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.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

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)
7.10	7.60	7.36

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)
7.10	7.60	10.36

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RESULTS

ID: 39004 Date: 9/2/16	
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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	22.2	17.8	7.36	10.36	22.14	6.64
Mid	5300	22.3	17.9	7.36	10.36	22.16	6.64
High	5320	22.2	17.9	7.36	10.36	22.17	6.64

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

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	11.29	11.47	14.39	22.14	-7.75
Mid	5300	11.46	11.28	14.38	22.16	-7.78
High	5320	11.35	11.40	14.39	22.17	-7.79

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	-0.68	-0.50	2.42	6.64	-4.22
Mid	5300	-0.49	-0.69	2.42	6.64	-4.22
High	5320	1.80	1.96	4.89	6.64	-1.75

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PSD, CHAIN 0





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PSD, CHAIN 1



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8.19. 802.11n HT20 2Tx STBC MODE IN THE 5.3 GHz BAND

8.19.1. 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)	
Low	5260	22.20	22.17	
Mid	5300	22.27	22.27	
High	5320	22.07	22.37	

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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.

RESULTS

Channel	Frequency	99% BW	99% BW	
		Chain 0	Chain 1	
	(MHz)	(MHz)	(MHz)	
Low	5260	17.973	17.791	
Mid	5300	17.801	17.765	
High	5320	17.865	17.934	

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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

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

Average Power Results

Channel	Frequency	Chain 0	Chain 1	Total
		Power	Power	Power
	(MHz)	(dBm)	(dBm)	(dBm)
Low	5260	12.38	12.36	15.38
Mid	5300	12.42	12.39	15.42
High	5320	12.39	12.36	15.39

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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.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

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)
7.10	7.60	7.36

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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	22.17	17.79	7.36	7.36	22.14	9.64
Mid	5300	22.27	17.77	7.36	7.36	22.14	9.64
High	5320	22.07	17.87	7.36	7.36	22.16	9.64

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

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	12.38	12.36	15.38	22.14	-6.76
Mid	5300	12.42	12.39	15.42	22.14	-6.72
High	5320	12.39	12.36	15.39	22.16	-6.77

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	1.90	1.96	4.94	9.64	-4.70
Mid	5300	2.02	1.87	4.96	9.64	-4.68
High	5320	3.36	3.45	6.42	9.64	-3.22

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PSD, CHAIN 0





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PSD, CHAIN 1



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8.20. 802.11an VHT20 2Tx BEAM FORMING MODE IN THE 5.3 GHz BAND

8.20.1. 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)
Low	5260	21.945	21.912
Mid	5300	22.168	21.912
High	5320	22.134	21.945

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26 DB BANDWIDTH, CHAIN 0





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26 DB BANDWIDTH, CHAIN 1



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8.20.2. 99% BANDWIDTH

<u>LIMITS</u>

None; for reporting purposes only.

RESULTS

Channel	Frequency	99% BW	99% BW
		Chain 0	Chain 1
	(MHz)	(MHz)	(MHz)
Low	5260	17.883	17.739
Mid	5300	17.754	17.767
High	5320	17.970	17.832

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99% BANDWIDTH, CHAIN 0





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99% BANDWIDTH, CHAIN 1



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8.20.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

|--|

Channel	Frequency	Chain 0	Chain 1	Total
		Power	Power	Power
	(MHz)	(dBm)	(dBm)	(dBm)
Low	5260	11.40	11.36	14.39
Mid	5300	11.43	11.39	14.42
High	5320	11.41	11.35	14.39

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8.20.4. 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.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

DIRECTIONAL ANTENNA GAIN

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)
7.10	7.60	10.36

RESULTS

ID: 39004 Date: 9/2/16	
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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	21.91	17.74	10.36	10.36	19.13	6.64
Mid	5300	21.91	17.75	10.36	10.36	19.13	6.64
High	5320	21.95	17.83	10.36	10.36	19.15	6.64

Duty Cycle CF (dB)	0.10	Included in Calculations of Corr'd 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	11.40	11.36	14.39	19.13	-4.74
Mid	5300	11.43	11.39	14.42	19.13	-4.71
High	5320	11.41	11.35	14.39	19.15	-4.76

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	-0.17	-0.66	2.70	6.64	-3.94
Mid	5300	-0.26	-0.71	2.63	6.64	-4.01
High	5320	-0.09	-0.57	2.79	6.64	-3.85

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PSD, CHAIN 0





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PSD, CHAIN 1



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8.21. 802.11n HT40 CHAIN 0 MODE IN THE 5.3 GHz BAND

8.21.1. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency	26 dB Bandwidtl	
	(MHz)	(MHz)	
Low	5270	40.796	
High	5310	40.796	

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26 dB BANDWIDTH





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8.21.2. 99% BANDWIDTH

<u>LIMITS</u>

None; for reporting purposes only.

RESULTS

Channel	Frequency	99% Bandwidth
	(MHz)	(MHz)
Low	5270	36.195
High	5310	36.428

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99% BANDWIDTH





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8.21.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

ID:	39004	Date:	9/2/16

Channel	Frequency	Power
	(MHz)	(dBm)
Low	5270	12.44
High	5310	12.39

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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 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.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

DIRECTIONAL ANTENNA GAIN

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

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RESULTS

ID: 39004 Date: 9/2/16

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	5270	40.80	36.20	7.10	24.00	9.90
High	5310	40.80	36.43	7.10	24.00	9.90

Duty Cycle CF (dB) 0.00 Included in Calculations of Corr'd 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	12.44	12.44	24.00	-11.56
High	5310	12.39	12.39	24.00	-11.61

PSD Results

Channel	Frequency	Chain 0	Total PSD		PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	5270	2.87	2.87	9.90	-7.03
High	5310	0.01	0.01	9 90	-9.89

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<u>PSD</u>





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8.22. 802.11n HT40 CHAIN 1 MODE IN THE 5.3 GHz BAND

8.22.1. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency	26 dB Bandwidth
	(MHz)	(MHz)
Low	5270	40.982
High	5310	40.920

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26 dB BANDWIDTH





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8.22.2. 99% BANDWIDTH

<u>LIMITS</u>

None; for reporting purposes only.

RESULTS

Channel	Frequency	99% Bandwidth
	(MHz)	(MHz)
Low	5270	36.440
High	5310	36.349

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99% BANDWIDTH





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8.22.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

ID.	39004	Date:	9/2/16

Channel	Frequency	Power
	(MHz)	(dBm)
Low	5270	12.39
High	5310	12.43

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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.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

DIRECTIONAL ANTENNA GAIN

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

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RESULTS

ID: 39004 Date: 9/2/16

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	5270	40.98	36.44	7.60	24.00	9.40
High	5310	40.92	36.35	7.60	24.00	9.40

Duty Cycle CF (dB) 0.00 Includ

Included in Calculations of Corr'd 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	12.39	12.39	24.00	-11.61
High	E010	12 12	10 40	24.00	11 57

PSD Results

Channel	Frequency	Chain 1	Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	5270	3.00	3.00	9.40	-6.40
High	5310	-0.03	-0.03	9.40	-9.43

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<u>PSD</u>





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8.23. 802.11n HT40 2Tx CDD MODE IN THE 5.3 GHz BAND

8.23.1. 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)
Low	5270	40.672	40.796
High	5310	40.796	40.920

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26 DB BANDWIDTH, CHAIN 0





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26 DB BANDWIDTH, CHAIN 1





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8.23.2. 99% BANDWIDTH

<u>LIMITS</u>

None; for reporting purposes only.

RESULTS

Channel	Frequency	99% BW	99% BW
		Chain 0	Chain 1
	(MHz)	(MHz)	(MHz)
Low	5270	36.364	36.205
High	5310	36.163	36.365

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99% BANDWIDTH, CHAIN 0





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99% BANDWIDTH, CHAIN 1





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8.23.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

ID:	39004	Date:	9/2/16

Average Power Results

Channel	Frequency	Chain 0	Chain 1	Total
		Power	Power	Power
	(MHz)	(dBm)	(dBm)	(dBm)
Low	5270	12.37	12.34	15.37
High	5310	12.39	12.41	15.41

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8.23.4. 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.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

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)		
7.10	7.60	7.36		

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)
7.10	7.60	10.36

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RESULTS

ID: 39	004 Date:	9/2/16
ID: 39	1004 I Date :	9/2/16

0.00

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	40.67	36.21	7.36	10.36	24.00	6.64
High	5310	40.80	36.37	7.36	10.36	24.00	6.64

Duty Cycle CF (dB)

Included in Calculations of Corr'd 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	12.37	12.34	15.37	24.00	-8.63
High	5310	12.39	12.41	15.41	24.00	-8.59

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	-0.79	-0.91	2.16	6.64	-4.48
High	5310	0.54	0.65	3.60	6.64	-3.04

PSD, CHAIN 0





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PSD, CHAIN 1





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8.24. 802.11n HT40 2Tx STBC MODE IN THE 5.3 GHz BAND

8.24.1. 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)
Low	5270	40.92	40.38
High	5310	40.63	40.38

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26 DB BANDWIDTH, CHAIN 0





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26 DB BANDWIDTH, CHAIN 1





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8.24.2. 99% BANDWIDTH

<u>LIMITS</u>

None; for reporting purposes only.

RESULTS

Channel	Frequency	99% BW	99% BW
		Chain 0	Chain 1
	(MHz)	(MHz)	(MHz)
Low	5270	36.357	36.197
High	5310	36.400	36.360

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99% BANDWIDTH, CHAIN 0





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99% BANDWIDTH, CHAIN 1





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8.24.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

ID:	39004	Date:	9/2/16

Average Power Results

Channel	Frequency	Chain 0	Chain 1	Total
		Power	Power	Power
	(MHz)	(dBm)	(dBm)	(dBm)
Low	5270	12.44	12.21	15.34
High	5310	12.27	12.26	15.28

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 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.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

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)			
7.10	7.60	7.36			

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RESULTS

ID: 39004 Date: 9/2/16	
--------------------------------------	--

0.00

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	40.38	36.20	7.36	7.36	24.00	9.64
High	5310	40.38	36.36	7.36	7.36	24.00	9.64

Duty Cycle CF (dB)

Included in Calculations of Corr'd 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	12.44	12.21	15.34	24.00	-8.66
High	5310	12.27	12.26	15.28	24.00	-8.72

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	1.67	1.42	4.56	9.64	-5.08
High	5310	0.49	0.46	3.49	9.64	-6.15

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PSD, CHAIN 0





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PSD, CHAIN 1





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8.25. 802.11an VHT40 2Tx BEAM FORMING MODE IN THE 5.3 GHz BAND

8.25.1. 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)
Low	5270	40.443	39.900
High	5310	40.138	40.443

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26 DB BANDWIDTH, CHAIN 0





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26 DB BANDWIDTH, CHAIN 1





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8.25.2. 99% BANDWIDTH

<u>LIMITS</u>

None; for reporting purposes only.

RESULTS

Channel	Frequency	99% BW 99% BV	
		Chain 0	Chain 1
	(MHz)	(MHz) (MHz	
Low	5270	36.359	36.231
High	5310	36.383	36.349

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99% BANDWIDTH, CHAIN 0





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99% BANDWIDTH, CHAIN 1





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8.25.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

ID:	39004	Date:	9/2/16

Average Power Results

Channel	Frequency	Chain 0	Chain 1	Total
		Power	Power	Power
	(MHz)	(dBm)	(dBm)	(dBm)
Low	5270	12.46	12.35	15.42
High	5310	12.37	12.34	15.37

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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 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.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

DIRECTIONAL ANTENNA GAIN

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)	
7.10	7.60	10.36	

RESULTS

ID: 39004 Date: 9/2/16

0.12

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	39.90	36.23	10.36	10.36	22.23	6.64
High	5310	40.14	36.35	10.36	10.36	22.24	6.64

Duty Cycle CF (dB)

Included in Calculations of Corr'd 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	12.46	12.35	15.42	22.23	-6.82
High	5310	12 37	12.34	15.37	22 24	-6.88

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	-1.29	-6.22	0.04	6.64	-6.60
High	5310	-4.18	-4.36	-1.14	6.64	-7.78

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PSD, CHAIN 0





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PSD, CHAIN 1





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8.26. 802.11ac VHT80 CHAIN 0 MODE IN THE 5.3 GHz BAND

8.26.1. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency	26 dB Bandwidth
	(MHz)	(MHz)
Mid	5290	83.664

26 dB BANDWIDTH



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8.26.2. 99% BANDWIDTH

<u>LIMITS</u>

None; for reporting purposes only.

RESULTS

Channel	Frequency	99% Bandwidth
	(MHz)	(MHz)
Mid	5290	76.602

99% BANDWIDTH



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8.26.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

ID:	39004	Date	e:	9/2/16	6
				-	1
Channel	Frequer	Frequency		Power	
	(MHz)	(MHz)		(dBm)	
Mid	5290	5290		12.40	

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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.

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.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

DIRECTIONAL ANTENNA GAIN

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

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RESULTS

ID: 39004 Date: 9/2/16

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	83.66	76.60	7.10	24.00	9.90

Duty Cycle CF (dB)	0.22	Included in Calculations of Corr'd 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	12.40	12.40	24.00	-11.60

PPSD Results

Channel	Frequency	Chain 0	Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Mid	5290	-4.60	-4.38	9.90	-14.28

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<u>PSD</u>



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8.27. 802.11ac VHT80 CHAIN 1 MODE IN THE 5.3 GHz BAND

8.27.1. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency	26 dB Bandwidth
	(MHz)	(MHz)
Mid	5290	83.538

26 dB BANDWIDTH



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8.27.2. 99% BANDWIDTH

<u>LIMITS</u>

None; for reporting purposes only.

RESULTS

Channel	Frequency	99% Bandwidth
	(MHz)	(MHz)
Mid	5290	76.176

99% BANDWIDTH



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8.27.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

ID:	39004	Date	e:	9/2/16	6
					1
Channel	Frequer	псу		Power	
	(MHz)	(MHz)		(dBm)	
Mid	5290	5290		12.39	

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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 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.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

DIRECTIONAL ANTENNA GAIN

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

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RESULTS

ID: 39	004 Date:	9/2/16
ID: 39	1004 I Date :	9/2/16

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	83.54	76.18	7.60	24.00	9.40

Duty Cycle CF (dB) 0.22 Included in	n Calculations of Corr'd 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	12.39	12.39	24.00	-11.61

PPSD Results

Channel	Frequency	Chain 1	Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Mid	5290	-4.83	-4.61	9.40	-14.01

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<u>PSD</u>



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8.28. 802.11ac VHT80 2Tx CDD MODE IN THE 5.3 GHz BAND

8.28.1. 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	5290	82.875	82.875

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26 DB BANDWIDTH, CHAIN 0



26 DB BANDWIDTH, CHAIN 1



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8.28.2. 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	5290	75.810	76.321

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99% BANDWIDTH, CHAIN 0



99% BANDWIDTH, CHAIN 1



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8.28.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

|--|

Average Power Results

Channel	Frequency	Chain 0	Chain 1	Total
		Power	Power	Power
	(MHz)	(dBm)	(dBm)	(dBm)
	```	<b>X</b> - <b>7</b>	(/	X- /

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# 8.28.4. 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.

## TEST PROCEDURE

Measurements perform using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

## **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	<b>Uncorrelated Chains</b>
Antenna	Antenna	Directional
Gain	Gain	Gain
(dBi)	(dBi)	(dBi)
7.10	7.60	7.36

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

Chain 0	Chain 1	<b>Correlated Chains</b>
Antenna	Antenna	Directional
Gain	Gain	Gain
(dBi)	(dBi)	(dBi)
7.10	7.60	10.36

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