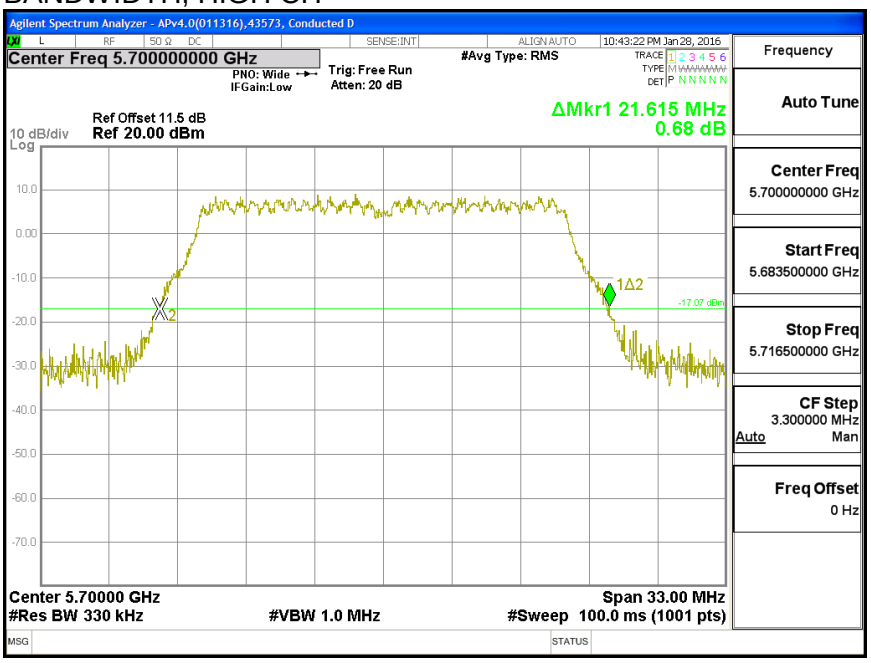
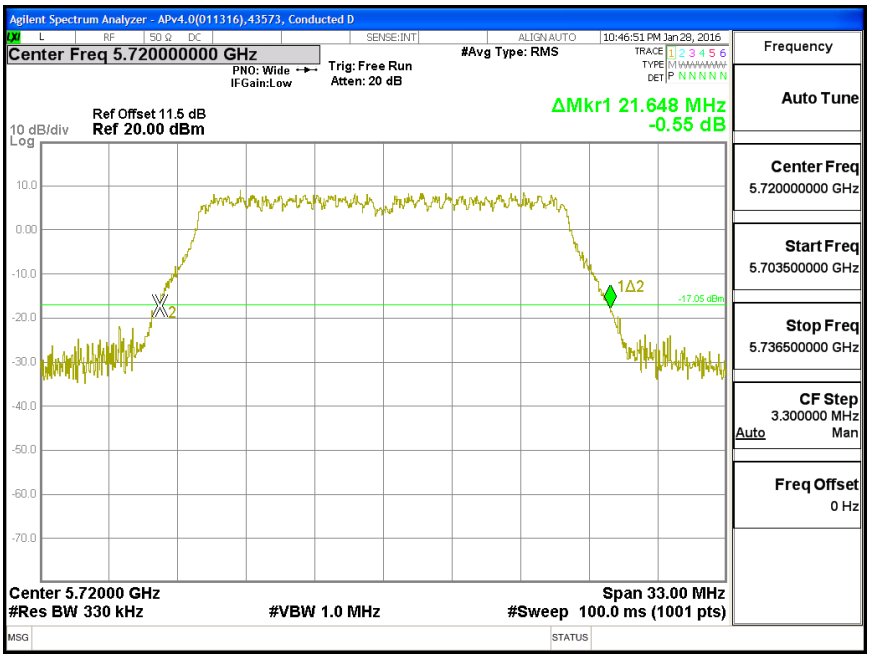
BANDWIDTH, HIGH CH



BANDWIDTH ANTENNA A STRADDLE CH 144



8.74.2. 99% BANDWIDTH

LIMITS

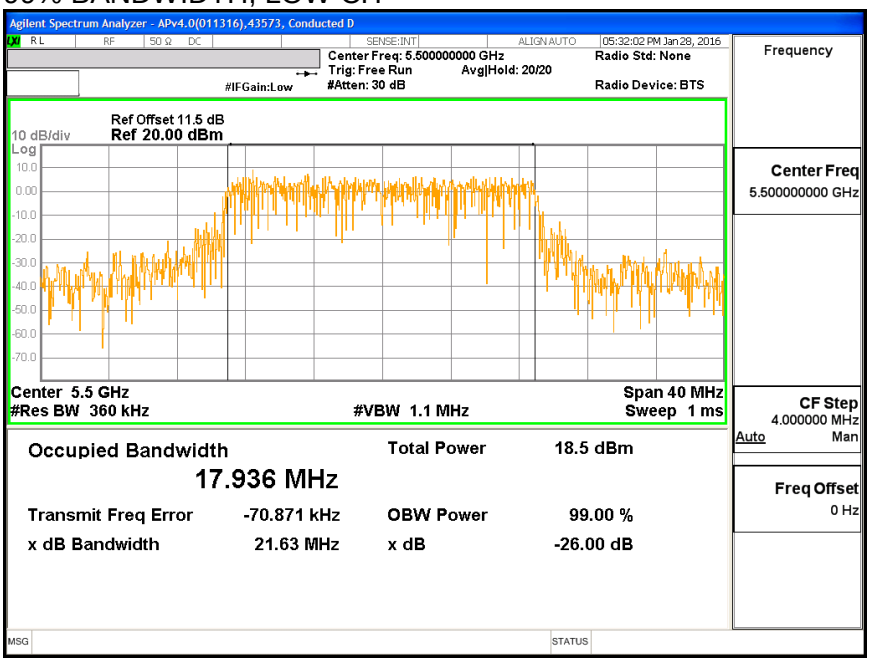
None; for reporting purposes only.

RESULTS

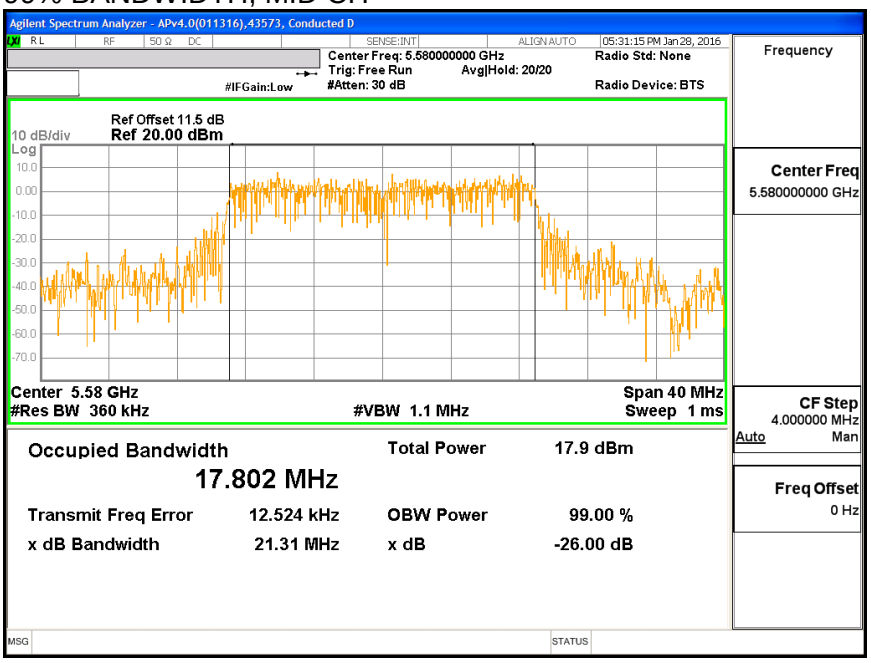
Channel	Frequency (MHz)	99% BW Antenna A (MHz)	99% BW Antenna C (MHz)
Low	5500	17.936	17.906
Mid	5580	17.802	17.858
High	5700	17.889	17.752
144	5720	17.904	17.851

99% BANDWIDTH, ANTENNA - A

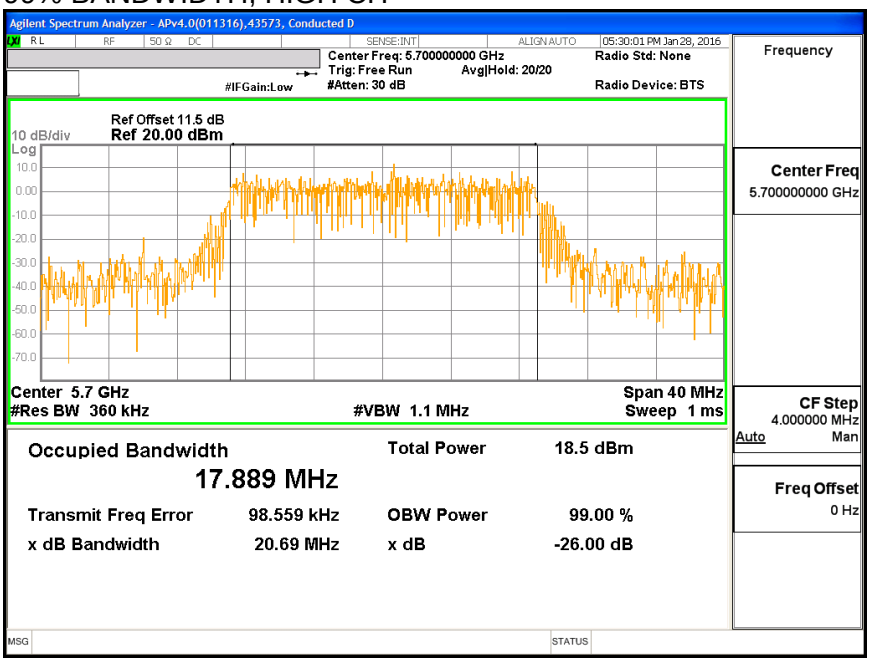
99% BANDWIDTH, LOW CH



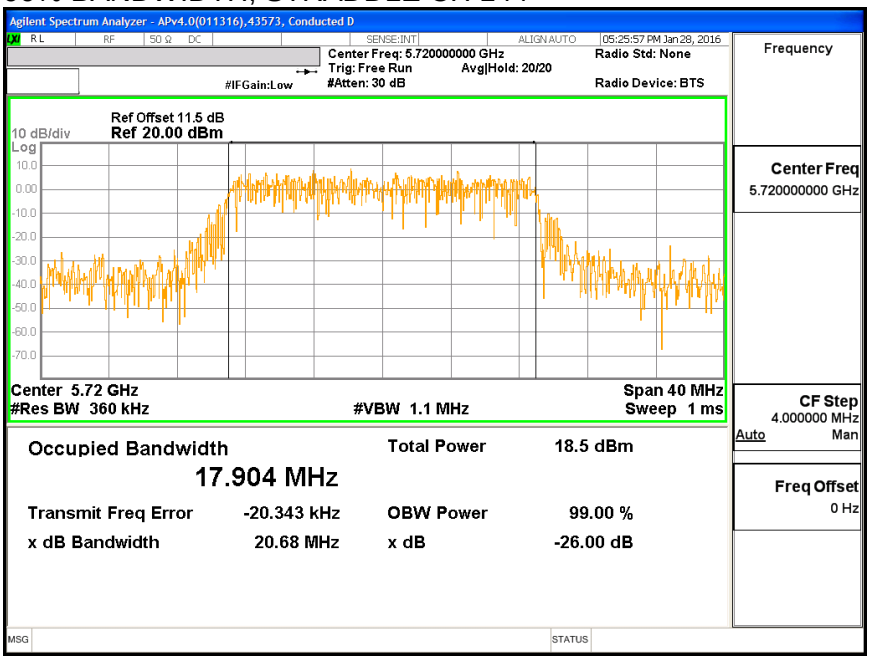
99% BANDWIDTH, MID CH



99% BANDWIDTH, HIGH CH

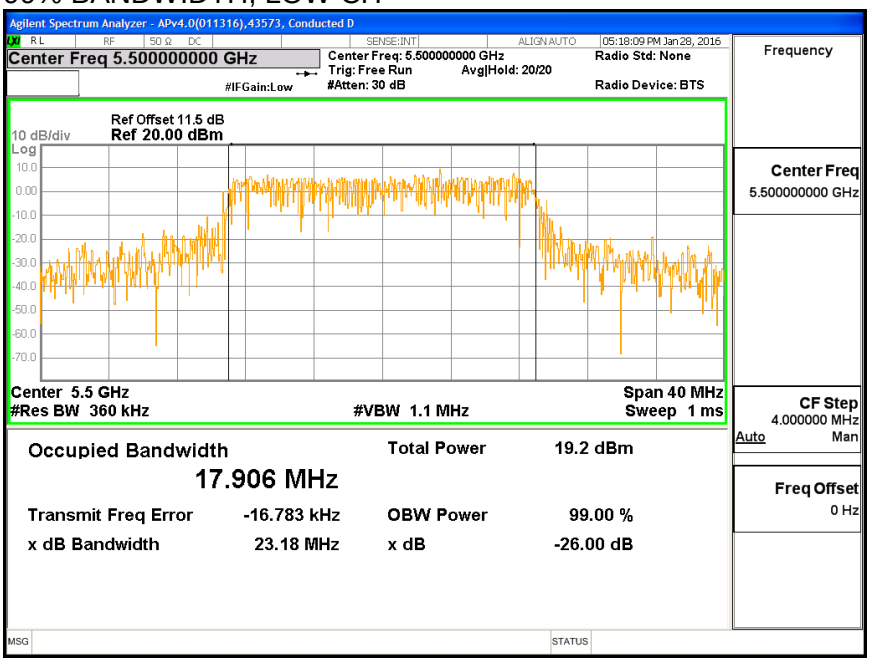


99% BANDWIDTH, STRADDLE CH 144

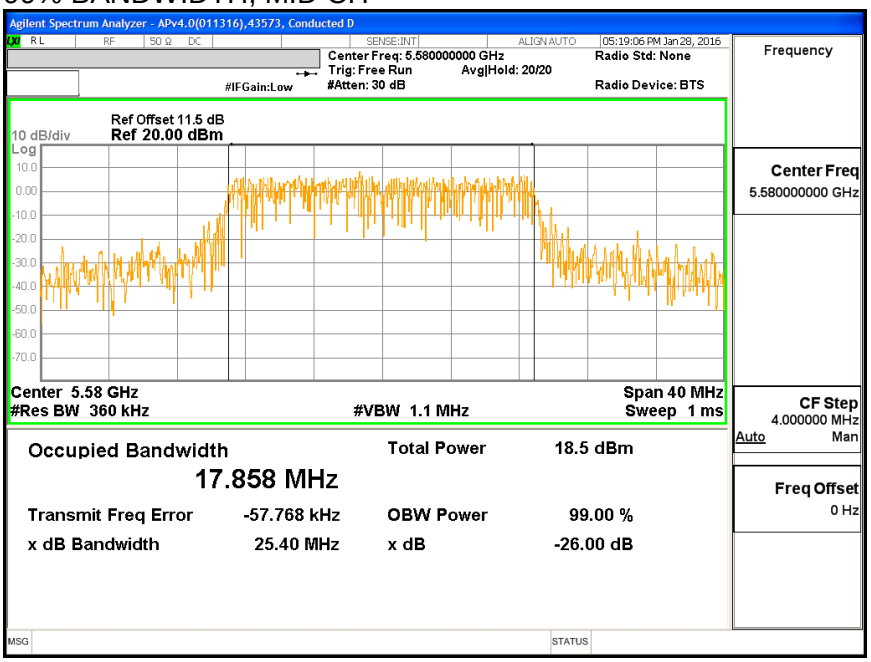


99% BANDWIDTH, ANTENNA - C

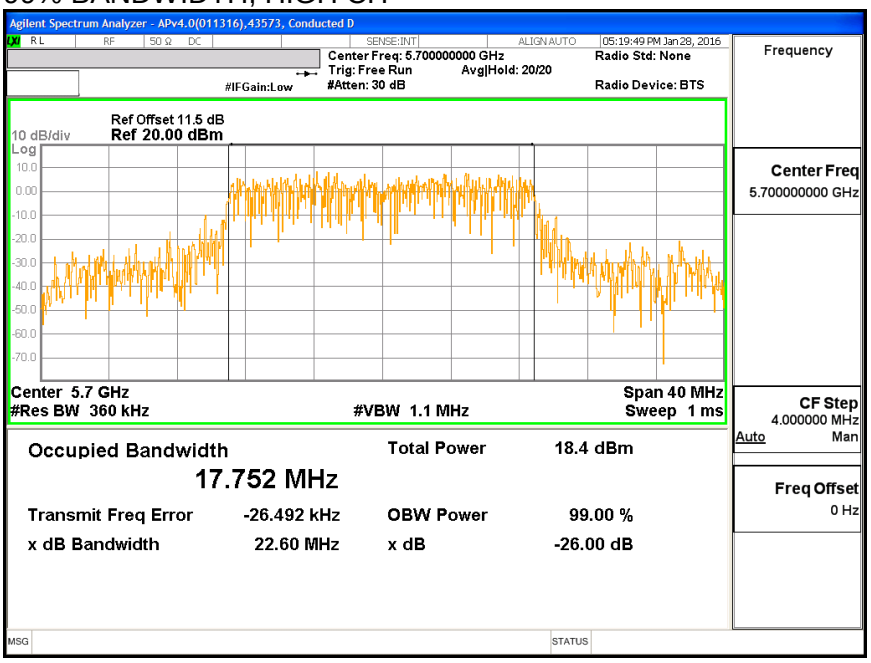
99% BANDWIDTH, LOW CH



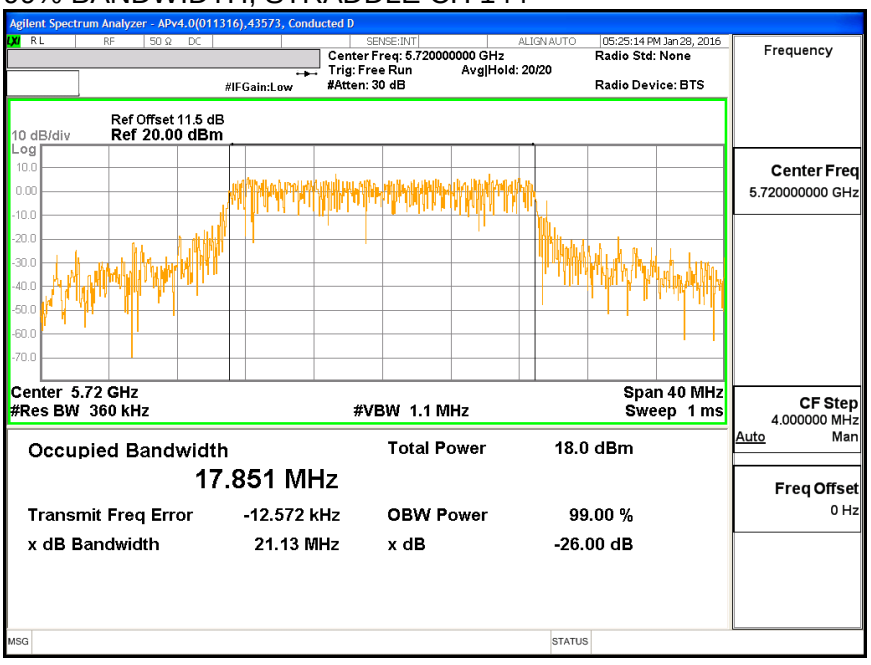
99% BANDWIDTH, MID CH



99% BANDWIDTH, HIGH CH



99% BANDWIDTH, STRADDLE CH 144



8.74.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

Average Power Results

Channel	Frequency (MHz)	Antenna A Power (dBm)	Antenna C Power (dBm)	Total Power (dBm)
Low	5500	14.45	14.50	17.49
Mid	5580	15.00	15.00	18.01
High	5700	13.41	13.50	16.47
144	5720	14.91	14.94	17.94

8.74.4. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.47–5.725 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26–dB emission bandwidth in MHz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1–MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST PROCEDURE

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

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

DIRECTIONAL ANTENNA GAIN

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

Antenna A Gain (dBi)	Anetnna C Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
4.03	4.16	4.10

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

Antenna A Gain (dBi)	Antenna C Gain (dBi)	Correlated Chains Directional Gain (dBi)
4.03	4.16	7.11

RESULTS

Bandwidth, Antenna Gain and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Low	5500	22.10	17.936	4.10	7.11	23.54	9.89
Mid	5580	22.13	17.858	4.10	7.11	23.52	9.89
High	5700	21.85	17.889	4.10	7.11	23.53	9.89

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

Output Power Results

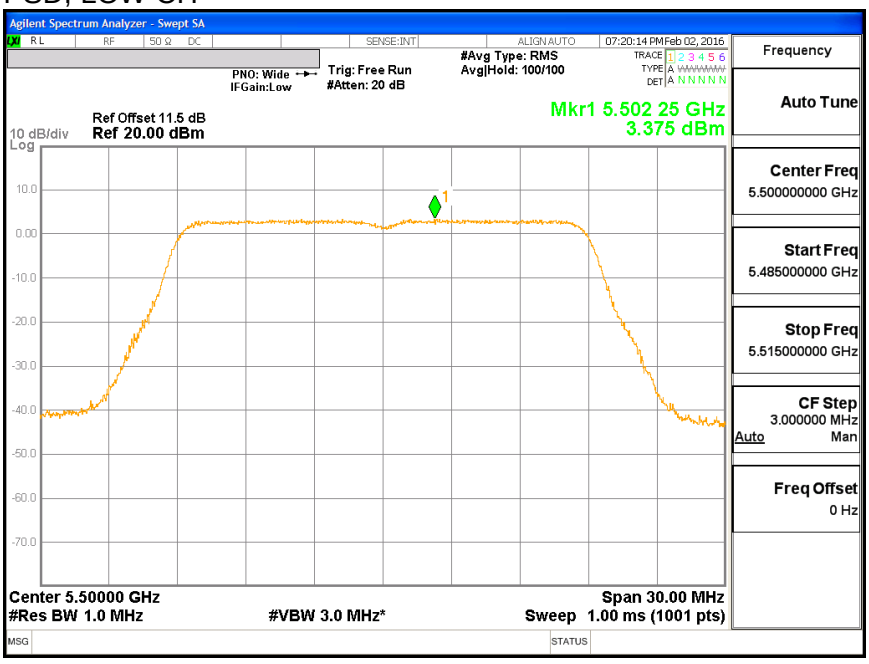
Channel	Frequency (MHz)	Antenna A Meas Power (dBm)	Antenna C Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	14.45	14.50	17.49	23.54	-6.05
Mid	5580	15.00	15.00	18.01	23.52	-5.51
High	5700	13.41	13.50	16.47	23.53	-7.06

PSD Results

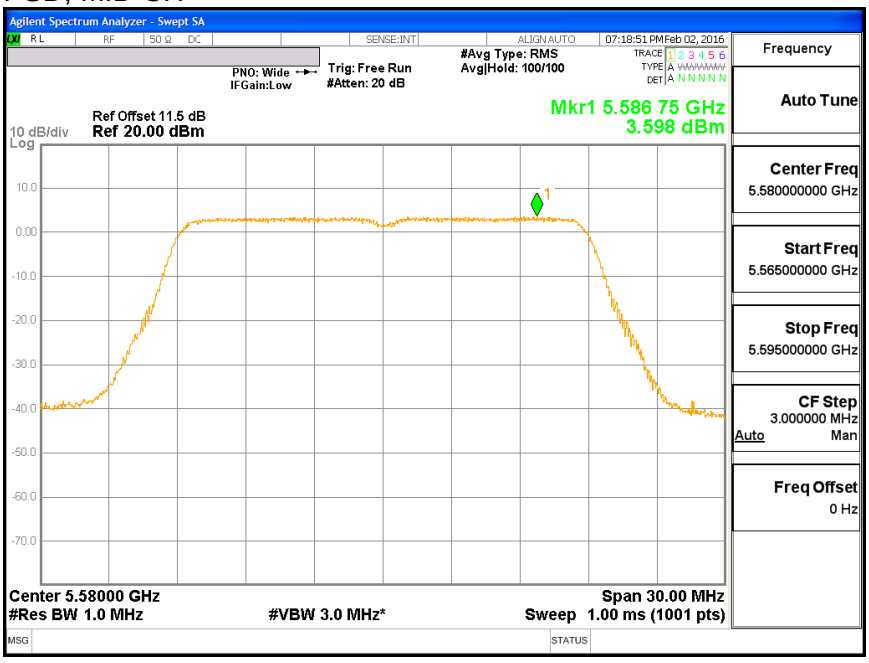
Channel	Frequency (MHz)	Antenna A Meas PSD (dBm)	Antenna C Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5500	3.38	2.96	6.18	9.89	-3.71
Mid	5580	3.60	3.36	6.49	9.89	-3.40
High	5700	1.58	1.77	4.69	9.89	-5.20

PSD, ANTENNA - A

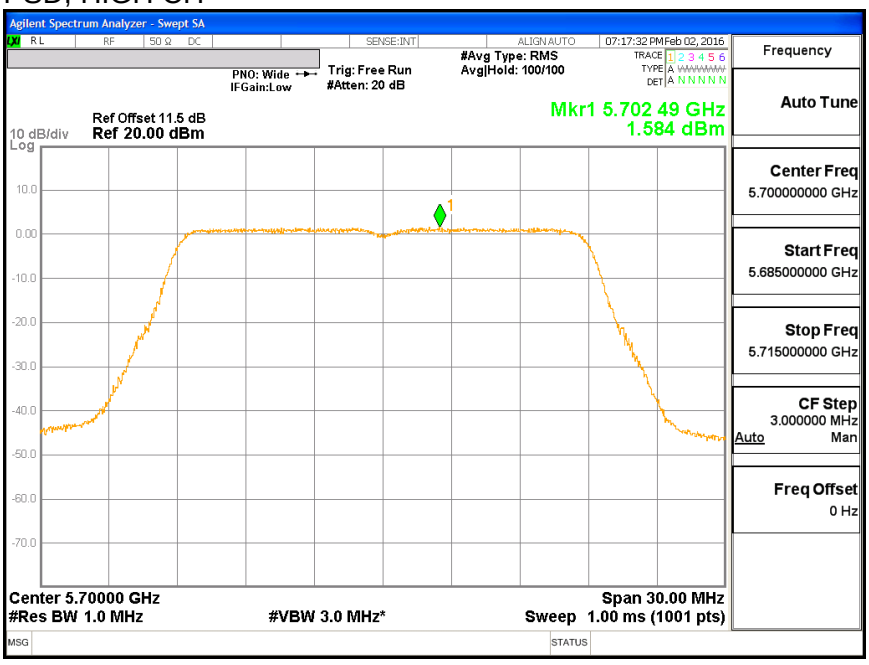
PSD, LOW CH



PSD, MID CH

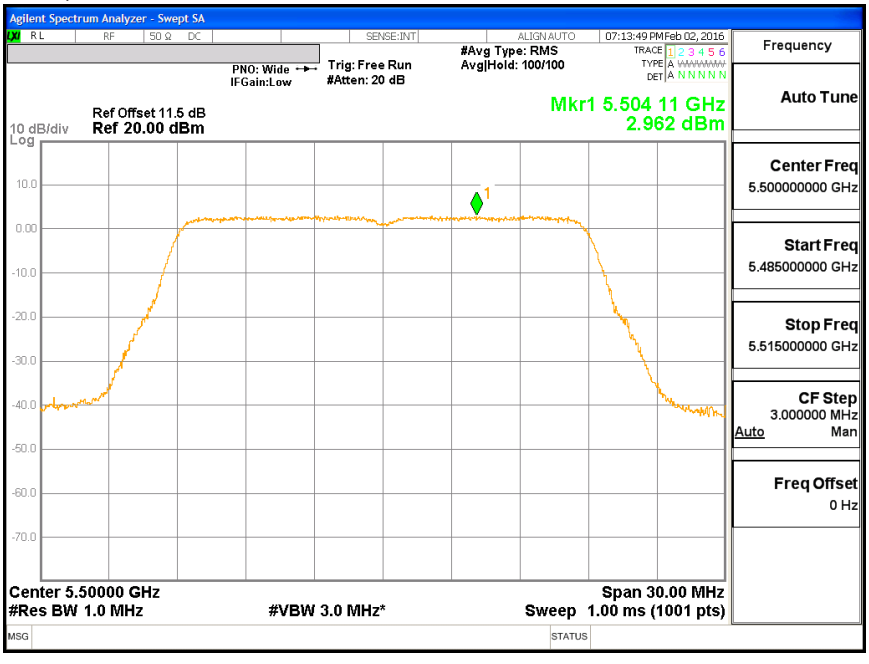


PSD, HIGH CH

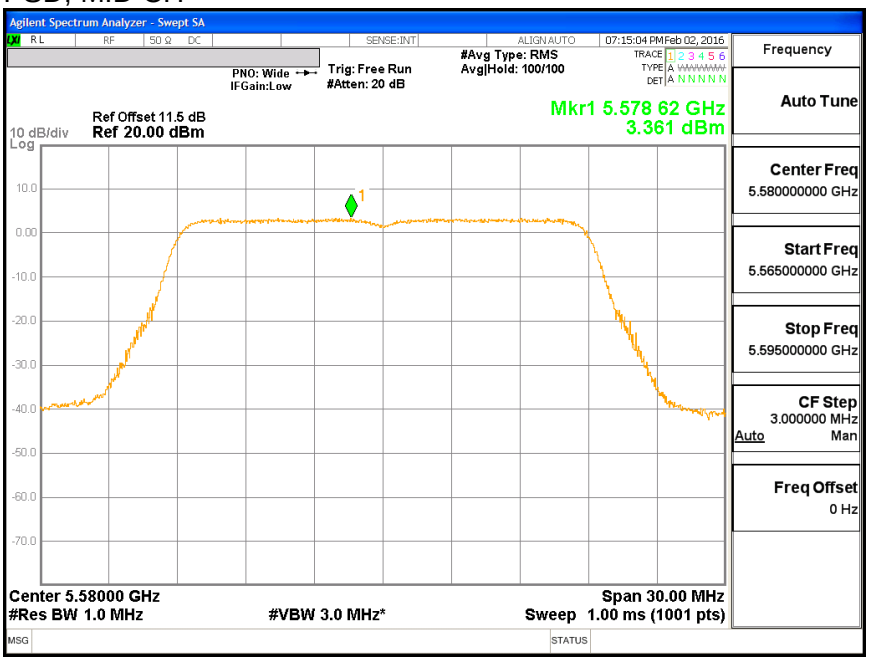


PSD, ANTENNA - C

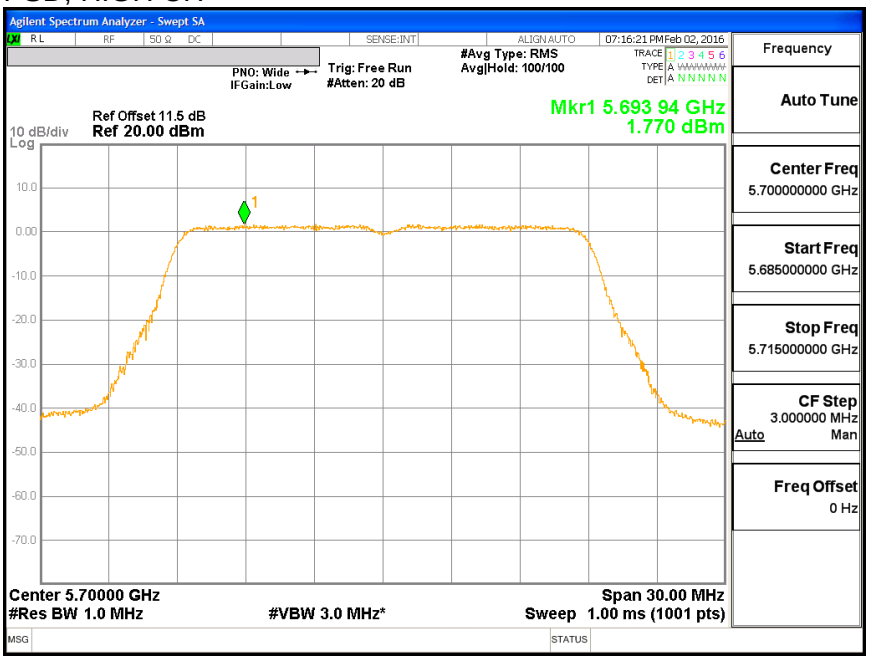
PSD, LOW CH



PSD, MID CH



PSD, HIGH CH



8.75. 802.11ac VHT20 ANTENNA A+C CDD STRADDLE CHANNEL 144 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)
144	5720	16.04	4.10	7.11	23.05	9.89

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

Output Power Results

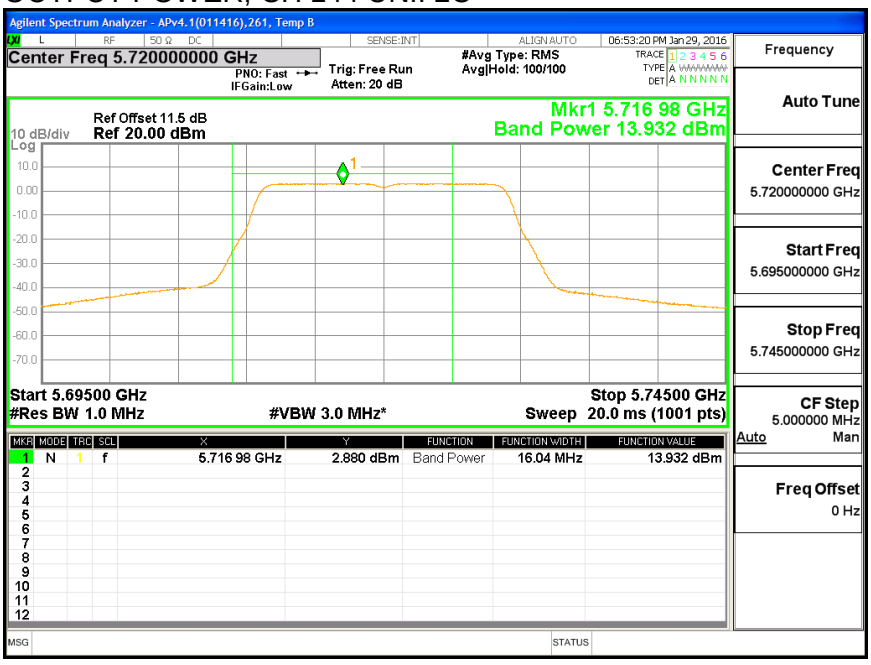
Channel	Frequency (MHz)	Antenna A Meas Power (dBm)	Antenna C Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
144	5720	13.93	13.79	16.87	23.05	-6.18

PSD Results

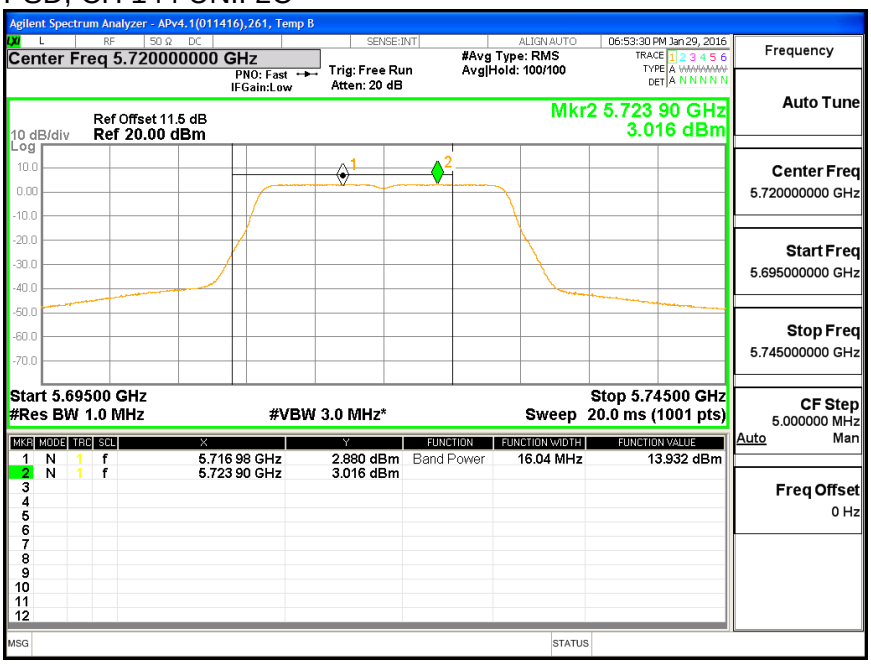
Channel	Frequency (MHz)	Antenna A Meas PSD (dBm)	Antenna C Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
144	5720	3.02	2.88	5.96	9.89	-3.93

ANTENNA - A

OUTPUT POWER, CH 144 UNII 2C

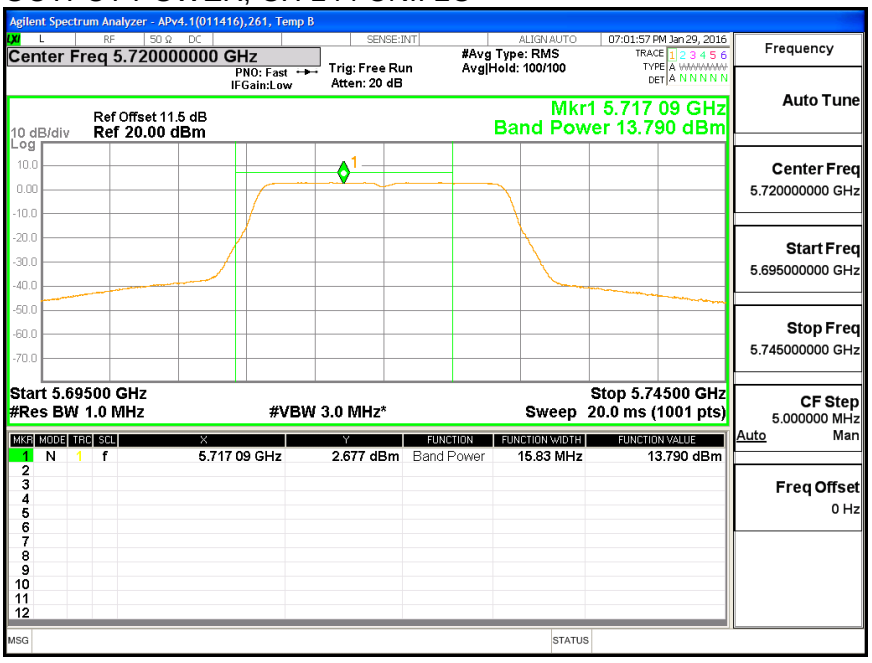


PSD, CH 144 UNII 2C

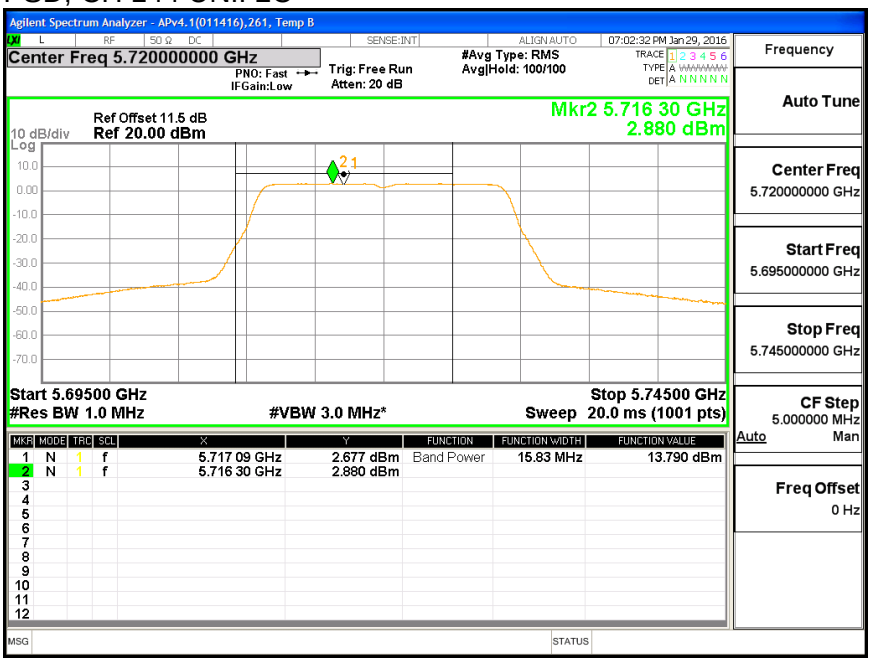


ANTENNA - C

OUTPUT POWER, CH 144 UNII 2C



PSD, CH 144 UNII 2C



UNII-3 BAND

Antenna Gain and Limit

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain For Power (dBi)	Directional Gain For PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
144	5720	6.04	4.10	7.11	30.00	28.89

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

Output Power Results

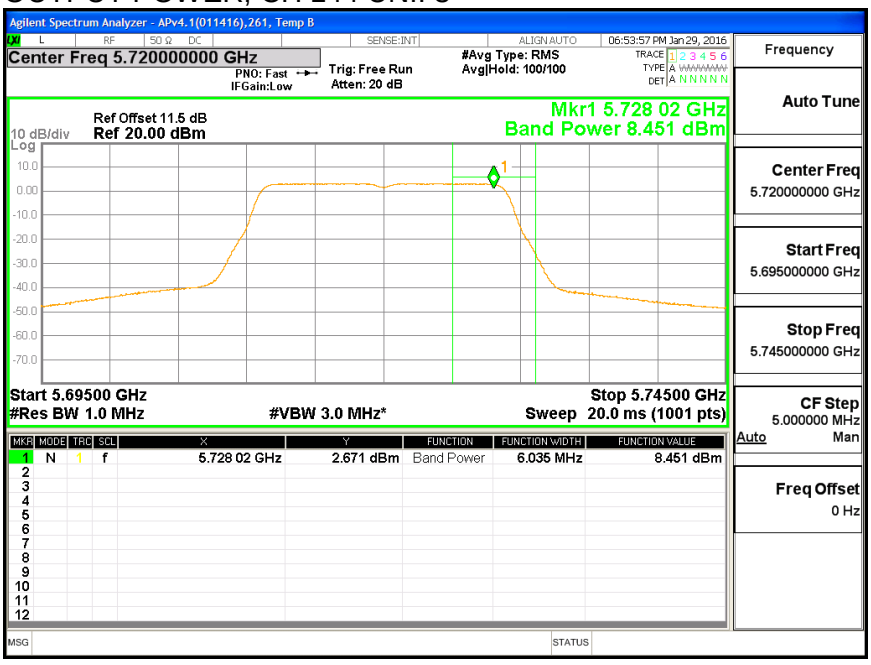
Channel	Frequency (MHz)	Antenna A Meas Power (dBm)	Antenna C Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
144	5720	8.45	8.24	11.36	30.00	-18.64

PSD Results

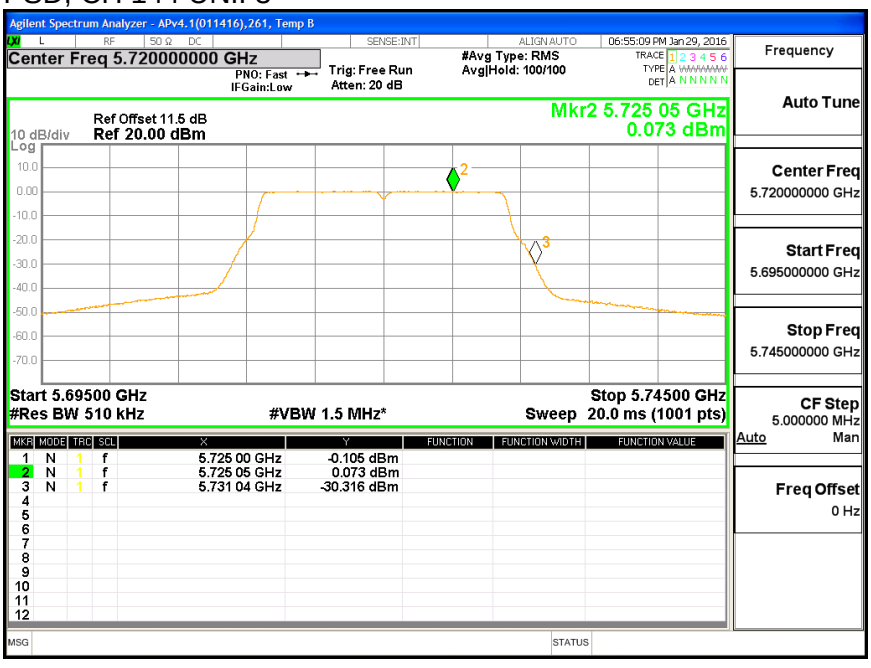
Channel	Frequency (MHz)	Antenna A Meas PSD (dBm)	Antenna C Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
144	5720	0.07	-0.04	3.03	28.89	-25.86

ANTENNA - A

OUTPUT POWER, CH 144 UNII 3

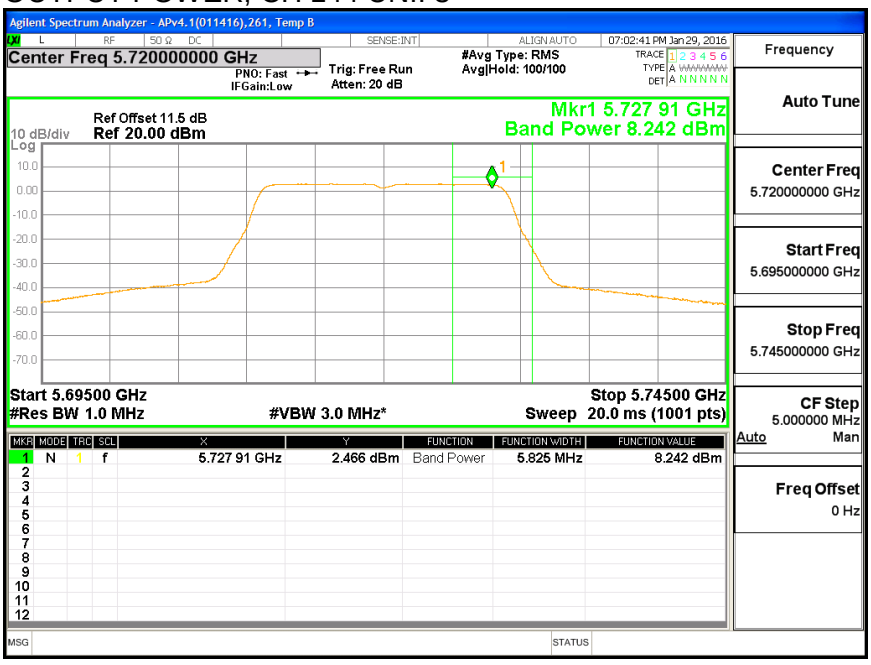


PSD, CH 144 UNII 3

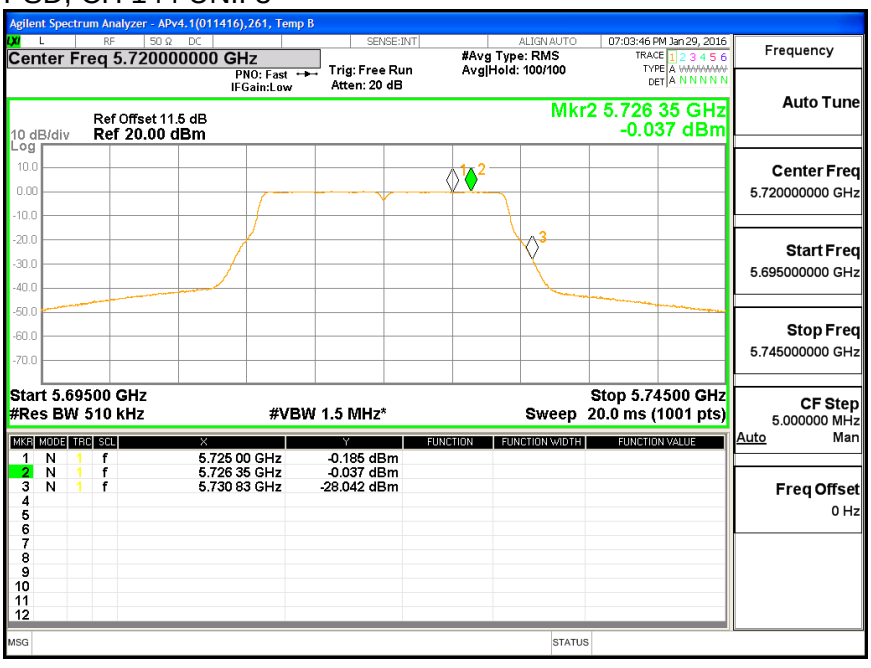


ANTENNA - C

OUTPUT POWER, CH 144 UNII 3



PSD, CH 144 UNII 3



8.75.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

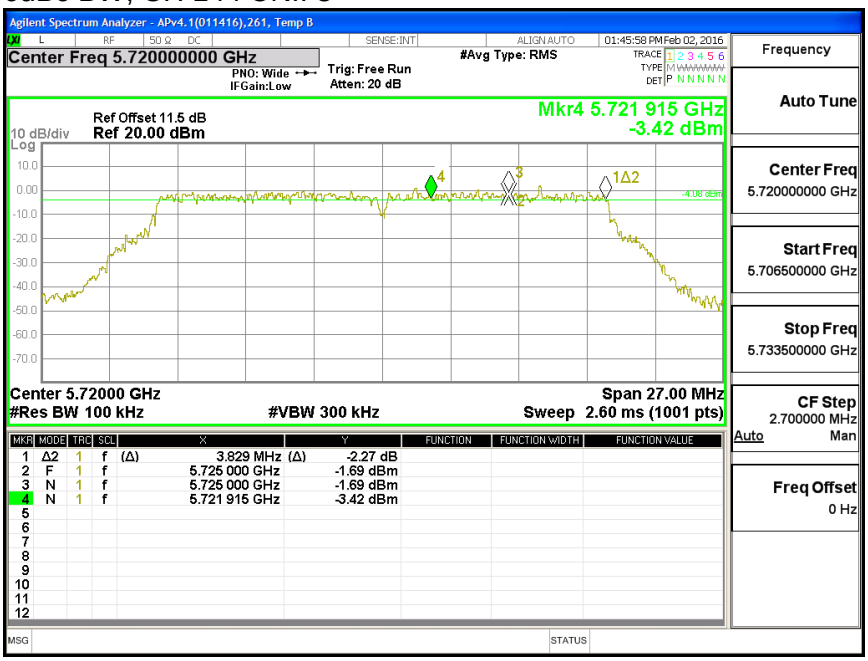
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

Channel	Frequency (MHz)	6 dB BW Antenna A (MHz)	6 dB BW Antenna C (MHz)
144	5720	3.83	3.61

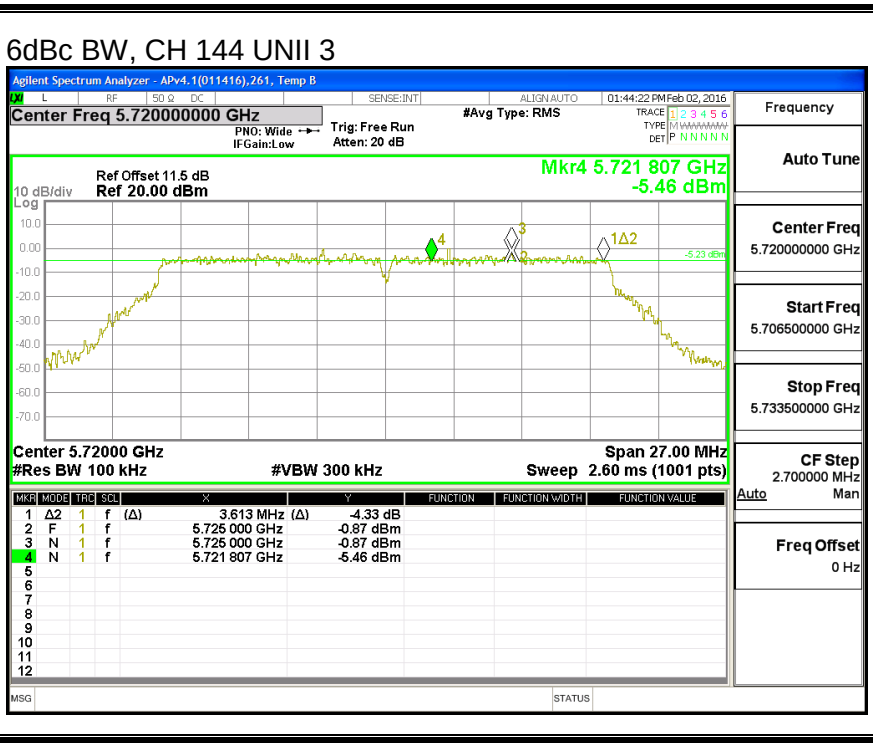
ANTENNA - A

6dBc BW, CH 144 UNII 3



ANTENNA - C

6dBc BW, CH 144 UNII 3



8.76. 802.11n HT20 ANTENNA B+A STBC MODE IN THE 5.6 GHz BAND

8.76.1. 26 dB BANDWIDTH

LIMITS

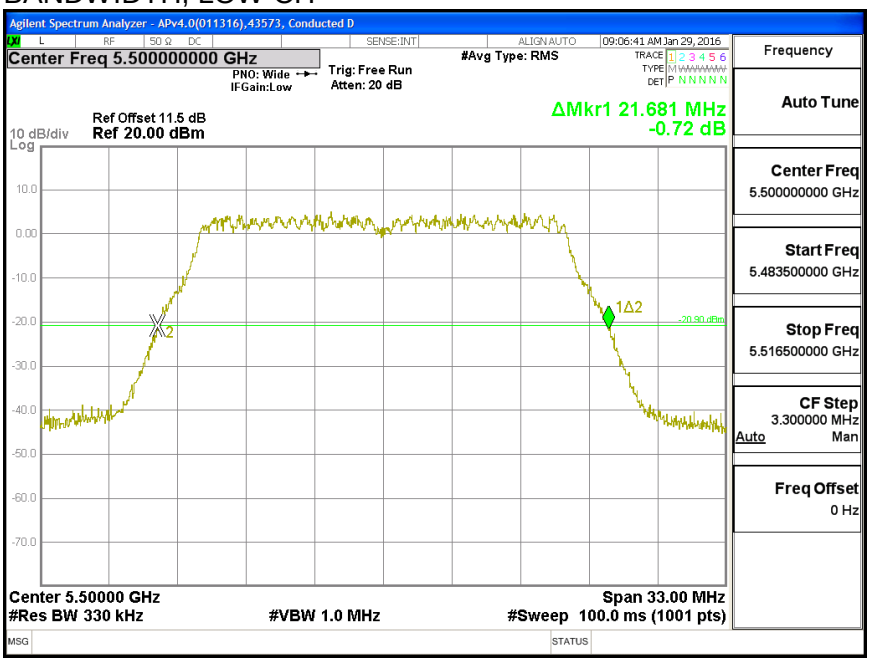
None; for reporting purposes only.

RESULTS

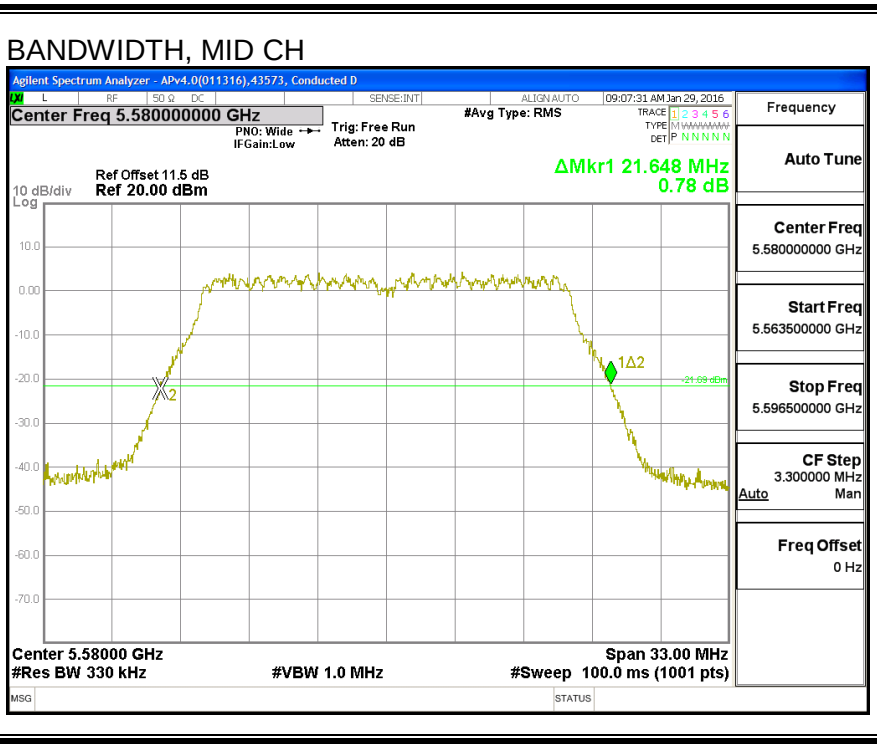
Channel	Frequency (MHz)	26 dB BW Antenna B (MHz)	26 dB BW Antenna A (MHz)
Low	5500	21.68	21.75
Mid	5580	21.65	21.75
High	5700	21.68	21.78
144	5720	21.78	21.62

26 dB BANDWIDTH, ANTENNA - B

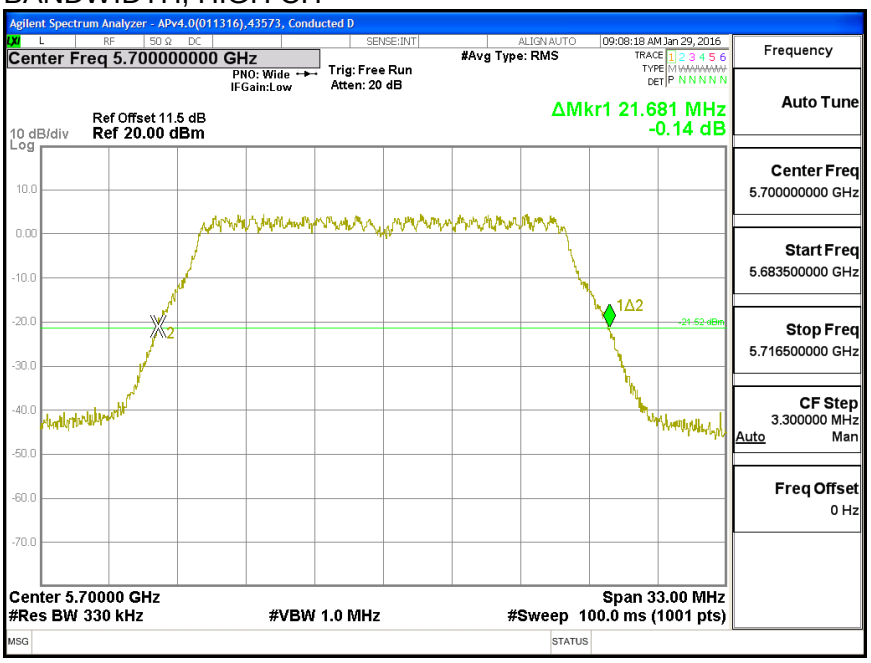
BANDWIDTH, LOW CH



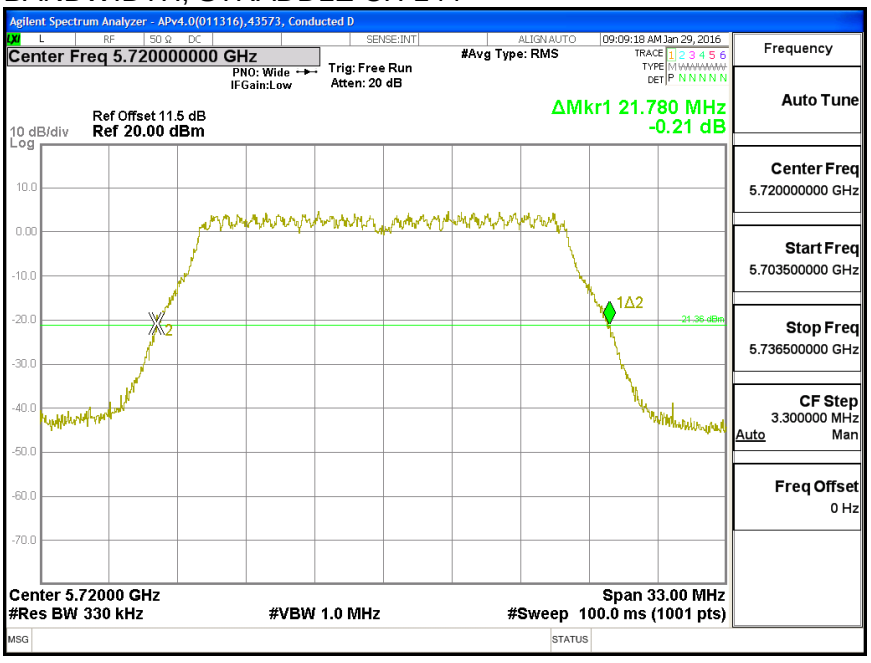
BANDWIDTH, MID CH



BANDWIDTH, HIGH CH

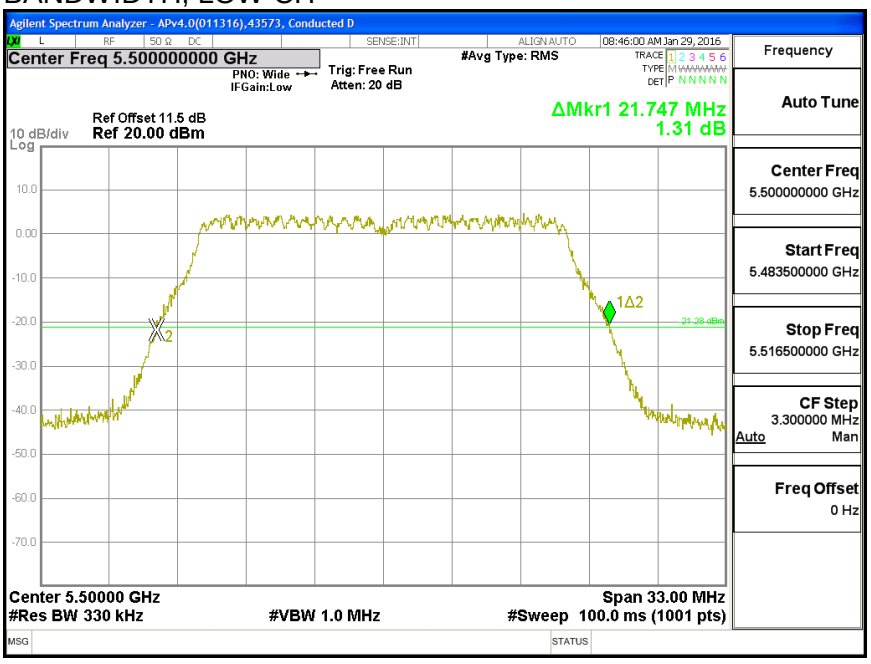


BANDWIDTH, STRADDLE CH 144

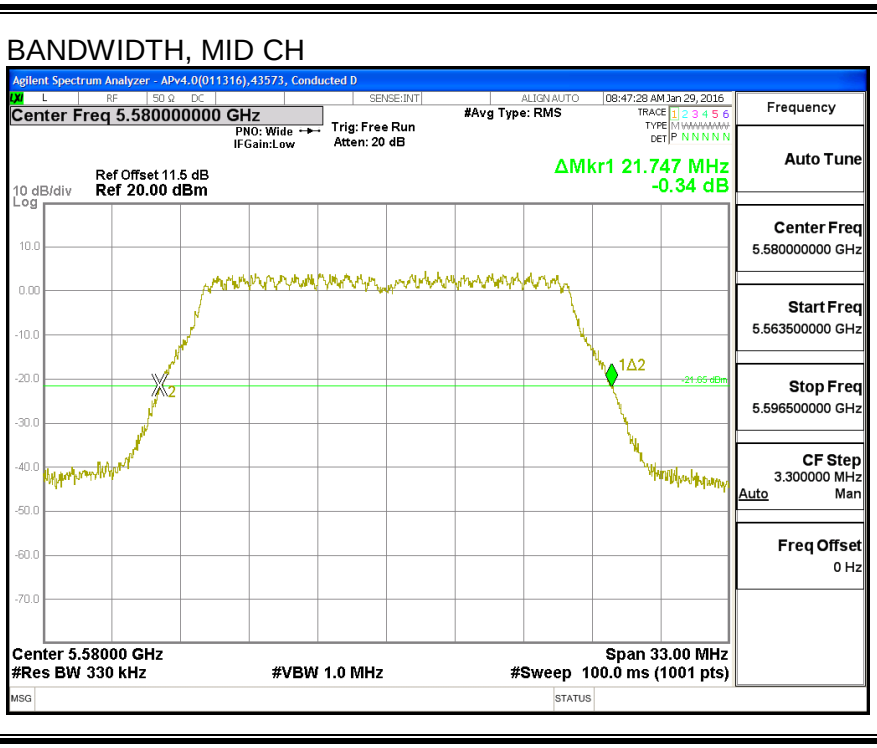


26 dB BANDWIDTH, ANTENNA - A

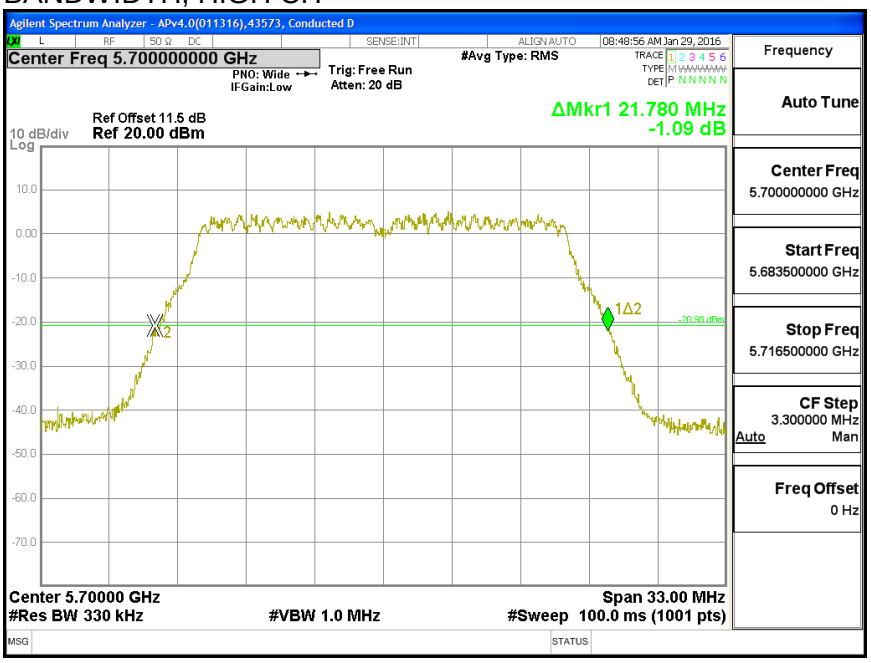
BANDWIDTH, LOW CH



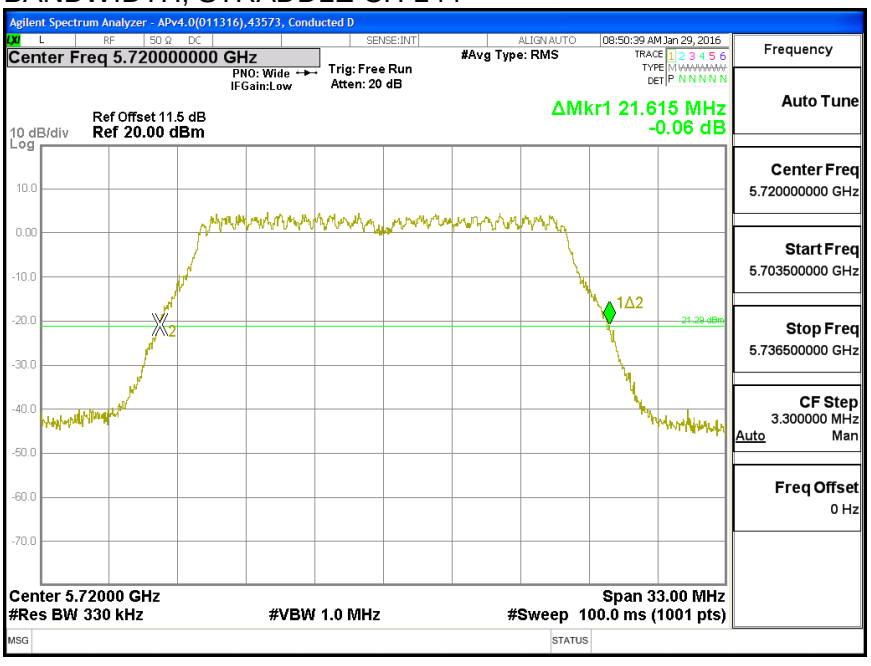
BANDWIDTH, MID CH



BANDWIDTH, HIGH CH



BANDWIDTH, STRADDLE CH 144



8.76.2. 99% BANDWIDTH

LIMITS

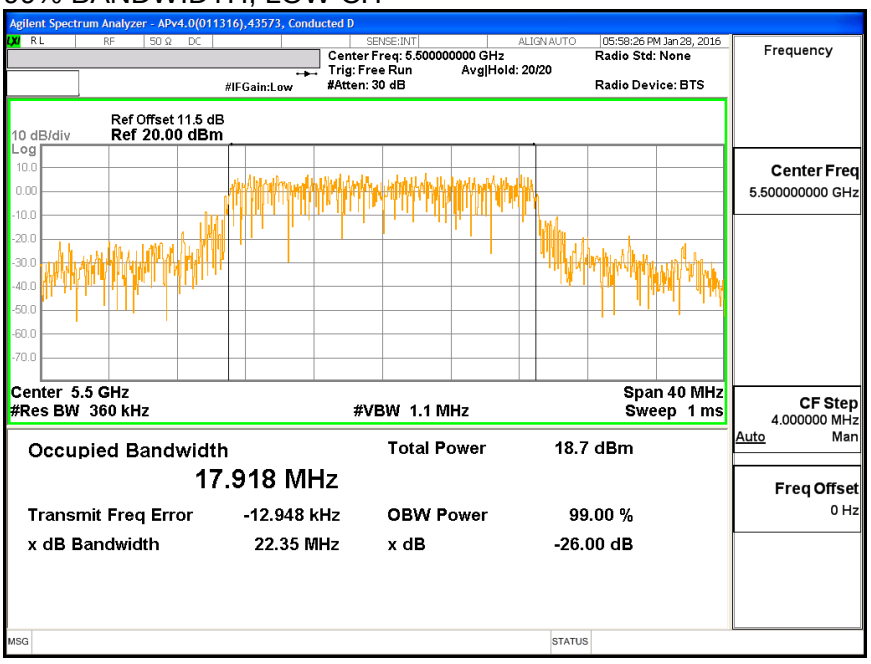
None; for reporting purposes only.

RESULTS

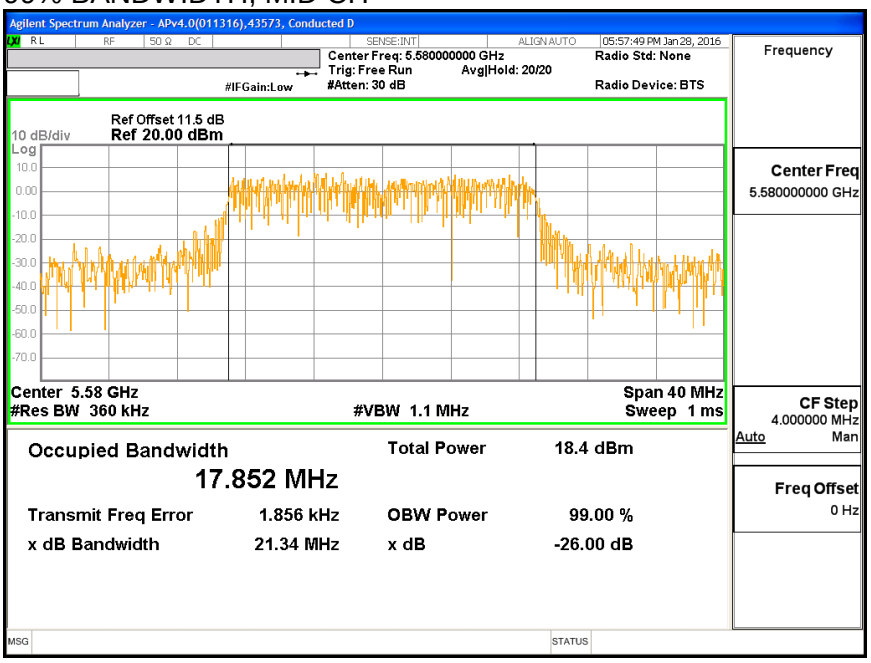
Channel	Frequency (MHz)	99% BW Antenna B (MHz)	99% BW Antenna A (MHz)
Low	5500	17.918	17.854
Mid	5580	17.852	17.783
High	5700	17.981	17.901
144	5720	17.863	17.787

99% BANDWIDTH, ANTENNA - B

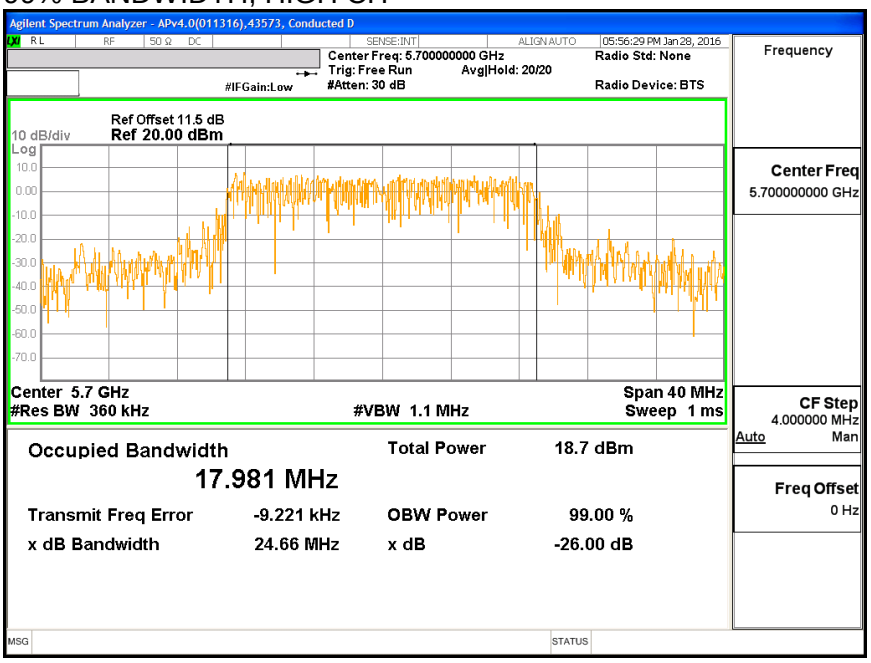
99% BANDWIDTH, LOW CH



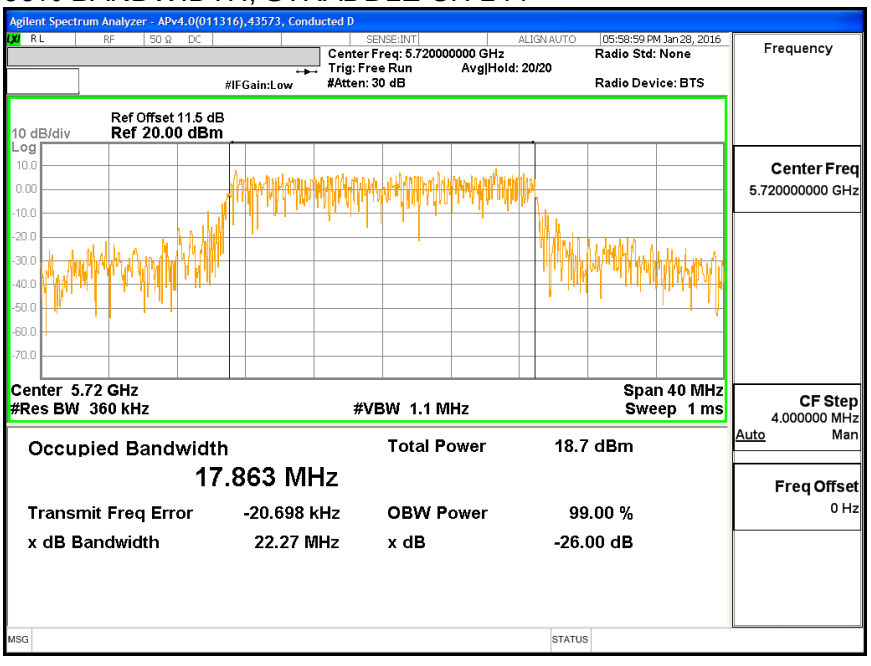
99% BANDWIDTH, MID CH



99% BANDWIDTH, HIGH CH

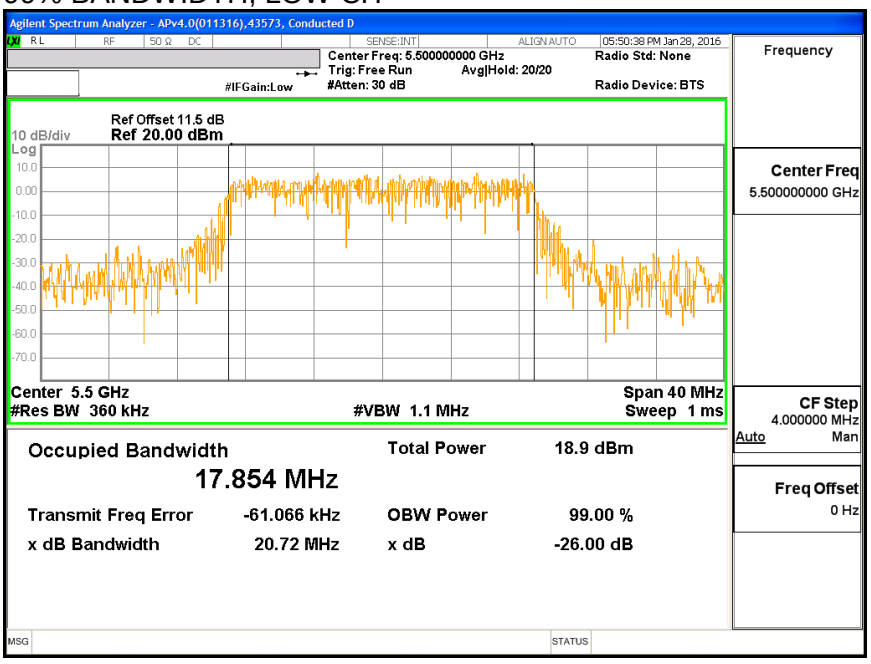


99% BANDWIDTH, STRADDLE CH 144

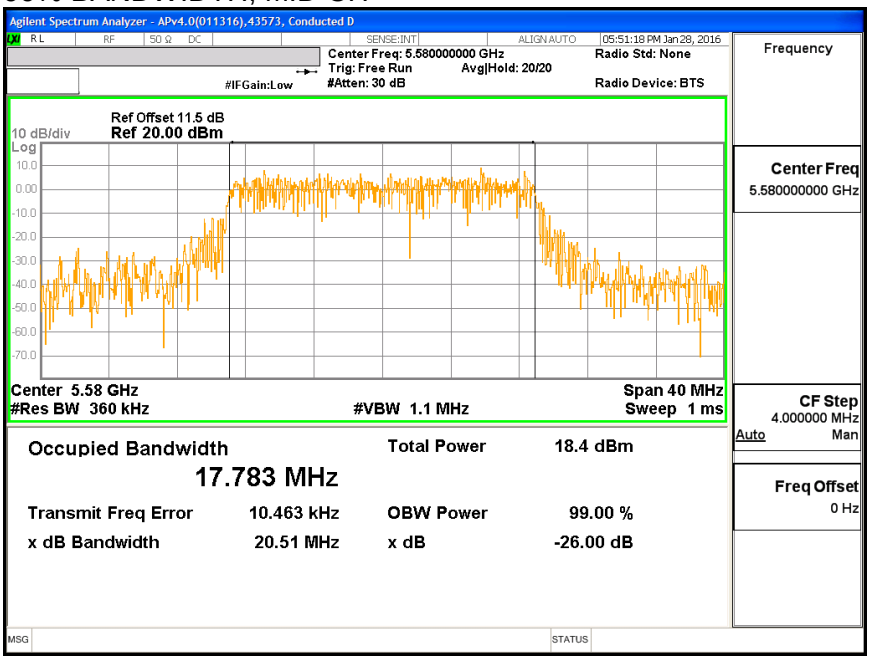


99% BANDWIDTH, ANTENNA - A

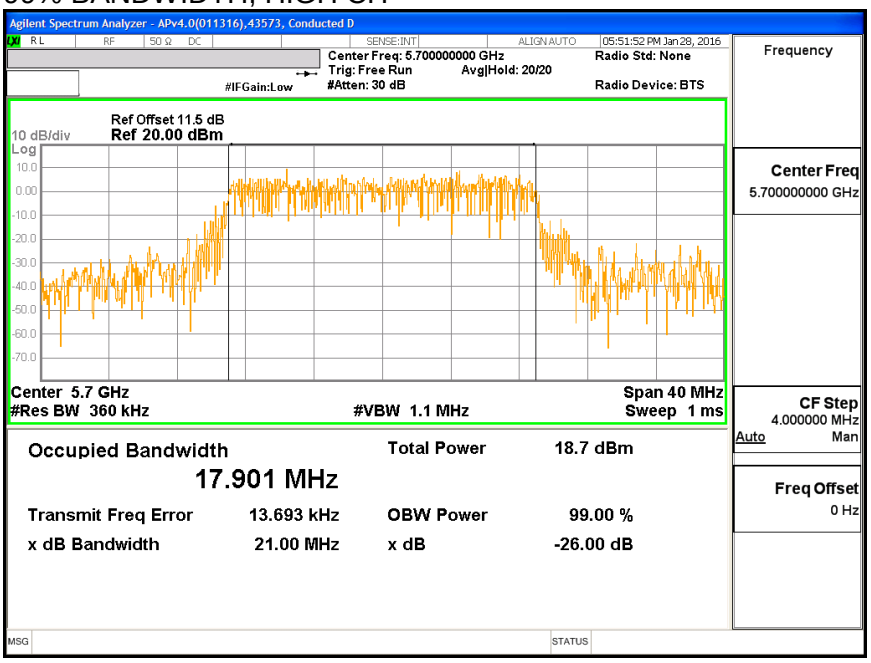
99% BANDWIDTH, LOW CH



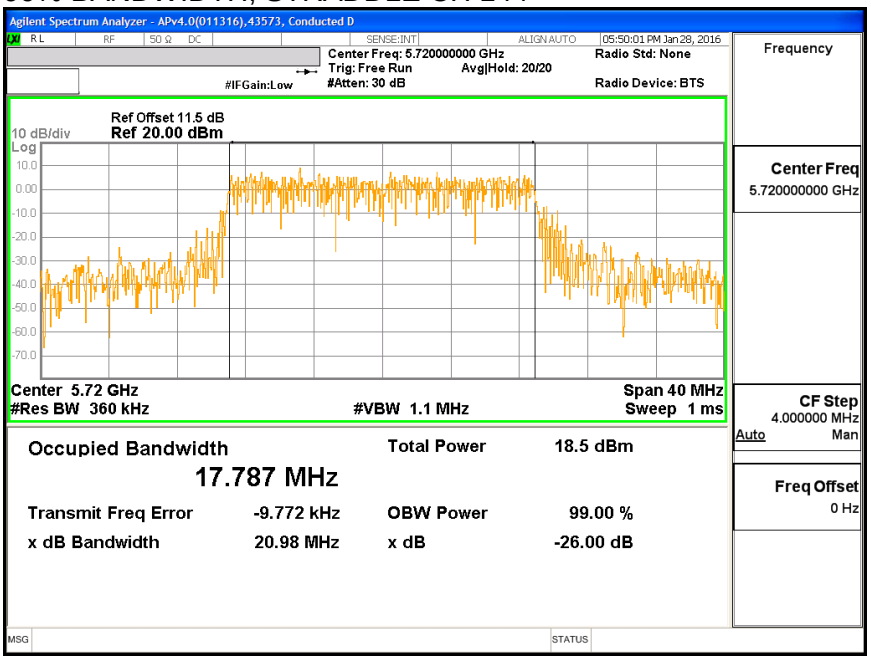
99% BANDWIDTH, MID CH



99% BANDWIDTH, HIGH CH



99% BANDWIDTH, STRADDLE CH 144



8.76.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

Average Power Results

Channel	Frequency (MHz)	Antenna B Power (dBm)	Antenna A Power (dBm)	Total Power (dBm)
Low	5500	14.50	14.28	17.40
Mid	5580	16.47	16.00	19.25
High	5700	13.50	13.50	16.51
144	5720	16.49	15.94	19.23

8.76.4. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.47–5.725 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26–dB emission bandwidth in MHz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1–MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST PROCEDURE

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

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

DIRECTIONAL ANTENNA GAIN

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

Antenna B Gain (dBi)	Anetnna A Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
2.83	4.03	3.47

RESULTS

Bandwidth, Antenna Gain and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Low	5500	21.75	17.918	3.47	3.47	23.53	11.00
Mid	5580	21.75	17.852	3.47	3.47	23.52	11.00
High	5700	21.78	17.981	3.47	3.47	23.55	11.00

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

Output Power Results

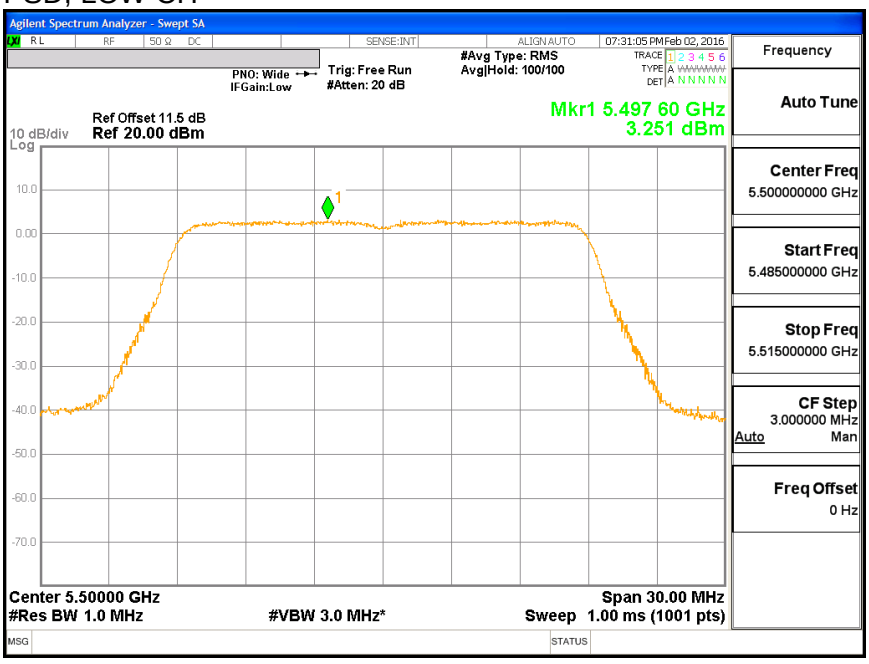
Channel	Frequency (MHz)	Antenna B Meas Power (dBm)	Antenna A Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	14.50	14.28	17.40	23.53	-6.13
Mid	5580	16.47	16.00	19.25	23.52	-4.27
High	5700	13.50	13.50	16.51	23.55	-7.04

PSD Results

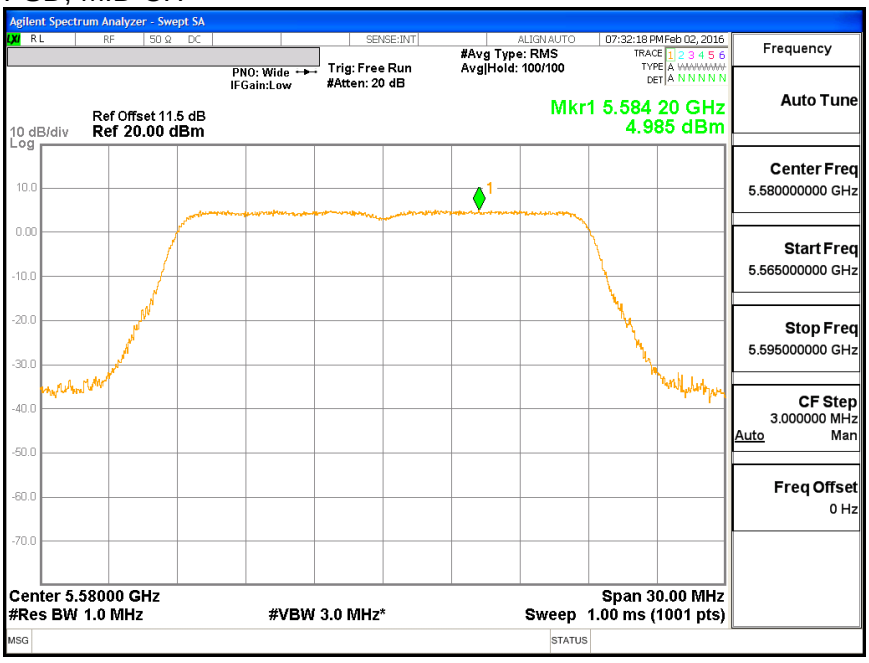
Channel	Frequency (MHz)	Antenna B Meas PSD (dBm)	Antenna A Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5500	3.25	3.00	6.14	11.00	-4.86
Mid	5580	4.99	4.52	7.77	11.00	-3.23
High	5700	2.57	2.45	5.52	11.00	-5.48

PSD, ANTENNA - B

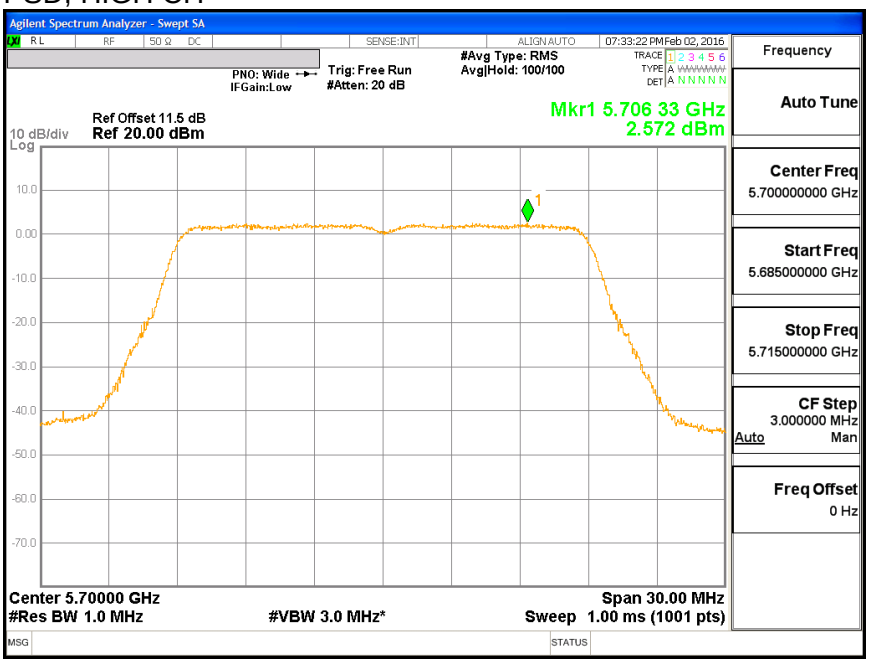
PSD, LOW CH



PSD, MID CH

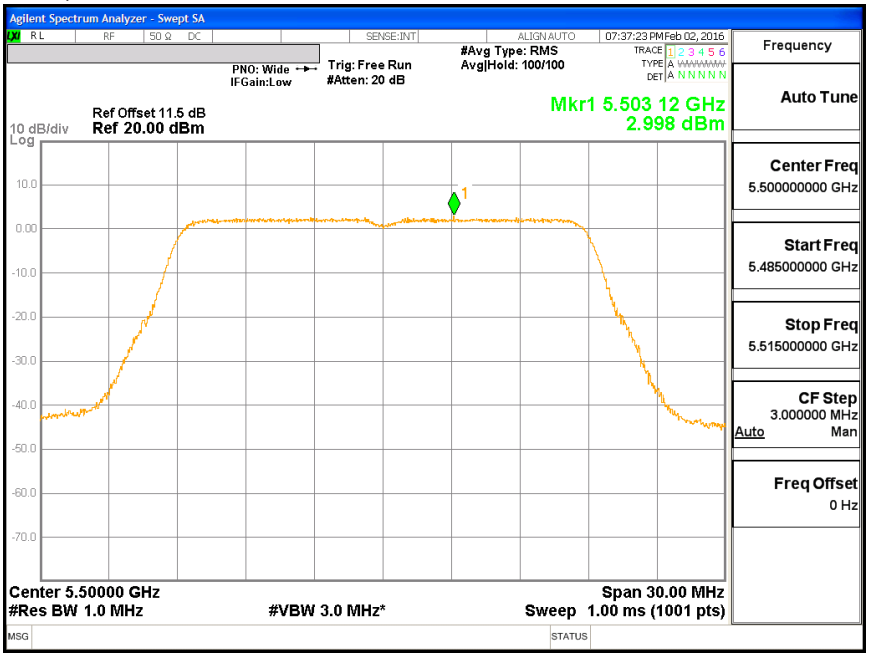


PSD, HIGH CH

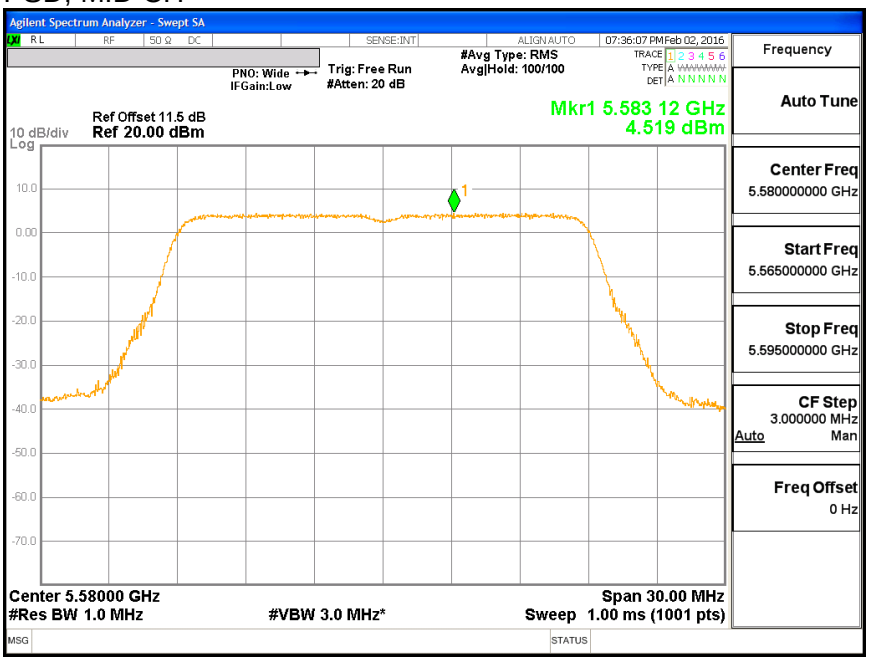


PSD, ANTENNA - A

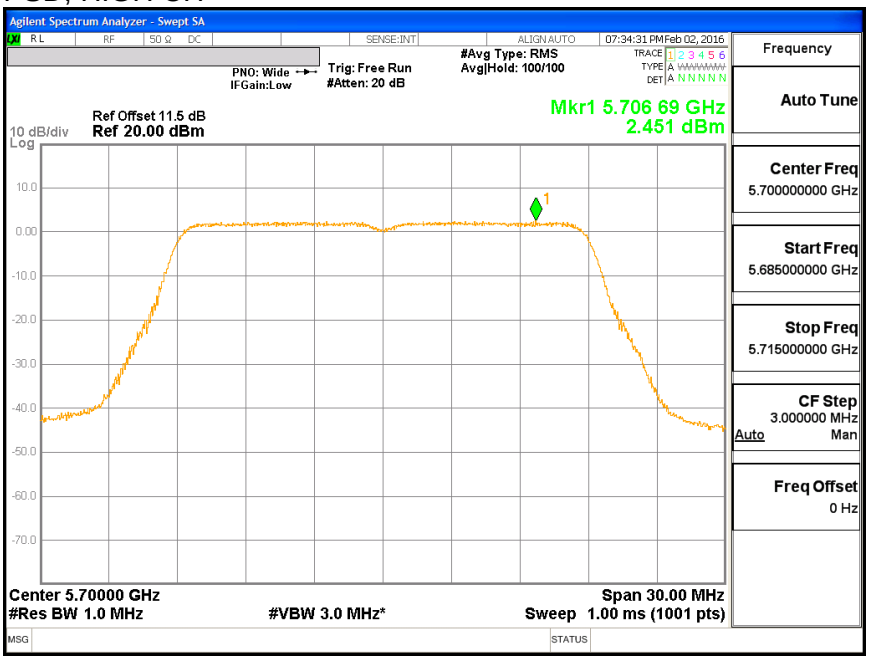
PSD, LOW CH



PSD, MID CH



PSD, HIGH CH



8.77. 802.11ac VHT20 ANTENNA B+A STBC STRADDLE CHANNEL 144 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)
144	5720	15.89	3.47	3.47	23.01	11.00

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

Output Power Results

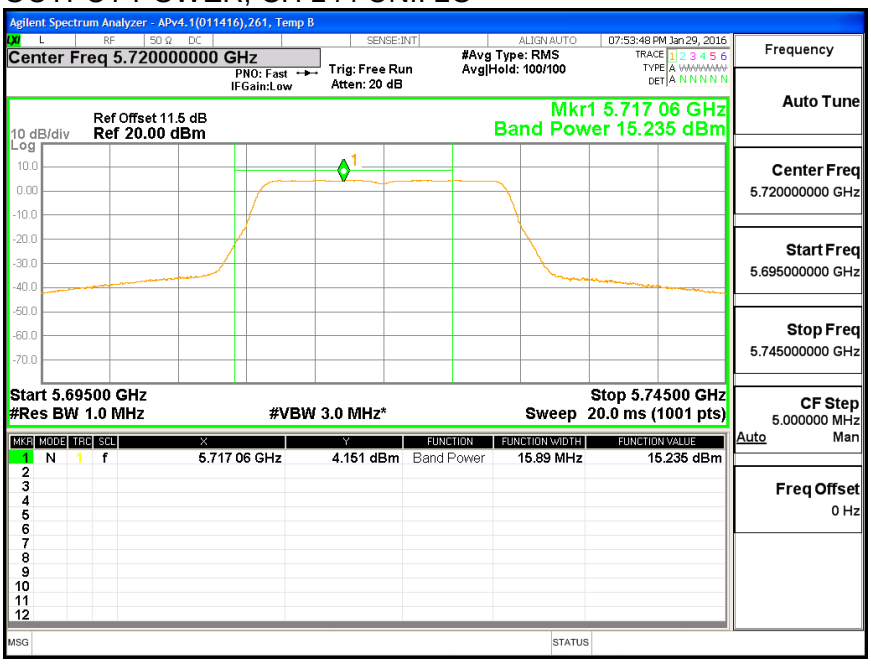
Channel	Frequency (MHz)	Antenna B Meas Power (dBm)	Antenna A Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
144	5720	15.24	14.78	18.02	23.01	-4.99

PSD Results

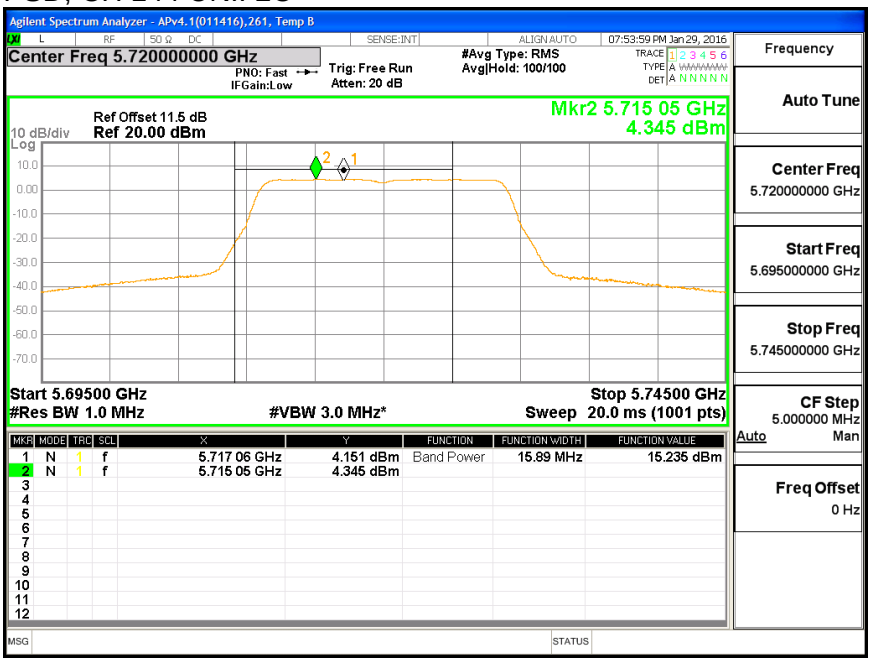
Channel	Frequency (MHz)	Antenna B Meas PSD (dBm)	Antenna A Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
144	5720	4.35	3.82	7.10	11.00	-3.90

ANTENNA - B

OUTPUT POWER, CH 144 UNII 2C

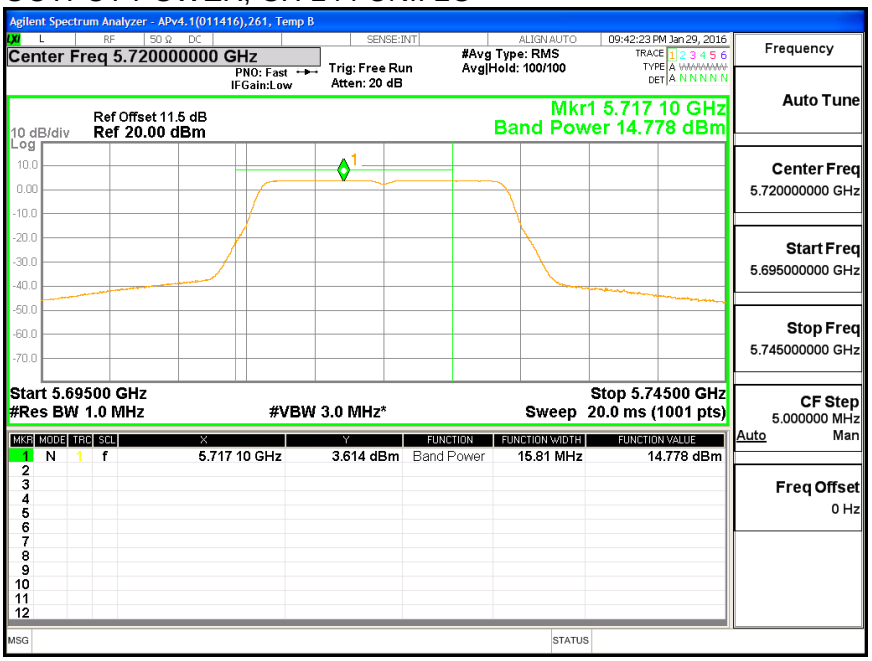


PSD, CH 144 UNII 2C

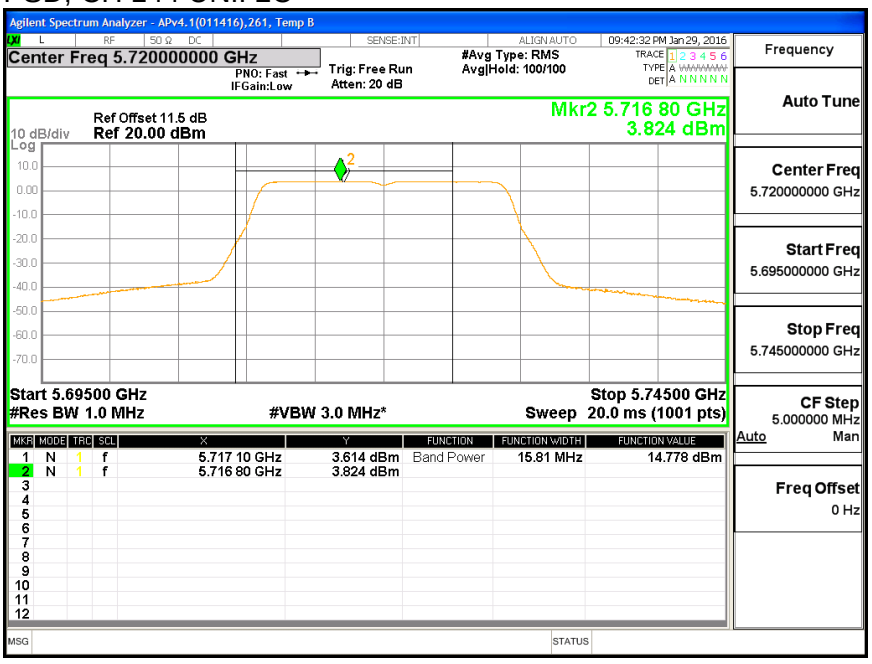


ANTENNA - A

OUTPUT POWER, CH 144 UNII 2C



PSD, CH 144 UNII 2C



UNII-3 BAND

Antenna Gain and Limit

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain For Power (dBi)	Directional Gain For PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
144	5720	5.89	3.47	3.47	30.00	30.00

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

Output Power Results

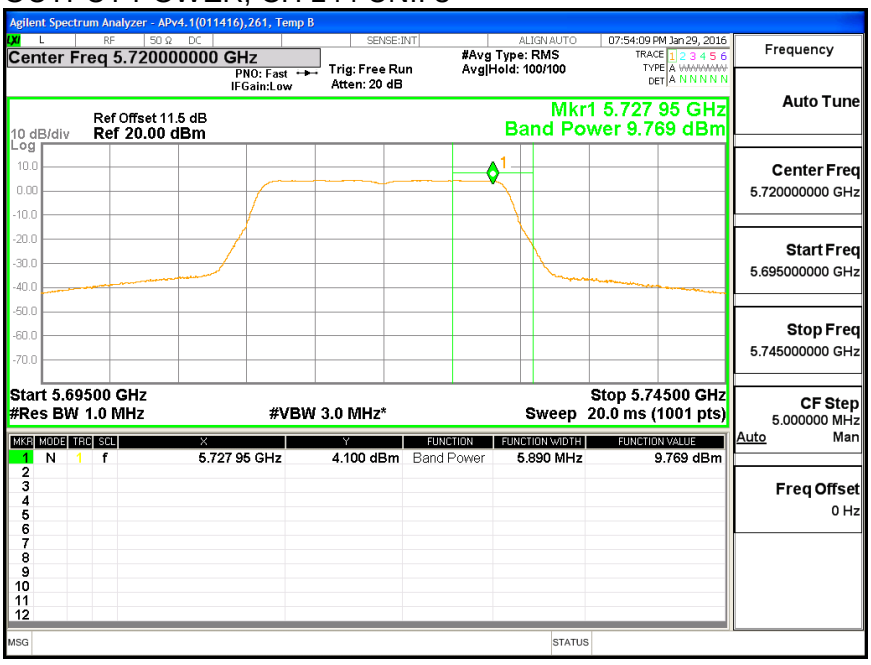
Channel	Frequency (MHz)	Antenna B Meas Power (dBm)	Antenna A Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
144	5720	9.77	9.30	12.55	30.00	-17.45

PSD Results

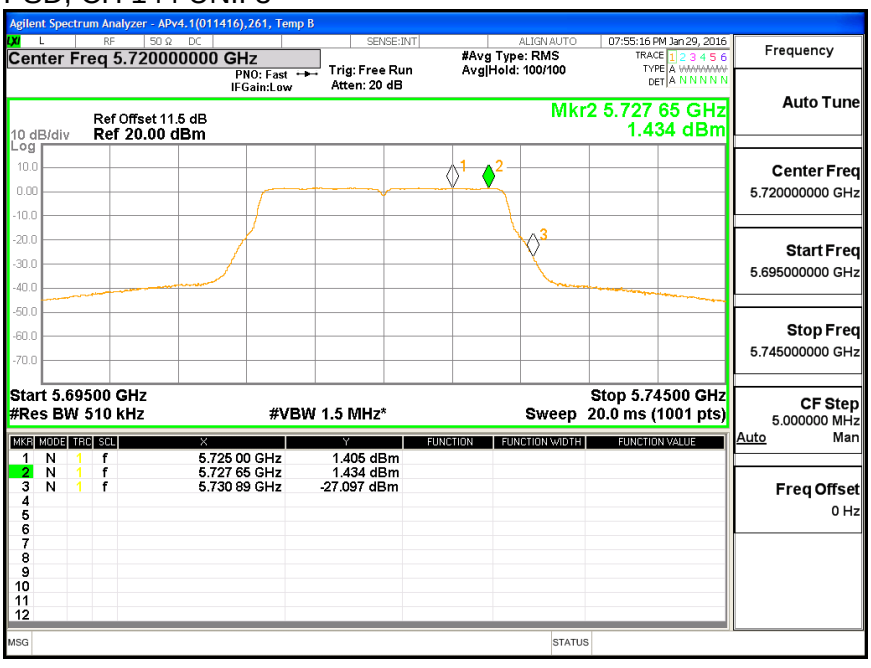
Channel	Frequency (MHz)	Antenna B Meas PSD (dBm)	Antenna A Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
144	5720	1.43	1.09	4.28	30.00	-25.72

ANTENNA - B

OUTPUT POWER, CH 144 UNII 3

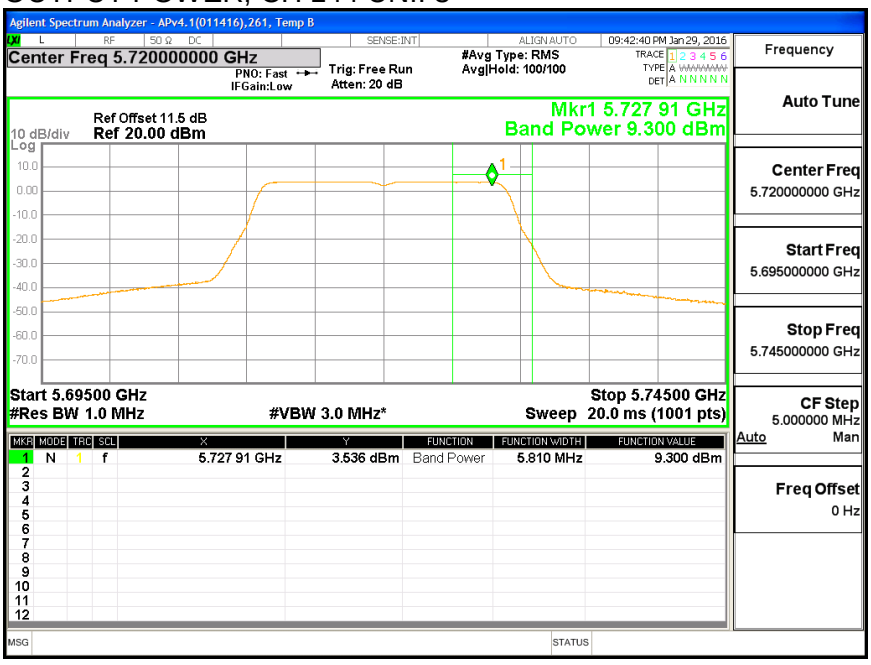


PSD, CH 144 UNII 3

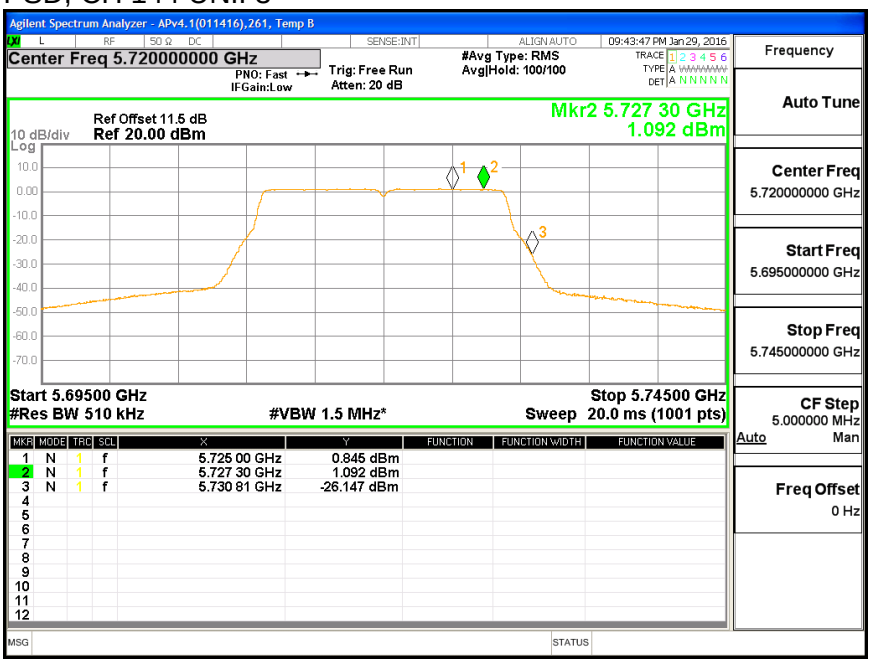


ANTENNA - A

OUTPUT POWER, CH 144 UNII 3



PSD, CH 144 UNII 3



8.77.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

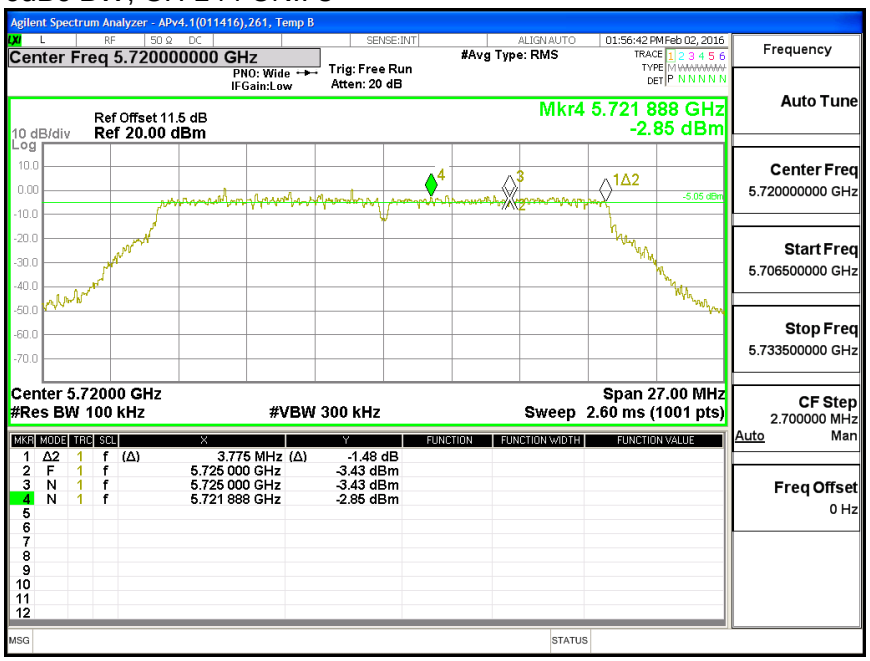
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

Channel	Frequency (MHz)	6 dB BW Antenna B (MHz)	6 dB BW Antenna A (MHz)
144	5720	3.78	3.83

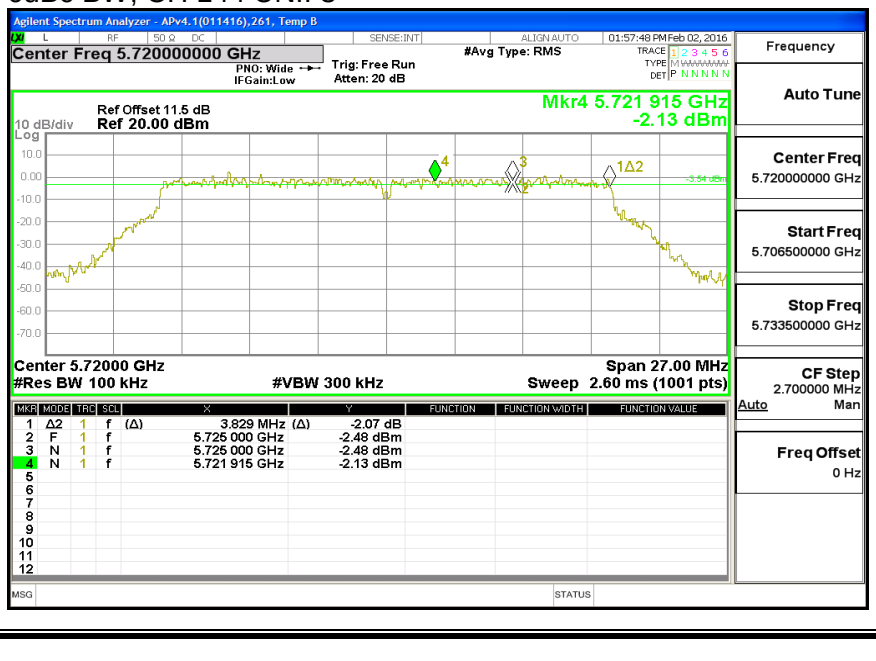
ANTENNA - B

6dBc BW, CH 144 UNII 3



ANTENNA - A

6dBc BW, CH 144 UNII 3



8.78. 802.11n HT20 ANTENNA A+C STBC MODE IN THE 5.6 GHz BAND

8.78.1. 26 dB BANDWIDTH

LIMITS

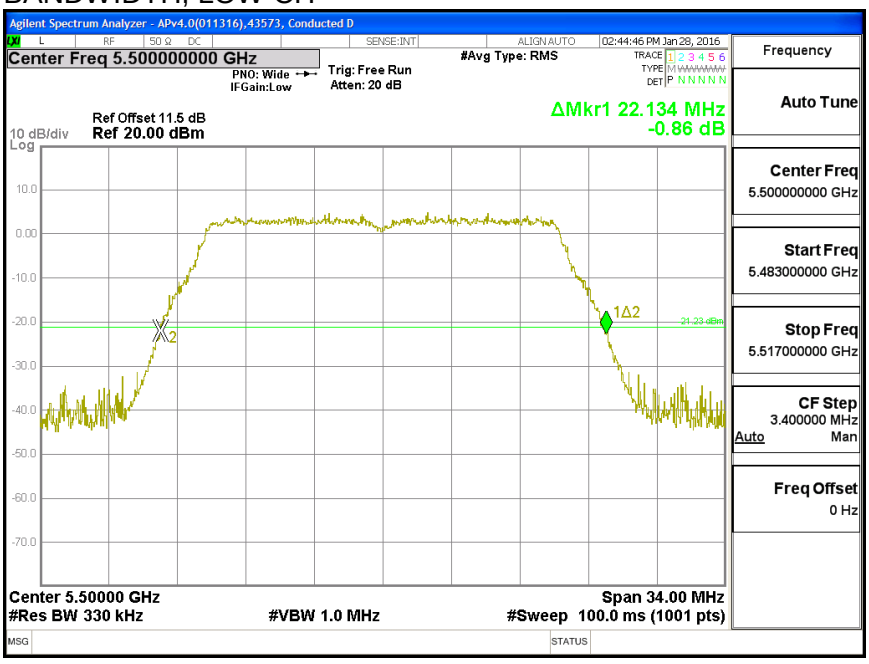
None; for reporting purposes only.

RESULTS

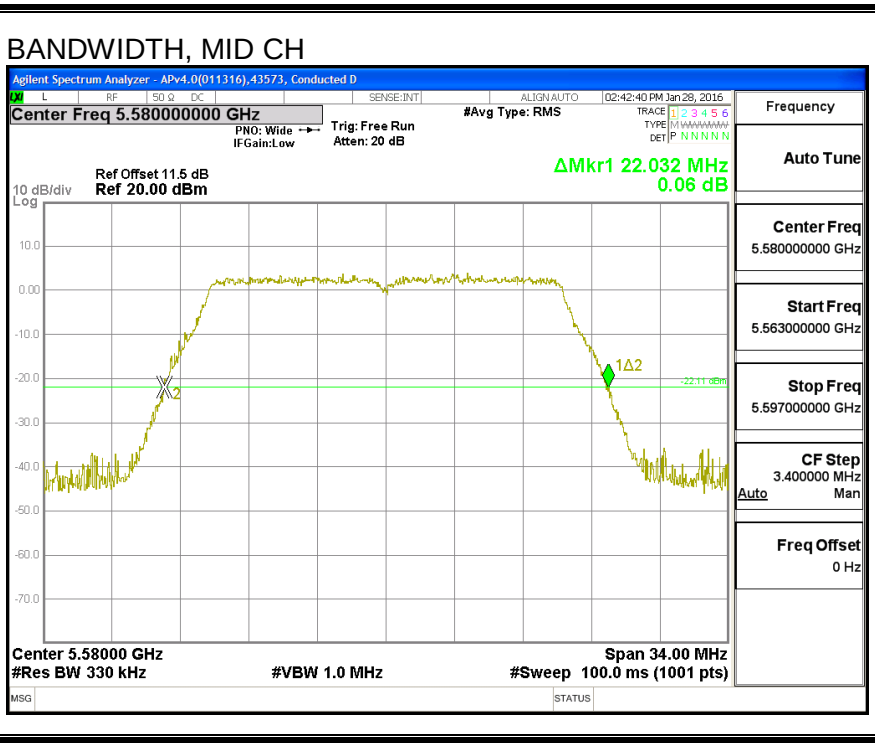
Channel	Frequency (MHz)	26 dB BW Antenna A (MHz)	26 dB BW Antenna C (MHz)
Low	5500	22.13	21.85
Mid	5580	22.03	21.75
High	5700	22.13	21.55
144	5720	22.17	21.75

26 dB BANDWIDTH, ANTENNA - A

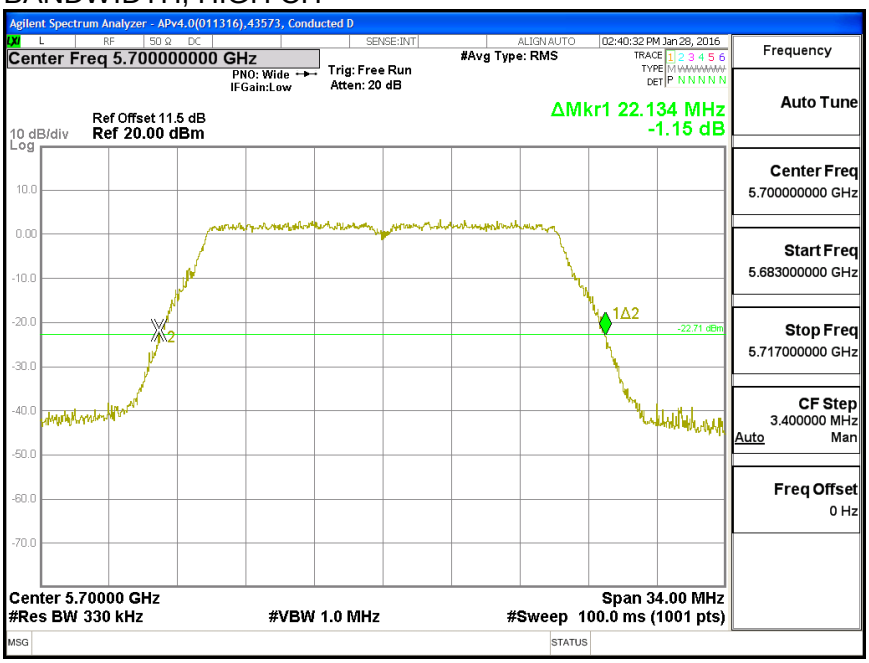
BANDWIDTH, LOW CH



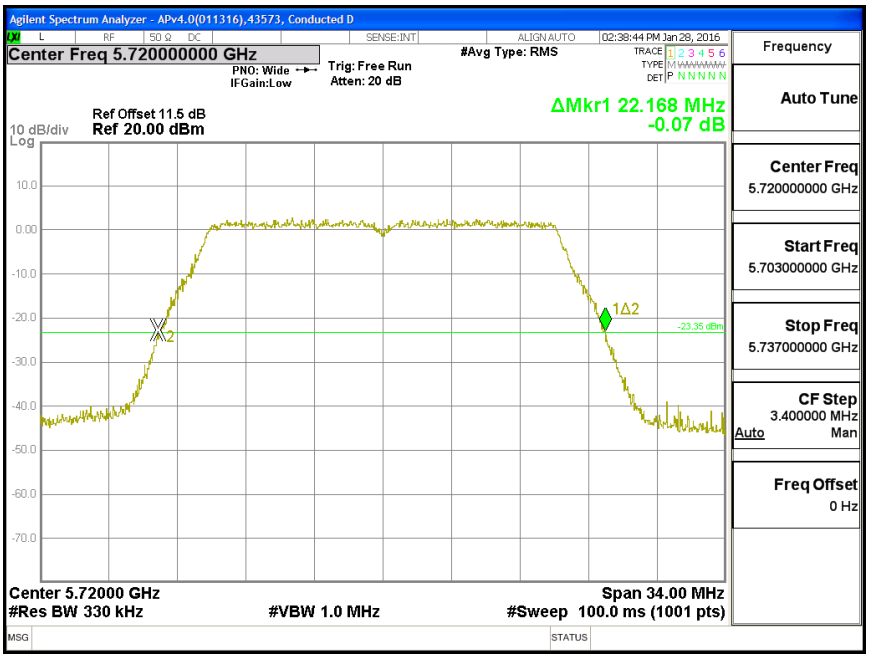
BANDWIDTH, MID CH



BANDWIDTH, HIGH CH

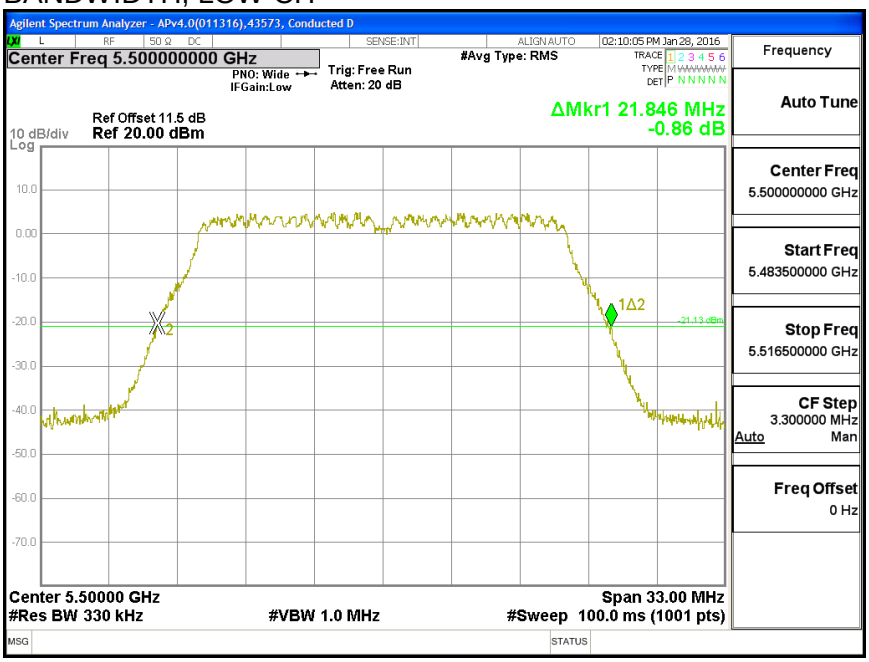


BANDWIDTH ANTENNA B STRADDLE CH 144

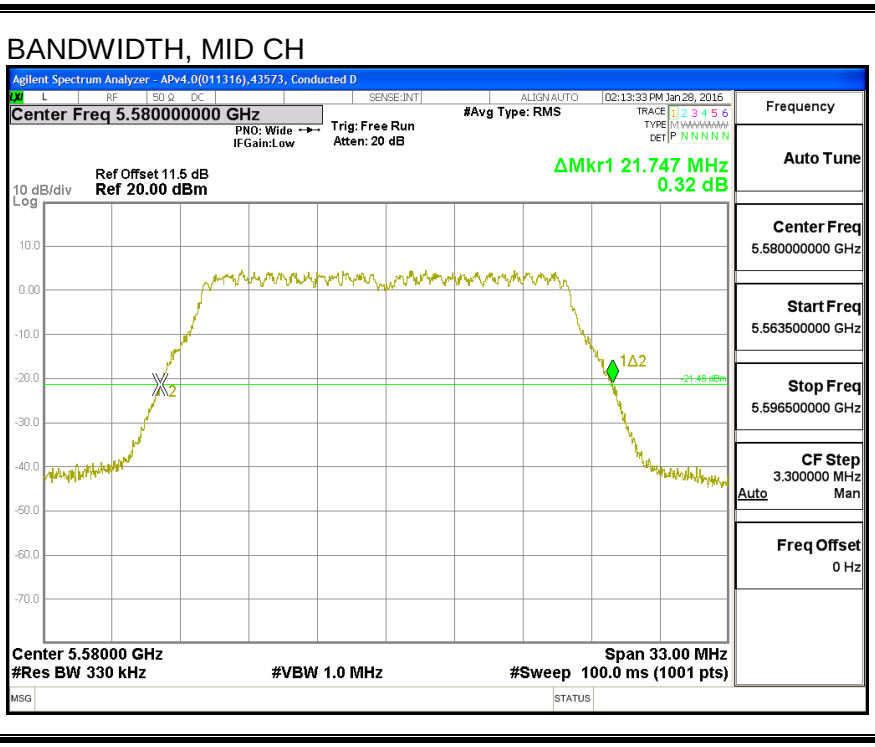


26 dB BANDWIDTH, ANTENNA - C

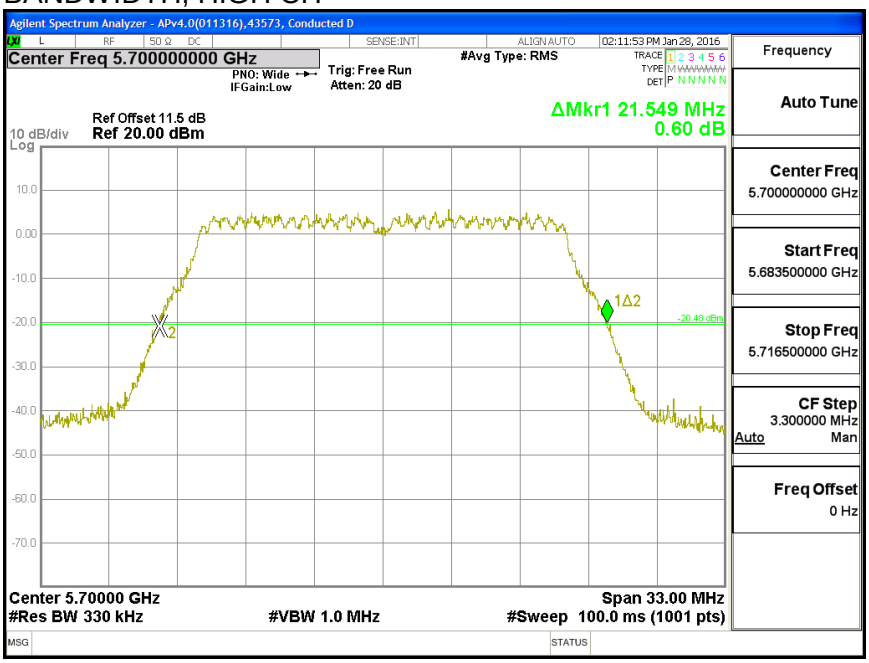
BANDWIDTH, LOW CH



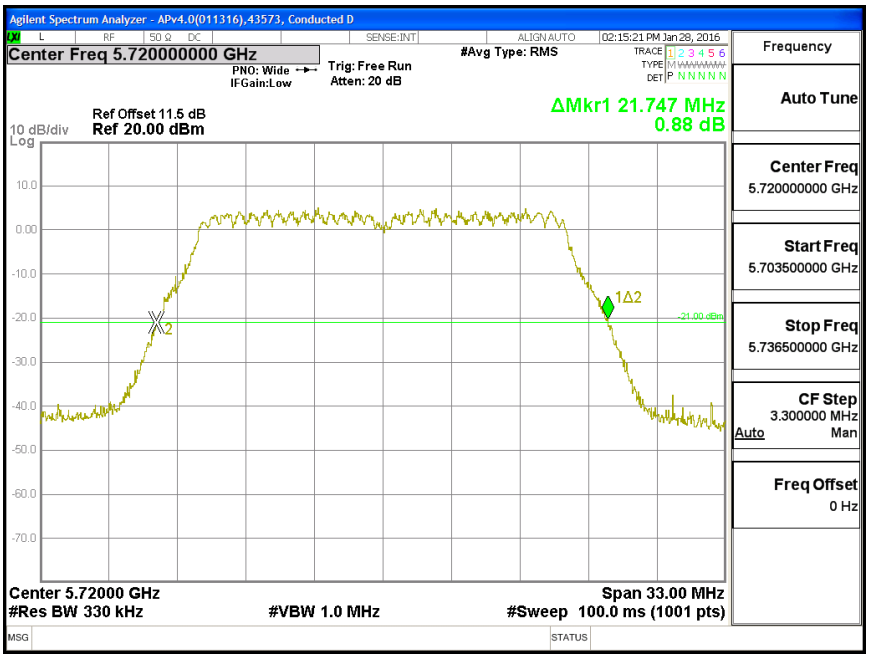
BANDWIDTH, MID CH



BANDWIDTH, HIGH CH



BANDWIDTH ANTENNA A STRADDLE CH 144



8.78.2. 99% BANDWIDTH

LIMITS

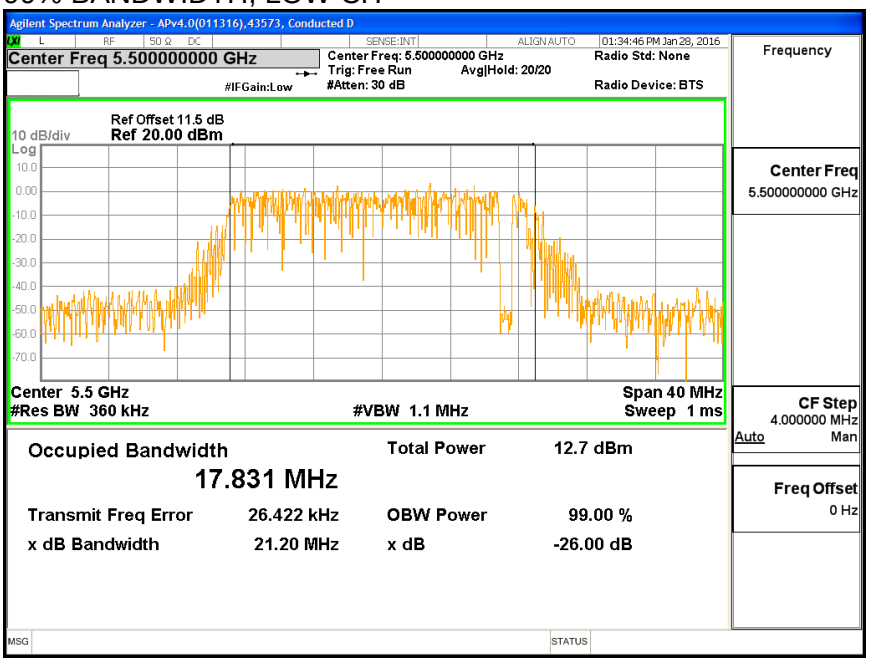
None; for reporting purposes only.

RESULTS

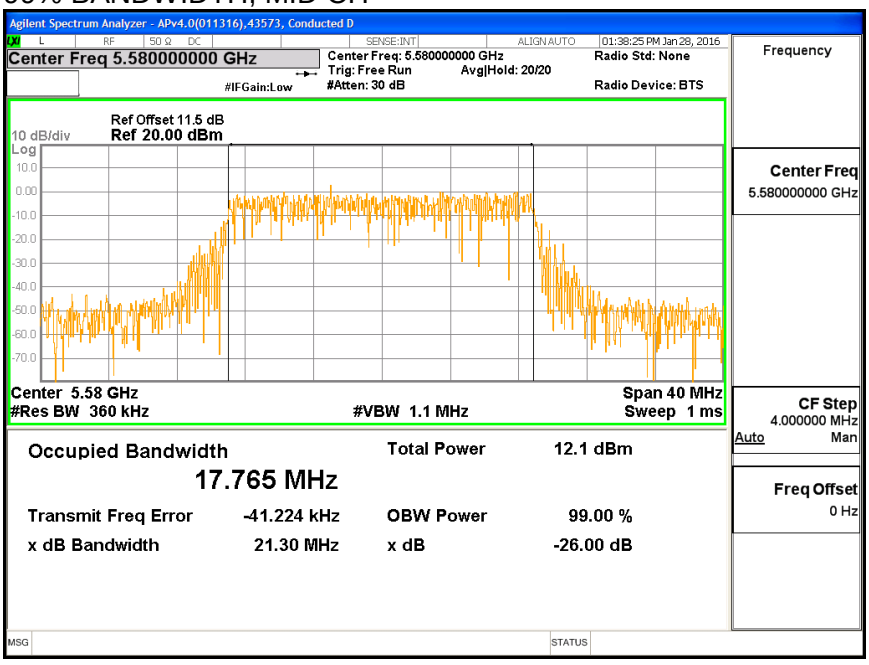
Channel	Frequency (MHz)	99% BW Antenna A (MHz)	99% BW Antenna C (MHz)
Low	5500	17.831	17.831
Mid	5580	17.765	17.918
High	5700	17.791	17.751
144	5720	17.713	17.849

99% BANDWIDTH, ANTENNA - A

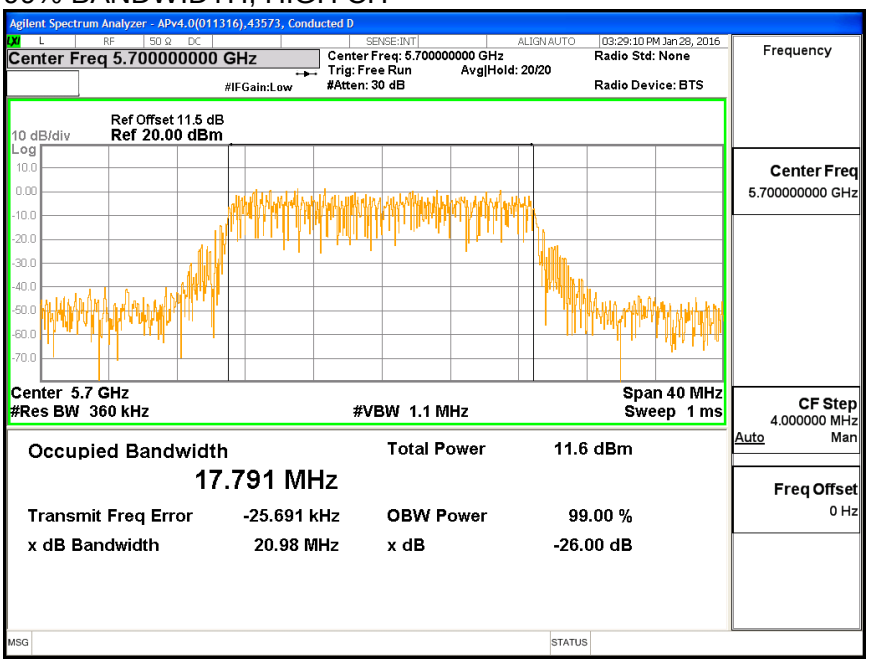
99% BANDWIDTH, LOW CH



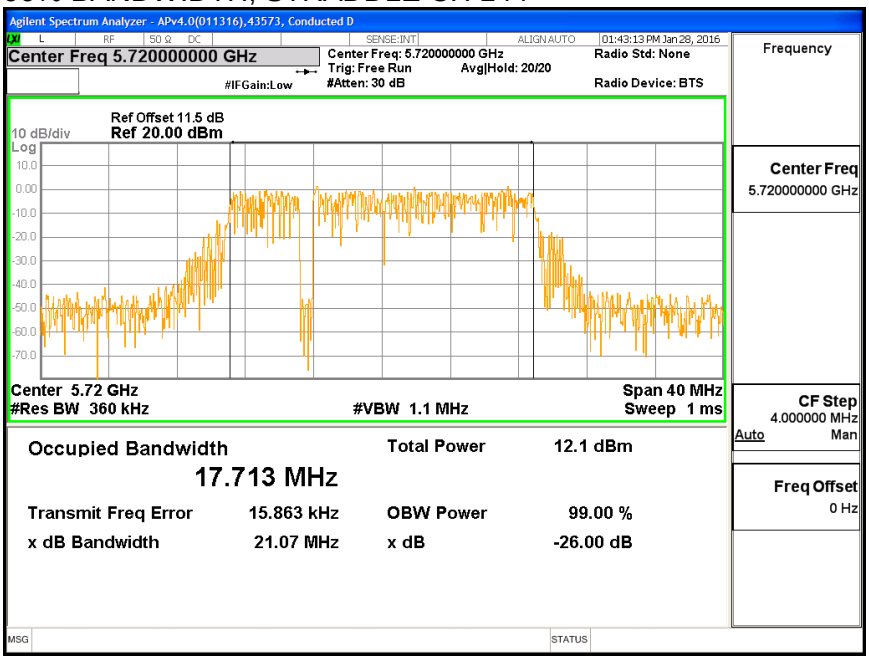
99% BANDWIDTH, MID CH



99% BANDWIDTH, HIGH CH

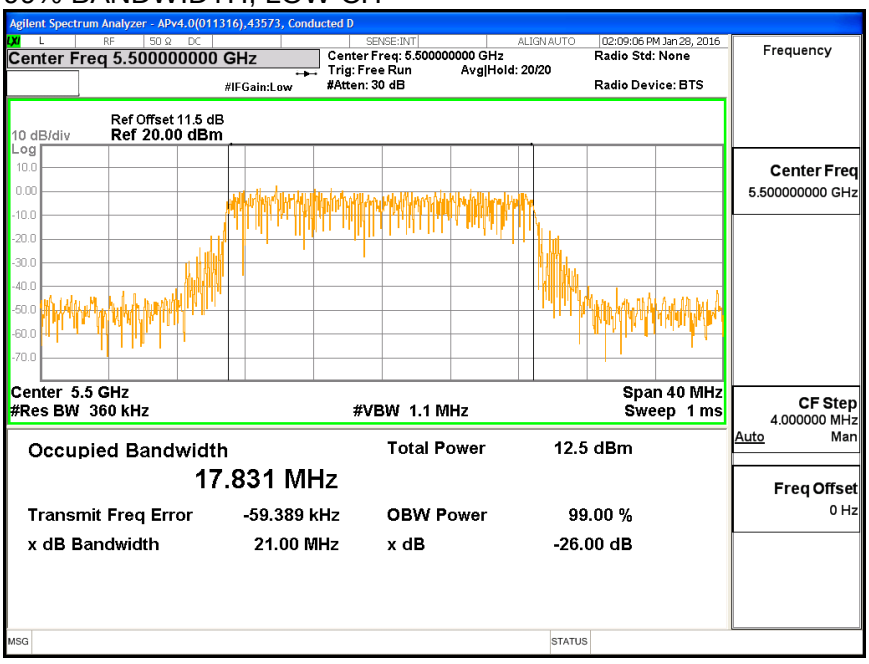


99% BANDWIDTH, STRADDLE CH 144

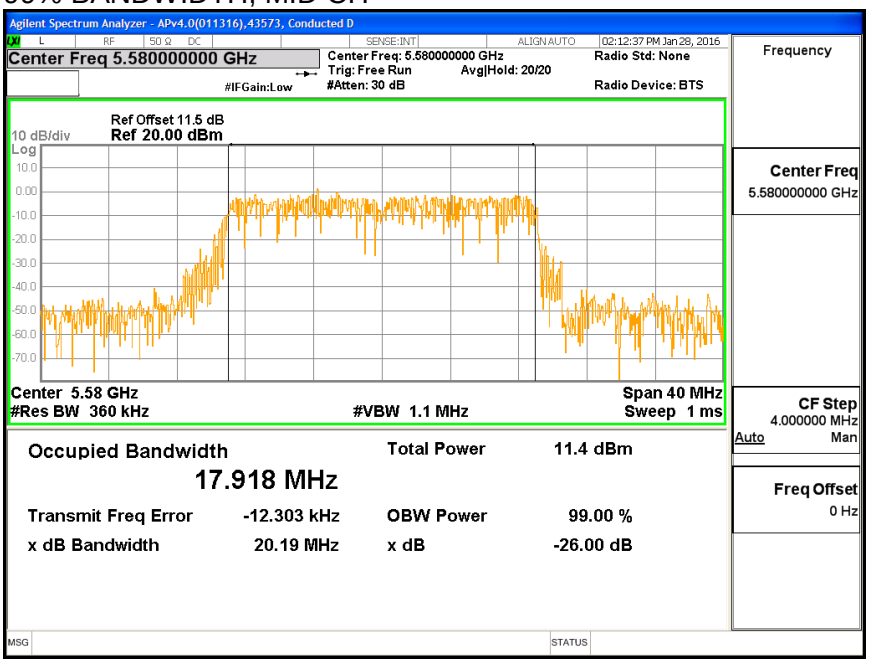


99% BANDWIDTH, ANTENNA - C

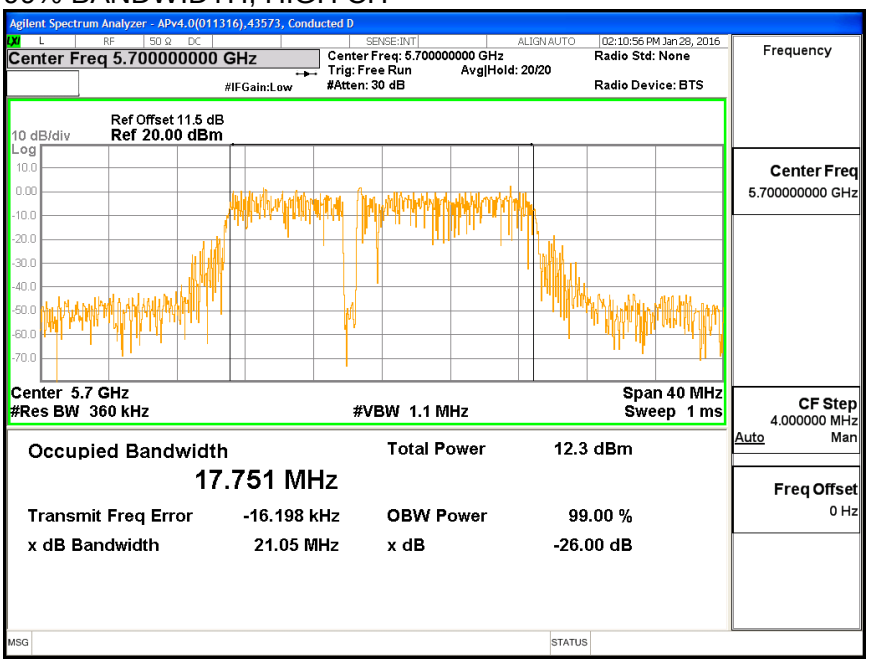
99% BANDWIDTH, LOW CH



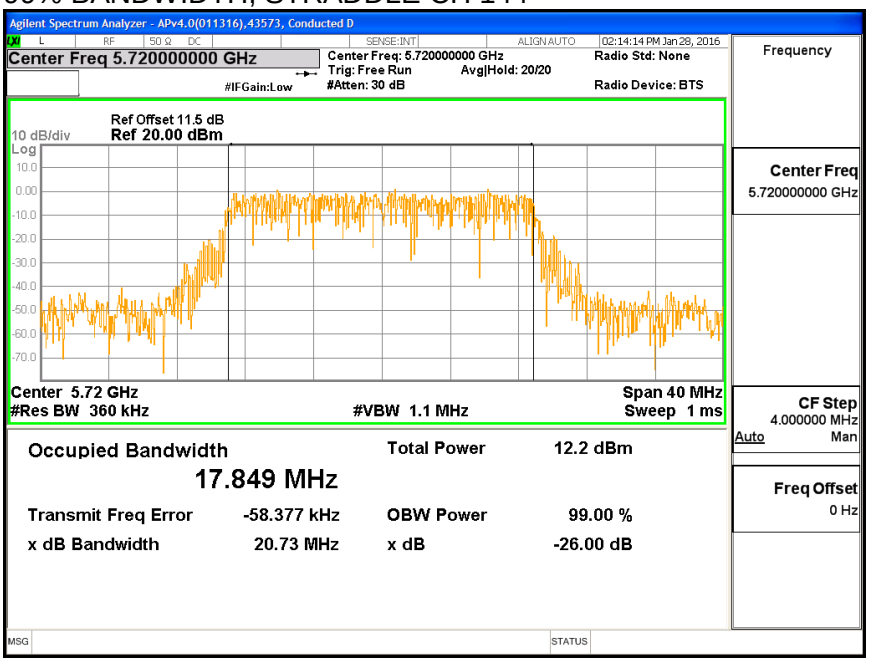
99% BANDWIDTH, MID CH



99% BANDWIDTH, HIGH CH



99% BANDWIDTH, STRADDLE CH 144



8.78.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

Average Power Results

Channel	Frequency (MHz)	Antenna A Power (dBm)	Antenna C Power (dBm)	Total Power (dBm)
Low	5500	14.50	14.49	17.51
Mid	5580	16.00	15.00	18.54
High	5700	13.50	13.47	16.50
144	5720	16.00	14.95	18.52

8.78.4. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.47–5.725 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26–dB emission bandwidth in MHz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1–MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST PROCEDURE

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

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

DIRECTIONAL ANTENNA GAIN

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

Antenna A Gain (dBi)	Anetnna C Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
4.03	4.16	4.10

RESULTS

Bandwidth, Antenna Gain and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Low	5500	22.13	17.831	4.10	4.10	23.51	11.00
Mid	5580	22.03	17.918	4.10	4.10	23.53	11.00
High	5700	22.13	17.791	4.10	4.10	23.50	11.00

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

Output Power Results

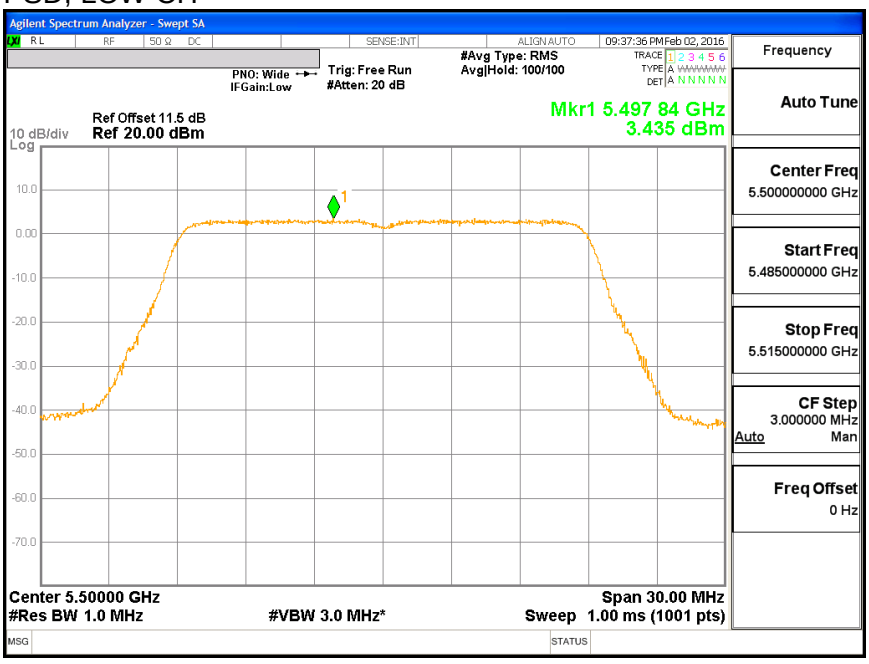
Channel	Frequency (MHz)	Antenna A Meas Power (dBm)	Antenna C Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	14.50	14.49	17.51	23.51	-6.01
Mid	5580	16.00	15.00	18.54	23.53	-4.99
High	5700	13.50	13.47	16.50	23.50	-7.01

PSD Results

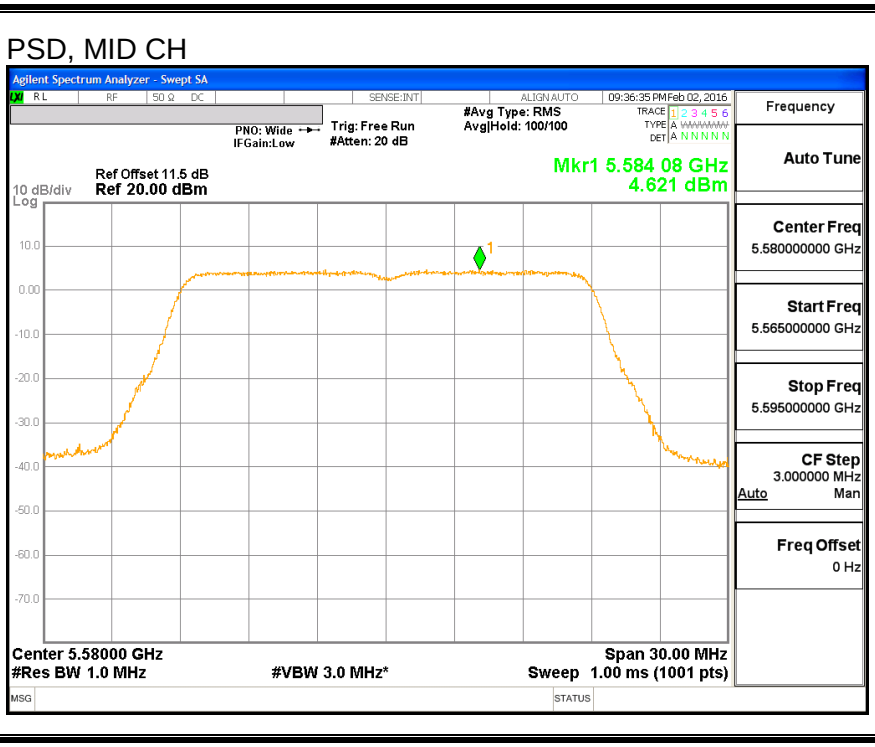
Channel	Frequency (MHz)	Antenna A Meas PSD (dBm)	Antenna C Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5500	3.44	3.05	6.26	11.00	-4.74
Mid	5580	4.62	3.44	7.08	11.00	-3.92
High	5700	2.46	2.04	5.26	11.00	-5.74

PSD, ANTENNA - A

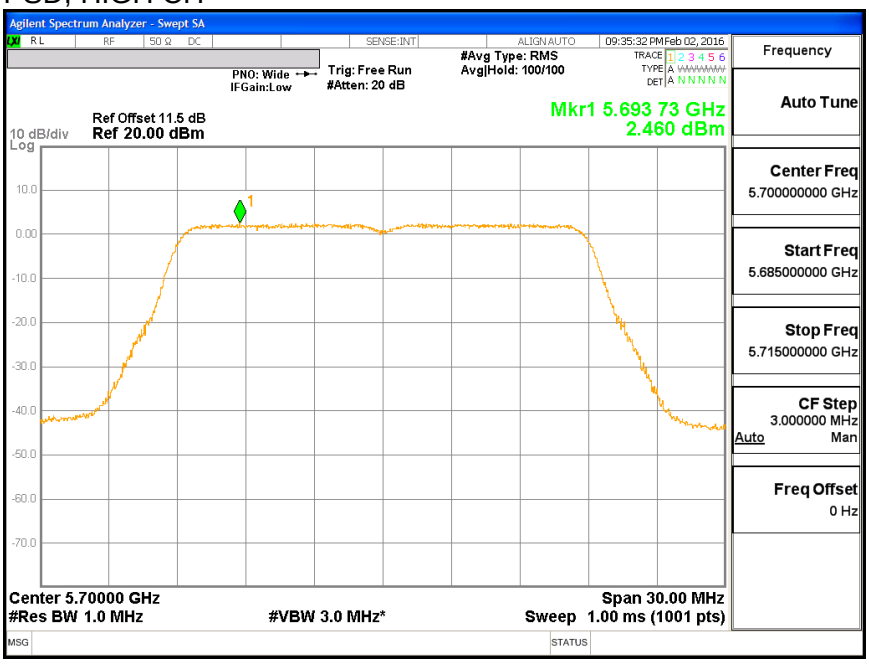
PSD, LOW CH



PSD, MID CH

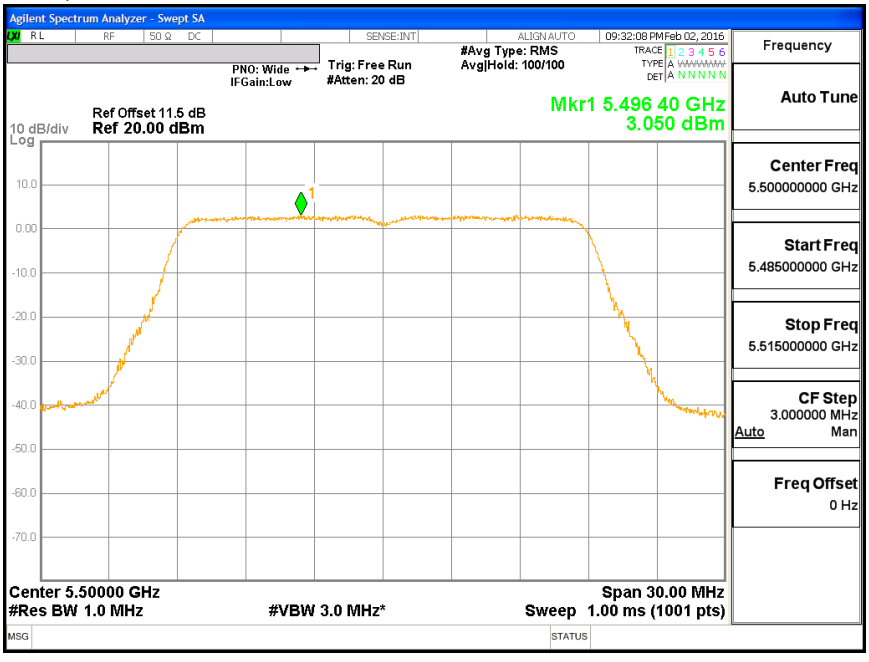


PSD, HIGH CH

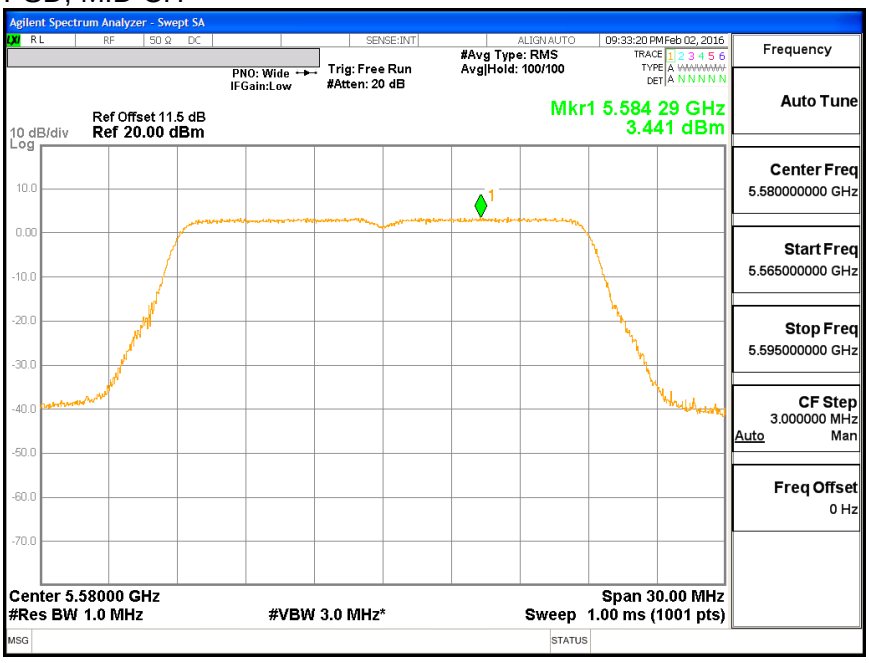


PSD, ANTENNA - C

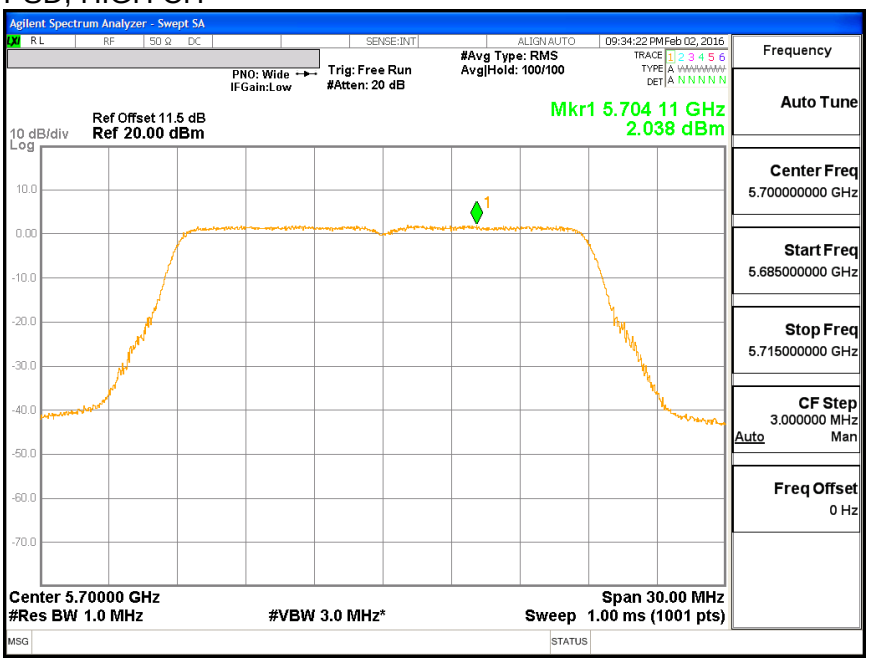
PSD, LOW CH



PSD, MID CH



PSD, HIGH CH



8.79. 802.11ac VHT20 ANTENNA A+C STBC STRADDLE CHANNEL 144 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)
144	5720	16.09	4.10	4.10	23.07	11.00

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

Output Power Results

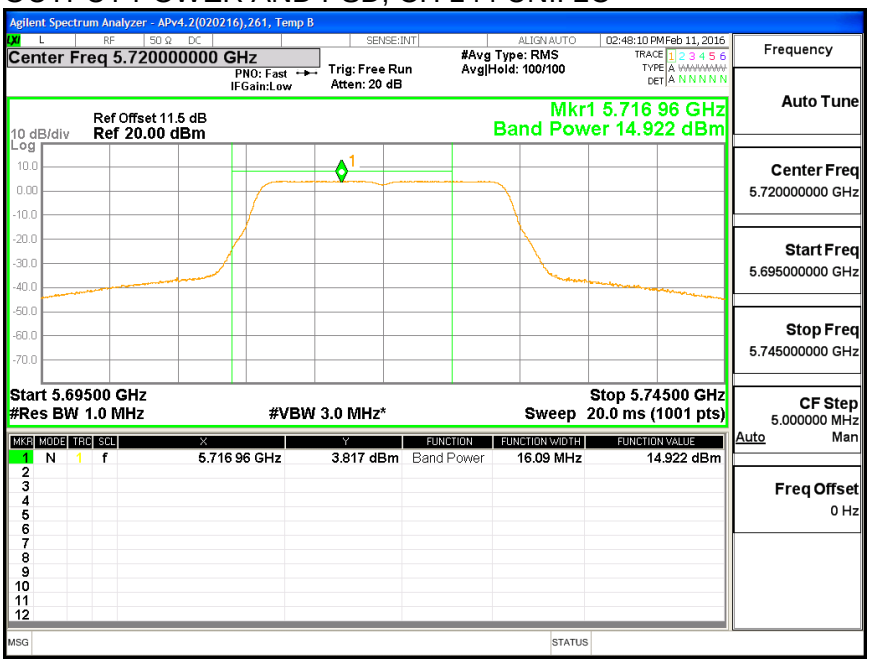
Channel	Frequency (MHz)	Antenna A Meas Power (dBm)	Antenna C Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
144	5720	14.92	13.79	17.40	23.07	-5.66

PSD Results

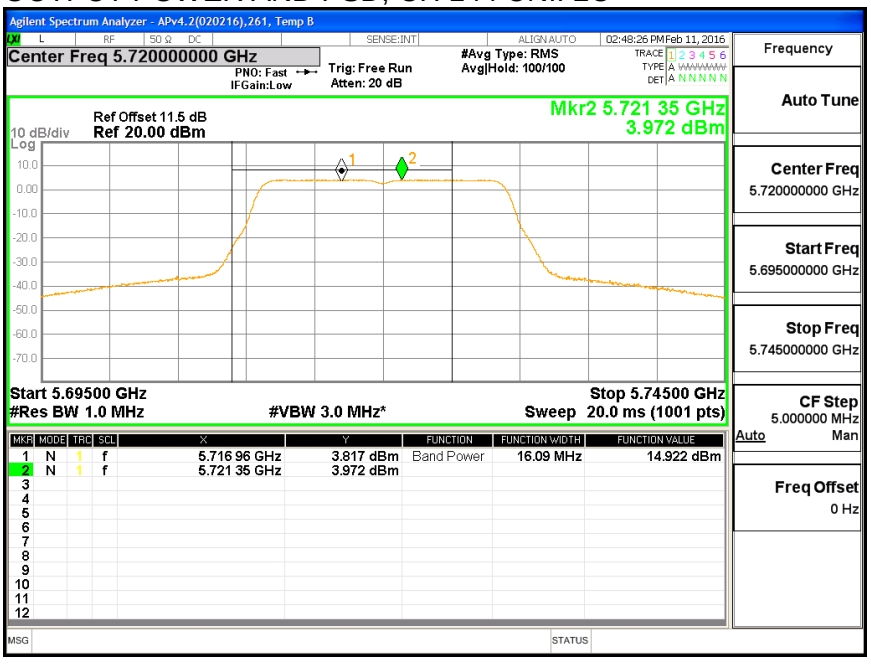
Channel	Frequency (MHz)	Antenna A Meas PSD (dBm)	Antenna C Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
144	5720	3.97	2.88	6.47	11.00	-4.53

ANTENNA - A

OUTPUT POWER AND PSD, CH 144 UNII 2C

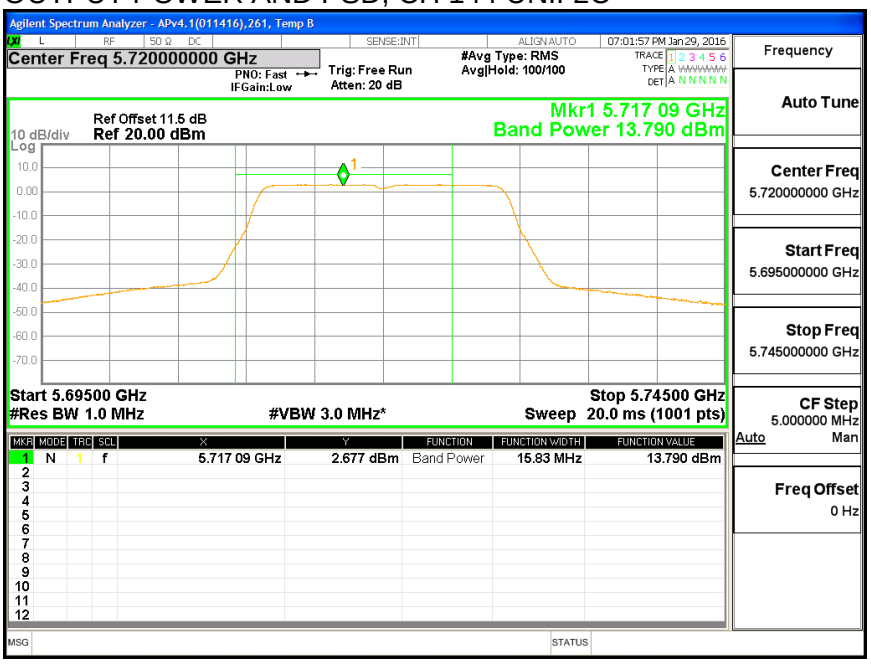


OUTPUT POWER AND PSD, CH 144 UNII 2C

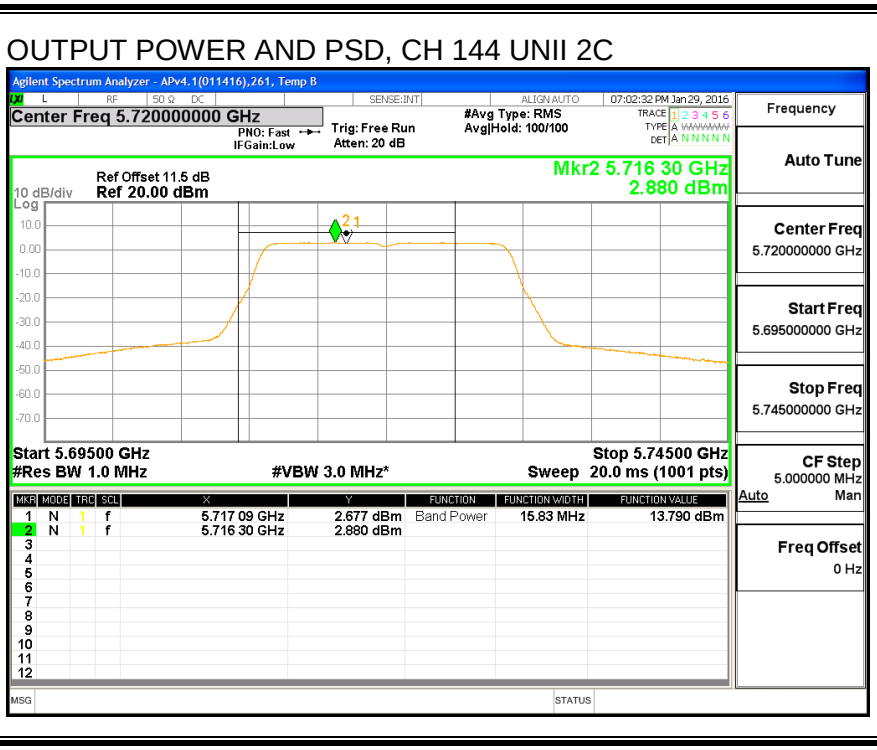


ANTENNA - C

OUTPUT POWER AND PSD, CH 144 UNII 2C



OUTPUT POWER AND PSD, CH 144 UNII 2C



UNII-3 BAND

Antenna Gain and Limit

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain For Power (dBi)	Directional Gain For PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
144	5720	6.09	4.10	7.11	30.00	28.89

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

Output Power Results

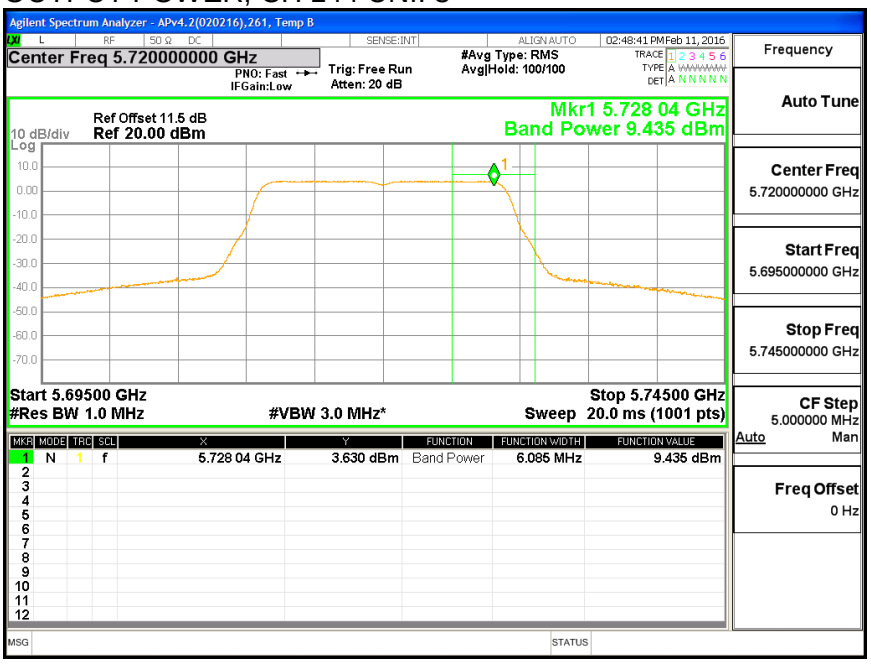
Channel	Frequency (MHz)	Antenna A Meas Power (dBm)	Antenna C Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
144	5720	9.44	8.24	11.89	30.00	-18.11

PSD Results

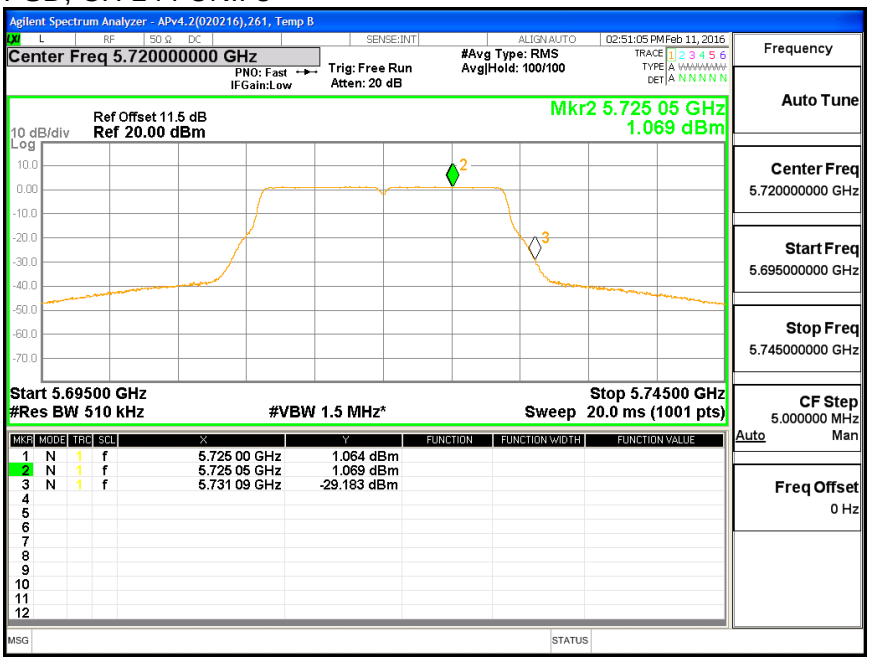
Channel	Frequency (MHz)	Antenna A Meas PSD (dBm)	Antenna C Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
144	5720	1.07	-0.04	3.56	28.89	-25.33

ANTENNA - A

OUTPUT POWER, CH 144 UNII 3

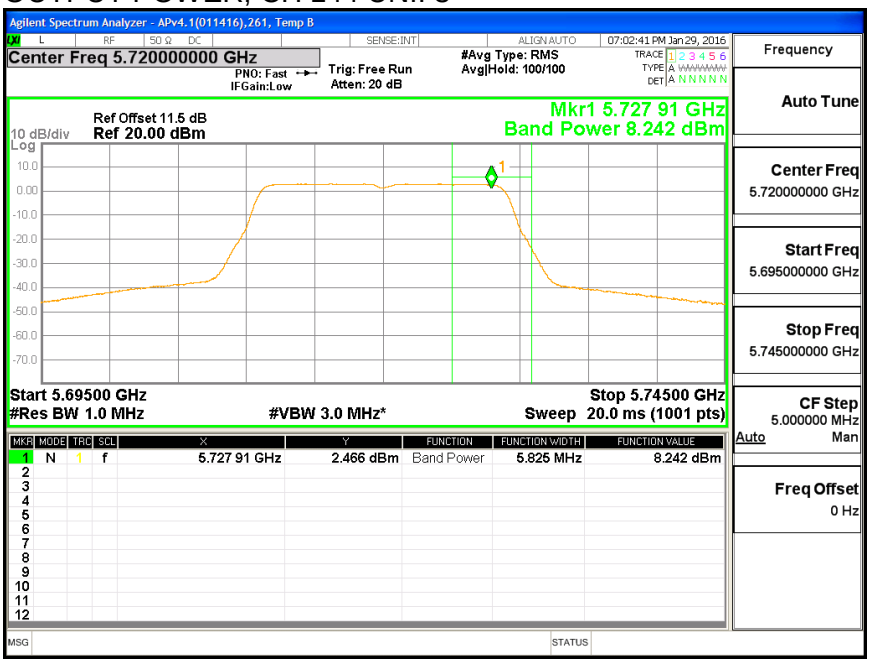


PSD, CH 144 UNII 3

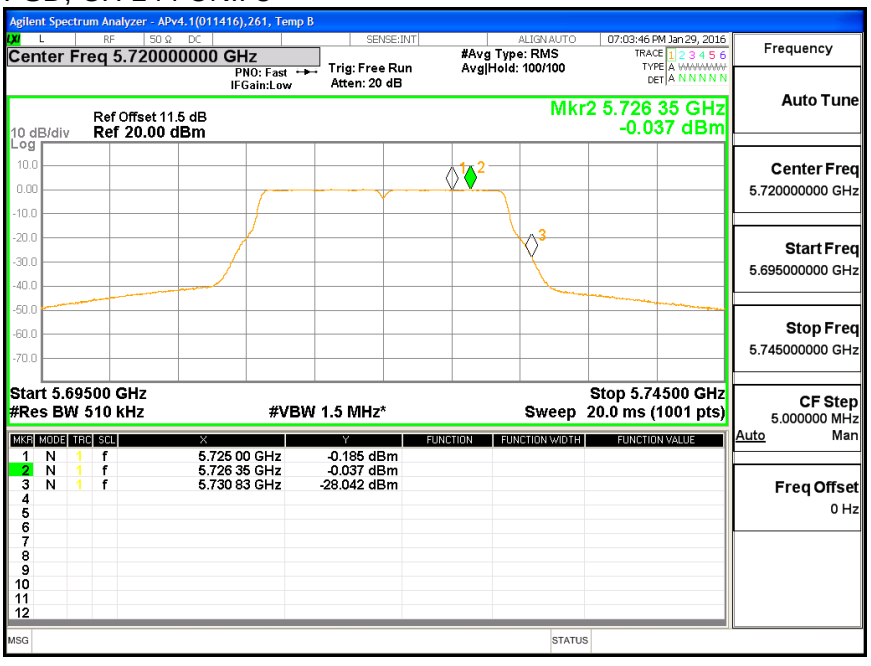


ANTENNA - C

OUTPUT POWER, CH 144 UNII 3



PSD, CH 144 UNII 3



8.79.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

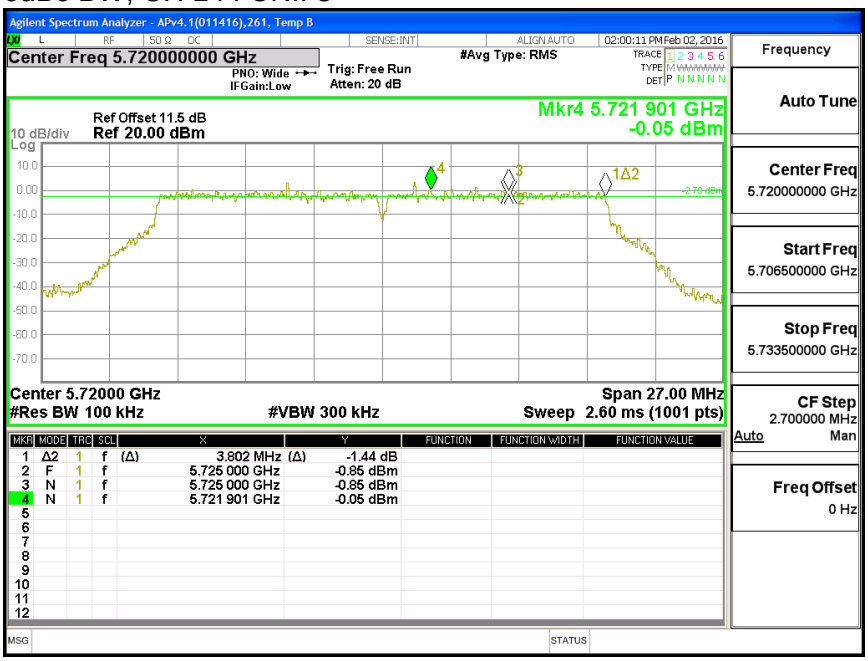
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

Channel	Frequency (MHz)	6 dB BW Antenna A (MHz)	6 dB BW Antenna C (MHz)
144	5720	3.80	3.80

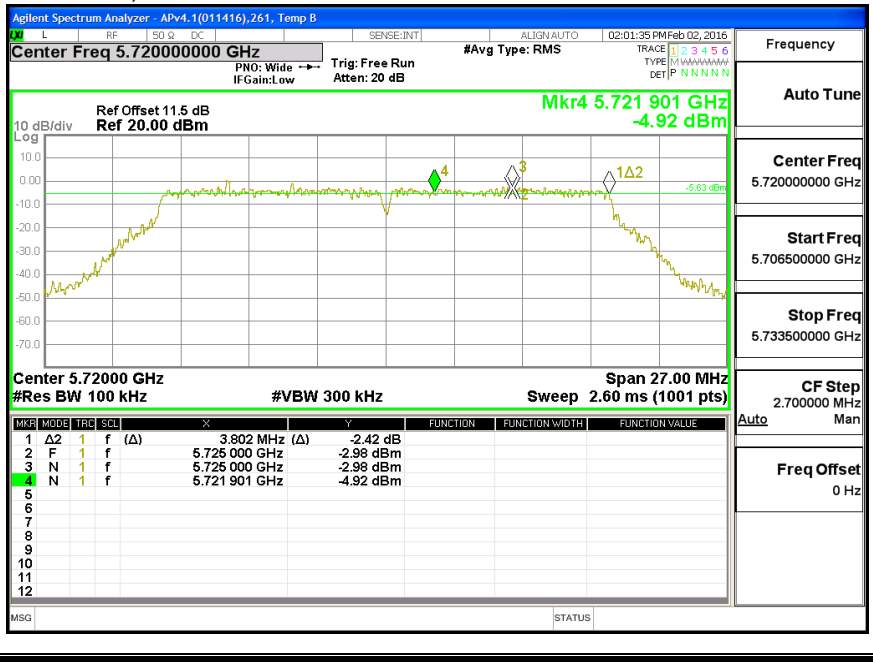
ANTENNA - A

6dBc BW, CH 144 UNII 3



ANTENNA - C

6dBc BW, CH 144 UNII 3



8.80. 802.11n HT20 ANTENNA B+A SDM MODE IN THE 5.6 GHz BAND

Noted: Covered by 802.11n HT20 ANTENNA B+A STBC MODE IN THE 5.6 GHz BAND

8.81. 802.11n HT20 ANTENNA A+C SDM MODE IN THE 5.6 GHz BAND

Noted: Covered by 802.11n HT20 ANTENNA A+C STBC MODE IN THE 5.6 GHz BAND

8.82. 802.11n HT40 ANTENNA - B MODE IN THE 5.6 GHz BAND

8.82.1. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

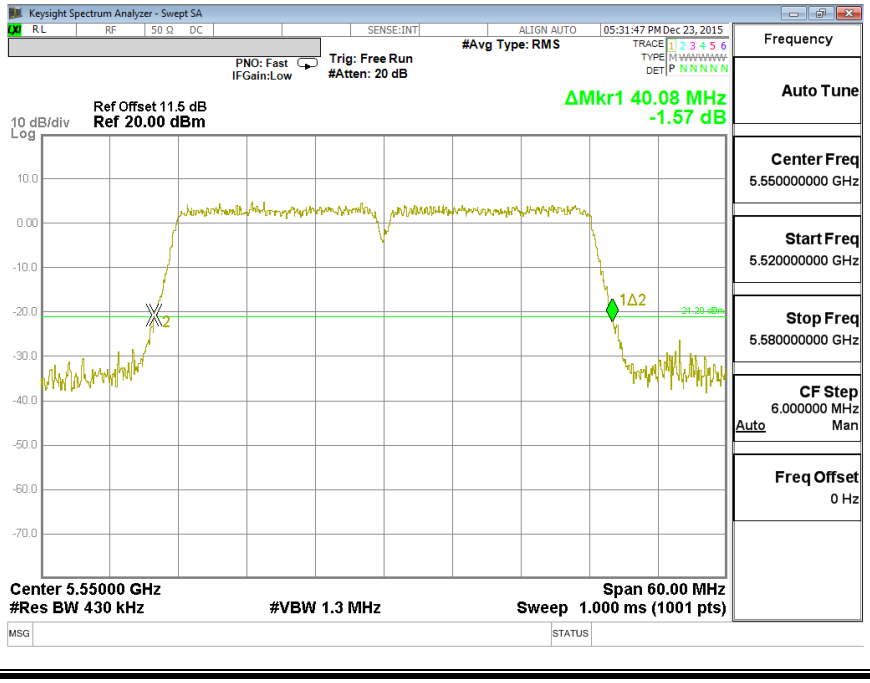
RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5510	39.72
Mid	5550	40.08
High	5670	39.90
142	5710	39.90

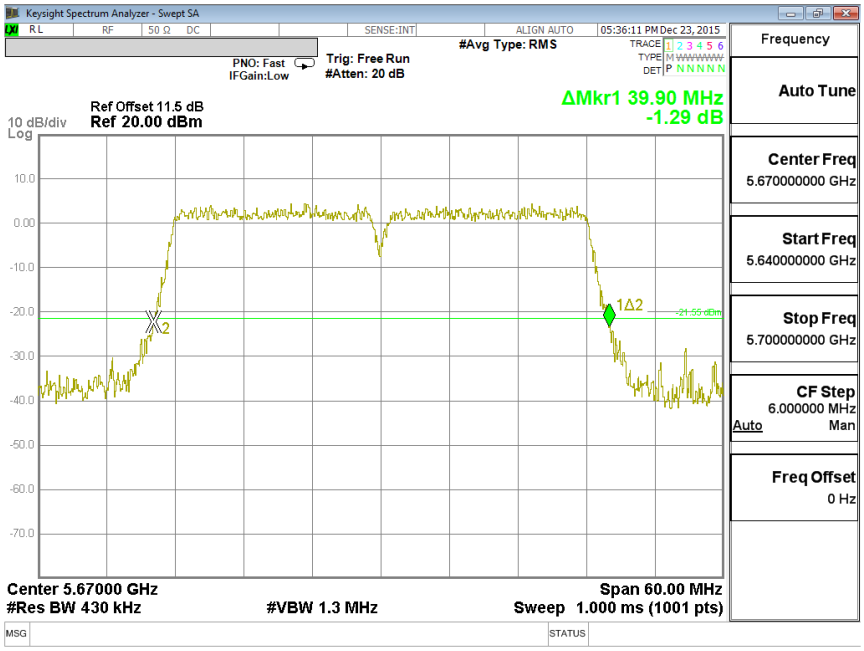
26 dB BANDWIDTH

BANDWIDTH, LOW CH

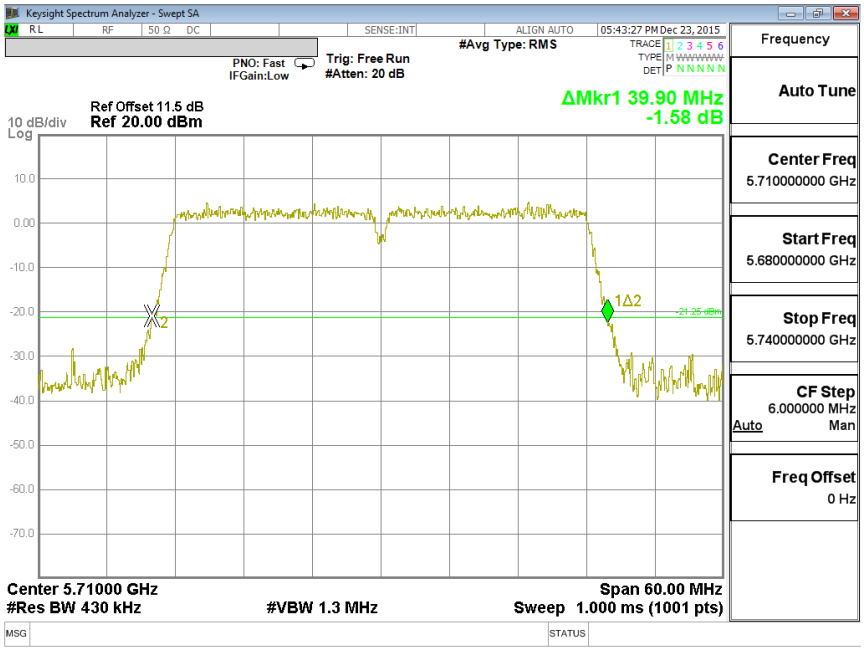
BANDWIDTH, MID CH



BANDWIDTH' HIGH CH



BANDWIDTH STRADDLE CH 142



8.82.2. 99% BANDWIDTH

LIMITS

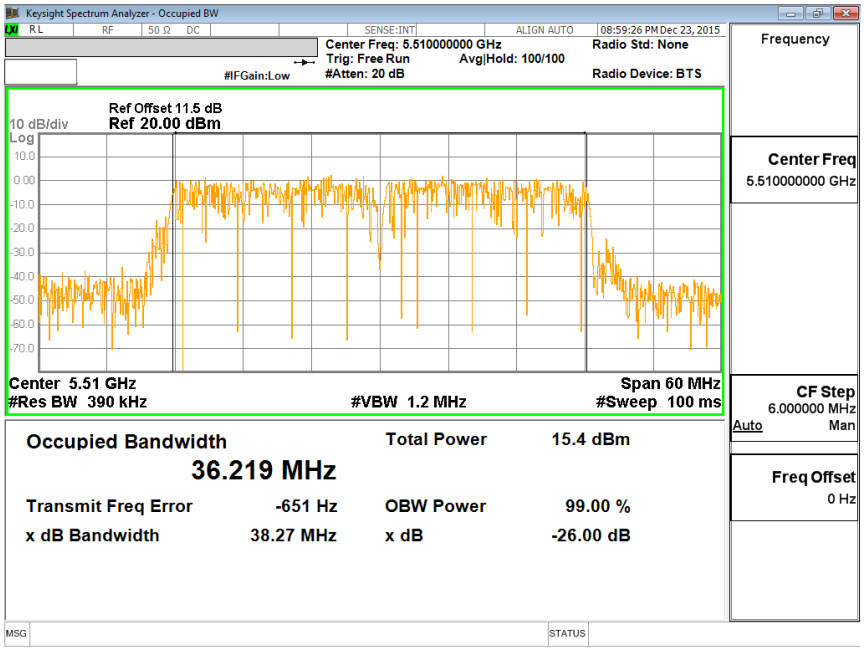
None; for reporting purposes only.

RESULTS

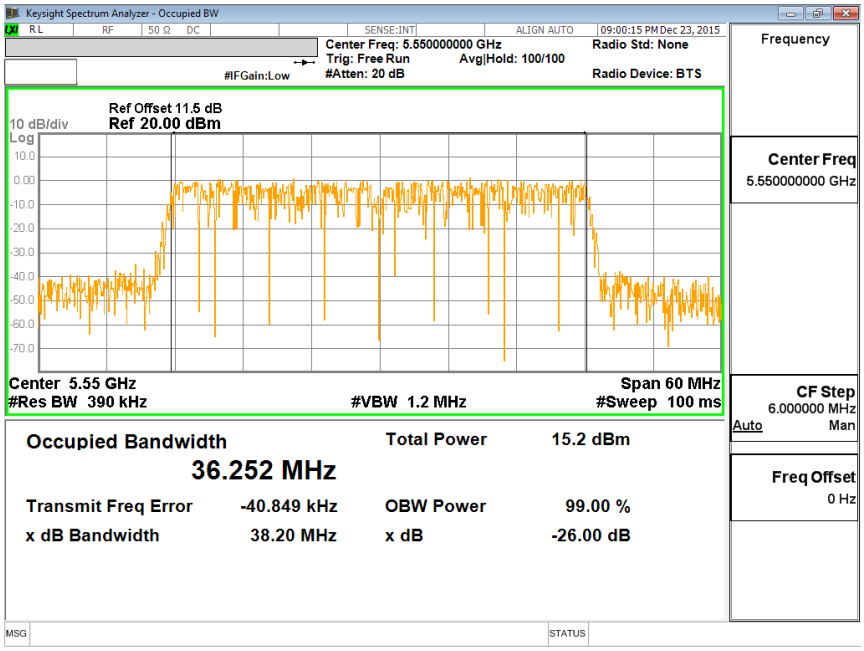
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5510	36.219
Mid	5550	36.252
High	5670	36.135
142	5710	36.219

99% BANDWIDTH

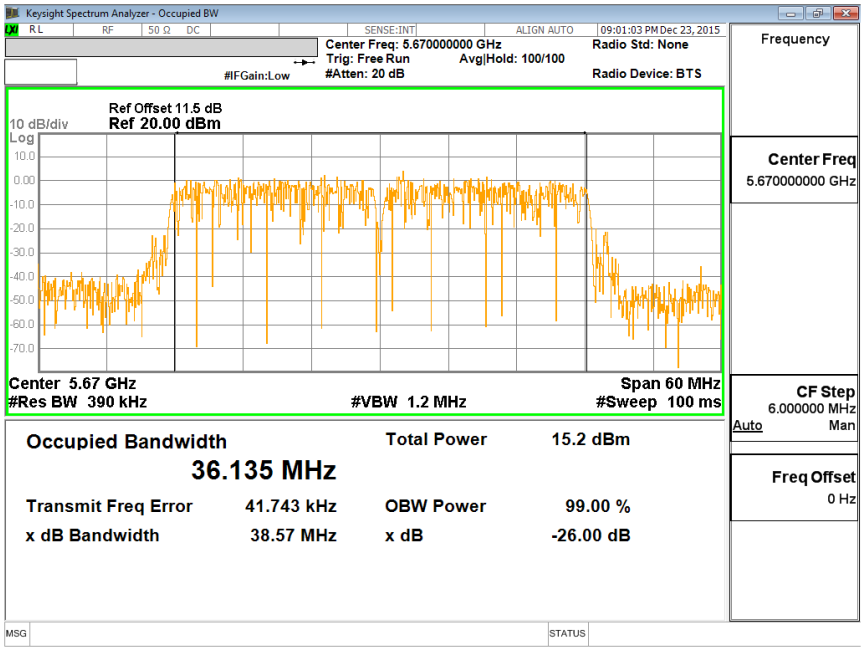
BANDWIDTH, LOW CH



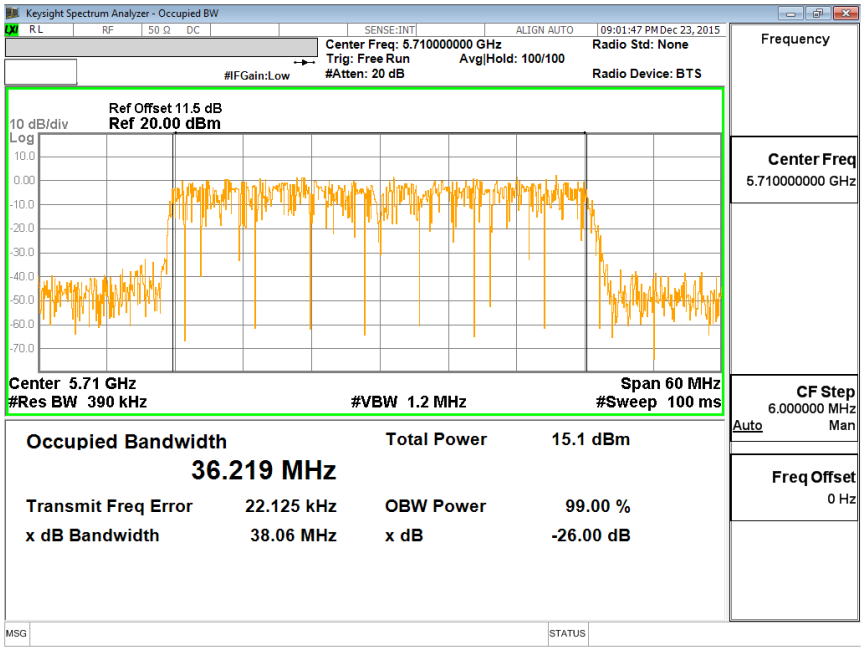
BANDWIDTH, MID CH



BANDWIDTH, HIGH CH



BANDWIDTH, STRADDLE CH 142



8.82.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

Channel	Frequency (MHz)	Power (dBm)
Low	5510	13.88
Mid	5550	16.47
High	5670	15.94
142	5710	16.38

8.82.4. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.47–5.725 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26–dB emission bandwidth in MHz. In addition, the peak power spectral density shall not exceed 11 dBm in any 1–MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST PROCEDURE

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

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

DIRECTIONAL ANTENNA GAIN

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

RESULTS

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Low	5510	39.72	36.219	2.83	24.00	11.00
Mid	5550	40.08	36.252	2.83	24.00	11.00
High	5670	39.90	36.135	2.83	24.00	11.00

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

Output Power Results

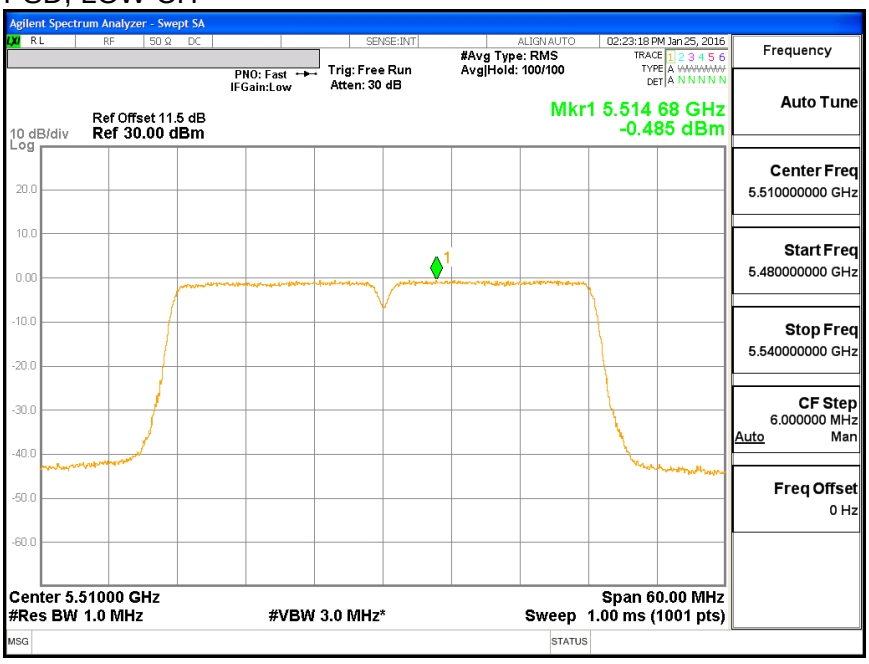
Channel	Frequency (MHz)	Antenna B Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5510	13.88	13.88	24.00	-10.12
Mid	5550	16.47	16.47	24.00	-7.53
High	5670	15.94	15.94	24.00	-8.06

PSD Results

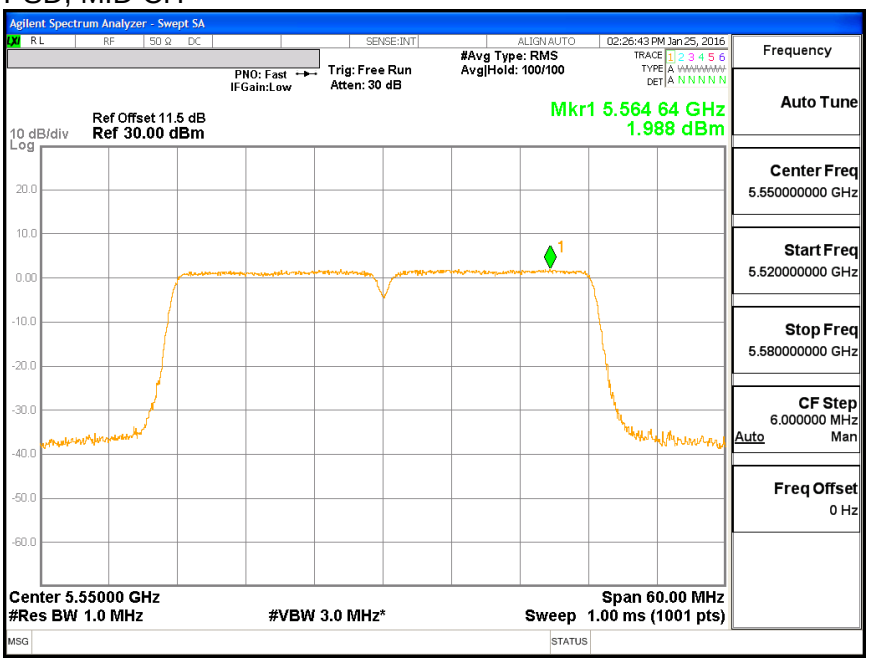
Channel	Frequency (MHz)	Antenna B Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5510	-0.49	-0.49	11.00	-11.49
Mid	5550	1.99	1.99	11.00	-9.01
High	5670	1.58	1.58	11.00	-9.42

PSD,

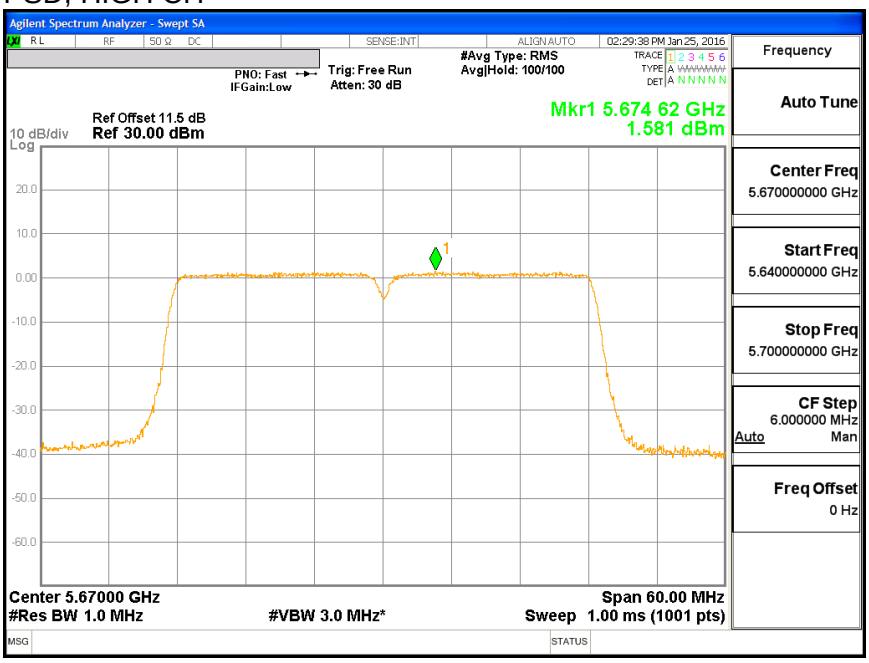
PSD, LOW CH



PSD, MID CH



PSD, HIGH CH



8.83. 802.11ac VHT40 ANTENNA - B STRADDLE CH 142 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)
142	5710	34.95	2.83	2.83	24.00	11.00

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

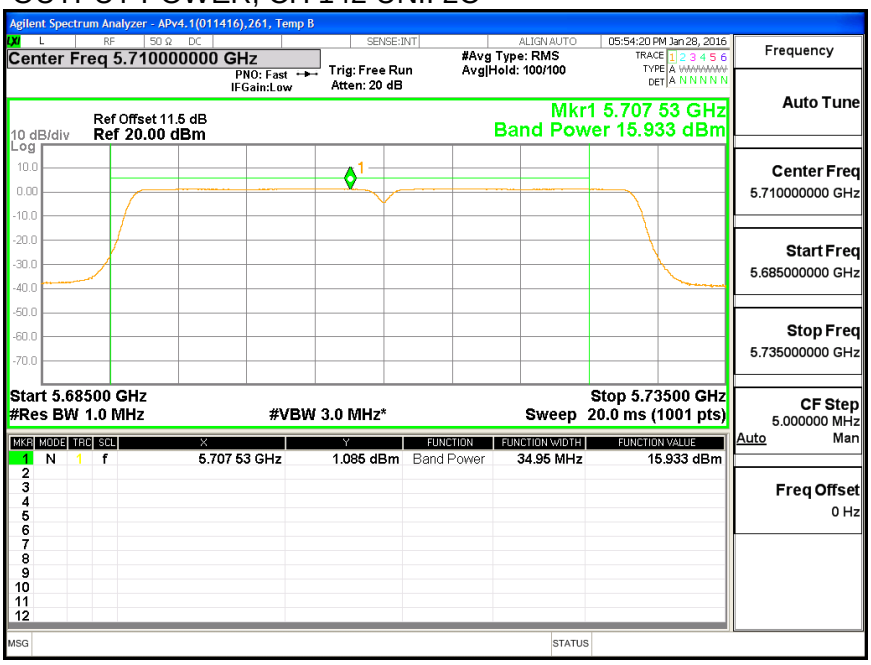
Output Power Results

Channel	Frequency (MHz)	Antenna B Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
142	5710	15.93	15.93	24.00	-8.07

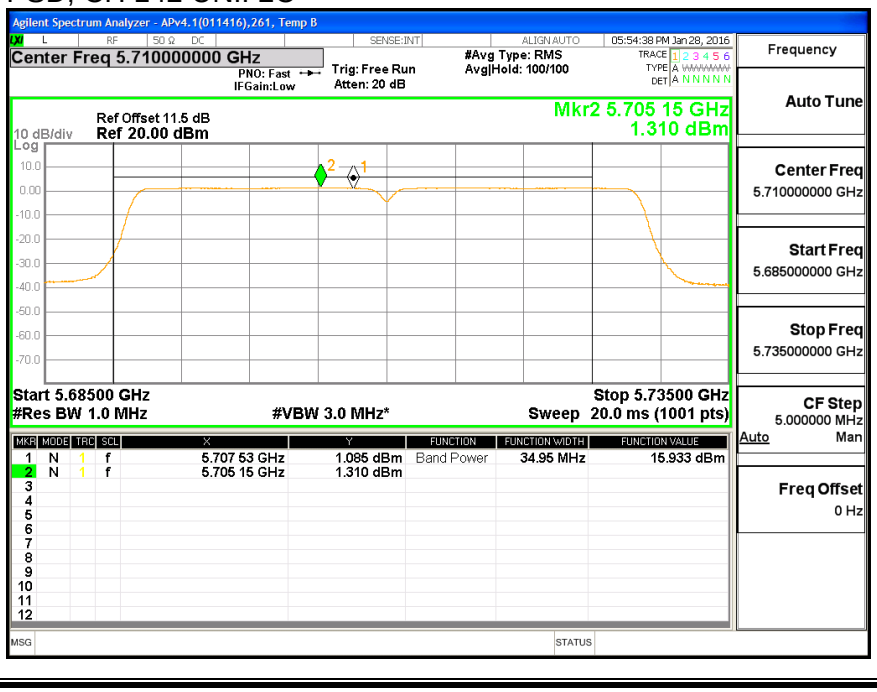
PSD Results

Channel	Frequency (MHz)	Antenna B Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
142	5710	1.31	1.31	11.00	-9.69

OUTPUT POWER, CH 142 UNII 2C



PSD, CH 142 UNII 2C



UNII-3 BAND

Antenna Gain and Limit

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm)
142	5710	4.95	2.83	30.00	30.00

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

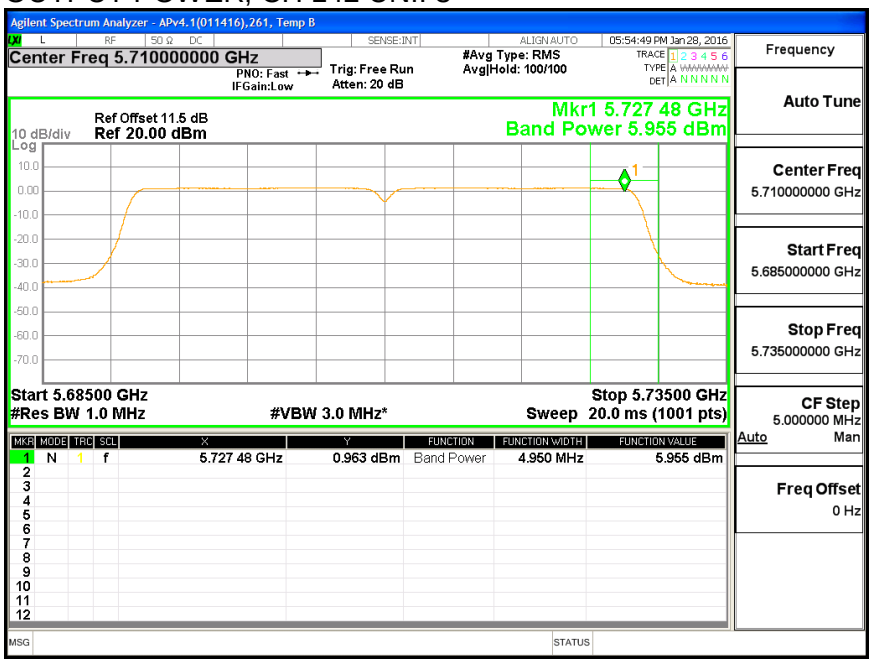
Output Power Results

Channel	Frequency (MHz)	Antenna B Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
142	5710	5.96	5.96	30.00	-24.05

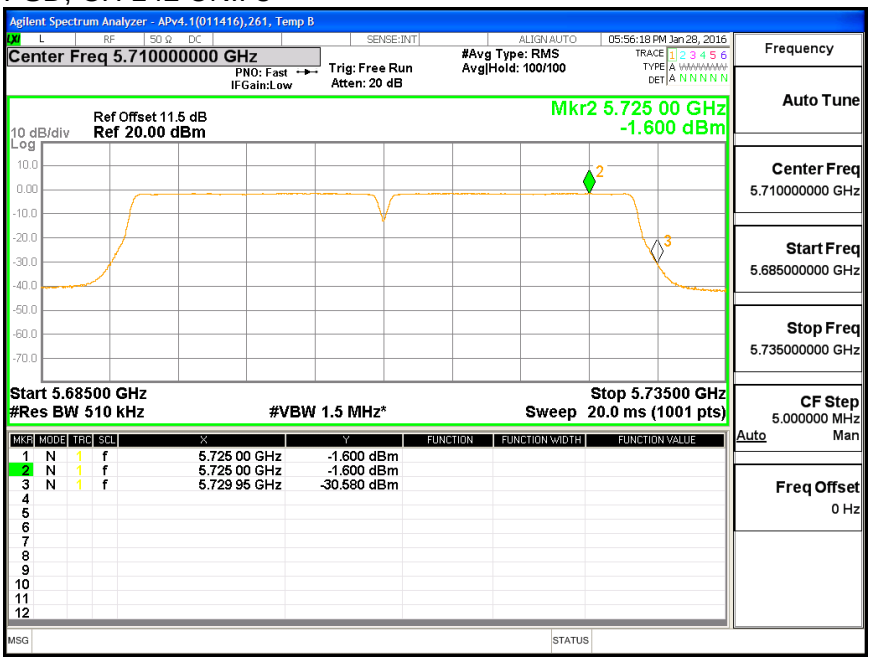
PSD Results

Channel	Frequency (MHz)	Antenna B Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
142	5710	-1.60	-1.60	30.00	-31.60

OUTPUT POWER, CH 142 UNII 3



PSD, CH 142 UNII 3



8.83.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

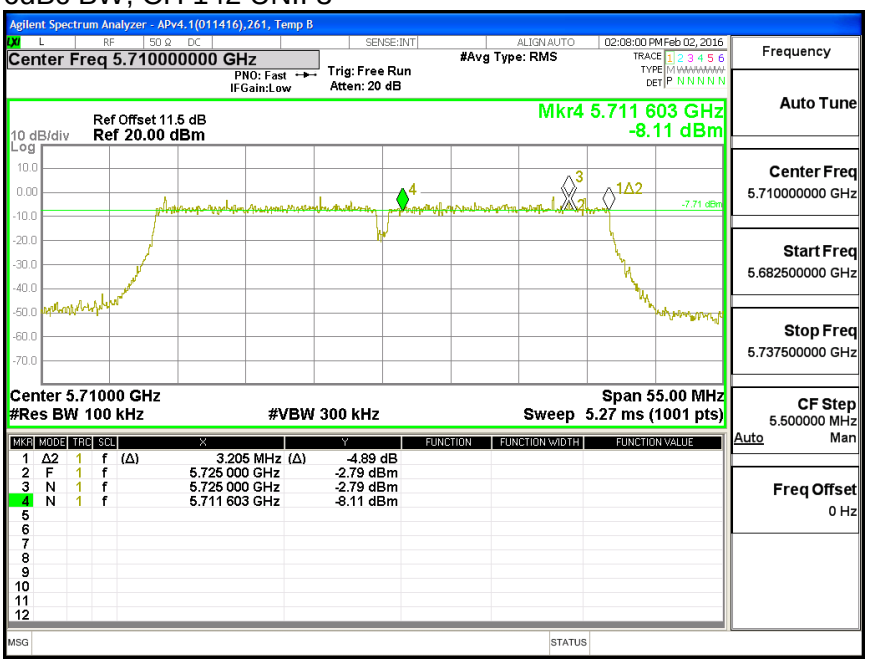
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)
142	5710	3.21

6 dB BANDWIDTH

6dBc BW, CH 142 UNII 3



8.84. 802.11n HT40 ANTENNA - A MODE IN THE 5.6 GHz BAND

8.84.1. 26 dB BANDWIDTH

LIMITS

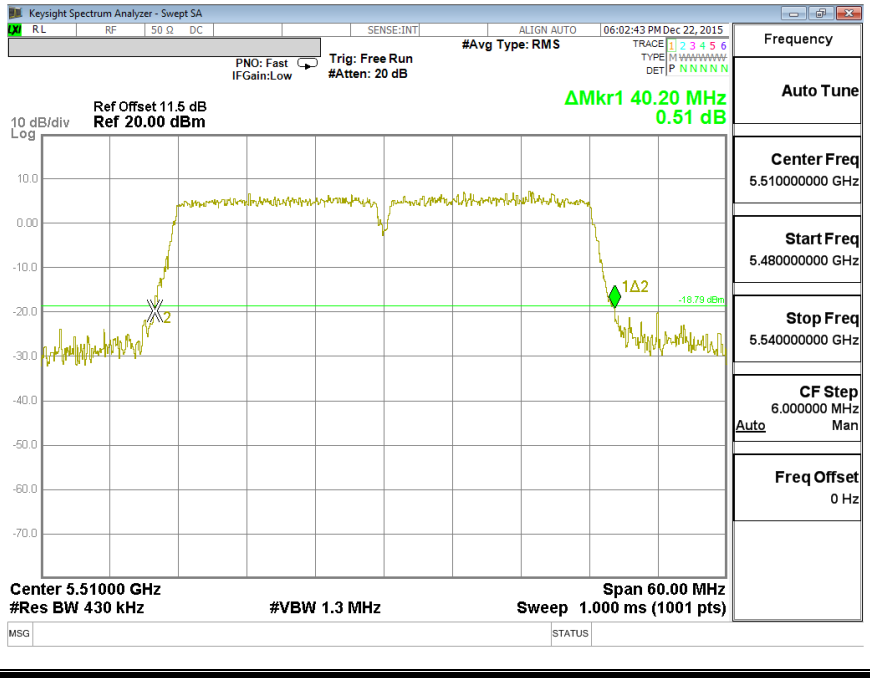
None; for reporting purposes only.

RESULTS

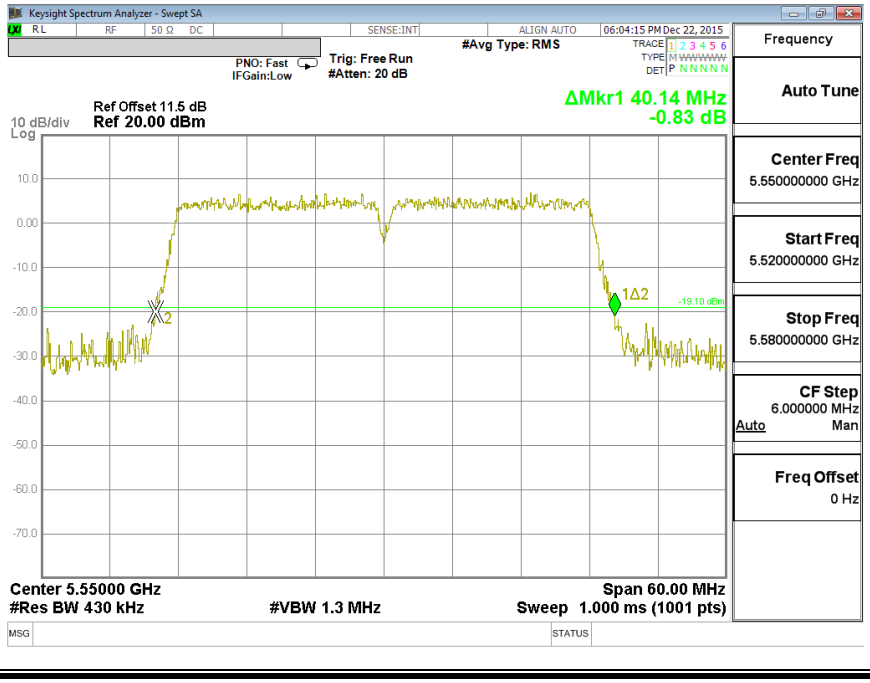
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5510	40.20
Mid	5550	40.14
High	5670	40.26
142	5710	39.90

26 dB BANDWIDTH

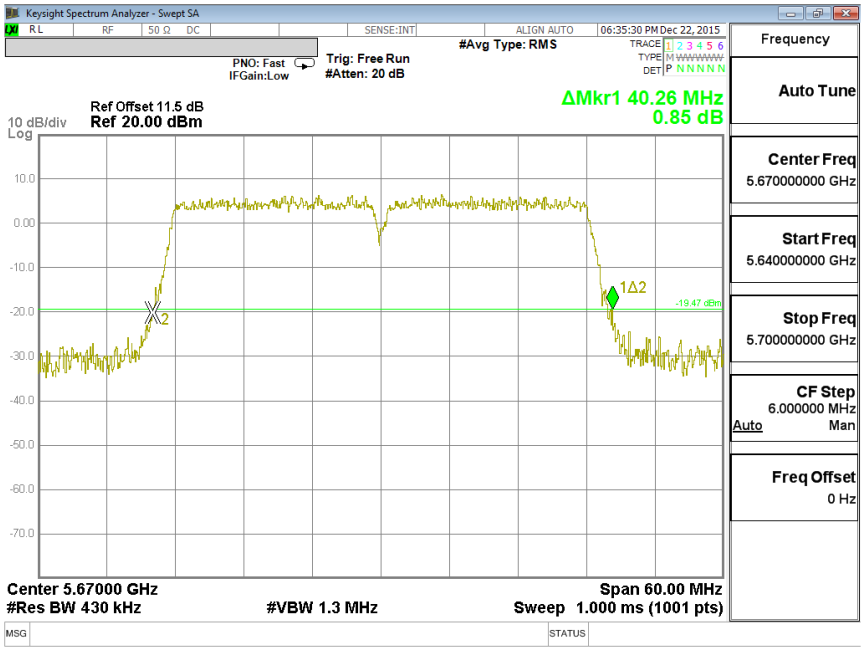
BANDWIDTH, LOW CH



BANDWIDTH, MID CH



BANDWIDTH' HIGH CH



BANDWIDTH STRADDLE CH 142

8.84.2. 99% BANDWIDTH

LIMITS

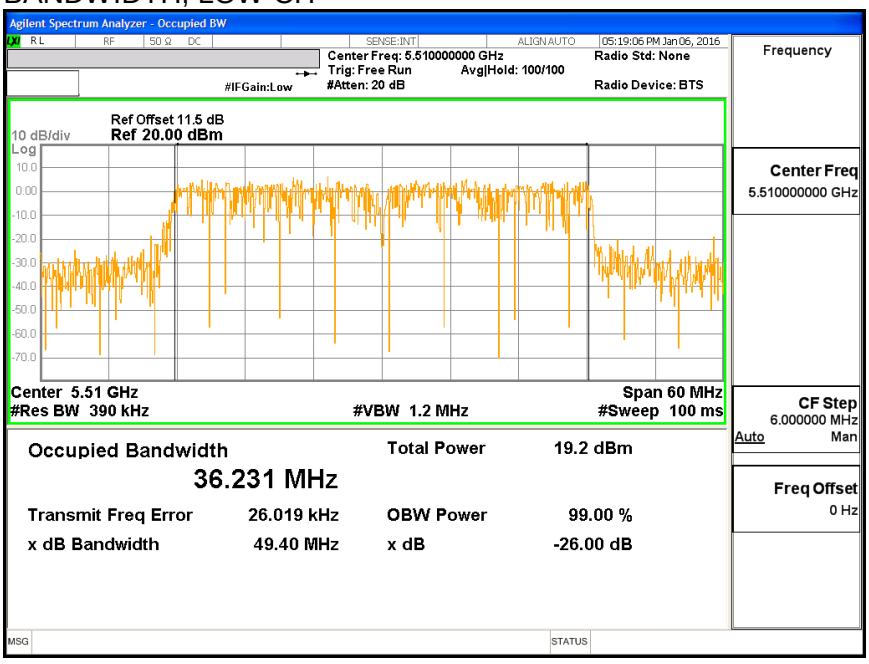
None; for reporting purposes only.

RESULTS

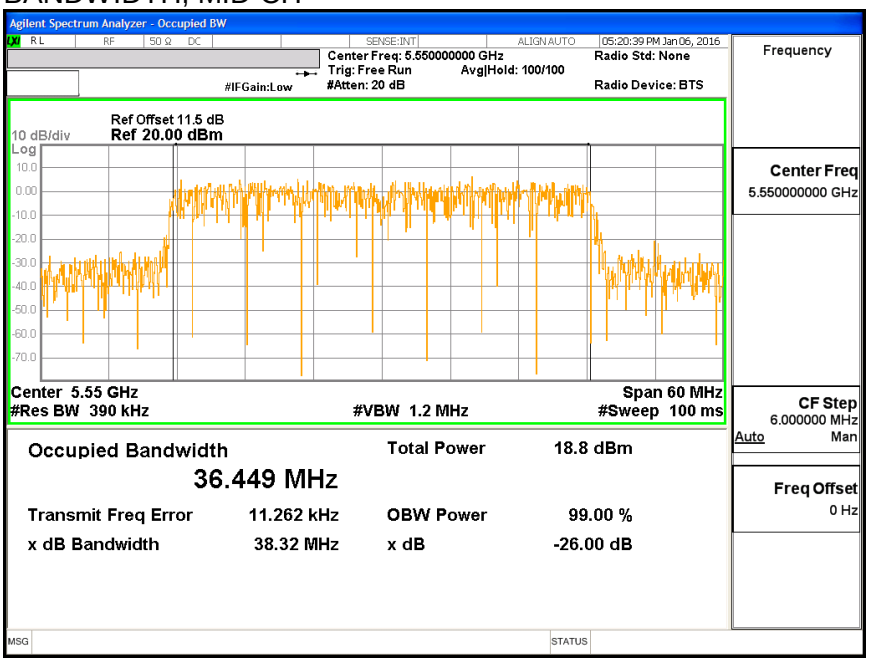
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5510	36.231
Mid	5550	36.449
High	5670	36.266
142	5710	36.150

99% BANDWIDTH

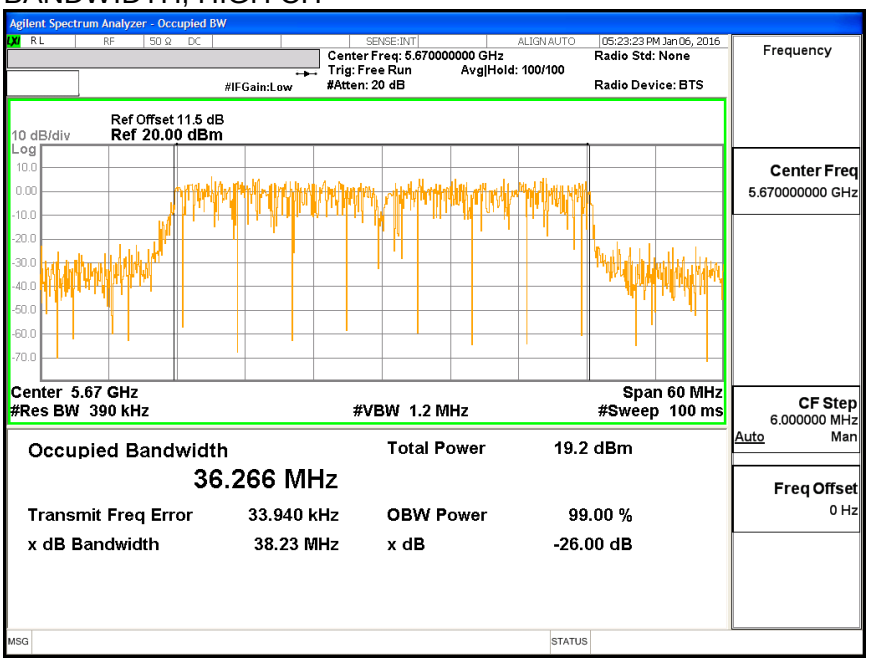
BANDWIDTH, LOW CH



BANDWIDTH, MID CH



BANDWIDTH, HIGH CH



BANDWIDTH, STRADDLE CH 142

8.84.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

Channel	Frequency (MHz)	Power (dBm)
Low	5510	13.96
Mid	5550	16.00
High	5670	15.92
142	5710	15.99

8.84.4. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.47–5.725 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26–dB emission bandwidth in MHz. In addition, the peak power spectral density shall not exceed 11 dBm in any 1–MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST PROCEDURE

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

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

DIRECTIONAL ANTENNA GAIN

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

RESULTS

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Low	5510	40.20	36.231	4.03	24.00	11.00
Mid	5550	40.14	36.449	4.03	24.00	11.00
High	5670	40.26	36.266	4.03	24.00	11.00

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

Output Power Results

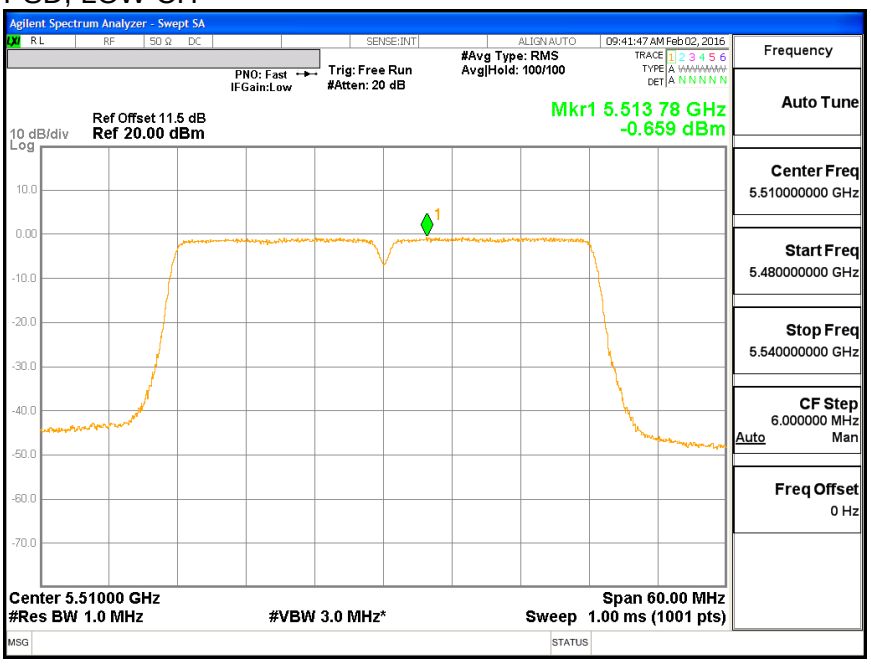
Channel	Frequency (MHz)	Antenna A Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5510	13.96	13.96	24.00	-10.04
Mid	5550	16.00	16.00	24.00	-8.00
High	5670	15.92	15.92	24.00	-8.08

PSD Results

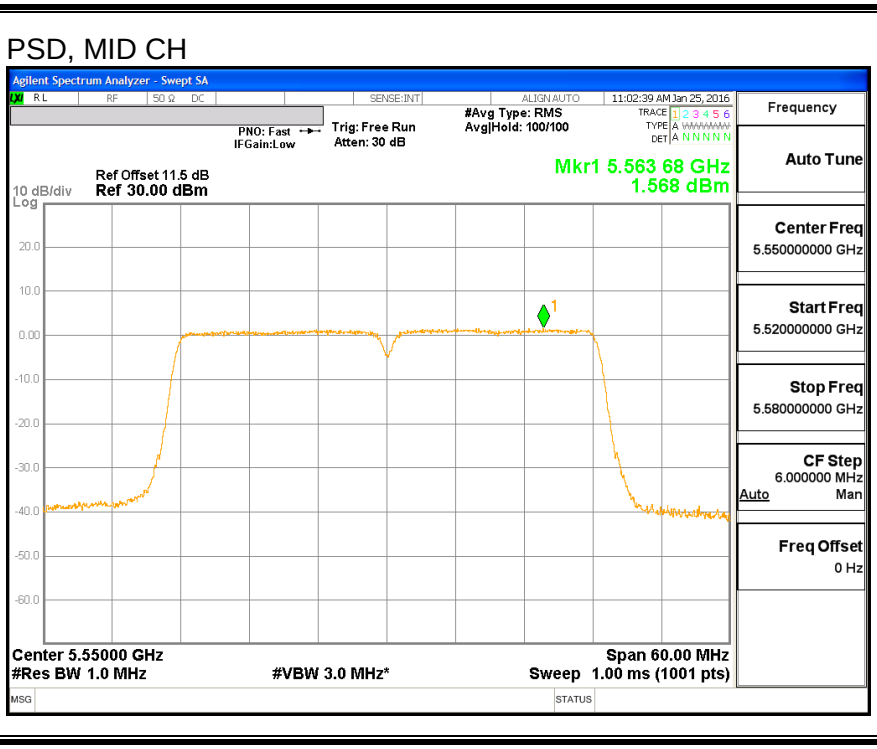
Channel	Frequency (MHz)	Antenna A Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5510	-0.66	-0.66	11.00	-11.66
Mid	5550	1.57	1.57	11.00	-9.43
High	5670	1.49	1.49	11.00	-9.51

PSD,

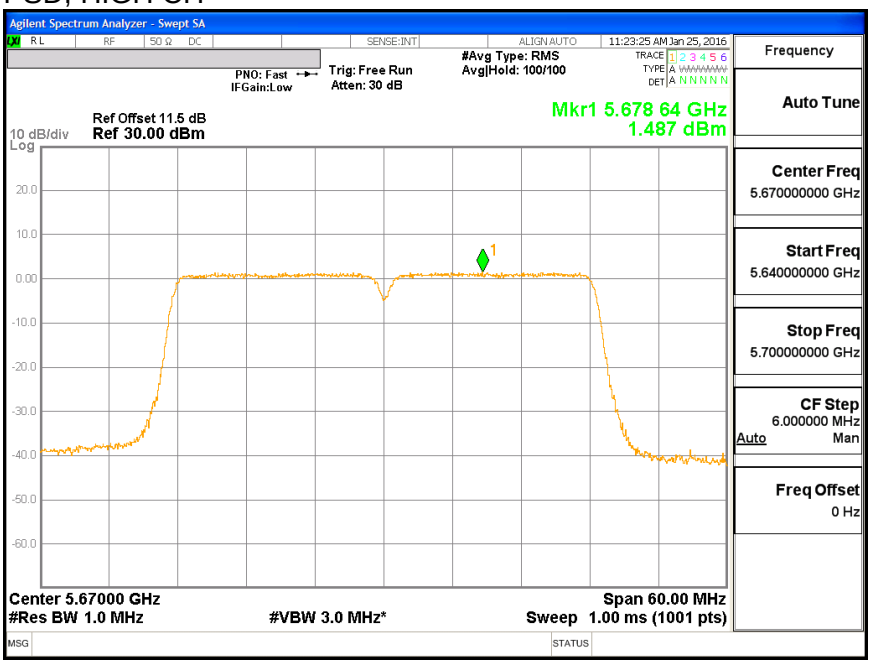
PSD, LOW CH



PSD, MID CH



PSD, HIGH CH



8.85. 802.11ac VHT40 ANTENNA - A STRADDLE CH 142 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)
142	5710	34.95	4.03	4.03	24.00	11.00

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

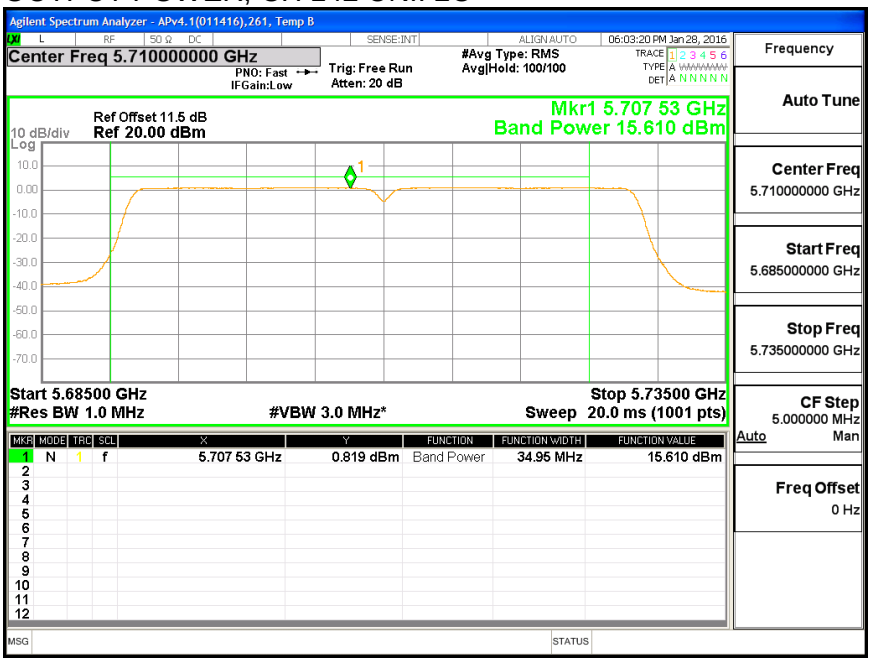
Output Power Results

Channel	Frequency (MHz)	Antenna A Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
142	5710	15.61	15.61	24.00	-8.39

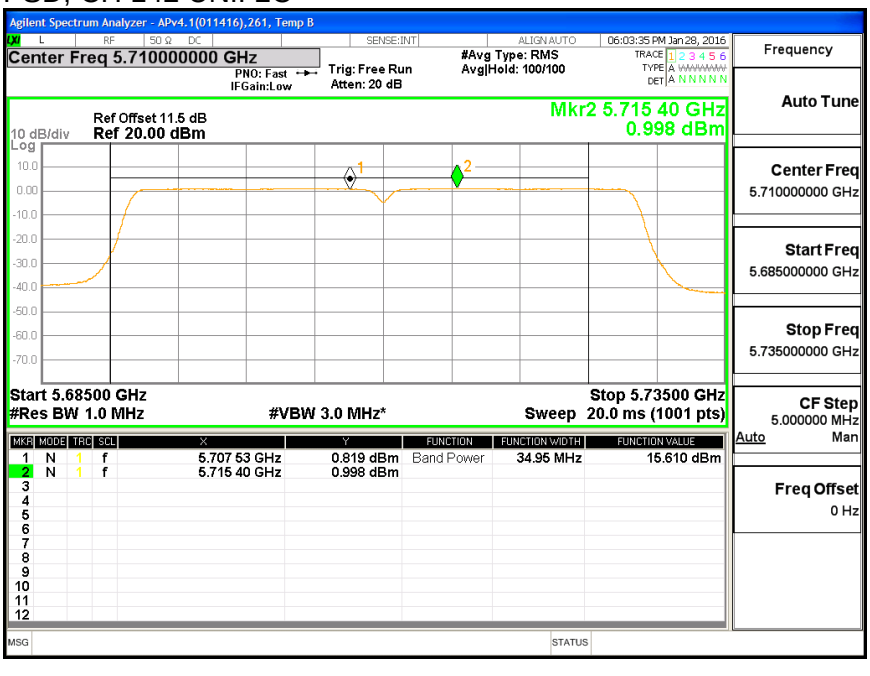
PSD Results

Channel	Frequency (MHz)	Antenna A Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
142	5710	1.00	1.00	11.00	-10.00

OUTPUT POWER, CH 142 UNII 2C



PSD, CH 142 UNII 2C



UNII-3 BAND

Antenna Gain and Limit

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm)
142	5710	4.95	4.03	30.00	30.00

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

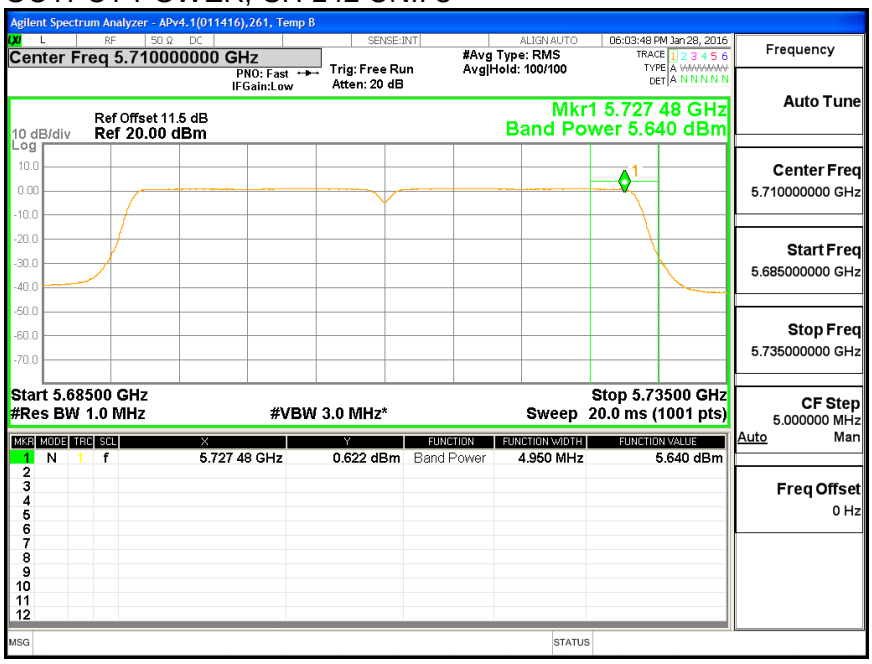
Output Power Results

Channel	Frequency (MHz)	Antenna A Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
142	5710	5.64	5.64	30.00	-24.36

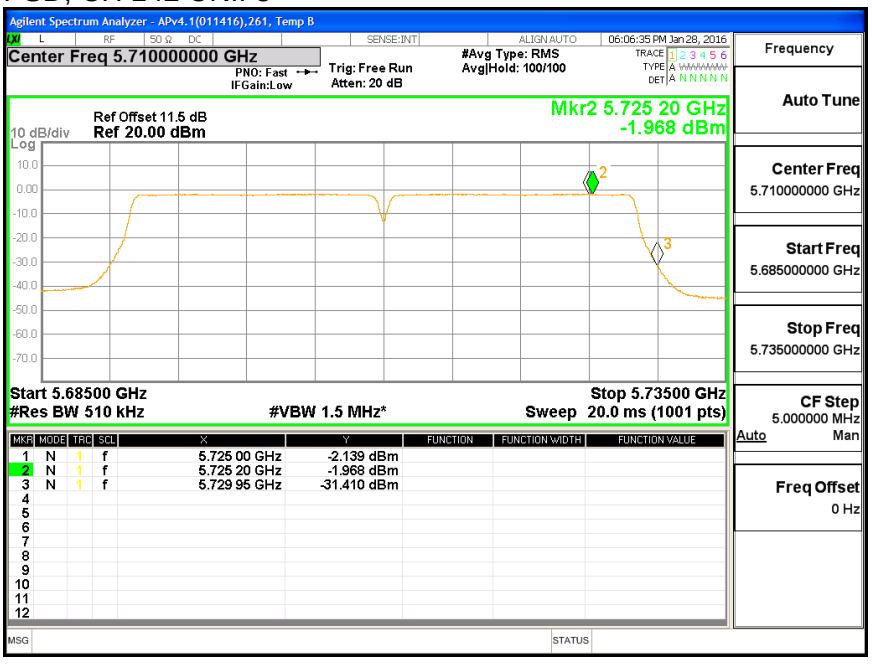
PSD Results

Channel	Frequency (MHz)	Antenna A Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
142	5710	-1.97	-1.97	30.00	-31.97

OUTPUT POWER, CH 142 UNII 3



PSD, CH 142 UNII 3



8.85.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

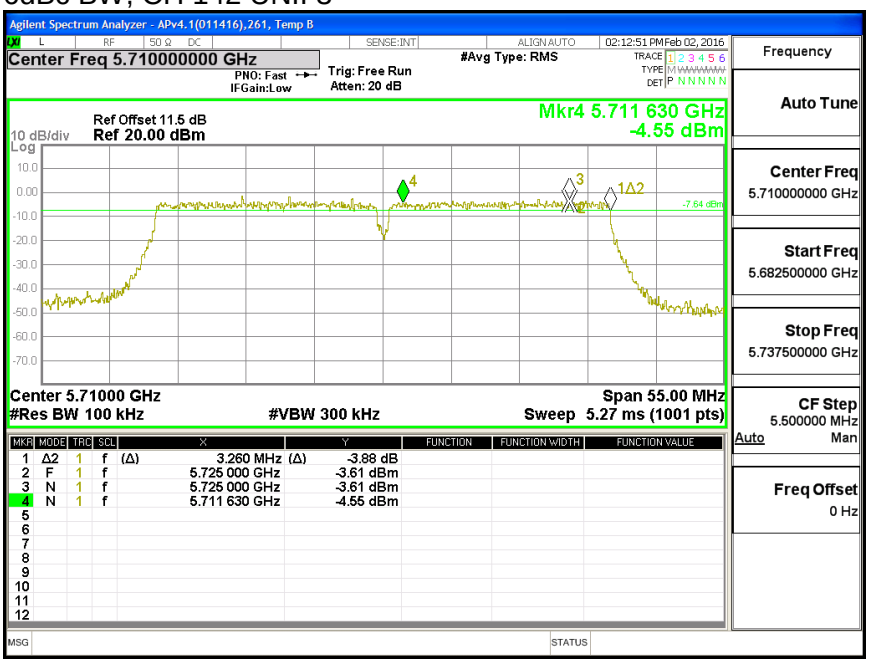
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)
142	5710	3.26

6 dB BANDWIDTH

6dBc BW, CH 142 UNII 3



8.86. 802.11n HT40 ANTENNA - C MODE IN THE 5.6 GHz BAND

8.86.1. 26 dB BANDWIDTH

LIMITS

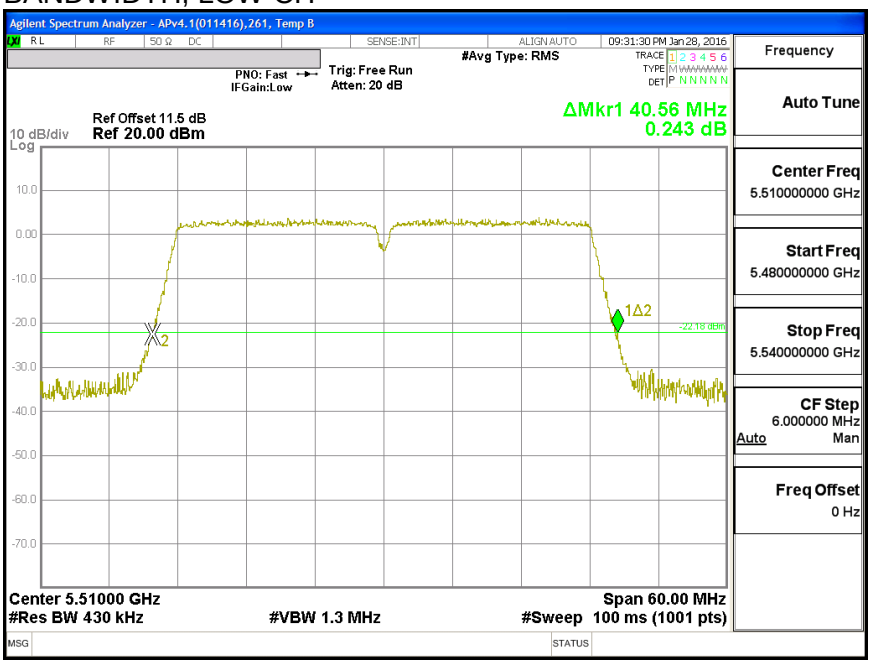
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5510	40.56
Mid	5550	40.56
High	5670	40.62
142	5710	40.38

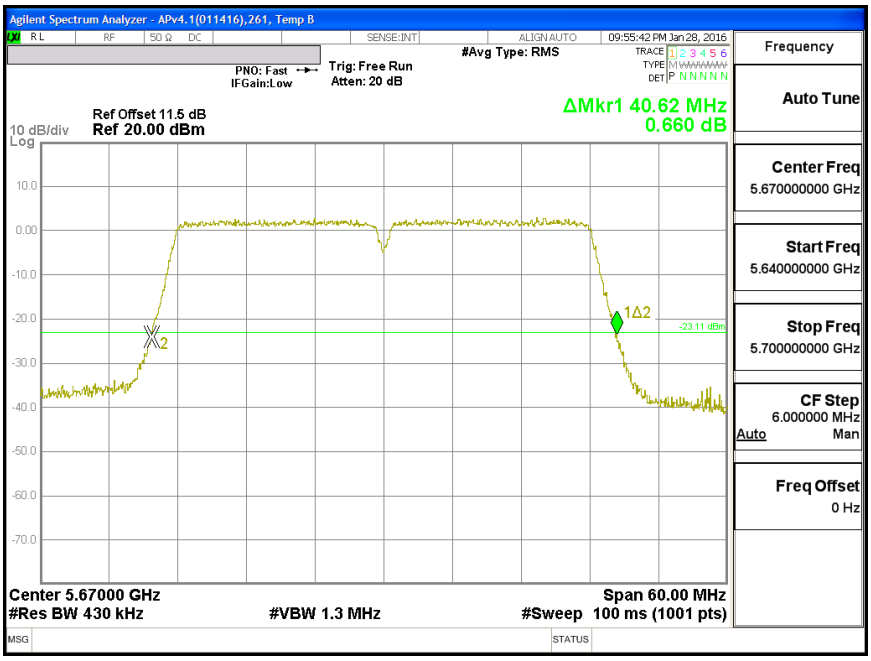
26 dB BANDWIDTH

BANDWIDTH, LOW CH



BANDWIDTH, MID CH

BANDWIDTH' HIGH CH



BANDWIDTH STRADDLE CH 142