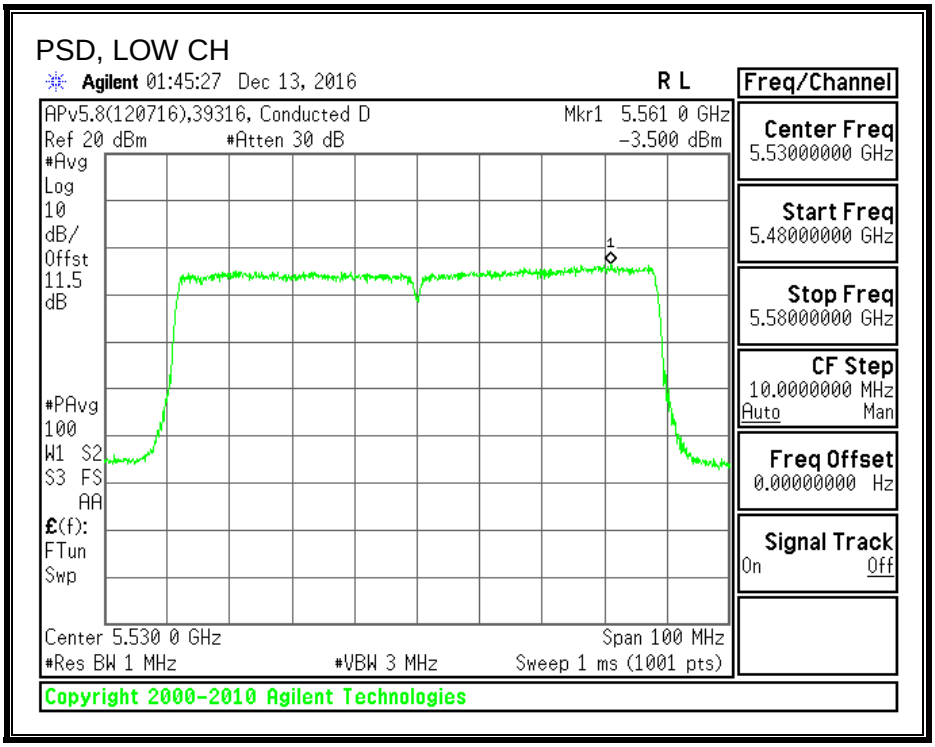
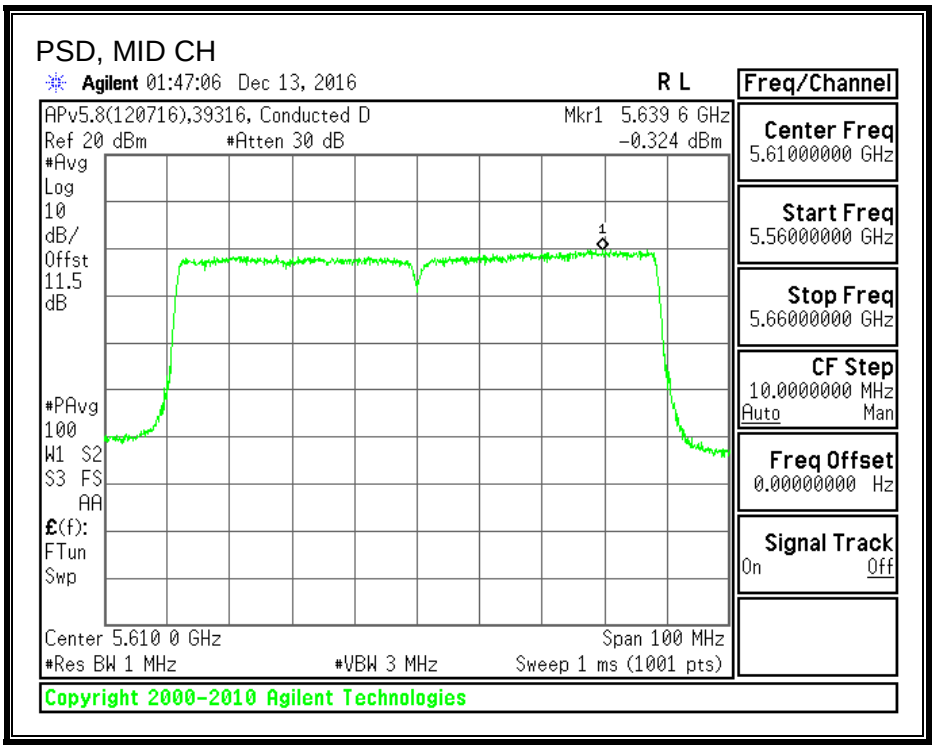
PSD, ANTENNA A

PSD, LOW CH

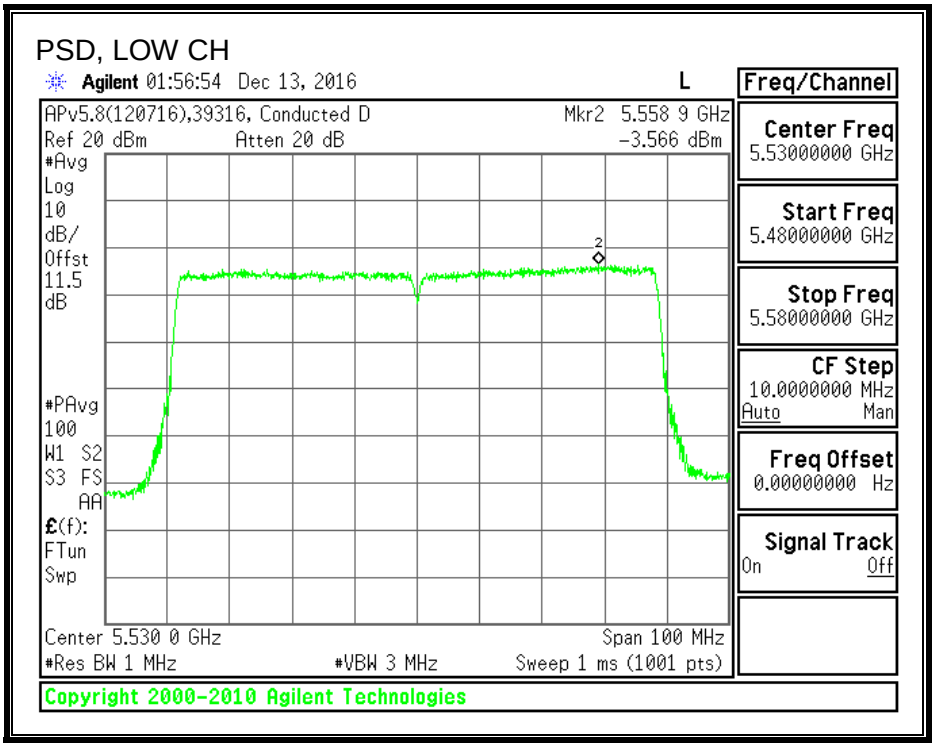


PSD, MID CH

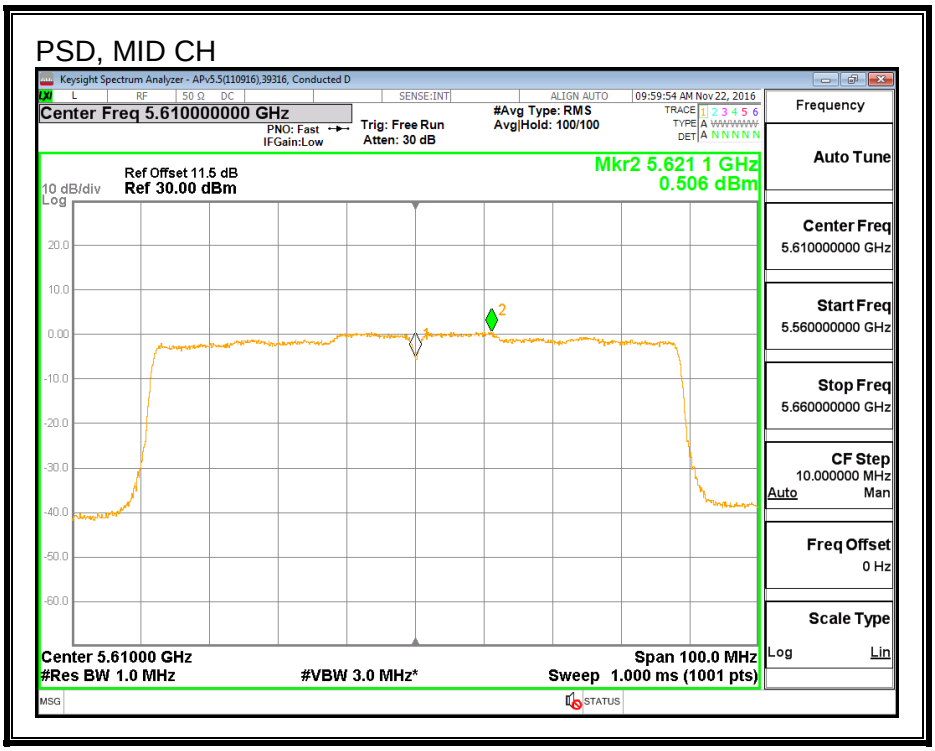


PSD, ANTENNA B

PSD, LOW CH



PSD, MID CH



8.42.5. 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	76.36	3.28	6.29	24.00	10.71

Duty Cycle CF (dB)	0.21	Included in Calculations of Corr'd Power & PSD

Output Power Results

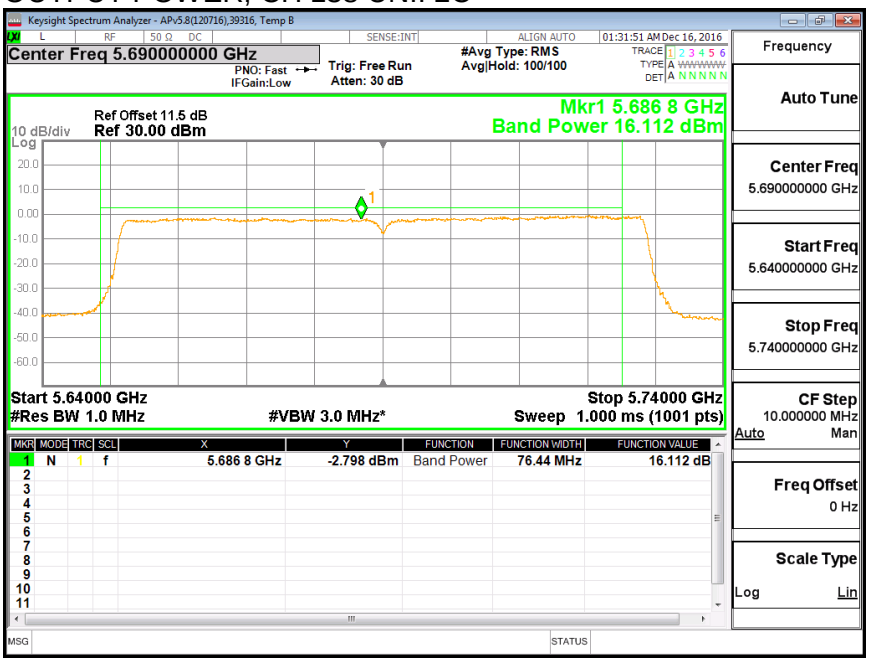
Channel	Frequency (MHz)	Ant A Meas Power (dBm)	Ant B Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	16.11	16.53	19.55	24.00	-4.45

PSD Results

Channel	Frequency (MHz)	Ant A Meas PSD (dBm)	Ant B Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	-0.61	-0.14	2.85	10.71	-7.86

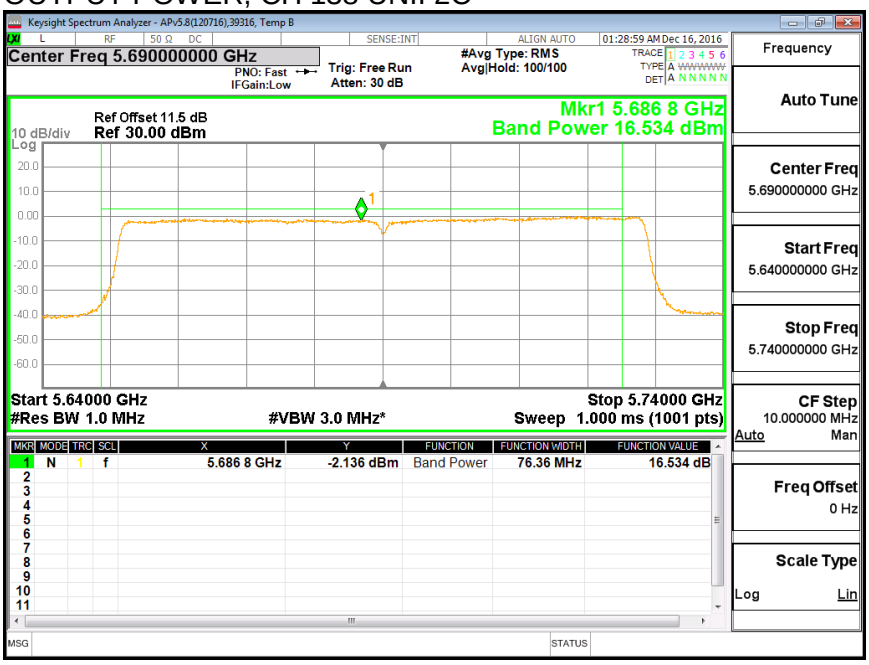
OUTPUT POWER, ANTENNA A

OUTPUT POWER, CH 138 UNII 2C



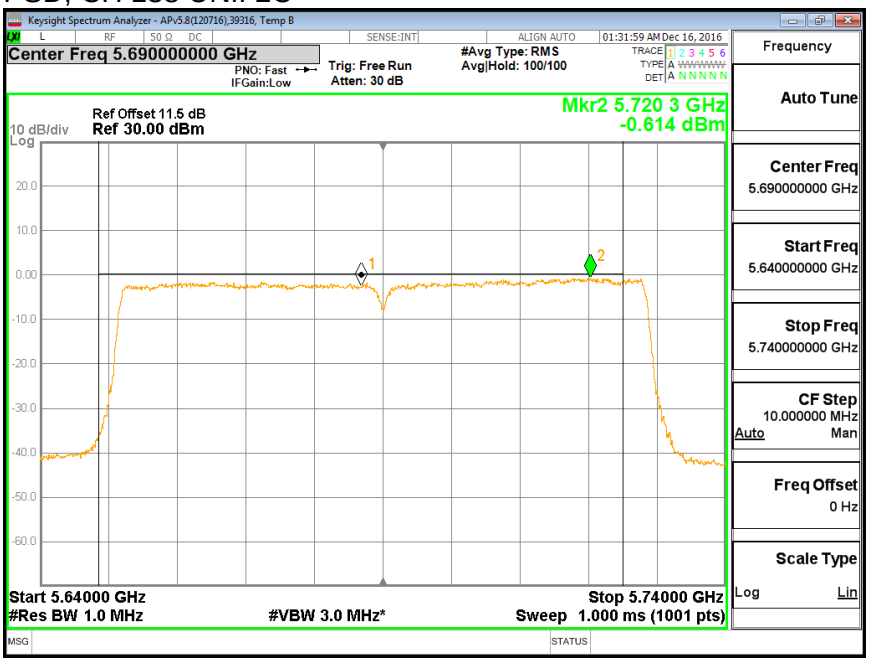
OUTPUT POWER, ANTENNA B

OUTPUT POWER, CH 138 UNII 2C



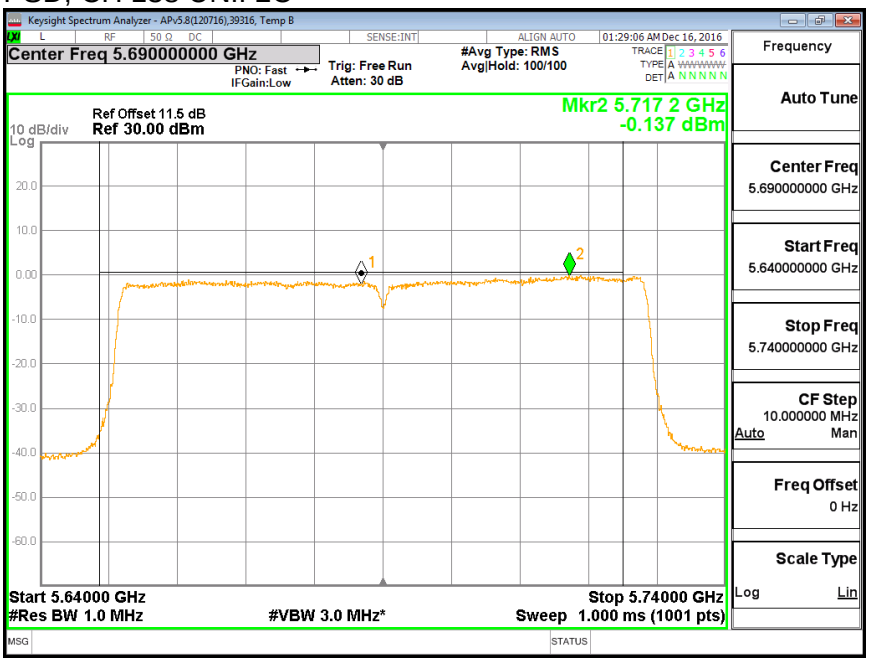
PSD, ANTENNA A

PSD, CH 138 UNII 2C



PSD, ANTENNA B

PSD, CH 138 UNII 2C



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	6.36	3.38	6.39	30.00	29.61

Duty Cycle CF (dB)	0.21	Included in Calculations of Corr'd Power & PSD

Output Power Results

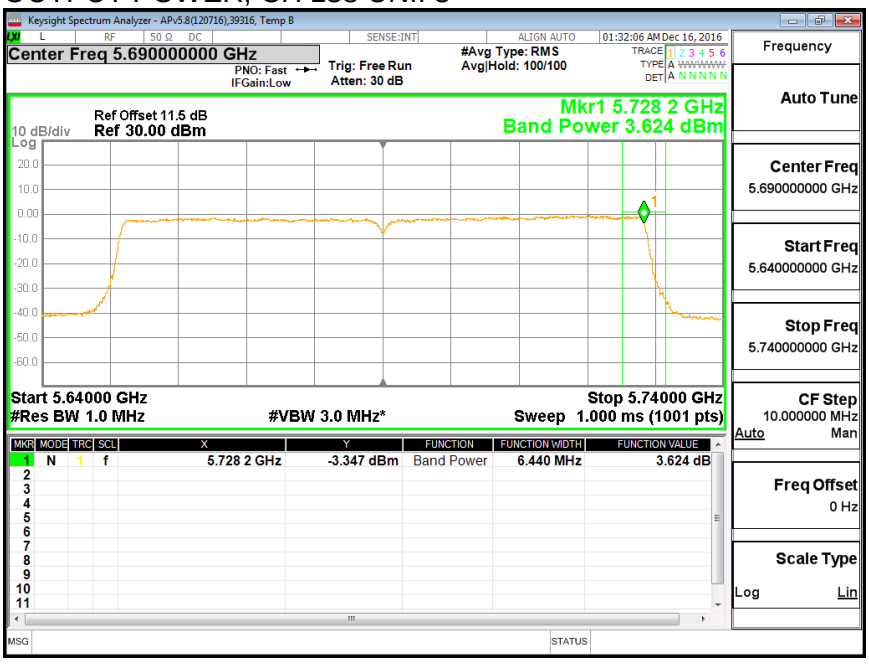
Channel	Frequency (MHz)	Ant A Meas Power (dBm)	Ant B Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	3.62	4.10	7.09	30.00	-22.91

PSD Results

Channel	Frequency (MHz)	Ant A Meas PSD (dBm)	Ant B Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	-4.31	-2.46	-0.07	29.61	-29.68

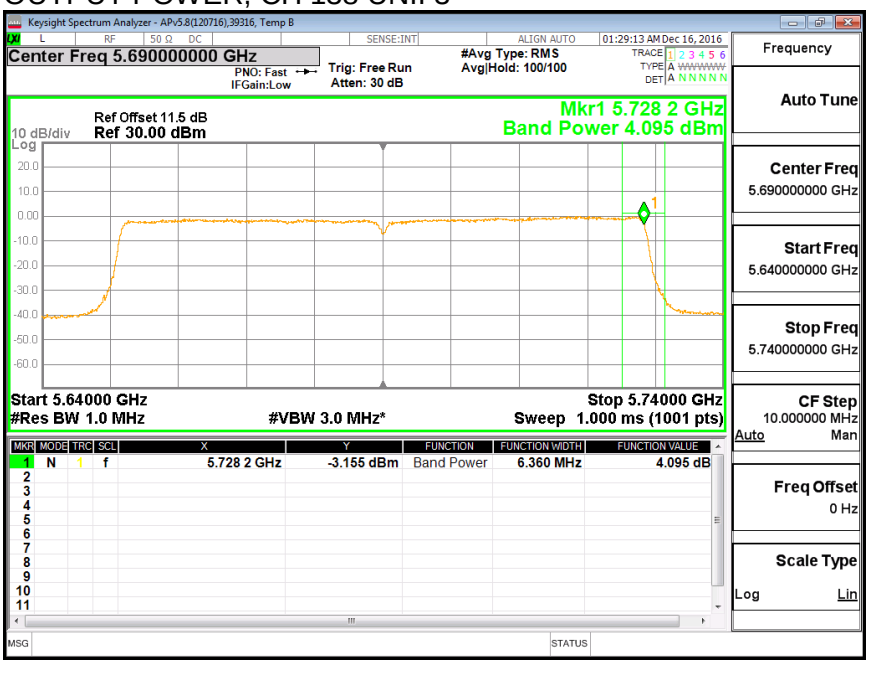
OUTPUT POWER, ANTENNA A

OUTPUT POWER, CH 138 UNII 3



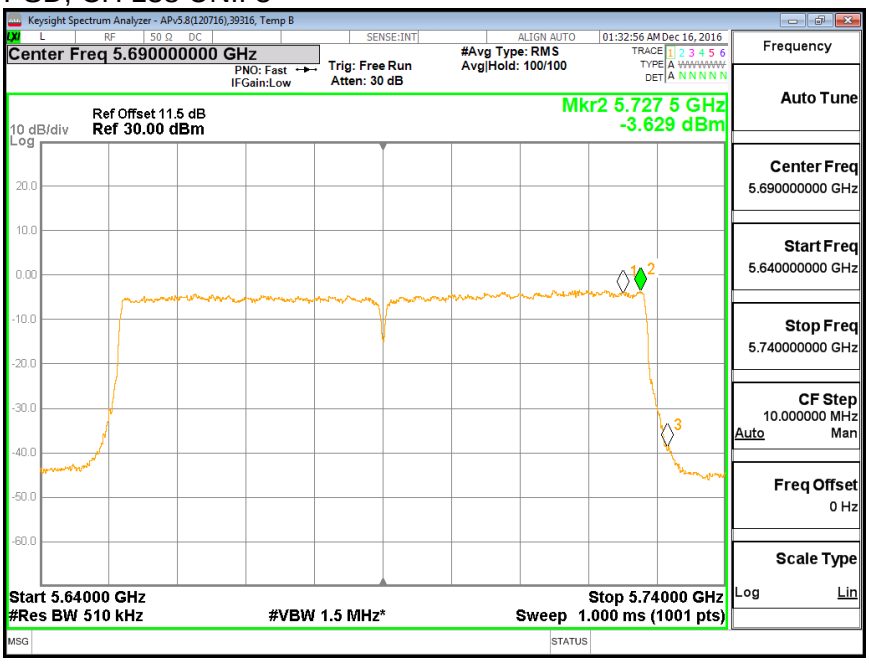
OUTPUT POWER, ANTENNA B

OUTPUT POWER, CH 138 UNII 3



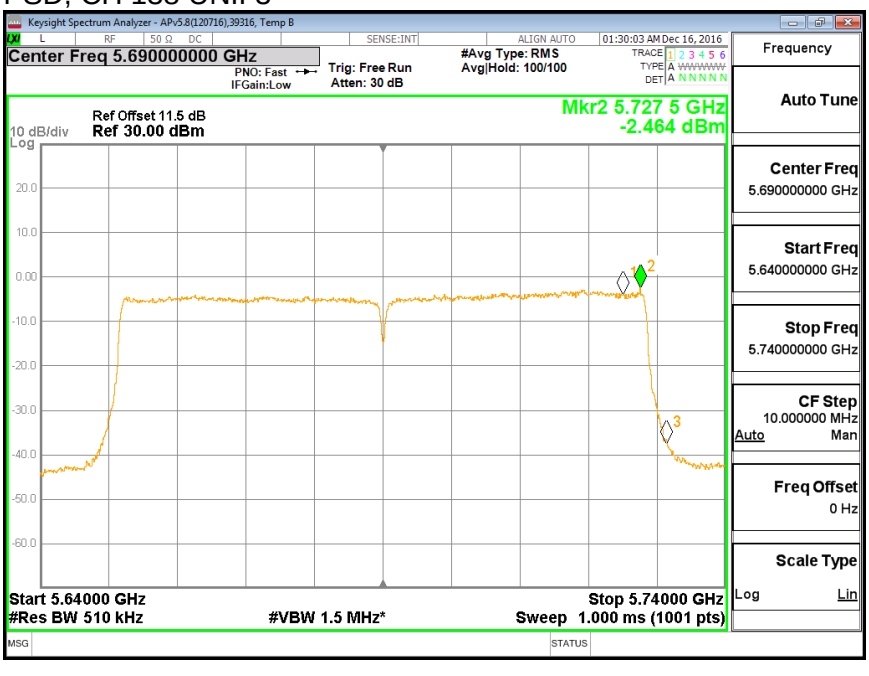
PSD, ANTENNA A

PSD, CH 138 UNII 3



PSD, ANTENNA B

PSD, CH 138 UNII 3



8.42.6. 6 dB BANDWIDTH

LIMITS

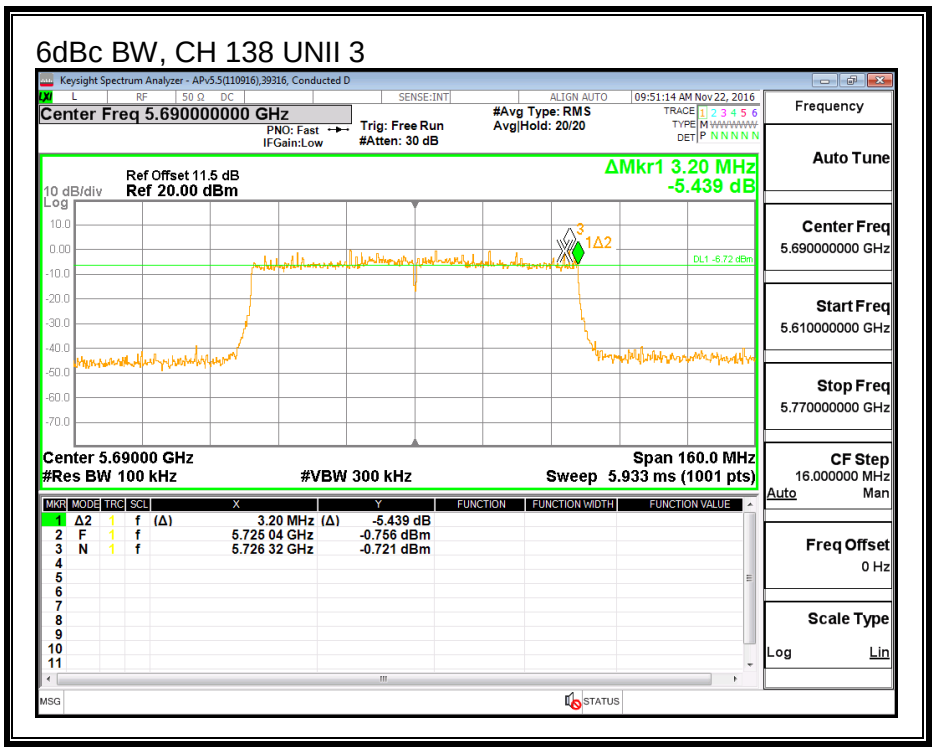
FCC §15.407 (e)

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

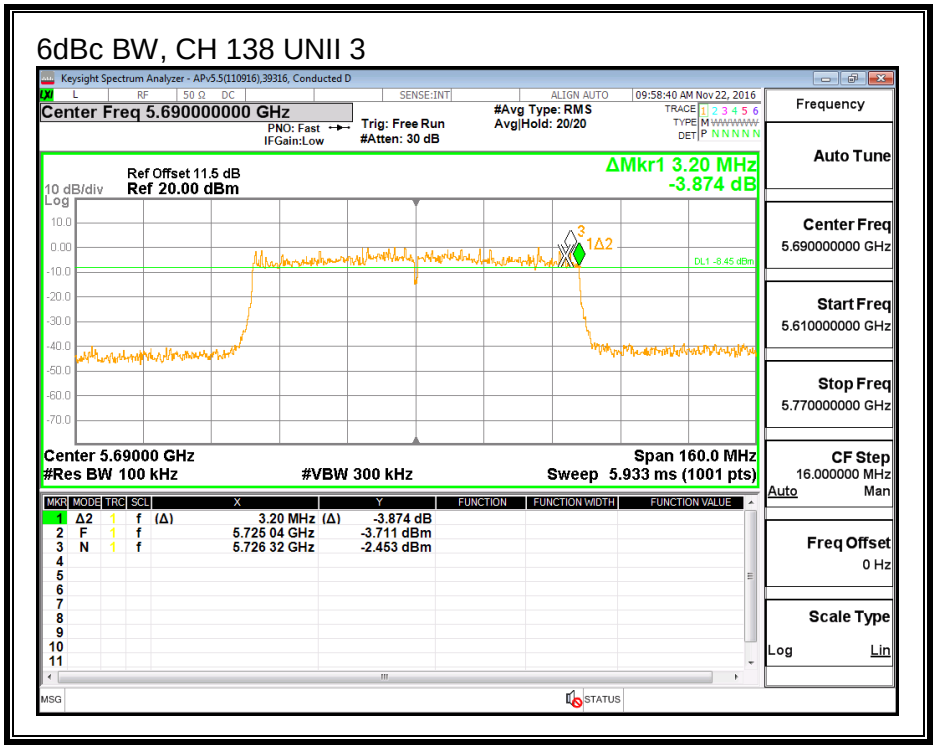
RESULTS

Channel	Frequency (MHz)	6 dB BW Ant A (MHz)	6 dB BW Ant B (MHz)
High	5690	3.20	3.20

ANTENNA A



ANTENNA B



8.43. 802.11ac VHT80 2Tx (ANTENNA A + ANTENNA B) STBC MODE IN THE 5.6 GHz BAND (5610MHz for FCC only)

Noted: Covered by 802.11ac VHT80 2Tx (ANTENNA A + ANTENNA B) CDD MODE IN THE 5.6 GHz BAND

8.44. 802.11n HT20 ANTENNA A MODE IN THE 5.8 GHz BAND

8.44.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

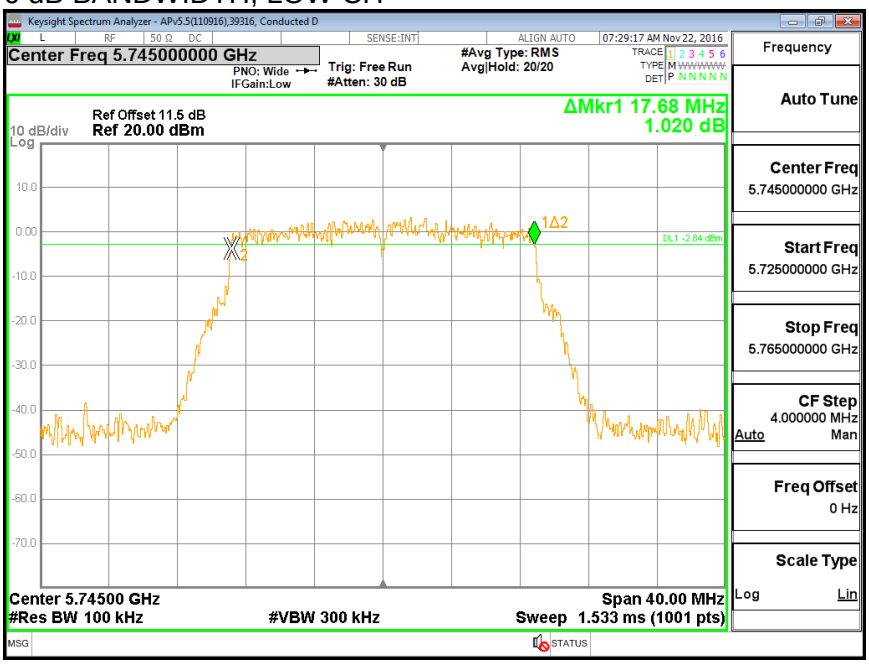
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

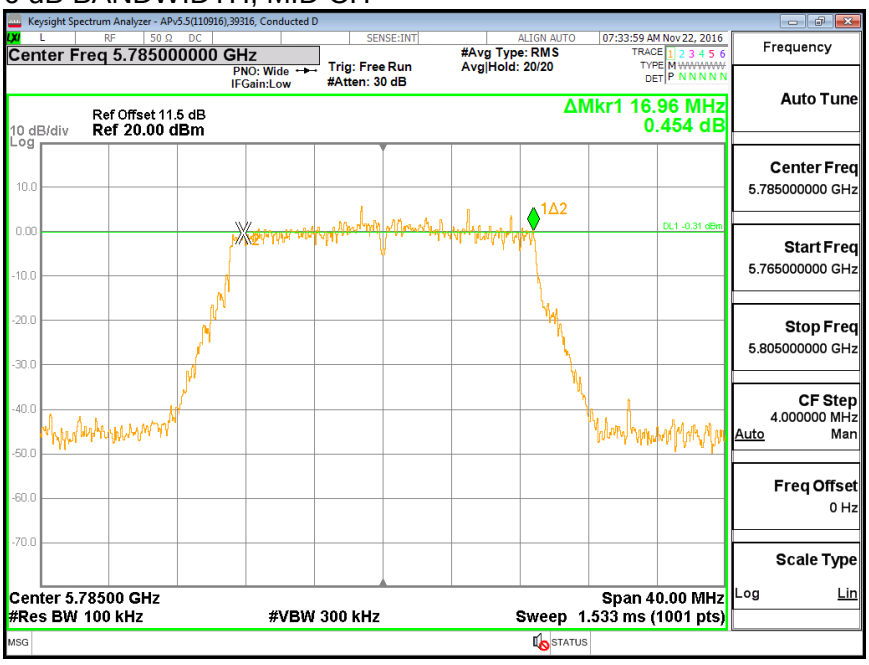
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5745	17.680	0.5
Mid	5785	16.960	0.5
High	5825	17.560	0.5

6 dB BANDWIDTH

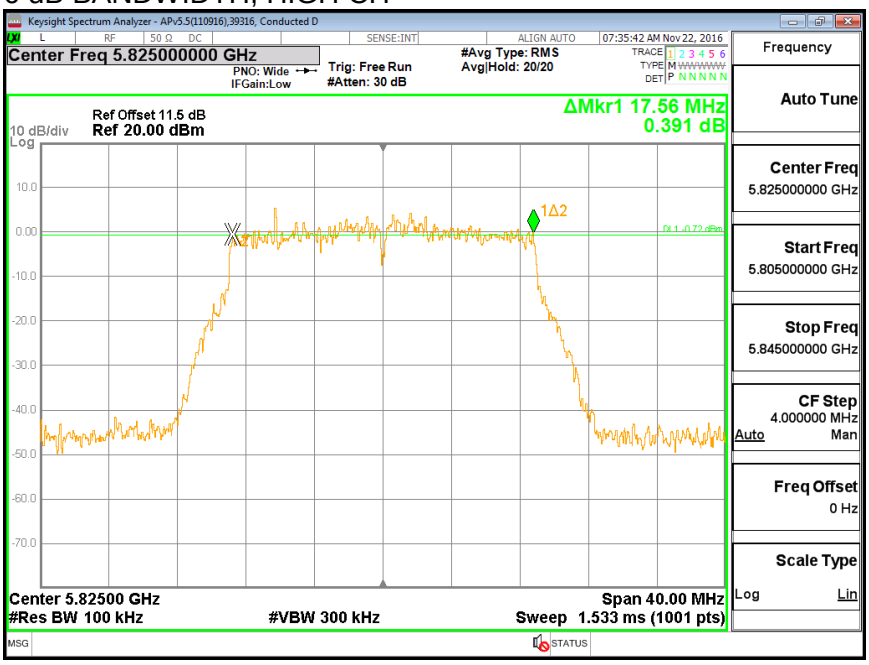
6 dB BANDWIDTH, LOW CH



6 dB BANDWIDTH, MID CH



6 dB BANDWIDTH, HIGH CH



8.44.2. 26 dB BANDWIDTH

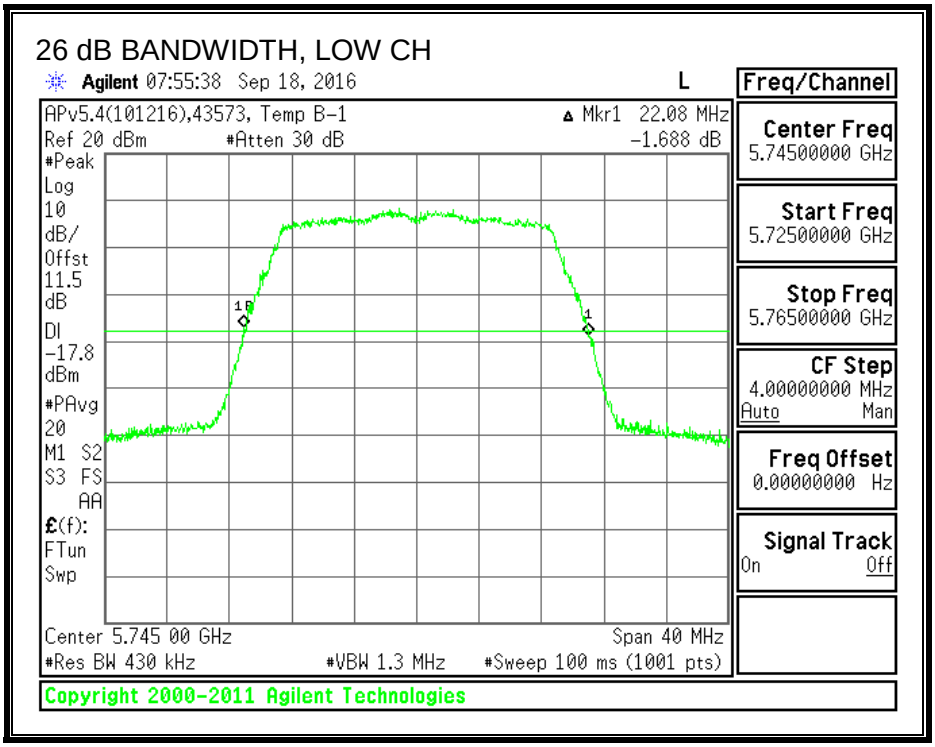
LIMITS

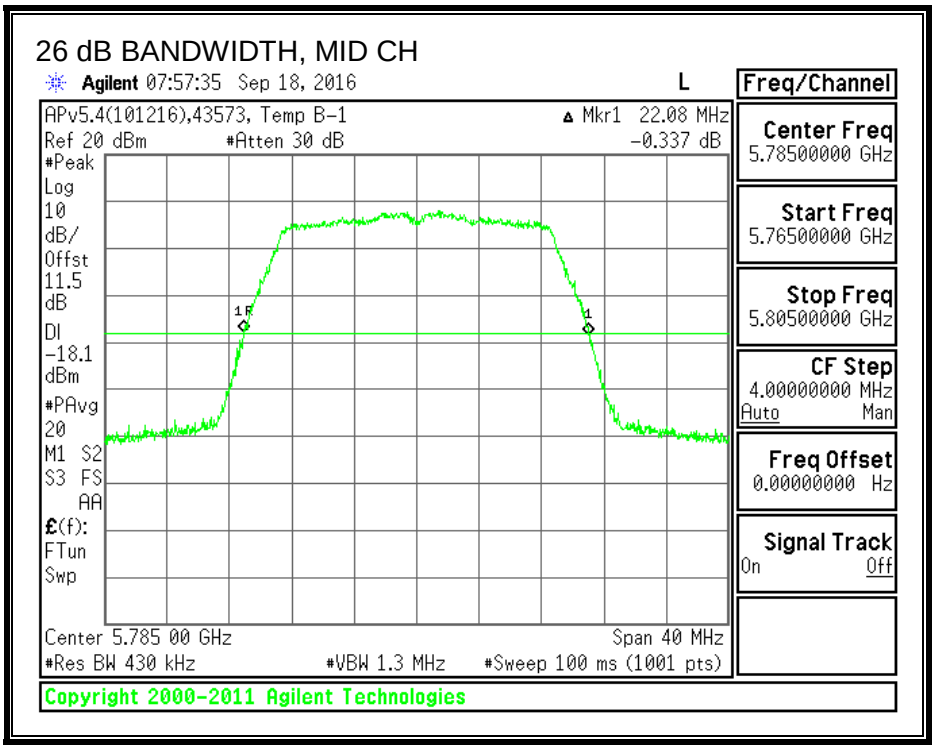
None, for reporting purposes only

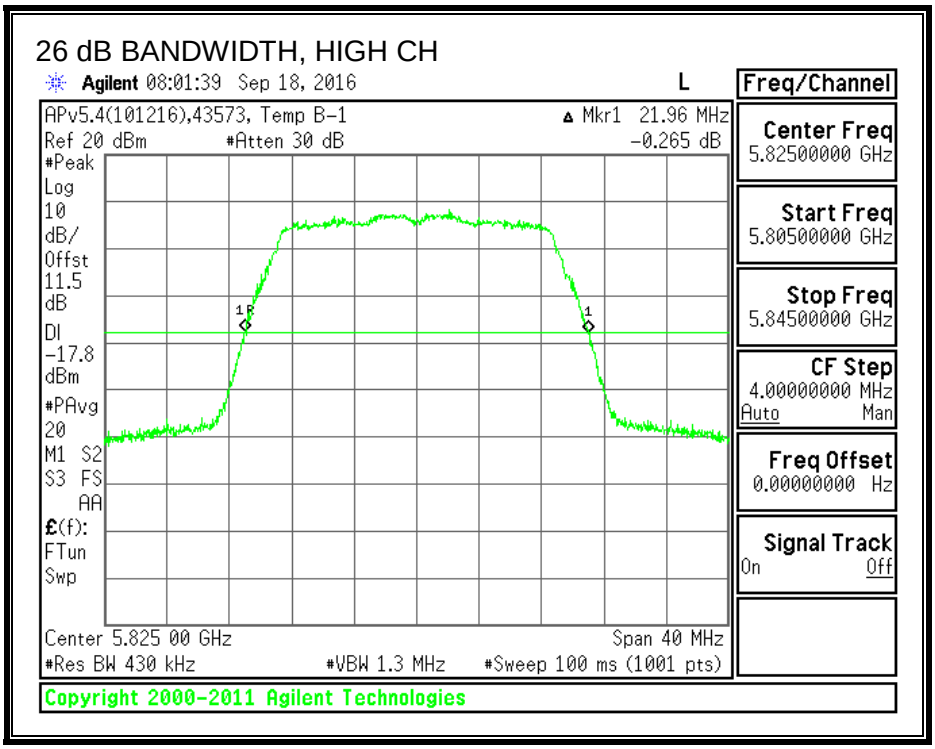
RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5745	22.080
Mid	5785	22.080
High	5825	21.960

26 dB BANDWIDTH







8.44.3. 99% BANDWIDTH

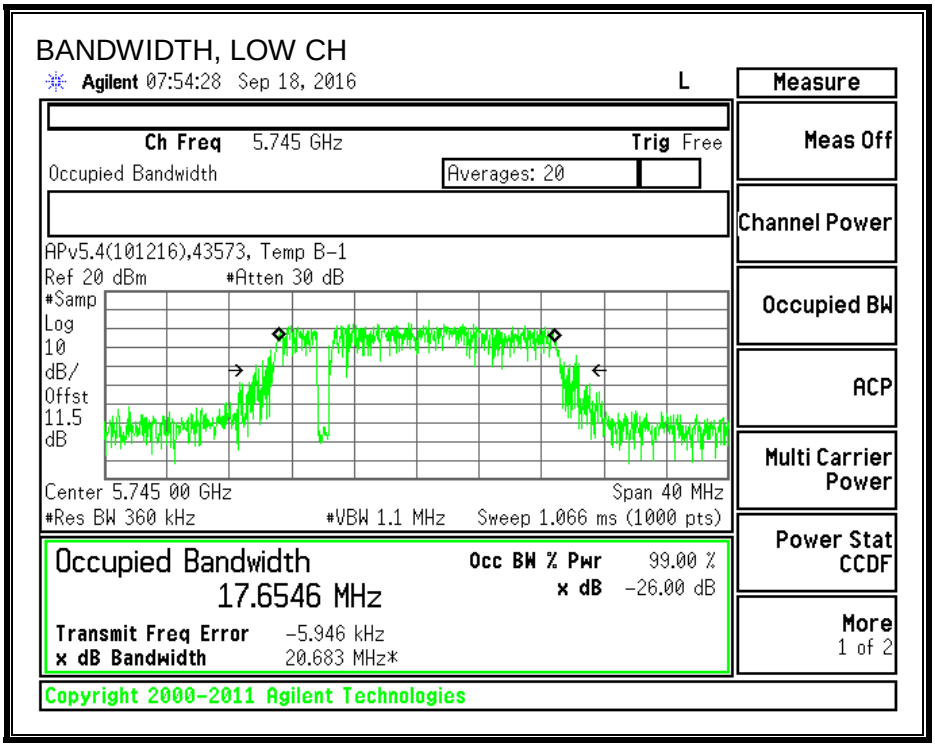
LIMITS

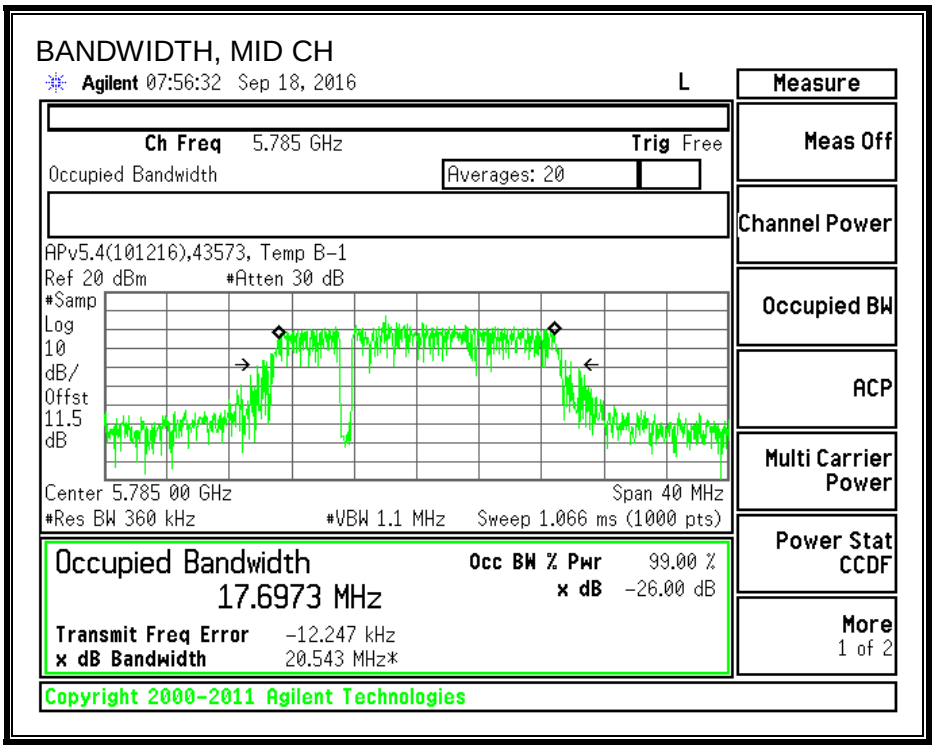
None; for reporting purposes only.

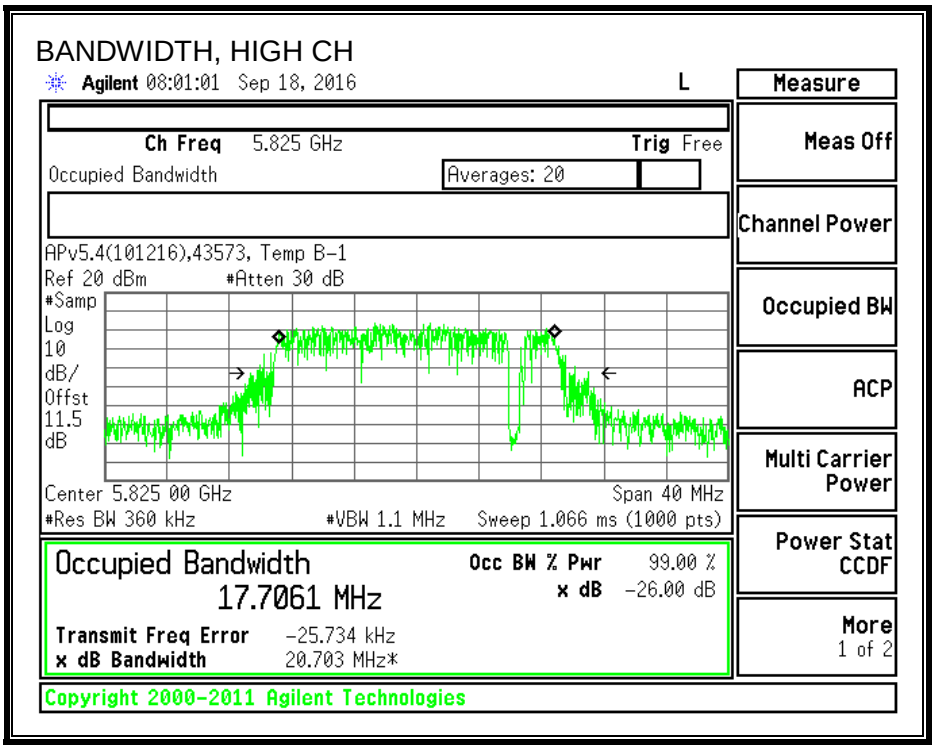
RESULTS

Frequency (MHz)	99% Bandwidth (MHz)
5745	17.655
5785	17.697
5825	17.706

99% BANDWIDTH







8.44.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

ID:	30554	Date:	12/15/16

Channel	Frequency (MHz)	Power (dBm)
Low	5745	16.44
Mid	5785	16.40
High	5825	16.45

8.44.5. OUTPUT POWER

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

ID:	30554	Date:	12/15/16

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Power Limit (dBm)
Low	5745	3.54	30.00
Mid	5785	3.54	30.00
High	5825	3.54	30.00

Output Power Results

Channel	Frequency (MHz)	Ant A Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	16.44	16.44	30.00	-13.56
Mid	5785	16.40	16.40	30.00	-13.60
High	5825	16.45	16.45	30.00	-13.55

8.44.6. PSD

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	3.54	30.00
Mid	5785	3.54	30.00
High	5825	3.54	30.00

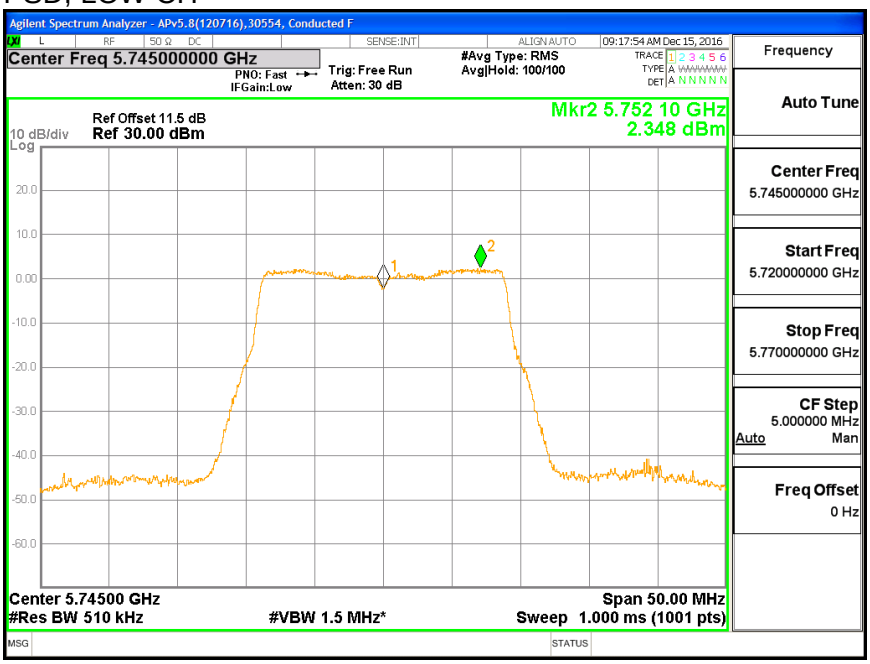
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD

PSD Results

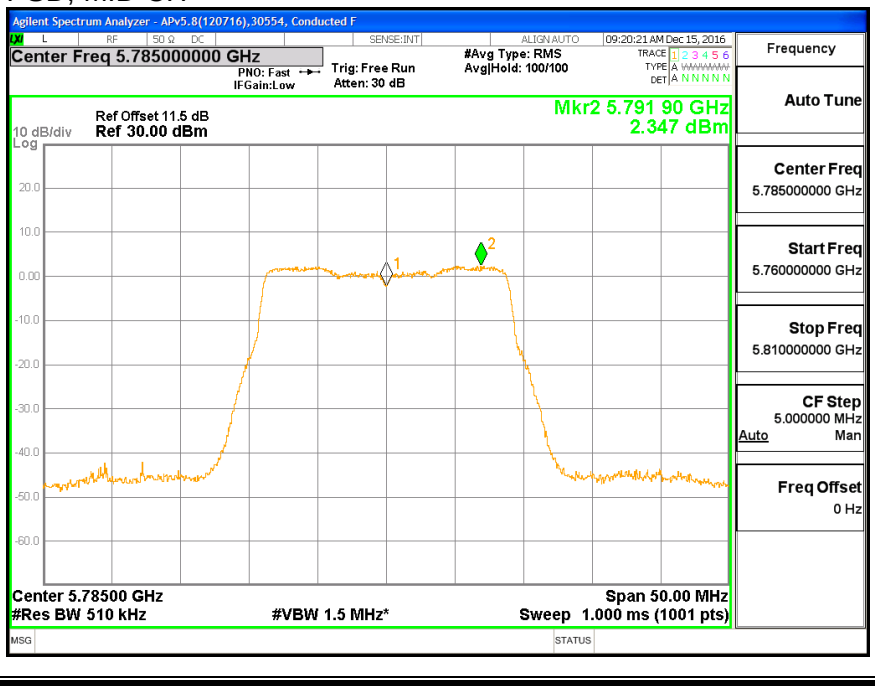
Channel	Frequency (MHz)	Ant A Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5745	2.35	2.35	30.00	-27.65
Mid	5785	2.35	2.35	30.00	-27.65
High	5825	2.59	2.59	30.00	-27.41

PSD

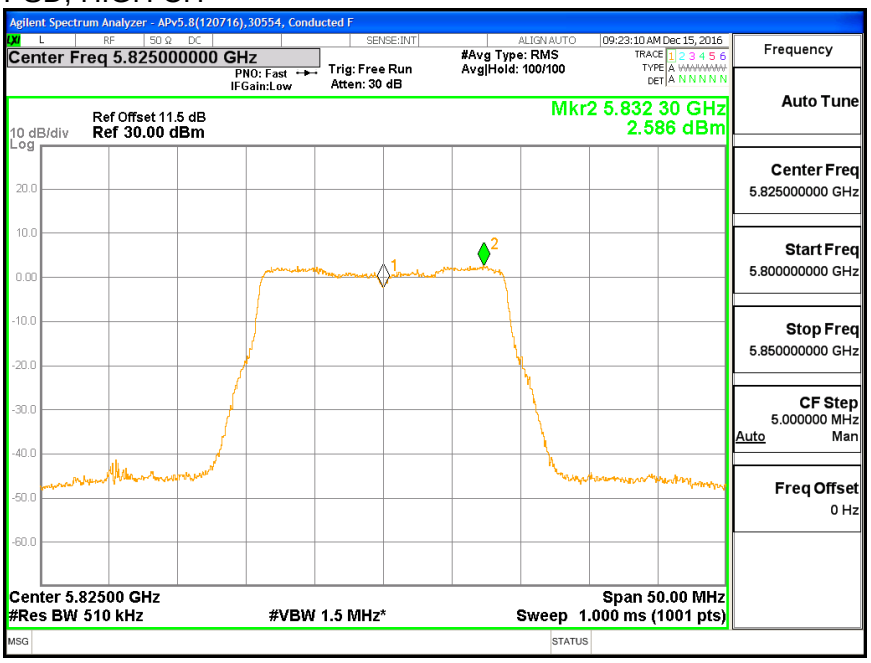
PSD, LOW CH



PSD, MID CH



PSD, HIGH CH



8.45. 802.11n HT20 ANTENNA B MODE IN THE 5.8 GHz BAND

8.45.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

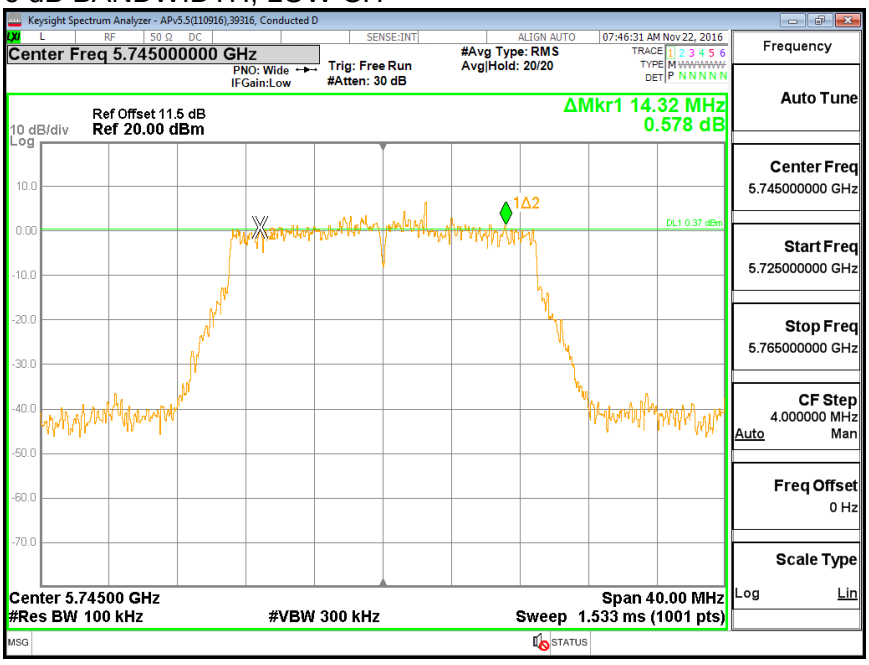
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

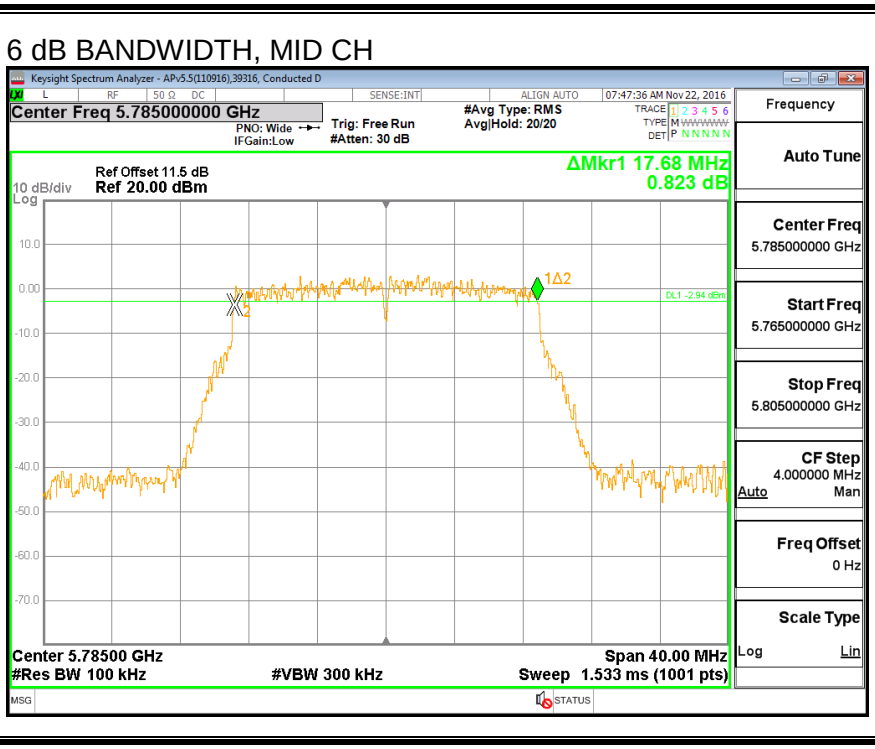
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5745	14.320	0.5
Mid	5785	17.680	0.5
High	5825	16.840	0.5

6 dB BANDWIDTH

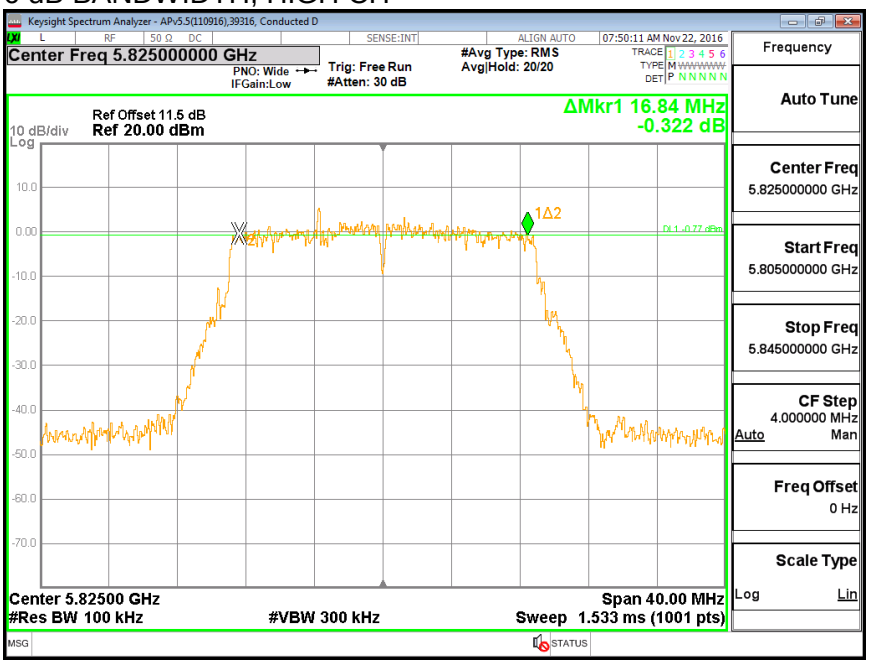
6 dB BANDWIDTH, LOW CH



6 dB BANDWIDTH, MID CH



6 dB BANDWIDTH, HIGH CH



8.45.2. 26 dB BANDWIDTH

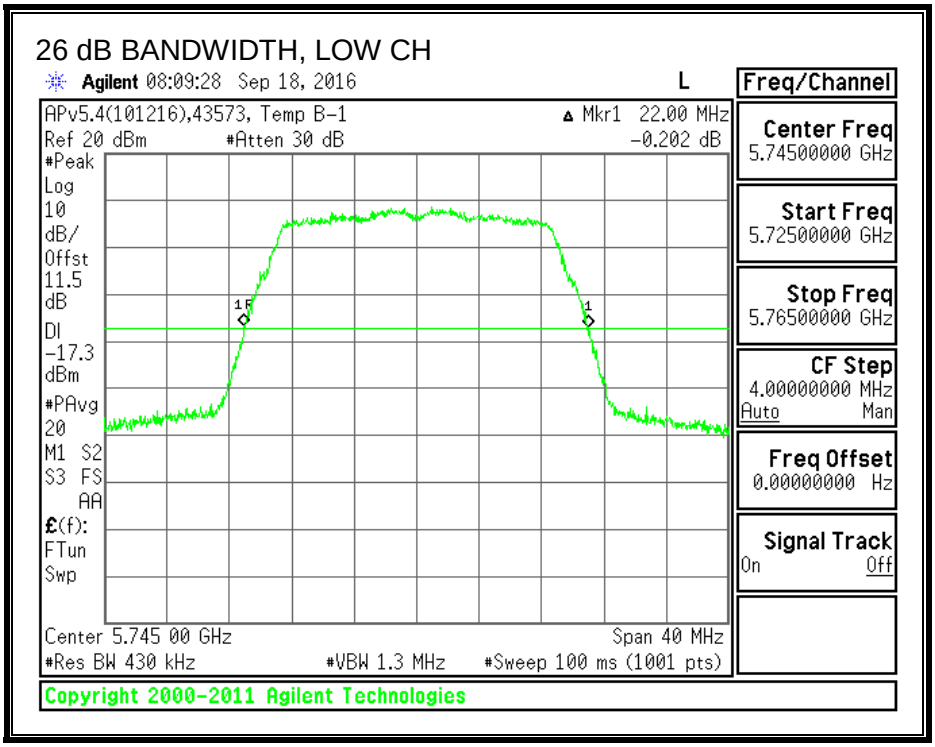
LIMITS

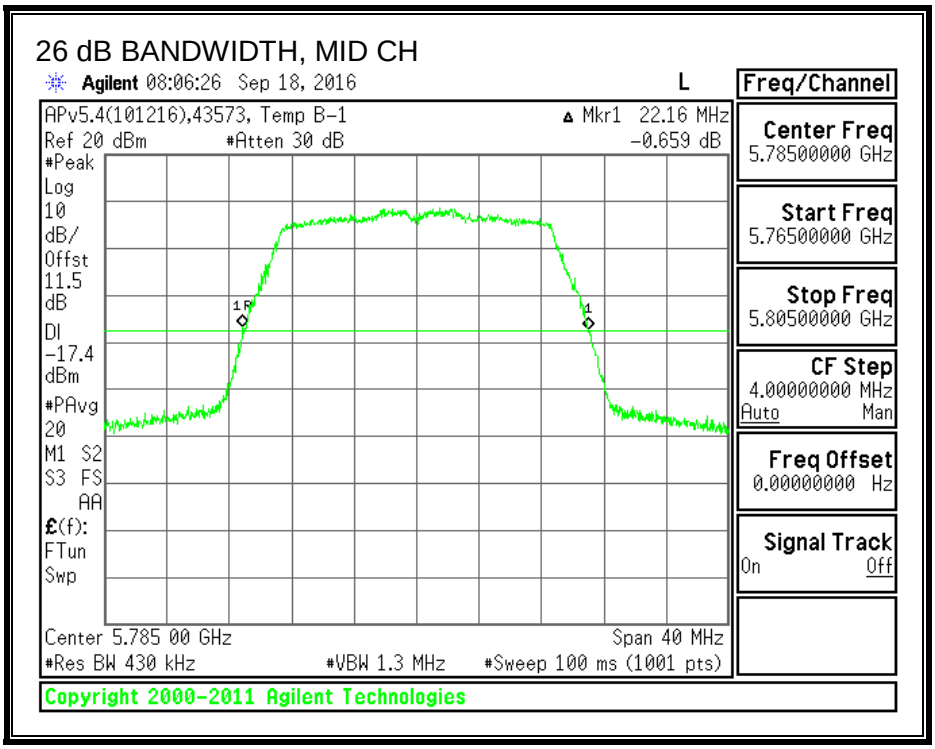
None, for reporting purposes only

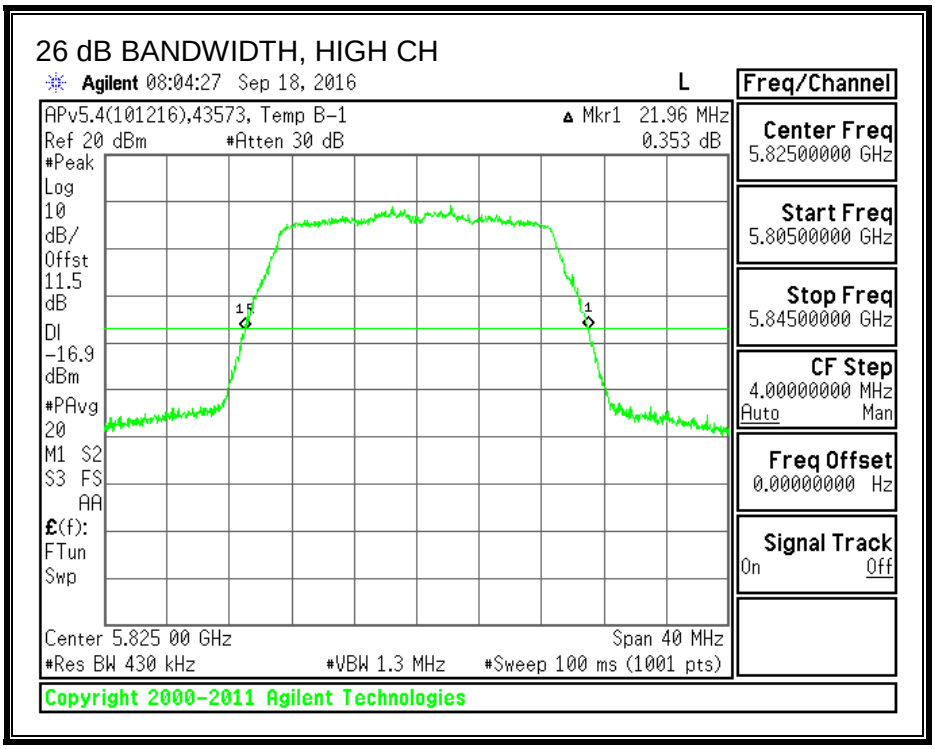
RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5745	22.000
Mid	5785	22.160
High	5825	21.960

26 dB BANDWIDTH







8.45.3. 99% BANDWIDTH

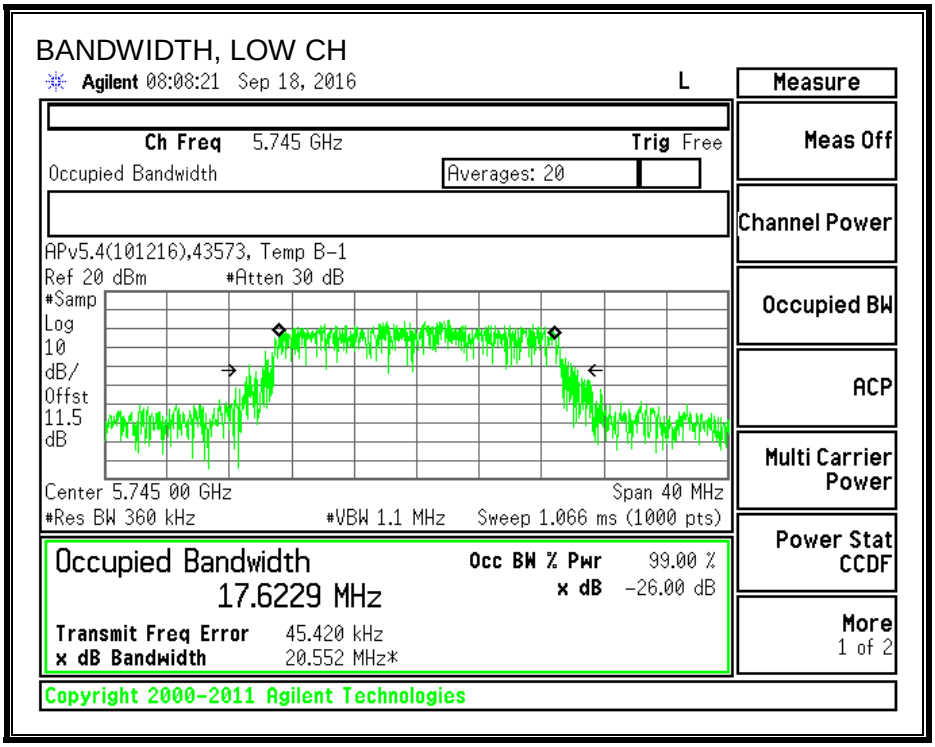
LIMITS

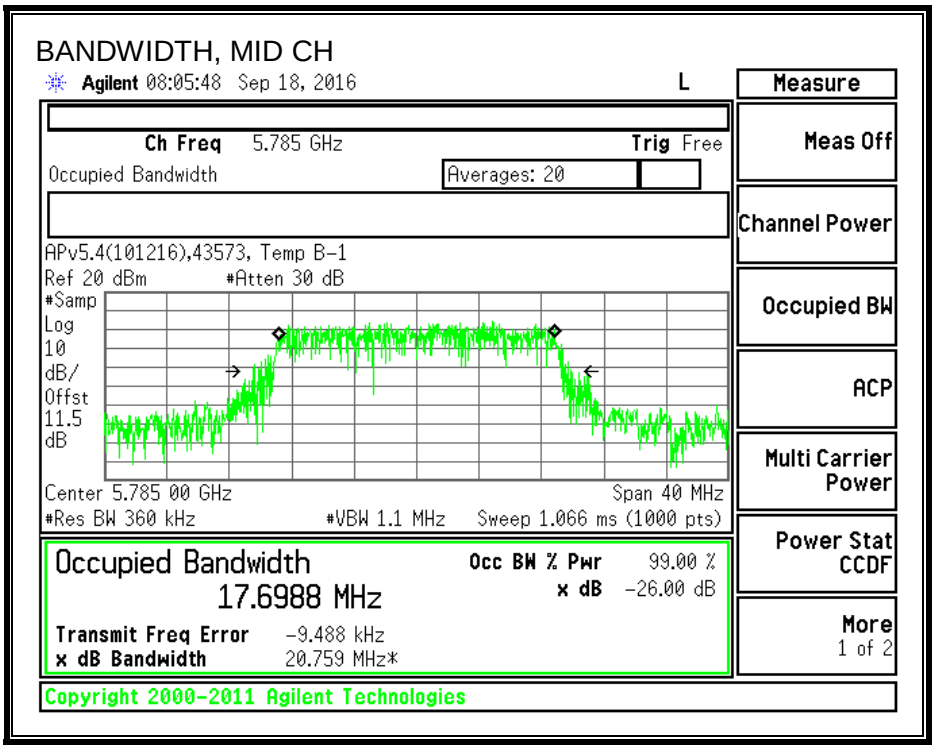
None; for reporting purposes only.

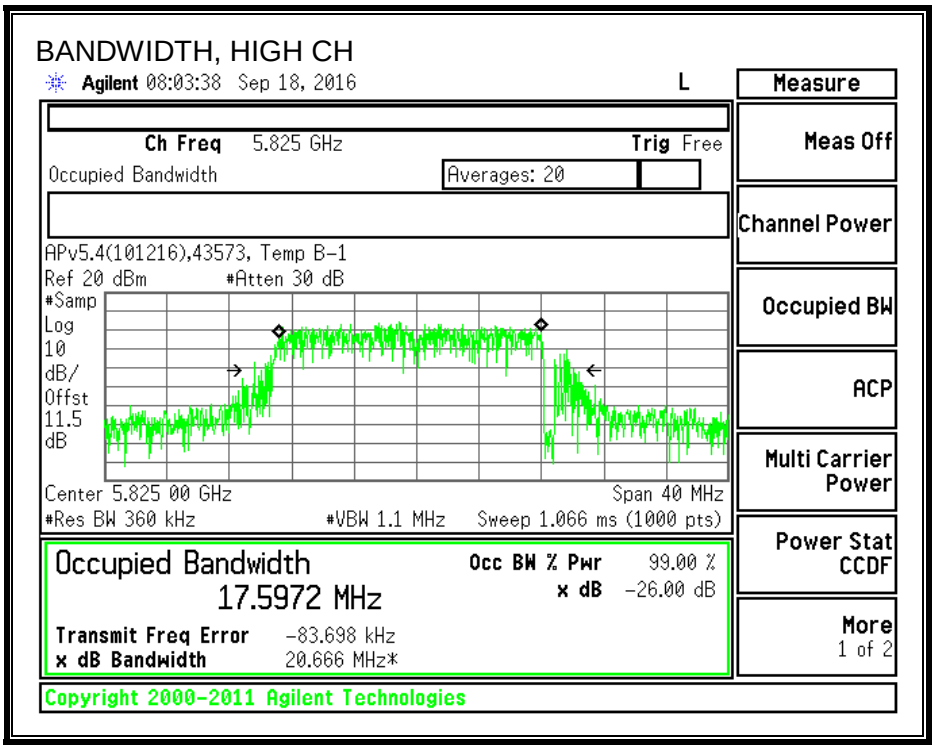
RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5745	17.623
Mid	5785	17.699
High	5825	17.597

99% BANDWIDTH







8.45.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

ID:	30554	Date:	12/15/16

Channel	Frequency (MHz)	Power (dBm)
Low	5745	16.41
Mid	5785	16.39
High	5825	16.45

8.45.5. OUTPUT POWER

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

ID:	30554	Date:	12/15/16

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Power Limit (dBm)
Low	5745	3.21	30.00
Mid	5785	3.21	30.00
High	5825	3.21	30.00

Output Power Results

Channel	Frequency (MHz)	Ant B Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	16.41	16.41	30.00	-13.59
Mid	5785	16.39	16.39	30.00	-13.61
High	5825	16.45	16.45	30.00	-13.55

8.45.6. PSD

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	3.22	30.00
Mid	5785	3.22	30.00
High	5825	3.22	30.00

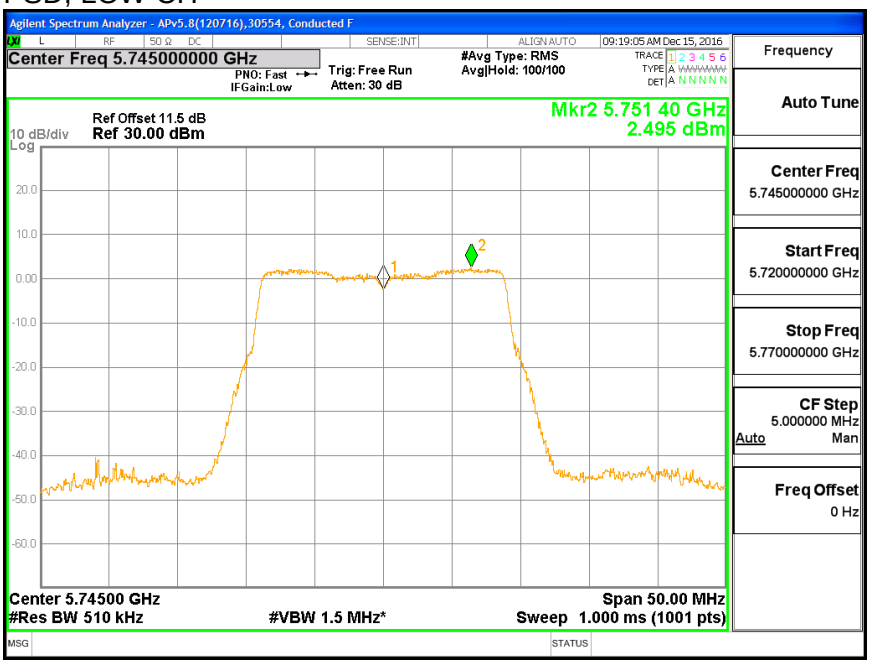
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD

PSD Results

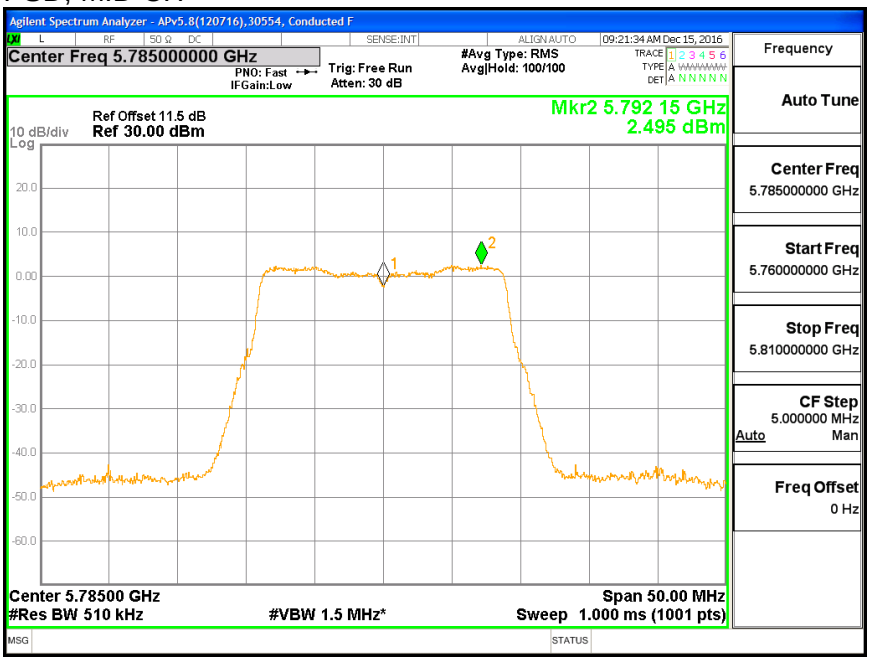
Channel	Frequency (MHz)	Ant B Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5745	2.50	2.50	30.00	-27.51
Mid	5785	2.50	2.50	30.00	-27.51
High	5825	2.71	2.71	30.00	-27.29

PSD

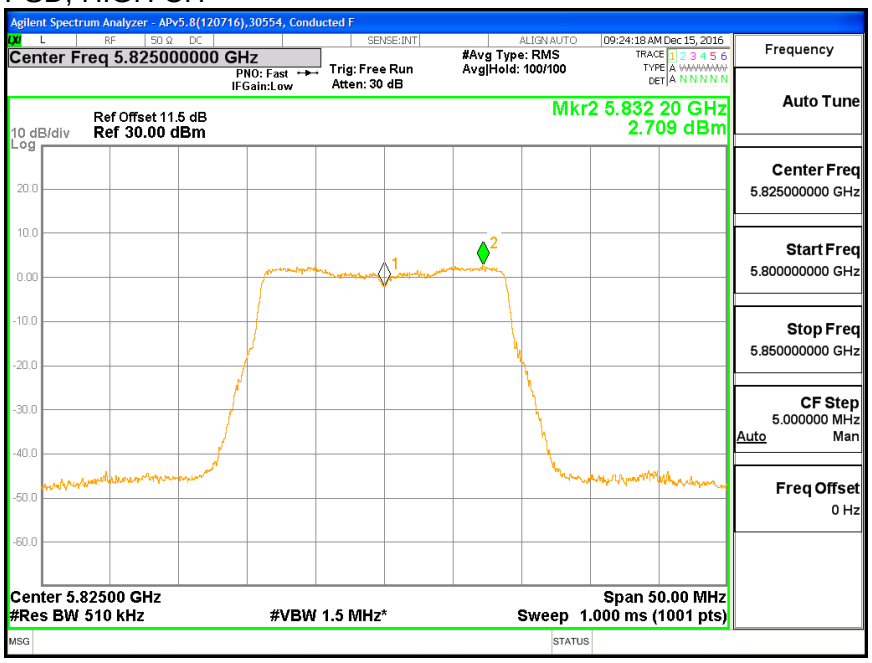
PSD, LOW CH



PSD, MID CH



PSD, HIGH CH



8.46. 802.11n HT20 2Tx (ANTENNA A + ANTENNA B) CDD MODE IN THE 5.8 GHz BAND

8.46.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

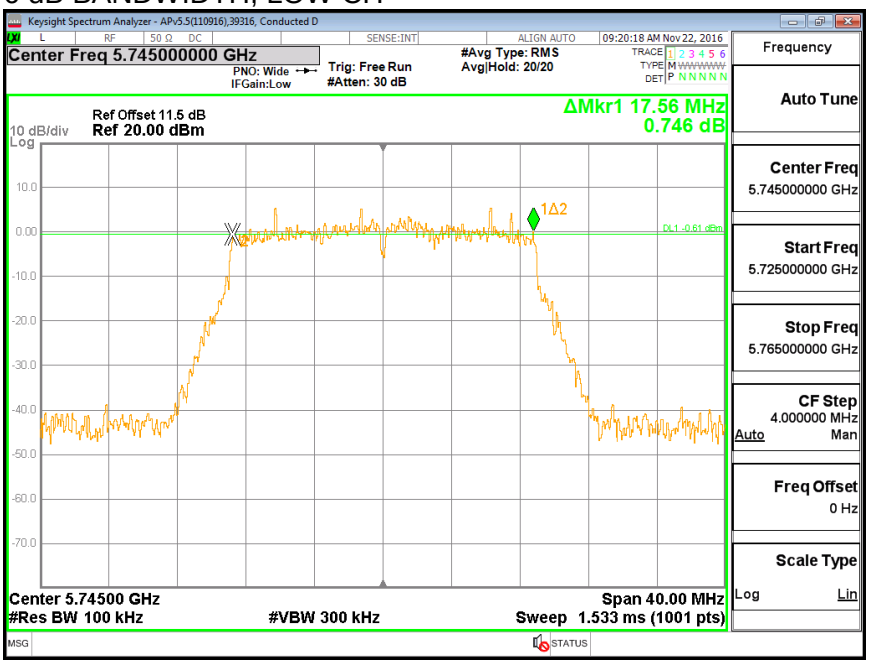
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

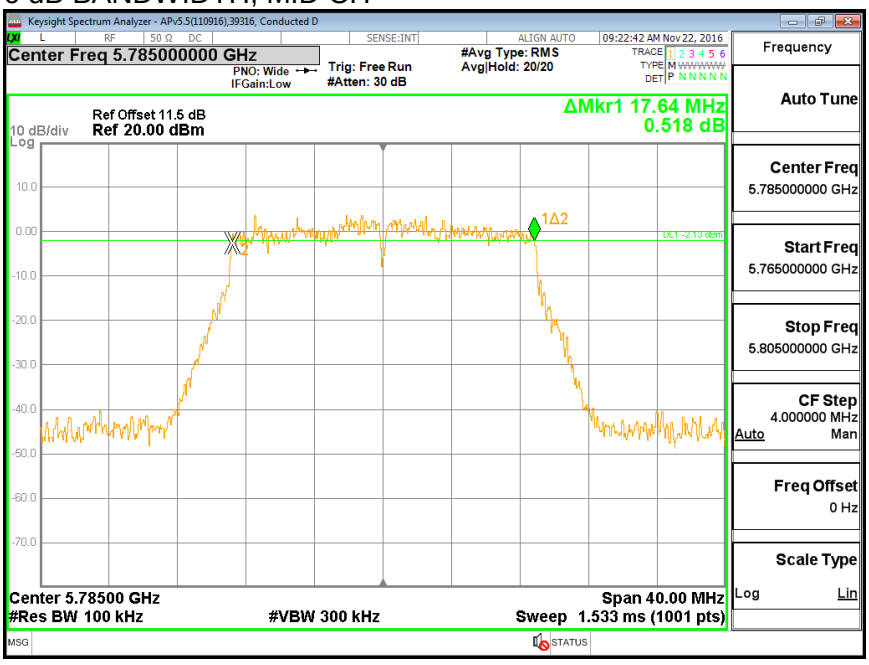
Channel	Frequency (MHz)	6 dB BW Ant A (MHz)	6 dB BW Ant B (MHz)	Minimum Limit (MHz)
Low	5745	17.560	16.280	0.5
Mid	5785	17.640	17.600	0.5
High	5825	17.640	17.680	0.5

6 dB BANDWIDTH, ANTENNA A

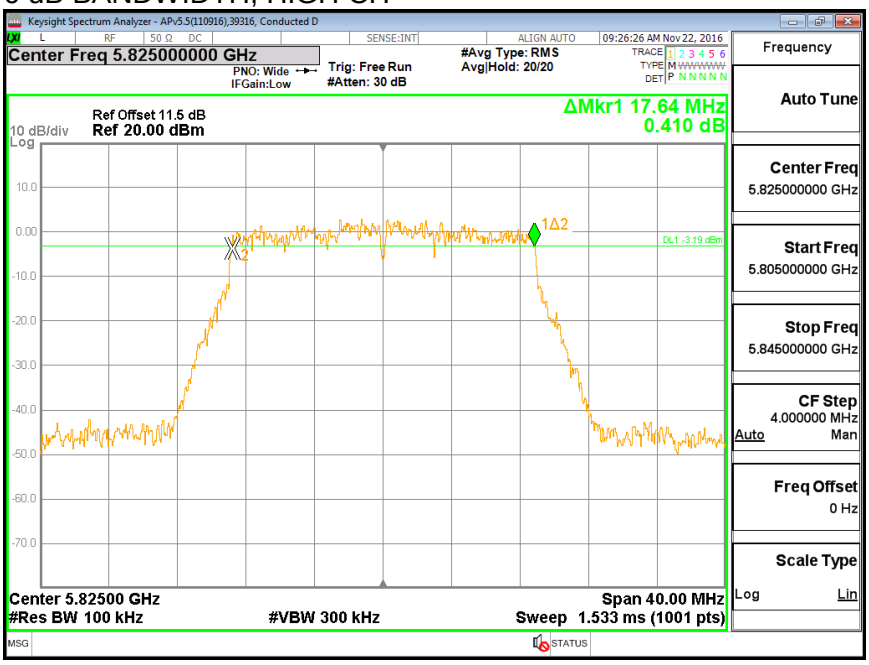
6 dB BANDWIDTH, LOW CH



6 dB BANDWIDTH, MID CH

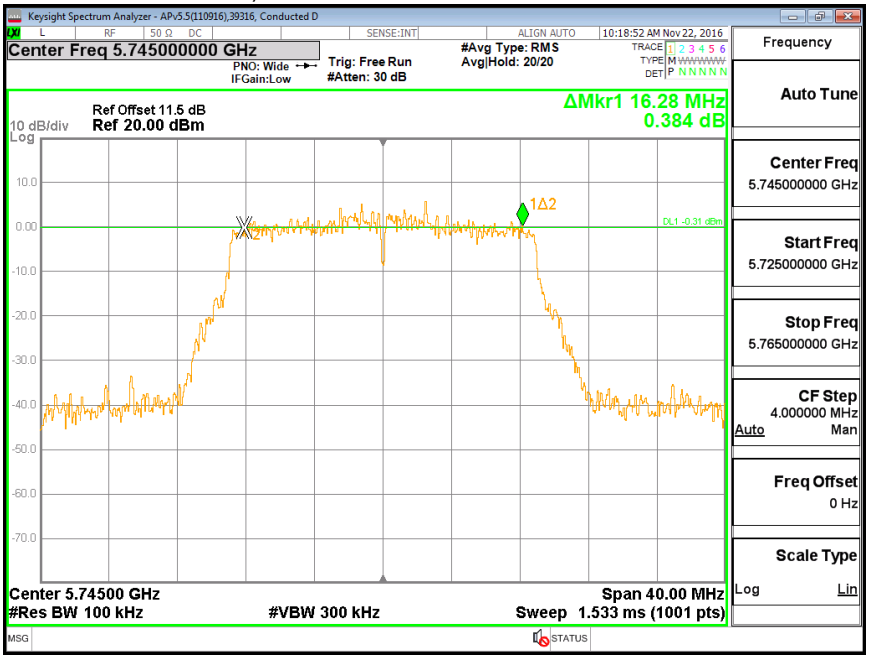


6 dB BANDWIDTH, HIGH CH

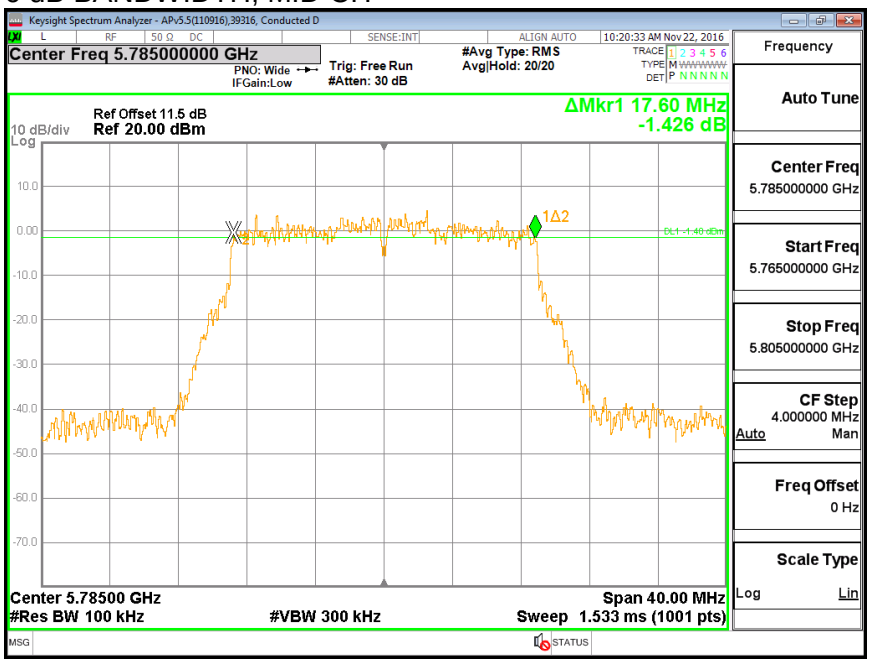


6 dB BANDWIDTH, ANTENNA B

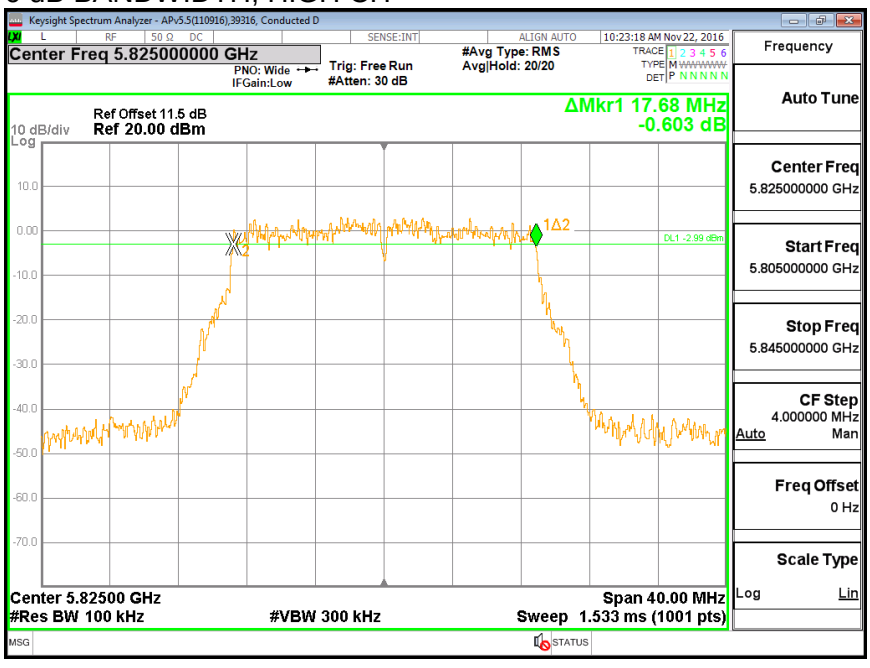
6 dB BANDWIDTH, LOW CH



6 dB BANDWIDTH, MID CH



6 dB BANDWIDTH, HIGH CH



8.46.2. 26 dB BANDWIDTH

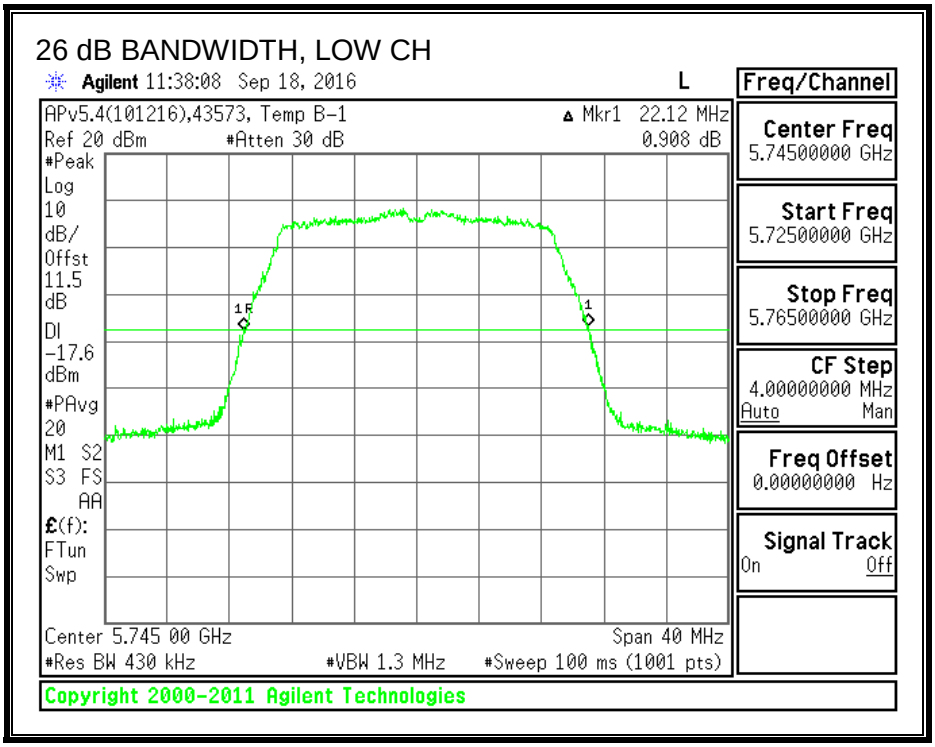
LIMITS

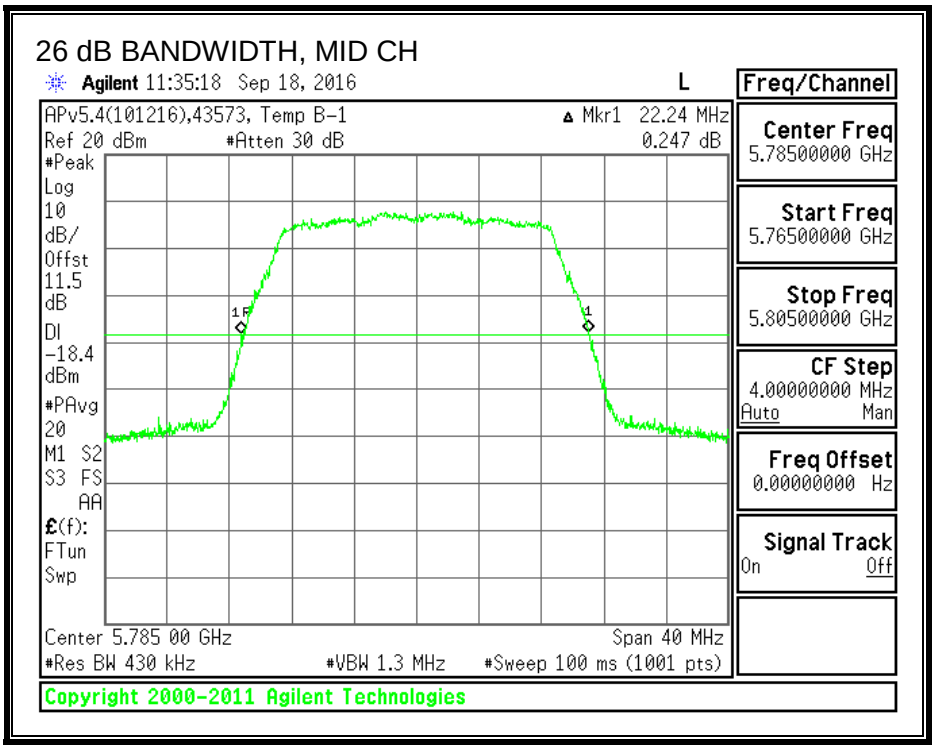
None, for reporting purposes only.

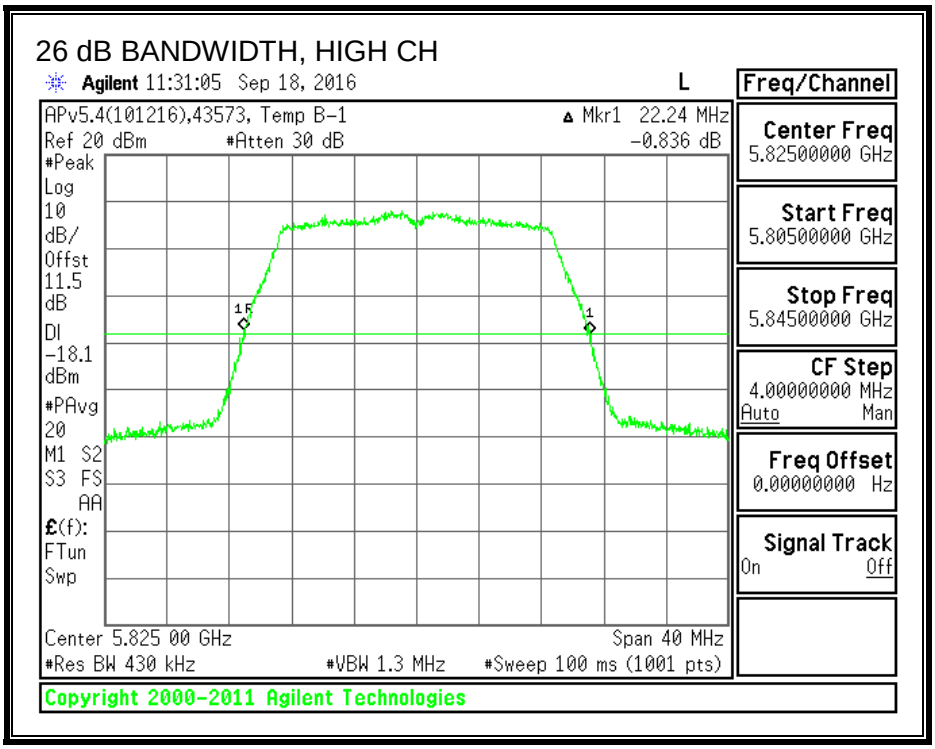
RESULTS

Channel	Frequency (MHz)	26 dB BW Ant A (MHz)	26 dB BW Ant B (MHz)
Low	5745	22.120	21.680
Mid	5785	22.240	21.640
High	5825	22.240	21.760

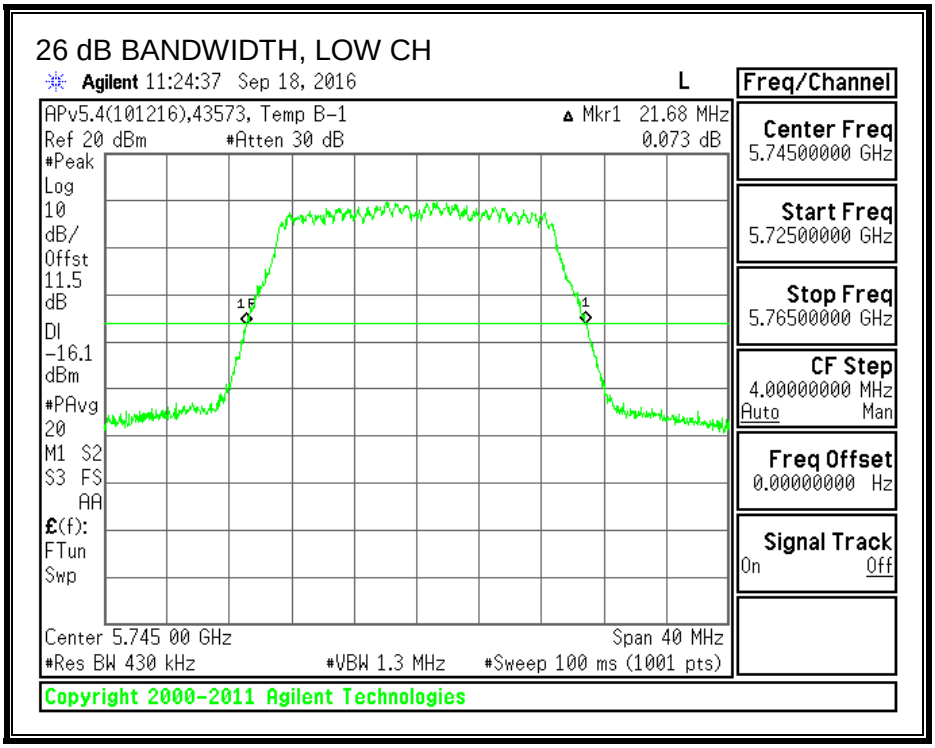
26 dB BANDWIDTH, ANTENNA A



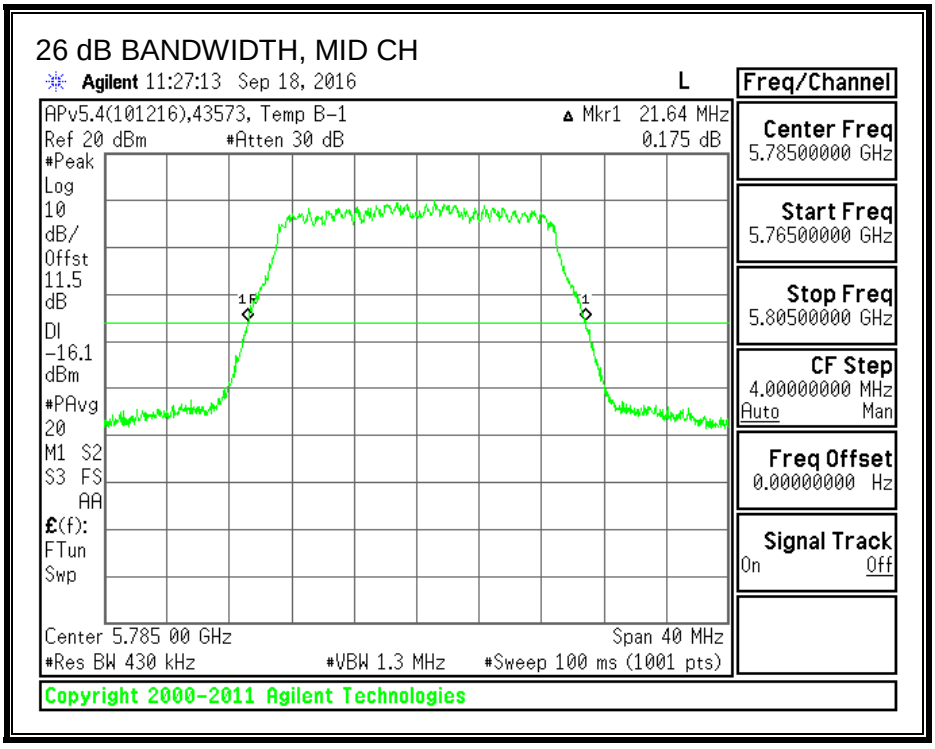




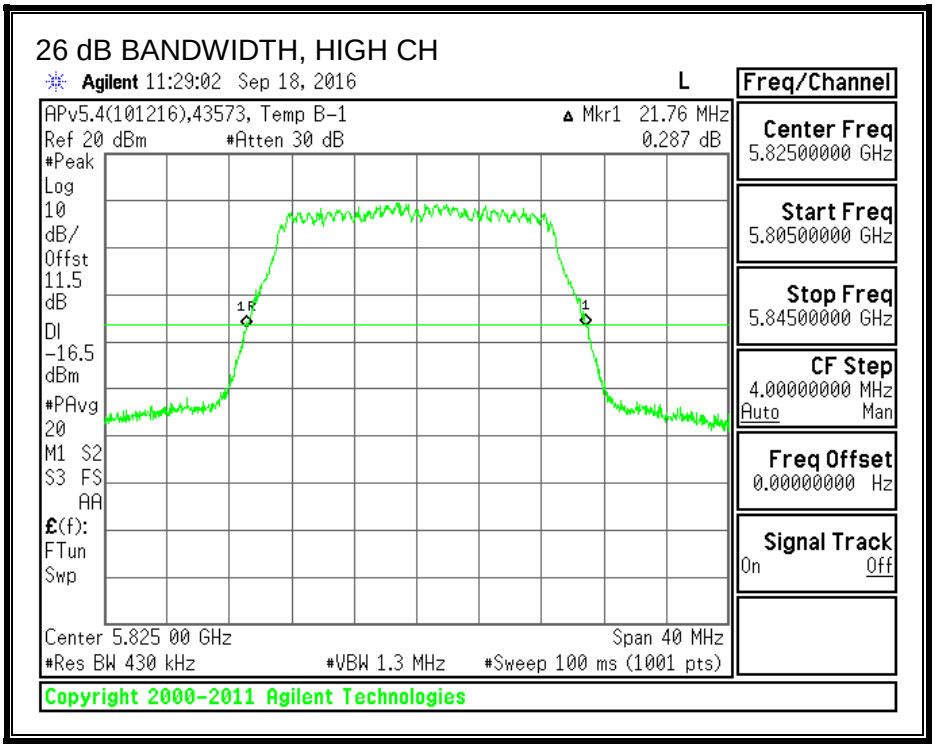
26 dB BANDWIDTH, ANTENNA B



26 dB BANDWIDTH, MID CH



26 dB BANDWIDTH, HIGH CH



8.46.3. 99% BANDWIDTH

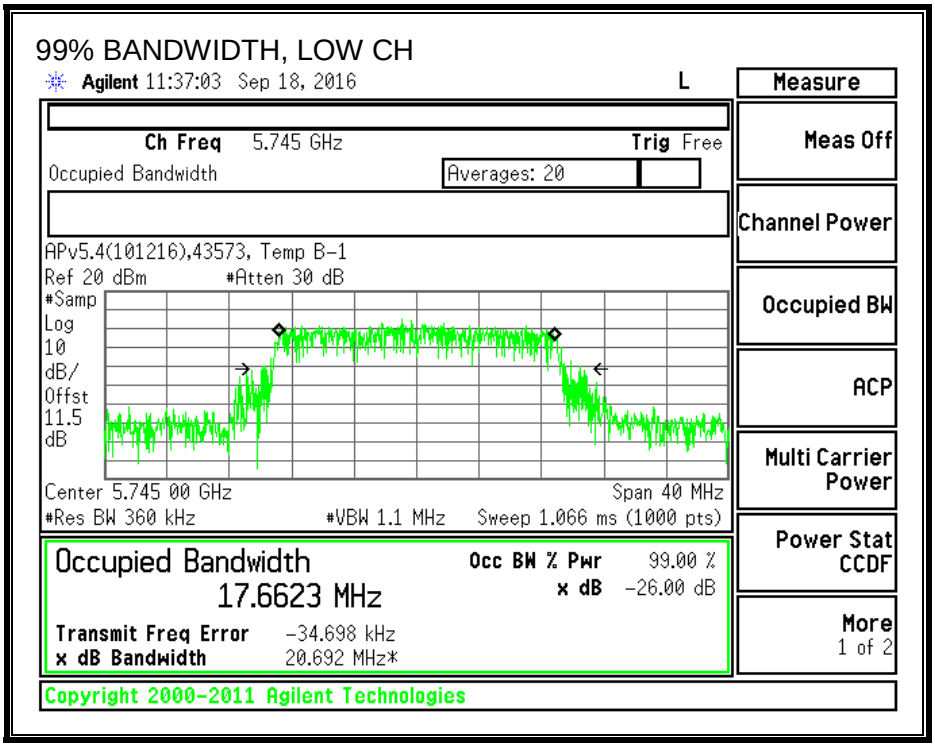
LIMITS

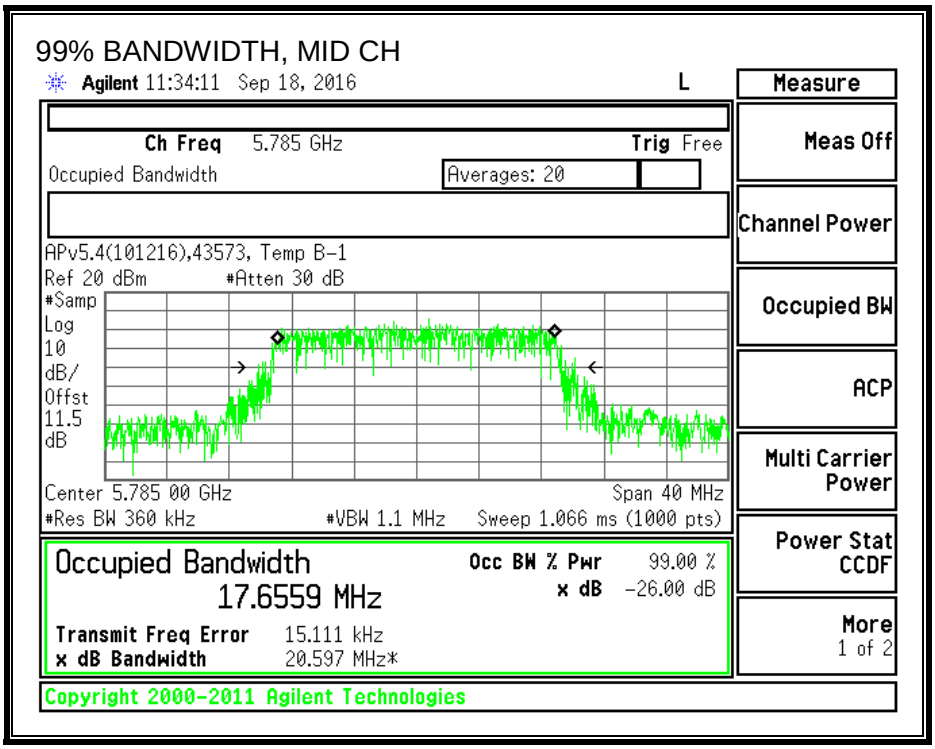
None; for reporting purposes only.

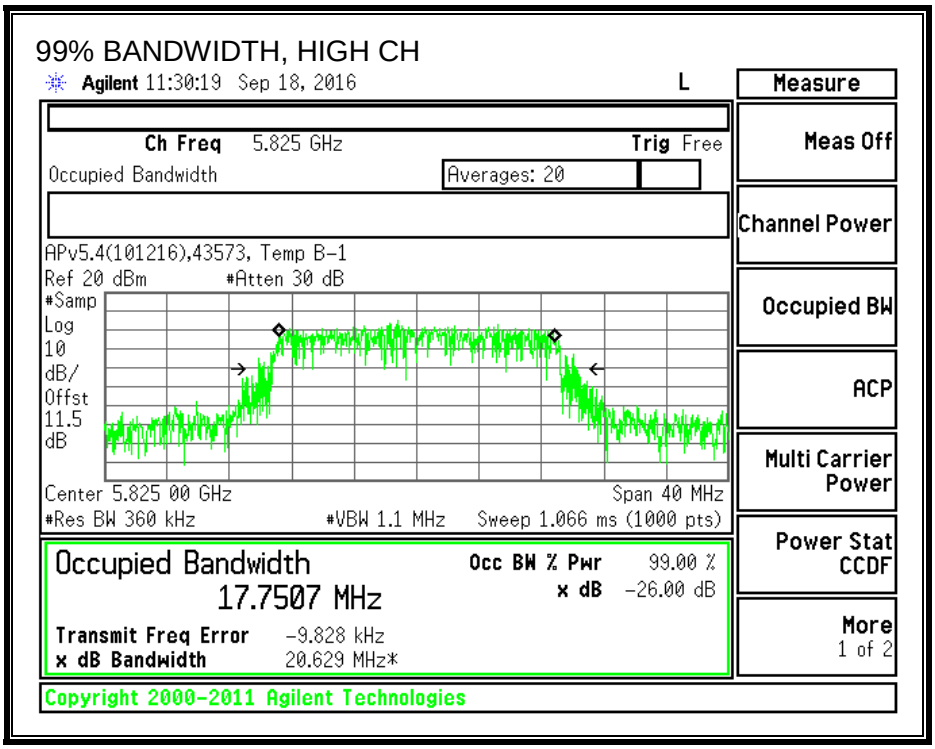
RESULTS

Channel	Frequency (MHz)	99% BW Ant A (MHz)	99% BW Ant B (MHz)
Low	5745	17.662	17.685
Mid	5785	17.656	17.653
High	5825	17.751	17.664

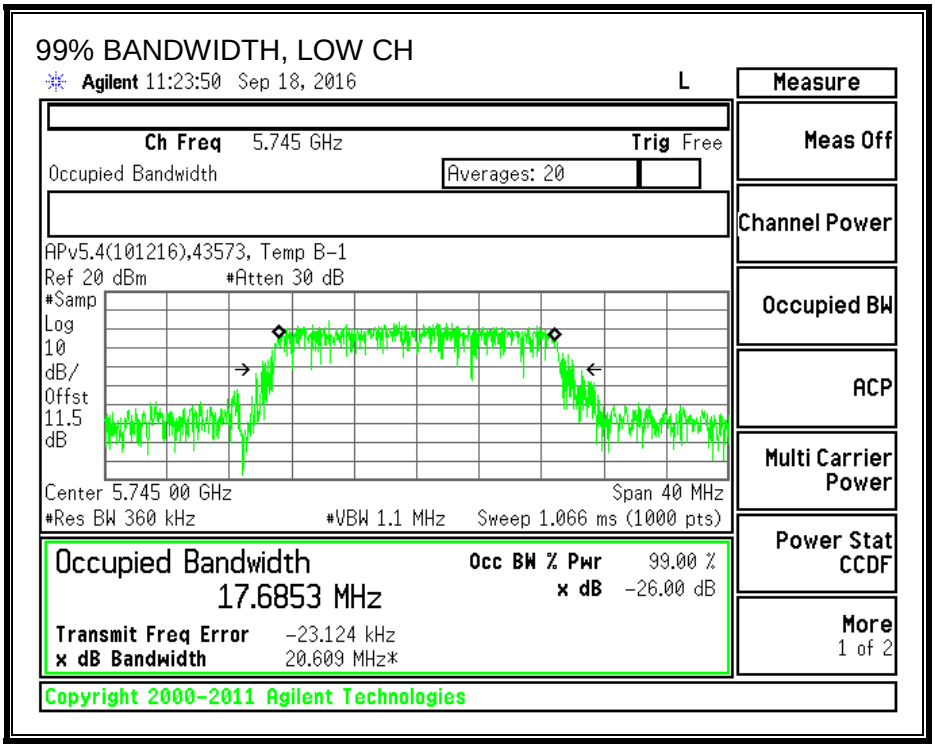
99% BANDWIDTH, ANTENNA A



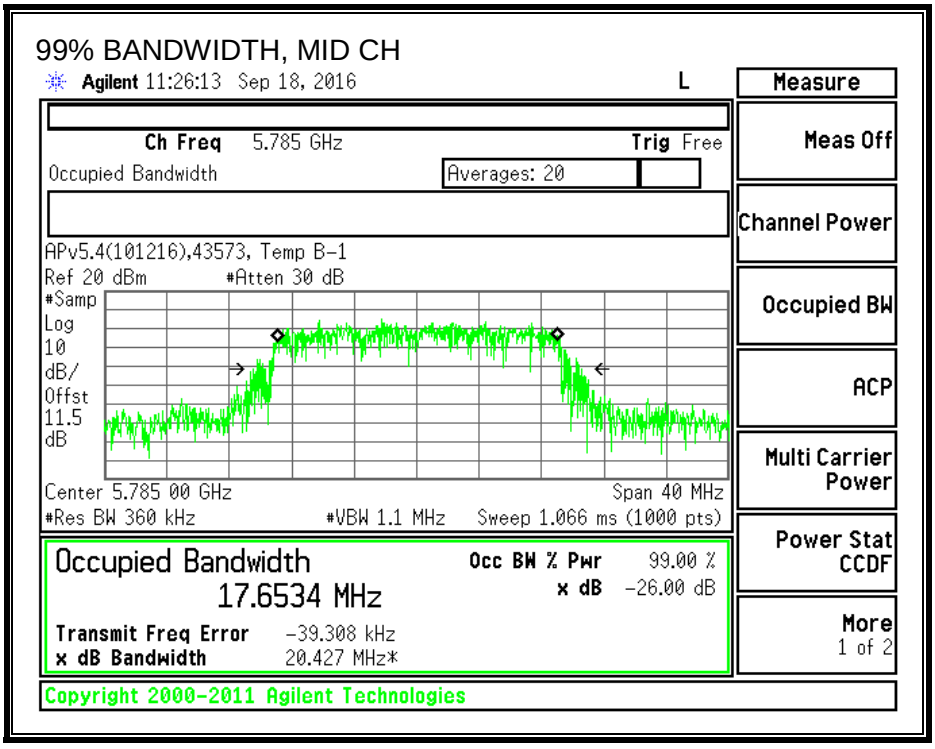




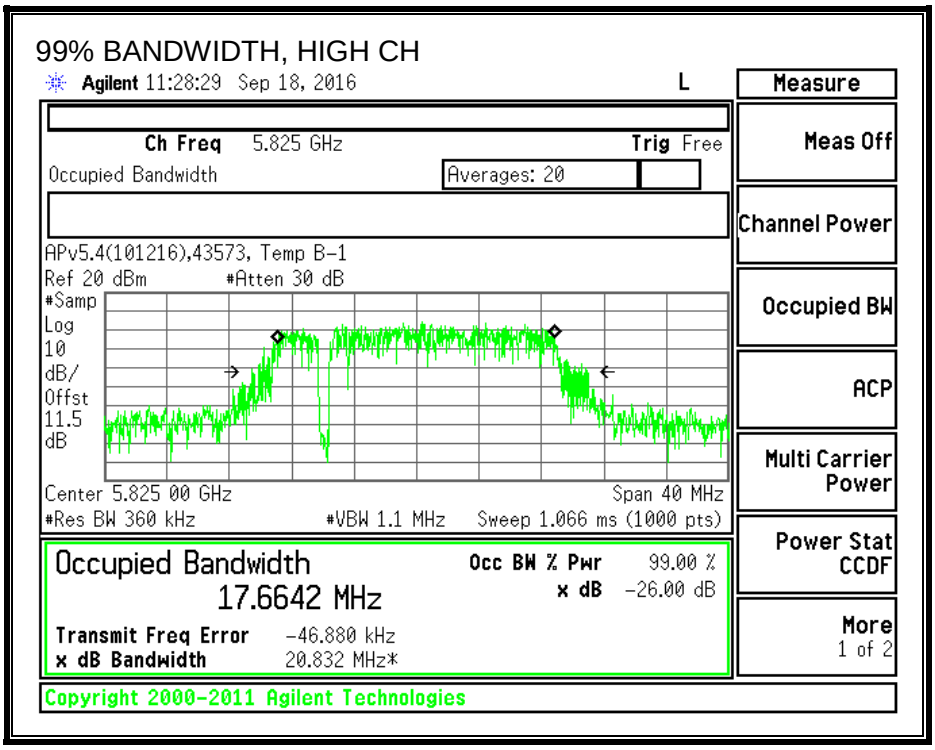
99% BANDWIDTH, ANTENNA B



99% BANDWIDTH, MID CH



99% BANDWIDTH, HIGH CH



8.46.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

ID:	39316	Date:	12/15/16

Channel	Frequency (MHz)	Ant A Power (dBm)	Ant B Power (dBm)	Total Power (dBm)
Low	5745	16.46	16.44	19.46
Mid	5785	16.49	16.48	19.50
High	5825	16.47	16.45	19.47

8.46.5. OUTPUT POWER

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:

Ant A Antenna Gain (dBi)	Ant B Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
3.54	3.21	3.38

RESULTS

ID:	39316	Date:	12/15/16

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Power Limit (dBm)
Low	5745	3.38	30.00
Mid	5785	3.38	30.00
High	5825	3.38	30.00

Output Power Results

Channel	Frequency (MHz)	Ant A Meas Power (dBm)	Ant B Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	16.46	16.44	19.46	30.00	-10.54
Mid	5785	16.49	16.48	19.50	30.00	-10.50
High	5825	16.47	16.45	19.47	30.00	-10.53

8.46.6. PSD

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:

Ant A Antenna Gain (dBi)	Ant B Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
3.54	3.22	6.39

RESULTS

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5745	6.39	29.61
Mid	5785	6.39	29.61
High	5825	6.39	29.61

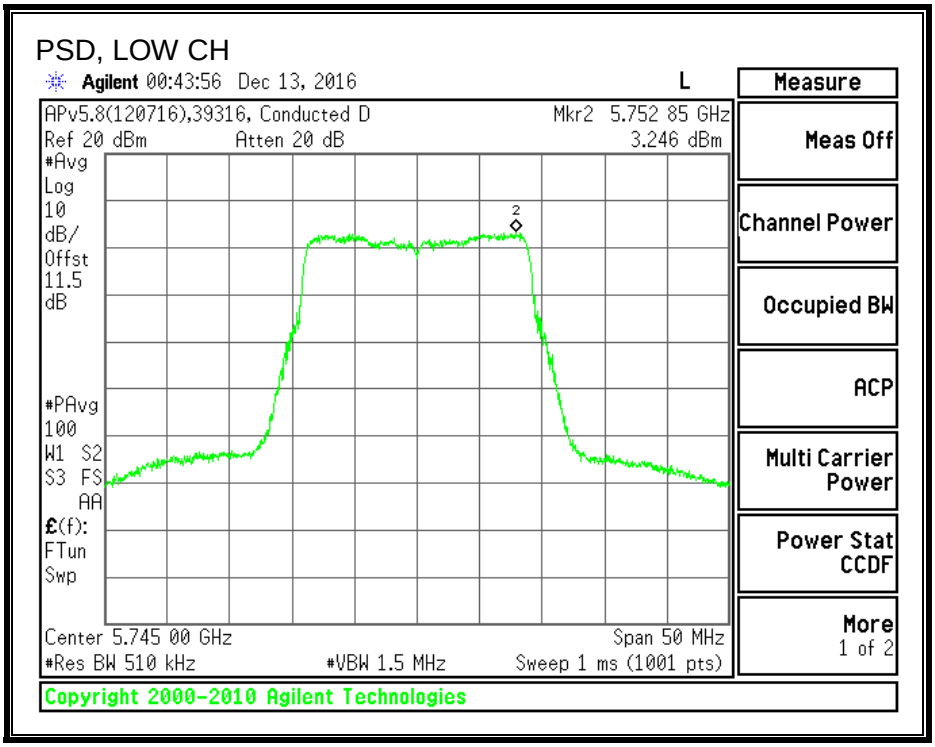
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD

PSD Results

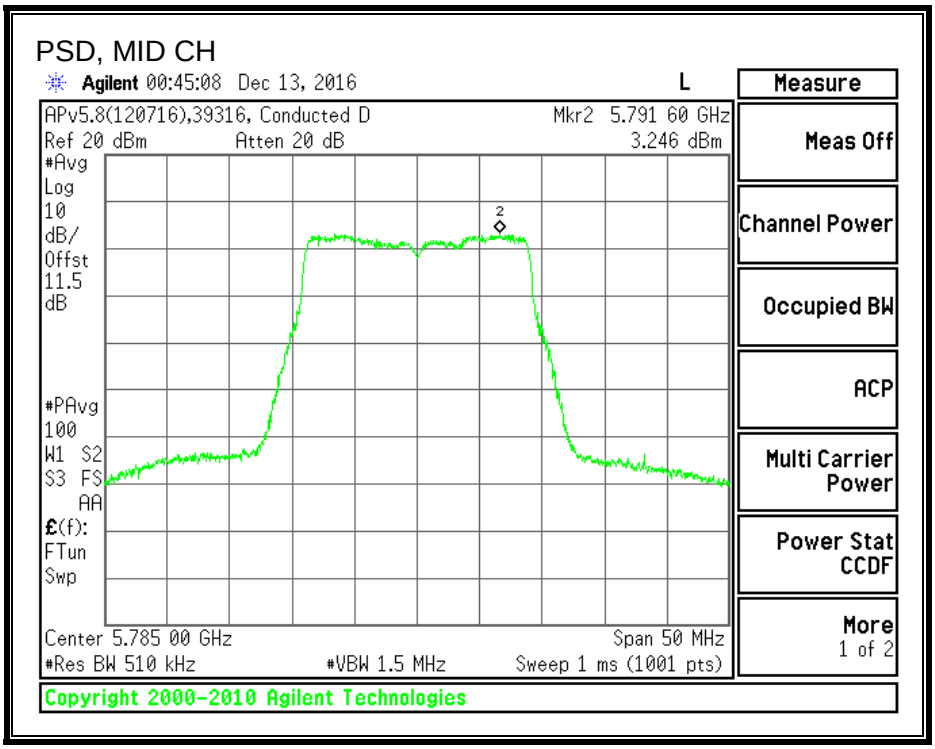
Channel	Frequency (MHz)	Ant A Meas PSD (dBm)	Ant B Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5745	3.25	3.54	6.41	29.61	-23.20
Mid	5785	3.25	3.48	6.37	29.61	-23.24
High	5825	3.08	3.60	6.36	29.61	-23.25

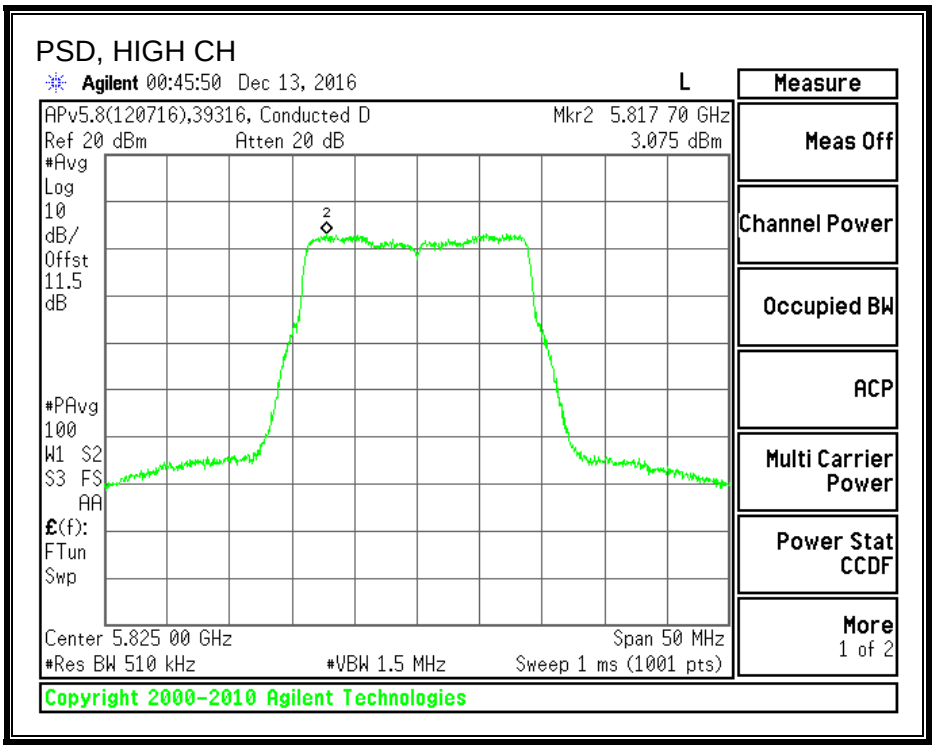
PSD, ANTENNA A

PSD, LOW CH

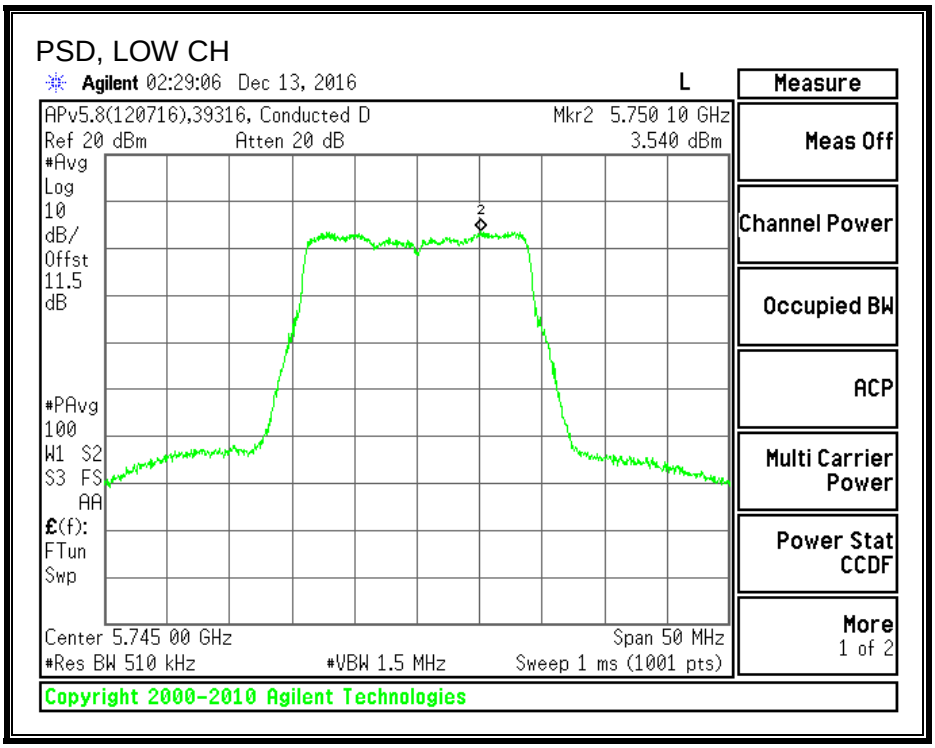


PSD, MID CH

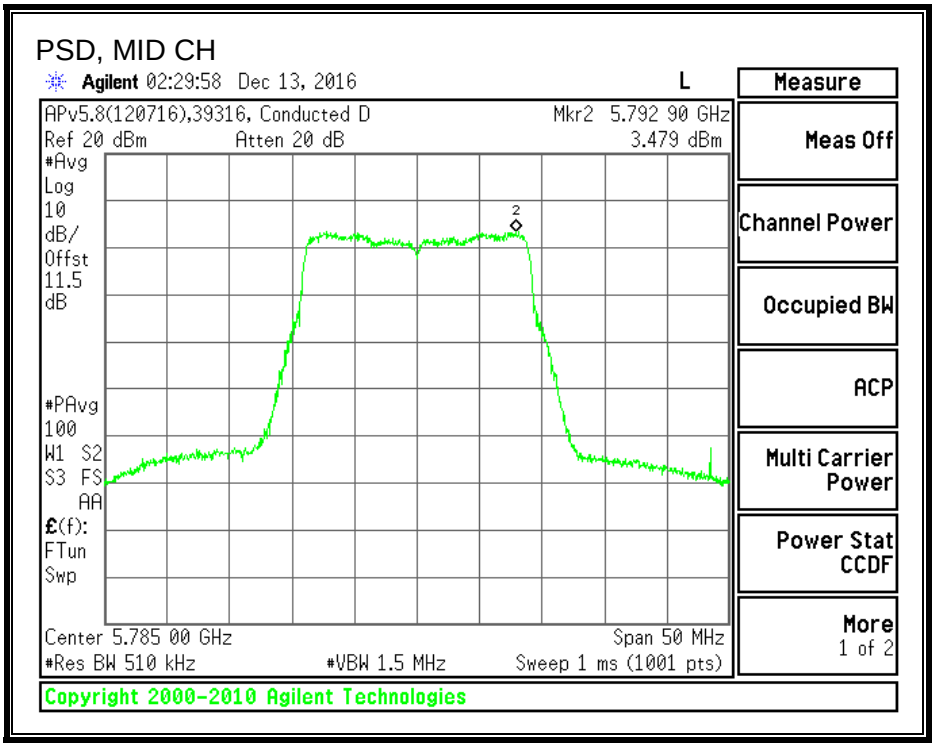




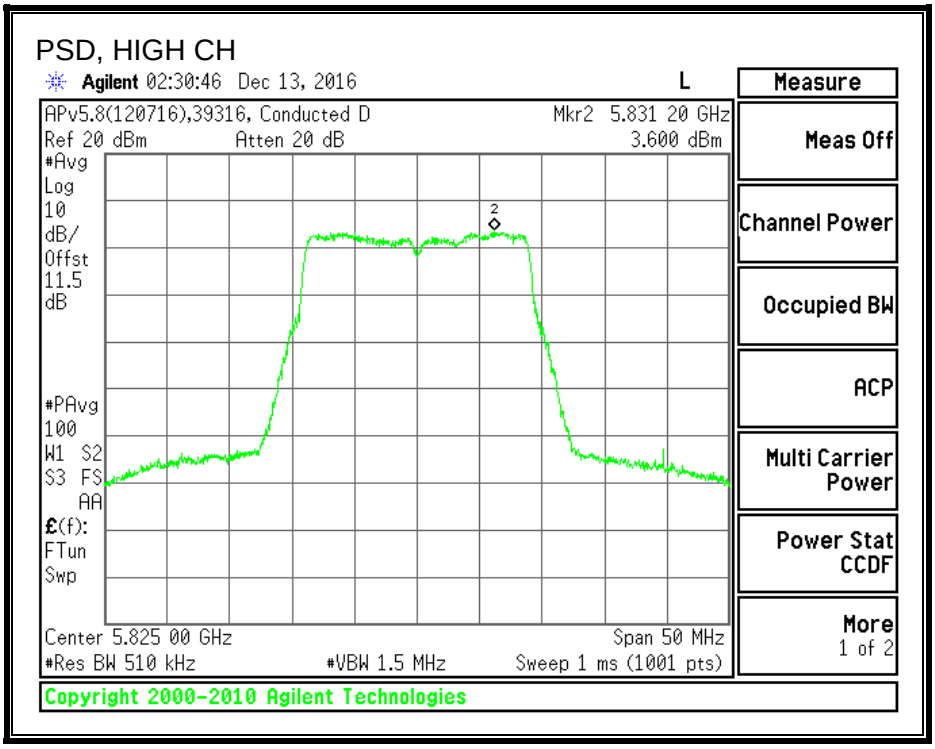
PSD, ANTENNA B



PSD, MID CH



PSD, HIGH CH



8.47. 802.11n HT20 2Tx (ANTENNA A + ANTENNA B) STBC MODE IN THE 5.8 GHz BAND

Noted: Covered by 802.11n HT20 2Tx (ANTENNA A + ANTENNA B) CDD MODE IN THE 5.8 GHz BAND

8.48. 802.11n HT40 ANTENNA A MODE IN THE 5.8 GHz BAND

8.48.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

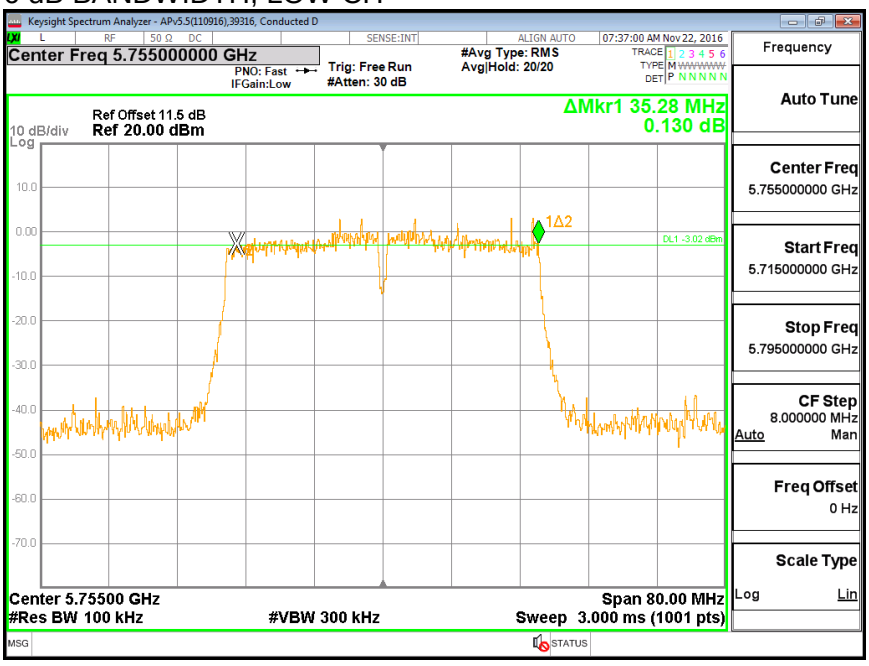
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

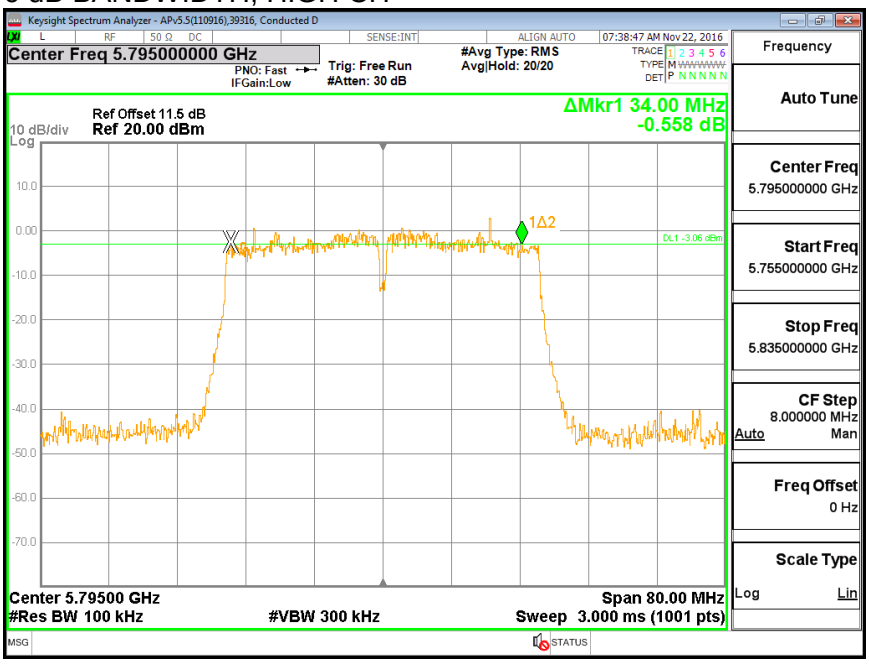
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5755	35.280	0.5
High	5795	34.000	0.5

6 dB BANDWIDTH

6 dB BANDWIDTH, LOW CH



6 dB BANDWIDTH, HIGH CH



8.48.2. 26 dB BANDWIDTH

LIMITS

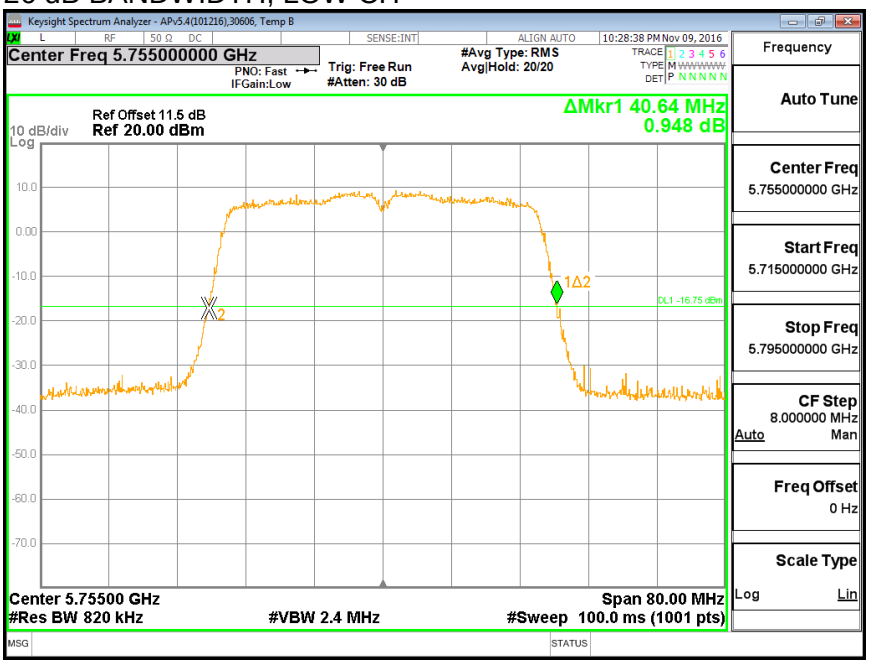
None, for reporting purposes only.

RESULTS

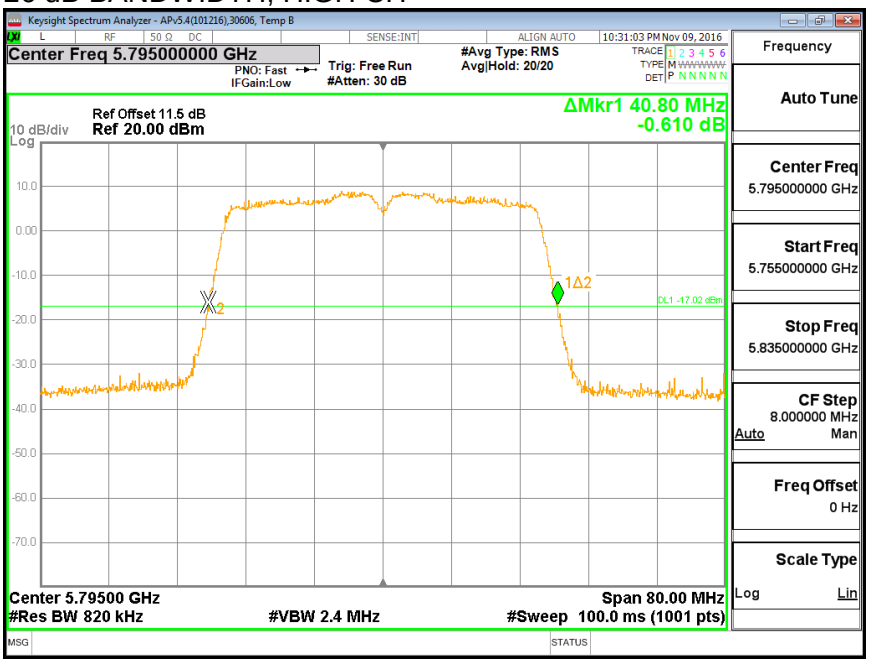
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5755	40.640
High	5795	40.800

26 dB BANDWIDTH

26 dB BANDWIDTH, LOW CH



26 dB BANDWIDTH, HIGH CH



8.48.3. 99% BANDWIDTH

LIMITS

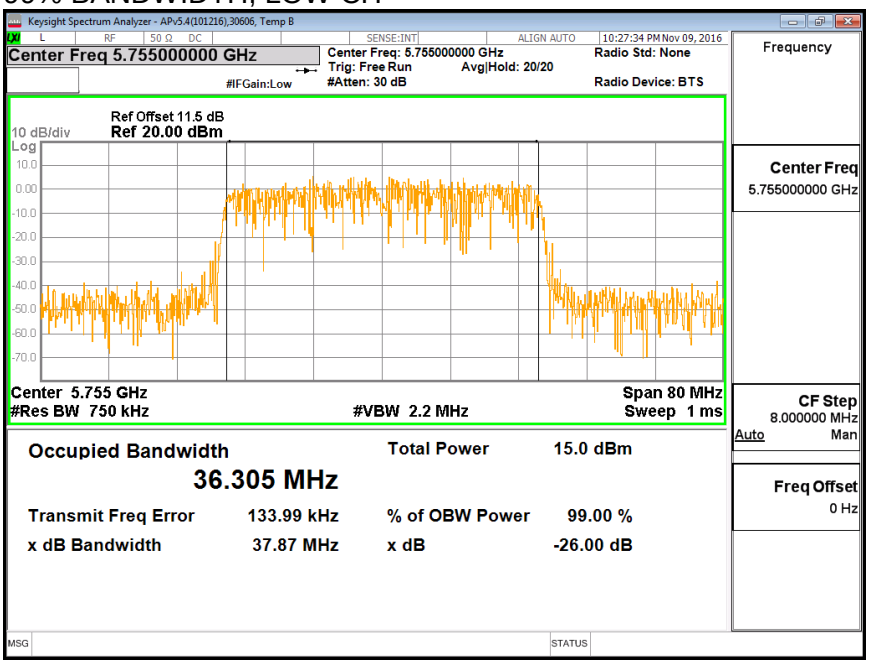
None; for reporting purposes only.

RESULTS

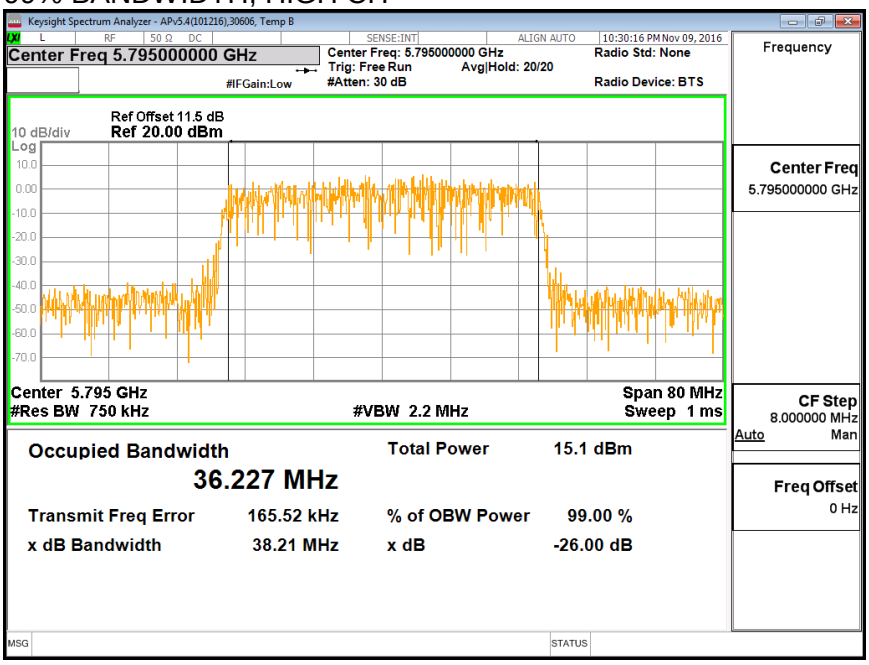
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5755	36.305
High	5795	36.227

99% BANDWIDTH

99% BANDWIDTH, LOW CH



99% BANDWIDTH, HIGH CH



8.48.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

ID:	30554	Date:	12/15/16

Channel	Frequency (MHz)	Power (dBm)
Low	5755	16.33
High	5795	16.39

8.48.5. OUTPUT POWER

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

ID:	30554	Date:	12/15/16

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)
Low	5755	3.54	30.00
High	5795	3.54	30.00

Output Power Results

Channel	Frequency (MHz)	Ant A Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5755	16.33	16.33	30.00	-13.67
High	5795	16.39	16.39	30.00	-13.61

8.48.6. PSD

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	3.54	30.00
High	5795	3.54	30.00

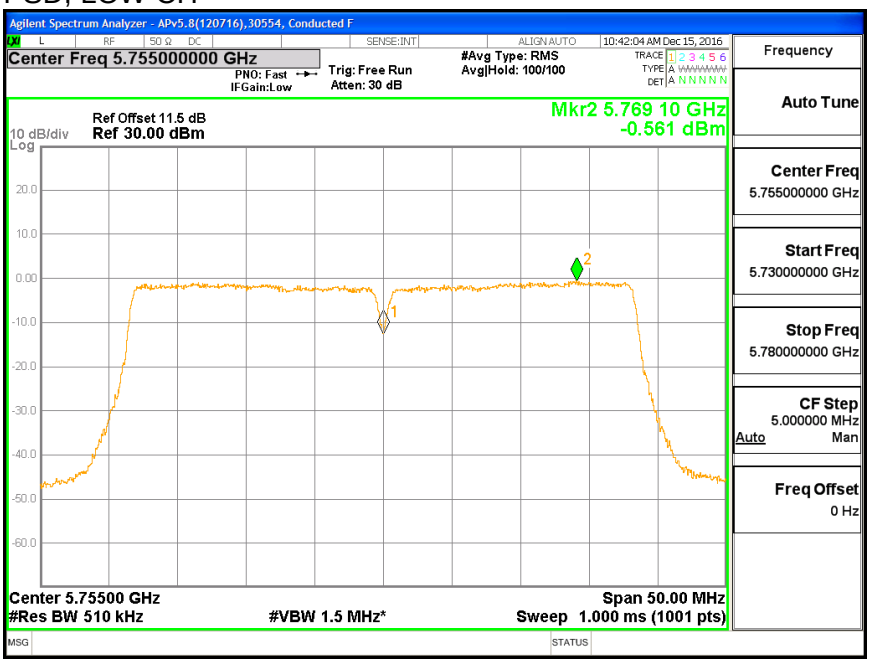
Duty Cycle CF (dB)	0.10	Included in Calculations of Corr'd PSD

PSD Results

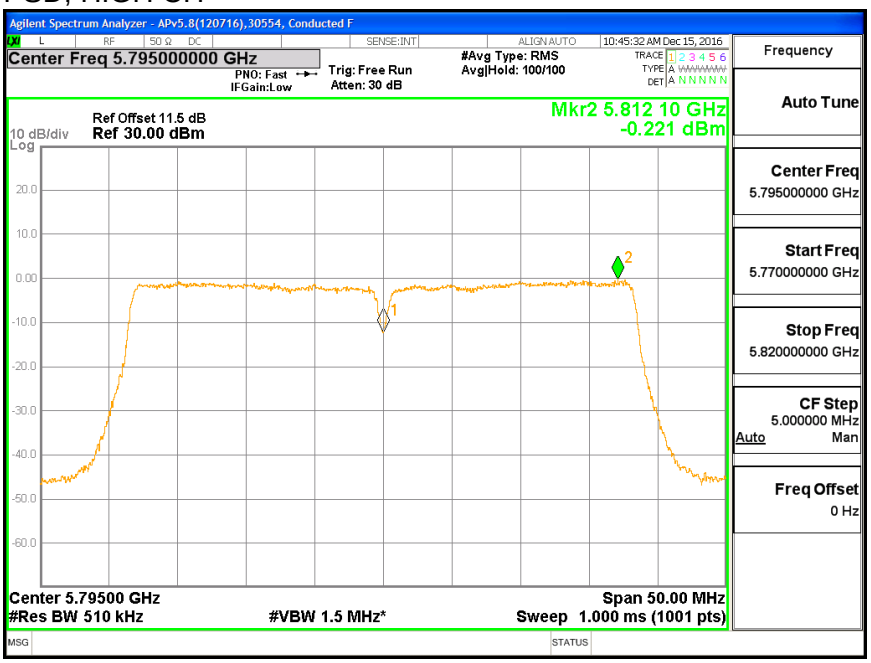
Channel	Frequency (MHz)	Ant A Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5755	-0.561	-0.46	30.00	-30.46
High	5795	-0.221	-0.12	30.00	-30.12

PSD

PSD, LOW CH



PSD, HIGH CH



8.49. 802.11n HT40 ANTENNA B MODE IN THE 5.8 GHz BAND

8.49.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

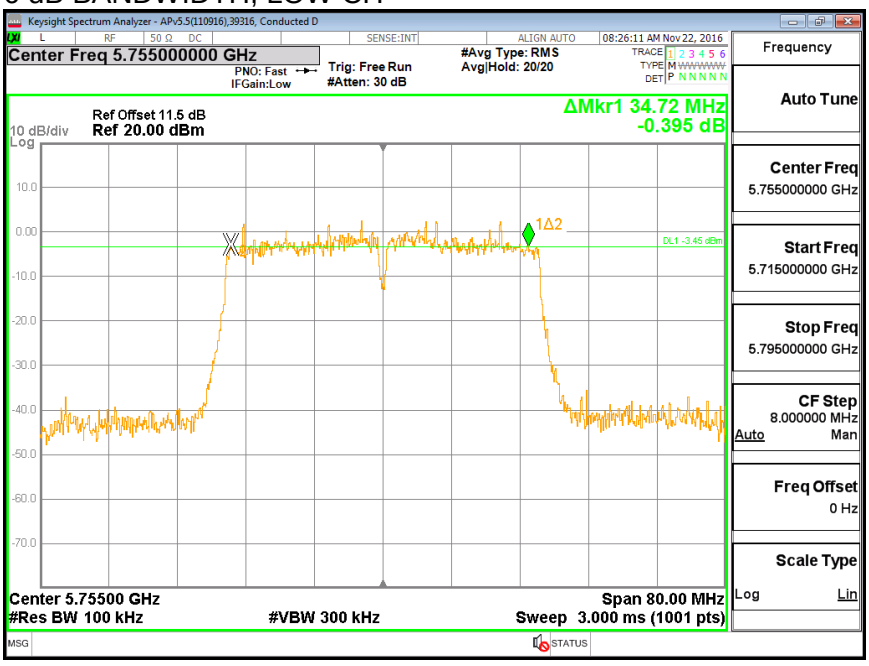
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

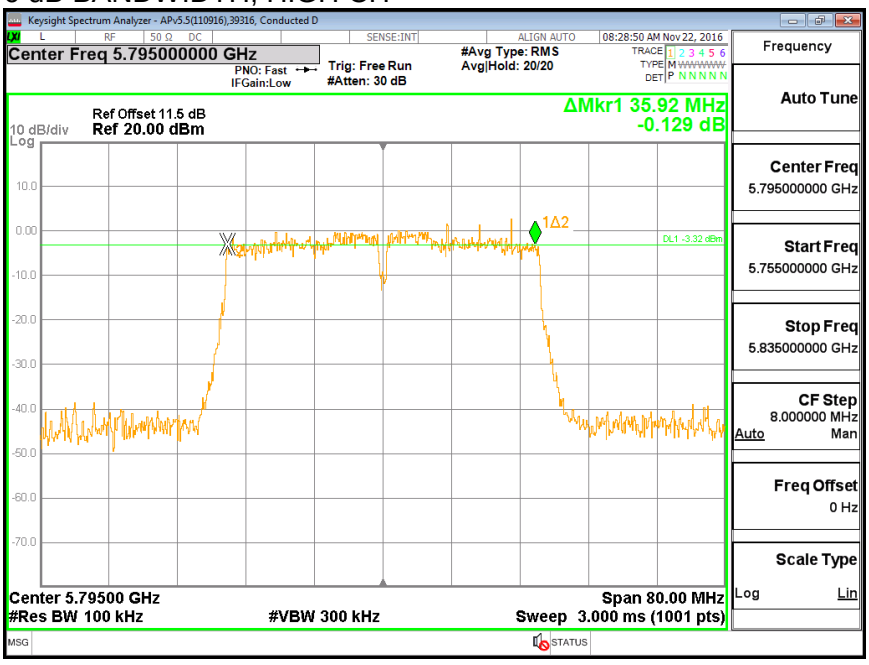
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5755	34.720	0.5
High	5795	35.920	0.5

6 dB BANDWIDTH

6 dB BANDWIDTH, LOW CH



6 dB BANDWIDTH, HIGH CH



8.49.2. 26 dB BANDWIDTH

LIMITS

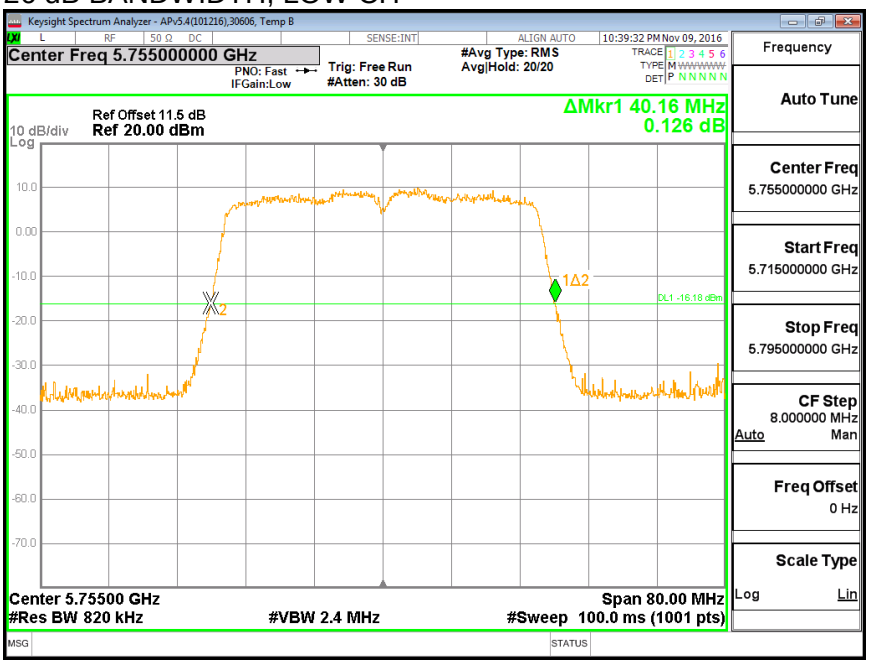
None, for reporting purposes only.

RESULTS

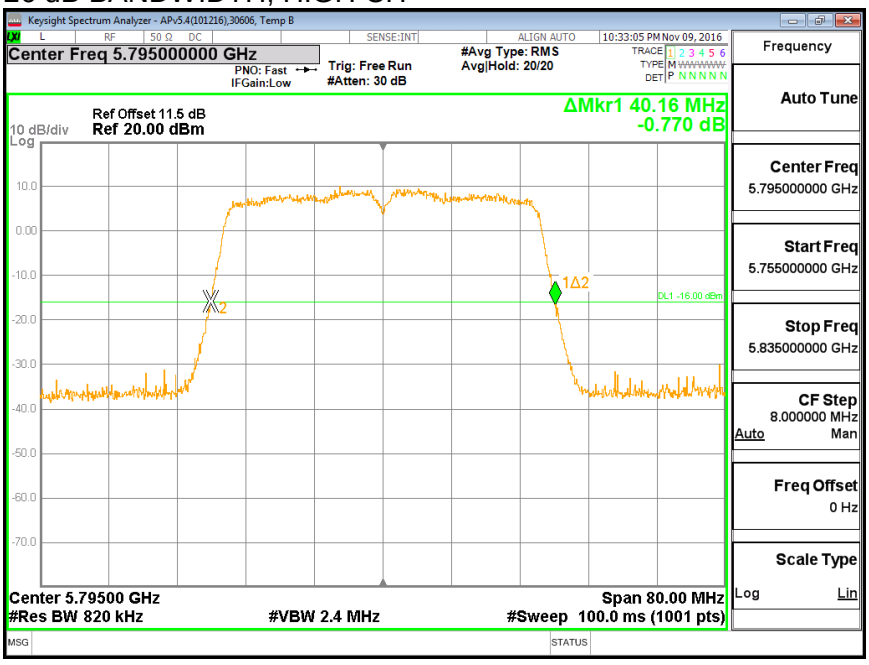
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5755	40.160
High	5795	40.160

26 dB BANDWIDTH

26 dB BANDWIDTH, LOW CH



26 dB BANDWIDTH, HIGH CH



8.49.3. 99% BANDWIDTH

LIMITS

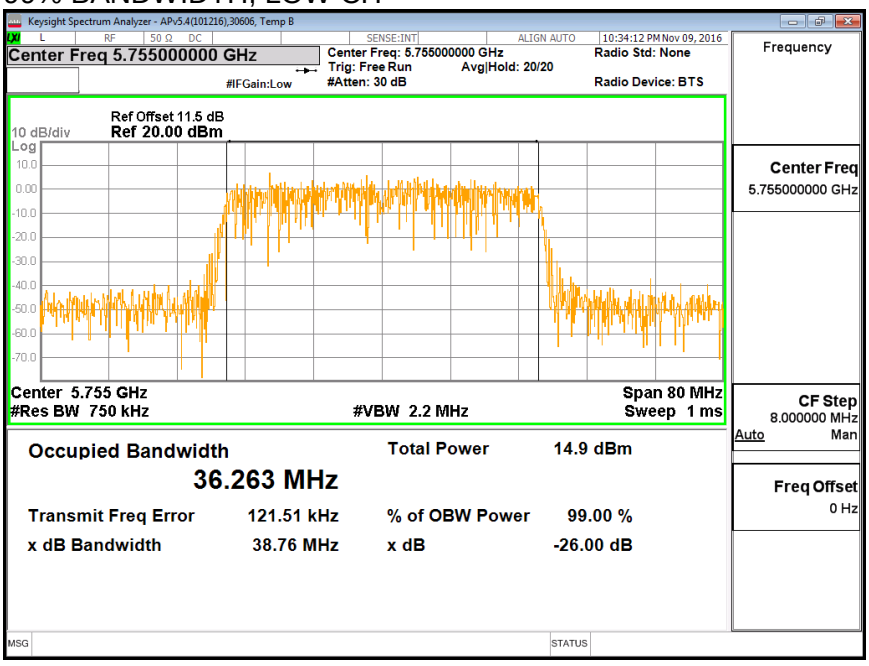
None; for reporting purposes only.

RESULTS

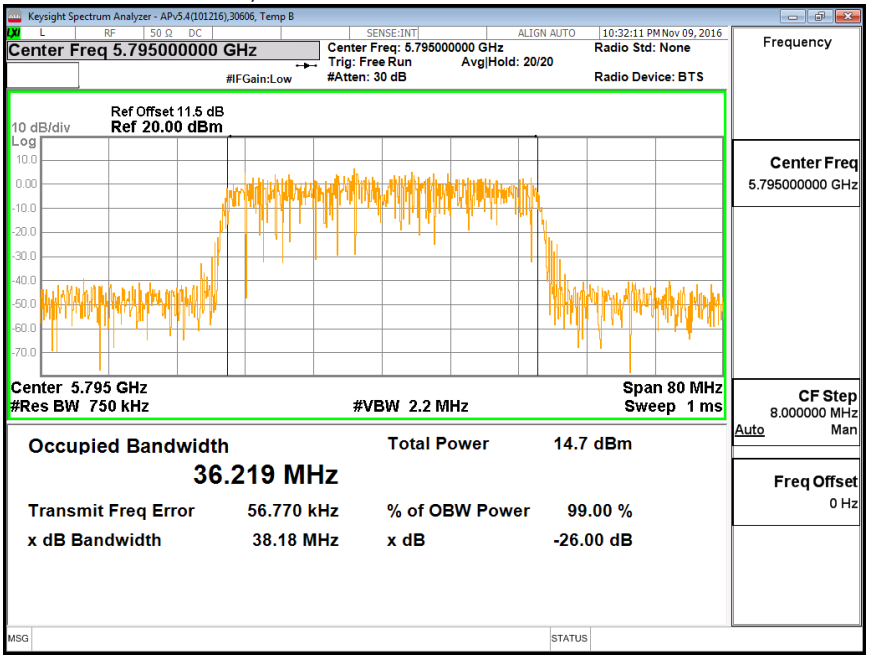
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5755	36.263
High	5795	36.219

99% BANDWIDTH

99% BANDWIDTH, LOW CH



99% BANDWIDTH, HIGH CH



8.49.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

ID:	30554	Date:	12/15/16

Channel	Frequency (MHz)	Power (dBm)
Low	5755	16.41
High	5795	16.40

8.49.5. OUTPUT POWER

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

ID:	30554	Date:	12/15/16

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)
Low	5755	3.21	30.00
High	5795	3.21	30.00

Output Power Results

Channel	Frequency (MHz)	Ant B Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5755	16.41	16.41	30.00	-13.59
High	5795	16.40	16.40	30.00	-13.60

8.49.6. PSD

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	3.21	30.00
High	5795	3.21	30.00

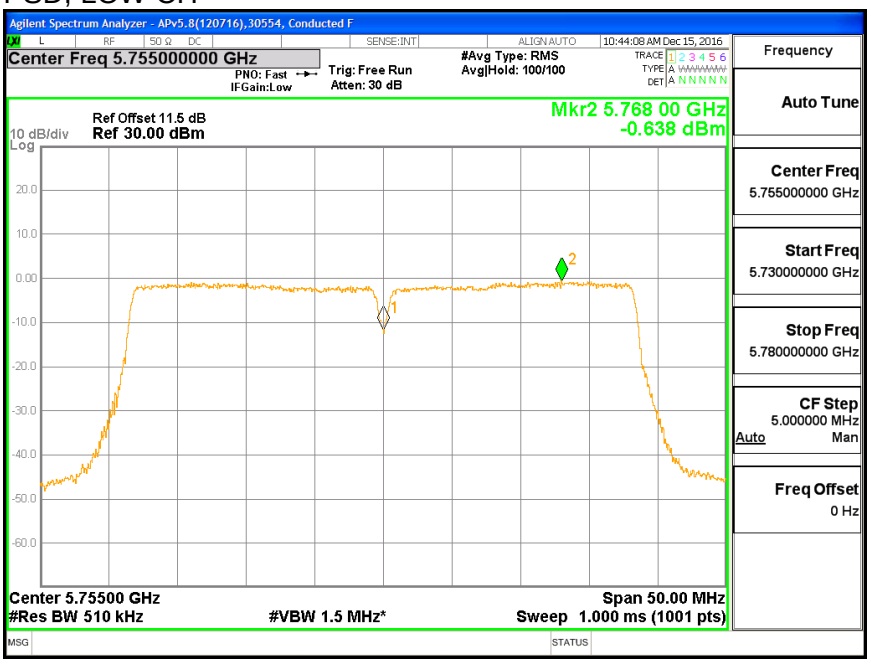
Duty Cycle CF (dB)	0.10	Included in Calculations of Corr'd PSD

PSD Results

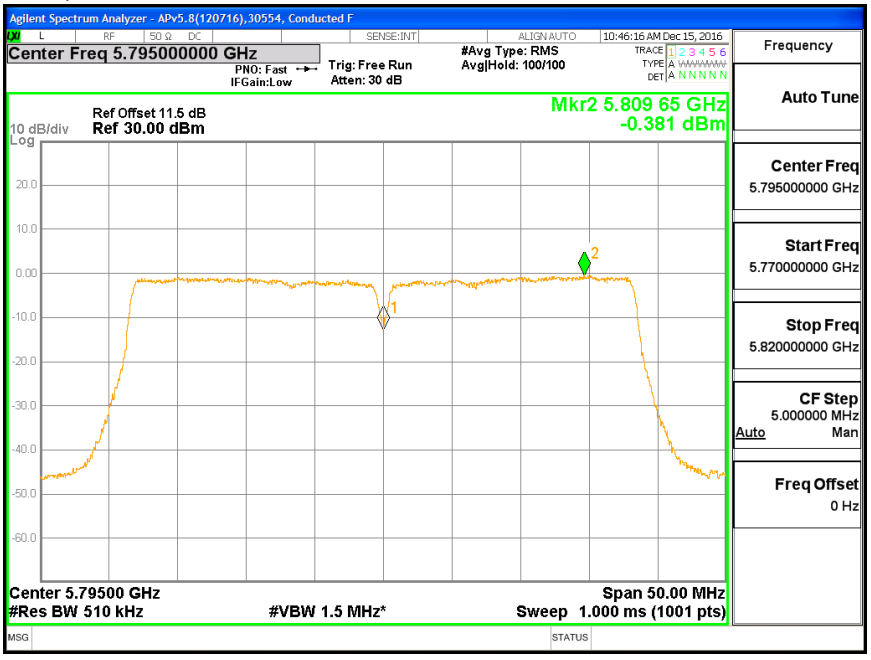
Channel	Frequency (MHz)	Ant B Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5755	-0.638	-0.54	30.00	-30.54
High	5795	-0.381	-0.28	30.00	-30.28

PSD

PSD, LOW CH



PSD, HIGH CH



8.50. 802.11n HT40 2Tx (ANTENNA A + ANTENNA B) CDD MODE IN THE 5.8 GHz BAND

8.50.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

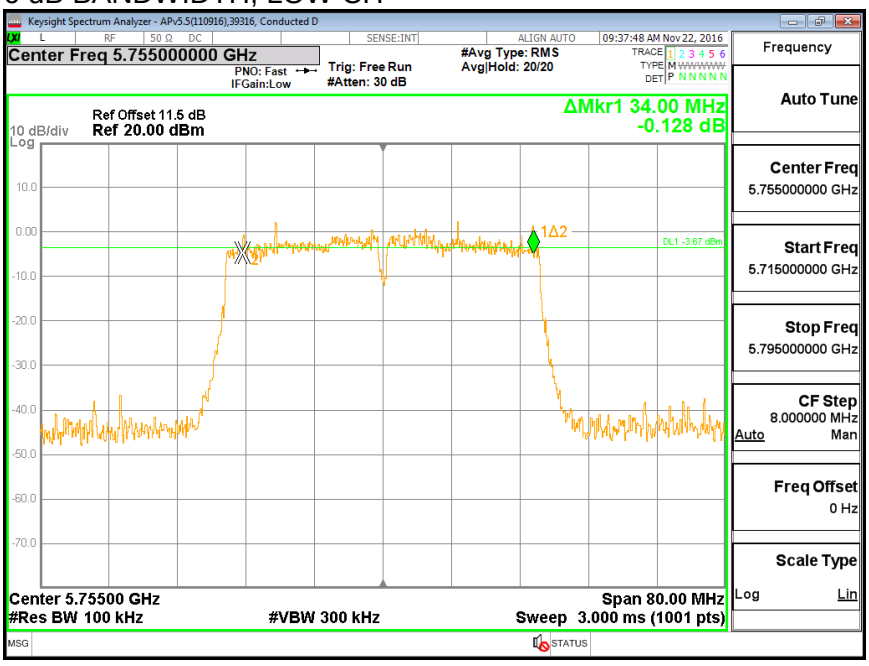
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

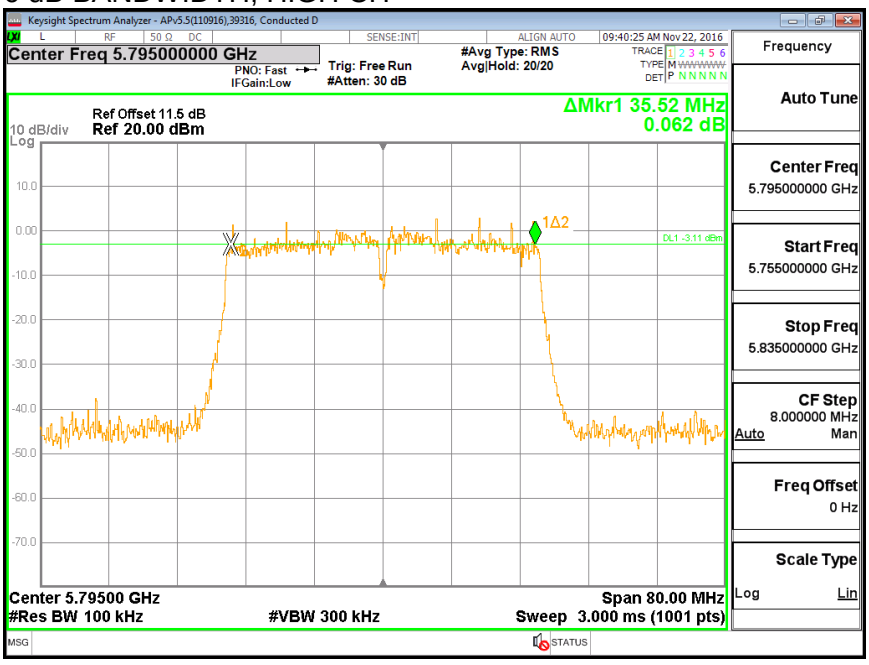
Channel	Frequency (MHz)	6 dB BW Ant A (MHz)	6 dB BW Ant B (MHz)	Minimum Limit (MHz)
Low	5755	34.000	36.400	0.5
High	5795	35.520	36.320	0.5

6 dB BANDWIDTH, ANTENNA A

6 dB BANDWIDTH, LOW CH

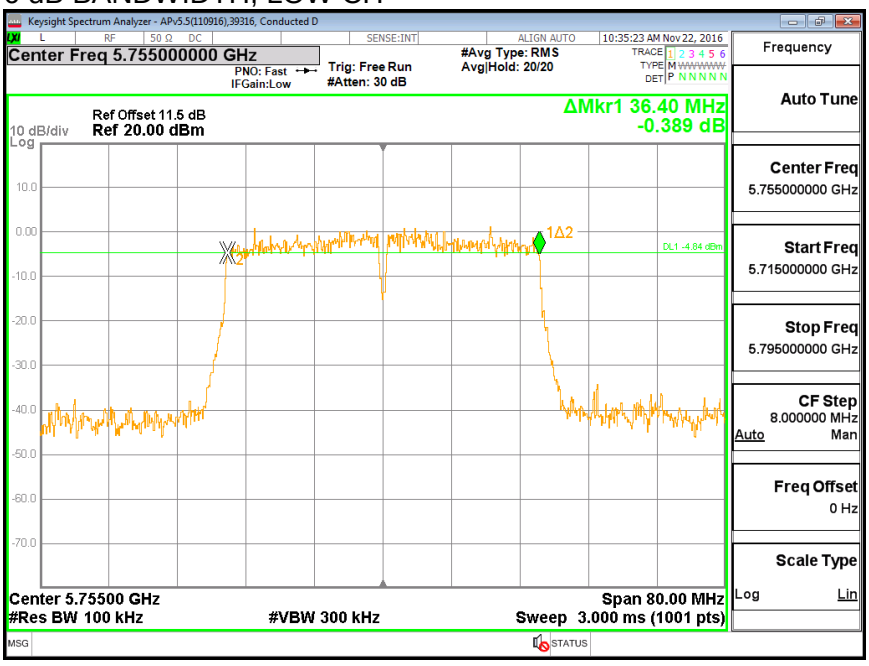


6 dB BANDWIDTH, HIGH CH

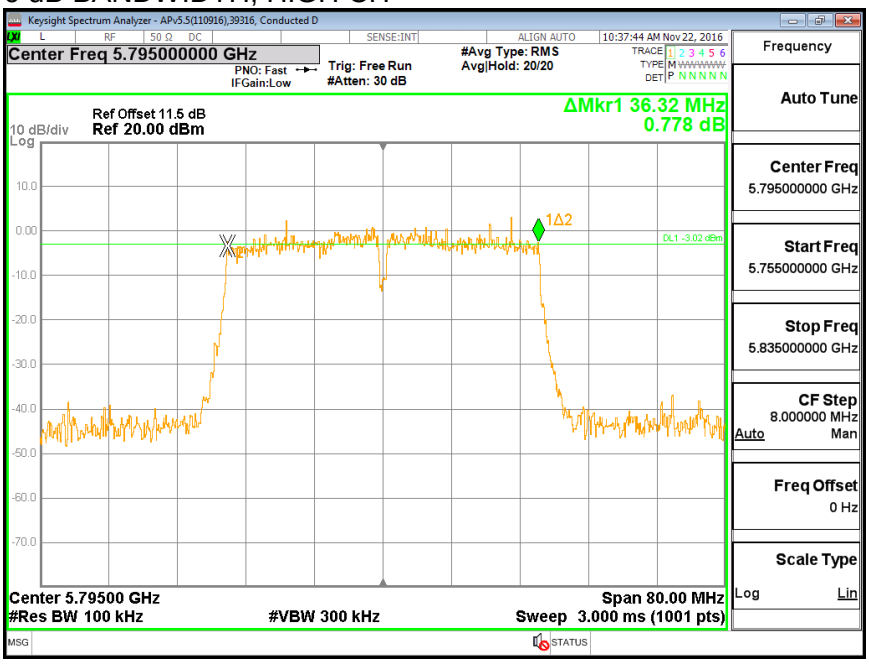


6 dB BANDWIDTH, ANTENNA B

6 dB BANDWIDTH, LOW CH



6 dB BANDWIDTH, HIGH CH



8.50.2. 26 dB BANDWIDTH

LIMITS

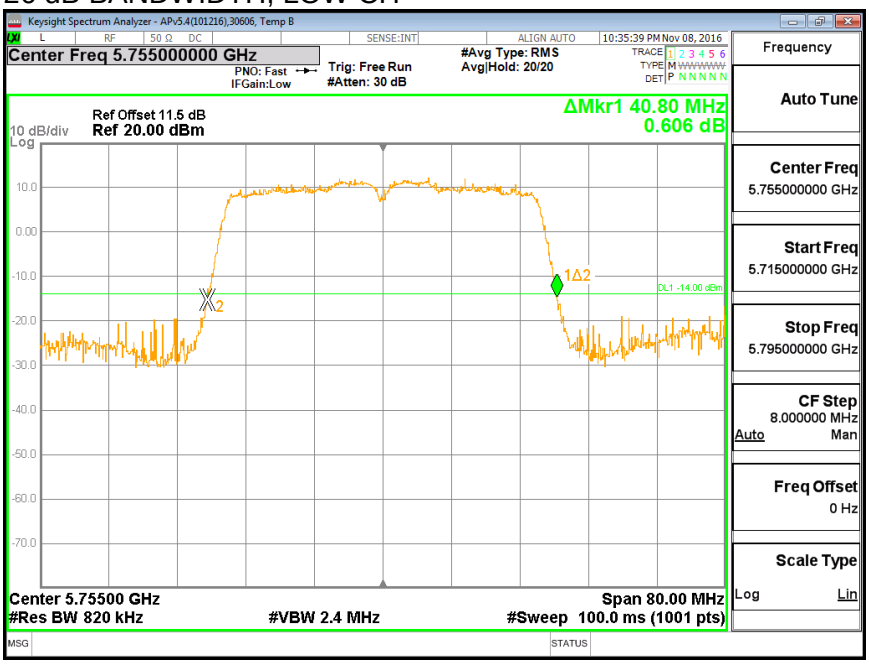
None, for reporting purposes only.

RESULTS

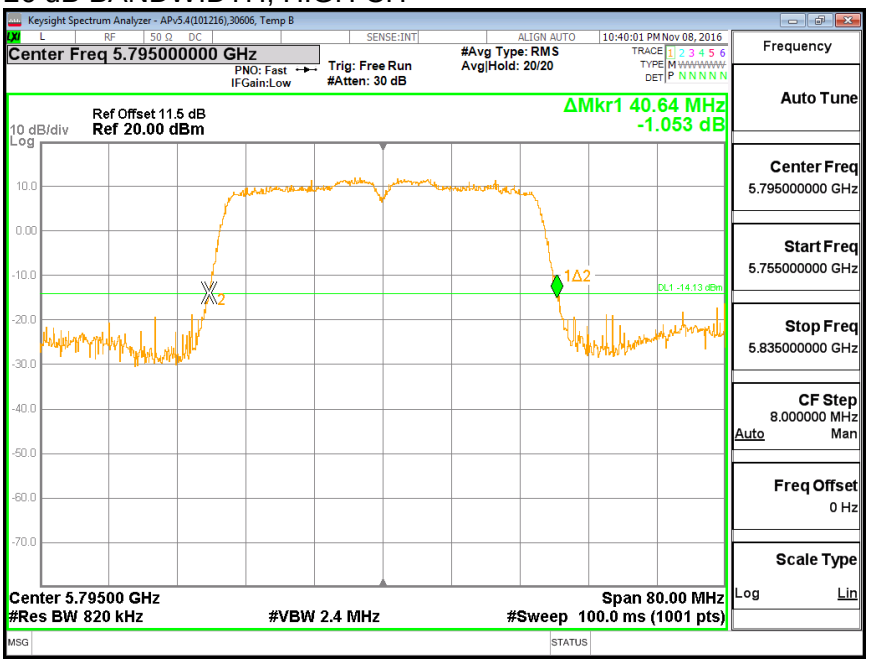
Channel	Frequency (MHz)	26 dB BW Ant A (MHz)	26 dB BW Ant B (MHz)
Low	5755	40.800	40.160
High	5795	40.640	40.160

26 dB BANDWIDTH, ANTENNA A

26 dB BANDWIDTH, LOW CH

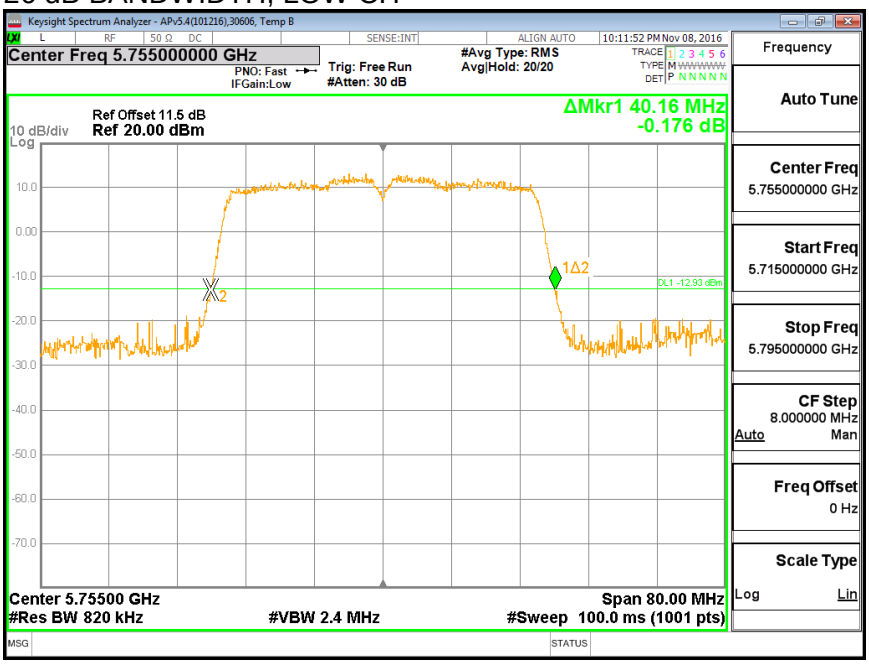


26 dB BANDWIDTH, HIGH CH

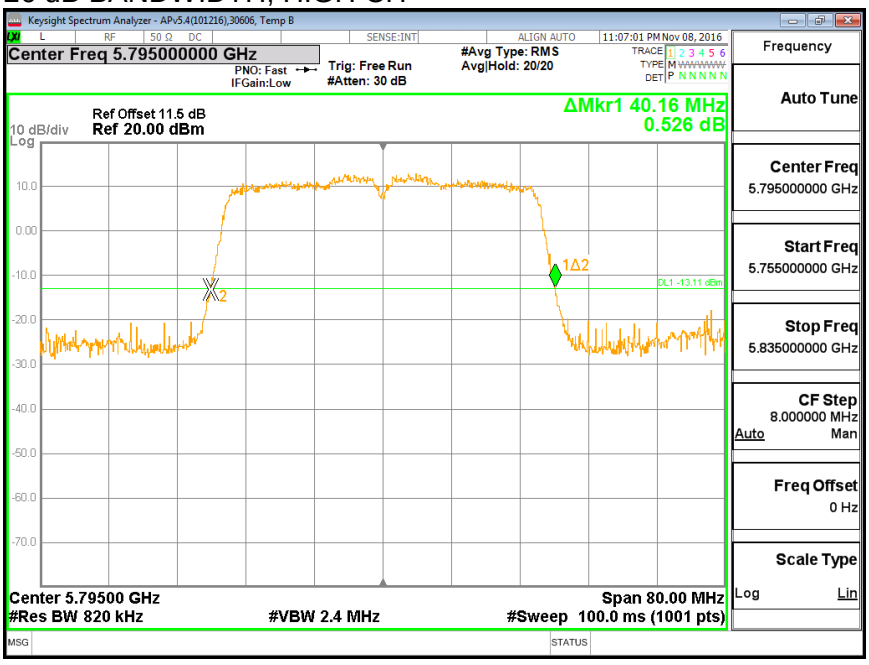


26 dB BANDWIDTH, ANTENNA B

26 dB BANDWIDTH, LOW CH



26 dB BANDWIDTH, HIGH CH



8.50.3. 99% BANDWIDTH

LIMITS

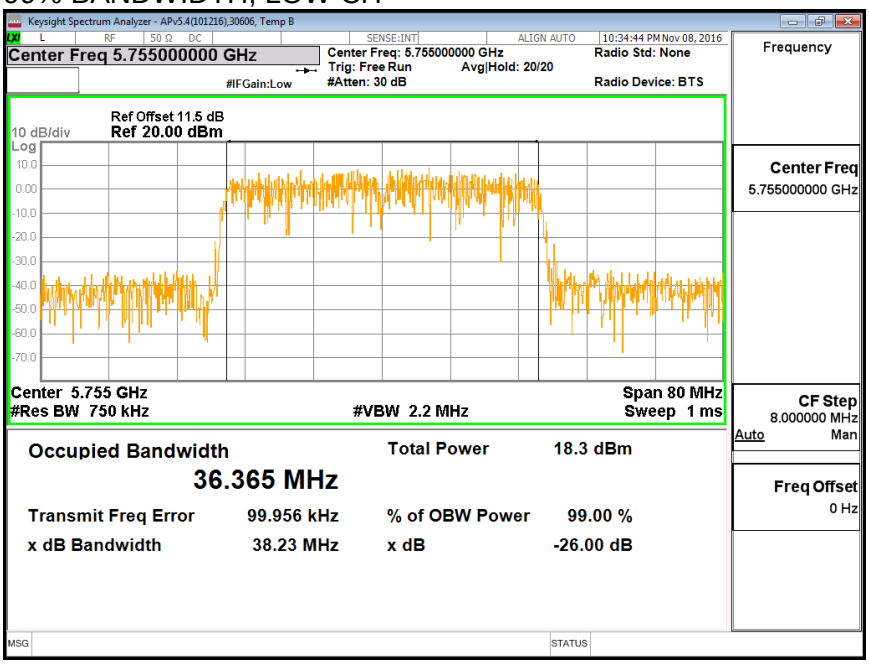
None; for reporting purposes only.

RESULTS

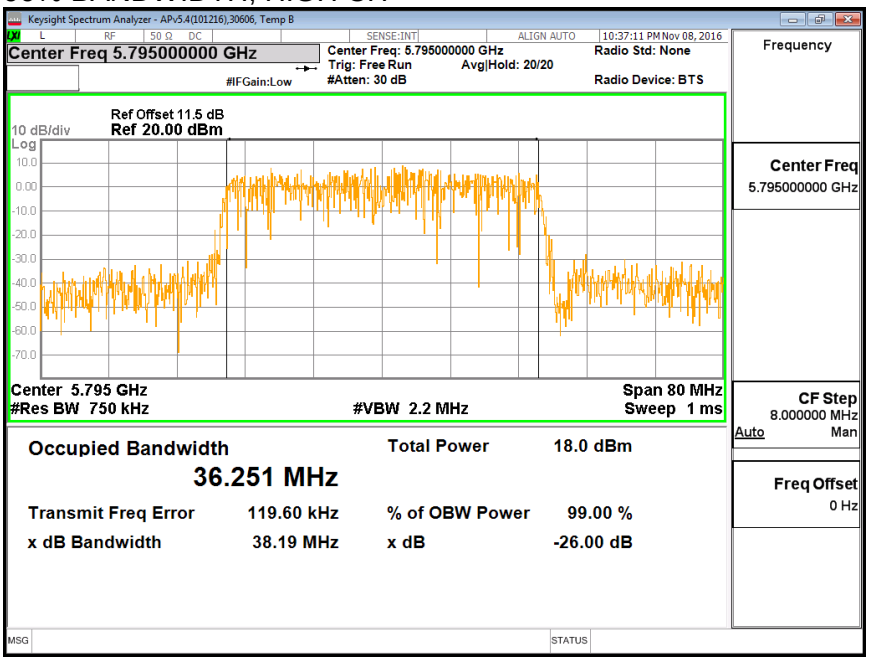
Channel	Frequency (MHz)	99% BW Ant A (MHz)	99% BW Ant B (MHz)
Low	5755	36.365	36.192
High	5795	36.251	36.302

99% BANDWIDTH, ANTENNA A

99% BANDWIDTH, LOW CH

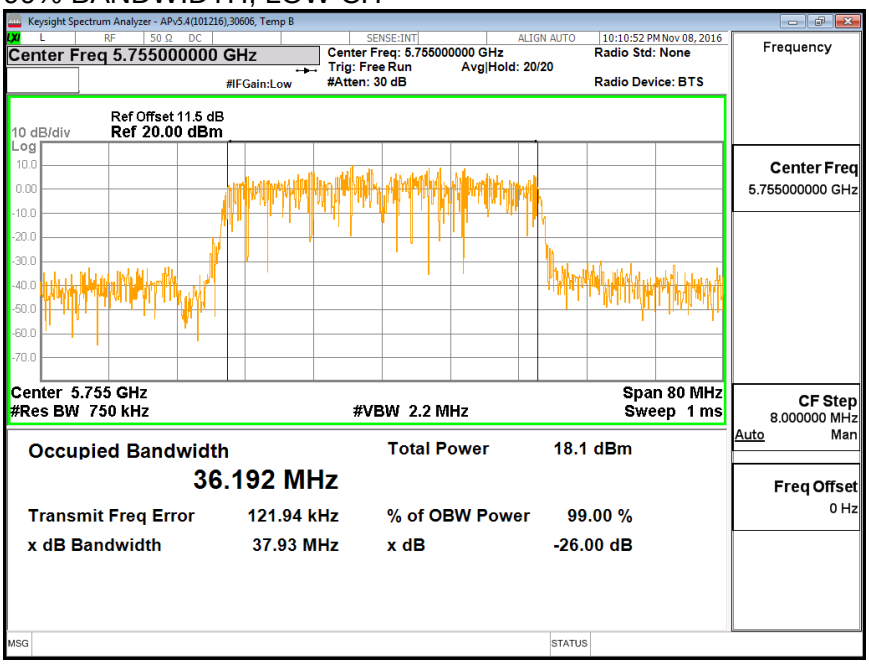


99% BANDWIDTH, HIGH CH

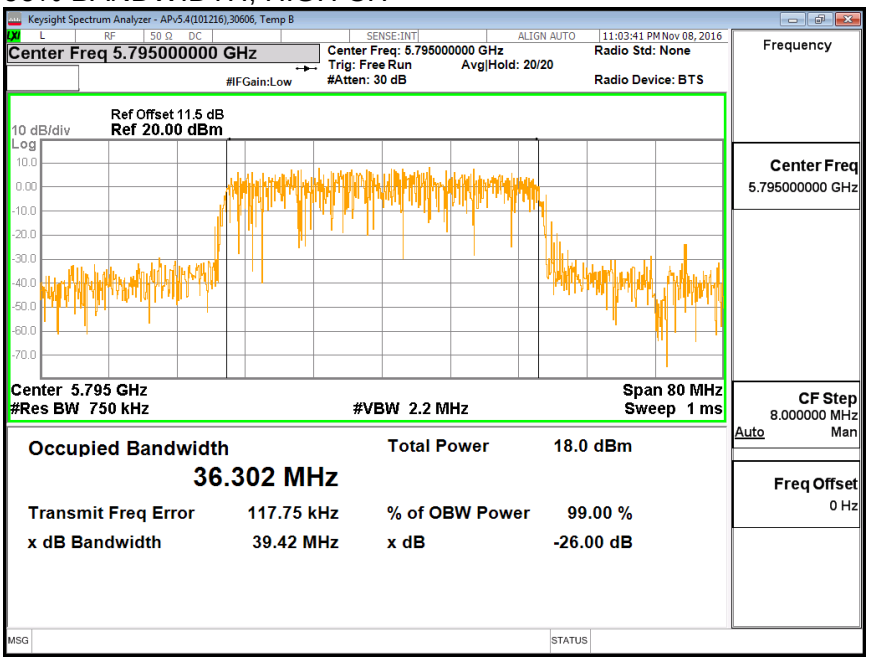


99% BANDWIDTH, ANTENNA B

99% BANDWIDTH, LOW CH



99% BANDWIDTH, HIGH CH



8.50.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

ID:	39316	Date:	12/15/16

Channel	Frequency (MHz)	Ant A Power (dBm)	Ant B Power (dBm)	Total Power (dBm)
Low	5755	16.43	16.49	19.47
High	5795	16.34	16.45	19.41

8.50.5. OUTPUT POWER

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:

Ant A Antenna Gain (dBi)	Ant B Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
3.54	3.21	3.38

RESULTS

ID:	39316	Date:	12/15/16

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)
Low	5755	3.38	30.00
High	5795	3.38	30.00

Output Power Results

Channel	Frequency (MHz)	Ant A Meas Power (dBm)	Ant B Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5755	16.43	16.49	19.47	30.00	-10.53
High	5795	16.34	16.45	19.41	30.00	-10.59

8.50.6. PSD

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:

Ant A Antenna Gain (dBi)	Ant B Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
3.54	3.22	6.39

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5755	6.39	29.61
High	5795	6.39	29.61

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

PSD Results

Channel	Frequency (MHz)	Ant A Meas PSD (dBm)	Ant B Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5755	0.372	0.392	3.49	29.61	-26.12
High	5795	0.252	0.43	3.45	29.61	-26.16