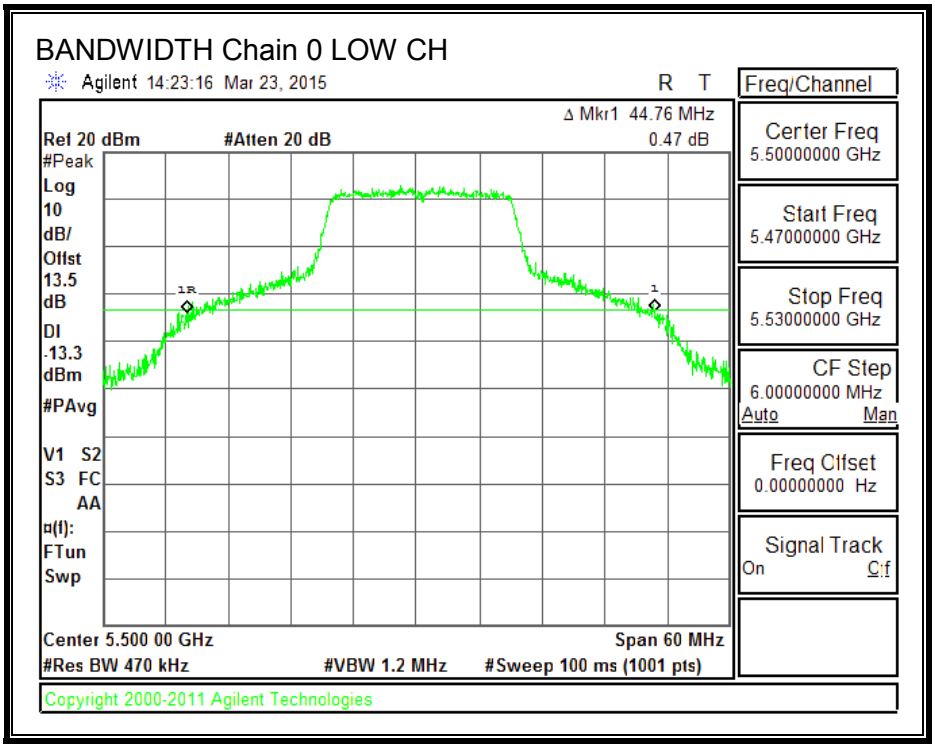
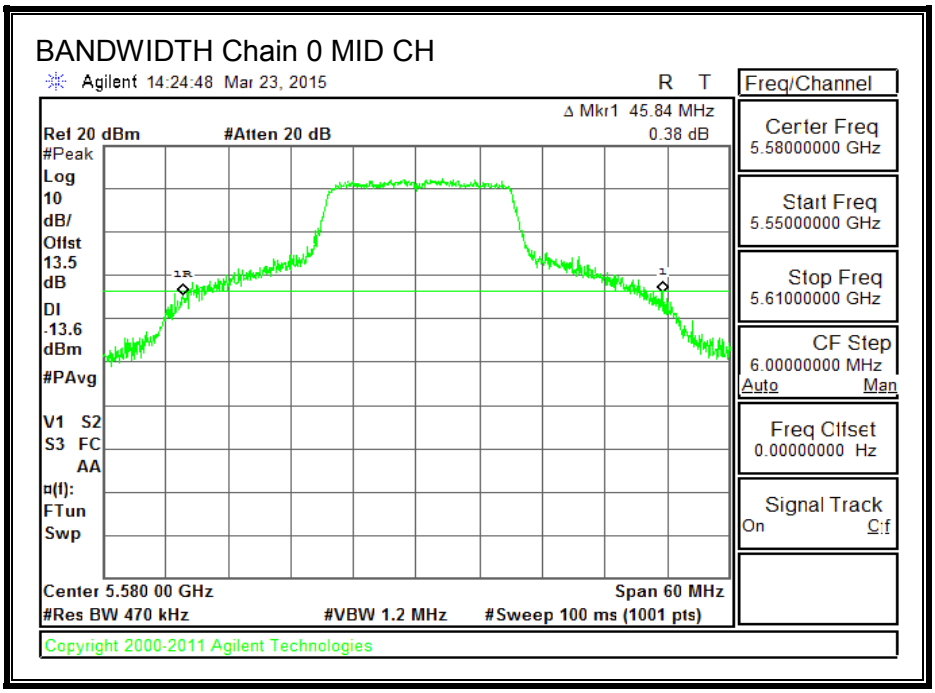
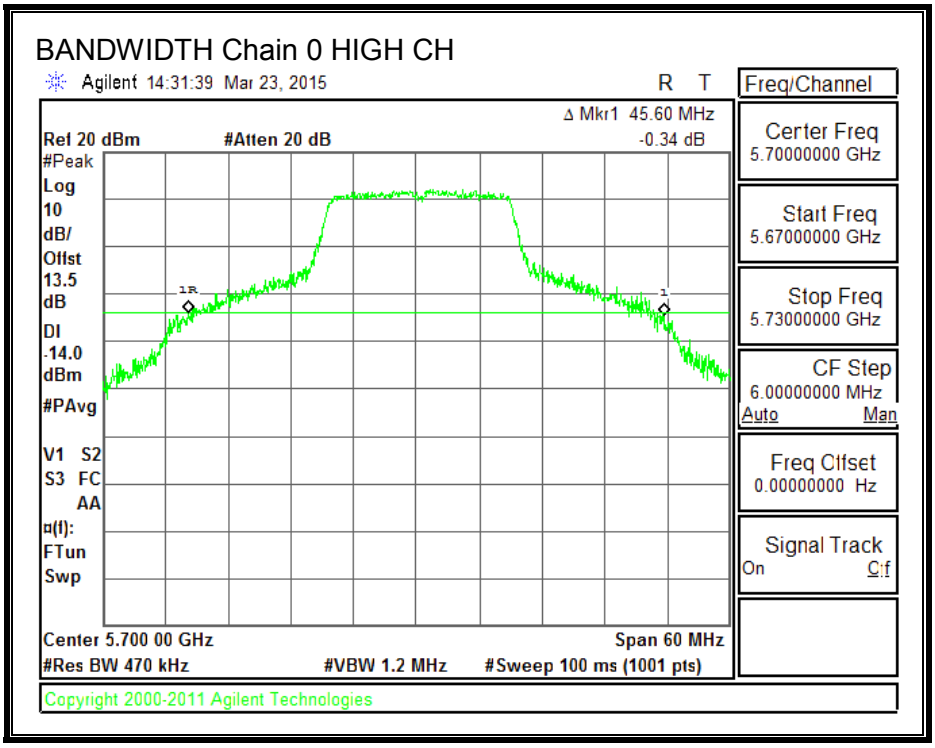
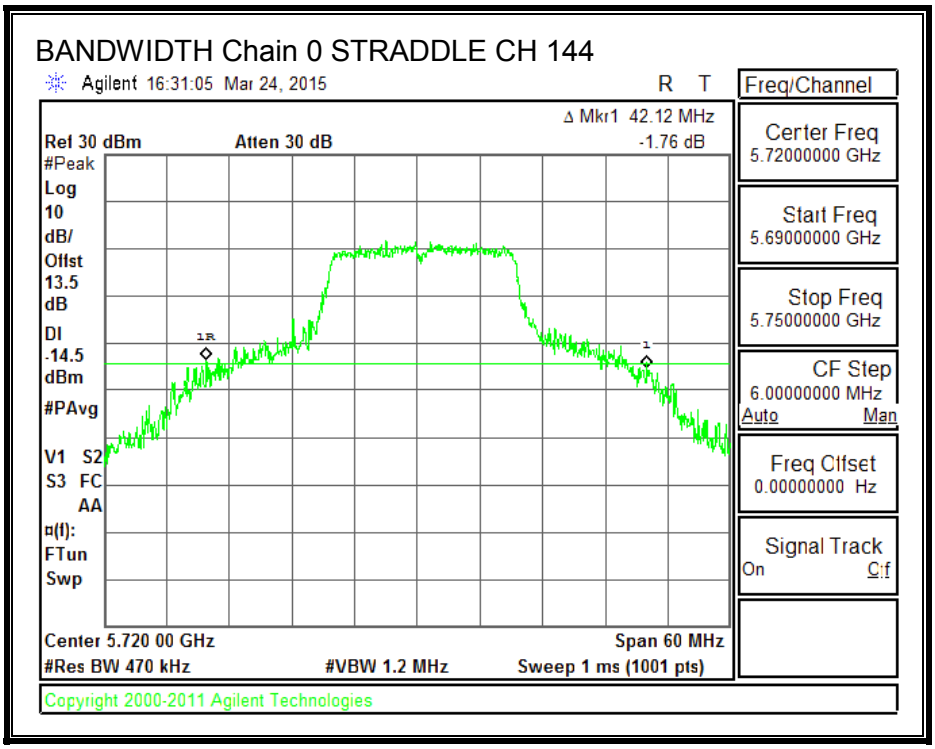
26 dB BANDWIDTH, Chain 0

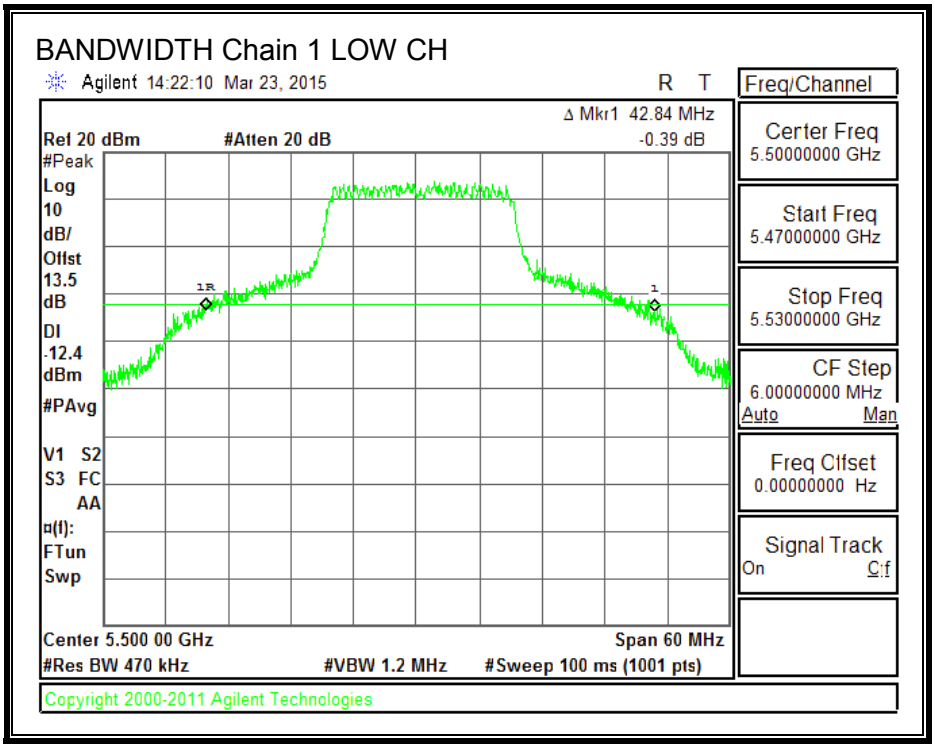


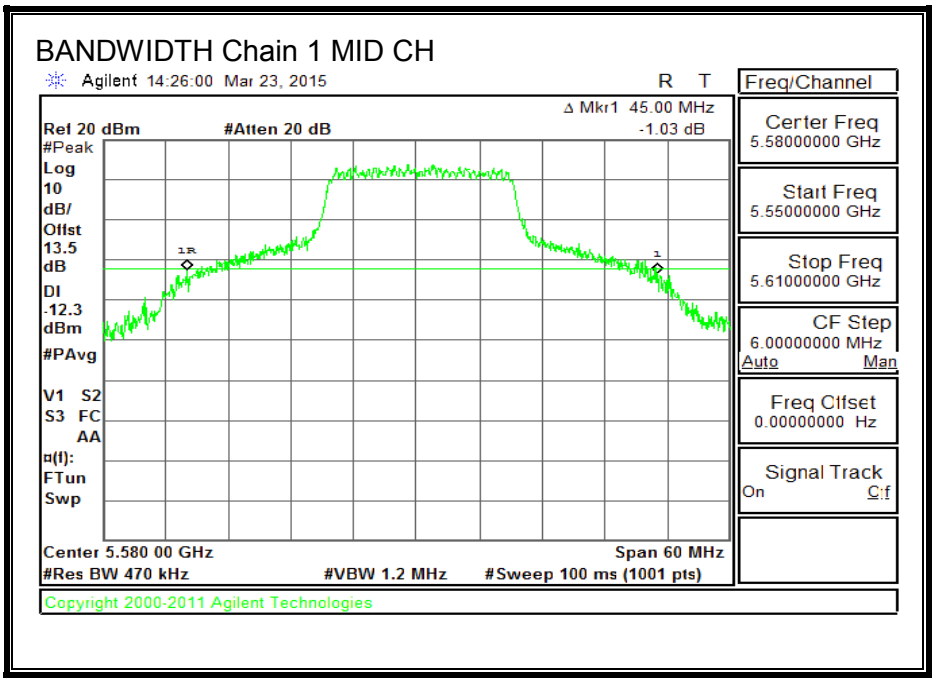




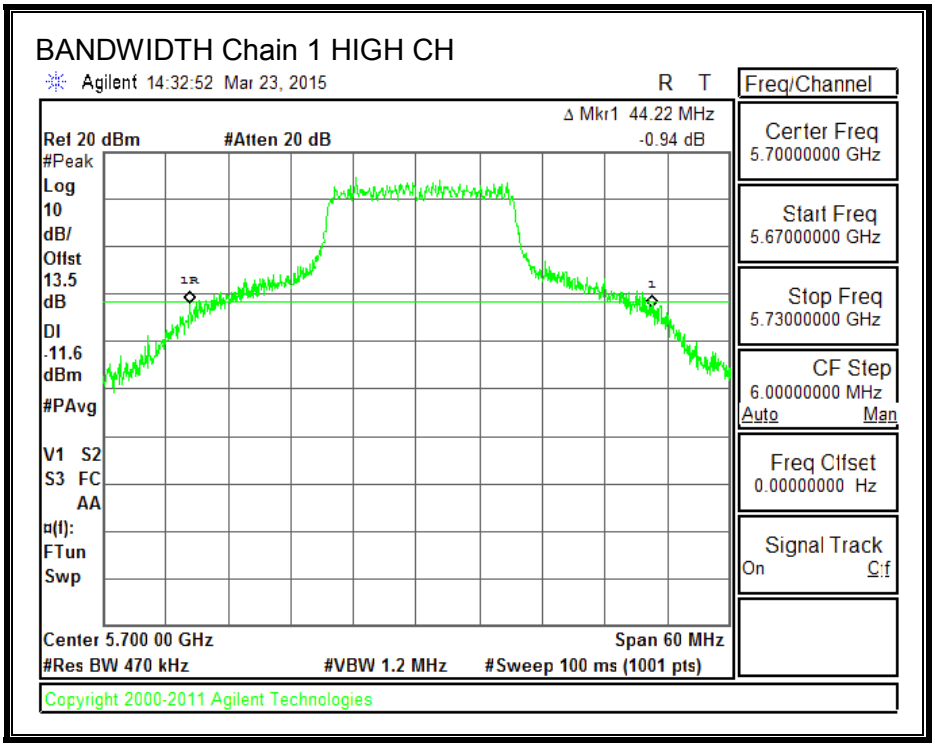


26 dB BANDWIDTH, Chain 1

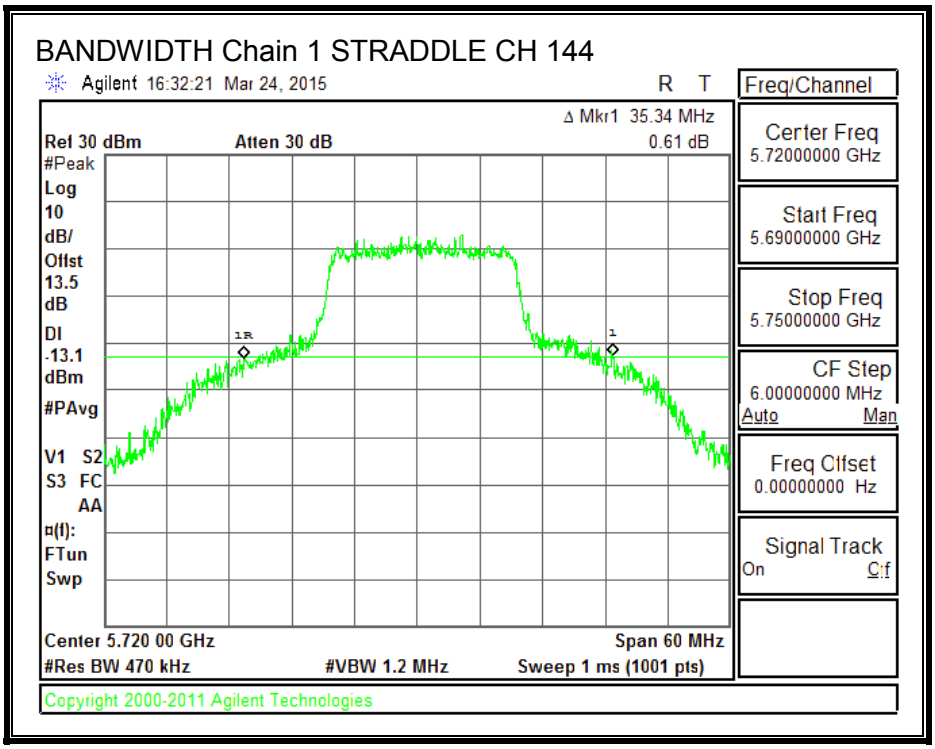




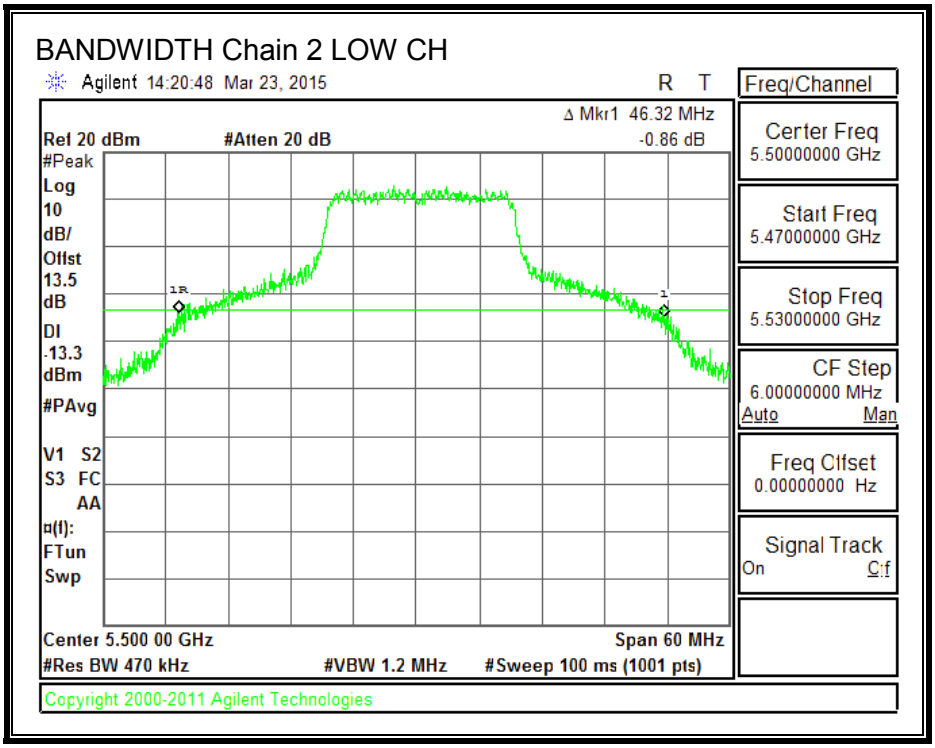
BANDWIDTH Chain 1 HIGH CH

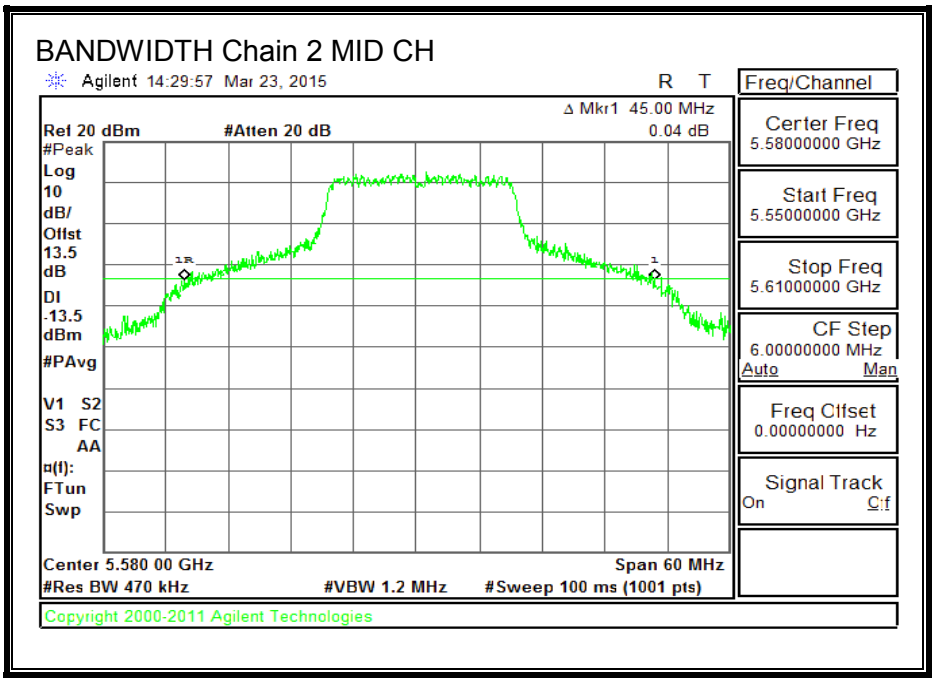


BANDWIDTH Chain 1 STRADDLE CH 144

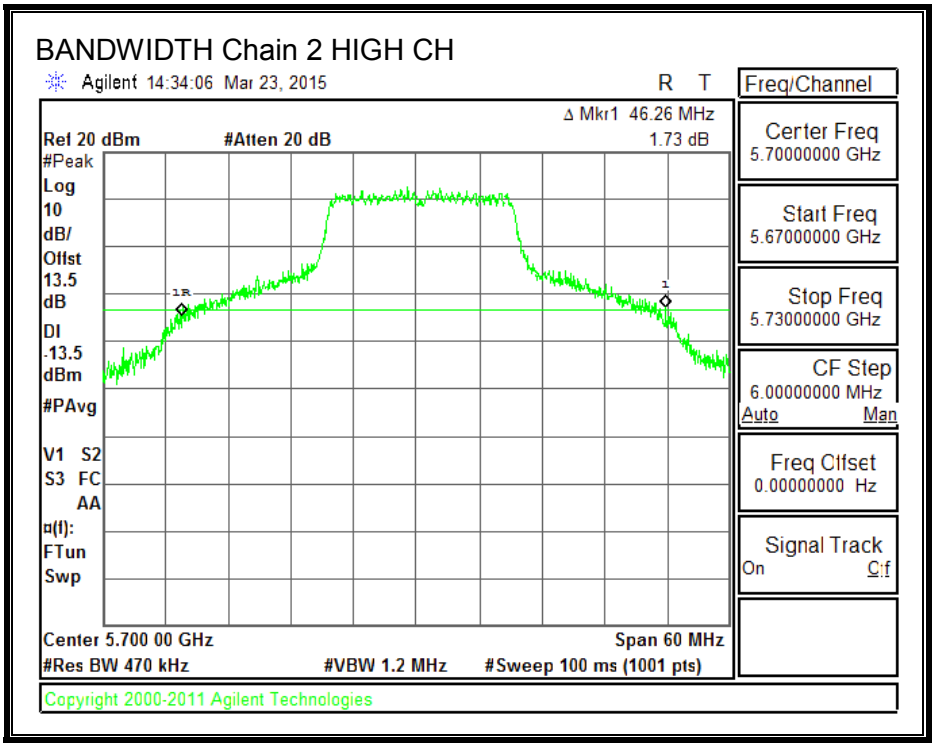


26 dB BANDWIDTH, Chain 2

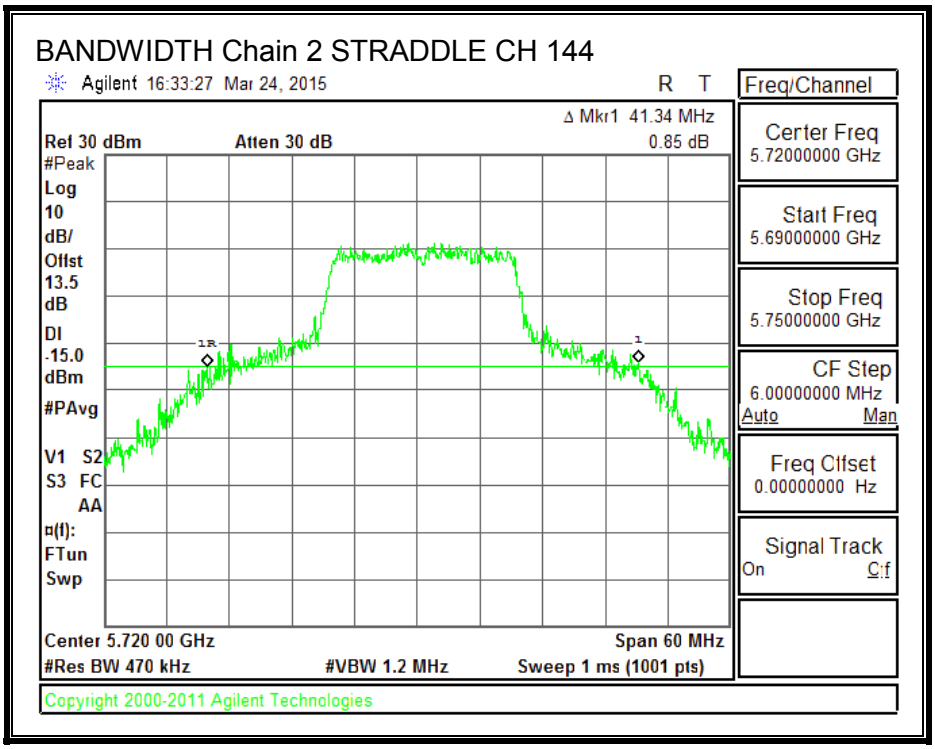




BANDWIDTH Chain 2 HIGH CH



BANDWIDTH Chain 2 STRADDLE CH 144



8.24.2. 99% BANDWIDTH

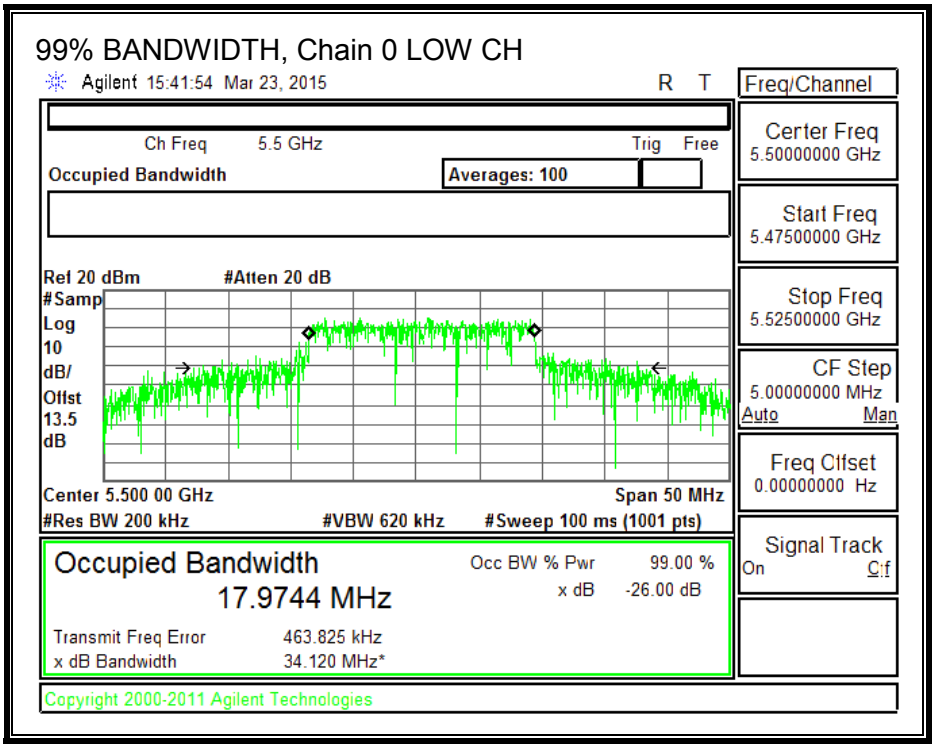
LIMITS

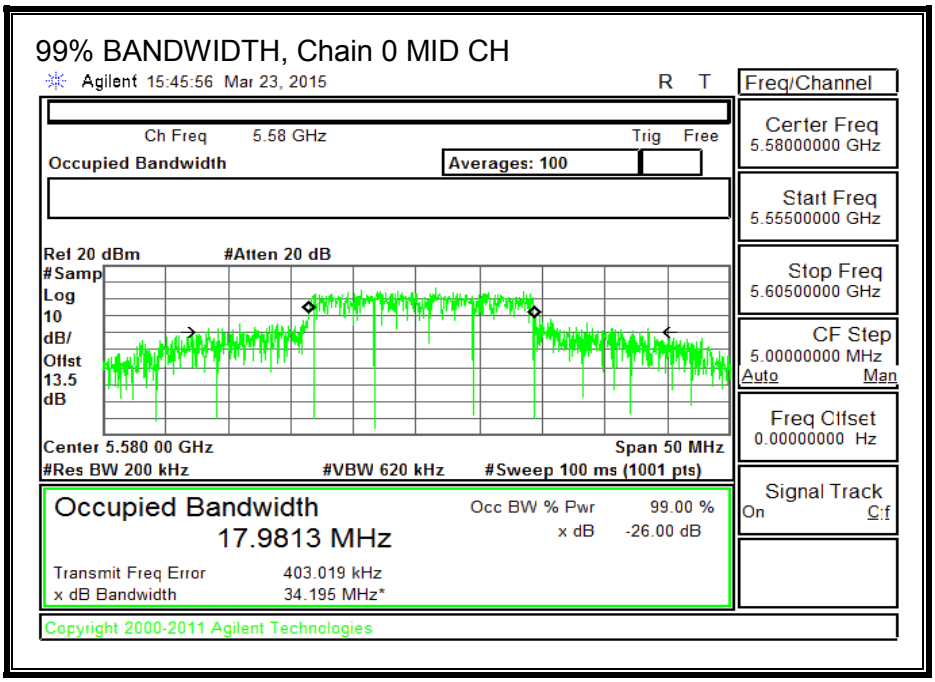
None; for reporting purposes only.

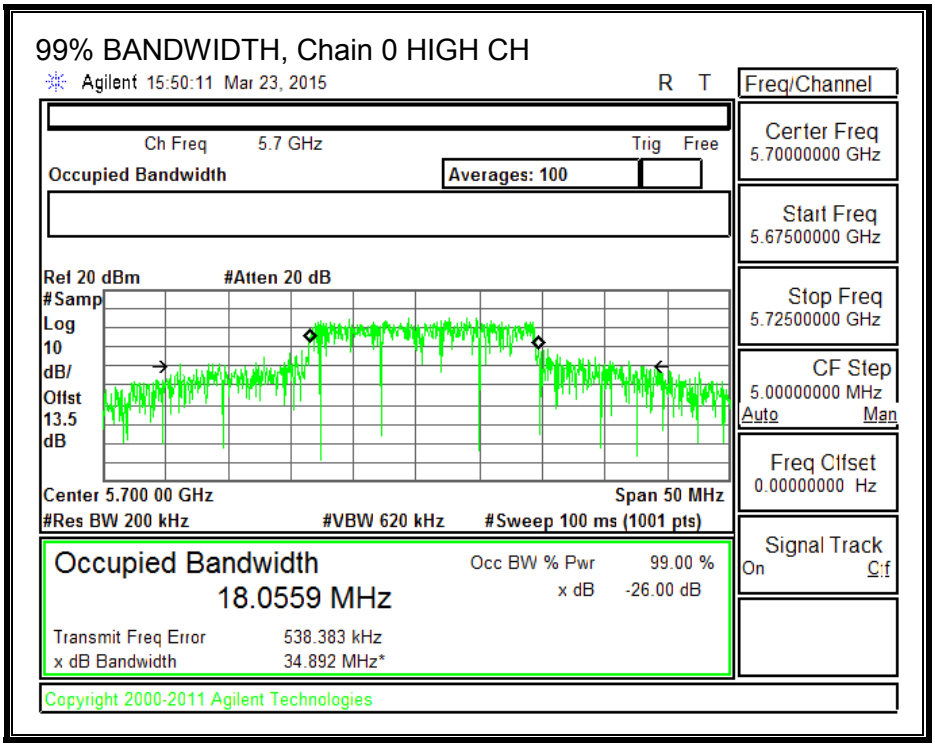
RESULTS

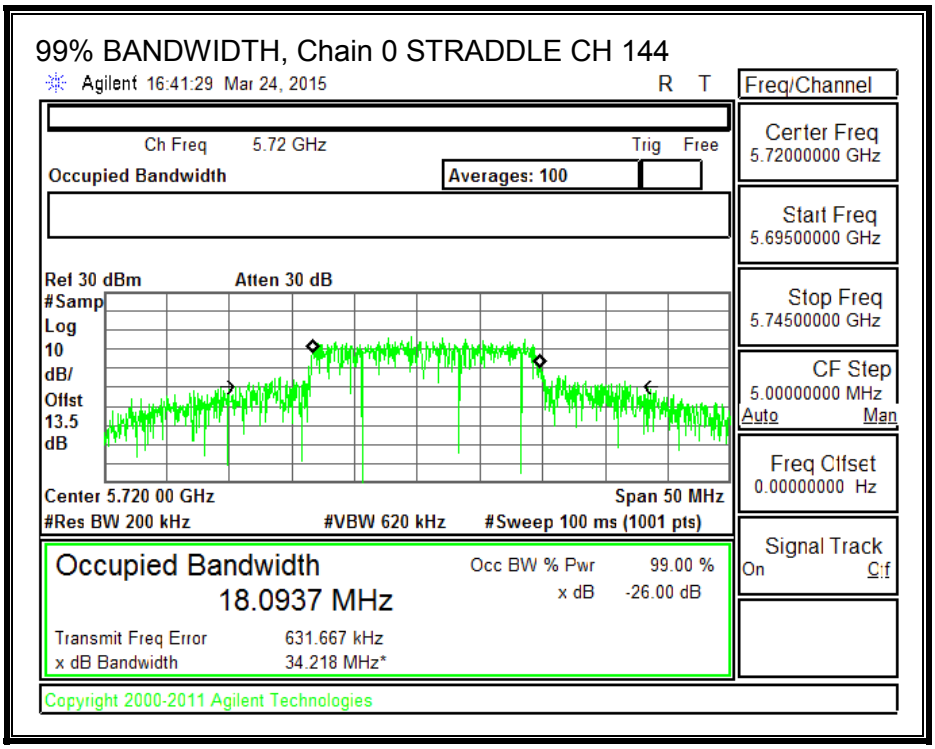
Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)	99% BW Chain 2 (MHz)
Low	5500	17.9744	17.9038	18.0624
Mid	5580	17.9813	17.9439	18.4014
High	5700	18.0559	18.0754	18.6710
144	5720	18.0937	17.8402	17.9554

99% BANDWIDTH, Chain 0

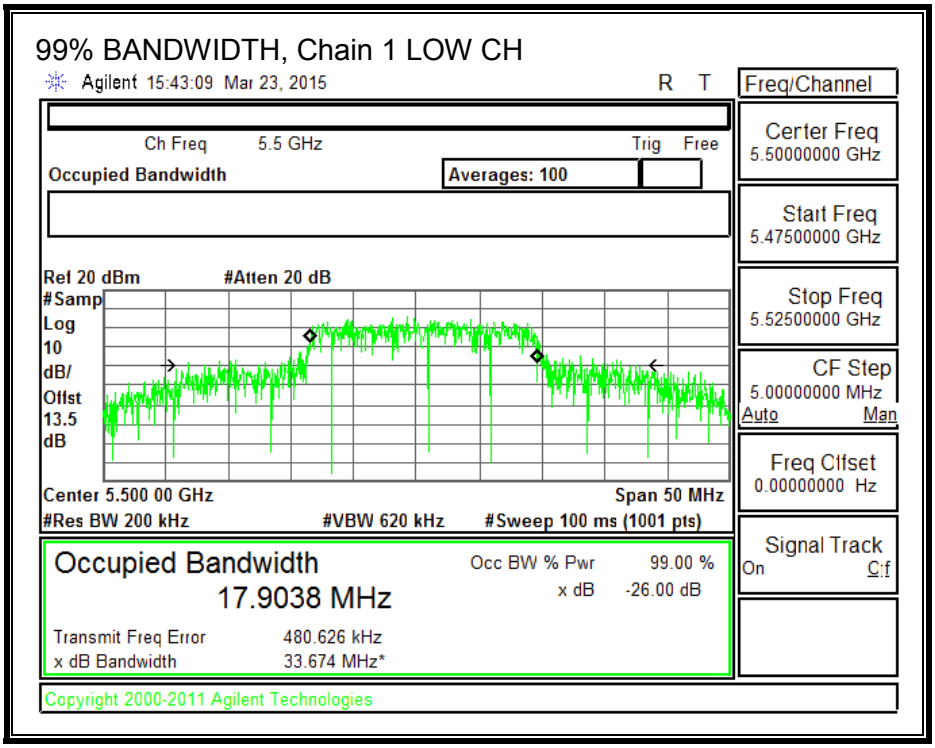


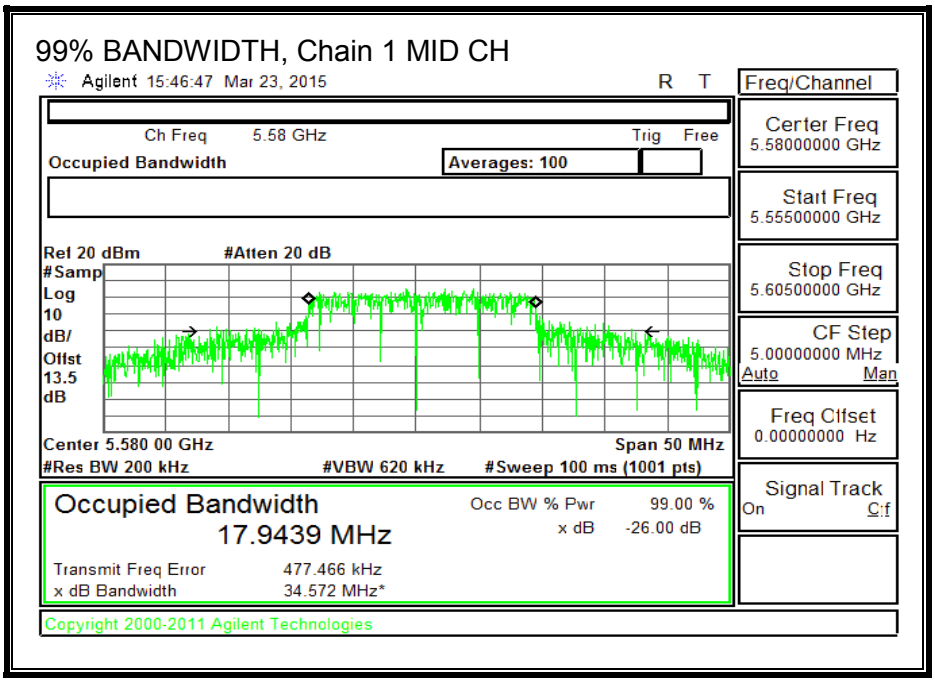


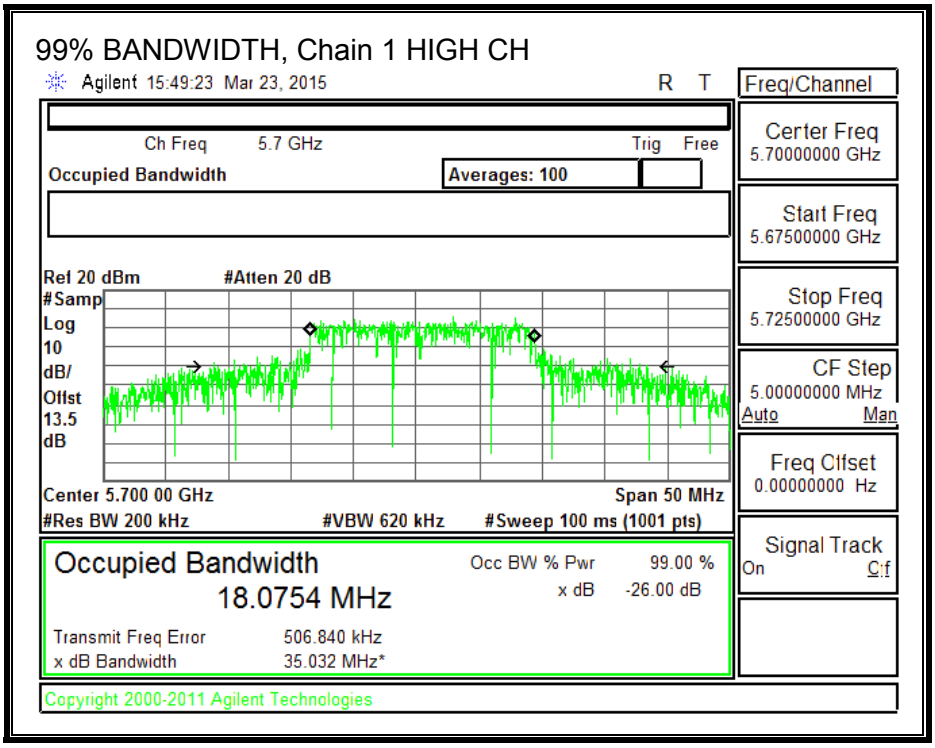


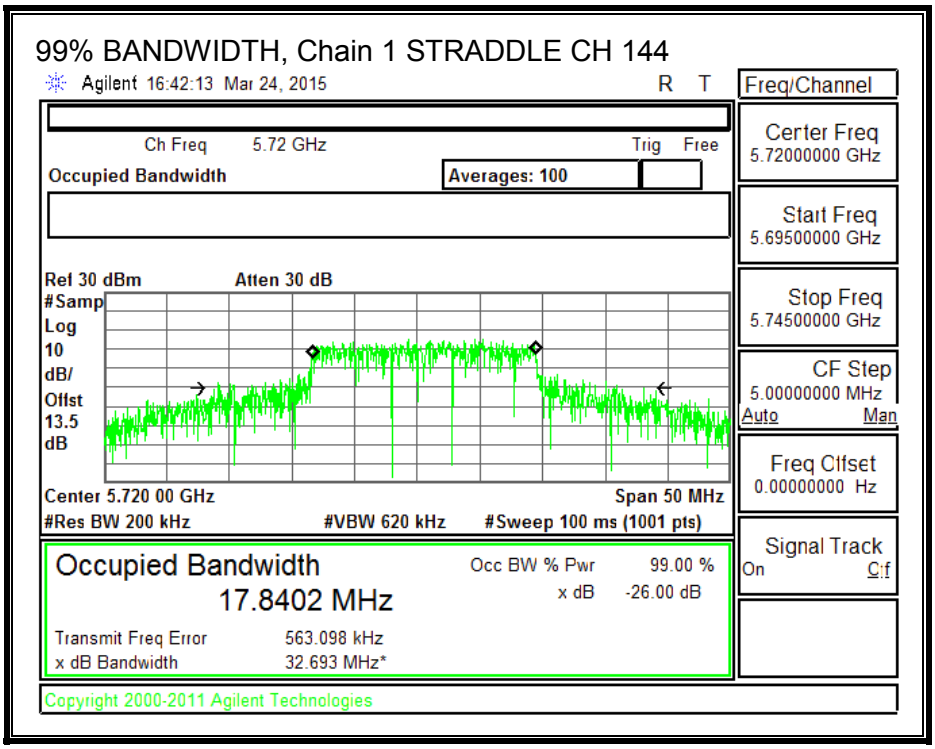


99% BANDWIDTH, Chain 1

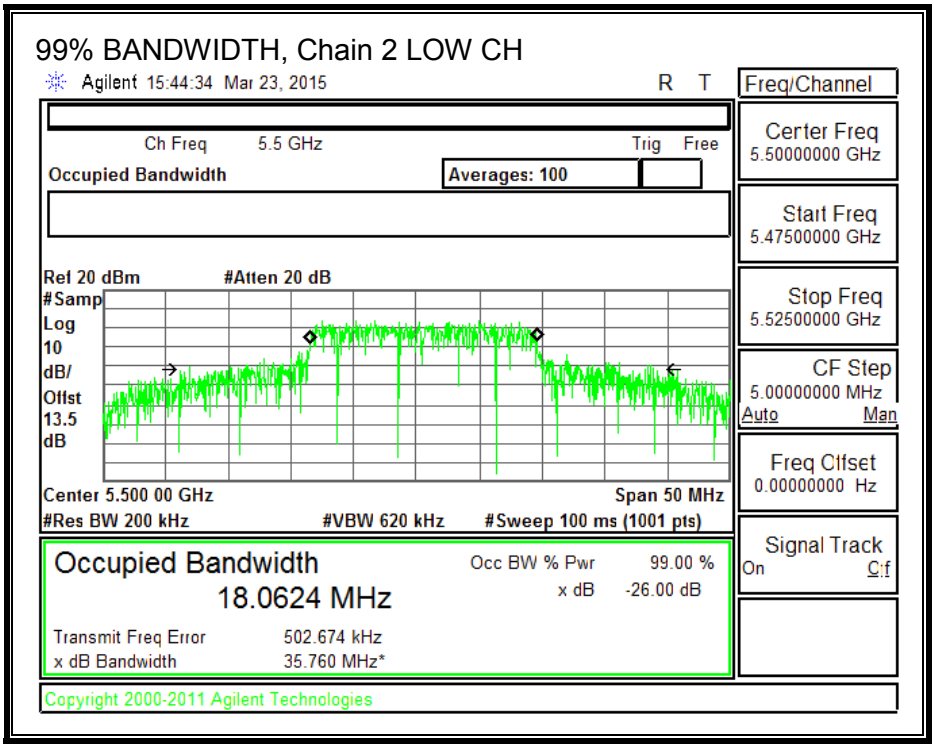


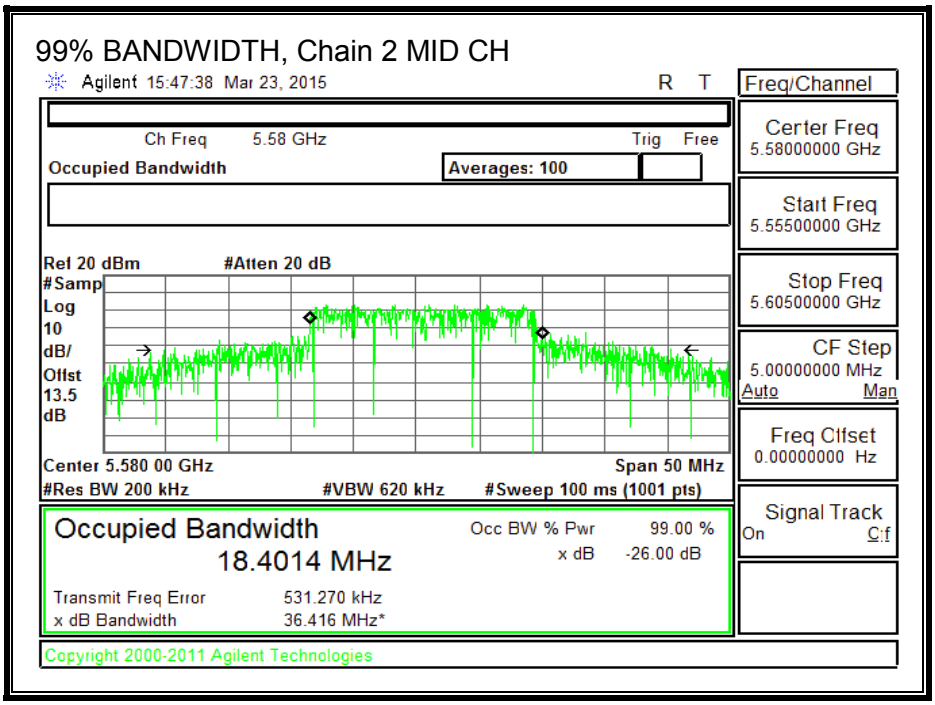




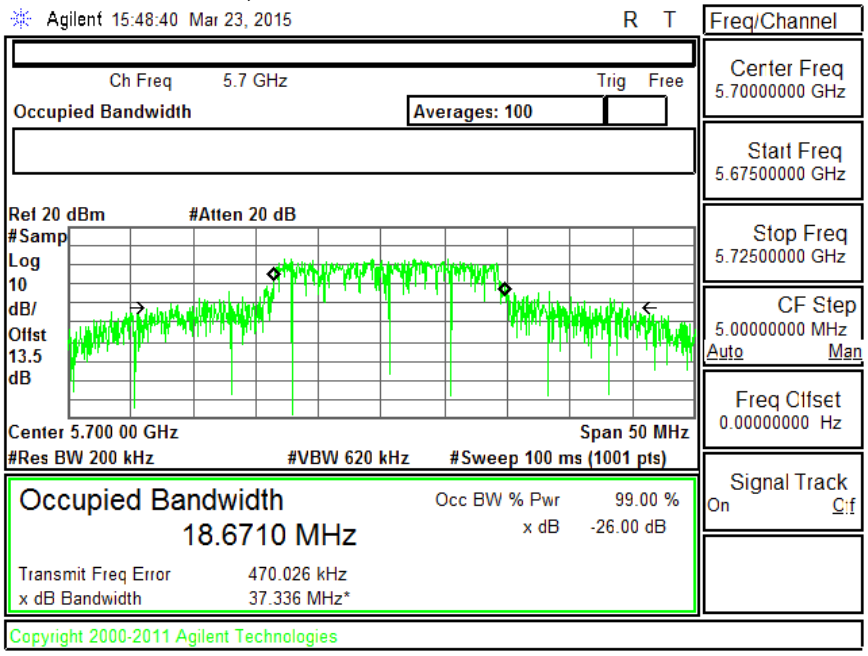


99% BANDWIDTH, Chain 2

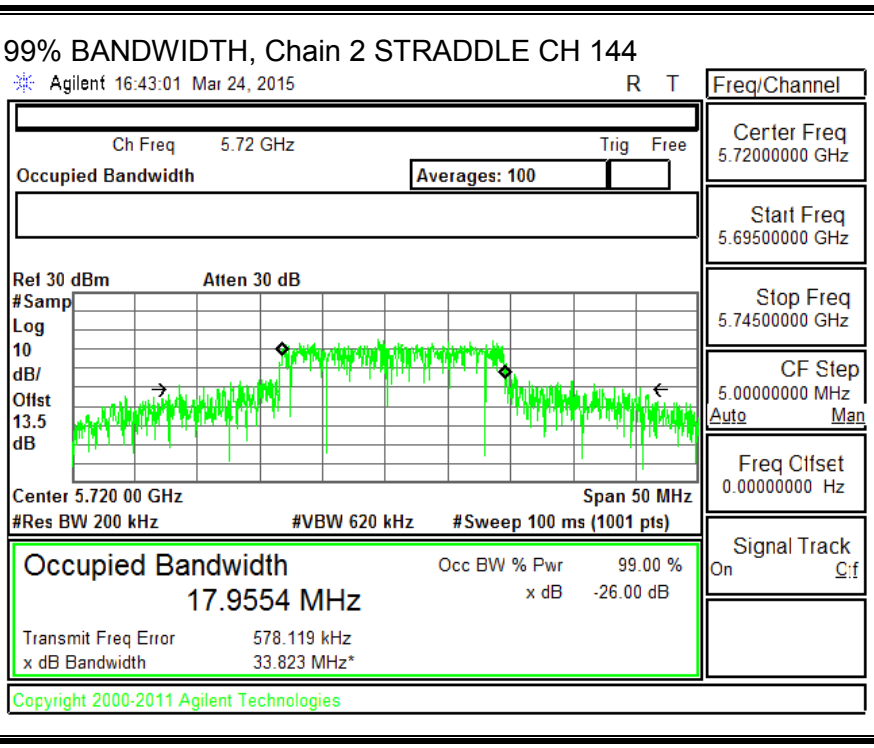




99% BANDWIDTH, Chain 2 HIGH CH



99% BANDWIDTH, Chain 2 STRADDLE CH 144



8.24.3. 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 the same for each chain. The directional gain is equal to the antenna gain, 6.21 dBi.

For PSD, the TX chains are correlated and the antenna gain is the same for each chain. The directional gain is:

Antenna Gain (dBi)	10 * Log (3 chains) (dB)	Correlated Chains Directional Gain (dBi)
6.21	4.77	10.98

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	42.84	6.21	10.98	23.79	6.02
Mid	5580	45.00	6.21	10.98	23.79	6.02
High	5700	44.22	6.21	10.98	23.79	6.02

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	13.10	13.05	13.20	17.89	23.79	-5.90
Mid	5580	13.15	13.00	12.98	17.82	23.79	-5.97
High	5700	13.00	13.04	12.90	17.75	23.79	-6.04

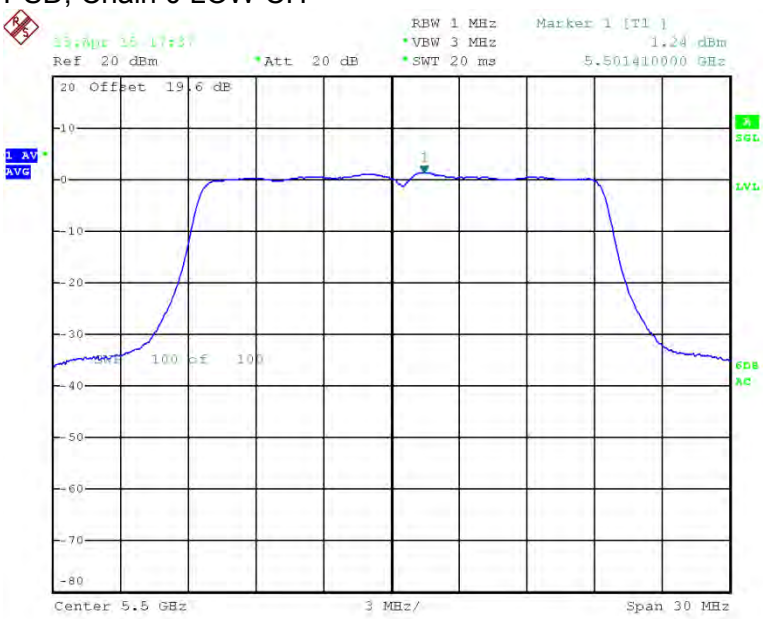
PSD Results

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	1.24	0.98	1.35	5.96	6.02	-0.06
Mid	5580	1.18	0.91	0.35	5.60	6.02	-0.42
High	5700	0.59	0.49	0.15	5.19	6.02	-0.83

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.

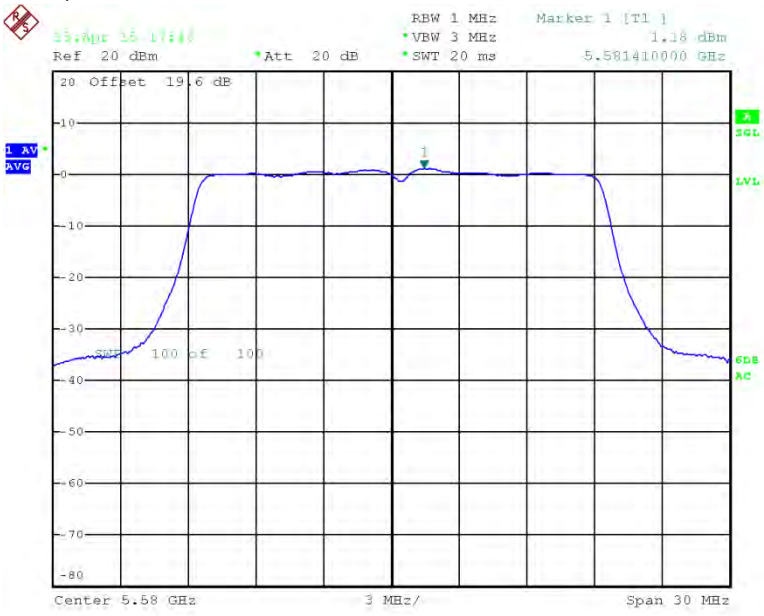
PSD, Chain 0

PSD, Chain 0 LOW CH

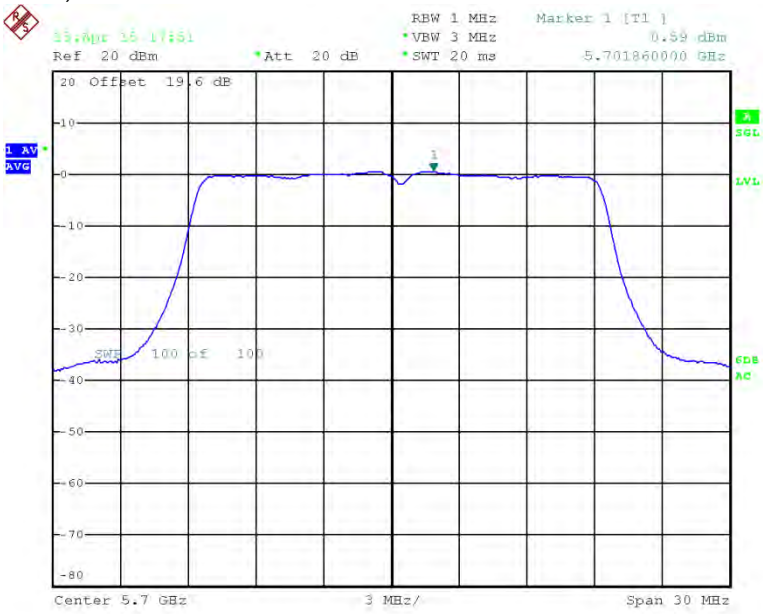


Date: 15.APR.2015 17:37:39

PSD, Chain 0 MID CH

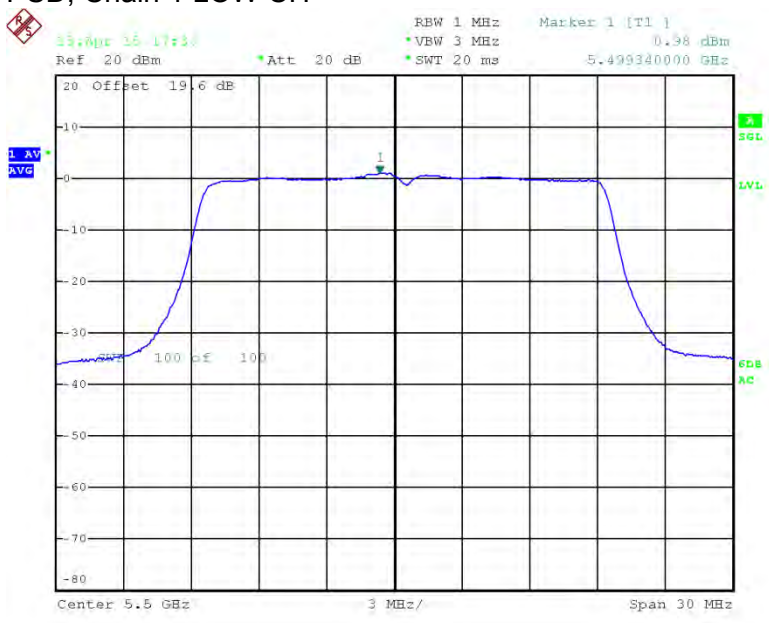


PSD, Chain 0 HIGH CH



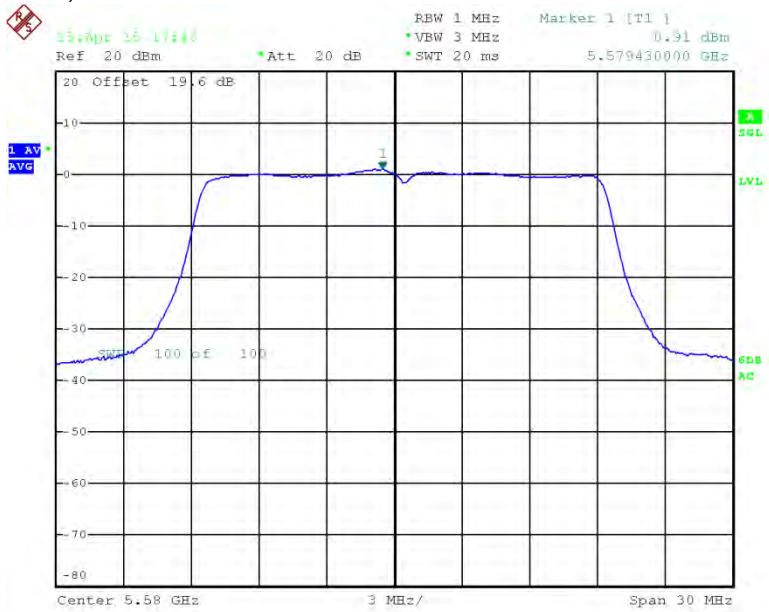
PSD, Chain 1

PSD, Chain 1 LOW CH



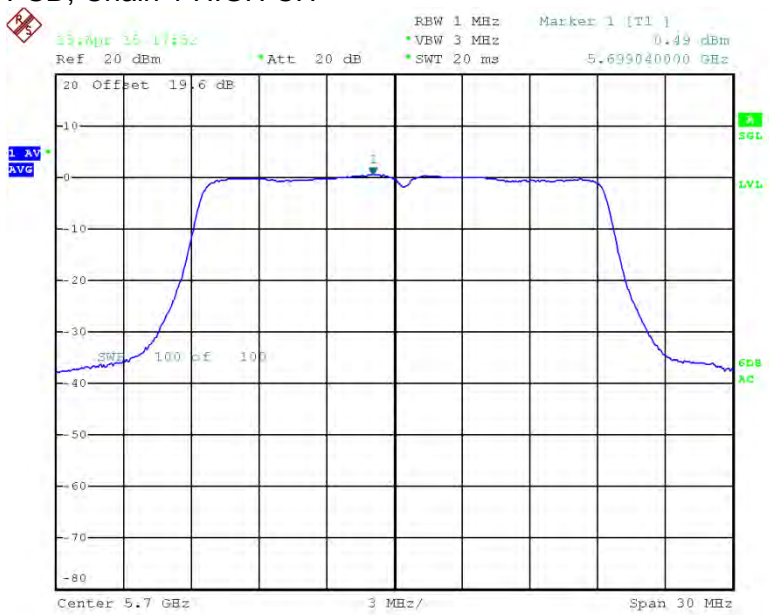
Date: 15.APR.2015 17:38:21

PSD, Chain 1 MID CH



Date: 15.APR.2015 17:48:59

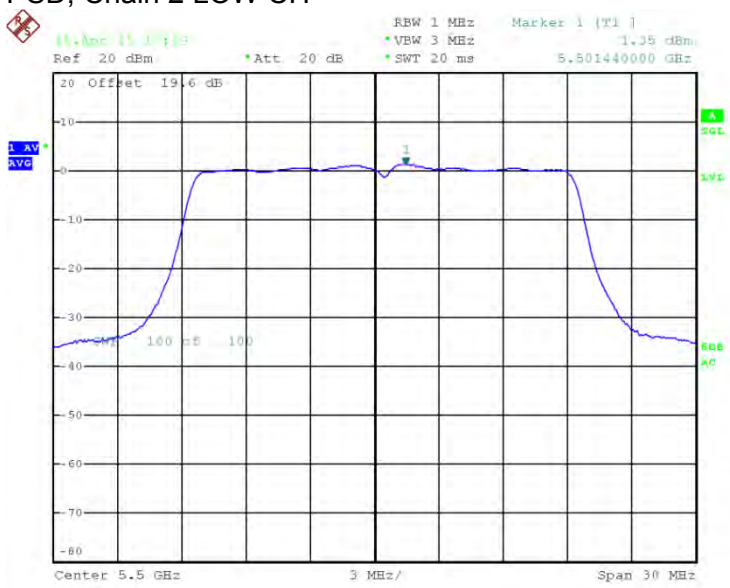
PSD, Chain 1 HIGH CH



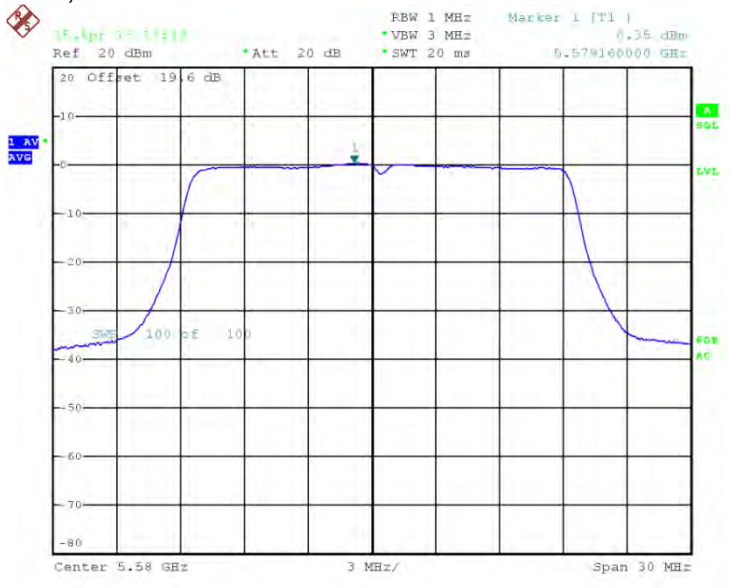
Date: 15.APR.2015 17:52:06

PSD, Chain 2

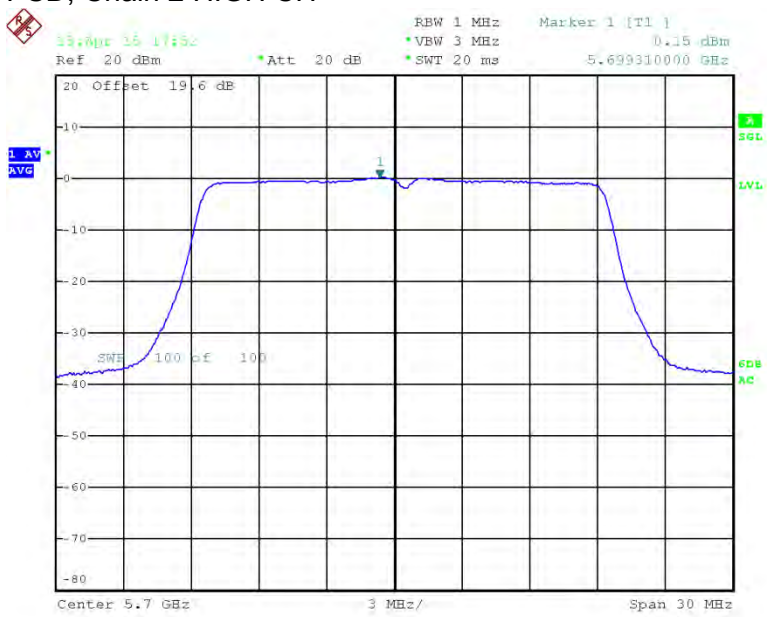
PSD, Chain 2 LOW CH



PSD, Chain 2 MID CH



PSD, Chain 2 HIGH CH



Date: 15.APR.2015 17:52:55

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	22.67	6.21	10.98	23.79	6.02

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

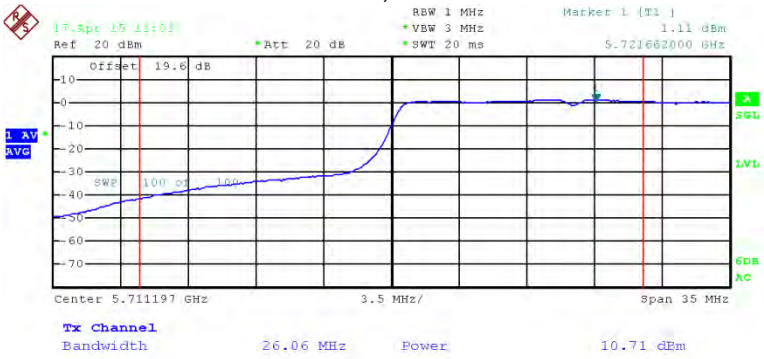
Output Power Results

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	10.71	11.27	10.88	15.73	23.79	-8.06

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	1.11	1.17	1.14	5.91	6.02	-0.11

OUTPUT POWER AND PSD, Chain 0 CH 144 UNII

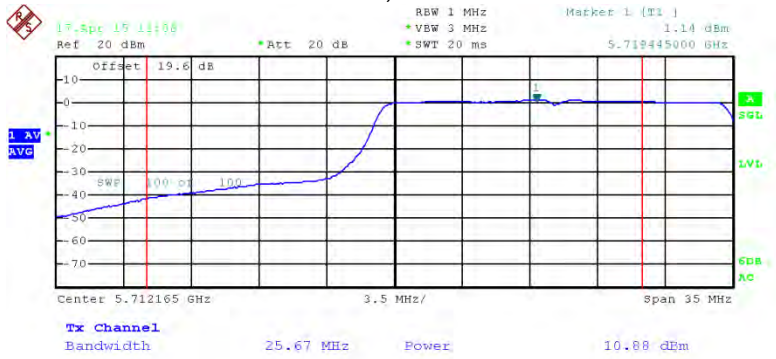


Date: 17.APR.2015 11:02:38

OUTPUT POWER AND PSD, Chain 1 CH 144 UNII

Date: 17.APR.2015 11:06:57

OUTPUT POWER AND PSD, Chain 2 CH 144 UNII



Date: 17.APR.2015 11:08:36

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	6.21	10.98	29.79	25.02

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

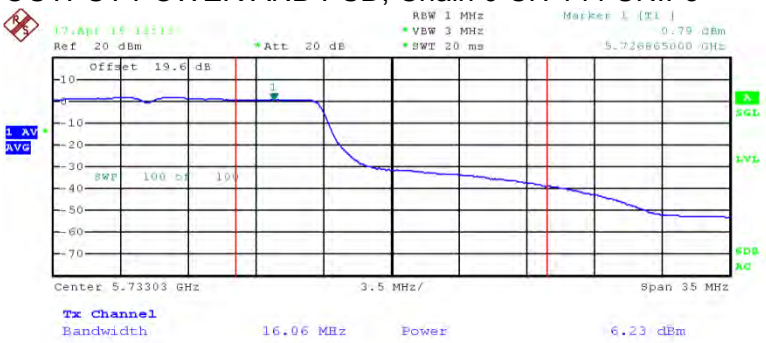
Output Power Results

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	6.23	5.98	5.67	10.74	29.79	-19.05

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	0.79	0.34	0.31	5.26	25.02	-19.76

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

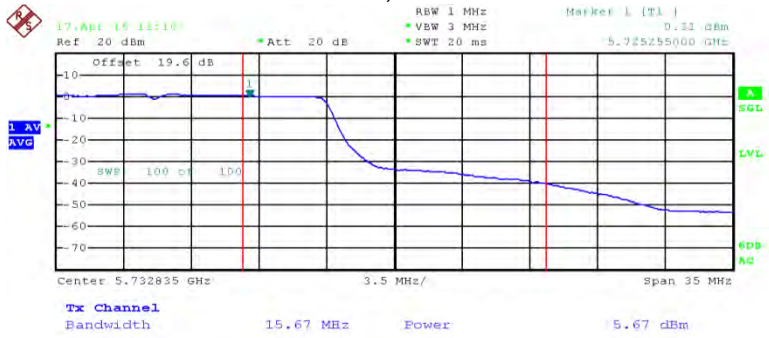


Date: 17.APR.2015 11:12:38

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

Date: 17.APR.2015 11:13:46

OUTPUT POWER AND PSD, Chain 2 CH 144 UNII-3



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8.24.4. 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	18.98	18.80	18.75	23.62

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.

8.25. 802.11n HT20 STBC 3Tx MODE IN THE 5.6 GHz BAND

8.25.1. 26 dB BANDWIDTH

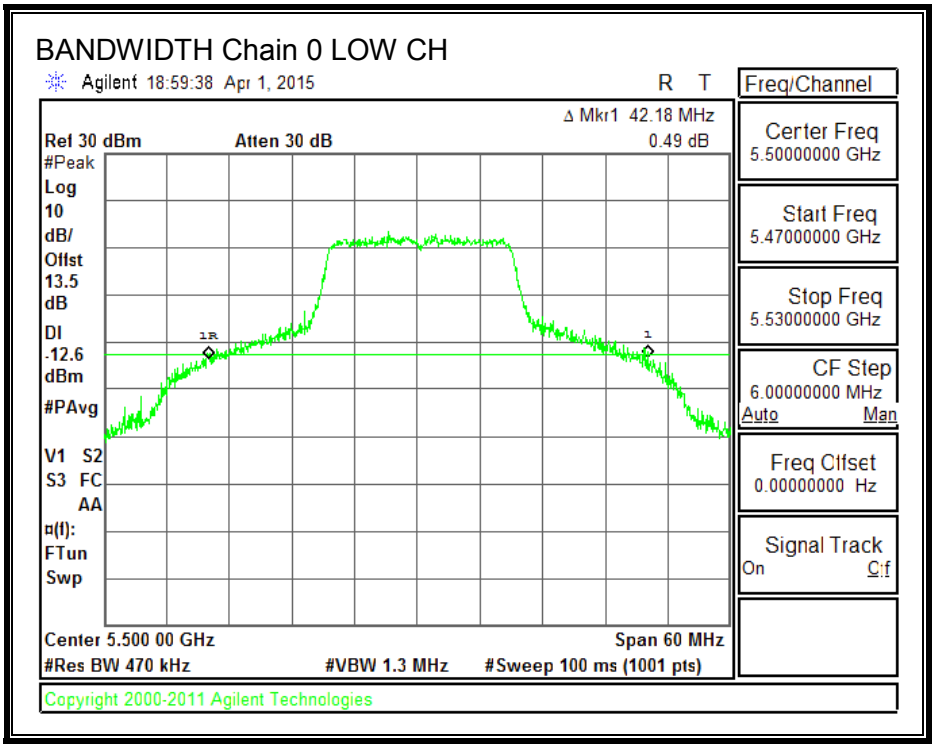
LIMITS

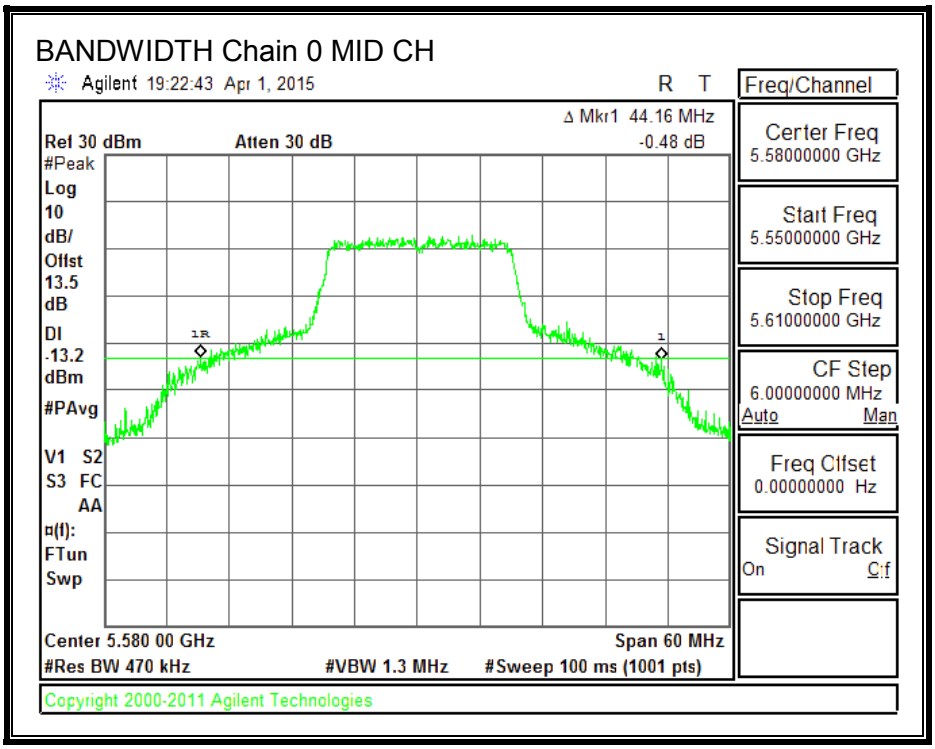
None; for reporting purposes only.

RESULTS

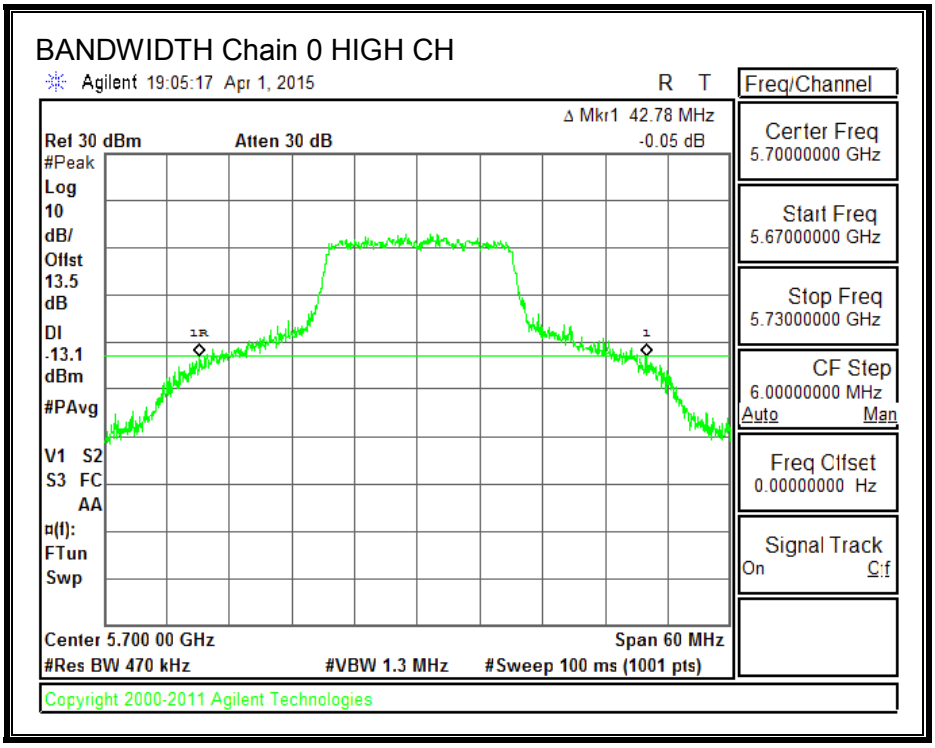
Channel	Frequency (MHz)	26 dB BW Chain 0 (MHz)	26 dB BW Chain 1 (MHz)	26 dB BW Chain 2 (MHz)
Low	5500	42.18	45.06	43.92
Mid	5580	44.16	45.54	44.94
High	5700	42.78	42.30	45.84
144	5720	44.04	45.96	45.18

26 dB BANDWIDTH, Chain 0

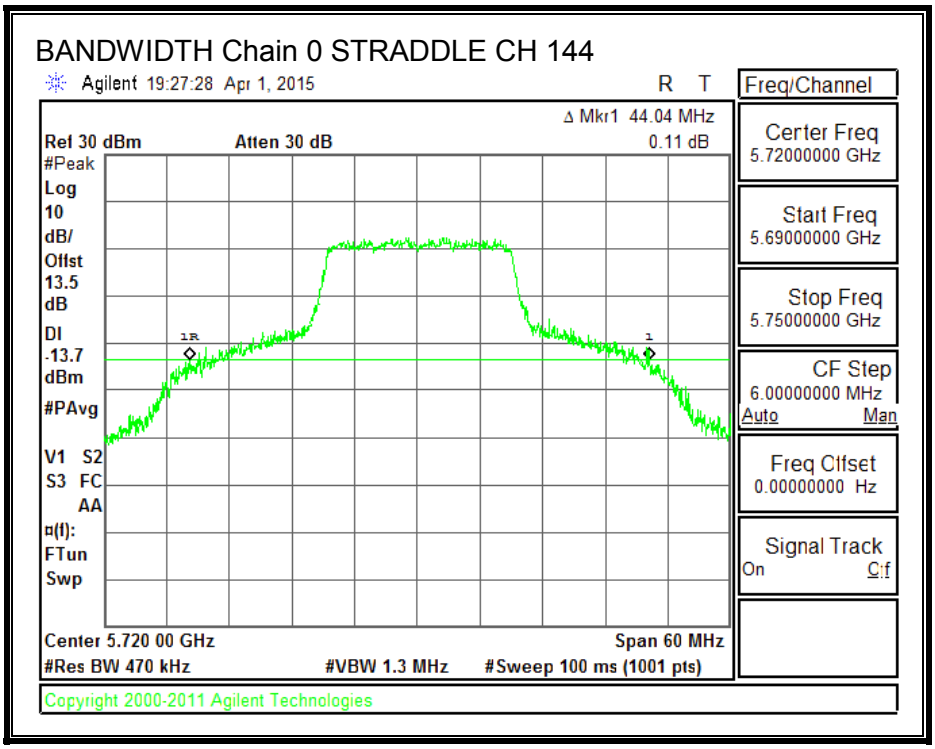




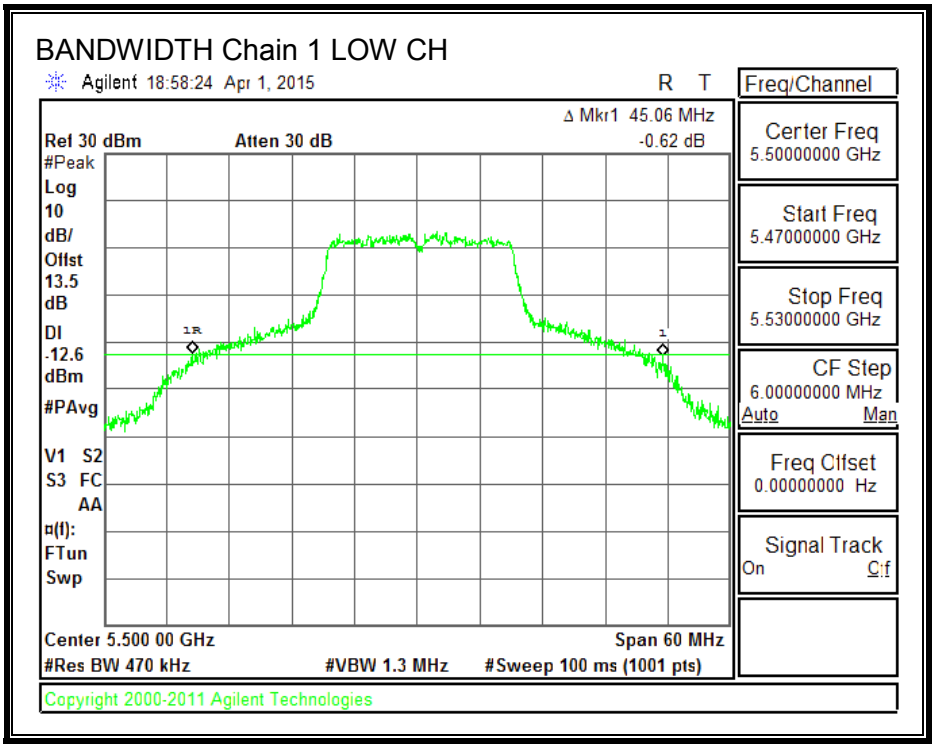
BANDWIDTH Chain 0 HIGH CH

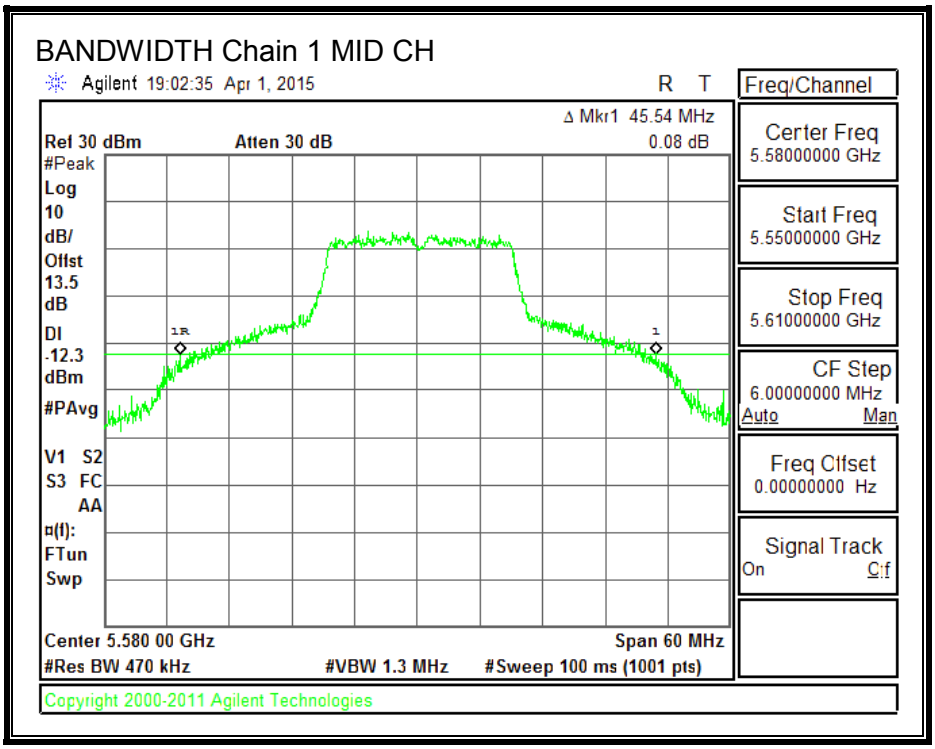


BANDWIDTH Chain 0 STRADDLE CH 144

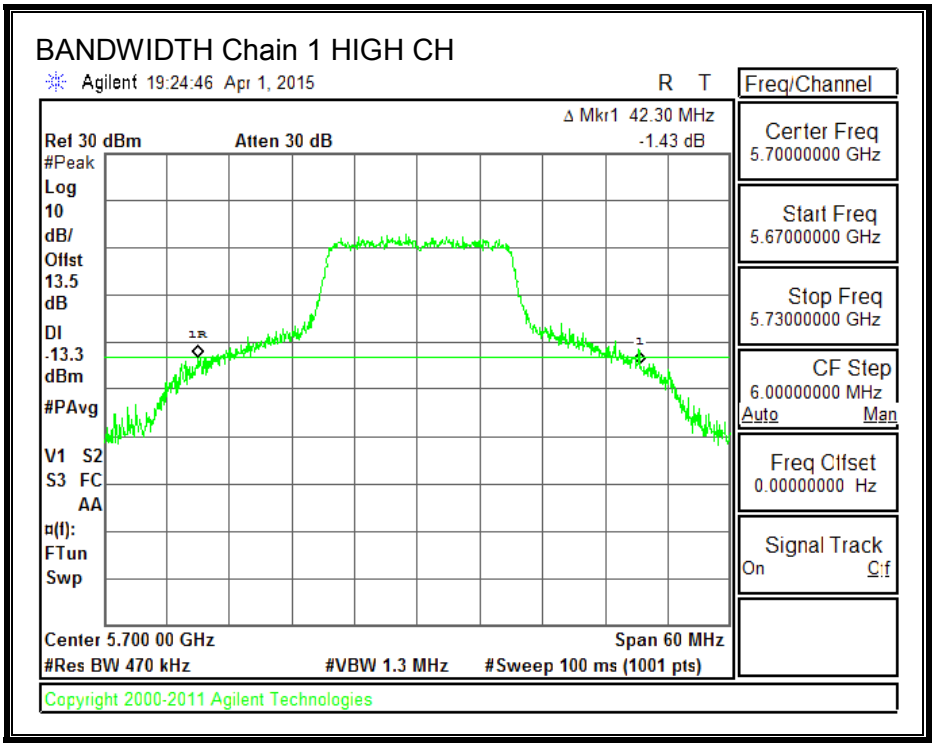


26 dB BANDWIDTH, Chain 1

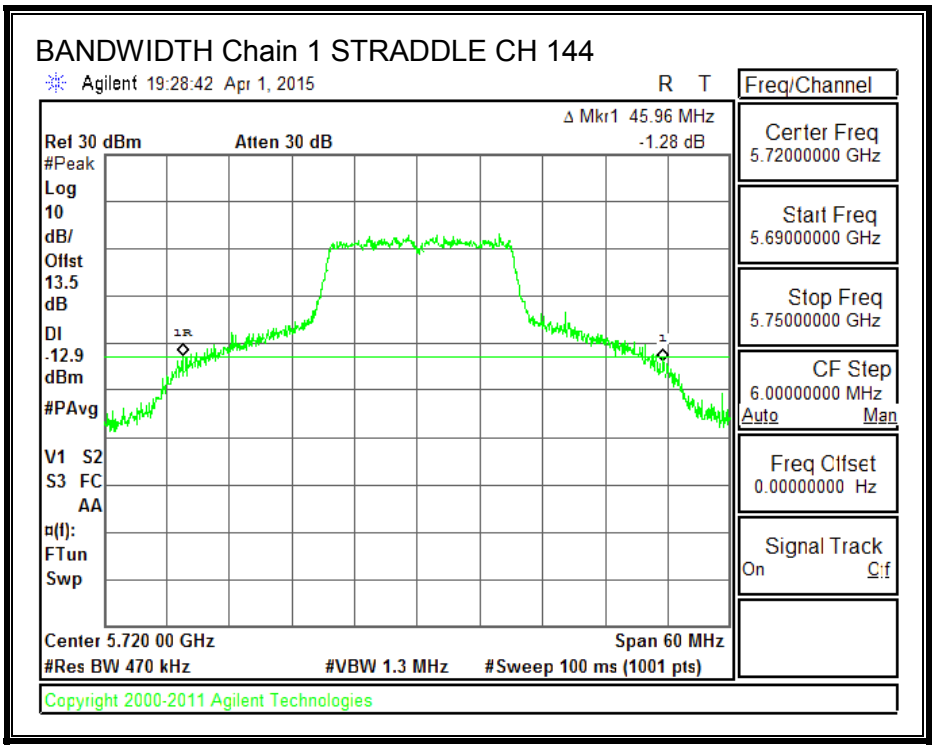




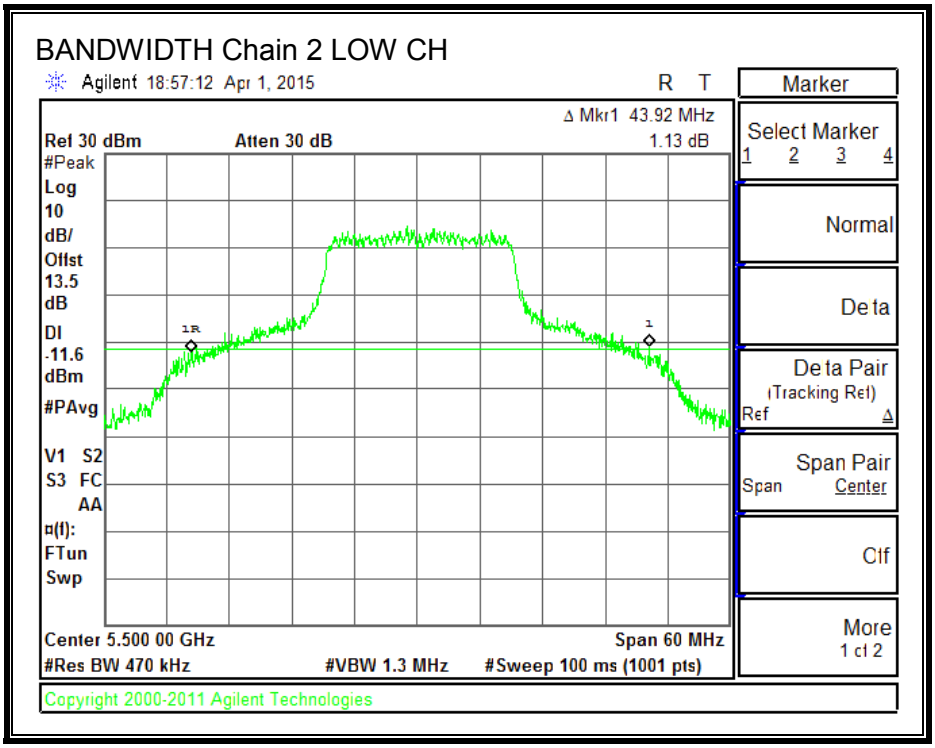
BANDWIDTH Chain 1 HIGH CH

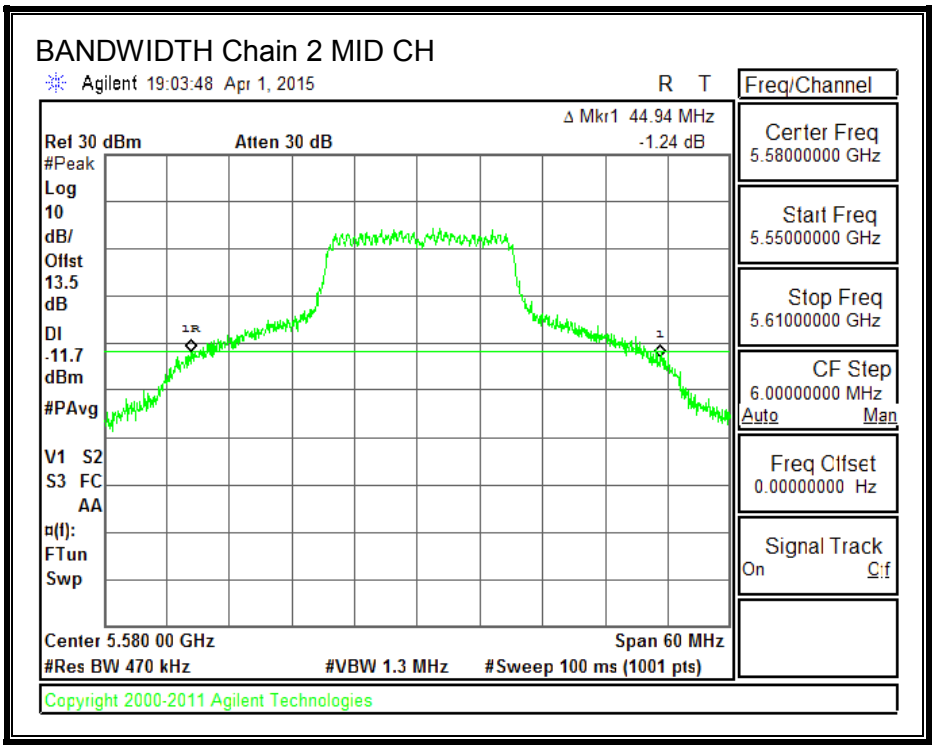


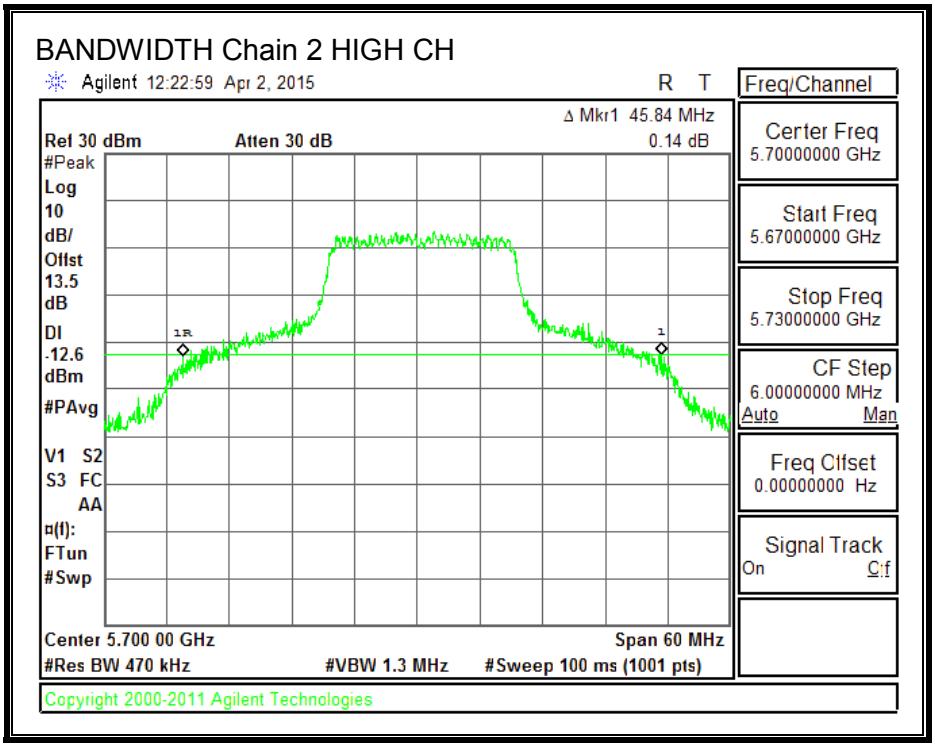
BANDWIDTH Chain 1 STRADDLE CH 144

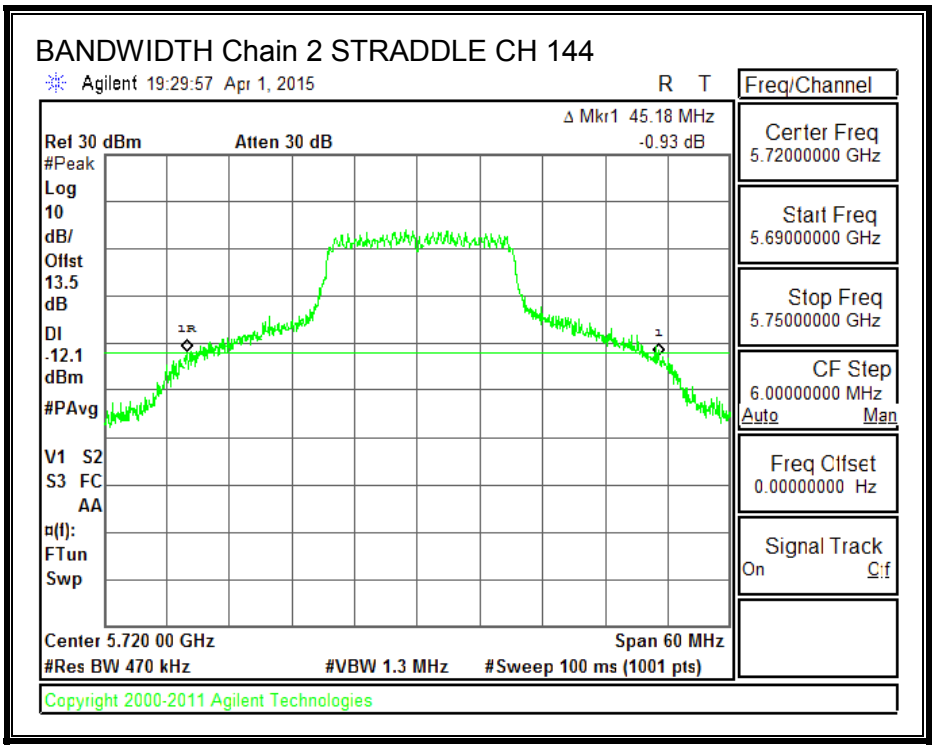


26 dB BANDWIDTH, Chain 2









8.25.2. 99% BANDWIDTH

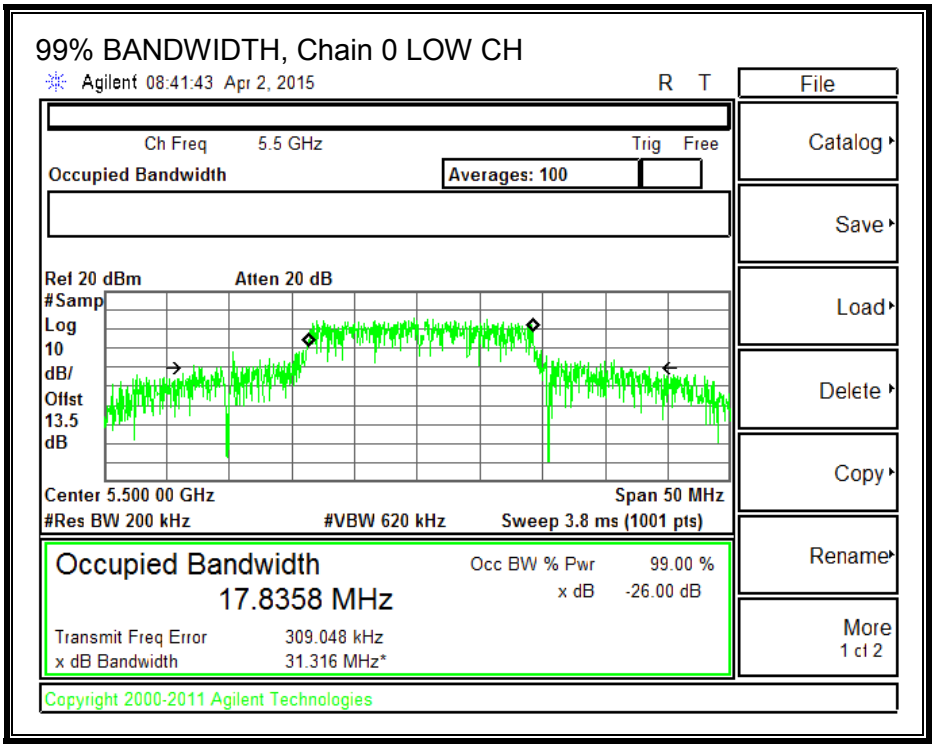
LIMITS

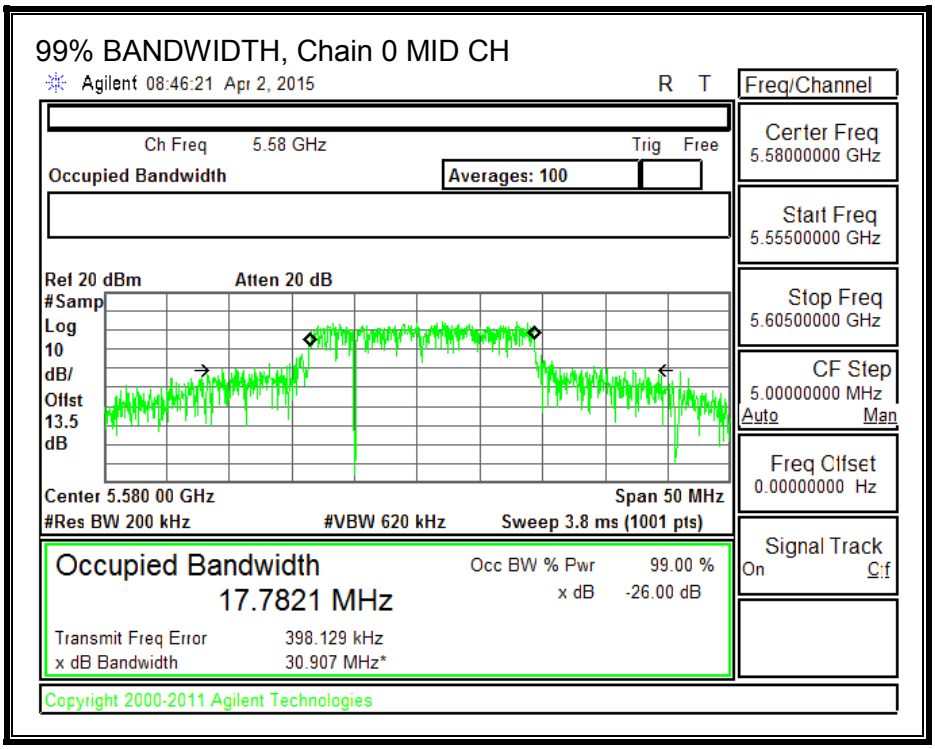
None; for reporting purposes only.

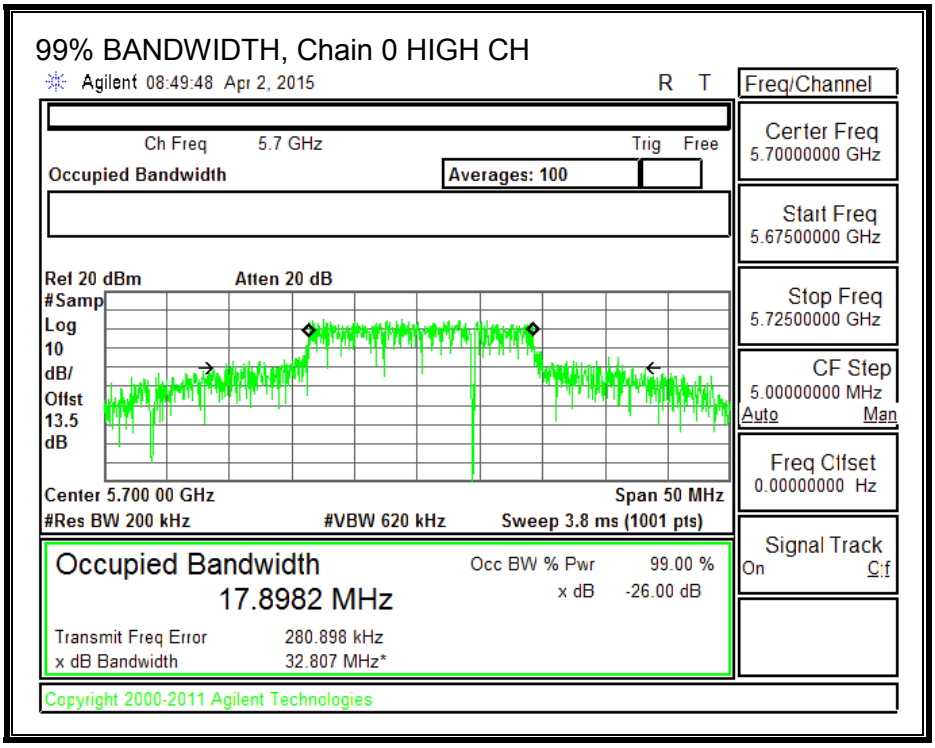
RESULTS

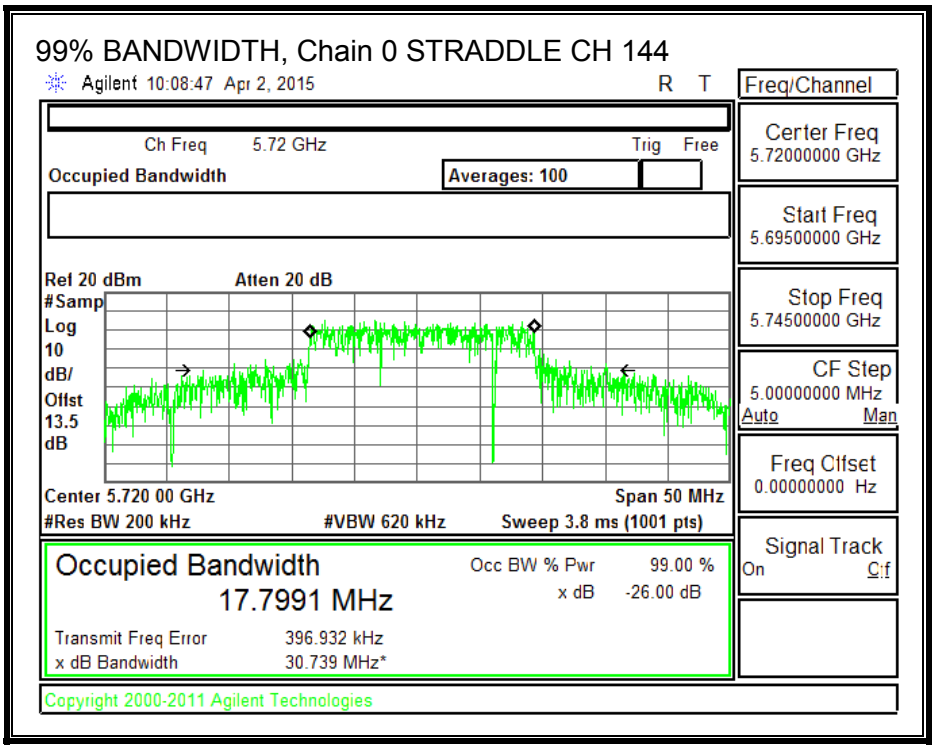
Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)	99% BW Chain 2 (MHz)
Low	5500	17.8358	17.7589	17.8753
Mid	5580	17.7821	17.7839	17.7444
High	5700	17.8982	17.7522	17.7417
144	5720	17.7991	17.9585	17.7883

99% BANDWIDTH, Chain 0

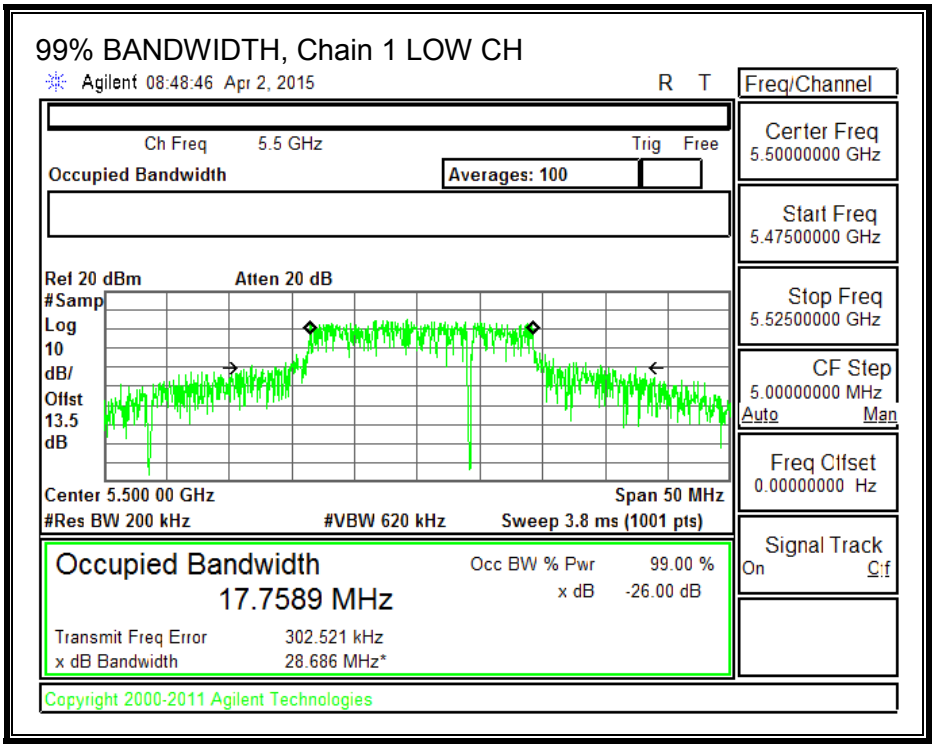


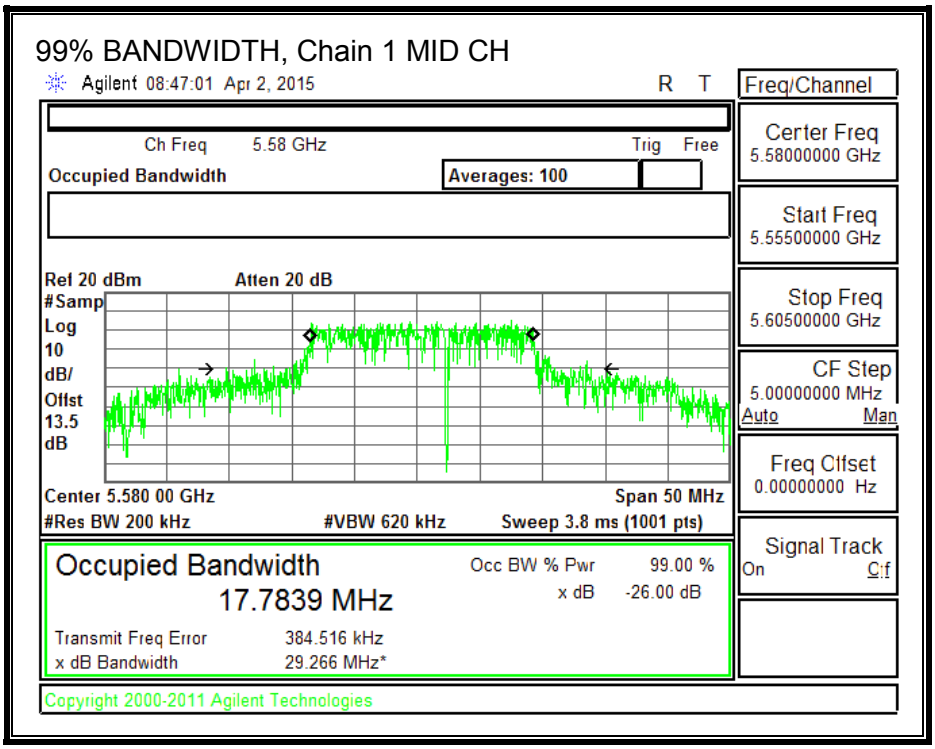


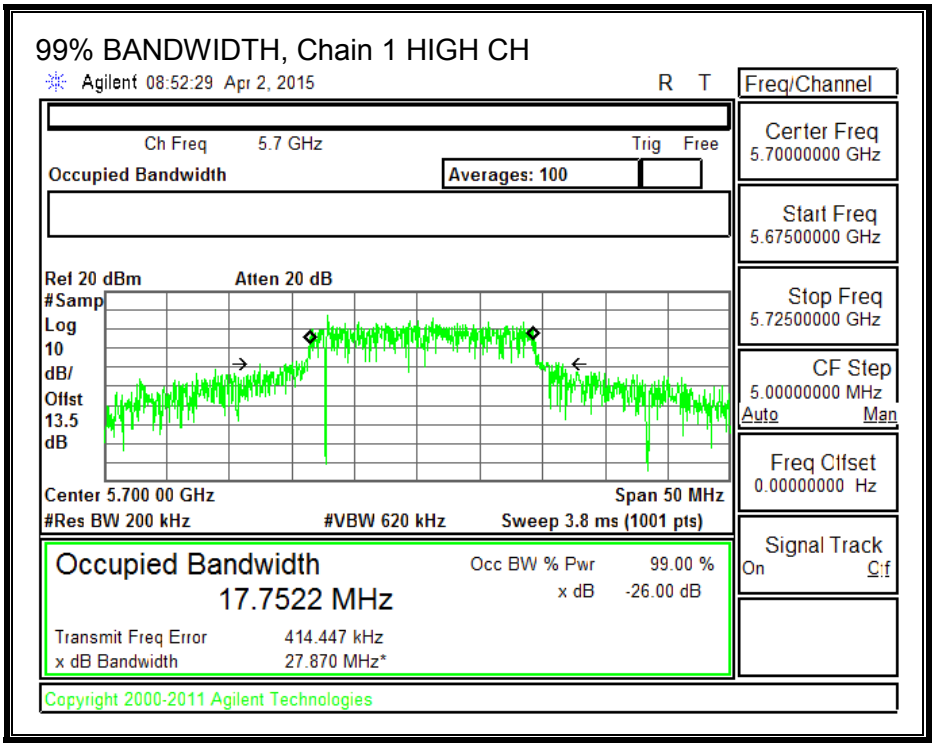


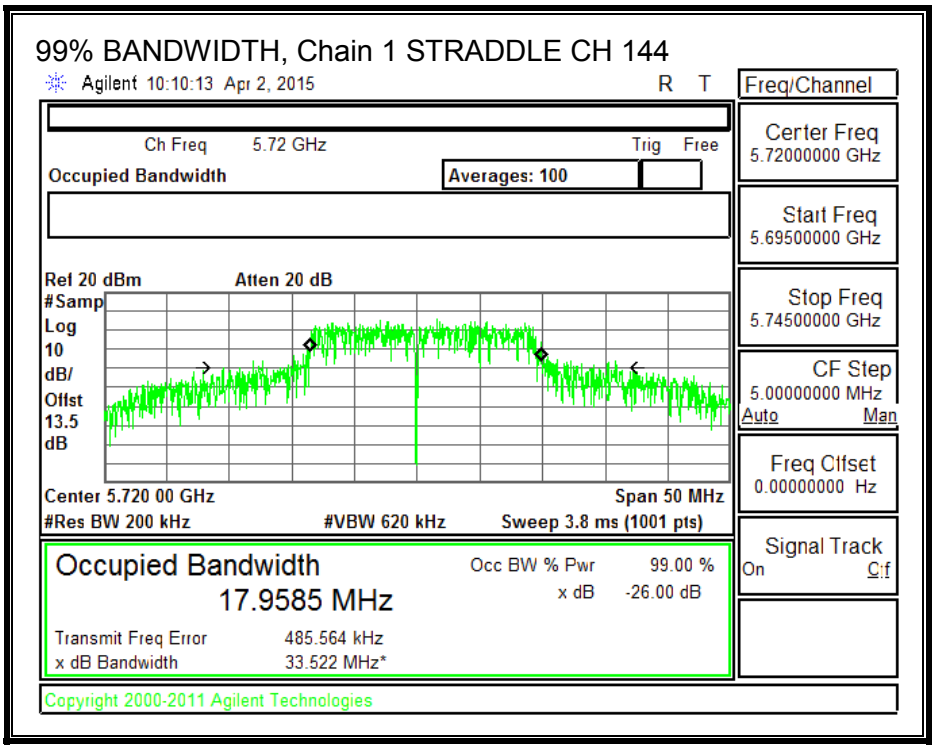


99% BANDWIDTH, Chain 1

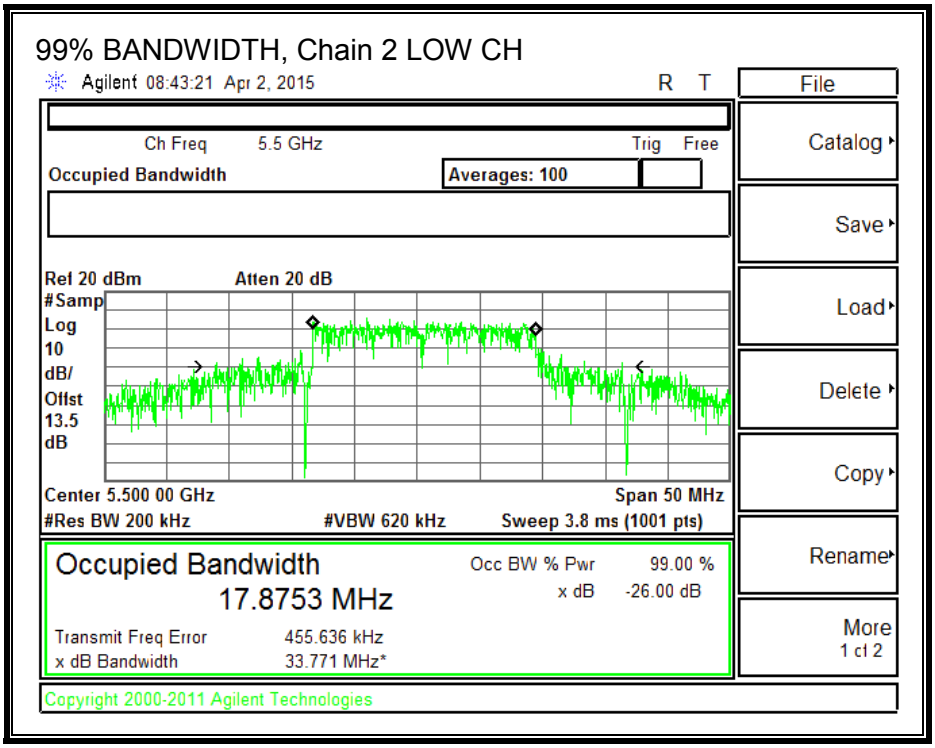


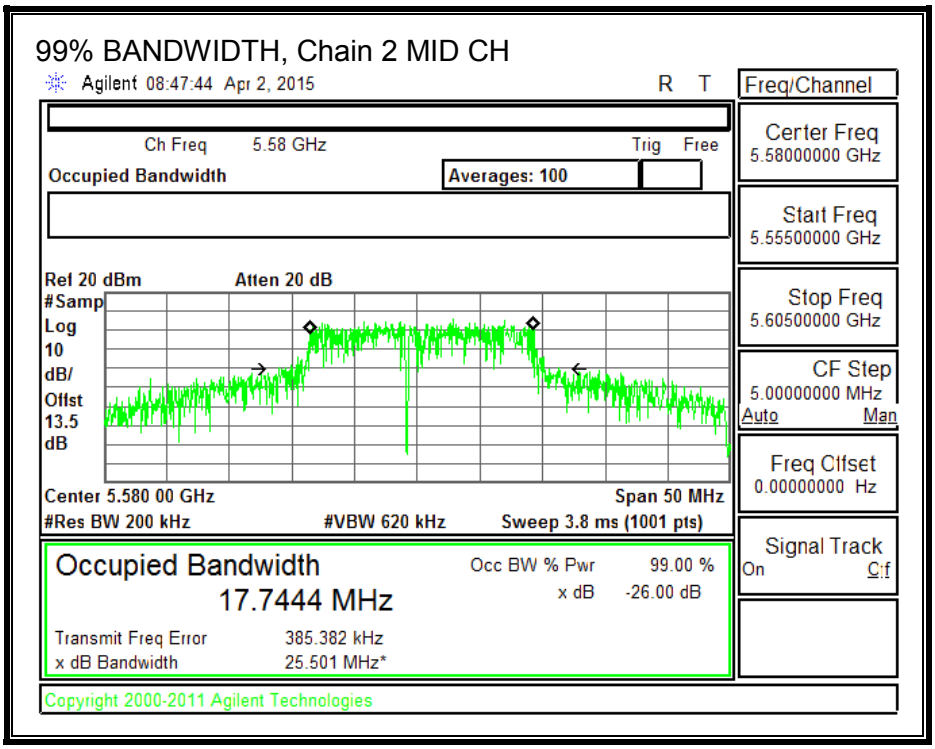


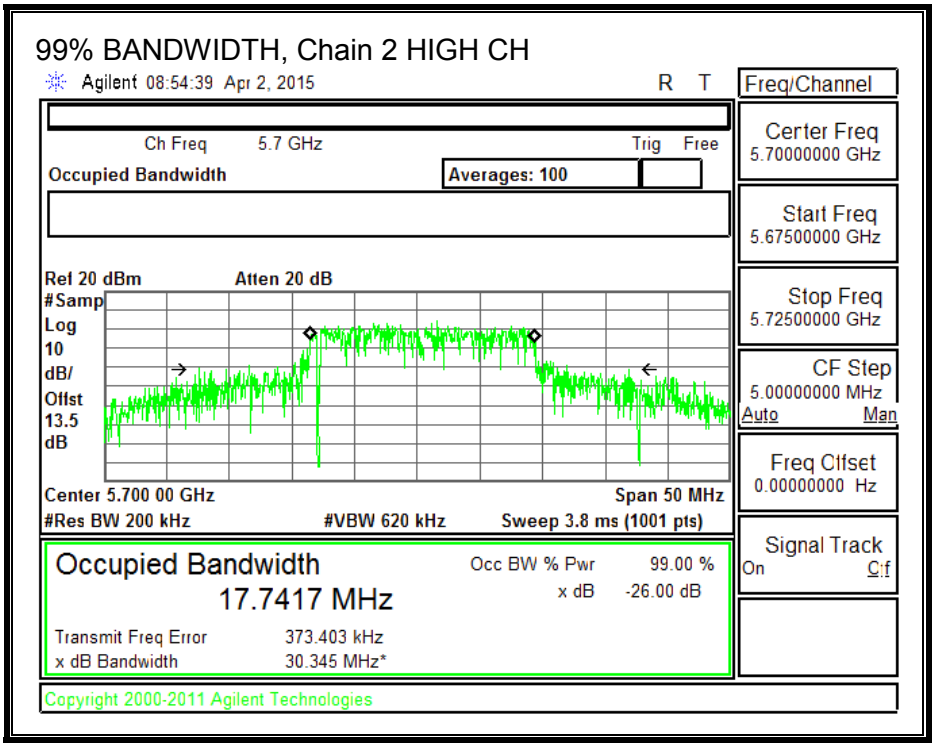


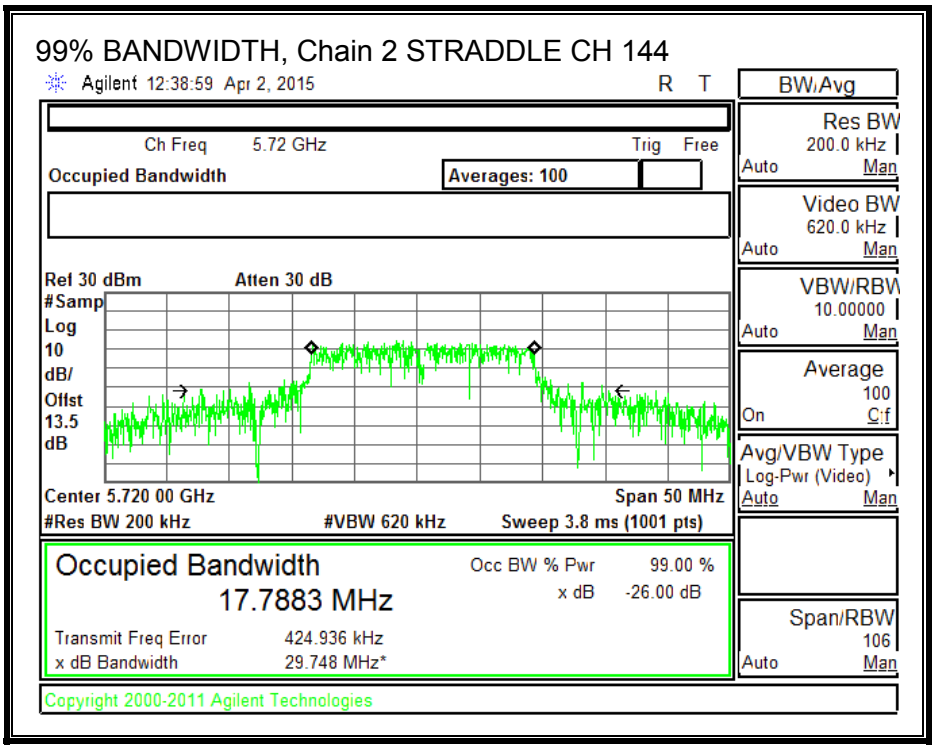


99% BANDWIDTH, Chain 2









8.25.3. 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 and PSD, the TX chains are uncorrelated and the antenna gain is the same for each chain. The directional gain is equal to the antenna gain, 6.21 dBi.

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	42.18	6.21	6.21	23.79	10.79
Mid	5580	44.16	6.21	6.21	23.79	10.79
High	5700	42.30	6.21	6.21	23.79	10.79

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	16.15	16.61	16.58	21.22	23.79	-2.57
Mid	5580	18.40	18.45	18.40	23.19	23.79	-0.60
High	5700	13.08	13.82	13.56	18.27	23.79	-5.52

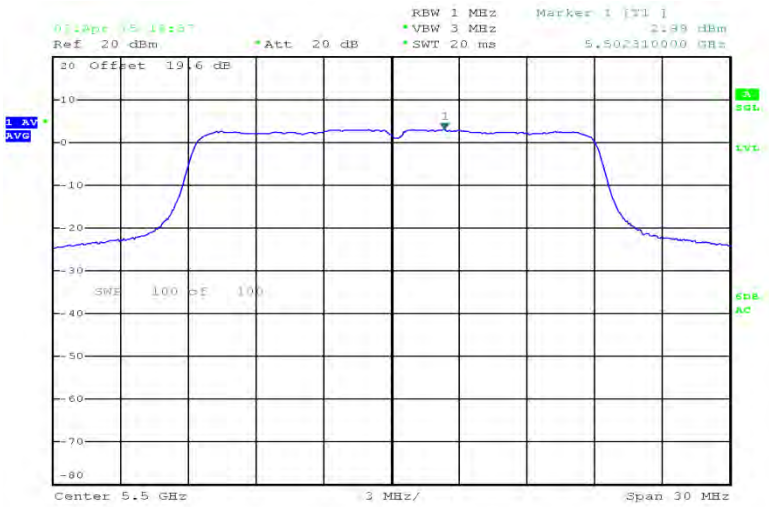
PSD Results

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	2.99	3.38	3.17	7.95	10.79	-2.84
Mid	5580	3.24	3.64	3.24	8.15	10.79	-2.64
High	5700	2.61	3.18	2.83	7.65	10.79	-3.14

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.

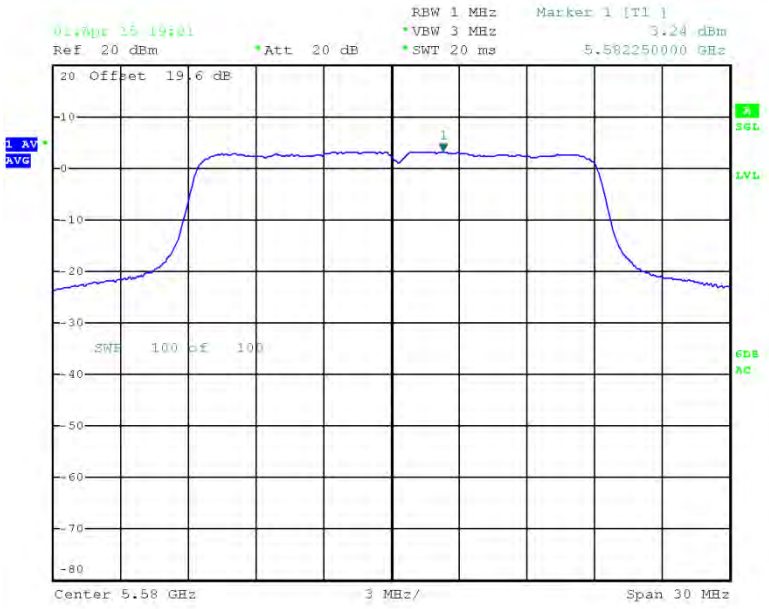
PSD, Chain 0

PSD, Chain 0 LOW CH



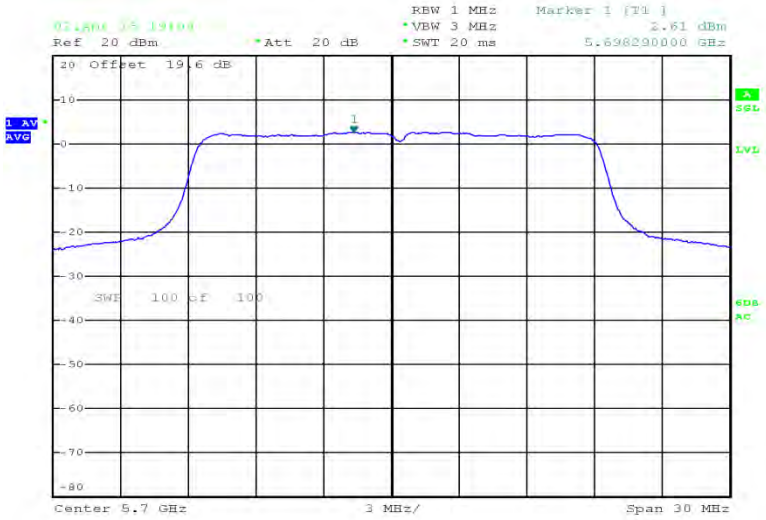
Date: 2.APR.2015 18:57:07

PSD, Chain 0 MID CH



Date: 2.APR.2015 19:01:11

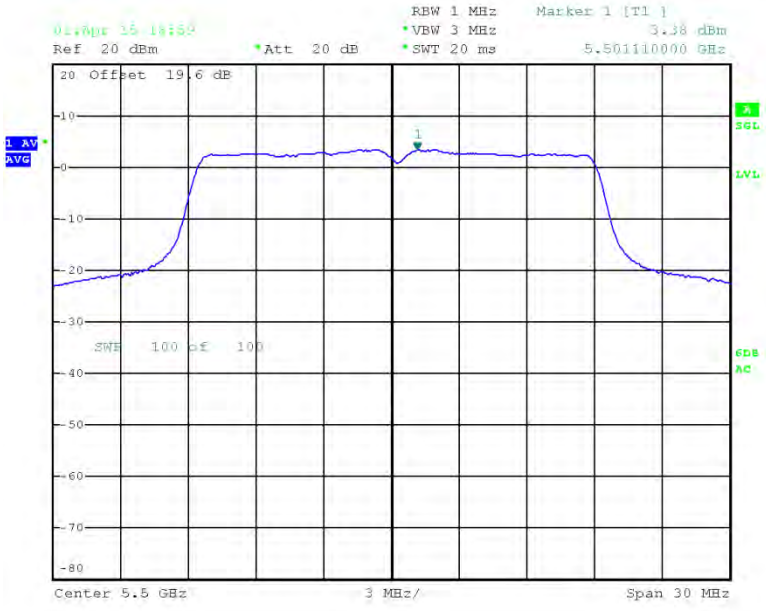
PSD, Chain 0 HIGH CH



Date: 2.APR.2015 19:04:36

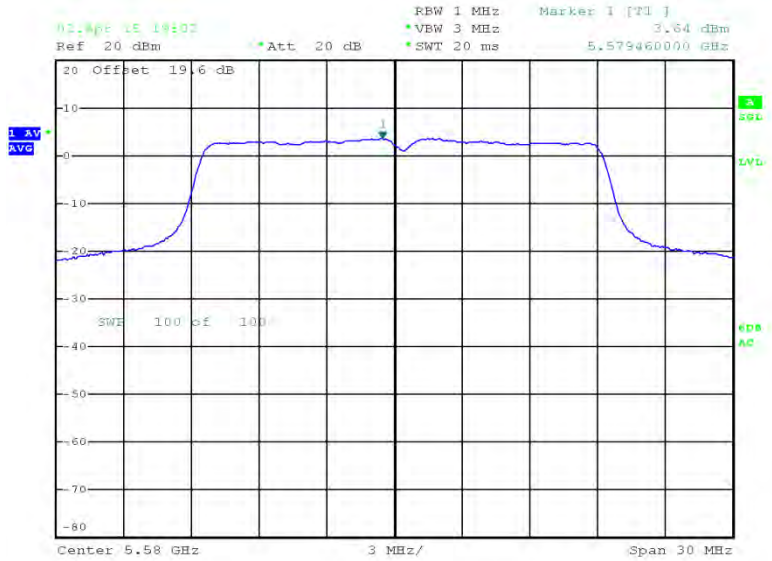
PSD, Chain 1

PSD, Chain 1 LOW CH



Date: 2.APR.2015 18:59:19

PSD, Chain 1 MID CH



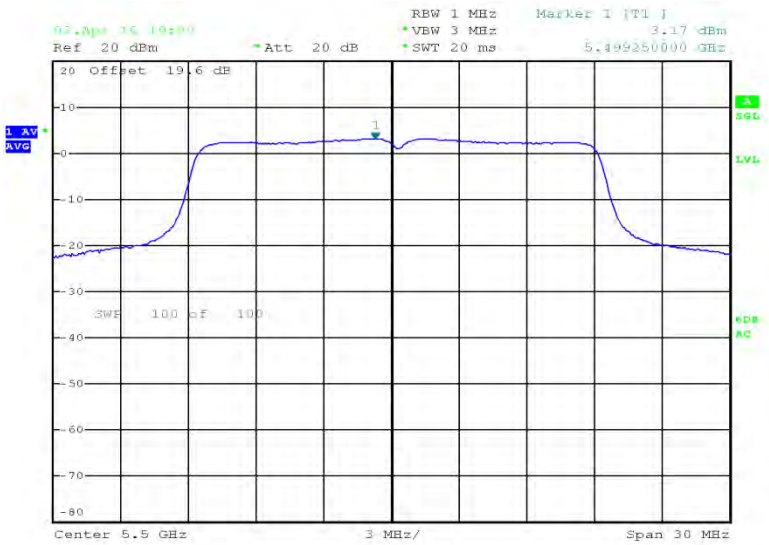
Date: 2.APR.2015 19:02:04

PSD, Chain 1 HIGH CH

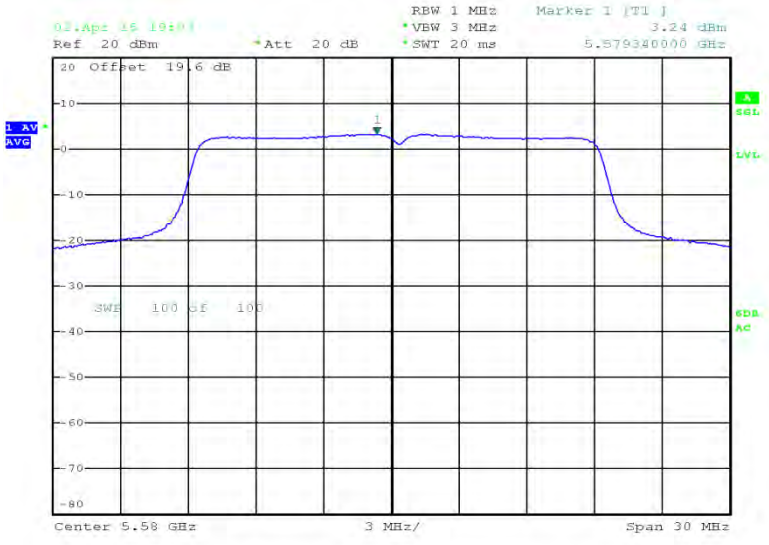
Date: 2.APR.2015 19:05:38

PSD, Chain 2

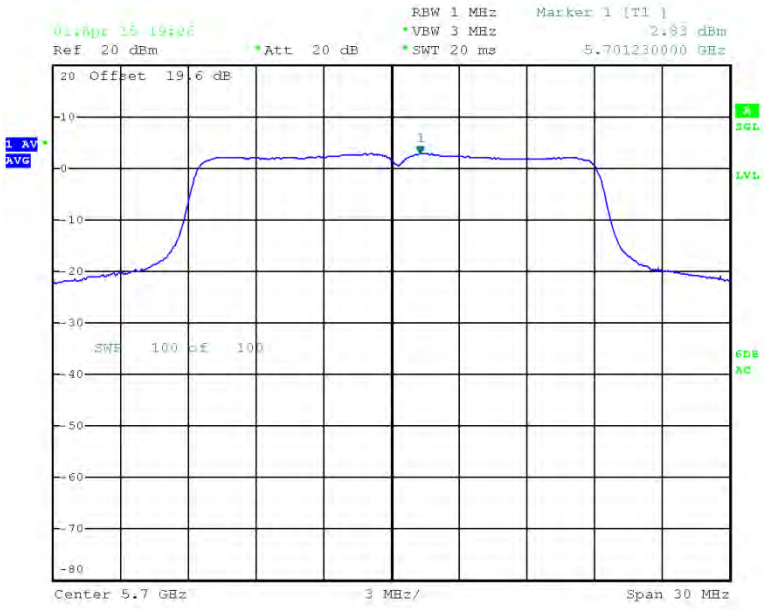
PSD, Chain 2 LOW CH



PSD, Chain 2 MID CH



OUTPUT POWER AND PSD, Chain 2 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	27.02	6.21	6.21	23.79	10.79

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

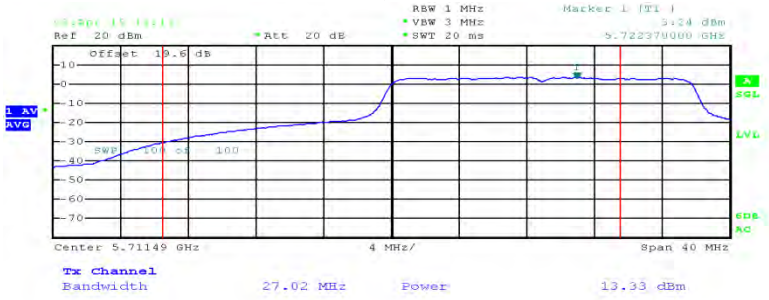
Output Power Results

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	13.33	13.40	13.28	18.11	23.79	-5.68

PSD Results

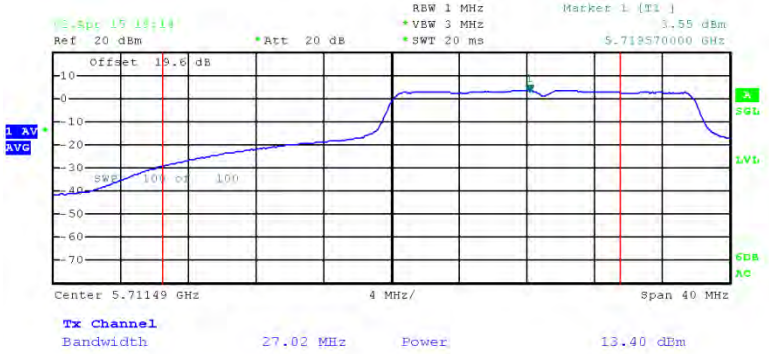
Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Chain 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
144	5720	3.24	3.55	3.31	8.14	10.79	-2.65

OUTPUT POWER AND PSD, Chain 0 CH 144 UNII



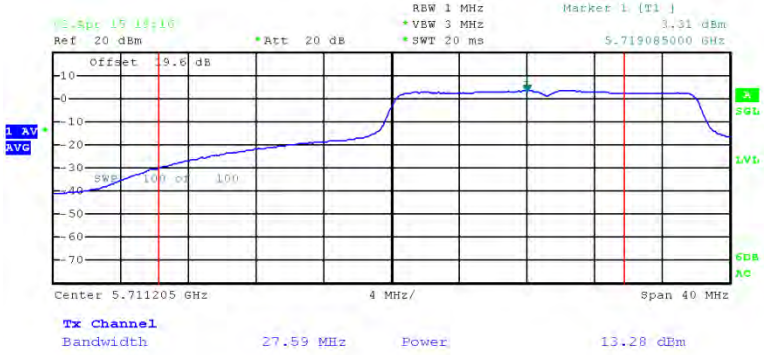
Date: 2.APR.2015 19:13:36

OUTPUT POWER AND PSD, Chain 1 CH 144 UNII



Date: 2.APR.2015 19:14:47

OUTPUT POWER AND PSD, Chain 2 CH 144 UNII



Date: 2.APR.2015 19:16:44

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	6.21	6.21	29.79	29.79

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

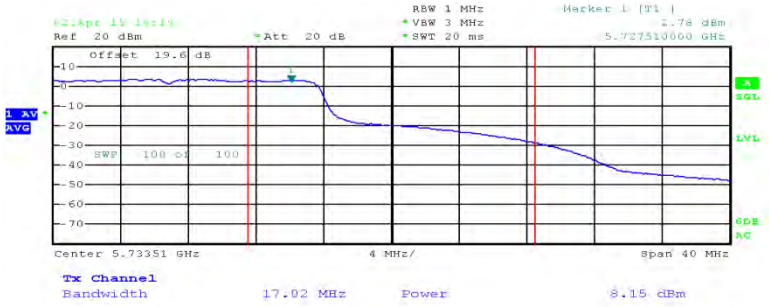
Output Power Results

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	8.15	8.51	8.04	13.01	29.79	-16.78

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	2.78	2.95	2.57	7.54	29.79	-22.25

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



Date: 2.APR.2015 19:19:21

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

Date: 2.APR.2015 19:21:16

OUTPUT POWER and PSD, Chain 2 CH 144 UNII-3

Date: 2.APR.2015 19:23:28

8.25.4. 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	18.87	18.90	19.00	23.69

8.26. 802.11n HT20 TxBF 3Tx MODE IN THE 5.6 GHz BAND

8.26.1. 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 the same for each chain. The directional gain is:

Antenna Gain (dBi)	10 * Log (3 chains) (dB)	Correlated Chains Directional Gain (dBi)
6.21	4.77	10.98

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	42.84	10.98	10.98	19.02	6.02
Mid	5580	45.00	10.98	10.98	19.02	6.02
High	5700	44.22	10.98	10.98	19.02	6.02

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	13.20	13.90	13.60	18.35	19.02	-0.67
Mid	5580	13.15	14.00	13.56	18.36	19.02	-0.66
High	5700	12.90	13.78	13.45	18.16	19.02	-0.86

PSD Results

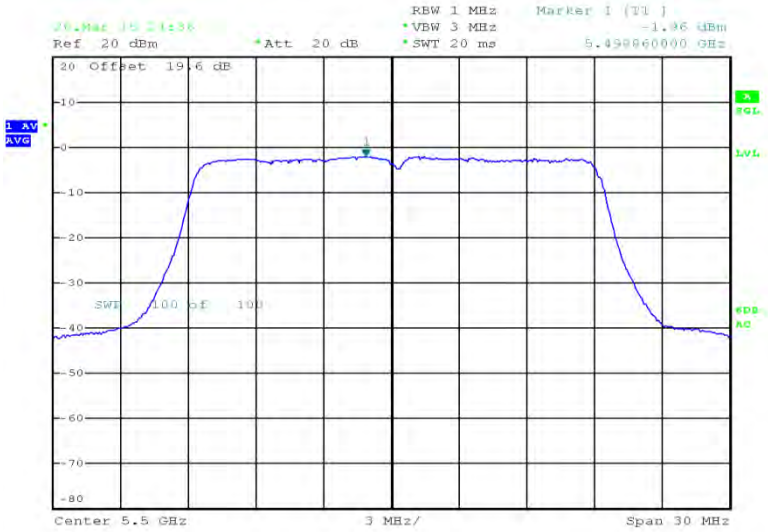
Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Chain 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5500	-1.96	-1.04	-1.46	3.30	6.02	-2.72
Mid	5580	-1.59	-0.80	-1.26	3.57	6.02	-2.45
High	5700	-1.83	-1.19	-1.52	3.27	6.02	-2.75

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.

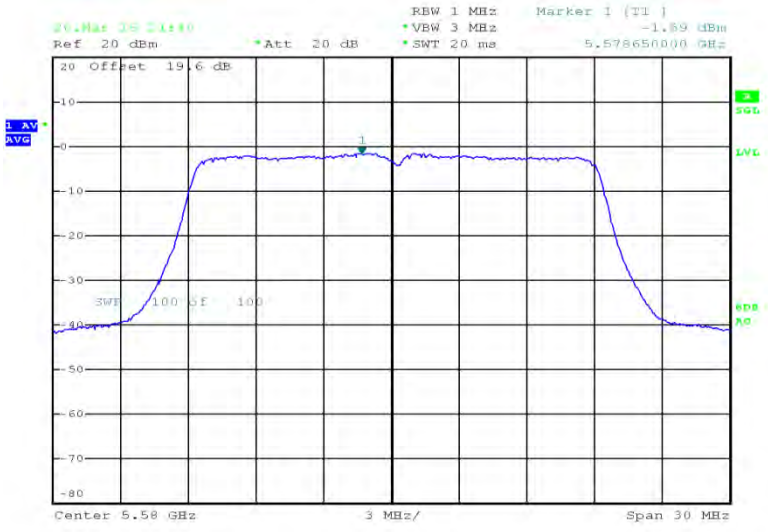
PSD, Chain 0

PSD, Chain 0 LOW CH



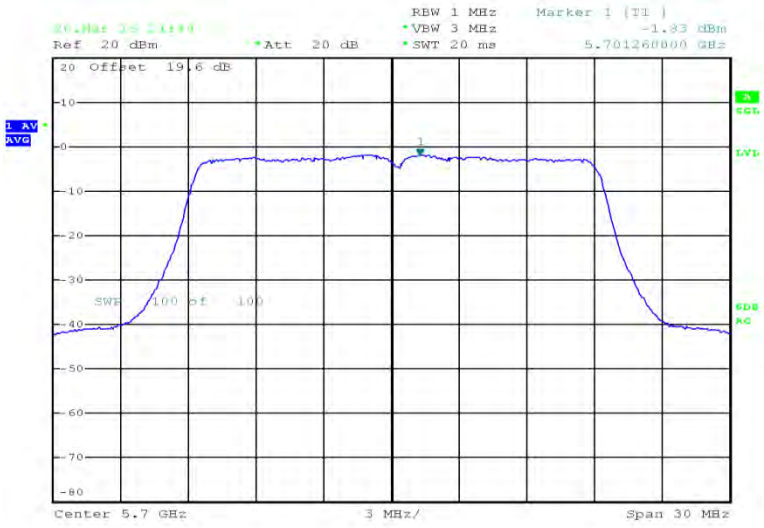
Date: 26.MAR.2015 21:36:50

PSD, Chain 0 MID CH



Date: 26.MAR.2015 21:40:32

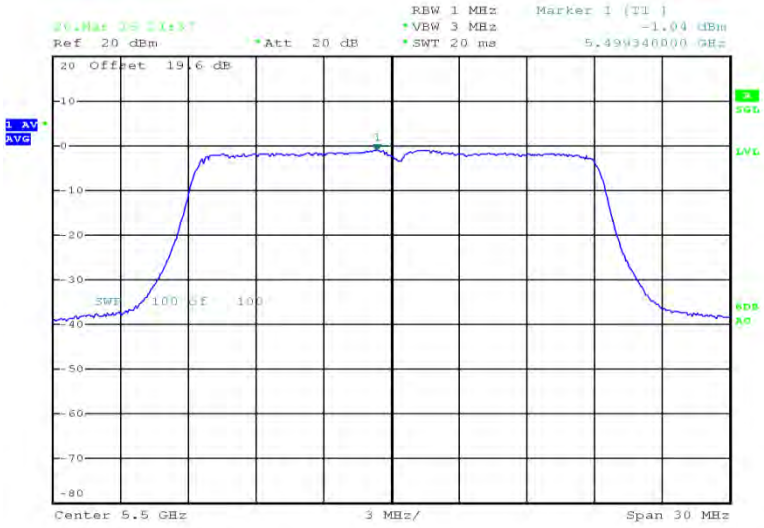
PSD, Chain 0 HIGH CH



Date: 26.MAR.2015 21:44:25

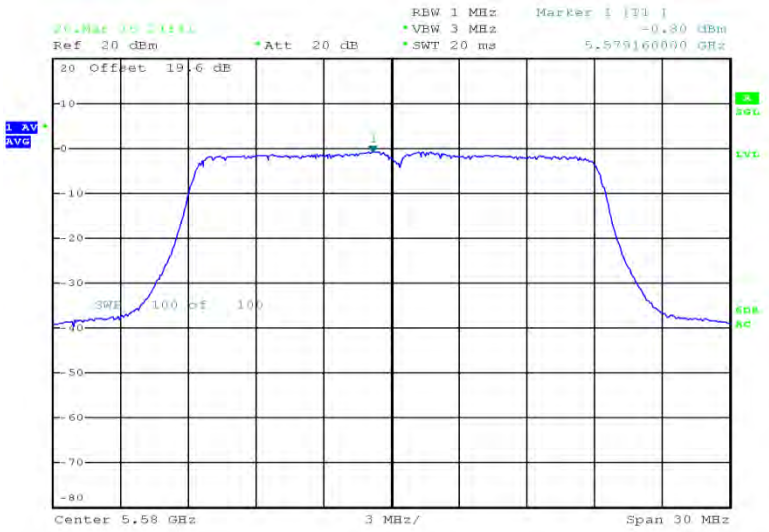
PSD, Chain 1

PSD, Chain 1 LOW CH



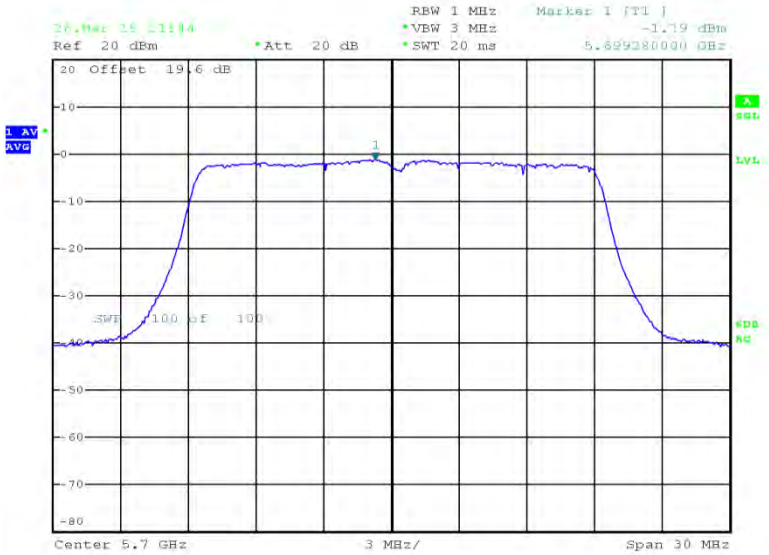
Date: 26.MAR.2015 21:37:22

PSD, Chain 1 MID CH



Date: 26.MAR.2015 21:41:04

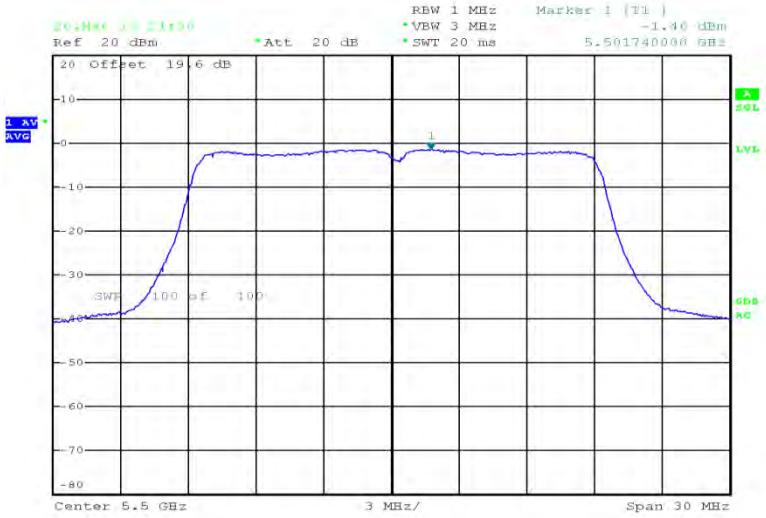
PSD, Chain 1 HIGH CH



Date: 26.MAR.2015 21:44:58

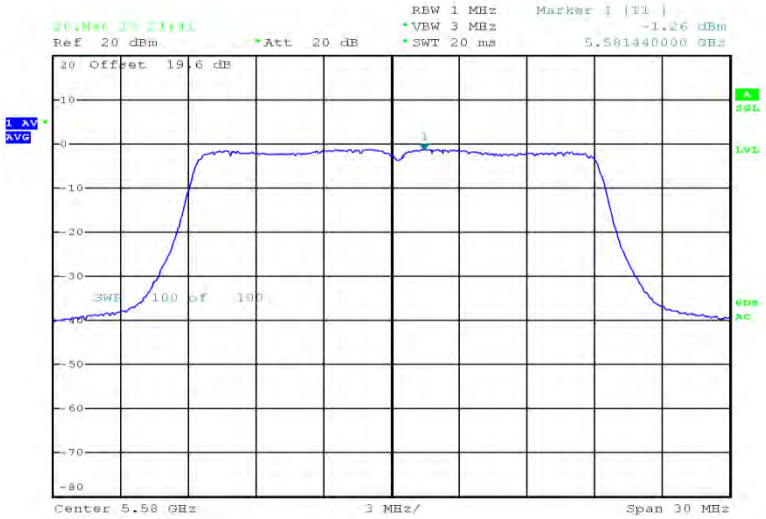
PSD, Chain 2

PSD, Chain 2 LOW CH



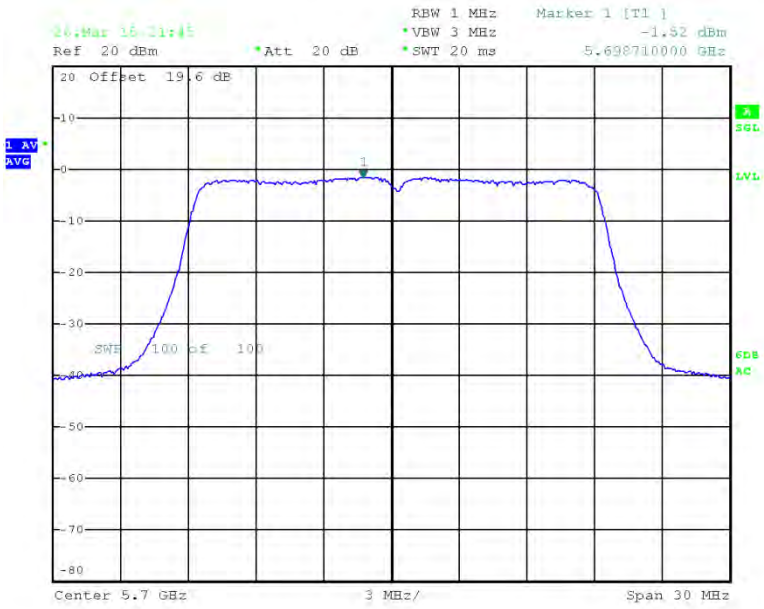
Date: 26.MAR.2015 21:38:06

PSD, Chain 2 MID CH



Date: 26.MAR.2015 21:41:43

PSD, Chain 2 HIGH CH



Date: 26.MAR.2015 21:45:38

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	22.67	10.98	10.98	19.02	6.02

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

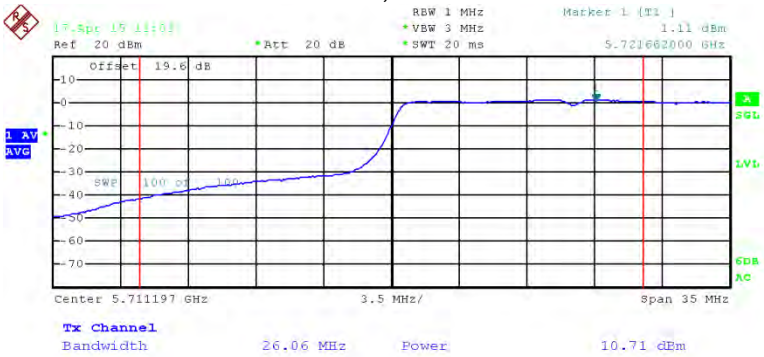
Output Power Results

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	10.71	11.27	10.88	15.73	19.02	-3.29

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	1.11	1.17	1.14	5.91	6.02	-0.11

OUTPUT POWER AND PSD, Chain 0 CH 144 UNII

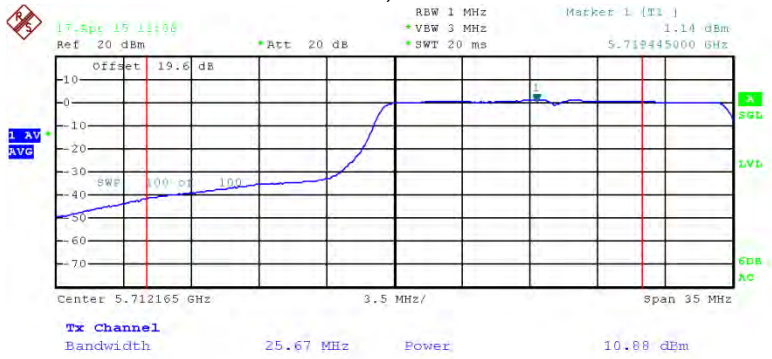


Date: 17.APR.2015 11:02:38

OUTPUT POWER AND PSD, Chain 1 CH 144 UNII

Date: 17.APR.2015 11:06:57

OUTPUT POWER AND PSD, Chain 2 CH 144 UNII



Date: 17.APR.2015 11:08:36

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	10.98	10.98	25.02	25.02

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

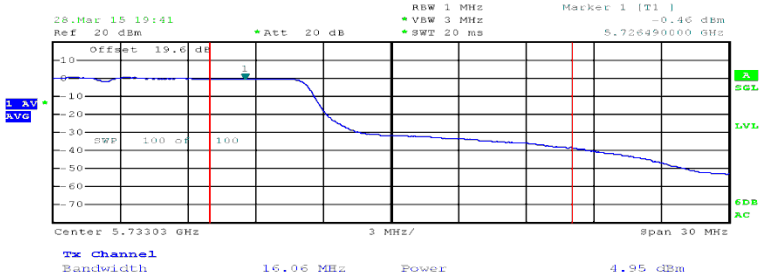
Output Power Results

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	4.95	5.62	5.35	10.09	25.02	-14.93

PSD Results

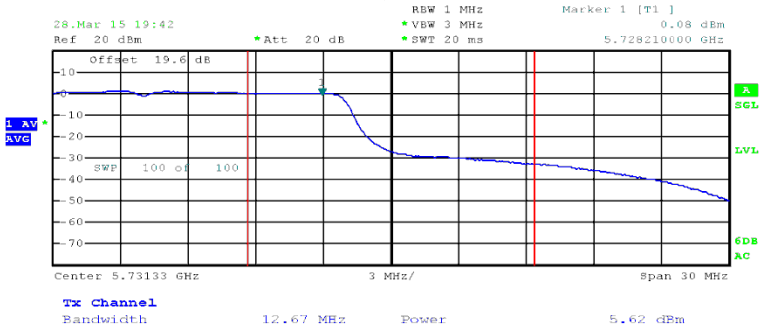
Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Chain 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
144	5720	-0.46	0.08	-0.16	4.60	25.02	-20.42

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



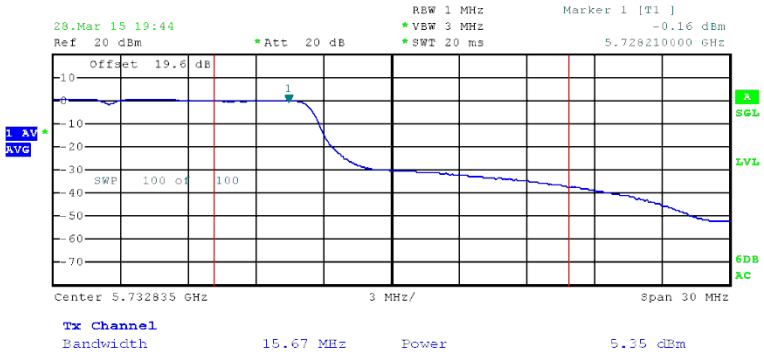
Date: 28.MAR.2015 19:41:23

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



Date: 28.MAR.2015 19:42:57

OUTPUT POWER AND PSD, Chain 2 CH 144 UNII-3



Date: 28.MAR.2015 19:44:56

8.26.2. 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	18.98	18.80	18.75	23.62

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.

8.27. 802.11n HT40 1Tx MODE IN THE 5.6 GHz BAND

8.27.1. 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) = 6.21 dBi

RESULTS

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)
Low	5510	96.48	6.21	23.79
High	5670	98.64	6.21	23.79

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5510	12.77	12.77	23.79	-11.02
High	5670	17.55	17.55	23.79	-6.24

Note: for Chain 0, 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.

8.28. 802.11n HT40 CDD 3Tx MODE IN THE 5.6 GHz BAND

8.28.1. 26 dB BANDWIDTH

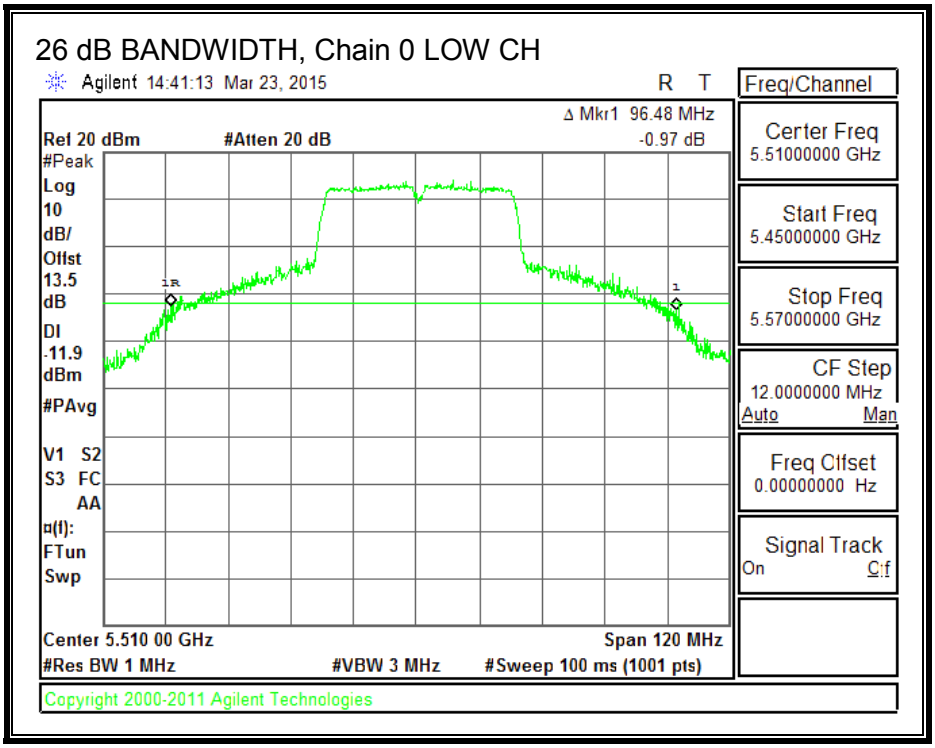
LIMITS

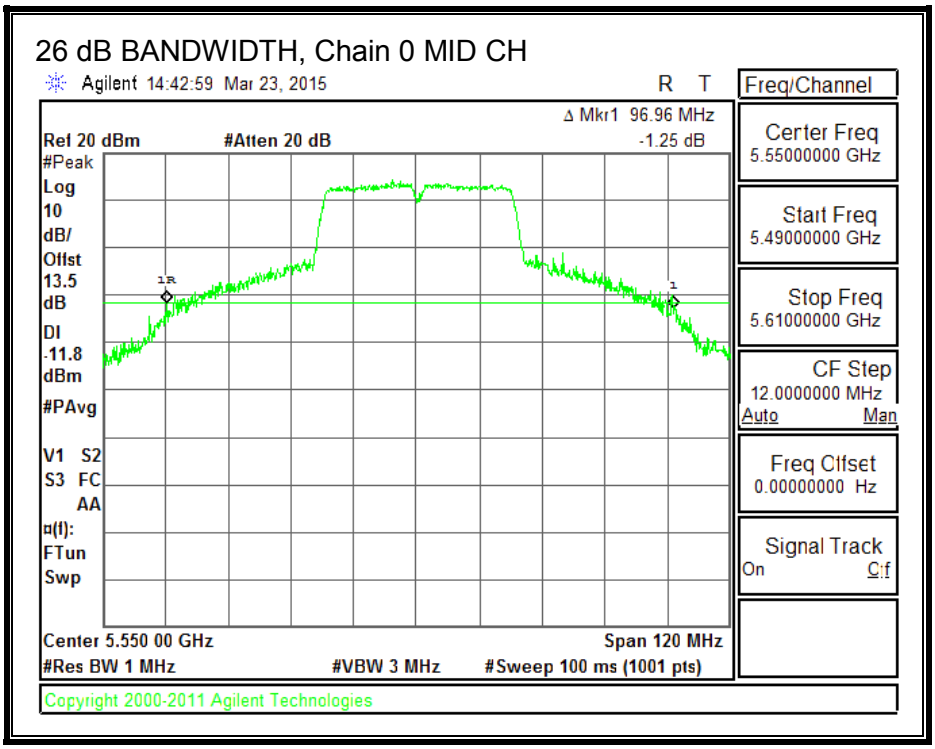
None; for reporting purposes only.

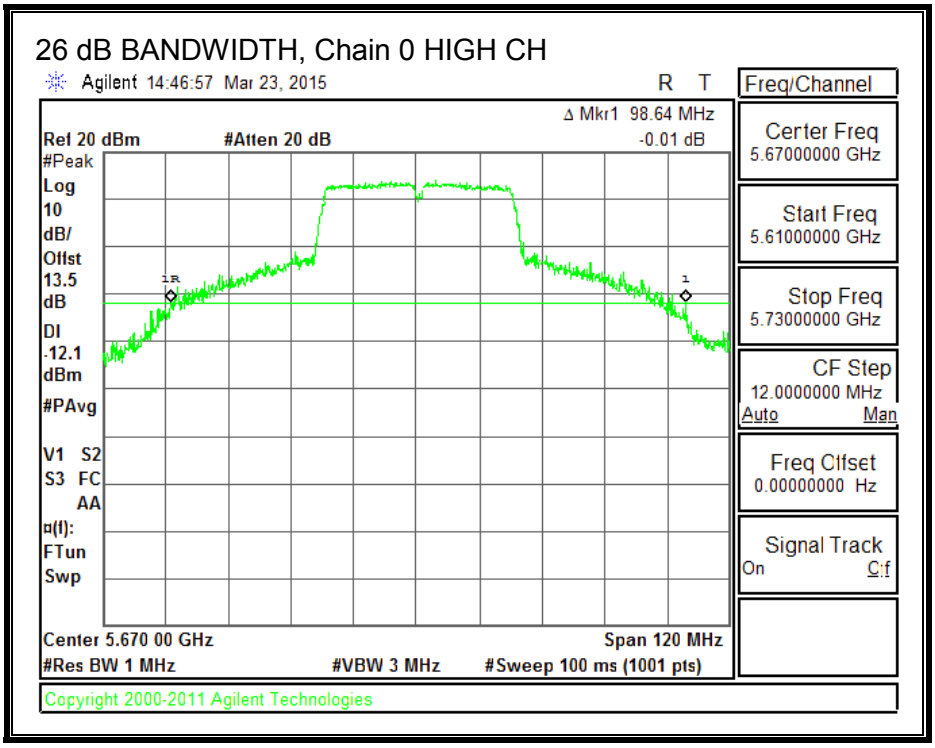
RESULTS

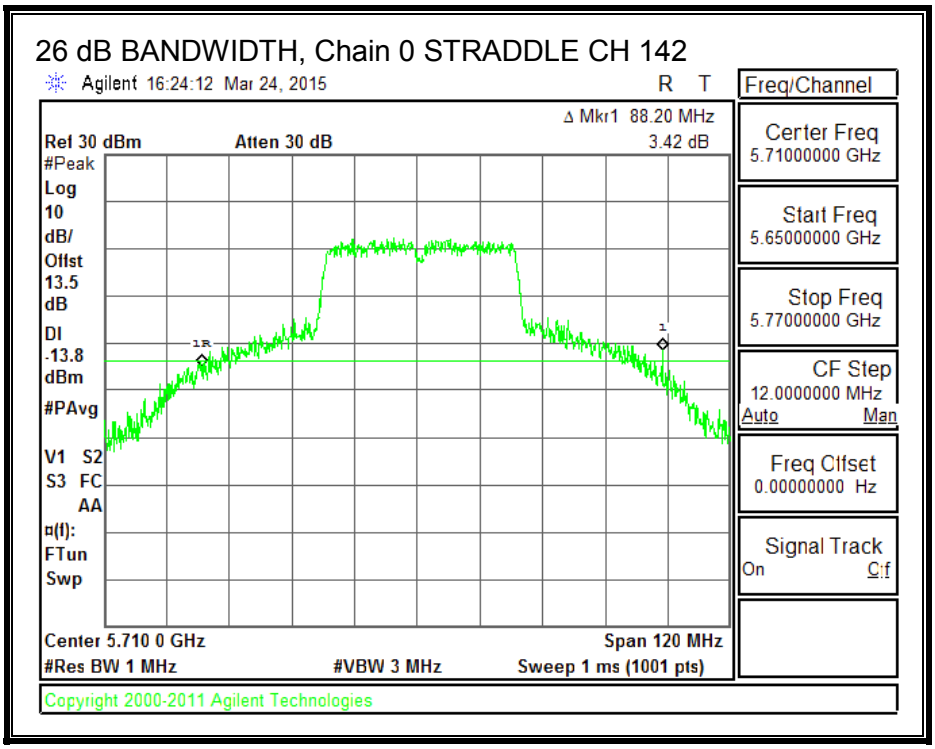
Channel	Frequency (MHz)	26 dB BW Chain 0 (MHz)	26 dB BW Chain 1 (MHz)	26 dB BW Chain 2 (MHz)
Low	5510	96.48	94.44	95.04
Mid	5550	96.96	92.64	90.72
High	5670	98.64	93.00	95.04
142	5710	88.20	86.28	87.60

26 dB BANDWIDTH, Chain 0

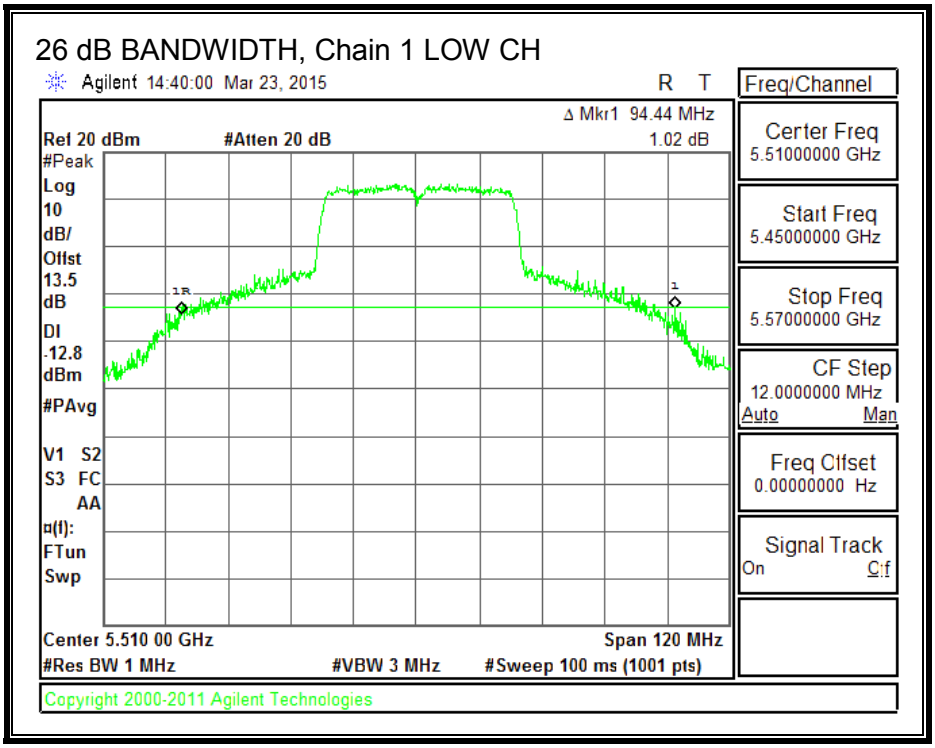


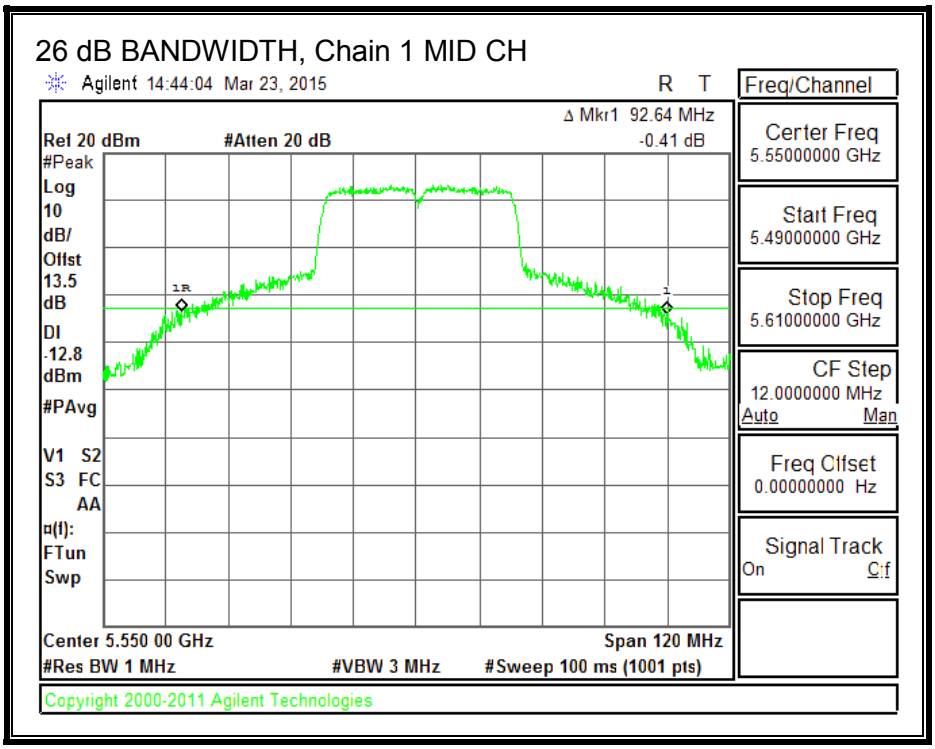


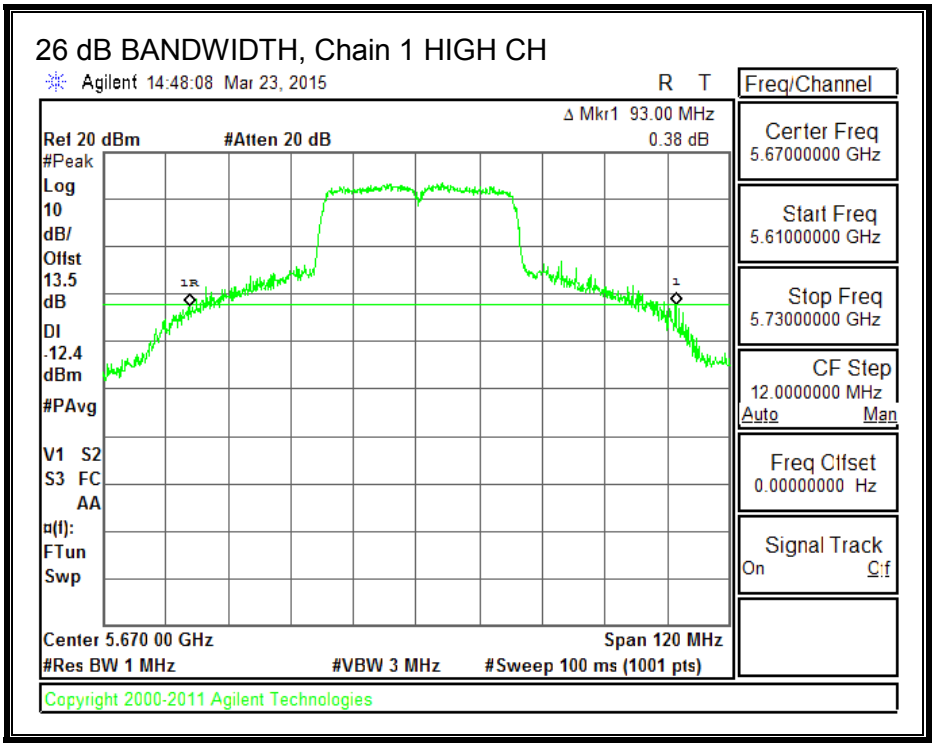


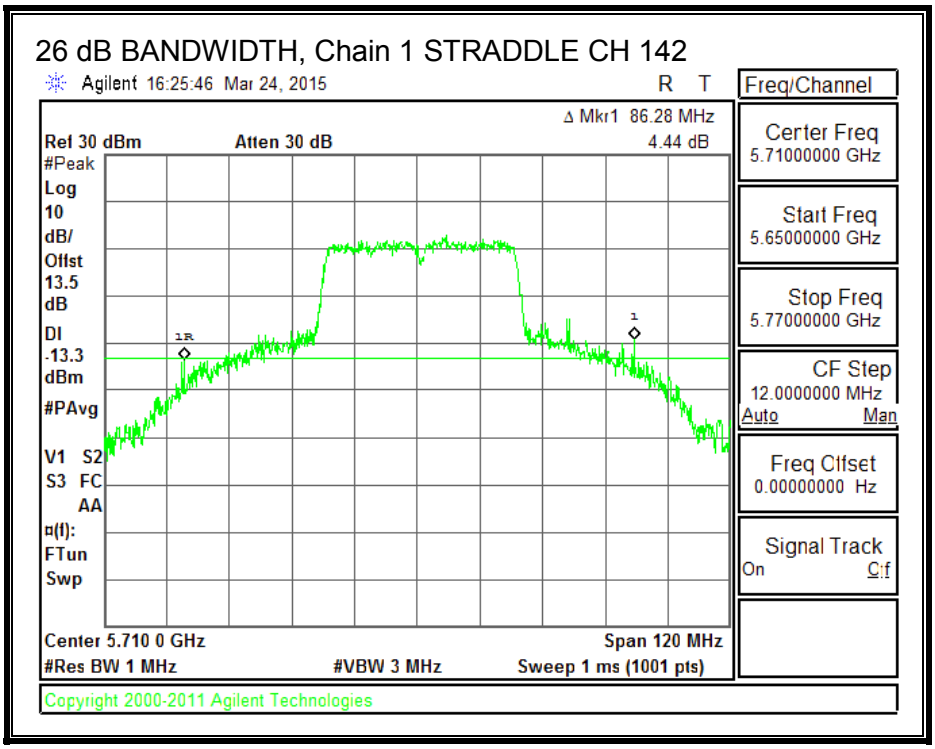


26 dB BANDWIDTH, Chain 1

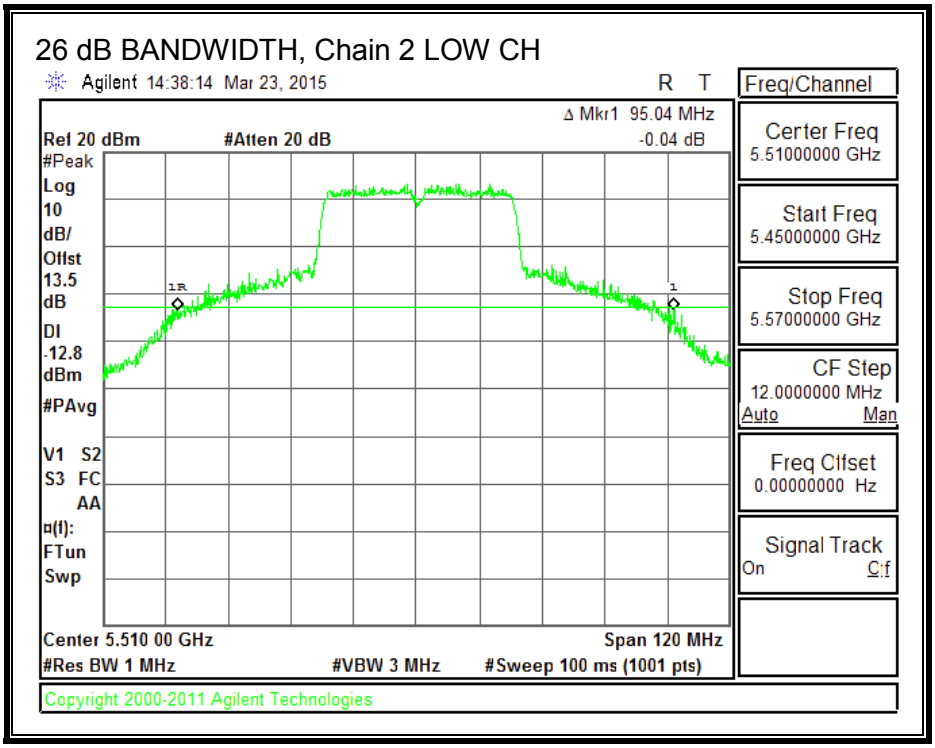


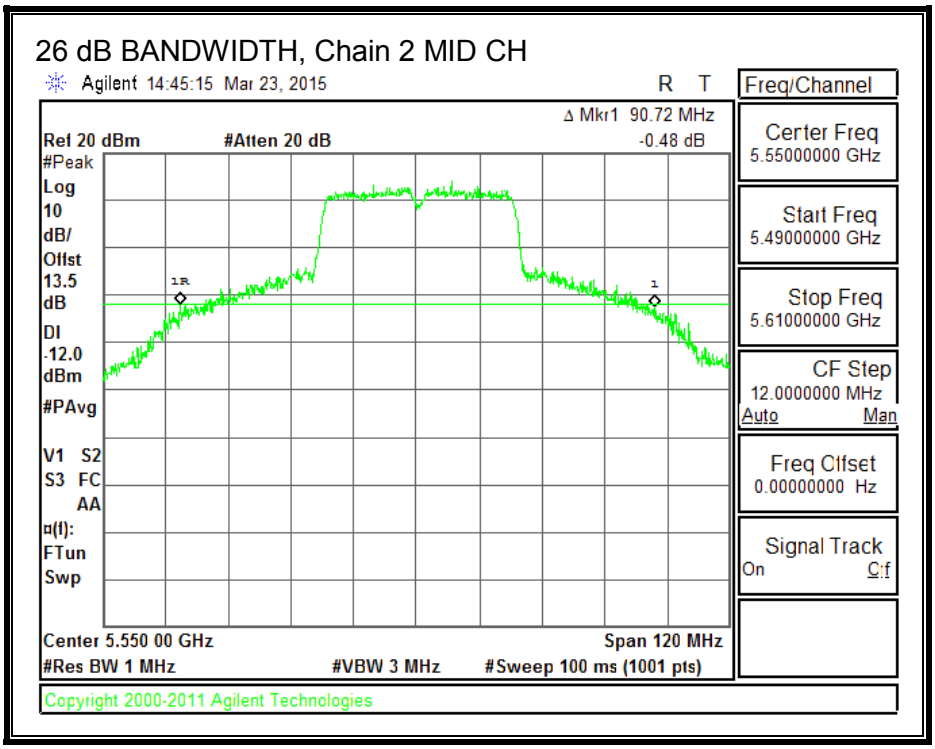


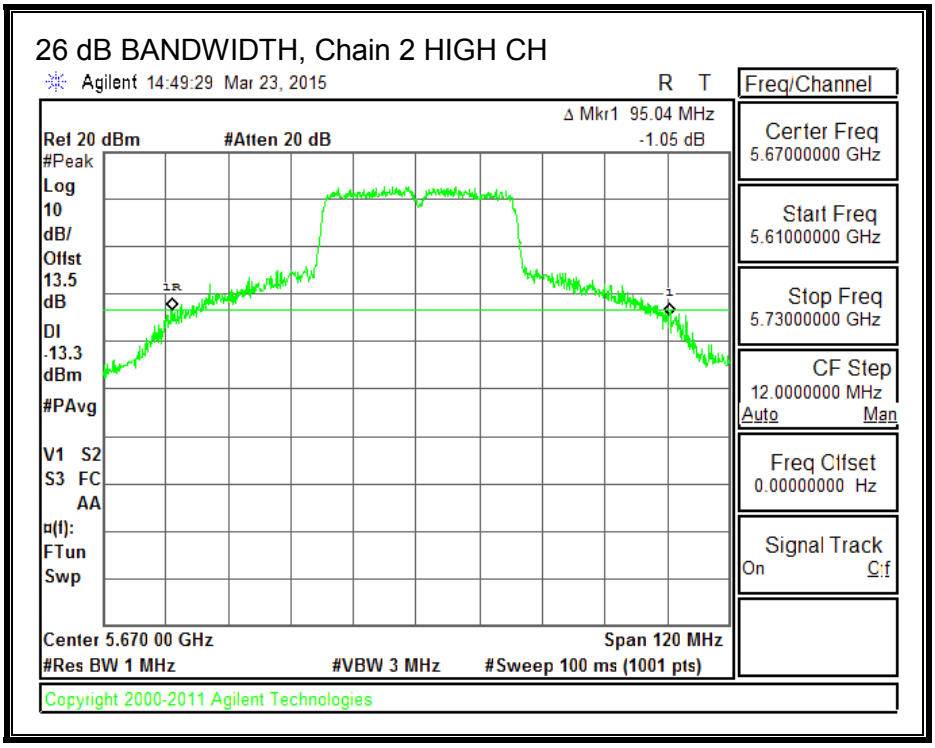


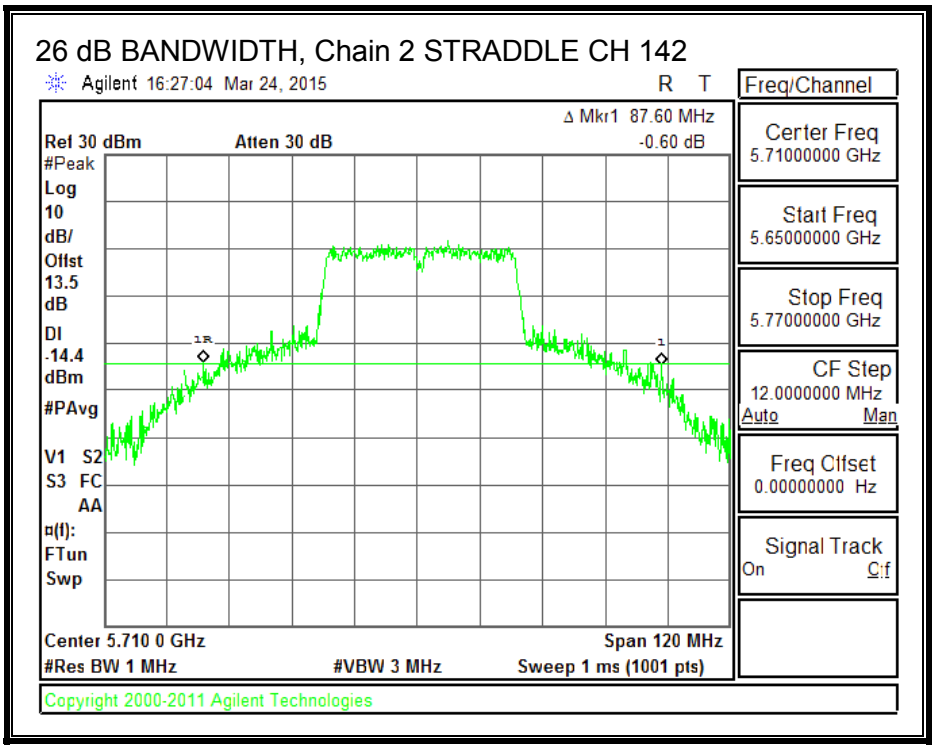


26 dB BANDWIDTH, Chain 2









8.28.2. 99% BANDWIDTH

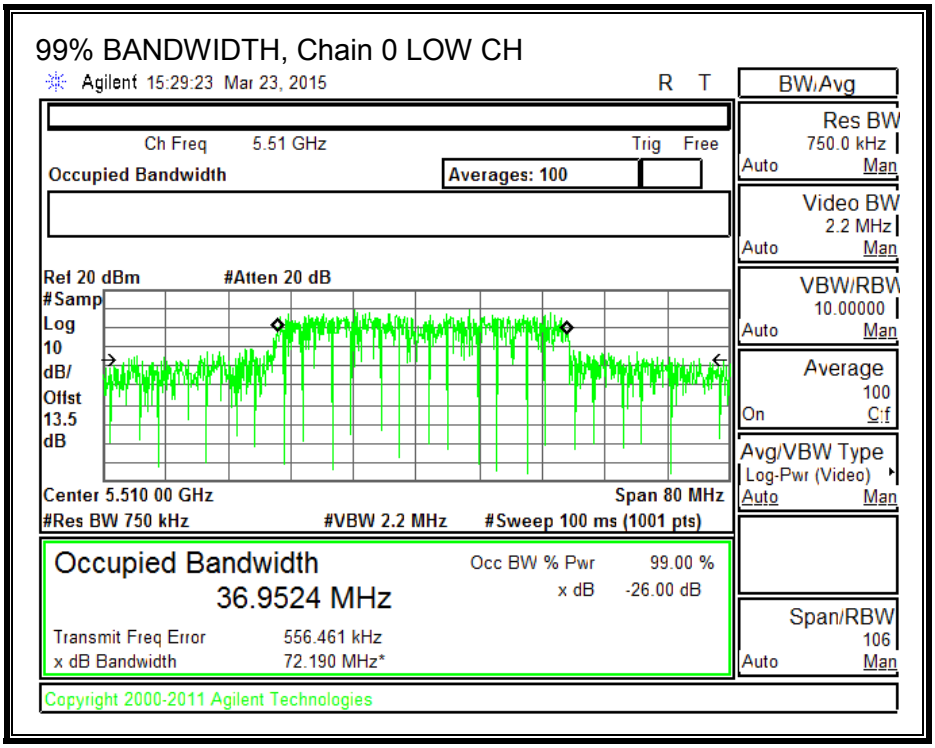
LIMITS

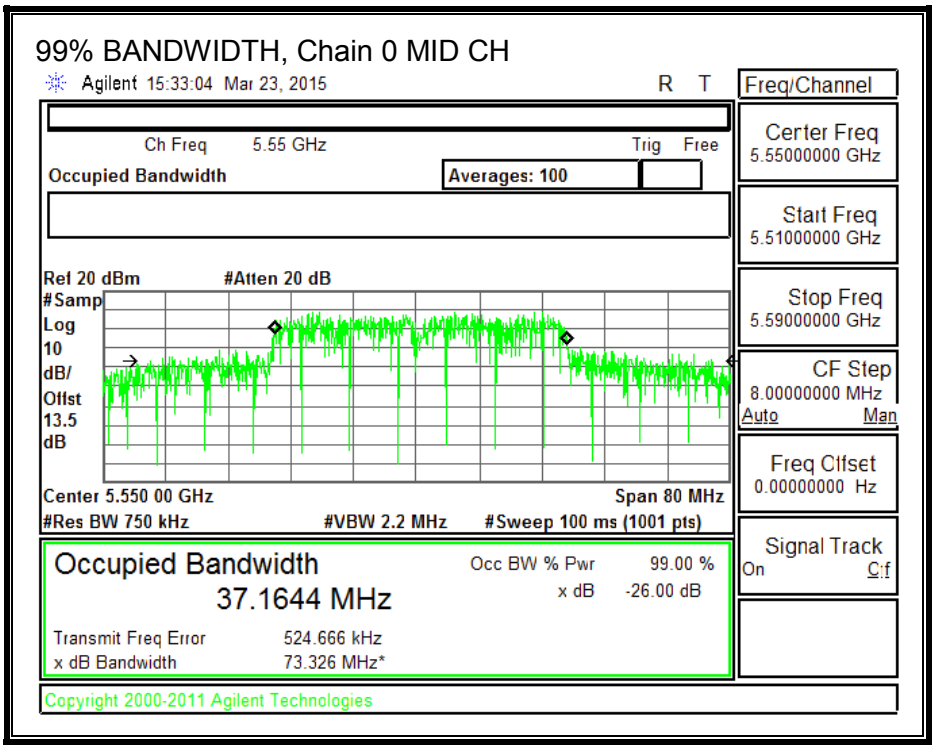
None; for reporting purposes only.

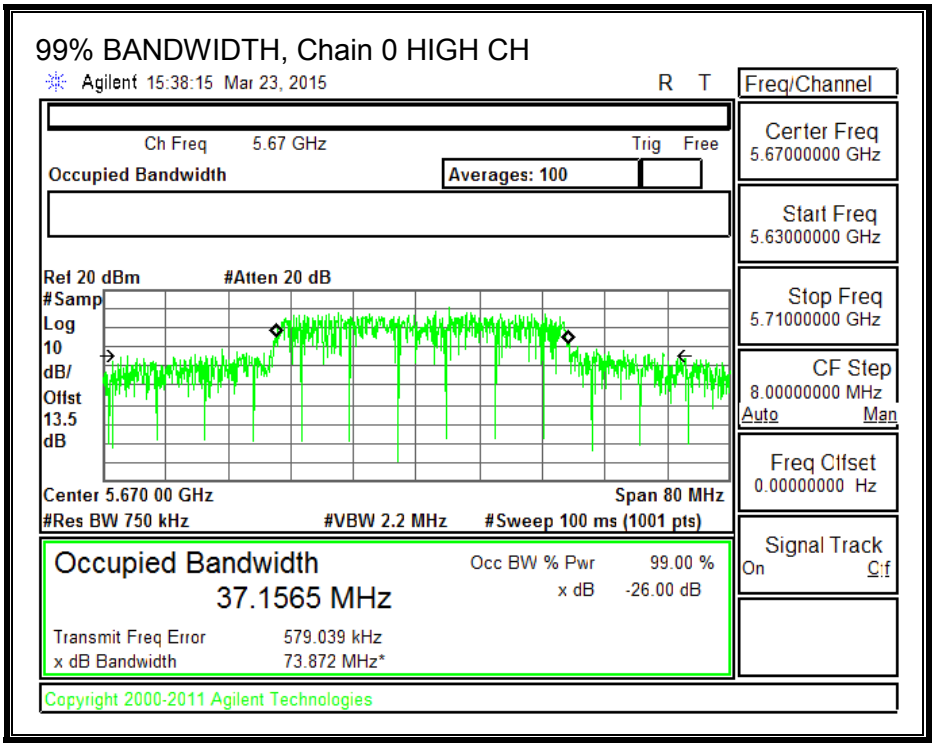
RESULTS

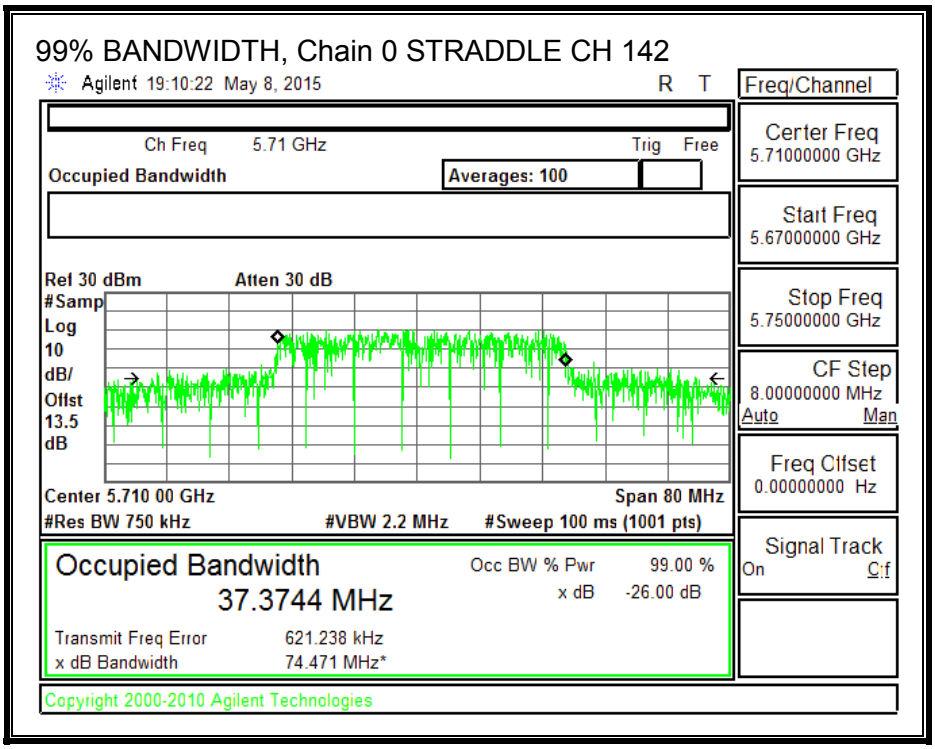
Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)	99% BW Chain 2 (MHz)
Low	5510	36.9524	37.7159	36.8017
Mid	5550	37.1644	36.7699	36.8932
High	5670	37.1565	36.7697	37.2609
142	5710	37.3744	36.8254	37.0058

99% BANDWIDTH, Chain 0

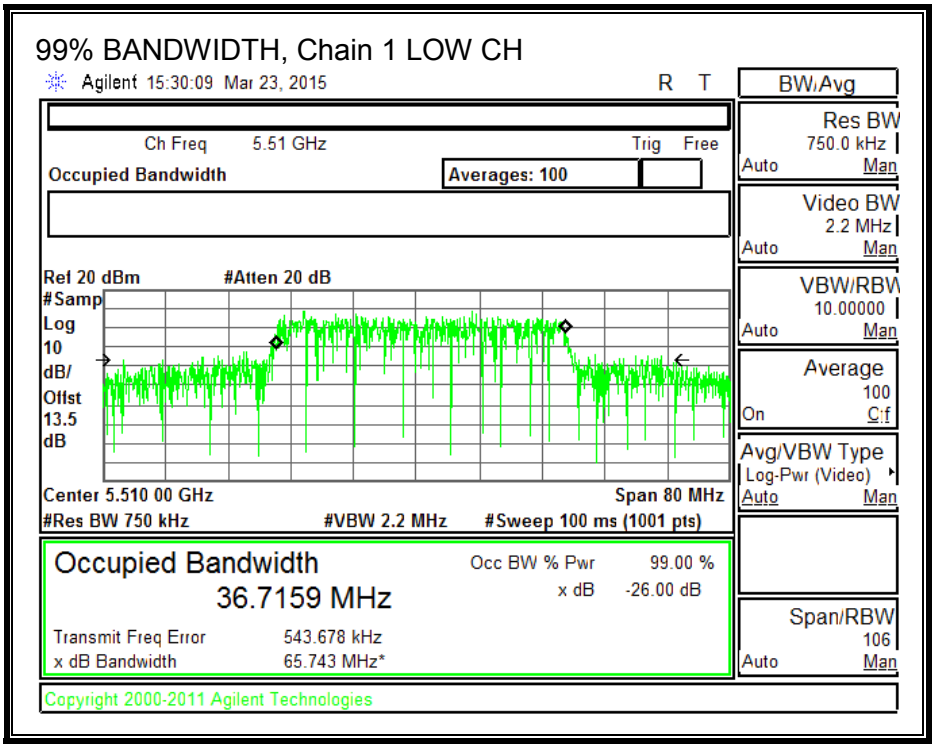


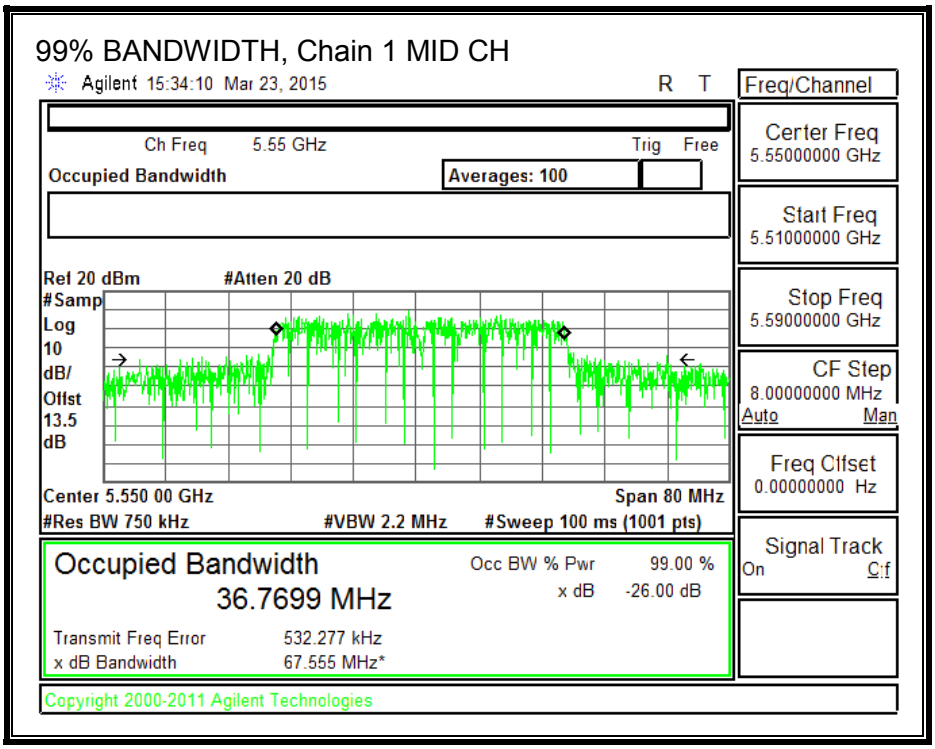


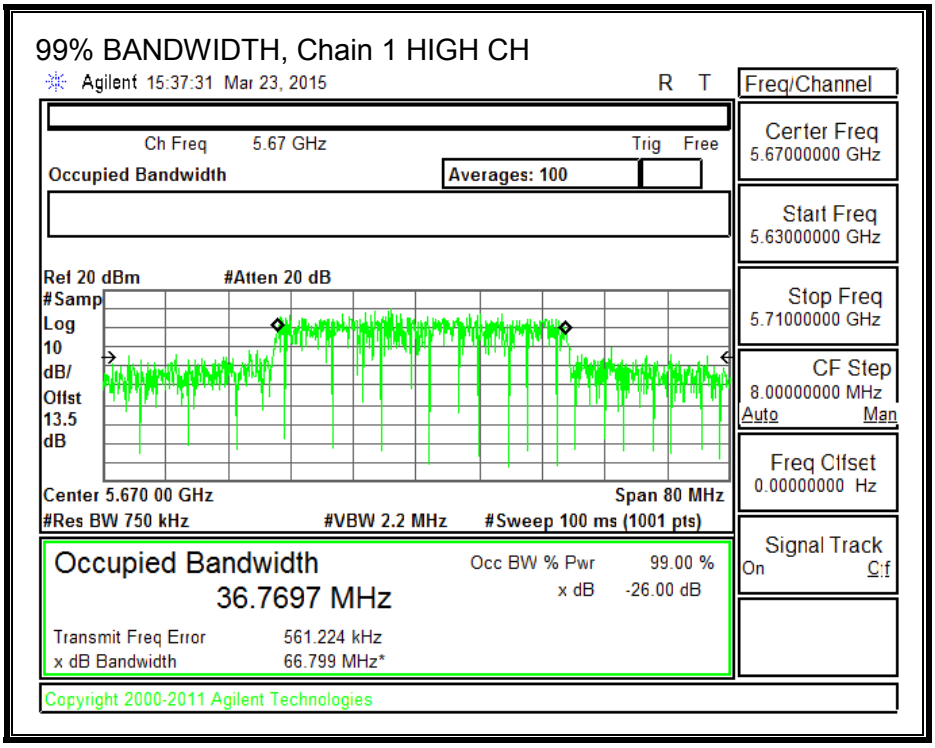


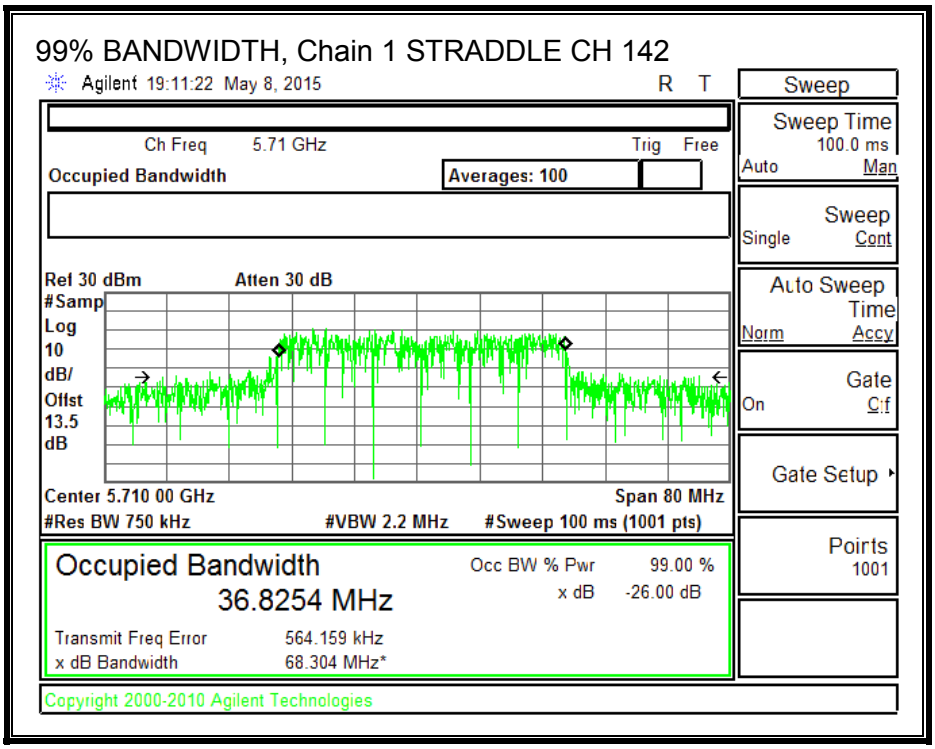


99% BANDWIDTH, Chain 1

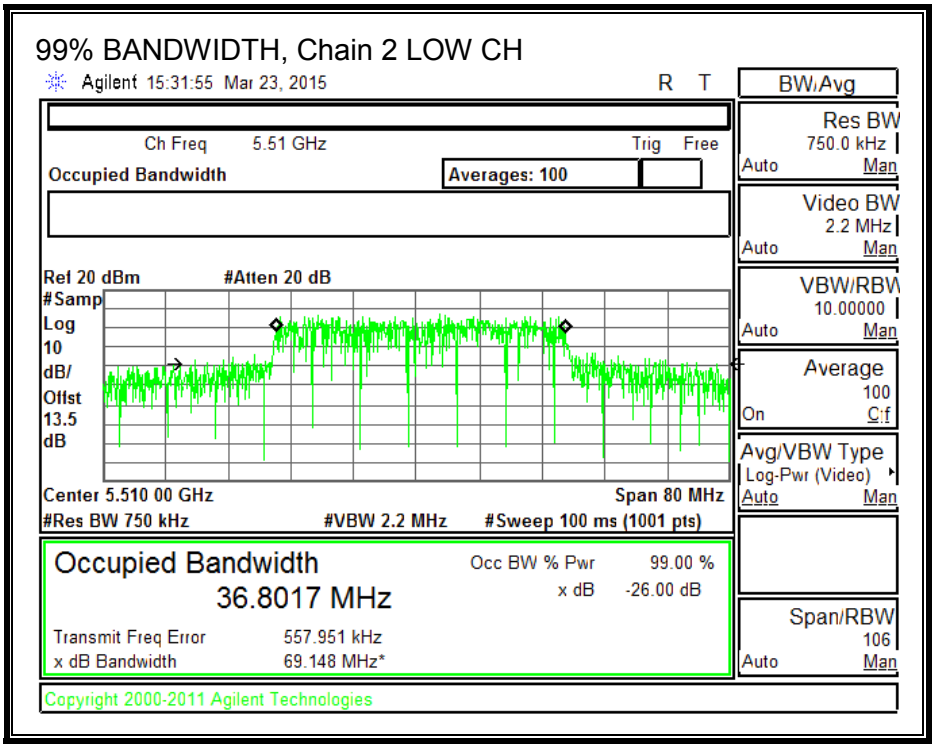


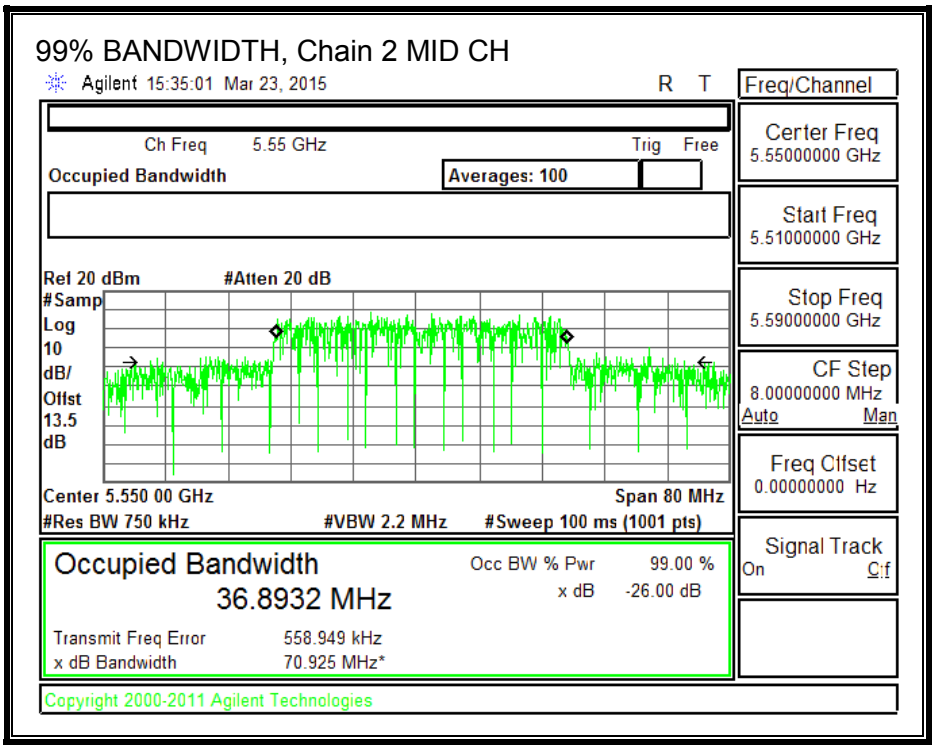




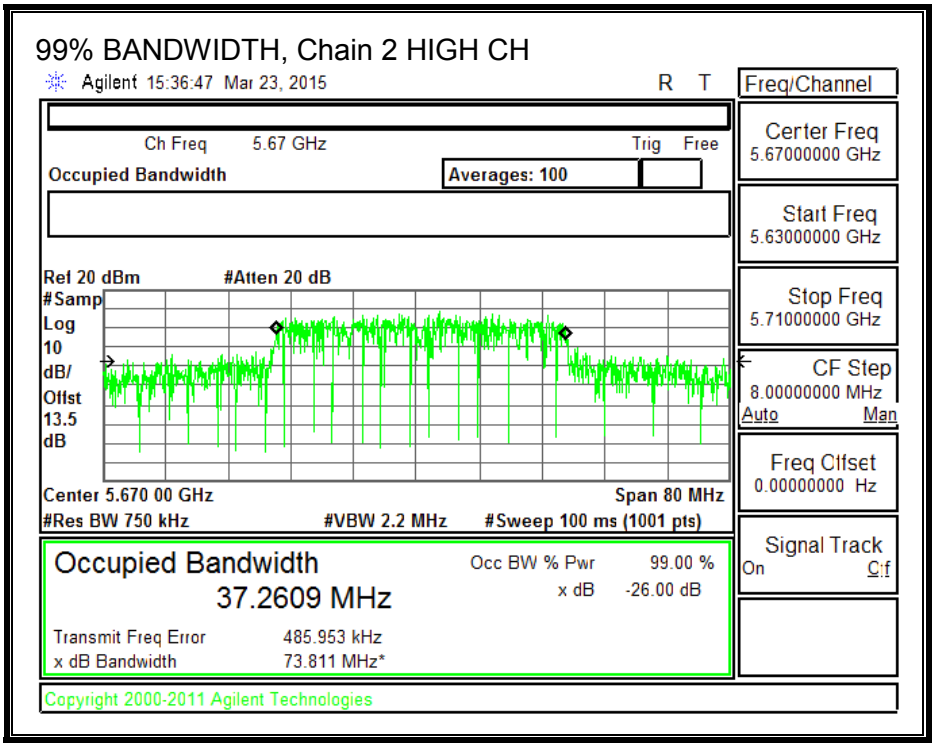


99% BANDWIDTH, Chain 2

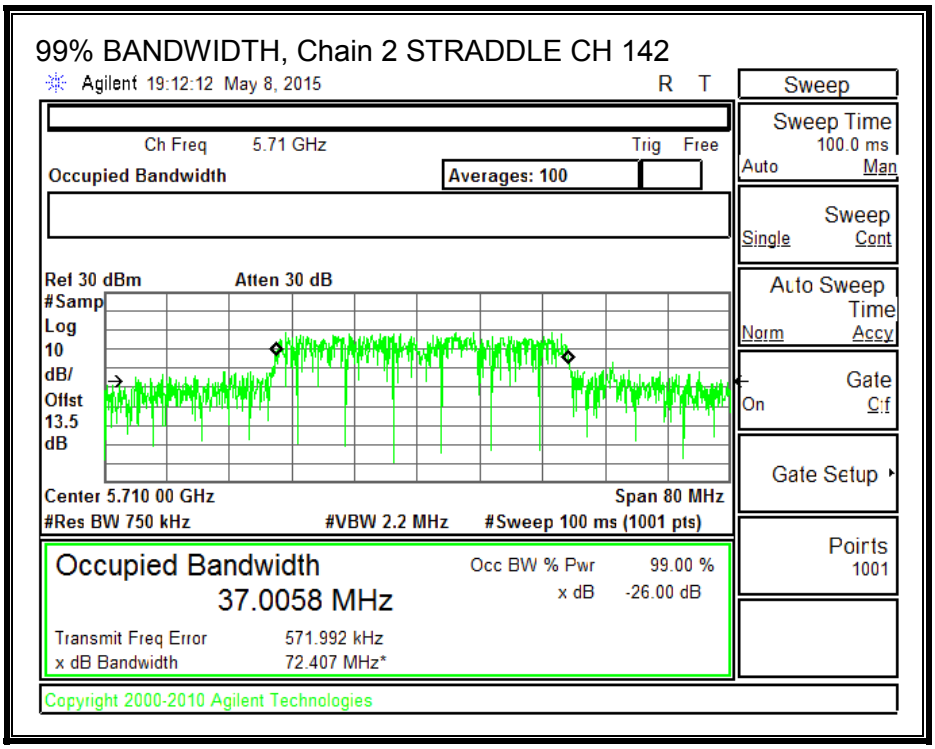




99% BANDWIDTH, Chain 2 HIGH CH



99% BANDWIDTH, Chain 2 STRADDLE CH 142



8.28.3. 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 the same for each chain. The directional gain is equal to the antenna gain, 6.21 dBi.

For PSD the TX chains are correlated and the antenna gain is the same for each chain. The directional gain is:

Antenna Gain (dBi)	10 * Log (3 chains) (dB)	Correlated Chains Directional Gain (dBi)
6.21	4.77	10.98

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	94.44	6.21	10.98	23.79	6.02
Mid	5550	90.72	6.21	10.98	23.79	6.02
High	5670	93.00	6.21	10.98	23.79	6.02

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	12.02	12.51	12.23	17.03	23.79	-6.76
Mid	5550	18.90	18.45	18.90	23.53	23.79	-0.26
High	5670	15.67	16.21	15.90	20.70	23.79	-3.09

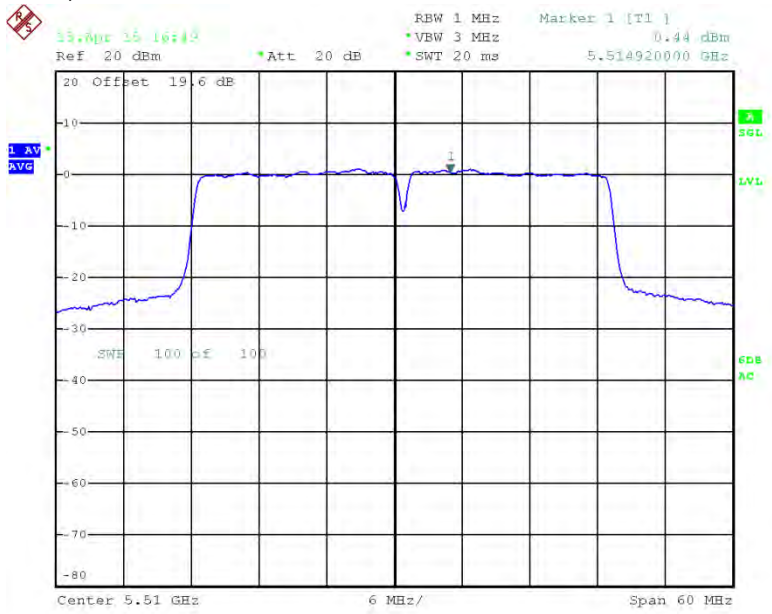
PSD Results

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	5510	0.44	0.50	0.03	5.19	6.02	-0.83
Mid	5550	1.47	0.71	0.13	5.67	6.02	-0.35
High	5670	1.51	0.77	0.54	5.82	6.02	-0.20

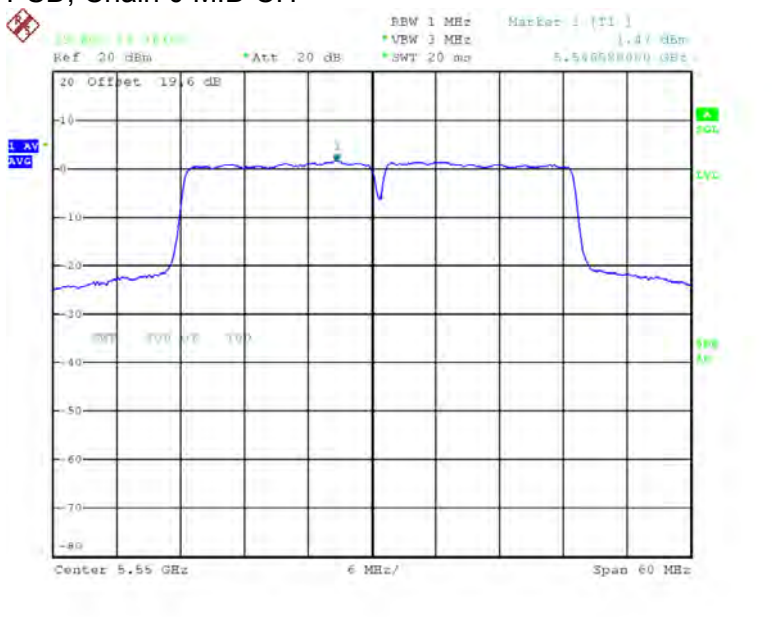
Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

PSD, Chain 0

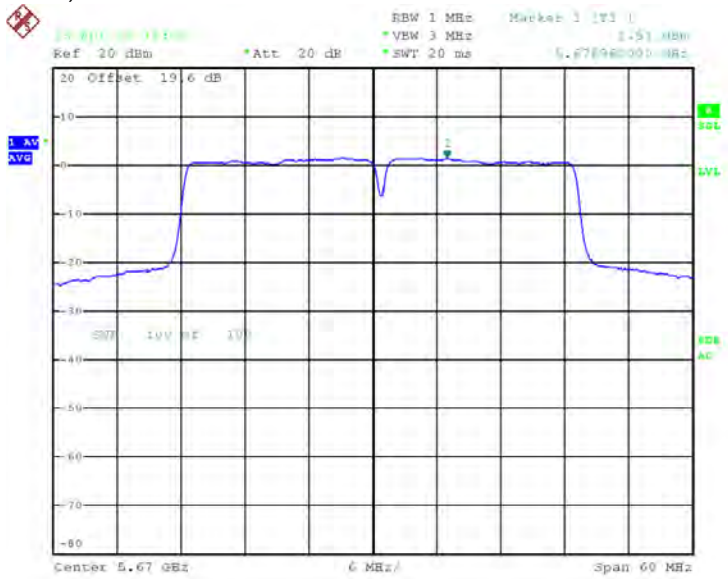
PSD, Chain 0 LOW CH



PSD, Chain 0 MID CH



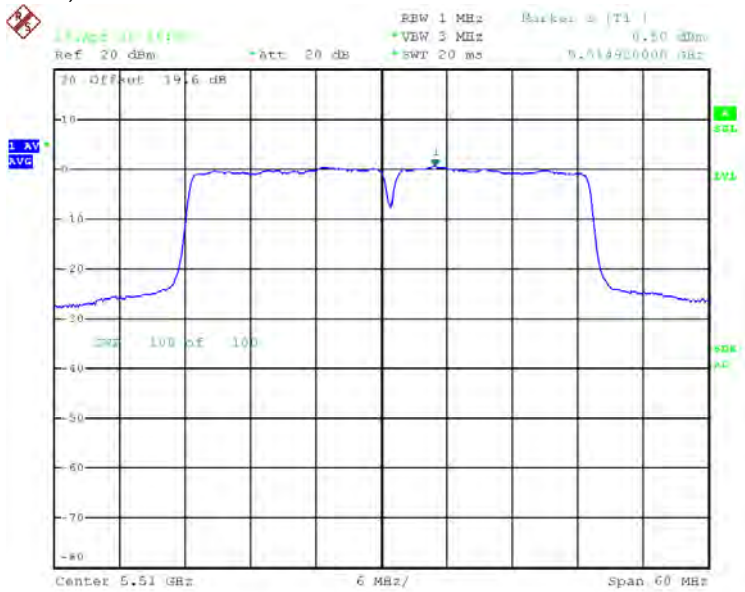
PSD, Chain 0 HIGH CH



Date: 15.APR.2015 16:58:42

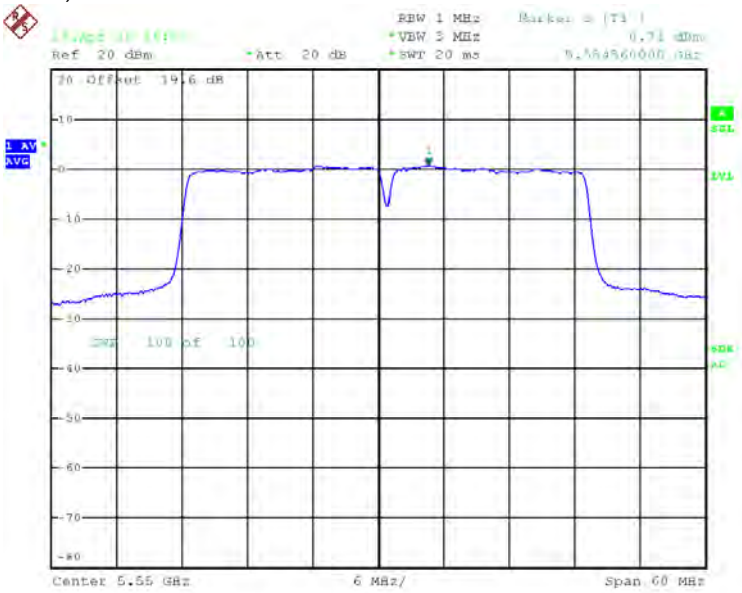
PSD, Chain 1

PSD, Chain 1 LOW CH



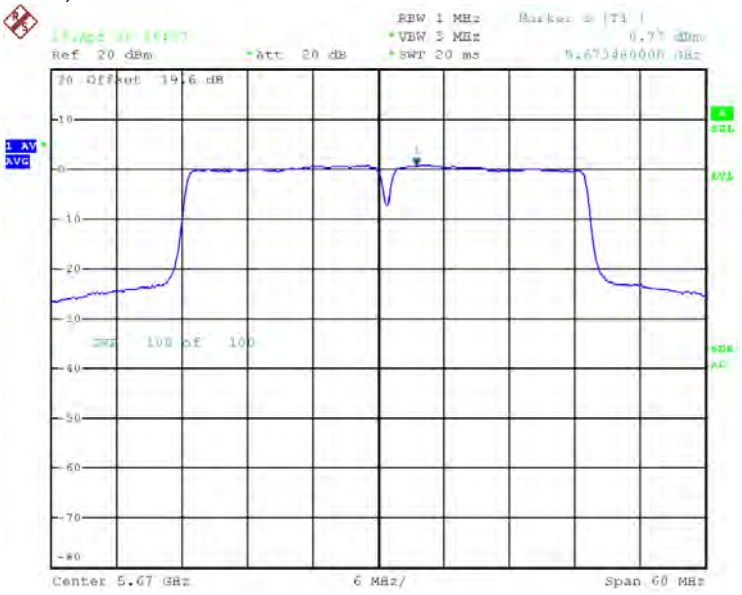
Date: 15.APR.2015 16:48:52

PSD, Chain 1 MID CH



Date: 15.APR.2015 16:51:45

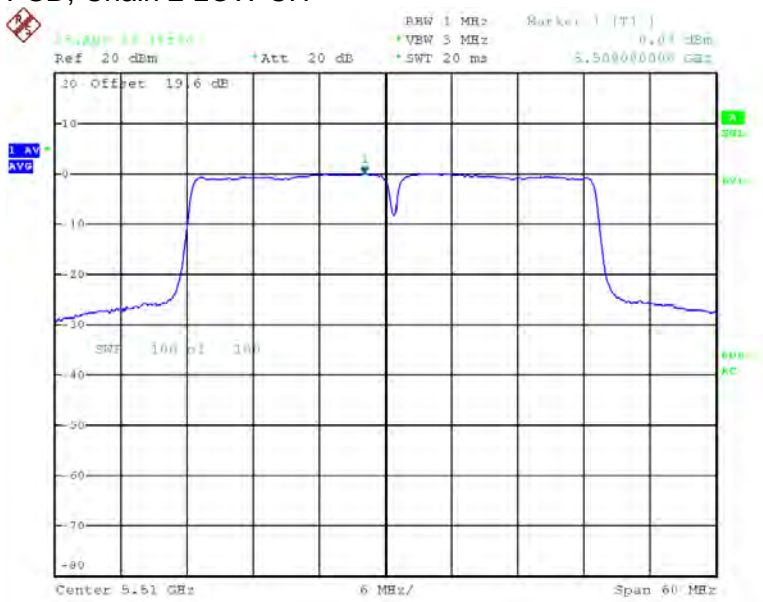
PSD, Chain 1 HIGH CH



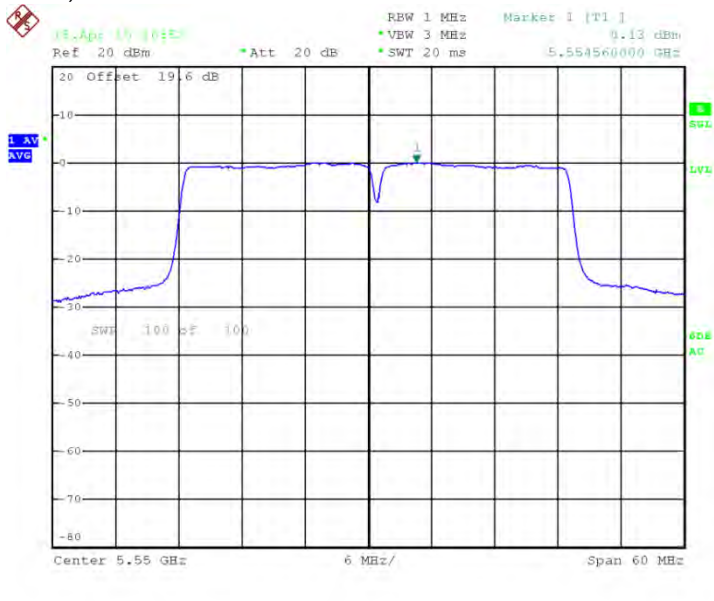
Date: 15.APR.2015 16:57:33

PSD, Chain 2

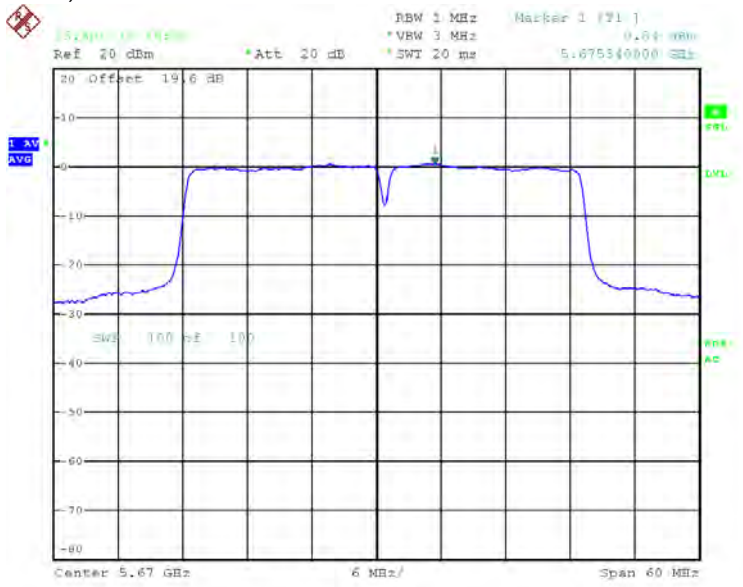
PSD, Chain 2 LOW CH



PSD, Chain 2 MID CH



PSD, Chain 2 HIGH CH



Date: 15.APR.2015 16:56:49

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	58.14	6.21	10.98	23.79	6.02

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

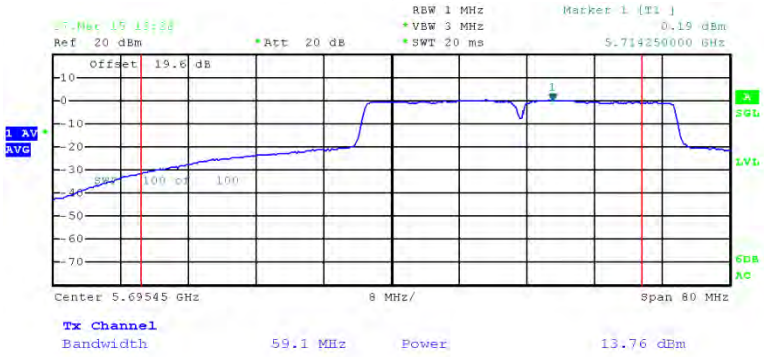
Output Power Results

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	13.76	13.26	13.46	18.36	23.79	-5.43

PSD Results

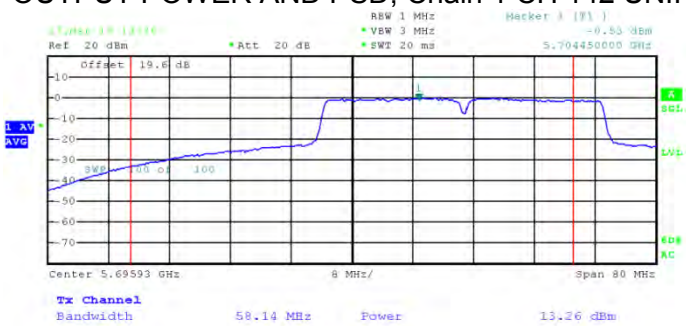
Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Chain 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
142	5710	0.19	-0.53	-0.12	4.72	6.02	-1.30

OUTPUT POWER AND PSD, Chain 0 CH 142 UNII



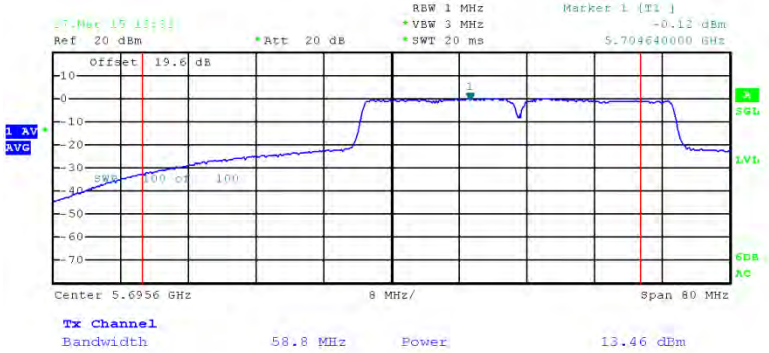
Date: 27.MAR.2015 13:28:28

OUTPUT POWER AND PSD, Chain 1 CH 142 UNII



Date: 27.MAR.2015 13:26:26

OUTPUT POWER AND PSD, Chain 2 CH 142 UNII



Date: 27.MAR.2015 13:32:24

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	6.21	10.98	29.79	25.02

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	4.50	3.75	3.97	8.95	29.79	-20.84

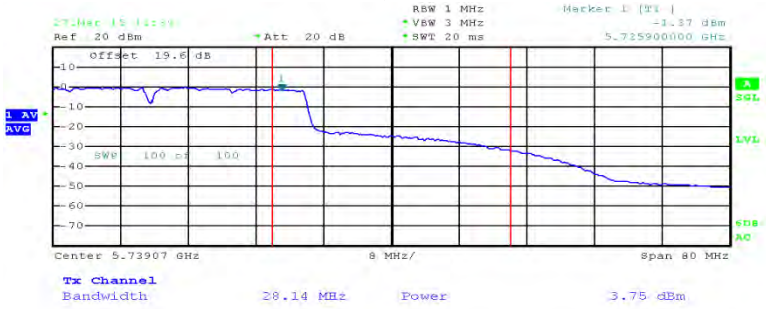
PSD Results

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	-0.69	-1.37	-1.13	3.81	25.02	-21.21

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

Date: 27.MAR.2015 13:34:34

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



Date: 27.MAR.2015 13:39:18

OUTPUT POWER AND PSD, Chain 2 CH 142 UNII-3

Date: 27.MAR.2015 13:42:06

8.28.4. 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	18.90	19.05	18.95	23.74

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.

8.29. 802.11n HT40 TxBF 3Tx MODE IN THE 5.6 GHz BAND

8.29.1. 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 the same for each chain. The directional gain is:

Antenna Gain (dBi)	10 * Log (3 chains) (dB)	Correlated Chains Directional Gain (dBi)
6.21	4.77	10.98

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	94.44	10.98	10.98	19.02	6.02
Mid	5550	90.72	10.98	10.98	19.02	6.02
High	5670	93.00	10.98	10.98	19.02	6.02

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	12.02	12.51	12.23	17.03	19.02	-1.99
Mid	5550	13.90	14.27	14.05	18.85	19.02	-0.17
High	5670	13.87	14.23	14.10	18.84	19.02	-0.18

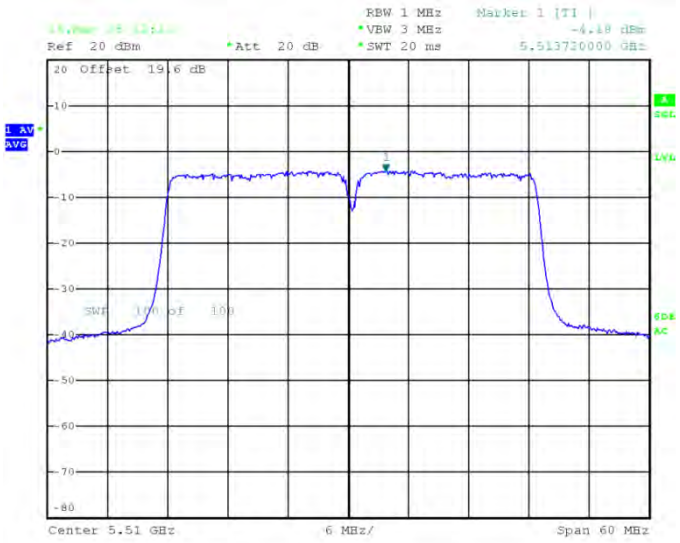
PSD Results

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	-4.18	-3.72	-4.00	0.90	6.02	-5.12
Mid	5550	-4.13	-3.69	-4.06	0.91	6.02	-5.11
High	5670	-4.03	-3.77	-3.98	0.94	6.02	-5.08

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.

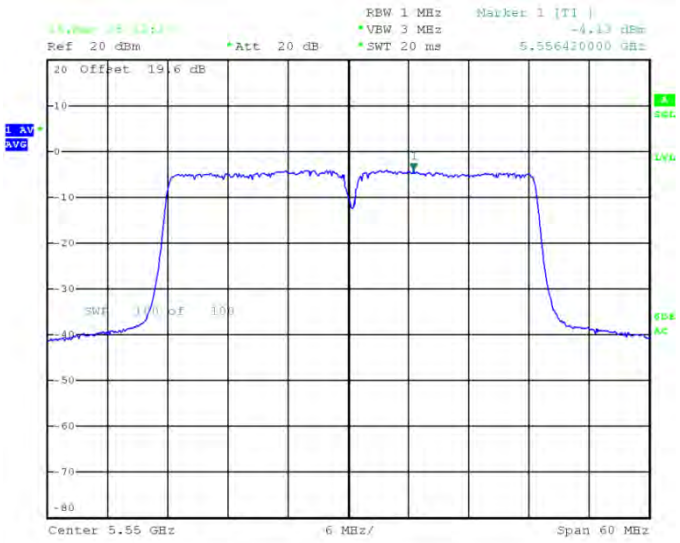
PSD, Chain 0

PSD, Chain 0 LOW CH



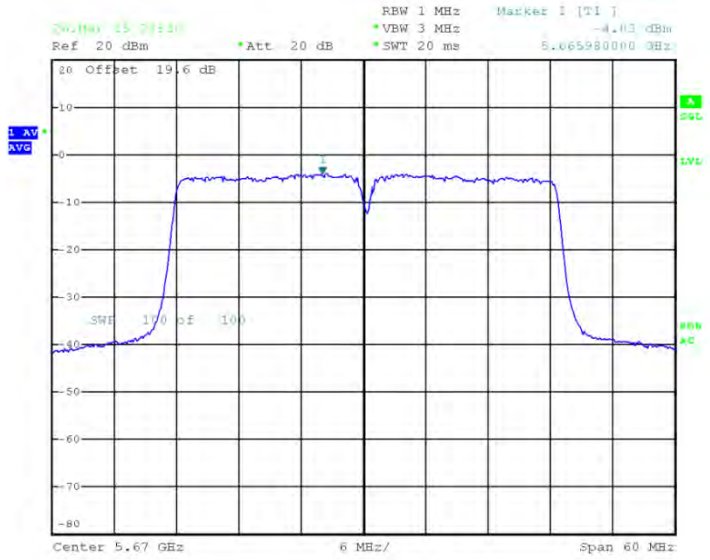
Date: 26.MAR.2015 22:23:37

PSD, Chain 0 MID CH



Date: 26.MAR.2015 22:27:11

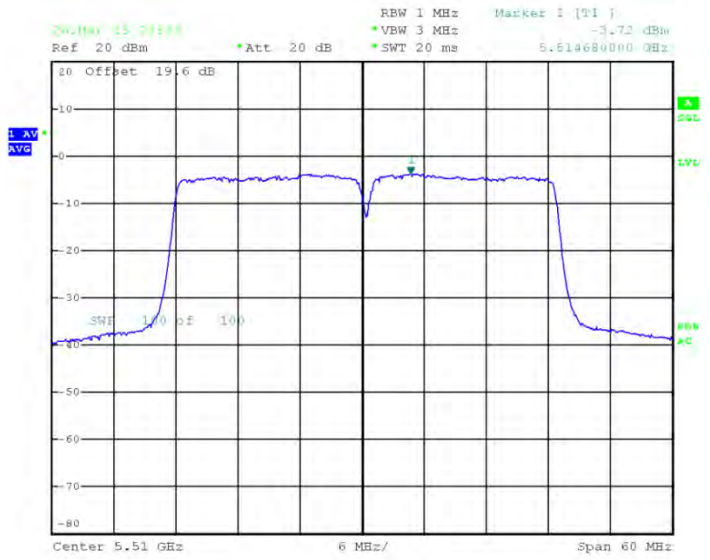
PSD, Chain 0 HIGH CH



Date: 26.MAR.2015 22:30:17

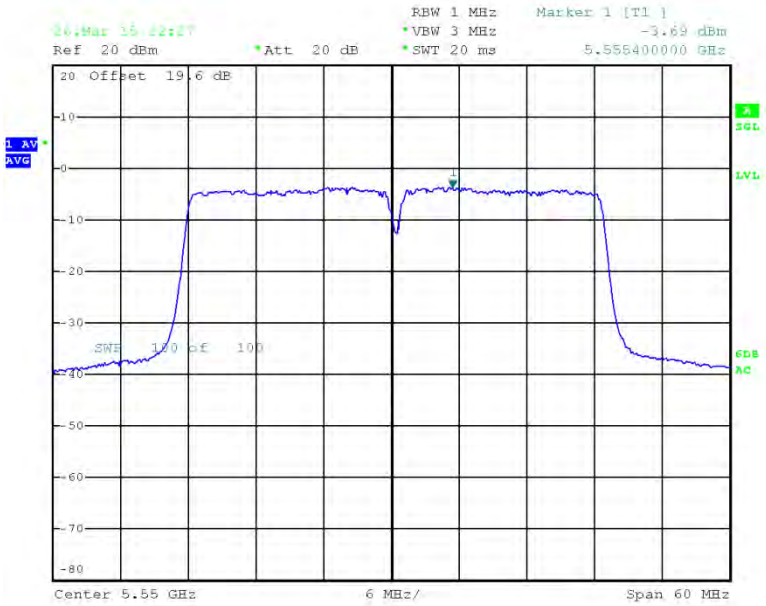
PSD, Chain 1

PSD, Chain 1 LOW CH



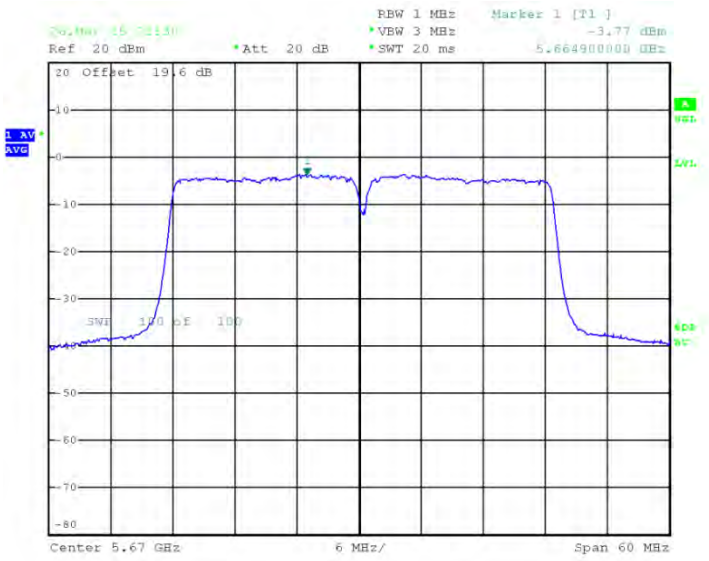
Date: 26.MAR.2015 22:24:25

PSD, Chain 1 MID CH



Date: 26.MAR.2015 22:27:52

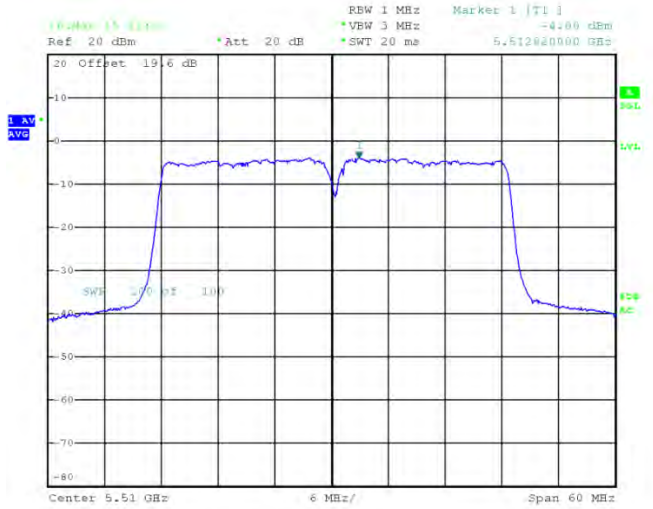
PSD, Chain 1 HIGH CH



Date: 26.MAR.2015 22:30:55

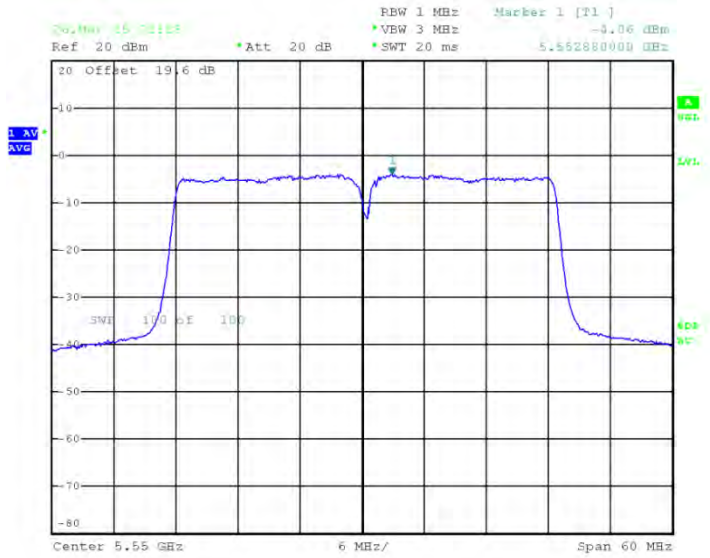
PSD, Chain 2

PSD, Chain 2 LOW CH



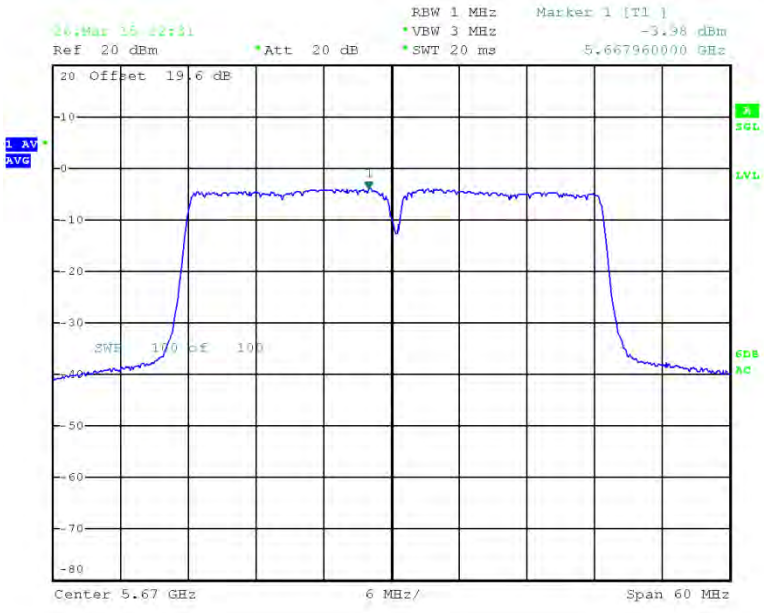
Date: 26.MAR.2015 22:25:01

PSD, Chain 2 MID CH



Date: 26.MAR.2015 22:28:37

PSD, Chain 2 HIGH CH



Date: 26.MAR.2015 22:31:52

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	59.10	10.98	10.98	19.02	6.02

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

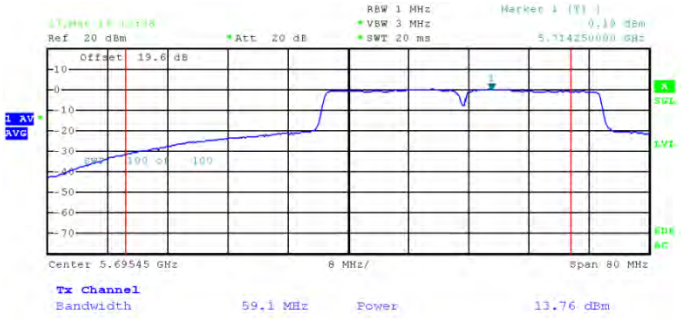
Output Power Results

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	13.76	13.26	13.46	18.36	19.02	-0.66

PSD Results

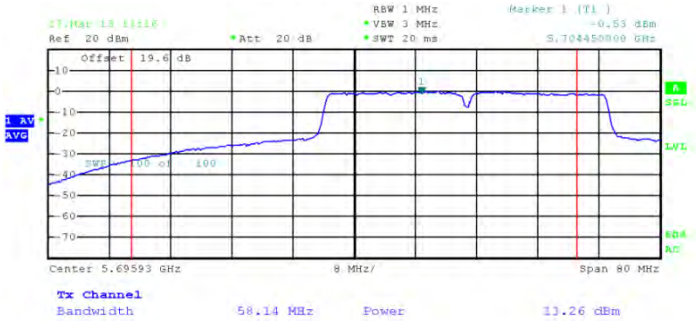
Channel	Frequency (MHz)	Chain 0 Meas PSD	Chain 1 Meas PSD	Chain 2 Meas PSD	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
142	5710	0.19	-0.53	-0.12	4.72	6.02	-1.30

OUTPUT POWER AND PSD, Chain 0 CH 142 UNII



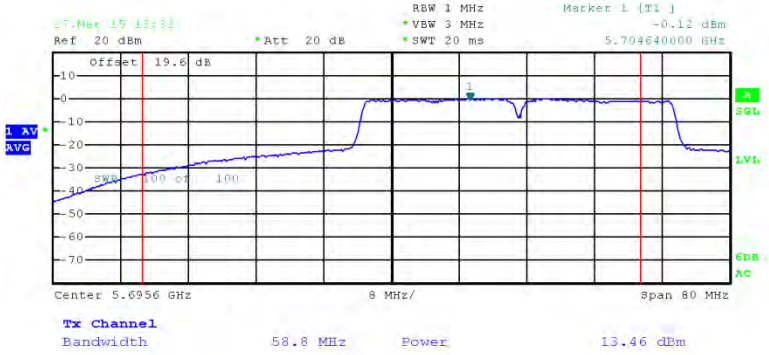
Date: 27.MAR.2015 13:28:28

OUTPUT POWER AND PSD, Chain 1 CH 142 UNII



Date: 27.MAR.2015 13:26:26

OUTPUT POWER AND PSD, Chain 2 CH 142 UNII



Date: 27.MAR.2015 13:32:24

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	10.98	10.98	25.02	25.02

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

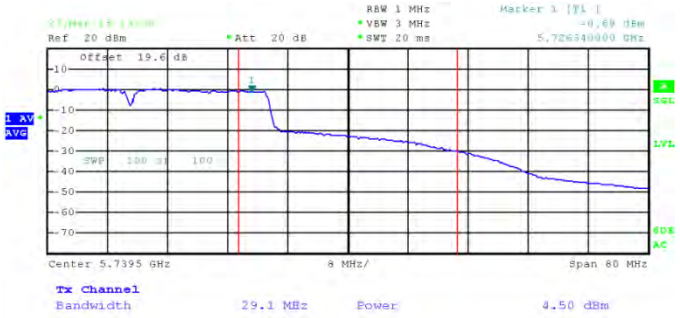
Output Power Results

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	4.50	3.75	3.97	8.95	25.02	-16.07

PSD Results

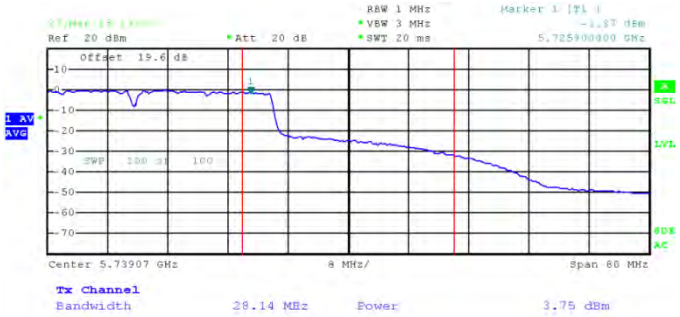
Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Chain 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
142	5710	-0.69	-1.37	-1.13	3.81	25.02	-21.21

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



Date: 27.MAR.2015 13:34:34

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



Date: 27.MAR.2015 13:39:18

OUTPUT POWER AND PSD, Chain 2 CH 142 UNII-3

Date: 27.MAR.2015 13:42:06

8.29.2. 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	18.90	19.05	18.95	23.74

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.

8.30. 802.11ac VHT80 1Tx MODE IN THE 5.6 GHz BAND

8.30.1. 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) = 6.21 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	178.25	6.21	23.79	10.79
High	5610	176.75	6.21	23.79	10.79

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5530	14.03	14.03	23.79	-9.76
High	5610	18.64	18.64	23.79	-5.15

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.

8.31. 802.11ac VHT80 CDD 3Tx MODE IN THE 5.6 GHz BAND

8.31.1. 26 dB BANDWIDTH

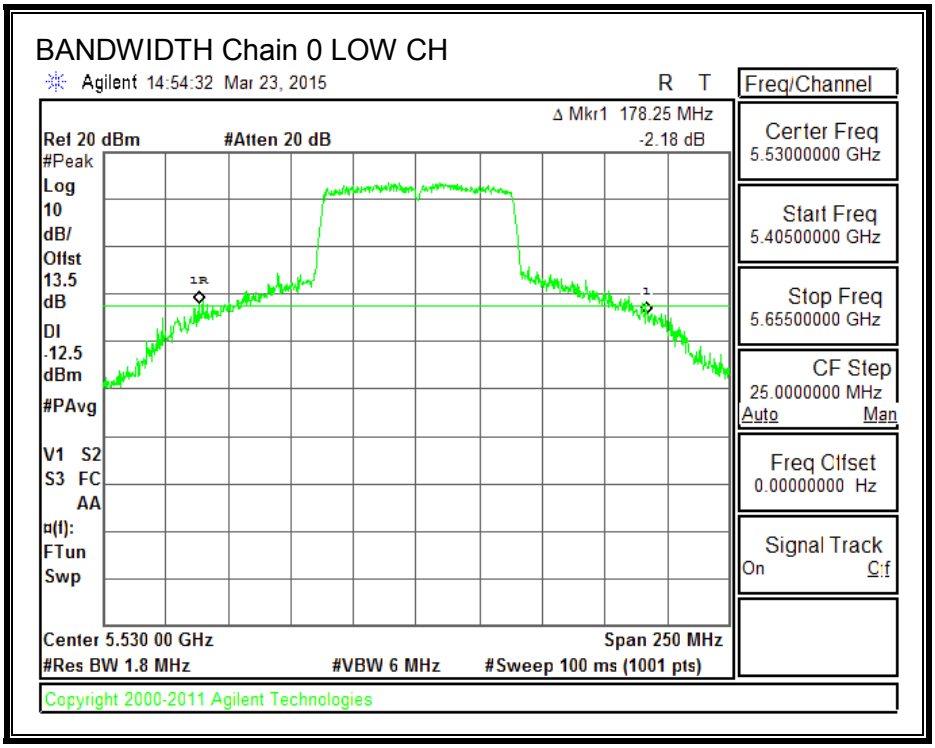
LIMITS

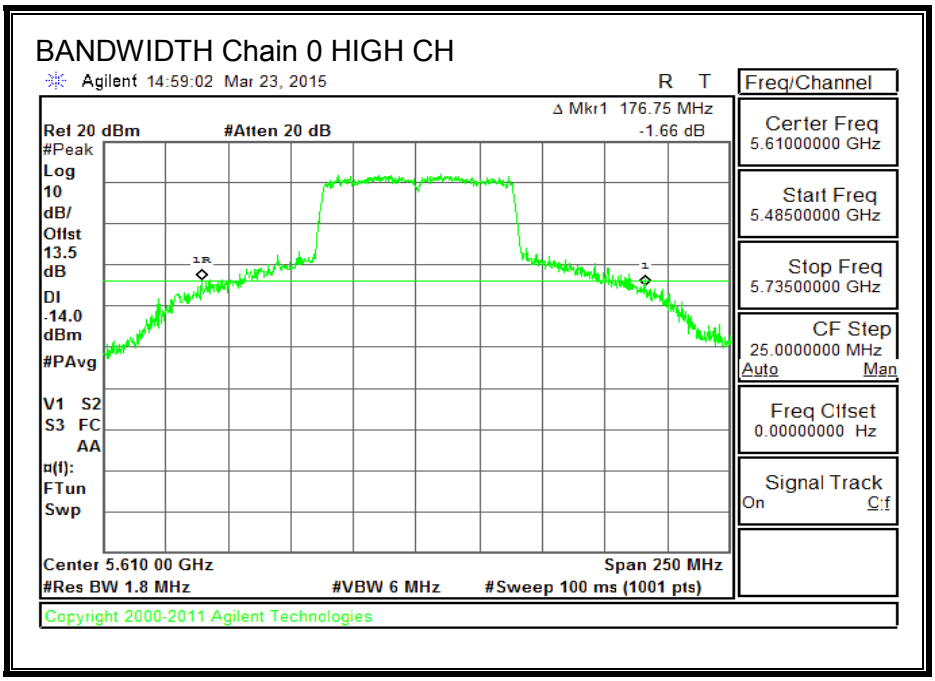
None; for reporting purposes only.

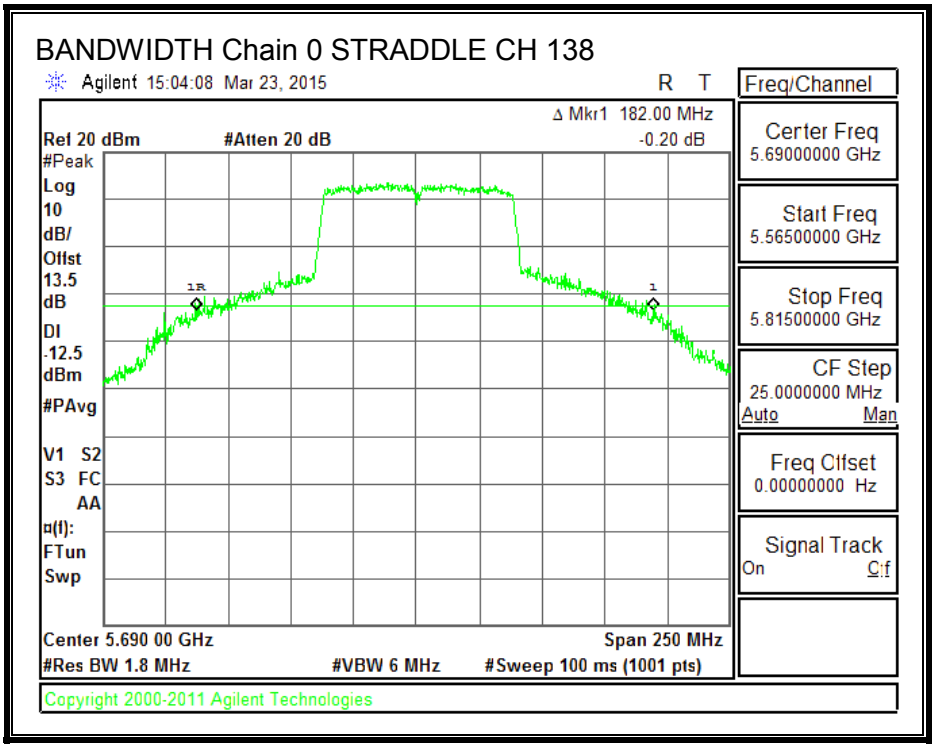
RESULTS

Channel	Frequency (MHz)	26 dB BW Chain 0 (MHz)	26 dB BW Chain 1 (MHz)	26 dB BW Chain 2 (MHz)
Low	5530	178.25	160.25	171.25
High	5610	176.75	172.00	177.50
138	5690	182.00	160.50	175.50

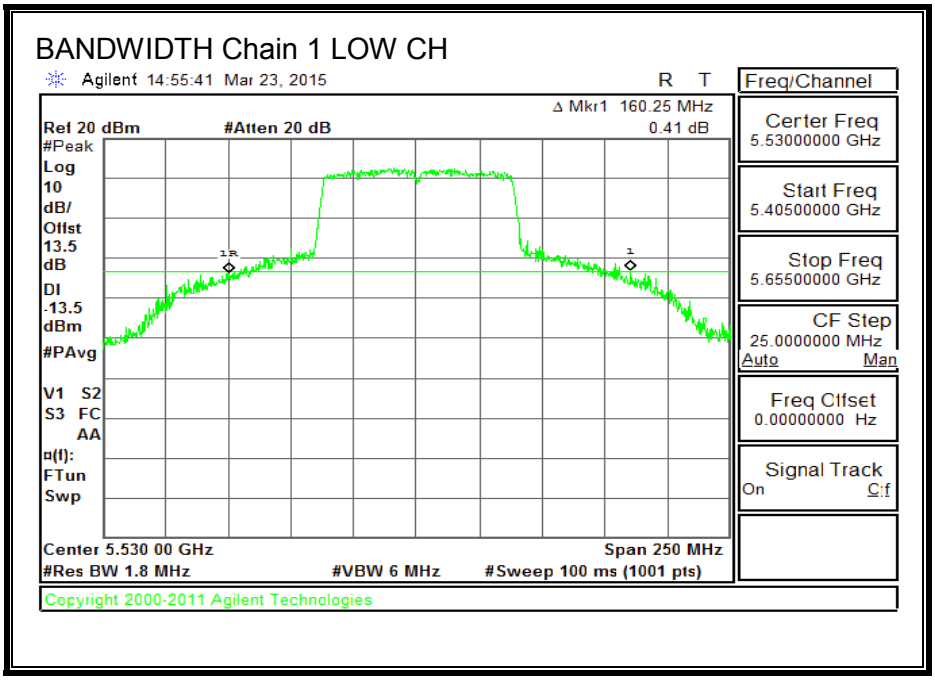
26 dB BANDWIDTH, Chain 0



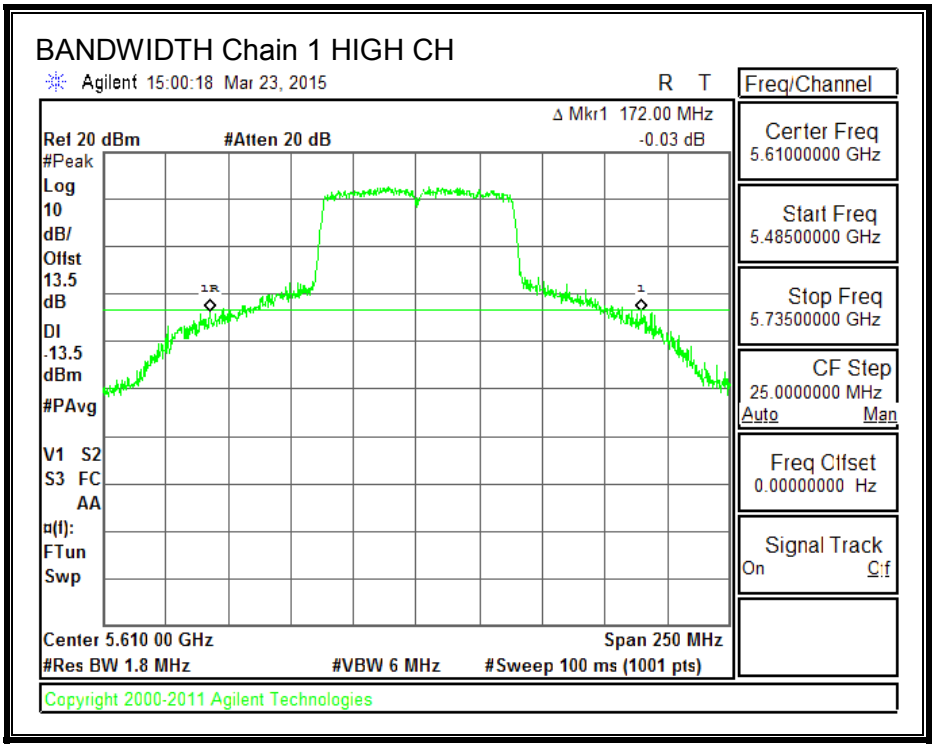




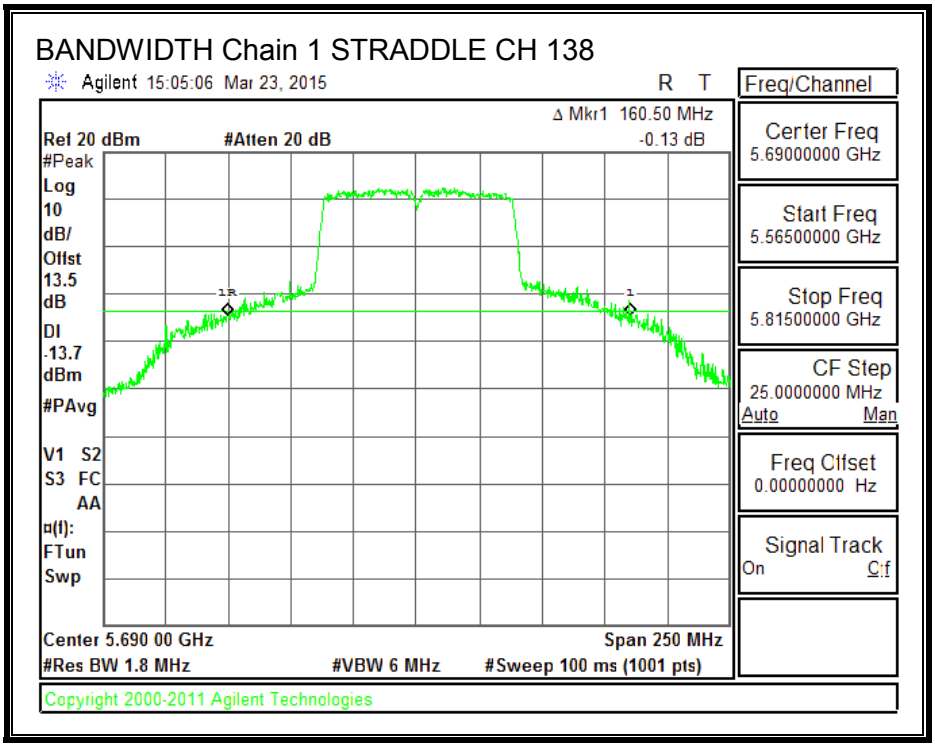
26 dB BANDWIDTH, Chain 1



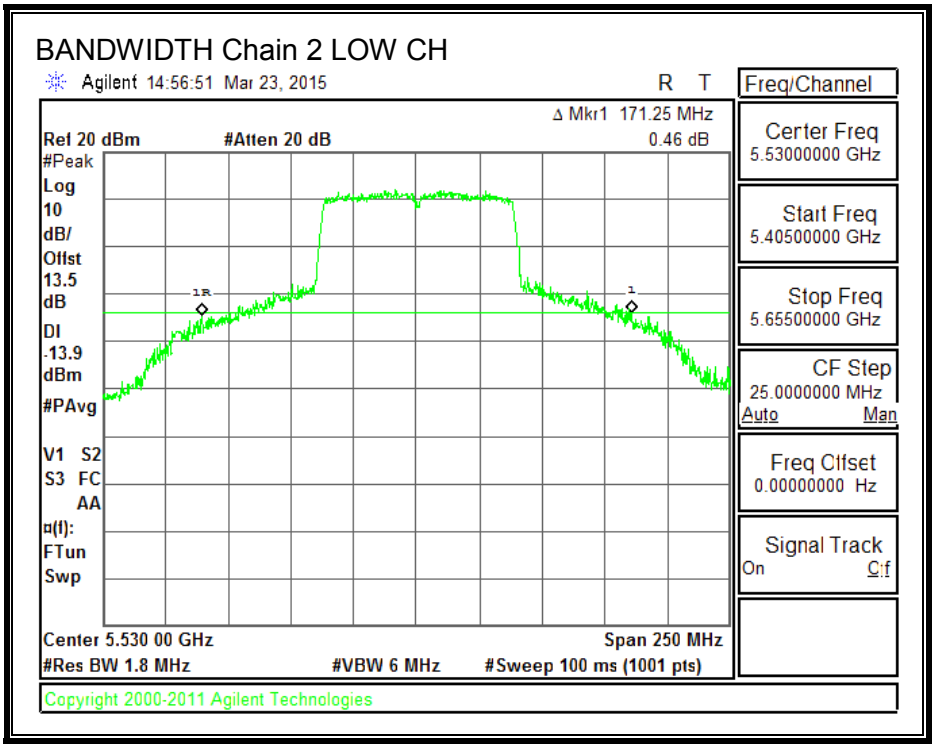
BANDWIDTH Chain 1 HIGH CH

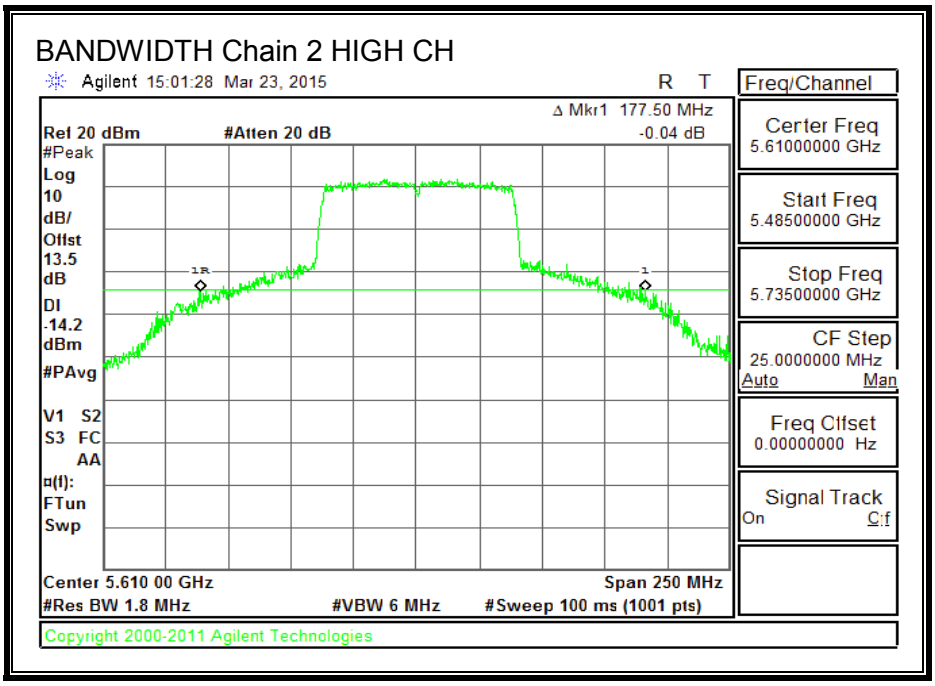


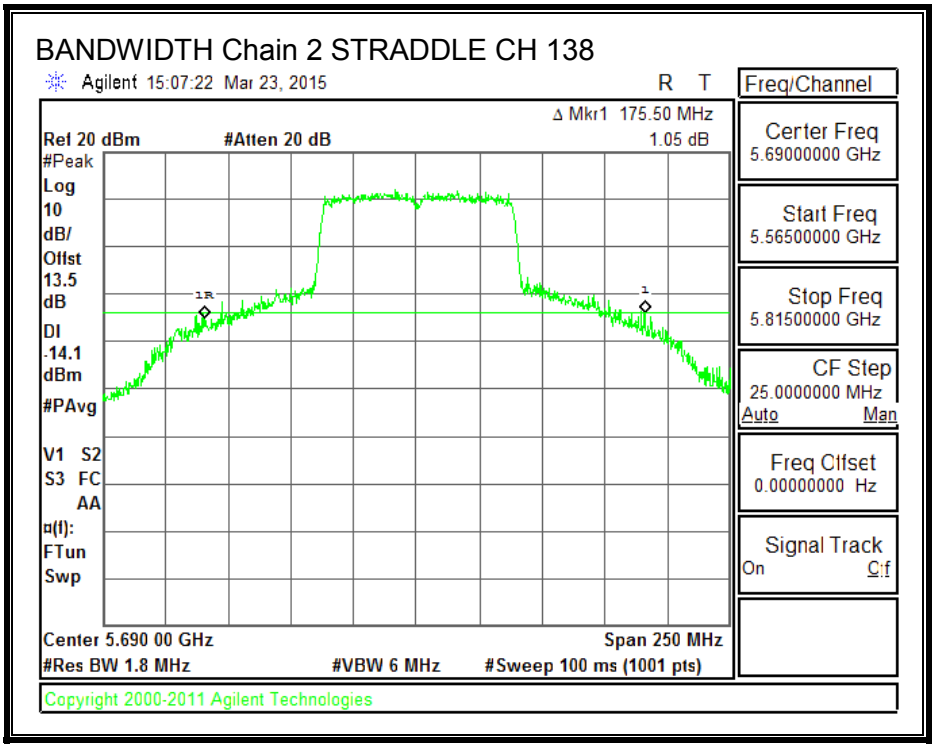
BANDWIDTH Chain 1 STRADDLE CH 138



26 dB BANDWIDTH, Chain 2







8.31.2. 99% BANDWIDTH

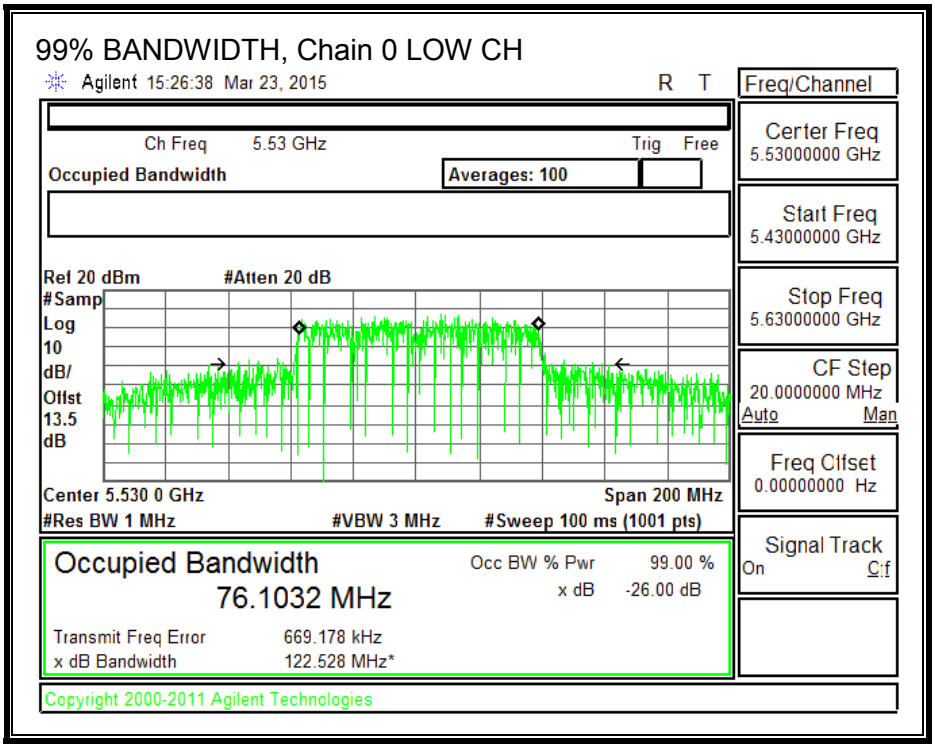
LIMITS

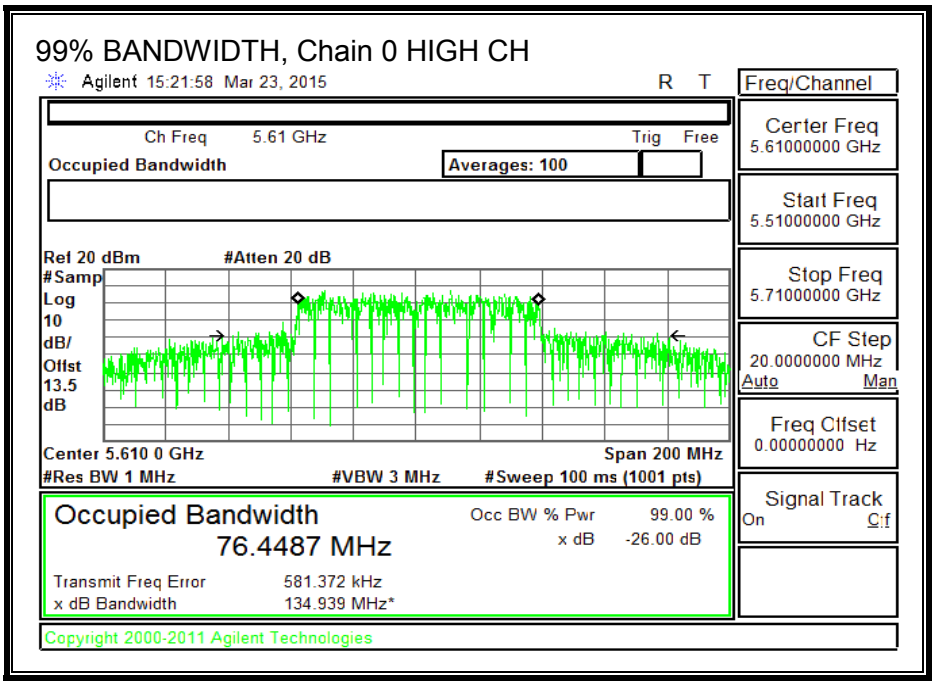
None; for reporting purposes only.

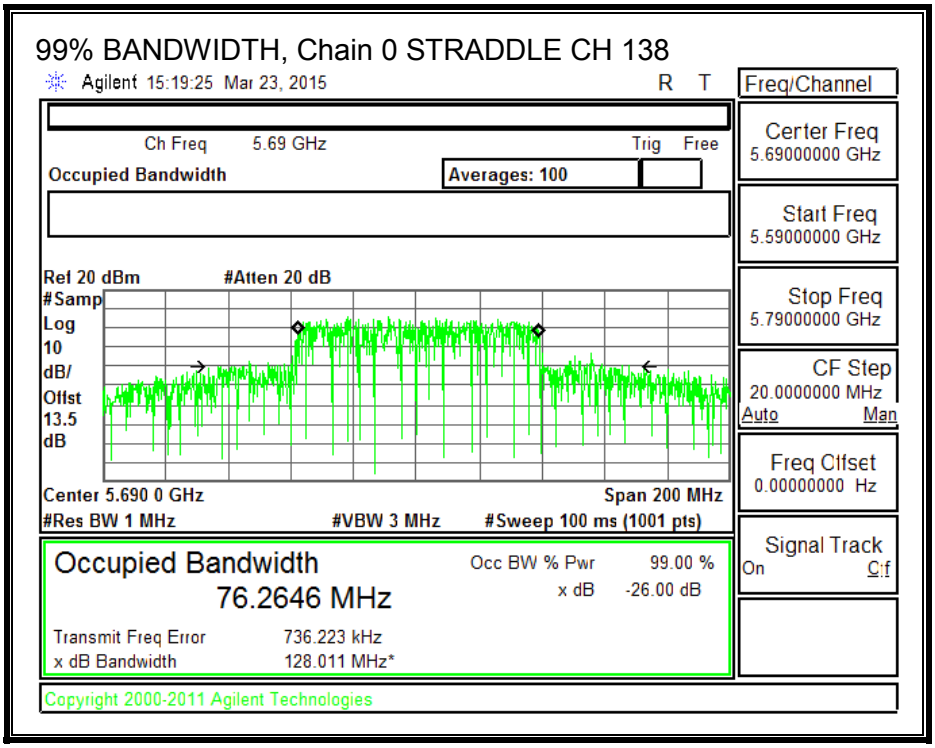
RESULTS

Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)	99% BW Chain 2 (MHz)
Low	5530	76.1032	76.0465	76.2838
High	5610	76.4487	75.9832	76.0098
138	5690	76.2646	76.0059	76.0528

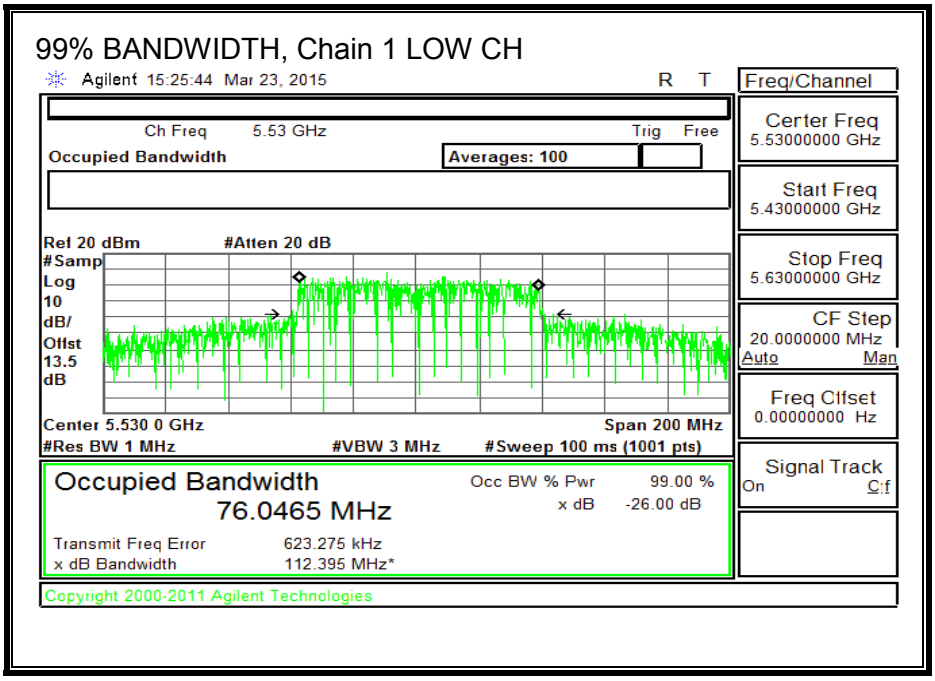
99% BANDWIDTH, Chain 0

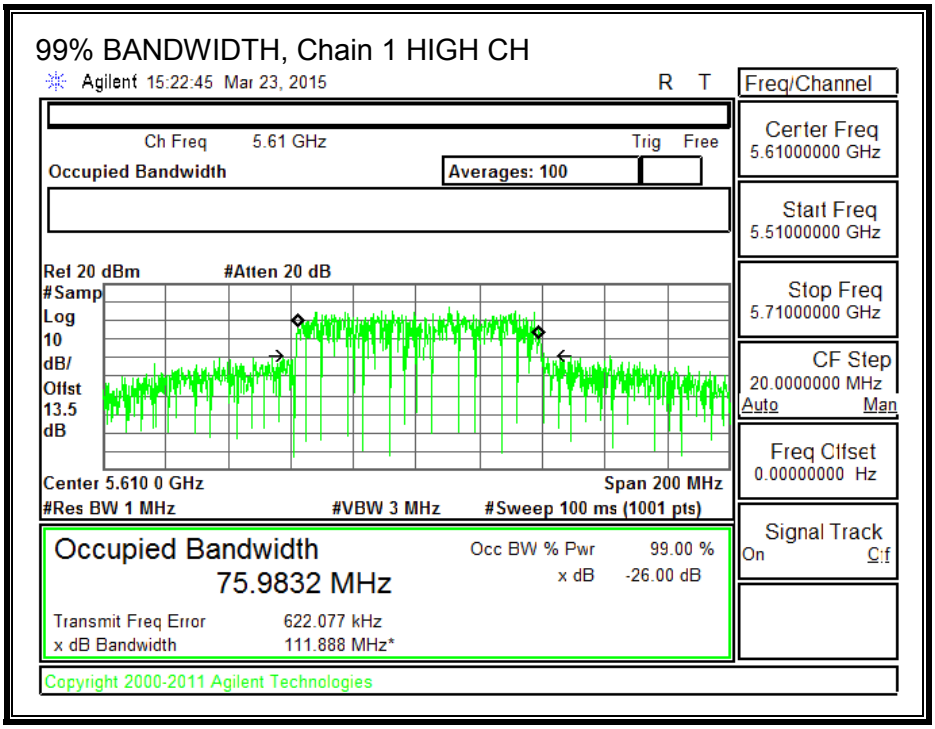


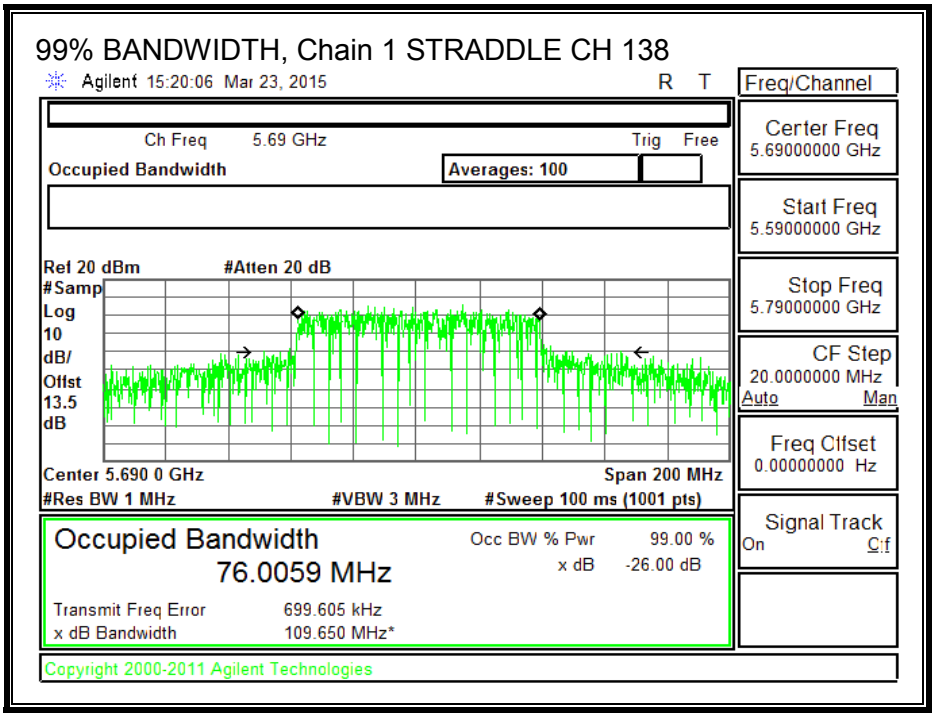




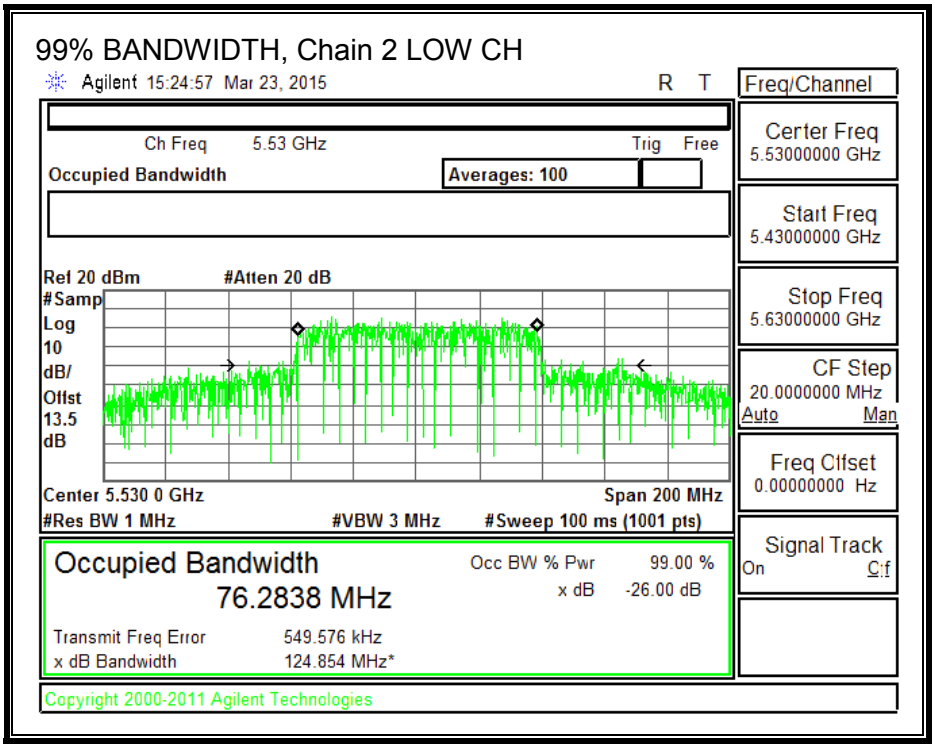
99% BANDWIDTH, Chain 1

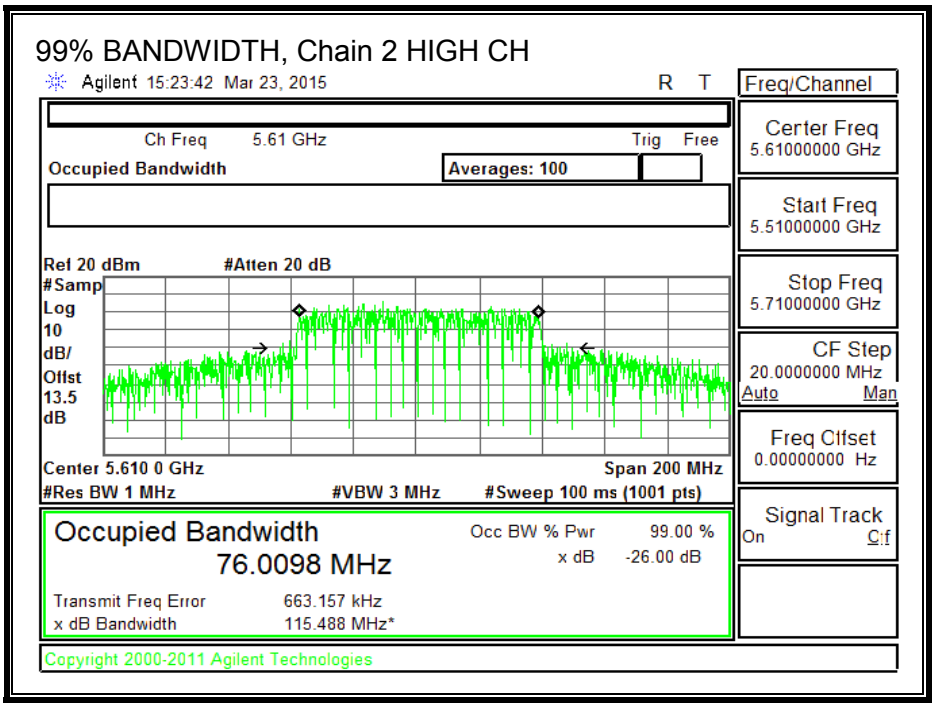


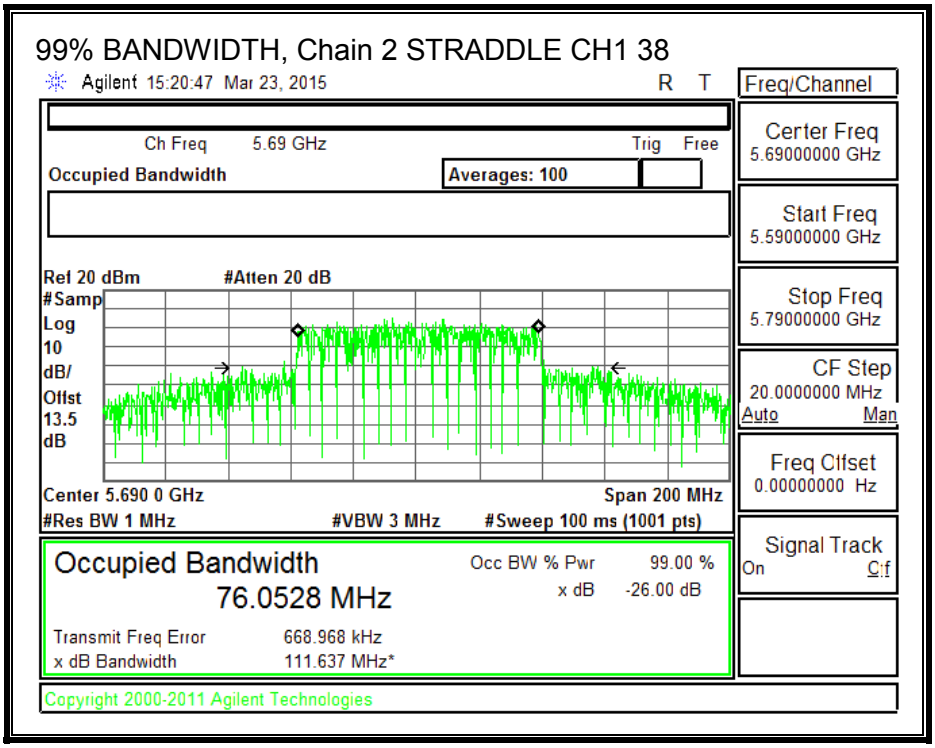




99% BANDWIDTH, Chain 2







8.31.3. 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 the same for each chain. The directional gain is equal to the antenna gain, 6.21 dBi.

For PSD the TX chains are correlated and the antenna gain is the same for each chain. The directional gain is:

Antenna Gain (dBi)	10 * Log (3 chains) (dB)	Correlated Chains Directional Gain (dBi)
6.21	4.77	10.98

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	160.25	6.21	10.98	23.79	6.02
High	5610	172.00	6.21	10.98	23.79	6.02

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	11.43	11.54	11.55	16.28	23.79	-7.51
High	5610	16.16	16.61	16.72	21.27	23.79	-2.52

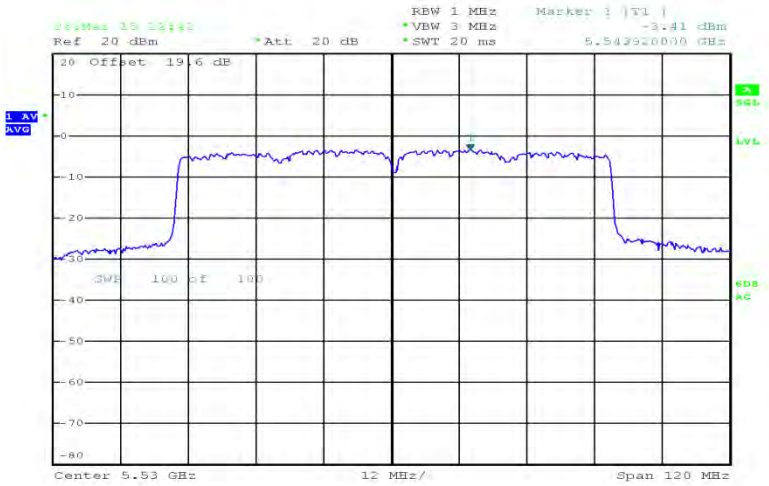
PSD Results

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	-3.41	-4.42	-4.37	0.91	6.02	-5.11
High	5610	-3.90	-4.02	-3.80	1.05	6.02	-4.97

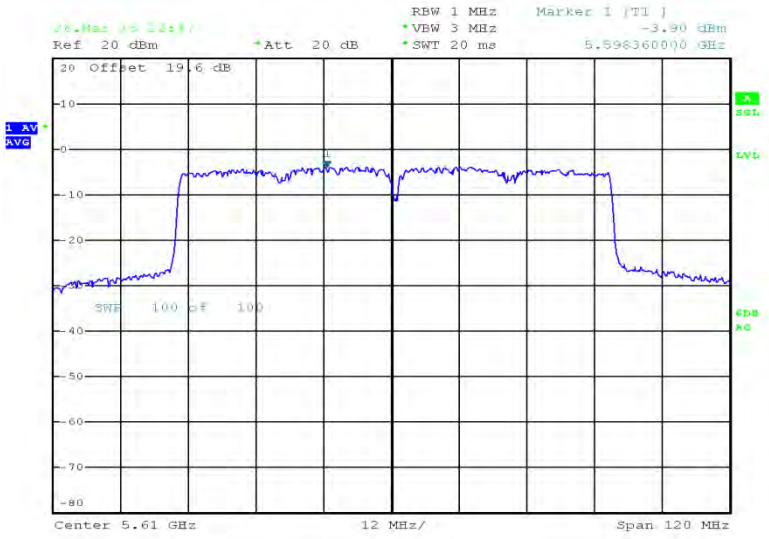
Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

PSD, Chain 0

PSD, Chain 0 LOW CH

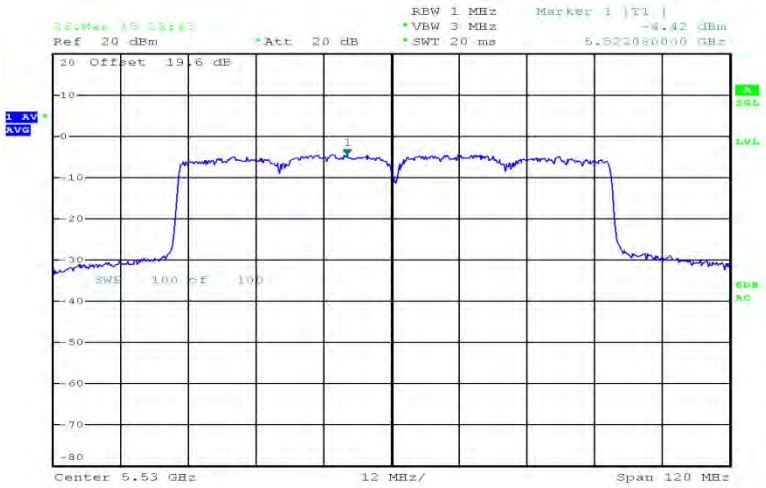


PSD, Chain 0 HIGH CH

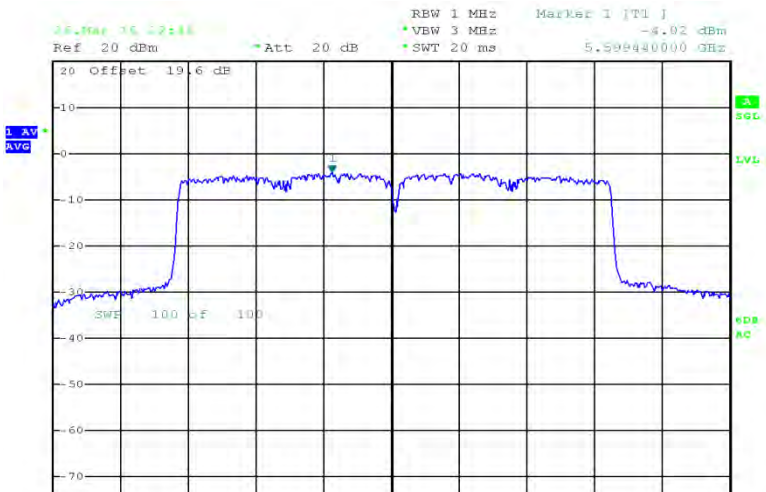


PSD, Chain 1

PSD, Chain 1 LOW CH

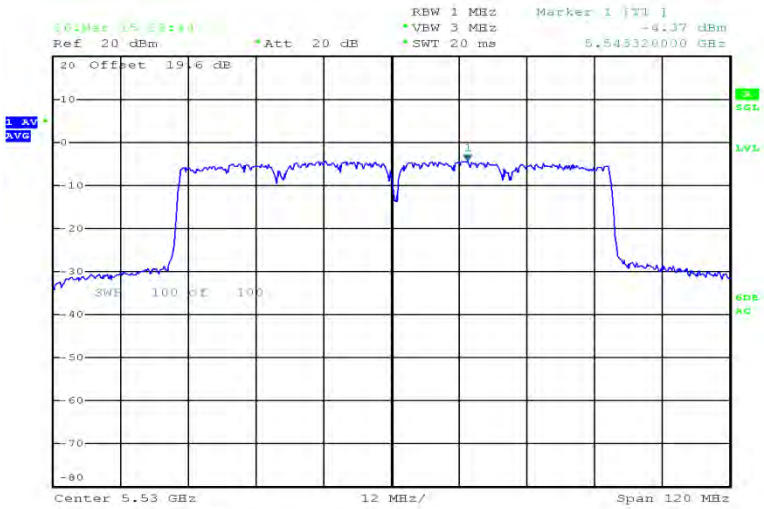


PSD, Chain 1 HIGH CH



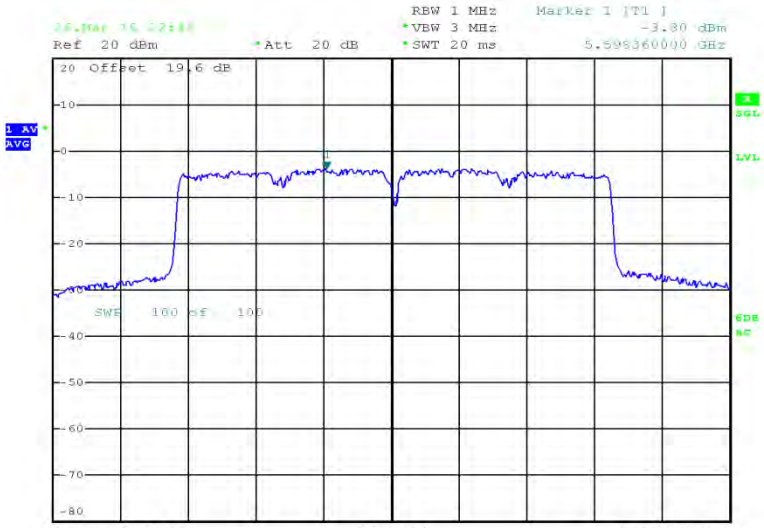
PSD, Chain 2

PSD, Chain 2 LOW CH



Date: 26.MAR.2015 22:44:03

PSD, Chain 2 HIGH CH



Date: 26.MAR.2015 22:48:56

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	115.25	6.21	10.98	23.79	6.02

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

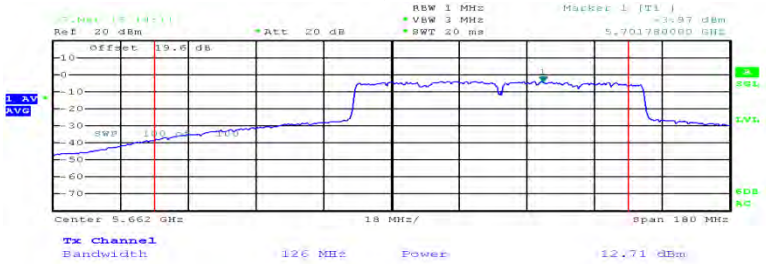
Output Power Results

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	12.71	12.09	12.40	17.36	23.79	-6.43

PSD Results

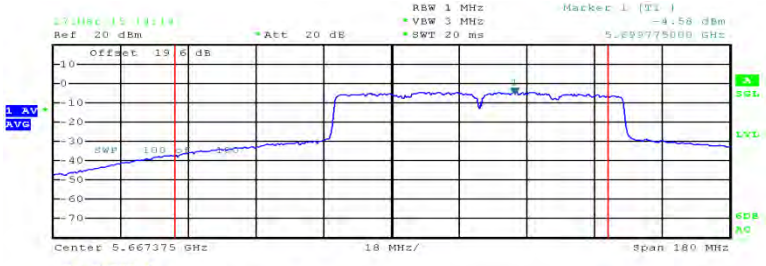
Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Chain 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	-3.97	-4.58	-4.32	0.67	6.02	-5.35

OUTPUT POWER AND PSD, Chain 0 CH 138 UNII



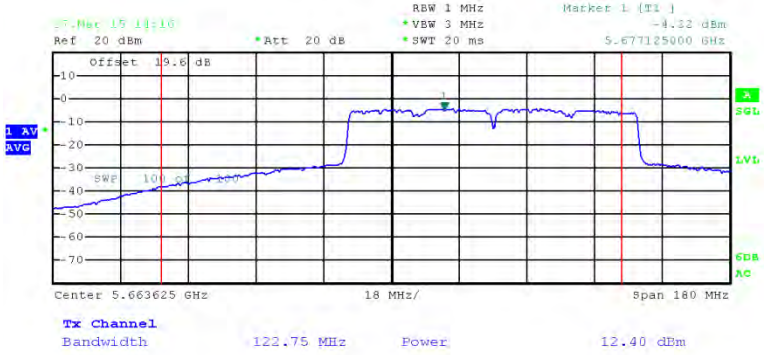
Date: 27.MAR.2015 14:11:43

OUTPUT POWER AND PSD, Chain 1 CH 138 UNII



Date: 27.MAR.2015 14:14:17

OUTPUT POWER AND PSD, Chain 2 CH 138 UNII



Date: 27.MAR.2015 14:16:04

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	6.21	10.98	29.79	25.02

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

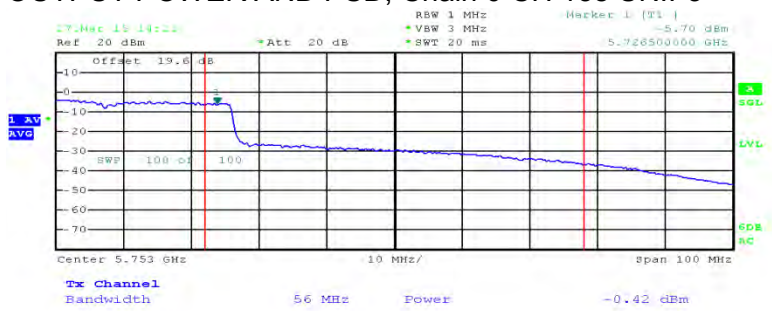
Output Power Results

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	-0.42	-1.21	-0.82	4.15	29.79	-25.64

PSD Results

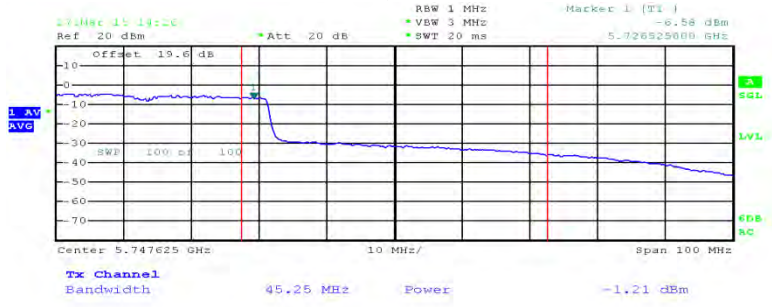
Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Chain 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	-5.70	-6.58	-5.97	-1.12	25.02	-26.14

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



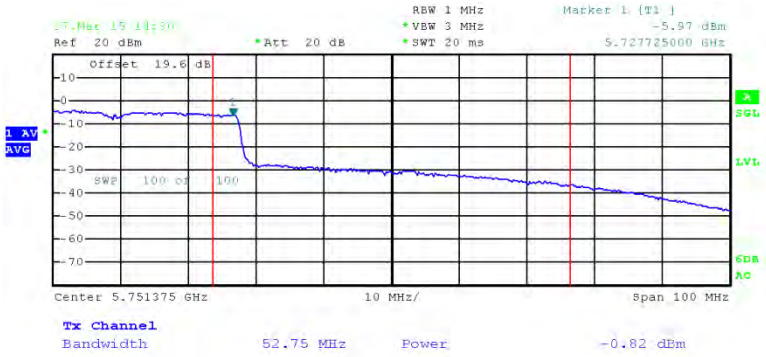
Date: 27.MAR.2015 14:22:51

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



Date: 27.MAR.2015 14:26:39

OUTPUT POWER AND PSD, Chain 2 CH 138 UNII-3



Date: 27.MAR.2015 14:30:03

8.31.4. 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	18.10	17.96	17.80	22.73

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.

8.32. 802.11ac VHT80 TxBF 3Tx MODE IN THE 5.6 GHz BAND

8.32.1. 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 the same for each chain. The directional gain is:

Antenna Gain (dBi)	10 * Log (3 chains) (dB)	Correlated Chains Directional Gain (dBi)
6.21	4.77	10.98

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	160.25	10.98	10.98	19.02	6.02
High	5610	172.00	10.98	10.98	19.02	6.02

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	11.5	11.52	10.93	16.10	19.02	-2.92
High	5610	13.90	14.05	14.00	18.75	19.02	-0.27

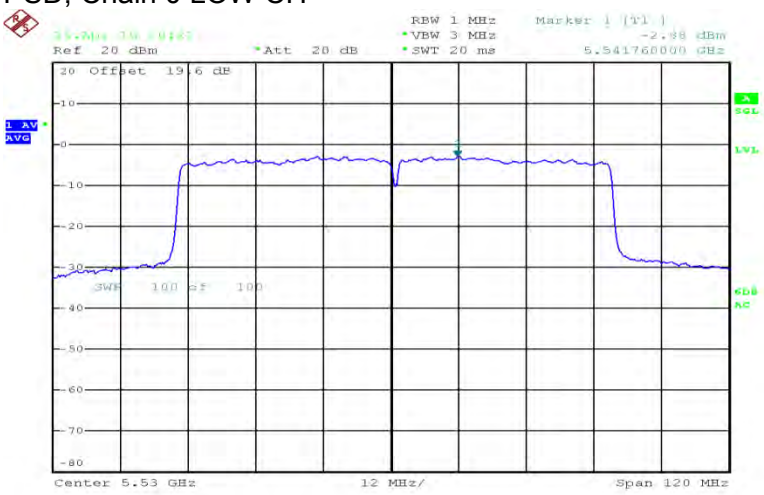
PSD Results

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)
Low	5530	-2.88	-3.62	-1.83	2.24	6.02	-3.78
High	5610	-2.92	-2.83	-3.12	2.00	6.02	-4.02

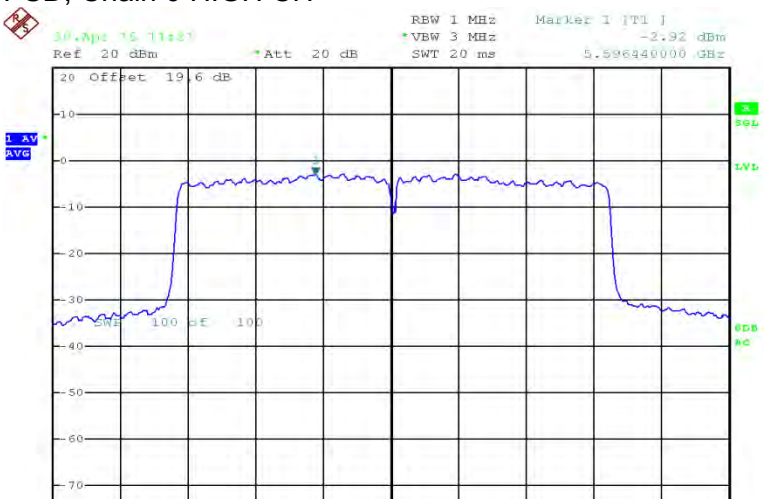
Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

PSD, Chain 0

PSD, Chain 0 LOW CH

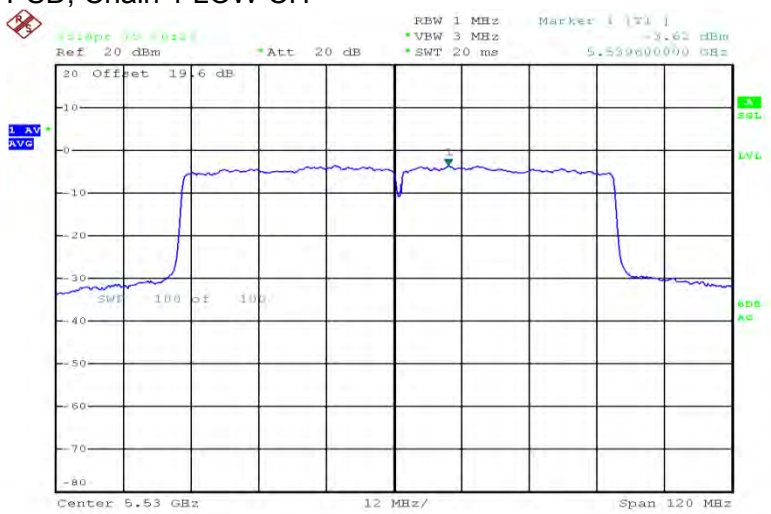


PSD, Chain 0 HIGH CH



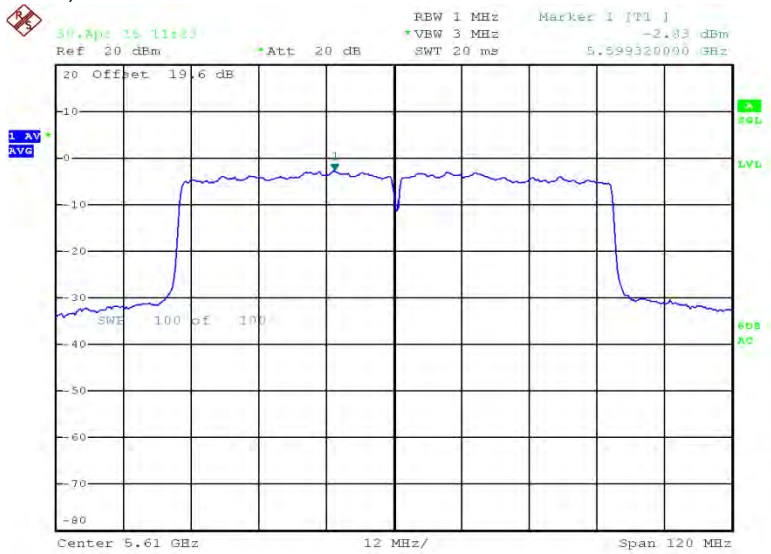
PSD, Chain 1

PSD, Chain 1 LOW CH



Date: 15.APR.2015 20:22:05

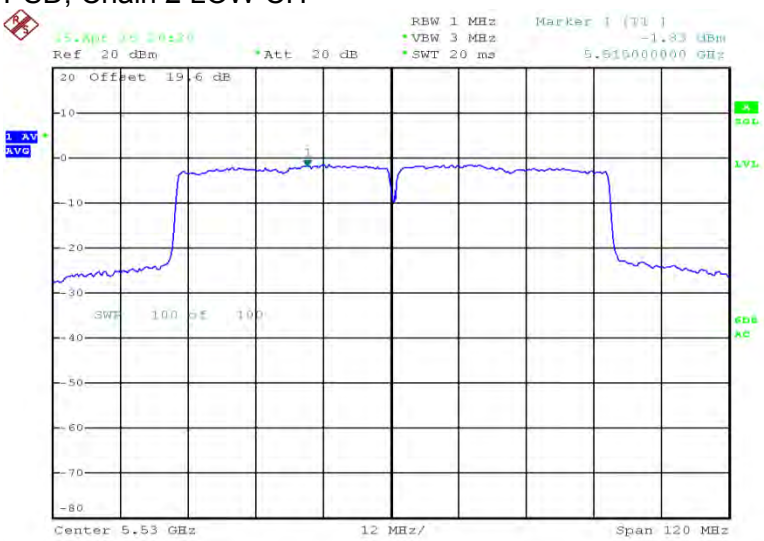
PSD, Chain 1 HIGH CH



Date: 30.APR.2015 11:23:01

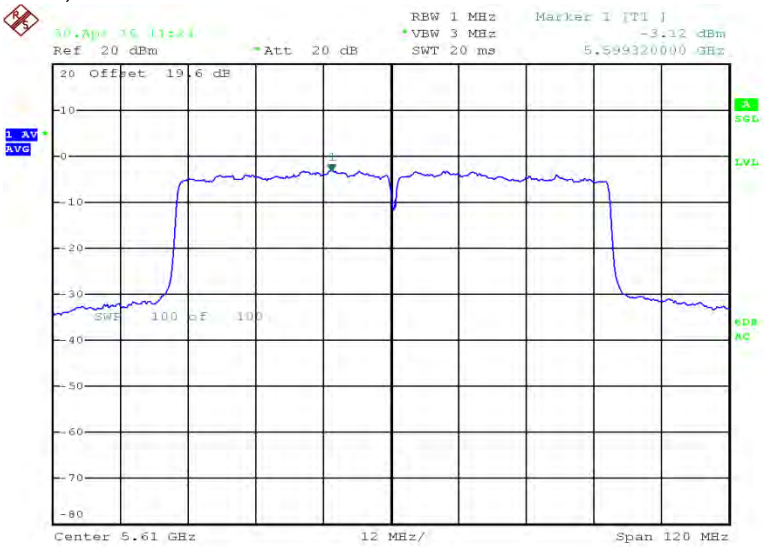
PSD, Chain 2

PSD, Chain 2 LOW CH



Date: 15.APR.2015 20:20:46

PSD, Chain 2 HIGH CH



Date: 30.APR.2015 11:24:40

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	115.25	10.98	10.98	19.02	6.02

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

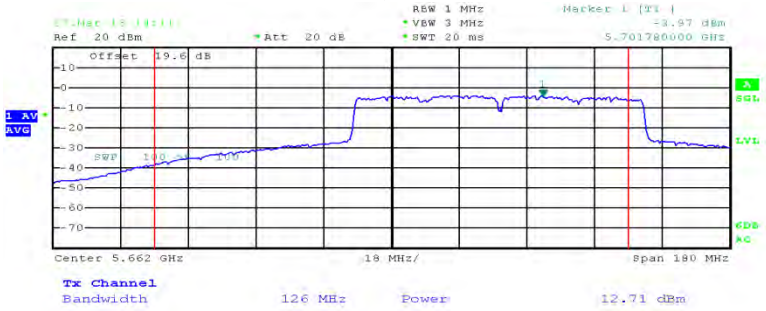
Output Power Results

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	12.71	12.09	12.40	17.36	19.02	-1.66

PSD Results

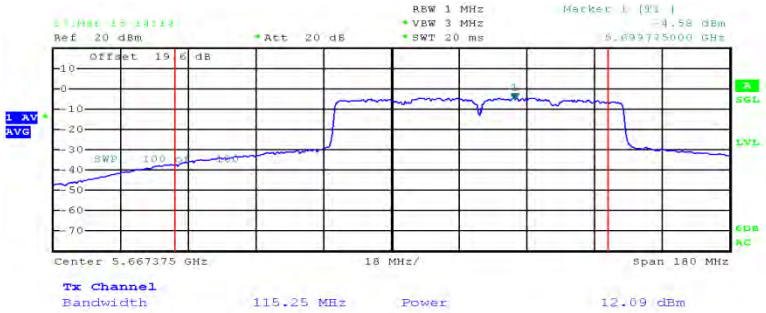
Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Chain 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	-3.97	-4.58	-4.32	0.67	6.02	-5.35

OUTPUT POWER AND PSD, Chain 0 CH 138 UNII



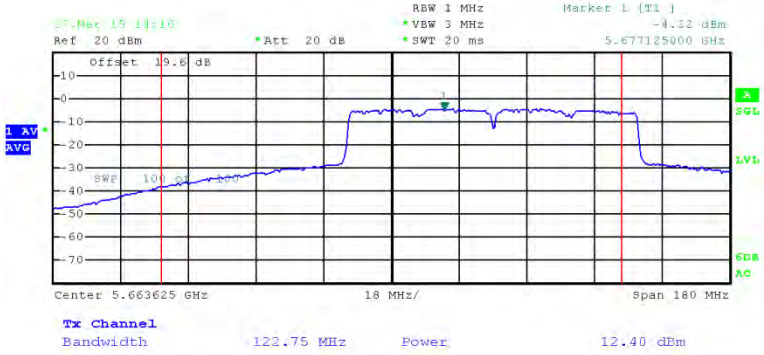
Date: 27.MAR.2015 14:11:43

OUTPUT POWER AND PSD, Chain 1 CH 138 UNII



Date: 27.MAR.2015 14:14:17

OUTPUT POWER AND PSD, Chain 2 CH 138 UNII



Date: 27.MAR.2015 14:16:04

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	10.98	10.98	25.02	25.02

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

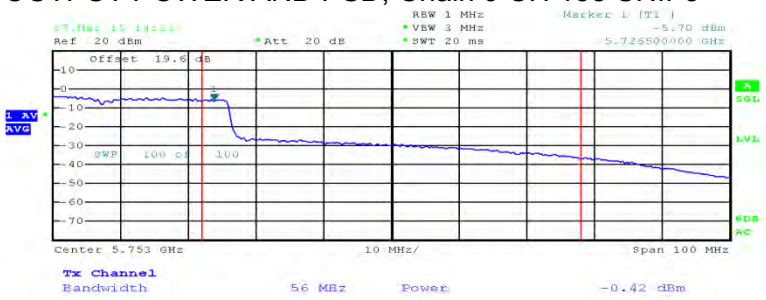
Output Power Results

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	-0.42	-1.21	-0.82	4.15	25.02	-20.87

PSD Results

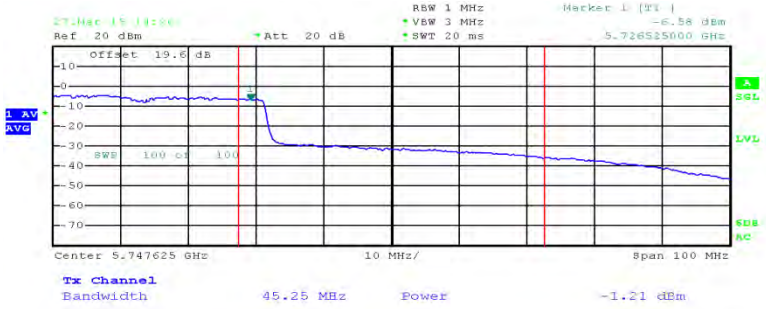
Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Chain 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	-5.70	-6.58	-5.97	-1.12	25.02	-26.14

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



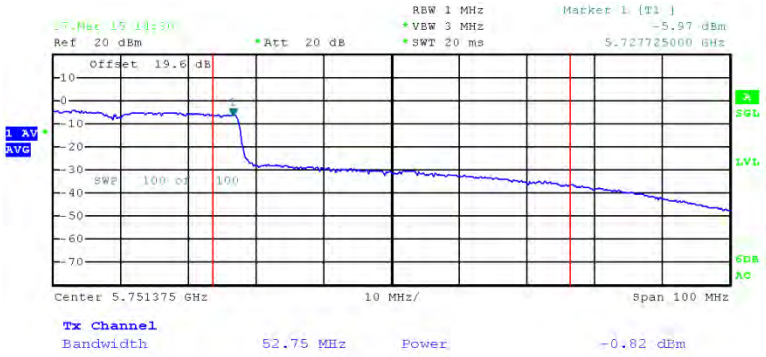
Date: 27.MAR.2015 14:22:51

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



Date: 27.MAR.2015 14:26:39

OUTPUT POWER AND PSD, Chain 2 CH 138 UNII-3



Date: 27.MAR.2015 14:30:03

8.32.2. 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	18.10	17.96	17.80	22.73

8.33. 802.11a LEGACY MODE IN THE 5.8 GHz BAND

8.33.1. 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) = 6.21 dBi

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Power Limit (dBm)
Low	5745	6.21	29.79
High	5825	6.21	29.79

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	18.75	18.75	29.79	-11.04
High	5825	18.90	18.90	29.79	-10.89

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.

8.33.2. 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

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

RESULTS

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5745	6.21	29.79
High	5825	6.21	29.79

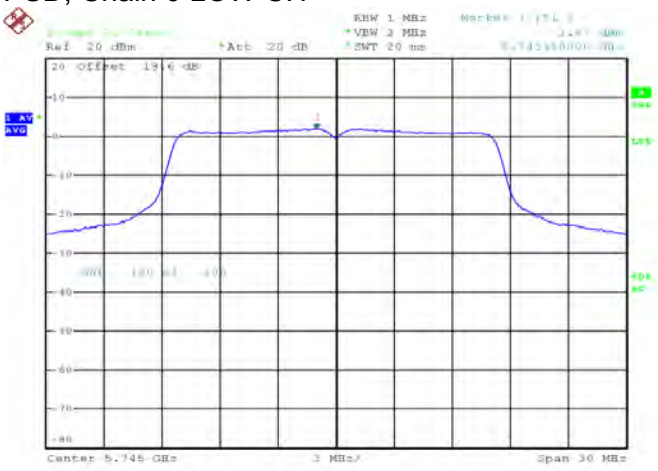
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD

PSD Results

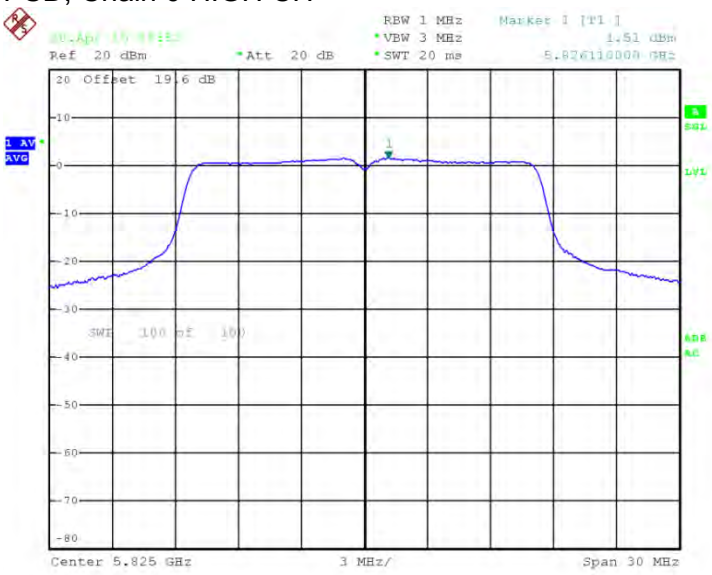
Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5745	1.87	1.87	29.79	-27.92
High	5825	1.51	1.51	29.79	-28.28

PSD, Chain 0

PSD, Chain 0 LOW CH



PSD, Chain 0 HIGH CH



8.34. 802.11n HT20 CDD 2Tx MODE IN THE 5.8 GHz BAND

8.34.1. 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 the same for each chain. The directional gain is equal to the antenna gain, 6.21 dBi.

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Power Limit (dBm)
Low	5745	6.21	29.79
High	5825	6.21	29.79

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	14.82	14.64	17.74	29.79	-12.05
High	5825	16.95	16.81	19.89	29.79	-9.90

8.35. 802.11n HT20 CDD 3Tx MODE IN THE 5.8 GHz BAND

8.35.1. 6 dB BANDWIDTH

LIMITS

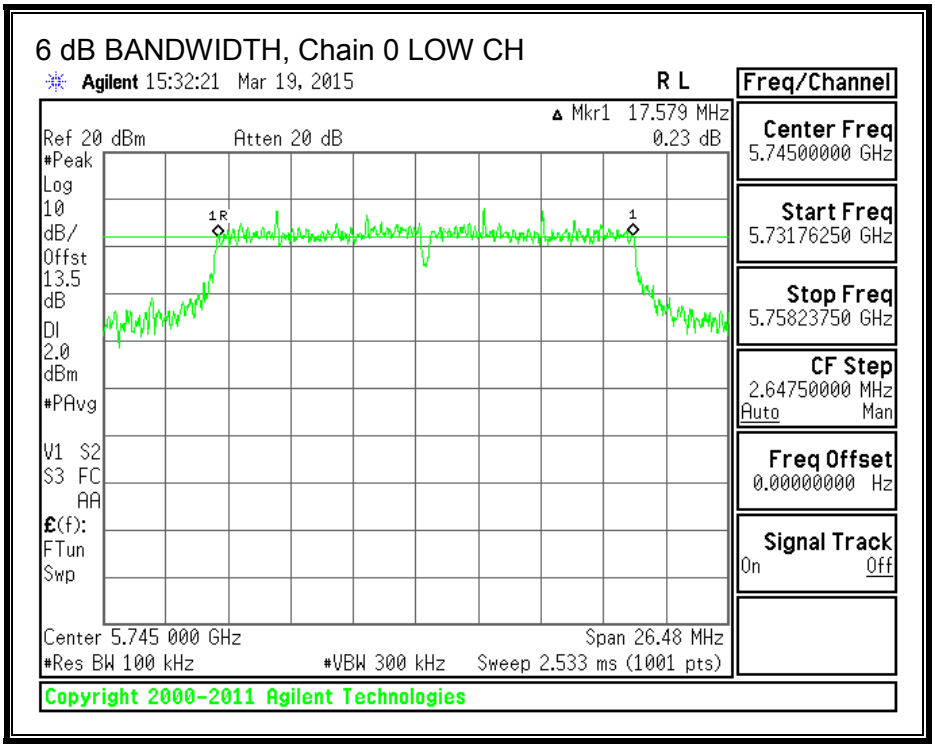
FCC §15.407 (e)

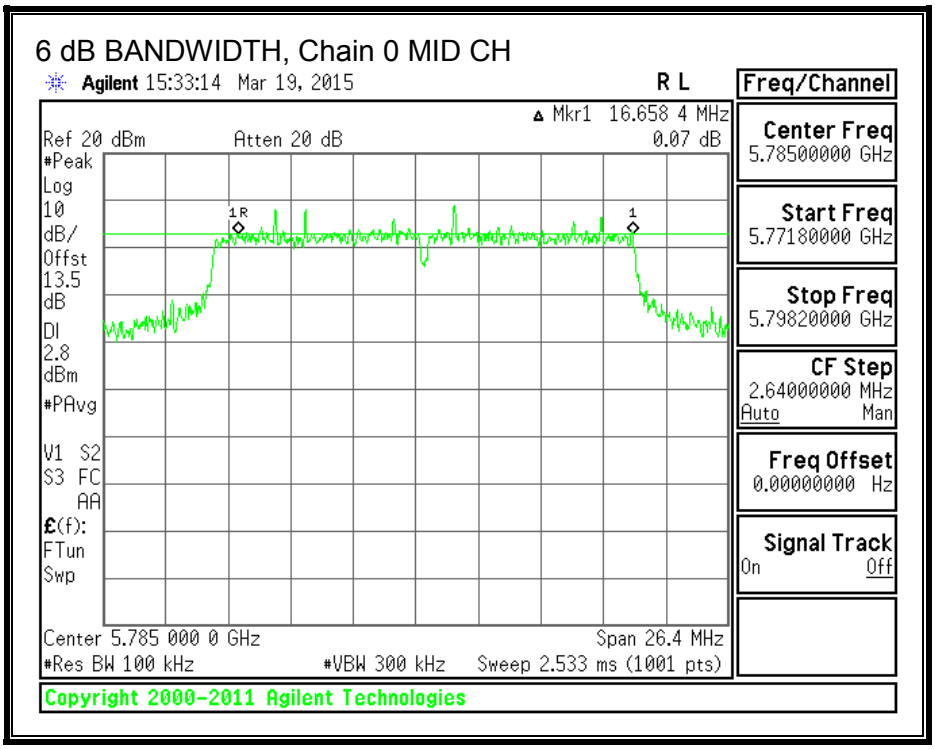
The minimum 6 dB bandwidth shall be at least 500 kHz.

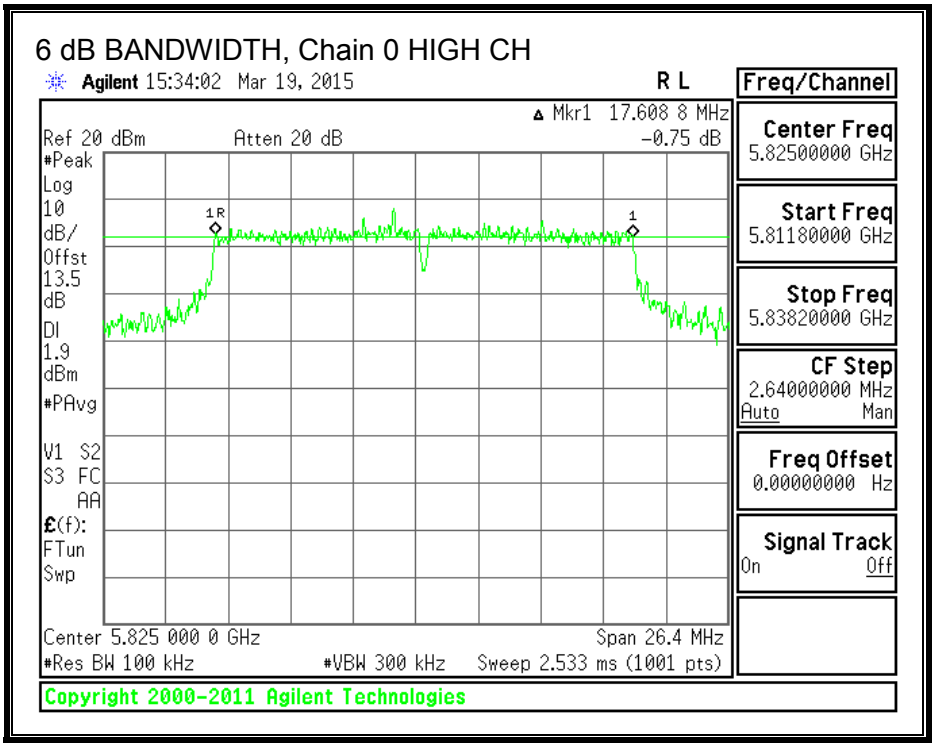
RESULTS

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	17.5790	17.5824	17.6110	0.5
Mid	5785	16.6584	17.5850	17.6320	0.5
High	5825	17.6088	17.6088	17.1290	0.5

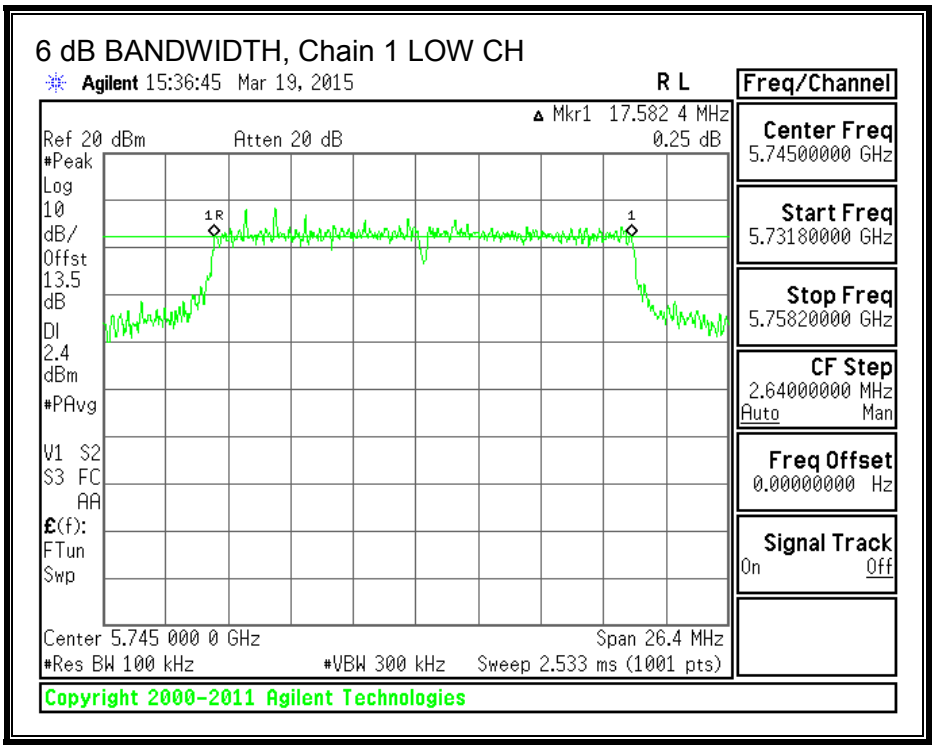
6 dB BANDWIDTH, Chain 0

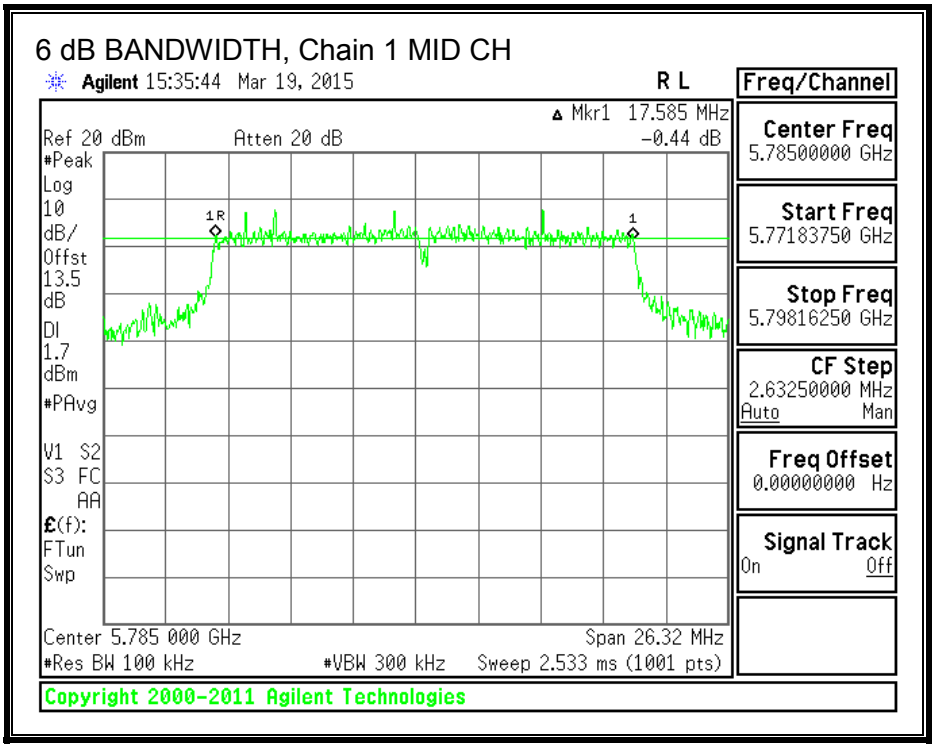


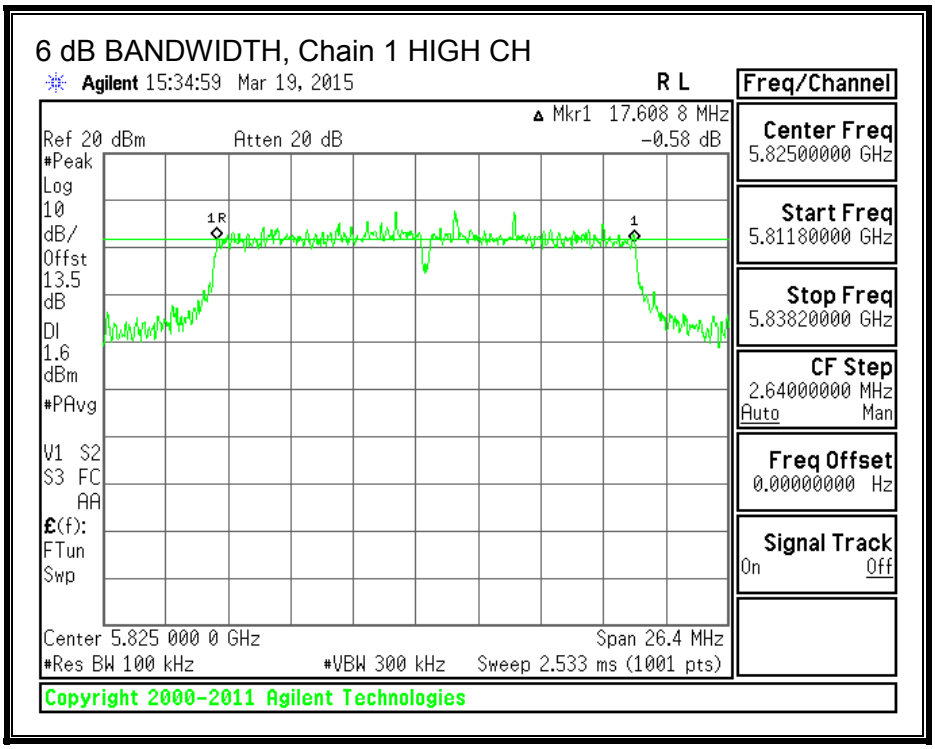




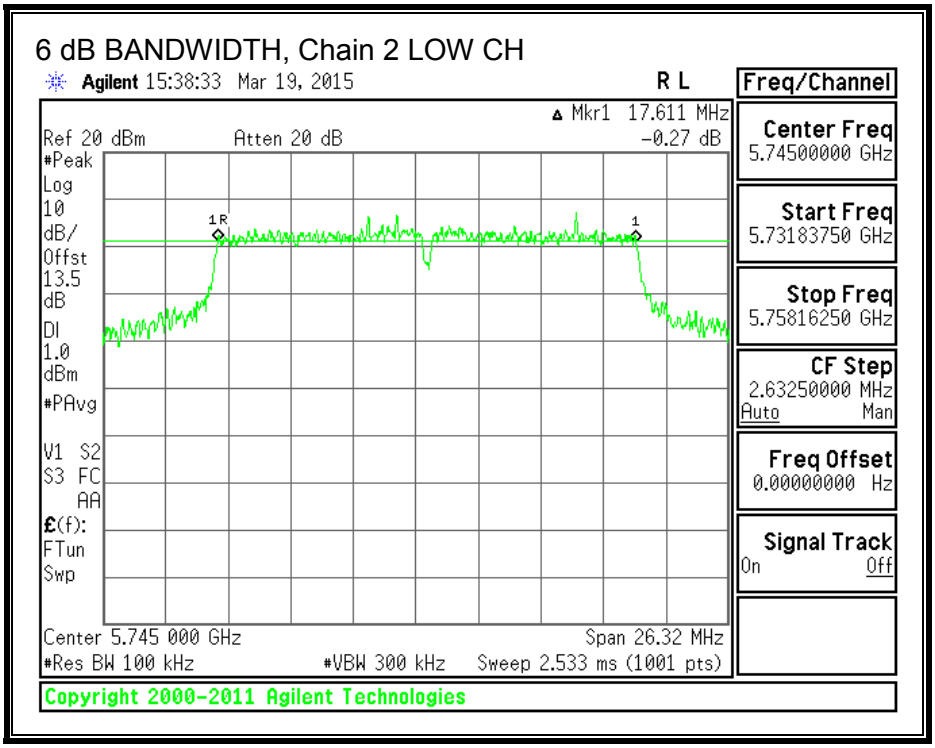
6 dB BANDWIDTH, Chain 1

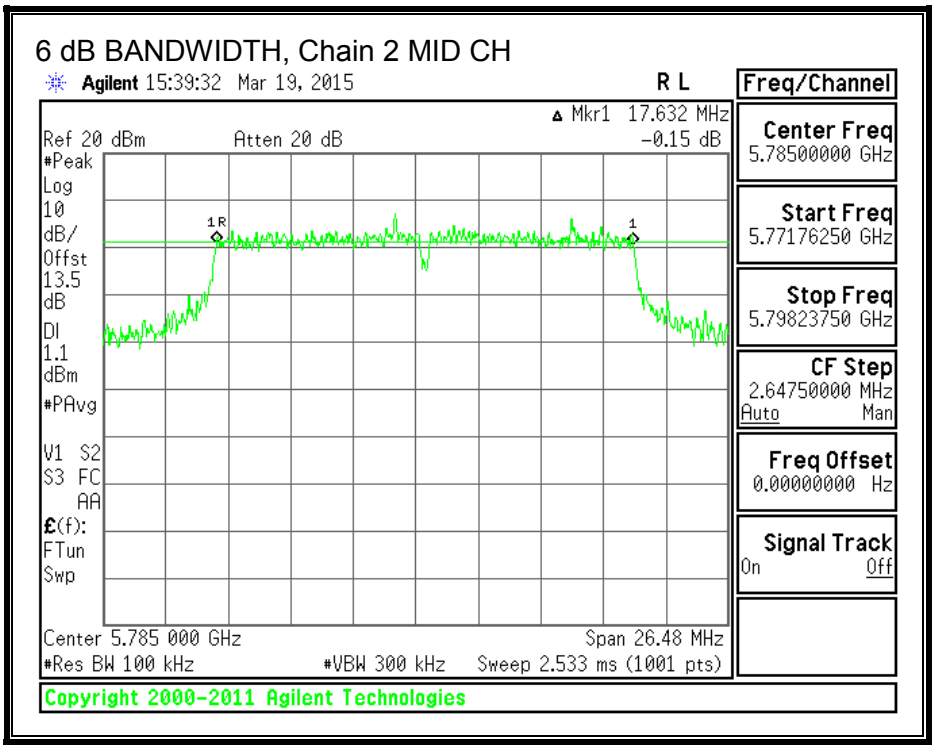


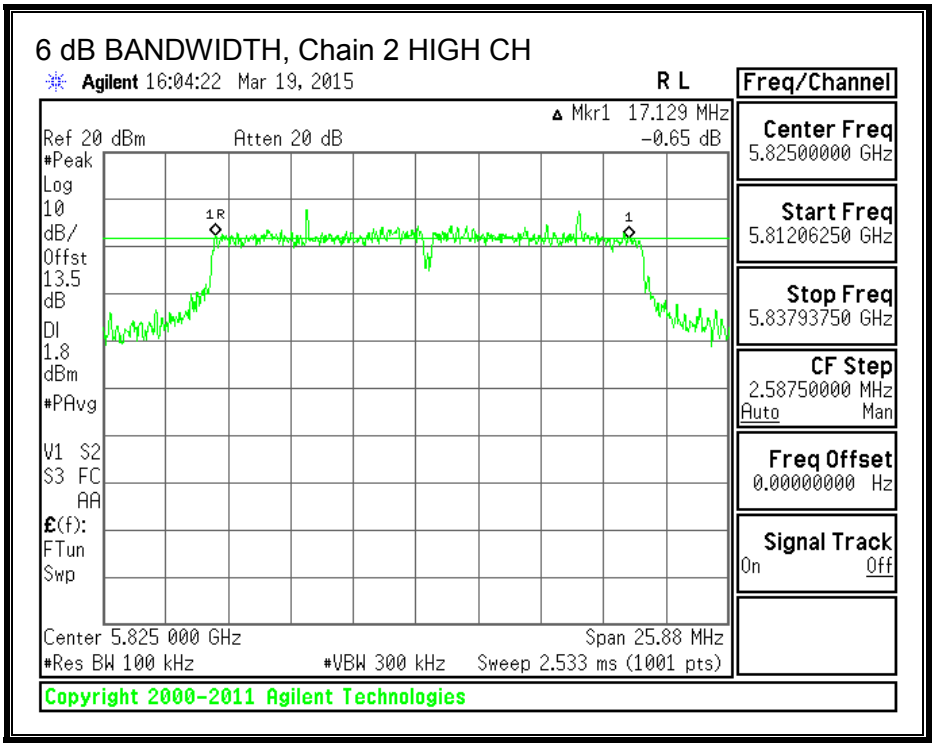




6 dB BANDWIDTH, Chain 2







8.35.2. 99% BANDWIDTH

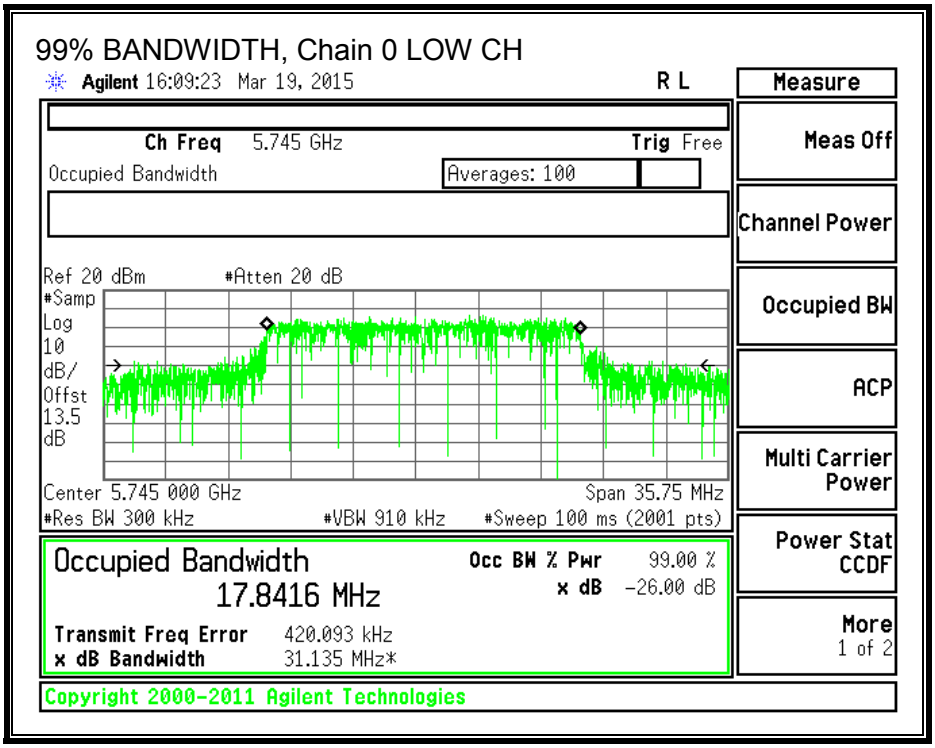
LIMITS

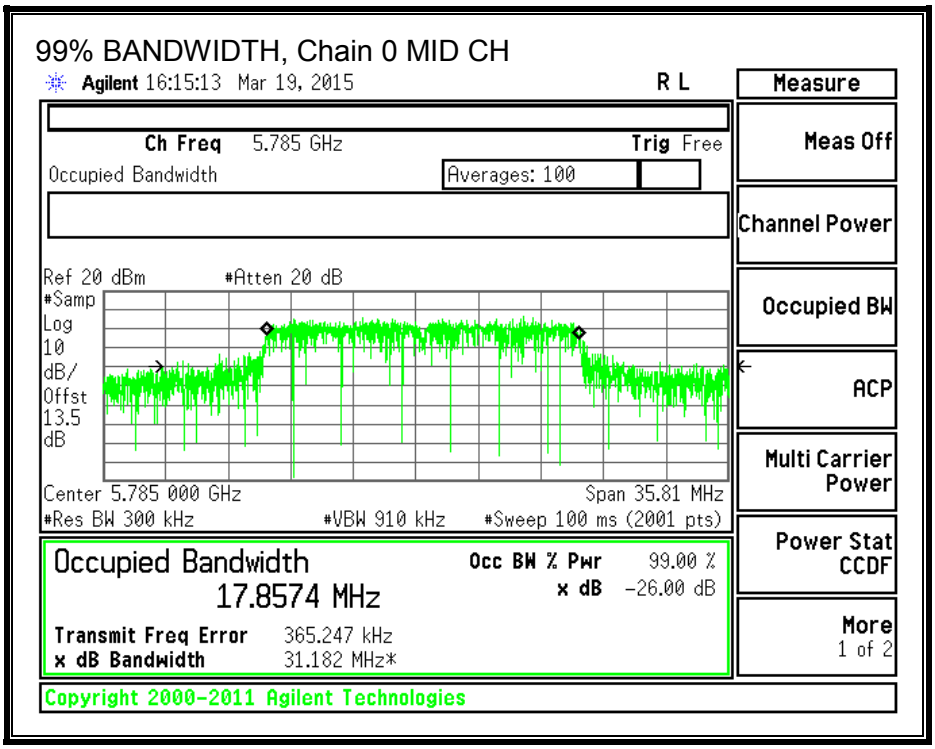
None; for reporting purposes only.

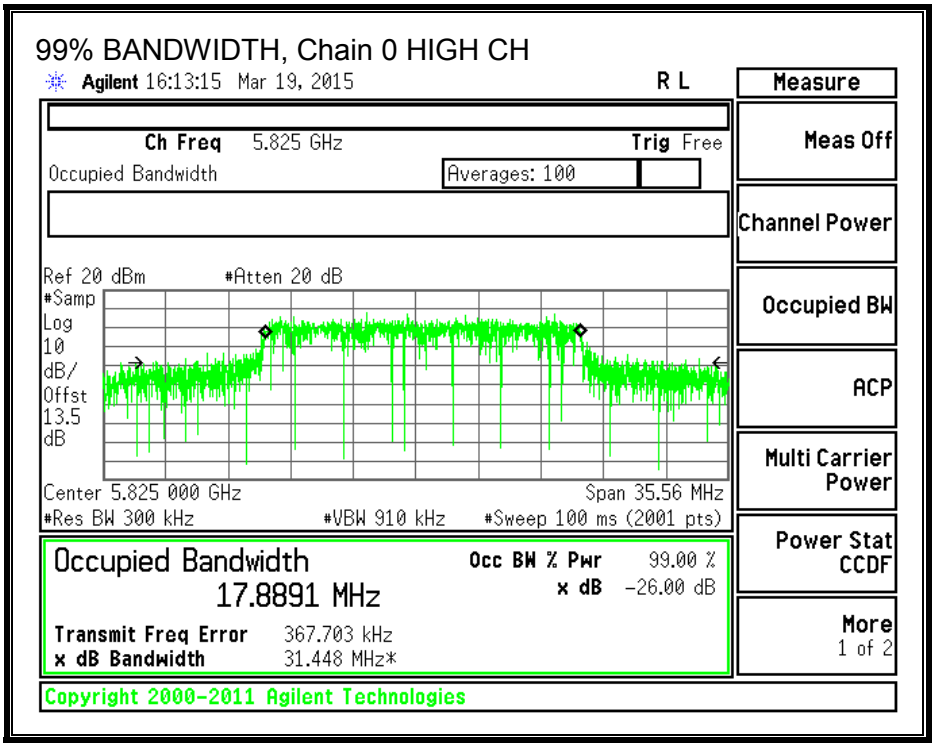
RESULTS

Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)	99% BW Chain 2 (MHz)
Low	5745	17.8416	17.8562	17.8256
Mid	5785	17.8574	17.8762	17.8273
High	5825	17.8891	17.8713	17.8116

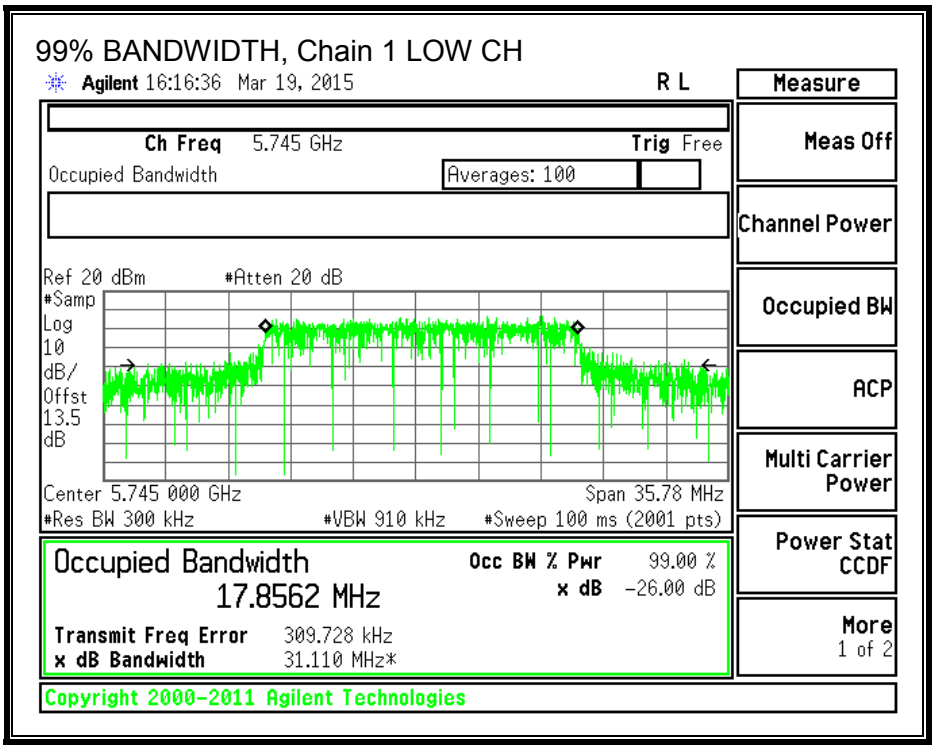
99% BANDWIDTH, Chain 0

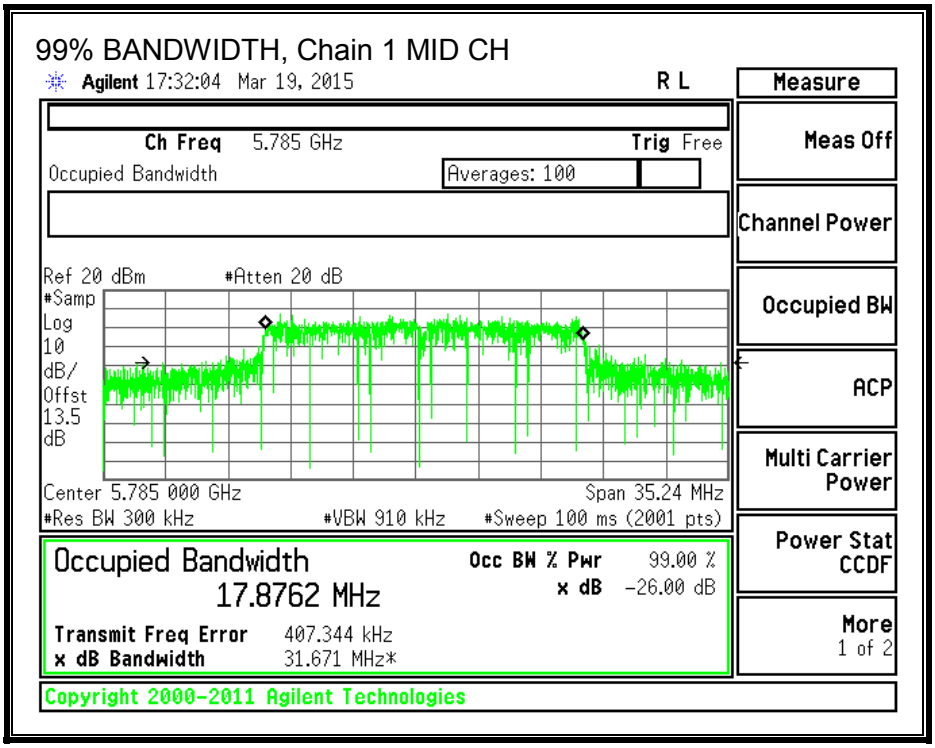


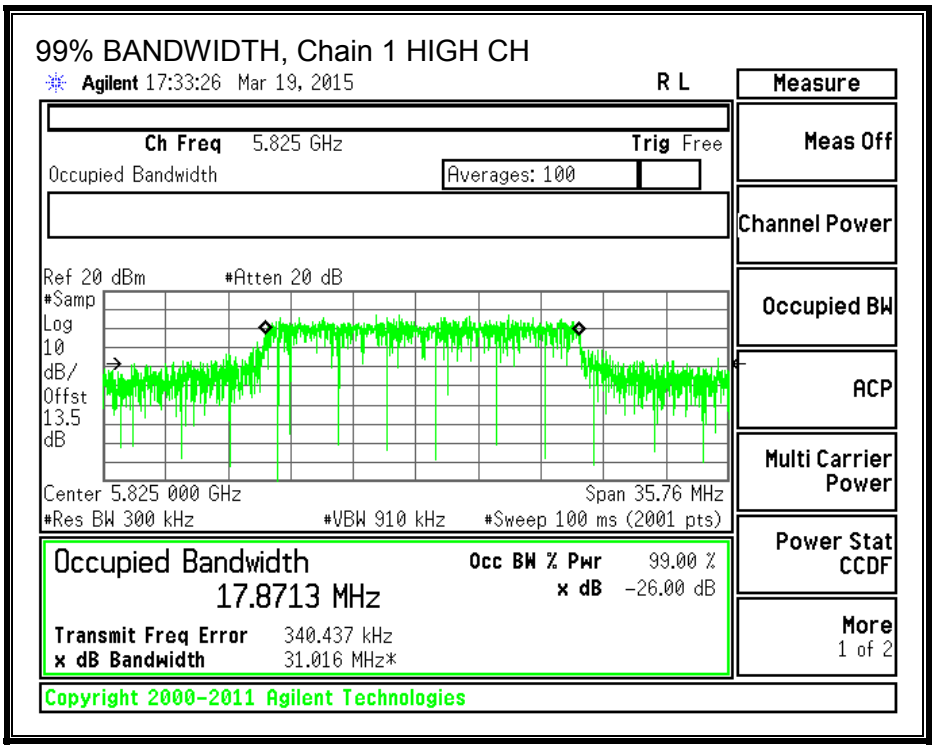




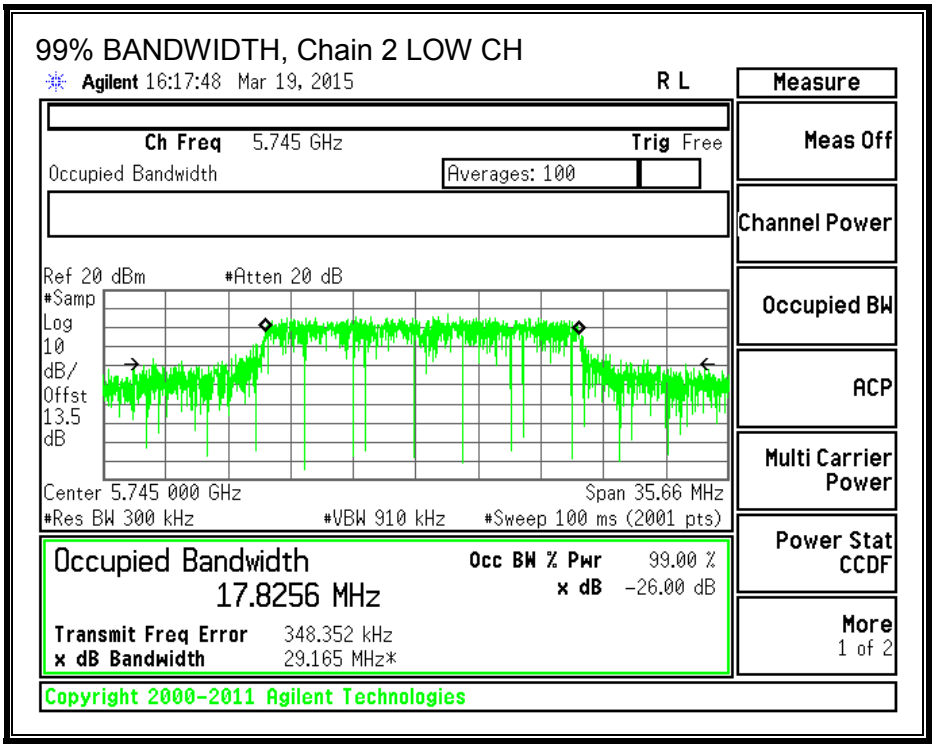
99% BANDWIDTH, Chain 1

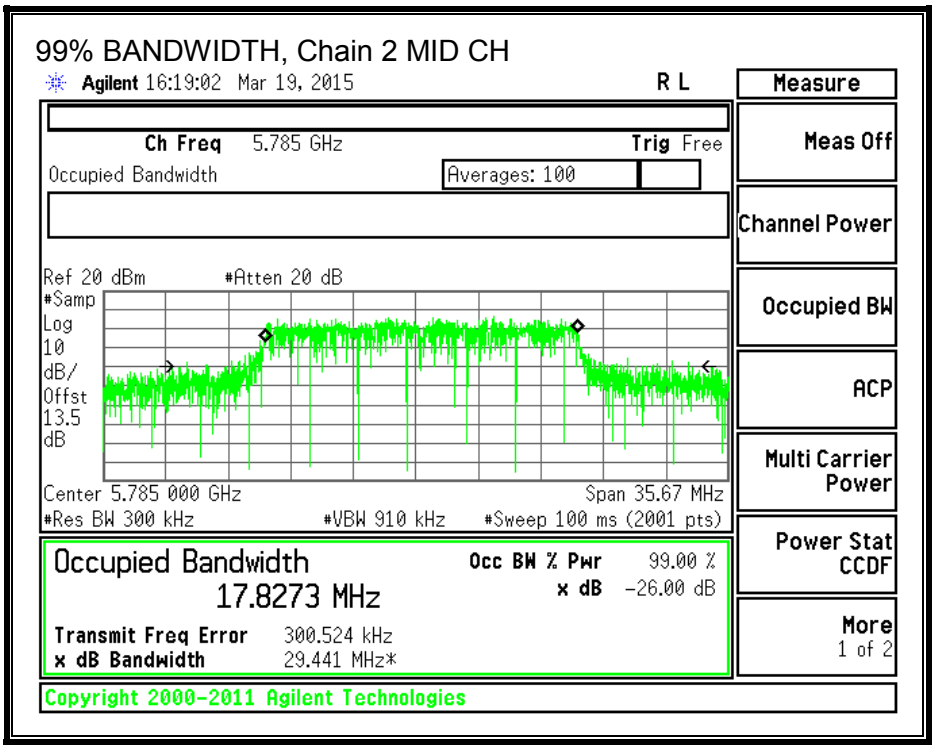


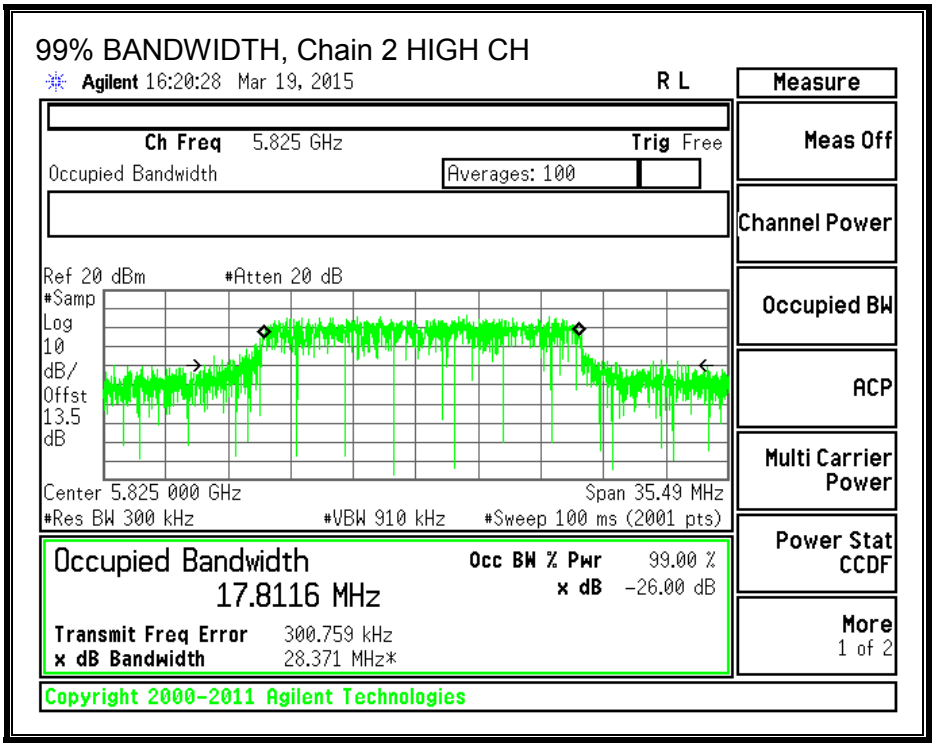




99% BANDWIDTH, Chain 2







8.35.3. 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 the same for each chain. The directional gain is equal to the antenna gain, 6.21 dBi.

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)
Low	5745	6.21	29.79
Mid	5785	6.21	29.79
High	5825	6.21	29.79

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	13.31	14.04	13.98	18.56	29.79	-11.23
Mid	5785	18.50	18.82	18.10	23.25	29.79	-6.54
High	5825	16.04	16.80	16.70	21.30	29.79	-8.49

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.

8.35.4. 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 the same for each chain. The directional gain is:

Antenna Gain (dBi)	10 * Log (3 chains) (dB)	Correlated Chains Directional Gain (dBi)
6.21	4.77	10.98

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5745	10.98	25.02
Mid	5785	10.98	25.02
High	5825	10.98	25.02

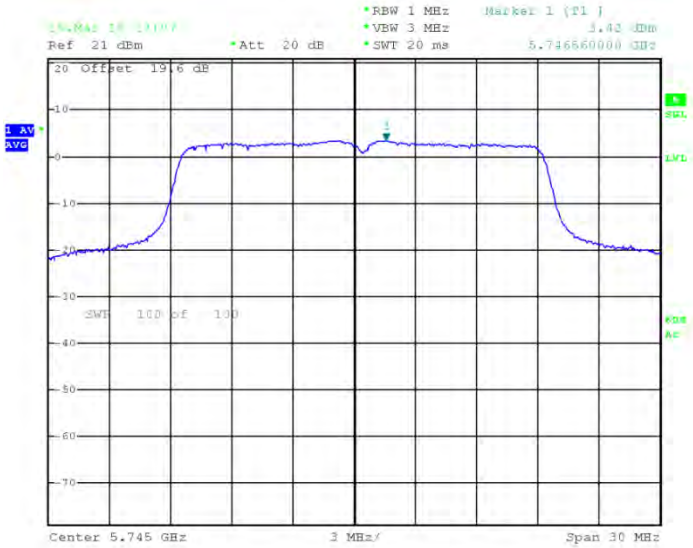
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD

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	3.420	3.330	2.660	7.92	25.02	-17.10
Mid	5785	3.280	3.720	2.730	8.03	25.02	-16.99
High	5825	3.610	3.460	3.000	8.14	25.02	-16.88

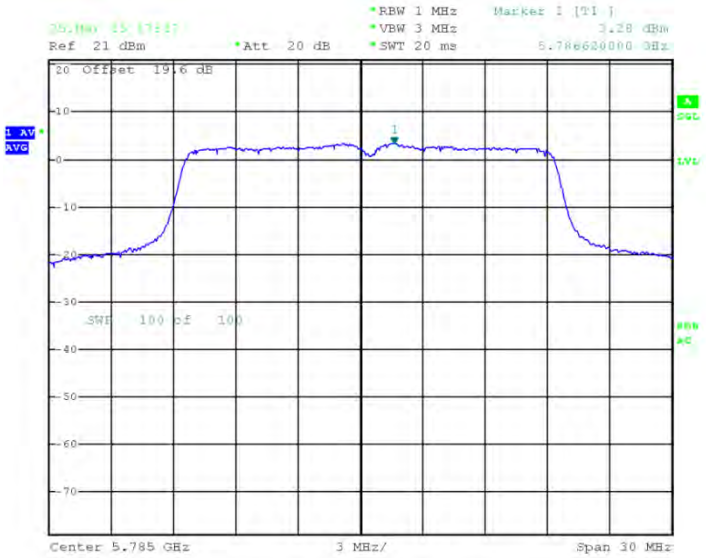
PSD, Chain 0

PSD, Chain 0 LOW CH



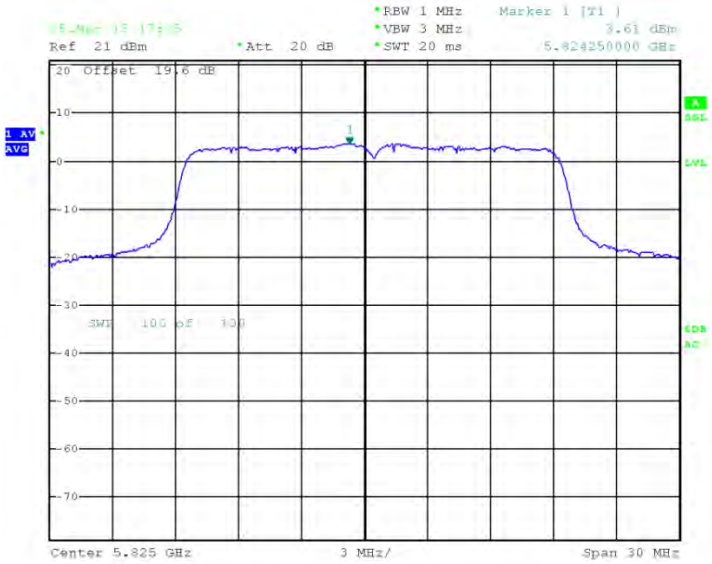
Date: 25.MAR.2015 17:07:25

PSD, Chain 0 MID CH



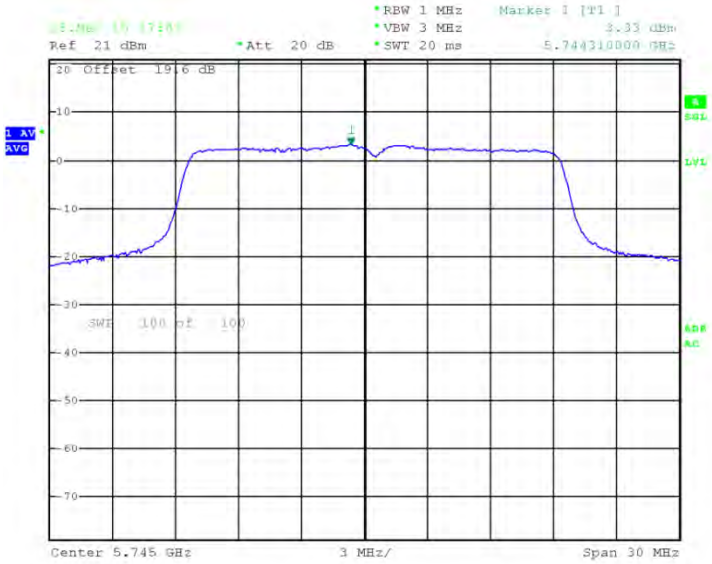
Date: 25.MAR.2015 17:12:14

PSD, Chain 0 HIGH CH

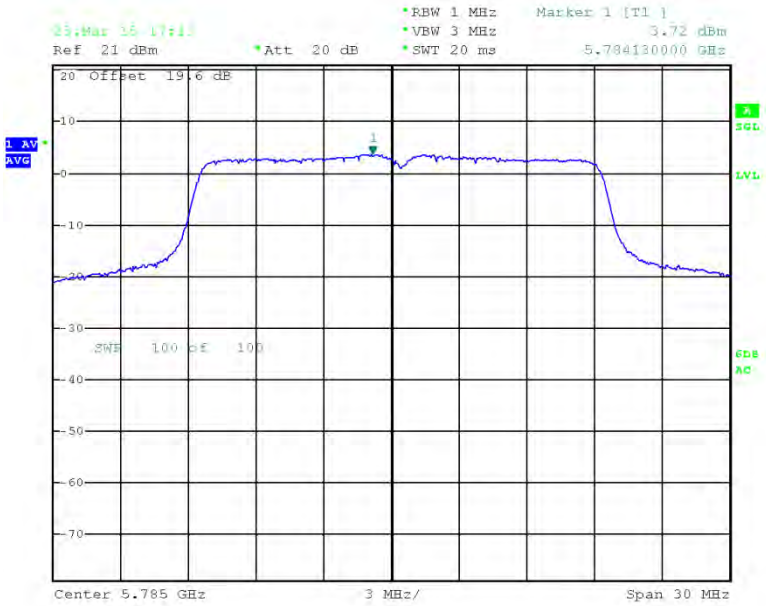


PSD, Chain 1

PSD, Chain 1 LOW CH

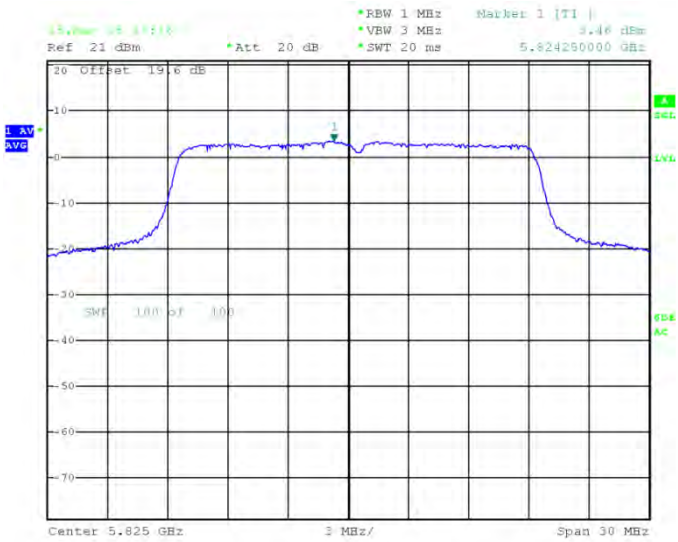


PSD, Chain 1 MID CH



Date: 25.MAR.2015 17:13:02

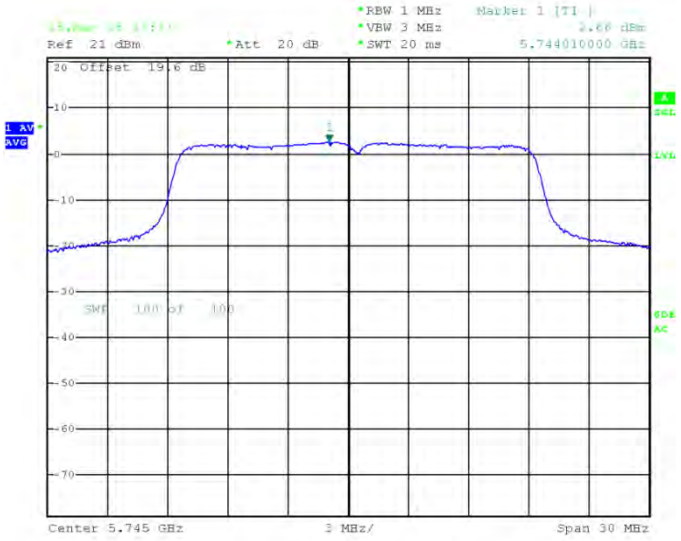
PSD, Chain 1 HIGH CH



Date: 25.MAR.2015 17:16:17

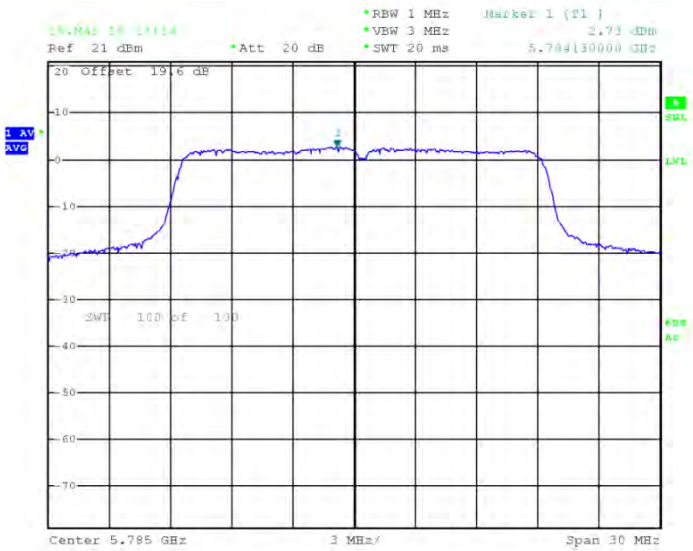
PSD, Chain 2

PSD, Chain 2 LOW CH



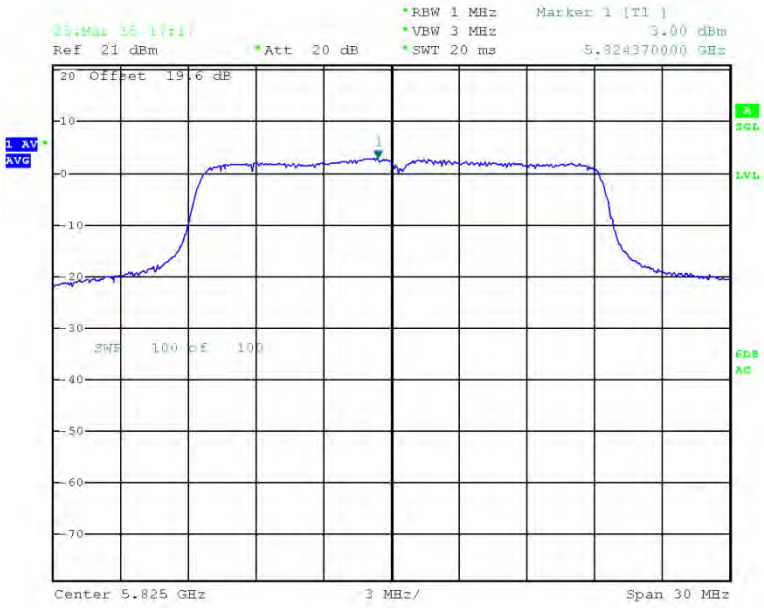
Date: 25.MAR.2015 17:11:07

PSD, Chain 2 MID CH



Date: 25.MAR.2015 17:14:04

PSD, Chain 2 HIGH CH



8.36. 802.11n HT20 TxBF 3Tx MODE IN THE 5.8 GHz BAND

8.36.1. 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 correlated and the antenna gain is the same for each chain. The directional gain is:

Antenna Gain (dBi)	10 * Log (3 chains) (dB)	Correlated Chains Directional Gain (dBi)
6.21	4.77	10.98

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)
Low	5745	10.98	25.02
Mid	5785	10.98	25.02
High	5825	10.98	25.02

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	13.31	14.04	13.96	18.55	25.02	-6.47
Mid	5785	18.87	18.92	19.05	23.72	25.02	-1.30
High	5825	17.18	17.17	16.21	21.65	25.02	-3.37

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.

8.37. 802.11n HT40 1Tx MODE IN THE 5.8 GHz BAND

8.37.1. 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) = 6.21 dBi

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)
Low	5755	6.21	29.79
High	5795	6.21	29.79

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5755	14.18	14.18	29.79	-15.61
High	5795	19.31	19.31	29.79	-10.48

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.

8.38. 802.11n HT40 CDD 3Tx MODE IN THE 5.8 GHz BAND

8.38.1. 6 dB BANDWIDTH

LIMITS

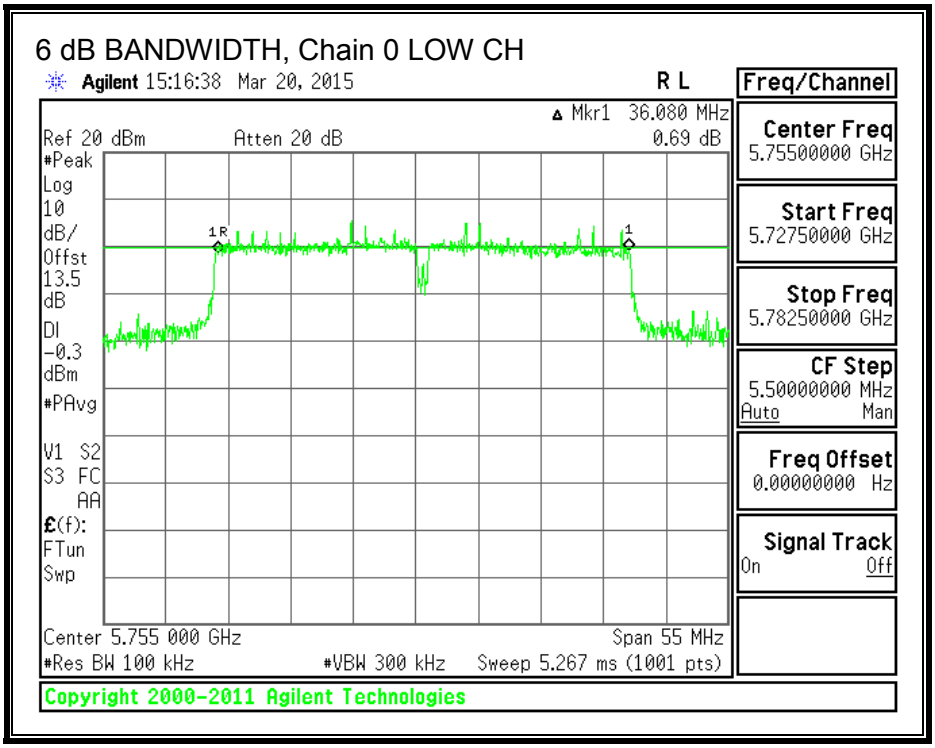
FCC §15.407 (e)

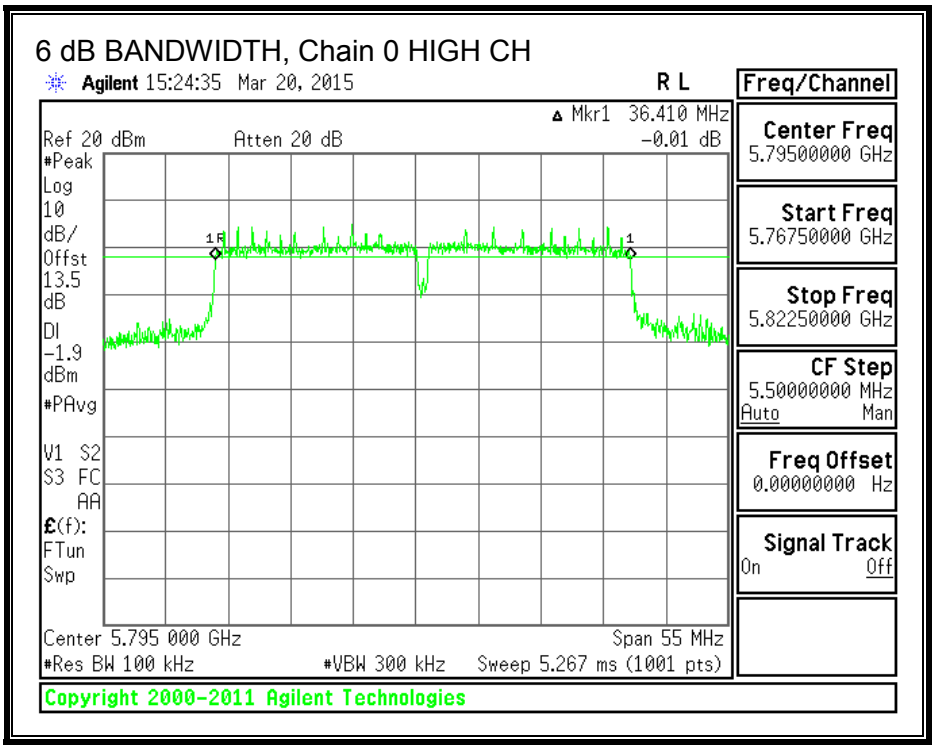
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

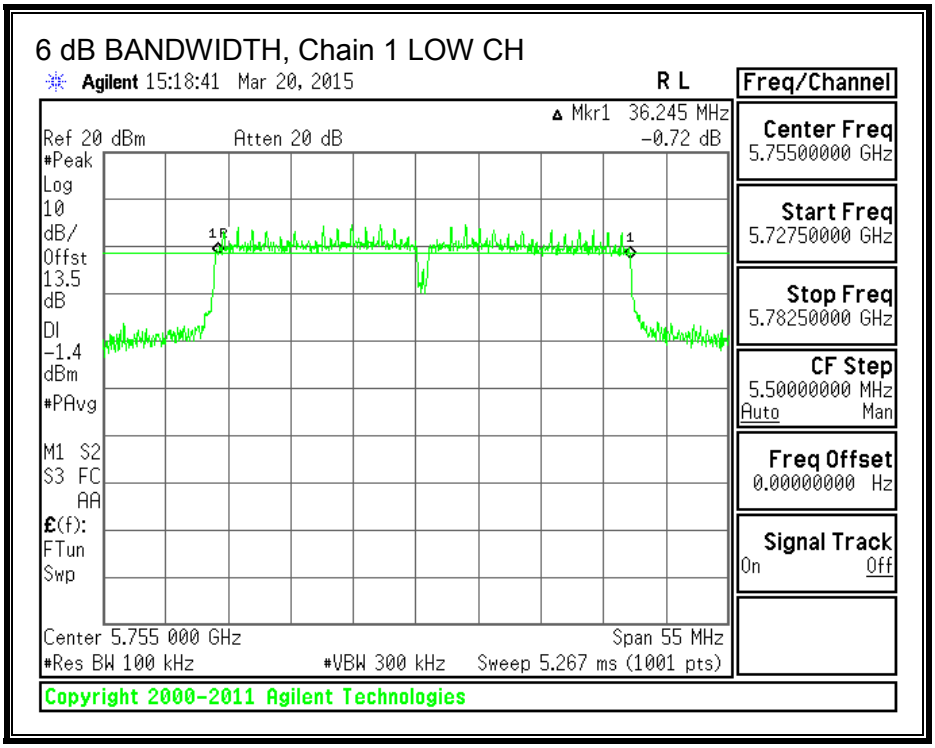
Channel	Frequency (MHz)	6 dB BW Chain 0 (MHz)	6 dB BW Chain 1 (MHz)	6 dB BW Chain 2 (MHz)	Minimum Limit (MHz)
Low	5755	36.080	36.245	36.300	0.5
High	5795	36.410	36.410	36.410	0.5

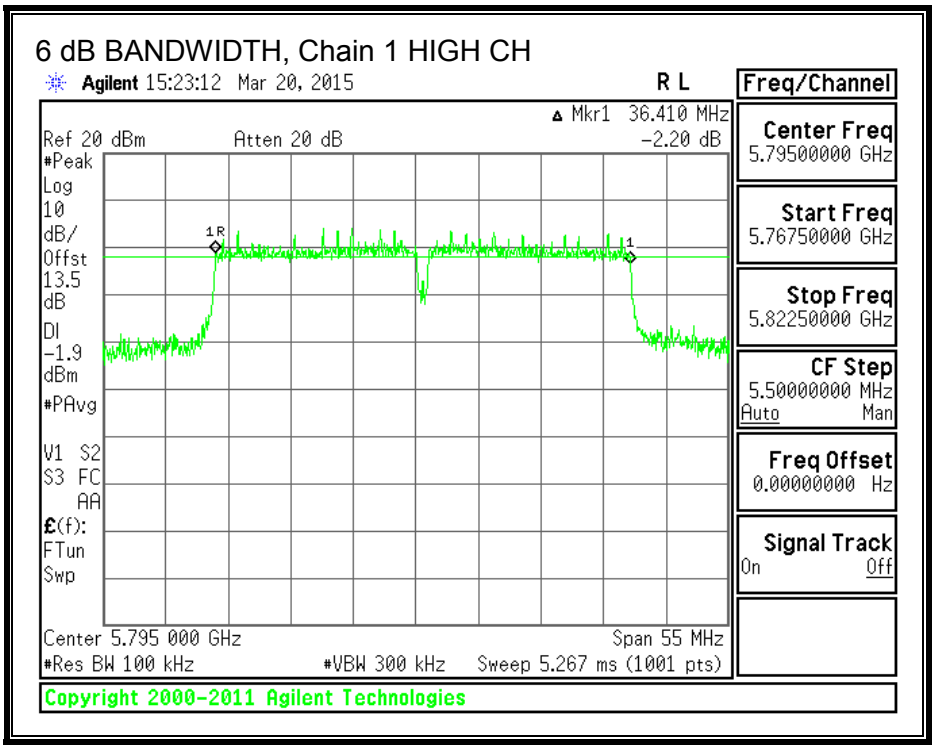
6 dB BANDWIDTH, Chain 0



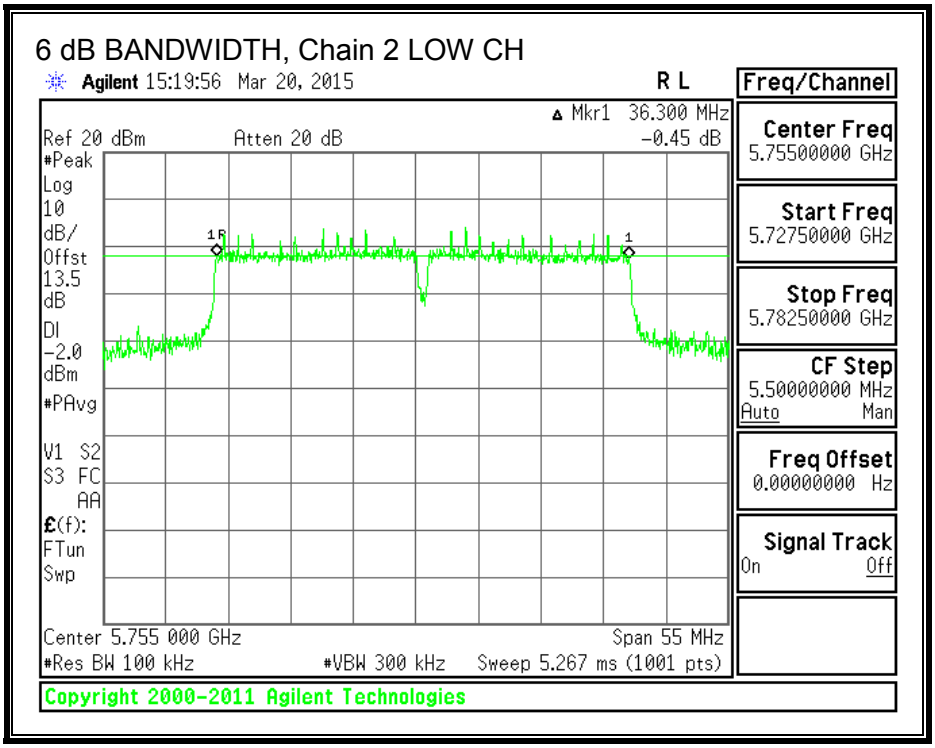


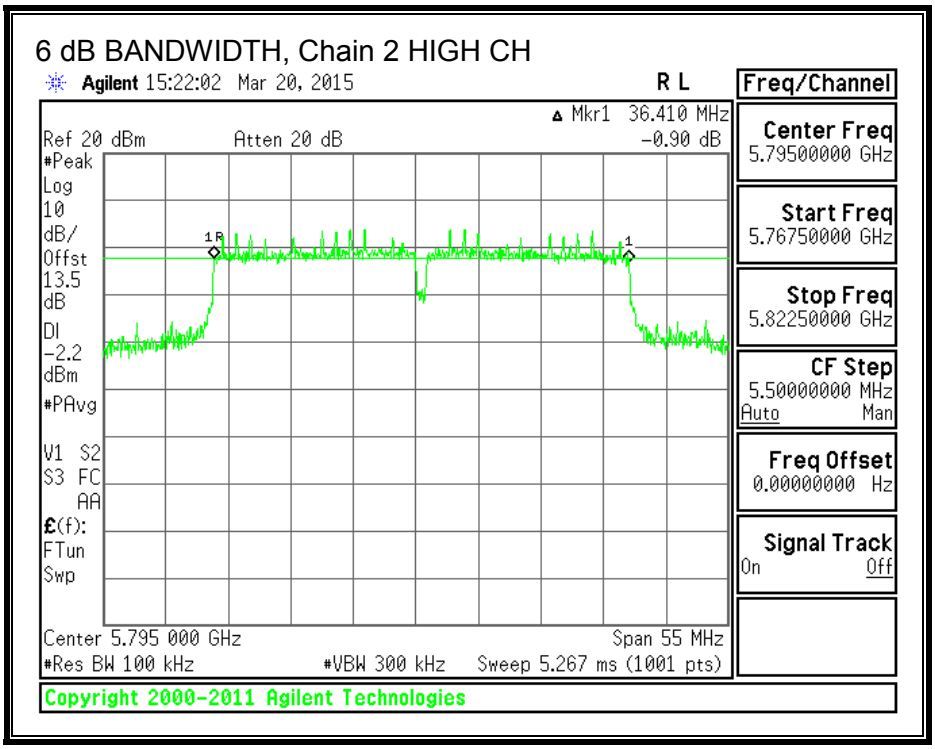
6 dB BANDWIDTH, Chain 1





6 dB BANDWIDTH, Chain 2





8.38.2. 99% BANDWIDTH

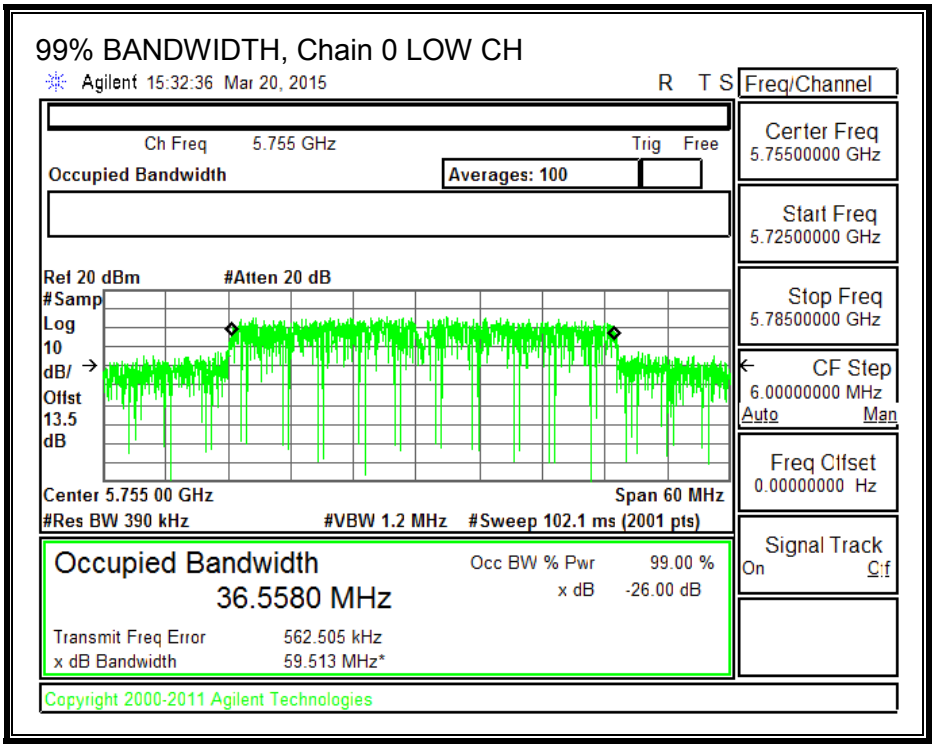
LIMITS

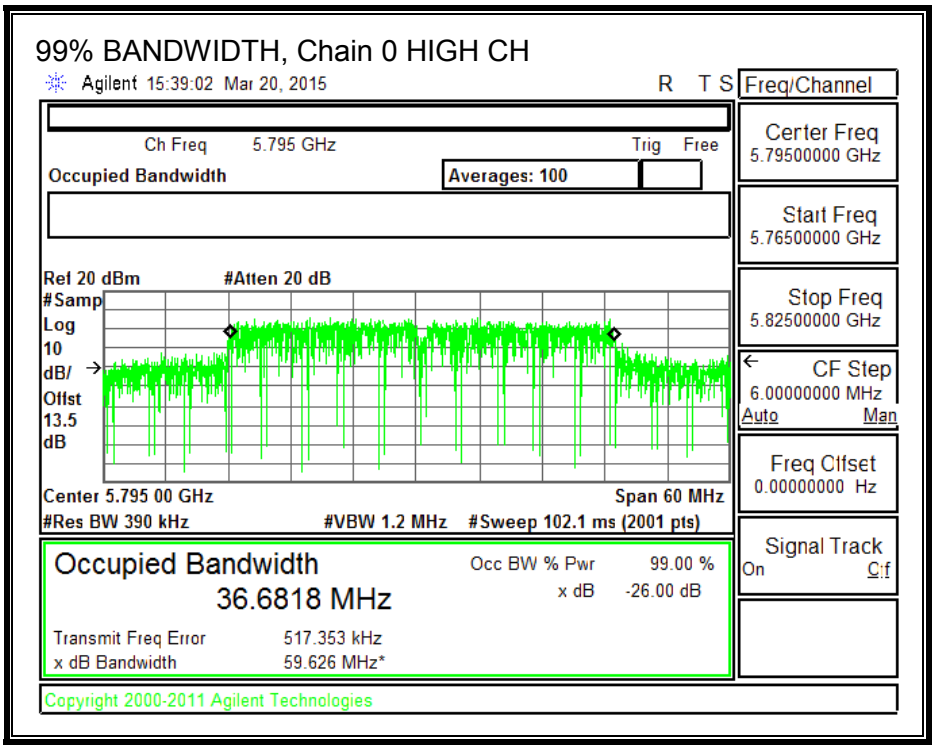
None; for reporting purposes only.

RESULTS

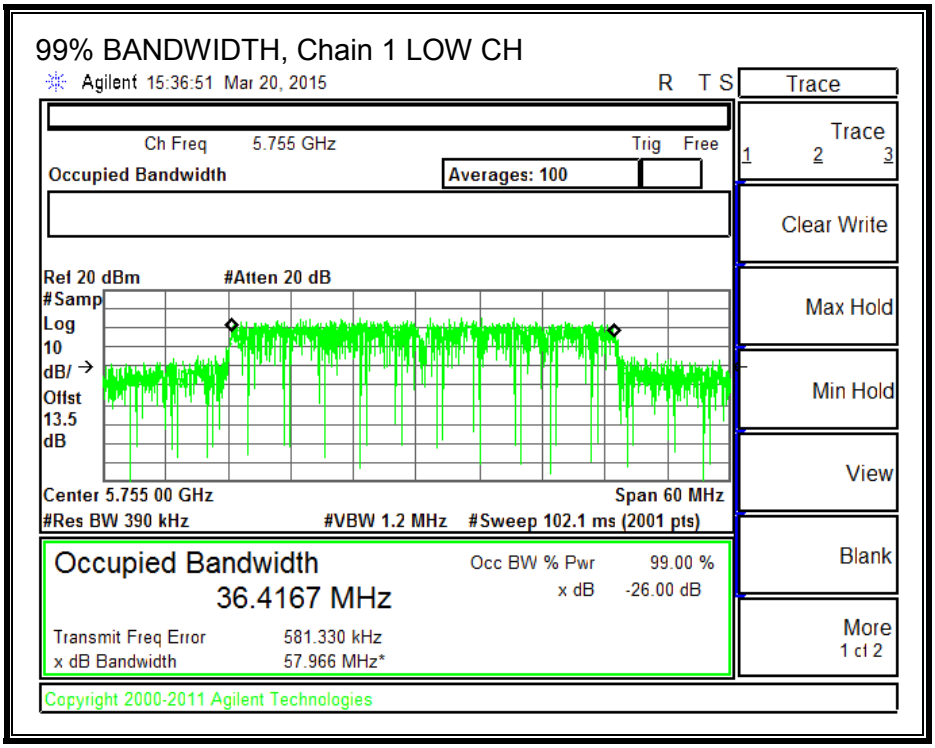
Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)	99% BW Chain 2 (MHz)
Low	5755	36.5580	36.4167	36.4492
High	5795	36.6818	36.4172	36.4494

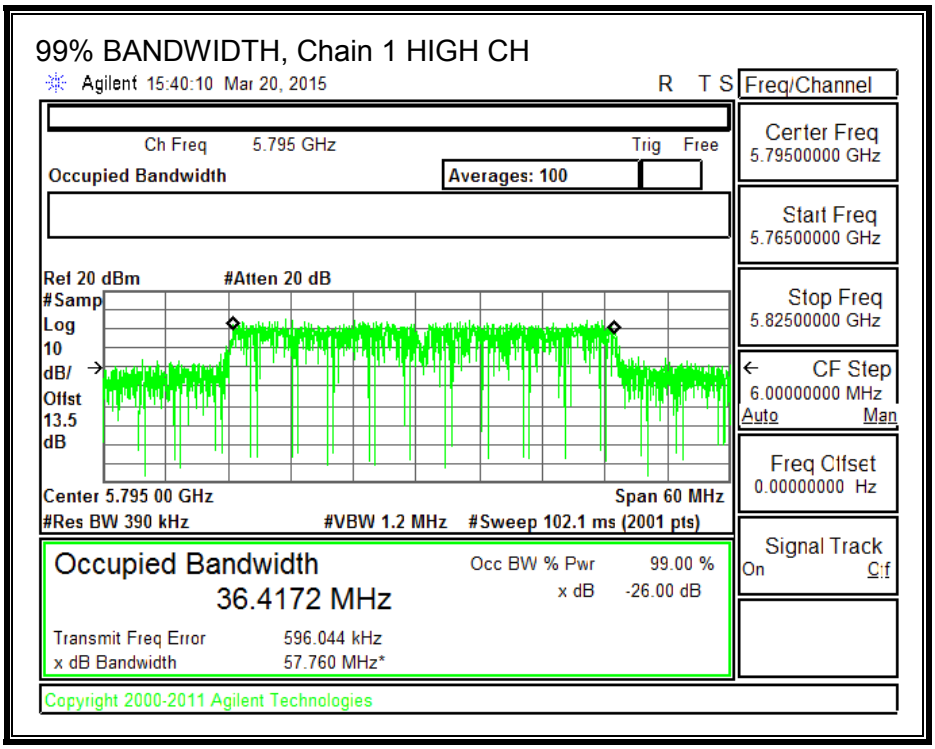
99% BANDWIDTH, Chain 0



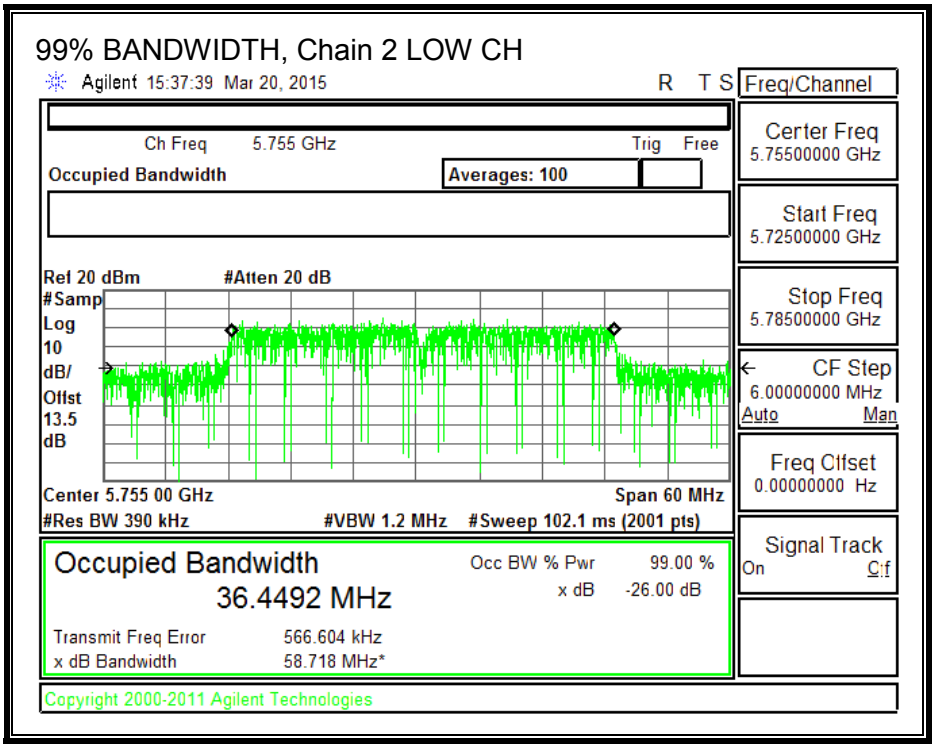


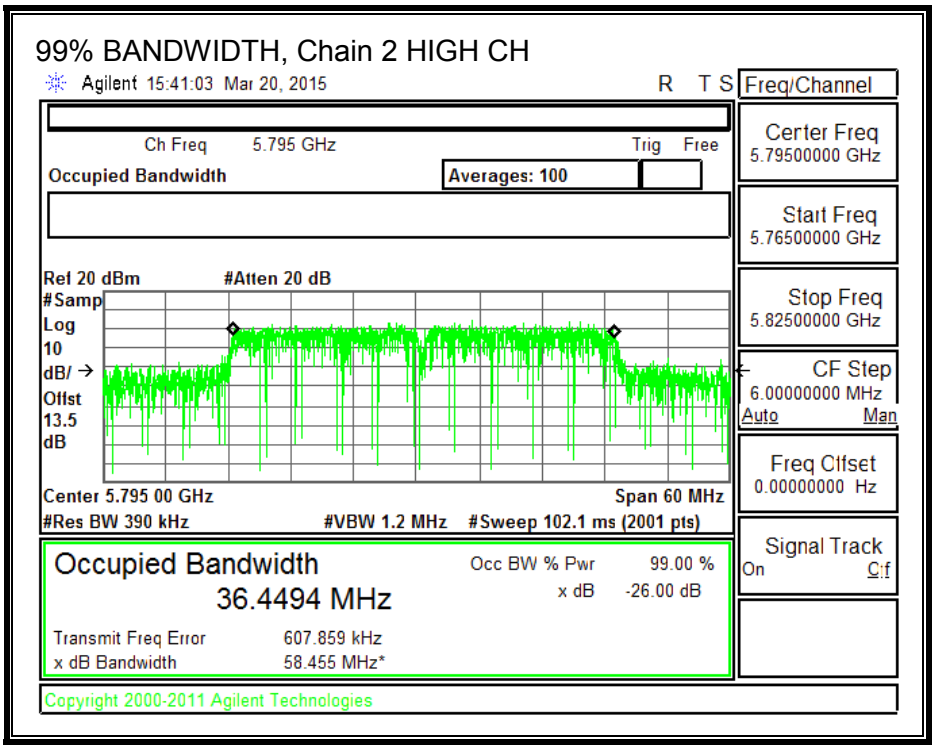
99% BANDWIDTH, Chain 1





99% BANDWIDTH, Chain 2





8.38.3. 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 the same for each chain. The directional gain is equal to the antenna gain, 6.21 dBi.

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)
Low	5755	6.21	29.79
High	5795	6.21	29.79

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

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	5755	12.12	11.95	11.82	16.74	29.79	-13.05
High	5795	19.41	18.89	19.09	23.91	29.79	-5.88

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.

8.38.4. 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 the same for each chain. The directional gain is:

Antenna Gain (dBi)	10 * Log (3 chains) (dB)	Correlated Chains Directional Gain (dBi)
6.21	4.77	10.98

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5755	10.98	25.02
High	5795	10.98	25.02

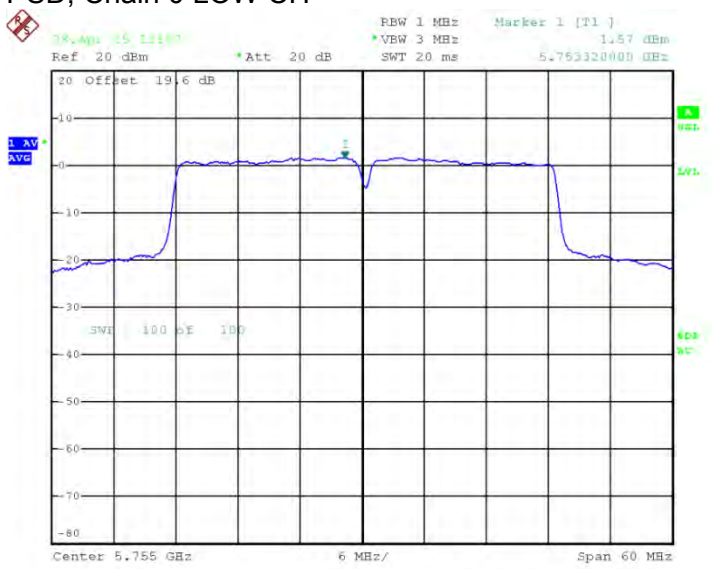
Duty Cycle CF (dB)	0.09	Included in Calculations of Corr'd PSD

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	5755	1.570	-0.160	-0.260	5.33	25.02	-19.69
High	5795	-2.080	-1.390	-0.860	3.45	25.02	-21.57

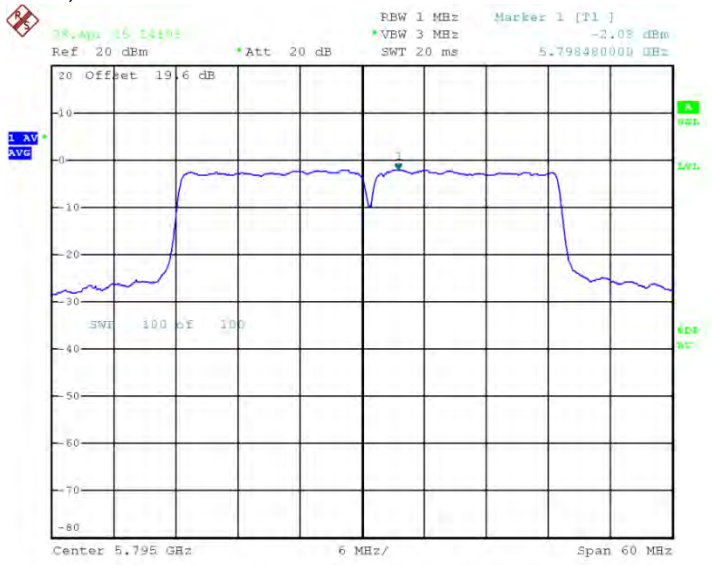
PSD, Chain 0

PSD, Chain 0 LOW CH



Date: 28.APR.2015 13:57:40

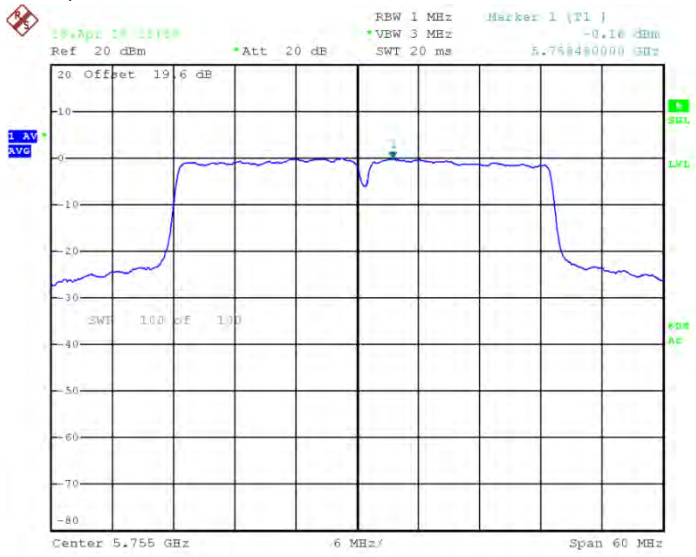
PSD, Chain 0 HIGH CH



Date: 28.APR.2015 14:05:37

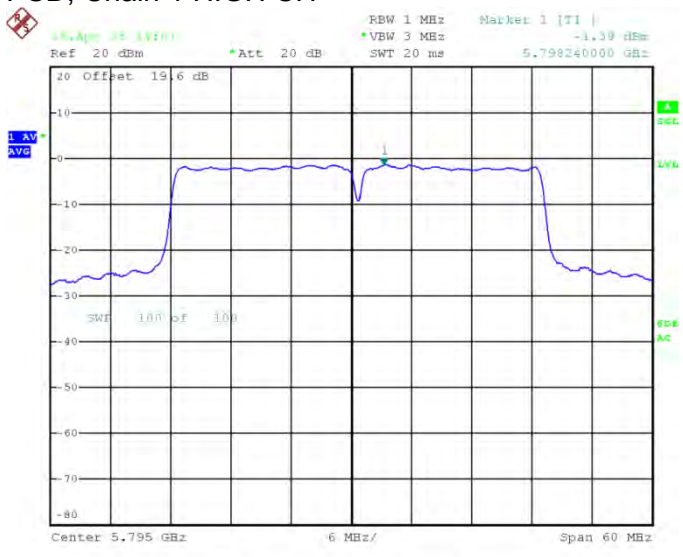
PSD, Chain 1

PSD, Chain 1 LOW CH



Date: 28.APR.2015 13:58:38

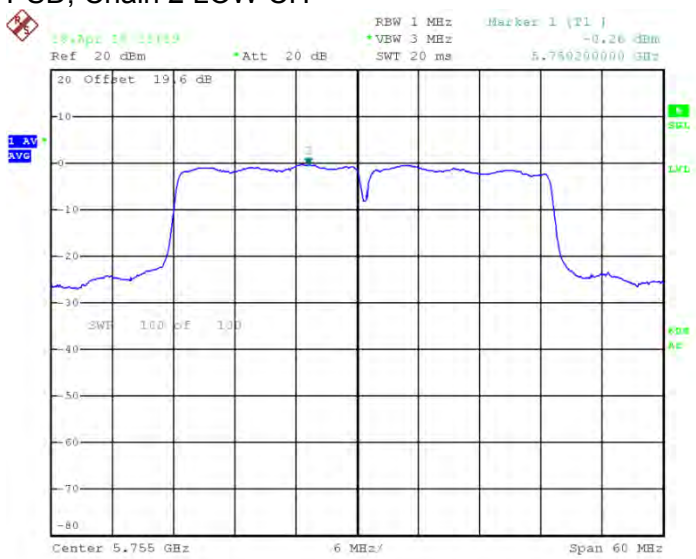
PSD, Chain 1 HIGH CH



Date: 28.APR.2015 14:01:54

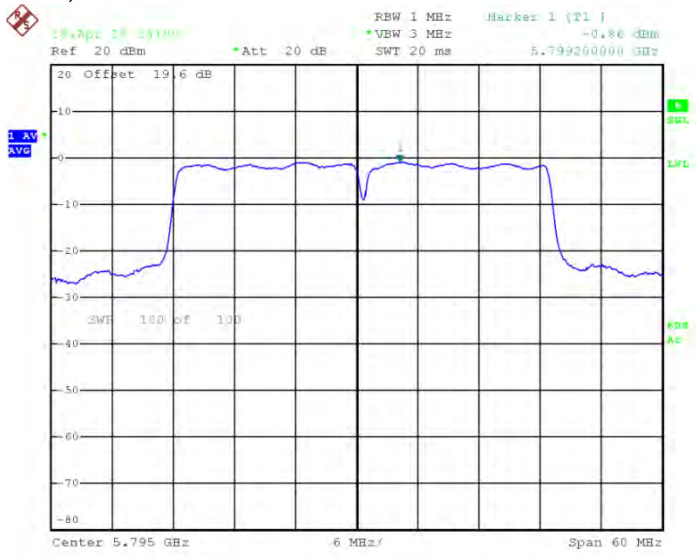
PSD, Chain 2

PSD, Chain 2 LOW CH



Date: 28.APR.2015 13:59:43

PSD, Chain 2 HIGH CH



Date: 28.APR.2015 14:00:48

8.39. 802.11n HT40 TxBF 3Tx MODE IN THE 5.8 GHz BAND

8.39.1. 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 correlated and the antenna gain is the same for each chain. The directional gain is:

Antenna Gain (dBi)	10 * Log (3 chains) (dB)	Correlated Chains Directional Gain (dBi)
6.21	4.77	10.98

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)
Low	5755	10.98	25.02
High	5795	10.98	25.02

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	5755	11.90	11.92	11.41	16.52	25.02	-8.50
High	5795	19.28	19.26	18.38	23.76	25.02	-1.26

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.

8.39.2. 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 correlated and the antenna gain is the same for each chain. The directional gain is:

Antenna Gain (dBi)	10 * Log (3 chains) (dB)	Correlated Chains Directional Gain (dBi)
6.21	4.77	10.98

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5755	10.98	25.02
High	5795	10.98	25.02

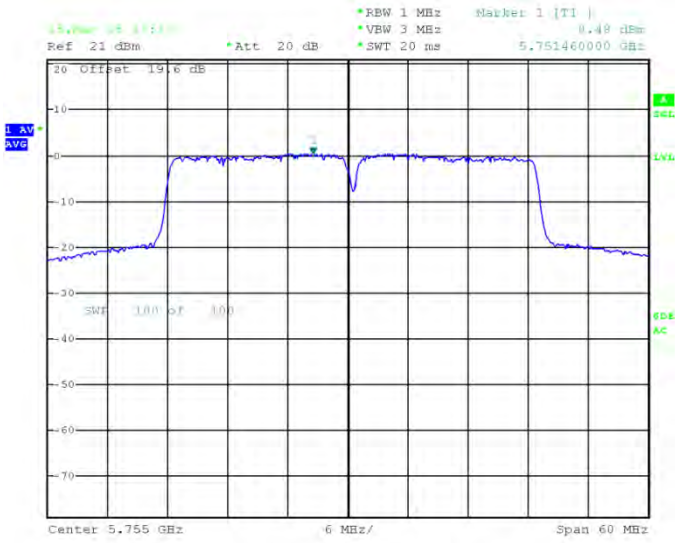
Duty Cycle CF (dB)	0.09	Included in Calculations of Corr'd PSD

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	5755	0.480	-0.340	-0.990	4.62	25.02	-20.40
High	5795	0.330	-0.320	-0.970	4.57	25.02	-20.45

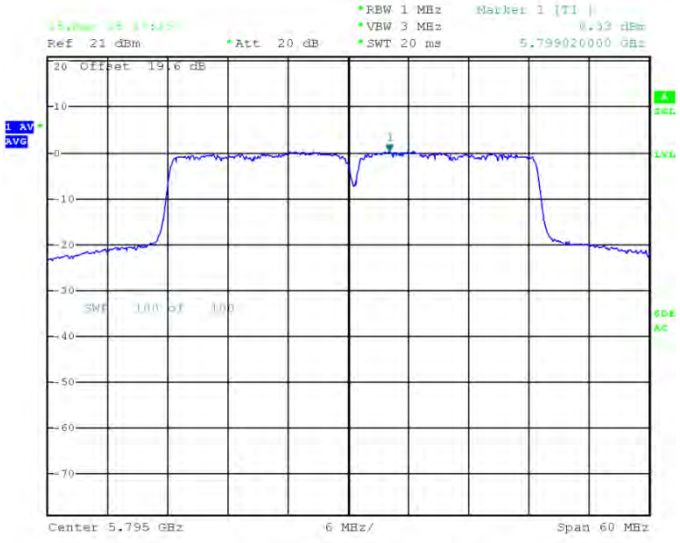
PSD, Chain 0

PSD, Chain 0 LOW CH



Date: 25.MAR.2015 17:23:28

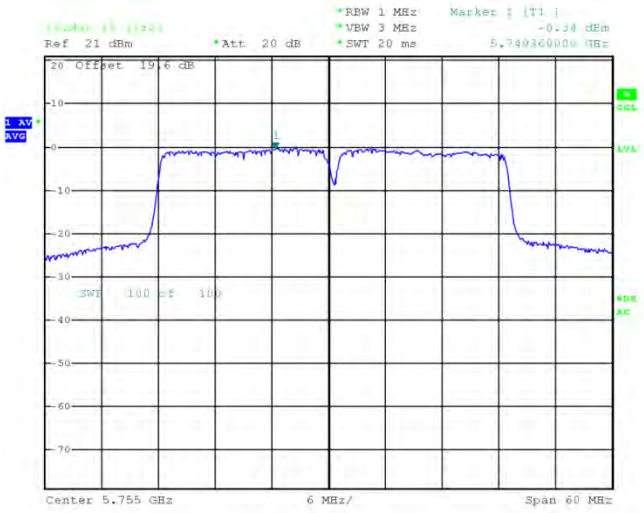
PSD, Chain 0 HIGH CH



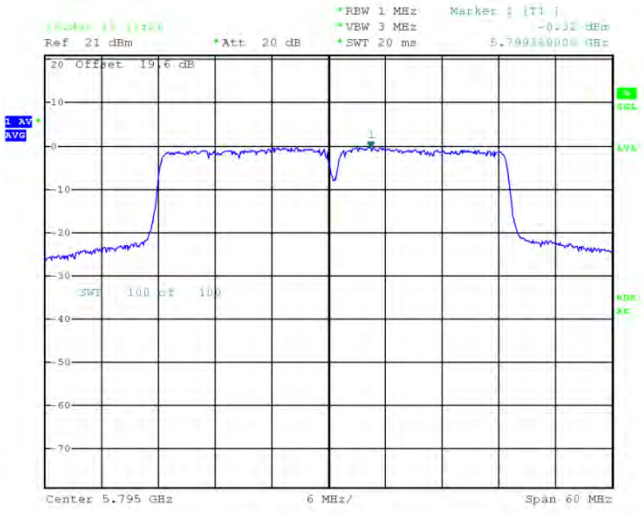
Date: 25.MAR.2015 17:25:47

PSD, Chain 1

PSD, Chain 1 LOW CH

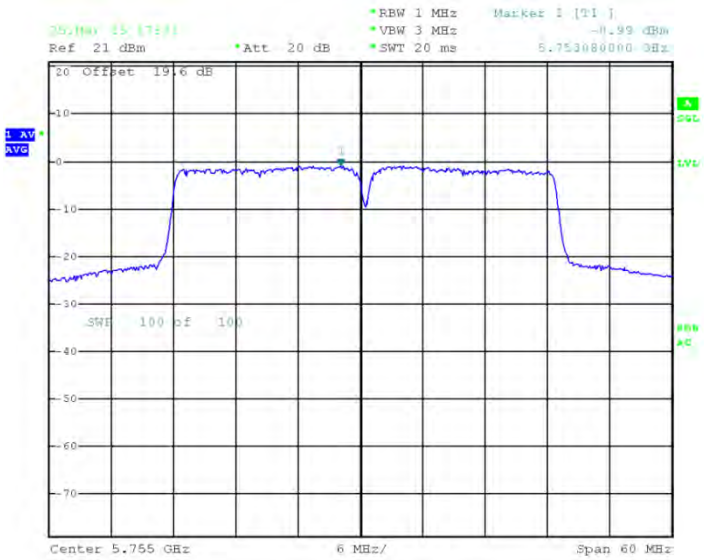


PSD, Chain 1 HIGH CH



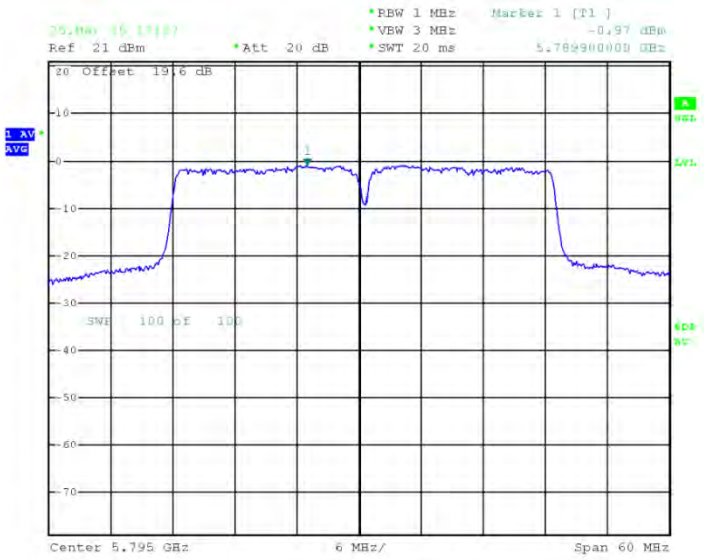
PSD, Chain 2

PSD, Chain 2 LOW CH



Date: 25.MAR.2015 17:21:07

PSD, Chain 2 HIGH CH



Date: 25.MAR.2015 17:27:36

8.40. 802.11ac VHT80 1TX MODE IN THE 5.8 GHz BAND

8.40.1. 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

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

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)
Mid	5775	6.21	29.79

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid	5775	13.28	13.28	29.79	-16.51

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.

8.41. 802.11ac VHT80 CDD 2TX MODE IN THE 5.8 GHz BAND

8.41.1. 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 the same for each chain. The directional gain is equal to the antenna gain, 6.21 dBi.

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)
Mid	5775	6.21	29.79

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)
Mid	5775	11.92	11.79	14.87	29.79	-14.92

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. 802.11ac VHT80 CDD 3Tx MODE IN THE 5.8 GHz BAND

8.42.1. 6 dB BANDWIDTH

LIMITS

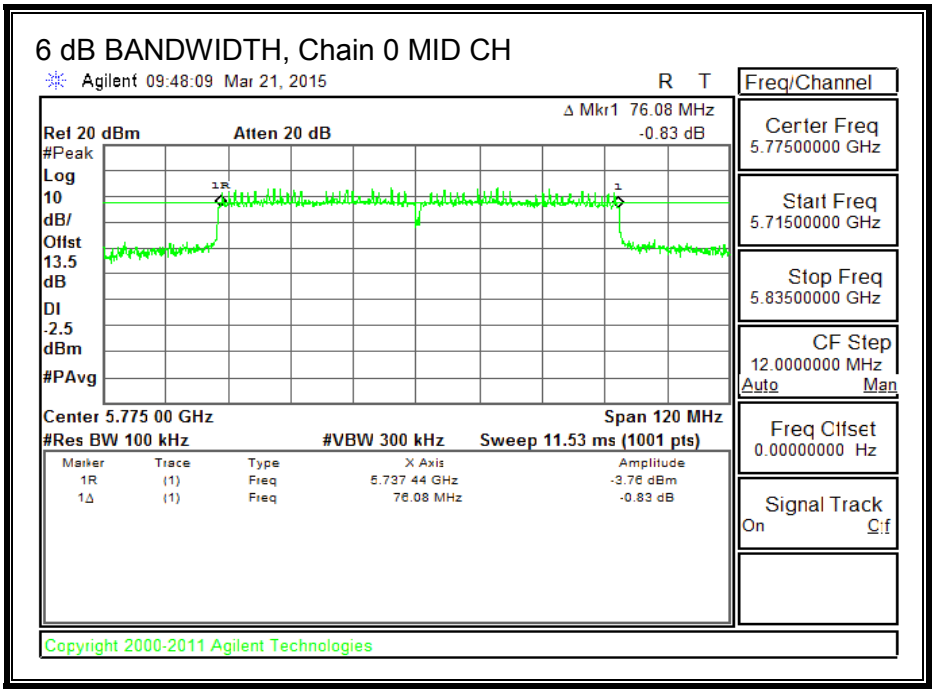
FCC §15.407 (e)

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

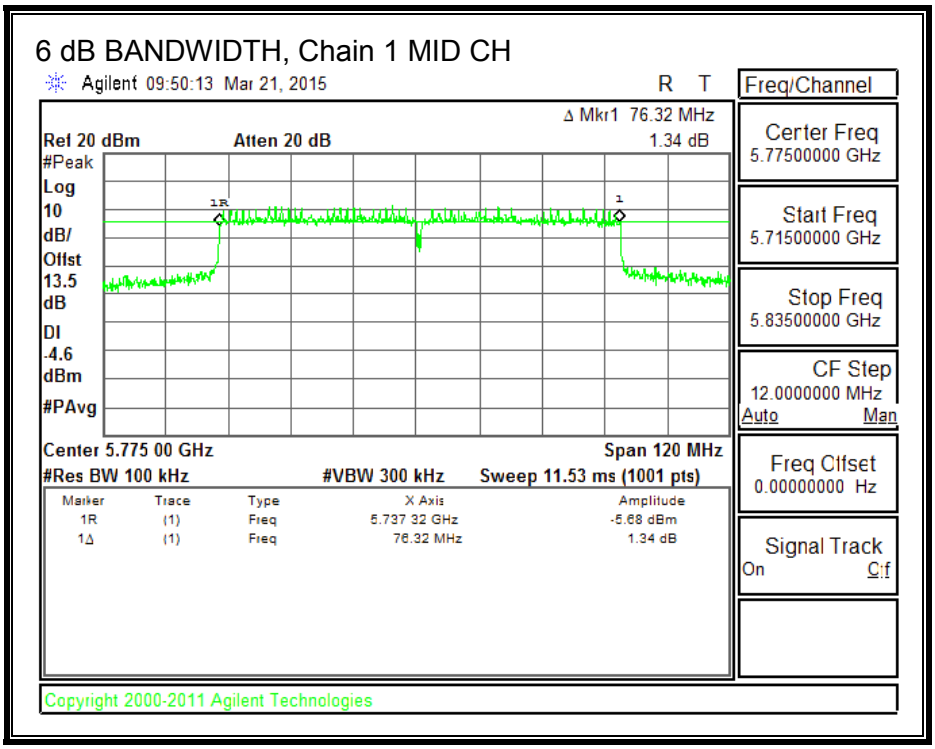
RESULTS

Channel	Frequency (MHz)	6 dB BW Chain 0 (MHz)	6 dB BW Chain 1 (MHz)	6 dB BW Chain 2 (MHz)	Minimum Limit (MHz)
Mid	5775	76.08	76.32	75.96	0.5

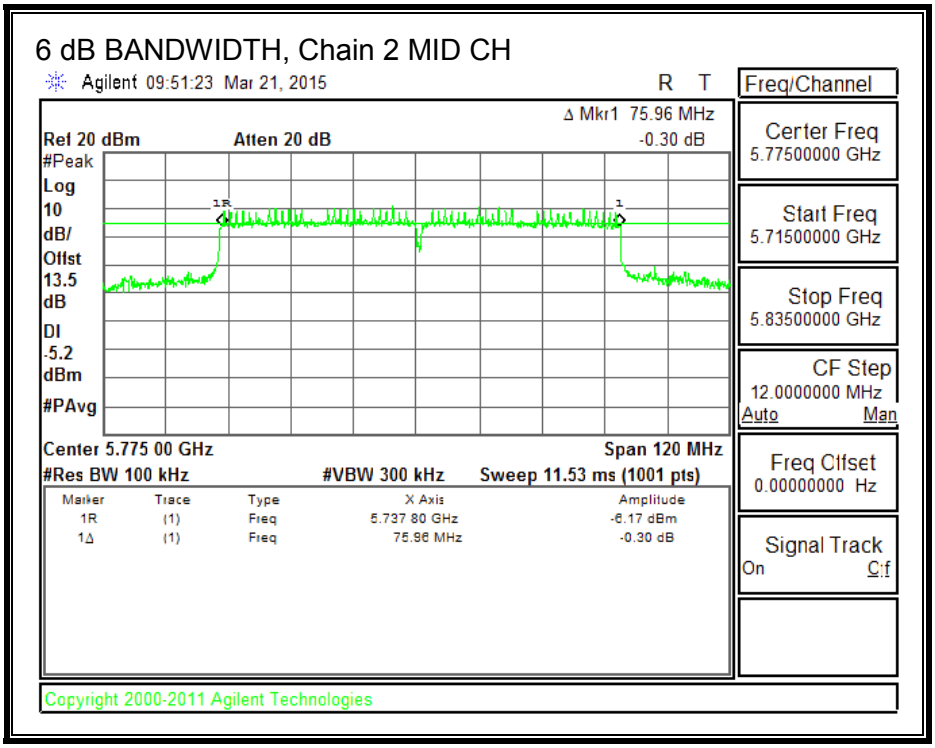
6 dB BANDWIDTH, Chain 0



6 dB BANDWIDTH, Chain 1



6 dB BANDWIDTH, Chain 2



8.42.2. 99% BANDWIDTH

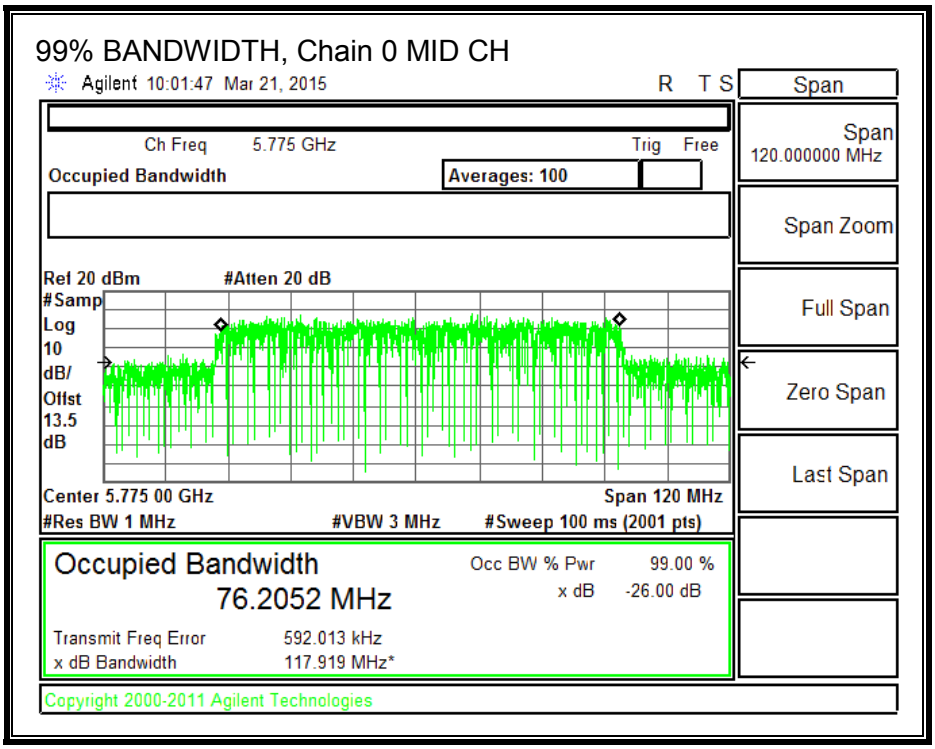
LIMITS

None; for reporting purposes only.

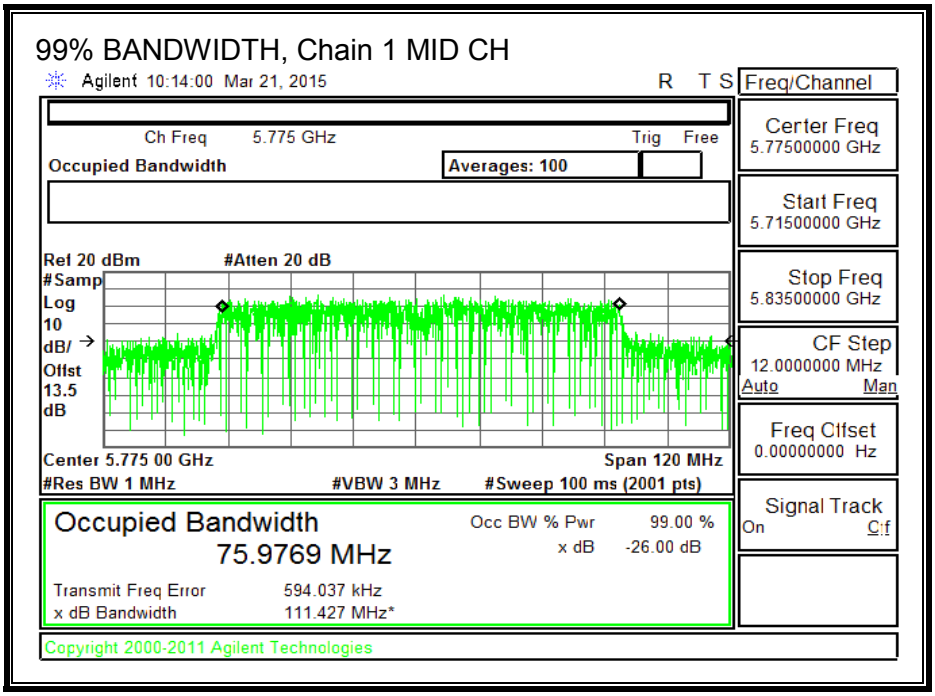
RESULTS

Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)	99% BW Chain 2 (MHz)
Mid	5775	76.2052	75.9769	76.0576

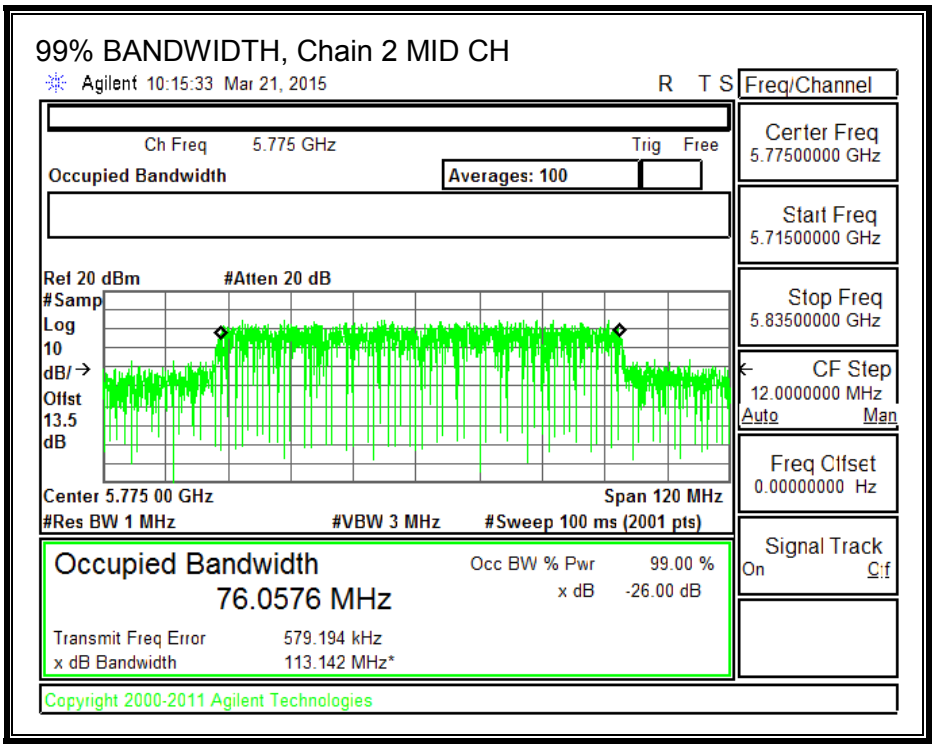
99% BANDWIDTH, Chain 0



99% BANDWIDTH, Chain 1



99% BANDWIDTH, Chain 2



8.42.3. 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 the same for each chain. The directional gain is equal to the antenna gain, 6.21 dBi.

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)
Mid	5775	6.21	29.79

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)
Mid	5775	10.47	10.98	10.80	15.53	29.79	-14.26

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.

8.42.4. 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 the same for each chain. The directional gain is:

Antenna Gain (dBi)	10 * Log (3 chains) (dB)	Correlated Chains Directional Gain (dBi)
6.21	4.77	10.98

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Mid	5775	10.98	25.02

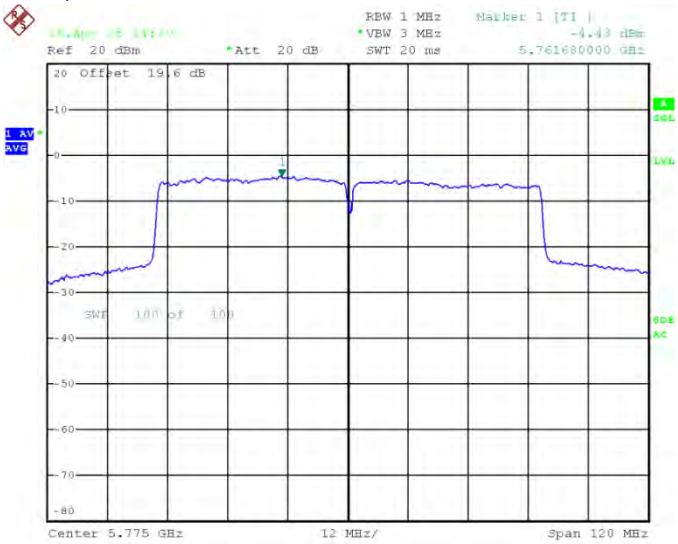
Duty Cycle CF (dB)	0.18	Included in Calculations of Corr'd PSD

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)
Mid	5775	-4.43	-4.62	-4.69	0.37	25.02	-24.65

PSD, Chain 0

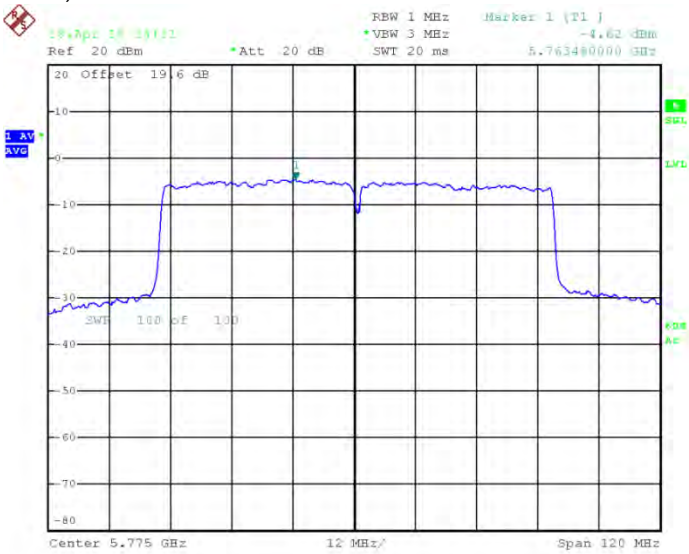
PSD, Chain 0 MID CH



Date: 28.APR.2015 14:30:22

PSD, Chain 1

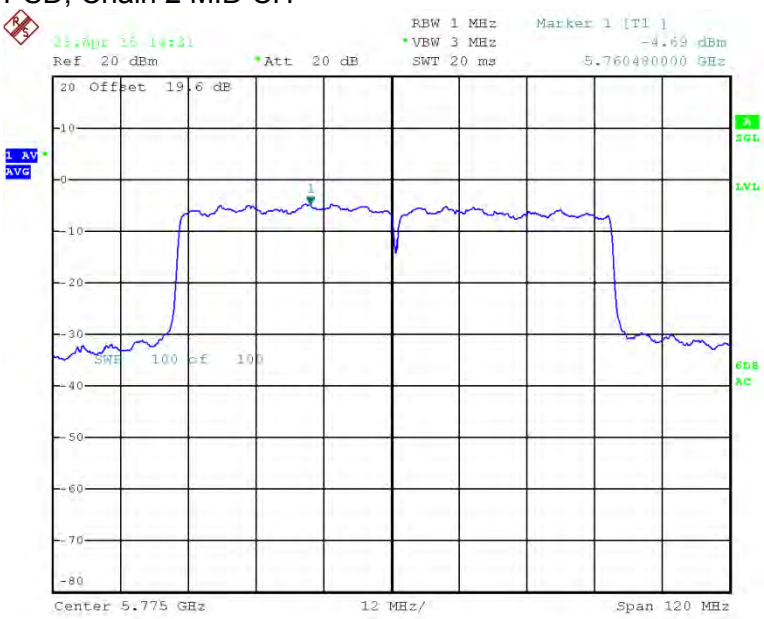
PSD, Chain 1 MID CH



Date: 28.APR.2015 14:31:01

PSD, Chain 2

PSD, Chain 2 MID CH



8.43. 802.11ac VHT80 TxBF 3Tx MODE IN THE 5.8 GHz BAND

8.43.1. 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 correlated and the antenna gain is the same for each chain. The directional gain is:

Antenna Gain (dBi)	10 * Log (3 chains) (dB)	Correlated Chains Directional Gain (dBi)
6.21	4.77	10.98

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)
Mid	5775	10.98	25.02

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)
Mid	5775	11.16	11.13	10.22	15.63	25.02	-9.39

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.

8.43.2. 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 correlated and the antenna gain is the same for each chain. The directional gain is:

Antenna Gain (dBi)	10 * Log (3 chains) (dB)	Correlated Chains Directional Gain (dBi)
6.21	4.77	10.98

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Mid	5775	10.98	25.02

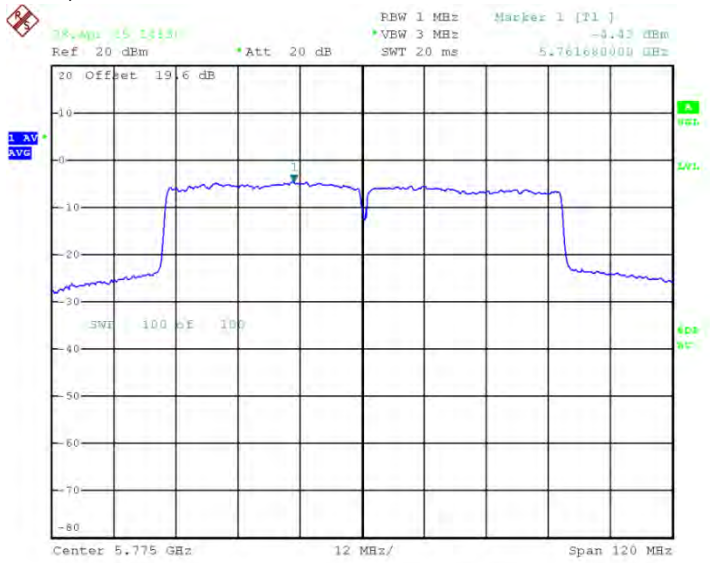
Duty Cycle CF (dB)	0.18	Included in Calculations of Corr'd PSD

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)
Mid	5775	-4.43	-4.62	-4.69	0.37	25.02	-24.65

PSD, Chain 0

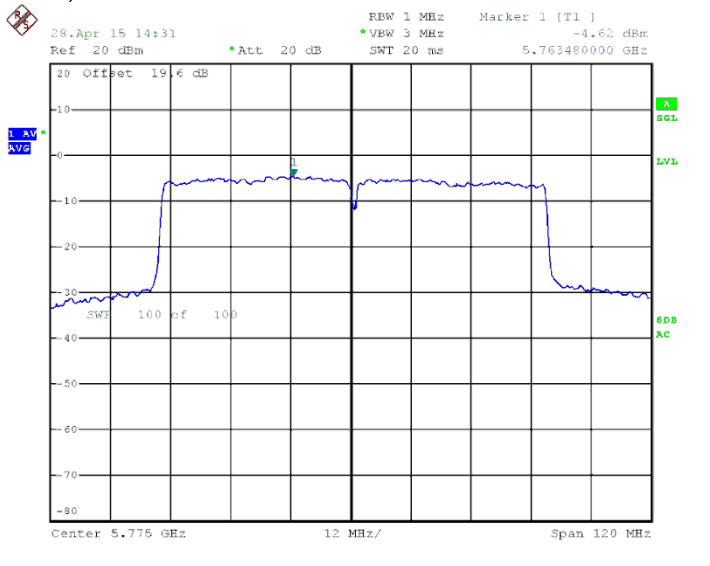
PSD, Chain 0 MID CH



Date: 28.APR.2015 14:30:22

PSD, Chain 1

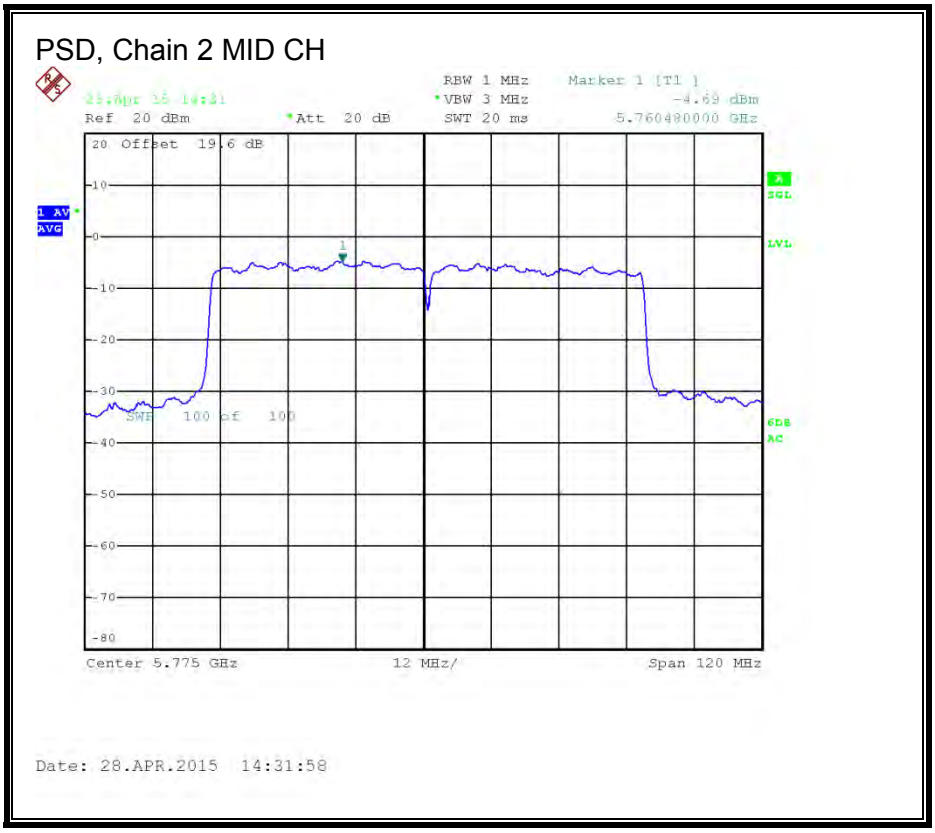
PSD, Chain 1 MID CH



Date: 28.APR.2015 14:31:01

PSD, Chain 2

PSD, Chain 2 MID CH



8.44. COLOCATION

Below table shows potential intermodulation frequencies due to Bluetooth and 5GHz WLAN simultaneous transmission.

Modes	A	B	A + B	A - B	2A + B	A + 2B	A - 2B
8PSK + 11a 5.3 band	2441	5260	7701	2819	10142	12961	8079
8PSK + 11a 5.6 band	2441	5580	8021	3139	10462	13601	8719
8PSK + 11a 5.8 band	2441	5785	8226	3344	10667	14011	9129