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

8.25.1. 26 dB BANDWIDTH

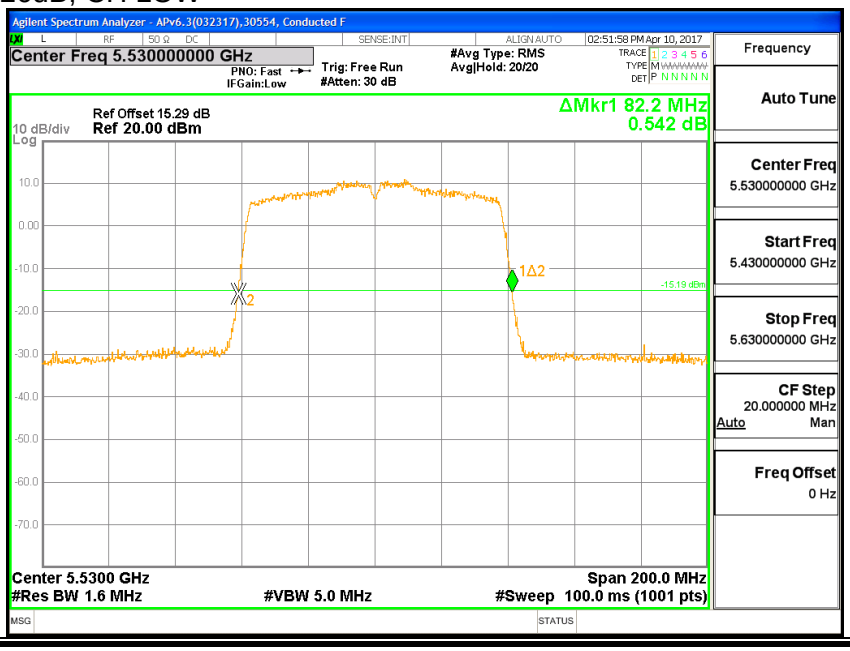
LIMITS

None; for reporting purposes only.

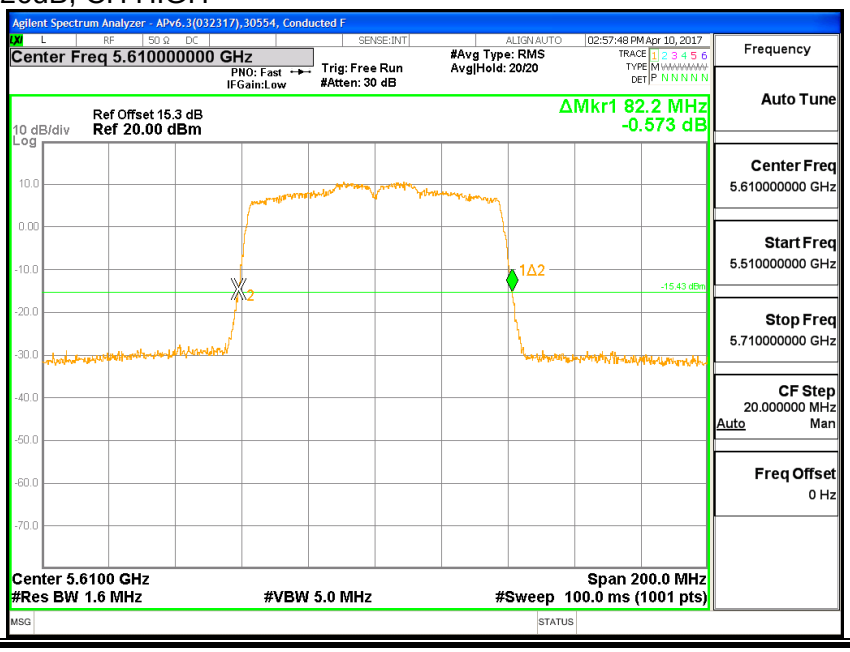
RESULTS

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

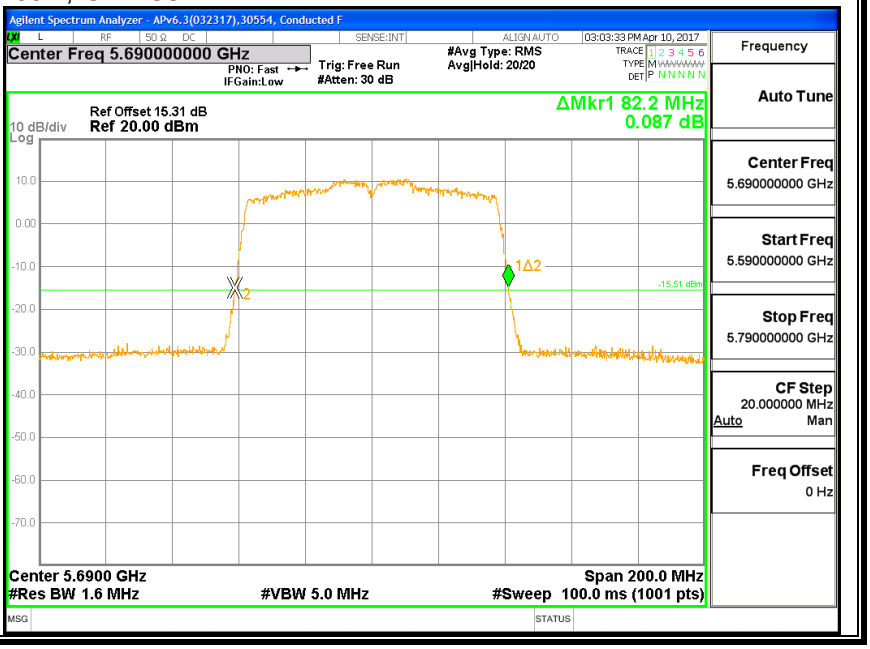
26dB, CH LOW



26dB, CH HIGH



26dB, CH 138



8.25.2. 99% BANDWIDTH

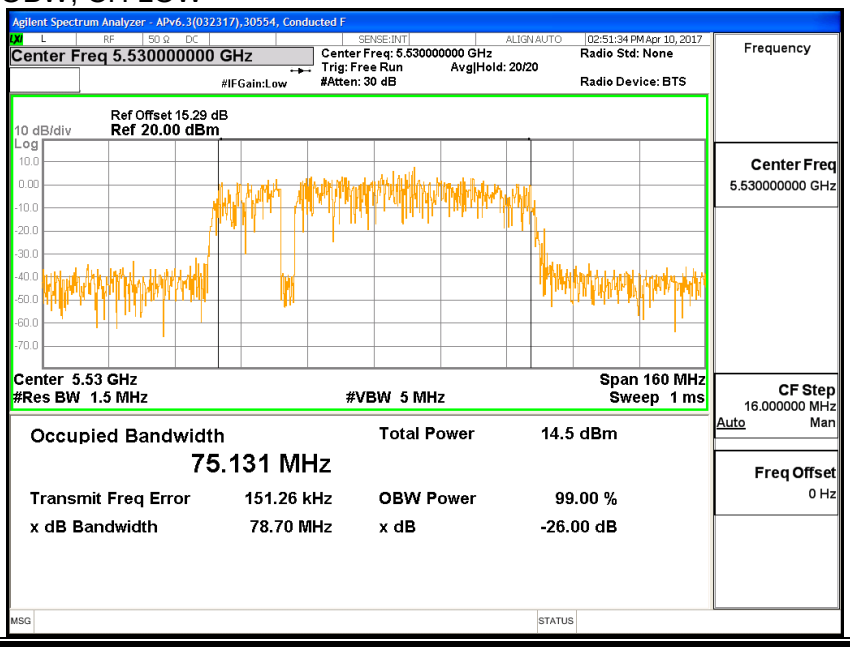
LIMITS

None; for reporting purposes only.

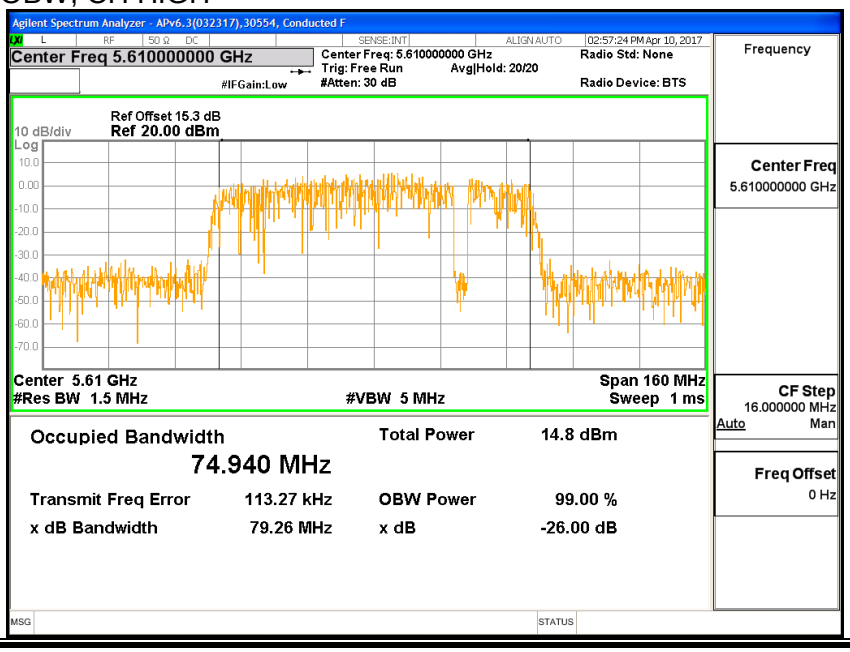
RESULTS

Channel	Frequency	99% BW UAT 2 (MHz)
Low	5530	75.131
High	5610	74.940
138	5690	75.732

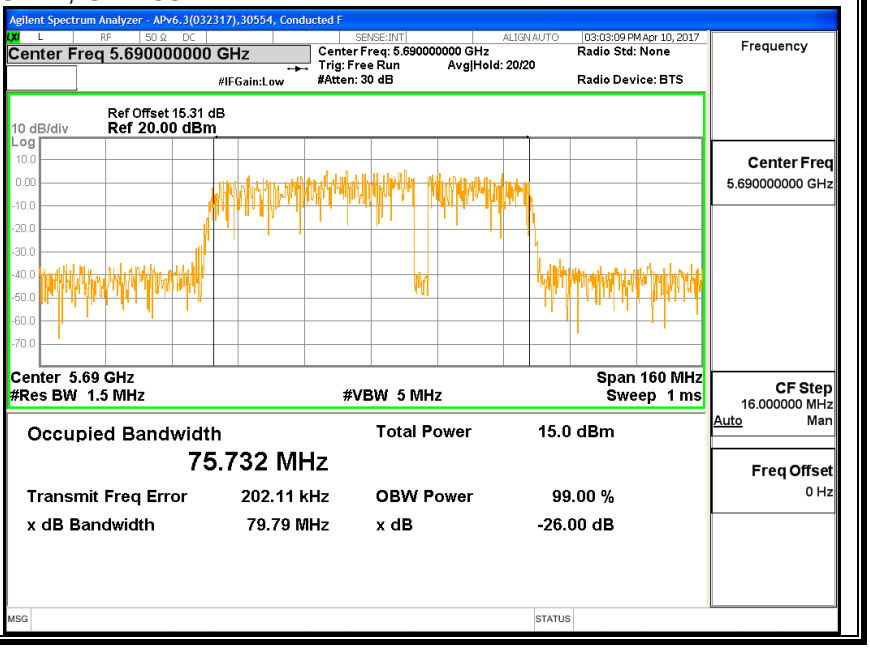
OBW, CH LOW



OBW, CH HIGH



OBW, CH 138



8.25.3. AVERAGE POWER

ID:	30554	Date:	7/13/2017

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	14.84
High	5610	18.89
138	5690	18.77

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.

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	82.20	75.13	-2.25	24.00	11.00
Mid	5610	82.20	74.94	-2.25	24.00	11.00

Duty Cycle CF (dB)	0.20	Included in Calculations of Corr'd PSD

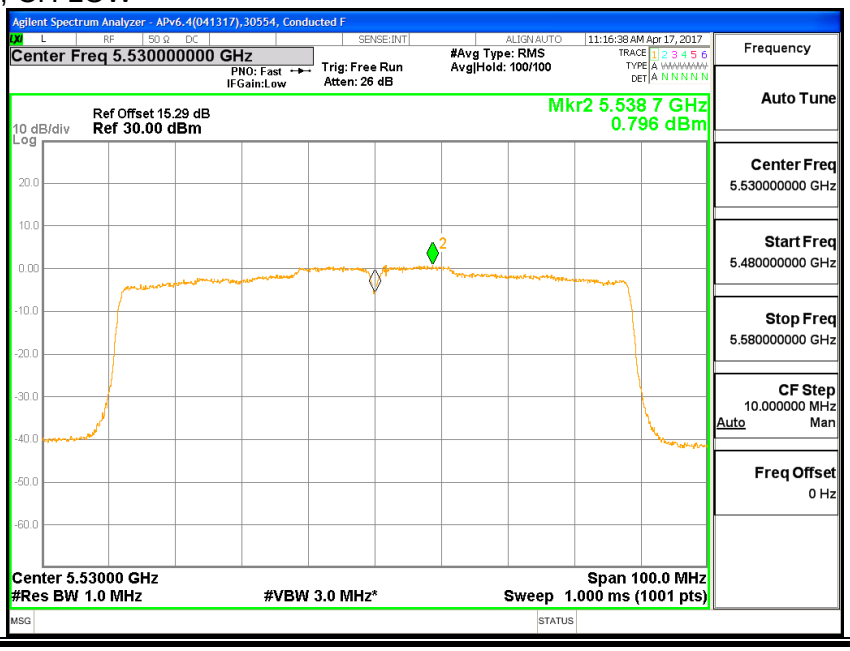
Output Power Results

Channel	Frequency (MHz)	UAT 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5530	14.84	14.84	24.00	-9.16
Mid	5610	18.89	18.89	24.00	-5.11

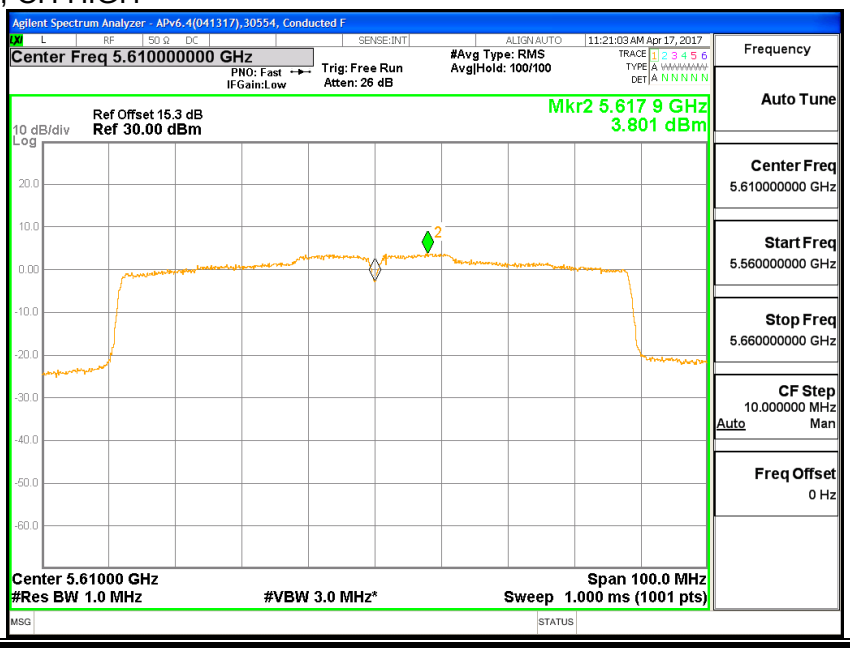
PSD Results

Channel	Frequency (MHz)	UAT 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5530	0.796	0.996	11.00	-10.00
Mid	5610	3.801	4.001	11.00	-7.00

, CH LOW



, CH HIGH



8.25.5. 11ac HT80 UAT 2 SISO STRADDLE CHANNEL 138

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	-2.25	-2.25	24.00	11.00

Duty Cycle CF (dB)	0.20	Included in Calculations of Corr'd Power & PSD

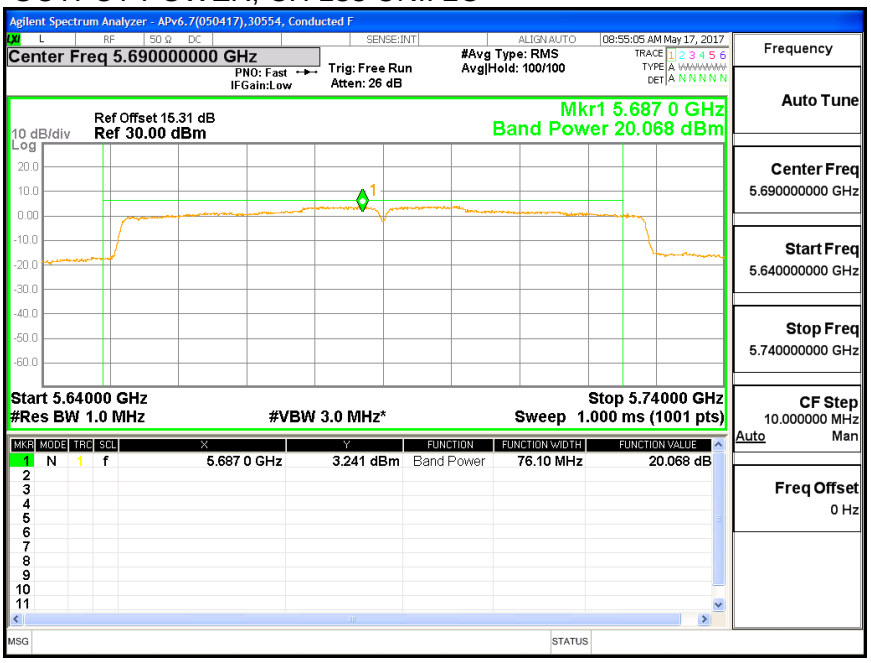
Output Power Results

Channel	Frequency (MHz)	UAT 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	20.07	20.27	24.00	-3.73

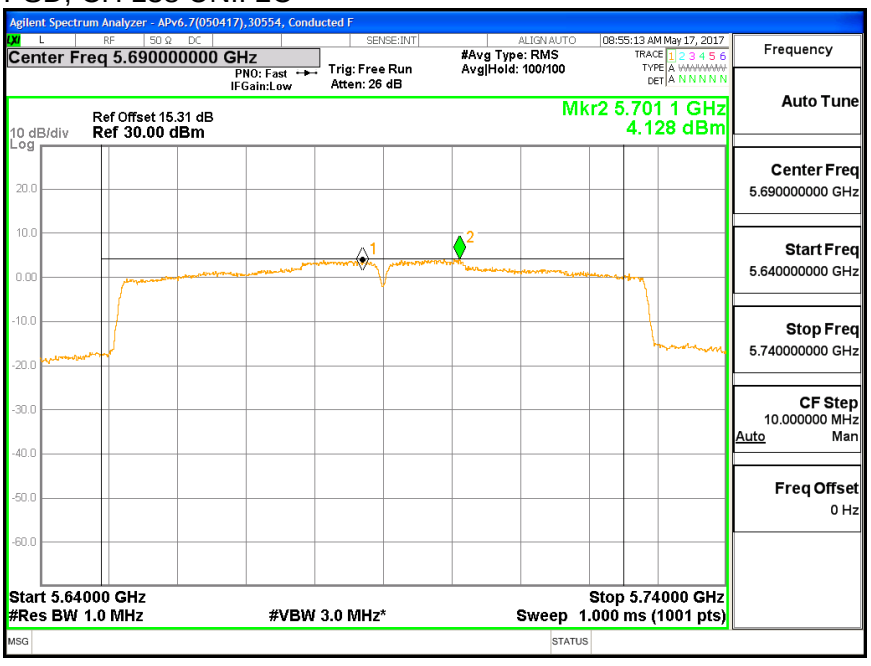
PSD Results

Channel	Frequency (MHz)	UAT 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	4.128	4.328	11.00	-6.67

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	82.20	-2.41	30.00	30.00

Duty Cycle CF (dB)	0.20	Included in Calculations of Corr'd Power & PSD

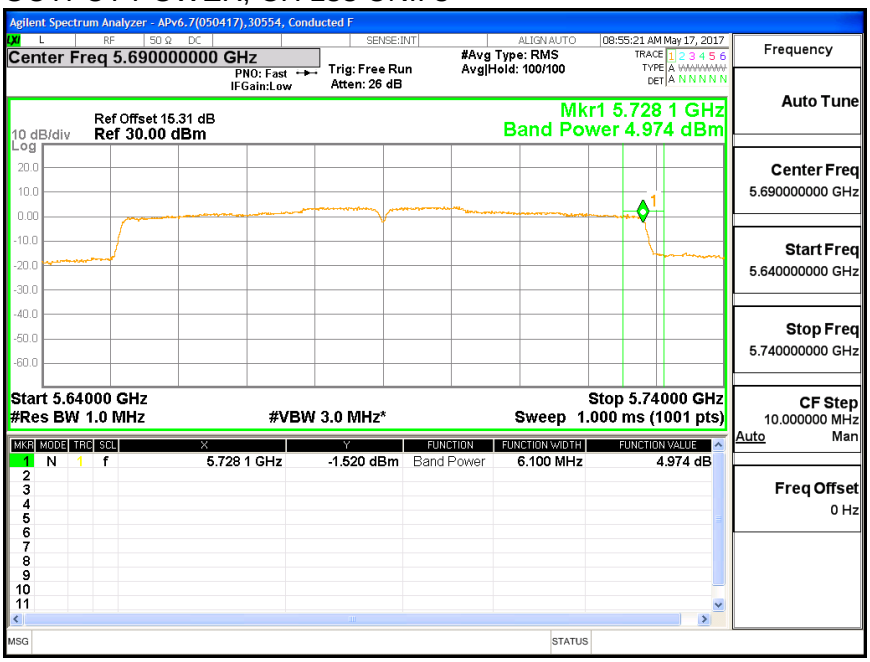
Output Power Results

Channel	Frequency (MHz)	UAT 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	4.97	5.17	30.00	-24.83

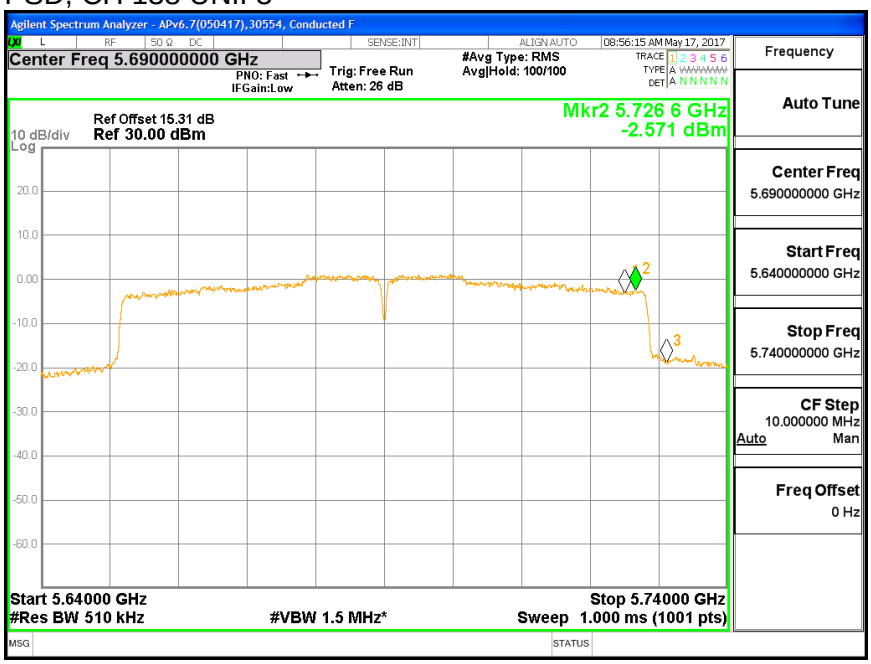
PSD Results

Channel	Frequency (MHz)	UAT 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	-2.571	-2.371	30.00	-32.37

OUTPUT POWER, CH 138 UNII 3



PSD, CH 138 UNII 3



8.25.6. 6 dB BANDWIDTH

LIMITS

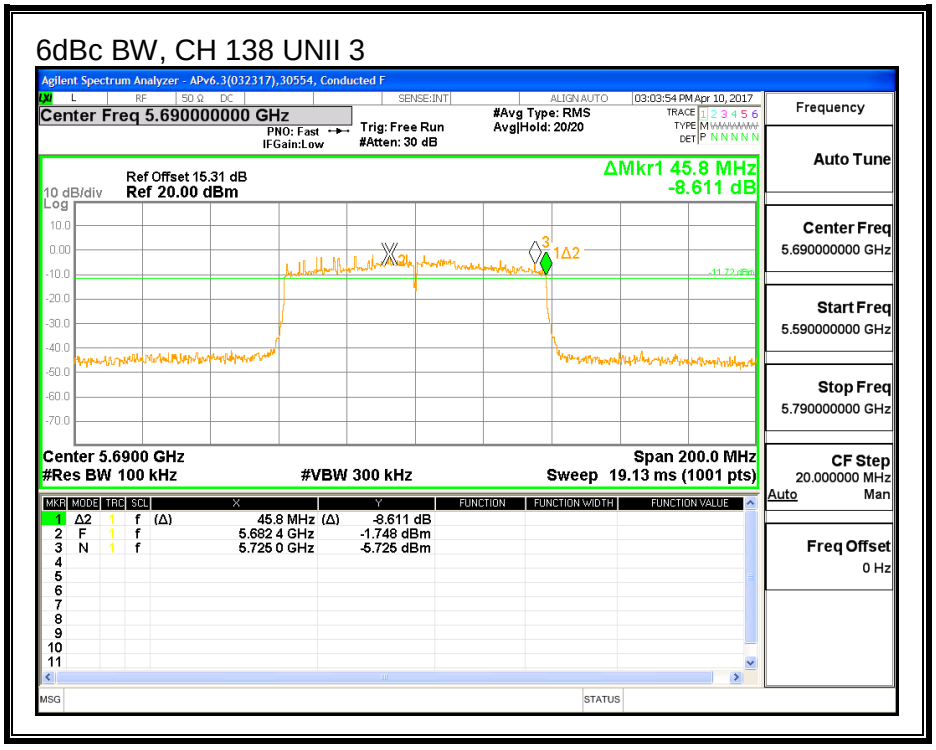
FCC §15.407 (e)

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

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)
138	5690	45.80

6 dB BANDWIDTH



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

8.26.1. 26 dB BANDWIDTH

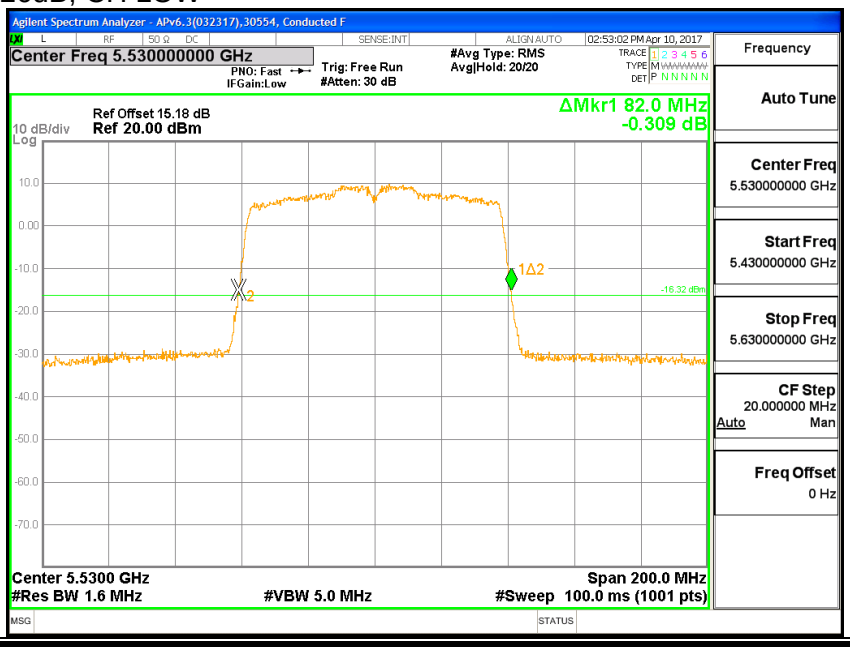
LIMITS

None; for reporting purposes only.

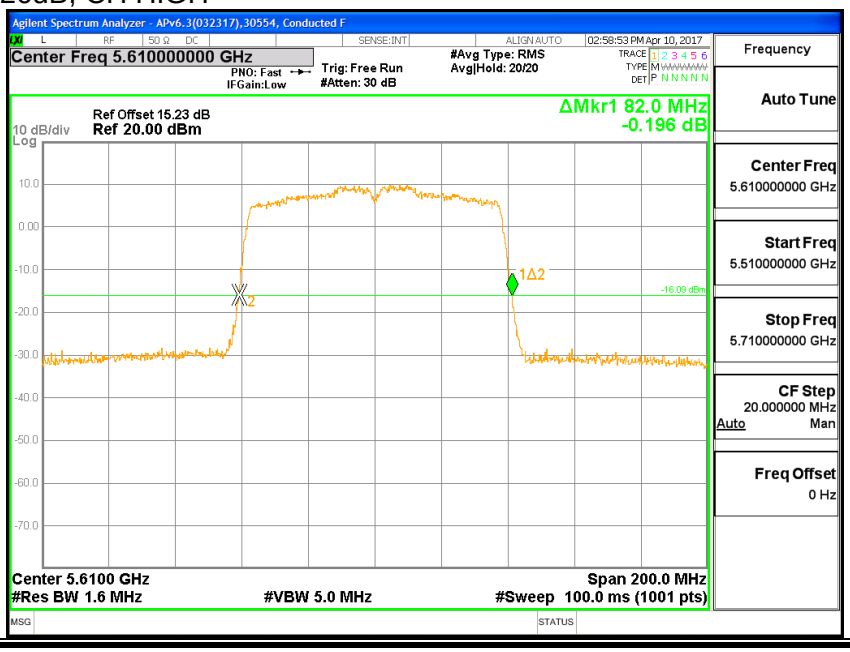
RESULTS

Channel	Frequency	26 dB BW LAT 3 (MHz)
Low	5530	82.0
High	5610	82.0
138	5690	81.8

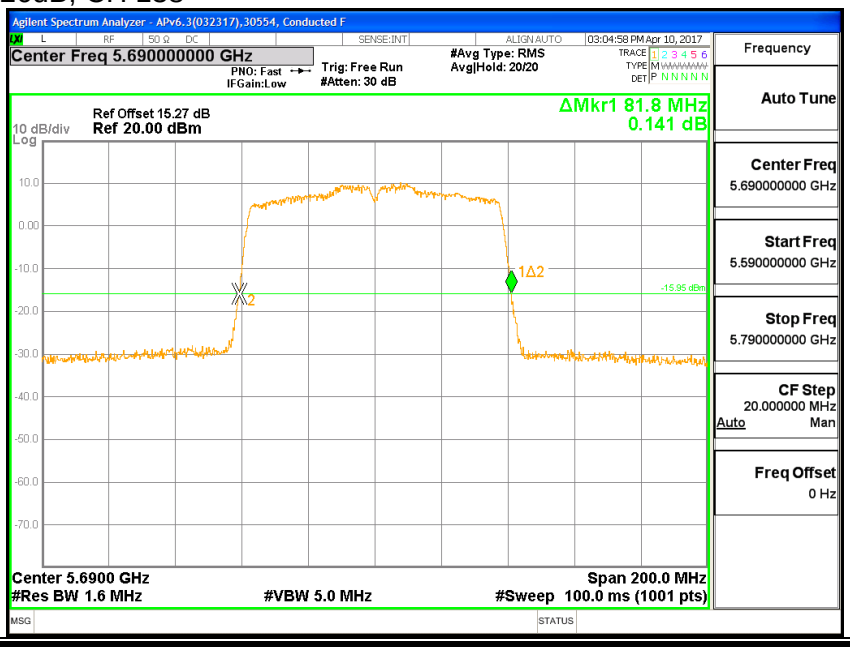
26dB, CH LOW



26dB, CH HIGH



26dB, CH 138



8.26.2. 99% BANDWIDTH

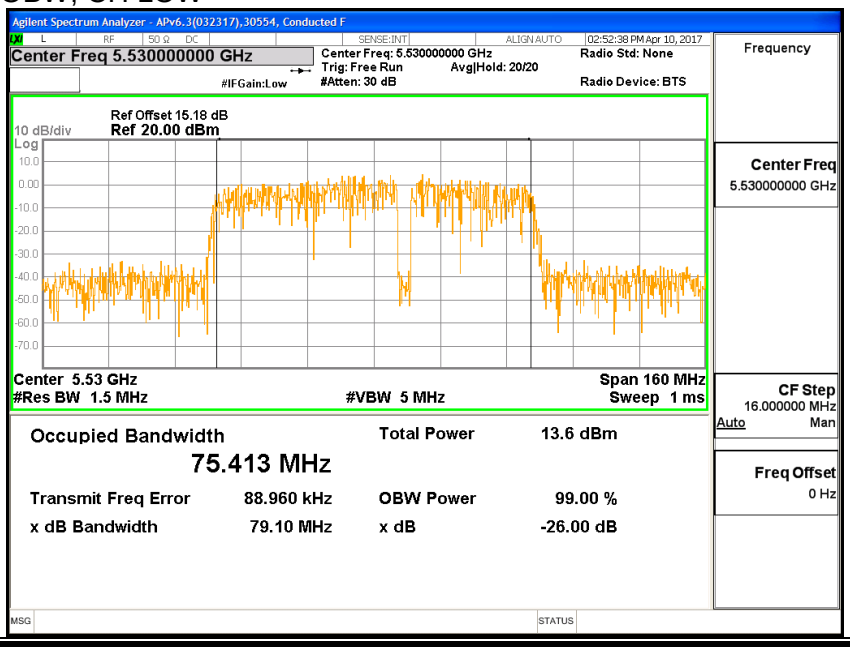
LIMITS

None; for reporting purposes only.

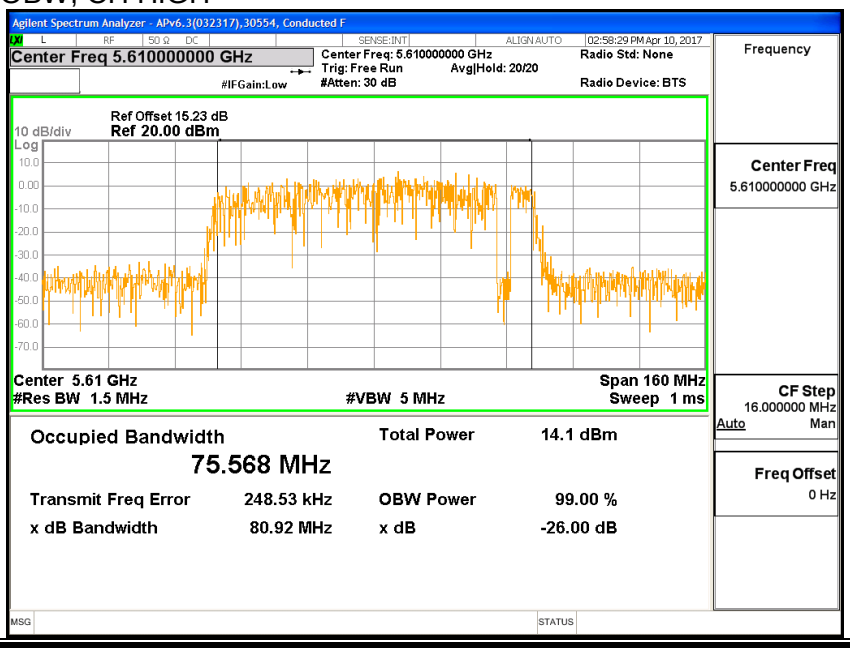
RESULTS

Channel	Frequency	99% BW LAT 3 (MHz)
Low	5530	75.413
High	5610	74.568
138	5690	75.192

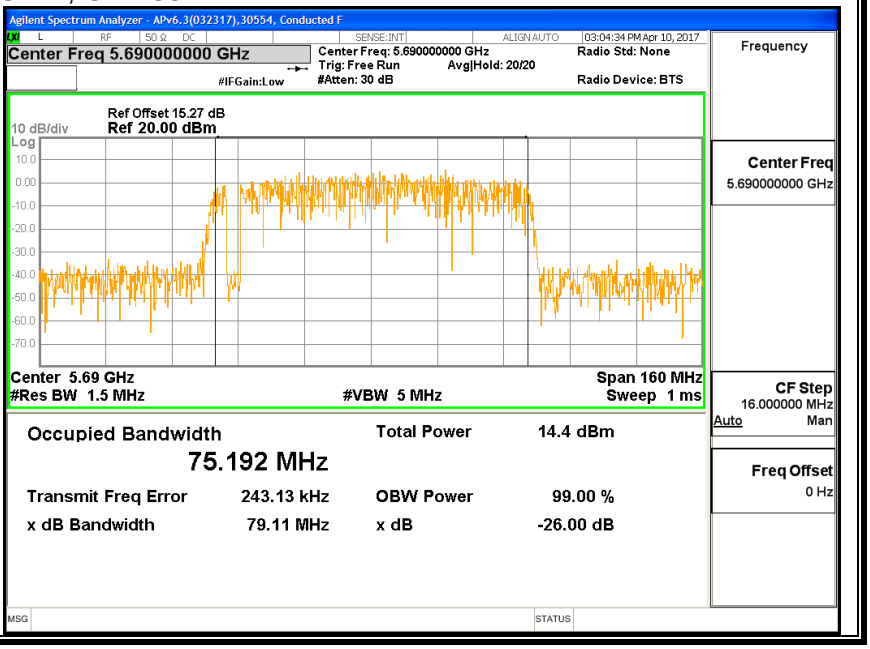
OBW, CH LOW



OBW, CH HIGH



OBW, CH 138



8.26.3. AVERAGE POWER

ID:	30554	Date:	7/13/2017

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	14.88
High	5610	18.81
138	5690	18.93

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.

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	82.00	75.41	-0.41	24.00	11.00
Mid	5610	82.00	75.57	-0.41	24.00	11.00

Duty Cycle CF (dB)	0.20	Included in Calculations of Corr'd PSD

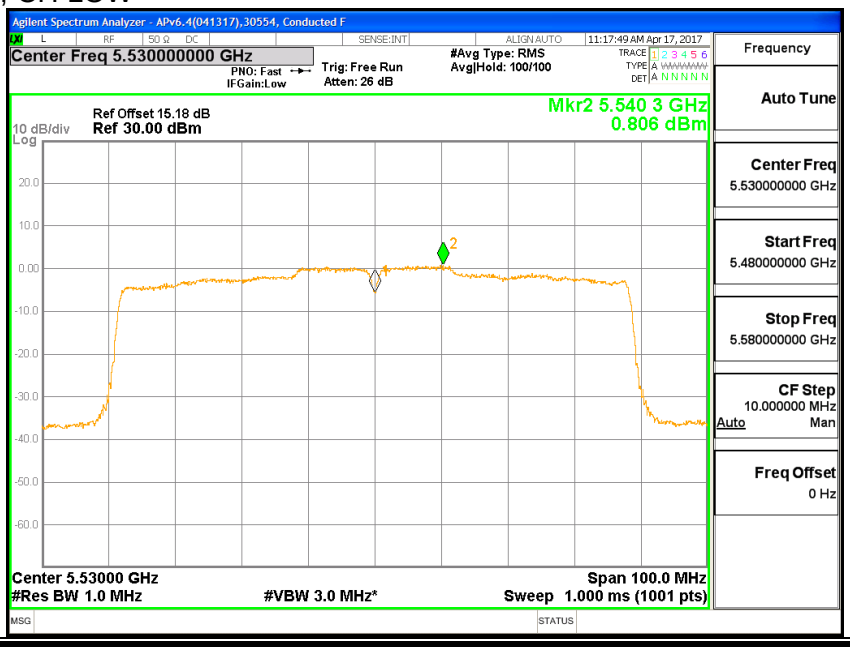
Output Power Results

Channel	Frequency (MHz)	LAT 3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5530	14.88	14.88	24.00	-9.12
Mid	5610	18.81	18.81	24.00	-5.19

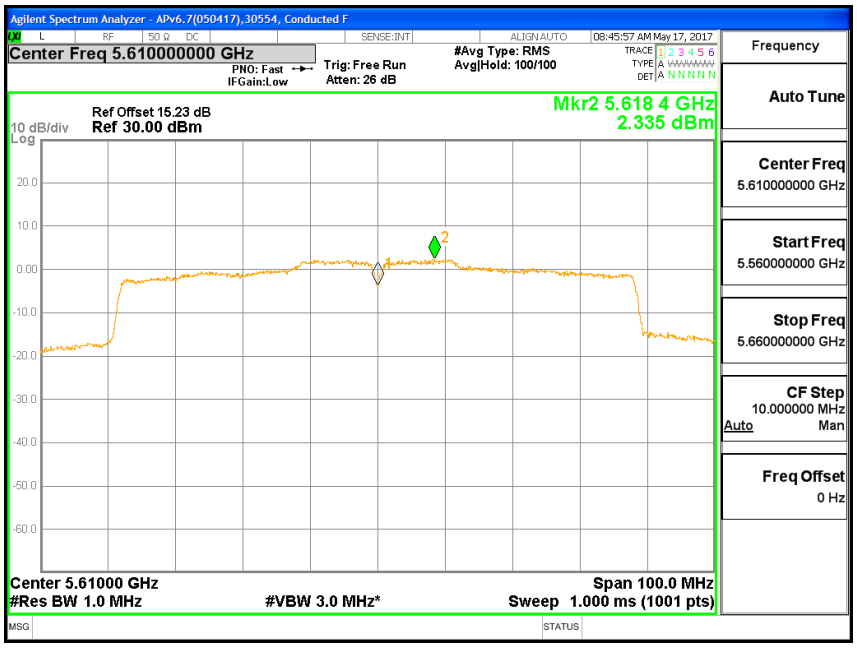
PSD Results

Channel	Frequency (MHz)	LAT 3 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5530	0.806	1.006	11.00	-9.99
Mid	5610	2.335	2.535	11.00	-8.47

, CH LOW



, CH HIGH



8.26.5. 11ac HT80 LAT 3 SISO STRADDLE CHANNEL 138

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	81.8	-0.41	-0.41	24.00	11.00

Duty Cycle CF (dB)	0.20	Included in Calculations of Corr'd Power & PSD

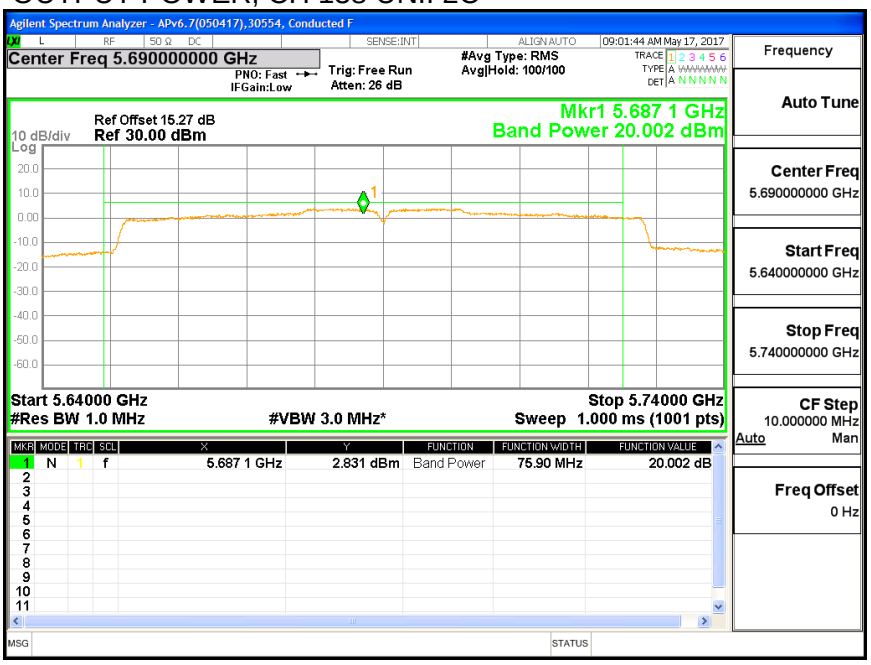
Output Power Results

Channel	Frequency (MHz)	LAT 3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	20.00	20.20	24.00	-3.80

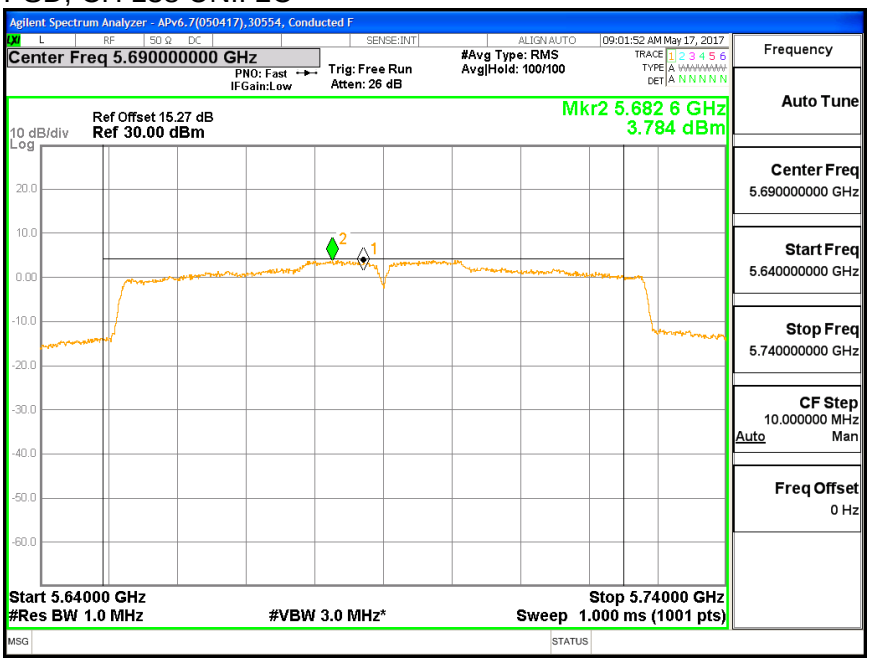
PSD Results

Channel	Frequency (MHz)	LAT 3 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	3.78	3.98	11.00	-7.02

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	81.80	-0.15	30.00	30.00

Duty Cycle CF (dB)	0.20	Included in Calculations of Corr'd Power & PSD

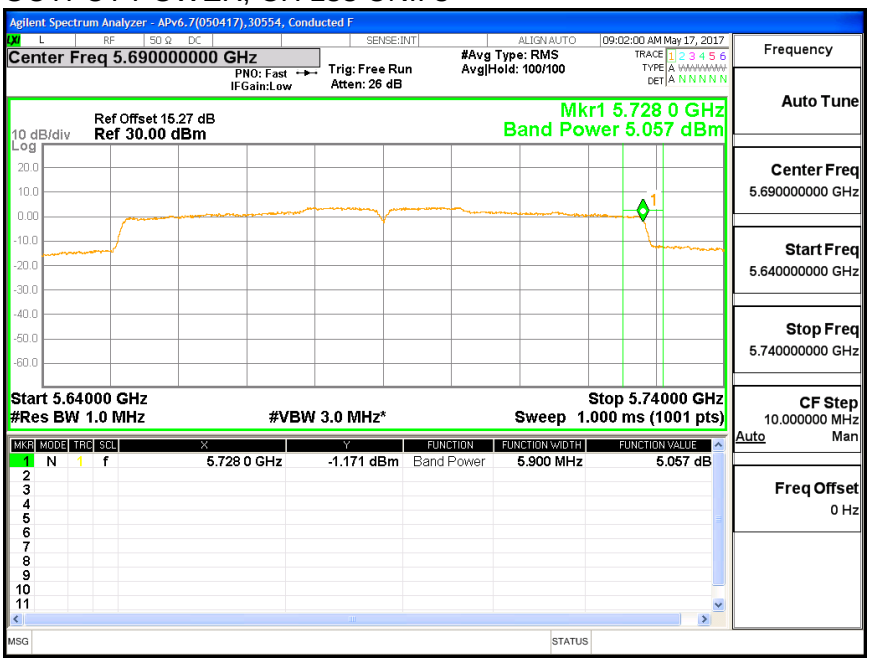
Output Power Results

Channel	Frequency (MHz)	LAT 3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	5.06	5.26	30.00	-24.74

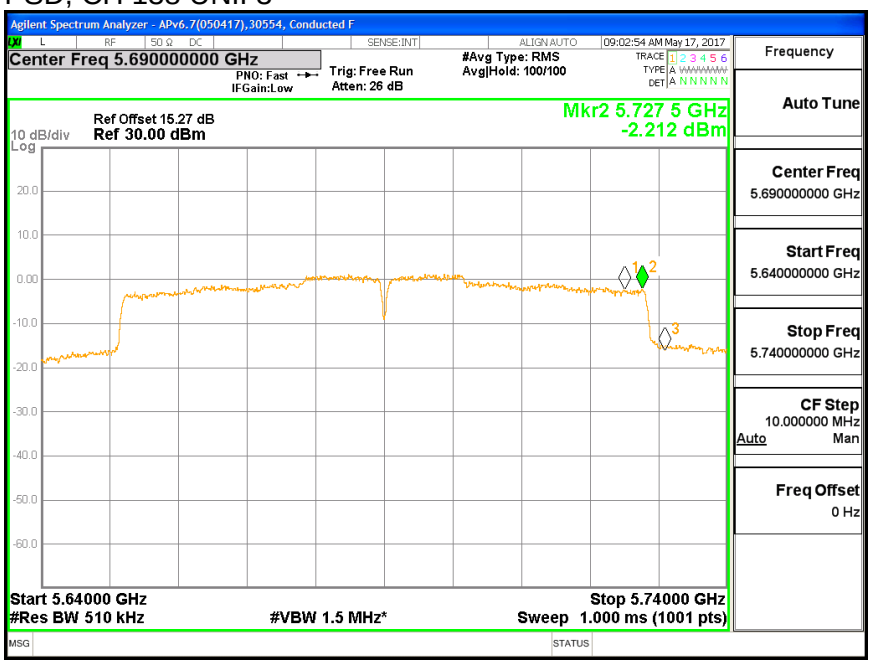
PSD Results

Channel	Frequency (MHz)	LAT 3 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	-2.212	-2.012	30.00	-32.01

OUTPUT POWER, CH 138 UNII 3



PSD, CH 138 UNII 3



8.26.6. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

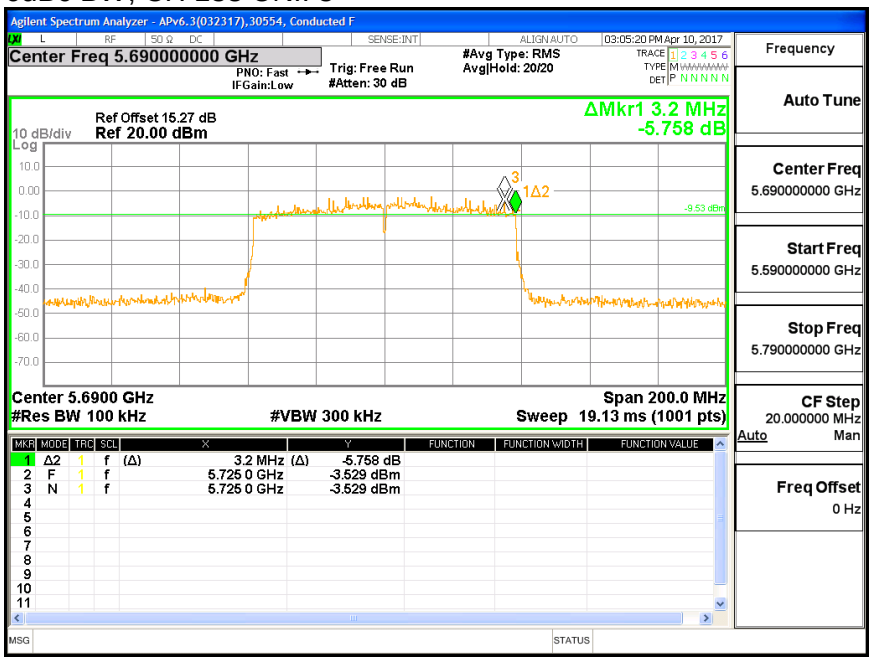
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)
High	5690	3.20

6 dB BANDWIDTH

6dBc BW, CH 138 UNII 3



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

8.27.1. 26 dB BANDWIDTH

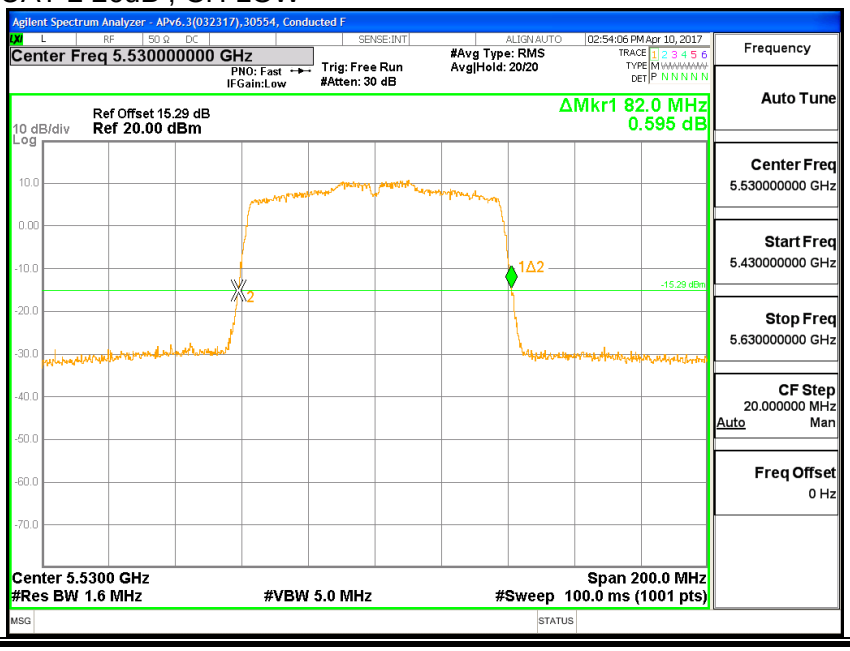
LIMITS

None; for reporting purposes only.

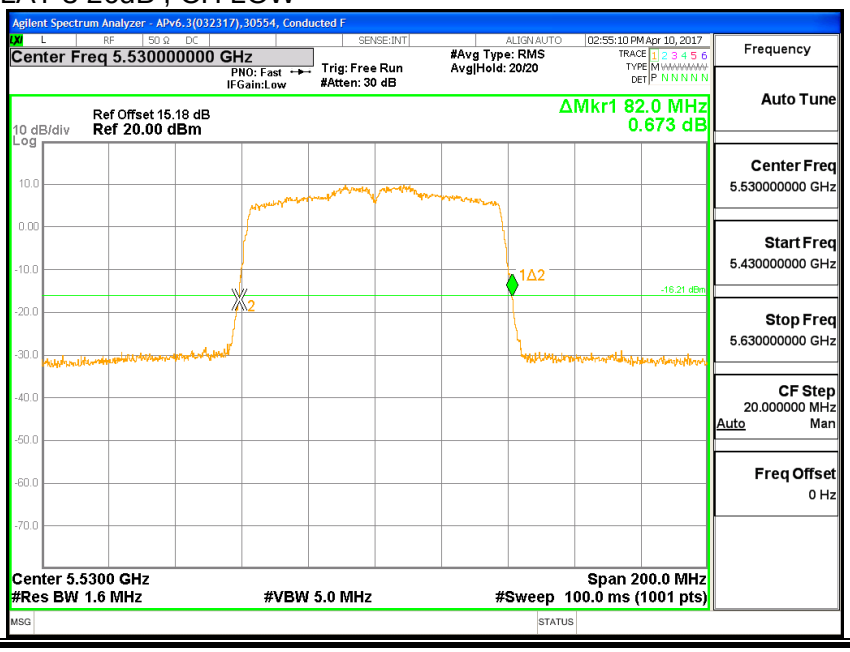
RESULTS

Channel	Frequency	26 dB BW UAT 2 (MHz)	26 dB BW LAT 3 (MHz)
Low	5530	82.0	82.0
High	5610	82.0	82.0
138	5690	82.2	82.2

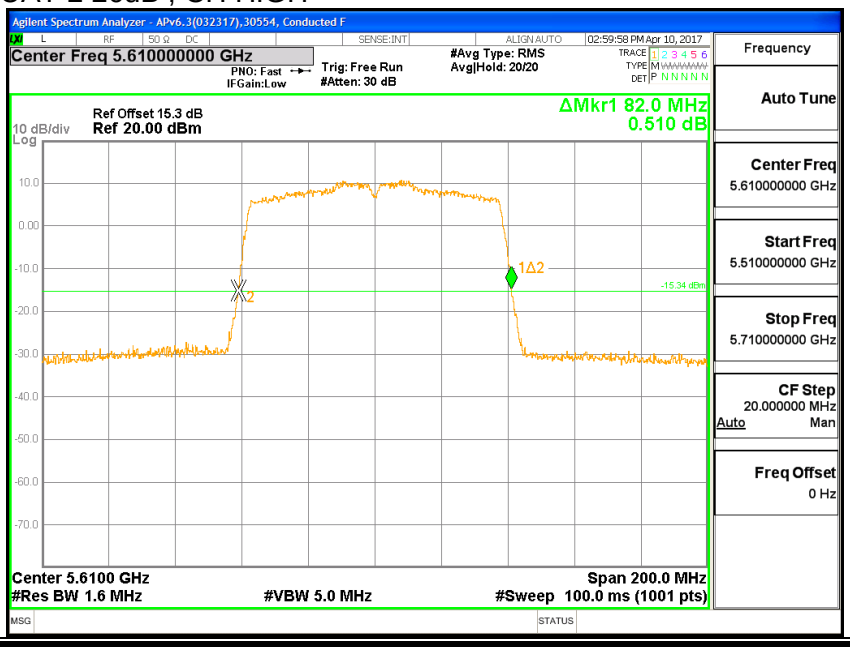
UAT 2 26dB , CH LOW



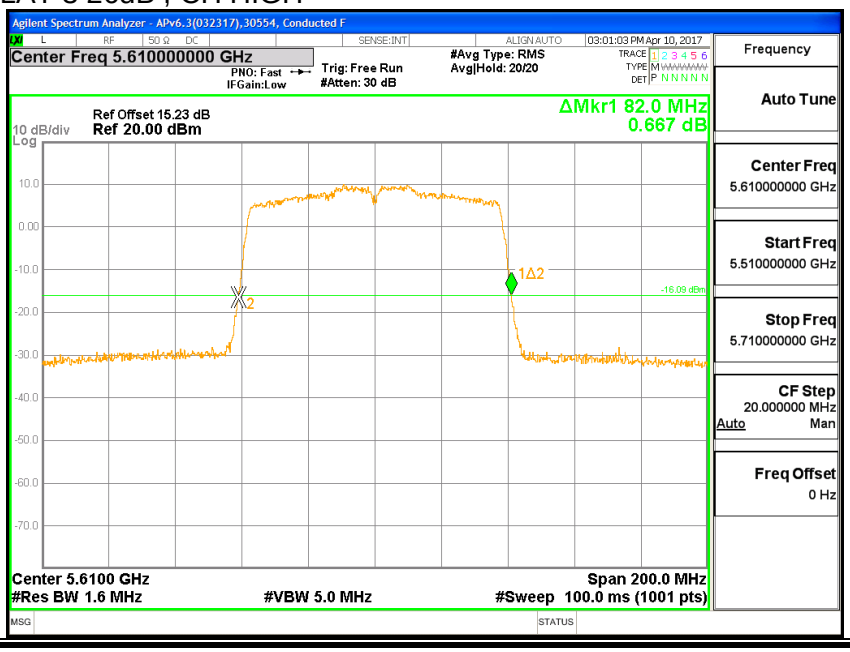
LAT 3 26dB , CH LOW



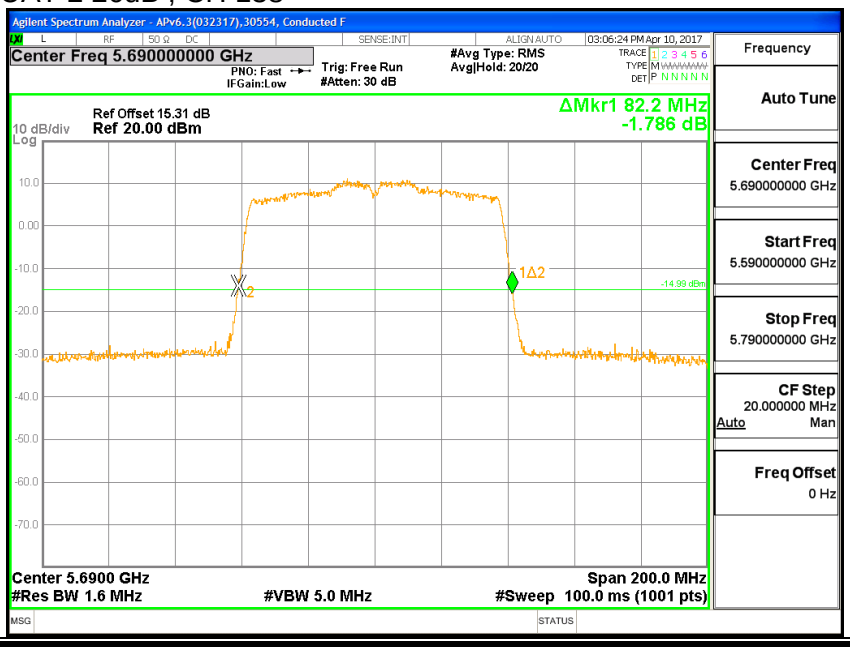
UAT 2 26dB , CH HIGH



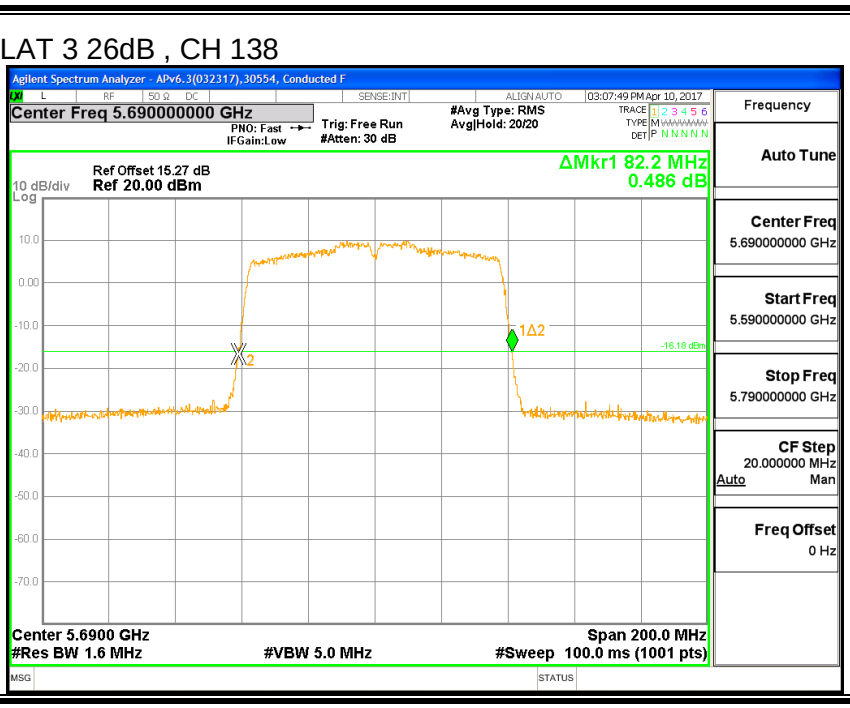
LAT 3 26dB , CH HIGH



UAT 2 26dB , CH 138



LAT 3 26dB , CH 138



8.27.2. 99% BANDWIDTH

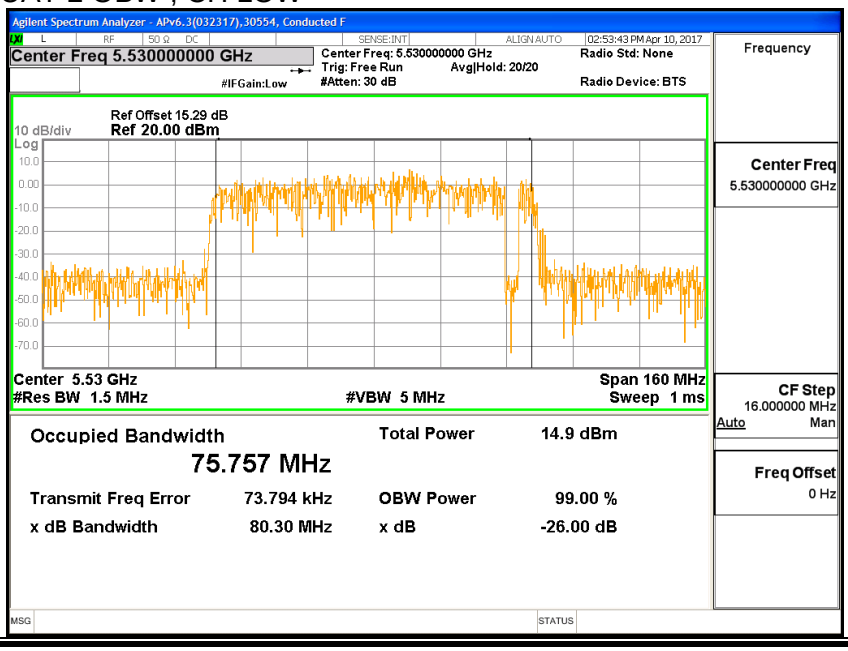
LIMITS

None; for reporting purposes only.

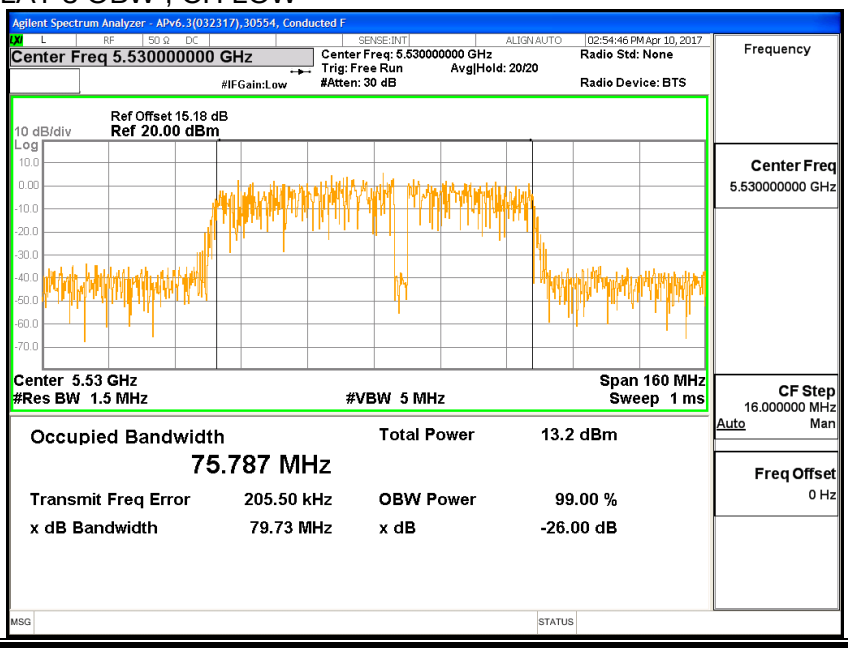
RESULTS

Channel	Frequency	99% BW UAT 2 (MHz)	99% BW LAT 3 (MHz)
Low	5530	75.757	75.787
High	5610	74.884	75.605
138	5690	75.586	75.567

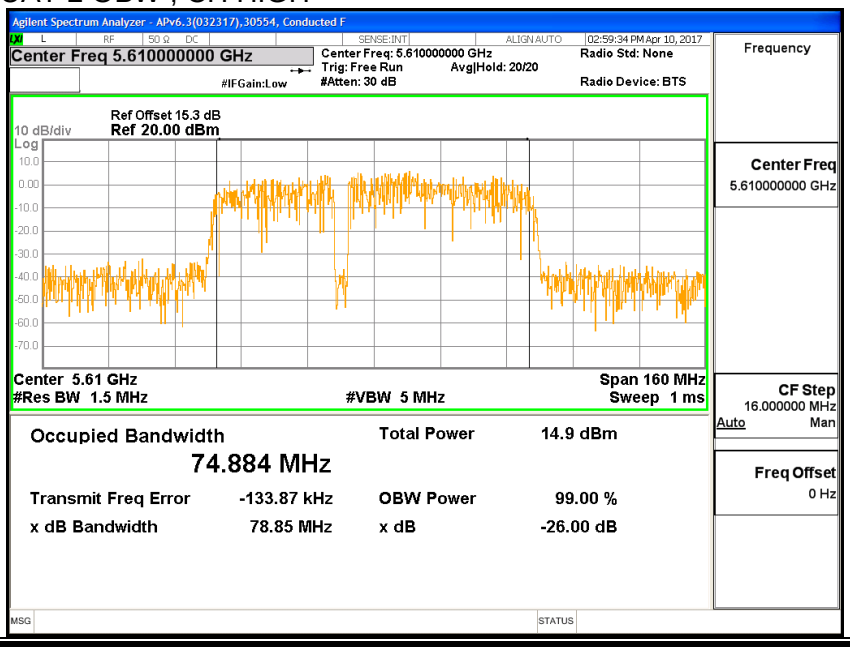
UAT 2 OBW , CH LOW



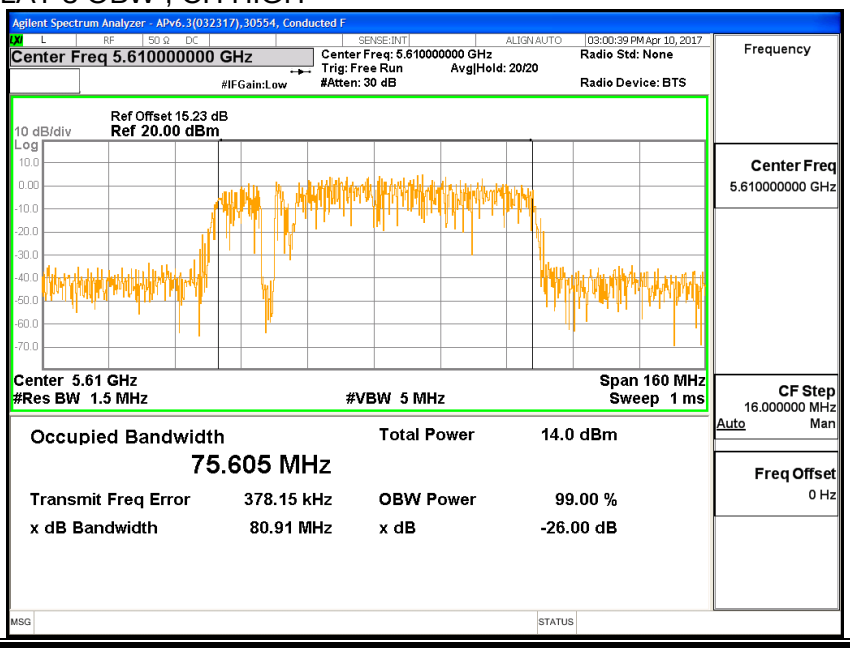
LAT 3 OBW , CH LOW



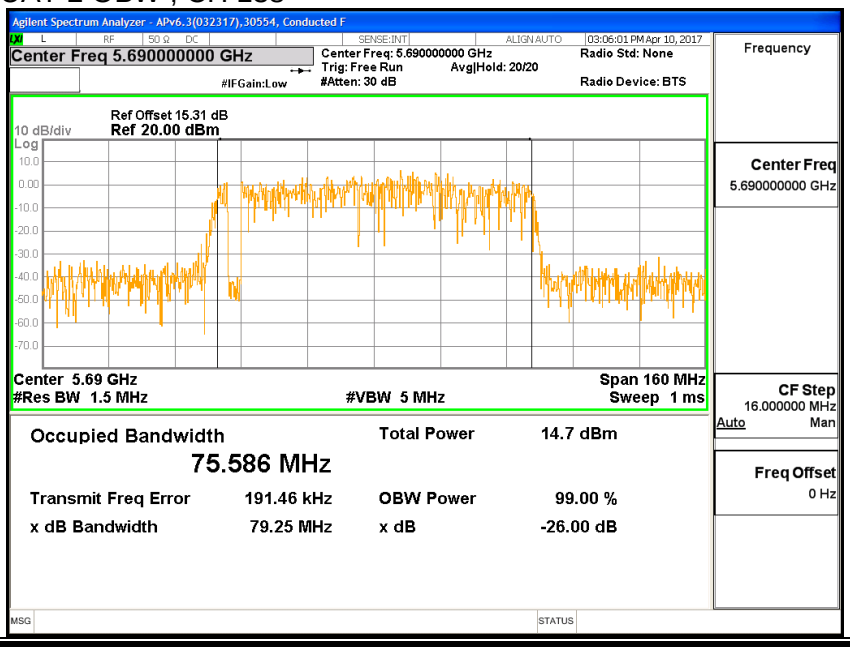
UAT 2 OBW , CH HIGH



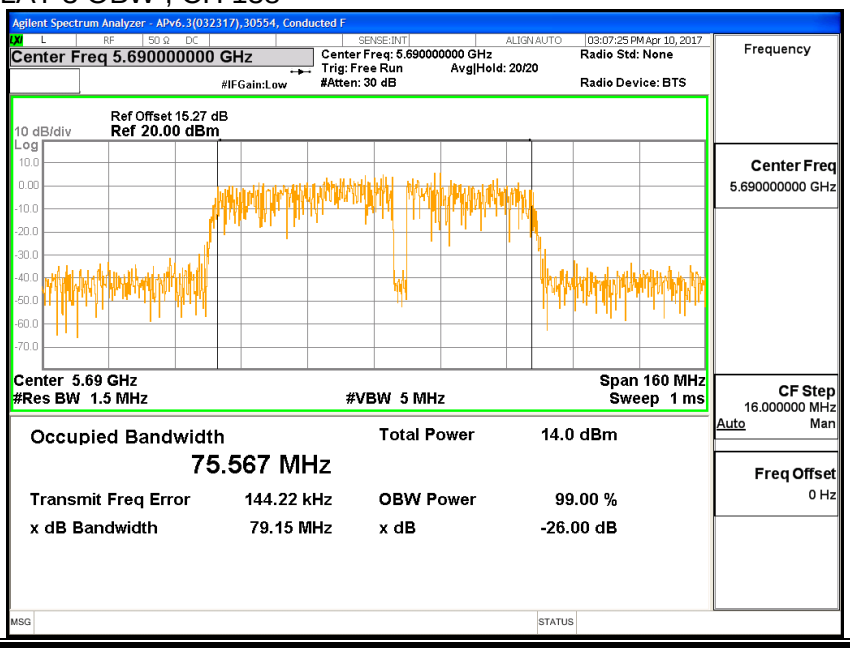
LAT 3 OBW , CH HIGH



UAT 2 OBW , CH 138



LAT 3 OBW , CH 138



8.27.3. AVERAGE POWER

ID:	30554	Date:	7/13/2017

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	14.41	14.39	17.41
Mid	5610	18.92	18.88	21.91
High	5690	18.90	18.86	21.89

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.

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)
-2.25	-0.41	-1.23

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)
-2.25	-0.41	1.73

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	75.757	-1.25	1.71	24.00	11.00
High	5610	82	74.884	-1.25	1.71	24.00	11.00

Duty Cycle CF (dB)	0.20	Included in Calculations of Corr'd PSD

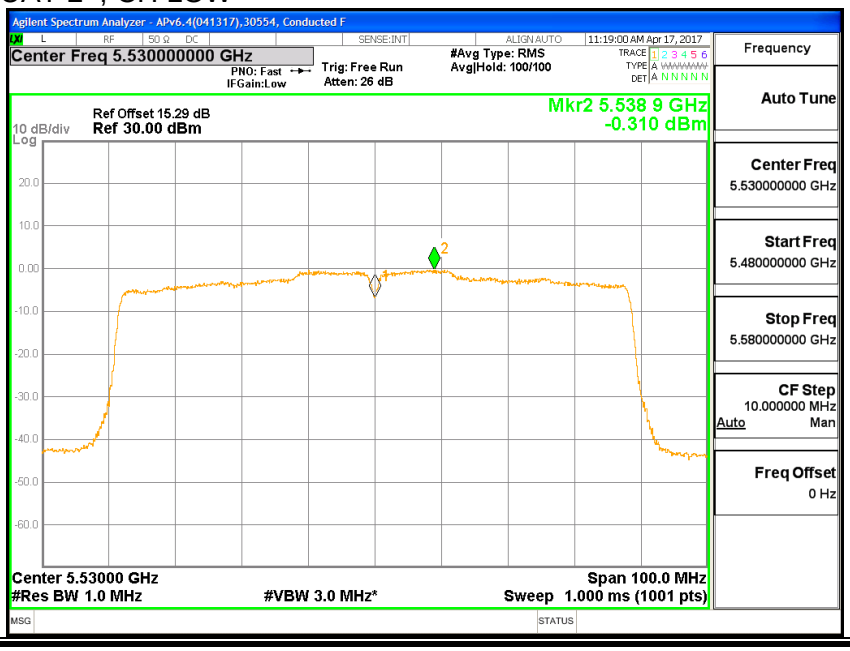
Output Power Results

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	14.41	14.39	17.41	24.00	-6.59
High	5610	18.92	18.88	21.91	24.00	-2.09

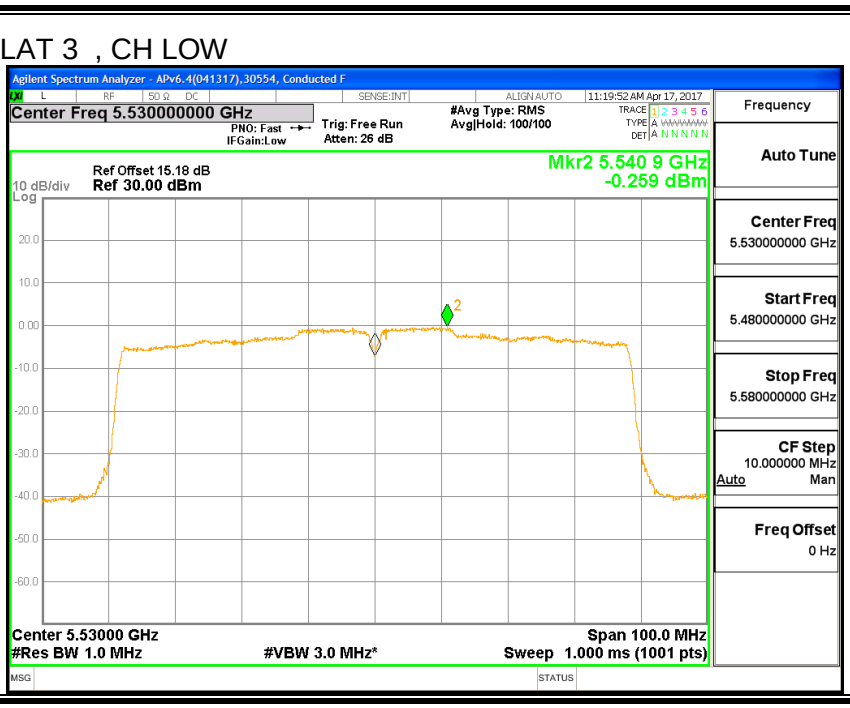
PSD Results

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	-0.31	-0.26	2.93	11.00	-8.07
High	5610	4.04	3.50	6.99	11.00	-4.01

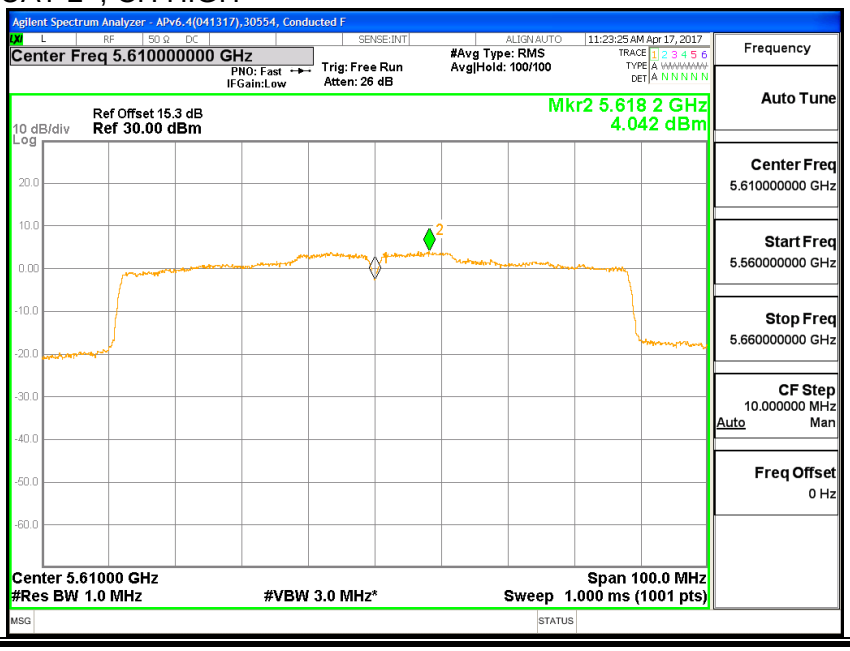
UAT 2 , CH LOW



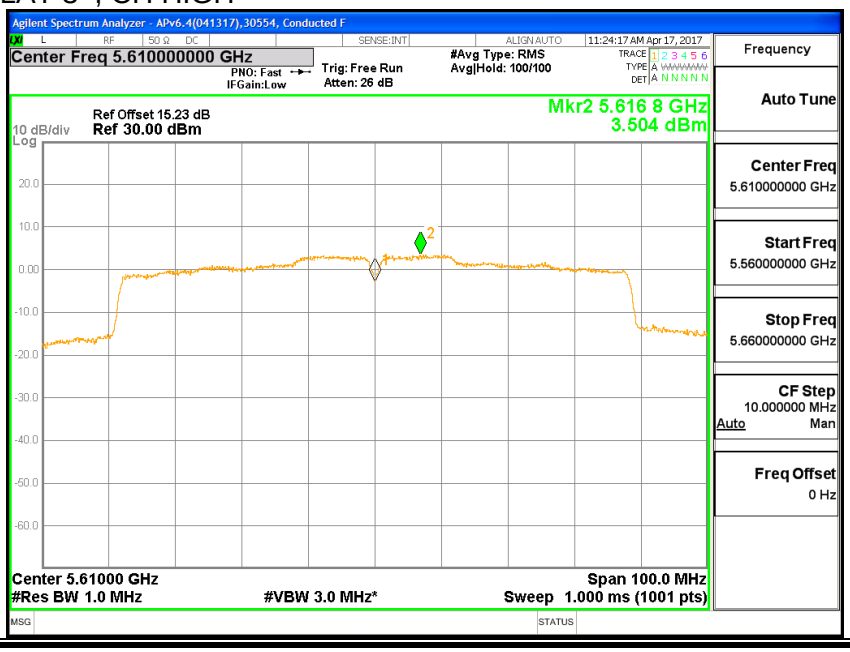
LAT 3 , CH LOW



UAT 2 , CH HIGH



LAT 3 , CH HIGH



8.27.5. 11ac HT80 2TX CDD MIMO STRADDLE CHANNEL 138

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	-1.23	1.73	24.00	11.00

Duty Cycle CF (dB)	0.20	Included in Calculations of Corr'd Power & PSD

Output Power Results

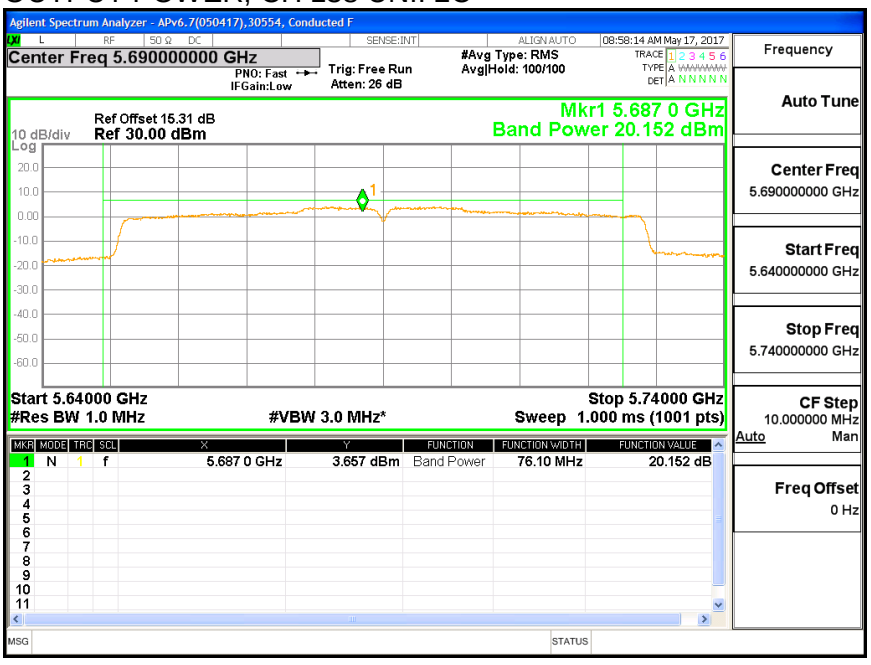
Channel	Frequency (MHz)	UAT 2 Meas Power (dBm)	LAT 3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	20.15	20.04	23.31	24.00	-0.69

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	3.99	4.06	7.23	11.00	-3.77

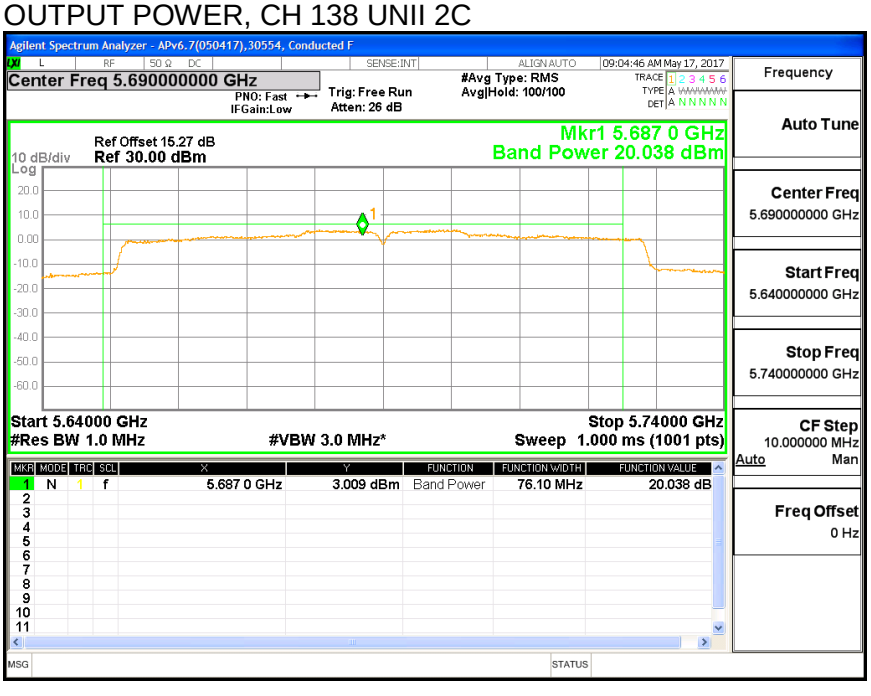
OUTPUT POWER, UAT 2

OUTPUT POWER, CH 138 UNII 2C



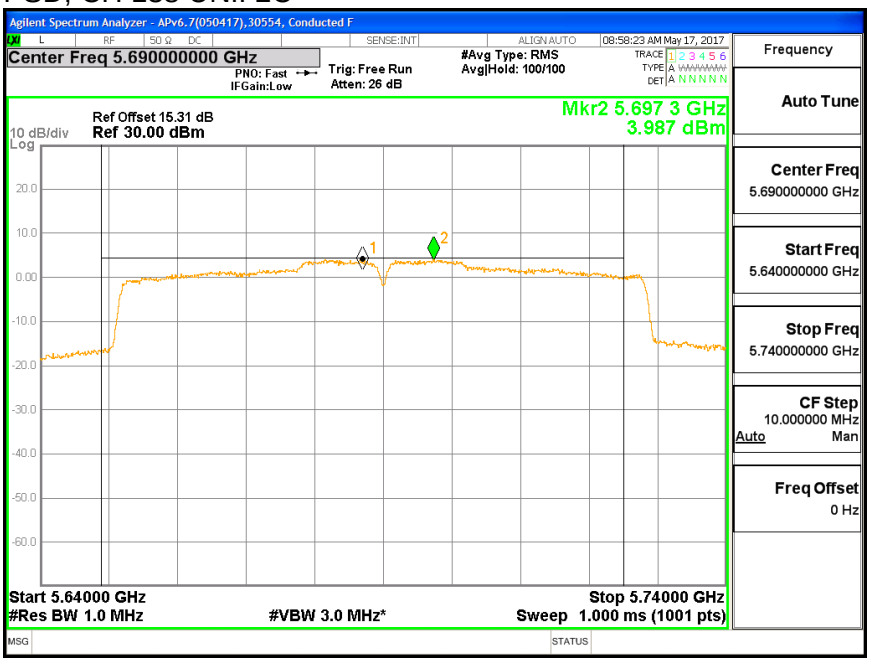
OUTPUT POWER, LAT 3

OUTPUT POWER, CH 138 UNII 2C



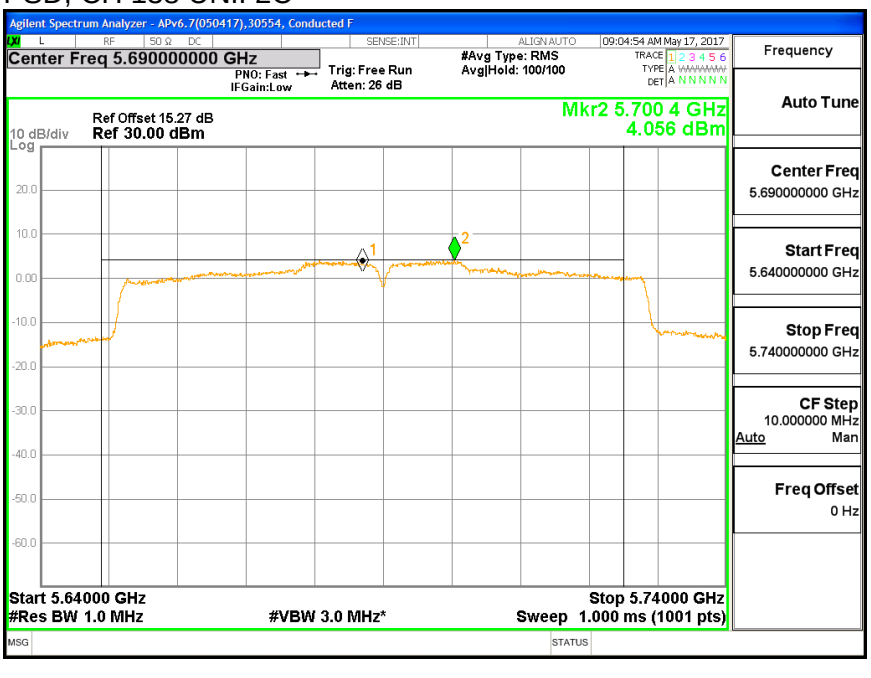
PSD, UAT 2

PSD, CH 138 UNII 2C



PSD, LAT 3

PSD, CH 138 UNII 2C



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)
-1.61	-0.15	-0.82

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)
-1.61	-0.15	2.16

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)
138	5690	82.20	-0.82	2.16	30.00	30.00

Duty Cycle CF (dB)	0.20	Included in Calculations of Corr'd Power & PSD

Output Power Results

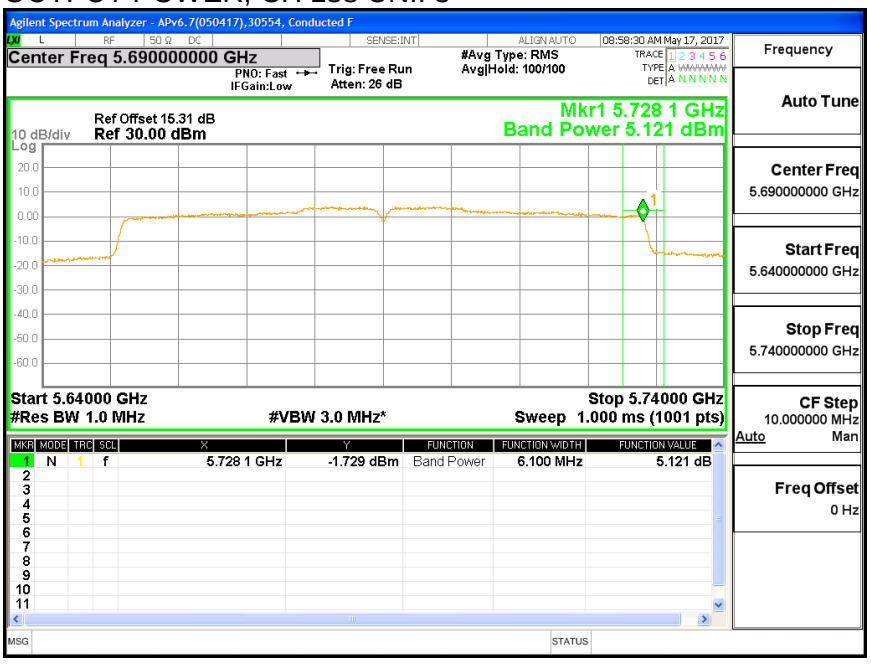
Channel	Frequency (MHz)	UAT 2 Meas Power (dBm)	LAT 3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	5.12	5.22	8.38	30.00	-21.62

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	-1.951	-2.306	1.085	30.00	-28.91

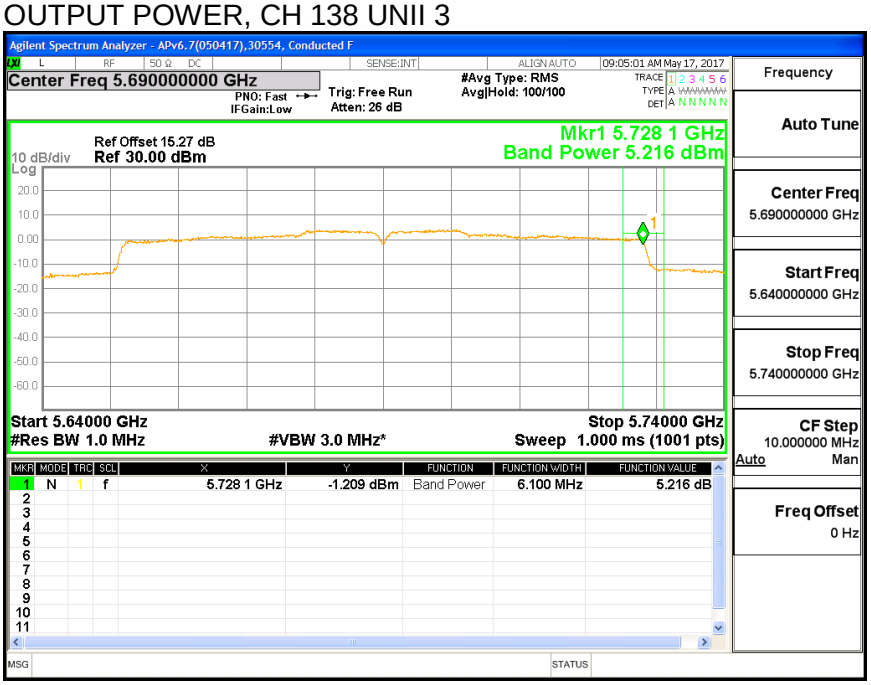
OUTPUT POWER, UAT 2

OUTPUT POWER, CH 138 UNII 3



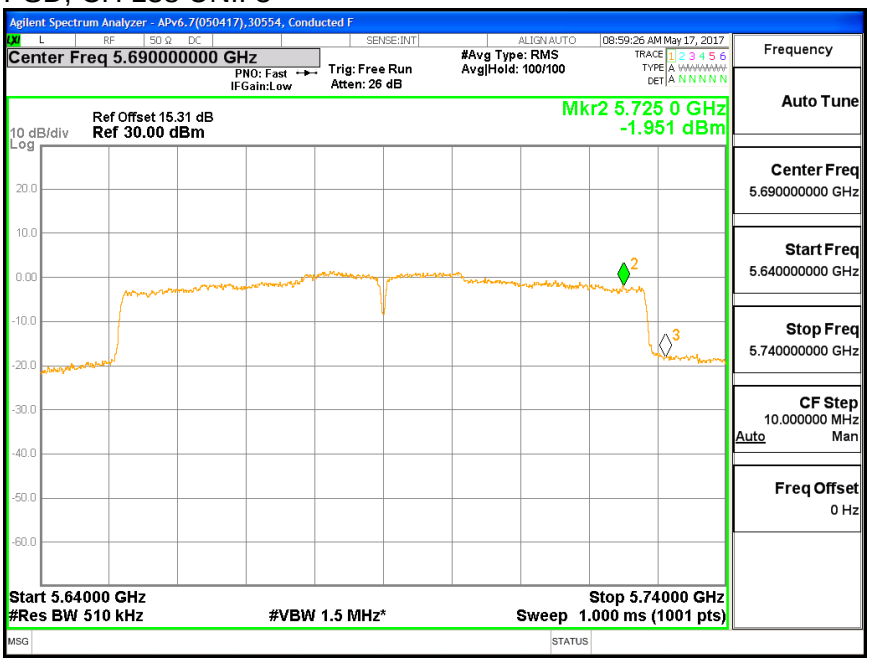
OUTPUT POWER, LAT 3

OUTPUT POWER, CH 138 UNII 3



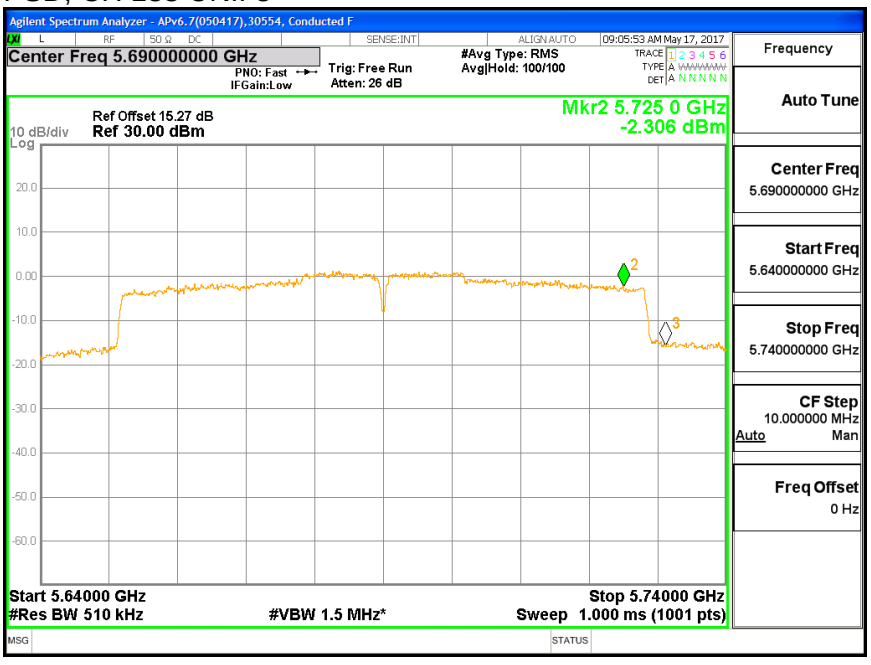
PSD, UAT 2

PSD, CH 138 UNII 3



PSD, LAT 3

PSD, CH 138 UNII 3



8.27.6. 6 dB BANDWIDTH

LIMITS

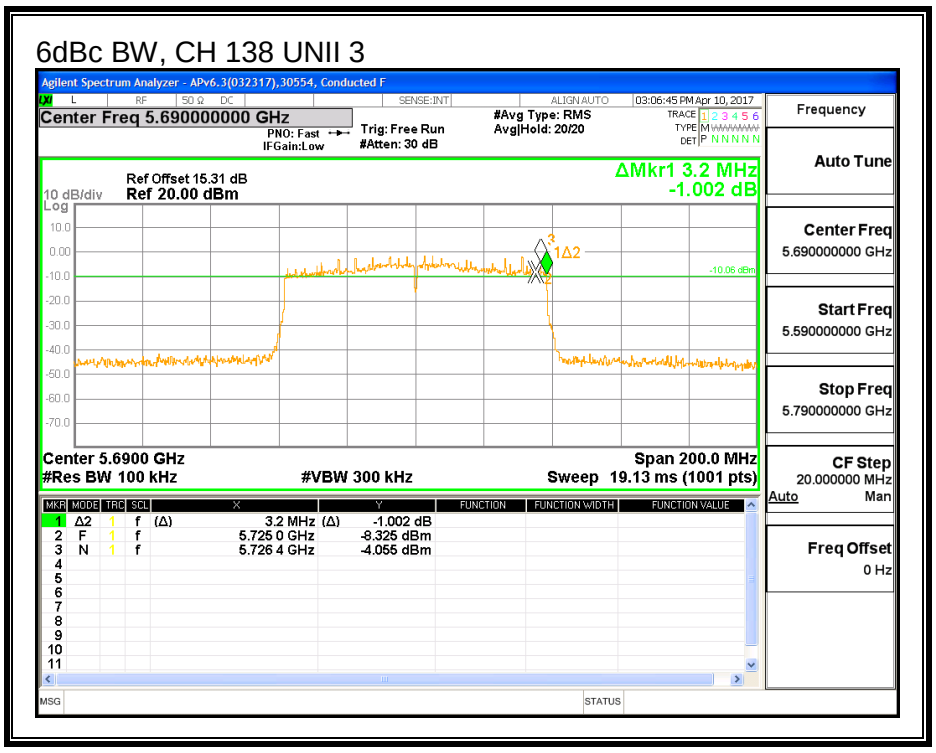
FCC §15.407 (e)

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

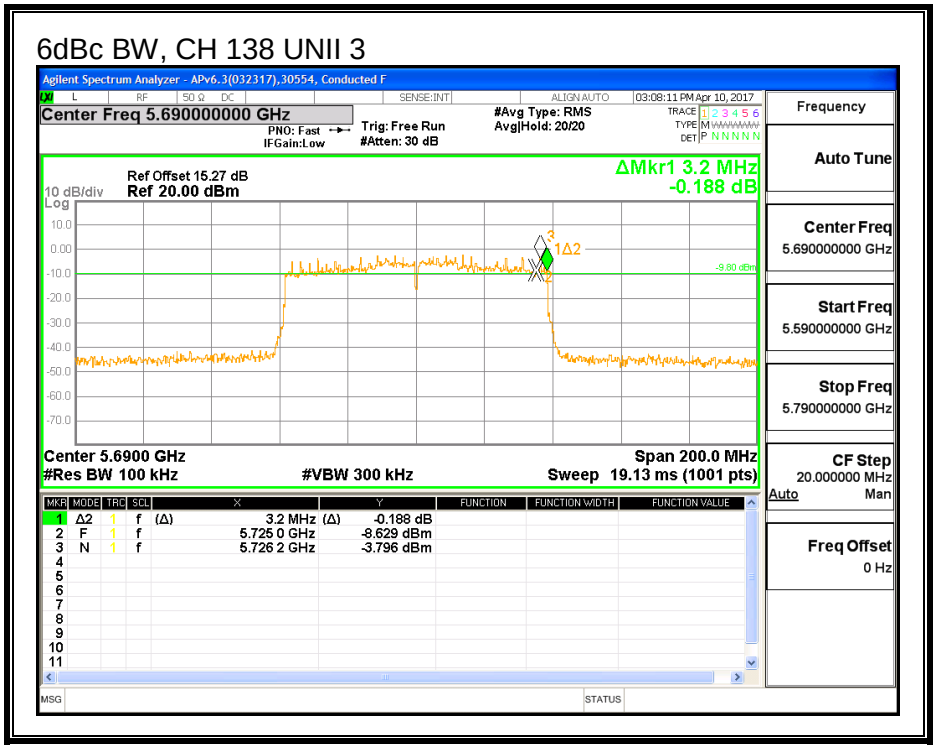
RESULTS

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

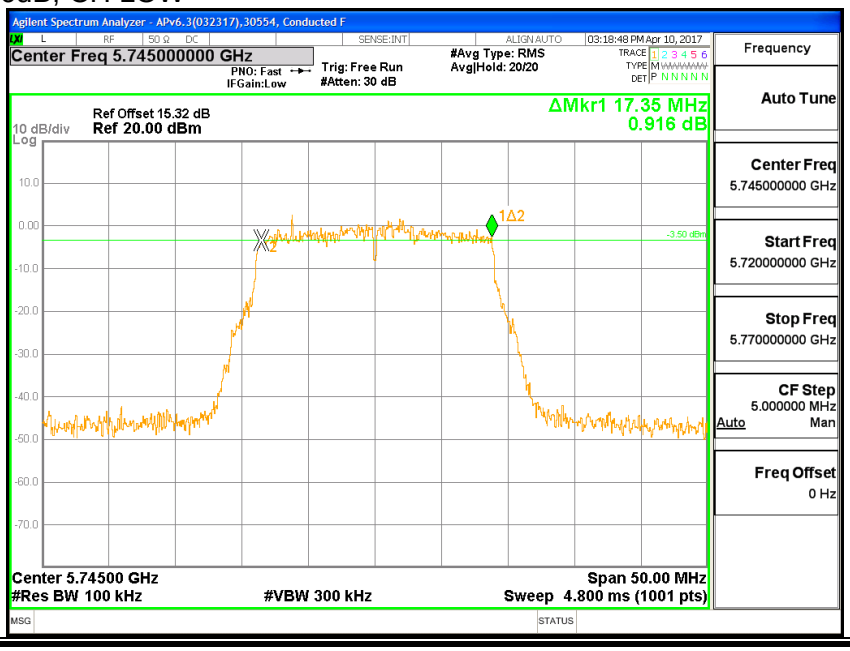
FCC §15.407 (e)

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

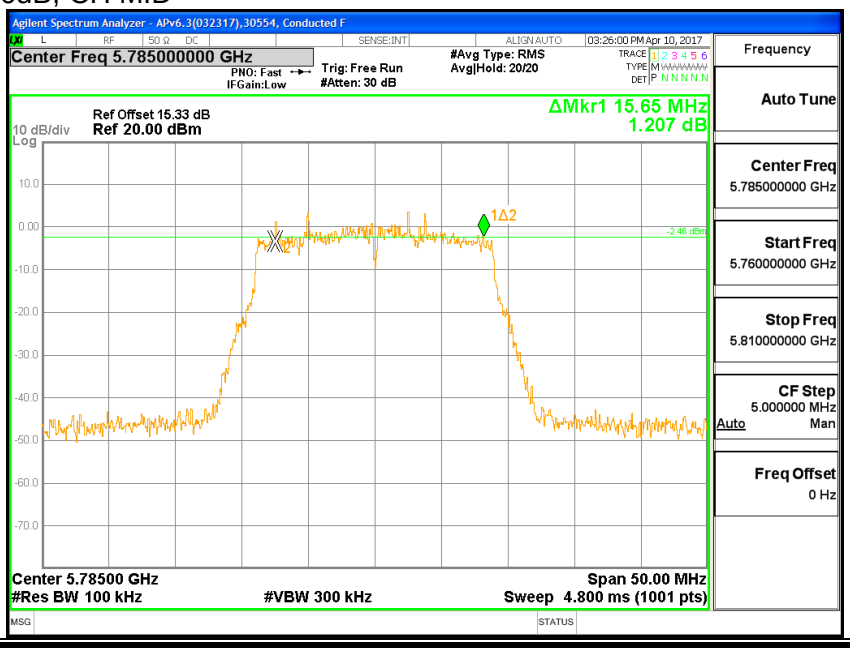
RESULTS

Channel	Frequency	6 dB BW UAT 2 (MHz)	Minimum Limit (MHz)
Low	5745	17.35	0.5
Mid	5785	15.65	0.5
High	5825	17.60	0.5

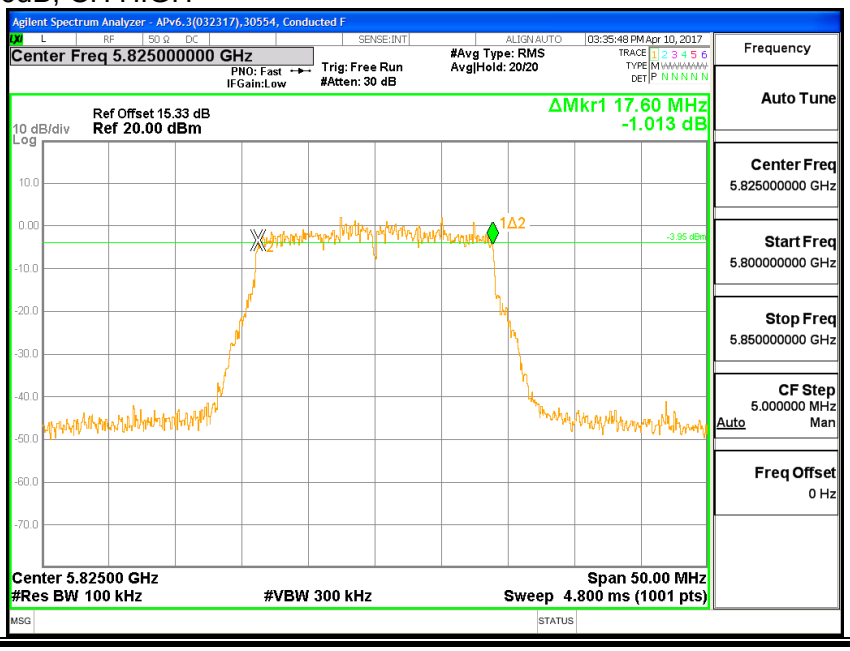
6dB, CH LOW



6dB, CH MID



6dB, CH HIGH



8.28.2. 26 dB BANDWIDTH

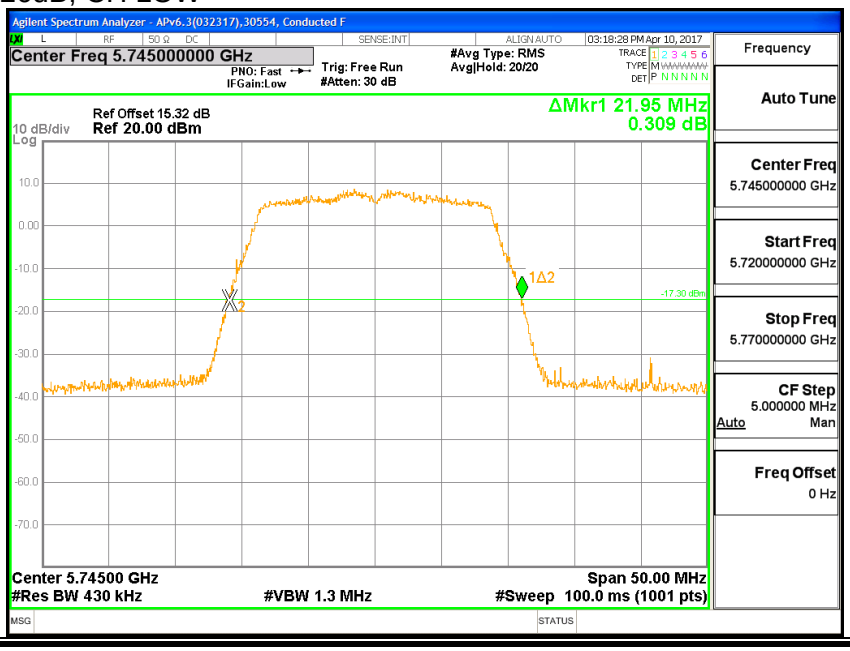
LIMITS

None; for reporting purposes only.

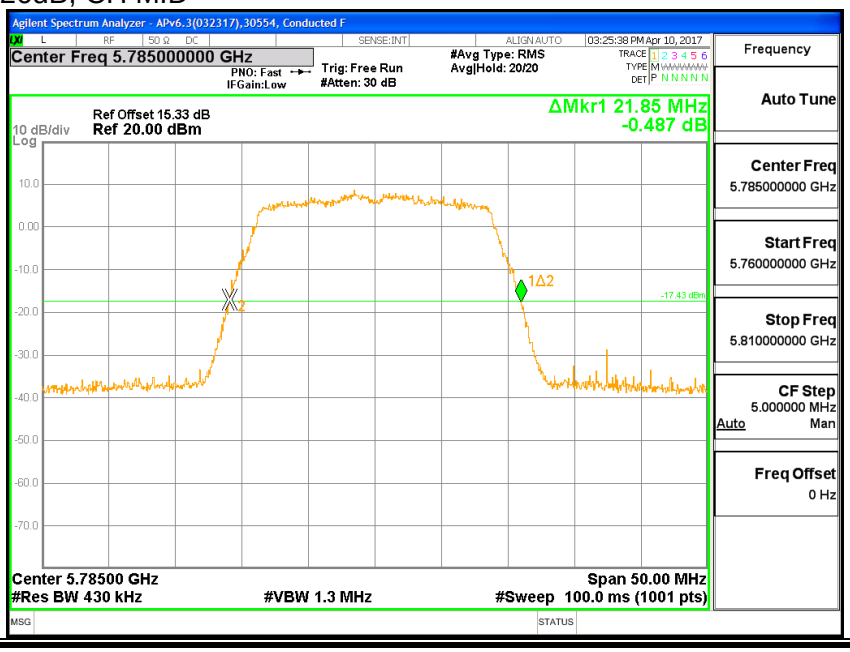
RESULTS

Channel	Frequency	26 dB BW UAT 2 (MHz)
Low	5745	21.95
Mid	5785	21.85
High	5825	21.90

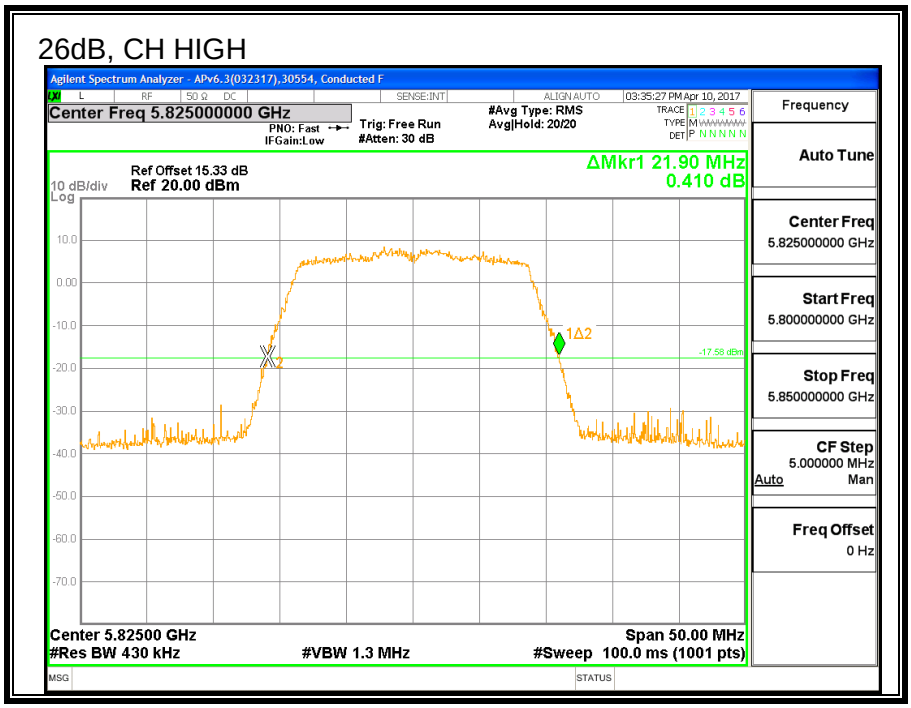
26dB, CH LOW



26dB, CH MID



26dB, CH HIGH



8.28.3. 99% BANDWIDTH

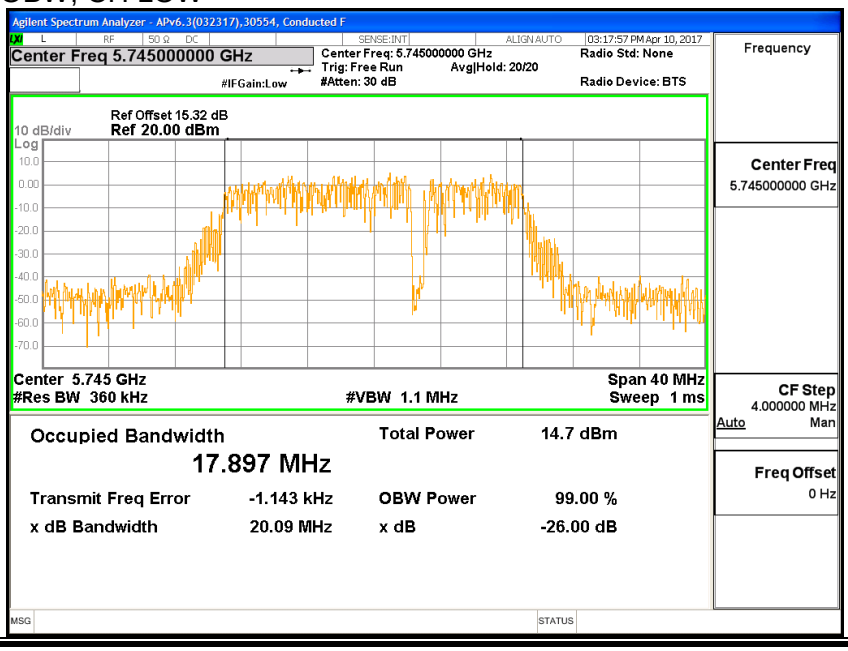
LIMITS

None; for reporting purposes only.

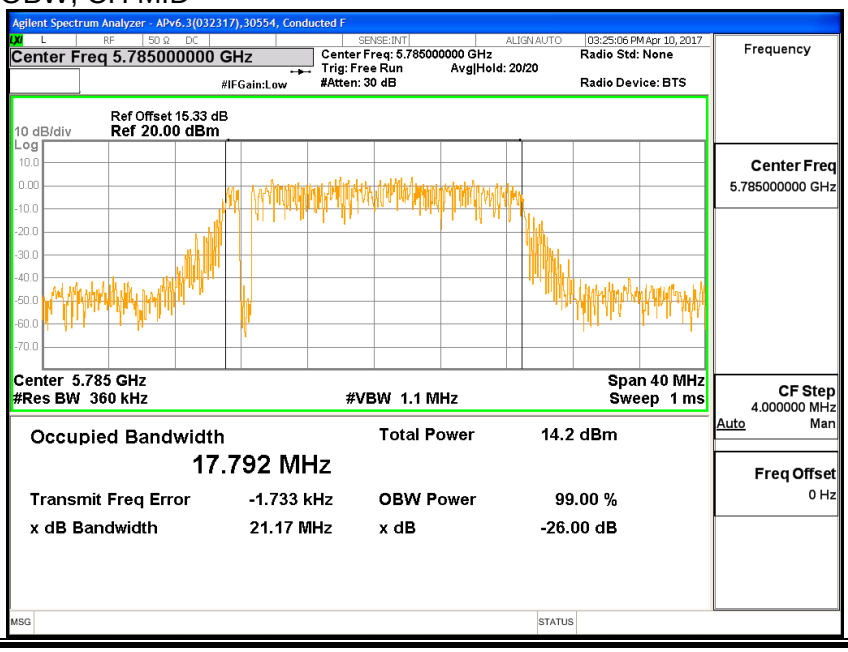
RESULTS

Channel	Frequency	99% BW UAT 2 (MHz)
Low	5745	17.897
Mid	5785	17.792
High	5825	17.637

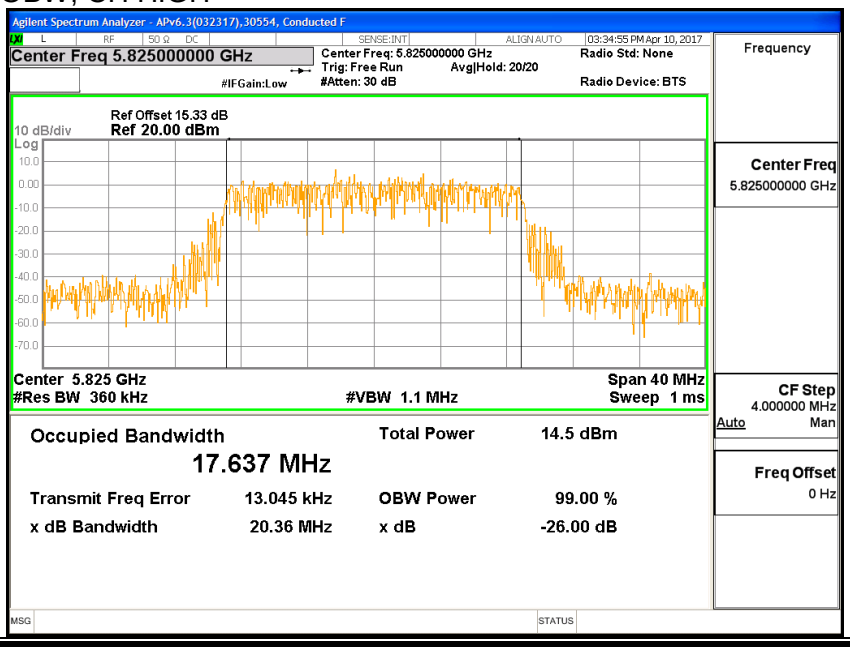
OBW, CH LOW



OBW, CH MID



OBW, CH HIGH



8.28.4. AVERAGE POWER

ID:	30554	Date:	7/13/2017

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	20.81
Mid	5785	20.77
High	5825	20.90

8.28.5. OUTPUT POWER

ID:	30554	Date:	7/13/2017

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	-1.61	30.00
Mid	5785	-1.61	30.00
High	5825	-1.61	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	20.81	20.81	30.00	-9.19
Mid	5785	20.77	20.77	30.00	-9.23
High	5825	20.90	20.90	30.00	-9.10

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

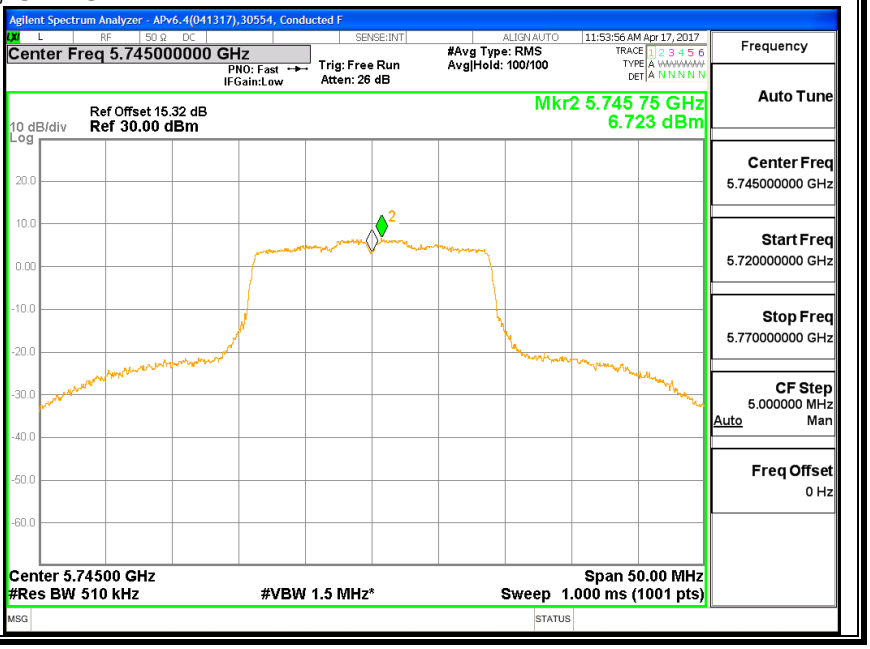
Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5745	-1.61	30.00
Mid	5785	-1.61	30.00
High	5825	-1.61	30.00

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

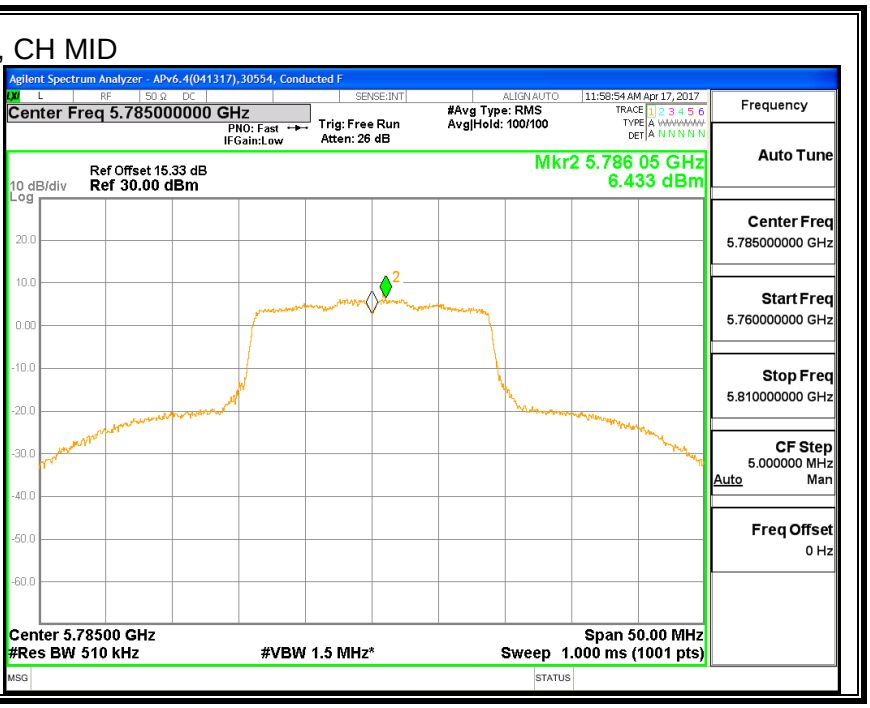
PSD Results

Channel	Frequency (MHz)	UAT 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5745	6.723	6.723	30.00	-23.28
Mid	5785	6.433	6.433	30.00	-23.57
High	5825	6.512	6.512	30.00	-23.49

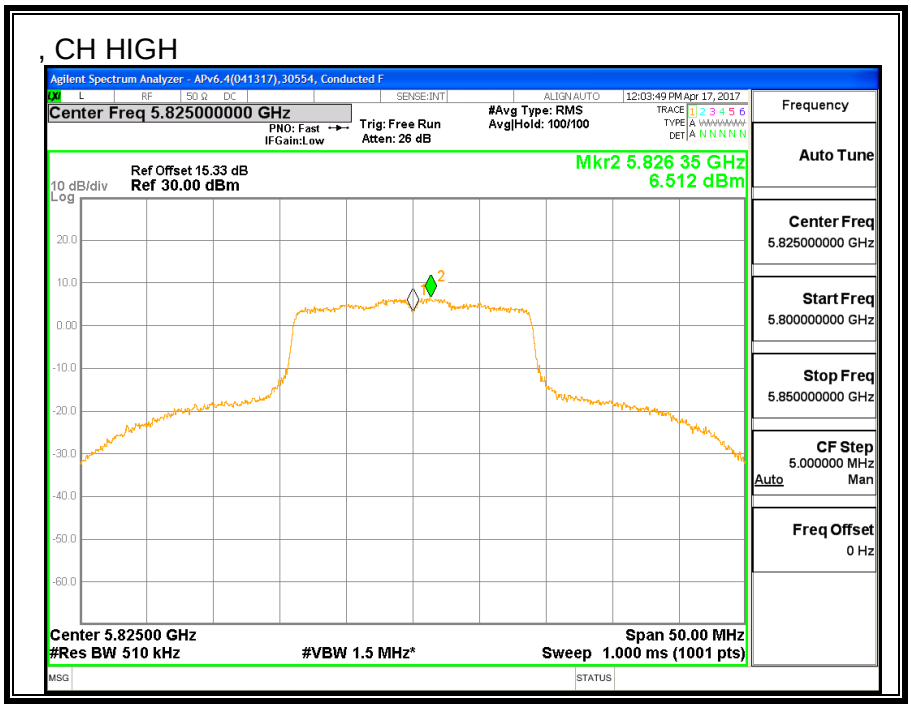
, CH LOW



, CH MID



, CH HIGH



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

8.29.1. 6 dB BANDWIDTH

LIMITS

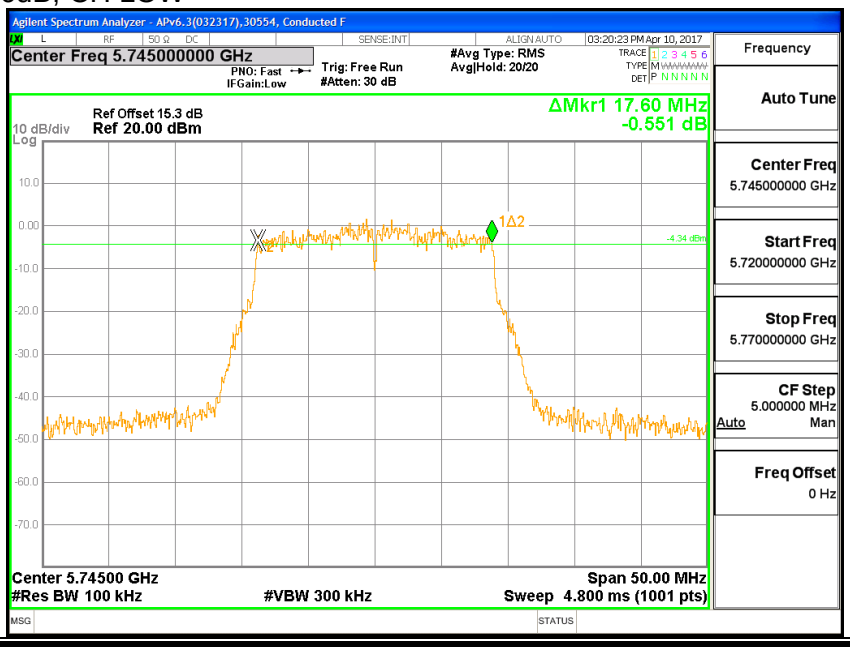
FCC §15.407 (e)

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

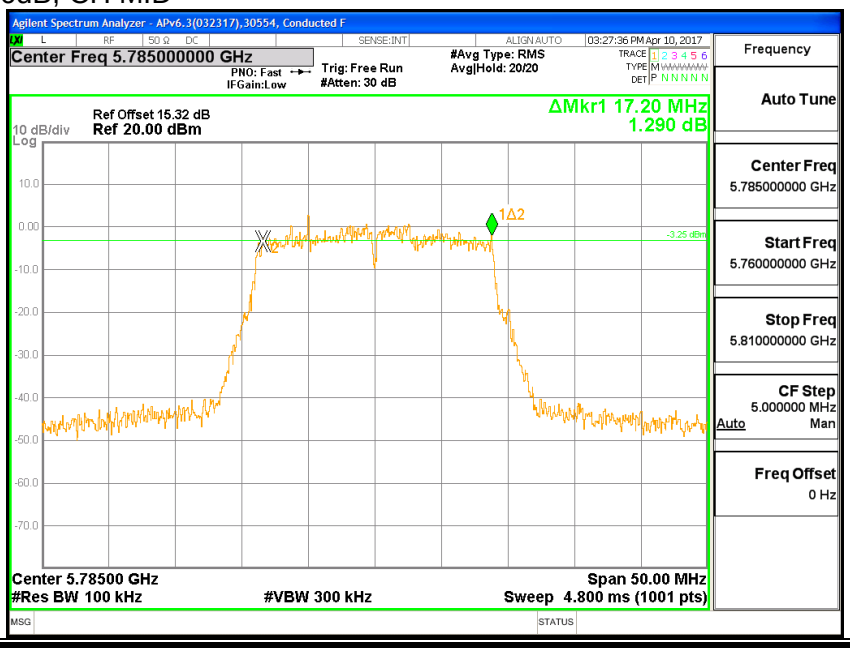
RESULTS

Channel	Frequency	6 dB BW LAT 3 (MHz)	Minimum Limit (MHz)
Low	5745	17.60	0.5
Mid	5785	17.20	0.5
High	5825	16.75	0.5

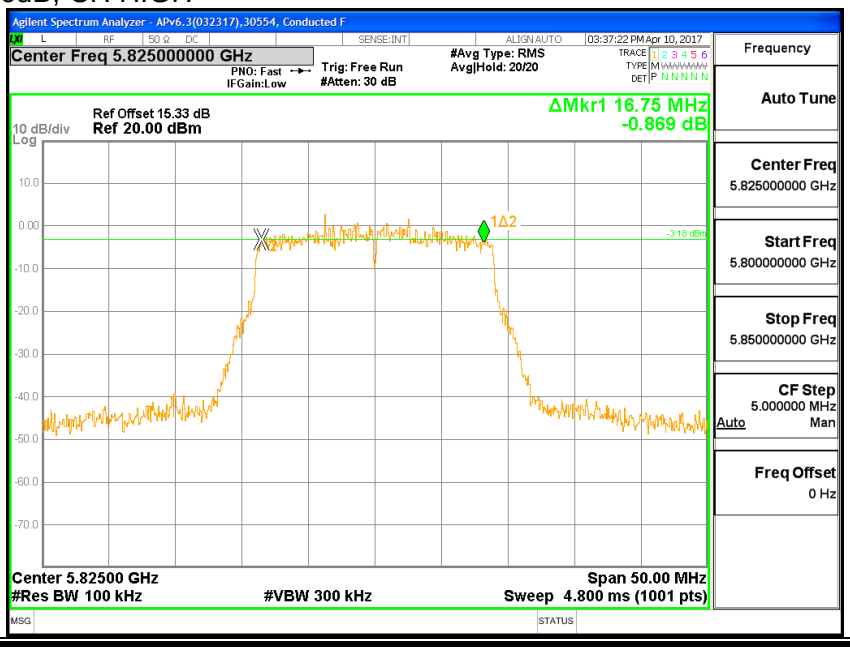
6dB, CH LOW



6dB, CH MID



6dB, CH HIGH



8.29.2. 26 dB BANDWIDTH

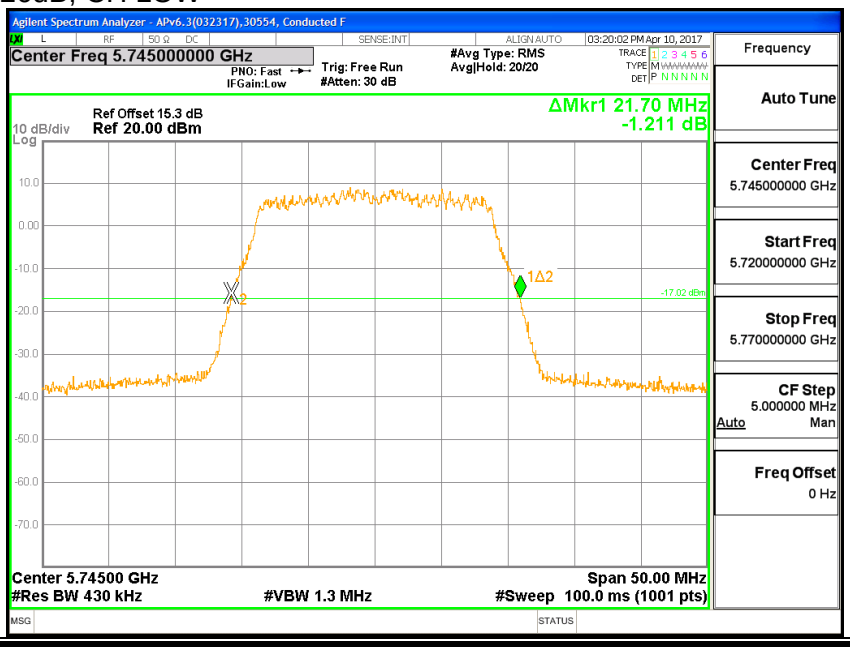
LIMITS

None; for reporting purposes only.

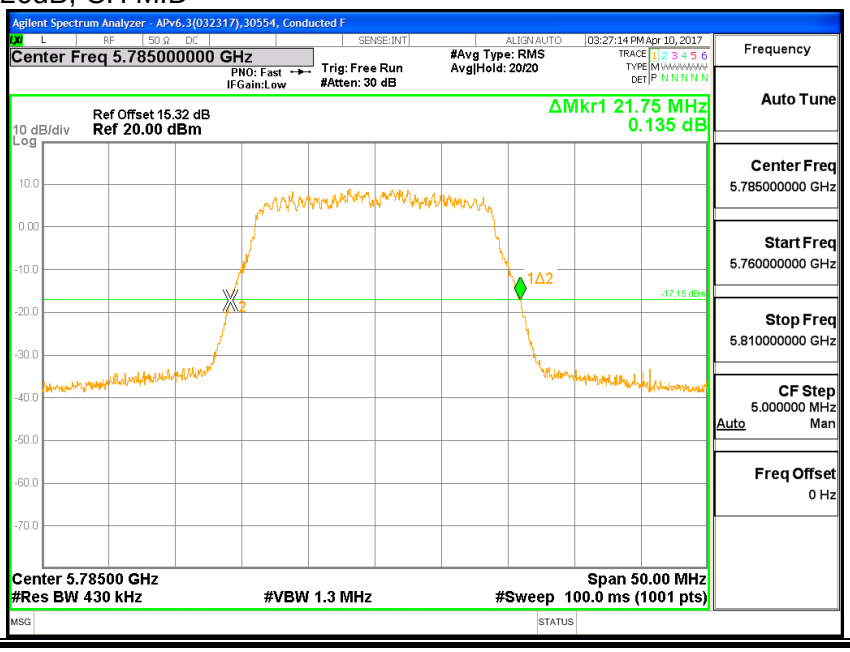
RESULTS

Channel	Frequency	26 dB BW LAT 3 (MHz)
Low	5745	21.70
Mid	5785	21.75
High	5825	21.65

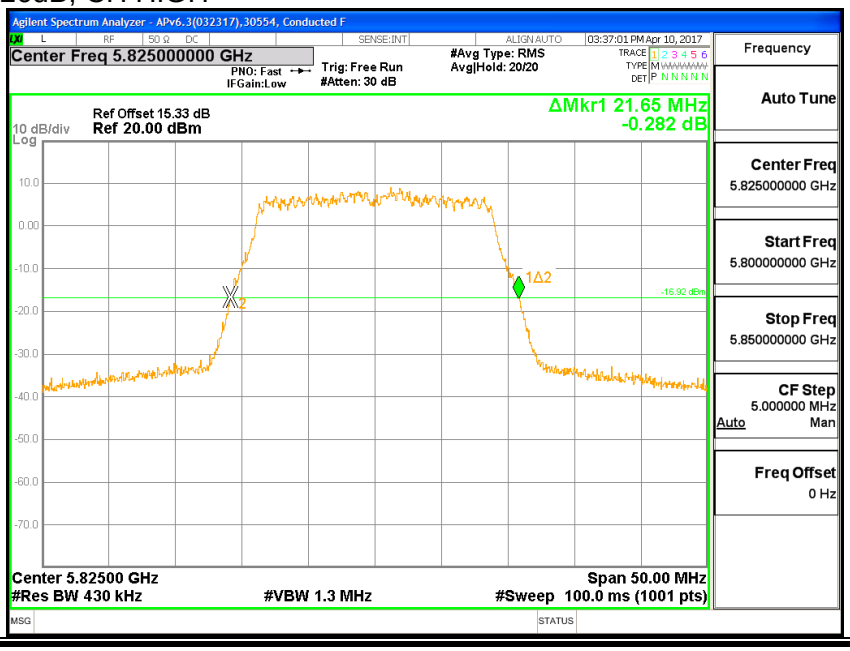
26dB, CH LOW



26dB, CH MID



26dB, CH HIGH



8.29.3. 99% BANDWIDTH

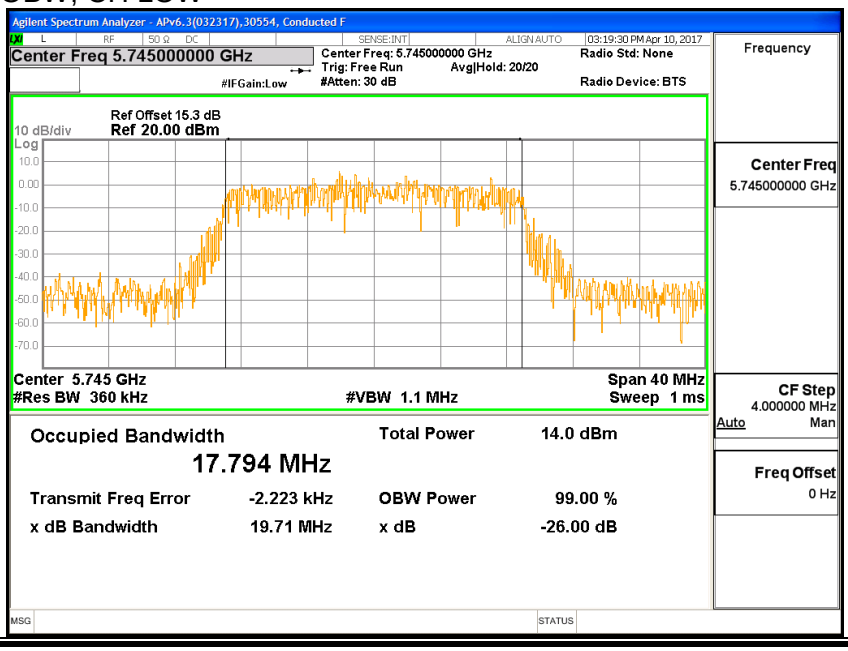
LIMITS

None; for reporting purposes only.

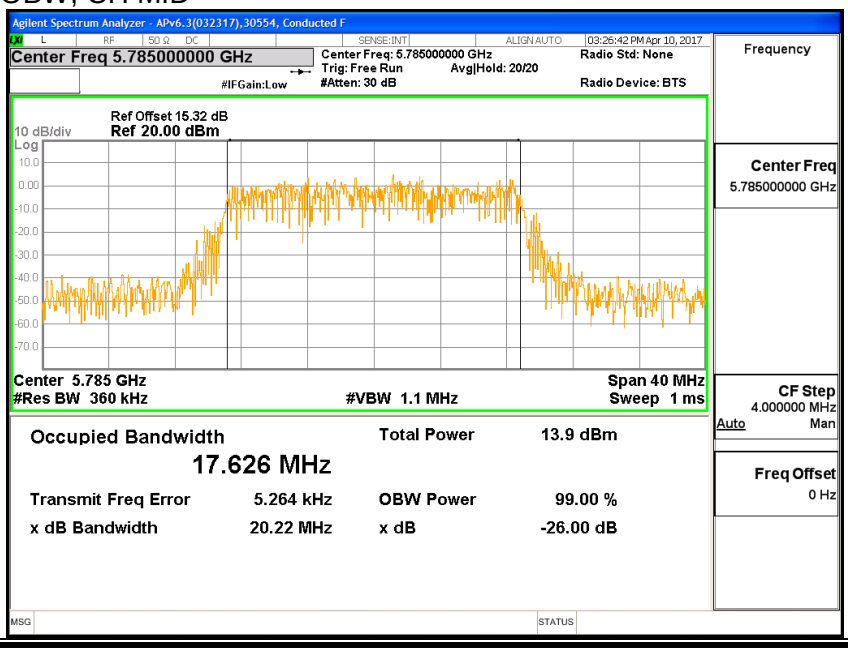
RESULTS

Channel	Frequency	99% BW LAT 3 (MHz)
Low	5745	17.794
Mid	5785	17.626
High	5825	17.692

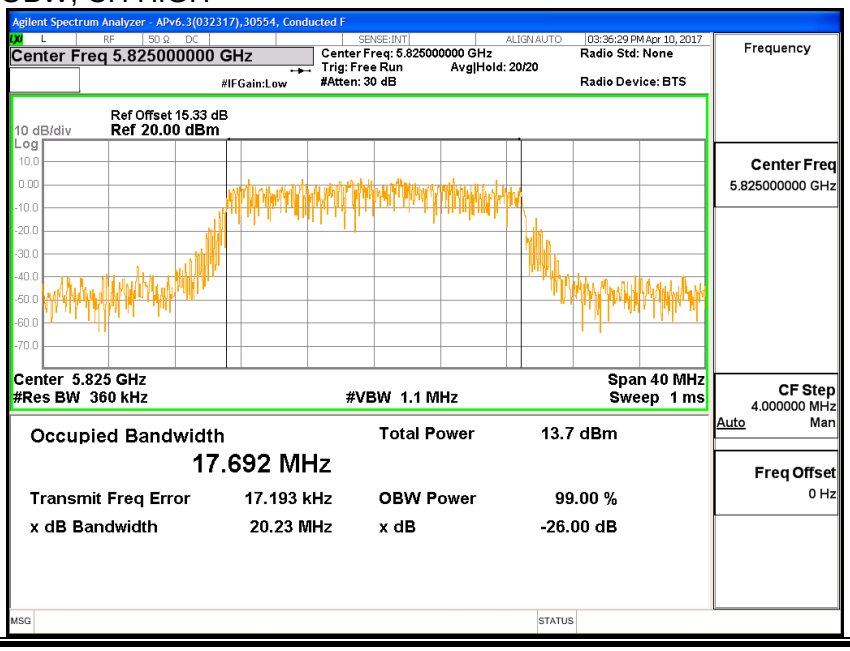
OBW, CH LOW



OBW, CH MID



OBW, CH HIGH



8.29.4. AVERAGE POWER

ID:	30554	Date:	7/13/2017

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	20.77
Mid	5785	20.94
High	5825	20.89

8.29.5. OUTPUT POWER

ID:	30554	Date:	7/13/2017

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	-0.15	30.00
Mid	5785	-0.15	30.00
High	5825	-0.15	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	20.77	20.77	30.00	-9.23
Mid	5785	20.94	20.94	30.00	-9.06
High	5825	20.89	20.89	30.00	-9.11

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

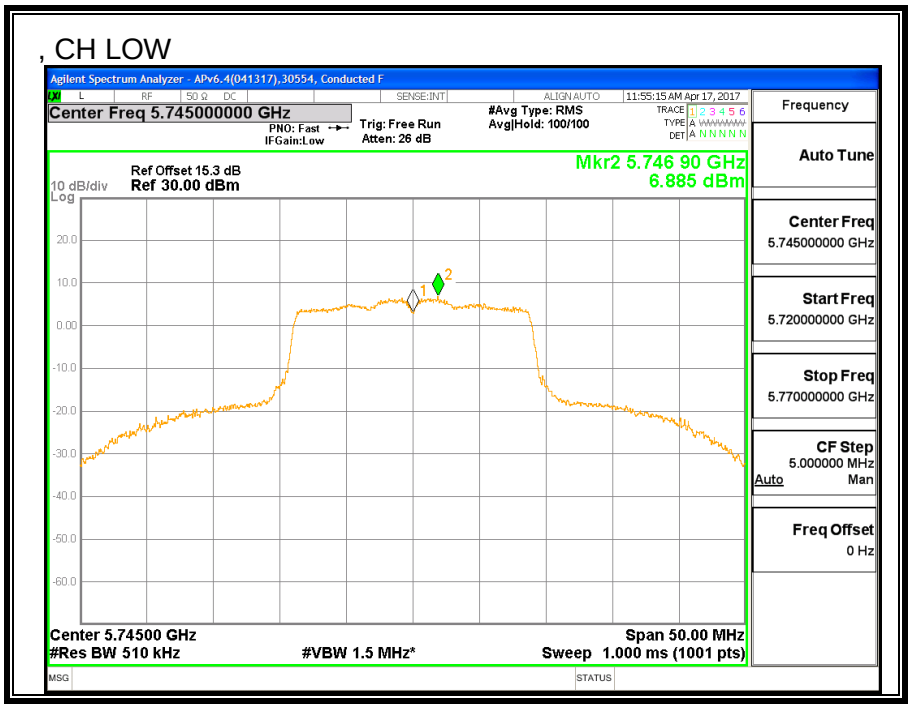
Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5745	-0.15	30.00
Mid	5785	-0.15	30.00
High	5825	-0.15	30.00

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

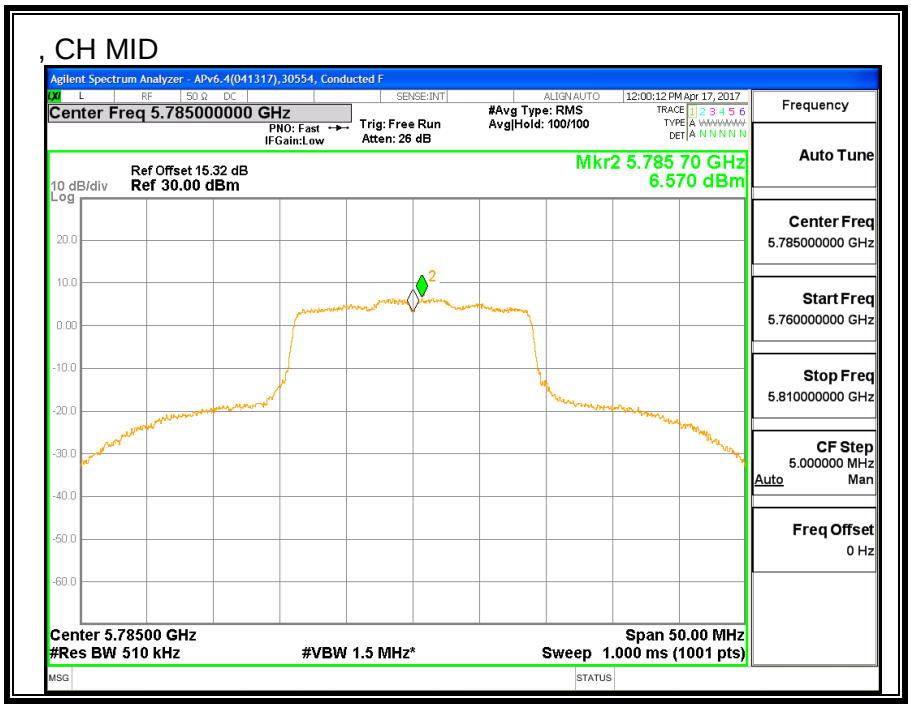
PSD Results

Channel	Frequency (MHz)	LAT 3 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5745	6.885	6.885	30.00	-23.12
Mid	5785	6.570	6.570	30.00	-23.43
High	5825	6.570	6.570	30.00	-23.43

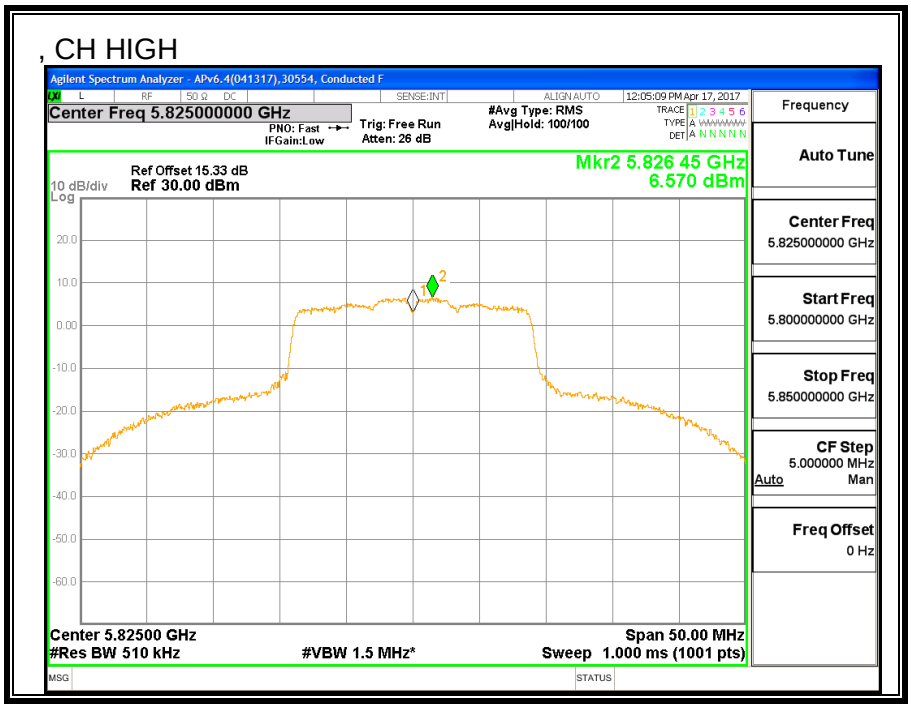
, CH LOW



, CH MID



, CH HIGH



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

8.30.1. 6 dB BANDWIDTH

LIMITS

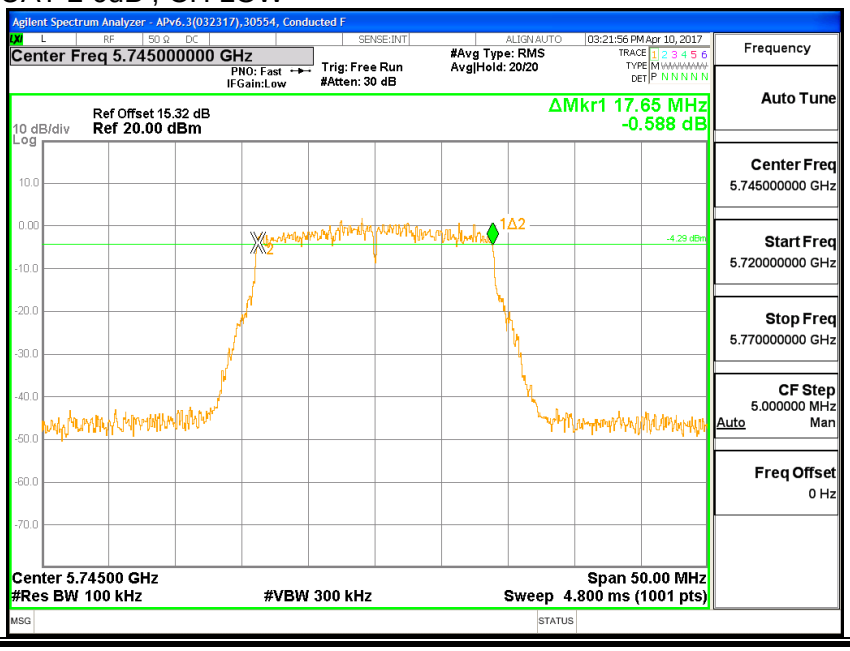
FCC §15.407 (e)

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

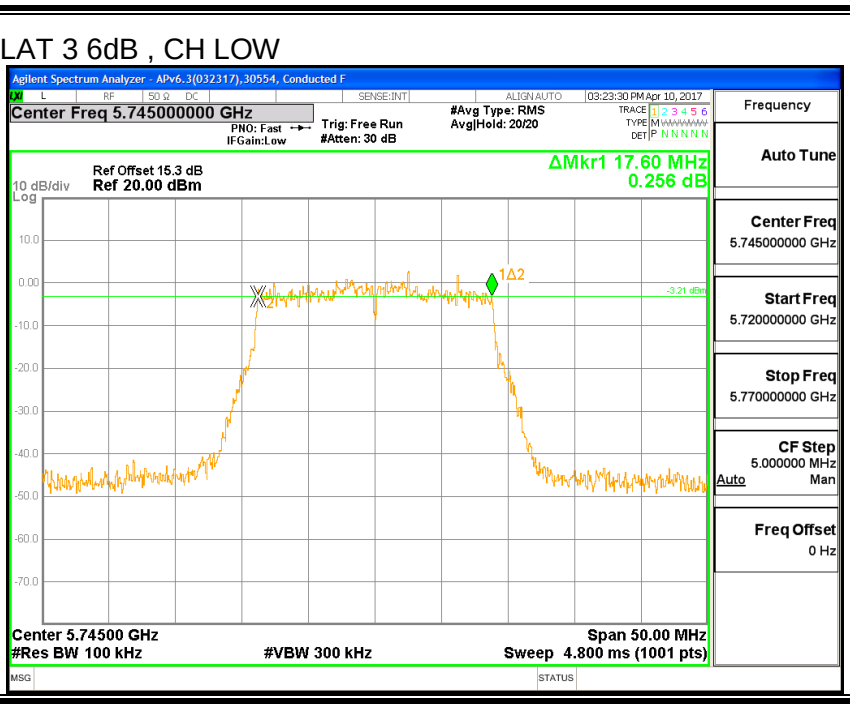
RESULTS

Channel	Frequency	6 dB BW UAT 2 (MHz)	6 dB BW LAT 3 (MHz)	Minimum Limit (MHz)
Low	5745	17.65	17.60	0.5
Mid	5785	17.55	17.60	0.5
High	5825	16.95	17.65	0.5

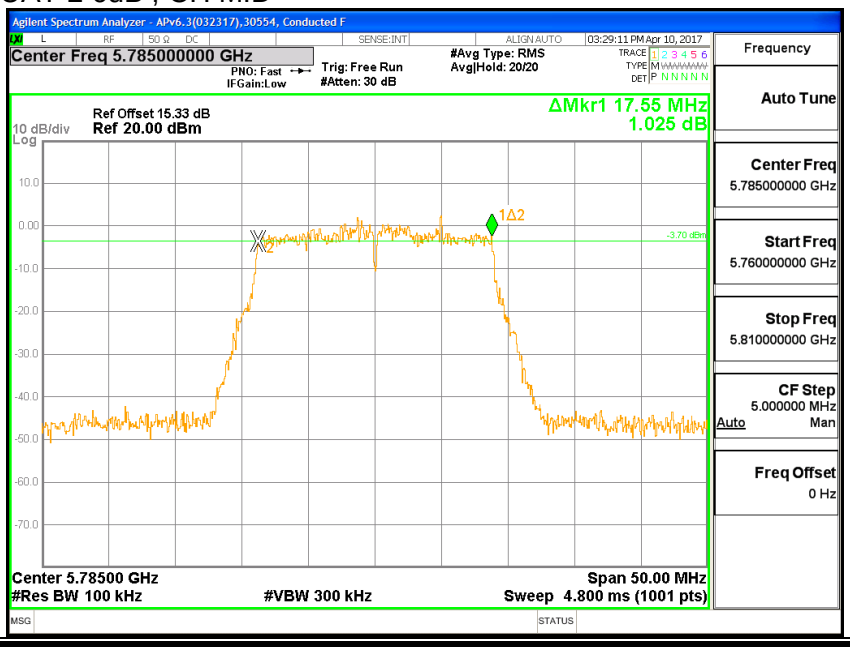
UAT 2 6dB , CH LOW



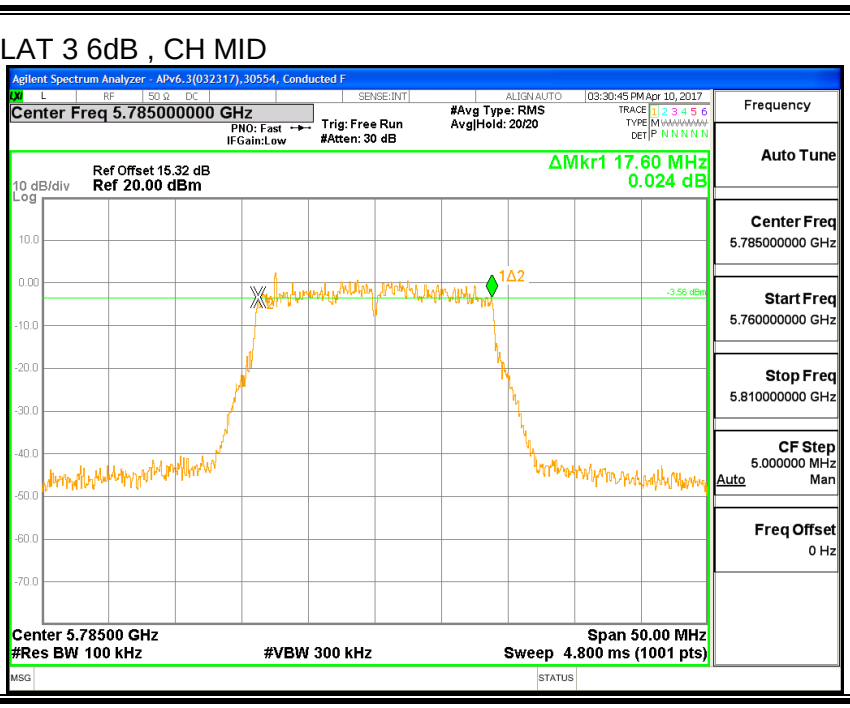
LAT 3 6dB , CH LOW



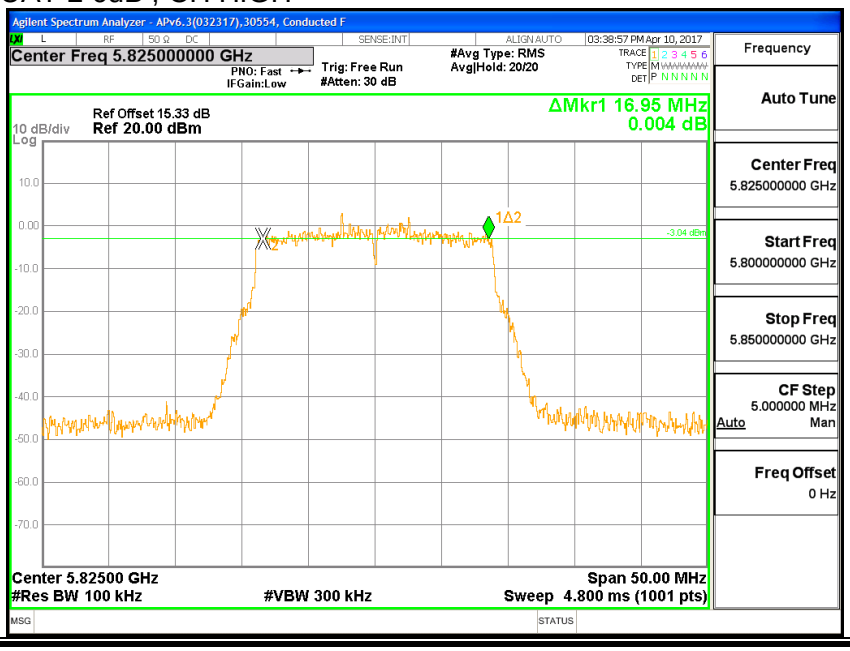
UAT 2 6dB , CH MID



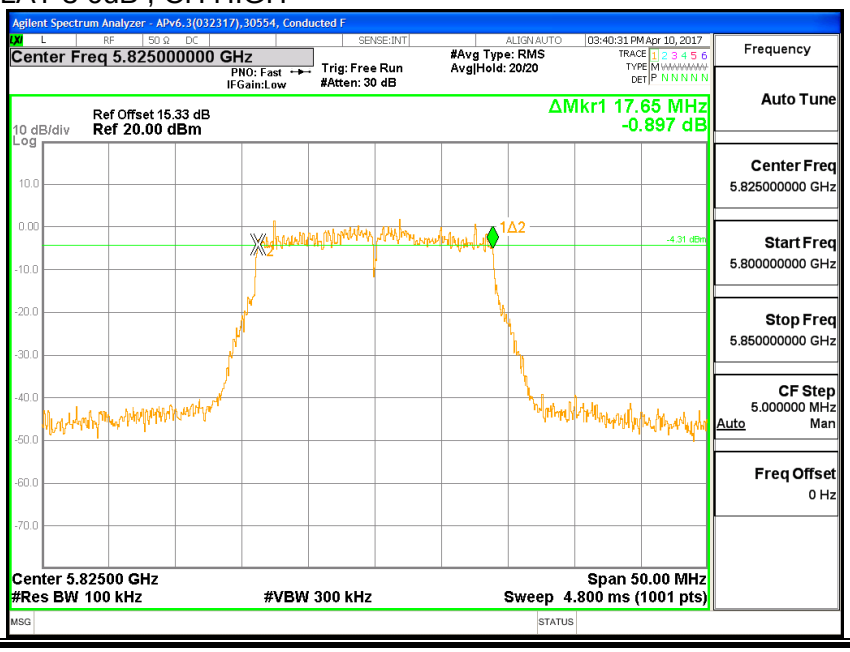
LAT 3 6dB , CH MID



UAT 2 6dB , CH HIGH



LAT 3 6dB , CH HIGH



8.30.2. 26 dB BANDWIDTH

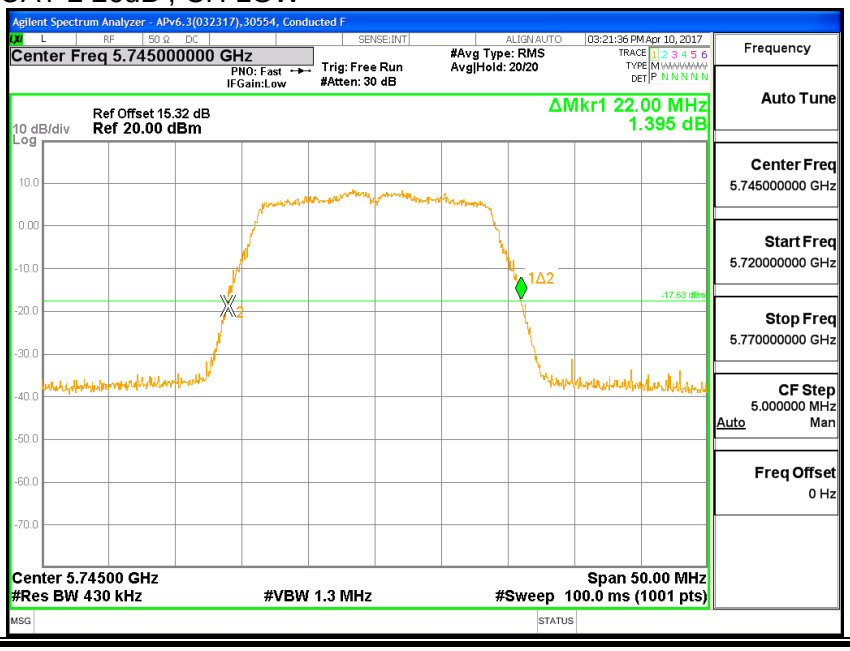
LIMITS

None; for reporting purposes only.

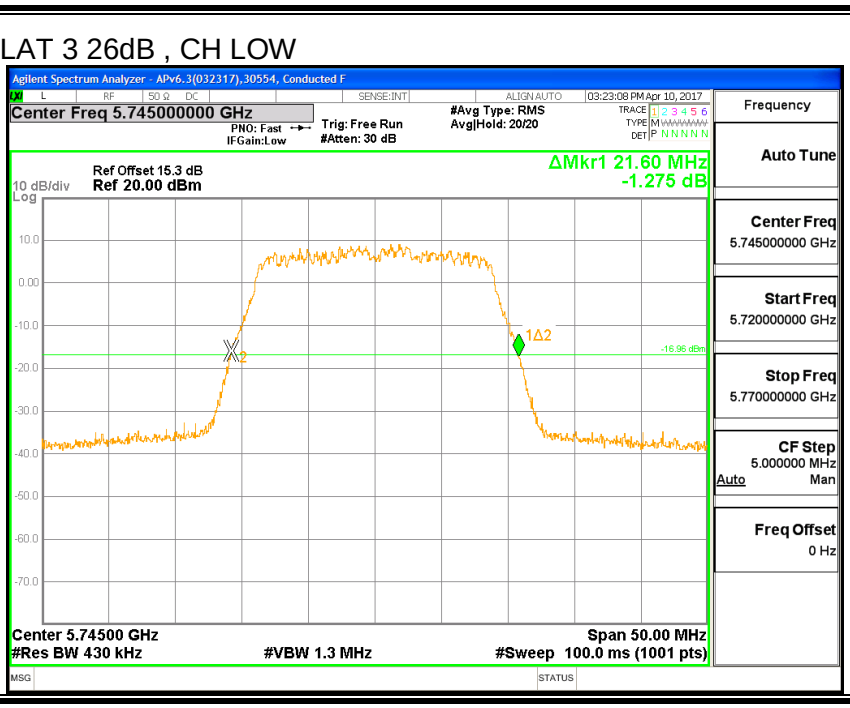
RESULTS

Channel	Frequency	26 dB BW UAT 2 (MHz)	26 dB BW LAT 3 (MHz)
Low	5745	22.00	21.60
Mid	5785	21.85	21.50
High	5825	21.95	21.65

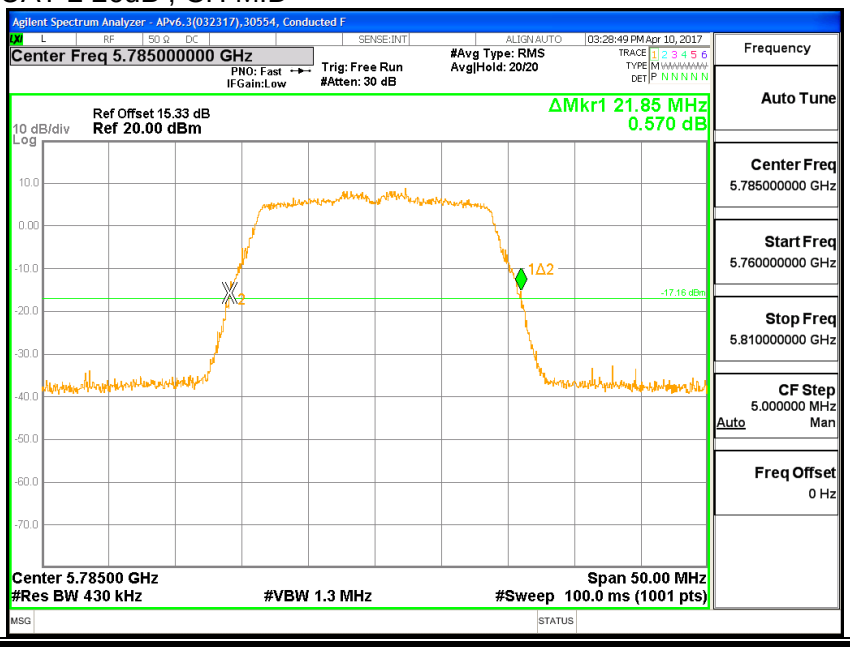
UAT 2 26dB , CH LOW



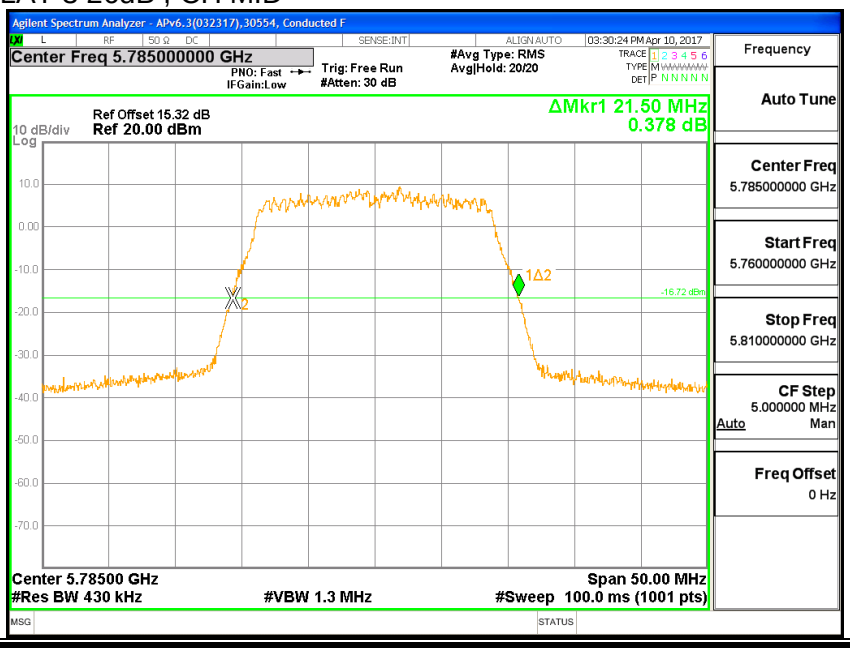
LAT 3 26dB , CH LOW



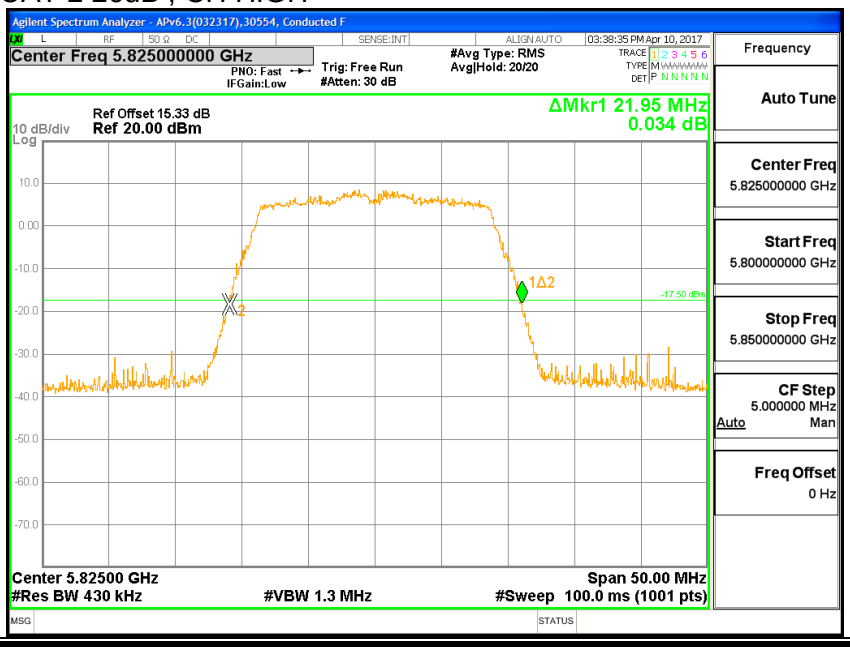
UAT 2 26dB , CH MID



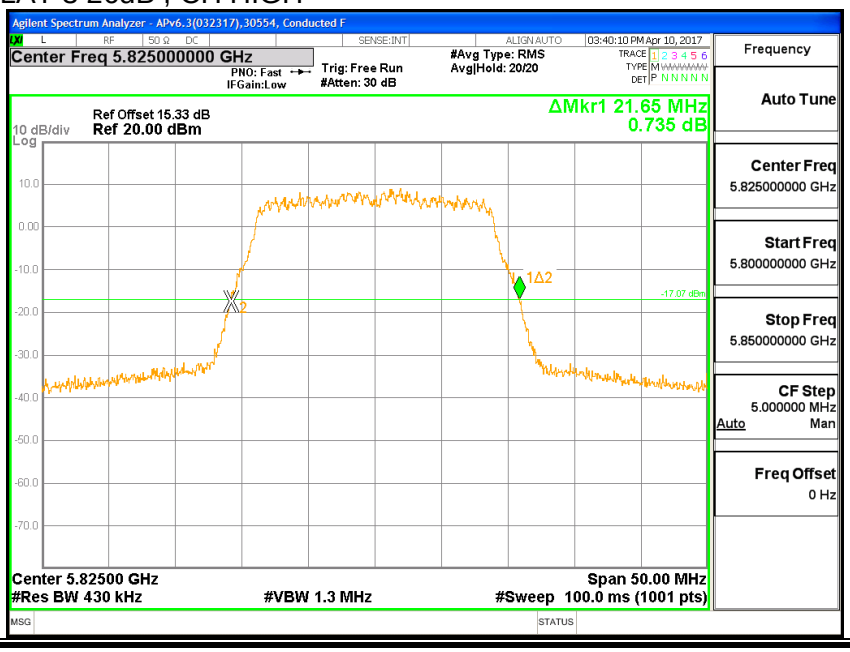
LAT 3 26dB , CH MID



UAT 2 26dB , CH HIGH



LAT 3 26dB , CH HIGH



8.30.3. 99% BANDWIDTH

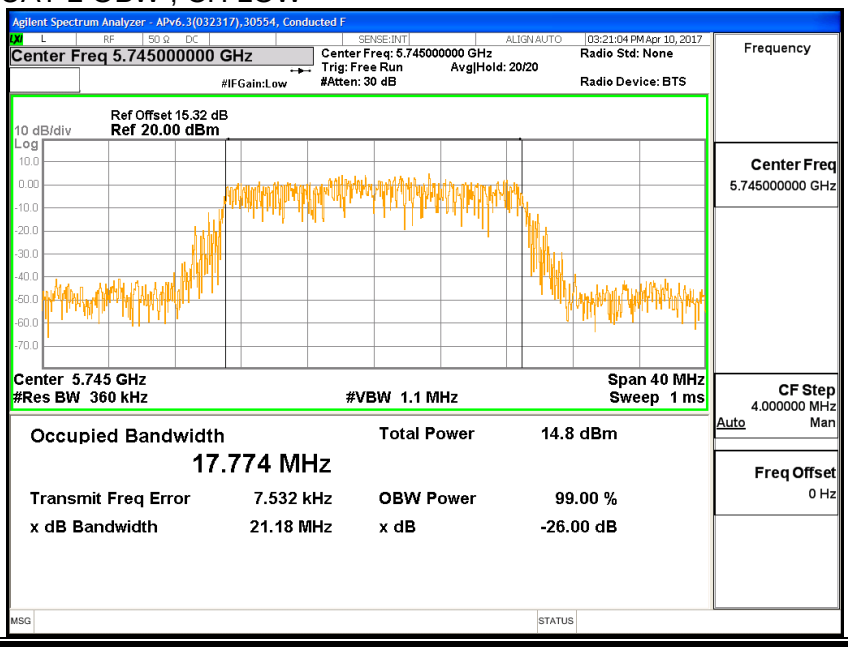
LIMITS

None; for reporting purposes only.

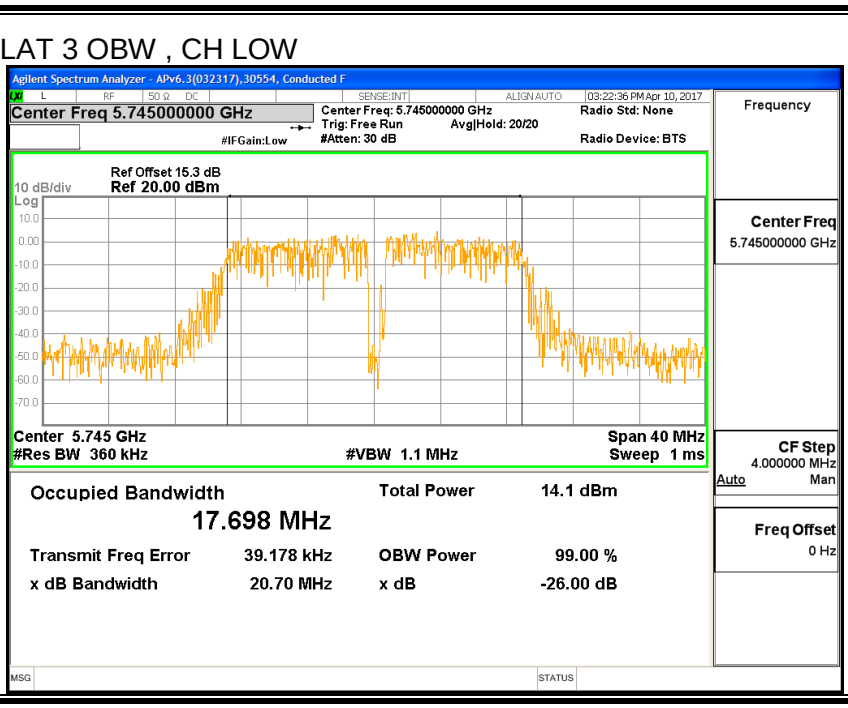
RESULTS

Channel	Frequency	99% BW UAT 2 (MHz)	99% BW LAT 3 (MHz)
Low	5745	17.774	17.698
Mid	5785	17.695	17.685
High	5825	17.839	17.803

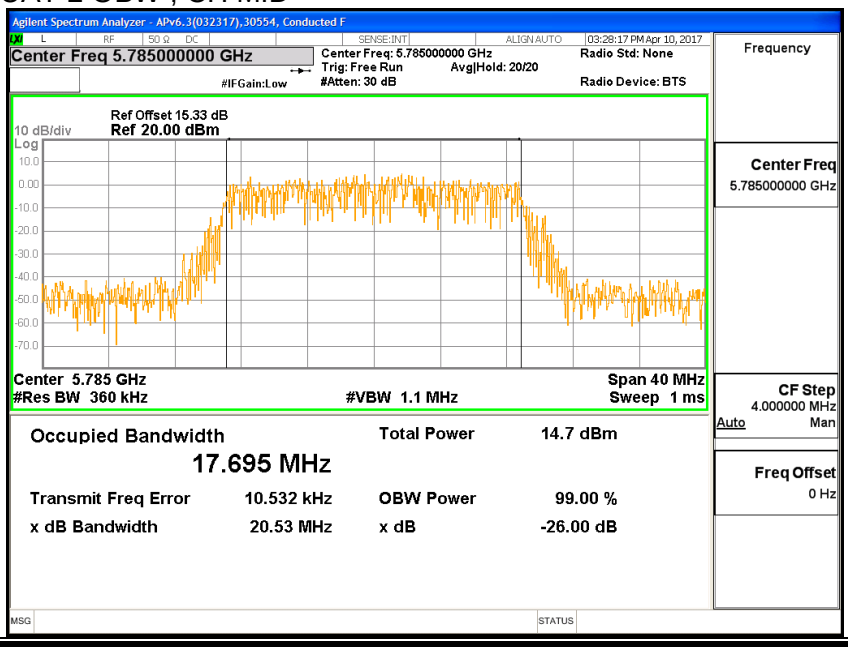
UAT 2 OBW , CH LOW



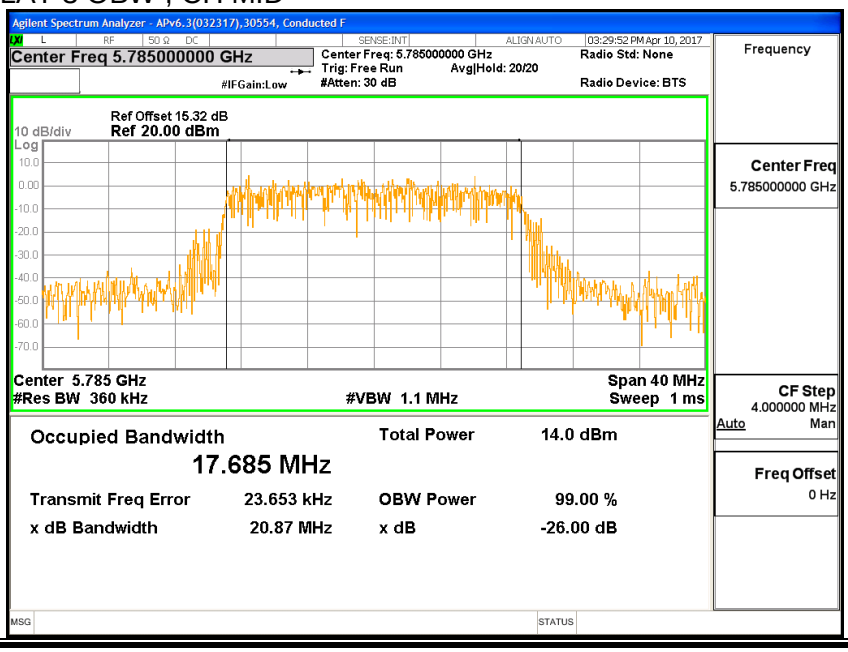
LAT 3 OBW , CH LOW



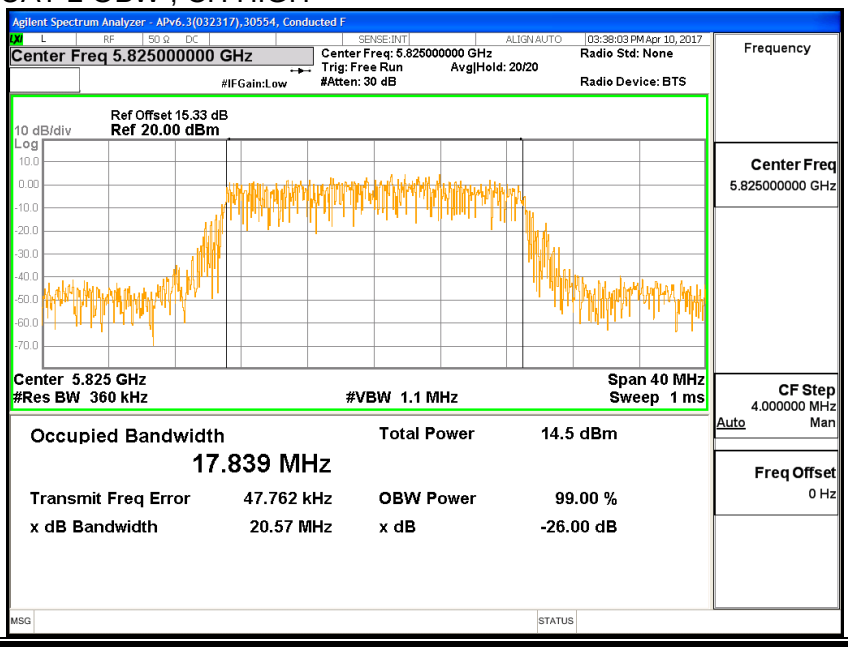
UAT 2 OBW , CH MID



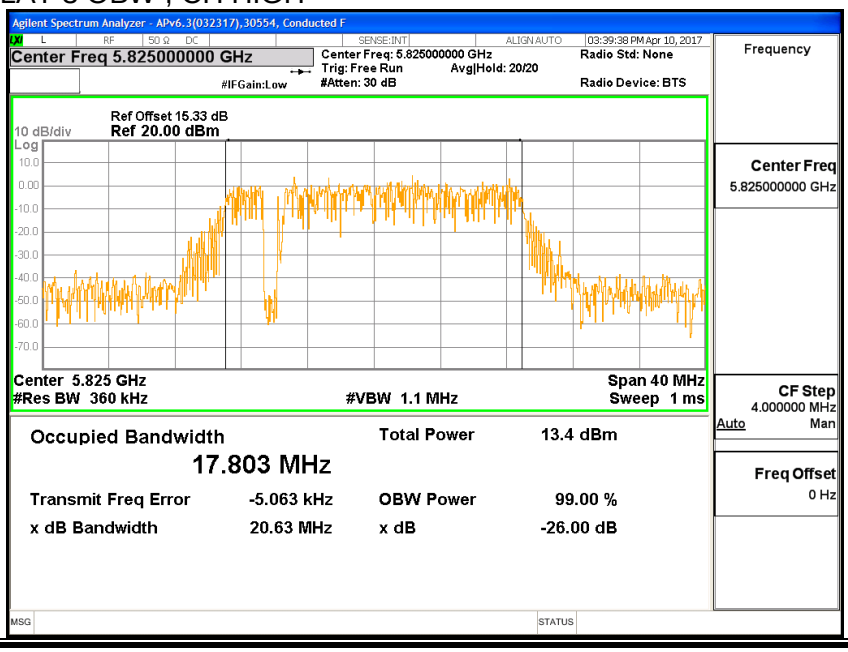
LAT 3 OBW , CH MID



UAT 2 OBW , CH HIGH



LAT 3 OBW , CH HIGH



8.30.4. AVERAGE POWER

ID:	30554	Date:	7/13/2017

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	20.83	20.94	23.90
Mid	5785	20.89	20.85	23.88
High	5825	20.78	20.91	23.86

8.30.5. OUTPUT POWER

ID:	30554	Date:	7/13/2017

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

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

Antenna Gain (dBi)	Antenna Gain (dBi)	Directional Gain (dBi)
-1.61	-0.15	-0.82

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Power Limit (dBm)
Low	5745	-0.82	30.00
Mid	5785	-0.82	30.00
High	5825	-0.82	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	20.83	20.94	23.90	30.00	-6.10
Mid	5785	20.89	20.85	23.88	30.00	-6.12
High	5825	20.78	20.91	23.86	30.00	-6.14

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

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)
-1.61	-0.15	2.16

RESULTS

Antenna Gain and Limits

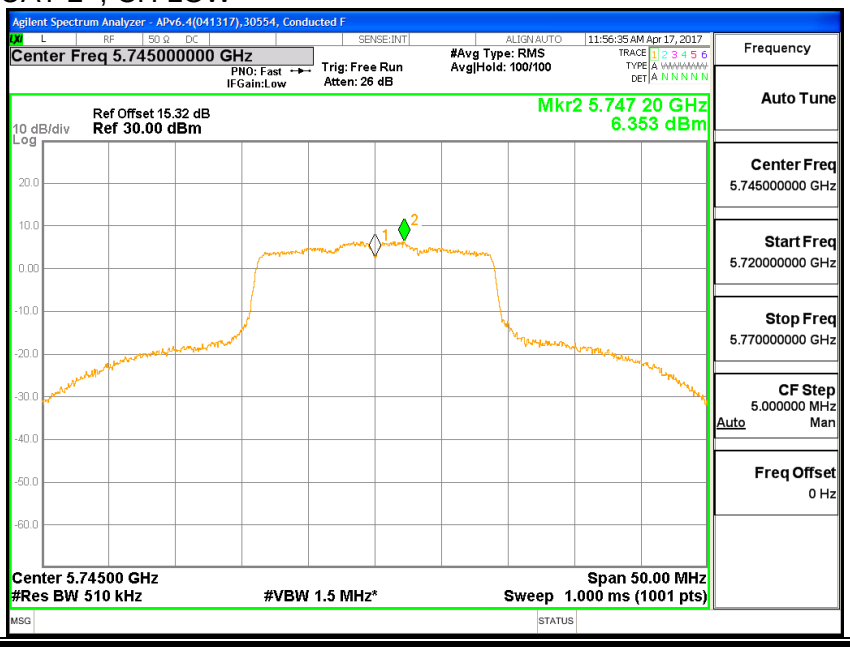
Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5745	2.16	30.00
Mid	5785	2.16	30.00
High	5825	2.16	30.00

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

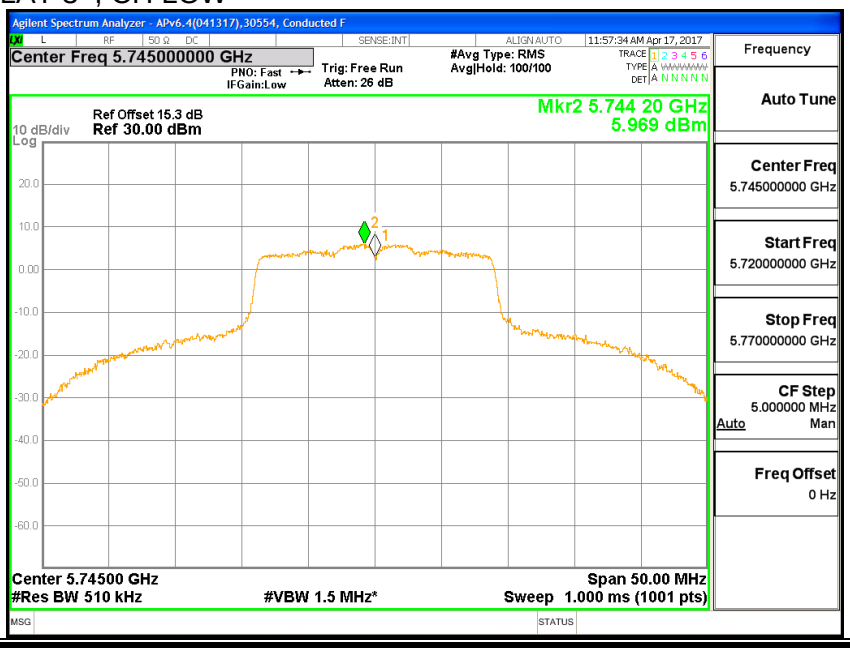
PSD Results

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	6.353	5.969	9.18	30.00	-20.82
Mid	5785	6.240	6.465	9.36	30.00	-20.64
High	5825	6.355	6.148	9.26	30.00	-20.74

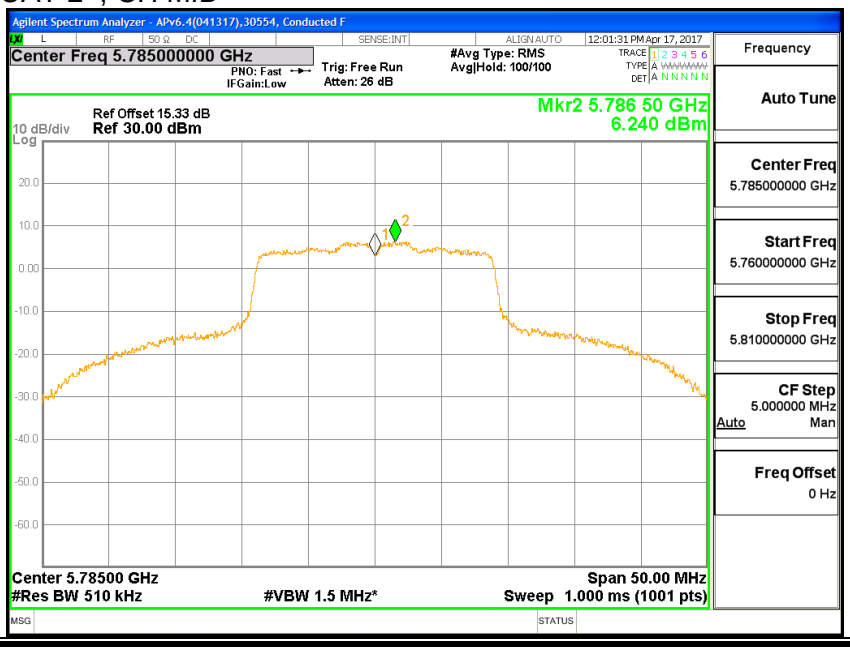
UAT 2 , CH LOW



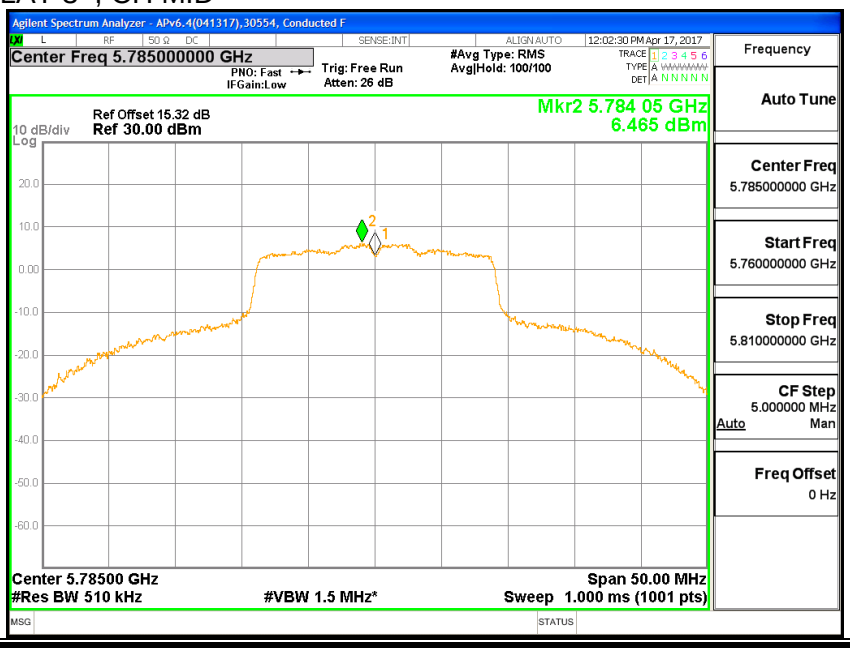
LAT 3 , CH LOW



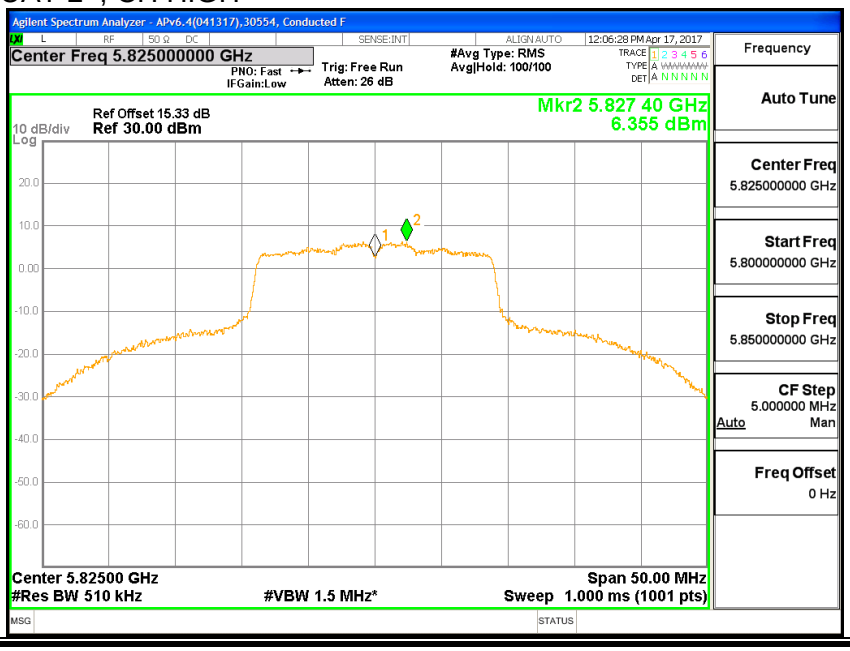
UAT 2 , CH MID



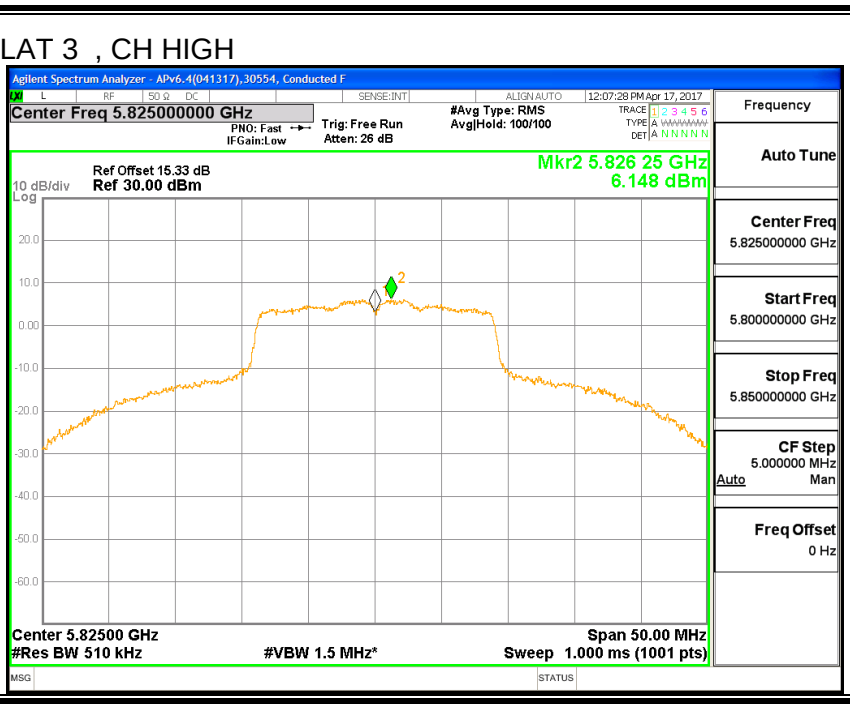
LAT 3 , CH MID



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

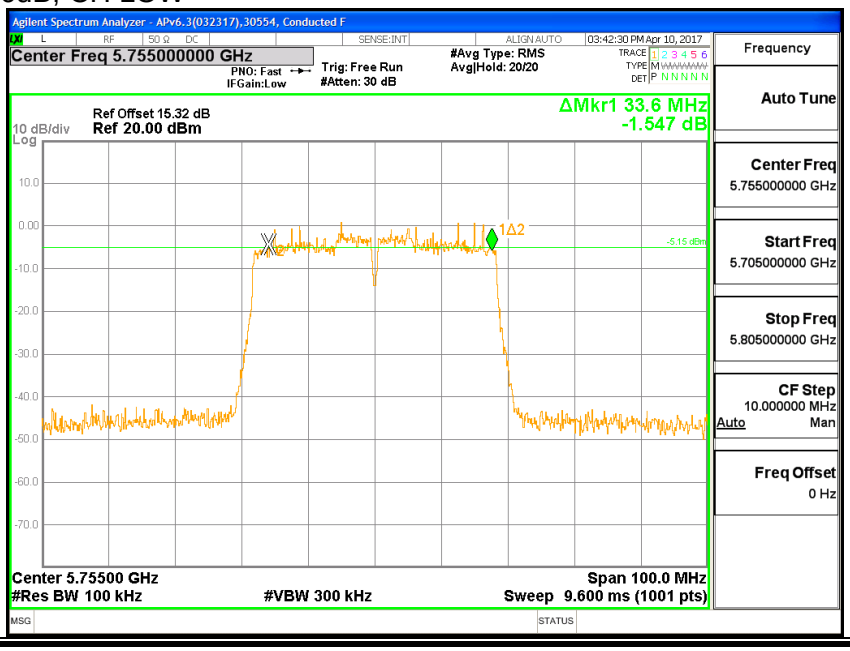
FCC §15.407 (e)

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

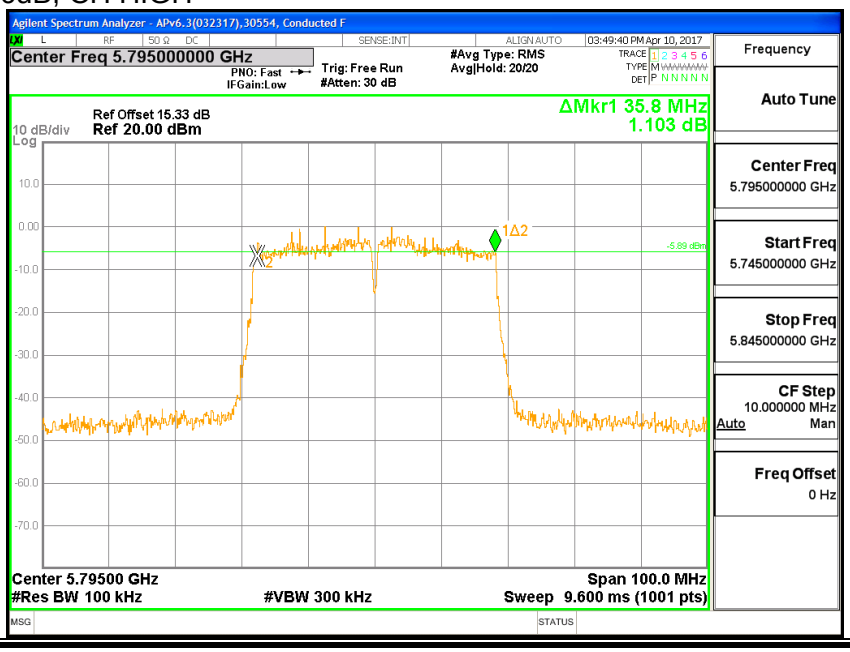
RESULTS

Channel	Frequency	6 dB BW UAT 2 (MHz)	Minimum Limit (MHz)
Low	5755	33.60	0.5
High	5795	35.80	0.5

6dB, CH LOW



6dB, CH HIGH



8.31.2. 26 dB BANDWIDTH

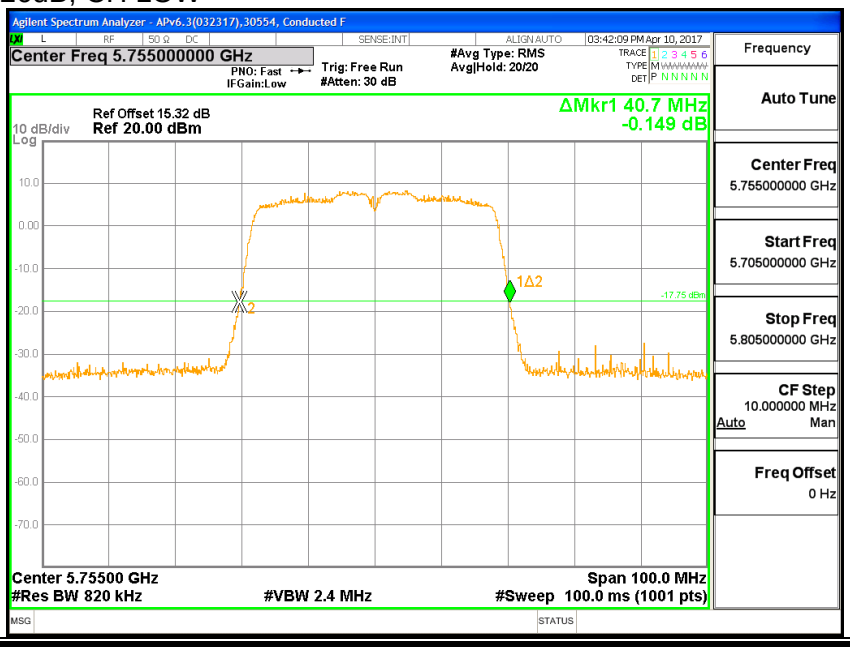
LIMITS

None; for reporting purposes only.

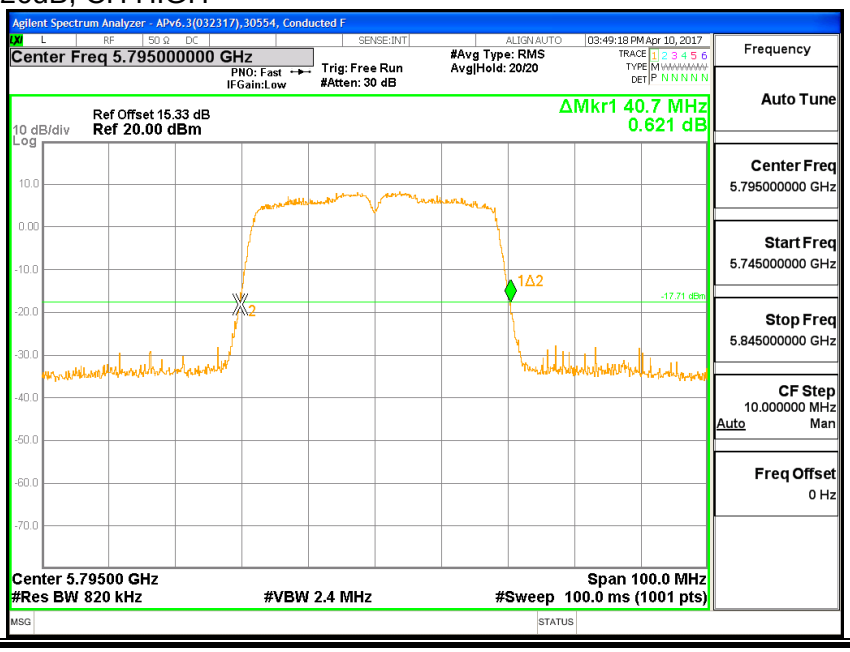
RESULTS

Channel	Frequency	26 dB BW UAT 2 (MHz)
Low	5755	40.7
High	5795	40.7

26dB, CH LOW



26dB, CH HIGH



8.31.3. 99% BANDWIDTH

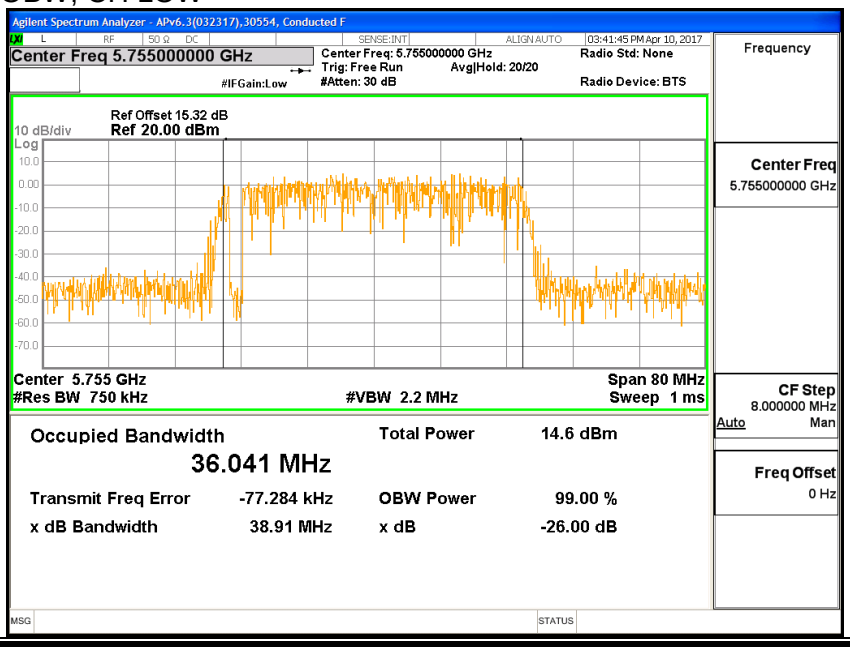
LIMITS

None; for reporting purposes only.

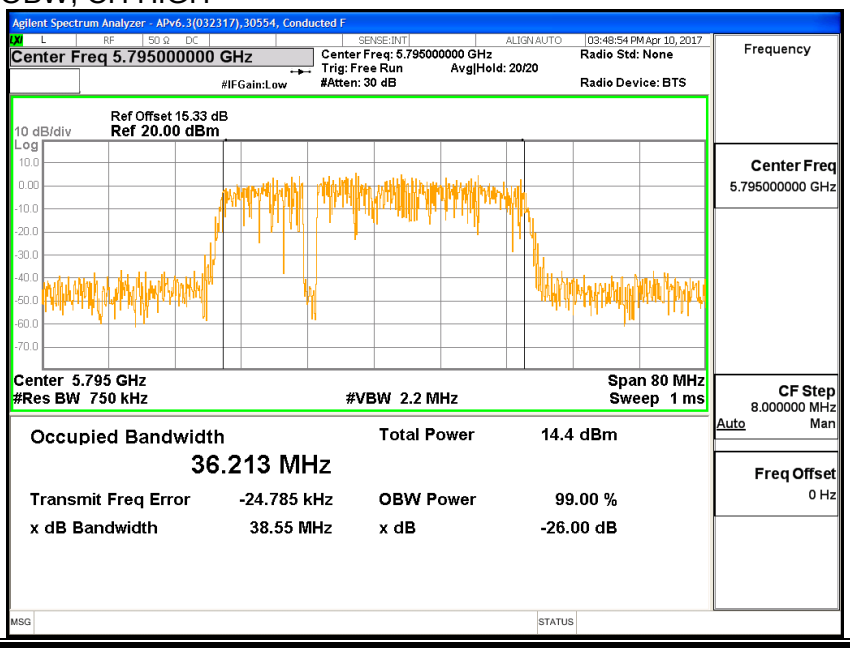
RESULTS

Channel	Frequency	99% BW UAT 2 (MHz)
Low	5755	36.041
High	5795	36.213

OBW, CH LOW



OBW, CH HIGH



8.31.4. AVERAGE POWER

ID:	30554	Date:	7/13/2017

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	19.28
High	5795	19.41

8.31.5. OUTPUT POWER

ID:	30554	Date:	7/13/2017

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	-1.61	30.00
High	5795	-1.61	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	19.28	19.28	30.00	-10.72
High	5795	19.41	19.41	30.00	-10.59

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

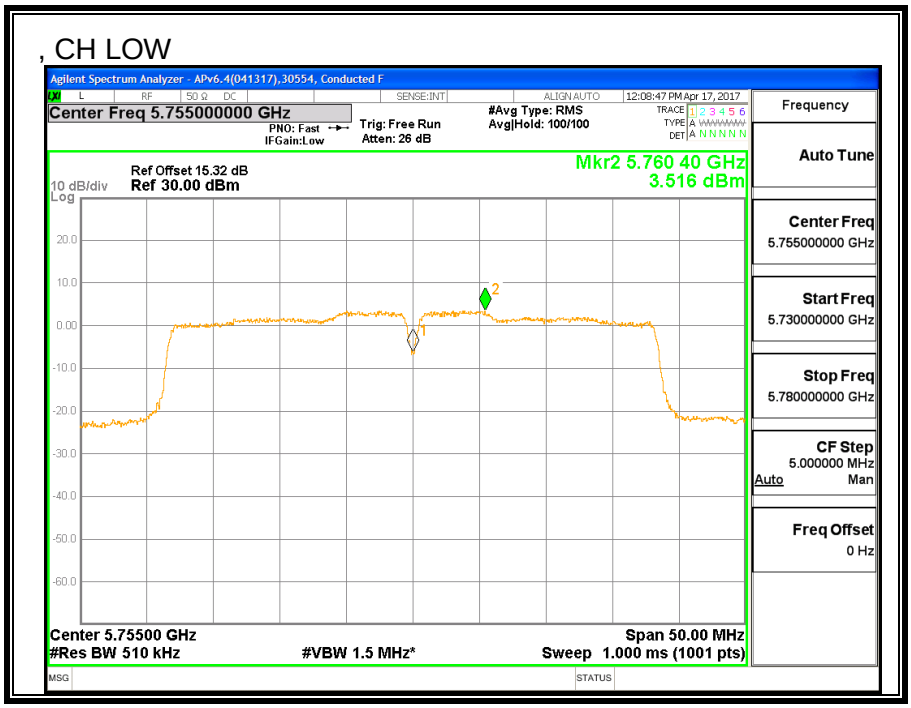
Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5755	-1.61	30.00
High	5795	-1.61	30.00

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

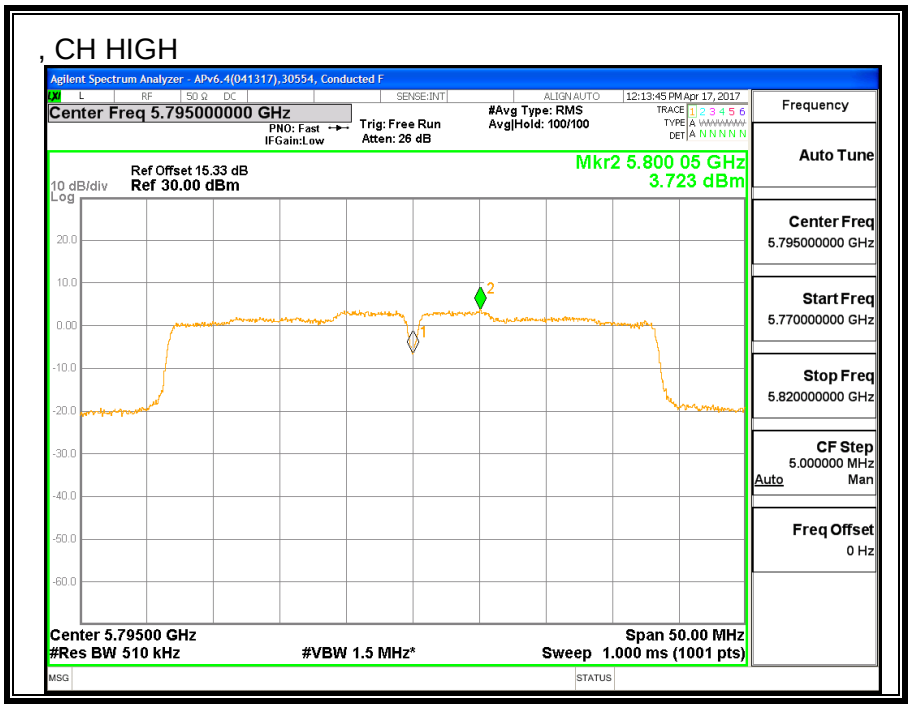
PSD Results

Channel	Frequency (MHz)	UAT 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5755	3.516	3.616	30.00	-26.38
High	5795	3.723	3.823	30.00	-26.18

, CH LOW



, CH HIGH



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

8.32.1. 6 dB BANDWIDTH

LIMITS

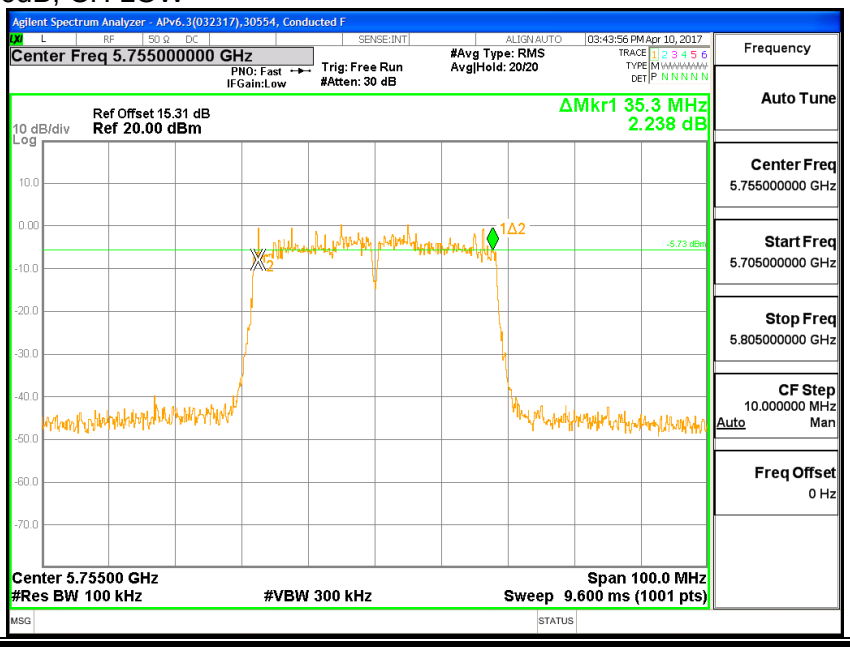
FCC §15.407 (e)

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

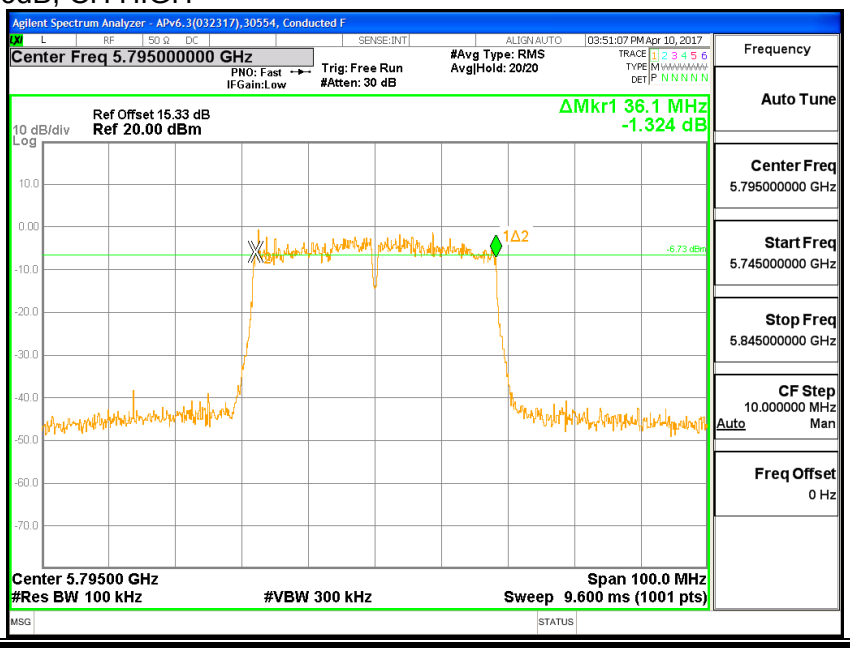
RESULTS

Channel	Frequency	6 dB BW LAT 3 (MHz)	Minimum Limit (MHz)
Low	5755	35.30	0.5
High	5795	36.10	0.5

6dB, CH LOW



6dB, CH HIGH



8.32.2. 26 dB BANDWIDTH

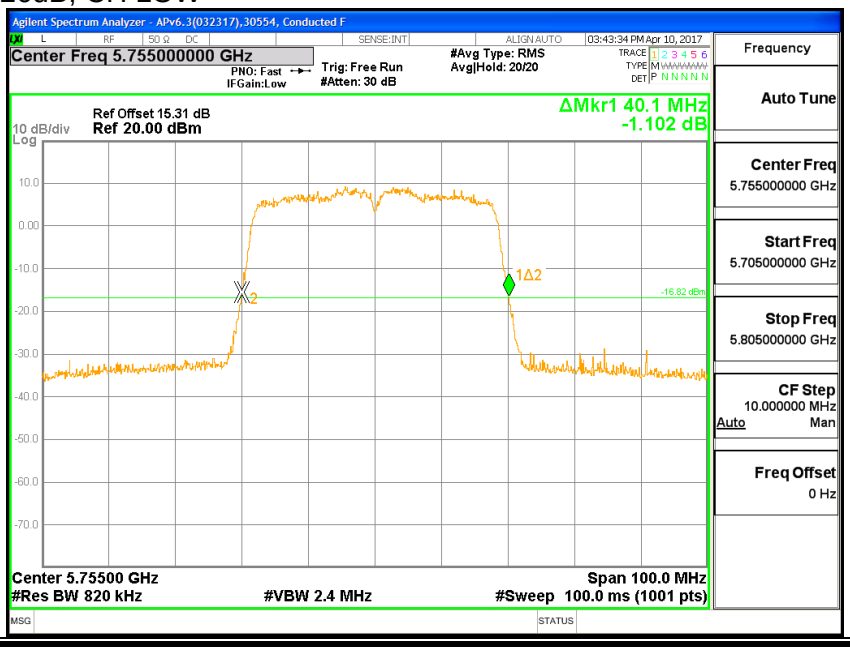
LIMITS

None; for reporting purposes only.

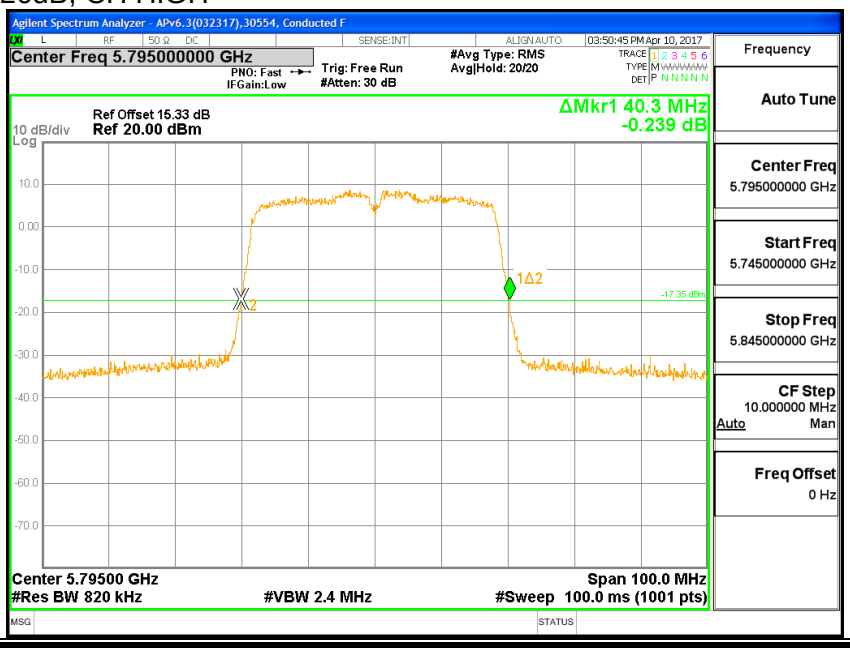
RESULTS

Channel	Frequency	26 dB BW LAT 3 (MHz)
Low	5755	40.1
High	5795	40.3

26dB, CH LOW



26dB, CH HIGH



8.32.3. 99% BANDWIDTH

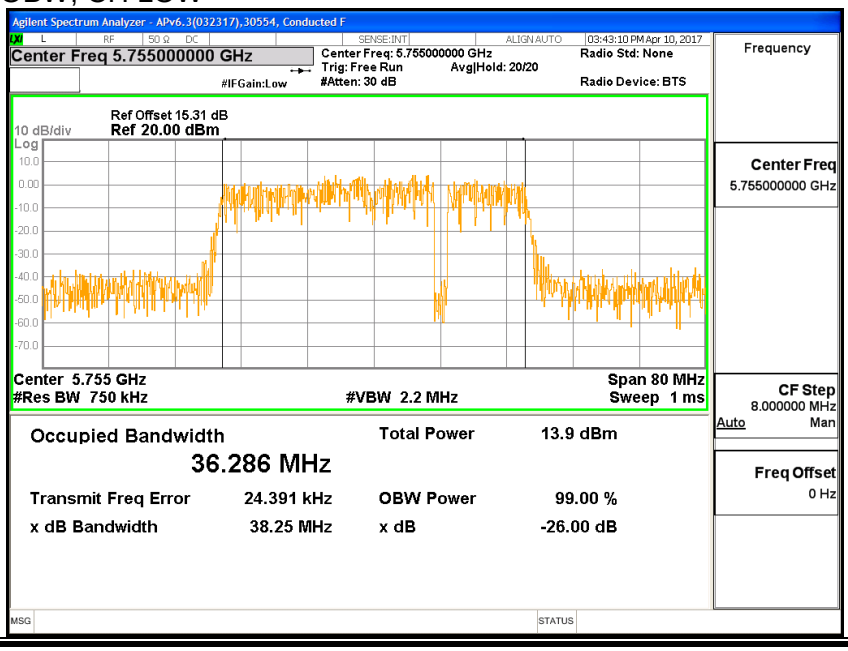
LIMITS

None; for reporting purposes only.

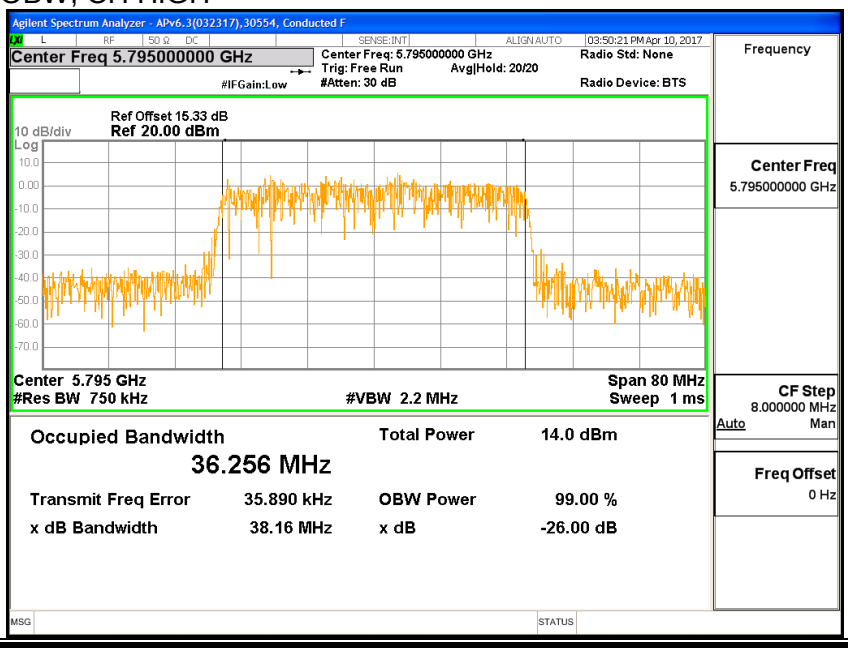
RESULTS

Channel	Frequency	99% BW LAT 3 (MHz)
Low	5755	36.286
High	5795	36.256

OBW, CH LOW



OBW, CH HIGH



8.32.4. AVERAGE POWER

ID:	30554	Date:	7/13/2017

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	19.47
High	5795	19.33

8.32.5. OUTPUT POWER

ID:	30554	Date:	7/13/2017

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	-0.15	30.00
High	5795	-0.15	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	19.47	19.47	30.00	-10.53
High	5795	19.33	19.33	30.00	-10.67

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

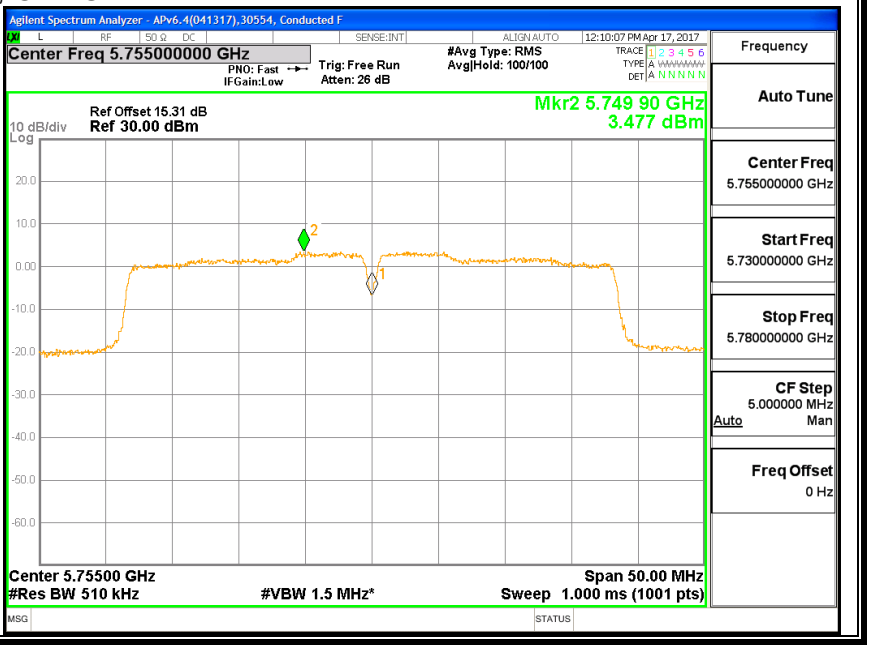
Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5755	-0.15	30.00
High	5795	-0.15	30.00

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	3.477	3.577	30.00	-26.42
High	5795	3.771	3.871	30.00	-26.13

, CH LOW



, CH HIGH