

APPENDIX A

TEST PLOTS

(Model: AEX-AR9590-NI)



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A.1 EMISSION BANDWIDTH MEASUREMENT

Test Date	2016/04/14 ~ 05/20	Temp./Hum.	25 ~ 26°C/54 ~ 60%
Cable Loss	N/A	Test Voltage	DC 3.3V

A.1.1 Emission Bandwidth Result

Modulation Type	UNII Band	Centre Frequency (MHz)	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Limit	
		5180	36.42	18.538		
	I	5200	34.79	18.715		
802.11a		5240	36.57	18.758		
602.11a		5260	27.95	16.692		
	II-2A	5280	28.07	16.683		
		5320	28.84	16.648	Reference	
	I	5180	22.66	17.818	only	
		I	5200	31.56	18.522	
802.11n-		5240	33.10	18.389		
HT20		5260	25.13	17.740		
	II-2A	5280	23.62	17.707		
		5320	23.40	17.703		
	Ι	5190	57.65	36.392		
802.11n-	1	5230	59.83	36.356	Reference	
HT40	II-2A	5270	50.98	36.355	only	
	11 - 2 <i>F</i> X	5310	40.87	36.147		

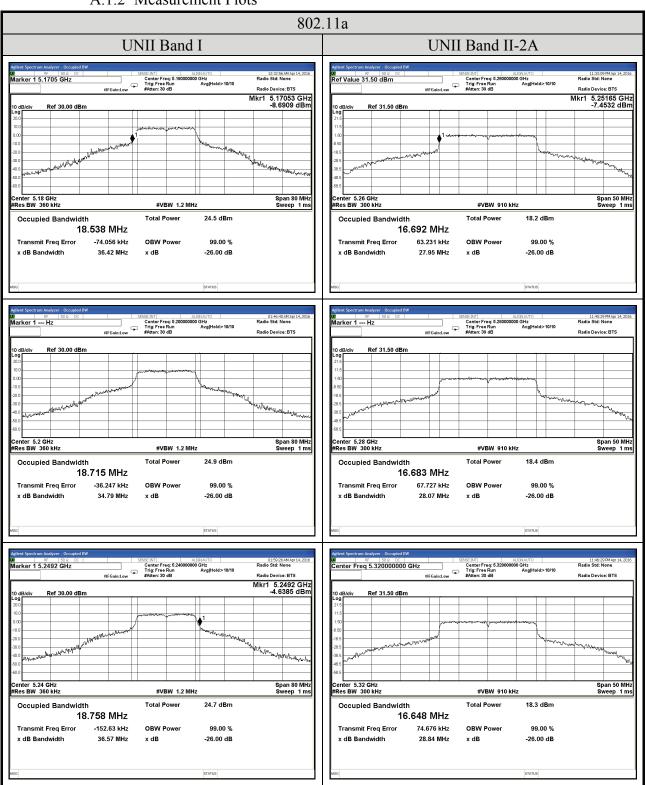
Modulation UNII Type Band		Centre Frequency (MHz) 6dB Bandwidth (MHz)		Limit
		5745	16.35	
802.11a	III	5785	16.33	
		5825	16.30	
000 11		5745	17.07	> 500kHz
802.11n- HT20		5785	16.08	≥ 500kHz
11120		5825		15.80
802.11n-	1n- 5755 3		35.27	
HT40	III	5795	35.82	

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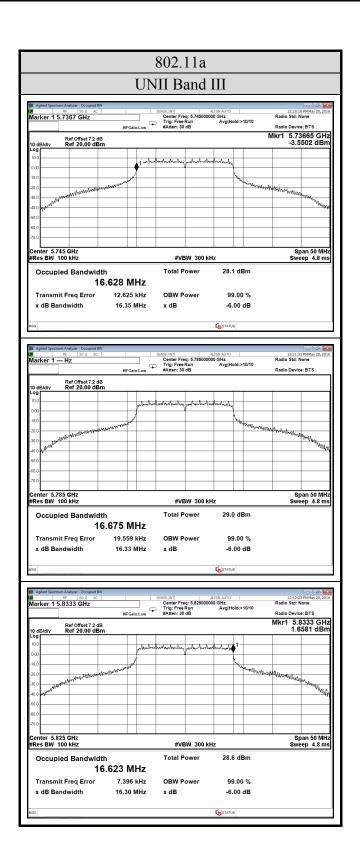


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A.1.2 Measurement Plots



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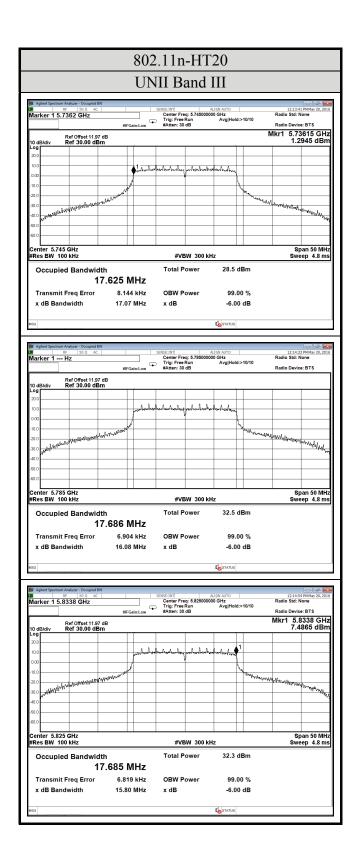


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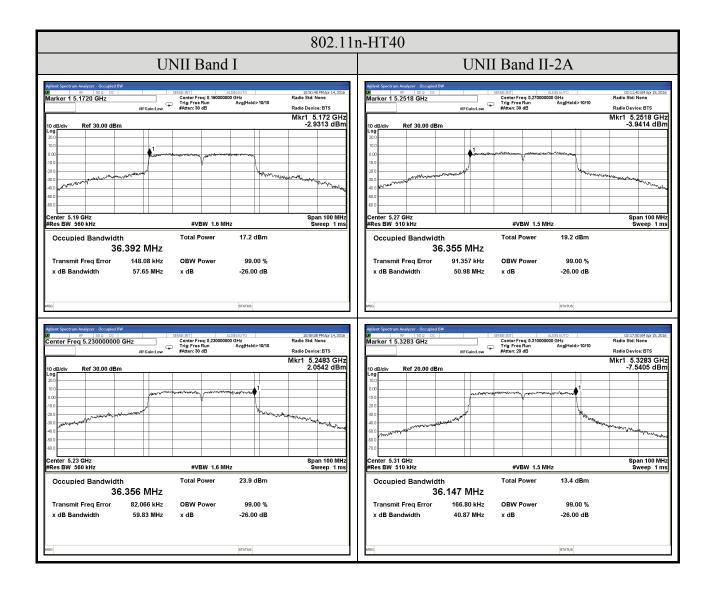
802.11n-HT20 UNII Band I **UNII Band II-2A** 12:16:47 AM Apr 15 Radio Std: None VBW 750.00 kHz Marker 1 5.2512 GHz Center Freq: 5.1 Trig: Free Run #Atten: 30 dB Center Freq: 5.2 Trig: Free Run #Atten: 34 dB Mkr1 5.17088 GHz 3.1865 dBm Mkr1 5.25115 GHz -2.3775 dBm Span 50 MHz Sweep 1 ms Occupied Bandwidth Total Power 32.6 dBm Occupied Bandwidth Total Power 19.5 dBm 17.818 MHz 17.740 MHz 10.023 kHz 99.00 % 27.744 kHz OBW Powe 99.00 % x dB Bandwidth 22.66 MHz x dB -26.00 dB x dB Bandwidth 25.13 MHz x dB -26.00 dB VBW 1.2000 MHz VBW 750.00 kHz 3Hz Avg|Hold:>10/10 Center Freq: 5.: Trig: Free Run #Atten: 30 dB Center Freq: 5. Trig: Free Run #Atten: 30 dB GHz Avg|Hold:>10/10 Ref 30.00 dBr Ref 30.00 dBr Center 5.2 GHz #Res BW 360 kHz Span 50 MHz Sweep 1.133 ms Occupied Bandwidth Total Power 27.1 dBm Occupied Bandwidth Total Power 19.9 dBm 18.522 MHz 17.707 MHz Transmit Freq Error -3.147 kHz OBW Power 99.00 % Transmit Freq Error 88.674 kHz OBW Power 99.00 % x dB Bandwidth 31.56 MHz y dB -26.00 dB x dB Bandwidth 23.62 MHz x dB -26.00 dB 12:40:30 AM Apr 15 Radio Std: None 10:43:12 PM Apr 14, 2 Radio Std: None Center Freq: 5.244 Trig: Free Run #Atten: 30 dB 0 GHz Avg|Hold>10/10 larker 1 5.2492 GHz 00 GHz Avg|Hold:>10/10 Marker 1 5.3290 GHz Center Freq: 5.3: Trig: Free Run #Atten: 36 dB Mkr1 5.32895 GHz -3.1787 dBm Mkr1 5.2492 GHz -1.0129 dBm Span 50 MHz Sweep 1.133 ms Occupied Bandwidth Total Power 25.6 dBm Occupied Bandwidth Total Power 20.5 dBm 18.389 MHz 17.703 MHz OBW Power OBW Power Transmit Freq Error 15.229 kHz 99.00 % 40.712 kHz 99.00 % x dB Bandwidth 33.10 MHz x dB -26.00 dB x dB Bandwidth 23.40 MHz x dB -26.00 dB

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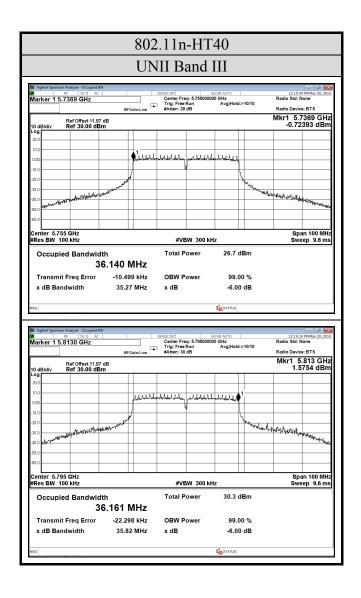
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A.2 MAXIMUM OUTPUT POWER MEASUREMENT

A.2.1 Emission Bandwidth Result

Test Date 2016/05/15		Temp./Hum.	26°C/54%		
Cable Loss	N/A	Test Voltage	DC 3.3V		

Modulation	UNII Band	Centre Frequency	Output Power	10log	MAX Output Power		Limit	Limit without
Type		(MHz)	(dBm) (1/	(1/X)	(dBm)	(W)		TPC Function
		5180	14.24		14.46	0.028	0.70 YY	
	I II-2A	5200	14.20	0.22	14.42	0.028	< 250 mW (24 dBm) < 250 mW (24 dBm) < 1 W (30 dBm)	
		5240	15.45		15.67	0.037		
		5260	15.50		15.72	0.037		< 500mW (26.99dBm)
802.11a		5280	14.85		15.07	0.032		
		5320	15.11		15.33	0.034		
		5745	16.65		16.87	0.049		
	III	III 5785	18.03		18.25	0.067		
		5825	17.85		18.07	0.064		

Note: The results have been included cable loss.

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Modulation	UNII Band	r realiency	Output Power			10log	MAX Output Power		Limit	Limit without TPC		
Туре		(MHz)	Chain 0	Chain 1	Chain 2	(1/X)	(dBm)	(W)		Function		
		5180	10.24	10.46	9.62		15.40	0.035	<0.105 W (20.23 dBm) Note 2			
	I	5200	10.22	10.29	10.04		15.46	0.035				
		5240	10.36	10.43	10.32		15.65	0.037				
000 11		5260	10.87	11.15	11.02	0.51 15.99 15.53 18.83	16.29	0.043	<0.105 W (20.23 dBm) (20.420 W (26.23 dBm) Note 3	< 500mW (26.99dBm)		
802.11n- HT20	II-2A	5280	10.25	10.43	11.37		15.99	0.040				
		5320	10.12	10.03	10.58		15.53	0.036				
	III	5745	13.23	13.65	13.76		18.83	0.076				
		5785	16.62	17.24	16.82		22.18	0.165				
		5825	16.74	17.28	16.84		22.24	0.167				
	I	5190	9.79	9.83	8.86		15.04	0.032	<0.105 W			
		5230	14.91	13.63	13.94		19.72	0.094	(20.23 dBm) Note 2			
802.11n-	II-2A	5270	14.85	13.63	13.85	0.76	19.67	0.093	<0.105 W	< 500mW		
HT40		5310	9.80	8.67	9.65	0.76	14.93	0.031	$(20.23 \underset{\text{Note } 2}{\text{dBm}})$	(26.99dBm)		
	TIT	5755	10.24	11.19	11.40		16.50	0.045	< 0.420 W			
	III	III	III	5795	14.02	14.17	14.51		19.77	0.095	(26.23 dBm) Note 3	

Note 1: The results have been included cable loss.

Note 2: 802.11n Directional gain is 9.77dBi > 6dBi, the Limit is 24 - (9.77-6) = 20.23 dBm

Note 3: 802.11n Directional gain is 9.77dBi > 6dBi, the Limit is 30 - (9.77-6) = 26.23dBm