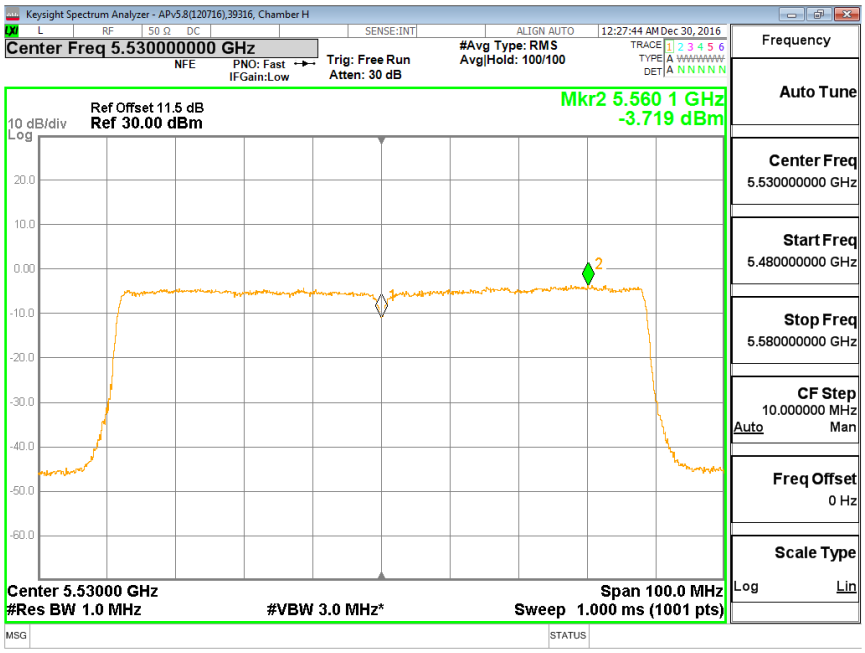
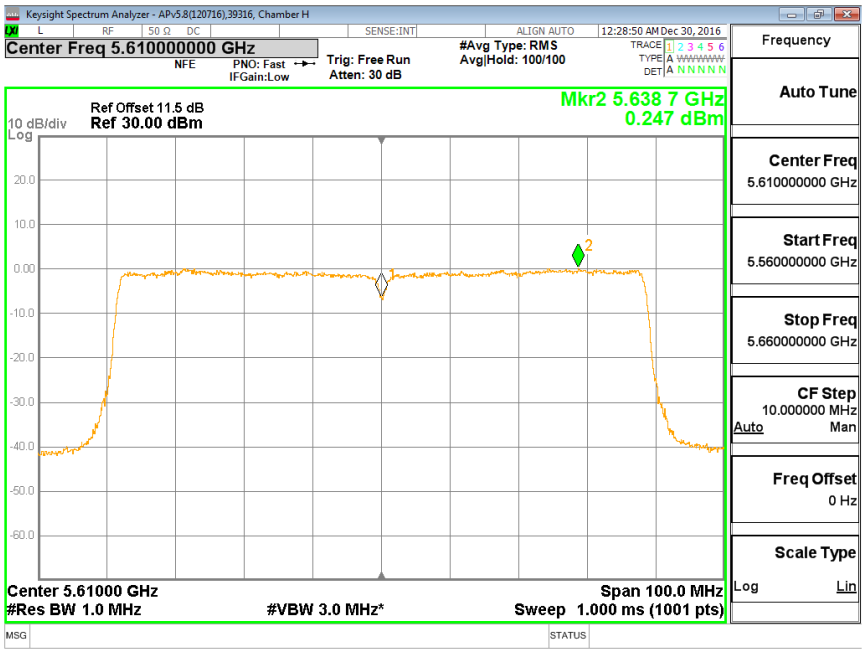
PSD, ANTENNA A

PSD, LOW CH



PSD, MID CH



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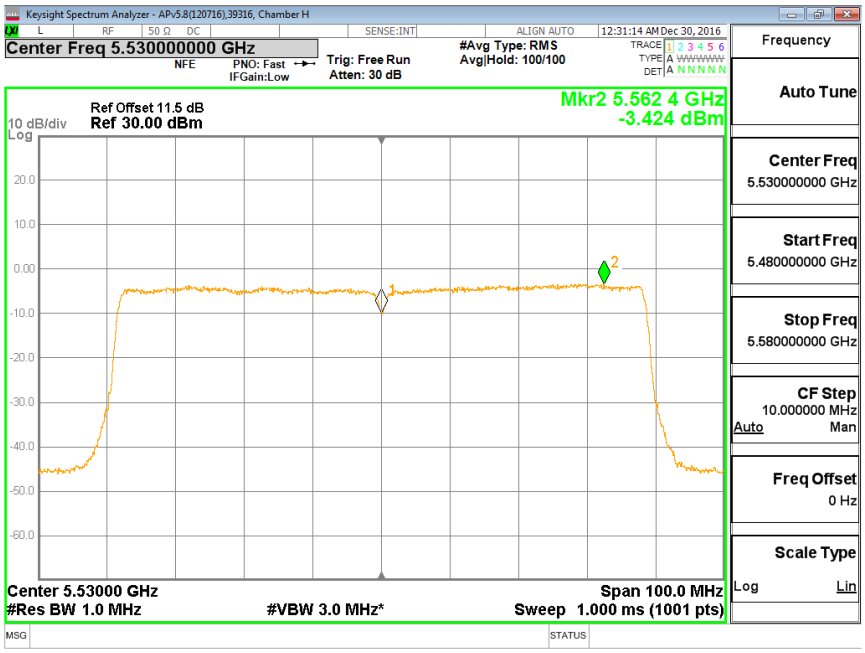
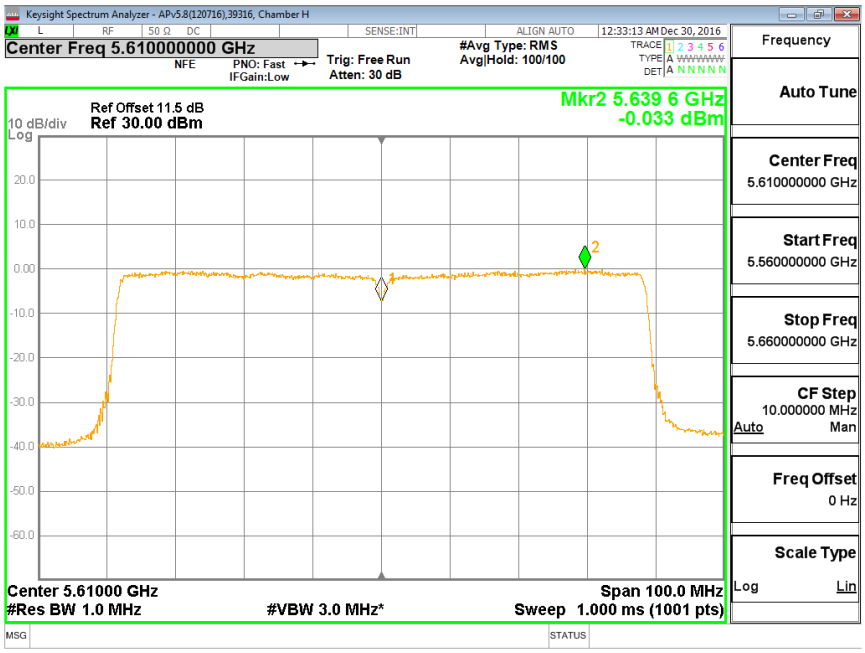
PSD, ANTENNA B

PSD, LOW CH



PSD, MID CH



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8.45. 802.11ac VHT80 2Tx (ANTENNA A + ANTENNA B) CDD STRADDLE CHANNEL 138 RESULTS

8.45.1. OUTPUT POWER AND PSD

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	76.28	3.28	6.29	24.00	10.71

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

Output Power Results

Channel	Frequency (MHz)	Antenna A Meas Power (dBm)	Antenna B Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	16.13	16.63	19.59	24.00	-4.41

PSD Results

Channel	Frequency (MHz)	Antenna A Meas PSD (dBm)	Antenna B Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	-0.435	0.233	3.12	10.71	-7.59

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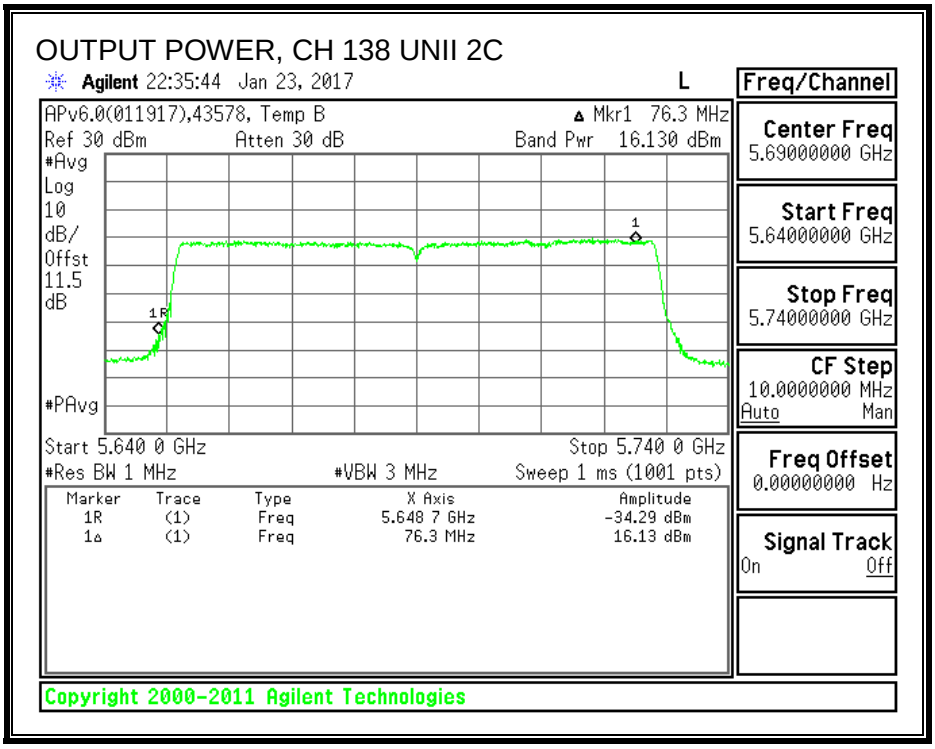
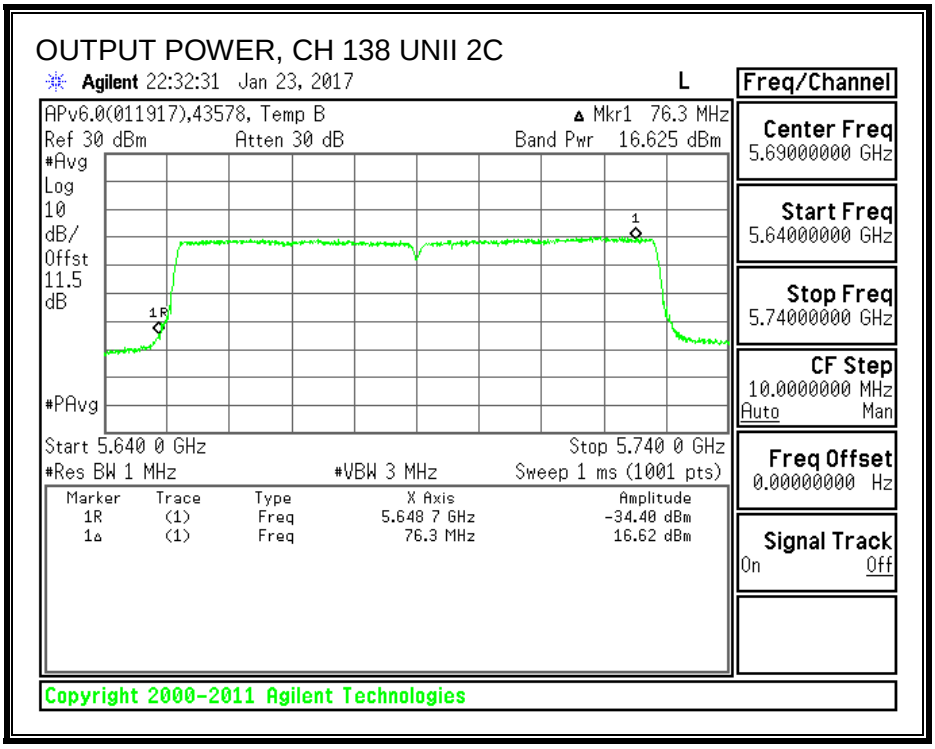
OUTPUT POWER, ANTENNA A



OUTPUT POWER, ANTENNA B



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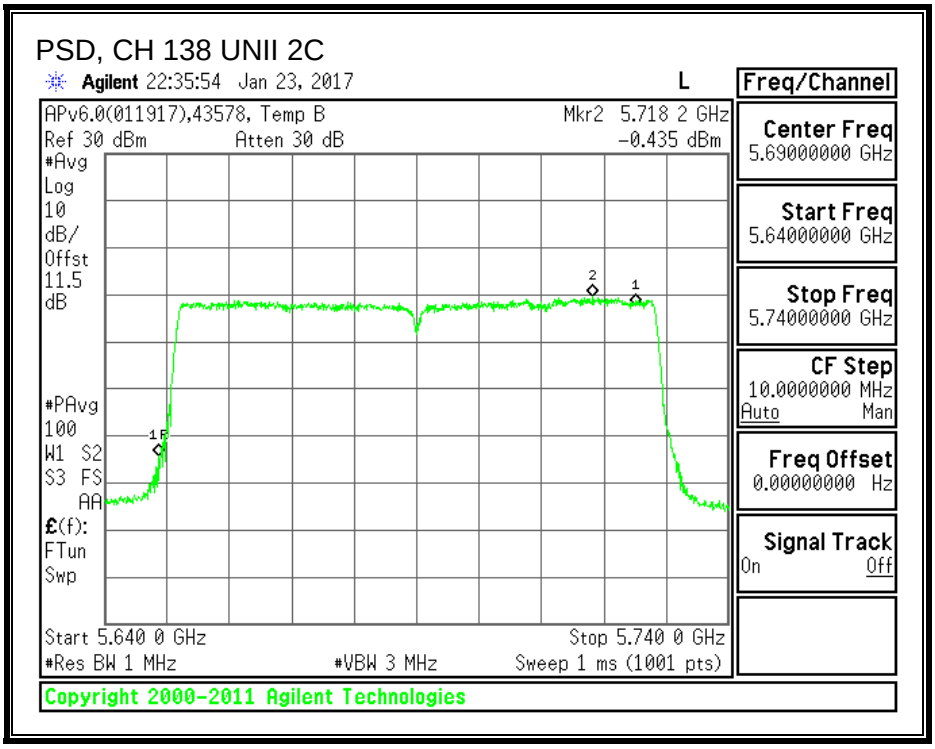
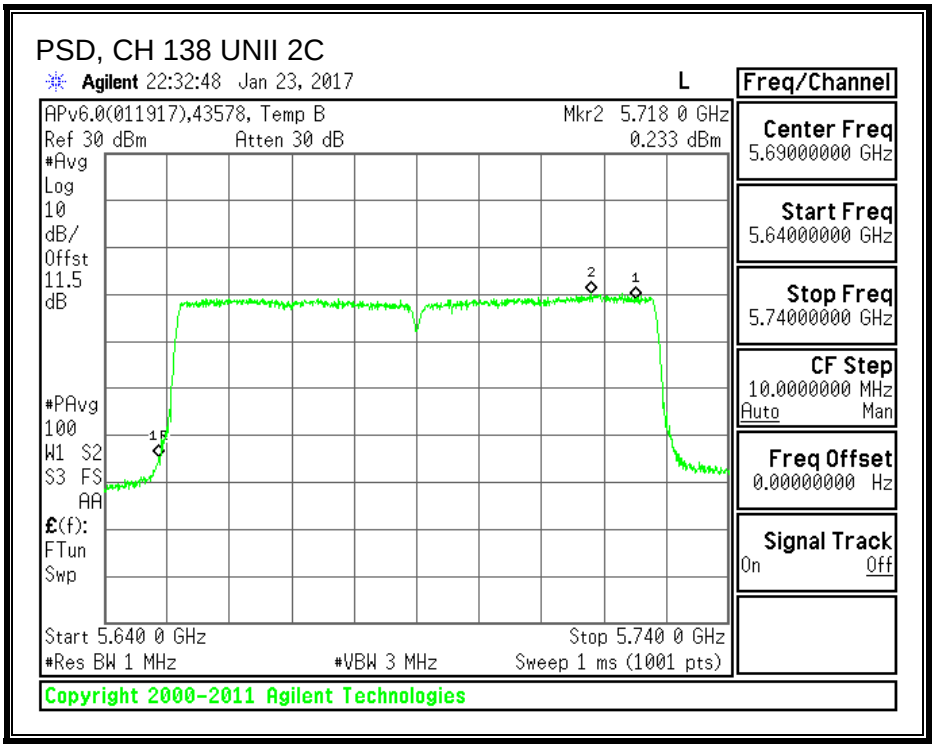
PSD, ANTENNA A



PSD, ANTENNA B



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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	6.28	3.38	6.39	30.00	29.61

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

Output Power Results

Channel	Frequency (MHz)	Antenna A Meas Power (dBm)	Antenna B Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	3.294	3.877	6.81	30.00	-23.19

PSD Results

Channel	Frequency (MHz)	Antenna A Meas PSD (dBm)	Antenna B Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	-3.672	-3.383	-0.31	29.61	-29.92

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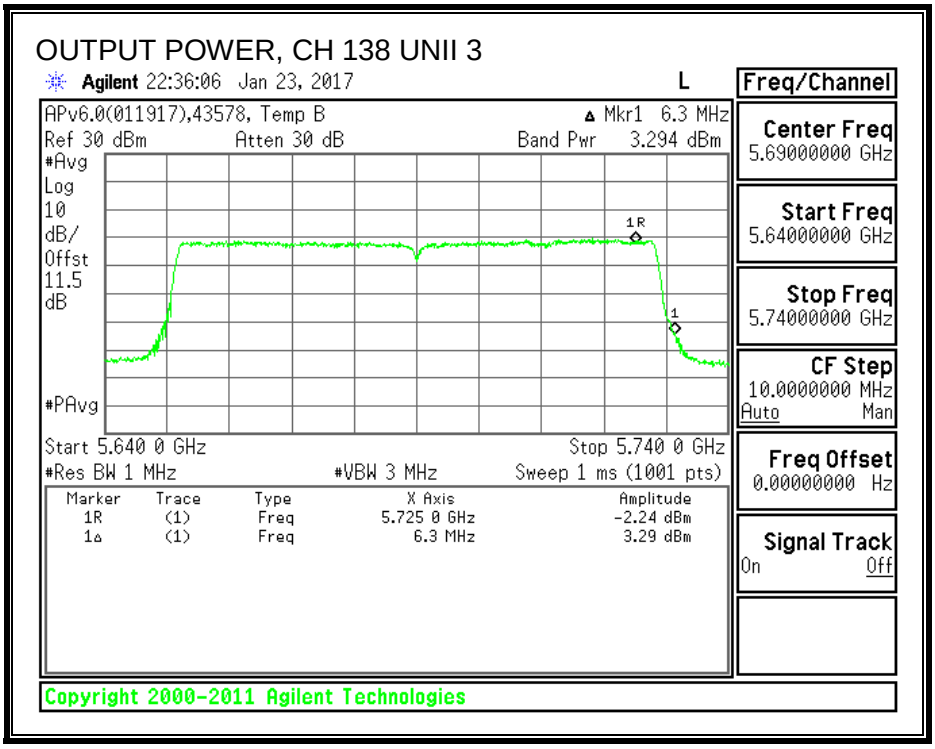
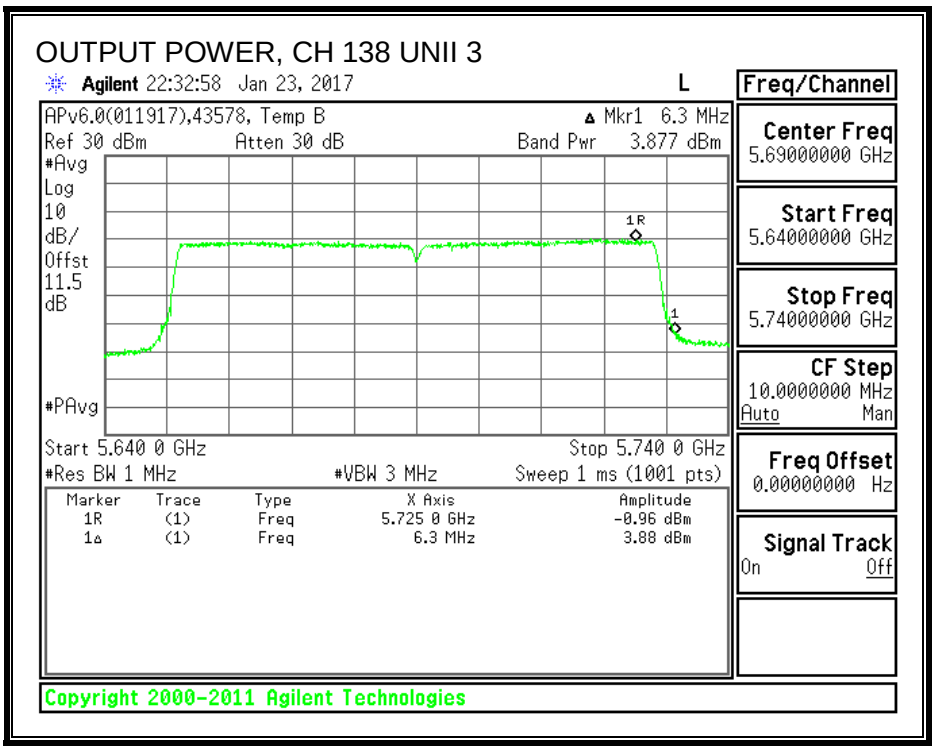
OUTPUT POWER, ANTENNA A



OUTPUT POWER, ANTENNA B



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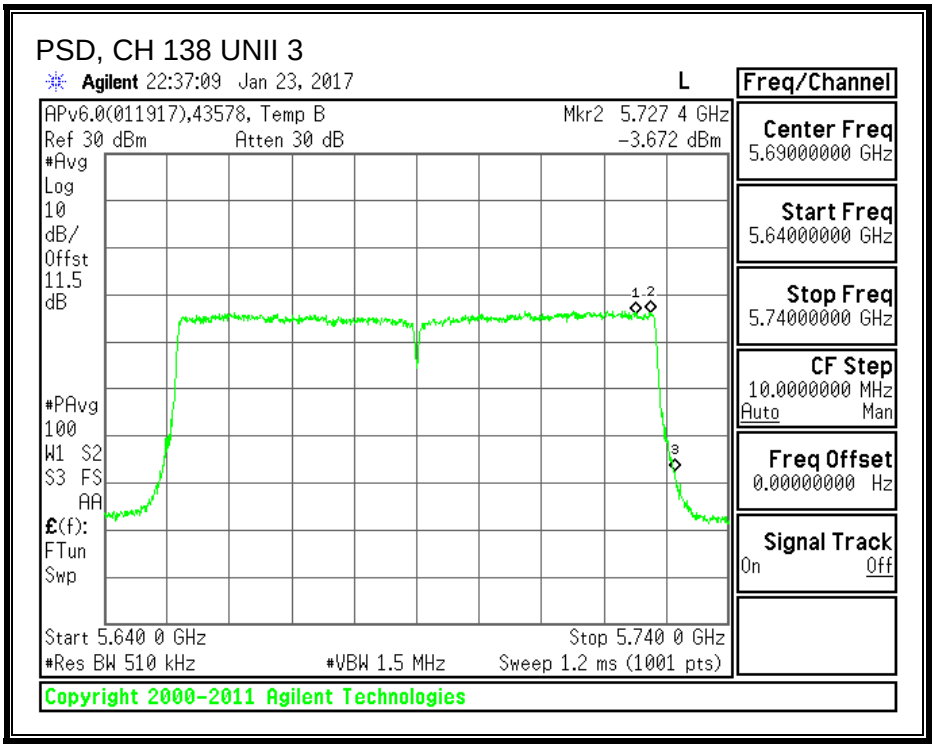
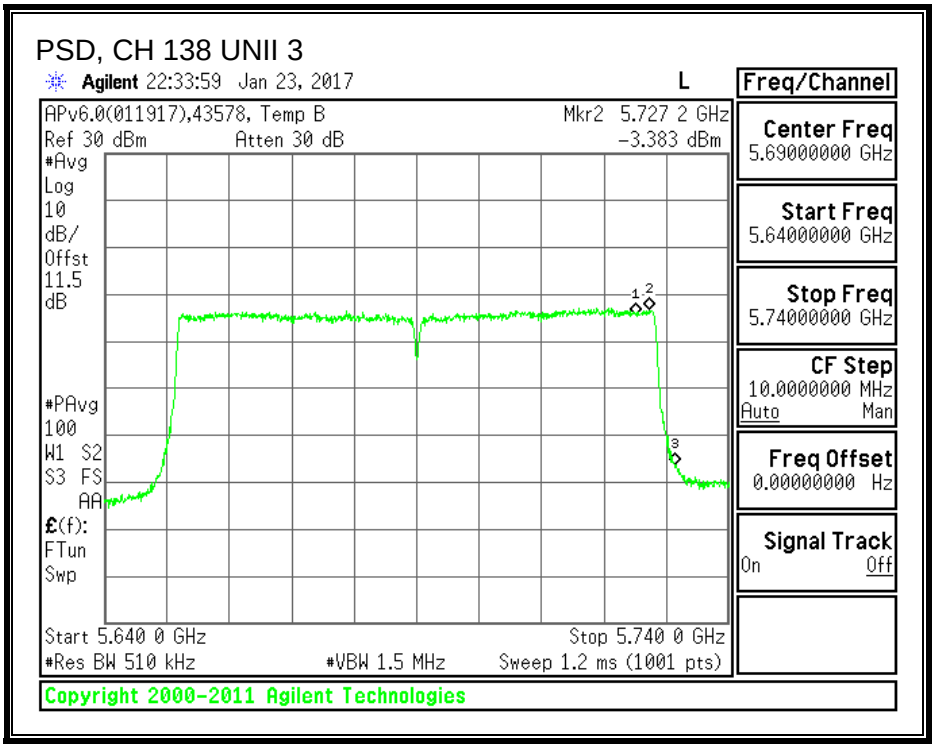
PSD, ANTENNA A



PSD, ANTENNA B



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8.45.2. 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 Antenna A (MHz)	6 dB BW Antenna B (MHz)
High	5690	2.72	2.88

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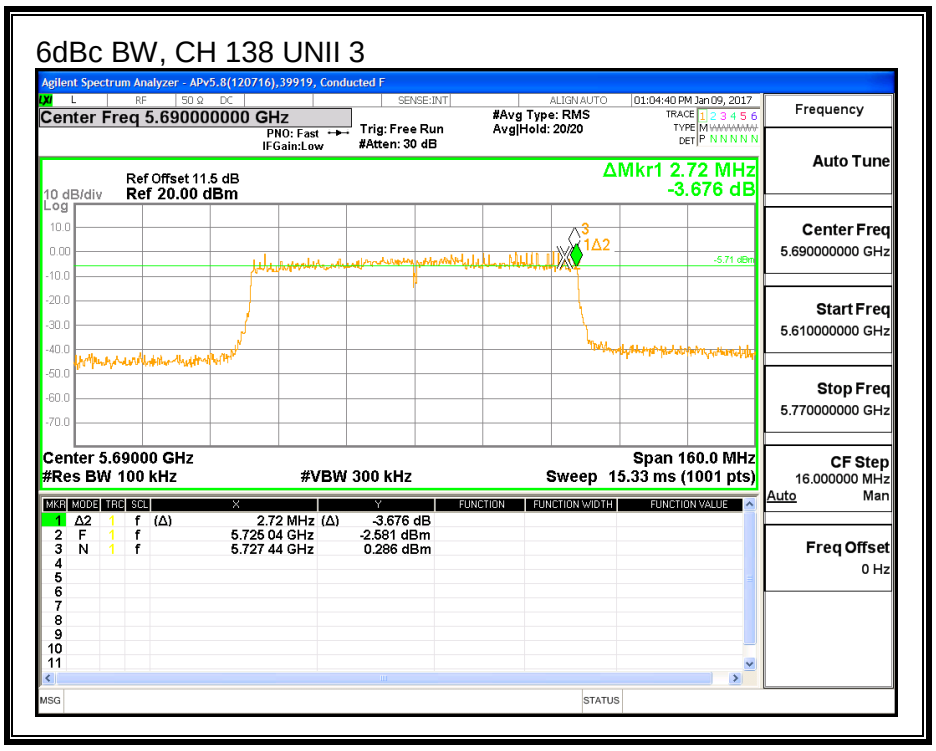
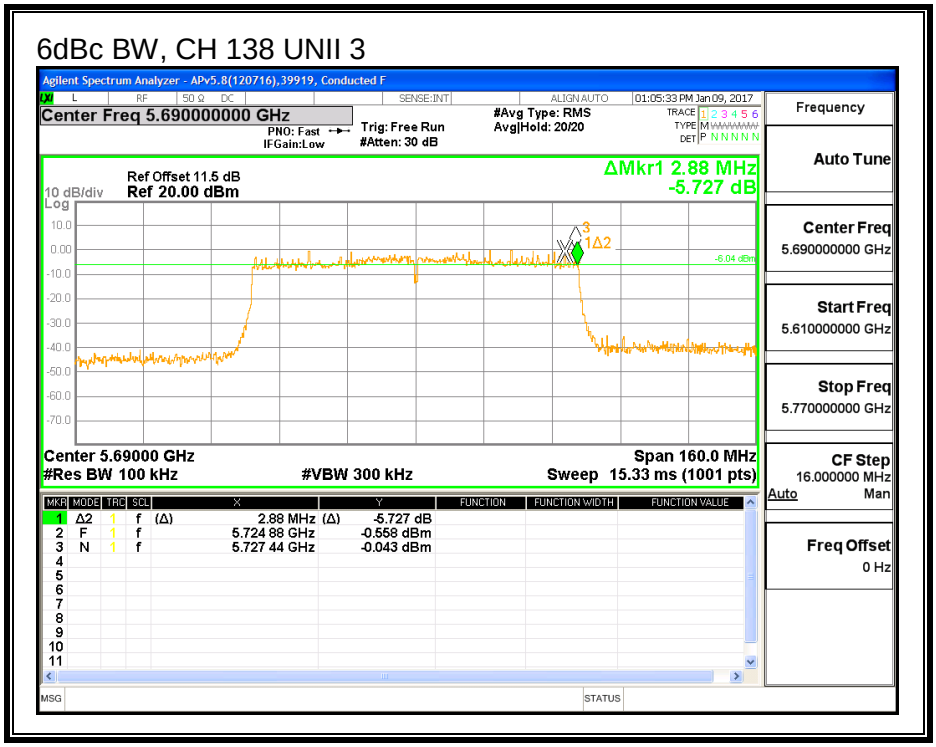
ANTENNA A



ANTENNA B



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8.46. 802.11ac VHT80 2Tx (ANTENNA A + ANTENNA B) STBC MODE IN THE 5.6 GHz BAND

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

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8.47. 802.11n HT20 ANTENNA A MODE IN THE 5.8 GHz BAND

8.47.1. 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	17.760	0.5
High	5825	17.600	0.5

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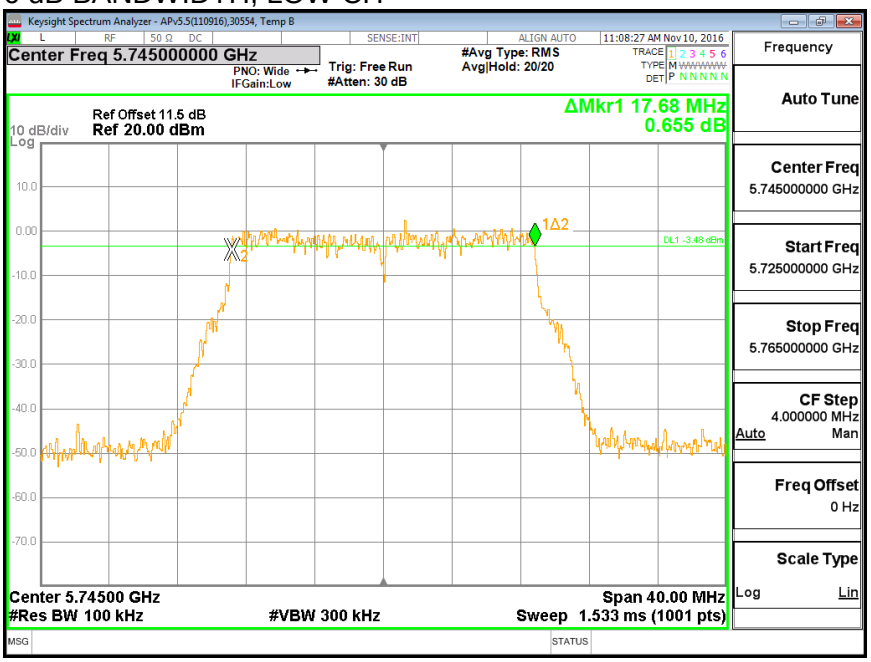
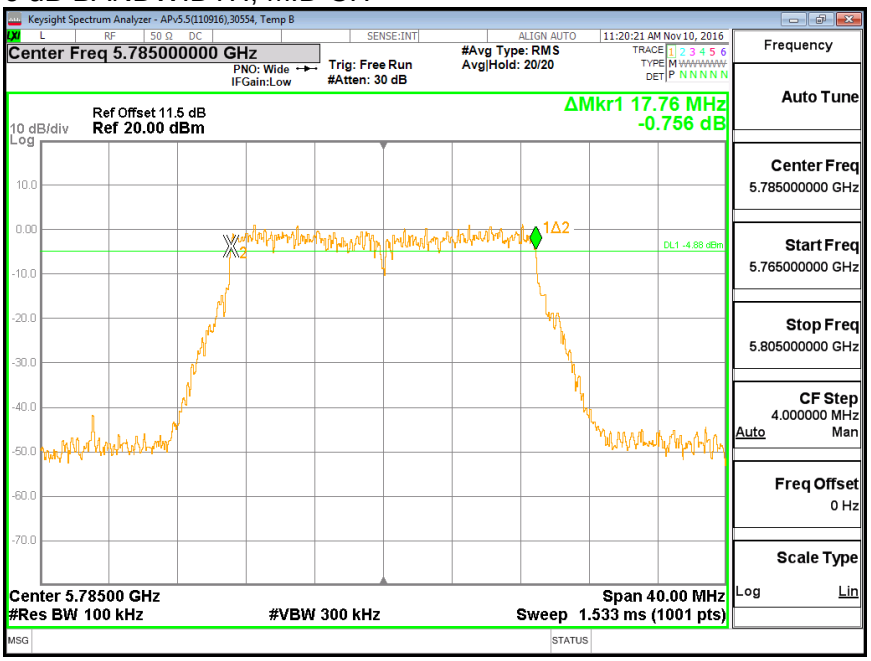
6 dB BANDWIDTH

6 dB BANDWIDTH, LOW CH



6 dB BANDWIDTH, MID CH



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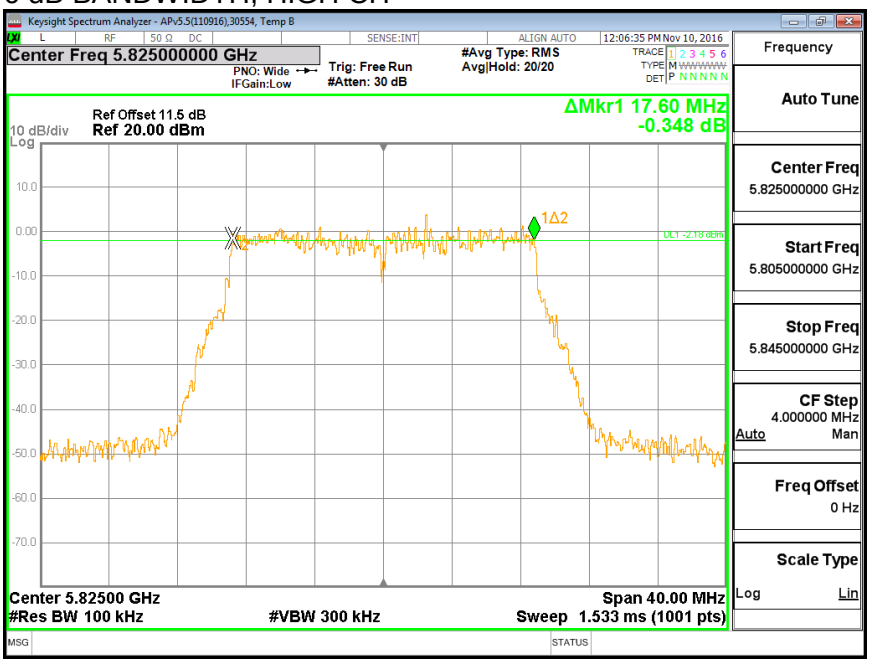
6 dB BANDWIDTH, HIGH CH



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8.47.2. 26 dB BANDWIDTH

LIMITS

None, for reporting purposes only

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5745	22.000
Mid	5785	21.880
High	5825	21.800

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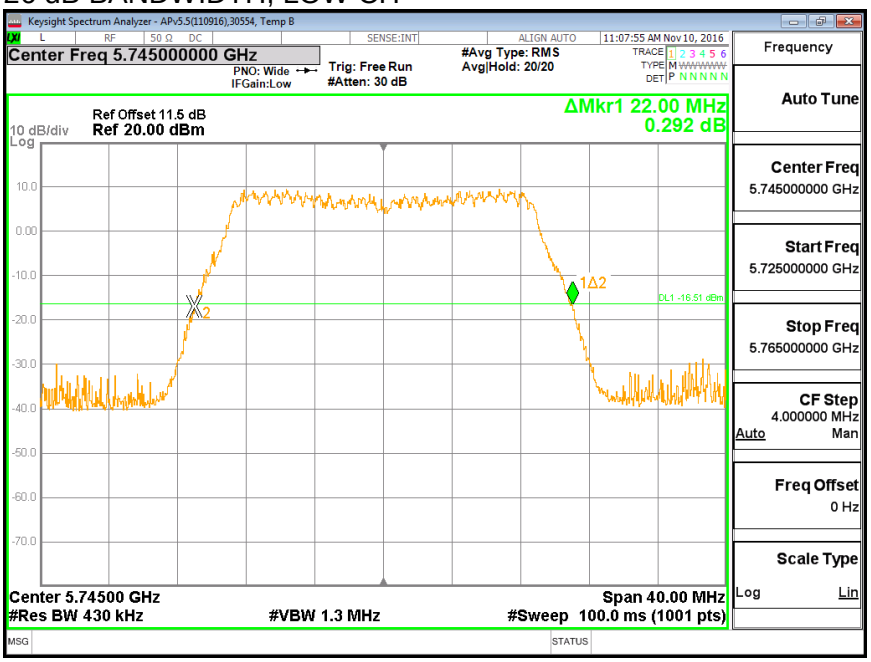
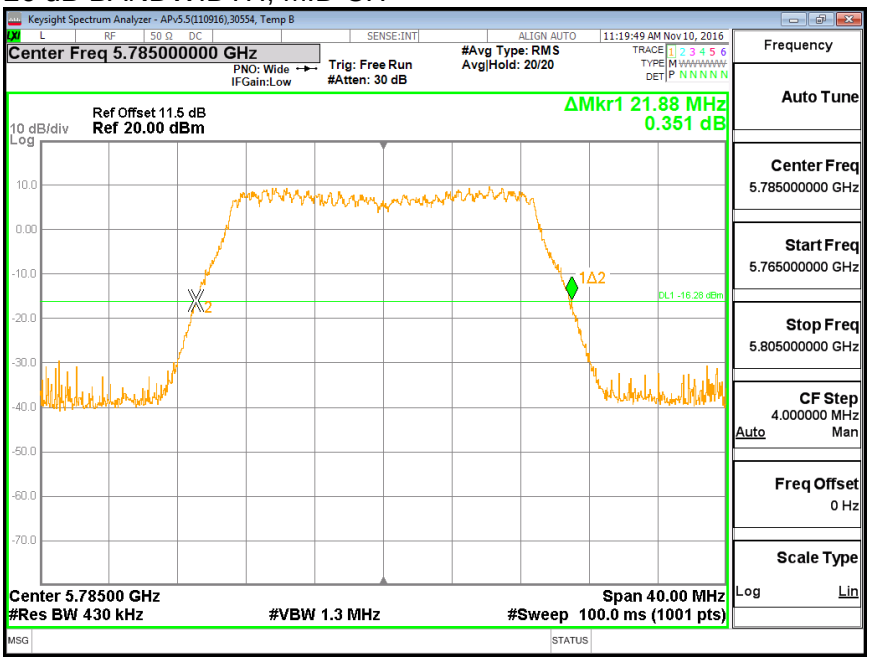
26 dB BANDWIDTH

26 dB BANDWIDTH, LOW CH



26 dB BANDWIDTH, MID CH



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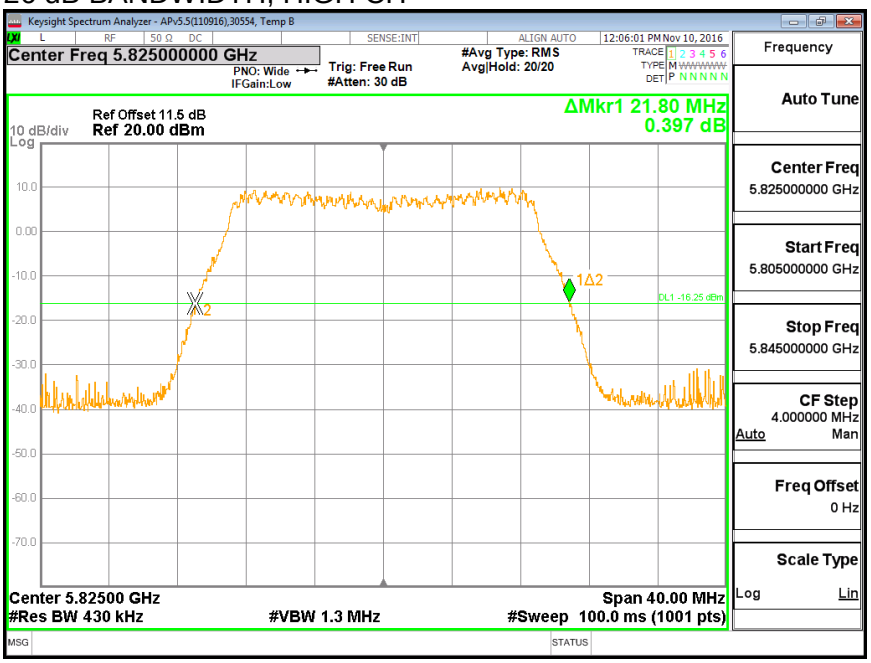
26 dB BANDWIDTH, HIGH CH



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8.47.3. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Frequency (MHz)	99% Bandwidth (MHz)
5745	16.437
5785	17.893
5825	17.829

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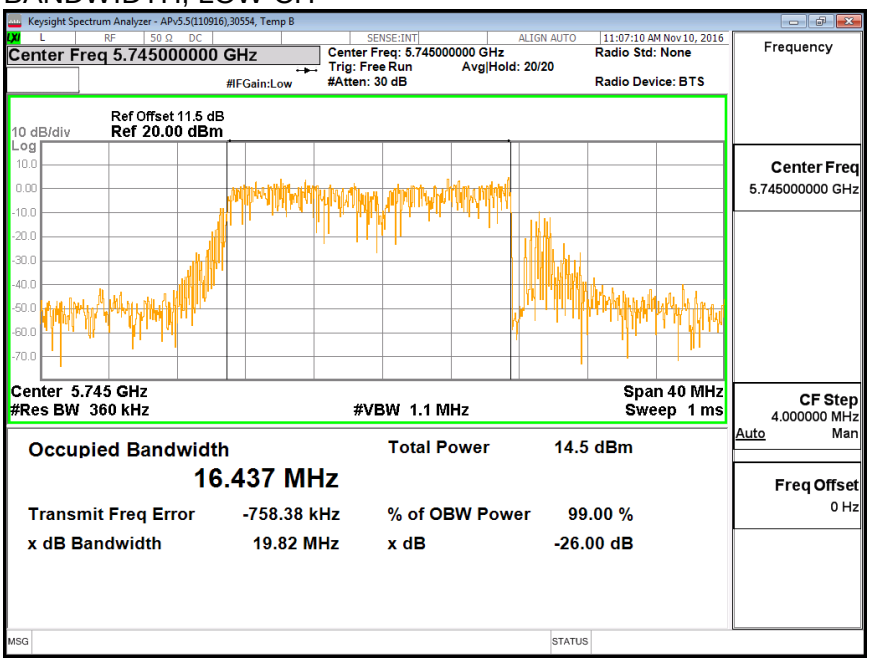
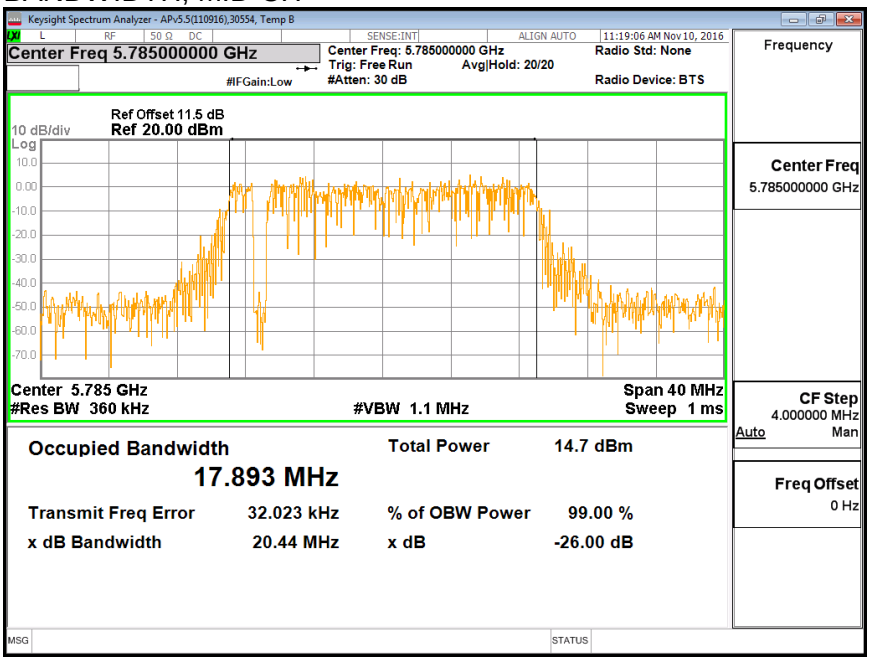
99% BANDWIDTH

BANDWIDTH, LOW CH



BANDWIDTH, MID CH



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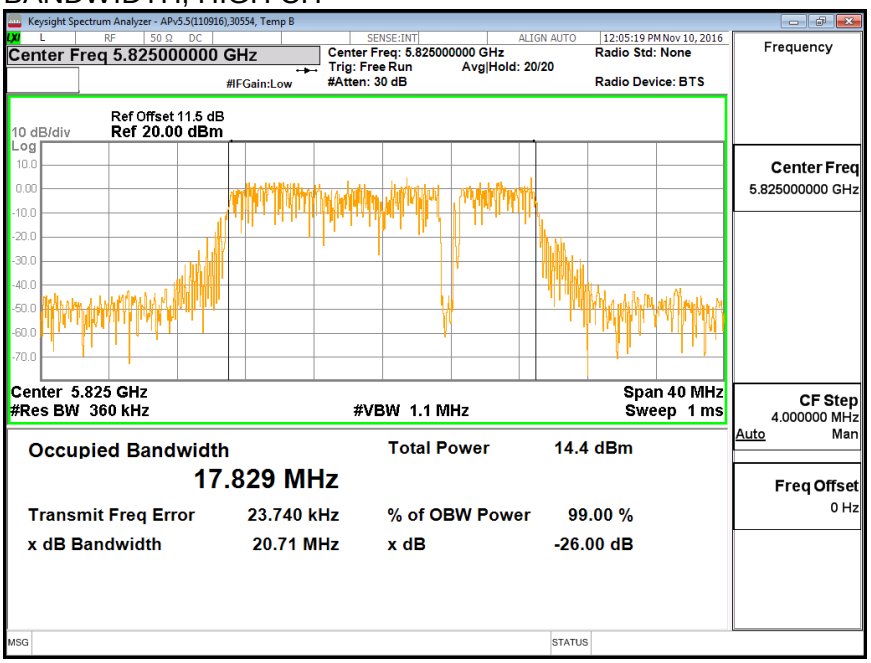
BANDWIDTH, HIGH CH



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8.47.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

ID:	39472	Date:	12/14/16

Channel	Frequency (MHz)	Power (dBm)
Low	5745	16.45
Mid	5785	16.43
High	5825	16.39

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8.47.5. 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.

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RESULTS

ID:	39472	Date:	12/14/16

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)	Antenna A Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	16.45	16.45	30.00	-13.55
Mid	5785	16.43	16.43	30.00	-13.57
High	5825	16.39	16.39	30.00	-13.61

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8.47.6. 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)	Antenna A Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5745	3.37	3.37	30.00	-26.63
Mid	5785	3.54	3.54	30.00	-26.46
High	5825	3.49	3.49	30.00	-26.51

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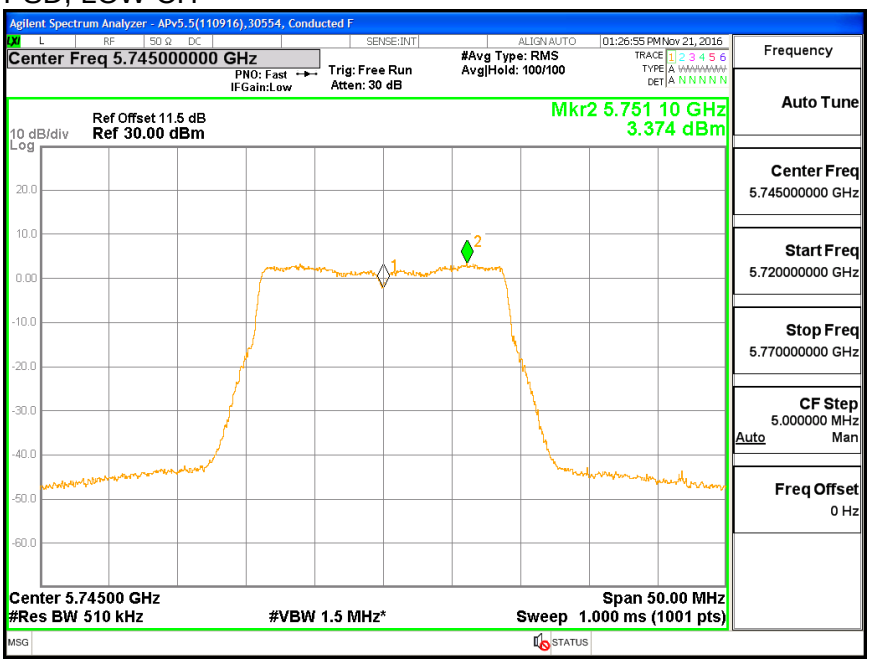
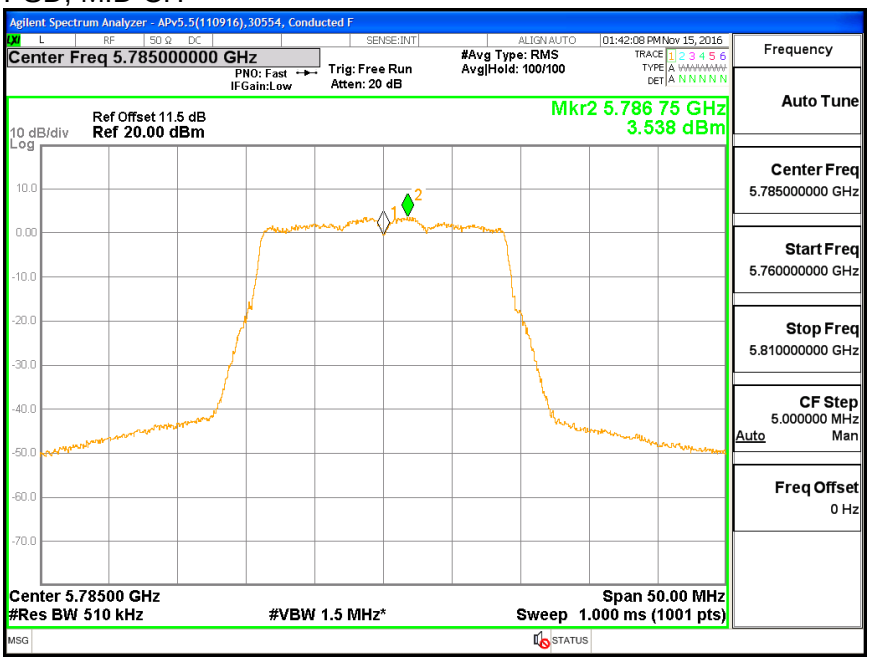
PSD

PSD, LOW CH



PSD, MID CH



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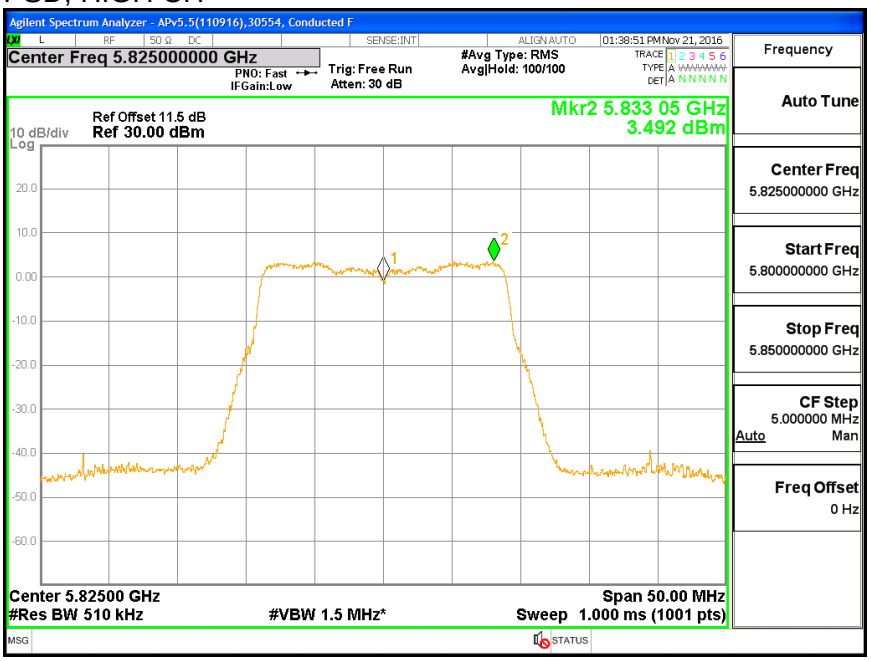
PSD, HIGH CH



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8.48. 802.11n HT20 ANTENNA B 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	5745	17.720	0.5
Mid	5785	17.800	0.5
High	5825	17.600	0.5

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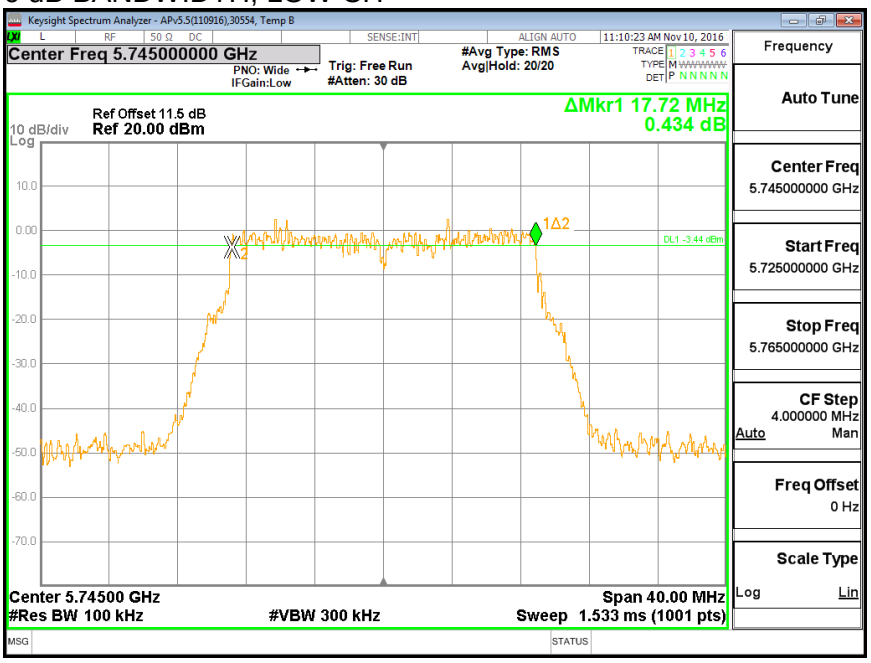
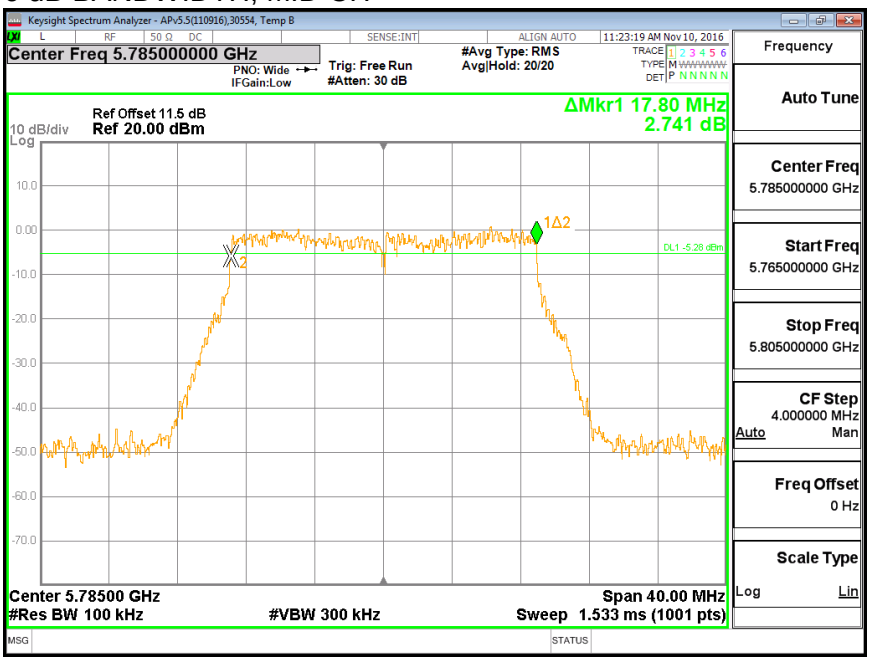
6 dB BANDWIDTH

6 dB BANDWIDTH, LOW CH



6 dB BANDWIDTH, MID CH



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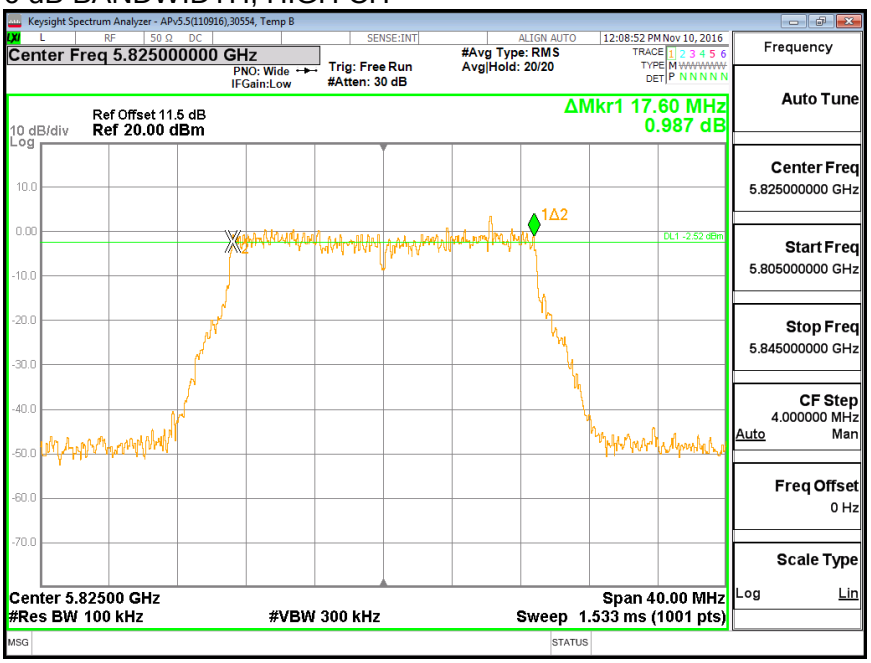
6 dB BANDWIDTH, HIGH CH



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8.48.2. 26 dB BANDWIDTH

LIMITS

None, for reporting purposes only

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5745	21.800
Mid	5785	21.920
High	5825	21.760

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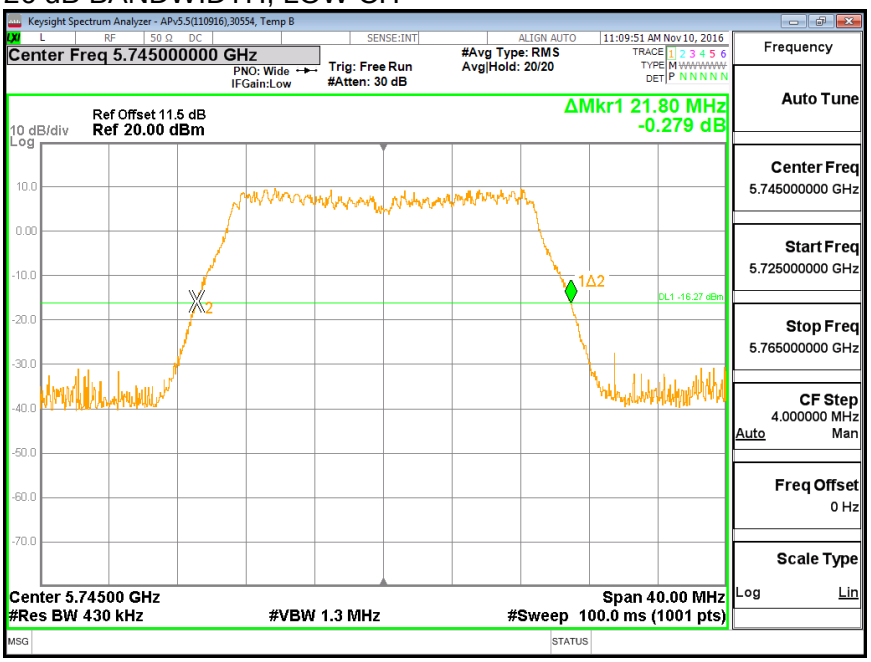
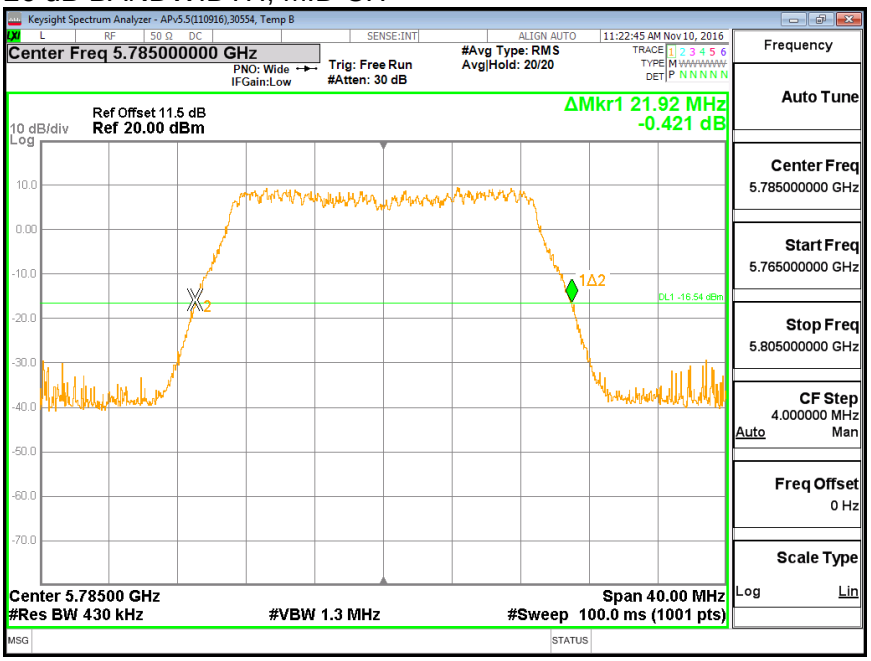
26 dB BANDWIDTH

26 dB BANDWIDTH, LOW CH



26 dB BANDWIDTH, MID CH



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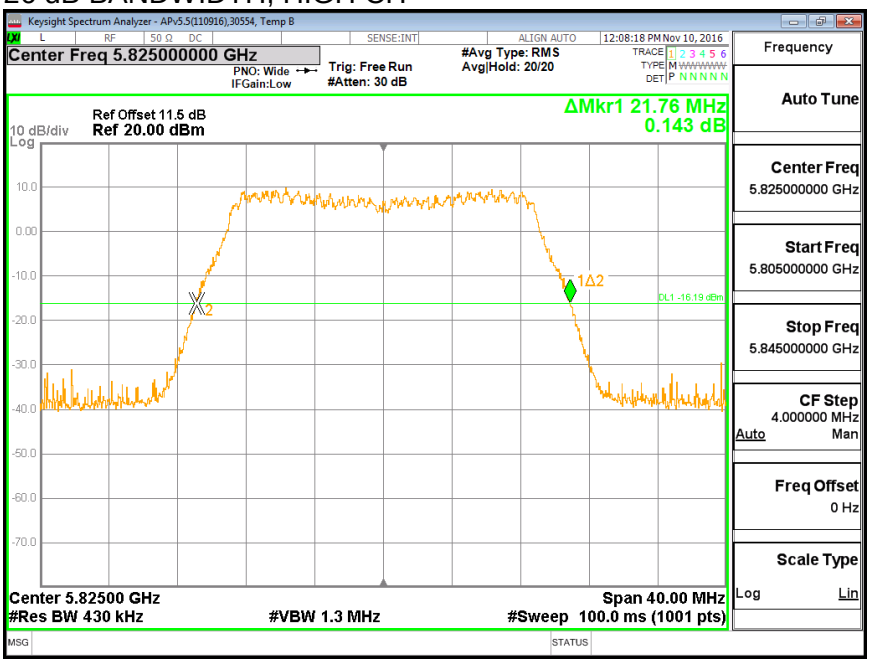
26 dB BANDWIDTH, HIGH CH



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8.48.3. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5745	17.783
Mid	5785	17.940
High	5825	17.831

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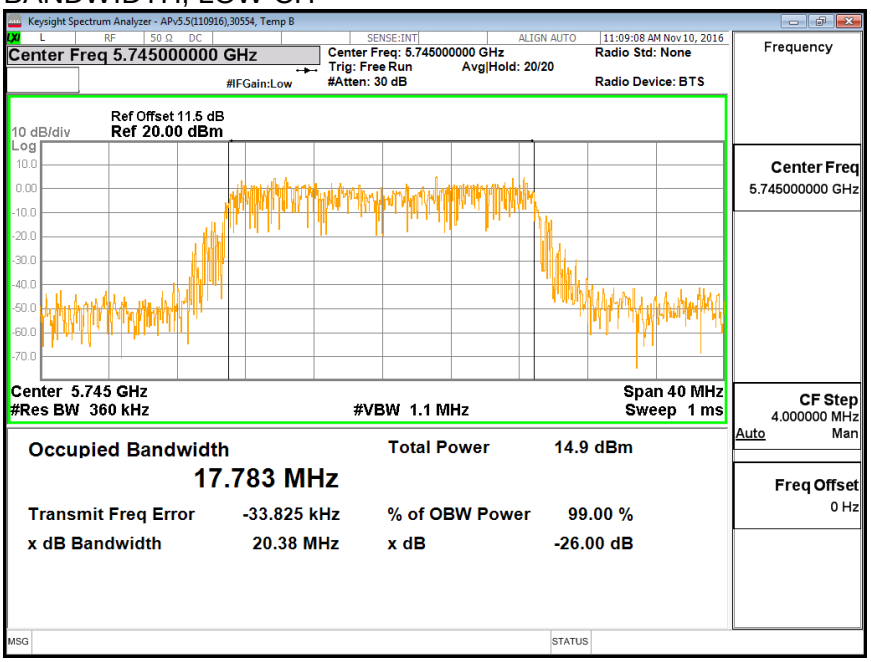
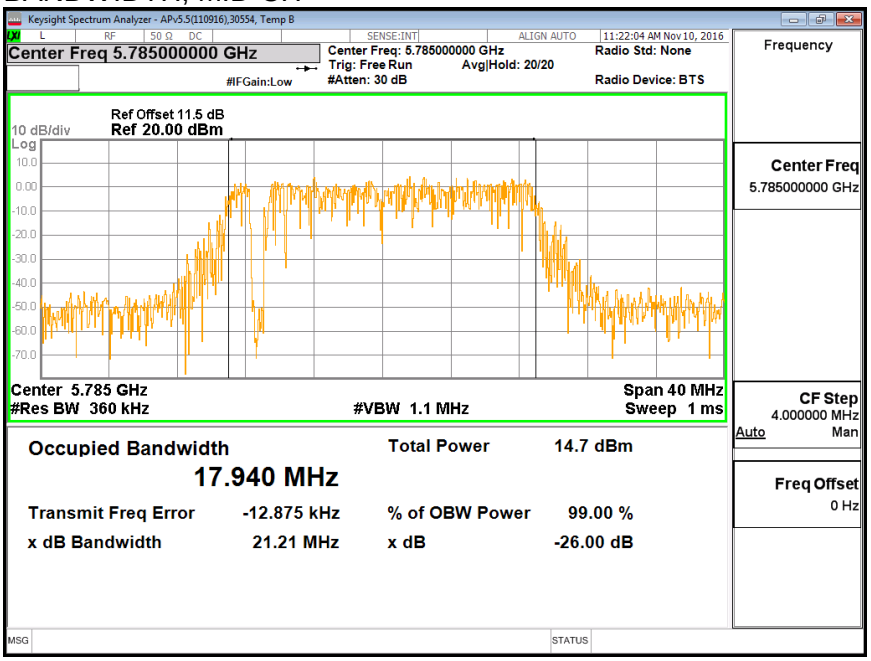
99% BANDWIDTH

BANDWIDTH, LOW CH



BANDWIDTH, MID CH



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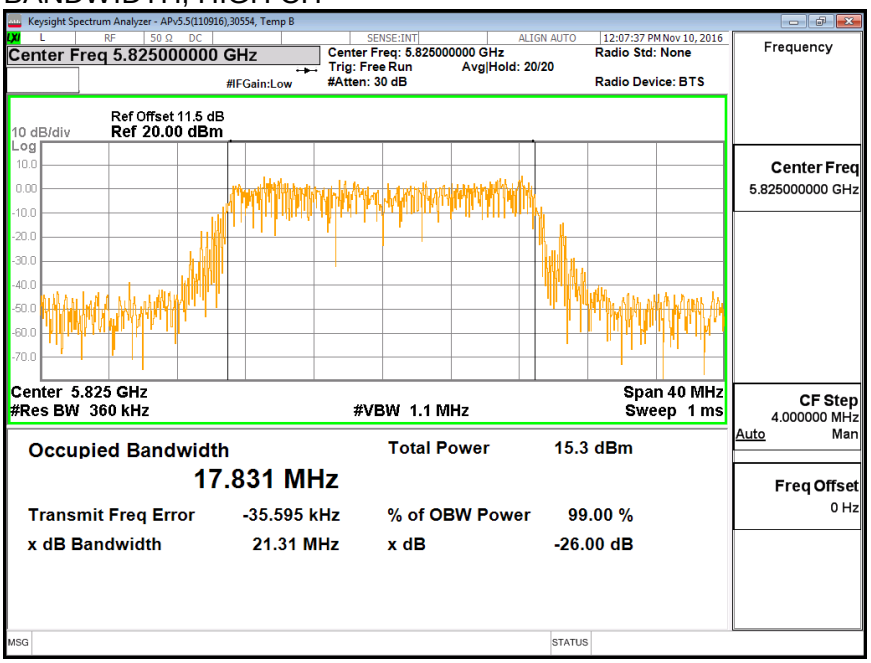
BANDWIDTH, HIGH CH



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8.48.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

ID:	39316	Date:	12/14/16

Channel	Frequency (MHz)	Power (dBm)
Low	5745	16.40
Mid	5785	16.46
High	5825	16.42

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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.

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RESULTS

ID:	39316	Date:	12/14/16

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)	Antenna B Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	16.40	16.40	30.00	-13.60
Mid	5785	16.46	16.46	30.00	-13.54
High	5825	16.42	16.42	30.00	-13.58

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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	5745	3.21	30.00
Mid	5785	3.21	30.00
High	5825	3.21	30.00

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

PSD Results

Channel	Frequency (MHz)	Antenna B Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5745	3.43	3.43	30.00	-26.57
Mid	5785	3.64	3.64	30.00	-26.37
High	5825	3.73	3.73	30.00	-26.27

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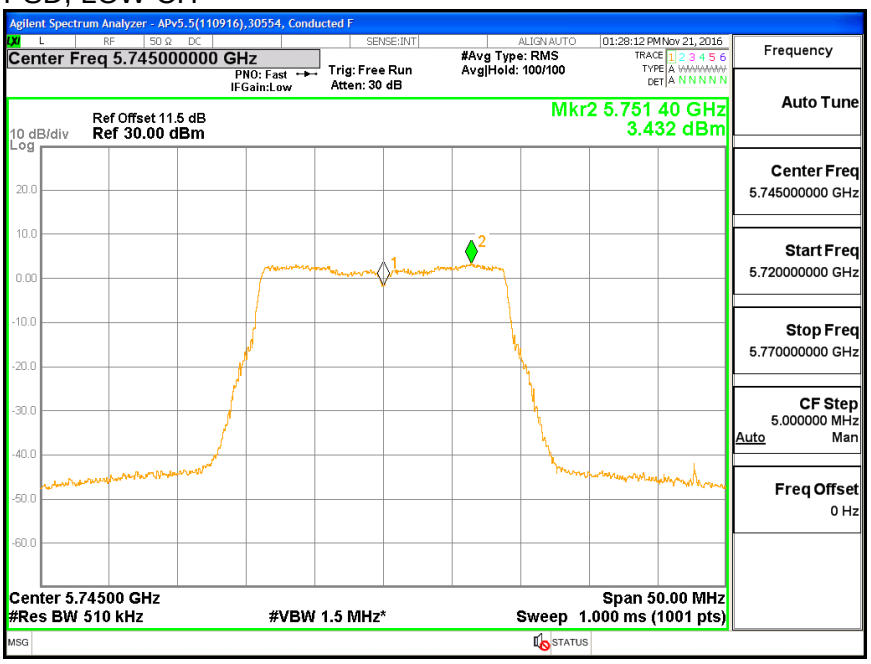
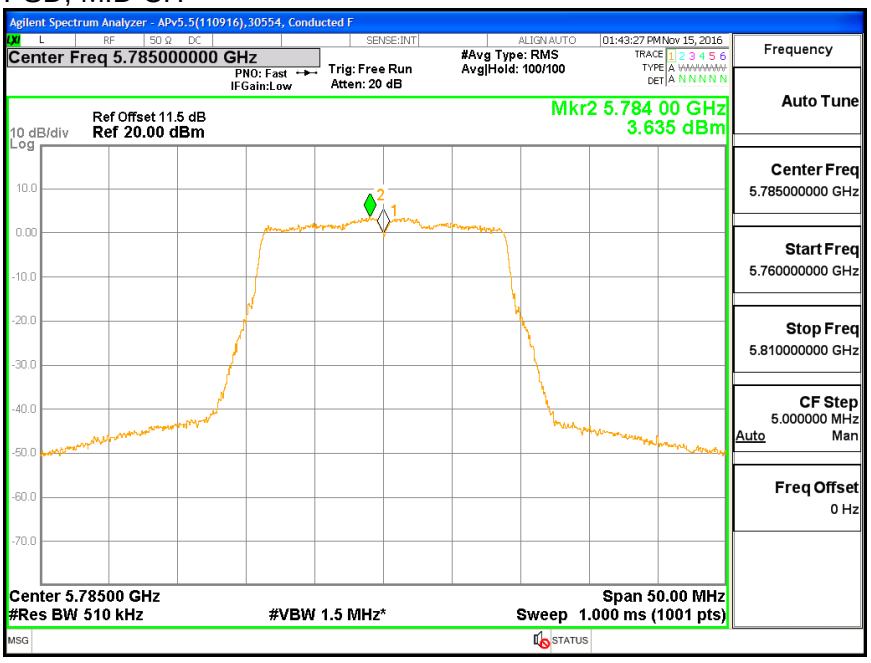
PSD

PSD, LOW CH



PSD, MID CH



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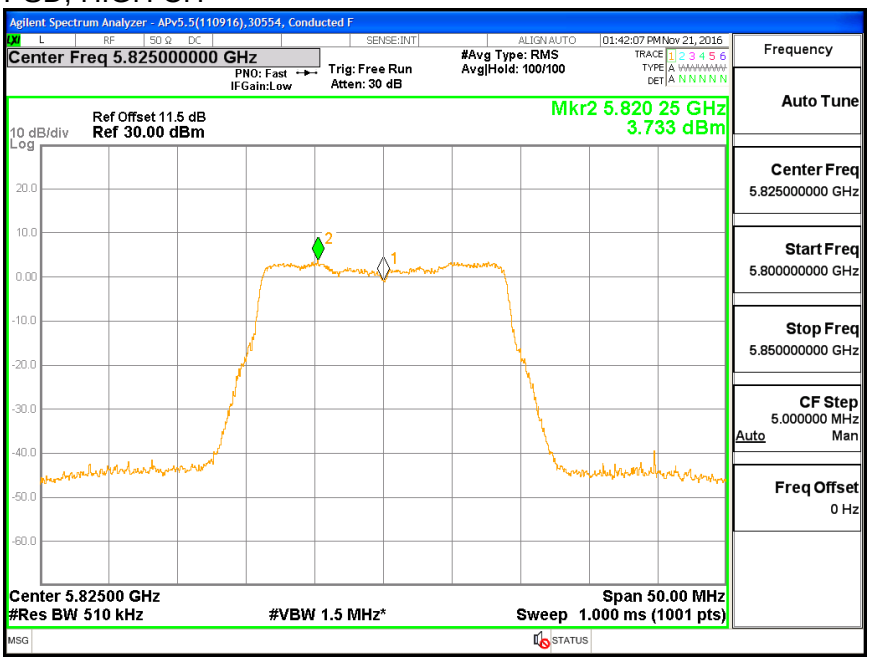
PSD, HIGH CH



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8.49. 802.11n HT20 2Tx (ANTENNA A + ANTENNA B) CDD 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 BW Antenna A (MHz)	6 dB BW Antenna B (MHz)	Minimum Limit (MHz)
Low	5745	17.680	17.560	0.5
Mid	5785	17.680	17.760	0.5
High	5825	17.760	17.680	0.5

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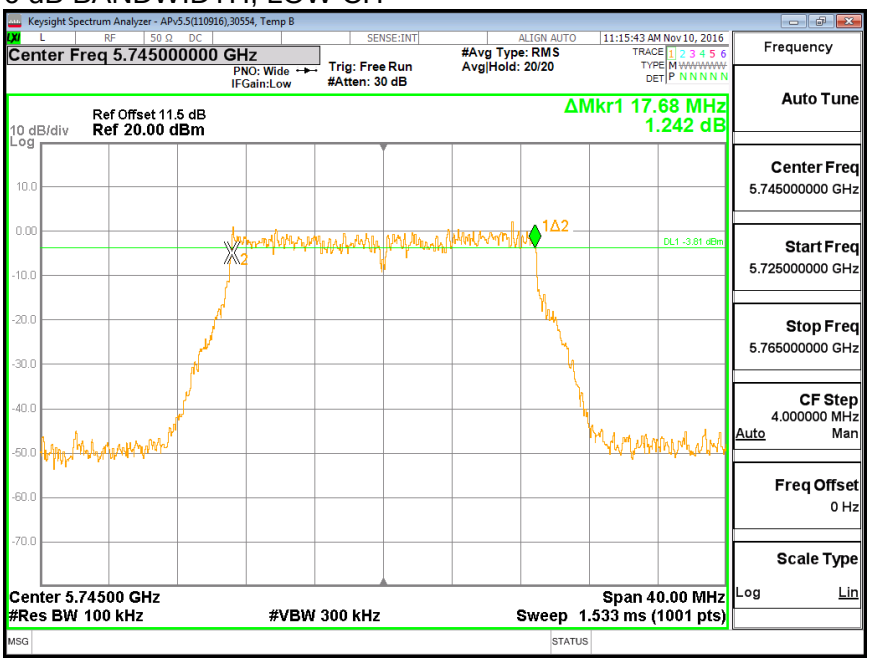
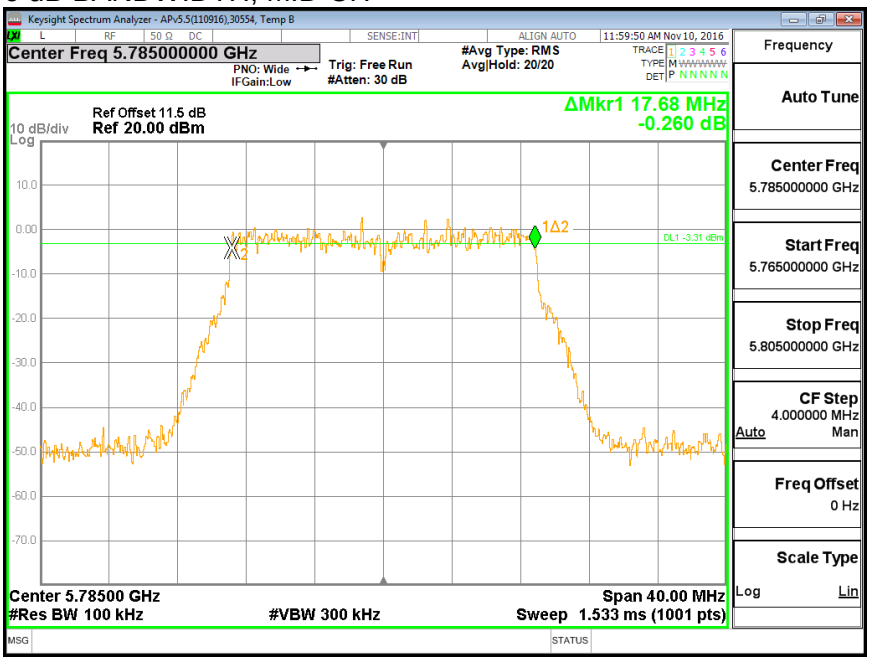
6 dB BANDWIDTH, ANTENNA A

6 dB BANDWIDTH, LOW CH



6 dB BANDWIDTH, MID CH



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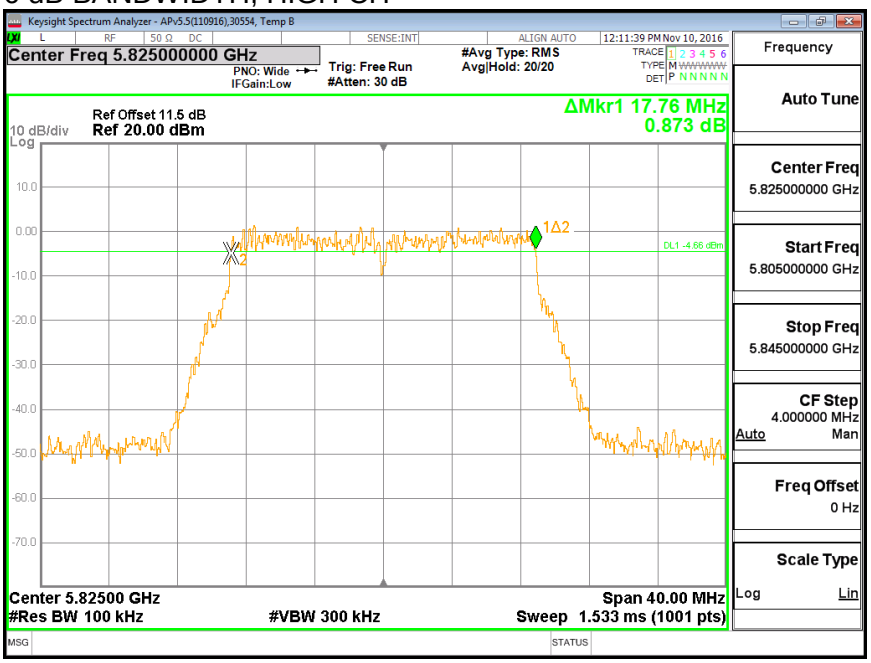
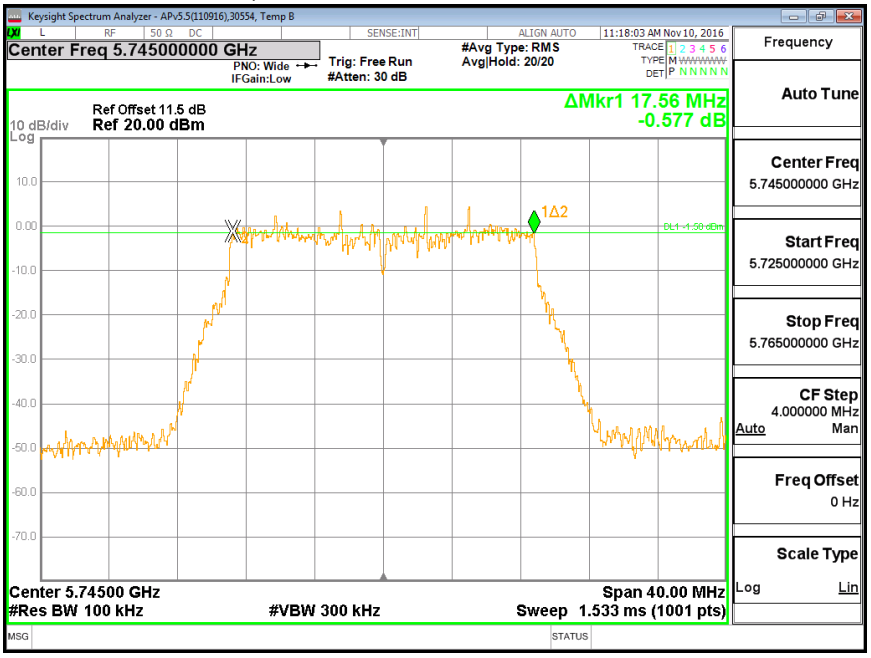
6 dB BANDWIDTH, HIGH CH



6 dB BANDWIDTH, ANTENNA B

6 dB BANDWIDTH, LOW CH



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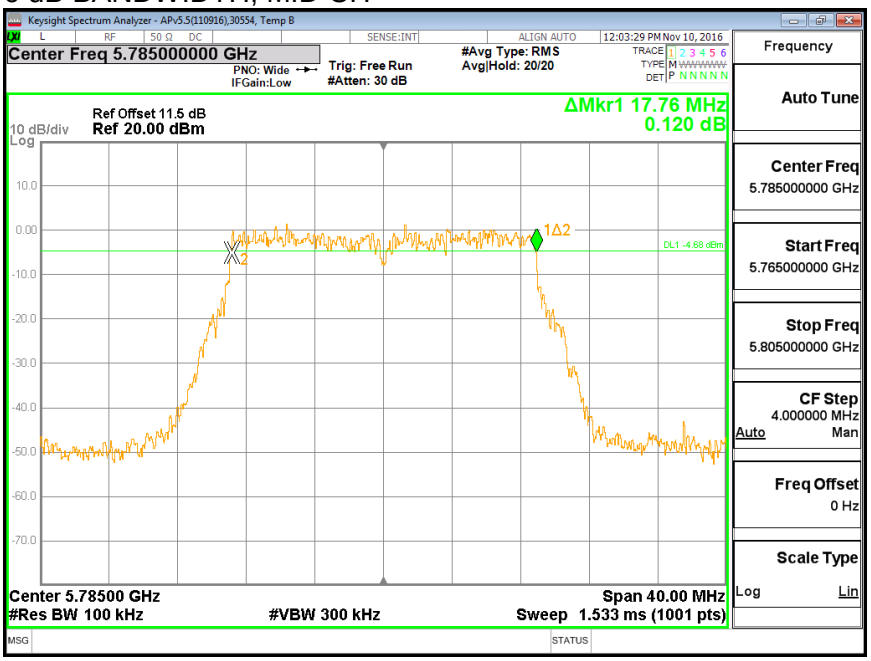
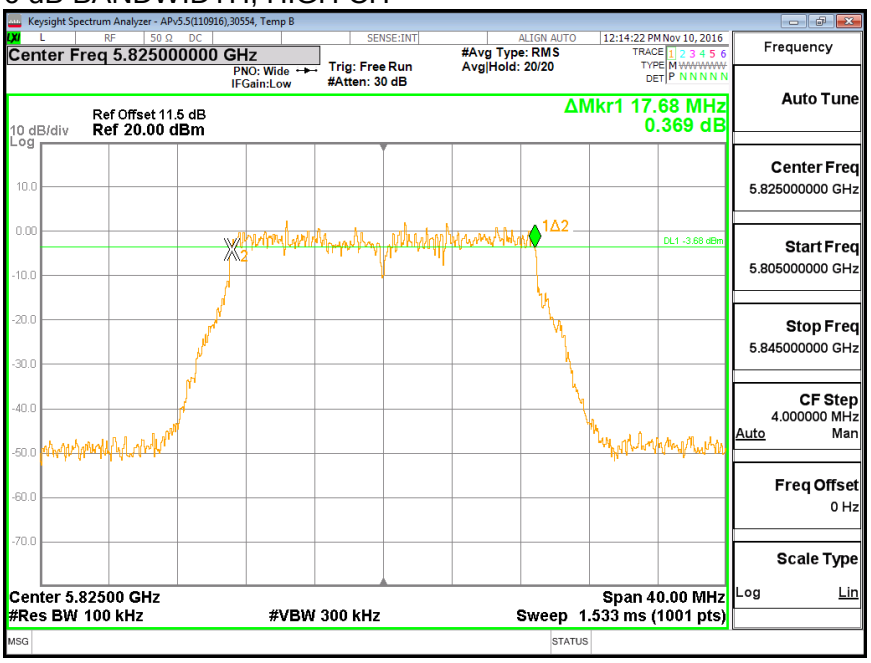
6 dB BANDWIDTH, MID CH



6 dB BANDWIDTH, HIGH CH



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8.49.2. 26 dB BANDWIDTH

LIMITS

None, for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB BW Antenna A (MHz)	26 dB BW Antenna B (MHz)
Low	5745	21.880	21.840
Mid	5785	21.840	21.880
High	5825	21.800	21.800

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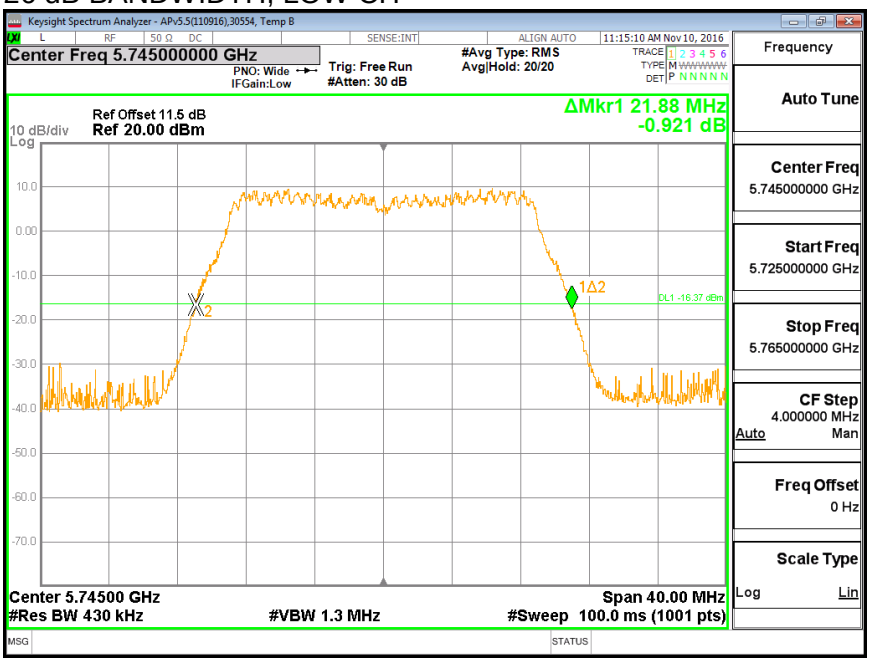
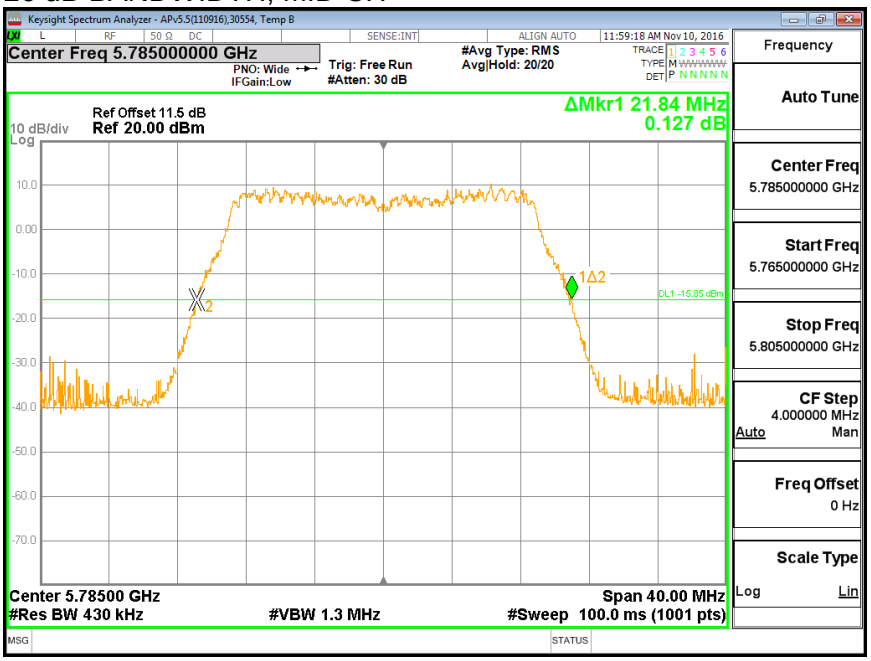
26 dB BANDWIDTH, ANTENNA A

26 dB BANDWIDTH, LOW CH



26 dB BANDWIDTH, MID CH



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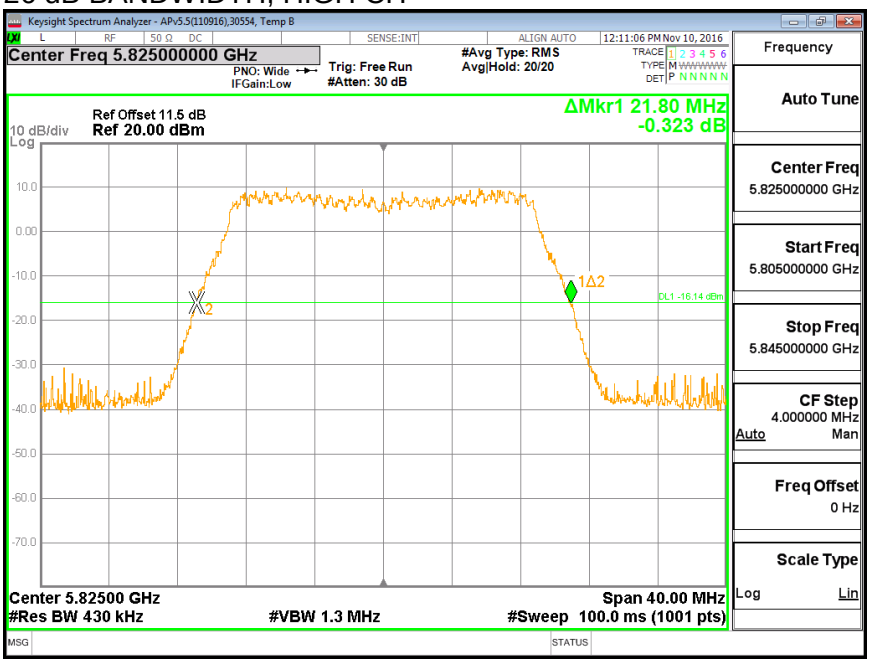
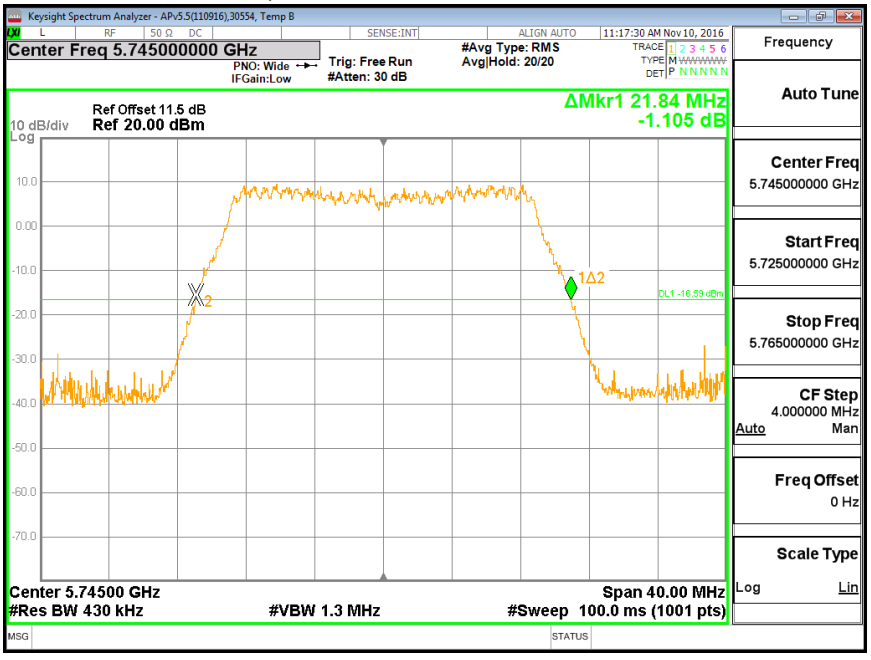
26 dB BANDWIDTH, HIGH CH



26 dB BANDWIDTH, ANTENNA B

26 dB BANDWIDTH, LOW CH



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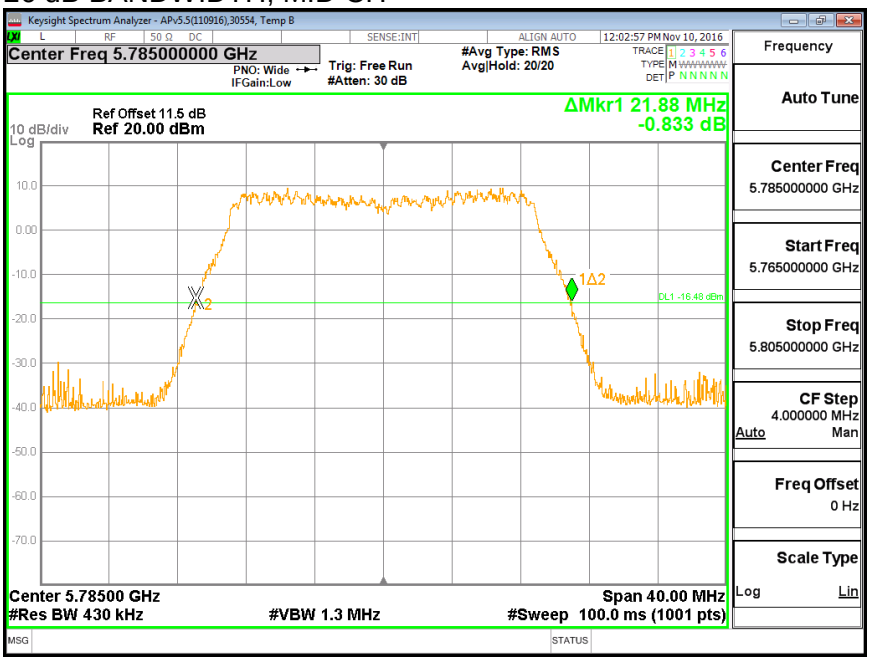
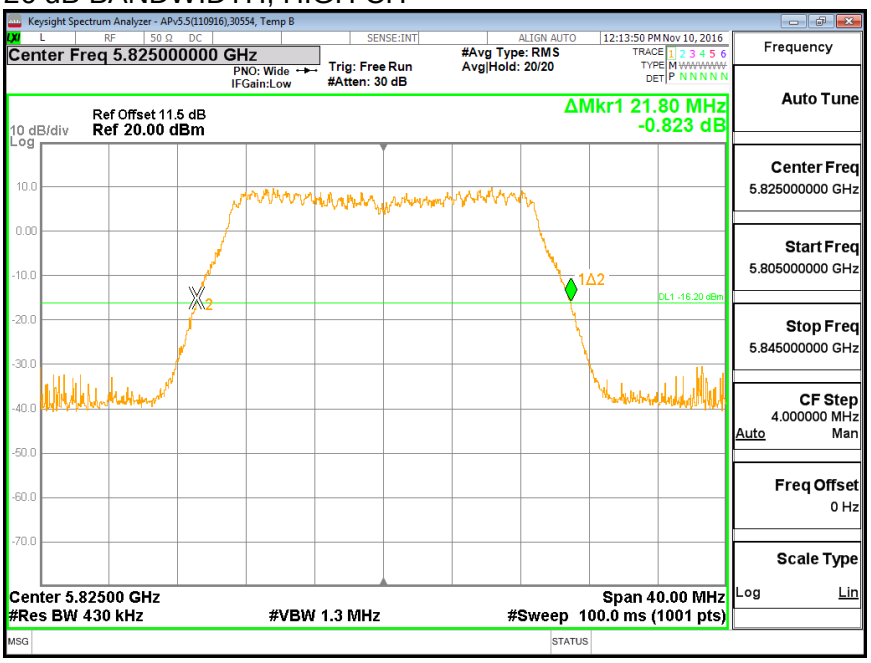
26 dB BANDWIDTH, MID CH



26 dB BANDWIDTH, HIGH CH



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8.49.3. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% BW Antenna A (MHz)	99% BW Antenna B (MHz)
Low	5745	17.961	17.858
Mid	5785	17.770	17.762
High	5825	17.909	17.764

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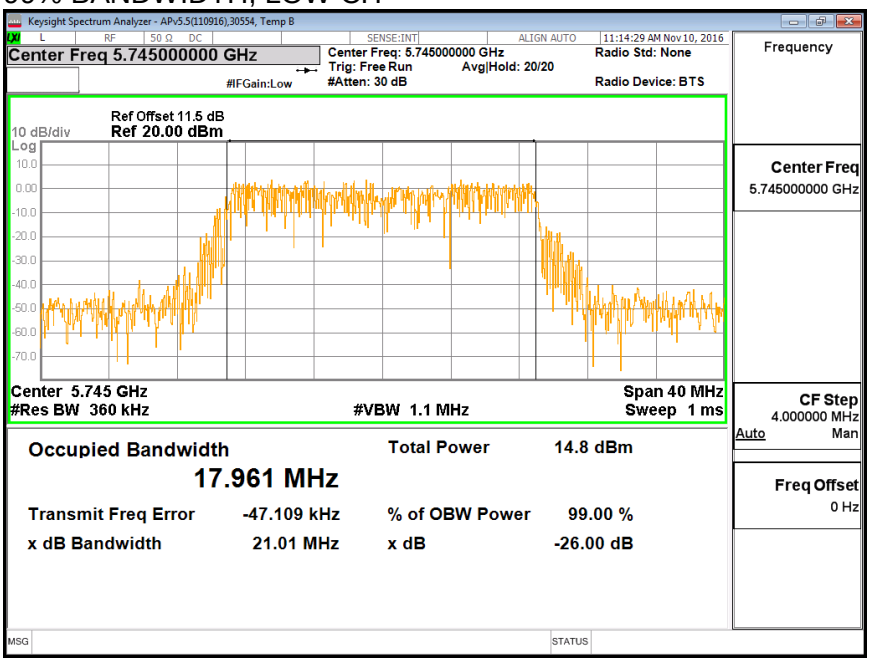
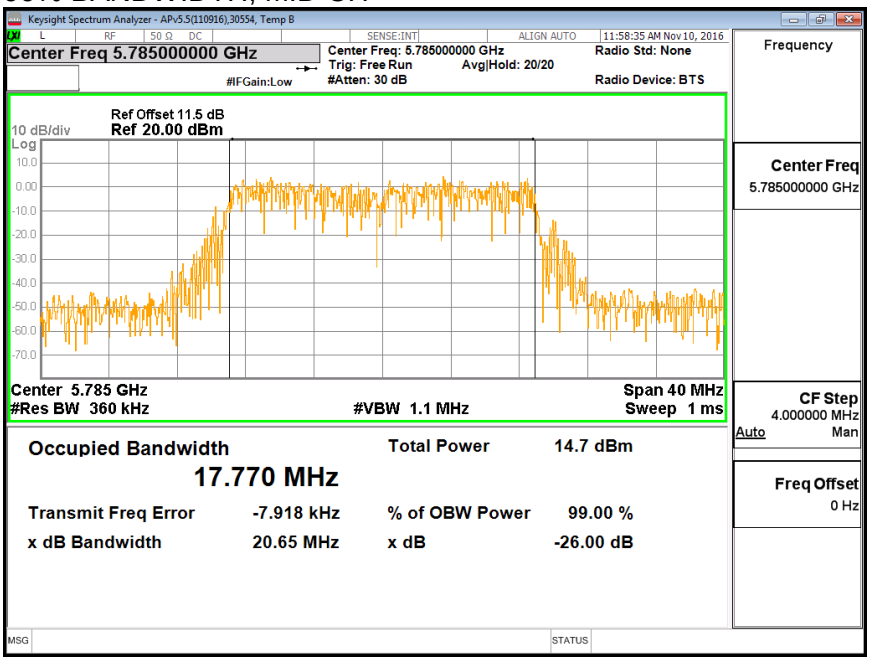
99% BANDWIDTH, ANTENNA A

99% BANDWIDTH, LOW CH



99% BANDWIDTH, MID CH



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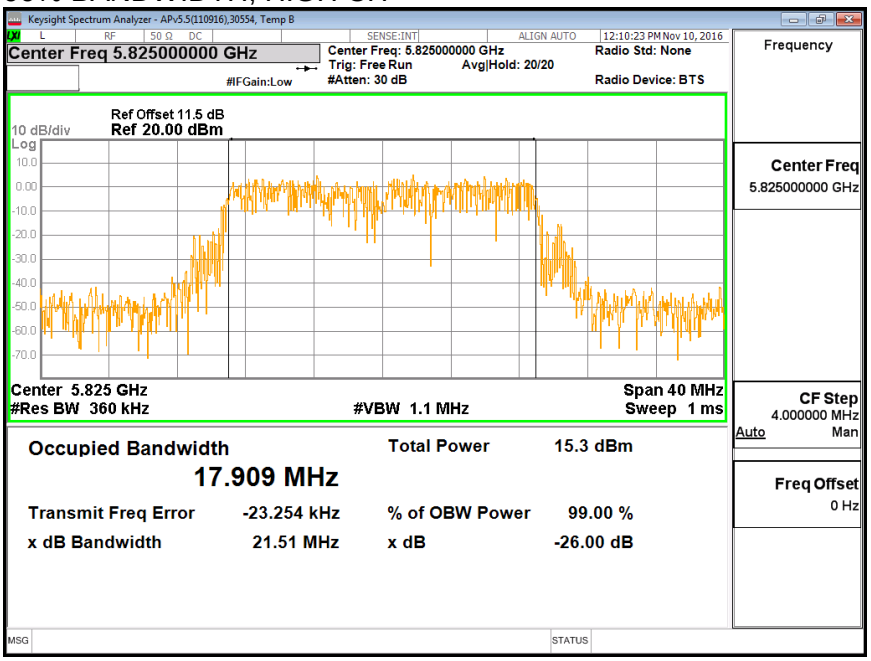
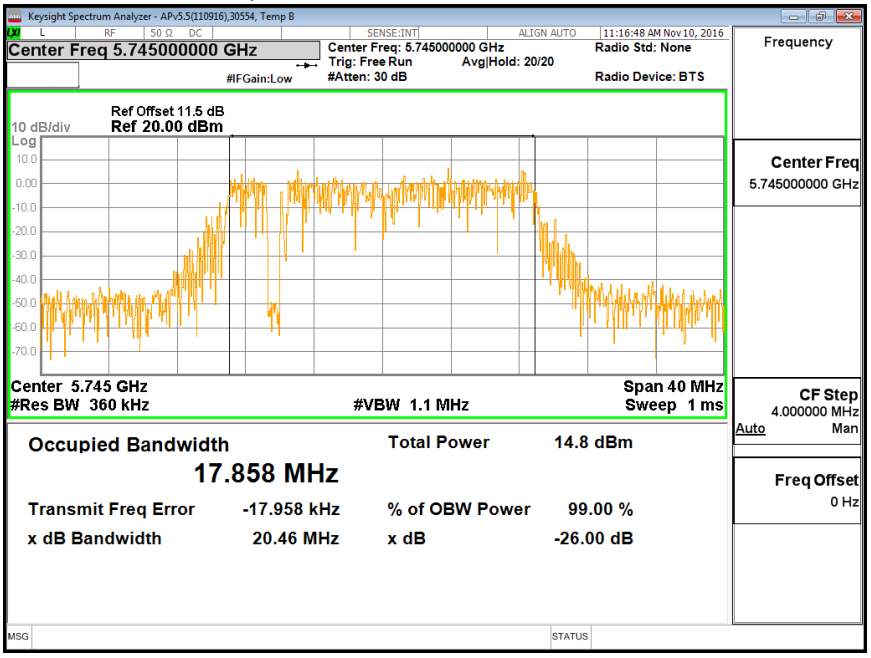
99% BANDWIDTH, HIGH CH



99% BANDWIDTH, ANTENNA B

99% BANDWIDTH, LOW CH



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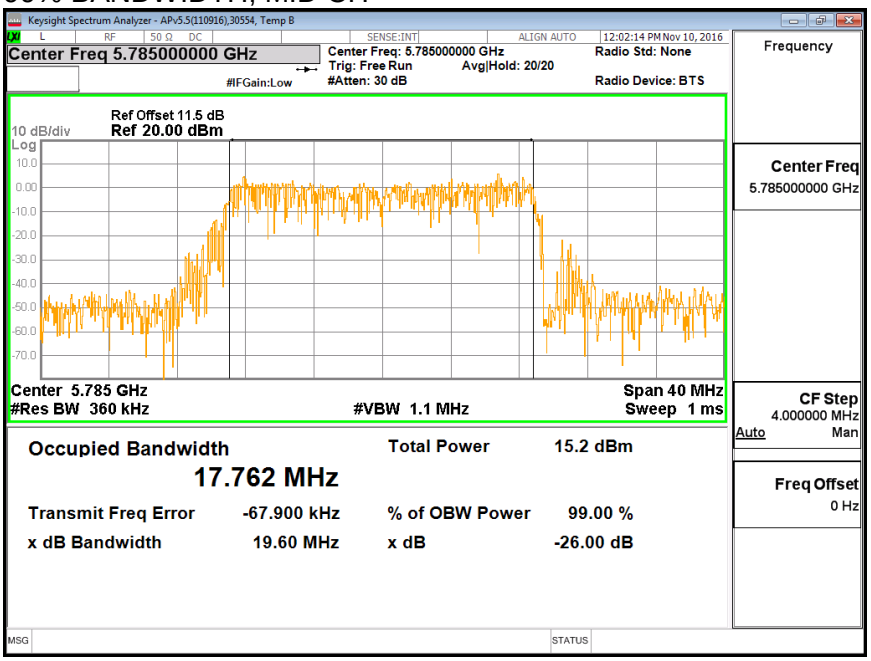
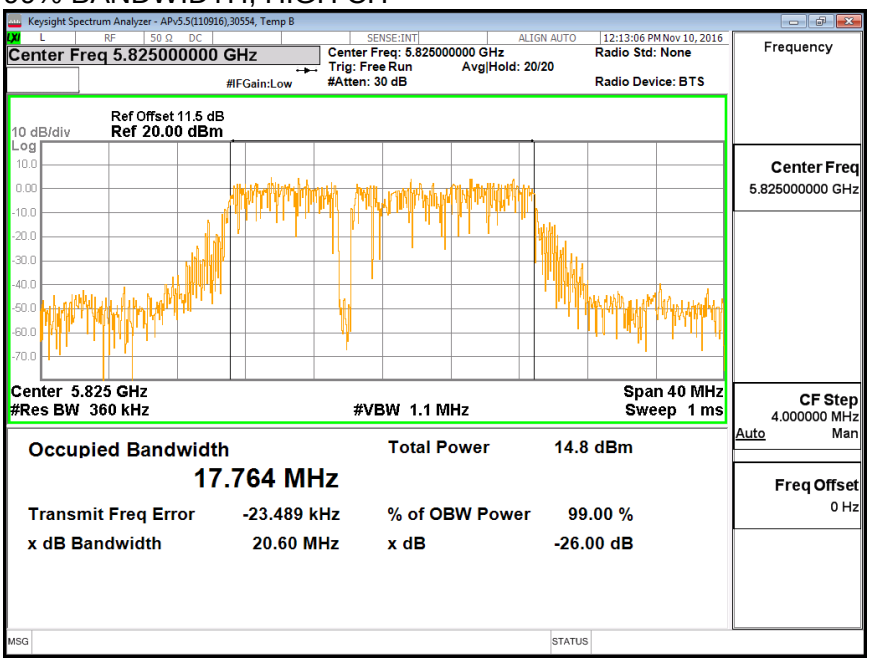
99% BANDWIDTH, MID CH



99% BANDWIDTH, HIGH CH



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8.49.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

ID:	39316	Date:	12/14/16

Channel	Frequency (MHz)	Antenna A Power (dBm)	Antenna B Power (dBm)	Total Power (dBm)
Low	5745	16.45	16.41	19.44
Mid	5785	16.43	16.47	19.46
High	5825	16.49	16.44	19.48

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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

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

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

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RESULTS

ID:	39472	Date:	12/14/16

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)	Antenna A Meas Power (dBm)	Antenna B Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	16.45	16.41	19.44	30.00	-10.56
Mid	5785	16.43	16.47	19.46	30.00	-10.54
High	5825	16.49	16.44	19.48	30.00	-10.52

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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

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

Antenna A Gain (dBi)	Antenna B Gain (dBi)	Correlated Chains Directional Gain (dBi)
3.54	3.21	6.39

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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)	Antenna A Meas PSD (dBm)	Antenna B Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5745	3.35	3.54	6.46	29.61	-23.15
Mid	5785	3.81	3.72	6.78	29.61	-22.83
High	5825	3.22	3.30	6.27	29.61	-23.34

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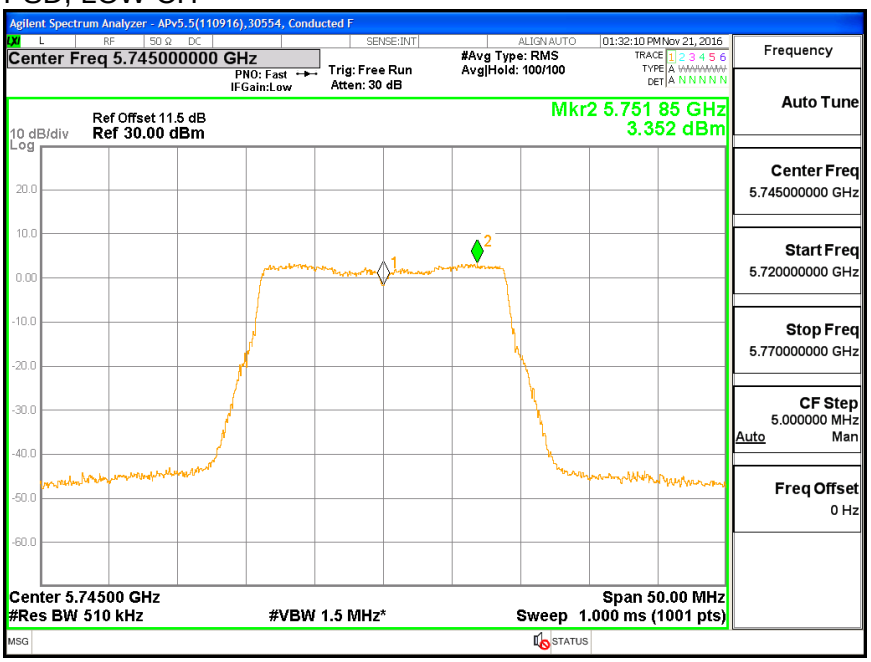
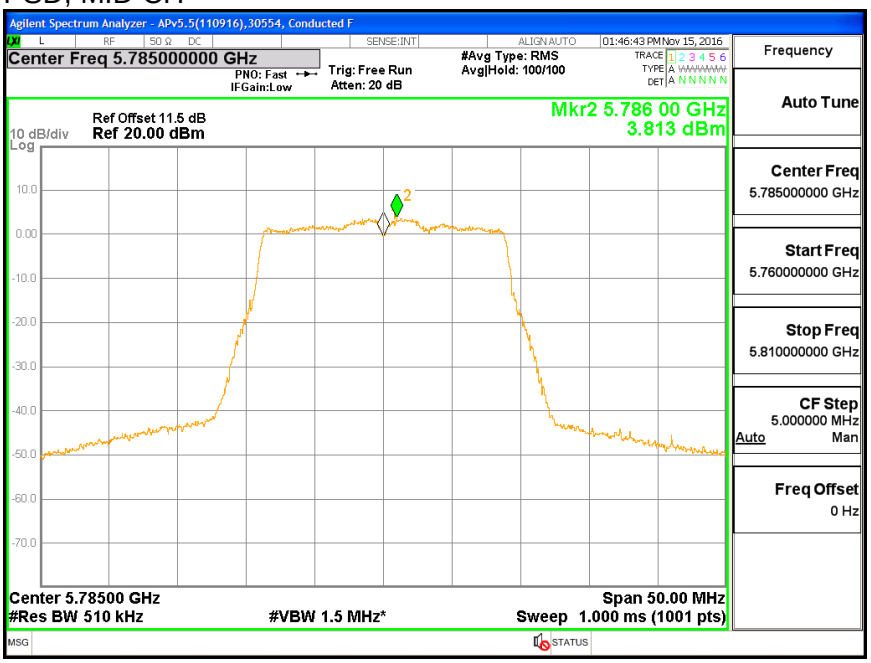
PSD, ANTENNA A

PSD, LOW CH



PSD, MID CH



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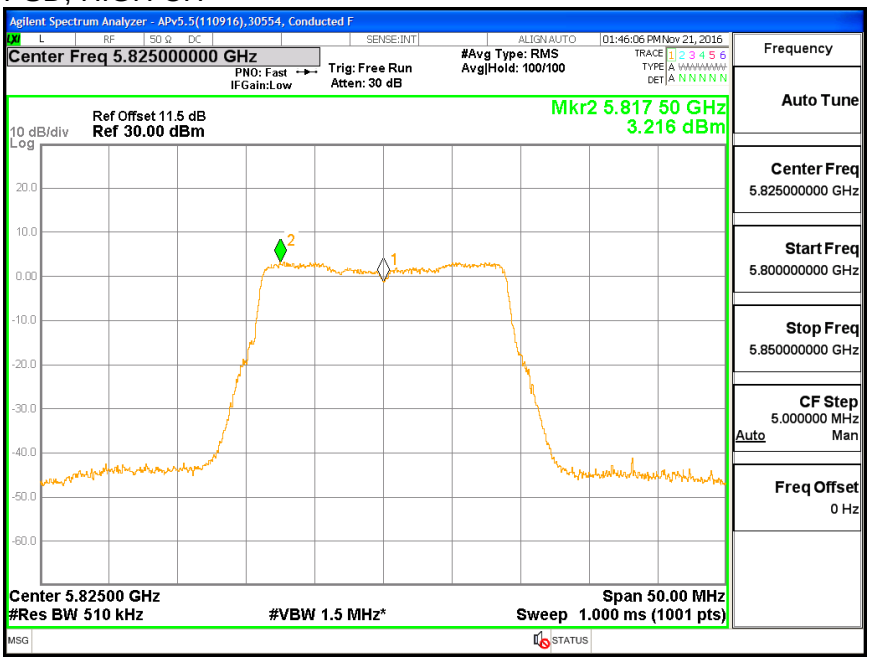
PSD, HIGH CH



PSD, ANTENNA B

PSD, LOW CH

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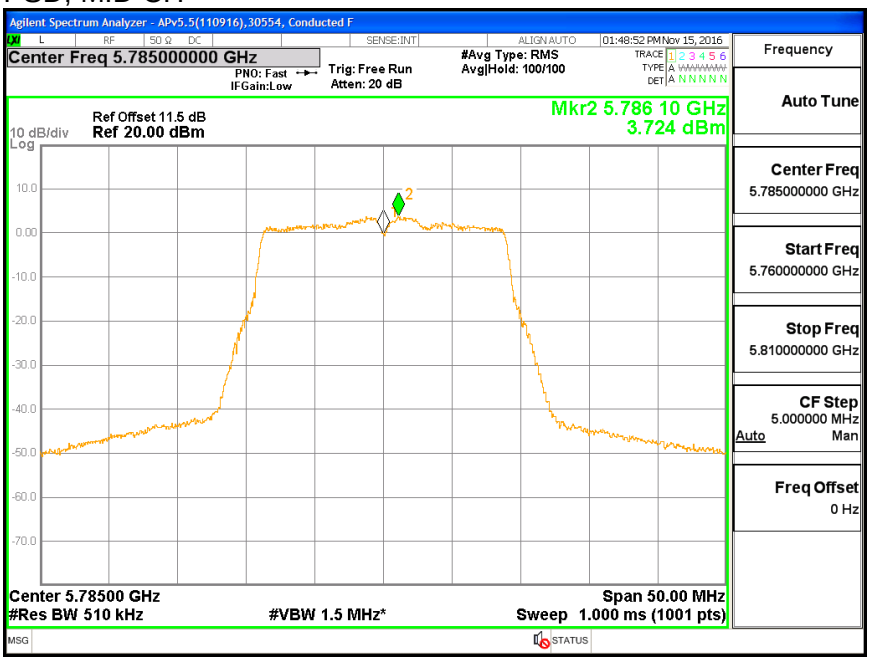
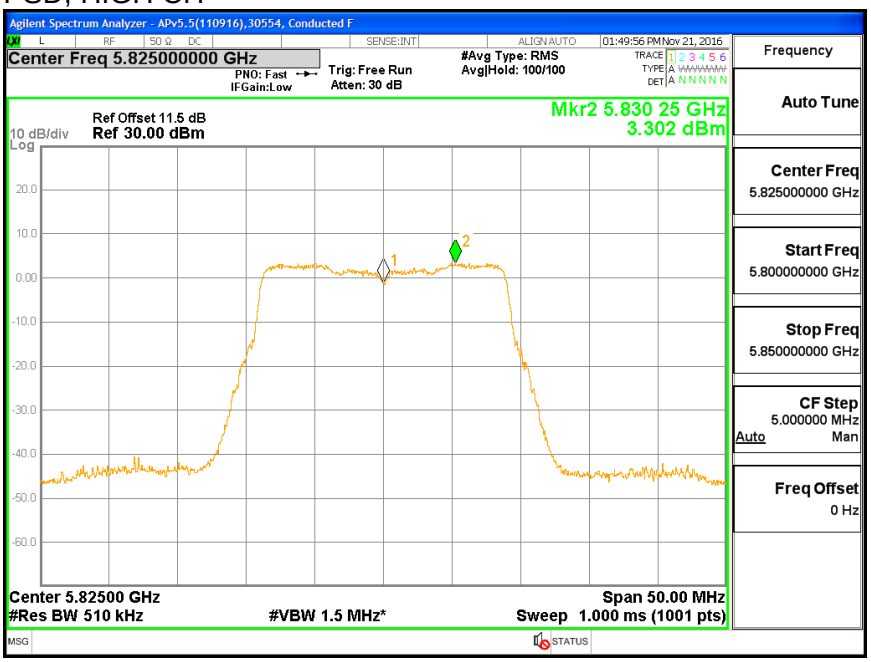
PSD, MID CH



PSD, HIGH CH



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8.50. 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

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8.51. 802.11n HT40 ANTENNA A MODE IN THE 5.8 GHz BAND

8.51.1. 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	36.400	0.5
High	5795	36.400	0.5

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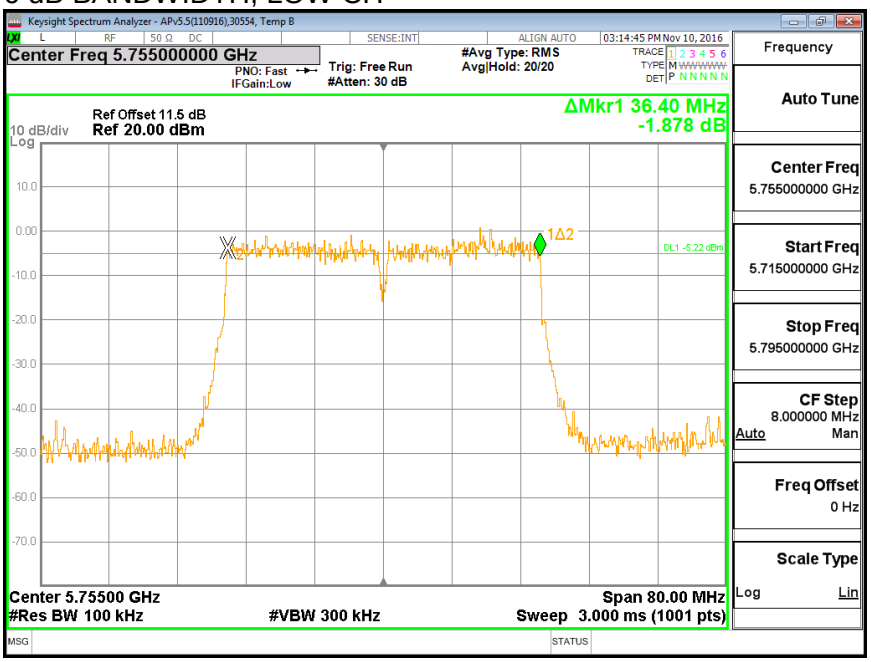
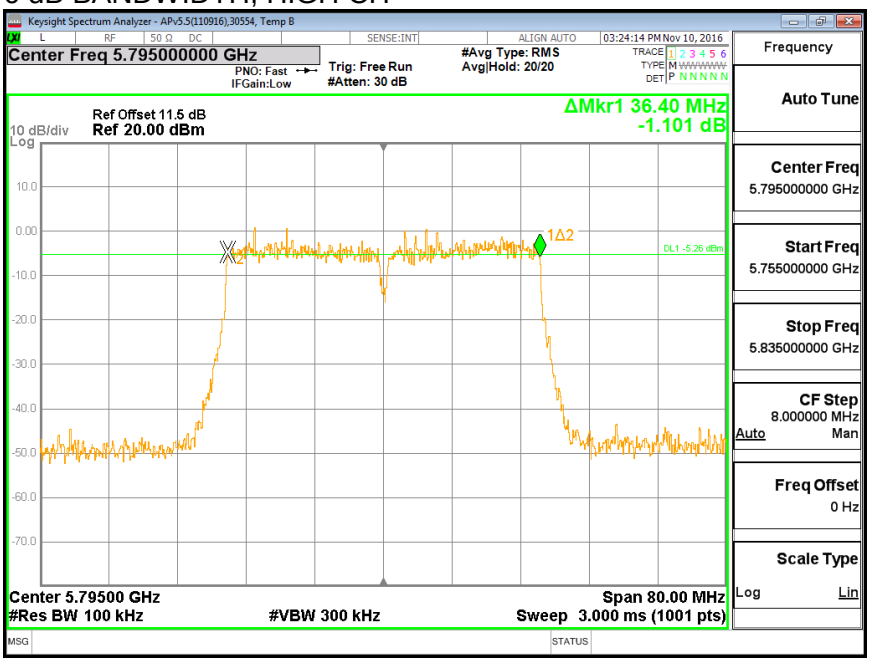
6 dB BANDWIDTH

6 dB BANDWIDTH, LOW CH



6 dB BANDWIDTH, HIGH CH



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8.51.2. 26 dB BANDWIDTH

LIMITS

None, for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5755	40.560
High	5795	40.480

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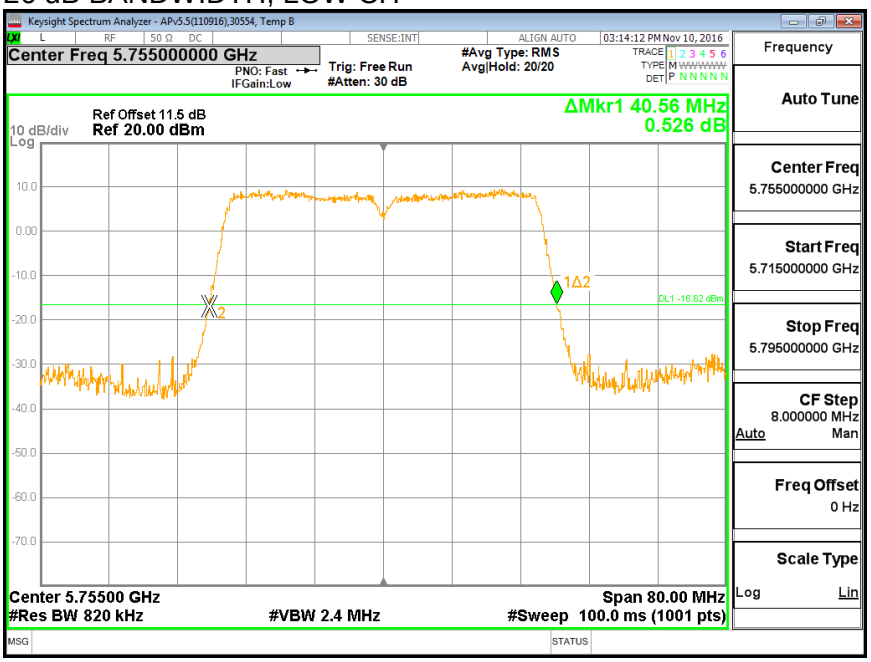
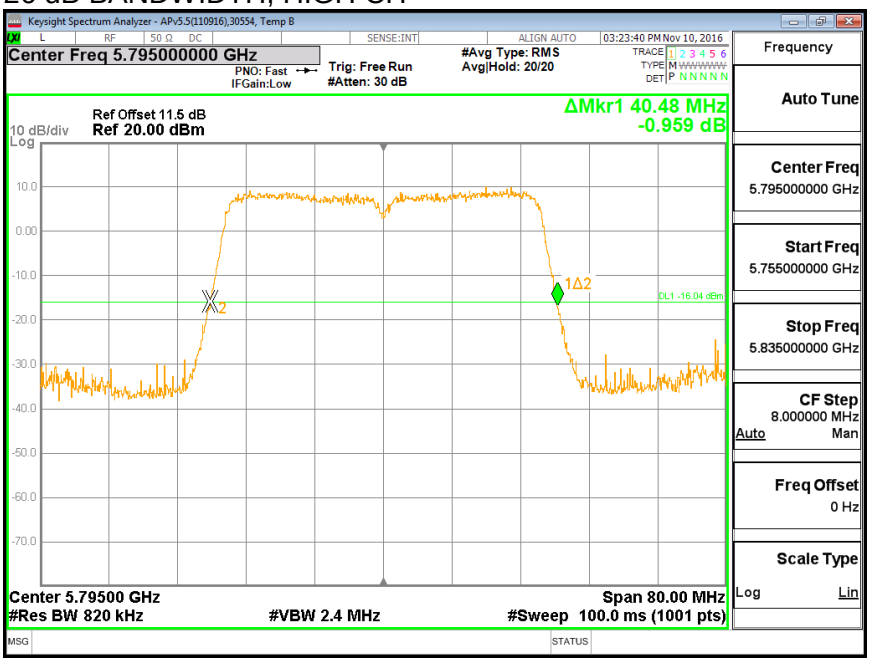
26 dB BANDWIDTH

26 dB BANDWIDTH, LOW CH



26 dB BANDWIDTH, HIGH CH



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8.51.3. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5755	36.372
High	5795	36.577

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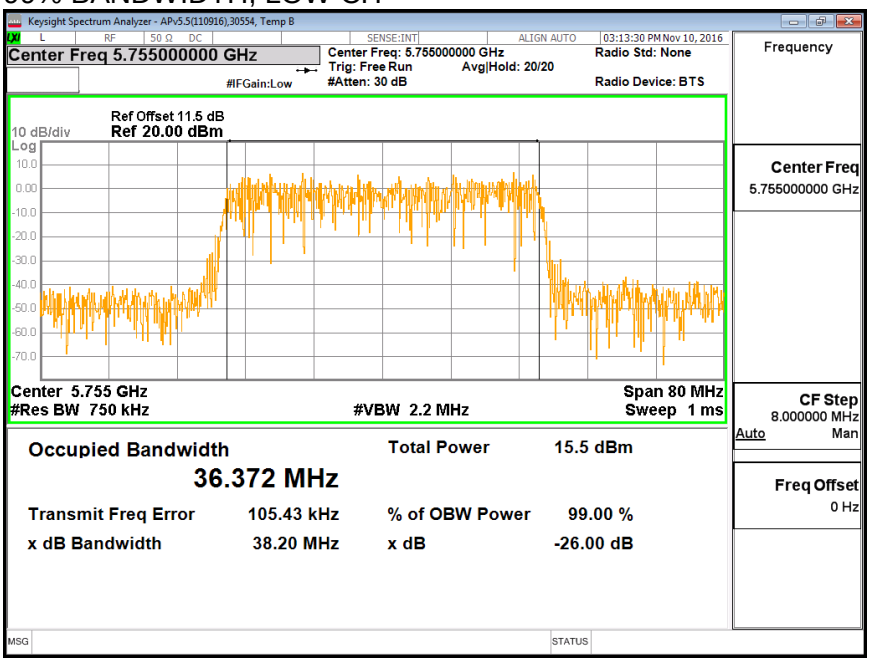
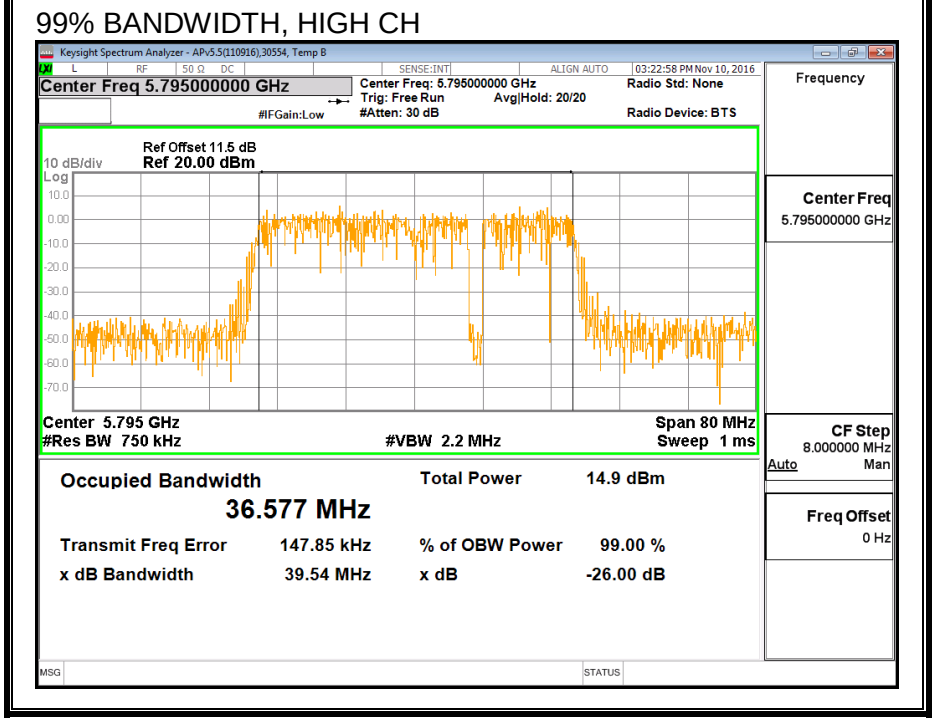
99% BANDWIDTH

99% BANDWIDTH, LOW CH



99% BANDWIDTH, HIGH CH



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8.51.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

ID:	39316	Date:	12/14/16

Channel	Frequency (MHz)	Power (dBm)
Low	5755	16.43
High	5795	16.44

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8.51.5. 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.

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RESULTS

ID:	39316	Date:	12/14/16

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)	Antenna A Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5755	16.43	16.43	30.00	-13.57
High	5795	16.44	16.44	30.00	-13.56

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8.51.6. 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.

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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)	Antenna A Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5755	0.329	0.43	30.00	-29.57
High	5795	0.668	0.77	30.00	-29.23

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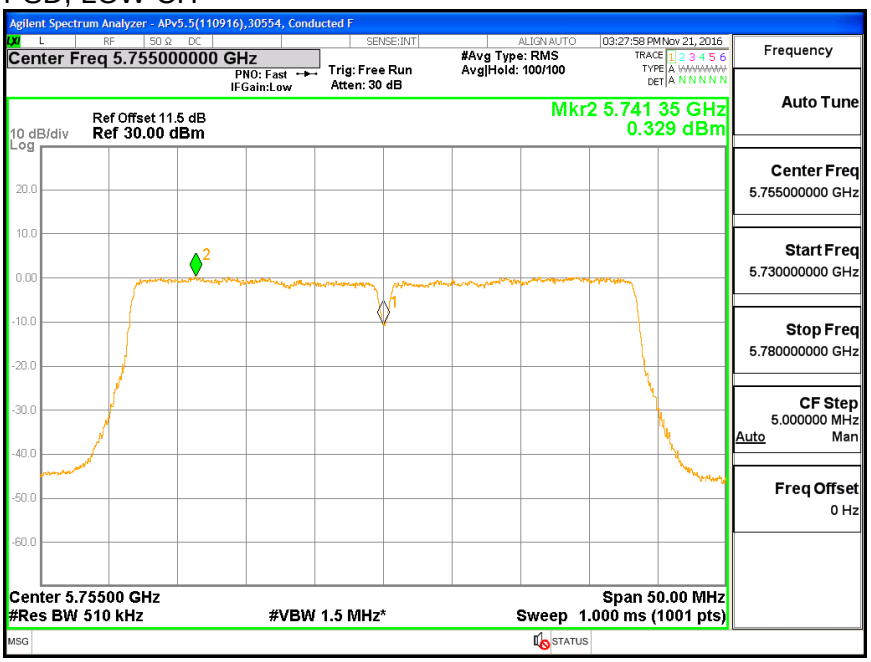
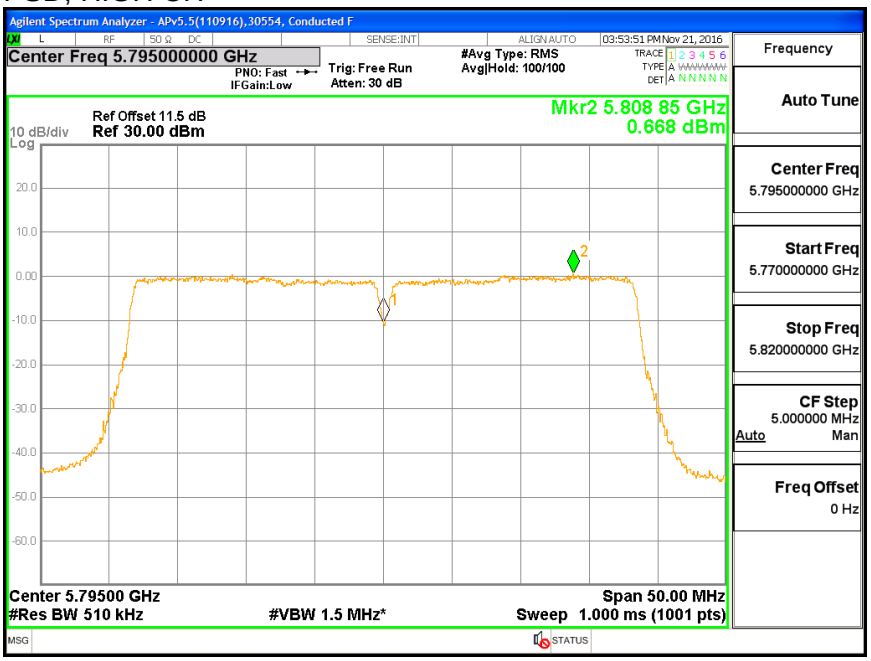
PSD

PSD, LOW CH



PSD, HIGH CH



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8.52. 802.11n HT40 ANTENNA B MODE IN THE 5.8 GHz BAND

8.52.1. 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	36.400	0.5
High	5795	36.400	0.5

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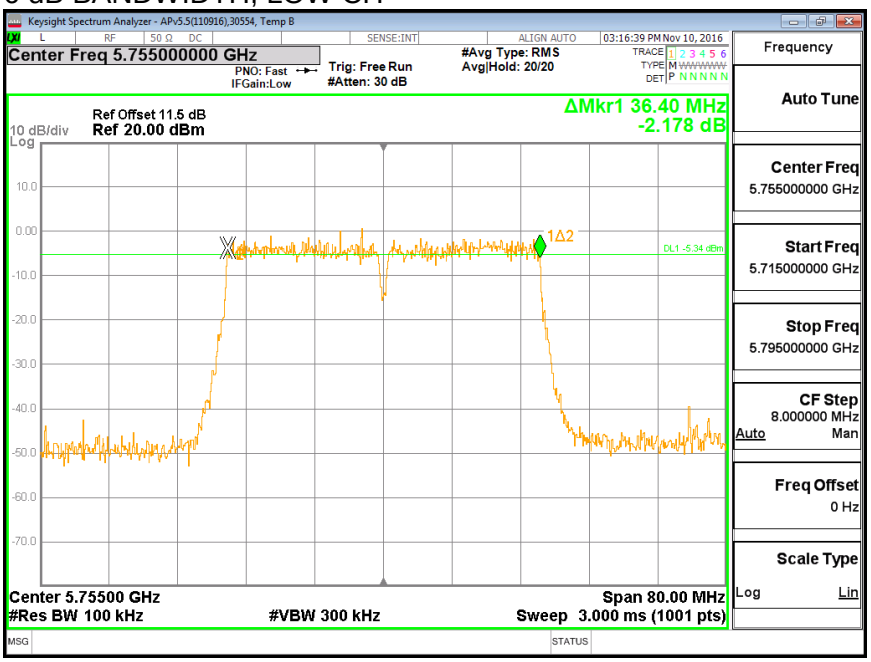
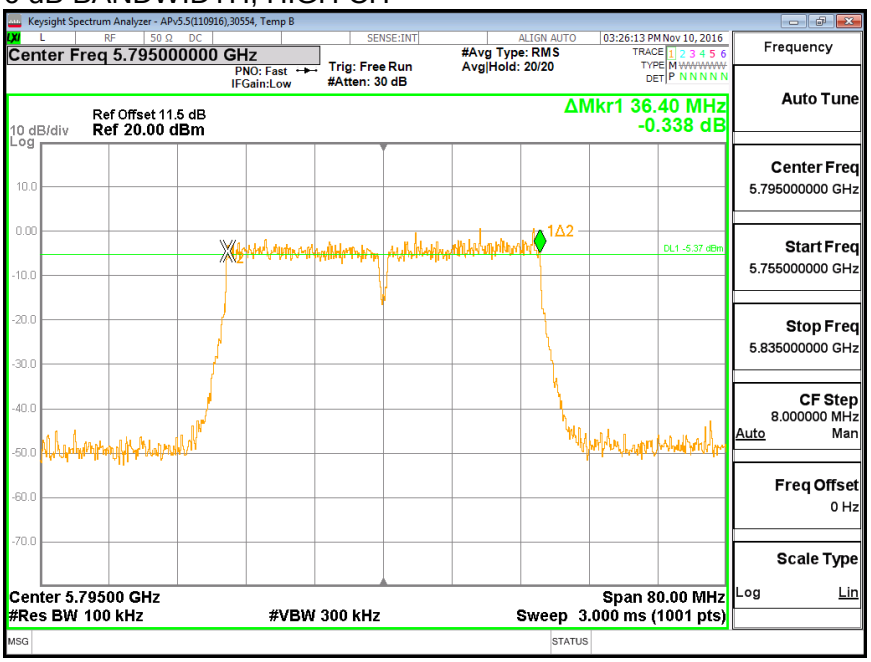
6 dB BANDWIDTH

6 dB BANDWIDTH, LOW CH



6 dB BANDWIDTH, HIGH CH



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8.52.2. 26 dB BANDWIDTH

LIMITS

None, for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5755	40.640
High	5795	40.560

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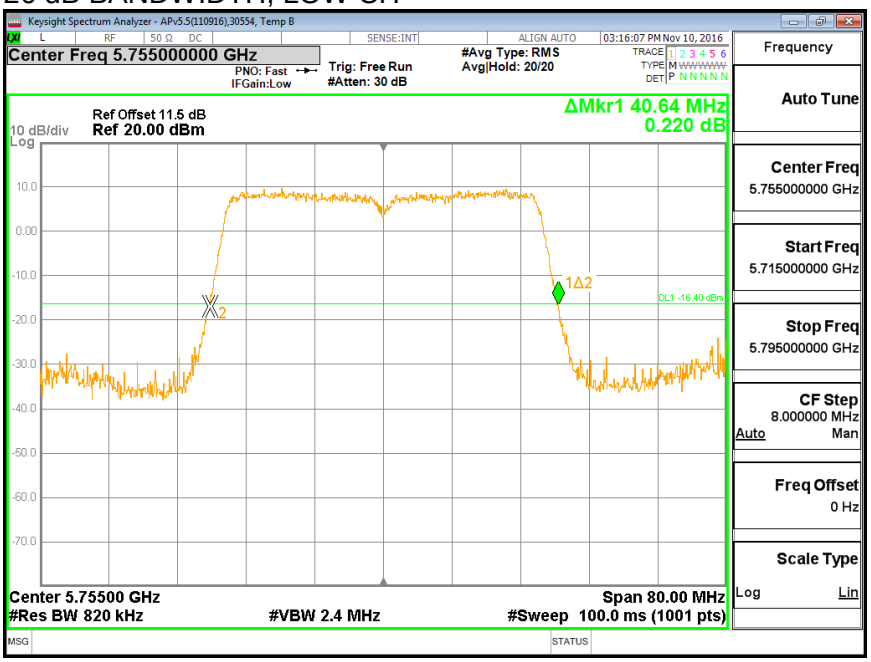
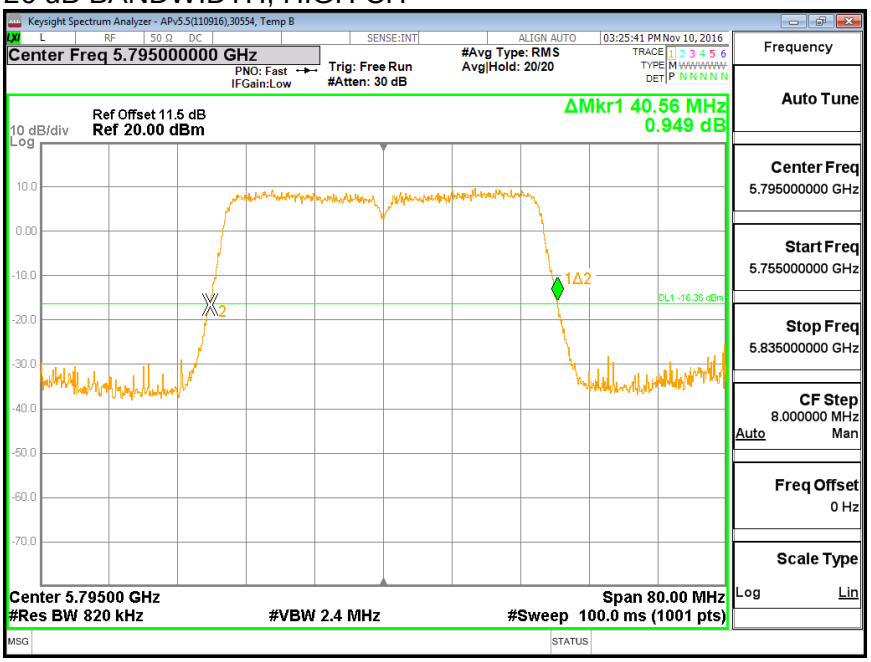
26 dB BANDWIDTH

26 dB BANDWIDTH, LOW CH



26 dB BANDWIDTH, HIGH CH



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8.52.3. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5755	36.497
High	5795	36.340

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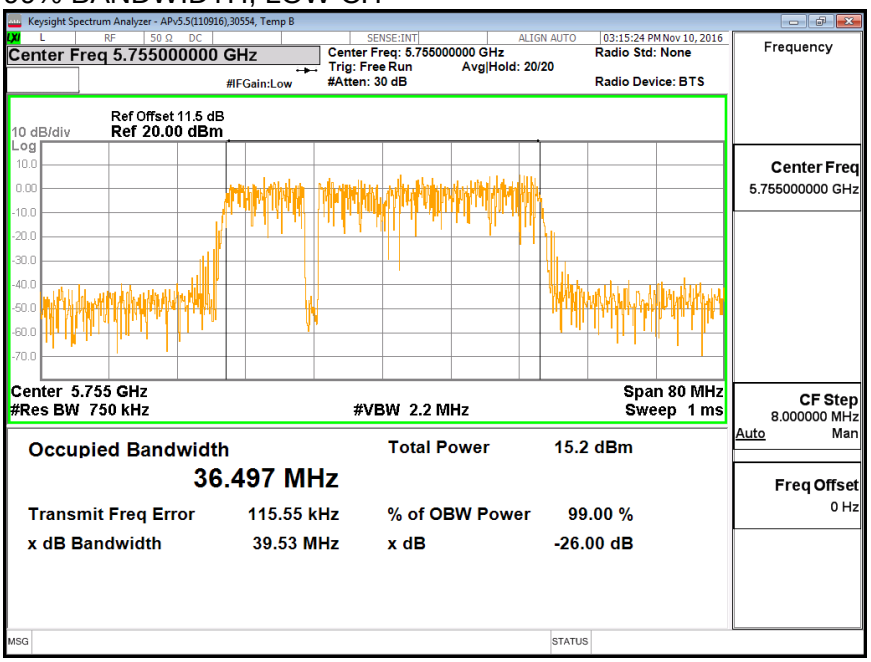
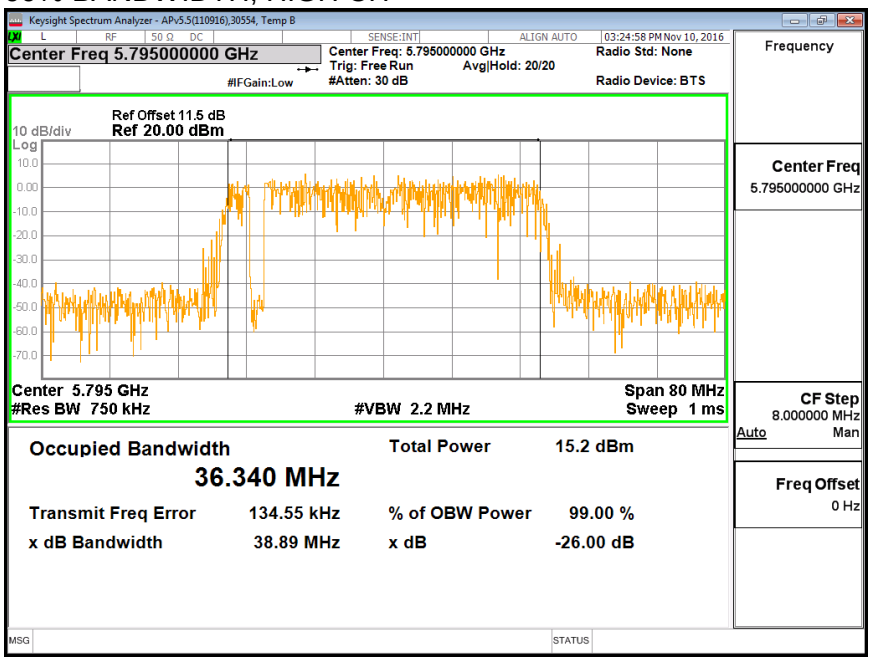
99% BANDWIDTH

99% BANDWIDTH, LOW CH



99% BANDWIDTH, HIGH CH



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8.52.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

ID:	39316	Date:	12/14/16

Channel	Frequency (MHz)	Power (dBm)
Low	5755	16.43
High	5795	16.47

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8.52.5. 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.

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RESULTS

ID:	39316	Date:	12/14/16

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)	Antenna B Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5755	16.43	16.43	30.00	-13.57
High	5795	16.47	16.47	30.00	-13.53

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8.52.6. 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.

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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)	Antenna B Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5755	0.486	0.59	30.00	-29.41
High	5795	0.533	0.63	30.00	-29.37

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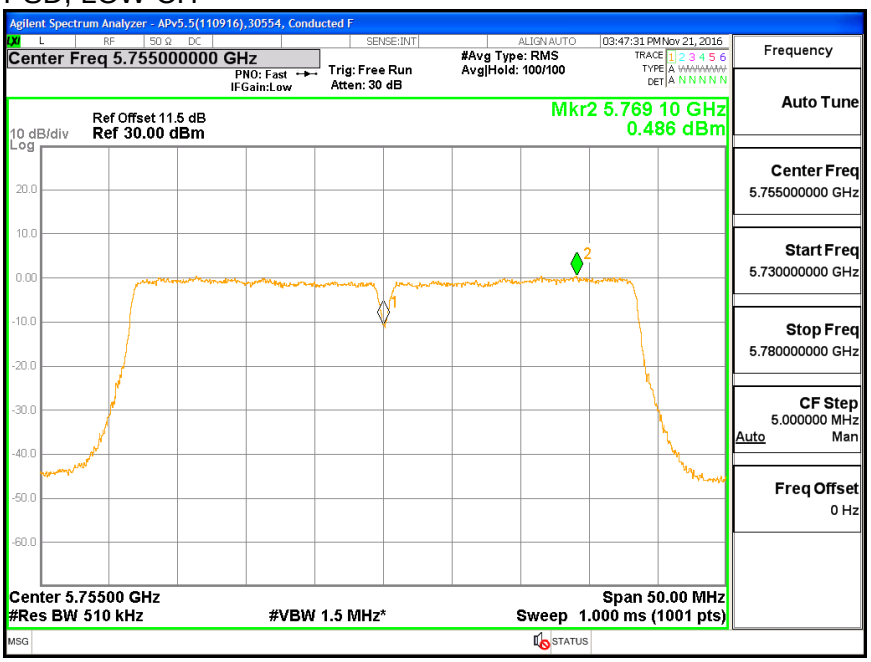
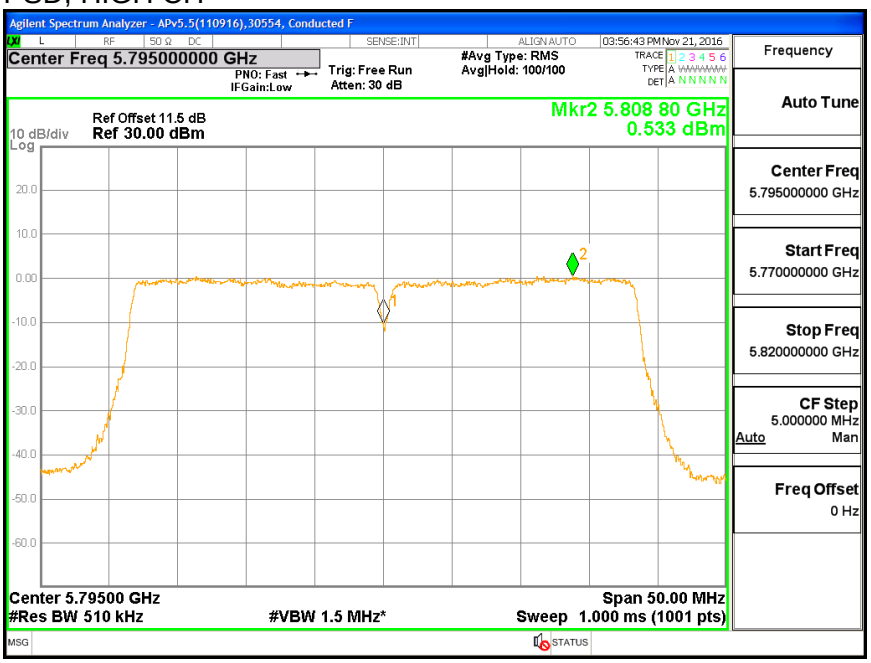
PSD

PSD, LOW CH



PSD, HIGH CH



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8.53. 802.11n HT40 2Tx (ANTENNA A + ANTENNA B) CDD MODE IN THE 5.8 GHz BAND

8.53.1. 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 Antenna A (MHz)	6 dB BW Antenna B (MHz)	Minimum Limit (MHz)
Low	5755	36.400	36.400	0.5
High	5795	36.400	36.400	0.5

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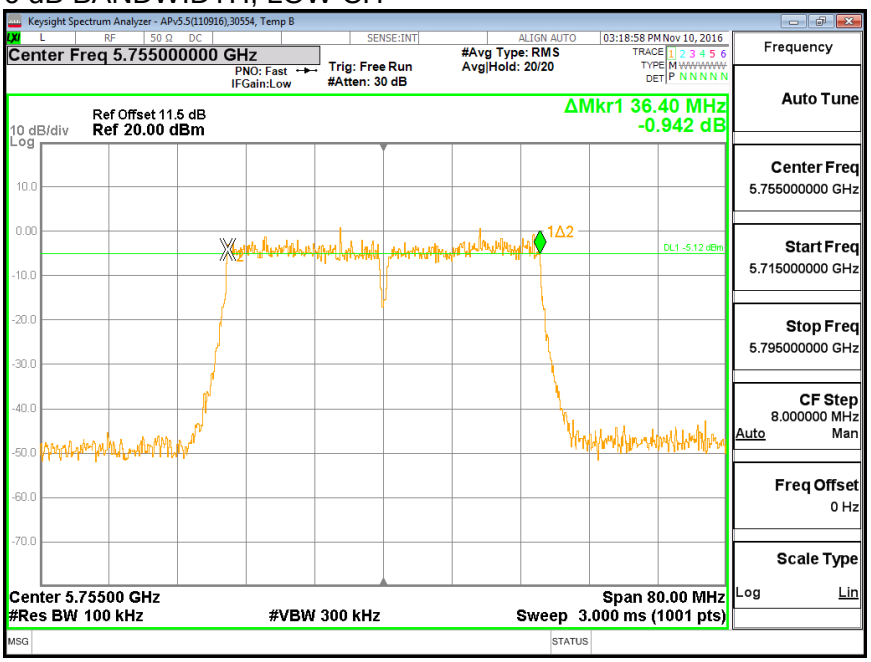
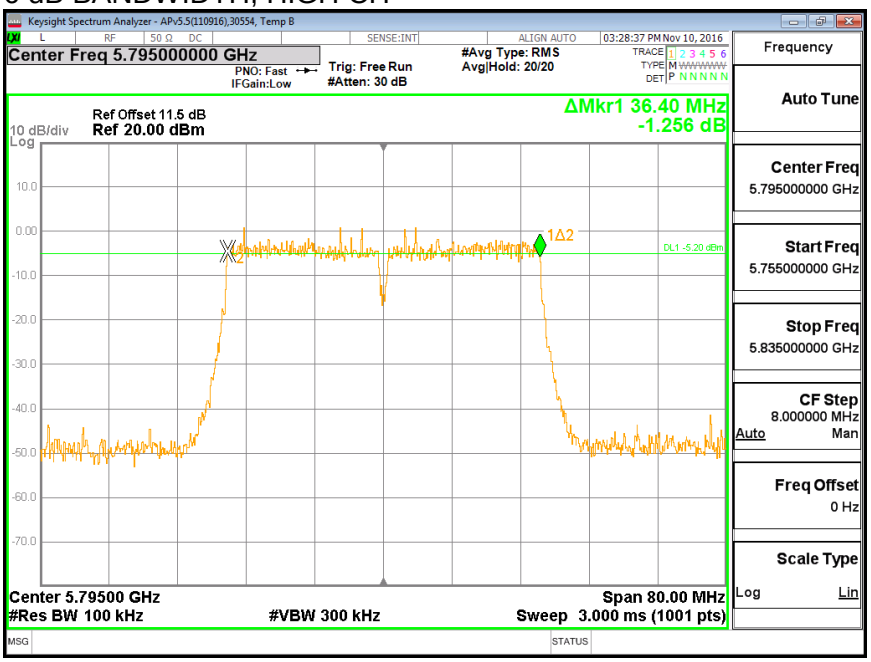
6 dB BANDWIDTH, ANTENNA A

6 dB BANDWIDTH, LOW CH



6 dB BANDWIDTH, HIGH CH



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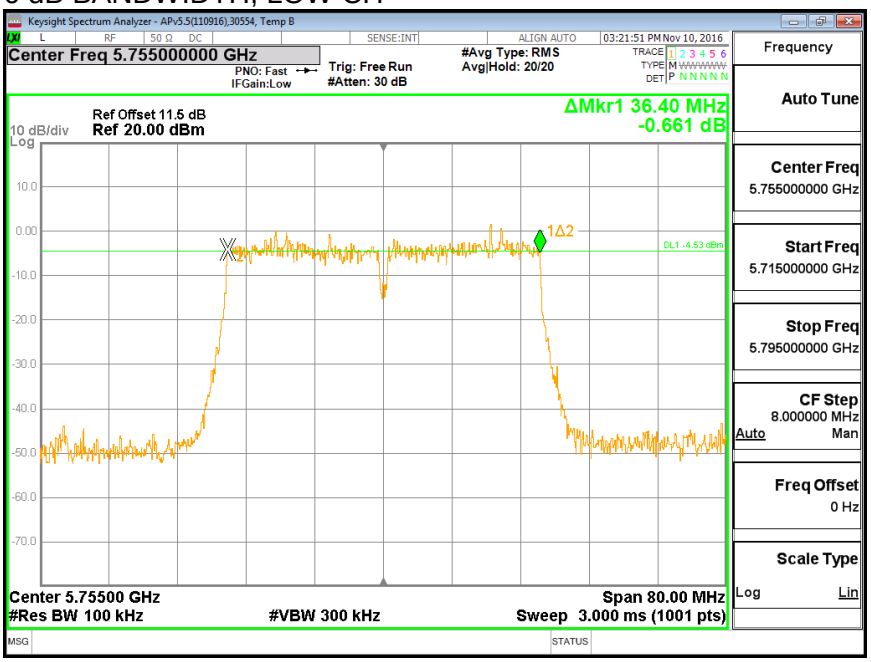
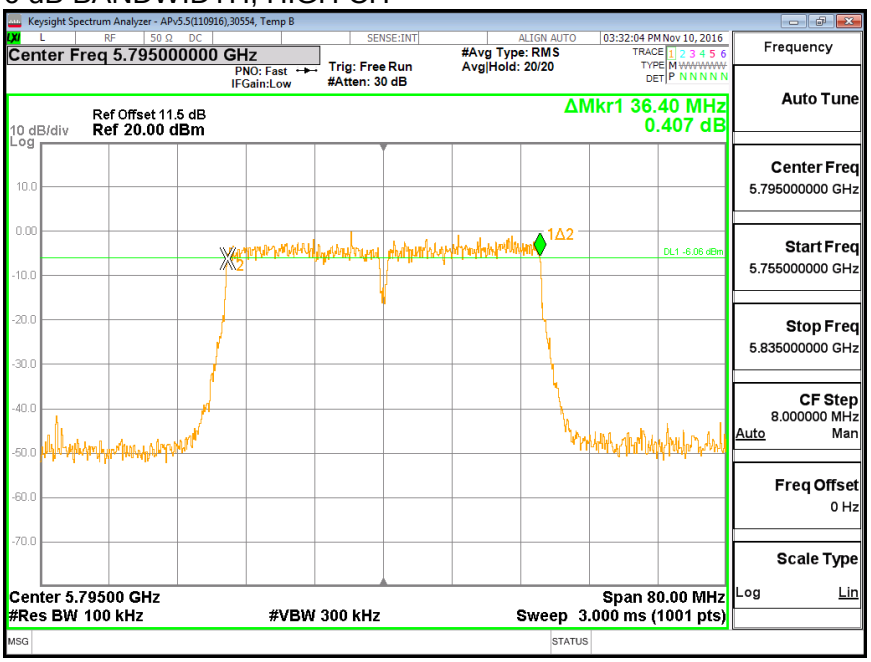
6 dB BANDWIDTH, ANTENNA B

6 dB BANDWIDTH, LOW CH



6 dB BANDWIDTH, HIGH CH



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8.53.2. 26 dB BANDWIDTH

LIMITS

None, for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB BW Antenna A (MHz)	26 dB BW Antenna B (MHz)
Low	5755	40.480	40.560
High	5795	40.320	40.480

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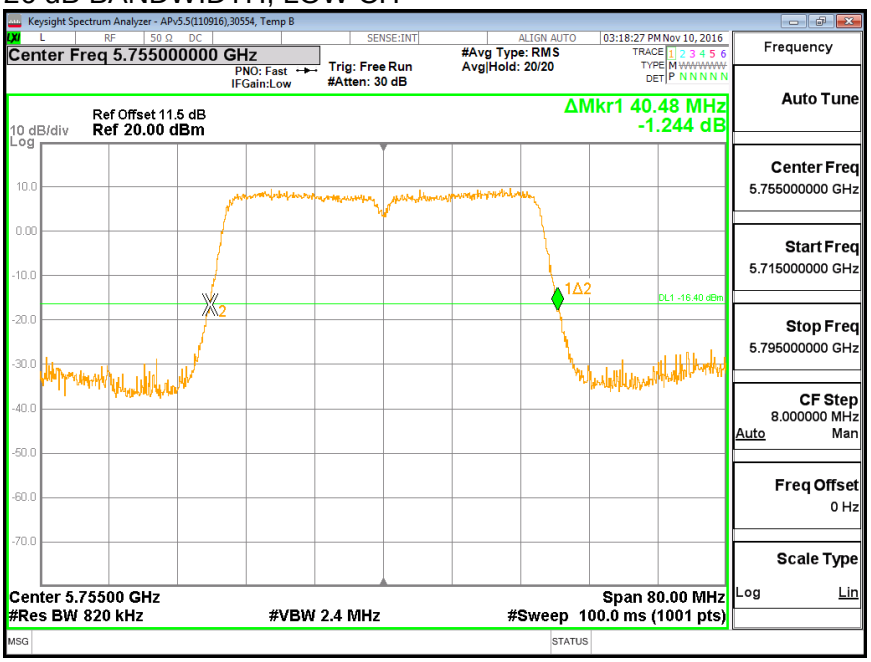
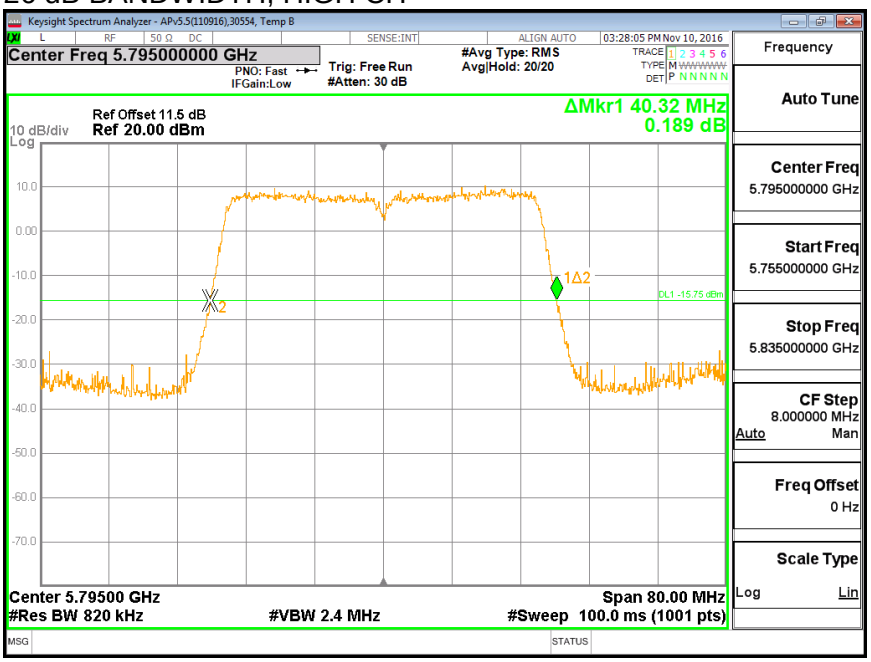
26 dB BANDWIDTH, ANTENNA A

26 dB BANDWIDTH, LOW CH



26 dB BANDWIDTH, HIGH CH



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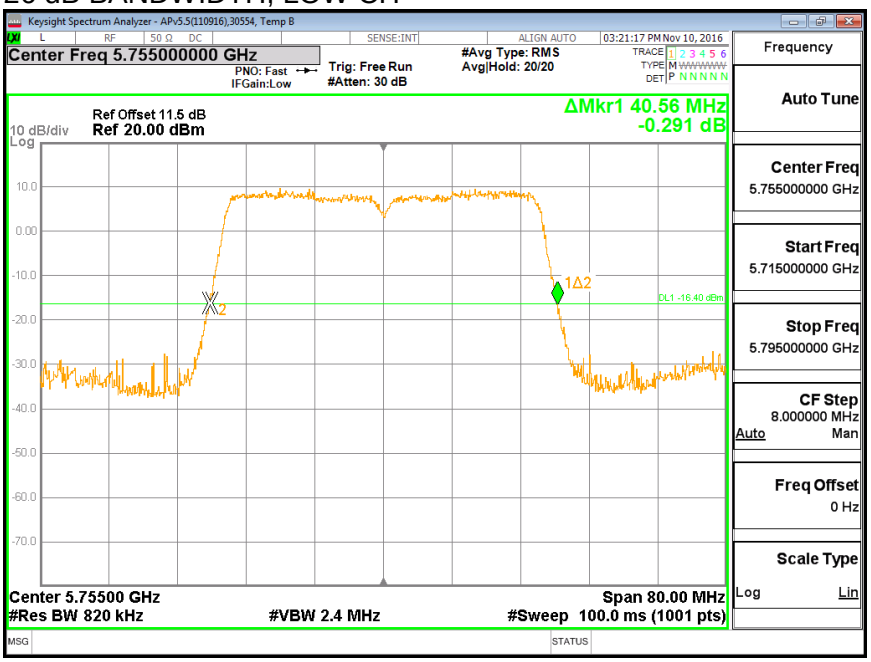
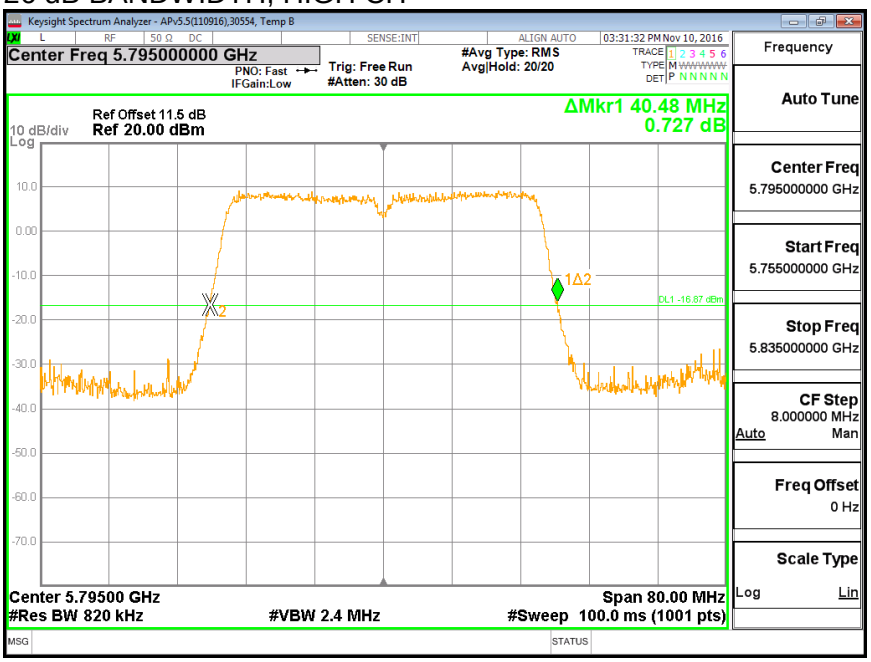
26 dB BANDWIDTH, ANTENNA B

26 dB BANDWIDTH, LOW CH



26 dB BANDWIDTH, HIGH CH



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8.53.3. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% BW Antenna A (MHz)	99% BW Antenna B (MHz)
Low	5755	36.617	36.595
High	5795	36.461	36.441

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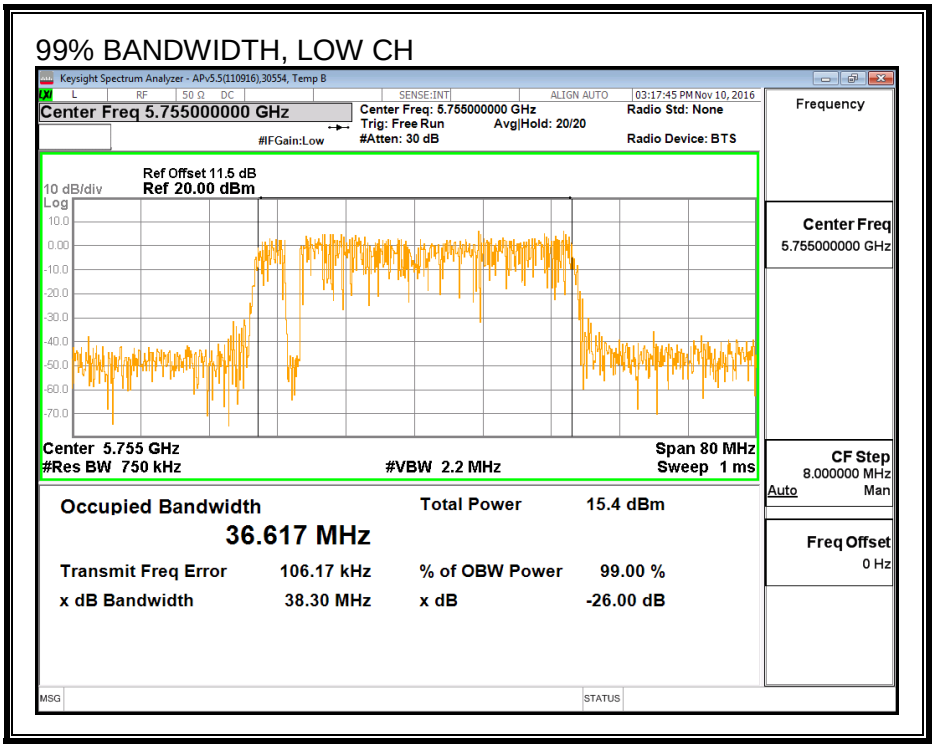
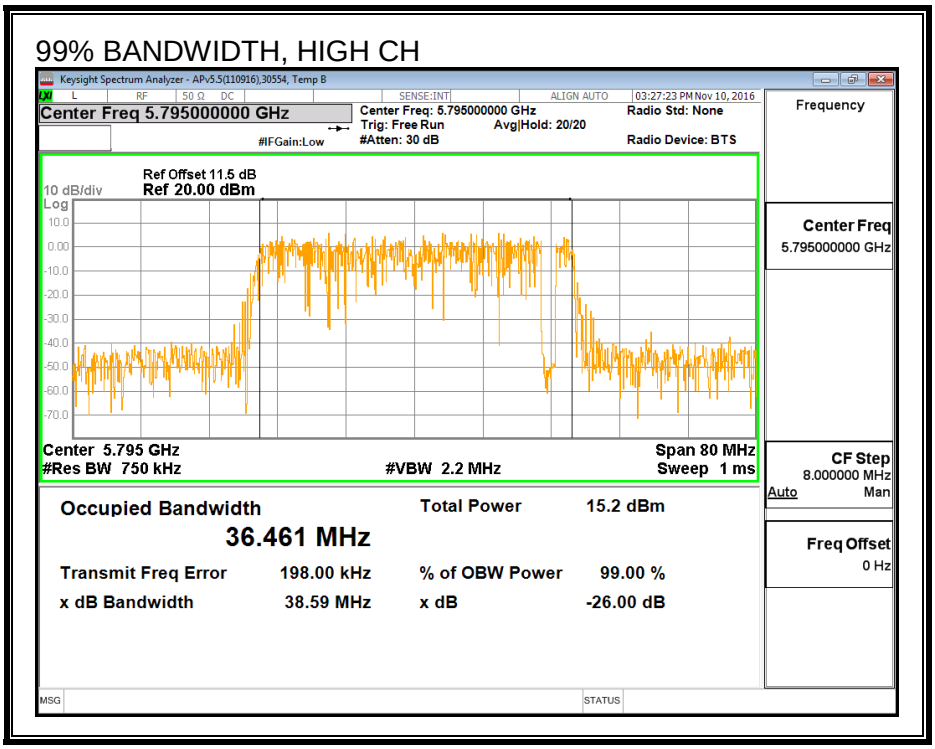
99% BANDWIDTH, ANTENNA A





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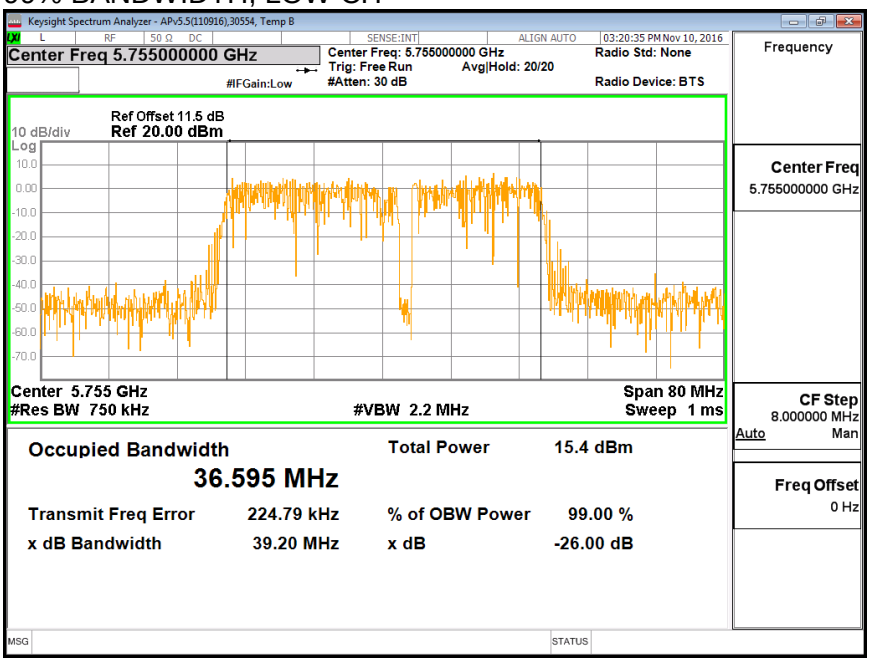
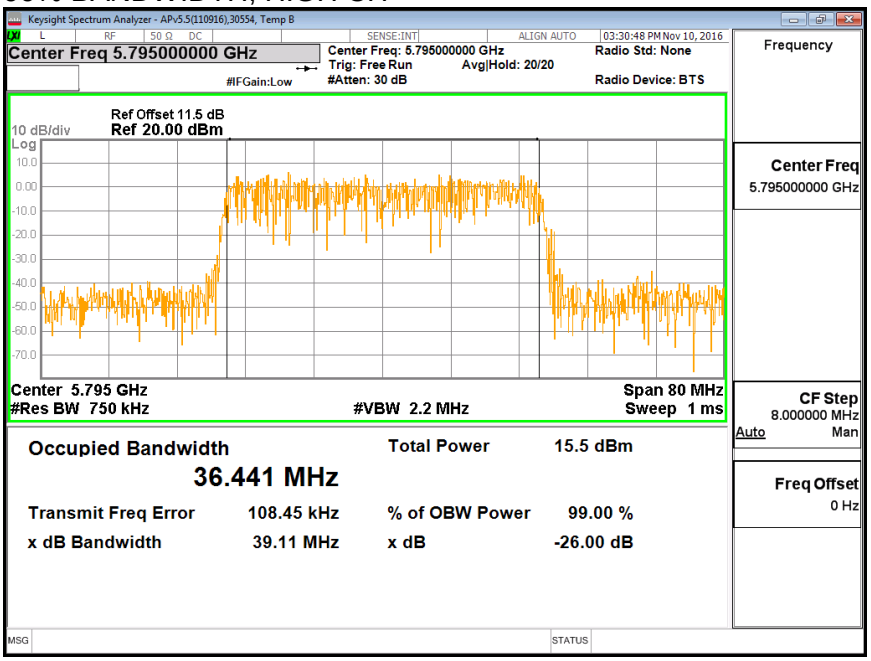
99% BANDWIDTH, ANTENNA B

99% BANDWIDTH, LOW CH



99% BANDWIDTH, HIGH CH



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8.53.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

ID:	39316	Date:	12/14/16

Average Power Results

Channel	Frequency (MHz)	Antenna A Power (dBm)	Antenna B Power (dBm)	Total Power (dBm)
Low	5755	16.49	16.46	19.49
High	5795	16.47	16.45	19.47

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8.53.5. 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:

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

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RESULTS

ID:	39316	Date:	12/14/16

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)	Antenna A Meas Power (dBm)	Antenna B Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5755	16.49	16.46	19.49	30.00	-10.51
High	5795	16.47	16.45	19.47	30.00	-10.53

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8.53.6. 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:

Antenna A Gain (dBi)	Antenna B Gain (dBi)	Correlated Chains Directional Gain (dBi)
3.54	3.21	6.39

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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)	Antenna A Meas PSD (dBm)	Antenna B Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5755	0.304	0.441	3.48	29.61	-26.13
High	5795	0.451	0.258	3.47	29.61	-26.14

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