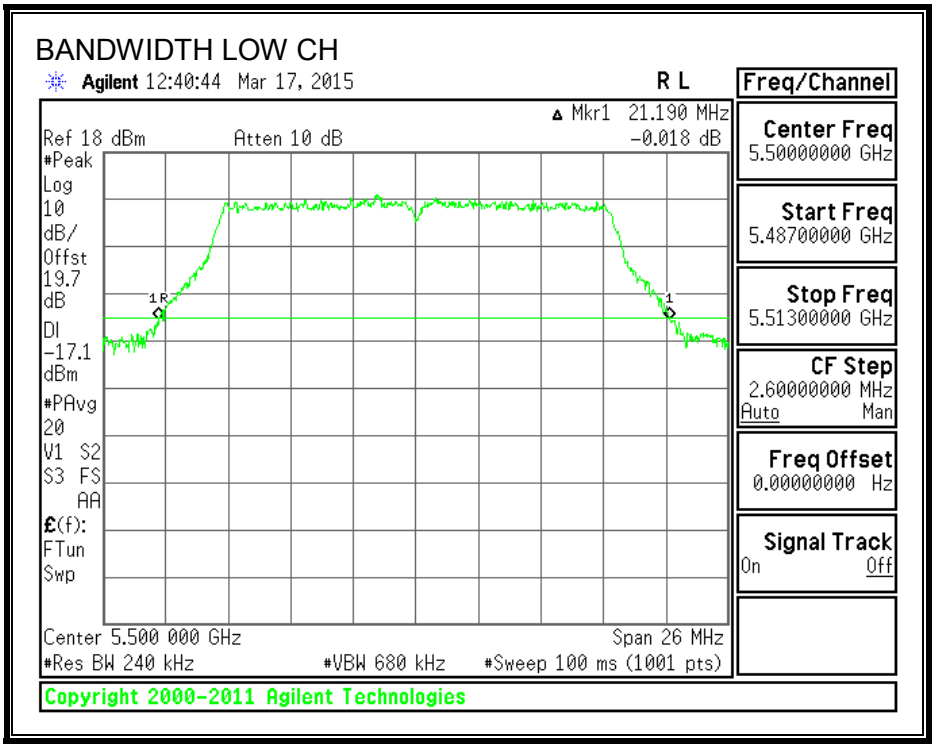
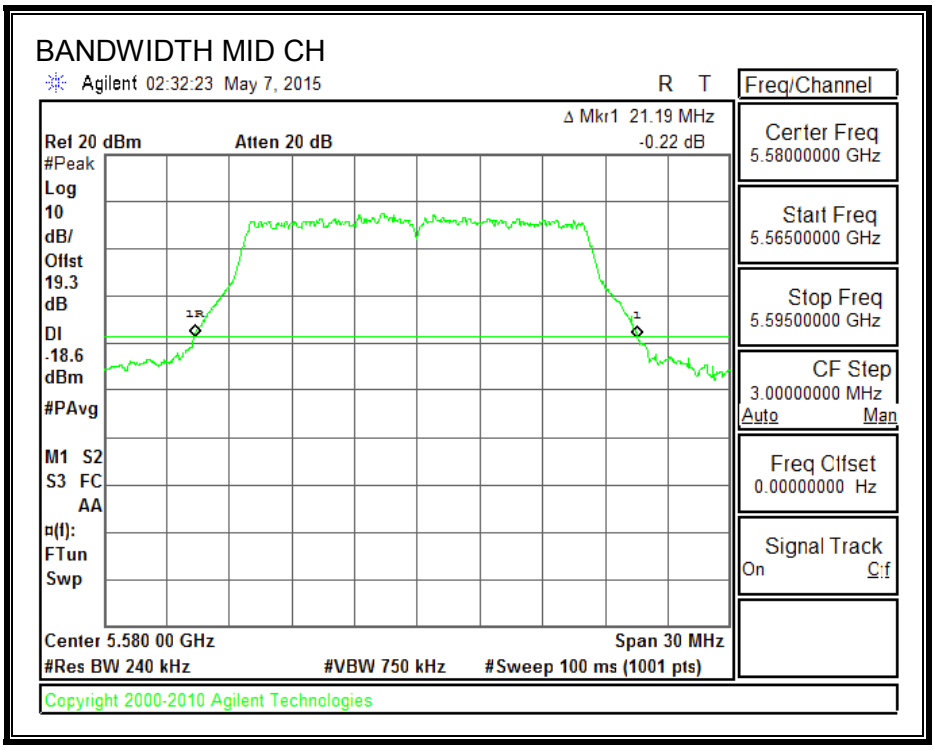
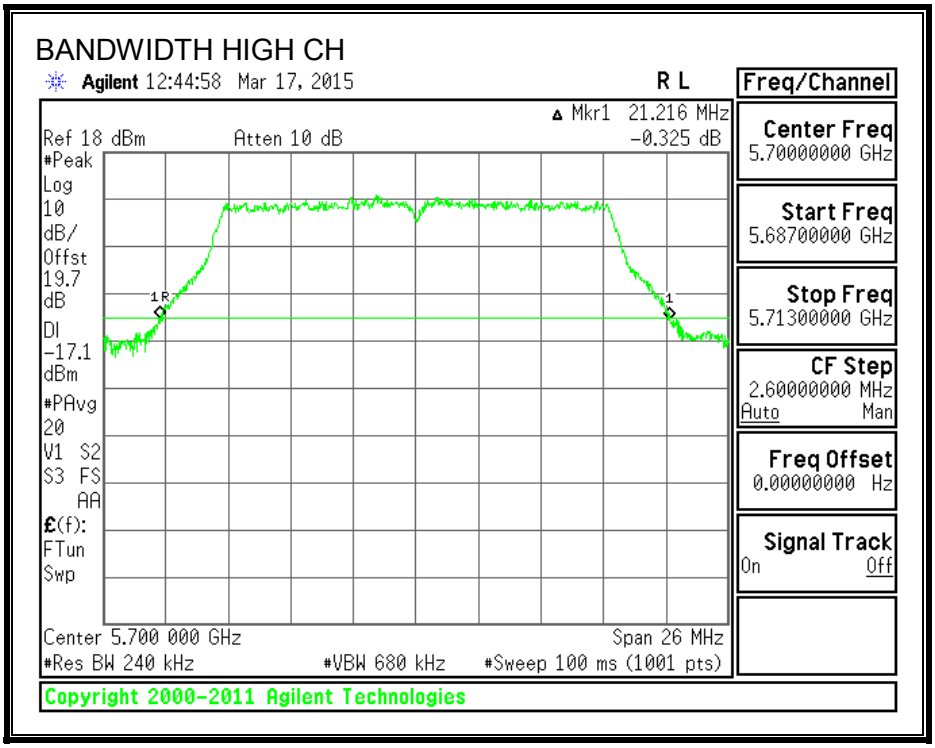
26 dB BANDWIDTH







8.37.2. 99% BANDWIDTH

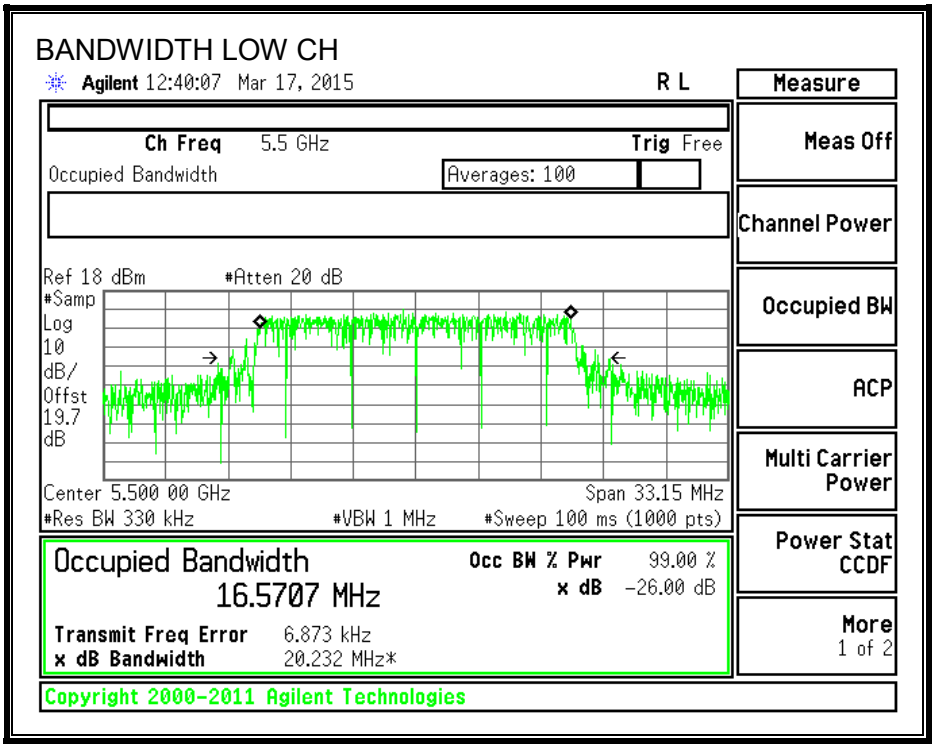
LIMITS

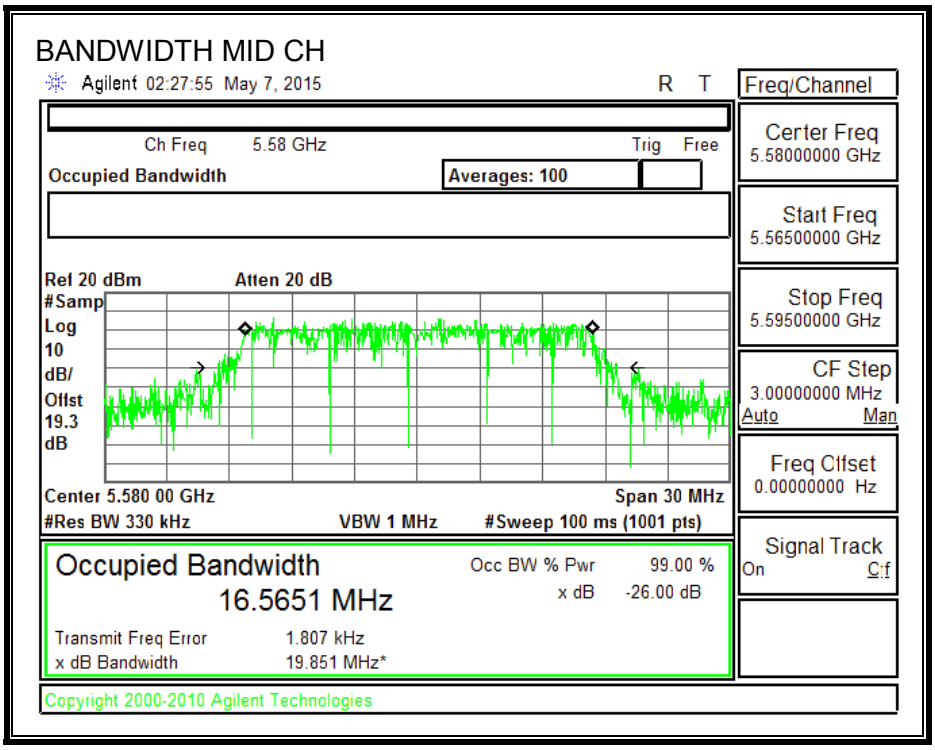
None; for reporting purposes only.

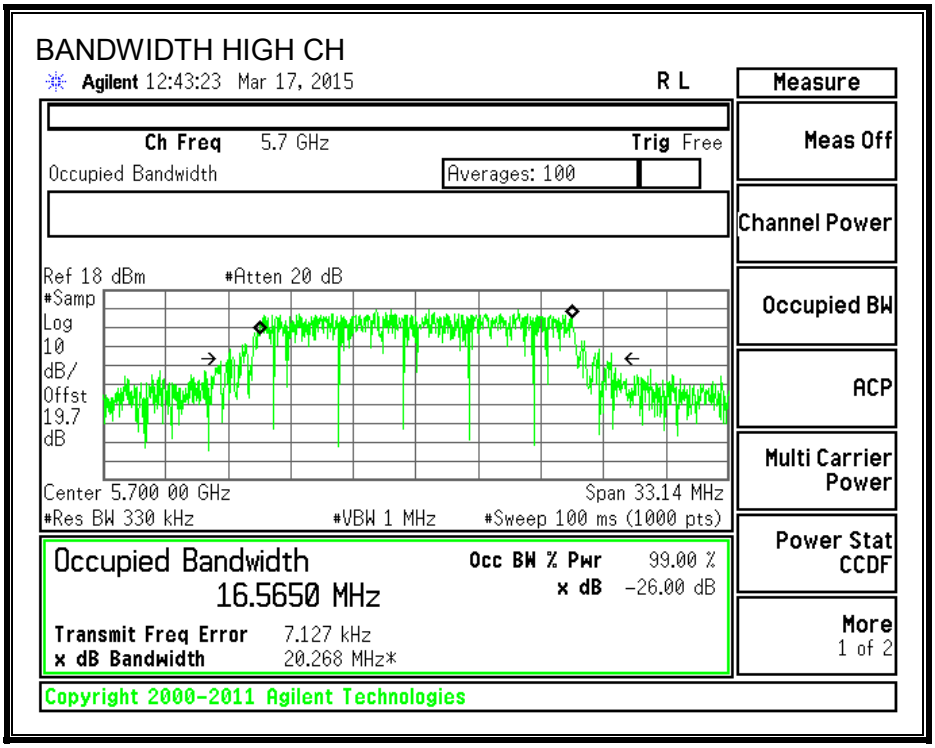
RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5500	16.5707
Mid	5580	16.5651
High	5700	16.5650

99% BANDWIDTH







8.37.3. 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.

DIRECTIONAL ANTENNA GAIN

This is SISO mode, AG is the highest (worst-case) = 5.72 dBi

RESULTS

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Low	5500	23.14	5.72	24.00	11.00
Mid	5600	21.29	5.72	24.00	11.00
High	5700	22.97	5.72	24.00	11.00

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

Output Power Results

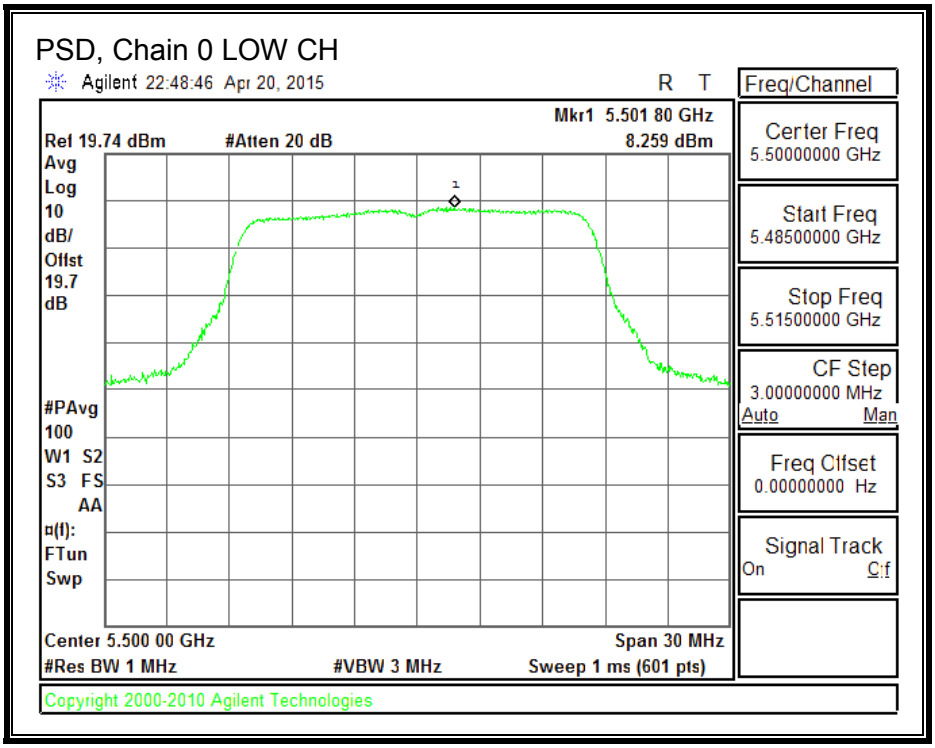
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	15.90	15.90	24.00	-8.10
Mid	5600	18.00	18.00	24.00	-6.00
High	5700	14.70	14.70	24.00	-9.30

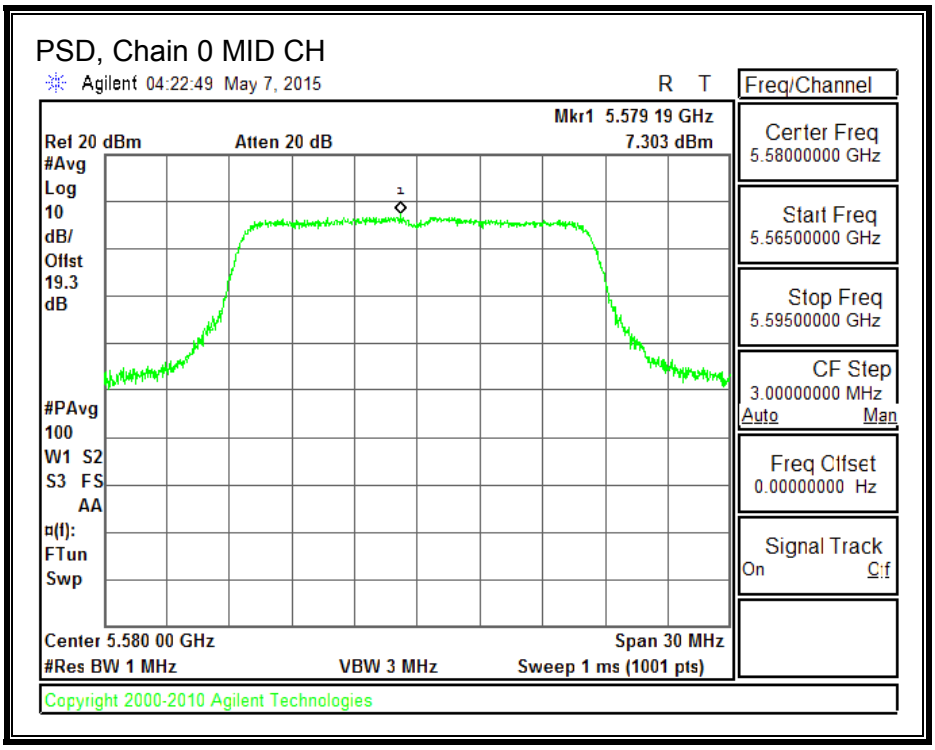
PSD Results

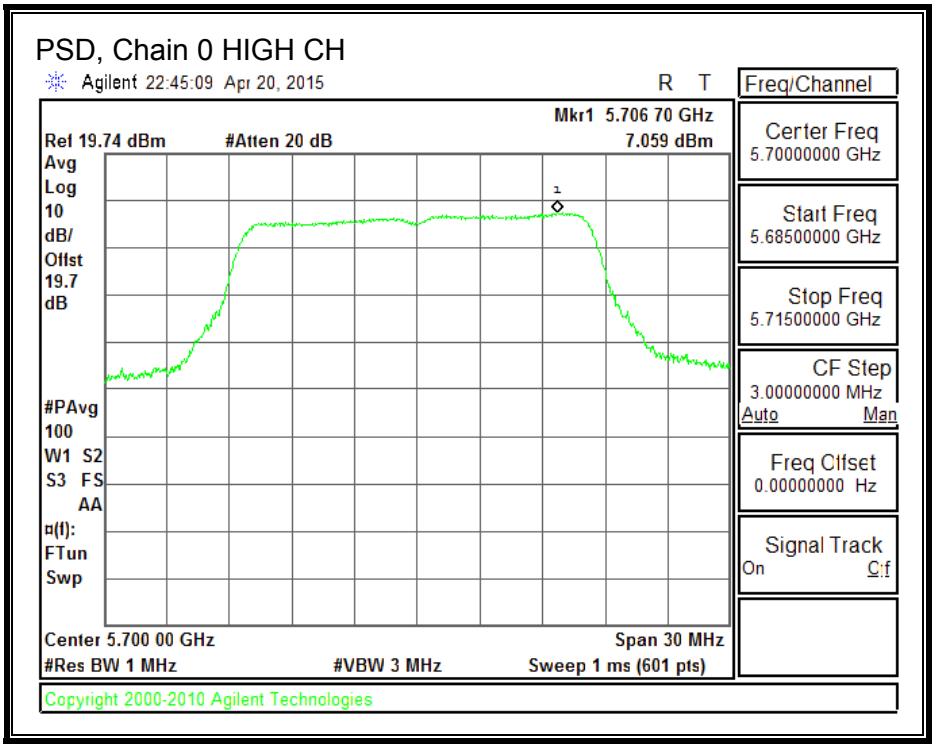
Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5500	8.259	8.259	11.00	-2.741
Mid	5600	7.303	7.303	11.00	-3.697
High	5700	7.059	7.059	11.00	-3.941

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

PSD, Chain 0







8.38. 802.11n HT20 CDD 2TX MODE IN THE 5.6 GHz BAND

8.38.1. 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.

DIRECTIONAL ANTENNA GAIN

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

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
3.17	4.72	5.01

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

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
3.17	4.72	7.99

RESULTS

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)
Low	5500	27.89	5.01	7.99	24.00	9.01
Mid	5580	27.24	5.01	7.99	24.00	9.01
High	5700	21.35	5.01	7.99	24.00	9.01

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

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	15.10	15.00	18.06	24.00	-5.94
Mid	5580	15.90	16.00	18.96	24.00	-5.04
High	5700	13.50	13.20	16.36	24.00	-7.64

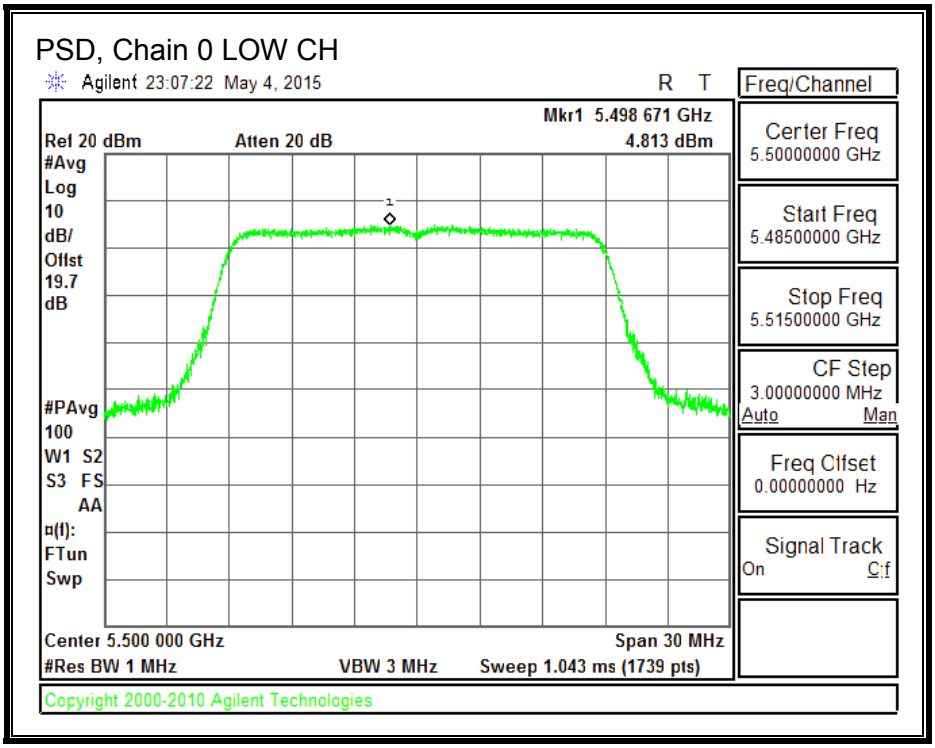
PSD Results

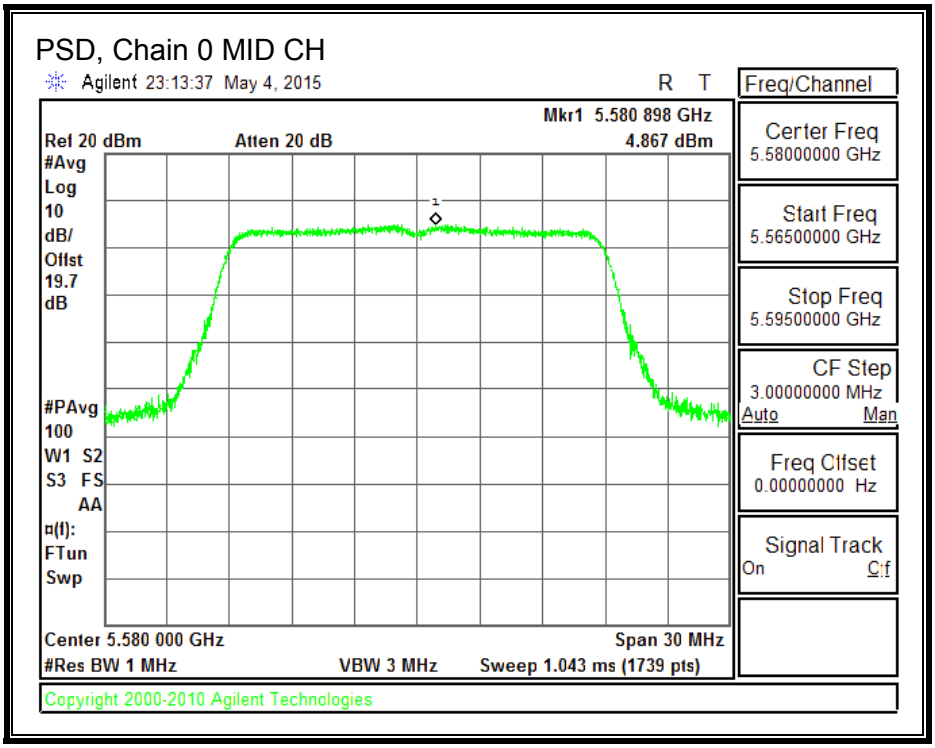
Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5500	4.813	5.129	7.98	9.01	-1.03
Mid	5580	4.867	5.073	7.98	9.01	-1.03
High	5700	4.987	4.984	8.00	9.01	-1.01

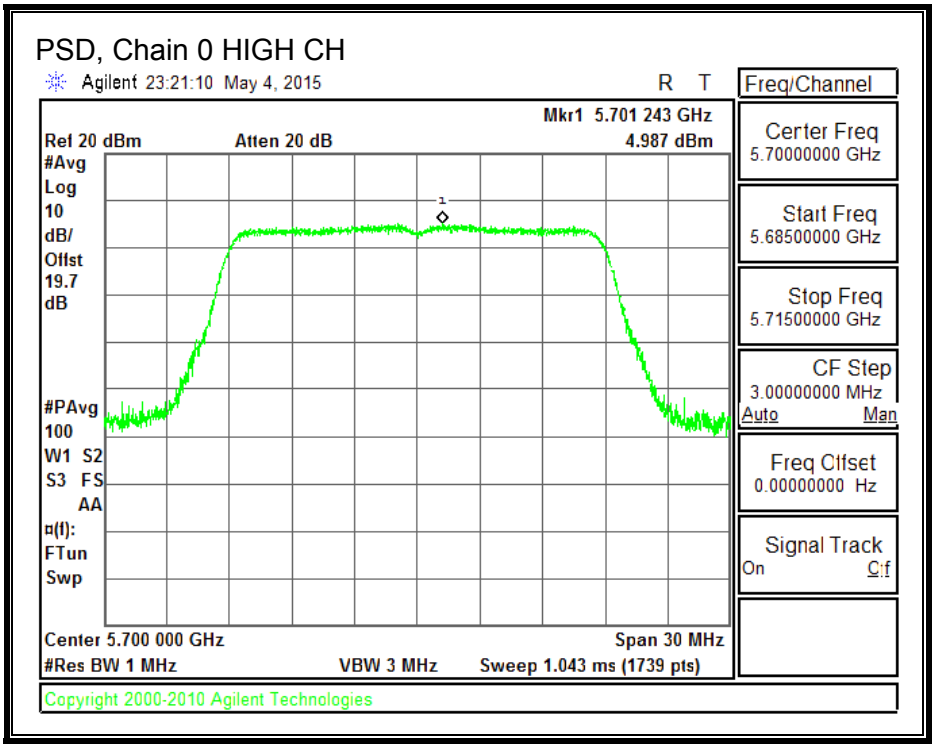
Note: for Chain 0 and Chain 1, 26dB & 99% data & plots, see section 802.11n HT20 CDD 3TX MODE IN THE 5.6 GHz BAND

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary

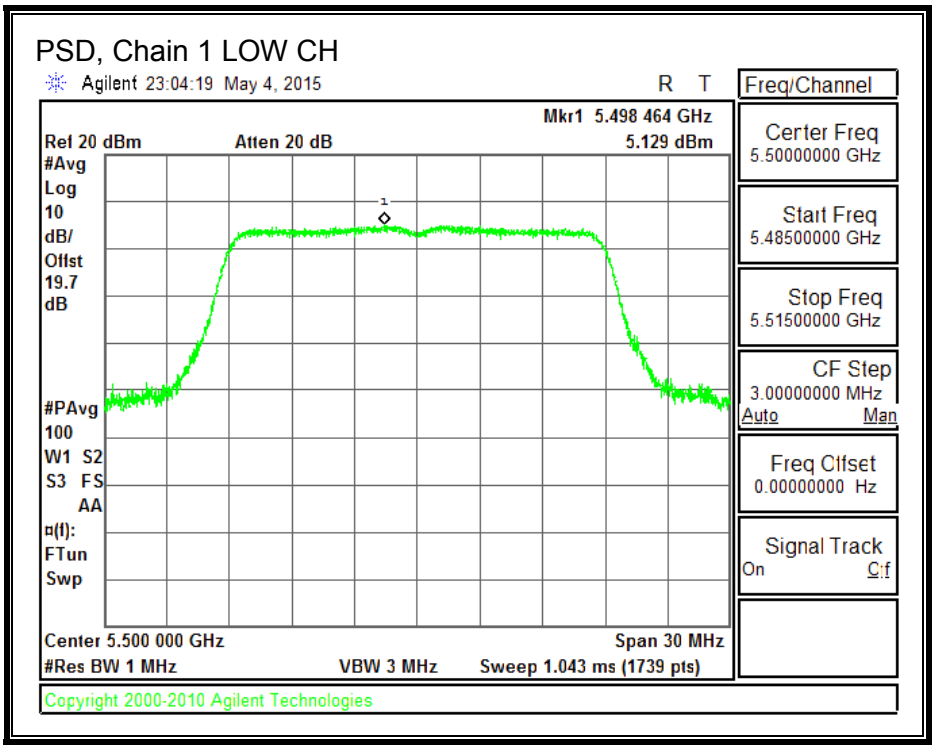
PSD, Chain 0



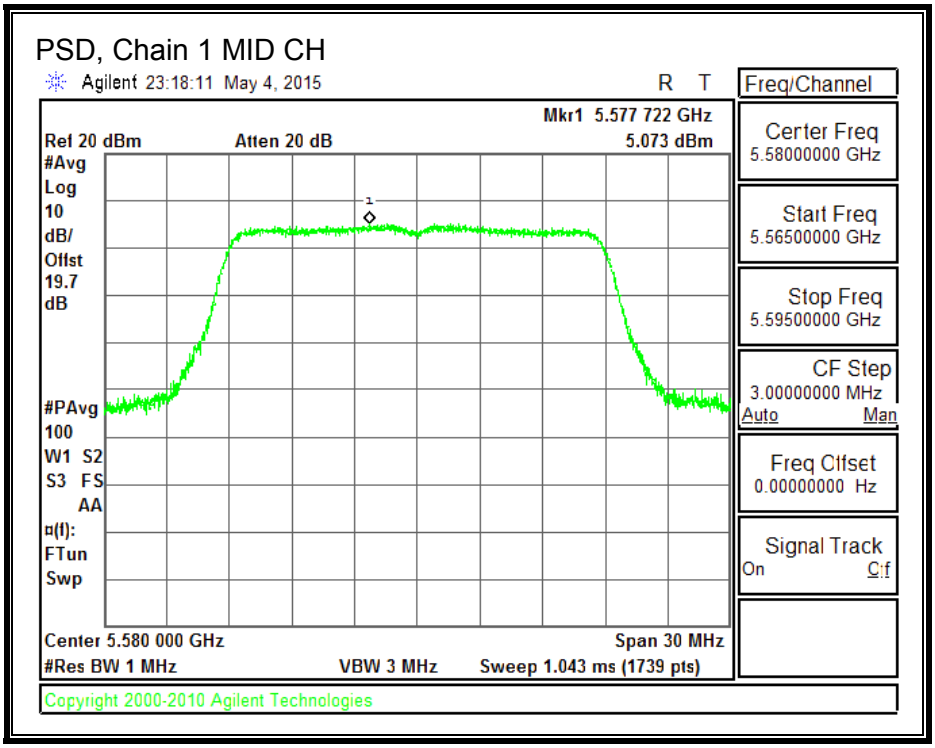




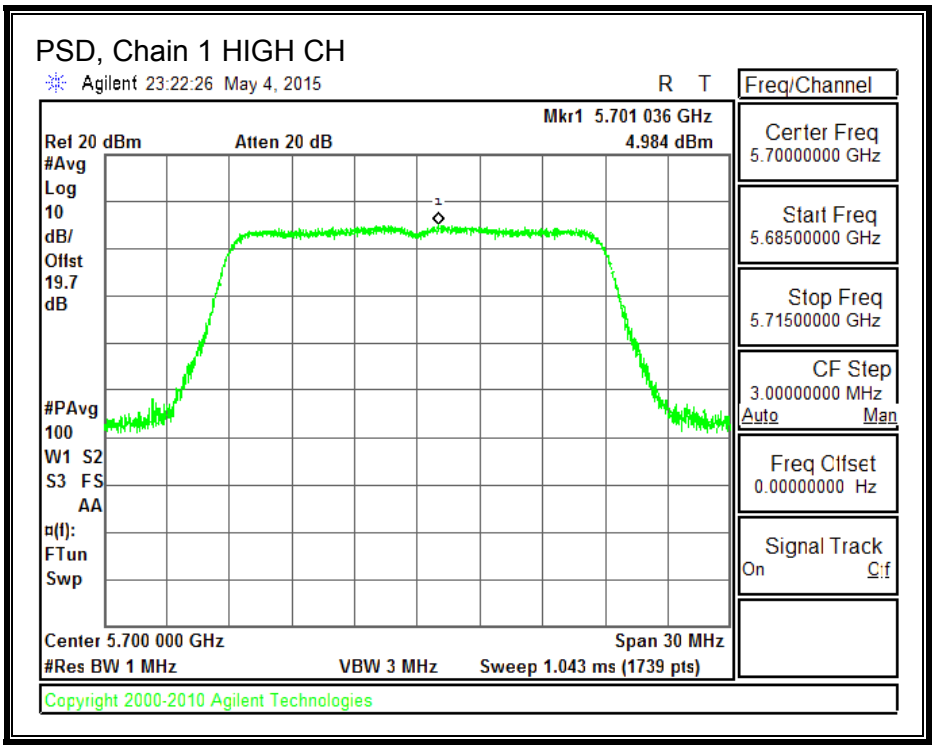
PSD, Chain 1



PSD, Chain 1 MID CH



PSD, Chain 1 HIGH CH



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	20.08	5.01	7.99	24.00	9.01

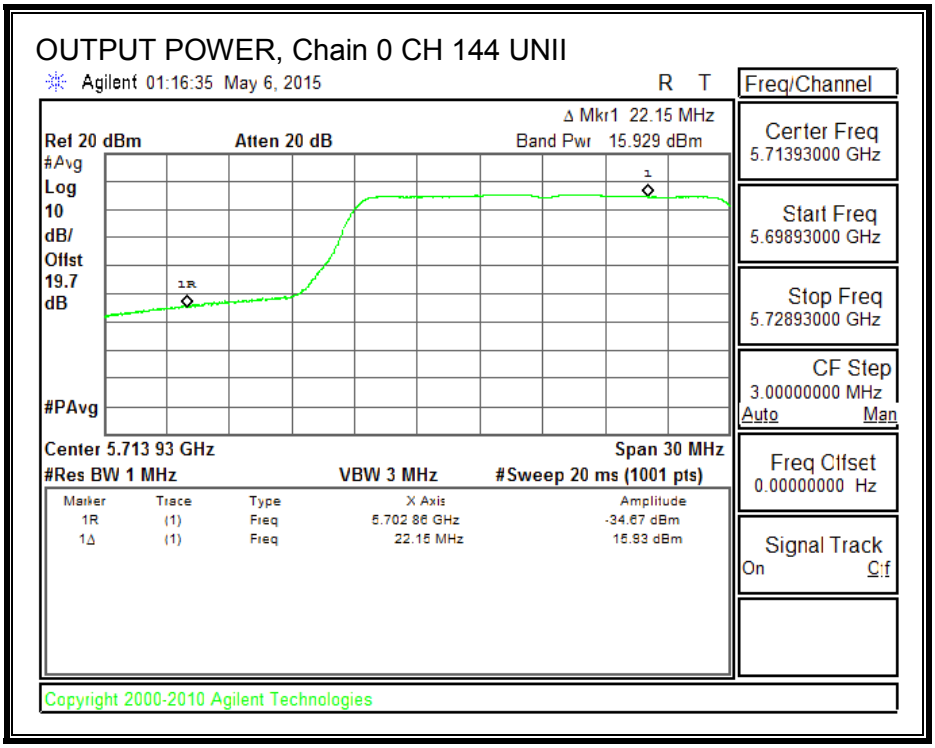
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power & PSD

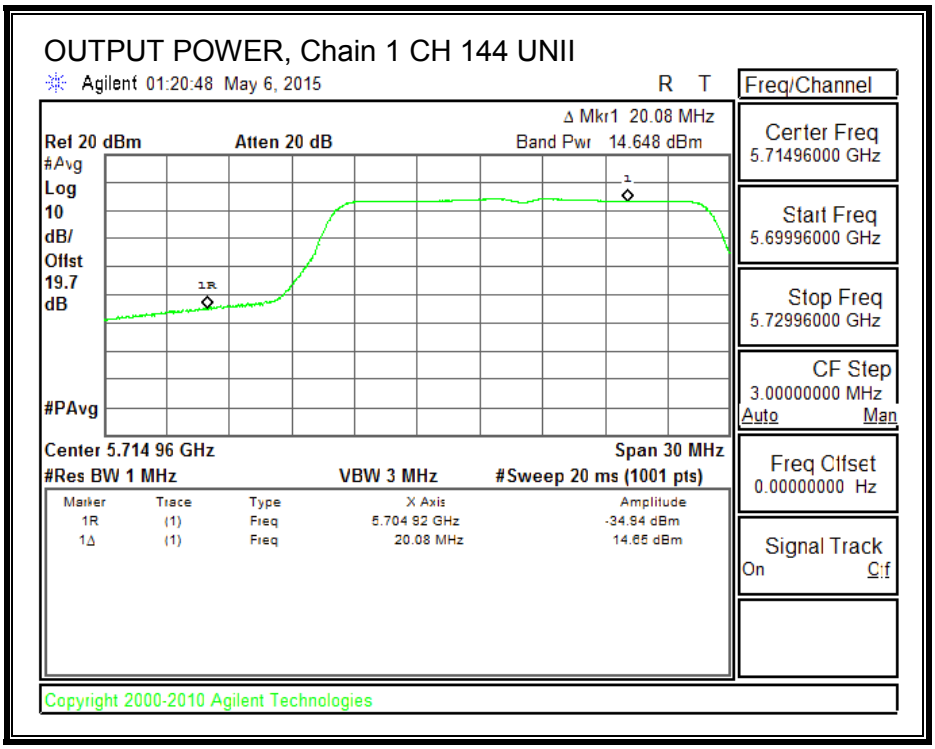
Output Power Results

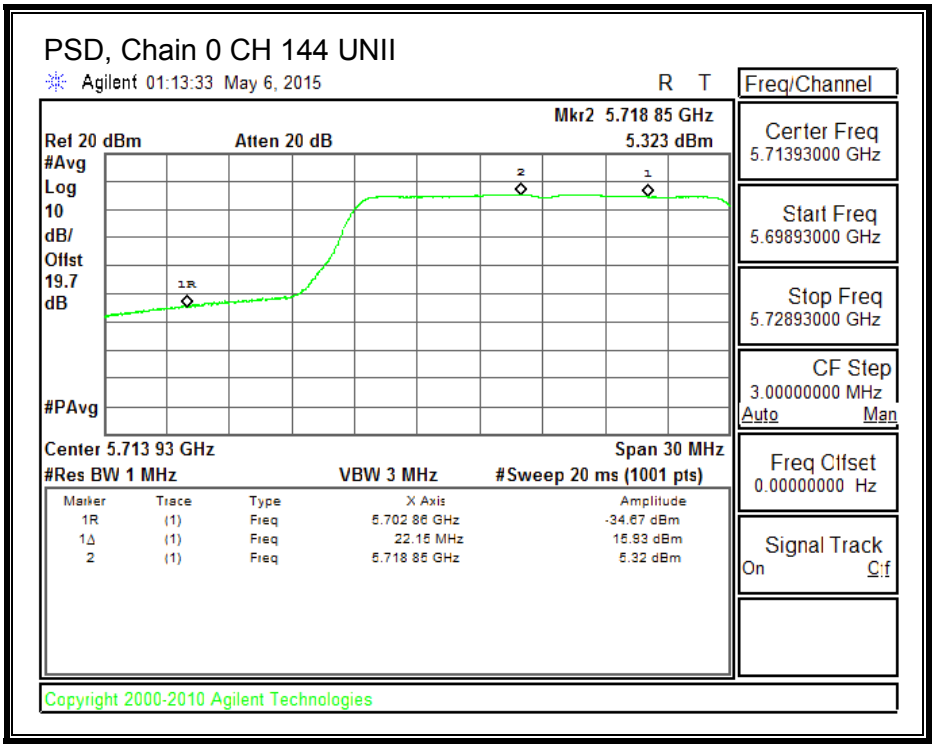
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
144	5720	15.929	14.648	18.35	24.00	-5.65

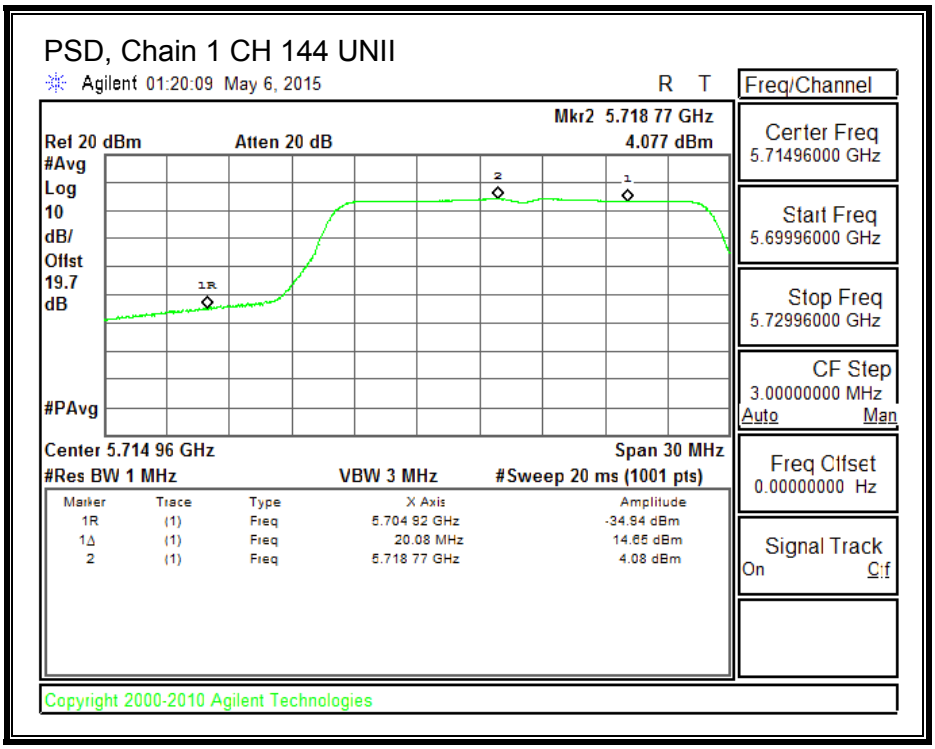
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
144	5720	5.323	4.077	7.75	9.01	-1.26









UNII-3 BAND

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
144	5720	5.06	8.03	30.00	27.97

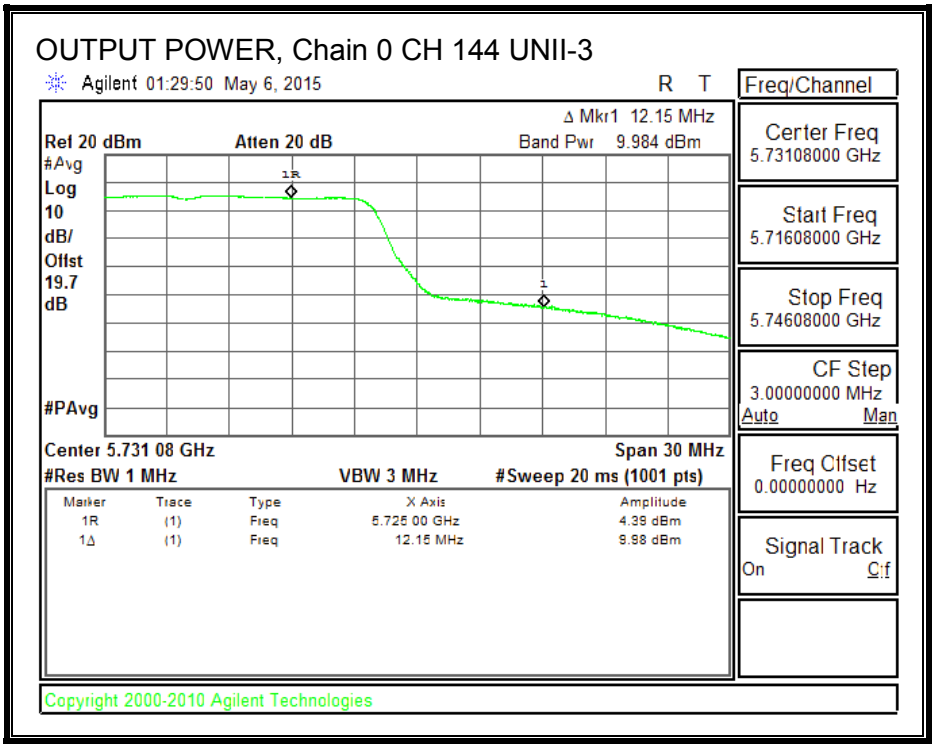
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power & PSD

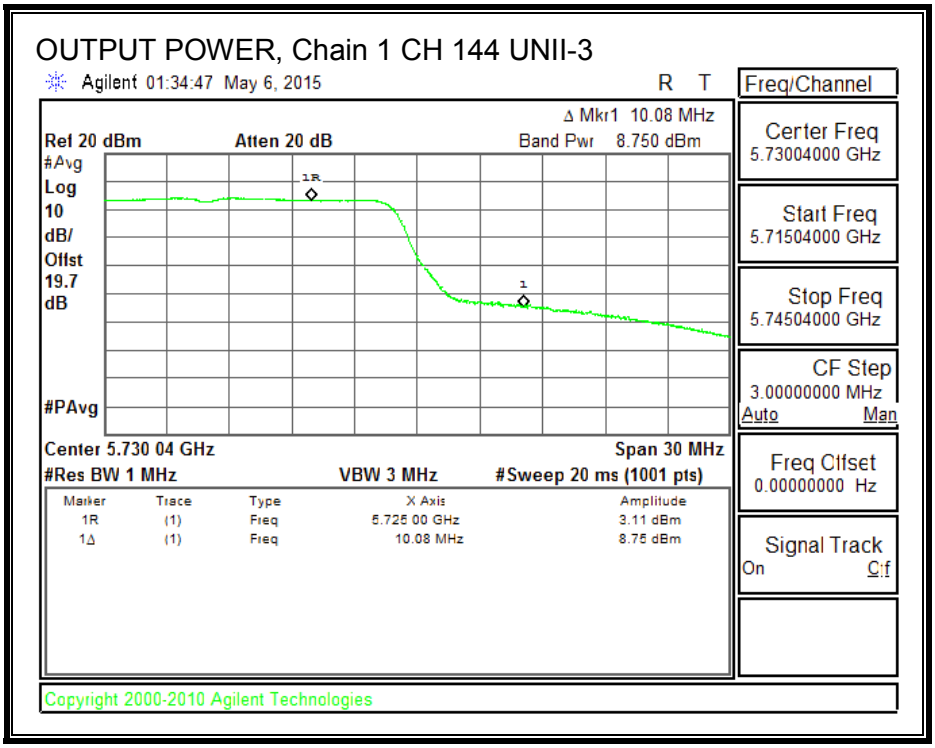
Output Power Results

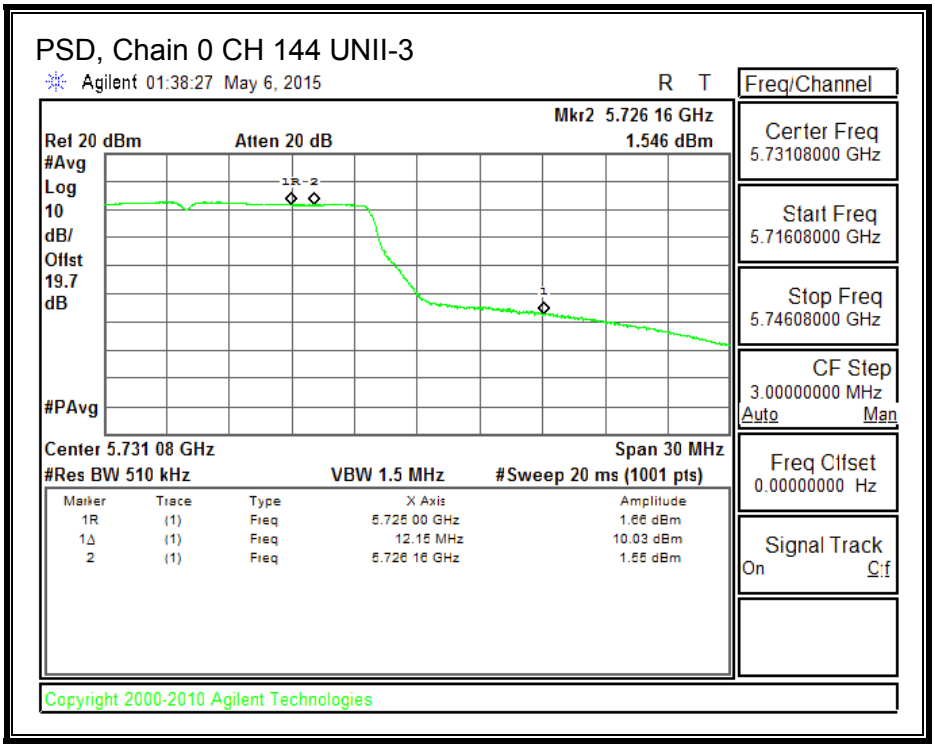
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
144	5720	9.98	8.75	12.42	30.00	-17.58

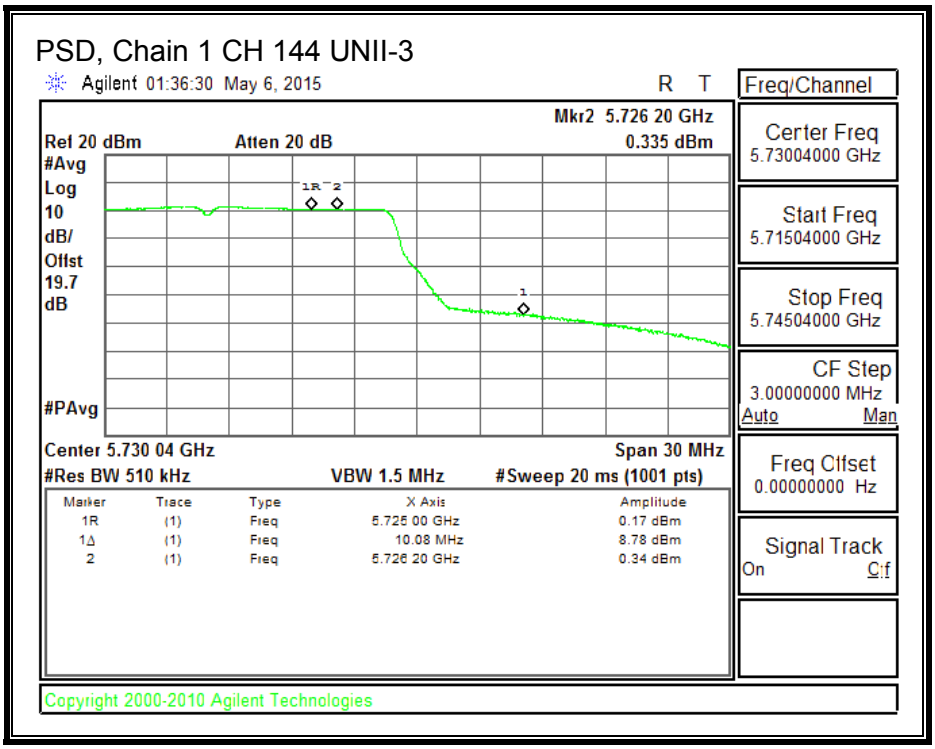
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
144	5720	1.546	0.335	3.993	27.97	-23.98









8.38.2. AVERAGE OUTPUT POWER (WHOLE FUNDAMENTAL)

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

RESULTS

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)
144	5720	17.90	17.50	20.71

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary

8.39. 802.11n HT20 STBC 2TX MODE IN THE 5.6 GHz BAND

8.39.1. 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.

DIRECTIONAL ANTENNA GAIN

For power and PSD, the TX chains are uncorrelated and the antenna gain is unequal among the chains. The directional gain is:

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
3.17	4.72	5.01

RESULTS

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)
Low	5500	27.89	5.01	5.01	24.00	11.00
Mid	5580	27.24	5.01	5.01	24.00	11.00
High	5700	21.35	5.01	5.01	24.00	11.00

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

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	15.10	15.00	18.06	24.00	-5.94
Mid	5580	17.30	17.81	20.57	24.00	-3.43
High	5700	13.50	13.20	16.36	24.00	-7.64

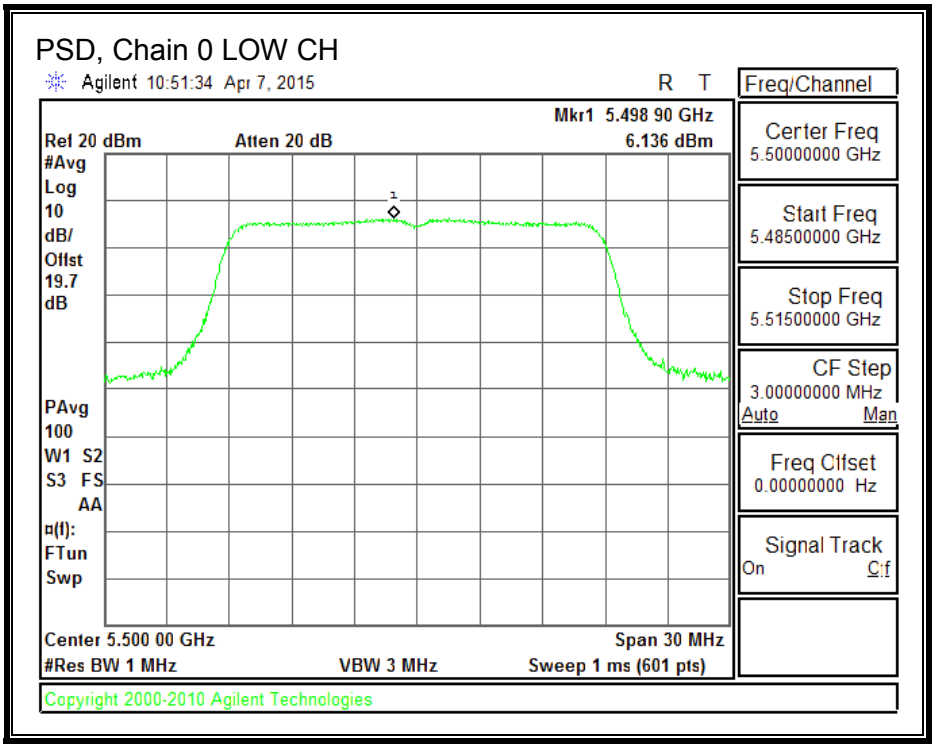
PSD Results

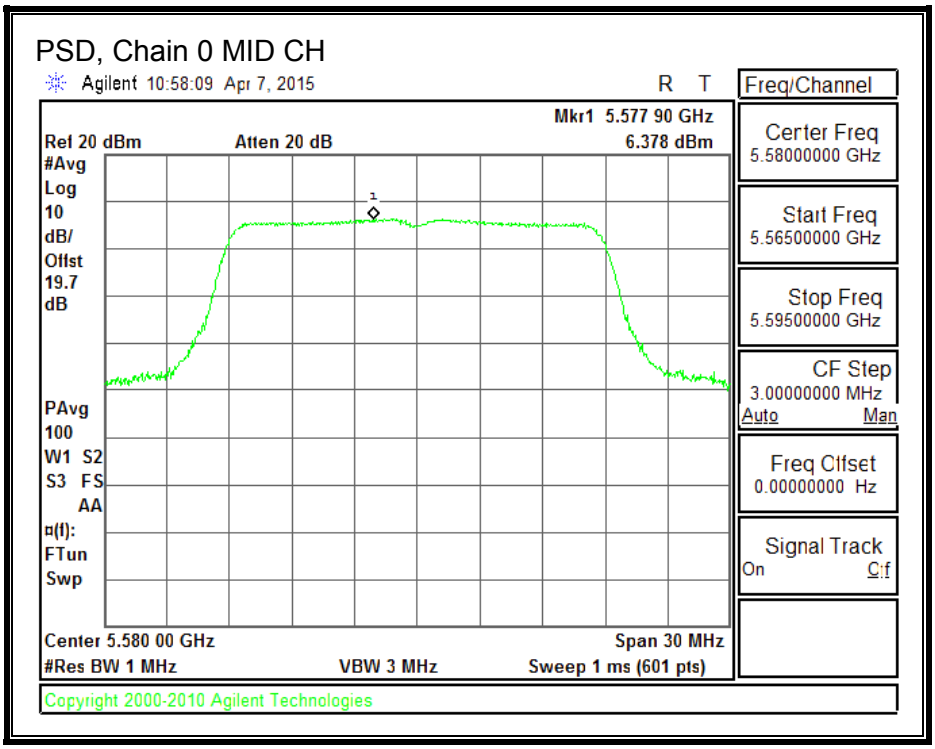
Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5500	6.136	6.435	9.30	11.00	-1.70
Mid	5580	6.378	6.518	9.46	11.00	-1.54
High	5700	6.940	6.822	9.89	11.00	-1.11

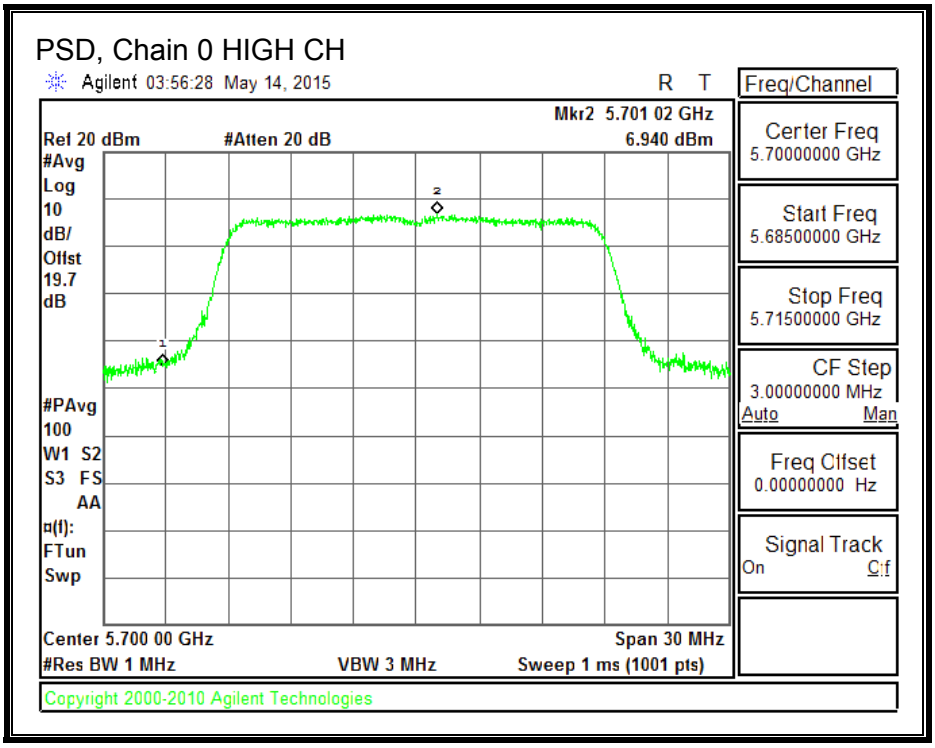
Note: for Chain 0 and Chain 1, 26dB & 99% data & plots, see section 802.11n HT20 CDD 3TX MODE IN THE 5.6 GHz BAND

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary

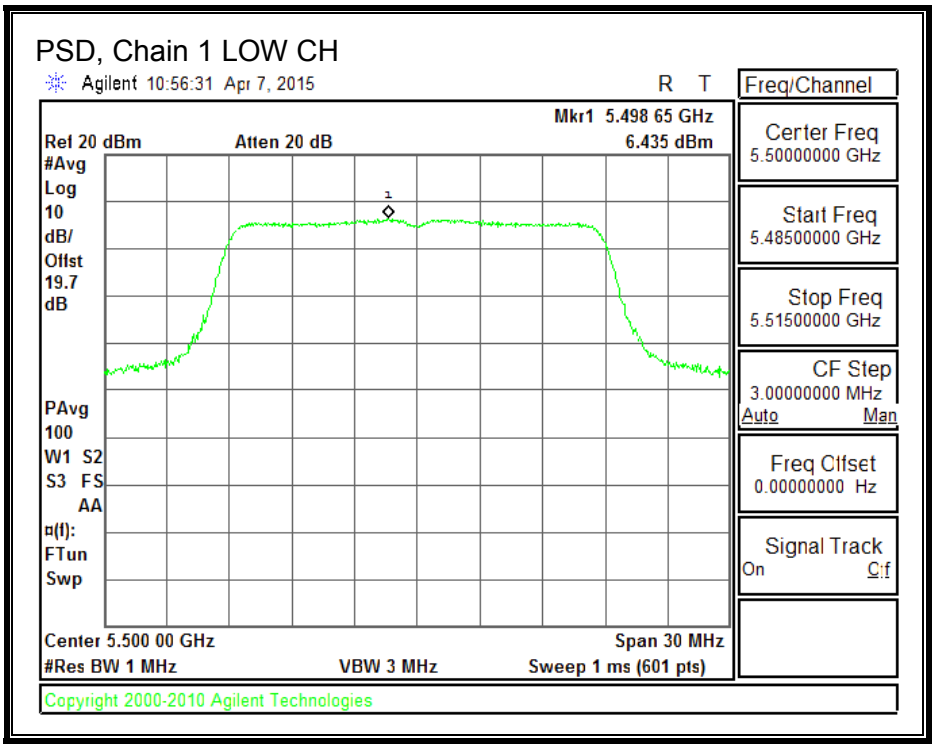
PSD, Chain 0

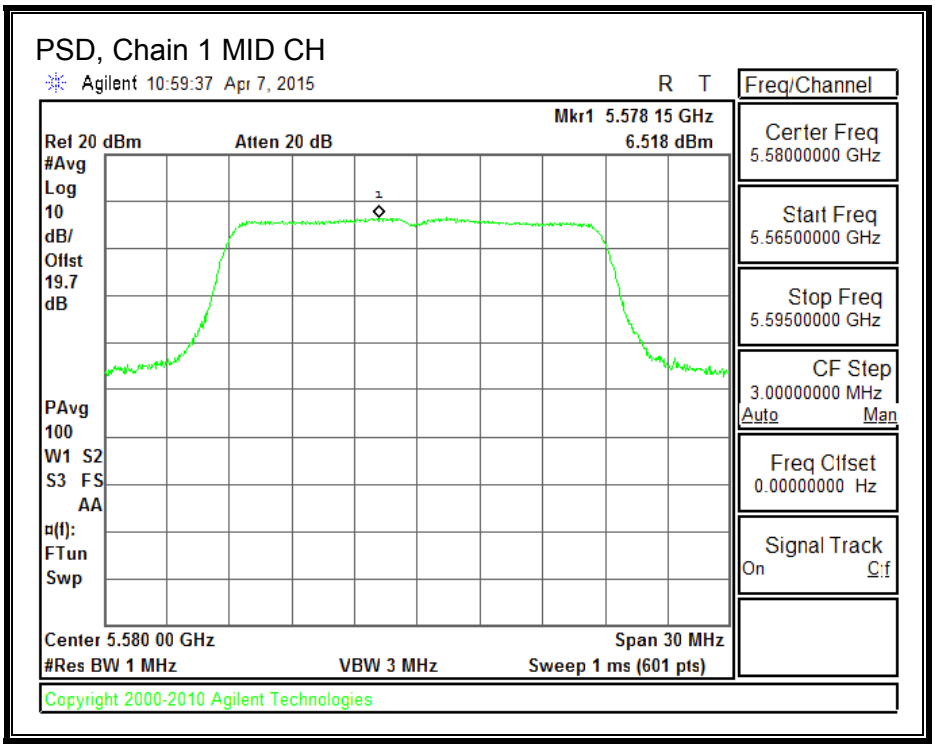


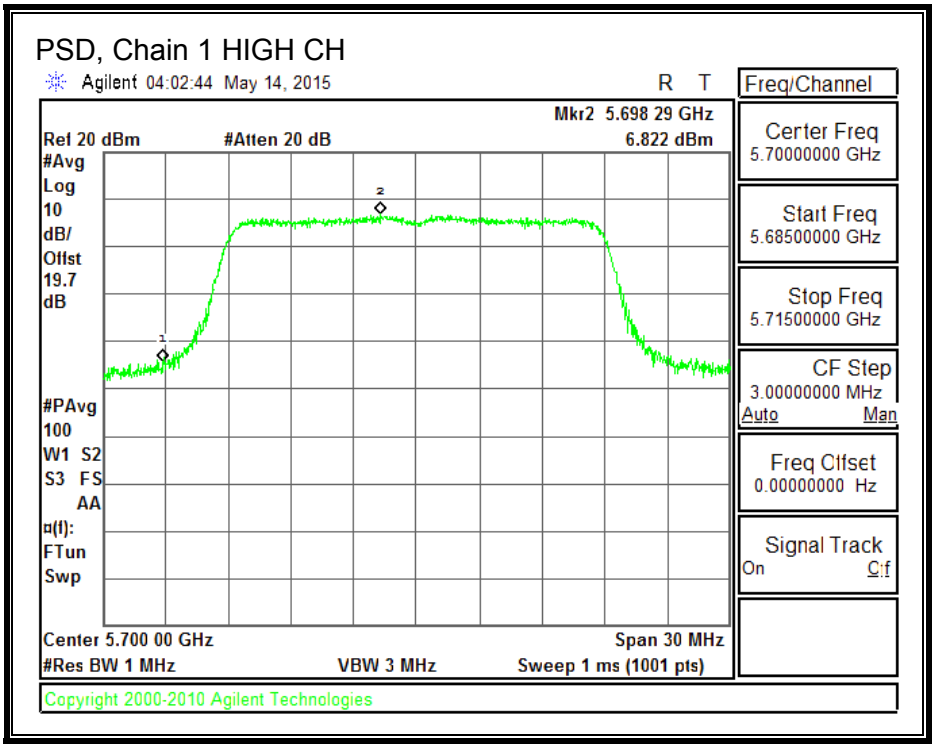




PSD, Chain 1







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	16.06	5.01	5.01	23.06	11.00

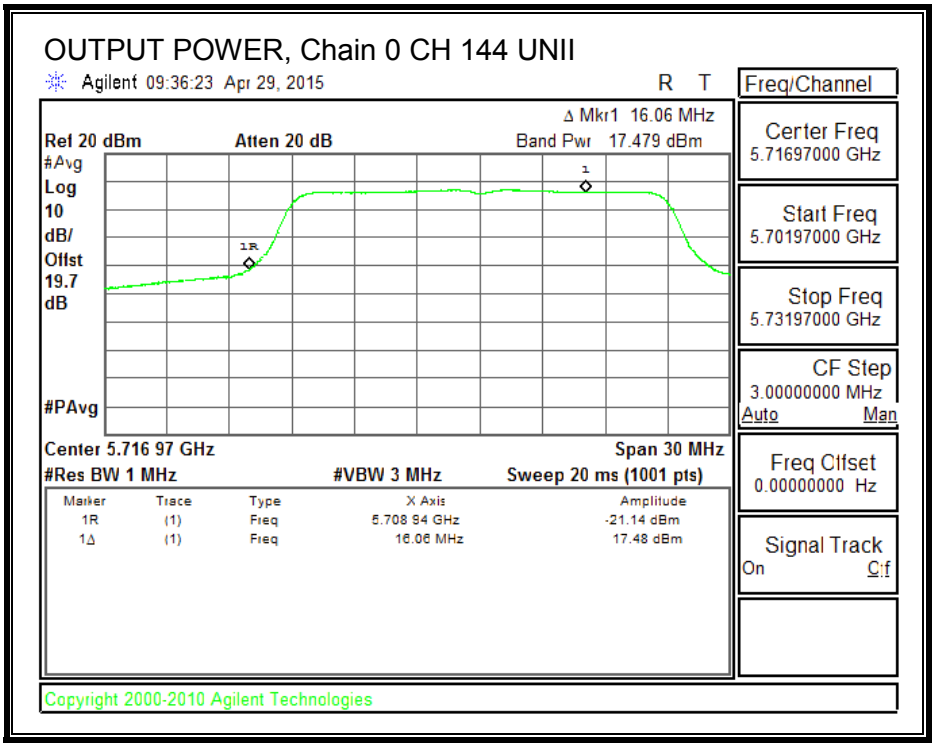
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power & PSD

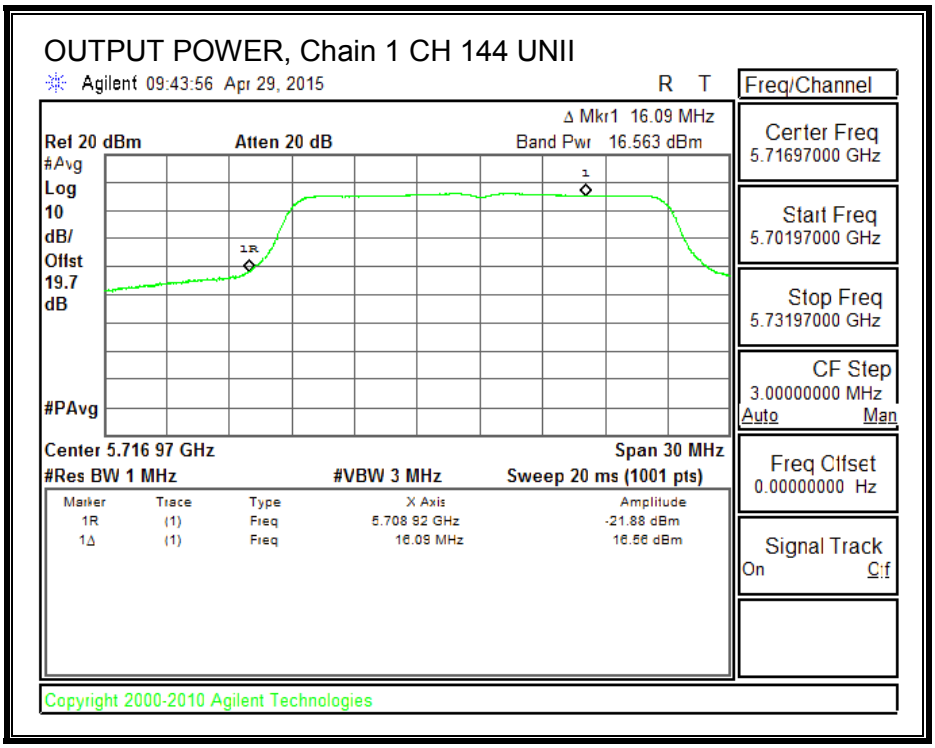
Output Power Results

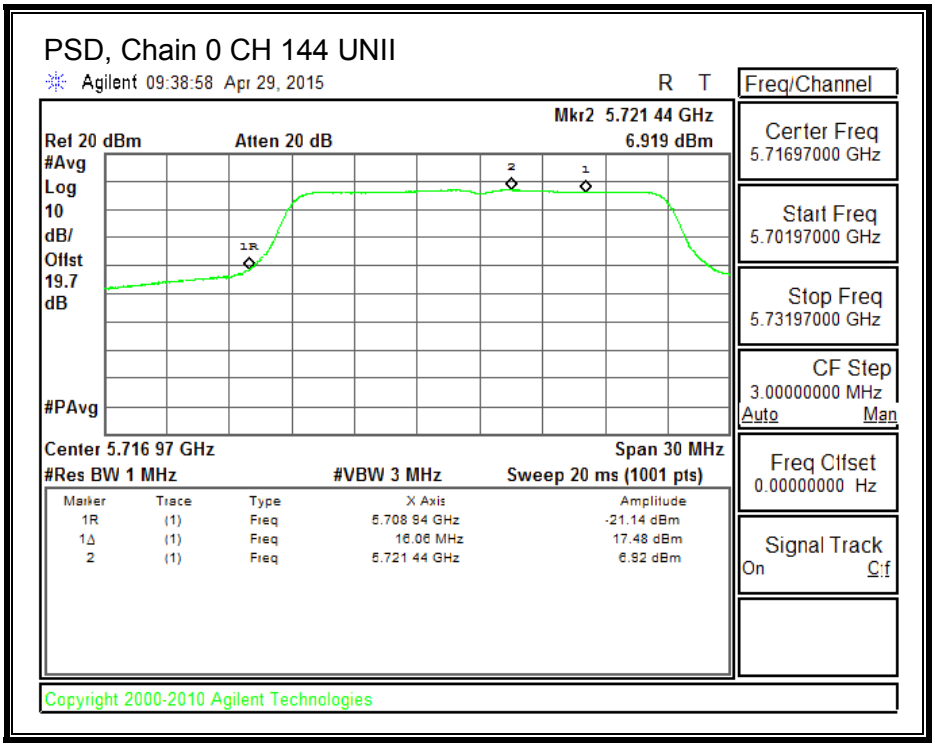
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
144	5720	17.479	16.563	20.055	23.06	-3.00

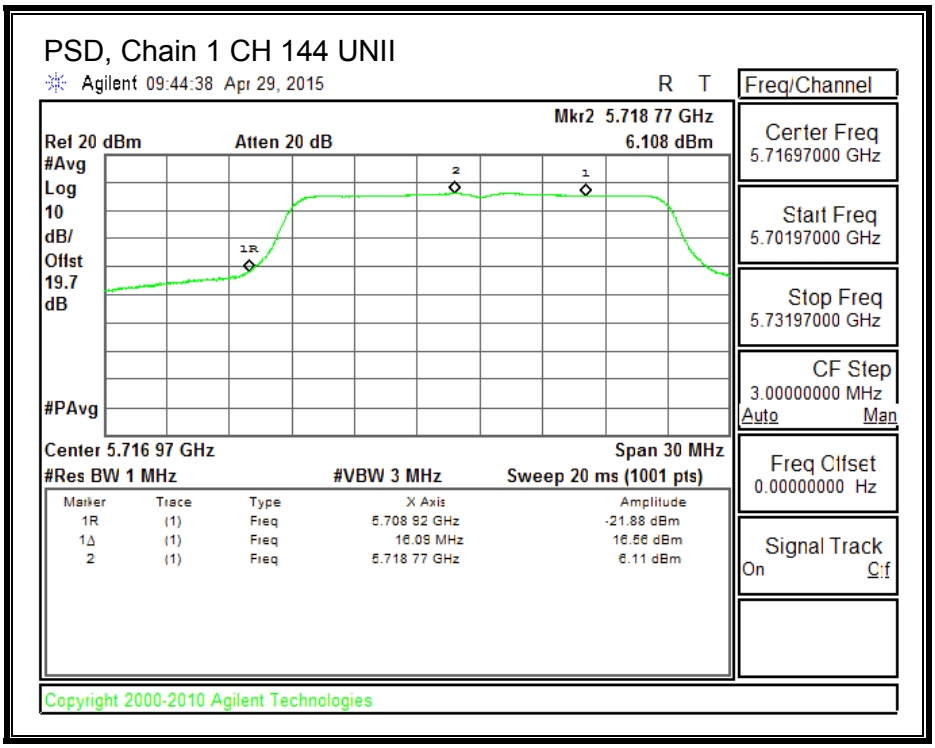
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
144	5720	6.92	6.11	9.54	11.00	-1.46









UNII-3 BAND

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
144	5720	5.06	5.06	30.00	30.00

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

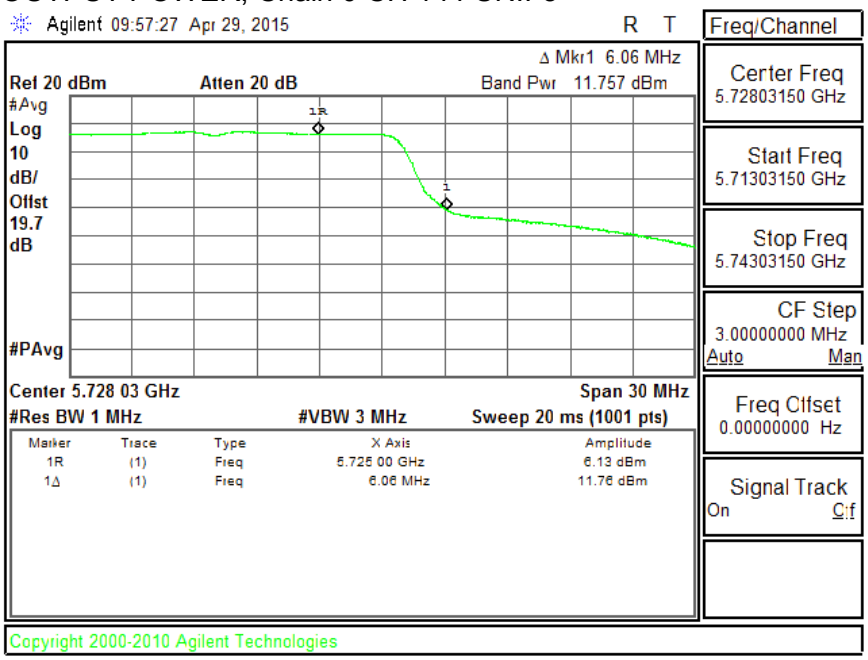
Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
144	5720	11.76	10.78	14.31	30.00	-15.69

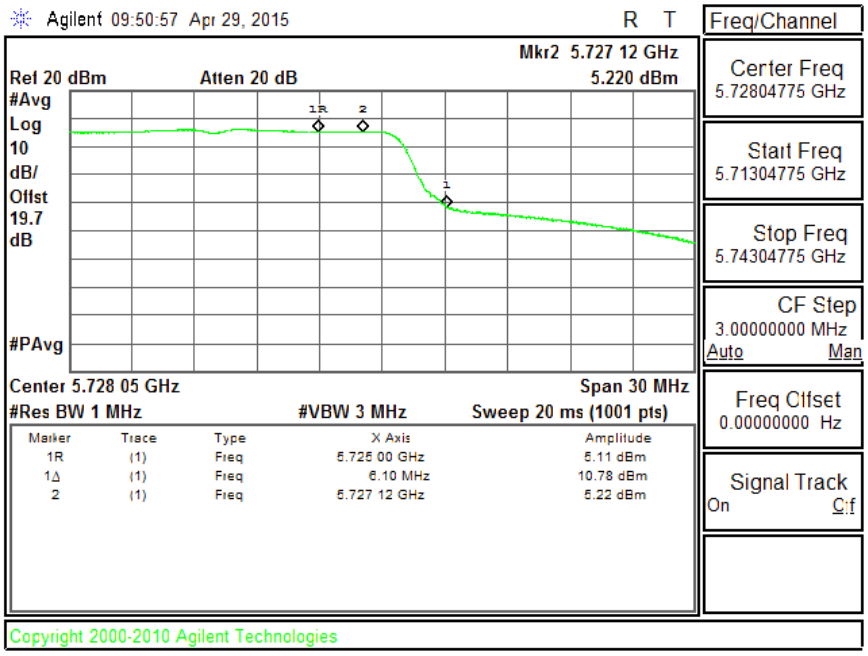
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
144	5720	6.17	5.22	8.73	30.00	-21.27

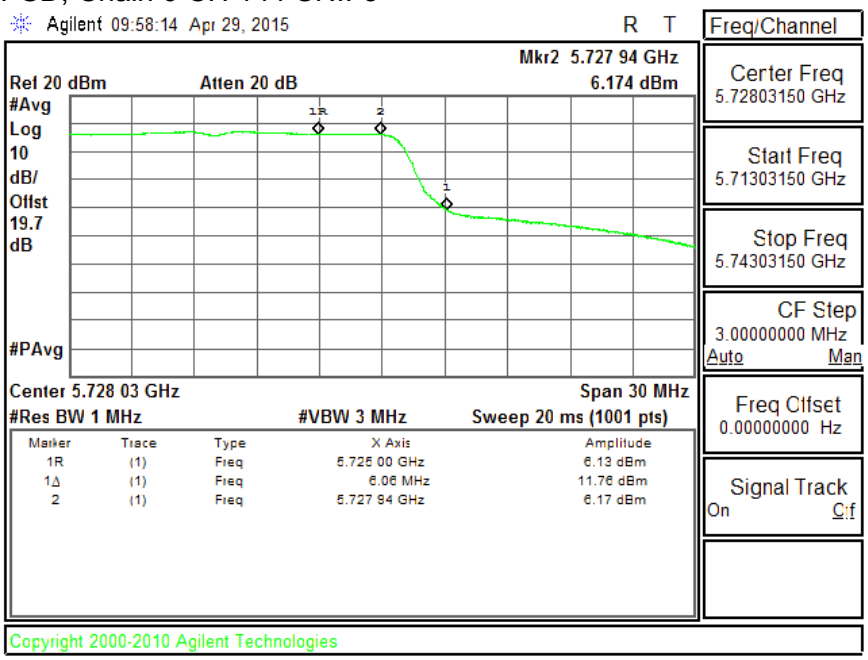
OUTPUT POWER, Chain 0 CH 144 UNII-3



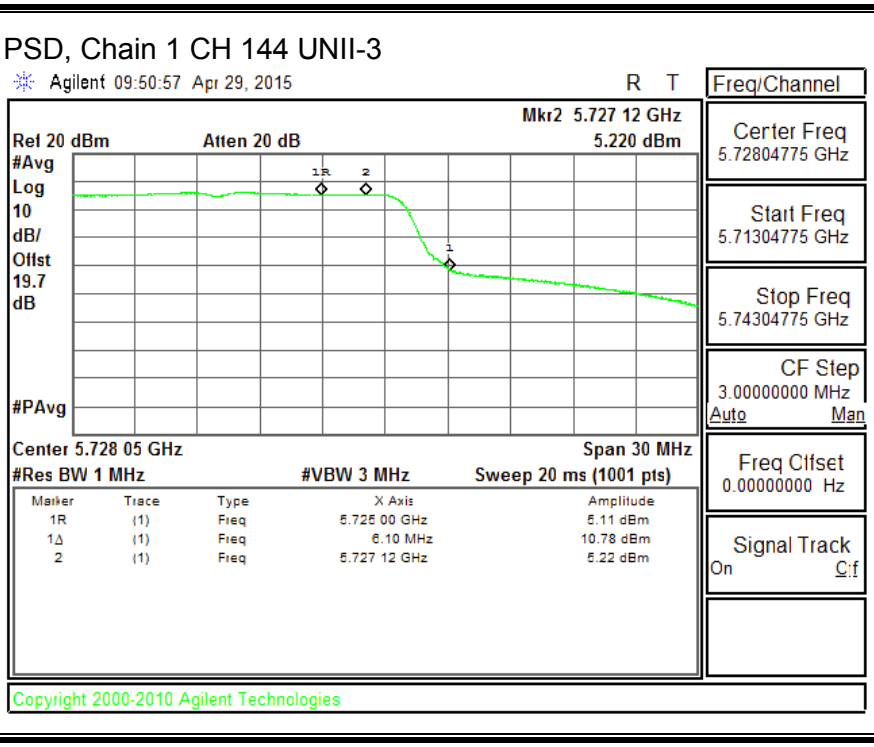
OUTPUT POWER, Chain 1 CH 144 UNII-3



PSD, Chain 0 CH 144 UNII-3



PSD, Chain 1 CH 144 UNII-3



8.40.1. AVERAGE OUTPUT POWER (WHOLE FUNDAMENTAL)

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

RESULTS

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)
144	5720	18.15	17.60	20.89

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary

8.40. 802.11n HT20 TxBF 2TX MODE IN THE 5.6 GHz BAND

8.40.1. 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.

DIRECTIONAL ANTENNA GAIN

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

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
3.17	4.72	7.99

RESULTS

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)
Low	5500	27.89	7.99	7.99	22.01	9.01
Mid	5580	27.24	7.99	7.99	22.01	9.01
High	5700	21.35	7.99	7.99	22.01	9.01

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

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	14.10	14.60	17.37	22.01	-4.64
Mid	5580	15.90	16.00	18.96	22.01	-3.05
High	5700	13.00	12.85	15.94	22.01	-6.07

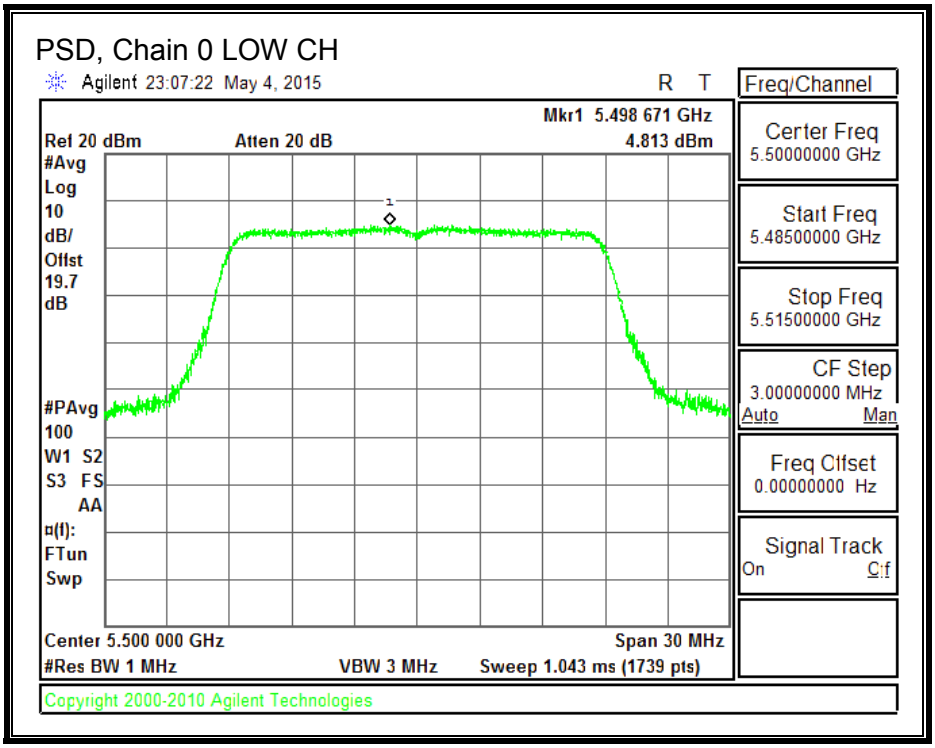
PSD Results

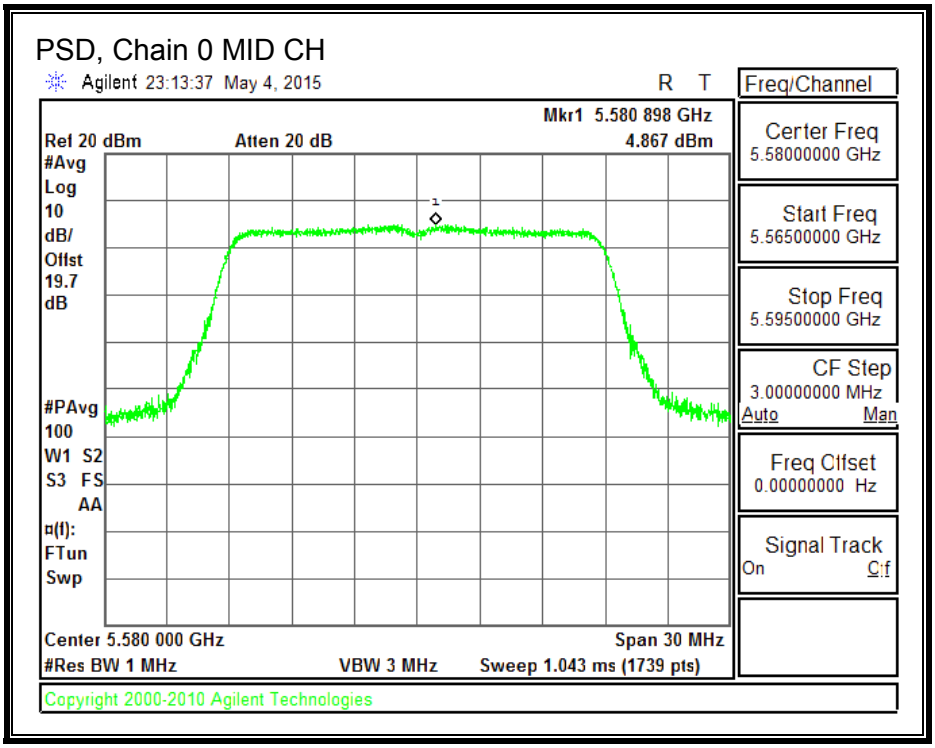
Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5500	4.813	5.129	7.98	9.01	-1.03
Mid	5580	4.867	5.073	7.98	9.01	-1.03
High	5700	4.987	4.984	8.00	9.01	-1.01

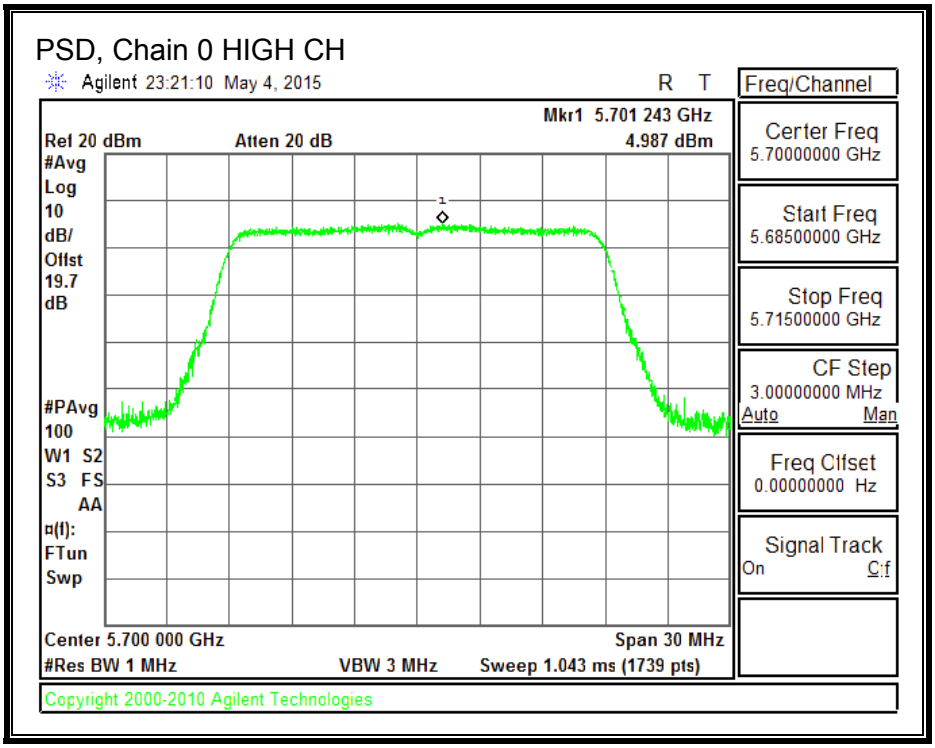
Note: for Chain 0 and Chain 1, 26dB & 99% data & plots, see section 802.11n HT20 CDD 3TX MODE IN THE 5.6 GHz BAND

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary

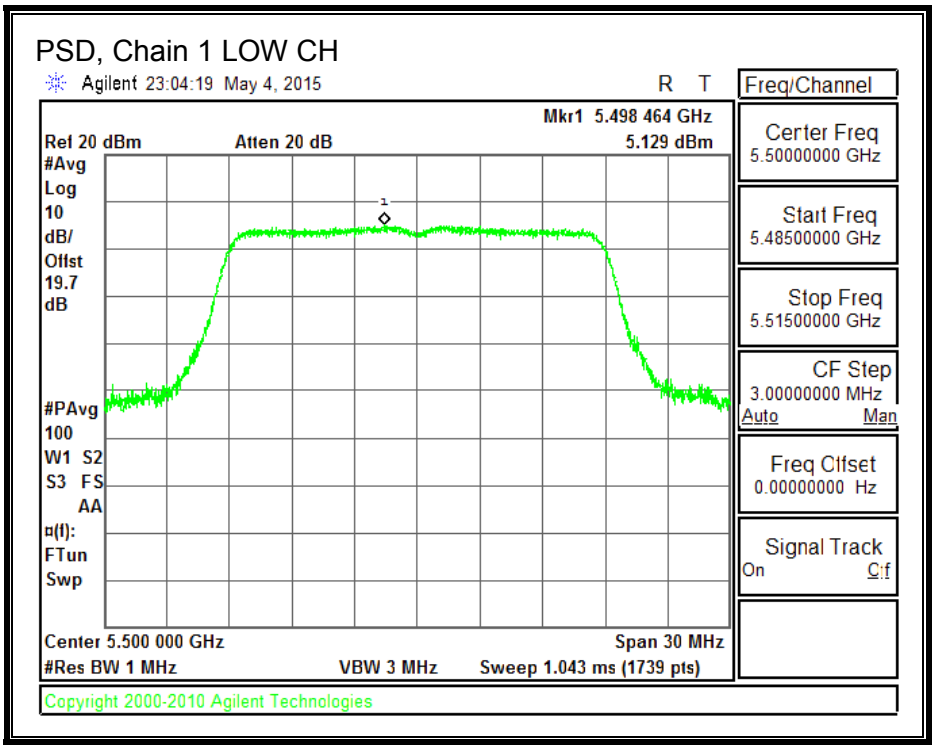
PSD, Chain 0



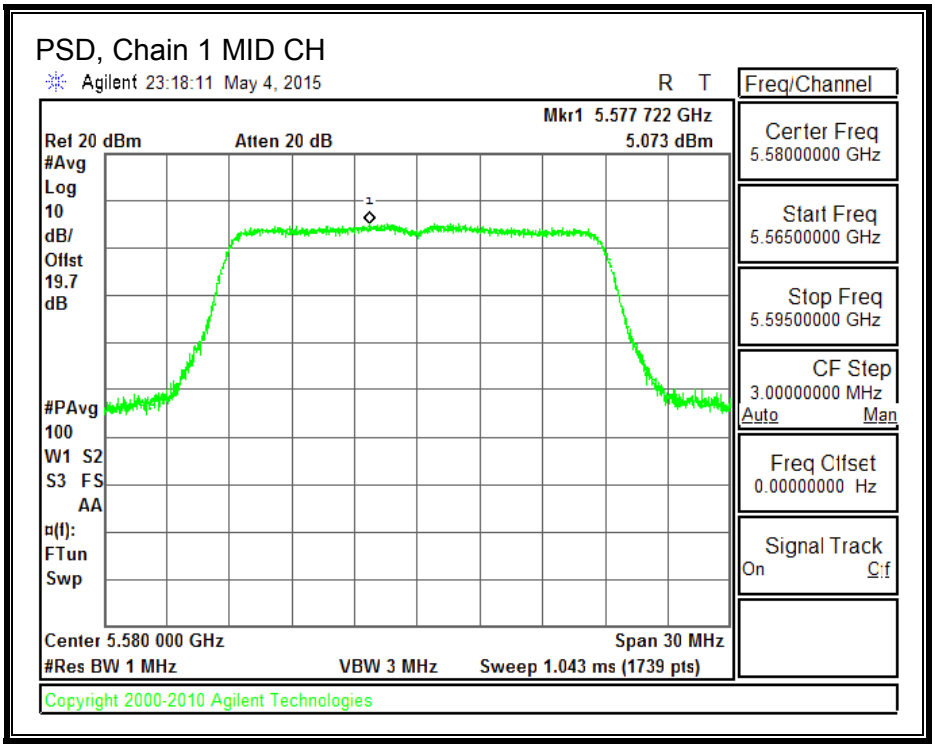




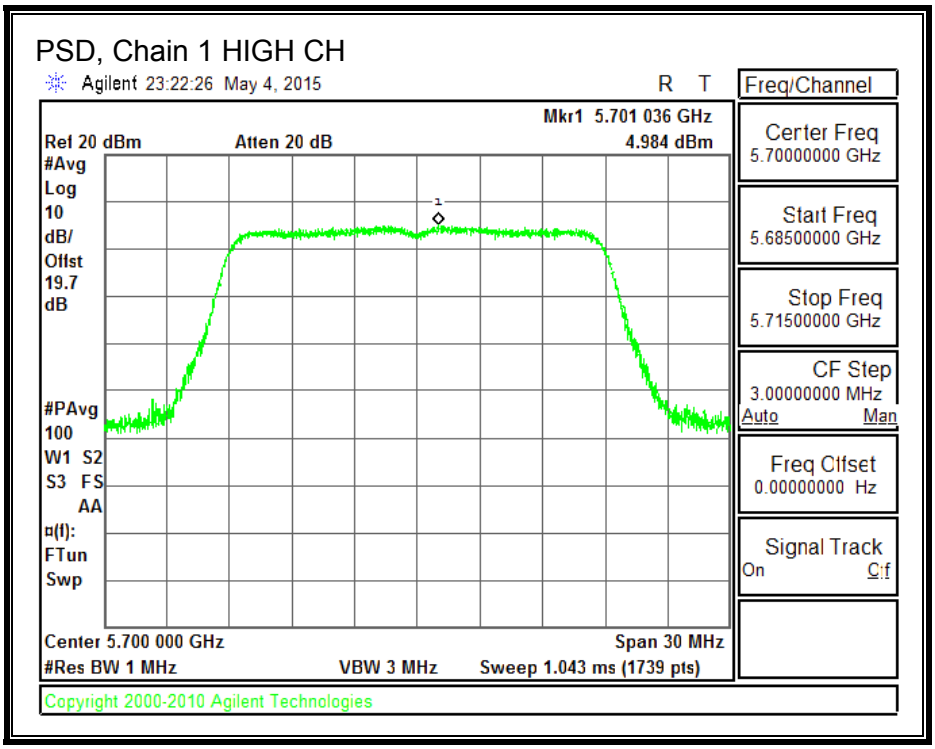
PSD, Chain 1



PSD, Chain 1 MID CH



PSD, Chain 1 HIGH CH



8.41. 802.11n HT20 CDD 3TX MODE IN THE 5.6 GHz BAND

8.41.1. 26 dB BANDWIDTH

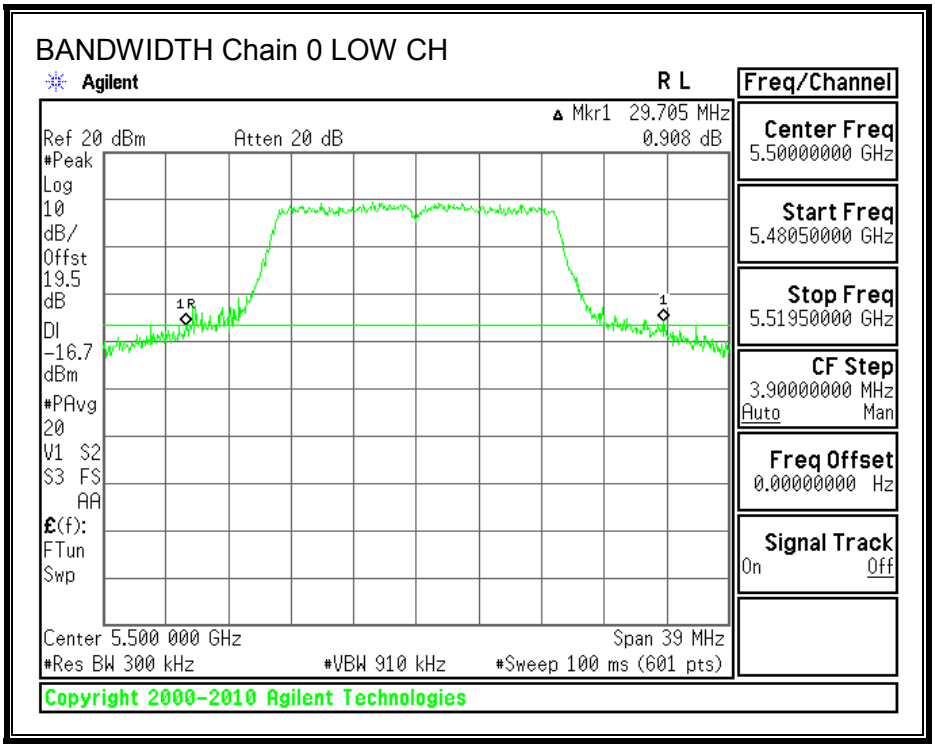
LIMITS

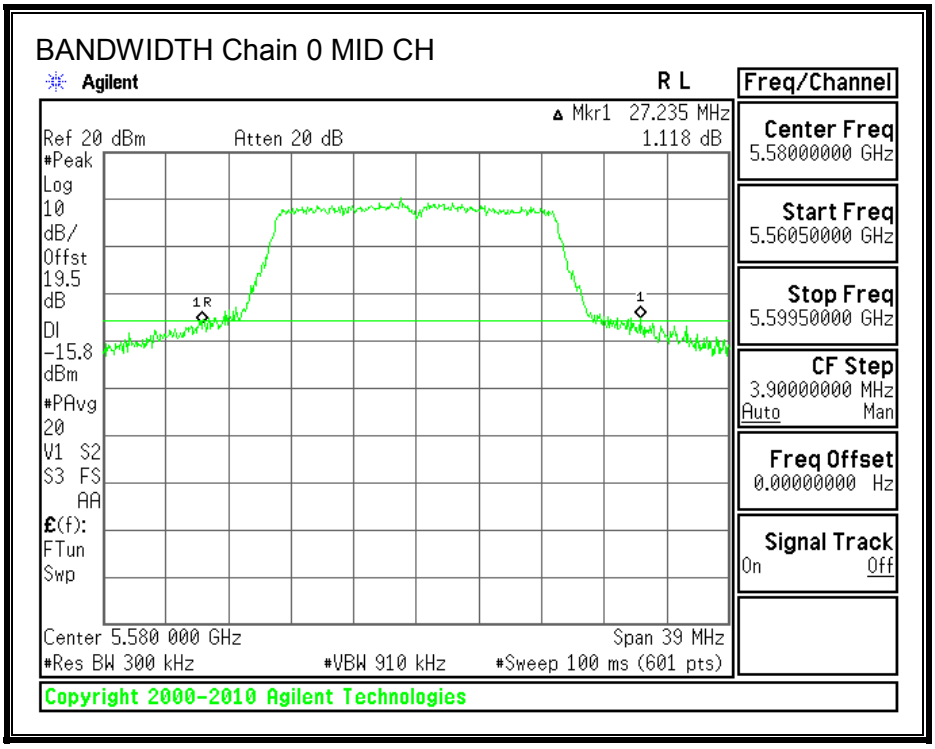
None; for reporting purposes only.

RESULTS

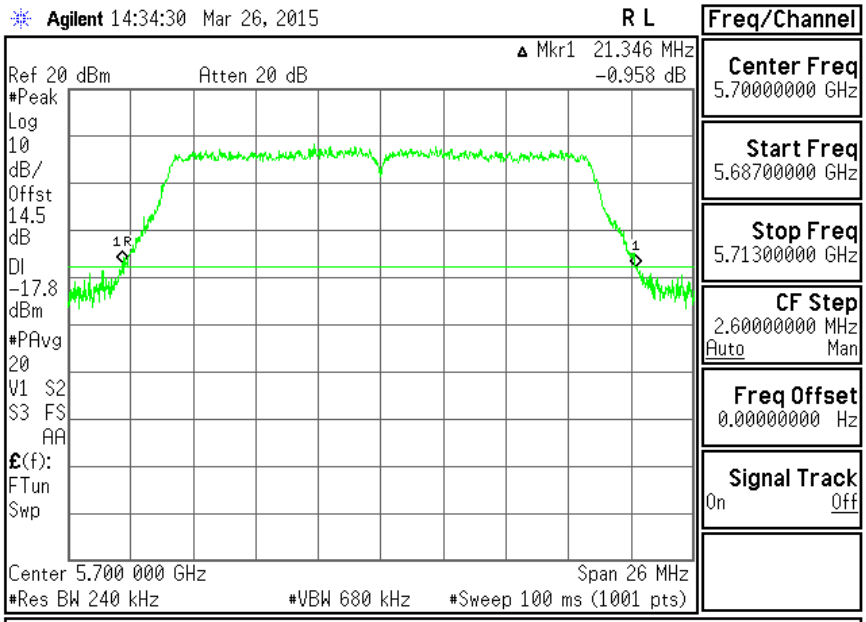
Channel	Frequency (MHz)	26 dB BW Chain 0 (MHz)	26 dB BW Chain 1 (MHz)	26 dB BW Chain 2 (MHz)
Low	5500	29.705	31.915	27.885
Mid	5580	27.235	30.030	28.015
High	5700	21.346	22.828	21.684
144	5720	34.320	30.160	29.770

26 dB BANDWIDTH, Chain 0

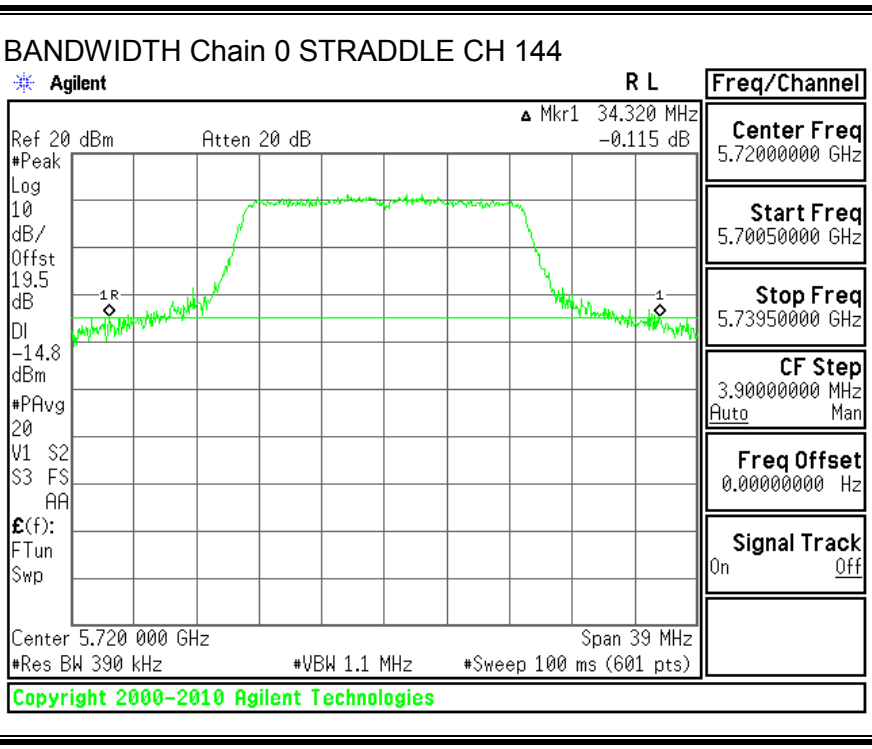




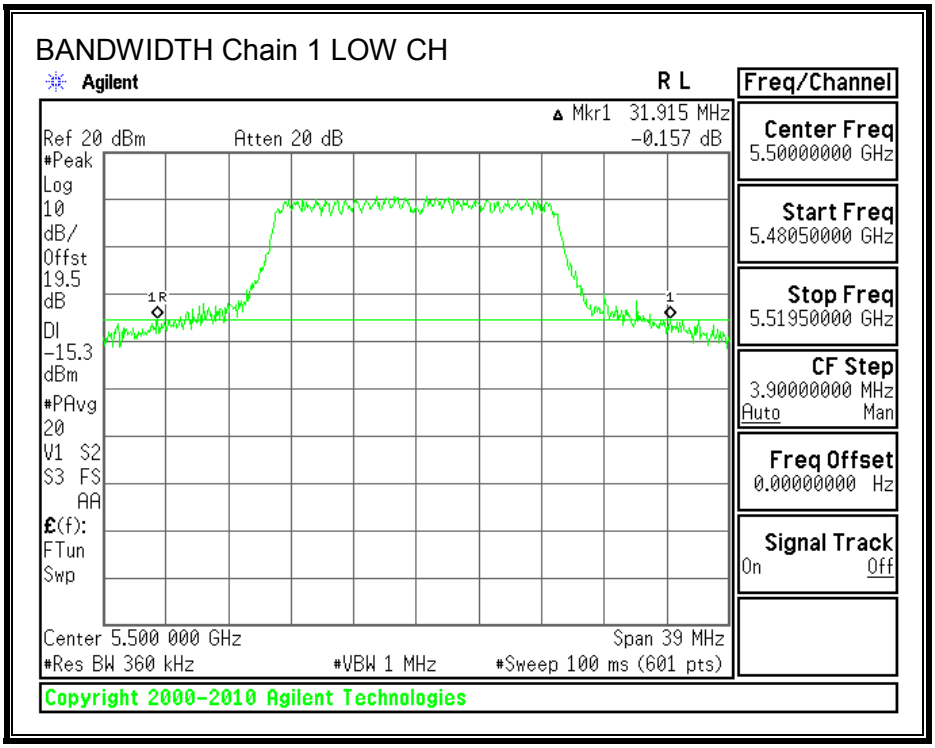
BANDWIDTH Chain 0 HIGH CH

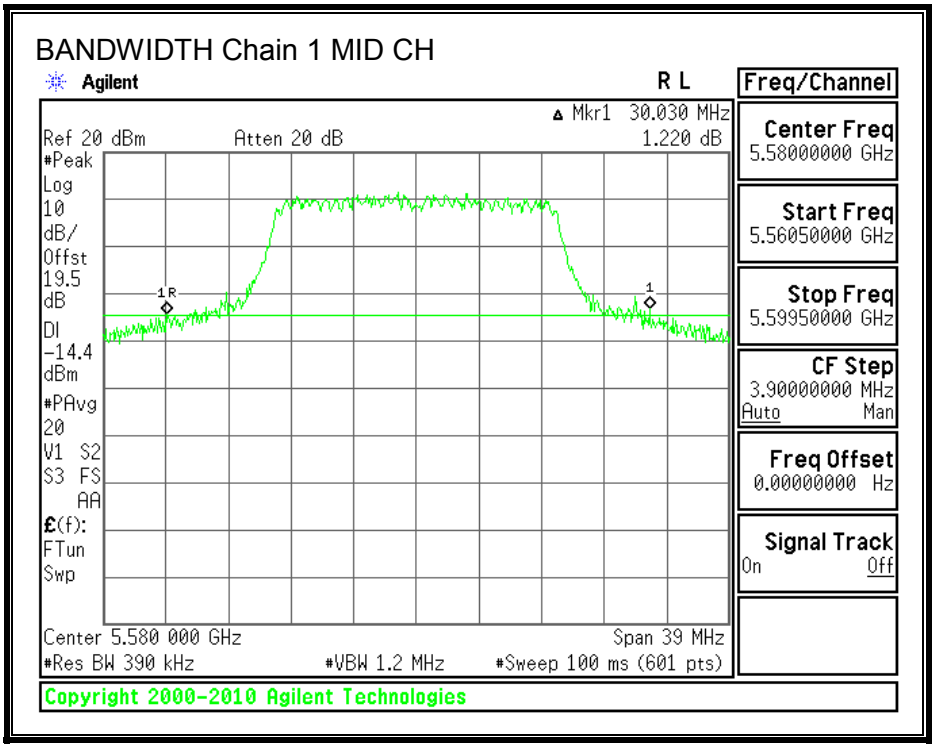


BANDWIDTH Chain 0 STRADDLE CH 144

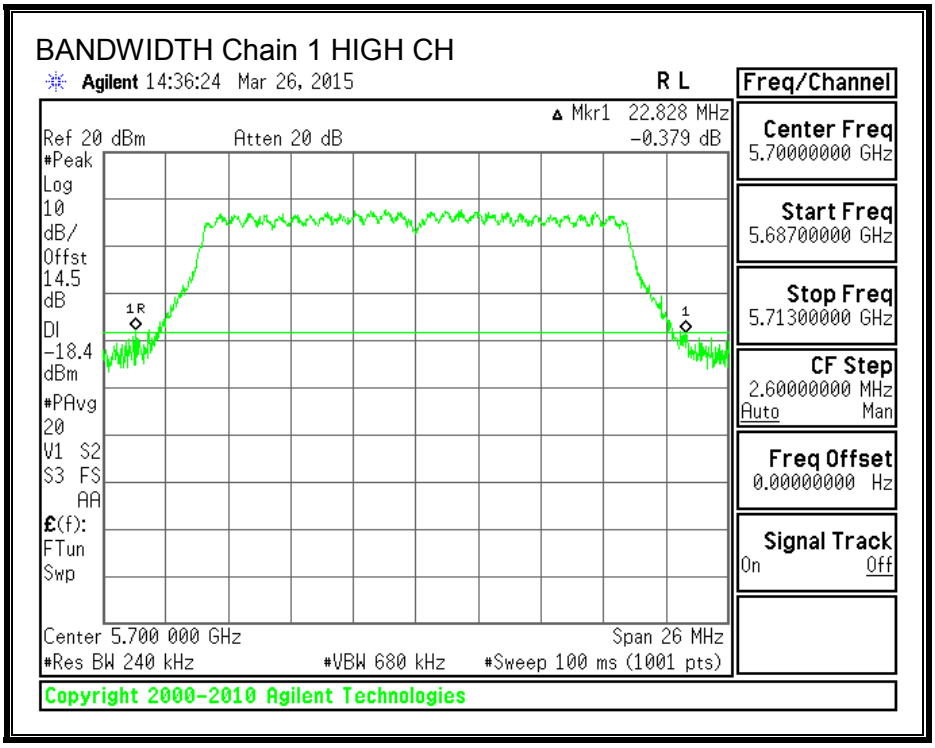


26 dB BANDWIDTH, Chain 1

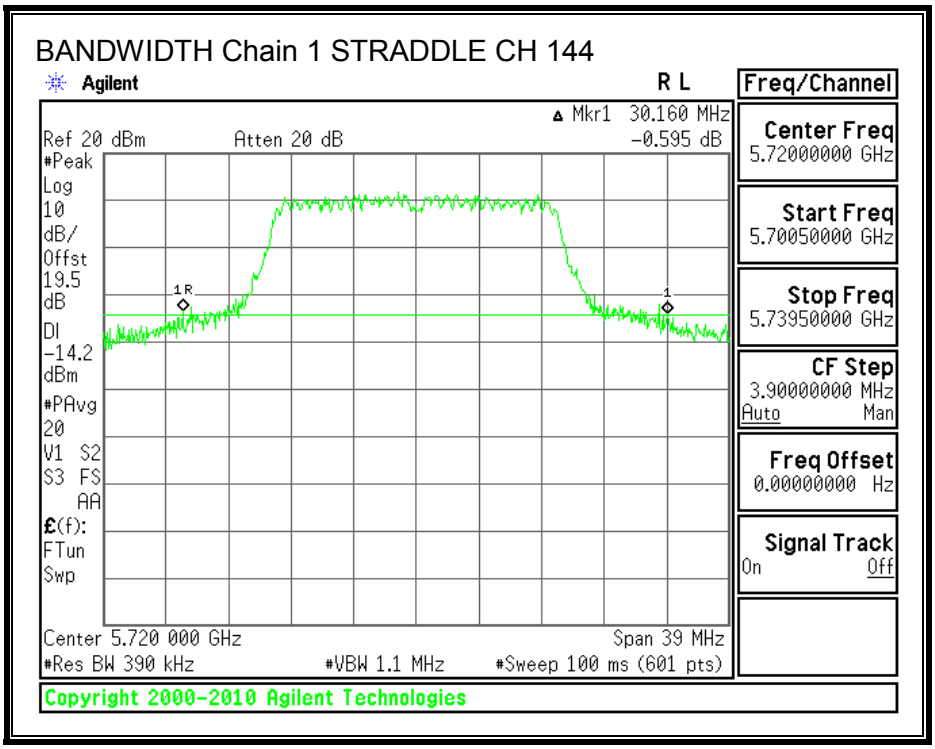




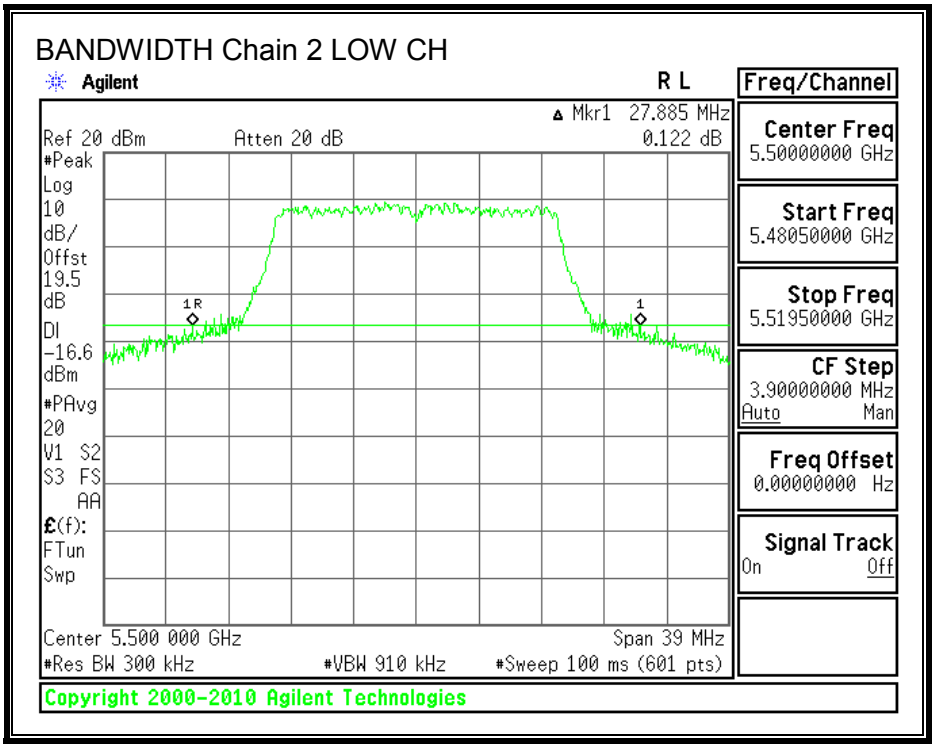
BANDWIDTH Chain 1 HIGH CH

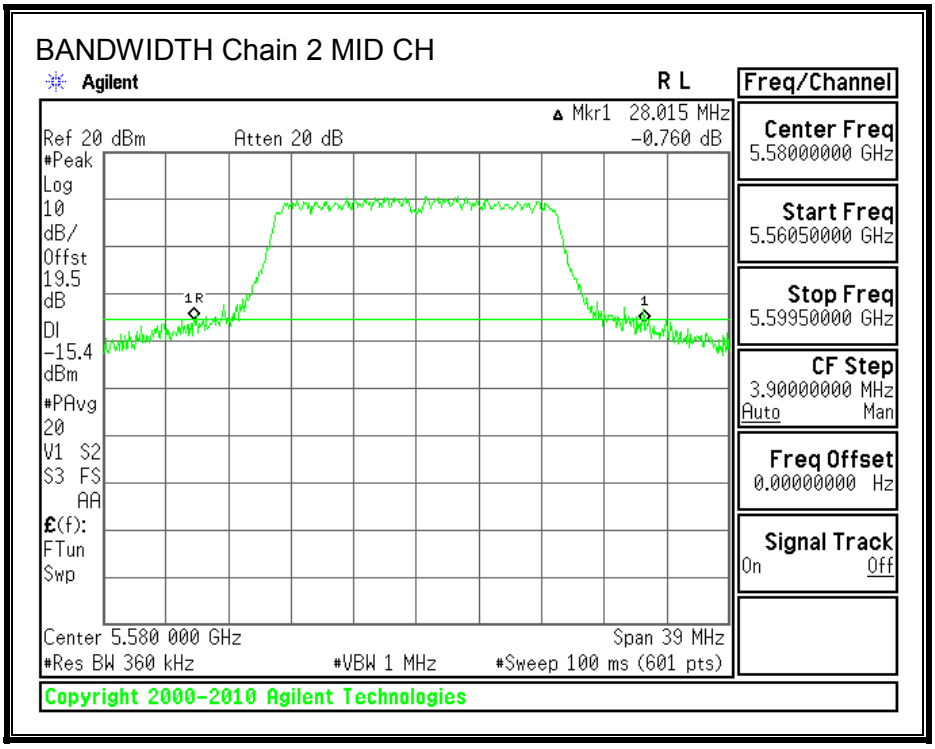


BANDWIDTH Chain 1 STRADDLE CH 144

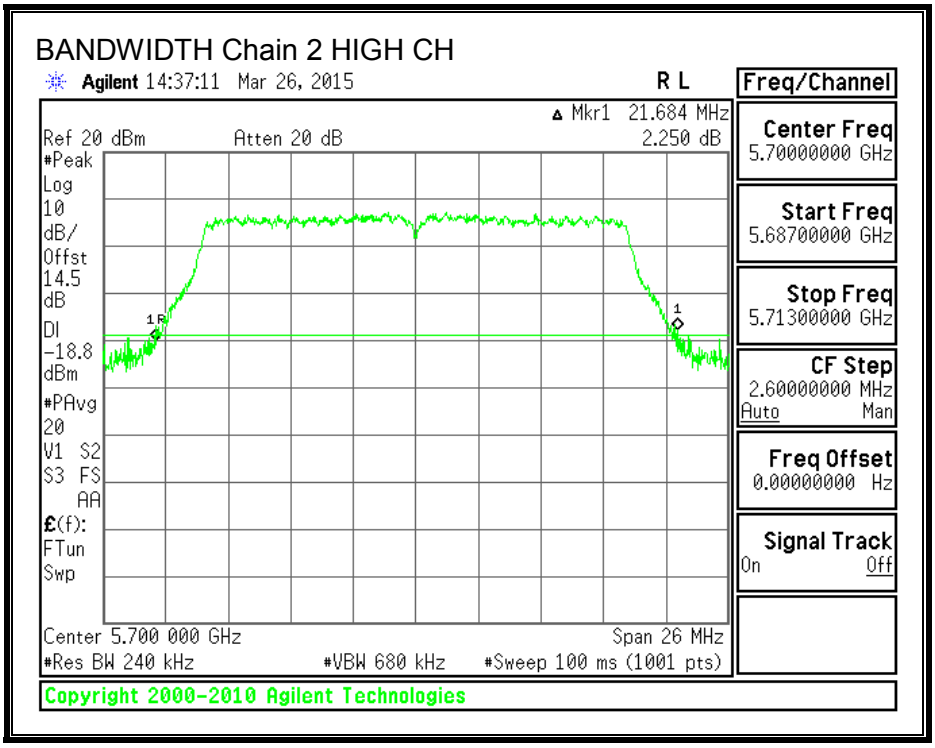


26 dB BANDWIDTH, Chain 2

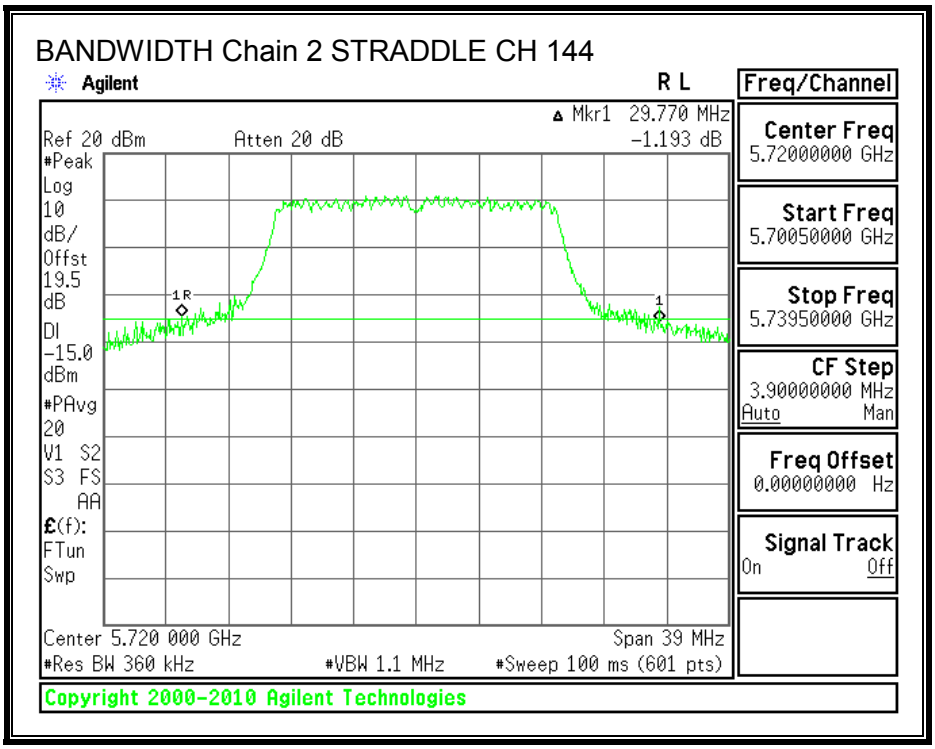




BANDWIDTH Chain 2 HIGH CH



BANDWIDTH Chain 2 STRADDLE CH 144



8.41.2. 99% BANDWIDTH

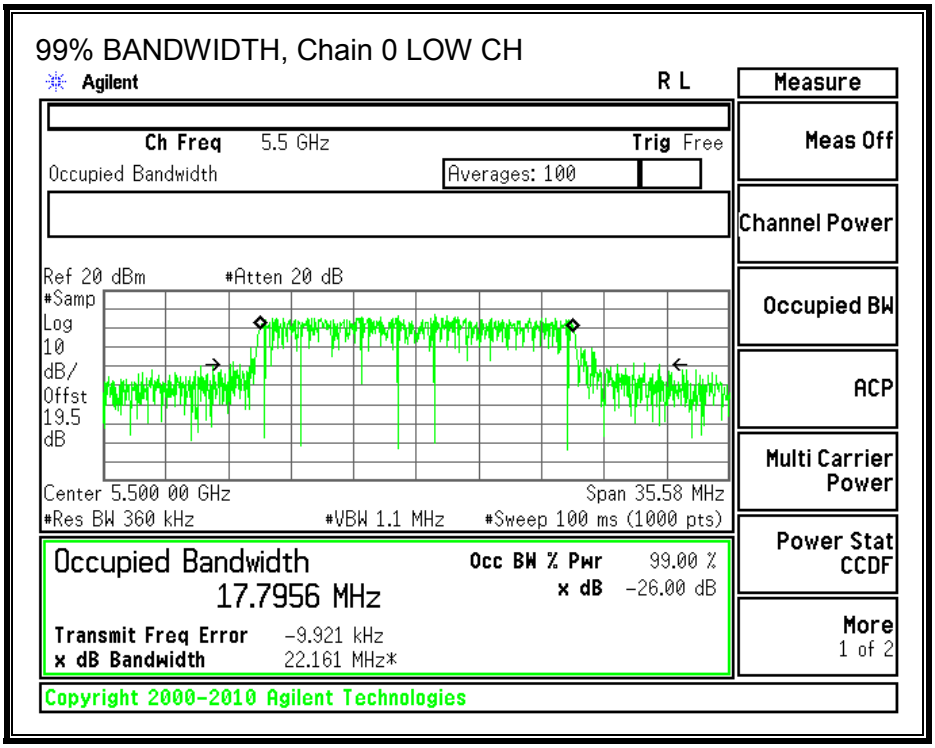
LIMITS

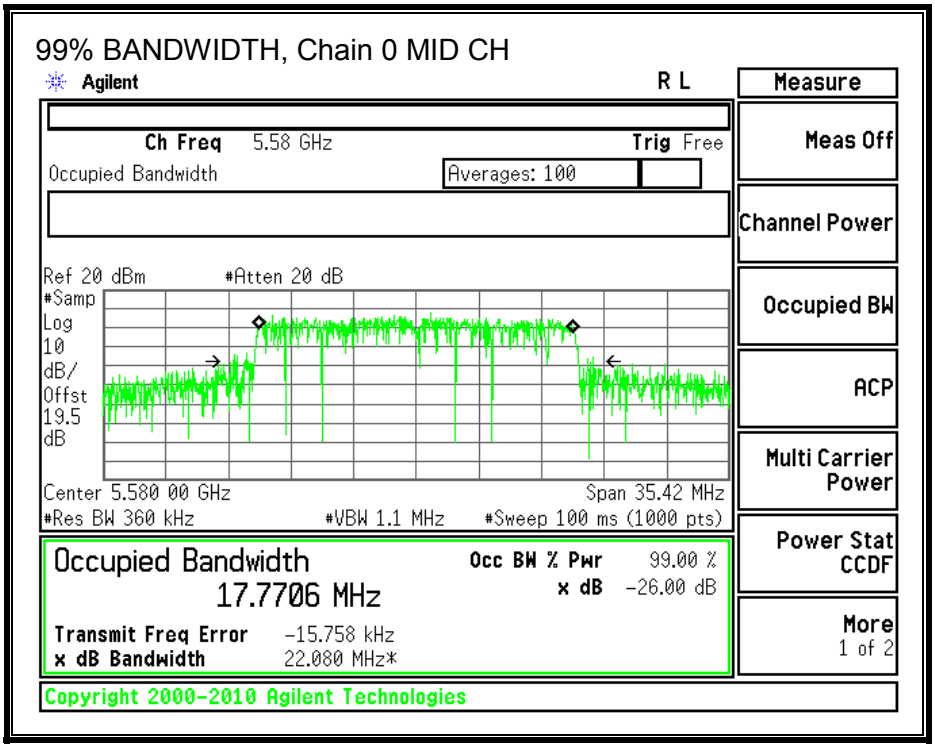
None; for reporting purposes only.

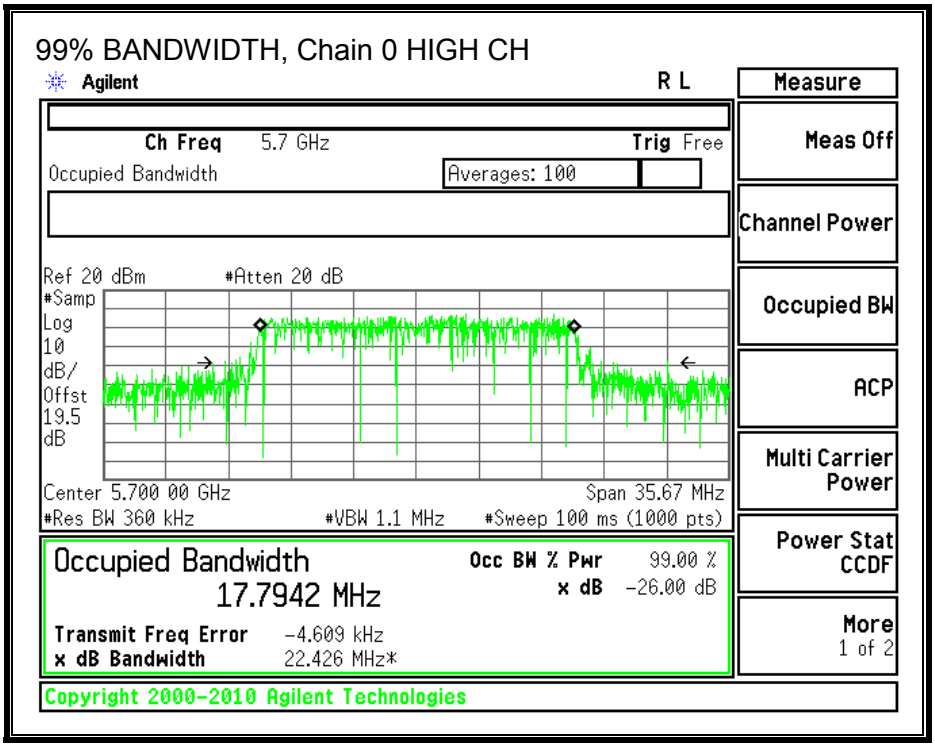
RESULTS

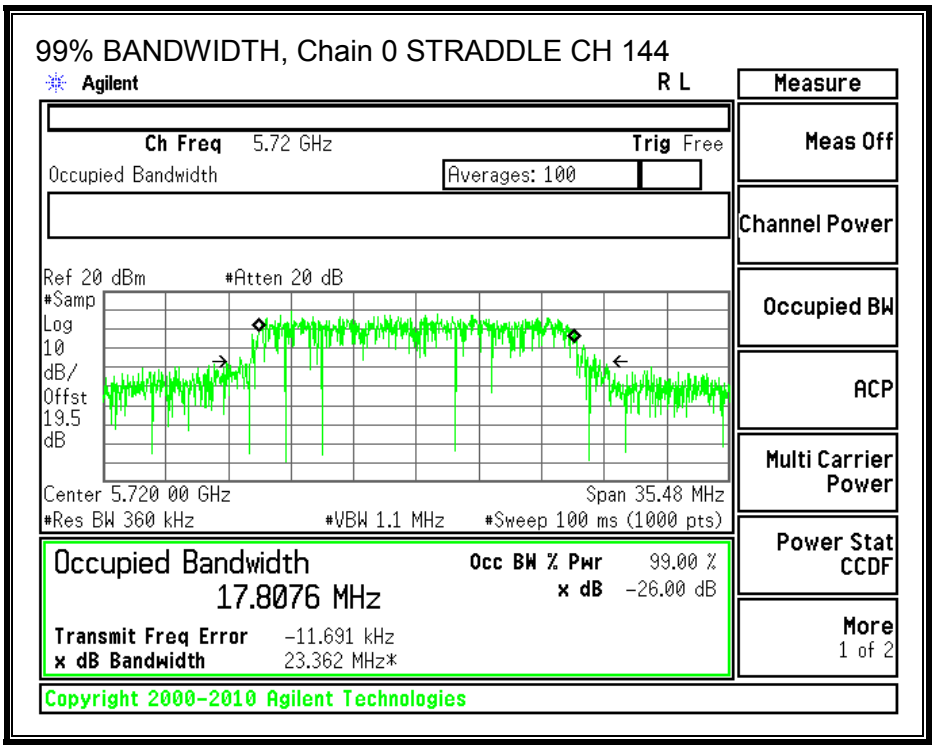
Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)	99% BW Chain 2 (MHz)
Low	5500	17.7956	17.8218	17.7825
Mid	5580	17.7706	17.8079	17.7695
High	5700	17.7942	17.7920	17.7873
144	5720	17.8076	17.7859	17.7960

99% BANDWIDTH, Chain 0

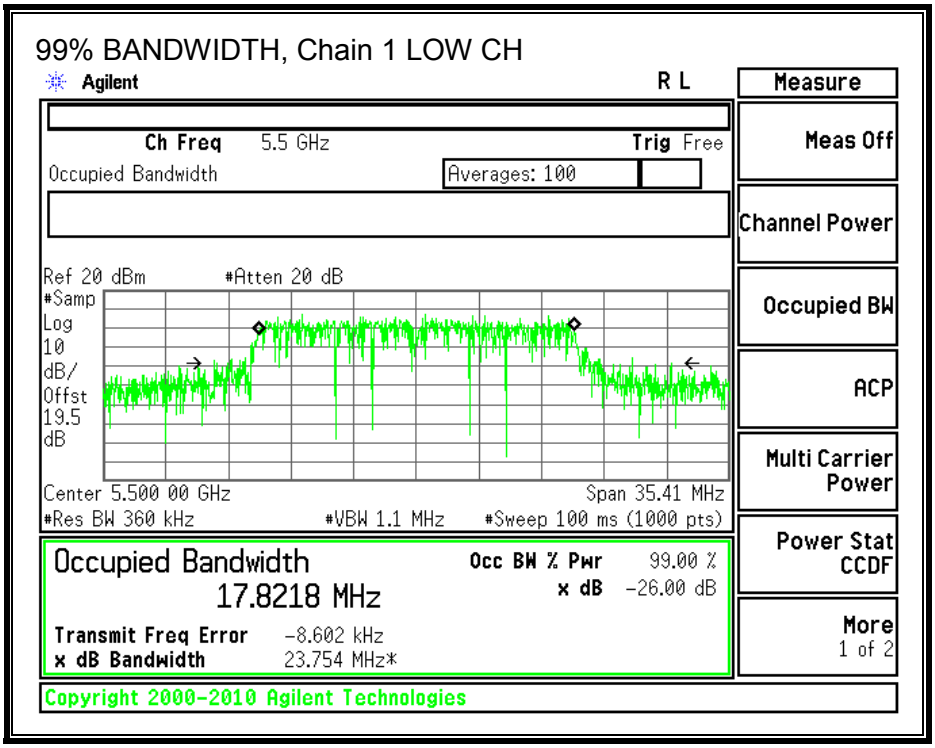


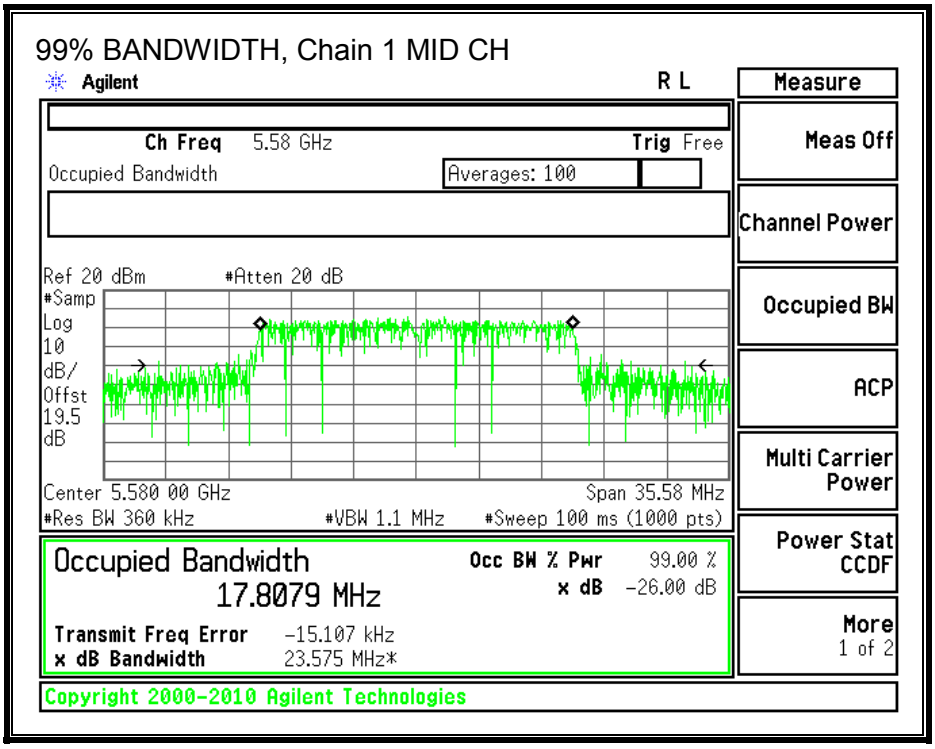




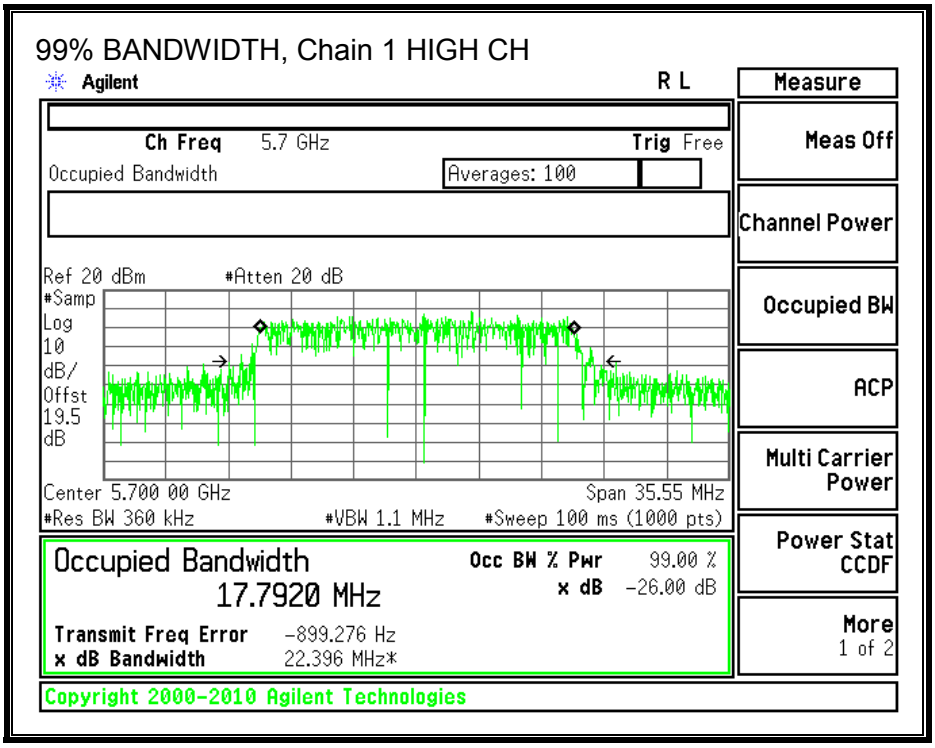


99% BANDWIDTH, Chain 1

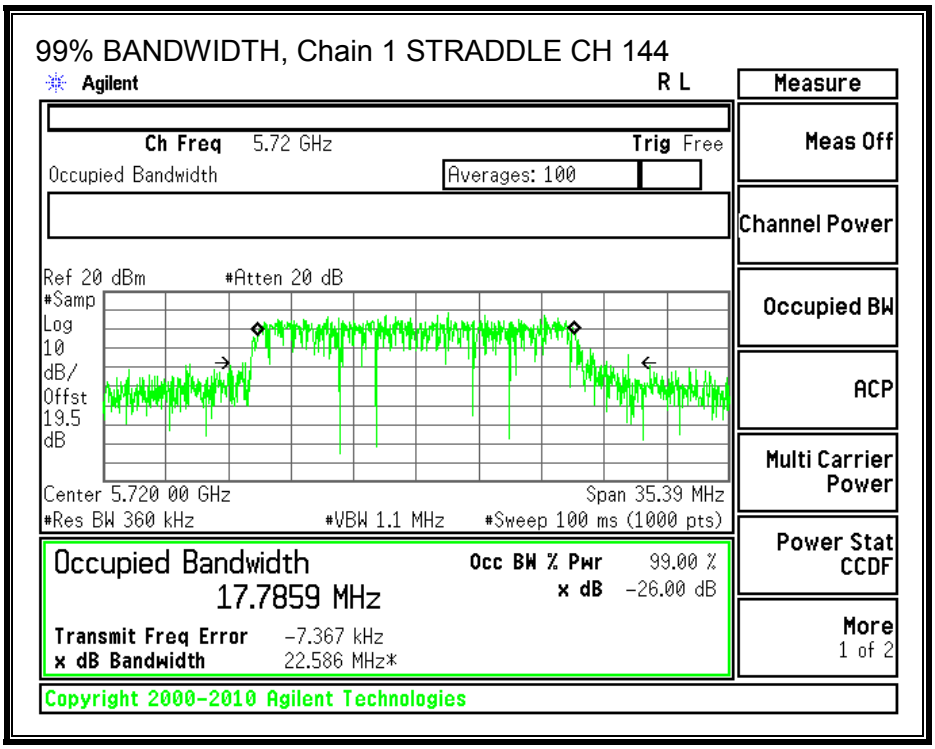




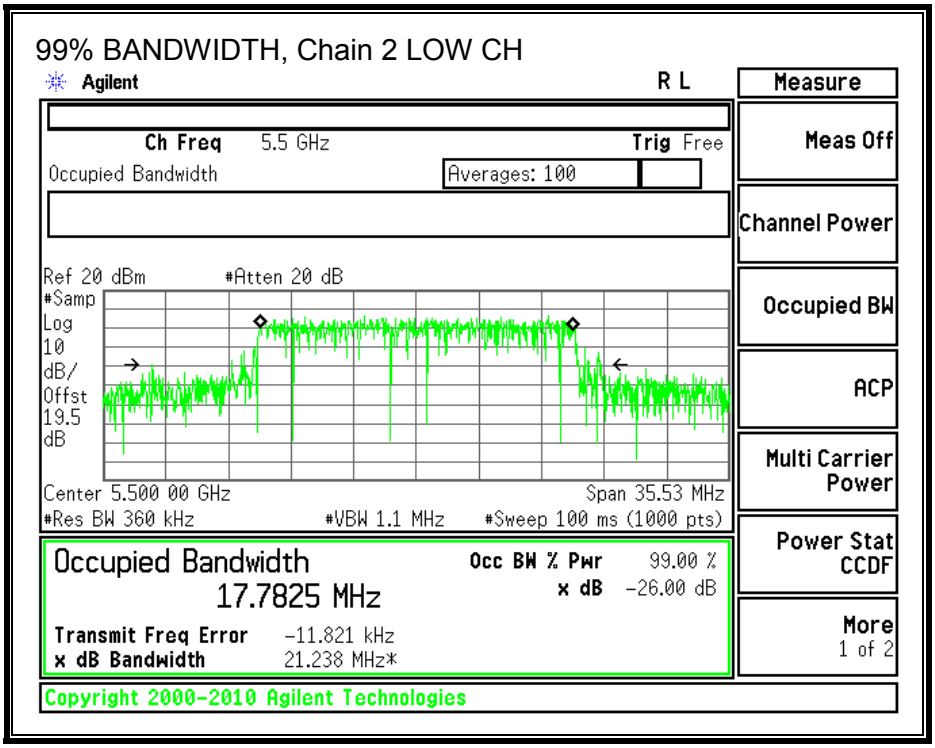
99% BANDWIDTH, Chain 1 HIGH CH

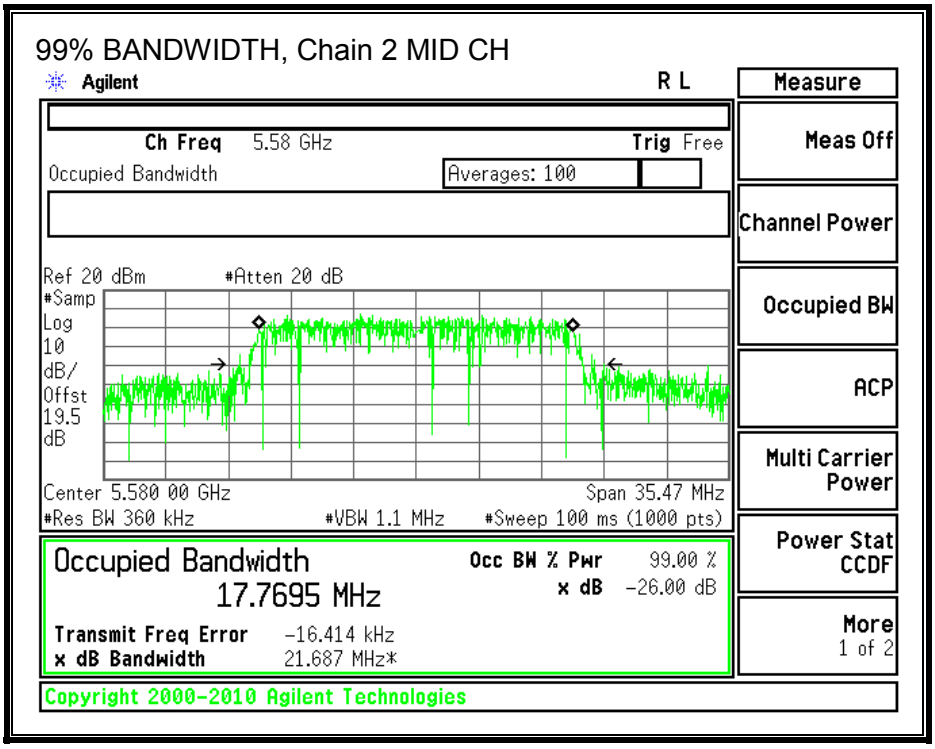


99% BANDWIDTH, Chain 1 STRADDLE CH 144

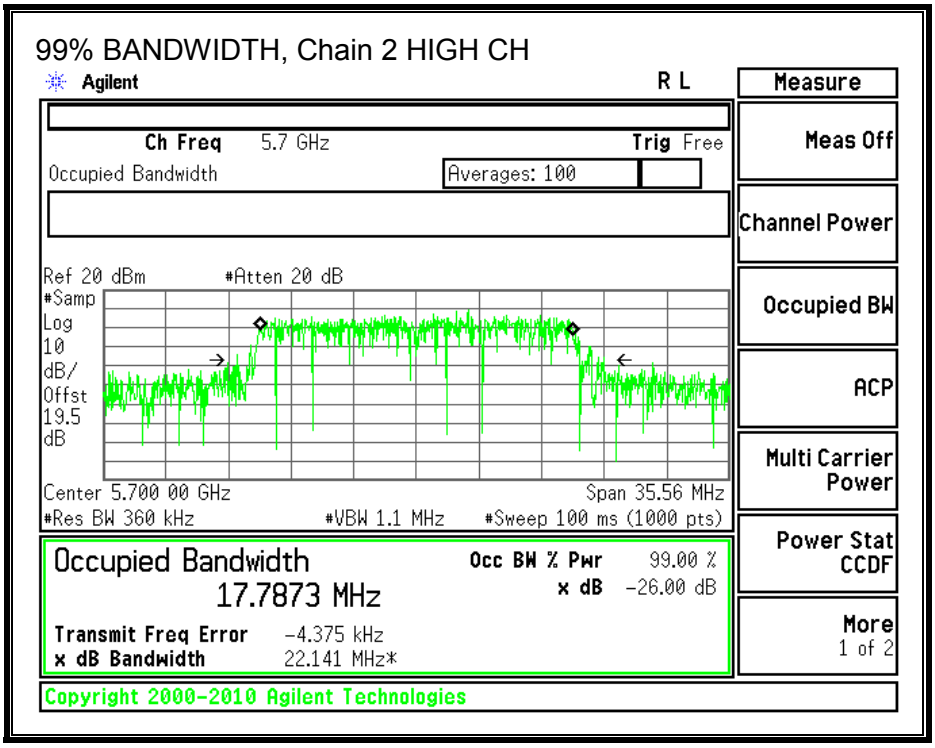


99% BANDWIDTH, Chain 2

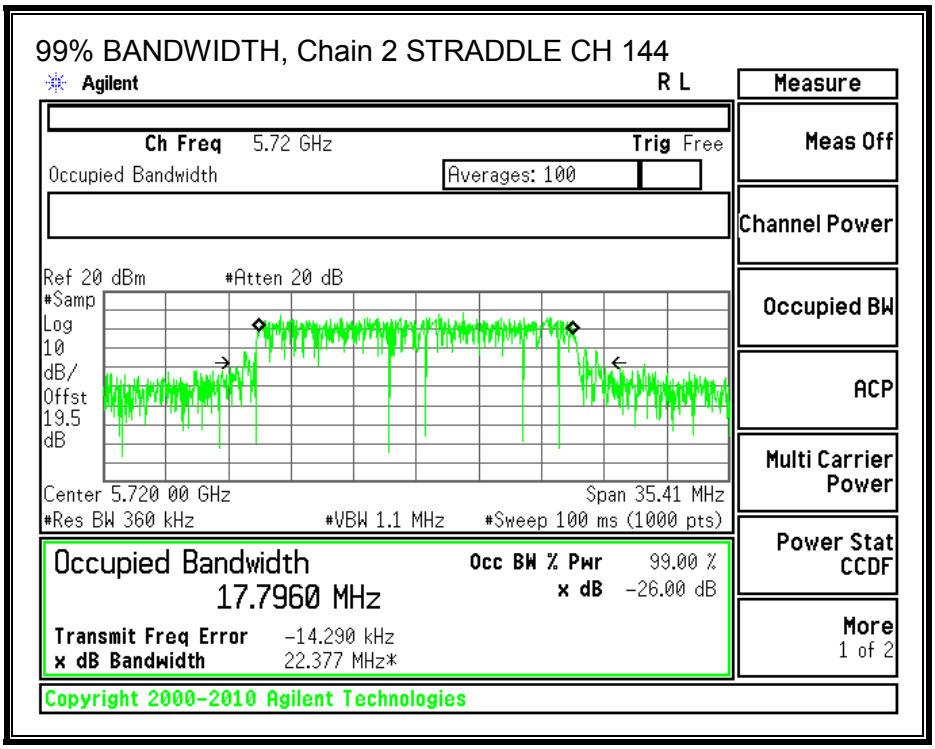




99% BANDWIDTH, Chain 2 HIGH CH



99% BANDWIDTH, Chain 2 STRADDLE CH 144



8.41.3. 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.

DIRECTIONAL ANTENNA GAIN

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

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Chain 2 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
3.17	2.09	4.72	4.46

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

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Chain 2 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
3.17	2.09	4.72	9.17

RESULTS

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)
Low	5500	27.89	4.46	9.17	24.00	7.83
Mid	5580	27.24	4.46	9.17	24.00	7.83
High	5700	21.35	4.46	9.17	24.00	7.83

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

Output Power Results

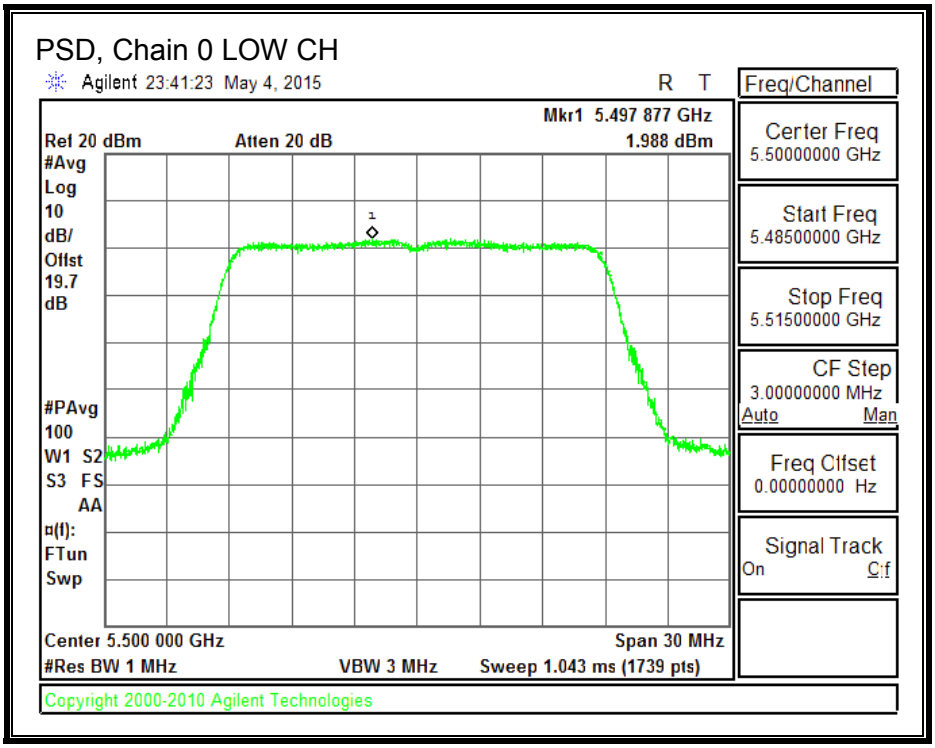
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Chain 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	12.80	13.40	12.80	17.78	24.00	-6.22
Mid	5580	12.80	13.10	12.50	17.58	24.00	-6.42
High	5700	12.30	12.40	12.20	17.07	24.00	-6.93

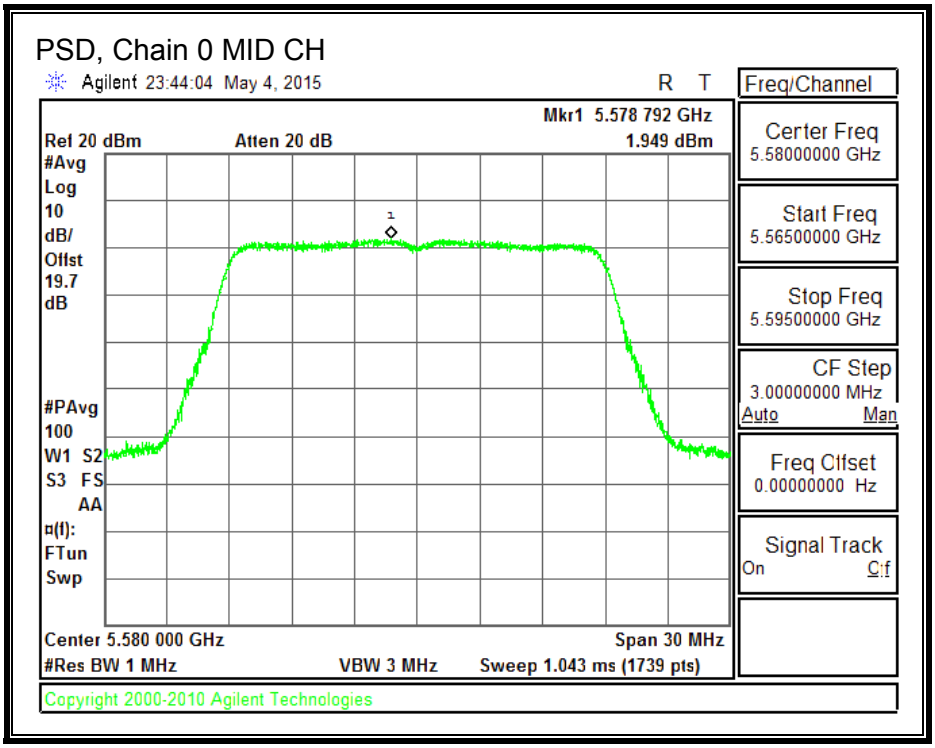
PSD Results

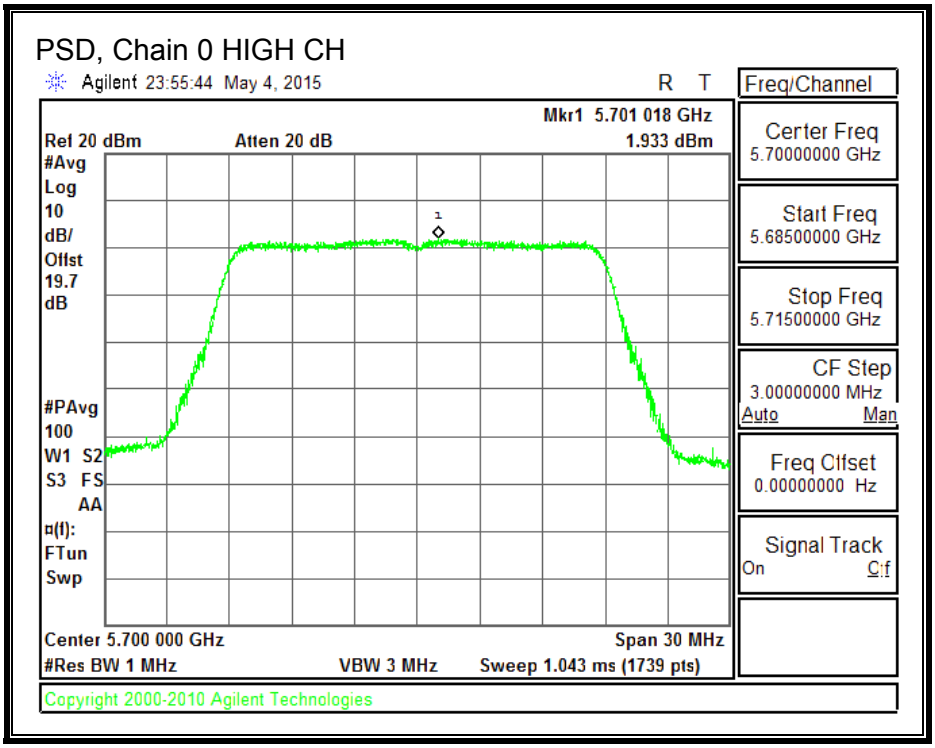
Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Chain 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5500	1.988	2.450	1.642	6.81	7.83	-1.02
Mid	5580	1.949	2.302	1.566	6.72	7.83	-1.11
High	5700	1.933	2.021	1.917	6.73	7.83	-1.10

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

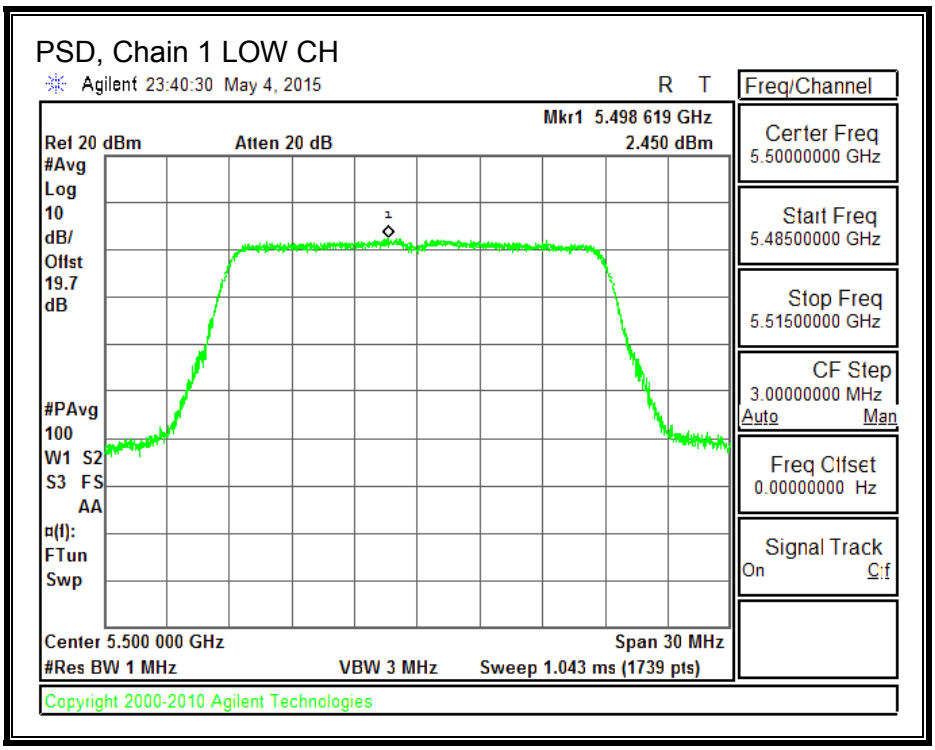
PSD, Chain 0



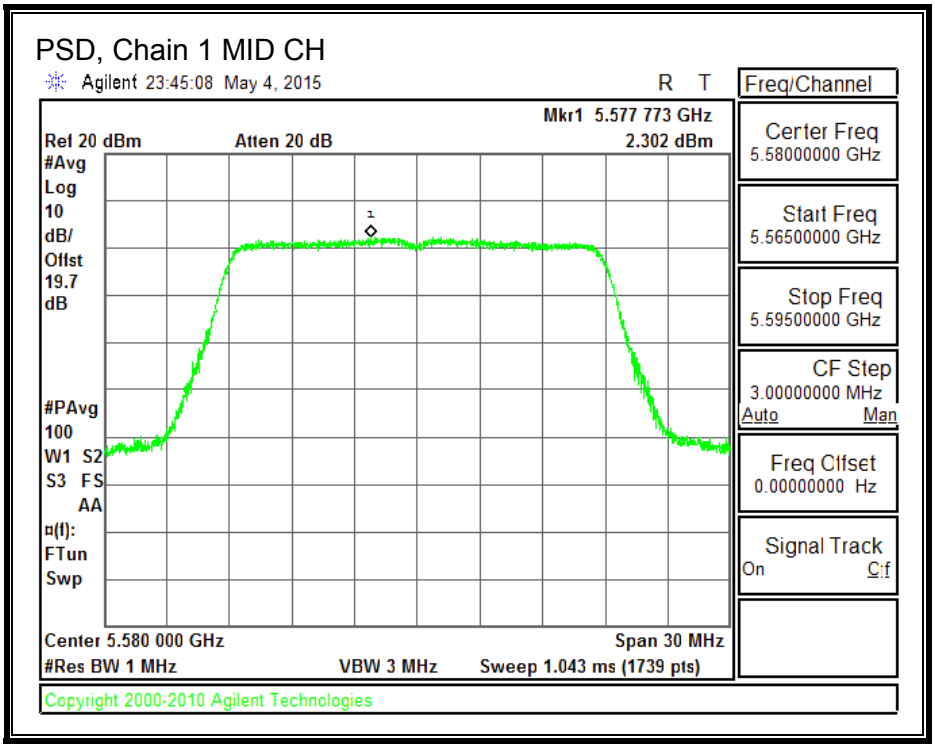




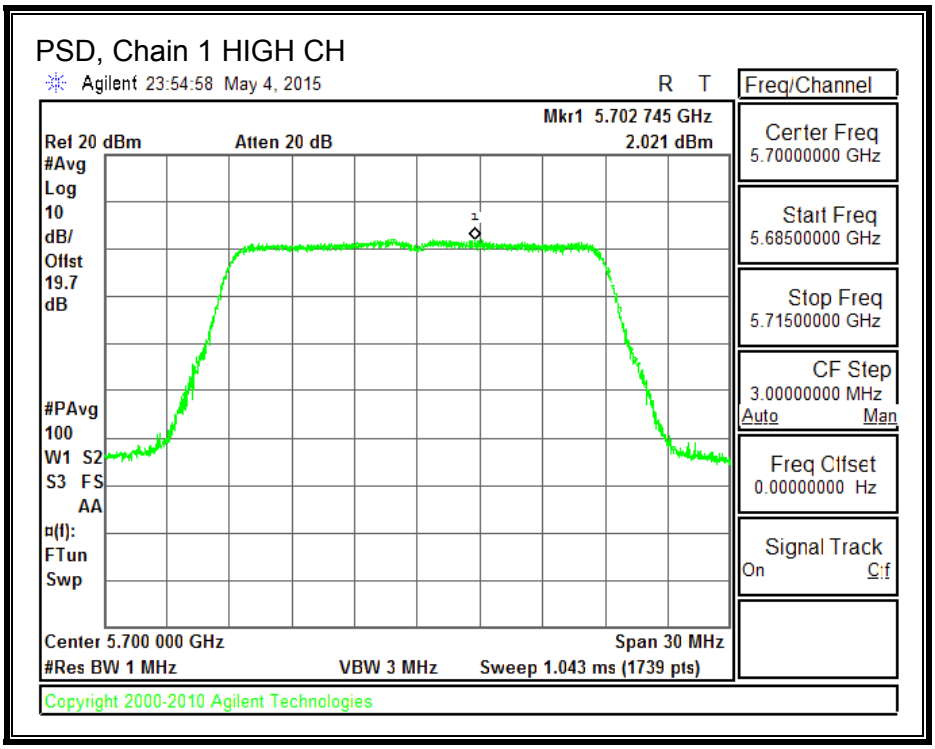
PSD, Chain 1



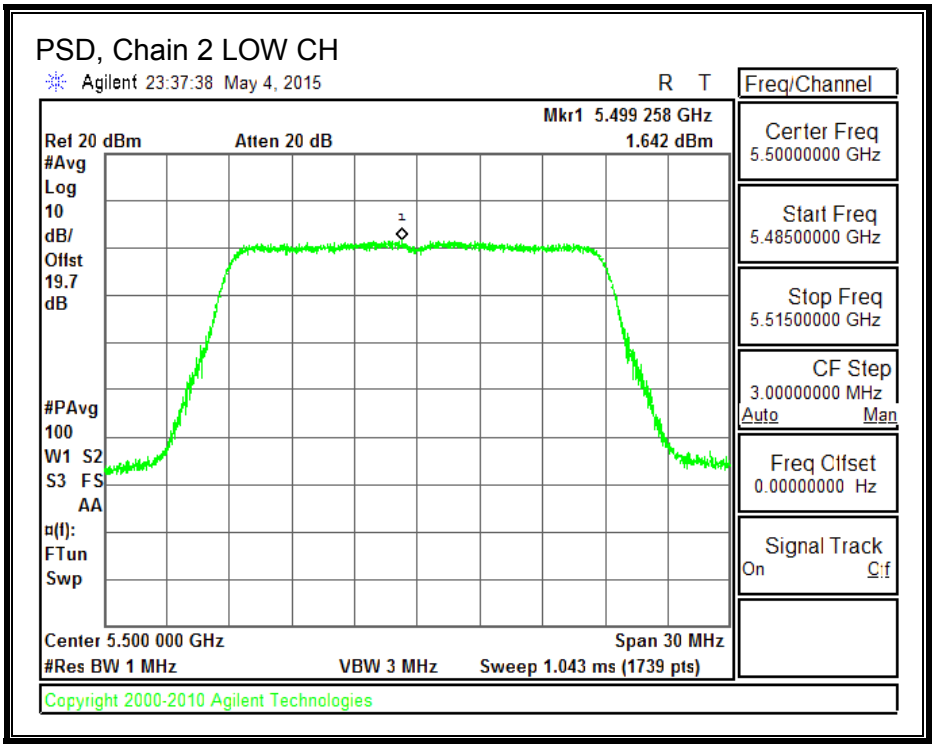
PSD, Chain 1 MID CH

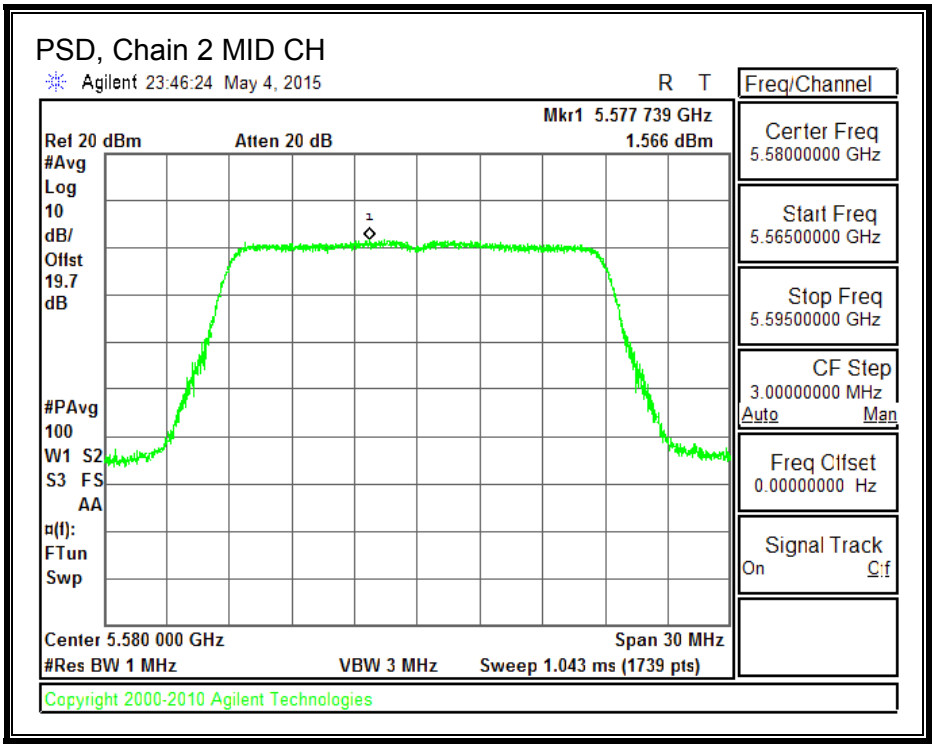


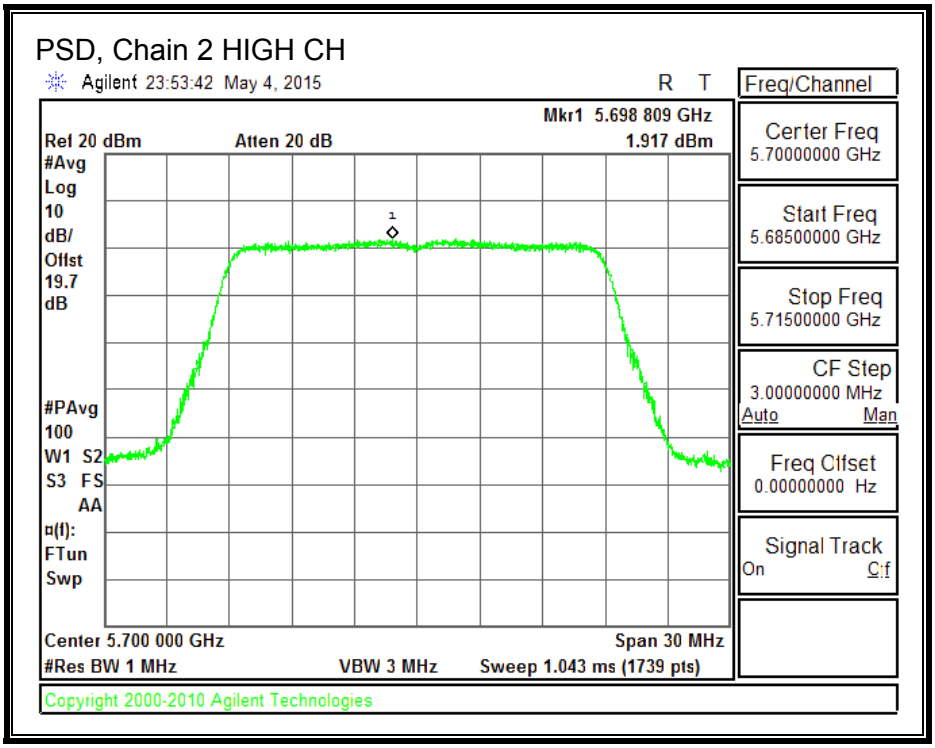
PSD, Chain 1 HIGH CH



PSD, Chain 2







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	19.89	4.46	9.17	23.99	7.83

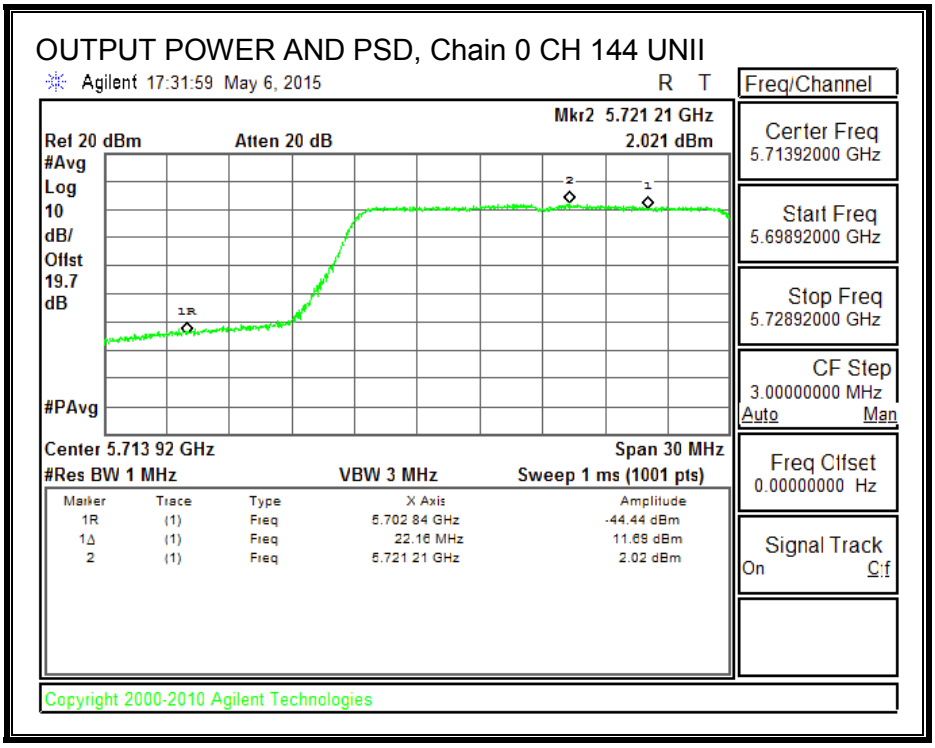
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD

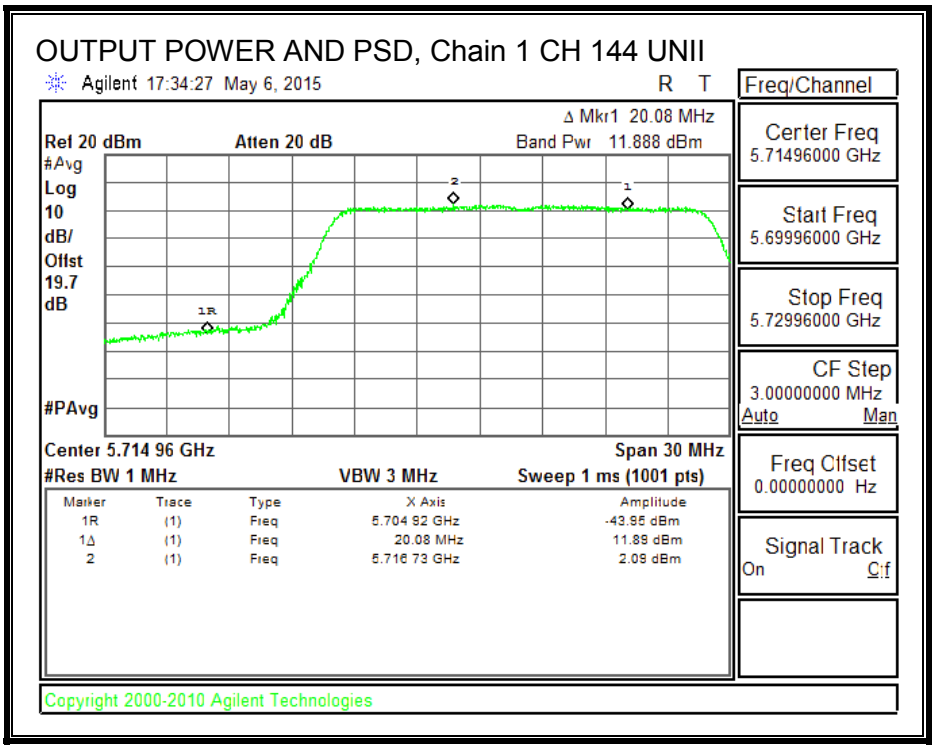
Output Power Results

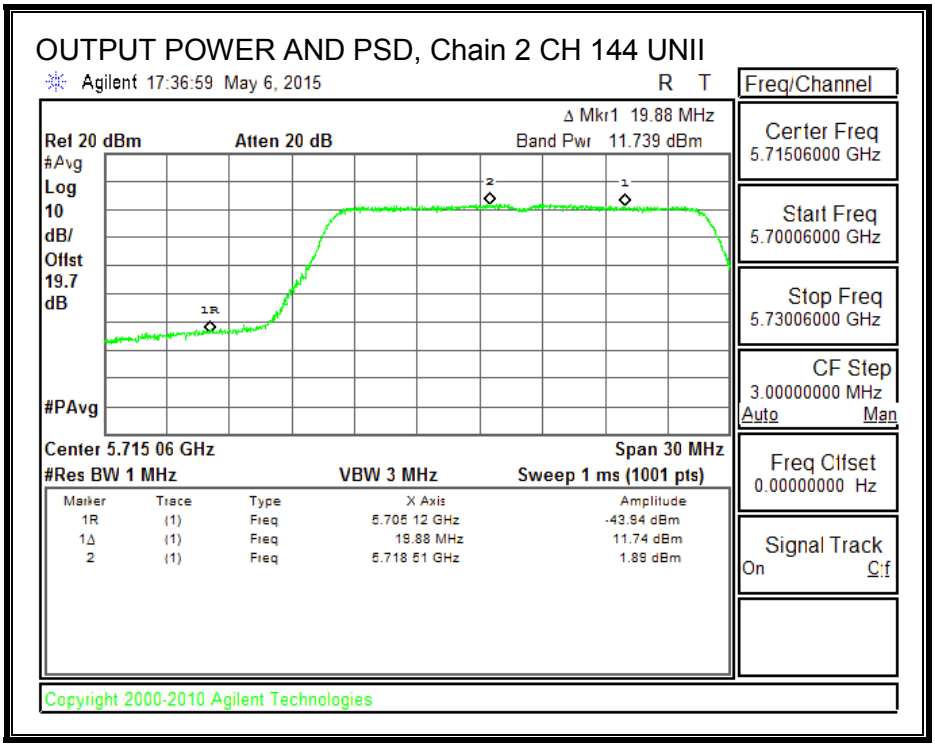
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Chain 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
144	5720	11.690	11.888	11.739	16.54	23.99	-7.44

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Chain 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
144	5720	2.021	2.090	1.890	6.77	7.83	-1.06







UNII-3 BAND

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
144	5720	4.47	9.15	30.00	26.85

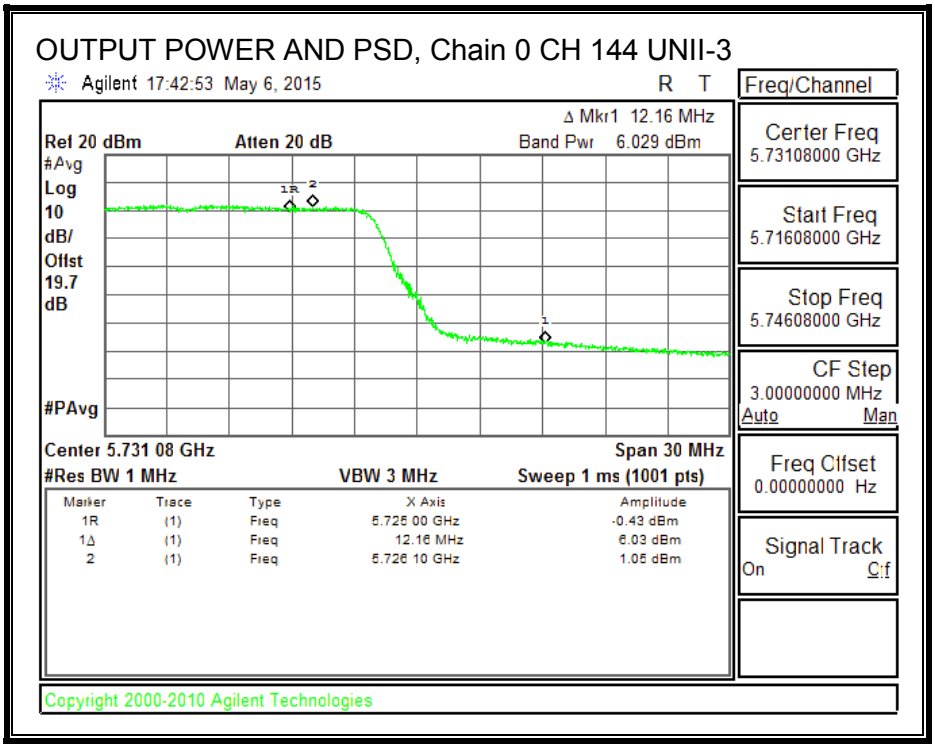
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power & PSD

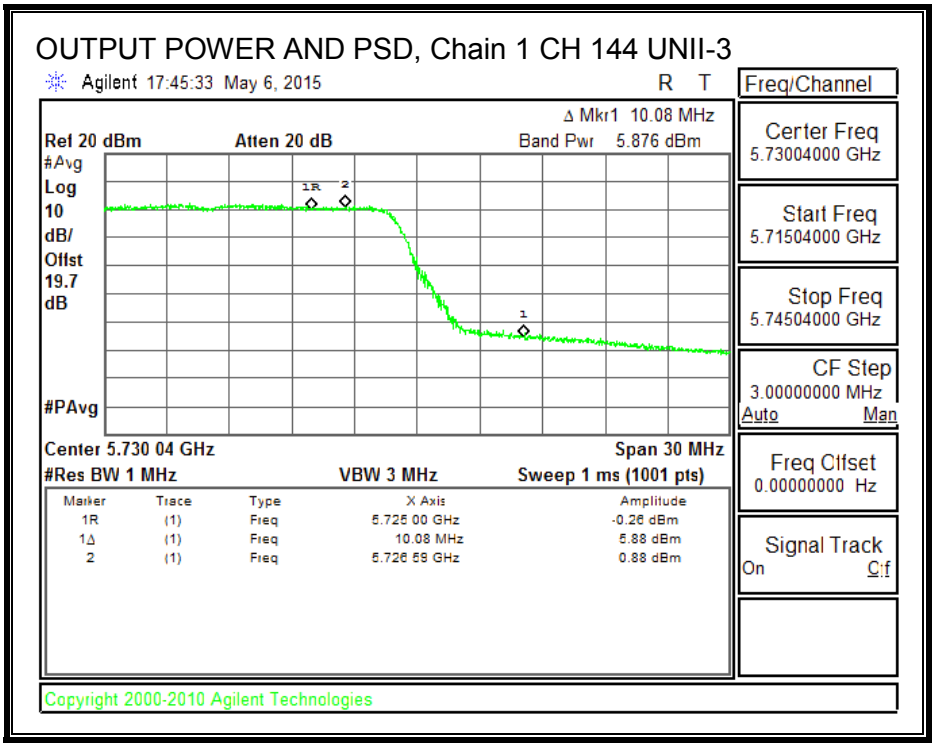
Output Power Results

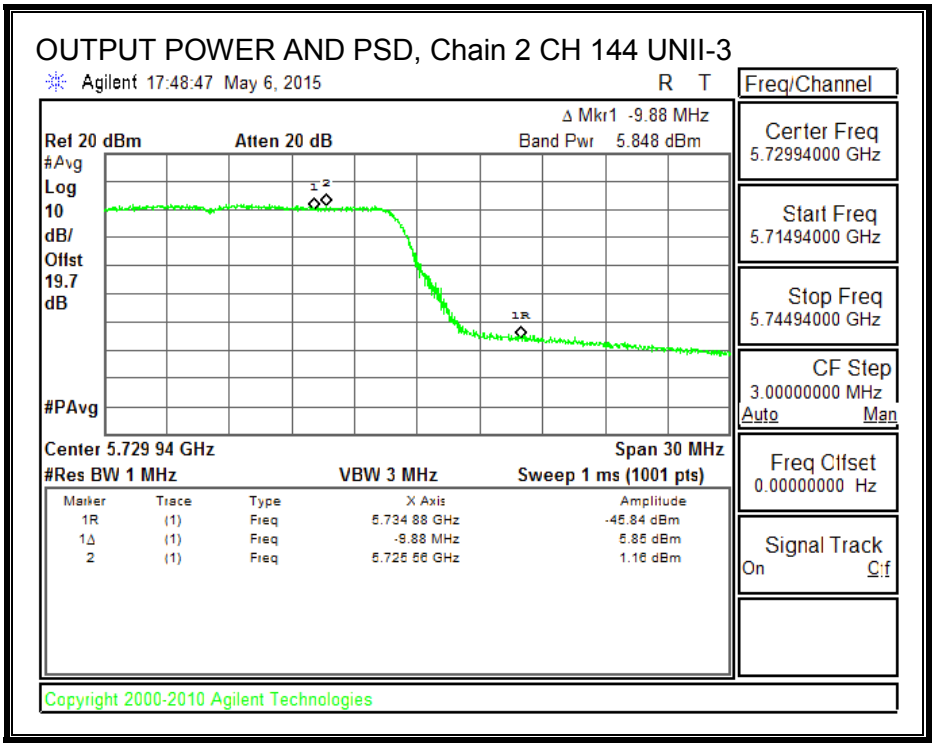
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Chain 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
144	5720	6.029	5.876	5.848	10.69	30.00	-19.31

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Chain 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
144	5720	1.05	0.88	1.16	5.80	26.85	-21.05







8.41.4. AVERAGE OUTPUT POWER (WHOLE FUNDAMENTAL)

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

RESULTS

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Chain 2 Meas Power (dBm)	Total Corr'd Power (dBm)
144	5720	12.90	13.00	12.80	17.67

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

8.42. 802.11n HT20 STBC 3TX MODE IN THE 5.6 GHz BAND

8.42.1. 26 dB BANDWIDTH

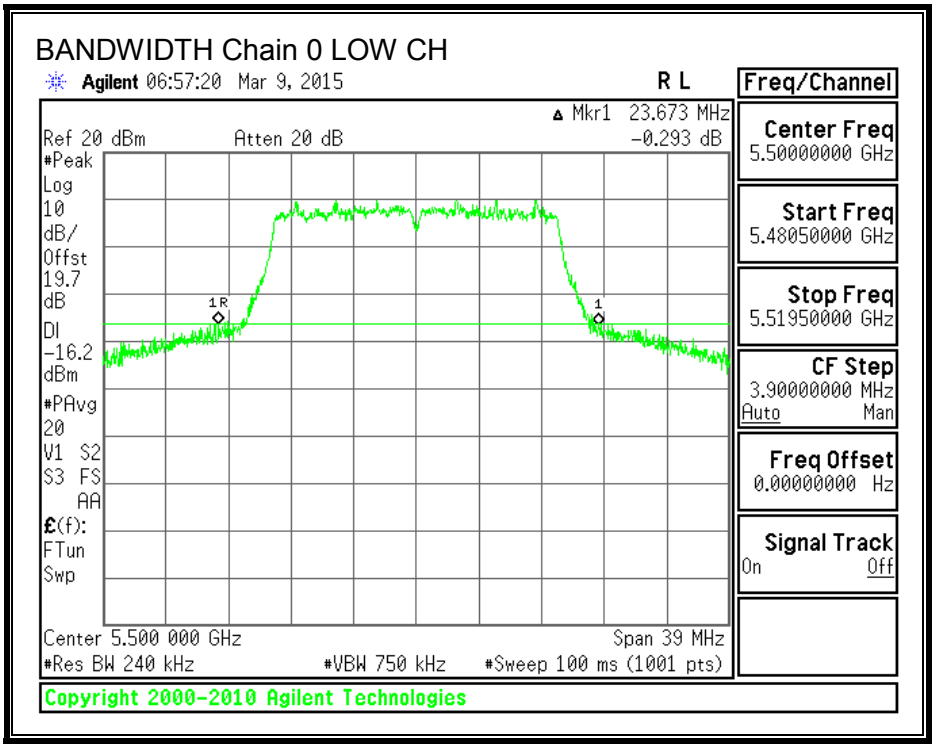
LIMITS

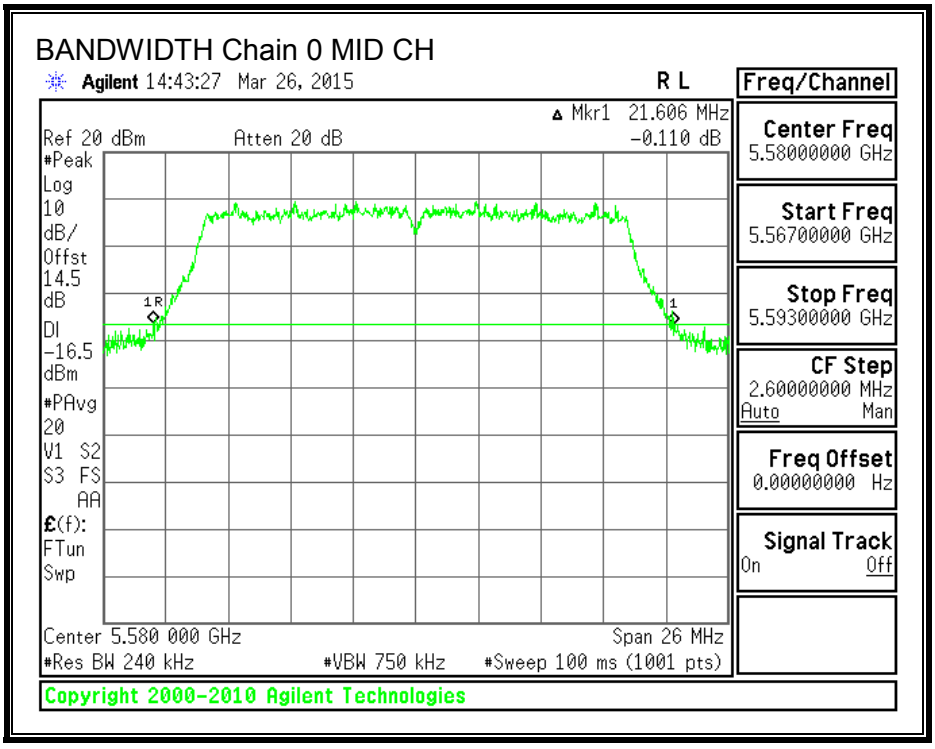
None; for reporting purposes only.

RESULTS

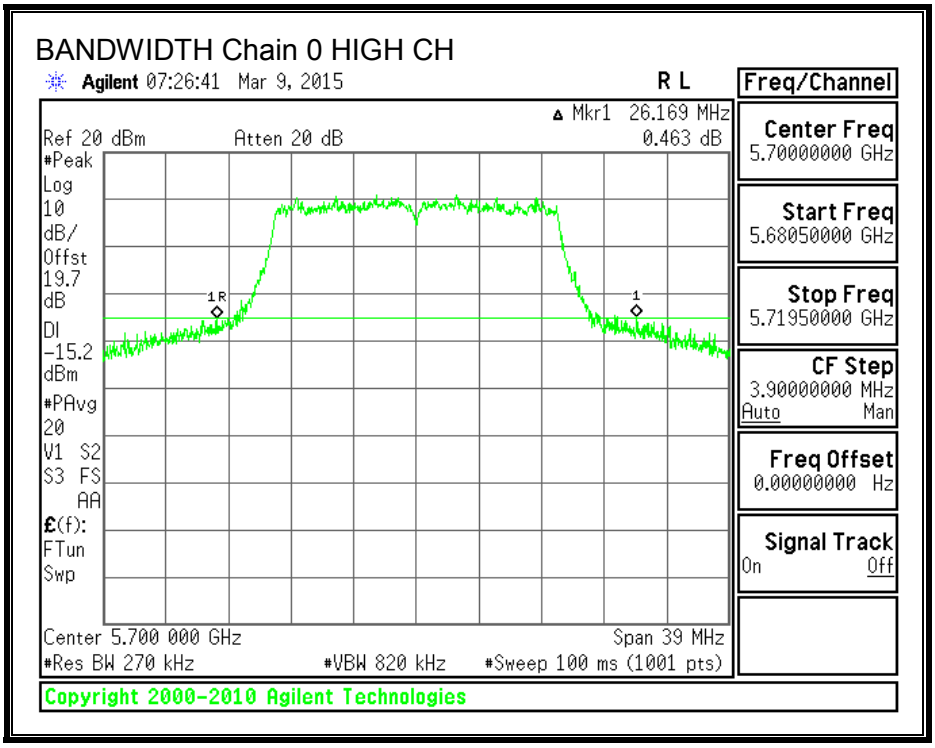
Channel	Frequency (MHz)	26 dB BW Chain 0 (MHz)	26 dB BW Chain 1 (MHz)	26 dB BW Chain 2 (MHz)
Low	5500	23.673	29.484	22.464
Mid	5580	21.606	27.456	21.502
High	5700	26.169	26.325	21.632
144	5720	22.126	22.191	21.346

26 dB BANDWIDTH, Chain 0

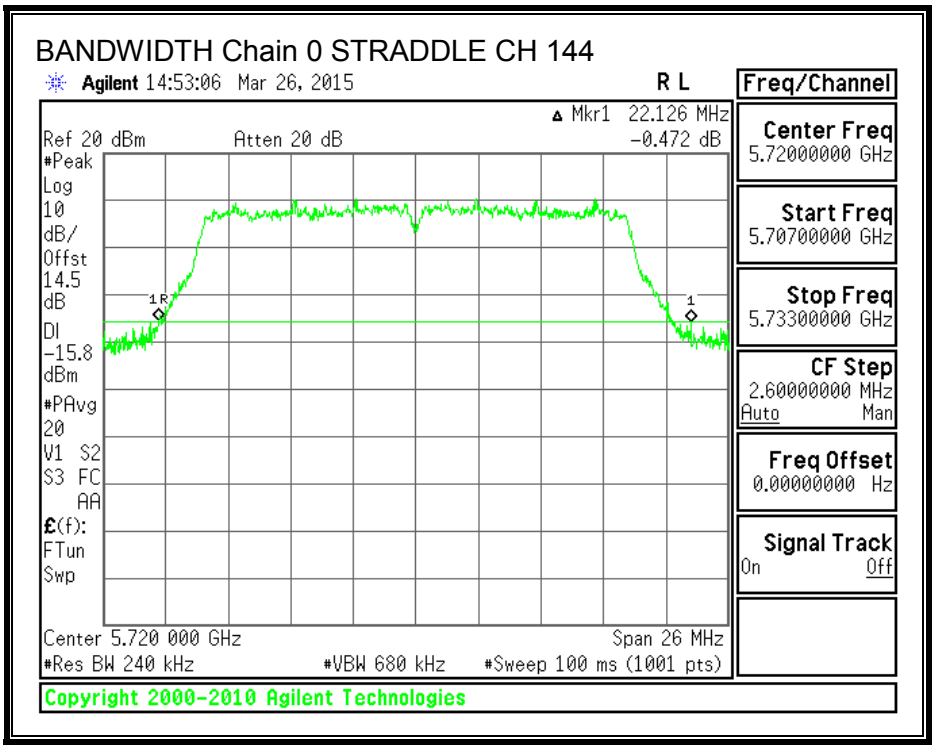




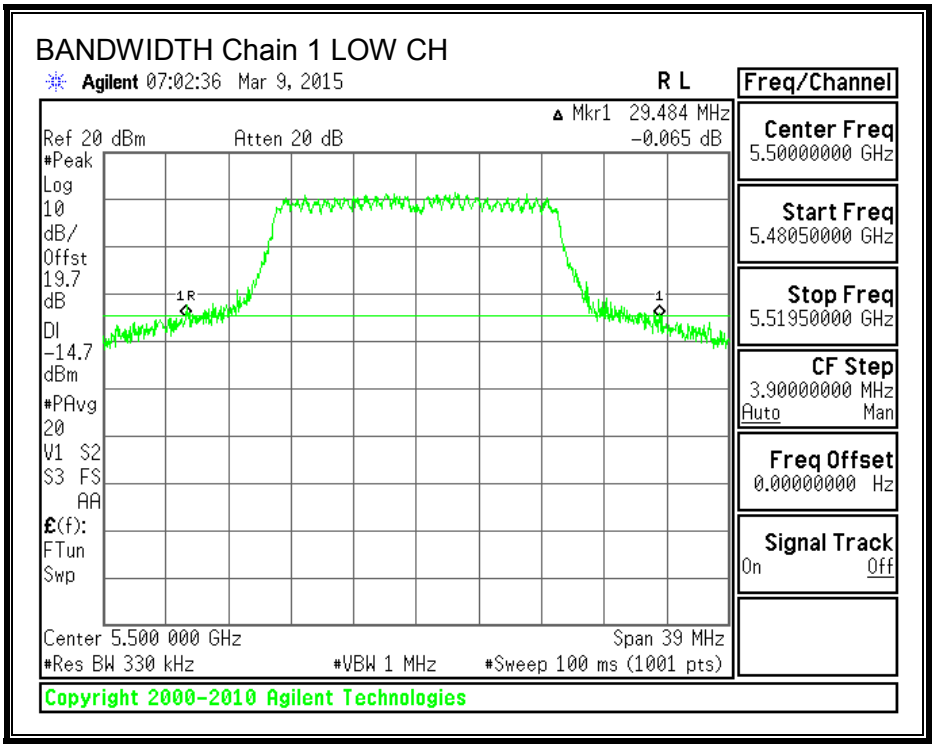
BANDWIDTH Chain 0 HIGH CH

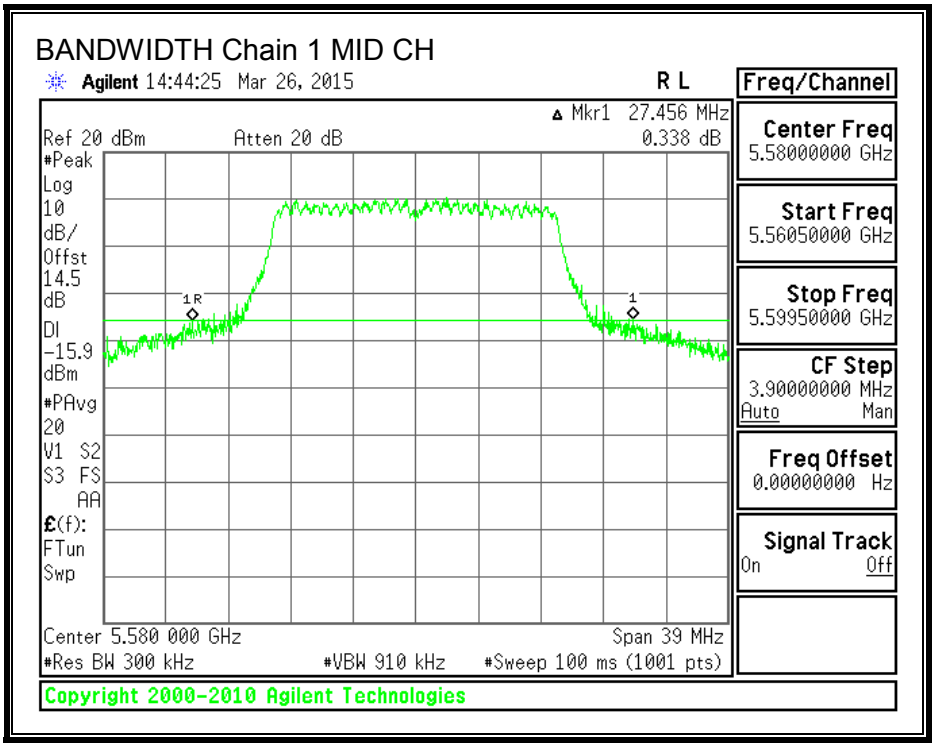


BANDWIDTH Chain 0 STRADDLE CH 144

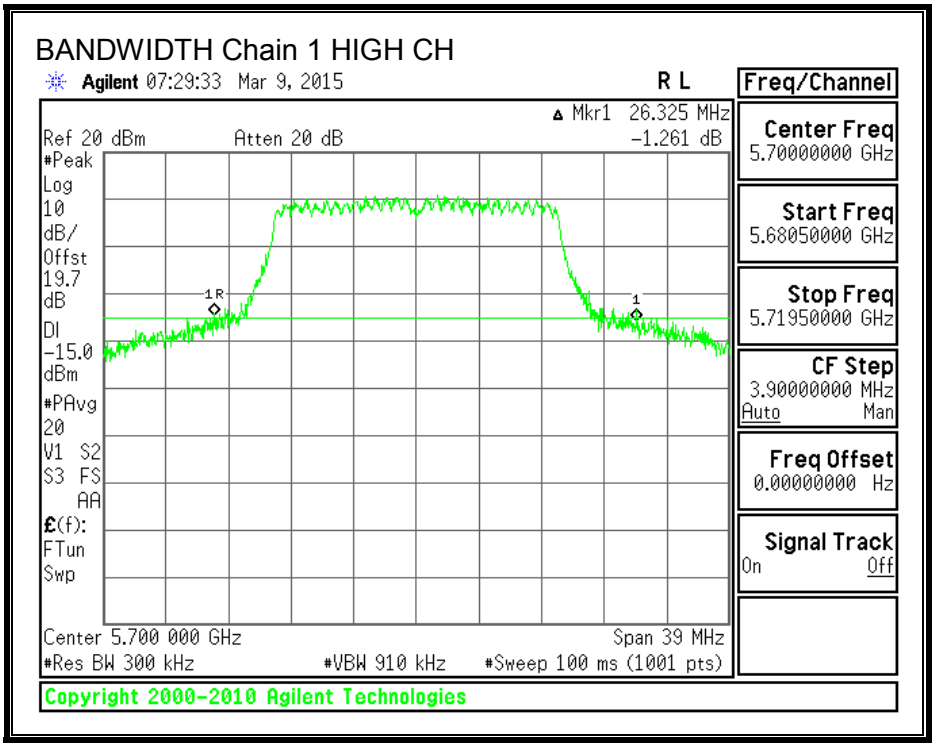


26 dB BANDWIDTH, Chain 1

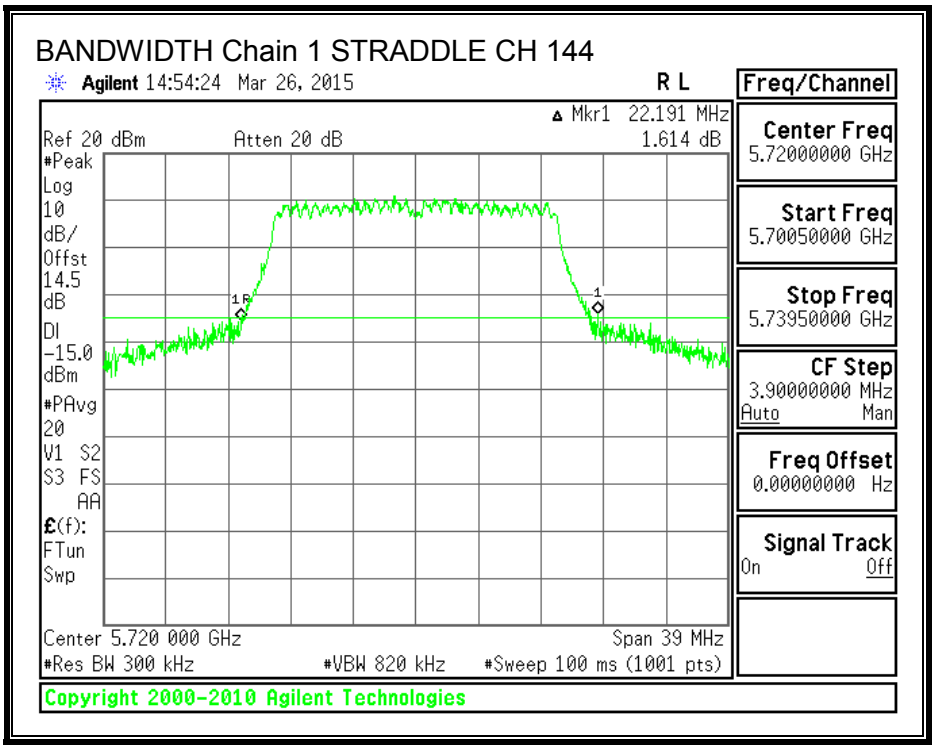




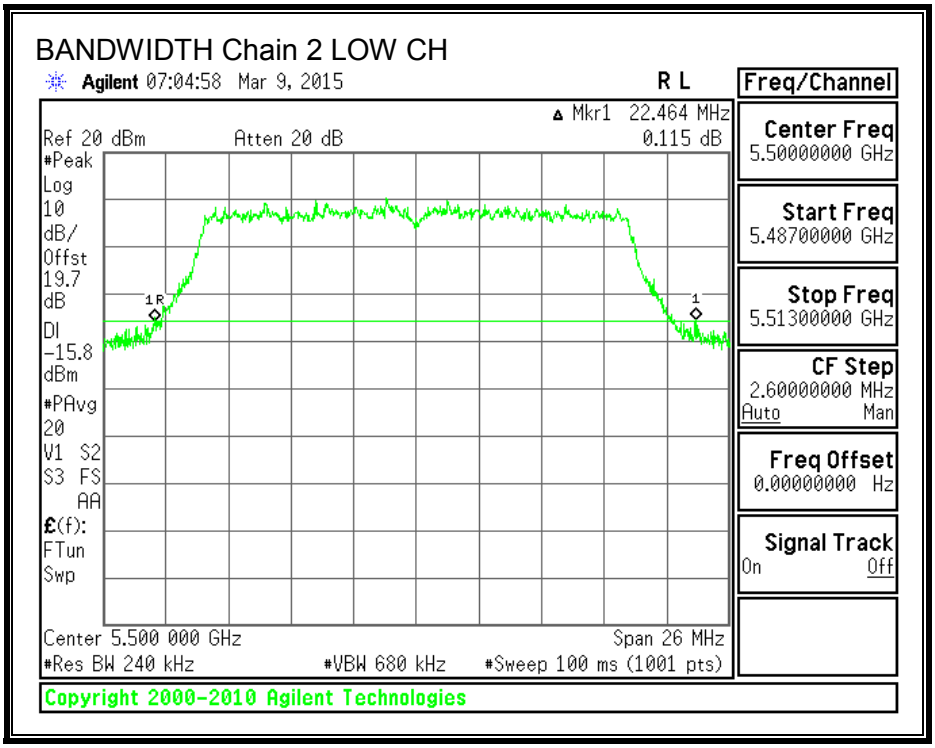
BANDWIDTH Chain 1 HIGH CH

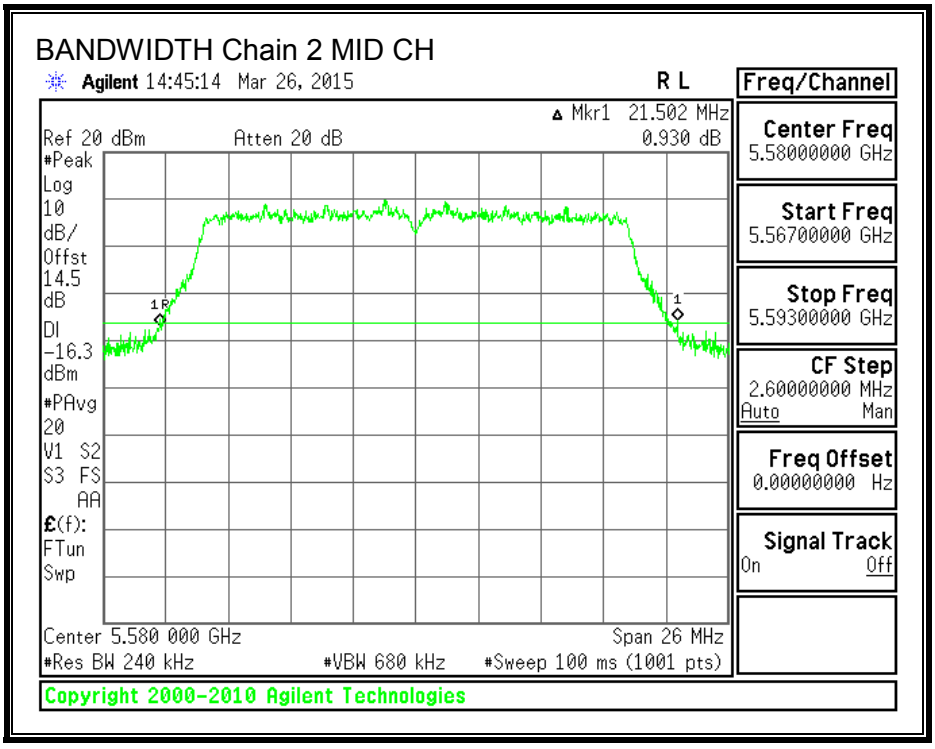


BANDWIDTH Chain 1 STRADDLE CH 144

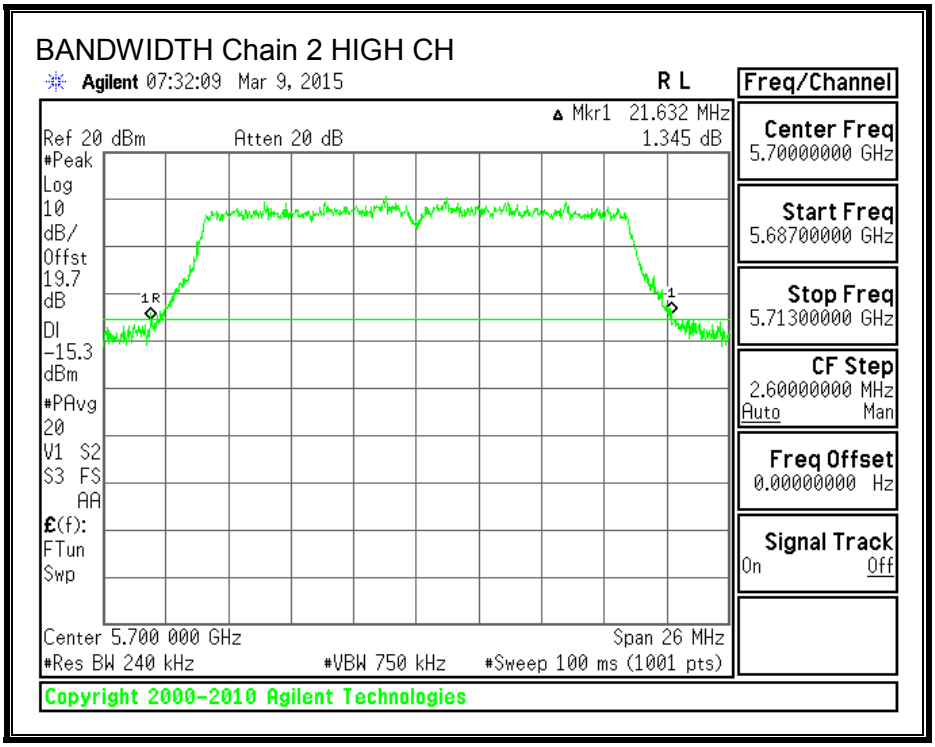


26 dB BANDWIDTH, Chain 2

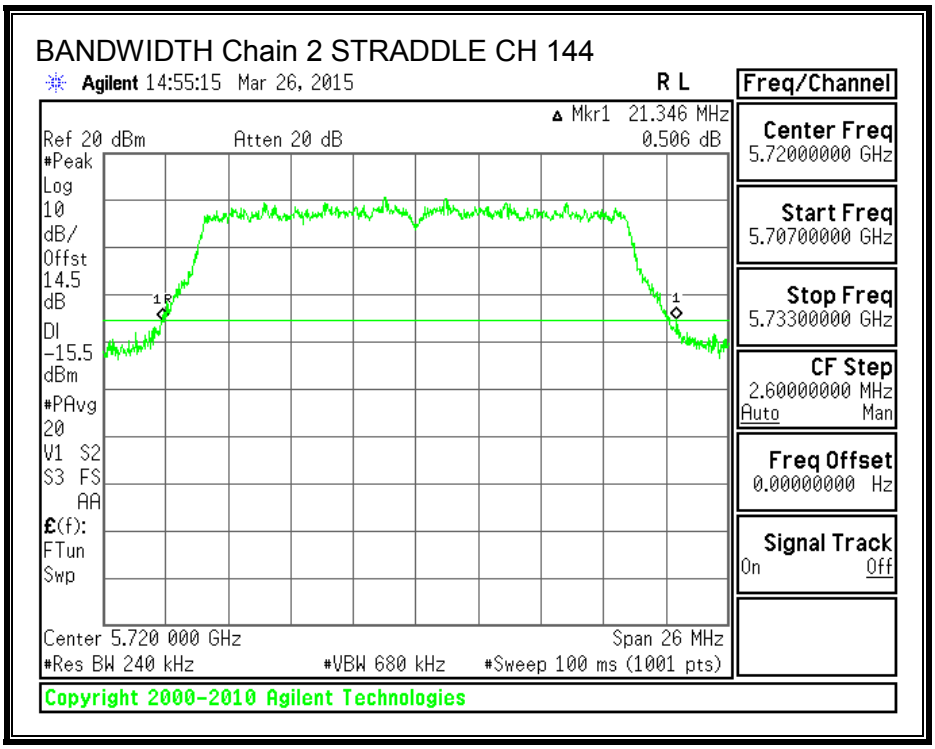




BANDWIDTH Chain 2 HIGH CH



BANDWIDTH Chain 2 STRADDLE CH 144



8.42.2. 99% BANDWIDTH

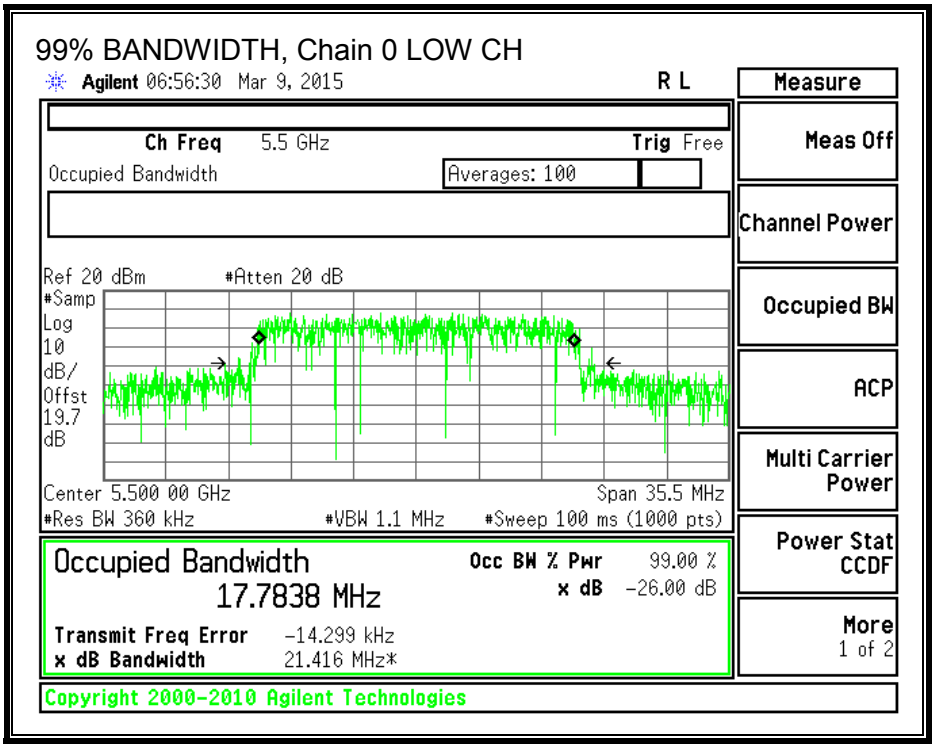
LIMITS

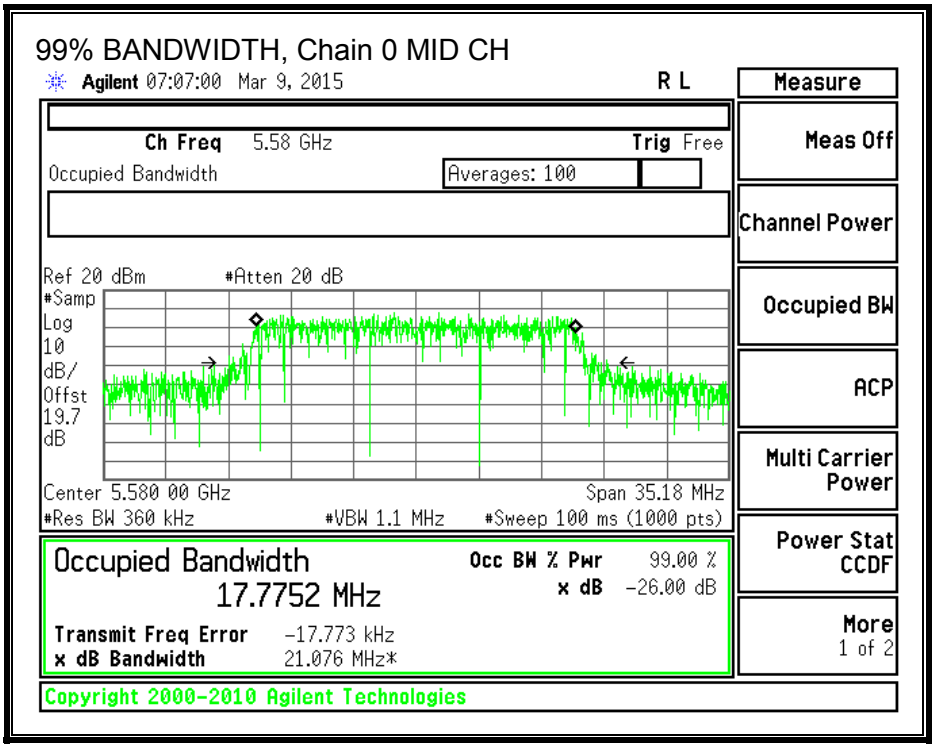
None; for reporting purposes only.

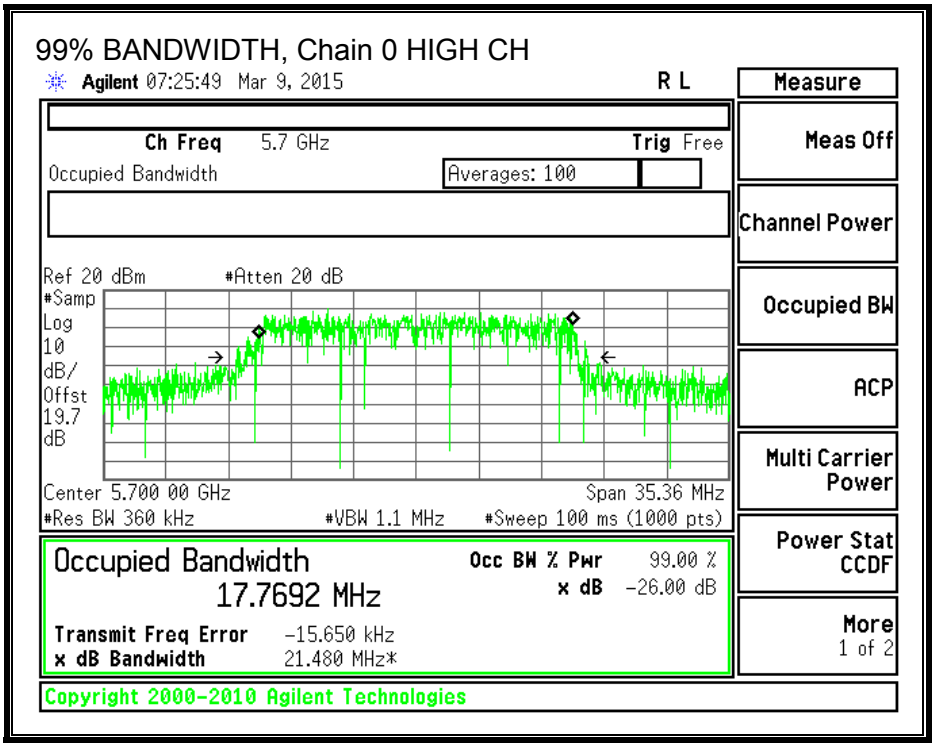
RESULTS

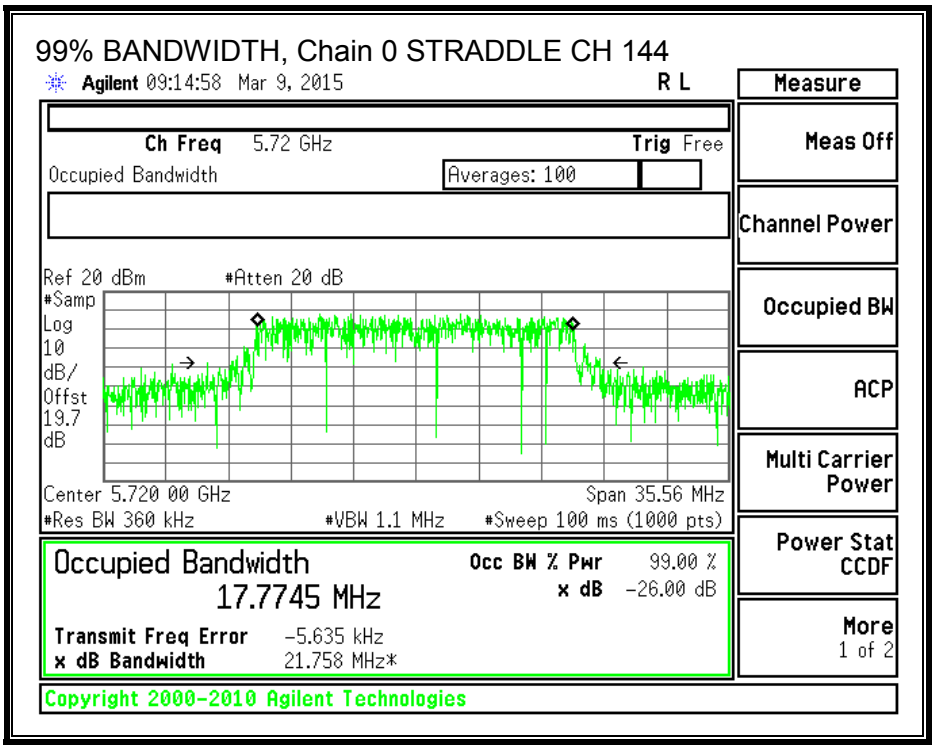
Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)	99% BW Chain 2 (MHz)
Low	5500	17.7838	17.8214	17.7489
Mid	5580	17.7752	17.8055	17.7580
High	5700	17.7692	17.7777	17.7450
144	5720	17.7745	17.7937	17.7739

99% BANDWIDTH, Chain 0

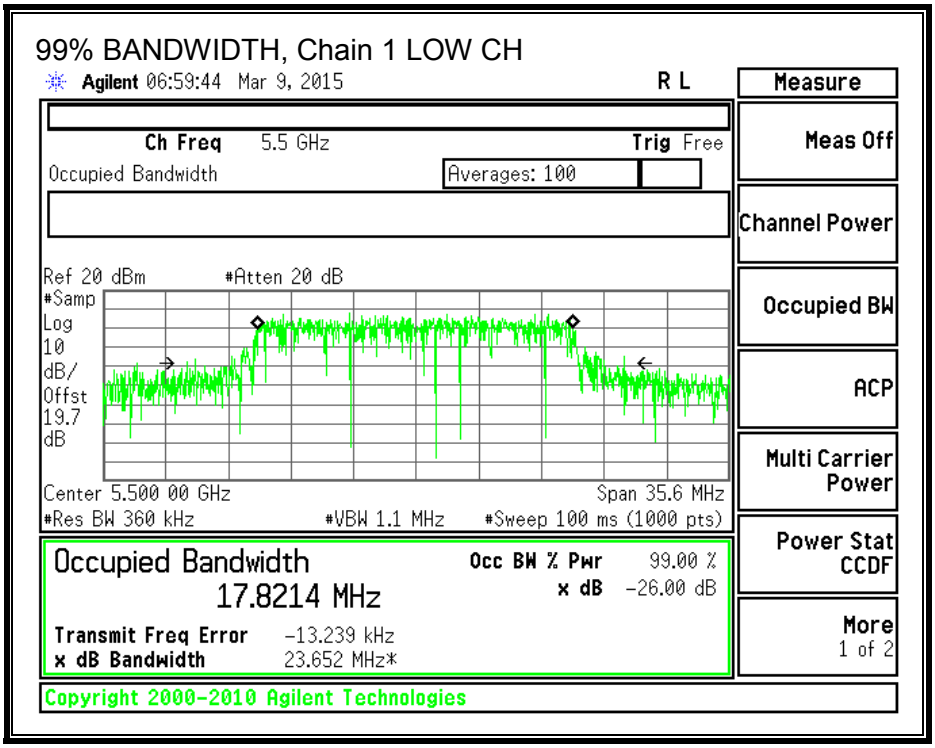


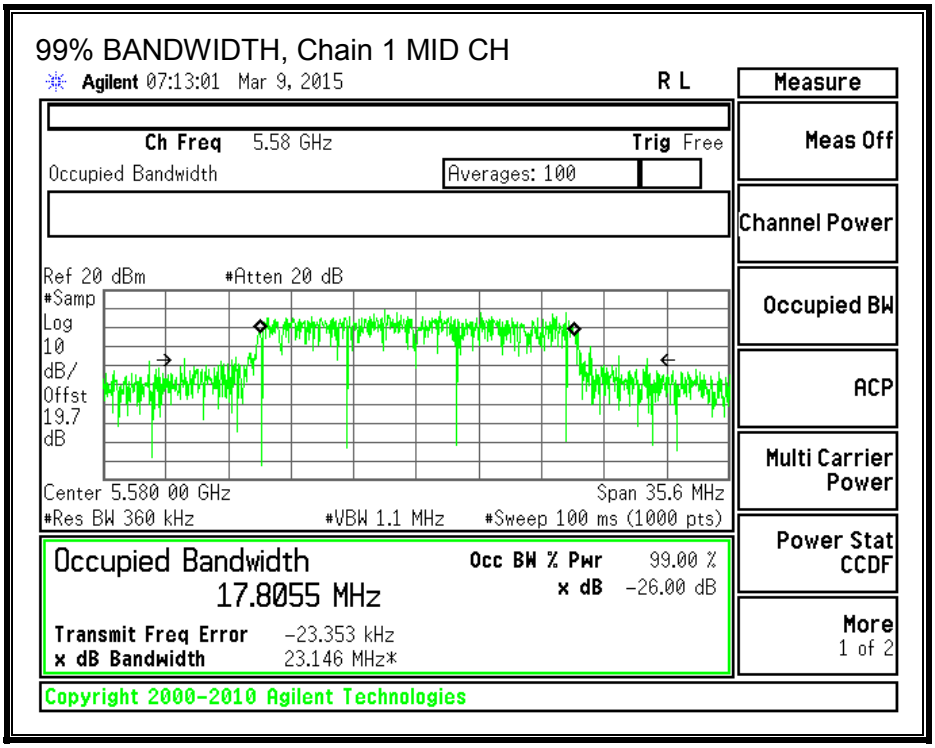




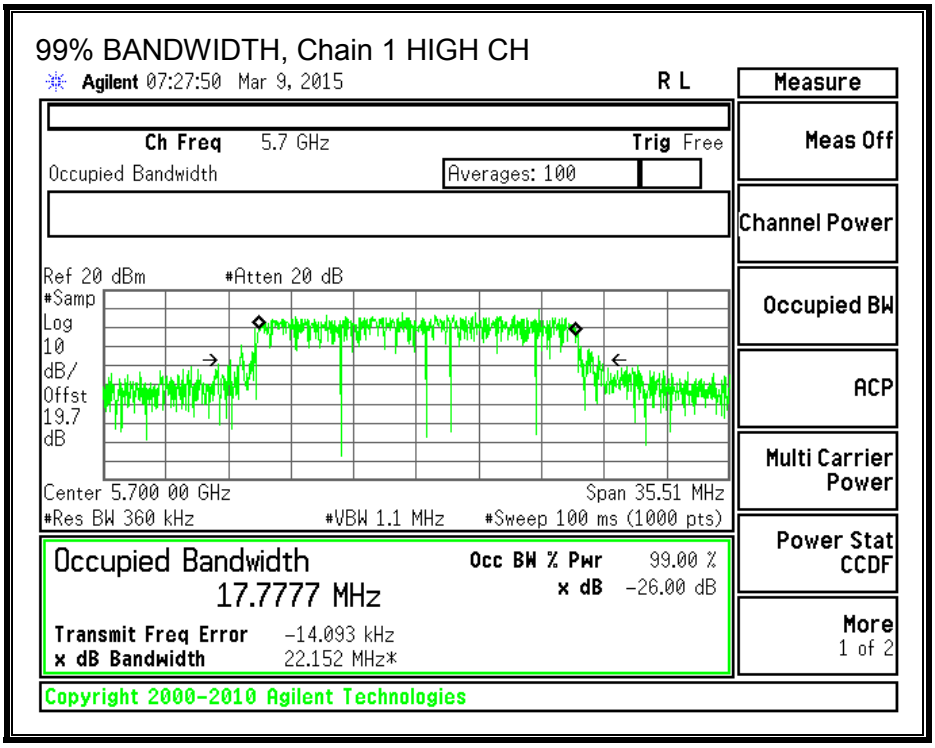


99% BANDWIDTH, Chain 1

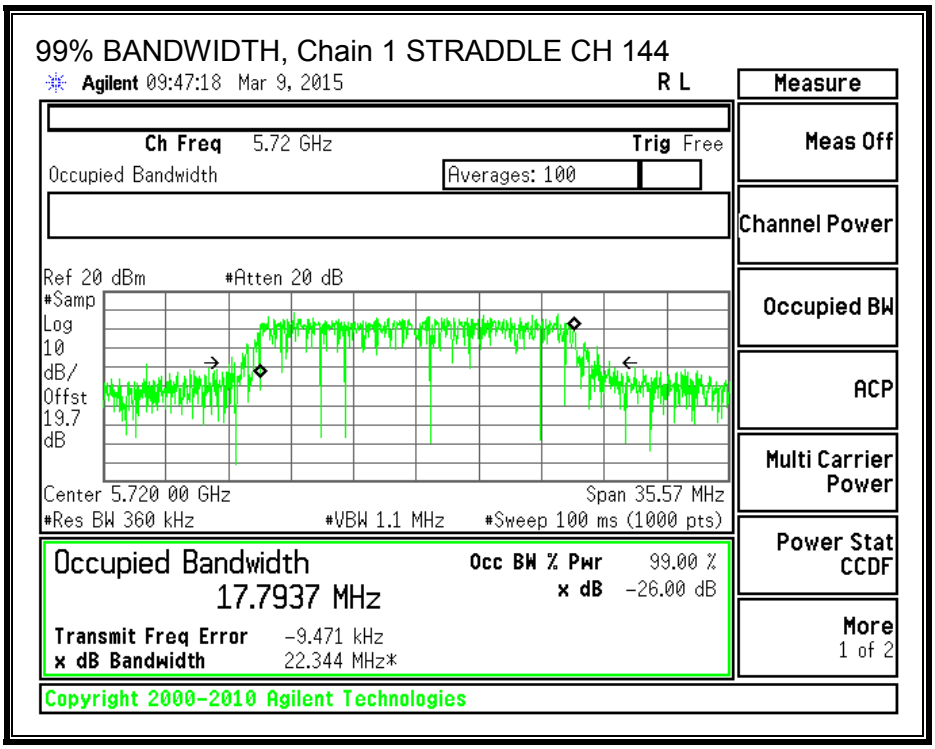




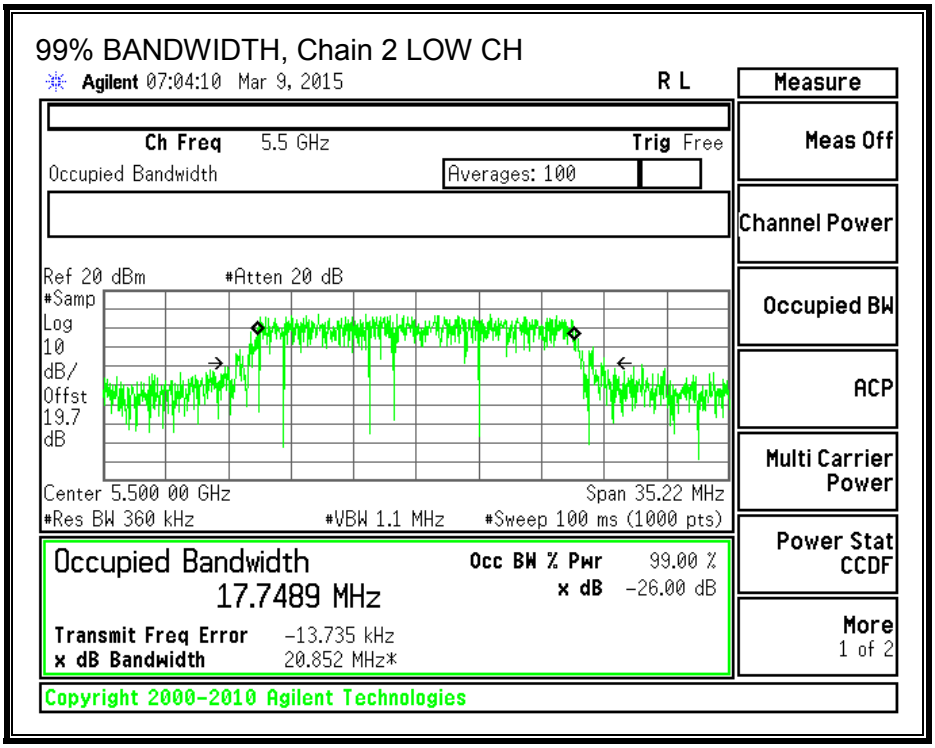
99% BANDWIDTH, Chain 1 HIGH CH

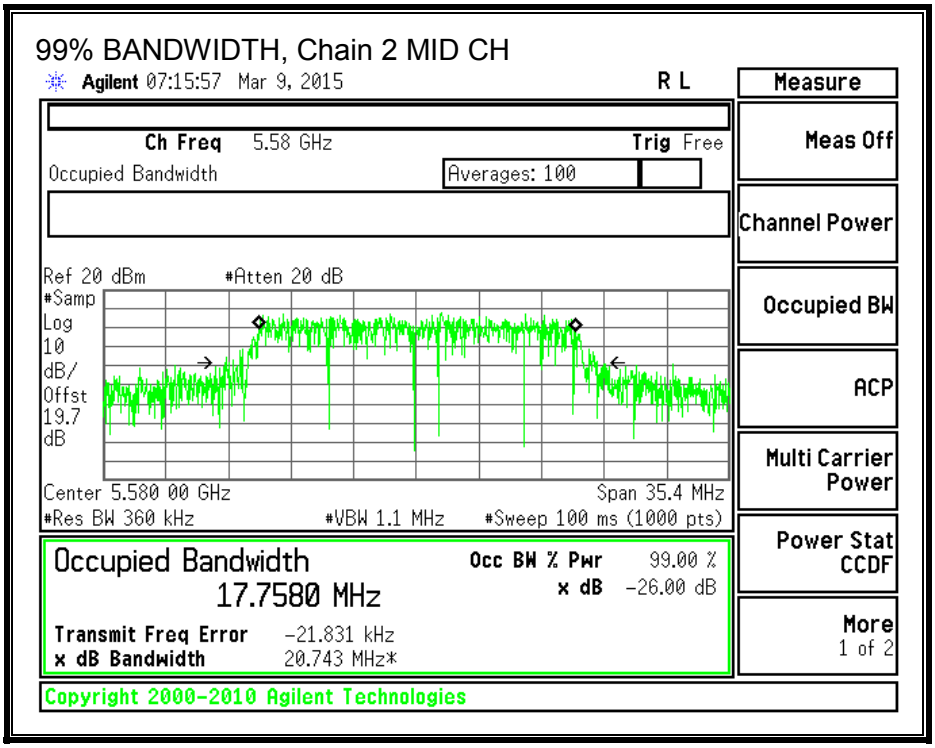


99% BANDWIDTH, Chain 1 STRADDLE CH 144

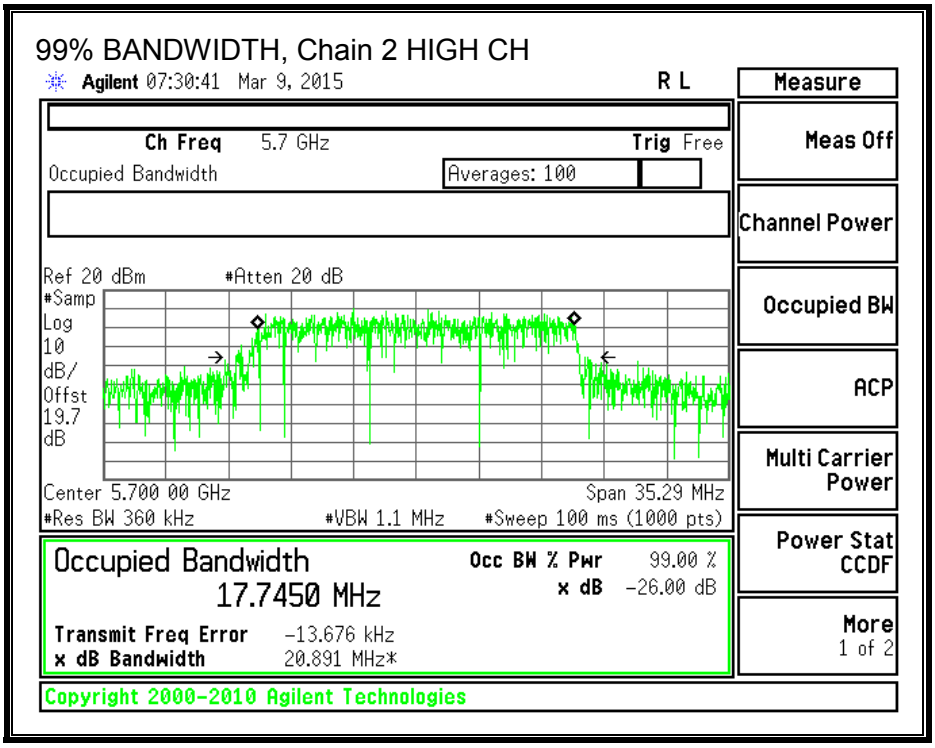


99% BANDWIDTH, Chain 2

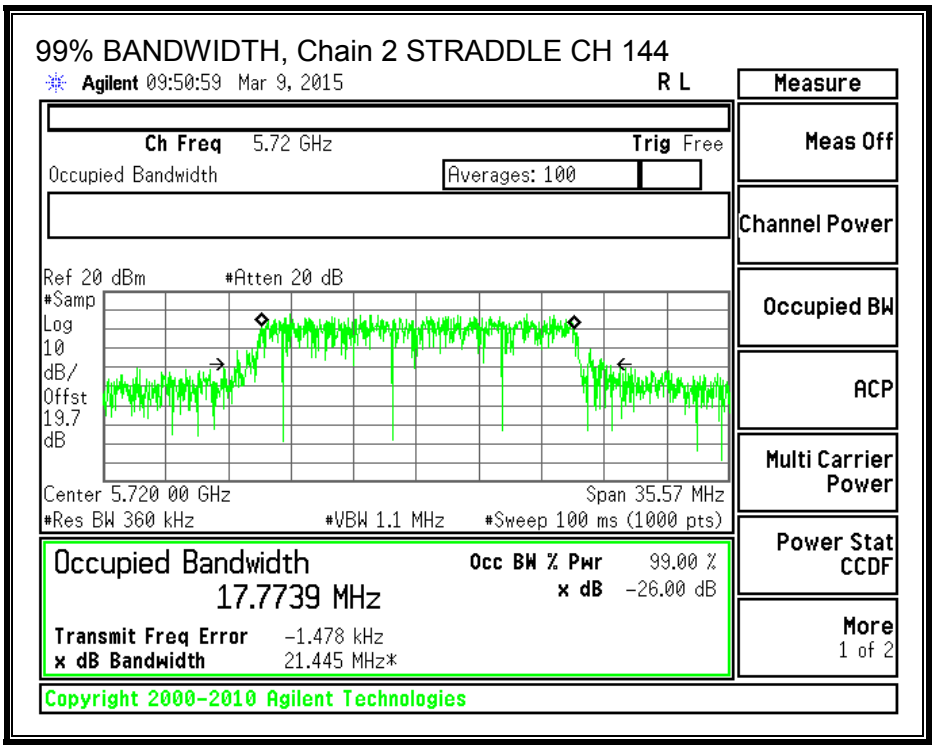




99% BANDWIDTH, Chain 2 HIGH CH



99% BANDWIDTH, Chain 2 STRADDLE CH 144



8.42.3. 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.

DIRECTIONAL ANTENNA GAIN

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

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Chain 2 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
3.17	2.09	4.72	4.46

RESULTS

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)
Low	5500	22.46	4.46	4.46	24.00	11.00
Mid	5580	21.50	4.46	4.46	24.00	11.00
High	5700	21.63	4.46	4.46	24.00	11.00

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

Output Power Results

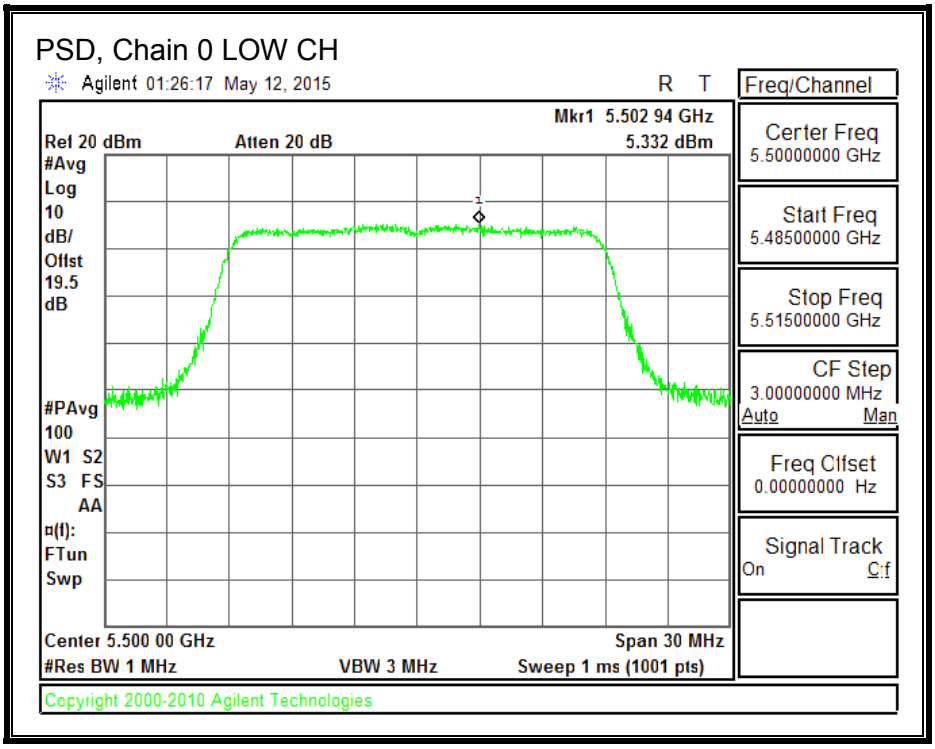
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Chain 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	14.70	14.90	14.40	19.44	24.00	-4.56
Mid	5580	16.20	16.60	16.10	21.08	24.00	-2.92
High	5700	12.80	12.60	12.60	17.44	24.00	-6.56

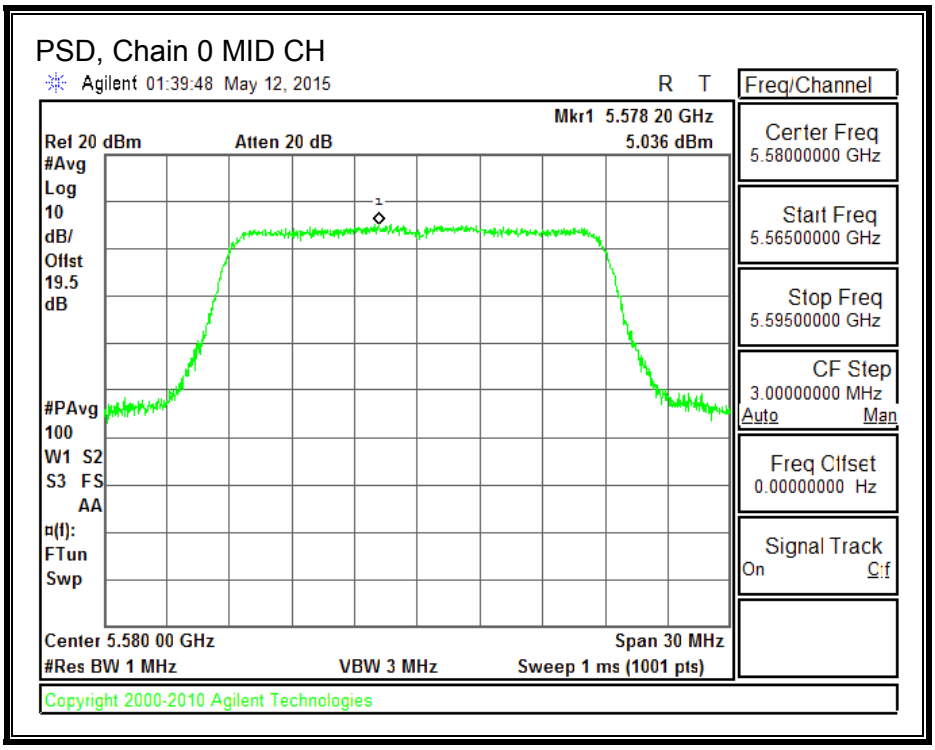
PSD Results

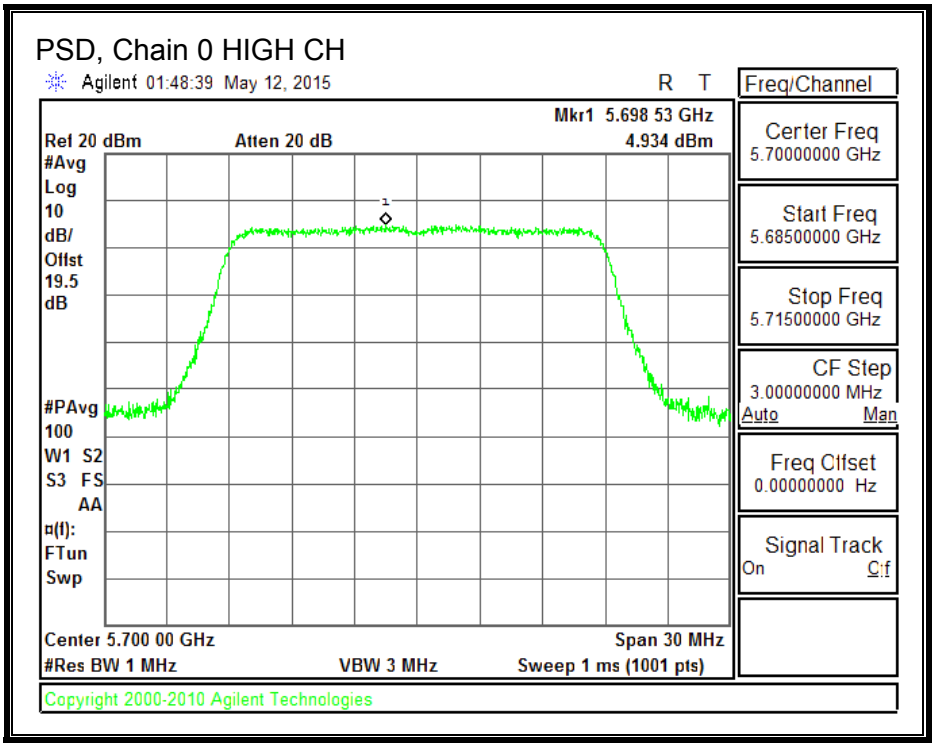
Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Chain 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5500	5.332	5.534	4.704	9.98	11.00	-1.02
Mid	5580	5.036	5.460	4.951	9.93	11.00	-1.07
High	5700	4.934	5.314	4.853	9.81	11.00	-1.19

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

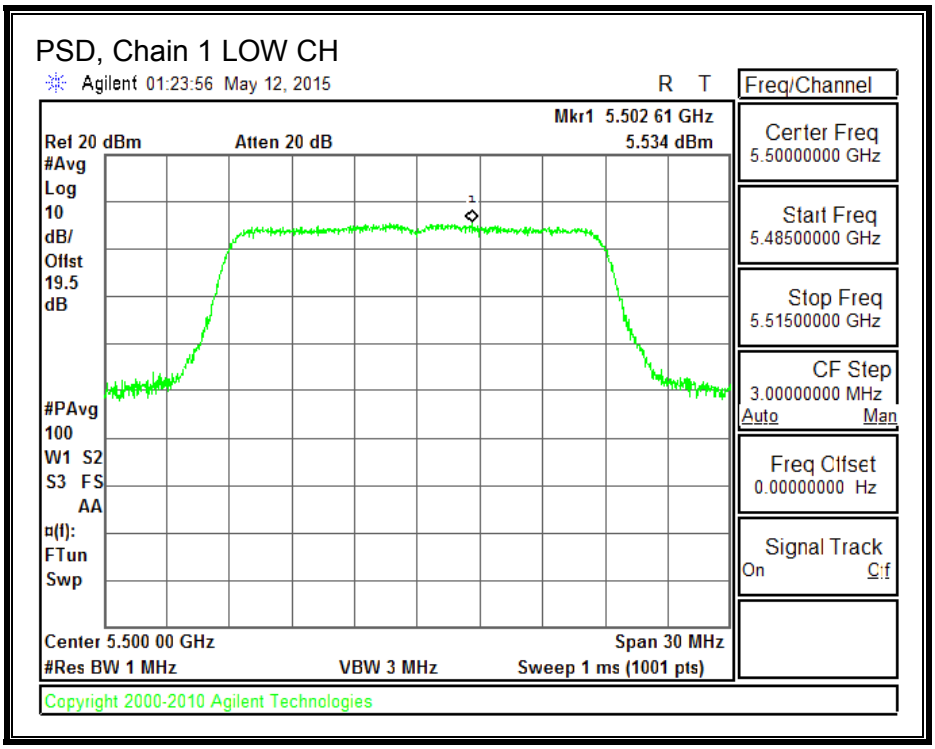
PSD, Chain 0



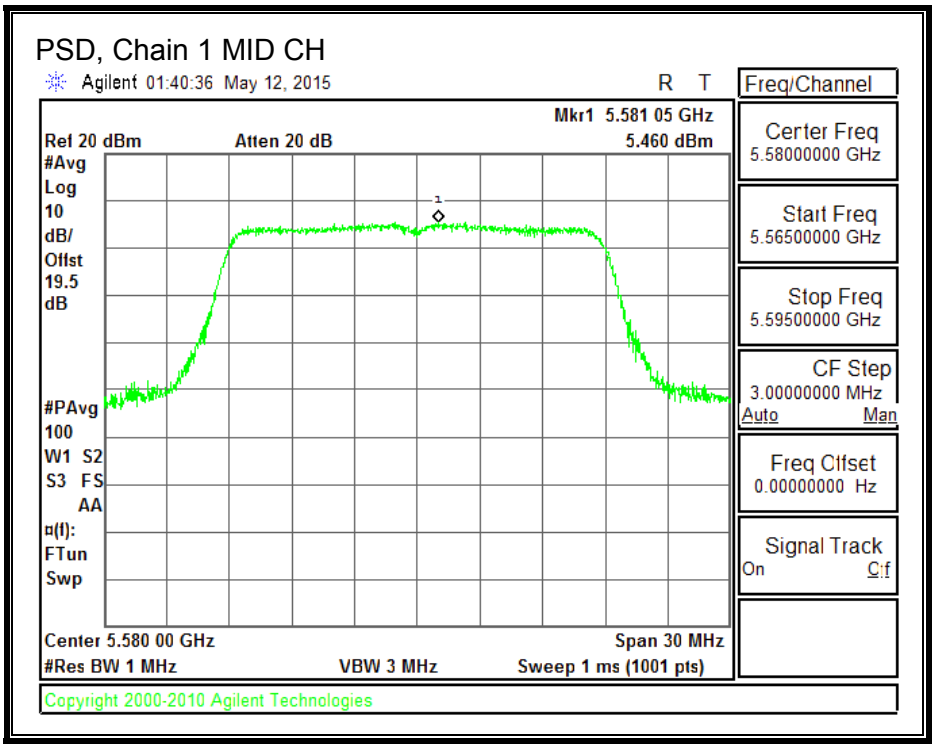




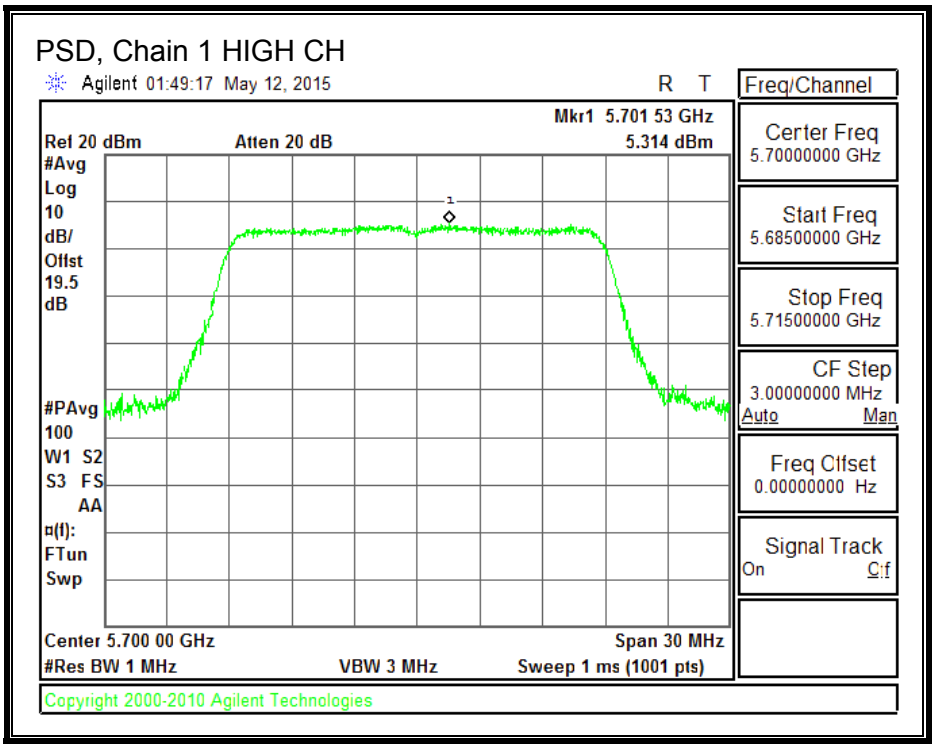
PSD, Chain 1



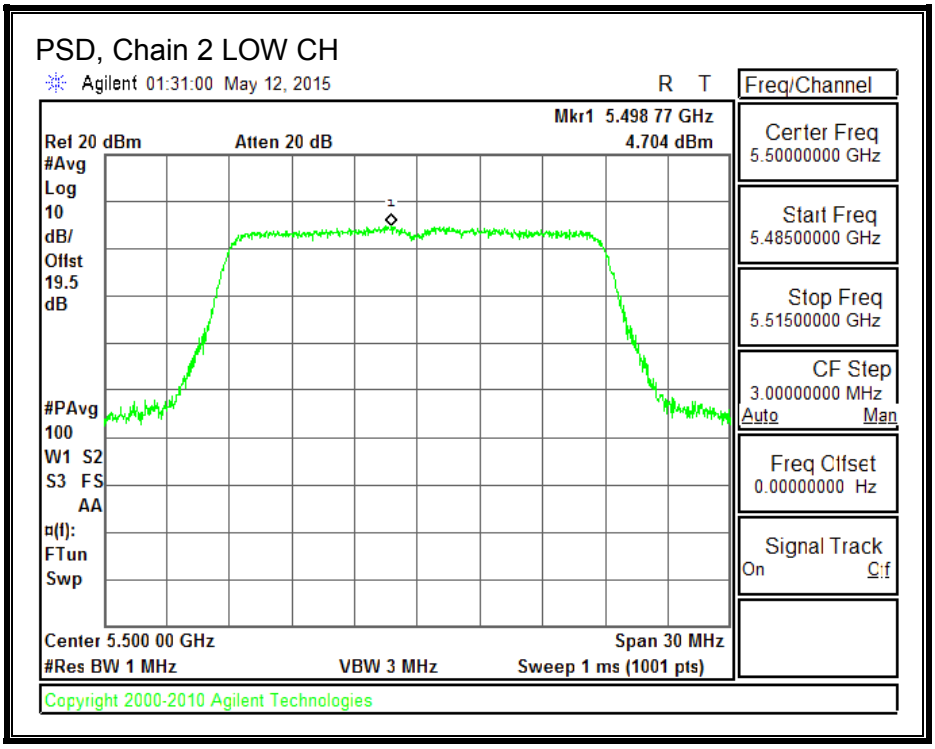
PSD, Chain 1 MID CH

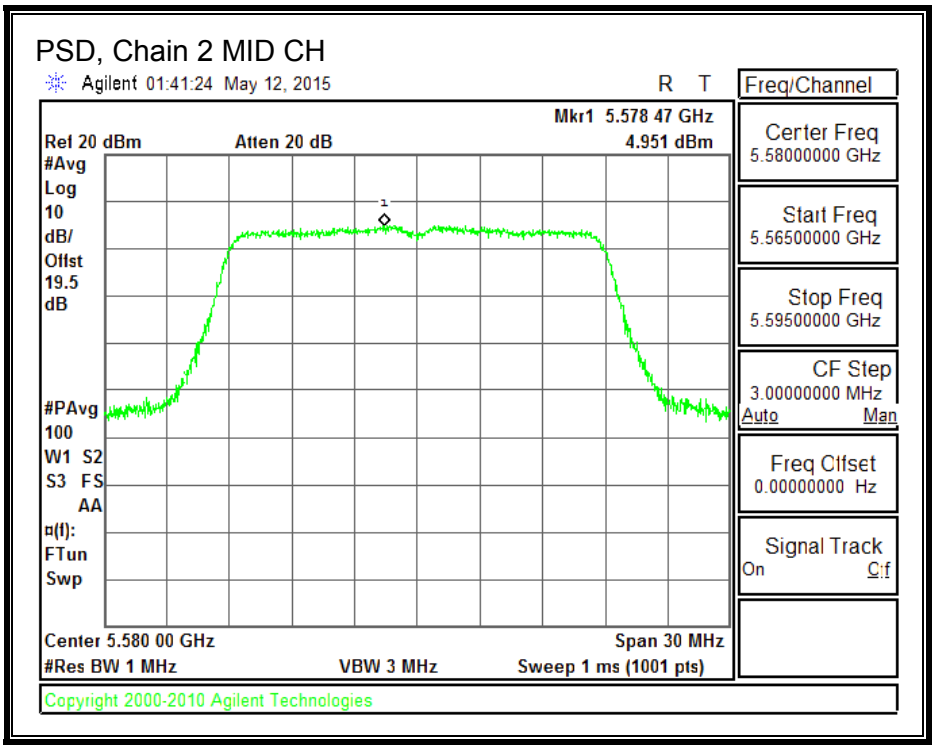


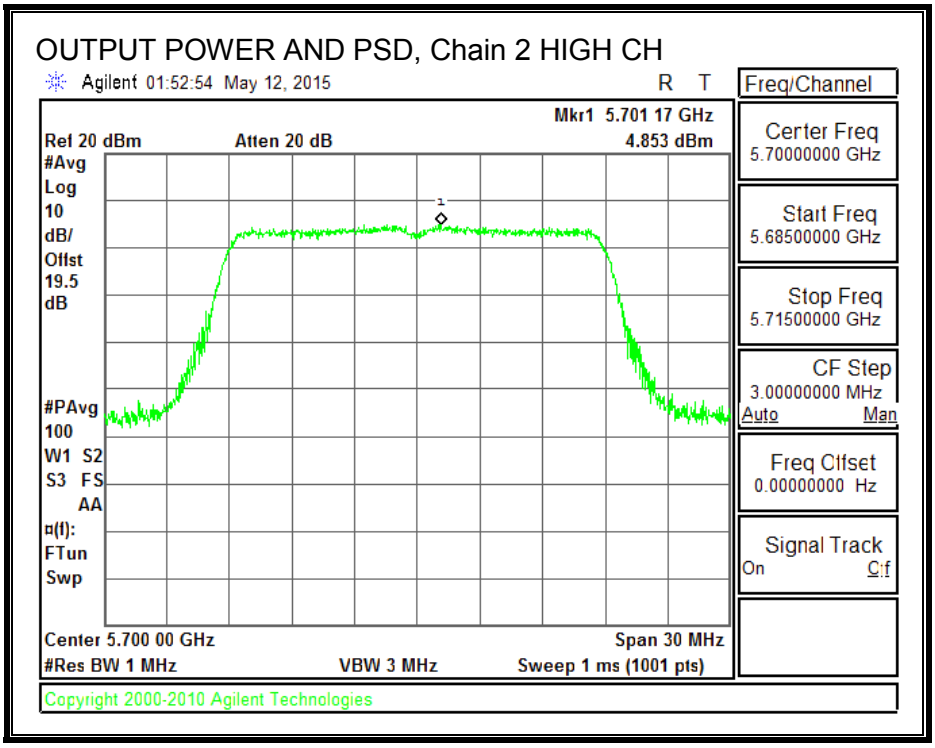
PSD, Chain 1 HIGH CH



PSD, Chain 2







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	15.67	4.46	4.46	22.95	11.00

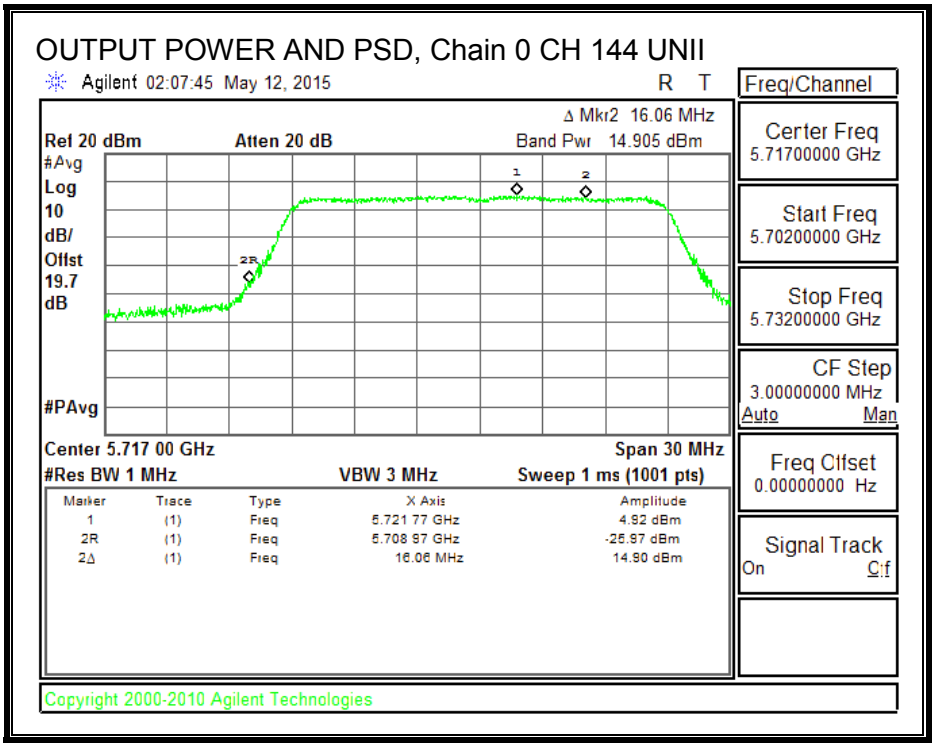
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power & PSD

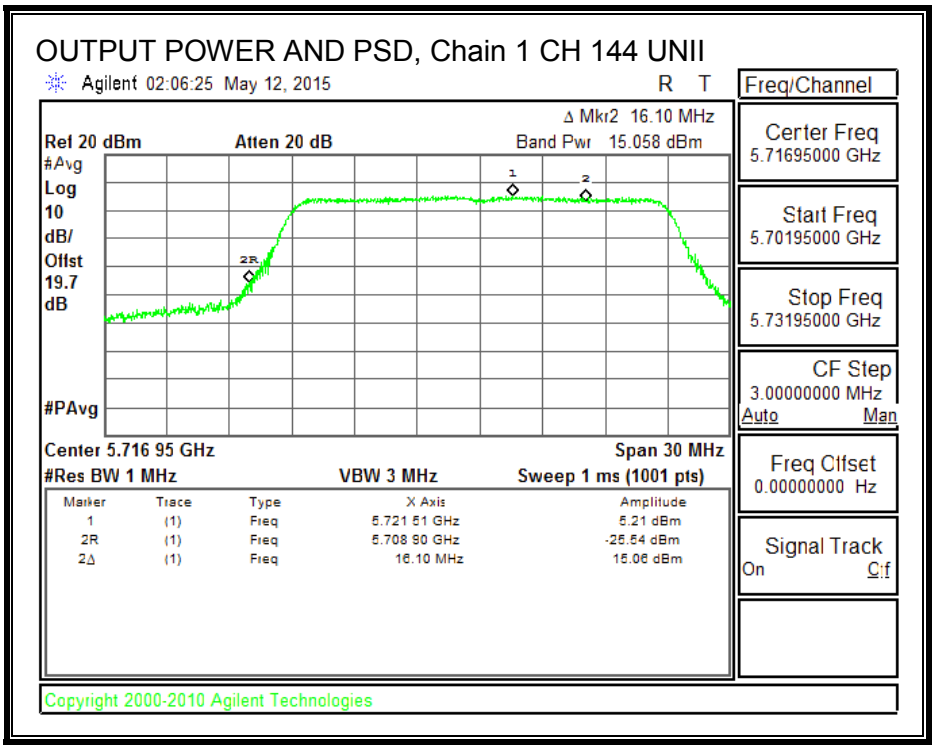
Output Power Results

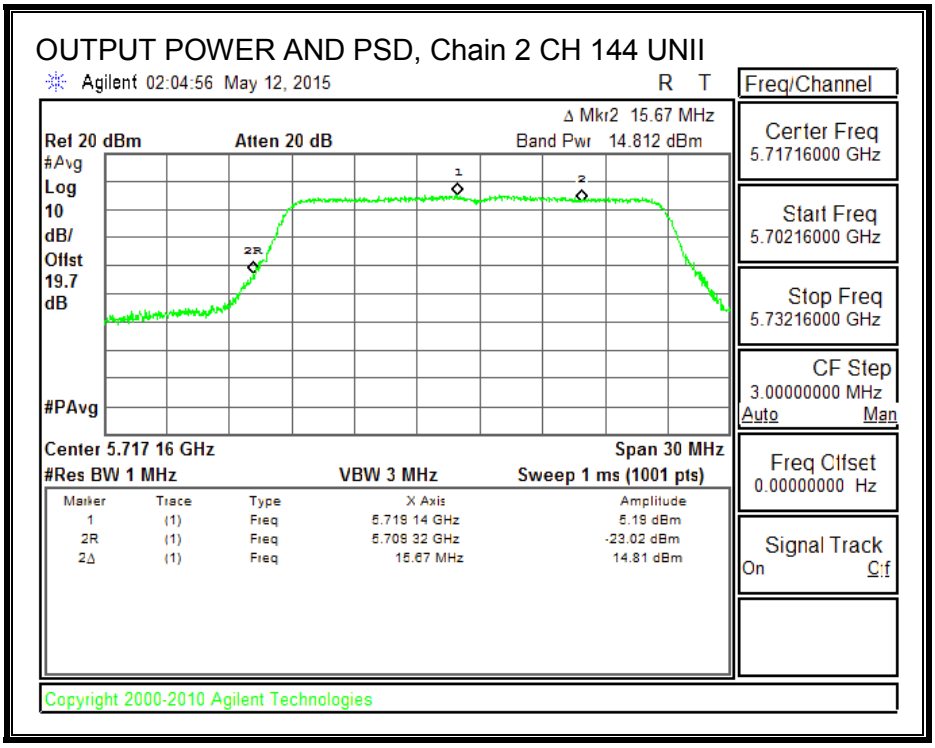
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Chain 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
144	5720	14.905	15.058	14.812	19.70	22.95	-3.25

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Chain 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
144	5720	4.92	5.21	5.19	9.88	11.00	-1.12







UNII-3 BAND

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
144	5720	7.00	4.47	29.00	30.00

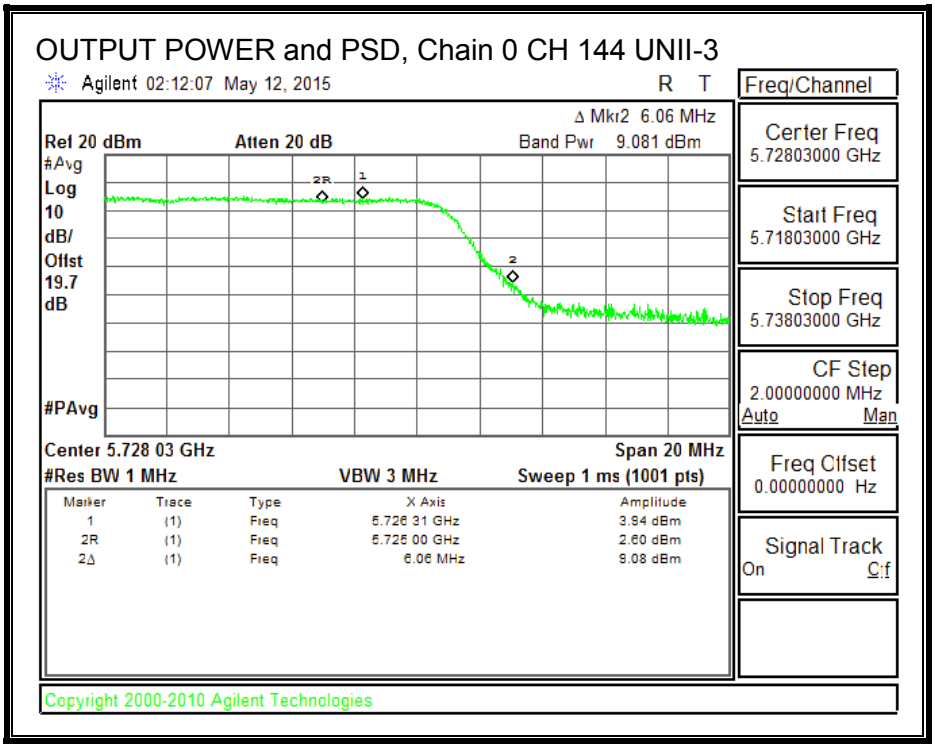
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power & PSD

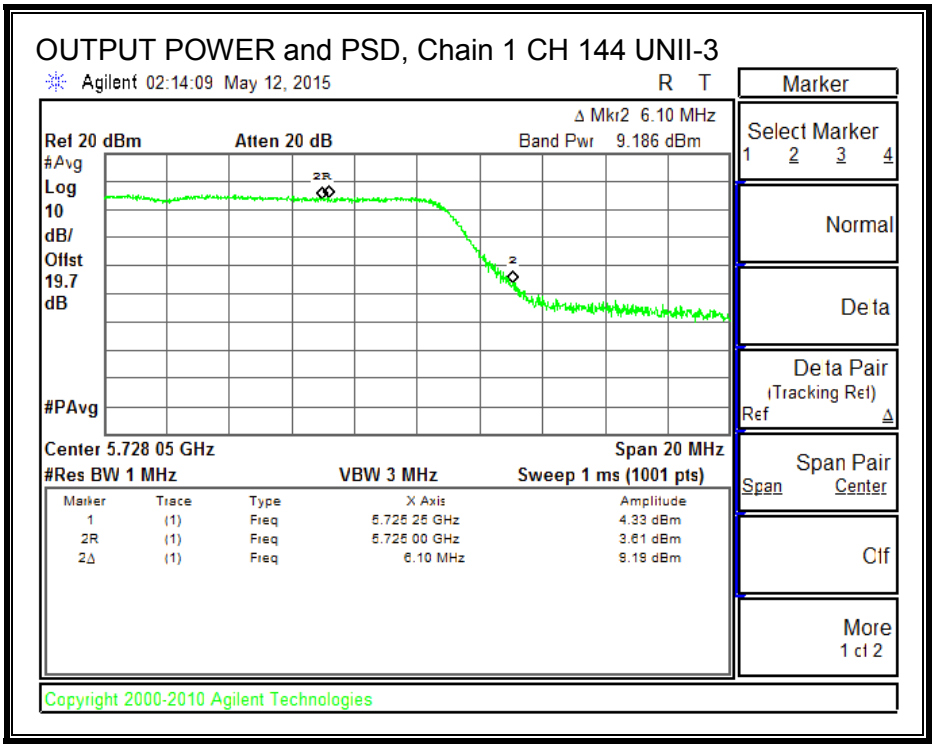
Output Power Results

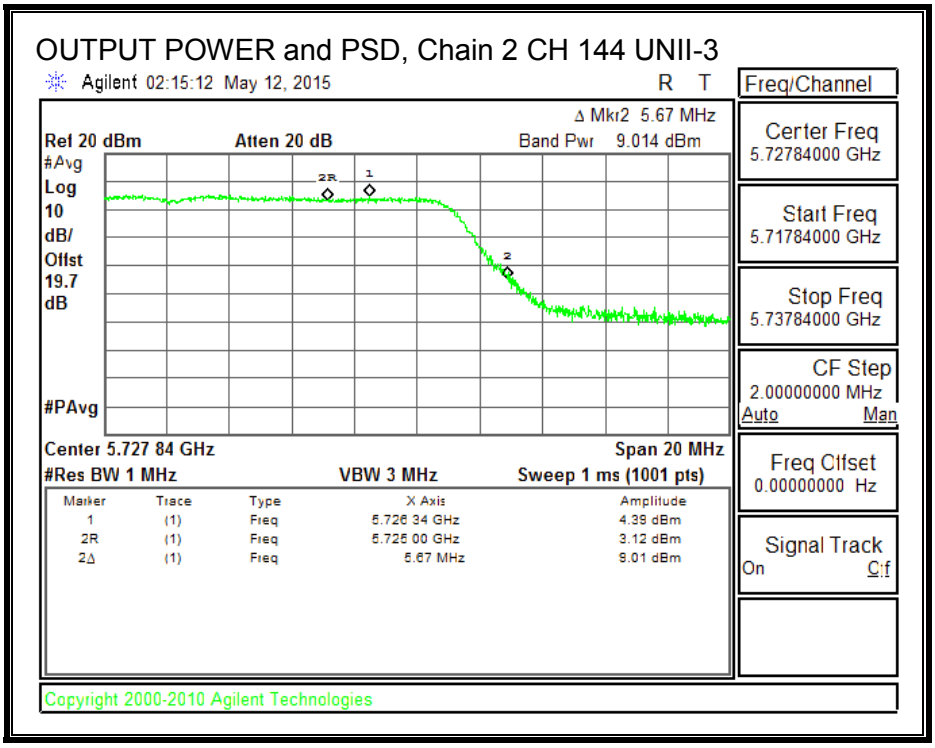
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Chain 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
144	5720	9.081	9.186	9.014	13.87	29.00	-15.13

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Chain 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
144	5720	3.94	4.33	4.39	9.00	30.00	-21.00







8.42.4. AVERAGE OUTPUT POWER (WHOLE FUNDAMENTAL)

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

RESULTS

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Chain 2 Meas Power (dBm)	Total Corr'd Power (dBm)
144	5720	15.60	15.80	15.50	20.41

8.43. 802.11n HT20 TxBF 3TX MODE IN THE 5.6 GHz BAND

8.43.1. 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.

DIRECTIONAL ANTENNA GAIN

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

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Chain 2 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
3.17	2.09	4.72	9.17

RESULTS

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)
Low	5500	27.89	9.17	9.17	20.83	7.83
Mid	5580	27.24	9.17	9.17	20.83	7.83
High	5700	21.35	9.17	9.17	20.83	7.83

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

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Chain 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	12.80	13.40	12.80	17.78	20.83	-3.05
Mid	5580	12.80	13.10	12.50	17.58	20.83	-3.25
High	5700	12.30	12.40	12.20	17.07	20.83	-3.76

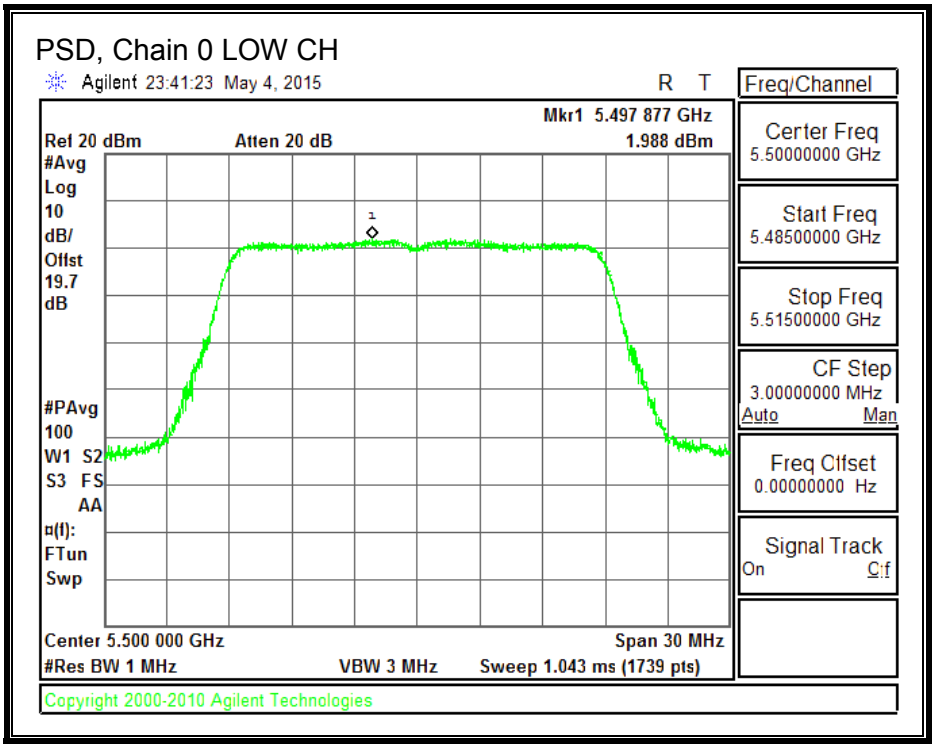
PSD Results

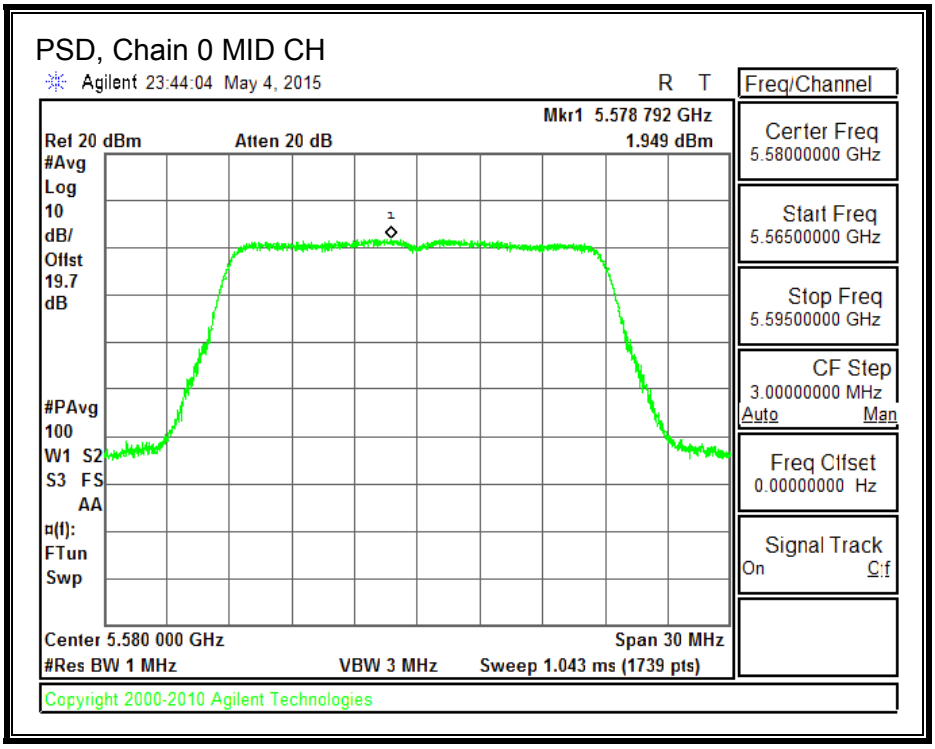
Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Chain 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5500	1.988	2.450	1.642	6.81	7.83	-1.02
Mid	5580	1.949	2.302	1.566	6.72	7.83	-1.11
High	5700	1.933	2.021	1.917	6.73	7.83	-1.10

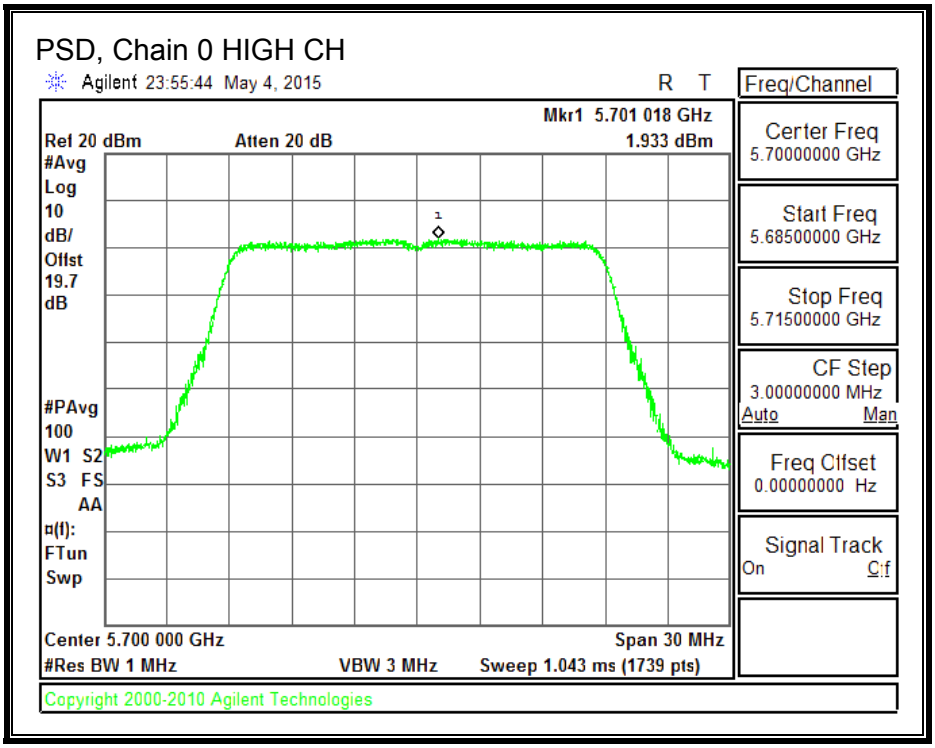
Note: for Chains 0, 1 and 2, 26dB & 99% data & plots, see section 11n HT20 CDD 3TX MODE IN THE 5.6 GHz BAND

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

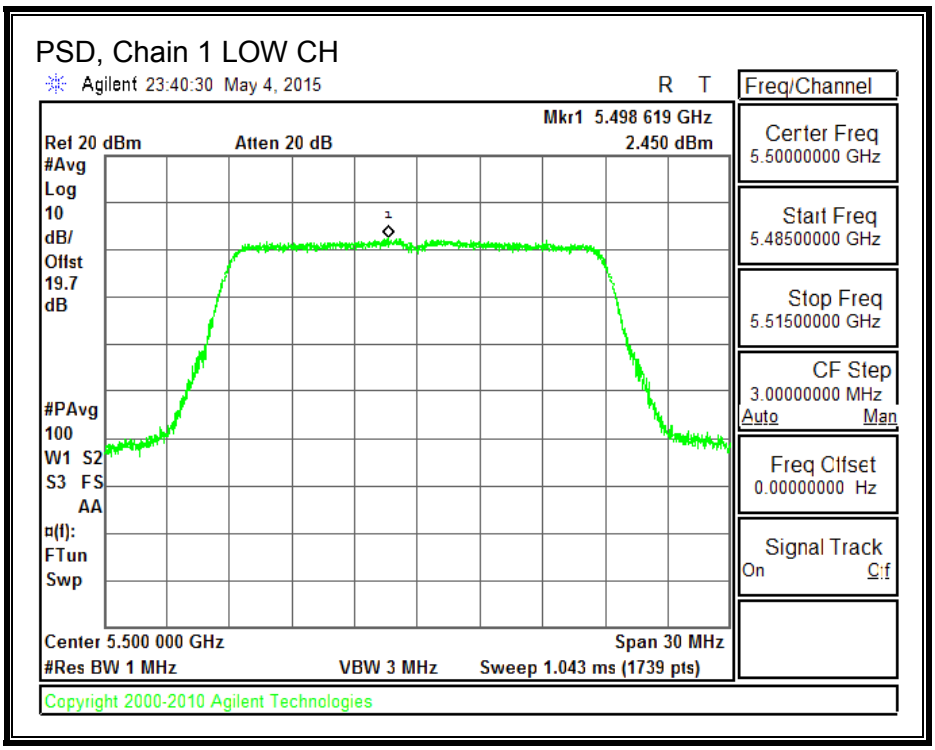
PSD, Chain 0



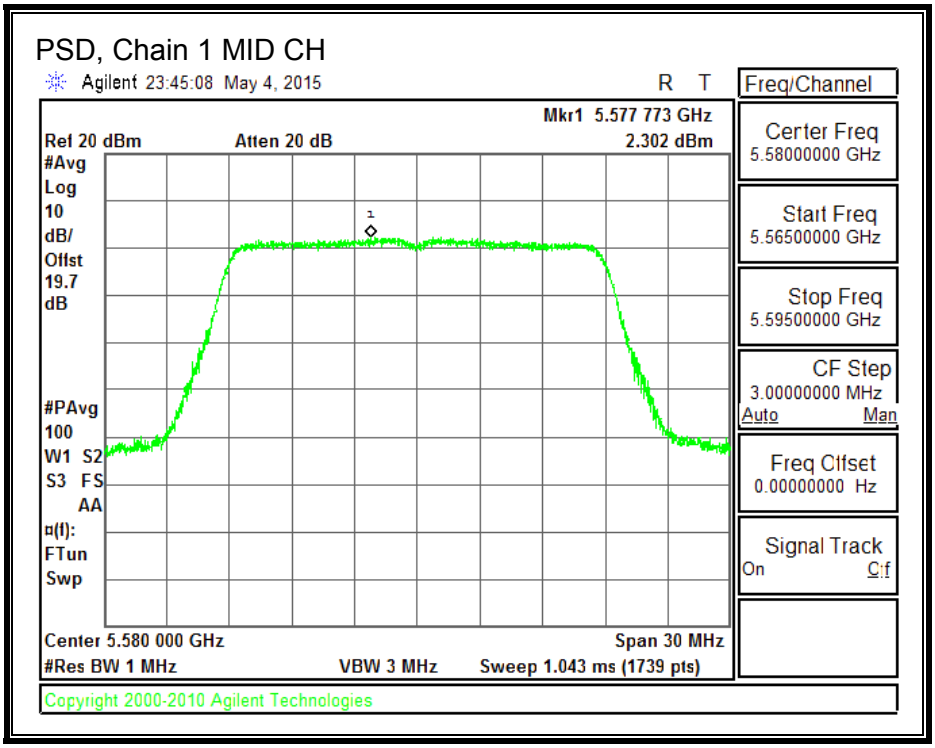




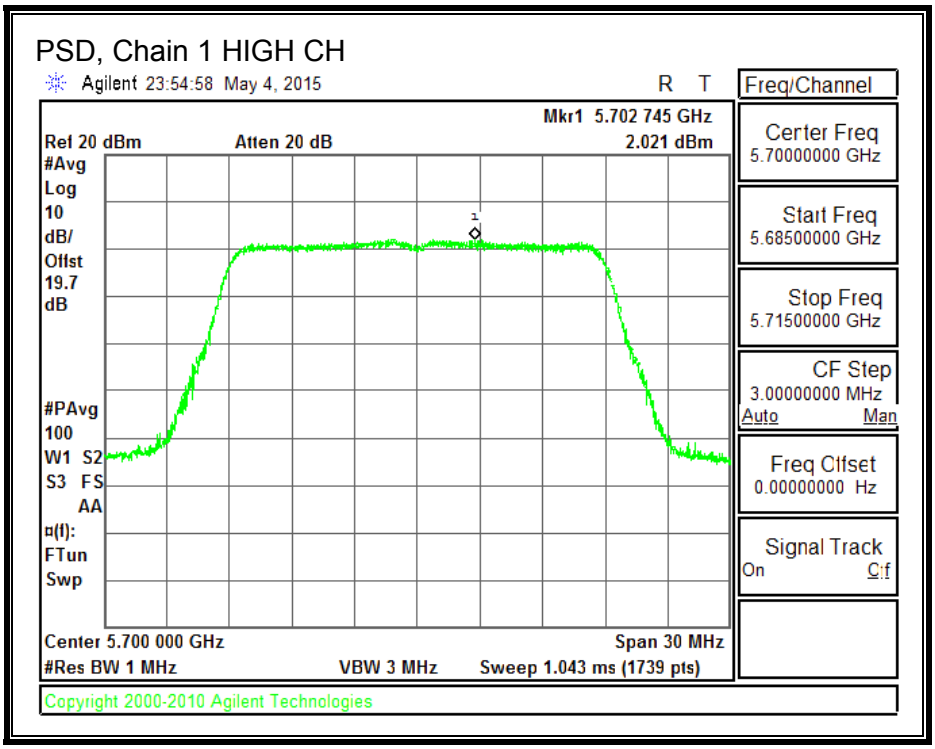
PSD, Chain 1



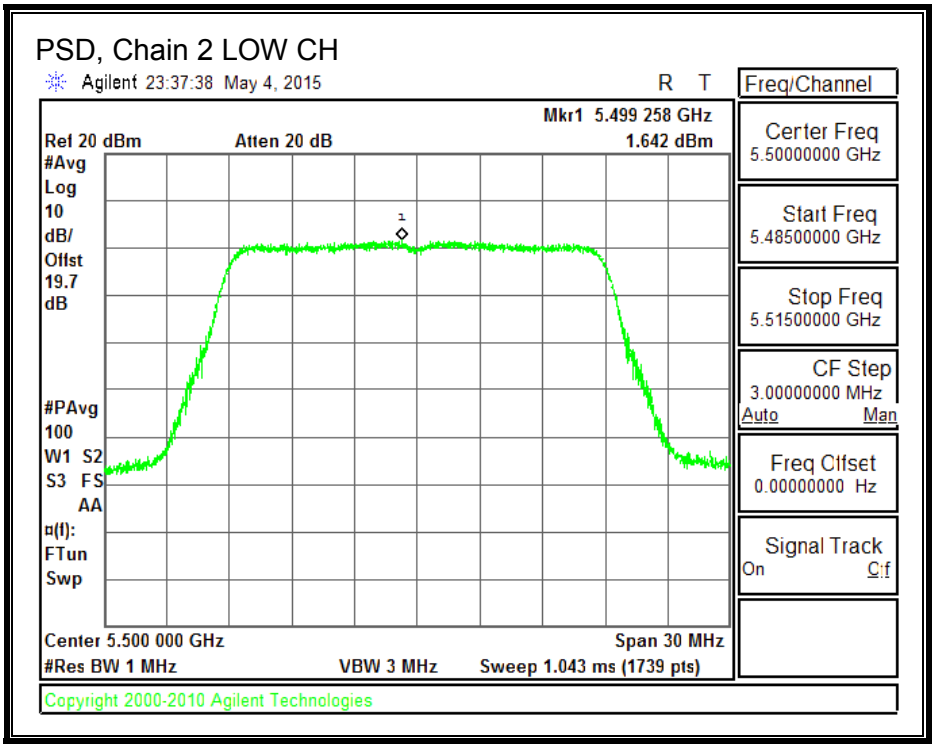
PSD, Chain 1 MID CH

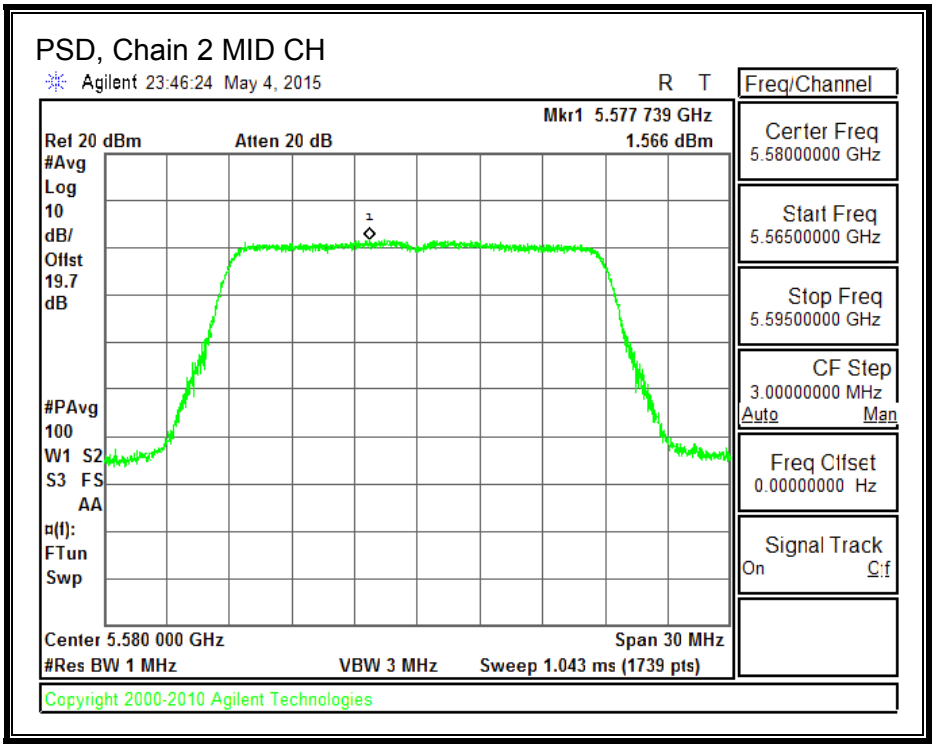


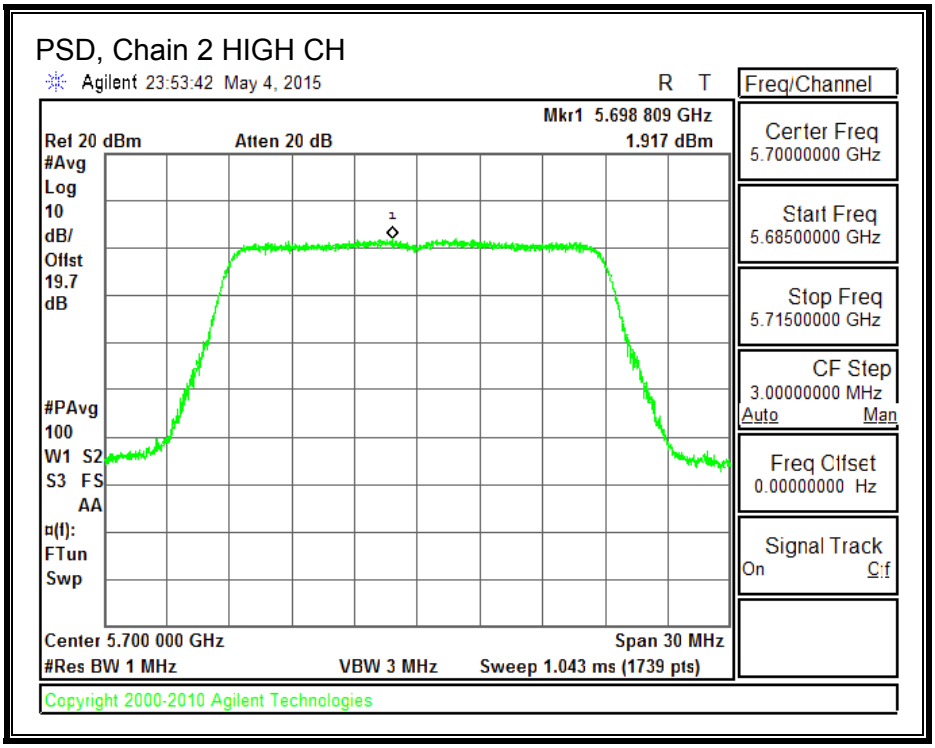
PSD, Chain 1 HIGH CH



PSD, Chain 2







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	19.89	9.17	9.17	20.82	7.83

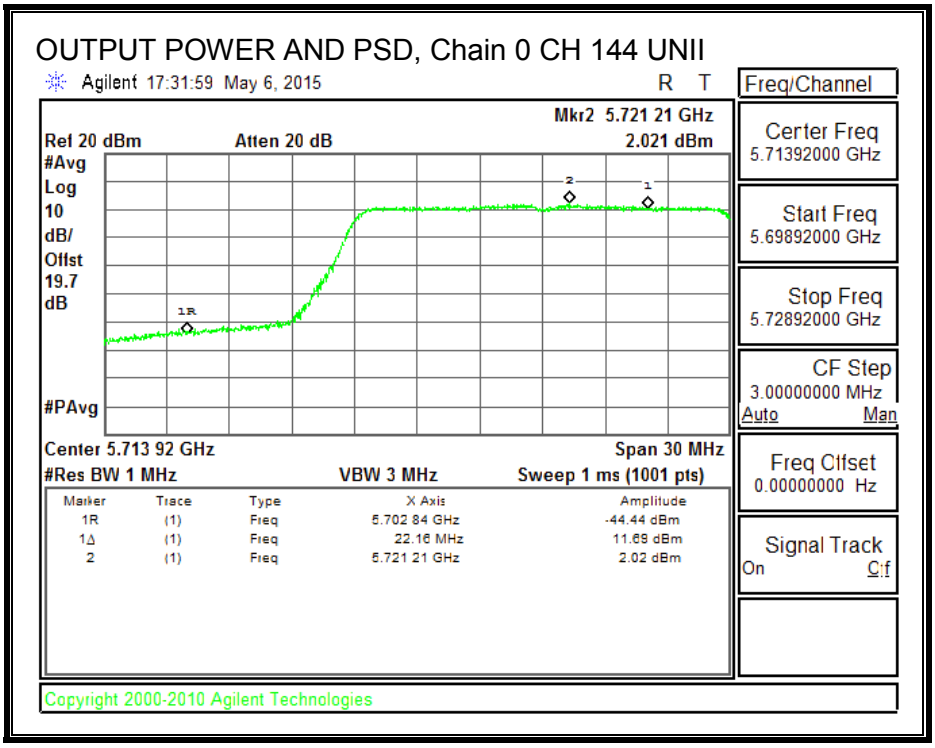
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power & PSD

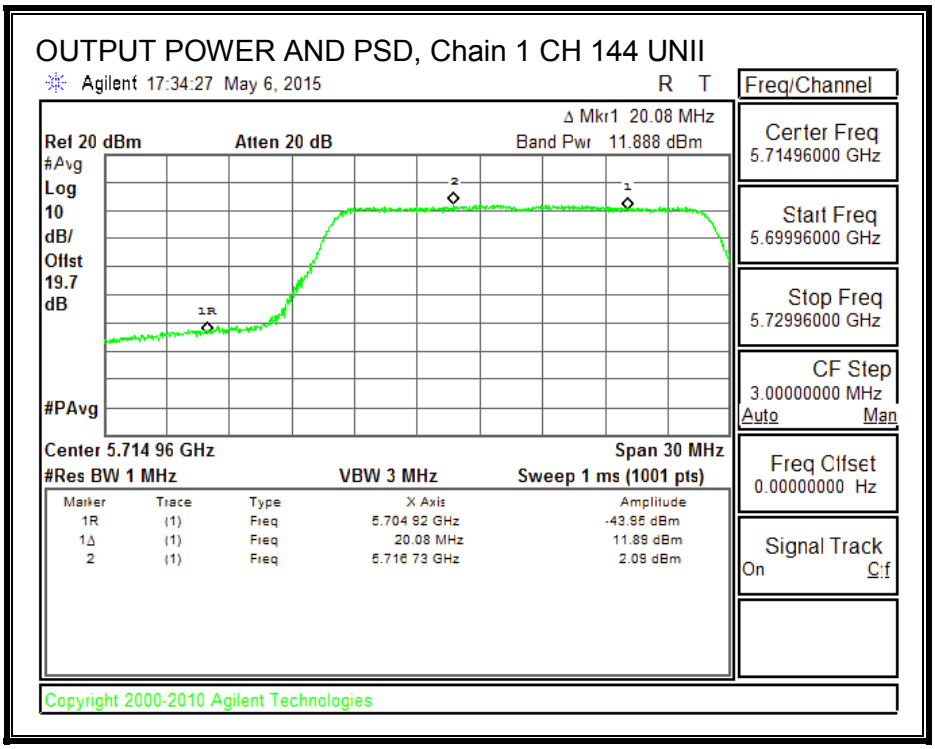
Output Power Results

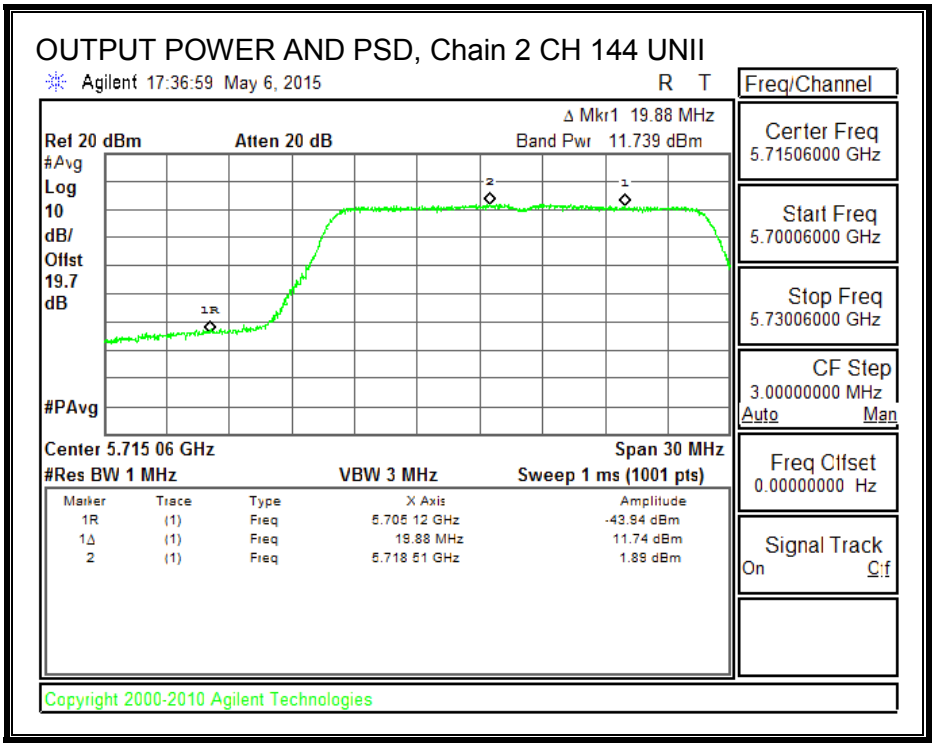
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Chain 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
144	5720	11.690	11.888	11.739	16.54	20.82	-4.27

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Chain 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
144	5720	2.02	2.09	1.89	6.77	7.83	-1.06







UNII-3 BAND

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
144	5720	9.17	9.17	26.83	26.83

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

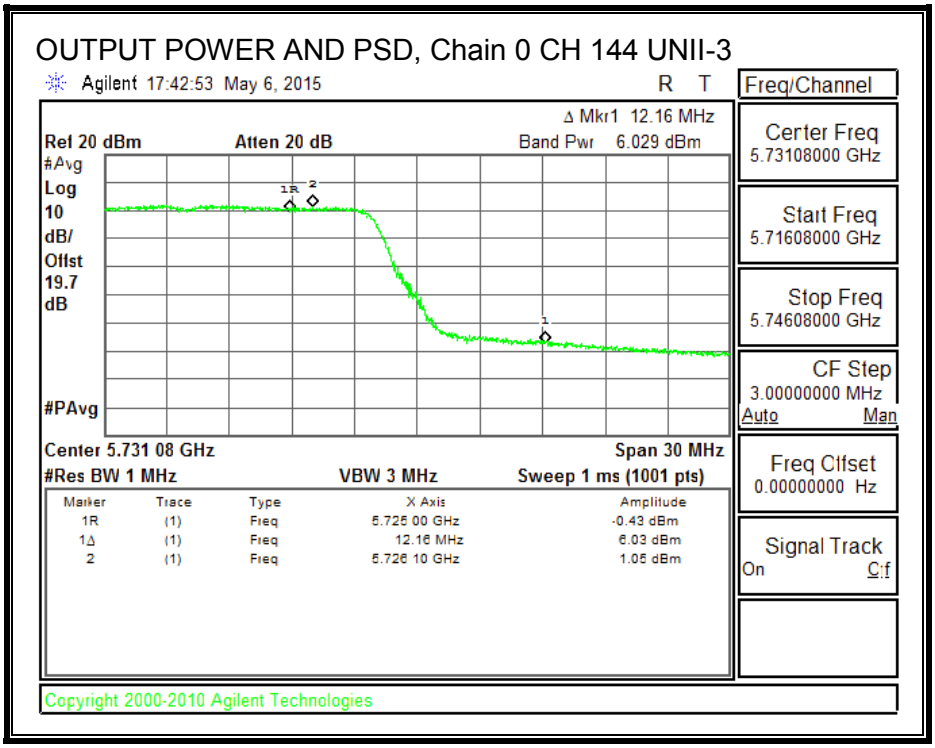
Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Chain 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
144	5720	6.029	5.876	5.848	10.69	26.83	-16.14

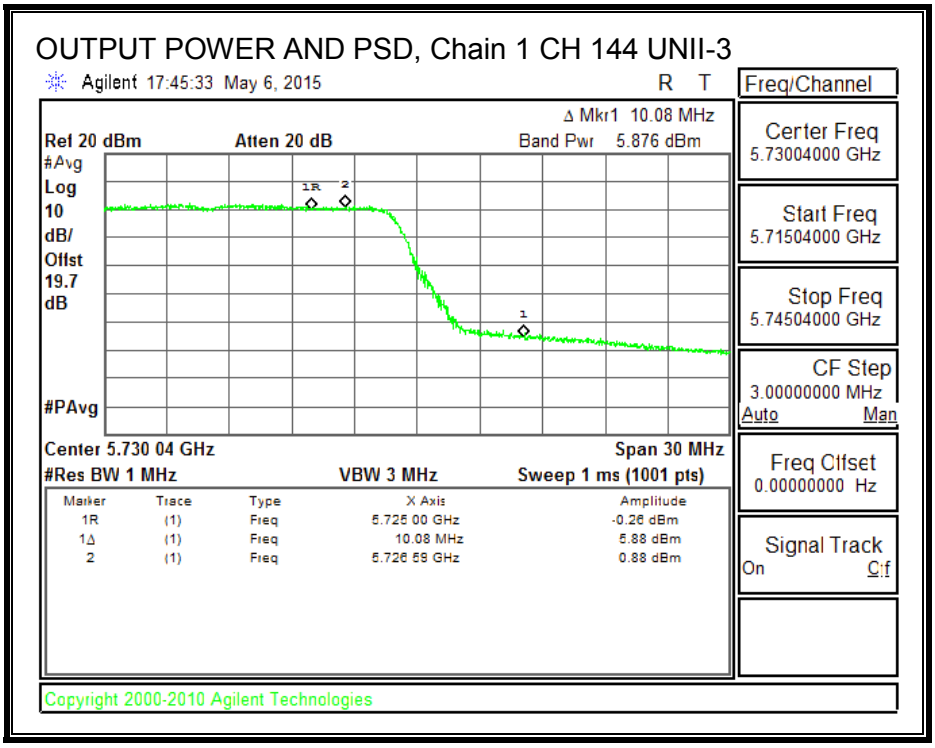
PSD Results

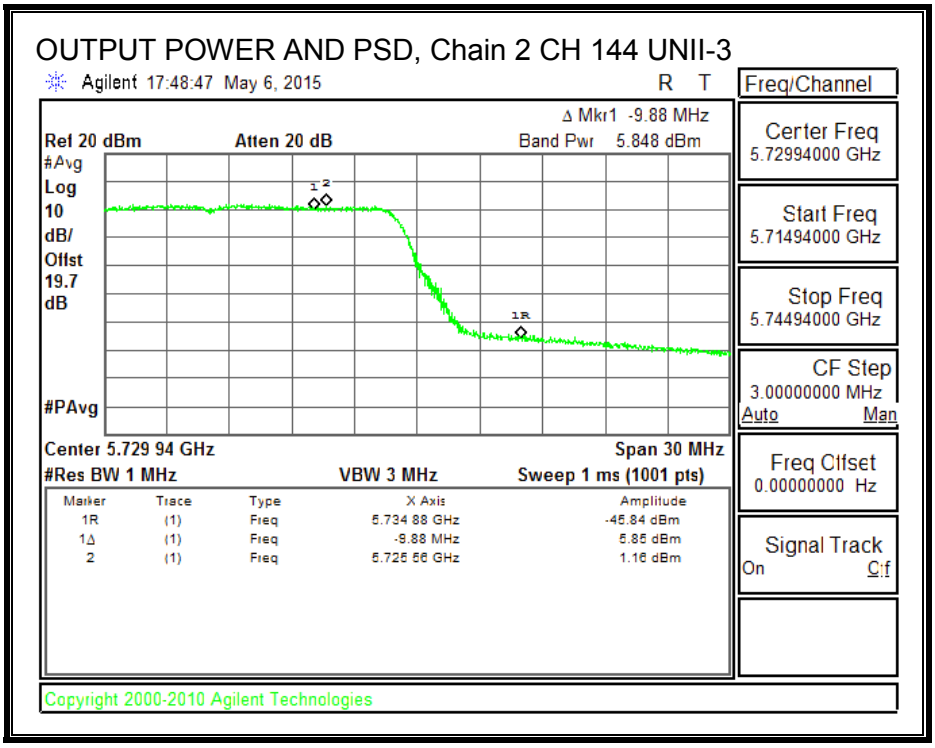
Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Chain 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
144	5720	1.05	0.88	1.16	5.80	26.83	-21.03

OUTPUT POWER AND PSD, Chain 0 CH 144 UNII-3



OUTPUT POWER AND PSD, Chain 1 CH 144 UNII-3





8.43.2. AVERAGE OUTPUT POWER (WHOLE FUNDAMENTAL)

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

RESULTS

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Chain 2 Meas Power (dBm)	Total Corr'd Power (dBm)
144	5720	13.20	13.25	13.30	18.02

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

8.44. 802.11n HT40 1TX MODE IN THE 5.6 GHz BAND

8.44.1. OUTPUT POWER

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.

DIRECTIONAL ANTENNA GAIN

This is SISO mode, AG is the highest (worst-case) = 5.72 dBi

RESULTS

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)
Low	5510	56.16	5.72	24.00
Mid	5550	63.27	5.72	24.00
High	5670	50.84	5.72	24.00

Output Power Results

Channel	Frequency (MHz)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5510	11.00	11.00	24.00	-13.00
Mid	5550	18.00	18.00	24.00	-6.00
High	5670	15.80	15.80	24.00	-8.20

Note: for Chain 1 26dB data & plots, see section 11n HT40 CDD 3TX MODE IN THE 5.6 GHz BAND.

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

8.45. 802.11n HT40 CDD 2TX MODE IN THE 5.6 GHz BAND

8.45.1. 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.

DIRECTIONAL ANTENNA GAIN

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

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
3.17	4.72	5.01

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

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
3.17	4.72	7.99

RESULTS

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)
Low	5510	56.16	5.01	7.99	24.00	9.01
Mid	5550	63.27	5.01	7.99	24.00	9.01
High	5670	50.84	5.01	7.99	24.00	9.01

Duty Cycle CF (dB)	0.09	Included in Calculations of Corr'd PSD

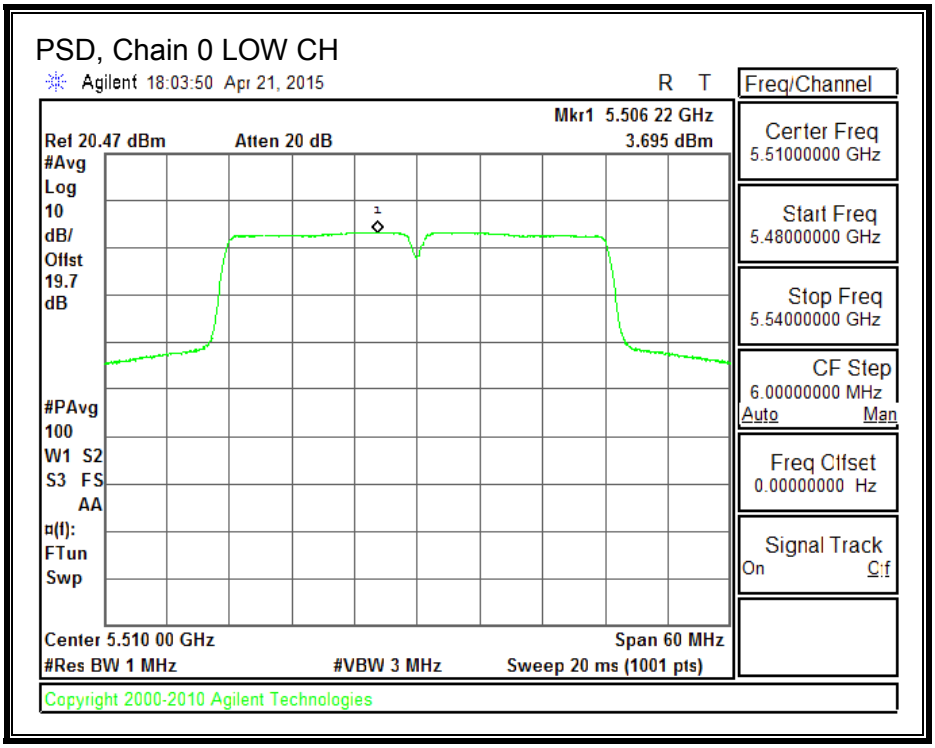
Output Power Results

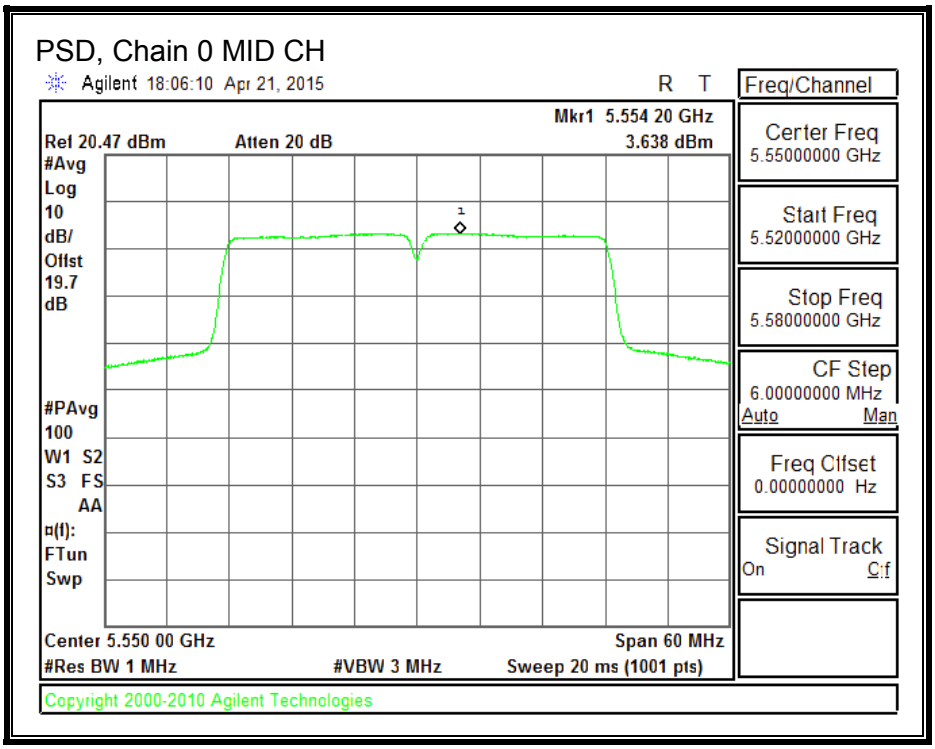
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5510	12.10	11.90	15.01	24.00	-8.99
Mid	5550	17.98	17.65	20.83	24.00	-3.17
High	5670	16.40	16.30	19.36	24.00	-4.64

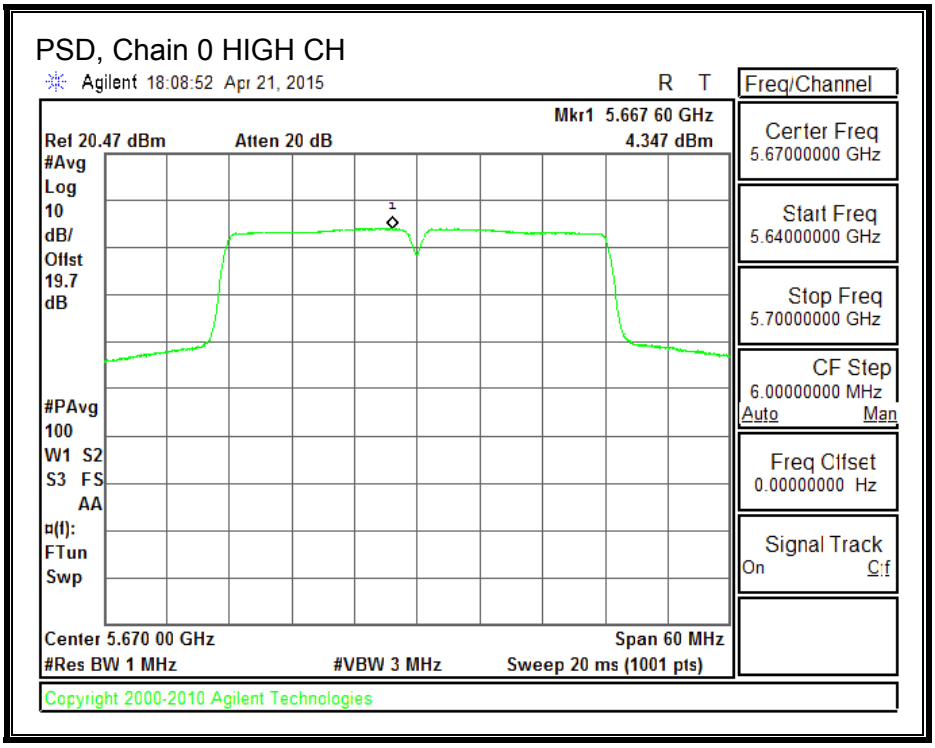
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5510	3.695	3.284	6.59	9.01	-2.42
Mid	5550	3.638	3.229	6.54	9.01	-2.47
High	5670	4.347	3.974	7.26	9.01	-1.75

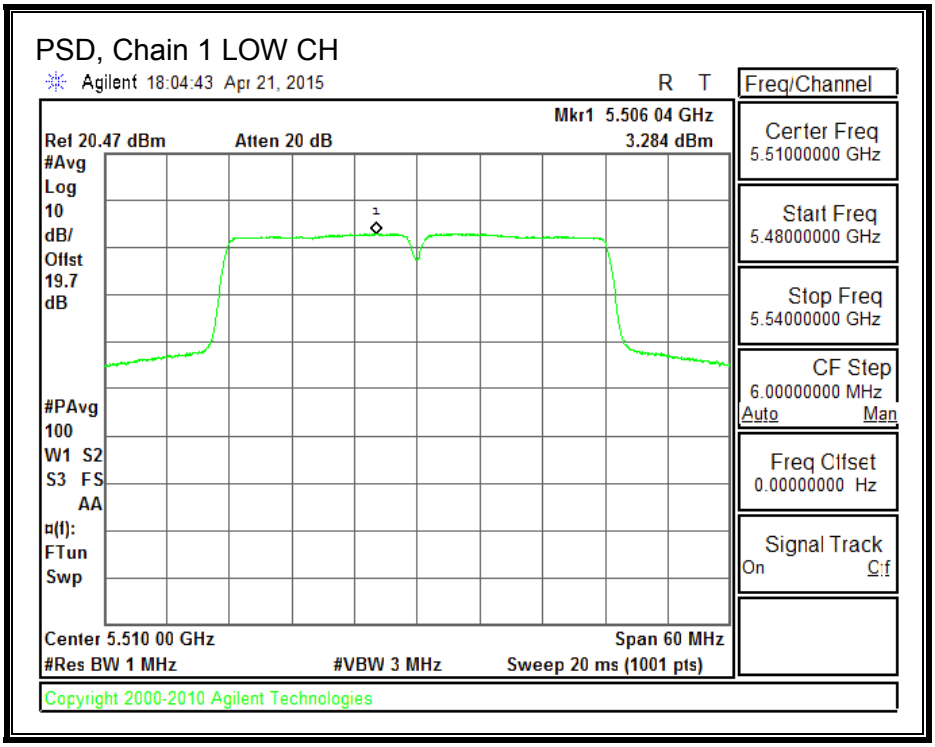
PSD, Chain 0



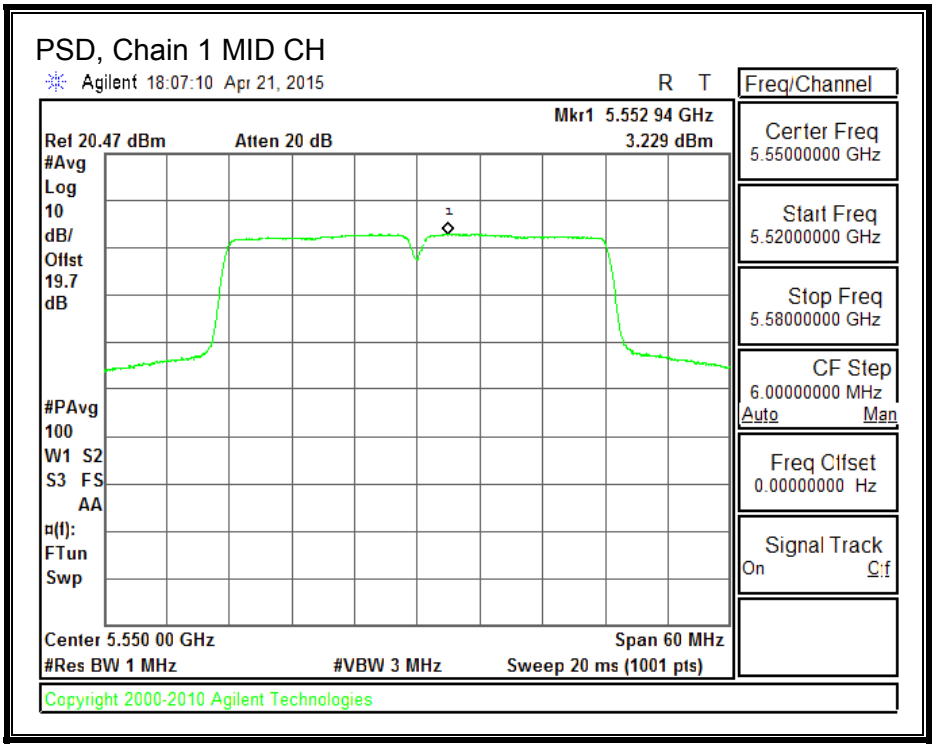




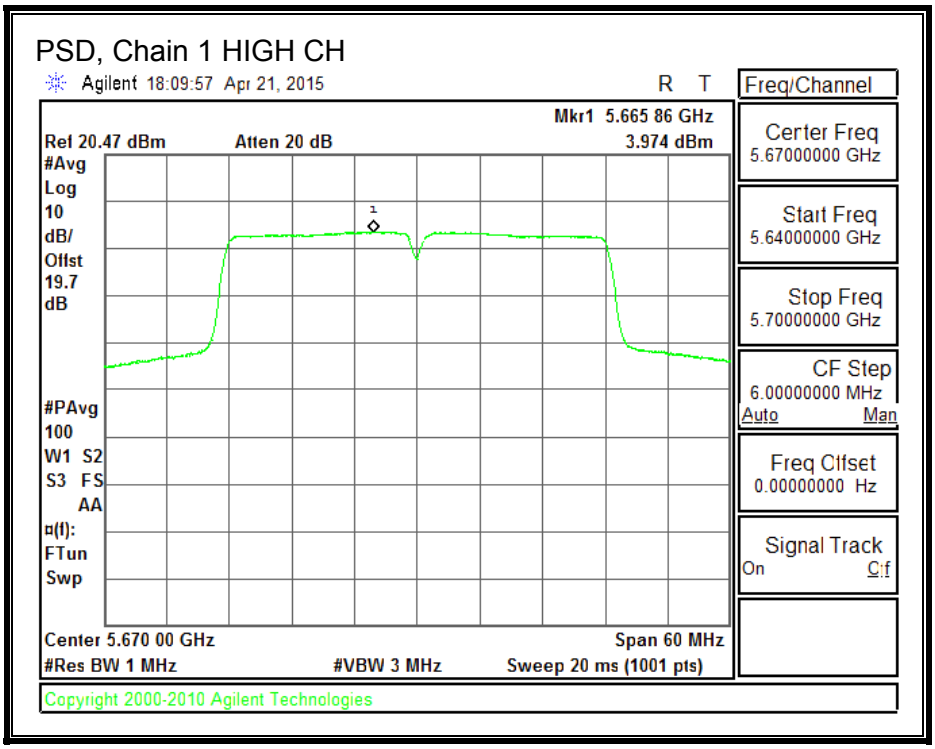
PSD, Chain 1



PSD, Chain 1 MID CH



PSD, Chain 1 HIGH CH



STRADDLE CHANNEL 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	47.95	5.01	7.99	24.00	9.01

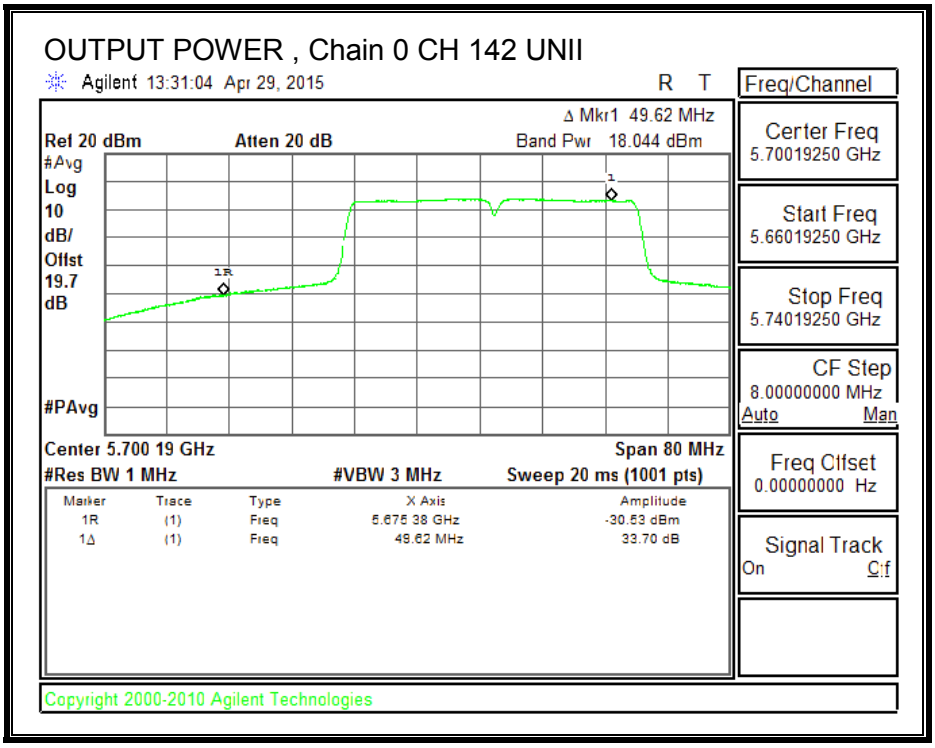
Duty Cycle CF (dB)	0.09	Included in Calculations of Corr'd Power & PSD

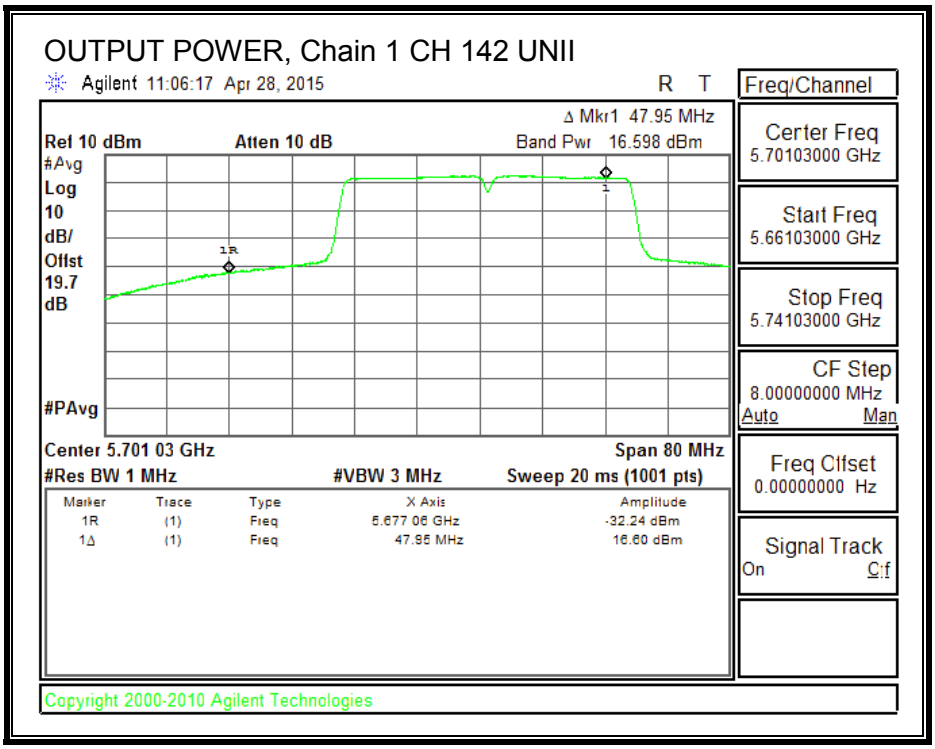
Output Power Results

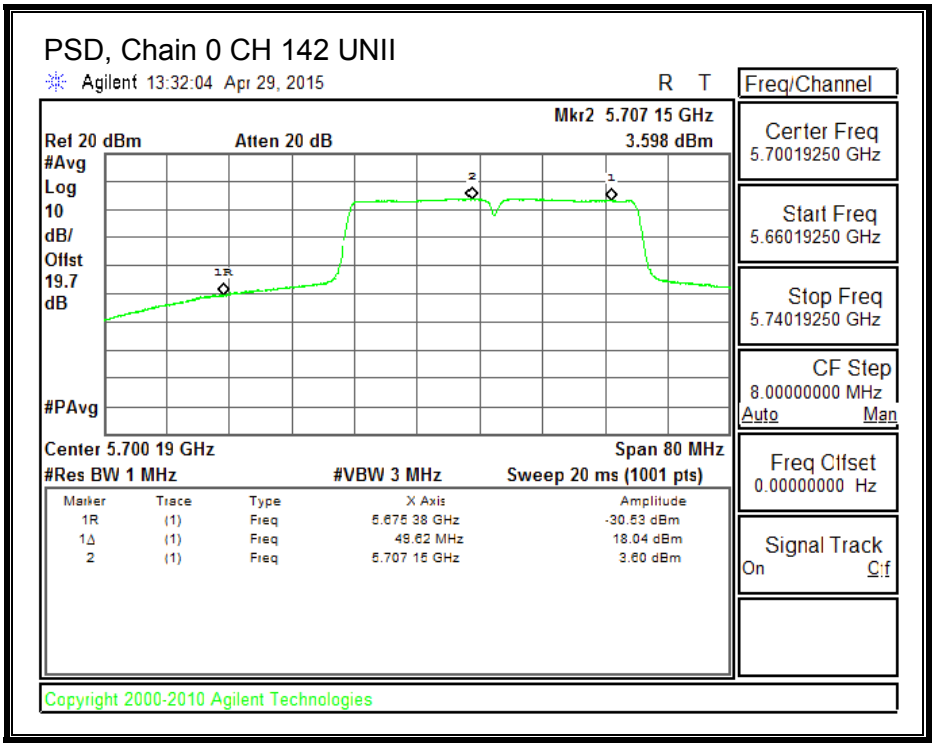
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
142	5710	18.044	16.598	20.48	24.00	-3.52

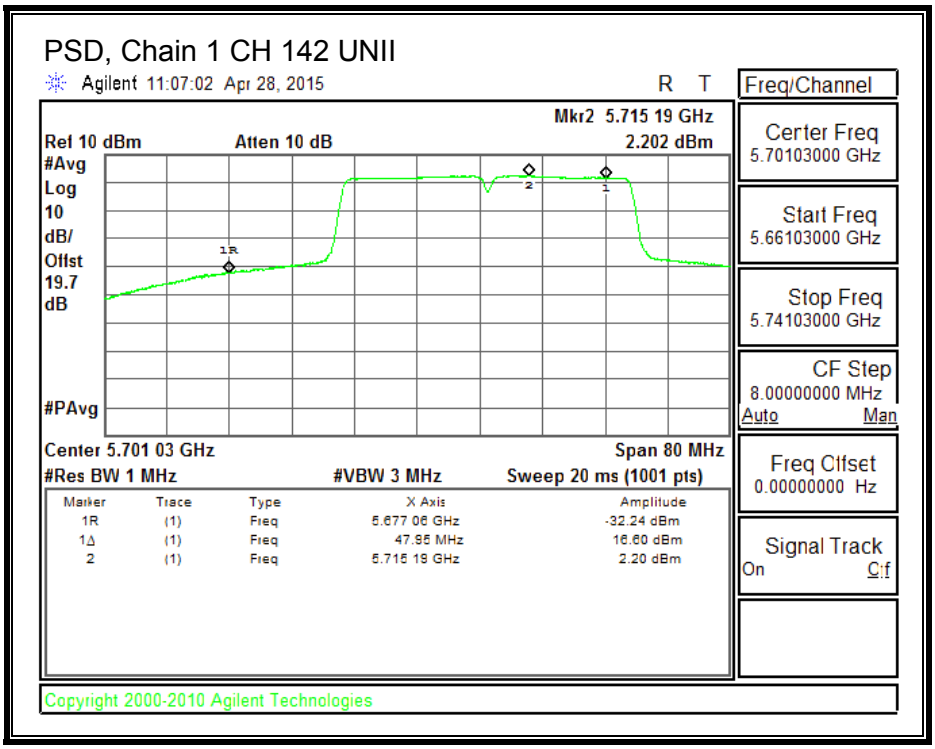
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
142	5710	3.598	2.202	6.06	9.01	-2.95









UNII-3 BAND

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
142	5710	5.06	8.03	30.00	27.97

Duty Cycle CF (dB)	0.09	Included in Calculations of Corr'd Power & PSD

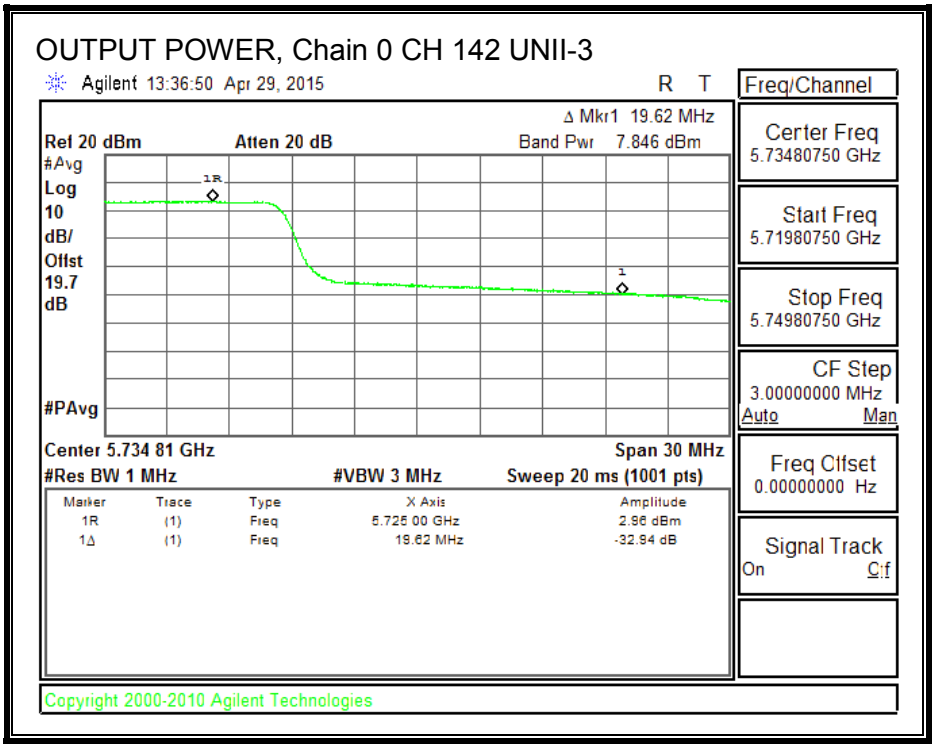
Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
142	5710	7.846	6.308	10.25	30.00	-19.75

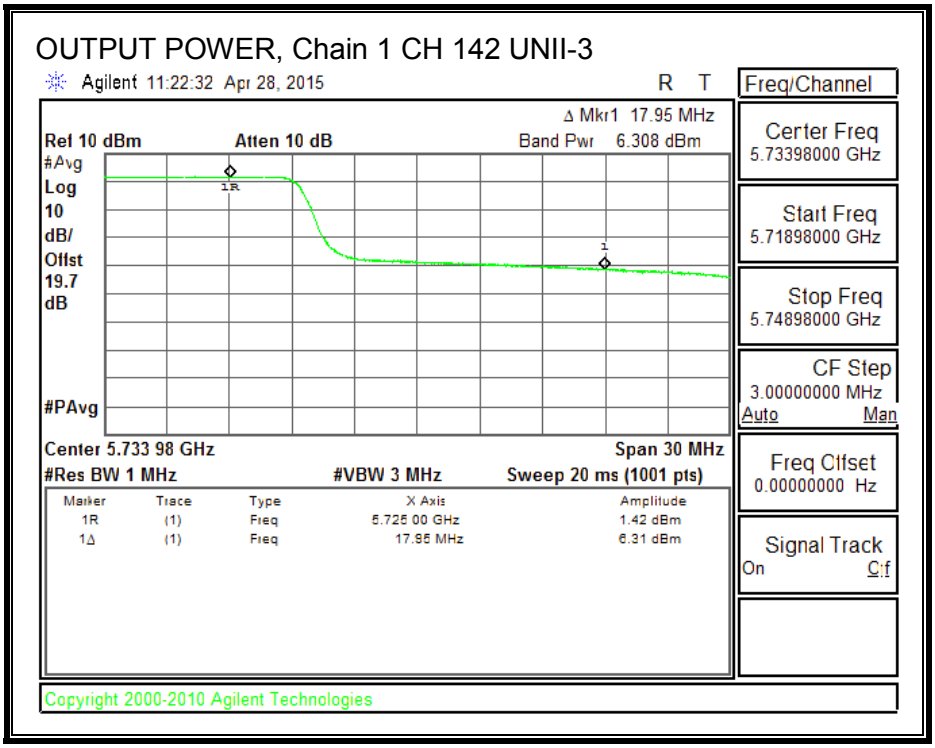
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
142	5710	2.938	1.362	5.32	27.97	-22.65

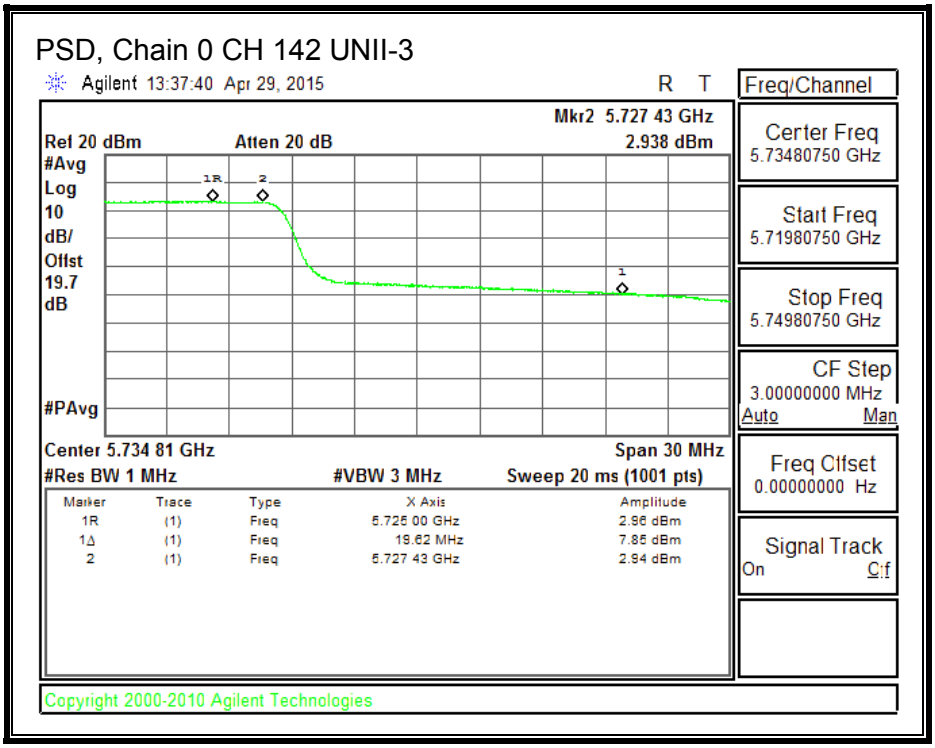
OUTPUT POWER, Chain 0 CH 142 UNII-3



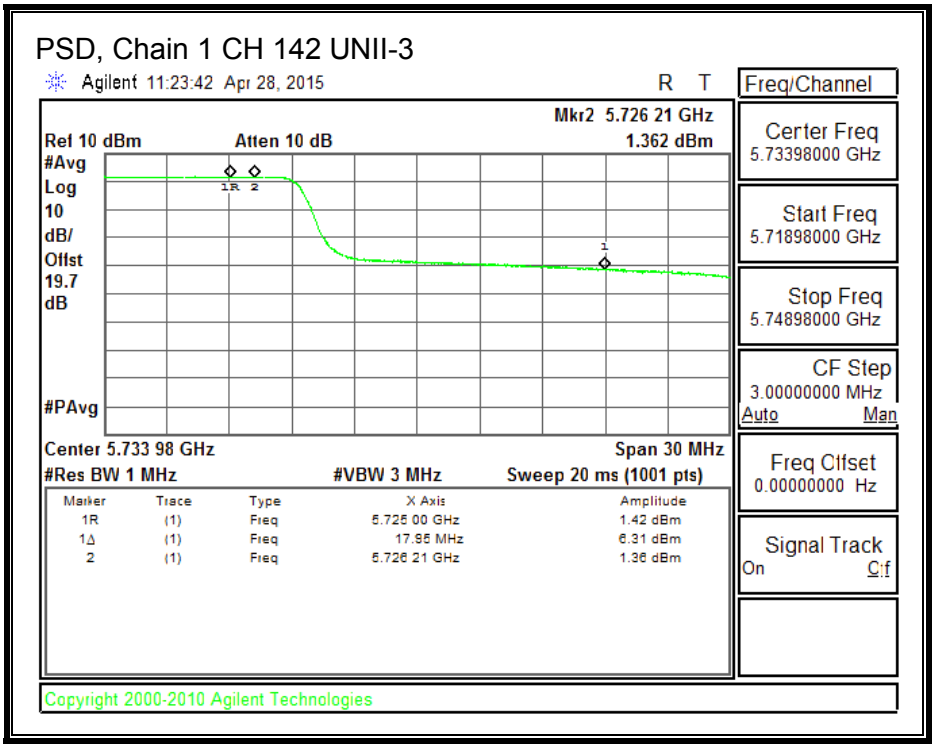
OUTPUT POWER, Chain 1 CH 142 UNII-3



PSD, Chain 0 CH 142 UNII-3



PSD, Chain 1 CH 142 UNII-3



8.45.2. AVERAGE OUTPUT POWER (WHOLE FUNDAMENTAL)

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

RESULTS

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)
142	5710	18.10	17.70	20.91

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary

8.46. 802.11n HT40 TxBF 2TX MODE IN THE 5.6 GHz BAND

8.46.1. 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.

DIRECTIONAL ANTENNA GAIN

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

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
3.17	4.72	7.99

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

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
3.17	4.72	7.99

RESULTS

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)
Low	5510	56.16	7.99	7.99	22.01	9.01
Mid	5550	63.27	7.99	7.99	22.01	9.01
High	5670	50.84	7.99	7.99	22.01	9.01

Duty Cycle CF (dB)	0.09	Included in Calculations of Corr'd PSD

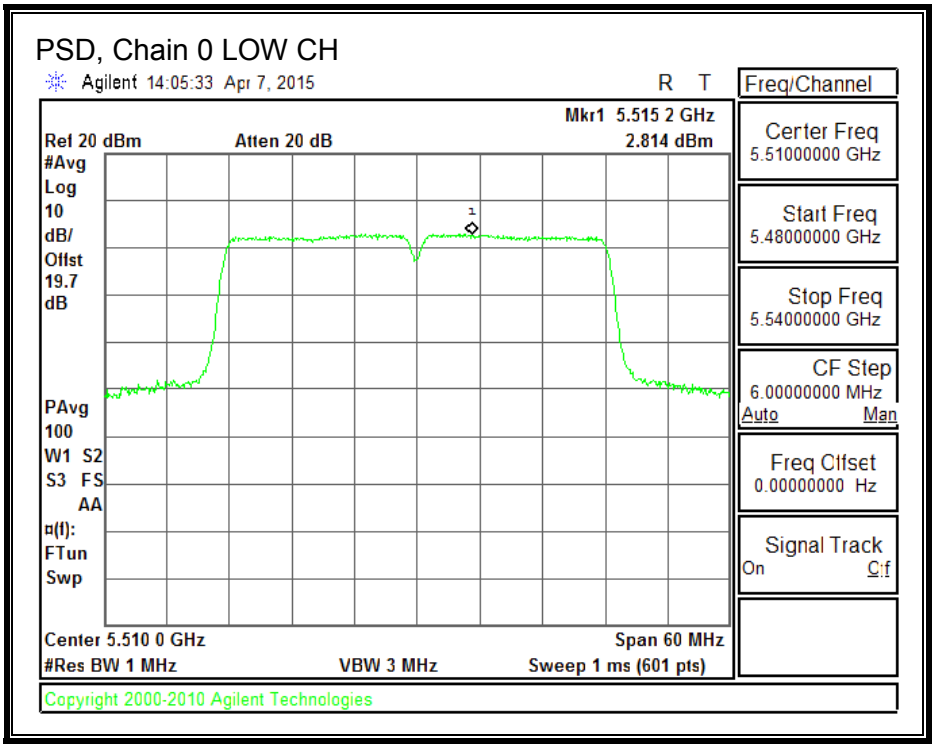
Output Power Results

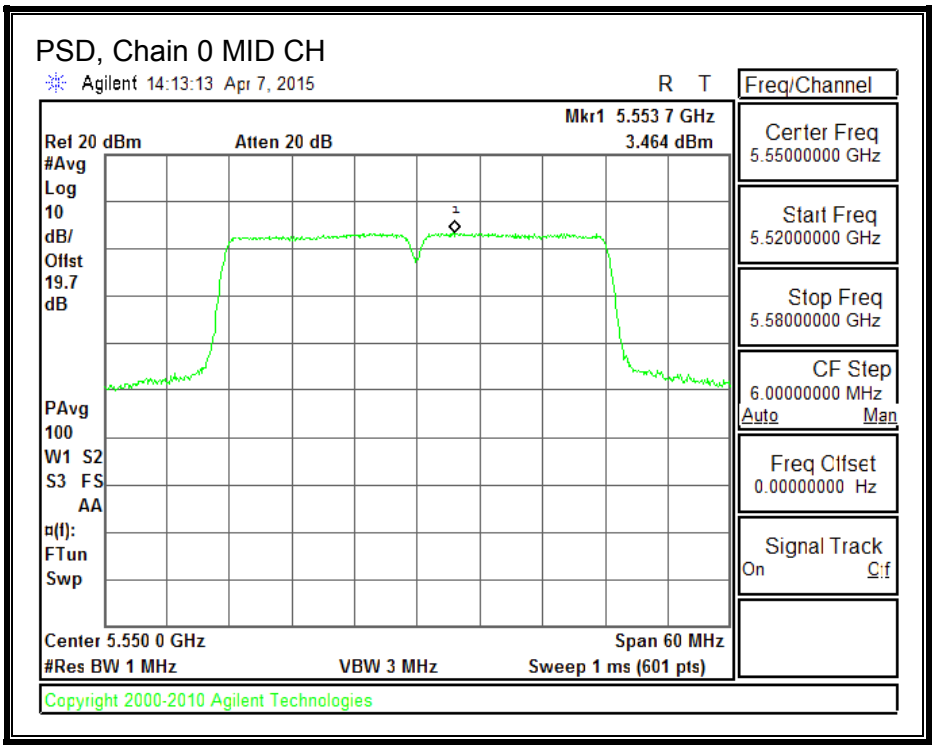
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5510	10.90	10.60	13.76	22.01	-8.25
Mid	5550	17.98	17.65	20.83	22.01	-1.18
High	5670	13.90	13.60	16.76	22.01	-5.25

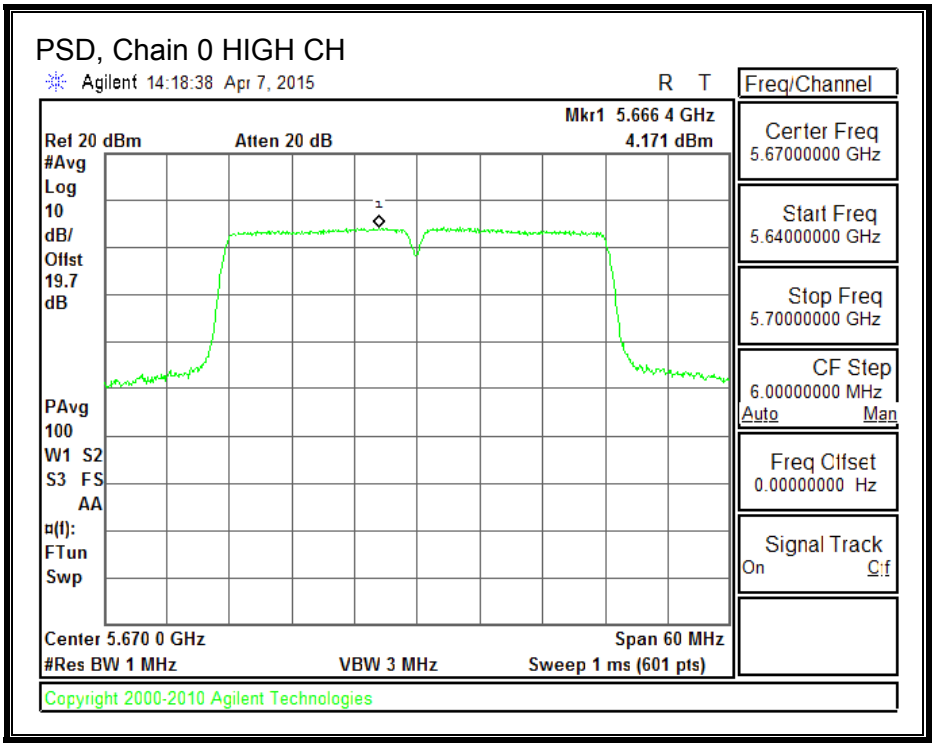
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5510	2.814	2.703	5.86	9.01	-3.15
Mid	5550	3.464	3.227	6.45	9.01	-2.56
High	5670	4.171	3.612	7.00	9.01	-2.01

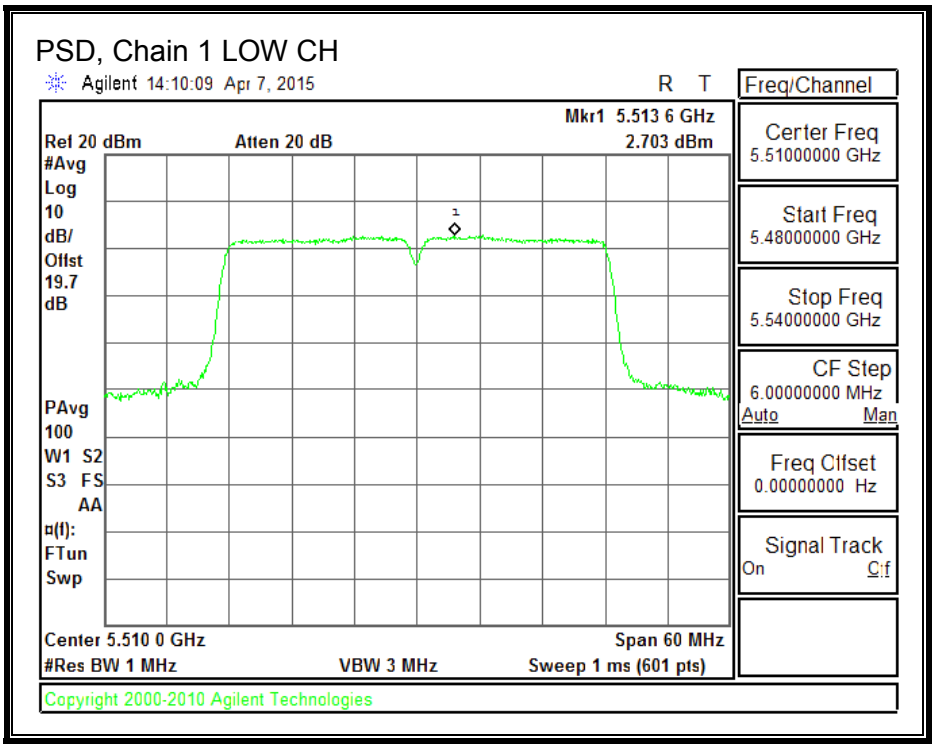
PSD, Chain 0



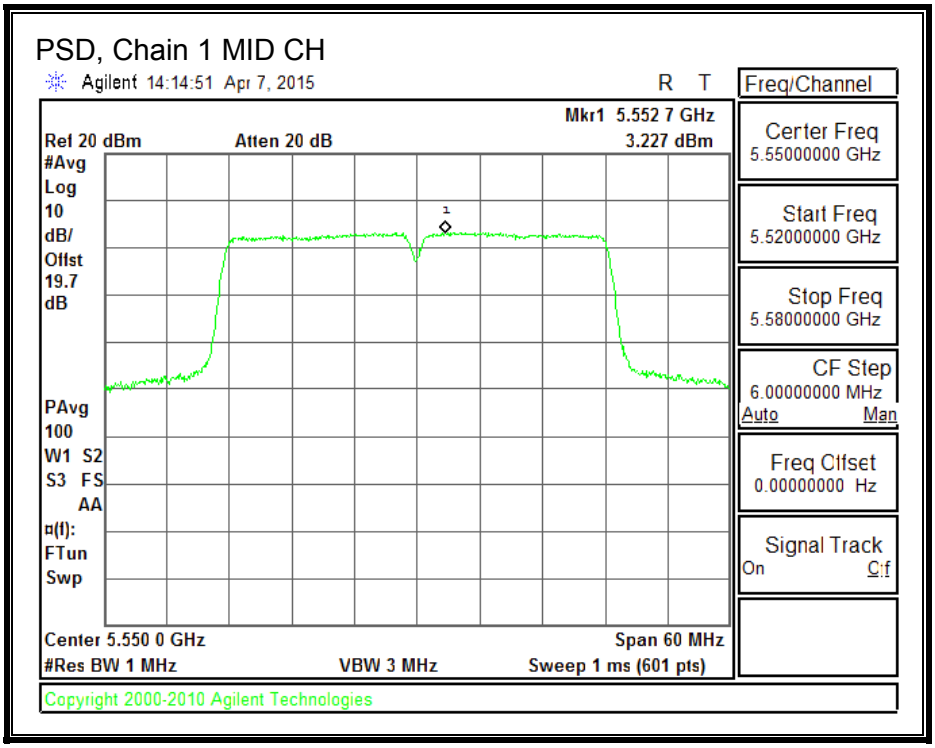




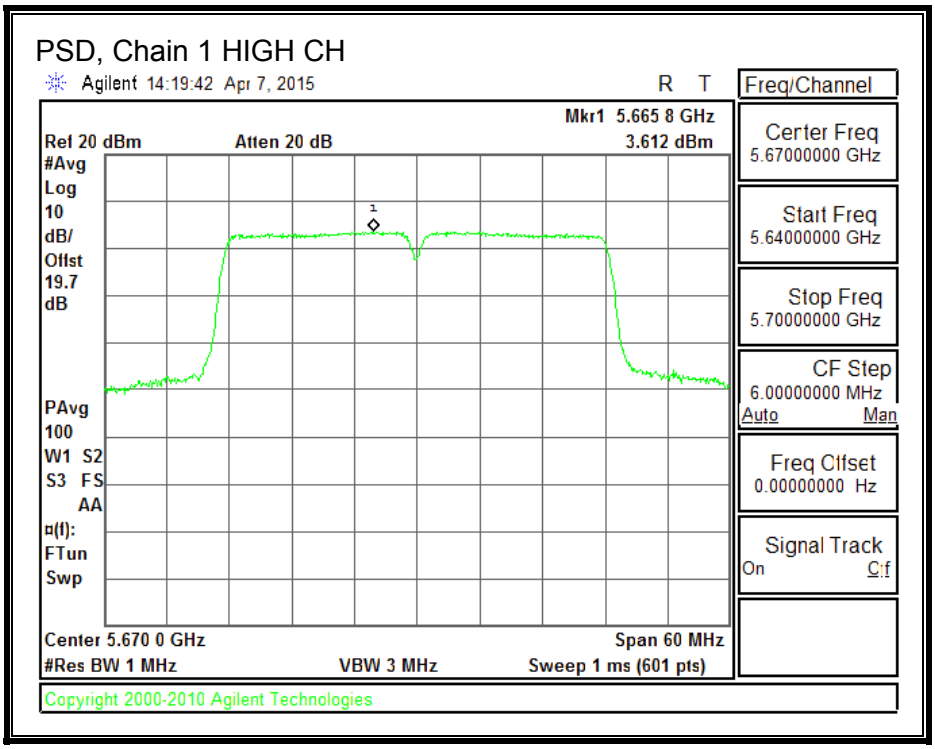
PSD, Chain 1



PSD, Chain 1 MID CH



PSD, Chain 1 HIGH CH



STRADDLE CHANNEL 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	47.95	7.99	7.99	22.01	9.01

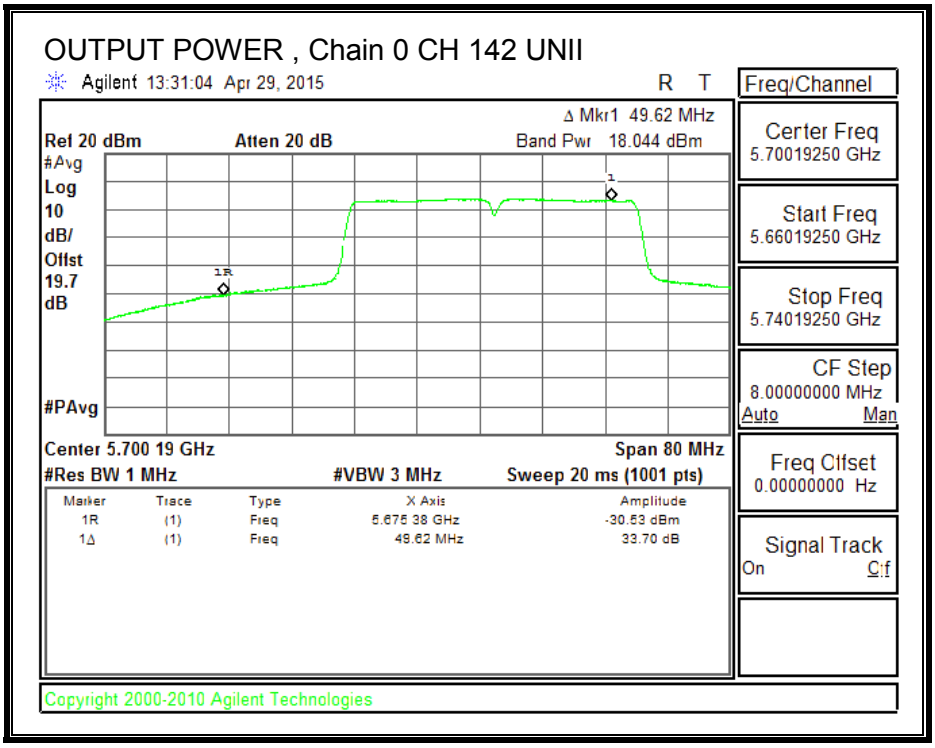
Duty Cycle CF (dB)	0.09	Included in Calculations of Corr'd Power & PSD

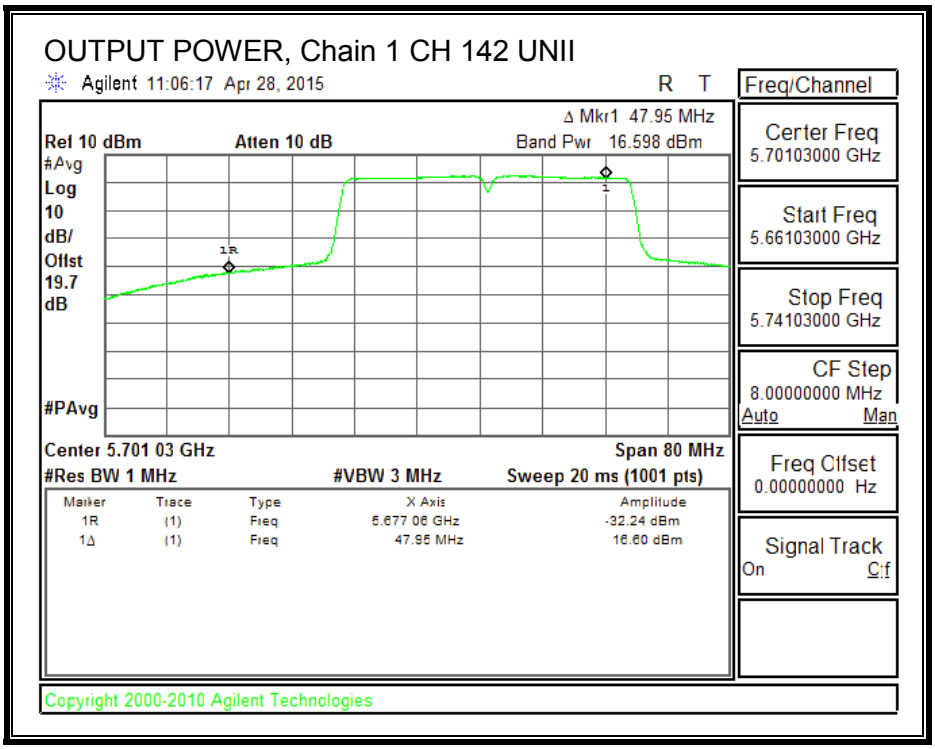
Output Power Results

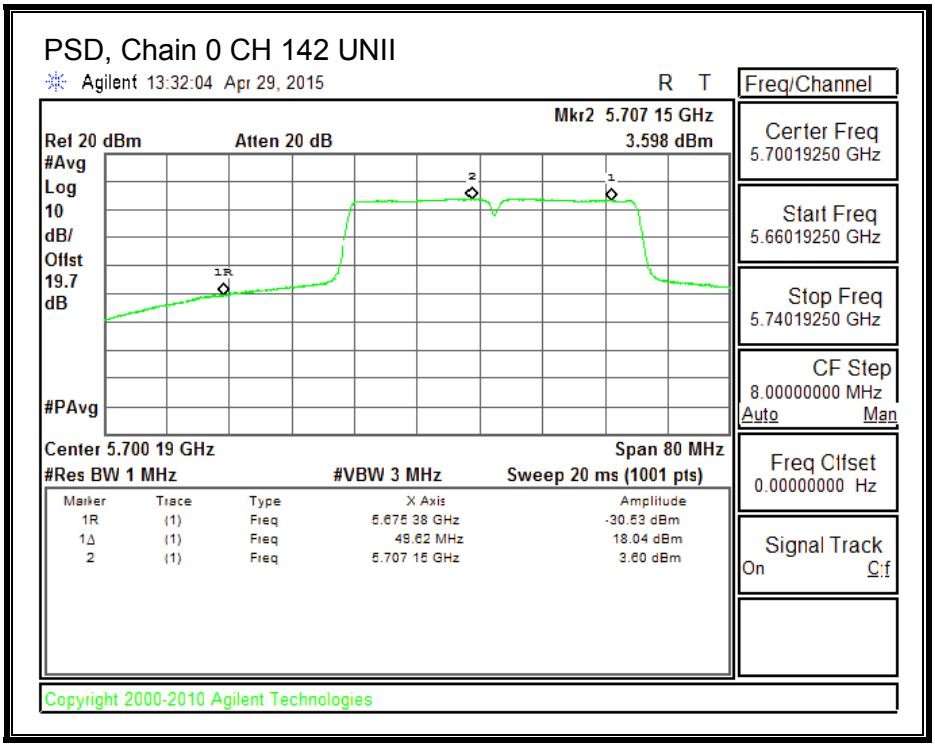
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
142	5710	18.044	16.598	20.48	22.01	-1.53

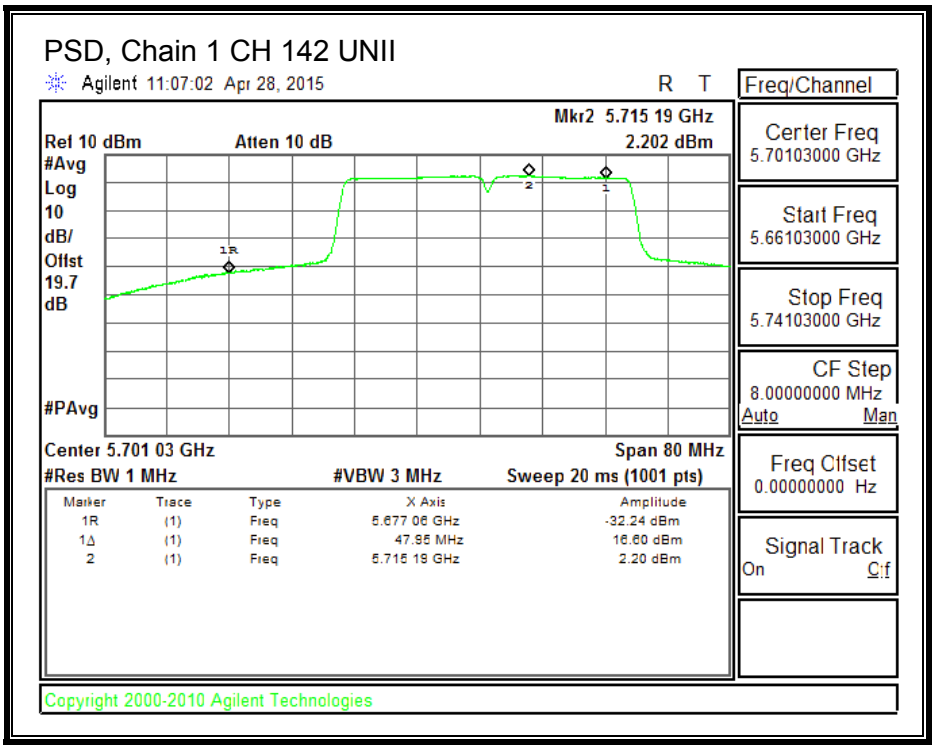
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
142	5710	3.598	2.202	6.06	9.01	-2.95









UNII-3 BAND

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
142	5710	7.03	8.03	28.97	27.97

Duty Cycle CF (dB)	0.09	Included in Calculations of Corr'd Power & PSD

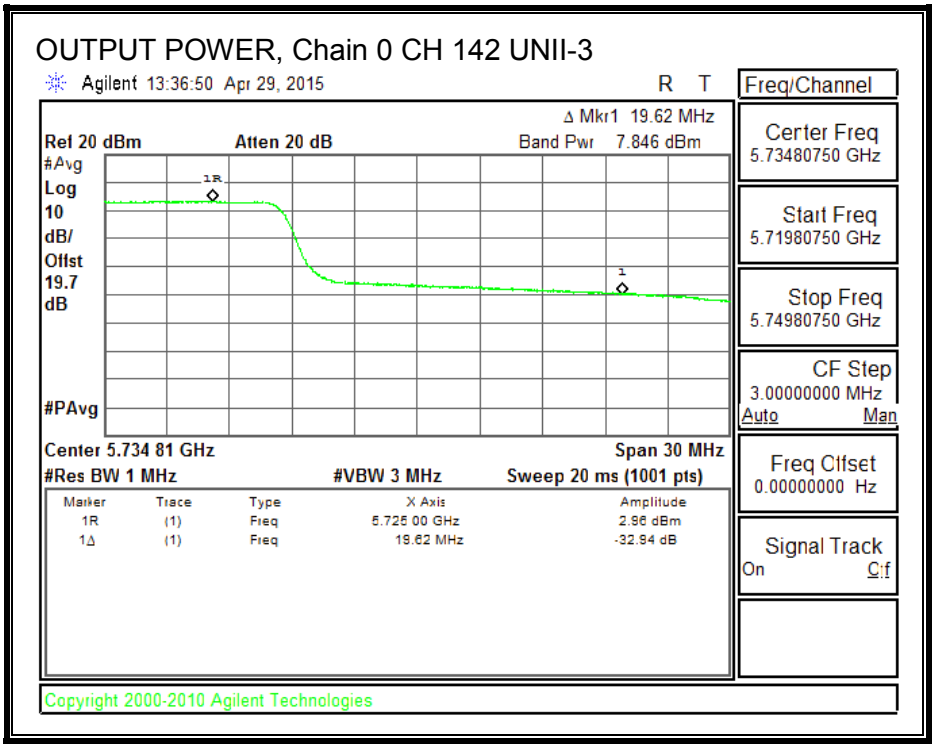
Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
142	5710	7.846	6.308	10.245	28.97	-18.72

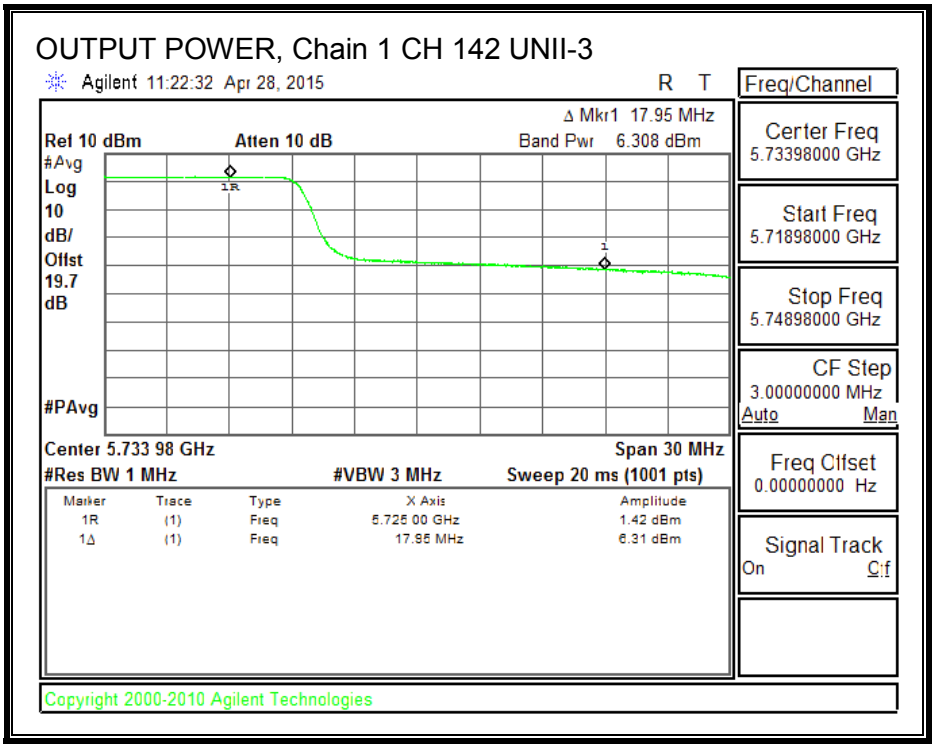
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
142	5710	2.938	1.362	5.32	27.97	-22.65

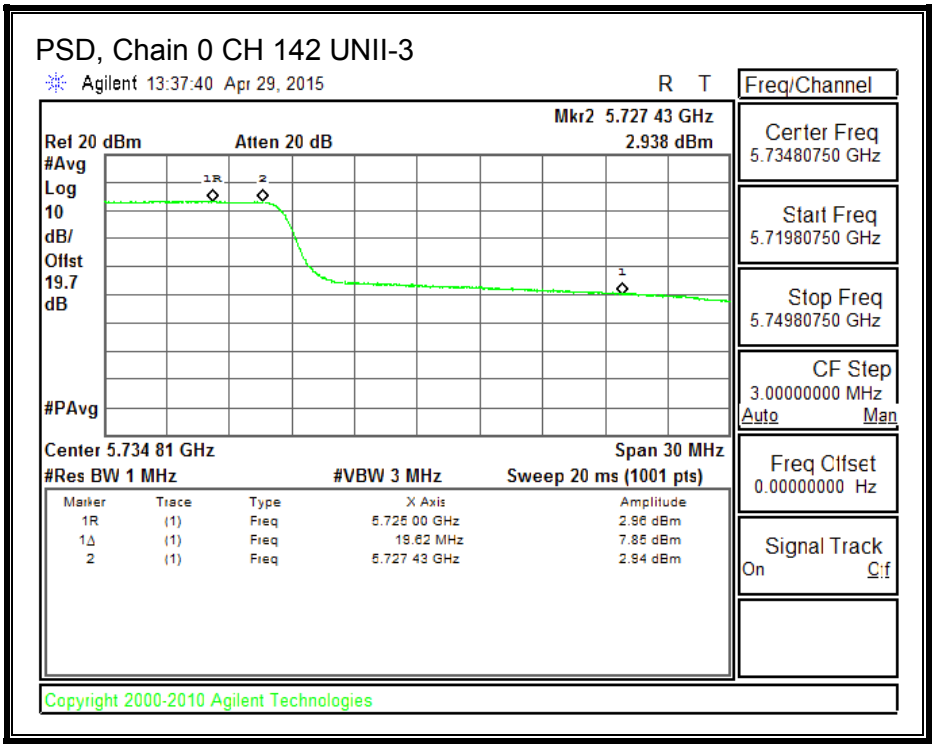
OUTPUT POWER, Chain 0 CH 142 UNII-3



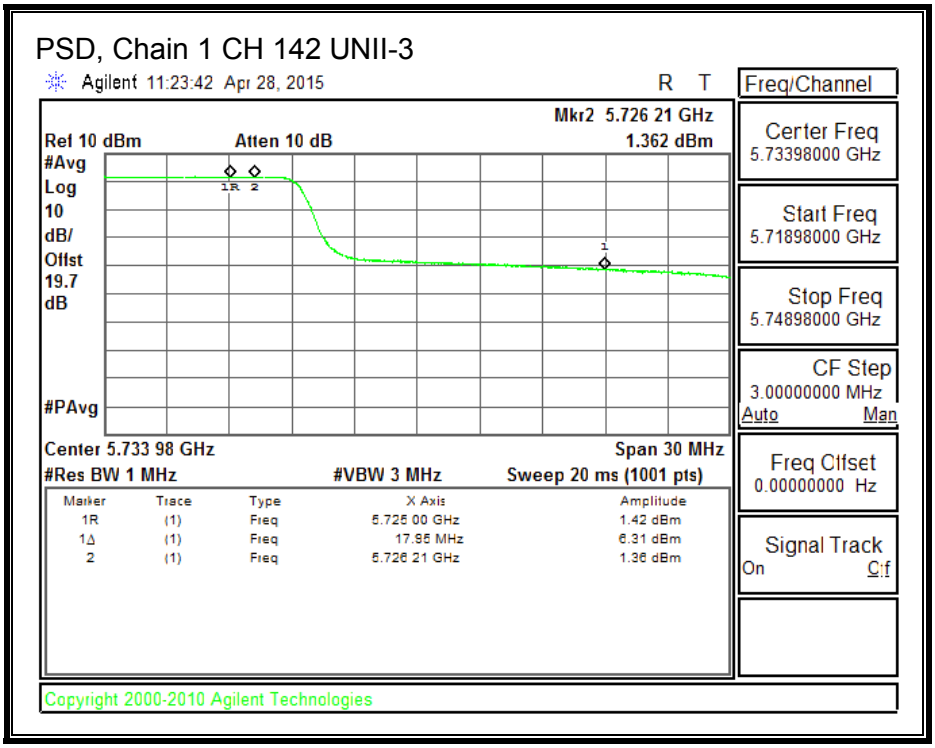
OUTPUT POWER, Chain 1 CH 142 UNII-3



PSD, Chain 0 CH 142 UNII-3



PSD, Chain 1 CH 142 UNII-3



8.46.2. AVERAGE OUTPUT POWER (WHOLE FUNDAMENTAL)

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

RESULTS

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)
142	5710	18.10	17.70	20.91

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary

8.47. 802.11n HT40 CDD 3TX MODE IN THE 5.6 GHz BAND

8.47.1. 26 dB BANDWIDTH

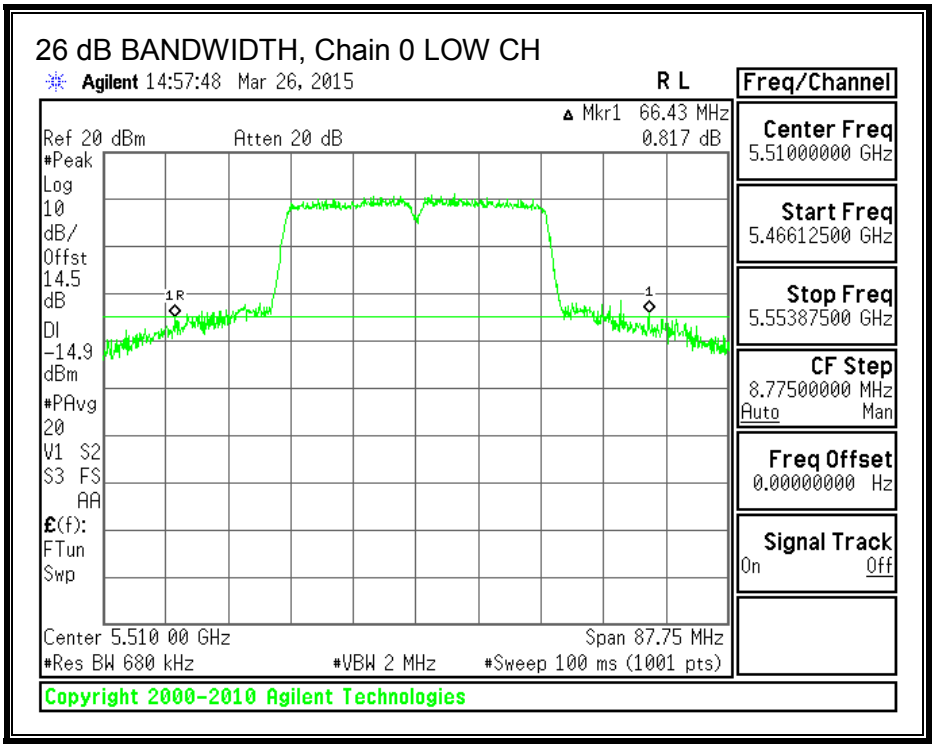
LIMITS

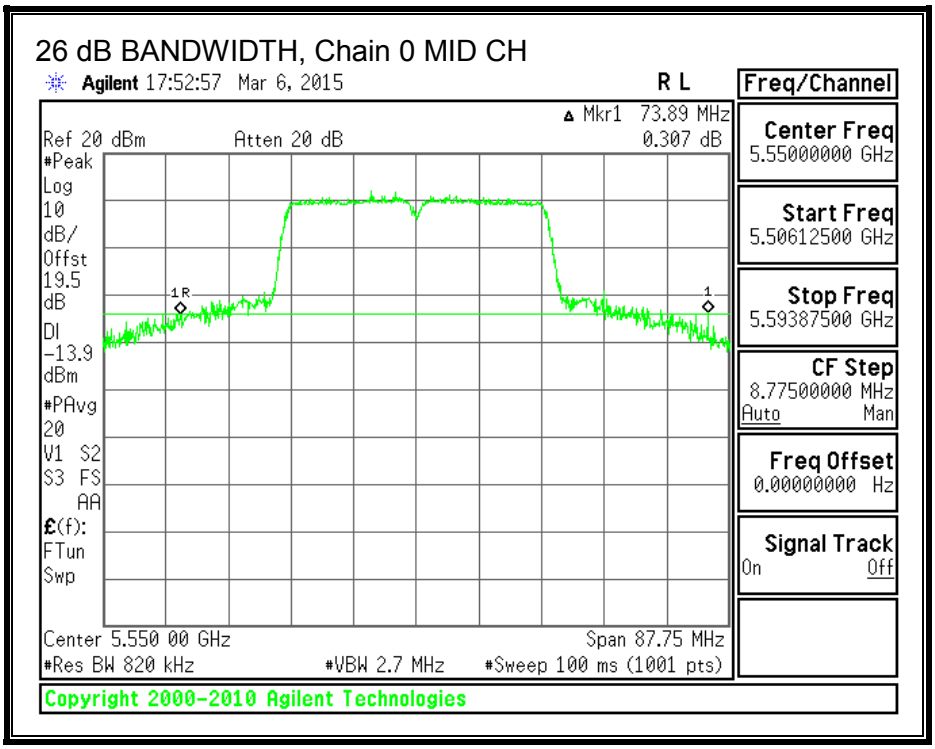
None; for reporting purposes only.

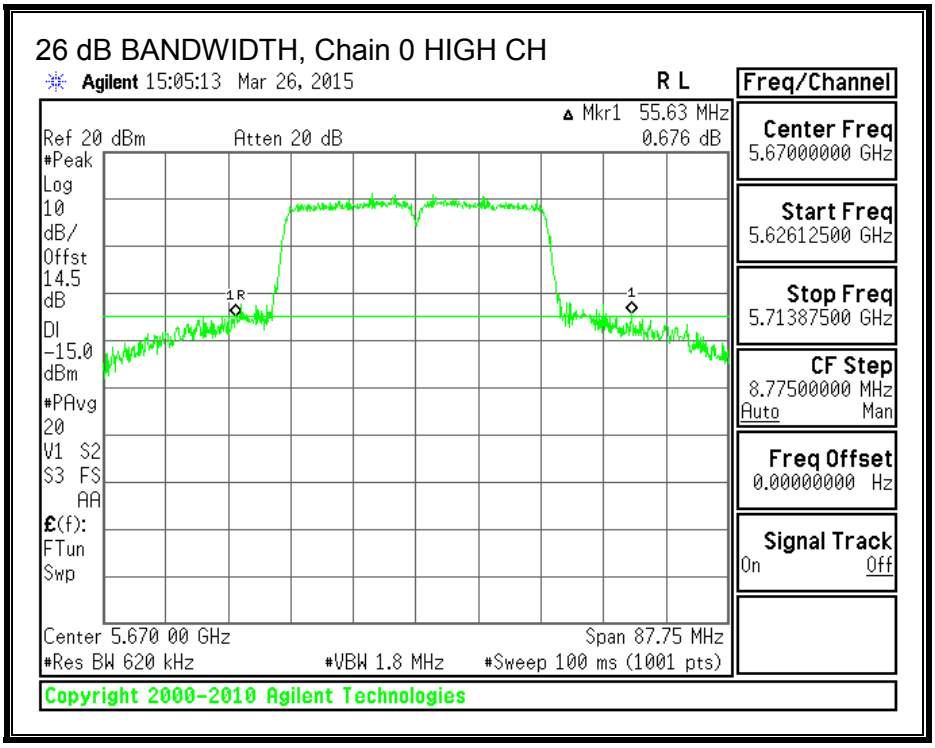
RESULTS

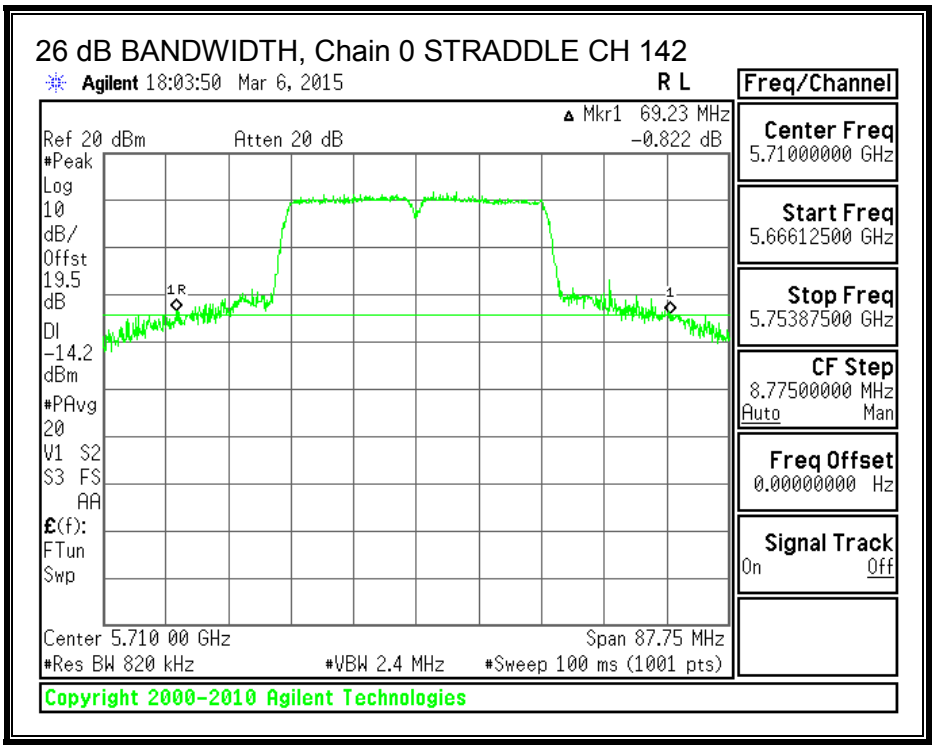
Channel	Frequency (MHz)	26 dB BW Chain 0 (MHz)	26 dB BW Chain 1 (MHz)	26 dB BW Chain 2 (MHz)
Low	5510	66.430	56.160	50.540
Mid	5550	73.890	63.270	62.390
High	5670	55.630	50.836	51.012
142	5710	69.230	65.900	72.040

26 dB BANDWIDTH, Chain 0

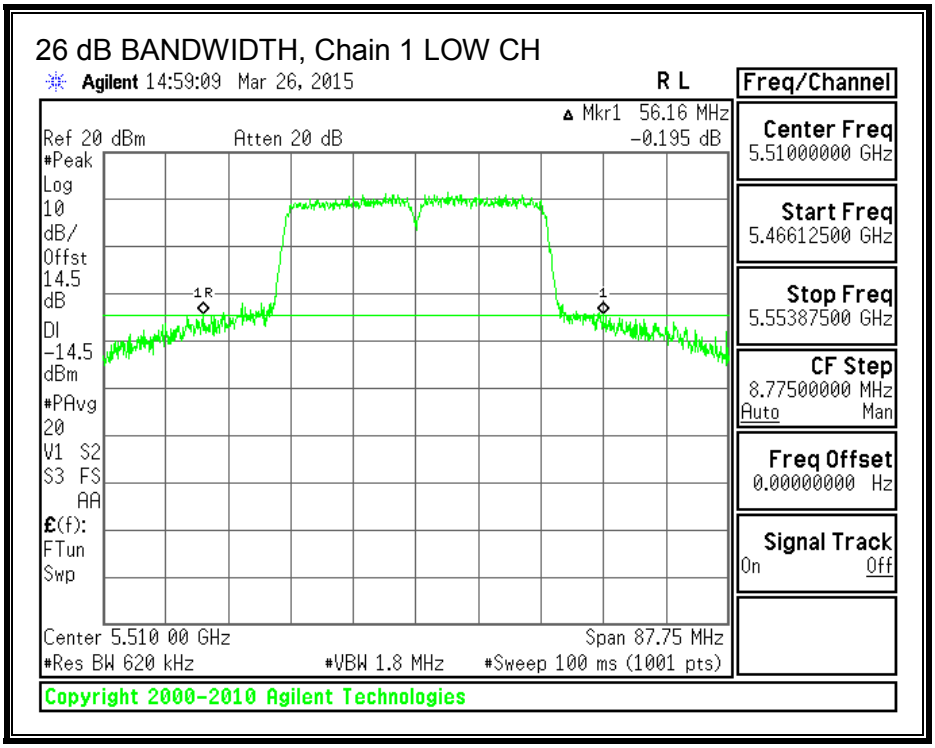


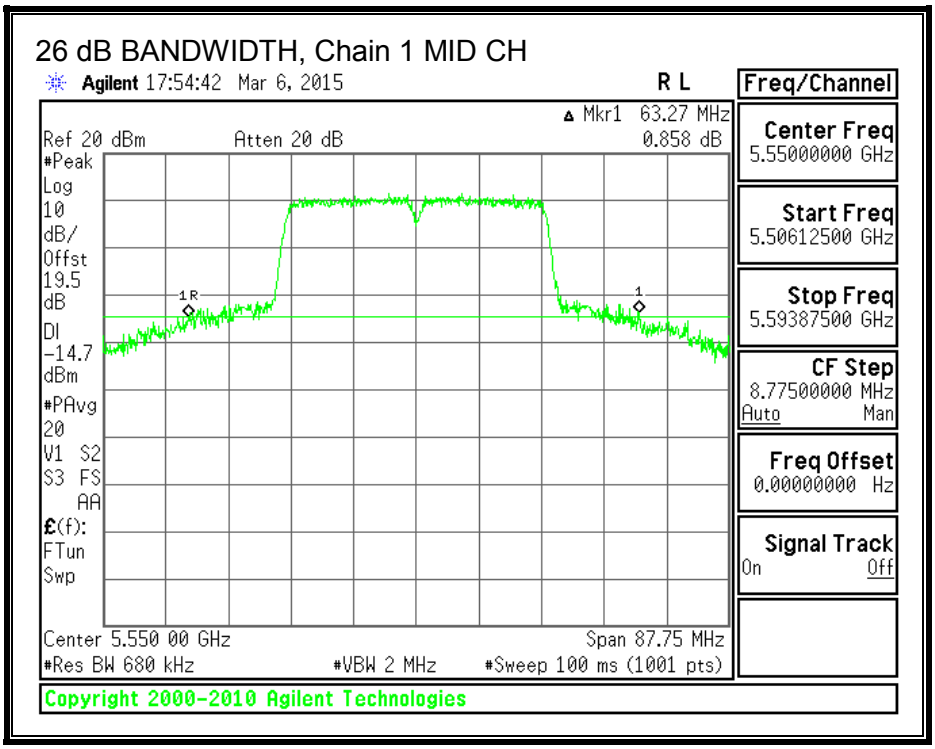




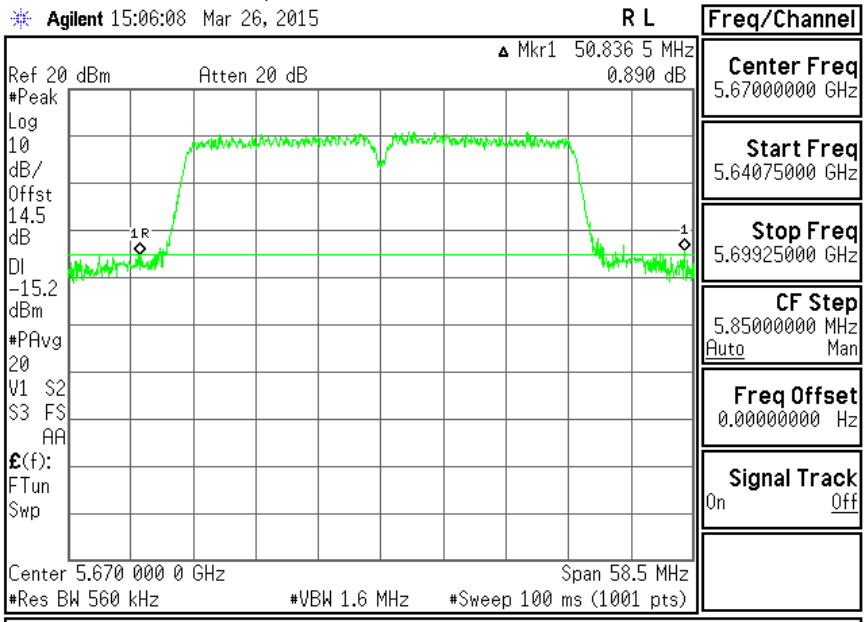


26 dB BANDWIDTH, Chain 1

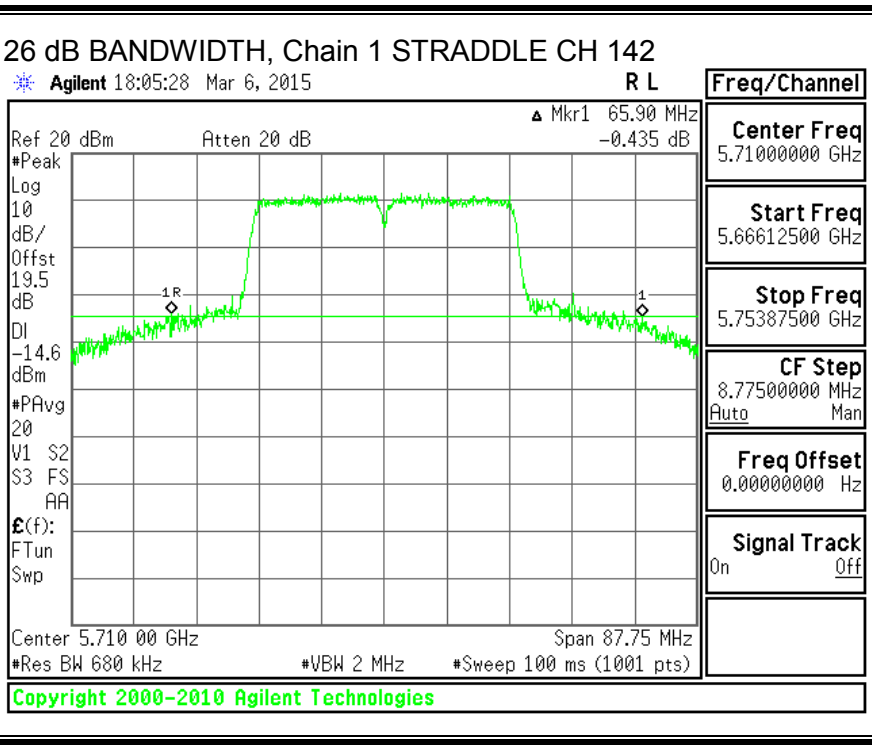




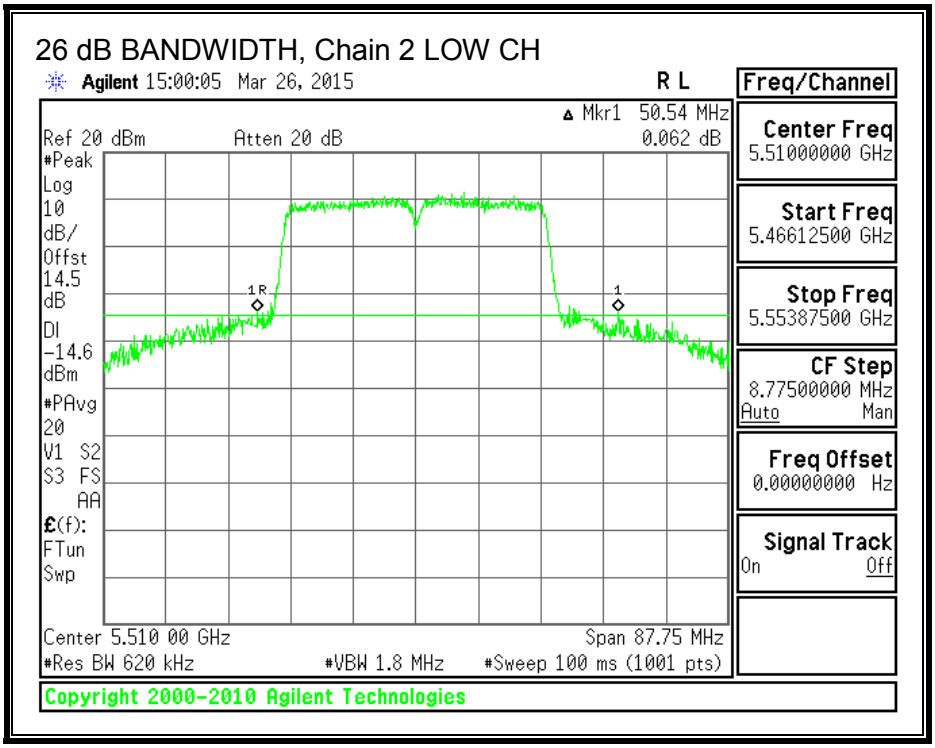
26 dB BANDWIDTH, Chain 1 HIGH CH

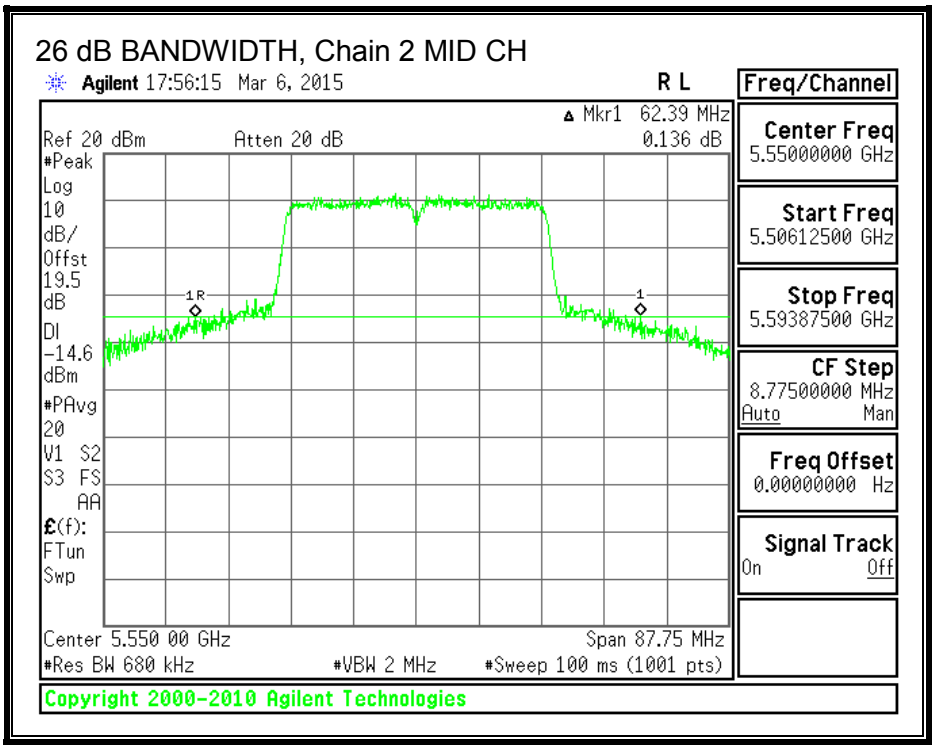


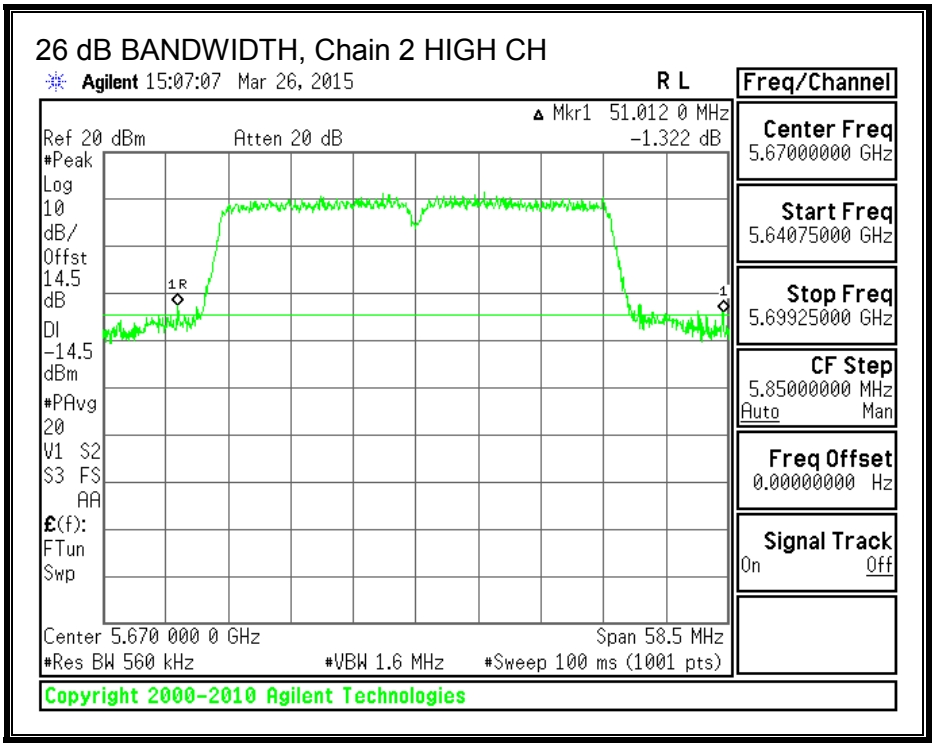
26 dB BANDWIDTH, Chain 1 STRADDLE CH 142

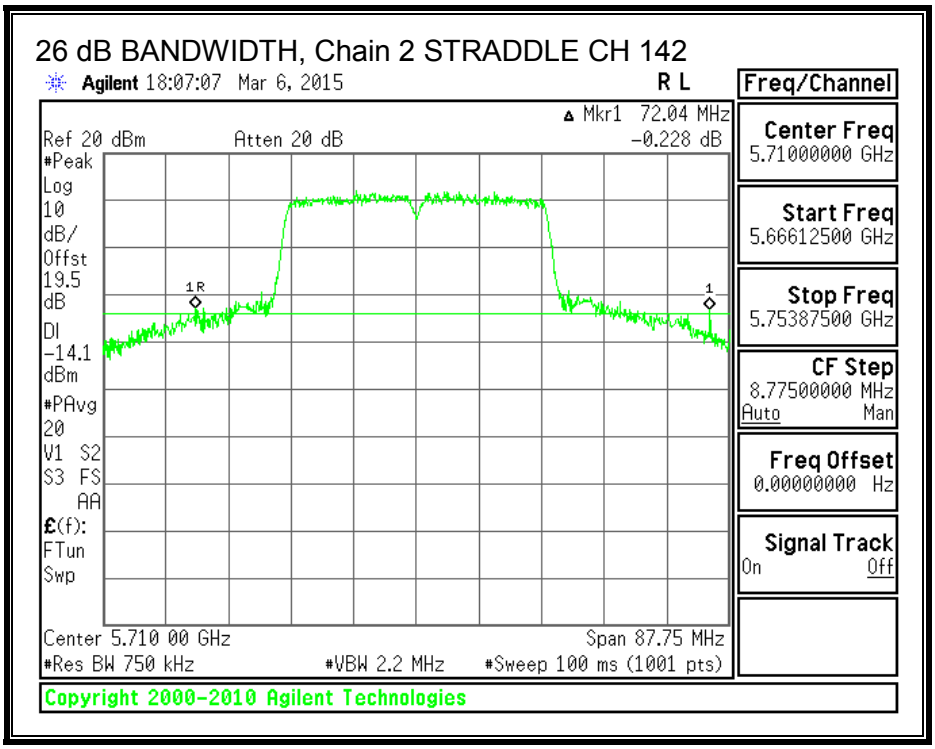


26 dB BANDWIDTH, Chain 2









8.47.2. 99% BANDWIDTH

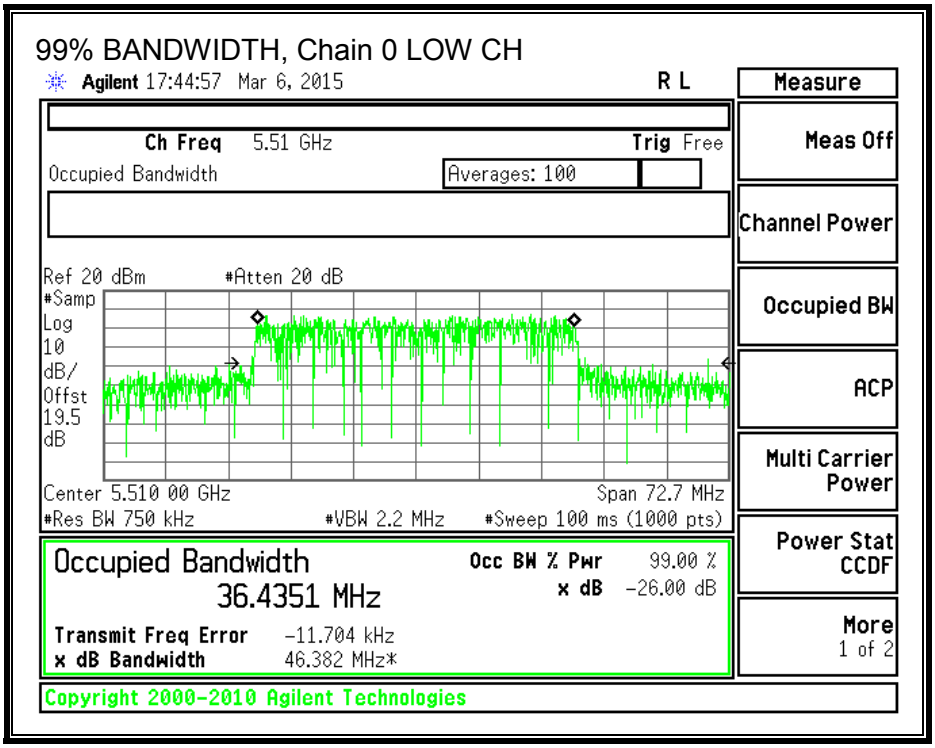
LIMITS

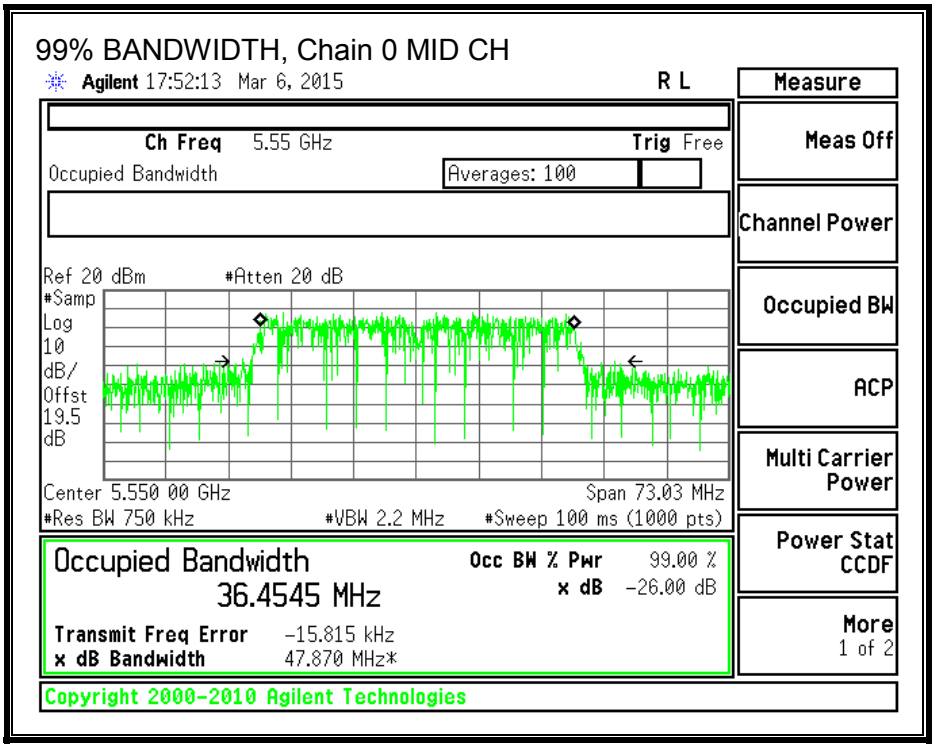
None; for reporting purposes only.

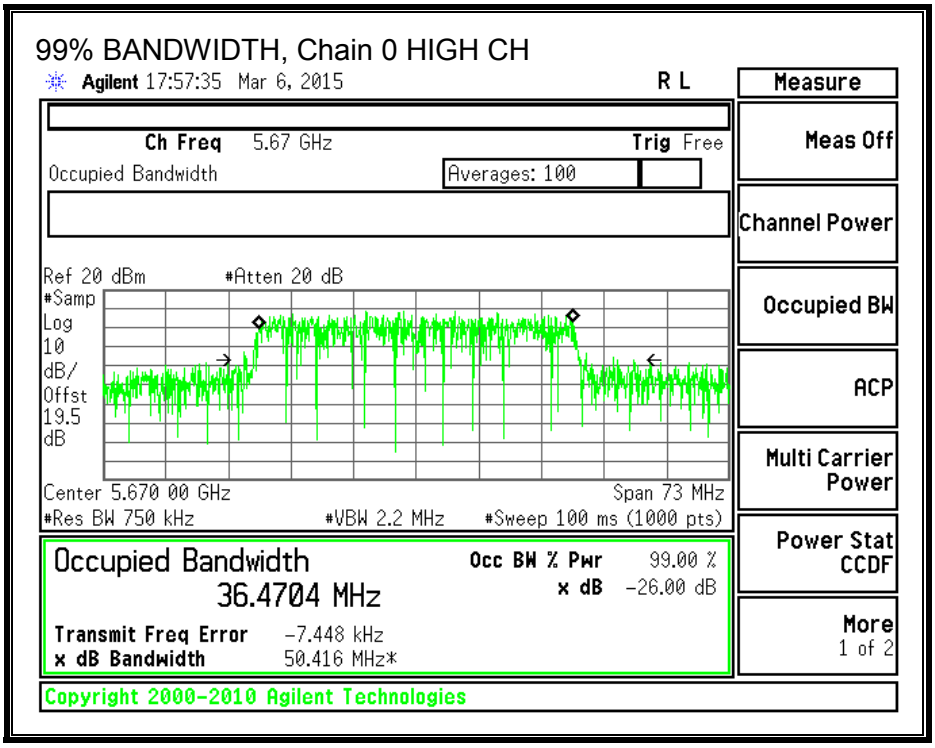
RESULTS

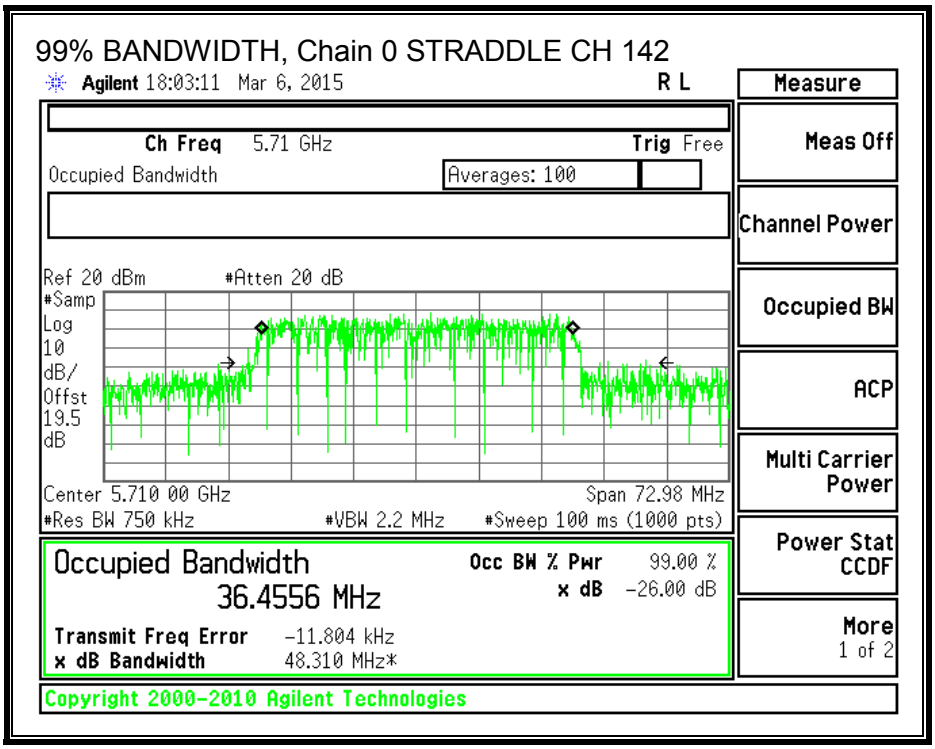
Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)	99% BW Chain 2 (MHz)
Low	5510	36.4351	36.4257	36.3987
Mid	5550	36.4545	36.4326	36.4222
High	5670	36.4704	36.4718	36.4566
142	5710	36.4556	36.3931	36.4306

99% BANDWIDTH, Chain 0

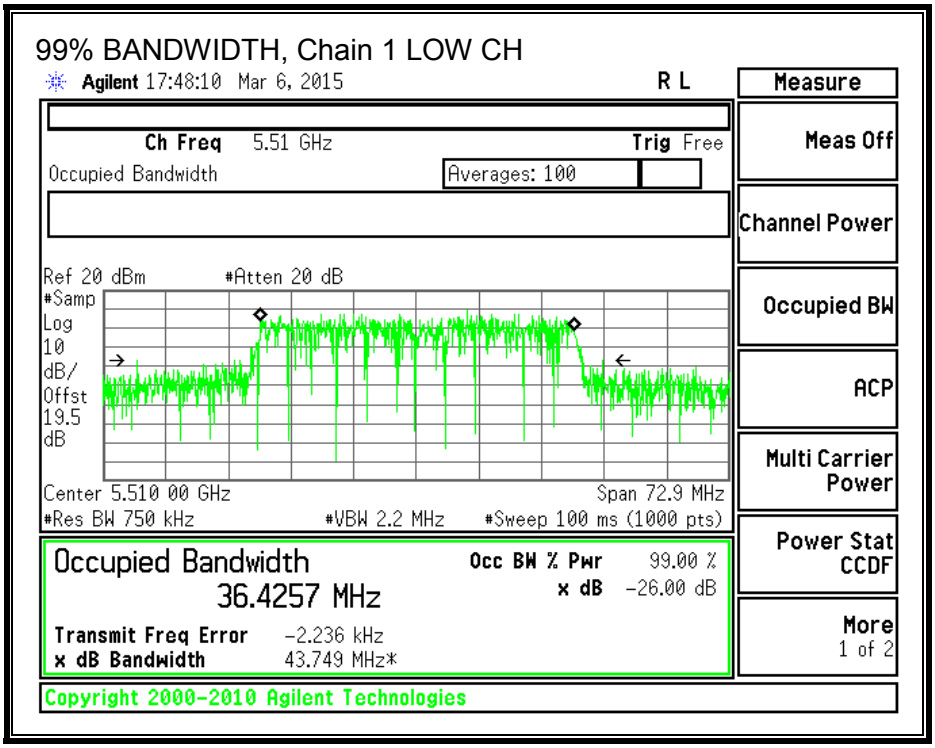


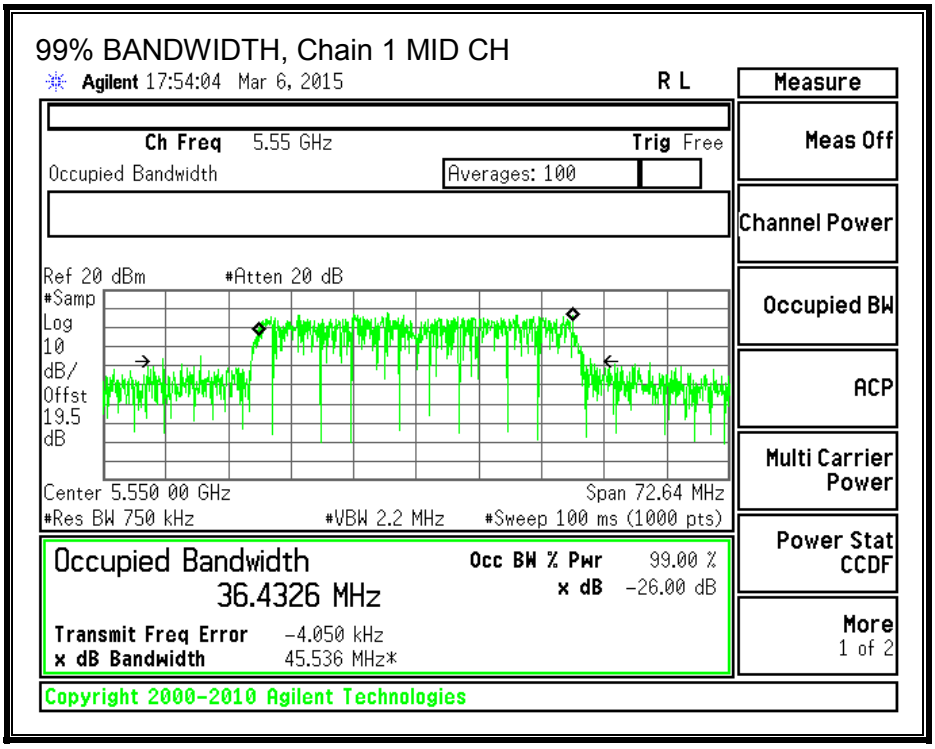


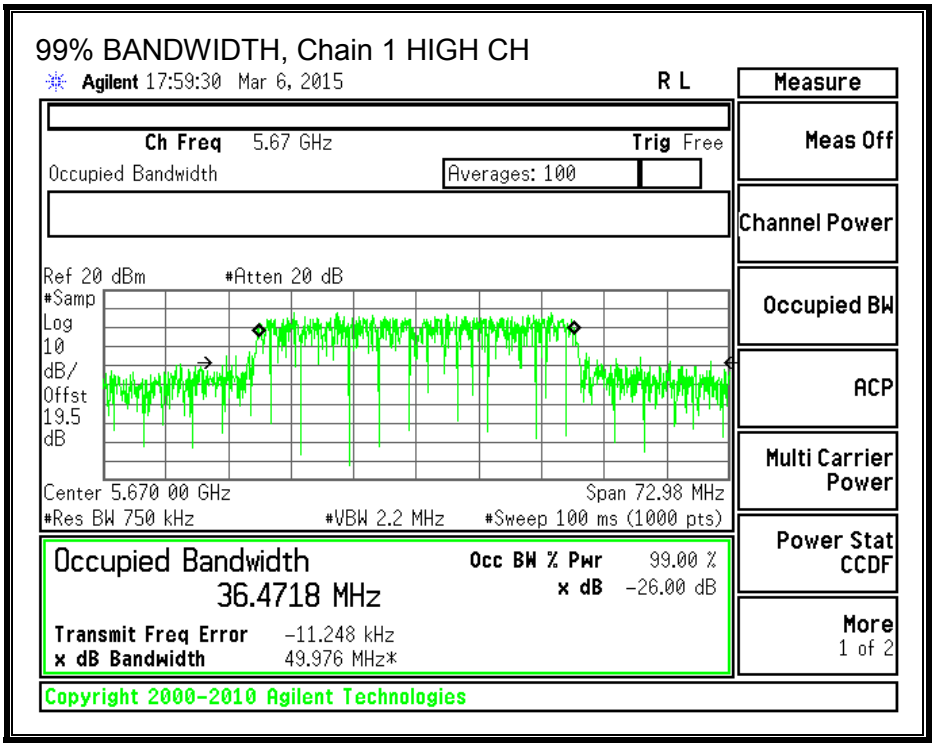


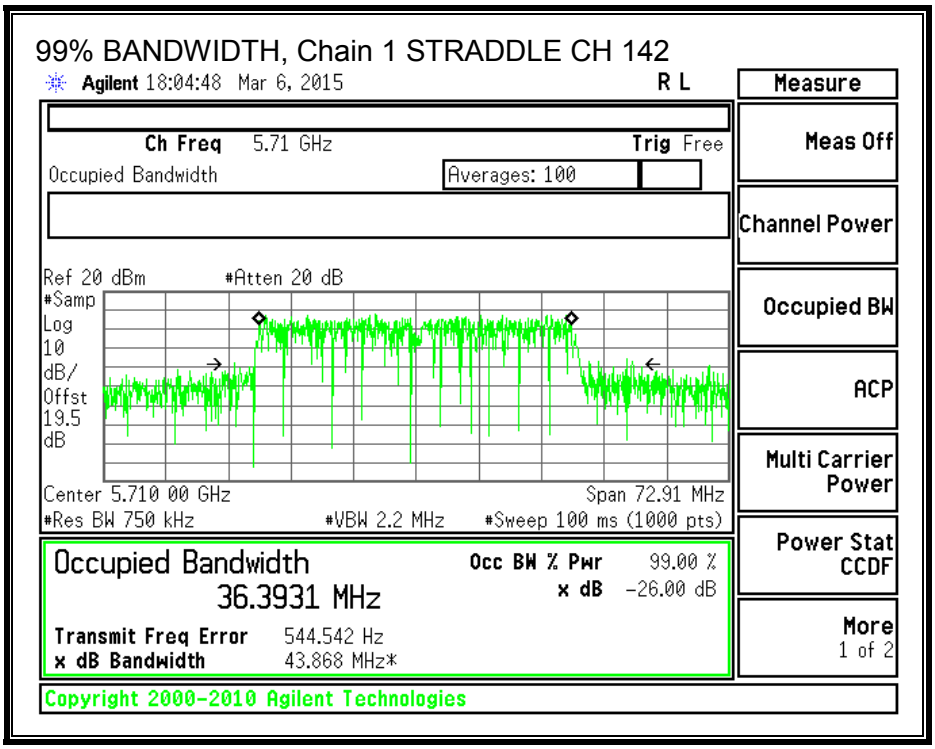


99% BANDWIDTH, Chain 1

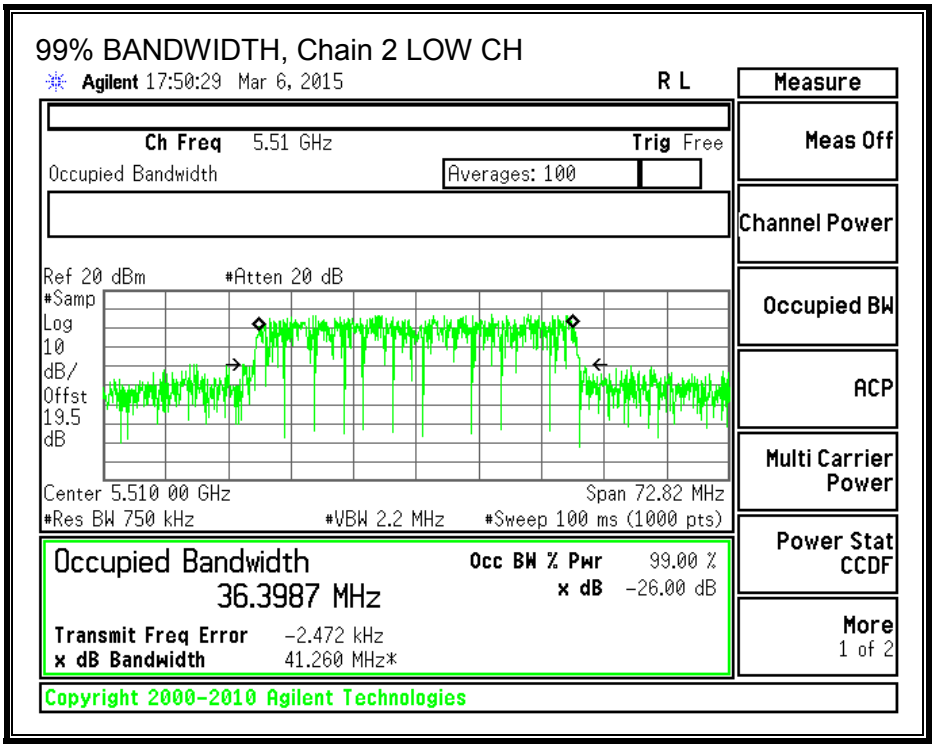


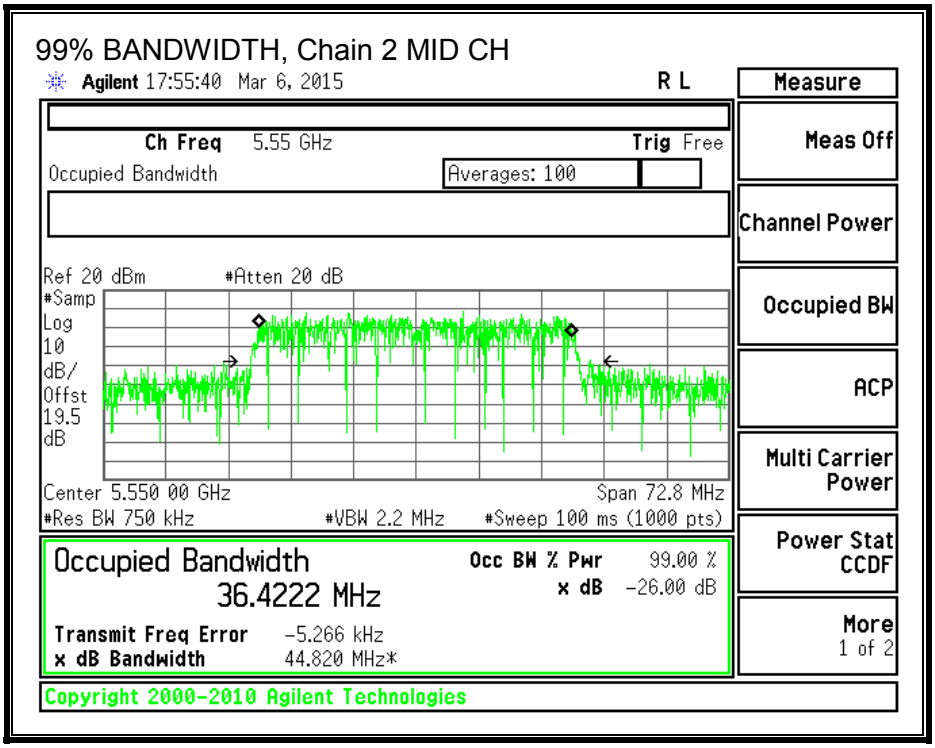


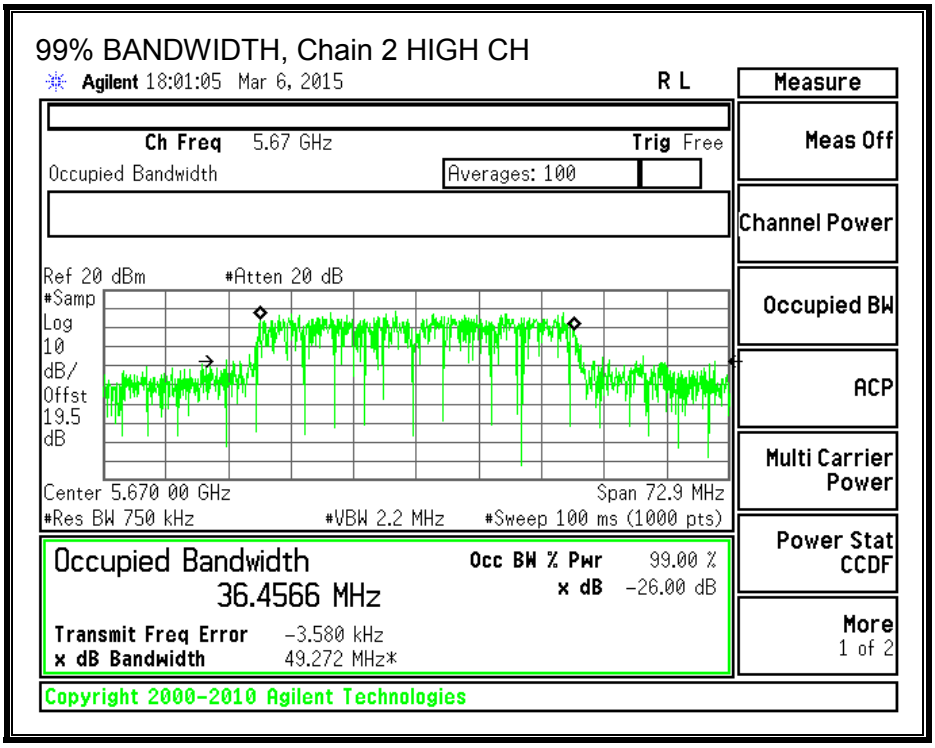


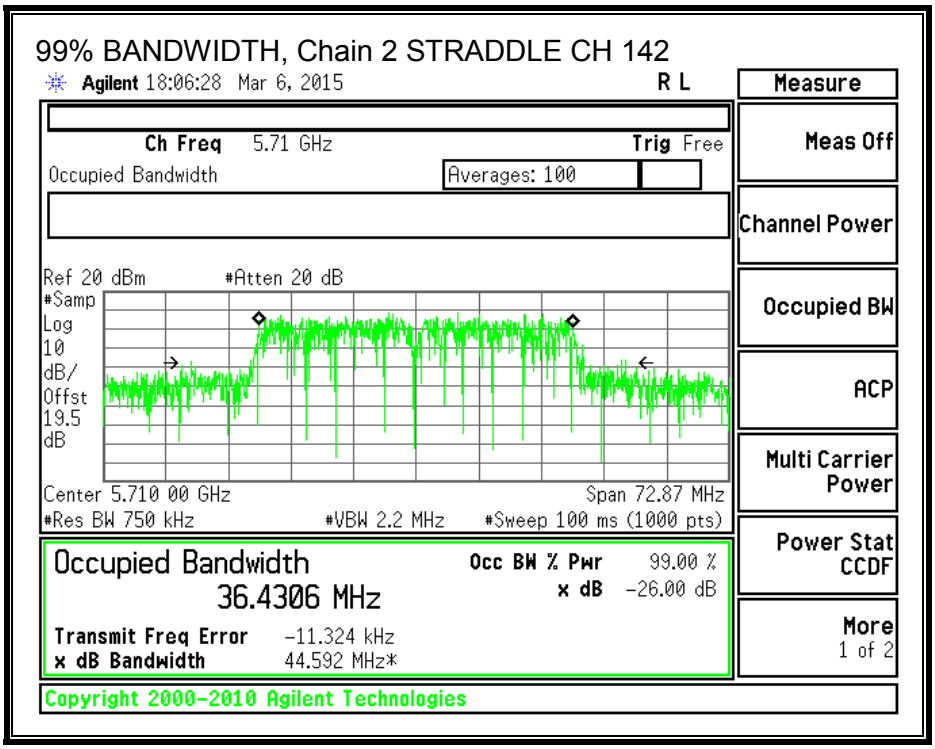


99% BANDWIDTH, Chain 2









8.47.3. 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.

DIRECTIONAL ANTENNA GAIN

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

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Chain 2 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
3.17	2.09	4.72	4.46

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

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Chain 2 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
3.17	2.09	4.72	9.17

RESULTS

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)
Low	5510	50.54	4.46	9.17	24.00	7.83
Mid	5550	62.39	4.46	9.17	24.00	7.83
High	5670	50.84	4.46	9.17	24.00	7.83

Duty Cycle CF (dB)	0.09	Included in Calculations of Corr'd PSD

Output Power Results

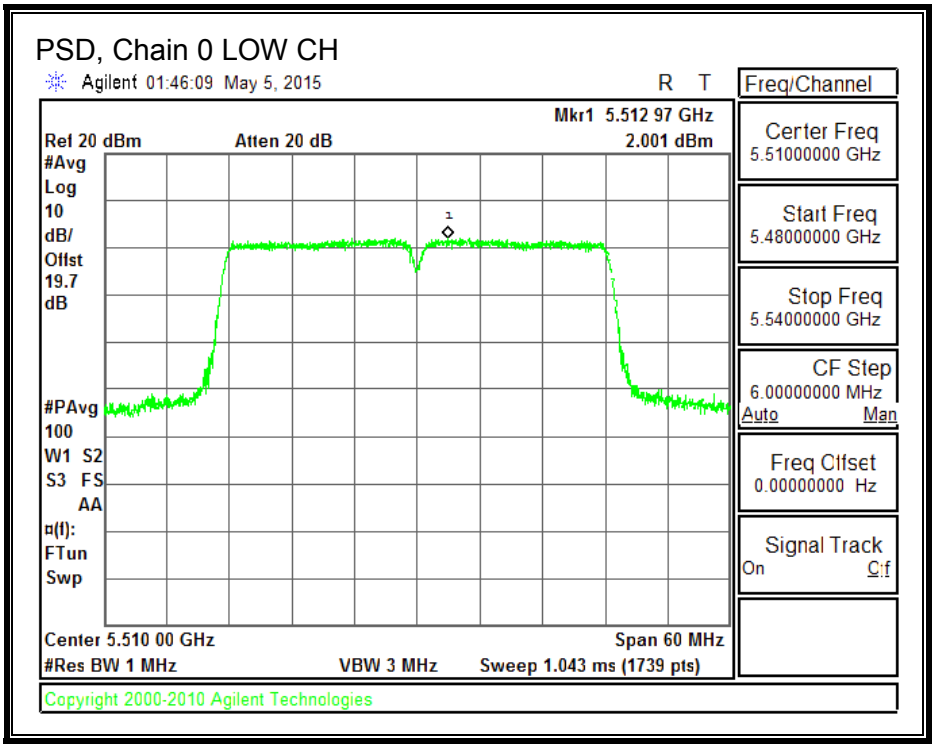
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Chain 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5510	10.00	9.80	9.70	14.61	24.00	-9.39
Mid	5550	16.20	16.30	16.10	20.97	24.00	-3.03
High	5670	15.40	15.60	15.60	20.31	24.00	-3.69

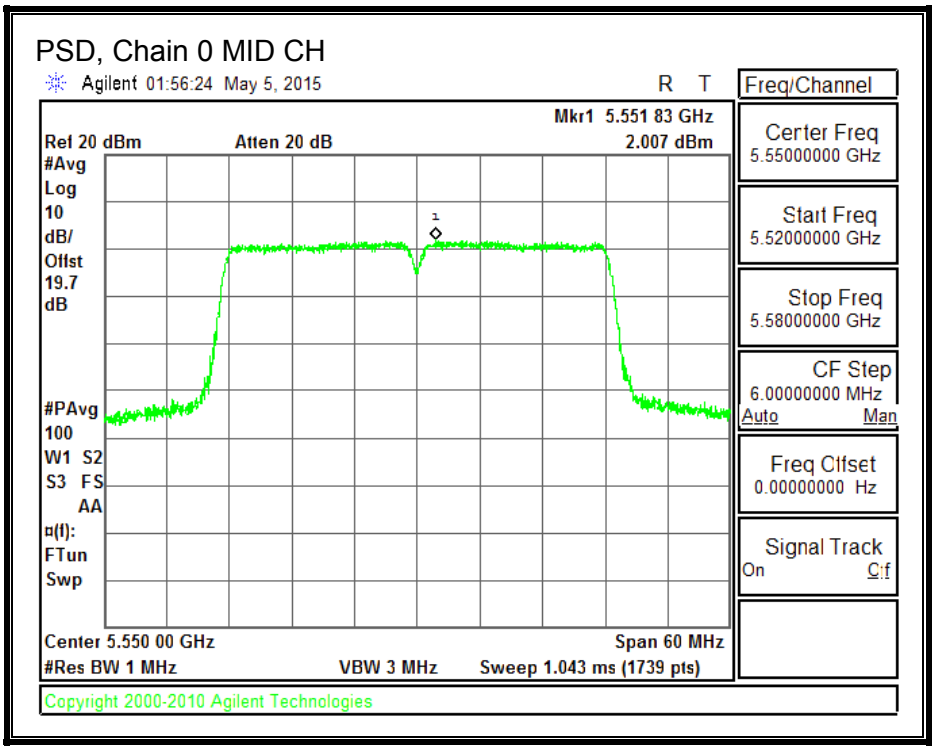
PSD Results

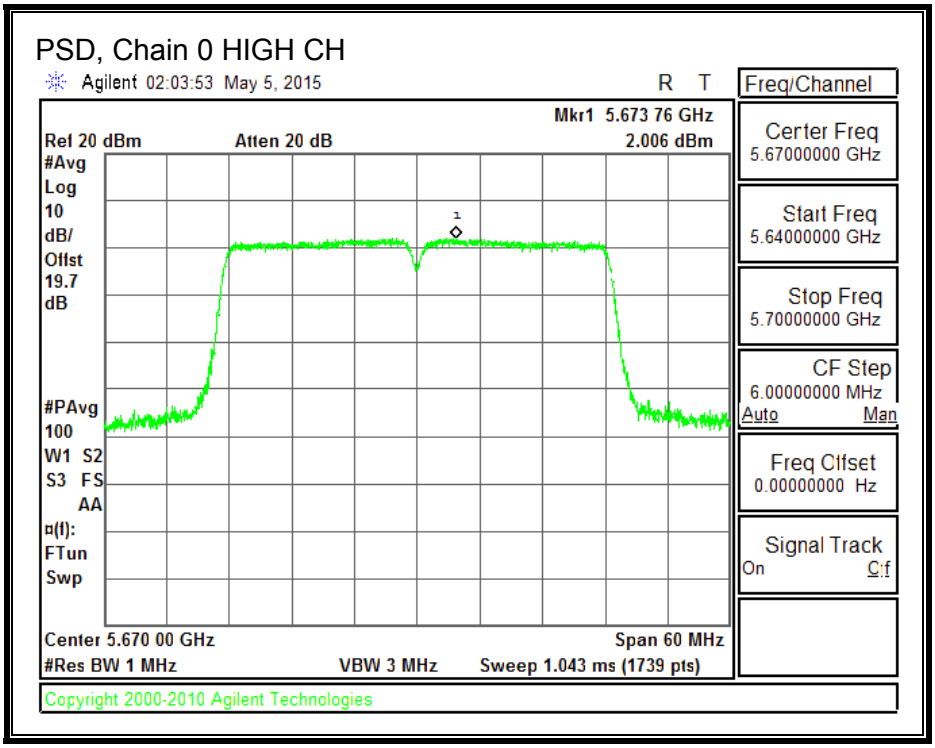
Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Chain 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5510	2.001	2.015	1.892	6.83	7.83	-1.00
Mid	5550	2.007	2.100	1.728	6.81	7.83	-1.02
High	5670	2.006	1.933	1.884	6.80	7.83	-1.03

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

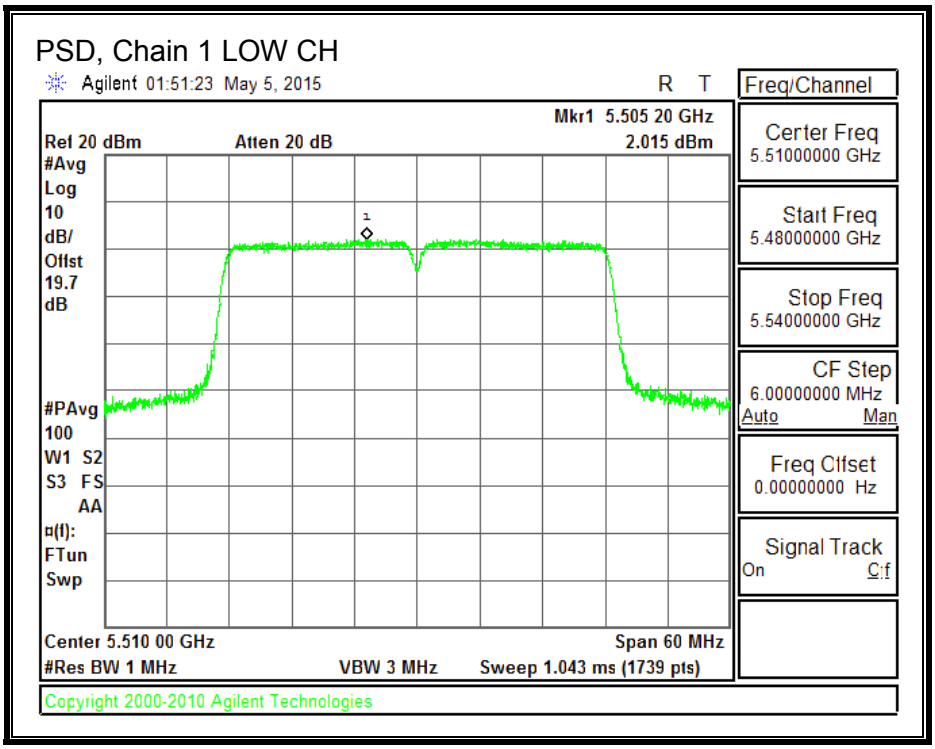
PSD, Chain 0

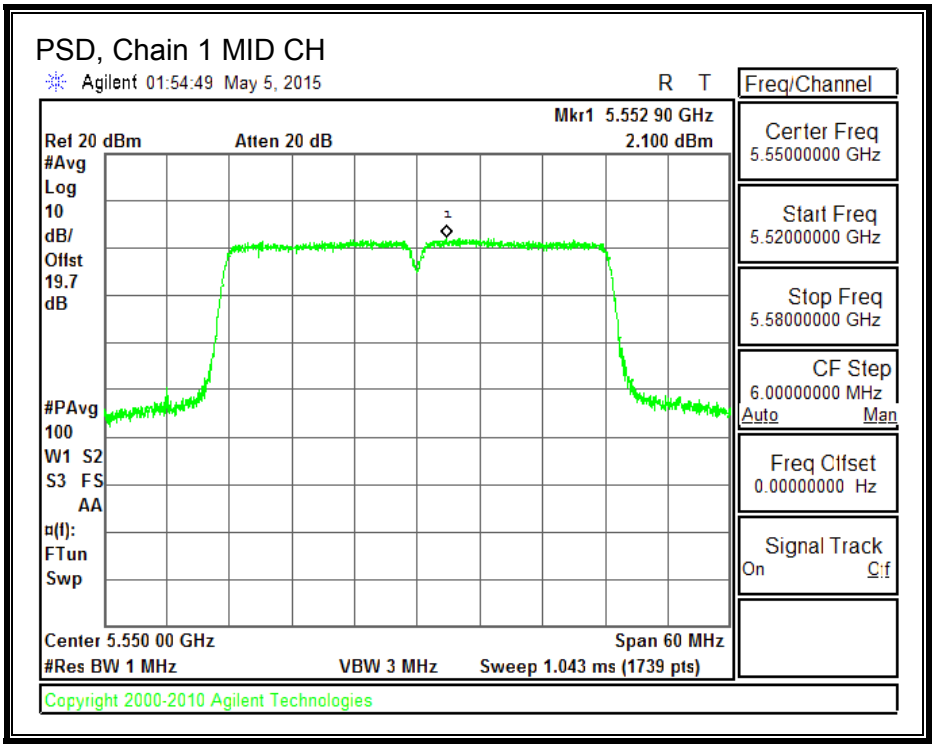


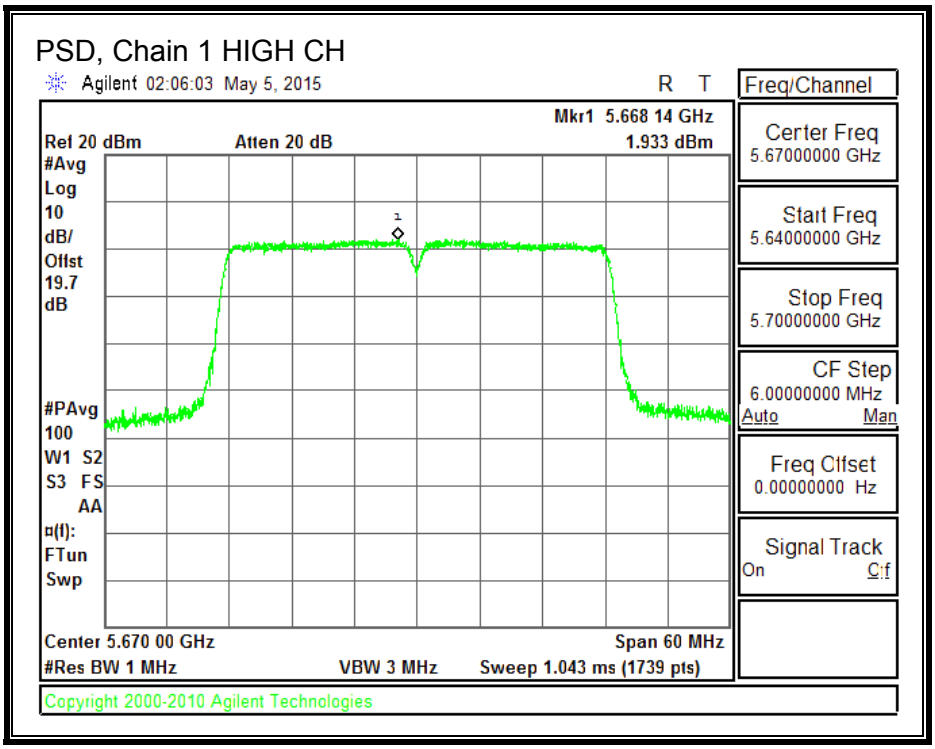




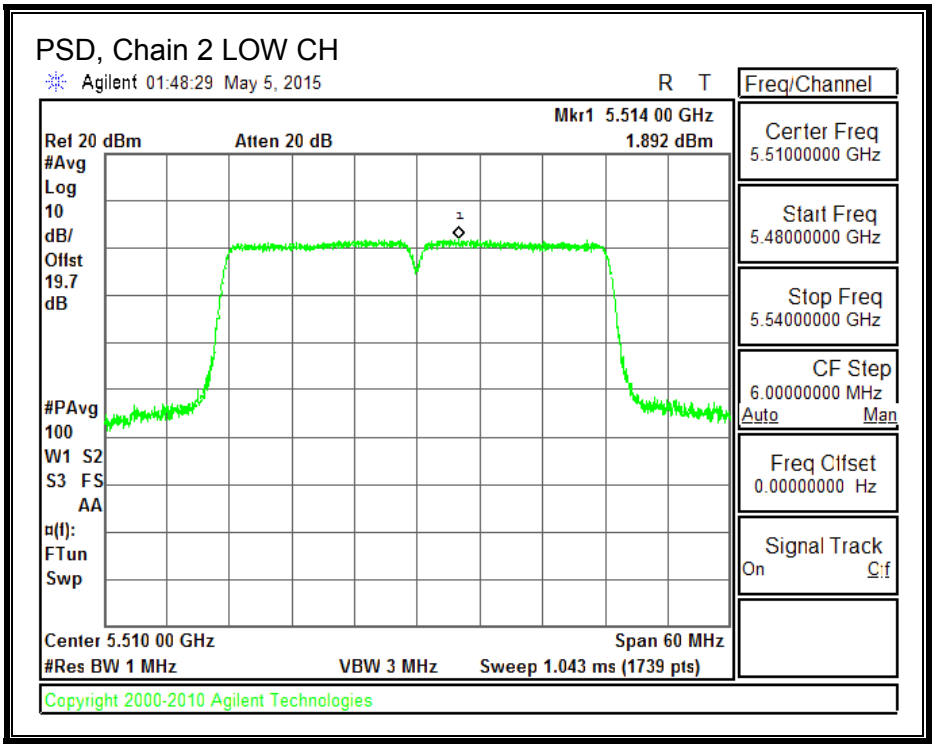
PSD, Chain 1

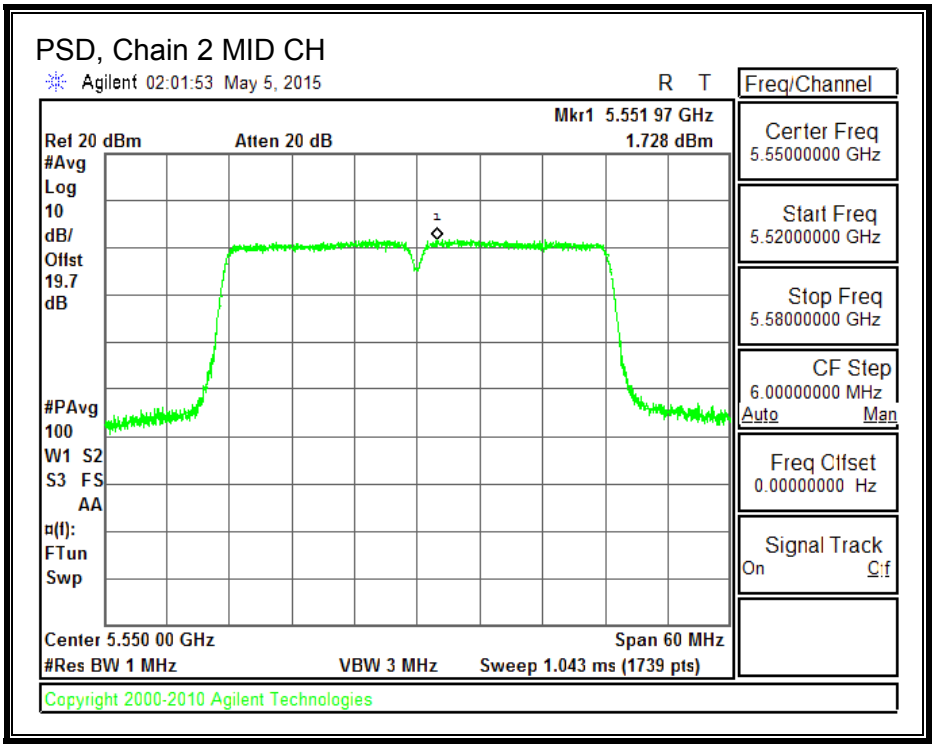


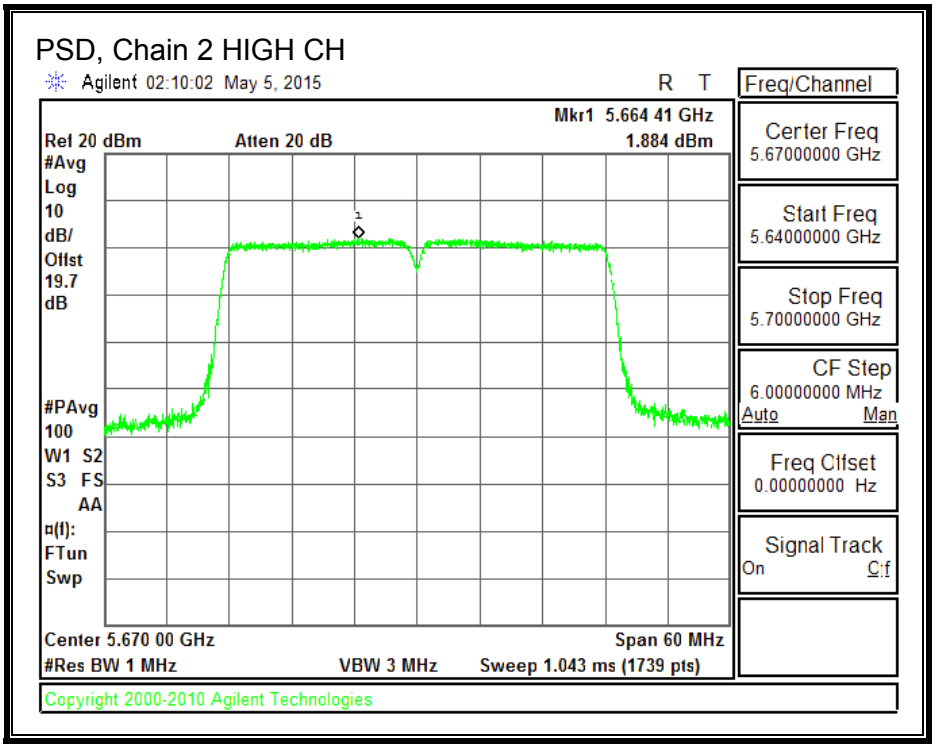




PSD, Chain 2







STRADDLE CHANNEL 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	47.95	5.01	9.17	24.00	7.83

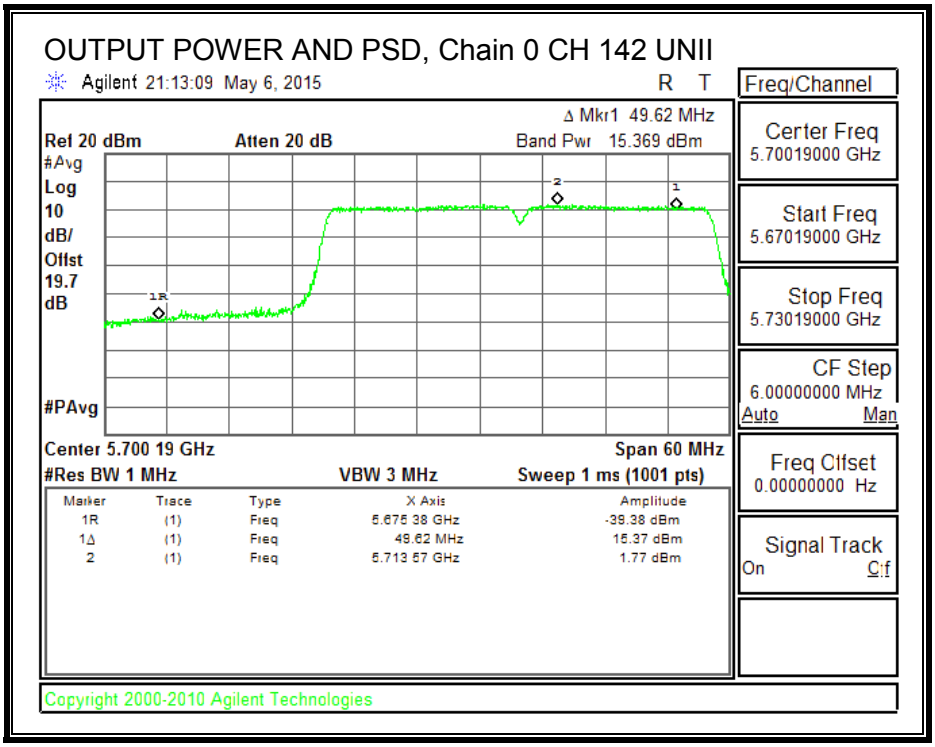
Duty Cycle CF (dB)	0.09	Included in Calculations of Corr'd Power & PSD

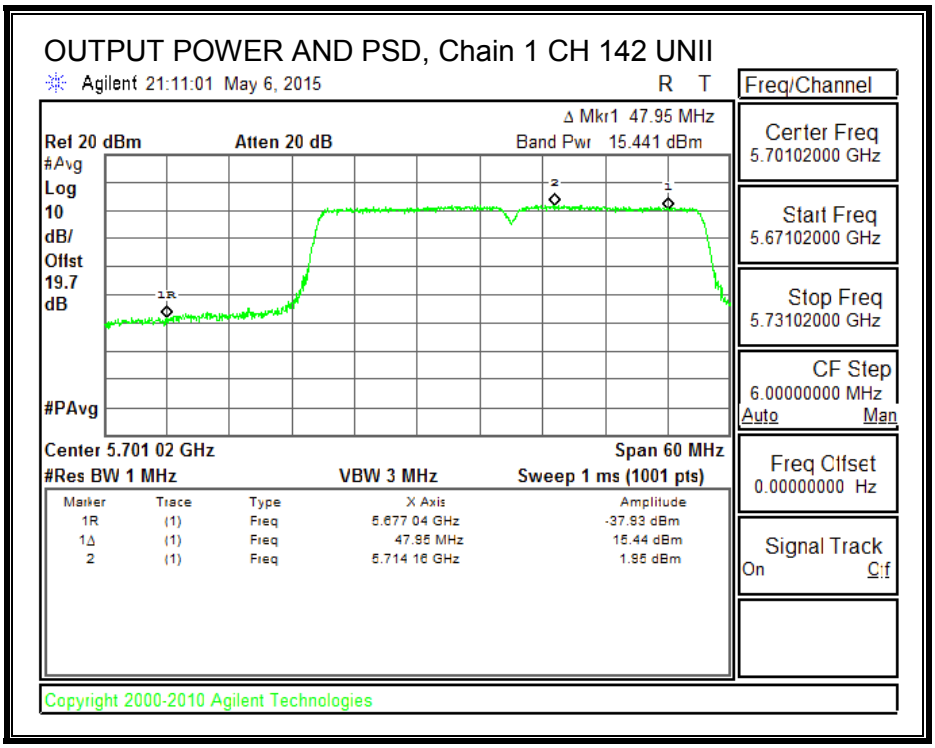
Output Power Results

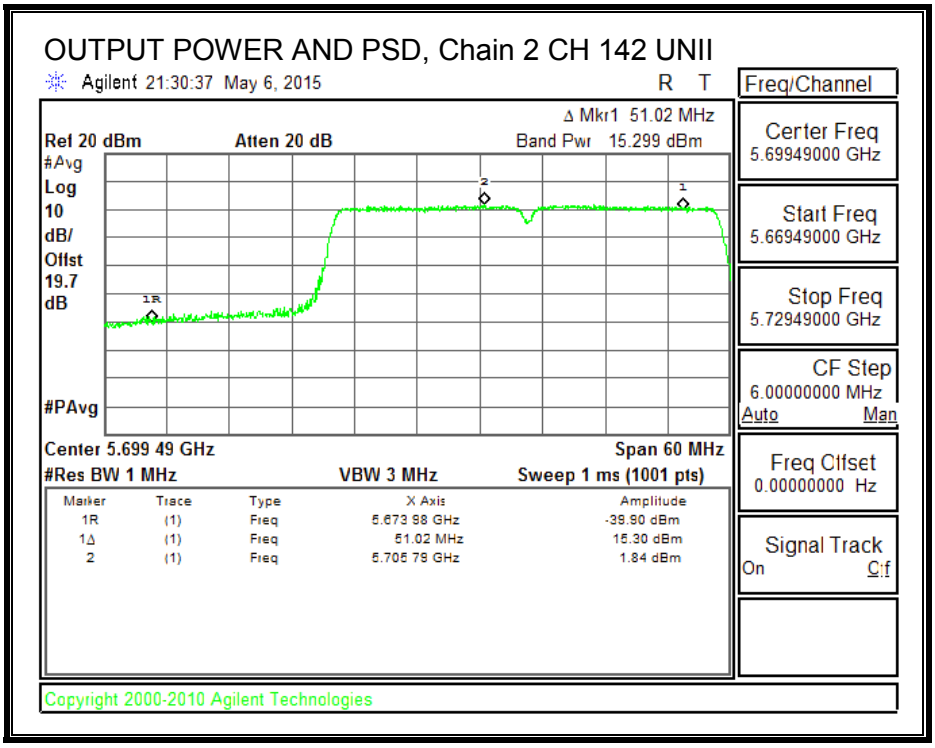
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Chain 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
142	5710	15.369	15.441	15.299	20.23	24.00	-3.77

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Chain 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
142	5710	1.77	1.95	1.84	6.72	7.83	-1.11







UNII-3 BAND

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
142	5710	4.47	9.15	30.00	26.85

Duty Cycle CF (dB)	0.09	Included in Calculations of Corr'd Power & PSD

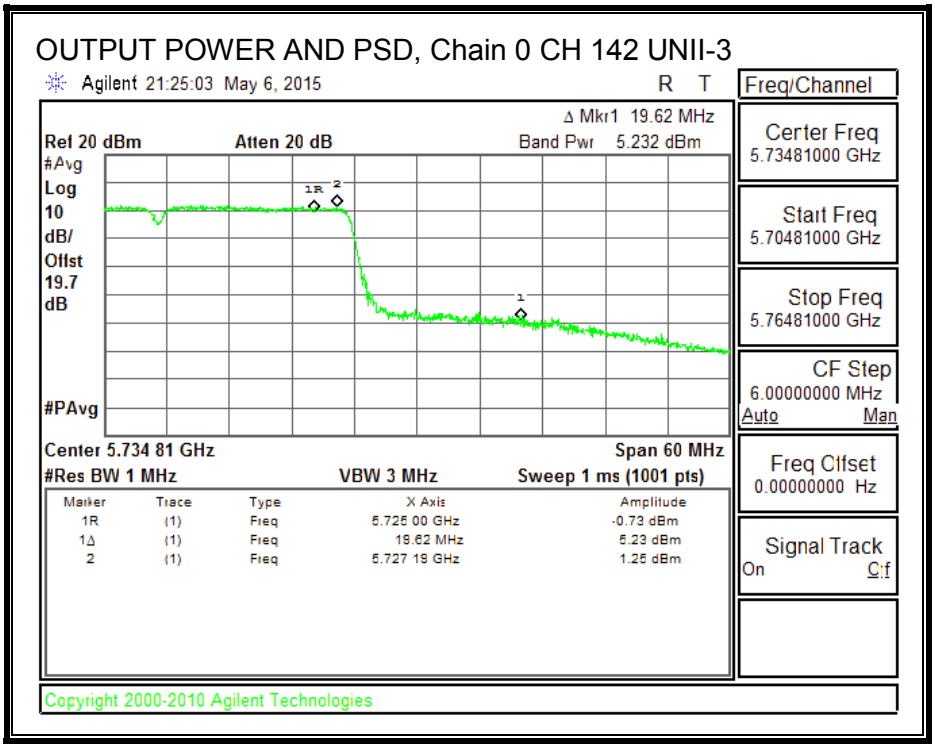
Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Chain 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
142	5710	5.232	5.206	5.110	10.04	30.00	-19.96

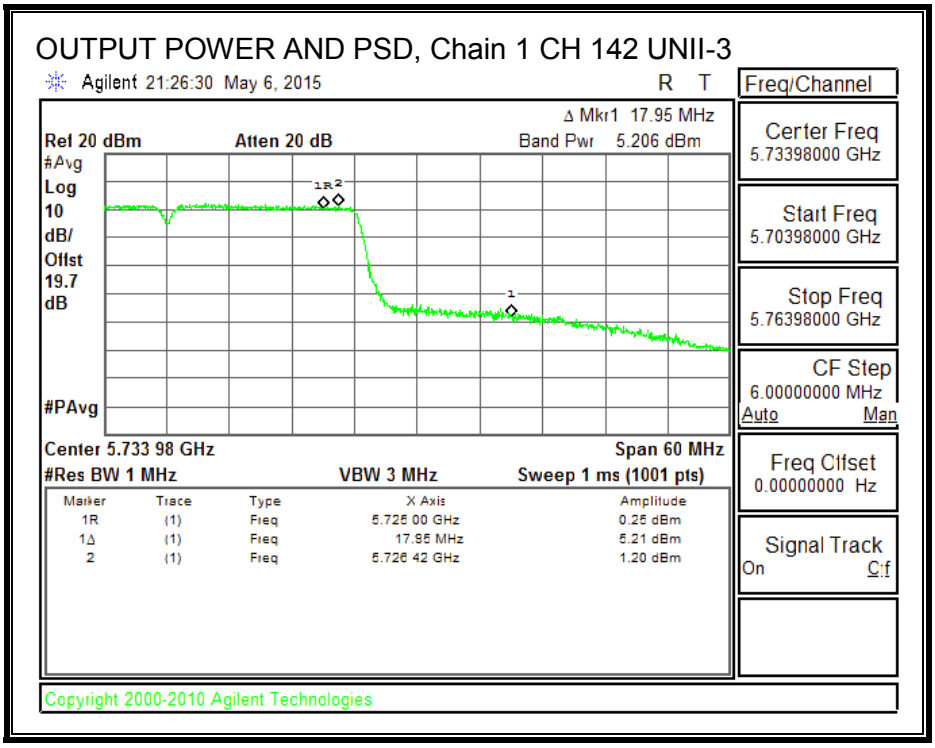
PSD Results

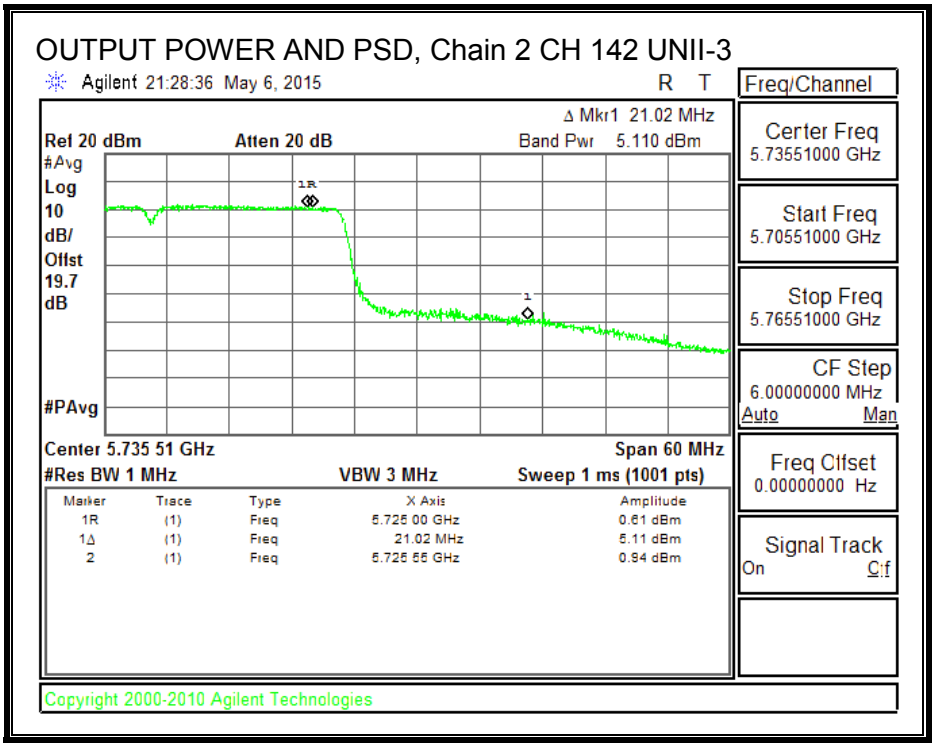
Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Chain 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
142	5710	1.25	1.20	0.94	5.99	26.85	-20.86

OUTPUT POWER AND PSD, Chain 0 CH 142 UNII-3



OUTPUT POWER AND PSD, Chain 1 CH 142 UNII-3





8.47.4. AVERAGE OUTPUT POWER (WHOLE FUNDAMENTAL)

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

RESULTS

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Chain 2 Meas Power (dBm)	Total Corr'd Power (dBm)
142	5710	15.70	15.70	15.60	20.44

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

8.48. 802.11n HT40 TxBF 3TX MODE IN THE 5.6 GHz BAND

8.48.1. 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.

DIRECTIONAL ANTENNA GAIN

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

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Chain 2 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
3.17	2.09	4.72	9.17

RESULTS

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)
Low	5510	50.54	9.17	9.17	20.83	7.83
Mid	5550	62.39	9.17	9.17	20.83	7.83
High	5670	50.84	9.17	9.17	20.83	7.83

Duty Cycle CF (dB)	0.09	Included in Calculations of Corr'd PSD

Output Power Results

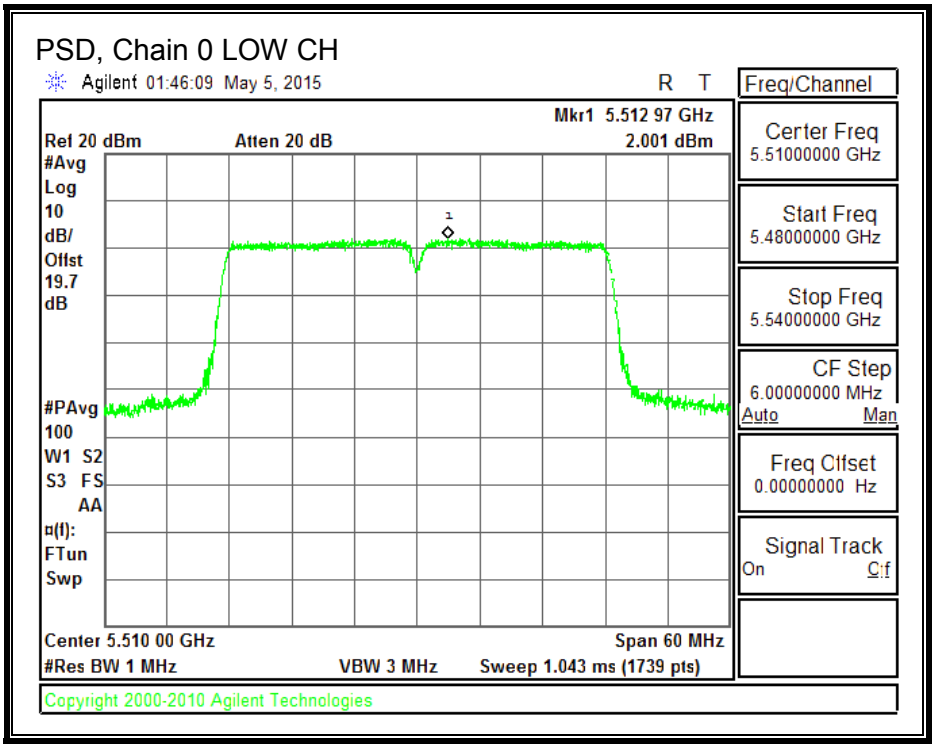
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Chain 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5510	9.90	9.40	9.70	14.44	20.83	-6.39
Mid	5550	15.00	14.80	14.80	19.64	20.83	-1.19
High	5670	14.20	14.00	14.00	18.84	20.83	-1.99

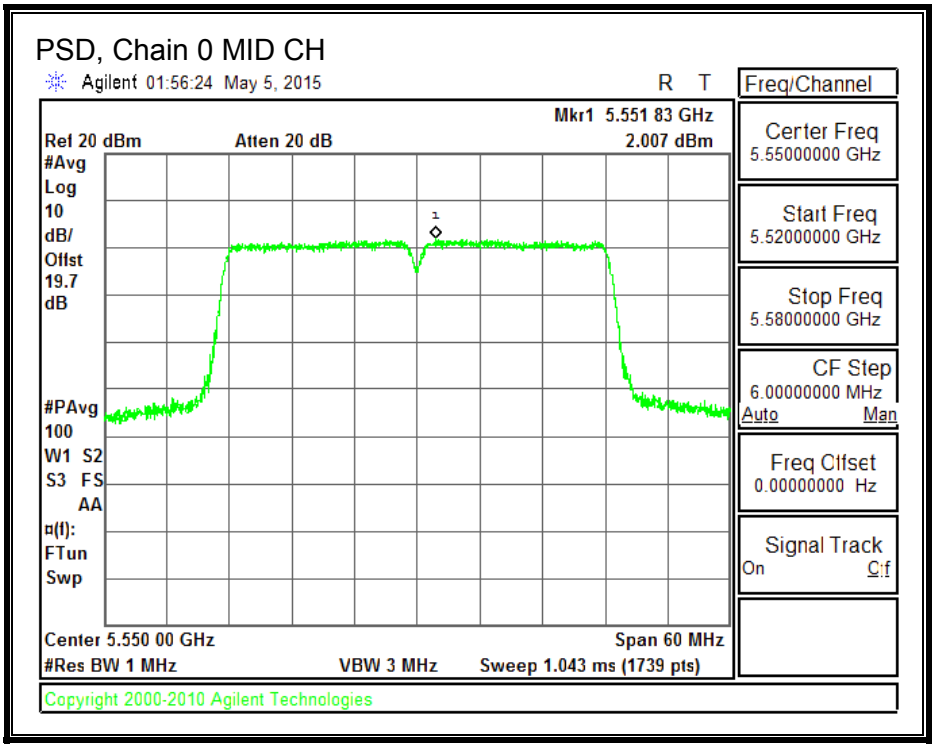
PSD Results

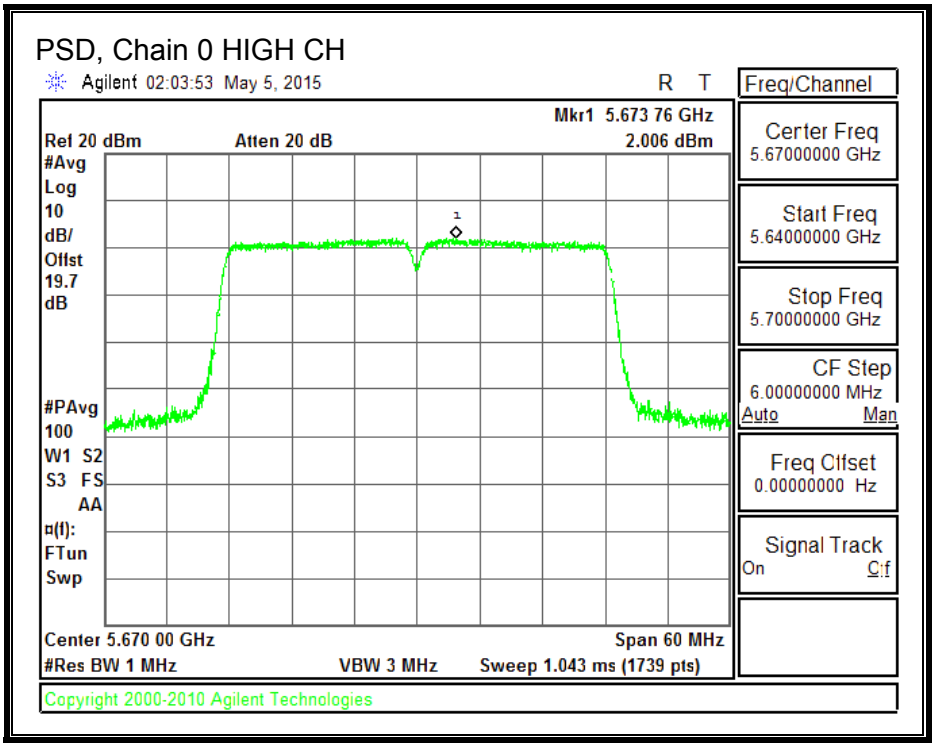
Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Chain 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5510	2.001	2.015	1.892	6.83	7.83	-1.00
Mid	5550	2.007	2.100	1.728	6.81	7.83	-1.02
High	5670	2.006	1.933	1.884	6.80	7.83	-1.03

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

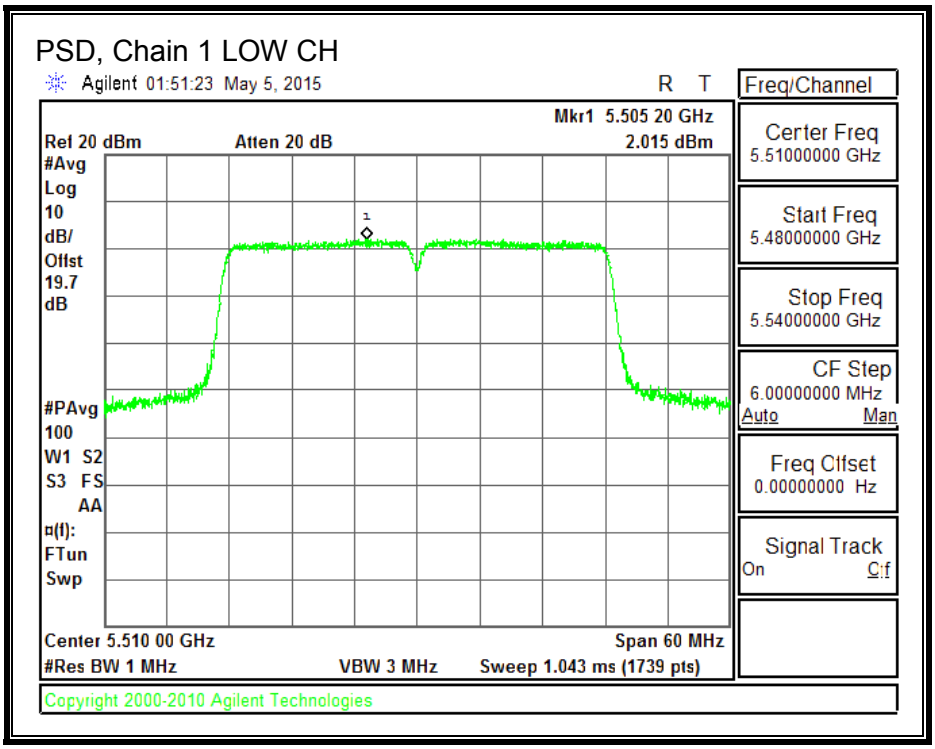
PSD, Chain 0

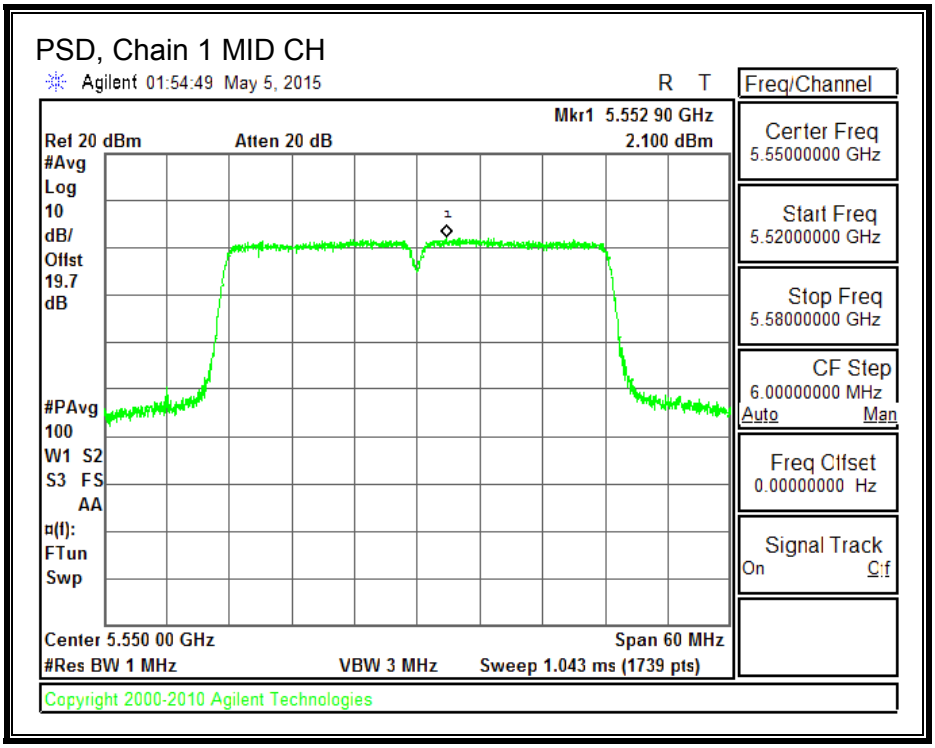


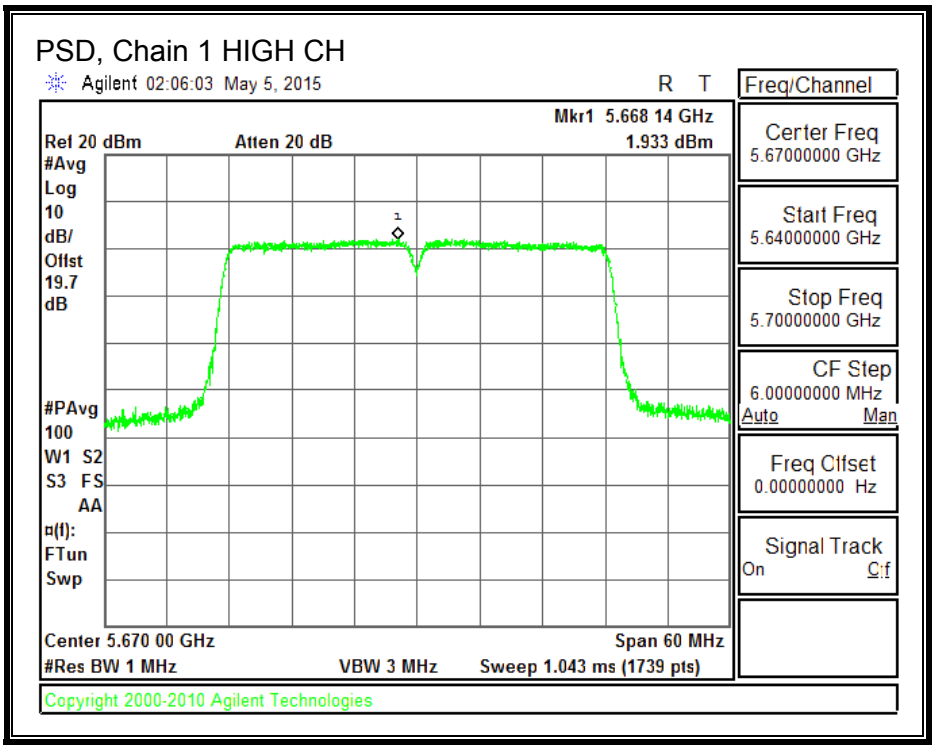




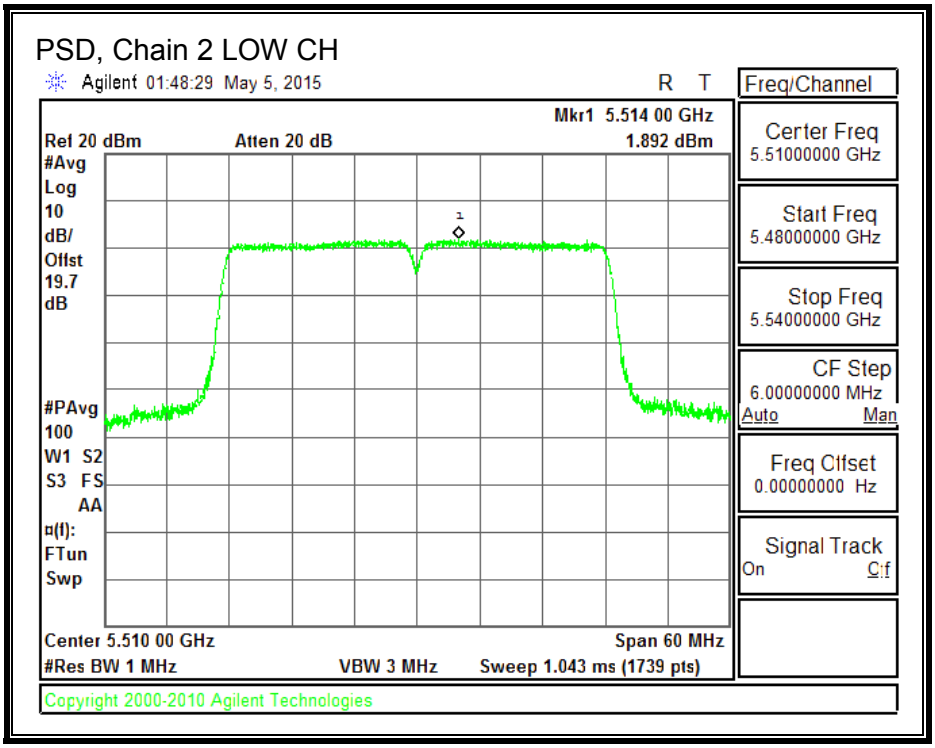
PSD, Chain 1

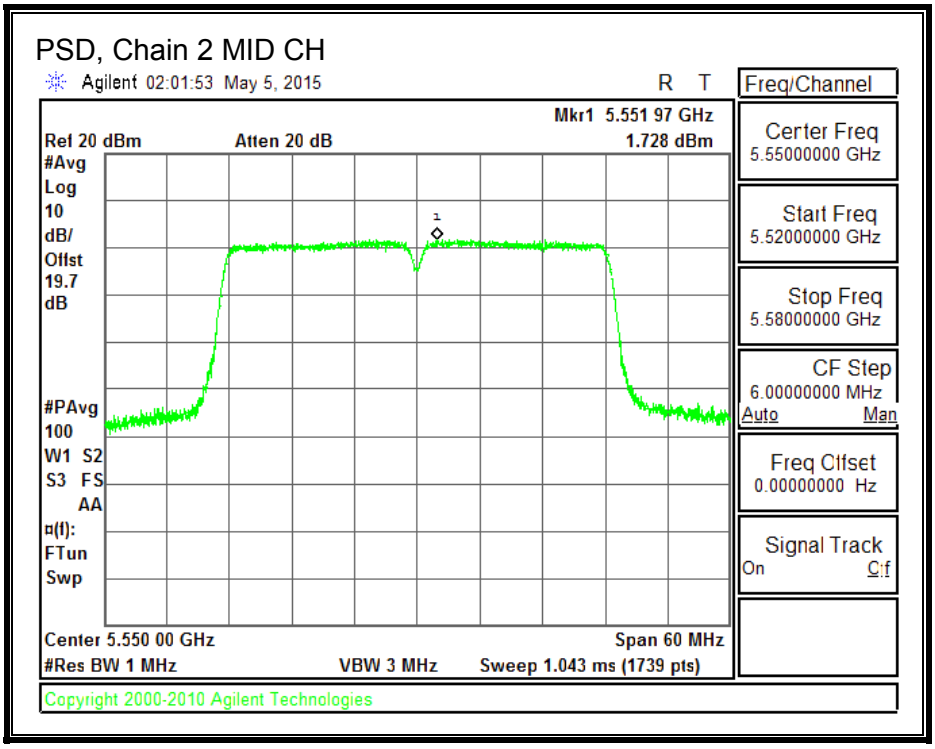


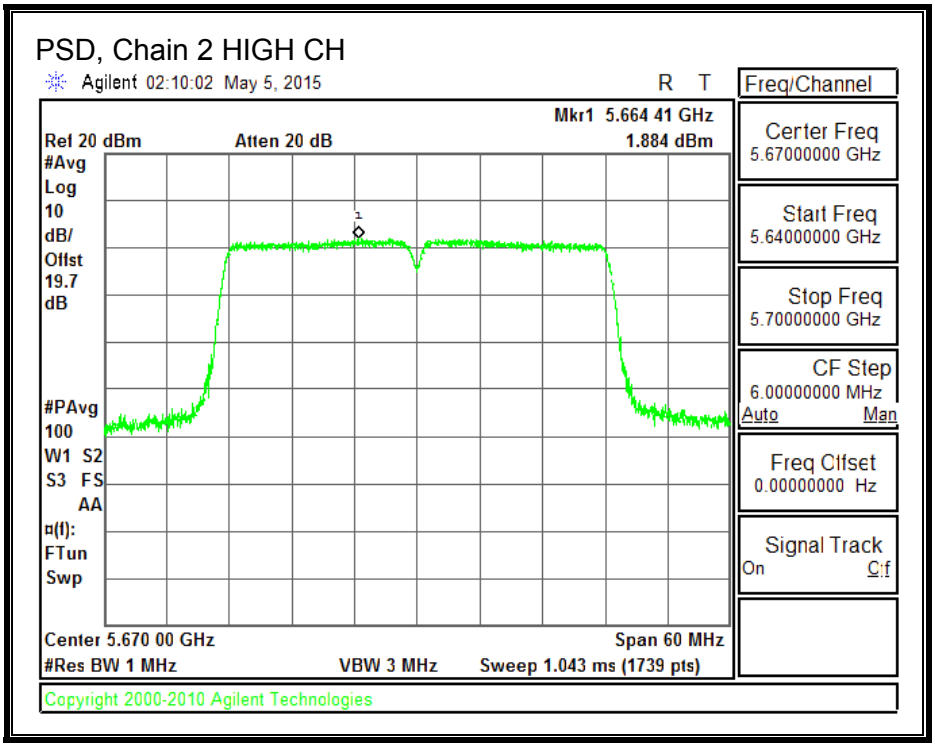




PSD, Chain 2







STRADDLE CHANNEL 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	47.95	9.17	9.17	20.83	7.83

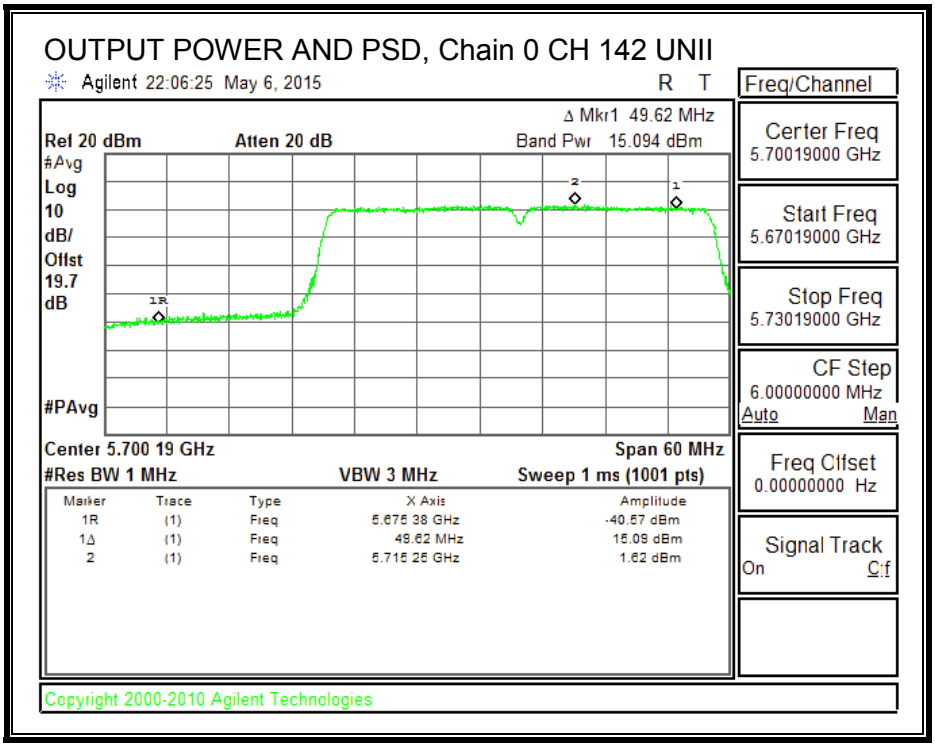
Duty Cycle CF (dB)	0.09	Included in Calculations of Corr'd Power & PSD

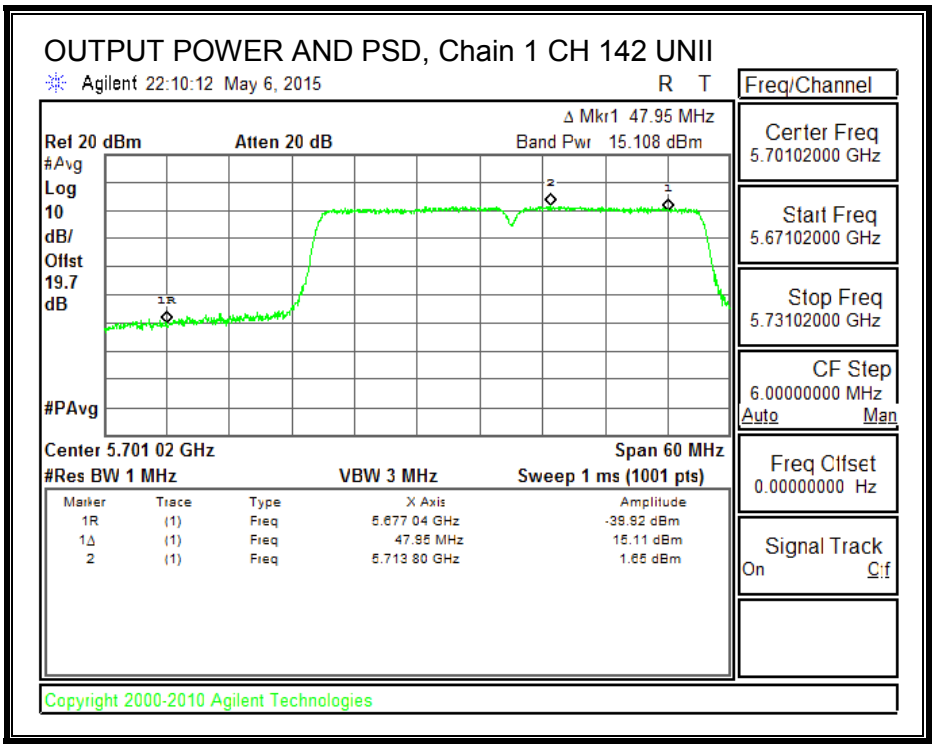
Output Power Results

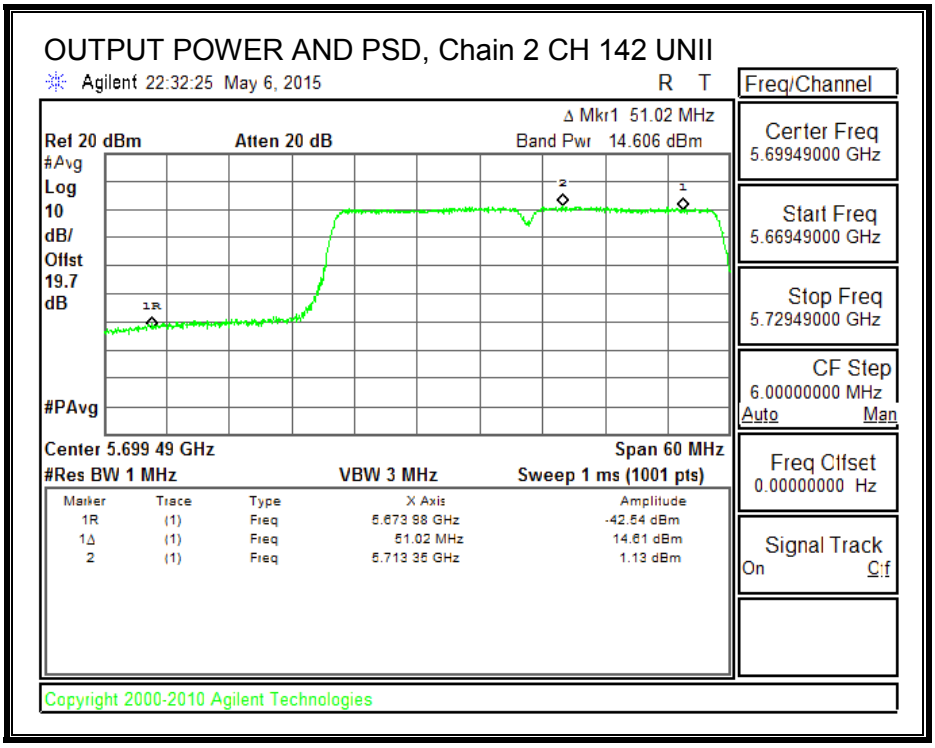
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Chain 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
142	5710	15.094	15.108	14.606	19.803	20.83	-1.03

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD	Chain 1 Meas PSD	Chain 2 Meas PSD	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
142	5710	1.62	1.65	1.13	6.33	7.83	-1.50







UNII-3 BAND

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
142	5710	9.15	9.15	26.85	26.85

Duty Cycle CF (dB)	0.09	Included in Calculations of Corr'd Power & PSD

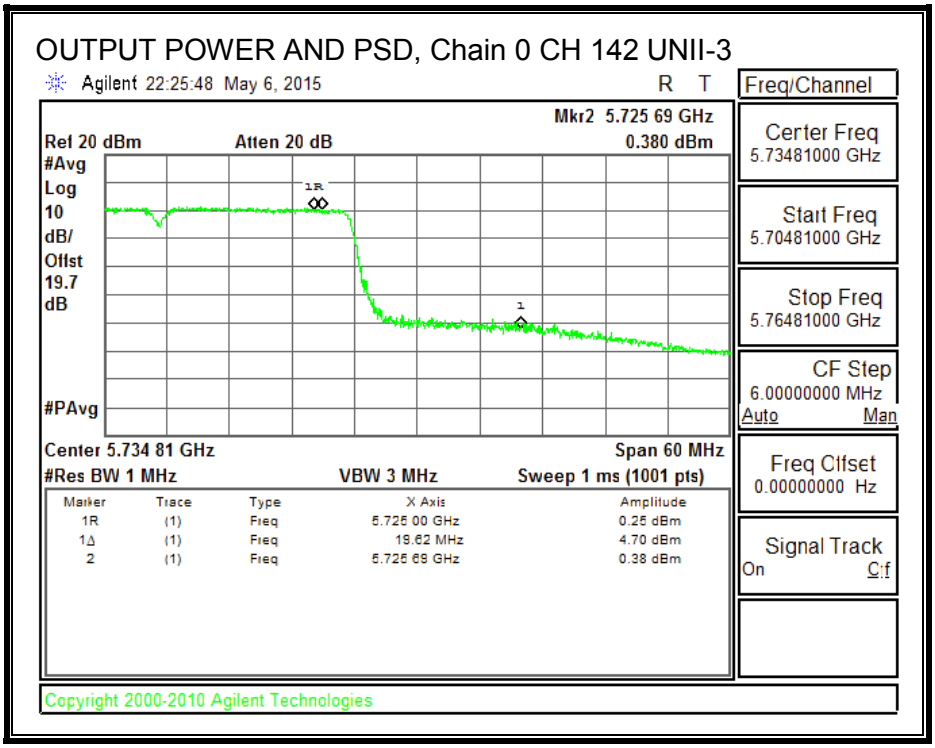
Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Chain 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
142	5710	4.700	4.819	4.713	9.606	26.85	-17.24

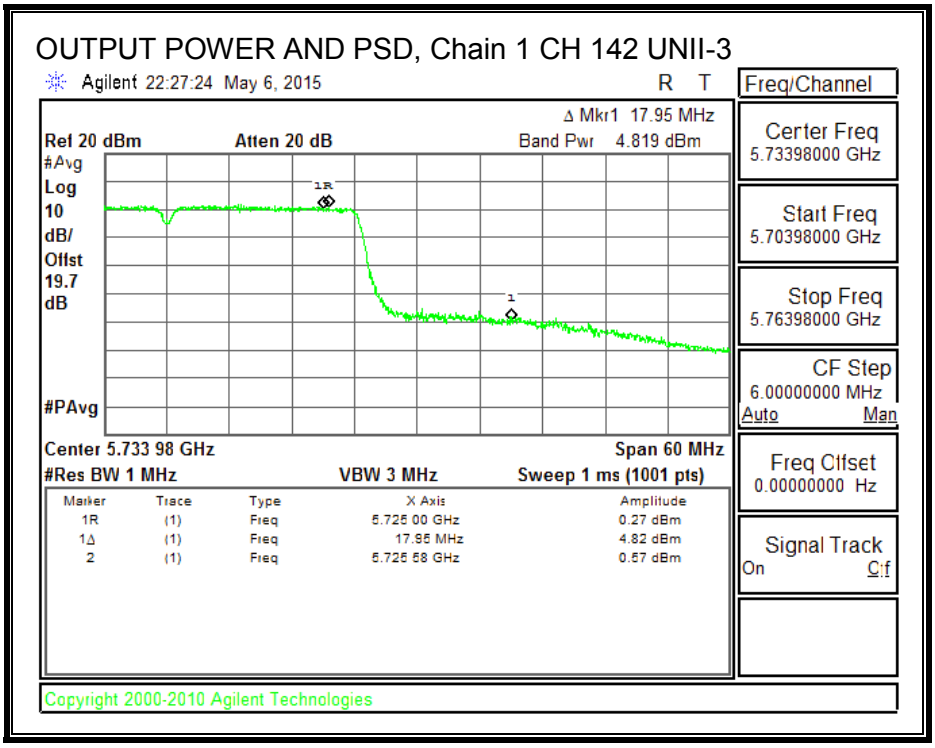
PSD Results

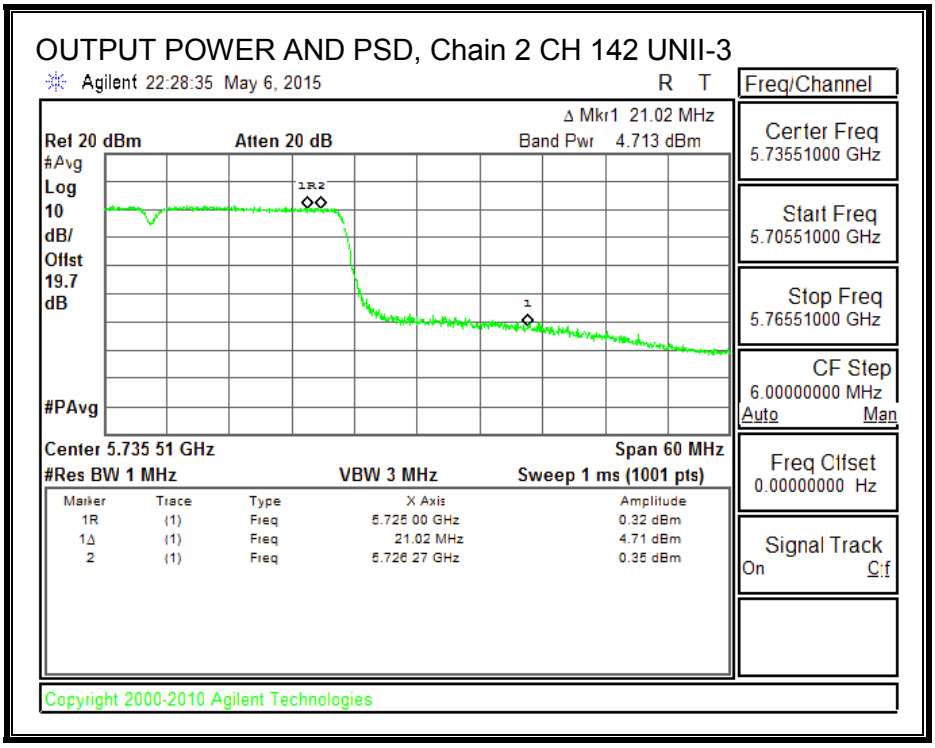
Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Chain 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
142	5710	0.38	0.57	0.35	5.30	26.85	-21.55

OUTPUT POWER AND PSD, Chain 0 CH 142 UNII-3



OUTPUT POWER AND PSD, Chain 1 CH 142 UNII-3





8.48.2. AVERAGE OUTPUT POWER (WHOLE FUNDAMENTAL)

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

RESULTS

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Chain 2 Meas Power (dBm)	Total Corr'd Power (dBm)
142	5710	15.30	15.30	14.90	19.94

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

8.49. 802.11ac VHT80 1TX MODE IN THE 5.6 GHz BAND

8.49.1. OUTPUT POWER

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.

DIRECTIONAL ANTENNA GAIN

This is SISO mode, AG is the highest (worst-case) = 5.72 dBi

RESULTS

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Low	5530	116.22	5.72	24.00	11.00
Mid	5610	109.35	5.72	24.00	11.00

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5530	9.20	9.20	24.00	-14.80
Mid	5610	17.50	17.50	24.00	-6.50

Note: for Chain 0, 26dB data & plots, see section 11ac HT80 CDD 3TX MODE IN THE 5.6 GHz BAND.

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

8.50. 802.11n VHT80 CDD 2TX MODE IN THE 5.6 GHz BAND

8.50.1. 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.

DIRECTIONAL ANTENNA GAIN

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

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
3.17	4.72	5.01

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

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
3.17	4.72	7.99

RESULTS

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)
Low	5530	145.91	5.01	7.99	24.00	9.01
Mid	5610	109.35	5.01	7.99	24.00	9.01

Duty Cycle CF (dB)	0.18	Included in Calculations of Corr'd PSD

Output Power Results

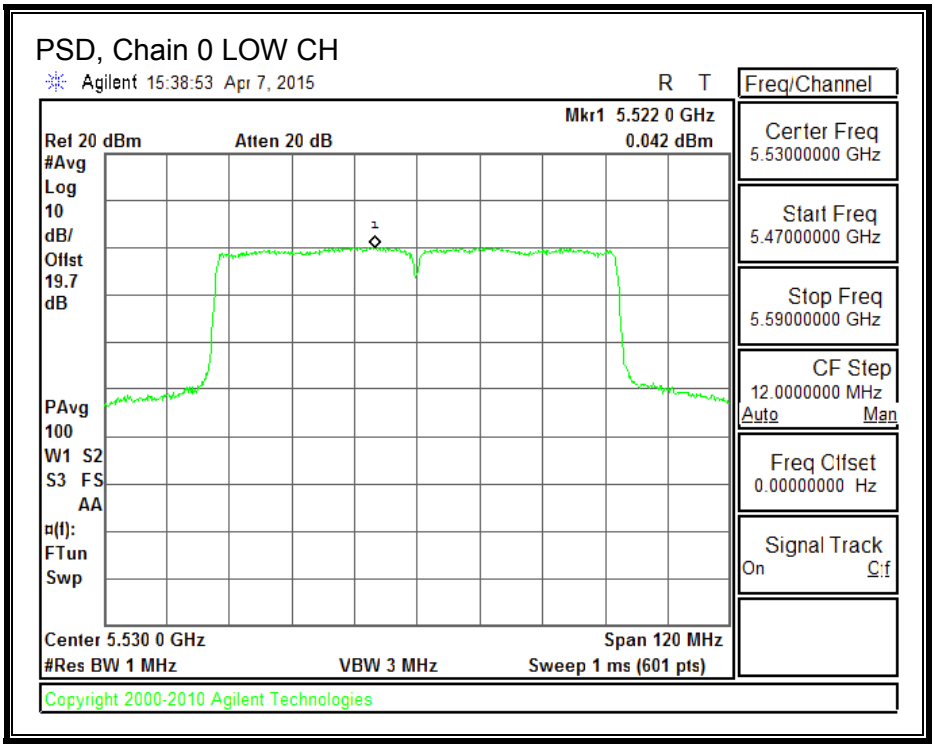
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5530	9.70	9.20	12.47	24.00	-11.53
Mid	5610	16.10	16.10	19.11	24.00	-4.89

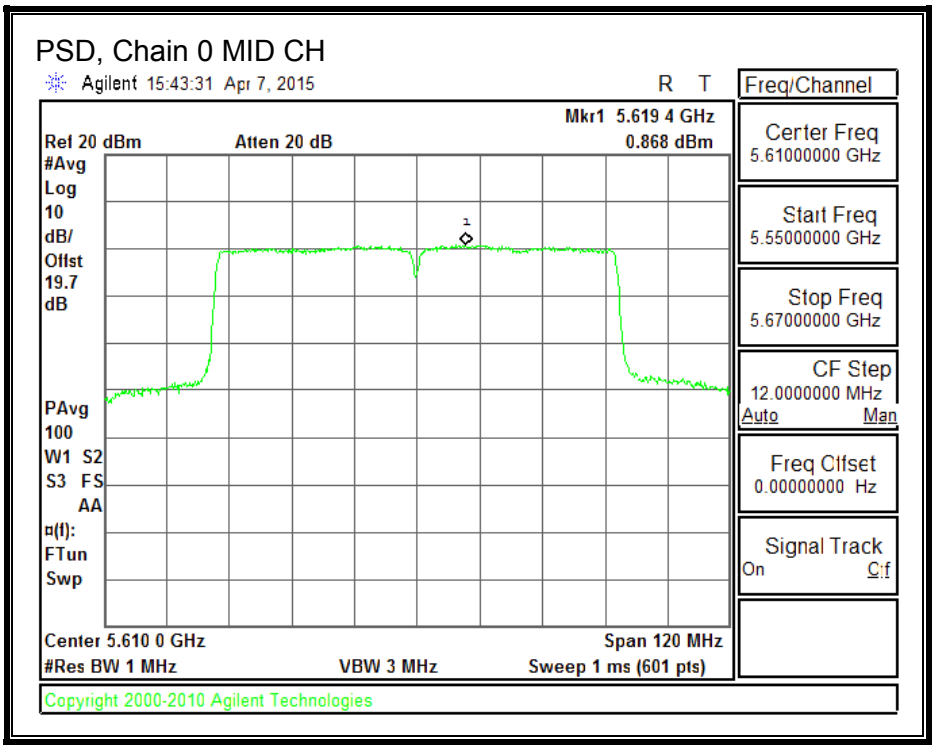
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5530	0.042	0.091	3.26	9.01	-5.75
Mid	5610	0.868	0.640	3.95	9.01	-5.06

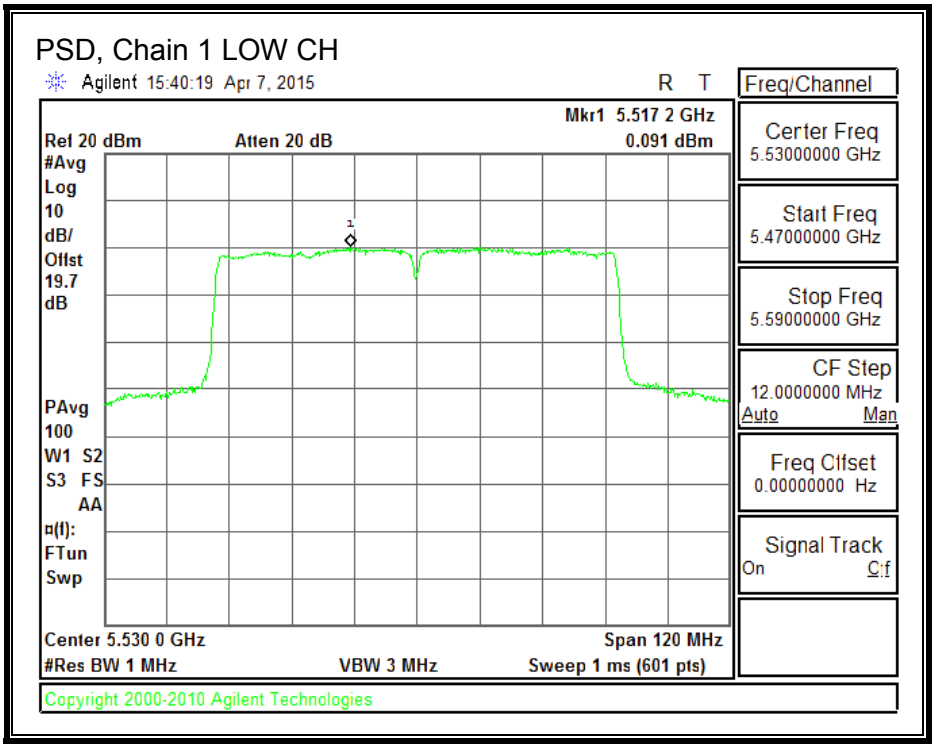
Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

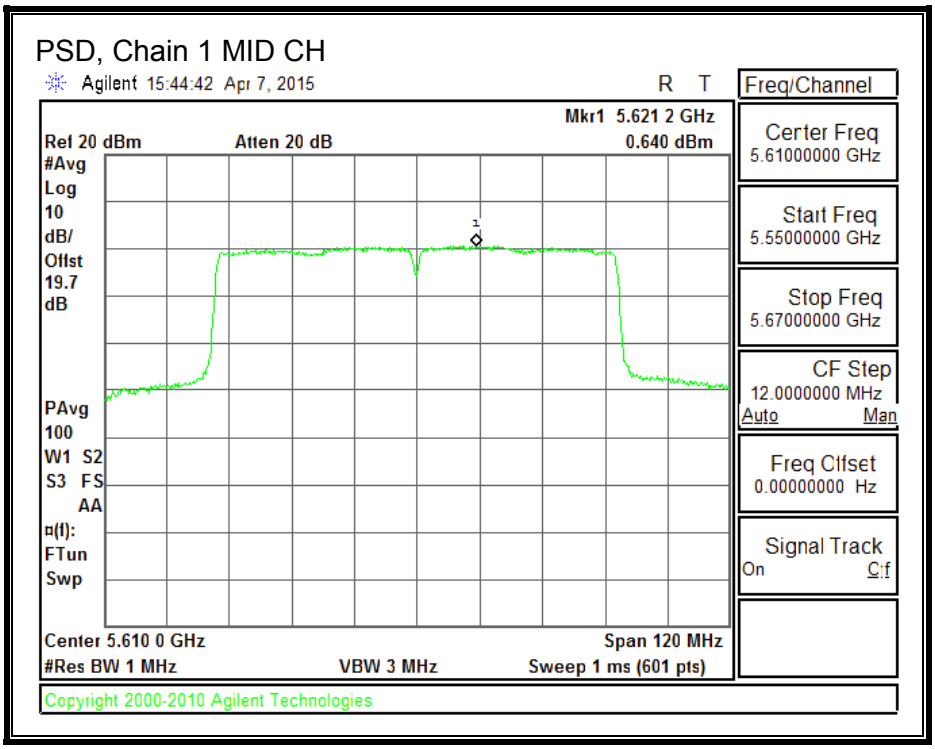
PSD, Chain 0





PSD, Chain 1





STRADDLE CHANNEL 138 RESULTS

UNII-2C BAND

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
138	5690	86.20	4.01	7.99	24.00	9.01

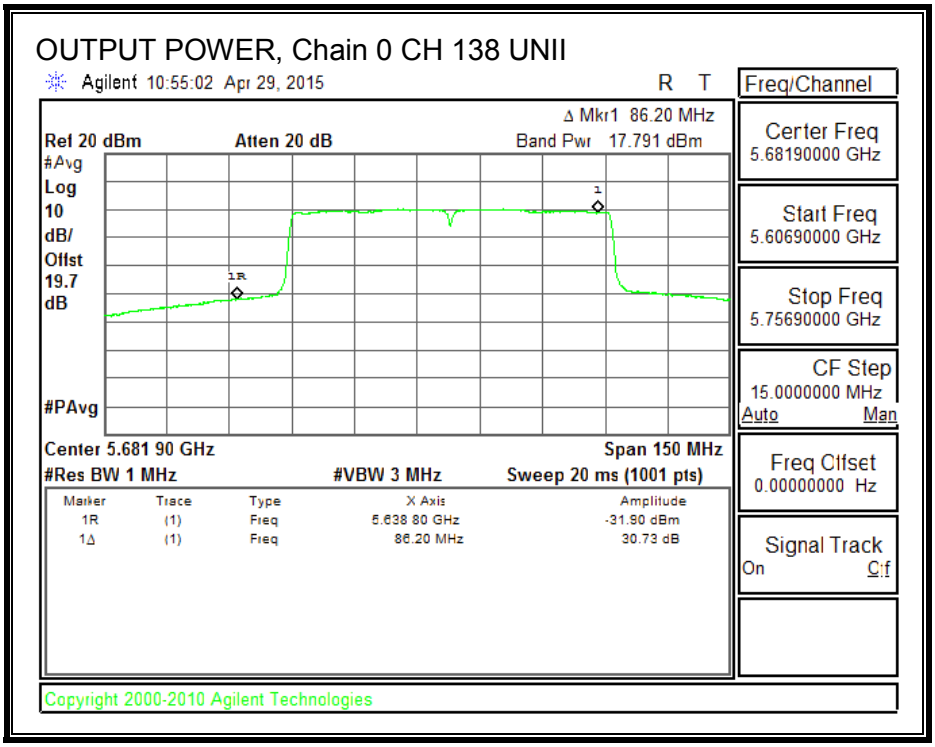
Duty Cycle CF (dB)	0.18	Included in Calculations of Corr'd Power & PSD

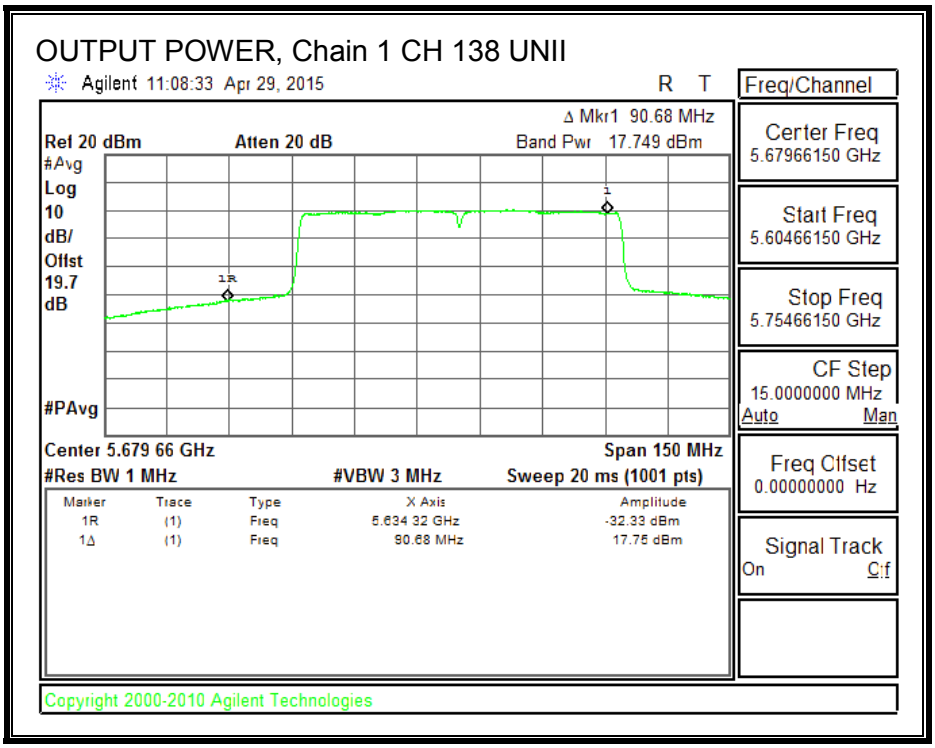
Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	17.791	17.749	20.96	24.00	-3.04

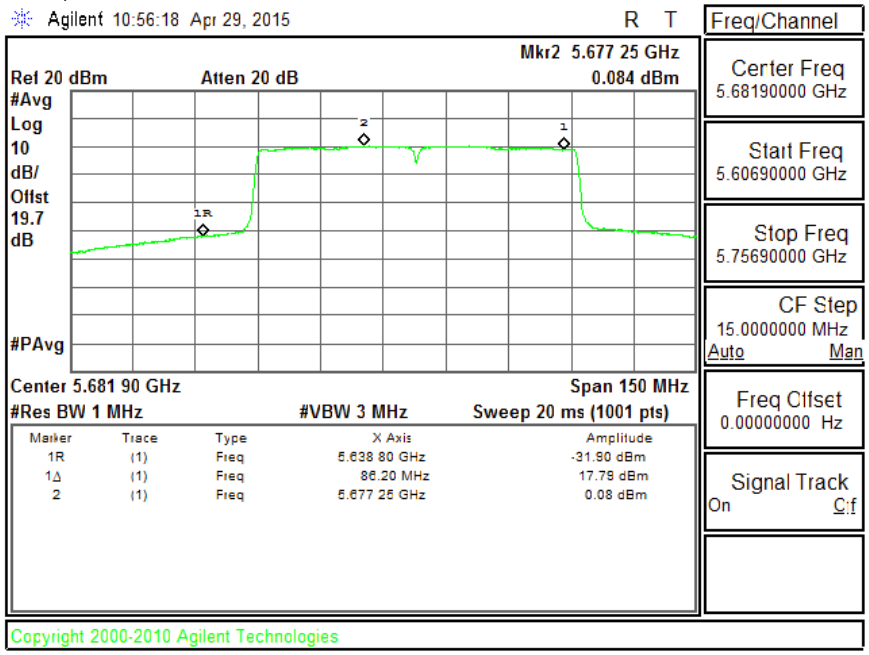
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	0.084	-0.353	3.06	9.01	-5.95

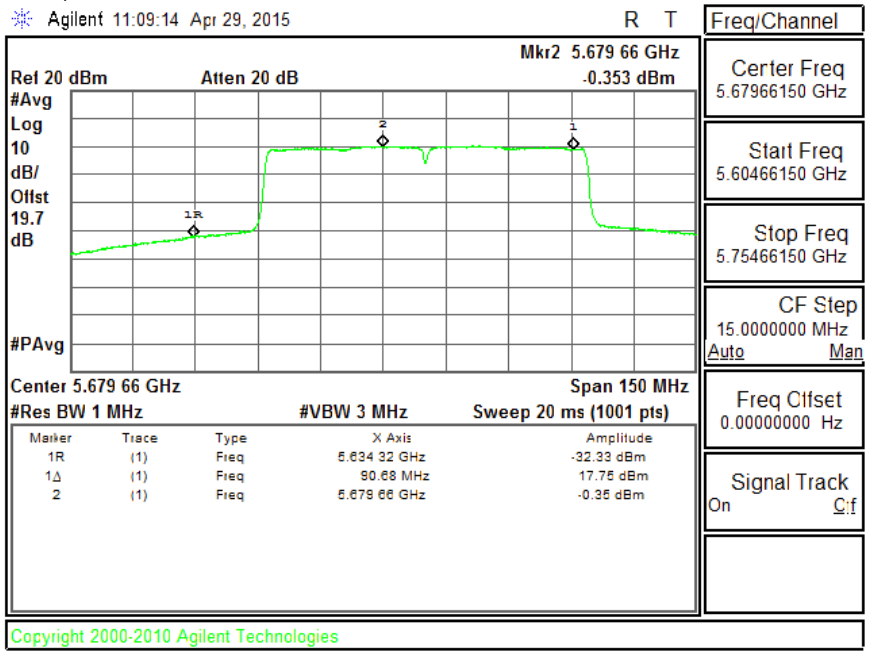




PSD, Chain 0 CH 138 UNII



PSD, Chain 1 CH 138 UNII



UNII-3 BAND

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
138	5690	4.06	8.03	30.00	27.97

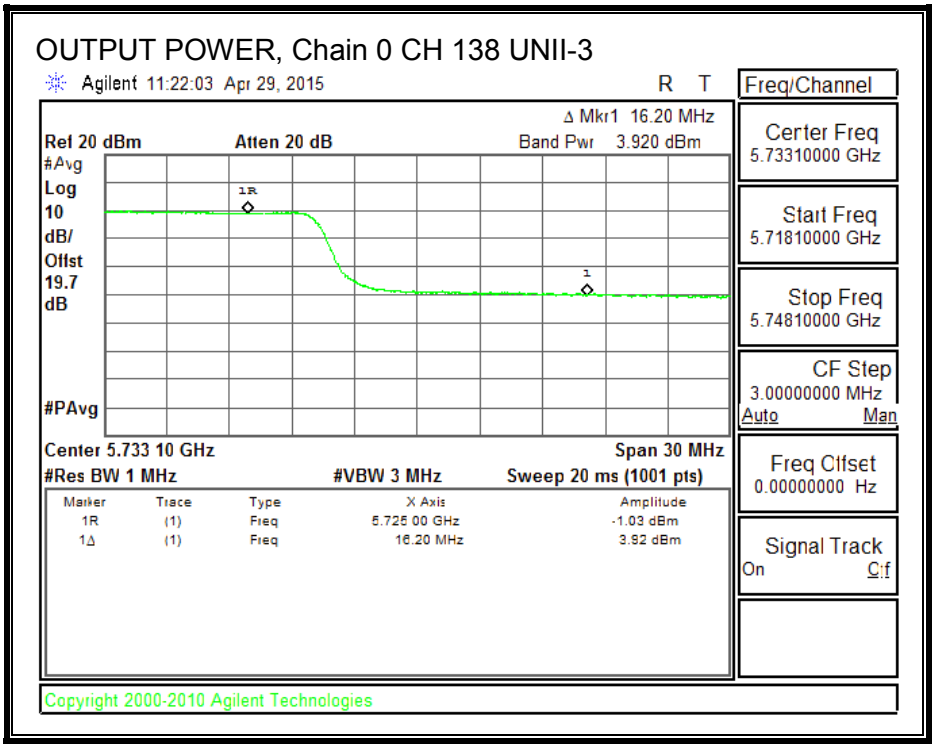
Duty Cycle CF (dB)	0.18	Included in Calculations of Corr'd Power & PSD

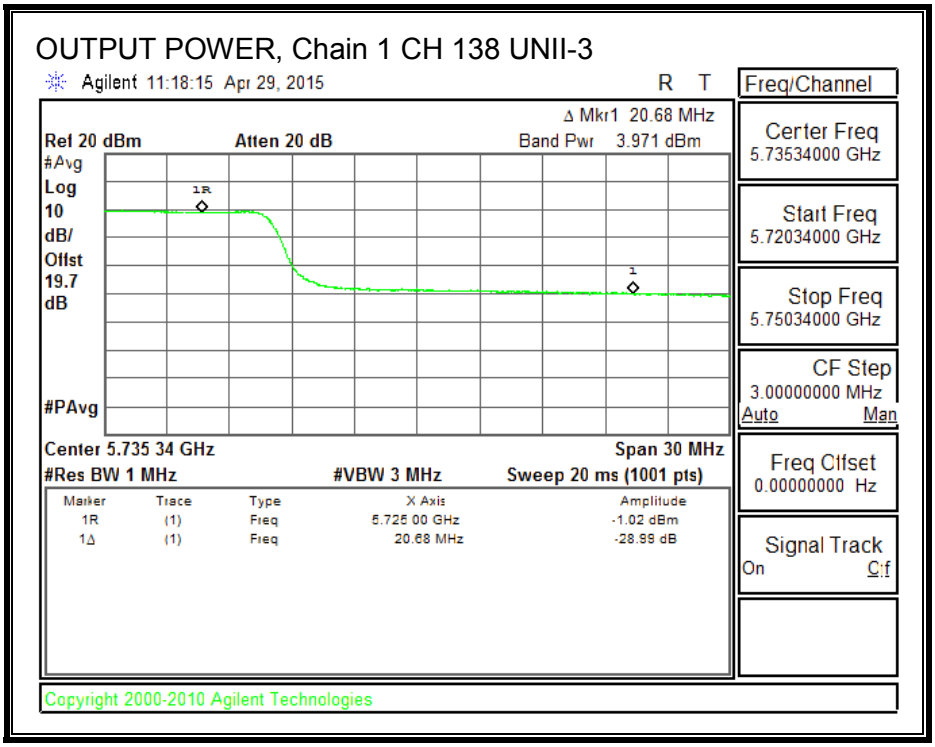
Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	3.920	3.971	7.14	30.00	-22.86

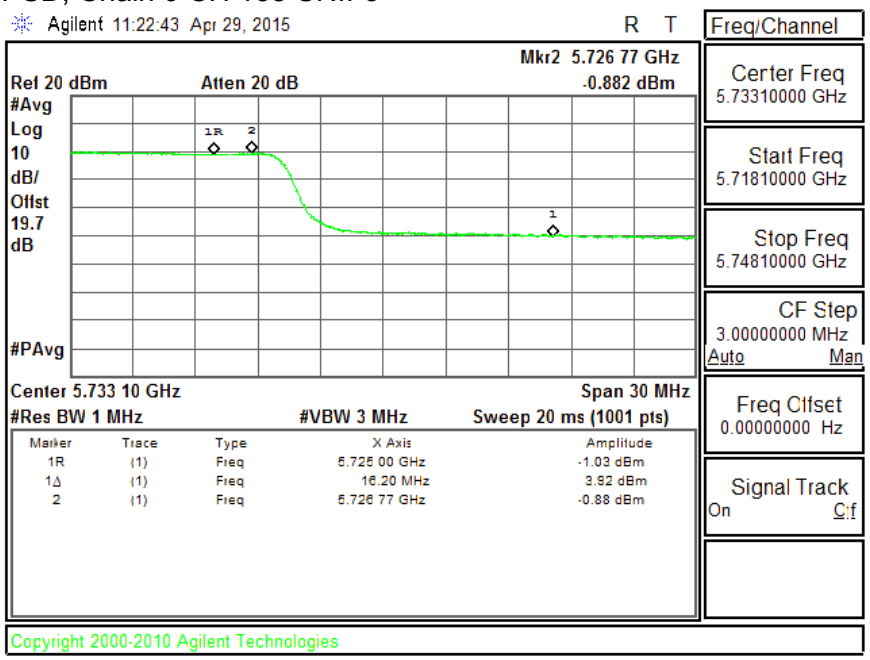
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	-0.882	-0.822	2.34	27.97	-25.63

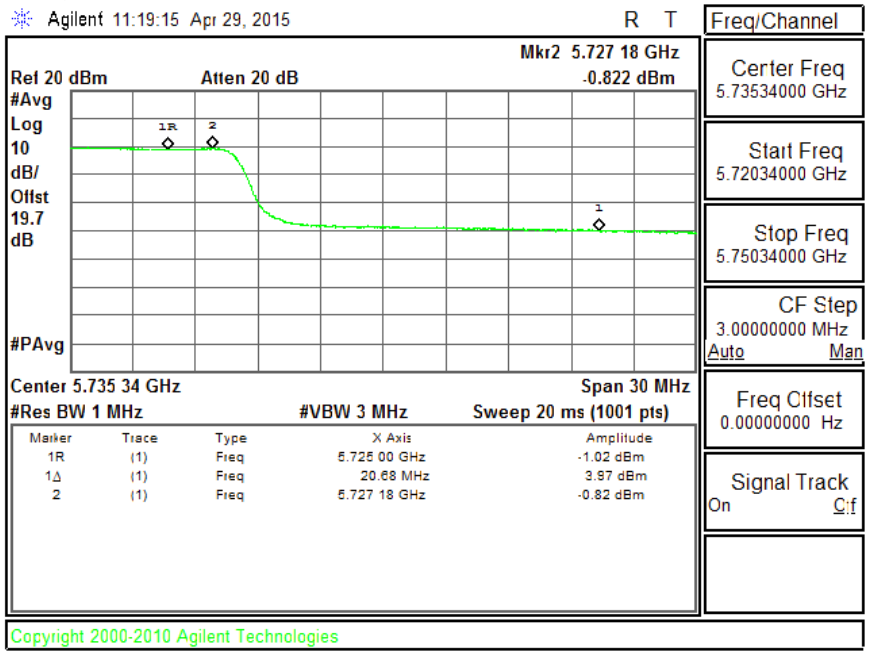




PSD, Chain 0 CH 138 UNII-3



PSD, Chain 1 CH 138 UNII-3



8.50.2. AVERAGE OUTPUT POWER (WHOLE FUNDAMENTAL)

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

RESULTS

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)
138	5690	18.55	17.60	21.11

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary

8.51. 802.11n VHT80 TxBF 2TX MODE IN THE 5.6 GHz BAND

8.51.1. 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.

DIRECTIONAL ANTENNA GAIN

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

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
3.17	4.72	7.99

RESULTS

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)
Low	5530	116.22	7.99	7.99	22.01	9.01
Mid	5610	109.35	7.99	7.99	22.01	9.01

Duty Cycle CF (dB)	0.18	Included in Calculations of Corr'd PSD

Output Power Results

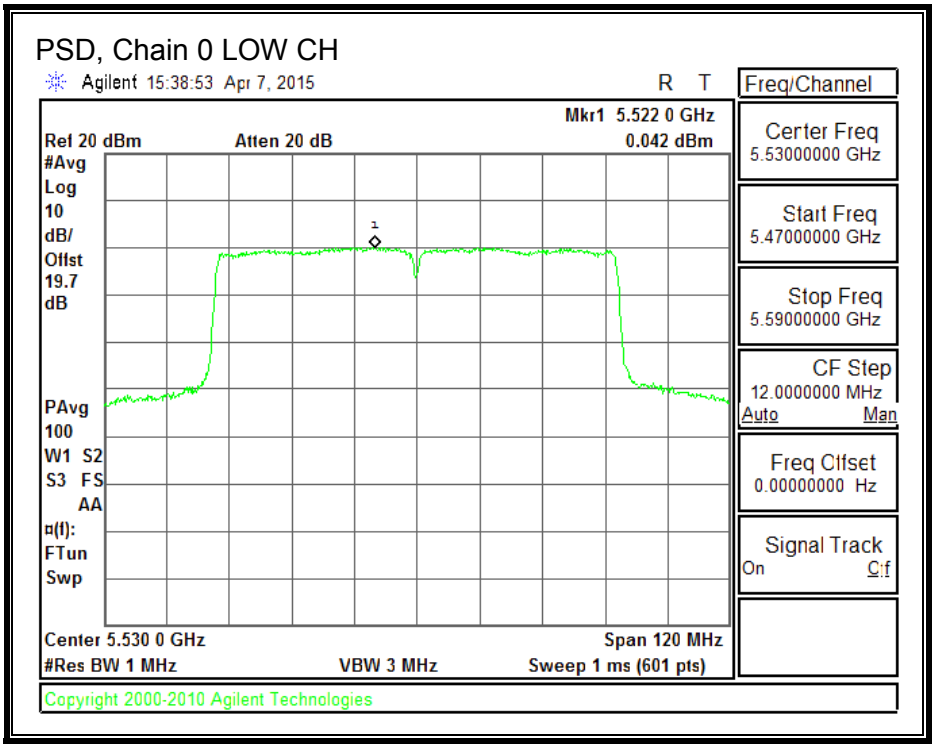
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5530	8.30	7.70	11.02	22.01	-10.99
Mid	5610	14.80	14.20	17.52	22.01	-4.49

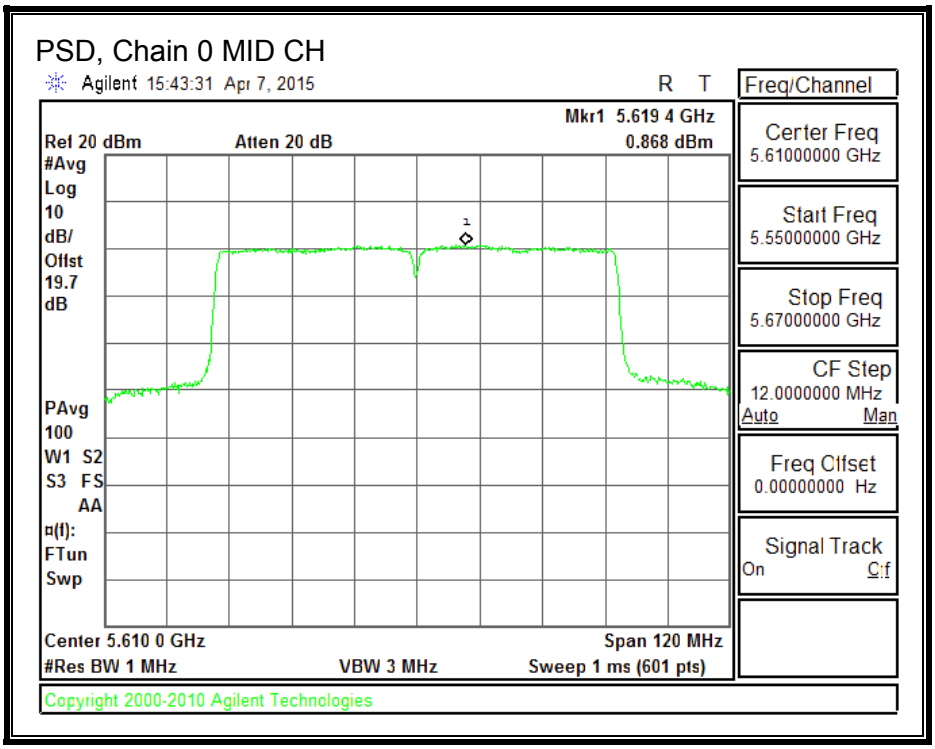
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5530	0.04	0.09	3.26	9.01	-5.75
Mid	5610	0.87	0.64	3.95	9.01	-5.06

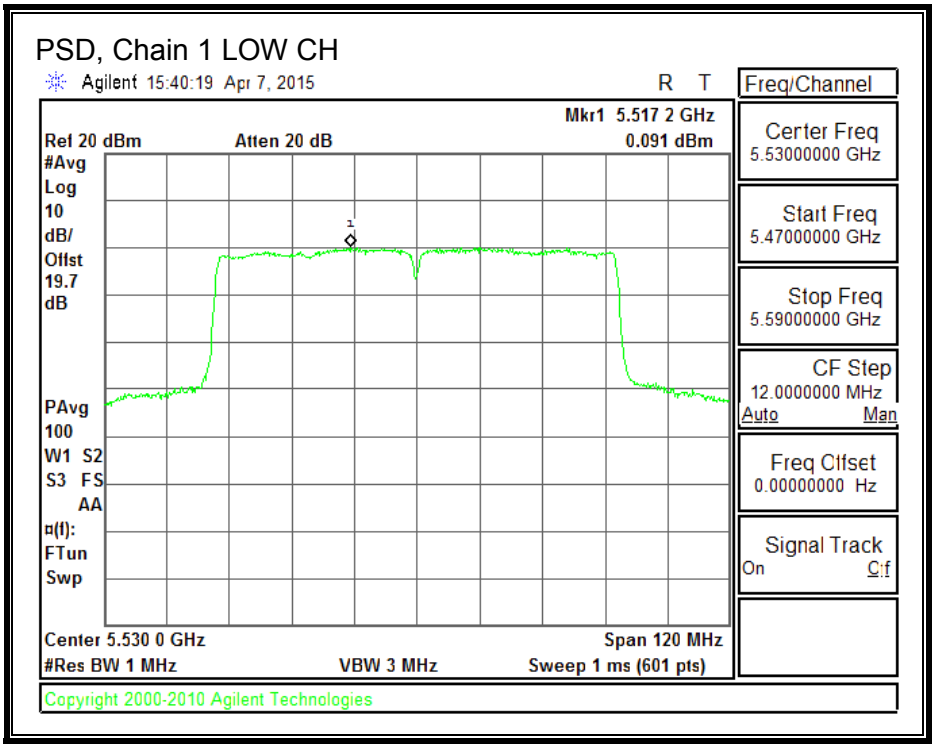
Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

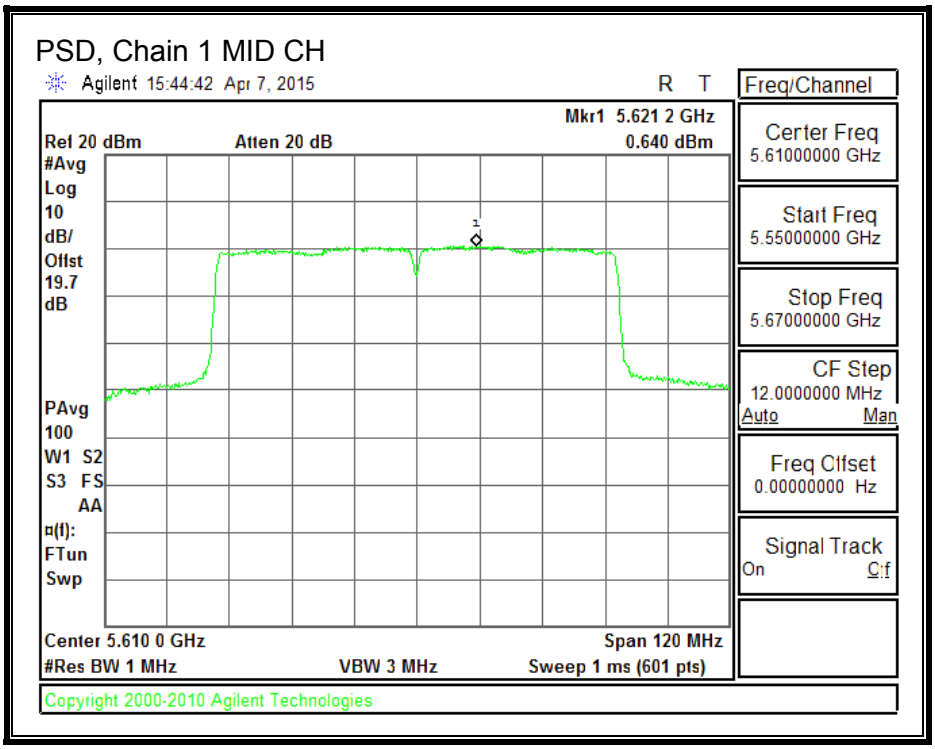
PSD, Chain 0





PSD, Chain 1





STRADDLE CHANNEL 138 RESULTS

UNII-2C BAND

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
138	5690	86.20	7.99	7.99	22.01	9.01

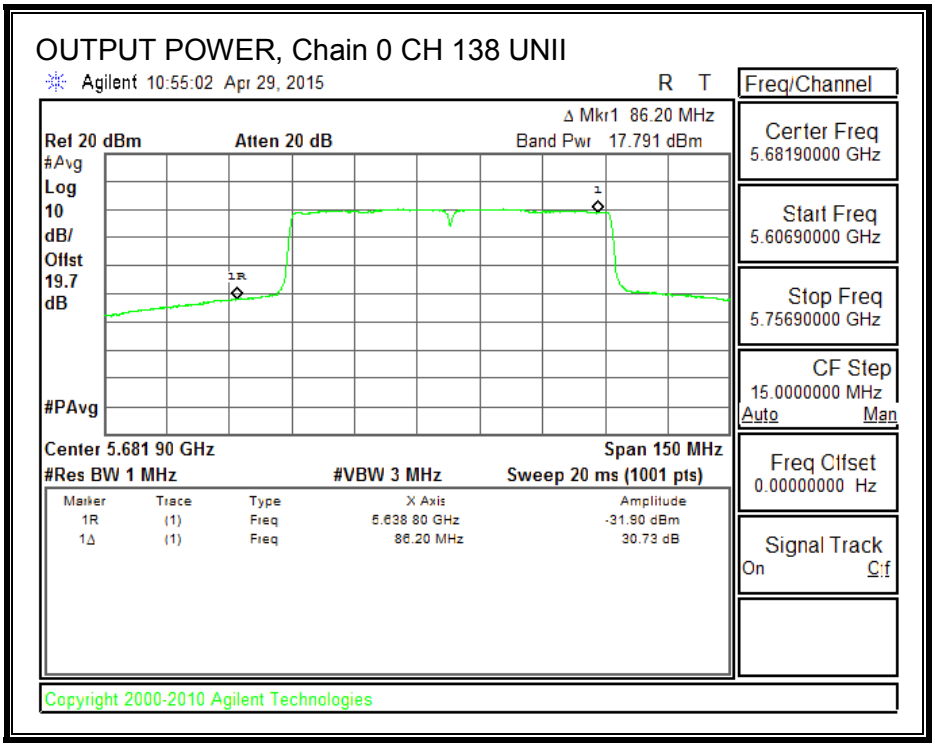
Duty Cycle CF (dB)	0.18	Included in Calculations of Corr'd Power & PSD

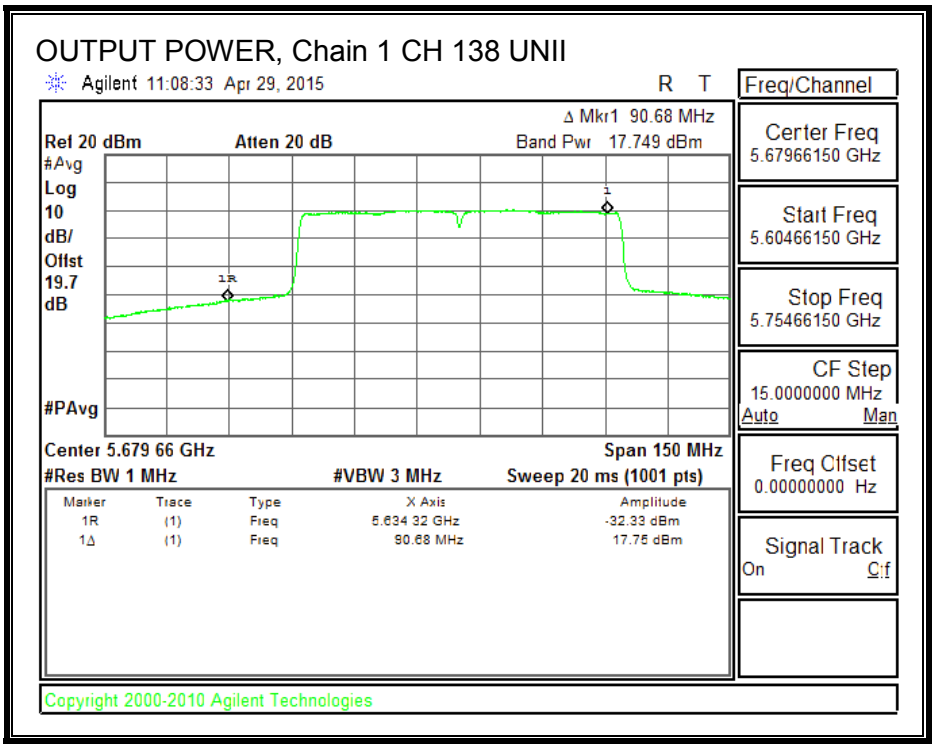
Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	17.791	17.749	20.96	22.01	-1.05

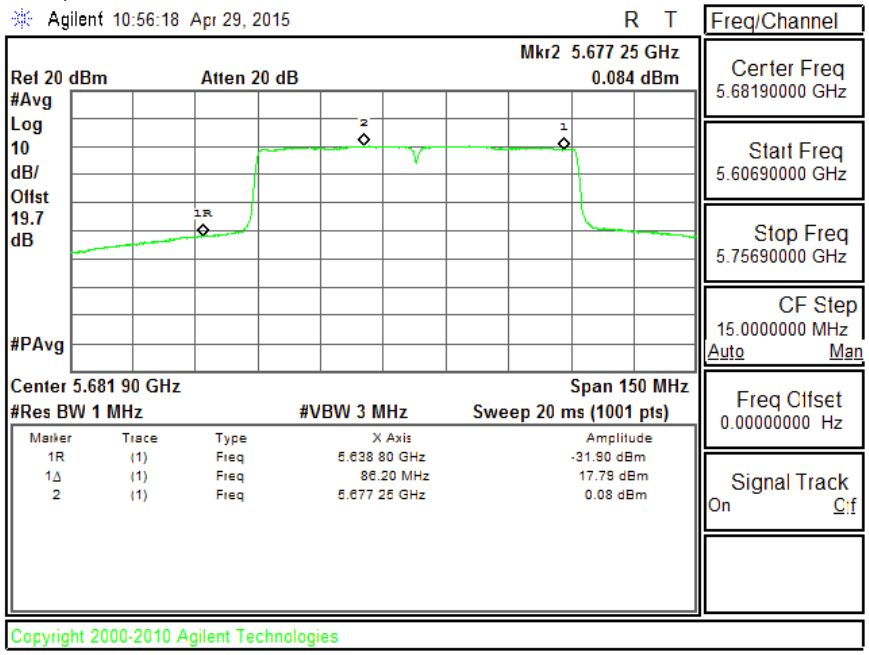
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	0.084	-0.353	3.06	9.01	-5.95

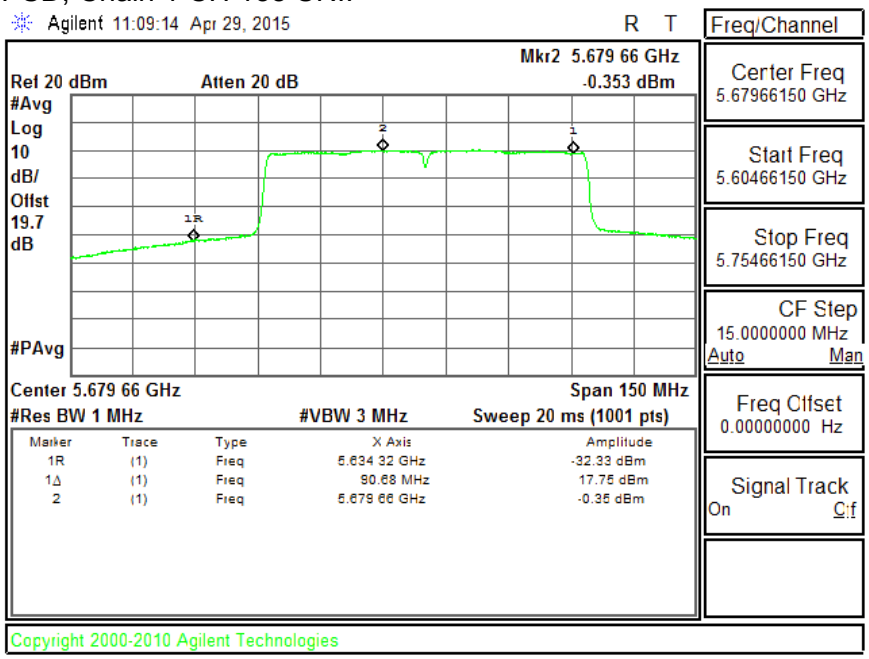




PSD, Chain 0 CH 138 UNII



PSD, Chain 1 CH 138 UNII



UNII-3 BAND

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
138	5690	8.03	8.03	27.97	27.97

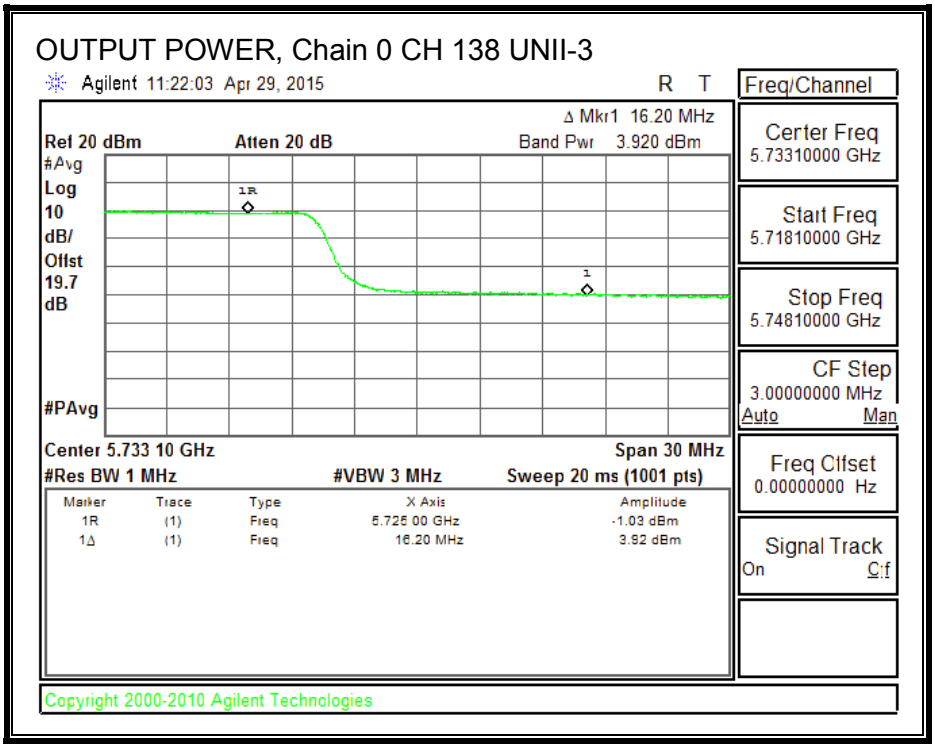
Duty Cycle CF (dB)	0.18	Included in Calculations of Corr'd Power & PSD

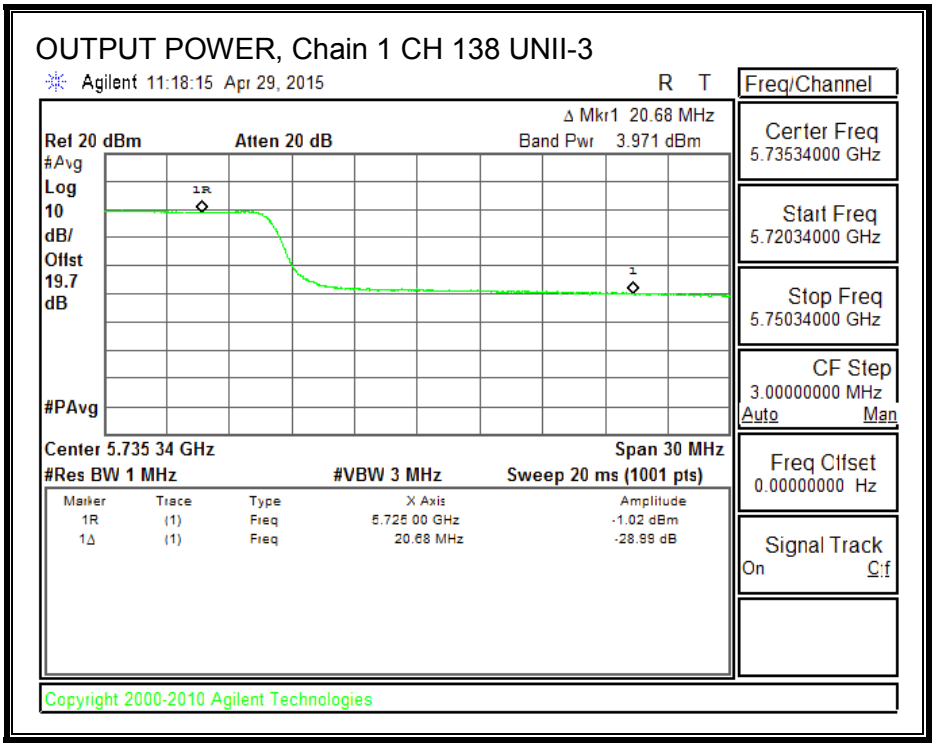
Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	3.920	3.971	7.14	27.97	-20.83

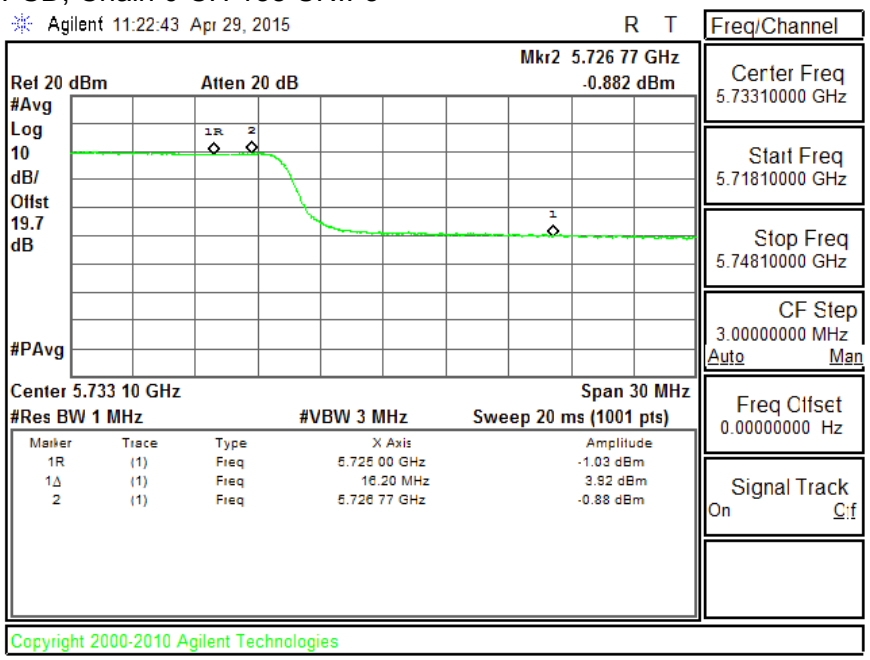
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	-0.882	-0.822	2.34	27.97	-25.63

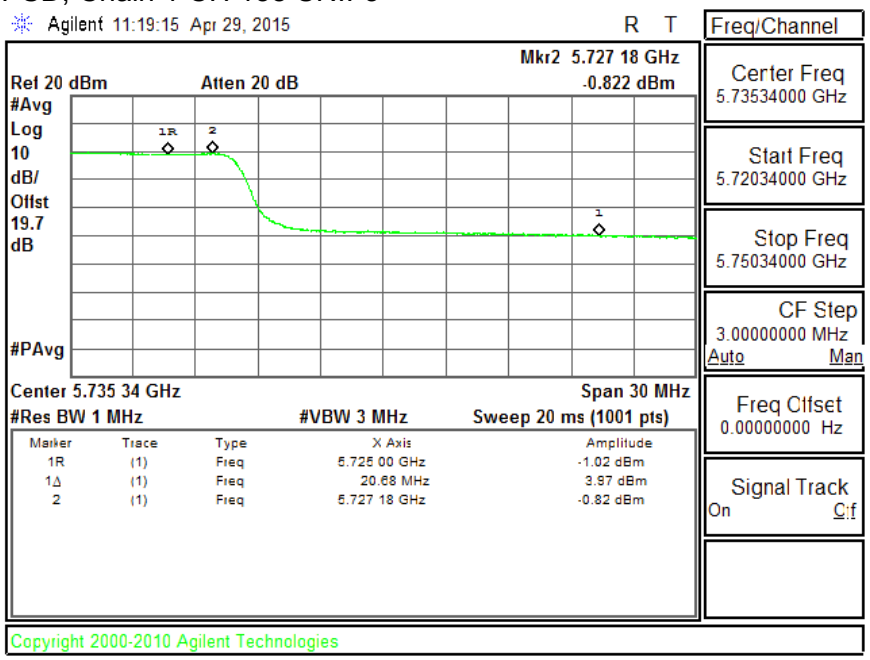




PSD, Chain 0 CH 138 UNII-3



PSD, Chain 1 CH 138 UNII-3



8.51.2. AVERAGE OUTPUT POWER (WHOLE FUNDAMENTAL)

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

RESULTS

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)
138	5690	18.55	17.45	21.05

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary

8.52. 802.11ac VHT80 CDD 3TX MODE IN THE 5.6 GHz BAND

8.52.1. 26 dB BANDWIDTH

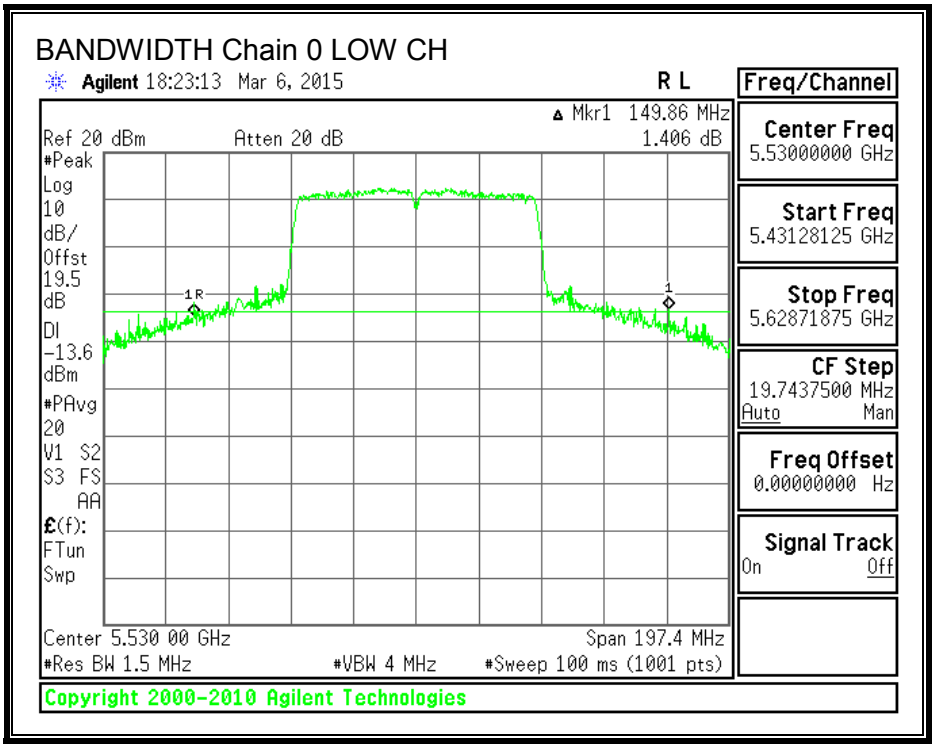
LIMITS

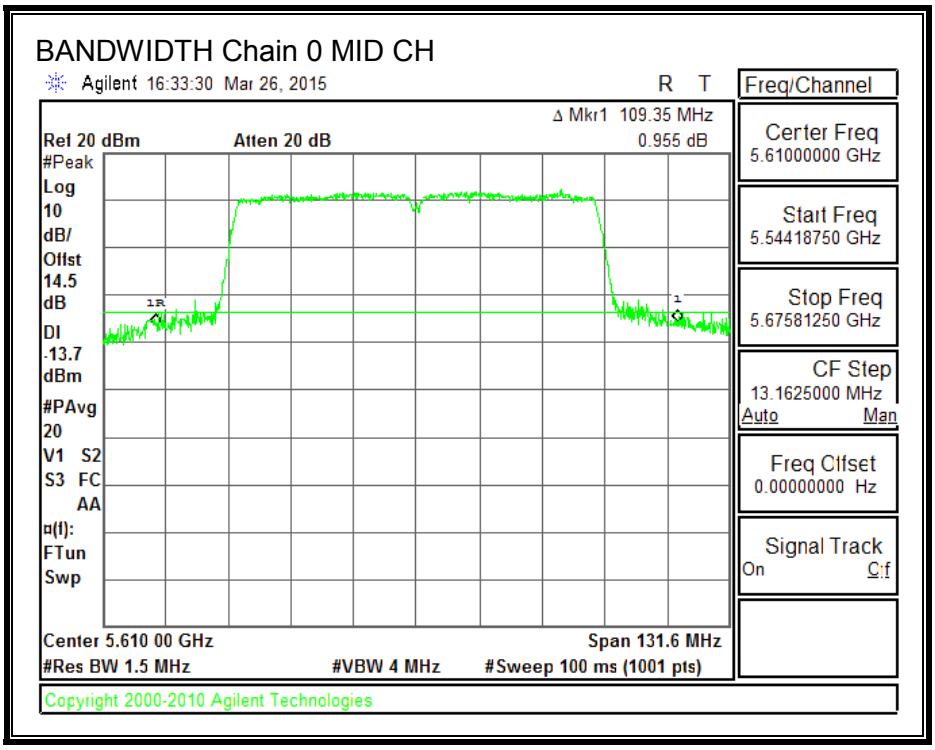
None; for reporting purposes only.

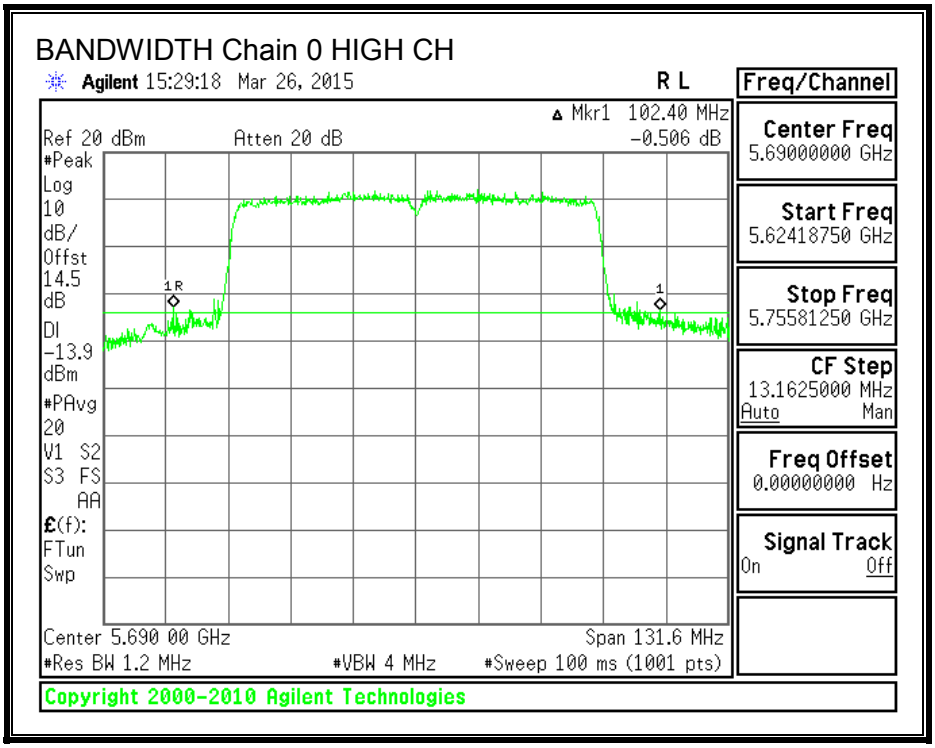
RESULTS

Channel	Frequency (MHz)	26 dB BW Chain 0 (MHz)	26 dB BW Chain 1 (MHz)	26 dB BW Chain 2 (MHz)
Low	5530	149.86	145.91	116.22
Mid	5610	109.35	111.71	115.40
High	5690	102.40	111.354	99.964

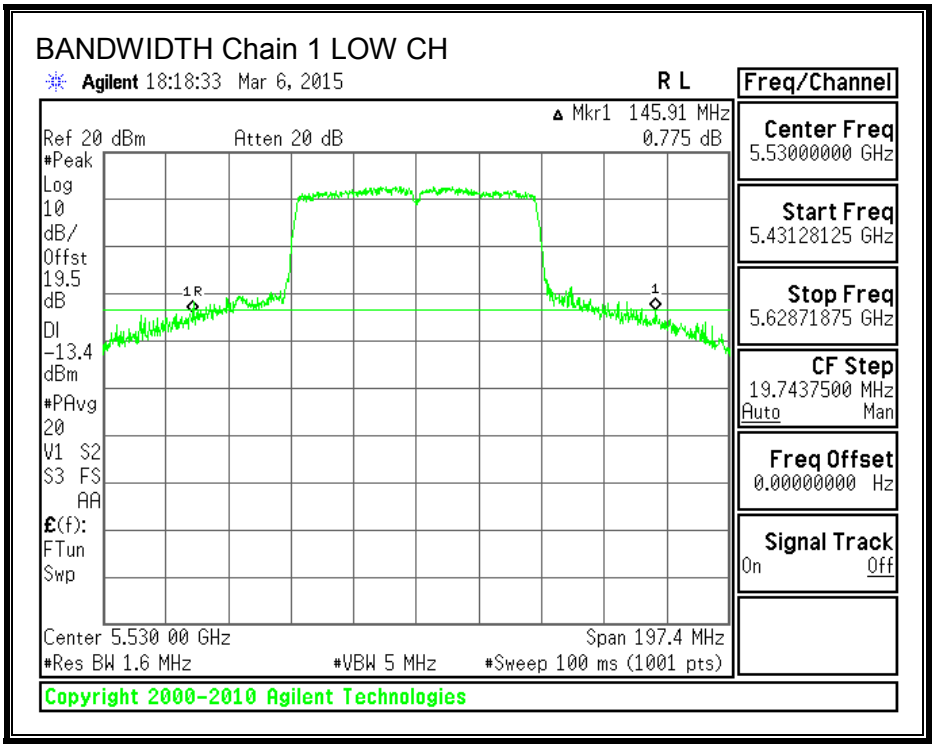
26 dB BANDWIDTH, Chain 0



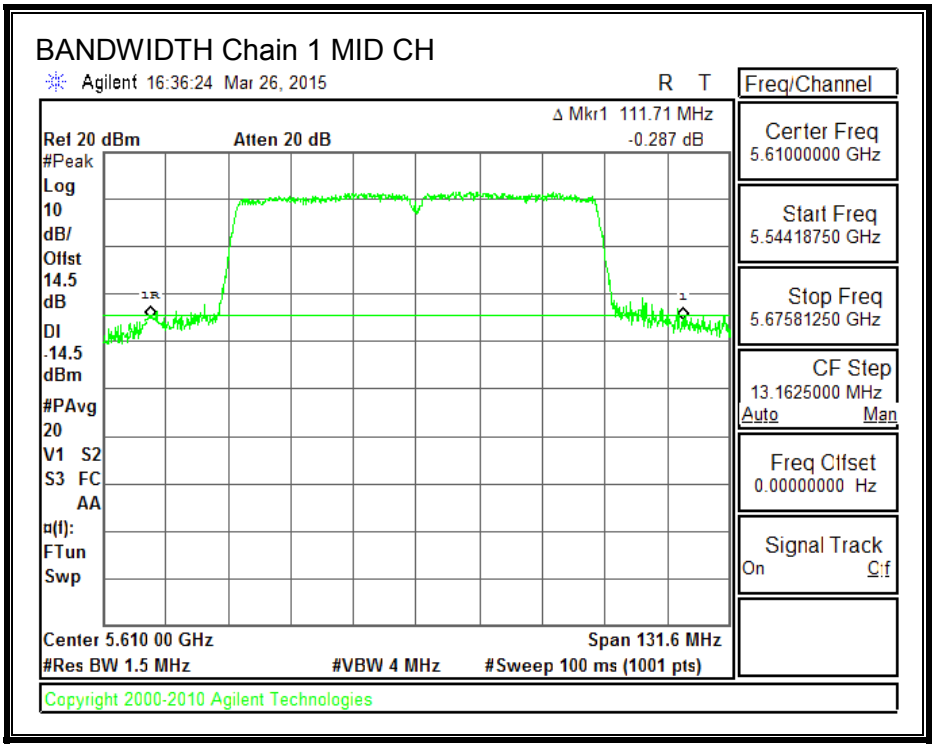




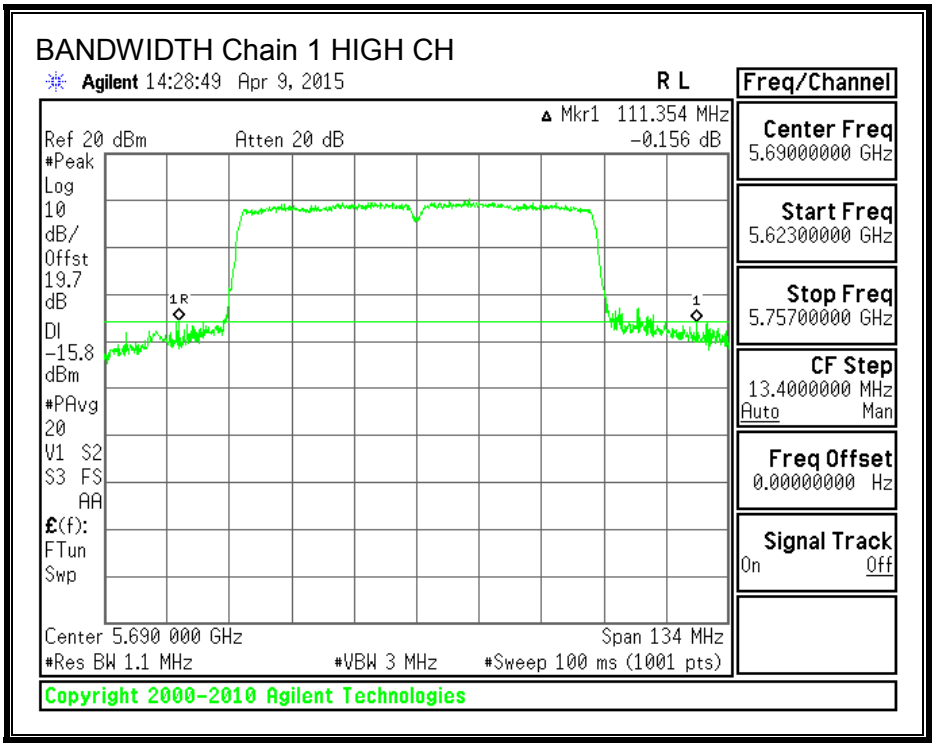
26 dB BANDWIDTH, Chain 1



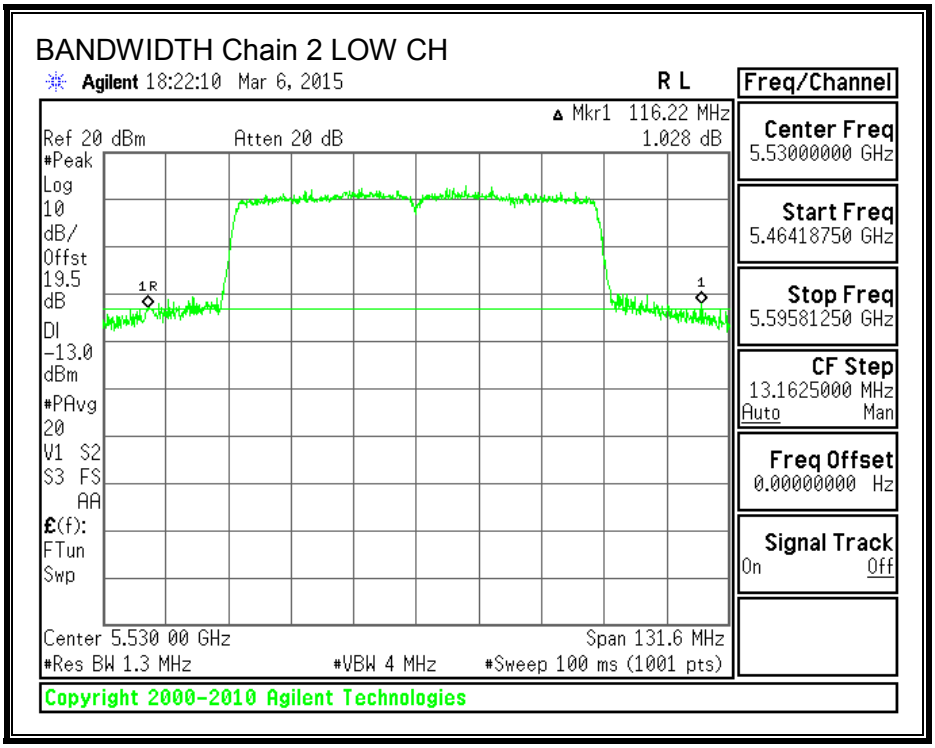
BANDWIDTH Chain 1 MID CH

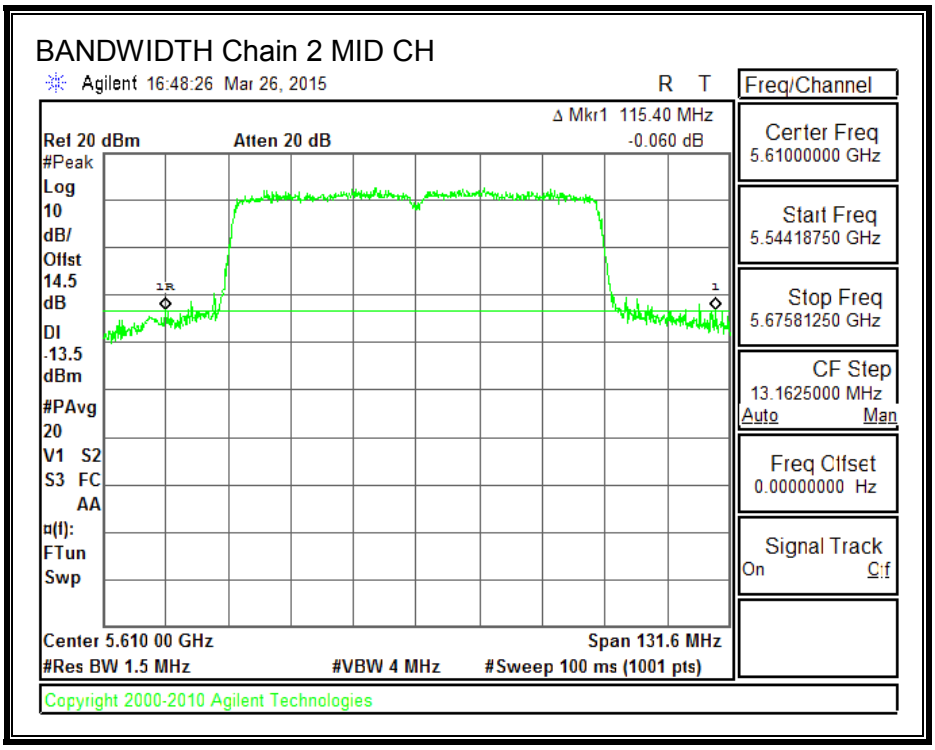


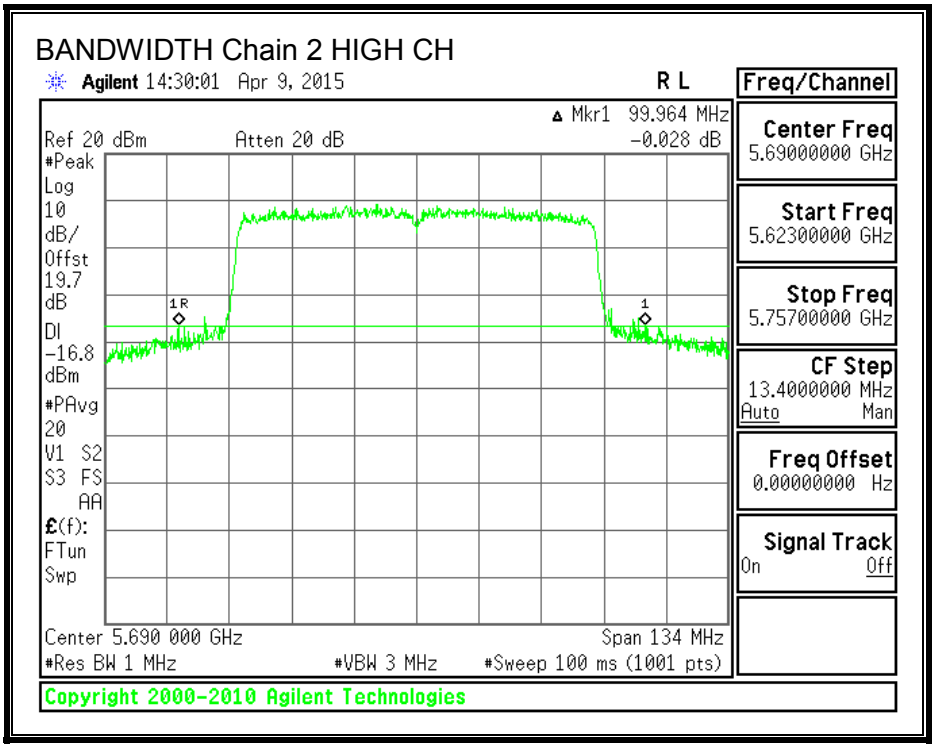
BANDWIDTH Chain 1 HIGH CH



26 dB BANDWIDTH, Chain 2







8.52.2. 99% BANDWIDTH

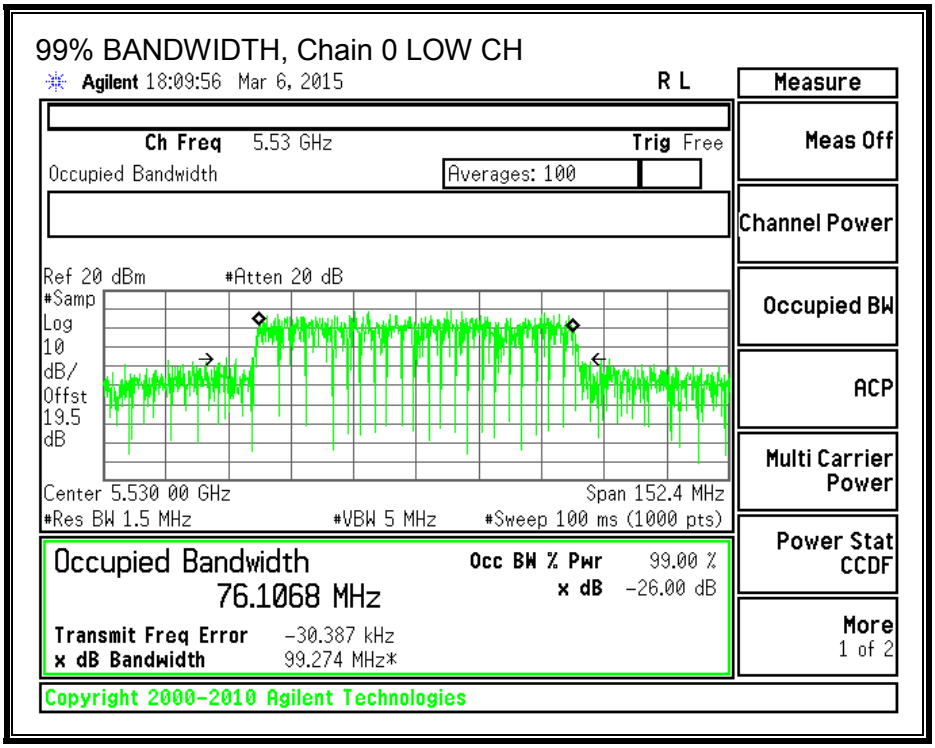
LIMITS

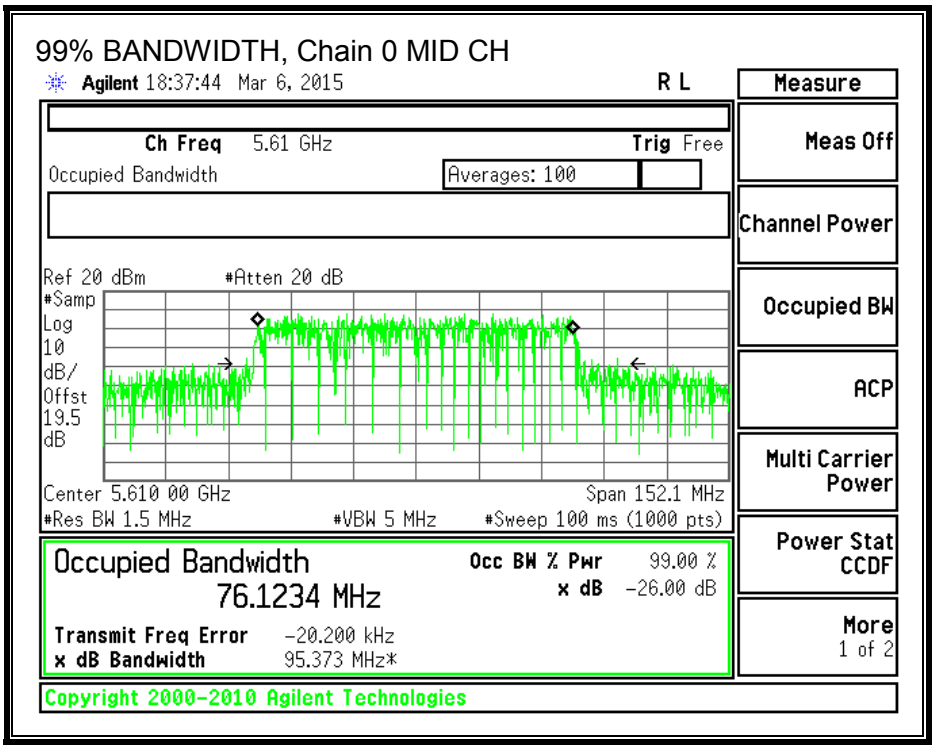
None; for reporting purposes only.

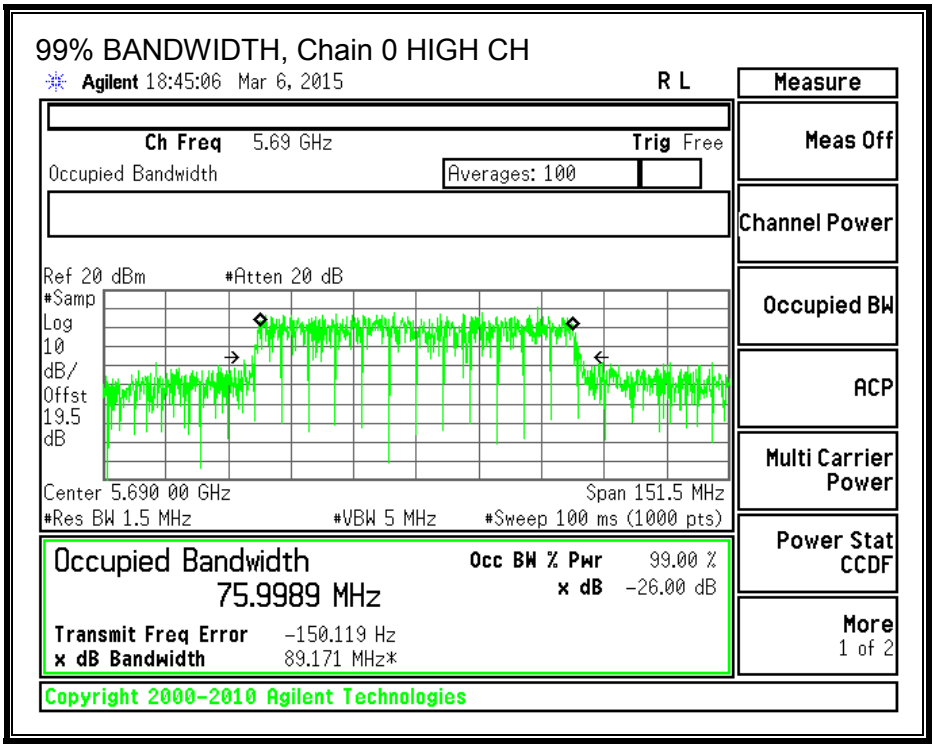
RESULTS

Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)	99% BW Chain 2 (MHz)
Low	5530	76.1068	76.0287	75.9534
Mid	5610	76.1234	76.0641	76.0862
High	5690	75.9989	75.9891	76.0230

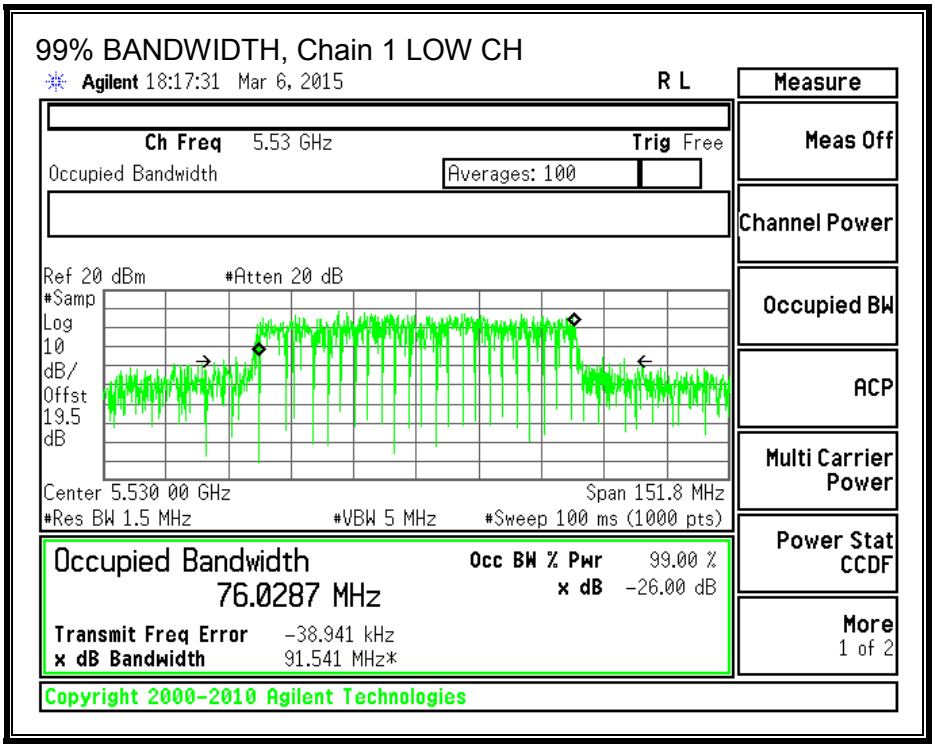
99% BANDWIDTH, Chain 0

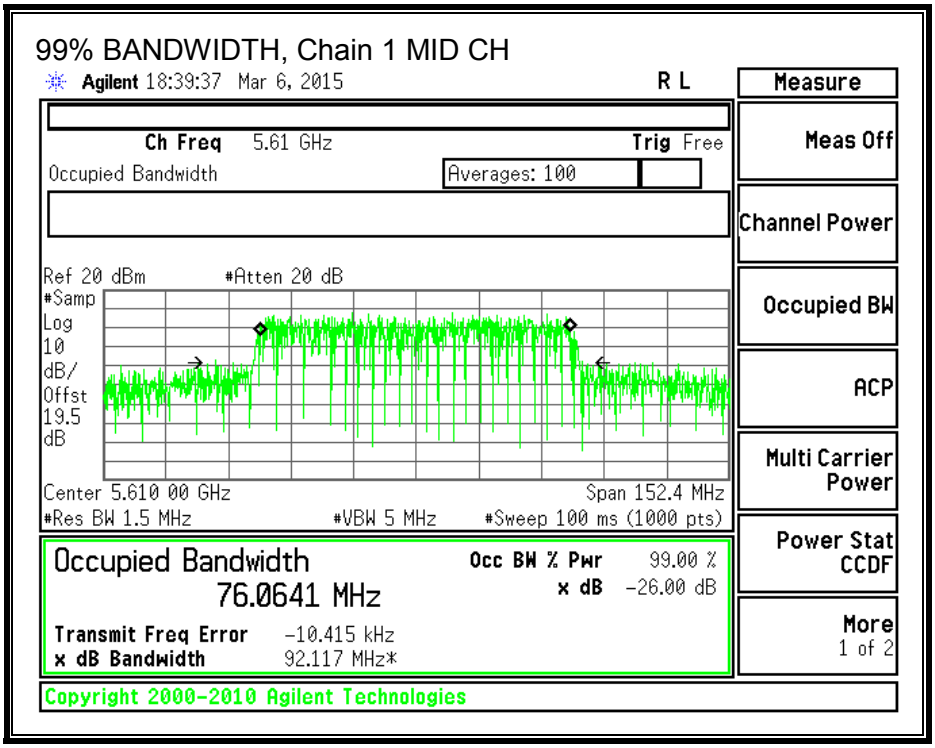


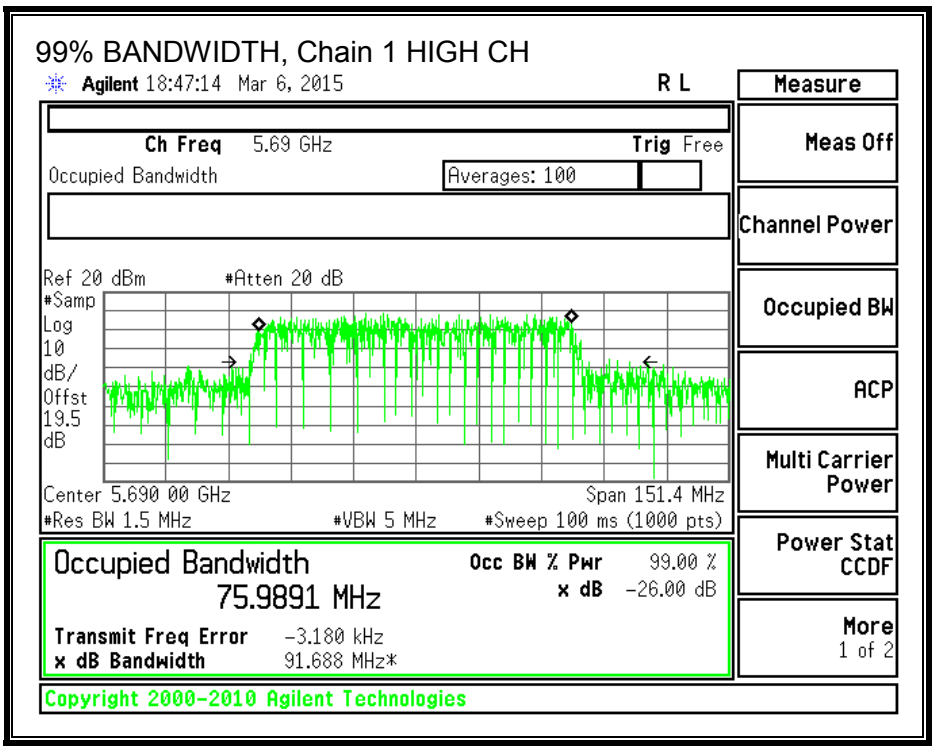




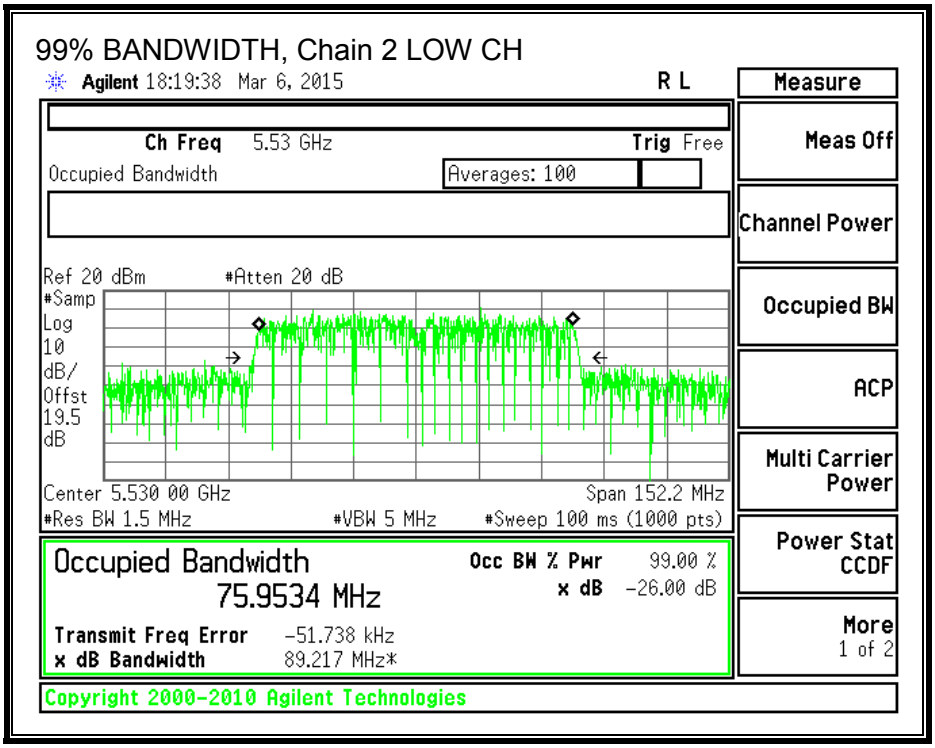
99% BANDWIDTH, Chain 1

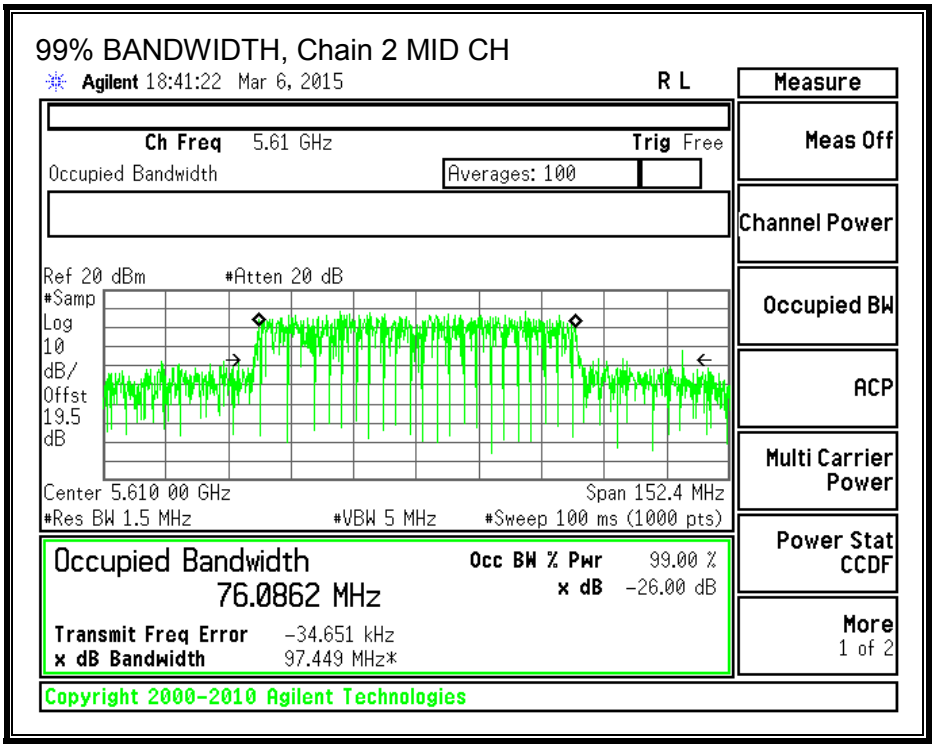


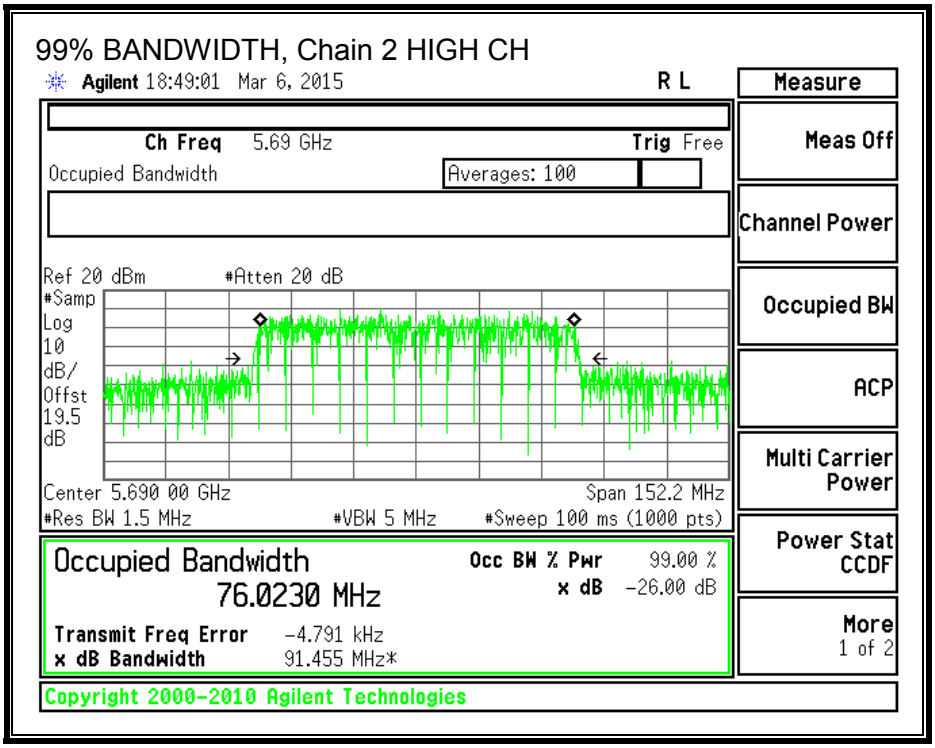




99% BANDWIDTH, Chain 2







8.52.3. 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.

DIRECTIONAL ANTENNA GAIN

For power, the TX chains are ucorrelated and the antenna gain is unequal among the chains. The directional gain is:

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Chain 2 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
3.17	2.09	4.72	4.46

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

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Chain 2 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
3.17	2.09	4.72	9.17

RESULTS

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)
Low	5530	116.22	4.46	9.17	24.00	7.83
Mid	5610	109.35	4.46	9.17	24.00	7.83

Duty Cycle CF (dB)	0.18	**Included in Calculations of Corr'd PSD**

Output Power Results

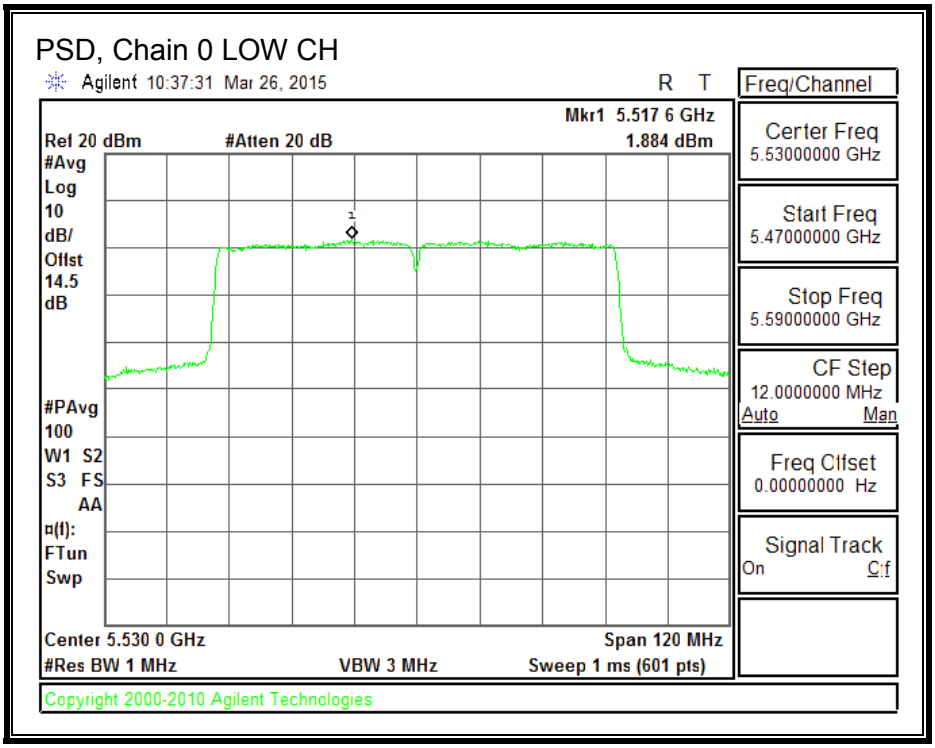
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Chain 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5530	8.70	8.70	8.60	13.44	24.00	-10.56
Mid	5610	16.00	15.40	15.90	20.55	24.00	-3.45

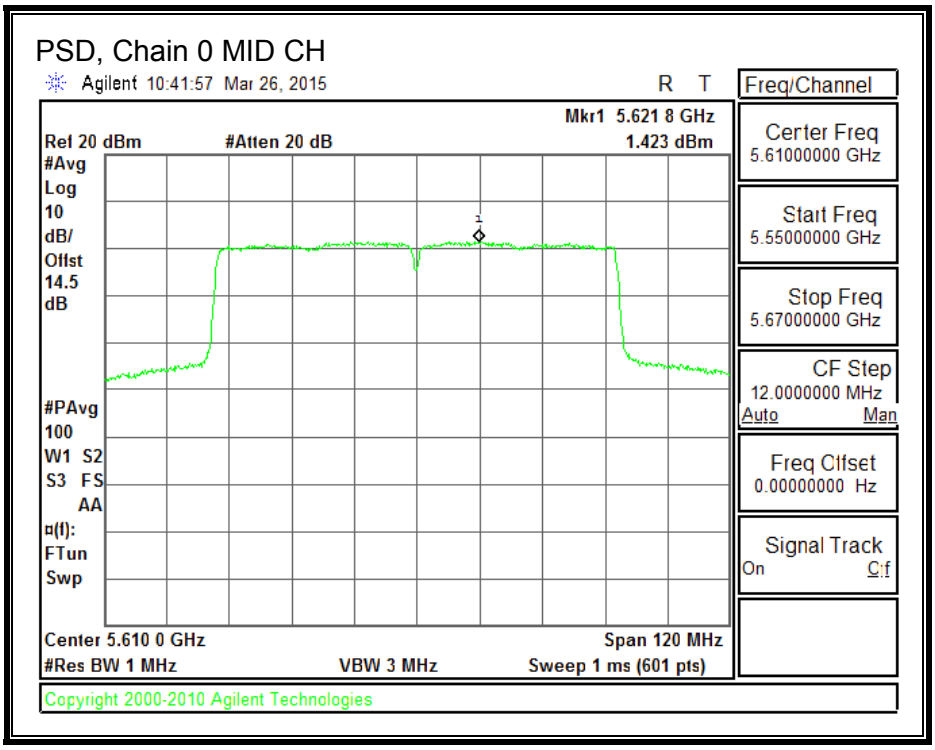
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Chain 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5530	1.884	1.590	1.194	6.52	7.83	-1.31
Mid	5610	1.423	1.288	1.234	6.27	7.83	-1.56

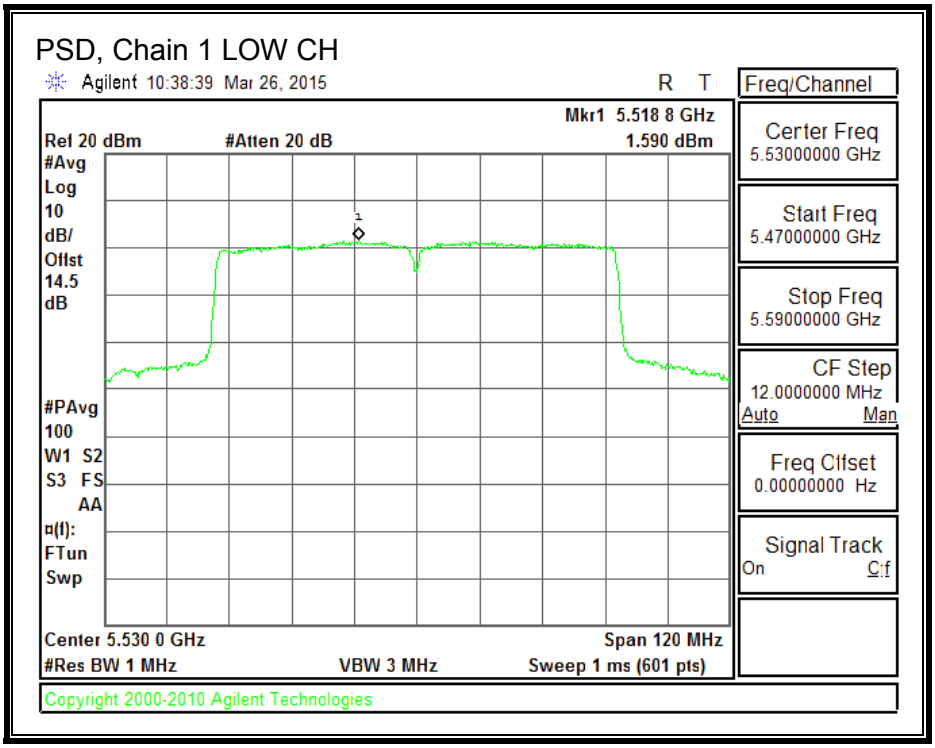
Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

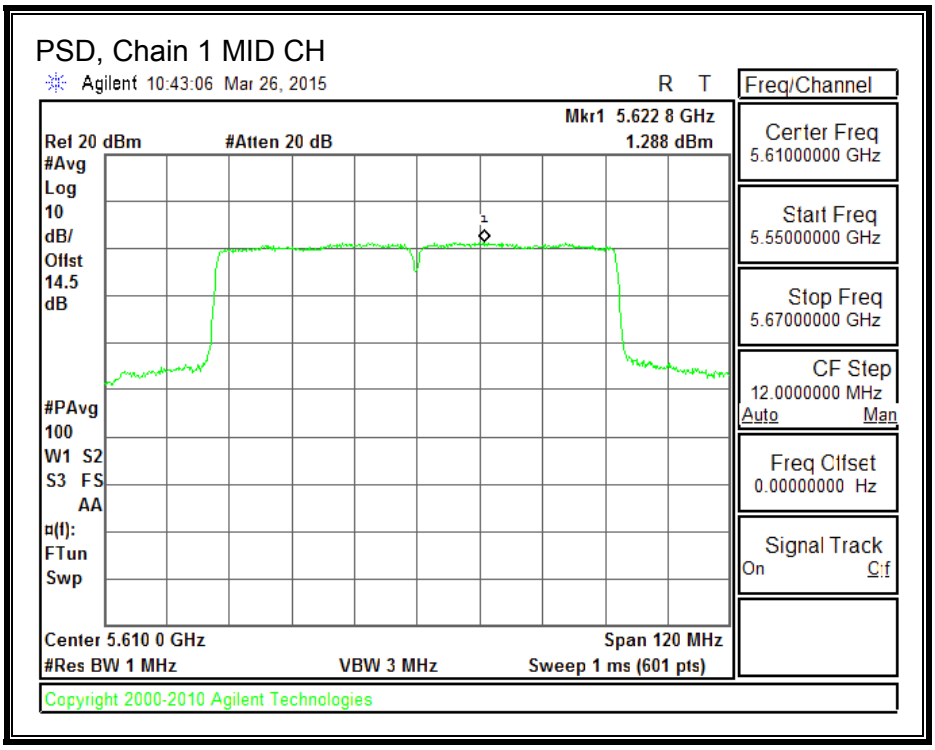
PSD, Chain 0



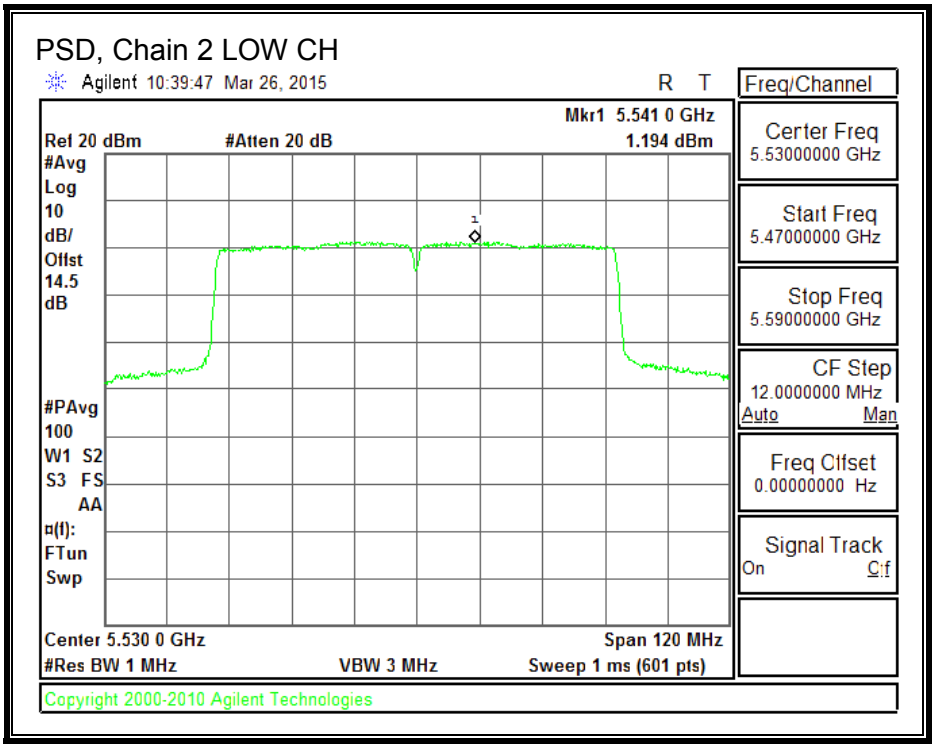


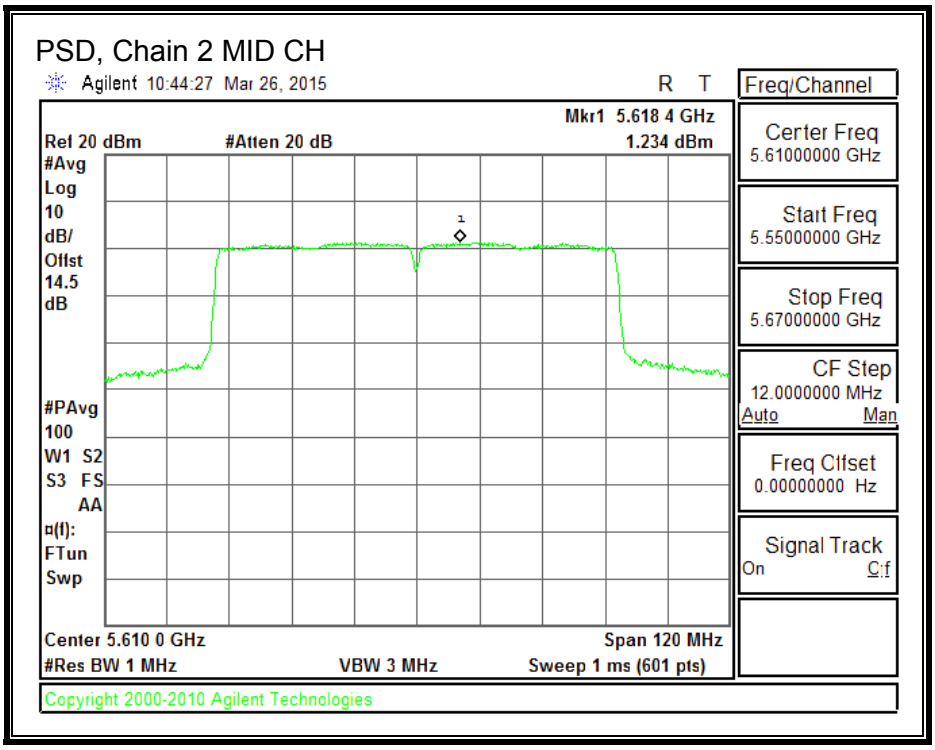
PSD, Chain 1





PSD, Chain 2





STRADDLE CHANNEL 138 RESULTS

UNII-2C BAND

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
138	5690	84.98	4.46	9.17	24.00	7.83

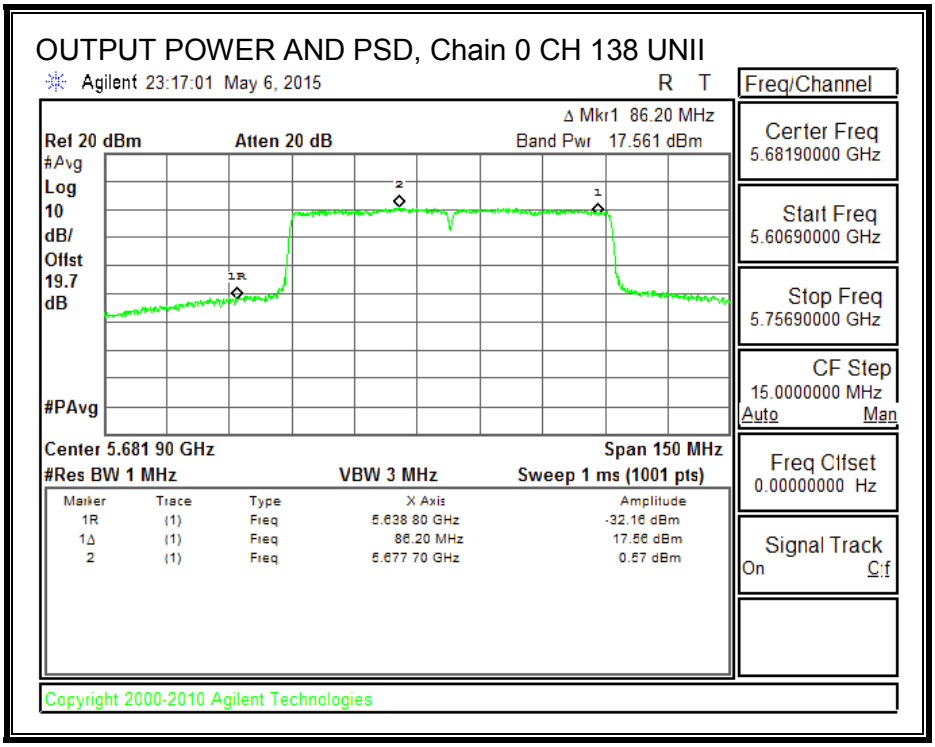
Duty Cycle CF (dB)	0.18	Included in Calculations of Corr'd PSD

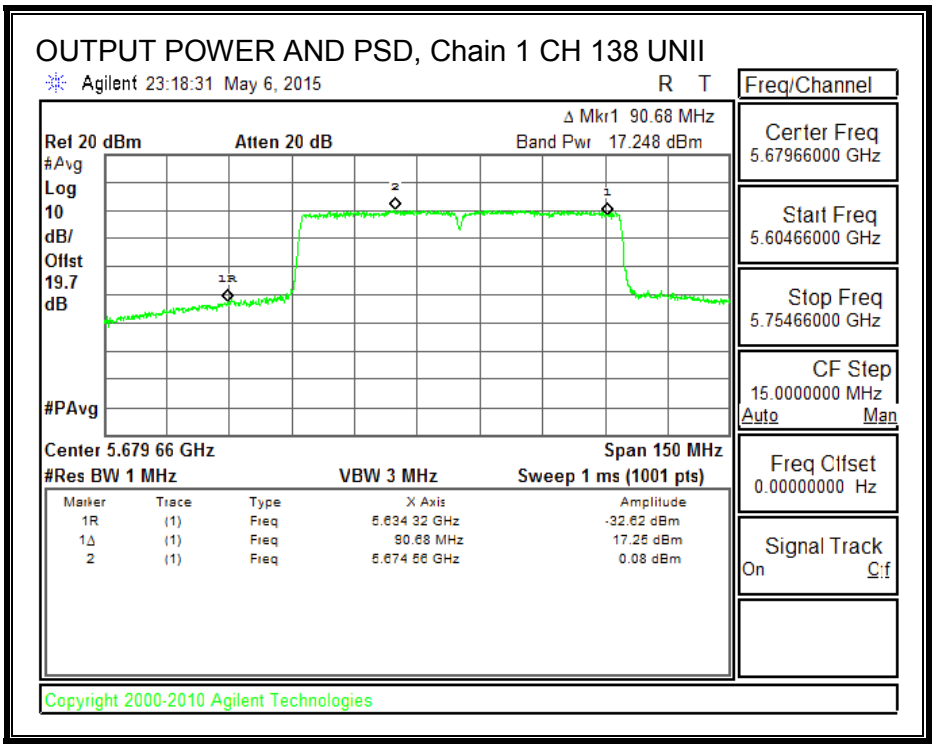
Output Power Results

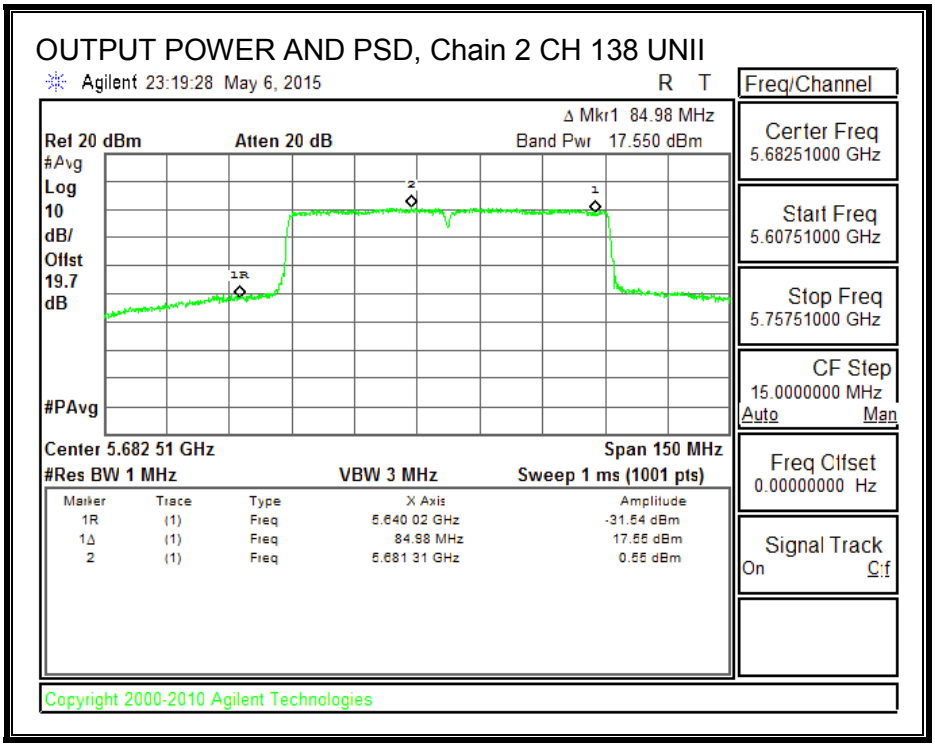
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Chain 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	17.561	17.248	17.550	22.407	24.00	-1.59

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Chain 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	0.57	0.08	0.55	5.36	7.83	-2.47







UNII-3 BAND

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
138	5690	4.47	9.15	30.00	26.85

Duty Cycle CF (dB)	0.18	Included in Calculations of Corr'd Power & PSD

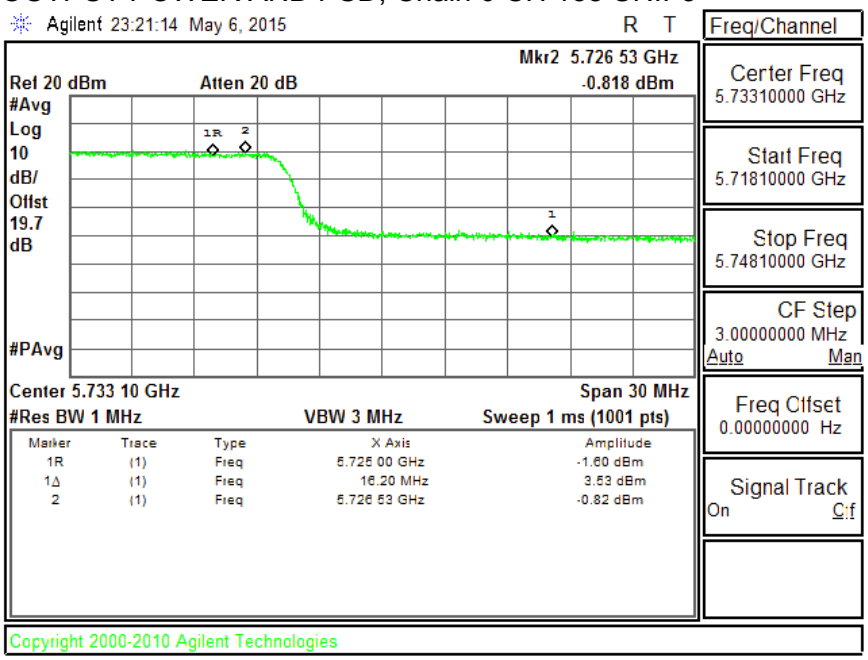
Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Chain 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	3.530	3.400	3.391	8.39	30.00	-21.61

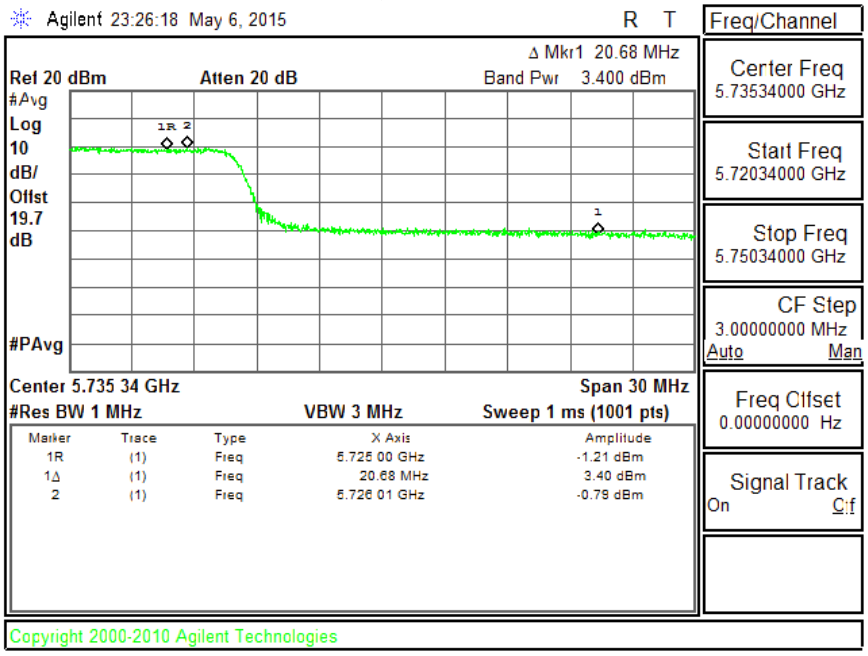
PSD Results

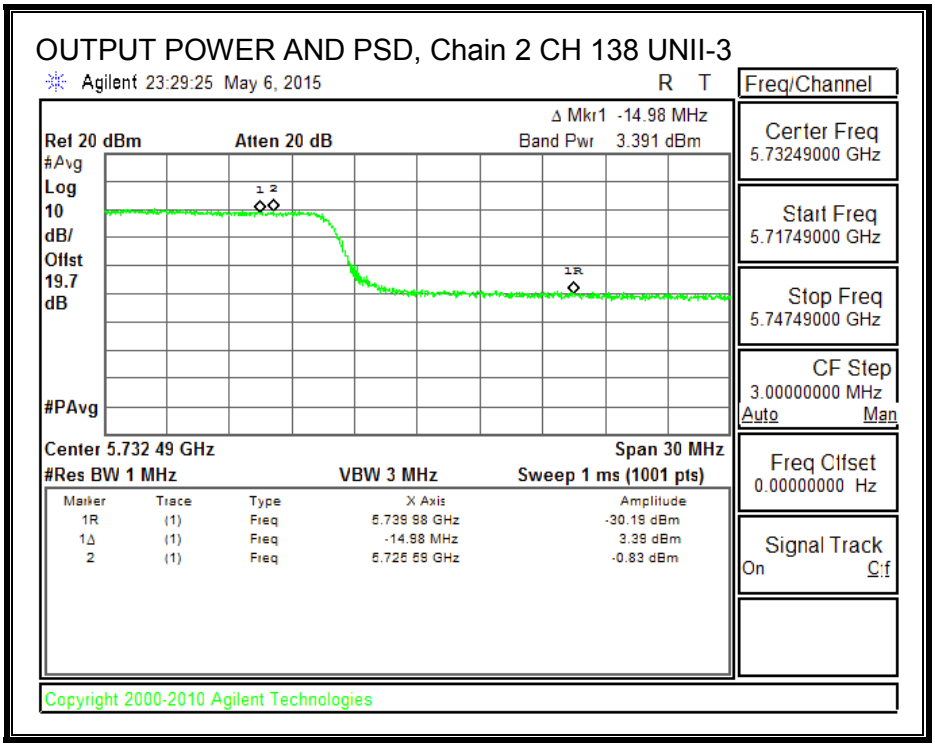
Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Chain 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	-0.82	-0.79	-0.83	4.14	26.85	-22.71

OUTPUT POWER AND PSD, Chain 0 CH 138 UNII-3



OUTPUT POWER AND PSD, Chain 1 CH 138 UNII-3





8.52.4. AVERAGE OUTPUT POWER (WHOLE FUNDAMENTAL)

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

RESULTS

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Chain 2 Meas Power (dBm)	Total Corr'd Power (dBm)
138	5690	18.00	17.90	18.00	22.74

8.53. 802.11ac VHT80 TxBF 3TX MODE IN THE 5.6 GHz BAND

8.53.1. 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.

DIRECTIONAL ANTENNA GAIN

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

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Chain 2 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
3.17	2.09	4.72	9.17

RESULTS

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)
Low	5530	116.22	9.17	9.17	20.83	7.83
Mid	5610	109.35	9.17	9.17	20.83	7.83

Duty Cycle CF (dB)	0.18	Included in Calculations of Corr'd PSD

Output Power Results

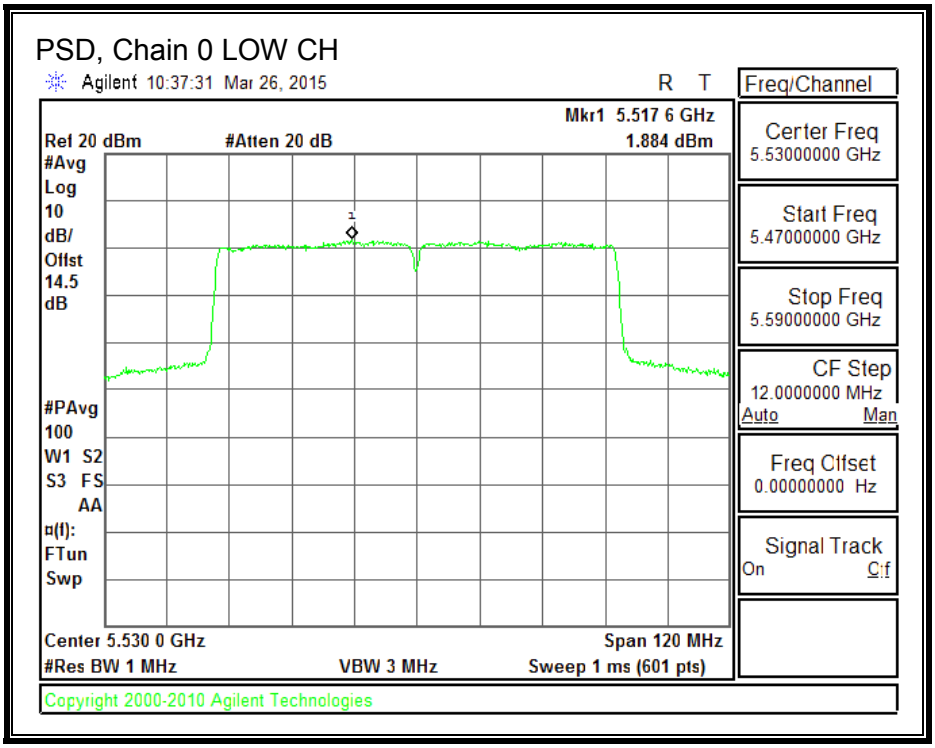
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Chain 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5530	8.70	8.60	8.60	13.40	20.83	-7.43
Mid	5610	14.00	13.90	14.00	18.74	20.83	-2.09

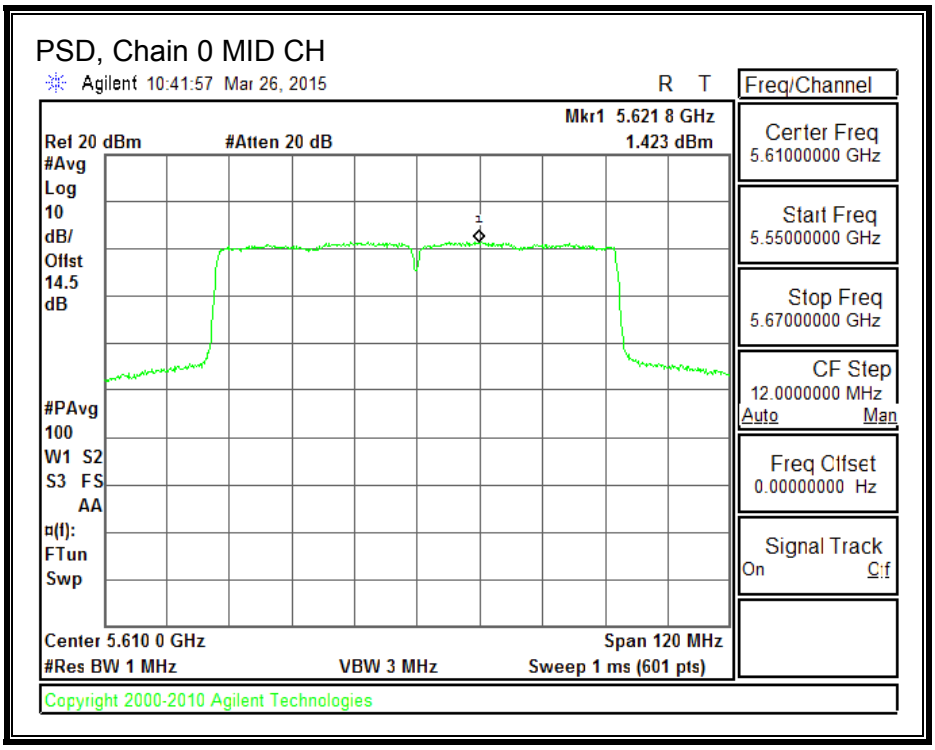
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Chain 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5530	1.884	1.590	1.194	6.52	7.83	-1.31
Mid	5610	1.423	1.288	1.234	6.27	7.83	-1.56

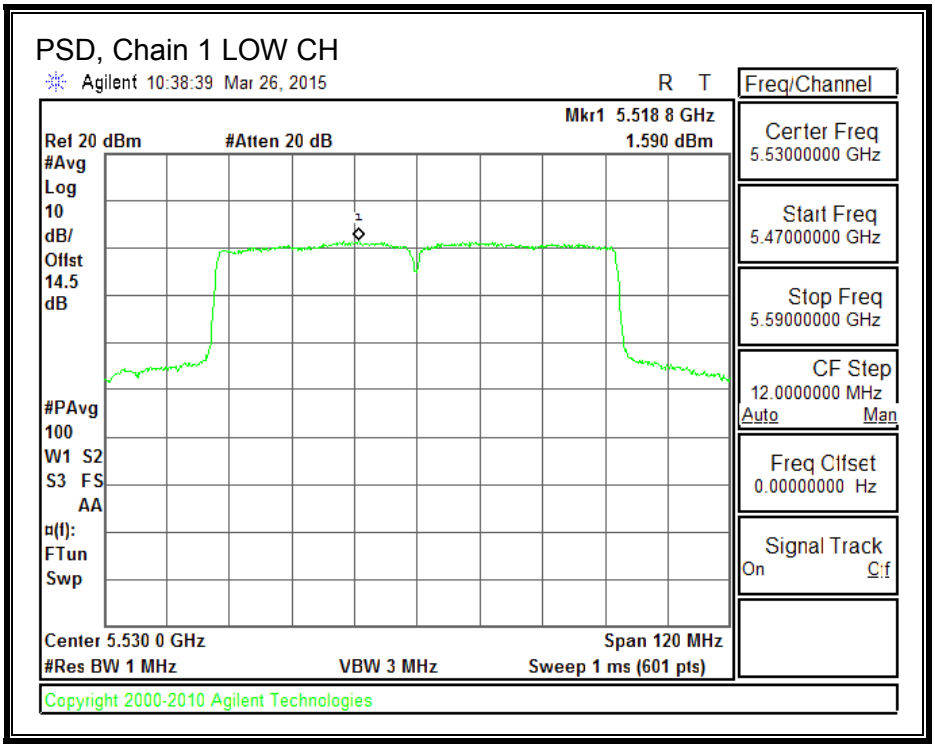
Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

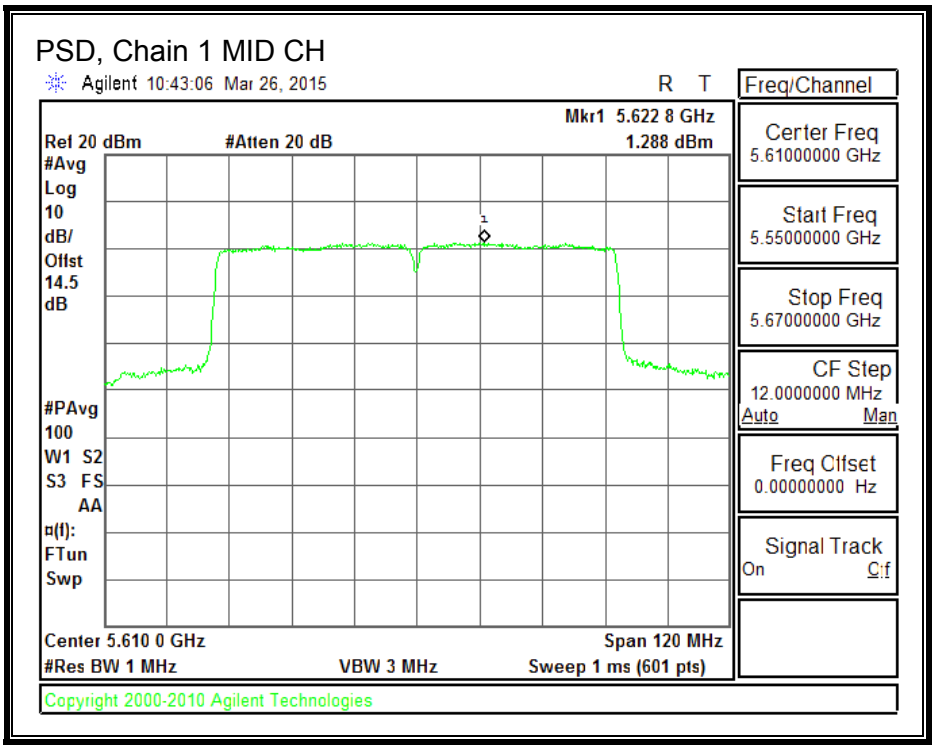
PSD, Chain 0



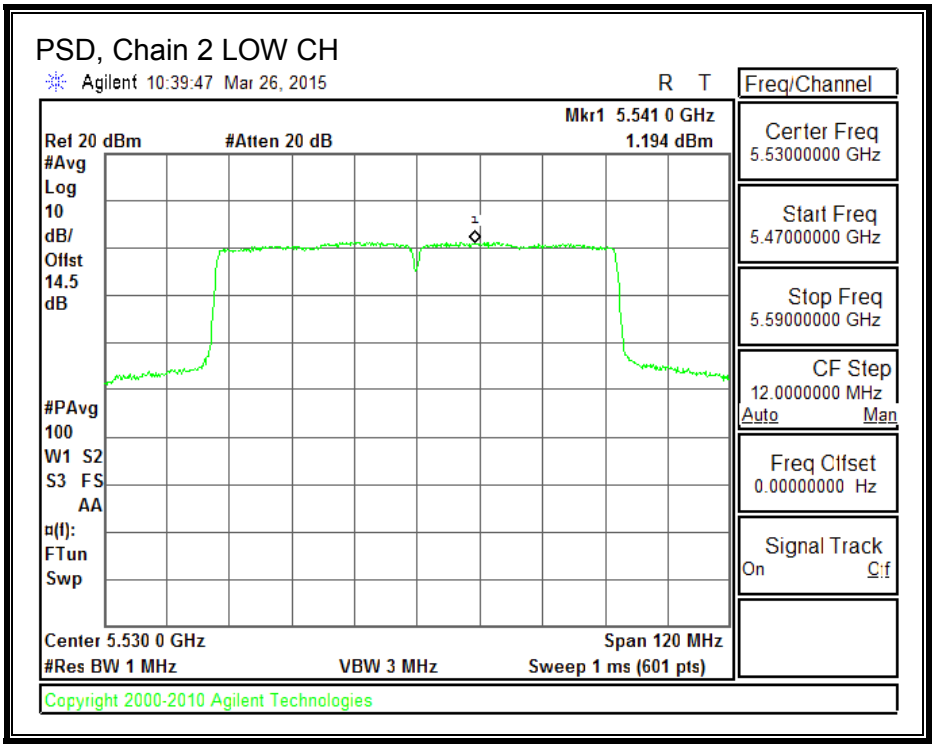


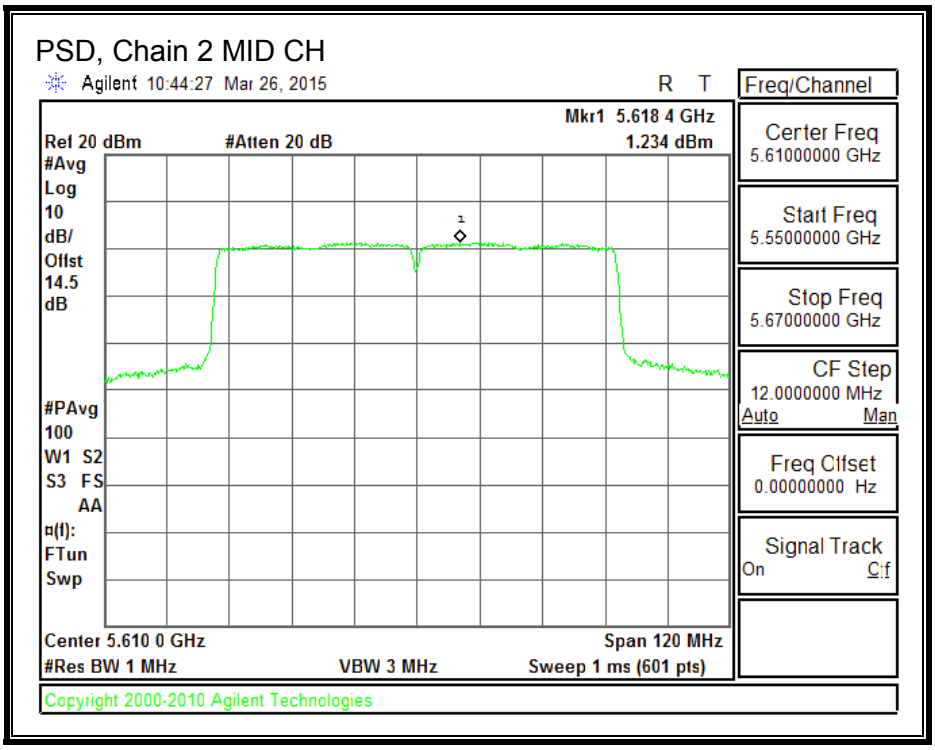
PSD, Chain 1





PSD, Chain 2





STRADDLE CHANNEL 138 RESULTS

UNII-2C BAND

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
138	5690	84.98	9.17	9.17	20.83	7.83

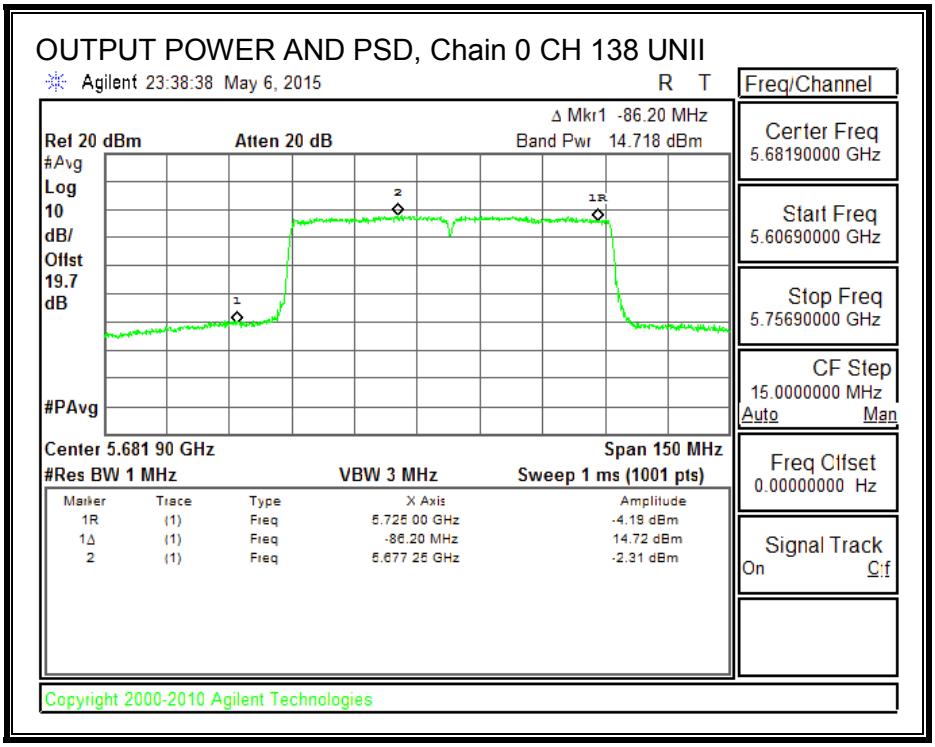
Duty Cycle CF (dB)	0.18	Included in Calculations of Corr'd PSD

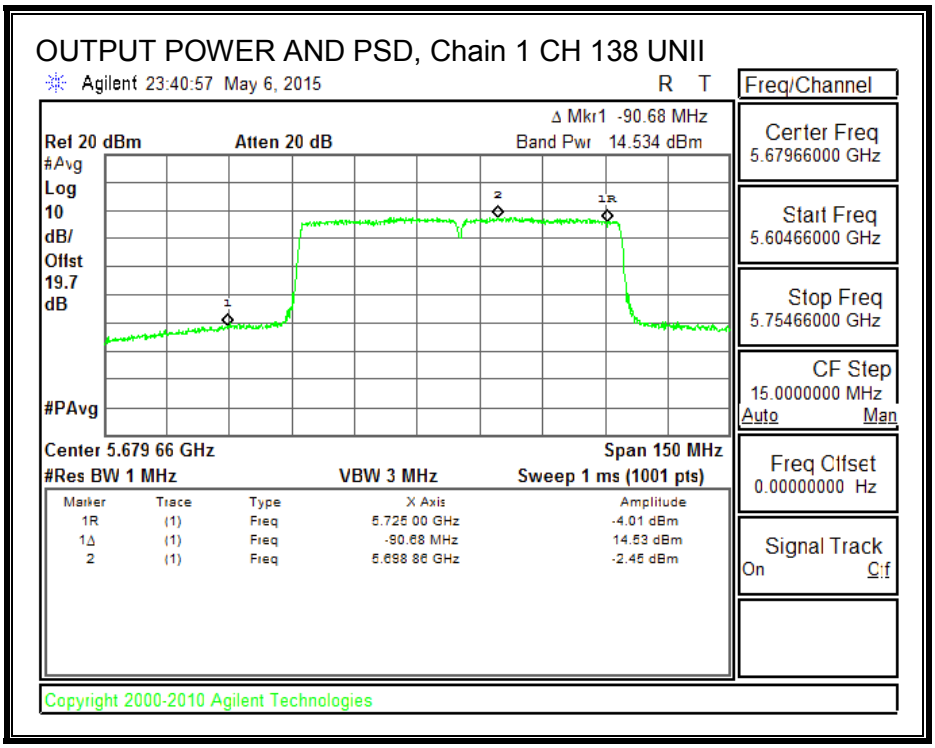
Output Power Results

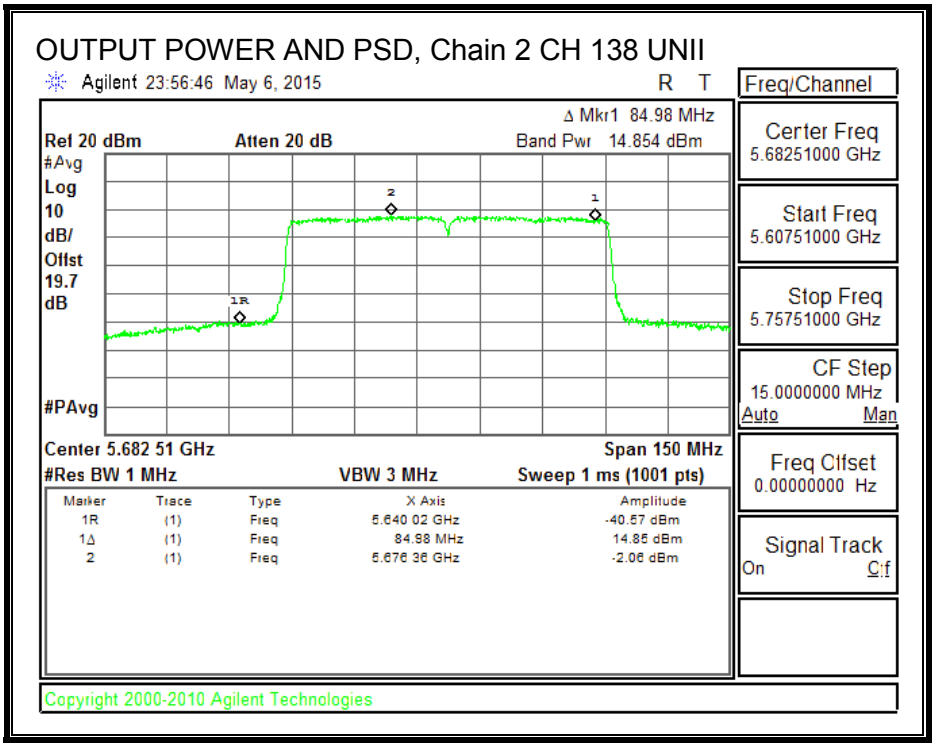
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Chain 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	14.718	14.534	14.854	19.66	20.83	-1.17

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Chain 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	-2.31	-2.45	-2.06	2.68	7.83	-5.15







UNII-3 BAND

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
138	5690	9.15	9.15	26.85	26.85

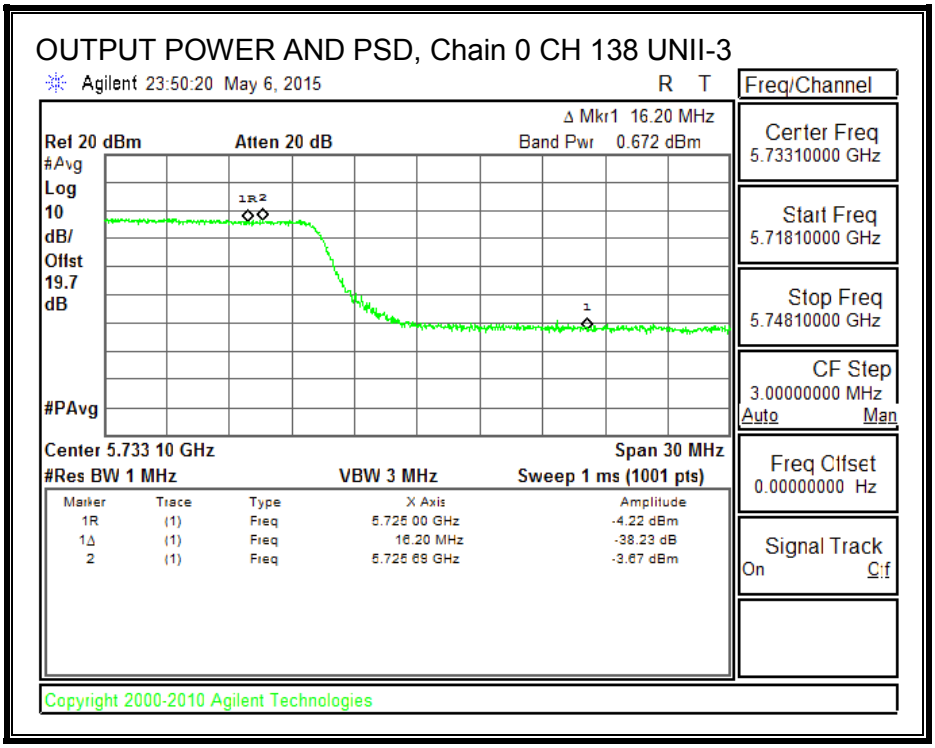
Duty Cycle CF (dB)	0.18	Included in Calculations of Corr'd Power & PSD

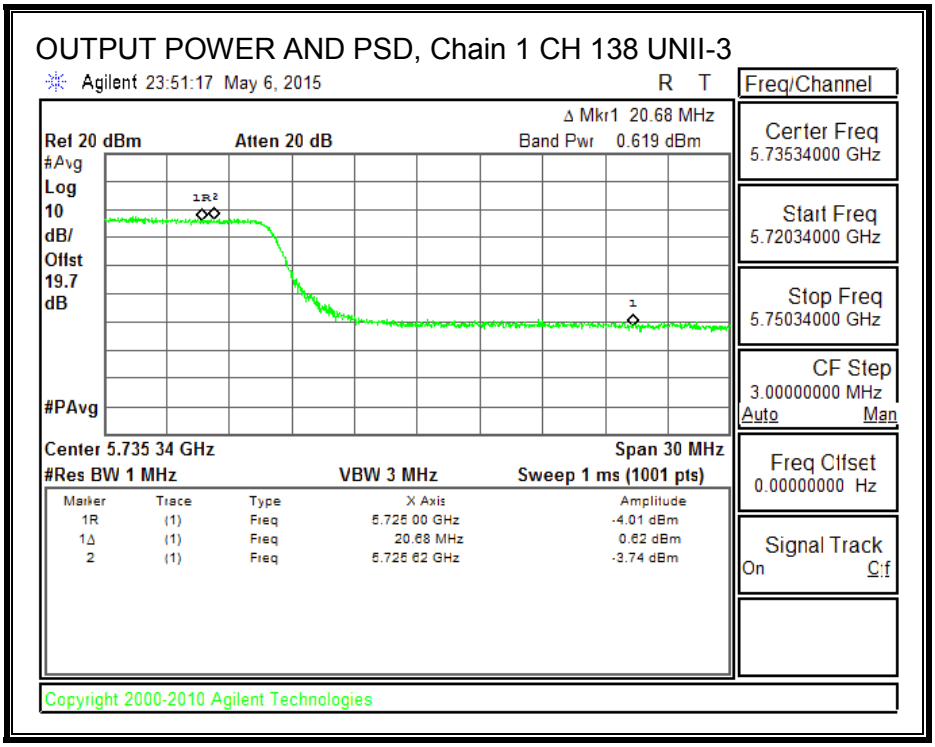
Output Power Results

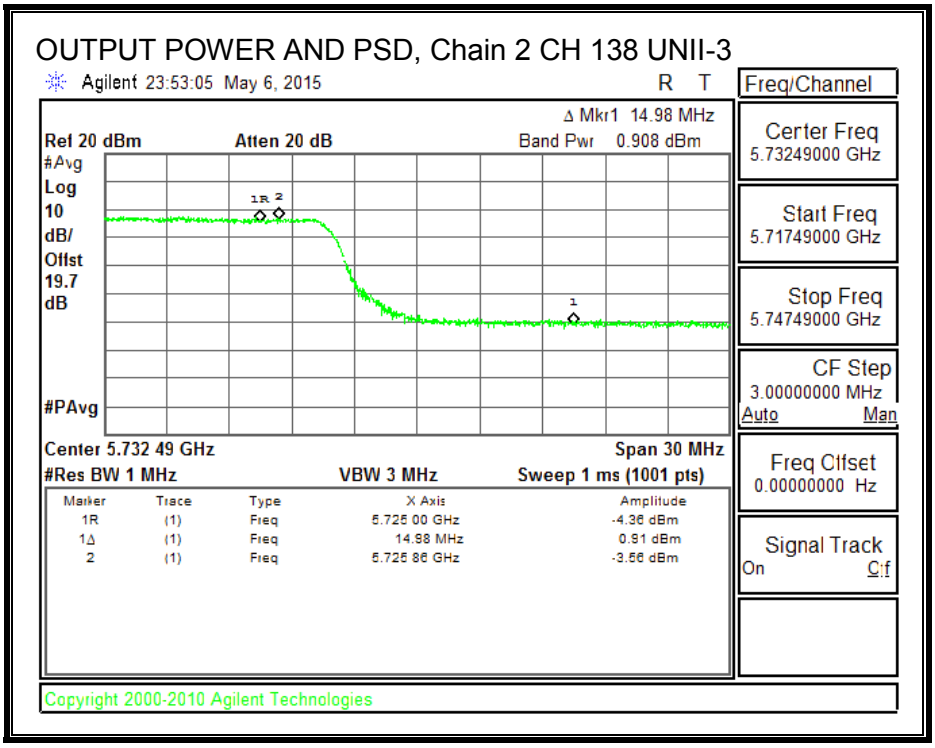
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Chain 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	0.672	0.619	0.908	5.69	26.85	-21.16

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Chain 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	-3.67	-3.74	-3.56	1.30	26.85	-25.55







8.53.2. AVERAGE OUTPUT POWER (WHOLE FUNDAMENTAL)

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

RESULTS

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Chain 2 Meas Power (dBm)	Total Corr'd Power (dBm)
138	5690	14.90	14.80	15.00	19.67

8.54. 802.11a LEGACY MODE IN THE 5.8 GHz BAND

8.54.1. 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.

DIRECTIONAL ANTENNA GAIN

This is SISO mode, AG is the highest (worst-case) = 5.86 dBi

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Power Limit (dBm)
Low	5745	5.86	30.00
Mid	5785	5.86	30.00
High	5825	5.86	30.00

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	14.30	14.30	30.00	-15.70
Mid	5785	18.00	18.00	30.00	-12.00
High	5825	17.10	17.10	30.00	-12.90

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

8.54.2. Maximum Power Spectral Density (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

This is SISO mode, AG is the highest (worst-case) = 5.86 dBi

RESULTS

Antenna Gain and Limits

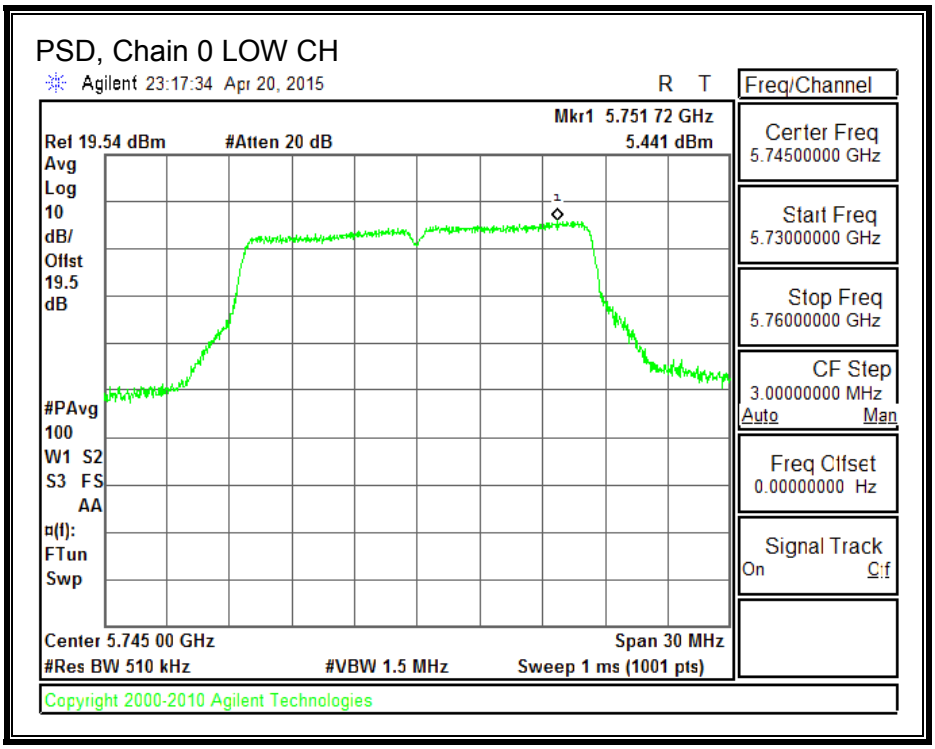
Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5745	5.86	30.00
High	5825	5.86	30.00

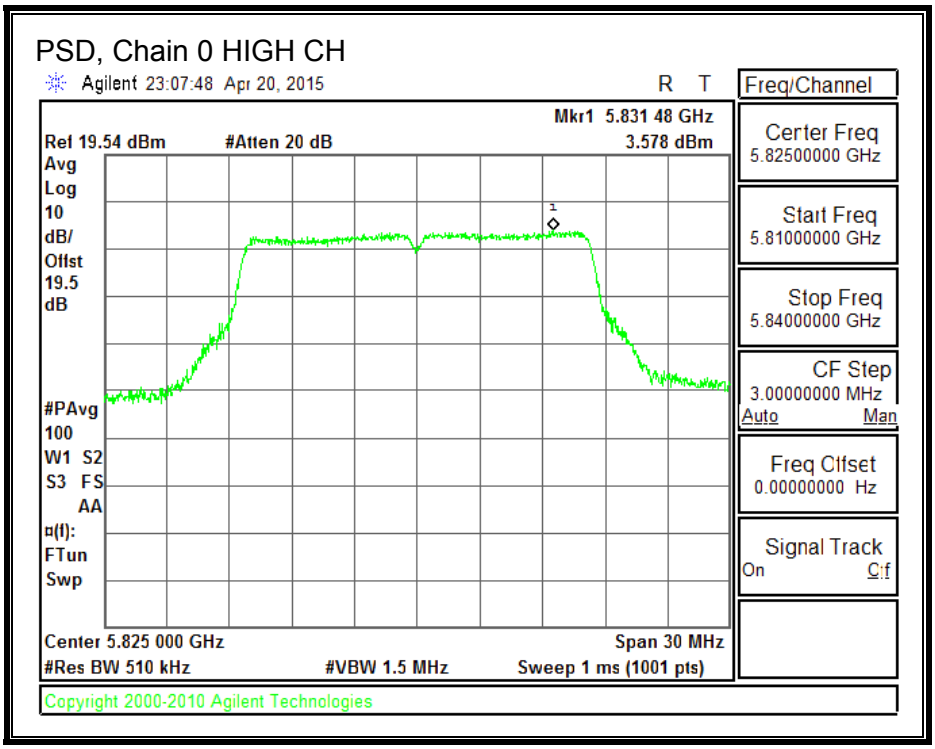
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5745	5.441	5.441	30.00	-24.56
High	5825	3.578	3.578	30.00	-26.42

PSD, Chain 0





8.55. 802.11n HT20 CDD 2TX MODE IN THE 5.8 GHz BAND

8.55.1. 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.

DIRECTIONAL ANTENNA GAIN

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

Chain 0 Antenna Gain (dBi)	Chain 2 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
3.09	4.86	5.06

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Power Limit (dBm)
Low	5745	5.06	30.00
Mid	5785	5.06	30.00
High	5825	5.06	30.00

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	13.00	13.10	16.06	30.00	-13.94
Mid	5785	17.52	17.58	20.56	30.00	-9.44
High	5825	16.10	16.20	19.16	30.00	-10.84

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

8.55.2. Maximum Power Spectral Density (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

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

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
3.09	4.86	8.03

RESULTS

Antenna Gain and Limits

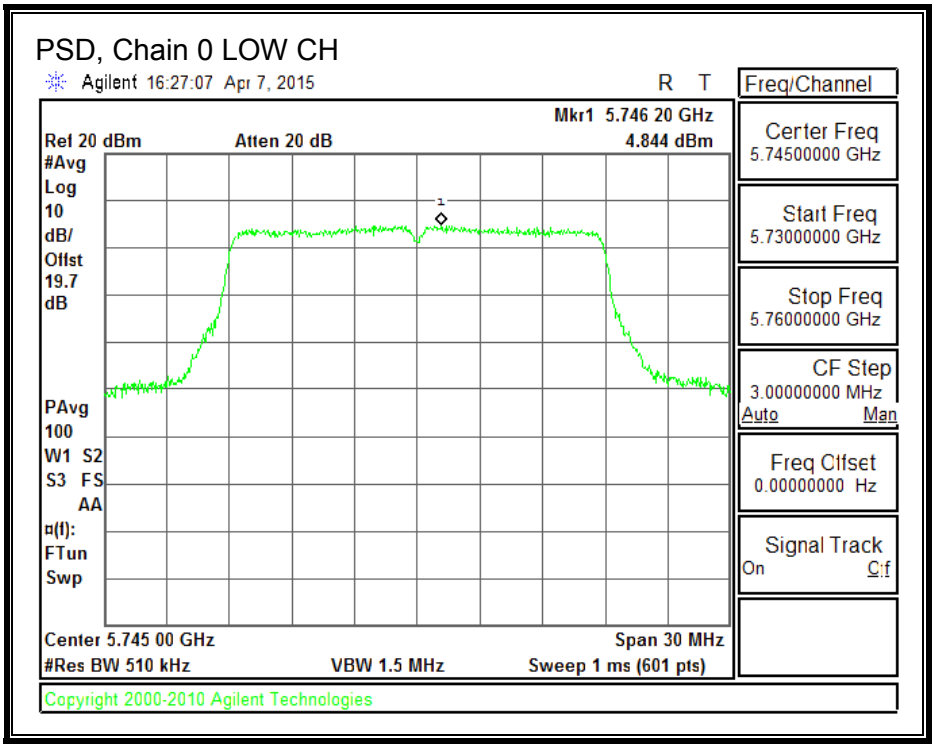
Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5745	8.03	27.97
Mid	5785	8.03	27.97
High	5825	8.03	27.97

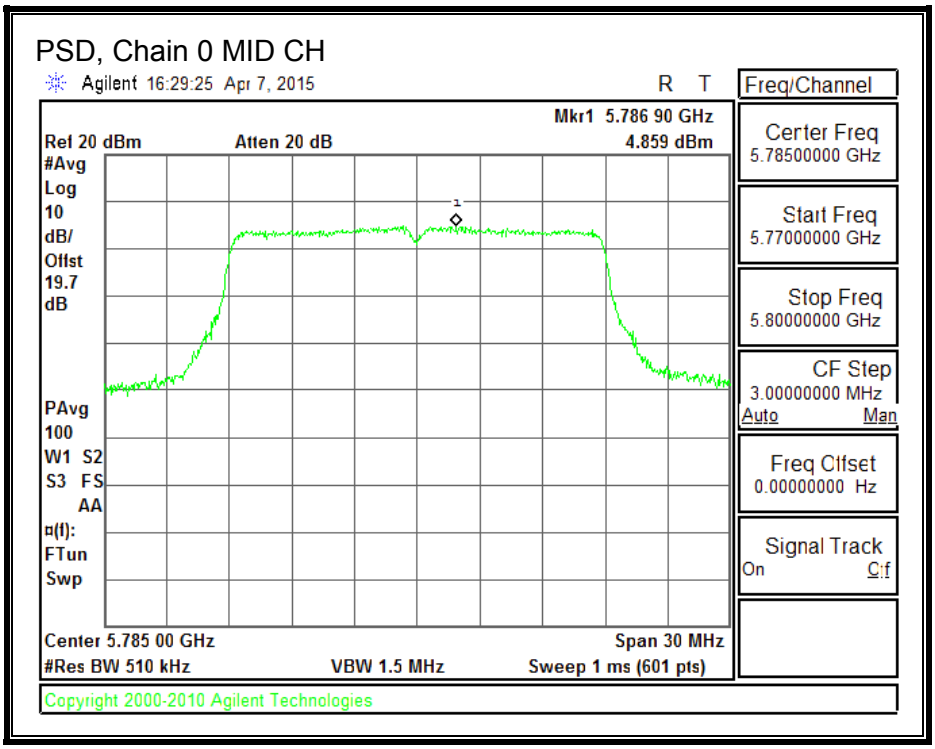
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD

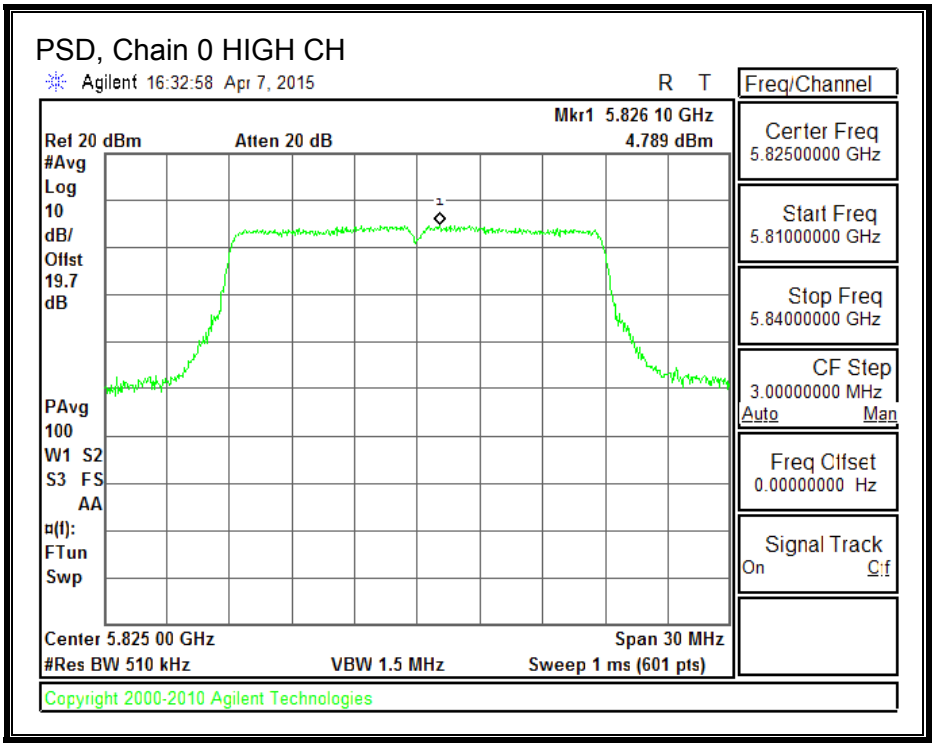
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5745	4.844	4.644	7.755	27.97	-20.21
Mid	5785	4.859	4.977	7.929	27.97	-20.04
High	5825	4.789	5.083	7.949	27.97	-20.02

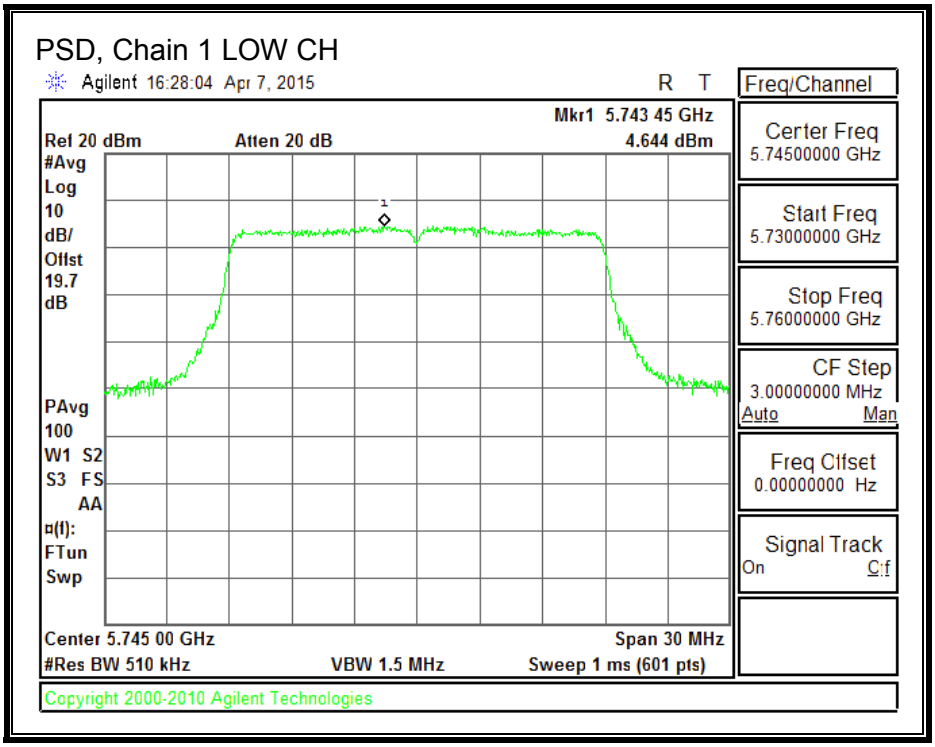
PSD, Chain 0



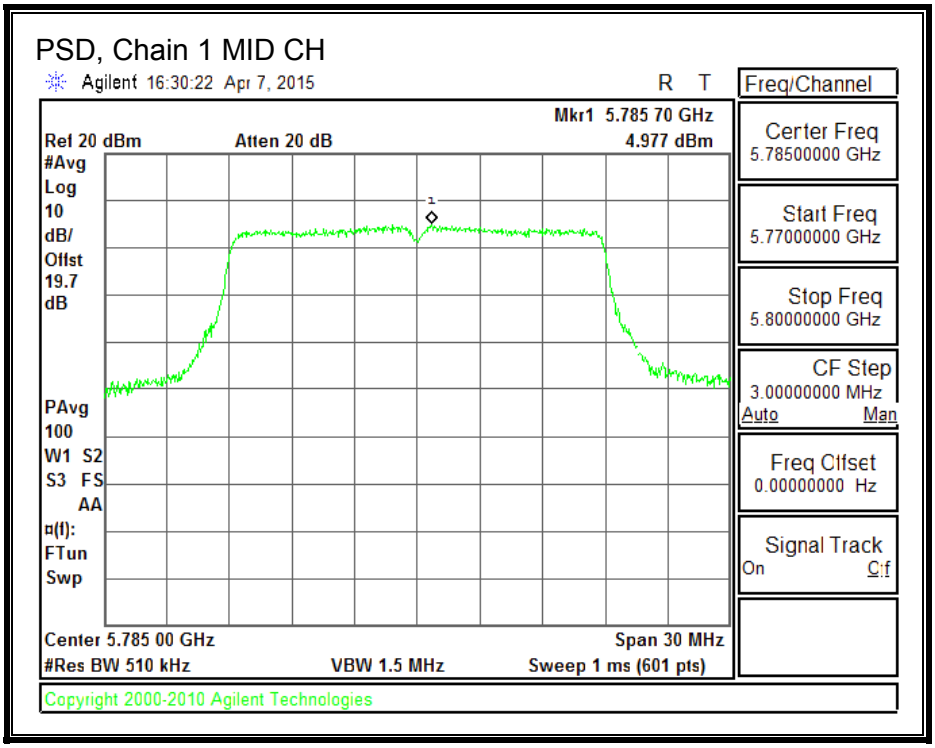




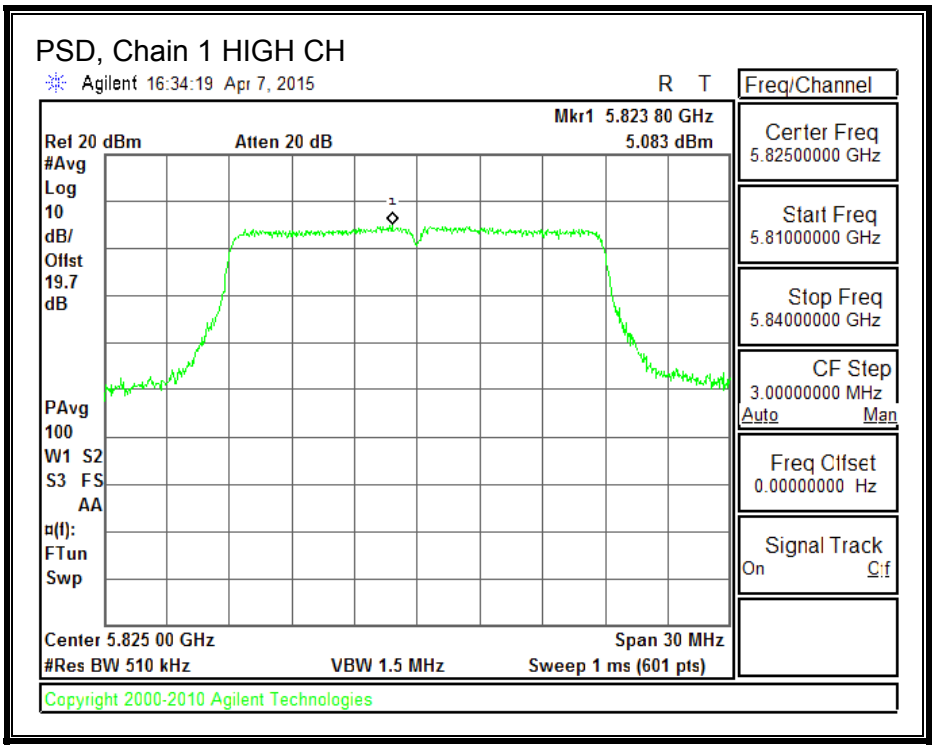
PSD, Chain 1



PSD, Chain 1 MID CH



PSD, Chain 1 HIGH CH



8.56. 802.11n HT20 STBC 2TX MODE IN THE 5.8 GHz BAND

8.56.1. 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.

DIRECTIONAL ANTENNA GAIN

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

Chain 0 Antenna Gain (dBi)	Chain 2 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
3.09	4.86	5.06

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Power Limit (dBm)
Low	5745	5.06	30.00
Mid	5785	5.06	30.00
High	5825	5.06	30.00

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	13.00	13.10	16.06	30.00	-13.94
Mid	5785	17.45	17.60	20.54	30.00	-9.46
High	5825	16.10	16.20	19.16	30.00	-10.84

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

8.56.2. Maximum Power Spectral Density (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 uncorrelated and the antenna gain is unequal among the chains. The directional gain is:

Chain 0 Antenna Gain (dBi)	Chain 2 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
3.09	4.86	5.06

RESULTS

Antenna Gain and Limits

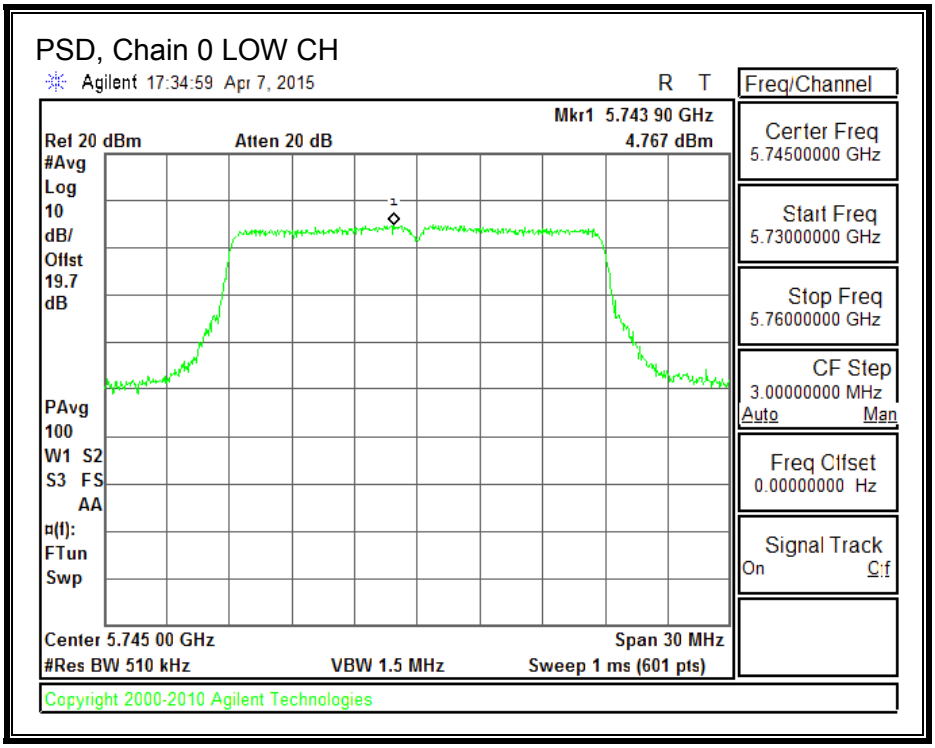
Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5745	5.06	30.00
Mid	5785	5.06	30.00
High	5825	5.06	30.00

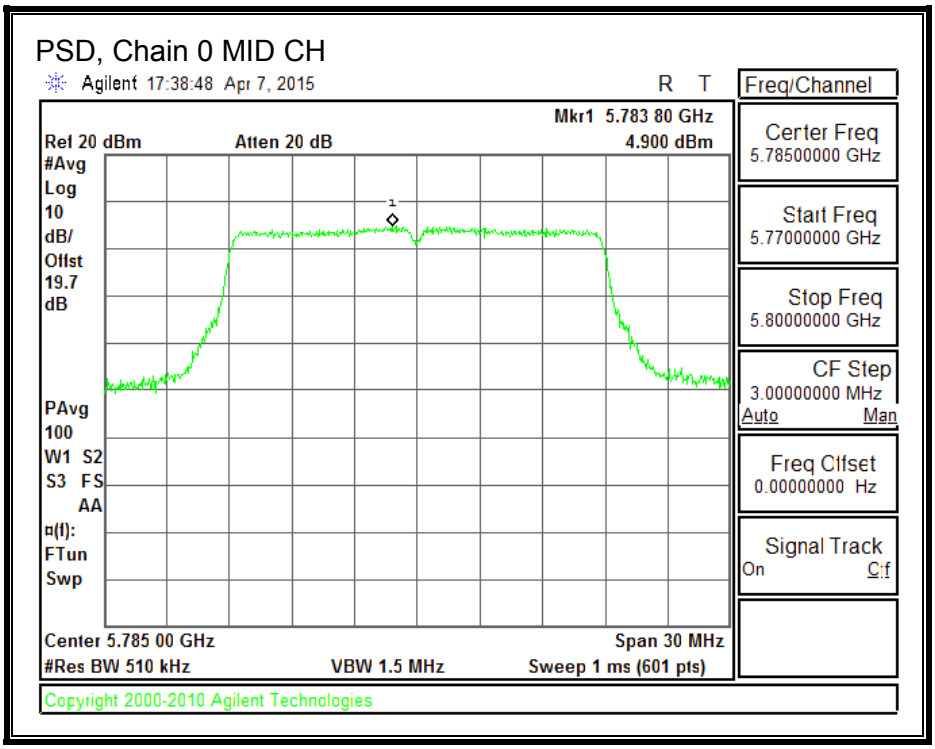
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD

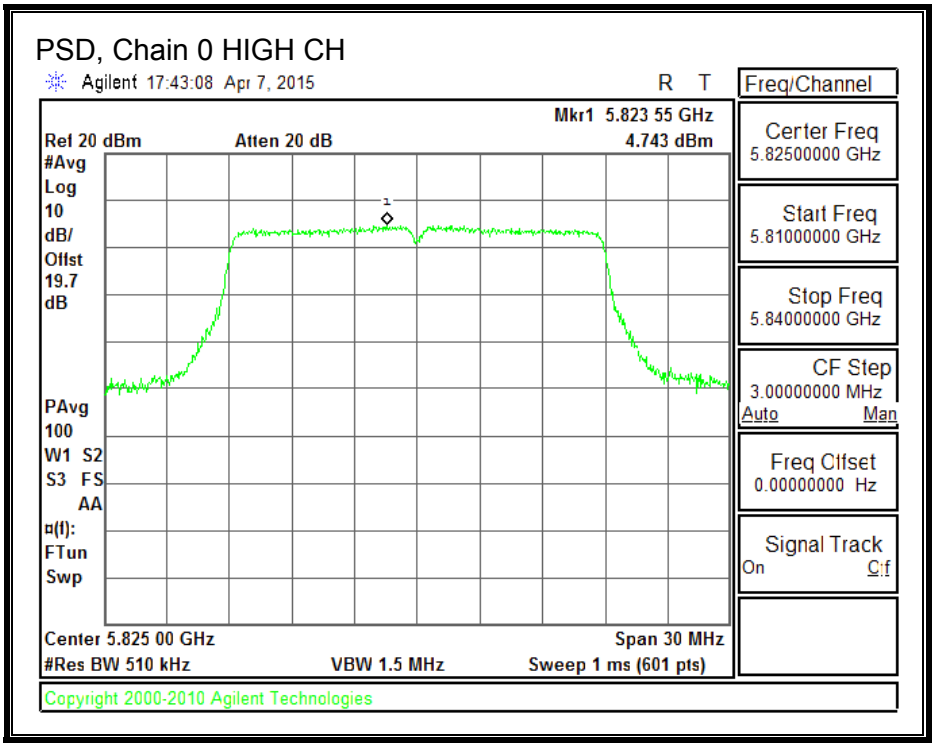
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5745	4.767	4.857	7.823	30.00	-22.18
Mid	5785	4.900	4.777	7.849	30.00	-22.15
High	5825	4.743	5.017	7.892	30.00	-22.11

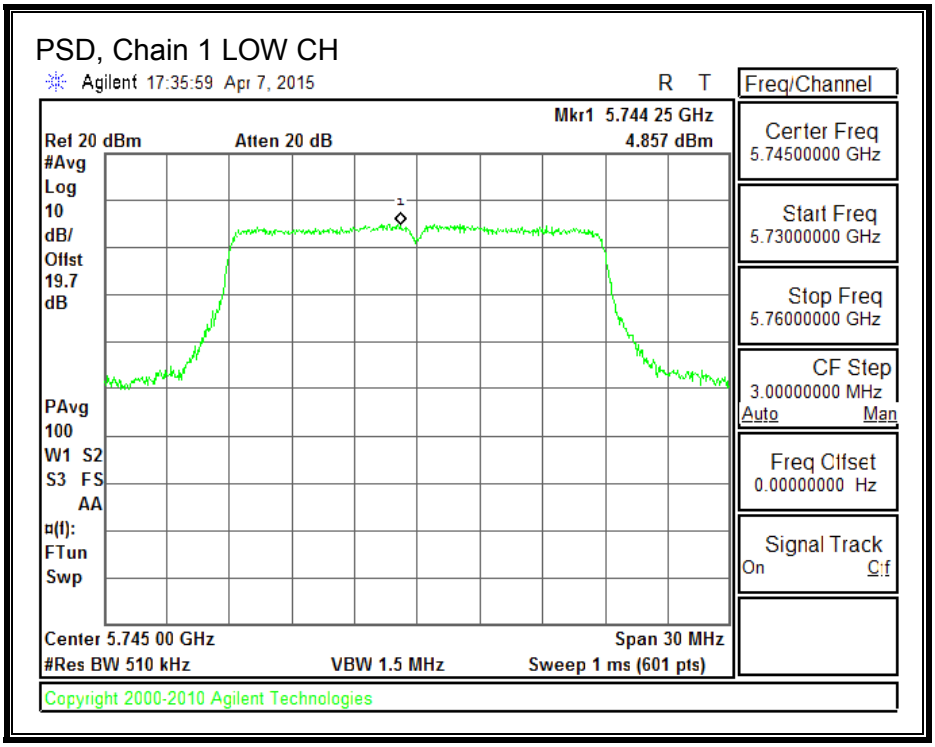
PSD, Chain 0



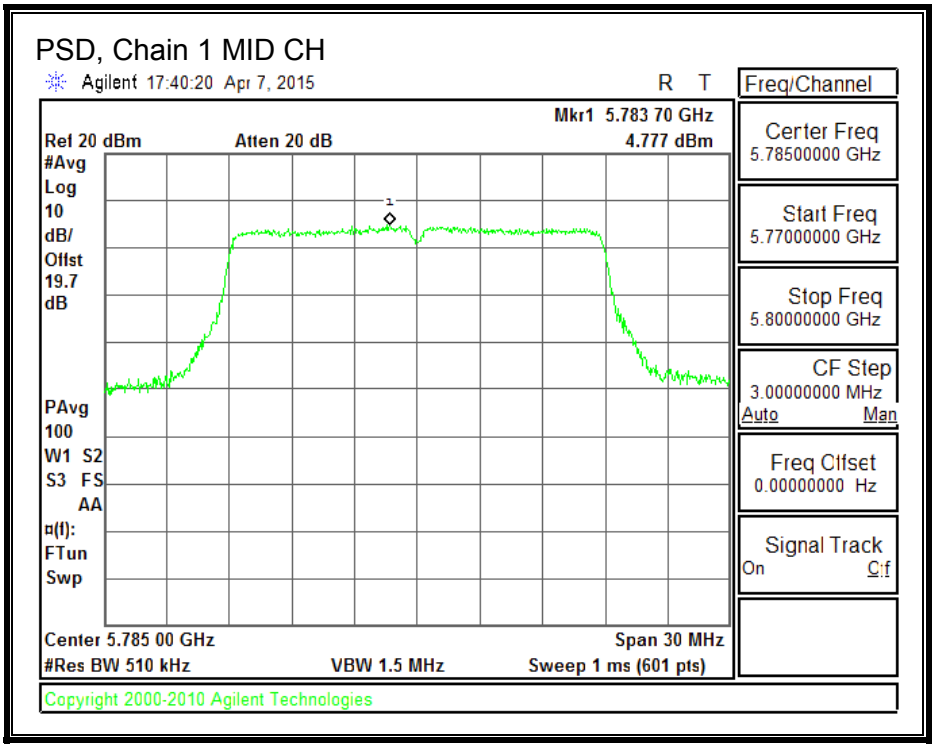




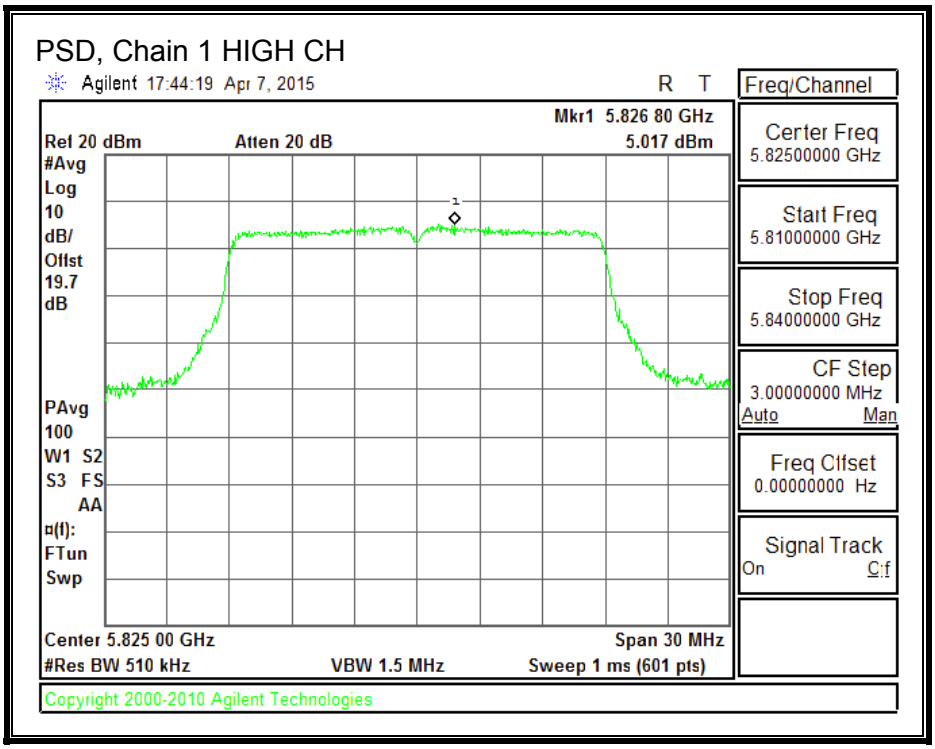
PSD, Chain 1



PSD, Chain 1 MID CH



PSD, Chain 1 HIGH CH



8.57. 802.11n HT20 TxBF 2TX MODE IN THE 5.8 GHz BAND

8.57.1. 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.

DIRECTIONAL ANTENNA GAIN

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

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
3.09	4.86	8.03

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Power Limit (dBm)
Low	5745	8.03	27.97
High	5825	8.03	27.97

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	12.10	12.00	15.06	27.97	-12.91
Mid	5785	17.52	17.58	20.56	28.97	-8.41
High	5825	15.60	15.80	18.71	27.97	-9.26

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

8.57.2. Maximum Power Spectral Density (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

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

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
3.09	4.86	8.03

RESULTS

Antenna Gain and Limits

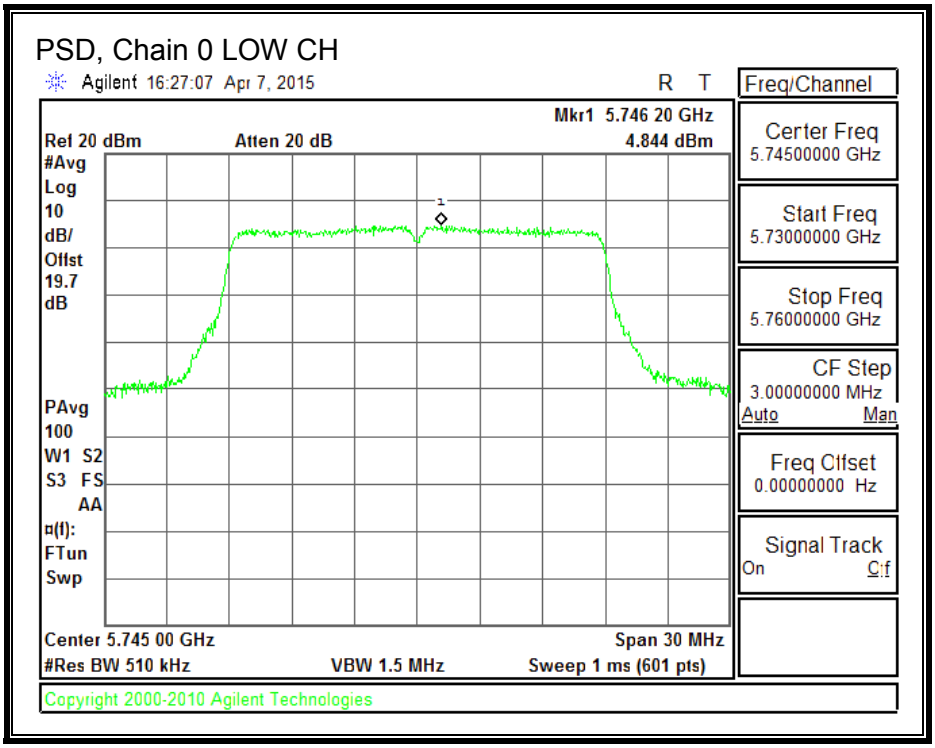
Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5745	8.03	27.97
Mid	5785	8.03	27.97
High	5825	8.03	27.97

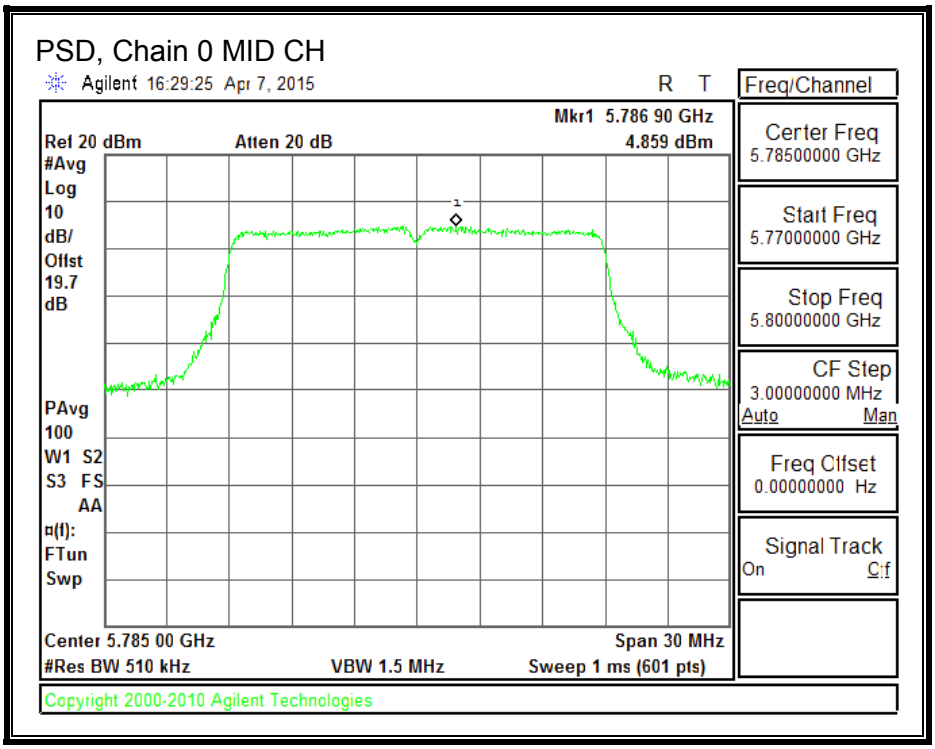
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD

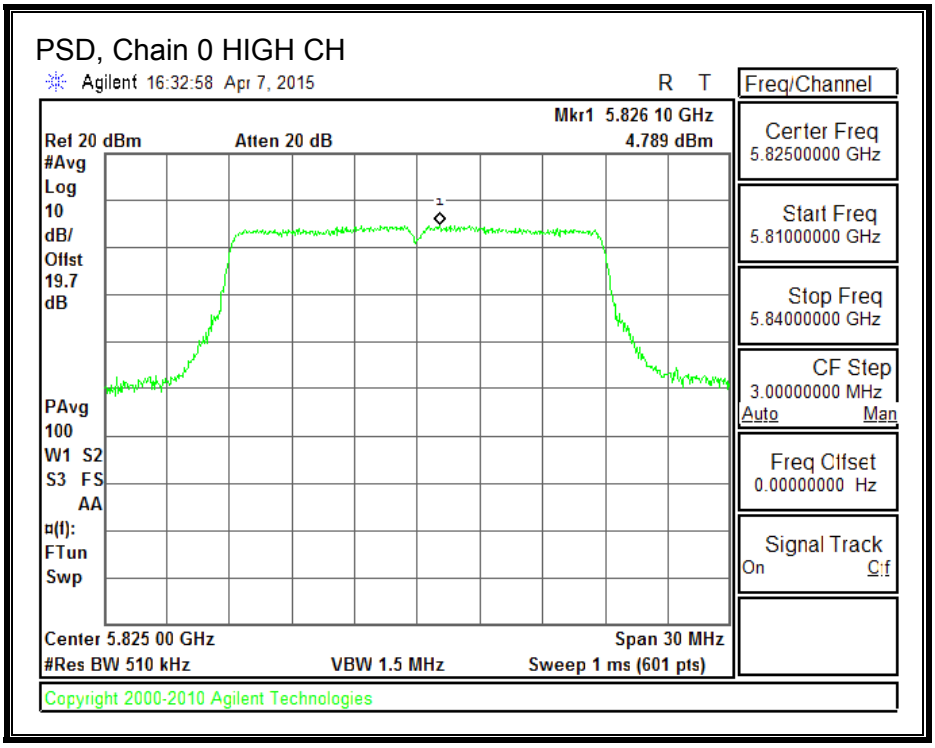
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5745	4.844	4.644	7.755	27.97	-20.21
Mid	5785	4.859	4.977	7.929	27.97	-20.04
High	5825	4.789	5.083	7.949	27.97	-20.02

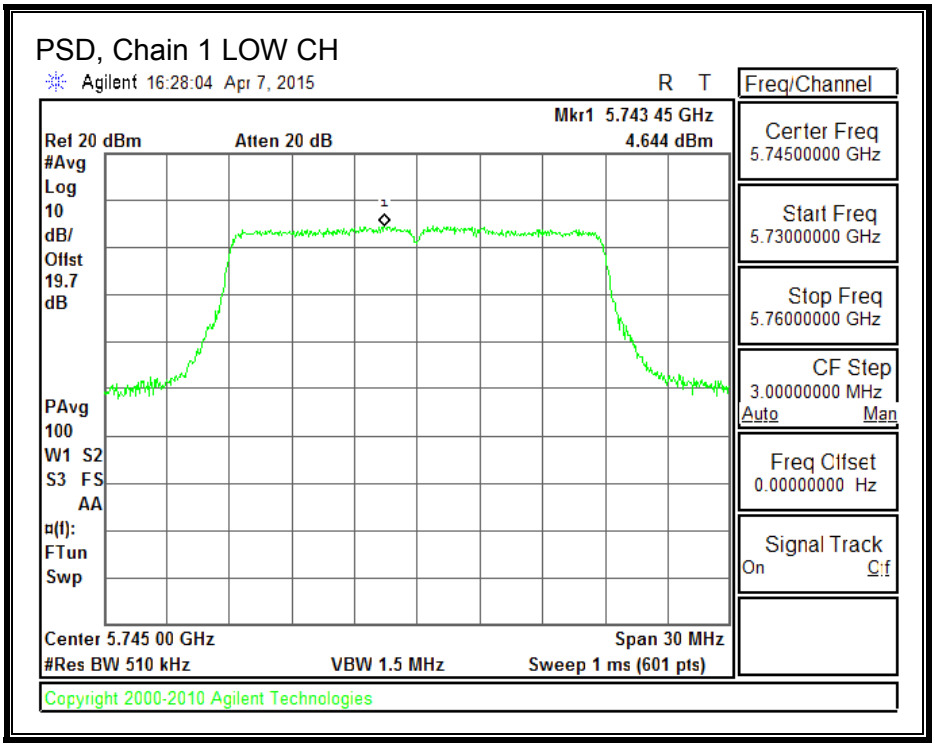
PSD, Chain 0



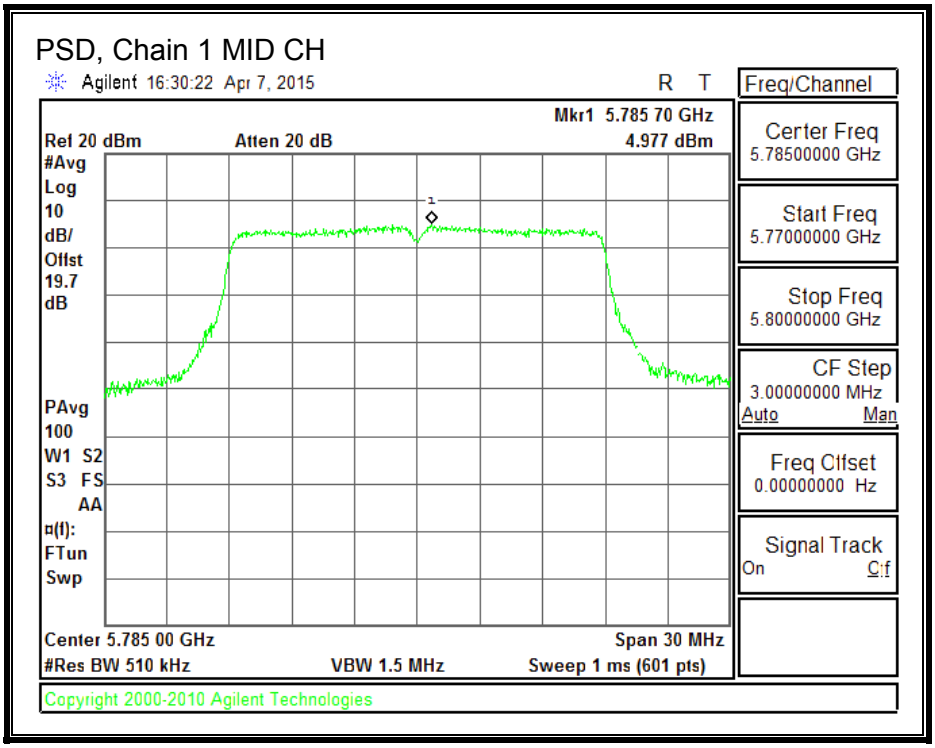




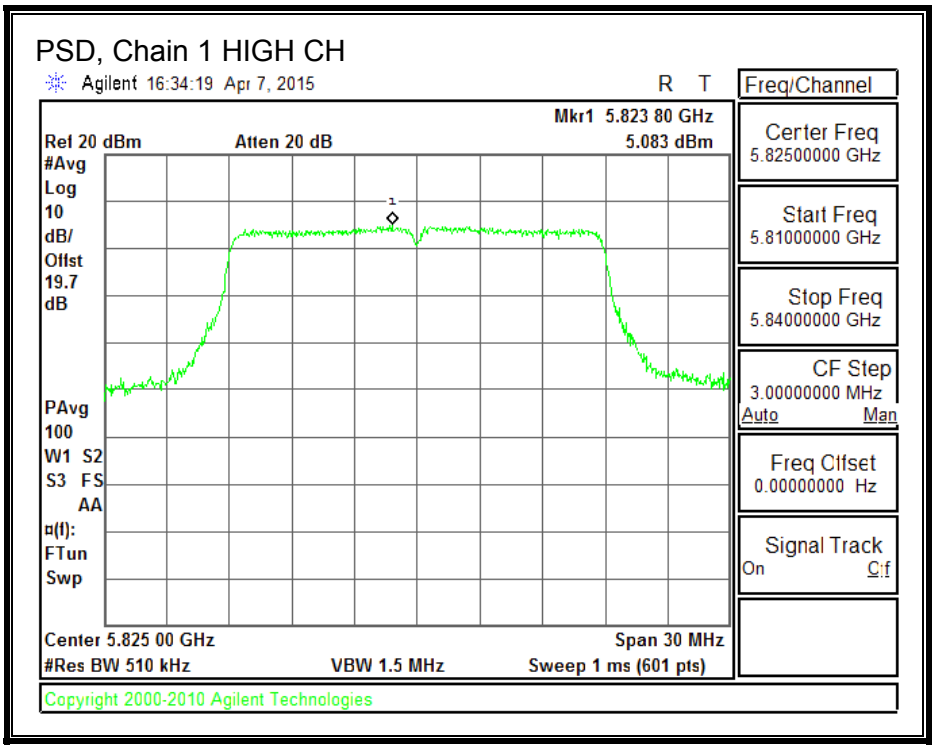
PSD, Chain 1



PSD, Chain 1 MID CH



PSD, Chain 1 HIGH CH



8.58. 802.11n HT20 CDD 3TX MODE IN THE 5.8 GHz BAND

8.58.1. 6 dB BANDWIDTH

LIMITS

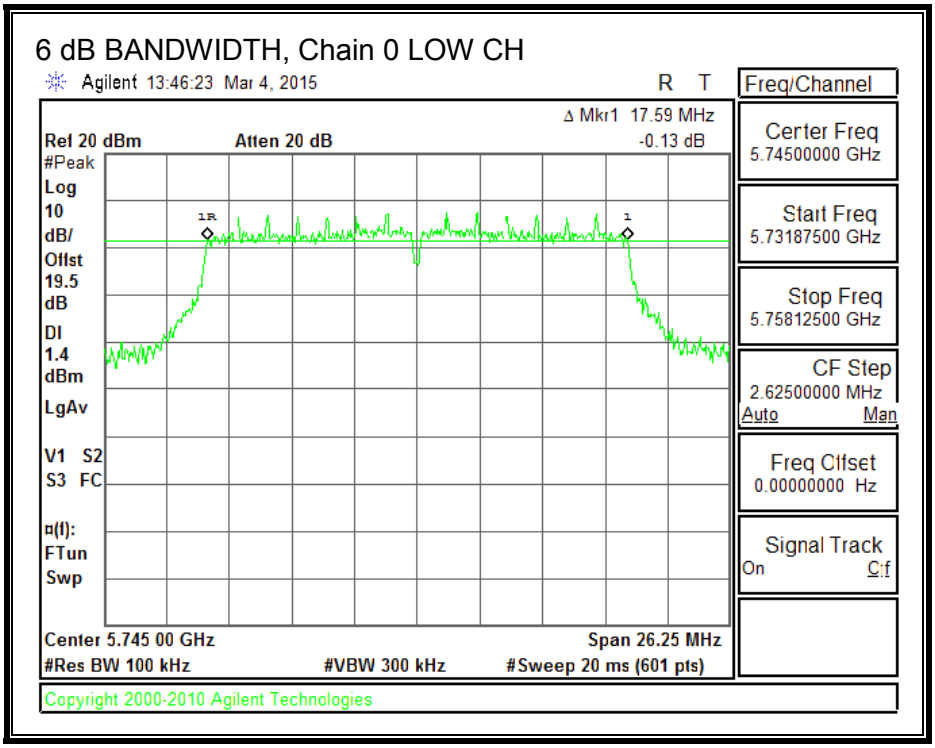
FCC §15.407 (e)

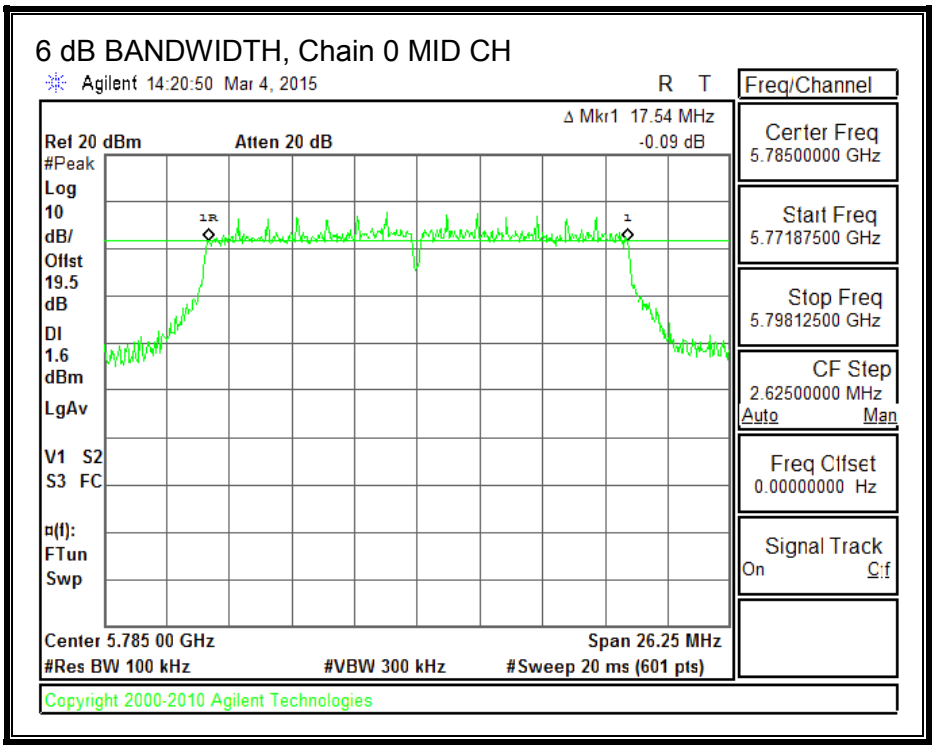
The minimum 6 dB bandwidth shall be at least 500 kHz.

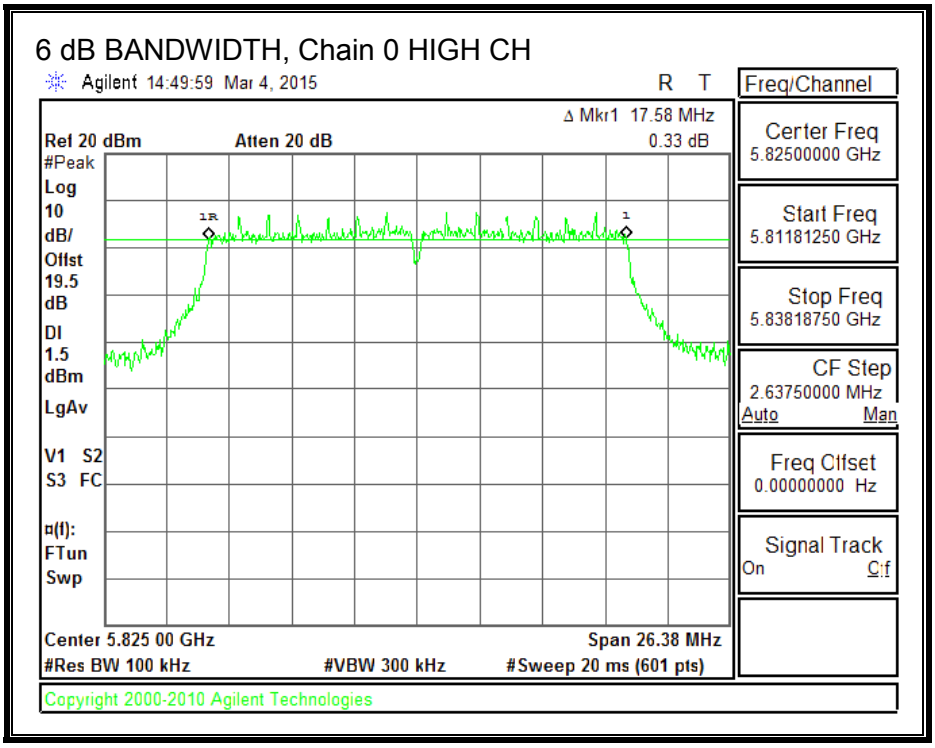
RESULTS

Channel	Frequency (MHz)	6 dB BW Chain 0 (MHz)	6 dB BW Chain 1 (MHz)	6 dB BW Chain 2 (MHz)	Minimum Limit (MHz)
Low	5745	17.59	17.58	17.58	0.5
Mid	5785	17.54	17.58	17.58	0.5
High	5825	17.58	17.62	17.58	0.5

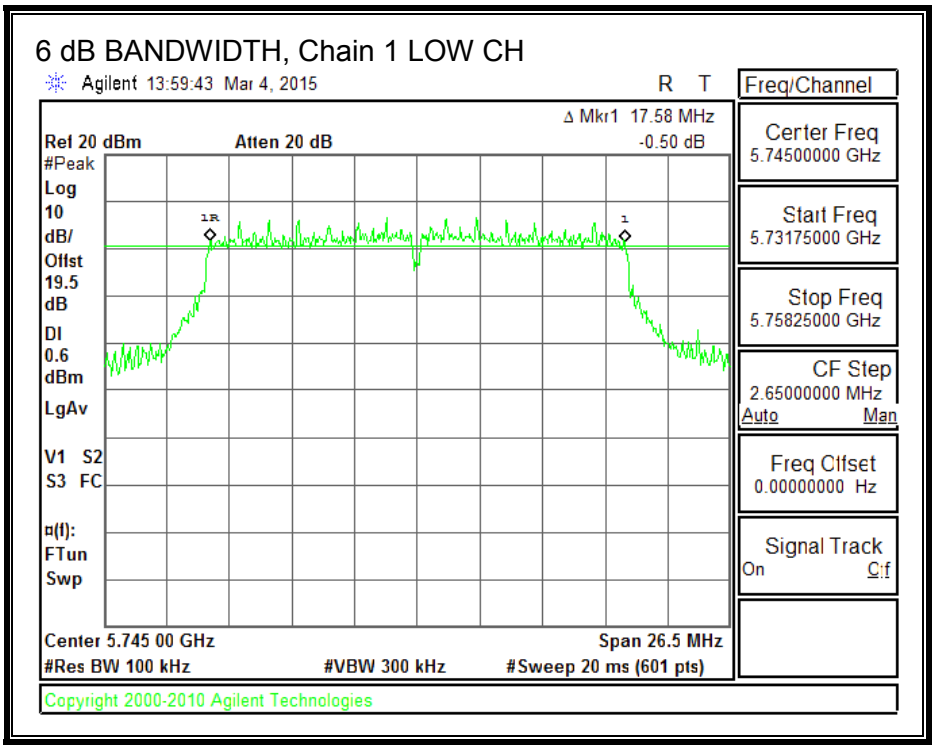
6 dB BANDWIDTH, Chain 0

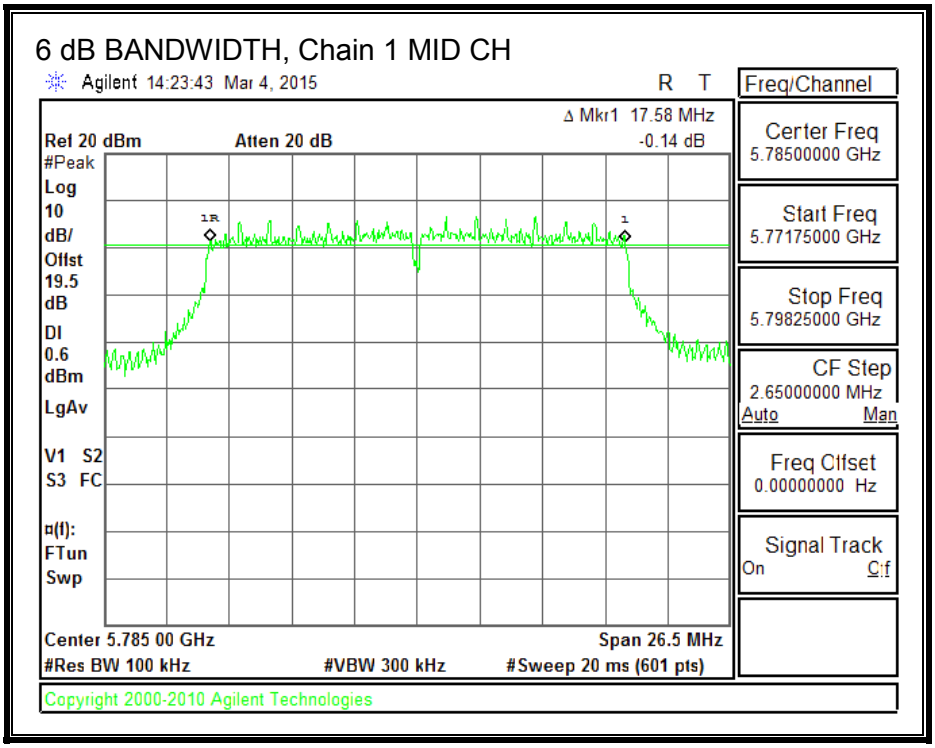


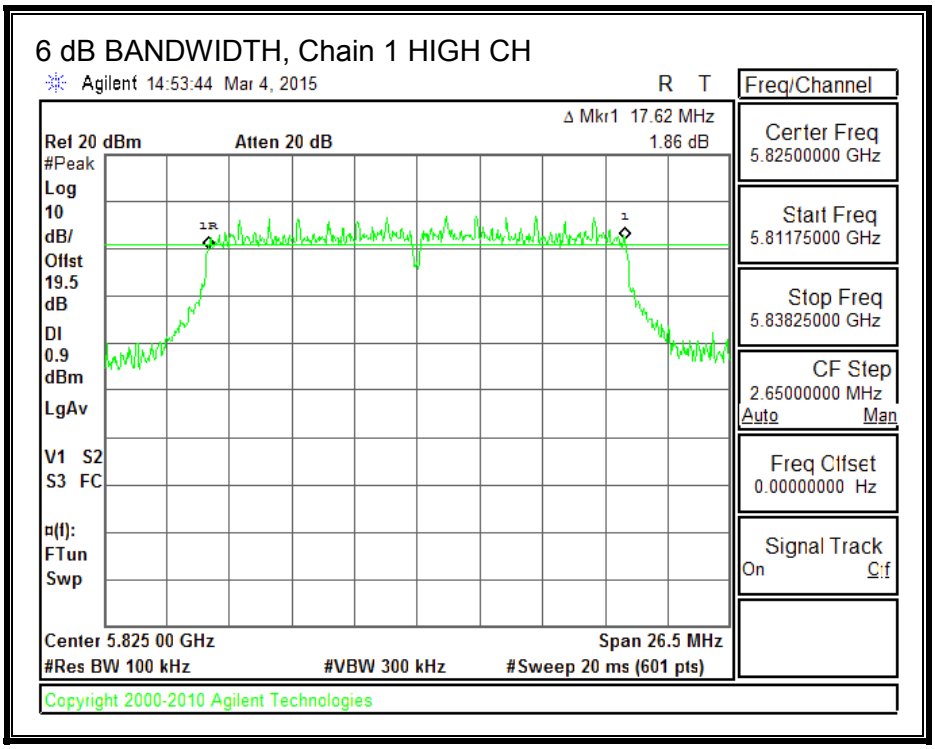




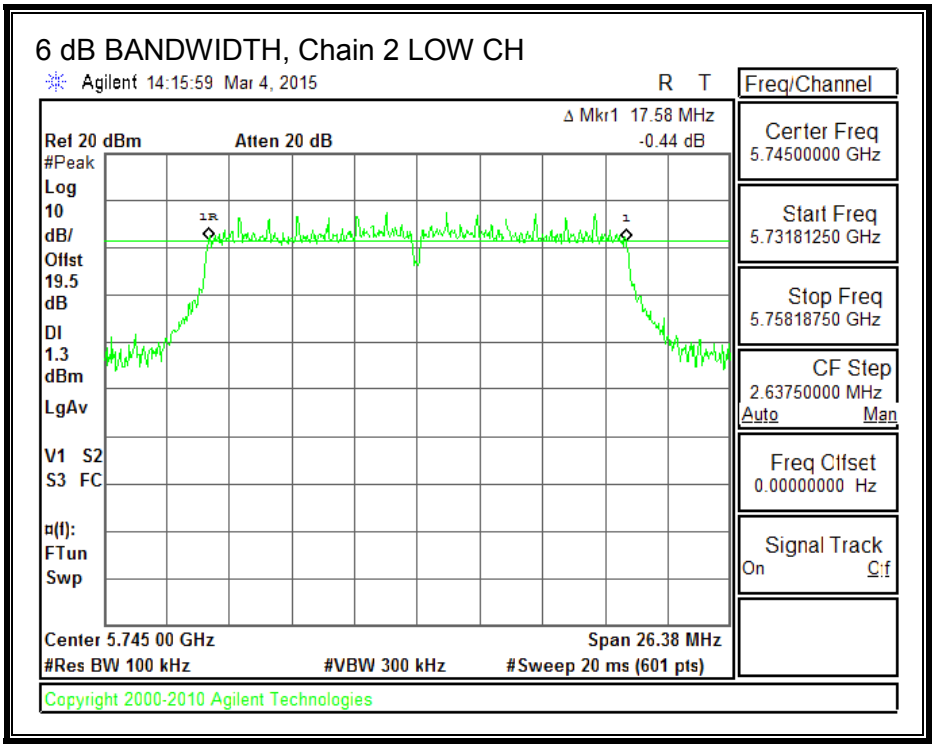
6 dB BANDWIDTH, Chain 1

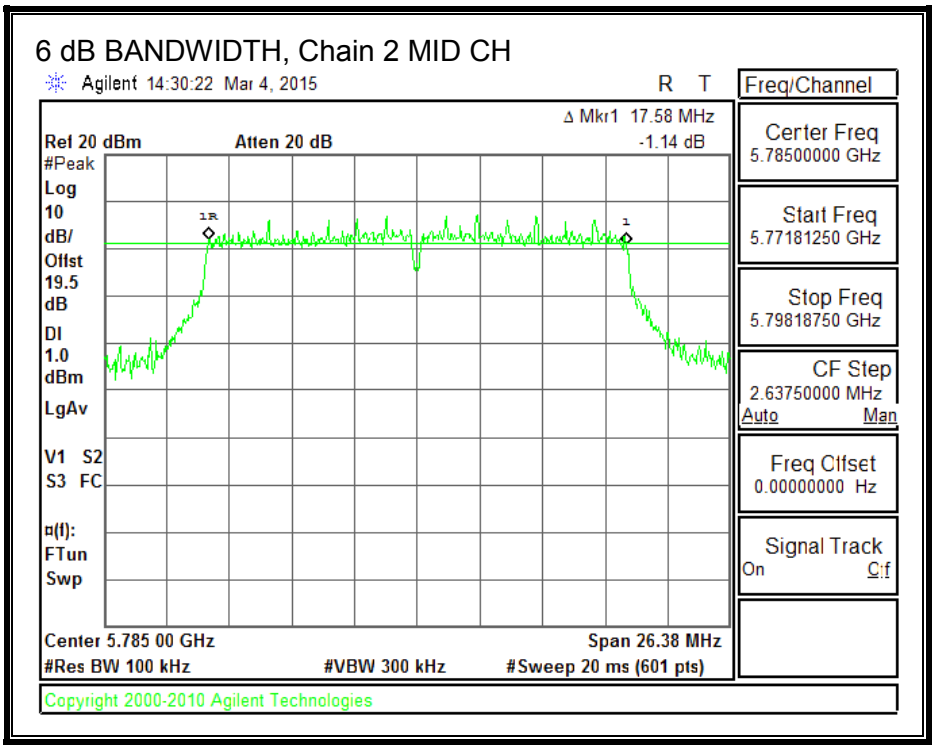




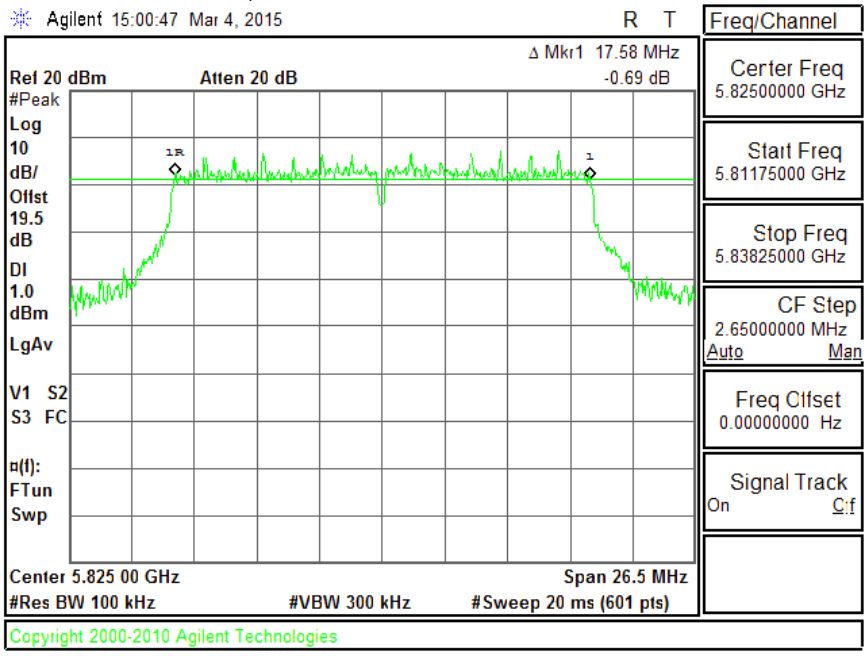


6 dB BANDWIDTH, Chain 2





6 dB BANDWIDTH, Chain 2 HIGH CH



8.58.2. 99% BANDWIDTH

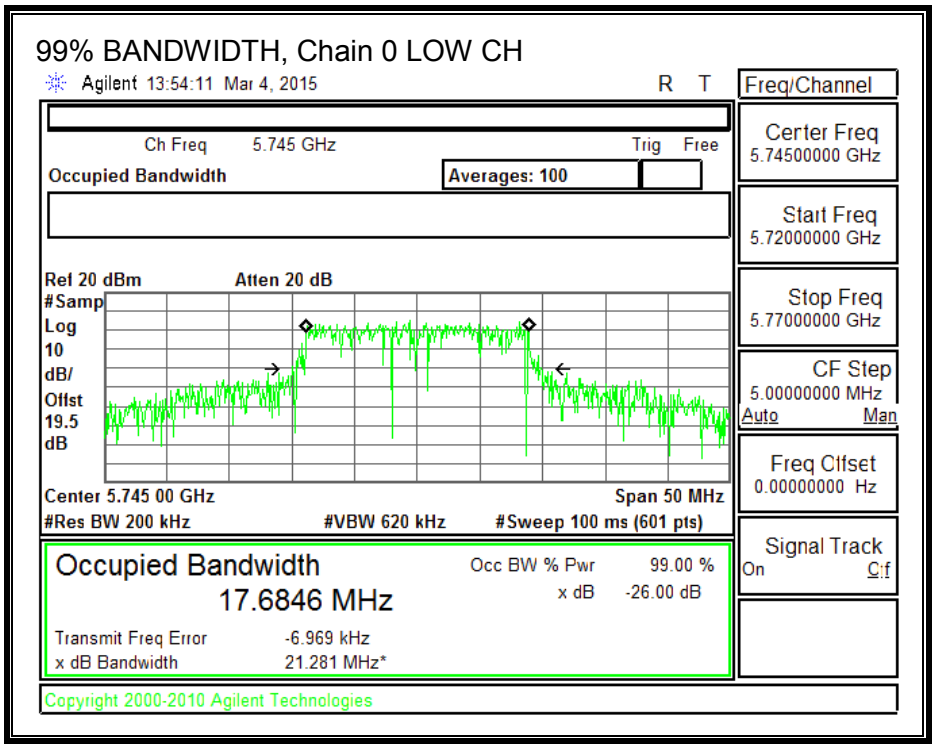
LIMITS

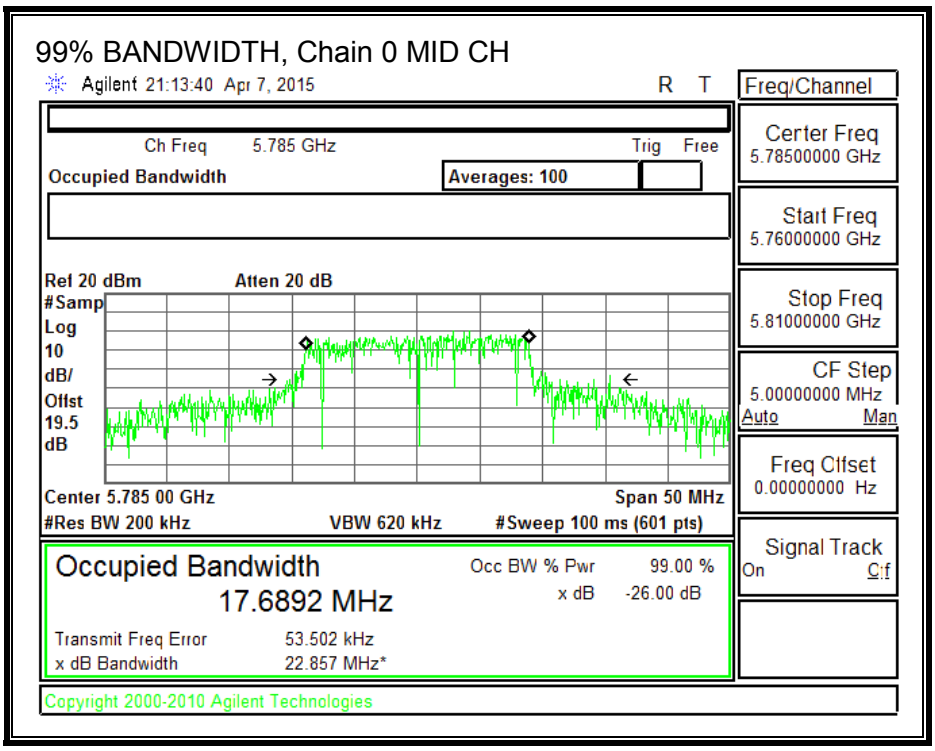
None; for reporting purposes only.

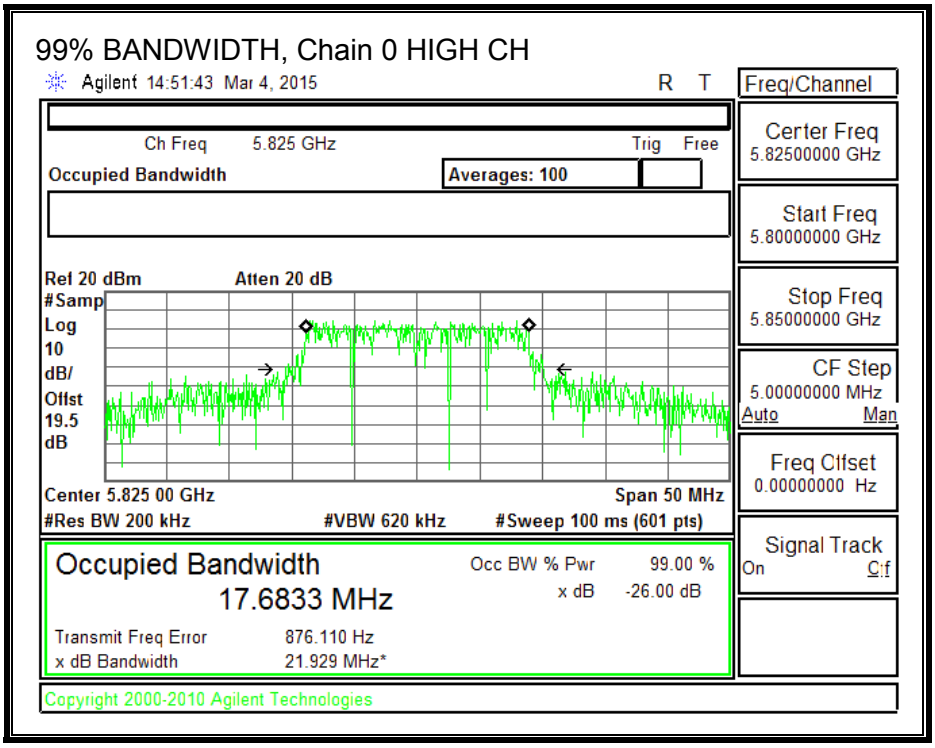
RESULTS

Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)	99% BW Chain 2 (MHz)
Low	5745	17.6846	17.6716	17.6789
Mid	5785	17.6892	17.6777	17.6715
High	5825	17.6833	17.6817	17.6782

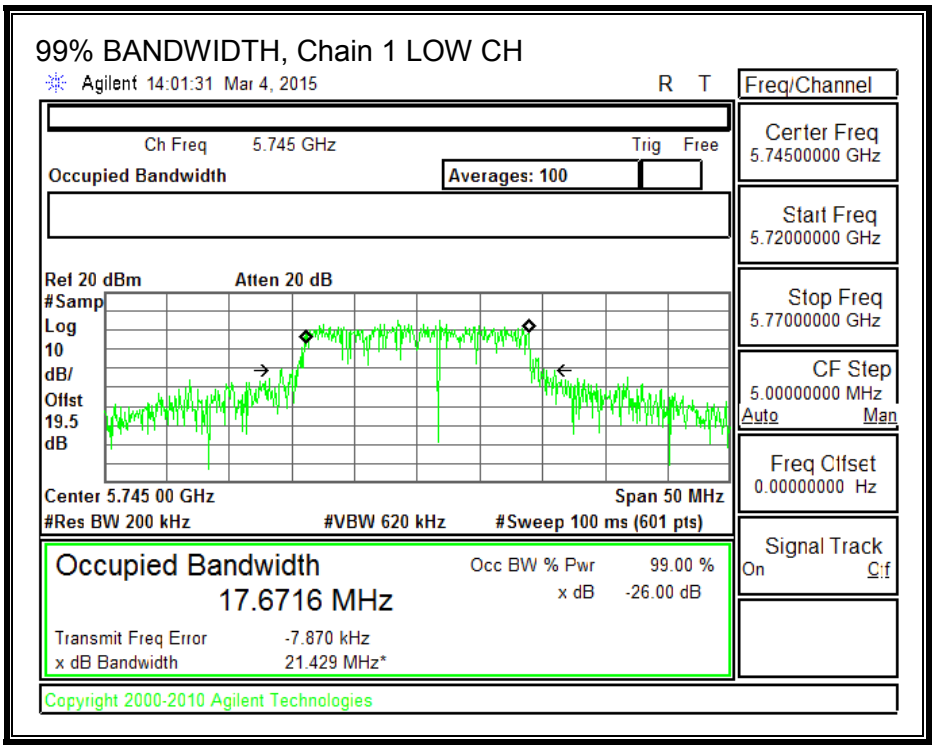
99% BANDWIDTH, Chain 0

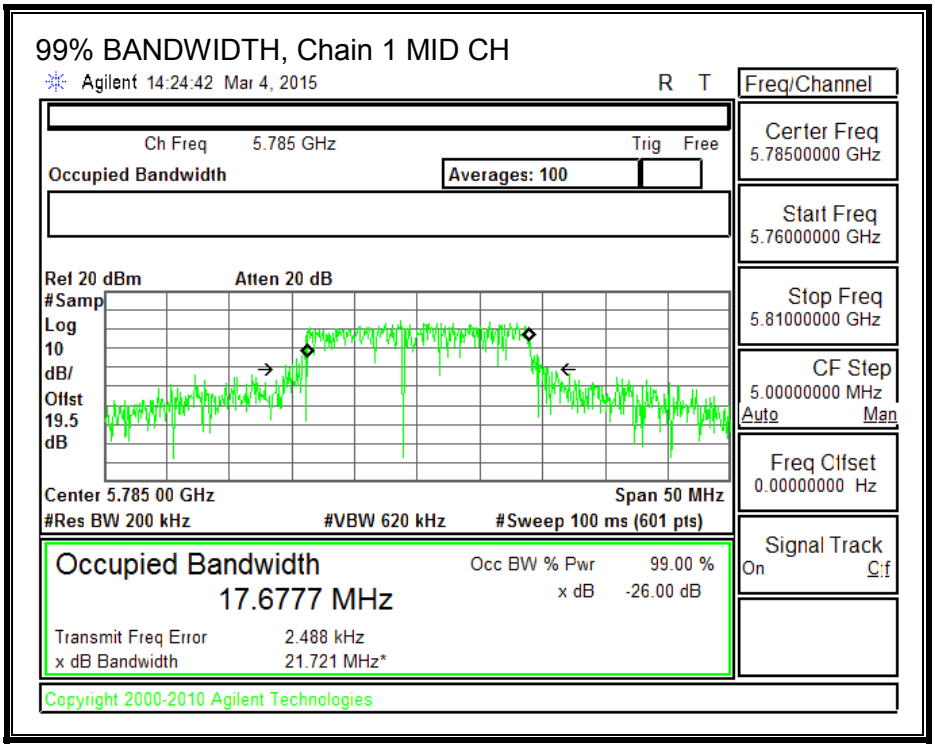


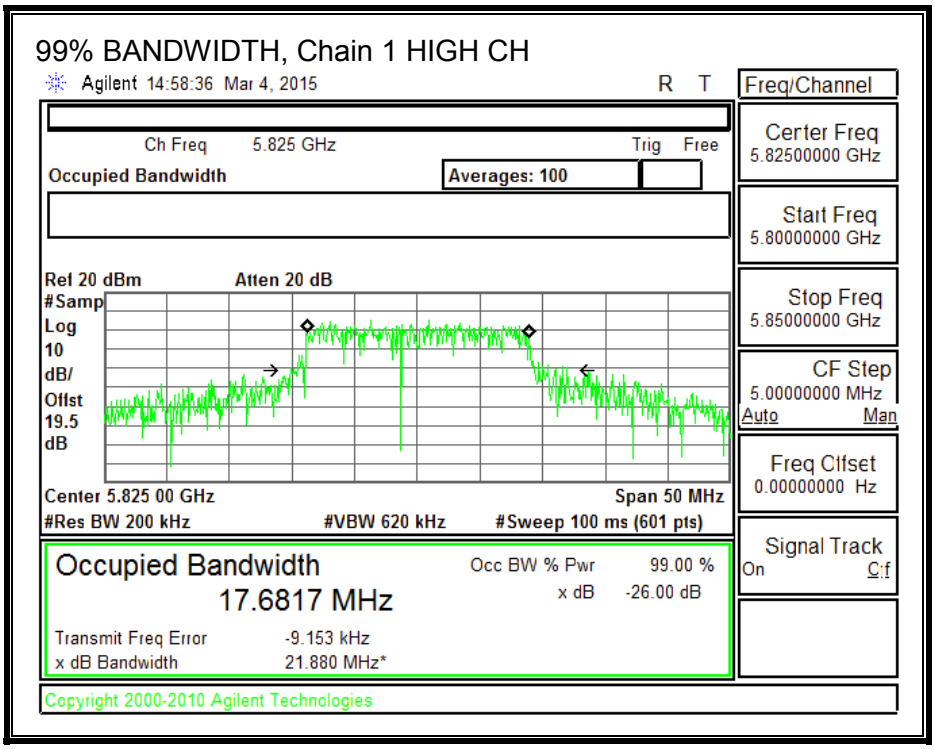




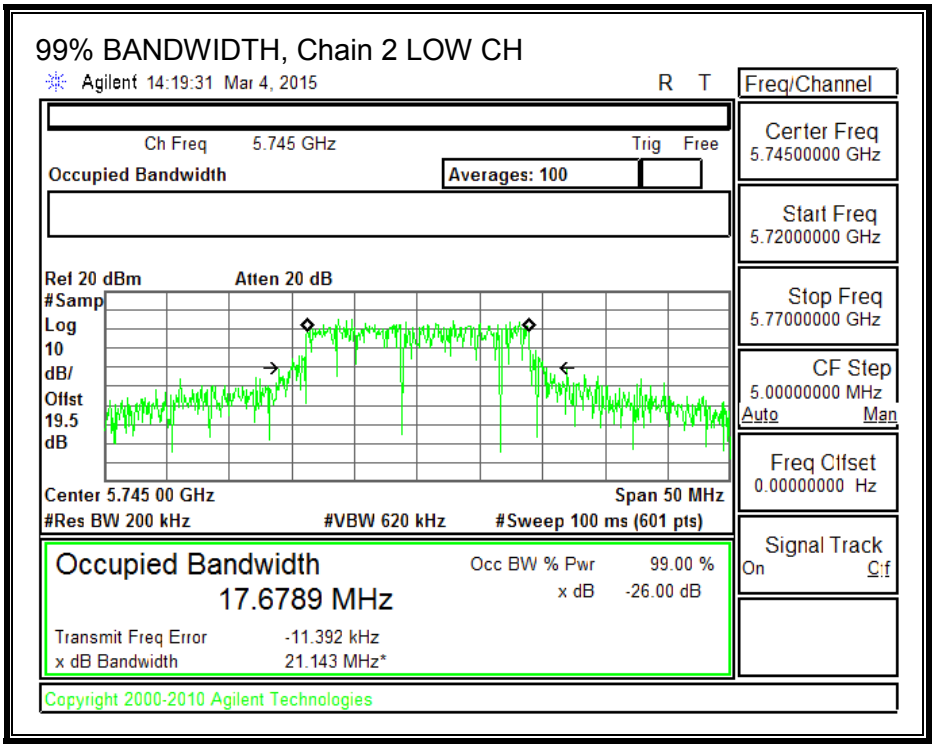
99% BANDWIDTH, Chain 1

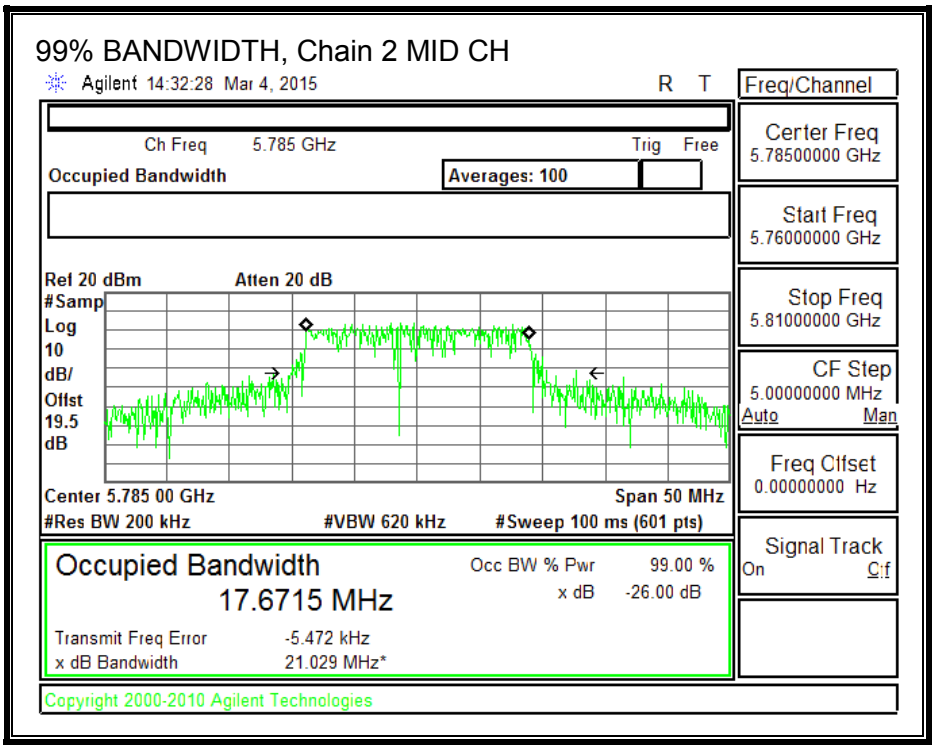


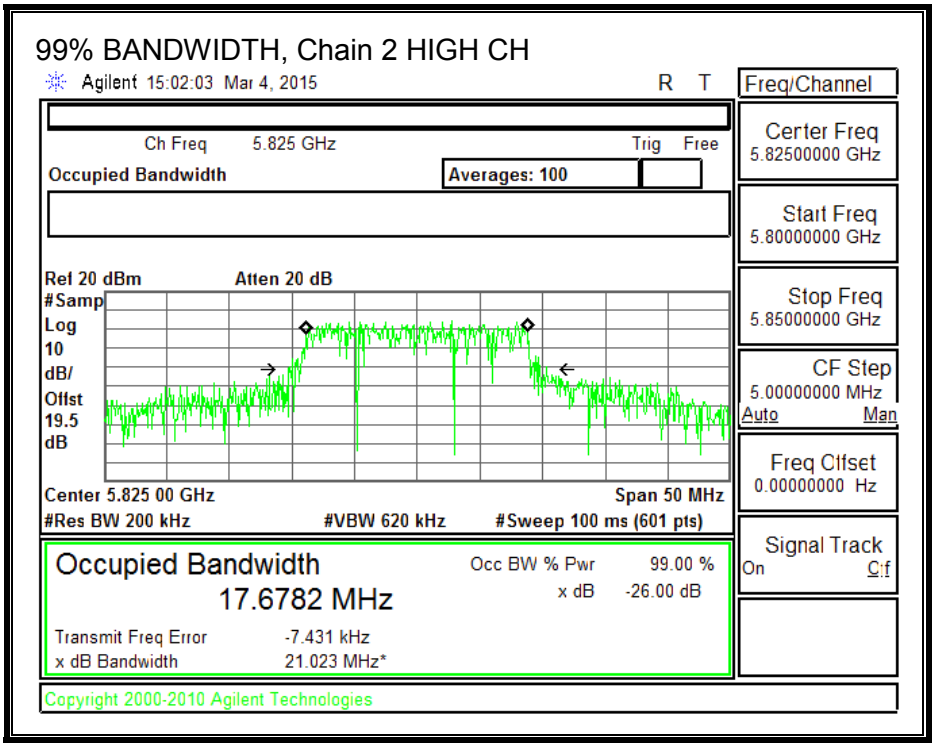




99% BANDWIDTH, Chain 2







8.58.3. 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.

DIRECTIONAL ANTENNA GAIN

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

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Chain 2 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
3.09	1.95	4.86	4.47

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)
Low	5745	3.47	30.00
153	5765	3.47	30.00
Mid	5785	3.47	30.00
High	5825	3.47	30.00

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Chain 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	12.60	12.80	12.30	17.34	30.00	-12.66
153	5765	18.30	18.20	17.60	22.82	30.00	-7.18
Mid	5785	18.60	18.48	17.85	23.09	30.00	-6.91
High	5825	16.50	16.60	15.80	21.09	30.00	-8.91

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

8.58.4. Maximum Power Spectral Density (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:

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Chain 2 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
3.09	1.95	4.86	9.15

RESULTS

Antenna Gain and Limit

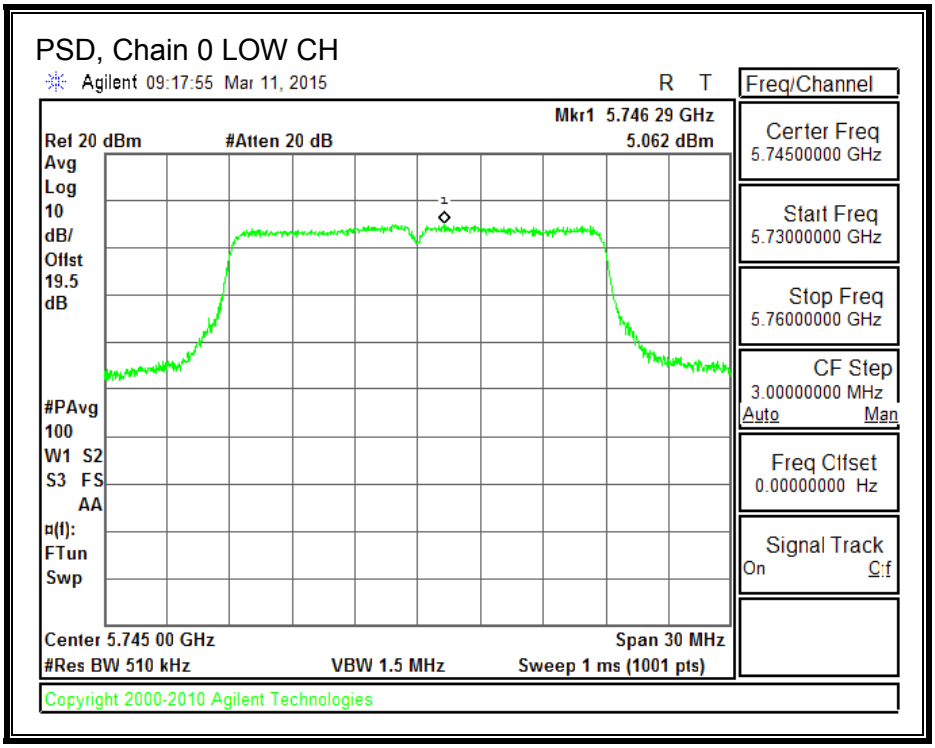
Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5745	9.15	26.85
Mid	5785	9.15	26.85
High	5825	9.15	26.85

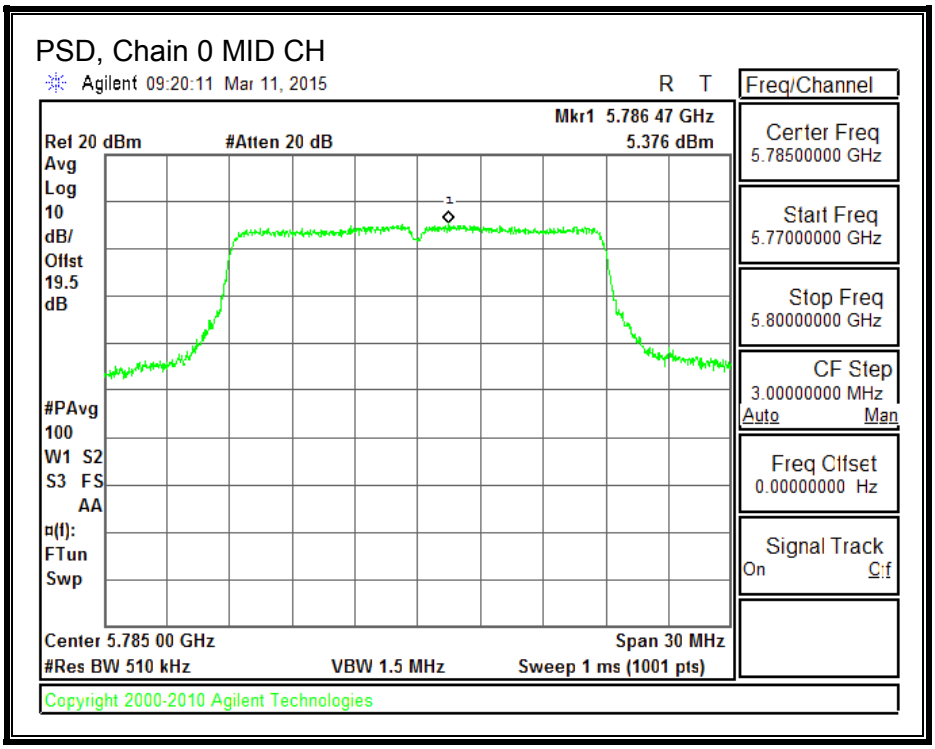
Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

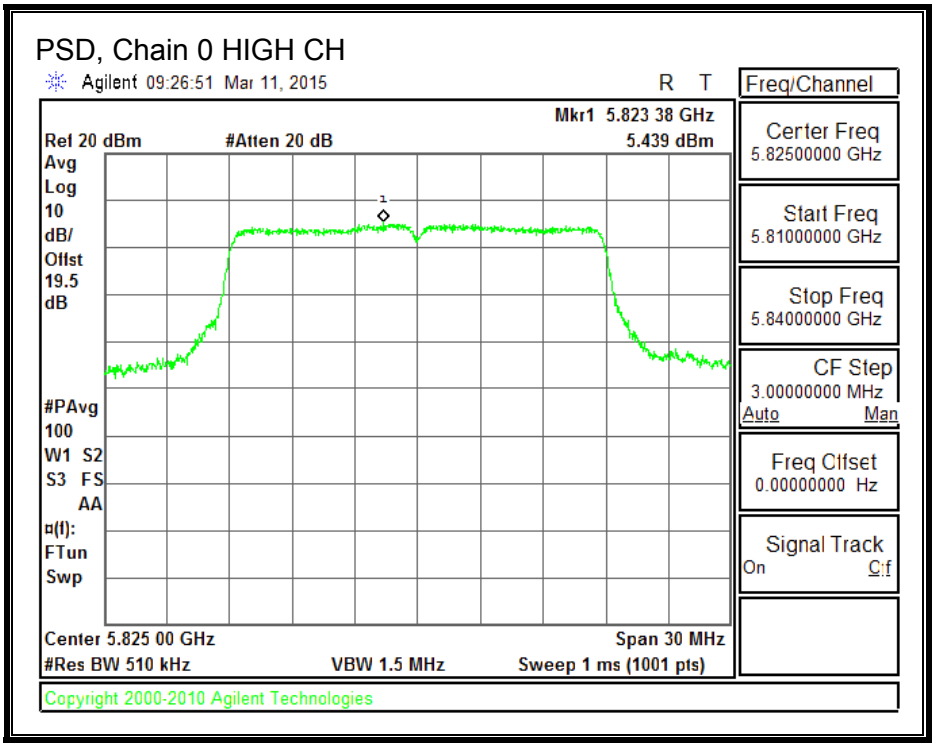
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Chain 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5745	5.062	4.725	4.316	9.48	26.85	-17.37
Mid	5785	5.376	5.159	4.710	9.86	26.85	-16.99
High	5825	5.439	5.073	5.008	9.95	26.85	-16.90

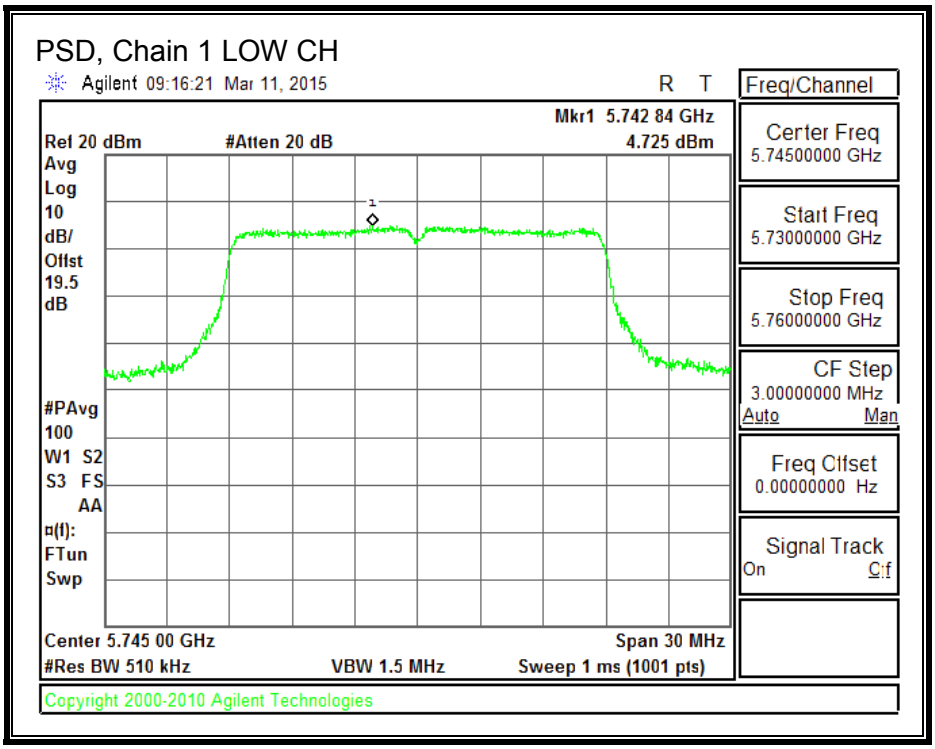
PSD, Chain 0

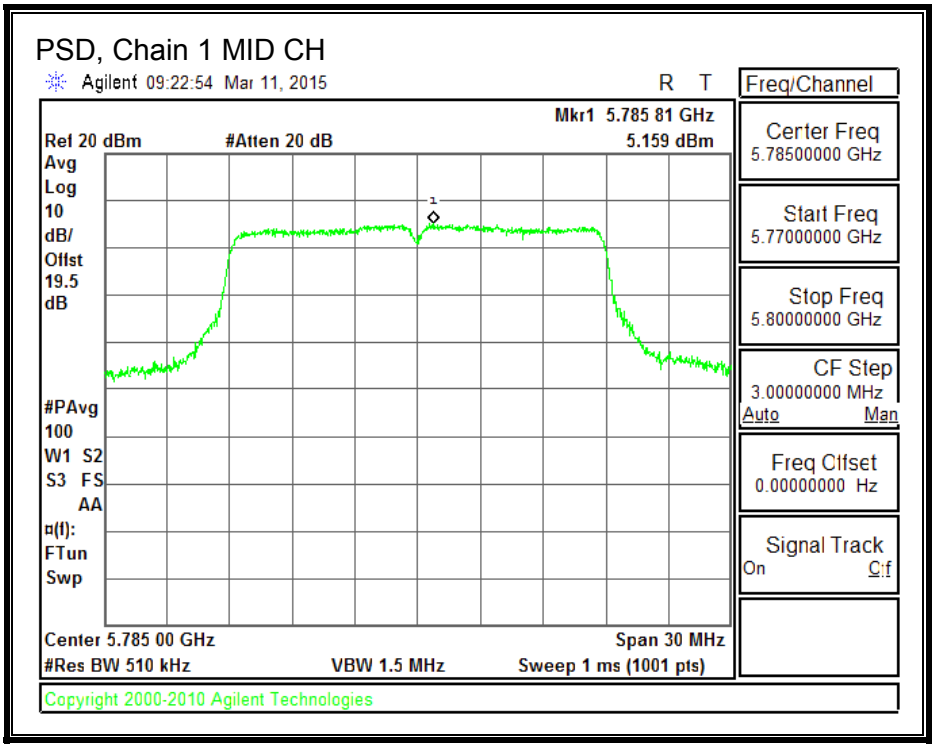


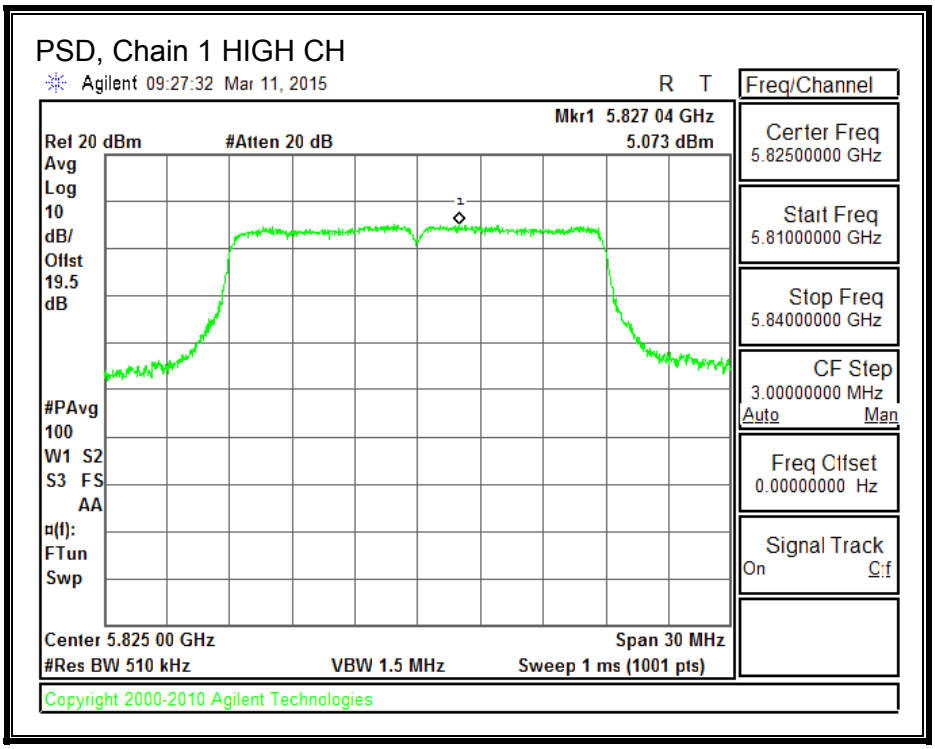




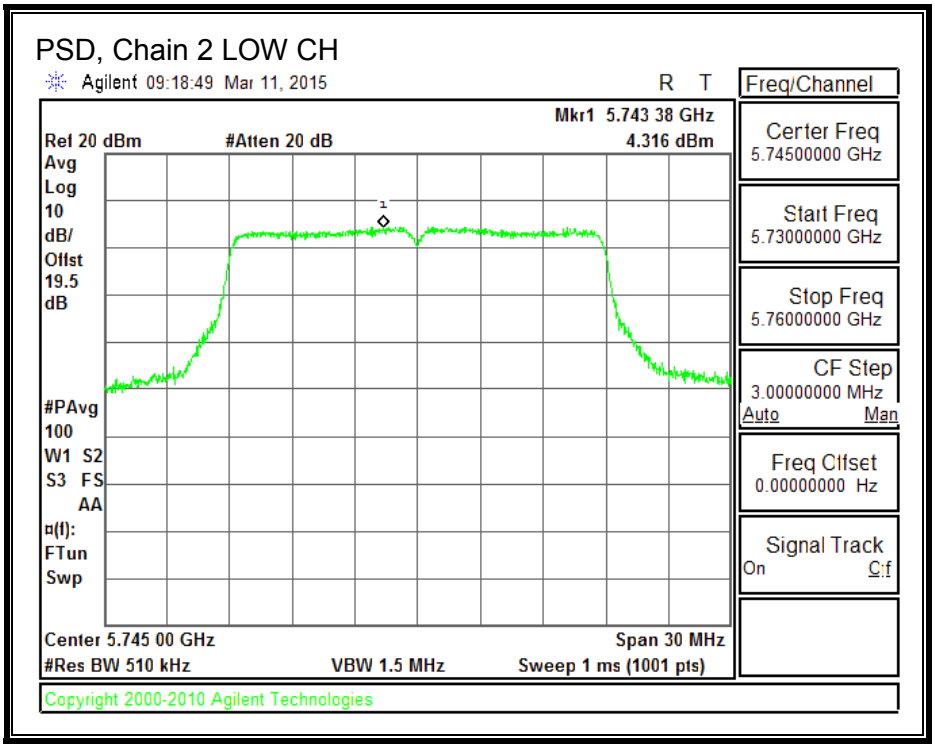
PSD, Chain 1

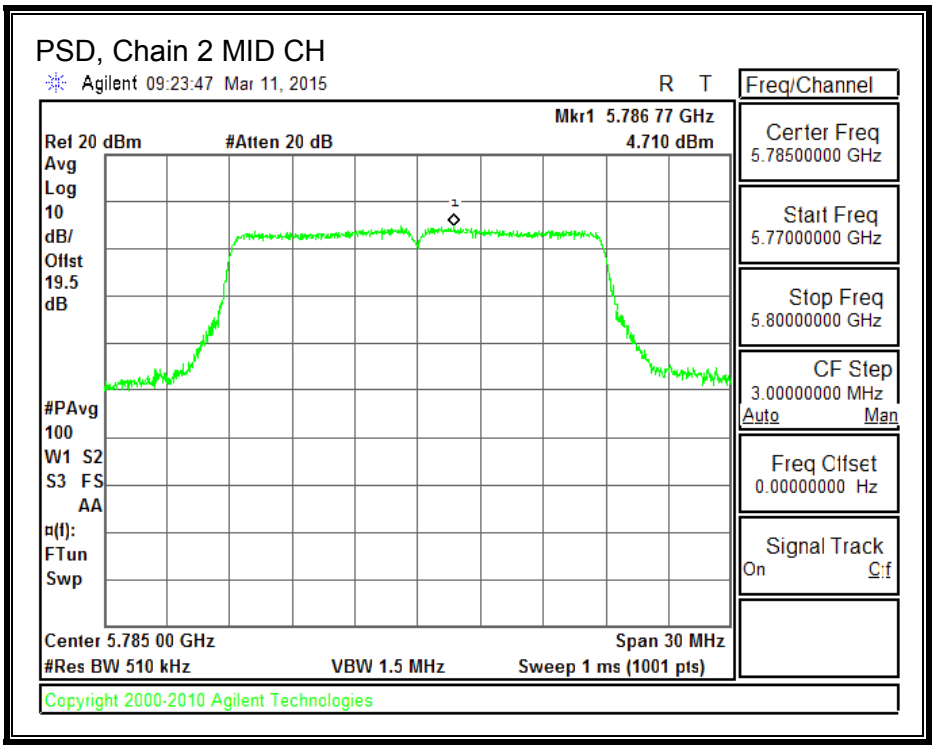


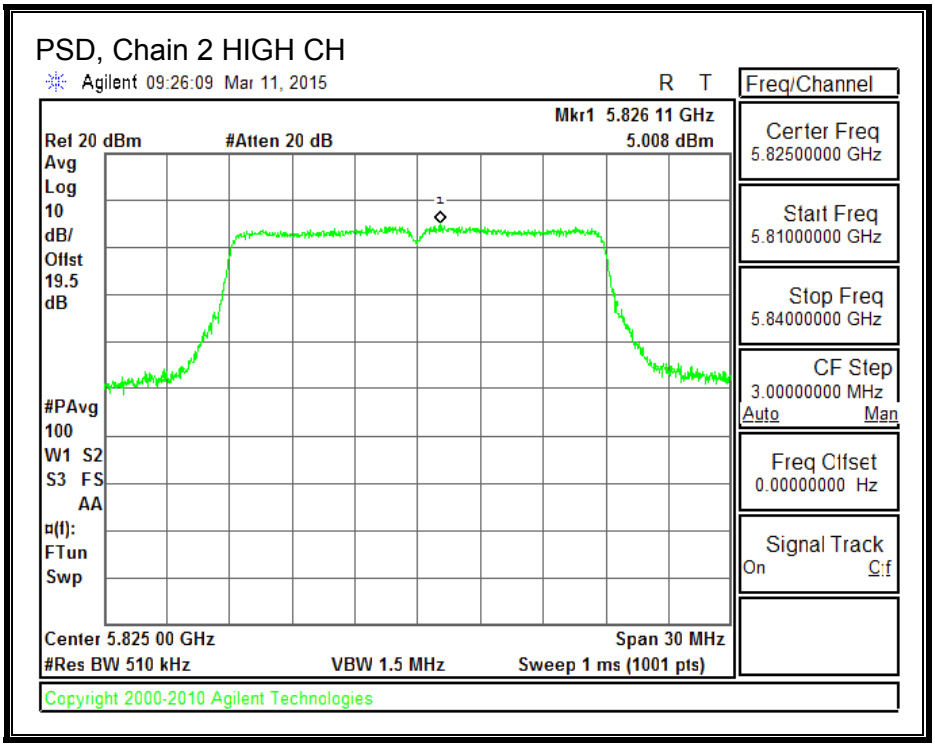




PSD, Chain 2







8.59. 802.11n HT20 TxBF 3TX MODE IN THE 5.8 GHz BAND

8.59.1. 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.

DIRECTIONAL ANTENNA GAIN

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

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Chain 2 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
3.09	1.95	4.86	9.15

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)
Low	5745	8.15	27.85
Mid	5785	8.15	27.85
High	5825	8.15	27.85

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Chain 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	12.30	12.10	11.90	16.87	27.85	-10.98
Mid	5785	18.60	18.48	17.85	23.09	27.85	-4.76
High	5825	16.50	16.30	16.10	21.07	27.85	-6.78

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

8.60. 802.11n HT40 1TX MODE IN THE 5.8 GHz BAND

8.60.1. 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.

DIRECTIONAL ANTENNA GAIN

This is SISO mode, AG is the highest (worst-case) = 5.86 dBi

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)
Low	5755	5.86	30.00
High	5795	5.96	30.00

Output Power Results

Channel	Frequency (MHz)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5755	10.50	10.50	30.00	-19.50
High	5795	16.60	16.60	30.00	-13.40

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

8.61. 802.11n HT40 CDD 2TX MODE IN THE 5.8 GHz BAND

8.61.1. 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.

DIRECTIONAL ANTENNA GAIN

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

Chain 0 Antenna Gain (dBi)	Chain 2 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
3.09	4.86	5.06