

8.17. 802.11a SISO MODE IN THE 5.3 GHz BAND

Note: Covered by 802.11n HT20 SISO CDD MODE

8.18. 802.11n HT20 CHAIN 0 MODE IN THE 5.3 GHz BAND

8.18.1. 26 dB BANDWIDTH

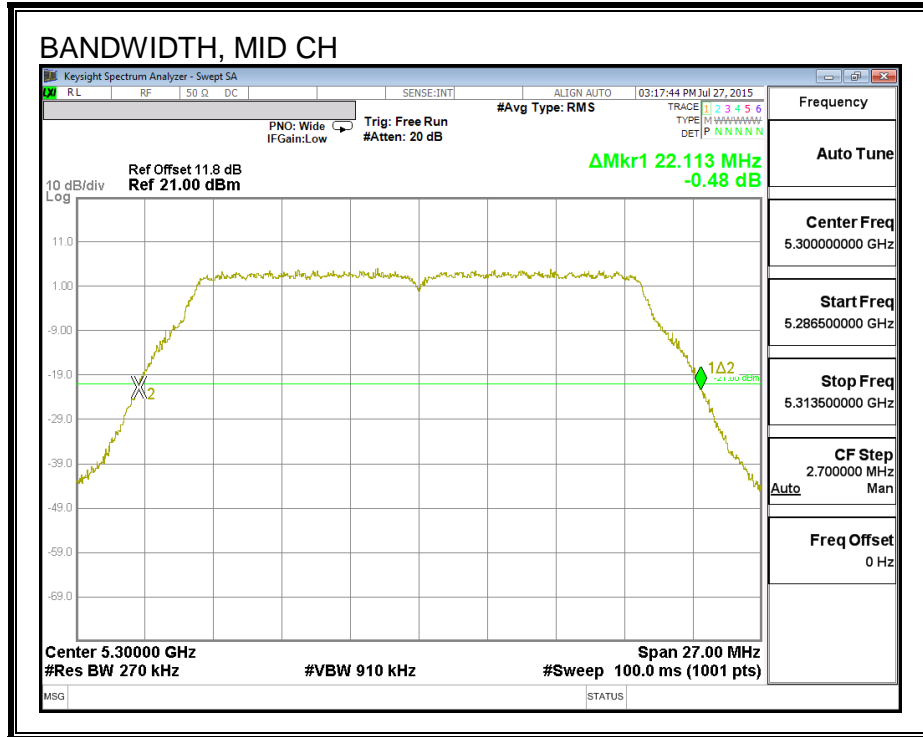
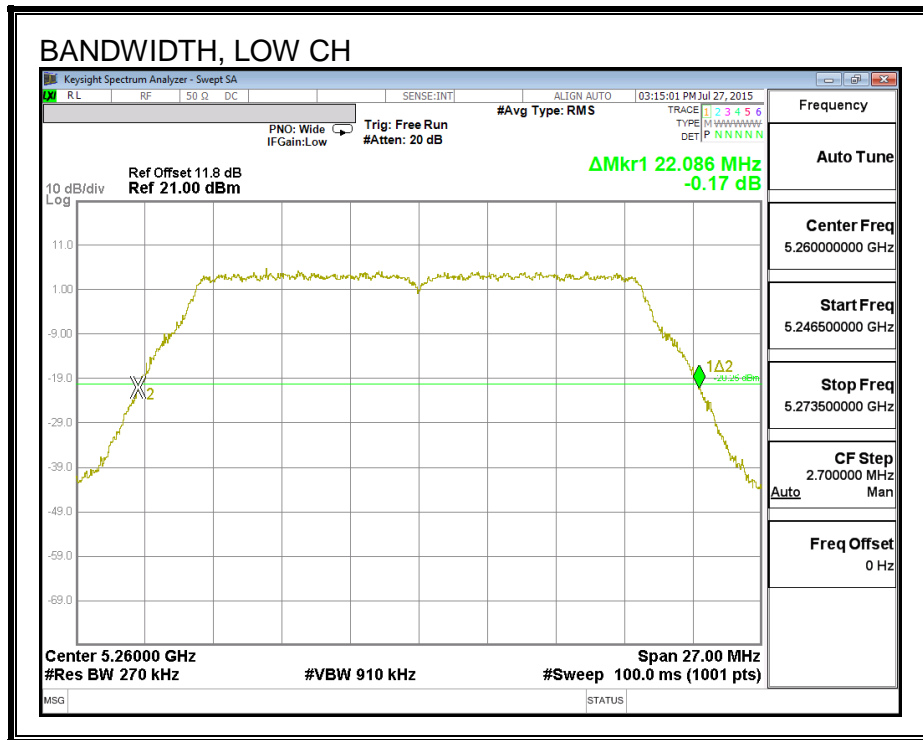
LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5260	22.09
Mid	5300	22.11
High	5320	22.14

26 dB BANDWIDTH



8.18.2. 99% BANDWIDTH

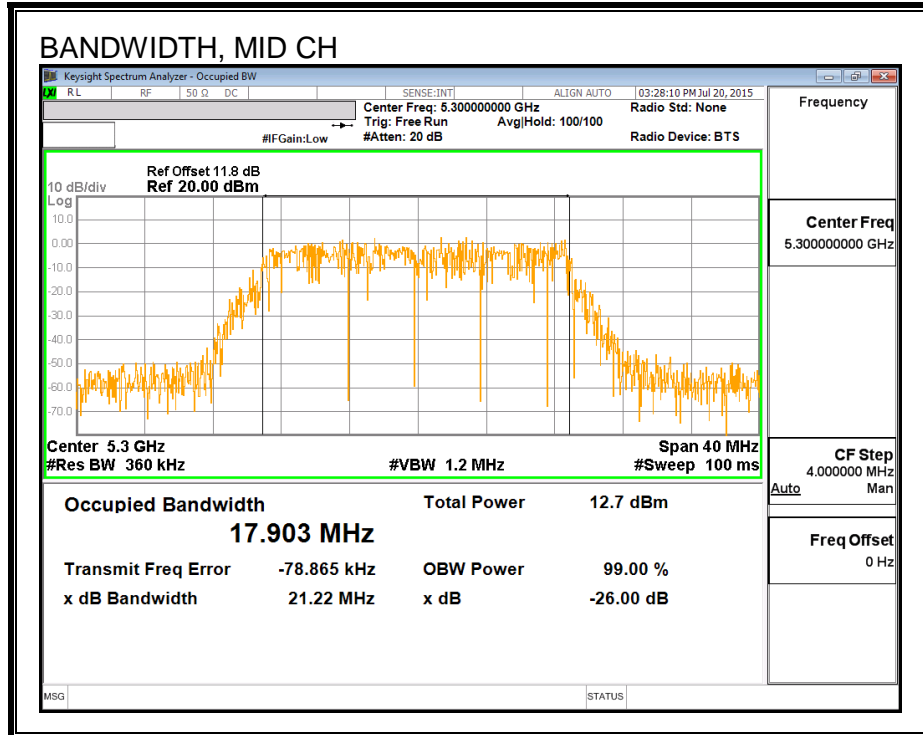
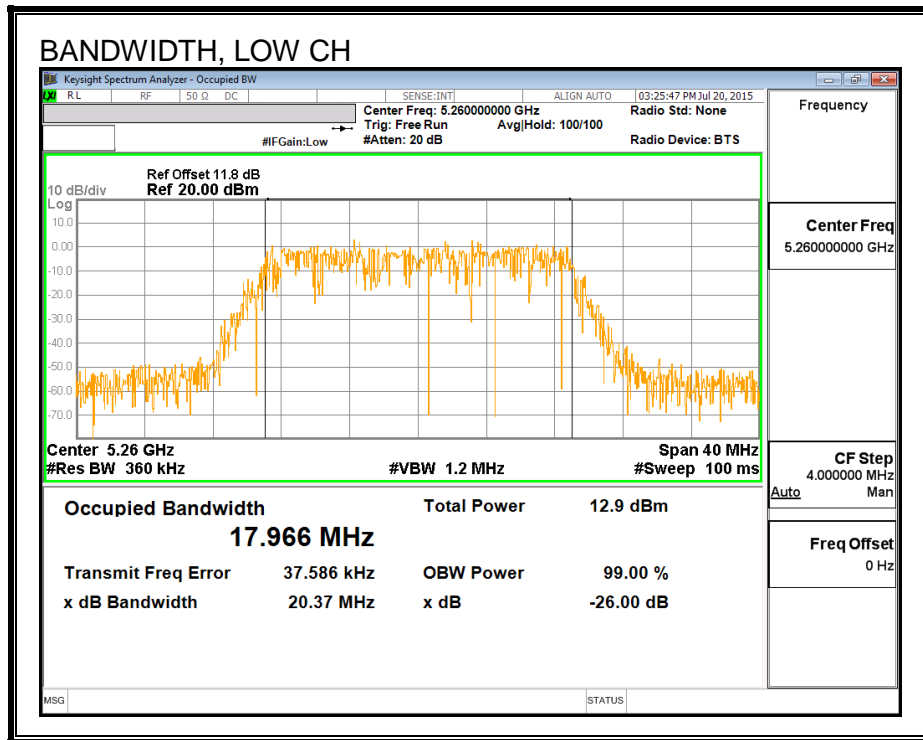
LIMITS

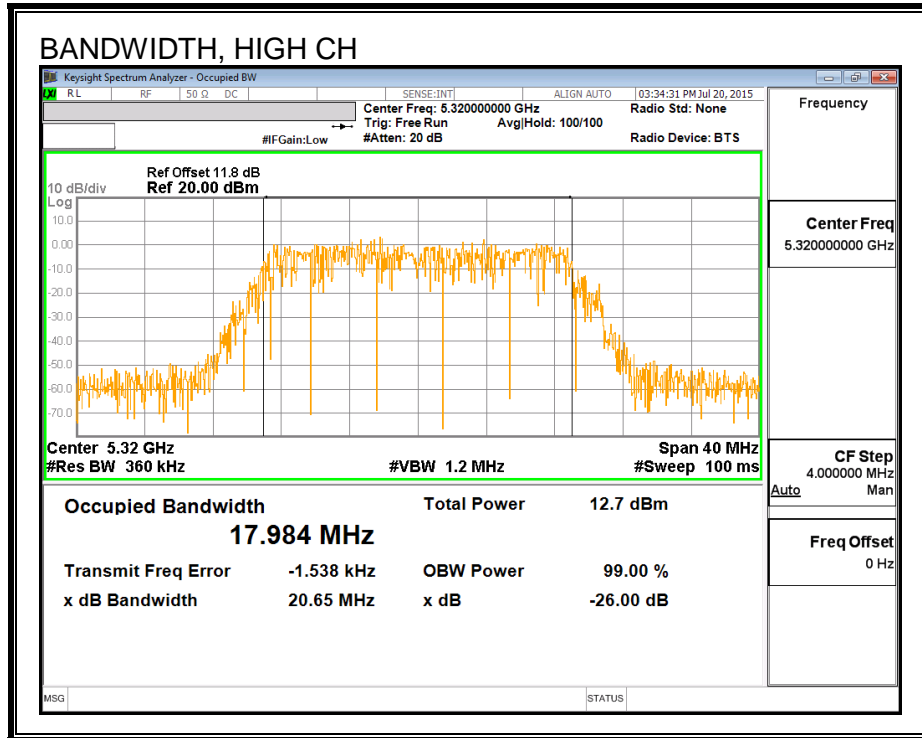
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5260	17.966
Mid	5300	17.903
High	5320	17.984

99% BANDWIDTH





8.18.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	Power (dBm)
Low	5260	16.38
Mid	5300	16.38
High	5320	16.31

8.18.4. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.25–5.35 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, 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

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

RESULTS

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Low	5260	22.09	17.966	2.30	23.54	11.00
Mid	5300	22.11	17.903	2.30	23.53	11.00
High	5320	22.14	17.984	2.30	23.55	11.00

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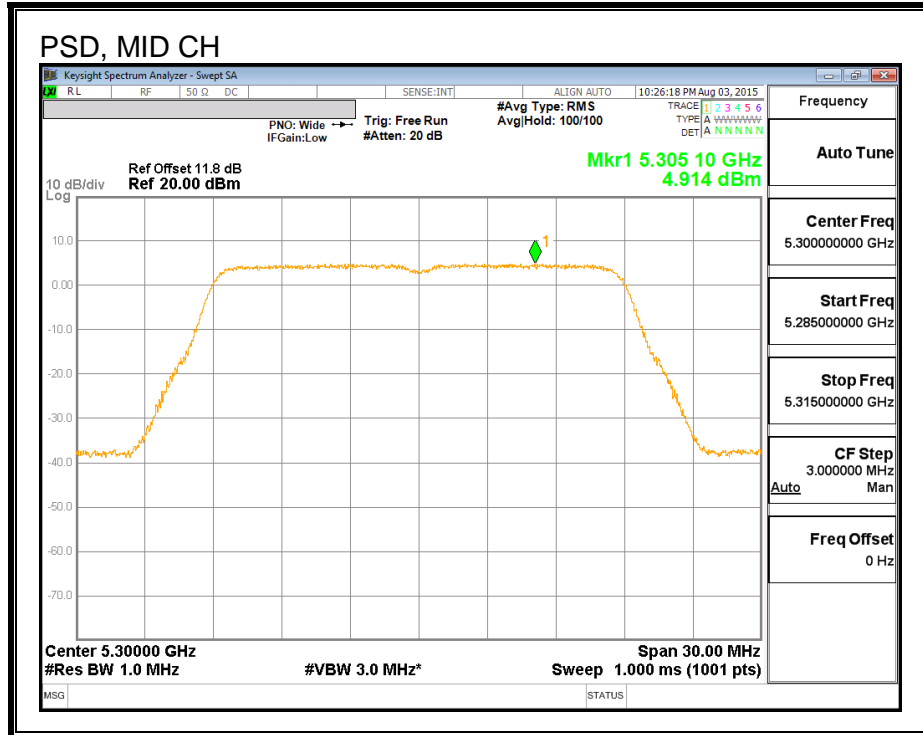
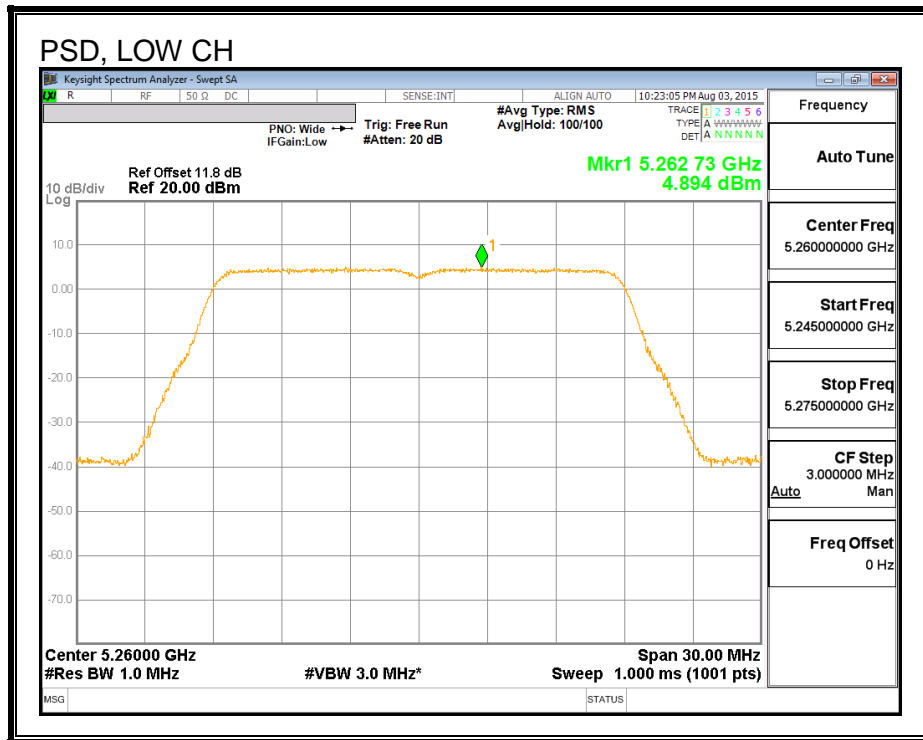
Output Power Results

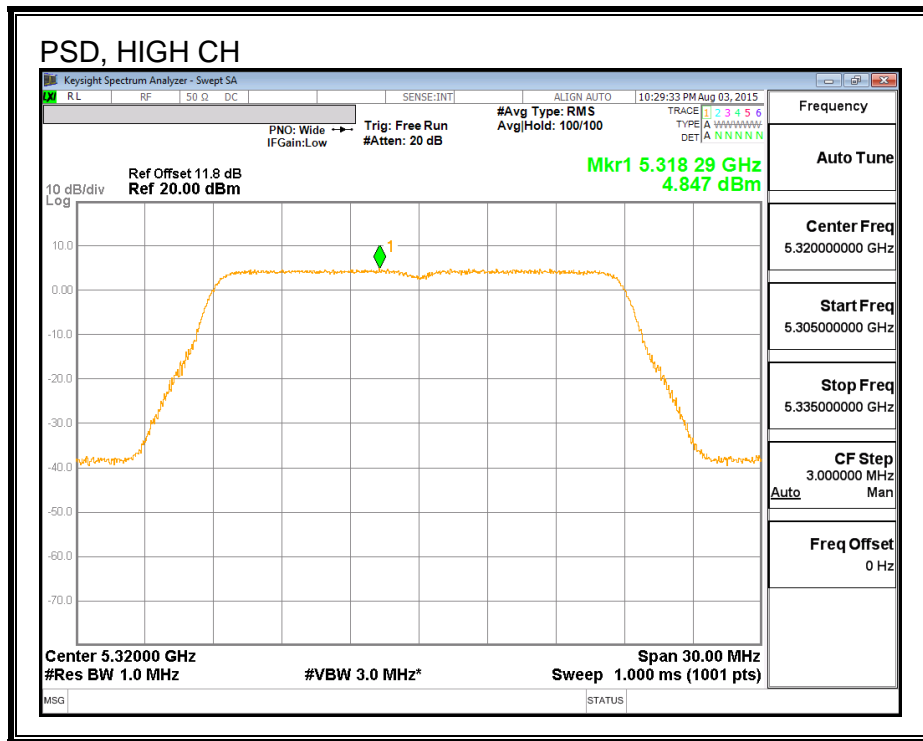
Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5260	16.38	16.38	23.54	-7.16
Mid	5300	16.38	16.38	23.53	-7.15
High	5320	16.31	16.31	23.55	-7.24

PSD Results

Channel	Frequency (MHz)	Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5260	4.89	4.89	11.00	-6.11
Mid	5300	4.91	4.91	11.00	-6.09
High	5320	4.85	4.85	11.00	-6.15

PSD





8.19. 802.11n HT20 CHAIN 1 MODE IN THE 5.3 GHz BAND

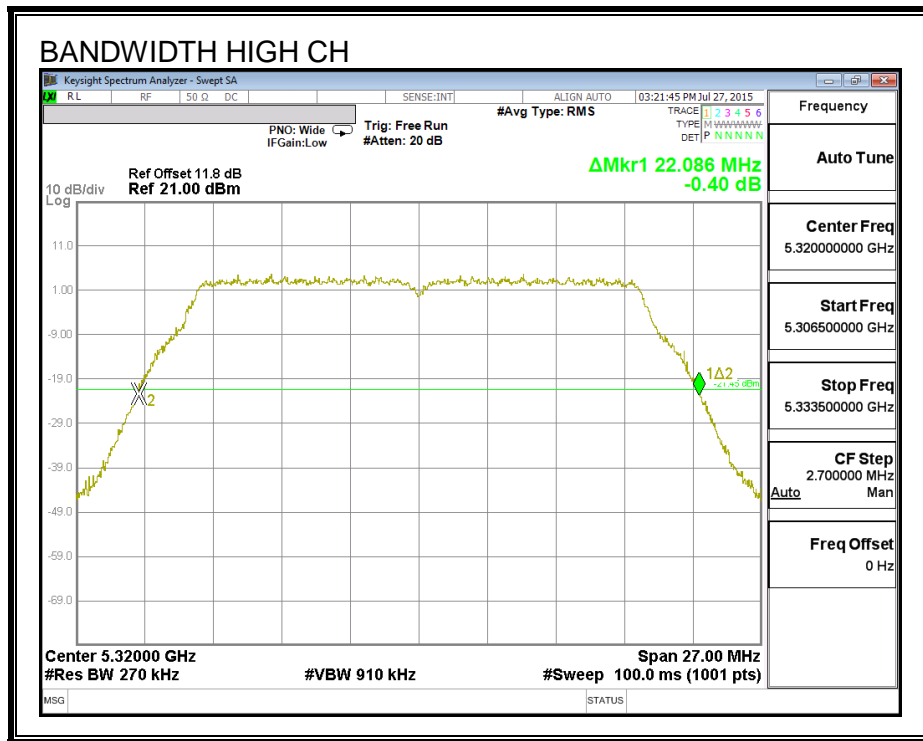
8.19.1. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5260	22.06
Mid	5300	22.01
High	5320	22.09



8.19.2. 99% BANDWIDTH

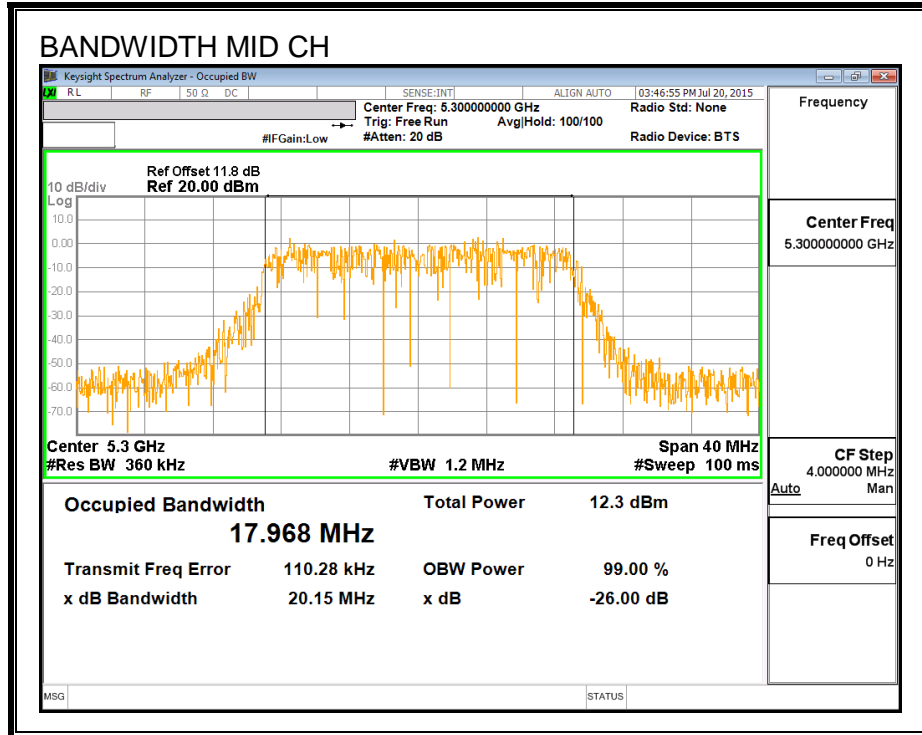
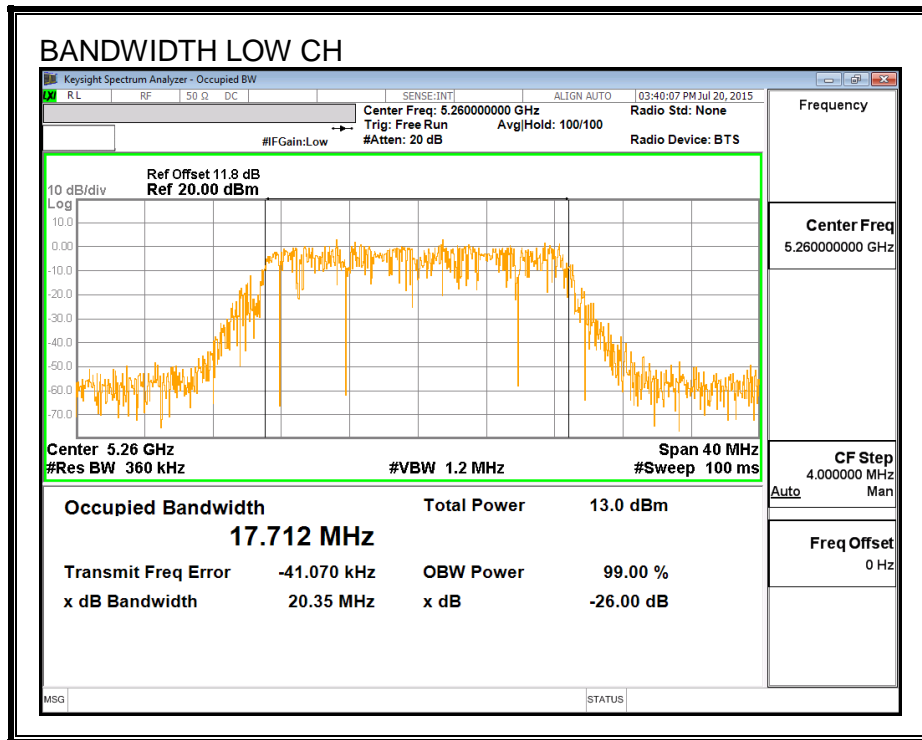
LIMITS

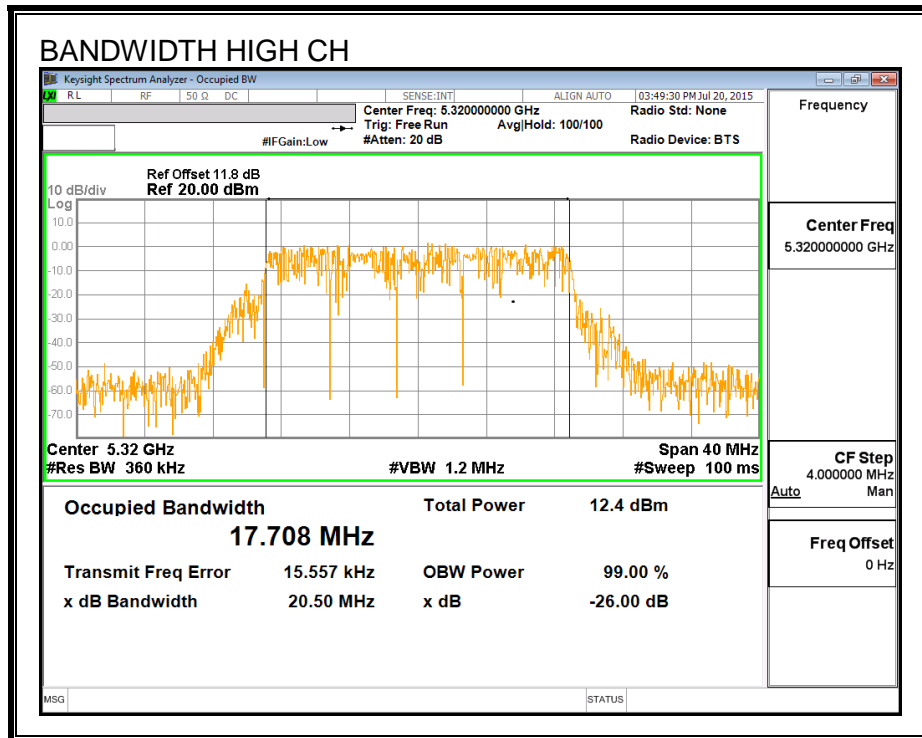
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5260	17.712
Mid	5300	17.968
High	5320	17.708

99% BANDWIDTH





8.19.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	Power (dBm)
Low	5260	16.90
Mid	5300	16.81
High	5320	16.47

8.19.4. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.25–5.35 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, 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

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

RESULTS

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Low	5260	22.06	17.712	2.90	23.48	11.00
Mid	5300	22.01	17.968	2.90	23.54	11.00
High	5320	22.09	17.708	2.90	23.48	11.00

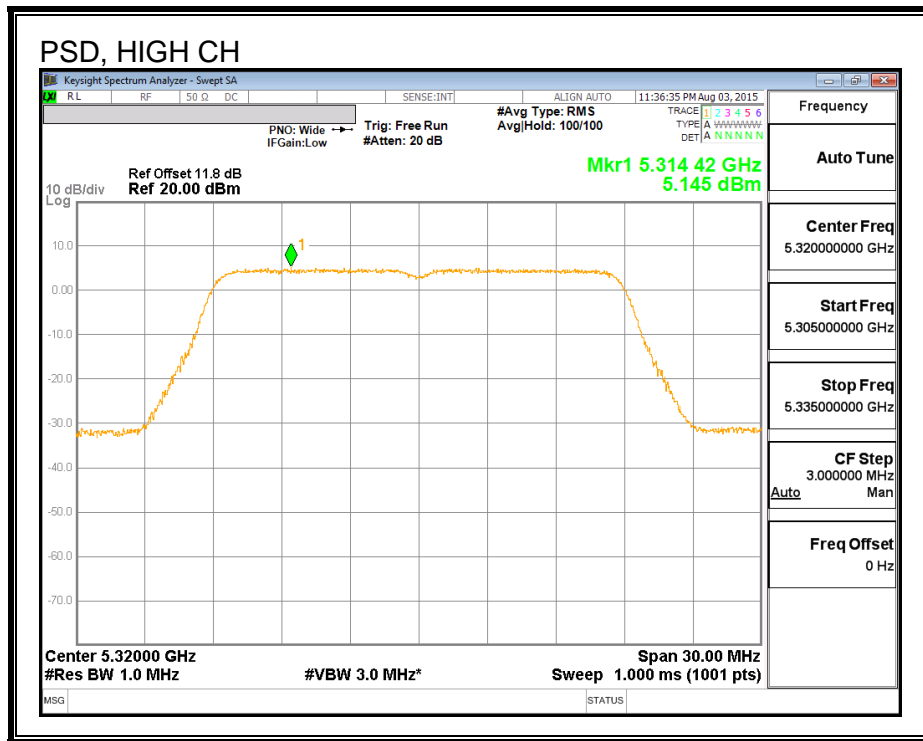
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power & PSD
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Output Power Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5260	16.90	16.90	23.48	-6.58
Mid	5300	16.81	16.81	23.54	-6.73
High	5320	16.47	16.47	23.48	-7.01

PSD Results

Channel	Frequency (MHz)	Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5260	5.46	5.46	11.00	-5.54
Mid	5300	5.55	5.55	11.00	-5.45
High	5320	5.15	5.15	11.00	-5.86



8.20. 802.11a CDD 2TX MODE IN THE 5.3 GHz BAND

Note: Covered by 802.11n HT20 CDD 2TX MODE.

8.21. 802.11n HT20 2Tx CDD MODE IN THE 5.3 GHz BAND

8.21.1. 26 dB BANDWIDTH

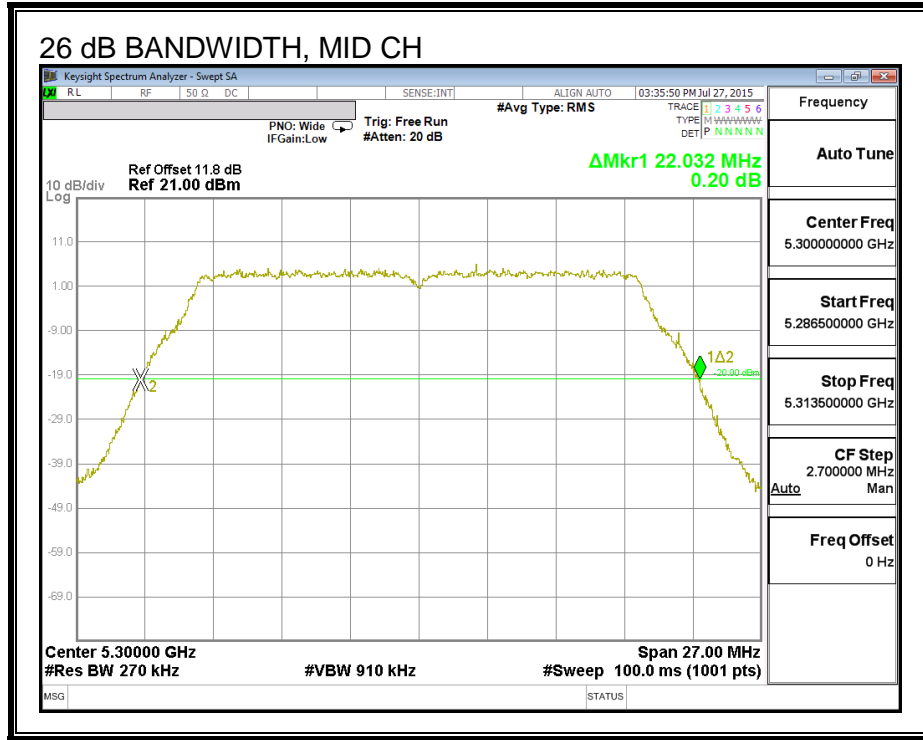
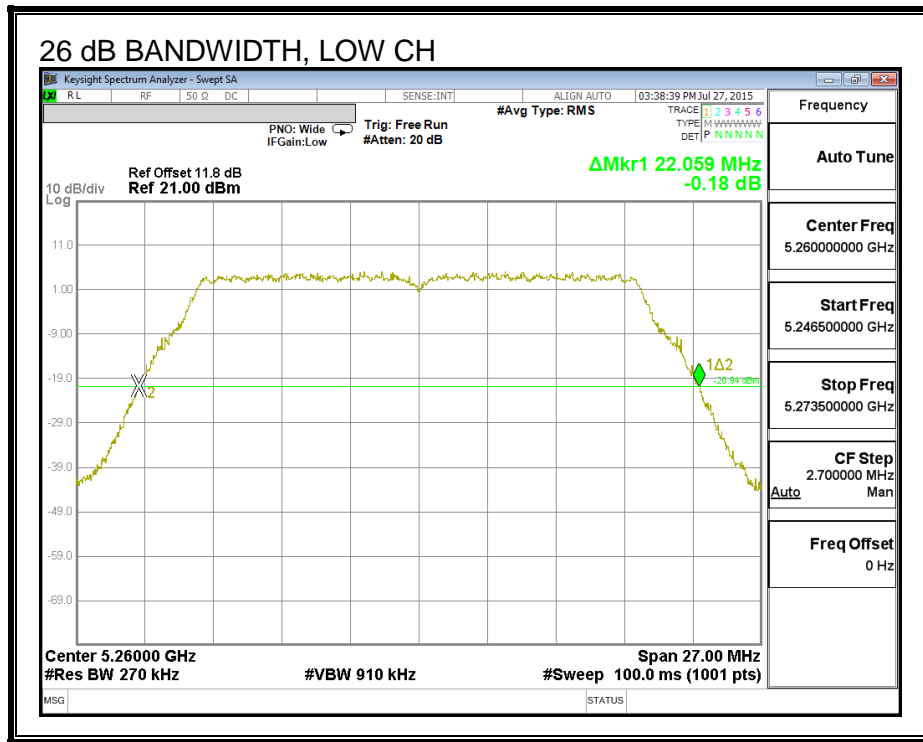
LIMITS

None; for reporting purposes only.

RESULTS

Frequency (MHz)	26 dB BW Chain 0 (MHz)	26 dB BW Chain 1 (MHz)
5260	22.06	22.01
5300	22.03	22.01
5320	22.06	22.01

26 DB BANDWIDTH, CHAIN 0



8.21.2. 99% BANDWIDTH

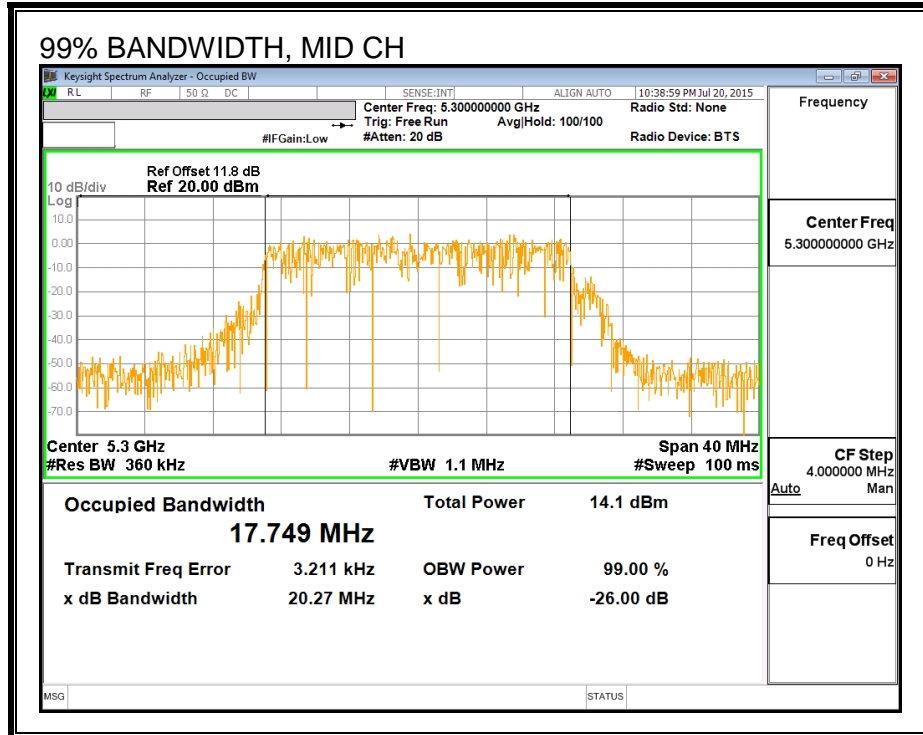
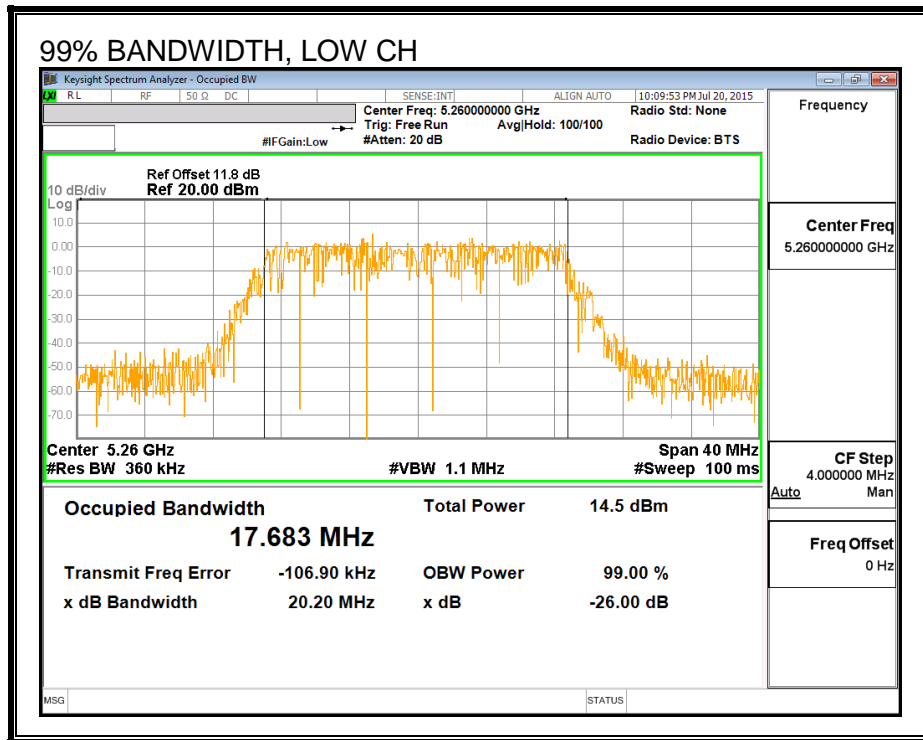
LIMITS

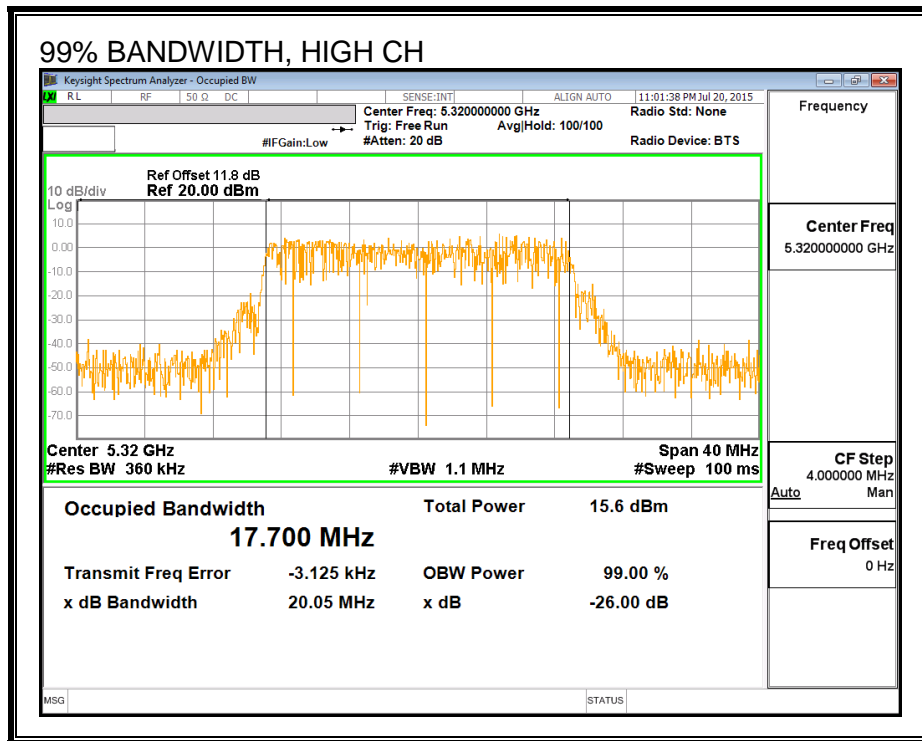
None; for reporting purposes only.

RESULTS

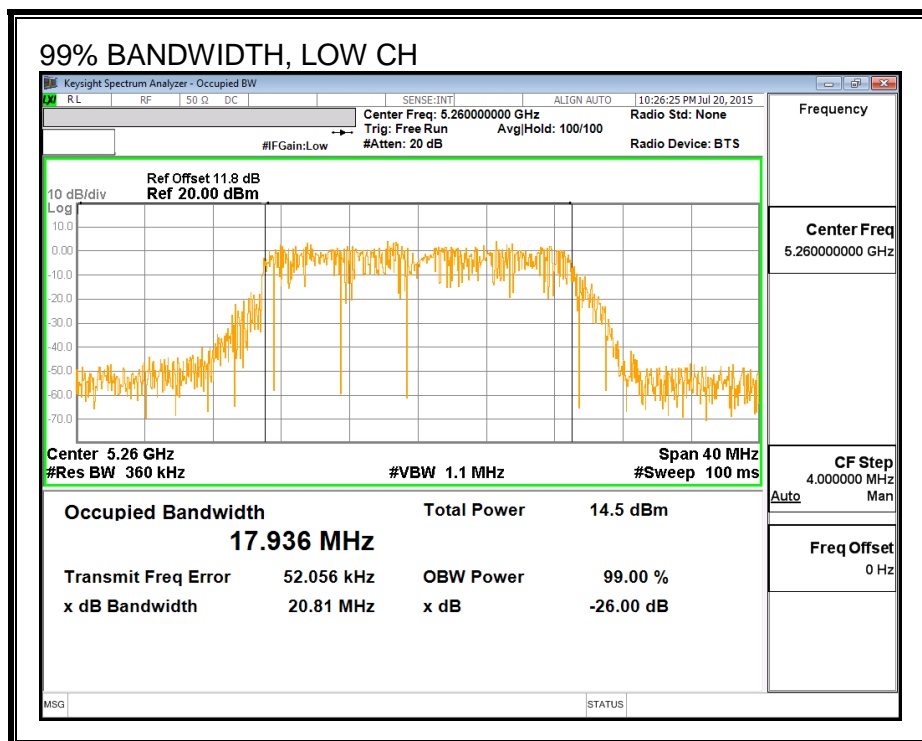
Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)
Low	5260	17.683	17.936
Mid	5300	17.749	17.711
High	5320	17.700	17.844

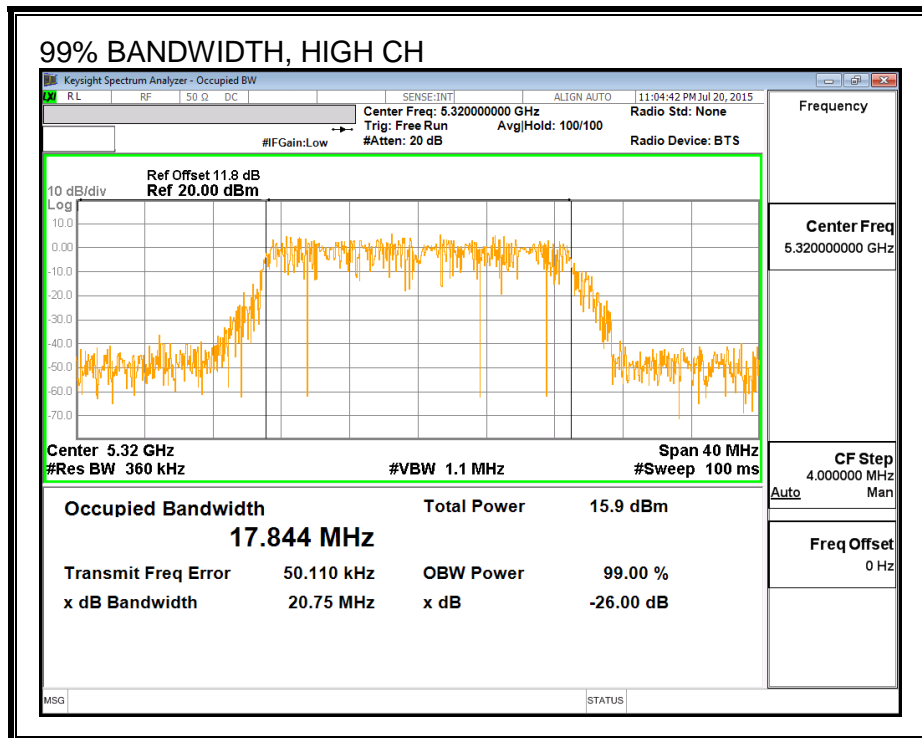
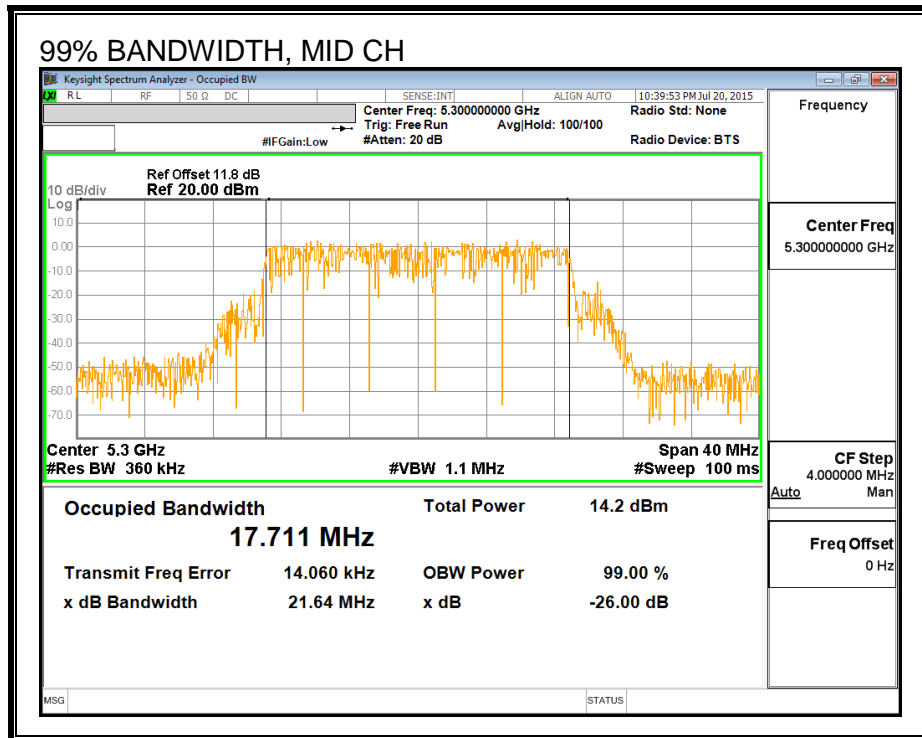
99% BANDWIDTH, CHAIN 0





99% BANDWIDTH, CHAIN 1





8.21.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

RESULTS

Average Power Results

Channel	Frequency (MHz)	Chain 0 Power (dBm)	Chain 1 Power (dBm)	Total Power (dBm)
Low	5260	15.93	15.86	18.91
Mid	5300	15.85	16.00	18.94
High	5320	14.98	14.83	17.92

8.21.4. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.25–5.35 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, 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

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

Antenna Gain (dBi)	Antenna Gain (dBi)	Directional Gain (dBi)
2.30	2.90	2.61

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

Antenna Gain (dBi)	Antenna Gain (dBi)	Directional Gain (dBi)
2.30	2.90	5.62

RESULTS

Bandwidth, Antenna Gain and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Low	5260	22.059	17.936	2.61	5.62	23.54	11.00
Mid	5300	22.032	17.749	2.61	5.62	23.49	11.00
High	5320	22.059	17.844	2.61	5.62	23.51	11.00

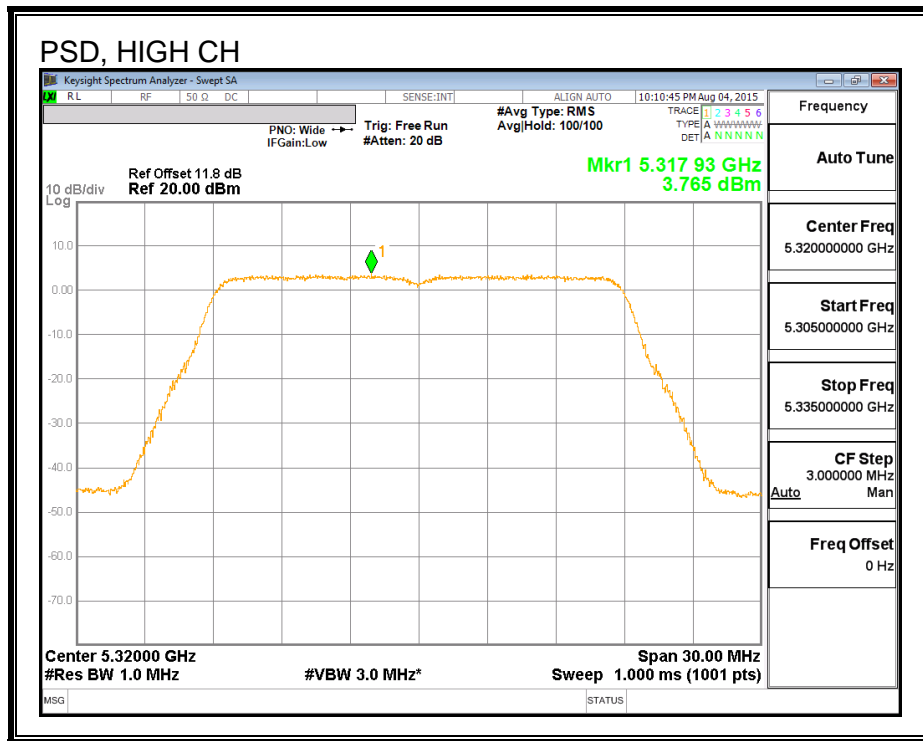
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power & PSD
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Output Power Results

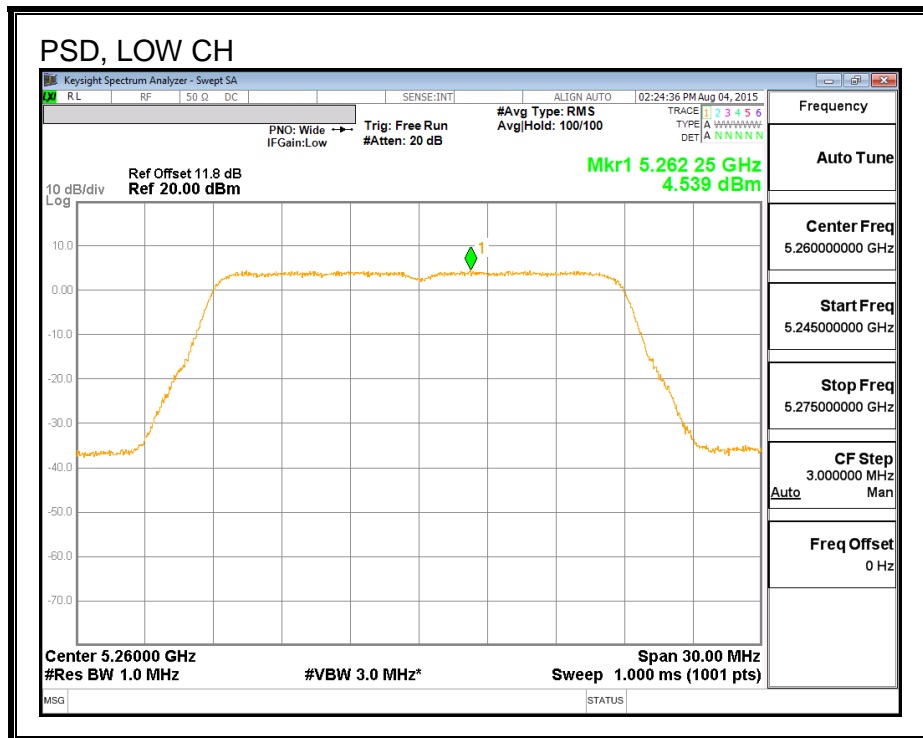
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5260	15.93	15.86	18.91	23.54	-4.63
Mid	5300	15.85	16.00	18.94	23.49	-4.56
High	5320	14.98	14.83	17.92	23.51	-5.60

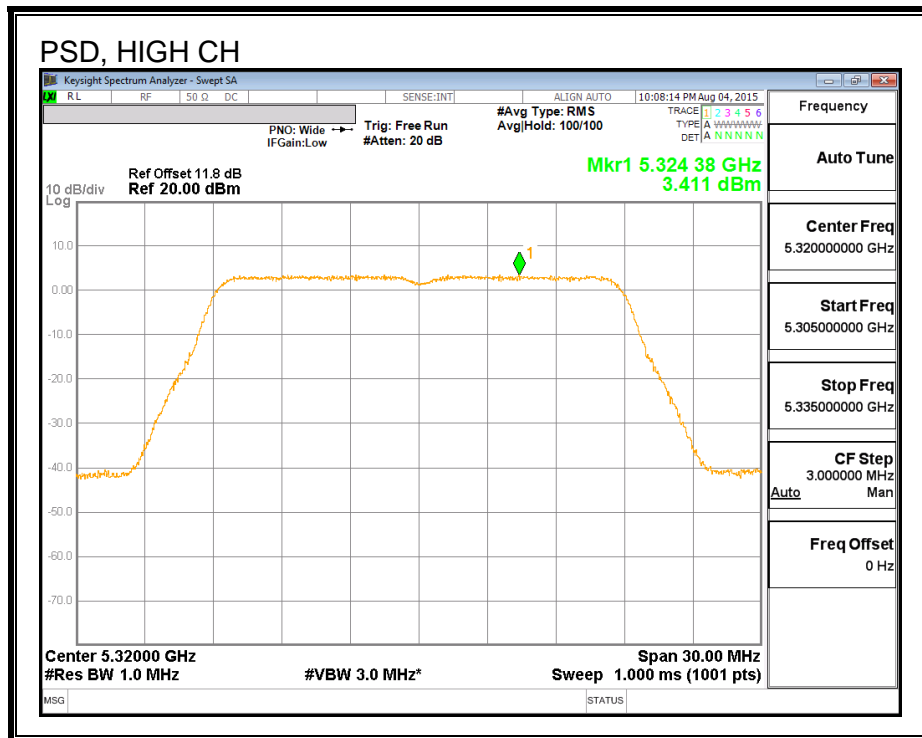
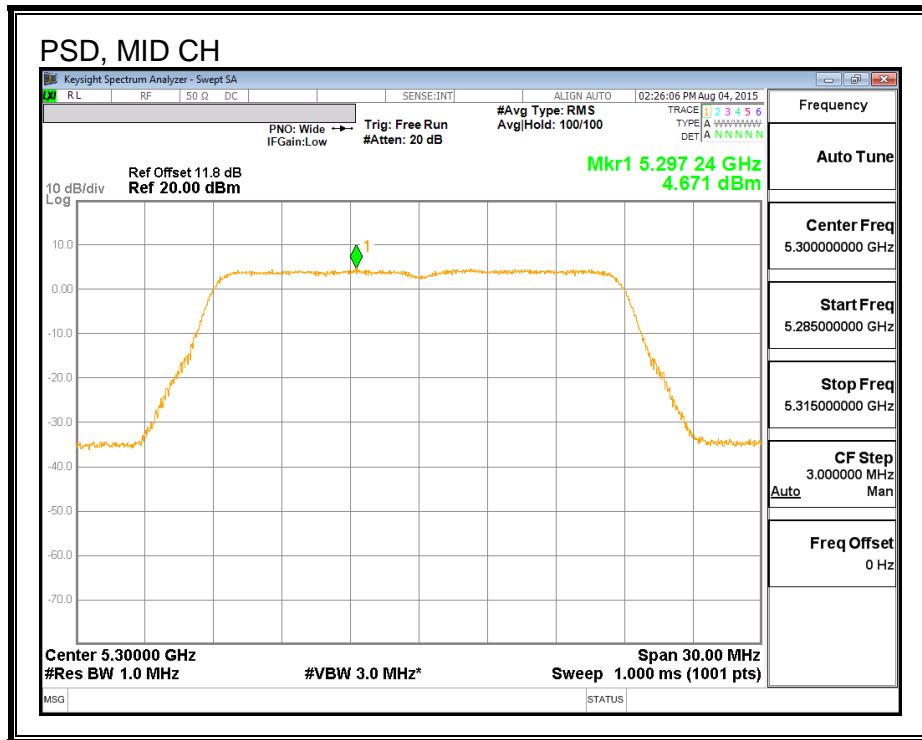
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5260	4.58	4.54	7.57	11.00	-3.43
Mid	5300	4.13	4.67	7.42	11.00	-3.58
High	5320	3.77	3.41	6.60	11.00	-4.40



PSD, Chain 1





8.22. 802.11n HT20 2Tx STBC MODE IN THE 5.3 GHz BAND

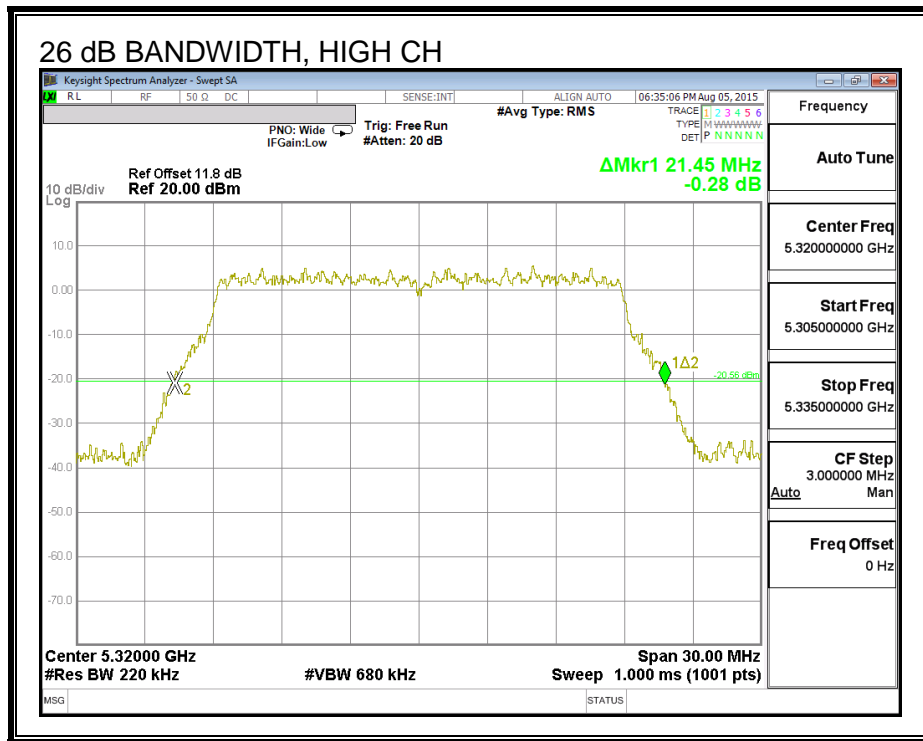
8.22.1. 26 dB BANDWIDTH

LIMITS

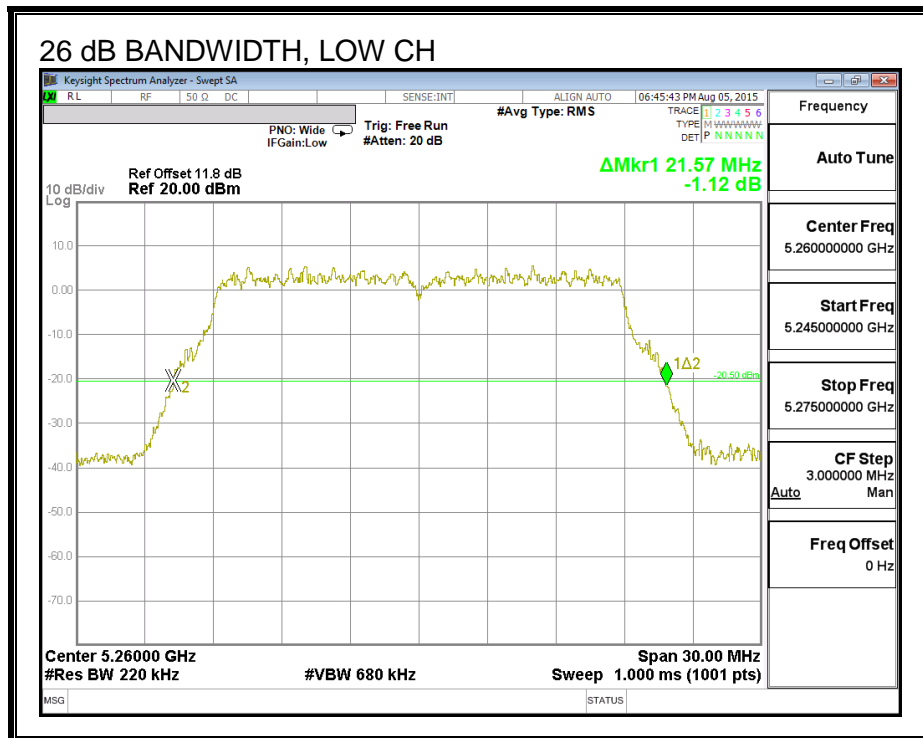
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB BW Chain 0 (MHz)	26 dB BW Chain 1 (MHz)
Low	5260	21.54	21.57
Mid	5300	21.51	21.60
High	5320	21.45	21.42



26 dB BANDWIDTH, Chain 1



8.22.2. 99% BANDWIDTH

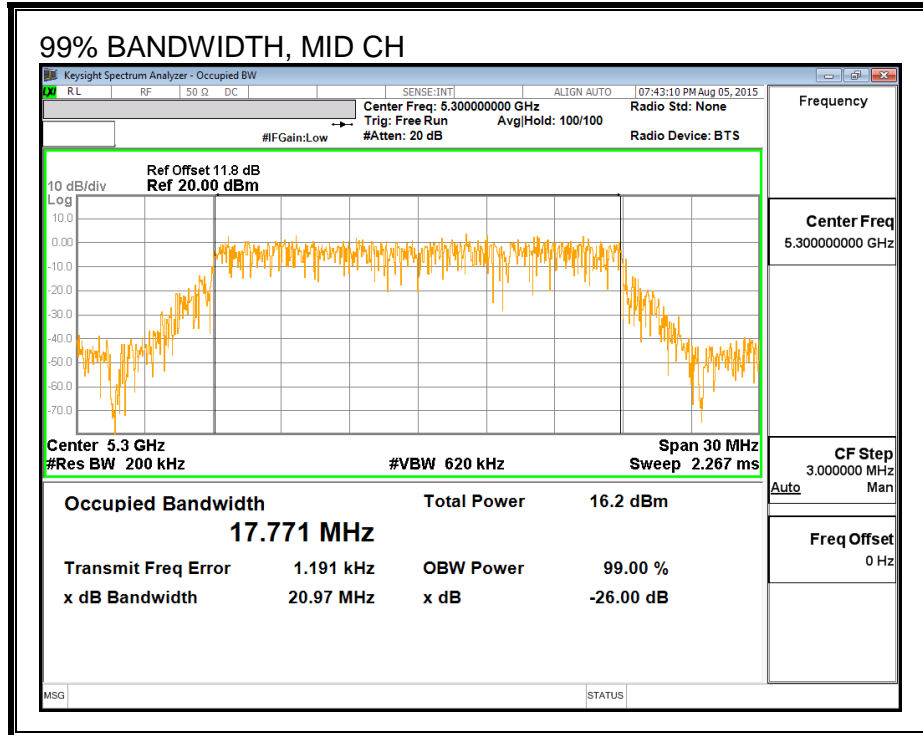
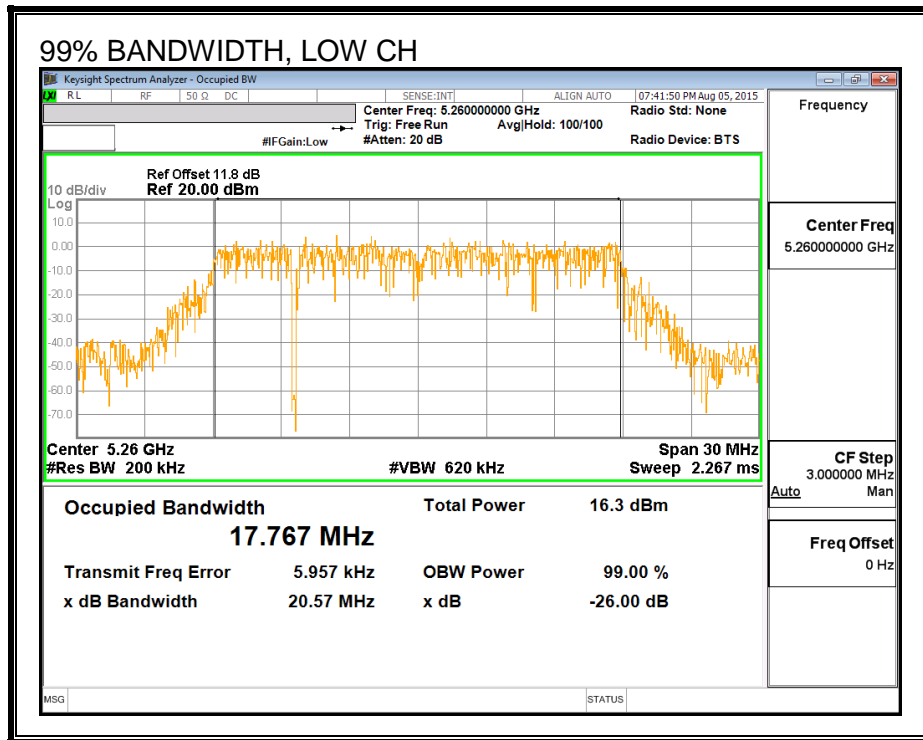
LIMITS

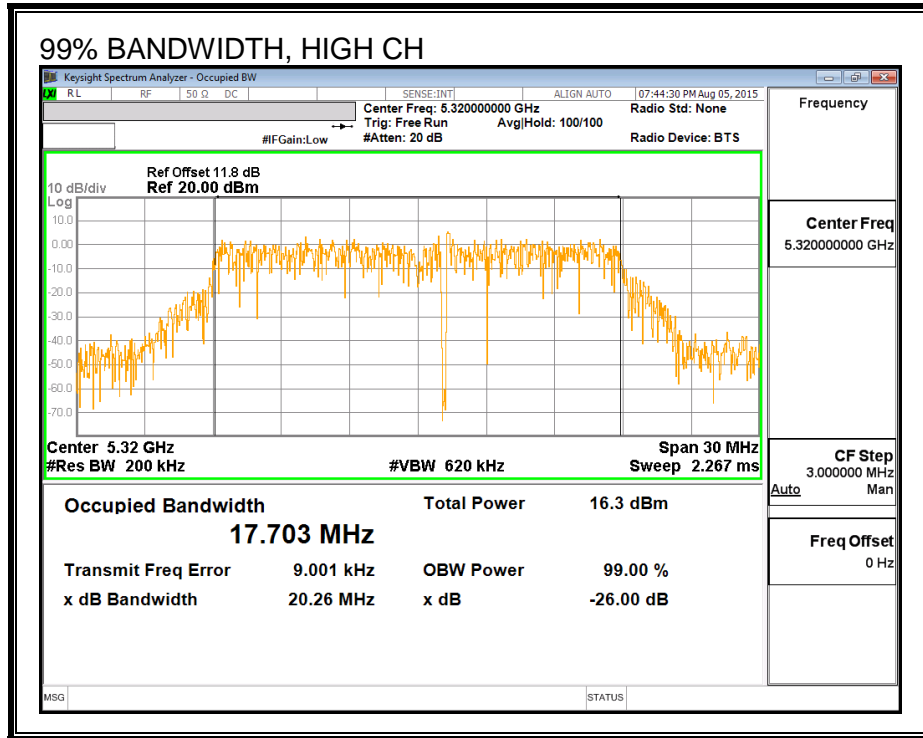
None; for reporting purposes only.

RESULTS

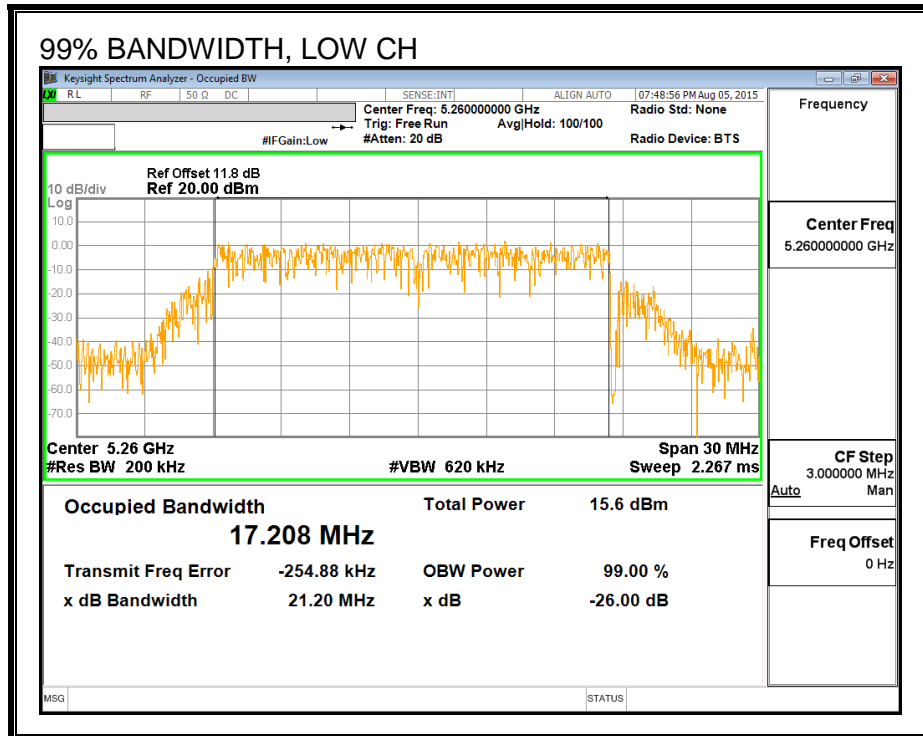
Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)
Low	5260	17.767	17.208
Mid	5300	17.771	17.743
High	5320	17.703	17.793

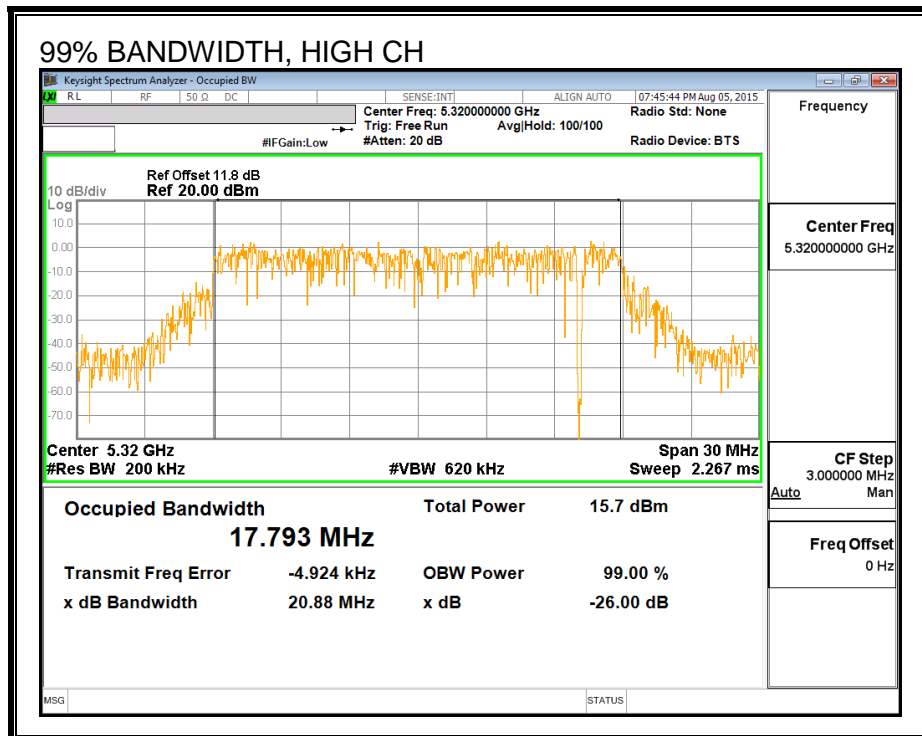
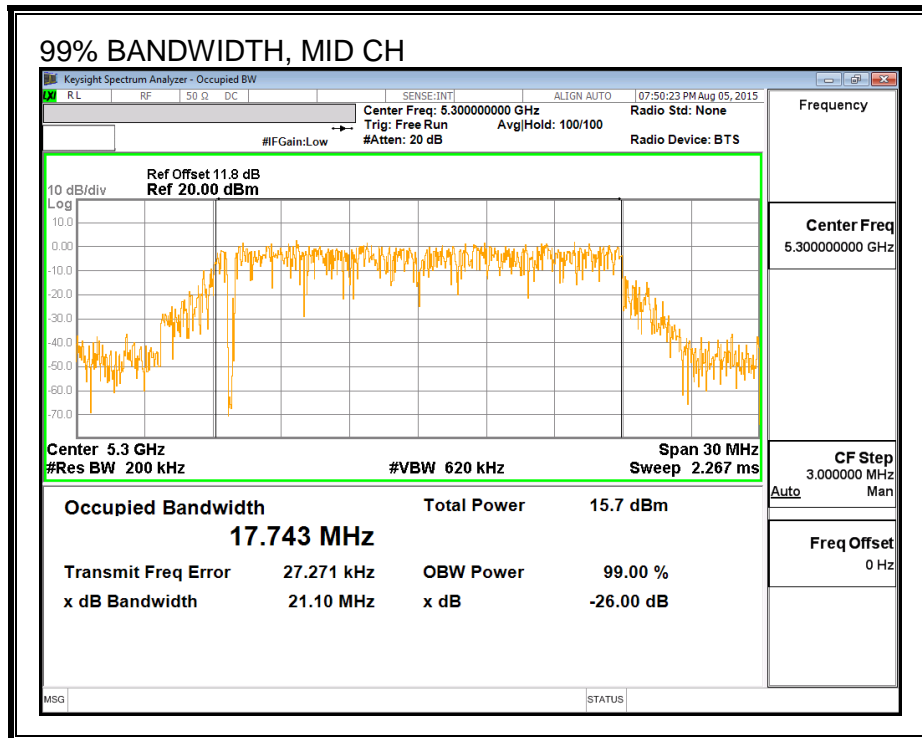
99% BANDWIDTH, Chain 0





99% BANDWIDTH, Chain 1





8.22.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

RESULTS

Average Power Results

Channel	Frequency (MHz)	Chain 0 Power (dBm)	Chain 1 Power (dBm)	Total Power (dBm)
Low	5260	16.38	16.90	19.66
Mid	5300	16.48	16.83	19.67
High	5320	14.88	14.92	17.91

8.22.4. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.25–5.35 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

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

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
2.30	2.90	2.61

RESULTS

Bandwidth, Antenna Gain and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Low	5260	21.57	17.767	2.61	2.61	23.50	11.00
Mid	5300	21.60	17.771	2.61	2.61	23.50	11.00
High	5320	21.45	17.793	2.61	2.61	23.50	11.00

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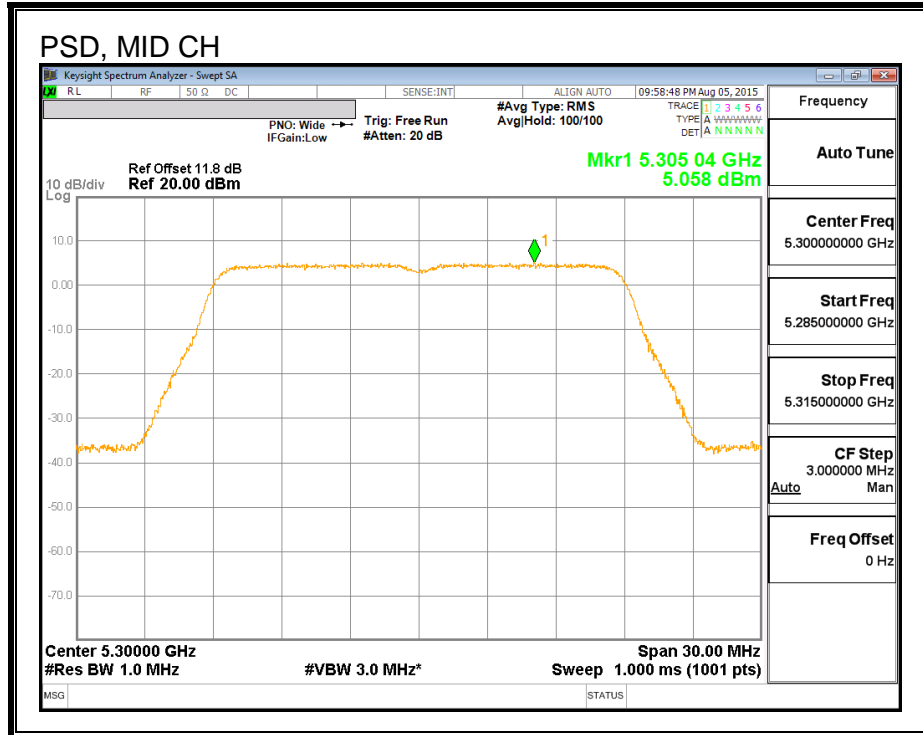
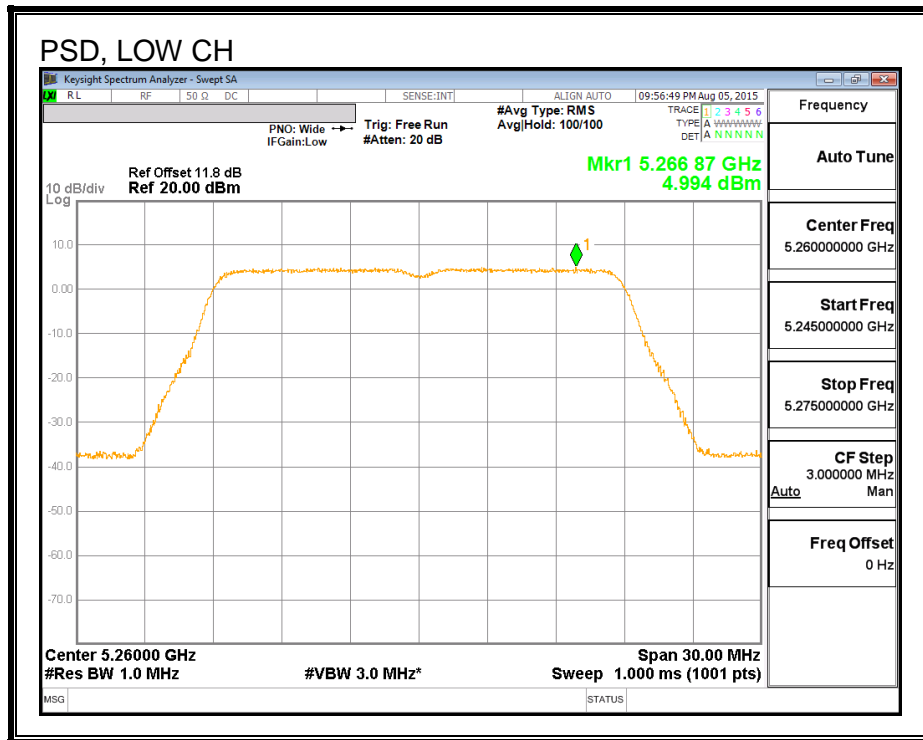
Output Power Results

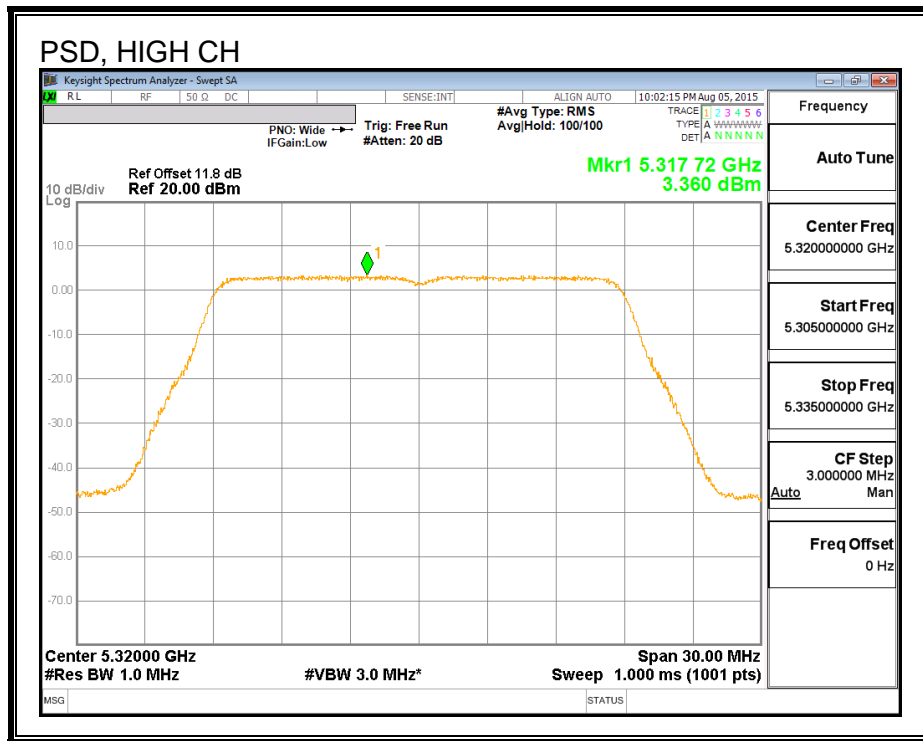
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5260	16.38	16.90	19.66	23.50	-3.84
Mid	5300	16.48	16.83	19.67	23.50	-3.83
High	5320	14.88	14.92	17.91	23.50	-5.59

PSD Results

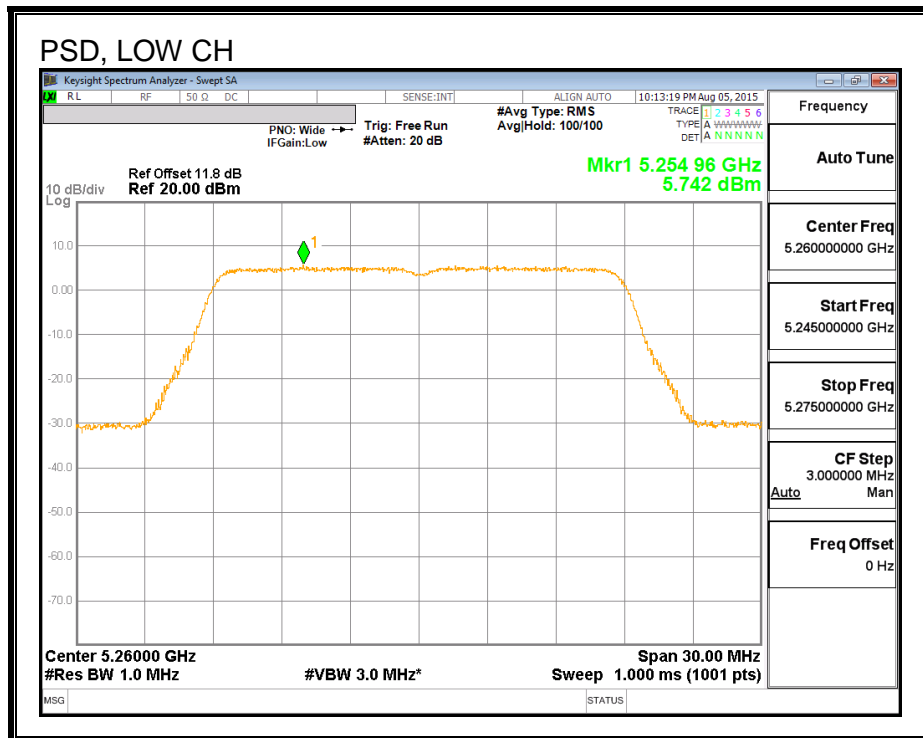
Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5260	4.99	5.74	8.39	11.00	-2.61
Mid	5300	5.06	5.62	8.36	11.00	-2.64
High	5320	3.36	3.45	6.42	11.00	-4.58

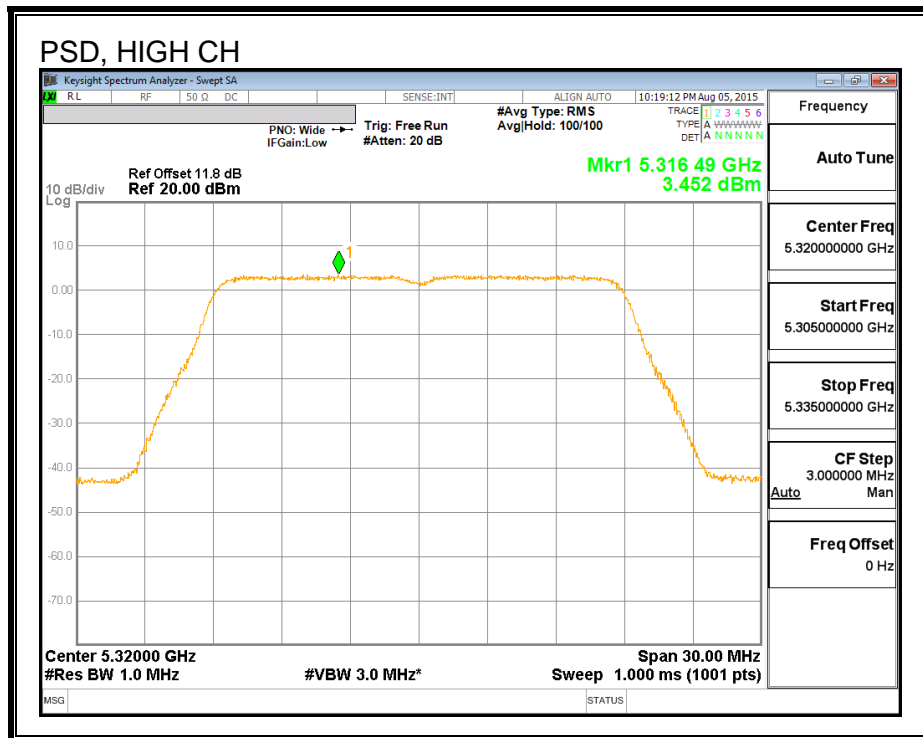
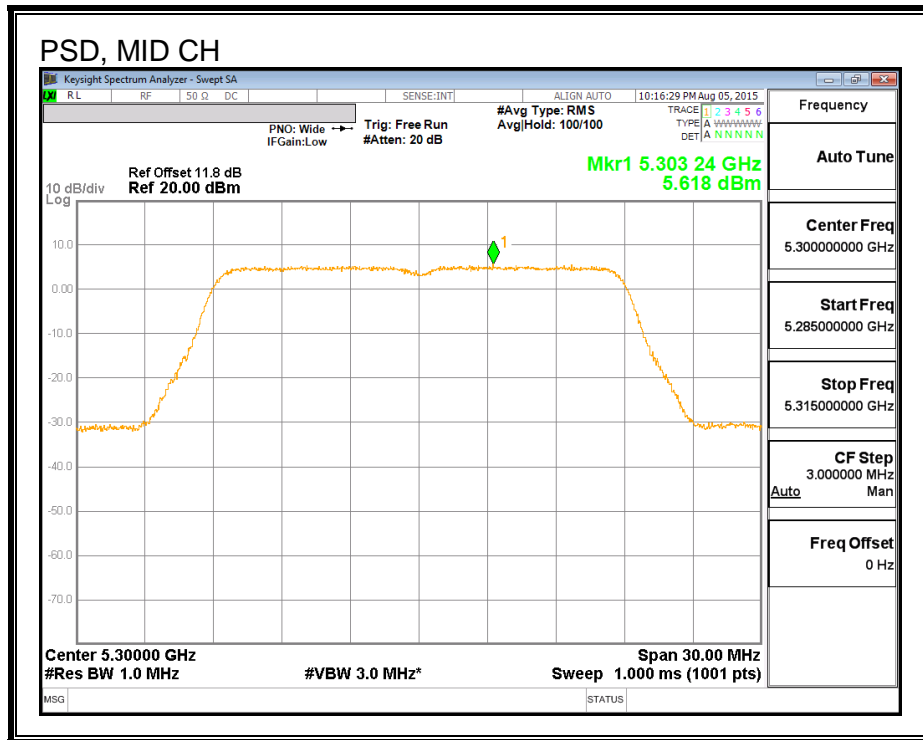
PSD, Chain 0





PSD, Chain 1





8.23. 802.11n HT20 2Tx SDM MODE IN THE 5.3 GHz BAND

Note: Covered by 802.11n HT20 2Tx STBC MODE

8.24. 802.11n HT40 CHAIN 0 MODE IN THE 5.3 GHz BAND

8.24.1. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5270	40.38
High	5310	40.38

8.24.2. 99% BANDWIDTH

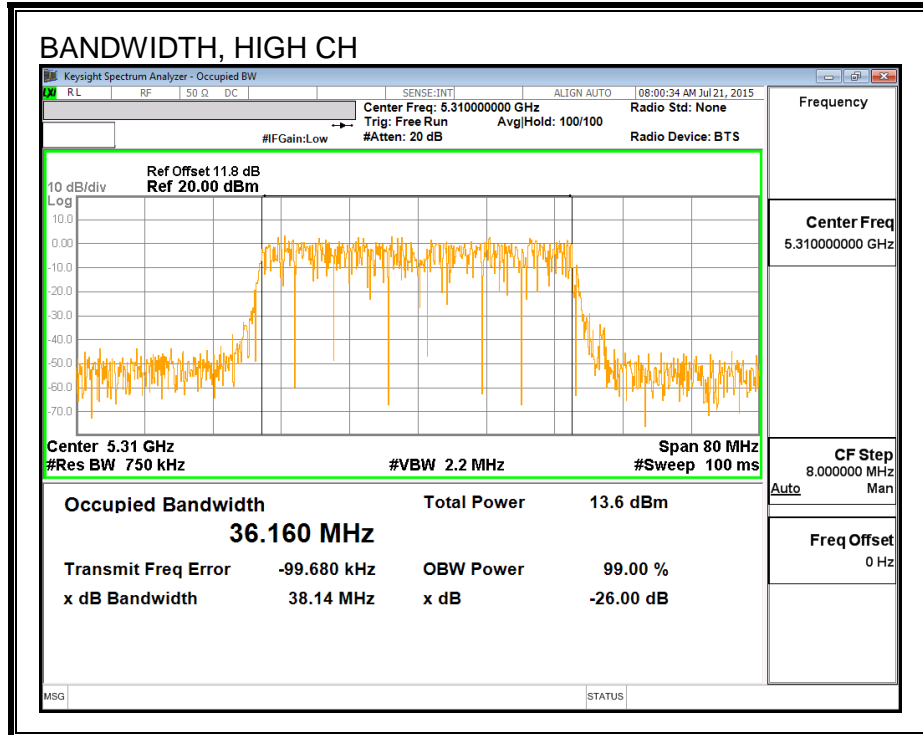
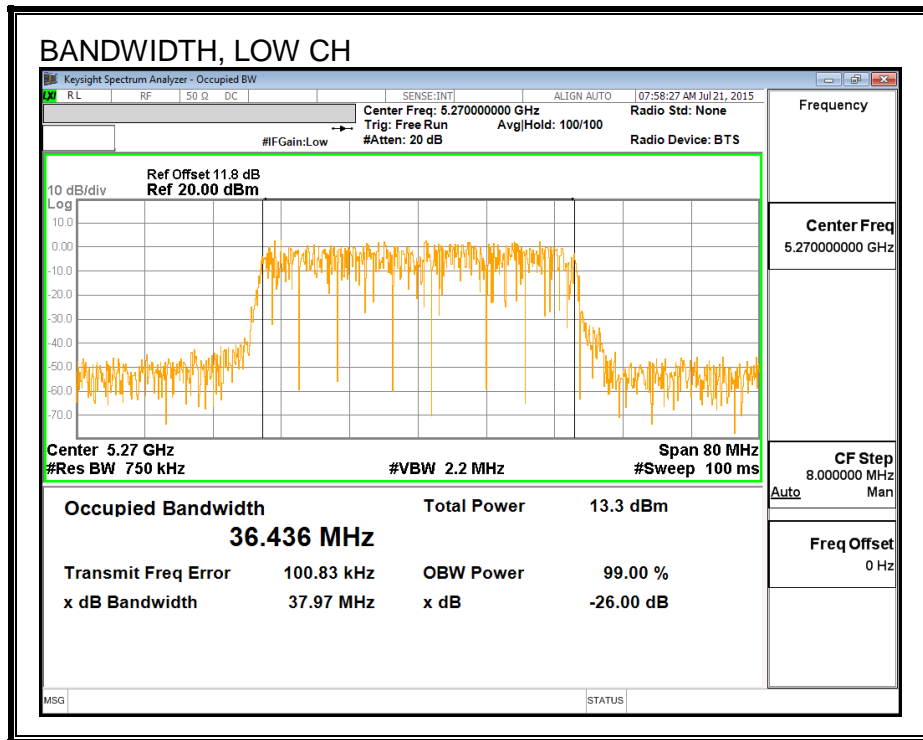
LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5270	36.436
High	5310	36.160

99% BANDWIDTH



8.24.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	Power (dBm)
Low	5270	16.44
High	5310	14.39

8.24.4. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.25–5.35 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, 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

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

RESULTS

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Low	5270	40.38	36.436	2.30	24.00	11.00
High	5310	40.38	36.160	2.30	24.00	11.00

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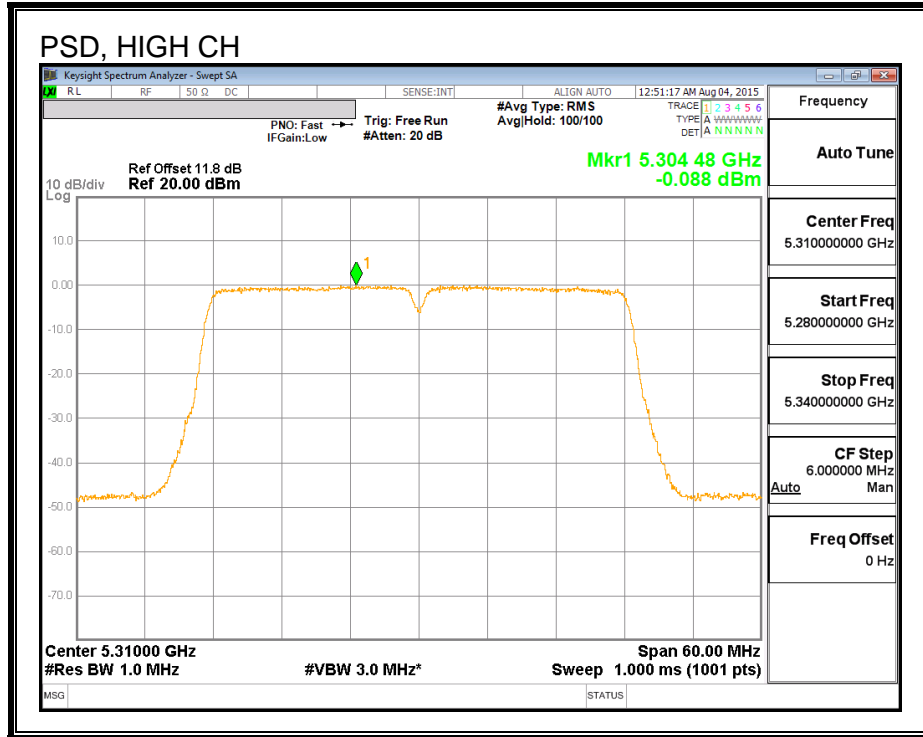
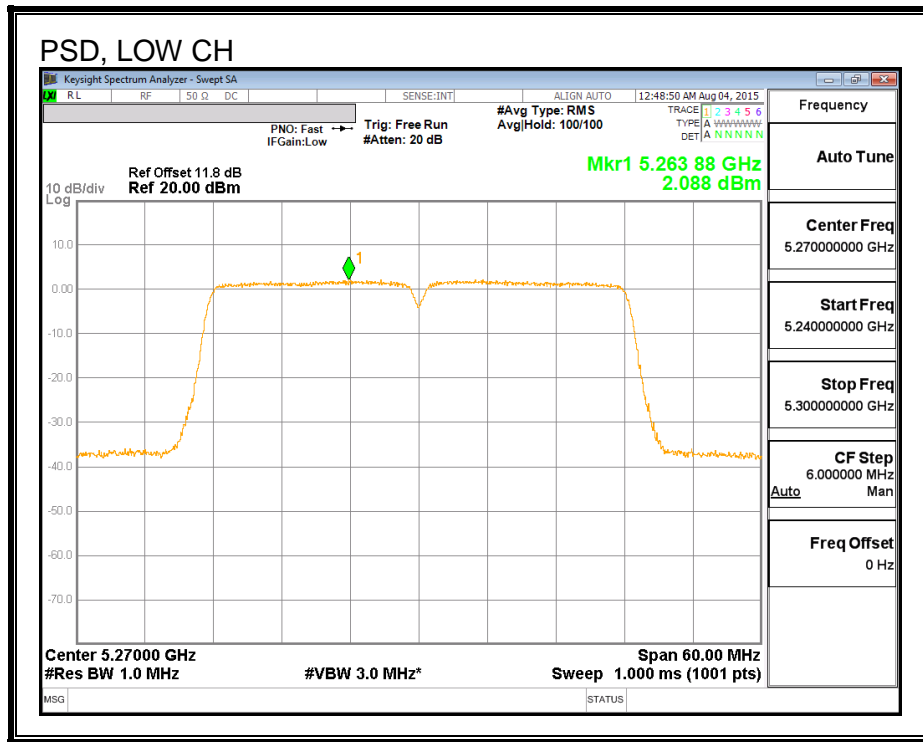
Output Power Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5270	16.44	16.44	24.00	-7.56
High	5310	14.39	14.39	24.00	-9.61

PSD Results

Channel	Frequency (MHz)	Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5270	2.09	2.09	11.00	-8.91
High	5310	-0.09	-0.09	11.00	-11.09

PSD



8.25. 802.11n HT40 CHAIN 1 MODE IN THE 5.3 GHz BAND

8.25.1. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5270	40.32
High	5310	40.20

8.25.2. 99% BANDWIDTH

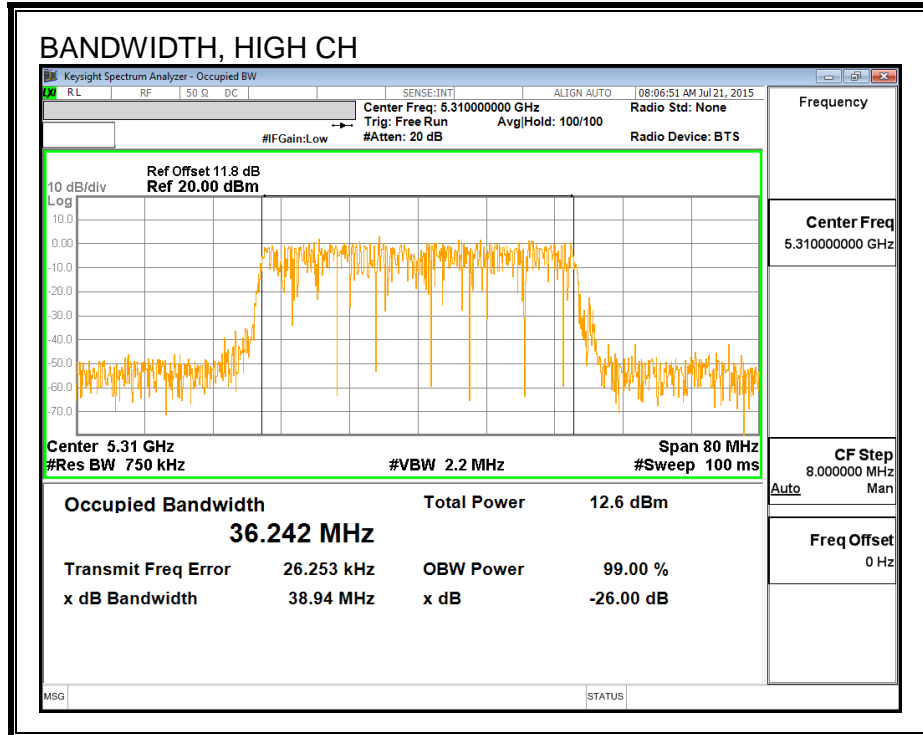
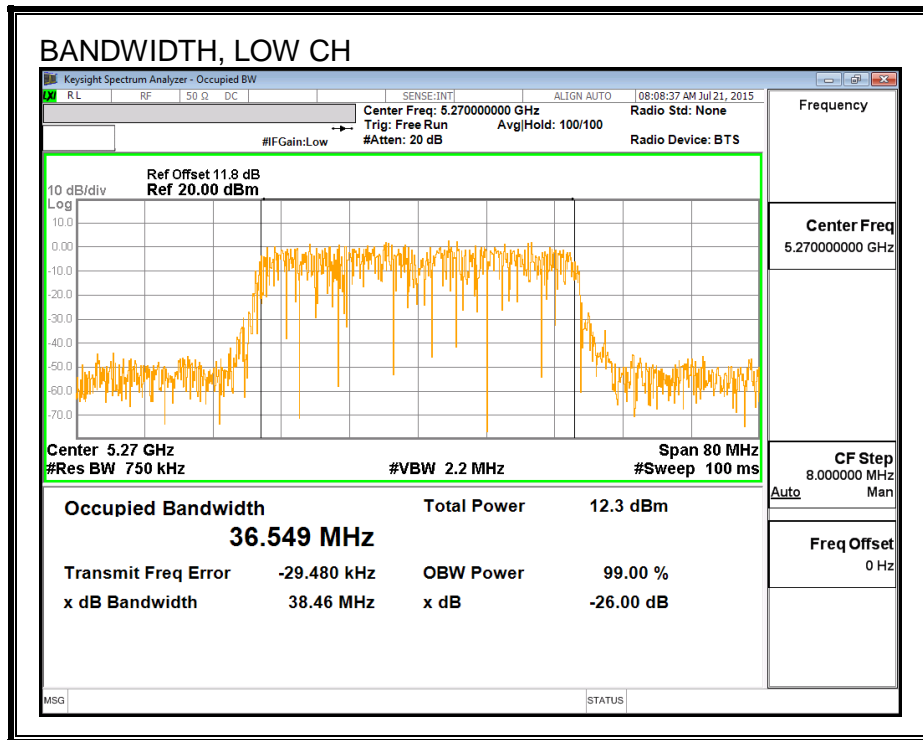
LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5270	36.549
High	5310	36.242

99% BANDWIDTH



8.25.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	Power (dBm)
Low	5270	16.84
High	5310	14.42

8.25.4. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.25–5.35 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, 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

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

RESULTS

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Low	5270	40.32	36.549	2.90	24.00	11.00
High	5310	40.20	36.242	2.90	24.00	11.00

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

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5270	16.84	16.84	24.00	-7.16
High	5310	14.42	14.42	24.00	-9.58

PSD Results

Channel	Frequency (MHz)	Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5270	2.43	2.43	11.00	-8.57
High	5310	0.15	0.15	11.00	-10.85

8.26. 802.11n HT40 2Tx CDD MODE IN THE 5.3 GHz BAND

8.26.1. 26 dB BANDWIDTH

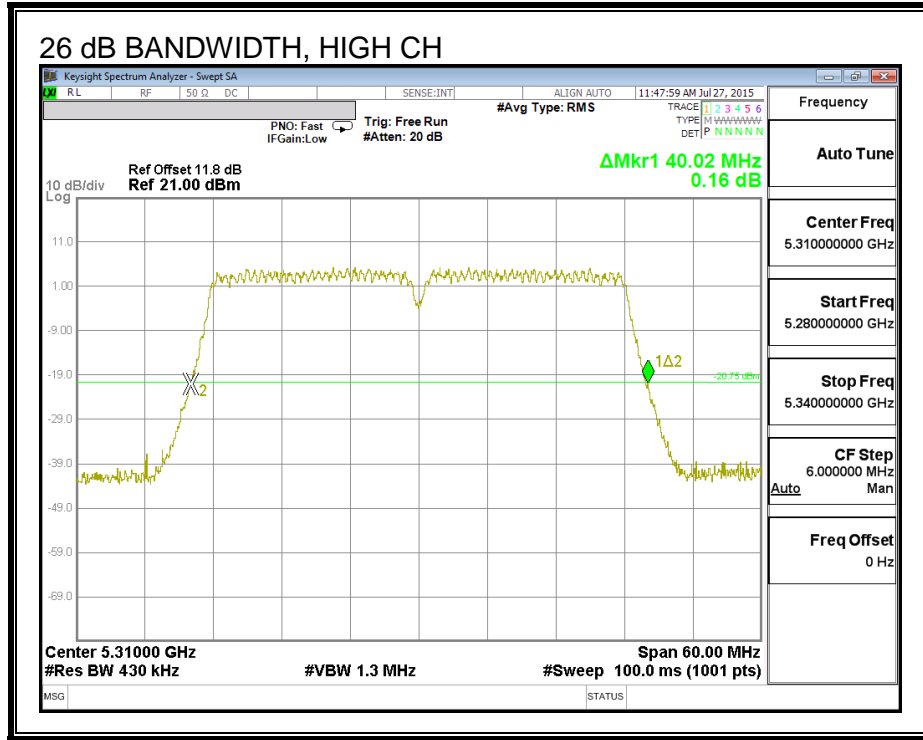
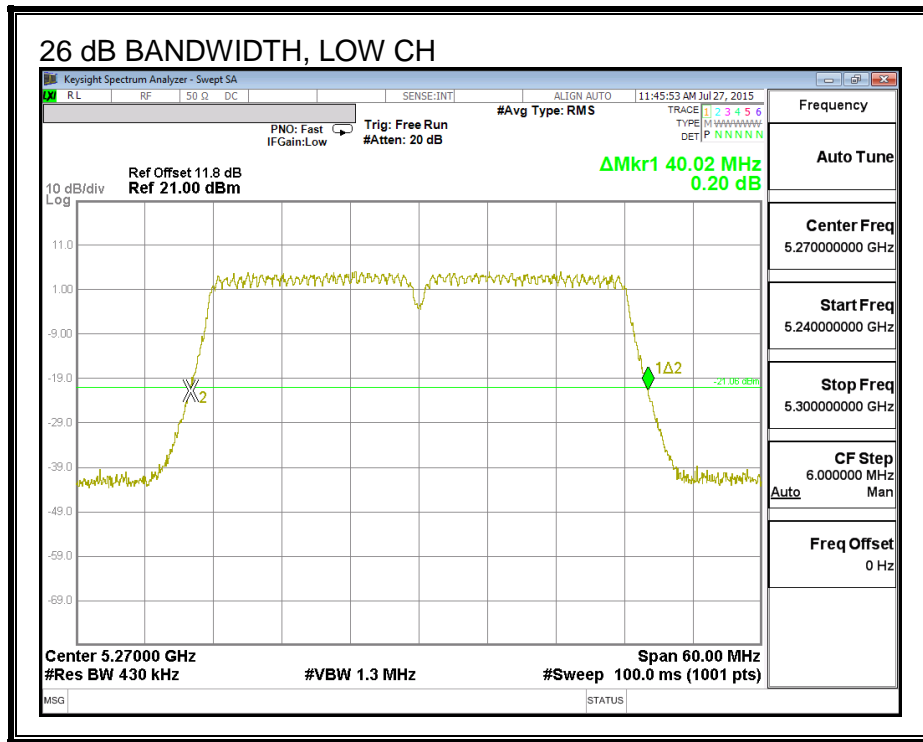
LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB BW Chain 0 (MHz)	26 dB BW Chain 1 (MHz)
Low	5270	40.44	40.02
High	5310	40.26	40.02

26 DB BANDWIDTH, CHAIN 1



8.26.2. 99% BANDWIDTH

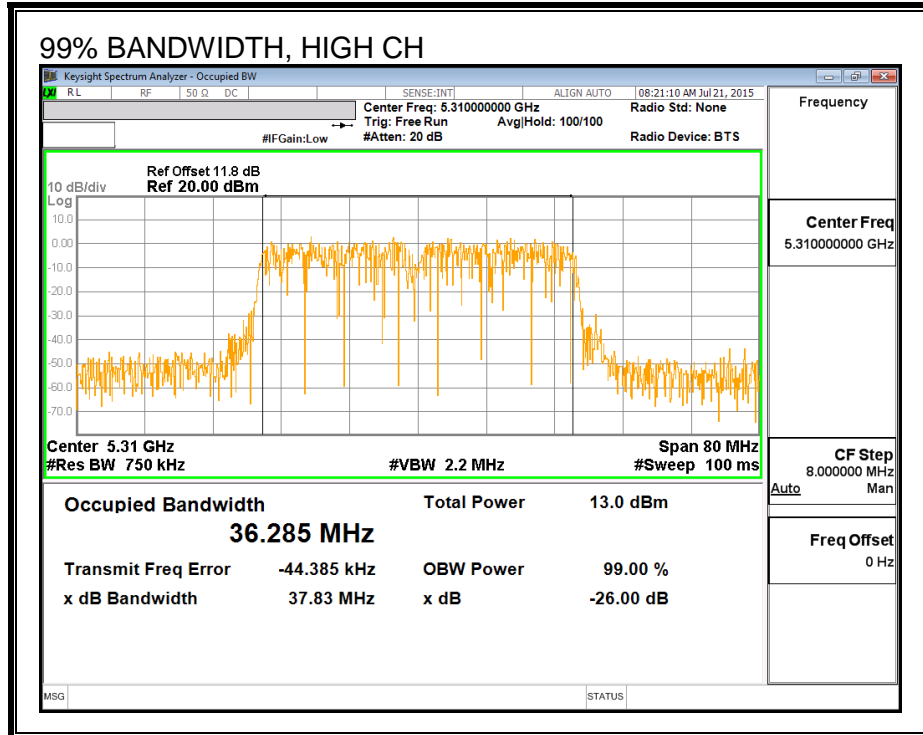
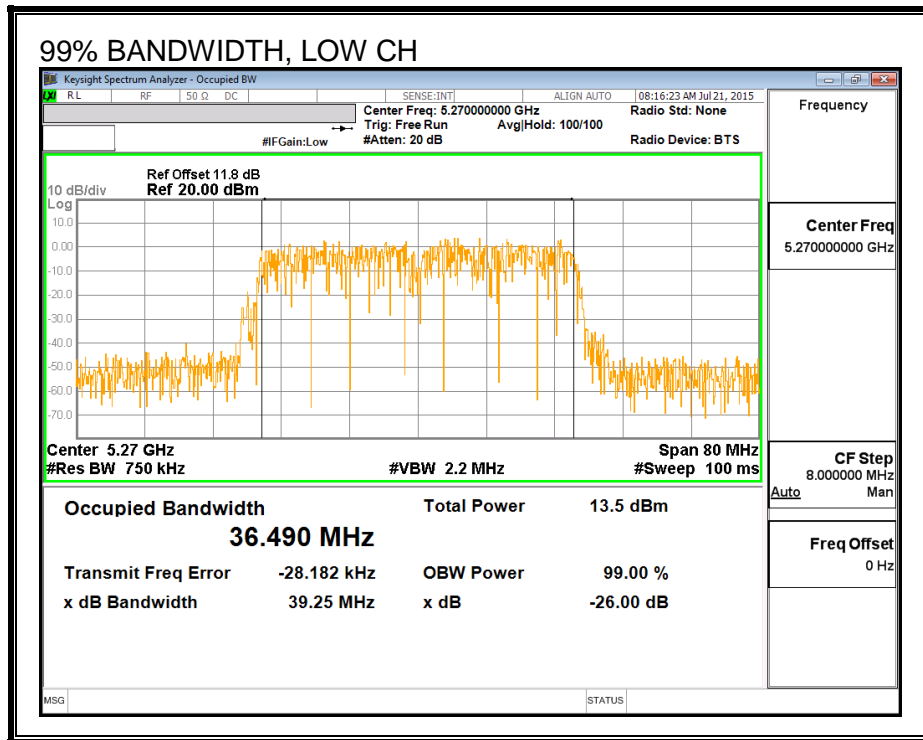
LIMITS

None; for reporting purposes only.

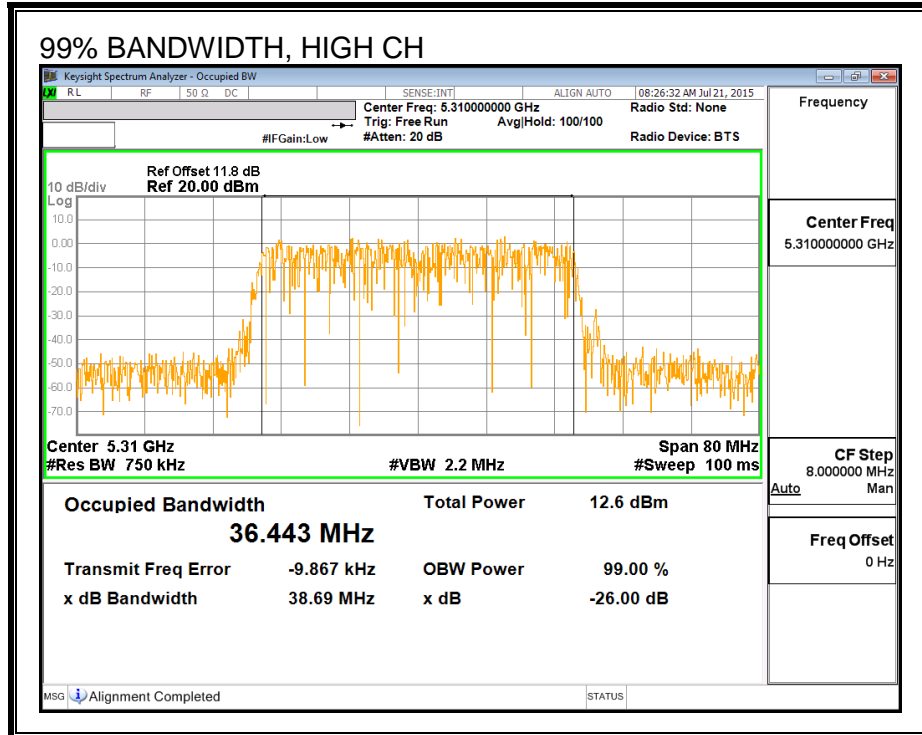
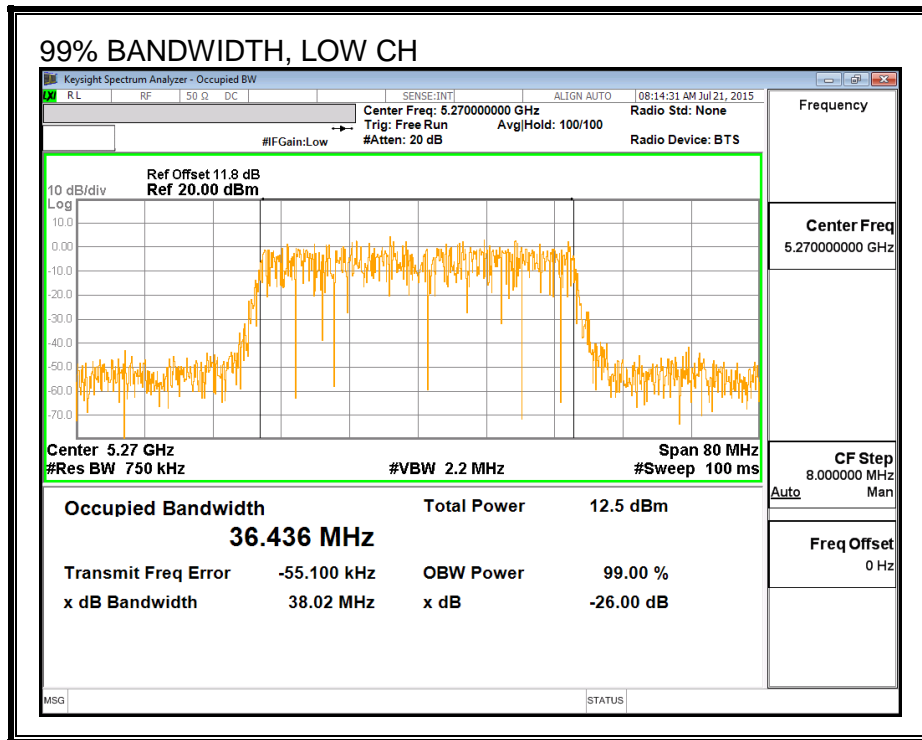
RESULTS

Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)
Low	5270	36.490	36.436
High	5310	36.285	36.443

99% BANDWIDTH, CHAIN 0



99% BANDWIDTH, CHAIN 1



8.26.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

RESULTS

Average Power Results

Channel	Frequency (MHz)	Chain 0 Power (dBm)	Chain 1 Power (dBm)	Total Power (dBm)
Low	5270	15.97	16.00	19.00
High	5310	13.45	13.37	16.42

8.26.4. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.25–5.35 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

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

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
2.30	2.90	2.61

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

Antenna Gain (dBi)	Antenna Gain (dBi)	Directional Gain (dBi)
2.30	2.90	5.62

RESULTS

Bandwidth, Antenna Gain and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Low	5270	40.02	36.436	2.61	5.62	24.00	11.00
High	5310	40.02	36.285	2.61	5.62	24.00	11.00

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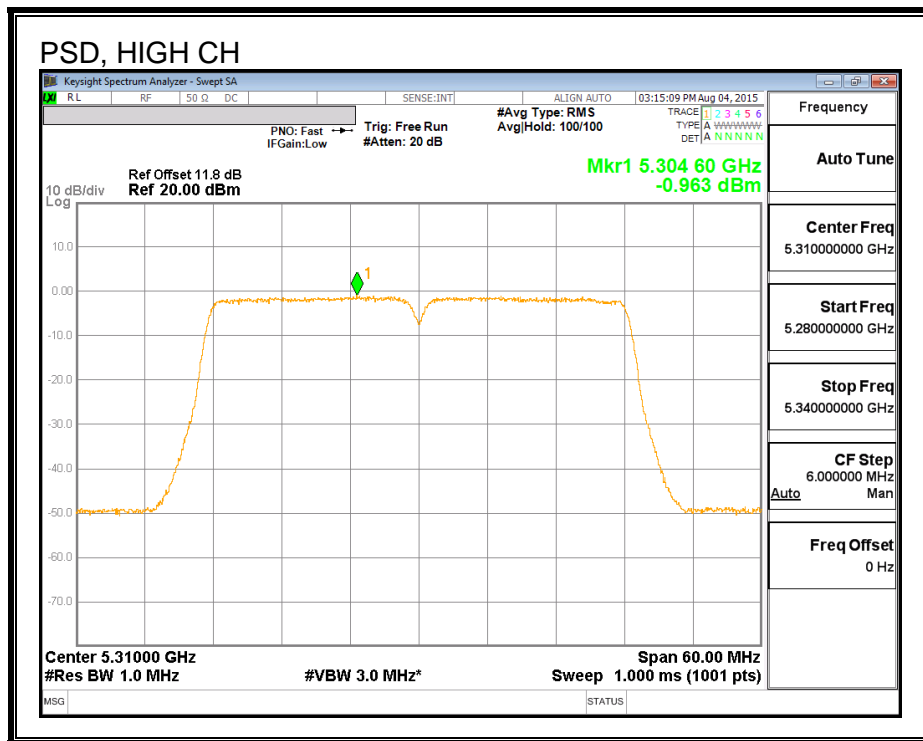
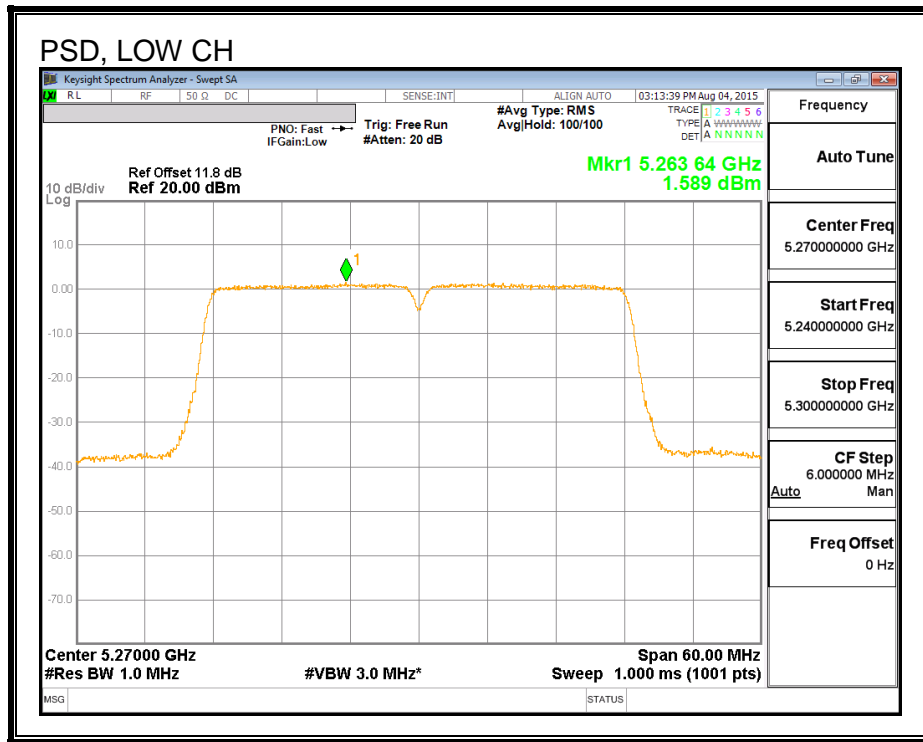
Output Power Results

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	5270	15.97	16.00	19.00	24.00	-5.00
High	5310	13.45	13.37	16.42	24.00	-7.58

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5270	1.45	1.59	4.53	11.00	-6.47
High	5310	-0.76	-0.96	2.15	11.00	-8.85

PSD, Chain 1



8.27. 802.11n HT40 2Tx STBC MODE IN THE 5.3 GHz BAND

8.27.1. 26 dB BANDWIDTH

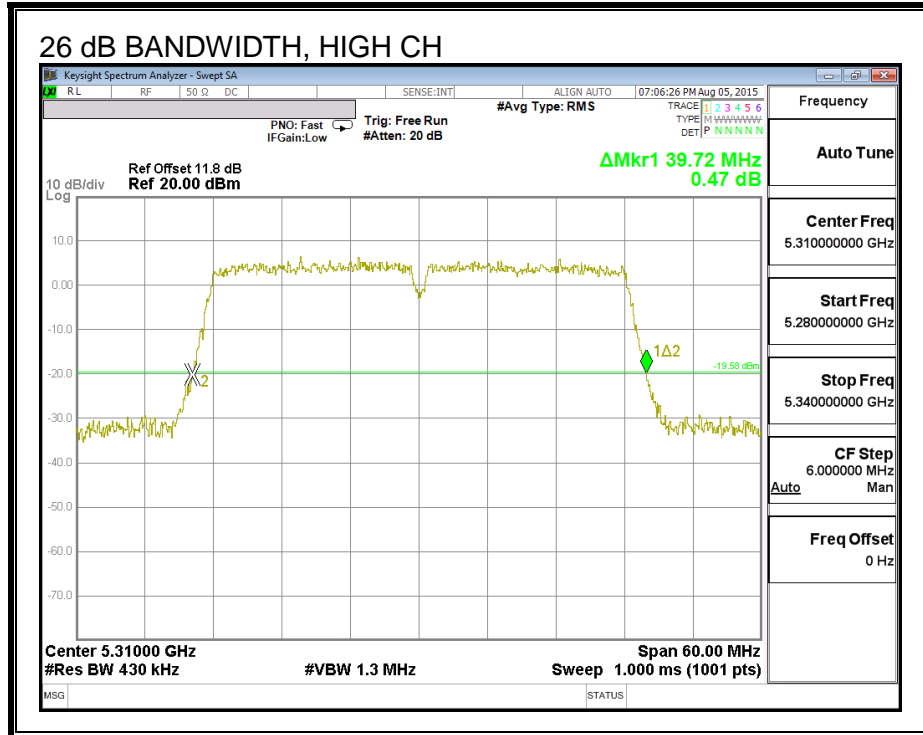
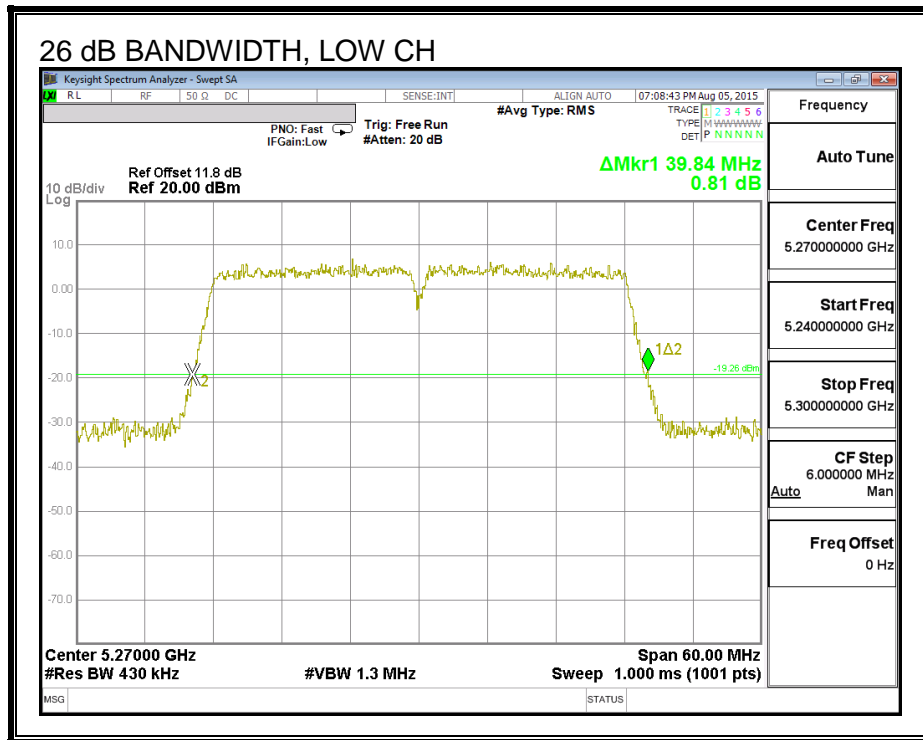
LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB BW Chain 0 (MHz)	26 dB BW Chain 1 (MHz)
Low	5270	39.84	39.54
High	5310	39.72	39.78

26 dB BANDWIDTH, Chain 0



8.27.2. 99% BANDWIDTH

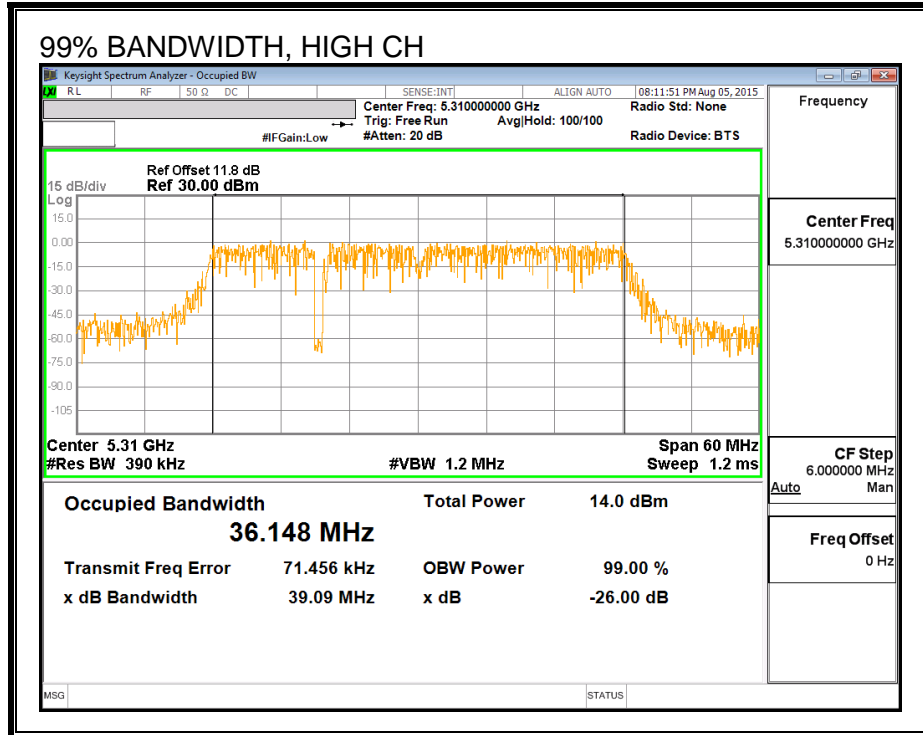
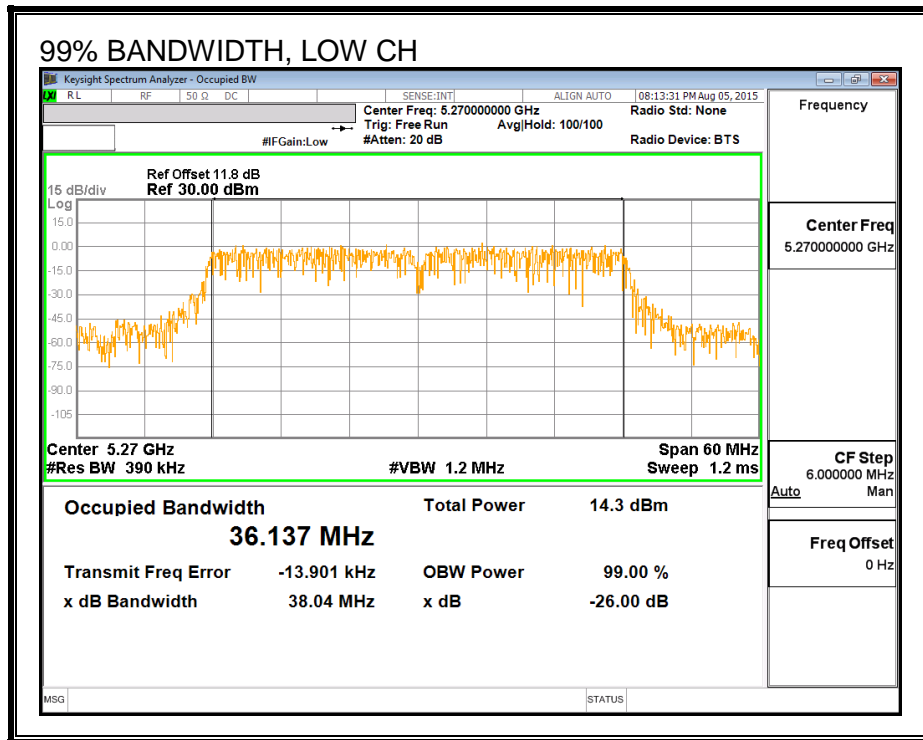
LIMITS

None; for reporting purposes only.

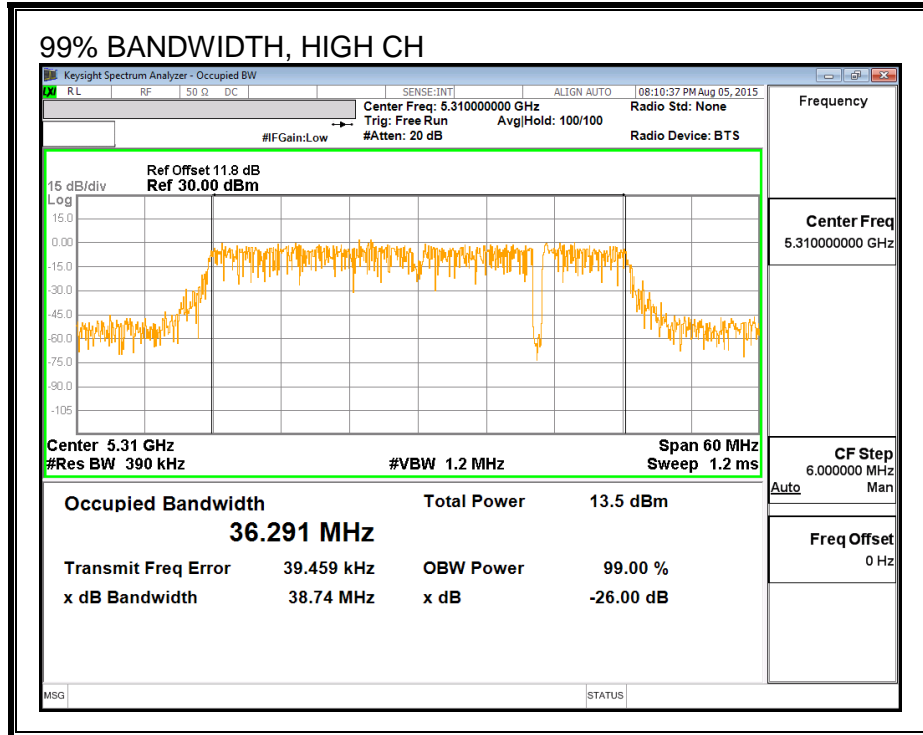
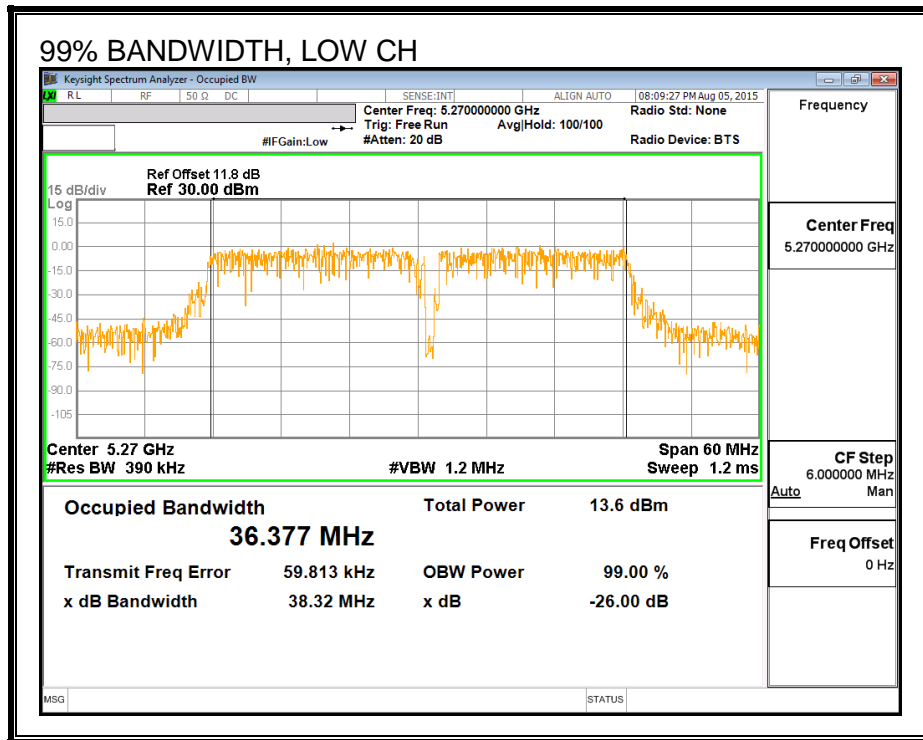
RESULTS

Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)
Low	5270	36.137	36.377
High	5310	36.148	36.291

99% BANDWIDTH, Chain 0



99% BANDWIDTH, Chain 1



8.27.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

RESULTS

Average Power Results

Channel	Frequency (MHz)	Chain 0 Power (dBm)	Chain 1 Power (dBm)	Total Power (dBm)
Low	5270	16.49	16.98	19.75
High	5310	13.45	13.37	16.42

8.27.4. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.25–5.35 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, 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

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

Antenna Gain (dBi)	Antenna Gain (dBi)	Directional Gain (dBi)
2.30	2.90	2.61

RESULTS

Bandwidth, Antenna Gain and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Low	5270	39.54	36.137	2.61	2.61	24.00	11.00
High	5310	39.72	36.148	2.61	2.61	24.00	11.00

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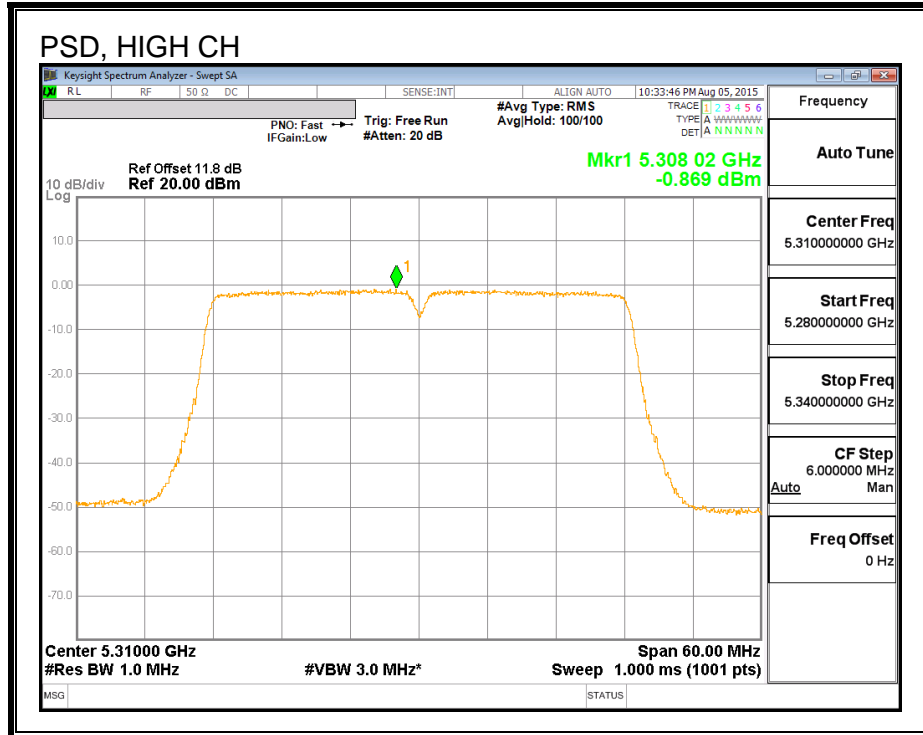
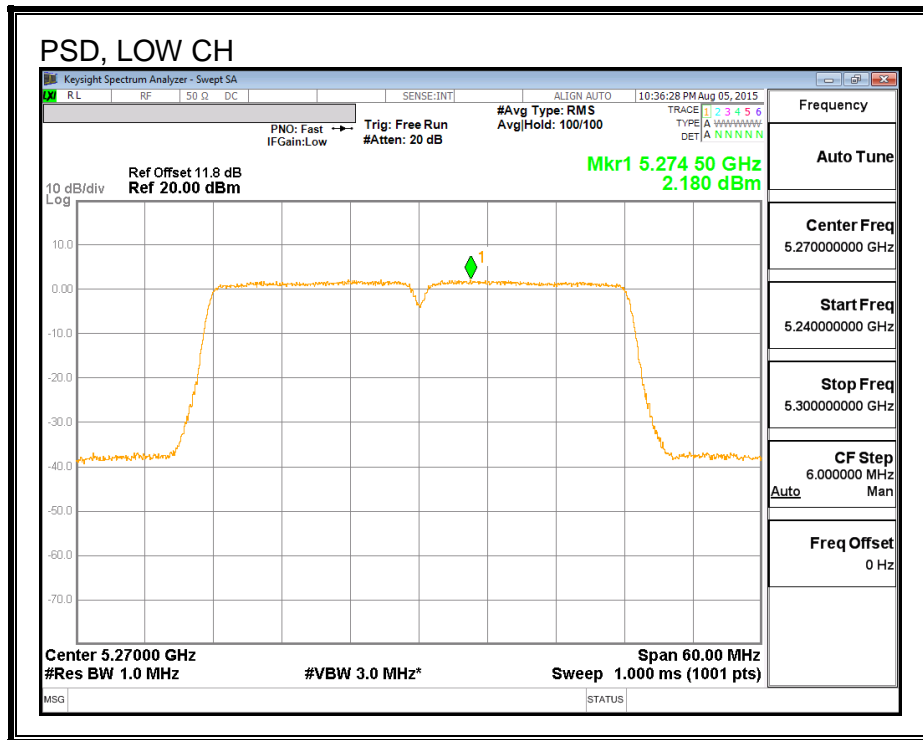
Output Power Results

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	5270	16.49	16.98	19.75	24.00	-4.25
High	5310	13.45	13.37	16.42	24.00	-7.58

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5270	2.18	2.58	5.40	11.00	-5.60
High	5310	-0.87	-0.94	2.11	11.00	-8.89

PSD, Chain 0



8.28. 802.11n HT40 2Tx SDM MODE IN THE 5.3 GHz BAND

Note: Covered by 802.11n HT40 2Tx STBC MODE

8.29. 802.11ac VHT80 CHAIN 0 MODE IN THE 5.3 GHz BAND

8.29.1. 26 dB BANDWIDTH

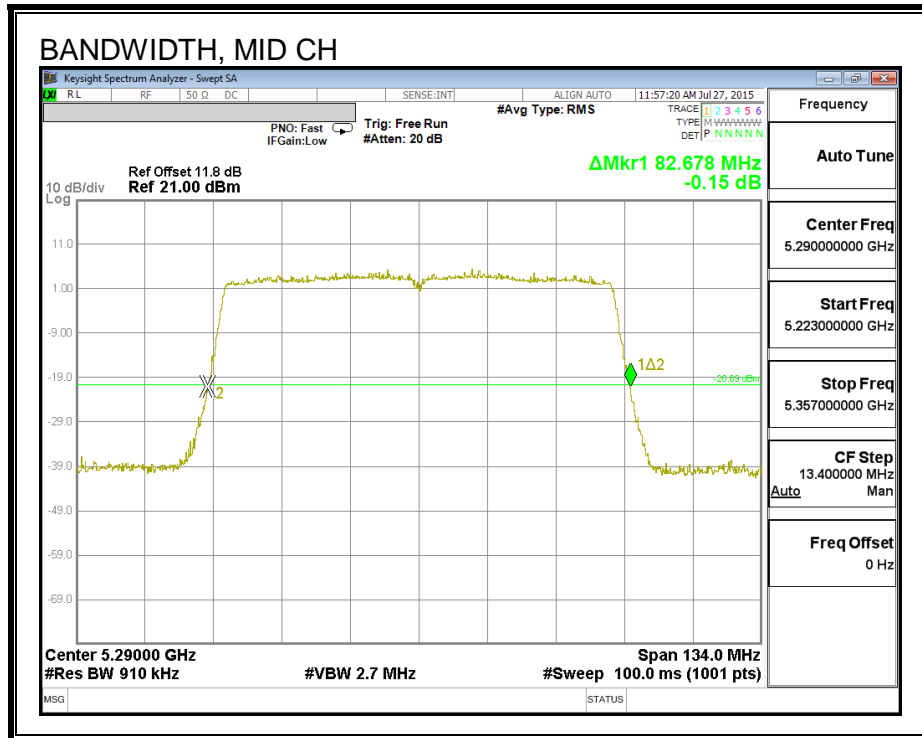
LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Mid	5290	82.68

26 dB BANDWIDTH



8.29.2. 99% BANDWIDTH

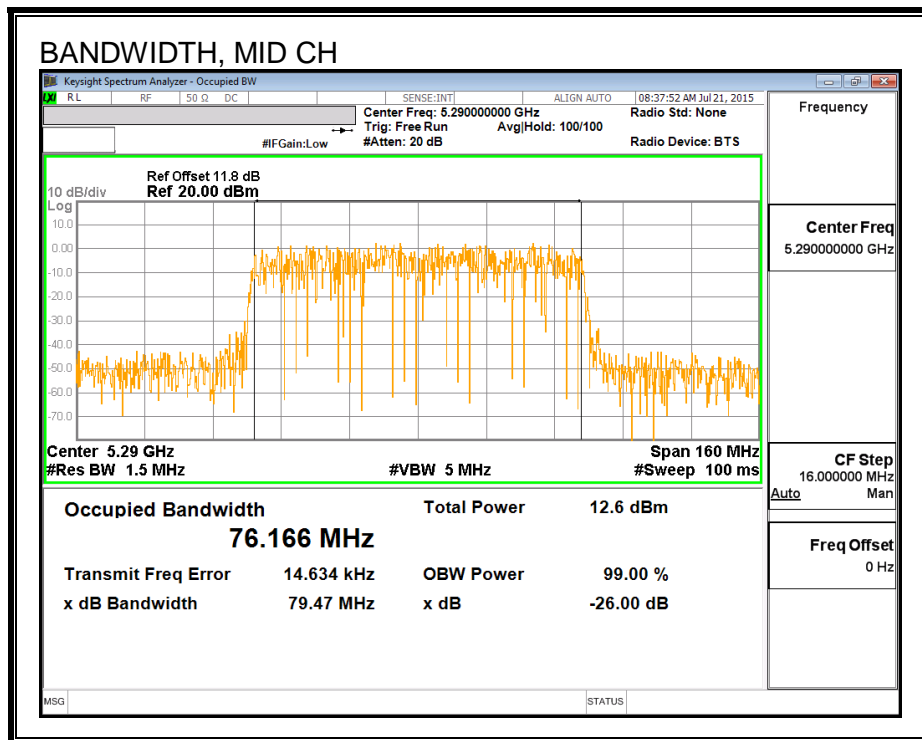
LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Mid	5290	76.166

99% BANDWIDTH



8.29.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	Power (dBm)
Mid	5290	14.35

8.29.4. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.25–5.35 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, 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

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

RESULTS

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Mid	5290	82.68	76.166	2.30	24.00	11.00

Duty Cycle CF (dB)	0.19	Included in Calculations of Corr'd Power & PSD
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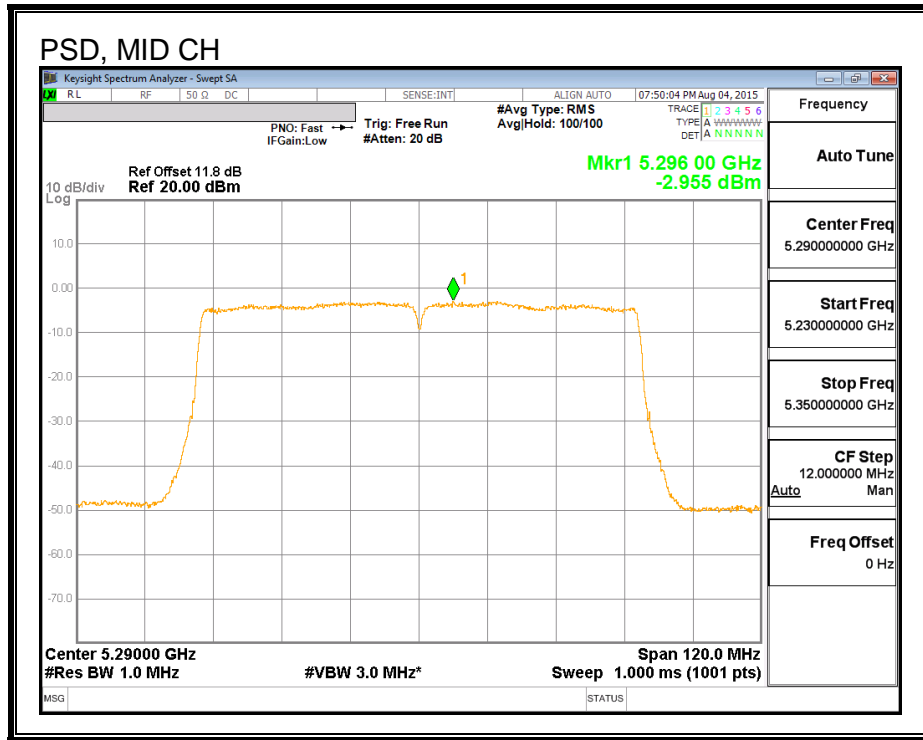
Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid	5290	14.16	14.35	24.00	-9.65

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Mid	5290	-2.96	-2.77	11.00	-13.77

PSD, Chain 0



8.30. 802.11ac VHT80 CHAIN 1 MODE IN THE 5.3 GHz BAND

8.30.1. 26 dB BANDWIDTH

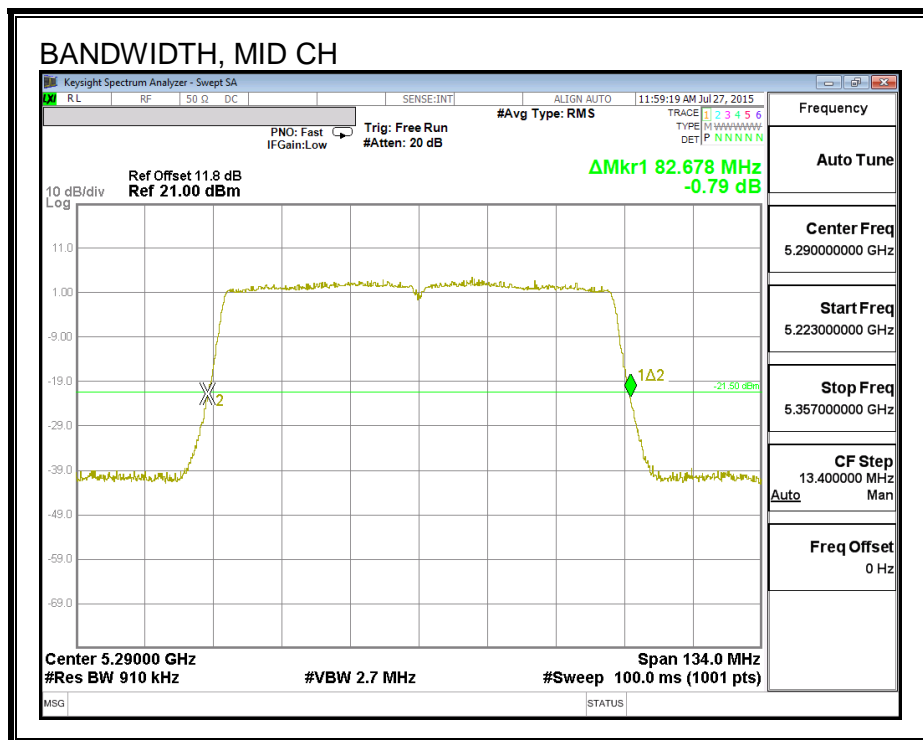
LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Mid	5290	82.68

26 dB BANDWIDTH



8.30.2. 99% BANDWIDTH

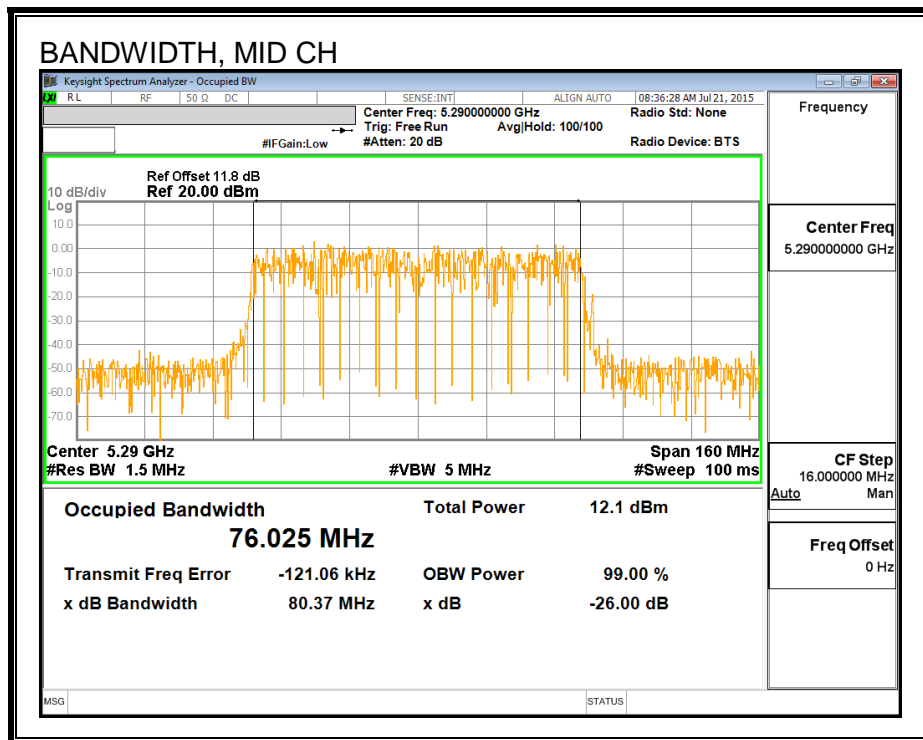
LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Mid	5290	76.025

99% BANDWIDTH



8.30.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	Power (dBm)
Mid	5290	14.50

8.30.4. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.25–5.35 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, 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

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

RESULTS

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Mid	5290	82.68	76.025	2.90	24.00	11.00

Duty Cycle CF (dB)	0.19	Included in Calculations of Corr'd Power & PSD
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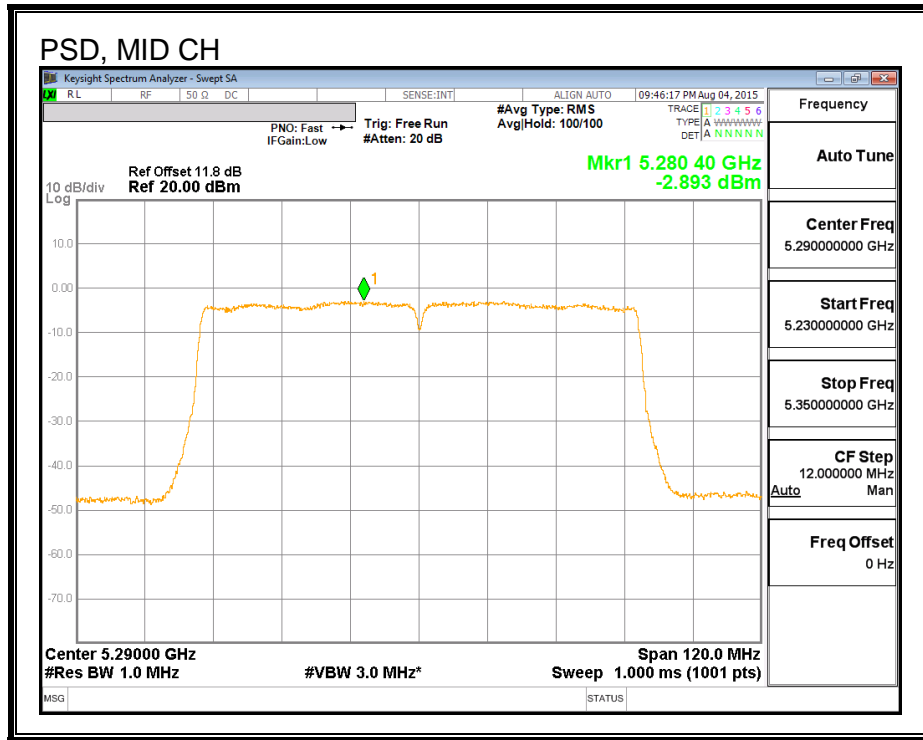
Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid	5290	14.31	14.50	24.00	-9.50

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Mid	5290	-2.89	-2.70	11.00	-13.70

PSD, Chain 1



8.31. 802.11ac VHT80 2Tx CDD MODE IN THE 5.3 GHz BAND

8.31.1. 26 dB BANDWIDTH

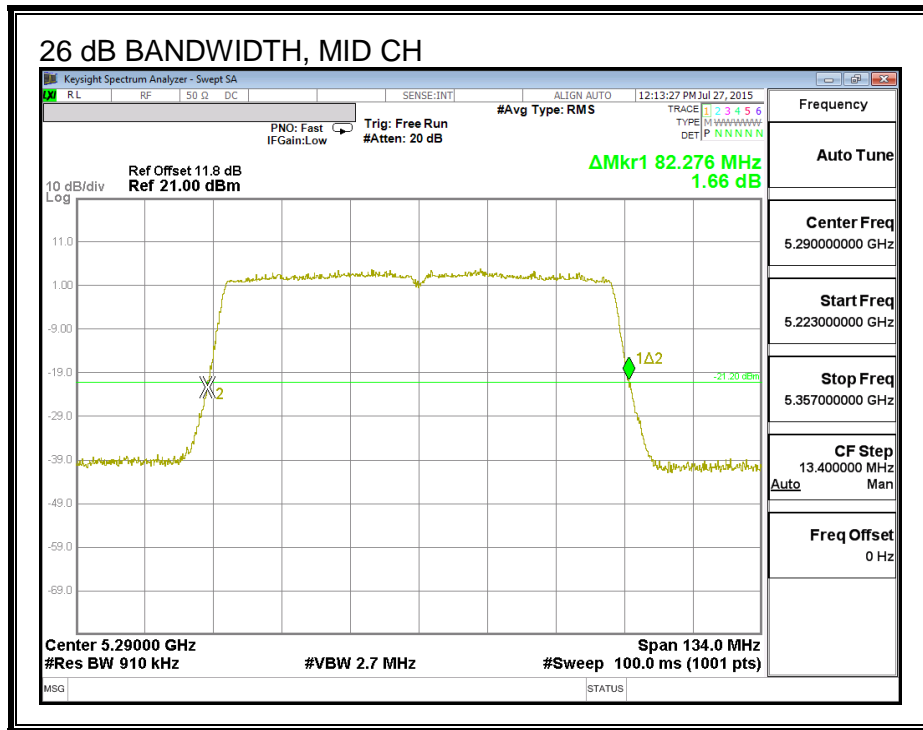
LIMITS

None; for reporting purposes only.

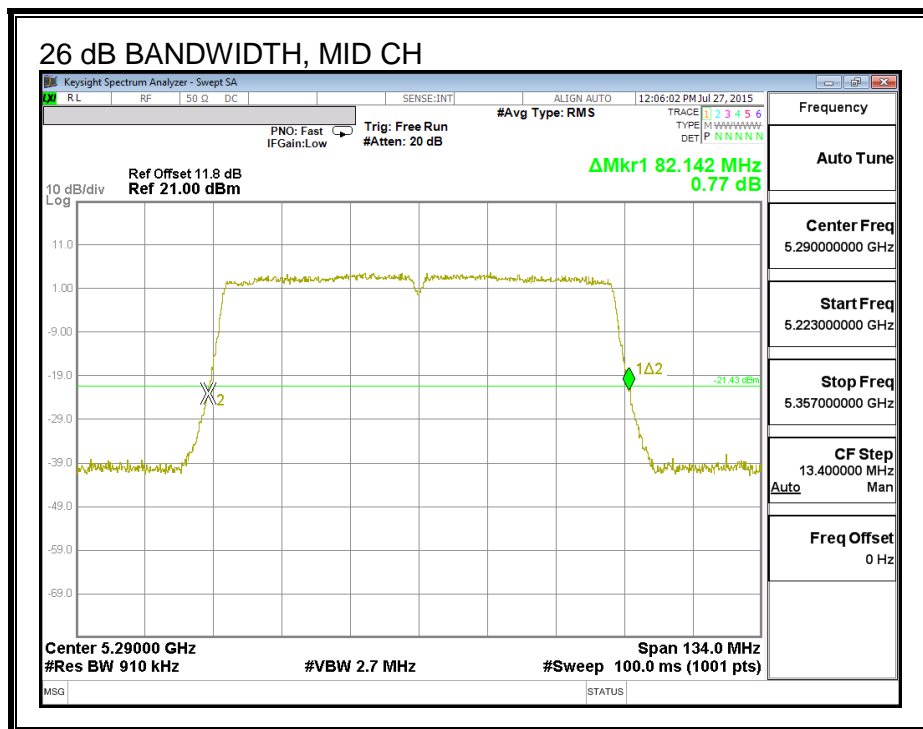
RESULTS

Channel	Frequency (MHz)	26 dB BW Chain 0 (MHz)	26 dB BW Chain 1 (MHz)
Mid	5290	82.28	82.14

26 DB BANDWIDTH, CHAIN 0



26 DB BANDWIDTH, CHAIN 1



8.31.2. 99% BANDWIDTH

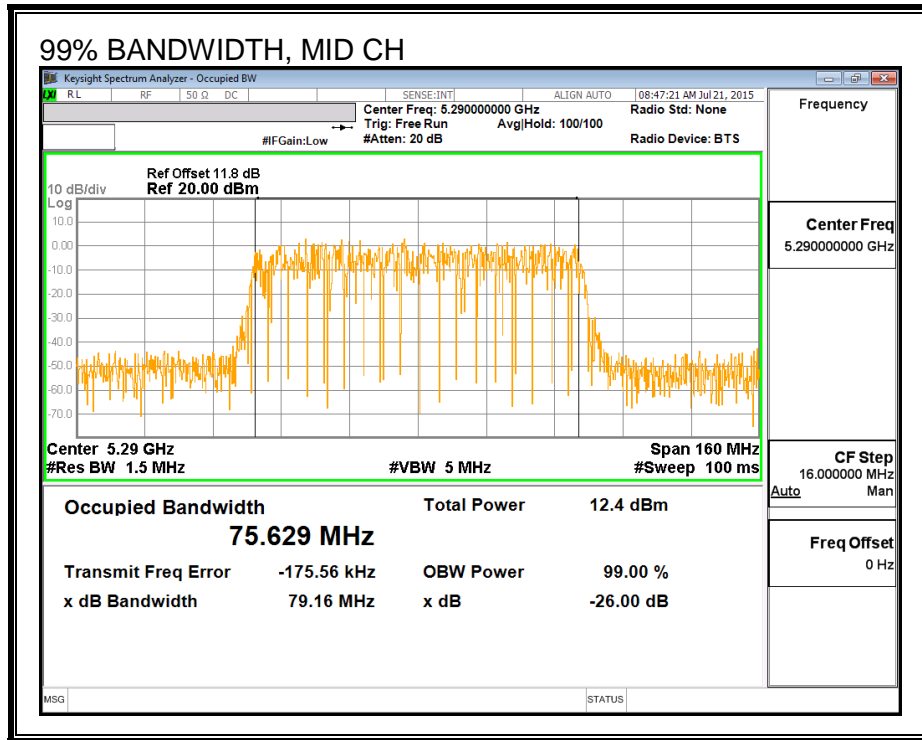
LIMITS

None; for reporting purposes only.

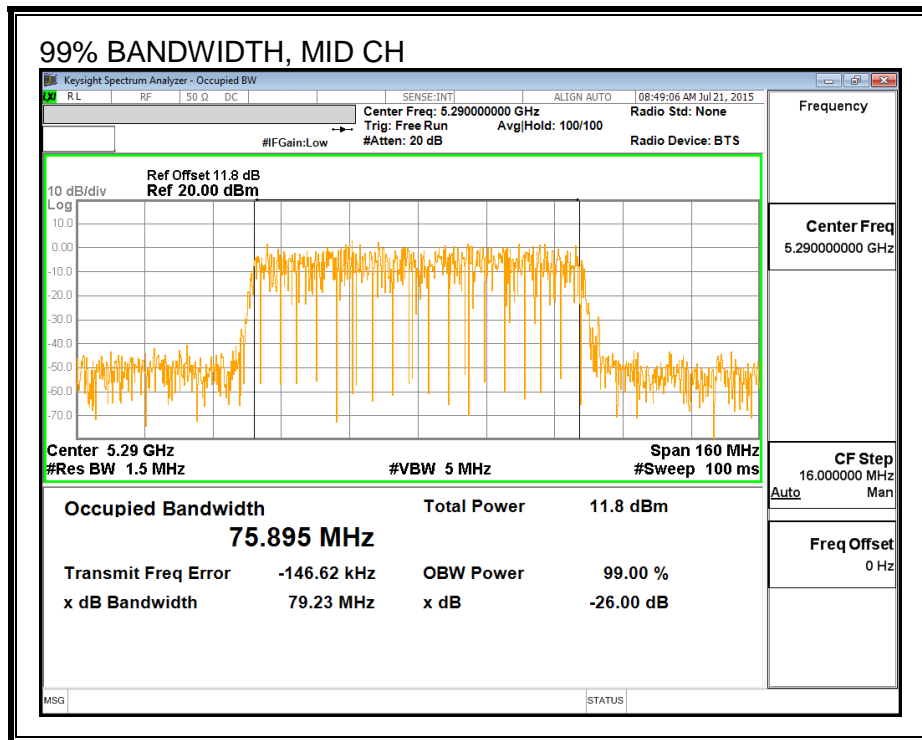
RESULTS

Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)
Mid	5290	75.629	75.895

99% BANDWIDTH, CHAIN 0



99% BANDWIDTH, CHAIN 1



8.31.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

RESULTS

Average Power Results

Channel	Frequency (MHz)	Chain 0 Power (dBm)	Chain 1 Power (dBm)	Total Power (dBm)
Mid	5290	12.87	12.94	15.92

8.31.4. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.25–5.35 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

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

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
2.30	2.90	2.61

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

Antenna Gain (dBi)	Antenna Gain (dBi)	Directional Gain (dBi)
2.30	2.90	5.62

RESULTS

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Mid	5290	82.14	75.629	2.61	5.62	24.00	11.00

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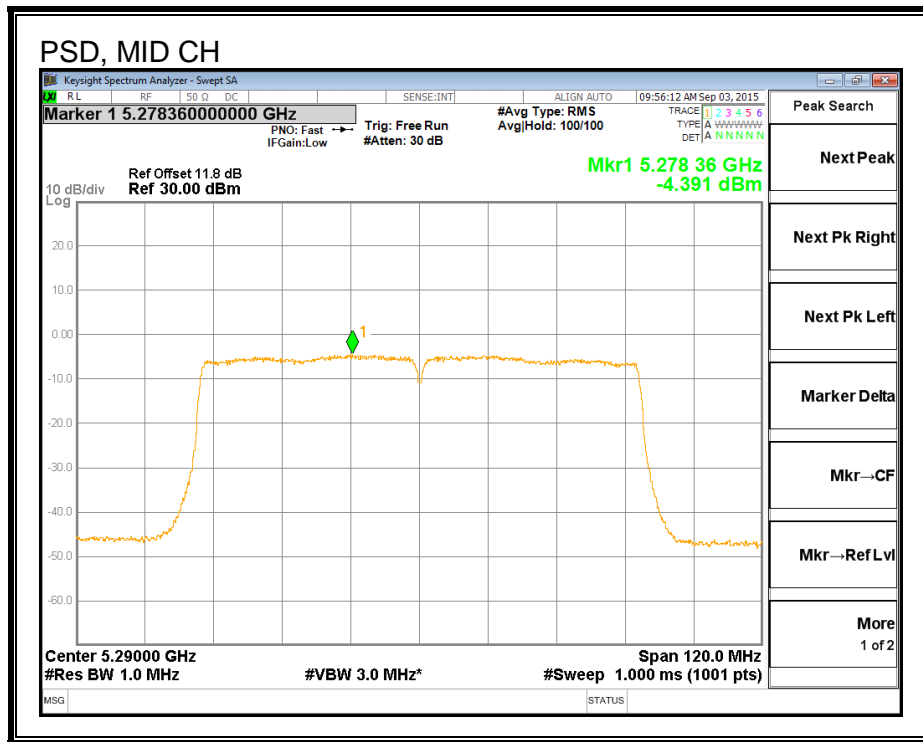
Output Power Results

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	5290	12.65	12.72	15.92	24.00	-8.08

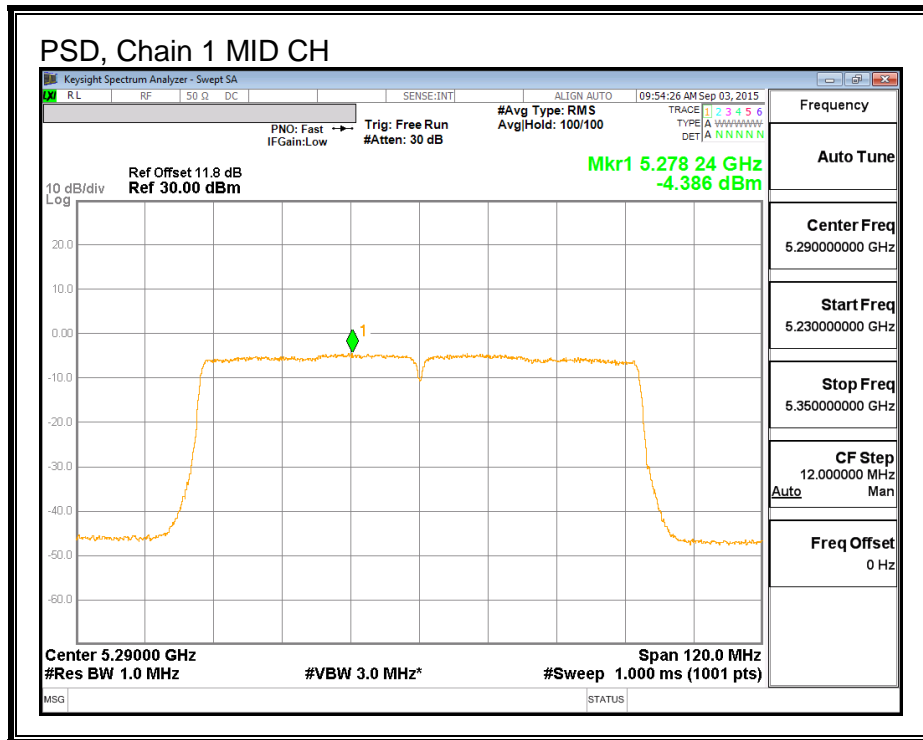
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Mid	5290	-4.391	-4.386	-1.16	11.00	-12.16

PSD, Chain 0



PSD, Chain 1



8.32. 802.11n VHT80 2Tx STBC/SDM MODE IN THE 5.3 GHz BAND

Note: Covered by 802.11n HT20 2Tx CDD MODE

8.33. 802.11a SISO MODE IN THE 5.6 GHz BAND

Note: Covered by 802.11n HT20 SISO CDD MODE

8.34. 802.11n HT20 CHAIN 0 MODE IN THE 5.6 GHz BAND

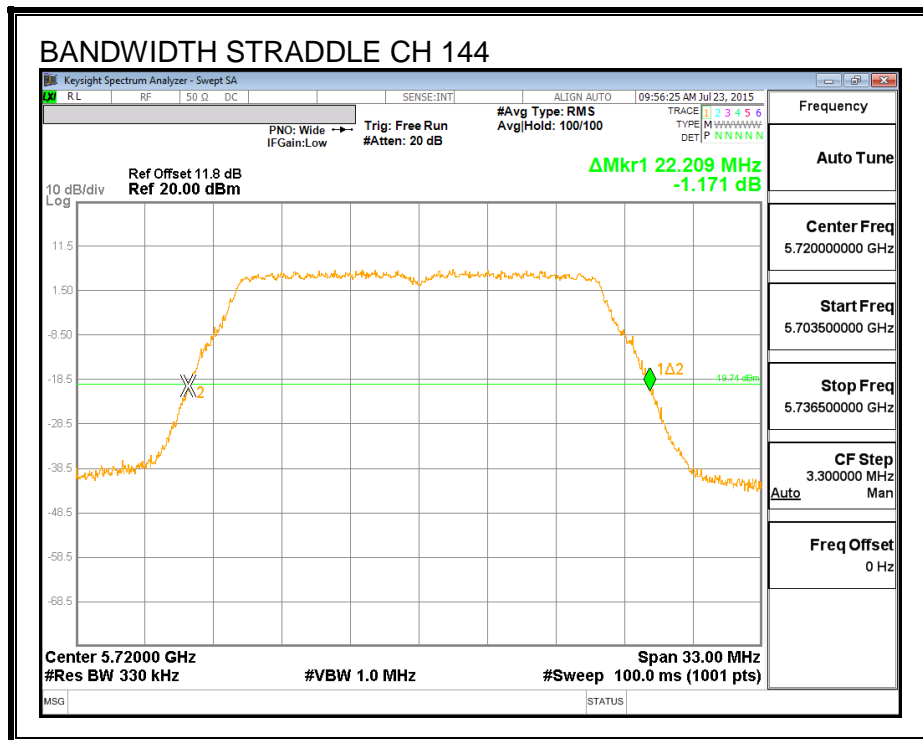
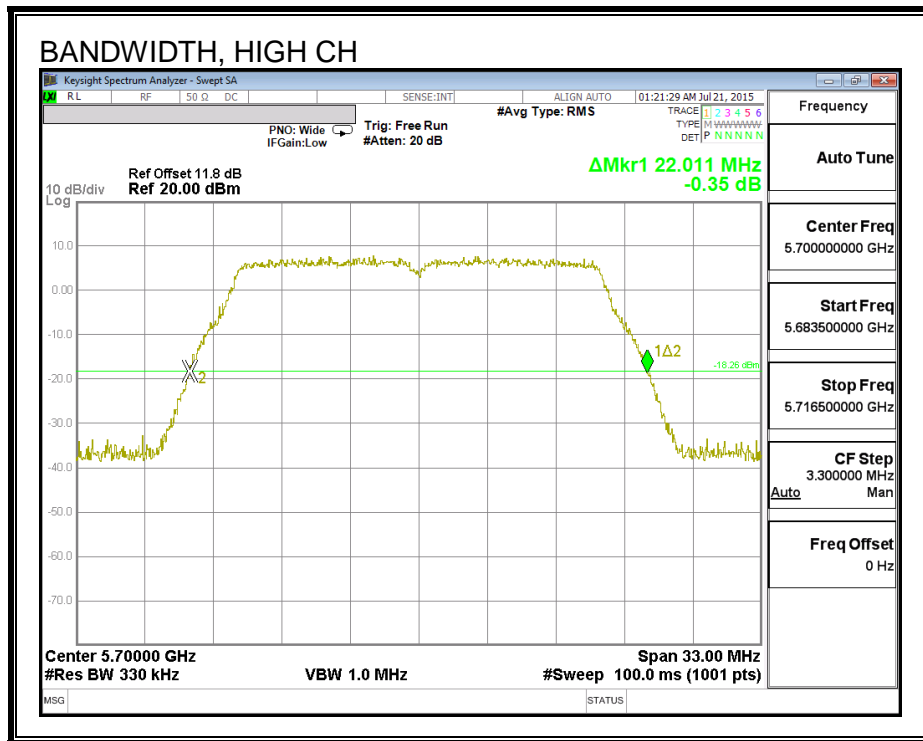
8.34.1. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5500	22.11
Mid	5580	22.01
High	5700	22.01
144	5720	22.21



8.34.2. 99% BANDWIDTH

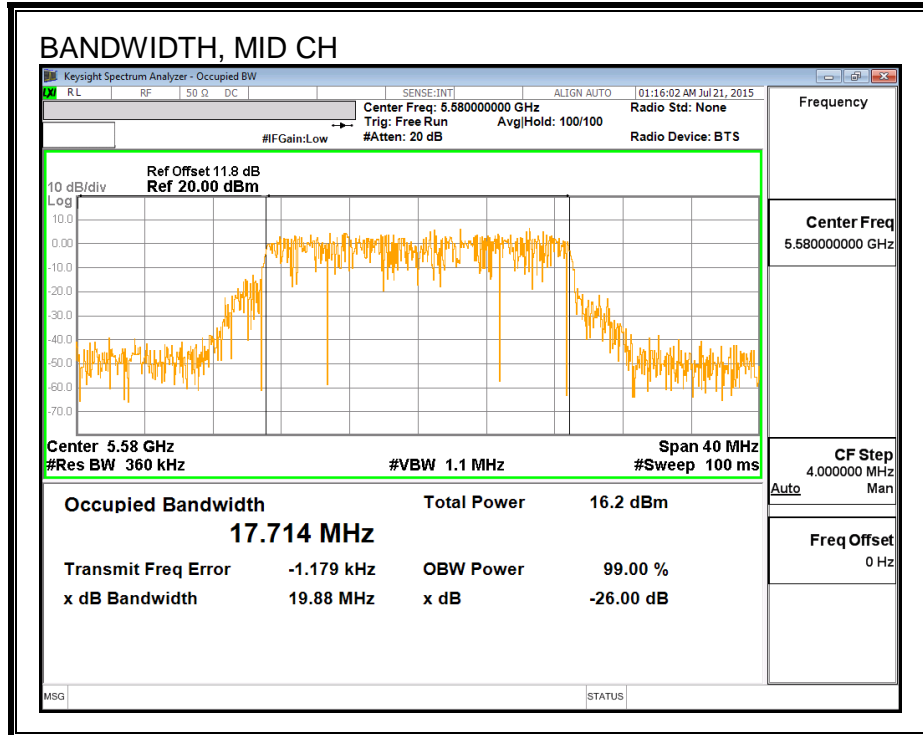
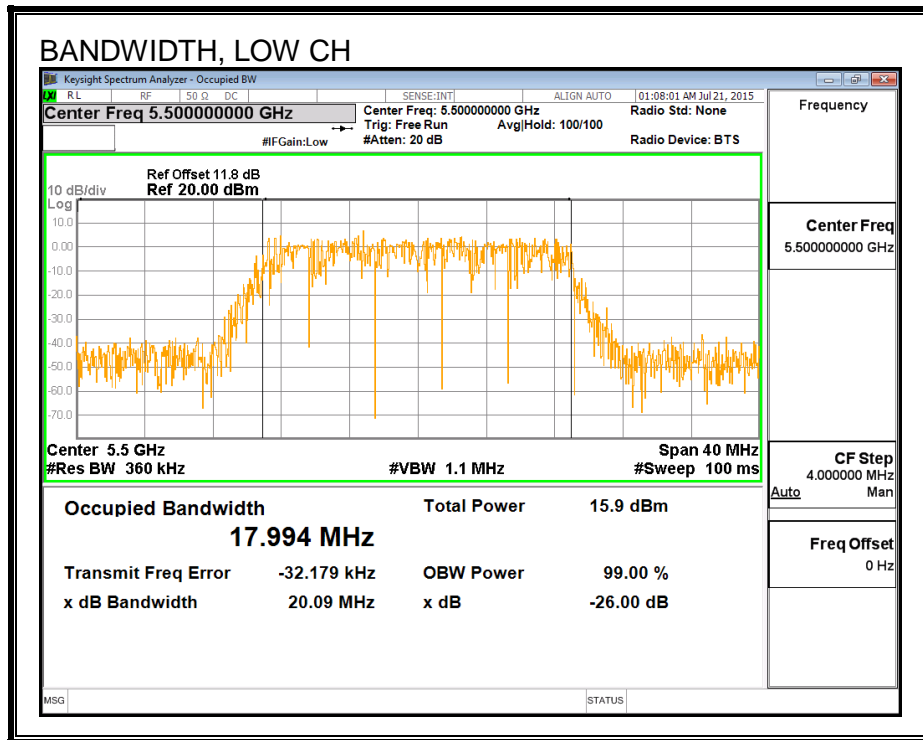
LIMITS

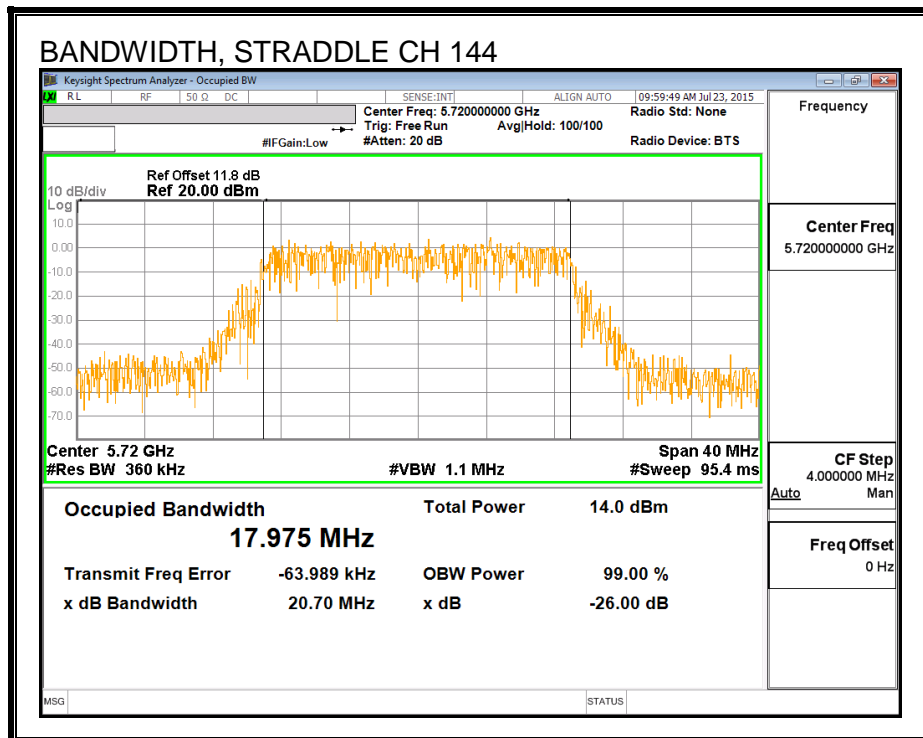
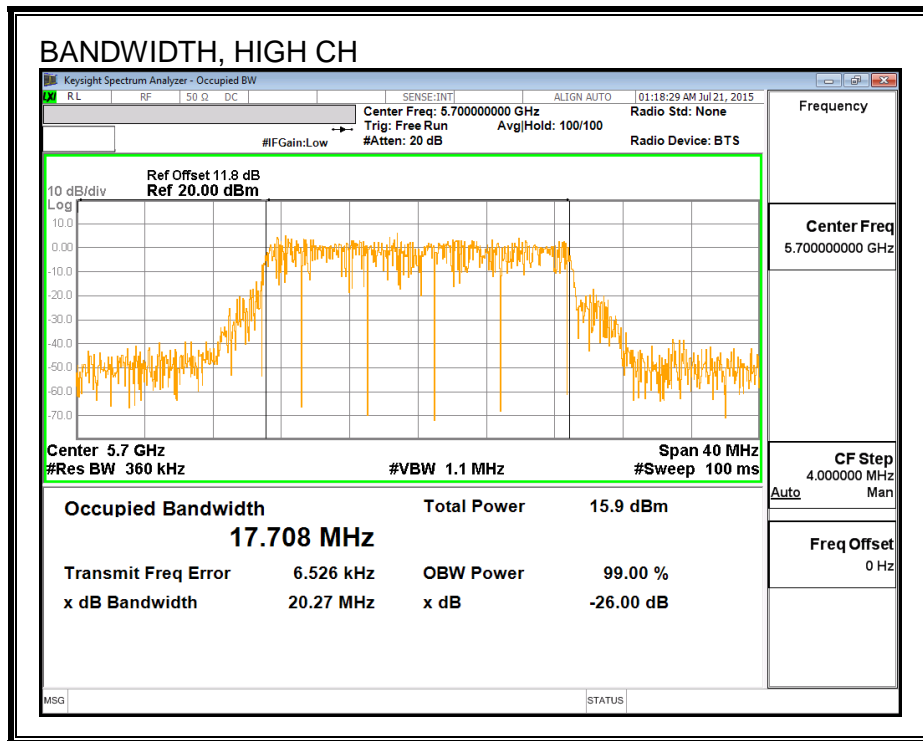
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5500	17.994
Mid	5580	17.714
High	5700	17.708
144	5720	17.975

99% BANDWIDTH





8.34.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	Power (dBm)
Low	5500	15.33
Mid	5580	15.38
High	5700	14.87
144	5720	15.50

8.34.4. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.47–5.725 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, 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

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

RESULTS

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Low	5500	22.11	17.994	2.70	23.55	11.00
Mid	5580	22.01	17.714	2.70	23.48	11.00
High	5700	22.01	17.708	2.70	23.48	11.00

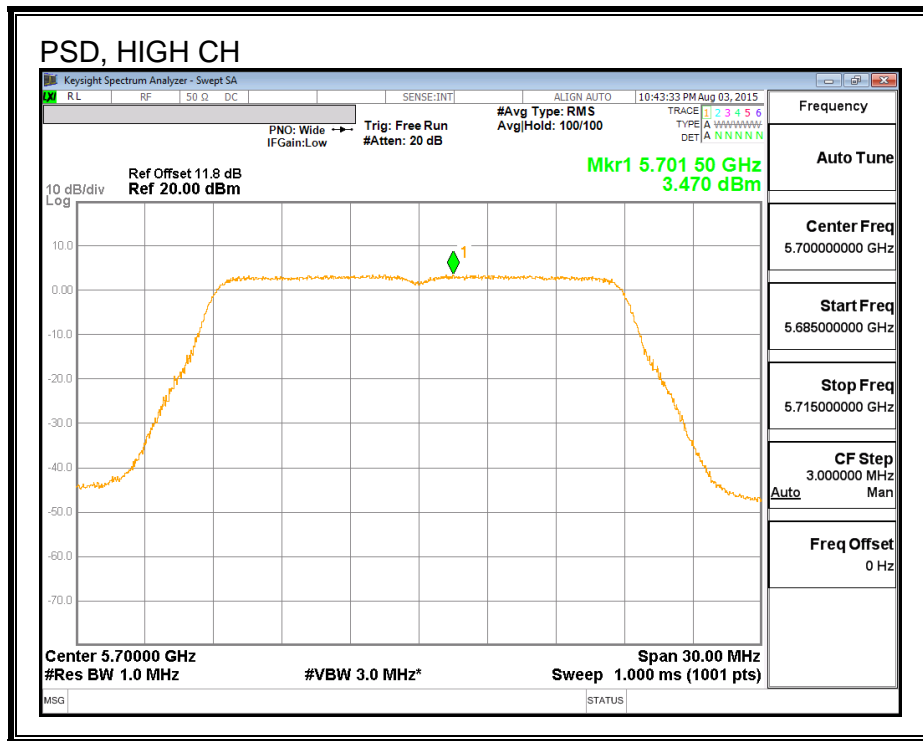
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power & PSD
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Output Power Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	15.33	15.33	23.55	-8.22
Mid	5580	15.38	15.38	23.48	-8.10
High	5700	14.87	14.87	23.48	-8.61

PSD Results

Channel	Frequency (MHz)	Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5500	3.94	3.94	11.00	-7.07
Mid	5580	4.12	4.12	11.00	-6.88
High	5700	3.47	3.47	11.00	-7.53



8.34.5. STRADDLE CHANNEL 144 RESULTS

UNII-2C BAND

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
144	5720	16.10	2.70	2.70	23.07	11.00

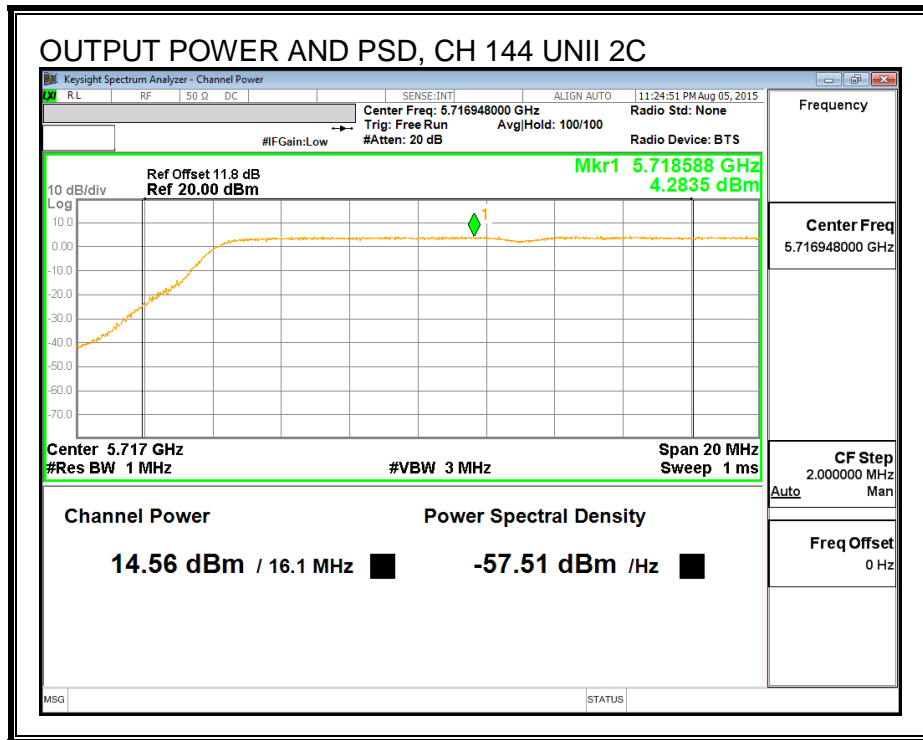
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power & PSD
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Output Power Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
144	5720	14.56	14.56	23.07	-8.51

PSD Results

Channel	Frequency (MHz)	Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
144	5720	4.28	4.28	11.00	-6.72



UNII-3 BAND

Antenna Gain and Limit

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm)
144	5720	6.10	2.70	30.00	30.00

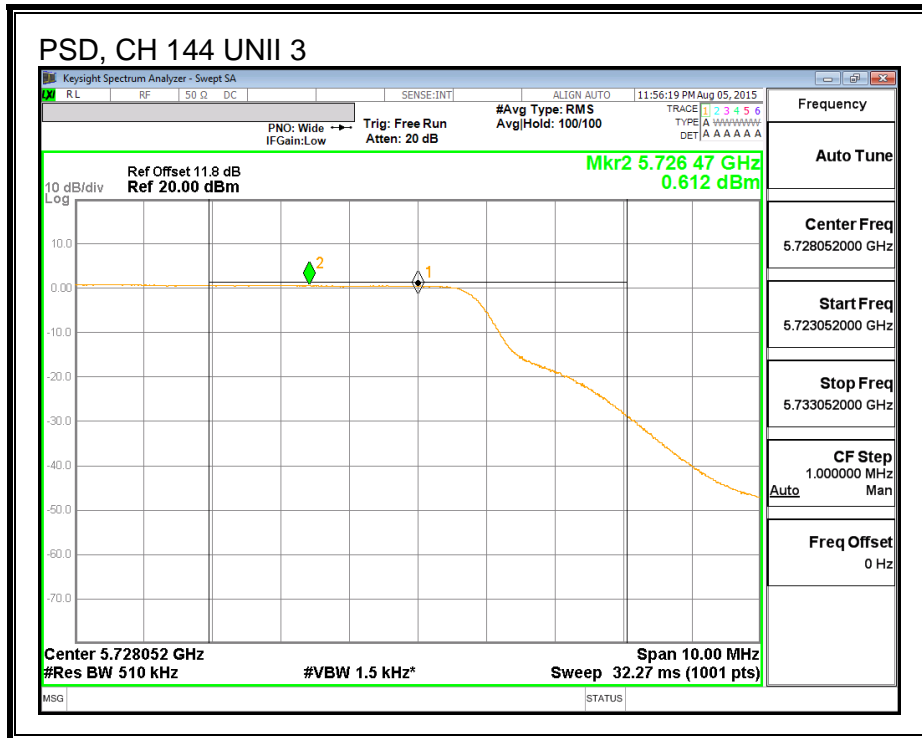
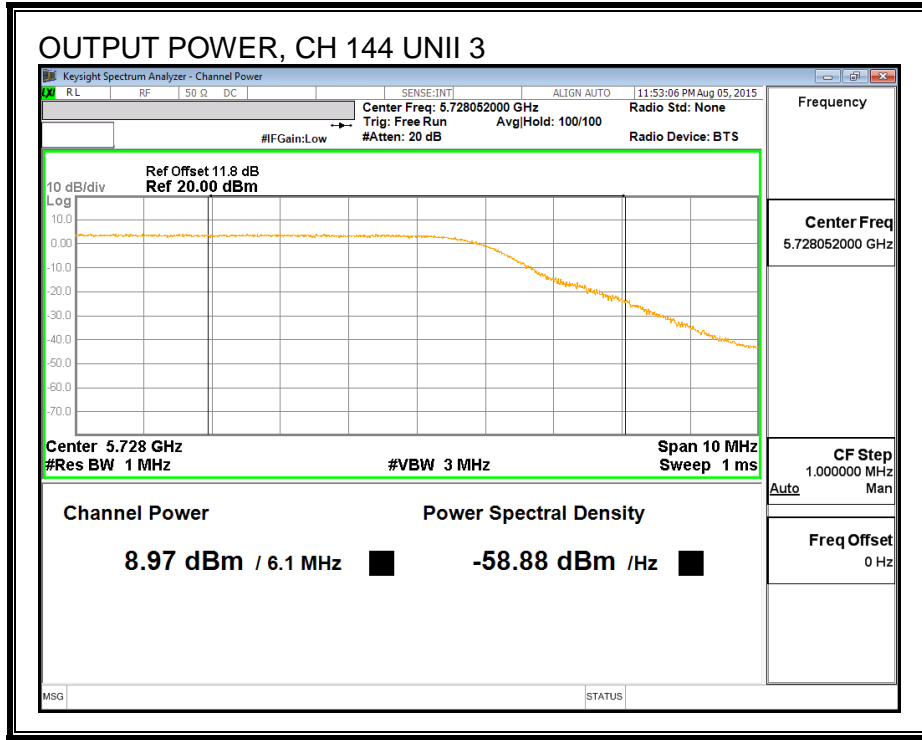
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power & PSD
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Output Power Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
144	5720	8.97	8.97	30.00	-21.03

PSD Results

Channel	Frequency (MHz)	Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
144	5720	0.61	0.61	30.00	-29.39



8.34.6. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

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

RESULTS

