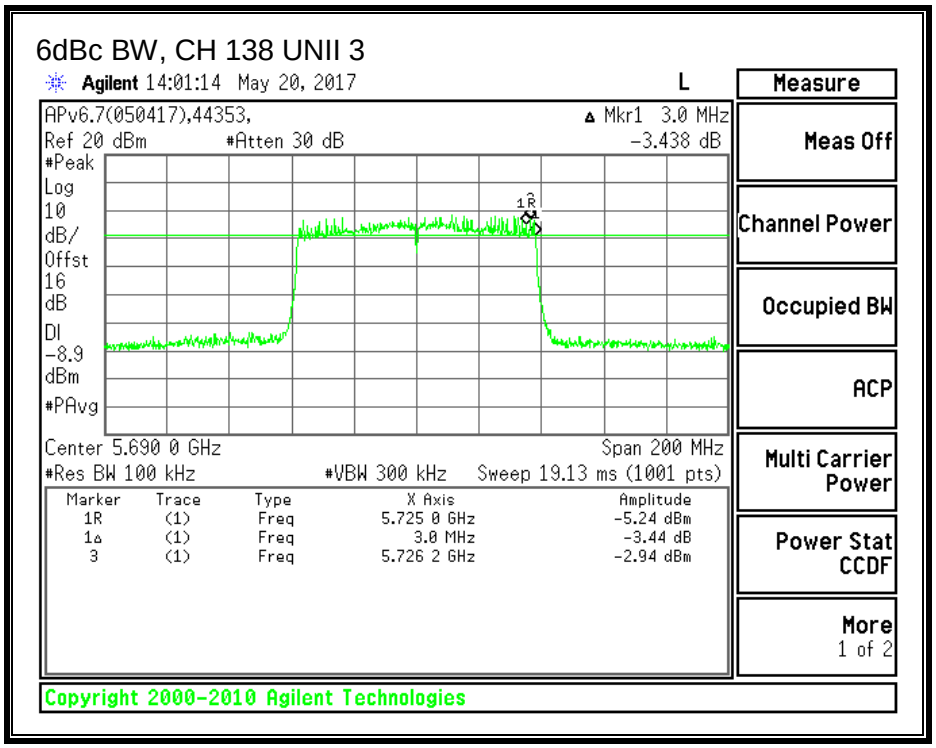
FCC §15.407 (e)

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

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)
High	5690	3.00

6 dB BANDWIDTH



8.27. 11ac HT80 2TX CDD MIMO MODE IN THE 5.6GHz BAND

8.27.1. 26 dB BANDWIDTH

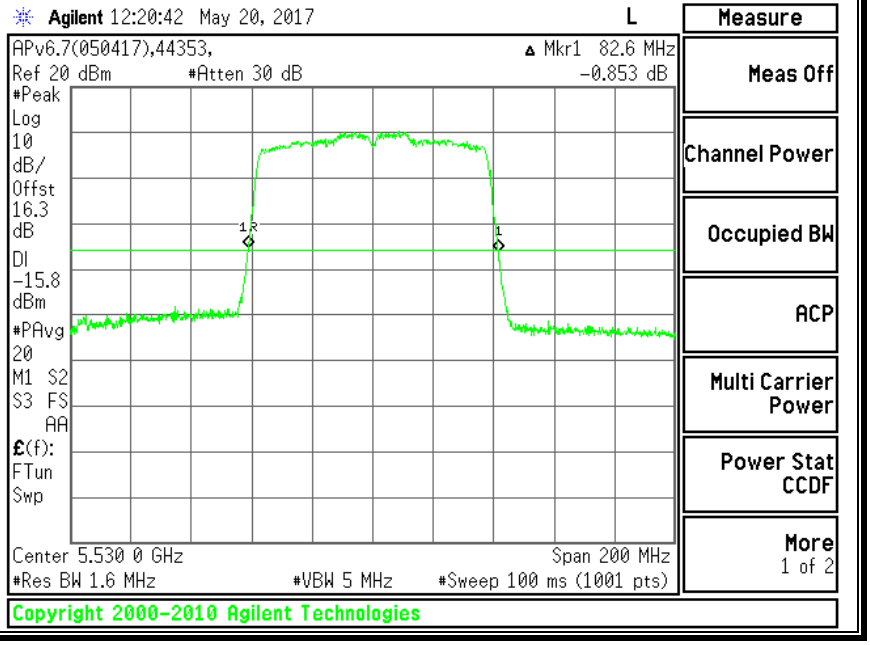
LIMITS

None; for reporting purposes only.

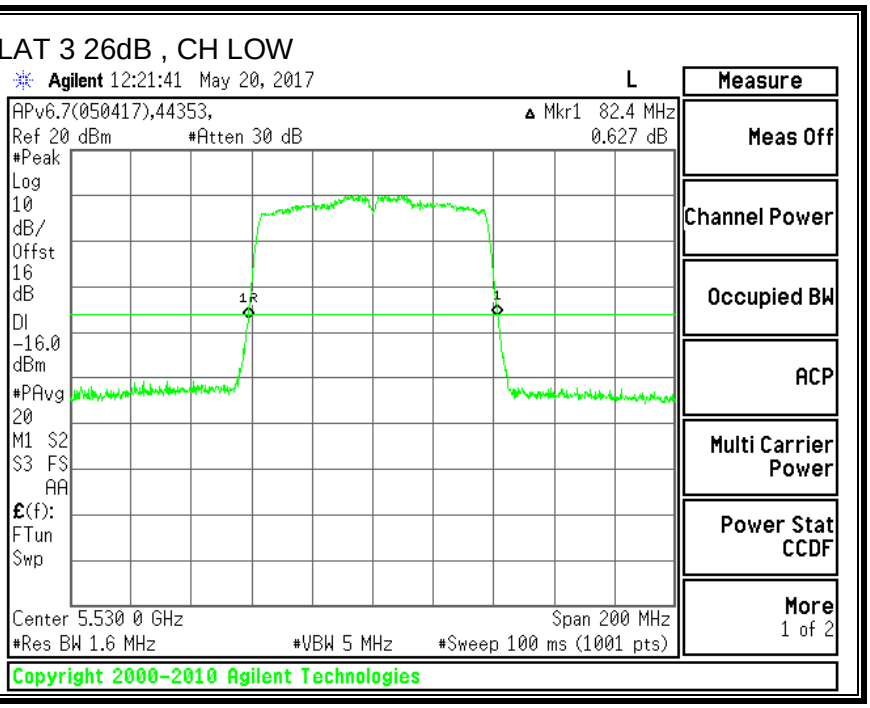
RESULTS

Channel	Frequency	26 dB BW UAT 2 (MHz)	26 dB BW LAT 3 (MHz)
Low	5530	82.6	82.4
High	5610	82.6	82.4
138	5690	82.6	82.2

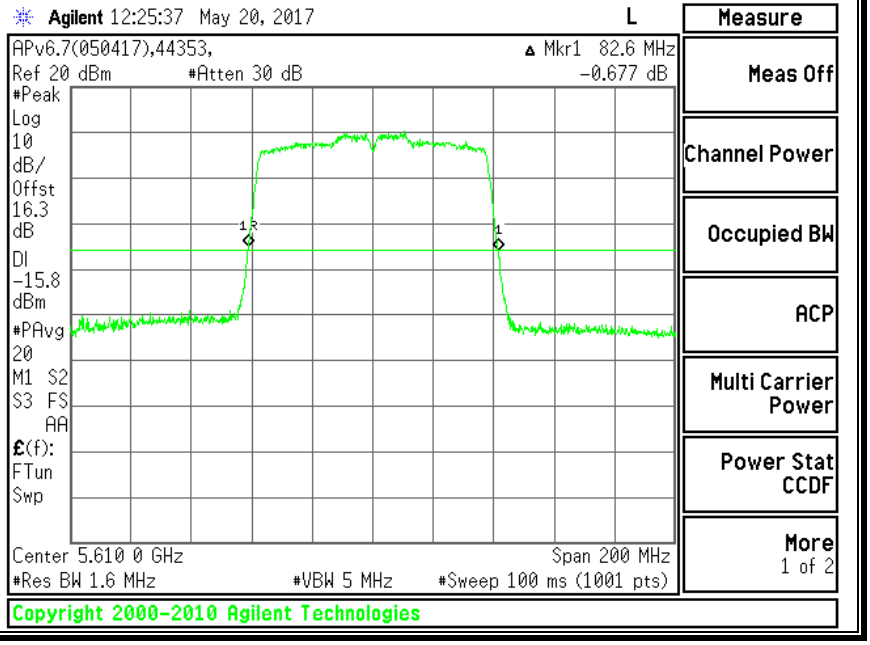
UAT 2 26dB , CH LOW



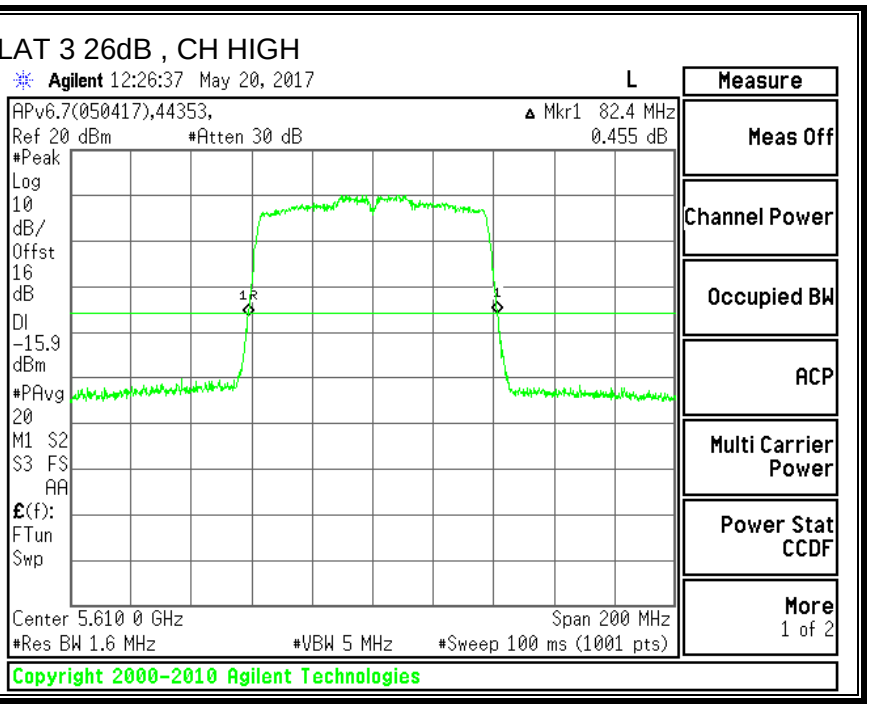
LAT 3 26dB , CH LOW



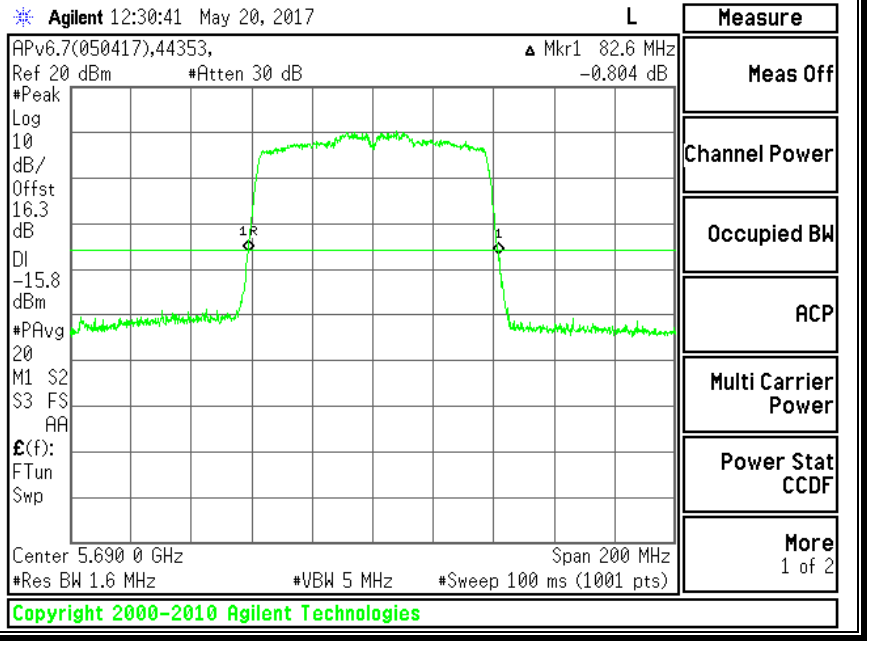
UAT 2 26dB , CH HIGH



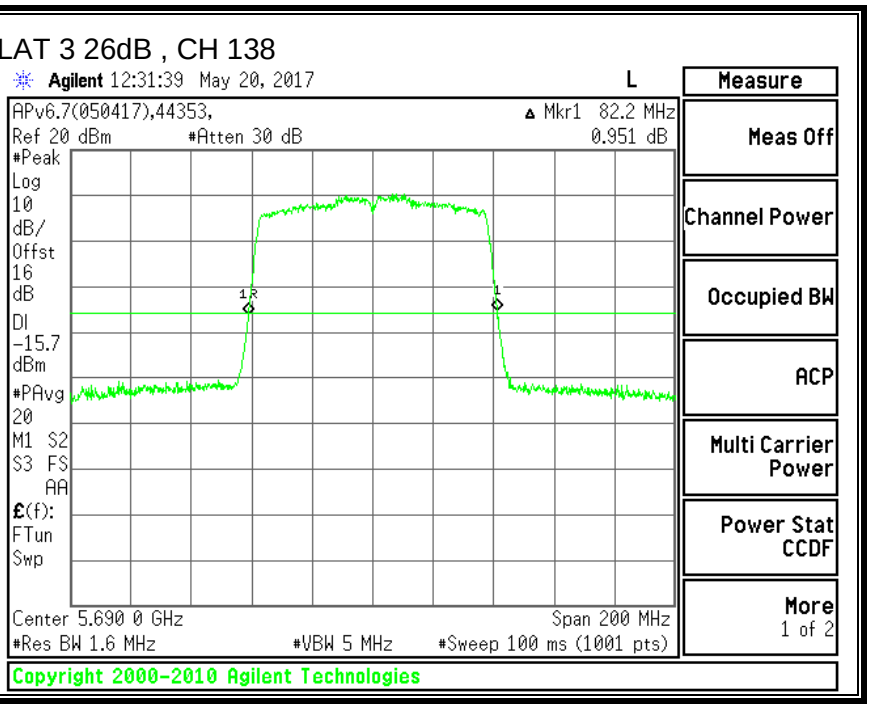
LAT 3 26dB , CH HIGH



UAT 2 26dB , CH 138



LAT 3 26dB , CH 138



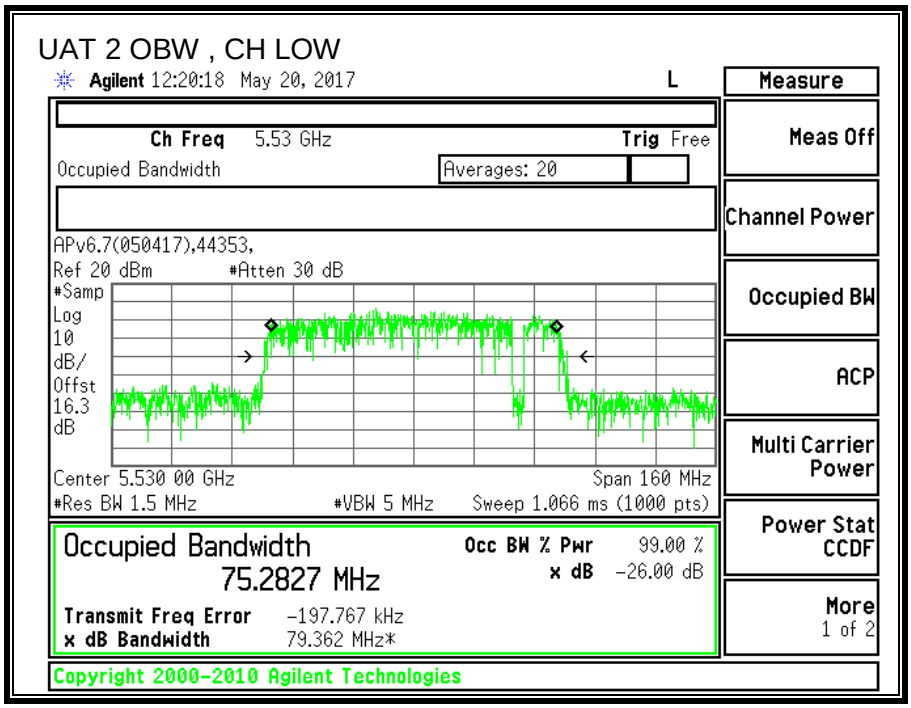
8.27.2. 99% BANDWIDTH

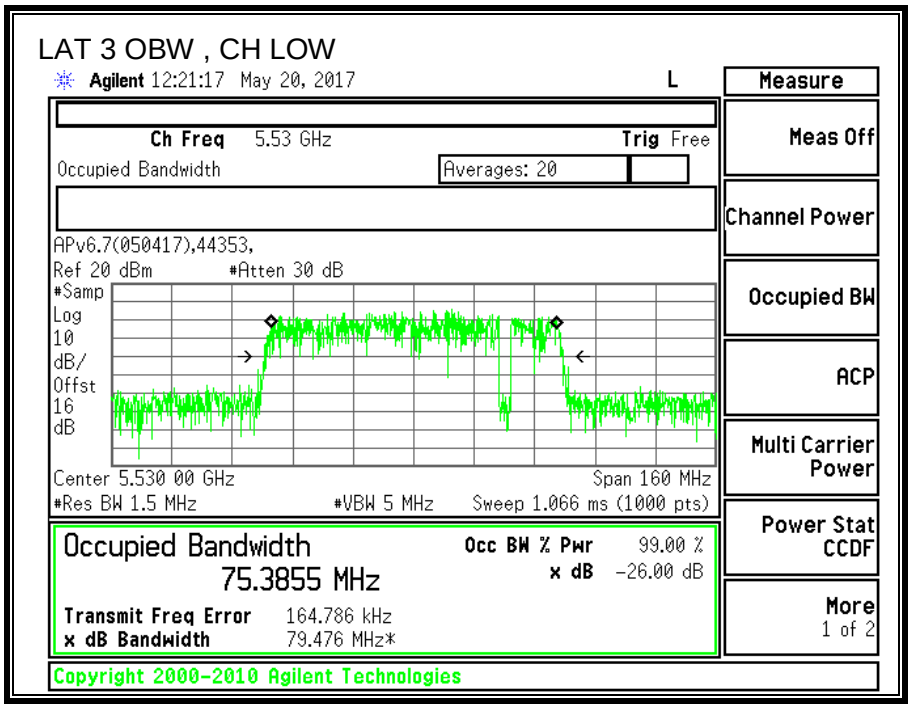
LIMITS

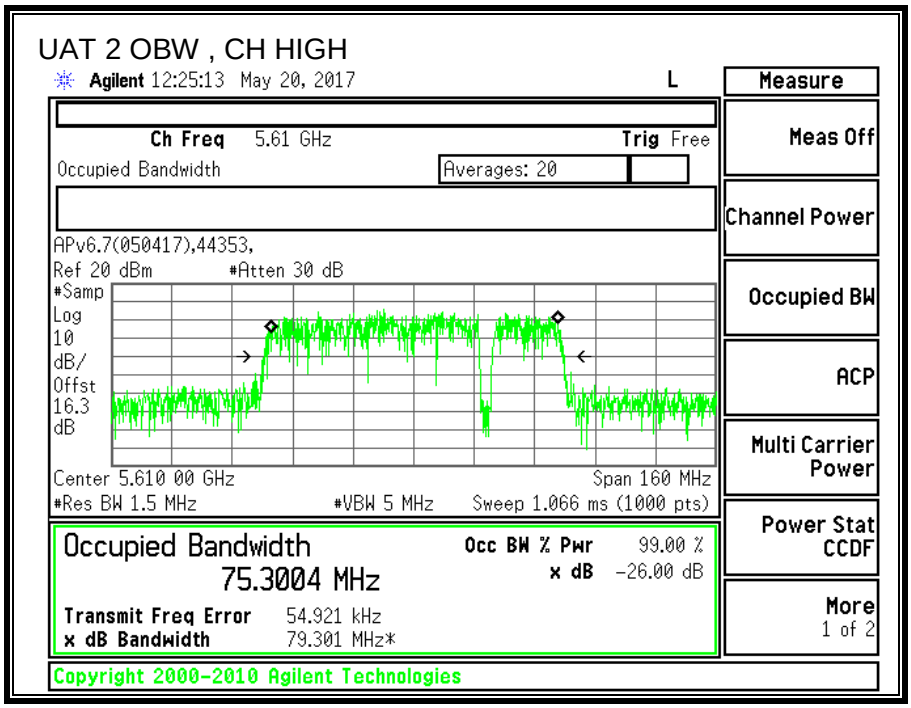
None; for reporting purposes only.

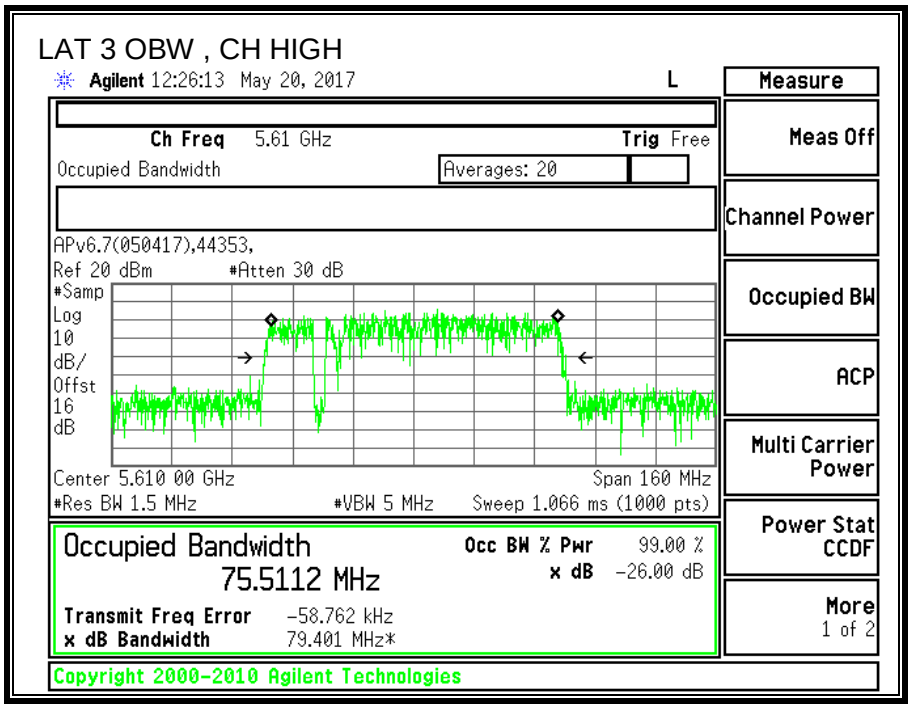
RESULTS

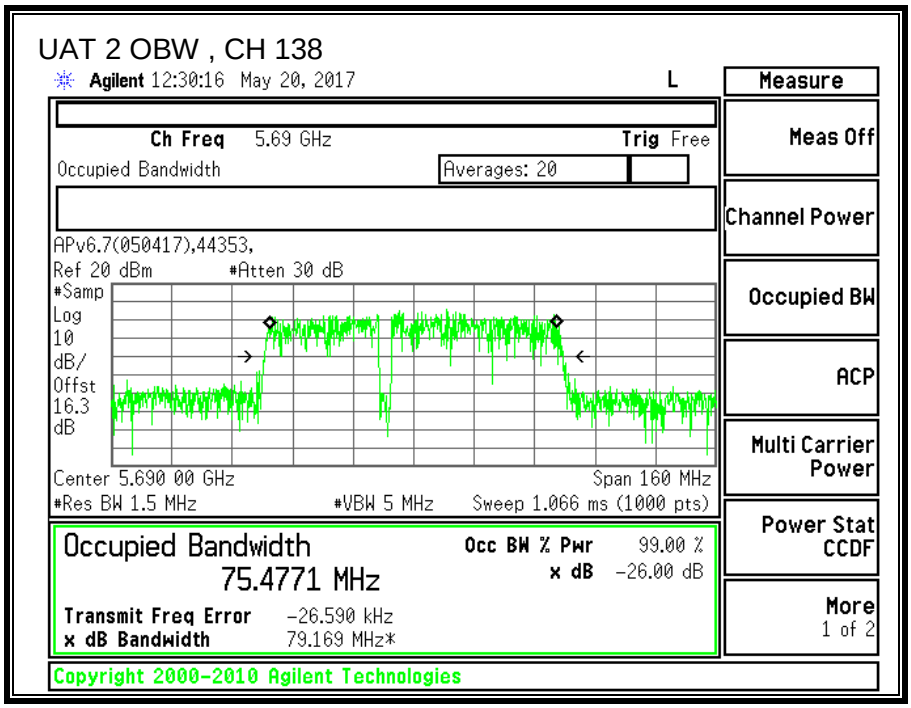
Channel	Frequency	99% BW UAT 2 (MHz)	99% BW LAT 3 (MHz)
Low	5530	75.2827	75.3855
High	5610	75.3004	75.5112
138	5690	75.4771	75.4584

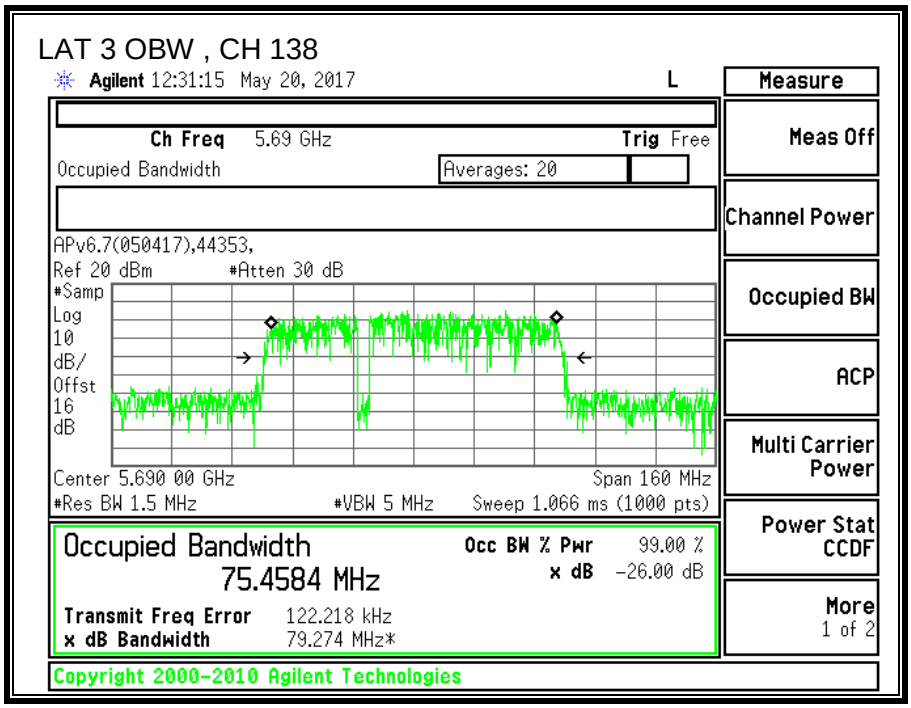












8.27.3. AVERAGE POWER

ID:	30554	Date:	08/04/2017

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

Channel	Frequency (MHz)	UAT 2 Power (dBm)	LAT 3 Power (dBm)	Total Power (dBm)
Low	5530	16.40	16.45	19.44
Mid	5610	19.43	19.41	22.43
High	5690	19.29	19.32	22.32

8.27.4. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.47–5.725 GHz, the maximum conducted output power over the frequency band 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 MHz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1–MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

PSD test procedure: KDB 789033 D02 v01r04, Section F (Method SA-2).

Straddle channel power is measured using PXA spectrum analyzer, duty cycle correction factor is required.

DIRECTIONAL ANTENNA GAIN

For Power used uncorrelated gain: The TX chains are uncorrelated and the antenna gain is unequal among the chains. The directional gain is:

UAT 2 Antenna Gain (dBi)	LAT 3 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
-2.13	-7.97	-4.13

For PSD used correlated gain: The TX chains are correlated and the antenna gain is unequal among the chains. The directional gain is:

UAT 2 Antenna Gain (dBi)	LAT 3 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
-2.13	-7.97	-1.56

RESULTS

Bandwidth, Antenna Gain and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Low	5530	82.40	75.283	-4.13	-1.56	24.00	11.00
High	5610	82.40	75.300	-4.13	-1.56	24.00	11.00

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

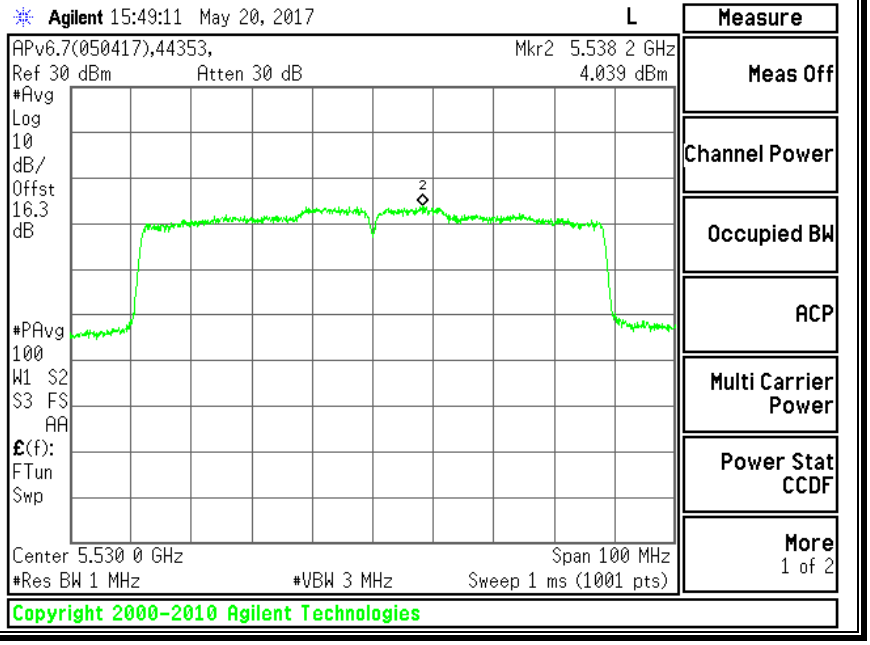
Output Power Results

Channel	Frequency (MHz)	UAT 2 Meas Power (dBm)	LAT 3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5530	16.40	16.45	19.44	24.00	-4.56
High	5610	19.43	19.41	22.43	24.00	-1.57

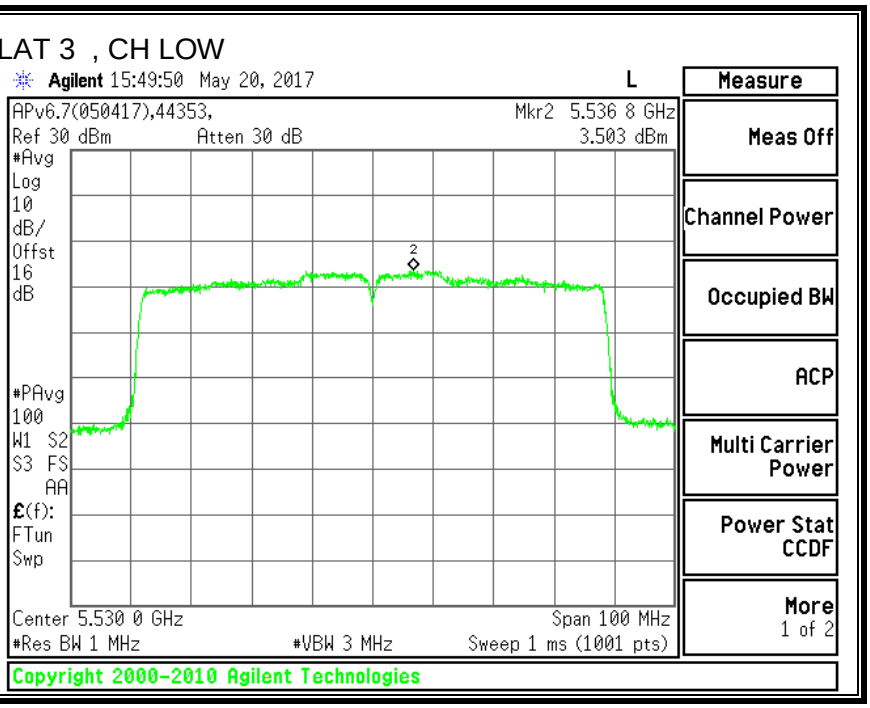
PSD Results

Channel	Frequency (MHz)	UAT 2 Meas PSD (dBm)	LAT 3 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5530	4.04	3.50	6.98	11.00	-4.02
High	5610	4.06	3.61	7.04	11.00	-3.96

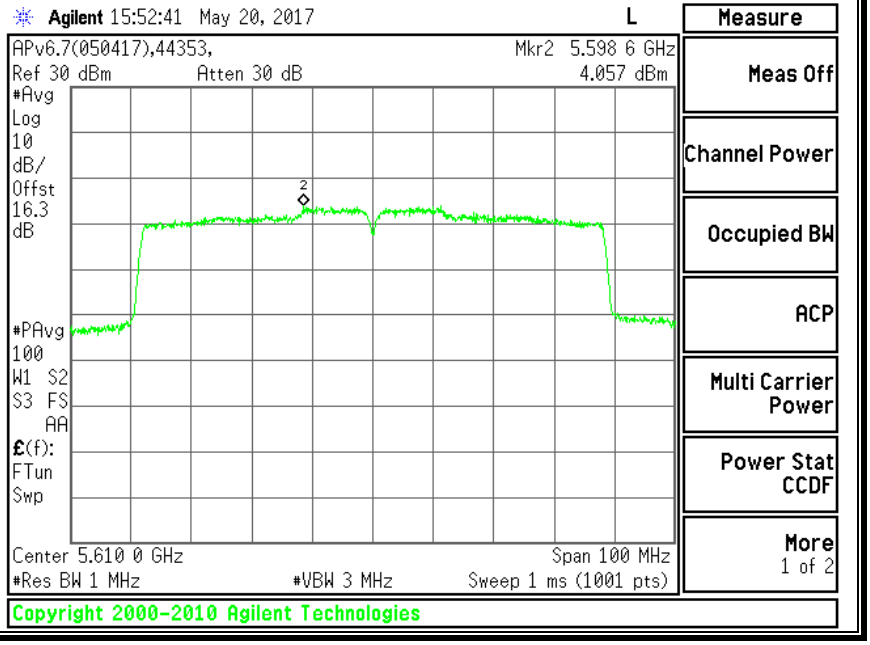
UAT 2 , CH LOW



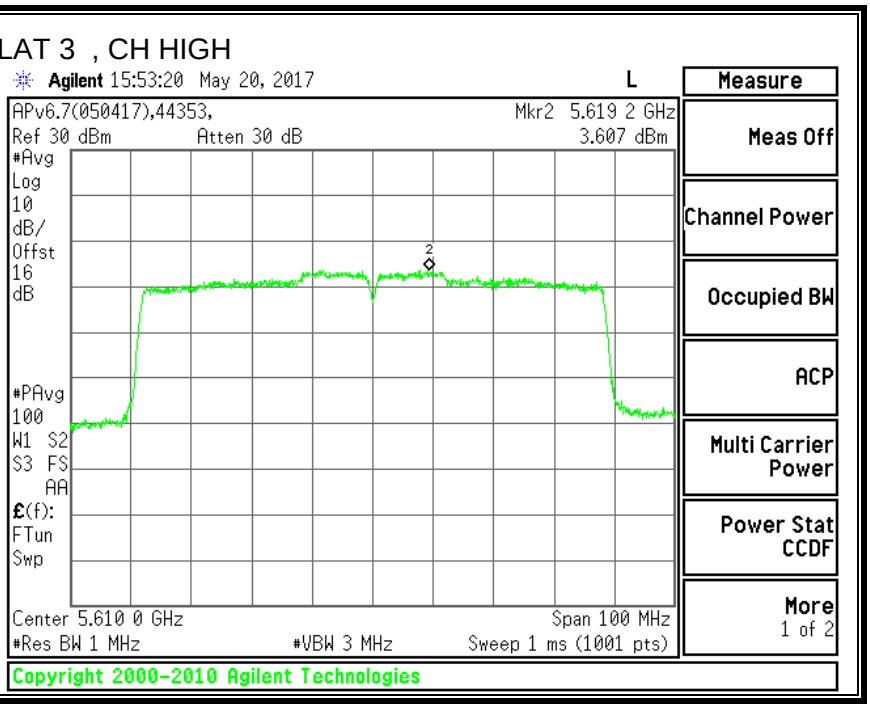
LAT 3 , CH LOW



UAT 2 , CH HIGH



LAT 3 , CH HIGH



8.27.5. STRADDLE CHANNEL 138 RESULTS

UNII-2C BAND

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)
138	5690	82.20	-4.13	-1.56	24.00	11.00

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

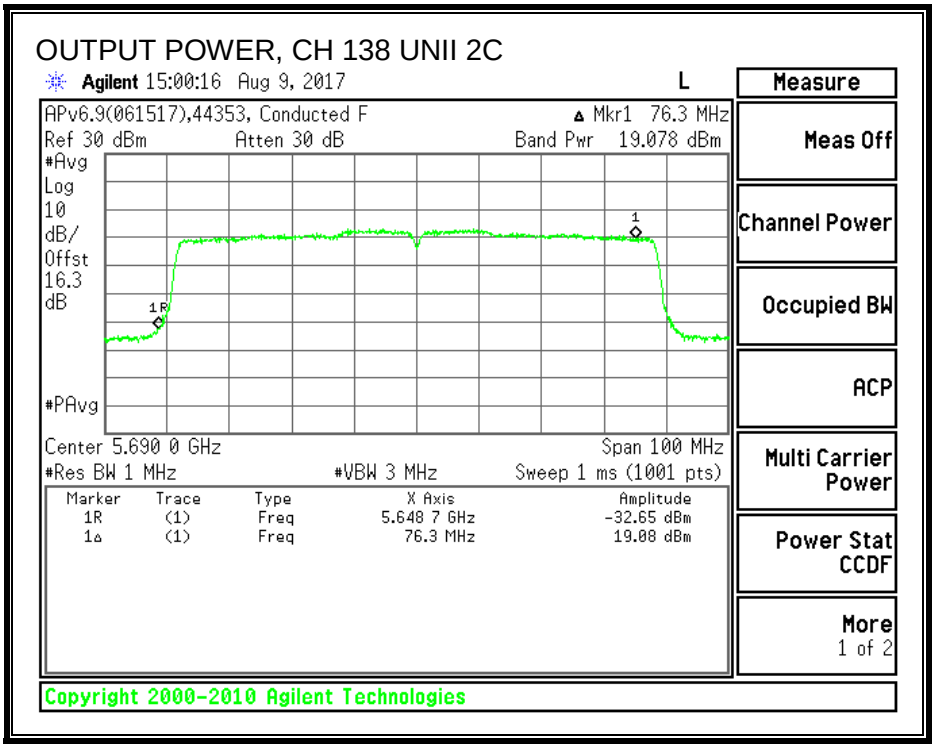
Output Power Results

Channel	Frequency (MHz)	UAT 2 Meas Power (dBm)	LAT 3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	19.08	19.00	22.24	24.00	-1.76

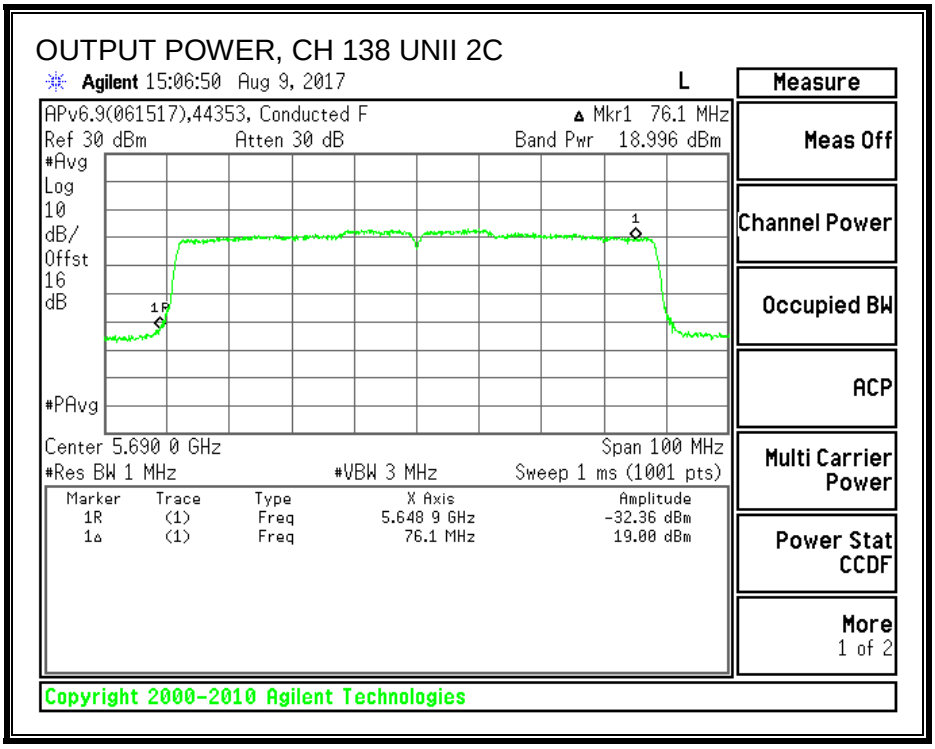
PSD Results

Channel	Frequency (MHz)	UAT 2 Meas PSD (dBm)	LAT 3 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	3.10	3.11	6.31	11.00	-4.69

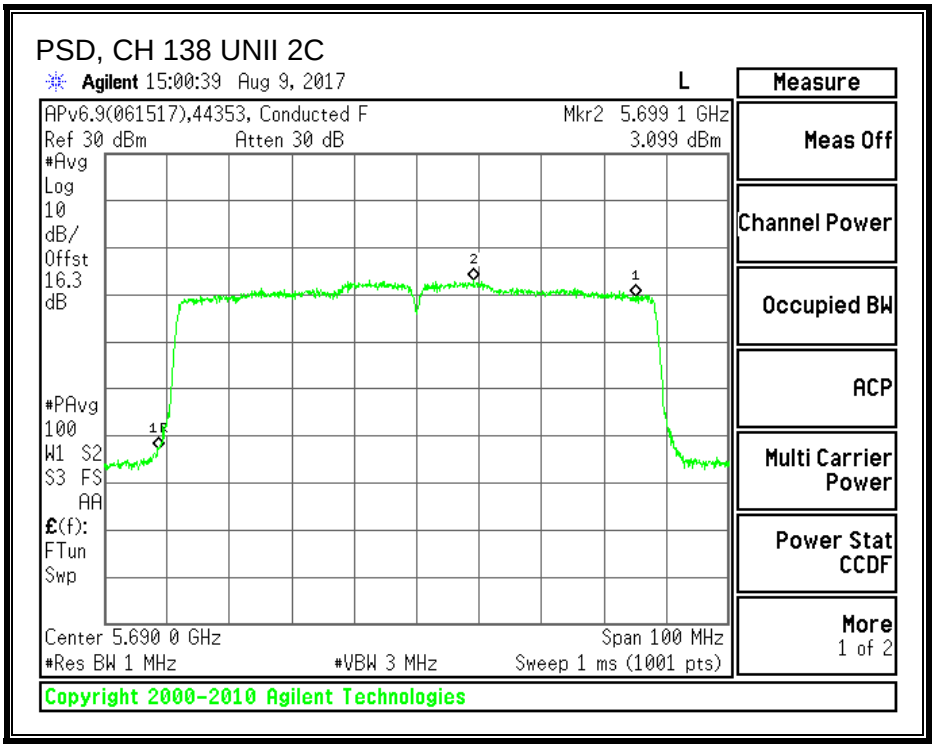
OUTPUT POWER, UAT 2



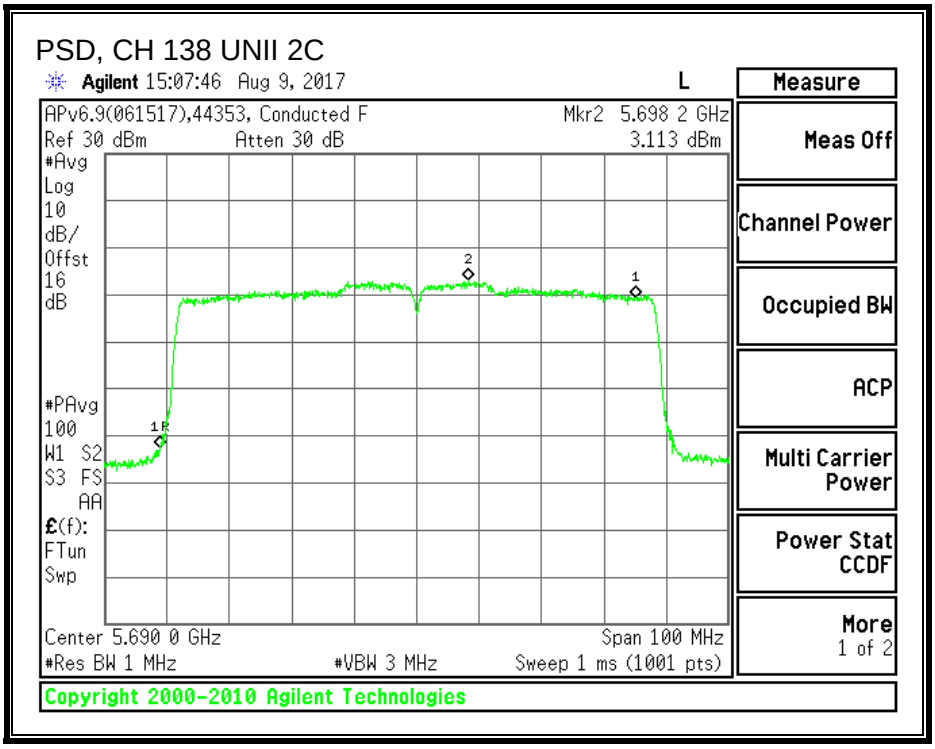
OUTPUT POWER, LAT 3



PSD, UAT 2



PSD, LAT 3



DIRECTIONAL ANTENNA GAIN

For Power used uncorrelated gain: The TX chains are uncorrelated and the antenna gain is unequal among the chains. The directional gain is:

UAT 2 Antenna Gain (dBi)	LAT 3 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
-2.71	-7.67	-4.52

For PSD used correlated gain: The TX chains are correlated and the antenna gain is unequal among the chains. The directional gain is:

UAT 2 Antenna Gain (dBi)	LAT 3 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
-2.71	-7.67	-1.83

UNII-3 BAND

Antenna Gain and Limit

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm)
138	5690	82.20	-4.52	-1.83	30.00	30.00

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

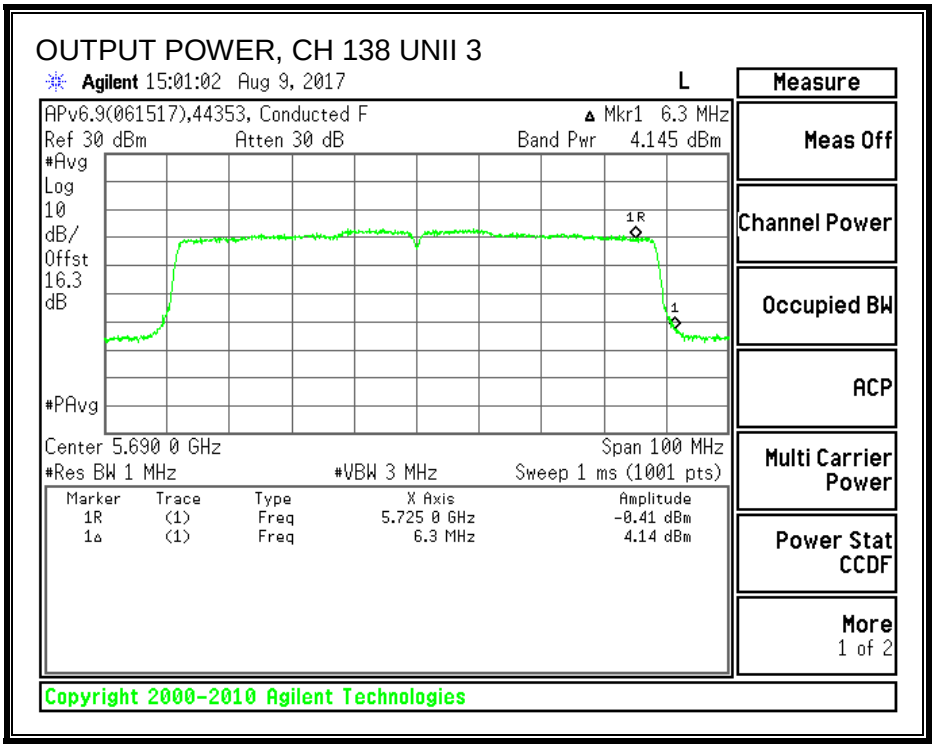
Output Power Results

Channel	Frequency (MHz)	UAT 2 Meas Power (dBm)	LAT 3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	4.15	4.13	7.34	30.00	-22.66

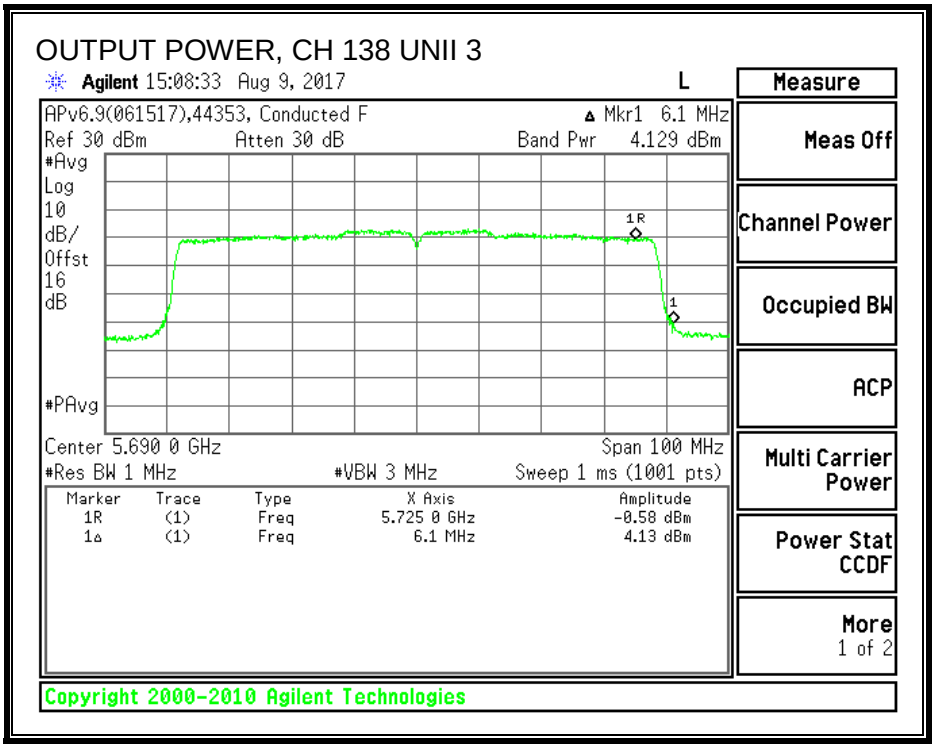
PSD Results

Channel	Frequency (MHz)	UAT 2 Meas PSD (dBm)	LAT 3 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	-2.77	-2.89	0.37	30.00	-29.63

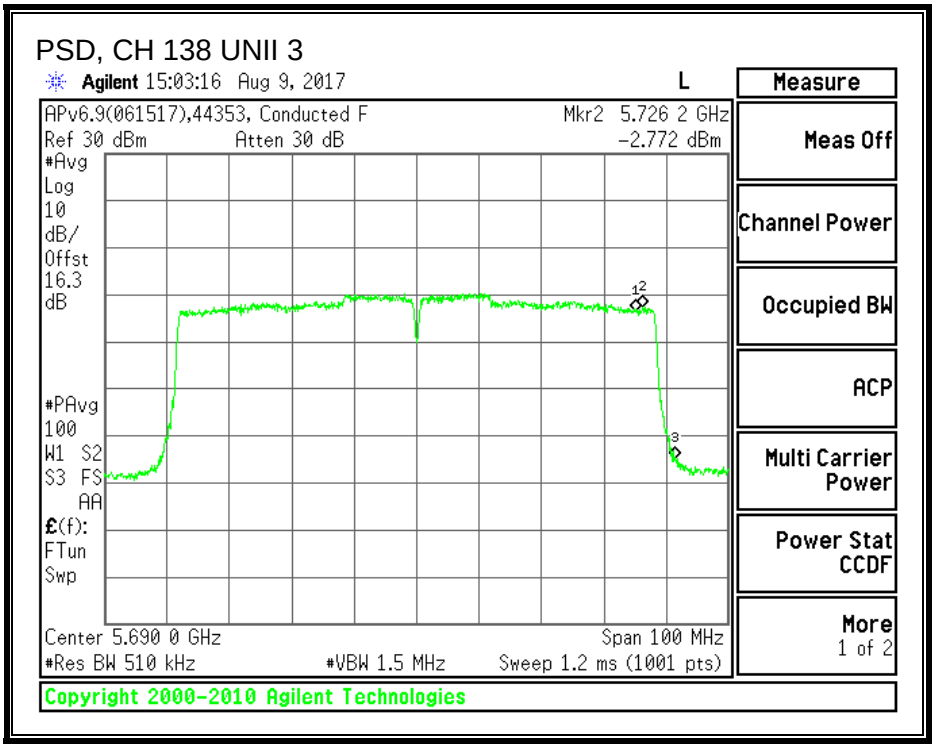
OUTPUT POWER, UAT 2



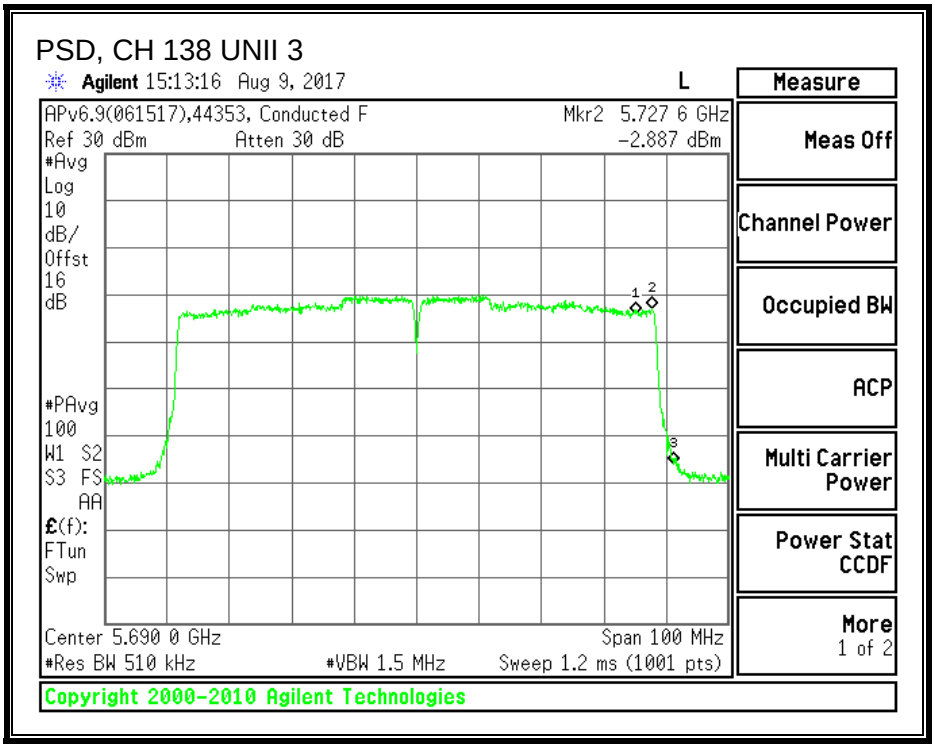
OUTPUT POWER, LAT 3



PSD, UAT 2



PSD, LAT 3



8.27.6. 6 dB BANDWIDTH

LIMITS

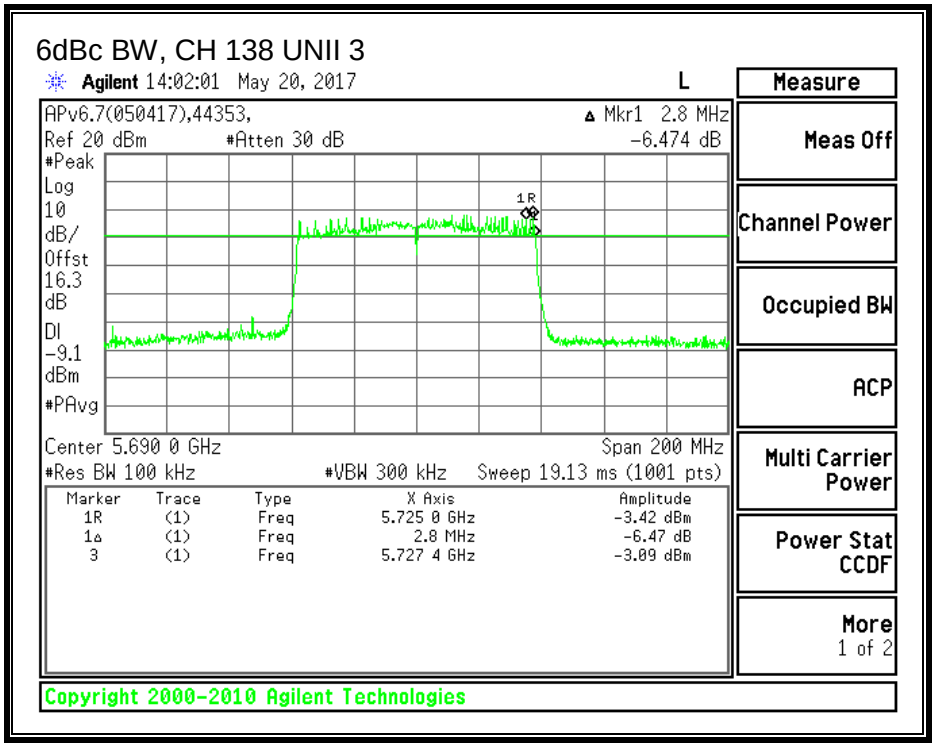
FCC §15.407 (e)

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

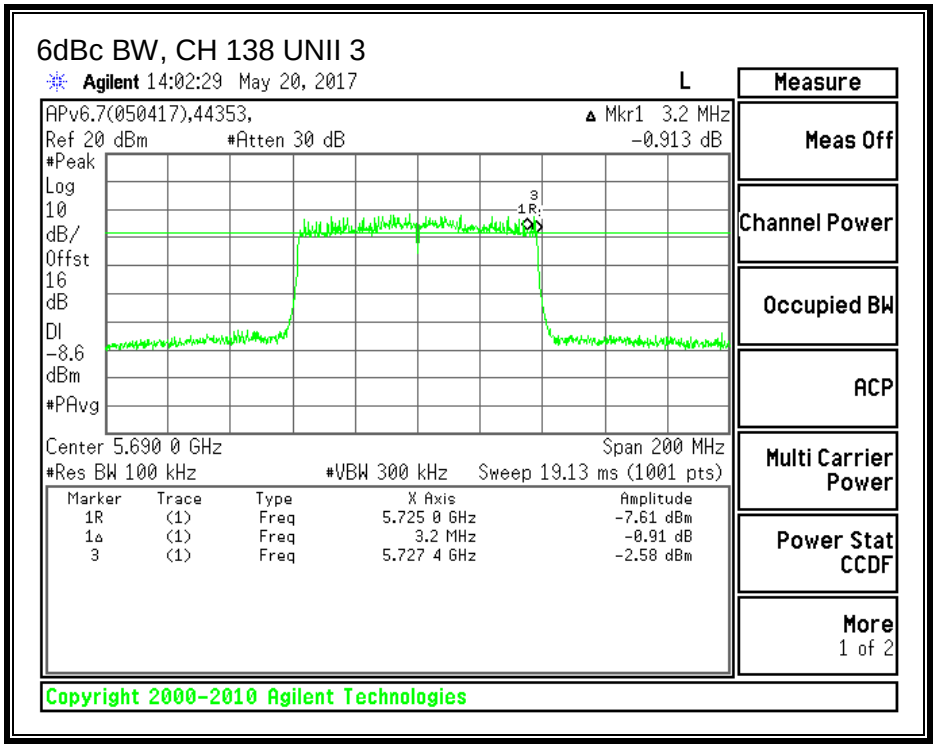
RESULTS

Channel	Frequency (MHz)	6 dB BW UAT 2 (MHz)	6 dB BW LAT 3 (MHz)
High	5690	2.80	3.20

UAT 2



LAT 3



8.28. 11n HT20 UAT 2 SISO MODE IN THE 5.8GHz BAND

8.28.1. 6 dB BANDWIDTH

LIMITS

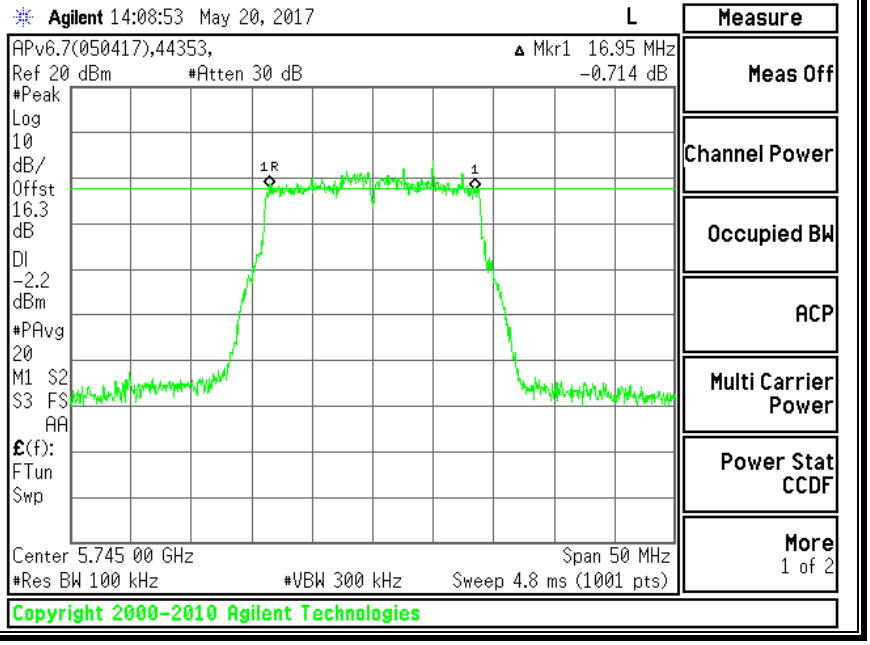
FCC §15.407 (e)

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

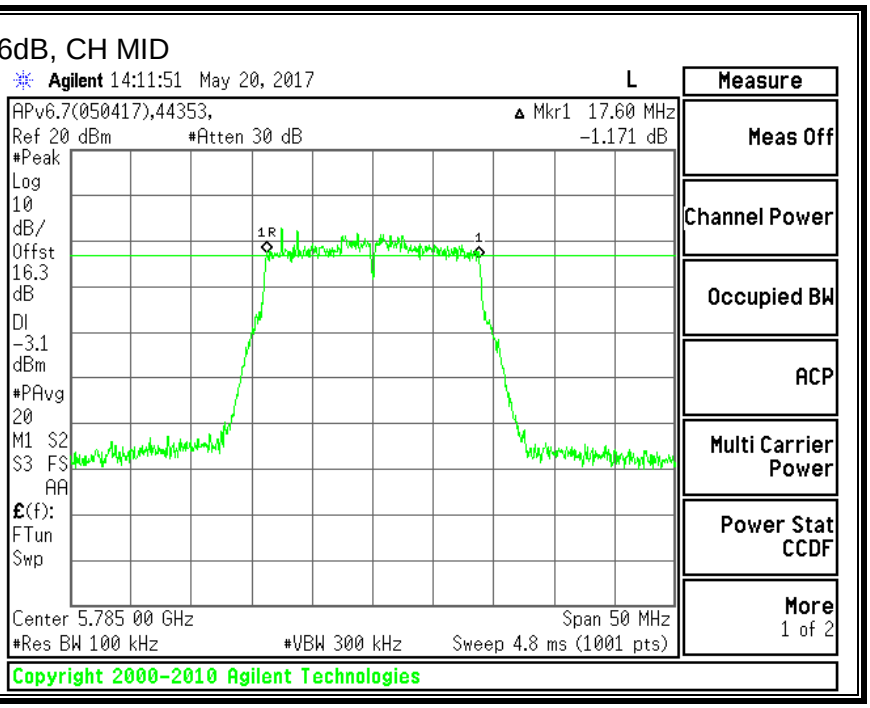
RESULTS

Channel	Frequency	6 dB BW UAT 2 (MHz)	Minimum Limit (MHz)
Low	5745	16.95	0.5
Mid	5785	17.60	0.5
High	5825	17.25	0.5

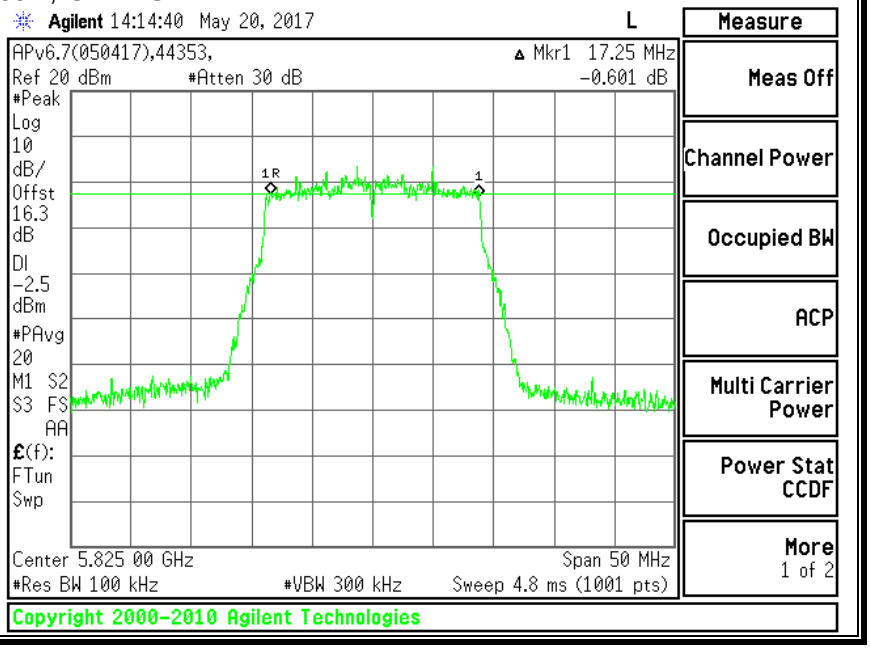
6dB, CH LOW



6dB, CH MID



6dB, CH HIGH



8.28.2. 26 dB BANDWIDTH

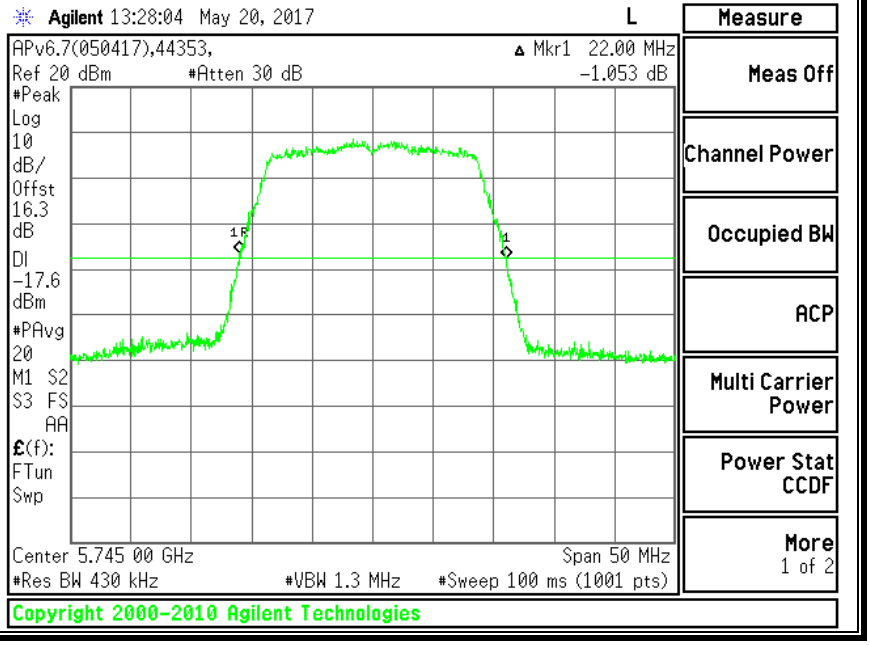
LIMITS

None; for reporting purposes only.

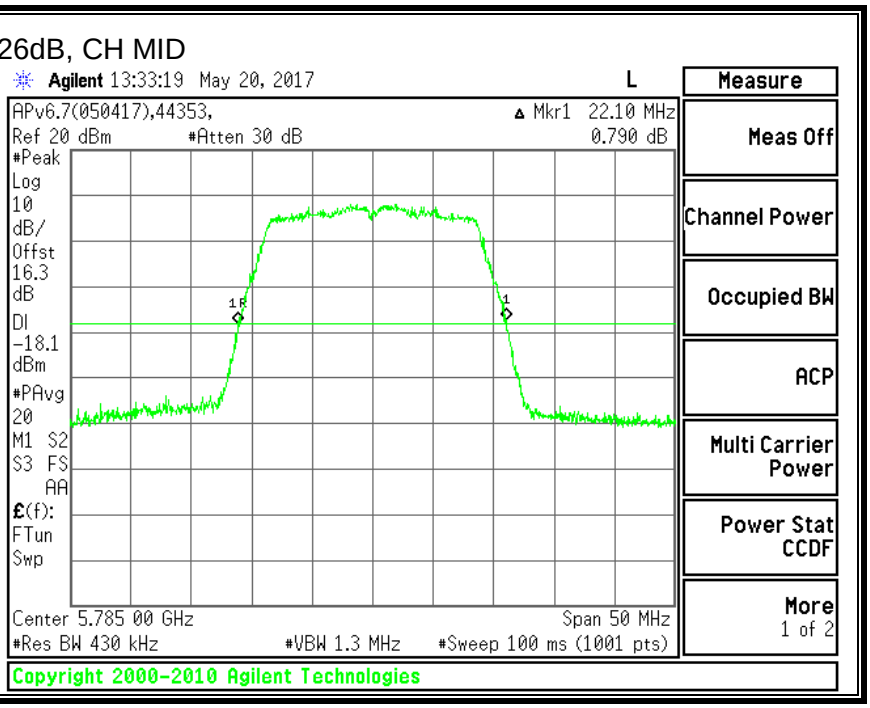
RESULTS

Channel	Frequency	26 dB BW UAT 2 (MHz)
Low	5745	22
Mid	5785	22.1
High	5825	21.95

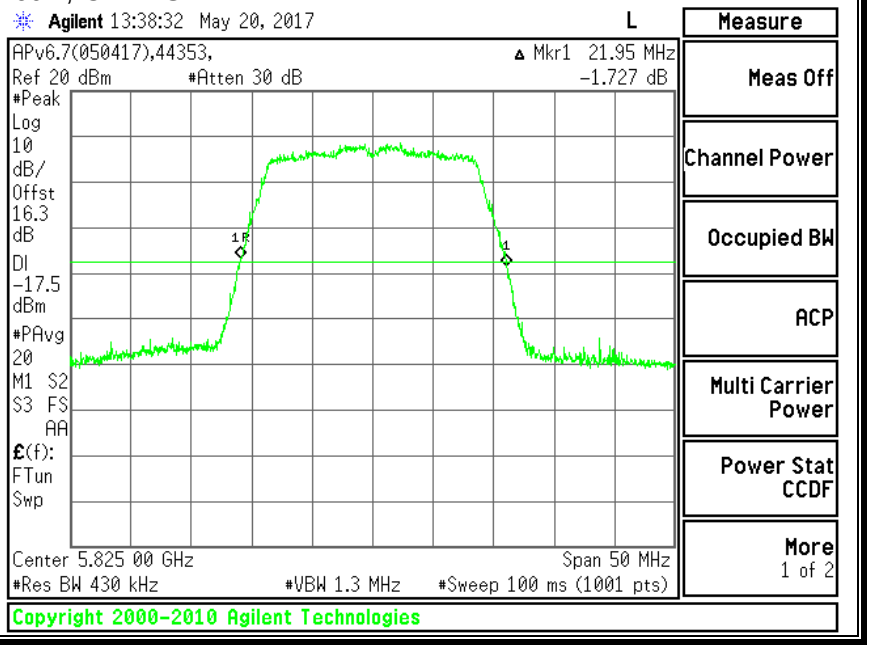
26dB, CH LOW



26dB, CH MID



26dB, CH HIGH



8.28.3. 99% BANDWIDTH

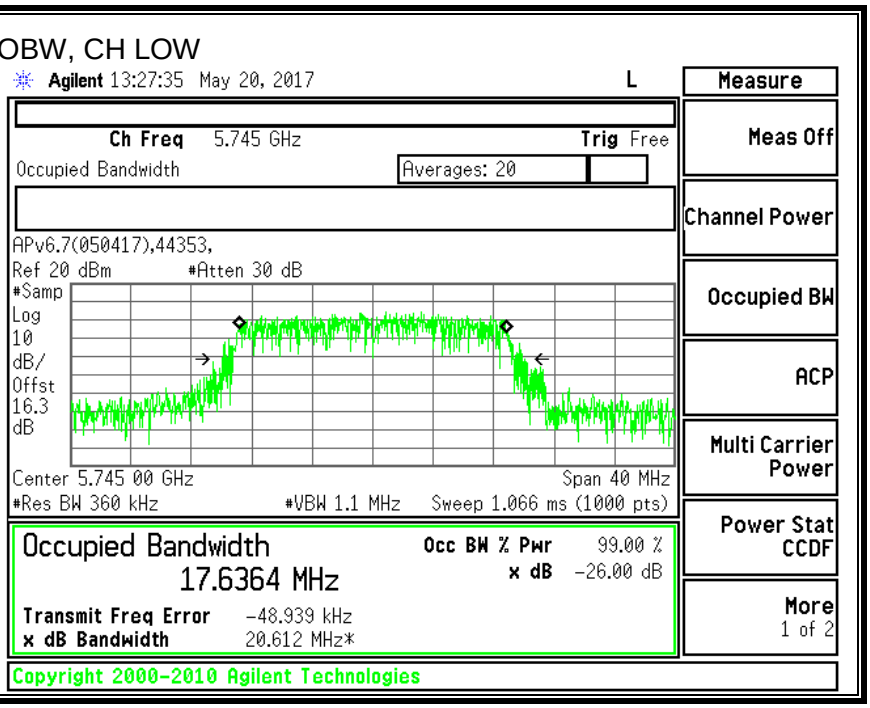
LIMITS

None; for reporting purposes only.

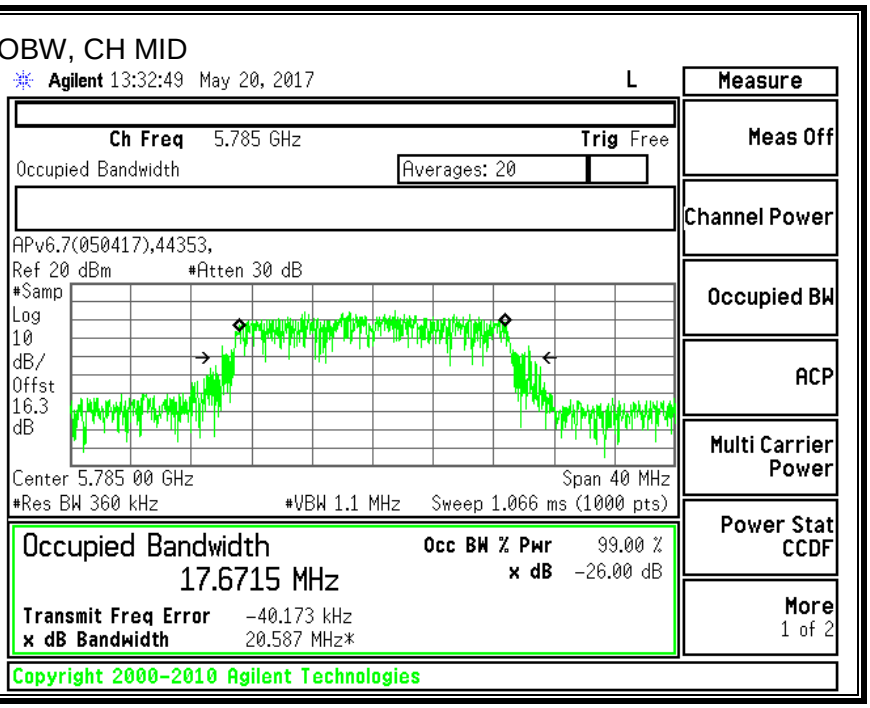
RESULTS

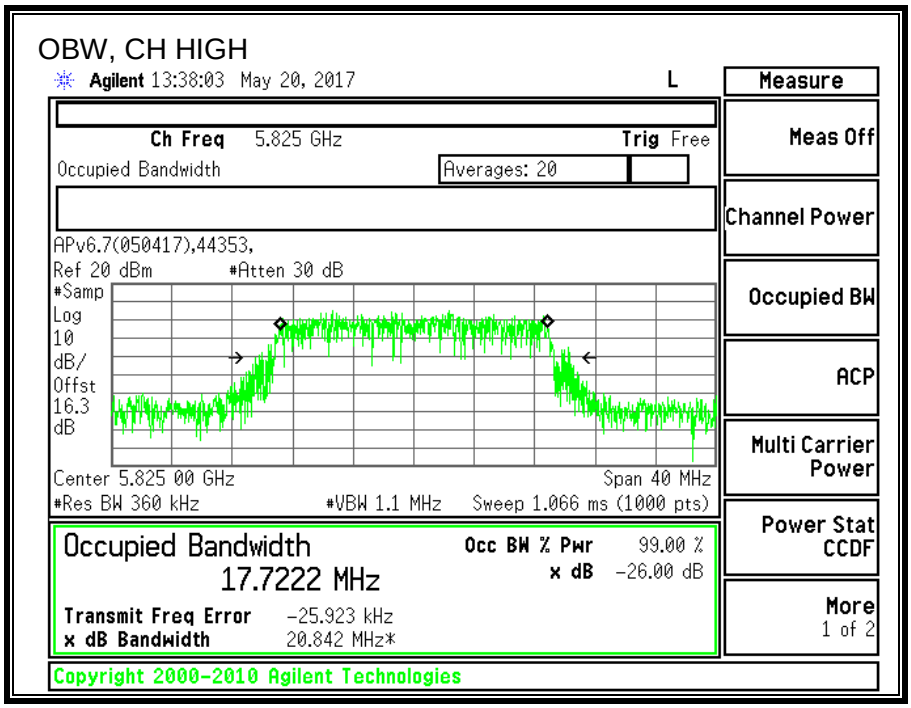
Channel	Frequency	99% BW UAT 2 (MHz)
Low	5745	17.6364
Mid	5785	17.6715
High	5825	17.7222

OBW, CH LOW



OBW, CH MID





8.28.4. AVERAGE POWER

ID:	30554	Date:	08/04/2017

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

Channel	Frequency	Power UAT 2 (dBm)
Low	5745	21.42
Mid	5785	21.40
High	5825	21.37

8.28.5. OUTPUT POWER

ID:	30554	Date:	08/04/2017

LIMITS

FCC §15.407 (a) (3)

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

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

DIRECTIONAL ANTENNA GAIN

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

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Power Limit (dBm)
Low	5745	-2.71	30.00
Mid	5785	-2.71	30.00
High	5825	-2.71	30.00

Output Power Results

Channel	Frequency (MHz)	UAT 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	21.42	21.42	30.00	-8.58
Mid	5785	21.40	21.40	30.00	-8.60
High	5825	21.37	21.37	30.00	-8.63

8.28.6. POWER SPECTRAL DENSITY

LIMITS

FCC §15.407 (a) (3)

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

DIRECTIONAL ANTENNA GAIN

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

RESULTS

Antenna Gain and Limits

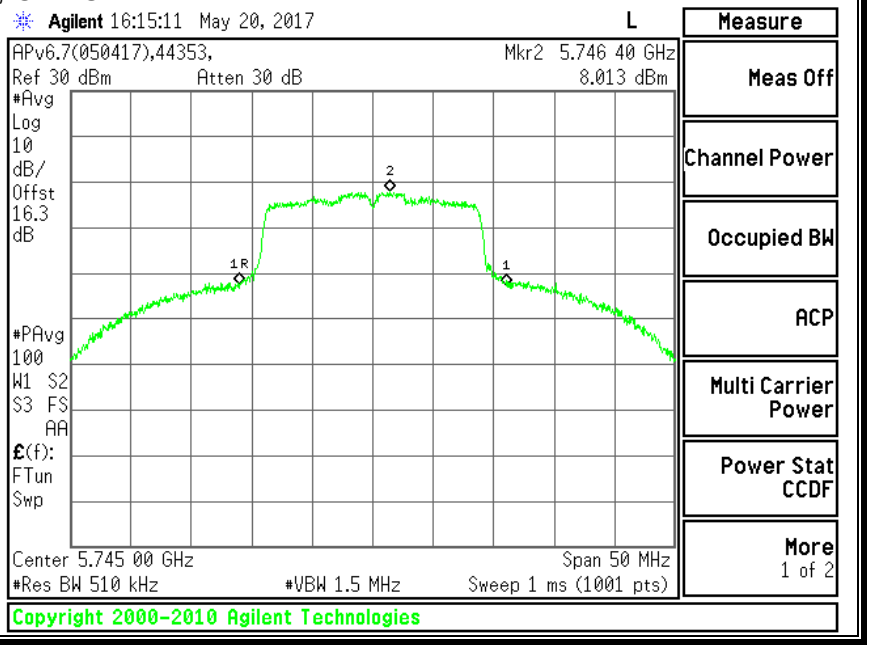
Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5745	-2.71	30.00
Mid	5785	-2.71	30.00
High	5825	-2.71	30.00

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

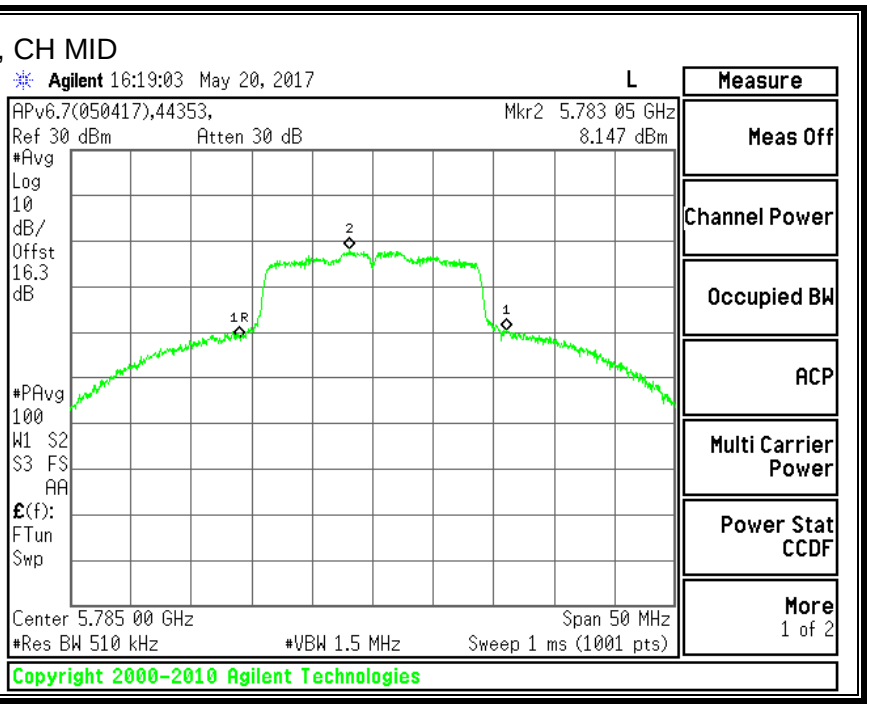
PSD Results

Channel	Frequency (MHz)	UAT 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5745	8.013	8.013	30.00	-21.99
Mid	5785	8.147	8.147	30.00	-21.85
High	5825	7.880	7.880	30.00	-22.12

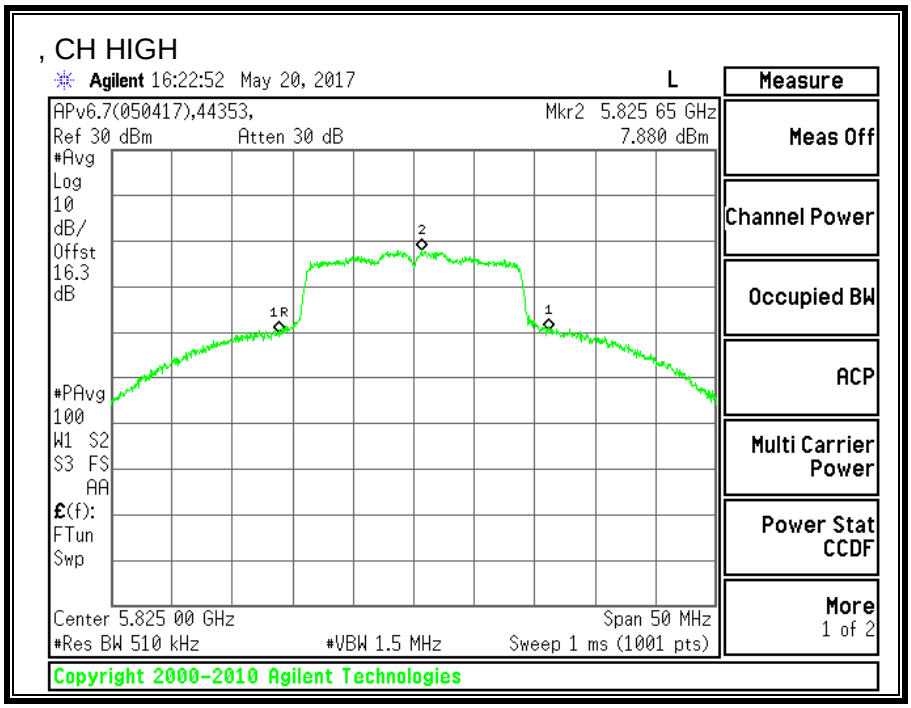
, CH LOW



, CH MID



, CH HIGH



8.29. 11n HT20 LAT 3 SISO MODE IN THE 5.8GHz BAND

8.29.1. 6 dB BANDWIDTH

LIMITS

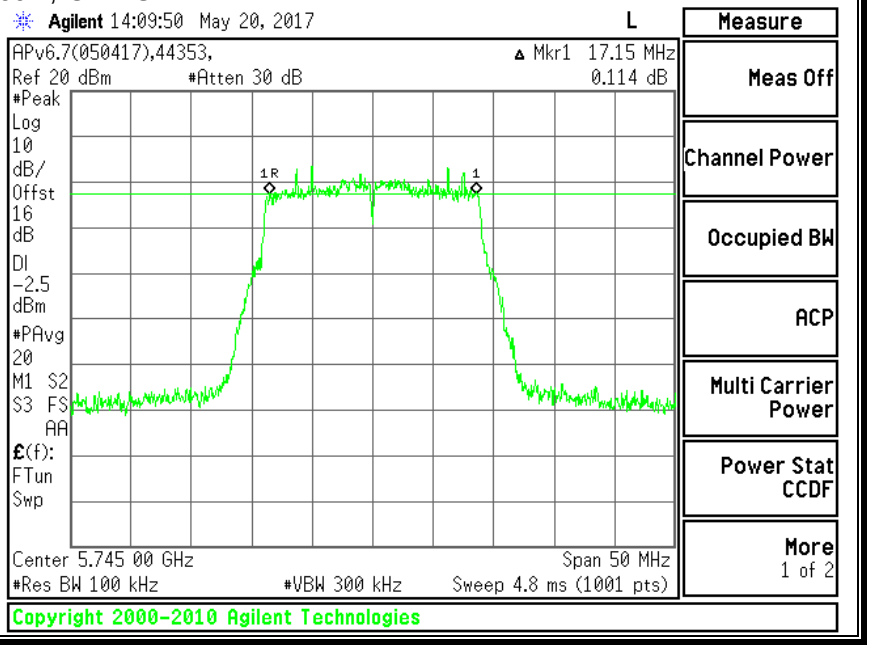
FCC §15.407 (e)

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

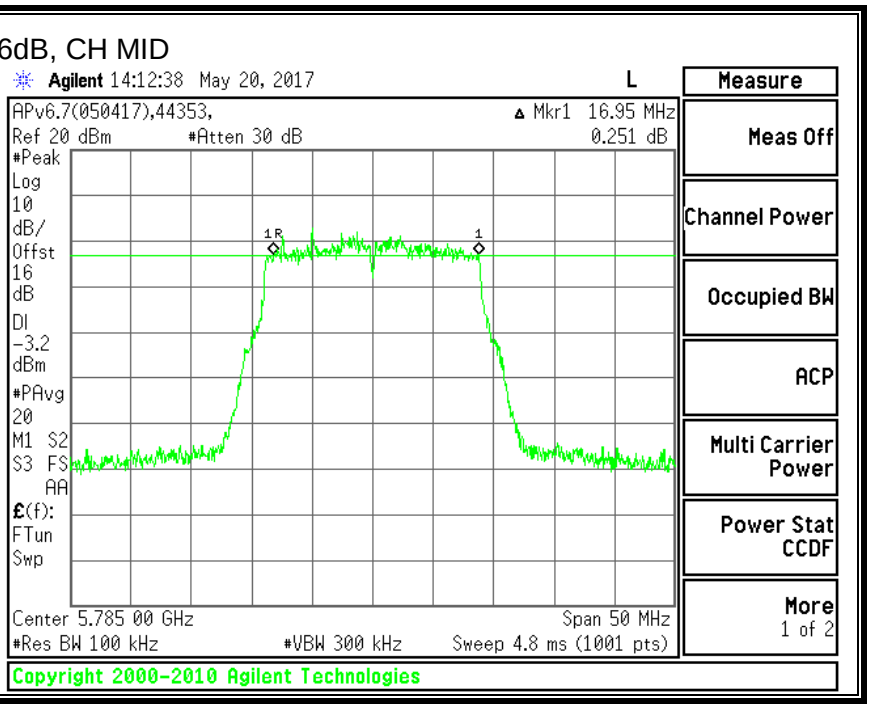
RESULTS

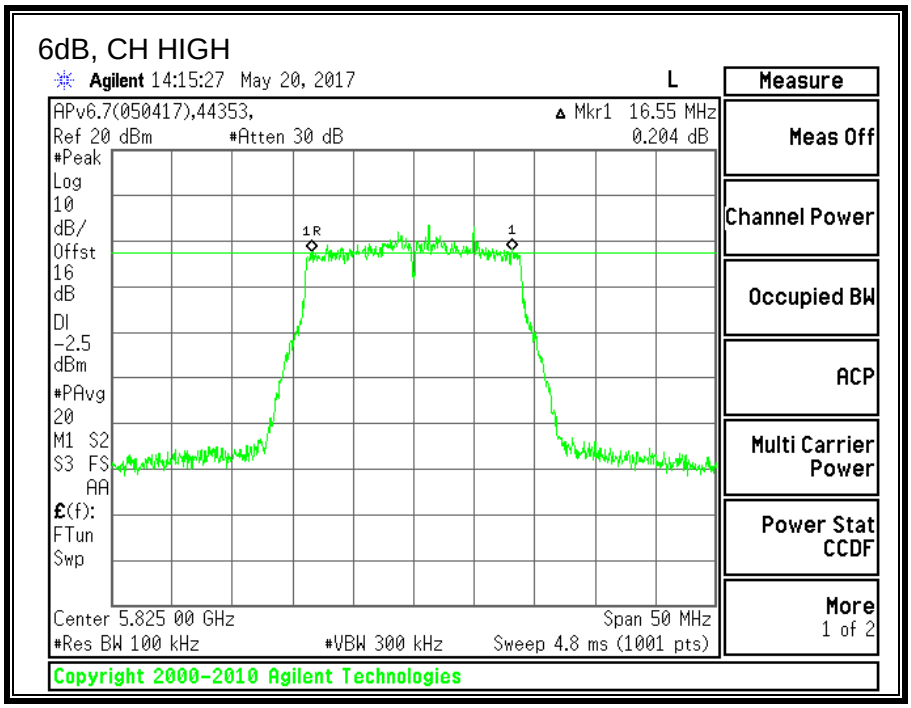
Channel	Frequency	6 dB BW LAT 3 (MHz)	Minimum Limit (MHz)
Low	5745	17.15	0.5
Mid	5785	16.95	0.5
High	5825	16.55	0.5

6dB, CH LOW



6dB, CH MID





8.29.2. 26 dB BANDWIDTH

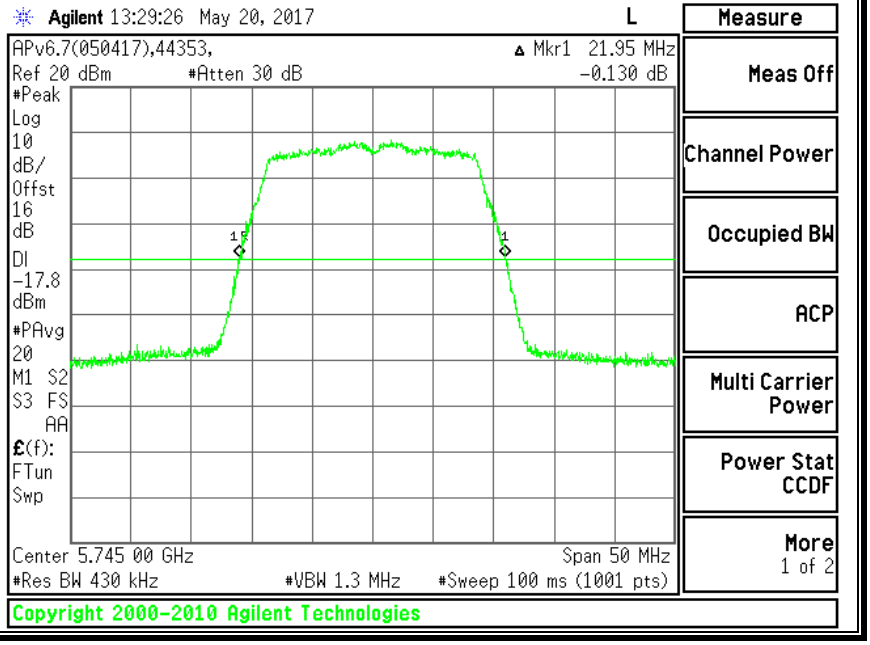
LIMITS

None; for reporting purposes only.

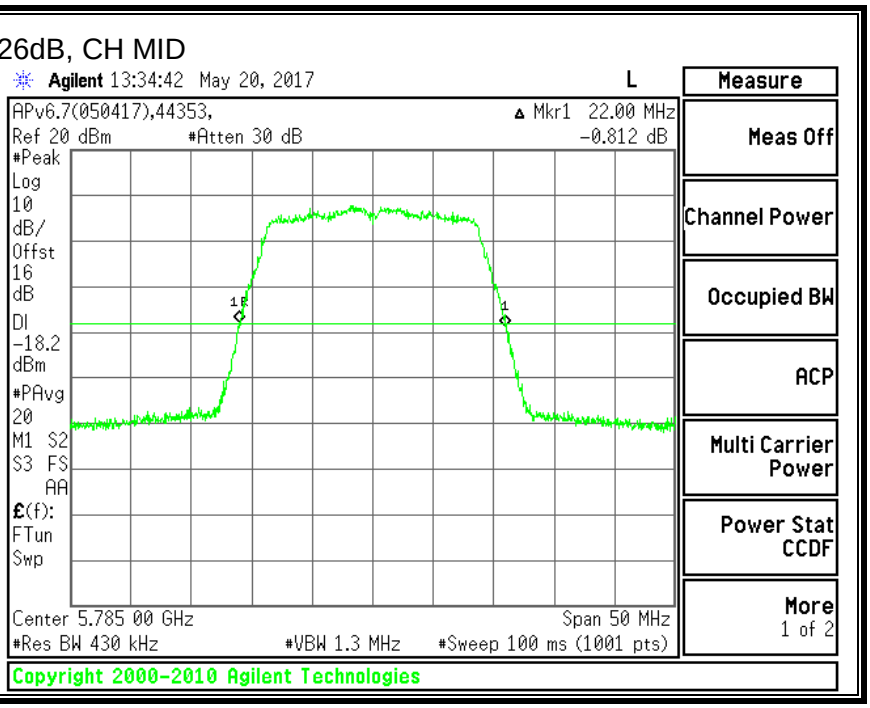
RESULTS

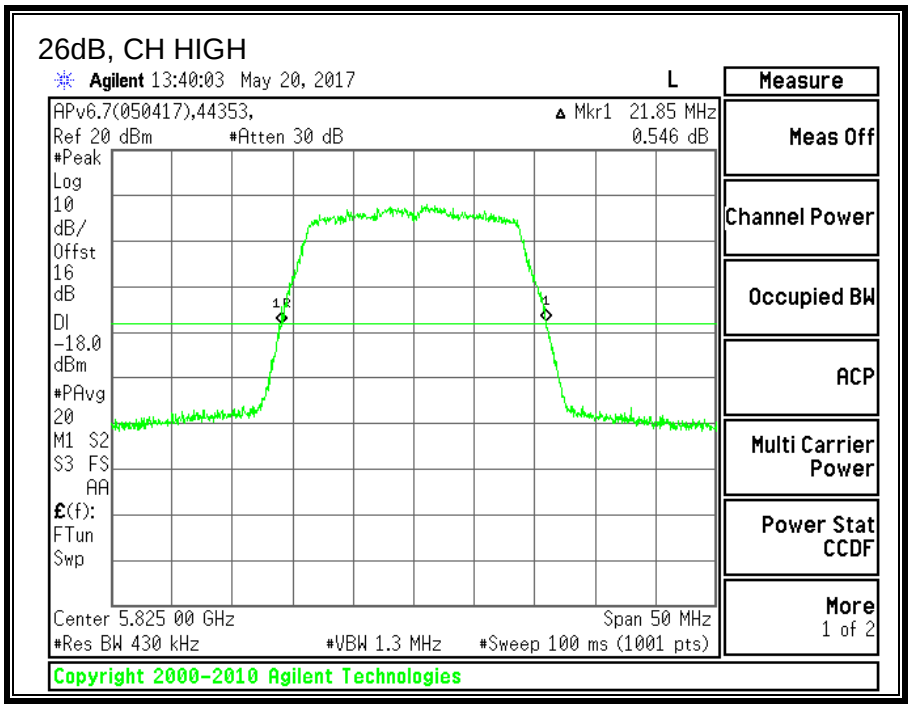
Channel	Frequency	26 dB BW LAT 3 (MHz)
Low	5745	21.95
Mid	5785	22.00
High	5825	21.85

26dB, CH LOW



26dB, CH MID





8.29.3. 99% BANDWIDTH

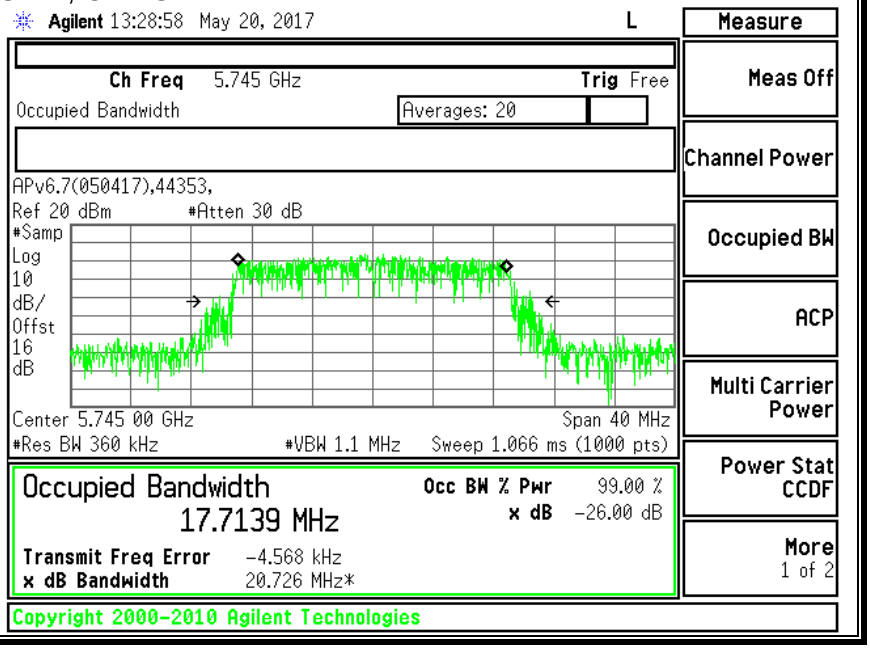
LIMITS

None; for reporting purposes only.

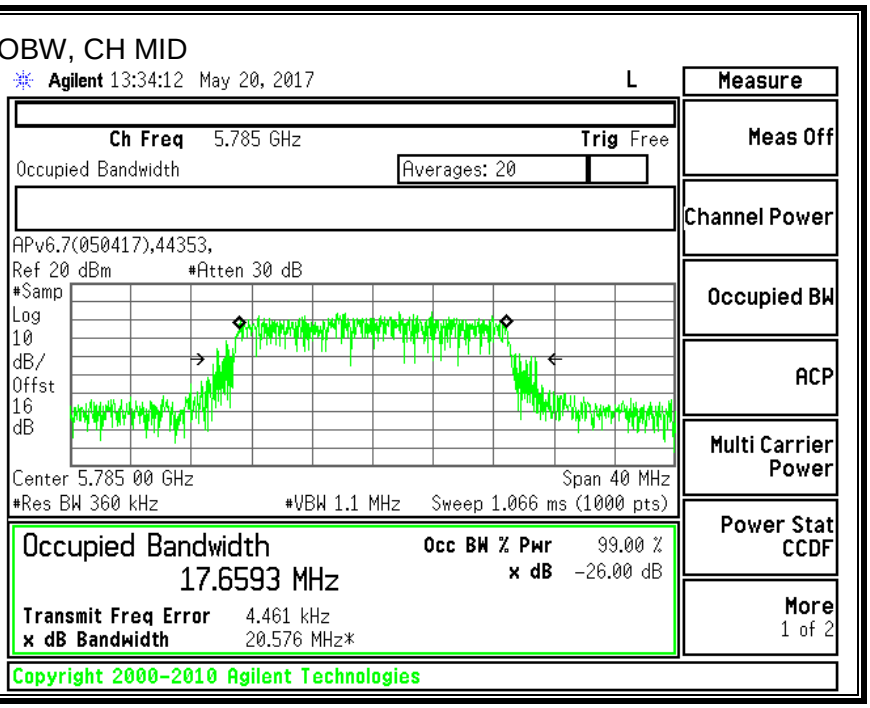
RESULTS

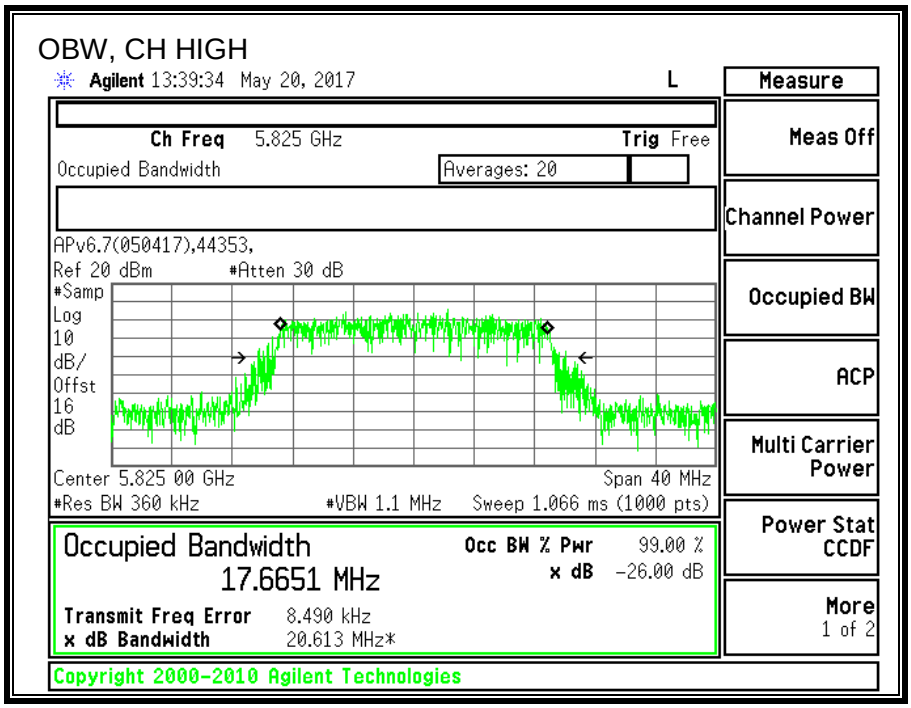
Channel	Frequency	99% BW LAT 3 (MHz)
Low	5745	17.7139
Mid	5785	17.6593
High	5825	17.6651

OBW, CH LOW



OBW, CH MID





8.29.4. AVERAGE POWER

ID:	30554	Date:	08/04/2017

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

Channel	Frequency	Power LAT 3 (dBm)
Low	5745	21.39
Mid	5785	21.48
High	5825	21.44

8.29.5. OUTPUT POWER

ID:	30554	Date:	08/04/2017

LIMITS

FCC §15.407 (a) (3)

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

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

DIRECTIONAL ANTENNA GAIN

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

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Power Limit (dBm)
Low	5745	-7.67	30.00
Mid	5785	-7.67	30.00
High	5825	-7.67	30.00

Output Power Results

Channel	Frequency (MHz)	LAT 3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	21.39	21.39	30.00	-8.61
Mid	5785	21.48	21.48	30.00	-8.52
High	5825	21.44	21.44	30.00	-8.56

8.29.6. POWER SPECTRAL DENSITY

LIMITS

FCC §15.407 (a) (3)

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

DIRECTIONAL ANTENNA GAIN

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

RESULTS

Antenna Gain and Limits

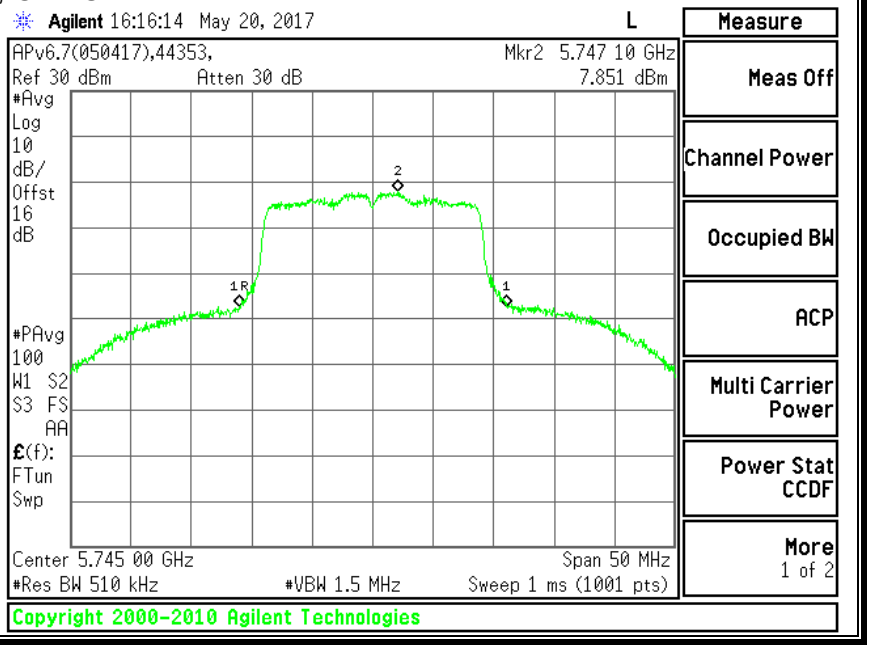
Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5745	-7.67	30.00
Mid	5785	-7.67	30.00
High	5825	-7.67	30.00

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

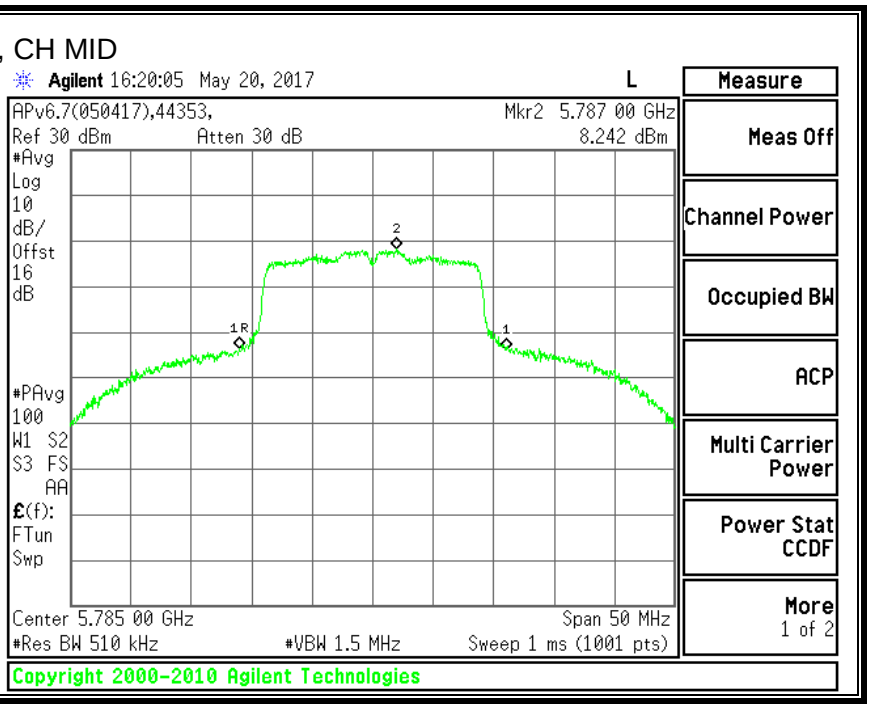
PSD Results

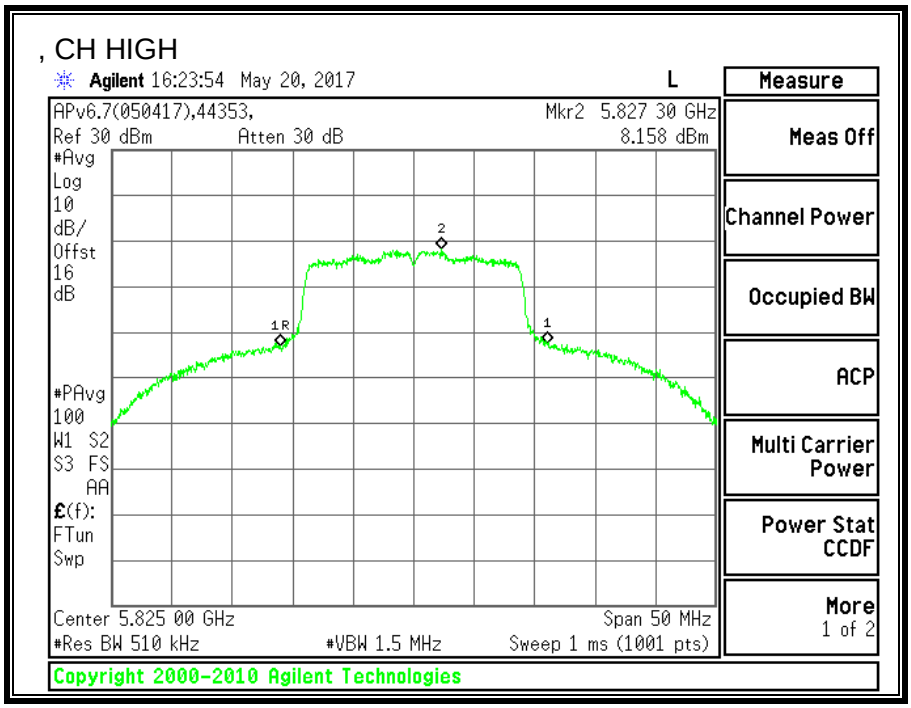
Channel	Frequency (MHz)	LAT 3 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5745	7.85	7.85	30.00	-22.15
Mid	5785	8.24	8.24	30.00	-21.76
High	5825	8.16	8.16	30.00	-21.84

, CH LOW



, CH MID





8.30. 11n HT20 2TX CDD MIMO MODE IN THE 5.8GHz BAND

8.30.1. 6 dB BANDWIDTH

LIMITS

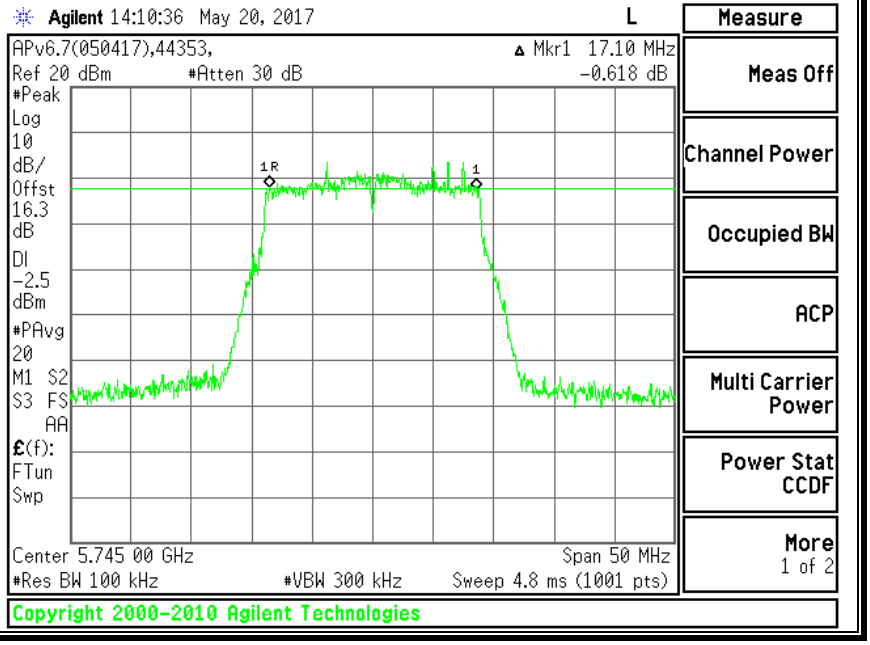
FCC §15.407 (e)

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

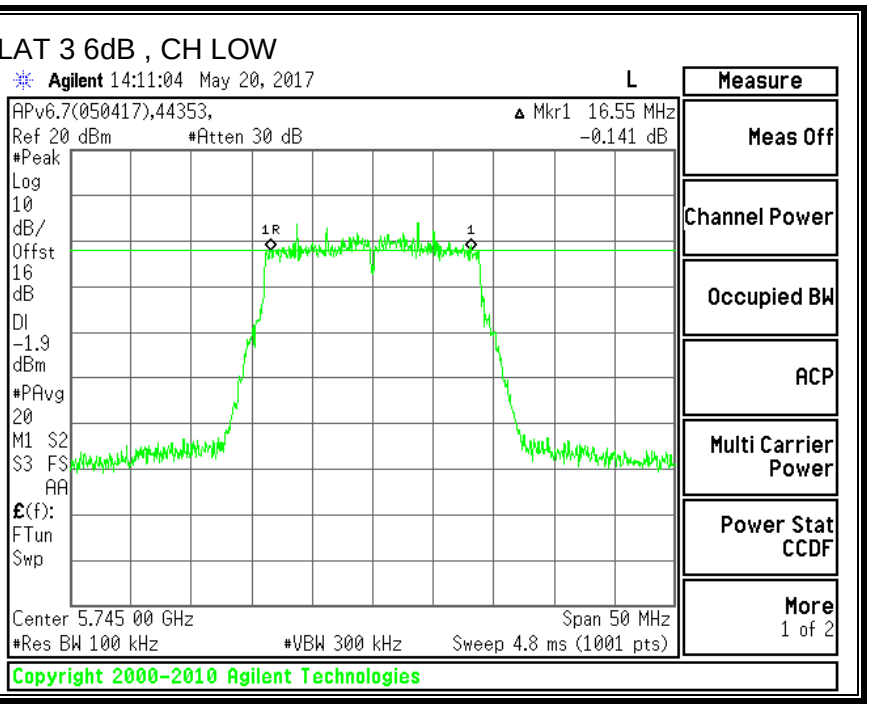
RESULTS

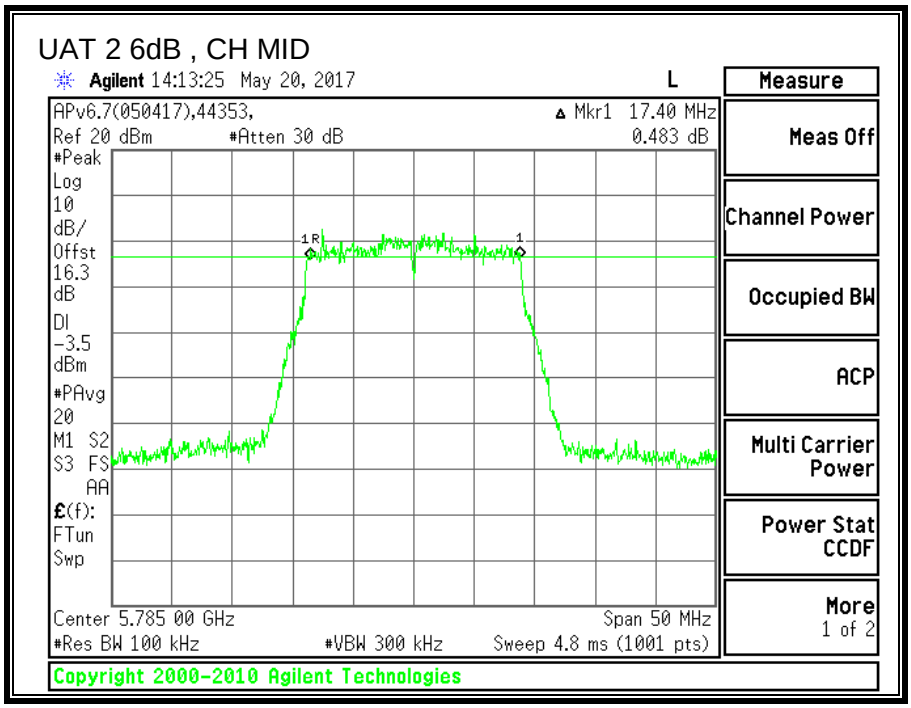
Channel	Frequency	6 dB BW UAT 2 (MHz)	6 dB BW LAT 3 (MHz)	Minimum Limit (MHz)
Low	5745	17.10	16.55	0.5
Mid	5785	17.40	17.55	0.5
High	5825	17.55	16.50	0.5

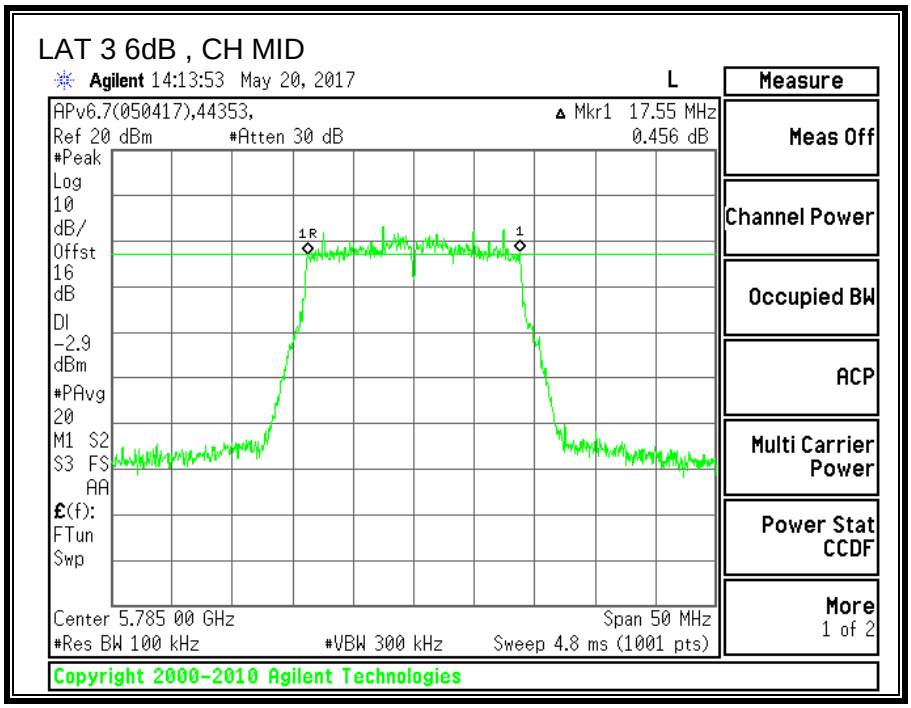
UAT 2 6dB , CH LOW



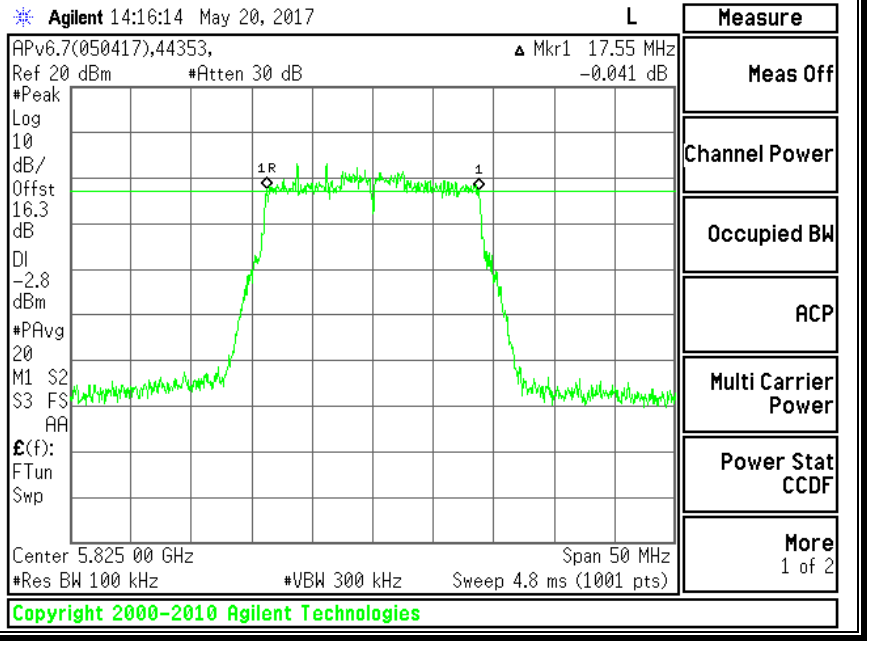
LAT 3 6dB , CH LOW



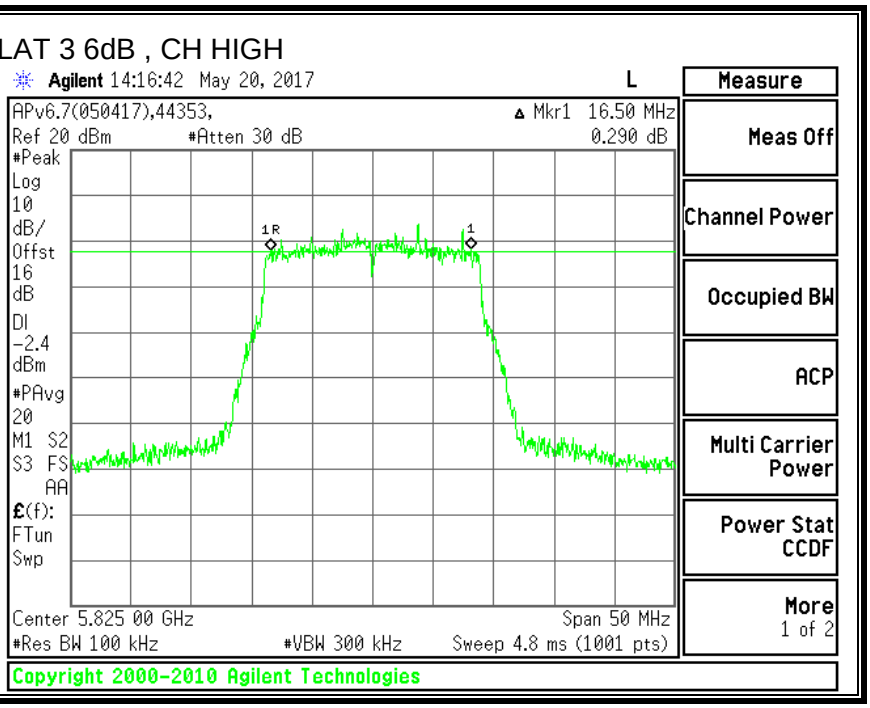




UAT 2 6dB , CH HIGH



LAT 3 6dB , CH HIGH



8.30.2. 26 dB BANDWIDTH

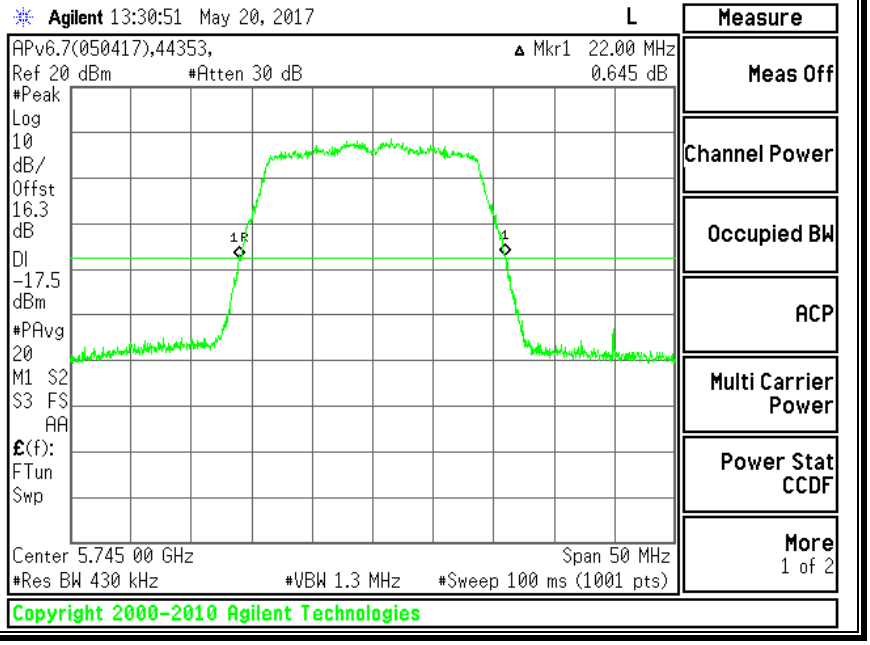
LIMITS

None; for reporting purposes only.

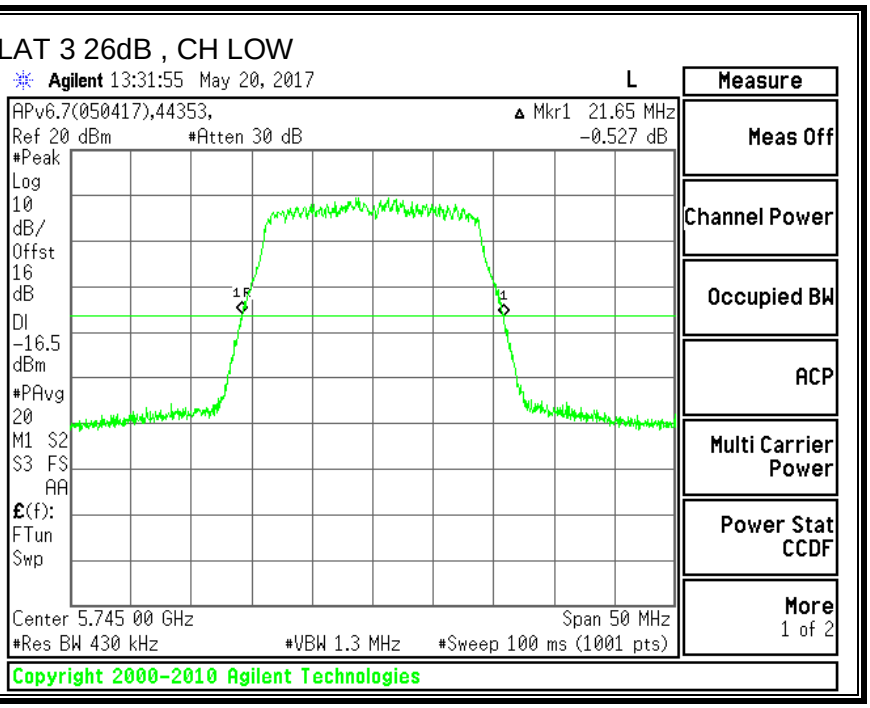
RESULTS

Channel	Frequency	26 dB BW UAT 2 (MHz)	26 dB BW LAT 3 (MHz)
Low	5745	22.00	21.65
Mid	5785	22.15	21.60
High	5825	21.95	21.60

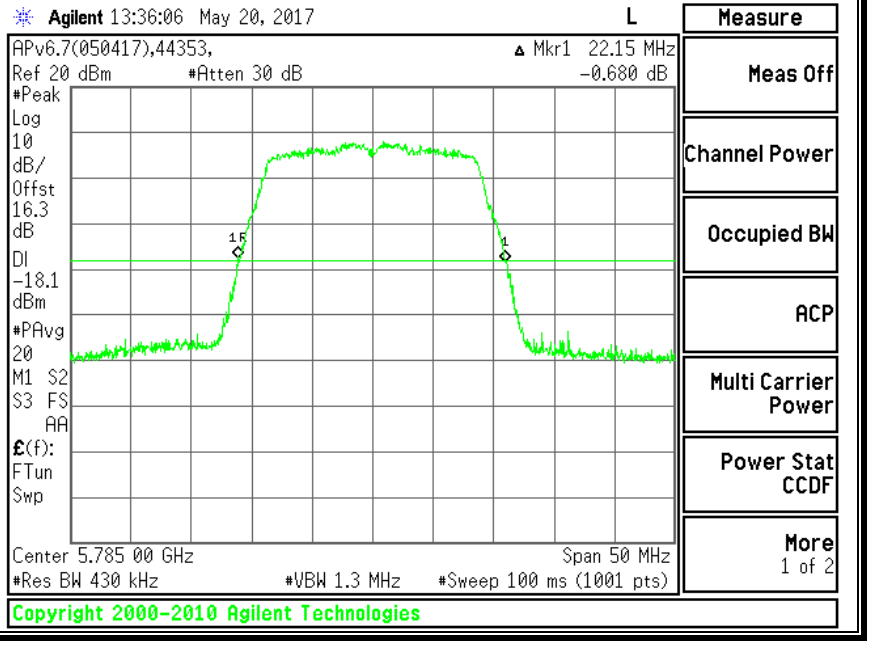
UAT 2 26dB , CH LOW



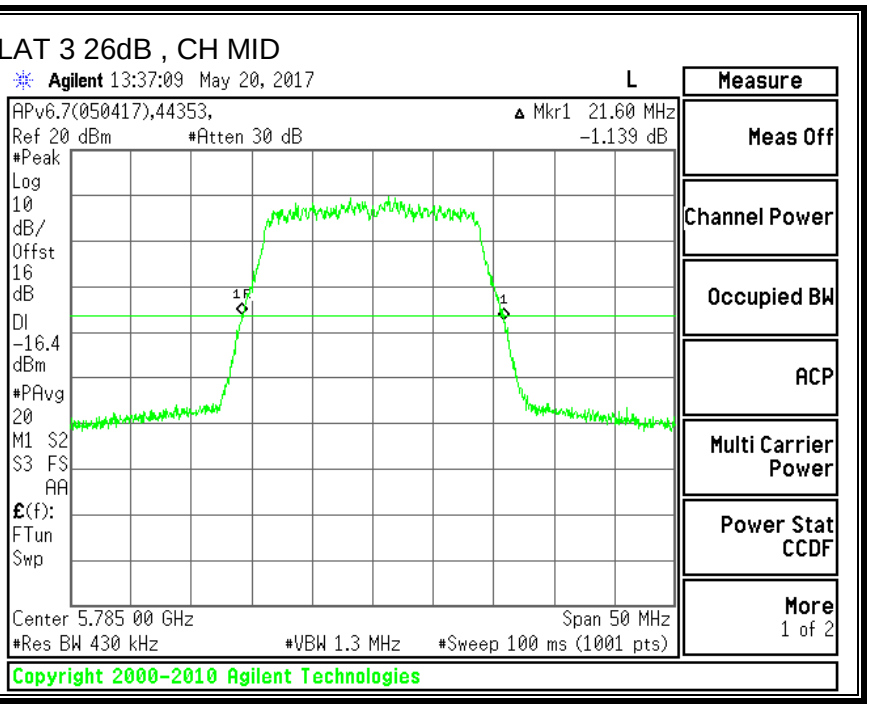
LAT 3 26dB , CH LOW



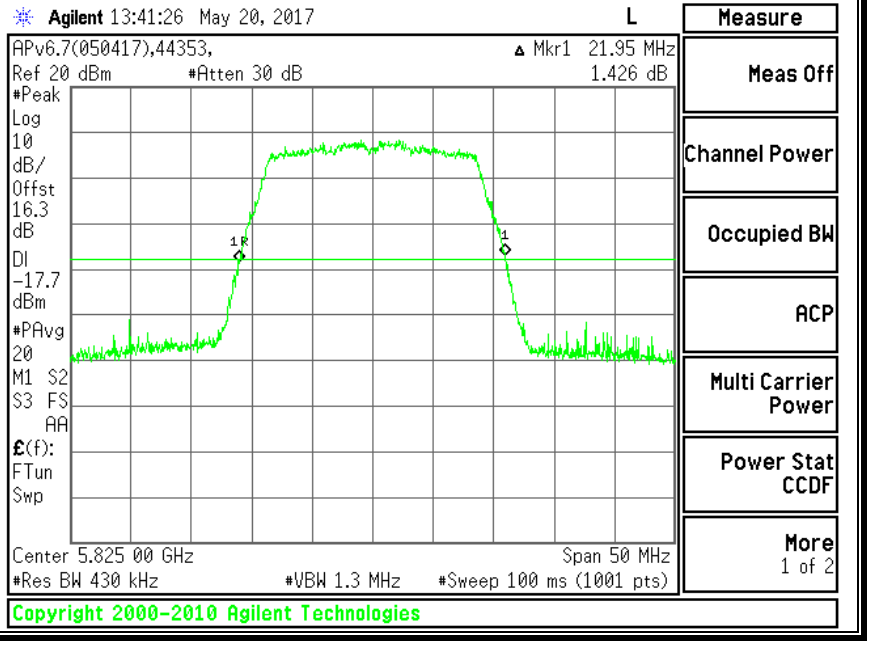
UAT 2 26dB , CH MID



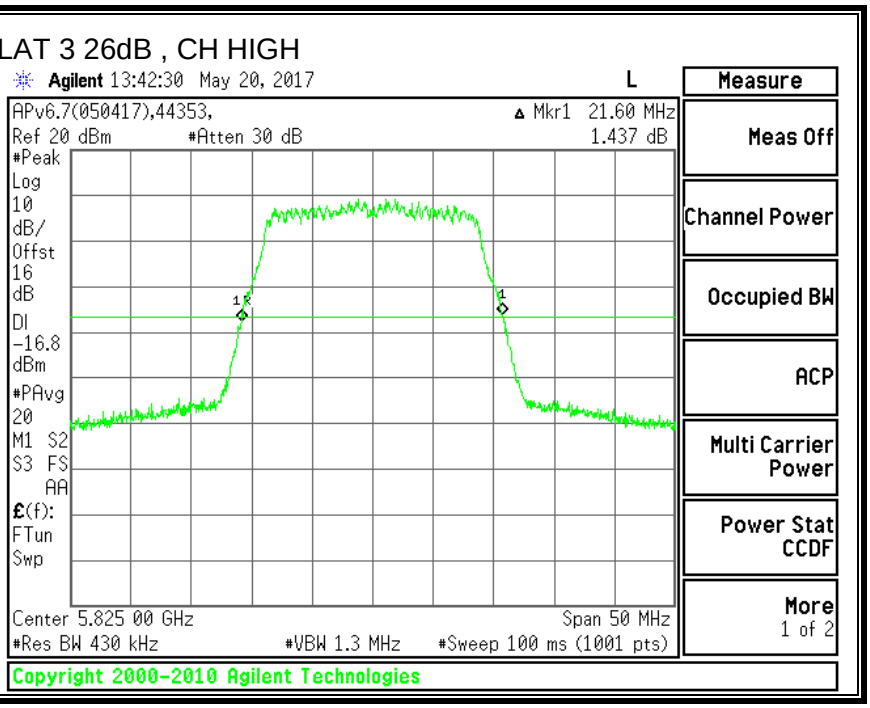
LAT 3 26dB , CH MID



UAT 2 26dB , CH HIGH



LAT 3 26dB , CH HIGH



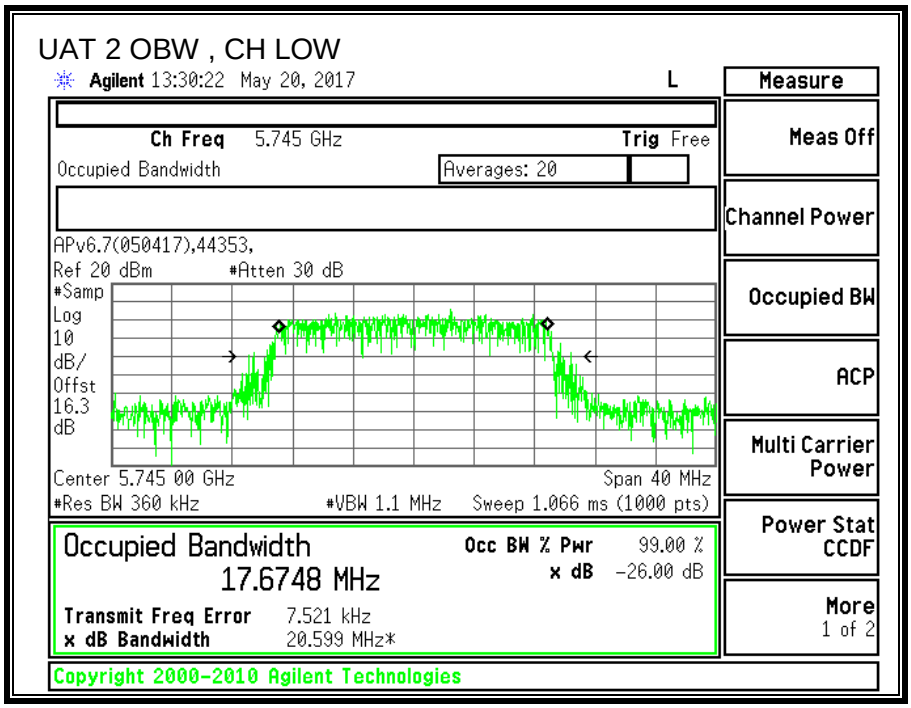
8.30.3. 99% BANDWIDTH

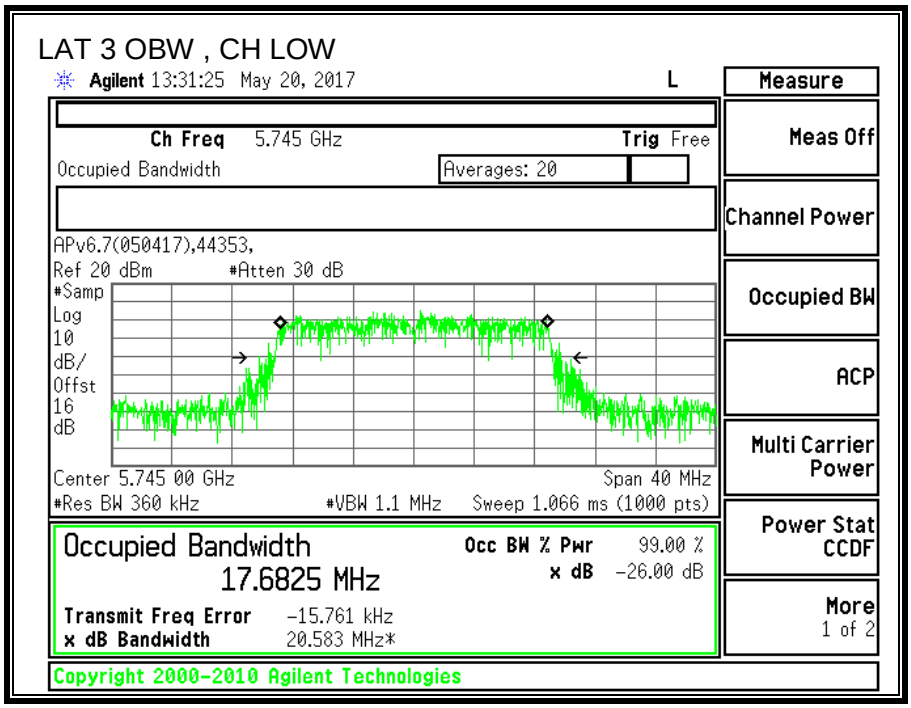
LIMITS

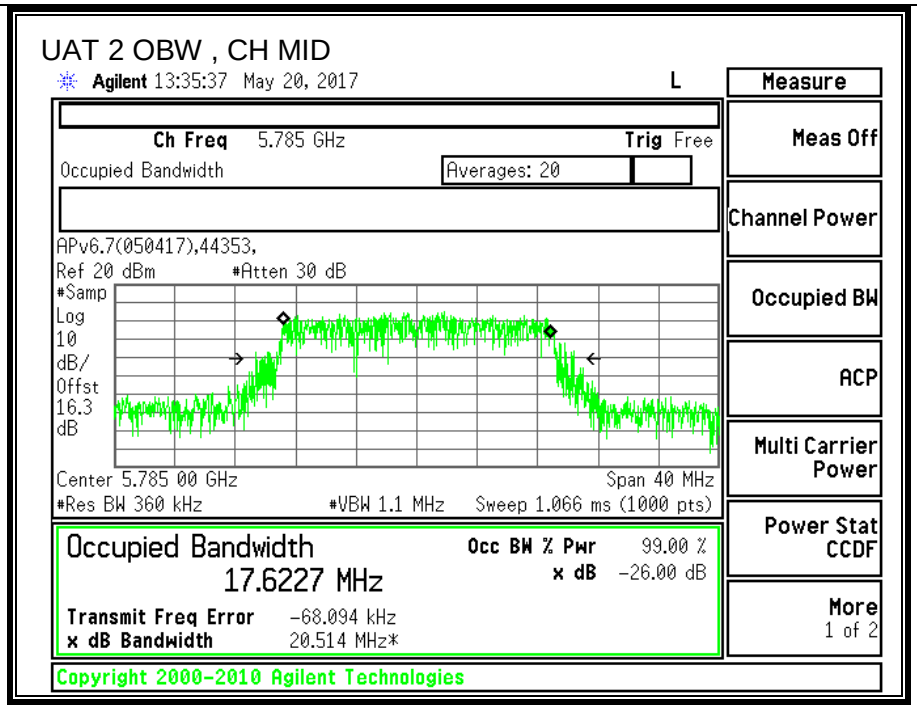
None; for reporting purposes only.

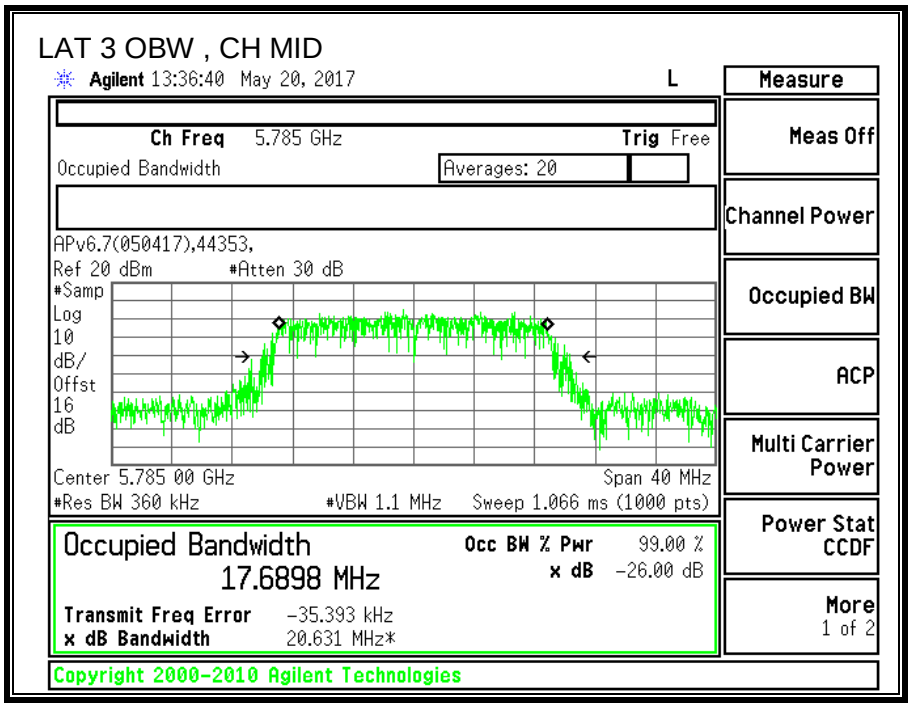
RESULTS

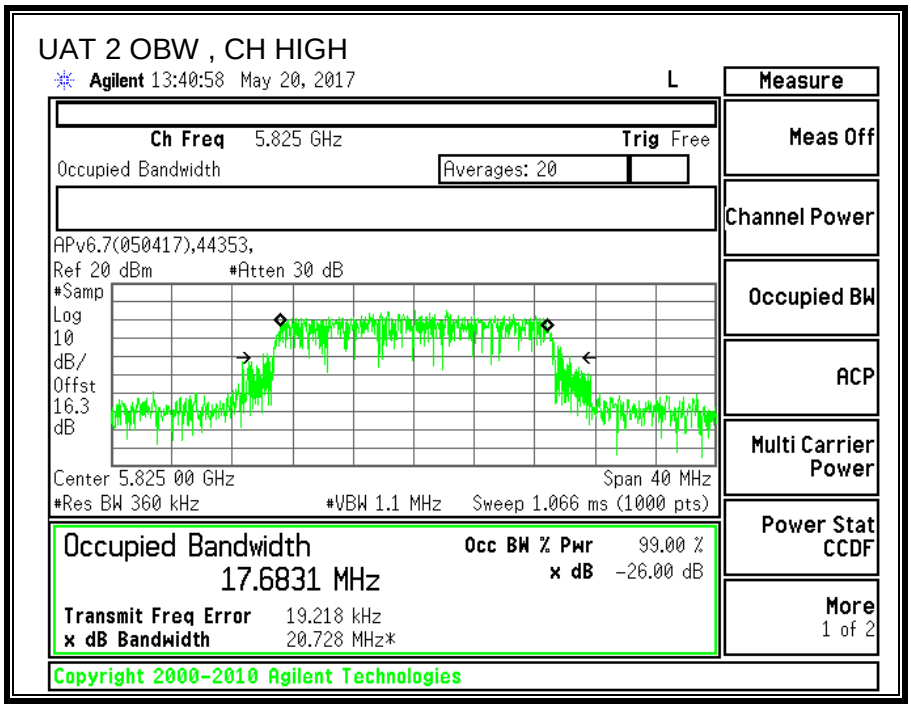
Channel	Frequency	99% BW UAT 2 (MHz)	99% BW LAT 3 (MHz)
Low	5745	17.6748	17.6825
Mid	5785	17.6227	17.6898
High	5825	17.6831	17.7259

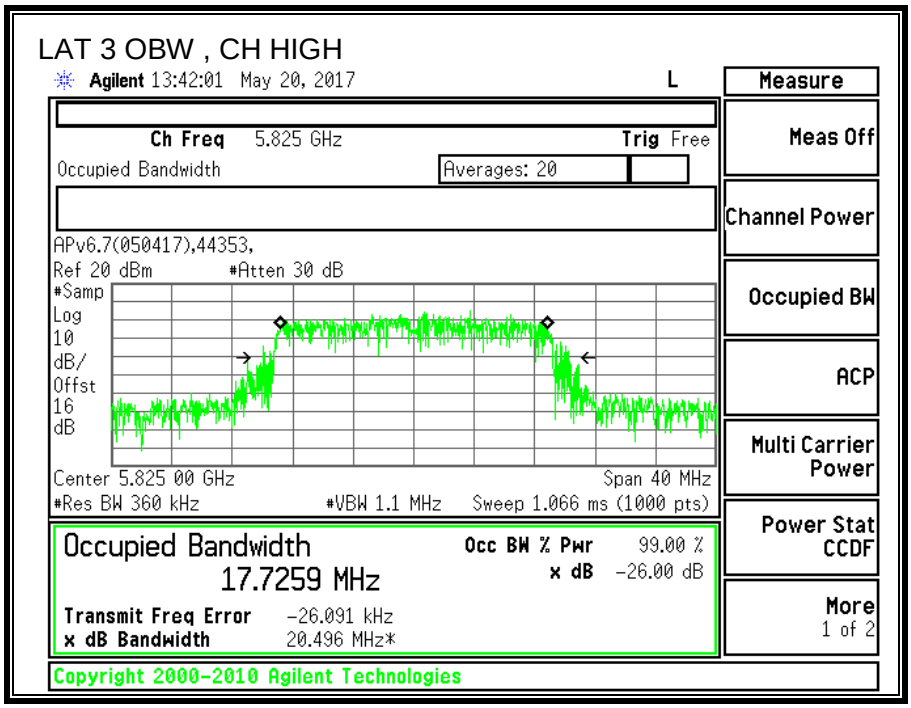












8.30.4. AVERAGE POWER

ID:	30554	Date:	08/04/2017

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

Channel	Frequency (MHz)	UAT 2 Power (dBm)	LAT 3 Power (dBm)	Total Power (dBm)
Low	5745	21.46	21.40	24.44
Mid	5785	21.43	21.37	24.41
High	5825	21.36	21.42	24.40

8.30.5. OUTPUT POWER

ID:	30554	Date:	08/04/2017

LIMITS

FCC §15.407 (a) (3)

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

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

DIRECTIONAL ANTENNA GAIN

For Power used uncorrelated gain: The TX chains are uncorrelated and the antenna gain is unequal among the chains. The directional gain is:

UAT 2 Antenna Gain (dBi)	LAT 3 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
-2.71	-7.67	-4.52

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Power Limit (dBm)
Low	5745	-4.52	30.00
Mid	5785	-4.52	30.00
High	5825	-4.52	30.00

Output Power Results

Channel	Frequency (MHz)	UAT 2 Meas Power (dBm)	LAT 3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	21.46	21.40	24.44	30.00	-5.56
Mid	5785	21.43	21.37	24.41	30.00	-5.59
High	5825	21.36	21.42	24.40	30.00	-5.60

8.30.6. POWER SPECTRAL DENSITY

LIMITS

FCC §15.407 (a) (3)

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

DIRECTIONAL ANTENNA GAIN

For PSD used correlated gain: The TX chains are correlated and the antenna gain is unequal among the chains. The directional gain is:

UAT 2 Antenna Gain (dBi)	LAT 3 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
-2.71	-7.67	-1.83

RESULTS

Antenna Gain and Limits

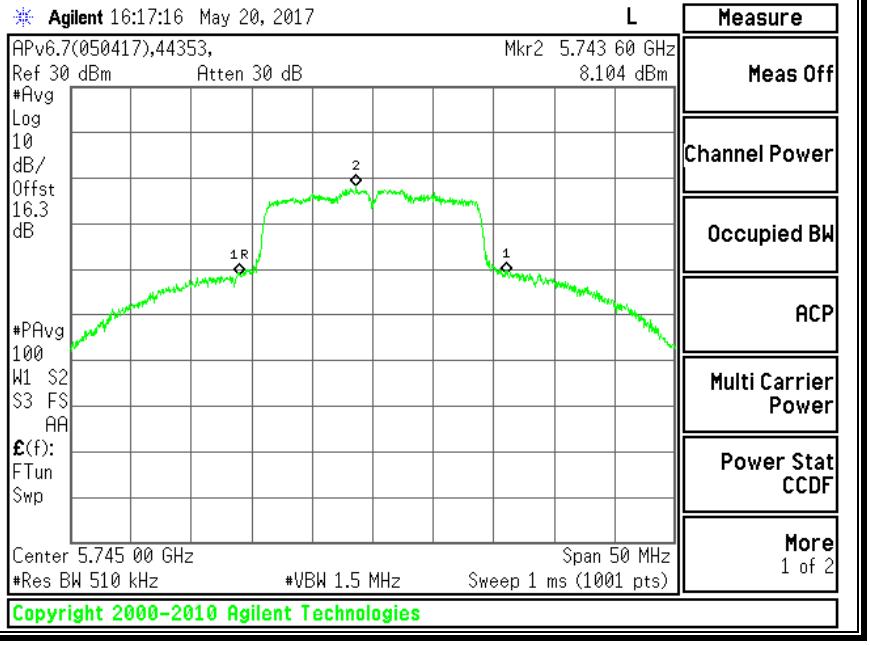
Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5745	-1.83	30.00
Mid	5785	-1.83	30.00
High	5825	-1.83	30.00

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

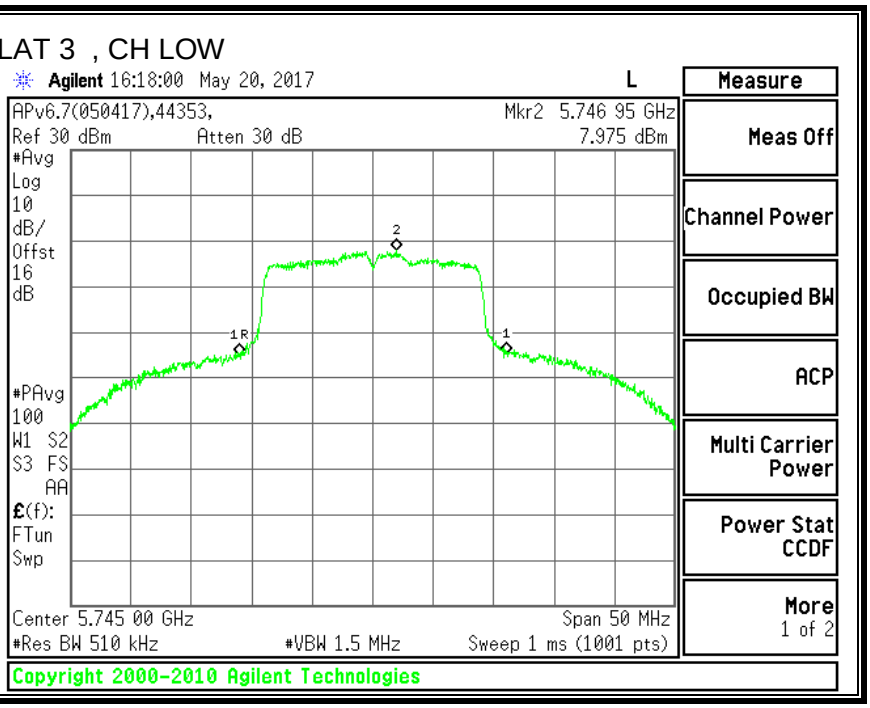
PSD Results

Channel	Frequency (MHz)	UAT 2 Meas PSD (dBm)	LAT 3 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5745	8.104	7.975	11.05	30.00	-18.95
Mid	5785	7.551	7.685	10.63	30.00	-19.37
High	5825	7.947	7.624	10.80	30.00	-19.20

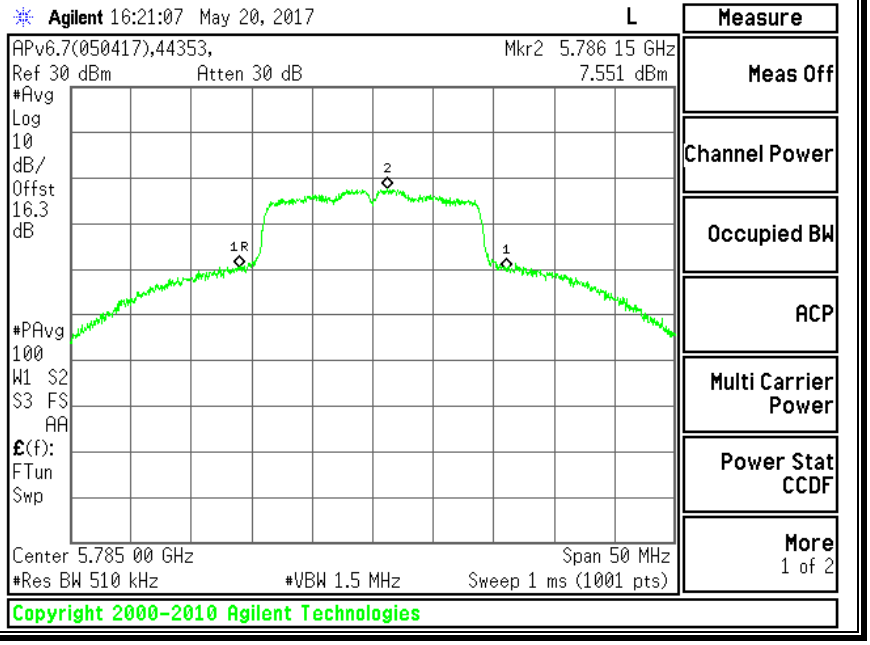
UAT 2 , CH LOW



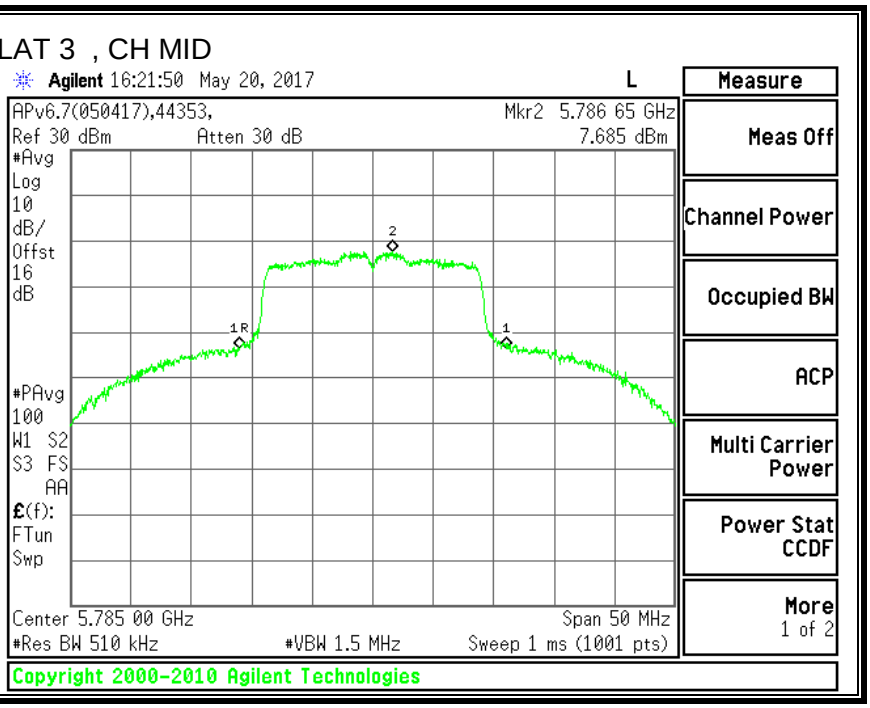
LAT 3 , CH LOW



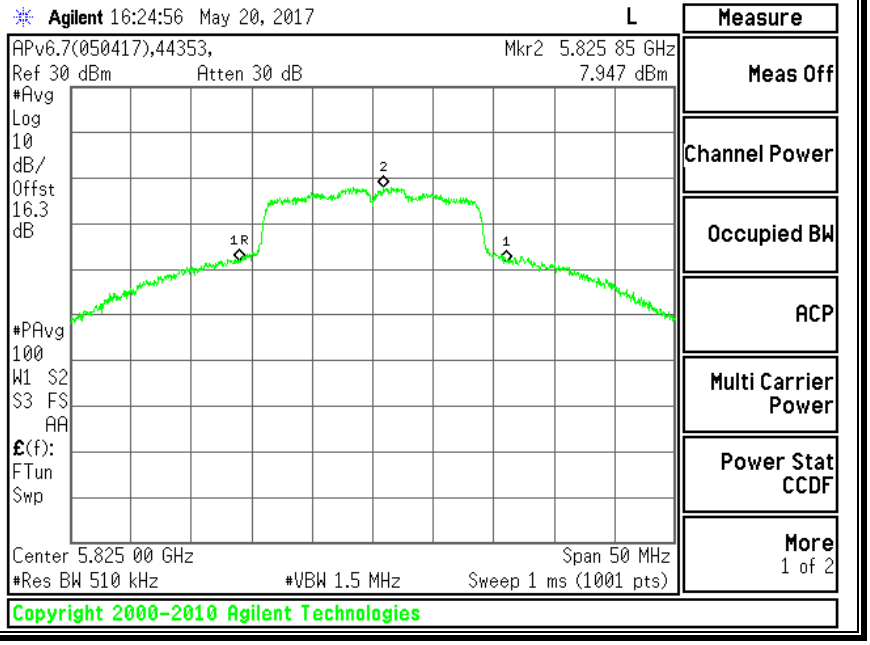
UAT 2 , CH MID



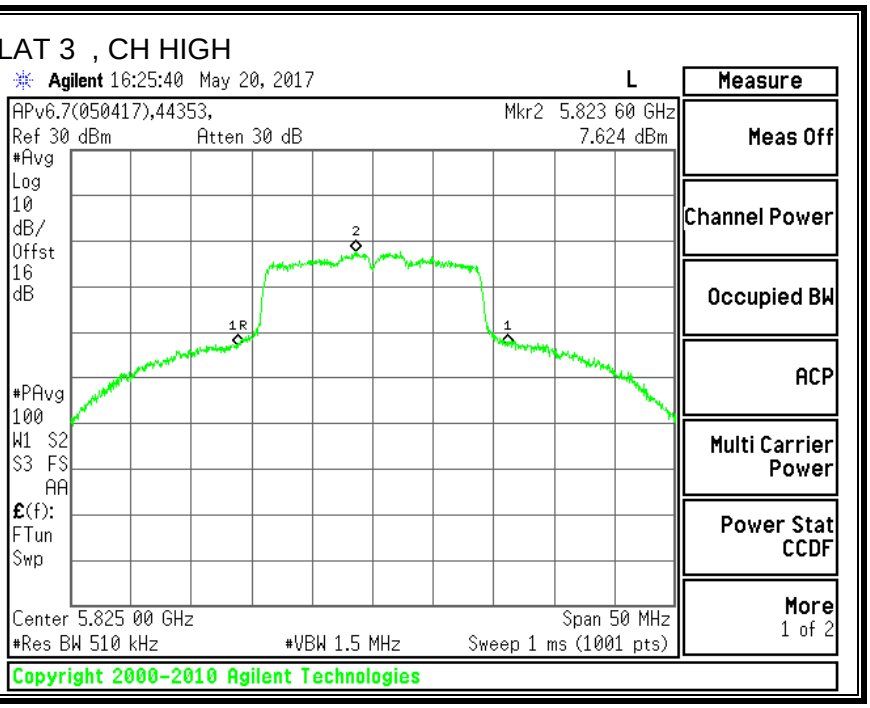
LAT 3 , CH MID



UAT 2 , CH HIGH



LAT 3 , CH HIGH



8.31. 11n HT40 UAT 2 SISO MODE IN THE 5.8GHz BAND

8.31.1. 6 dB BANDWIDTH

LIMITS

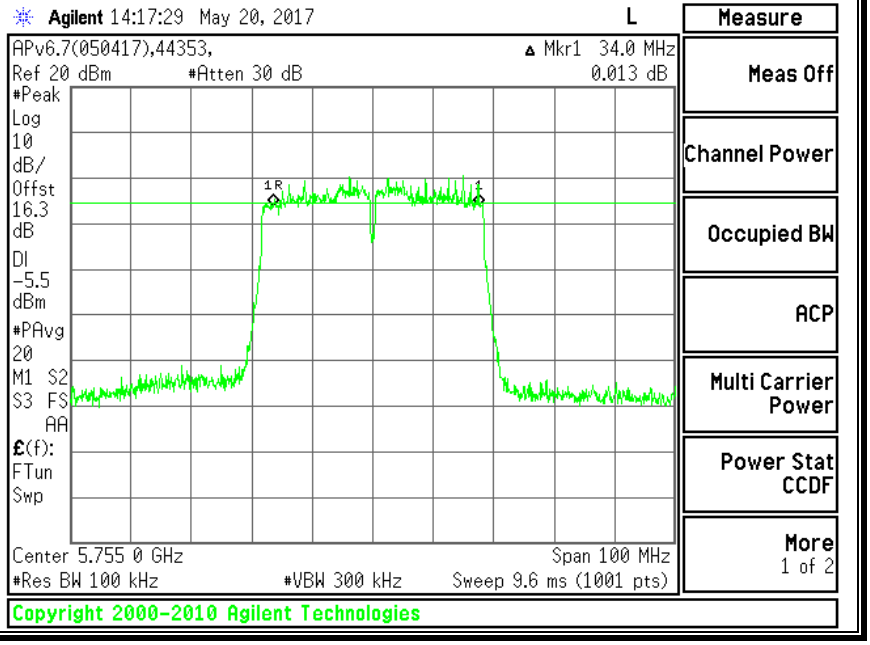
FCC §15.407 (e)

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

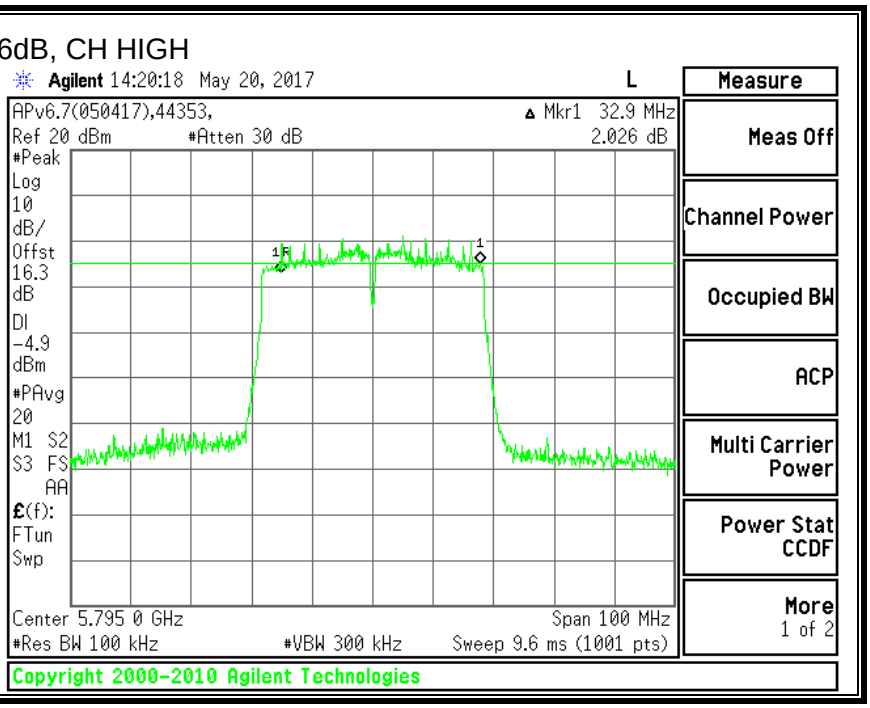
RESULTS

Channel	Frequency	6 dB BW UAT 2 (MHz)	Minimum Limit (MHz)
Low	5755	34.0	0.5
High	5795	32.9	0.5

6dB, CH LOW



6dB, CH HIGH



8.31.2. 26 dB BANDWIDTH

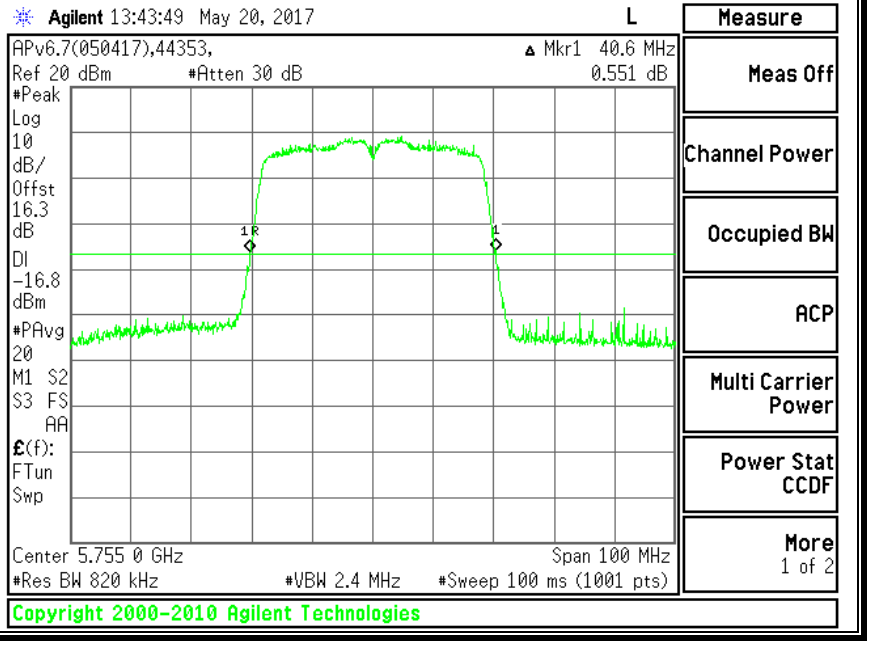
LIMITS

None; for reporting purposes only.

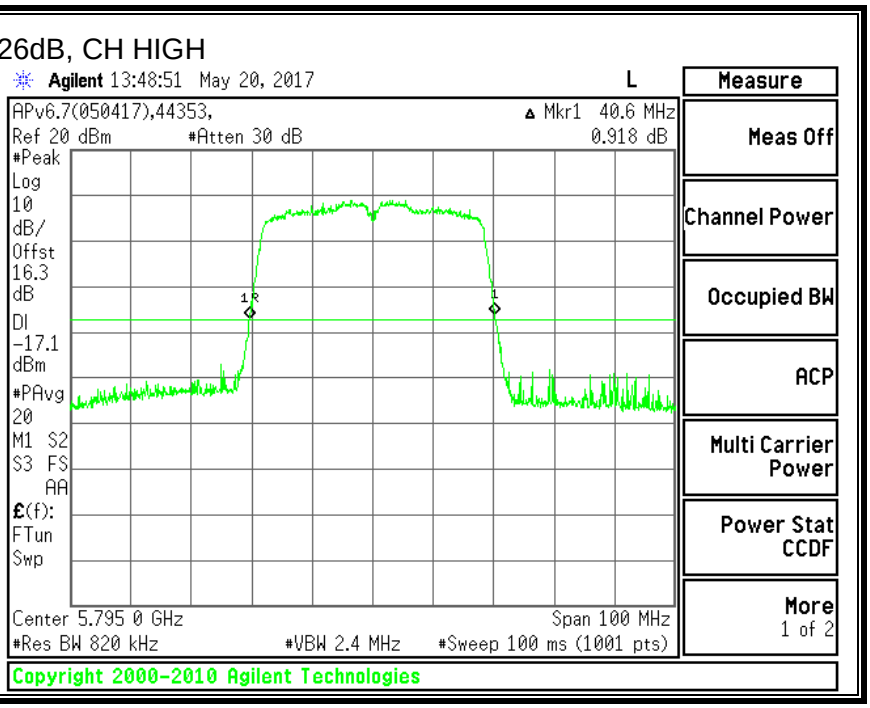
RESULTS

Channel	Frequency	26 dB BW UAT 2 (MHz)
Low	5755	40.6
High	5795	40.6

26dB, CH LOW



26dB, CH HIGH



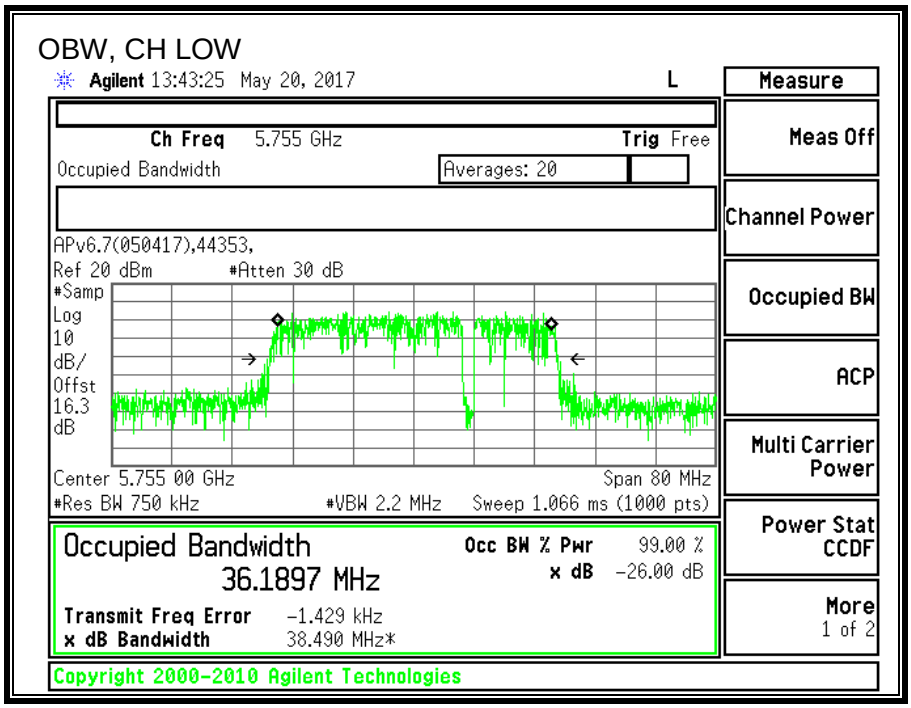
8.31.3. 99% BANDWIDTH

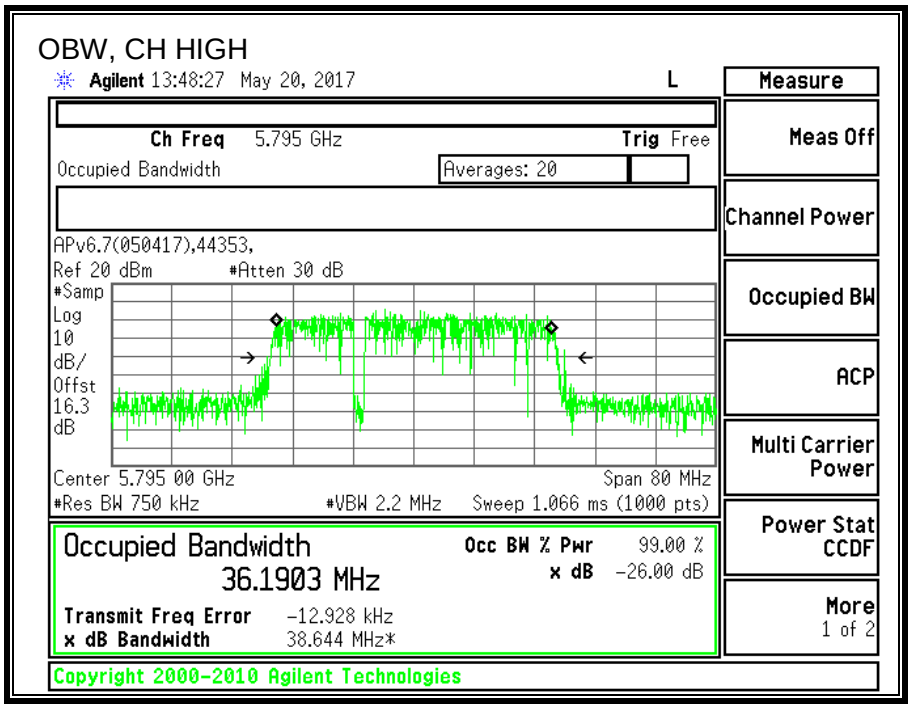
LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency	99% BW UAT 2 (MHz)
Low	5755	36.1897
High	5795	36.1903





8.31.4. AVERAGE POWER

ID:	30554	Date:	08/04/2017

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

Channel	Frequency	Power UAT 2 (dBm)
Low	5755	19.42
High	5795	19.45

8.31.5. OUTPUT POWER

ID:	30554	Date:	08/04/2017

LIMITS

FCC §15.407 (a) (3)

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

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

DIRECTIONAL ANTENNA GAIN

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

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)
Low	5755	-2.71	30.00
High	5795	-2.71	30.00

Output Power Results

Channel	Frequency (MHz)	UAT 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5755	19.42	19.42	30.00	-10.58
High	5795	19.45	19.45	30.00	-10.55

8.31.6. POWER SPECTRAL DENSITY

LIMITS

FCC §15.407 (a) (3)

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

DIRECTIONAL ANTENNA GAIN

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

RESULTS

Antenna Gain and Limits

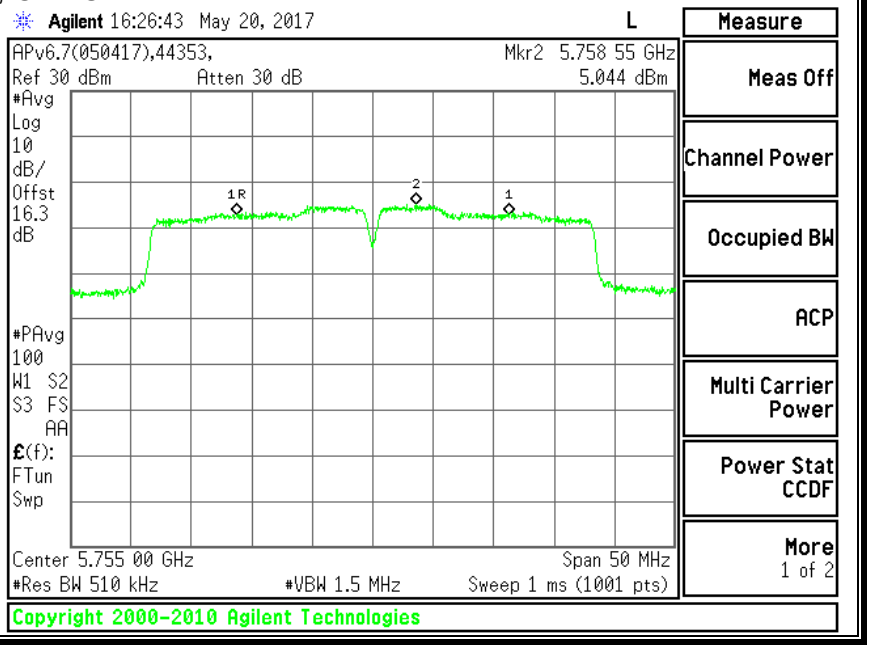
Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5755	-2.71	30.00
High	5795	-2.71	30.00

Duty Cycle CF (dB)	0.10	Included in Calculations of Corr'd PSD

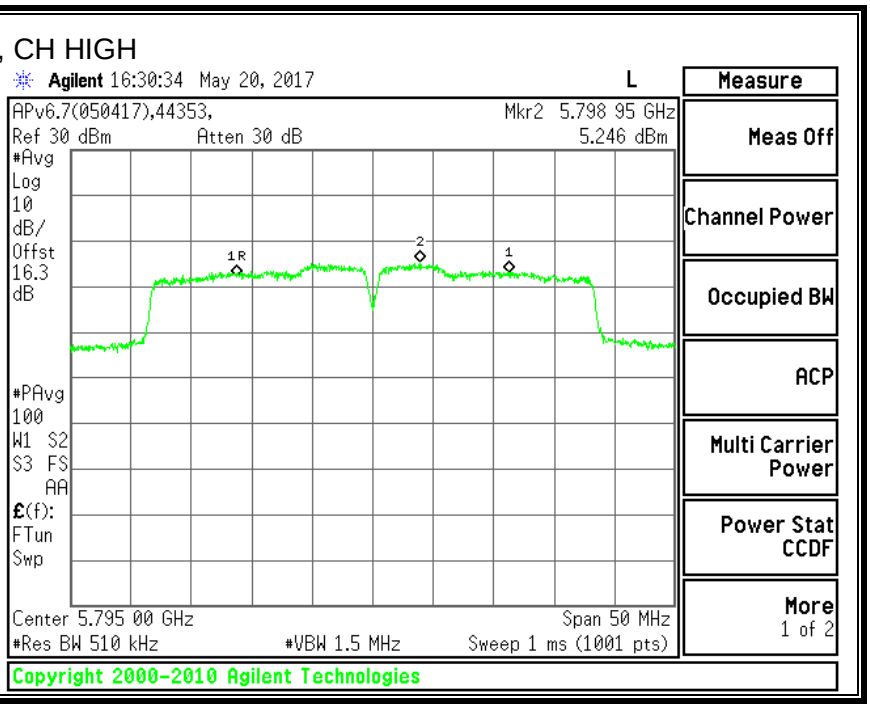
PSD Results

Channel	Frequency (MHz)	UAT 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5755	5.044	5.14	30.00	-24.86
High	5795	5.246	5.35	30.00	-24.65

, CH LOW



, CH HIGH



8.32. 11n HT40 LAT 3 SISO MODE IN THE 5.8GHz BAND

8.32.1. 6 dB BANDWIDTH

LIMITS

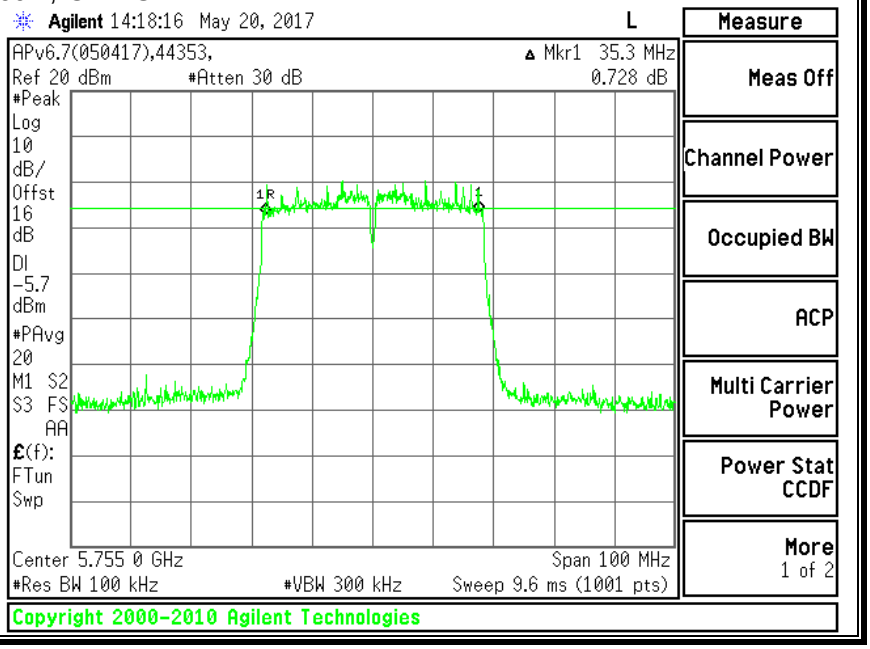
FCC §15.407 (e)

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

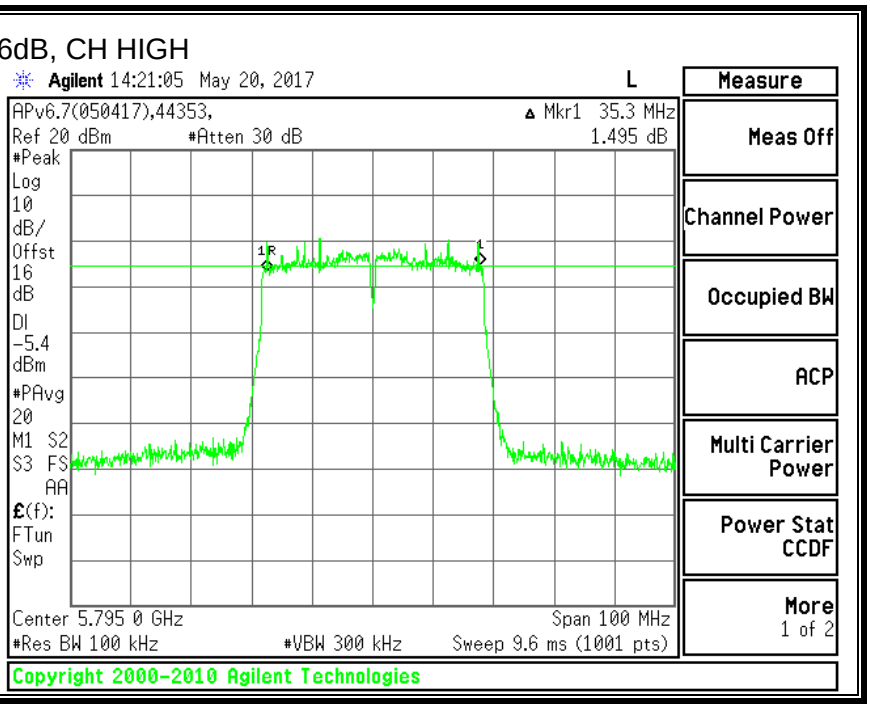
RESULTS

Channel	Frequency	6 dB BW LAT 3 (MHz)	Minimum Limit (MHz)
Low	5755	35.3	0.5
High	5795	35.3	0.5

6dB, CH LOW



6dB, CH HIGH



8.32.2. 26 dB BANDWIDTH

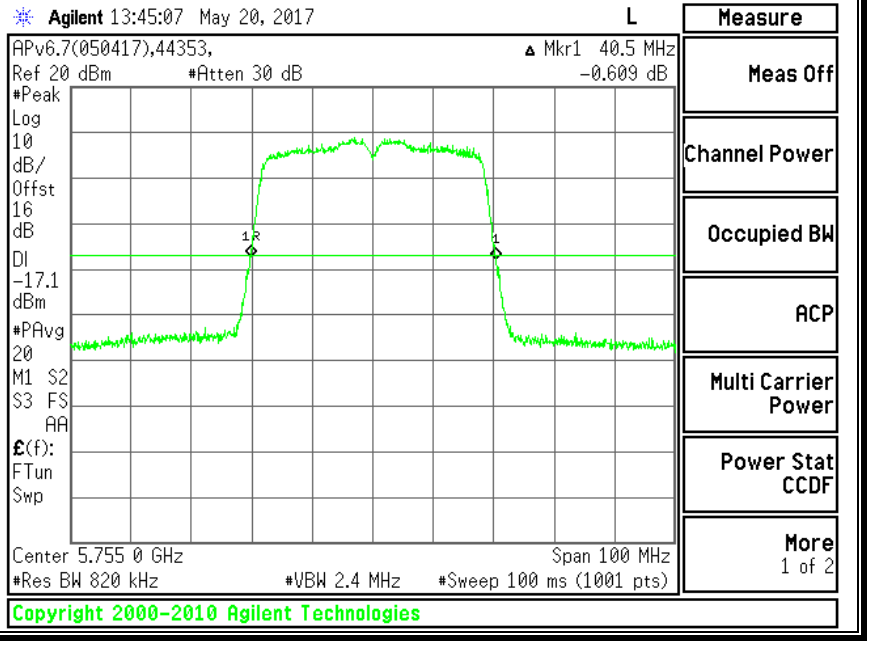
LIMITS

None; for reporting purposes only.

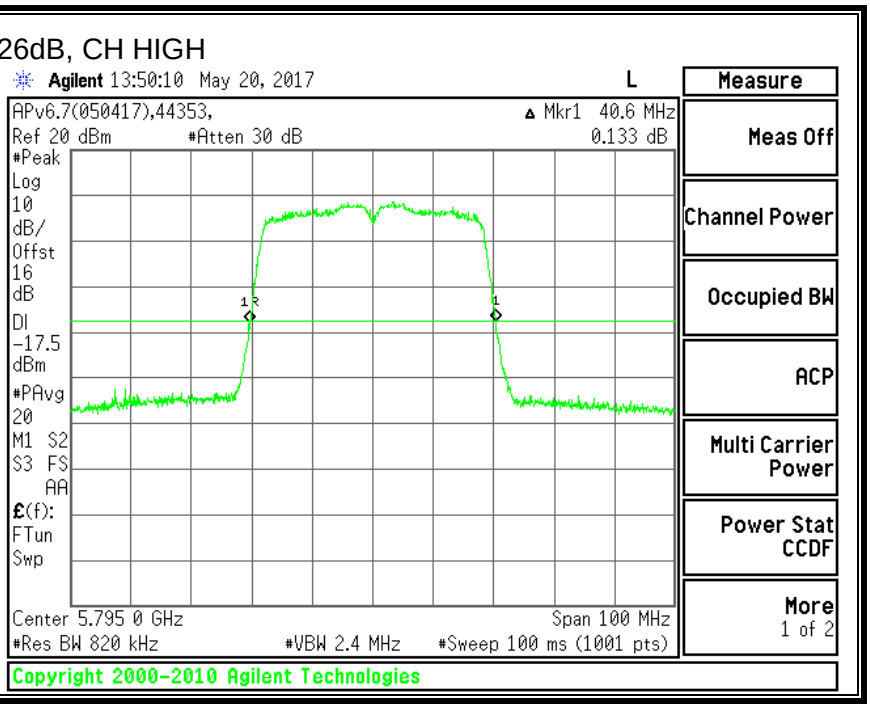
RESULTS

Channel	Frequency	26 dB BW LAT 3 (MHz)
Low	5755	40.5
High	5795	40.6

26dB, CH LOW



26dB, CH HIGH



8.32.3. 99% BANDWIDTH

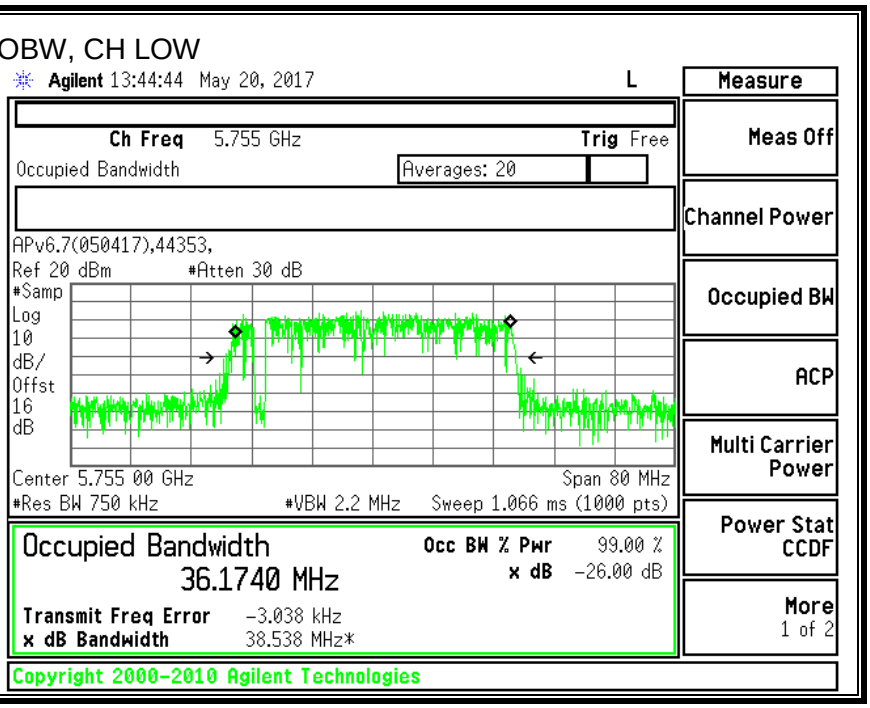
LIMITS

None; for reporting purposes only.

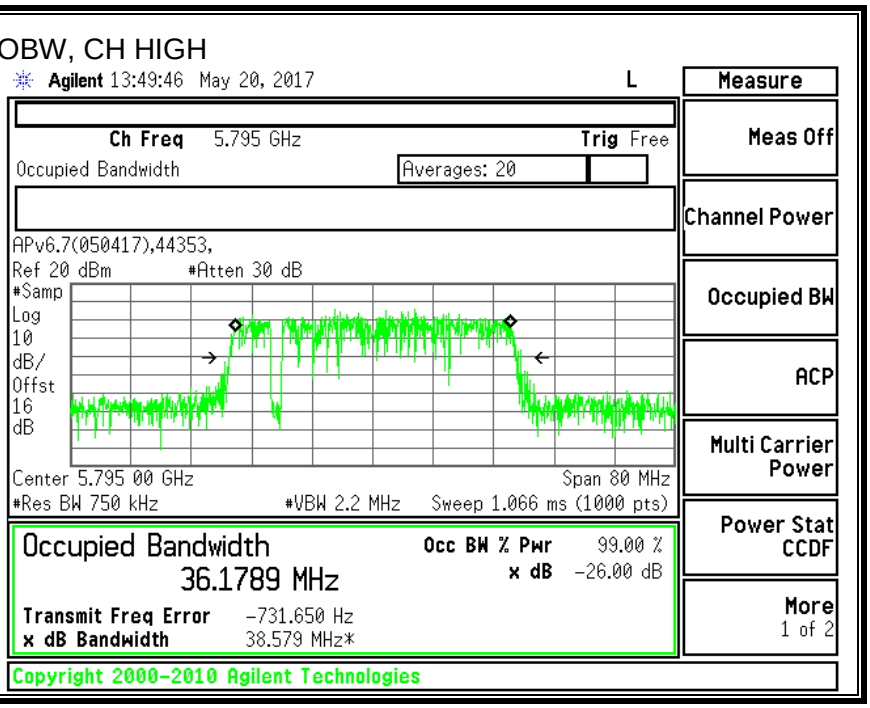
RESULTS

Channel	Frequency	99% BW LAT 3 (MHz)
Low	5755	36.1740
High	5795	36.1789

OBW, CH LOW



OBW, CH HIGH



8.32.4. AVERAGE POWER

ID:	30554	Date:	08/04/2017

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

Channel	Frequency	Power LAT 3 (dBm)
Low	5755	19.37
High	5795	19.49

8.32.5. OUTPUT POWER

ID:	30554	Date:	08/04/2017

LIMITS

FCC §15.407 (a) (3)

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

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

DIRECTIONAL ANTENNA GAIN

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

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)
Low	5755	-7.67	30.00
High	5795	-7.67	30.00

Output Power Results

Channel	Frequency (MHz)	LAT 3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5755	19.37	19.37	30.00	-10.63
High	5795	19.49	19.49	30.00	-10.51

8.32.6. POWER SPECTRAL DENSITY

LIMITS

FCC §15.407 (a) (3)

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

DIRECTIONAL ANTENNA GAIN

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

RESULTS

Antenna Gain and Limits

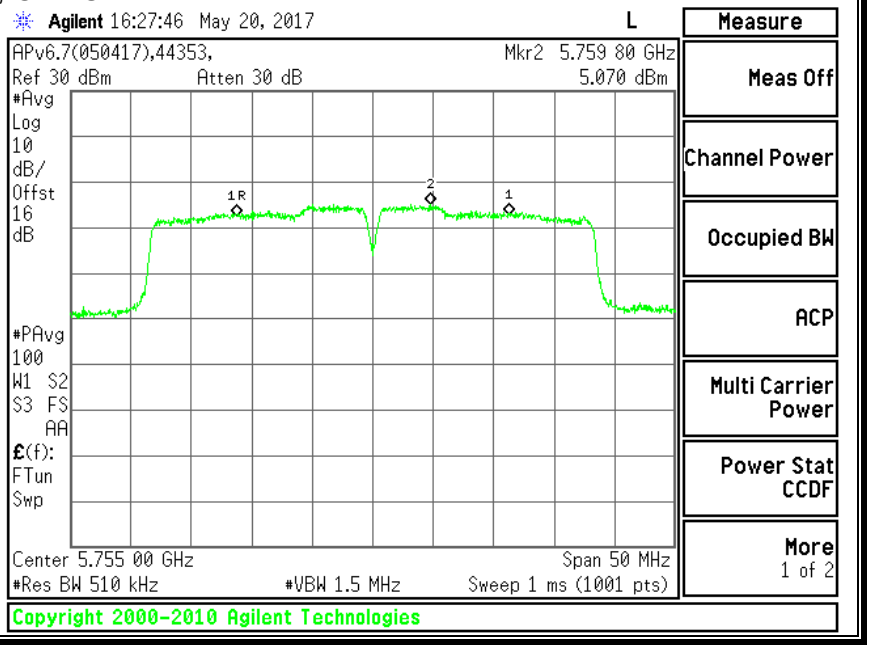
Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5755	-7.67	30.00
High	5795	-7.67	30.00

Duty Cycle CF (dB)	0.10	Included in Calculations of Corr'd PSD

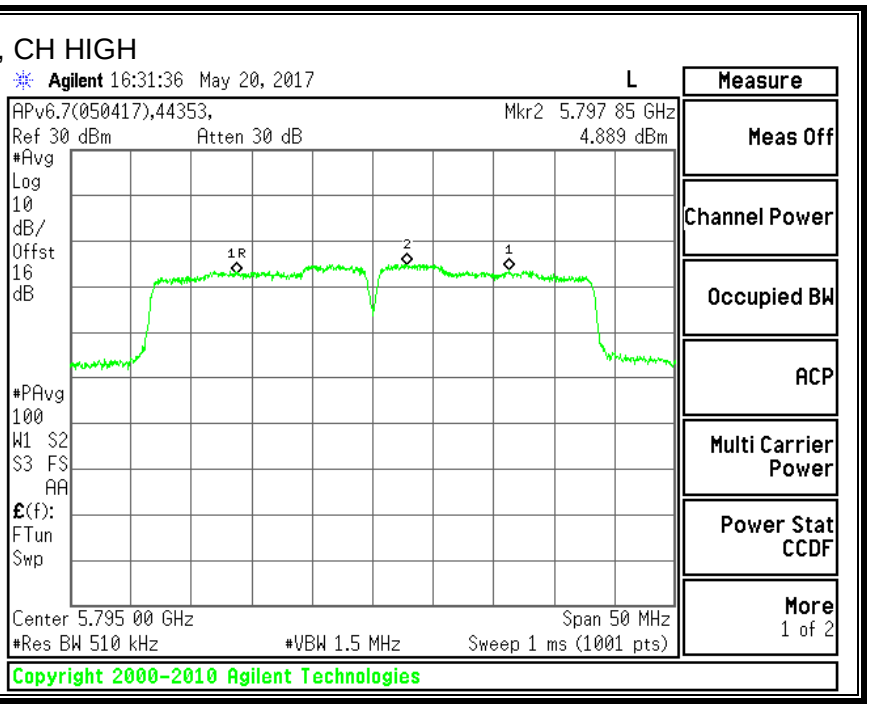
PSD Results

Channel	Frequency (MHz)	LAT 3 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5755	5.07	5.17	30.00	-24.83
High	5795	4.889	4.99	30.00	-25.01

, CH LOW



, CH HIGH



8.33. 11n HT40 2TX CDD MIMO MODE IN THE 5.8GHz BAND

8.33.1. 6 dB BANDWIDTH

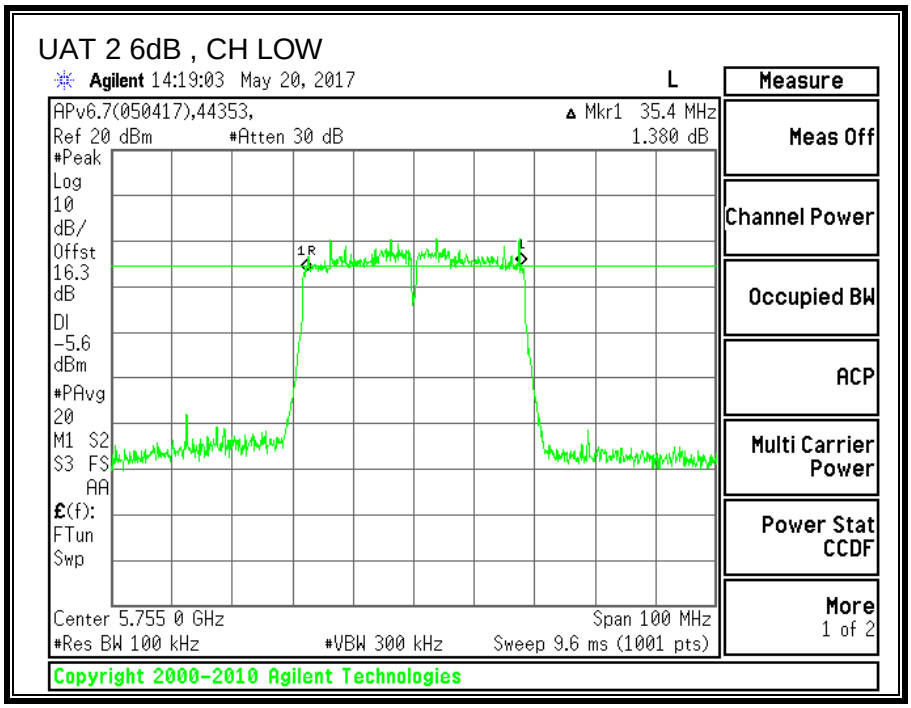
LIMITS

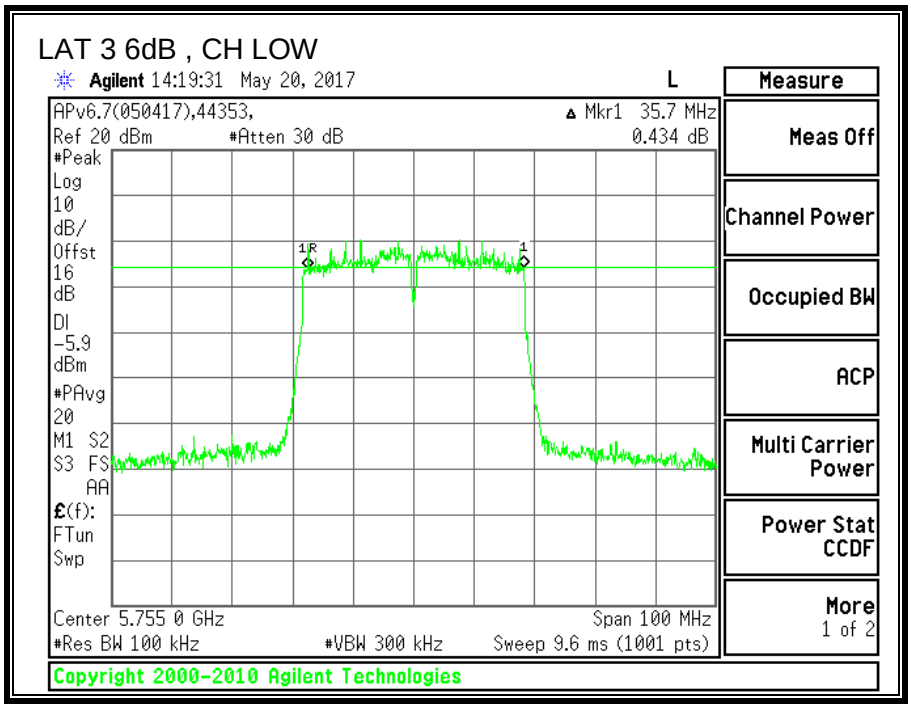
FCC §15.407 (e)

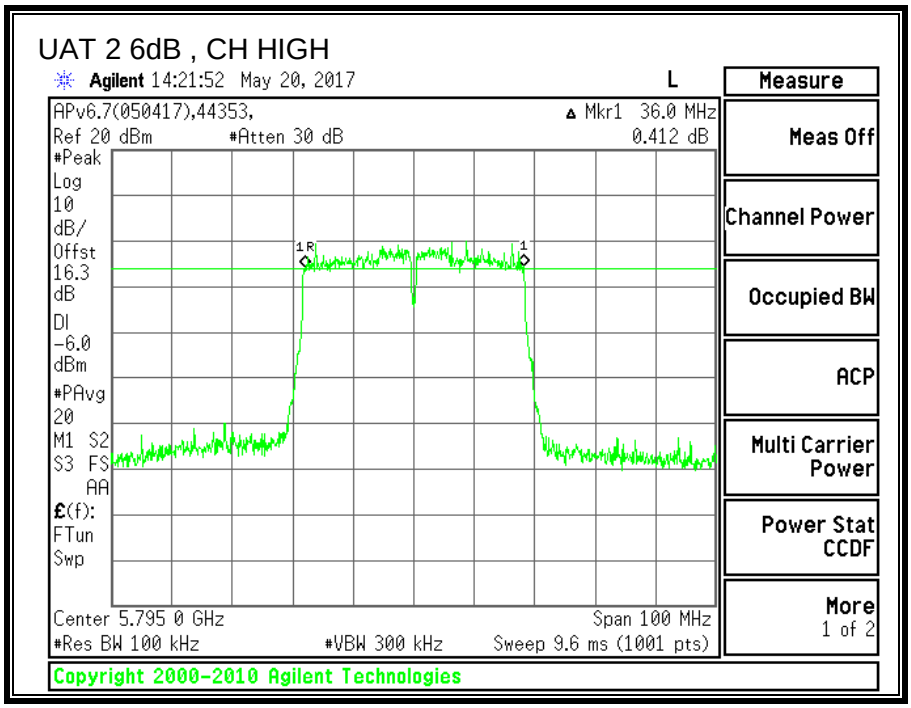
The minimum 6 dB bandwidth shall be at least 500 kHz.

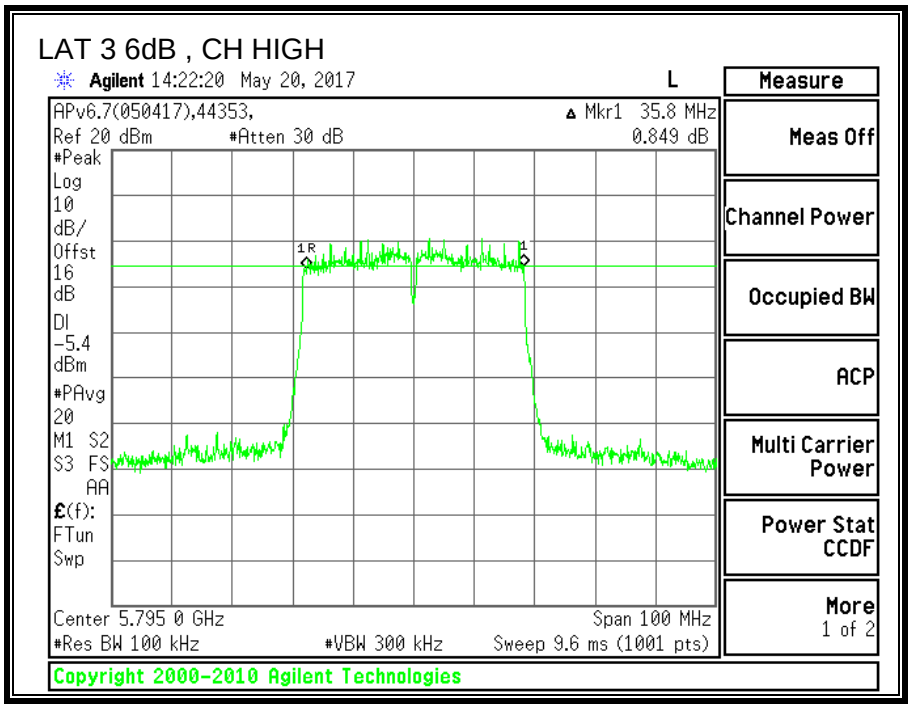
RESULTS

Channel	Frequency	6 dB BW UAT 2 (MHz)	6 dB BW LAT 3 (MHz)	Minimum Limit (MHz)
Low	5755	35.4	35.7	0.5
High	5795	36.0	35.8	0.5









8.33.2. 26 dB BANDWIDTH

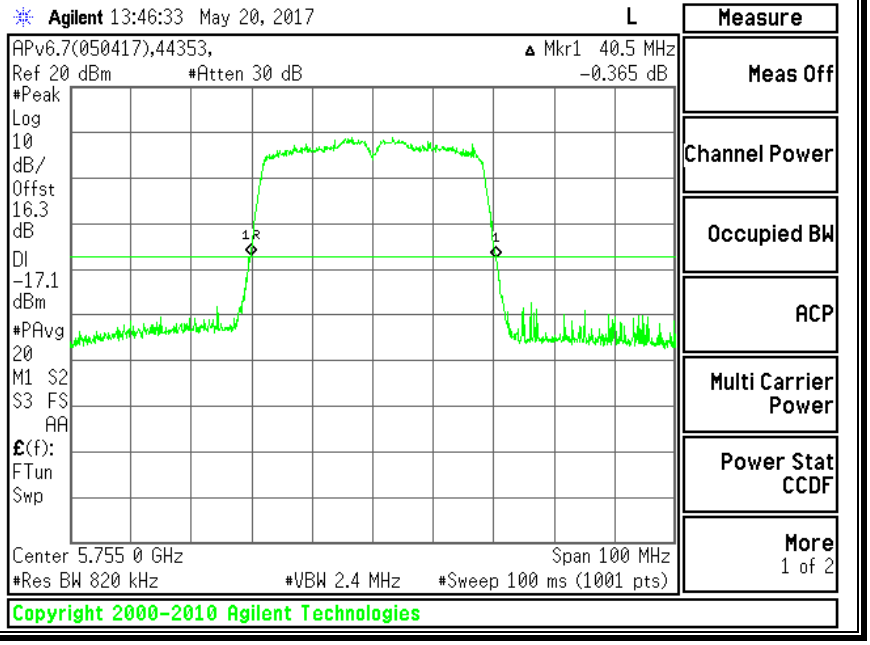
LIMITS

None; for reporting purposes only.

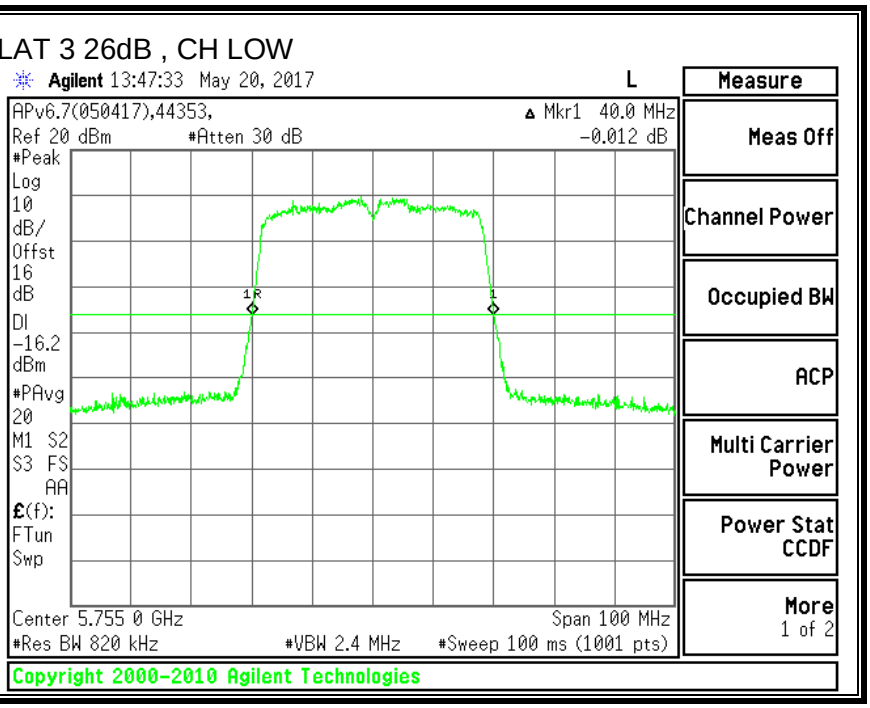
RESULTS

Channel	Frequency	26 dB BW UAT 2 (MHz)	26 dB BW LAT 3 (MHz)
Low	5755	40.5	40.0
High	5795	40.6	40.2

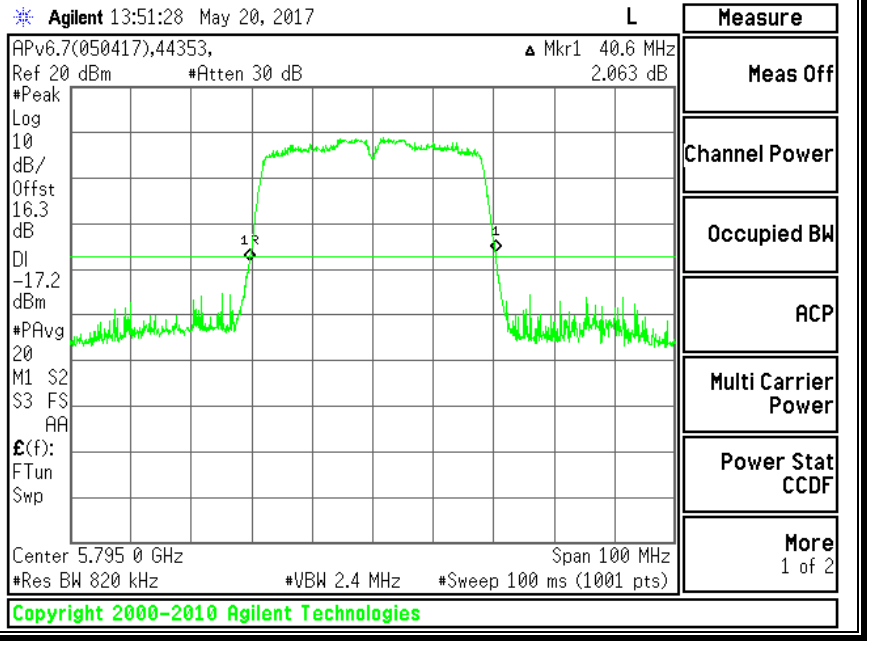
UAT 2 26dB , CH LOW



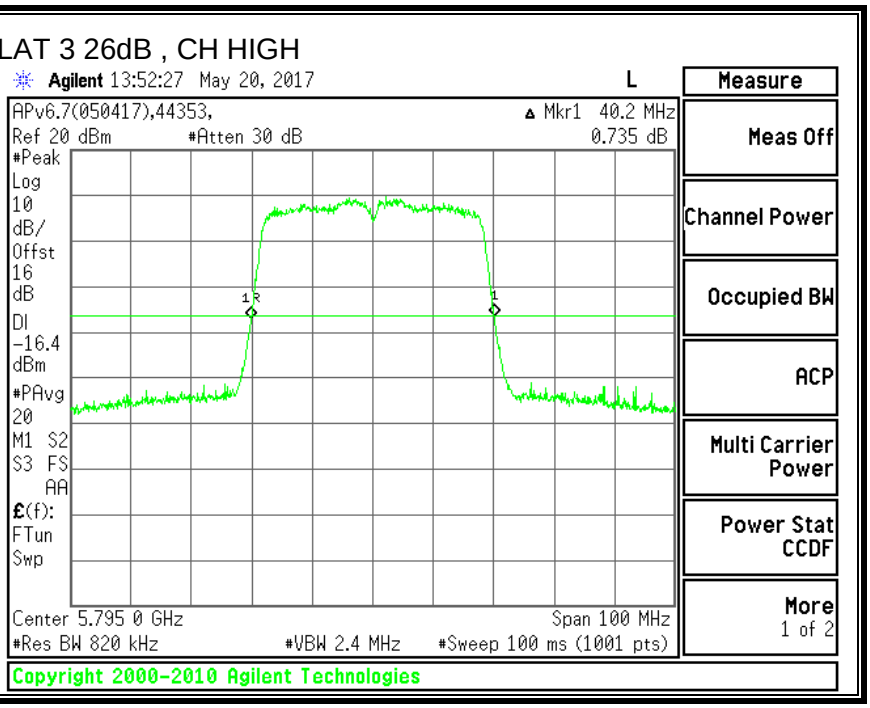
LAT 3 26dB , CH LOW



UAT 2 26dB , CH HIGH



LAT 3 26dB , CH HIGH



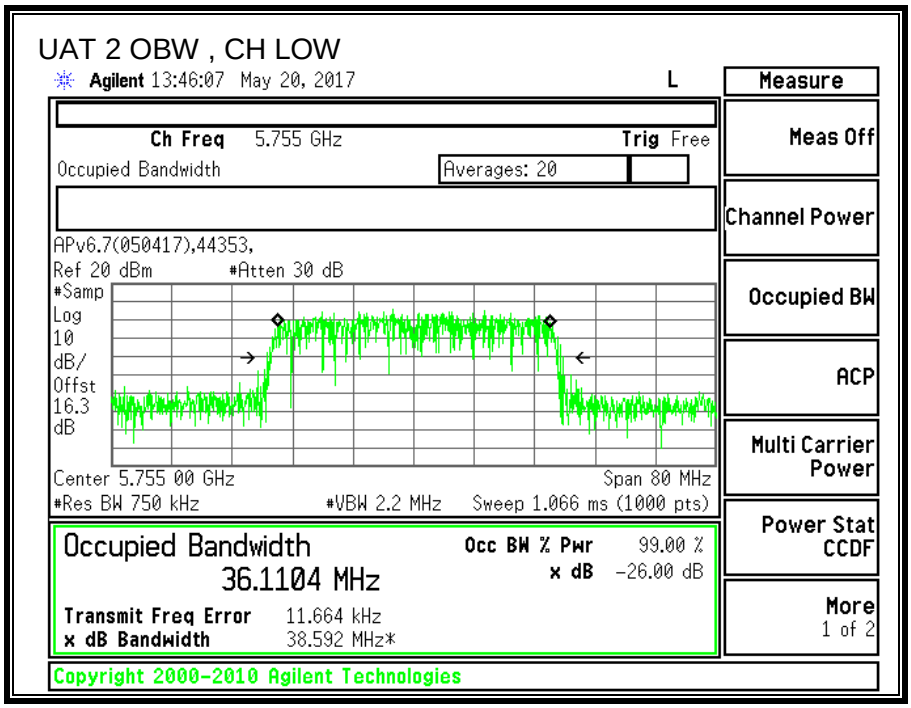
8.33.3. 99% BANDWIDTH

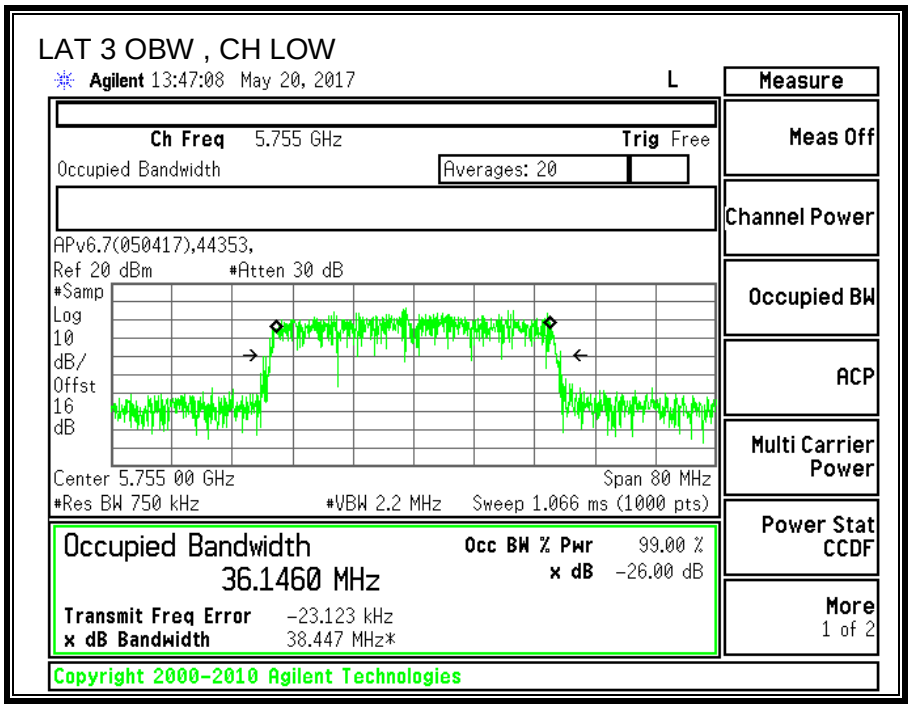
LIMITS

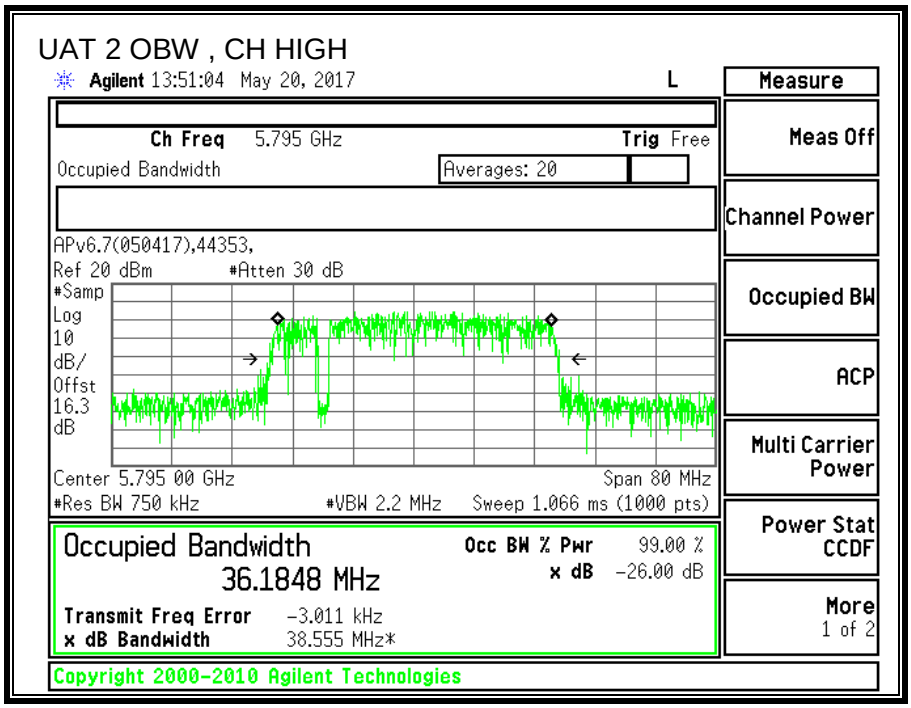
None; for reporting purposes only.

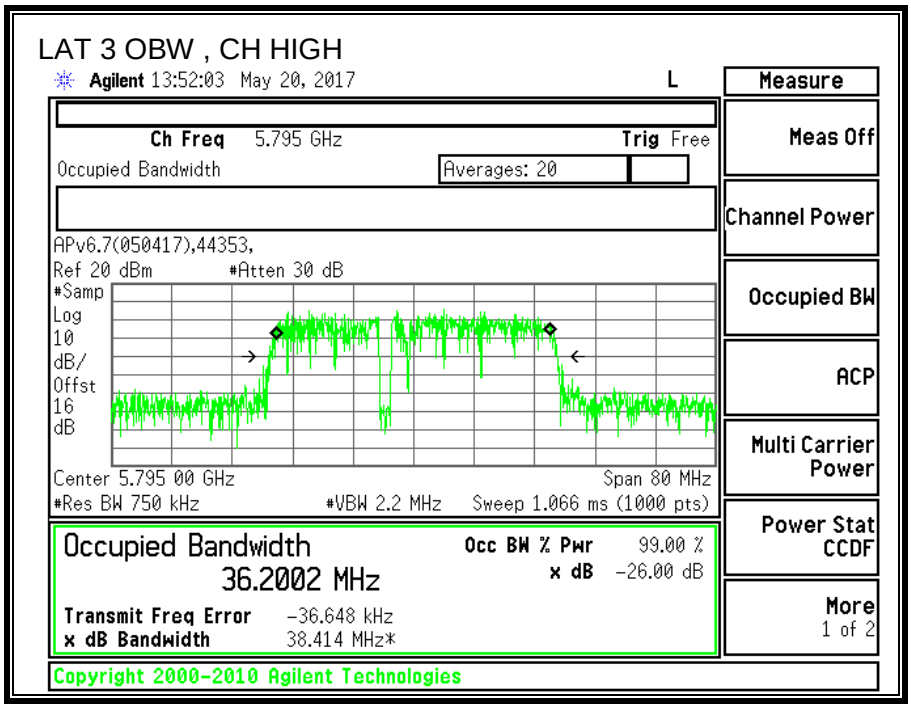
RESULTS

Channel	Frequency	99% BW UAT 2 (MHz)	99% BW LAT 3 (MHz)
Low	5755	36.1104	36.1460
High	5795	36.1848	36.2002









8.33.4. AVERAGE POWER

ID:	30554	Date:	08/04/2017

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

Channel	Frequency (MHz)	UAT 2 Power (dBm)	LAT 3 Power (dBm)	Total Power (dBm)
Low	5755	19.45	19.39	22.43
High	5795	19.38	19.34	22.37

8.33.5. OUTPUT POWER

ID:	30554	Date:	08/04/2017

LIMITS

FCC §15.407 (a) (3)

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

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

DIRECTIONAL ANTENNA GAIN

For Power used uncorrelated gain: The TX chains are uncorrelated and the antenna gain is unequal among the chains. The directional gain is:

UAT 2 Antenna Gain (dBi)	LAT 3 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
-2.71	-7.67	-4.52

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)
Low	5755	-4.52	30.00
High	5795	-4.52	30.00

Output Power Results

Channel	Frequency (MHz)	UAT 2 Meas Power (dBm)	LAT 3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5755	19.45	19.39	22.43	30.00	-7.57
High	5795	19.38	19.34	22.37	30.00	-7.63

8.33.6. POWER SPECTRAL DENSITY

LIMITS

FCC §15.407 (a) (3)

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

DIRECTIONAL ANTENNA GAIN

For PSD used correlated gain: The TX chains are correlated and the antenna gain is unequal among the chains. The directional gain is:

UAT 2 Antenna Gain (dBi)	LAT 3 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
-2.71	-7.67	-1.83

RESULTS

Antenna Gain and Limit

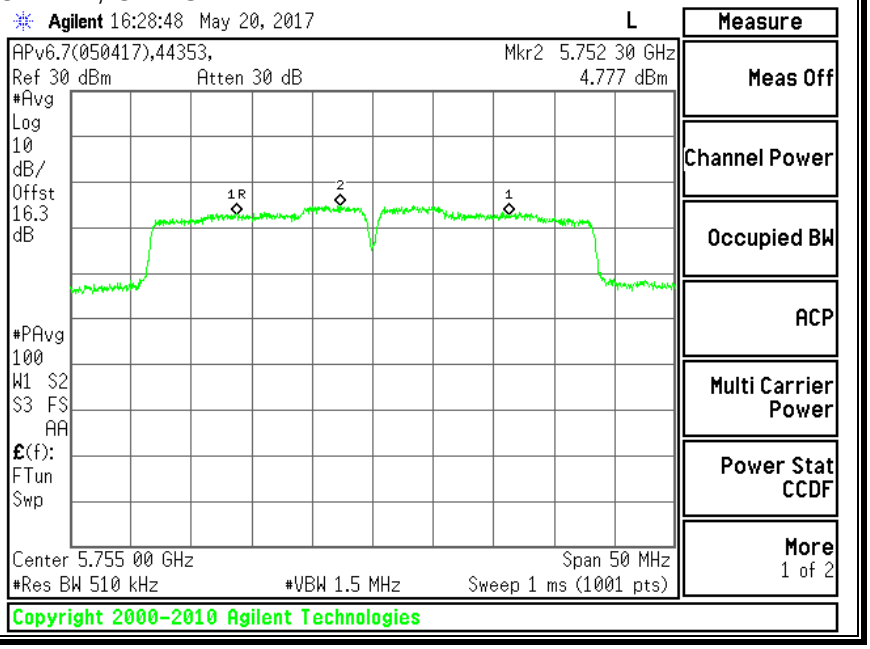
Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5755	-1.83	30.00
High	5795	-1.83	30.00

Duty Cycle CF (dB)	0.10	Included in Calculations of Corr'd PSD

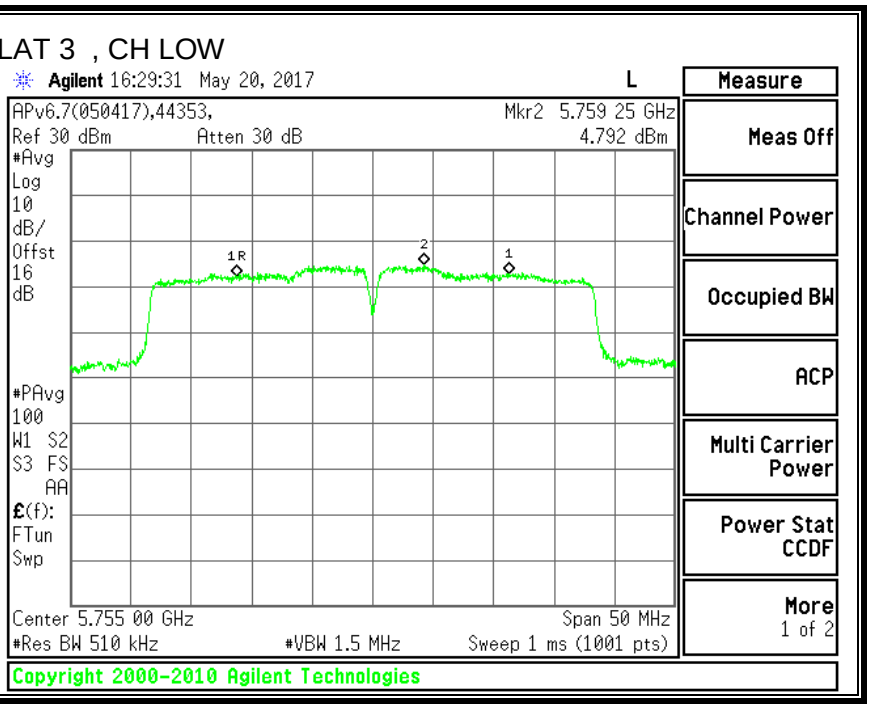
PSD Results

Channel	Frequency (MHz)	UAT 2 Meas PSD (dBm)	LAT 3 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5755	4.777	4.792	7.89	30.00	-22.11
High	5795	4.993	4.882	8.05	30.00	-21.95

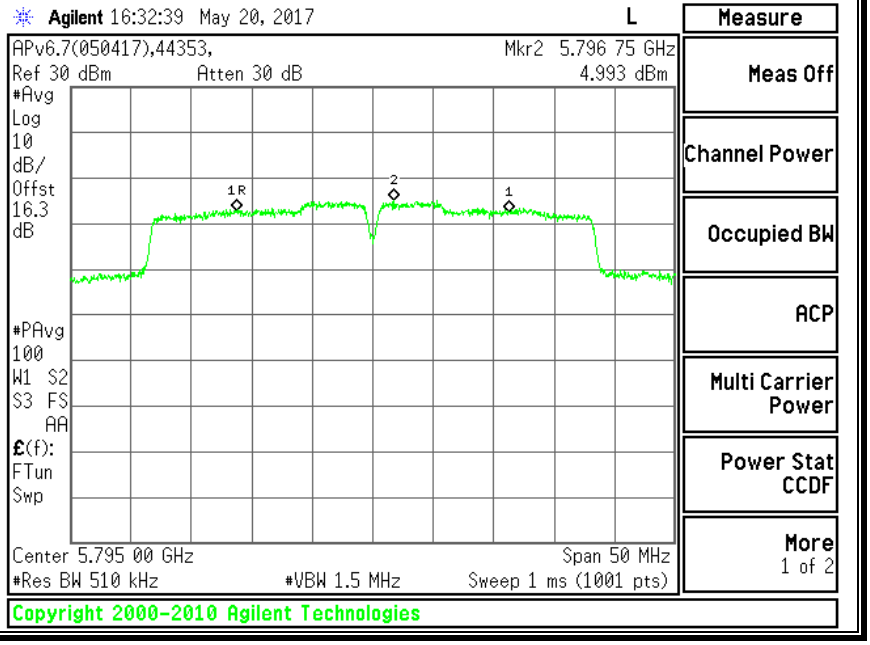
UAT 2 , CH LOW



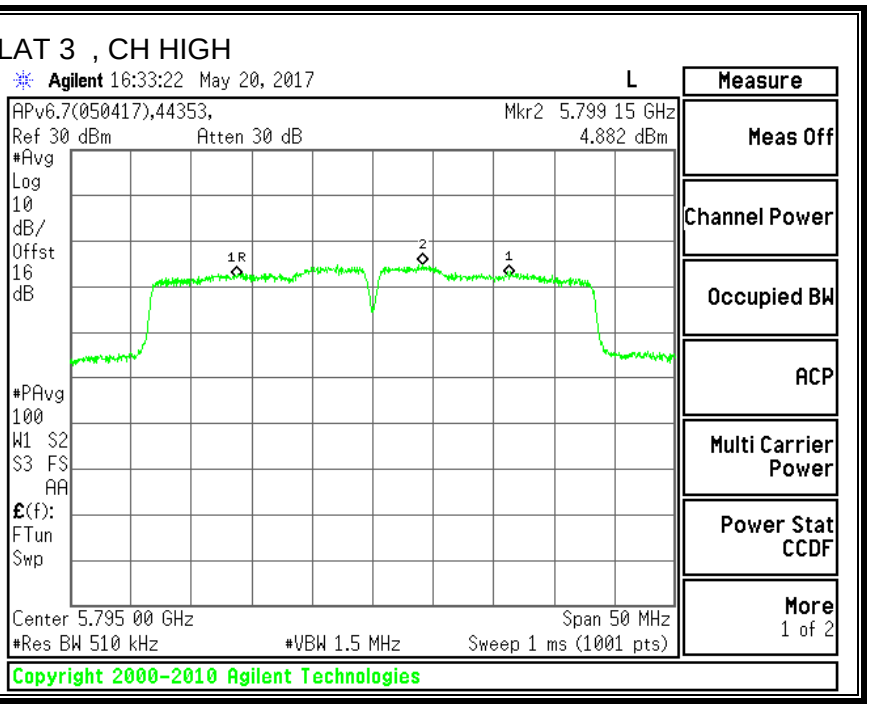
LAT 3 , CH LOW



UAT 2 , CH HIGH



LAT 3 , CH HIGH



8.34. 11ac HT80 UAT 2 SISO MODE IN THE 5.8GHz BAND

8.34.1. 6 dB BANDWIDTH

LIMITS

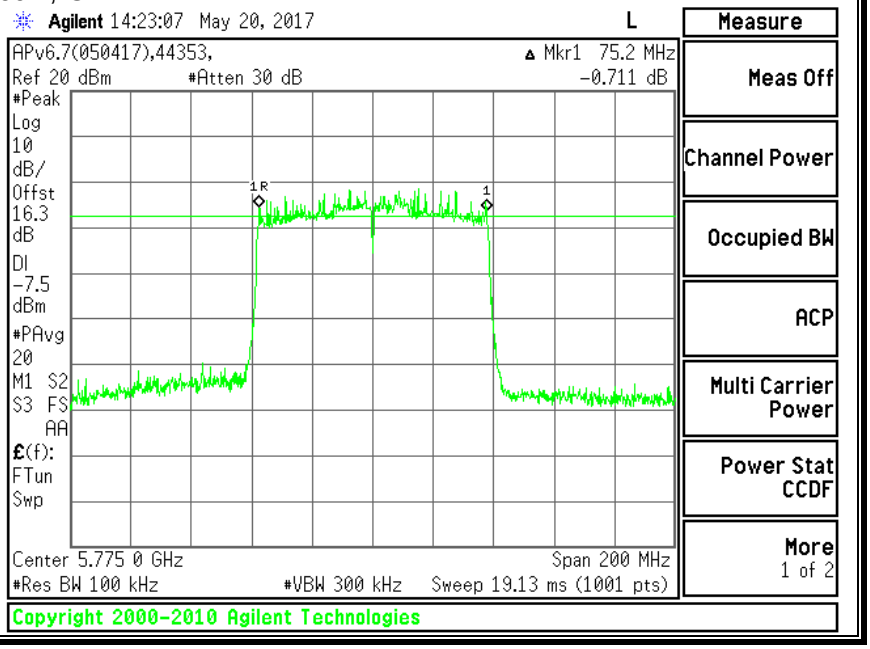
FCC §15.407 (e)

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

RESULTS

Channel	Frequency	6 dB BW UAT 2 (MHz)	Minimum Limit (MHz)
Mid	5775	75.2	0.5

6dB, CH MID



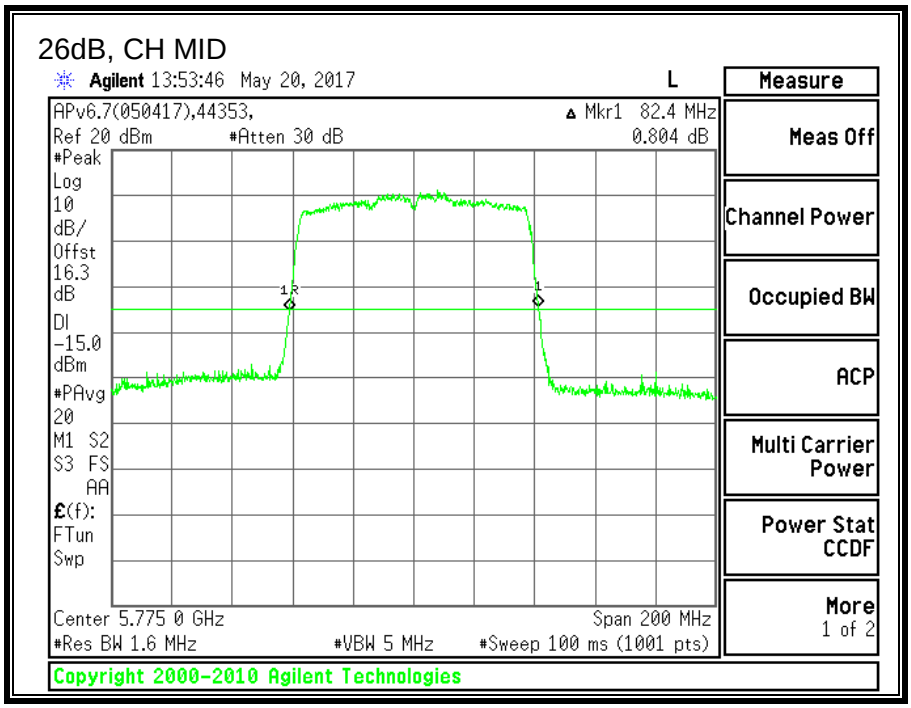
8.34.2. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency	26 dB BW UAT 2 (MHz)
Mid	5775	82.4



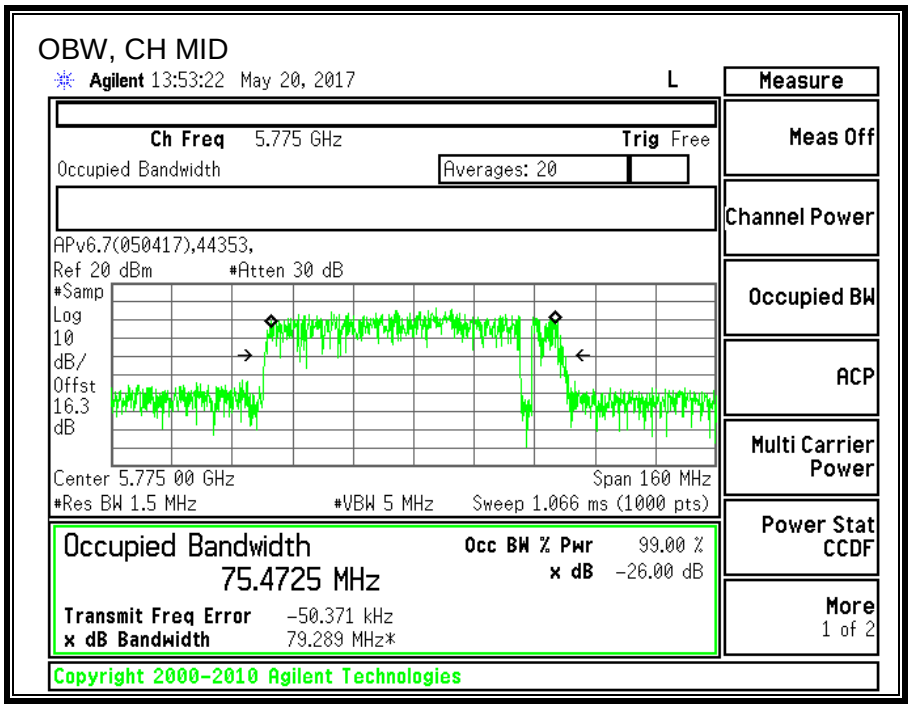
8.34.3. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency	99% BW UAT 2 (MHz)
Mid	5775	75.4725



8.34.4. AVERAGE POWER

ID:	30554	Date:	08/04/2017

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

Channel	Frequency	Power UAT 2 (dBm)
Mid	5775	19.44

8.34.5. OUTPUT POWER

ID:	30554	Date:	08/04/2017

LIMITS

FCC §15.407 (a) (3)

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

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

DIRECTIONAL ANTENNA GAIN

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

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)
Mid	5775	-2.71	30.00

Output Power Results

Channel	Frequency (MHz)	UAT 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid	5775	19.44	19.44	30.00	-10.56

8.34.6. POWER SPECTRAL DENSITY

LIMITS

FCC §15.407 (a) (3)

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

DIRECTIONAL ANTENNA GAIN

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

RESULTS

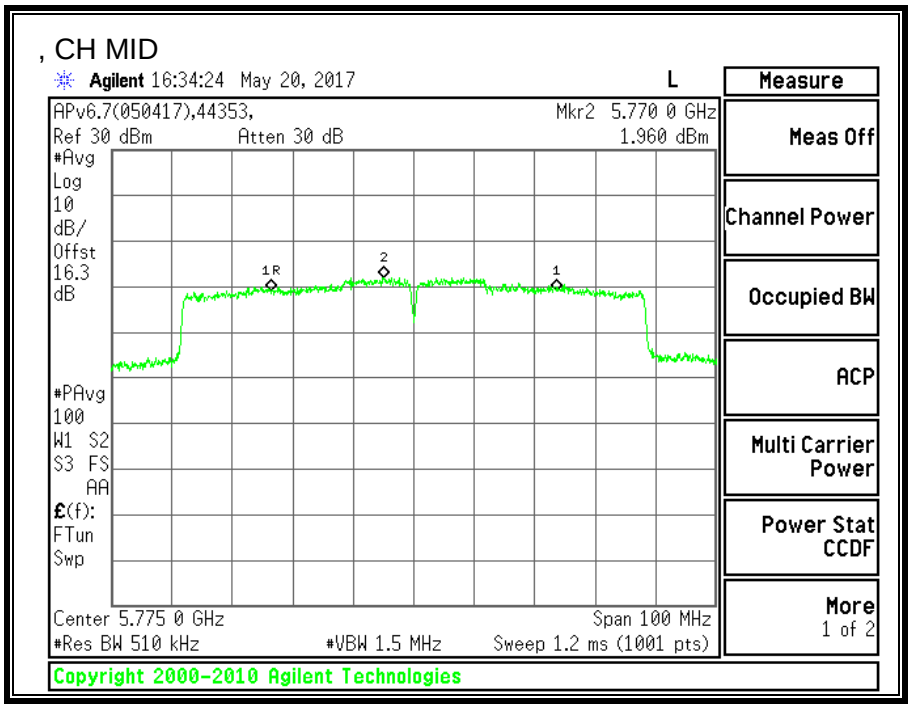
Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Mid	5775	-2.71	30.00

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

PSD Results

Channel	Frequency (MHz)	UAT 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Mid	5775	1.96	2.15	30.00	-27.85



8.35. 11ac HT80 LAT 3 SISO MODE IN THE 5.8GHz BAND

8.35.1. 6 dB BANDWIDTH

LIMITS

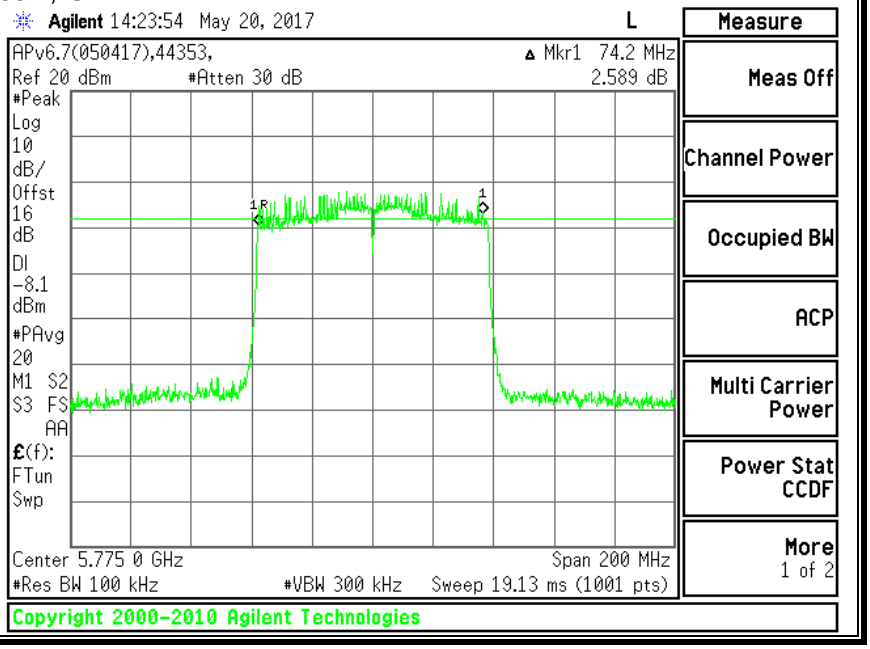
FCC §15.407 (e)

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

RESULTS

Channel	Frequency	6 dB BW LAT 3 (MHz)	Minimum Limit (MHz)
Mid	5775	74.2	0.5

6dB, CH MID



8.35.2. 26 dB BANDWIDTH

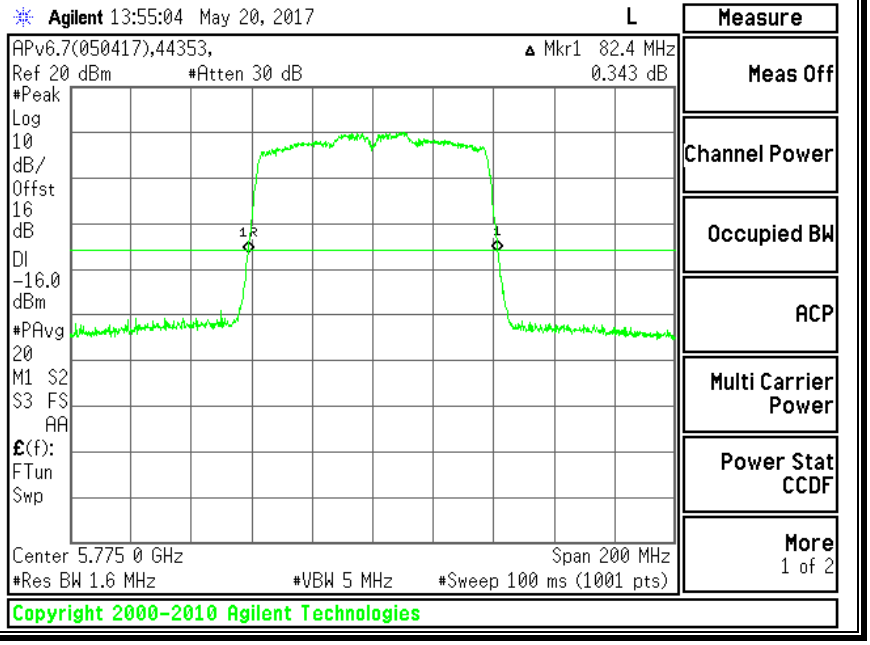
LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency	26 dB BW LAT 3 (MHz)
Mid	5775	82.4

26dB, CH MID



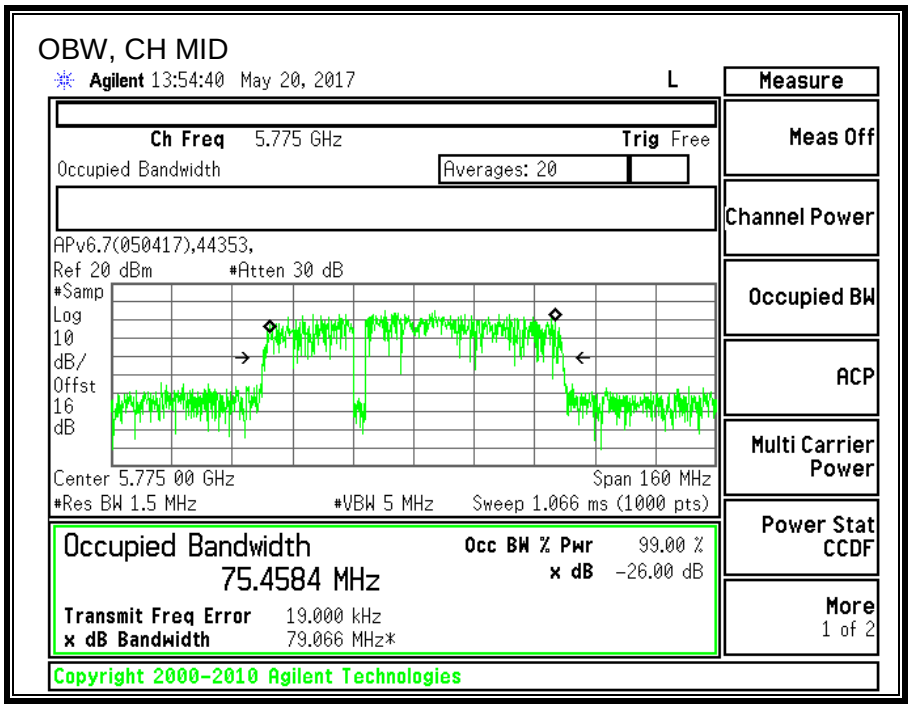
8.35.3. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency	99% BW LAT 3 (MHz)
Mid	5775	75.4584



8.35.4. AVERAGE POWER

ID:	30554	Date:	08/04/2017

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

Channel	Frequency	Power LAT 3 (dBm)
Mid	5775	19.31

8.35.5. OUTPUT POWER

ID:	30554	Date:	08/04/2017

LIMITS

FCC §15.407 (a) (3)

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

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

DIRECTIONAL ANTENNA GAIN

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

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)
Mid	5775	-7.67	30.00

Output Power Results

Channel	Frequency (MHz)	LAT 3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid	5775	19.31	19.31	30.00	-10.69

8.35.6. POWER SPECTRAL DENSITY

LIMITS

FCC §15.407 (a) (3)

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

DIRECTIONAL ANTENNA GAIN

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

RESULTS

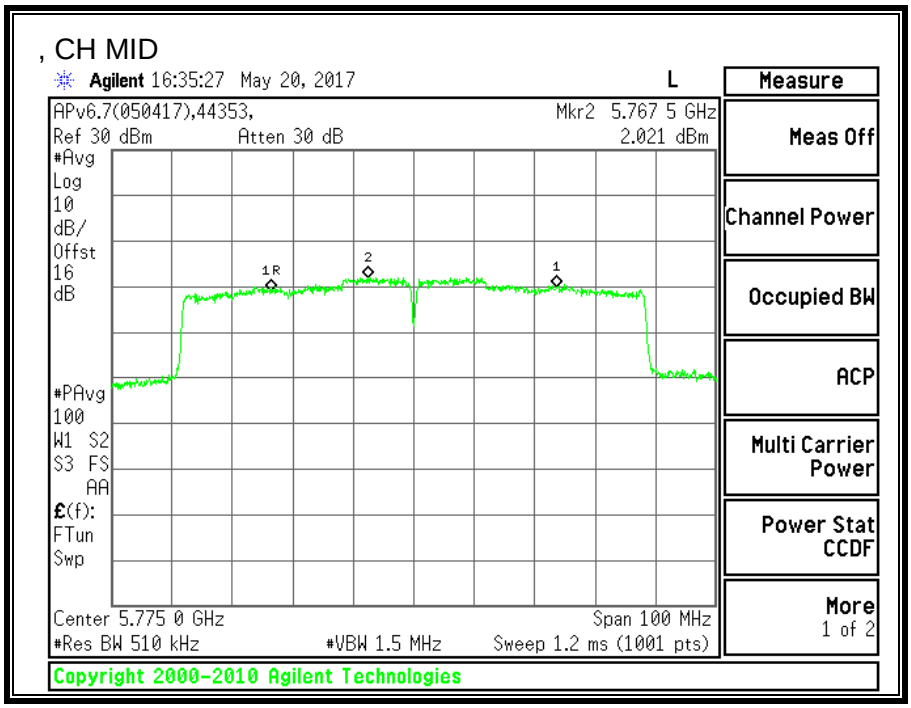
Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Mid	5775	-7.67	30.00

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

PSD Results

Channel	Frequency (MHz)	LAT 3 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Mid	5775	2.021	2.21	30.00	-27.79



8.36. 11ac HT80 2TX CDD MIMO MODE IN THE 5.8GHz BAND

8.36.1. 6 dB BANDWIDTH

LIMITS

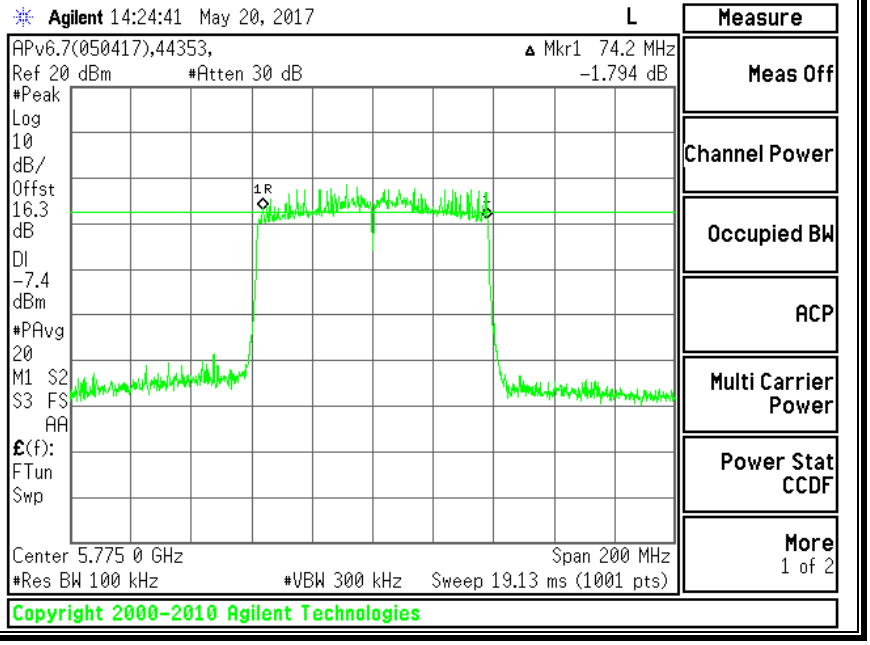
FCC §15.407 (e)

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

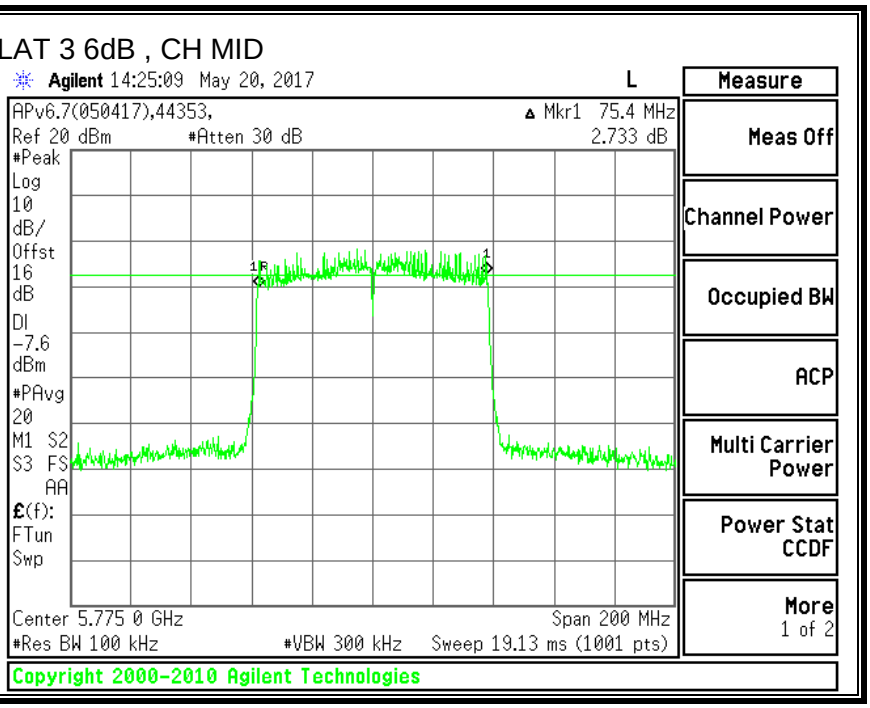
RESULTS

Channel	Frequency	6 dB BW UAT 2 (MHz)	6 dB BW LAT 3 (MHz)	Minimum Limit (MHz)
Mid	5775	74.2	75.4	0.5

UAT 2 6dB , CH MID



LAT 3 6dB , CH MID



8.36.2. 26 dB BANDWIDTH

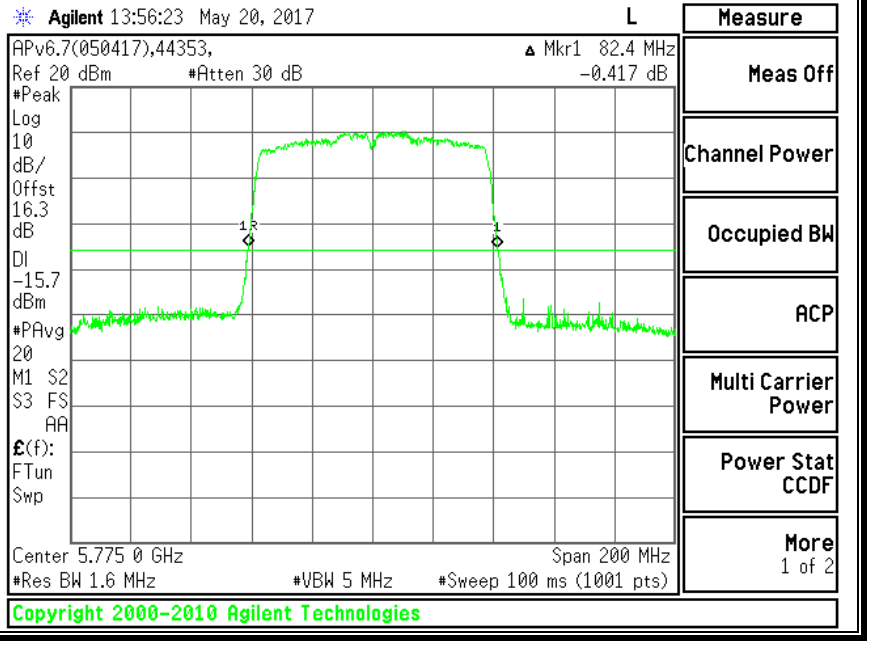
LIMITS

None; for reporting purposes only.

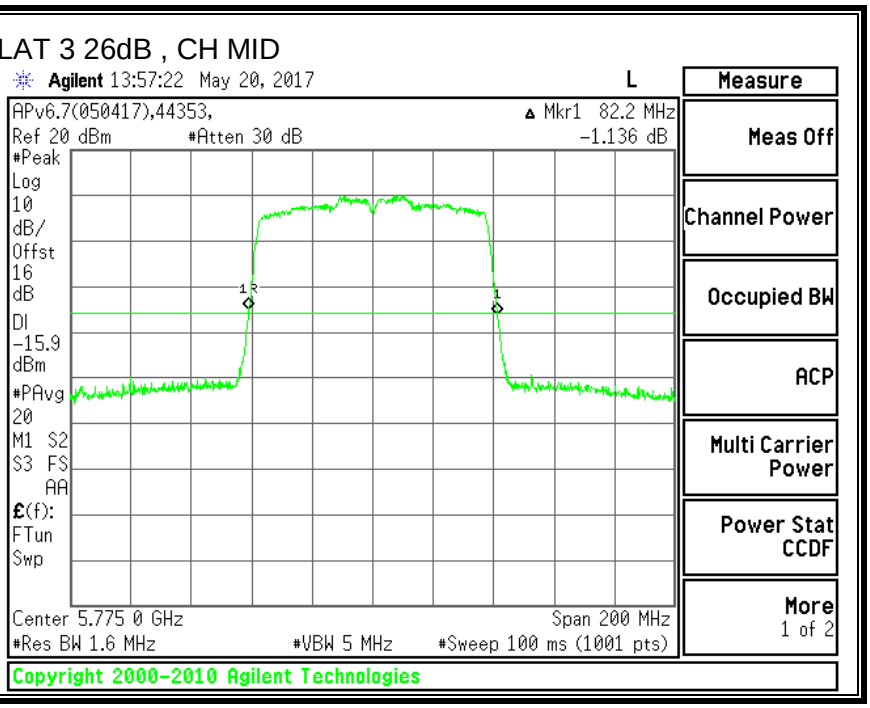
RESULTS

Channel	Frequency	26 dB BW UAT 2 (MHz)	26 dB BW LAT 3 (MHz)
Mid	5775	82.4	82.2

UAT 2 26dB , CH MID



LAT 3 26dB , CH MID



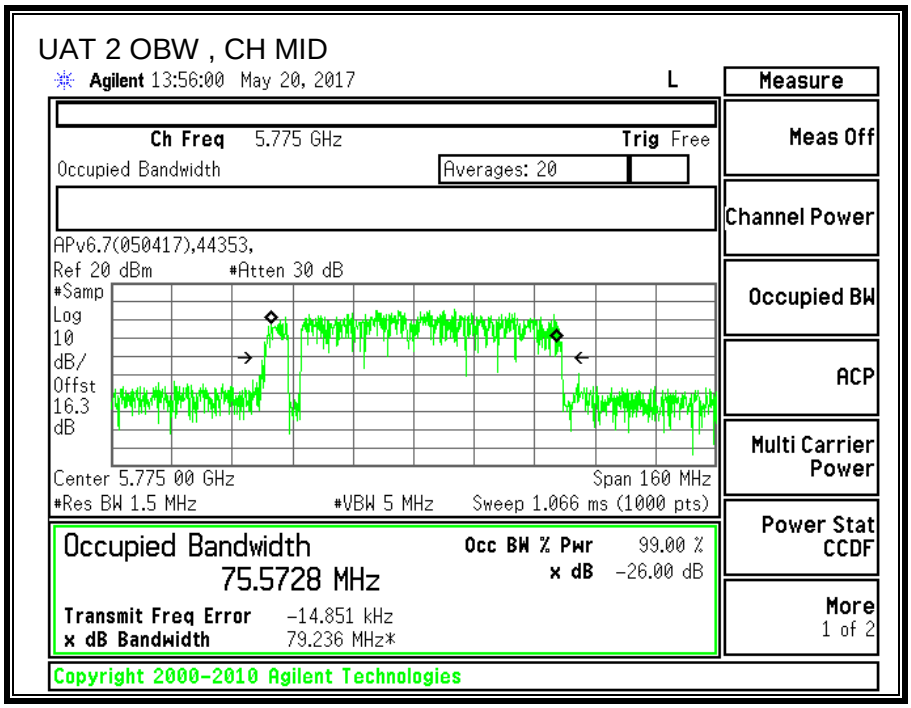
8.36.3. 99% BANDWIDTH

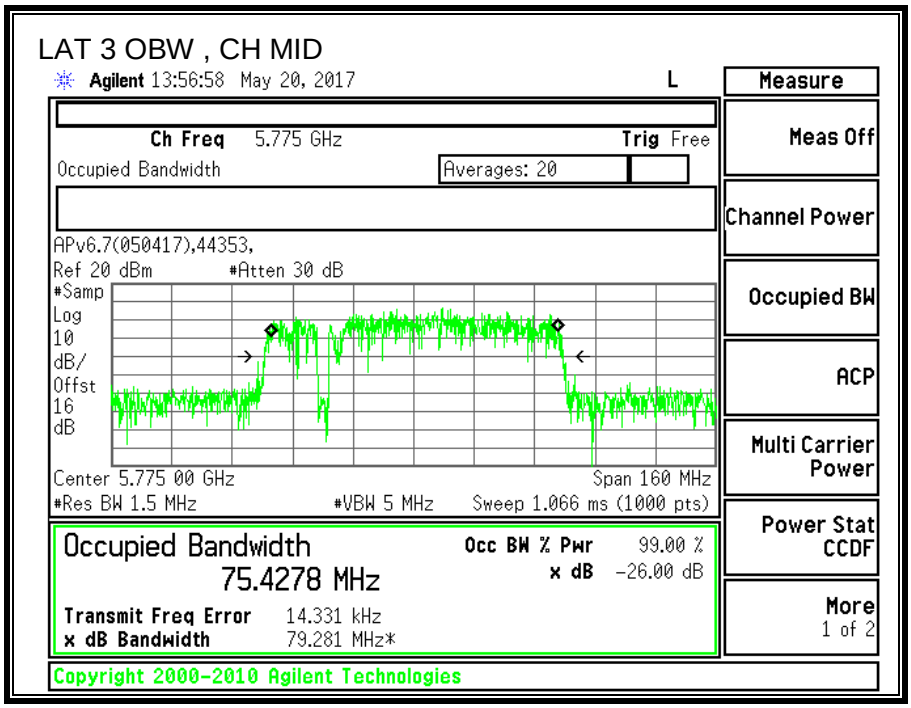
LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency	99% BW UAT 2 (MHz)	99% BW LAT 3 (MHz)
Mid	5775	75.5728	75.4278





8.36.4. AVERAGE POWER

ID:	30554	Date:	08/04/2017

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

Channel	Frequency (MHz)	UAT 2 Power (dBm)	LAT 3 Power (dBm)	Total Power (dBm)
Mid	5775	19.41	19.36	22.40

8.36.5. OUTPUT POWER

ID:	30554	Date:	08/04/2017

LIMITS

FCC §15.407 (a) (3)

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

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

DIRECTIONAL ANTENNA GAIN

For Power used uncorrelated gain: The TX chains are uncorrelated and the antenna gain is unequal among the chains. The directional gain is:

UAT 2 Antenna Gain (dBi)	LAT 3 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
-2.71	-7.67	-4.52

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)
Mid	5775	-4.52	30.00

Output Power Results

Channel	Frequency (MHz)	UAT 2 Meas Power (dBm)	LAT 3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid	5775	19.41	19.36	22.40	30.00	-7.60

8.36.6. POWER SPECTRAL DENSITY

LIMITS

FCC §15.407 (a) (3)

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

DIRECTIONAL ANTENNA GAIN

For PSD used correlated gain: The TX chains are correlated and the antenna gain is unequal among the chains. The directional gain is:

UAT 2 Antenna Gain (dBi)	LAT 3 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
-2.71	-7.67	-1.83

RESULTS

Antenna Gain and Limit

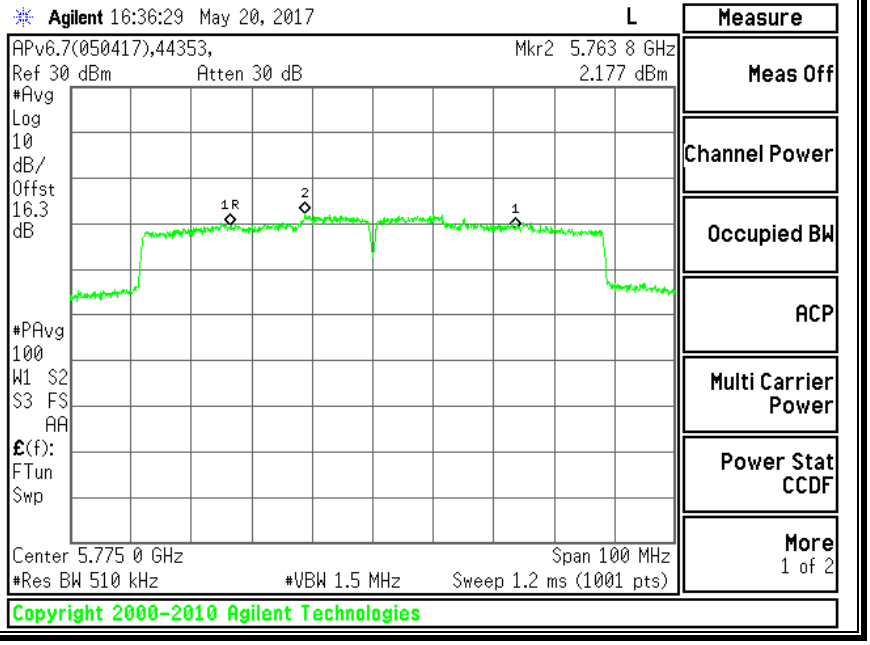
Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Mid	5775	-1.83	30.00

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

PSD Results

Channel	Frequency (MHz)	UAT 2 Meas PSD (dBm)	LAT 3 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Mid	5775	2.177	1.807	5.20	30.00	-24.80

UAT 2 , CH MID



LAT 3 , CH MID