

8.20.3. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (2)

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands 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 megahertz. In addition, the peak power spectral density shall not exceed 11 dBm in any 1 megahertz 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

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

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Chain 2 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
7.09	7.06	3.58	10.83

RESULTS

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PPSP (dBi)
Mid	5290	81.17	75.4236	10.83	10.83

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSP Limit (dBm)	IC PSD Limit (dBm)	PPSP Limit (dBm)
Mid	5290	19.17	24.00	30.00	19.17	6.17	11.00	6.17

Duty Cycle CF (dB)	0.85	Included in Calculations of Corr'd PPSP
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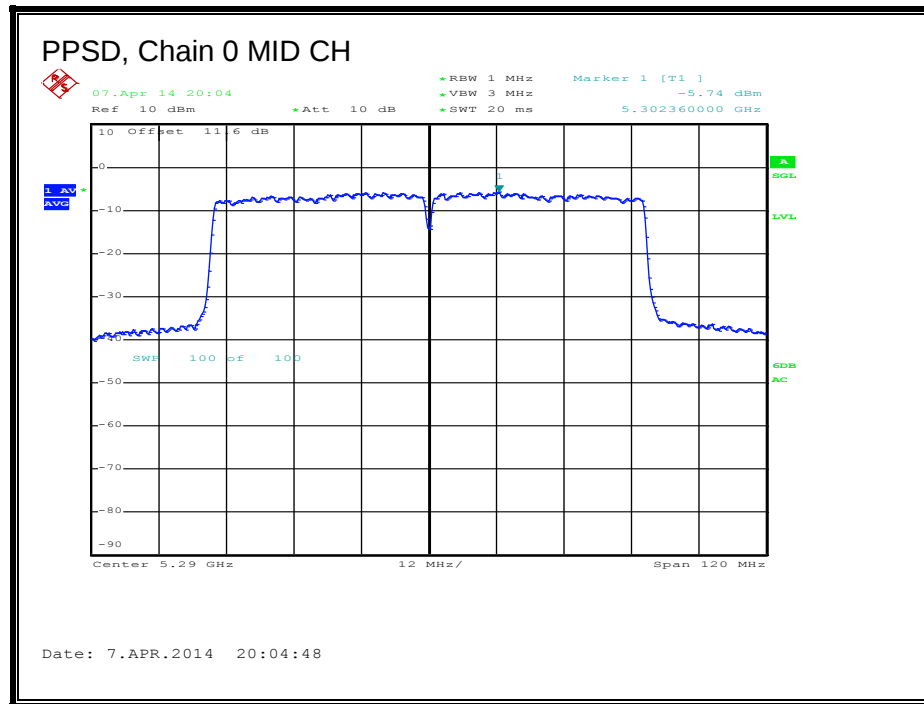
Output Power Results

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	5290	9.90	9.80	9.60	14.54	19.17	-4.63

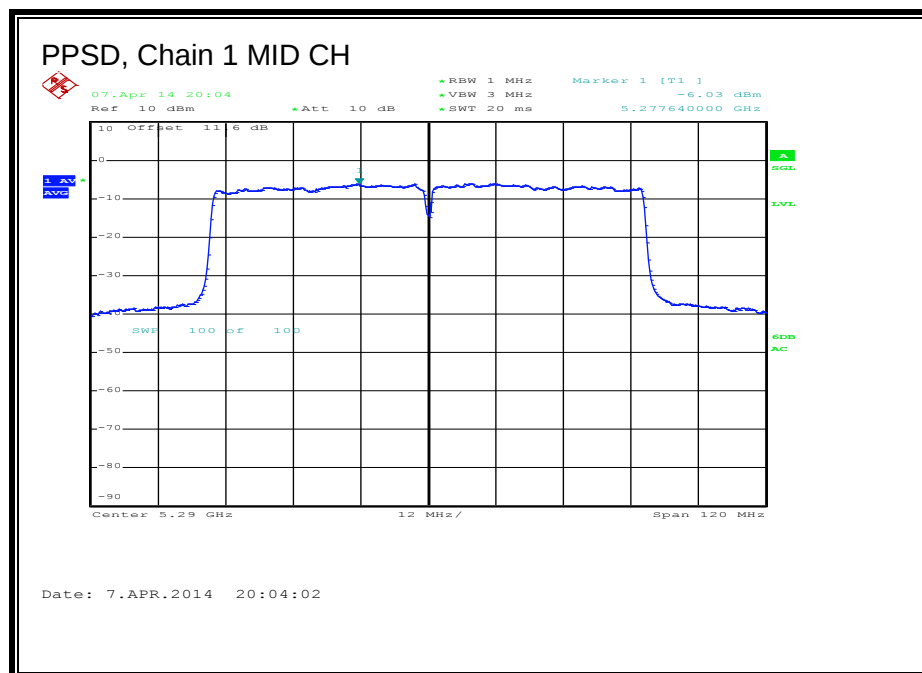
PPSP Results

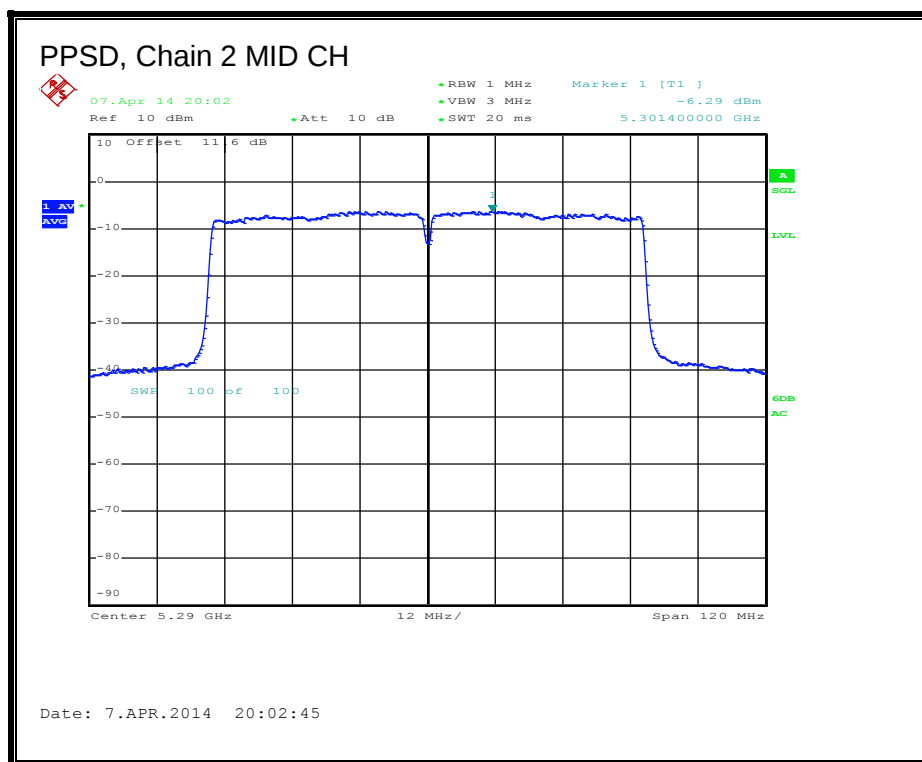
Channel	Frequency (MHz)	Chain 0 Meas PPSP (dBm)	Chain 1 Meas PPSP (dBm)	Chain 2 Meas PPSP (dBm)	Total Corr'd PPSP (dBm)	PPSP Limit (dBm)	PPSP Margin (dB)
Mid	5290	-5.74	-6.03	-6.29	-0.39	6.17	-6.56

PPSD, Chain 0



PPSD, Chain 1



PPSD, Chain 2

8.21. 802.11a LEGACY MODE IN THE 5.6GHz BAND

8.21.1. 26 dB BANDWIDTH

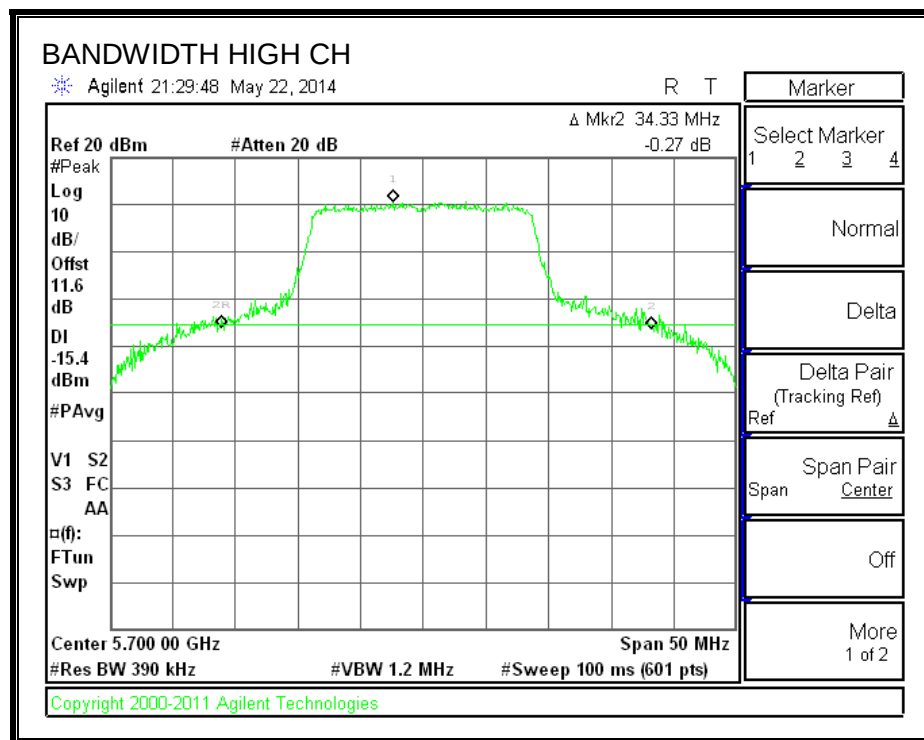
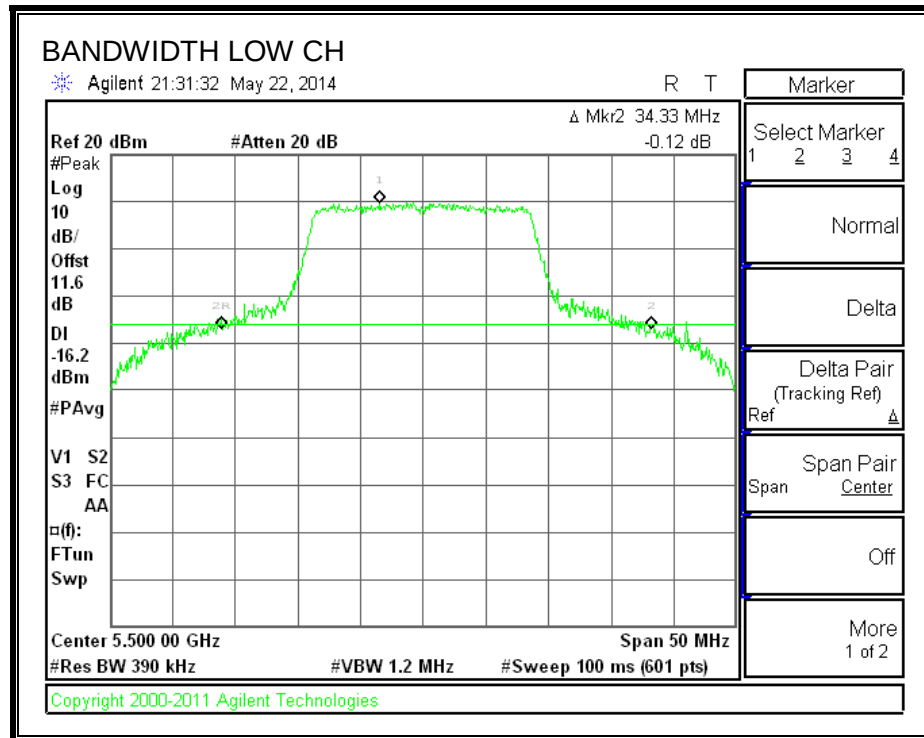
LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5500	34.33
High	5700	34.33

26 dB BANDWIDTH



8.21.2. **99% BANDWIDTH**

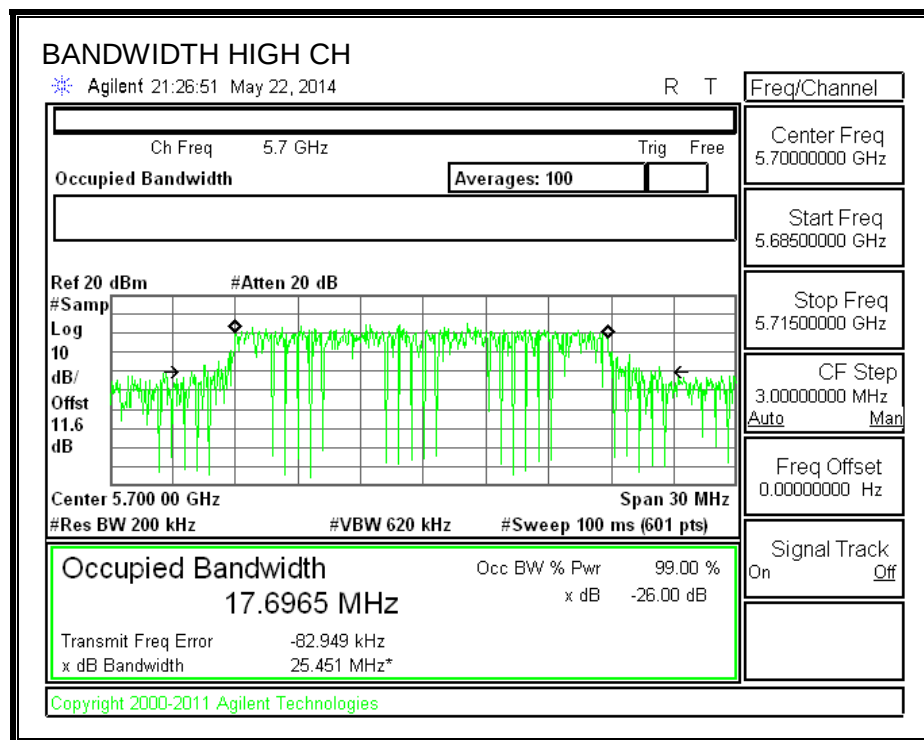
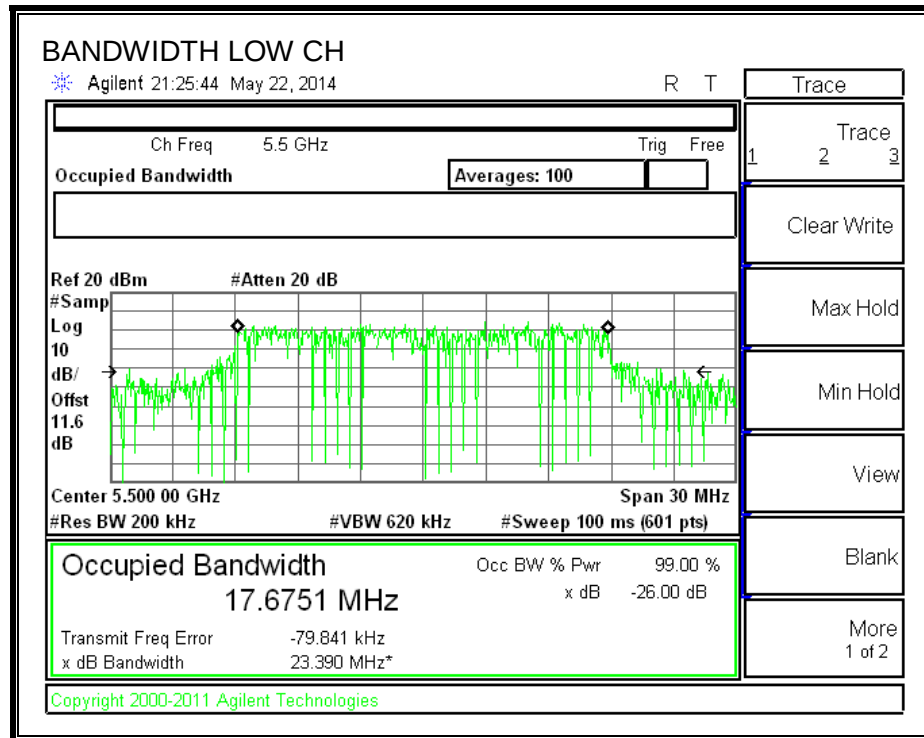
LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5500	17.6751
High	5700	17.6965

99% BANDWIDTH



8.21.3. **OUTPUT POWER**

LIMITS

IC RSS-210 A9.2 (3)

The maximum e.i.r.p. shall not exceed 250 mW or $11 + 10 \log_{10} B$, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band. The Maximum e.i.r.p shall not exceed 1.0W or $17 + 10 \log_{10} B$, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.

DIRECTIONAL ANTENNA GAIN

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

RESULTS

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5500	34.33	17.6751	6.66
High	5700	34.33	17.6965	6.66

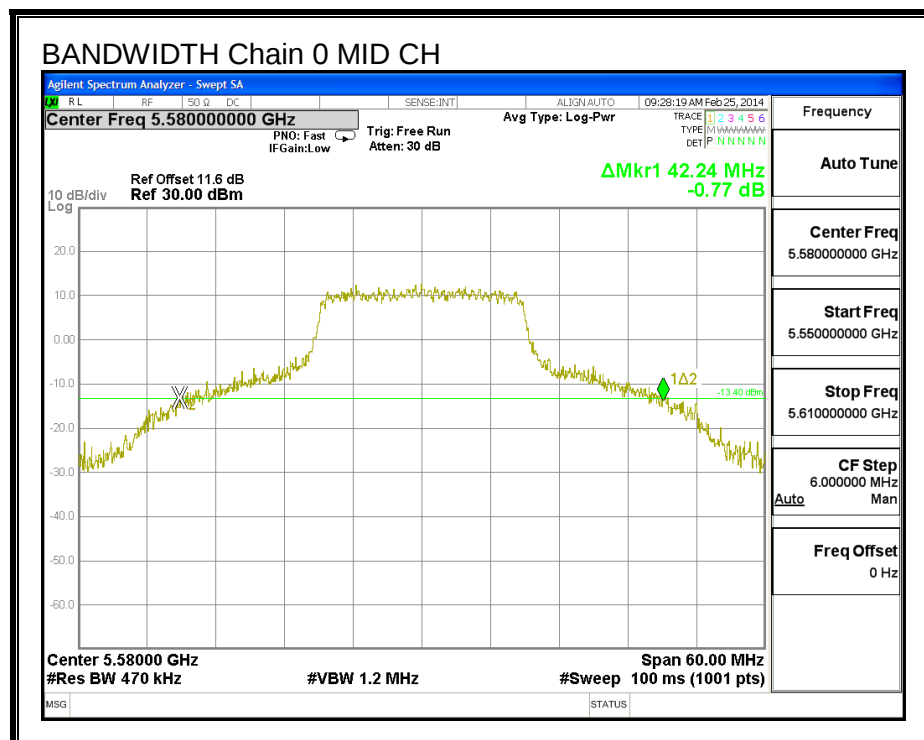
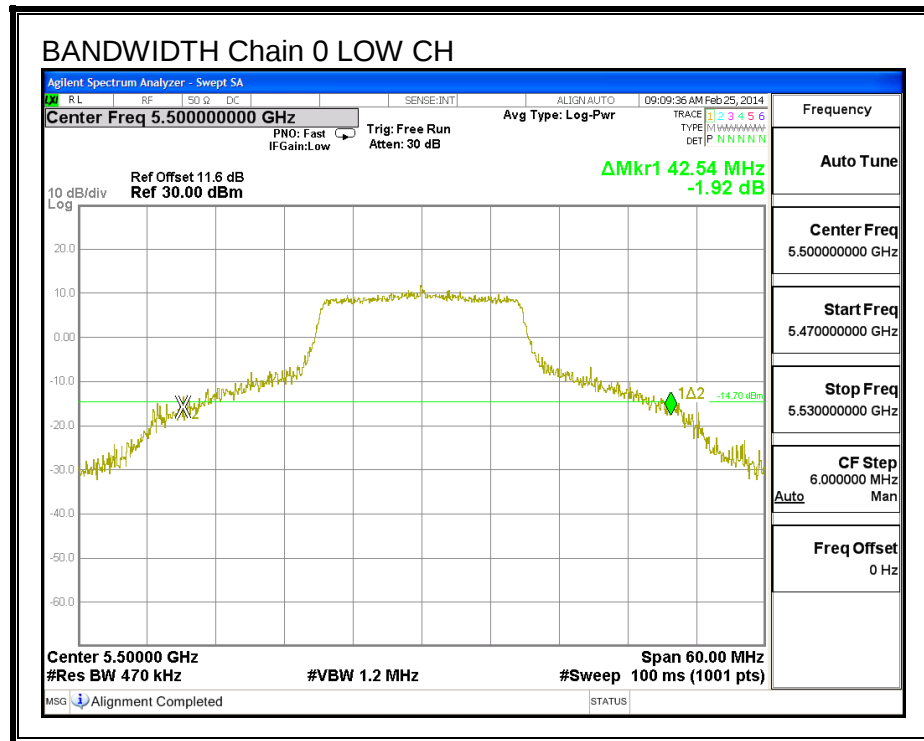
Limits

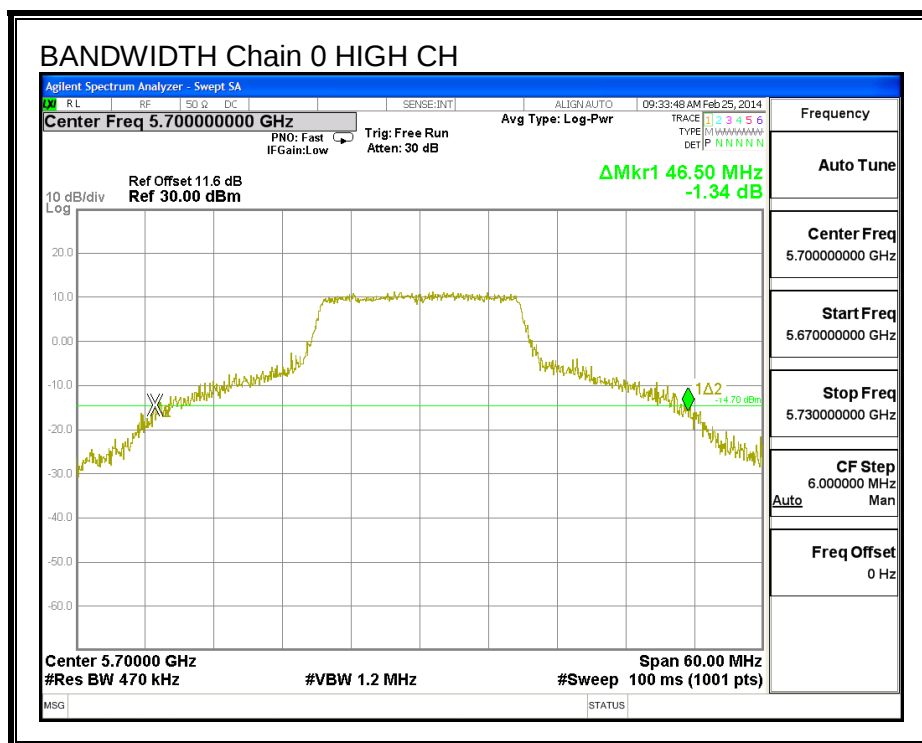
Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5500	23.34	23.47	29.47	22.81	10.34	11.00	10.34
High	5700	23.34	23.48	29.48	22.82	10.34	11.00	10.34

Output Power Results

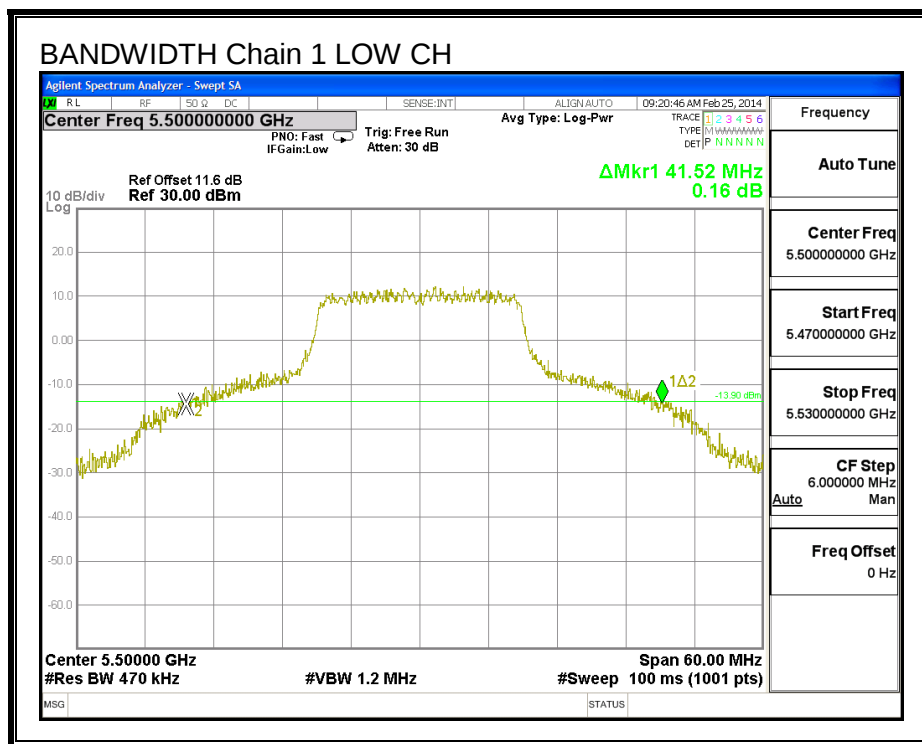
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	17.01	17.01	22.81	-5.80
High	5700	16.30	16.30	22.82	-6.52

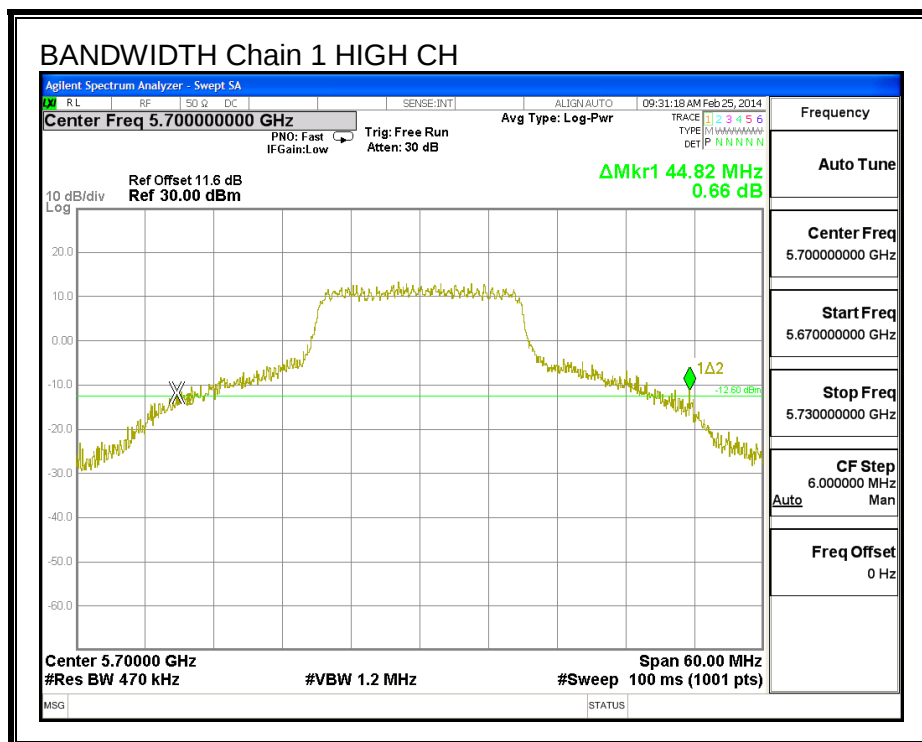
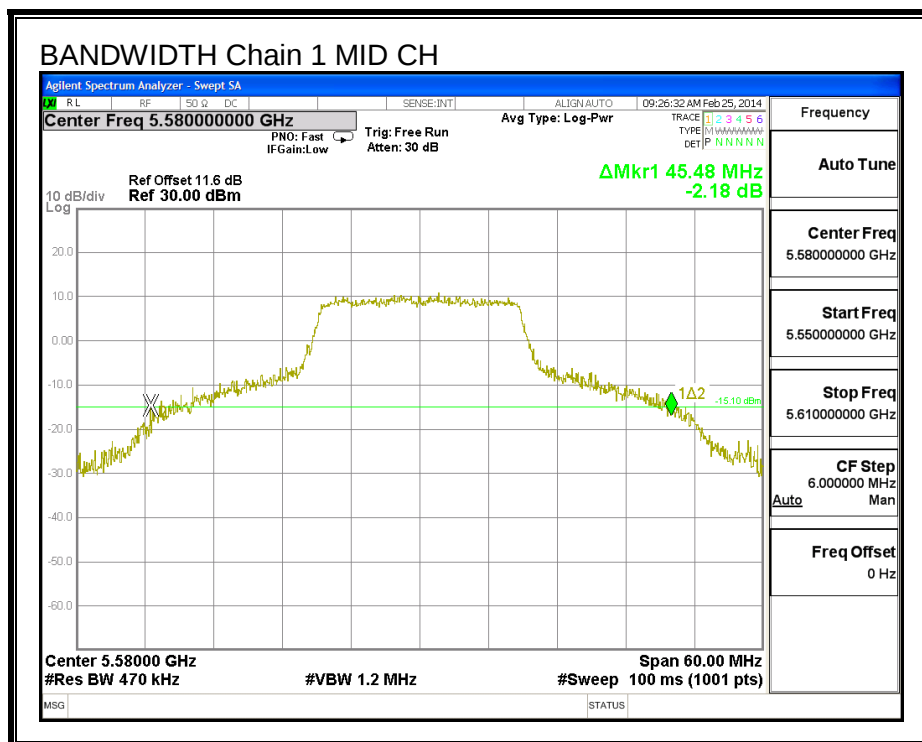
8.22.1. 26 dB BANDWIDTH

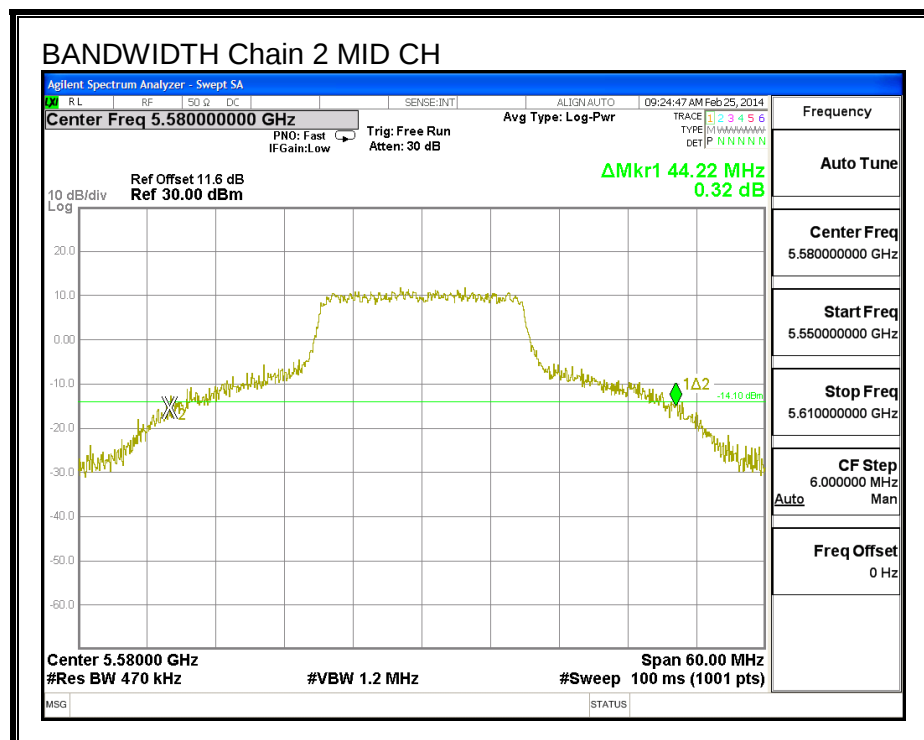
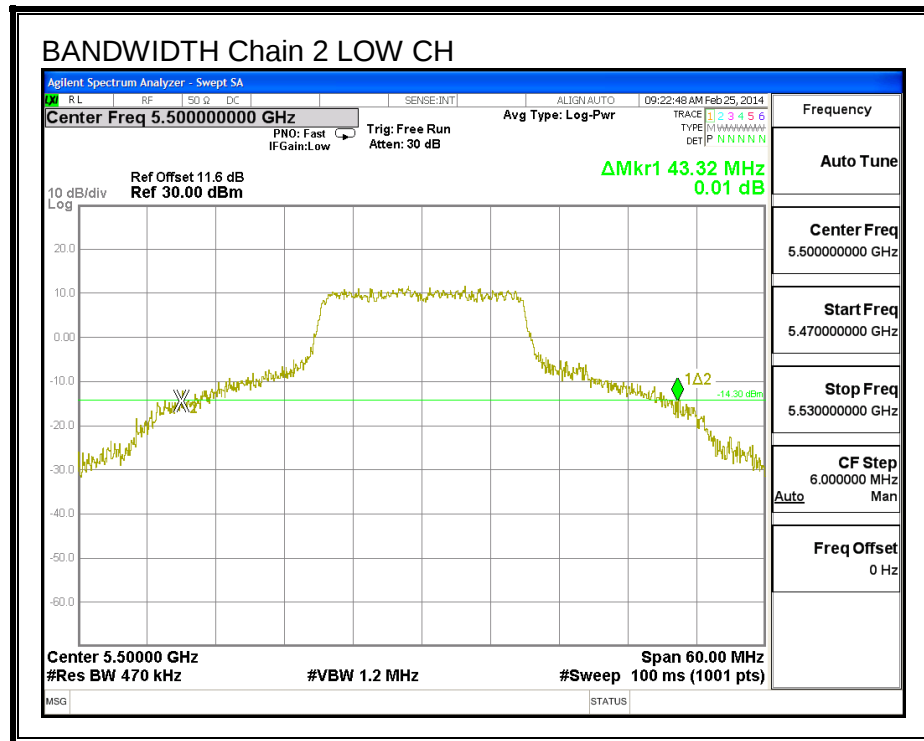


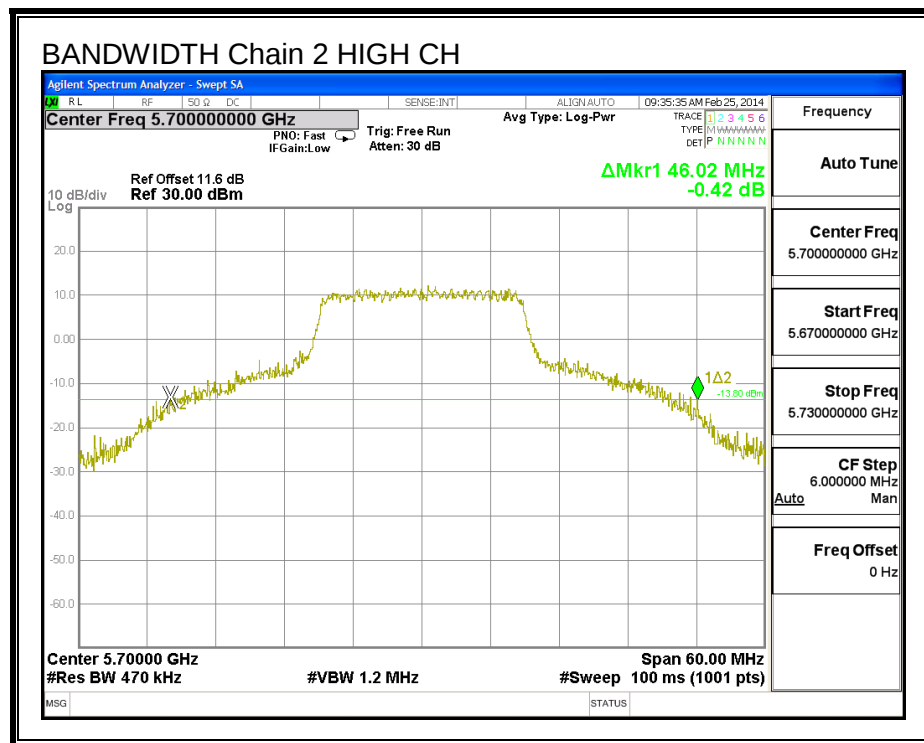


26 dB BANDWIDTH, Chain 1









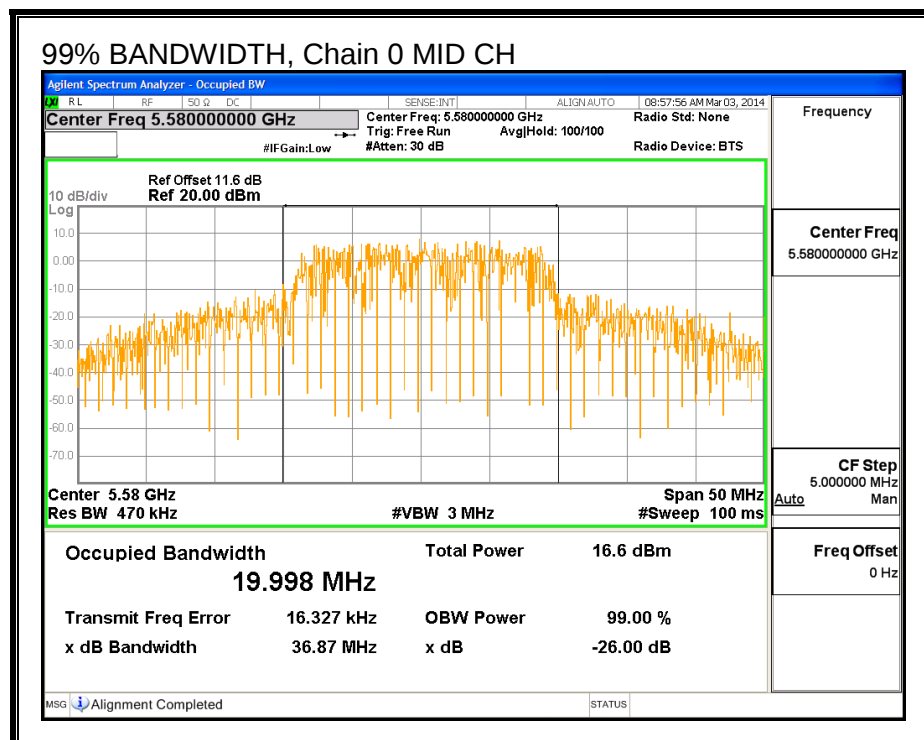
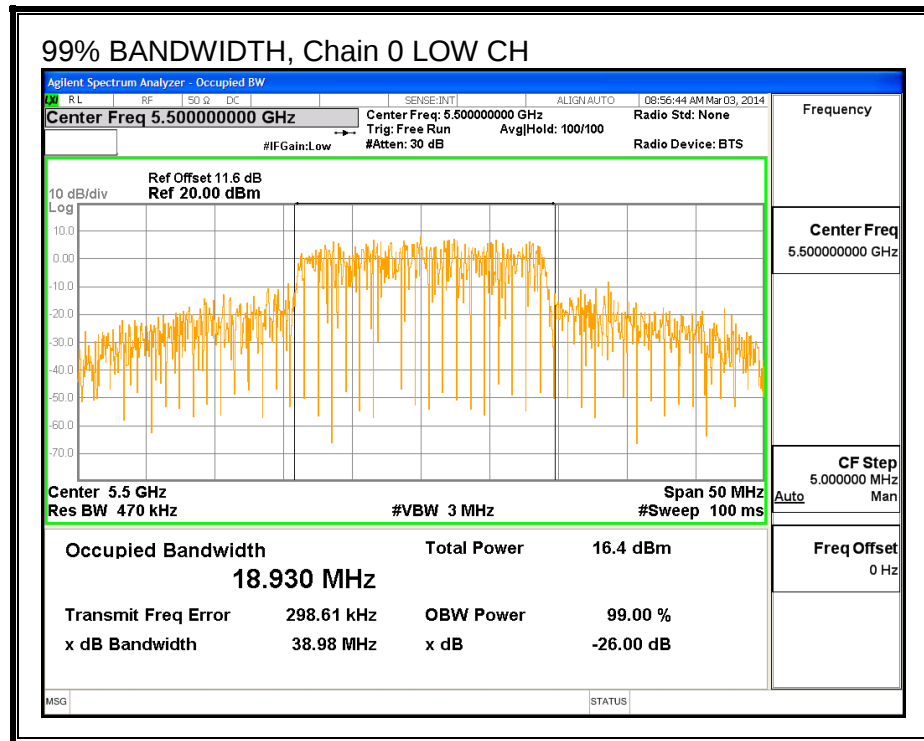
8.22.2. **99% BANDWIDTH**

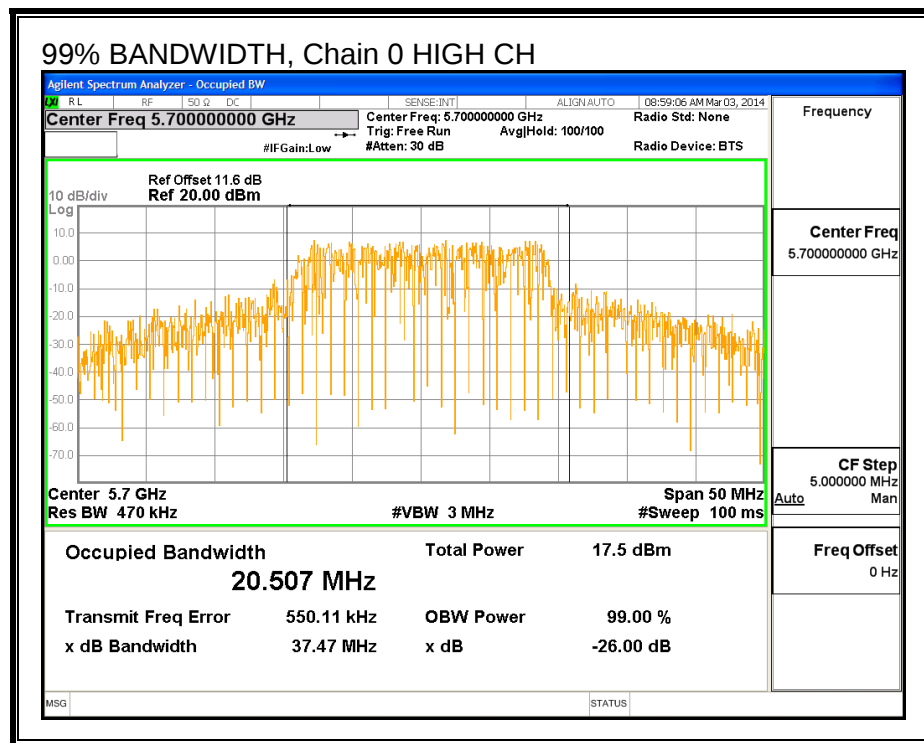
LIMITS

None; for reporting purposes only.

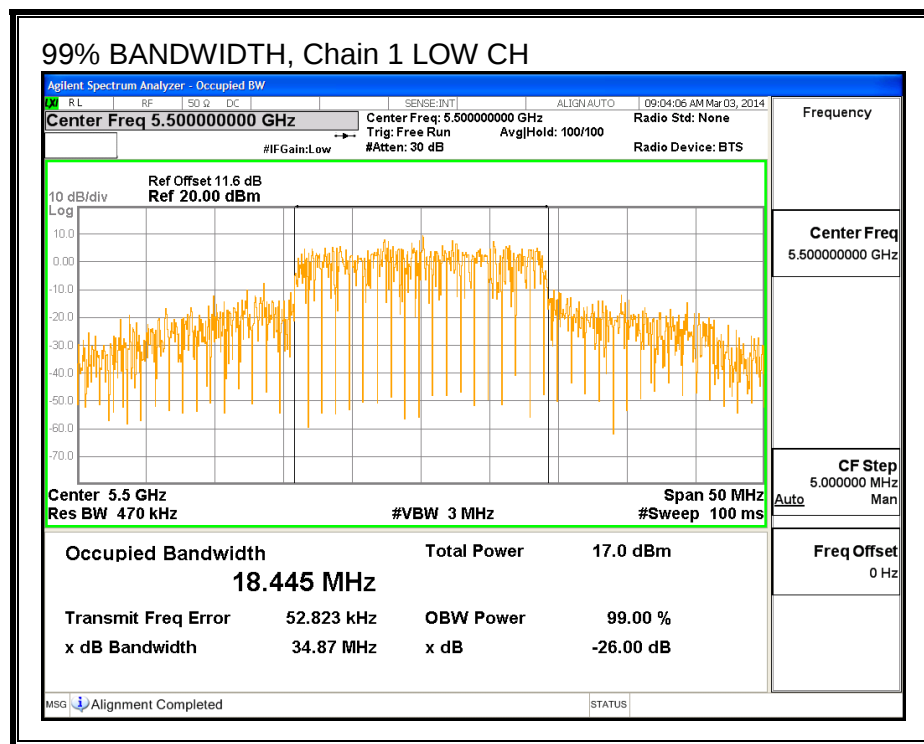
RESULTS

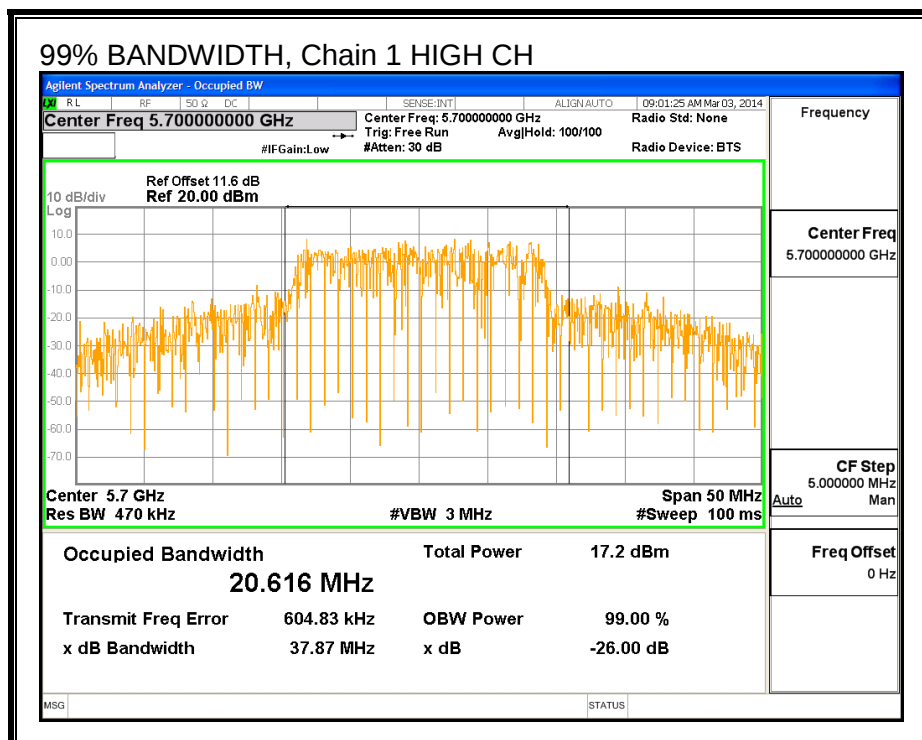
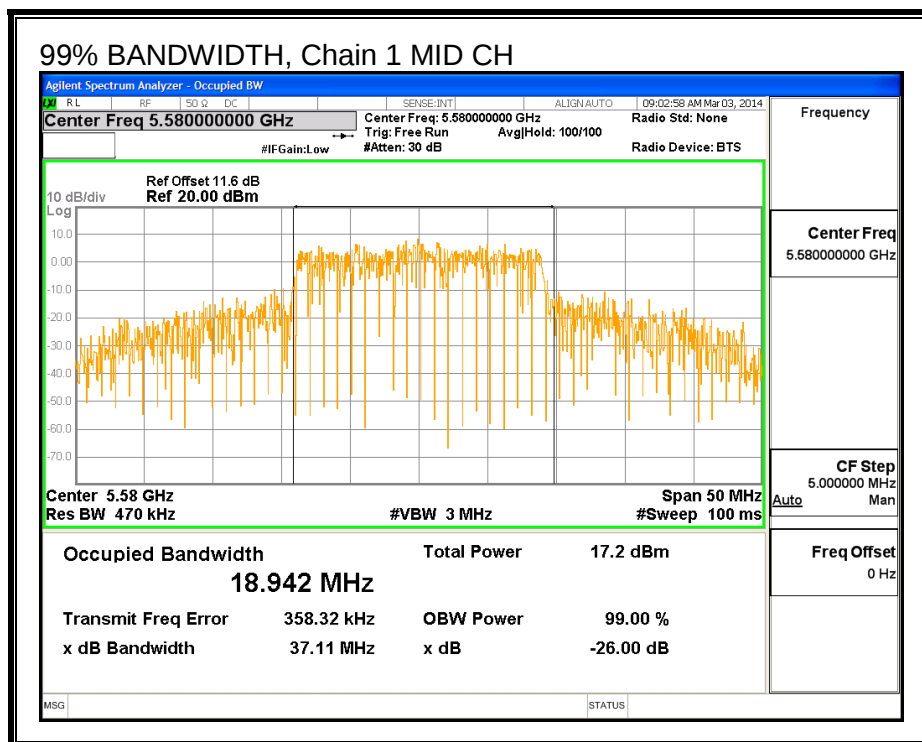
Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)	99% BW Chain 2 (MHz)
Low	5500	18.930	18.445	19.895
Mid	5580	19.998	18.942	19.487
High	5700	20.507	20.616	19.388

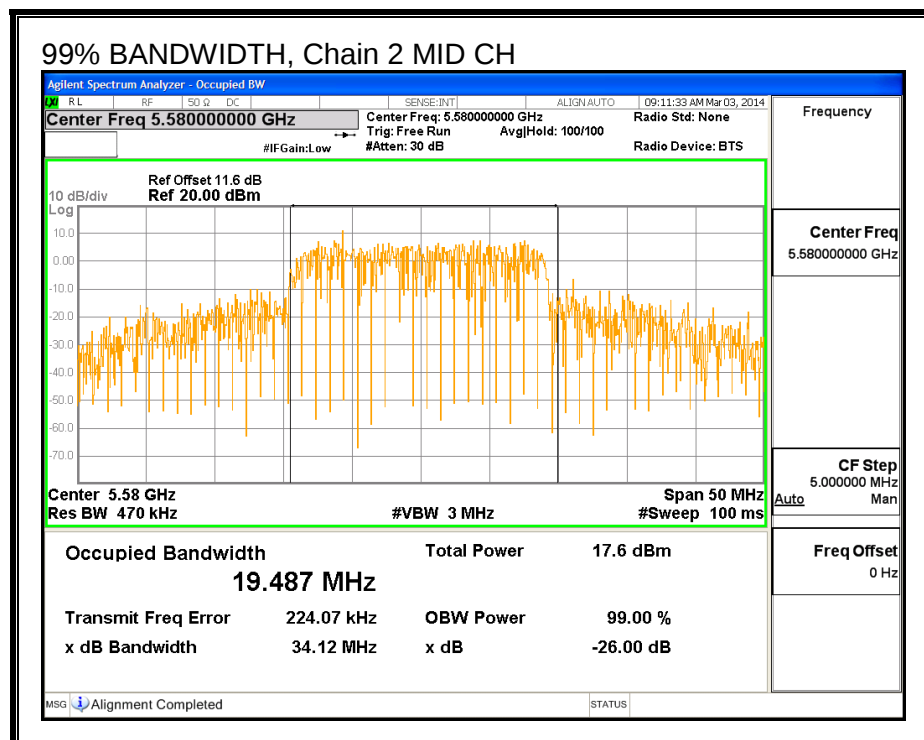
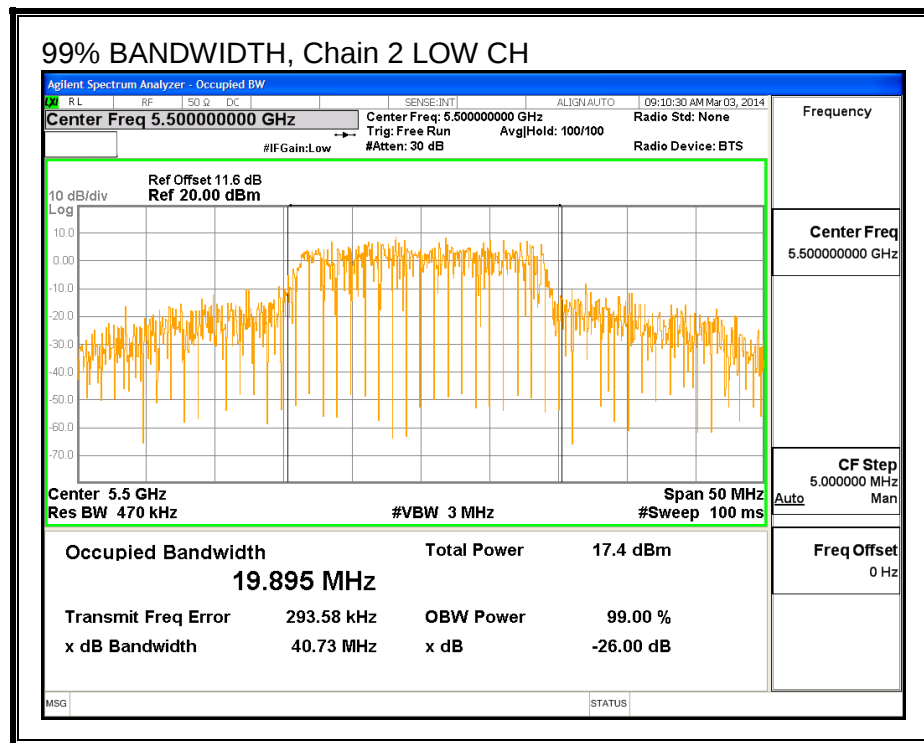
99% BANDWIDTH, Chain 0

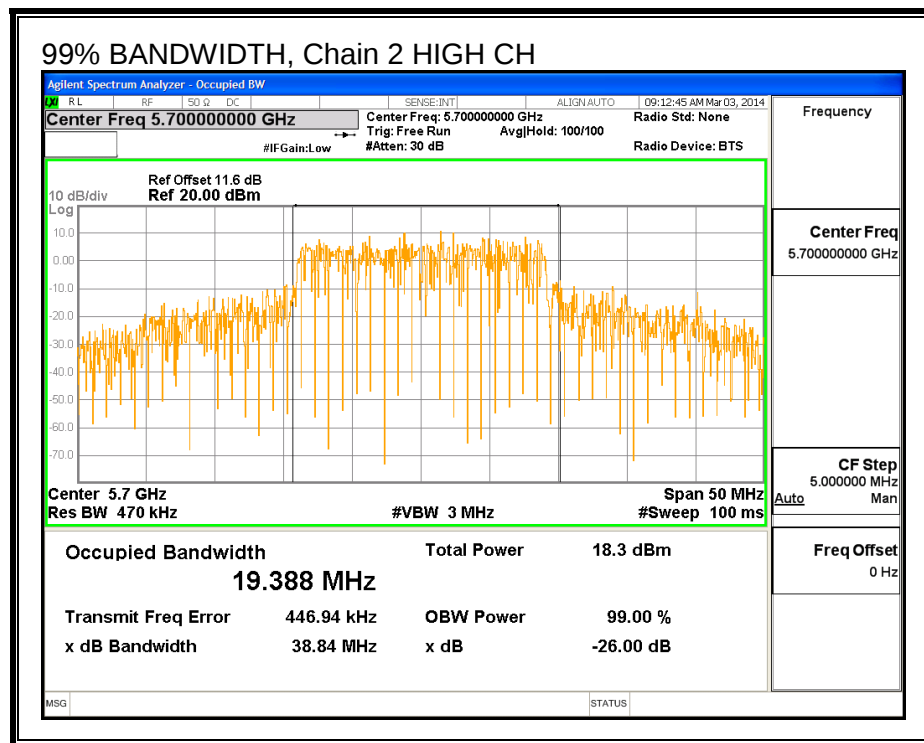


99% BANDWIDTH, Chain 1





99% BANDWIDTH, Chain 2



8.22.3. OUTPUT POWER AND PPSD

LIMITS

IC RSS-210 A9.2 (3)

The maximum e.i.r.p. shall not exceed 250 mW or $11 + 10 \log_{10} B$, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band. The Maximum e.i.r.p shall not exceed 1.0W or $17 + 10 \log_{10} B$, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.

DIRECTIONAL ANTENNA GAIN

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

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Chain 2 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
5.03	6.66	3.94	5.36

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

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Chain 2 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
5.03	6.66	3.94	10.05

RESULTS

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PPSD (dBi)
Low	5500	41.52	18.445	5.36	10.05
Mid	5580	42.24	18.942	5.36	10.05
High	5700	44.82	19.388	5.36	10.05

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5500	24.00	23.66	29.66	23.66	6.95	11.00	6.95
Mid	5580	24.00	23.77	29.77	23.77	6.95	11.00	6.95
High	5700	24.00	23.88	29.88	23.88	6.95	11.00	6.95

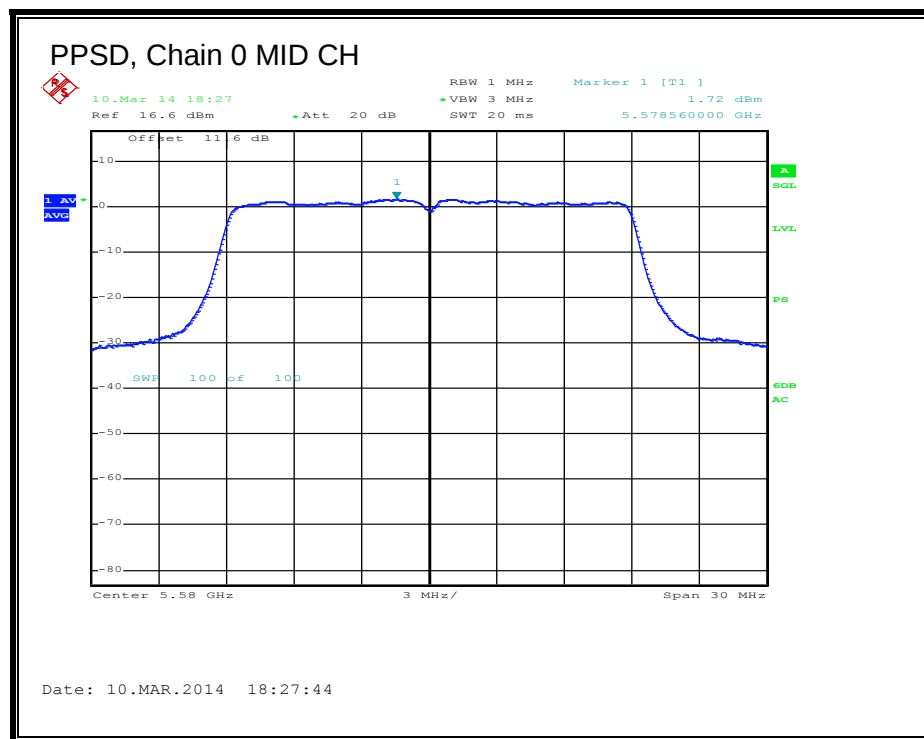
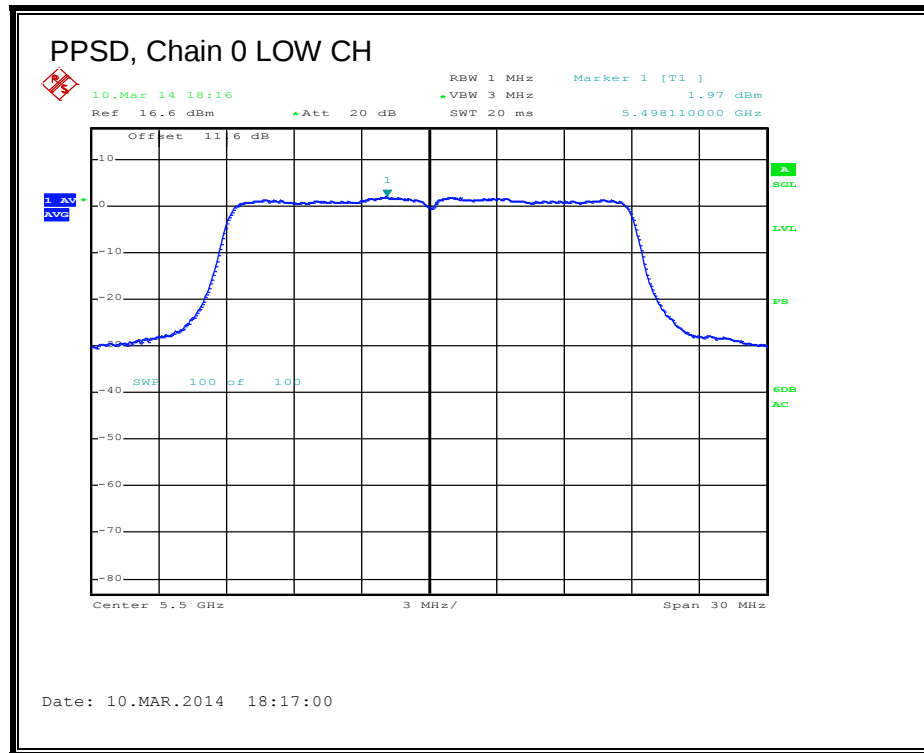
Duty Cycle CF (dB)	0.22	Included in Calculations of Corr'd PPSD
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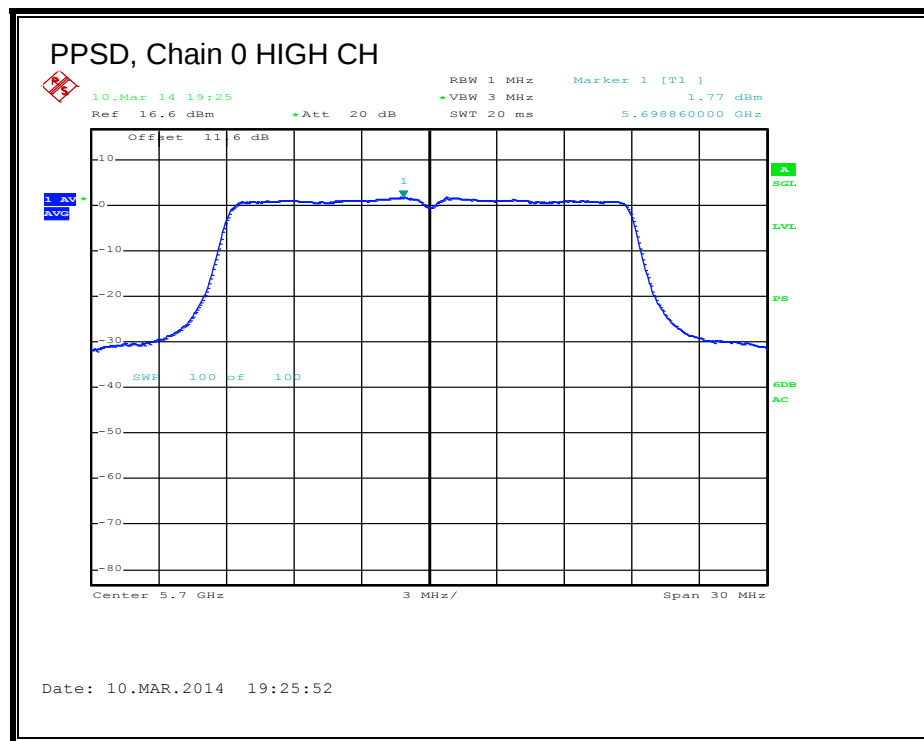
Output Power Results

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	15.67	15.88	16.06	20.64	23.66	-3.01
Mid	5580	15.90	15.91	16.07	20.73	23.77	-3.04
High	5700	14.60	15.07	15.16	19.72	23.88	-4.15

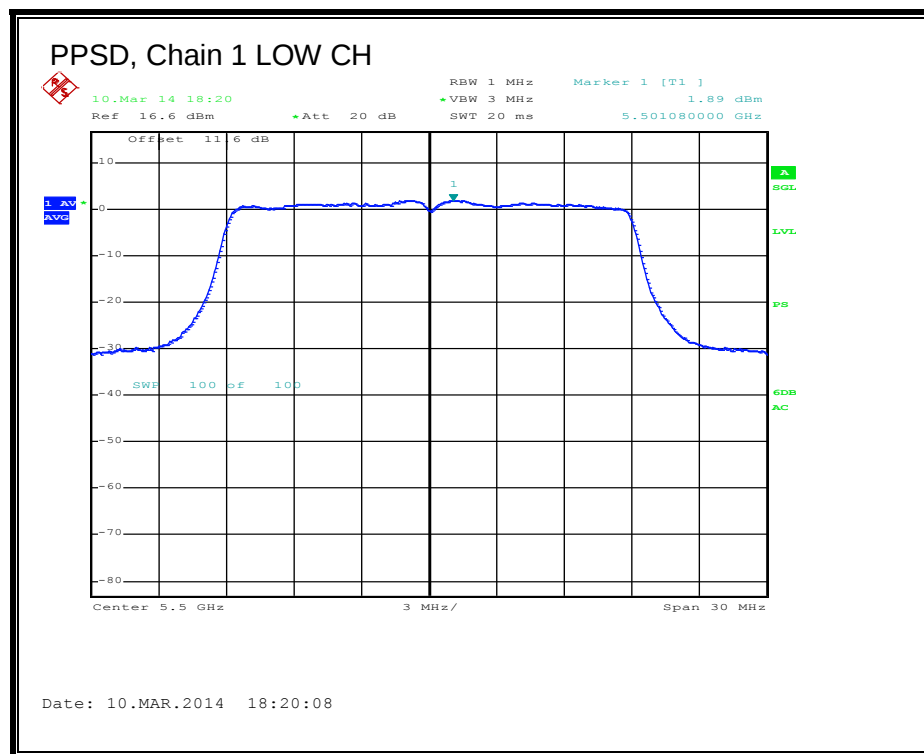
PPSD Results

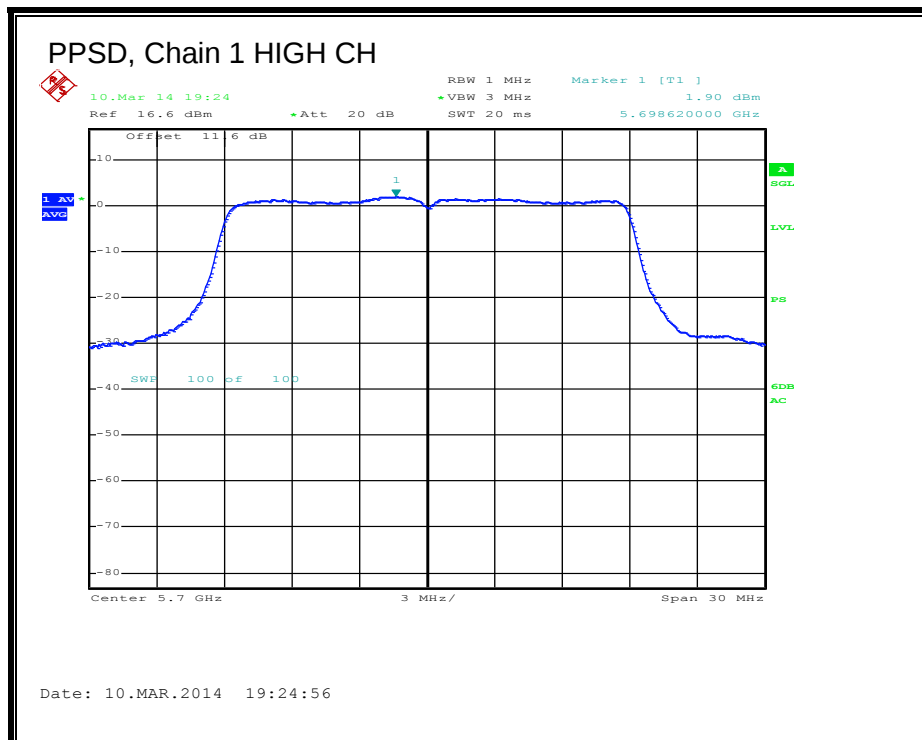
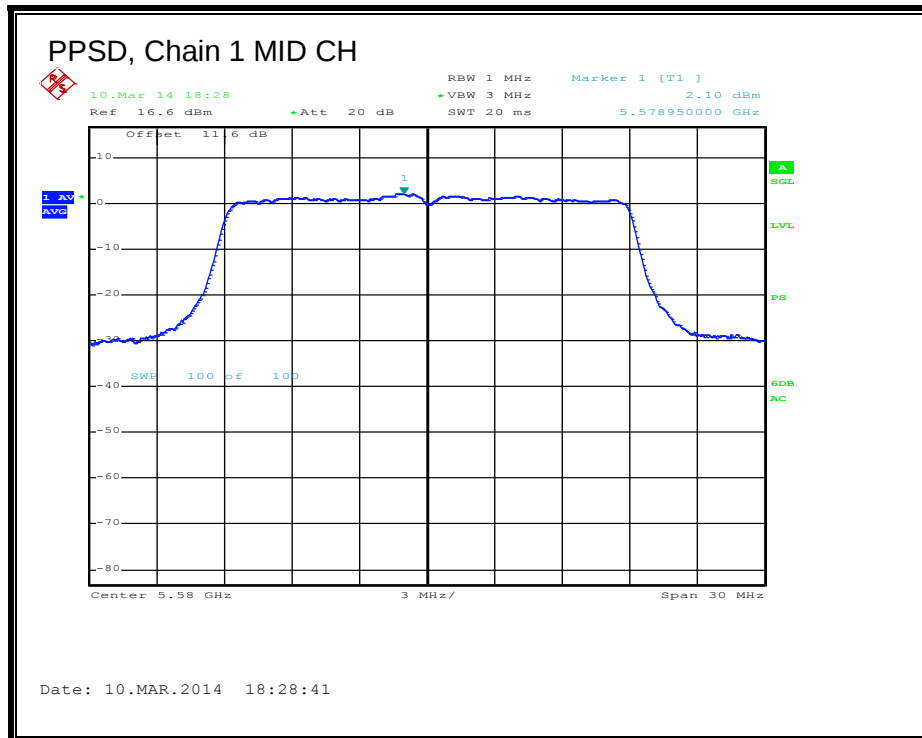
Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Chain 1 Meas PPSD (dBm)	Chain 2 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5500	1.97	1.89	1.84	6.89	6.95	-0.06
Mid	5580	1.72	2.10	2.01	6.94	6.95	-0.01
High	5700	1.77	1.90	2.12	6.92	6.95	-0.03

PPSD, Chain 0

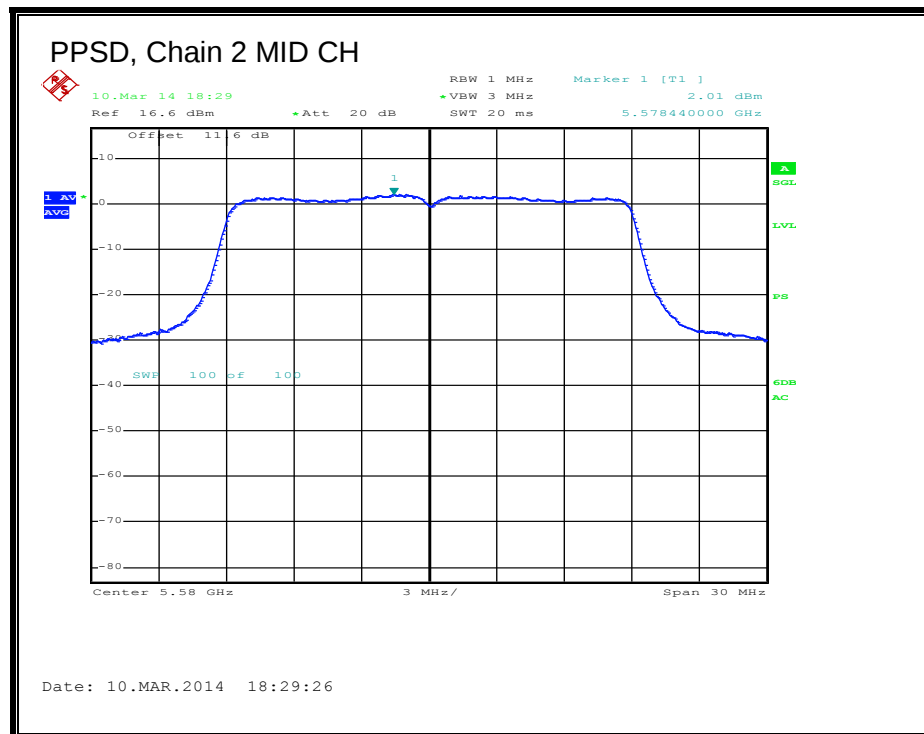
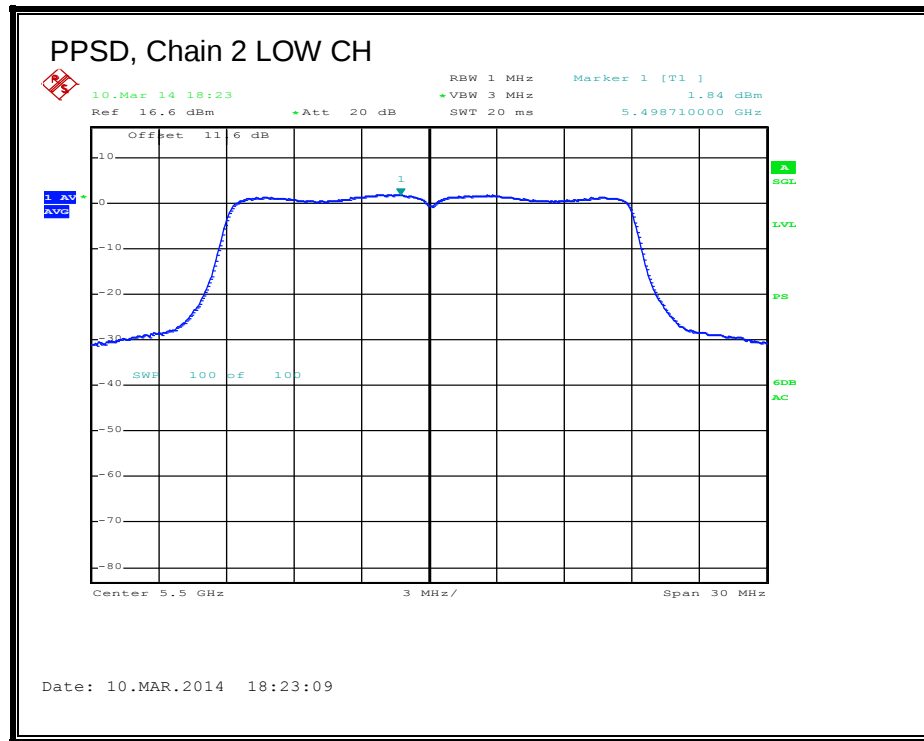


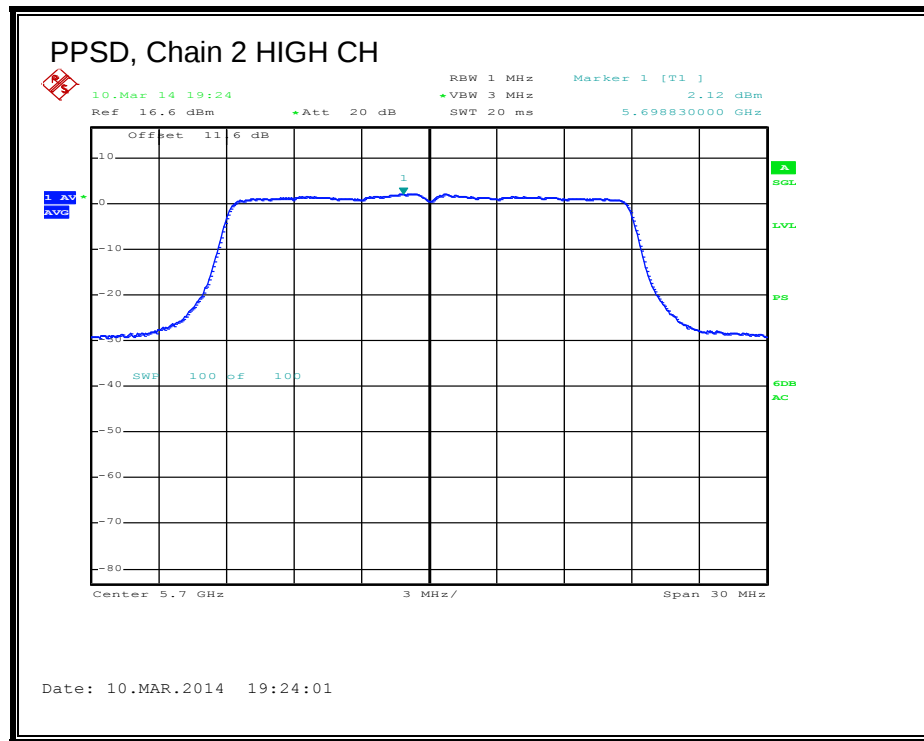
PPSD, Chain 1





PPSD, Chain 2





8.23. 802.11n HT20 STBC 3TX MODE IN THE 5.6 GHz BAND

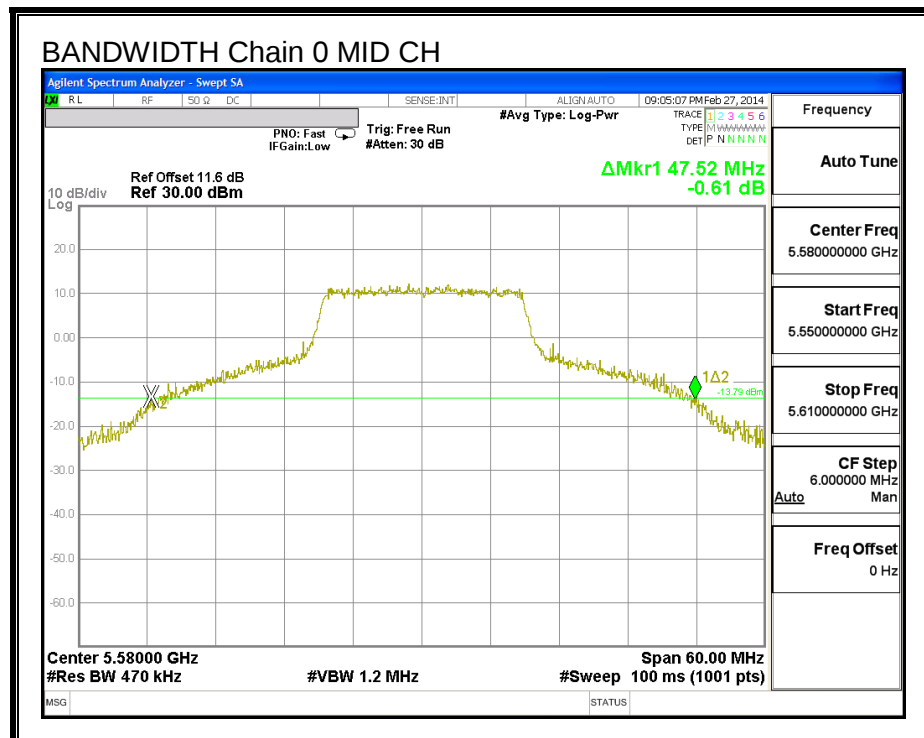
8.23.1. 26 dB BANDWIDTH

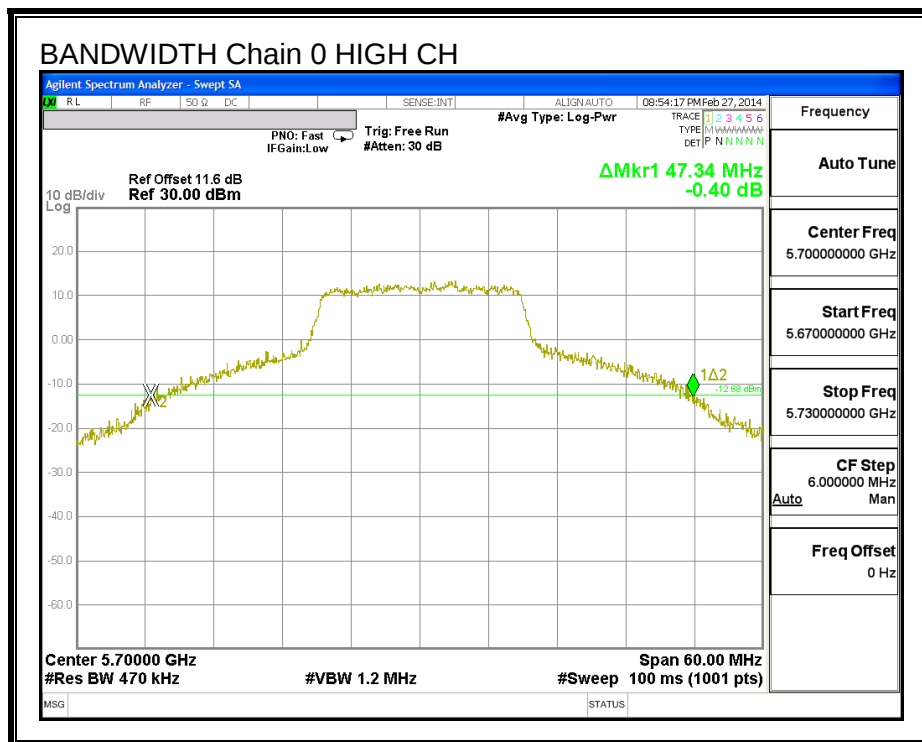
LIMITS

None; for reporting purposes only.

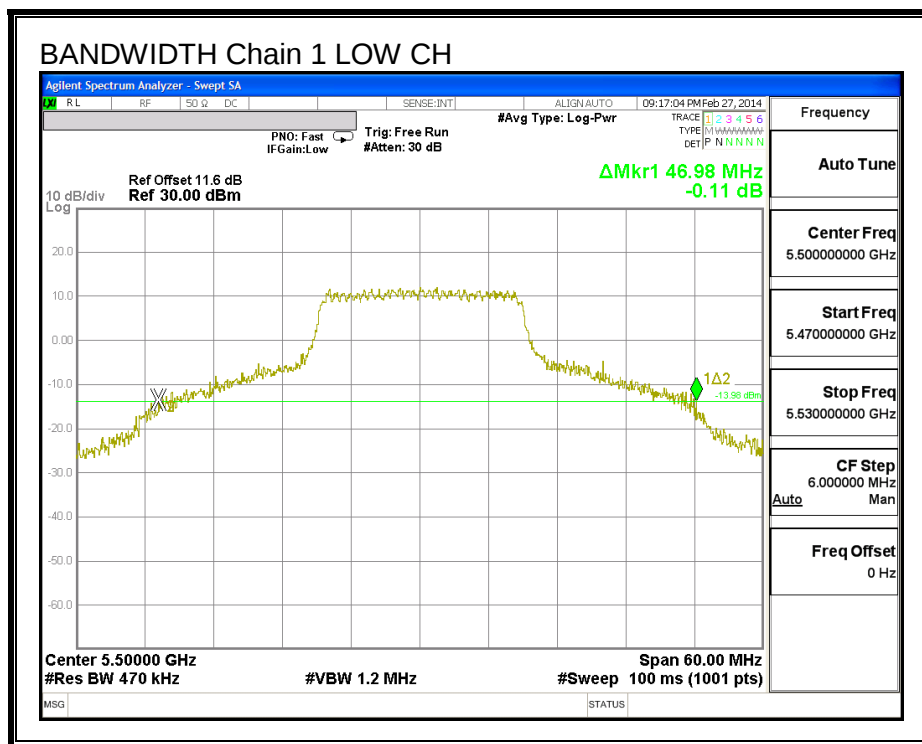
RESULTS

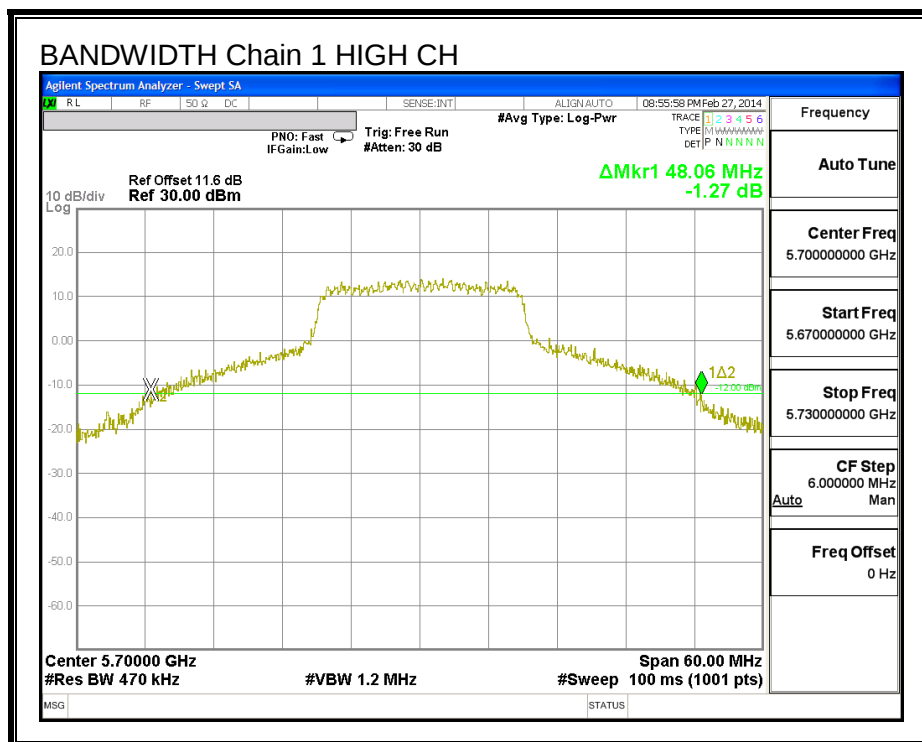
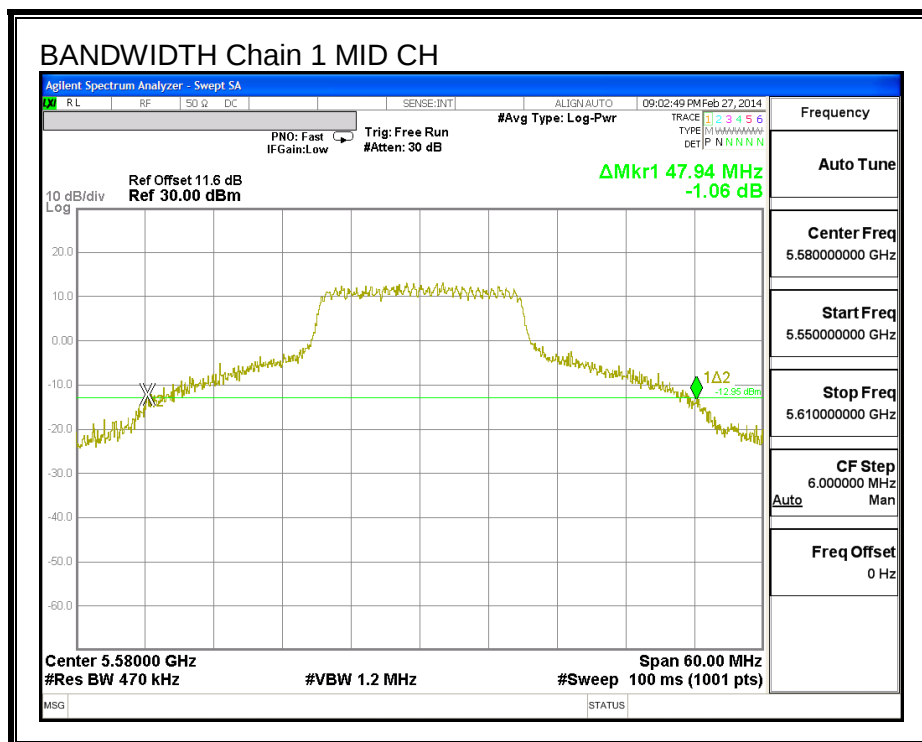
Channel	Frequency (MHz)	26 dB BW Chain 0 (MHz)	26 dB BW Chain 1 (MHz)	26 dB BW Chain 2 (MHz)
Low	5500	47.22	46.98	47.16
Mid	5580	47.52	47.94	46.62
High	5700	47.34	48.06	47.34

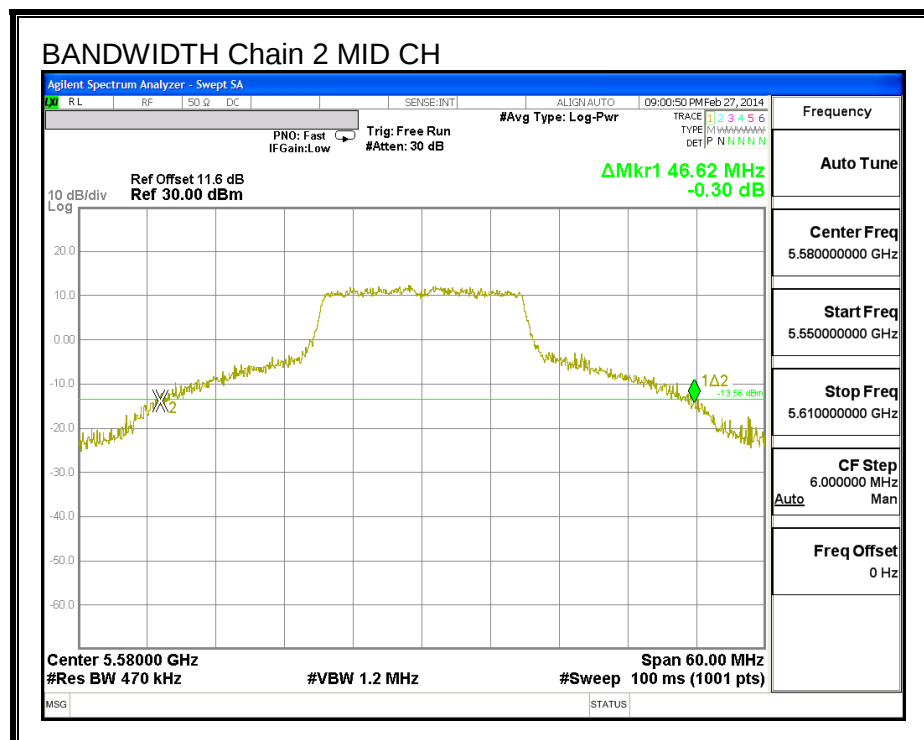
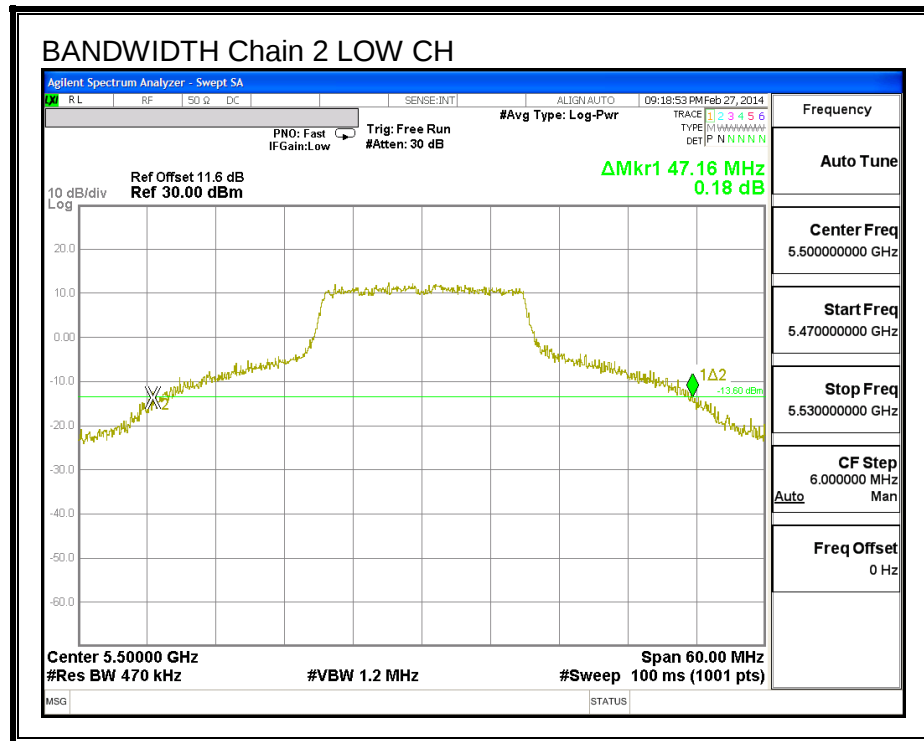


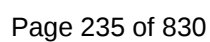


26 dB BANDWIDTH, Chain 1





26 dB BANDWIDTH, Chain 2



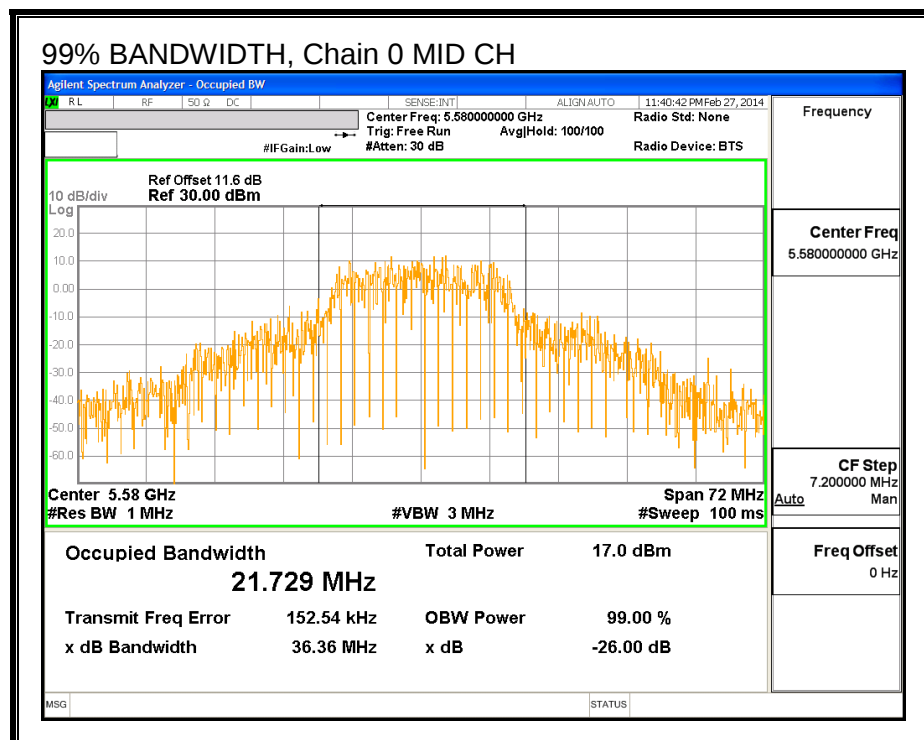
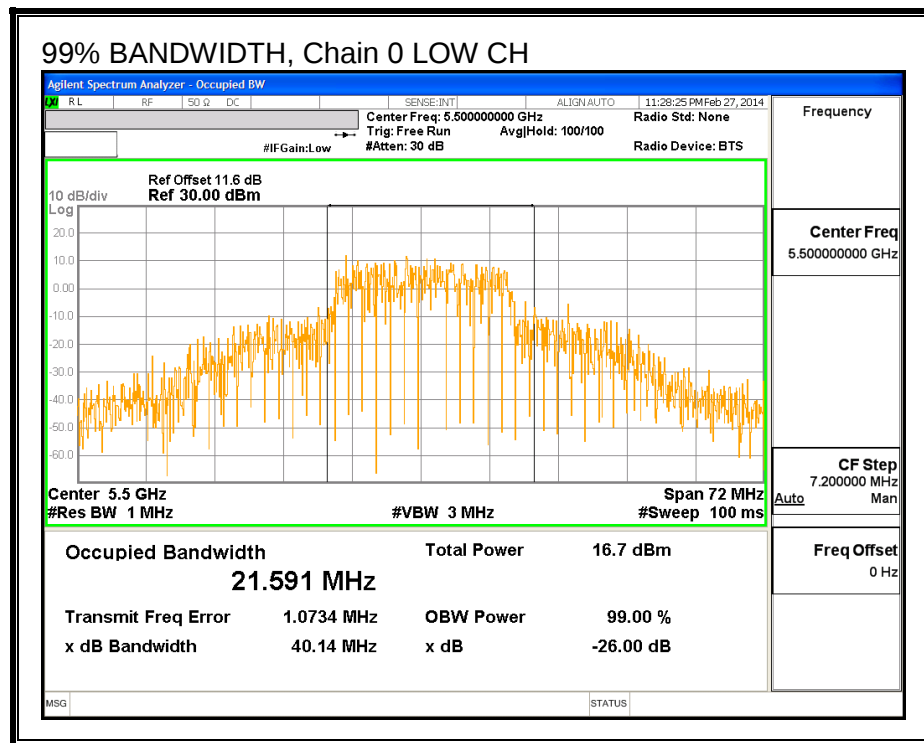
8.23.2. **99% BANDWIDTH**

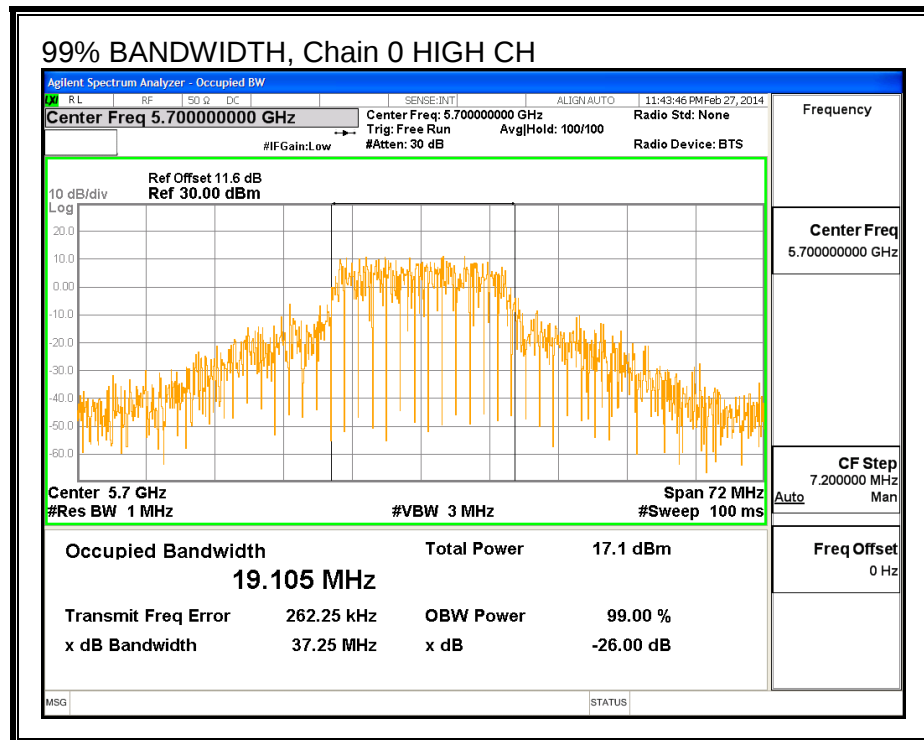
LIMITS

None; for reporting purposes only.

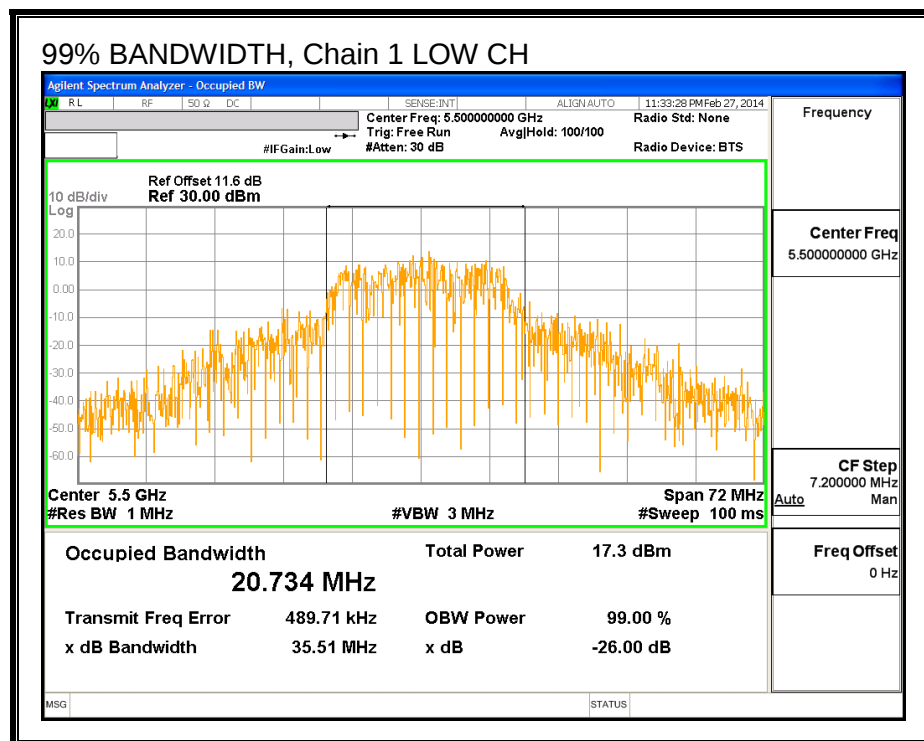
RESULTS

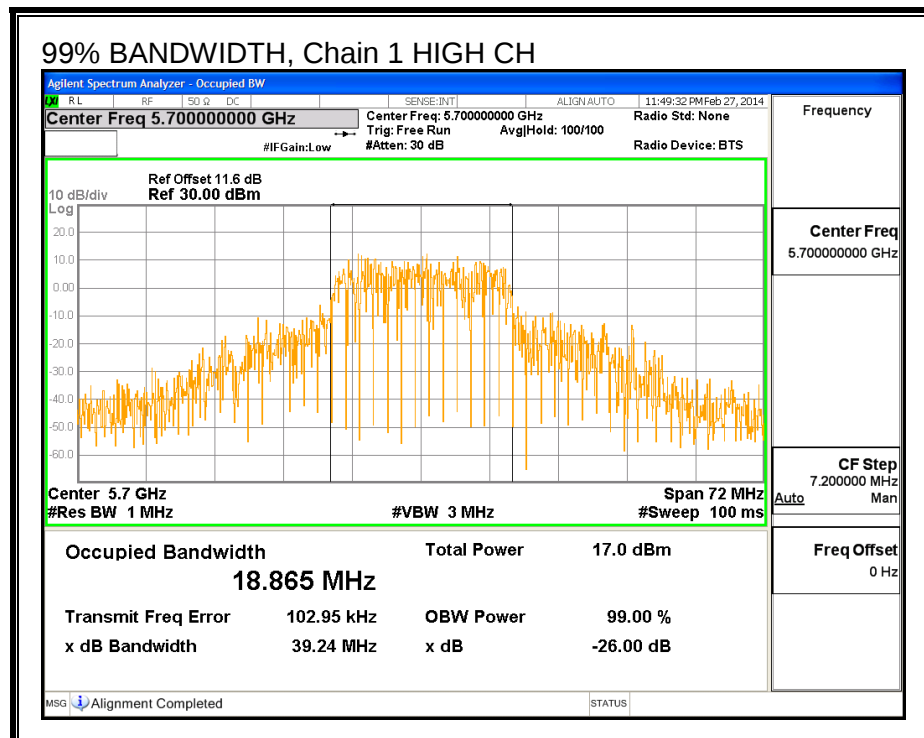
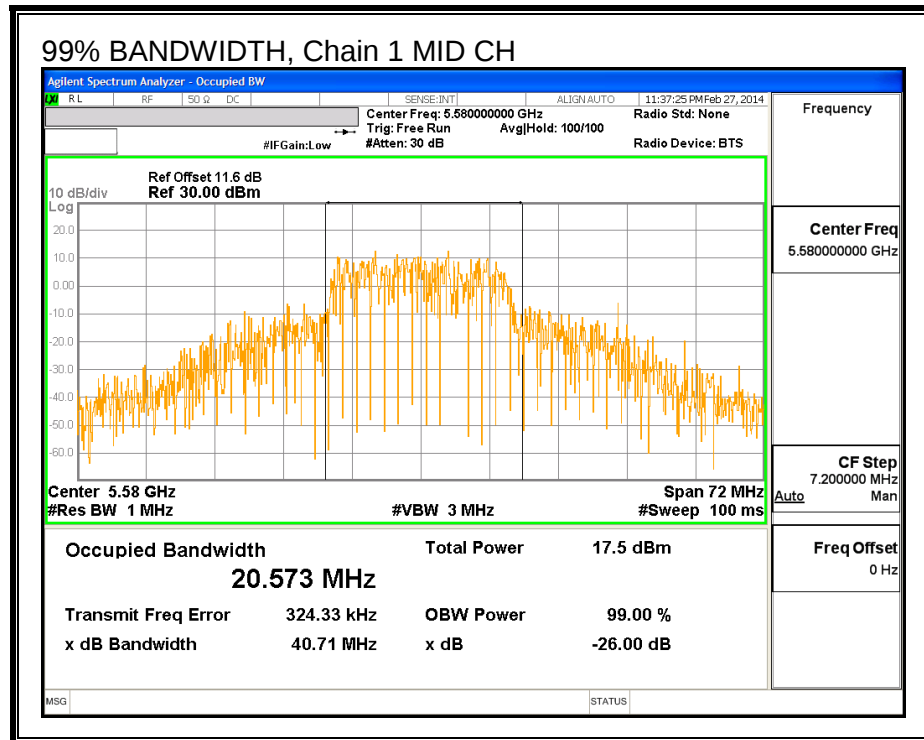
Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)	99% BW Chain 2 (MHz)
Low	5500	21.591	20.734	19.585
Mid	5580	21.729	20.573	19.511
High	5700	19.105	18.865	19.063

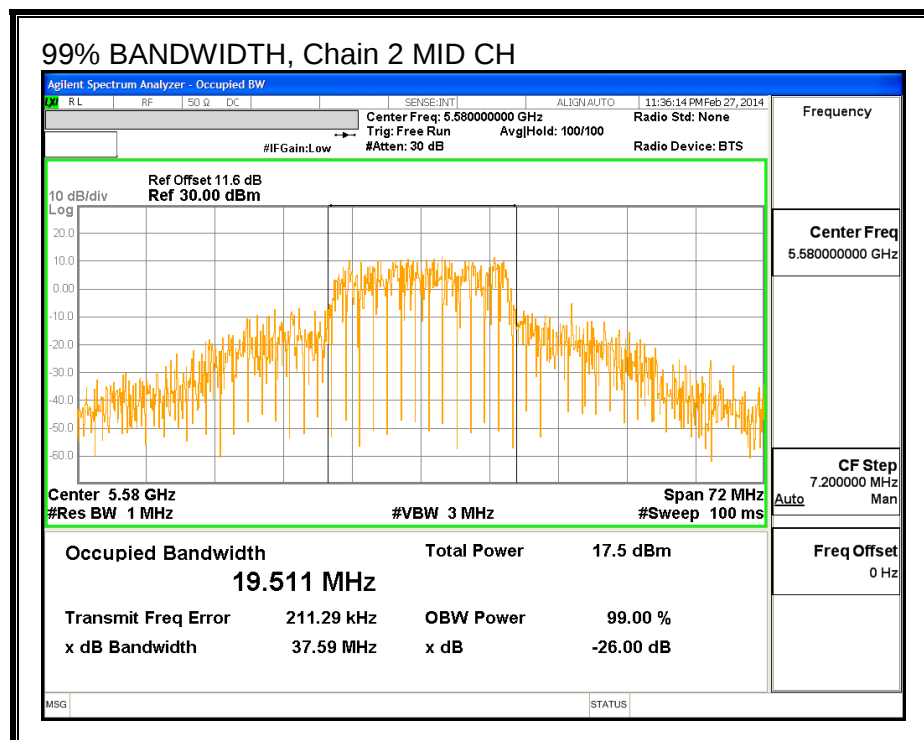
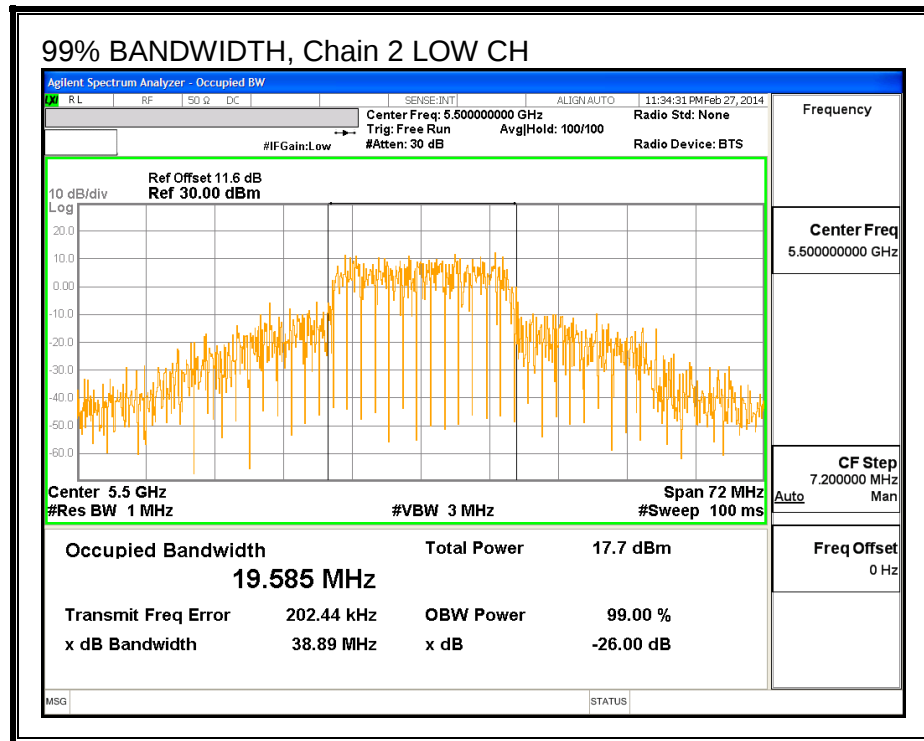
99% BANDWIDTH, Chain 0

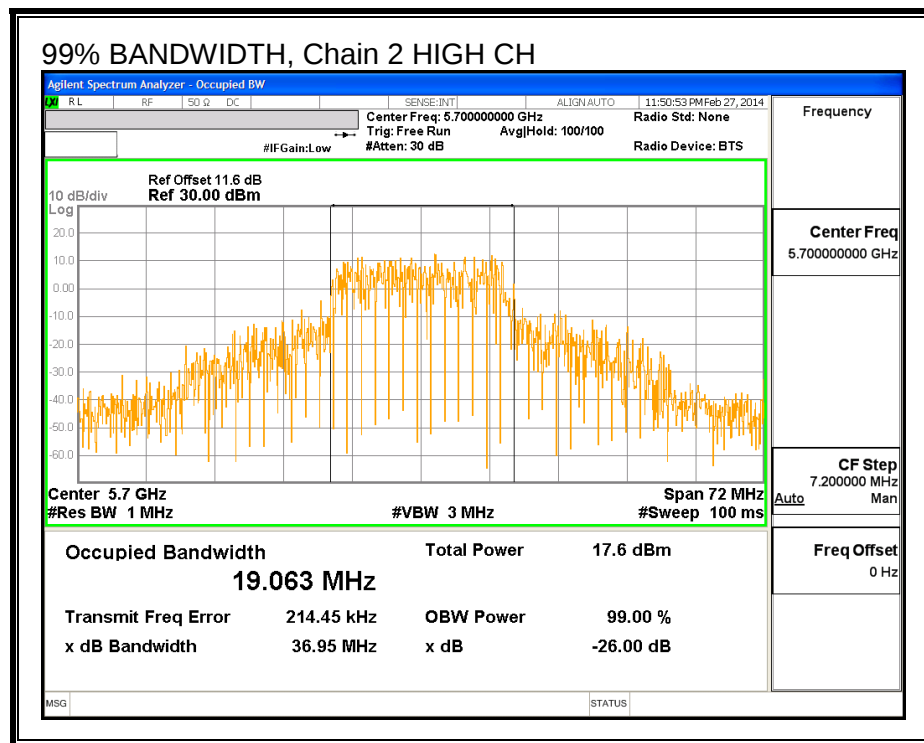


99% BANDWIDTH, Chain 1





99% BANDWIDTH, Chain 2



8.23.3. OUTPUT POWER AND PPSD

LIMITS

IC RSS-210 A9.2 (3)

The maximum e.i.r.p. shall not exceed 250 mW or $11 + 10 \log_{10} B$, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band. The Maximum e.i.r.p shall not exceed 1.0W or $17 + 10 \log_{10} B$, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.

DIRECTIONAL ANTENNA GAIN

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

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Chain 2 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
5.03	6.66	3.94	5.36

RESULT

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5500	46.98	19.585	5.36
Mid	5580	46.62	19.511	5.36
High	5700	47.34	18.865	5.36

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5500	24.00	23.92	29.92	23.92	11.00	11.00	11.00
Mid	5580	24.00	23.90	29.90	23.90	11.00	11.00	11.00
High	5700	24.00	23.76	29.76	23.76	11.00	11.00	11.00

Duty Cycle CF (dB)	0.21	Included in Calculations of Corr'd PPSP
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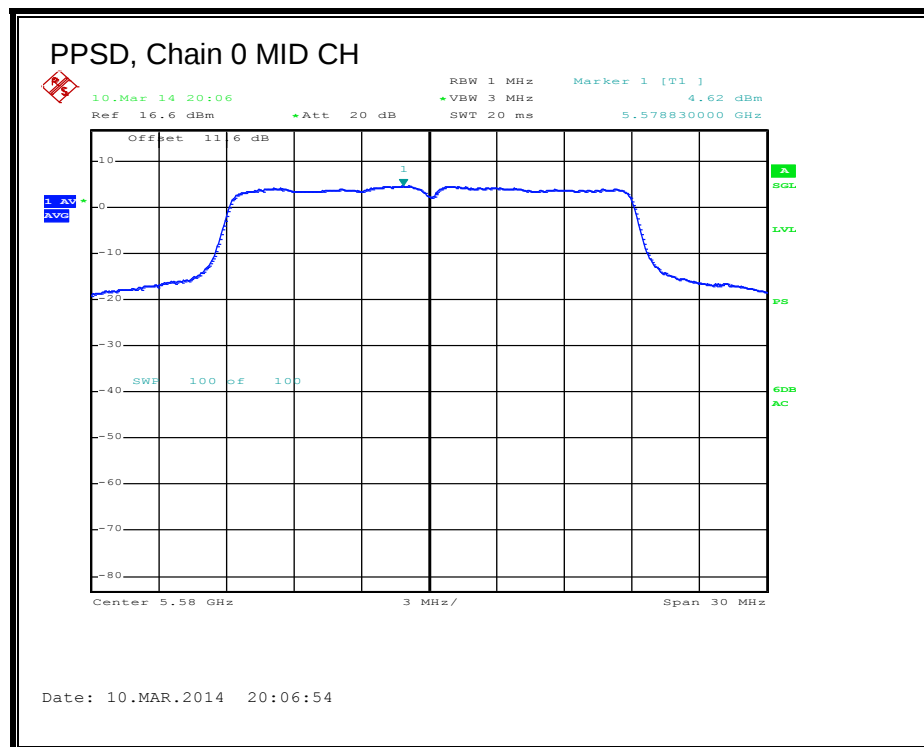
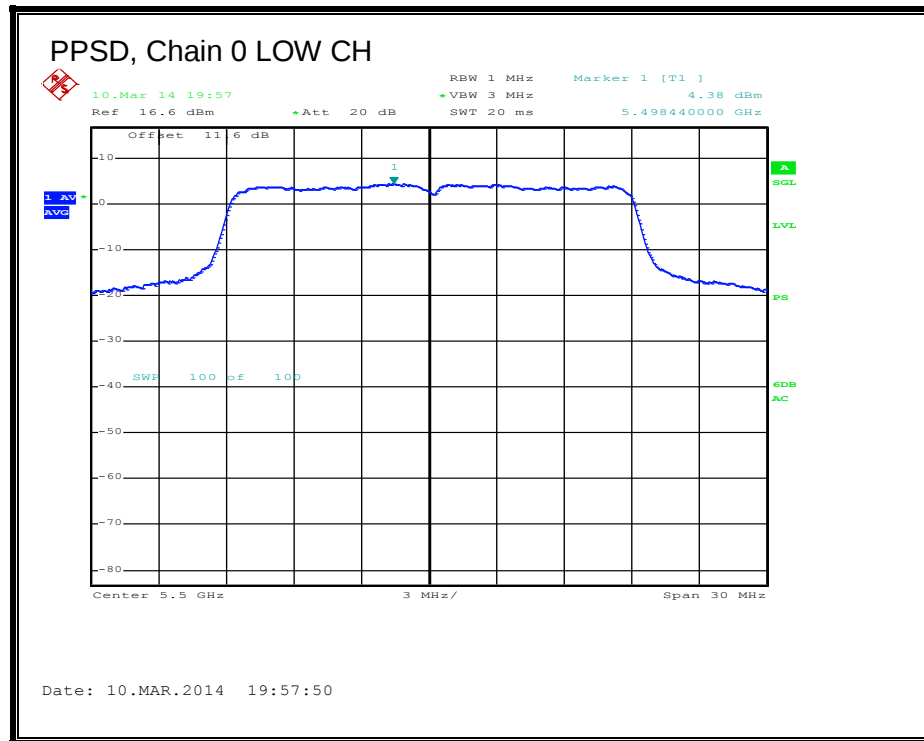
Output Power Results

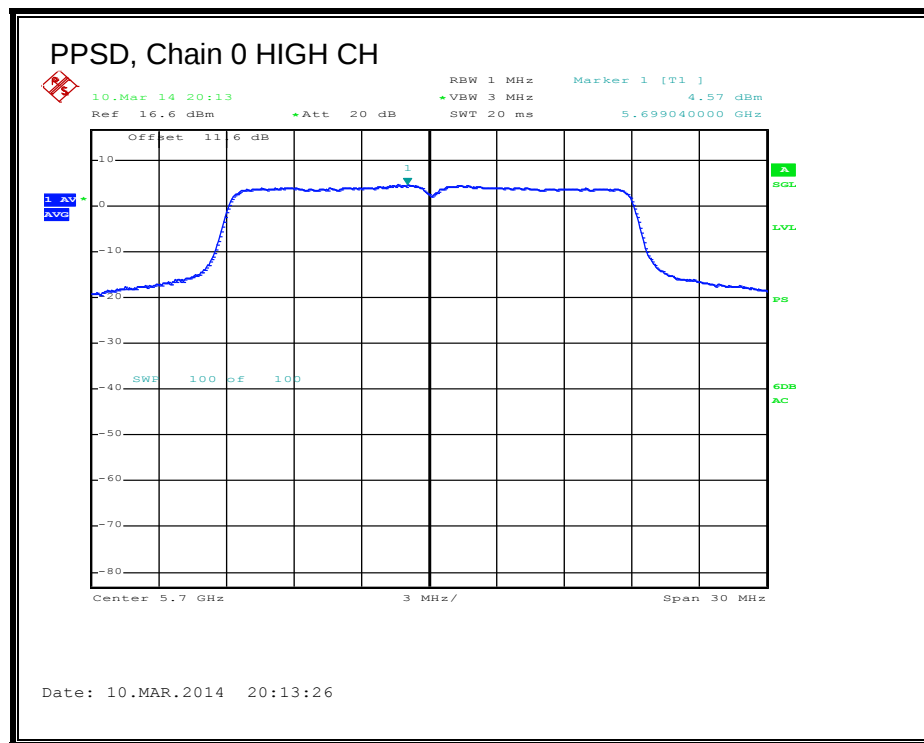
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Chain 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	18.58	18.88	18.98	23.59	23.92	-0.33
Mid	5580	18.50	18.94	19.10	23.63	23.90	-0.28
High	5700	18.70	18.74	18.97	23.58	23.76	-0.18

PPSD Results

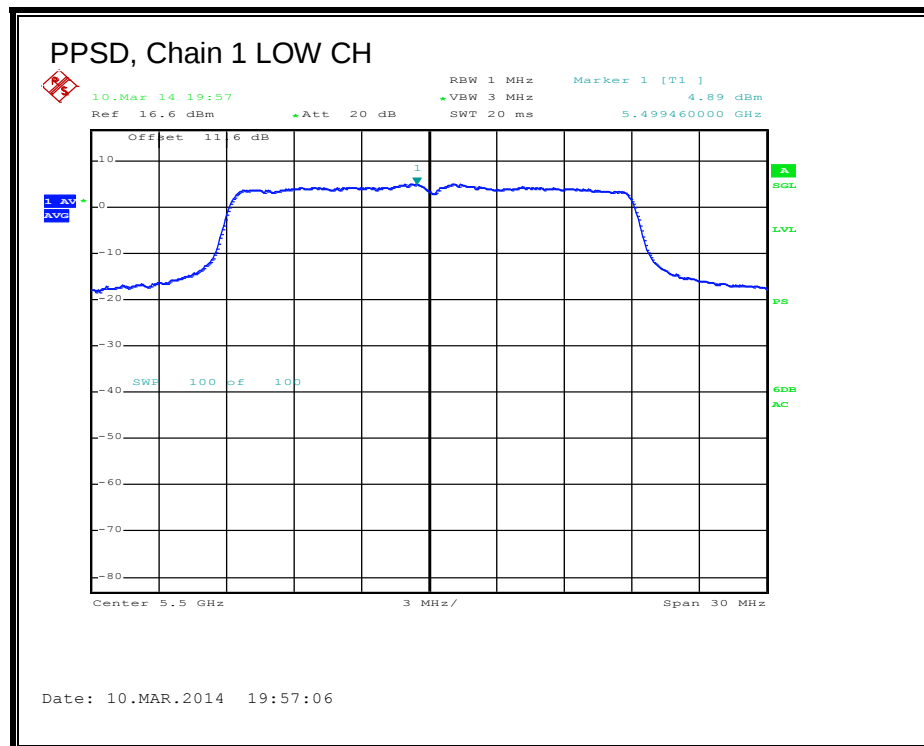
Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Chain 1 Meas PPSD (dBm)	Chain 2 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5500	4.38	4.89	4.88	9.70	11.00	-1.30
Mid	5580	4.62	5.03	5.00	9.87	11.00	-1.13
High	5700	4.57	4.64	4.83	9.66	11.00	-1.34

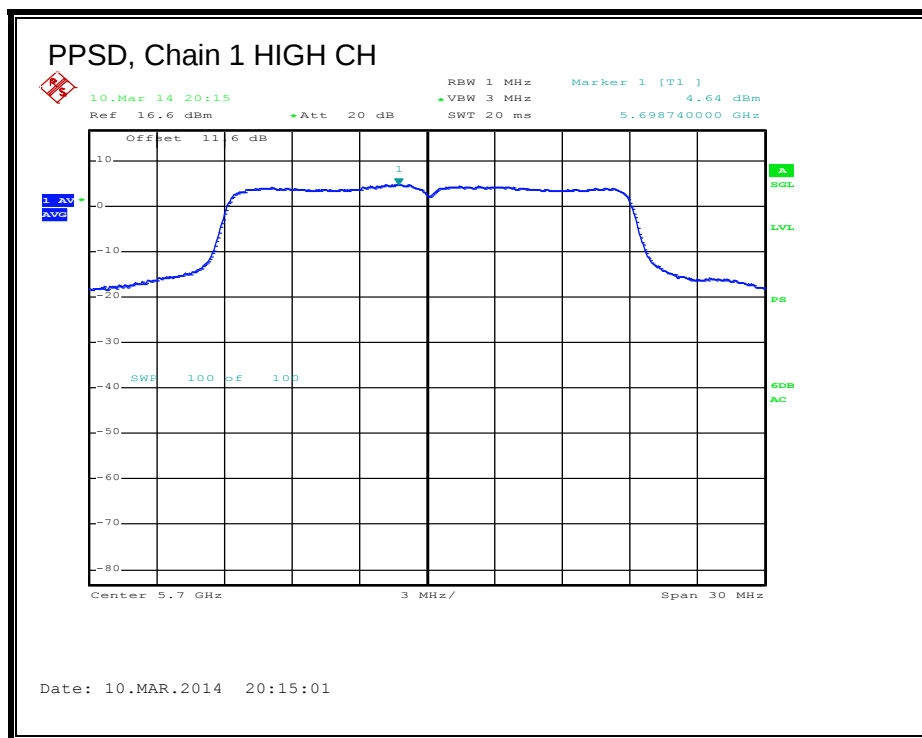
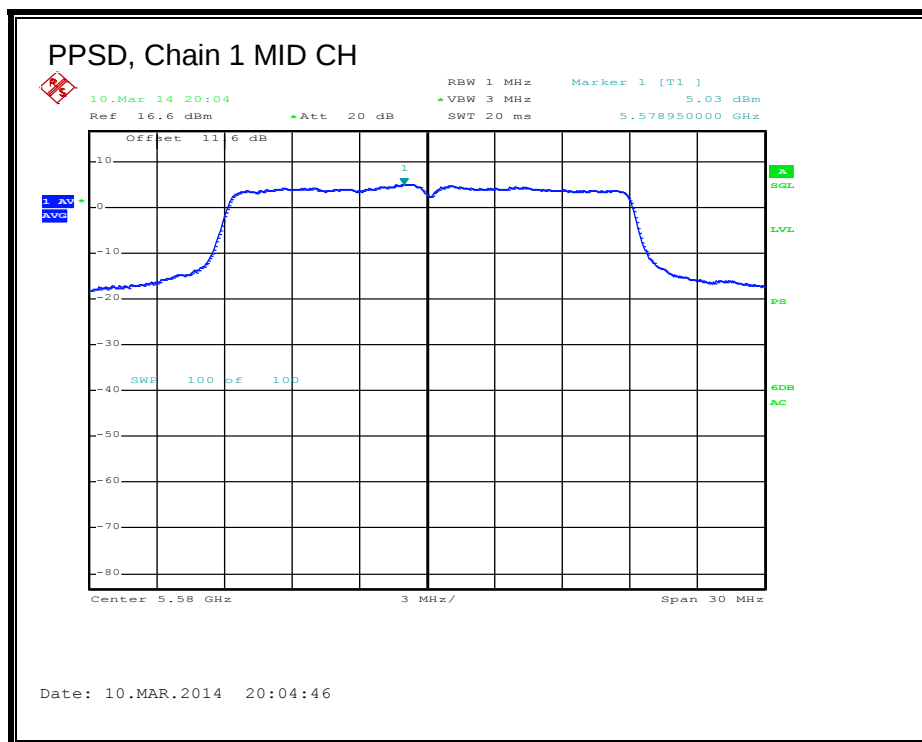
PPSD, Chain 0

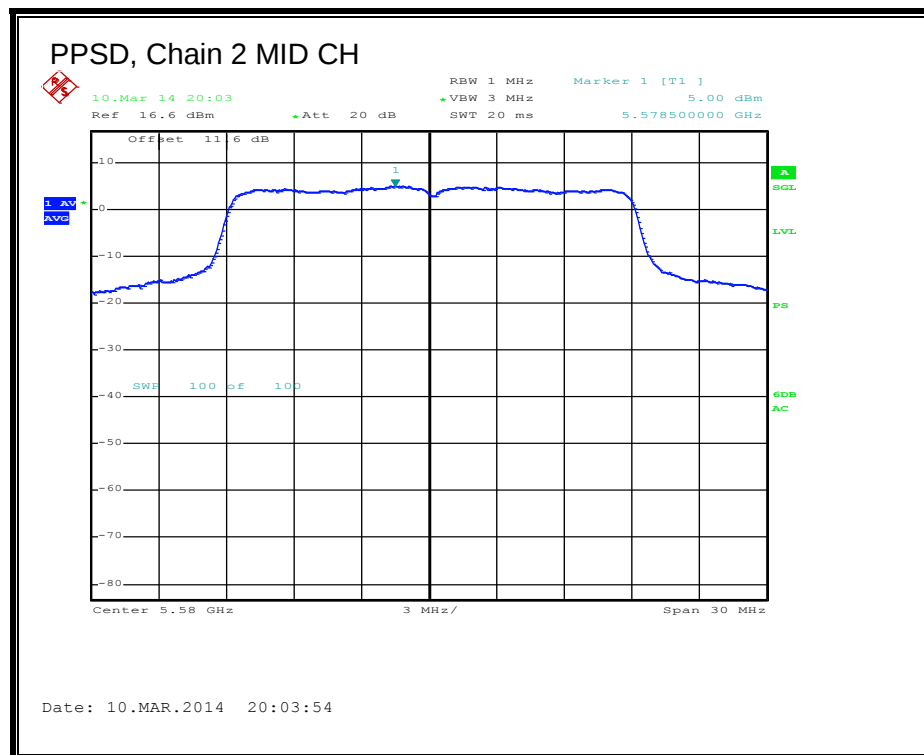
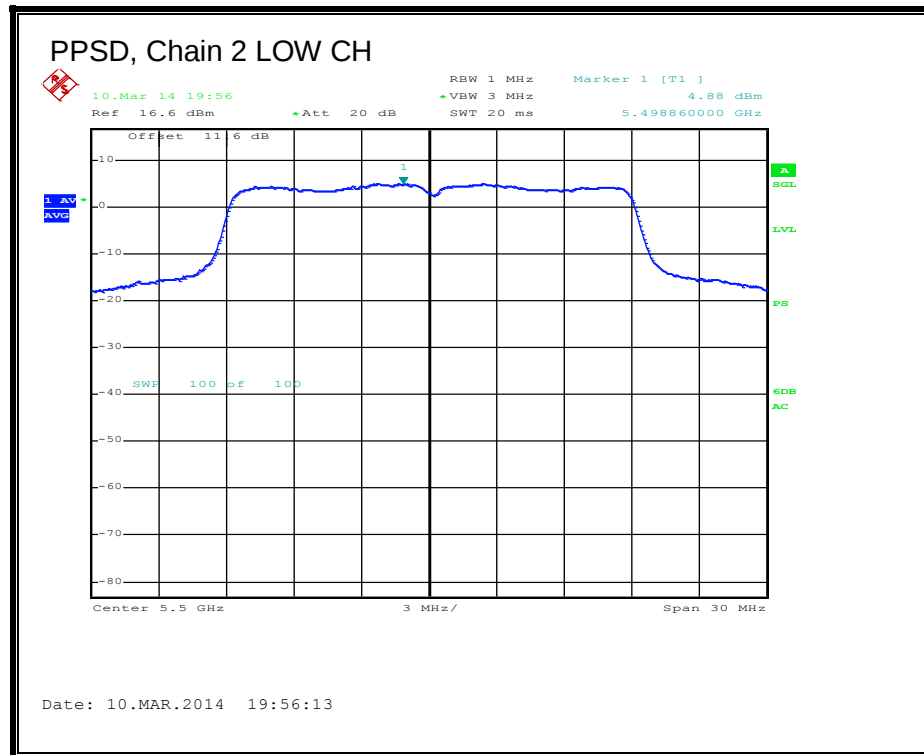


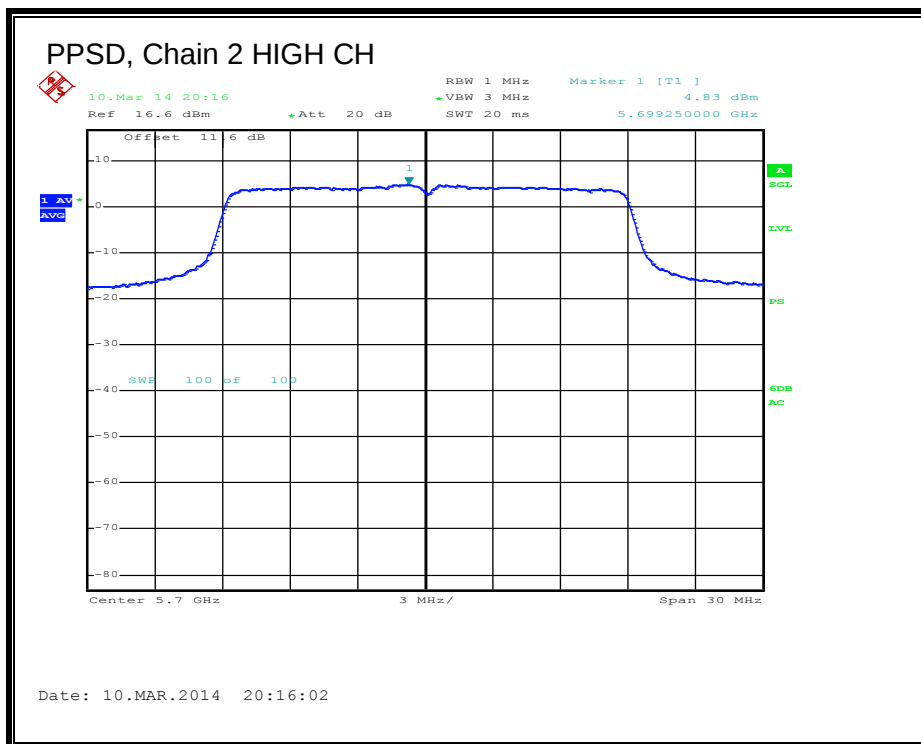


PPSD, Chain 1





PPSD, Chain 2



8.24. 802.11n HT20 BF 3TX MODE IN THE 5.6GHz BAND

8.24.1. OUTPUT POWER AND PPSD

LIMITS

IC RSS-210 A9.2 (3)

The maximum e.i.r.p. shall not exceed 250 mW or $11 + 10 \log_{10} B$, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band. The Maximum e.i.r.p shall not exceed 1.0W or $17 + 10 \log_{10} B$, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.

DIRECTIONAL ANTENNA GAIN

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

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Chain 2 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
5.03	6.66	3.94	10.05

RESULTS

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PPSD (dBi)
Low	5500	41.52	18.445	10.05	10.05
Mid	5580	42.24	18.942	10.05	10.05
High	5700	44.82	19.388	10.05	10.05

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5500	19.95	23.66	29.66	19.61	6.95	11.00	6.95
Mid	5580	19.95	23.77	29.77	19.72	6.95	11.00	6.95
High	5700	19.95	23.88	29.88	19.83	6.95	11.00	6.95

Duty Cycle CF (dB)	0.22	Included in Calculations of Corr'd PPSD
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Output Power Results

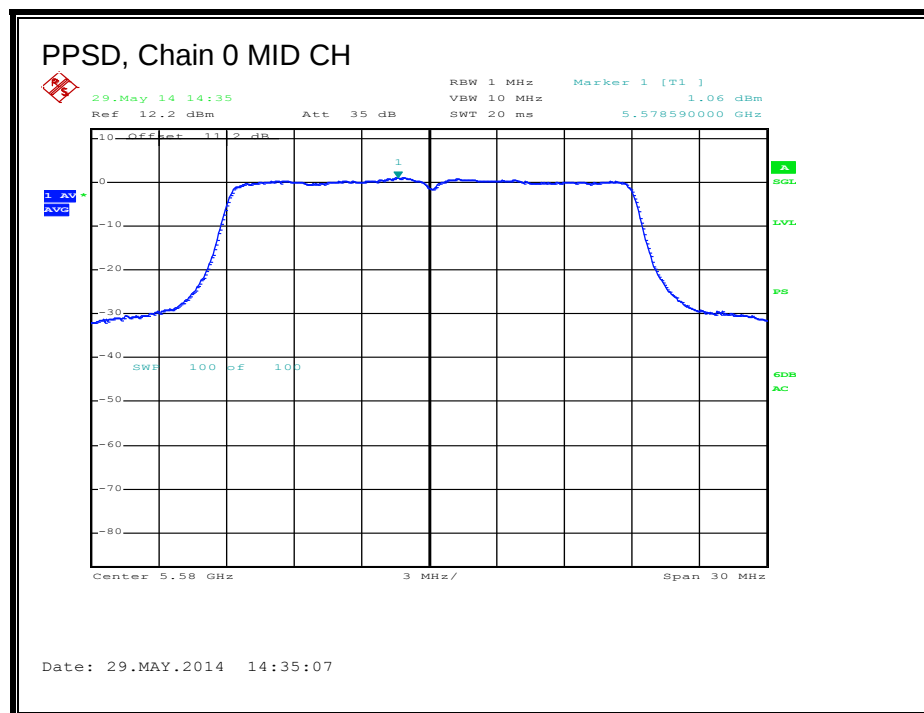
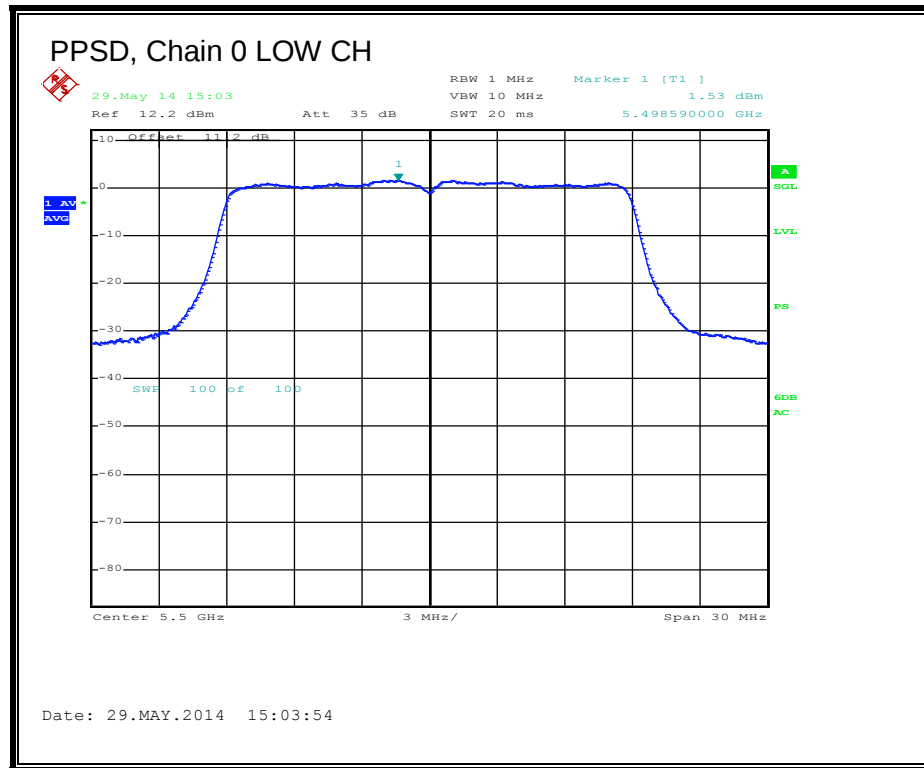
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Chain 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	14.68	14.69	14.86	19.52	19.61	-0.09
Mid	5580	14.70	14.46	14.67	19.38	19.72	-0.34
High	5700	14.82	14.64	14.81	19.53	19.83	-0.30

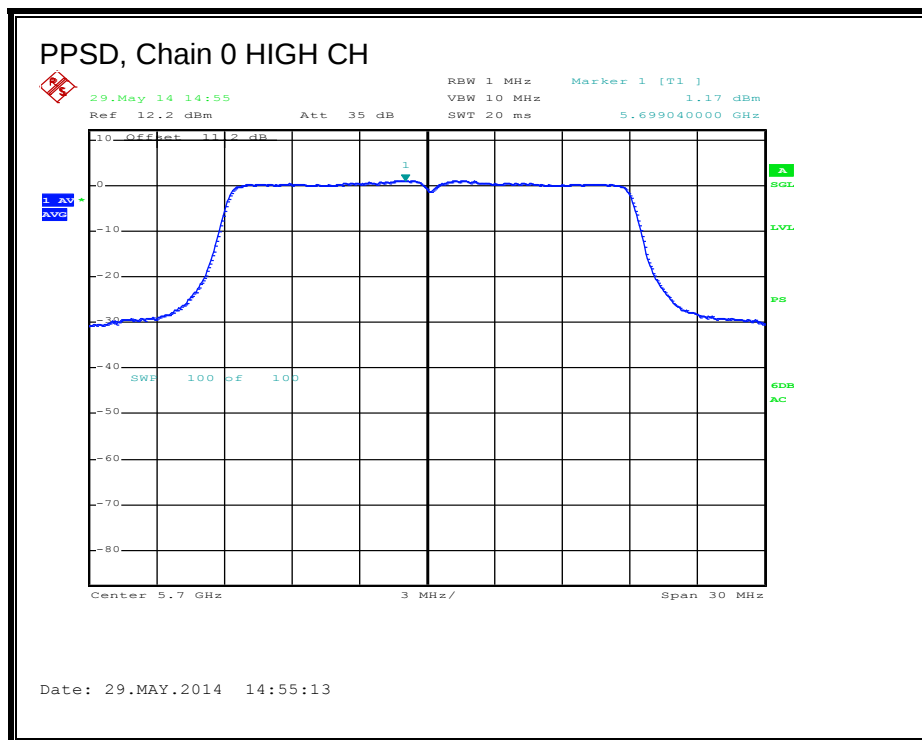
PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Chain 1 Meas PPSD (dBm)	Chain 2 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5500	1.53	1.32	1.00	6.28	6.95	-0.67
Mid	5580	1.06	0.98	1.02	6.01	6.95	-0.94
High	5700	1.17	0.97	1.20	6.11	6.95	-0.84

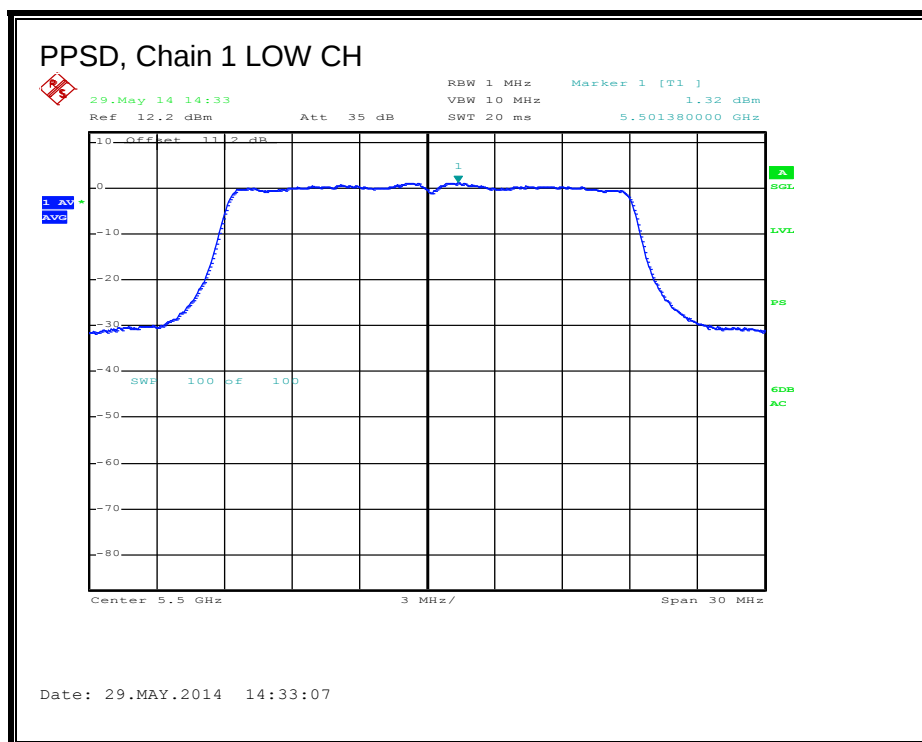
Note: 26dB & 99% data & plots, see section 802.11n HT20 CDD 3TX IN THE 5.3GHz BAND

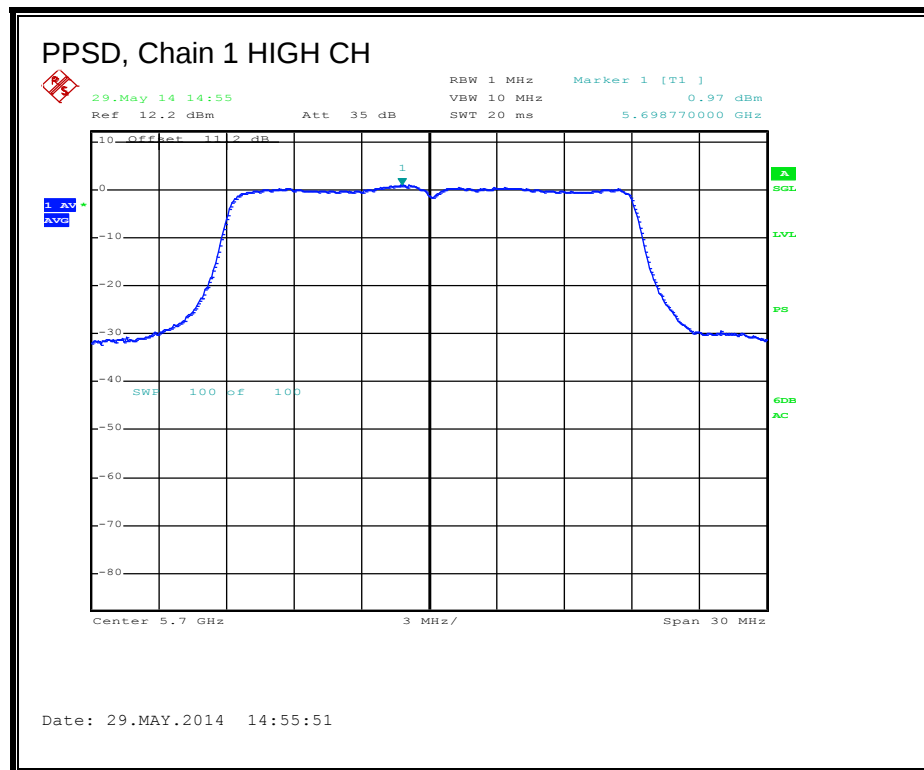
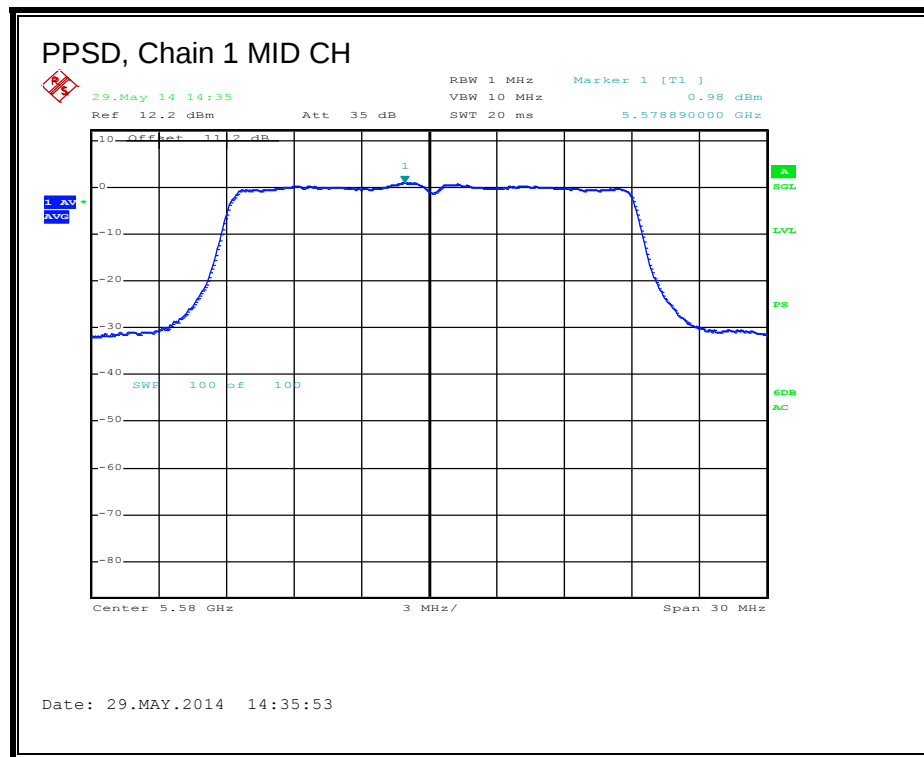
PPSD, Chain 0



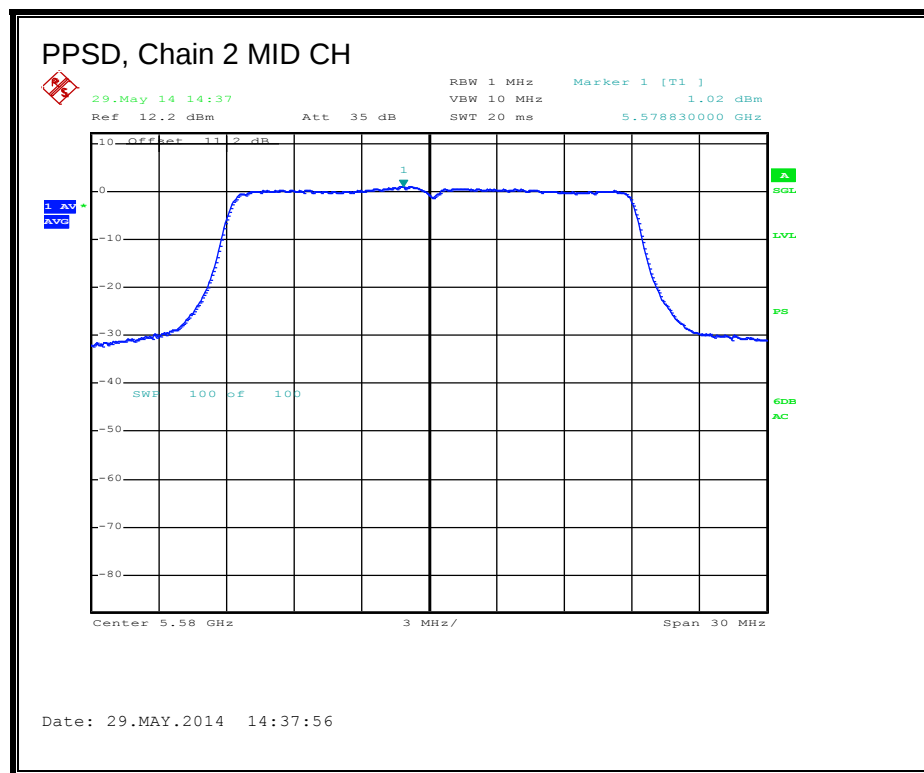
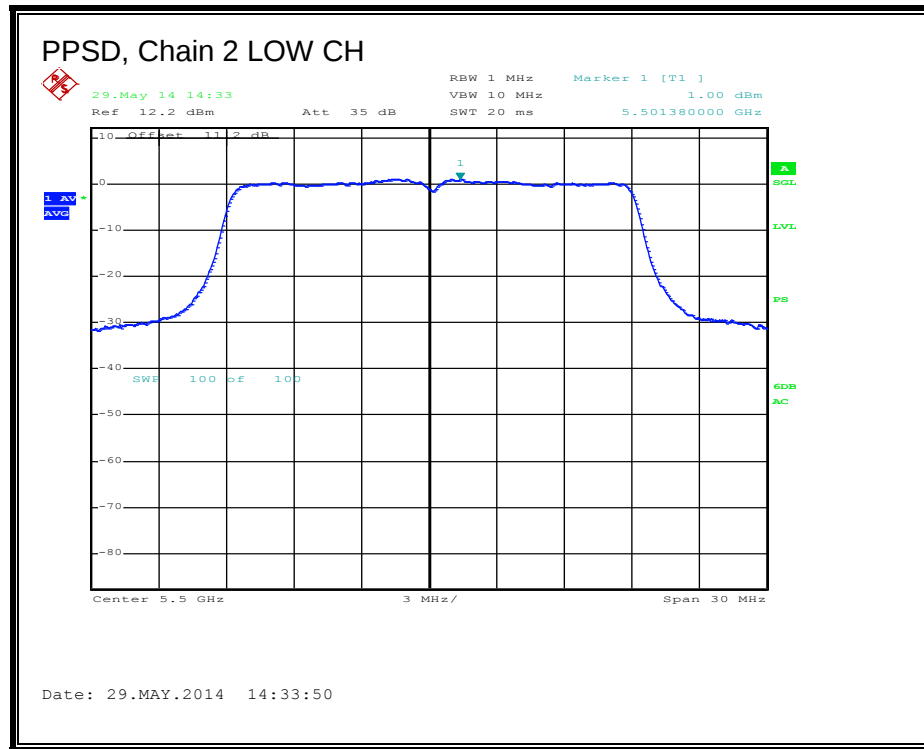


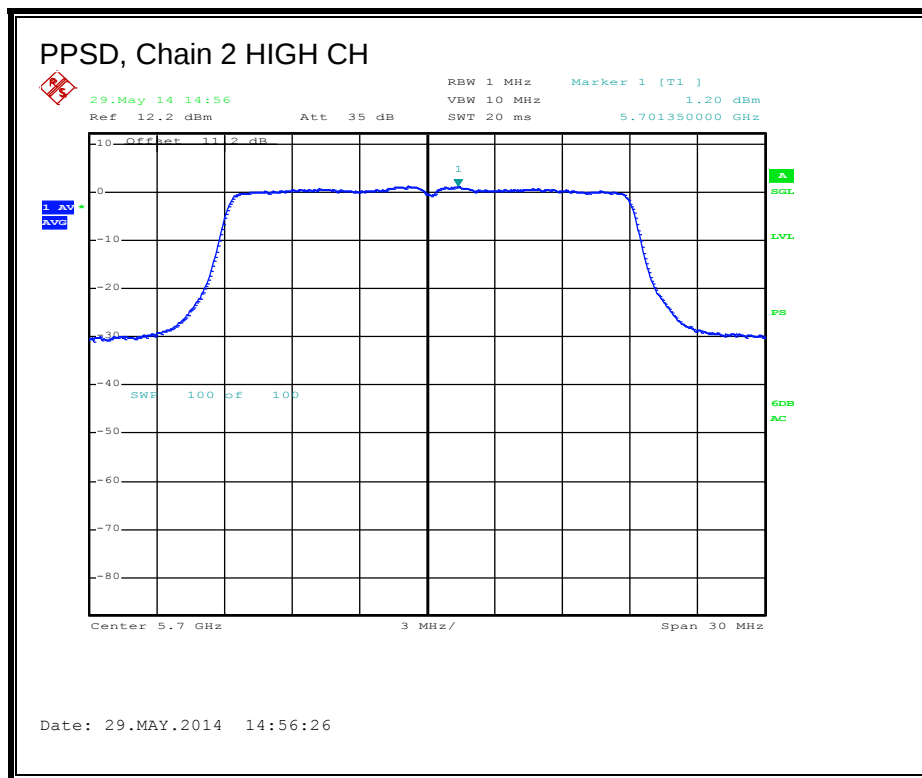
PPSD, Chain 1





PPSD, Chain 2





8.25. **802.11n HT20 CDD 3TX MODE 5.6 GHz BAND, CHANNEL
144**

8.25.1. **26 dB BANDWIDTH**

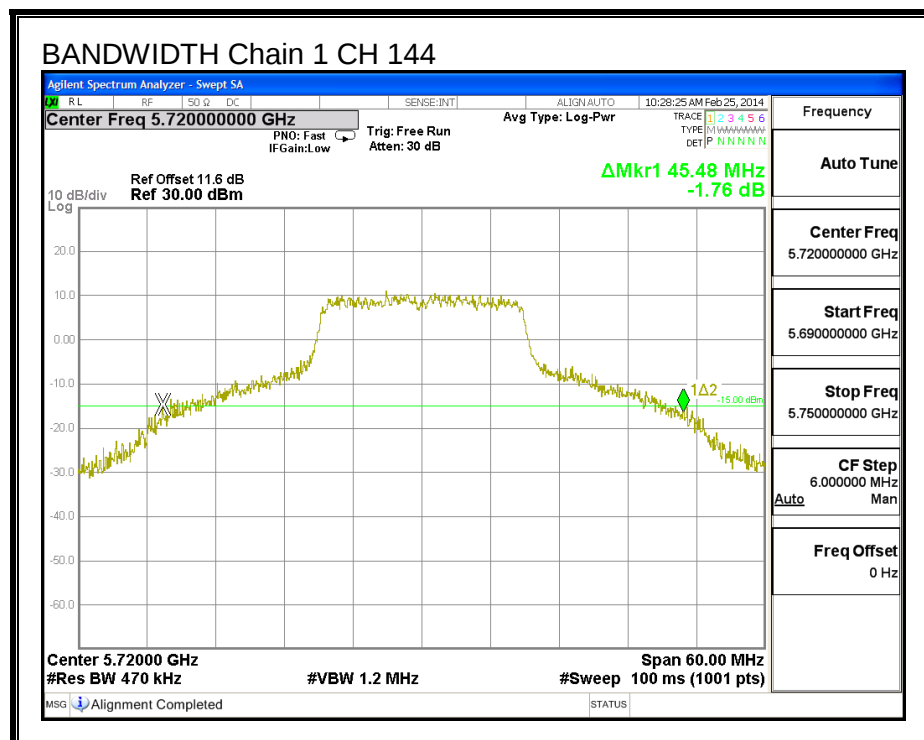
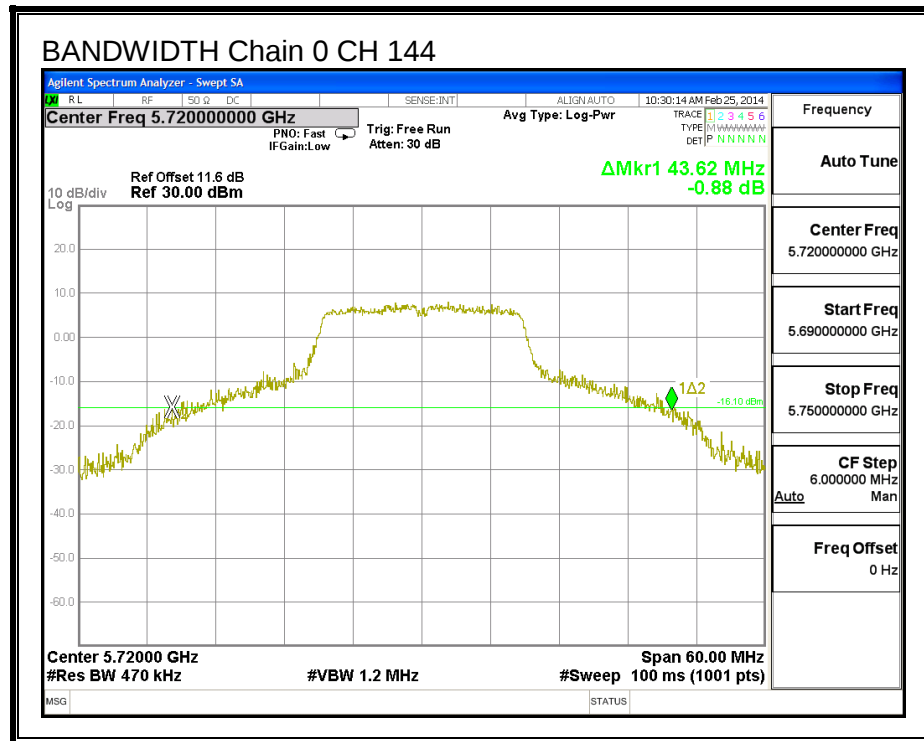
LIMITS

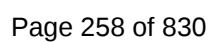
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB BW Chain 0 (MHz)	26 dB BW Chain 1 (MHz)	26 dB BW Chain 2 (MHz)
144	5720	43.62	45.48	43.62

26 dB BANDWIDTH





8.25.2. **99% BANDWIDTH**

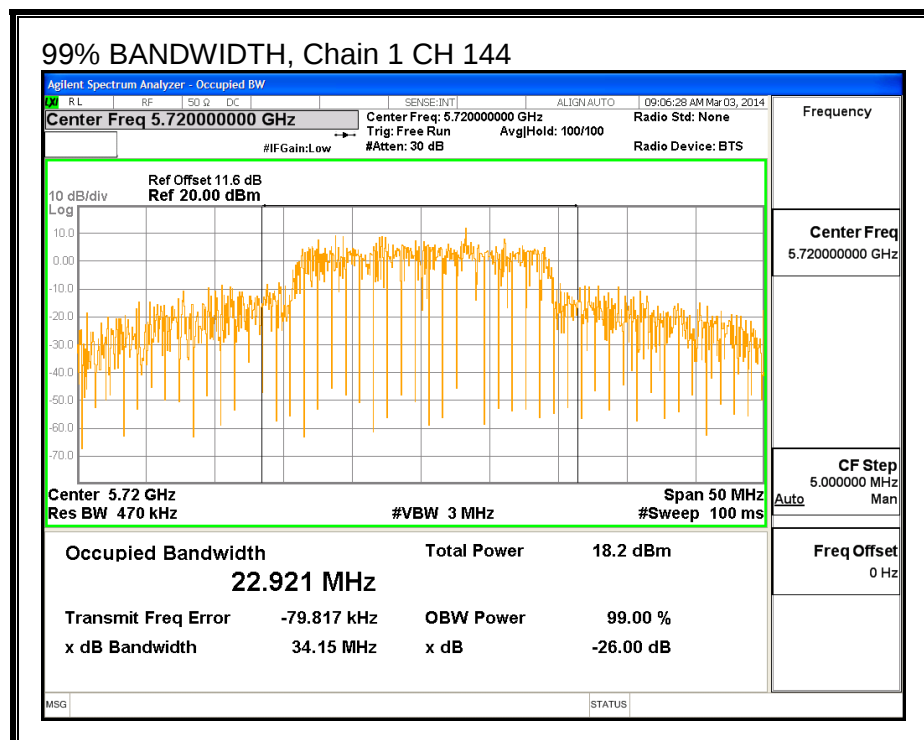
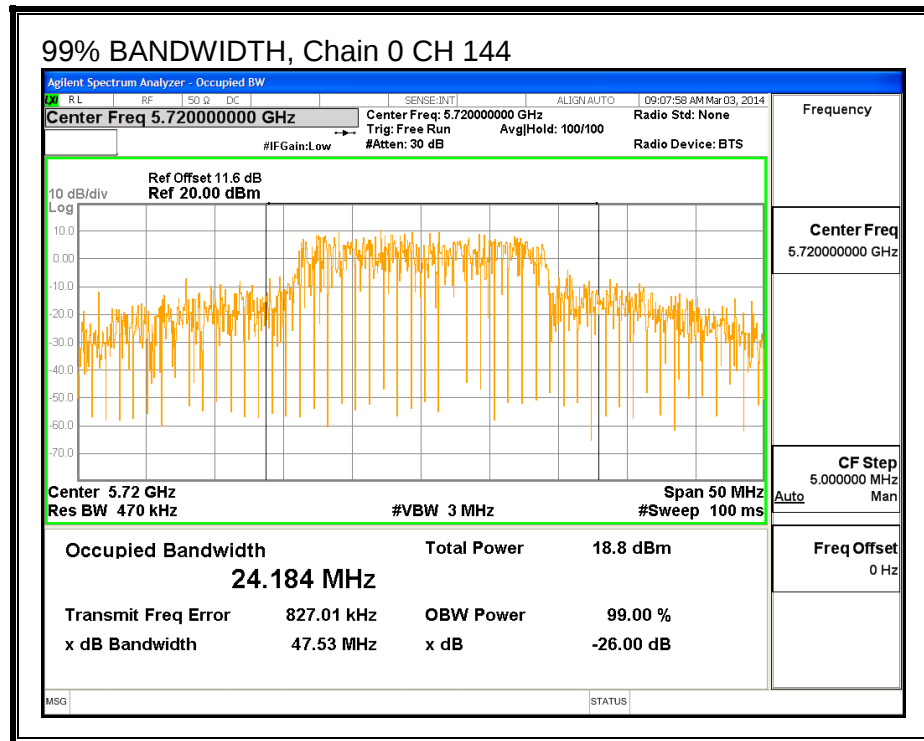
LIMITS

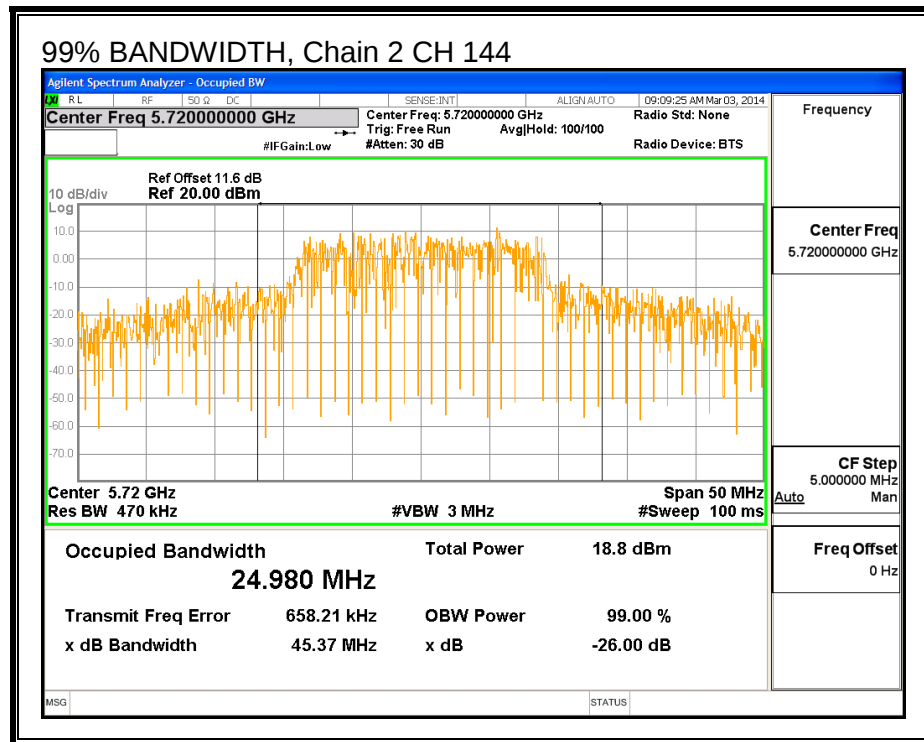
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)	99% BW Chain 2 (MHz)
144	5720	24.184	22.921	24.980

99% BANDWIDTH





8.25.3. OUTPUT POWER AND PPSD

LIMITS

IC RSS-210 A9.2 (3)

The maximum e.i.r.p. shall not exceed 250 mW or $11 + 10 \log_{10} B$, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band. The Maximum e.i.r.p shall not exceed 1.0W or $17 + 10 \log_{10} B$, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.

DIRECTIONAL ANTENNA GAIN

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

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Chain 2 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
5.03	6.66	3.94	5.36

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

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Chain 2 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
5.03	6.66	3.94	10.05

RESULTS

For UNII BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PPSD (dBi)
144	5720	26.81	16.460	5.36	10.05

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
144	5720	24.00	23.16	29.16	23.16	6.95	11.00	6.95

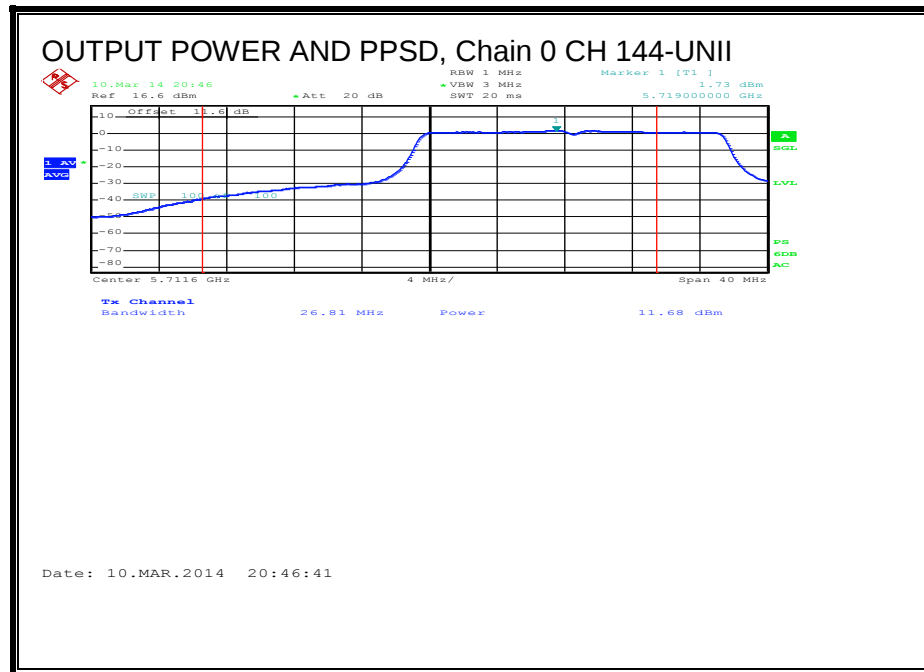
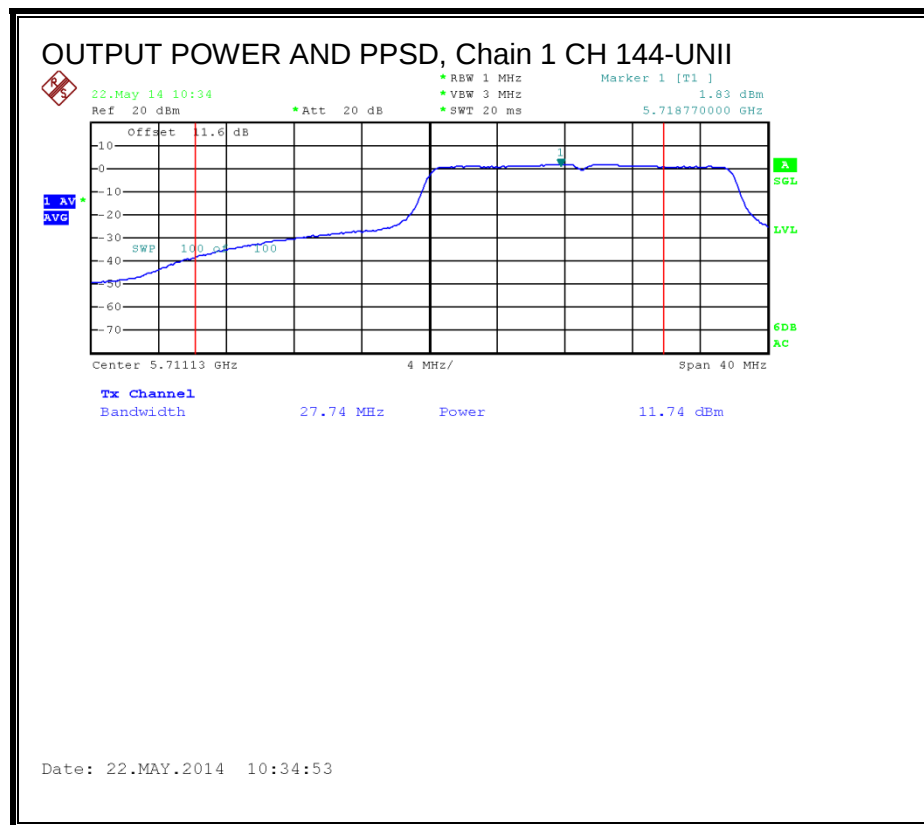
Duty Cycle CF (dB)	0.22	Included in Calculations of Corr'd PPSD
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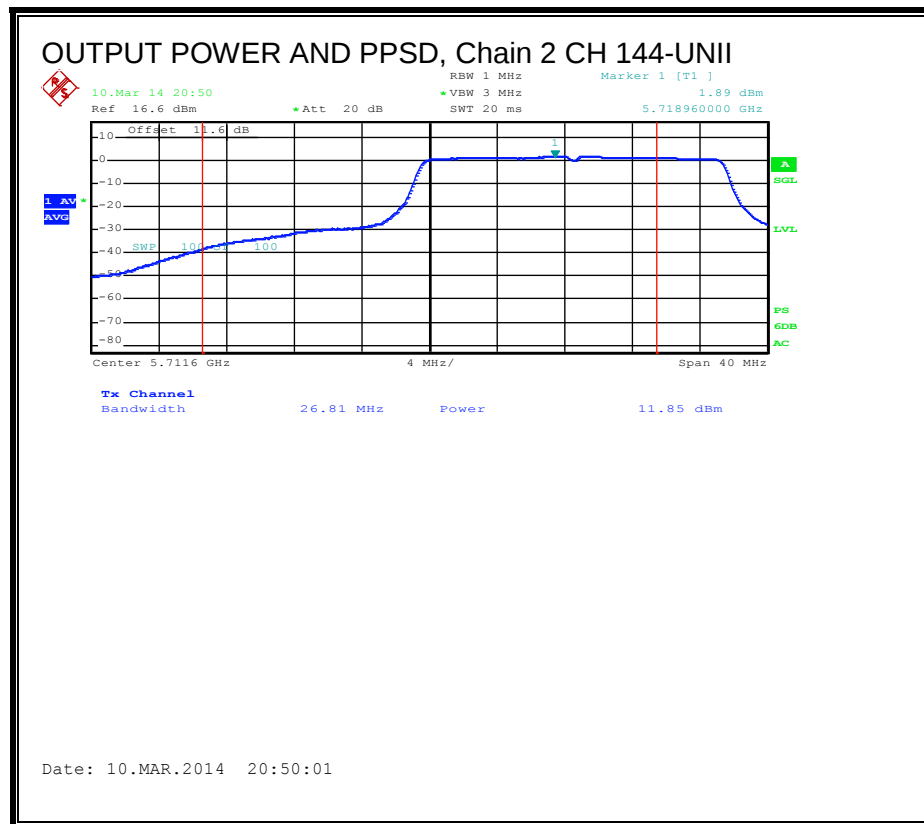
Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Chain 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
144	5720	11.68	11.74	11.85	16.75	23.16	-6.42

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Chain 1 Meas PPSD (dBm)	Chain 2 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
144	5720	1.73	1.83	1.89	6.81	6.95	-0.14

OUTPUT POWER AND PPSD, Chain 0**OUTPUT POWER AND PPSD, Chain 1**

OUTPUT POWER AND PPSD, Chain 2

For UNII-3 BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PPSD (dBi)
144	5720	16.81	6.460	6.19	10.05

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
144	5720	29.81	19.10	25.10	29.81	25.95	11.00	11.00

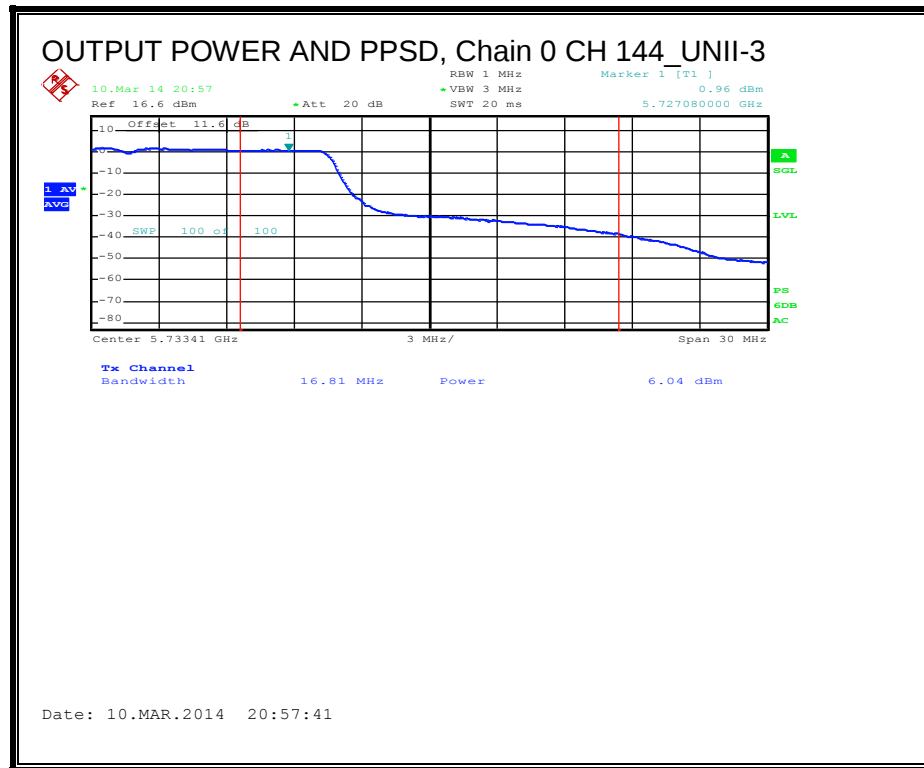
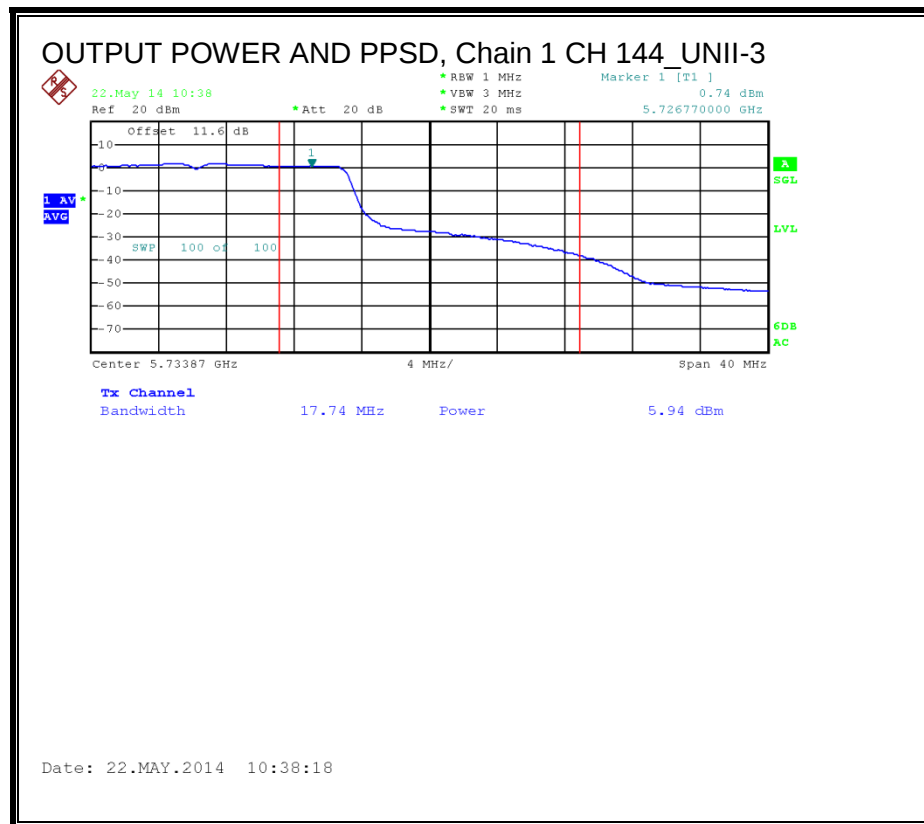
Duty Cycle CF (dB)	0.22	Included in Calculations of Corr'd PPSD
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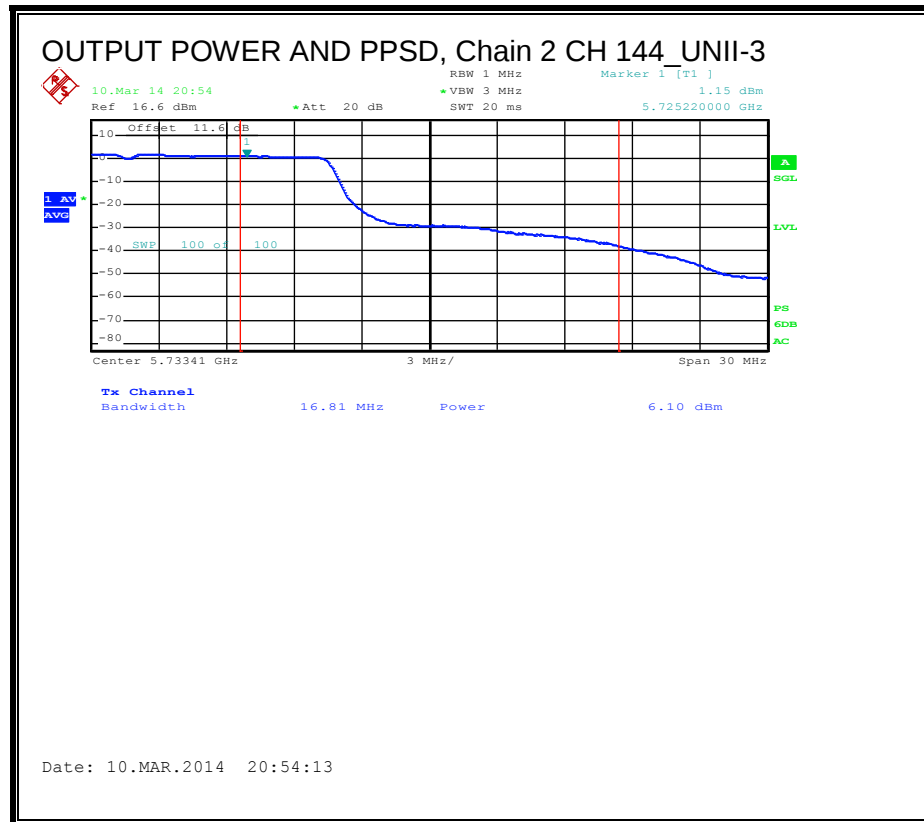
Output Power Results

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	6.04	5.94	6.10	11.02	29.81	-18.79

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Chain 1 Meas PPSD (dBm)	Chain 2 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
144	5720	0.96	0.74	1.15	5.94	25.95	-20.01

OUTPUT POWER AND PPSD, Chain 0**OUTPUT POWER AND PPSD, Chain 1**

OUTPUT POWER AND PSD, Chain 2

8.25.4. **AVERAGE OUTPUT POWER (WHOLE
FUNDAMENTAL)**

LIMITS

IC RSS-210 A9.2 (3)

The maximum e.i.r.p. shall not exceed 250 mW or $11 + 10 \log_{10} B$, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band. The Maximum e.i.r.p shall not exceed 1.0W or $17 + 10 \log_{10} B$, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 10.6 dB (including 10 dB pad and .6dB cable) was entered as an offset in the power meter to allow for direct reading of 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)
144	5720	15.70	15.80	15.80	20.54

8.26. 802.11n HT20 STBC 3TX MODE 5.6 GHz BAND, CHANNEL 144

8.26.1. 26 dB BANDWIDTH

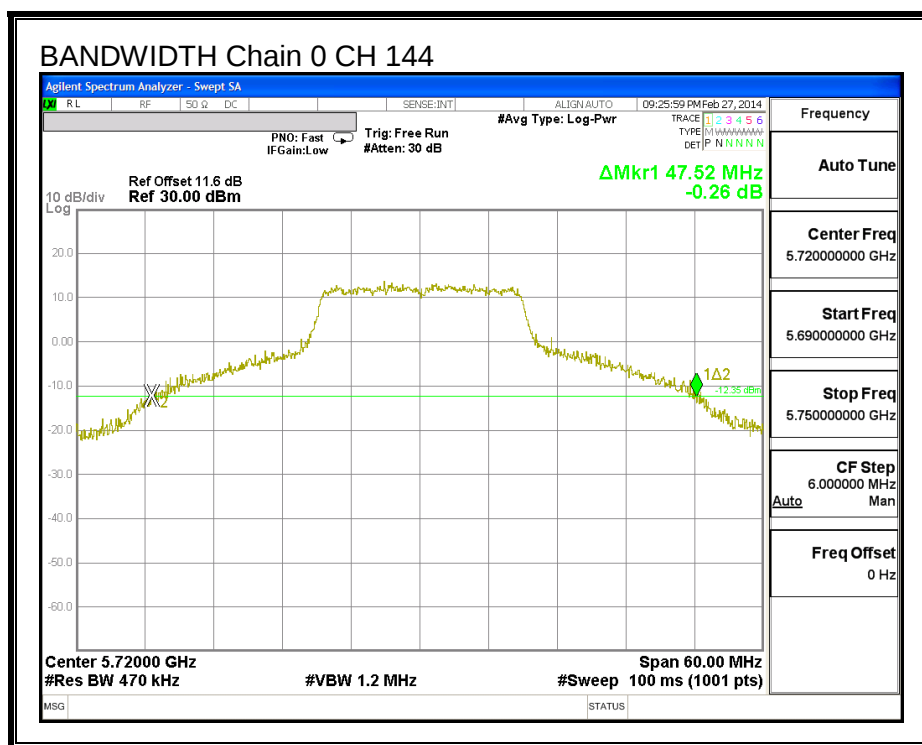
LIMITS

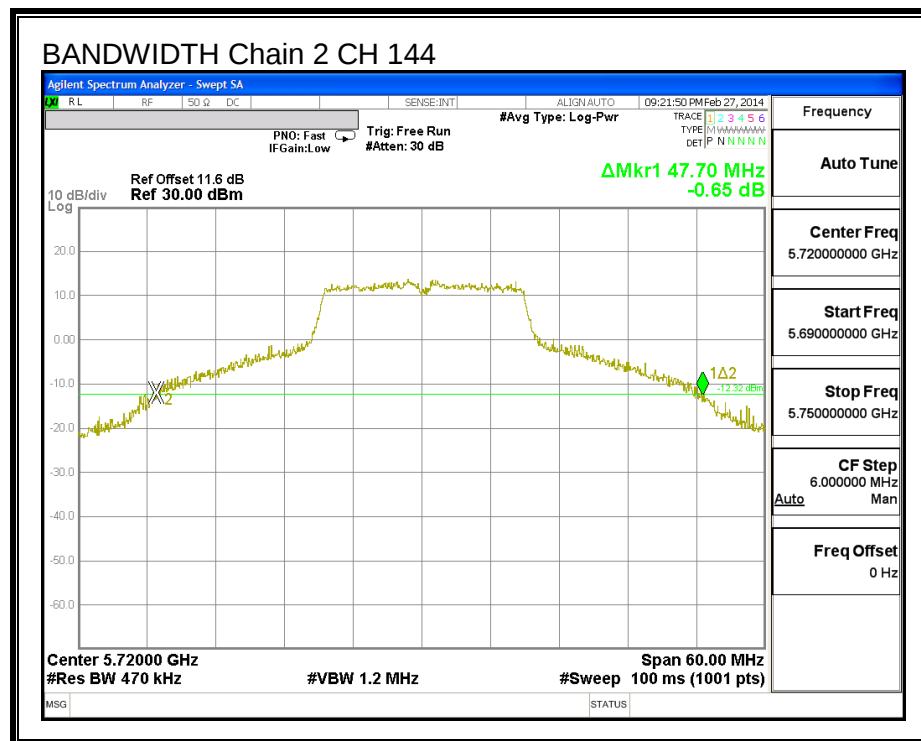
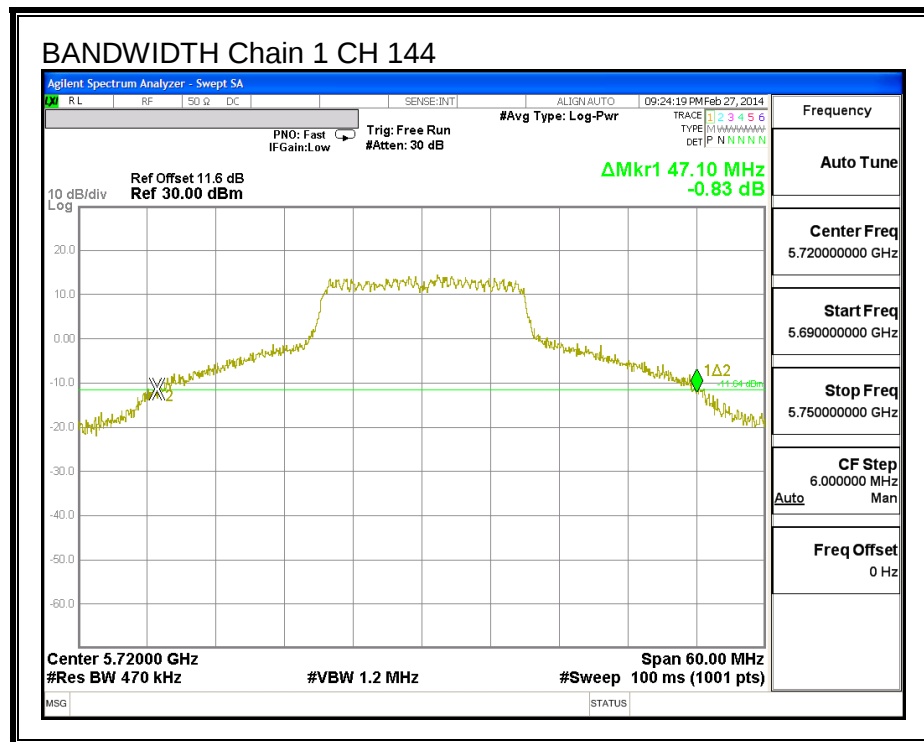
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB BW Chain 0 (MHz)	26 dB BW Chain 1 (MHz)	26 dB BW Chain 2 (MHz)
144	5720	47.52	47.10	47.70

26 dB BANDWIDTH





8.26.2. **99% BANDWIDTH**

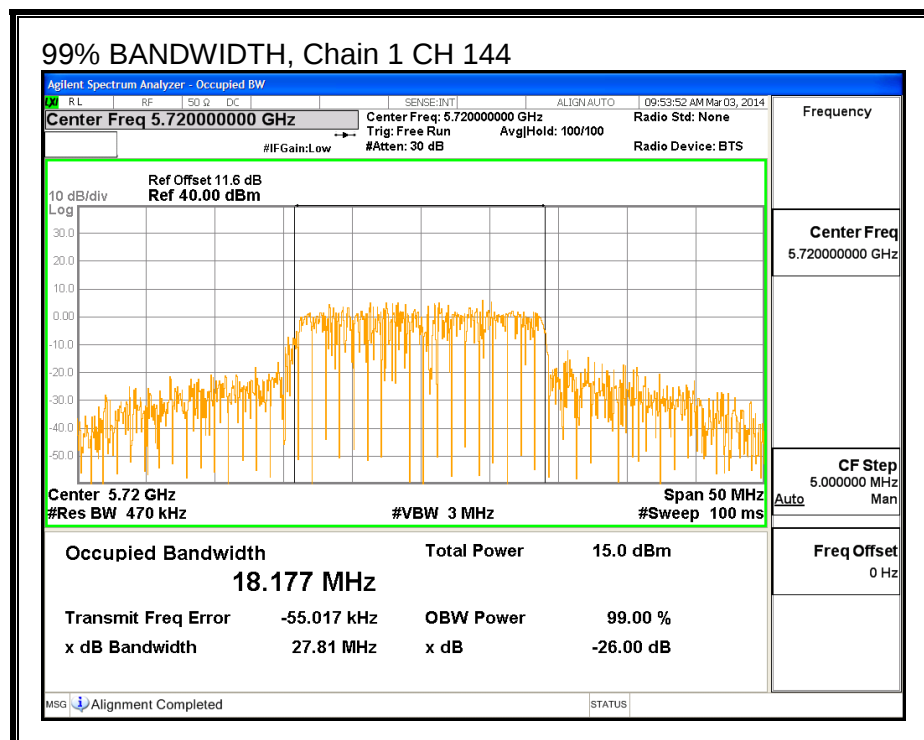
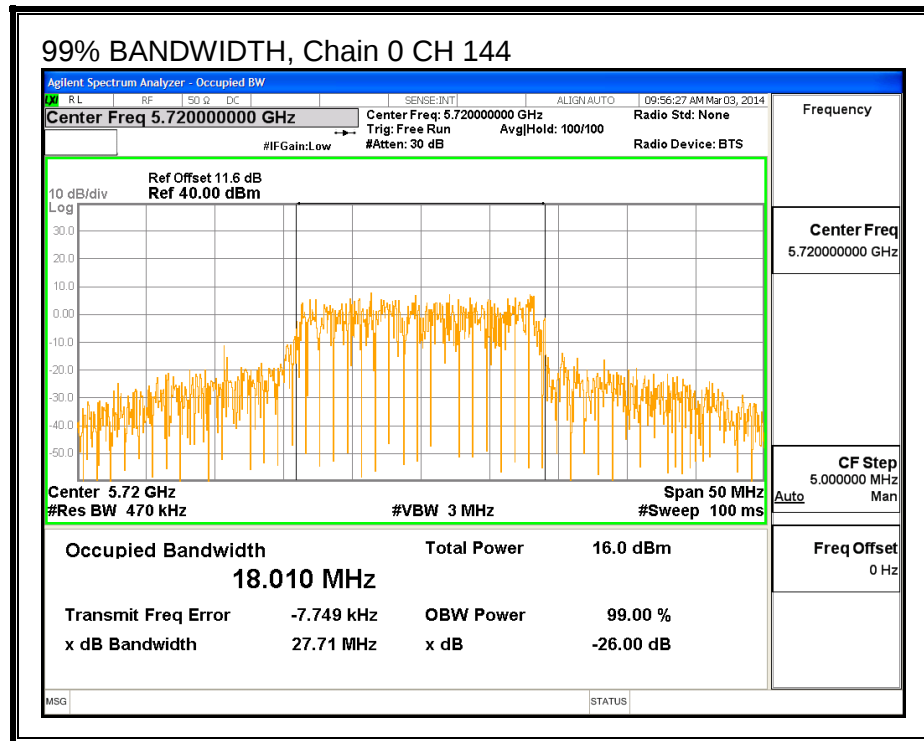
LIMITS

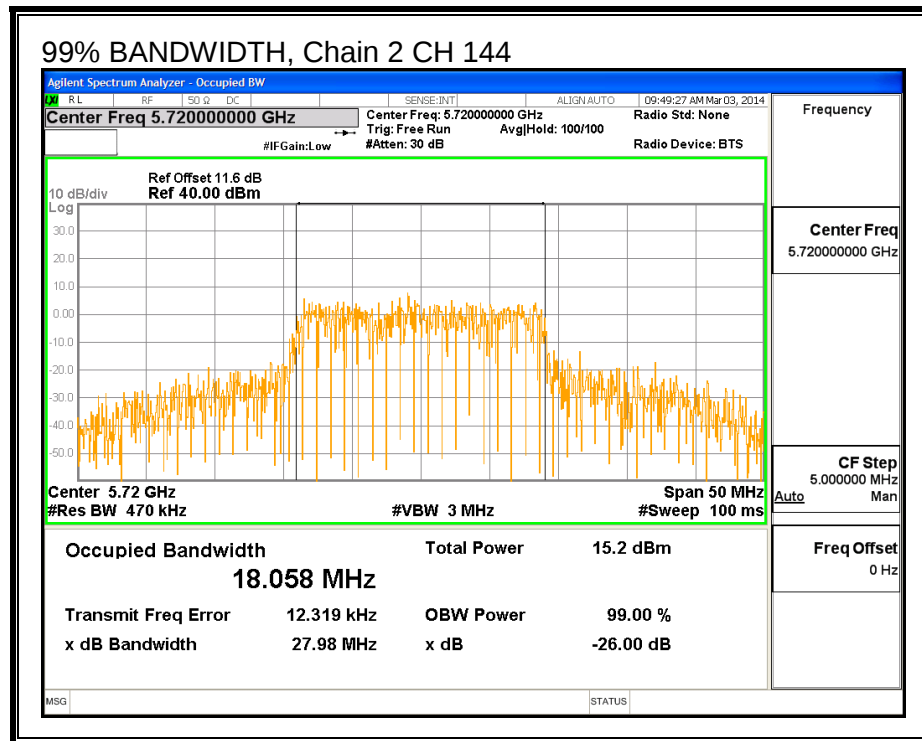
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)	99% BW Chain 2 (MHz)
144	5720	18.010	18.177	18.058

99% BANDWIDTH





8.26.3. **OUTPUT POWER AND PPSD**

LIMITS

IC RSS-210 A9.2 (3)

The maximum e.i.r.p. shall not exceed 250 mW or $11 + 10 \log_{10} B$, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band. The Maximum e.i.r.p shall not exceed 1.0W or $17 + 10 \log_{10} B$, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.

DIRECTIONAL ANTENNA GAIN

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

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Chain 2 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
5.03	6.66	3.94	5.36

RESULTS

For UNII BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
144	5720	28.55	14.005	5.36

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
144	5720	24.00	22.46	28.46	22.46	11.00	11.00	11.00

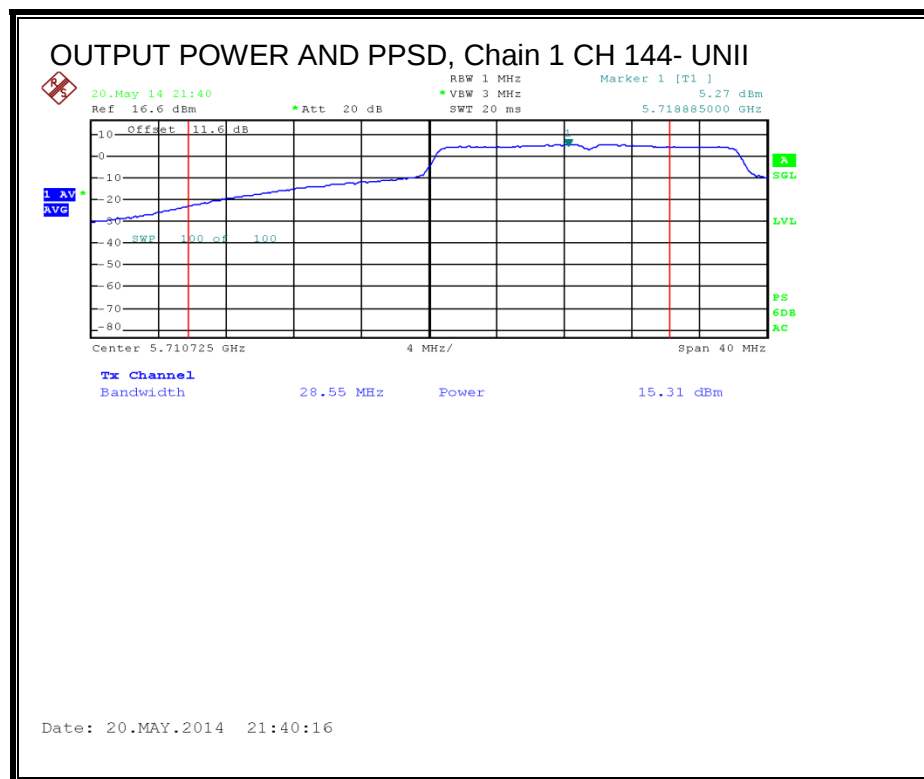
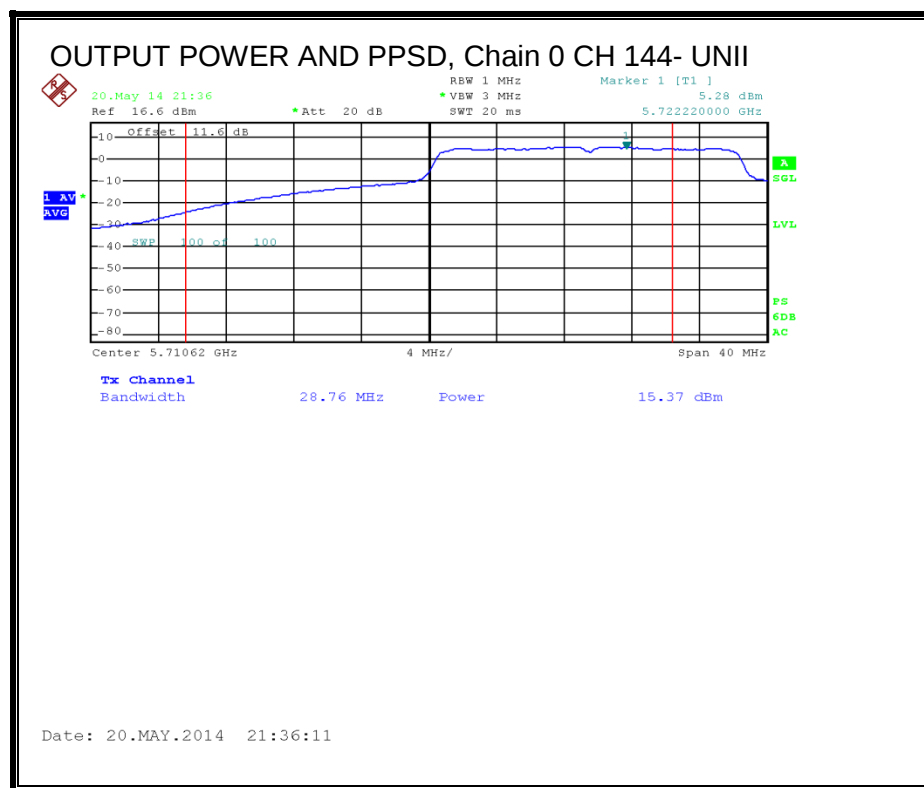
Duty Cycle CF (dB)	0.21	Included in Calculations of Corr'd PPSD
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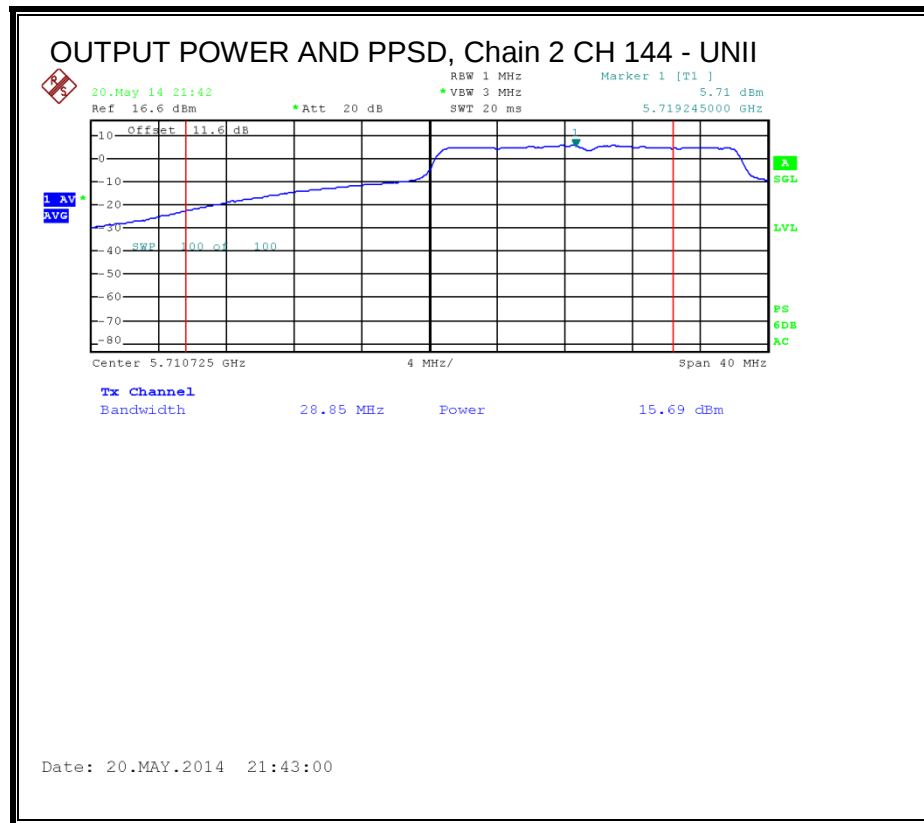
Output Power Results

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	15.37	15.31	15.69	20.44	22.46	-2.02

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Chain 1 Meas PPSD (dBm)	Chain 2 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
144	5720	5.28	5.27	5.71	10.41	11.00	-0.59

PPSD and AVE POWER



FOR UNII-3 BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
144	5720	18.55	4.005	5.36

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
144	5720	30.00	17.03	23.03	30.00	30.00	11.00	11.00

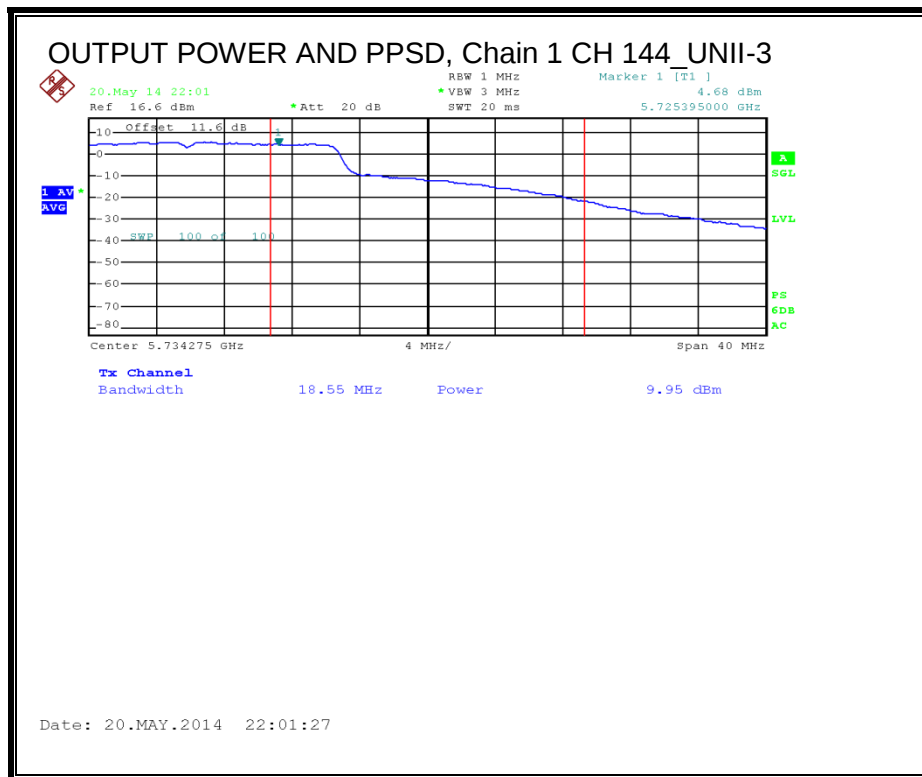
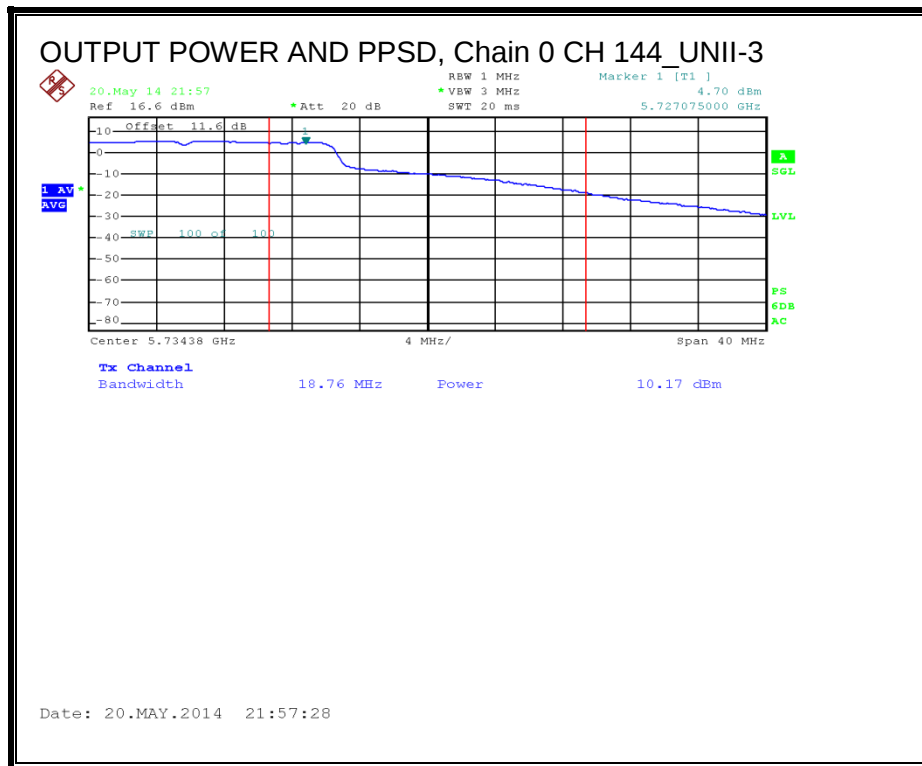
Duty Cycle CF (dB)	0.21	Included in Calculations of Corr'd PPSD
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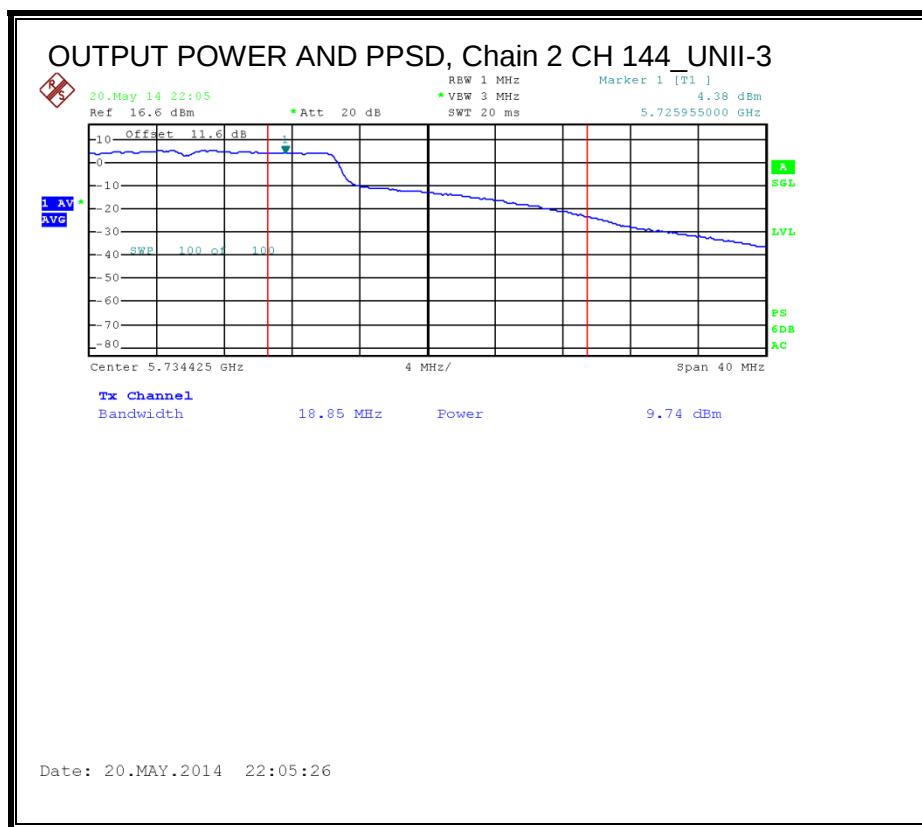
Output Power Results

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	10.17	9.95	9.74	14.94	30.00	-15.06

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Chain 1 Meas PPSD (dBm)	Chain 2 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
144	5720	4.70	4.68	4.38	9.57	30.00	-20.43





8.26.4. **AVERAGE OUTPUT POWER (WHOLE
FUNDAMENTAL)**

LIMITS

IC RSS-210 A9.2 (3)

The maximum e.i.r.p. shall not exceed 250 mW or $11 + 10 \log_{10} B$, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band. The Maximum e.i.r.p shall not exceed 1.0W or $17 + 10 \log_{10} B$, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 11.6 dB (including 10 dB pad and 0.6dB cable) was entered as an offset in the power meter to allow for direct reading of power.

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	18.75	18.76	18.79	23.54

8.27 802.11n HT20 BF MODE IN THE 5.6GHz BAND, CHANNEL 144

8.27.1. OUTPUT POWER AND PPSD

LIMITS

IC RSS-210 A9.2 (3)

The maximum e.i.r.p. shall not exceed 250 mW or $11 + 10 \log_{10} B$, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band. The Maximum e.i.r.p shall not exceed 1.0W or $17 + 10 \log_{10} B$, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.

DIRECTIONAL ANTENNA GAIN

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

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Chain 2 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
5.03	6.66	3.94	10.05

RESULTS

For UNII BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PPSP (dBi)
144	5720	26.81	16.460	10.05	10.05

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSP Limit (dBm)	IC PSD Limit (dBm)	PPSP Limit (dBm)
144	5720	19.95	23.16	29.16	19.11	6.95	11.00	6.95

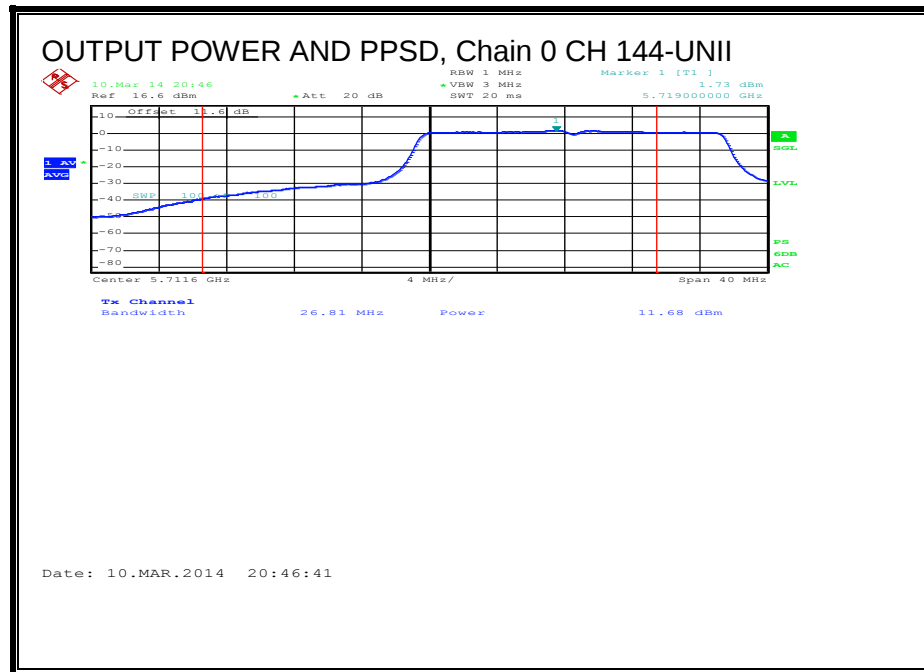
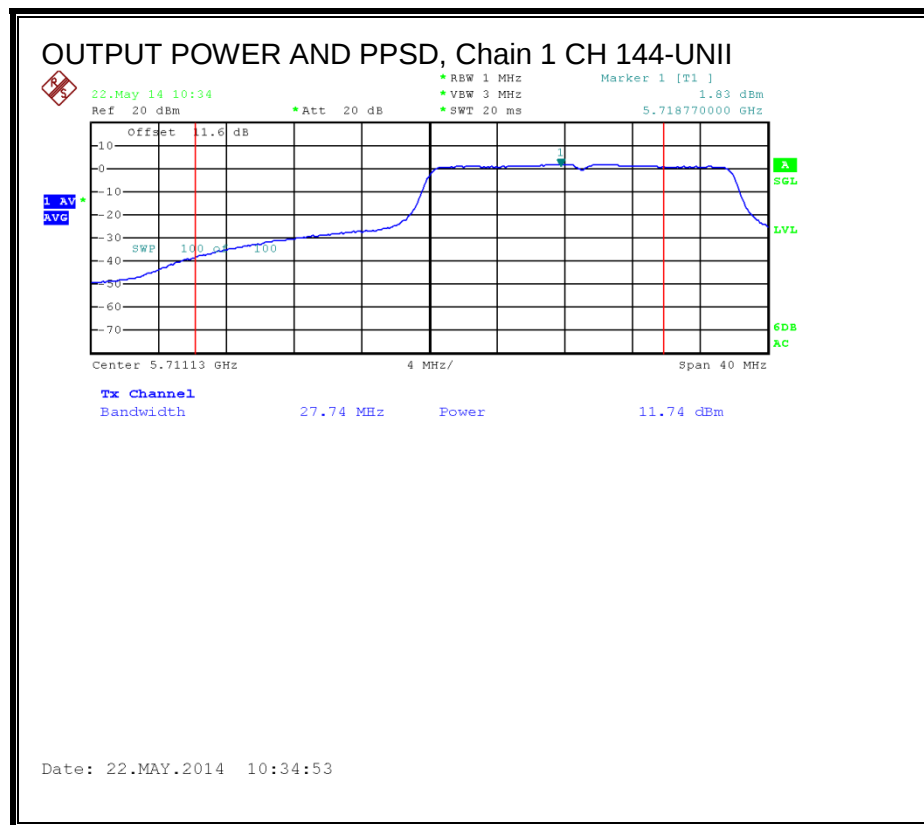
Duty Cycle CF (dB)	0.22	Included in Calculations of Corr'd PPSP
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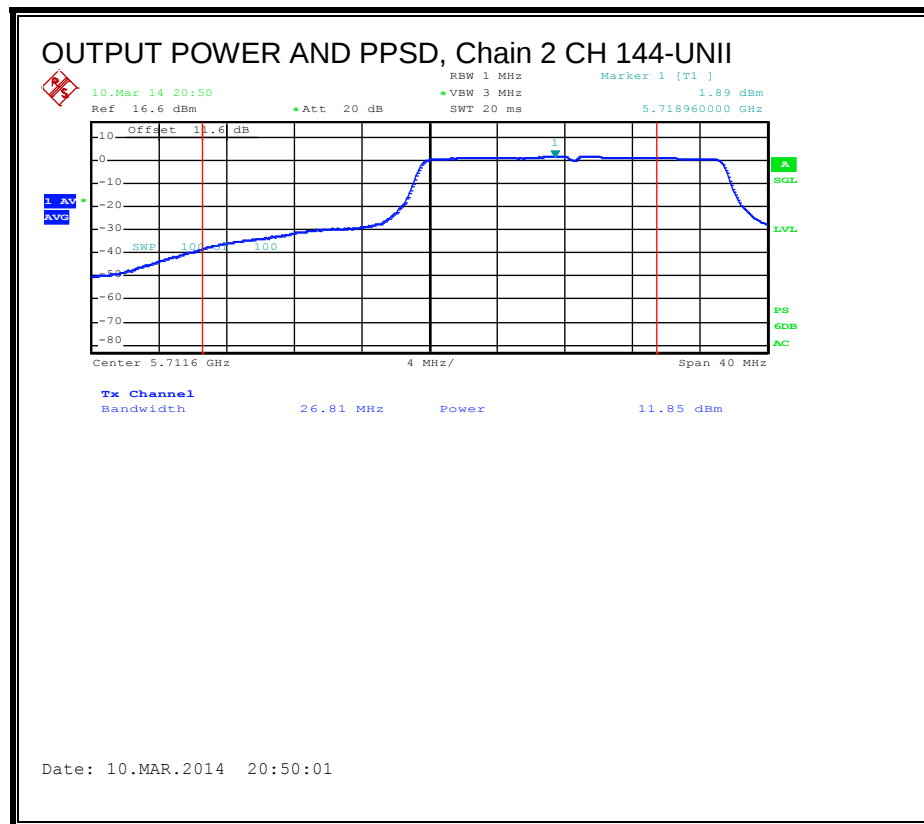
Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Chain 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
144	5720	11.68	11.74	11.85	16.75	19.11	-2.37

PPSP Results

Channel	Frequency (MHz)	Chain 0 Meas PPSP (dBm)	Chain 1 Meas PPSP (dBm)	Chain 2 Meas PPSP (dBm)	Total Corr'd PPSP (dBm)	PPSP Limit (dBm)	PPSP Margin (dB)
144	5720	1.73	1.83	1.89	6.81	6.95	-0.14

OUTPUT POWER AND PPSD, Chain 0**OUTPUT POWER AND PPSD, Chain 1**

OUTPUT POWER AND PPSD, Chain 2

For UNII-3 BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PPSD (dBi)
144	5720	16.81	6.460	10.05	10.05

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
144	5720	25.95	19.10	25.10	25.95	25.95	11.00	11.00

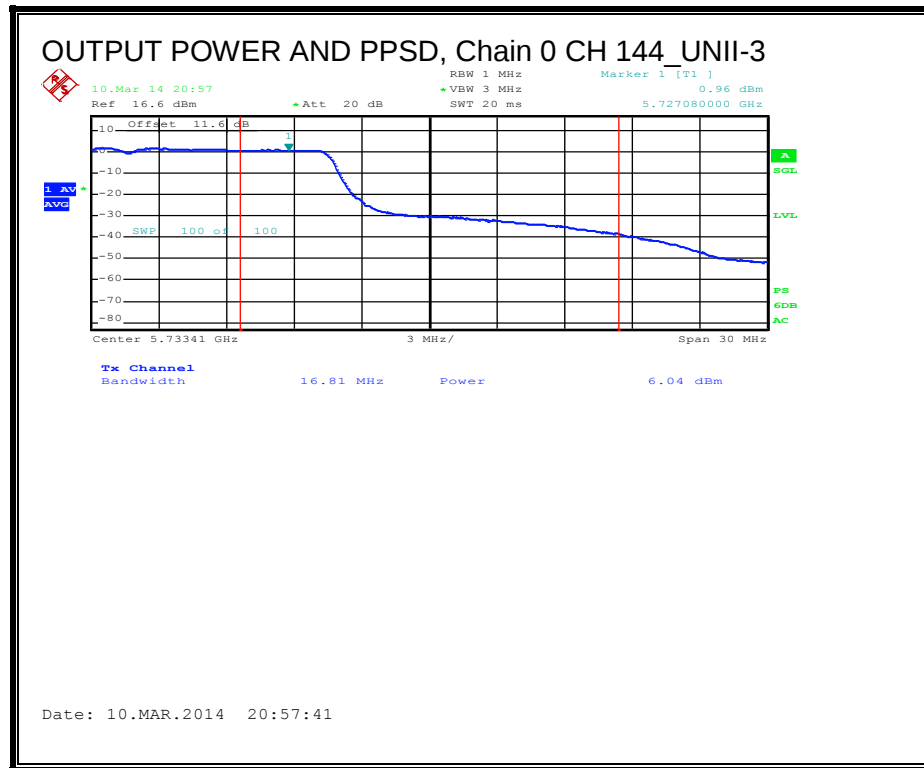
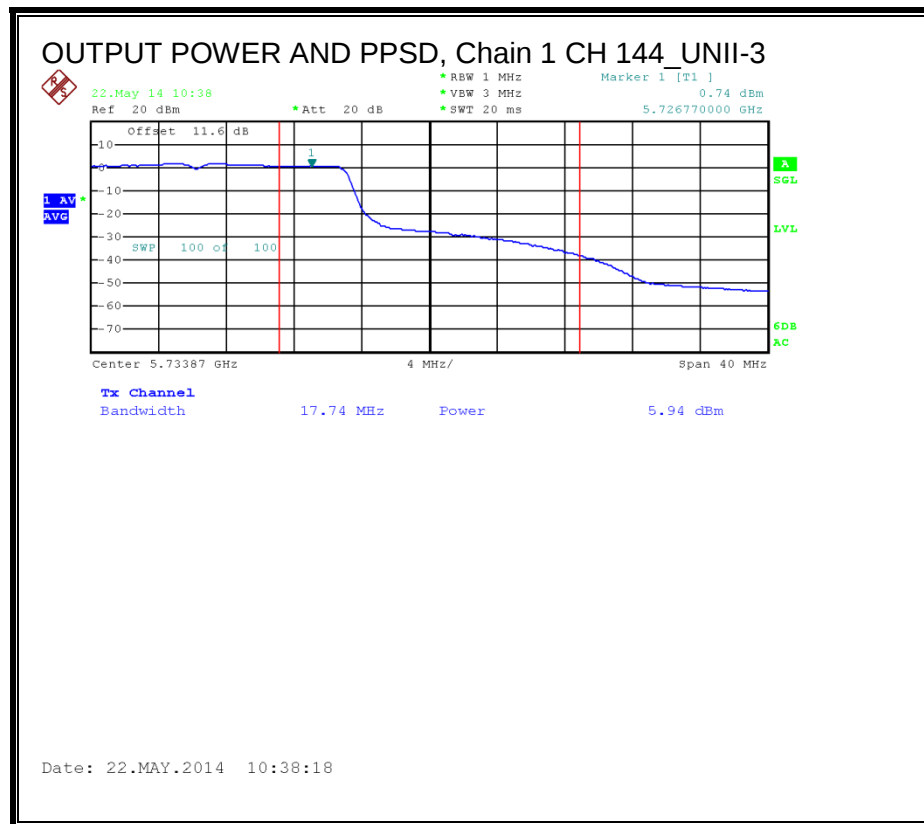
Duty Cycle CF (dB)	0.22	Included in Calculations of Corr'd PPSD
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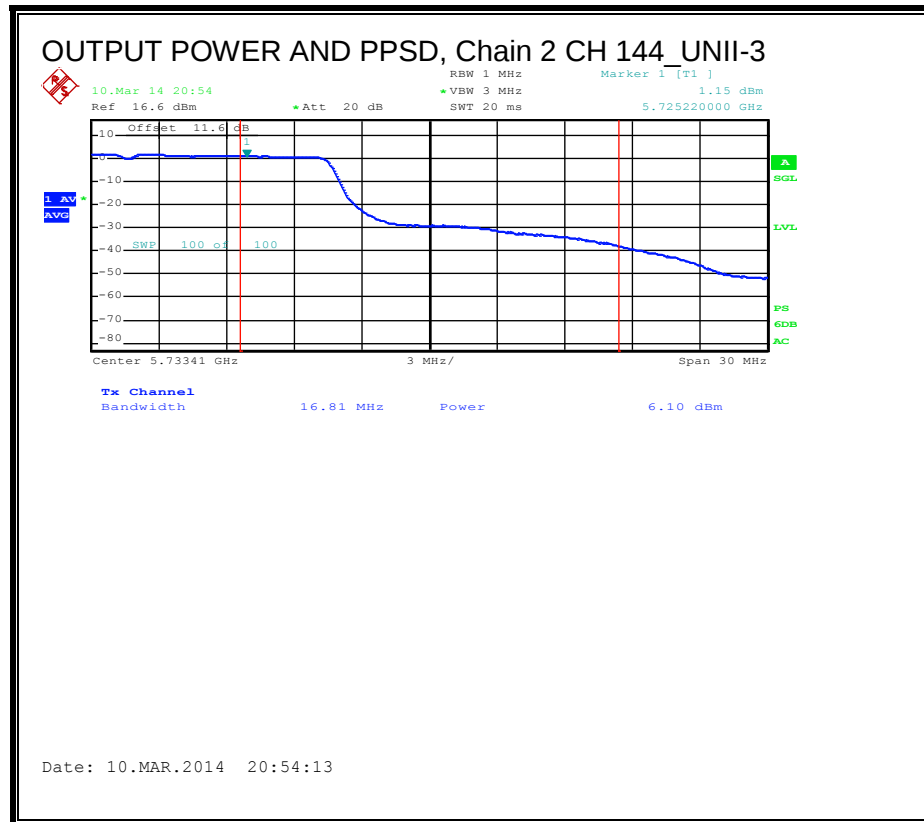
Output Power Results

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	6.04	5.94	6.10	11.02	25.95	-14.93

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Chain 1 Meas PPSD (dBm)	Chain 2 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
144	5720	0.96	0.74	1.15	5.94	25.95	-20.01

OUTPUT POWER AND PPSD, Chain 0**OUTPUT POWER AND PPSD, Chain 1**

OUTPUT POWER AND PPSD, Chain 2

8.27.2. **AVERAGE OUTPUT POWER (WHOLE
FUNDAMENTAL)**

LIMITS

IC RSS-210 A9.2 (3)

The maximum e.i.r.p. shall not exceed 250 mW or $11 + 10 \log_{10} B$, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band. The Maximum e.i.r.p shall not exceed 1.0W or $17 + 10 \log_{10} B$, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 10.6 dB (including 10 dB pad and .6dB cable) was entered as an offset in the power meter to allow for direct reading of 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)
144	5720	15.70	15.80	15.80	20.54

8.28.1. OUTPUT POWER

The maximum e.i.r.p. shall not exceed 250 mW or $11 + 10 \log_{10} B$, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band. The Maximum e.i.r.p shall not exceed 1.0W or $17 + 10 \log_{10} B$, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.

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

RESULTS

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5510	93.250	45.593	6.66
High	5670	96.625	52.068	6.66

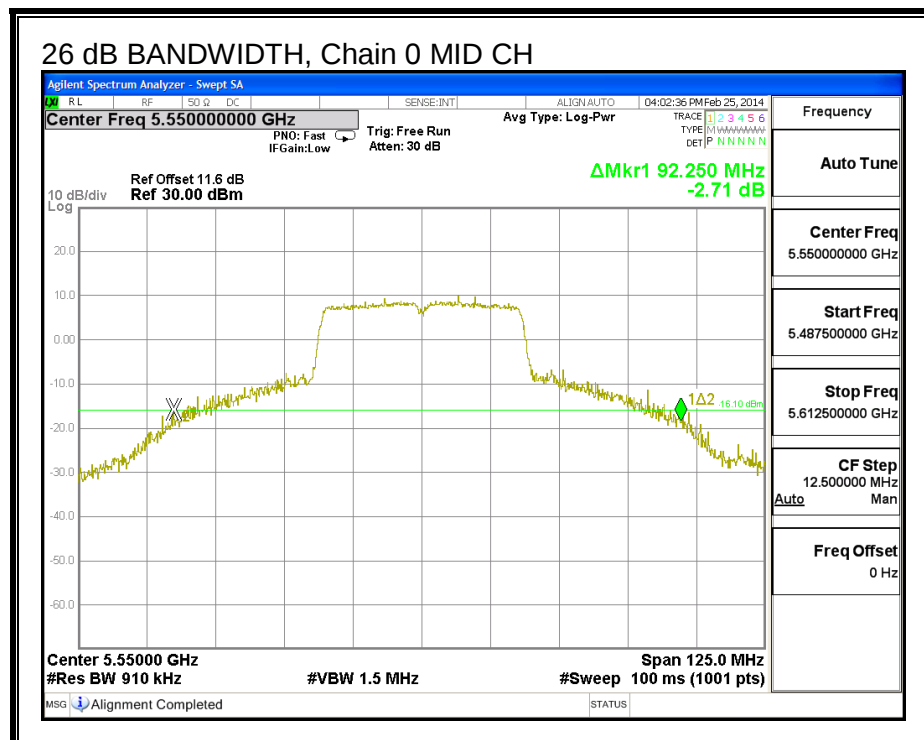
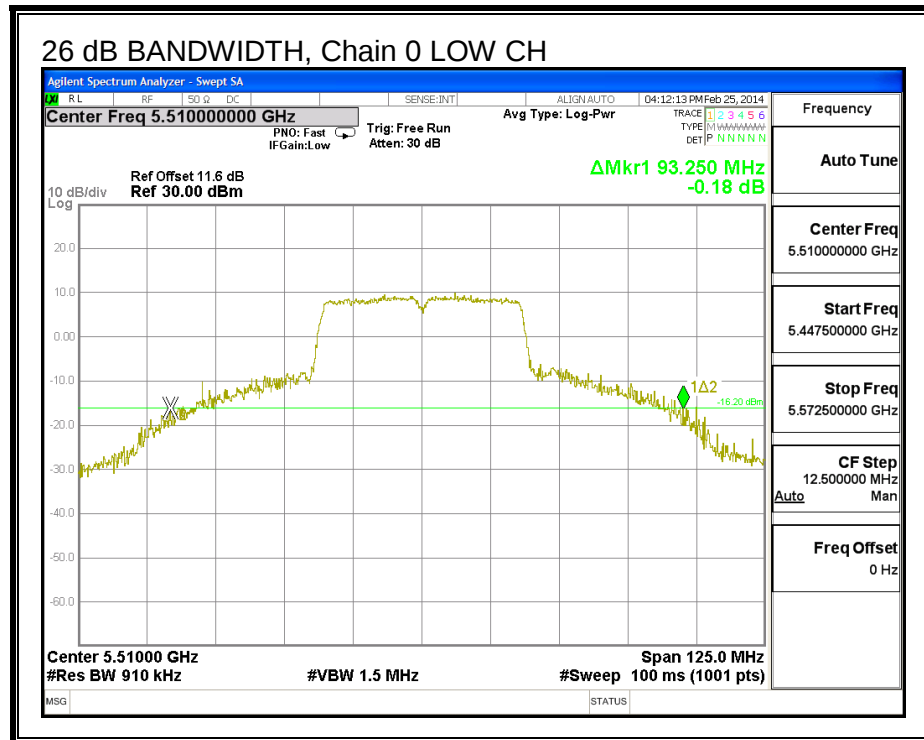
Limits

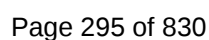
Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)
Low	5510	23.34	24.00	30.00	23.34
High	5670	23.34	24.00	30.00	23.34

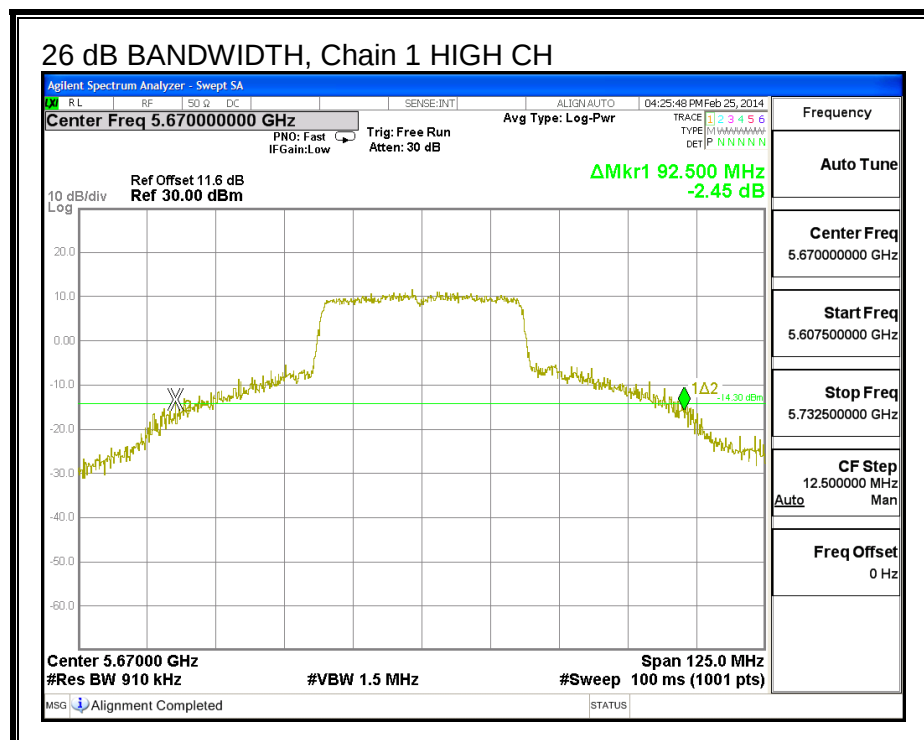
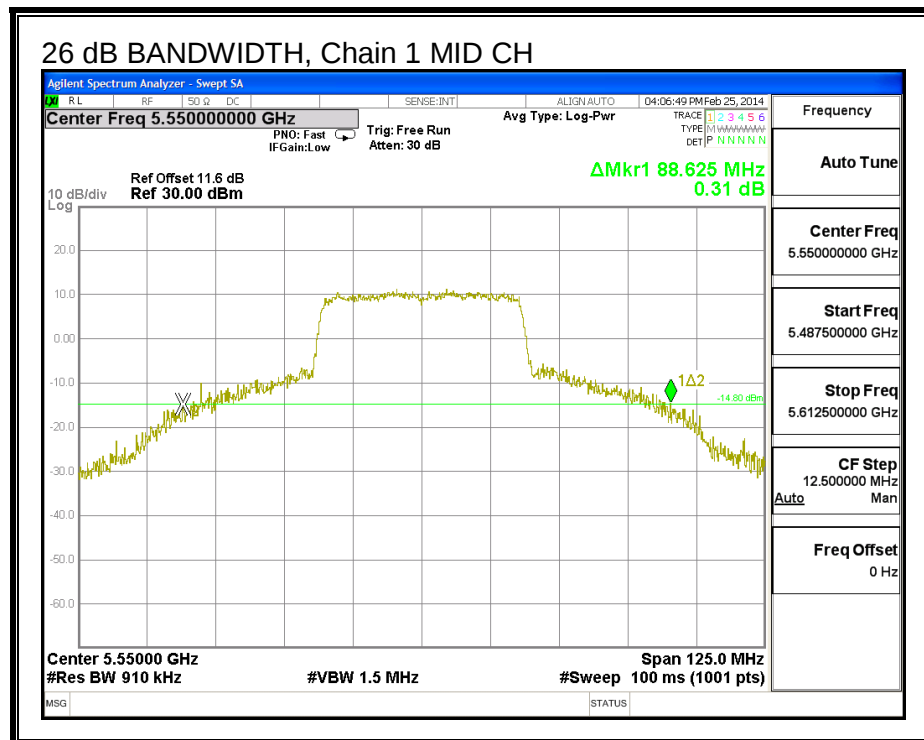
Output Power Results

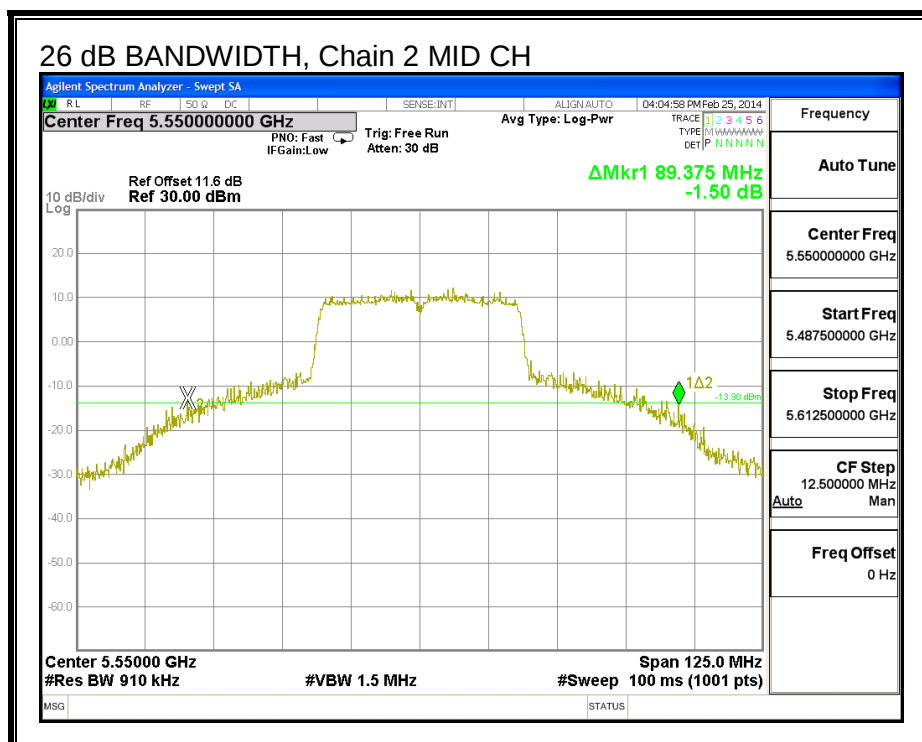
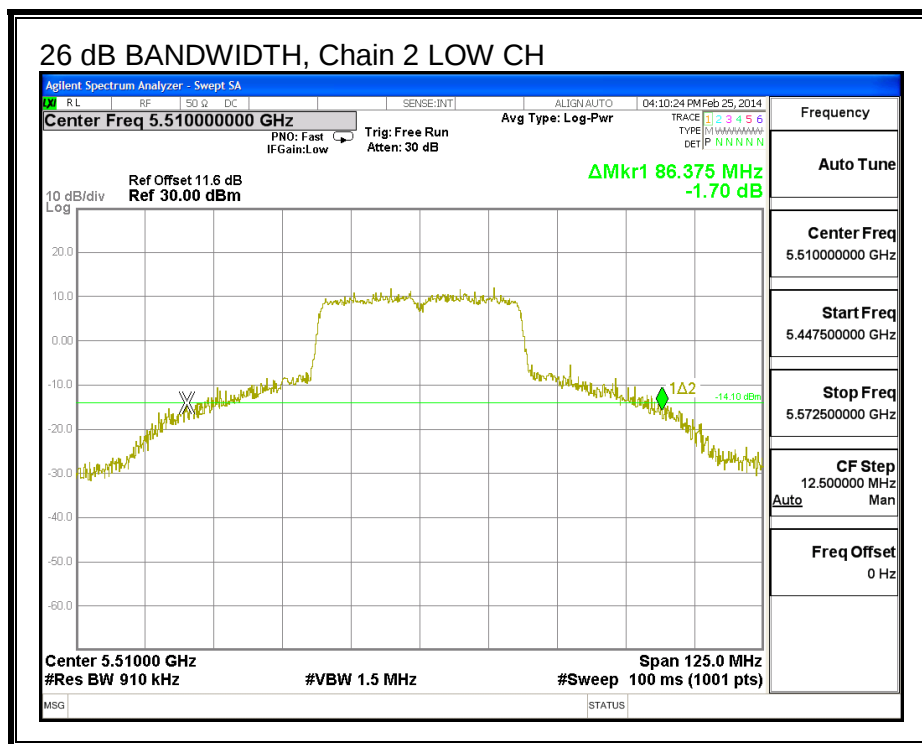
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5510	16.28	16.28	23.34	-7.06
High	5670	18.11	18.11	23.34	-5.23

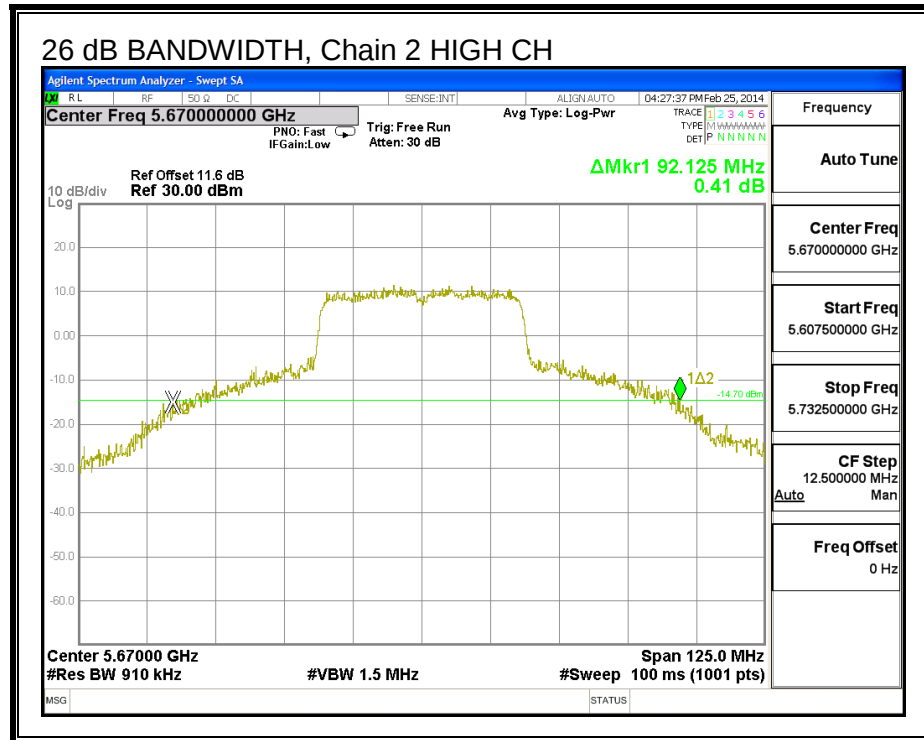
Note: for Chain 0, 26dB & 99% data & plots, see section 802.11n HT40 CDD 3TX MODE IN THE 5.6 GHz BAND







26 dB BANDWIDTH, Chain 2



8.29.2. **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	45.593	46.859	42.196
Mid	5550	45.289	44.887	44.380
High	5670	52.068	47.877	50.215

99% BANDWIDTH, Chain 0