8.10. 802.11ac HT80 CHAIN 1 MODE IN THE 5.2 GHz BAND

8.10.1. 26 dB BANDWIDTH

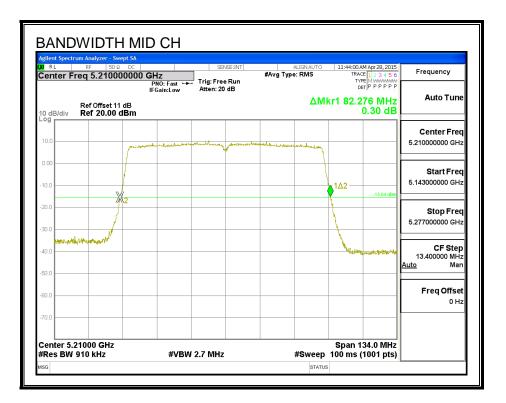
<u>LIMITS</u>

None; for reporting purposes only.

RESULTS

Channel	Frequency	26 dB Bandwidth
	(MHz)	(MHz)
Mid	5210	82.28

26 dB BANDWIDTH



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8.10.2. 99% BANDWIDTH

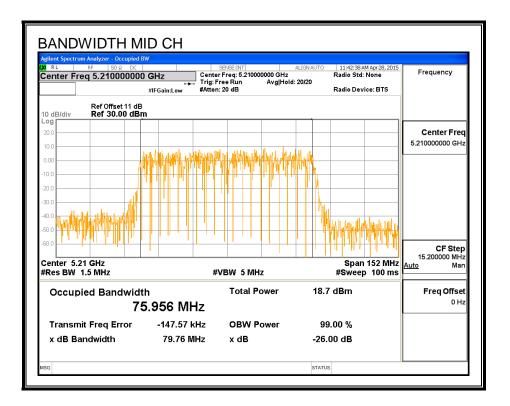
<u>LIMITS</u>

None; for reporting purposes only.

RESULTS

Channel	Frequency	99% Bandwidth
	(MHz)	(MHz)
Mid	5210	75.956

99% BANDWIDTH



8.10.3. AVERAGE POWER

<u>LIMITS</u>

None; for reporting purposes only.

RESULTS

Channel	Frequency	Power
	(MHz)	(dBm)
Mid	5210	12.97

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8.10.4. OUTPUT POWER AND PSD

<u>LIMITS</u>

FCC §15.407 (a) (1)

(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 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 maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 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 maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum 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 maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

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

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RESULTS

Antenna Gain and Limits

Channel	Frequency	Directional	Directional	Power	PSD
		Gain	Gain	Limit	Limit
		for Power	for PSD		
	(MHz)	(dBi)	(dBi)	(dBm)	(dBm)
Mid	5210	-1.54	-1.54	24.00	11.00

Duty Cycle CF (dB)	0.21	Included in Calculations of Corr'd Power & PSD

Output Power Results

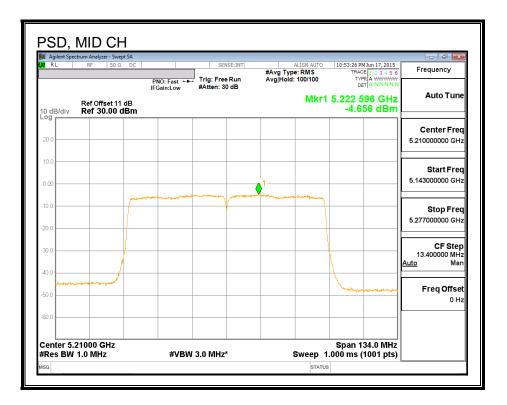
Channel	Frequency	Chain 1	Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Mid	5210	12.97	13.18	24.00	-10.82

PSD Results

Channel	Frequency	Chain 1	Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Mid	5210	-4.66	-4.45	11.00	-15.45

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PSD



8.11. 802.11ac HT80 2Tx CDD MODE IN THE 5.2 GHz BAND

8.11.1. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

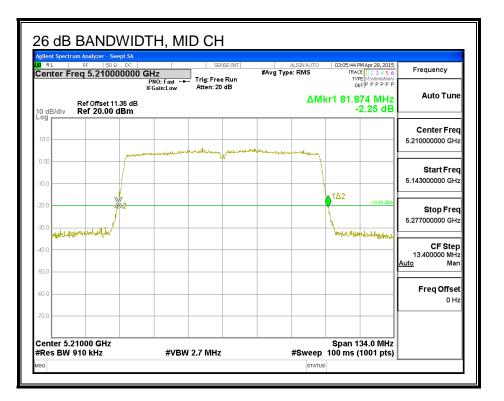
RESULTS

Channel	Frequency	26 dB BW	26 dB BW
		Chain 0	Chain 1
	(MHz)	(MHz)	(MHz)
Mid	5210	81.87	81.61

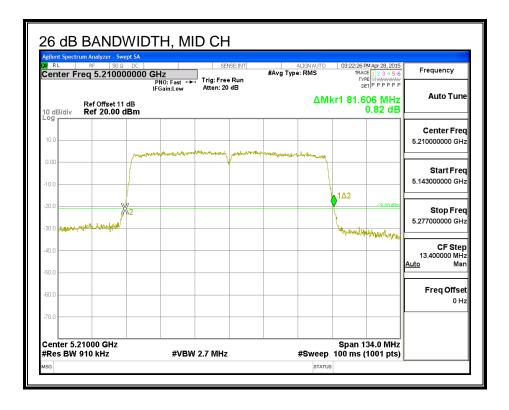
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26 DB BANDWIDTH, CHAIN 0



26 DB BANDWIDTH, CHAIN 1



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8.11.2. 99% BANDWIDTH

<u>LIMITS</u>

None; for reporting purposes only.

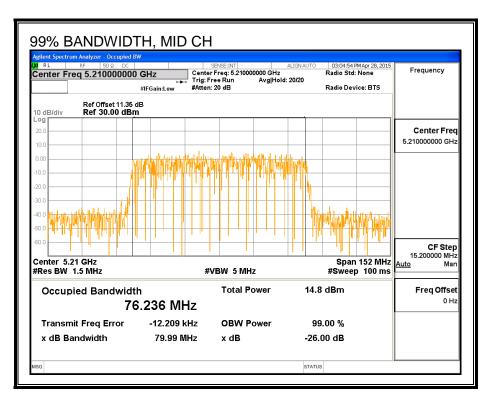
RESULTS

Channel	Frequency	99% BW	99% BW
		Chain 0	Chain 1
	(MHz)	(MHz)	(MHz)
Mid	5210	76.236	75.718

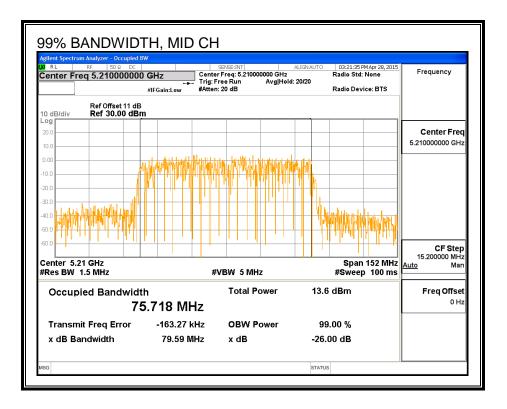
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99% BANDWIDTH, CHAIN 0



99% BANDWIDTH, CHAIN 1



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8.11.3. AVERAGE POWER

<u>LIMITS</u>

None; for reporting purposes only.

RESULTS

Channel	Frequency	Chain 0	Chain 1	Total
		Power	Power	Power
	(MHz)	(dBm)	(dBm)	(dBm)

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8.11.4. OUTPUT POWER AND PSD

<u>LIMITS</u>

FCC §15.407 (a) (1)

(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 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 maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 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 maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum 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 maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

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DIRECTIONAL ANTENNA GAIN

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

Chain 0	Chain 1	Uncorrelated Chains
Antenna	Antenna	Directional
Gain	Gain	Gain
(dBi)	(dBi)	(dBi)
-4.18	-1.54	-2.66

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

Chain 0	Chain 1	Correlated Chains
Antenna	Antenna	Directional
Gain	Gain	Gain
(dBi)	(dBi)	(dBi)
-4.18	-1.54	0.25

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RESULTS

Antenna Gain and Limits

Channel	Frequency	Directional	Directional	Power	PSD
		Gain	Gain	Limit	Limit
		for Power	for PSD		
	(MHz)	(dBi)	(dBi)	(dBm)	(dBm)
Mid	5210	-2.66	0.25	24.00	11.00

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

Output Power Results

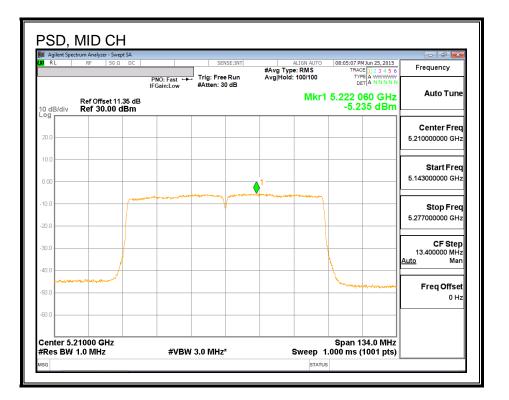
Channel	Frequency	Chain 0	Chain 1	Total	Power	Power
		Meas	Meas	Corr'd	Limit	Margin
		Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Mid	5210	11.98	11.89	15.17	24.00	-8.83

PSD Results

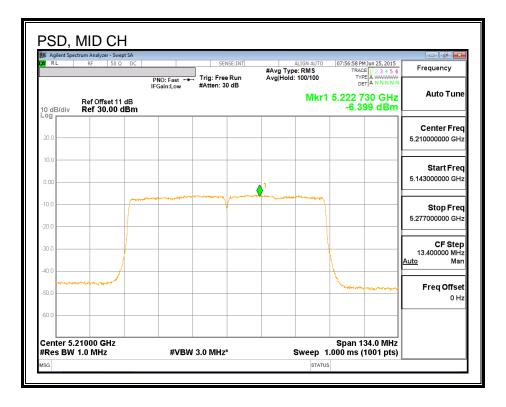
Channel	Frequency	Chain 0	Chain 1	Total	PSD	PSD
		Meas	Meas	Corr'd	Limit	Margin
		PSD	PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Mid	5210	-5.24	-6.40	-2.55	11.00	-13.55

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PSD, CHAIN 0



PSD, CHAIN 1



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8.12. 802.11ac HT80 2Tx STBC MODE IN THE 5.2 GHz BAND

Note: Covered by 802.11ac VHT80 2Tx CDD MODE

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8.13. 802.11n HT20 CHAIN 0 MODE IN THE 5.3 GHz BAND

8.13.1. 26 dB BANDWIDTH

<u>LIMITS</u>

None; for reporting purposes only.

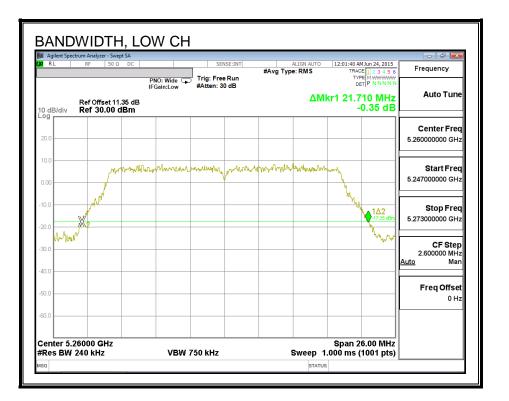
RESULTS

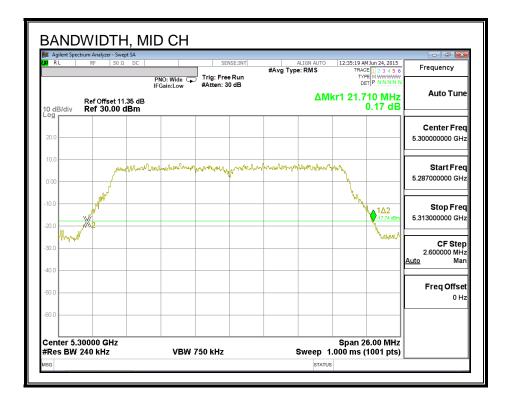
Channel	Frequency	26 dB Bandwidth
	(MHz)	(MHz)
Low	5260	21.71
Mid	5300	21.71
High	5320	21.53

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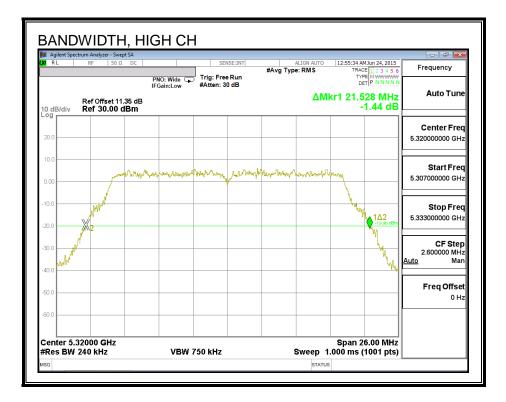
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26 dB BANDWIDTH





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8.13.2. 99% BANDWIDTH

<u>LIMITS</u>

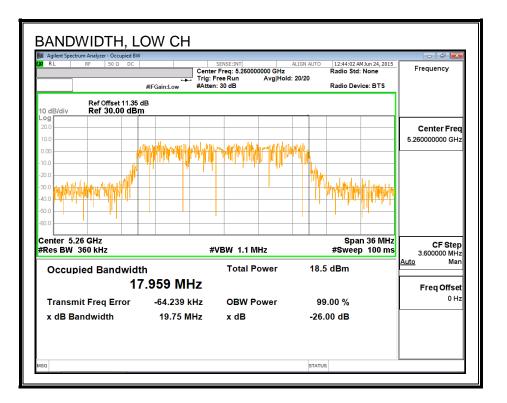
None; for reporting purposes only.

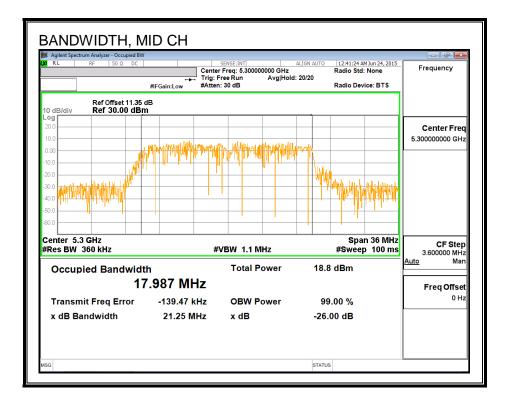
RESULTS

Channel	Frequency	99% Bandwidth
	(MHz)	(MHz)
Low	5260	17.959
Mid	5300	17.987
High	5320	17.813

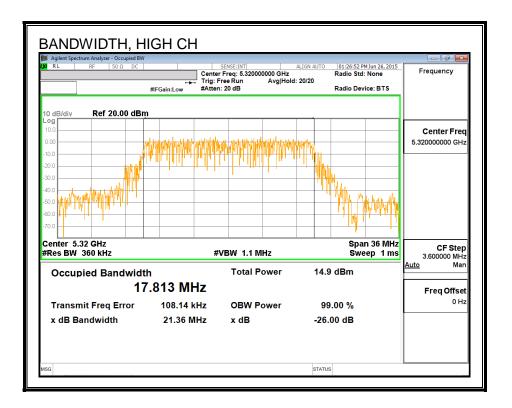
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99% BANDWIDTH





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8.13.3. AVERAGE POWER

<u>LIMITS</u>

None; for reporting purposes only.

<u>RESULTS</u>

Channel	Frequency	Power
	(MHz)	(dBm)
Low	5260	18.49
Mid	5300	18.43
High	5320	15.85

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8.13.4. 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.

IC RSS-247 (6.2.2) (1)

The maximum conducted output power shall not exceed 250 mW or 11 + 10 log10B, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log10B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

DIRECTIONAL ANTENNA GAIN

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

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0.00

RESULTS

Bandwidth, Antenna Gain, and Limits

Channel	Frequency	Min	Min	Directional	Power	PSD
		26 dB	99%	Gain	Limit	Limit
		BW	BW			
	(MHz)	(MHz)	(MHz)	(dBi)	(dBm)	(dBm)
Low	5260	21.71	17.96	-2.96	23.54	11.00
Mid	5300	21.71	17.99	-2.96	23.55	11.00
High	5320	21.53	17.81	-2.96	23.51	11.00

Duty Cycle CF (dB)

Included in Calculations of Corr'd Power & PSD

Output Power Results

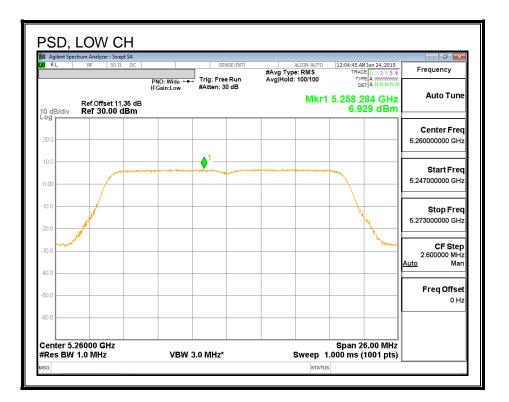
Channel	Frequency	Chain 0	Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	5260	18.49	18.49	23.54	-5.05
Mid	5300	18.43	18.43	23.55	-5.12
High	5320	15.85	15.85	23.51	-7.66

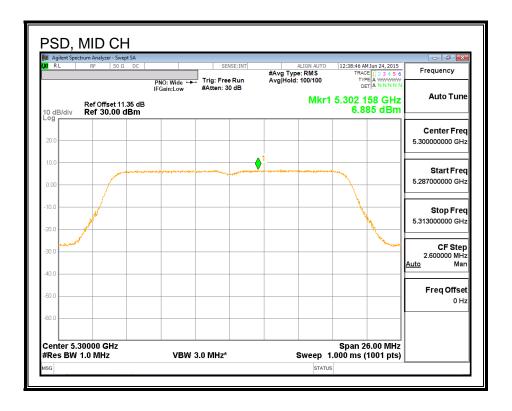
PSD Results

Channel	Frequency	Chain 0	Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	5260	6.93	6.93	11.00	-4.07
Mid	5300	6.89	6.89	11.00	-4.12
High	5320	4.29	4.29	11.00	-6.71

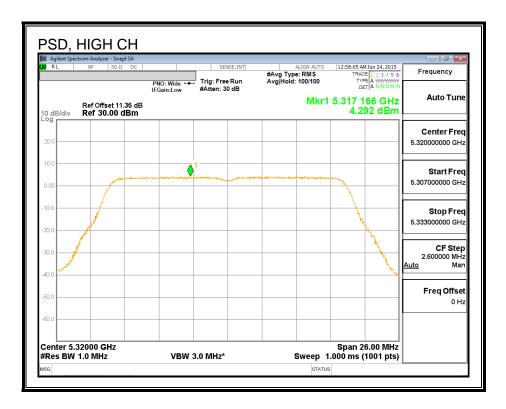
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PSD





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8.14. 802.11n HT20 CHAIN 1 MODE IN THE 5.3 GHz BAND

8.14.1. 26 dB BANDWIDTH

<u>LIMITS</u>

None; for reporting purposes only.

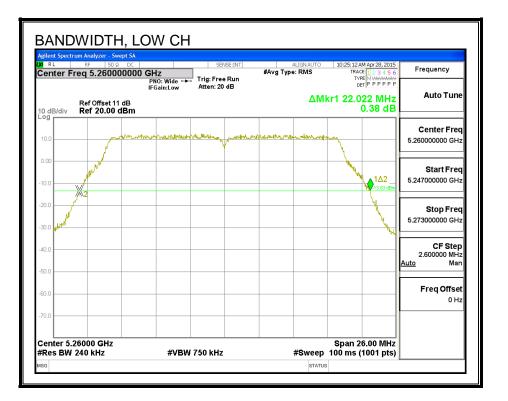
<u>RESULTS</u>

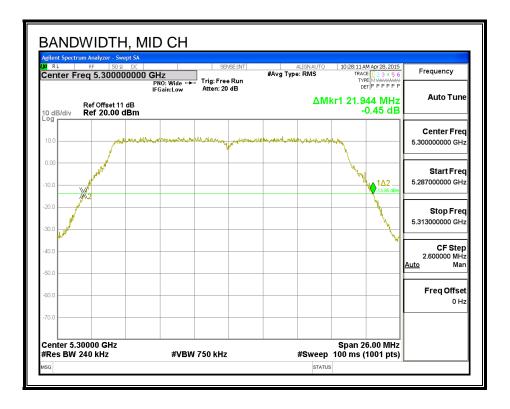
Channel	Frequency	26 dB Bandwidth
	(MHz)	(MHz)
Low	5260	22.02
Mid	5300	21.94
High	5320	21.81

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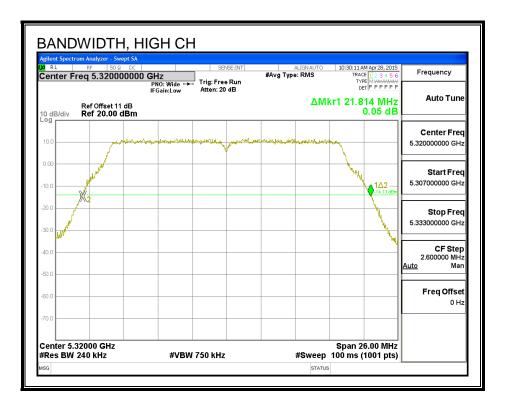
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26 dB BANDWIDTH





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8.14.2. 99% BANDWIDTH

<u>LIMITS</u>

None; for reporting purposes only.

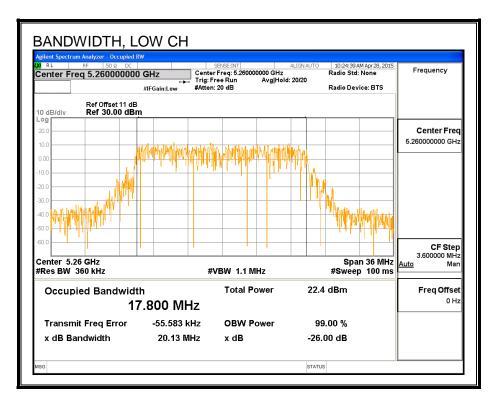
RESULTS

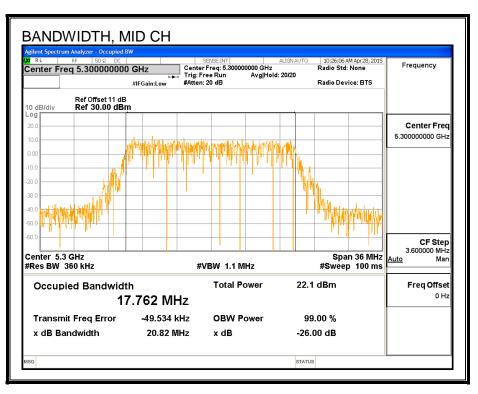
Channel	Frequency	99% Bandwidth
	(MHz)	(MHz)
Low	5260	17.800
Mid	5300	17.762
High	5320	17.935

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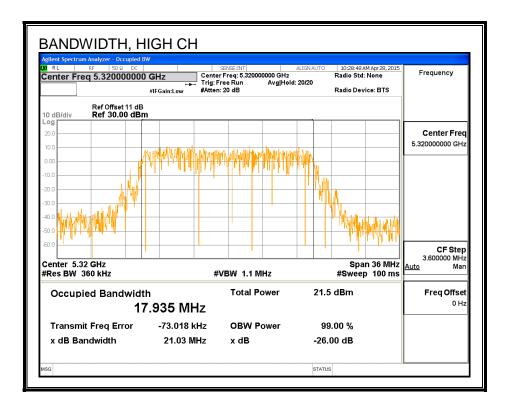
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99% BANDWIDTH





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8.14.3. AVERAGE POWER

<u>LIMITS</u>

None; for reporting purposes only.

<u>RESULTS</u>

Channel	Frequency	Power	
	(MHz)	(dBm)	
Low	5260	19.37	
Mid	5300	19.45	
High	5320	15.82	

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8.14.4. 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.

IC RSS-247 (6.2.2) (1)

The maximum conducted output power shall not exceed 250 mW or 11 + 10 log10B, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log10B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

DIRECTIONAL ANTENNA GAIN

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

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0.00

RESULTS

Bandwidth, Antenna Gain, and Limits

Channel	Frequency	Min	Min	Directional	Power	PSD
		26 dB	99%	Gain	Limit	Limit
		BW	BW			
	(MHz)	(MHz)	(MHz)	(dBi)	(dBm)	(dBm)
Low	5260	22.02	17.80	-1.54	23.50	11.00
Mid	5300	21.94	17.76	-1.54	23.49	11.00
High	5320	21.81	17.94	-1.54	23.54	11.00

Duty Cycle CF (dB)

Included in Calculations of Corr'd Power & PSD

Output Power Results

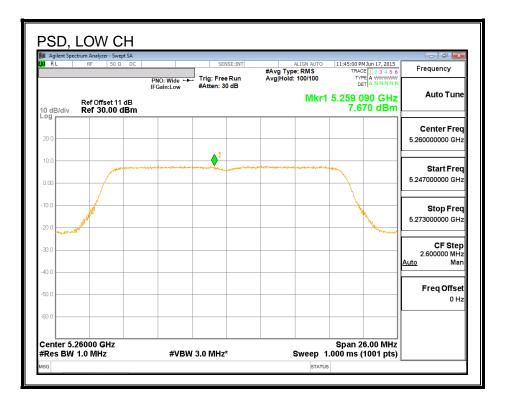
Channel	Frequency	Chain 1	Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	5260	19.37	19.37	23.50	-4.13
Mid	5300	19.45	19.45	23.49	-4.04
High	5320	15.82	15.82	23.54	-7.72

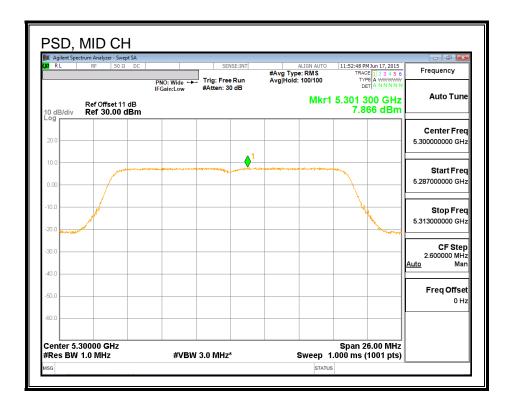
PSD Results

Channel	Frequency	Chain 1	Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	5260	7.67	7.67	11.00	-3.33
Mid	5300	7.87	7.87	11.00	-3.13
High	5320	4.29	4.29	11.00	-6.71

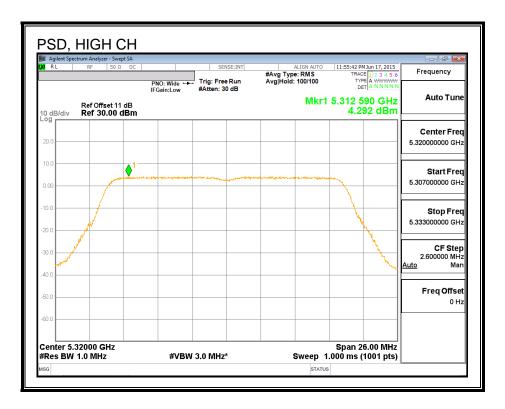
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PSD





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8.15. 802.11n HT20 2Tx CDD MODE IN THE 5.3 GHz BAND

8.15.1. 26 dB BANDWIDTH

<u>LIMITS</u>

None; for reporting purposes only.

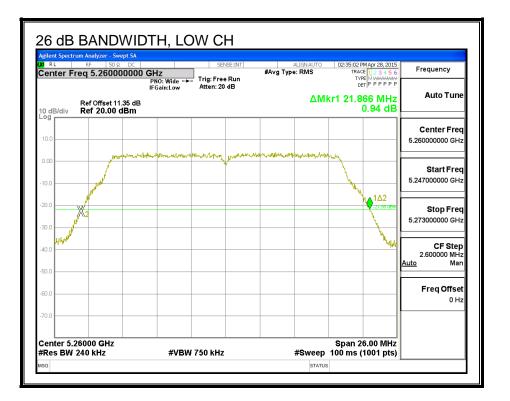
RESULTS

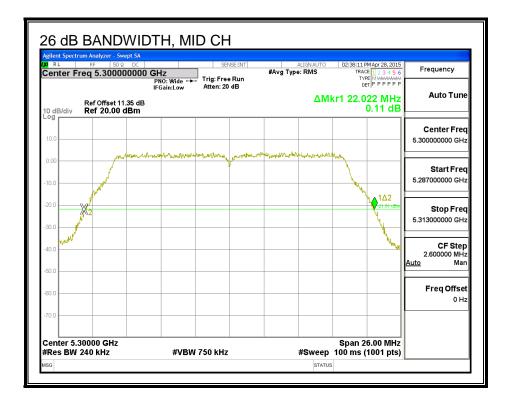
Channel	Frequency	26 dB BW	26 dB BW
		Chain 0	Chain 1
	(MHz)	(MHz)	(MHz)
Low	5260	21.87	21.94
Mid	5300	22.02	21.79
High	5320	21.92	21.84

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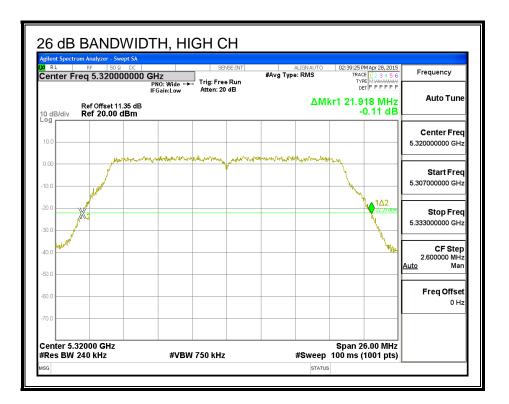
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26 DB BANDWIDTH, CHAIN 0

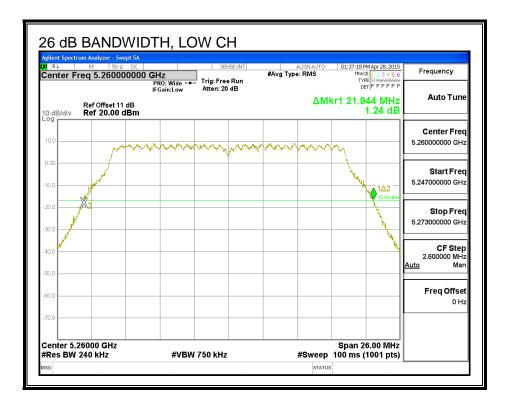




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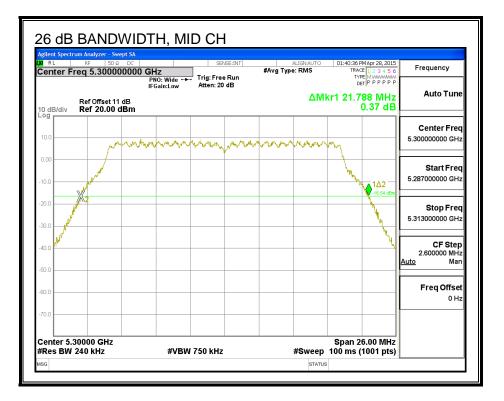


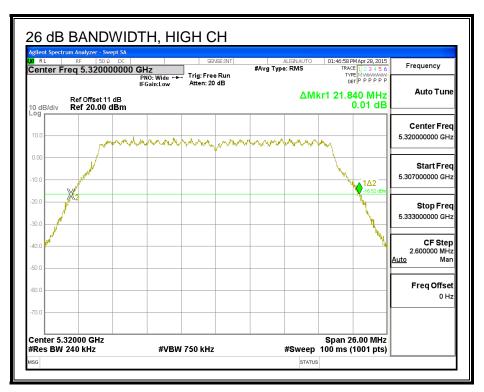
26 DB BANDWIDTH, CHAIN 1



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8.15.2. 99% BANDWIDTH

<u>LIMITS</u>

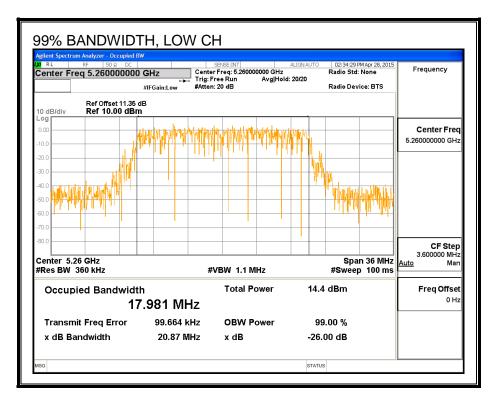
None; for reporting purposes only.

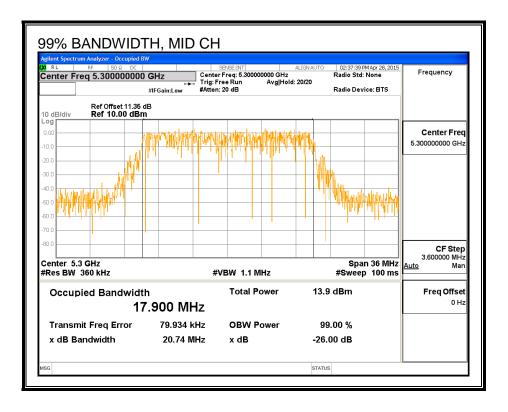
<u>RESULTS</u>

Channel	Frequency	99% BW	99% BW
		Chain 0	Chain 1
	(MHz)	(MHz)	(MHz)
Low	5260	17.981	17.800
Mid	5300	17.900	17.828
High	5320	17.636	17.762

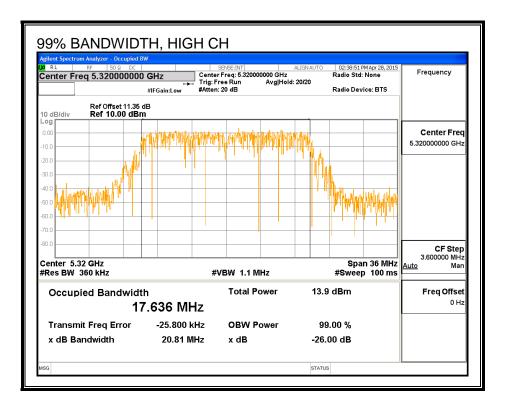
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99% BANDWIDTH, CHAIN 0

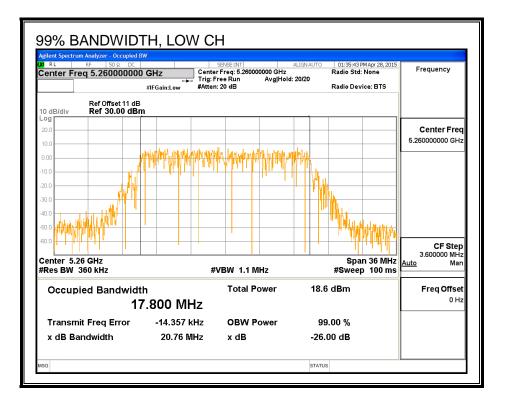




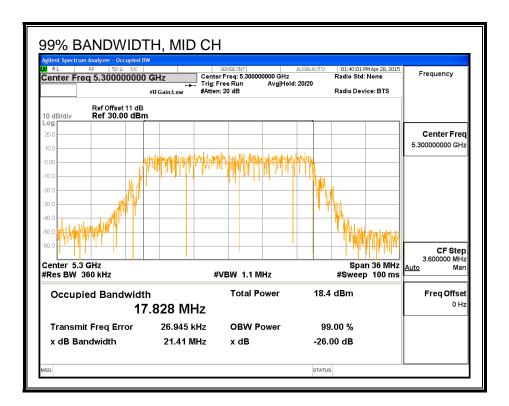
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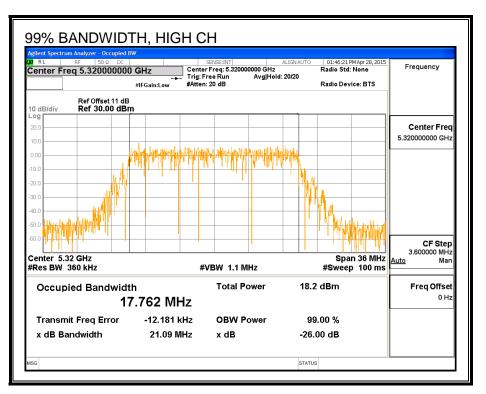


99% BANDWIDTH, CHAIN 1



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8.15.3. AVERAGE POWER

<u>LIMITS</u>

None; for reporting purposes only.

<u>RESULTS</u>

Channel	Frequency	Chain 0 Chain 1		Total
		Power Power		Power
	(MHz)	(dBm)	(dBm)	(dBm)
Low	5260	16.95	16.81	19.89
Mid	5300	17.00	16.88	19.95
High	5320	16.00	15.98	19.00

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8.15.4. OUTPUT POWER AND PSD

<u>LIMITS</u>

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.

IC RSS-247 (6.2.2) (1)

The maximum conducted output power shall not exceed 250 mW or 11 + 10 log10B, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log10B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

DIRECTIONAL ANTENNA GAIN

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

Chain 0	Chain 1	Uncorrelated Chains			
Antenna	Antenna	Directional			
Gain	Gain	Gain			
(dBi)	(dBi)	(dBi)			
-2.96	-1.54	-2.19			

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

Chain 0	Chain 1	Correlated Chains	
Antenna	Antenna	Directional	
Gain	Gain	Gain	
(dBi)	(dBi)	(dBi)	
-2.96	-1.54	0.79	

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RESULTS

Bandwidth, Antenna Gain and Limits

Channel	Frequency	Min	Min	Directional	Directional	Power	PSD
		26 dB	99%	Gain	Gain	Limit	Limit
		BW	BW	for Power	for PSD		
	(MHz)	(MHz)	(MHz)	(dBi)	(dBi)	(dBm)	(dBm)
Low	5260	21.94	17.981	-2.19	0.79	23.55	11.00
Mid	5300	22.02	17.900	-2.19	0.79	23.53	11.00
High	5320	21.92	17.762	-2.19	0.79	23.49	11.00

Duty Cycle CF (dB) 0.00

Included in Calculations of Corr'd Power & PSD

Output Power Results

Channel	Frequency	Chain 0	Chain 1	Total	Power	Power
		Meas	Meas	Corr'd	Limit	Margin
		Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5260	16.95	16.81	19.89	23.55	-3.66
Mid	5300	17.00	16.88	19.95	23.53	-3.58
High	5320	16.00	15.98	19.00	23.49	-4.49

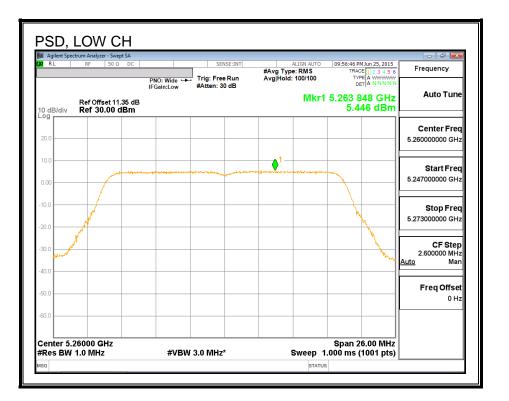
PSD Results

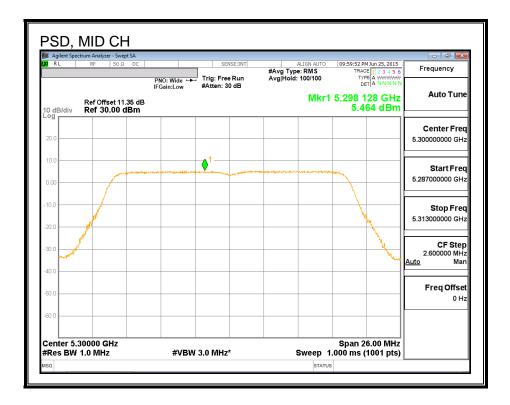
Channel	Frequency	Chain 0	Chain 1	Total	PSD	PSD
		Meas	Meas	Corr'd	Limit	Margin
		PSD	PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5260	5.45	5.32	8.40	11.00	-2.60
Mid	5300	5.46	5.41	8.45	11.00	-2.55
High	5320	4.60	4.57	7.59	11.00	-3.41

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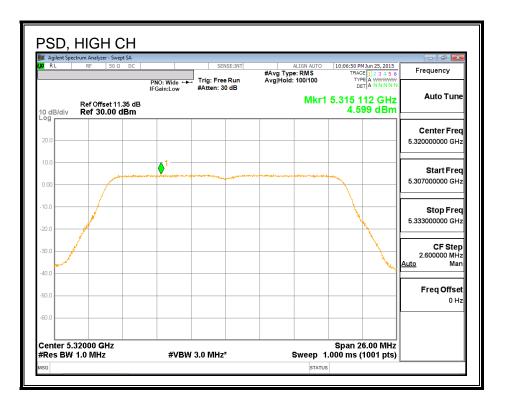
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PSD, CHAIN 0

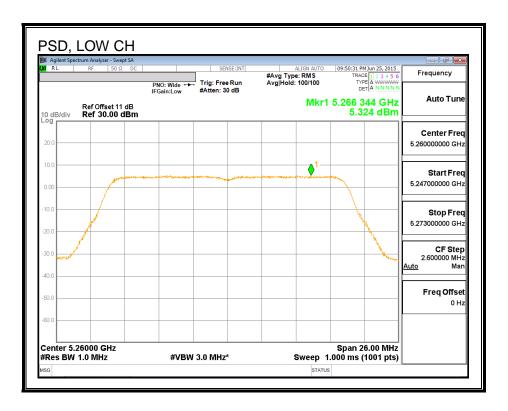




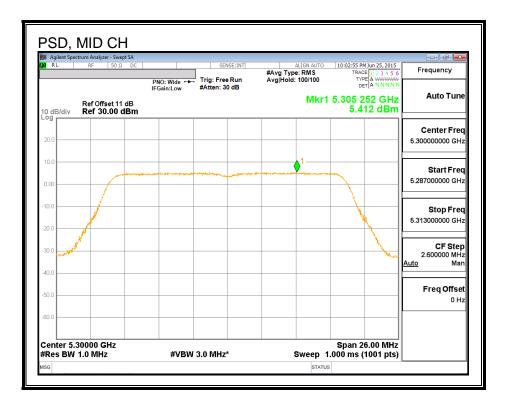
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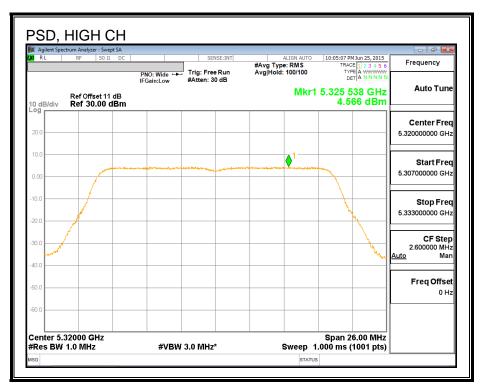


PSD, CHAIN 1



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8.16. 802.11n HT20 2Tx STBC MODE IN THE 5.3 GHz BAND

Note: Covered by 802.11n HT20 2Tx CDD MODE

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8.17. 802.11n HT40 CHAIN 0 MODE IN THE 5.3 GHz BAND

8.17.1. 26 dB BANDWIDTH

<u>LIMITS</u>

None; for reporting purposes only.

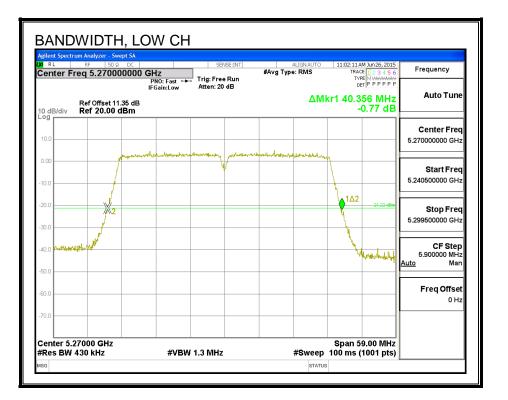
RESULTS

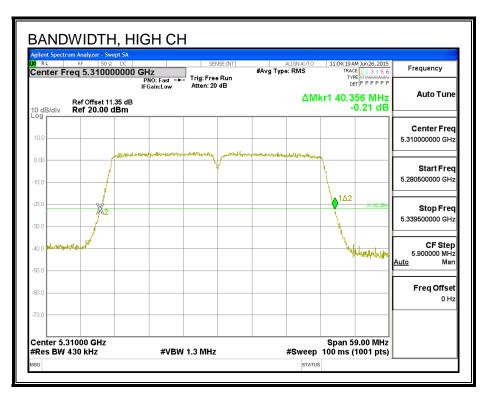
Channel	Frequency	26 dB Bandwidth
	(MHz)	(MHz)
Low	5270	40.36
High	5310	40.36

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26 dB BANDWIDTH





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8.17.2. 99% BANDWIDTH

<u>LIMITS</u>

None; for reporting purposes only.

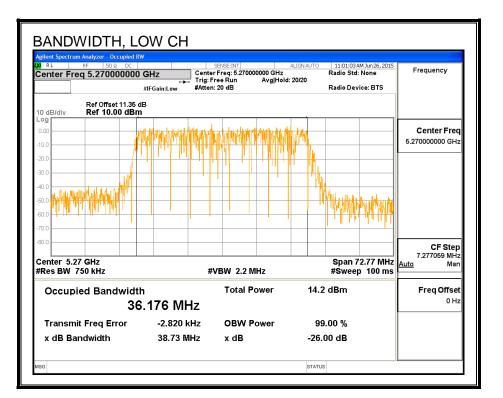
<u>RESULTS</u>

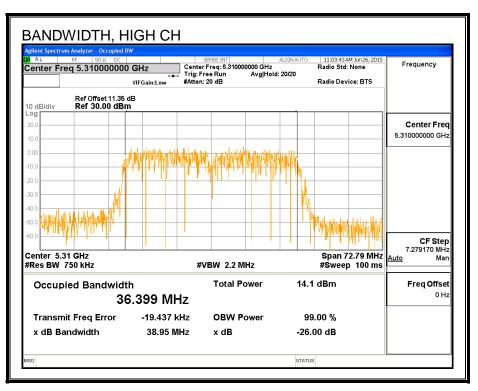
Channel	Frequency	99% Bandwidth	
	(MHz)	(MHz)	
Low	5270	36.176	
High	5310	36.399	

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99% BANDWIDTH





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8.17.3. AVERAGE POWER

<u>LIMITS</u>

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	Power (dBm)
Low	5270	17.94
High	5310	14.89

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8.17.4. 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.

IC RSS-247 (6.2.2) (1)

The maximum conducted output power shall not exceed 250 mW or 11 + 10 log10B, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log10B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

DIRECTIONAL ANTENNA GAIN

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

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RESULTS

Bandwidth, Antenna Gain, and Limits

Frequency	Min	Min	Directional	Power	PSD
	26 dB	99%	Gain	Limit	Limit
	BW	BW			
(MHz)	(MHz)	(MHz)	(dBi)	(dBm)	(dBm)
5270	40.36	36.18	-2.96	24.00	11.00
5310	40.36	36.40	-2.96	24.00	11.00
	(MHz) 5270	26 dB BW (MHz) (MHz) 5270 40.36	26 dB 99% BW BW (MHz) (MHz) (MHz) 5270 40.36 36.18	26 dB 99% Gain BW BW Gain (MHz) (MHz) (MHz) (dBi) 5270 40.36 36.18 -2.96	26 dB 99% Gain Limit BW BW EW Image: Compare the second se

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

Output Power Results

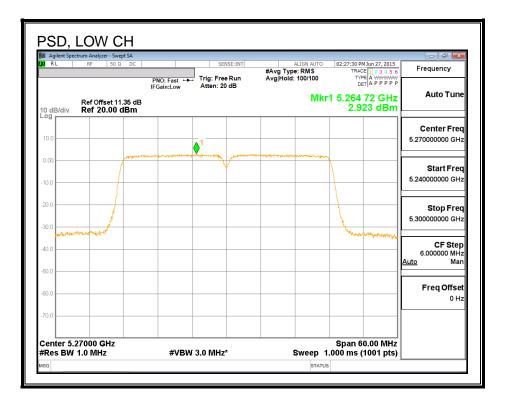
Channel	Frequency	Chain 0	Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	5270	17.94	17.94	24.00	-6.06
High	5310	14.89	14.89	24.00	-9.11

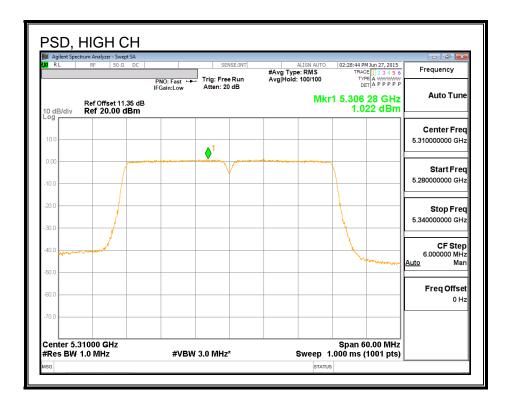
PSD Results

Channel	Frequency	Chain 0	Total	PSD	PSD
		Meas	Meas Corr'd		Margin
		PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	5270	2.92	2.92	11.00	-8.08
High	5310	1.02	1.02	11.00	-9.98

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PSD





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8.18. 802.11n HT40 CHAIN 1 MODE IN THE 5.3 GHz BAND

8.18.1. 26 dB BANDWIDTH

<u>LIMITS</u>

None; for reporting purposes only.

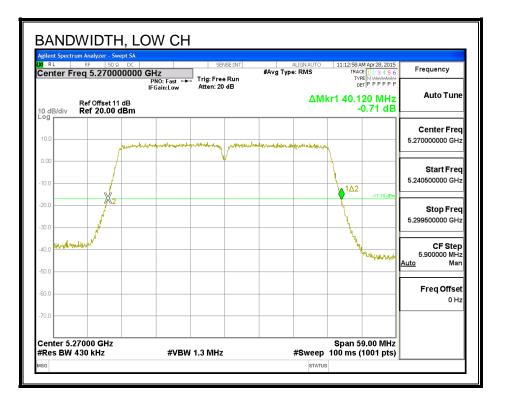
RESULTS

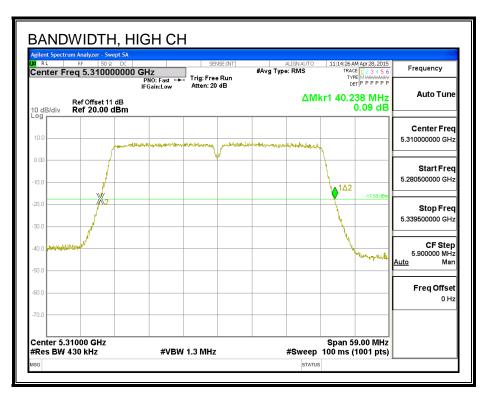
Channel	Frequency	26 dB Bandwidth
	(MHz)	(MHz)
Low	5270	40.12
High	5310	40.24

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26 dB BANDWIDTH





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8.18.2. 99% BANDWIDTH

<u>LIMITS</u>

None; for reporting purposes only.

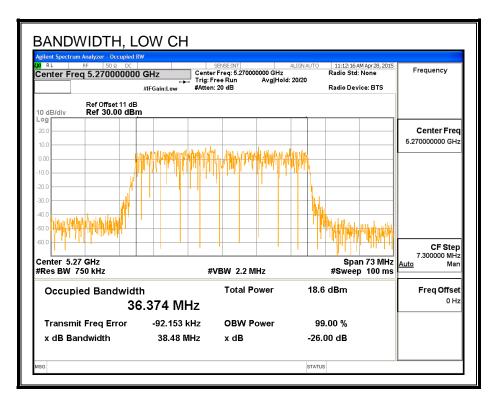
<u>RESULTS</u>

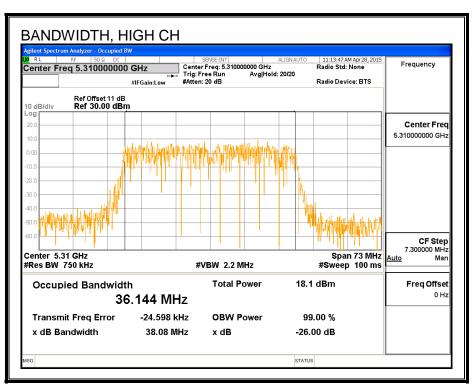
Channel	Frequency	99% Bandwidth	
(MHz)		(MHz)	
Low	5270	36.374	
High	5310	36.144	

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99% BANDWIDTH





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8.18.3. AVERAGE POWER

<u>LIMITS</u>

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	Power (dBm)
Low	5270	17.62
High	5310	15.00

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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 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.

IC RSS-247 (6.2.2) (1)

The maximum conducted output power shall not exceed 250 mW or 11 + 10 log10B, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log10B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

DIRECTIONAL ANTENNA GAIN

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

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RESULTS

Bandwidth, Antenna Gain, and Limits

Frequency	Min	Min	Directional	Power	PSD
	26 dB	99%	Gain	Limit	Limit
	BW	BW			
(MHz)	(MHz)	(MHz)	(dBi)	(dBm)	(dBm)
5270	40.12	36.37	-1.54	24.00	11.00
5310	40.24	36.14	-1.54	24.00	11.00
	(MHz) 5270	26 dB BW (MHz) (MHz) 5270 40.12	26 dB 99% BW BW (MHz) (MHz) (MHz) 5270 40.12 36.37	26 dB 99% Gain BW BW Gain (MHz) (MHz) (dBi) 5270 40.12 36.37 -1.54	26 dB 99% Gain Limit BW BW Image: BW

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

Output Power Results

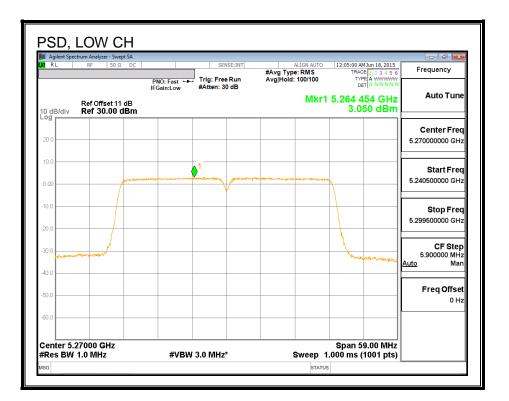
Channel	Frequency	Chain 1	Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	5270	17.62	17.62	24.00	-6.38
High	5310	15.00	15.00	24.00	-9.00

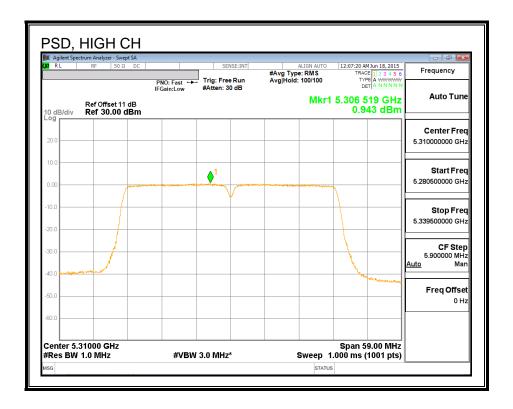
PSD Results

Channel	Frequency	Chain 1	Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	5270	3.05	3.05	11.00	-7.95
High	5310	0.94	0.94	11.00	-10.06

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PSD





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8.19. 802.11n HT40 2Tx CDD MODE IN THE 5.3 GHz BAND

8.19.1. 26 dB BANDWIDTH

<u>LIMITS</u>

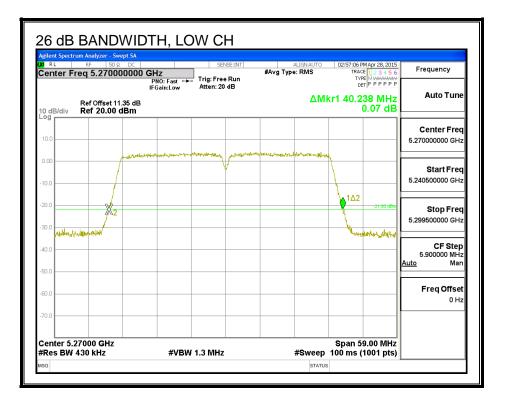
None; for reporting purposes only.

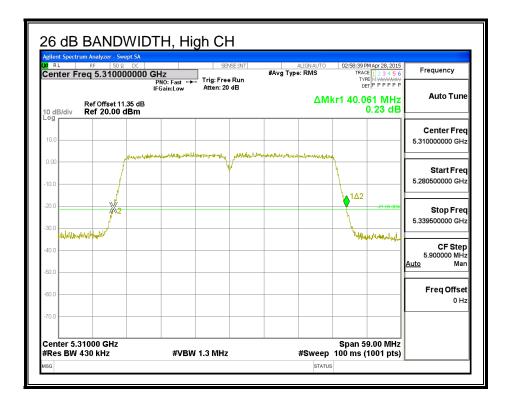
RESULTS

Channel	Frequency	26 dB BW	26 dB BW	
		Chain 0	Chain 1	
	(MHz)	(MHz)	(MHz)	
Low	5270	40.24	39.77	
High	5310	40.06	39.71	

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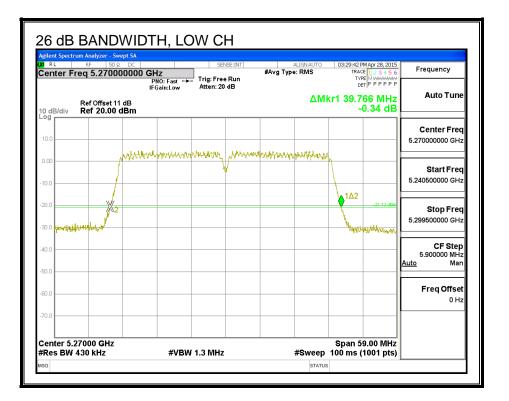
26 DB BANDWIDTH, CHAIN 0

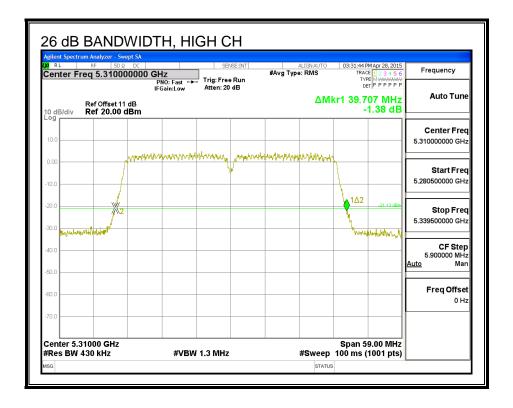




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26 DB BANDWIDTH, CHAIN 1





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8.19.2. 99% BANDWIDTH

<u>LIMITS</u>

None; for reporting purposes only.

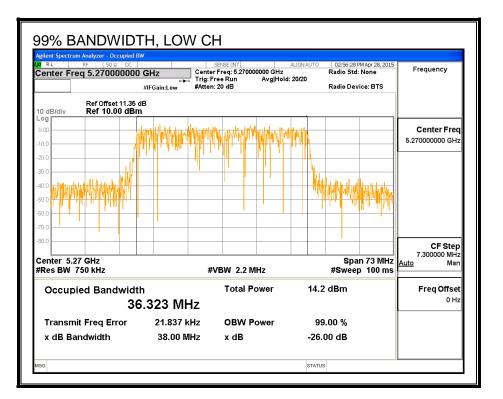
<u>RESULTS</u>

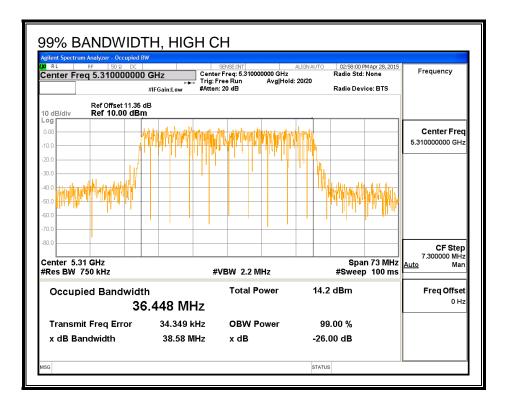
Channel	Frequency	99% BW	99% BW
		Chain 0	Chain 1
	(MHz)	(MHz)	(MHz)
Low	5270	36.323	36.548
High	5310	36.448	36.221

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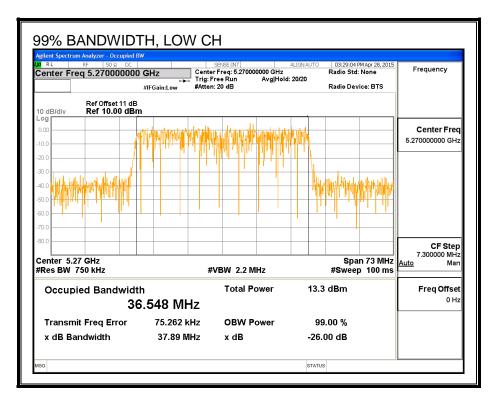
99% BANDWIDTH, CHAIN 0

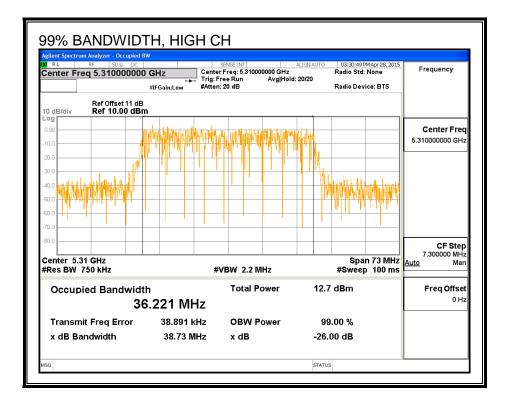




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99% BANDWIDTH, CHAIN 1





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8.19.3. AVERAGE POWER

<u>LIMITS</u>

None; for reporting purposes only.

<u>RESULTS</u>

Average Power Results

Channel	Frequency	Chain 0	Chain 1	Total
		Power	Power	Power
	(MHz)	(dBm)	(dBm)	(dBm)
Low	5270	17.85	17.92	20.90
High	5310	14.45	14.27	17.37

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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 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.

IC RSS-247 (6.2.2) (1)

The maximum conducted output power shall not exceed 250 mW or 11 + 10 log10B, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log10B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

DIRECTIONAL ANTENNA GAIN

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

Chain 0	Chain 1	Uncorrelated Chains
Antenna	Antenna	Directional
Gain	Gain	Gain
(dBi)	(dBi)	(dBi)
-2.96	-1.54	-2.19

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

Chain 0	Chain 1	Correlated Chains
Antenna	Antenna	Directional
Gain	Gain	Gain
(dBi)	(dBi)	(dBi)
-2.96	-1.54	0.79

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RESULTS

Bandwidth, Antenna Gain and Limits

Channel	Frequency	Min	Min	Directional	Directional	Power	PSD
		26 dB	99%	Gain	Gain	Limit	Limit
		BW	BW	for Power	for PSD		
	(MHz)	(MHz)	(MHz)	(dBi)	(dBi)	(dBm)	(dBm)
Low	5270	40.24	36.55	-2.19	0.79	24.00	11.00
High	5310	40.06	36.45	-2.19	0.79	24.00	11.00

Duty Cycle CF (dB) 0.00

Included in Calculations of Corr'd Power & PSD

Output Power Results

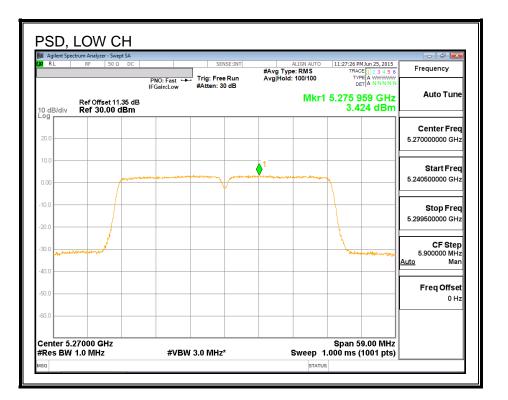
Channel	Frequency	Chain 0	Chain 1	Total	Power	Power
		Meas	Meas	Corr'd	Limit	Margin
		Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5270	17.85	17.92	20.90	24.00	-3.10
High	5310	14.45	14.27	17.37	24.00	-6.63

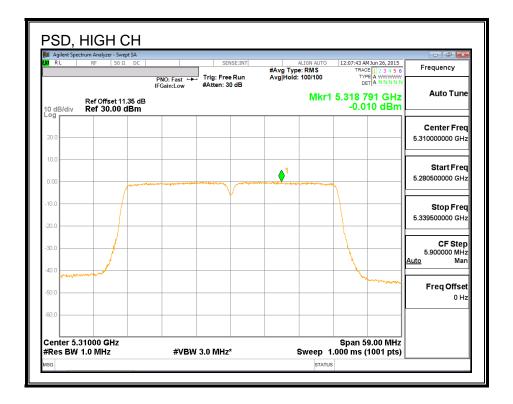
PSD Results

Channel	Frequency	Chain 0	Chain 1	Total	PSD	PSD
		Meas	Meas	Corr'd	Limit	Margin
		PSD	PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5270	3.42	3.48	6.46	11.00	-4.54
High	5310	-0.01	-0.05	2.98	11.00	-8.02

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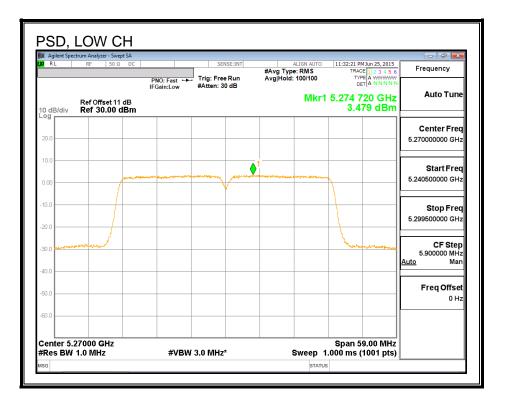
PSD, CHAIN 0

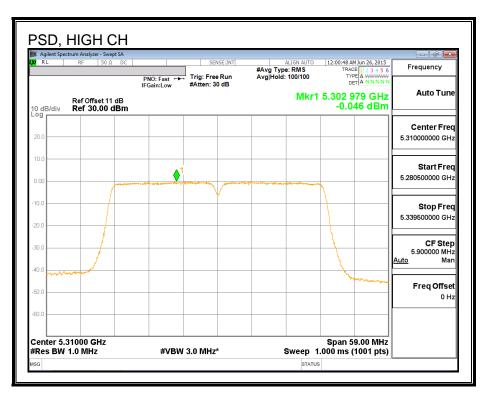




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PSD, CHAIN 1





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8.20. 802.11n HT40 2Tx STBC MODE IN THE 5.3 GHz BAND

Note: Covered by 802.11n HT40 2Tx CDD MODE

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8.21. 802.11ac HT80 CHAIN 0 MODE IN THE 5.3 GHz BAND

8.21.1. 26 dB BANDWIDTH

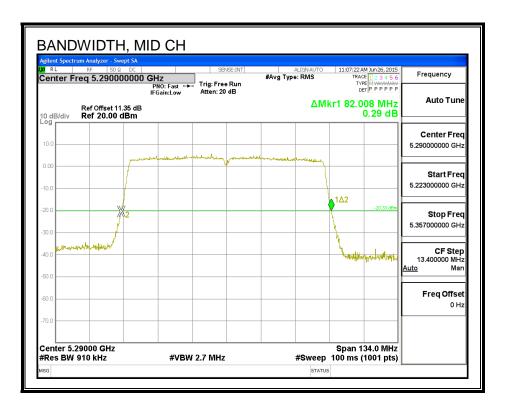
<u>LIMITS</u>

None; for reporting purposes only.

RESULTS

Channel	Frequency	26 dB Bandwidth
	(MHz)	(MHz)
Mid	5290	82.01

26 dB BANDWIDTH



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8.21.2. 99% BANDWIDTH

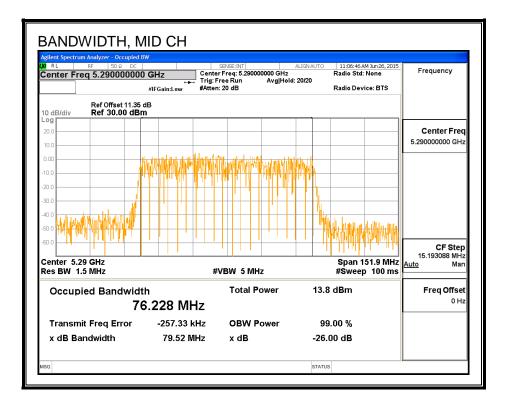
<u>LIMITS</u>

None; for reporting purposes only.

<u>RESULTS</u>

Channel	Frequency	99% Bandwidth
	(MHz)	(MHz)
Mid	5290	76.228

99% BANDWIDTH



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8.21.3. AVERAGE POWER

<u>LIMITS</u>

None; for reporting purposes only.

RESULTS

Channel	Frequency	Power
	(MHz)	(dBm)
Mid	5290	14.88

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8.21.4. OUTPUT POWER AND PSD

<u>LIMITS</u>

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.

IC RSS-247 (6.2.2) (1)

The maximum conducted output power shall not exceed 250 mW or 11 + 10 log10B, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log10B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

DIRECTIONAL ANTENNA GAIN

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

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RESULTS

Bandwidth, Antenna Gain, and Limits

Channel	Frequency	Min	Min	Directional	Power	PSD
		26 dB	99%	Gain	Limit	Limit
		BW	BW			
	(MHz)	(MHz)	(MHz)	(dBi)	(dBm)	(dBm)
Mid	5290	82.01	76.23	2.96	24.00	11.00

Duty Cycle CF (dB) 0.21 Included in Calculation	ons of Corr'd Power & PSD
---	---------------------------

Output Power Results

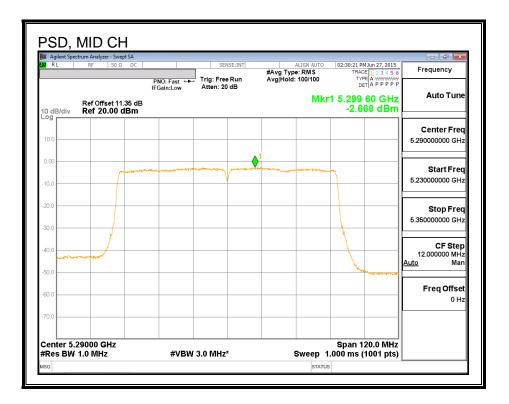
Channel	Frequency	Chain 0	Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Mid	5290	14.88	15.09	24.00	-8.91

PPSD Results

Channel	Frequency	Chain 0	Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Mid	5290	-2.67	-2.46	11.00	-13.46

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PSD



8.22. 802.11ac HT80 CHAIN 1 MODE IN THE 5.3 GHz BAND

8.22.1. 26 dB BANDWIDTH

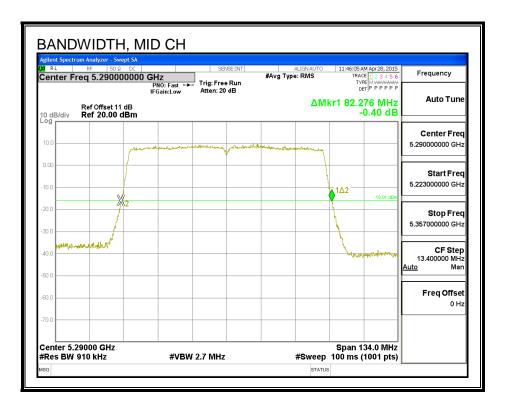
<u>LIMITS</u>

None; for reporting purposes only.

RESULTS

Channel	Frequency	26 dB Bandwidth
	(MHz)	(MHz)
Mid	5290	82.28

26 dB BANDWIDTH



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8.22.2. 99% BANDWIDTH

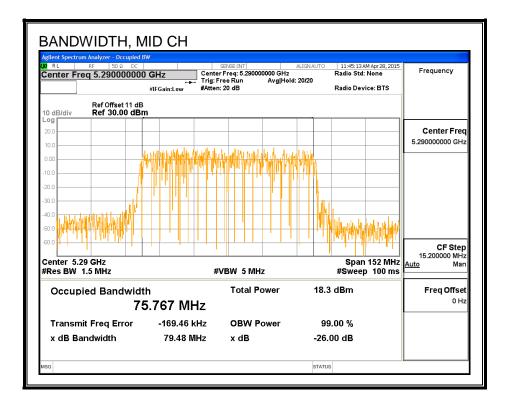
<u>LIMITS</u>

None; for reporting purposes only.

<u>RESULTS</u>

Channel	Frequency	99% Bandwidth
	(MHz)	(MHz)
Mid	5290	75.767

99% BANDWIDTH



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8.22.3. AVERAGE POWER

<u>LIMITS</u>

None; for reporting purposes only.

RESULTS

Channel	Frequency	Power
	(MHz)	(dBm)
Mid	5290	15.00

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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.

IC RSS-247 (6.2.2) (1)

The maximum conducted output power shall not exceed 250 mW or 11 + 10 log10B, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log10B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

DIRECTIONAL ANTENNA GAIN

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

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RESULTS

Bandwidth, Antenna Gain, and Limits

Channel	Frequency	Min	Min	Directional	Power	PSD
		26 dB	99%	Gain	Limit	Limit
		BW	BW			
	(MHz)	(MHz)	(MHz)	(dBi)	(dBm)	(dBm)
Mid	5290	82.28	75.77	-1.54	24.00	11.00

Duty Cycle CF (dB) 0.21 Included in Calculation	ons of Corr'd Power & PSD
---	---------------------------

Output Power Results

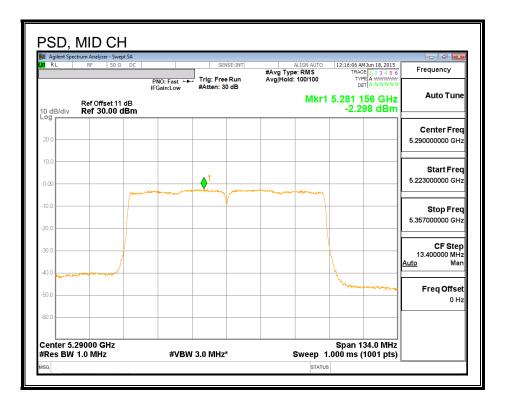
Channel	Frequency	Chain 1	Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Mid	5290	15.00	15.21	24.00	-8.79

PPSD Results

Channel	Frequency	Chain 1	Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Mid	5290	-2.30	-2.09	11.00	-13.09

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PSD



8.23. 802.11ac HT80 2Tx CDD MODE IN THE 5.3 GHz BAND

8.23.1. 26 dB BANDWIDTH

<u>LIMITS</u>

None; for reporting purposes only.

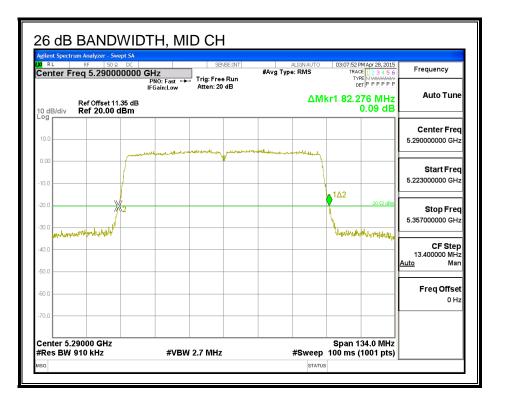
RESULTS

Channel	Frequency	26 dB BW	26 dB BW
		Chain 0	Chain 1
	(MHz)	(MHz)	(MHz)
Mid	5290	82.28	81.47

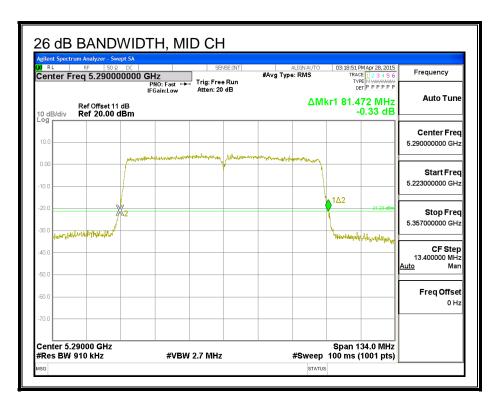
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26 DB BANDWIDTH, CHAIN 0



26 DB BANDWIDTH, CHAIN 1



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8.23.2. 99% BANDWIDTH

<u>LIMITS</u>

None; for reporting purposes only.

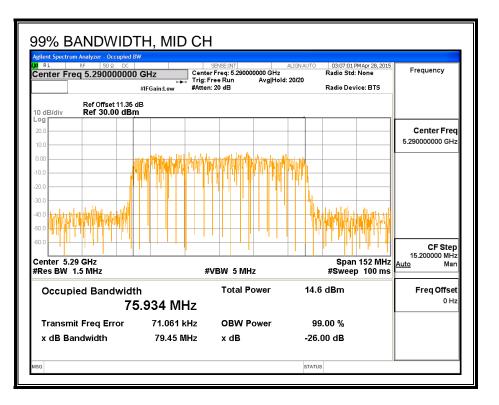
<u>RESULTS</u>

Channel	Frequency	99% BW	99% BW
		Chain 0	Chain 1
	(MHz)	(MHz)	(MHz)
Mid	5290	75.934	75.268

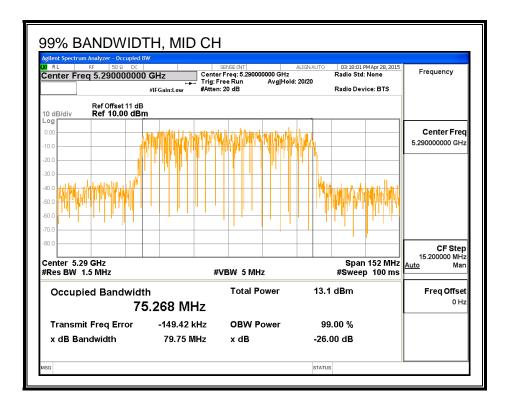
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99% BANDWIDTH, CHAIN 0



99% BANDWIDTH, CHAIN 1



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8.23.3. AVERAGE POWER

<u>LIMITS</u>

None; for reporting purposes only.

RESULTS

Average Power Results

Channel	Frequency	Chain 0	Chain 1	Total
		Power	Power	Power
	(MHz)	(dBm)	(dBm)	(dBm)
Mid	5290	13.94	13.95	16.96

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8.23.4. OUTPUT POWER AND PSD

<u>LIMITS</u>

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.

IC RSS-247 (6.2.2) (1)

The maximum conducted output power shall not exceed 250 mW or 11 + 10 log10B, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log10B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

DIRECTIONAL ANTENNA GAIN

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

Chain 0	Chain 1	Uncorrelated Chains
Antenna	Antenna	Directional
Gain	Gain	Gain
(dBi)	(dBi)	(dBi)
-2.96	-2.96 -1.54 -2.19	

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

Chain 0	Chain 1	Correlated Chains	
Antenna	Antenna	Directional	
Gain	Gain	Gain	
(dBi)	(dBi)	(dBi)	
-2.96	-1.54	0.79	

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RESULTS

Bandwidth, Antenna Gain, and Limits

Channel	Frequency	Min	Min	Directional	Directional	Power	PSD
		26 dB	99%	Gain	Gain	Limit	Limit
		BW	BW	for Power	for PSD		
	(MHz)	(MHz)	(MHz)	(dBi)	(dBi)	(dBm)	(dBm)
Mid	5290	82.28	75.93	-2.19	0.79	24.00	11.00

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

Channel	Frequency	Chain 0	Chain 1	Total	Power	Power
		Meas	Meas	Corr'd	Limit	Margin
		Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Mid	5290	13.94	13.95	17.18	24.00	-6.82

PSD Results

Channel	Frequency	Chain 0	Chain 1	Total	PSD	PSD
		Meas	Meas	Corr'd	Limit	Margin
		PSD	PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Mid	5290	-3.39	-3.39	-0.16	11.00	-11.16

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