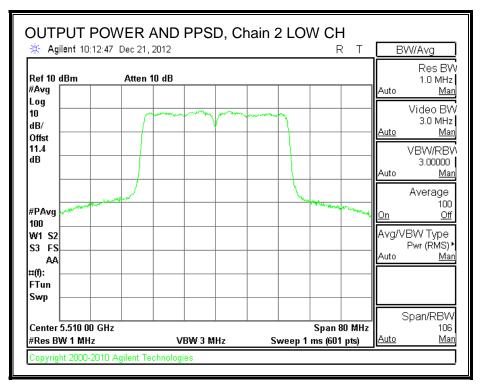
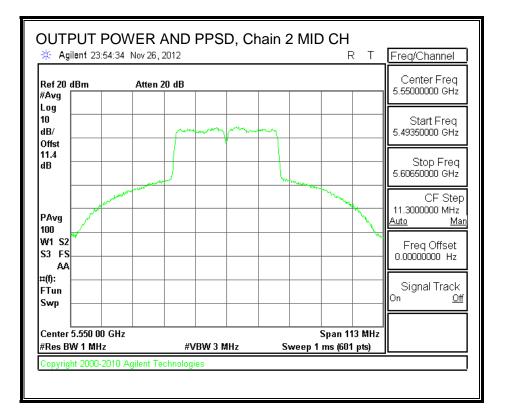
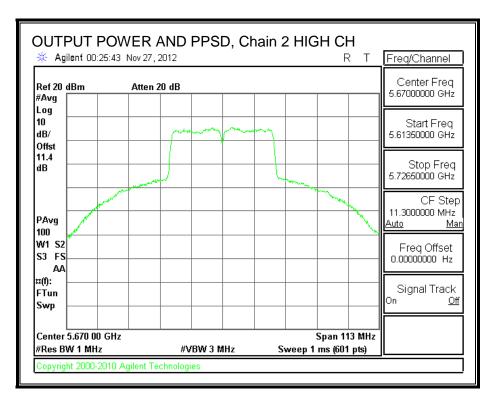
OUTPUT POWER AND PPSD, Chain 2





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7.82.4.**PEAK EXCURSION**

LIMITS

FCC §15.407 (a) (6)

The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the peak transmit power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.

RESULTS

Chain 0

Channel	Frequency	PK Level	PSD	DCCF	Peak Excursion	Limit	Margin
	(MHz)	(dBm)	(dBm)	(dB)	(dB)	(dB)	(dB)
Mid	5550	8.94	4.53	0.57	3.84	13	-9.16

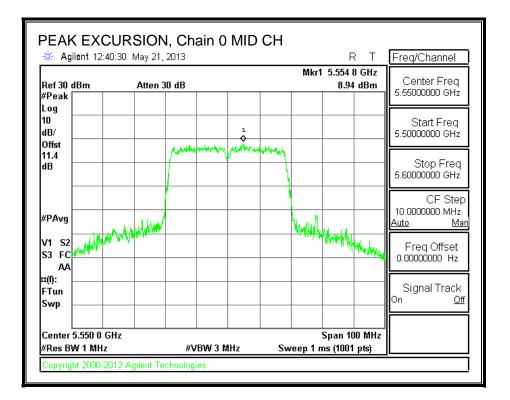
Chain 1

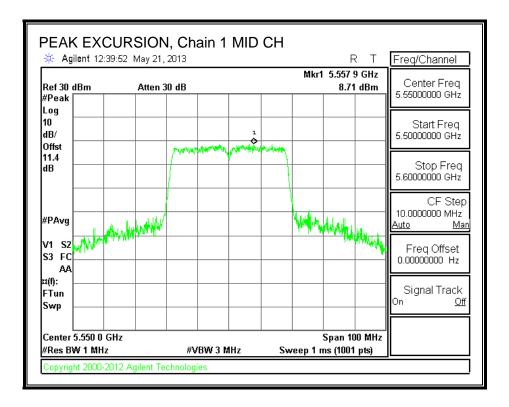
Channel	Frequency	PK Level	PSD	DCCF	Peak Excursion	Limit	Margin
	(MHz)	(dBm)	(dBm)	(dB)	(dB)	(dB)	(dB)
Mid	5550	8.71	4.95	0.57	3.19	13	-9.81

Chain 2

Channel	Frequency	PK Level	PSD	DCCF	Peak Excursion	Limit	Margin
	(MHz)	(dBm)	(dBm)	(dB)	(dB)	(dB)	(dB)
Mid	5550	8.82	3.77	0.57	4.48	13	-8.52

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🔆 Agilent 1	2:39:16 N	May 21,	2013					R		Freq/Channel
Ref 30 dBm #Peak		Atten 3	0 dB				Mkr1	5.545 3 8.82	3 GHz dBm	Center Freq 5.5500000 GHz
Log 10 dB/ Offst										Start Freq 5.5000000 GHz
dB			for the second s	-dealer when	porter de la	-				Stop Freq 5.6000000 GHz
#PAvg V1 S2	lNahaha	AN ANY					W	11.M.	.lu	CF Step 10.000000 MHz <u>Auto Man</u>
V1 S2 S3 FC AA									MHAANNW	Freq Offset 0.00000000 Hz
¤(f): FTun Swp										Signal Track On <u>Off</u>
Center 5.550 (#Res BW 1 M			#\/	BW 3 M	IHz	Sw		Span 10 ns (1001		

7.83. 802.11n HT40 STBC 3TX MODE CHANNEL 142 IN THE 5.6 GHz BAND

7.83.1.26 dB BANDWIDTH- UNII

<u>LIMITS</u>

None; for reporting purposes only.

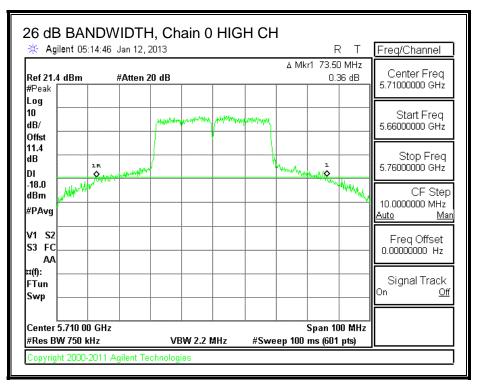
RESULTS

Channel	Frequency	26 dB BW	26 dB BW	26 dB BW
		Chain 0	Chain 1	Chain 2
	(MHz)	(MHz)	(MHz)	(MHz)
Mid	5710	73.500	86.170	75.170

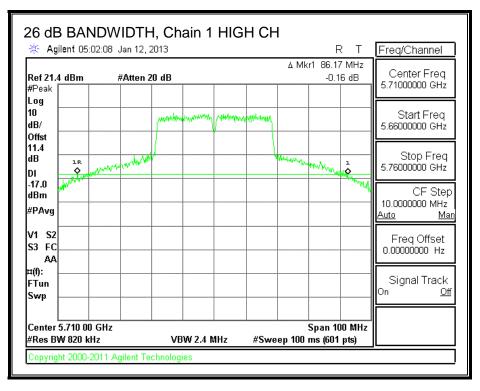
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26 dB BANDWIDTH, Chain 0



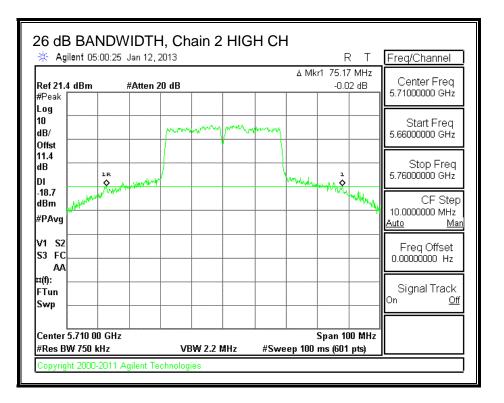
26 dB BANDWIDTH, Chain 1



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26 dB BANDWIDTH, Chain 2



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7.83.2.99% BANDWIDTH

LIMITS

None; for reporting purposes only.

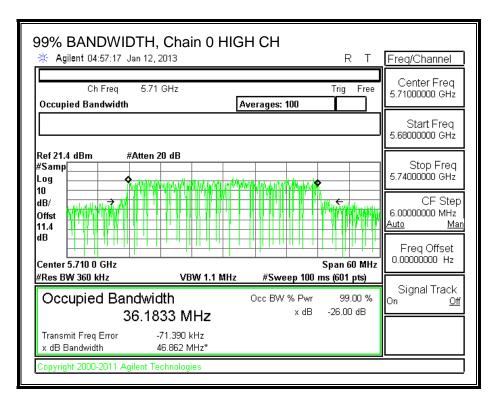
<u>RESULTS</u>

Channel	Frequency	99% BW	99% BW	99% BW
		Chain 0	Chain 1	Chain 2
	(MHz)	(MHz)	(MHz)	(MHz)
Mid	5710	36.1833	36.4080	36.2800

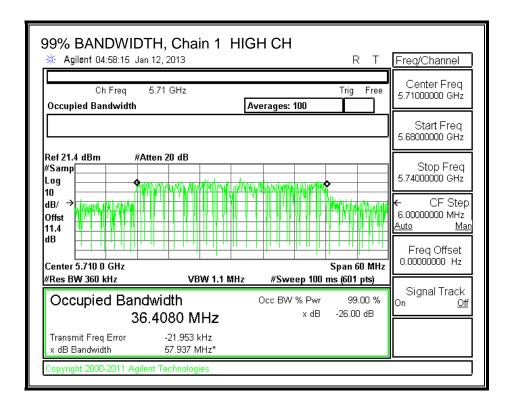
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99% BANDWIDTH, Chain 0

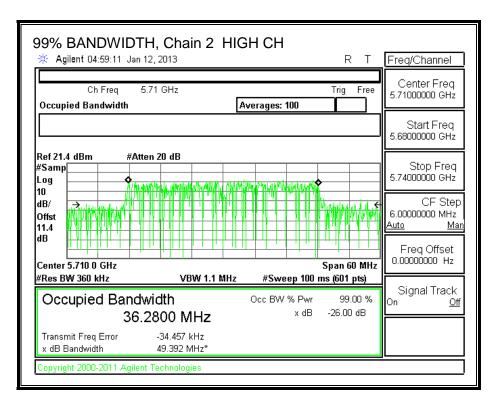


99% BANDWIDTH, Chain 1



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99% BANDWIDTH, Chain 2



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7.83.3. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (1)

FCC §15.407 (a) (1)

For the band 5.5–5.7 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.

IC RSS-210 A9.2 (1)

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

DIRECTIONAL ANTENNA GAIN

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

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

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RESULTS

Limits (FCC), portion in UNII 2 ext band

Bandwidth and Antenna Gain

Channel	Frequency	Min	Min	Uncorrelated
		26 dB	99%	Gain
		BW	BW	
	(MHz)	(MHz)	(MHz)	(dBi)
High	5710	51.750	33.0917	5.36

Limits

Channel	Frequency	FCC	IC	IC	Power	FCC	IC	PPSD
		Power	Power	EIRP	Limit	PPSD	PSD	Limit
		Limit	Limit	Limit		Limit	Limit	
	(MHz)	(dBm)						
High	5710	24.00	24.00	30.00	24.00	11.00	11.00	11.00

Duty Cycle CF (dB)0.57Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency	Chain 0	Chain 1	Chain 2	Total	Power	Power
		Meas	Meas	Meas	Corr'd	Limit	Margin
		Power	Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
High	5710	16.30	17.30	16.69	22.12	24.00	-1.88

PPSD Results

Channel	Frequency	Chain 0	Chain 1	Chain 2	Total	PPSD	PPSD
		Meas	Meas	Meas	Corr'd	Limit	Margin
		PPSD	PPSD	PPSD	PPSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
High	5710	2.524	3.375	3.438	8.47	11.00	-2.53

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Limits (FCC), portion in 5.8 GHz DTS band

Channel	Frequency	Min	Min	Uncorrelated
		26 dB	99%	Gain
		BW	BW	
	(MHz)	(MHz)	(MHz)	(dBi)
High	5710	3.092	3.0917	5.36

Bandwidth and Antenna Gain

Limits

Channel	Frequency	FCC	IC	IC	Power	FCC	IC	PPSD
		Power	Power	EIRP	Limit	PPSD	PSD	Limit
		Limit	Limit	Limit		Limit	Limit	
	(MHz)	(dBm)						
High	5710	15.90	15.90	21.90	15.90	11.00	11.00	11.00

Duty Cycle CF (dB) 0.57 Included in Calculations of Corr'd Power & PPSD

Output Power Results

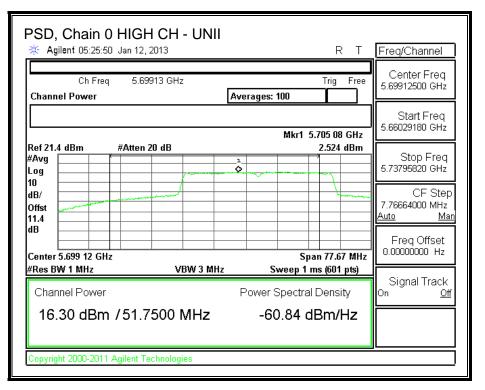
Channel	Frequency	Chain 0	Chain 1	Chain 2	Total	Power	Power
		Meas	Meas	Meas	Corr'd	Limit	Margin
		Power	Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
High	5710	5.85	7.49	6.75	12.09	15.90	-3.81

PPSD Results

Channel	Frequency	Chain 0	Chain 1	Chain 2	Total	PPSD	PPSD
		Meas	Meas	Meas	Corr'd	Limit	Margin
		PPSD	PPSD	PPSD	PPSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
High	5710	1.710	2.894	2.43	7.71	11.00	-3.29

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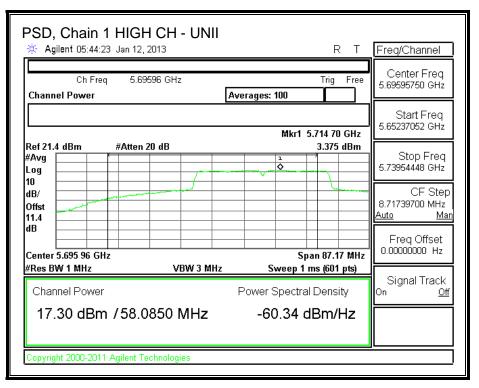
OUTPUT POWER & PPSD, Chain 0

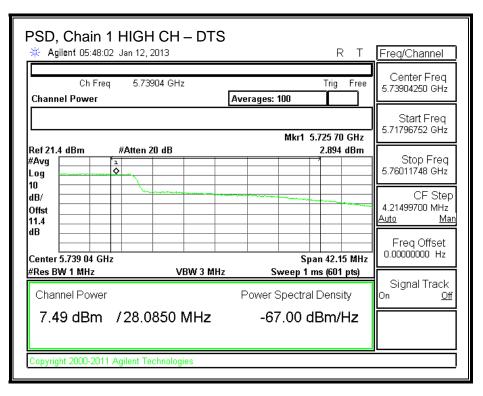


PSD, Chain 0 HIG		F	₹Т	Freq/Channel		
Ch Freq 5. Channel Power	73588 GHz	Trig	Free	Center Freq 5.73587500 GHz		
		Mkr1 5.725 0		Start Freq 5.71955380 GHz		
Ref 21.4 dBm #Atte #Avg Log 10	n 20 dB	1.71) dBm	Stop Freq 5.75219620 GHz		
dB/				CF Step 3.26424000 MHz <u>Auto Man</u>		
dB Start 5.719 55 GHz #Res BW 1 MHz	VBW 3 MHz	Stop 5.752 2 Sweep 1 ms (60		Freq Offset 0.00000000 Hz		
Channel Power Constrained Power Power Spectral Density 5.85 dBm /21.7500 MHz -67.53 dBm/Hz						
Copyright 2000-2011 Agilent	Technologies			<u> </u>]		

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OUTPUT POWER & PPSD, Chain 1

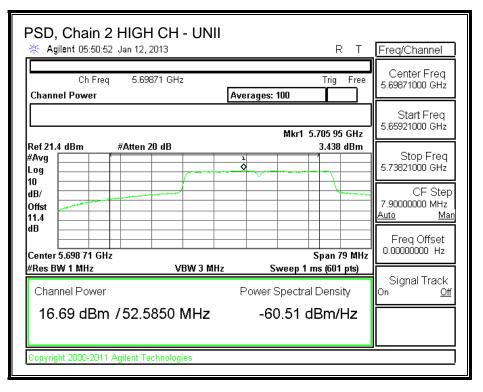


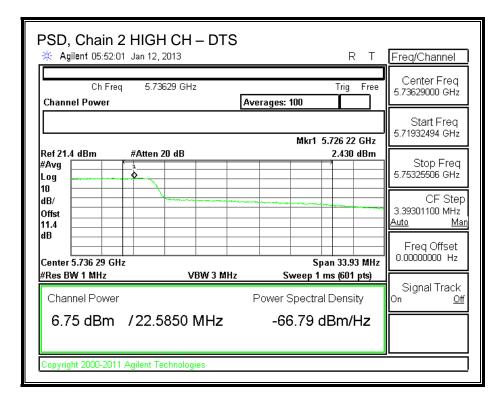


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OUTPUT POWER & PPSD, Chain 2





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7.84. 802.11n HT40 BF 2TX MODE IN THE 5.6 GHz BAND

Covered by testing 802.11ac VHT40 BF 2TX mode, total power across the two chains is higher than the power level the device will operate at.

7.85. 802.11n HT40 BF 3TX MODE IN THE 5.6 GHz BAND

Covered by testing 802.11ac VHT40 BF 3TX mode, total power across the two chains is higher than the power level the device will operate at.

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7.86. 802.11ac VHT40 BF 2TX MODE IN THE 5.6 GHz BAND

7.86.1. **26 dB BANDWIDTH**

<u>LIMITS</u>

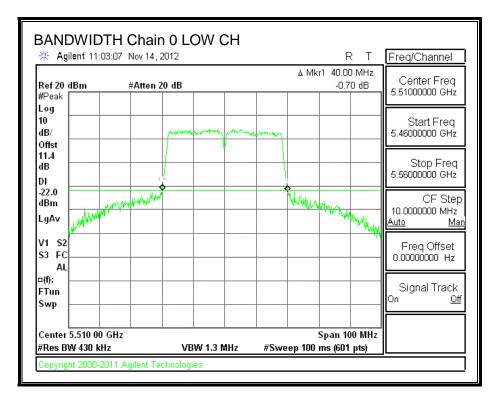
None; for reporting purposes only.

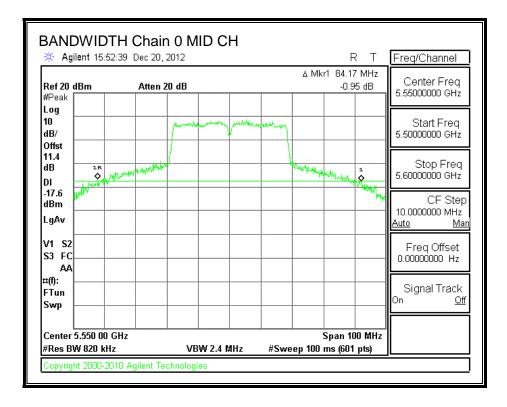
RESULTS

Channel	Frequency	26 dB BW	26 dB BW	
		Chain 0	Chain 1	
	(MHz)	(MHz)	(MHz)	
Low	5510	40.00	46.17	
Mid	5550	84.17	89.17	
High	5670	91.40	95.60	

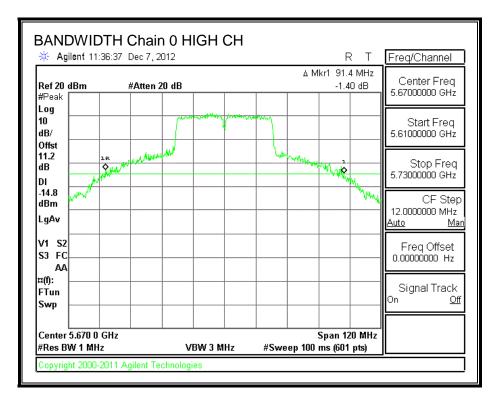
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26 dB BANDWIDTH, Chain 0

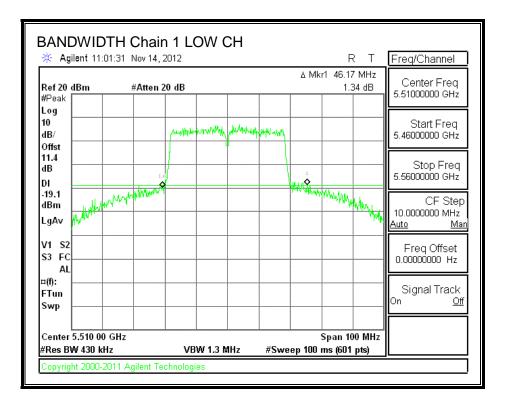




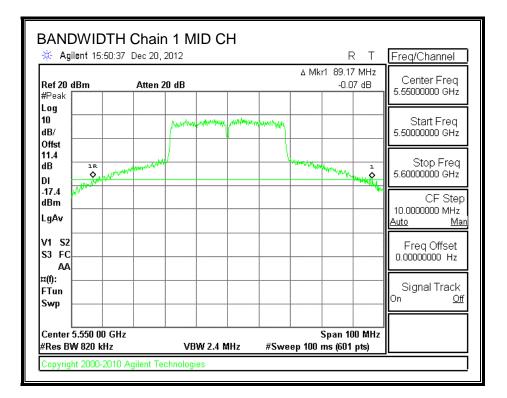
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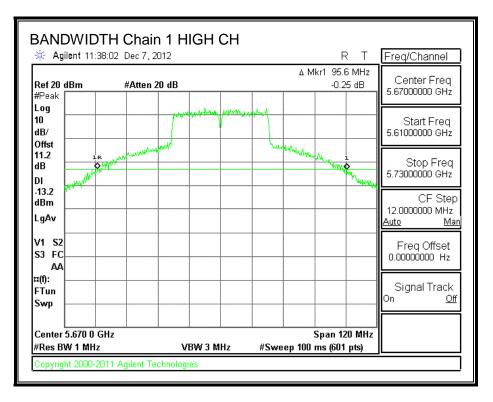


26 dB BANDWIDTH, Chain 1



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7.86.2. **99% BANDWIDTH**

LIMITS

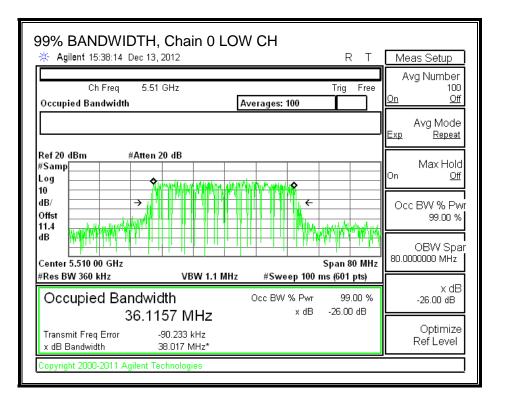
None; for reporting purposes only.

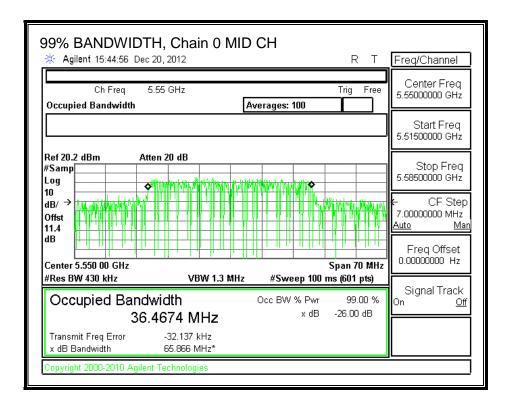
<u>RESULTS</u>

Channel	Frequency	99% BW	99% BW
		Chain 0	Chain 1
	(MHz)	(MHz)	(MHz)
Low	5510	36.1157	36.1365
Mid	5550	36.4674	36.9126
High	5670	40.8144	36.4150

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99% BANDWIDTH, Chain 0

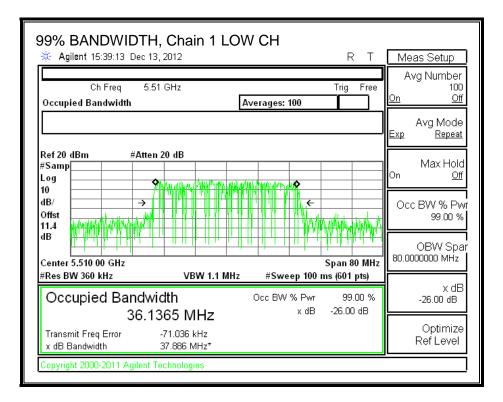




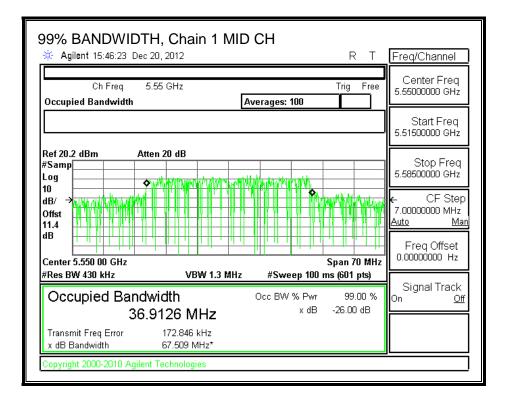
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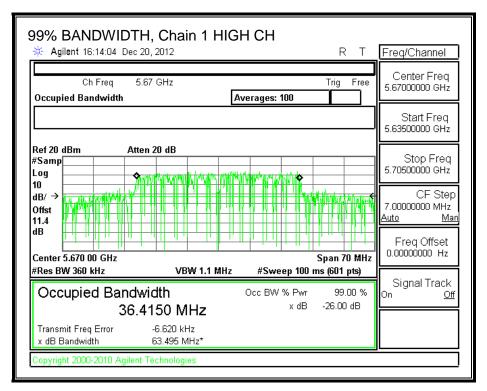
99% BANDWIDTH, Chain 0 H	IGH CH	RТ	BW/Av	g
Ch Freq 5.67 GHz Occupied Bandwidth	Averages: 100	Trig Free		es BW) kHz <u>Man</u>
				eo BW 6 MHz <u>Man</u>
Ref 20 dBm #Atten 20 dB #Samp Log 10 → dB/ Offst 11.4 dB Center 5.670 00 GHz		Span 80 MHz	3.0 Auto	
#Res BW 560 kHz VBW 1.6 MH	lz #Sweep 100 i	•		IMan
Occupied Bandwidth 40.8144 MHz	Occ BW % Pwr x dB	99.00 % -26.00 dB	Span/	
Transmit Freq Error -144.998 kHz x dB Bandwidth 76.072 MHz*			Span, Auto	106 <u>Man</u>
Copyright 2000-2011 Agilent Technologies				

99% BANDWIDTH, Chain 1



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7.86.3. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (1)

For the band 5.15–5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 50 mW or 4 dBm + 10 log B, where B is the 26–dB emission bandwidth in MHz. In addition, the peak power spectral density shall not exceed 4 dBm in any 1–MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

IC RSS-210 A9.2 (1)

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

DIRECTIONAL ANTENNA GAIN

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

Chain 0	Chain 1	Correlated Chains
Antenna	Antenna	Directional
Gain	Gain	Gain
(dBi)	(dBi)	(dBi)
5.03	6.66	8.89

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RESULTS

Bandwidth and Antenna Gain

Channel	Frequency	Min	Min	Directional
		26 dB	99%	Gain
		BW	BW	
	(MHz)	(MHz)	(MHz)	(dBi)
Low	5510	40.00	36.1157	8.89
Mid	5550	84.17	36.4674	8.89
High	5670	91.40	36.4150	8.89

Limits

Channel	Frequency	FCC	IC	IC	Power	FCC	IC	PPSD
		Power	Power	EIRP	Limit	PPSD	PSD	Limit
		Limit	Limit	Limit		Limit	Limit	
	(MHz)	(dBm)						
Low	5510	21.11	24.00	30.00	21.11	8.11	11.00	8.11
Mid	5550	21.11	24.00	30.00	21.11	8.11	11.00	8.11
High	5670	21.11	24.00	30.00	21.11	8.11	11.00	8.11

Duty Cycle CF (dB) 0.43 Ir	Included in Calculations of PPSD
----------------------------	----------------------------------

Output Power Results

Channel	Frequency	Chain 0	Chain 1	Total	Power	Power
		Meas	Meas	Corr'd	Limit	Margin
		Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5510	13.65	14.53	17.12	21.11	-3.99
Mid	5550	18.09	18.01	21.06	21.11	-0.05
High	5670	17.84	18.04	20.95	21.11	-0.16

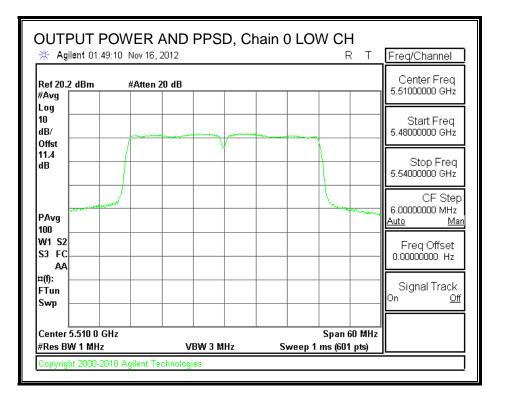
PPSD Results

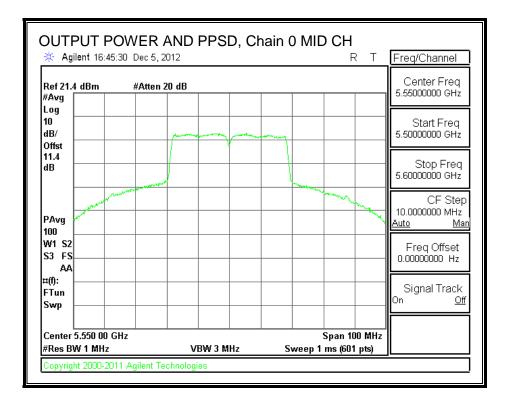
Channel	Frequency	Chain 0	Chain 1	Total	PPSD	PPSD
		Meas	Meas	Corr'd	Limit	Margin
		PPSD	PPSD	PPSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5510	-1.15	0.73	3.33	8.11	-4.78
Mid	5550	3.62	4.69	7.63	8.11	-0.48
High	5670	4.53	4.09	7.76	8.11	-0.35

<u>Note:</u> method (1) "Measure and sum the spectra across the outputs" as specified in KDB 662911 D01 v01r02 was used for this PSD measurements.

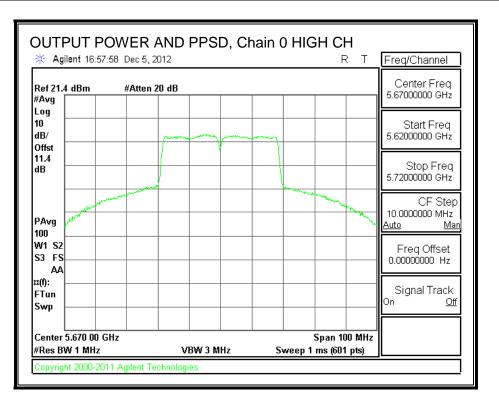
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OUTPUT POWER AND PPSD, Chain 0

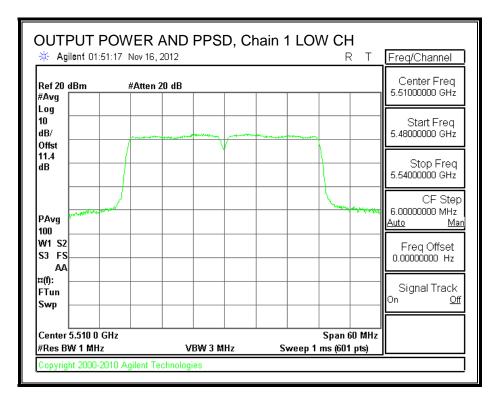




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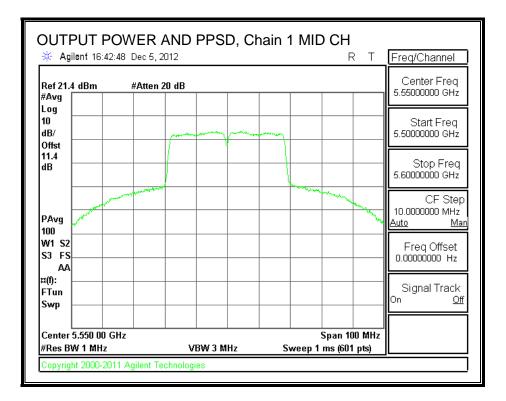


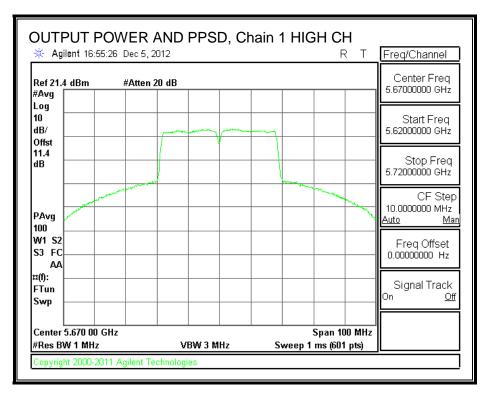
OUTPUT POWER AND PPSD, Chain 1



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7.87. 802.11ac VHT40 BF 2TX MODE, CHANNEL 142 IN THE 5.6 GHz BAND

7.87.1.26 dB BANDWIDTH- UNII

<u>LIMITS</u>

None; for reporting purposes only.

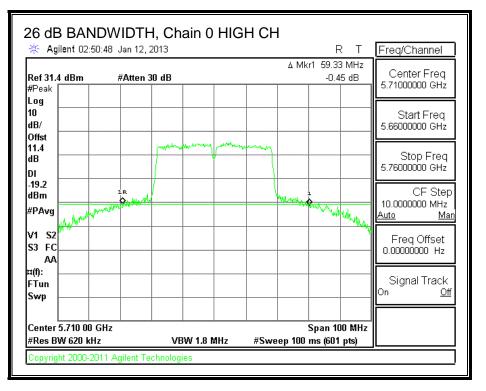
RESULTS

Channel	Frequency	26 dB BW	26 dB BW	
		Chain 0	Chain 1	
	(MHz)	(MHz)	(MHz)	
High	5710	59.33	69.50	

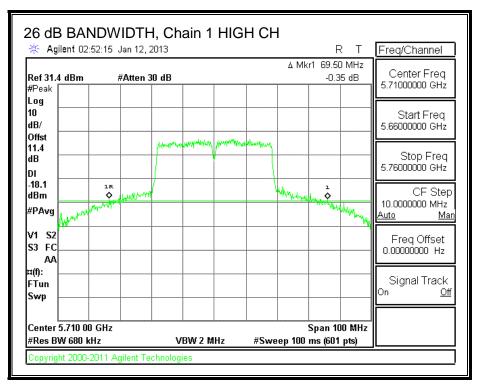
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26 dB BANDWIDTH, Chain 0



26 dB BANDWIDTH, Chain 1



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7.87.2.99% BANDWIDTH

LIMITS

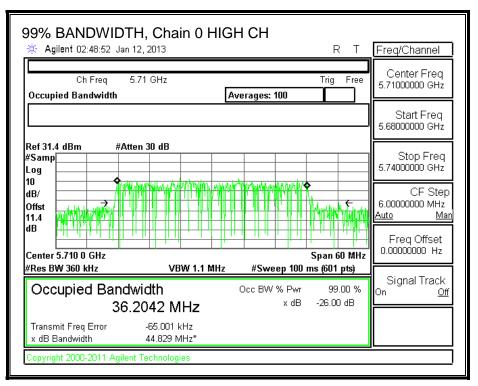
None; for reporting purposes only.

<u>RESULTS</u>

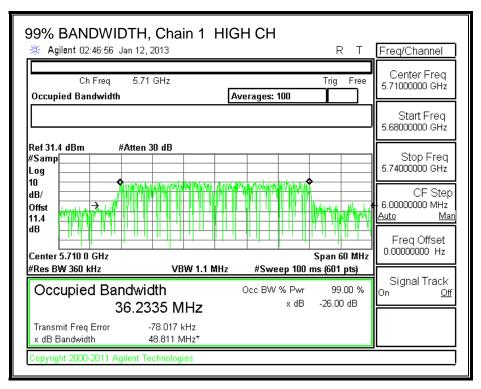
Channel	Frequency	99% BW	99% BW	
		Chain 0	Chain 1	
	(MHz)	(MHz)	(MHz)	
High	5710	36.2042	36.2335	

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99% BANDWIDTH, Chain 0



99% BANDWIDTH, Chain 1



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7.87.3. OUTPUT POWER AND PSD

LIMITS

FCC §15.247

IC RSS-210 A8.4

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

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

Chain 0	Chain 1	Correlated Chains	
Antenna	Antenna	Directional	
Gain	Gain	Gain	
(dBi)	(dBi)	(dBi)	
5.03	6.66	8.89	

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RESULTS

Limits (FCC), portion in UNII 2 ext band

Bandwidth and Antenna Gain

Channel	Frequency	Min	Min	Correlated
		26 dB	99%	Gain
		BW	BW	
	(MHz)	(MHz)	(MHz)	(dBi)
Mid	5710	44.67	33.1021	8.89

Limits

Channel	Frequency	FCC	IC	IC	Power	FCC	IC	PPSD
		Power	Power	EIRP	Limit	PPSD	PSD	Limit
		Limit	Limit	Limit		Limit	Limit	
	(MHz)	(dBm)						
Mid	5710	21.11	24.00	30.00	21.11	8.11	11.00	8.11

Duty Cycle CF (dB)0.43Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency	Chain 0	Chain 1	Total	Power	Power
		Meas	Meas	Corr'd	Limit	Margin
		Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Mid	5710	16.11	16.29	19.64	21.11	-1.47

PPSD Results

Channel	Frequency	Chain 0	Chain 1	Total	PPSD	PPSD
		Meas	Meas	Corr'd	Limit	Margin
		PPSD	PPSD	PPSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Mid	5710	2.233	2.567	5.84	8.11	-2.27

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Limits (FCC), portion in 5.8 GHz DTS band

Bandwidth and Antenna Gain

Channel	Frequency	Min	Min	Correlated
		26 dB	99%	Gain
		BW	BW	
	(MHz)	(MHz)	(MHz)	(dBi)
Mid	5710	14.67	3.1021	8.89

Limits

Channel	Frequency	FCC	IC	IC	Power	FCC	IC	PPSD
		Power	Power	EIRP	Limit	PPSD	PSD	Limit
		Limit	Limit	Limit		Limit	Limit	
	(MHz)	(dBm)						
Mid	5710	19.77	15.92	21.92	13.03	8.11	11.00	8.11

Duty Cycle CF (dB) 0.43 Included in Calculations of Corr'd Power & PPSD

Output Power Results

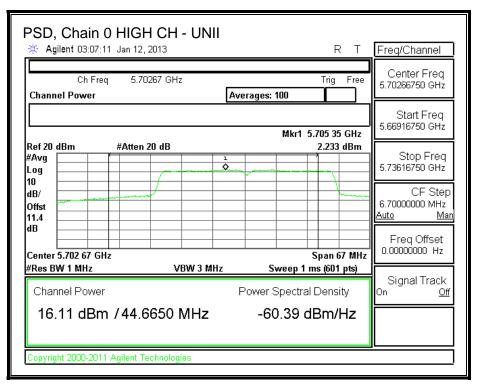
Channel	Frequency	Chain 0	Chain 1	Total	Power	Power
		Meas	Meas	Corr'd	Limit	Margin
		Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Mid	5710	5.94	6.32	9.57	13.03	-3.45

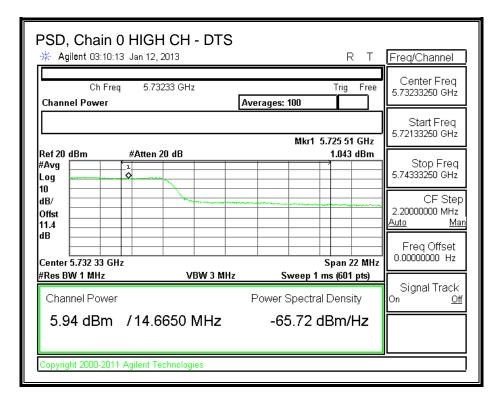
PPSD Results

Channel	Frequency	Chain 0	Chain 1	Total	PPSD	PPSD
		Meas	Meas	Corr'd	Limit	Margin
		PPSD	PPSD	PPSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Mid	5710	1.043	1.349	4.64	8.11	-3.47

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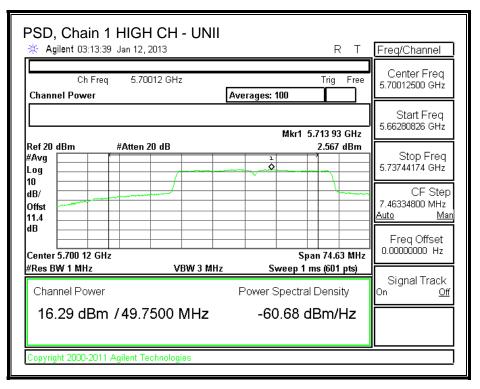
PSD, Chain 0

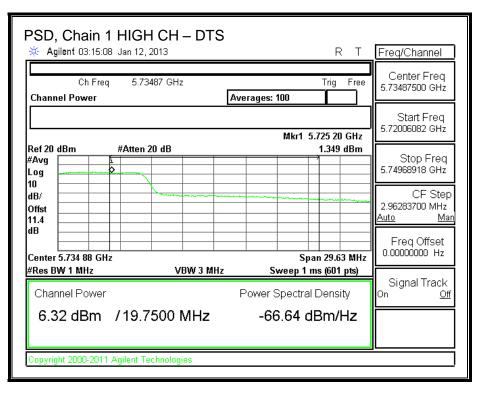




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PSD, Chain 1





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7.88. 802.11ac VHT40 BF 3TX MODE IN THE 5.6 GHz BAND

This mode has same antenna port results as 802.11n HT20 CDD 3TX, except for output power, as shown below.

7.88.1. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (1)

FCC §15.407 (a) (1)

For the band 5.5–5.7 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.

IC RSS-210 A9.2 (1)

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

DIRECTIONAL ANTENNA GAIN

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

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

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OUTPUT POWER RESULTS

Bandwidth and Antenna Gain

Channel	Frequency	Min	Min	Directional
		26 dB	99%	Gain
		BW	BW	
	(MHz)	(MHz)	(MHz)	(dBi)
Low	5510	39.625	36.0770	10.05
Mid	5550	39.625	36.1113	10.05
High	5670	39.500	36.0829	10.05

Limits

Channel	Frequency	FCC	IC	IC	Power
		Power	Power	EIRP	Limit
		Limit	Limit	Limit	
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)
Low	5510	19.95	24.00	30.00	19.95
Mid	5550	19.95	24.00	30.00	19.95
High	5670	19.95	24.00	30.00	19.95

Output Power Results

Channel	Frequency	Chain 0	Chain 1	Chain 2	Total	Power	Power
		Meas	Meas	Meas	Corr'd	Limit	Margin
		Power	Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5510	13.45	14.10	13.60	18.50	19.95	-1.45
Mid	5550	15.04	15.08	15.11	19.85	19.95	-0.10
High	5670	15.01	15.18	15.00	19.84	19.95	-0.11

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7.89. 802.11ac VHT80 1TX MODE IN THE 5.6 GHz BAND

7.89.1. **26 dB BANDWIDTH**

LIMITS

None; for reporting purposes only.

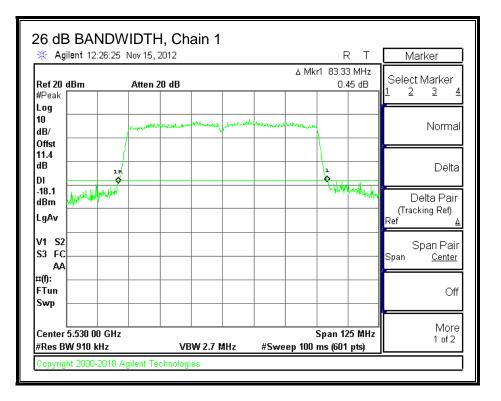
RESULTS

Channel	Frequency	26 dB BW		
		Chain 1		
	(MHz)	(MHz)		
Mid	5530	83.33		

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26 dB BANDWIDTH, Chain 1



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7.89.2. **99% BANDWIDTH**

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency	99% BW
		Chain 1
	(MHz)	(MHz)
Mid	5530	75.2802

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99% BANDWIDTH, Chain 1

99% BANDWIDTH, Chain # Agilent 12:21:06 Nov 15, 2012	1	RT	Sweep
Ch Freq 5.53 GHz Occupied Bandwidth	Averages: 100	Trig Free	Sweep Time 100.0 ms Auto <u>Man</u>
			Sweep <u>Single Cont</u>
Ref 10 dBm Atten 10 dB #Samp Log 10 dB/ Offst 11.4 dB Center 5.530 0 GHz #Res BW 820 kHz ∨BW	Sp 2.4 MHz #Sweep 100 ms	an 200 MHz	Auto Sweep Time <u>Norm Accy</u> Gate On <u>Off</u> Gate Setup •
Occupied Bandwidth 75.2802 MH Transmit Freg Error 30.977 kH:	Occ BW % Pwr Iz x dB	99.00 % -26.00 dB	Points 601
x dB Bandwidth 78.534 MH Copyright 2000-2010 Agilent Technologies	Ζ*		

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7.89.3.OUTPUT POWER AND PPSD

FCC §15.407 (a) (1)

FCC §15.407 (a) (1)

For the band 5.5–5.7 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.

IC RSS-210 A9.2 (1)

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

DIRECTIONAL ANTENNA GAIN

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

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RESULTS

Bandwidth and Antenna Gain

Channel	Frequency	Min	Min	Directional
		26 dB	99%	Gain
		BW	BW	
	(MHz)	(MHz)	(MHz)	(dBi)
Mid	5530	83.33	75.2802	6.66

Limits

Channel	Frequency	FCC	IC	IC	Power	FCC	IC	PPSD
		Power	Power	EIRP	Limit	PPSD	PSD	Limit
		Limit	Limit	Limit		Limit	Limit	
	(MHz)	(dBm)						
Mid	5530	23.34	24.00	30.00	23.34	10.34	11.00	10.34

Duty Cycle CF (dB) 0.85 Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency	Chain 1	Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Mid	5530	19.40	19.40	23.34	-3.94

PPSD Results

Channel	Frequency	Chain 1	Total	PPSD	PPSD
		Meas	Corr'd	Limit	Margin
		PPSD	PPSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Mid	5530	1.34	2.19	10.34	-8.15

Note: method (1) "Measure and sum the spectra across the outputs" as specified in KDB 662911 D01 v01r02 was used for this PSD measurements.

PPSD, Chain 1

Channel	r t <u>f</u>				15, 2012	ain 1 14:22 Nov), Ch ilent 20:
nter Freq 00000 GHz	5				en 10 dB	#At	2 dBm
Start Freq 50000 GHz							
Stop Freq 50000 GHz						-	earner
CF Step 00000 MHz <u>Mar</u>							
eq Offset 100000 Hz							
nal Track <u>Off</u>	0						
	an 125 MHz s (601 pts)			VBW 3 N			5.530 OC W 1 MH
gr	an 125 MHz	S Sweep 1 n	Hz		t Technoloş	2	W 1 MH

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7.89.4.**PEAK EXCURSION**

LIMITS

FCC §15.407 (a) (6)

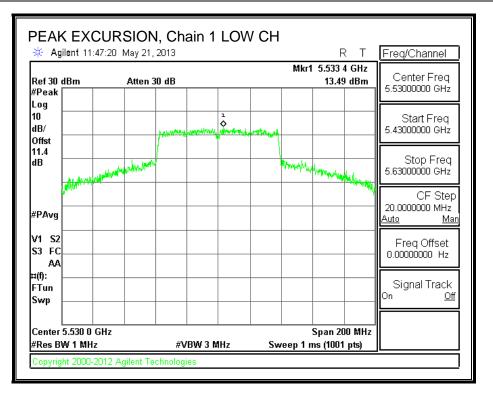
The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the peak transmit power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.

RESULTS

Chain 1

Channel	Frequency	PK Level	PSD	DCCF	Peak Excursion	Limit	Margin
	(MHz)	(dBm)	(dBm)	(dB)	(dB)	(dB)	(dB)
Mid	5530	13.49	1.34	0.85	11.30	13	-1.70

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7.90. 802.11ac VHT80 1TX MODE CHANNEL 138 IN THE 5.6 GHz BAND

7.90.1. **26 dB BANDWIDTH**

<u>LIMITS</u>

None; for reporting purposes only.

RESULTS

Channel	Frequency	26 dB Bandwidth
	(MHz)	(MHz)
High	5690	146.3

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26 dB BANDWIDTH

			HIGH Dec 10, 3						F	? Т	Freq/Channel
Ref 20.6 #Peak			#Atten 2					∆ Mk	1 146.3		Center Freq 5.69000000 GHz
Log 10 dB/ Offst				Mintelline		,ulmada.	allocation				Start Freq 5.59000000 GHz
11.4 dB DI		IR Øhe	aduations					hillinada	1 •••••••		Stop Freq 5.79000000 GHz
-21.0 dBm #PAvg	providence	dep-and-								nulum.	CF Step 20.0000000 MHz <u>Auto Man</u>
V1 S2 S3 FC AA											Freq Offset 0.00000000 Hz
¤(f): FTun Swp											Signal Track On <u>Off</u>
Center : #Res B\				v	BW 4 M	Hz	#Swe	ep 100	Span 20 ms (601		
Copyrig	nt 2000-	2011 Ag	gilent Te	chnologi	es						

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7.90.2. **99% BANDWIDTH**

LIMITS

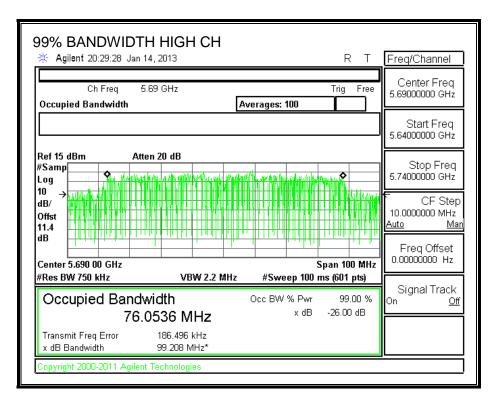
None; for reporting purposes only.

<u>RESULTS</u>

Channel Frequency 99% Bandwidt								
	(MHz)	(MHz)						
High	5690	76.0536						

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99% BANDWIDTH



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7.90.3. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (1)

For the band 5.5–5.7 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.

IC RSS-210 A9.2 (1)

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

DIRECTIONAL ANTENNA GAIN

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

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RESULTS

Limits (FCC), portion in UNII 2 ext band

Bandwidth and Antenna Gain

Channel	Frequency	Min	Min	Directional
		26 dB	99%	Gain
		BW	BW	
	(MHz)	(MHz)	(MHz)	(dBi)
High	5690	108.50	73.0268	6.66

Limits

Channel	Frequency	FCC	IC	IC	Power	FCC	IC	PPSD
		Power	Power	EIRP	Limit	PPSD	PSD	Limit
		Limit	Limit	Limit		Limit	Limit	
	(MHz)	(dBm)						
High	5690	24.00	24.00	30.00	24.00	10.34	11.00	10.34

 Duty Cycle CF (dB)
 0.85
 Included in Calculations of PPSD

Output Power Results

Channel	Frequency	Chain 1	Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
High	5690	19.89	20.74	24.00	-3.26

PPSD Results

Channel	Frequency	Chain 1	Total	PPSD	PPSD
		Meas	Corr'd	Limit	Margin
		PPSD	PPSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
High	5690	1.376	2.23	10.34	-8.11

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Limits (FCC), portion in 5.8 GHz DTS band

Bandwidth and Antenna Gain

Channel	Frequency	Min	Min	Directional
		26 dB	99%	Gain
		BW	BW	
	(MHz)	(MHz)	(MHz)	(dBi)
High	5690	60.35	3.0268	6.66

Limits

Channel	Frequency	FCC	IC	IC	Power	FCC	IC	PPSD
		Power	Power	EIRP	Limit	PPSD	PSD	Limit
		Limit	Limit	Limit		Limit	Limit	
	(MHz)	(dBm)						
High	5690	24.00	15.81	21.81	15.81	10.34	11.00	10.34

Duty Cycle CF (dB) 0.85 Included in Calculations of PPSD

Output Power Results

Channel	Frequency	Chain 1	Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
High	5690	6.70	7.55	15.81	-8.26

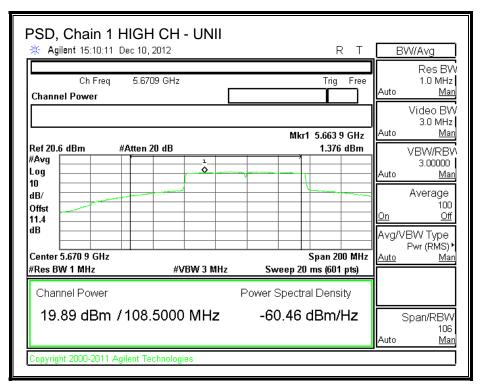
PPSD Results

Channel	Frequency	Chain 1	Total	PPSD	PPSD
		Meas	Corr'd	Limit	Margin
		PPSD	PPSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
High	5690	1.315	2.17	10.34	-8.18

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PSD, Chain 1



	Ch Freq	5.743	9 GHz		Trig Free	Center Freq 5.74390000 GHz
Chann	el Power		[5.74390000 GHZ
						Start Freq
				Mk	r1 5.727 29 GHz	5.70308129 GHz
Ref 20.6 ¥Avg Log	6 dBm	#Atten 2	0 dB		1.315 dBm	Stop Freq 5.77873871 GHz
10 dB/ Offst 11.4						CF Step 6.96774200 MHz <u>Auto Ma</u>
	5.743 90 GH	z			Span 69.68 MHz	Freq Offset 0.00000000 Hz
FRes B	W 1 MHz		#VBW 3 MHz	Sweep	20 ms (601 pts)	Signal Track
Channel Power Spectral Density						On <u>Of</u>
6.70 dBm /37.8000 MHz -69.07 dBm/Hz						

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7.91. 802.11ac VHT80 CDD 2TX MODE IN THE 5.6 GHz BAND

7.91.1. **26 dB BANDWIDTH**

<u>LIMITS</u>

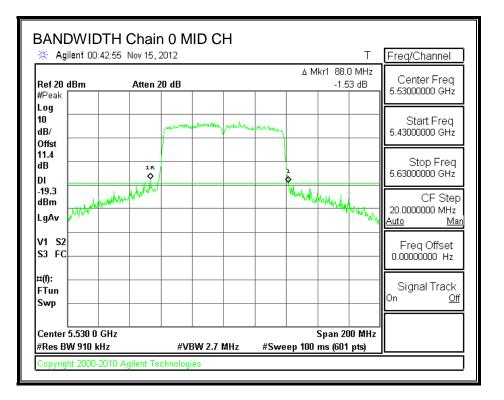
None; for reporting purposes only.

RESULTS

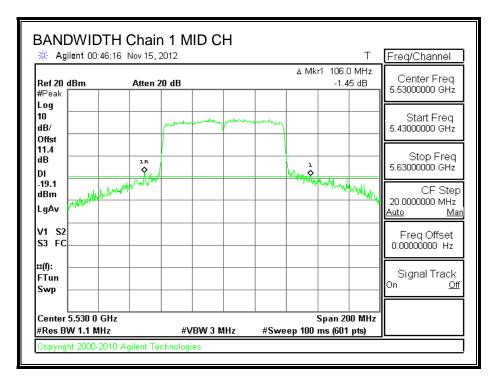
Channel	Frequency	26 dB BW	26 dB BW
		Chain 0	Chain 1
	(MHz)	(MHz)	(MHz)
Mid	5530	88.0	106.0

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26 dB BANDWIDTH, Chain 0



26 dB BANDWIDTH, Chain 1



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7.91.2. **99% BANDWIDTH**

LIMITS

None; for reporting purposes only.

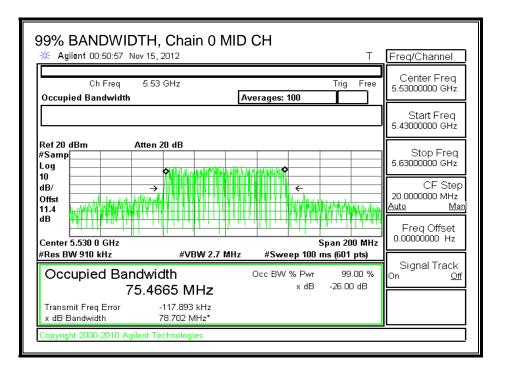
<u>RESULTS</u>

Channel	Frequency	99% BW	99% BW
		Chain 0	Chain 1
	(MHz)	(MHz)	(MHz)
Mid	5530	75.4665	75.5178

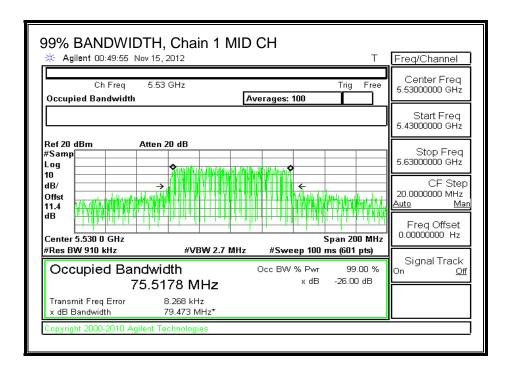
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99% BANDWIDTH, Chain 0



99% BANDWIDTH, Chain 1



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7.91.3. **OUTPUT POWER AND PPSD**

LIMITS

FCC §15.407 (a) (1)

For the band 5.5–5.7 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.

IC RSS-210 A9.2 (1)

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

ANTENNA GAIN

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

Chain 0	Chain 1	Uncorrelated Chains
Antenna	Antenna	Directional
Gain	Gain	Gain
(dBi)	(dBi)	(dBi)
5.03	6.66	5.92

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

Chain 0	Chain 1	Correlated Chains
Antenna	Antenna	Directional
Gain	Gain	Gain
(dBi)	(dBi)	(dBi)
5.03	6.66	8.89

OUTPUT POWER RESULTS

Bandwidth and Antenna Gain

Channel	Frequency	Min	Min	Directional
		26 dB	99%	Gain
		BW	BW	
	(MHz)	(MHz)	(MHz)	(dBi)
Mid	5530	88.00	75.4665	5.92

Limits

Channel	Frequency	FCC	IC	IC	Power	FCC	IC	PPSD
		Power	Power	EIRP	Limit	PPSD	PSD	Limit
		Limit	Limit	Limit		Limit	Limit	
	(MHz)	(dBm)						
Mid	5530	24.00	24.00	30.00	24.00	11.00	11.00	11.00

Output Power Results

Channel	Frequency	Chain 0	Chain 1	Total	Power	Power
		Meas	Meas	Corr'd	Limit	Margin
		Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Mid	5530	14.38	14.45	17.43	24.00	-6.57

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PPSD RESULTS

Bandwidth and Antenna Gain

Channel	Frequency	Min	Min	Directional
		26 dB	99%	Gain
		BW	BW	
	(MHz)	(MHz)	(MHz)	(dBi)
Mid	5530	88.00	75.4665	8.89

Limits

Channel	Frequency	FCC	IC	PPSD
		PPSD	PSD	Limit
		Limit	Limit	
	(MHz)	(dBm)	(dBm)	(dBm)
Mid	5530	8.11	11.00	8.11

Duty Cycle CF (dB) 0.85 Included in Calculations of PPSD

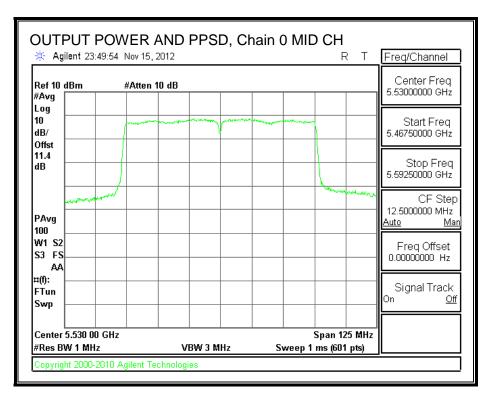
PPSD Results

Channel	Frequency	Chain 0	Chain 1	Total	PPSD	PPSD
		Meas	Meas	Corr'd	Limit	Margin
		PPSD	PPSD	PPSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Mid	5530	-1.93	-1.62	2.09	8.11	-6.02

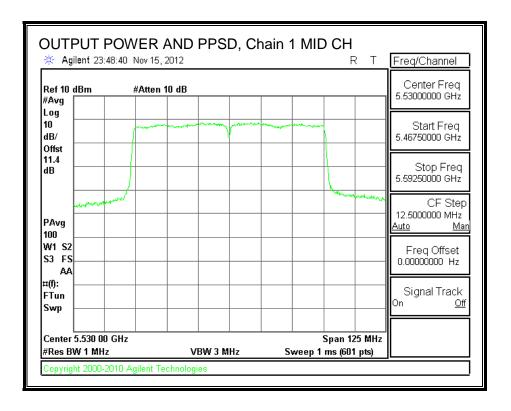
<u>Note:</u> method (1) "Measure and sum the spectra across the outputs" as specified in KDB 662911 D01 v01r02 was used for this PSD measurements.

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OUTPUT POWER AND PPSD, Chain 0



OUTPUT POWER AND PPSD, Chain 1



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7.92. 802.11ac VHT80 CDD 2TX MODE CHANNEL 138 IN THE 5.6 GHz BAND

7.92.1.26 dB BANDWIDTH- UNII

<u>LIMITS</u>

None; for reporting purposes only.

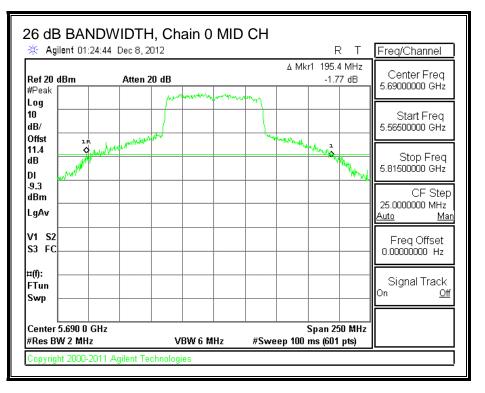
RESULTS

Channel	Frequency	26 dB BW	26 dB BW
		Chain 0	Chain 1
	(MHz)	(MHz)	(MHz)
Mid	5690	195.40	207.90

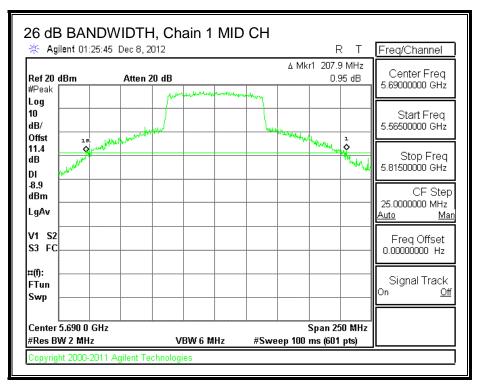
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26 dB BANDWIDTH, Chain 0



26 dB BANDWIDTH, Chain 1



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7.92.2.99% BANDWIDTH

LIMITS

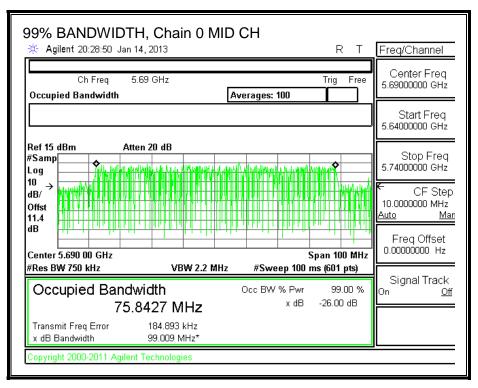
None; for reporting purposes only.

<u>RESULTS</u>

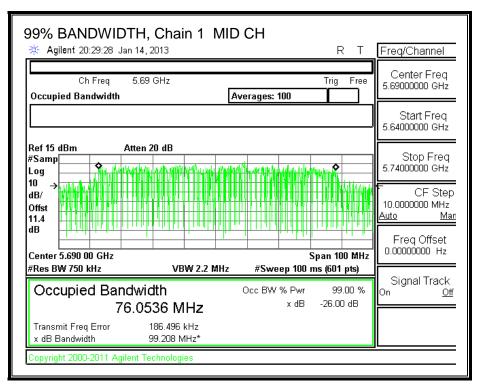
Channel	Frequency	99% BW	99% BW
		Chain 0	Chain 1
	(MHz)	(MHz)	(MHz)
Mid	5690	75.8427	76.0536

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99% BANDWIDTH, Chain 0



99% BANDWIDTH, Chain 1



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7.92.3. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (1)

For the band 5.5–5.7 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.

IC RSS-210 A9.2 (1)

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

DIRECTIONAL ANTENNA GAIN

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

Chain 0	Chain 1	Uncorrelated Chains
Antenna	Antenna	Directional
Gain	Gain	Gain
(dBi)	(dBi)	(dBi)
5.03	6.66	5.92

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

Chain 0	Chain 1	Correlated Chains
Antenna	Antenna	Directional
Gain	Gain	Gain
(dBi)	(dBi)	(dBi)
5.03	6.66	8.89

RESULTS

Limits (FCC), portion in UNII 2 ext band

Bandwidth and Antenna Gain

Channel	Frequency	Min	Min	Correlated	Uncorrelated
		26 dB	99%	Gain	Gain
		BW	BW		
	(MHz)	(MHz)	(MHz)	(dBi)	(dBi)
High	5690	128.50	72.9214	8.89	5.92

Limits

Channel	Frequency	FCC	IC	IC	Power	FCC	IC	PPSD
		Power	Power	EIRP	Limit	PPSD	PSD	Limit
		Limit	Limit	Limit		Limit	Limit	
	(MHz)	(dBm)						
High	5690	24.00	24.00	30.00	24.00	8.11	11.00	8.11

 Duty Cycle CF (dB)
 0.85
 Included in Calculations of PPSD

Output Power Results

Channel	Frequency	Chain 0	Chain 1	Total	Power	Power
		Meas	Meas	Corr'd	Limit	Margin
		Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
High	5690	19.46	20.18	23.70	24.00	-0.30

PPSD Results

Channel	Frequency	Chain 0	Chain 1	Total	PPSD	PPSD
		Meas	Meas	Corr'd	Limit	Margin
		PPSD	PPSD	PPSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
High	5690	2.35	2.24	6.15	8.11	-1.96

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Limits (FCC), portion in 5.8 GHz DTS band

Bandwidth and Antenna Gain

Channel	Frequency	Min	Min	Correlated	Uncorrelated
		26 dB	99%	Gain	Gain
		BW	BW		
	(MHz)	(MHz)	(MHz)	(dBi)	(dBi)
High	5690	62.70	6.8060	8.89	5.92

Limits

Channel	Frequency	FCC	IC	IC	Power	FCC	IC	PPSD
		Power	Power	EIRP	Limit	PPSD	PSD	Limit
		Limit	Limit	Limit		Limit	Limit	
	(MHz)	(dBm)						
High	5690	24.00	19.33	25.33	19.33	8.11	11.00	8.11

 Duty Cycle CF (dB)
 0.85
 Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency	Chain 0	Chain 1	Total	Power	Power
		Meas	Meas	Corr'd	Limit	Margin
		Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
High	5690	5.79	6.57	10.06	19.33	-9.27

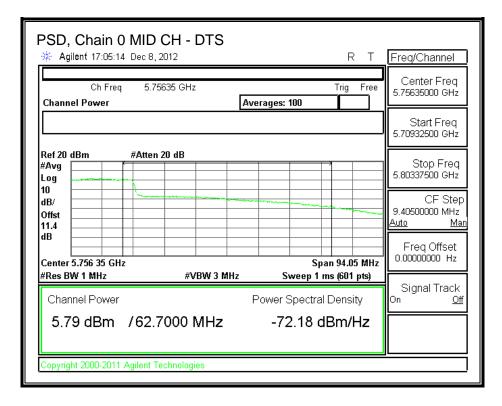
PPSD Results

Channel	Frequency	Chain 0	Chain 1	Total	PPSD	PPSD
		Meas	Meas	Corr'd	Limit	Margin
		PPSD	PPSD	PPSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
High	5690	1.501	2.10	5.67	8.11	-2.44

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PSD, Chain 0

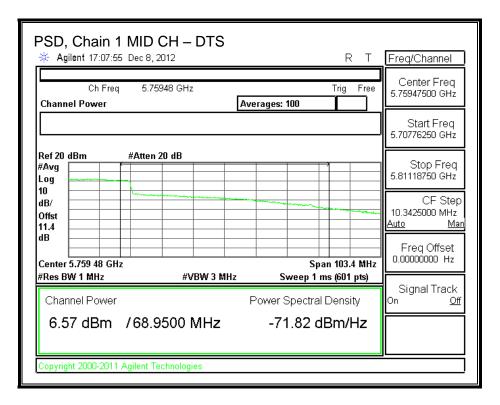
Ch Freq 5.65865 GHz Trig Free Channel Power Averages: 100 Start Freq Ref 20 dBm #Atten 20 dB Stop Freq #Avg Grss Stop Freq Log Center 5.658 6 GHz Stop Freq 10 Gffst Gffst Stop Freq 0 dB/ Gffst Gffst Genter 5.658 6 GHz Span 199 MHz Kers BW 1 MHz #VBW 3 MHz Sweep 1 ms (601 pts) Signal Track On On Channel Power Power Spectral Density Signal Track On On Offst 19.46 dBm / 132.7000 MHz -61.77 dBm/Hz Signal Track On On Offst	PSD, Chain 0 MID 0			RТ	Freq/Channel
Ref 20 dBm #Atten 20 dB #Avg Start Freq Log Stop Freq 10 Stop Freq dB/ Stop Freq Offst Stop Freq 11.4 Stop Freq dB Stop Freq 0 Stop Freq 5.75815000 GHz Stop Freq 11.4 Stop Freq 11.4 Stop Freq 11.4 Stop Freq 0.0000000 MHz Man Freq Offset 0.0000000 Hz 0.0000000 Hz Signal Track On Off			erages: 100	Trig Free	
#Avg Stop Freq Log Stop Freq 10 Grade dB/ Grade Offst Grade 11.4 Grade dB Grade Center 5.658 6 GHz Span 199 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 1 ms (601 pts) Channel Power Power Spectral Density					
Offset 11.4 dB 19.9000000 MHz Auto Center 5.658 6 GHz #Res BW 1 MHz Span 199 MHz WBW 3 MHz Sweep 1 ms (601 pts) Channel Power Power Spectral Density	#Avg	D dB			
Center 5.658 6 GHz Span 199 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 1 ms (601 pts) Channel Power Power Spectral Density Signal Track On Off	Offst 11.4				19.900000 MHz
Channel Power Power Spectral Density On Off	Center 5.658 6 GHz	#VBW 3 MHz			0.00000000 Hz
				, r	
Copyright 2000-2011 Agilent Technologies				DITIVITZ	



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PSD, Chain 1

PSD, Chain 1 MID			RT	Freq/Channel
Ch Freq 5.65 Channel Power	865 GHz	erages: 100	Trig Free	Center Freq 5.65865000 GHz
				Start Freq 5.55446368 GHz
Ref 20 dBm #Atten #Avg Log	20 dB			Stop Freq 5.76283632 GHz
dB/ Offst 11.4 dB				CF Step 20.8372650 MHz <u>Auto Mar</u>
Center 5.658 6 GHz #Res BW 1 MHz	#VBW 3 MHz		pan 208.4 MHz ms (601 pts)	Freq Offset 0.00000000 Hz
Channel Power 20.18 dBm /138		Power Spectr -61.25	al Density dBm/Hz	Signal Track On <u>Off</u>
Copyright 2000-2011 Agilent To	achnologies			



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7.93. 802.11ac VHT80 CDD 3TX MODE IN THE 5.6 GHz BAND

7.93.1. **26 dB BANDWIDTH**

<u>LIMITS</u>

None; for reporting purposes only.

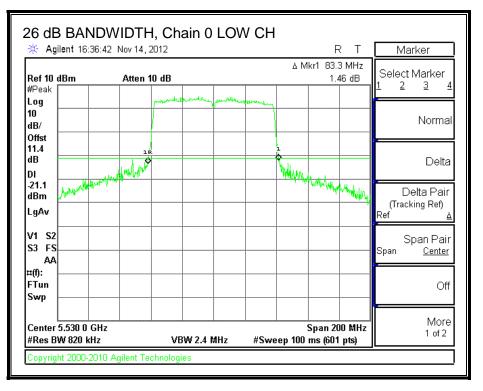
RESULTS

Channel	Frequency	26 dB BW	26 dB BW	26 dB BW
		Chain 0	Chain 1	Chain 2
	(MHz)	(MHz)	(MHz)	(MHz)
Low	5530	83.3	83.7	82.3

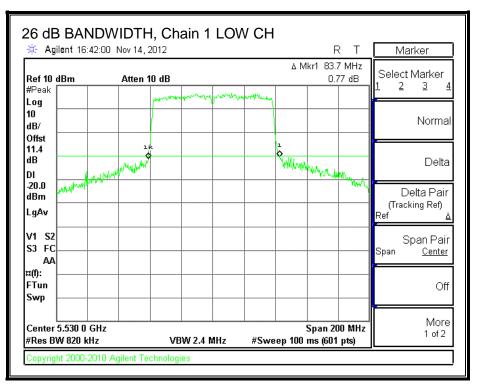
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26 dB BANDWIDTH, Chain 0

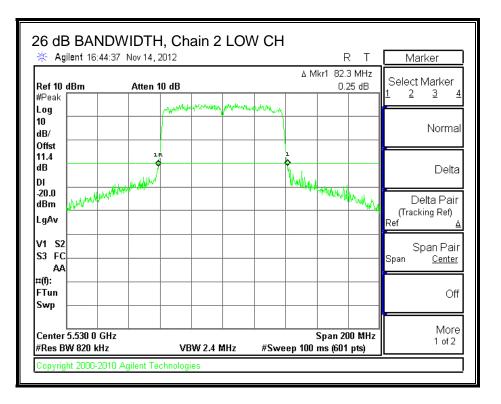


26 dB BANDWIDTH, Chain 1



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26 dB BANDWIDTH, Chain 2



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7.93.2. **99% BANDWIDTH**

LIMITS

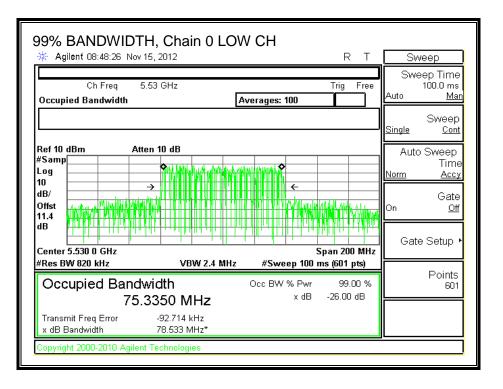
None; for reporting purposes only.

<u>RESULTS</u>

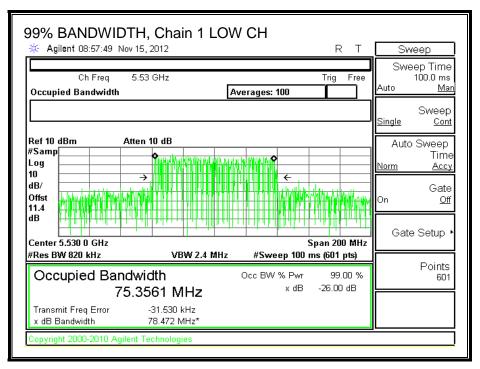
Channel	Frequency	99% BW	99% BW	99% BW
		Chain 0	Chain 1	Chain 2
	(MHz)	(MHz)	(MHz)	(MHz)

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99% BANDWIDTH, Chain 0

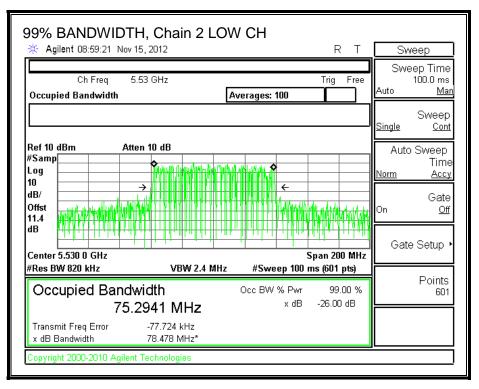


99% BANDWIDTH, Chain 1



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99% BANDWIDTH, Chain 2



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7.93.3. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (1)

FCC §15.407 (a) (1)

For the band 5.5–5.7 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.

IC RSS-210 A9.2 (1)

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

DIRECTIONAL ANTENNA GAIN

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

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

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

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

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OUTPUT POWER RESULTS

Bandwidth and Antenna Gain

Channel	Frequency	Min	Min	Directional
		26 dB	99%	Gain
		BW	BW	
	(MHz)	(MHz)	(MHz)	(dBi)
Low	5530	82.30	75.2941	5.36

Limits

Channel	Frequency	FCC	IC	IC	Power
		Power	Power	EIRP	Limit
		Limit	Limit	Limit	
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)
Low	5530	24.00	24.00	30.00	24.00

Output Power Results

Channel	Frequency	Chain 0	Chain 1	Chain 2	Total	Power	Power
		Meas	Meas	Meas	Corr'd	Limit	Margin
		Power	Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5530	12.82	13.14	12.87	17.72	24.00	-6.28

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PPSD RESULTS

Bandwidth and Antenna Gain

Channel	Frequency	Min	Min	Directional
		26 dB	99%	Gain
		BW	BW	
	(MHz)	(MHz)	(MHz)	(dBi)
Low	5530	82.30	75.2941	10.05

Limits

Channel	Frequency	FCC	IC	PPSD
		PPSD	PSD	Limit
		Limit	Limit	
	(MHz)	(dBm)	(dBm)	(dBm)
Low	5530	6.95	11.00	6.95

Duty Cycle CF (dB)	0.85	Included in PPSD

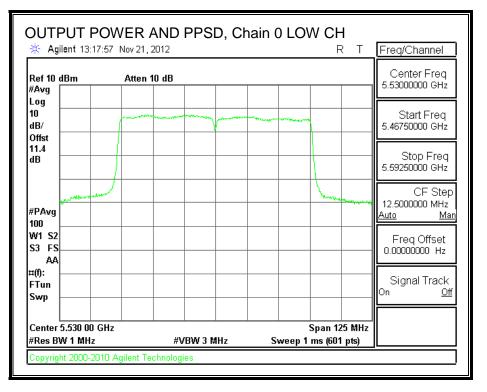
PPSD Results

Channel	Frequency	Chain 0	Chain 1	Chain 2	Total	PPSD	PPSD
		Meas	Meas	Meas	Corr'd	Limit	Margin
		PPSD	PPSD	PPSD	PPSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5530	-2.98	-3.00	-2.47	2.81	6.95	-4.14

<u>Note:</u> method (1) "Measure and sum the spectra across the outputs" as specified in KDB 662911 D01 v01r02 was used for this PSD measurements.

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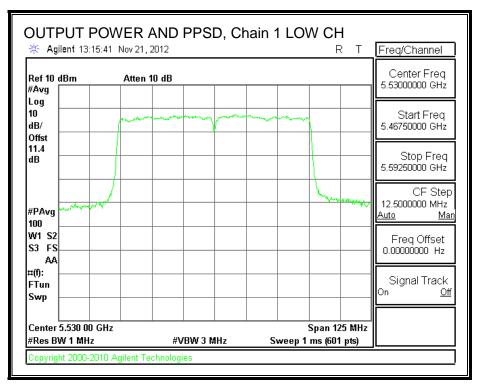
OUTPUT POWER AND PPSD, Chain 0



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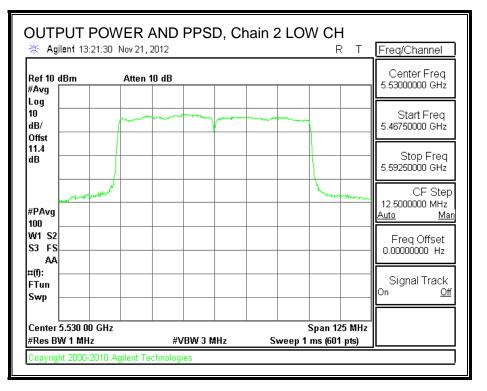
OUTPUT POWER AND PPSD, Chain 1



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OUTPUT POWER AND PPSD, Chain 2



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7.93.4.**PEAK EXCURSION**

LIMITS

FCC §15.407 (a) (6)

The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the peak transmit power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.

RESULTS

Chain 0

Channel	Frequency	PK Level	PSD	DCCF	Peak Excursion	Limit	Margin
	(MHz)	(dBm)	(dBm)	(dB)	(dB)	(dB)	(dB)
Mid	5530	1.63	-2.98	0.85	3.76	13	-9.24

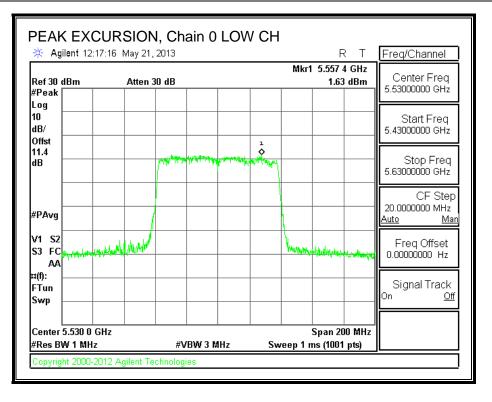
Chain 1

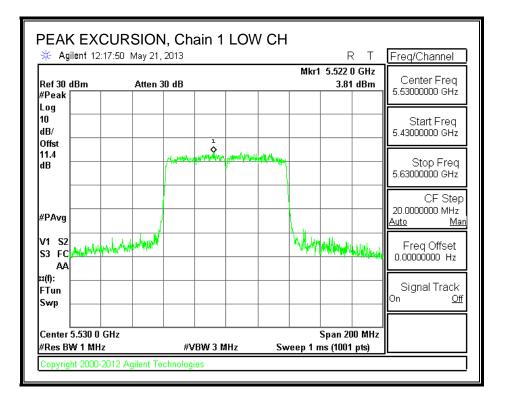
Channel	Frequency	PK Level	PSD	DCCF	Peak Excursion	Limit	Margin
	(MHz)	(dBm)	(dBm)	(dB)	(dB)	(dB)	(dB)
Mid	5530	3.81	-3.00	0.85	5.96	13	-7.04

Chain 2

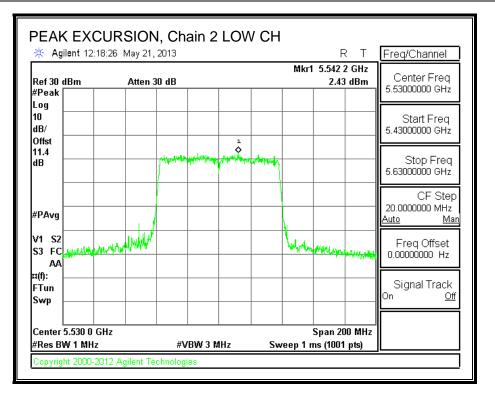
Channel	Frequency	PK Level	PSD	DCCF	Peak Excursion	Limit	Margin
	(MHz)	(dBm)	(dBm)	(dB)	(dB)	(dB)	(dB)
Mid	5530	2.43	-2.47	0.85	4.05	13	-8.95

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7.94. 802.11ac VHT80 CDD 3TX MODE CHANNEL 138 IN THE 5.6 GHz BAND

7.94.1.26 dB BANDWIDTH- UNII

<u>LIMITS</u>

None; for reporting purposes only.

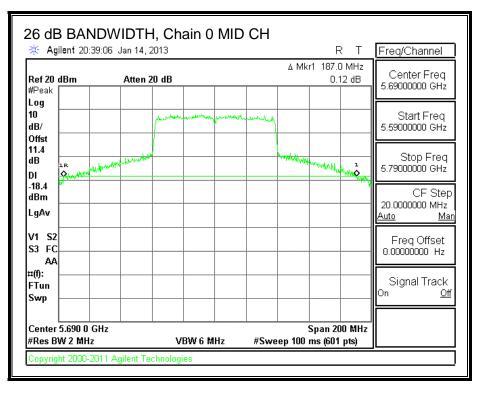
RESULTS

Channel	Frequency	26 dB BW	26 dB BW	26 dB BW
		Chain 0	Chain 1	Chain 2
	(MHz)	(MHz)	(MHz)	(MHz)
Mid	5690	187.00	190.70	182.70

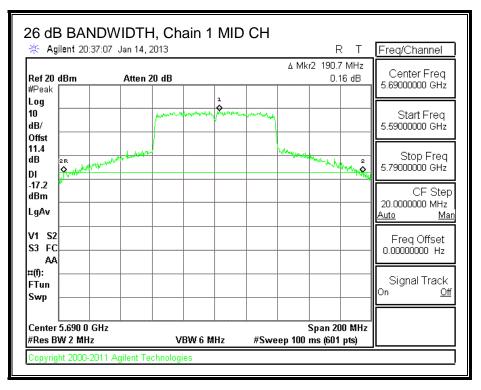
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26 dB BANDWIDTH, Chain 0



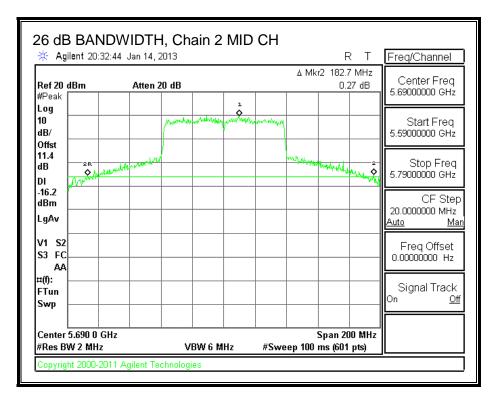
26 dB BANDWIDTH, Chain 1



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26 dB BANDWIDTH, Chain 2



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7.94.2.99% BANDWIDTH

LIMITS

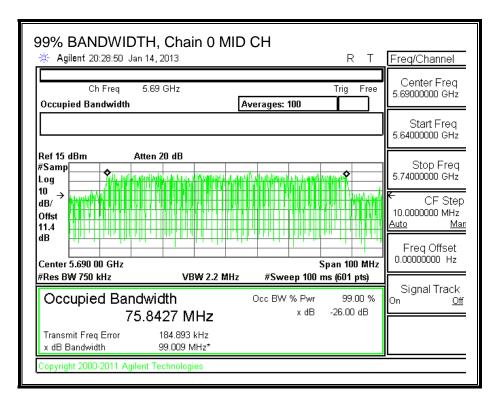
None; for reporting purposes only.

<u>RESULTS</u>

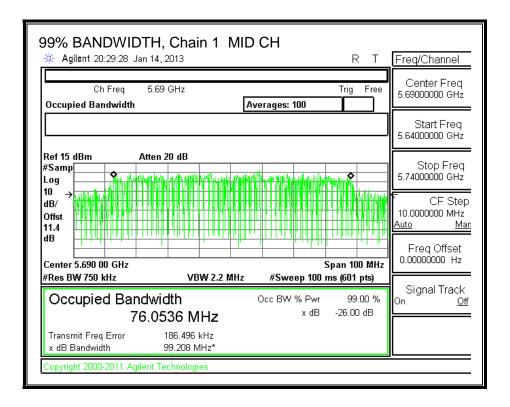
Channel	Frequency	99% BW	99% BW	99% BW
		Chain 0	Chain 1	Chain 2
	(MHz)	(MHz)	(MHz)	(MHz)
Mid	5690	75.8427	76.0536	75.9943

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99% BANDWIDTH, Chain 0

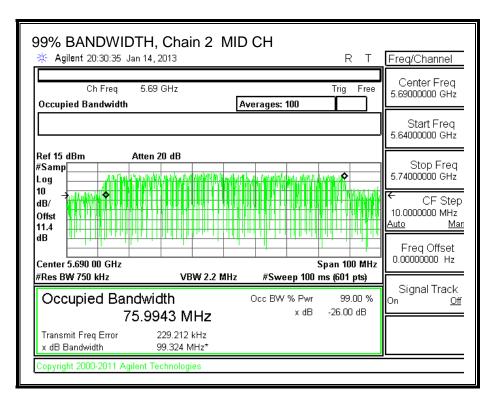


99% BANDWIDTH, Chain 1



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99% BANDWIDTH, Chain 2



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7.94.3. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (1)

For the band 5.5–5.7 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.

IC RSS-210 A9.2 (1)

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

DIRECTIONAL ANTENNA GAIN

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

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

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

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

RESULTS

Limits (FCC), portion in UNII 2 ext band

Bandwidth and Antenna Gain

Channel	Frequency	Min	Min	Correlated	Uncorrelated
		26 dB	99%	Gain	Gain
		BW	BW		
	(MHz)	(MHz)	(MHz)	(dBi)	(dBi)
High	5690	126.35	72.9213	10.05	5.36

Limits

Channel	Frequency	FCC	IC	IC	Power	FCC	IC	PPSD
		Power	Power	EIRP	Limit	PPSD	PSD	Limit
		Limit	Limit	Limit		Limit	Limit	
	(MHz)	(dBm)						
High	5690	24.00	24.00	30.00	24.00	6.95	11.00	6.95

Duty Cycle CF (dB)0.85Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency	Chain 0	Chain 1	Chain 2	Total	Power	Power
		Meas	Meas	Meas	Corr'd	Limit	Margin
							_
		Power	Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)

PPSD Results

Channel	Frequency	Chain 0	Chain 1	Chain 2	Total	PPSD	PPSD
		Meas	Meas	Meas	Corr'd	Limit	Margin
		PPSD	PPSD	PPSD	PPSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
High	5690	0.368	0.976	1.242	6.50	6.95	-0.45

Limits (FCC), portion in 5.8 GHz DTS band

Channel	Frequency	Min	Min	Correlated	Uncorrelated
		26 dB	99%	Gain	Gain
		BW	BW		
	(MHz)	(MHz)	(MHz)	(dBi)	(dBi)
High	5690	56.35	2.9213	10.05	5.36

Bandwidth and Antenna Gain

Limits

Channel	Frequency	FCC	IC	IC	Power	FCC	IC	PPSD
		Power	Power	EIRP	Limit	PPSD	PSD	Limit
		Limit	Limit	Limit		Limit	Limit	
	(MHz)	(dBm)						
High	5690	24.00	15.66	21.66	15.66	6.95	11.00	6.95

 Duty Cycle CF (dB)
 0.85
 Included in Calculations of Corr'd Power & PPSD

Output Power Results

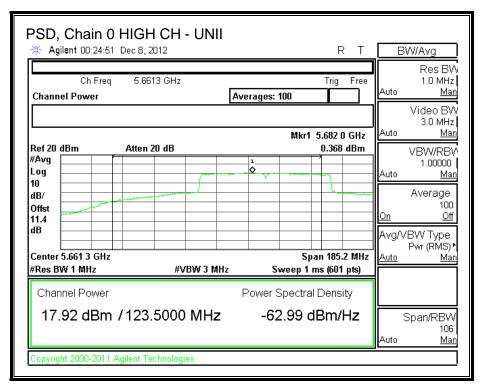
Channel	Frequency	Chain 0	Chain 1	Chain 2	Total	Power	Power
		Meas	Meas	Meas	Corr'd	Limit	Margin
		Power	Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
High	5690	3.99	5.05	5.13	10.37	15.66	-5.28

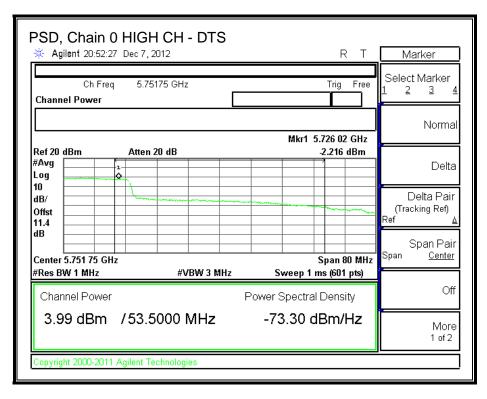
PPSD Results

Channel	Frequency	Chain 0	Chain 1	Chain 2	Total	PPSD	PPSD
		Meas	Meas	Meas	Corr'd	Limit	Margin
		PPSD	PPSD	PPSD	PPSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
High	5690	-2.216	-0.068	-0.742	4.70	6.95	-2.25

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PSD, Cain 0

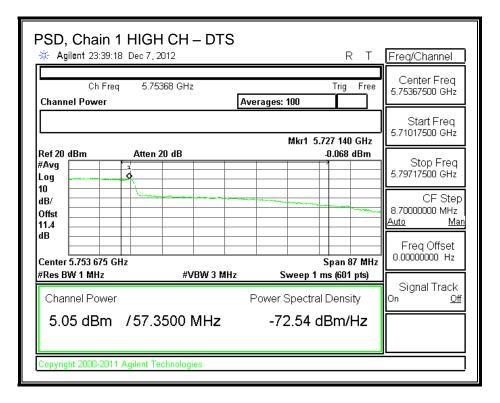




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PSD, Cain 1

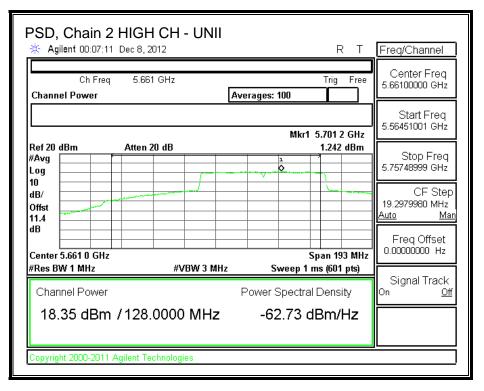
PSD, Chain 1 HIGH		RT	Freq/Channel
Ch Freq 5.66 Channel Power	132 GHz Averag	Trig Free	Center Freq 5.66132500 GHz
		Mkr1 5.677 2 GHz	Start Freq 5.56582500 GHz
Ref 20 dBm Atten #Avg Log	20 dB	0.976 dBm	Stop Freq 5.75682500 GHz
dB/ Offst 11.4			CF Step 19.1000000 MHz <u>Auto Man</u>
dB	#VBW 3 MHz	Span 191 MH Sweep 1 ms (601 pts)	Freq Offset 0.00000000 Hz
Channel Power Power Spectral Density On <u>Off</u>			
17.98 dBm / 127.3500 MHz -63.07 dBm/Hz			
Copyright 2000-2011 Agilent Technologies			



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PSD, Cain 2



PSD, Chain 2 HIGH			RТ	B	///Avg
Ch Freq 5.754 Channel Power	1 GHz	verages: 100	Trig Free	Auto	Res BW 1.0 MHz <u>Man</u>
Ref 20 dBm Atten 2	n 48	Mkr1 5.72	7 030 GHz .742 dBm	Auto	Video BW 3.0 MHz <u>Man</u>
#Avg				Auto	VBW/RBV 1.00000 <u>Man</u> Average
Offst				<u>On</u> Avg/V	100 <u>Off</u> BW Type
Center 5.754 000 GHz #Res BW 1 MHz	#VBW 3 MHz	St Sweep 1 ms	pan 87 MHz ; (601 pts)	<u>Auto</u>	Pwr (RMS) ► <u>Man</u>
Channel Power Power Spectral Density 5.13 dBm / 58.0000 MHz -72.50 dBm/Hz Span/RBW 106 Auto Man					
Copyright 2000-2011 Agilent Technologies					

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7.95. 802.11ac VHT80 BF 2TX MODE IN THE 5.6 GHz BAND

7.95.1. **26 dB BANDWIDTH**

LIMITS

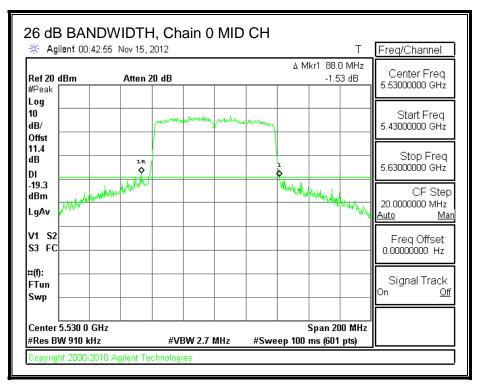
None; for reporting purposes only.

RESULTS

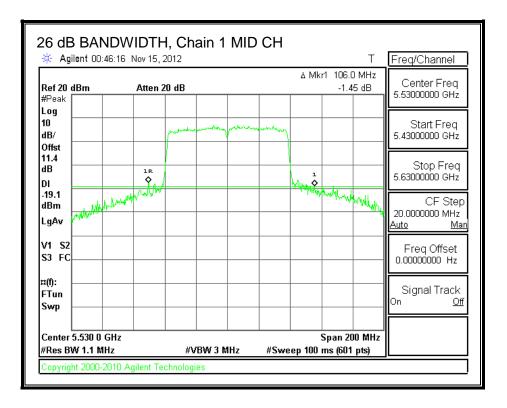
Channel	Frequency	26 dB BW	26 dB BW
		Chain 0	Chain 1
	(MHz)	(MHz)	(MHz)
Mid	5530	88.0	106.0

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26 dB BANDWIDTH, Chain 0



26 dB BANDWIDTH, Chain 1



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7.95.2. **99% BANDWIDTH**

LIMITS

None; for reporting purposes only.

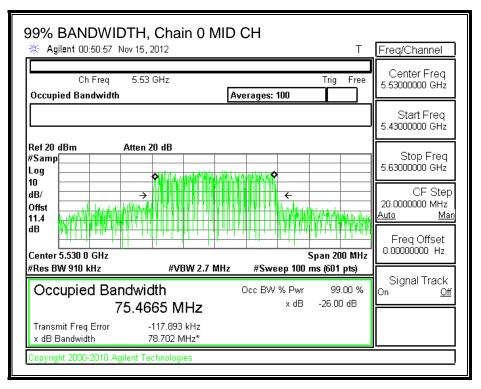
<u>RESULTS</u>

Channel	Frequency	99% BW	99% BW
		Chain 0	Chain 1
	(MHz)	(MHz)	(MHz)
Mid	5530	75.4665	75.5178

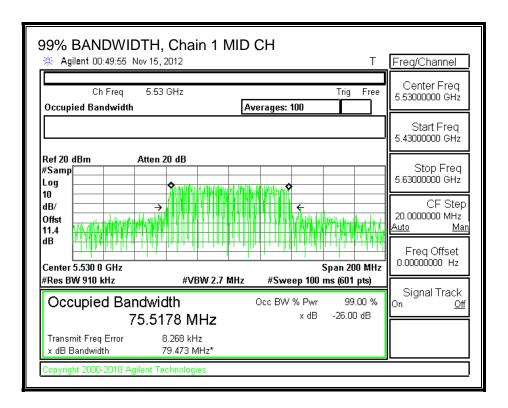
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99% BANDWIDTH, Chain 0



99% BANDWIDTH, Chain 1



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7.95.3. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (1)

FCC §15.407 (a) (1)

For the band 5.5–5.7 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.

IC RSS-210 A9.2 (1)

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

DIRECTIONAL ANTENNA GAIN

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

Chain 0	Chain 1	Correlated Chains
Antenna	Antenna	Directional
Gain	Gain	Gain
(dBi)	(dBi)	(dBi)
5.03	6.66	8.89

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RESULTS

Bandwidth and Antenna Gain

Channel	Frequency	Min	Min	Directional
		26 dB	99%	Gain
		BW	BW	
	(MHz)	(MHz)	(MHz)	(dBi)
Low	5530	88.0	75.4665	8.89

Limits

Channel	Frequency	FCC	IC	IC	Power	FCC	IC	PPSD
		Power	Power	EIRP	Limit	PPSD	PSD	Limit
		Limit	Limit	Limit		Limit	Limit	
	(MHz)	(dBm)						
Low	5530	21.11	24.00	30.00	21.11	8.11	11.00	8.11

 Duty Cycle CF (dB)
 0.85
 Included in Calculations of Corr'd Power & PPSD

Output Power Results

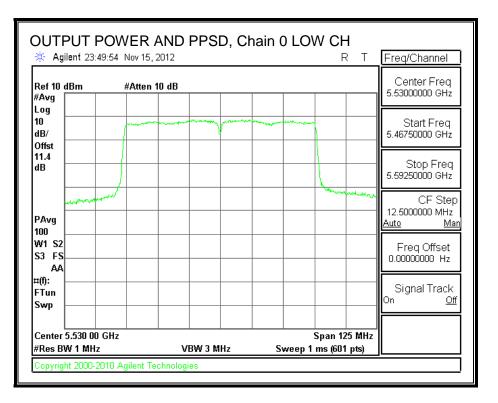
Channel	Frequency	Chain 0	Chain 1	Total	Power	Power
		Meas	Meas	Corr'd	Limit	Margin
		Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5530	14.81	15.59	18.23	21.11	-2.88

PPSD Results

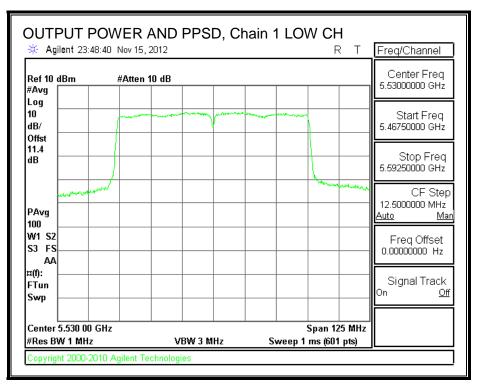
Channel	Frequency	Chain 0	Chain 1	Total	PPSD	PPSD
		Meas	Meas	Corr'd	Limit	Margin
		PPSD	PPSD	PPSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5530	-1.93	-1.62	2.09	8.11	-6.02

Note: method (1) "Measure and sum the spectra across the outputs" as specified in KDB 662911 D01 v01r02 was used for this PSD measurements.

OUTPUT POWER AND PPSD, Chain 0



OUTPUT POWER AND PPSD, Chain 1



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7.95.4.**PEAK EXCURSION**

LIMITS

FCC §15.407 (a) (6)

The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the peak transmit power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.

RESULTS

Chain 0

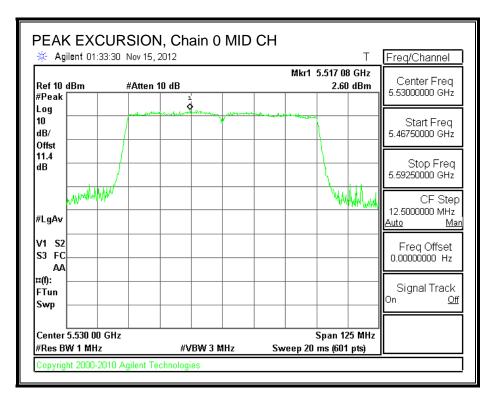
Channel	Frequency	PK Level	PSD	DCCF	Peak Excursion	Limit	Margin
	(MHz)	(dBm)	(dBm)	(dB)	(dB)	(dB)	(dB)
Mid	5530	2.60	-1.93	0.85	3.68	13	-9.32

Chain 1

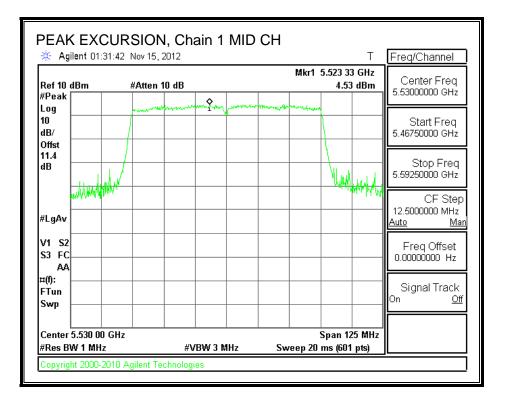
Channel	Frequency	PK Level	PSD	DCCF	Peak Excursion	Limit	Margin
	(MHz)	(dBm)	(dBm)	(dB)	(dB)	(dB)	(dB)
Mid	5530	4.53	-1.62	0.85	5.30	13	-7.70

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PEAK EXCURSION, Chain 0



PEAK EXCURSION, Chain 1



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7.96. 802.11ac VHT80 BF 2TX MODE CHANNEL 138 IN THE 5.6 GHz BAND

7.96.1.26 dB BANDWIDTH- UNII

<u>LIMITS</u>

None; for reporting purposes only.

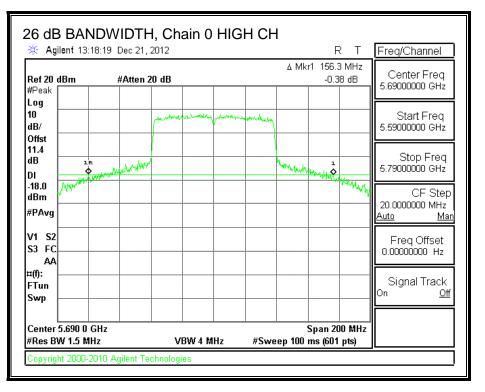
RESULTS

Channel	Frequency	26 dB BW	26 dB BW	
		Chain 0	Chain 1	
	(MHz)	(MHz)	(MHz)	
High	5690	156.30	159.70	

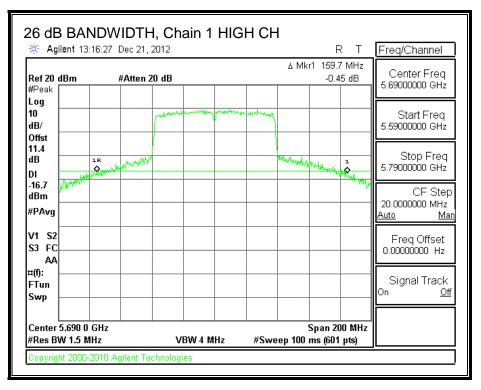
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26 dB BANDWIDTH, Chain 0



26 dB BANDWIDTH, Chain 1



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7.96.2.99% BANDWIDTH

LIMITS

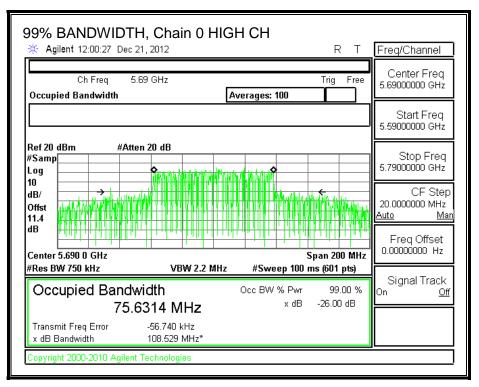
None; for reporting purposes only.

<u>RESULTS</u>

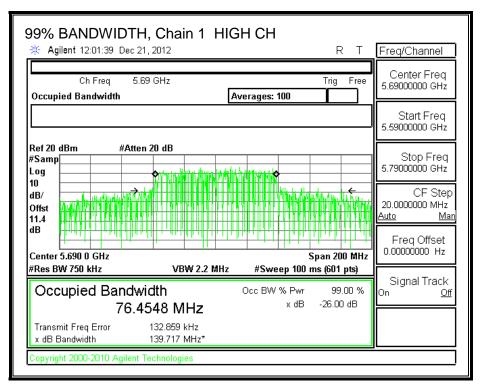
Channel	Frequency	99% BW	99% BW
		Chain 0	Chain 1
	(MHz)	(MHz)	(MHz)
High	5690	75.6314	76.4548

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99% BANDWIDTH, Chain 0



99% BANDWIDTH, Chain 1



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7.96.3. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (1)

FCC §15.407 (a) (1)

For the band 5.5–5.7 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.

IC RSS-210 A9.2 (1)

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

DIRECTIONAL ANTENNA GAIN

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

Chain 0	Chain 1	Correlated Chains
Antenna	Antenna	Directional
Gain	Gain	Gain
(dBi)	(dBi)	(dBi)
5.03	6.66	8.89

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RESULTS

Limits (FCC), portion in UNII 2 ext band

Bandwidth and Antenna Gain

Channel	Frequency	Min	Min	Correlated
		26 dB	99%	Gain
		BW	BW	
	(MHz)	(MHz)	(MHz)	(dBi)
High	5690	113.15	72.8157	8.89

Limits

Channel	Frequency	FCC	IC	IC	Power	FCC	IC	PPSD
		Power	Power	EIRP	Limit	PPSD	PSD	Limit
		Limit	Limit	Limit		Limit	Limit	
	(MHz)	(dBm)						
High	5690	21.11	24.00	30.00	21.11	8.11	11.00	8.11

Duty Cycle CF (dB)0.85Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency	Chain 0	Chain 1	Total	Power	Power
		Meas	Meas	Corr'd	Limit	Margin
		Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
High	5690	17.27	17.12	21.06	21.11	-0.05

PPSD Results

Channel	Frequency	Chain 0	Chain 1	Total	PPSD	PPSD
		Meas	Meas	Corr'd	Limit	Margin
		PPSD	PPSD	PPSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
High	5690	-1.057	-0.261	3.22	8.11	-4.89

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Limits (FCC), portion in 5.8 GHz DTS band

Bandwidth and Antenna Gain

Channel	Frequency	Min	Min	Correlated
		26 dB	99%	Gain
		BW	BW	
	(MHz)	(MHz)	(MHz)	(dBi)
High	5690	43.15	44.8500	8.89

Limits

Channel	Frequency	FCC	IC	IC	Power	FCC	IC	PPSD
		Power	Power	EIRP	Limit	PPSD	PSD	Limit
		Limit	Limit	Limit		Limit	Limit	
	(MHz)	(dBm)						
High	5690	21.11	24.00	30.00	21.11	8.11	11.00	8.11

Duty Cycle CF (dB) 0.85 Included in Calculations of Corr'd Power & PPSD

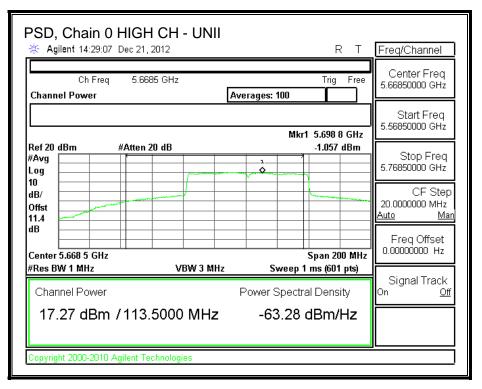
Output Power Results

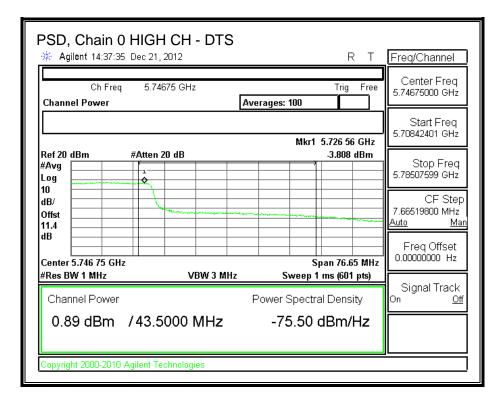
Channel	Frequency	Chain 0	Chain 1	Total	Power	Power
		Meas	Meas	Corr'd	Limit	Margin
		Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
High	5690	0.89	2.86	5.85	21.11	-15.26

PPSD Results

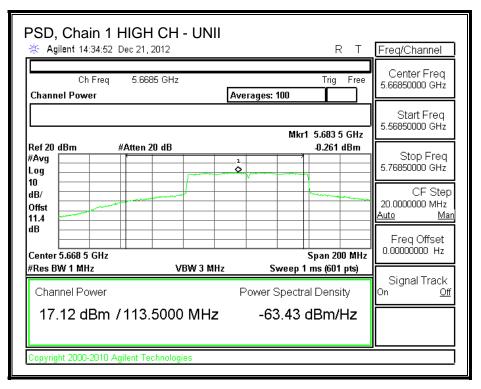
Channel	Frequency	Chain 0	Chain 1	Total	PPSD	PPSD
		Meas	Meas	Corr'd	Limit	Margin
		PPSD	PPSD	PPSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
High	5690	-3.808	-1.696	1.24	8.11	-6.87

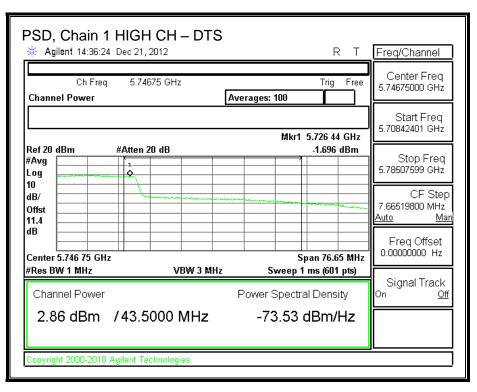
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7.97. 802.11ac VHT80 BF 3TX MODE IN THE 5.6 GHz BAND

7.97.1. **26 dB BANDWIDTH**

LIMITS

None; for reporting purposes only.

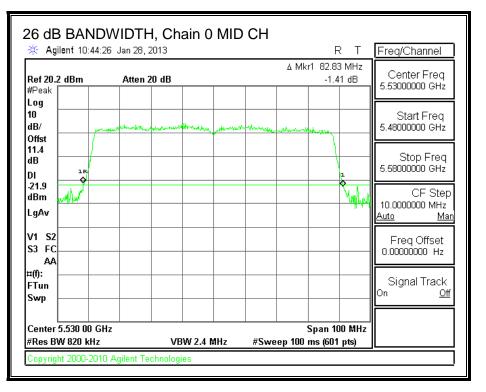
RESULTS

Channel	Frequency	26 dB BW	26 dB BW	26 dB BW
		Chain 0	Chain 1	Chain 2
	(MHz)	(MHz)	(MHz)	(MHz)
Mid	5530	82.83	81.67	82.00

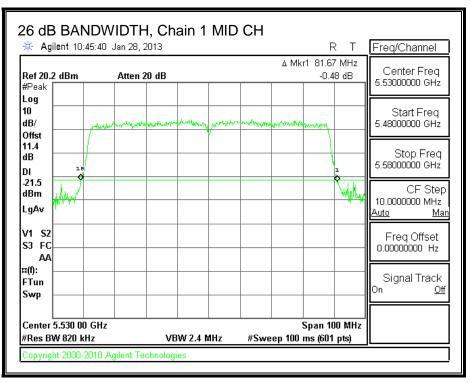
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26 dB BANDWIDTH, Chain 0



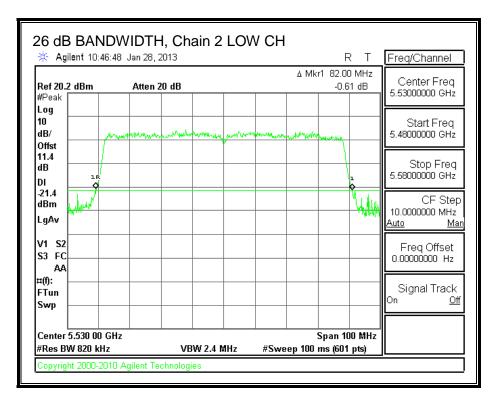
26 dB BANDWIDTH, Chain 1



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26 dB BANDWIDTH, Chain 2



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7.97.2. **99% BANDWIDTH**

LIMITS

None; for reporting purposes only.

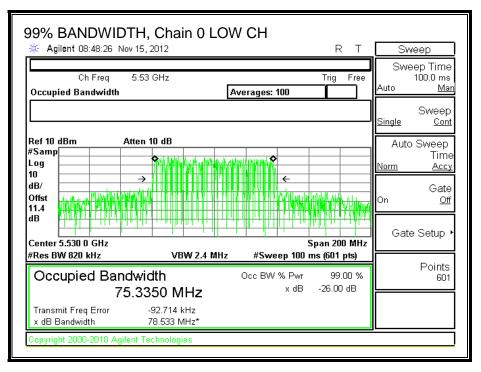
<u>RESULTS</u>

Channel	Frequency	99% BW	99% BW	99% BW
		Chain 0	Chain 1	Chain 2
	(MHz)	(MHz)	(MHz)	(MHz)
Mid	5530	75.3350	75.3561	75.2941

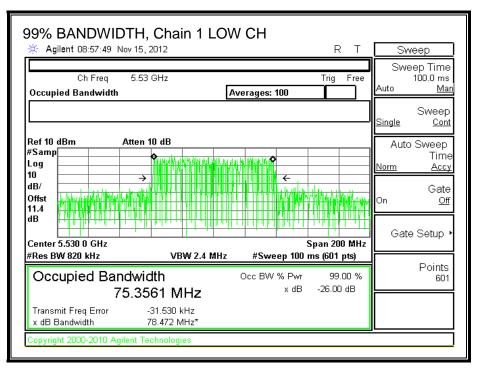
UL CCS FORM NO: CCSUP4701H 47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888 This report shall not be reproduced except in full, without the written approval of UL CCS.

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99% BANDWIDTH, Chain 0



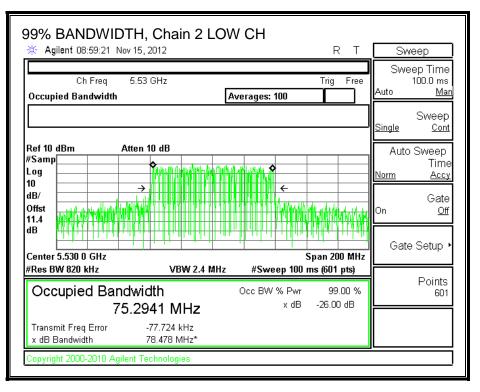
99% BANDWIDTH, Chain 1



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99% BANDWIDTH, Chain 2



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7.97.3. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (1)

For the band 5.5–5.7 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.

IC RSS-210 A9.2 (1)

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

DIRECTIONAL ANTENNA GAIN

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

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

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OUTPUT POWER RESULTS

Channel	Frequency	Min	Min	Directional
		26 dB	99%	Gain
		BW	BW	
	(MHz)	(MHz)	(MHz)	(dBi)
MID	5530	81.67	75.2941	10.05

Limits

Channel	Frequency	FCC	IC	IC	Power
		Power	Power	EIRP	Limit
		Limit	Limit	Limit	
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)
MID	5530	19.95	24.00	30.00	19.95

Output Power Results

Channel	Frequency	Chain 0	Chain 1	Chain 2	Total	Power	Power
		Meas	Meas	Meas	Corr'd	Limit	Margin
		Power	Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
MID	5530	13.42	13.00	13.12	17.95	19.95	-2.00

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PPSD RESULTS

Bandwidth and Antenna Gain

Channel	Frequency	Min	Min	Directional
		26 dB	99%	Gain
		BW	BW	
	(MHz)	(MHz)	(MHz)	(dBi)
Low	5530	81.67	75.2941	10.05

Limits

Channel	Frequency	FCC	IC	PPSD
		PPSD	PSD	Limit
		Limit	Limit	
	(MHz)	(dBm)	(dBm)	(dBm)
Low	5530	6.95	11.00	6.95

Duty Cycle CF (dB)	0.85	Included in PPSD

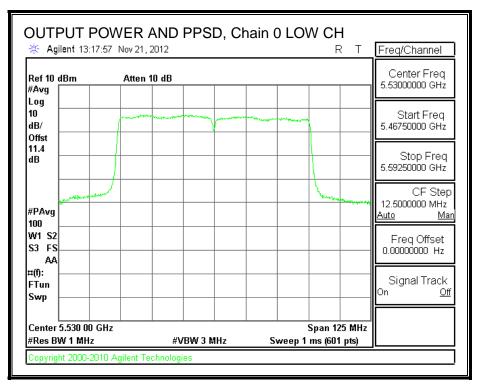
PPSD Results

Channel	Frequency	Chain 0	Chain 1	Chain 2	Total	PPSD	PPSD
		Meas	Meas	Meas	Corr'd	Limit	Margin
		PPSD	PPSD	PPSD	PPSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5530	-2.98	-3.00	-2.47	2.81	6.95	-4.14

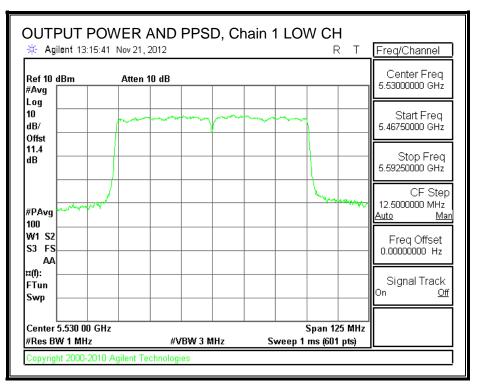
<u>Note:</u> method (1) "Measure and sum the spectra across the outputs" as specified in KDB 662911 D01 v01r02 was used for this PSD measurements.

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OUTPUT POWER AND PPSD, Chain 0

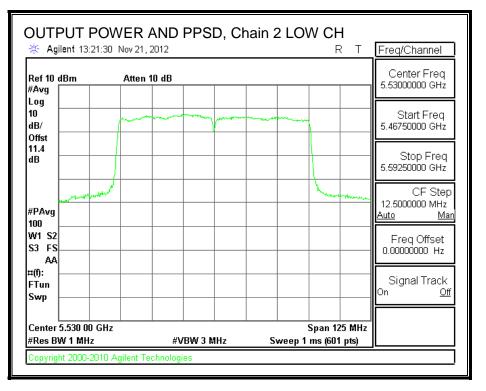


OUTPUT POWER AND PPSD, Chain 1



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OUTPUT POWER AND PPSD, Chain 2



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7.98. 802.11ac VHT80 BF 3TX MODE CHANNEL 138 IN THE 5.6 GHz BAND

7.98.1.26 dB BANDWIDTH- UNII

<u>LIMITS</u>

None; for reporting purposes only.

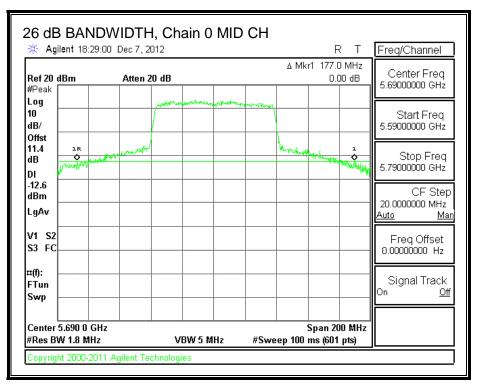
RESULTS

Channel	Frequency	26 dB BW	26 dB BW	26 dB BW
		Chain 0	Chain 1	Chain 2
	(MHz)	(MHz)	(MHz)	(MHz)
Mid	5690	177.0	184.7	186.0

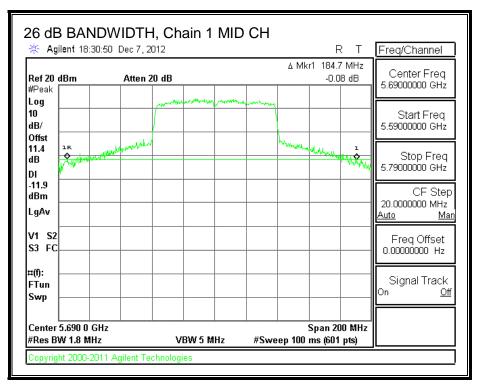
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26 dB BANDWIDTH, Chain 0



26 dB BANDWIDTH, Chain 1



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26 dB BANDWIDTH, Chain 2

	26 dB BANDWIDTH, Chain 2 MID CH							
🔆 Agilent 18:32:21 [Dec 7 , 2012		RT	Freq/Channel				
Ref 20 dBm #Peak	Atten 20 dB		∆ Mkr1 186.0 MH: -0.08 dB	z Center Freq 5.6900000 GHz				
Log 10 dB/		mandung		Start Freq 5.59000000 GHz				
11.4 1R dB			hand my have more	5.79000000 GHz				
-11.7 dBm LgAv				CF Step 20.0000000 MHz <u>Auto Man</u>				
V1 S2 S3 FC				Freq Offset 0.00000000 Hz				
¤(f): FTun Swp				Signal Track On <u>Off</u>				
Center 5.690 0 GHz Span 200 MHz #Res BW 1.8 MHz VBW 5 MHz #Sweep 100 ms (601 pts)								
Copyright 2000-2011 Ag	jilent Technologies]				

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7.98.2.99% BANDWIDTH

LIMITS

None; for reporting purposes only.

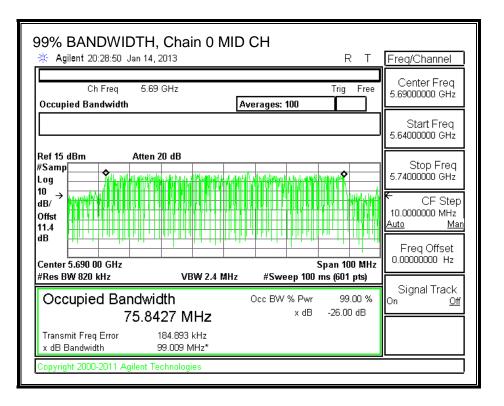
<u>RESULTS</u>

Channel	Frequency	99% BW	99% BW	99% BW
		Chain 0	Chain 1	Chain 2
	(MHz)	(MHz)	(MHz)	(MHz)
Mid	5690	75.8427	76.0536	75.9943

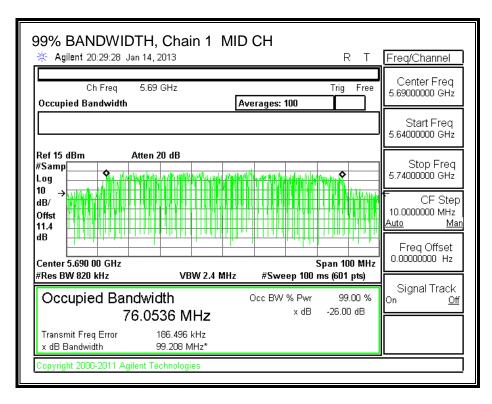
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99% BANDWIDTH, Chain 0

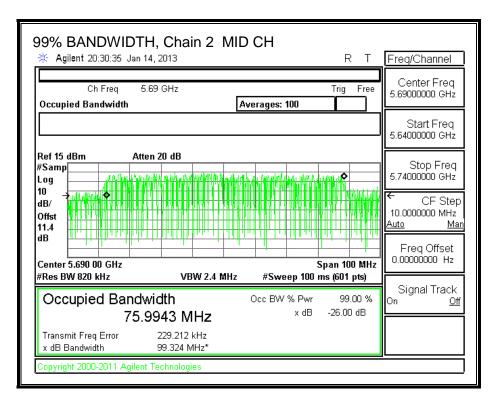


99% BANDWIDTH, Chain 1



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99% BANDWIDTH, Chain 2



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7.98.3. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (1)

For the band 5.5–5.7 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.

IC RSS-210 A9.2 (1)

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

DIRECTIONAL ANTENNA GAIN

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

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

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RESULTS

Limits (FCC), portion in UNII 2 ext band

Bandwidth and Antenna Gain

Channel	Frequency	Min	Min	Correlated
		26 dB	99%	Gain
		BW	BW	
	(MHz)	(MHz)	(MHz)	(dBi)
High	5690	123.50	74.0295	10.05

Limits

Channel	Frequency	FCC	IC	IC	Power	FCC	IC	PPSD
		Power	Power	EIRP	Limit	PPSD	PSD	Limit
		Limit	Limit	Limit		Limit	Limit	
	(MHz)	(dBm)						
High	5690	24.00	24.00	30.00	19.95	6.95	11.00	6.95

Duty Cycle CF (dB) 0.85 Included in Calculations of PPSD

Output Power Results

Channel	Frequency	Chain 0	Chain 1	Chain 2	Total	Power	Power
		Meas	Meas	Meas	Corr'd	Limit	Margin
		Power	Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
High	5690	14.11	14.65	14.19	19.94	19.95	-0.01

PPSD Results

Channel	Frequency	Chain 0	Chain 1	Chain 2	Total	PPSD	PPSD
		Meas	Meas	Meas	Corr'd	Limit	Margin
		PPSD	PPSD	PPSD	PPSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
High	5690	-3.60	-2.355	-3.205	2.60	6.95	-4.35

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Bandwidth and Antenna Gain

Channel	Frequency	Min	Min	Correlated
		26 dB	99%	Gain
		BW	BW	
	(MHz)	(MHz)	(MHz)	(dBi)
High	5690	53.50	4.0295	10.05

Limits

Channel	Frequency	FCC	IC	IC	Power	FCC	IC	PPSD
		Power	Power	EIRP	Limit	PPSD	PSD	Limit
		Limit	Limit	Limit		Limit	Limit	
	(MHz)	(dBm)						
High	5690	24.00	17.05	23.05	13.00	6.95	11.00	6.95

 Duty Cycle CF (dB)
 0.85
 Included in Calculations of PPSD

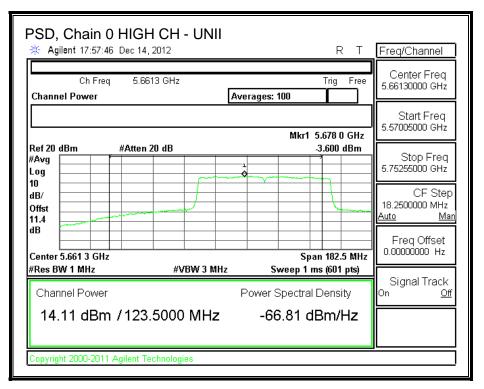
Output Power Results

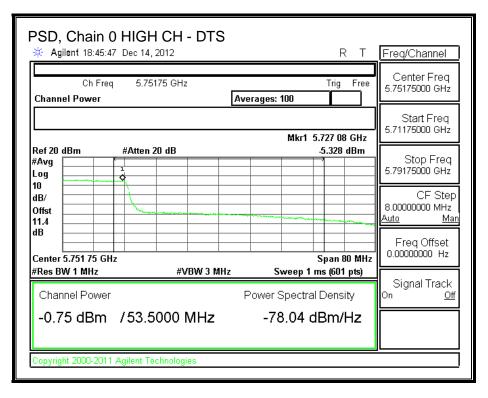
Channel	Frequency	Chain 0	Chain 1	Chain 2	Total	Power	Power
		Meas	Meas	Meas	Corr'd	Limit	Margin
		Power	Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
High	5690	-0.75	0.14	-0.55	5.25	13.00	-7.75

PPSD Results

Channel	Frequency	Chain 0	Chain 1	Chain 2	Total	PPSD	PPSD
		Meas	Meas	Meas	Corr'd	Limit	Margin
		PPSD	PPSD	PPSD	PPSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
High	5690	-5.328	-4.204	-4.630	0.92	6.95	-6.03

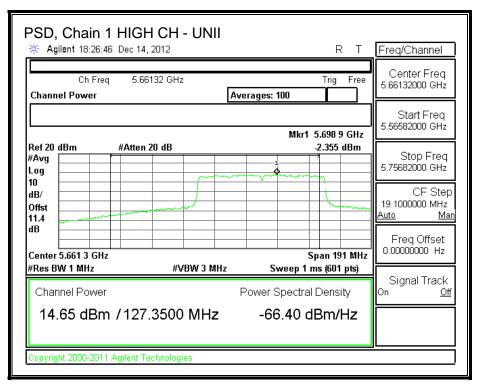
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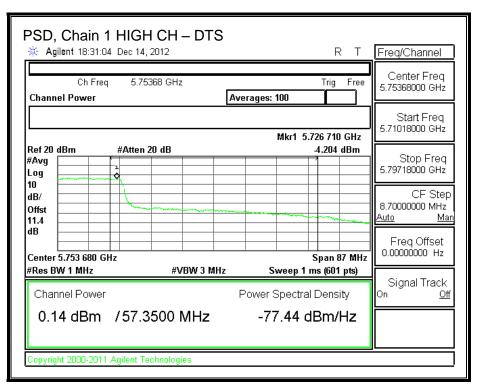




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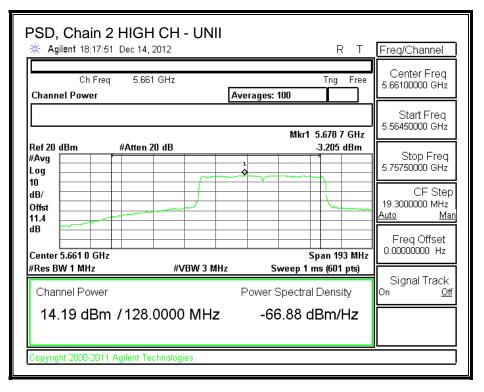
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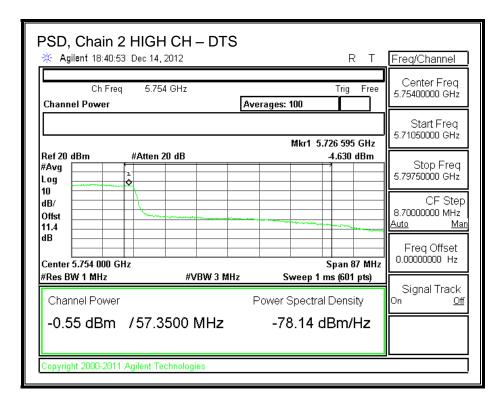




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8. RADIATED TEST RESULTS

8.1. LIMITS AND PROCEDURE

<u>LIMITS</u>

FCC §15.205 and §15.209

IC RSS-210 Clause 2.6 (Transmitter)

IC RSS-GEN Clause 6 (Receiver)

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.

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8.2. TRANSMITTER ABOVE 1 GHz

8.2.1. 802.11a LEGACY 1TX MODE IN THE 5.2 GHz BAND

Covered by testing 11n HT20 CDD 3TX, total power across the three chains is higher than the power level the device will operate at.

8.2.2. 802.11a CDD 2TX MODE IN THE 5.2 GHz BAND

Covered by testing 11n HT20 CDD 3TX, total power across the three chains is higher than the power level the device will operate at.

8.2.3. 802.11a CDD 3TX MODE IN THE 5.2 GHz BAND

Covered by testing 11n HT20 CDD 3TX, total power across the three chains is higher than the power level the device will operate at.

8.2.4. 802.11a BF 2TX MODE IN THE 5.2 GHz BAND

Covered by testing 11ac VHT20 BF 3TX, total power across the three chains is equal or higher than the power level the device will operate at.

8.2.5. 802.11a BF 3TX MODE IN THE 5.2 GHz BAND

Covered by testing 11ac VHT20 BF 3TX, total power across the three chains is equal or higher than the power level the device will operate at.

8.2.6. 802.11n HT20 1TX MODE IN THE 5.2 GHz BAND

Covered by testing 11n HT20 CDD 3TX, total power across the three chains is higher than the power level the device will operate at.

8.2.7. 802.11n HT20 CDD 2TX MODE IN THE 5.2 GHz BAND

Covered by testing 11n HT20 CDD 3TX, total power across the three chains is higher than the power level the device will operate at.

8.2.8. 802.11n HT20 STBC 2TX MODE IN THE 5.2 GHz BAND

Covered by testing 11n HT20 CDD 3TX, total power across the three chains is higher than the power level the device will operate at.

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8.2.9. 802.11n HT20 STBC 3TX MODE IN THE 5.2 GHz BAND

Covered by testing 11n HT20 CDD 3TX, total power across the three chains is higher than the power level the device will operate at.

8.2.10. 802.11n HT20 BF 2TX MODE IN THE 5.2 GHz BAND

Covered by testing 11ac VHT20 BF 3TX, total power across the three chains is equal or higher than the power level the device will operate at.

8.2.11. 802.11n HT20 BF 3TX MODE IN THE 5.2 GHz BAND

Covered by testing 11ac VHT20 BF 3TX, total power across the three chains is equal or higher than the power level the device will operate at.

8.2.12. 802.11ac VHT20 BF 2TX MODE IN THE 5.2 GHz BAND

Covered by testing 11ac VHT20 BF 3TX, total power across the three chains is equal or higher than the power level the device will operate at.

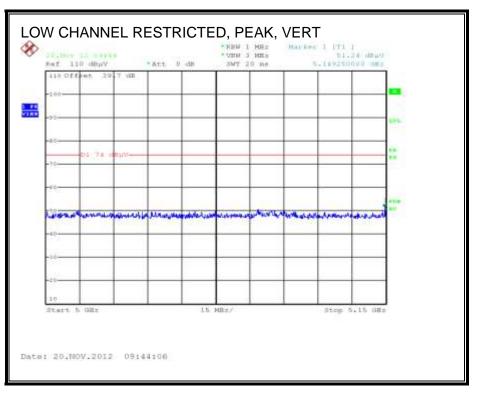
8.2.13. 802.11ac VHT20 BF 3TX MODE IN THE 5.2 GHz BAND

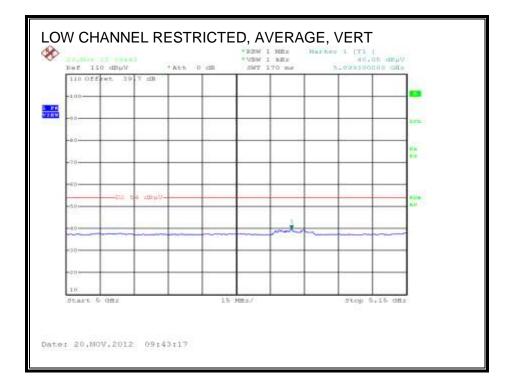
This mode is disabled in driver; the power level is less than 8dBm due to composite gain of antennas.

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8.2.14. 802.11n HT20 CDD 3TX MODE IN THE 5.2 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)





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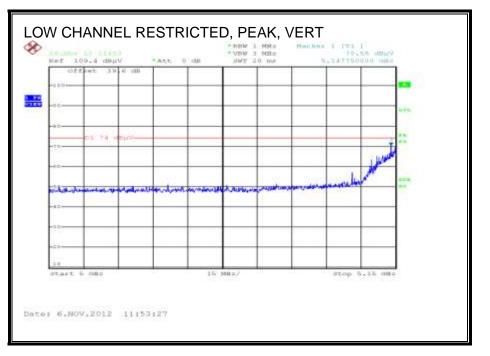
Company: Broadcom Corporation lest Target: FCC 15.407 Idea Oper: 5.2GHz band_HT20 CDD MCS0 3Tx f Measurement Frequency Amp Distance to Antenna Preamp Gain D Corr Average Field Strength Limit Pask Field Strength Limit Read Analyzer Reading AF Antenna Factor Peak Calculated Peak Field Strength Margin vs. Average Limit Margin vs. Average Limit CL f Dist Read AF CL Amp High Pass Filter Margin vs. Peak Limit f Dist Read AF CL Amp High Pass Filter Margin Ant. Pol. Det. Ant.High Table Angle Degree N f Dist Read AF CL Amp D Corr Filtr Corr. Limit Margin vs. Peak Limit f Dist Read AF CL Amp D Corr Filtr Corr. Limit Margin vs. Peak Margin vs. Peak N cow Channel 5180 MHz Image Image Image N N N 15:540 3.0 26:9 39:0 12:5 -34:0	Notes
Project #: 12U14668 Company: Broadcom Corporation Test Target: FCC 15.407 Mode Oper: 5.2GHz band_HT20 CDD MCS0 3Tx f Measurement Frequency Amp Preamp Gain Average Field Strength Limit Dist Distance to Antenna D Corr Distance Correct to 3 meters Peak Field Strength Limit Read Analyzer Reading Avgrage Field Strength @ 3 m Margin vs. Average Limit Average Limit AF Antenna Factor Peak Calculated Peak Field Strength Margin vs. Peak Limit CL Cable Loss HPF High Pass Filter Margin vs. Peak Limit f Dist Read AF CL Amp D Corr Filt Corr. Limit Margin vs. Peak Limit f Dist Read AF CL Amp D Corr Filt Corr. Limit Margin vs. Peak Limit f Off BB/m dB dB dB BB/mV/m dB V/H P/A/QP Ant.High Table Angle N f Ost Read AF CL Amp	Notor
Company: Broadcom Corporation lest Target: FCC 15.407 Idea Oper: 5.2GHz band_HT20 CDD MCS0 3Tx f Measurement Frequency Amp Distance to Antenna Preamp Gain D Corr Average Field Strength Limit Pask Field Strength Limit Read Analyzer Reading AF Antenna Factor Peak Calculated Peak Field Strength Margin vs. Average Limit Margin vs. Average Limit CL f Dist Read AF CL Amp High Pass Filter Margin vs. Peak Limit f Dist Read AF CL Amp High Pass Filter Margin Ant. Pol. Det. Ant.High Table Angle Degree N f Dist Read AF CL Amp D Corr Filtr Corr. Limit Margin vs. Peak Limit f Dist Read AF CL Amp D Corr Filtr Corr. Limit Margin vs. Peak Margin vs. Peak N cow Channel 5180 MHz Image Image Image N N N 15:540 3.0 26:9 39:0 12:5 -34:0	Notos
Fest Target: Mode Oper: FCC 15.407 5.2GHz band_HT20 CDD MCS0 3Tx f Measurement Frequency Amp Dist Preamp Gain Distance to Antenna Average Field Strength Limit Peak Field Strength Limit Read Read Analyzer Reading AF Average Field Strength @ 3 m AF Margin vs. Average Limit CL Cable Loss HPF High Pass Filter Margin vs. Peak Limit f Dist Read AF cl Cable Loss HPF High Pass Filter f Dist Read AF cl Oalo AF Calculated Peak Field Strength High Pass Filter Margin vs. Peak Limit f Dist Read AF CL Amp D Corr f Margin vs. Jass O O A HPF High Pass f Dist Read AF CL Amp D Corr Limit Margin vs. Peak Limit cl Margin vs. O O O O O P/A/QP Cm Degree N clow Channel 5180 MHz O	Notor
f Measurement Frequency Amp Distance to Antenna Preamp Gain D Corr Average Field Strength Limit Peak Field Strength Limit Peak Field Strength Limit Margin vs. Average Limit AF Antenna Factor CL Average Field Strength Calculated Peak Field Strength CL Margin vs. Average Limit Margin vs. Peak Limit CL Ant. Hol Calculated Peak Field Strength CL Det. Margin vs. Peak Limit Ant. High Table Angle V/H No f Dist CHz Read AF CL Amp dB D Corr Fltr B Corr. Limit Margin vs. Peak Limit Ant. Hol V/H Det. P/A/QP Ant.High Table Angle Degree N f Dist CHz Read AF CL Amp dB D Corr Fltr Fltr Corr. Limit Margin vs. Peak Limit f Dist CHZ Read AF CL Amp dB D Corr Fltr Corr. Limit Margin vs. Peak Limit f Dist CHZ Read AF CL Amp dB D Corr Fltr Corr. Limit Margin vs. Peak Limit f Dist Read AF CL Amp dB D Corr Fltr Corr. Limit Margin vs. Peak Limit list 0.01 0.0 0.0<	Notor
Dist Distance to Antenna D Corr Distance Correct to 3 meters Peak Field Strength Limit Read Analyzer Reading Avg Average Field Strength @ 3 m Margin vs. Average Limit AF Antenna Factor Peak Calculated Peak Field Strength Margin vs. Peak Limit CL Cable Loss HPF High Pass Filter Margin vs. Peak Limit f Dist Read AF CL Amp D Corr Filt Corr. Limit Margin vs. Peak Limit GHz (m) dBuV dB/m dB dB Corr. Limit Margin vs. Peak Limit Low Channel 5180 MHz	Notes
Dist Read Dist Analyzer Reading AF D Corr Antenna Factor CL D Corr Calculated Peak Field Strength HPF Peak Calculated Peak Field Strength High Pass Filter Peak Field Strength Margin vs. Average Limit Margin vs. Peak Limit f Dist CL Read Bl/m AF CL Amp dB D Corr dB Filt Corr. dB Limit Margin vs. Peak Limit D corr D Corr Filt Corr. dB Limit Margin vs. Peak Limit f Dist CHz Read (m) AF CL Amp dB D Corr Filtr Corr. dB Limit Margin vs. Peak Limit Margin vs. Peak Limit Low Channel 5180 MHz D Corr HPF GB dB dB V/M Margin vs. Peak Limit Low Channel 5180 MHz D Corr S - 34.0 0.0 0.0 54.0 74.0 -20.0 H P 180.7 248.2 Los Col J J J J J	Notes
AF CL Antenna Factor Cable Loss Peak HPF Calculated Peak Field Strength High Pass Filter Margin vs. Peak Limit f Dist GHz Read (m) AF dBuV CL Amp dB D Corr dB Fltr dB Corr. dB Limit dB Margin vs. Peak Limit f Dist GHz Read (m) AF dB/uV CL Amp dB D Corr Fltr GB Corr. dB Limit dB Margin vs. Peak Limit cov Date (m) dBuV dB dB D Corr Fltr GB Corr. GB Limit Margin vs. Peak Limit cov Date (m) dBuV dB dB D Corr Fltr GB Corr. GB Limit Margin vs. Peak Limit Low Channel 5180 MHz C C Amp JS.540 3.0 36.5 39.0 12.5 -34.0 0.0 0.0 44.5 54.0 -9.5 H A 180.7 248.2 15.540 3.0 2.6.1 39.0 12.5 -34.0 0.0 0.0 43.7 54.0 -10.3 V	Notes
CL Cable Loss HPF High Pass Filter f Dist (m) Read (BU/m) AF CL (B Amp (B D Corr (B Fltr (B Corr. (B Limit (B Margin (B Ant. Pol. (B Det. (M) Ant. High (B Table Angle (C N GHz (m) dB/m dB dB dB Corr. (B Limit (B Margin (B N.H. Pol. (V/H) Det. (N/H P/A/QP Cm Degree N Low Channel 5180 MHz N 15.540 3.0 36.5 39.0 12.5 -34.0 0.0 0.0 54.0 74.0 -9.5 H A 180.7 248.2 15.540 3.0 26.1 39.0 12.5 -34.0 0.0 0.0 53.8 74.0 -20.2 V P 189.9 348.6 15.540 3.0 26.1 39.0 12.5 -34.0 0.0 0.0 55.8 74.0 -10.3 <td>Notas</td>	Notas
CHz (m) dB/m dB dB dB dB dB dB dBuV/m dB V/H P/A/QP cm Degree cow Channel 5180 MHz 5540 3.0 36.5 39.0 12.5 -34.0 0.0 0.0 54.0 74.0 -20.0 H P 180.7 248.2 5.540 3.0 26.9 39.0 12.5 -34.0 0.0 0.0 44.5 54.0 -9.5 H A 180.7 248.2 5.540 3.0 36.3 39.0 12.5 -34.0 0.0 0.0 53.8 74.0 -20.2 V P 189.9 348.6 5.540 3.0 26.1 39.0 12.5 -34.0 0.0 0.0 43.7 54.0 -10.3 V A 189.9 348.6 5.640 3.0 28.4 38.8 12.5 -34.0 0.0 0.0 55.8 74.0 -18.2 H P	Notes
ow Channel 5180 MHz C C 5.540 3.0 36.5 39.0 12.5 -34.0 0.0 0.0 54.0 74.0 -20.0 H P 180.7 248.2 5.540 3.0 26.9 39.0 12.5 -34.0 0.0 0.0 44.5 54.0 -9.5 H A 180.7 248.2 5.540 3.0 36.3 39.0 12.5 -34.0 0.0 0.0 53.8 74.0 -20.2 V P 189.9 348.6 5.540 3.0 26.1 39.0 12.5 -34.0 0.0 0.0 43.7 54.0 -10.3 V A 189.9 348.6 5.640 3.0 26.1 39.0 12.5 -34.0 0.0 0.0 45.5 74.0 -10.3 V A 189.9 348.6 5.600 3.0 29.1 38.8 12.5 -34.0 0.0 0.0 45.5 45.0 <th>notes</th>	notes
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	
15.540 3.0 26.1 39.0 12.5 -34.0 0.0 43.7 54.0 -10.3 V A 189.9 348.6 Mid Channel 5200 MHz - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -	
Mid Channel 5200 MHz Image: Constraint of the state of t	
15.600 3.0 38.4 38.8 12.5 -34.0 0.0 0.0 55.8 74.0 -18.2 H P 100.7 41.5 15.600 3.0 29.1 38.8 12.5 -34.0 0.0 0.0 46.5 54.0 -7.5 H A 100.7 41.5 15.600 3.0 39.5 38.8 12.5 -34.0 0.0 0.0 56.9 74.0 -17.1 V P 100.2 345.0 15.600 3.0 39.2 38.8 12.5 -34.0 0.0 0.0 47.6 54.0 -6.4 V A 100.2 345.0	
15.600 3.0 29.1 38.8 12.5 -34.0 0.0 0.0 46.5 54.0 -7.5 H A 100.7 41.5 15.600 3.0 39.5 38.8 12.5 -34.0 0.0 0.0 56.9 74.0 -17.1 V P 100.2 345.0 15.600 3.0 30.2 38.8 12.5 -34.0 0.0 0.0 47.6 54.0 -6.4 V A 100.2 345.0	
15.600 3.0 30.2 38.8 12.5 -34.0 0.0 0.0 47.6 54.0 -6.4 V A 100.2 345.0	
High Channel 5240 MHz	
15.720 3.0 34.9 38.4 12.6 -34.0 0.0 0.0 51.9 74.0 -22.1 H P 138.5 45.9	
15.720 3.0 25.2 38.4 12.6 -34.0 0.0 0.0 42.2 54.0 -11.8 H A 138.5 45.9	
15.720 3.0 35.3 38.4 12.6 -34.0 0.0 0.0 52.4 74.0 -21.6 V P 194.1 86.7 15.720 3.0 25.3 38.4 12.6 -34.0 0.0 0.0 42.3 54.0 -11.7 V A 194.1 86.7	
Note: No other emissions were detected above the system noise floor.	

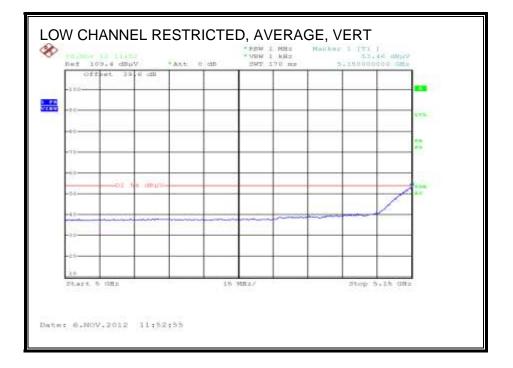
Note: tested with highest output powers at 20dBm to cover 1TX & 2TX.

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8.2.15. 802.11n HT40 1TX MODE IN THE 5.2 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)





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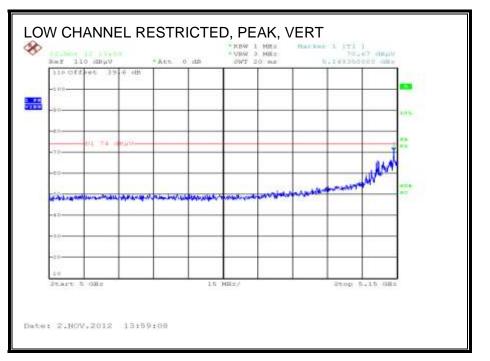
Covered by testing 11n HT40 CDD 3TX, total power across the three chains is higher than the power level the device will operate at.

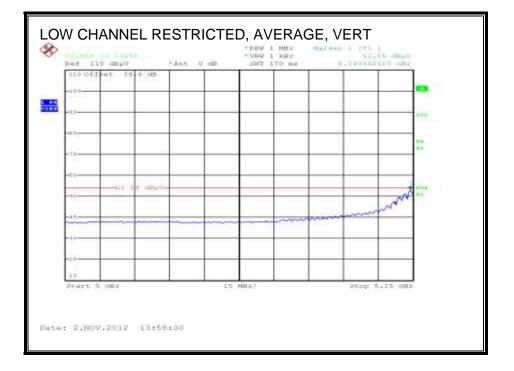
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8.2.16. 802.11n HT40 CDD 2TX MODE IN THE 5.2 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)





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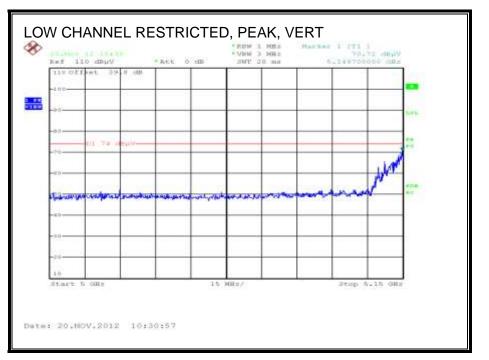
Covered by testing 11n HT40 CDD 3TX, total power across the three chains is higher than the power level the device will operate at.

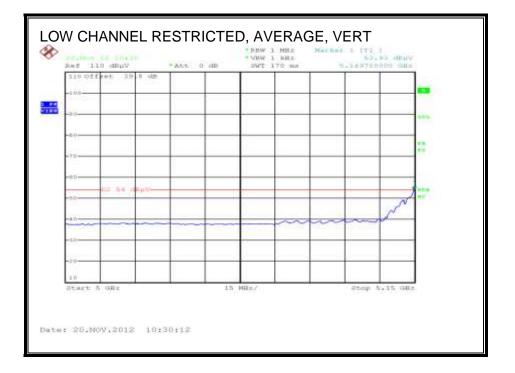
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8.2.17. 802.11n HT40 CDD 3TX MODE IN THE 5.2 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)





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Test Engr Date: Project #: Company Test Targo Mode Opo	: et:	Kristoph 12/03/12 12U1466 Broadco FCC 15. EUT with	58 m Corp 407	oratio		op and AC	C adap	ter. HT4	0 CDD M	CS0 3Tx	5.2GHz ba	und. With	7.6-18GH2	HPF	
	f Dist Read AF CL	Measuren Distance Analyzer Antenna Cable Los	to Anter Reading Factor	ina		Preamp C Distance Average l Calculate High Pass	Correc Field St d Peak	rength @ Field Stre	3 m	Peak Fie Margin v	Field Streng ld Strength ys. Average ys. Peak Lir	Limit Limit			
f	Dist	Read	AF	CL	Amp	D Corr		Corr.			Ant. Pol.	Det.	Ŭ	Table Angle	Notes
GHz	(m)	dBuV	dB/m	dB	dB	dB	dB	dBuV/m	dBuV/m	dB	V/H	P/A/QP	cm	Degree	
.ow Char			20.0	10.5	21.0			(1.0	54.0	12.2	N 7	D	101.6	245.0	
5.570 5.570	3.0	43.6 34.6	38.9 38.9	12.5 12.5	-34.0 -34.0	0.0	0.7 0.7	61.8 52.7	74.0 54.0	-12.2 -1.3	V V	<u>Р</u>	101.6	347.8	
5.570	3.0	<u>34.6</u> 39.1	38.9	12.5	-34.0 -34.0	0.0	0.7	52.7 57.2	54.0 74.0	-1.3 -16.8	V H	A P	101.6 125.4	347.8 14.5	
5.570	3.0	29.1	38.9	12.5	-34.0	0.0	0.7	47.2	74.0 54.0	-10.8	н Н	A	125.4	14.5	
Jigh Cha			30.7	12.5	-34.0	0.0	0.7	47.2	54.0	-0.0		A	123.4	14.5	
5.690	3.0	39.8	38.5	12.6	-34.0	0.0	0.7	57.6	74.0	-16.4	Н	Р	139.9	11.1	
15.690	3.0	30.6	38.5	12.6		0.0	0.7	48.4	54.0	-5.6	Н	Ā	139.9	11.1	*****
5.690	3.0	43.7	38.5	12.6	-34.0	0.0	0.7	61.6	74.0	-12.4	V	Р	114.4	0.0	
5.690	3.0	34.5	38.5	12.6	-34.0	0.0	0.7	52.3	54.0	-1.7	V	Α	114.4	0.0	
Rev. 4.1.2 Note: No		missions	were de	tected	above t	he syster	n nois	e floor.					· · · · · ·		

Note: tested with highest output powers at 20dBm to cover 1TX & 2TX.

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8.2.18. 802.11n HT40 STBC 2TX MODE IN THE 5.2 GHz BAND

Covered by testing 11n HT40 CDD 3TX, total power across the three chains is higher than the power level the device will operate at.

8.2.19. 802.11n HT40 STBC 3TX MODE IN THE 5.2 GHz BAND

Covered by testing 11n HT40 CDD 3TX, total power across the three chains is higher than the power level the device will operate at.

8.2.20. 802.11n HT40 BF 2TX MODE IN THE 5.2 GHz BAND

Covered by testing 11ac VHT40 BF 2TX, total power across the three chains is higher than the power level the device will operate at.

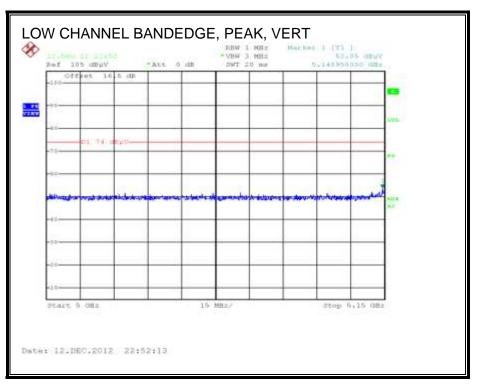
8.2.21. 802.11n HT40 BF 3TX MODE IN THE 5.2 GHz BAND

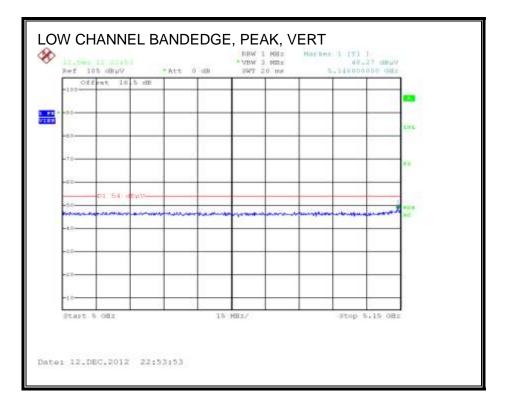
Covered by testing 11ac VHT40 BF 3TX, total power across the three chains is higher than the power level the device will operate at.

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8.2.22. 802.11ac VHT40 BF 2TX MODE IN THE 5.2 GHz BAND

AUTHORIZED BANDEDGE (LOW CHANNEL)





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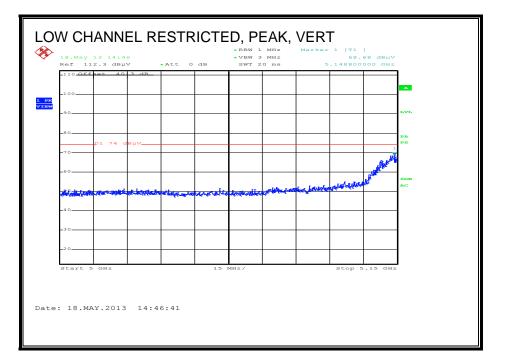
Covered by testing 11ac VHT40 BF 3TX, total power across the three chains is higher than the power level the device will operate at.

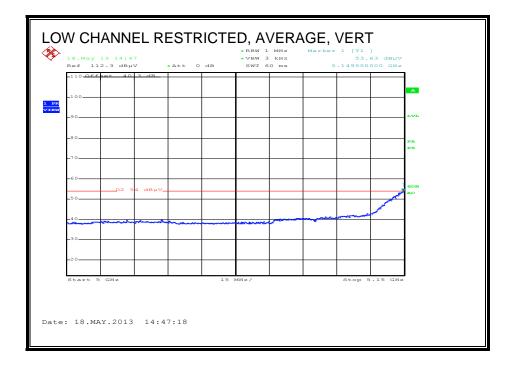
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8.2.23. 802.11ac VHT40 BF 3TX MODE IN THE 5.2 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)





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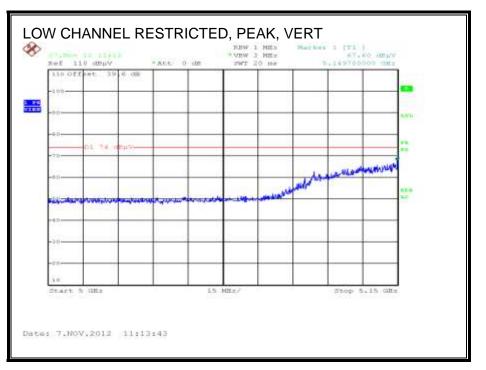
In Colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan="4"Colspan="4">Colspan="4"Colsp	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Project #: Jate: : Fest Engineer Configuration: Mode: Horn 1 T136; M/N: 3 HI Frequency C 3' cable 3' cable 22 f Dist GHz (m) Thannel 38 (5194) 5.570 3.0 Thannel 46 (5230)	nt: -18GHz -18GHz 22807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807000 280700000000000000000000000000000000000	12U14668 5/18/2013 K. Nguyen EUT with laptc Tx: 11ac 40 MI Pre-an T144 N 12' C 12' Ca Read Avg. dBuV 27.3	Hz TxBF nplifer Niteq 30 able 22 ble 228 AF	08A009 28076 07600 CL	931 - 500 -	20' cal	ble 22	2807500	i					FCC 15.205		
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Configuration:EUT with laptop: Tr, Hae 40 MHz TMBFMode:Tr, Hae 40 MHz TMBFEst Equipment:Pre-amplifer 1-26GHz T144 Miteq 3008A00931Pre-amplifer 26-40GHz T144 Miteq 3008A00931Horn > 18GHzLimit FCC 15.205More state12' cable 22807700 20' cable 2280750012' cable 22807500 20' cable 2280750020' cable 22807500 20' cable 22807500HPF T Reject FilterPeak Measurement RBW=1 MHz; VBW-33 Average Measurement RBW=1 MHz; VBW-33fDistRead Avg BuVAFCLAmp DD CorrFltrPeak Re AdAvg LMarAvg MarNotes V(K) Average Field Strength Limit Pk LimfMeasurement Frequency StopeAmp D CorrPreamp Gain D CorrAvg Lim StopeAverage Field Strength Limit Avg MarAverage Field Strength Limit Avg MarAverage Field Strength Limit Avg Mar Average Limit Pk LimAverage Field Strength Limit Avg Mar Average Field Strength Limit Avg Mar Average Field Strength Limit Avg Mar Argin vs. Average Limit Avg Mar Argin vs. Average Limit	diguration: EUT with laptop: de: Tx: Itae 40 MHz TxBF 2 Guipment: Horn 1-18 GHz Pre-amplifer 1-26 GHz Pre-amplifer 26-40 GHz Horn > 18 GHz Limit 136; M/N: 3117 @3m T144 Miteq 3008A00931 Pre-amplifer 26-40 GHz Horn > 18 GHz Limit FC 15.205 1 Prequency Cables 20' cable 22807500 20' cable 22807500 20' cable 22807500 Pre-amplifer 0 Pre-	Configuration: Viode: Fest Equipmer Horn 1 T136; M/N: 3 Hi Frequency Ci 3' cable 3' cable 22 f Dist GHz (S190 5.570 3.0 5.570 3.0 Thannel 46 (5230) 3.690 3.0	nt: -18GHz 1117 @3m ables 22807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 280700 280700 280700 280700 280700 2807000 2807000 2807000 28070000 2807000 2807000 2807000 280	EUT with laptor Tx; 11ac 40 MI Pre-an T144 N 12' cc 12' ca Read Avg. dBuV 27.3	Hz TxBF nplifer Niteq 30 able 22 ble 228 AF	08A009 28076 07600 CL	931 - 500 -	20' cal	ble 22	2807500	i					FCC 15.205		
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Horn 1-18GHz Pre-amplifer 1-26GHz Pre-amplifer 26-40GHz Horn > 18GHz Limit T136; M/N: 3117 @3m T144 Miteq 3008A00931 <td< td=""><td>Horn 1-18GHz 136; M/N: 3117 @3mPre-amplifer 1-26GHz T144 Miteq 3008A00931Horn > 18GHzLimitIterquency Cables3' cable 22807700 3' cable 2280770020' cable 22807500 20' cable 22807500Pre-amplifer 26-40GHzHorn > 18GHzLimitGeak Measurements RBW=1MHz; VBW=3MHz3' cable 22807700 3' cable 22807600Pre-amplifer 26-40GHzHorn > 18GHzLimitGeak Measurements RDW=1MHz; VBW=3MHz20' cable 22807500 20' cable 22807500 20' cable 22807500 20' cable 22807500HPFReject Filter Reject FilterPreak Measurements RBW=1MHz; VBW=3MHz Arge Measurements RBW=1MHz; VBW=3MHzfDistRead Avg. AF dBuV/mCLAmp D CorrPreamp Gain dB db dB db dB db dB db dB dbAvg MatbuV/mPk Lim Avg MarAvg Mar Margin vs. Average Field Strength Limit Pk LimfMeasurement Frequency D 3.0Arg Preamp Gain A state to Antenna Read Analyzer Reading AvgAvg Average Field Strength Limit Pk LimPreamp Gain Avg Mar Margin vs. Average Limit Pk Mar Margin vs. Average Limit Pk Mar Margin vs. Peak Limit</td><td>Horn 1 T136; M/N: 3 HI Frequency C 3' cable 3' cable 3' cable 22 f Dist GHz (m) Thannel 38 (519(5.570 3.0 5.570 3.0 Thannel 46 (523)</td><td>-18GHz 1117 @3m ables 22807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 280700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 280700 280700 280700 280700 280700 280700 280700 280700 280700 280700 280700 280700 280700 280700 280700 280700 280700 280700 280700 280700 2807000 280700 2807000 2807000 2807000 2807000 2807000</td><td> T144 N 12' c 12' ca 12' ca Read Avg. dBuV 27.3 </td><td>AF</td><td>08A009 28076 07600 CL</td><td>931 - 500 -</td><td>20' cal</td><td>ble 22</td><td>2807500</td><td> i</td><td></td><td></td><td></td><td></td><td>FCC 15.205</td></td<>	Horn 1-18GHz 136; M/N: 3117 @3mPre-amplifer 1-26GHz T144 Miteq 3008A00931Horn > 18GHzLimitIterquency Cables3' cable 22807700 3' cable 2280770020' cable 22807500 20' cable 22807500Pre-amplifer 26-40GHzHorn > 18GHzLimitGeak Measurements RBW=1MHz; VBW=3MHz3' cable 22807700 3' cable 22807600Pre-amplifer 26-40GHzHorn > 18GHzLimitGeak Measurements RDW=1MHz; VBW=3MHz20' cable 22807500 20' cable 22807500 20' cable 22807500 20' cable 22807500HPFReject Filter Reject FilterPreak Measurements RBW=1MHz; VBW=3MHz Arge Measurements RBW=1MHz; VBW=3MHzfDistRead Avg. AF dBuV/mCLAmp D CorrPreamp Gain dB db dB db dB db dB db dB dbAvg MatbuV/mPk Lim Avg MarAvg Mar Margin vs. Average Field Strength Limit Pk LimfMeasurement Frequency D 3.0Arg Preamp Gain A state to Antenna Read Analyzer Reading AvgAvg Average Field Strength Limit Pk LimPreamp Gain Avg Mar Margin vs. Average Limit Pk Mar Margin vs. Average Limit Pk Mar Margin vs. Peak Limit	Horn 1 T136; M/N: 3 HI Frequency C 3' cable 3' cable 3' cable 22 f Dist GHz (m) Thannel 38 (519(5.570 3.0 5.570 3.0 Thannel 46 (523)	-18GHz 1117 @3m ables 22807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 280700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 2807700 280700 280700 280700 280700 280700 280700 280700 280700 280700 280700 280700 280700 280700 280700 280700 280700 280700 280700 280700 280700 2807000 280700 2807000 2807000 2807000 2807000 2807000	 T144 N 12' c 12' ca 12' ca Read Avg. dBuV 27.3 	AF	08A009 28076 07600 CL	931 - 500 -	20' cal	ble 22	2807500	i					FCC 15.205		
T136; M/N: 3117 @3m T144 Miteq 3008A00931 FCC 15.205 FCC 15.205 If Frequency Cables 3' cable 22807700 12' cable 22807600 20' cable 22807500 I 2' cable 22807600 20' cable 22807500 Image: Colspan="4">PE AK Measurement RBW=1MHz; VBW=33 Are race Casurement RBW=1MHz; VBW=33 Are race Measurement RBW=1MHz; VBW=33 Of cable 22807700 IP Mar Avg Mar Mag Margan Notes CL Amp D Corr Fltr Peak Avg Pk Lim Avg Lim Pk Mar Avg Mar Notes GHz (m) dBuV dB/m dB dB dB dB dB dB dB dB uV/m dBuV/m dBuV/m dBuV/m dBuV/m dBuV/m dBuV/m dBuV/m dBuV/m dB uV/m dB uV (V/H) Channel 38 (5190 MHz) Channel 46 (5230 MHz) Image: Cable 22807 00 The rade Casure ment RBW=101112 S5570 3.0 Avg Mar Avg Mar Notes Cable 22807500 Image: Cable 22807500 PK Lim Avg Mar Notes Cable 22807500 PK Lim Avg Mar Notes Cable 22807500 PK Lim Neg Lim Avg Mar Notes Cable 22807500 <td>136; M/N: 3117 @3m T144 Miteq 3008A00931 FCC 15.205 I Frequency Cables 3' cable 22807700 12' cable 22807600 20' cable 22807500 PFC 15.205 FCC 15.205 3' cable 22807700 12' cable 22807600 20' cable 22807500 PFE Reject Filter Peak Measurements 3' cable 22807700 12' cable 22807600 20' cable 22807500 PK PFE Reject Filter Peak Measurements T144 Miteq 3008A00931 20' cable 22807500 P P P P P P P P P P P P P P P P P P P P P P P P P P P P P P P</td> <td>T136; M/N: 3 Hi Frequency G 3' cable 3' cable 3' cable 2' f Dist GHz Inamel 38 (5194) 5.570 3.0 5.570 3.0 5.570 3.0 5.570 3.0 5.570 3.0 5.570 3.0</td> <td>1117 @3m ables 22807700 2807700 2807700 Question MHz) 35.5 33.5</td> <td> T144 N 12' c 12' ca 12' ca Read Avg. dBuV 27.3 </td> <td>AF</td> <td>08A009 28076 07600 CL</td> <td>931 - 500 -</td> <td>20' cal</td> <td>ble 22</td> <td>2807500</td> <td> i</td> <td></td> <td></td> <td></td> <td></td> <td>FCC 15.205</td>	136; M/N: 3117 @3m T144 Miteq 3008A00931 FCC 15.205 I Frequency Cables 3' cable 22807700 12' cable 22807600 20' cable 22807500 PFC 15.205 FCC 15.205 3' cable 22807700 12' cable 22807600 20' cable 22807500 PFE Reject Filter Peak Measurements 3' cable 22807700 12' cable 22807600 20' cable 22807500 PK PFE Reject Filter Peak Measurements T144 Miteq 3008A00931 20' cable 22807500 P P P P P P P P P P P P P P P P P P P P P P P P P P P P P P P	T136; M/N: 3 Hi Frequency G 3' cable 3' cable 3' cable 2' f Dist GHz Inamel 38 (5194) 5.570 3.0 5.570 3.0 5.570 3.0 5.570 3.0 5.570 3.0 5.570 3.0	1117 @3m ables 22807700 2807700 2807700 Question MHz) 35.5 33.5	 T144 N 12' c 12' ca 12' ca Read Avg. dBuV 27.3 	AF	08A009 28076 07600 CL	931 - 500 -	20' cal	ble 22	2807500	i					FCC 15.205		
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CL Cable Loss HPF High Pass Filter		Dist Read AF	Distance to Analyzer R Antenna Fa	Antenna eading actor	y		D Corr Avg Peak	Distance Average Calculate	Correc Field S d Peak	Strength @ k Field Stre	3 m		Pk Lim Avg Mar	Peak Field Margin vs.	l Strength Li Average Li	imit imit		

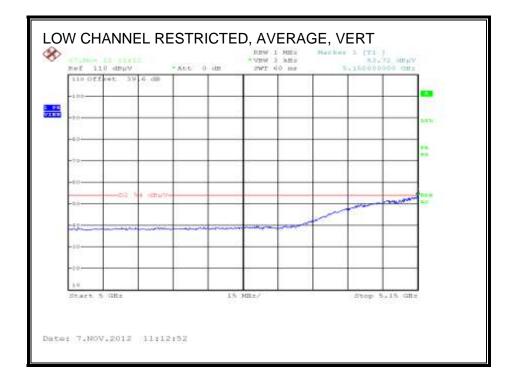
UL CCS FORM NO: CCSUP4701H 47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888 This report shall not be reproduced except in full, without the written approval of UL CCS.

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8.2.24. 802.11ac VHT80 1TX MODE IN THE 5.2 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)





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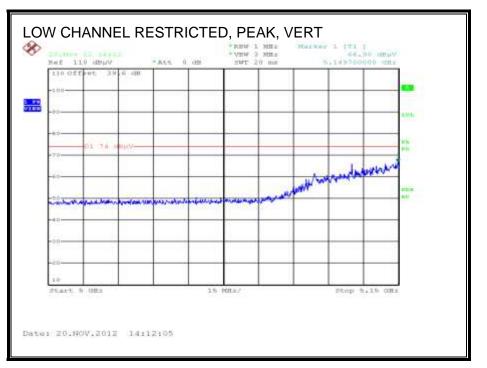
Covered by testing 11ac VHT80 CDD 3TX, total power across the three chains is higher than the power level the device will operate at.

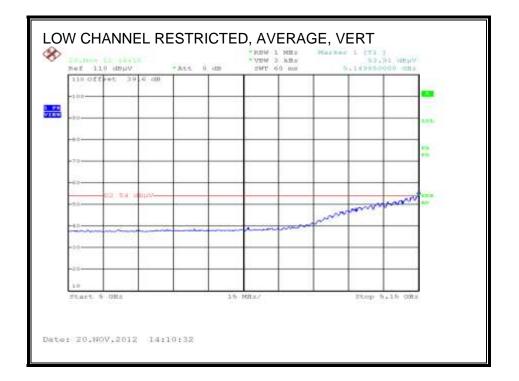
UL CCS FORM NO: CCSUP4701H 47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888 This report shall not be reproduced except in full, without the written approval of UL CCS.

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8.2.25. 802.11ac HT80 CDD 2TX MODE IN THE 5.2 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)





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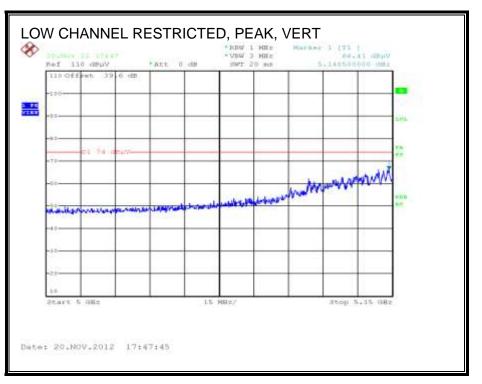
Covered by testing 11ac VHT80 CDD 3TX, total power across three two chains is higher than the power level the device will operate at.

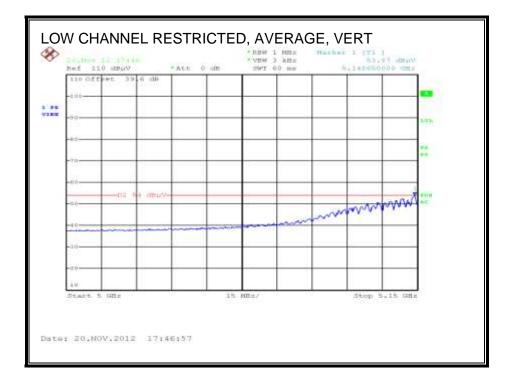
UL CCS FORM NO: CCSUP4701H 47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888 This report shall not be reproduced except in full, without the written approval of UL CCS.

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8.2.26. 802.11ac VHT80 CDD 3TX MODE IN THE 5.2 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)





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		Measuren													
Complia	nce Cer	tification	Service	s, Frei	nont 5n	h Chamb	er								
Test Engr Date: Project # Company Test Targ Mode Op	: y: et:	Kristoph 11/30/12 12U1466 Broadcor FCC 15 EUT with	58 m Corp 407	oratio		op and A(C adap	oter. HT8	0 CDD M	C S 0 3 Tx	5.2GHz ba	and.			
	f Dist Read AF CL	Measuren Distance Analyzer Antenna Cable Los	to Anter Reading Factor	ina		Preamp O Distance Average Calculate High Pas	Correc Field S d Peak	trength @ Field Stre	23 m	Peak Fie Margin v	Field Stren; ld Strength /s. Average /s. Peak Lir	Limit Limit			
f GHz	Dist	Read	AF dB/m	CL dB	Amp dB	D Corr		Corr.			Ant. Pol.		0	Table Angle	Notes
GHZ Mid Chai	(m)	dBuV	dB/m	qR	dВ	dB	đВ	dBuV/m	dBuV/m	dB	V/H	P/A/QP	cm	Degree	
und Chai 15.630	3.0	41.1	38.7	12.6	-34.0	0.0	0.7	59.0	74.0	-15.0	v	Р	140.1	345.3	
15.630	3.0	32.7	38.7	12.0	-34.0	0.0	0.7	50.7	54.0	-13.0	V	A	140.1	345.3	
15.630	3.0	35.6	38.7	12.6	-34.0	0.0	0.7	53.6	74.0	-20.4	, H	P	162.8	354.6	
15.630	3.0	26.2	38.7	12.6	-34.0	0.0	0.7	44.2	54.0	-9.8	Н	Ā	162.8	354.6	
Rev. 4.1.2 Note: No		missions	were de	tected	above t	he syster	n nois	se floor.		1		4	1		

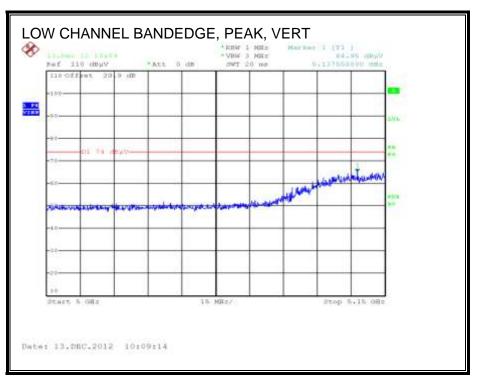
Note: tested with highest output powers at 20dBm to cover 1TX & 2TX.

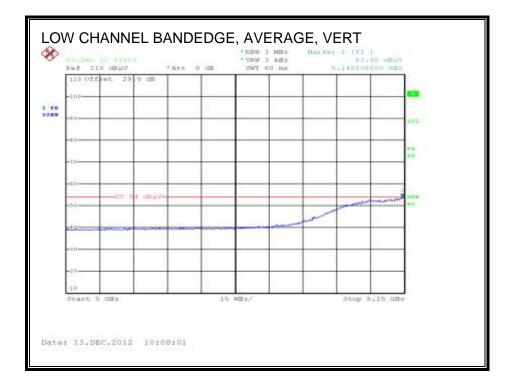
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8.2.27. 802.11ac VHT80 BF 2TX MODE IN THE 5.2 GHz BAND

AUTHORIZED BANDEDGE (LOW CHANNEL)





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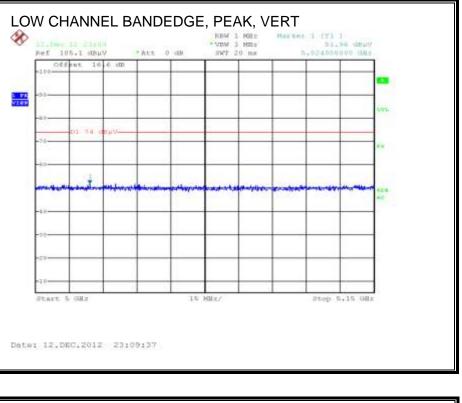
Covered by testing 11ac VHT80 BF 3TX, total power across the three chains is higher than the power level the device will operate at.

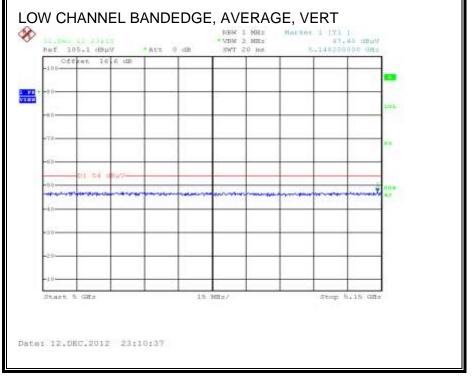
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8.2.28. 802.11ac VHT80 BF 3TX MODE IN THE 5.2 GHz BAND

AUTHORIZED BANDEDGE (LOW CHANNEL)





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. .	:	S. Aguila	ar												
Date:		12/10/12													
Project #:		12U2566	-												
Company		Broadcor	-	oratio	n										
Fest Targ		FCC 15.4													
Mode Op	er:	EUT with			• •	-	-				5.2 Ghz ba	and. Bean	forming.		
		Laptop w	ith ant	enna a	ind ada	pter setuj	p as B	eamforme	ee setup	in cham	ber.				
	f	Measurem	ient Freq			Preamp (Average	Field Stren	gth Limit			
	Dist	Distance	to Anter	ina	D Corr			et to 3 met		Peak Fie	ld Strength	Limit			
	Read	Analyzer	-		Avg			trength @		-	/s. Average				
	AF	Antenna l						Field Stree	ngth	Margin v	rs. Peak Lir	mit			
	CL	Cable Los	8		HPF	High Pas	s Filter								
f	Dist	Read	AF	CL		D Corr					Ant. Pol.		Ant.High	Table Angle	Notes
GHz	(m)	dBuV	dB/m	dB	dB	dB	dB	dBuV/m	dBuV/m	dB	V/H	P/A/QP	cm	Degree	
Mid Char		v													
15.630	3.0	34.7			-31.9	0.0	0.7	55.2	74.0	- 18.8	H	P	184.0	197.0	CH 42
15.630	3.0	25.2		å	-31.9	0.0	0.7	45.7	54.0	-8.3	H	A	184.0	197.0	CH 42
15.630	3.0	38.8	38.7		-31.9	0.0	0.7	59.3	74.0	-14.7	V	P	120.0	308.0	CH 42
15.630	3.0	28.2	38.7	13.0	-31.9	0.0	0.7	48.8	54.0	-5.2	V	Α	120.0	308.0	CH 42

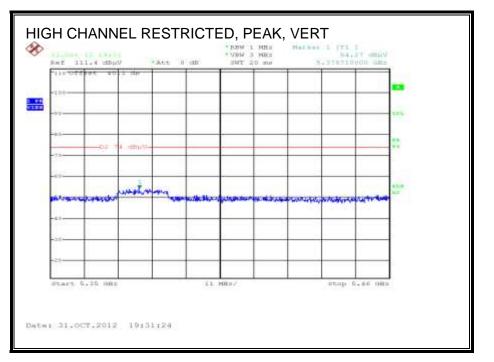
Note: tested with highest output powers at 20dBm to cover 2TX.

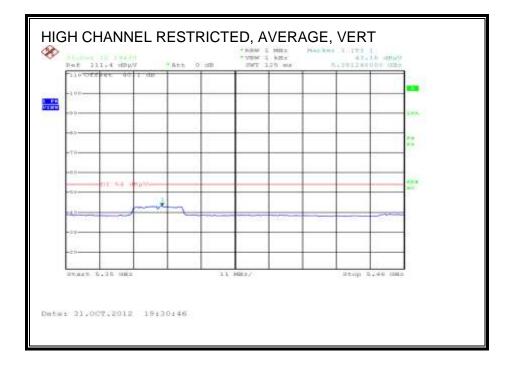
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8.2.29. 802.11a LEGACY MODE IN THE 5.3 GHz BAND

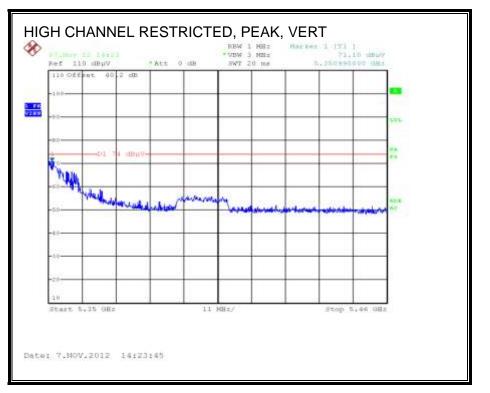
RESTRICTED BANDEDGE (MID CHANNEL 60)

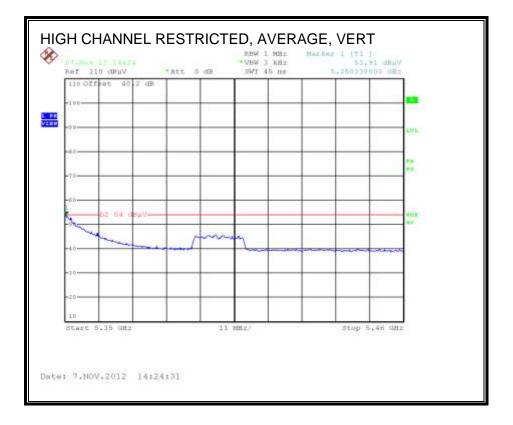




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RESTRICTED BANDEDGE (HIGH CHANNEL 64)





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Covered by testing 11n HT20 CDD 3TX, total power across the three chains is higher than the power level the device will operate at.

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8.2.30. 802.11a CDD 2Tx MODE IN THE 5.3 GHz BAND

Covered by testing 11n HT20 CDD 3TX, total power across the three chains is higher than the power level the device will operate at.

8.2.31. 802.11a CDD 3Tx MODE IN THE 5.3 GHz BAND

Covered by testing 11n HT20 CDD 3TX, total power across the three chains is higher than the power level the device will operate at.

8.2.32. 802.11a BF 2TX MODE IN THE 5.3 GHz BAND

Covered by testing 11ac VHT20 BF 3TX, total power across the three chains is equal or higher than the power level the device will operate at.

8.2.33. 802.11a BF 3TX MODE IN THE 5.3 GHz BAND

Covered by testing 11ac VHT20 BF 3TX, total power across the three chains is equal or higher than the power level the device will operate at.

8.2.34. 802.11n HT20 1TX MODE IN THE 5.3 GHz BAND

Covered by testing 11n HT20 CDD 3TX, total power across the three chains is higher than the power level the device will operate at.

8.2.35. 802.11n HT20 CDD 2TX MODE IN THE 5.3 GHz BAND

Covered by testing 11n HT20 CDD 3TX, total power across the three chains is higher than the power level the device will operate at.

8.2.36. 802.11n HT20 STBC 2TX MODE IN THE 5.3 GHz BAND

Covered by testing 11n HT20 CDD 3TX, total power across the three chains is higher than the power level the device will operate at.

8.2.37. 802.11n HT20 STBC 3TX MODE IN THE 5.3 GHz BAND

Covered by testing 11n HT20 CDD 3TX, total power across the three chains is higher than the power level the device will operate at.

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8.2.38. 802.11n HT20 BF 2TX MODE IN THE 5.3 GHz BAND

Covered by testing 11ac VHT20 BF 3TX, total power across the three chains is equal or higher than the power level the device will operate at.

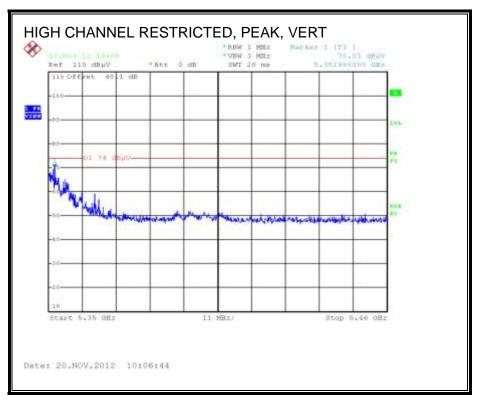
8.2.39. 802.11n HT20 BF 3TX MODE IN THE 5.3 GHz BAND

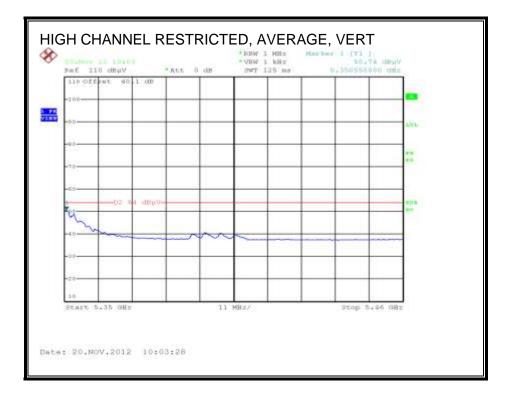
Covered by testing 11ac VHT20 BF 3TX, total power across the three chains is equal or higher than the power level the device will operate at.

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8.2.40. 802.11n HT20 CDD 3TX MODE IN THE 5.3 GHz BAND

RESTRICTED BANDEDGE (HIGH CHANNEL)





Notes

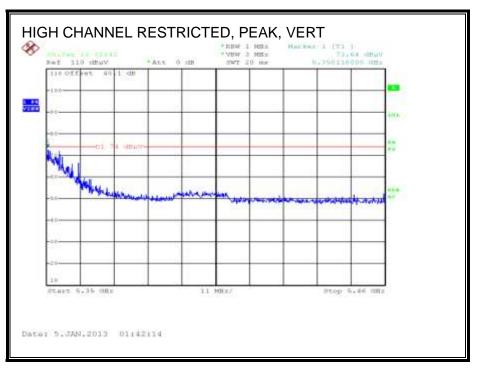
a-100-100-100-100-100-100-100-100-100-10

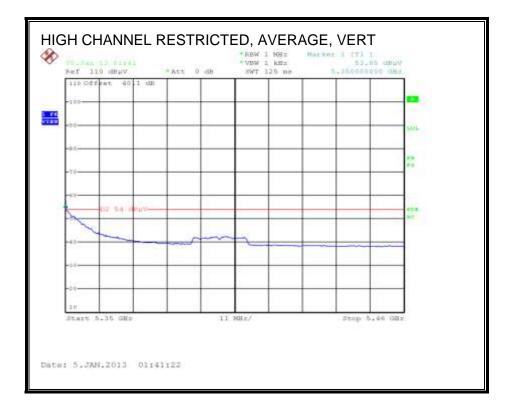
<u>Note:</u> tested with highest output powers at 20dBm for low & mid channels, 19dBm for high channel to cover 1TX & 2TX.

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8.2.41. 802.11ac VHT20 BF 3TX MODE IN THE 5.3 GHz BAND

RESTRICTED BANDEDGE (HIGH CHANNEL)





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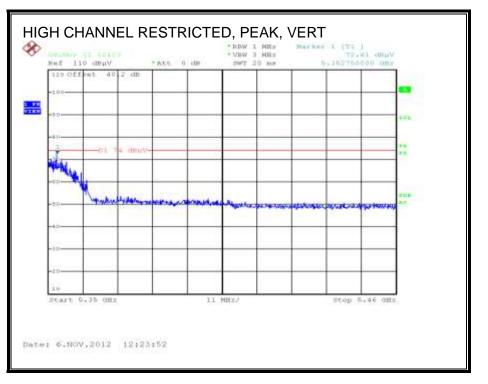
Test Engr		V. Tran		ilar											
Date:		01/04/13 12U1466													
Project #:		Broadco													
Company Test Targ		FCC 15.													
Mode Op				na sot	un lant	on and AC	~ Ada	nton 53(C HT20 X	ICS0 3T	X TX Beam	forming			
Mode Op	e1.					pter setuj						iloi mine			
	f	Measuren	nent Fre	quency	Amp	Preamp (Gain			Average	Field Stren	gth Limit			
	Dist	Distance	to Anter	nna	D Corr	Distance	Correc	ct to 3 me	ters	Peak Fie	ald Strength	Limit			
	Read	Analyzer	Reading		Avg	Average l	Field S	trength @	3 m	Margin	vs. Average	Limit			
	AF	Antenna			Peak	Calculate	d Peak	c Field Stre	ngth	Margin	vs. Peak Li	mit			
	CL	Cable Lo	55		HPF	High Pas	s Filter	r							
f	Dist	Read	AF	CL	Amp	D Corr	Fltr	Corr.	Limit	Margin	Ant. Pol.	Det.	Ant.High	Table Angle	Notes
GHz	(m)	dBuV		dB	dB	dB	dB	dBuV/m	dBuV/m	dB	V/H	P/A/QP	cm	Degree	
LOW CH			·····												
15.780	3.0	38.9	38.2	12.6		0.0	0.7	56.5	74.0	-17.5	H	P	141.1	253.8	
15.780	3.0	29.8	·	••••••••	-33.9	0.0	0.7	47.4	54.0	-6.6	H	A	141.1	253.8	
15.780 15.780	3.0 3.0	42.8 32.8	38.2 38.2		-33.9 -33.9	0.0	0.7 0.7	60.4 50.4	74.0 54.0	-13.6 -3.6	V V	P A	117.3 117.3	331.2 331.2	
10.700	3.0	<i>0.4</i> 0	-0.4	14.0	-33.9	0.0	v. /	00.4	04.0	-0.0	*	<u>a</u>	11/.0	331.2	
MID CHA	NNEL (60) 5300N	IHz	1				1							
15.900	3.0	41.0		12.7	-33.9	0.0	0.7	58.3	74.0	-15.7	H	P	133.2	240.8	
15.900	3.0	30.1	37.8	12.7		0.0	0.7	47.4	54.0	- 6.6	H	A	133.2	240.8	
15.900	3.0	41.3	37.8	12.7		0.0	0.7	58.6	74.0	-15.4	V	P	118.0	237.8	
15.900	3.0	32.1	37.8	12.7	-33.9	0.0	0.7	49.4	54.0	-4.6	V	A	118.0	237.8	
HICH CT	I A NINET	1640 5204						+							
HIGH CH 10.640	IANNEL 3.0	38.0	38.3	9.7	-35.7	0.0	0.8	51.0	74.0	-23.0	н	P	145.4	257.8	
10.640	3.0	28.9	38.3	9.7		0.0	0.8	41.9	54.0	-12.1	н	г А	145.4	257.8	
10.640	3.0	43.1	38.3	9.7		0.0	0.8	56.1	74.0	-17.9	v	P	142.4	353.6	
10.640	3.0	34.1	38.3		-35.7	0.0	0.8	- • • • • •	54.0	-6.9	V	A	142.4	353.6	
15.960	3.0	37.8	37.6		-33.9	0.0	0.7	·	74.0	- 19.1	H	P	100.0	241.3	
15.960	3.0	28.4	37.6		-33.9	0.0	0.7	• • • • • • • • • • • • • • • • • • • •	54.0	- <mark>8.5</mark>	H	A	100.0	241.3	
15.960	3.0	41.4	37.6	12.7		0.0	0.7	58.6	74.0	-15.4	V	P	106.3	236.3	
15.960	3.0	32.7	37.6	12.7	-33.9	0.0	0.7	49.9	54.0	-4.1	V	A	106.3	236.3	

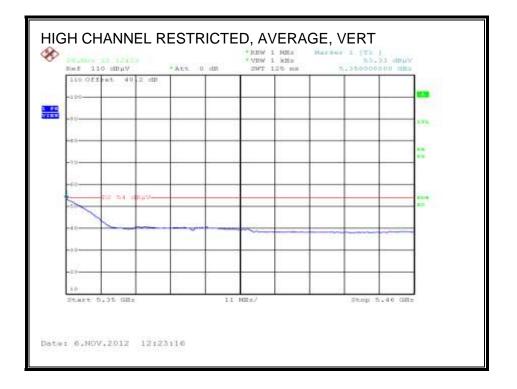
Note: tested with highest output powers at 20dBm to cover 2TX.

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8.2.42. 802.11n HT40 1TX MODE IN THE 5.3 GHz BAND

RESTRICTED BANDEDGE (HIGH CHANNEL)





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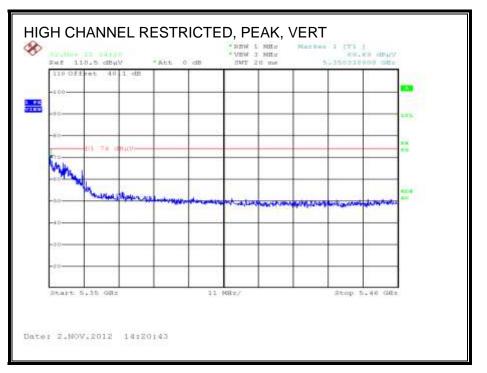
Covered by testing 11n HT40 CDD 3TX, total power across the three chains is higher than the power level the device will operate at.

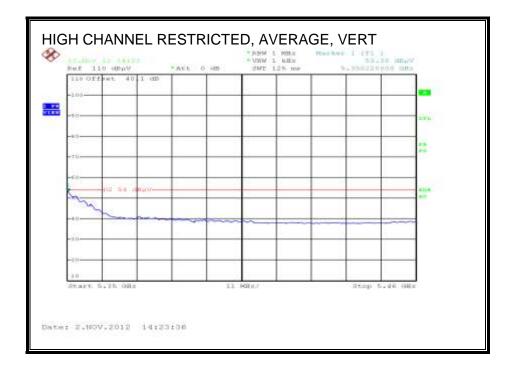
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8.2.43. 802.11n HT40 CDD 2TX MODE IN THE 5.3 GHz BAND

RESTRICTED BANDEDGE (HIGH CHANNEL)





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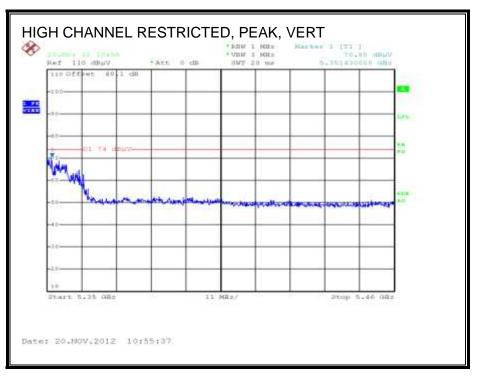
Covered by testing 11n HT40 CDD 3TX, total power across the three chains is higher than the power level the device will operate at.

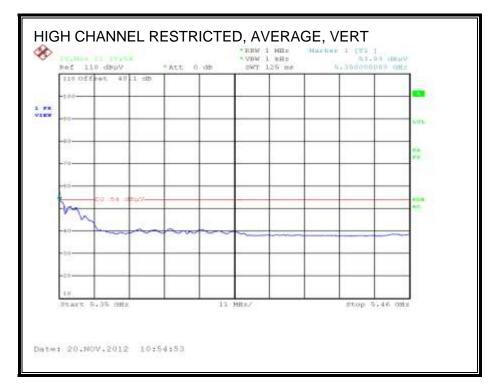
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8.2.44. 802.11n HT40 CDD 3TX MODE IN THE 5.3 GHz BAND

RESTRICTED BANDEDGE (HIGH CHANNEL)





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Gest Engr Date: Project #: Company Gest Targo Mode Opo	: ': et:	Kristoph 12/03/12 12U1466 Broadcon FCC 15 EUT with	8 m Corp 407	oratio		op and A(C adap	ter. HT4) CDD M	CS0 3Tx	5.3GHz ba	and. With	7.6-18GH	2 HPF	
	f Dist Read AF CL	Measuren Distance Analyzer Antenna Cable Los	to Anter Reading Factor	ina			Correc Field St d Peak	rength @ Field Stre	3 m	Peak Fie Margin	Field Stren eld Strength vs. Average vs. Peak Lir	Limit Limit			
f	Dist	Read	AF	CL	Amp	D Corr	8	Corr.	Limit	1	Ant. Pol.	Det.	-	Table Angle	Notes
GHz	(m)	dBuV	dB/m	dB	dB	dB	dB	dBuV/m	dBuV/m	dB	V/H	P/A/QP	cm	Degree	
.ow Char 5.810	nnel 527 3.0	0 MHz 44.2	38.1	12.6	-33.9	0.0	0.7	61.7	74.0	-12.3	v	Р	100.0	0.0	
5.810	3.0	44.2 35.4	38.1	12.6	-33.9	0.0	0.7	52.9	74.0 54.0	-12.5	v V	A F	100.0	0.0	
5.810	3.0	39.6	38.1	12.6	-33.9	0.0	0.7	57.1	74.0	-16.9	H	Р	100.4	16.4	
5.810	3.0	30.4	38.1	12.6	-33.9	0.0	0.7	47.9	54.0	- <u>6.1</u>	H	<u>A</u>	100.4	16.4	
<u>ligh Cha</u> 0.620	<u>innel 53</u> 3.0	10 MHz 42.1	38.3	9.7	-35.7	0.0	0.8	0.0 55.1	74.0	-18.9	v	Р	144.0	27.6	
0.620	3.0	33.5	38.3	9.7	-35.7	0.0	0.8	46.5	54.0	-7.5	v	A	144.0	27.6	
0.620	3.0	39.1	38.3	9.7	-35.7	0.0	0.8	52.1	74.0	-21.9	H	Р	137.5	325.3	
0.620	3.0	30.2	38.3	9.7	-35.7	0.0	0.8	43.2	54.0	-10.8	H	A	137.5	325.3	
5.930 5.930	3.0	44.7 35.3	37.7 37.7	12.7 12.7	-33.9 -33.9	0.0 0.0	0.7	61.9 52.5	74.0 54.0	-12.1	V V	<u>Р</u>	102.2 102.2	360.0 360.0	
<u>5.930</u> 5.930	3.0	41.0	37.7	12.7	-33.9	0.0	0.7 0.7	52.5 58.2	54.0 74.0	-1.5	V H	A P	102.2	<u> </u>	
5.930	3.0	31.5	37.7	12.7	-33.9	0.0	0.7	48.7	54.0	-5.3	H	A	147.6	14.4	
vote: ivo	omer ei	nissions	were de	<u>necrea</u>		ne syster	11 11015	<u>e 11001.</u>							

Note: tested with highest output powers at 20dBm to cover 1TX & 2TX.

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8.2.45. 802.11n HT40 STBC 1TX MODE IN THE 5.3 GHz BAND

Covered by testing 11n HT40 CDD 3TX, total power across the three chains is higher than the power level the device will operate at.

8.2.46. 802.11n HT40 STBC 2TX MODE IN THE 5.3 GHz BAND

Covered by testing 11n HT40 CDD 3TX, total power across the three chains is higher than the power level the device will operate at.

8.2.47. 802.11n HT40 STBC 3TX MODE IN THE 5.3 GHz BAND

Covered by testing 11n HT40 CDD 3TX, total power across the three chains is higher than the power level the device will operate at.

8.2.48. 802.11n HT40 BF 2TX MODE IN THE 5.3 GHz BAND

Covered by testing 11ac VHT40 BF 2TX, total power across the two chains is higher than the power level the device will operate at.

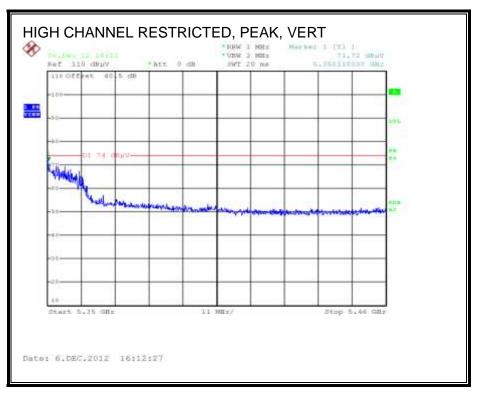
8.2.49. 802.11n HT40 BF 3TX MODE IN THE 5.3 GHz BAND

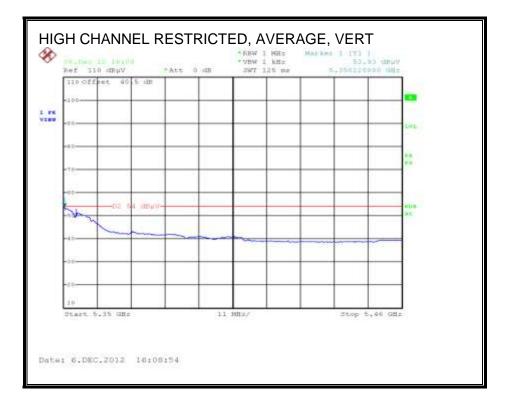
Covered by testing 11ac VHT40 BF 3TX, total power across the three chains is higher than the power level the device will operate at.

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8.2.50. 802.11ac VHT40 BF 2TX MODE IN THE 5.3 GHz BAND

RESTRICTED BANDEDGE (HIGH CHANNEL)





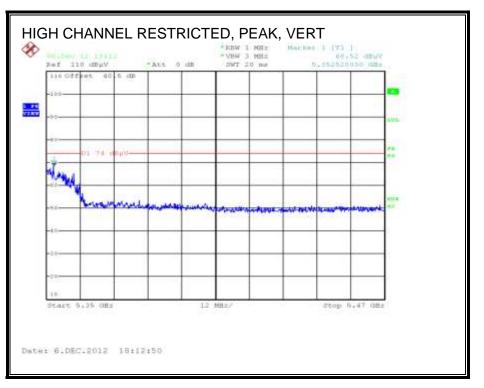
Covered by testing 11ac VHT40 BF 3TX, total power across the three chains is higher than the power level the device will operate at.

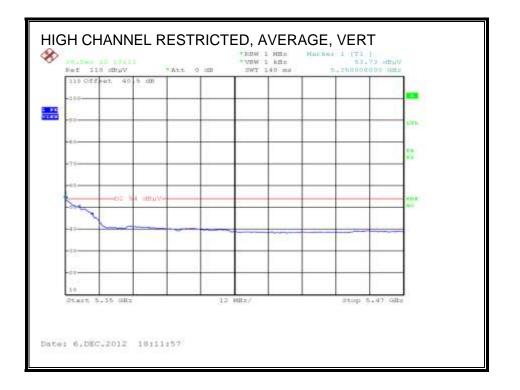
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8.2.51. 802.11ac VHT40 BF 3TX MODE IN THE 5.3 GHz BAND

RESTRICTED BANDEDGE (HIGH CHANNEL)





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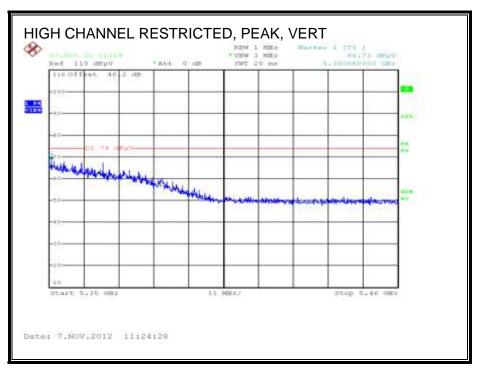
-		Measuren tification		s, Frei	nont 5n	ı Chamb	er										
Test Engi		S. Aguil:	ar														
Date:		12/10/12															
Project #		12U2566	8														
Company	y:	Broadcor	m Corp	oratio	n												
Test Targ		FCC 15.4	407														
Mode Op	er:	Tx 5.3G	llac H	[40 M	CS0 3T2	(TxBF)											
-		Laptop w	ith ant	enna a	ind ada	pter setu	p as B	eamform	iee setup	in cham	ber.						
	f	Measurem	ient Fre	quency	Amp	np Preamp Gain Average Field Strength Limit											
	Dist	Distance	to Anter	ina -	D Corr	Distance	Correc	t to 3 me	ters	Peak Field Strength Limit							
	Read	Analyzer	Reading		Avg												
	AF	Antennal	Factor		Peak	Calculate	d Peak	Field Stre	ength	Margin vs. Peak Limit							
	CL Cable Loss HP						High Pass Filter										
f	Dist	Read	AF	CL	Amp	D Corr	Fltr	Corr.	Limit	Margin	Ant. Pol.	Det.	Ant.High	Table Angle	Notes		
GHz	(m)	dBuV	dB/m	dB	dB	dB	dB	dBuV/m	dBuV/m	dB	V/H	P/A/QP	cm	Degree			
Low Cha	nnel 52'	70 MHz															
	3.0	36.1	38.1	12.6	-33.9	0.0	0.7	53.6	74.0	-20.4	H	P	126.8	255.5			
15.810					22.0	0.0											
	3.0	26.8	38.1	12.6	-33.9	0.0	0.7	44.3	54.0	-9.7	H	A	126.8	255.5			
15.810 15.810	3.0	26.8 39.6	38.1	12.6	-33.9	0.0	0.7	57.1	74.0	- 16.9	V	A P	100.3	237.0			
15.810 15.810 15.810	3.0 3.0	26.8 39.6 30.1	38.1	12.6					b								
15.810 15.810 15.810 High Ch	3.0 3.0 annel 53	26.8 39.6 30.1 10 MHz	38.1 38.1	12.6 12.6	-33.9 -33.9	0.0 0.0	0.7 0.7	57.1 47.6	74.0 54.0	-16.9 -6.4	V V	P A	100.3 100.3	237.0 237.0			
15.810 15.810 15.810 High Ch 10.620	3.0 3.0 annel 53 3.0	26.8 39.6 30.1 10 MHz 36.5	38.1 38.1 38.3	12.6 12.6 10.0	-33.9 -33.9 -34.0	0.0 0.0 0.0	0.7 0.7 0.8	57.1 47.6 51.6	74.0 54.0 74.0	-16.9 -6.4 -22.4	V V H	P A P	100.3 100.3 137.0	237.0 237.0 155.0			
15.810 15.810 15.810 High Ch 10.620 10.620	3.0 3.0 annel 53 3.0 3.0	26.8 39.6 30.1 10 MHz 36.5 26.0	38.1 38.1 38.3 38.3	12.6 12.6 10.0 10.0	-33.9 -33.9 -34.0 -34.0	0.0 0.0 0.0 0.0	0.7 0.7 0.8 0.8	57.1 47.6 51.6 41.0	74.0 54.0 74.0 54.0	-16.9 -6.4 -22.4 -13.0	V V H H	P A P A	100.3 100.3 137.0 137.0	237.0 237.0 155.0 155.0			
15.810 15.810 15.810 High Ch 10.620 10.620 10.620	3.0 3.0 annel 53 3.0 3.0 3.0 3.0	26.8 39.6 30.1 10 MHz 36.5 26.0 38.6	38.1 38.1 38.3 38.3 38.3 38.3	12.6 12.6 10.0 10.0 10.0	-33.9 -33.9 -34.0 -34.0 -34.0	0.0 0.0 0.0 0.0 0.0	0.7 0.7 0.8 0.8 0.8	57.1 47.6 51.6 41.0 53.6	74.0 54.0 74.0 54.0 74.0	-16.9 -6.4 -22.4 -13.0 -20.4	V V H H V	P A P A P	100.3 100.3 137.0 137.0 99.0	237.0 237.0 155.0 155.0 356.0			
15.810 15.810 15.810 High Ch 10.620 10.620 10.620 10.620	3.0 3.0 annel 53 3.0 3.0 3.0 3.0 3.0	26.8 39.6 30.1 310 MHz 36.5 26.0 38.6 27.3	38.1 38.1 38.3 38.3 38.3 38.3 38.3	12.6 12.6 10.0 10.0 10.0 10.0	-33.9 -33.9 -34.0 -34.0 -34.0 -34.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.7 0.7 0.8 0.8 0.8 0.8 0.8	57.1 47.6 51.6 41.0 53.6 42.3	74.0 54.0 74.0 54.0 74.0 54.0	-16.9 -6.4 -22.4 -13.0 -20.4 -11.7	V V H H V V	P A P A P A	100.3 100.3 137.0 137.0 99.0 99.0	237.0 237.0 155.0 155.0 356.0 356.0			
15.810 15.810 15.810 High Ch 10.620 10.620 10.620 10.620 10.620 15.930	3.0 3.0 annel 53 3.0 3.0 3.0 3.0 3.0 3.0 3.0	26.8 39.6 30.1 310 MHz 36.5 26.0 38.6 27.3 35.4	38.1 38.1 38.3 38.3 38.3 38.3 38.3 38.3	12.6 12.6 10.0 10.0 10.0 10.0 13.2	-33.9 -33.9 -34.0 -34.0 -34.0 -34.0 -31.8	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.7 0.7 0.8 0.8 0.8 0.8 0.8 0.8 0.7	57.1 47.6 51.6 41.0 53.6 42.3 55.1	74.0 54.0 74.0 54.0 74.0 54.0 74.0	-16.9 -6.4 -22.4 -13.0 -20.4 -11.7 -18.9	V V H V V H	P A P A P A P	100.3 100.3 137.0 137.0 99.0 99.0 99.0 215.0	237.0 237.0 155.0 155.0 356.0 356.0 140.0			
15.810 15.810 High Ch 10.620 10.620 10.620 10.620 10.620 15.930 15.930	3.0 3.0 annel 53 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	26.8 39.6 30.1 310 MHz 36.5 26.0 38.6 27.3 35.4 24.6	38.1 38.1 38.3 38.3 38.3 38.3 38.3 37.7 37.7	12.6 12.6 10.0 10.0 10.0 13.2 13.2	-33.9 -33.9 -34.0 -34.0 -34.0 -34.0 -31.8 -31.8	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.7 0.7 0.8 0.8 0.8 0.8 0.8 0.7 0.7	57.1 47.6 51.6 41.0 53.6 42.3 55.1 44.4	74.0 54.0 74.0 54.0 74.0 54.0 74.0 54.0 74.0	-16.9 -6.4 -22.4 -13.0 -20.4 -11.7 -18.9 -9.6	V V H V V H H	P A P A P A A	100.3 100.3 137.0 137.0 99.0 99.0 215.0 215.0	237.0 237.0 155.0 356.0 356.0 140.0 140.0			
15.810 15.810 15.810 High Ch 10.620 10.620 10.620 10.620 15.930 15.930 15.930	3.0 3.0 annel 53 3.0 3.0 3.0 3.0 3.0 3.0 3.0	26.8 39.6 30.1 310 MHz 36.5 26.0 38.6 27.3 35.4	38.1 38.3 38.3 38.3 38.3 38.3 37.7 37.7 37.7	12.6 12.6 10.0 10.0 10.0 13.2 13.2 13.2	-33.9 -33.9 -34.0 -34.0 -34.0 -34.0 -31.8	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.7 0.7 0.8 0.8 0.8 0.8 0.8 0.8 0.7	57.1 47.6 51.6 41.0 53.6 42.3 55.1	74.0 54.0 74.0 54.0 74.0 54.0 74.0	-16.9 -6.4 -22.4 -13.0 -20.4 -11.7 -18.9	V V H V V H	P A P A P A P	100.3 100.3 137.0 137.0 99.0 99.0 99.0 215.0	237.0 237.0 155.0 155.0 356.0 356.0 140.0			

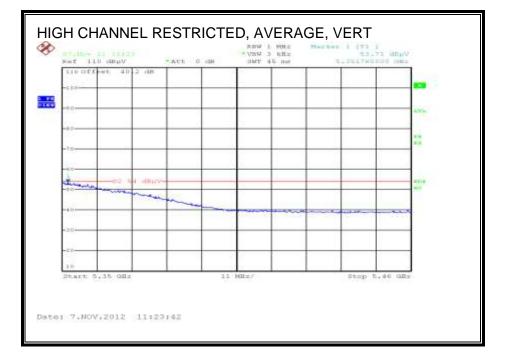
<u>Note:</u> tested with highest output powers to cover 2TX; low channel=17.5dBm & high channel=20dBm.

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8.2.52. 802.11ac VHT80 1TX MODE IN THE 5.3 GHz BAND

RESTRICTED BANDEDGE (HIGH CHANNEL)





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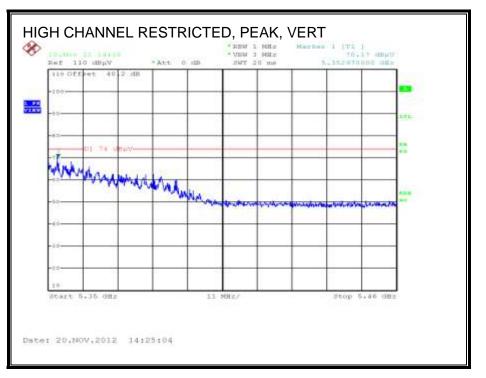
Covered by testing 11ac VHT80 CDD 3TX, total power across the three chains is higher than the power level the device will operate at.

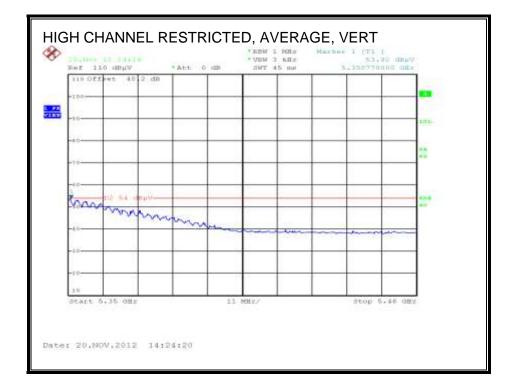
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8.2.53. 802.11ac HT80 CDD 2TX MODE IN THE 5.3 GHz BAND

RESTRICTED BANDEDGE (HIGH CHANNEL)





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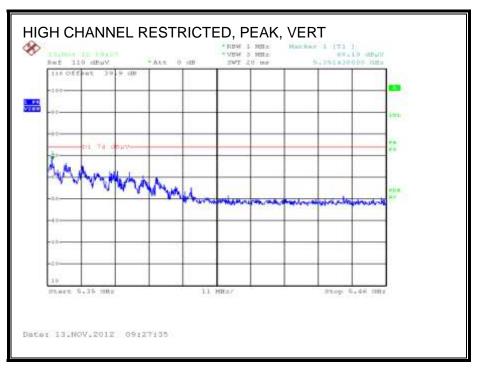
Covered by testing 11ac VHT80 CDD 3TX, total power across the three chains is higher than the power level the device will operate at.

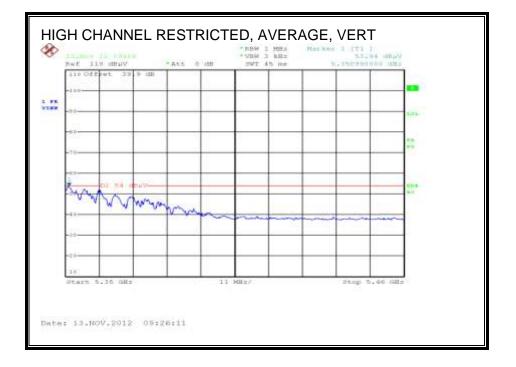
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8.2.54. 802.11ac HT80 CDD 3TX MODE IN THE 5.3 GHz BAND

RESTRICTED BANDEDGE (HIGH CHANNEL)





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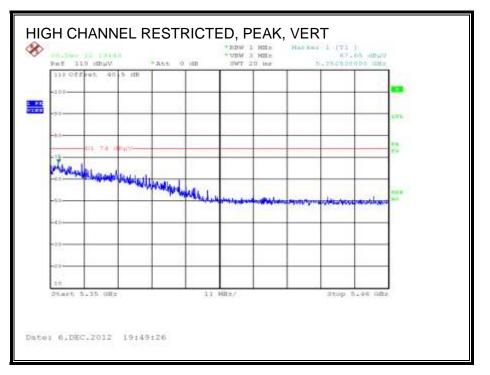
		Measuren tification		- F		Chamb									
Compilar	ice Cer	incation	Service	s, frei	nont 5n	i Chambe	er								
Test Engr	:	Kristoph	er Ngu	yen											
Date:		11/30/12													
Project #:		12U1466													
Company		Broadcon	-	oratio	n										
Test Targe Mode Ope		FCC 15.4 FUT with		na setu	in lante	n and M	' ader	ter HT&A		CS0 37-	5.2GHz ba	nd			
induc Opt		LO I with	antem	ia sett	ip, iapti	p anu AQ	, aud	ACT: 11100	CDD W	C 50 5 IX	5.20112 De	ind.			
	c					D	a .				E: 110				
	f Dist	Measuren				Preamp (Field Stren				
	Read														
	AF	Antenna Factor Peak Calculated Peak Field Strength Margin vs. Peak Limit													
	CL	Cable Loss HPF High Pass Filter													
						e									
f	Dist	Read	AF	CL	Amp	D Corr	Fltr	Corr.	Limit	Margin	Ant. Pol.	Det.	Ant.High	Table Angle	Notes
GHz	(m)	dBuV	dB/m	dB	dB	dB	dB	dBuV/m	dBuV/m	dB	V/H	P/A/QP	cm	Degree	
Mid Char													10.1.0	200.2	
15.870 15.870	3.0	42.4	37.9 37.9	12.7	-33.9	0.0 0.0	0.7 0.7	59.8 50.7	74.0 54.0	-14.2 -3.3	V V	P A	104.2 104.2	308.2 308.2	
15.870	3.0	37.2	37.9	12.7	-33.9	0.0	0.7	54.6	74.0	-3.5	 Н	A P	104.2	308.2	
15.870	3.0	27.6	37.9	12.7	-33.9	0.0	0.7	44.9	54.0	-10.4	H H	A	152.4	359.4	
	1	1		1		1		T		1			1		*****

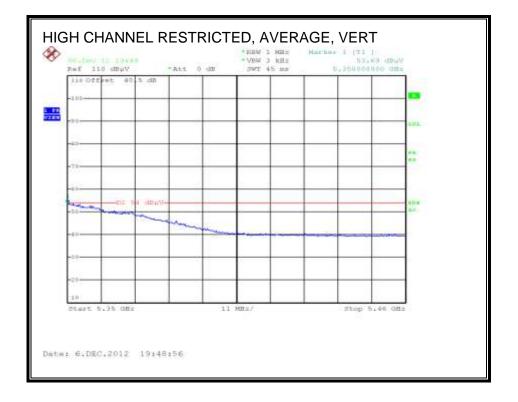
Note: tested with highest output powers at 20dBm to cover 1TX & 2TX.

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8.2.55. 802.11ac VHT80 BF 2TX MODE IN THE 5.3 GHz BAND

RESTRICTED BANDEDGE





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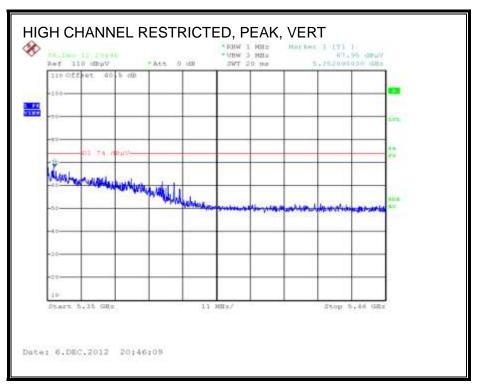
Covered by testing 11ac VHT80 BF 3TX, total power across the three chains is higher than the power level the device will operate at.

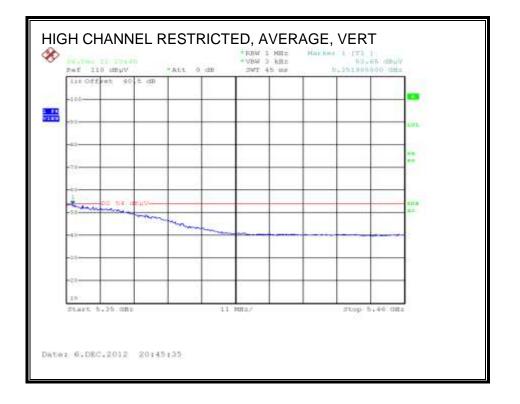
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8.2.56. 802.11ac VHT80 BF 3TX MODE IN THE 5.3 GHz BAND

RESTRICTED BANDEDGE (HIGH CHANNEL)





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Compila	ace oer	tification	Service			- Chadlo											
Test Engr		S. Aguil	ar														
Date:		12/10/12															
Project #	:	12U2566	8														
Company	y:	Broadco	m Corp	oratio	n												
Test Targ	et:	FCC 15.	407														
Mode Op	er:	EUT with	1 anten	na seti	ıp, lapte	op and AO	C adap	oter.	HT80 MG	CS0 3TX	5.2 Ghz ba	and. Bean	oforming.				
		Laptop w	Laptop with antenna and adapter setup as Beamformee setup in chamber.														
	f	Measuren	nent Fre	quency	Amp	Preamp (Gain			Average	Field Stren	gth Limit					
	Dist	Distance	to Anter	nna	D Corr	Distance	Correc	et to 3 me	ters	Peak Field Strength Limit							
	Read	Analyzer	Reading		Avg	Average	Field S	trength @	3 m	Margin vs. Average Limit							
	AF	Antenna Factor Peak Calculated Peak Field Strength Margin vs. Peak Limit															
	CL	Cable Loss HPF High Pass Filter															
f	Dist	Read	AF	CL	Amn	D Corr	Fltr	Corr.	Limit	Margin	Ant. Pol.	Det.	Ant High	Table Angle	Notes		
GHz	(m)	dBuV			dB	dB			dBuV/m		V/H	P/A/QP	cm	Degree			
Channel																	
15.870	3.0	35.1	37.9	13.1	-31.8	0.0	0.7	55.0	74.0	-19.0	H	P	139.0	0.0	CH 58		
15.870	3.0	25.3	37.9	13.1	-31.8	0.0	0.7	45.2	54.0	- <mark>8.8</mark>	H	A	139.0	0.0	CH 58		
15.870	3.0	36.9	37.9	13.1	-31.8	0.0	0.7	56.8	74.0	-17.2	V	P	126.0	300.0	CH 58		
15.870	3.0	27.1	37.9	13.1	-31.8	0.0	0.7	47.0	54.0	-7.0	V	A	126.0	300.0	CH 58		
								1 1						1			
Rev. 4.1.2	7		:	:													

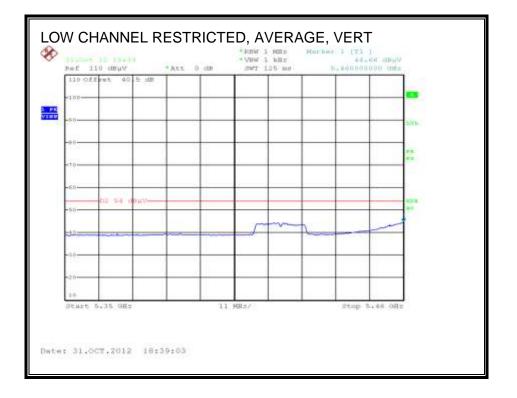
Note: tested with highest output powers at 20dBm to cover 2TX.

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8.2.57. 802.11a LEGACY 1TX MODE IN THE 5.6 GHz BAND

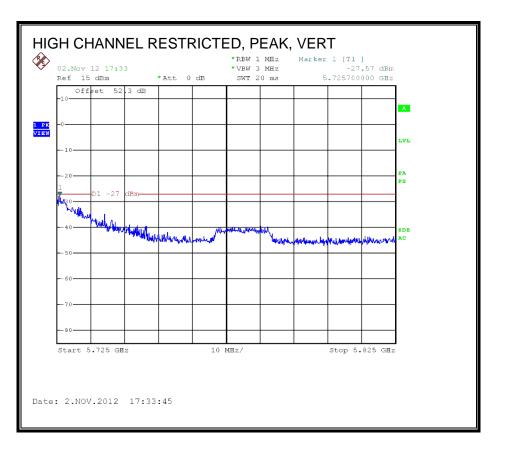
RESTRICTED & AUTHORIZED BANDEDGE (LOW CHANNEL)

LOW CHANNEL RESTRICTED & AUTHORIZED, PEAK, VERT * ROW 1 MORT * VEW 3 MEET X Hartes 1 171 43.53 deu Ref 110.4 dBuV *Att 0 dB EWT 20 mm 120 OFE 10 L PR Alt me lu Start 5.15 GH 12 882/ Stop 5,47 G82 Date: 31.0CT.2012 18:20:31



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RESTRICTED & AUTHORIZED BANDEDGE (HIGH CHANNEL)



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8.2.58. 802.11a CDD 2Tx MODE IN THE 5.6 GHz BAND

Covered by testing 11n HT20 CDD 3TX, total power across the three chains is higher than the power level the device will operate at.

8.2.59. 802.11a CDD 3Tx MODE IN THE 5.6 GHz BAND

Covered by testing 11n HT20 CDD 3TX, total power across the three chains is higher than the power level the device will operate at.

8.2.60. 802.11a BF 2TX MODE IN THE 5.6 GHz BAND

Covered by testing 11ac VHT20 BF 3TX, total power across the three chains is equal or higher than the power level the device will operate at.

8.2.61. 802.11a BF 3TX MODE IN THE 5.6 GHz BAND

Covered by testing 11ac VHT20 BF 3TX, total power across the three chains is equal or higher than the power level the device will operate at.

8.2.62. 802.11n HT20 1TX MODE IN THE 5.6 GHz BAND

Covered by testing 11n HT20 CDD 3TX, total power across the three chains is higher than the power level the device will operate at.

8.2.63. 802.11n HT20 STBC 3TX MODE IN THE 5.6 GHz BAND

Covered by testing 11n HT20 CDD 3TX, total power across the three chains is higher than the power level the device will operate at.

8.2.64. 802.11n HT20 BF 2TX MODE IN THE 5.6 GHz BAND

Covered by testing 11ac VHT20 BF 3TX, total power across the three chains is equal or higher than the power level the device will operate at.

8.2.65. 802.11n HT20 BF 3TX MODE IN THE 5.6 GHz BAND

Covered by testing 11ac VHT20 BF 3TX, total power across the three chains is equal or higher than the power level the device will operate at.

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8.2.66. 802.11ac VHT20 BF 2TX MODE IN THE 5.6 GHz BAND

Covered by testing 11ac VHT20 BF 3TX, total power across the three chains is equal or higher than the power level the device will operate at.

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8.2.67. 802.11n HT20 CDD 2TX MODE IN THE 5.6 GHz BAND

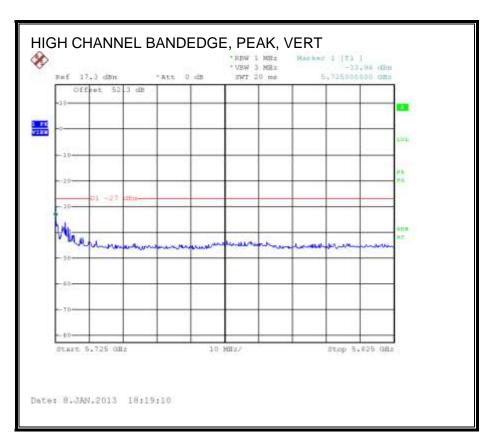
RESTRICTED & AUTHORIZED BANDEDGE (LOW CHANNEL)

Covered by testing 11n HT20 CDD 3TX, total power across the three chains is higher than the power level the device will operate at.

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AUTHORIZED BANDEDGE (HIGH CHANNEL)



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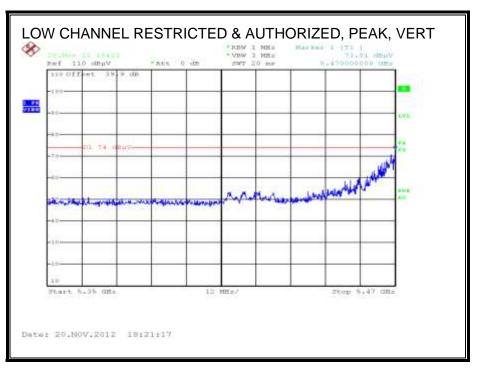
Covered by testing 11n HT20 CDD 3TX, total power across the three chains is higher than the power level the device will operate at.

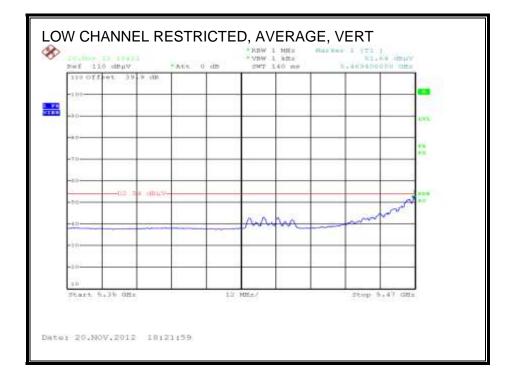
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8.2.68. 802.11n HT20 CDD 3TX MODE IN THE 5.6 GHz BAND

RESTRICTED & AUTHORIZED BANDEDGE (LOW CHANNEL)

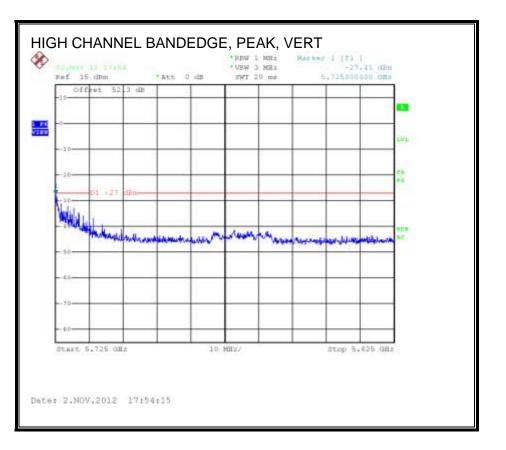




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AUTHORIZED BANDEDGE (HIGH CHANNEL)



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Date: Project #: Company Test Targ Mode Op	: et:	Kristopher 11/30/2012 12U14668 Broadcom (FCC 15.407 EUT with an	Corpora	tion	laptop a	and AC ac	dapte r	. HT20 C	CDD MCS	0 3Tx 5.6	GHz band	L					
Dist Distan Read Analyz AF Anten			Ideasurement Frequency Amp issance to Antenna D Cor nalyzer Reading Avg ntenna Factor Peak able Loss HPF				Field St	t to 3 me rength @ Field Stre	9 3 m	Average Field Strength Limit Peak Field Strength Limit Margin vs. Average Limit Margin vs. Peak Limit							
f	Dist	Read	AF	CL	Amp	D Corr	Fltr	Corr.	Limit	Margin	Ant. Pol.	Det.	Ant.High	Table Angle	Notes		
GHz	(m)	dBuV	dB/m	dB	dB	dB	dB	dBuV/m	dBuV/m	dB	V/H	P/A/QP	cm	Degree			
Low Cha	1nel 550	0 MHz															
11.000	3.0	39.9	38.4	10.1	-35.6	0.0	0.0	52.7	74.0	-21.3	Н	Р	126.8	332.3			
11.000	3.0	29.7	38.4	10.1	-35.6	0.0	0.0	42.5	54.0	-11.5	H	<u>A</u>	126.8	332.3			
11.000	3.0	50.8	38.4	10.1	-35.6	0.0	0.0	63.6	74.0	-10.4	<u>V</u>	Р	164.3	345.2			
11.000	3.0	41.2	38.4	10.1	-35.6	0.0	0.0	53.9	54.0	-0.1	V	A	164.3	345.2			
Mid Chai 11.160	<u>3.0</u>	47.1	38.5	10.2	-35.6	0.0	0.0	60.2	74.0	-13.8	Н	Р	168.5	321.0			
11.160 11.160	3.0	47.1	38.5	10.2	-35.0 -35.6	0.0	0.0	50.7	74.0 54.0	-13.8	H H	A P	168.5	321.0			
11.100	3.0	52.1	38.5	10.2	-35.6	0.0	0.0	65.2	74.0	- <u>3.5</u> -8.8	V N	P A	174.5	327.1			
	3.0	40.7	38.5	10.2	-35.6	0.0	0.0	53.8	54.0	-0.2	v	A	174.5	327.1			
11.160	1 5.0			10.2					54.0								
11.160 11.160	nnel 57		38.7	10.4	-35.6	0.0	0.0	58.6	74.0	-21.5	Н	Р	152.2	317.6			
11.160	nnel 57 3.0	38.8					0.0	43.6	54.0	-10.4	H	A	152.2	317.6			
11.160 11.160 High Cha		38.8 29.9	38.7	10.4	-35.6	0.0	0.0						0				
11.160 11.160 High Cha 11.400	3.0		÷	10.4 10.4	-35.6 -35.6	0.0 0.0	0.0	57.6	74.0	-16.4	V	Р	102.0	28.9			

<u>Note:</u> tested with highest output powers at Low & Mid channels = 19dBm and High channel = 20dBm to cover 1TX & 2TX.

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8.2.69. 802.11n HT20 STBC 2TX MODE IN THE 5.6 GHz BAND

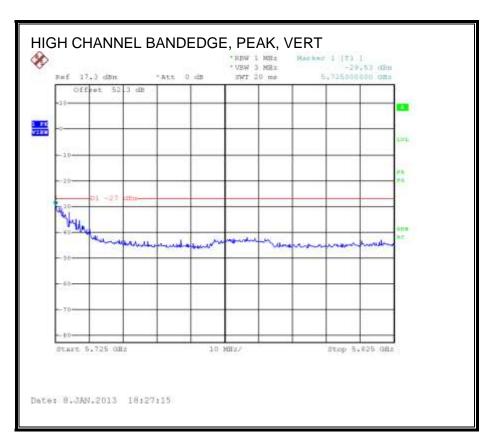
RESTRICTED & AUTHORIZED BANDEDGE (LOW CHANNEL)

Covered by testing 11n HT20 CDD 3TX, total power across the three chains is higher than the power level the device will operate at.

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AUTHORIZED BANDEDGE (HIGH CHANNEL)



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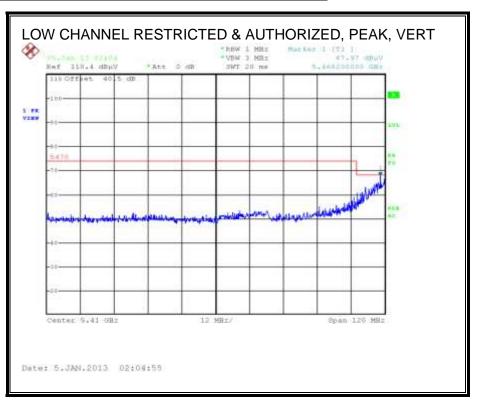
Covered by testing 11n HT20 CDD 3TX, total power across the three chains is higher than the power level the device will operate at.

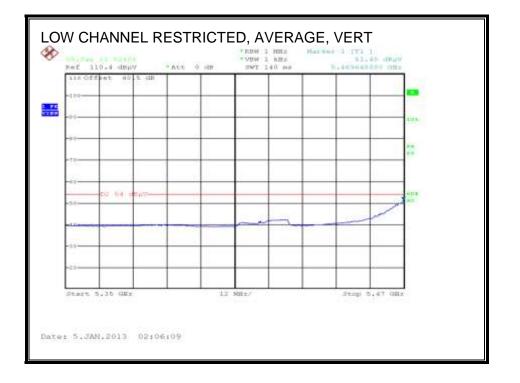
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8.2.70. 802.11ac VHT20 BF 3TX MODE IN THE 5.6 GHz BAND

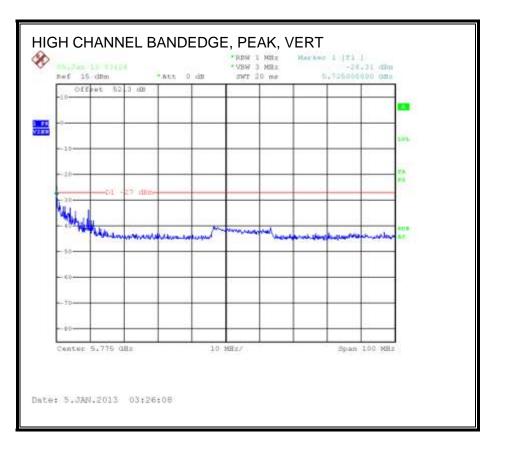
RESTRICTED & AUTHORIZED BANDEDGE (LOW CHANNEL)





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AUTHORIZED BANDEDGE (HIGH CHANNEL)



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Complia		Measuren tification		s, Frei	mont 5n	n Chamb	er									
Test Engi		Vien Tra	n													
Date:		01/03/13														
Project #		12U1466	8													
Company	y:	Broadco	m													
Test Targ		FCC 15.	407													
Mode Op	er:	Tx Beam	Formin	g_5.5	GHz Ba	nd_llac	HT201	MCS0 3T	X							
	f	Measuren	nant Fra	mencu	Amo	Preamp (Sain			Average Field Strength Limit						
	Dist	Distance			Distance		t to 3 me	ters	Peak Field Strength Limit Margin vs. Average Limit							
	Read	Analyzer		Avg			trength @									
	AF	Antenna		Peak			Field Stre		Margin vs. Rverage Linit Margin vs. Peak Limit							
					HPF	High Pas										
						-		~		Margin Ant. Pol. Det.						
f CH-	Dist	Read	AF	CL		D Corr		Corr.	Limit dBuV/m				-	Table Angle	Notes	
GHz	(m)	dBuV		dB	dB	dB	dB	aBuV/m	aBuV/m	dB	V/H	P/A/QP	cm	Degree		
11.000	IANNEL 3.0	(100), 55		10.1	-33.5	0.0	0.7	56.8	74.0	-17.2	v	п	133.6	336.7		
11.000	3.0	41.2		10.1		0.0	0.7	48.6	74.0 54.0	-17.2	v	P A	133.6	336.7		
11.000	3.0	37.2	38.3	10.1	¢	0.0	0.7	52.8	74.0	-21.2	H	P	100.7	8.5		
11.000	3.0	28.0			-33.5	0.0	0.7	43.7	54.0	-10.3	H	Ā	100.7	8.5		
		116), 5580								1						
		40.8	38.5	10.2	-33.3	0.0	0.7	57.0	74.0	-17.0	V	P	179.2	50.5		
MID CH	3.0	: 40.0		10.0	-33.3	0.0	0.7	48.5	54.0	-5.5	V	А	179.2	50.5		
MID CH/ 11.160	3.0 3.0	32.3	38.5	10.2					74.0	-17.7	н	Р	103.8	52.0		
MID CH/ 11.160 11.160			38.5	10.2	-33.3	0.0	0.7	56.3	74.0			-				
MID CH/ 11.160 11.160 11.160 11.160 11.160	3.0 3.0 3.0	32.3 40.1 31.1	38.5 38.5	10.2	¢	0.0 0.0	0.7 0.7	56.3 47.3	74.0 54.0	-17.7	H	Ā	103.8	52.0		
MID CH/ 11.160 11.160 11.160 11.160 11.160 HIGH CI	3.0 3.0 3.0 HANNEL	32.3 40.1 31.1 (140), 57	38.5 38.5 00MHz	10.2 10.2	-33.3 -33.3	0.0	0.7	47.3	54.0	-6.7	H	A	103.8	52.0		
MID CH/ 11.160 11.160 11.160 11.160 11.160 HIGH CI 11.400	3.0 3.0 3.0 HANNEL 3.0	32.3 40.1 31.1 (140), 57 41.9	38.5 38.5 00MHz 38.7	10.2 10.2 10.4	-33.3 -33.3 -33.0	0.0 0.0	0.7 0.7	47.3 58.8	54.0 74.0	-6.7 -15.2	H V	A P	103.8 166.0	52.0 4.7		
MID CH/ 11.160 11.160 11.160 11.160 HIGH CI 11.400 11.400	3.0 3.0 3.0 HANNEL 3.0 3.0	32.3 40.1 31.1 (140), 57 41.9 32.7	38.5 38.5 00MHz 38.7 38.7	10.2 10.2 10.4 10.4	-33.3 -33.3 -33.0 -33.0	0.0 0.0 0.0	0.7 0.7 0.7	47.3 58.8 49.6	54.0 74.0 54.0	-6.7 -15.2 -4.4	H V V	A P A	103.8 166.0 166.0	52.0 4.7 4.7		
MID CH/ 11.160 11.160 11.160 11.160	3.0 3.0 3.0 HANNEL 3.0	32.3 40.1 31.1 (140), 57 41.9	38.5 38.5 00MHz 38.7 38.7 38.7	10.2 10.2 10.4 10.4 10.4	-33.3 -33.3 -33.0	0.0 0.0	0.7 0.7	47.3 58.8 49.6 57.2	54.0 74.0	-6.7 -15.2	H V	A P	103.8 166.0	52.0 4.7		

Note: tested with highest output powers at 20dBm to cover 2TX.

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8.2.71. 802.11ac VHT20 BF 3TX MODE CHANNEL 144 IN THE 5.6 GHz BAND

RESTRICTED & AUTHORIZED BANDEDGE

NOT APPLICABLE.

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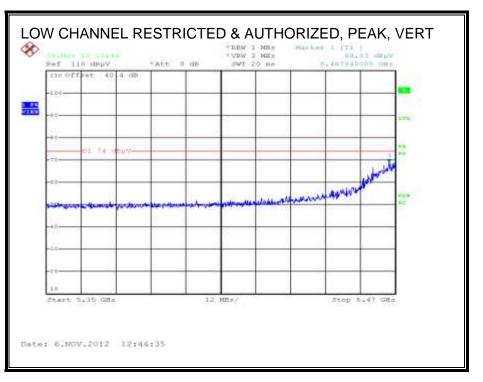
ate: 1 voject #: 12 ompany: B sst Target: F0	fication S Kristophe 1/14/2013 12U14668 Broadcom FCC 15.20 EUT with I	r Nguy Corpo 05	en	nont 5n	ı Chambe	r								
ate: 1 voject #: 12 ompany: B sst Target: F0	1/14/2013 12U14668 Broadcom FCC 15.20	Corpo												
roject #: 12 ompany: B sst Target: F0	12U14668 Broadcom FCC 15.20	Corpo 05	oratio											
ompany: B st Target: F	Broadcom FCC 15.20	Corpo 05	ratio											
st Target: F	FCC 15.20	05	ratio											
				n										
ode Oper: E	EUT with I	anten												
		Бартор	and A	AC adap	ter and B	eamfo	ormee, 1	lac 20 MI	iz 3Tx T	XBF				
f M	Measureme	ent Freq	vency	Amp	Preamp G	ain			Average	Field Stren	eth Limit			
Dist D	Distance to	Anten	na	D Corr	Distance	Correc	t to 3 me	ters		ld Strength				
	Analyzer R			Avg	Average F					vs. Average				
	Antenna Fa				Calculated			ngth	Margin v	vs. Peak Lis	nit			
CL C	Cable Loss			HPF	High Pass	Filter								
f Dist	Read	AF	CL	Amp	D Corr	Fltr	Corr.	Limit	Margin	Ant. Pol.		Ant.High	Table Angle	Notes
GHz (m)	dBuV	dB/m	dB	dB	dB	dB	dBuV/m	dBuV/m	dB	V/H	P/A/QP	cm	Degree	
hannel 144 (5720) MHz)													
.440 3.0	····.			-35.5	0.0	0.0	58.8	74.0	-15.2	V	P	140.8	263.1	
.440 3.0				-35.5	0.0	0.0	45.5	54.0	-8.5	V	A	140.8	263.1	
.440 3.0				-35.5	0.0	0.0	54.3	74.0	-19.7	H	P	142.1	281.7	
	30.5	38.8	11.1	-35.5	0.0	0.0	44.9	54.0	-9.1	H	A	142.1	281.7	
ev. 4.1.2.7 ote: No other emi	issions w	ere de	tected	above t	he systen	1 nois	e floor.							

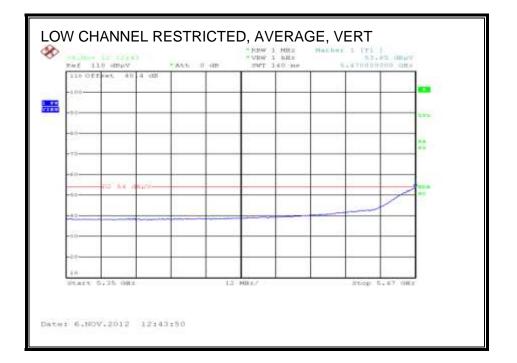
Note: tested with highest output powers at 20dBm to cover 2TX.

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8.2.72. 802.11n HT40 1TX MODE IN THE 5.6 GHz BAND

RESTRICTED & AUTHORIZED BANDEDGE (LOW CHANNEL)

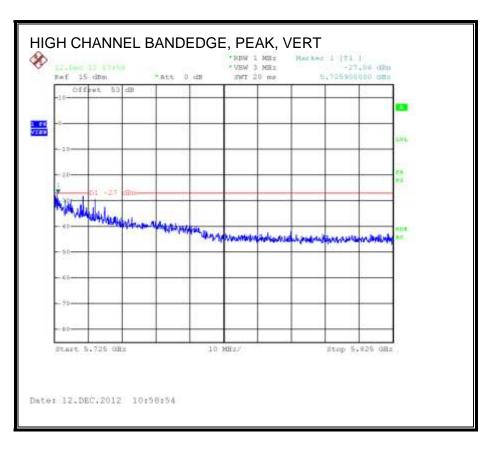




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AUTHORIZED BANDEDGE (HIGH CHANNEL)



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Covered by testing 11n HT40 CDD 3TX, total power across the three chains is higher than the power level the device will operate at.

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8.2.73. 802.11n HT40 1TX MODE CHANNEL 142 IN THE 5.6 GHz BAND

RESTRICTED & AUTHORIZED BANDEDGE

NOT APPLICABLE.

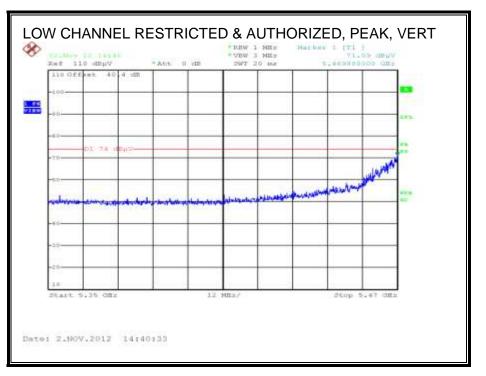
HARMONICS AND SPURIOUS EMISSIONS

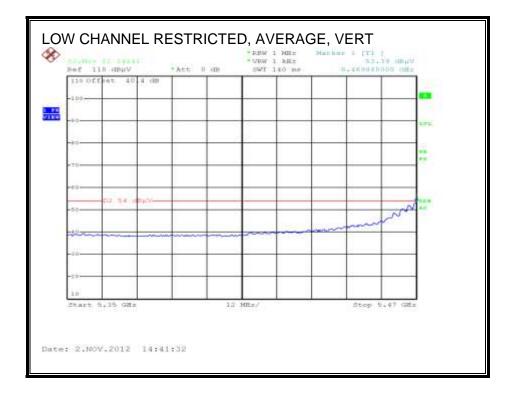
Covered by testing 11n HT40 CDD 3TX, total power across the three chains is higher than the power level the device will operate at.

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8.2.74. 802.11n HT40 CDD 2TX MODE IN THE 5.6 GHz BAND

RESTRICTED & AUTHORIZED BANDEDGE (LOW CHANNEL)





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AUTHORIZED BANDEDGE (HIGH CHANNEL)

Covered by testing 11n HT40 CDD 3TX, total power across the three chains is higher than the power level the device will operate at.

HARMONICS AND SPURIOUS EMISSIONS

Covered by testing 11n HT40 CDD 3TX, total power across the three chains is higher than the power level the device will operate at.

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8.2.75. 802.11n HT40 CDD 2TX MODE CHANNEL 142 IN THE 5.6 GHz BAND

RESTRICTED & AUTHORIZED BANDEDGE

NOT APPLICABLE.

HARMONICS AND SPURIOUS EMISSIONS

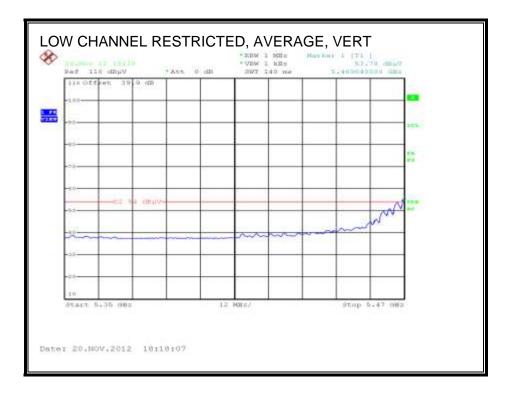
Covered by testing 11n HT40 CDD 3TX, total power across the three chains is higher than the power level the device will operate at.

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8.2.76. 802.11n HT40 CDD 3TX MODE IN THE 5.6 GHz BAND

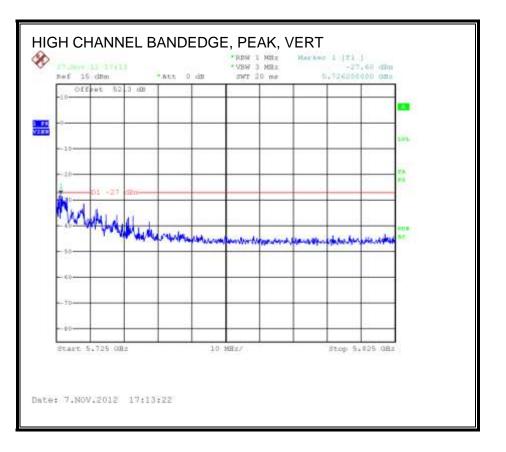
RESTRICTED & AUTHORIZED BANDEDGE

LOW CHANNEL RESTRICTED & AUTHORIZED, PEAK, VERT * RDW 3 MHz * VBW 3 MHz SWI 20 hz Þ Marhes 1 (09,76 dbut 110 dBµV *Att 0 dB 5,400920000 081 Ruf ab 0 ff de testio att 12 74 NN) 1200 North all the highly and below property and the second second Start 5.35 ddz 12 806±7 Stop 5.47 082 Date: 20.NOV.2012 18:15:41



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AUTHORIZED BANDEDGE (HIGH CHANNEL)



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-		ification			1011 3 1	спашр	.1								
est Engr ate:	:	Kristoph 12/03/12		/en											
roject #	:	12/03/12 12U1466													
ompany	/:	Broadcon	-	oratio	n										
èst Targ Iode Op		FCC 15.4			in lante	n and Af	ader	tor HTM		ሮፍስ 3ጭ	5.6CH2 b	nd With	7.6-18GH	, HPF	
Juc Op		LUI WILL	anteill	ia 5011	ip, iapto	'P anu AU	∠ auaµ			C 50 5 1X	5.00112 Da		,.0-10GH		
	f	Measurem				Preamp (Field Stren				
	Dist Read	Distance Analyzer			D Corr Avg	Distance Average		t to 3 me trength @			eld Strength vs. Average				
	AF	Antenna			Peak	Calculate					vs. Peak Lii				
	CL	Cable Los	is		HPF	High Pas	s Filter			-					
f	Dist	Read	AF	CL	Amp	D Corr		Corr.			Ant. Pol.	Det.		Table Angle	Notes
GHz	(m) nnel 551	dBuV 0 MHz	dB/m	dB	dB	dB	dB	aBuV/m	dBuV/m	dB	V/H	P/A/Q P	cm	Degree	
1.020	3.0	39.3	38.4	10.1	-35.6	0.0	0.7	52.8	74.0	-21.2	v	Р	167.0	3.3	
1.020	3.0	29.9	38.4	10.1	-35.6	0.0	0.7	43.4	54.0	-10.6	V	A	167.0	3.3	
1.020 1.020	3.0	34.9 24.9	38.4 38.4	10.1 10.1	-35.6 -35.6	0.0 0.0	0.7 0.7	48.4 38.4	74.0 54.0	-25.6 -15.6	H H	P A	197.2 197.2	110.8 110.8	
	nnel 555		30.4	10.1	-33.0	0.0	<u> </u>	30.4	34.0	-13.0	n	<u>A</u>	17/.4	110.0	
1.100	3.0	39.0	38.5	10.1	-35.6	0.0	0.7	52.7	74.0	-21.3	V	Р	100.3	19.7	
1.100 1.100	3.0	<u>30.4</u> 39.5	38.5 38.5	10.1 10.1	-35.6 -35.6	0.0 0.0	0.7 0.7	44.1 53.2	54.0 74.0	-9.9 -20.8	V H	A P	100.3 130.0	19.7 323.2	
1.100	3.0	26.1	38.5	10.1	-35.6	0.0	0.7	39.8	74.0 54.0	-14.2	н Н	A	130.0	323.2	
ligh Cha	annel 56	70 MHz													
1.340 1.340	3.0	43.0	38.7	10.4	-35.6	0.0	0.7	57.2	74.0	-16.8	V	Р	105.0	29.2	
1.340	3.0	33.3 35.8	38.7 38.7	10.4 10.4	-35.6 -35.6	0.0 0.0	0.7 0.7	47.5 50.0	54.0 74.0	-6.5 -24.0	V H	A P	105.0 198.8	29.2 237.0	
1.340	3.0	25.7	38.7	10.4	-35.6	0.0	0.7	39.9	54.0	-14.1	H	Ā	198.8	237.0	
Rev. 4.1.2															
		nissions (

Note: tested with highest output powers at 20dBm to cover 1TX & 2TX.

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8.2.77. 802.11n HT40 CDD 3TX MODE CHANNEL 142 IN THE 5.6 GHz BAND

RESTRICTED & AUTHORIZED BANDEDGE

NOT APPLICABLE.

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Test Engr	r:	Kristoph	er Ngu	yen												
Date:		1/14/201	3													
Project #	f:	12U1466	8													
Company	y:	Broadco	m Corp	oratio	n											
Test Targ	get:	FCC 15.	407													
Mode Op	per:	EUT with	1 Laptop	and A	AC adap	ter, lln l	HT40	CDD MC	S0 3Tx							
											T: 110					
	f Dist	Measuren Distance		• •	-	Preamp (Distance				-	Field Stren ld Strength	-				
					Avg			trength @			id strengtn 18. Average					
	Read AF	Analyzer Antonna	-		-					-	-					
	AF	Antenna	Factor		Peak	Calculate	d Peak	Field Stre		-	rs. Peak Li					
		-	Factor		-		d Peak	Field Stre		-	-					
f	AF	Antenna	Factor	CL	Peak HPF	Calculate	d Peak s Filter	Field Stre	ength	Margin v	rs. Peak Li	mit	Ant.High	Table Angle	Notes	
f GHz	AF CL	Antenna Cable Los	Factor AF	CL	Peak HPF Amp	Calculate High Pas	d Peak s Filter Fltr	Corr.	ength	Margin v Margin	-	mit	-	Table Angle Degree	Notes	
GHz	AF CL Dist (m)	Antenna Cable Los Read dBuV	Factor AF	CL	Peak HPF Amp	Calculate High Pas D Corr	d Peak s Filter Fltr	Corr.	ength Limit	Margin v Margin	Ant. Pol.	mit Det.	-		Notes	
GHz	AF CL Dist (m)	Antenna Cable Los Read	Factor SS AF dB/m	CL	Peak HPF Amp	Calculate High Pas D Corr	d Peak s Filter Fltr	Corr.	ength Limit	Margin v Margin	Ant. Pol.	Det. P/A/QP	-		Notes	
GHz Channel	AF CL Dist (m)	Antenna Cable Los Read dBuV 10 MHz)	AF dB/m 38.8	CL dB	Peak HPF dB -35.6	Calculate High Pass D Corr dB	d Peak s Filter Fltr dB	Corr. dBuV/m	ength Limit dBuV/m	Margin v Margin dB	rs. Peak Lis Ant. Pol. V/H	mit Det.	cm	Degree	Notes	
GHz Channel 11.420	AF CL Dist (m) 1142 (57 3.0	Antenna Cable Los Read dBuV 10 MHz) 39.9	Factor AF dB/m 38.8 38.8	CL dB 11.2 11.2	Peak HPF dB -35.6	Calculate High Pass D Corr dB 0.0	d Peak Filter Fltr dB 0.0	Corr. dBuV/m 54.3	Limit dBuV/m 74.0	Margin v Margin dB -19.7	rs. Peak Lis Ant. Pol. V/H V	mit Det. P/A/QP P	cm 132.5	Degree 255.6	Notes	

Note: tested with highest output powers at 20dBm to cover 1TX & 2TX.

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8.2.78. 802.11n HT40 STBC 3TX MODE IN THE 5.6 GHz BAND

Covered by testing 11n HT40 CDD 3TX, total power across the three chains is higher than the power level the device will operate at.

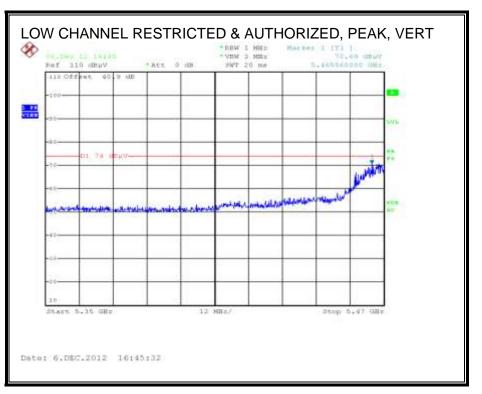
8.2.79. 802.11n HT40 STBC 3TX MODE CHANNEL 142 IN THE 5.6 GHz BAND

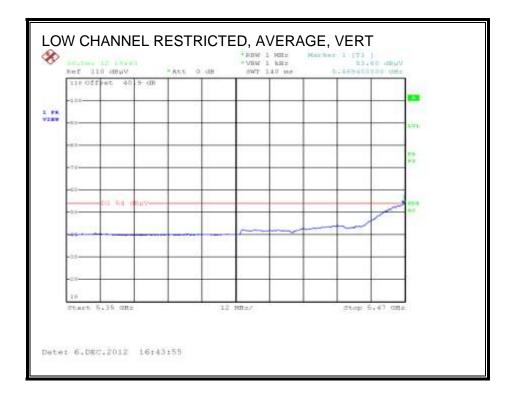
Covered by testing 11n HT40 CDD 3TX, total power across the three chains is higher than the power level the device will operate at.

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8.2.80. 802.11ac VHT40 BF 2TX MODE IN THE 5.6 GHz BAND

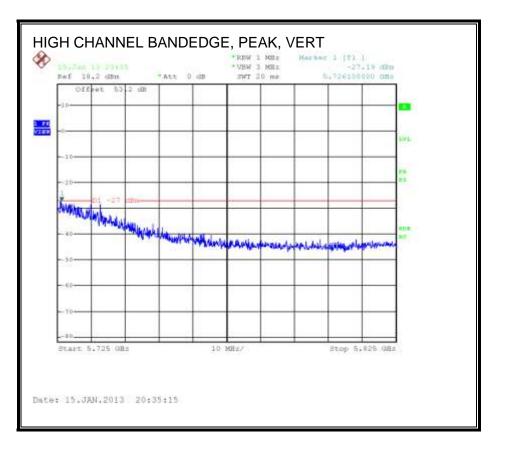
RESTRICTED & AUTHORIZED BANDEDGE (LOW CHANNEL)





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AUTHORIZED BANDEDGE (HIGH CHANNEL)



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Covered by testing 11ac VHT40 BF 3TX, total power across the three chains is higher than the power level the device will operate at.

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8.2.81. 802.11ac VHT40 BF 2TX MODE CHANNEL 142 IN THE 5.6 GHz BAND

RESTRICTED & AUTHORIZED BANDEDGE

NOT APPLICABLE.

HARMONICS AND SPURIOUS EMISSIONS

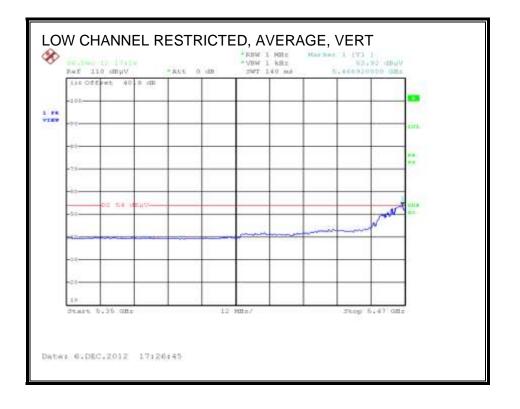
Covered by testing 11ac VHT40 BF 3TX, total power across the three chains is higher than the power level the device will operate at.

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8.2.82. 802.11ac VHT40 BF 3TX MODE IN THE 5.6 GHz BAND

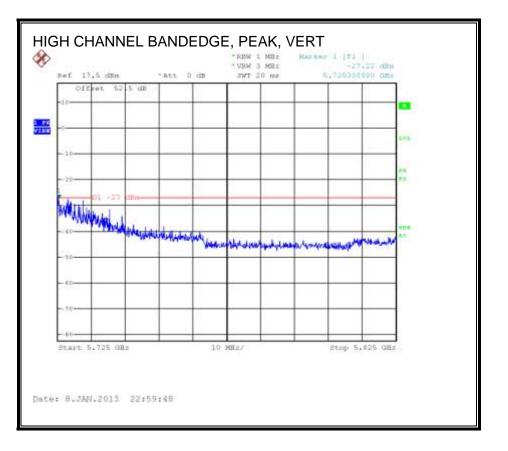
RESTRICTED & AUTHORIZED BANDEDGE (LOW CHANNEL)

LOW CHANNEL RESTRICTED & AUTHORIZED, PEAK, VERT * FORW 1 MORIZ * VEW 3 MORIZ Hartes 1 171 X 70,35 dBul Ref 310 dBuy "Att 0 HB SWT 20 mm 110 Off 405 40 3.400 i PR INTE 11 14 armit a liter the state of a state of the second 1.00 Start 5.35 GEr 12 Mile/ Stop 5.47 GBs Date: 6.DEC.2012 17:34:12



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AUTHORIZED BANDEDGE (HIGH CHANNEL)



UL CCS FORM NO: CCSUP4701H 47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888 This report shall not be reproduced except in full, without the written approval of UL CCS.

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Test Engr		S. Aguil	ar												
Date:		01/03/13													
Project #		12U1466													
Company		Broadco													
Test Targ		FCC 15.													
Mode Op	er:	Tx 5.6 G	Llac I	HT40 1	MCS0 3	IX (TxBF))								
		Laptop v	vith ant	enna	and ada	pter setu	p as B	eamform	ee setup	in cham	ber.				
	f	Measuren	nent Fre	onency	Amn	Preamp (Gain			Average	Field Stren	eth Limit			
	- Dist	Distance				Distance		ct to 3 me	ters		ld Strength				
	Read	Analyzer			Avg			trength @			s. Average				
	AF	Antenna			Peak			Field Stre			rs. Peak Li				
	CL	Cable Lo	55		HPF	High Pas			-						
f	Dist	Read	AF	CL	Amp	D Corr	Fltr	Corr.		Margin	Ant. Pol.		Ant.High	Table Angle	Notes
GHz	(m)	dBuV	dB/m	dB	dB	dB	dB	dBuV/m	dBuV/m	dB	V/H	P/A/QP	cm	Degree	
Low Cha		·····	20 4	10 -	22 4	0.0	0.7	7 5 1 0	74.0	02.0	т	n	157.0	152.0	
11.020 11.020	3.0 3.0	35.0 24.6	38.4 38.4	10.5 10.5		0.0 0.0	0.7 0.7	51.0 40.7	74.0 54.0	-23.0 -13.3	H H	P A	157.0 157.0	173.0 173.0	
11.020	3.0	34.8	38.4	10.5		0.0	0.7	50.9	54.0 74.0	-13.5 -23.1	N V	P	157.0	0.0	
11.020	3.0	24.8			-33.6	0.0	0.7	40.9	54.0	-13.1	v	A	121.0	0.0	
		1													
Mid Cha										ļ		_			
11.100	3.0	42.8		10.1		0.0	0.7	58.79	74.0	-15.2	H	P	139.2	300.8	
11.100 11.100	3.0 3.0	34.1 45.4	38.4 38.4	10.1	-33.3 -33.3	0.0 0.0	0.7	50.04 61.37	54.0 74.0	-4.0 -12.6	H V	A P	139.2 152.9	300.8 359.2	
11.100	3.0	45.4 34.6	38.4		-33.3	0.0		50.58	74.0 54.0	-12.0 -3.4	v	P A	152.9	359.2	
	0.0		00.1	10.1	-0010	0.0		00.00			•	**			
III I CI	annel 13	4 5670 M	Hz										•		
nign Ch	3.0	39.0	••••••••••••••••••	· � · · · · · · · · · · · · · · · ·	-33.0	0.0		55.71	74.0	- 18.3	H	P	146.8	320.3	
11.340	3.0	29.2	38.7	10.4		0.0		45.92	54.0	- <mark>8.1</mark>	H	A	146.8	320.3	
11.340 11.340		40.4	38.7	10.4		0.0		57.10 50.07	74.0 54.0	-16.9 -3.9	V V	P A	148.3 148.3	285.9 285.9	
11.340	3.0 3.0	33.4	38.7	10.4											

Note: tested with highest output powers at 20dBm to cover 2TX.

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8.2.83. 802.11ac VHT40 BF 3TX MODE CHANNEL 142 IN THE 5.6 GHz BAND

RESTRICTED & AUTHORIZED BANDEDGE

NOT APPLICABLE.

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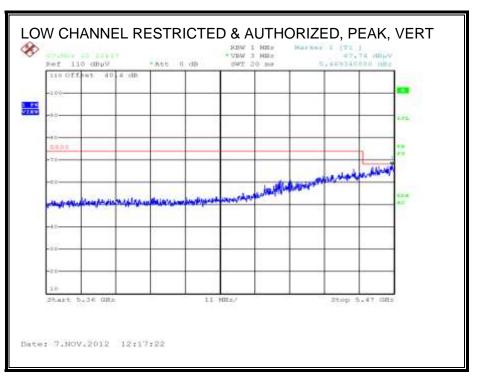
f Measurement Frequency Amp Preamp Gain Average Field Strength Limit Bit Dist ance to Antenna D Corr Distance Correct to 3 meters Peak Field Strength Limit Read Analyzer Reading Avg Average Field Strength @ 3 m Margin vs. Average Limit AF Antenna Factor Peak Calculated Peak Field Strength Margin vs. Peak Limit CL Cable Loss HPF High Pass Filter Margin vs. Peak Limit f Dist Read AF CL Amp D Corr Filt Corr. Limit Margin vs. Peak Limit f Dist Read AF CL Amp D Corr Filt Corr. Limit Margin vs. Peak Limit cHaNNEL 142,0 3.0 38.7 38.8 11.2 -35.6 0.0 0.0 53.1 74.0 -20.9 V P 138.7 160.3 1.420 3.0 28.1 38.8 11.2 -35.6 0.0 0.0 41.4 54.0 -11.6 V A 138.7 160.3 1.420 3.0	tate: 1/14/2013 roject #: 12U14668 Sompany: Broadcom Corporation est Target: FCC 15.205 Iode Oper: EUT with Laptop and AC adapter and beamformee; 11ac HT40 3Tx TXBF f Measurement Frequency Amp Preamp Gain Dist Distance to Antenna D Corr Jata Analyzer Reading Avg AF Antenna Factor Peak Calculated Peak Field Strength CL Cable Loss HPF High Pass Filter f Dist Read AF CL Amp GHz (m) dB uV B D Corr Filtr Corr. Limit Margin vs. Peak Limit CL Cable Loss HPF High Pass Filter Margin vs. Peak Limit Det. Ant.High Table Angle Notes HANNEL 142, 5710MHz Ital <	bate: 1/14/2013 roject #: 12U14668 Company: Broadcom Corporation est Target: FCC 15.205 f Measurement Frequency Amp Preamp Gain Average Field Strength Limit Dist Distance to Antenna D Corr Distance Correct to 3 meters Peak Field Strength Limit AF Antenna Factor Peak Calculated Peak Field Strength Margin vs. Average Limit CL Cable Loss HPF High Pass Filter f Dist Read AF CL Amp D Corr Fltr Corr. Limit Margin Ant. Pol. Det. Ant.High Table Angle Notes GHz (m) dBuV dB/m dB dB dB dB dB uV/m dBuV/m dB V/H P/A/QP cm Degree Notes HPF High Pass Filter HANNEL 142, 5710MHz	bate: 1/14/2013 roject #: 12U14668 Company: Broadcom Corporation est Target: FCC 15.205 Fode Oper: EUT with Laptop and AC adapter and beamformee; 11ac HT40 3Tx TXBF f Measurement Frequency Amp Preamp Gain Average Field Strength Limit Dist Distance to Antenna D Corr Distance Correct to 3 meters Peak Field Strength Limit Read Analyzer Reading Avg Average Field Strength @ 3 m Margin vs. Average Limit CL Cable Loss HPF High Pass Filter F Dist Read AF CL Amp D Corr Fltr Corr. Limit Margin Ant. Pol. Det. Ant.High Table Angle Notes GHz (m) dBuV dB/m dB dB dB dB dB dB uV/m dBuV/m dB V/H P/A/QP m Degree Notes HTANNEL 142, 5710MHz	Date: 1/14/2013 Project #: 12U14668 Company: Broadcom Corporation 'est Target: FCC 15.205 Jode Oper: EUT with Laptop and AC adapter and beamformee; 11ac HT40 3Tx TXBF f Measurement Frequency Amp Preamp Gain Dist Distance to Antenna D Corr Dist Distance to Antenna D Corr AF Antenna Factor Peak Calculated Peak Field Strength Margin vs. Average Limit CL Cable Loss HPF High Pass Filter Margin vs. Peak Limit Det. Ant.High Table Angle Notes GHz (m) dBu V dB dB dB dB U/m dB V/H P/A/QP mode Degree Notes CHANNEL 142, 5710MHz		ice Cer	tification	Service	s, Fre	mont 5n	1 Chambo	er								
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1.420 3.0 36.9 38.8 11.2 -35.6 0.0 0.0 51.2 74.0 -22.8 H P 117.0 291.4 1.420 3.0 27.1 38.8 11.2 -35.6 0.0 0.0 41.4 54.0 -12.6 H A 117.0 291.4 ev. 4.1.2.7	1.420 3.0 36.9 38.8 11.2 -35.6 0.0 0.0 51.2 74.0 -22.8 H P 117.0 291.4 1.420 3.0 27.1 38.8 11.2 -35.6 0.0 0.0 41.4 54.0 -12.6 H A 117.0 291.4 ev. 4.1.2.7	1.420 3.0 36.9 38.8 11.2 -35.6 0.0 0.0 51.2 74.0 -22.8 H P 117.0 291.4 1.420 3.0 27.1 38.8 11.2 -35.6 0.0 0.0 41.4 54.0 -12.6 H A 117.0 291.4 ev. 4.1.2.7	1.420 3.0 36.9 38.8 11.2 -35.6 0.0 0.0 51.2 74.0 -22.8 H P 117.0 291.4 1.420 3.0 27.1 38.8 11.2 -35.6 0.0 0.0 41.4 54.0 -12.6 H A 117.0 291.4 ev. 4.1.2.7	1.420 3.0 36.9 38.8 11.2 -35.6 0.0 0.0 51.2 74.0 -22.8 H P 117.0 291.4 1.420 3.0 27.1 38.8 11.2 -35.6 0.0 0.0 41.4 54.0 -12.6 H A 117.0 291.4 ev. 4.1.2.7													P			
1.420 3.0 27.1 38.8 11.2 -35.6 0.0 0.0 41.4 54.0 -12.6 H A 117.0 291.4 ev. 4.1.2.7	1.420 3.0 27.1 38.8 11.2 -35.6 0.0 0.0 41.4 54.0 -12.6 H A 117.0 291.4 ev. 4.1.2.7	1.420 3.0 27.1 38.8 11.2 -35.6 0.0 0.0 41.4 54.0 -12.6 H A 117.0 291.4 ev. 4.1.2.7	1.420 3.0 27.1 38.8 11.2 -35.6 0.0 0.0 41.4 54.0 -12.6 H A 117.0 291.4 ev. 4.1.2.7	1.420 3.0 27.1 38.8 11.2 -35.6 0.0 0.0 41.4 54.0 -12.6 H A 117.0 291.4 ev. 4.1.2.7																
tev. 4.1.2.7	lev. 4.1.2.7	tev. 4.1.2.7	tev. 4.1.2.7	tev. 4.1.2.7			*****				oo									
							27.1	38.8	11.2	-35.6	0.0	0.0	41.4	54.0	-12.6	Н	A	117.0	291.4	
							missions	were de	tected	l above t	he syster	n nois	se floor.							
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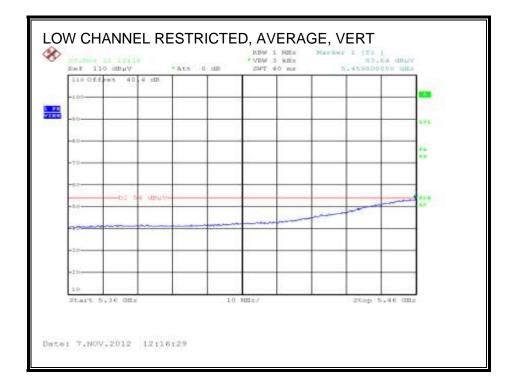
Note: tested with highest output powers at 20dBm to cover 2TX.

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8.2.84. 802.11ac VHT80 1TX MODE IN THE 5.6 GHz BAND

RESTRICTED & AUTHORIZED BANDEDGE (LOW CHANNEL)





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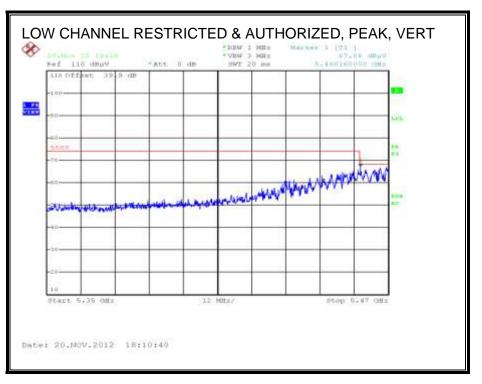
Covered by testing 11ac VHT80 CDD 3TX, total power across the three chains is higher than the power level the device will operate at.

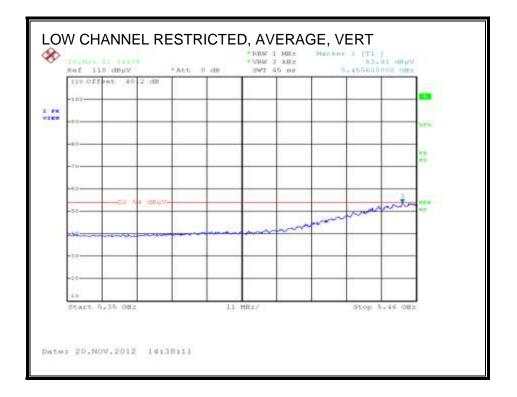
UL CCS FORM NO: CCSUP4701H 47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888 This report shall not be reproduced except in full, without the written approval of UL CCS.

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8.2.85. 802.11ac VHT80 CDD 2TX MODE IN THE 5.6 GHz BAND

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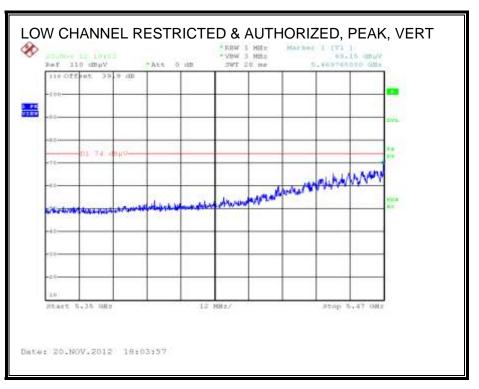
Covered by testing 11ac VHT80 CDD 3TX, total power across the three chains is higher than the power level the device will operate at.

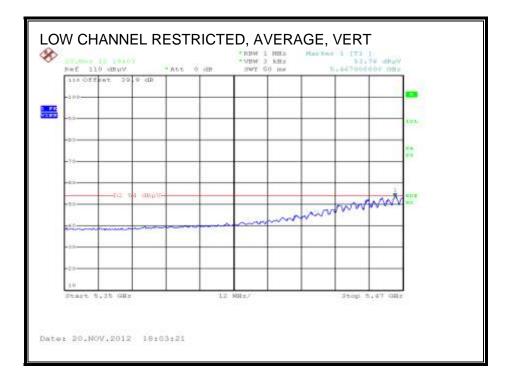
UL CCS FORM NO: CCSUP4701H 47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888 This report shall not be reproduced except in full, without the written approval of UL CCS.

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8.2.86. 802.11ac VHT80 CDD 3TX MODE IN THE 5.6 GHz BAND

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Compilan		Measuren tification		s, Frei	nont 51	n Chamb	er								
Test Engr		Kristoph	er Ngu	yen											
Date:		12/03/12													
Project #:		12U1466	-												
Company		Broadco		oratio	n										
Test Targe		FCC 15.													
Mode Ope	er:	EUT with	1 anteni	1a seti	up, lapt	op and AC	C adaş	oter. HT8	0 CDD M	CS0 3Tx	5.6GHz	oand.			
	f	Measuren		•	-	Preamp (ngth Limit			
	Dist	Distance				Distance					eld Strengtl				
	Read	Analyzer	_		Avg	Average I					vs. Averag				
	AF	Antenna			Peak	Calculate			ength	Margin	vs. Peak L	imit			
	CL	Cable Los	55		HPF	High Pas	s Filter								
f	Dist	Read	AF	CL	Amp	D Corr	Fltr	Corr.	Limit	Margin	Ant. Pol	Det.	Ant.High	Table Angle	Notes
GHz	(m)	dBuV	dB/m	dB	dB	dB	dB	dBuV/m	dBnV/m	dB	V/H	P/A/OP	cm	Degree	
									i and a v/m		· · · · · ·	; r/n/Qr	cm	Debree	
Low Char	nnel (10	6) 5530 M	fHz						ubuv/m	-	1/11	riaiQr	cm	Defree	
	nel (10 3.0	6) 5530 N 39.3		10.1	-35.6	0.0	0.7	52.9	74.0	-21.1	V	P	159.1	317.3	
Low Char 11.060 11.060					-35.6 -35.6	0.0 0.0	0.7 0.7		74.0 54.0	-21.1 -9.6	V V		159.1 159.1		
Low Char 11.060 11.060 11.060	3.0 3.0 3.0	39.3 30.8 34.5	38.4 38.4 38.4	10.1 10.1	-35.6 -35.6	0.0 0.0	0.7 0.7	52.9 44.4 48.1	74.0 54.0 74.0	-21.1 -9.6 -25.9	V V H	P A P	159.1 159.1 102.0	317.3 317.3 241.7	
Low Char 11.060 11.060 11.060 11.060	3.0 3.0 3.0 3.0	39.3 30.8 34.5 25.2	38.4 38.4 38.4	10.1 10.1	-35.6	0.0	0.7	52.9 44.4	74.0 54.0	-21.1 -9.6	V V	P A	159.1 159.1	317.3 317.3	
Low Char 11.060 11.060 11.060 11.060 Channel	3.0 3.0 3.0 3.0 138 (569	39.3 30.8 34.5 25.2 90 MHz)	38.4 38.4 38.4 38.4	10.1 10.1 10.1	-35.6 -35.6 -35.6	0.0 0.0 0.0	0.7 0.7 0.7	52.9 44.4 48.1 38.9	74.0 54.0 74.0 54.0	-21.1 -9.6 -25.9 -15.1	V V H H	P A P A	159.1 159.1 102.0 102.0	317.3 317.3 241.7 241.7	
Low Char 11.060 11.060 11.060 11.060 Channel 11.380	3.0 3.0 3.0 3.0 138 (569 3.0	39.3 30.8 34.5 25.2 90 MHz) 34.88	38.4 38.4 38.4 38.4 38.4 38.7	10.1 10.1 10.1 10.4	-35.6 -35.6 -35.6 -33.0	0.0 0.0 0.0	0.7 0.7 0.7 0.7	52.9 44.4 48.1 38.9 51.7	74.0 54.0 74.0 54.0 74.0	-21.1 -9.6 -25.9 -15.1 -22.3	V V H H	P A P A P	159.1 159.1 102.0 102.0 182.2	317.3 317.3 241.7 241.7 166.0	
Low Char 11.060 11.060 11.060 11.060 Channel 11.380 11.380	3.0 3.0 3.0 3.0 138 (569 3.0 3.0 3.0	39.3 30.8 34.5 25.2 90 MHz) 34.88 25.41	38.4 38.4 38.4 38.4 38.7 38.7	10.1 10.1 10.1 10.4 10.4	-35.6 -35.6 -35.6 -33.0 -33.0	0.0 0.0 0.0 0.0 0.0	0.7 0.7 0.7 0.7 0.7	52.9 44.4 48.1 38.9 51.7 42.2	74.0 54.0 74.0 54.0 74.0 74.0 54.0	-21.1 -9.6 -25.9 -15.1 -22.3 -11.8	V V H H H	P A P A P A	159.1 159.1 102.0 102.0 182.2 182.2	317.3 317.3 241.7 241.7 166.0 166.0	
Low Char 11.060 11.060 11.060 11.060 Channel 11.380	3.0 3.0 3.0 3.0 138 (569 3.0	39.3 30.8 34.5 25.2 90 MHz) 34.88	38.4 38.4 38.4 38.4 38.7 38.7 38.7	10.1 10.1 10.1 10.4 10.4 10.4	-35.6 -35.6 -35.6 -33.0	0.0 0.0 0.0	0.7 0.7 0.7 0.7	52.9 44.4 48.1 38.9 51.7 42.2 51.7	74.0 54.0 74.0 54.0 74.0	-21.1 -9.6 -25.9 -15.1 -22.3	V V H H H	P A P A P	159.1 159.1 102.0 102.0 182.2	317.3 317.3 241.7 241.7 166.0	

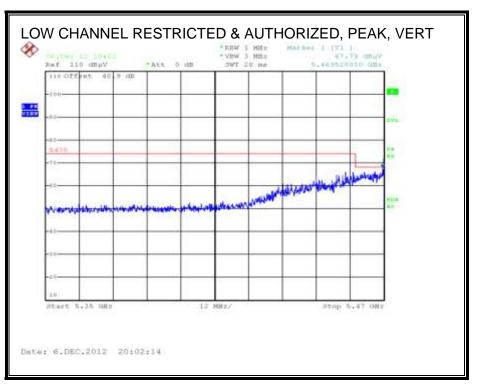
Note: tested with highest output powers at 20dBm to cover 1TX & 2TX.

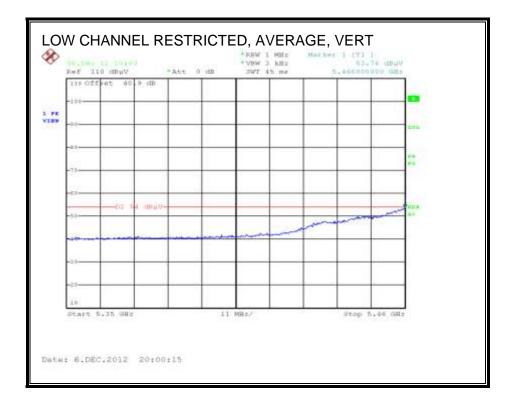
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8.2.87. 802.11ac VHT80 BF 2TX MODE IN THE 5.6 GHz BAND

RESTRICTED & AUTHORIZED BANDEDGE (LOW CHANNEL)





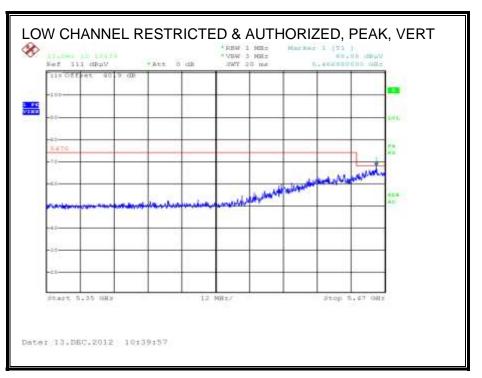
Covered by testing 11ac VHT80 BF 3TX, total power across the three chains is higher than the power level the device will operate at.

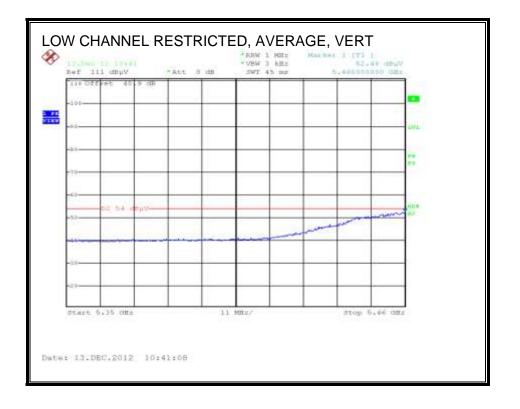
UL CCS FORM NO: CCSUP4701H 47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888 This report shall not be reproduced except in full, without the written approval of UL CCS.

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8.3. 802.11ac VHT80 BF 3TX MODE IN THE 5.6 GHz BAND

RESTRICTED & AUTHORIZED BANDEDGE (LOW CHANNEL)





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Test Engr Date:	:	S. Aguil 12/10/12													
Project #:		12U1460	58												
Company		Broadco	-	oratio	n										
Test Targ		FCC 15.													
Mode Op	er:		_			S0 3TX (T									
		Laptop	with ant	enna	and ada	pter setuj	p as B	eamform	ee setup	in cham	ber.				
	f	Measurer	mont Fra	mener	Amo	Preamp (ain .			Average	Field Stren	ath Timit			
	I Dist	Distance				Distance		nt to 3 ma	tors		Id Strength				
	Read	Analyzer			Avg			trength @			vs. Average				
	AF	Antenna			Peak			r Field Stre			vs. Peak Lis				
	CL	Cable Lo			HPF	High Pas					o. a care lot				
						-									
f	Dist	Read	AF	CL	Amp	D Corr	Fltr	Corr.			Ant. Pol.	Det.	Ant.High	Table Angle	Notes
GHz	(m)	dBuV	dB/m	dB	dB	dB	dB	dBuV/m	dBuV/m	dB	V/H	P/A/QP	cm	Degree	
)6), 5530N													
1.060	3.0	35.0	38.4	10.6	·	0.0	0.7	51.2	74.0	-22.8	H	P	183.0	237.0	
1.060	3.0	25.0	38.4		-33.5	0.0	0.7	41.2	54.0	-12.8	H	A	183.0	237.0	
1.060	3.0 3.0	34.4	38.4	10.6		0.0	0.7		74.0	-23.4	V	P	102.0	360.0	
1.060 ligh Cha		25.4 38), 5690	38.4	10.6	-33.5	0.0	0.7	41.6	54.0	-12.4	V	A	102.0	360.0	
1.380	3.0	35.7		11.0	-33.2	0.0	0.7	53.0	74.0	-21.0	H	P	156.0	279.0	
1.380	3.0	24.2	38.7	*******	-33.2	0.0	0.7	41.5	54.0	-12.5	H	A	156.0	279.0	
1.380	3.0	33.2	38.7	11.0		0.0	0.7		74.0	-23.5	v	P	104.0	360.0	
1.380	3.0	23.6	38.7		-33.2	0.0	0.7	40.9	54.0	-13.1	v	Ā	104.0	360.0	
ev. 4.1.2 ote: No		missions	were de	tected	d above :	the system	n noi:	se floor.							

Note: tested with highest output powers at 20dBm to cover 2TX.

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8.4. WORST-CASE BELOW 1 GHz

HORIZON			ΠΑΤΑ						
Project No: 1									
Client Name		Corporatio	on						
Model / Dev		•	511						
-			nd AC adapter		+ Casa				
Test By:Krist			iu AC duaptei	, 17 0015	l Case				
Test by.Kiist		yen							
Horizontal 3	0 - 1000MH	z							
Test	Meter	Detector	25MHz-	T243	dBuV/m	CFR 47	Margin	Height	Polarity
Frequency	Reading		1GHz	Sunol		Part 15	(dB)	[cm]	
(MHz)	(dBuV)		Amplified	Bilog		Class B			
			(dB)	(dB)		3m			
184.23	51.65	PK	11.1	-28	34.75	43.5	-8.75	200	Horz
230.79	55.46	РК	10.9	-28	38.36	46	-7.64	100	Horz
240.49	53.89	РК	11.4	-28	37.29	46	-8.71	100	Horz
399.57	54.74	РК	15.6	-27.9	42.44	46	-3.56	100	Horz
697.36	44.03	PK	19.6	-27	36.63	46	-9.37	100	Horz
Vertical 30 -	1000MHz								
Test	Meter	Detector	25MHz-	T243	dBuV/m	CFR 47	Margin	Height	Polarity
Frequency	Reading		1GHz	Sunol		Part 15	(dB)	[cm]	
(MHz)	(dBuV)		Amplified	Bilog		Class B			
			(dB)	(dB)		3m			
33.88	43.34	РК	18.4	-28.2	33.54	40	-6.46	100	Vert
144.46	58.61	РК	12.4	-28.1	42.91	43.5	-0.59	200	Vert

-28.1

-28

-27.6

-27.1

33.59

39.84

43.89

32.21

43.5

43.5

46

46

-9.91

-3.66

-2.11

-13.79

200

200

100

200

Vert

Vert

Vert

Vert

PK - Peak detector

144.46

199.75

497.54

796.3

QP - Quasi-Peak detector

LnAv - Linear Average detector

49.29

55.54

53.99

38.41

QP

РΚ

РΚ

РΚ

12.4

12.3

17.5

20.9

LgAv - Log Average detector

Av - Average detector

CAV - CISPR Average detector

RMS - RMS detection

CRMS - CISPR RMS detection

TAVG - Trace Averaging RMS detection

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9. AC POWER LINE CONDUCTED EMISSIONS

<u>LIMITS</u>

FCC §15.207 (a)

RSS-Gen 7.2.2

Frequency of Emission (MHz)	Conducted I	.imit (dBuV)
	Quasi-peak	Average
0.15-0.5	66 to 56 "	56 to 46 *
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

TEST PROCEDURE

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.4.

The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

Line conducted data is recorded for both NEUTRAL and HOT lines.

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RESULTS

6 WORST EMISSIONS

Company Name		Broadcom							
Project:		12U14668							
Model/Device:		BCM94360C	5						
Date:		12/21/2012							
Configuraiton:		TX WLAN W	orst case						
Test Voltage/Fre	quency:	120VAC 60H	z						
Tested by:		Steve Aguila	r						
Line-L1 .15 - 30M	Hz								-
	Meter								Av
	Meter Reading [dBuV]	Detector Type	LISN [dB]	Cables [dB]	Corrected [dB(uV)]	Class B QP Limit	QP Margin	Class B Av Limit [dB(uV)]	Av Margin [dB]
Test Frequency	Reading	Detector Type PK						1 1	Margin
Test Frequency [MHz]	Reading [dBuV]	Туре	[dB]	[dB]	[dB(uV)]	Limit	Margin	1 1	Margin
Test Frequency [MHz] 0.1545	Reading [dBuV] 55.11	Type PK	[dB] 0.1	[dB] 0	[dB(uV)] 55.21	Limit 65.8	Margin -10.59	Limit [dB(uV)] -	Margin [dB]
Test Frequency [MHz] 0.1545 0.1545	Reading [dBuV] 55.11 39.99	Type PK Av	[dB] 0.1 0.1	[dB] 0 0	[dB(uV)] 55.21 40.09	Limit 65.8	Margin -10.59 -	Limit [dB(uV)] - 55.8	Margin [dB]
Test Frequency [MHz] 0.1545 0.1545 0.1815	Reading [dBuV] 55.11 39.99 53.37	Type PK Av PK	[dB] 0.1 0.1 0.1	[dB] 0 0	[dB(uV)] 55.21 40.09 53.47	Limit 65.8	Margin -10.59 -	Limit [dB(uV)] - 55.8 -	Margin [dB] - -15.71 -

Line-L2 .15 - 30MHz

Test Frequency [MHz]	Meter Reading [dBuV]	Detector Type	LISN [dB]	Cables [dB]	Corrected [dB(uV)]	Class B QP Limit	QP Margin	Class B Av Limit [dB(uV)]	Av Margin [dB]
0.1545	52.78	PK	0.1	0	52.88	65.8	-12.92	-	-
0.1545	34.68	Av	0.1	0	34.78	-	-	55.8	-21.02
0.168	50.95	PK	0.1	0	51.05	65.1	-14.05	-	-
0.168	22.76	Av	0.1	0	22.86	-	-	55.1	-32.24
0.204	47.04	PK	0.1	0	47.14	63.4	-16.26	-	-
0.204	30.88	Av	0.1	0	30.98	-	-	53.4	-22.42

PK - Peak detector

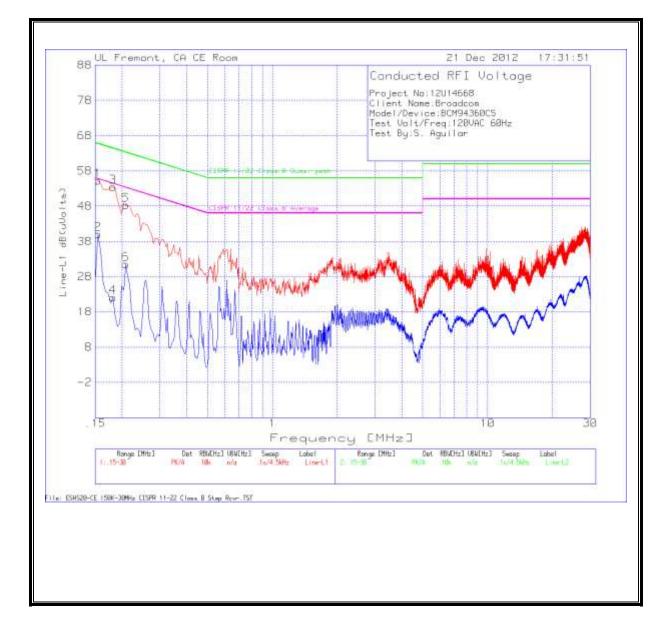
QP - Quasi-Peak detector

Av - Average detector

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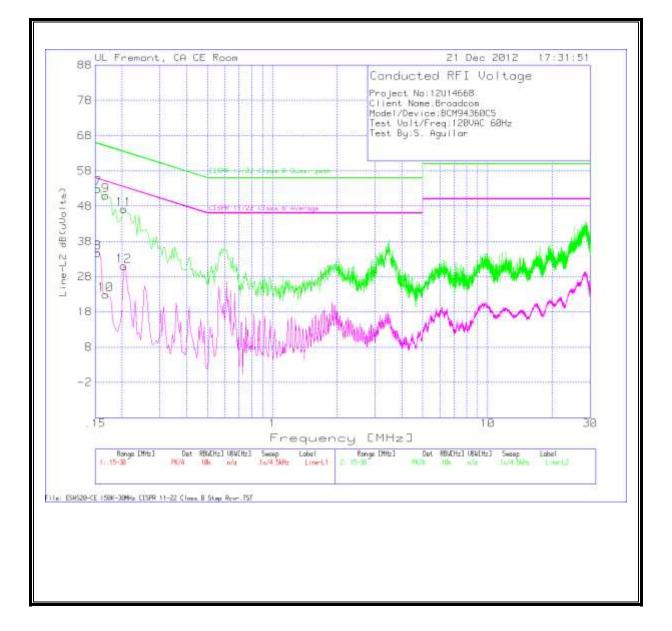
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LINE 1 RESULTS



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LINE 2 RESULTS



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10. DYNAMIC FREQUENCY SELECTION

10.1. OVERVIEW

10.1.1. LIMITS

INDUSTRY CANADA

IC RSS-210 is closely harmonized with FCC Part 15 DFS rules. The deviations are as follows:

RSS-210 Issue 7 A9.4 (b) (ii) Channel Availability Check Time: ...

Additional requirements for the band 5600-5650 MHz: Until further notice, devices subject to this Section shall not be capable of transmitting in the band 5600-5650 MHz, so that Environment Canada weather radars operating in this band are protected.

RSS-210 Issue 7 A9.4 (b) (iv) **Channel closing time:** the maximum channel closing time is 260 ms.

FCC

§15.407 (h) and FCC 06-96 APPENDIX "COMPLIANCE MEASUREMENT PROCEDURES FOR UNLICENSED-NATIONAL INFORMATION INFRASTRUCTURE DEVCIES OPERATING IN THE 5250-5350 MHz AND 5470-5725 MHz BANDS INCORPORATING DYNAMIC FREQUENCY SELECTION".

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Table 1: Applicability of DFS requirements prior to use of a channel

Requirement	Operational Mode				
	Master	Client (without radar detection)	Client (with radar detection)		
Non-Occupancy Period	Yes	Not required	Yes		
DFS Detection Threshold	Yes	Not required	Yes		
Channel Availability Check Time	Yes	Not required	Not required		
Uniform Spreading	Yes	Not required	Not required		

Table 2: Applicability of DFS requirements during normal operation

Requirement	Operational Mode				
	Master Client		Client		
		(without DFS)	(with DFS)		
DFS Detection Threshold	Yes	Not required	Yes		
Channel Closing Transmission Time	Yes	Yes	Yes		
Channel Move Time	Yes	Yes	Yes		

Table 3: Interference Threshold values, Master or Client incorporating In-ServiceMonitoring

Maximum Transmit Power	Value
	(see note)
≥ 200 milliwatt	-64 dBm
< 200 milliwatt	-62 dBm
Note 1: This is the level at the input of the receiver assumine Note 2: Throughout these test procedures an additional 1 of of the test transmission waveforms to account for variation will ensure that the test signal is at or above the detection to response.	dB has been added to the amplitude s in measurement equipment. This

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Table 4: DFS Response requirement values

Parameter	Value		
Non-occupancy period	30 minutes		
Channel Availability Check Time	60 seconds		
Channel Move Time	10 seconds		
Channel Closing Transmission Time	200 milliseconds +		
	approx. 60 milliseconds		
	over remaining 10 second		
	period		

The instant that the Channel Move Time and the Channel Closing Transmission Time begins is as follows:

For the Short pulse radar Test Signals this instant is the end of the *Burst*.

For the Frequency Hopping radar Test Signal, this instant is the end of the last radar burst generated.

For the Long Pulse radar Test Signal this instant is the end of the 12 second period defining the radar transmission.

The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required to facilitate channel changes (an aggregate of approximately 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.

Table 5 – Short Pulse Radar Test Waveforms

Radar	Pulse Width	PRI	Pulses	Minimum	Minimum
Туре	(Microseconds)	(Microseconds)		Percentage of	Trials
				Successful	
				Detection	
1	1	1428	18	60%	30
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate (I	80%	120			

Table 6 – Long Pulse Radar Test Signal

			<u> </u>				
Radar Waveform	Bursts	Pulses per	Pulse Width	Chirp Width	PRI (µsec)	Minimum Percentage	Minimum Trials
		Burst	(µsec)	(MHz)		of Successful Detection	
5	8-20	1-3	50-100	5-20	1000- 2000	80%	30

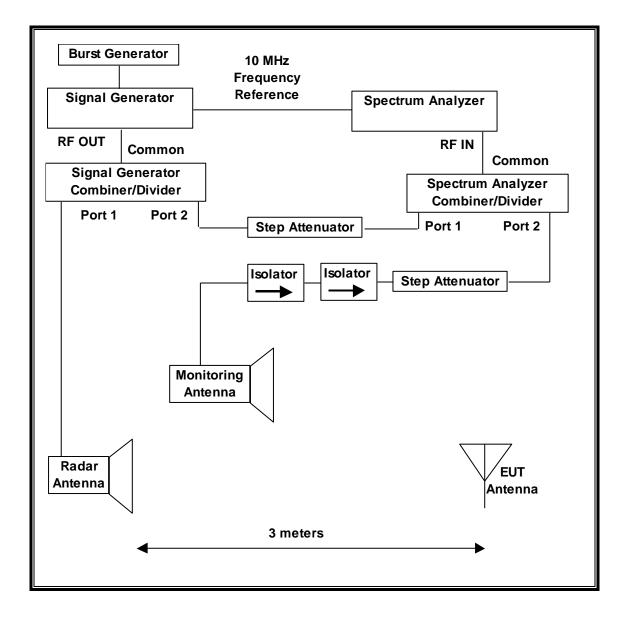
Table 7 – Frequency Hopping Radar Test Signal

Radar Waveform	Pulse Width	PRI (usec)	Burst Length	Pulses per	Hopping Rate	Minimum Percentage of	Minimum Trials
	(µsec)	()	(ms)	Нор	(kHz)	Successful Detection	
6	1	333	300	9	.333	70%	30

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10.1.2. TEST AND MEASUREMENT SYSTEM

RADIATED METHOD SYSTEM BLOCK DIAGRAM



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SYSTEM OVERVIEW

The short pulse and long pulse signal generating system utilizes the NTIA software. The Vector Signal Generator has been validated by the NTIA. The hopping signal generating system utilizes the CCS simulated hopping method and system, which has been validated by the DoD, FCC and NTIA. The software selects waveform parameters from within the bounds of the signal type on a random basis using uniform distribution.

The short pulse types 2, 3 and 4, and the long pulse type 5 parameters are randomized at runtime.

The hopping type 6 pulse parameters are fixed while the hopping sequence is based on the August 2005 NTIA Hopping Frequency List. The initial starting point randomized at run-time and each subsequent starting point is incremented by 475. Each frequency in the 100-length segment is compared to the boundaries of the EUT Detection Bandwidth and the software creates a hopping burst pattern in accordance with Section 7.4.1.3 Method #2 Simulated Frequency Hopping Radar Waveform Generating Subsystem of FCC 06-96 APPENDIX. The frequency of the signal generator is incremented in 1 MHz steps from F_L to F_H for each successive trial. This incremental sequence is repeated as required to generate a minimum of 30 total trials and to maintain a uniform frequency distribution over the entire Detection Bandwidth.

The signal monitoring equipment consists of a spectrum analyzer. The aggregate ON time is calculated by multiplying the number of bins above a threshold during a particular observation period by the dwell time per bin, with the analyzer set to peak detection and max hold.

SYSTEM CALIBRATION

A 50-ohm load is connected in place of the spectrum analyzer, and the spectrum analyzer is connected to a horn antenna via a coaxial cable, with the reference level offset set to (horn antenna gain – coaxial cable loss). The signal generator is set to CW mode. The amplitude of the signal generator is adjusted to yield a level of –64 dBm as measured on the spectrum analyzer.

Without changing any of the instrument settings, the spectrum analyzer is reconnected to the Common port of the Spectrum Analyzer Combiner/Divider. The Reference Level Offset of the spectrum analyzer is adjusted so that the displayed amplitude of the signal is –64 dBm.

The spectrum analyzer displays the level of the signal generator as received at the antenna ports of the Master Device. The interference detection threshold may be varied from the calibrated value of –64 dBm and the spectrum analyzer will still indicate the level as received by the Master Device.

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ADJUSTMENT OF DISPLAYED TRAFFIC LEVEL

A link is established between the Master and Slave and the distance between the units is adjusted as needed to provide a suitable received level at the Master and Slave devices. The video test file is streamed to generate WLAN traffic. The monitoring antenna is adjusted so that the WLAN traffic level, as displayed on the spectrum analyzer, is at lower amplitude than the radar detection threshold.

TEST AND MEASUREMENT EQUIPMENT

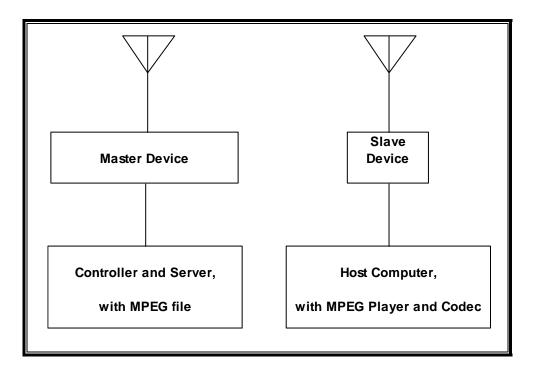
The following test and measurement equipment was utilized for the DFS tests documented in this report:

PERIPHERAL SUPPORT EQUIPMENT LIST								
Description	Manufacturer	Model	Serial Number	FCC ID				
N600 Wireless Dual Band Router (Master Device)	Netgear	WNDR3400	2BK311730FF6B	PY309300116				
AC Adapter (AP)	Netgear	FA-1201500SJA / FA-1201500SUA	4F105116T102090 45B	DoC				
Notebook PC (Controller/Server)	HP	Pavilion zv6000	CND5290401	DoC				
AC Adapter (Controller/Server PC)	HP	PA-1121-12HD	58B240ALLRK0HU	DoC				
Notebook PC (Host)	Apple	MacBook Pro A1297	C02H30KADV10	DoC				
AC Adapter (Host PC)	Lite On Technology	PA-1850-3 NSW24629	C06151702P5DJ9 4A8	DoC				

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10.1.3. SETUP OF EUT (CLIENT MODE)

RADIATED METHOD EUT TEST SETUP



SUPPORT EQUIPMENT

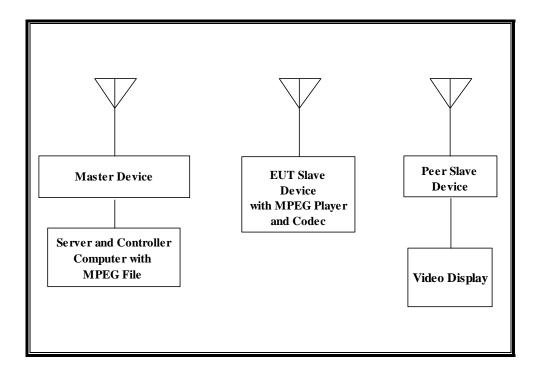
The following support equipment was utilized for the DFS tests documented in this report:

	PERIPHERAL SUPPORT EQUIPMENT LIST								
Description	Manufacturer	Model	Serial Number	FCC ID					
N600 Wireless Dual Band Router (Master Device)	Netgear	WNDR3400	2BK311730FF6B	PY309300116					
AC Adapter (AP)	Netgear	FA-1201500SJA / FA-1201500SUA	4F105116T102090 45B	DoC					
Notebook PC (Controller/Server)	HP	Pavilion zv6000	CND5290401	DoC					
AC Adapter (Controller/Server PC)	HP	PA-1121-12HD	58B240ALLRK0HU	DoC					
Notebook PC (Host)	Apple	MacBook Pro A1297	C02H30KADV10	DoC					
AC Adapter (Host PC)	Lite On Technology	PA-1850-3 NSW24629	C06151702P5DJ9 4A8	DoC					

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10.1.4. SETUP OF EUT (CLIENT-TO-CLIENT COMMUNICATIONS MODE)

RADIATED METHOD EUT TEST SETUP



SUPPORT EQUIPMENT

The following support equipment was utilized for the DFS tests documented in this report:

	PERIPHERAL SUPPORT EQUIPMENT LIST								
Description	Manufacturer	Model	Serial Number	FCC ID					
N600 Wireless Dual Band Router (Master Device)	Netgear	WNDR3400	2BK311730FF6B	PY309300116					
AC Adapter (AP)	Netgear	FA-1201500SJA / FA-1201500SUA	4F105116T10209045B	DoC					
Notebook PC (Controller/Server)	HP	Pavilion zv6000	CND5290401	DoC					
AC Adapter (Controller/Server PC)	HP	PA-1121-12HD	58B240ALLRK0HU	DoC					
Notebook PC (EUT Host)	Apple	A1465	C02JF8GSDRV6	DoC					
AC Adapter (Host PC)	Lite On	PA_1450-8	C0623350GF4F6V7AR	DoC					
Apple TV (Peer Slave)	Apple	A1427	DY3J8RZ3DRHN	BCGA1427					
Video Display	Coby Electronics	LEDVD1596	LGWH4XXXT07T02S01	DoC					

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10.1.5. **DESCRIPTION OF EUT**

The EUT operates over the 5250-5350 MHz and 5470-5725 MHz ranges.

The EUT is a Slave Device without radar detection capabilities.

The highest power level within these bands is 29.45 dBm EIRP in the 5250-5350 MHz band and 29.14 dBm EIRP in the 5470-5725 MHz band.

The highest gain antenna assembly consists of 3 antennas with individual gains of 7.09 dBi, 7.06 dBi and 3.58 dBi in the 5250-5350 MHz band and 5.03 dBi, 6.66 dBi and 3.94 dBi in the 5470-5725 MHz band. The lowest gain antenna assembly consists of 3 antennas with individual gains of 3.35 dBi, 3.44 dBi and 3.01 dBi in the 5250-5350 MHz band and 3.32 dBi, 2.41 dBi and 4.63 dBi in the 5470-5725 MHz band.

Three antennas are utilized to meet the diversity and MIMO operational requirements.

The rated output power of the Master unit is > 23dBm (EIRP). Therefore the required interference threshold level is -64 dBm. After correction for procedural adjustments, the required radiated threshold at the antenna port is -64 + 1 = -63 dBm.

The calibrated radiated DFS Detection Threshold level is set to –64 dBm. The tested level is lower than the required level hence it provides margin to the limit.

The EUT uses three transmitter/receiver chains, each connected to an antenna to perform radiated tests.

WLAN traffic exceeding the transmitter minimum activity ratio of 30% is generated by streaming the compressed video file "6 ½ Magic Hours" from the Master to the Slave in full motion video.

TPC is required since the maximum EIRP is greater than 500 mW (27 dBm).

The EUT utilizes the 802.11a/n architecture. Two nominal channel bandwidths are implemented: 20 MHz and 40 MHz.

The software installed in the access point is Linux revision 5.22.84.0.

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MANUFACTURER'S STATEMENT REGARDING UNIFORM CHANNEL SPREADING

This is not applicable to slave devices.

OVERVIEW OF MASTER DEVICE WITH RESPECT TO §15.407 (h) REQUIREMENTS

The Master Device is a Netgear N600 Dual Band Router, FCC ID: PY309300116. The DFS software installed in the Master Device is Linux revision 5.22.84.0. The minimum antenna gain for the Master Device is 2.73 dBi.

The calibrated radiated DFS Detection Threshold level is set to -64 dBm.

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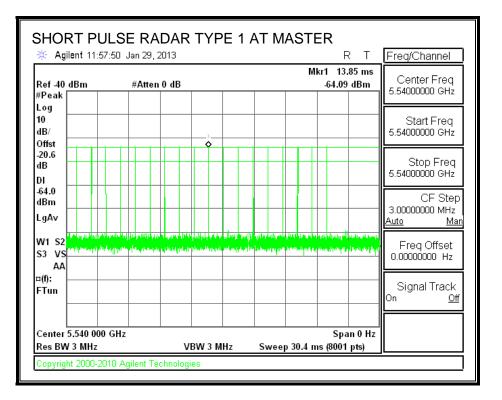
10.2. CLIENT MODE RESULTS FOR 20 MHz BANDWIDTH

10.2.1. TEST CHANNEL

All tests were performed at a channel center frequency of 5540 MHz.

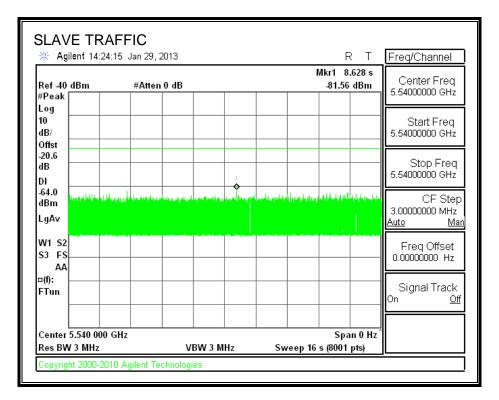
10.2.2. RADAR WAVEFORM AND TRAFFIC

RADAR WAVEFORM



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TRAFFIC



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10.2.3. **OVERLAPPING CHANNEL TESTS**

RESULTS

These tests are not applicable.

10.2.4. MOVE AND CLOSING TIME

REPORTING NOTES

The reference marker is set at the end of last radar pulse.

The delta marker is set at the end of the last WLAN transmission following the radar pulse. This delta is the channel move time.

The aggregate channel closing transmission time is calculated as follows:

```
Aggregate Transmission Time = (Number of analyzer bins showing transmission) * (dwell time per bin)
```

The observation period over which the FCC aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

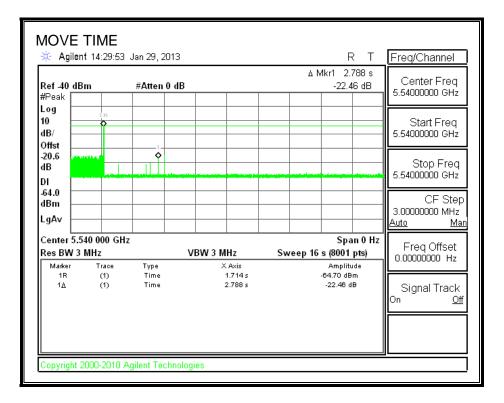
The observation period over which the IC aggregate time is calculated begins at (Reference Marker) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

Agency	Channel Move Time	Limit
	(sec)	(sec)
FCC / IC	2.788	10

Agency	Aggregate Channel Closing Transmission Time	Limit
	(msec)	(msec)
FCC	10.0	60
IC	12.0	260

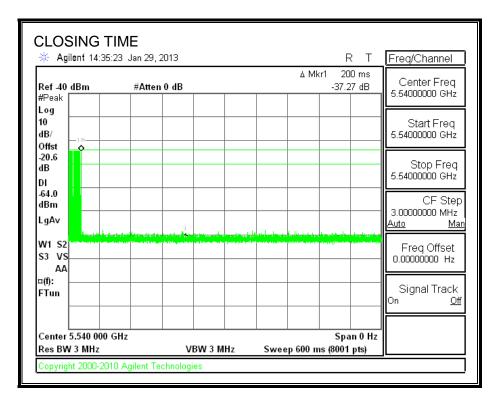
MOVE TIME



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CHANNEL CLOSING TIME

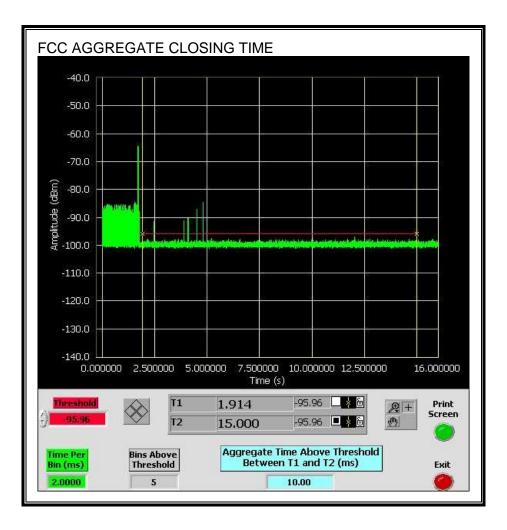


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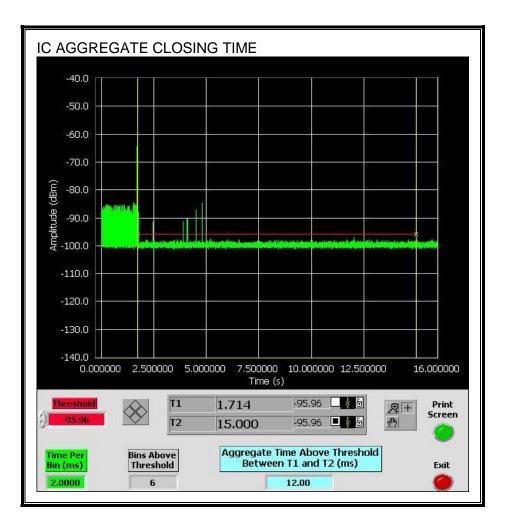
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AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

Only intermittent transmissions are observed during the FCC aggregate monitoring period.



Only intermittent transmissions are observed during the IC aggregate monitoring period.



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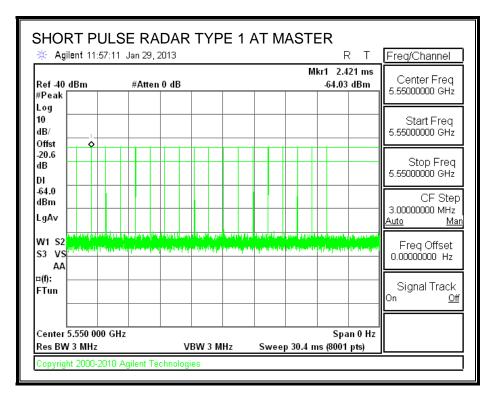
10.3. CLIENT MODE RESULTS FOR 40 MHz BANDWIDTH

10.3.1. TEST CHANNEL

All tests were performed at a channel center frequency of 5550 MHz.

10.3.2. RADAR WAVEFORM AND TRAFFIC

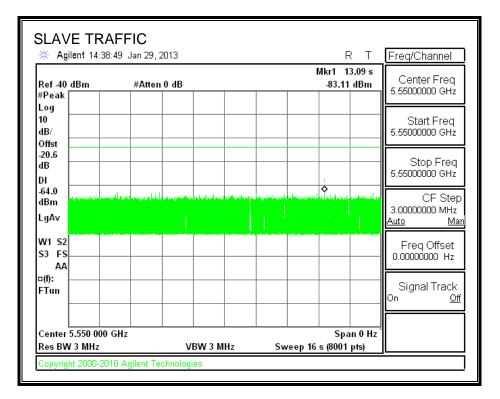
RADAR WAVEFORM



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10.3.3. **OVERLAPPING CHANNEL TESTS**

RESULTS

These tests are not applicable.

10.3.4. MOVE AND CLOSING TIME

REPORTING NOTES

The reference marker is set at the end of last radar pulse.

The delta marker is set at the end of the last WLAN transmission following the radar pulse. This delta is the channel move time.

The aggregate channel closing transmission time is calculated as follows:

```
Aggregate Transmission Time = (Number of analyzer bins showing transmission) * (dwell time per bin)
```

The observation period over which the FCC aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

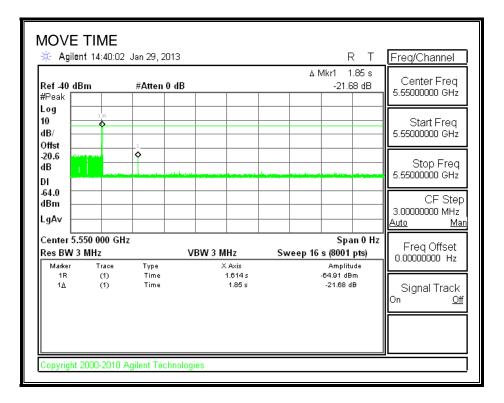
The observation period over which the IC aggregate time is calculated begins at (Reference Marker) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

Agency	Channel Move Time	Limit
	(sec)	(sec)
FCC / IC	1.850	10

Agency	Aggregate Channel Closing Transmission Time	Limit
	(msec)	(msec)
FCC	2.0	60
IC	16.0	260

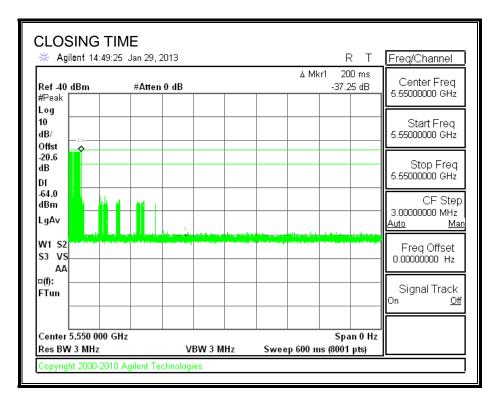
MOVE TIME



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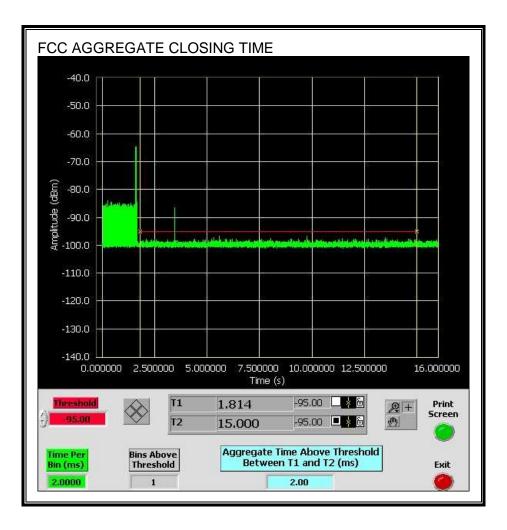
CHANNEL CLOSING TIME



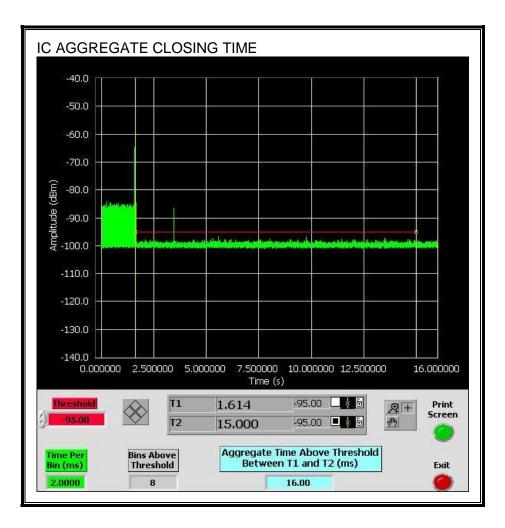
Page 877 of 906 UL CCS FORM NO: CCSUP4701H 47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888 This report shall not be reproduced except in full, without the written approval of UL CCS.

AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

Only intermittent transmissions are observed during the FCC aggregate monitoring period.



Only intermittent transmissions are observed during the IC aggregate monitoring period.



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10.3.5. NON-OCCUPANCY PERIOD

RESULTS

No EUT transmissions were observed on the test channel during the 30-minute observation time.

Agilent 15:34	17 Jan 29, 2013		RT	Freq/Channe
40 dBm	#Atten 0 dB	Δ	Mkr1 1.8 ks -33.49 dB	Center Fre 5.55000000 GH
18-18				Start Fre 5.5500000 GH
6				Stop Fre 5.5500000 GH
0 Maria da la composición de la composicinda composición de la composición de la composición de la com				CF St 3.0000000 MH <u>Auto</u>
S2 FS AA				Freq Offse 0.00000000 H
				Signal Trac On
nter 5.550 000 -	GHz VBW 3 M	Ha Surger 3	Span 0 Hz [°] ! ks (8001 pts)	

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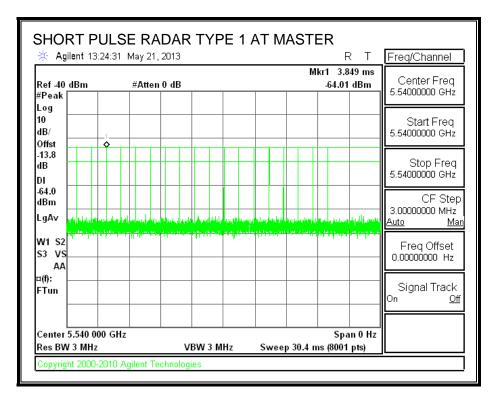
10.4. CLIENT-TO-CLIENT COMMUNICATIONS MODE RESULTS FOR 20 MHz BANDWIDTH

10.4.1. TEST CHANNEL

All tests were performed at a channel center frequency of 5540 MHz.

10.4.2. RADAR WAVEFORM AND TRAFFIC

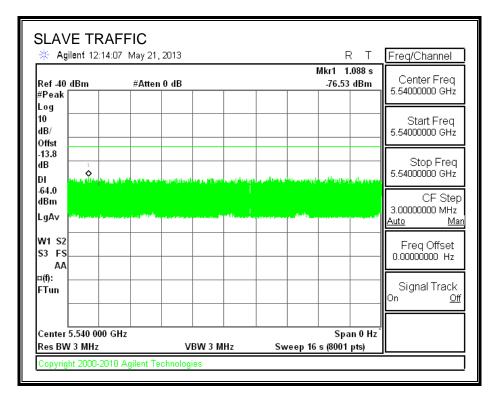
RADAR WAVEFORM



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TRAFFIC



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10.4.3. **OVERLAPPING CHANNEL TESTS**

RESULTS

These tests are not applicable.

10.4.4. MOVE AND CLOSING TIME

REPORTING NOTES

The reference marker is set at the end of last radar pulse.

The delta marker is set at the end of the last WLAN transmission following the radar pulse. This delta is the channel move time.

The aggregate channel closing transmission time is calculated as follows:

```
Aggregate Transmission Time = (Number of analyzer bins showing transmission) * (dwell time per bin)
```

The observation period over which the FCC aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

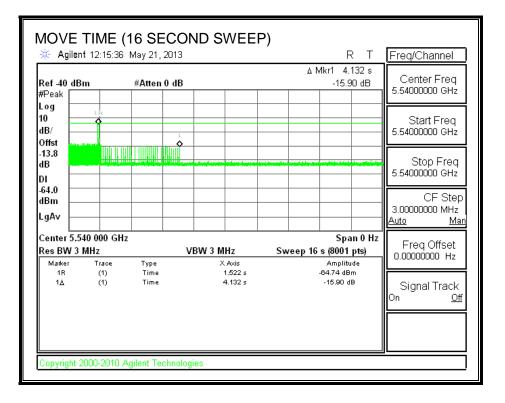
The observation period over which the IC aggregate time is calculated begins at (Reference Marker) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

Agency	Channel Move Time	Limit
	(sec)	(sec)
FCC / IC	4.015	10

Agency	Aggregate Channel Closing Transmission Time	Limit
	(msec)	(msec)
FCC	42.0	60
IC	54.0	260

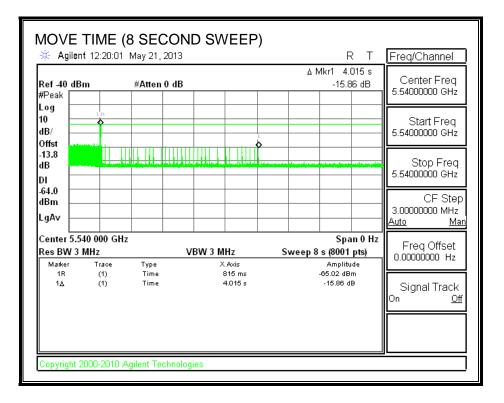
MOVE TIME (16 SECOND SWEEP)



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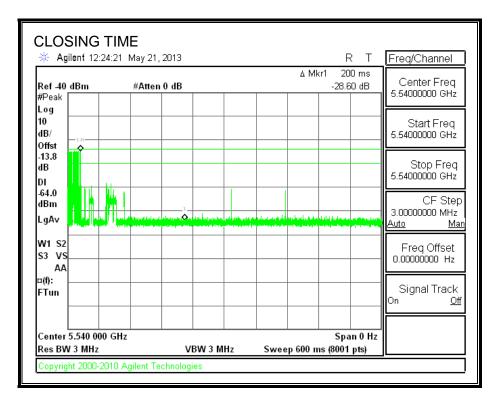
MOVE TIME (8 SECOND SWEEP)



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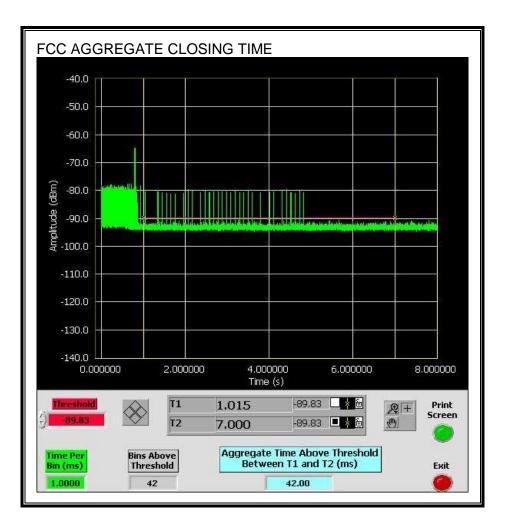
CHANNEL CLOSING TIME



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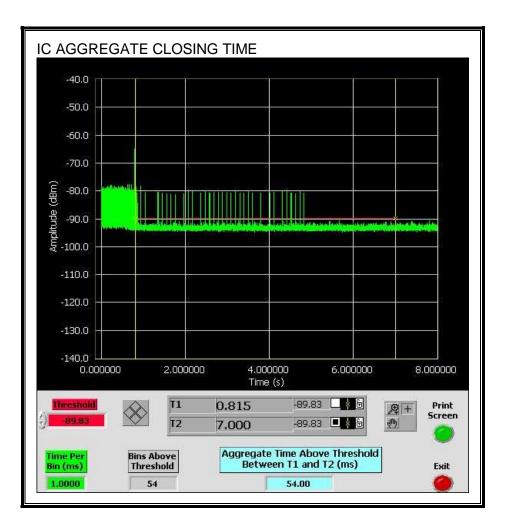
AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

Only intermittent transmissions are observed during the FCC aggregate monitoring period.



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Only intermittent transmissions are observed during the IC aggregate monitoring period.



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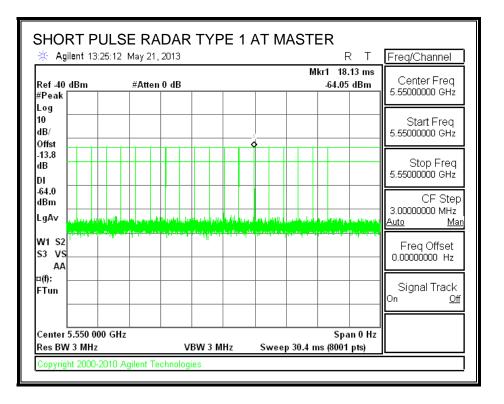
10.5. CLIENT-TO-CLIENT COMMUNICATIONS MODE RESULTS FOR 40 MHz BANDWIDTH

10.5.1. TEST CHANNEL

All tests were performed at a channel center frequency of 5550 MHz.

10.5.2. RADAR WAVEFORM AND TRAFFIC

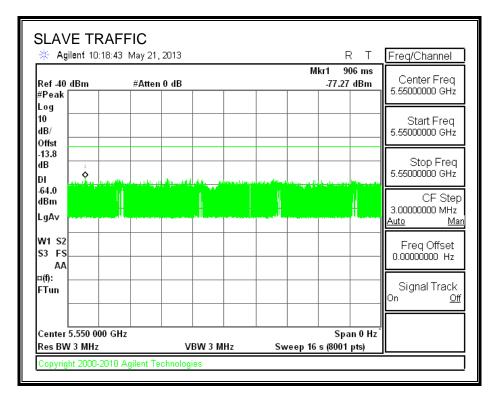
RADAR WAVEFORM



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TRAFFIC



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10.5.3. **OVERLAPPING CHANNEL TESTS**

RESULTS

These tests are not applicable.

10.5.4. MOVE AND CLOSING TIME

REPORTING NOTES

The reference marker is set at the end of last radar pulse.

The delta marker is set at the end of the last WLAN transmission following the radar pulse. This delta is the channel move time.

The aggregate channel closing transmission time is calculated as follows:

```
Aggregate Transmission Time = (Number of analyzer bins showing transmission) * (dwell time per bin)
```

The observation period over which the FCC aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

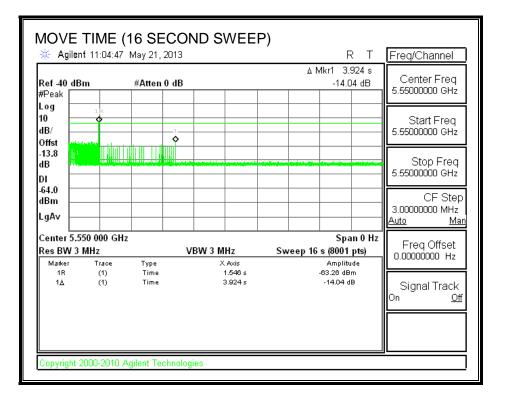
The observation period over which the IC aggregate time is calculated begins at (Reference Marker) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

Agency	Channel Move Time	Limit
	(sec)	(sec)
FCC / IC	4.112	10

Agency	Aggregate Channel Closing Transmission Time	Limit
	(msec)	(msec)
FCC	35.0	60
IC	73.0	260

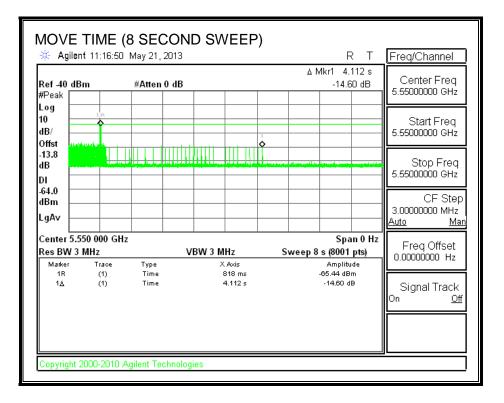
MOVE TIME (16 SECOND SWEEP)



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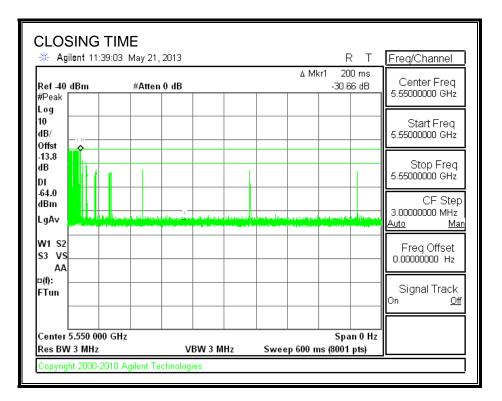
MOVE TIME (8 SECOND SWEEP)



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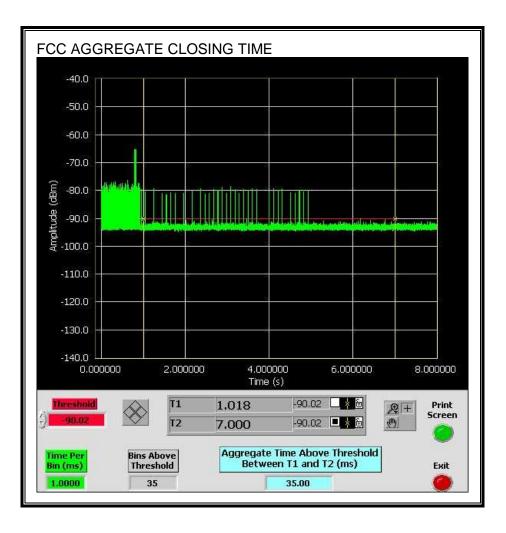
CHANNEL CLOSING TIME



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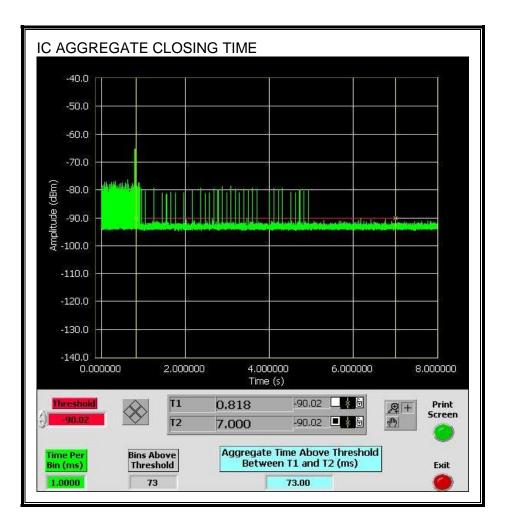
AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

Only intermittent transmissions are observed during the FCC aggregate monitoring period.



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Only intermittent transmissions are observed during the IC aggregate monitoring period.



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