Antenna Gain and Limit

Channel	Frequency	Directional	Directional Power	
		Gain	Limit	Limit
	(MHz)	(dBi)	(dBm)	(dBm)
144	5720	4.71	30.00	30.00

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

Output Power Results

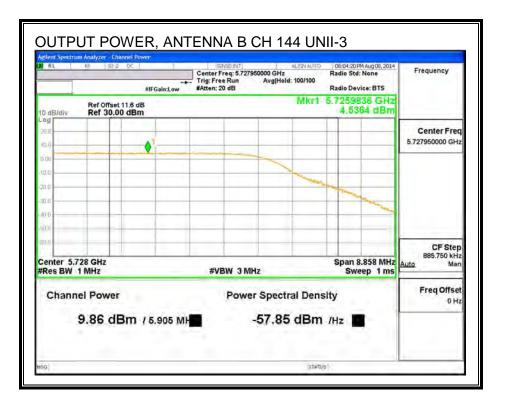
Channel	Frequency	Antenna B	Antenna C	Total	Power	Power
		Meas	Meas	Corr'd	Limit	Margin
		Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
144	5720	9.86	10.24	13.06	30.00	-16.94

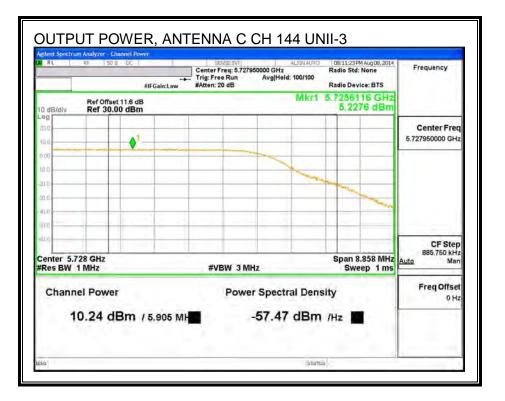
PSD Results

Channel	Frequency	Antenna B	Antenna C	Total	PSD	PSD
		Meas	Meas	Corr'd	Limit	Margin
		PSD	PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
144	5720	1.60	1.87	4.75	30.00	-25.25

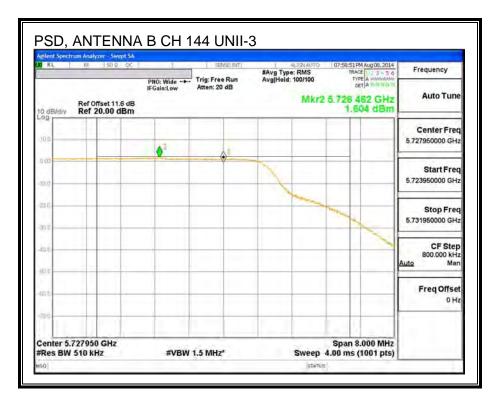
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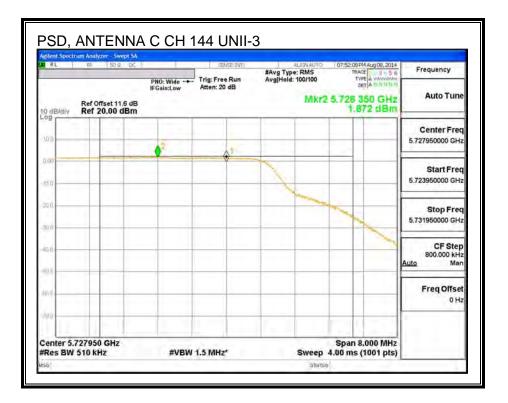
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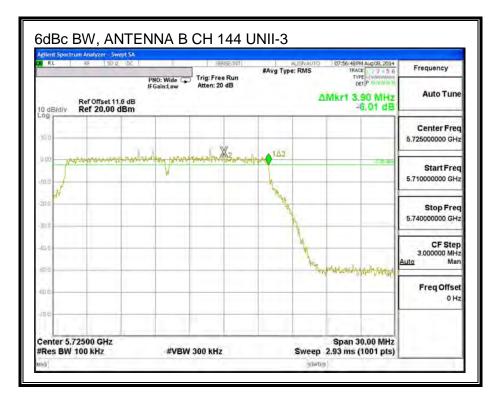


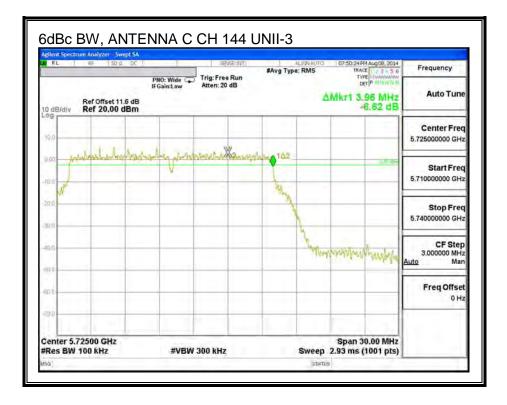
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9.21. 802.11n HT20 2Tx STBC/SDM MODE IN THE 5.6 GHz BAND

Refer to Section 9.20, 802.11n HT20 2Tx CDD MODE IN THE 5.6 GHz BAND

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9.22. 802.11n HT40 MODE IN THE 5.6 GHz BAND

9.22.1. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

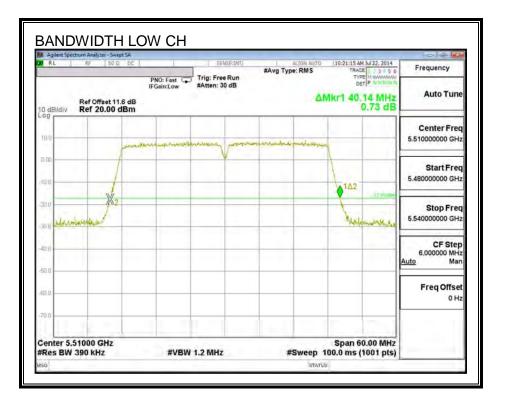
RESULTS

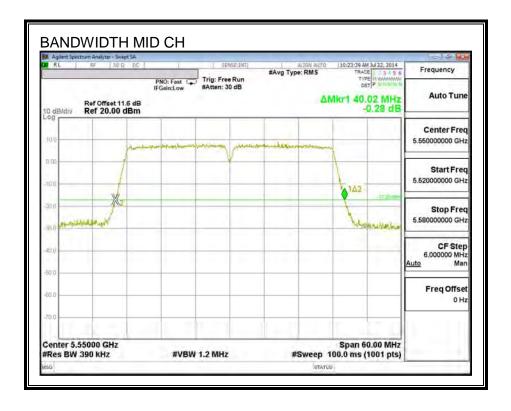
Channel	Frequency	26 dB Bandwidth
	(MHz)	(MHz)
Low	5510	40.14
Mid	5550	40.02
High	5670	39.90
High	5710	40.20

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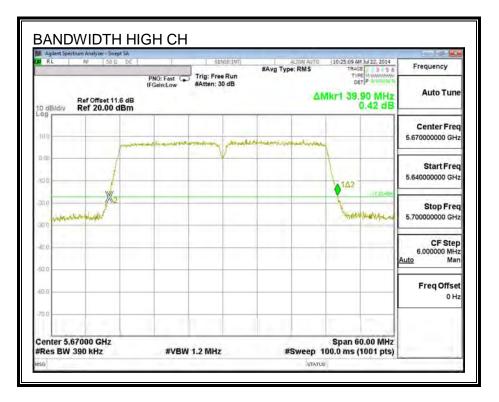
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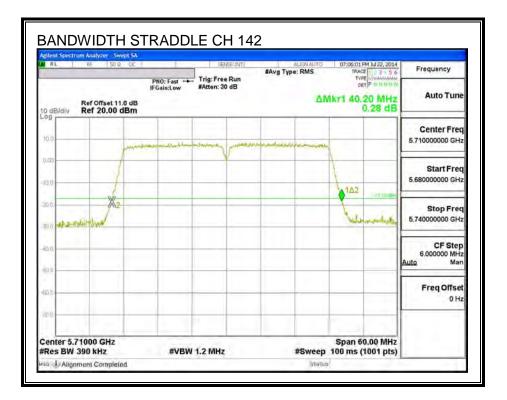
26 dB BANDWIDTH





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9.22.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

<u>RESULTS</u>

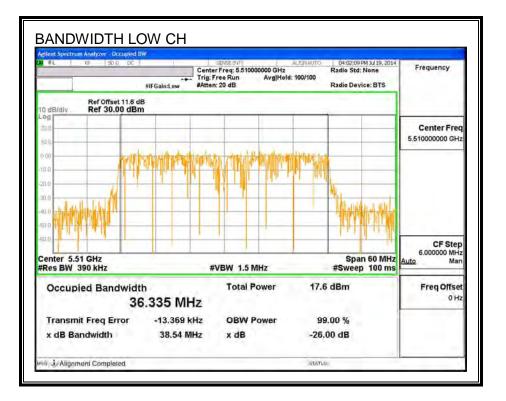
Channel	Frequency	99% Bandwidth
	(MHz)	(MHz)
Low	5510	36.335
Mid	5550	36.285
High	5670	36.136
142	5710	36.236

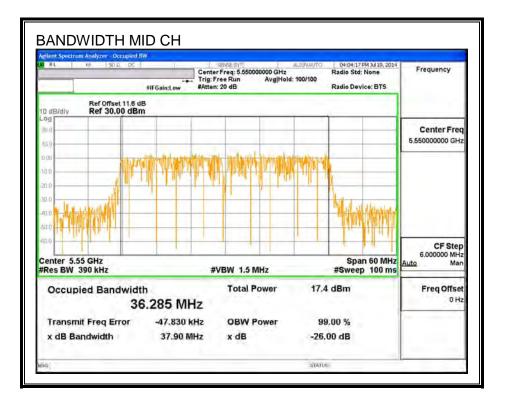
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 UL VERIFICATION SERVICES INC.
 FORM NO: CCSUP4701J

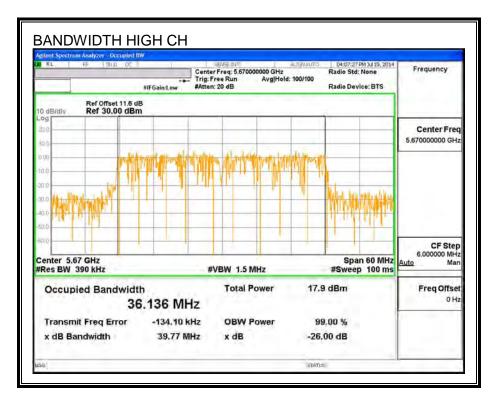
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 TEL: (510) 771-1000
 FAX: (510) 661-0888

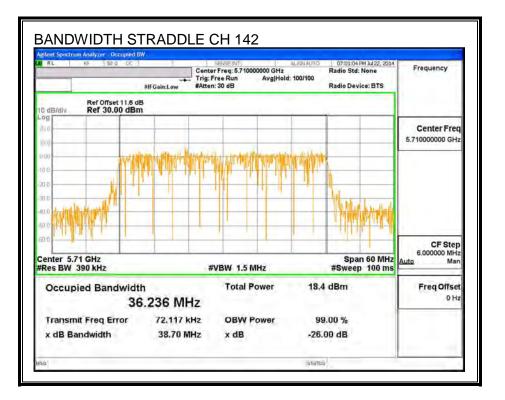
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9.22.1.AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter. The power meter was setup for a gated power measurement.

The cable assembly insertion loss of 11.6 dB (including 10 dB pad and 1.6 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS

Channel	Frequency Antenna B Power		Antenna C Power
	(MHz)	(dBm)	(dBm)
Low	5510	14.93	14.93
Mid	5550	16.47	17.90
High	5670	13.88	13.92
142	5710	16.41	17.87

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9.22.2. OUTPUT POWER AND PSD

<u>LIMITS</u>

FCC §15.407 (a) (2)

For the band 5.47–5.725 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26–dB emission bandwidth in MHz. In addition, the peak 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.

TEST PROCEDURE

The transmitter output is connected to a power meter. The power meter was setup for a gated power measurement.

The cable assembly insertion loss of 11.6 dB (including 10 dB pad and 1.6 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

DIRECTIONAL ANTENNA GAIN

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

ANTENNA B

Antenna
Gain
(dBi)
0.155

ANTENNA C

Antenna
Gain
(dBi)
3.004

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ANTENNA B

Bandwidth, Antenna Gain, and Limits

Channel	Frequency	Min	Directiona	Power	PSD
		26 dB	Gain	Limit	Limit
		BW			
	(MHz)	(MHz)	(dBi)	(dBm)	(dBm)
Low	5510	40.14	0.16	24.00	11.00
Mid	5550	40.02	0.16	24.00	11.00
High	5670	39.90	0.16	24.00	11.00

0.00

Duty Cycle CF (dB)

Included in Calculations of Corr'd Power & PSD

Output Power Results

Channel	Frequency	Antenna B	Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	5510	14.93	14.93	24.00	-9.07
Mid	5550	16.47	16.47	24.00	-7.53
High	5670	13.88	13.88	24.00	-10.12

PSD Results

Channel	Frequency	Antenna B	Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	5510	0.53	0.53	11.00	-10.47
Mid	5550	2.01	2.01	11.00	-8.99
High	5670	-0.78	-0.78	11.00	-11.78

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ANTENNA C

Bandwidth, Antenna Gain, and Limits

Channel	Frequency	Min	Directiona	Power	PSD
		26 dB	Gain	Limit	Limit
		BW			
	(MHz)	(MHz)	(dBi)	(dBm)	(dBm)
Low	5510	40.14	3.00	24.00	11.00
Mid	5550	40.02	3.00	24.00	11.00
High	5670	39.90	3.00	24.00	11.00

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

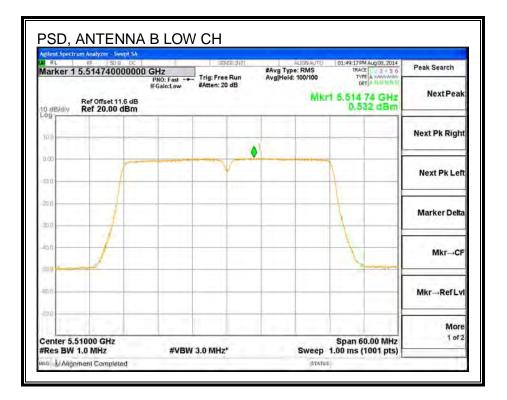
Output Power Results

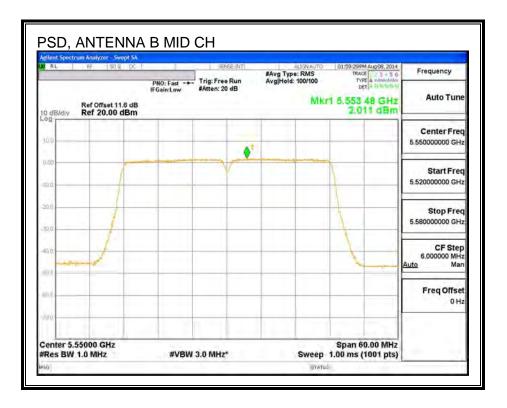
Channel	Frequency	Antenna C	Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	5510	14.93	14.93	24.00	-9.07
Mid	5550	17.90	17.90	24.00	-6.10
High	5670	13.92	13.92	24.00	-10.08

PSD Results

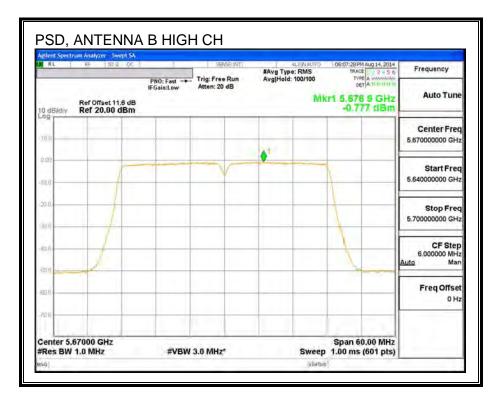
Channel	Frequency	Antenna C	Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	5510	0.55	0.55	11.00	-10.45
Mid	5550	3.44	3.44	11.00	-7.57
High	5670	-0.80	-0.80	11.00	-11.80

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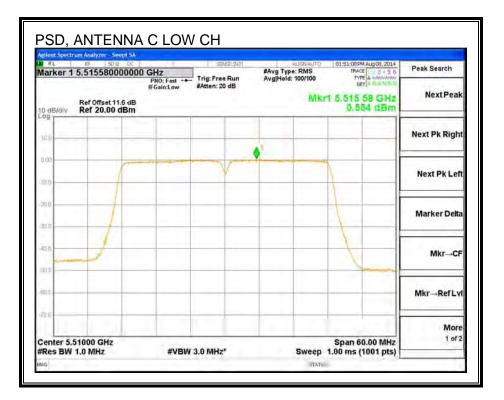


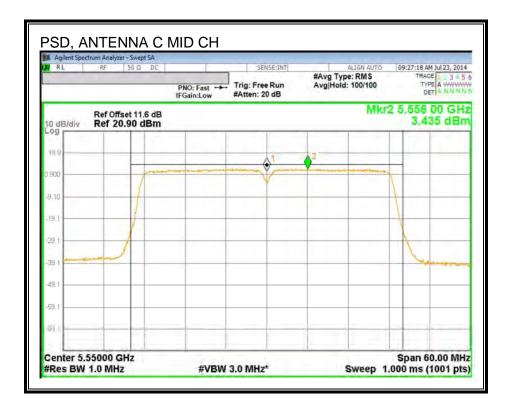
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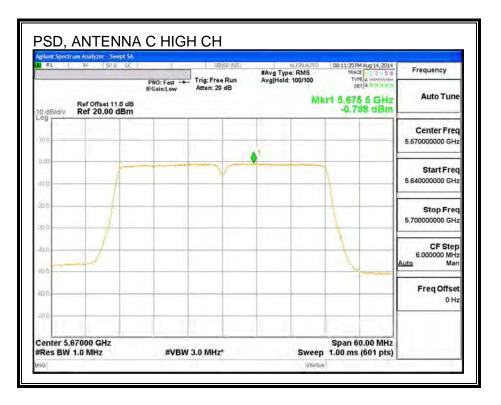
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PSD, ANTENNA C





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UNII-2C BAND

Bandwidth, Antenna Gain, and Limits

Channel	Frequency	Min	Directional	Directional	Power	PSD
		26 dB	Gain	Gain	Limit	Limit
		BW	for Power	for PSD		
	(MHz)	(MHz)	(dBi)	(dBi)	(dBm)	(dBm)
142	5710	40.02	0.16	0.16	24.00	11.00

Duty Cycle CF (db) 0.00 [Included in Calculations of Corr d Power & Pa	Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power & PSI
--	--------------------	------	--

Output Power Results

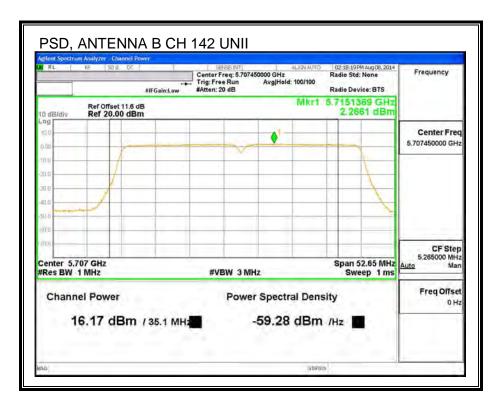
Channel	Frequency	Antenna B	Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
142	5710	16.17	16.17	24.00	-7.83

PSD Results

Channel	Frequency	Antenna B	Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
142	5710	2.27	2.27	11.00	-8.73

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Antenna Gain and Limit

Channel	Frequency	Directional	Power	PSD
		Gain	Limit	Limit
	(MHz)	(dBi)	(dBm)	(dBm)
142	5710	3.00	30.00	30.00

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

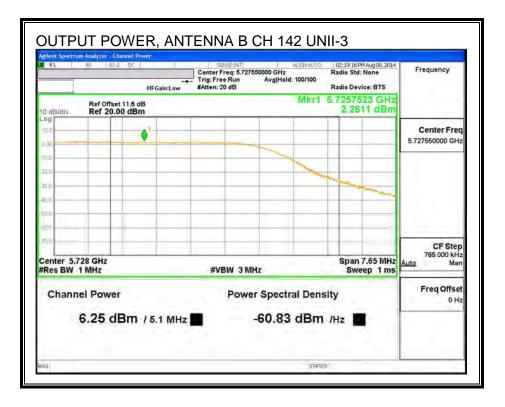
Output Power Results

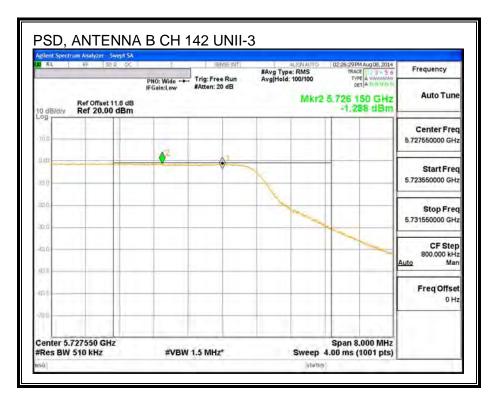
Channel	Frequency	Antenna B	Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
142	5710	6.25	6.25	30.00	-23.75

PSD Results

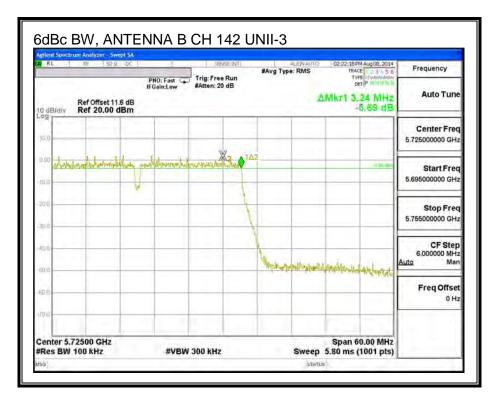
Channel	Frequency	Antenna B	Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
142	5710	-1.29	-1.29	30.00	-31.29

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Bandwidth, Antenna Gain, and Limits

Channel	Frequency	Min	Directional	Directional	Power	PSD
		26 dB	Gain	Gain	Limit	Limit
		BW	for Power	for PSD		
	(MHz)	(MHz)	(dBi)	(dBi)	(dBm)	(dBm)
142	5710	39.90	3.00	3.00	24.00	11.00

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

Output Power Results

Channel	Frequency	Antenna C	Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
142	5710	17.56	17.56	24.00	-6.44

PSD Results

Channel	Frequency	Antenna C	Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
142	5710	3.64	3.64	11.00	-7.36

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10 dB/div Log 30 0						1000	Radio De	evice: BTS	
10.0				Ref Offset 11.6 dB Mkr1 5.7170323 GHz 0 dB/dly Ref 30.00 dBm 3.6442 dBm					
					•				Center Fred 5.707450000 GHz
0.00 10.0. 20.0	\int							1	
οα ώσ	1							~	
Center 5.707	CH7					_	Snan	52.65 MHz	
Res BW 1 M	IHz		#VB	W 3 MHz			SW	veep 1 ms	CF Step 5,265000 MHz Auto Mar
Channel	^{Power} 56 dBm	/ 35.1 MH	2 II	Power	Spectra				Freq Offset 0 Hz

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Antenna Gain and Limit

Channel	Frequency	Directional	Power	PSD	
		Gain	Limit	Limit	
	(MHz)	(dBi)	(dBm)	(dBm)	
142	5710	3.00	30.00	30.00	

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

Output Power Results

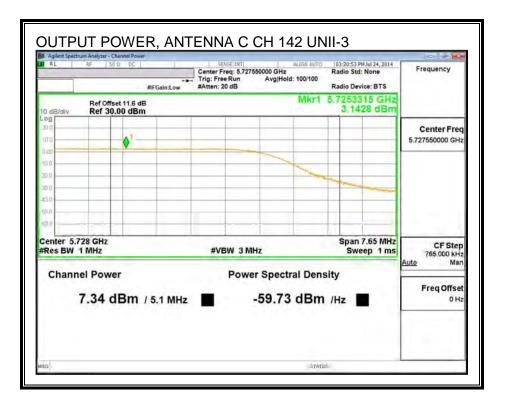
Channel	Frequency	Antenna C	Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
142	5710	7.34	7.34	30.00	-22.66

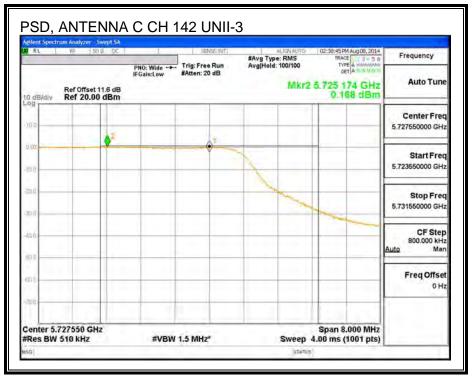
PSD Results

Channel	Frequency	Antenna C	Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
142	5710	0.17	0.17	30.00	-29.83

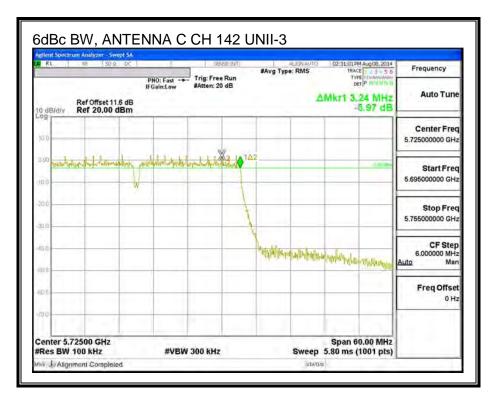
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9.23. 802.11n HT40 2Tx CDD MODE IN THE 5.6 GHz BAND

9.23.1. 26 dB BANDWIDTH

LIMITS

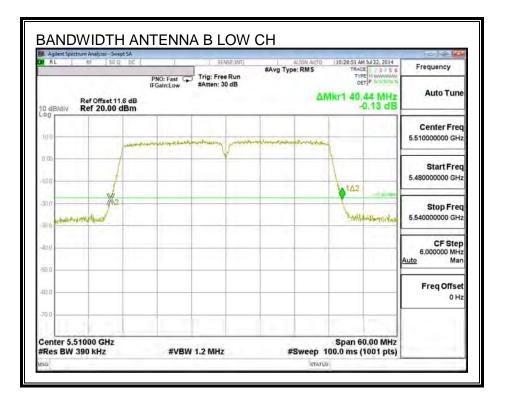
None; for reporting purposes only.

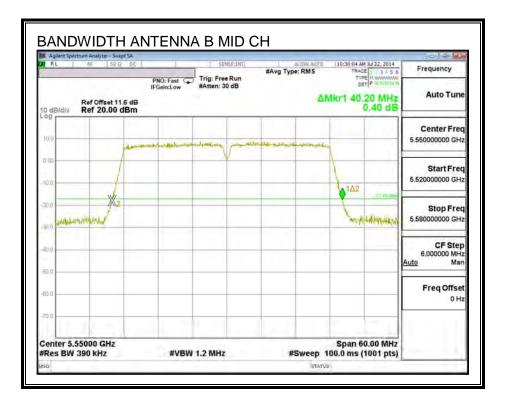
<u>RESULTS</u>

Channel	Frequency	26 dB BW	26 dB BW
		Antenna B	Antenna C
	(MHz)	(MHz)	(MHz)
Low	5510	40.44	39.72
Mid	5550	40.20	39.96
High	5670	40.20	39.72
High	5710	40.02	39.90

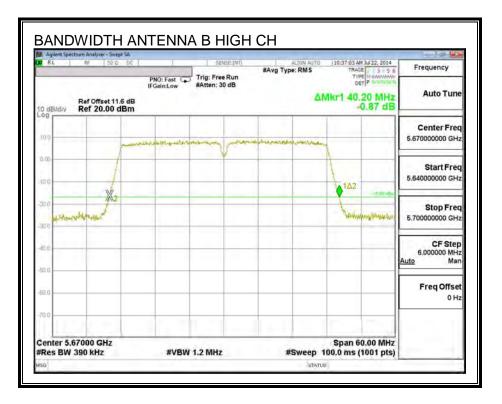
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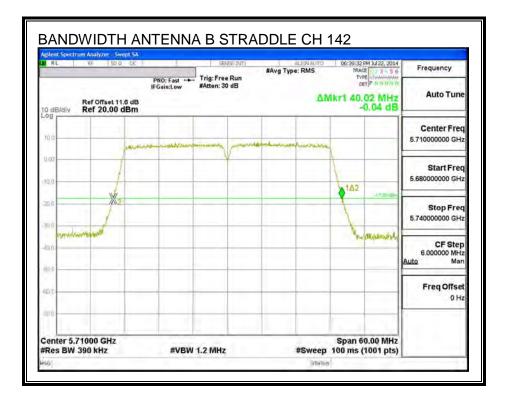
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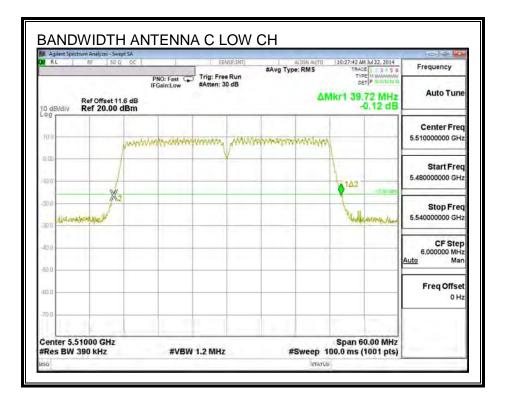


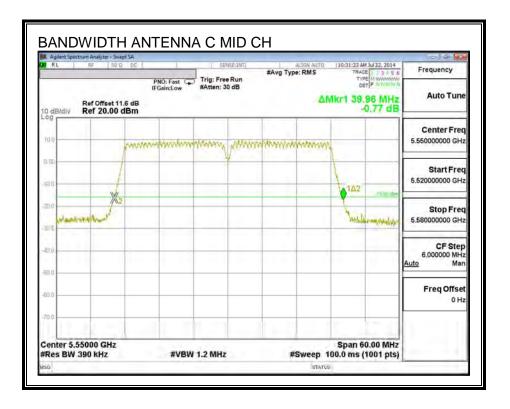
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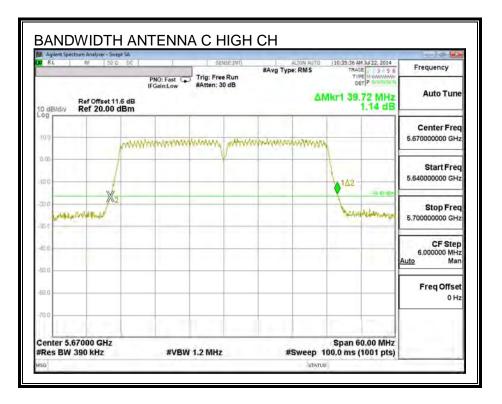


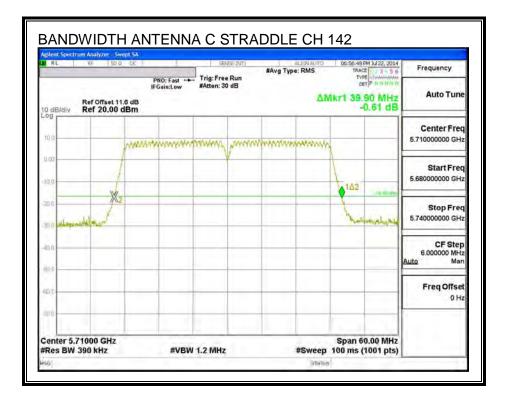
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9.23.2. 99% BANDWIDTH

LIMITS

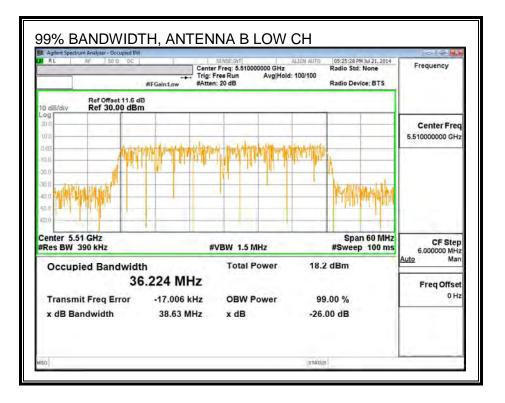
None; for reporting purposes only.

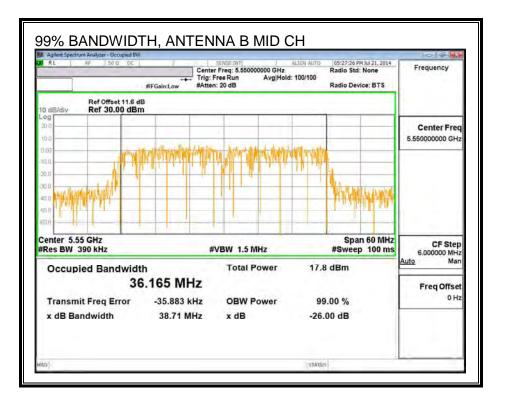
RESULTS

Channel	Frequency	99% BW	99% BW
		Antenna B	Antenna C
	(MHz)	(MHz)	(MHz)
Low	5510	36.224	36.118
Mid	5550	36.165	36.235
High	5670	36.196	36.224
High	5710	36.228	35.867

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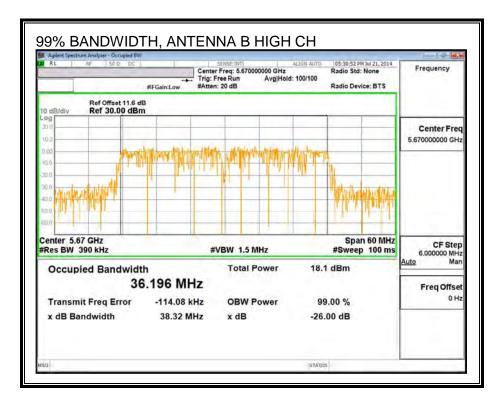
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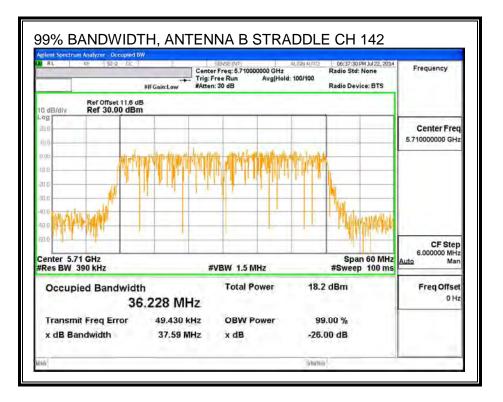




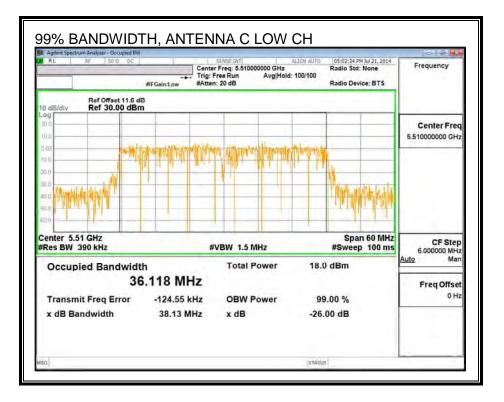
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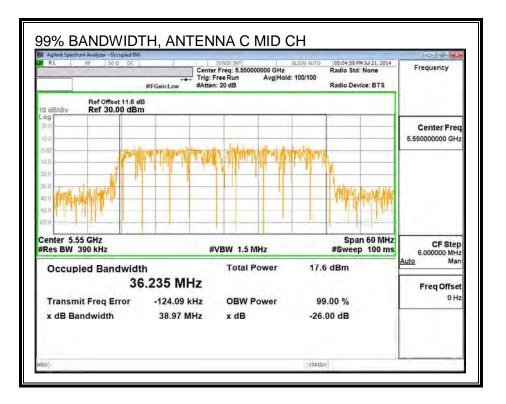
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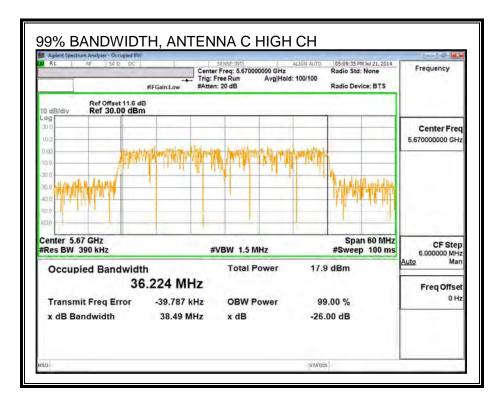
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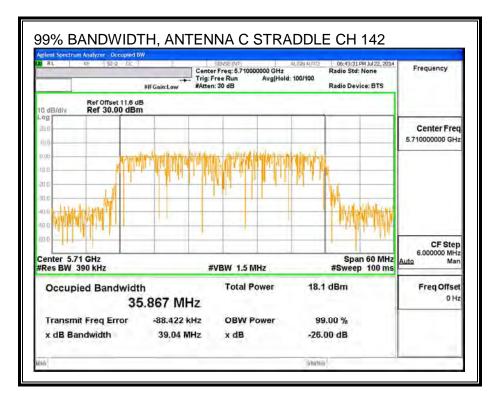




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9.23.1.AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter. The power meter was setup for a gated power measurement.

The cable assembly insertion loss of 11.6 dB (including 10 dB pad and 1.6 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS

Average Power Results

Channel	Frequency	Antenna B	Antenna C	Total
		Power	Power	Power
	(MHz)	(dBm)	(dBm)	(dBm)
Low	5510	13.43	13.38	16.42
Mid	5550	16.43	17.84	20.20
High	5670	12.97	12.96	15.98
High	5710	16.40	17.82	20.18

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9.23.2. OUTPUT POWER AND PSD

<u>LIMITS</u>

FCC §15.407 (a) (2)

For the band 5.47–5.725 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26–dB emission bandwidth in MHz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1–MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST PROCEDURE

The transmitter output is connected to a power meter. The power meter was setup for a gated power measurement.

The cable assembly insertion loss of 11.6 dB (including 10 dB pad and 1.6 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

DIRECTIONAL ANTENNA GAIN

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

Antenna B	Antenna C	Uncorrelated Chains		
Antenna	Antenna	Directional		
Gain Gain		Gain		
(dBi)	(dBi)	(dBi)		
0.16	3.00	1.81		

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

Antenna B	Antenna C	Correlated Chains
Antenna	Antenna	Directional
Gain	Gain	Gain
(dBi)	(dBi)	(dBi)
0.16	3.00	4.71

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Bandwidth, Antenna Gain, and Limits

Channel	Frequency	Min	Directional	Directional	Power	PSD
		26 dB	Gain	Gain	Limit	Limit
		BW	for Power	for PSD		
	(MHz)	(MHz)	(dBi)	(dBi)	(dBm)	(dBm)
Low	5510	39.72	1.81	4.71	24.00	11.00
Mid	5550	39.96	1.81	4.71	24.00	11.00
High	5670	39.72	1.81	4.71	24.00	11.00
			•			
Duty C	Duty Cycle CF (dB) 0.00 Included in Calculations of Corr'd Power & PS					wer & PSD

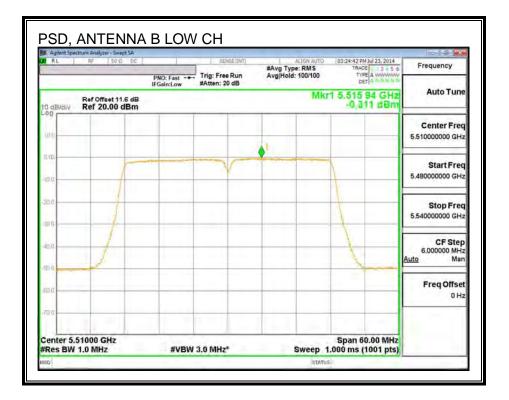
Output Power Results

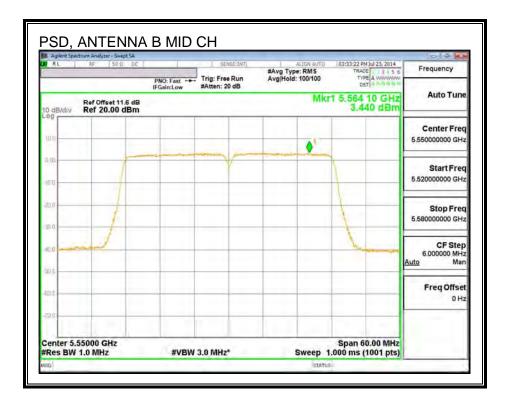
Channel	Frequency	Antenna B	Antenna C	Total	Power	Power
		Meas	Meas	Corr'd	Limit	Margin
		Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5510	13.43	13.38	16.42	24.00	-7.58
Mid	5550	16.43	17.84	20.20	24.00	-3.80
High	5670	12.97	12.96	15.98	24.00	-8.02

PSD Results

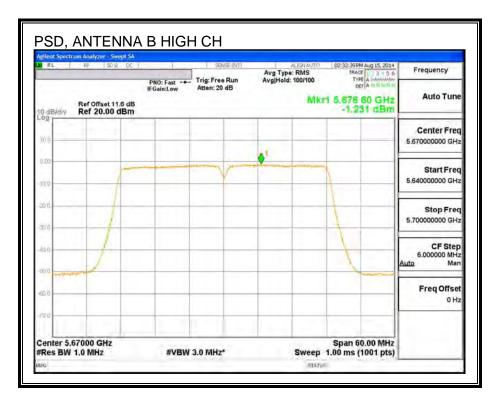
Channel	Frequency	Antenna B	Antenna C	Total	PSD	PSD
		Meas	Meas	Corr'd	Limit	Margin
		PSD	PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5510	-0.31	-0.30	2.71	11.00	-8.29
Mid	5550	3.44	3.77	6.62	11.00	-4.38
High	5670	-1.23	-1.11	1.84	11.00	-9.16

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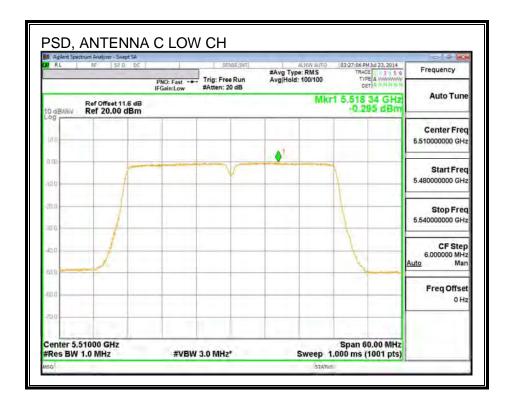




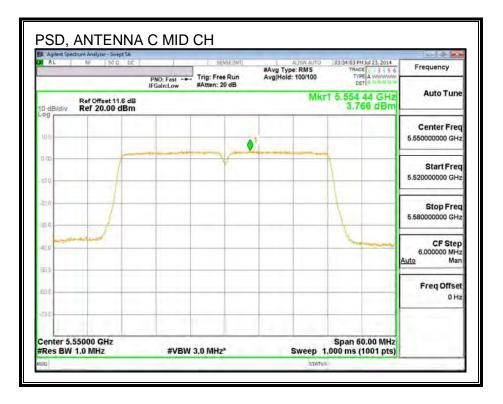
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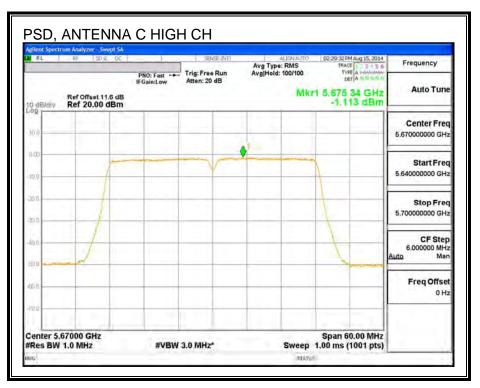


PSD, ANTENNA C



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STRADDLE CHANNEL 142 RESULTS

UNII-2C BAND

Bandwidth, Antenna Gain, and Limits

Channel	Frequency	Min	Directional	Directional	Power	PSD
		26 dB	Gain	Gain	Limit	Limit
		BW	for Power	for PSD		
	(MHz)	(MHz)	(dBi)	(dBi)	(dBm)	(dBm)
142	5710	39.90	1.81	4.71	24.00	11.00

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

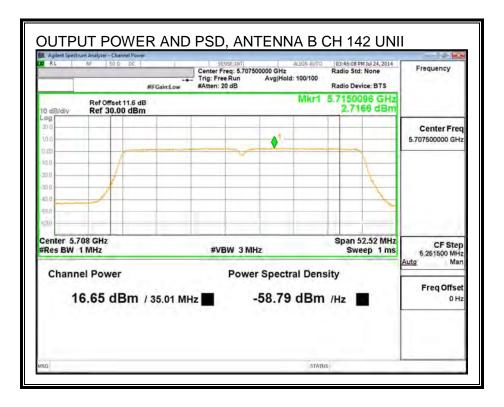
Output Power Results

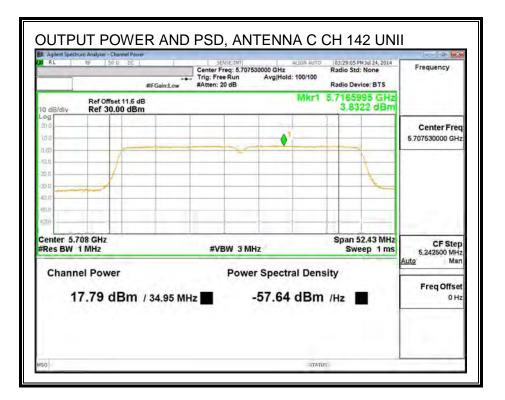
Channel	Frequency	Antenna B	Antenna C	Total	Power	Power
		Meas	Meas	Corr'd	Limit	Margin
		Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
142	5710	16.65	17.79	20.27	24.00	-3.73

PSD Results

Channel	Frequency	Antenna B	Antenna C	Total	PSD	PSD
		Meas	Meas	Corr'd	Limit	Margin
		PSD	PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
142	5710	2.72	3.83	6.32	11.00	-4.68

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Antenna Gain and Limit

Channel	Frequency	Directional	Power	PSD
		Gain	Limit	Limit
	(MHz)	(dBi)	(dBm)	(dBm)
142	5710	4.71	30.00	30.00

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

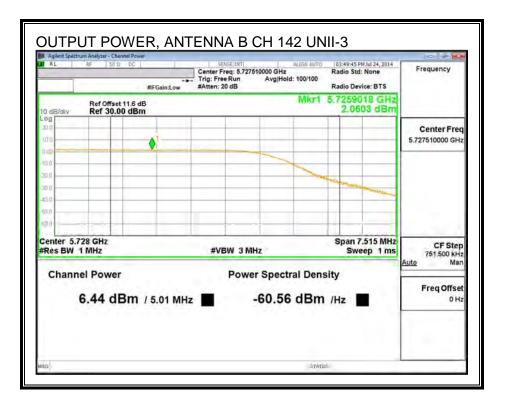
Output Power Results

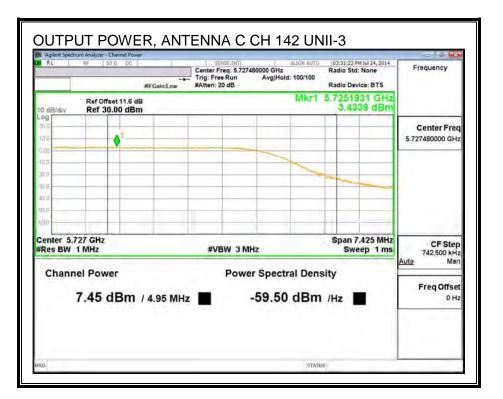
Channel	Frequency	Antenna B	Antenna C	Total	Power	Power
		Meas	Meas	Corr'd	Limit	Margin
		Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
142	5710	6.44	7.45	9.98	30.00	-20.02

PSD Results

Channel	Frequency	Antenna B	Antenna C	Total	PSD	PSD
		Meas	Meas	Corr'd	Limit	Margin
		PSD	PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
142	5710	2.06	3.43	5.81	30.00	-24.19

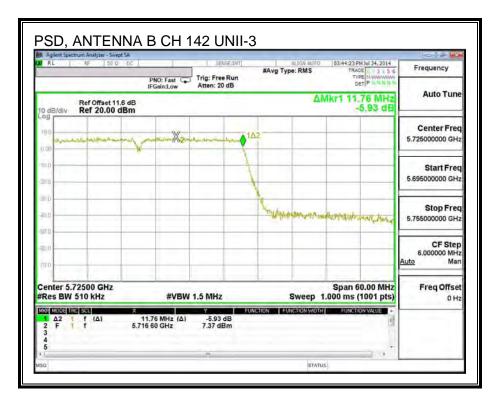
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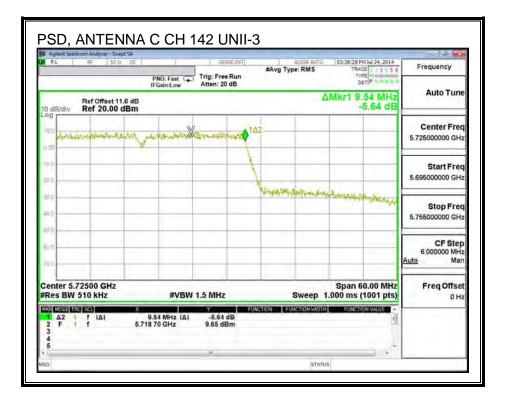




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9.24. 802.11n HT40 2Tx STBC/SDM MODE IN THE 5.6 GHz BAND

Refer to Section 9.23, 802.11n HT40 2Tx CDD MODE IN THE 5.6 GHz BAND

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9.25. 802.11ac 80MHz 1TX SISO MODE IN THE 5.6 GHz BAND

9.25.1. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

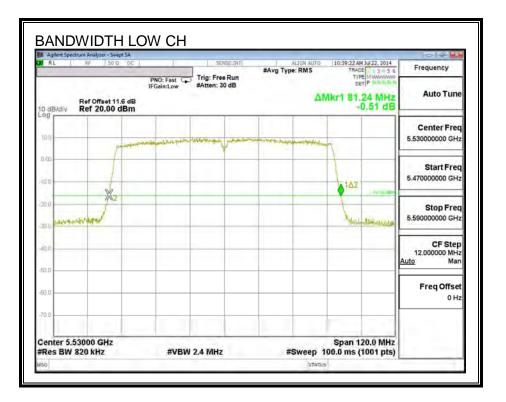
<u>RESULTS</u>

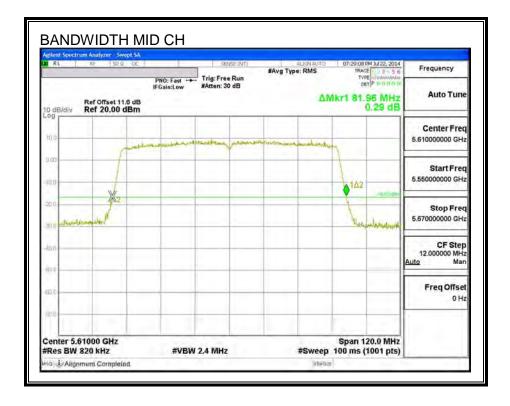
Channel	Frequency	26 dB Bandwidth
	(MHz)	(MHz)
Low	5530	81.24
Mid	5610	81.96
High	5690	81.48

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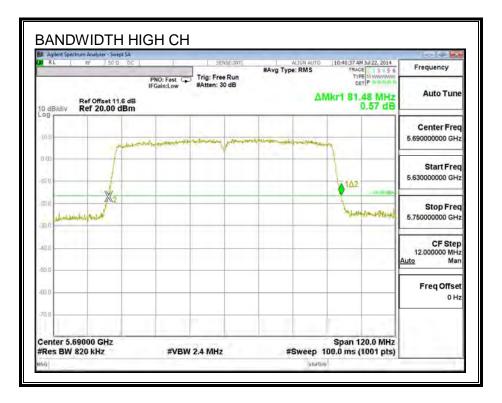
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26 dB BANDWIDTH





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9.25.2. 99% BANDWIDTH

LIMITS

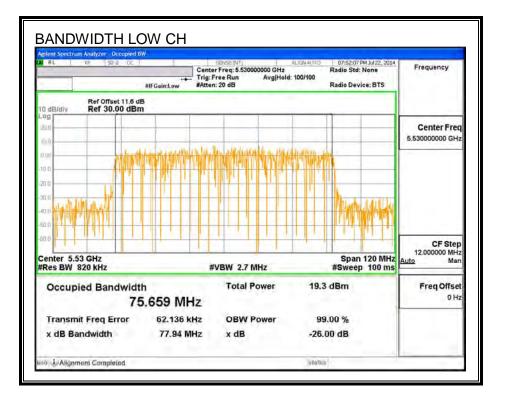
None; for reporting purposes only.

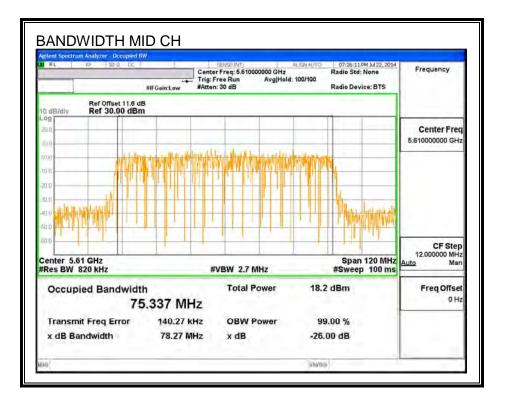
<u>RESULTS</u>

Channel	Frequency	99% Bandwidth
	(MHz)	(MHz)
Low	5530	75.659
Mid	5610	75.337
High	5690	75.241

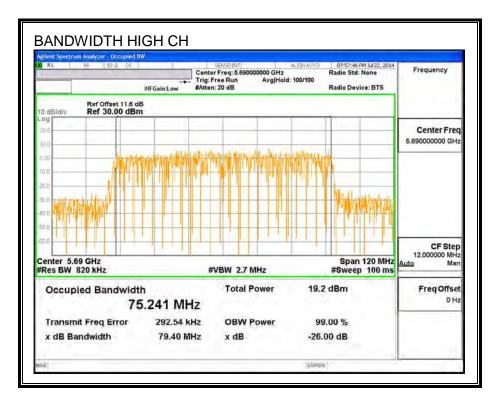
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9.25.1. AVERAGE POWER

<u>LIMITS</u>

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter. The power meter was setup for a gated power measurement.

The cable assembly insertion loss of 11.6 dB (including 10 dB pad and 1.6 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

<u>RESULTS</u>

Channel	Frequency	Antenna B Power	Antenna C Power
	(MHz)	(dBm)	(dBm)
Low	5530	15.87	15.96
Mid	5610	16.48	17.97
High	5690	16.44	17.92

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9.25.2. OUTPUT POWER AND PSD

<u>LIMITS</u>

FCC §15.407 (a) (2)

For the band 5.47–5.725 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26–dB emission bandwidth in MHz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1–MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST PROCEDURE

The transmitter output is connected to a power meter. The power meter was setup for a gated power measurement.

The cable assembly insertion loss of 11.6 dB (including 10 dB pad and 1.6 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

DIRECTIONAL ANTENNA GAIN

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

ANTENNA B

Antenna
Gain
(dBi)
0.155

ANTENNA C

Antenna
Gain
(dBi)
3.004

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ANTENNA B

Bandwidth, Antenna Gain, and Limits

Channel	Frequency	Min	Directional	Power	PSD
		26 dB	Gain	Limit	Limit
		BW			
	(MHz)	(MHz)	(dBi)	(dBm)	(dBm)
Low	5530	81.24	0.16	24.00	11.00
Mid	5610	81.96	0.16	24.00	11.00

0.21

Duty Cycle CF (dB)

Included in Calculations of Corr'd Power & PSD

Output Power Results

Channel	Frequency	Antenna B	Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	(MHz) 5530	(dBm) 15.87	(dBm) 16.08	(dBm) 24.00	(dB) -7.92

PSD Results

Channel	Frequency	Antenna B	Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	5530	-1.09	-0.88	11.00	-11.88
Mid	5610	-1.03	-0.82	11.00	-11.82

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Bandwidth, Antenna Gain, and Limits

Channel	Frequency	Min	Directional	Power	PSD
		26 dB	Gain	Limit	Limit
		BW			
	(MHz)	(MHz)	(dBi)	(dBm)	(dBm)
Low	5530	81.24	3.00	24.00	11.00
Mid	5610	81.96	3.00	24.00	11.00

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

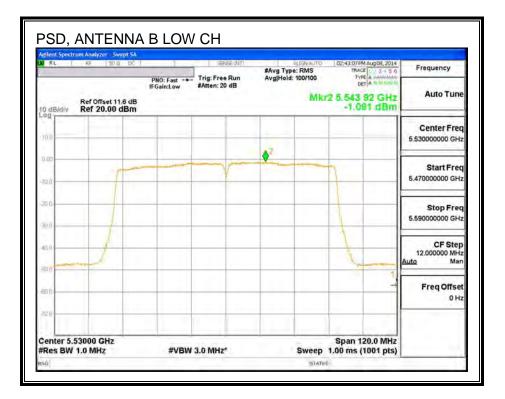
Output Power Results

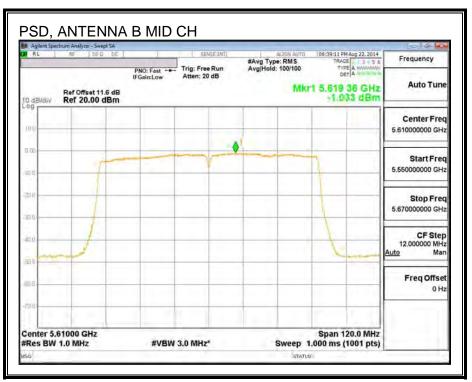
Channel	Frequency	Antenna C	Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	5530	15.96	16.17	24.00	-7.83
Mid	5610	17.97	18.18	24.00	-5.82

PSD Results

Channel	Frequency	Antenna C	Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	5530	-0.74	-0.53	11.00	-11.53
Mid	5610	-0.45	-0.24	11.00	-11.24

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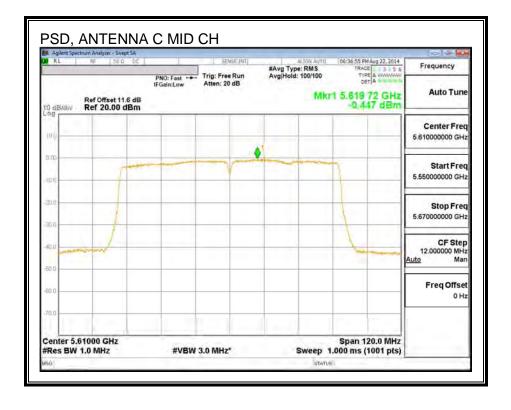




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PSD, ANTENNA C

RL	RE	50 Q DC	PNO: Fast • IFGain:Low			#Avg Type Avg Hold:		TRAC	M Jul 23, 2014 E 1 3 5 E A WWWWA
10 dB/div	Ref Offse Ref 20.						Mkrs	-0.7	16 GH 36 dBn
111.9							-		
3.900					1	2		_	
9.10		1-						1	
-19.1								4	
29.1			_						
39.1	1								
.49.)			_	-			_	1	
-59.1	_		_				_	_	
(13) Y	_		_	-	_		_		
-		-	-					1	



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STRADDLE CHANNEL 138 RESULTS

ANTENNA C UNII-2C BAND

Bandwidth, Antenna Gain, and Limits

Channel	Frequency	Min	Directional	Directional	Power	PSD
		26 dB	Gain	Gain	Limit	Limit
		BW	for Power	for PSD		
	(MHz)	(MHz)	(dBi)	(dBi)	(dBm)	(dBm)
138	5690	81.24	0.16	0.16	24.00	11.00

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

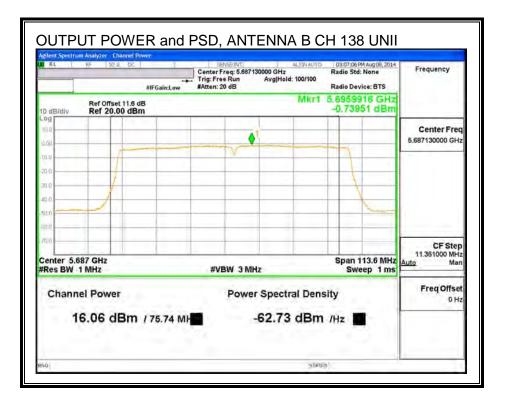
Output Power Results

Channel	Frequency	Antenna B	Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
138	5690	16.06	16.27	24.00	-7.73

PSD Results

Channel	Frequency	Antenna B	Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
138	5690	-0.74	-0.53	11.00	-11.53

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Antenna Gain and Limit

Channel	Frequency	Directional	Power	PSD
		Gain	Limit	Limit
	(MHz)	(dBi)	(dBm)	(dBm)
138	5690	0.16	30.00	30.00

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

Output Power Results

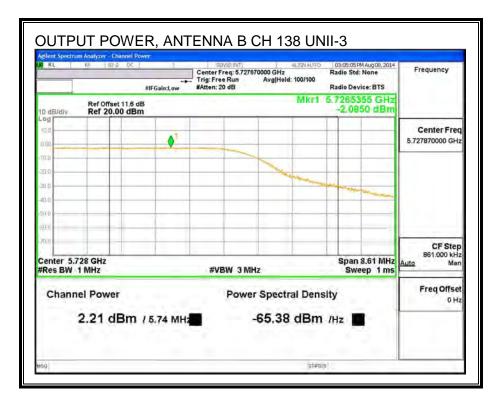
Channel	Frequency	Antenna B	Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
138	5690	2.21	2.42	30.00	-27.58

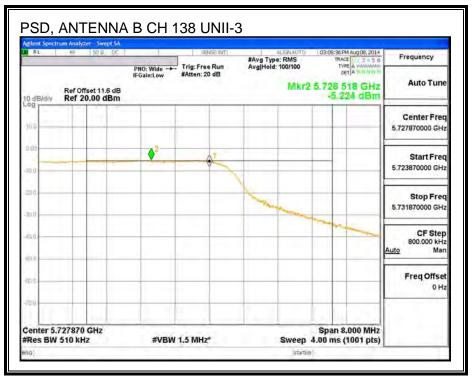
PSD Results

Channel	Frequency	Antenna B	Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
138	5690	-5.22	-5.01	30.00	-35.01

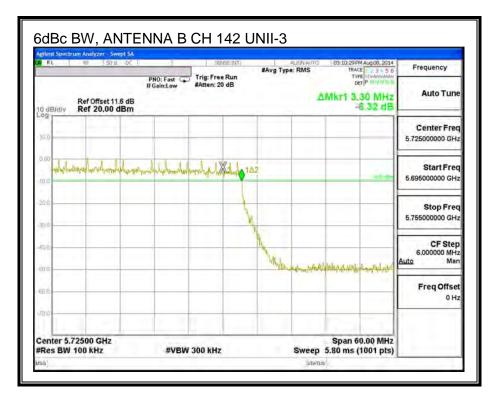
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ANTENNA C UNII-2C BAND

Bandwidth, Antenna Gain, and Limits

Channel	Frequency	Min	Directional Directiona		Power	PSD
		26 dB	Gain	Gain	Limit	Limit
		BW	for Power	for PSD		
	(MHz)	(MHz)	(dBi)	(dBi)	(dBm)	(dBm)
138	5690	81.48	3.00	3.00	24.00	11.00

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

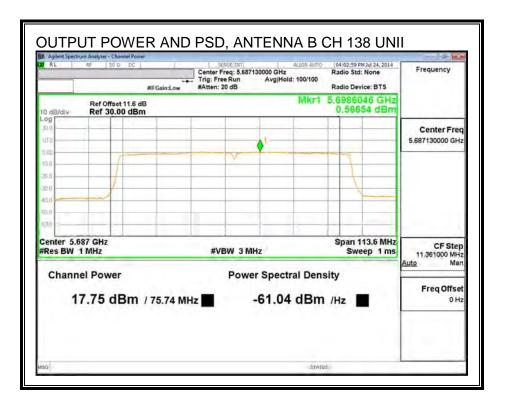
Output Power Results

Channel	Frequency	Antenna B	Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
138	5690	17.75	17.96	24.00	-6.04

PSD Results

Channe	I Frequency	Antenna B	Total	PSD	PSD
		Meas		Limit	Margin
		PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
138	5690	0.57	0.78	11.00	-10.22

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Antenna Gain and Limit

Channel	Frequency	Directional	Power	PSD
		Gain	Limit	Limit
	(MHz)	(dBi)	(dBm)	(dBm)
138	5690	3.00	30.00	30.00

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

Output Power Results

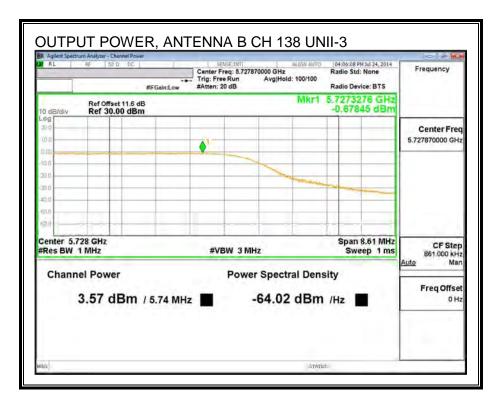
Channel	Frequency	Antenna B	Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
138	5690	3.57	3.78	30.00	-26.22

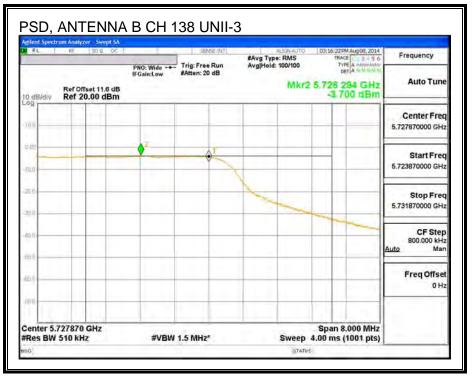
PSD Results

Channel	Frequency	Antenna B	Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
138	5690	-3.70	-3.49	30.00	-33.49

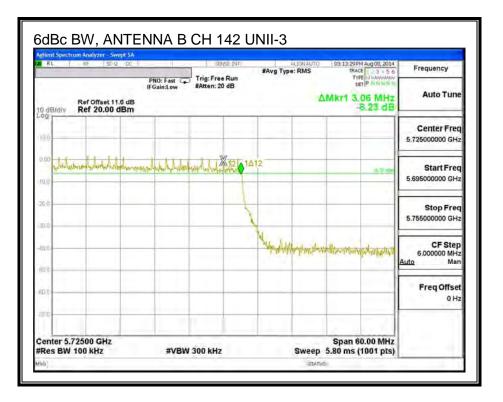
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9.26. 802.11ac 80MHz 2TX CDD MODE IN THE 5.6 GHz BAND

9.26.1. 26 dB BANDWIDTH

<u>LIMITS</u>

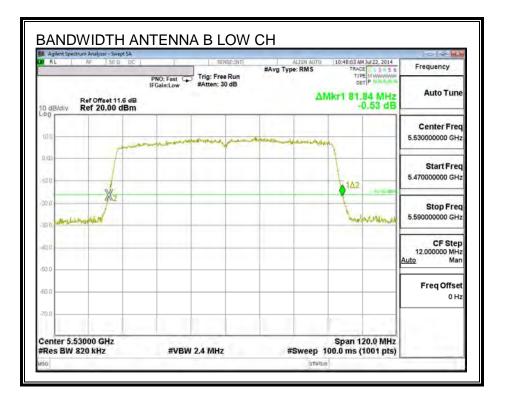
None; for reporting purposes only.

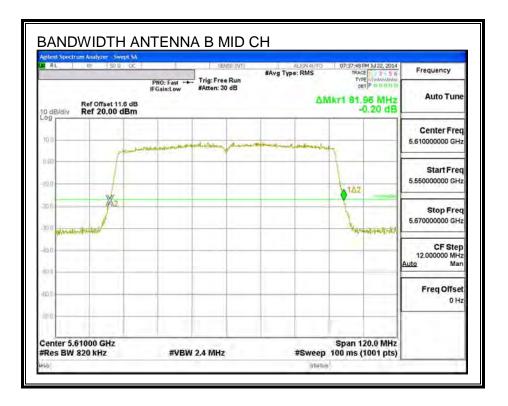
<u>RESULTS</u>

Channel	Frequency	26 dB BW	26 dB BW	
		Antenna B	Antenna C	
	(MHz)	(MHz)	(MHz)	
Low	5530	81.84	81.24	
Mid	5610	81.96	81.48	
High	5690	81.84	81.24	

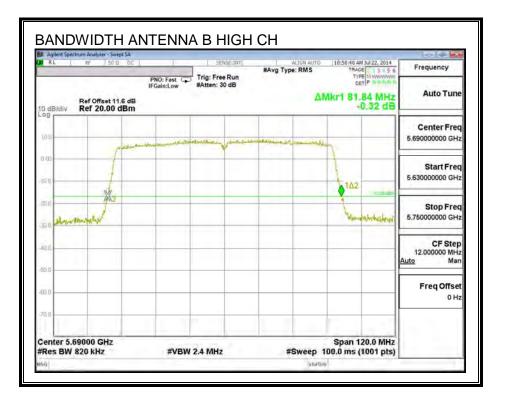
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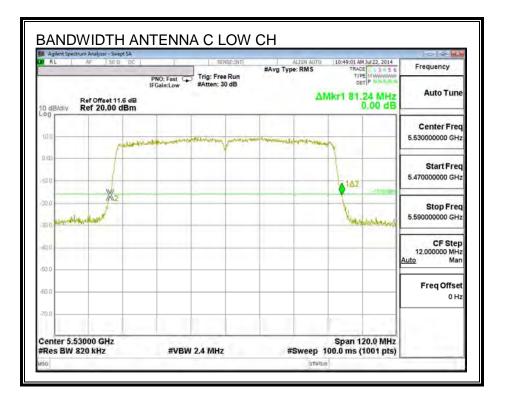


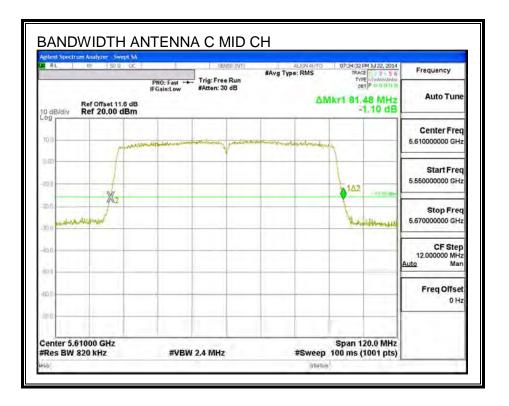


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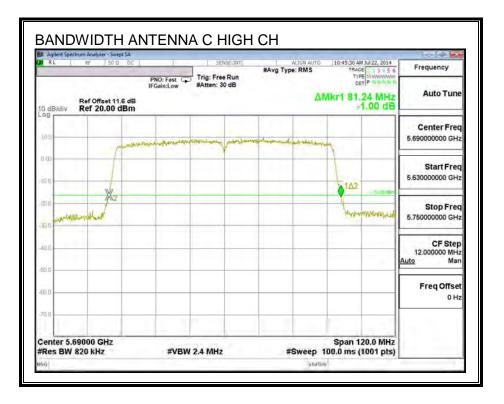


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9.26.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

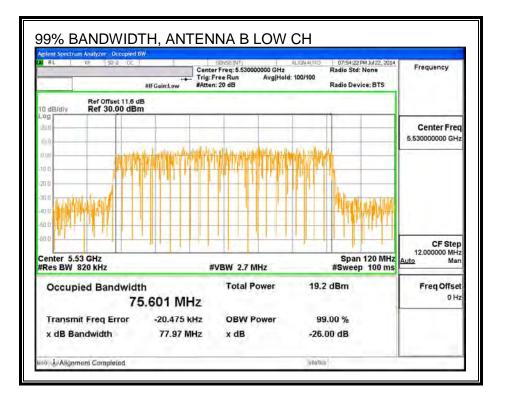
RESULTS

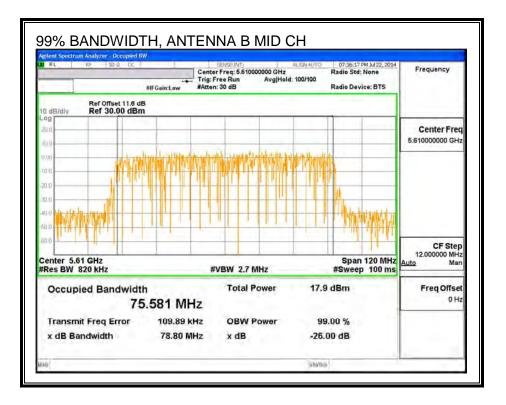
Channel	Frequency	99% BW	99% BW	
		Antenna B	Antenna C	
	(MHz)	(MHz)	(MHz)	
Low	5530	75.601	75.357	
Mid	5610	75.581	75.535	
High	5690	74.953	75.312	

DATE: SEPTEMBER 13, 2014

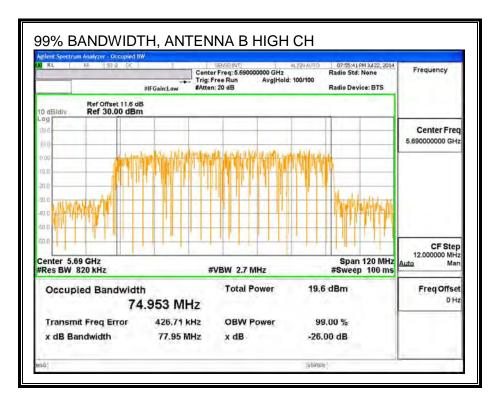
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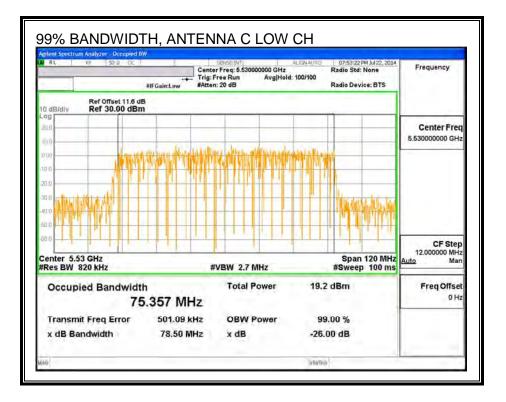


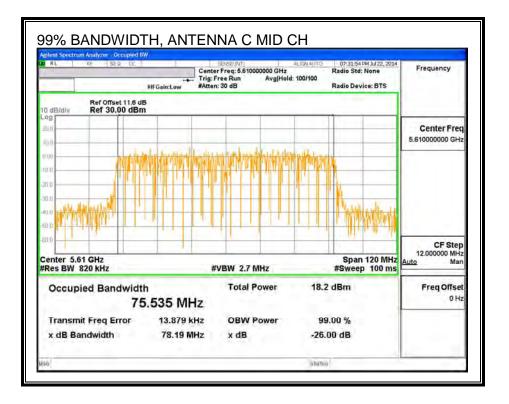


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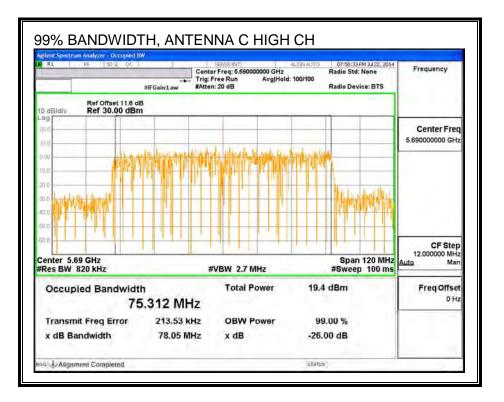


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9.26.1.AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter. The power meter was setup for a gated power measurement.

The cable assembly insertion loss of 11.6 dB (including 10 dB pad and 1.6 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS

Average Power Results

Channel	Frequency	Antenna B	ntenna B Antenna C	
		Power	Power	Power
	(MHz)	(dBm)	(dBm)	(dBm)
Low	5530	13.90	13.89	16.91
Mid	5610	16.39	17.93	20.24
High	5690	16.49	17.88	20.25

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9.26.2. OUTPUT POWER AND PSD

<u>LIMITS</u>

FCC §15.407 (a) (2)

For the band 5.47–5.725 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26–dB emission bandwidth in MHz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1–MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST PROCEDURE

The transmitter output is connected to a power meter. The power meter was setup for a gated power measurement.

The cable assembly insertion loss of 11.6 dB (including 10 dB pad and 1.6 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

DIRECTIONAL ANTENNA GAIN

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

Antenna B	Antenna C	Uncorrelated Chains	
Antenna	Antenna	Directional	
Gain	Gain	Gain	
(dBi)	(dBi)	(dBi)	
0.16	3.00	1.81	

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

Antenna B	Antenna C	Correlated Chains
Antenna	Antenna	Directional
Gain	Gain	Gain
(dBi)	(dBi)	(dBi)
0.16	3.00	4.71

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Bandwidth, Antenna Gain, and Limits

requency Min C		Directional	Directional	Power	PSD
	26 dB	Gain	Gain	Limit	Limit
	BW	for Power	for PSD		
(MHz)	(MHz)	(dBi)	(dBi)	(dBm)	(dBm)
5530	81.24	1.81	4.71	24.00	11.00
5610	81.48	1.81	4.71	24.00	11.00
		BW (MHz) (MHz) 5530 81.24	BW for Power (MHz) (MHz) (dBi) 5530 81.24 1.81	BW for Power for PSD (MHz) (MHz) (dBi) (dBi) 5530 81.24 1.81 4.71	BW for Power for PSD (MHz) (MHz) (dBi) (dBi) (dBm) 5530 81.24 1.81 4.71 24.00

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

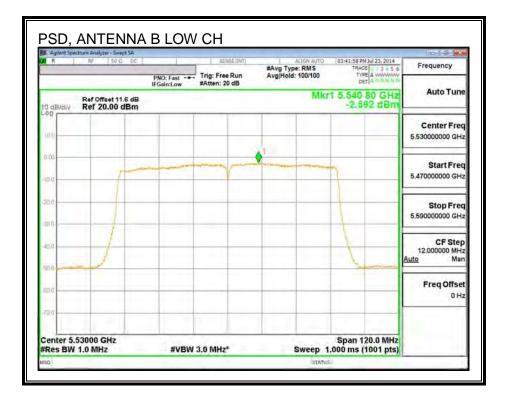
Output Power Results

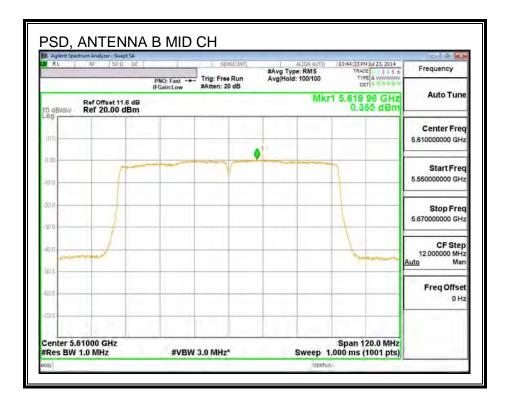
Channel	Frequency	Antenna B	Antenna C	Total	Power	Power
		Meas	Meas	Corr'd	Limit	Margin
		Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5530	13.90	13.89	17.12	24.00	-6.88
Mid	5610	16.39	17.93	20.45	24.00	-3.55

PSD Results

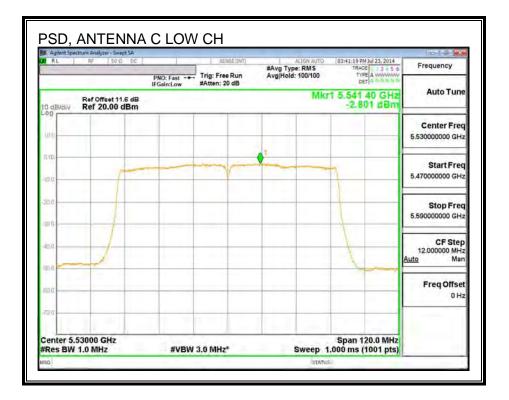
Channel	Frequency	Antenna B	Antenna C	Total	PSD	PSD
		Meas	Meas	Corr'd	Limit	Margin
		PSD	PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5530	-2.59	-2.80	0.53	11.00	-10.47
Mid	5610	0.36	0.10	3.45	11.00	-7.55

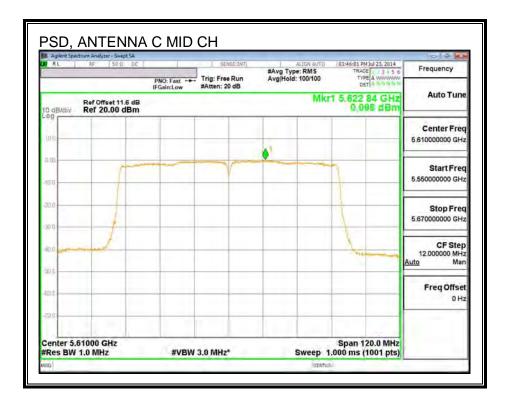
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STRADDLE CHANNEL 138 RESULTS

UNII-2C BAND

Bandwidth, Antenna Gain, and Limits

Channel	Frequency	Min	Directional	Directional	Power	PSD
		26 dB	Gain	Gain	Limit	Limit
		BW	for Power	for PSD		
	(MHz)	(MHz)	(dBi)	(dBi)	(dBm)	(dBm)
138	5690	81.24	1.81	4.71	24.00	11.00

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

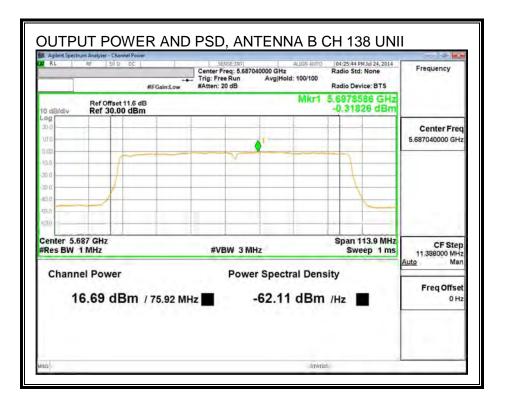
Output Power Results

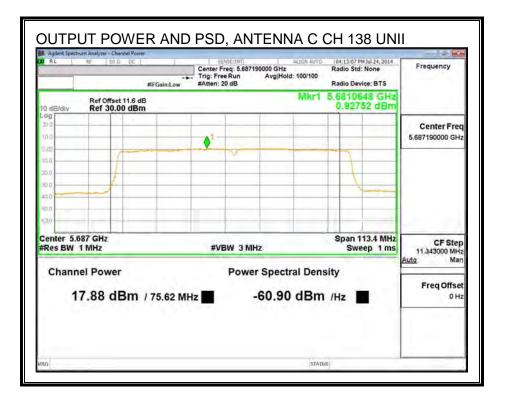
Channel	Frequency	Antenna B	Antenna C	Total	Power	Power
		Meas	Meas	Corr'd	Limit	Margin
		Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
138	5690	16.69	17.88	20.55	24.00	-3.45

PSD Results

Channel	Frequency	Antenna B	Antenna C	Total	PSD	PSD
		Meas	Meas	Corr'd	Limit	Margin
		PSD	PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
138	5690	-0.32	0.93	3.57	11.00	-7.43

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Antenna Gain and Limit

Channel	Frequency	Directional	Power	PSD
		Gain	Limit	Limit
	(MHz)	(dBi)	(dBm)	(dBm)
138	5690	4.71	30.00	30.00

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

Output Power Results

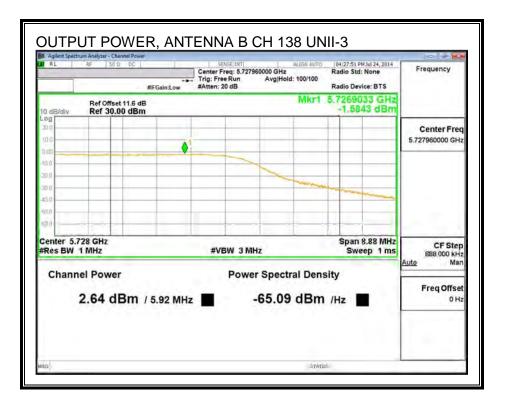
Channel	Frequency	Antenna B	Antenna C	Total	Power	Power
		Meas	Meas	Corr'd	Limit	Margin
		Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
138	5690	2.64	3.61	6.37	30.00	-23.63

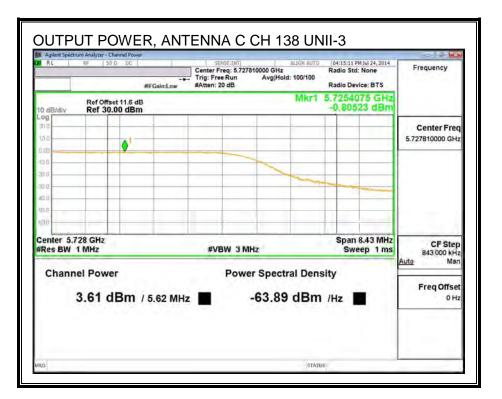
PSD Results

Channel	Frequency	Antenna B	Antenna C	Total	PSD	PSD
		Meas	Meas	Corr'd	Limit	Margin
		PSD	PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
138	5690	-1.58	-0.81	2.04	30.00	-27.96

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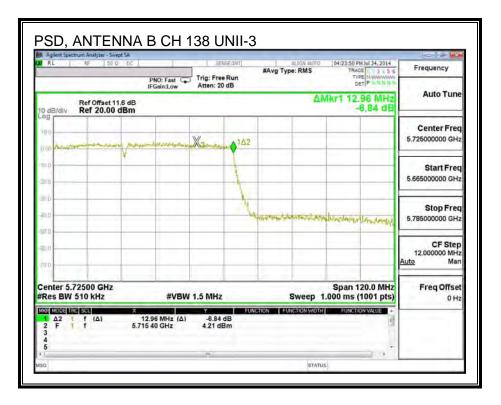
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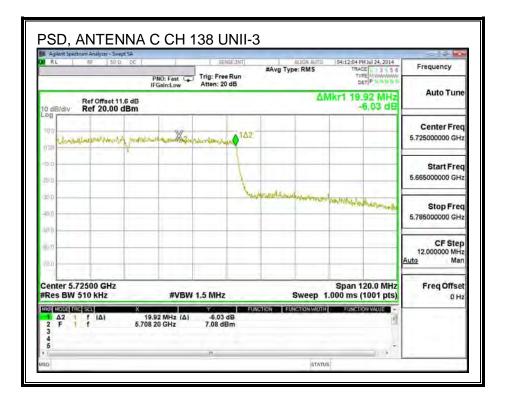




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9.27. 802.11ac 80MHz 2Tx STBC/SDM MODE IN THE 5.6 GHz BAND

Refer to Section 9.26, 802.11ac 80MHz 2TX CDD MODE IN THE 5.6 GHz BAND.

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9.28. 802.11a MODE 1TX SISO IN THE 5.8 GHz BAND

9.28.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

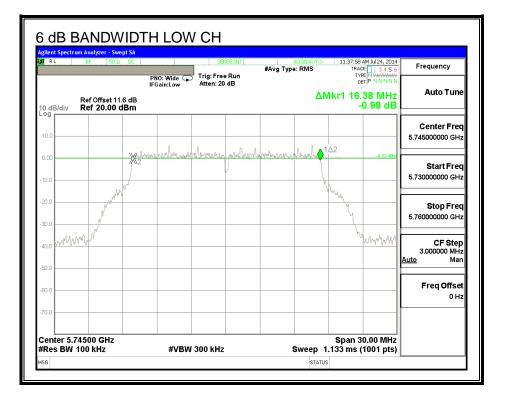
The minimum 6 dB bandwidth shall be at least 500 kHz.

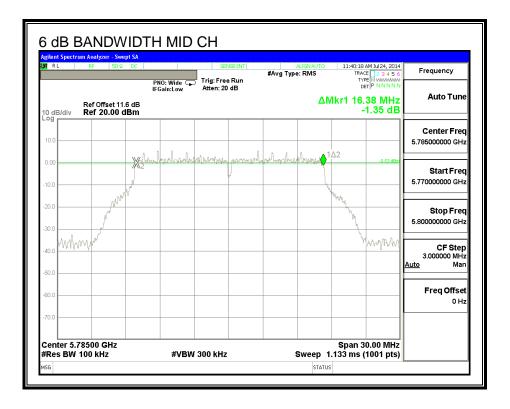
RESULTS

Channel	Frequency	6 dB Bandwidth	Minimum Limit
	(MHz)	(MHz)	(MHz)
Low	5745	16.3800	0.5
Mid	5785	16.3800	0.5
High	5825	16.3800	0.5

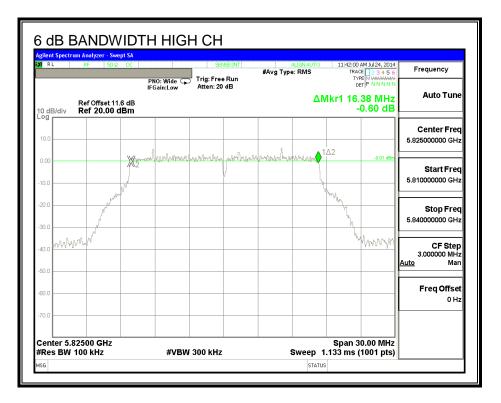
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9.28.2. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

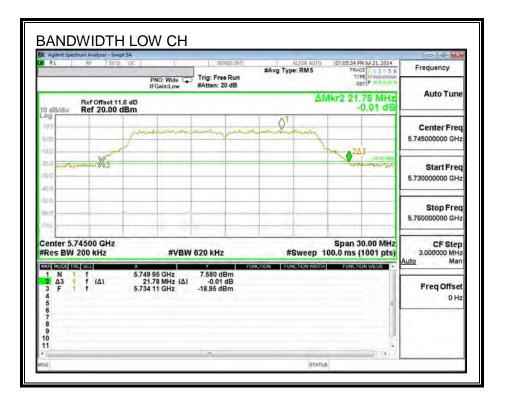
RESULTS

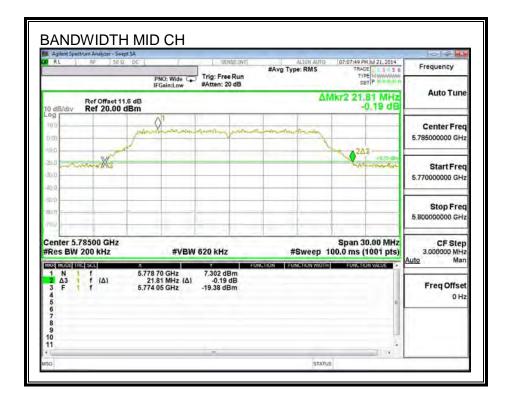
Channel	Frequency	26 dB Bandwidth
	(MHz)	(MHz)
Low	5745	21.78
Mid	5785	21.81
High	5805	21.69

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26 dB BANDWIDTH





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Agulent Spectrum Analyzer - Se RL RF 50 G	PNO: Wide	rig: Free Run	ALIGN AUTO #Avg Type: RMS	07:09:21 PM Jul 21, 2014 TRACE 1 1 5 6 TYPE M WWWWW	Frequency
Ref Offset 1 Bidly Ref 20.00	1.6 dB	Atten: 20 dB	ΔN	1kr2 21.69 MHz -0.44 dB	Auto Tune
9 70 10	mann	m	month	212	Center Free 5.825000000 GH
10				The second second	Start Free 5.810000000 GH
10 .m					Stop Free 5.840000000 GH
enter 5.82500 GHz Res BW 200 kHz	#VBW 62	20 kHz	#Sweep 1	Span 30.00 MHz 00.0 ms (1001 pts)	CF Step 3.000000 MH
RIMODE TREE SOL N 1 f Δ3 f f (Δ) F f f	21.69 MHz (Δ)	7.127 dBm -0.44 dB 18.95 dBm	TION FUNCTION WOTH	FUNCTION VALUE	Auto Mar Freq Offse 0 H:
7 8 9 0 1				Ļ	

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9.28.3. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

<u>RESULTS</u>

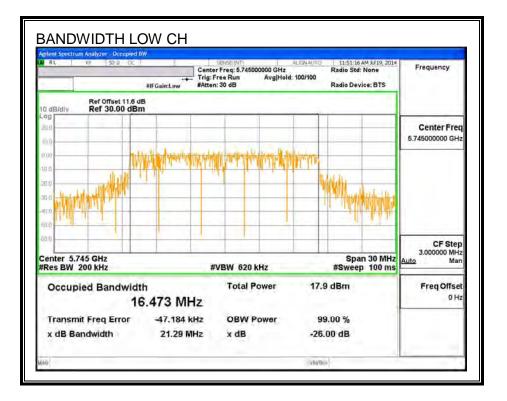
Channel	Frequency	99% Bandwidth
	(MHz)	(MHz)
Low	5745	16.4730
Mid	5785	16.6620
High	5825	16.4570

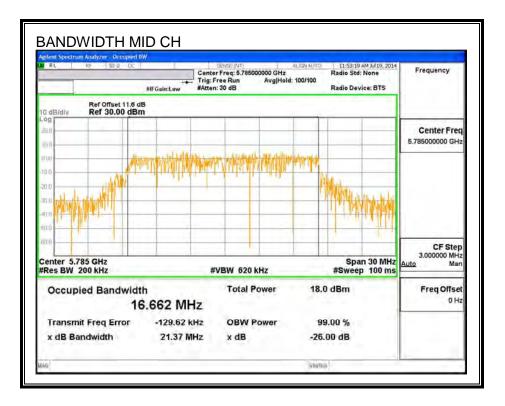
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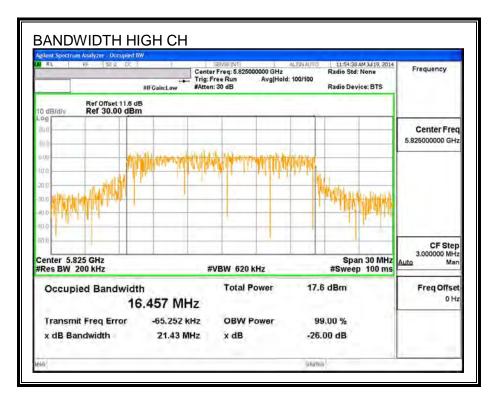
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9.28.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter. The power meter was setup for a gated power measurement.

The cable assembly insertion loss of 11.6 dB (including 10 dB pad and 1.6 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS

Channel	Frequency	Antenna B Power	Antenna C Power
	(MHz)	(dBm)	(dBm)
Low	5745	15.99	15.95
Mid	5785	16.90	17.91
High	5825	16.96	16.89

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9.28.5. OUTPUT POWER

LIMITS

FCC §15.407 (a) (3)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST PROCEDURE

The transmitter output is connected to a power meter. The power meter was setup for a gated power measurement.

The cable assembly insertion loss of 11.6 dB (including 10 dB pad and 1.6 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

DIRECTIONAL ANTENNA GAIN

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

ANTENNA B

Antenna	
Gain	
(dBi)	
-0.820	

ANTENNA C

Antenna
Gain
(dBi)
3.130

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ANTENNA B

Antenna Gain and Limit

Channel	Frequency	Directional	Power
		Gain	Limit
		for Power	
	(MHz)	(dBi)	(dBm)
Low	5745	-0.82	30.00
Mid	5785	-0.82	30.00
High	5825	-0.82	30.00

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

Output Power Results

Channel	Frequency	Antenna B	Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	5745	15.99	15.99	30.00	-14.01
Mid	5785	16.90	16.90	30.00	-13.10
High	5825	16.96	16.96	30.00	-13.04

ANTENNA C

Antenna Gain and Limit

Channel	Frequency	Directional	Power
		Gain	Limit
		for Power	
	(MHz)	(dBi)	(dBm)
Low	5745	3.13	30.00
Mid	5785	3.13	30.00
High	5825	3.13	30.00

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

Output Power Results

Channel	Frequency	Antenna C	Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	5745	15.95	15.95	30.00	-14.05
Mid	5785	17.91	17.91	30.00	-12.09
High	5825	16.89	16.89	30.00	-13.11

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9.28.6. MAXIMUM POWER SPECTRAL DENSITY (PSD)

LIMITS

FCC §15.407 (a) (3)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

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

ANTENNA B

Antenna
Gain
(dBi)
-0.820

ANTENNA C



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ANTENNA B

Antenna Gain and Limits

Channel	Frequency	Directional	PSD
		Gain	Limit
	(MHz)	(dBi)	(dBm)
Low	5745	-0.82	30.00
Mid	5785	-0.82	30.00
High	5825	-0.82	30.00

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

PSD Results

Channel	Frequency	Antenna B	Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	5745	1.03	1.03	30.00	-28.97
Mid	5785	1.96	1.96	30.00	-28.04
High	5825	2.14	2.14	30.00	-27.86

RESULTS ANTENNA C

Antenna Gain and Limits

Channel	Frequency	Directional	PSD
		Gain	Limit
	(MHz)	(dBi)	(dBm)
Low	5745	3.13	30.00
Mid	5785	3.13	30.00
High	5825	3.13	30.00

Duly Cycle CF (db) 0.00 Included in Calculations of Corr d P	Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSI)
--	--------------------	------	--	---

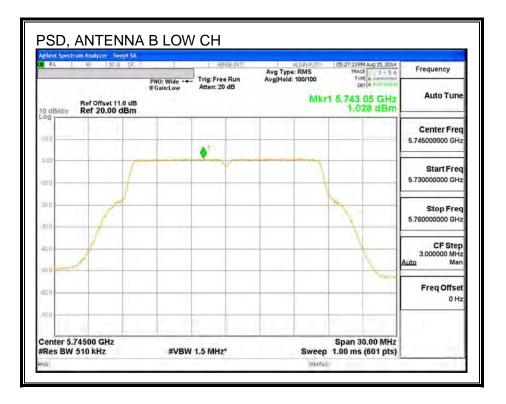
PSD Results

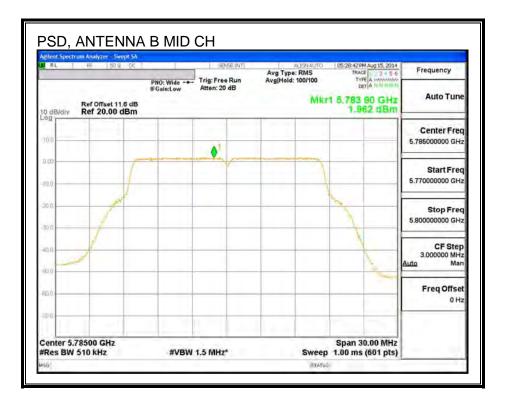
Channel	Frequency	Antenna C	Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	5745	1.43	1.43	30.00	-28.57
Mid	5785	10.50	10.50	30.00	-19.50
High	5825	2.22	2.22	30.00	-27.78

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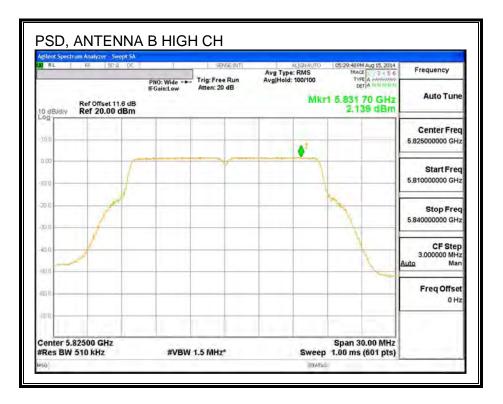
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PSD, ANTENNA B

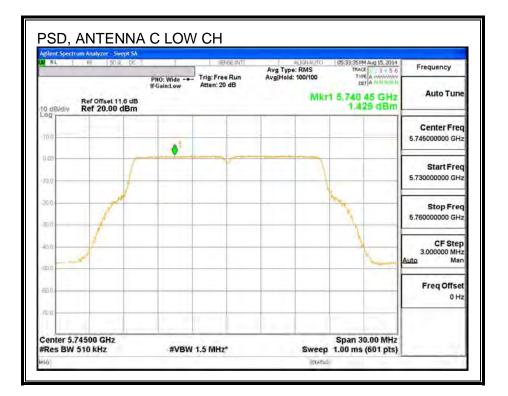


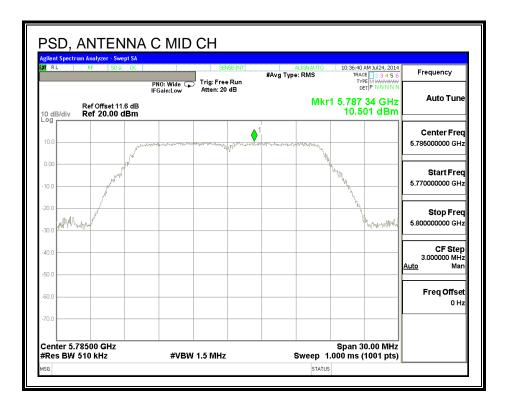


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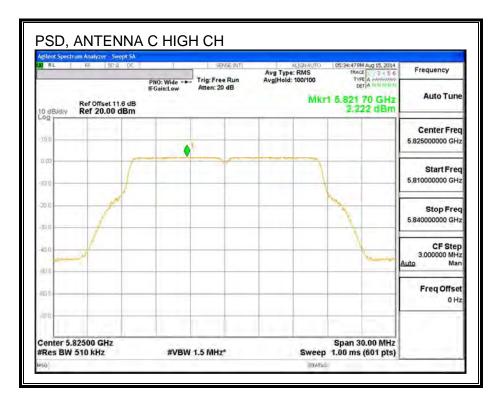


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9.29. 802.11n HT20 2TX CDD MODE IN THE 5.8 GHz BAND

9.29.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

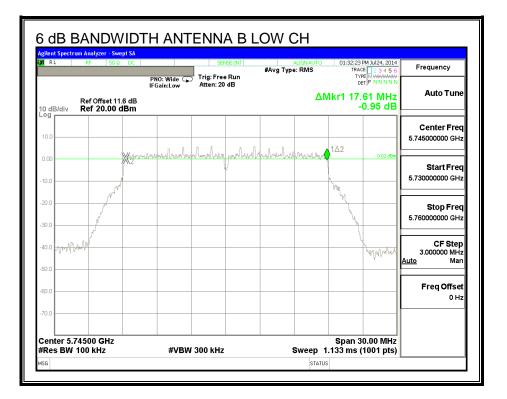
The minimum 6 dB bandwidth shall be at least 500 kHz.

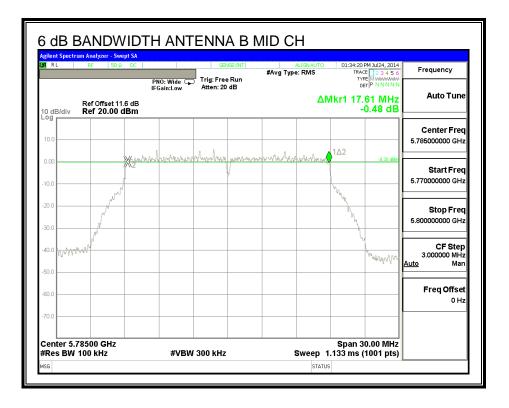
RESULTS

Channel	Frequency	6 dB BW	6 dB BW	Minimum
		Antenna B	Antenna C	Limit
	(MHz)	(MHz)	(MHz)	(MHz)
Low	5745	17.61	17.61	0.5
Mid	5785	17.61	17.61	0.5
High	5825	17.61	17.61	0.5

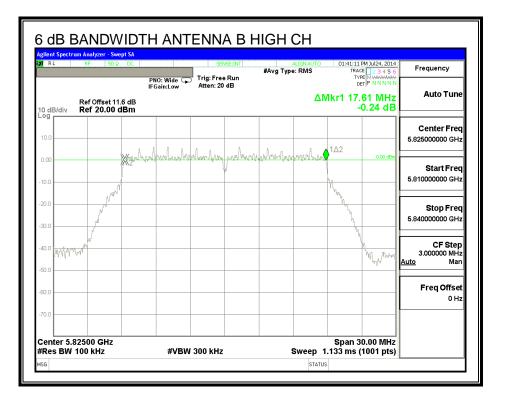
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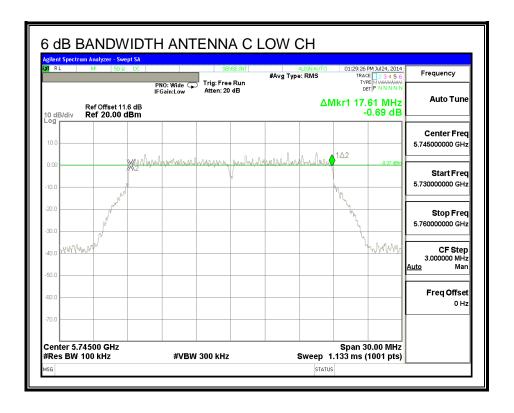




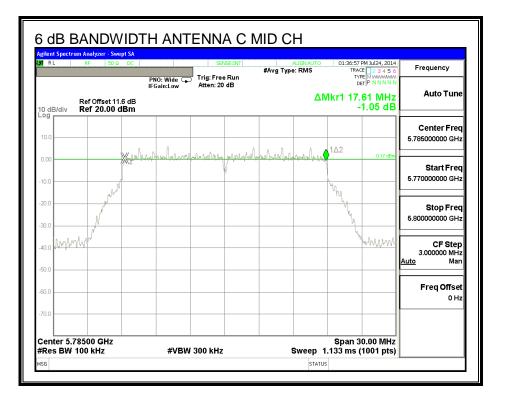
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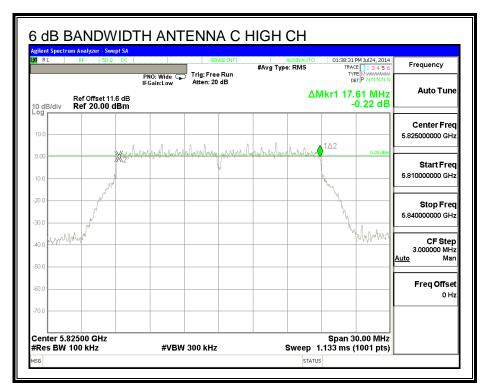


6 dB BANDWIDTH, ANTENNA C



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9.29.2. 26 dB BANDWIDTH

LIMITS

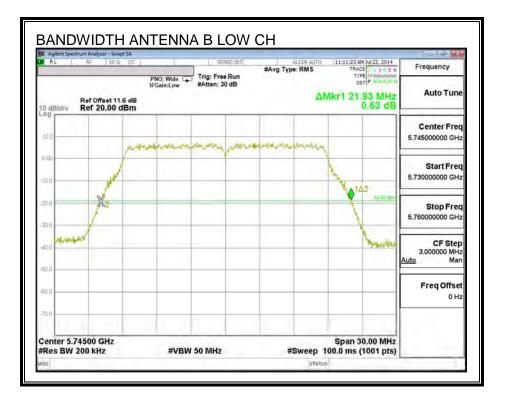
None; for reporting purposes only.

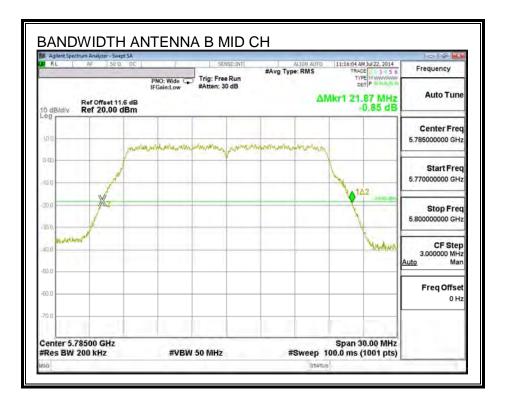
RESULTS

Channel	Frequency	26 dB BW	26 dB BW
		Antenna B	Antenna C
	(MHz)	(MHz)	(MHz)
Low	5745	21.93	21.78
Mid	5785	21.87	21.66
High	5825	21.87	21.78

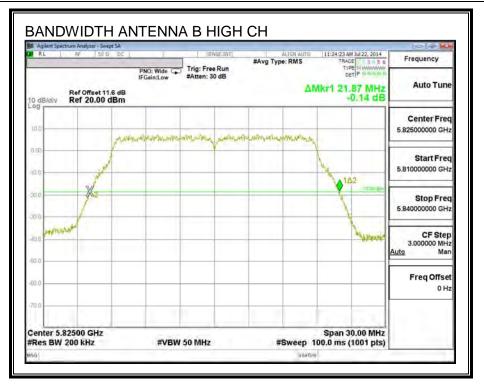
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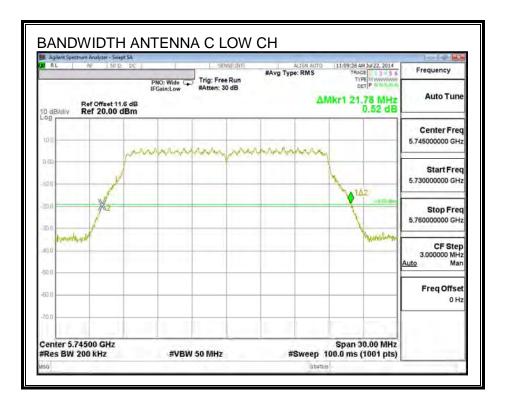




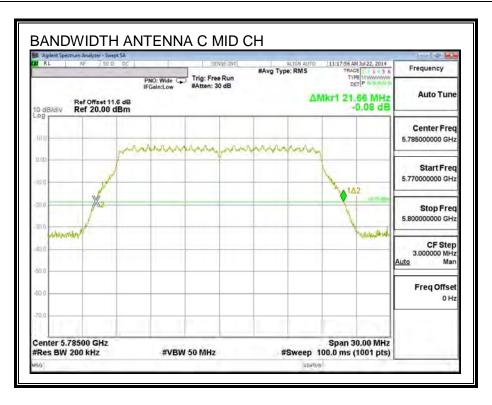
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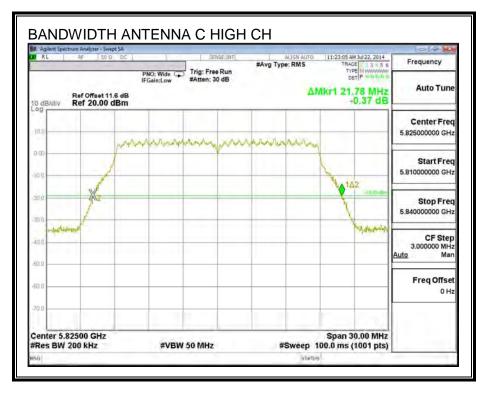


26 dB BANDWIDTH, ANTENNA C



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9.29.3. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

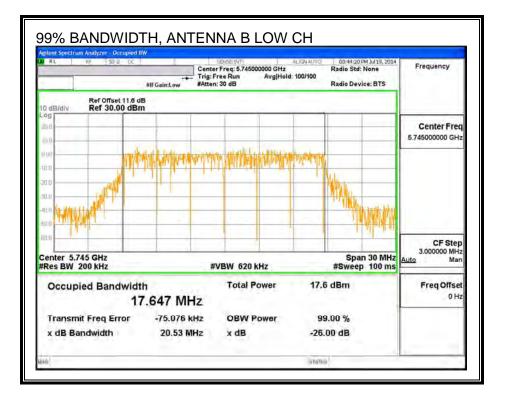
Channel	Frequency	99% BW	99% BW
		Antenna B	Antenna C
	(MHz)	(MHz)	(MHz)
Low	5745	17.647	17.875
Mid	5785	17.640	17.799
High	5825	17.615	17.855

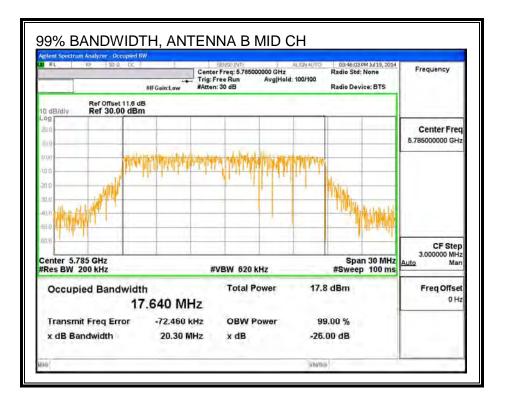
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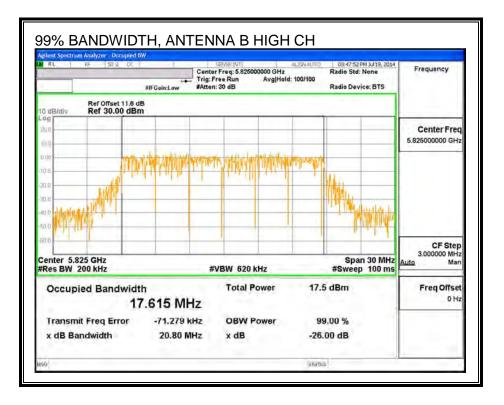
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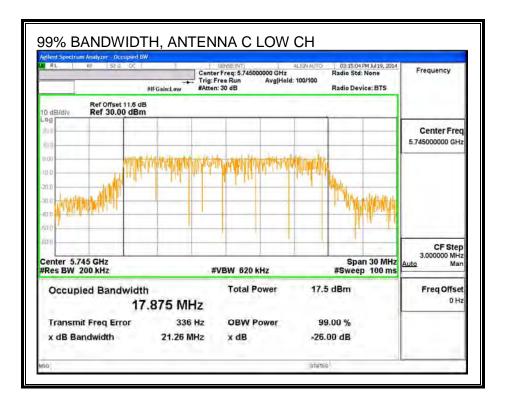




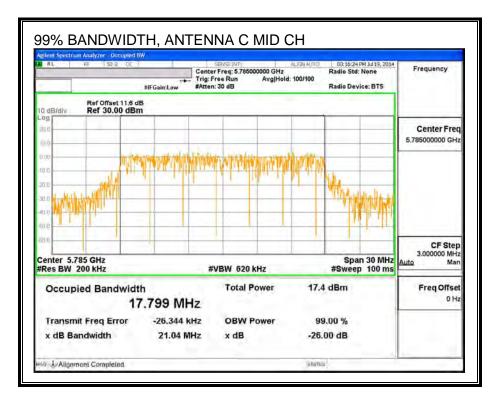
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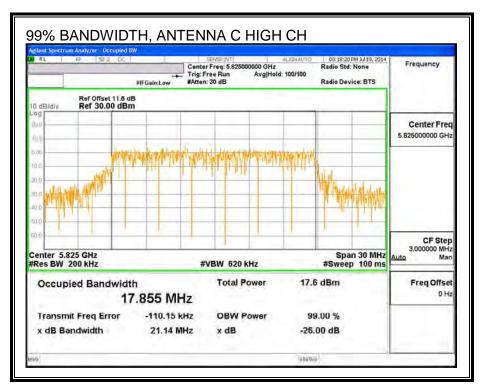


99% BANDWIDTH, ANTENNA C



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9.29.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter. The power meter was setup for a gated power measurement.

The cable assembly insertion loss of 11.6 dB (including 10 dB pad and 1.6 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS

Average Power Results

Channel	Frequency	Antenna B	Antenna C	Total
		Power	Power	Power
	(MHz)	(dBm)	(dBm)	(dBm)
Low	5745	14.91	14.93	17.93
Mid	5785	16.94	17.96	20.49
High	5825	15.91	15.93	18.93

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9.29.5. OUTPUT POWER

LIMITS

FCC §15.407 (a) (3)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST PROCEDURE

The transmitter output is connected to a power meter. The power meter was setup for a gated power measurement.

The cable assembly insertion loss of 11.6 dB (including 10 dB pad and 1.6 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

DIRECTIONAL ANTENNA GAIN

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

Antenna B	Antenna C	Uncorrelated Chains
Antenna	Antenna	Directional
Gain	Gain	Gain
(dBi)	(dBi)	(dBi)
-0.82	3.13	1.59

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Antenna Gain and Limit

Channel	Frequency	Directional	Power
		Gain	Limit
		for Power	
	(MHz)	(dBi)	(dBm)
Low	5745	1.59	30.00
Mid	5785	1.59	30.00
High	5825	1.59	30.00

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

Output Power Results

Channel	Frequency	Antenna B	Antenna C	Total	Power	Power
		Meas	Meas	Corr'd	Limit	Margin
		Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5745	14.91	14.93	17.93	30.00	-12.07
Mid	5785	16.94	17.96	20.49	30.00	-9.51
High	5825	15.91	15.93	18.93	30.00	-11.07

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9.29.6. MAXIMUM POWER SPECTRAL DENSITY (PSD)

LIMITS

FCC §15.407 (a) (3)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

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

Antenna B	Antenna C	Correlated Chains
Antenna	Antenna	Directional
Gain	Gain	Gain
(dBi)	(dBi)	(dBi)
-0.82	3.13	4.39

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RESULTS

Antenna Gain and Limits

Channel	Frequency	Directional	PSD
		Gain	Limit
	(MHz)	(dBi)	(dBm)
Low	5745	4.39	30.00
Mid	5785	4.39	30.00
High	5825	4.39	30.00

0.00

Duty Cycle CF (dB)

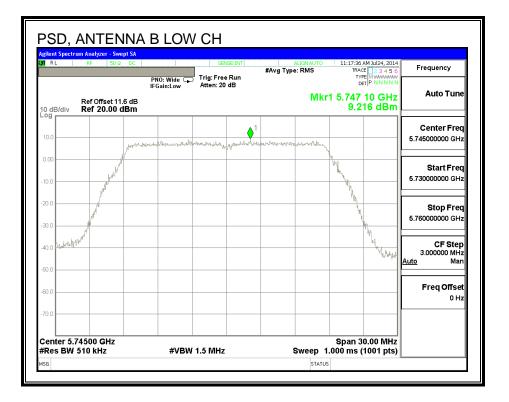
Included in Calculations of Corr'd PSD

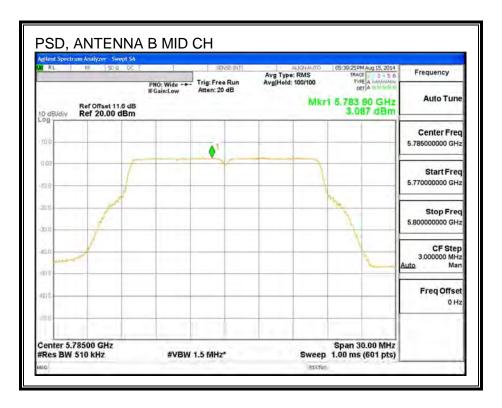
PSD Results

Channel	Frequency	Antenna B	Antenna C	Total	PSD	PSD
		Meas	Meas	Corr'd	Limit	Margin
		PSD	PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5745	9.22	10.97	13.19	30.00	-16.81
Mid	5785	3.09	13.49	13.87	30.00	-16.13
High	5825	9.93	11.79	13.97	30.00	-16.03

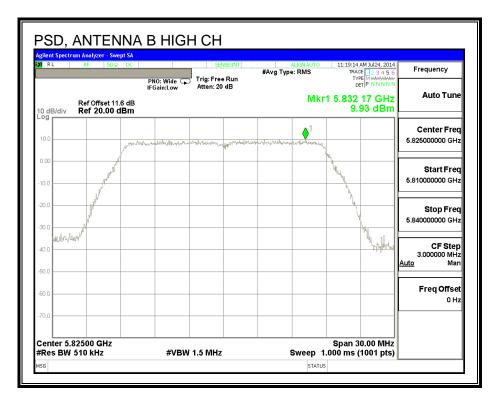
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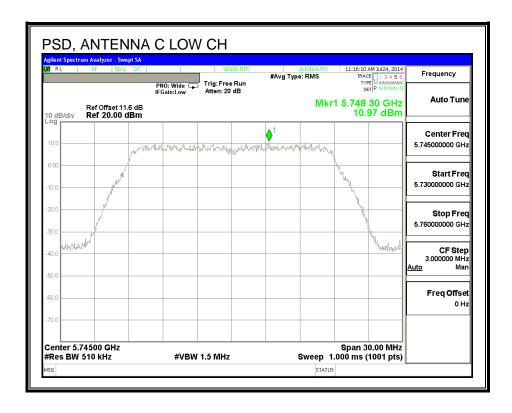




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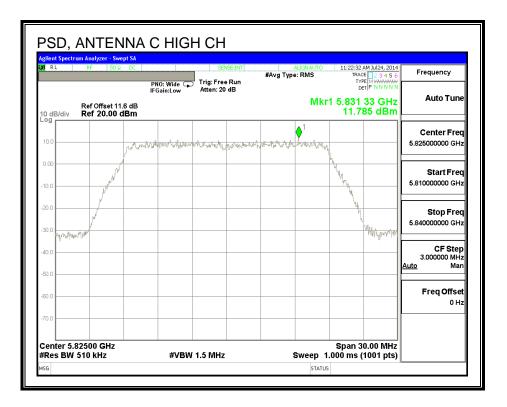


PSD, ANTENNA C



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	PNO: Wide	SENSE:INT	ALIGNAUTO #Avg Type: RMS	11:30:11 AM Jul 24, 2014 TRACE 2 3 4 5 6 TYPE M MANAAAAA	Frequency
Ref Offset 11.6 10 dB/div Ref 20.00 dl	IFGain:Low	Atten: 20 dB	Mkr	^{DET P NNNNN} 1 5.786 41 GHz 13.49 dBm	Auto Tune
10.0	warnahan Manananan	Jakan and and a start	Leven Man March March	4	Center Freq 5.785000000 GHz
0.00				No. Contraction of the second	Start Freq 5.770000000 GHz
				าไป เป็นรู้ระเบิดสระสุรรณ์	Stop Freq 5.80000000 GHz
40.0					CF Step 3.000000 MHz <u>Auto</u> Man
60.0					Freq Offsel 0 Hz
70.0					



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9.30. 802.11n HT20 2Tx STBC/SDM MODE IN THE 5.8 GHz BAND

Refer to Section 9.29, 802.11n HT20 2TX CDD MODE IN THE 5.8 GHz BAND.

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9.31. 802.11n HT40 1TX SISO MODE IN THE 5.8 GHz BAND

9.31.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

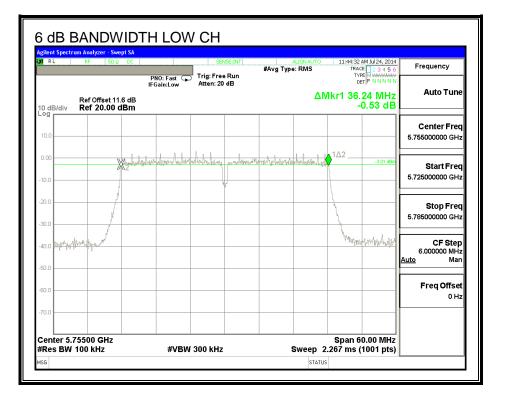
The minimum 6 dB bandwidth shall be at least 500 kHz.

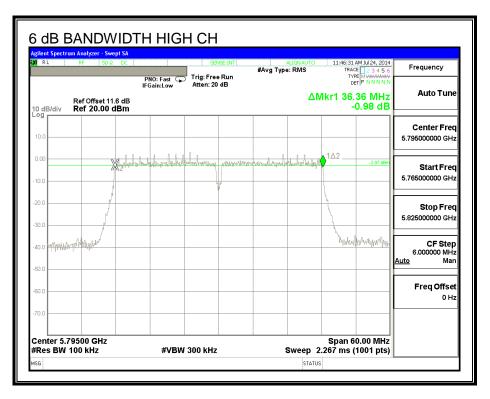
RESULTS

Channel	Frequency	6 dB Bandwidth	Minimum Limit
	(MHz)	(MHz)	(MHz)
Low	5755	36.2400	0.5
High	5795	36.3600	0.5

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9.31.2. 26 dB BANDWIDTH

<u>LIMITS</u>

None; for reporting purposes only.

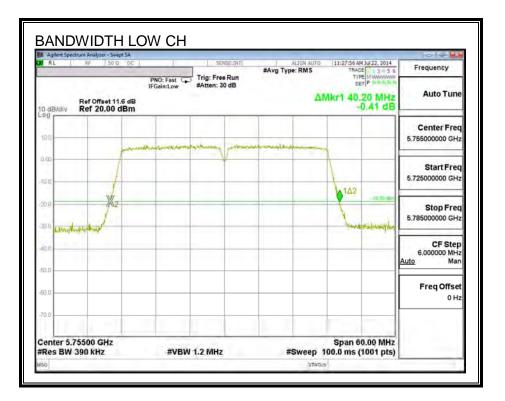
RESULTS

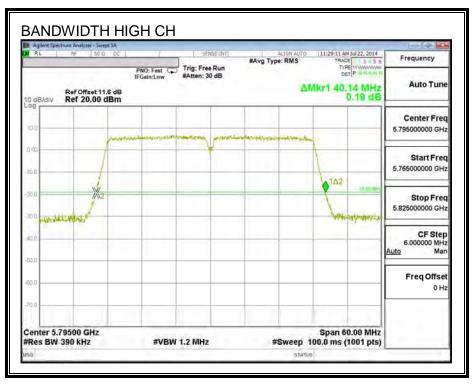
Channel	Frequency	26 dB Bandwidth
	(MHz)	(MHz)
Low	5755	40.20
High	5795	40.14

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26 dB BANDWIDTH





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9.31.3. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

<u>RESULTS</u>

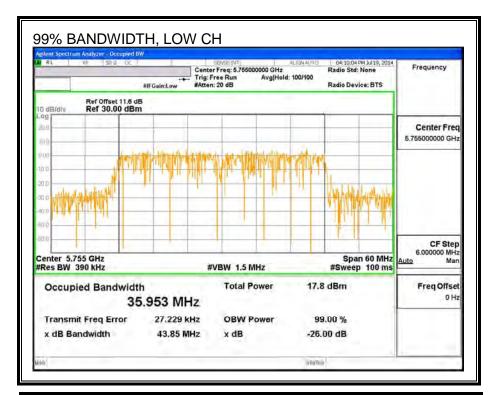
Channel Frequency		99% Bandwidth
	(MHz)	(MHz)
Low	5755	35.953
High	5795	36.262

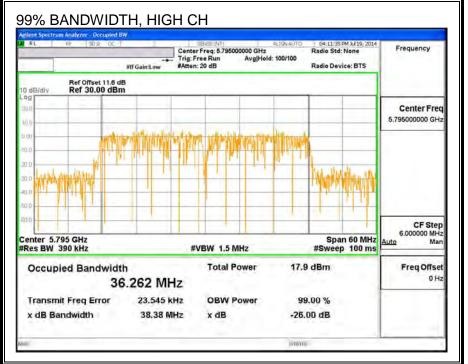
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9.31.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter. The power meter was setup for a gated power measurement.

The cable assembly insertion loss of 11.6 dB (including 10 dB pad and 1.6 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS

Channel	Frequency	Antenna B Power	Antenna C Power
	(MHz)	(dBm)	(dBm)
Low	5755	14.44	14.40
High	5795	16.98	16.80

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9.31.5. OUTPUT POWER

LIMITS

FCC §15.407 (a) (3)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST PROCEDURE

The transmitter output is connected to a power meter. The power meter was setup for a gated power measurement.

The cable assembly insertion loss of 11.6 dB (including 10 dB pad and 1.6 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

DIRECTIONAL ANTENNA GAIN

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

ANTENNA B

Antenna	
Gain	
(dBi)	
-0.820	

ANTENNA C

Antenna	
Gain	
(dBi)	
3.130	

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<u>ANTENNA B</u> Antenna Gain and Limit

High

Channel	Frequency	equency Directional	
		Gain	Limit
	(MHz)	(dBi)	(dBm)
Low	5755	-0.82	30.00

-0.82

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

30.00

Output Power Results

5795

Channel	Frequency	Antenna B	Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	(MHz) 5755	(dBm) 14.44	(dBm) 14.44	(dBm) 30.00	(dB) -15.56

ANTENNA C

Antenna Gain and Limit

Channel	Frequency	Directional	Power
		Gain	Limit
	(MHz)	(dBi)	(dBm)
Low	5755	3.13	30.00
High	5795	3.13	30.00

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

Output Power Results

Channel	Frequency	Antenna C	Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	5755	14.40	14.40	30.00	-15.60
High	5795	16.80	16.80	30.00	-13.20

9.31.6. MAXIMUM POWER SPECTRAL DENSITY (PSD)

LIMITS

FCC §15.407 (a) (3)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

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

ANTENNA B

Antenna
Gain
(dBi)
-0.820

ANTENNA C

Antenna	
Gain	
(dBi)	
3.130	

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ANTENNA B

Antenna Gain and Limits

Channel	Frequency	Directional	PSD
		Gain	Limit
	(MHz)	(dBi)	(dBm)
Low	5755	-0.82	30.00
High	5795	-0.82	30.00

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

PSD Results

Channel	Frequency	Antenna B	Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	(MHz) 5755	(dBm) -3.26	(dBm) -3.26	(dBm) 30.00	(dB) -33.26

ANTENNA C

Antenna Gain and Limits

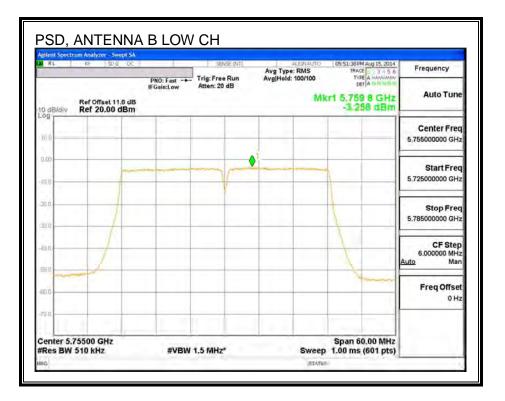
Channel	Frequency	Directional	PSD
		Gain	Limit
	(MHz)	(dBi)	(dBm)
Low	5755	3.13	30.00
High	5795	3.13	30.00

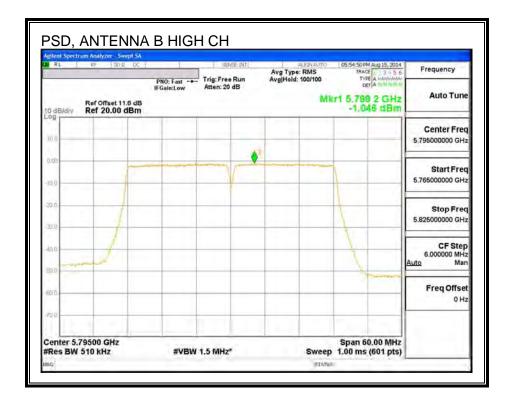
 Duty Cycle CF (dB)
 0.00
 Included in Calculations of Corr'd PSD

PSD Results

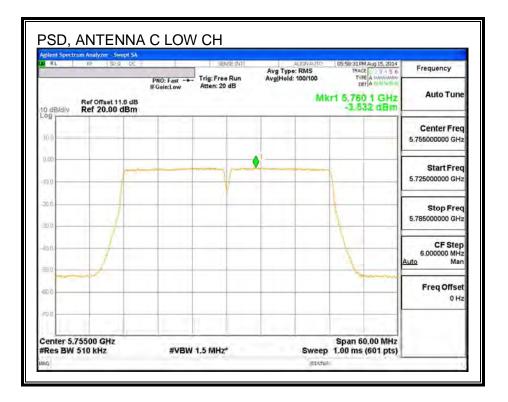
Channel	Frequency	Antenna C	Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	(MHz) 5755	(dBm) -3.53	(dBm) -3.53	(dBm) 30.00	(dB) -33.53

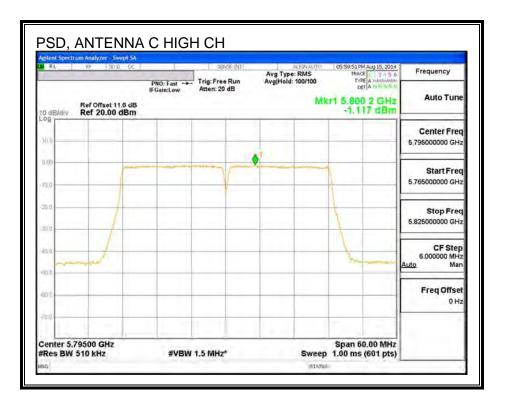
PSD, ANTENNA B





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9.32. 802.11n HT40 2TX CDD MODE IN THE 5.8 GHz BAND

9.32.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

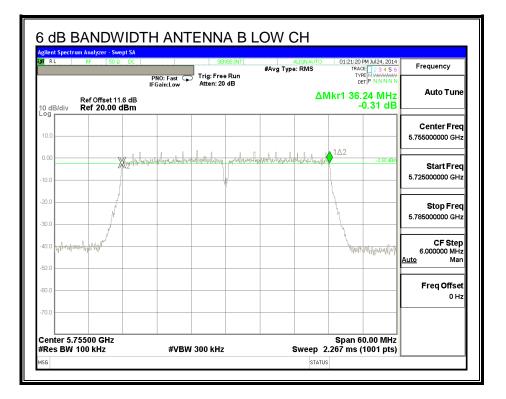
The minimum 6 dB bandwidth shall be at least 500 kHz.

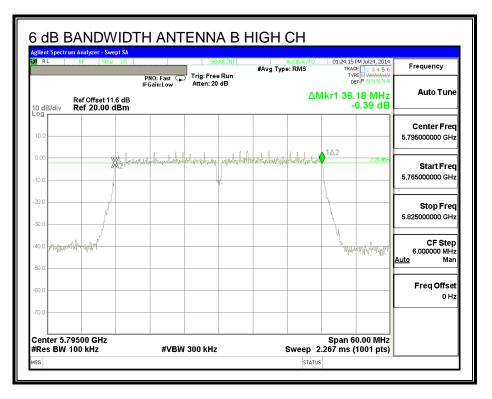
RESULTS

Channel	Frequency	6 dB BW	dBBW 6dBBW	
		Antenna B	Antenna C	Limit
	(MHz)	(MHz)	(MHz)	(MHz)
Low	5755	36.240	36.240	0.5
High	5795	36.180	36.240	0.5

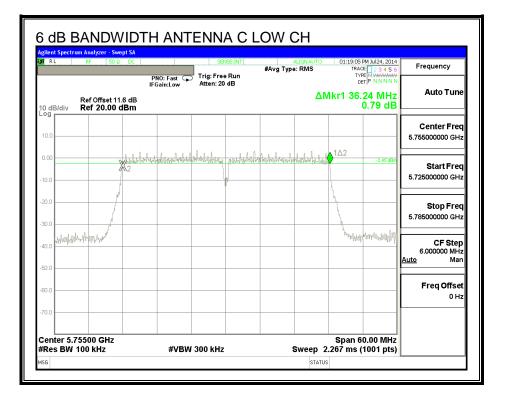
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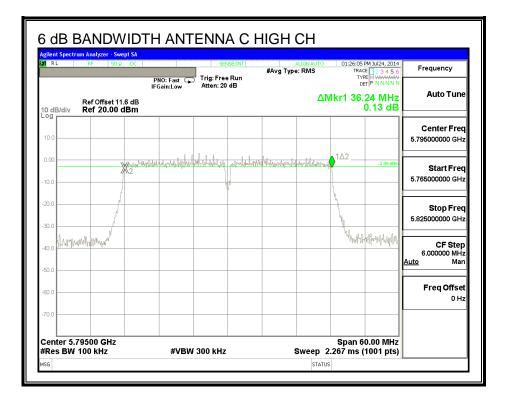
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9.32.2. 26 dB BANDWIDTH

<u>LIMITS</u>

None; for reporting purposes only.

RESULTS

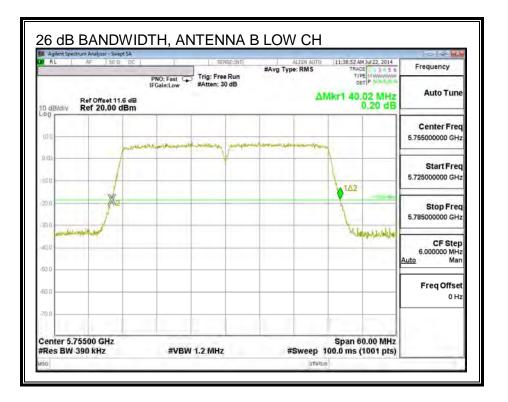
Channel	Frequency	26 dB BW	26 dB BW	
		Antenna B	Antenna C	
	(MHz)	(MHz)	(MHz)	
Low	5755	40.02	39.84	
High	5795	40.08	39.96	

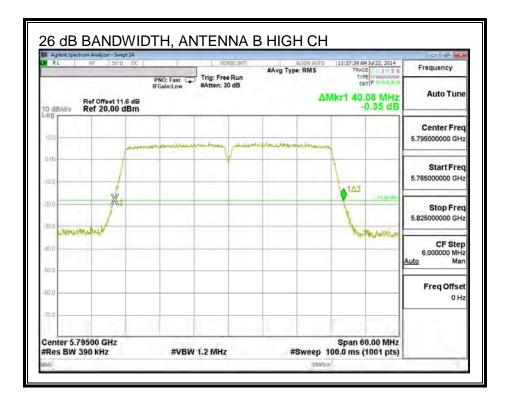
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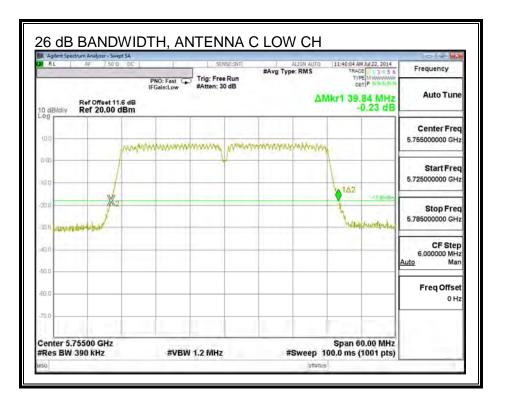
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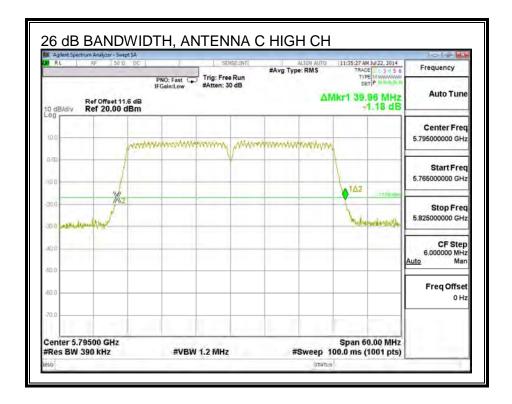




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26 dB BANDWIDTH, ANTENNA C





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9.32.3. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

<u>RESULTS</u>

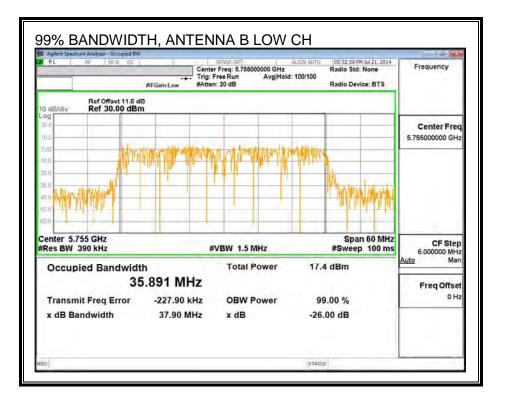
Channel Frequency		99% BW	99% BW	
		Antenna B	Antenna C	
	(MHz)	(MHz)	(MHz)	
Low	5755	35.891	36.364	
High	5795	36.215	36.274	

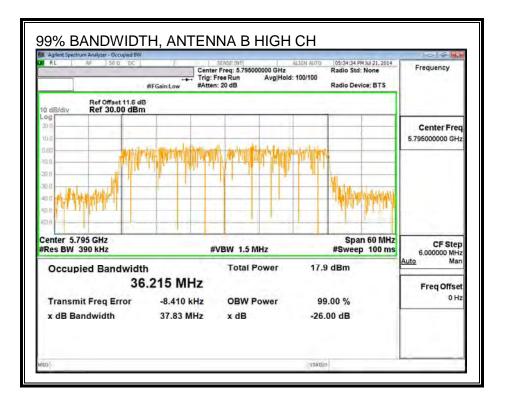
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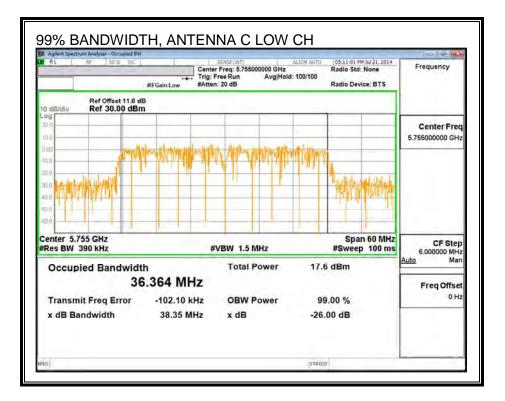
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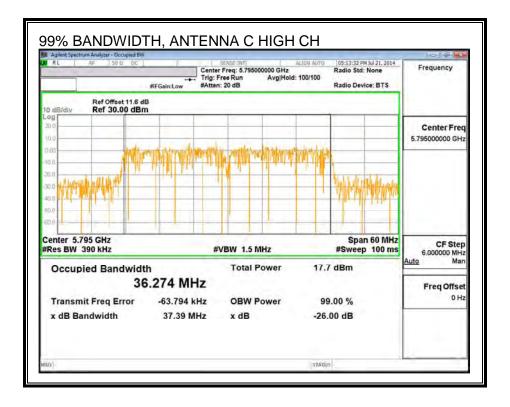




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99% BANDWIDTH, ANTENNA C





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9.32.1.AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter. The power meter was setup for a gated power measurement.

The cable assembly insertion loss of 11.6 dB (including 10 dB pad and 1.6 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS

Average Power Results

Channel	Frequency	Antenna B Antenna C		Total
		Power	Power	Power
	(MHz)	(dBm)	(dBm)	(dBm)
Low	5755	13.85	13.94	16.91
High	5795	15.91	15.93	18.93

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9.32.2. OUTPUT POWER

LIMITS

FCC §15.407 (a) (3)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST PROCEDURE

The transmitter output is connected to a power meter. The power meter was setup for a gated power measurement.

The cable assembly insertion loss of 11.6 dB (including 10 dB pad and 1.6 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

DIRECTIONAL ANTENNA GAIN

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

Antenna B	Antenna C	Uncorrelated Chains
Antenna	Antenna	Directional
Gain	Gain	Gain
(dBi)	(dBi)	(dBi)
-0.82	3.13	1.59

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Antenna Gain and Limit

Channel	Frequency	Directional	Power
		Gain	Limit
	(MHz)	(dBi)	(dBm)
Low	5755	1.59	30.00
High	5795	1.59	30.00

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

Output Power Results

Channel	Frequency	Antenna B	Antenna C	Total	Power	Power
		Meas	Meas	Corr'd	Limit	Margin
		Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5755	13.85	13.94	16.91	30.00	-13.09
High	5795	15.91	15.93	18.93	30.00	-11.07

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9.32.3. MAXIMUM POWER SPECTRAL DENSITY (PSD)

LIMITS

FCC §15.407 (a) (3)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

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

Antenna B	Antenna C	Correlated Chains
Antenna	Antenna	Directional
Gain	Gain	Gain
(dBi)	(dBi)	(dBi)
-0.82	3.13	4.39

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Antenna Gain and Limit

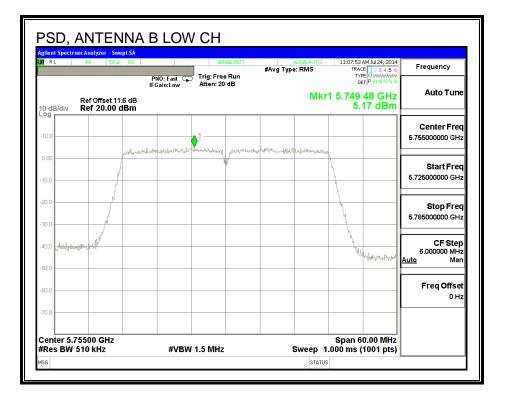
Channel	Frequency	Directional	PSD
		Gain	Limit
	(MHz)	(dBi)	(dBm)
Low	5755	4.39	30.00
High	5795	4.39	30.00

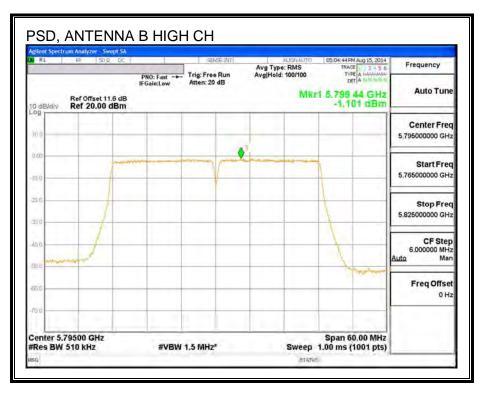
Duty Cycle CF (dB) 0.00 Included in Calculations of Corr'd PSD
--

PSD Results

Channel	Frequency	Antenna B	Antenna C	Total	PSD	PSD
		Meas	Meas	Corr'd	Limit	Margin
		PSD	PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5755	5.17	6.48	8.88	30.00	-21.12
High	5795	-1.10	-1.51	1.71	30.00	-28.29

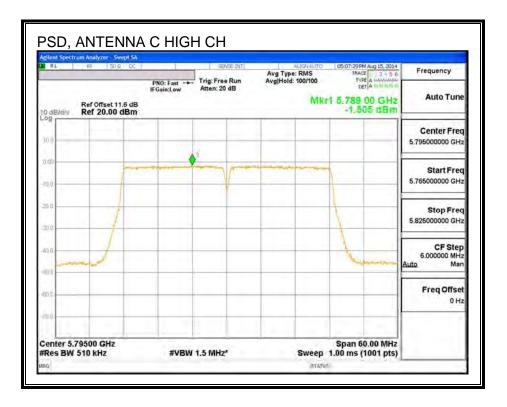
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RL RF	50 Ω DC	PNO: Fast	SENSE:INT	#Avg Tyj	ALIGNAUTO pe: RMS	11:10:39 AM Jul 24, 2 TRACE 2 3 4 TYPE M WMM	5 6 Frequency
dB/div Ref 2	fset 11.6 dB 2 0.00 dBm	IFGain:Low	Atten: 20 dB		Mkr1	₀ _{ET} P NNN 1 5.746 42 GI 6.48 dB	Auto Tune
og 10.0	n - 10.	1	huMinus. Isl	alannan	entra fra da mada -		Center Free 5.755000000 GH
10.0	1	an nafazirik a hlina	10000000000000000000000000000000000000	anan nakakan kalah	- Allenter Alferty		Start Free 5.725000000 GH
20.0							Stop Free 5.785000000 GH
0.0 www.my/my/him/him/hi	/					handerstrender	CF Step 6.000000 MH Auto Mar
0.0							Freq Offse 0 H
0.0							



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9.33. 802.11n HT40 2Tx STBC/SDM MODE IN THE 5.8 GHz BAND

Refer to Section 9.32, 802.11n HT40 2TX CDD MODE IN THE 5.8 GHz BAND.

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9.34. 802.11ac 801TX SISO MODE IN THE 5.8 GHz BAND

9.34.1. 6 dB BANDWIDTH

LIMITS

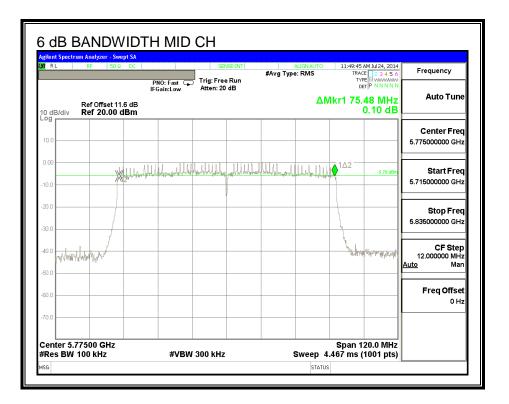
FCC §15.407 (e)

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

RESULTS

Channel	Frequency	6 dB Bandwidth	Minimum Limit
	(MHz)	(MHz)	(MHz)
Mid	5775	75.4800	0.5

6 dB BANDWIDTH



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9.34.2. 26 dB BANDWIDTH

DATE: SEPTEMBER 13, 2014

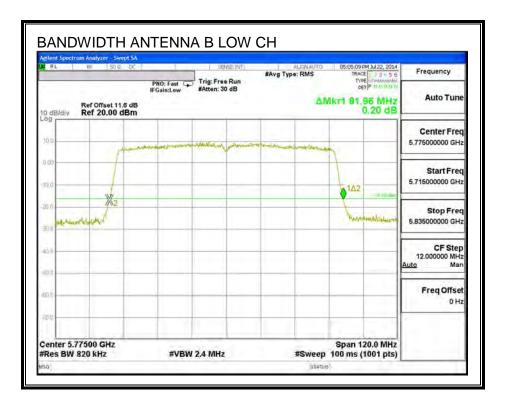
<u>LIMITS</u>

None; for reporting purposes only.

RESULTS

Channel	Frequency	26 dB BW
		Antenna B
	(MHz)	(MHz)
Mid	5775	81.96

26 dB BANDWIDTH, ANTENNA B



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9.34.3. 99% BANDWIDTH

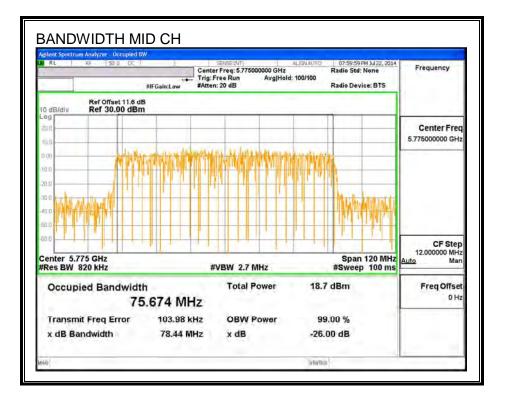
LIMITS

None; for reporting purposes only.

<u>RESULTS</u>

Channel	Frequency	99% Bandwidth
	(MHz)	(MHz)
Mid	5775	75.674

99% BANDWIDTH



9.34.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter. The power meter was setup for a gated power measurement.

The cable assembly insertion loss of 11.6 dB (including 10 dB pad and 1.6 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

<u>RESULTS</u>

Channel	Frequency	Antenna B Power	Antenna C Power
	(MHz)	(dBm)	(dBm)
Mid	5775	13.42	13.48

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9.34.5. OUTPUT POWER

LIMITS

FCC §15.407 (a) (3)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST PROCEDURE

The transmitter output is connected to a power meter. The power meter was setup for a gated power measurement.

The cable assembly insertion loss of 11.6 dB (including 10 dB pad and 1.6 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

DIRECTIONAL ANTENNA GAIN

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

ANTENNA B

Antenna	
Gain	
(dBi)	
-0.820	

ANTENNA C

Antenna	
Gain	
(dBi)	
3.130	

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ANTENNA B

Antenna Gain and Limit

Channel	Frequency	Directional	Power
		Gain	Limit
	(MHz)	(dBi)	(dBm)
Mid	5775	-0.82	30.00

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

Output Power Results

Channel	Frequency	Antenna B	Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Mid	5775	13.42	13.63	30.00	-16.37

ANTENNA C

Antenna Gain and Limit

Channel	Frequency	Directional	Power
		Gain	Limit
	(MHz)	(dBi)	(dBm)
Mid	5775	3.13	30.00

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

Output Power Results

Channel	Frequency	Antenna C	Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Mid	5775	13.48	13.69	30.00	-16.31

9.34.6. MAXIMUM POWER SPECTRAL DENSITY (PSD)

<u>LIMITS</u>

FCC §15.407 (a) (3)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

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

ANTENNA B

Antenna
Gain
(dBi)
-0.820

ANTENNA C

Antenna
Gain
(dBi)
3.130

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ANTENNA B

Antenna Gain and Limits

Channel	Frequency	Directional	PSD
		Gain	Limit
	(MHz)	(dBi)	(dBm)
Mid	5755	-0.82	30.00

	0.04	
Duty Cycle CF (dB)	0.21	Included in Calculations of Corr'd PSD

PSD Results

Channel	Frequency	Antenna B	Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Mid	5755	-7.29	-7.08	30.00	-37.08

ANTENNA C

Antenna Gain and Limits

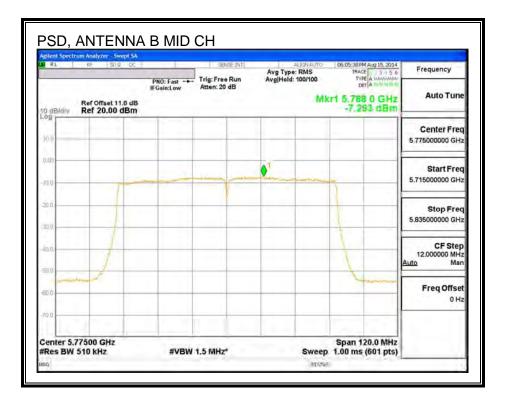
Channel	Frequency	Directional	PSD	
		Gain	Limit	
	(MHz)	(dBi)	(dBm)	
Mid	5755	3.13	30.00	

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

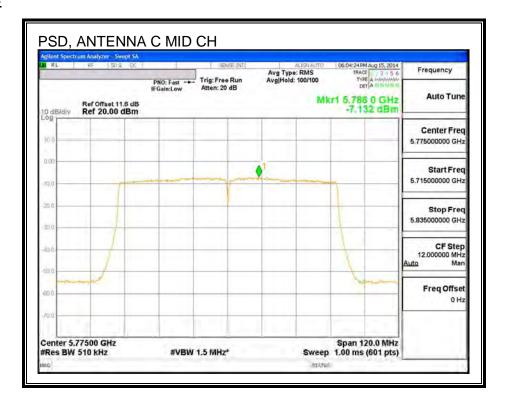
PSD Results

Channel	Frequency	Antenna C	Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Mid	5755	-7.13	-6.92	30.00	-36.92

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ANTENNA C



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9.35. 802.11ac VHT80 2TX CDD MODE IN THE 5.8 GHz BAND

9.35.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

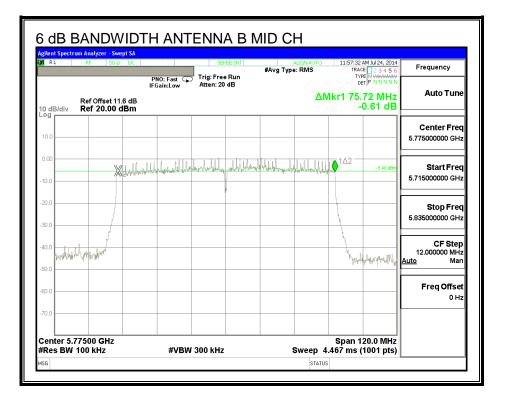
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

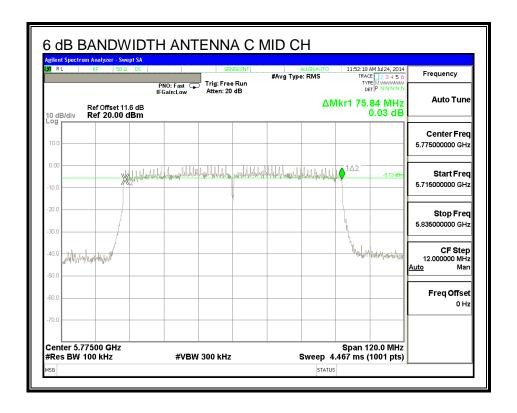
Channel	Frequency	6 dB BW	6 dB BW	Minimum
		Antenna B	Antenna C	Limit
	(MHz)	(MHz)	(MHz)	(MHz)
Mid	5775	75.72	75.84	0.5

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6 dB BANDWIDTH, ANTENNA C



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9.35.2. 26 dB BANDWIDTH

<u>LIMITS</u>

None; for reporting purposes only.

<u>RESULTS</u>

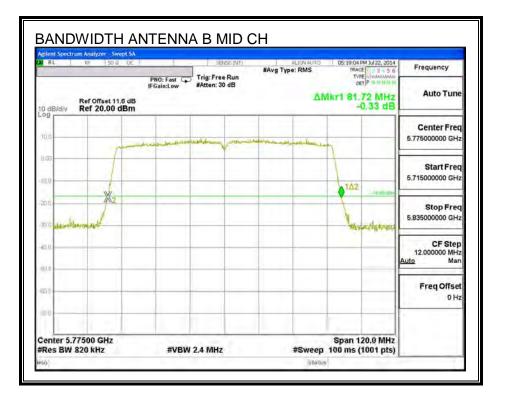
Channel Frequency		26 dB BW	26 dB BW
		Antenna B	Antenna C
	(MHz)	(MHz)	(MHz)
Mid	5775	81.72	81.48

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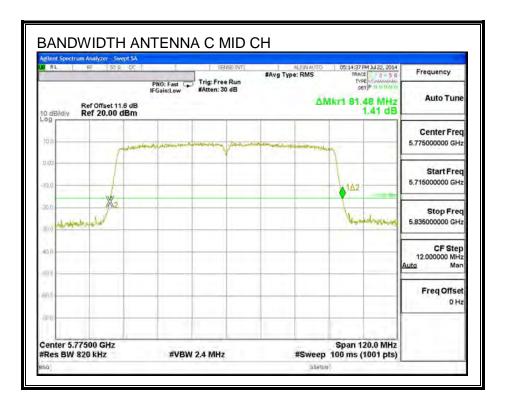
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26 dB BANDWIDTH, ANTENNA C



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9.35.3. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

<u>RESULTS</u>

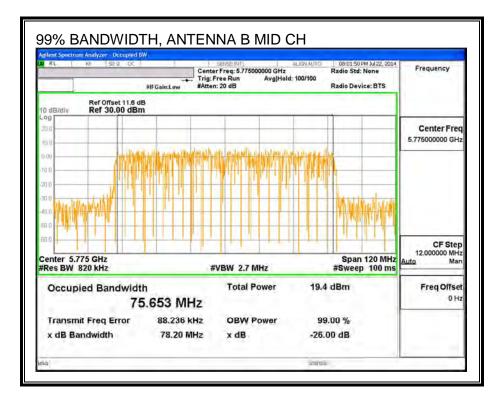
Channel	Frequency	99% BW	99% BW
		Antenna B	Antenna C
	(MHz)	(MHz)	(MHz)
Mid	5775	75.653	76.047

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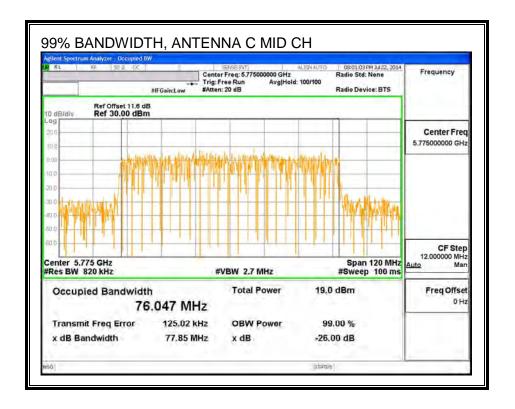
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99% BANDWIDTH, ANTENNA C



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9.35.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter. The power meter was setup for a gated power measurement.

The cable assembly insertion loss of 11.6 dB (including 10 dB pad and 1.6 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS

Average Power Results

Channel	Frequency	Antenna B	Antenna C	Total
		Power	Power	Power
	(MHz)	(dBm)	(dBm)	(dBm)
	((((

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9.35.5. OUTPUT POWER

LIMITS

FCC §15.407 (a) (3)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST PROCEDURE

The transmitter output is connected to a power meter. The power meter was setup for a gated power measurement.

The cable assembly insertion loss of 11.6 dB (including 10 dB pad and 1.6 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

DIRECTIONAL ANTENNA GAIN

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

Antenna B	Antenna C	Uncorrelated Chains
Antenna	Antenna	Directional
Gain	Gain	Gain
(dBi)	(dBi)	(dBi)
-0.82	3.13	1.59

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Antenna Gain and Limit

Channel	Frequency	Directional	Power
		Gain	Limit
	(MHz)	(dBi)	(dBm)
Mid	5775	1.59	30.00

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

Output Power Results

Channel	Frequency	Antenna B	Antenna C	Total	Power	Power
		Meas	Meas	Corr'd	Limit	Margin
		Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Mid	5775	13.00	12.91	16.18	30.00	-13.82

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9.35.6. MAXIMUM POWER SPECTRAL DENSITY (PSD)

LIMITS

FCC §15.407 (a) (3)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

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

Antenna B	Antenna C	Correlated Chains
Antenna	Antenna	Directional
Gain	Gain	Gain
(dBi)	(dBi)	(dBi)
-0.82	3.13	4.39

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RESULTS

Antenna Gain and Limit

Channel	Frequency	Directional	PSD
		Gain	Limit
	(MHz)	(dBi)	(dBm)
Mid	5755	4.39	30.00

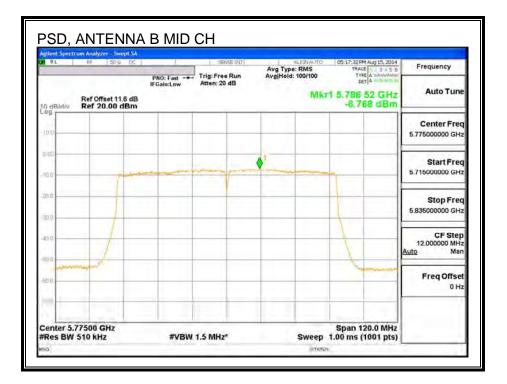
Duty Cycle CF (dB)	0.21	Included in Calculations of Corr'd PSD

PSD Results

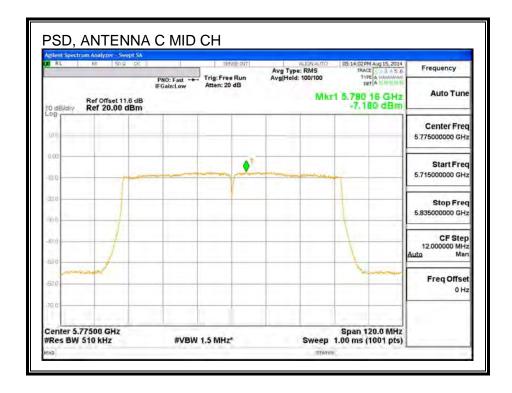
Channel	Frequency	Antenna B	Antenna C	Total	PSD	PSD
		Meas	Meas	Corr'd	Limit	Margin
		PSD	PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Mid	5755	-6.77	-7.18	-3.75	30.00	-33.75

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PSD, ANTENNA C



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9.36. 802.11ac VHT80 2Tx STBC/SDM MODE IN THE 5.8 GHz BAND

Refer to Section 9.35, 802.11ac VHT80 2TX CDD MODE IN THE 5.8 GHz BAND.

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10. RADIATED TEST RESULTS

10.1. LIMITS AND PROCEDURE

<u>LIMITS</u>

FCC §15.205 and §15.209

Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane. The antenna to EUT distance is 3 meters.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 1 MHz for peak measurements and as applicable for average measurements.

The spectrum from 30 MHz to 40 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band.

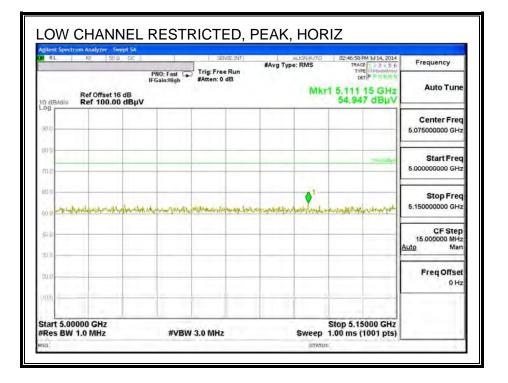
The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

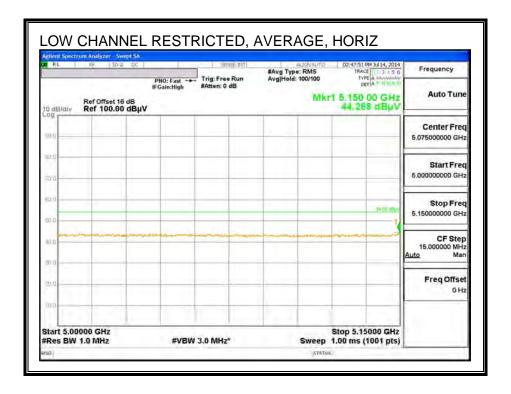
1TX mode indicates that only one antenna is transmitting. 2TX mode indicates that two antennas are transmitting simultaneously.

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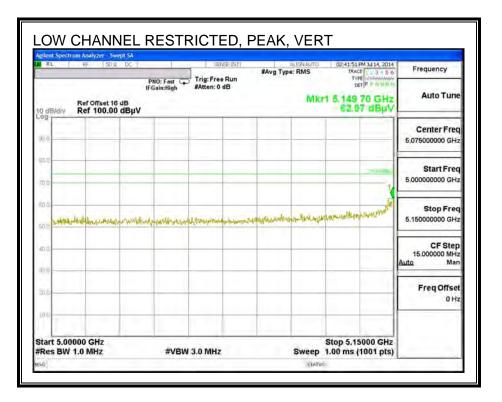
10.2. TX ABOVE 1 GHz 802.11a SISO MODE IN THE 5.2 GHz BAND

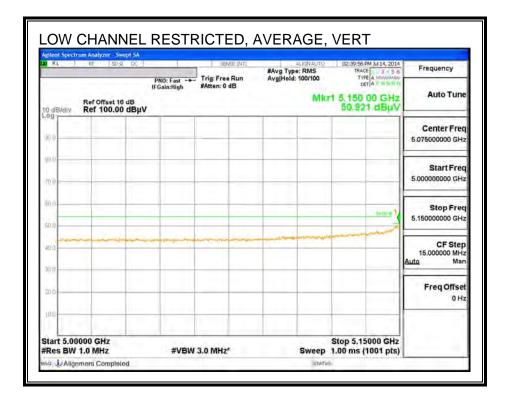
RESTRICTED BANDEDGE (LOW CHANNEL)



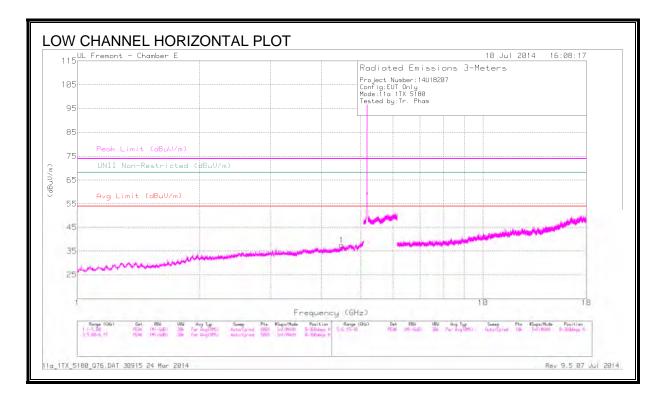


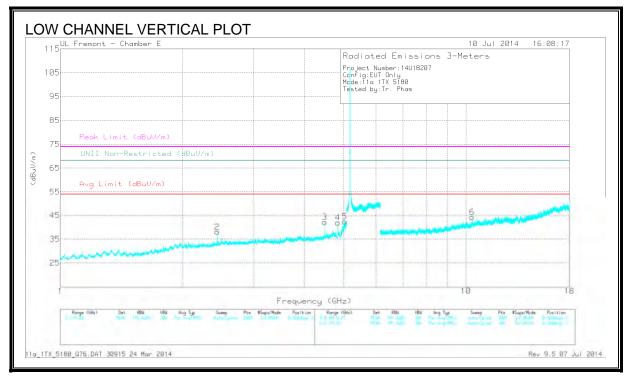
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Frequency	Meter	Det	AF	Amp/Cbl/Fltr/Pad	Corrected	Avg Limit	Margin	Peak	РК	UNII Non-	РК	Azimuth	Height	Polarity
(GHz)	Reading		T346	(dB)	Reading	(dBuV/m)	(dB)	Limit	Margin	Restricted	Margin	(Degs)	(cm)	
	(dBuV)		(dB/m)		(dBuV/m)			(dBuV/m)	(dB)	(dBuV/m)	(dB)			
* 3.85	47.46	PK1	33.5	-31.1	49.86	-	-	74	-24.14	-	-	335	212	Н
* 3.85	41.85	AD1	33.5	-31.1	44.25	54	-9.75	-	-	-	-	335	212	Н
* 4.705	45.82	PK1	34.2	-30.1	49.92	-	-	74	-24.08	-	-	330	247	Н
* 4.706	38.87	AD1	34.2	-30.1	42.97	54	-11.03	-	-	-	-	330	247	Н
* 3.85	44.79	PK1	33.5	-31.1	47.19	-	-	74	-26.81	-	-	294	337	V
* 3.85	38.17	AD1	33.5	-31.1	40.57	54	-13.43	-	-	-	-	294	337	V
* 4.706	49.67	PK1	34.2	-30.1	53.77	-	-	74	-20.23	-	-	329	323	V
* 4.706	45.98	AD1	34.2	-30.1	50.08	54	-3.92	-	-	-	-	329	323	V
* 5.134	45.48	PK1	34.2	-21.6	58.08	-	-	74	-15.92	-	-	351	203	V
* 5.133	36.01	AD1	34.2	-21.6	48.61	54	-5.39	-	-	-	-	351	203	V
1.855	42.69	PK1	30.6	-33.8	39.49	-	-	-	-	68.2	-28.71	77	387	Н
6.193	44.99	PK1	35.4	-29.2	51.19	-	-	-	-	68.2	-17.01	360	281	V

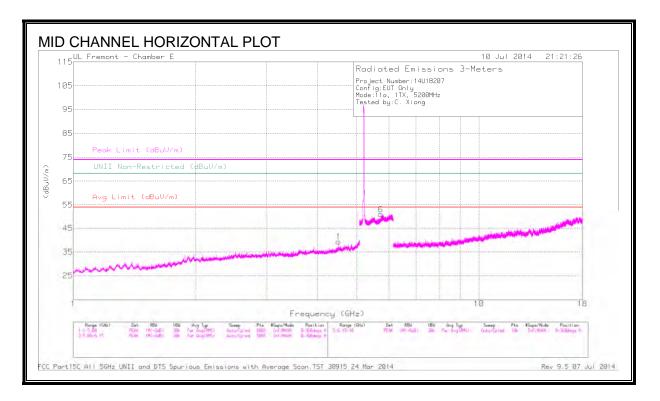
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

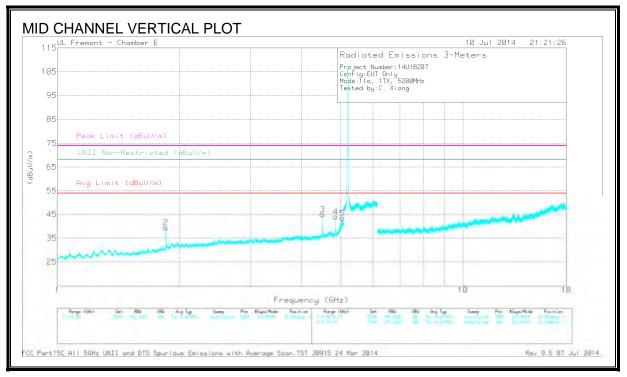
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

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Frequency	Meter	Det	AF	Amp/Cbl/Fltr/Pad	Corrected	Avg Limit	Margin	Peak	РК	UNII Non-	РК	Azimuth	Height	Polarity
(GHz)	Reading		T346	(dB)	Reading	(dBuV/m)	(dB)	Limit	Margin	Restricted	Margin	(Degs)	(cm)	
	(dBuV)		(dB/m)		(dBuV/m)			(dBuV/m)	(dB)	(dBuV/m)	(dB)			
* 4.507	42.19	PK1	33.9	-30	46.09	-	-	74	-27.91	-	-	360	114	н
* 4.507	33.64	AD1	33.9	-30	37.54	54	-16.46	-	-	-	-	360	114	Н
* 4.507	46.08	PK1	33.9	-30	49.98	-	-	74	-24.02	-	-	328	227	V
* 4.507	40.53	AD1	33.9	-30	44.43	54	-9.57	-	-	-	-	328	227	V
* 4.853	46.63	PK1	34.1	-30.5	50.23	-	-	74	-23.77	-	-	330	224	V
* 4.853	39.25	AD1	34.1	-30.5	42.85	54	-11.15	-	-	-	-	330	224	V
* 5.045	47.22	PK1	34.1	-28.8	52.52	-	-	74	-21.48	-	-	328	195	V
* 5.043	35.5	AD1	34.1	-28.8	40.8	54	-13.2	-	-	-	-	328	195	V
1.855	42.99	PK1	30.6	-33.8	39.79	-	-	-	-	68.2	-28.41	288	268	V
5.734	43.15	PK1	34.8	-20.8	57.15	-	-	-	-	68.2	-11.05	347	340	н

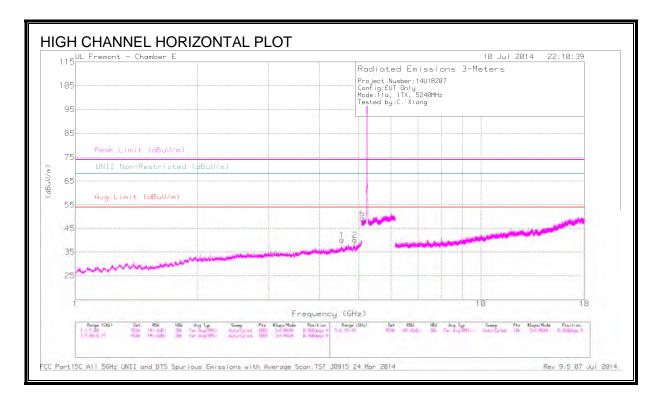
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

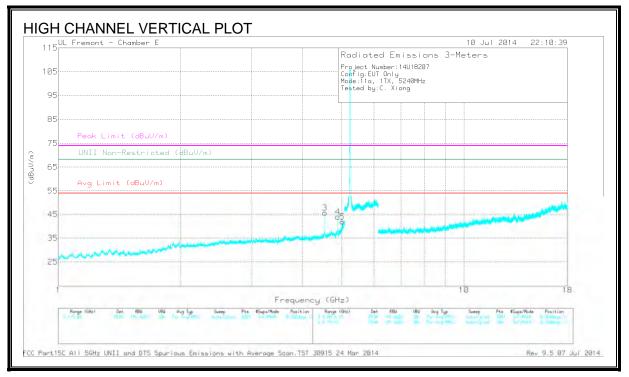
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

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Frequency	Meter	Det	AF	Amp/Cbl/Fltr/Pad	Corrected	Avg Limit	Margin	Peak	РК	UNII Non-	РК	Azimuth	Height	Polarity
(GHz)	Reading		T346	(dB)	Reading	(dBuV/m)	(dB)	Limit	Margin	Restricted	Margin	(Degs)	(cm)	
	(dBuV)		(dB/m)		(dBuV/m)			(dBuV/m)	(dB)	(dBuV/m)	(dB)			
* 4.541	43.3	PK1	34	-30.6	46.7	-	-	74	-27.3	-	-	0	110	Н
* 4.541	34.29	AD1	34	-30.6	37.69	54	-16.31	-	-	-	-	0	110	Н
* 4.891	43.14	PK1	34	-30.1	47.04	-	-	74	-26.96	-	-	1	103	Н
* 4.891	33.56	AD1	34	-30.1	37.46	54	-16.54	-	-	-	-	1	103	Н
* 4.541	47.45	PK1	34	-30.6	50.85	-	-	74	-23.15	-	-	334	200	V
* 4.541	41.61	AD1	34	-30.6	45.01	54	-8.99	-	-	-	-	334	200	V
* 4.891	46.45	PK1	34	-30.1	50.35	-	-	74	-23.65	-	-	333	175	V
* 4.891	40.04	AD1	34	-30.1	43.94	54	-10.06	-	-	-	-	333	175	V
* 5.023	45.66	PK1	34.1	-28.9	50.86	-	-	74	-23.14	-	-	325	175	V
* 5.022	34.44	AD1	34.1	-28.9	39.64	54	-14.36	-	-	-	-	325	175	V
* 5.106	42.92	PK1	34.2	-21.6	55.52	-	-	74	-18.48	-	-	344	112	Н
* 5.105	31.76	AD1	34.2	-21.6	44.36	54	-9.64	-	-	-	-	344	112	Н

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

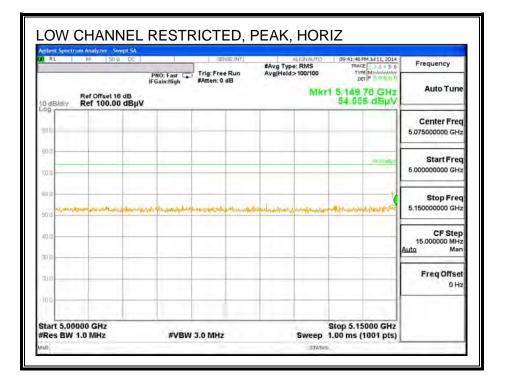
PK1 - KDB789033 Method: Peak

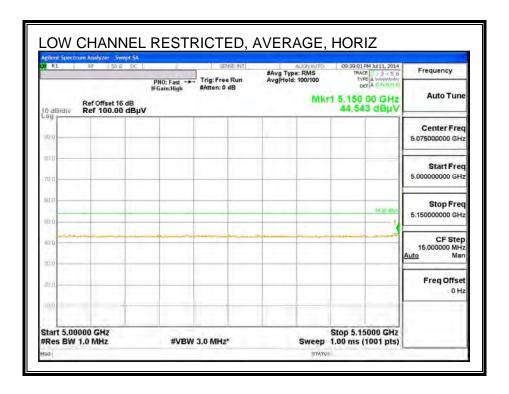
AD1 - KDB789033 Method: AD Primary Power Average

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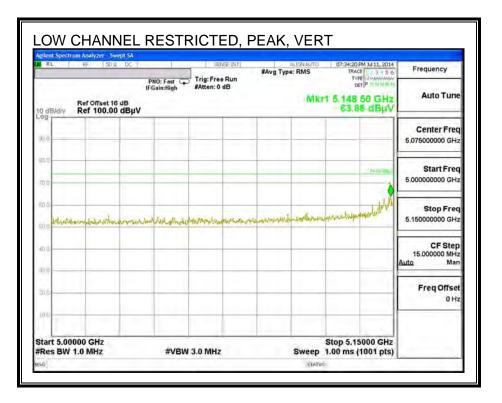
10.3. TX ABOVE 1 GHz 802.11n HT20 2Tx CDD MODE IN THE 5.2 GHz BAND

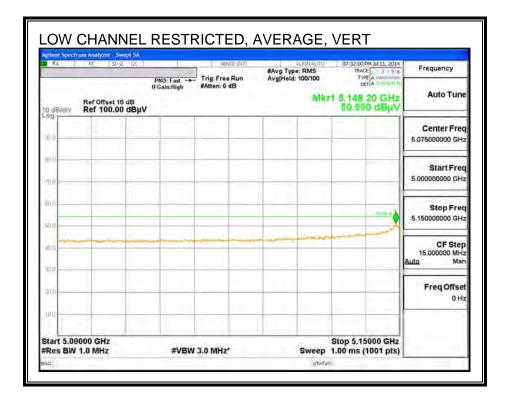
RESTRICTED BANDEDGE (LOW CHANNEL)



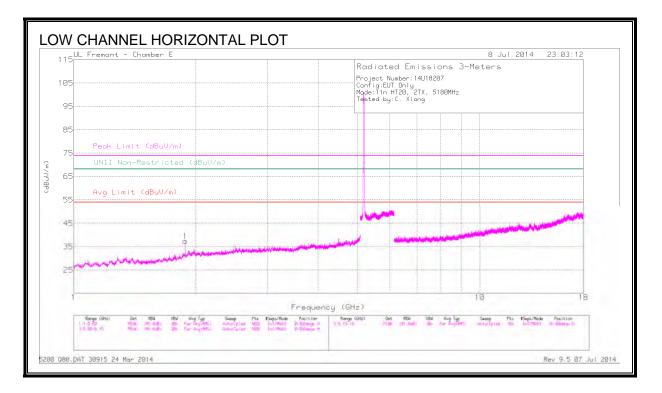


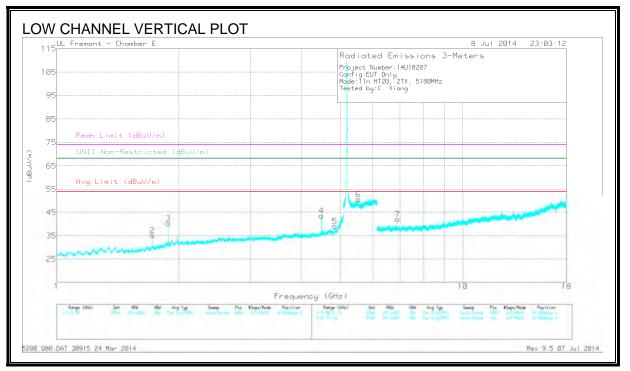
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Frequency	Meter	Det	AF	Amp/Cbl/Fltr/Pad	Corrected	Avg Limit	Margin	Peak	РК	UNII Non-	PK	Azimuth	Height	Polarity
(GHz)	Reading		T346	(dB)	Reading	(dBuV/m)	(dB)	Limit	Margin	Restricted	Margin	(Degs)	(cm)	
	(dBuV)		(dB/m)		(dBuV/m)			(dBuV/m)	(dB)	(dBuV/m)	(dB)			
* 1.721	44.05	PK1	29.3	-33.7	39.65	-	-	74	-34.35	-	-	251	219	V
* 1.722	31.61	AD1	29.4	-33.7	27.31	54	-26.69	-	-	-	-	251	219	V
* 4.834	43.85	PK1	34.1	-30.3	47.65	-	-	74	-26.35	-	-	320	181	V
* 4.834	33.93	AD1	34.1	-30.3	37.73	54	-16.27	-	-	-	-	320	181	V
1.881	42.65	PK1	30.9	-33.5	40.05	-	-	-	-	68.2	-28.15	291	395	н
1.881	42.11	PK1	30.9	-33.5	39.51	-	-	-	-	68.2	-28.69	136	137	V
4.489	46.04	PK1	33.9	-30.2	49.74	-	-	-	-	68.2	-18.46	334	200	V
5.531	43.92	PK1	34.6	-20.5	58.02	-	-	-	-	68.2	-10.18	317	235	V
6.907	41.86	PK1	35.9	-28.8	48.96	-	-	-	-	68.2	-19.24	134	176	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

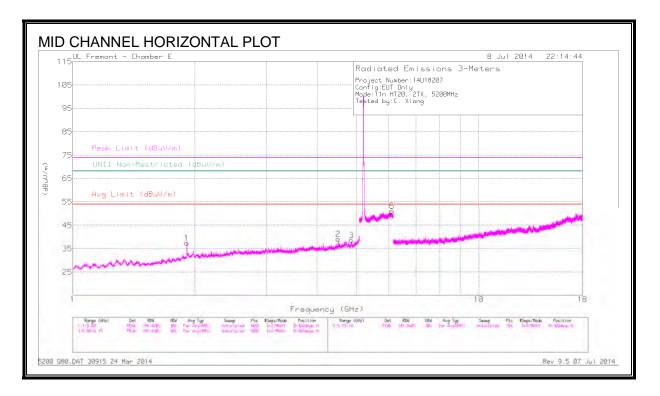
PK1 - KDB789033 Method: Peak

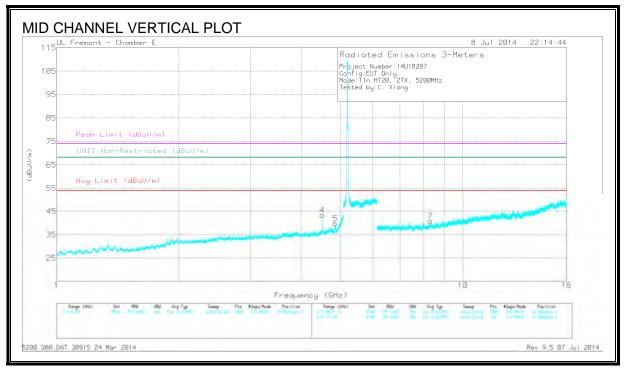
AD1 - KDB789033 Method: AD Primary Power Average

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Frequency	Meter	Det	AF	Amp/Cbl/Fltr/Pad	Corrected	Avg Limit	Margin	Peak	РК	UNII Non-	РК	Azimuth	Height	Polarity
(GHz)	Reading		T346	(dB)	Reading	(dBuV/m)	(dB)	Limit	Margin	Restricted	Margin	(Degs)	(cm)	
	(dBuV)		(dB/m)		(dBuV/m)			(dBuV/m)	(dB)	(dBuV/m)	(dB)			
* 4.506	43.02	PK1	33.9	-30	46.92	-	-	74	-27.08	-	-	351	114	Н
* 4.507	33.47	AD1	33.9	-30	37.37	54	-16.63	-	-	-	-	351	114	Н
* 4.853	42.62	PK1	34.1	-30.5	46.22	-	-	74	-27.78	-	-	344	214	Н
* 4.853	31.12	AD1	34.1	-30.5	34.72	54	-19.28	-	-	-	-	344	214	Н
* 4.506	45.6	PK1	33.9	-30	49.5	-	-	74	-24.5	-	-	332	199	V
* 4.507	39.5	AD1	33.9	-30	43.4	54	-10.6	-	-	-	-	332	199	V
* 4.853	43.84	PK1	34.1	-30.5	47.44	-	-	74	-26.56	-	-	319	175	V
* 4.853	34.43	AD1	34.1	-30.5	38.03	54	-15.97	-	-	-	-	319	175	V
* 8.312	38.89	PK1	35.9	-27.1	47.69	54	-6.31	74	-26.31	-	-	34	201	V
1.909	42.96	PK1	31.1	-32.9	41.16	-	-	-	-	68.2	-27.04	95	393	Н
6.112	42.63	PK1	35.3	-20.3	57.63	-	-	-	-	68.2	-10.57	71	226	Н

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

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