4. Peak Transmit Output

4.1. Test Equipment

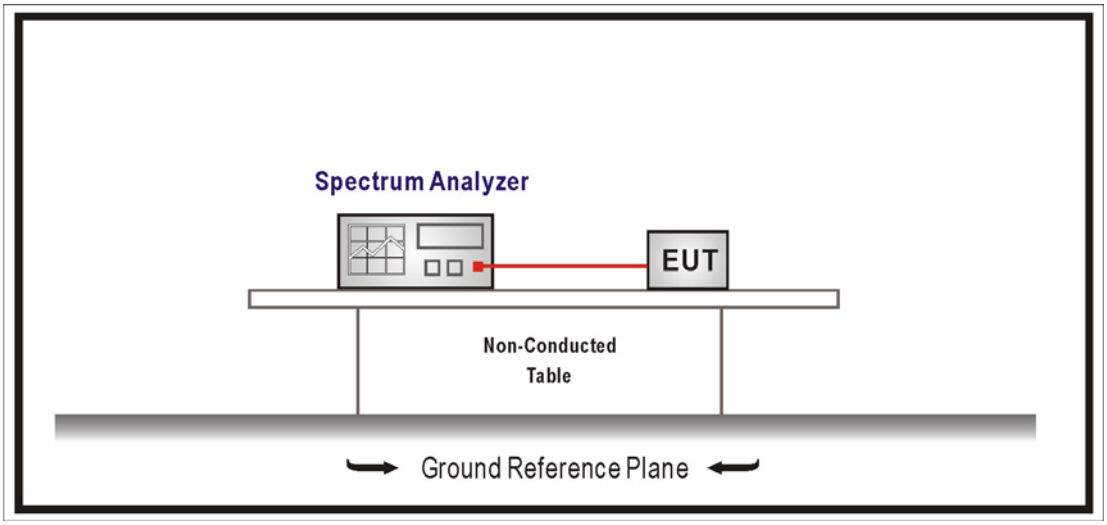
The following test equipments are used during the radiated emission tests:

Peak Transmit Output / SR7

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A-EXA	US47140172	2014/08/05

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

4.2. Test Setup



4.3. Limits

1. For the band 5.15-5.25 GHz, the peak transmit power over the frequency band of operation shall not exceed the lesser of 50 mW or 4 dBm + 10log B, where B is the 26dB emission bandwidth in MHz. If transmitting antenna of directional gain greater than 6 dBi are used, the peak transmit power shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.
2. For the band 5.25-5.35 GHz, the peak transmit power over the frequency band of operation shall not exceed the lesser of 250 mW or 11 dBm + 10log B, where B is the 26dB emission bandwidth in MHz. If transmitting antenna of directional gain greater than 6 dBi are used, the peak transmit power shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.
3. For the band 5.725-5.825 GHz, the peak transmit power over the frequency band of operation shall not exceed the lesser of 1W or 17 dBm + 10log B, where B is the 26dB emission bandwidth in MHz. If transmitting antenna of directional gain greater than 6 dBi are used, the peak transmit power shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.

4.4. Test Procedure

The EUT was setup to ANSI C63.4, 2009; tested to U-NII test procedure of March 2012 KDB 789033 for compliance to FCC 47CFR Subpart E requirements. The Method SA-1 of the Maximum conducted output power was used.

Set RBW=1MHz, VBW=3MHz with RMS detector and trace average 100 traces in power averaging mode. Set span to encompass the entire emission bandwidth (EBW) of the signal. Compute power by integrating the spectrum across the 26 dB EBW of the signal.

4.5. Uncertainty

The measurement uncertainty is defined as ± 1.27 dB

4.6. Test Result

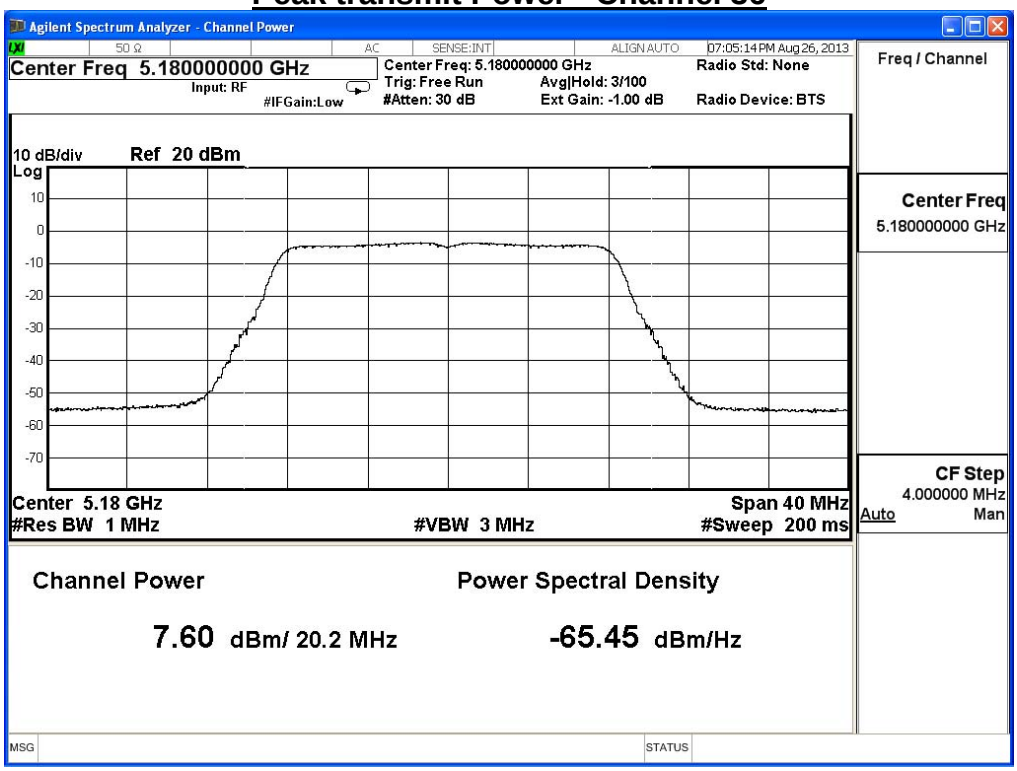
Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2013/08/26	Test Site	SR7

802.11a (ANT0) , Power Index : ch36:36 ch44:36 ch48:36						
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
36	5180	20.20	7.60	≤17	17.05	Pass
44	5220	20.19	7.78	≤17	17.05	Pass
48	5240	20.15	7.38	≤17	17.04	Pass

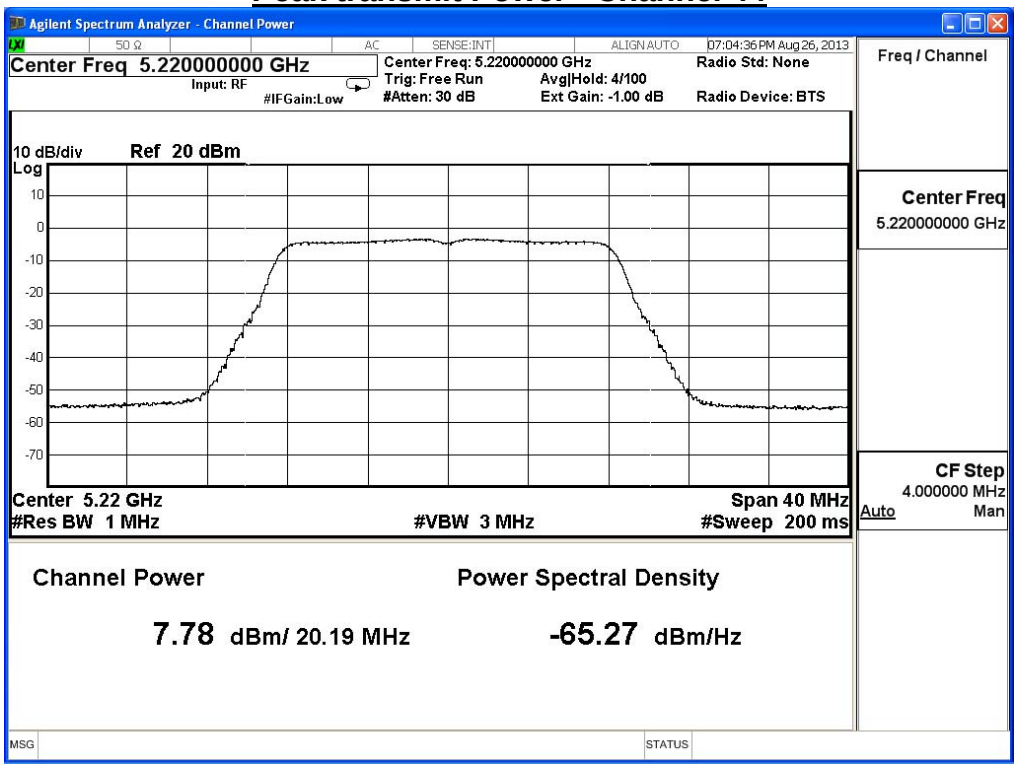
The worst emission of data rate is 6 Mbps.

Peak Power Output (dBm)									
Channel No	Frequency (MHz)	Data Rate							Required Limit
		6	12	18	24	36	48	54	
36	5180	7.60	--	--	--	--	--	--	17dBm or 4dBm+10logB
44	5220	7.78	7.68	7.58	7.38	7.14	6.90	6.66	
48	5240	7.38	--	--	--	--	--	--	

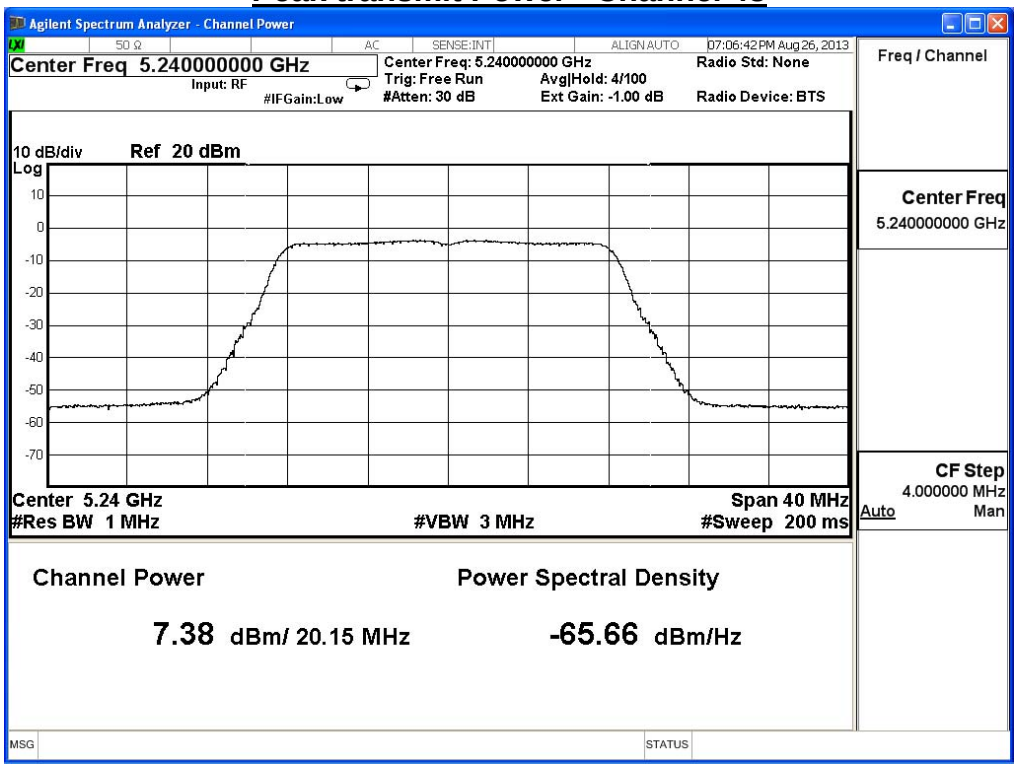
Peak transmit Power - Channel 36



Peak transmit Power - Channel 44



Peak transmit Power - Channel 48



Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2013/08/26	Test Site	SR7

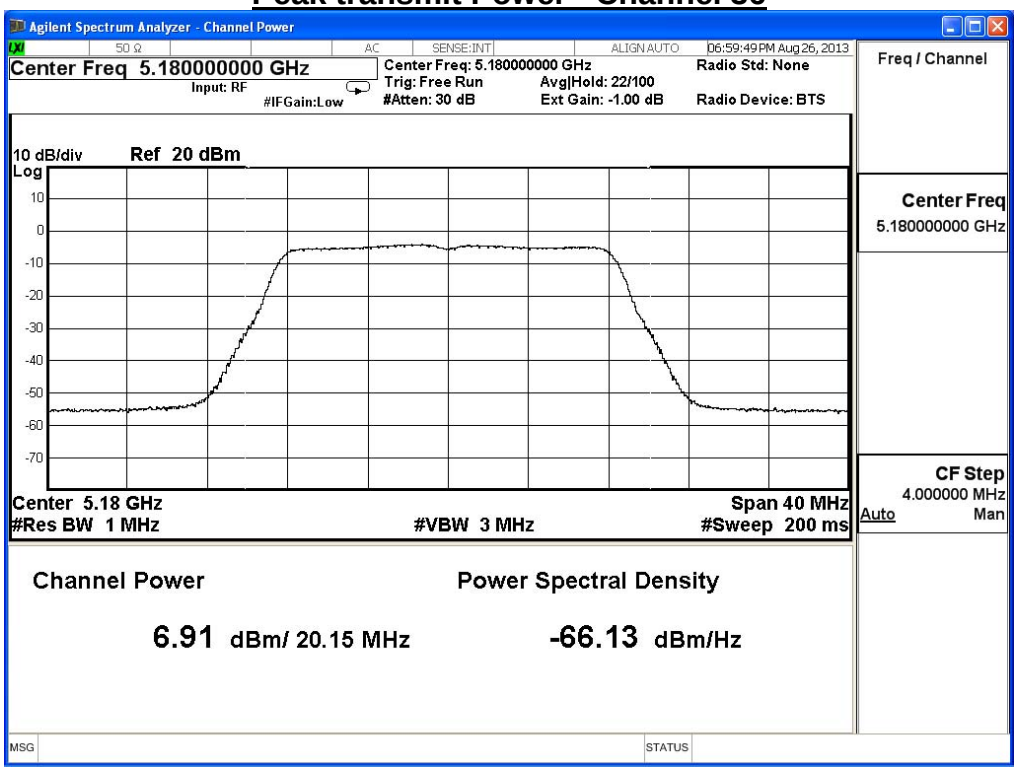
802.11a (ANT1) , Power Index : ch36:36 ch44:36 ch48:36

Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
36	5180	20.15	6.91	≤17	17.04	Pass
44	5220	20.24	7.00	≤17	17.06	Pass
48	5240	19.87	7.12	≤17	16.98	Pass

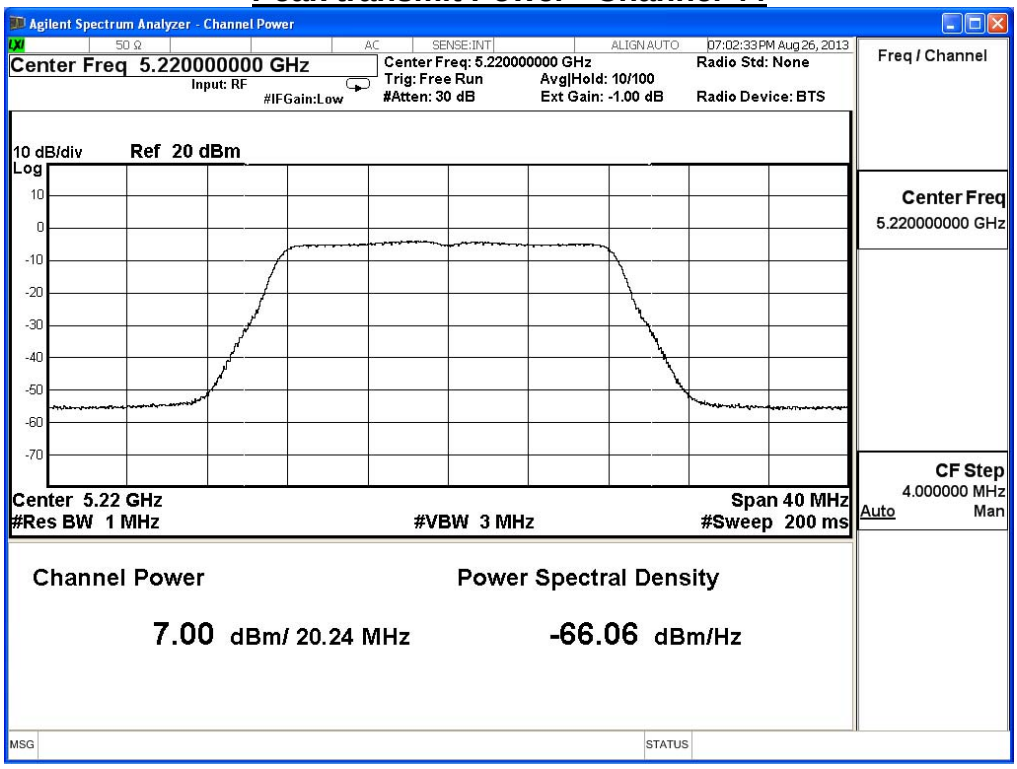
The worst emission of data rate is 6 Mbps.

Peak Power Output (dBm)									
Channel No	Frequency (MHz)	Data Rate							Required Limit
		6	12	18	24	36	48	54	
36	5180	6.91	--	--	--	--	--	--	17dBm or 4dBm+10logB
44	5220	7.00	6.90	6.70	6.50	6.26	6.14	6.02	
48	5240	7.12	--	--	--	--	--	--	

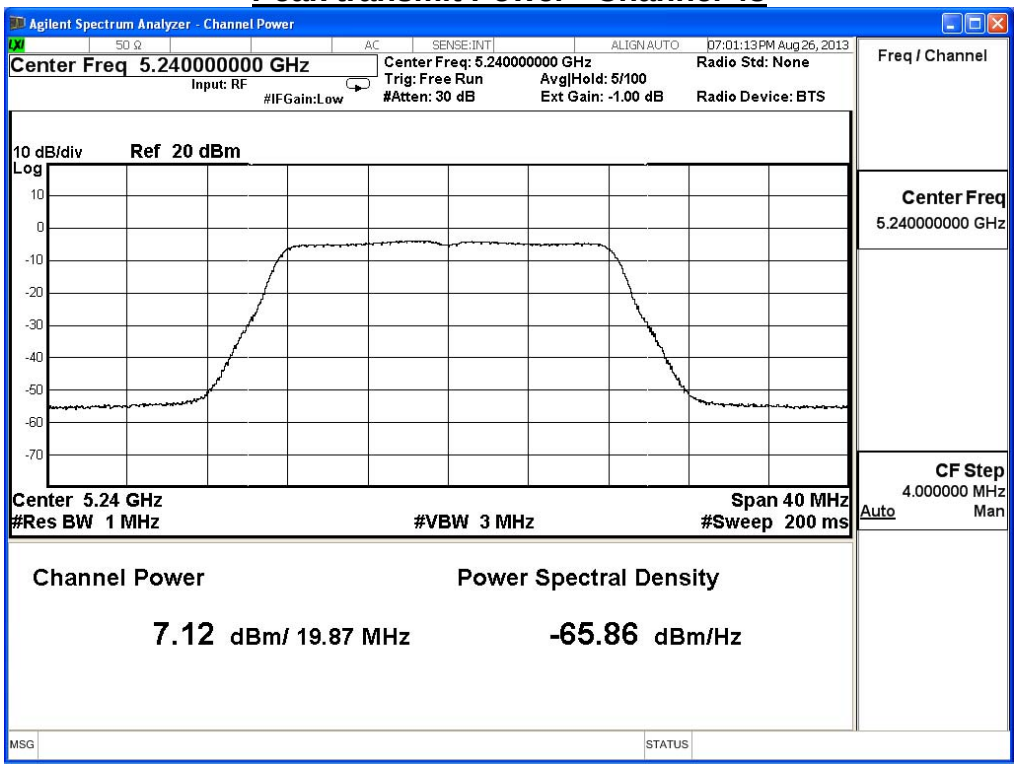
Peak transmit Power - Channel 36



Peak transmit Power - Channel 44



Peak transmit Power - Channel 48



Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2013/08/26	Test Site	SR7

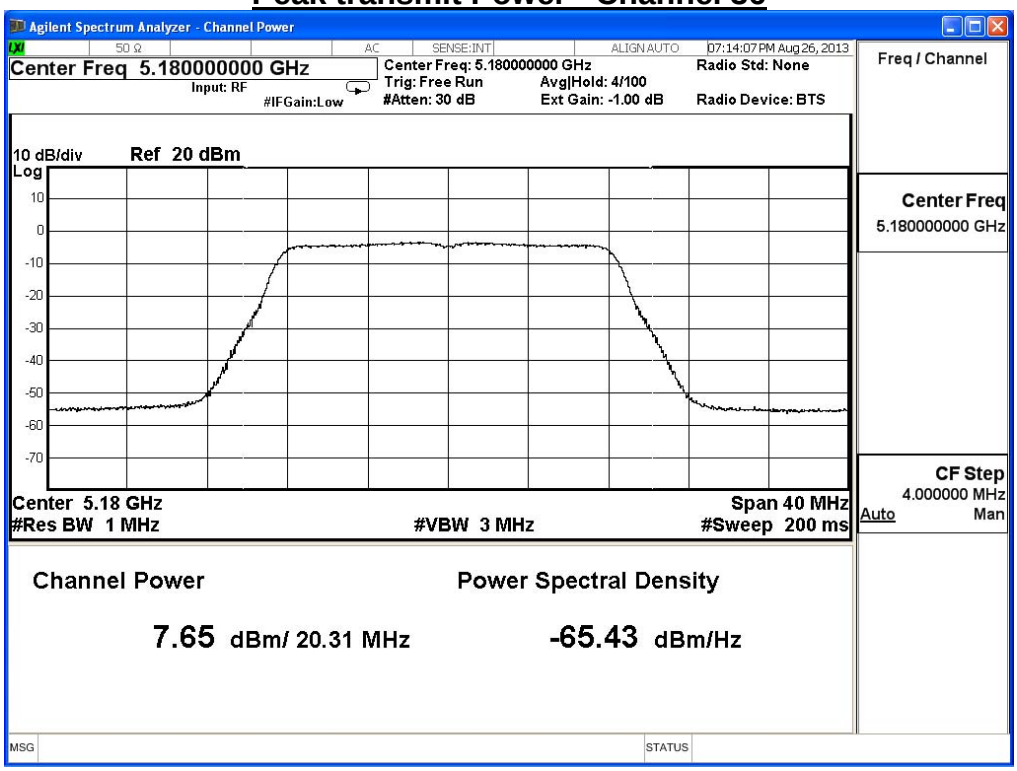
802.11a (ANT2) , Power Index : ch36:36 ch44:36 ch48:36

Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
36	5180	20.31	7.65	≤17	17.08	Pass
44	5220	20.02	7.81	≤17	17.01	Pass
48	5240	20.15	7.72	≤17	17.04	Pass

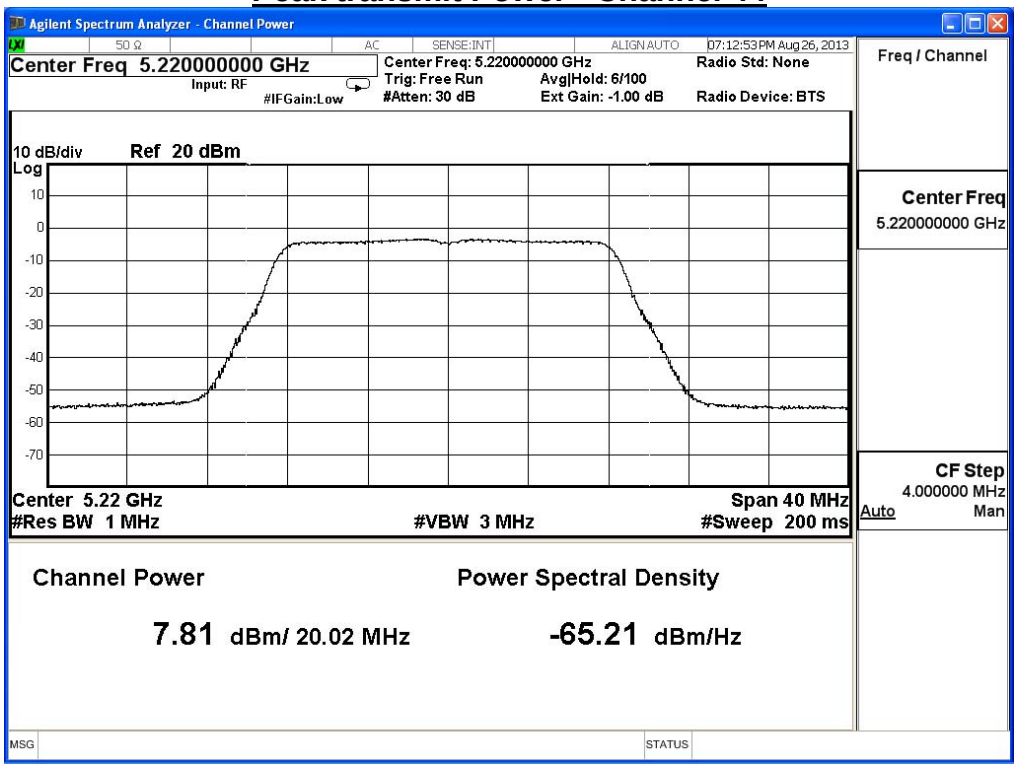
The worst emission of data rate is 6 Mbps.

Peak Power Output (dBm)									
Channel No	Frequency (MHz)	Data Rate							Required Limit
		6	12	18	24	36	48	54	
36	5180	7.65	--	--	--	--	--	--	17dBm or 4dBm+10logB
44	5220	7.81	7.61	7.41	7.31	7.19	6.95	6.71	
48	5240	7.72	--	--	--	--	--	--	

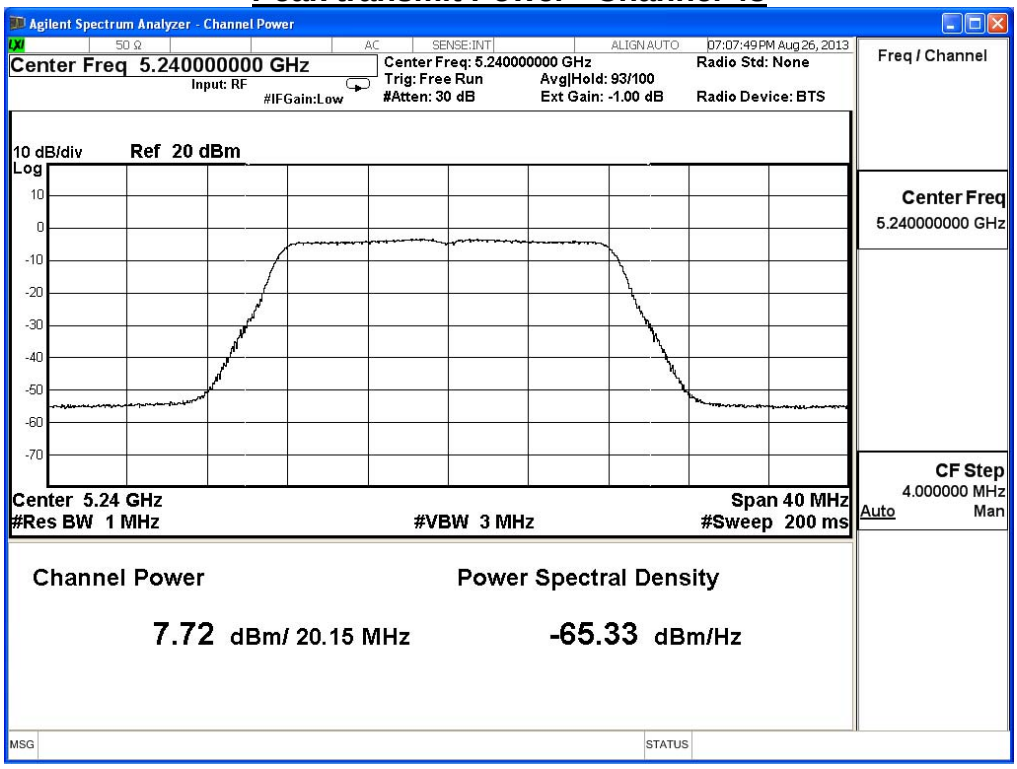
Peak transmit Power - Channel 36



Peak transmit Power - Channel 44



Peak transmit Power - Channel 48



Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2013/08/26	Test Site	SR7

802.11a (ANT0+1+2)

Channel No.	Frequency (MHz)	Total Output Power		Required Limit (dBm)	Result
		(mW)	(dBm)		
36	5180	16.48	12.17	≤17	Pass
44	5220	17.05	12.32	≤17	Pass
48	5240	16.54	12.18	≤17	Pass

802.11a, ANT 0+1+2

Peak Power Output (dBm)									
Channel No	Frequency (MHz)	Data Rate							Required Limit
		6	12	18	24	36	48	54	
36	5180	12.17	--	--	--	--	--	--	17dBm or 4dBm+10logB
44	5220	12.32	12.21	12.08	11.91	11.66	11.45	11.25	
48	5240	12.18	--	--	--	--	--	--	

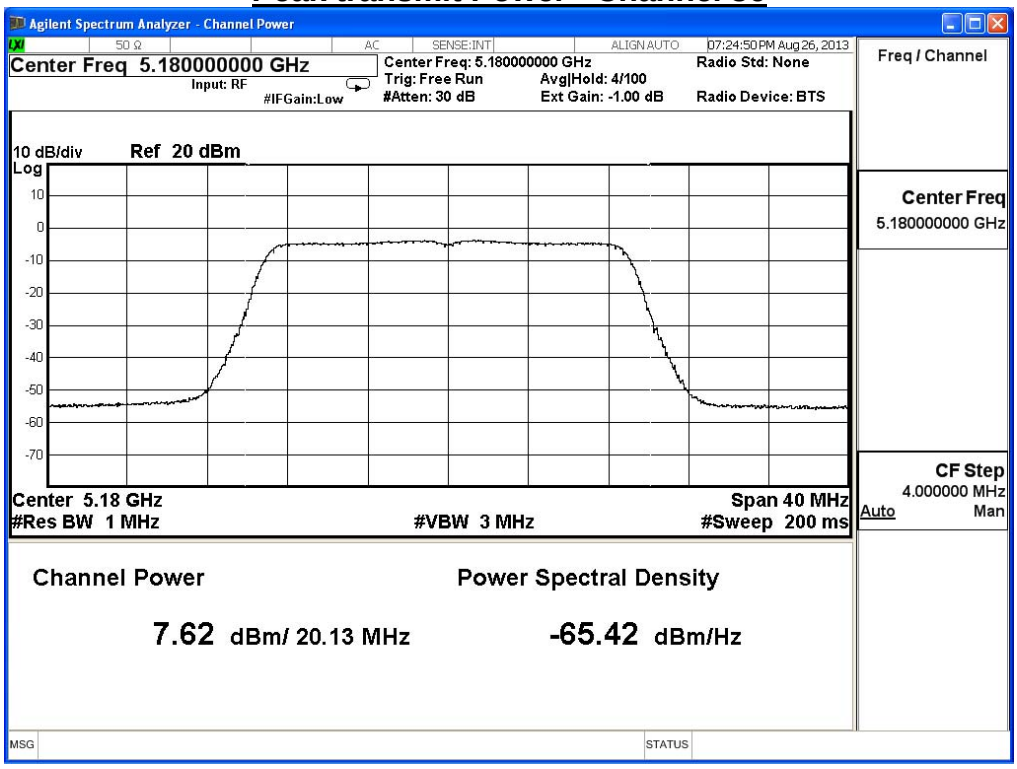
Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2013/08/26	Test Site	SR7

IEEE 802.11n(20MHz)_ANT 0, Power Index : ch36:36 ch44:36 ch48:36						
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
36	5180	20.13	7.62	≤17	17.04	Pass
44	5220	20.47	7.51	≤17	17.11	Pass
48	5240	20.65	7.92	≤17	17.15	Pass

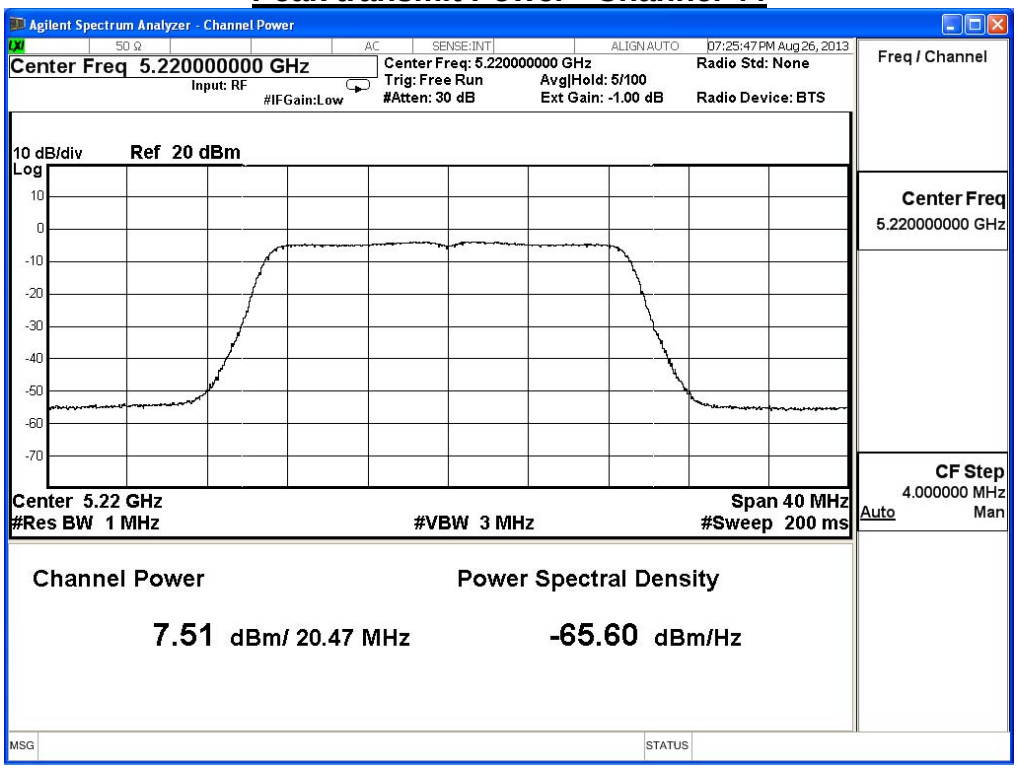
The worst emission of data rate is 19.5Mbps.

Peak Power Output (dBm)										
MCS Index		16	17	18	19	20	21	22	23	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		19.5	39	58.5	78	117	156	175.5	195	
36	5180	7.62	--	--	--	--	--	--	--	17dBm or 4dBm+10logB
44	5220	7.51	7.41	7.31	7.11	6.91	6.79	6.55	6.31	
48	5240	7.92	--	--	--	--	--	--	--	

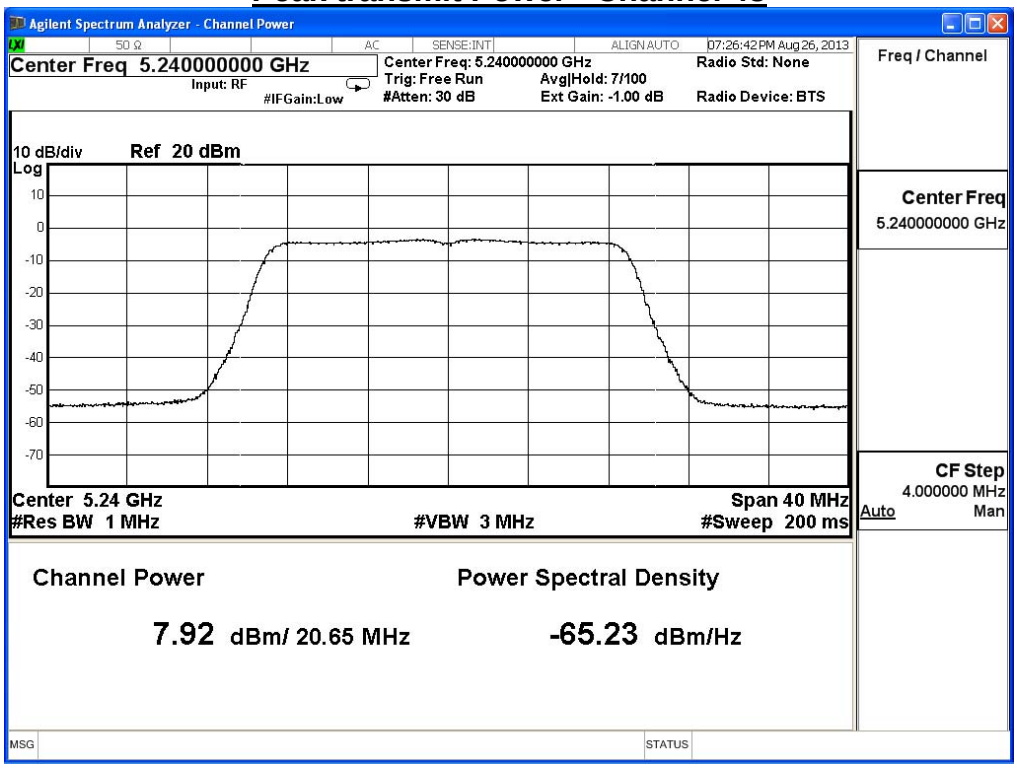
Peak transmit Power - Channel 36



Peak transmit Power - Channel 44



Peak transmit Power - Channel 48



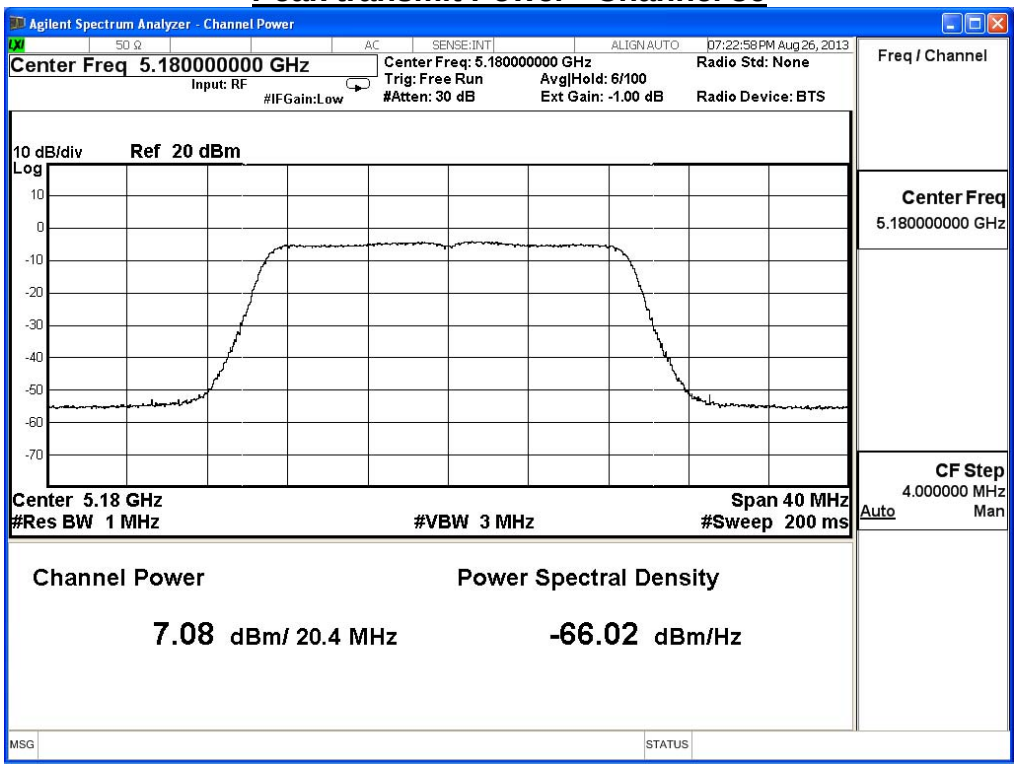
Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2013/08/26	Test Site	SR7

IEEE 802.11n(20MHz)_ANT 1, Power Index : ch36:36 ch44:36 ch48:36						
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
36	5180	20.40	7.08	≤17	17.10	Pass
44	5220	20.28	6.80	≤17	17.07	Pass
48	5240	20.43	6.71	≤17	17.10	Pass

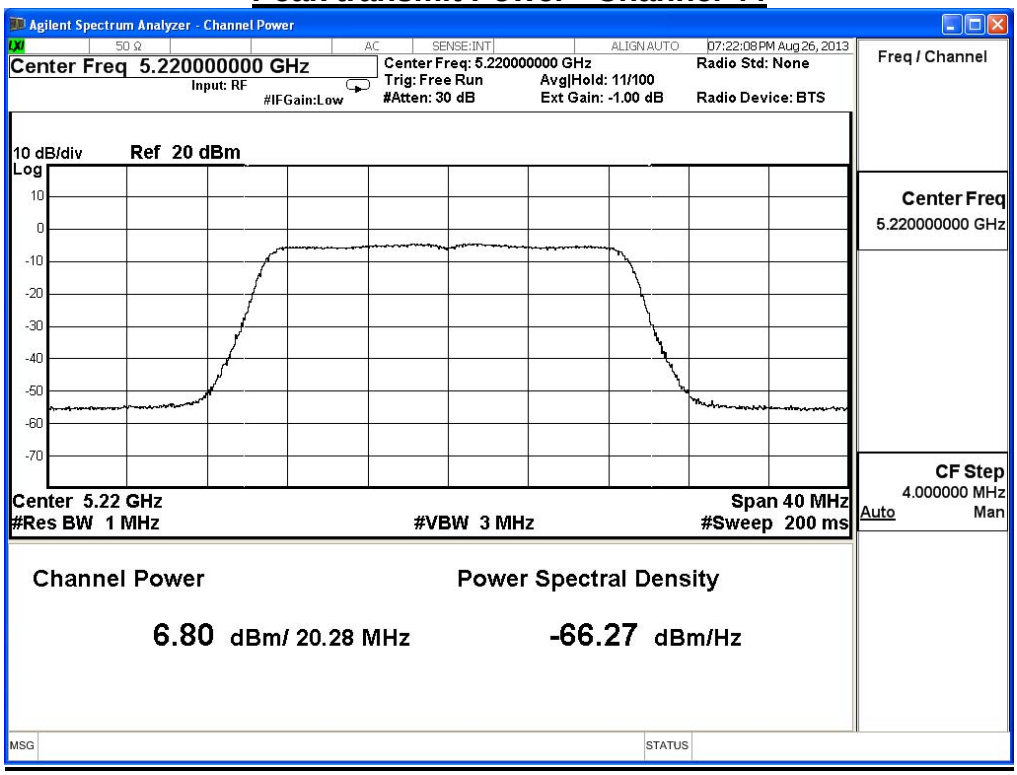
The worst emission of data rate is 19.5Mbps.

Peak Power Output (dBm)										
MCS Index		16	17	18	19	20	21	22	23	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		19.5	39	58.5	78	117	156	175.5	195	
36	5180	7.08	--	--	--	--	--	--	--	17dBm or 4dBm+10logB
44	5220	6.80	6.60	6.40	6.20	6.00	5.88	5.64	5.52	
48	5240	6.71	--	--	--	--	--	--	--	

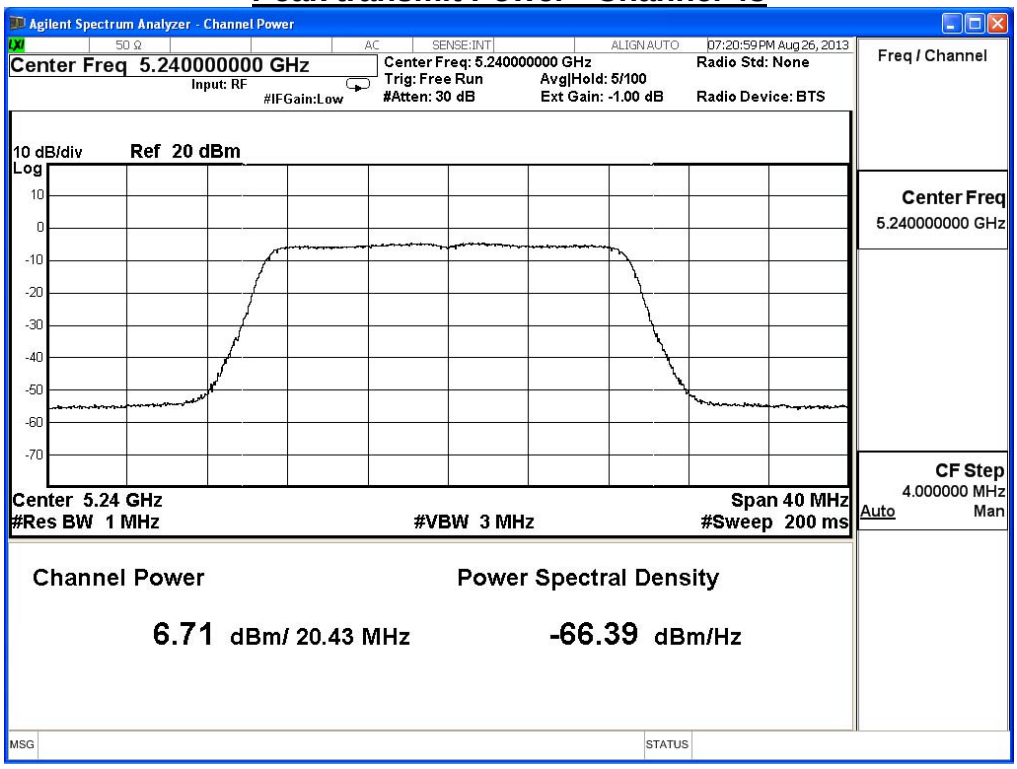
Peak transmit Power - Channel 36



Peak transmit Power - Channel 44



Peak transmit Power - Channel 48



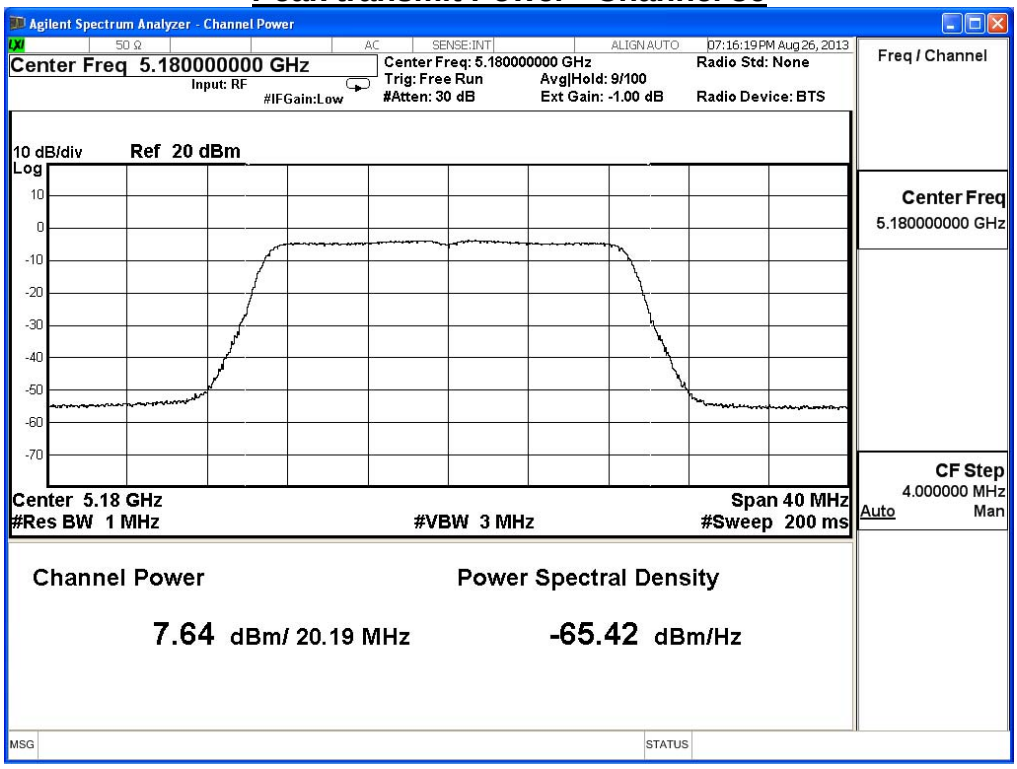
Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2013/08/26	Test Site	SR7

IEEE 802.11n(20MHz)_ANT 2, Power Index : ch36:36 ch44:36 ch48:36						
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
36	5180	20.19	7.64	≤17	17.05	Pass
44	5220	20.44	7.71	≤17	17.10	Pass
48	5240	20.28	7.73	≤17	17.07	Pass

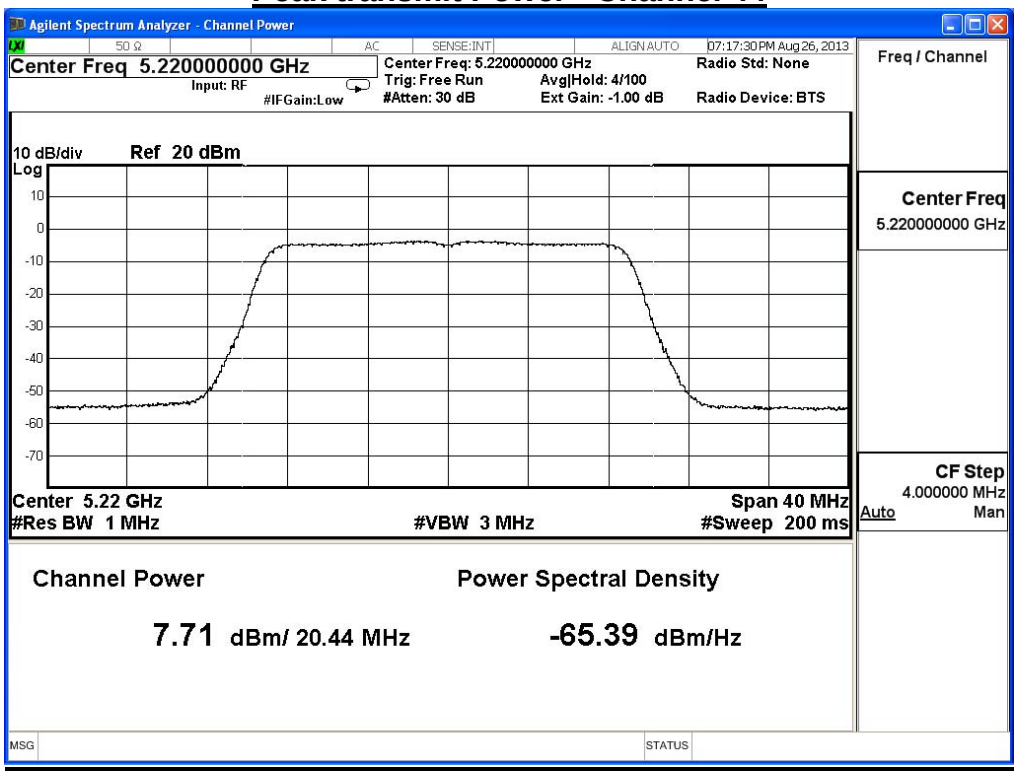
The worst emission of data rate is 19.5Mbps.

Peak Power Output (dBm)										
MCS Index		16	17	18	19	20	21	22	23	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		19.5	39	58.5	78	117	156	175.5	195	
36	5180	7.64	--	--	--	--	--	--	--	17dBm or 4dBm+10logB
44	5220	7.71	7.61	7.51	7.31	7.21	7.09	6.85	6.61	
48	5240	7.73	--	--	--	--	--	--	--	

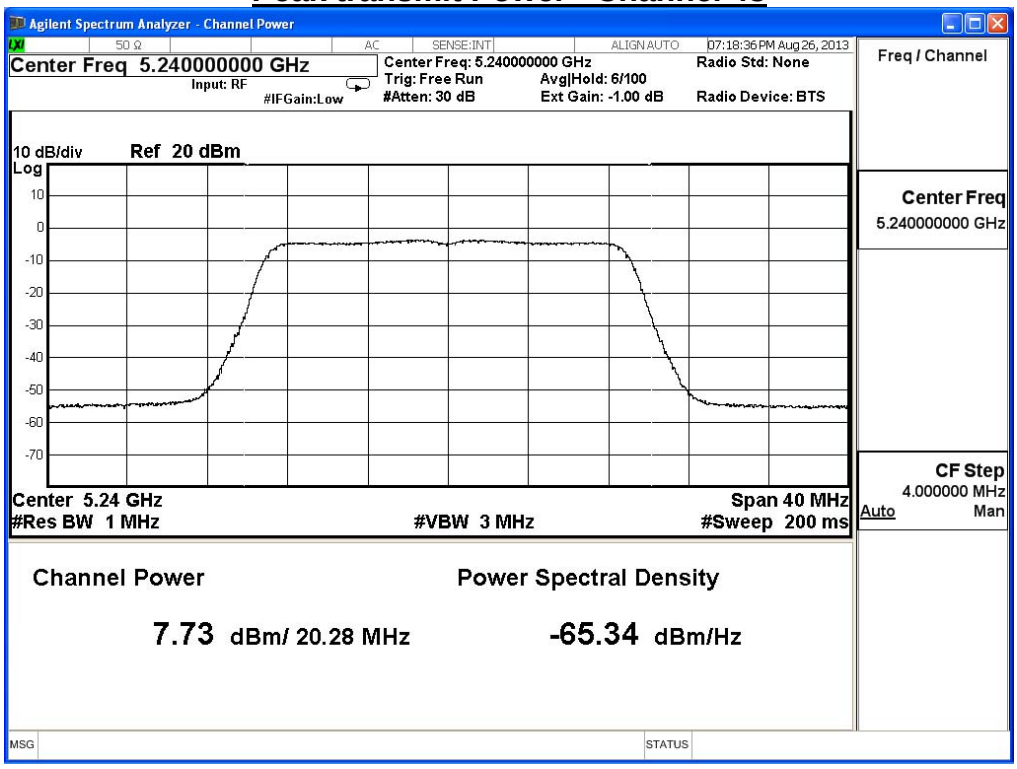
Peak transmit Power - Channel 36



Peak transmit Power - Channel 44



Peak transmit Power - Channel 48



Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2013/08/26	Test Site	SR7

IEEE 802.11n(20MHz)_ANT 0+1+2					
Channel No.	Frequency (MHz)	Total Output Power		Required Limit (dBm)	Result
		(mW)	(dBm)		
36	5180	16.69	12.23	≤17	Pass
44	5220	16.32	12.13	≤17	Pass
48	5240	16.81	12.26	≤17	Pass

802.11 n(20M), Antenna 0+1+2

Peak Power Output (dBm)										
MCS Index		16	17	18	19	20	21	22	23	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		19.5	39	58.5	78	117	156	175.5	195	
36	5180	12.23	--	--	--	--	--	--	--	17dBm or 4dBm+10logB
44	5220	12.13	12.00	11.87	11.67	11.51	11.39	11.15	10.94	
48	5240	12.26	--	--	--	--	--	--	--	

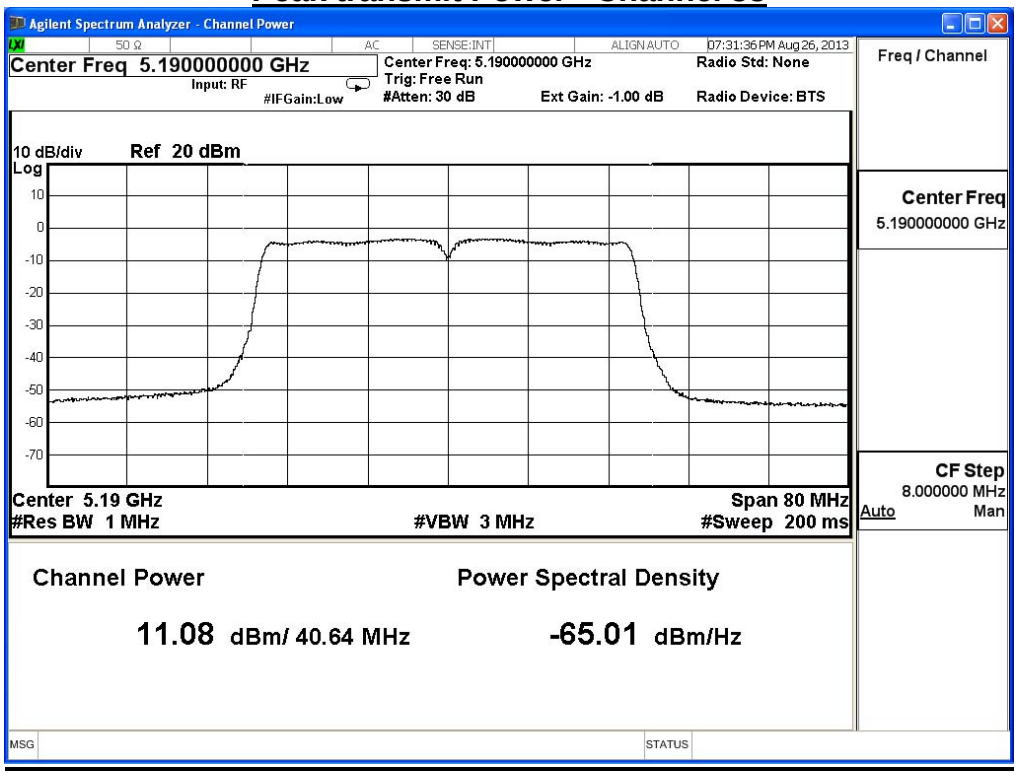
Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2013/08/26	Test Site	SR7

IEEE 802.11n(40MHz)_ANT 0, Power Index : ch38:47 ch46:49						
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
38	5190	40.64	11.08	≤17	20.09	Pass
46	5230	40.64	10.98	≤17	20.09	Pass

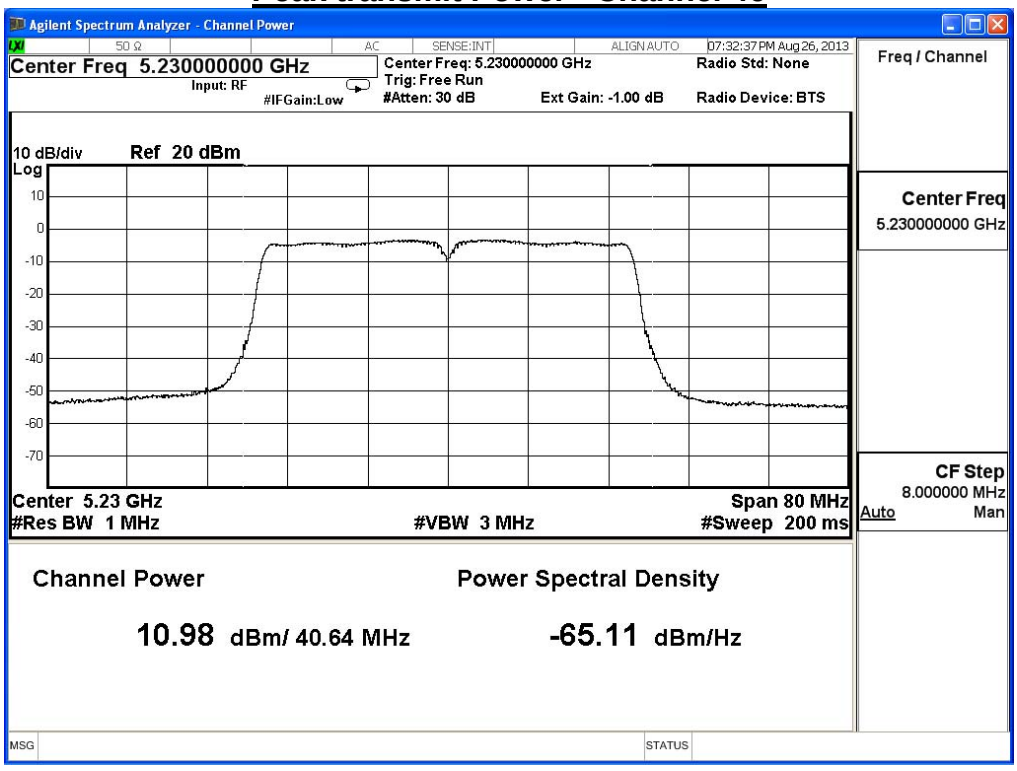
The worst emission of data rate is 40.5 Mbps

Peak Power Output (dBm)										
MCS Index		16	17	18	19	20	21	22	23	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		40.5	81	121.5	162	243	324	364.5	405	
38	5190	11.08	--	--	--	--	--	--	--	17dBm or 4dBm+10logB
46	5230	10.98	10.88	10.78	10.68	10.58	10.34	10.22	10.10	

Peak transmit Power - Channel 38



Peak transmit Power - Channel 46



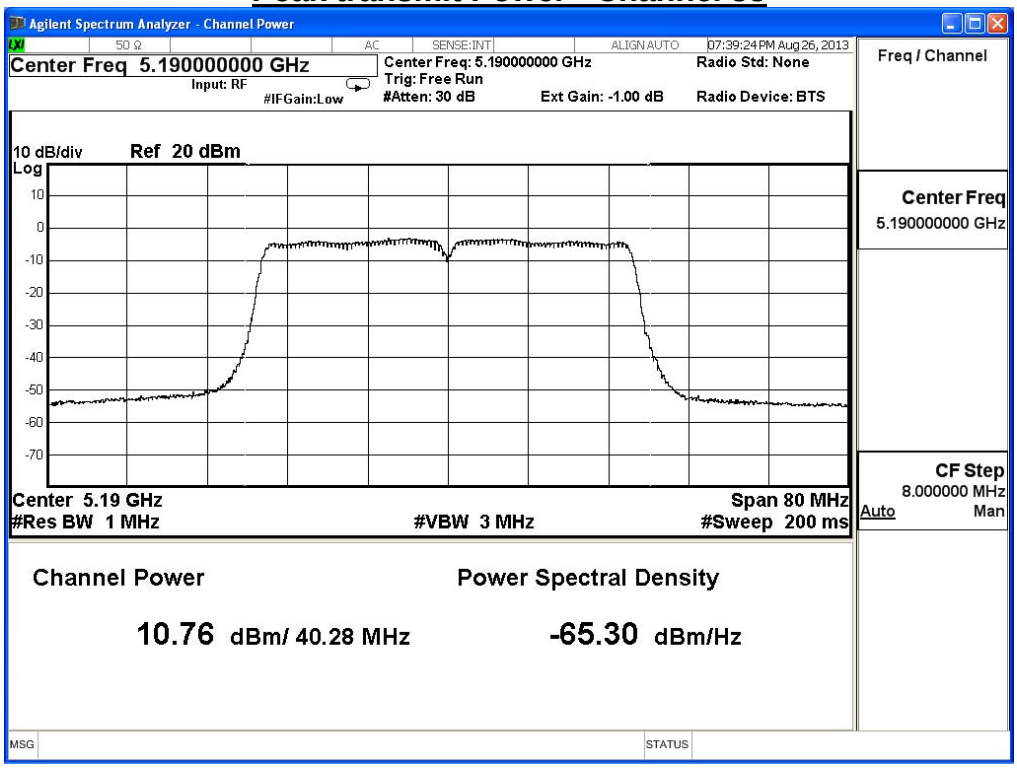
Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2013/08/26	Test Site	SR7

IEEE 802.11n(40MHz)_ANT 1, Power Index : ch38:47 ch46:49						
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
38	5190	40.28	10.76	≤17	20.05	Pass
46	5230	40.47	10.49	≤17	20.07	Pass

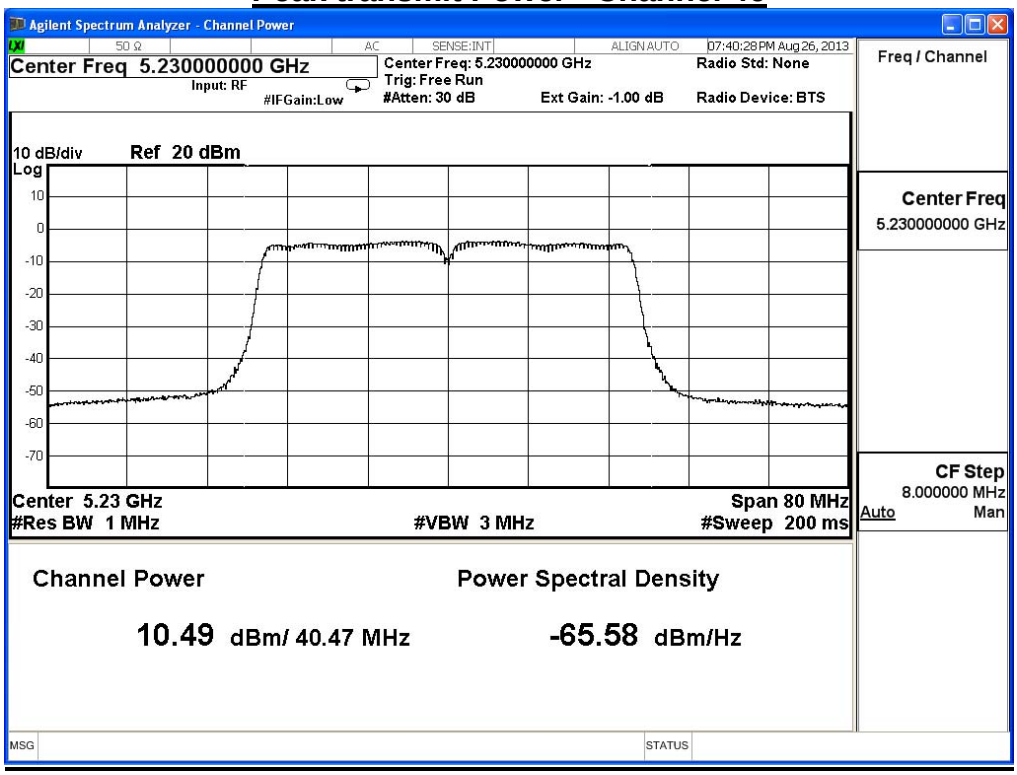
The worst emission of data rate is 40.5 Mbps

Peak Power Output (dBm)										
MCS Index		16	17	18	19	20	21	22	23	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		40.5	81	121.5	162	243	324	364.5	405	
38	5190	10.76	--	--	--	--	--	--	--	17dBm or 4dBm+10logB
46	5230	10.49	10.39	10.29	10.19	9.99	9.87	9.63	9.51	

Peak transmit Power - Channel 38



Peak transmit Power - Channel 46



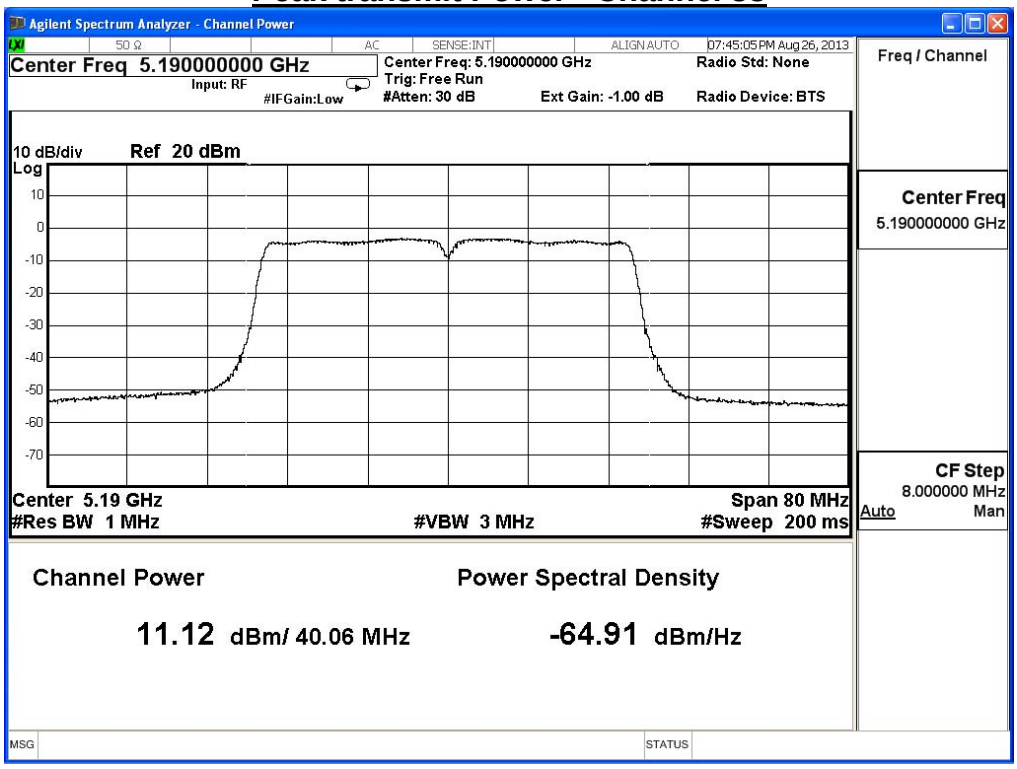
Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2013/08/26	Test Site	SR7

IEEE 802.11n(40MHz)_ANT 2, Power Index : ch38:47 ch46:49						
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
38	5190	40.06	11.12	≤17	20.03	Pass
46	5230	40.10	10.89	≤17	20.03	Pass

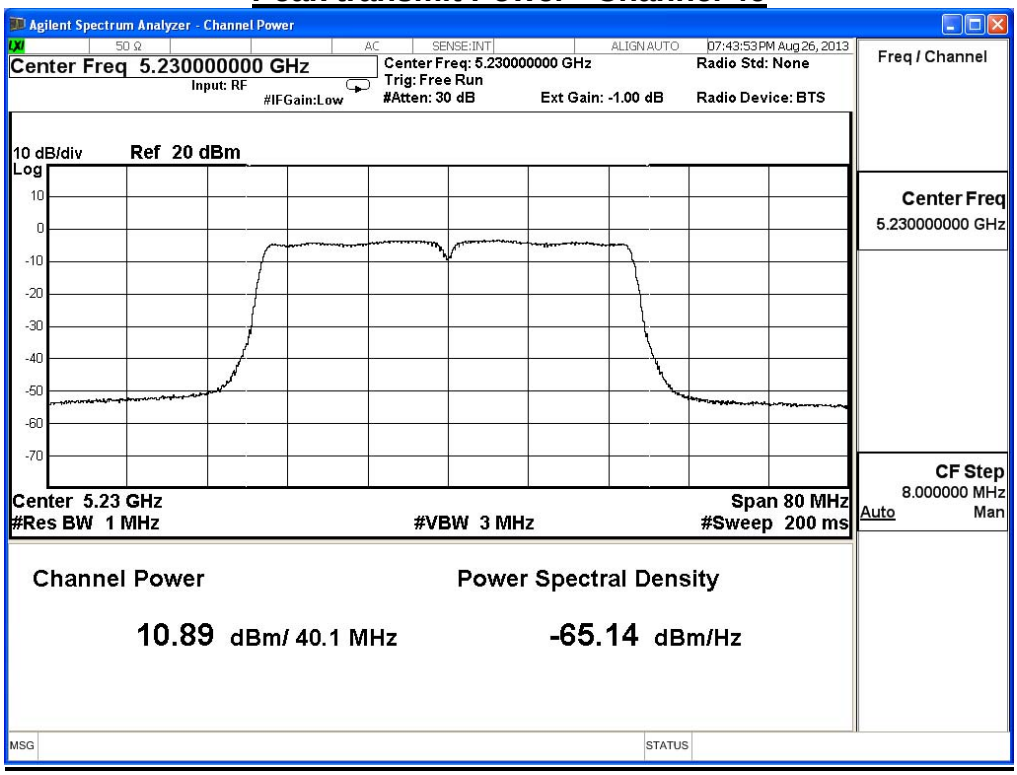
The worst emission of data rate is 40.5 Mbps

Peak Power Output (dBm)										
MCS Index		16	17	18	19	20	21	22	23	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		40.5	81	121.5	162	243	324	364.5	405	
38	5190	11.12	--	--	--	--	--	--	--	17dBm or 4dBm+10logB
46	5230	10.89	10.69	10.49	10.39	10.29	10.17	9.93	9.69	

Peak transmit Power - Channel 38



Peak transmit Power - Channel 46



Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2013/08/26	Test Site	SR7

IEEE 802.11n(40MHz)_ANT 0+1+2					
Channel No.	Frequency (MHz)	Total Output Power		Required Limit (dBm)	Result
		(mW)	(dBm)		
38	5190	37.68	15.76	≤17	Pass
46	5230	36.00	15.56	≤17	Pass

802.11 n(40M), Antenna 0+1+2

Peak Power Output (dBm)										
MCS Index		16	17	18	19	20	21	22	23	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		40.5	81	121.5	162	243	324	364.5	405	
38	5190	15.76	--	--	--	--	--	--	--	17dBm or
46	5230	15.56	15.36	15.23	15.09	14.96	14.76	14.52	14.32	4dBm+10logB

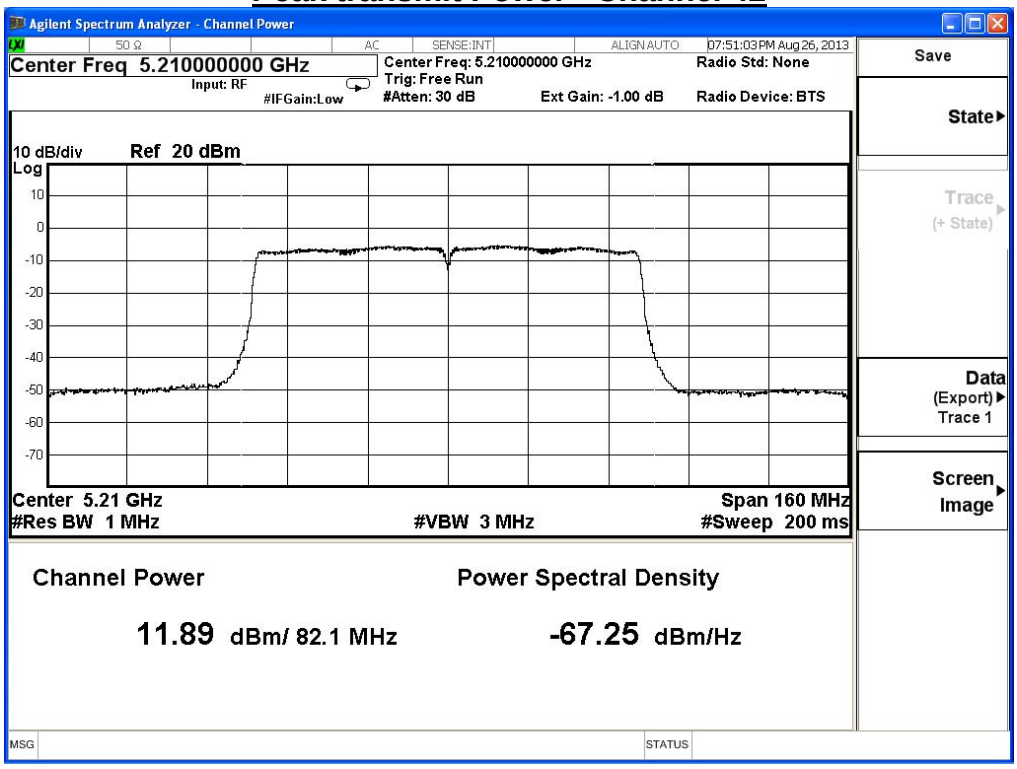
Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2013/08/26	Test Site	SR7

IEEE 802.11ac(80MHz)_ANT 0, Power Index : ch42:47						
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
42	5210	82.10	11.89	≤17	23.14	Pass

The worst emission of data rate is 87.9 Mbps

Peak Power Output (dBm)											
MCS Index		0	1	2	3	4	5	6	7	8	9	Required Limit
Channel No	Frequency (MHz)	Data Rate										
		87.9	175.5	263.4	351	526.5	702	789.9	877.5	1053	1170	
42	5210	11.89	11.69	11.49	11.29	11.19	11.09	10.85	10.61	10.49	10.37	17dBm or 4dBm+10logB

Peak transmit Power - Channel 42



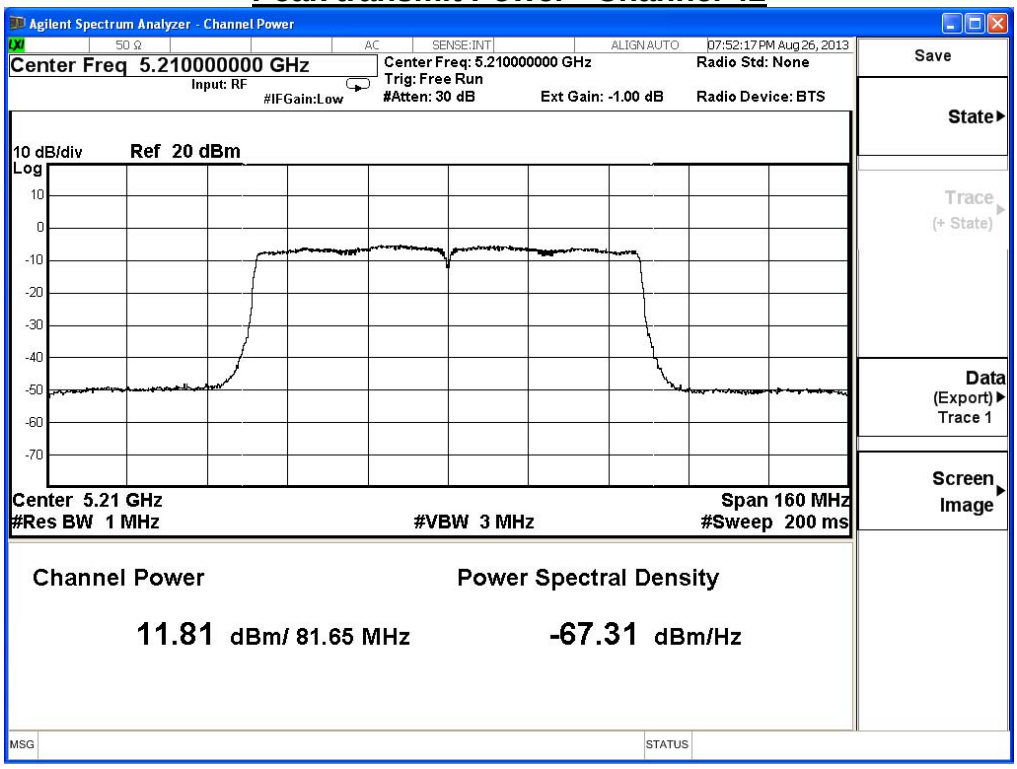
Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2013/08/26	Test Site	SR7

IEEE 802.11ac(40MHz)_ANT 1, Power Index : ch42:47						
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
42	5210	81.65	11.81	≤17	23.12	Pass

The worst emission of data rate is 87.9 Mbps

Peak Power Output (dBm)											
MCS Index		0	1	2	3	4	5	6	7	8	9	Required Limit
Channel No	Frequency (MHz)	Data Rate										
		87.9	175.5	263.4	351	526.5	702	789.9	877.5	1053	1170	
42	5210	11.81	11.61	11.41	11.31	11.11	11.01	10.89	10.65	10.41	10.17	17dBm or 4dBm+10logB

Peak transmit Power - Channel 42



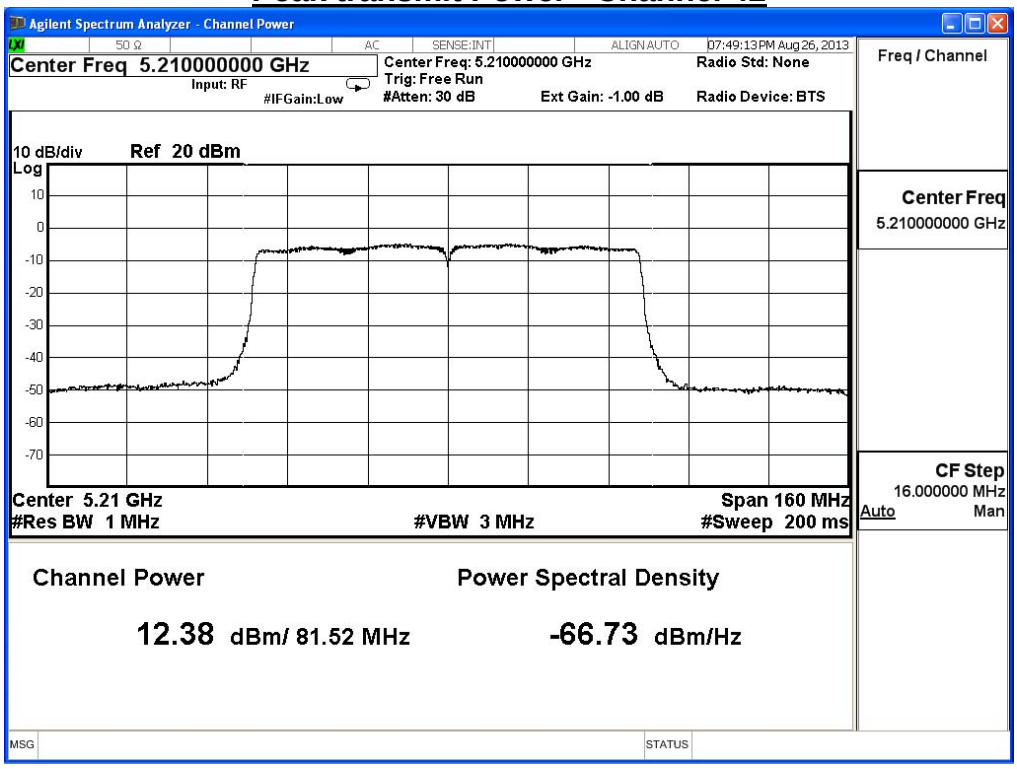
Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2013/08/26	Test Site	SR7

IEEE 802.11ac(40MHz)_ANT 2, Power Index : ch42:47						
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
42	5210	81.52	12.38	≤17	23.11	Pass

The worst emission of data rate is 87.9 Mbps

Peak Power Output (dBm)												
MCS Index		0	1	2	3	4	5	6	7	8	9	Required Limit
Channel No	Frequency (MHz)	Data Rate										
		87.9	175.5	263.4	351	526.5	702	789.9	877.5	1053	1170	
42	5210	12.38	12.18	11.98	11.78	11.68	11.48	11.24	11.12	11.00	10.76	17dBm or 4dBm+10logB

Peak transmit Power - Channel 42



Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2013/08/26	Test Site	SR7

IEEE 802.11ac(80MHz)_ANT 0+1+2					
Channel No.	Frequency (MHz)	Total Output Power		Required Limit (dBm)	Result
		(mW)	(dBm)		
42	5210	47.92	16.81	≤17	Pass

802.11 AC(80M), Antenna 0+1+2

Peak Power Output (dBm)												
MCS Index		0	1	2	3	4	5	6	7	8	9	Required Limit
Channel No	Frequency (MHz)	Data Rate										
		87.9	175.5	263.4	351	526.5	702	789.9	877.5	1053	1170	
42	5210	16.81	16.61	16.41	16.24	16.11	15.97	15.77	15.57	15.41	15.21	17dBm or 4dBm+10log B

Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 2: Transmit (Beamforming Mode)_Adapter: EXA1206UH		
Date of Test	2013/04/18	Test Site	SR7

802.11a, 1TX SISO, Power Index : ch36:66, ch44:66, ch48:66						
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
36	5180	20.259	13.32	≤ 14.19	≤17.06	Pass
44	5220	20.226	13.20	≤ 14.19	≤17.06	Pass
48	5240	20.243	13.24	≤ 14.19	≤17.06	Pass

The worst emission of data rate is 6 Mbps.

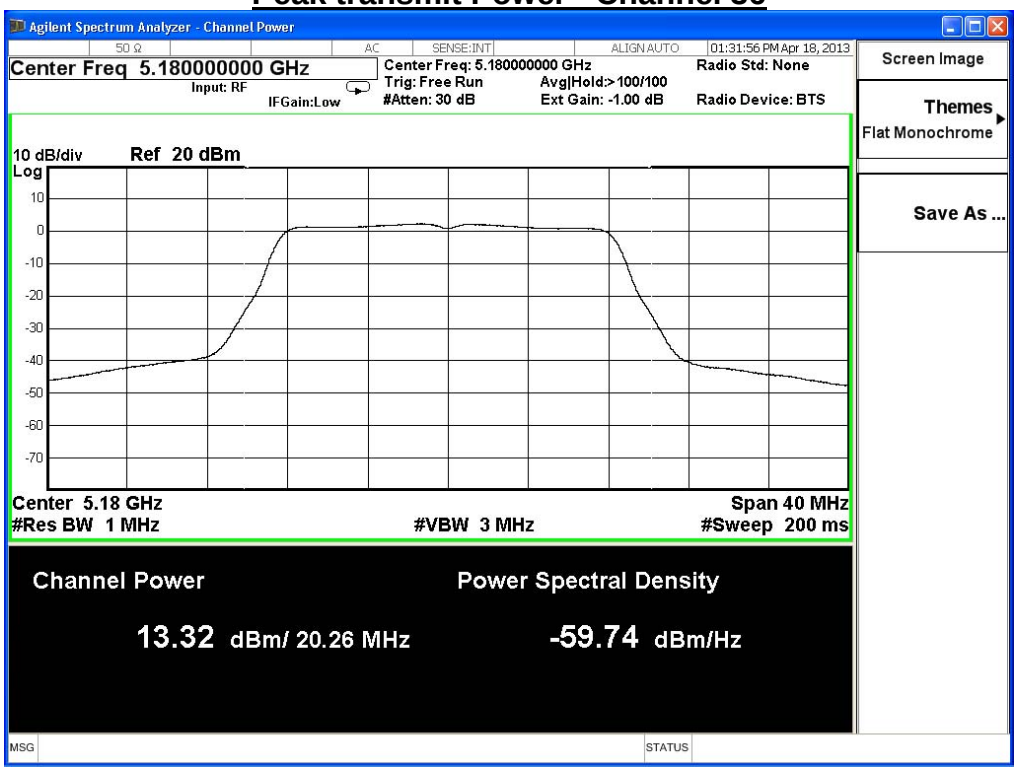
Peak Power Output (dBm)									
Channel No	Frequency (MHz)	Data Rate							Required Limit
		6	12	18	24	36	48	54	
36	5180	13.32	--	--	--	--	--	--	14.19dBm or 4dBm+10logB
44	5220	13.20	13.18	13.10	13.02	12.95	12.90	12.84	
48	5240	13.24	--	--	--	--	--	--	

Note:

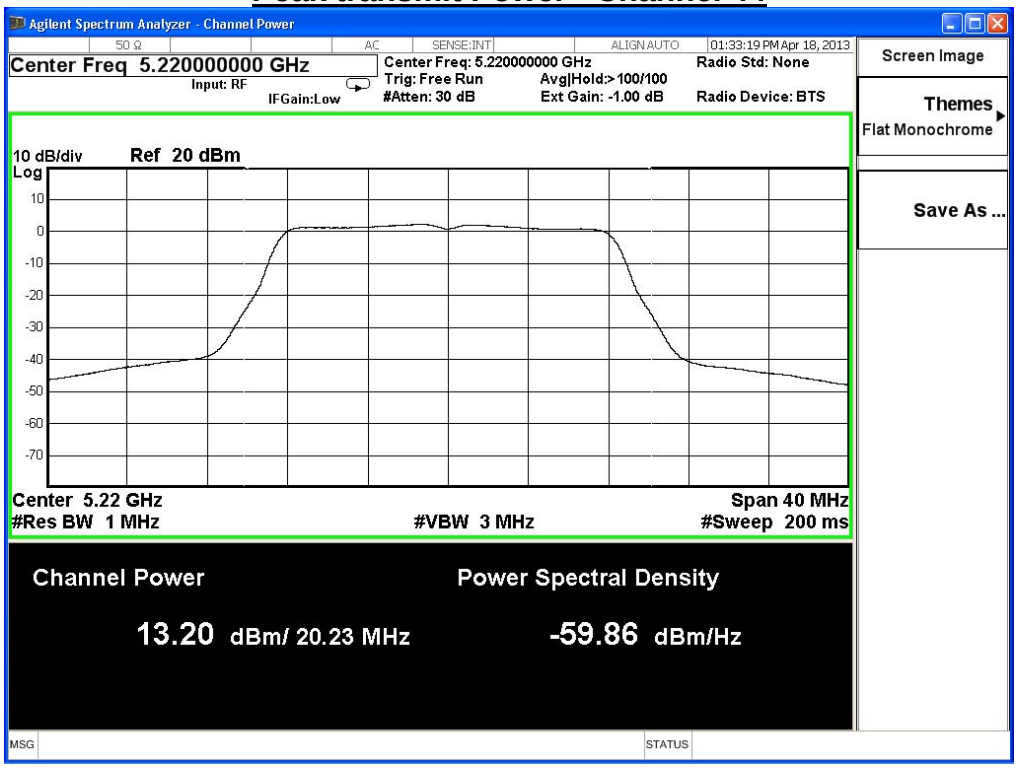
Total Gain : Beamforming Gain + Max Gain = 4.77dB + 4.04dBi = 8.81dBi

Required Limit = 17dBm - (8.81dBi – 6dB) = 17 – 2.81 = 14.19 dBm

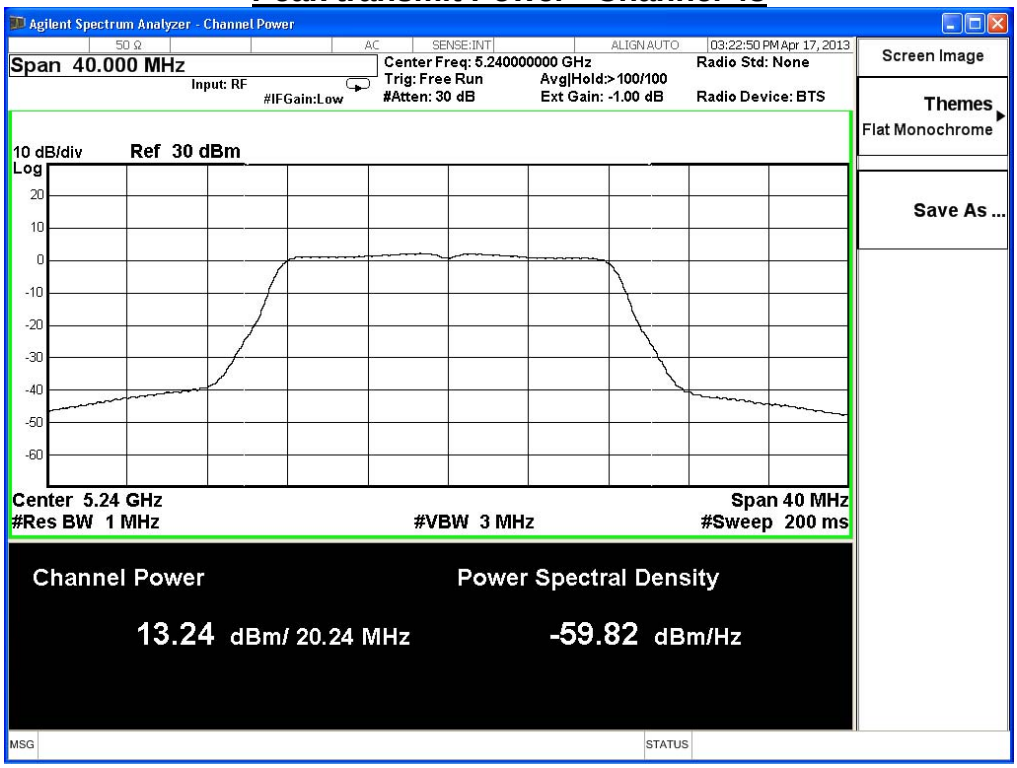
Peak transmit Power - Channel 36



Peak transmit Power - Channel 44



Peak transmit Power - Channel 48



Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 2: Transmit (Beamforming Mode)_Adapter: EXA1206UH		
Date of Test	2012/11/19	Test Site	SR7

IEEE 802.11n(20MHz)_ANT 0, Power Index : ch36:47, ch44:48, ch48:48

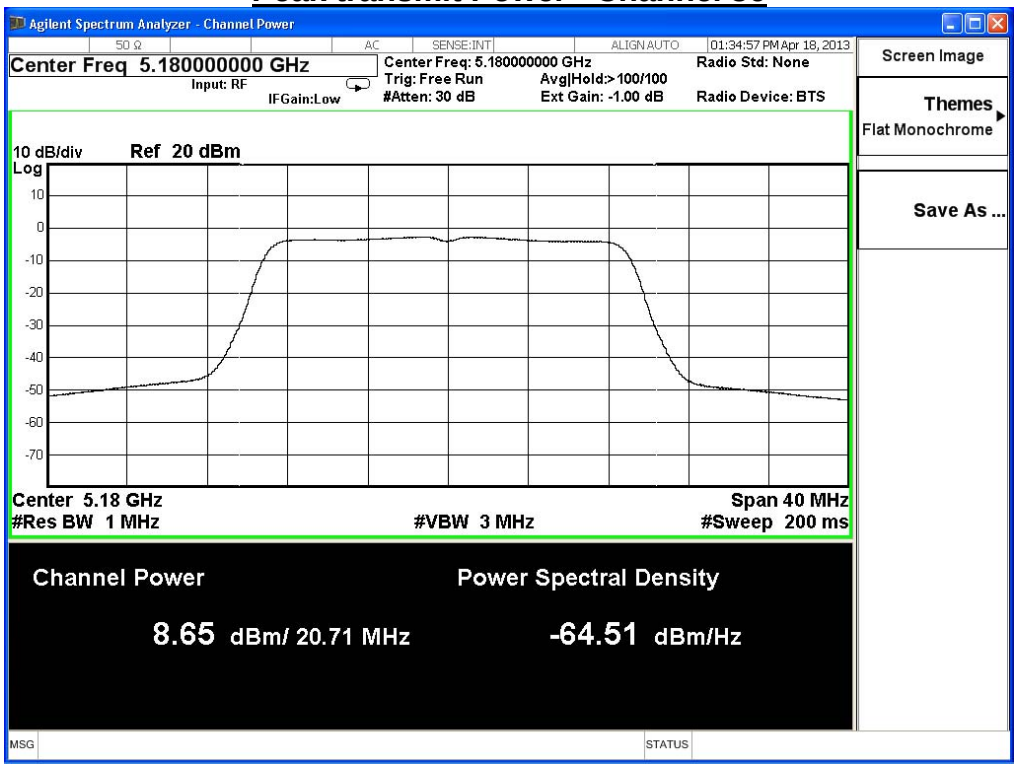
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
36	5180	20.711	8.65	≤ 14.19	≤17.16	Pass
44	5220	20.562	8.57	≤ 14.19	≤17.13	Pass
48	5240	20.654	8.66	≤ 14.19	≤17.15	Pass

The worst emission of data rate is 19.5Mbps.

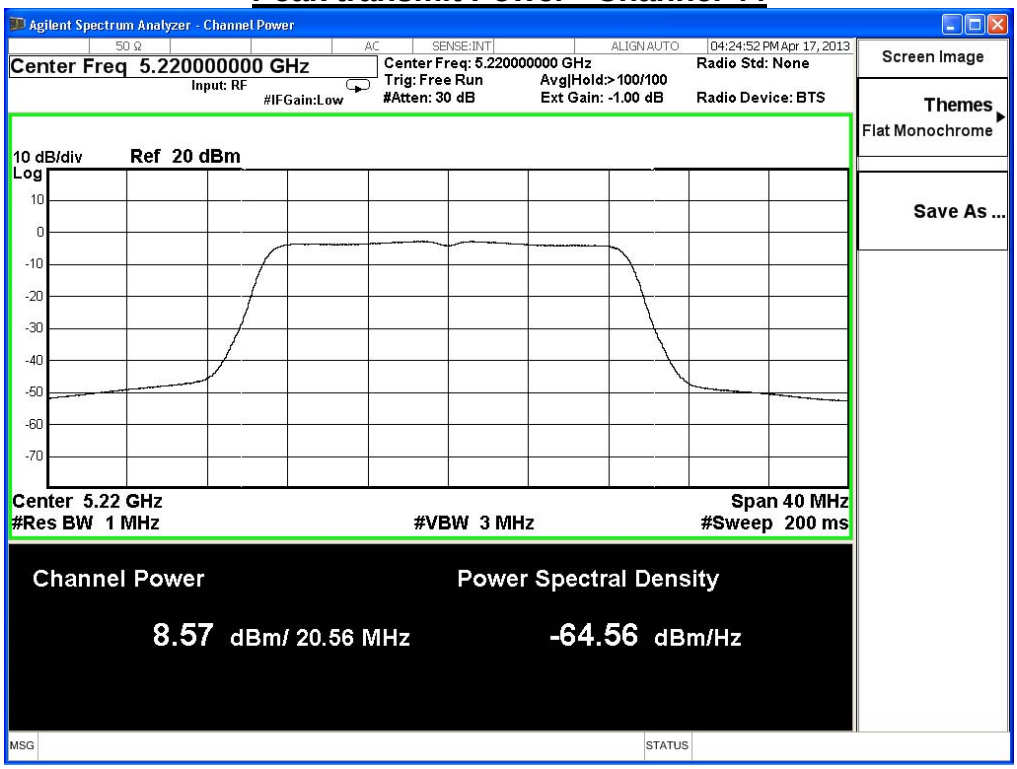
Peak Power Output (dBm)										
MCS Index		16	17	18	19	20	21	22	23	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		19.5	39	58.5	78	117	156	175.5	195	
36	5180	8.65	--	--	--	--	--	--	--	14.19dBm or 4dBm+10logB
44	5220	8.57	8.55	8.48	8.44	8.34	8.30	8.27	8.22	
48	5240	8.66	--	--	--	--	--	--	--	

Note:
Total Gain : 10log(Ant N) + Max Gain = 10log(3)+4.04dBi =8.81dBi
Required Limit = 17dBm - (8.81dBi – 6dBi) = 17 – 2.81 = 14.19 dBm

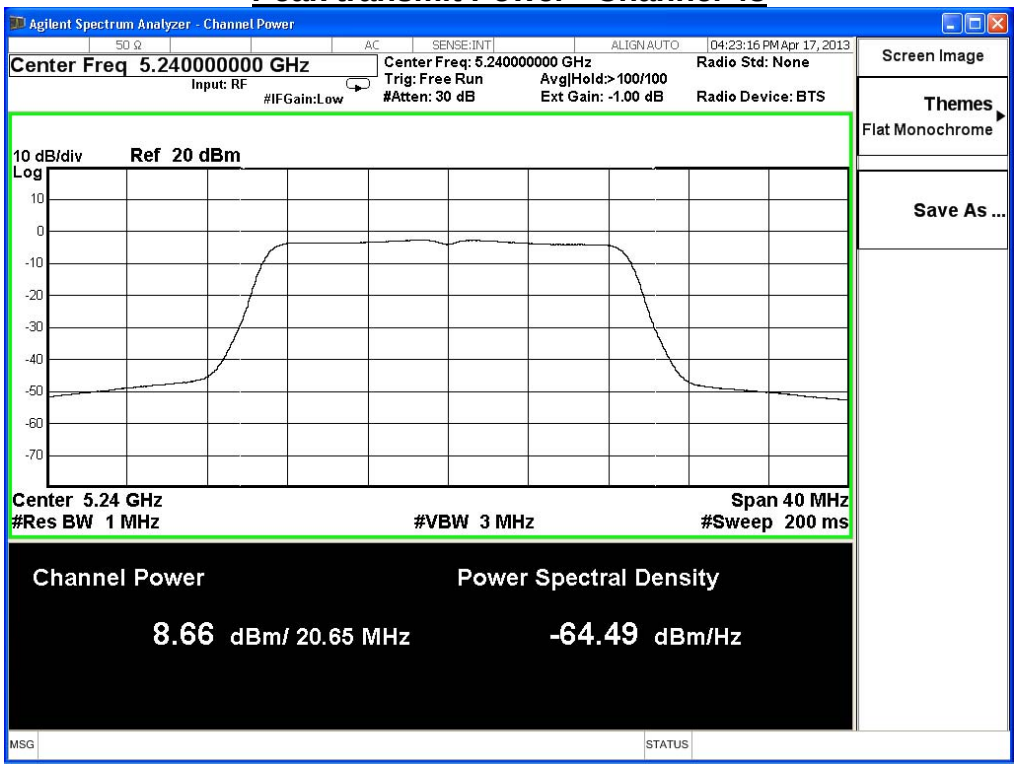
Peak transmit Power - Channel 36



Peak transmit Power - Channel 44



Peak transmit Power - Channel 48



Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 2: Transmit (Beamforming Mode)_Adapter: EXA1206UH		
Date of Test	2013/04/18	Test Site	SR7

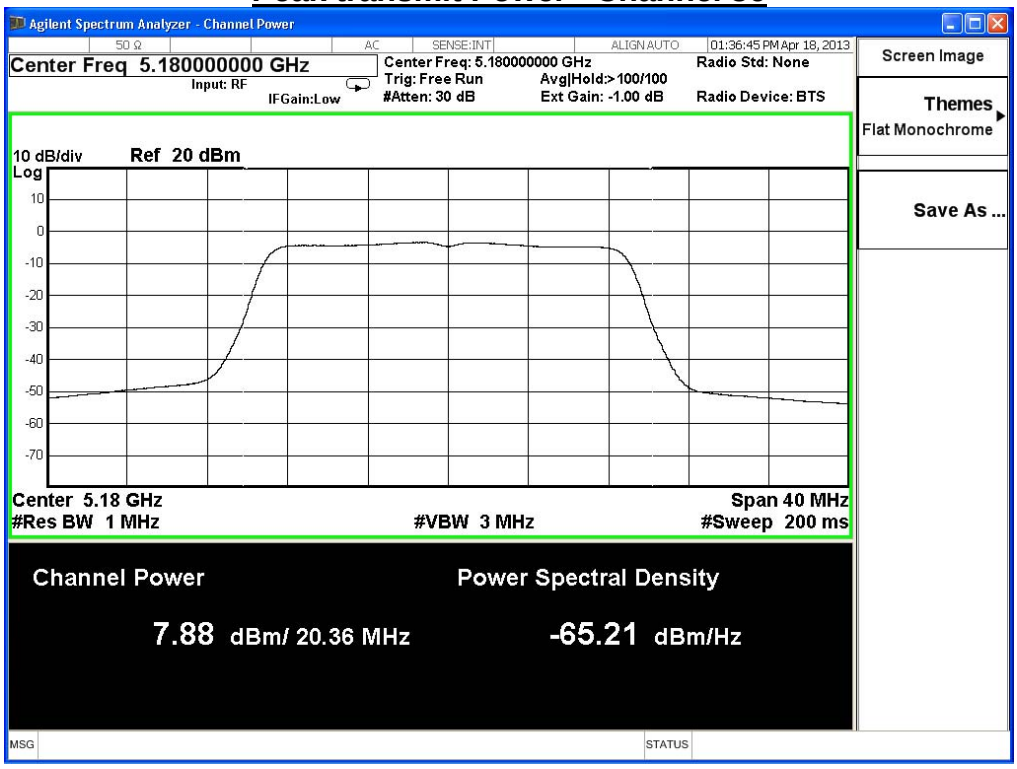
IEEE 802.11n(20MHz)_ANT 1, Power Index : ch36:47, ch44:48, ch48:48						
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
36	5180	20.360	7.88	≤ 14.19	≤17.08	Pass
44	5220	20.417	7.71	≤ 14.19	≤17.10	Pass
48	5240	20.370	7.51	≤ 14.19	≤17.09	Pass

The worst emission of data rate is 19.5Mbps.

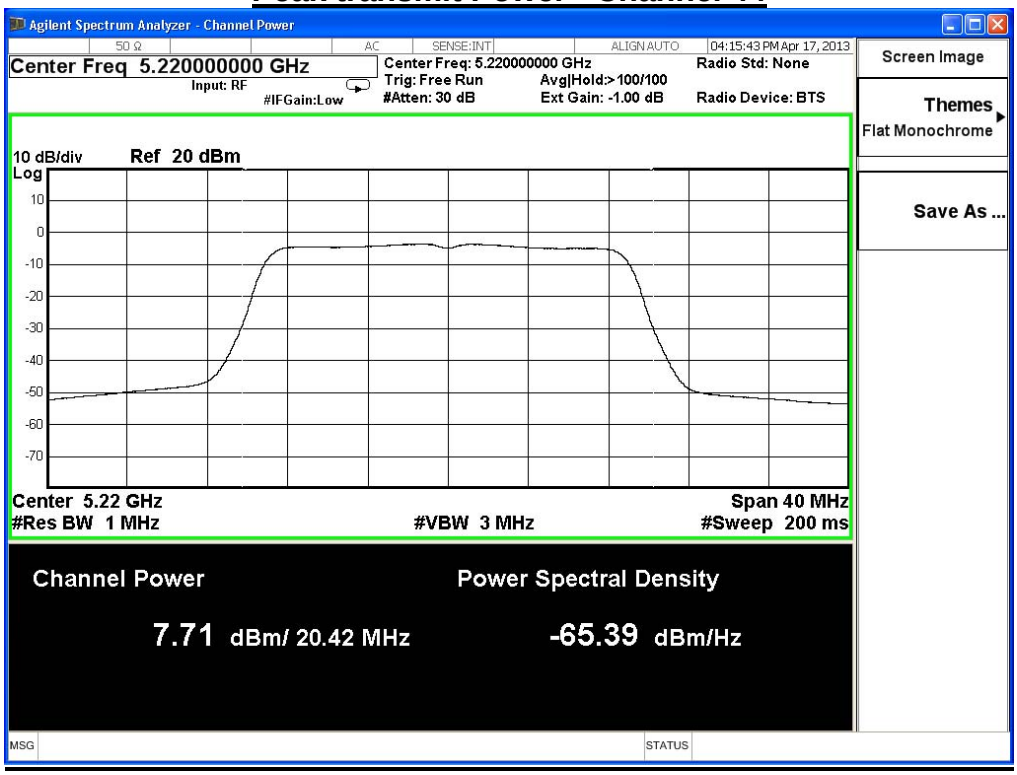
Peak Power Output (dBm)										
MCS Index		16	17	18	19	20	21	22	23	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		19.5	39	58.5	78	117	156	175.5	195	
36	5180	7.88	--	--	--	--	--	--	--	14.19dBm or 4dBm+10logB
44	5220	7.71	7.68	7.66	7.61	7.57	7.50	7.48	7.41	
48	5240	7.51	--	--	--	--	--	--	--	

Note:
Total Gain : 10log(Ant N) + Max Gain = 10log(3)+4.04dBi =8.81dBi
Required Limit = 17dBm - (8.81dBi – 6dBi) = 17 – 2.81 = 14.19 dBm

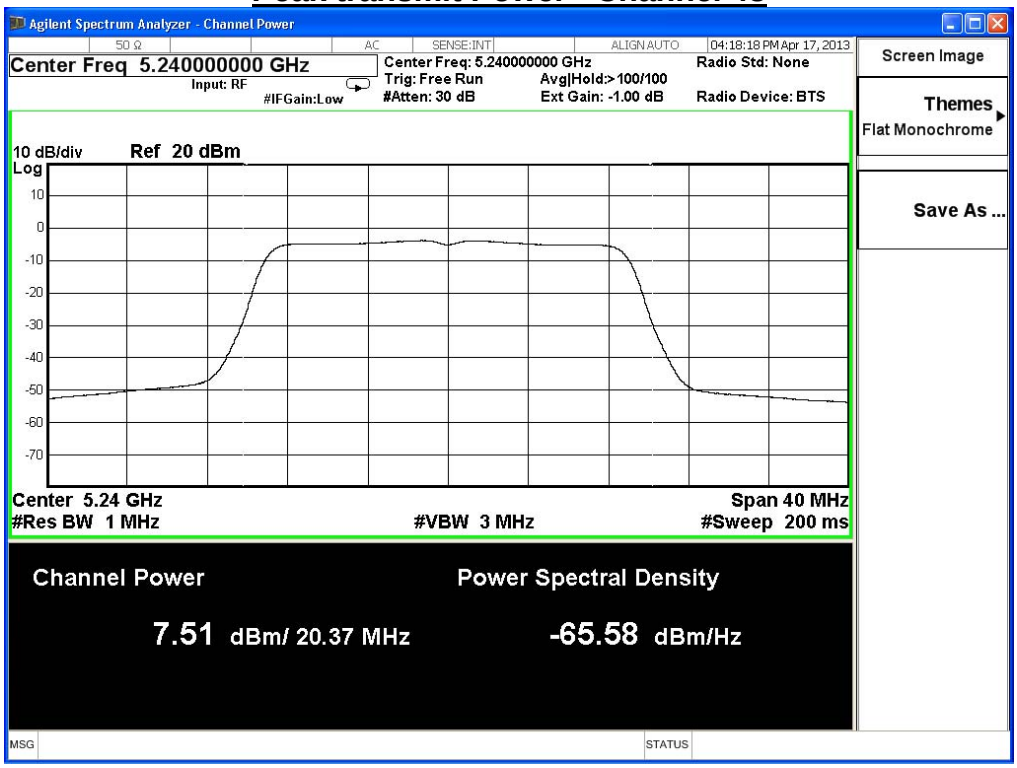
Peak transmit Power - Channel 36



Peak transmit Power - Channel 44



Peak transmit Power - Channel 48



Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 2: Transmit (Beamforming Mode)_Adapter: EXA1206UH		
Date of Test	2013/04/18	Test Site	SR7

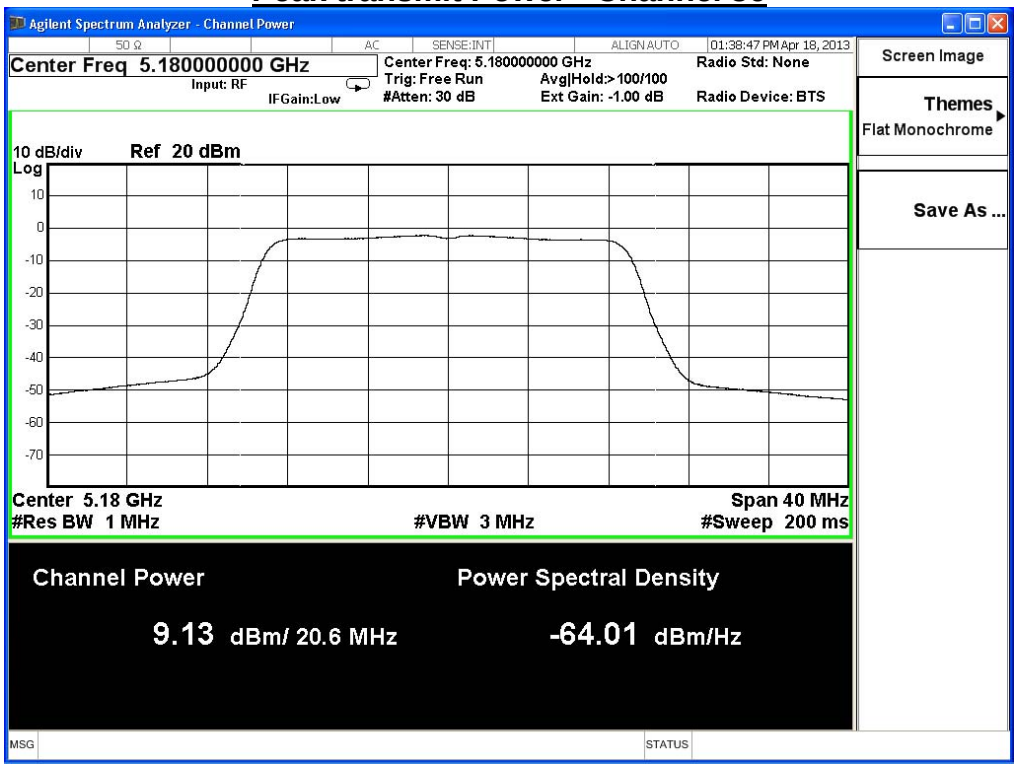
IEEE 802.11n(20MHz)_ANT 2, Power Index : ch36:47, ch44:48, ch48:48						
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
36	5180	20.603	9.13	≤ 14.19	≤17.14	Pass
44	5220	20.508	9.36	≤ 14.19	≤17.11	Pass
48	5240	20.507	9.45	≤ 14.19	≤17.12	Pass

The worst emission of data rate is 19.5Mbps.

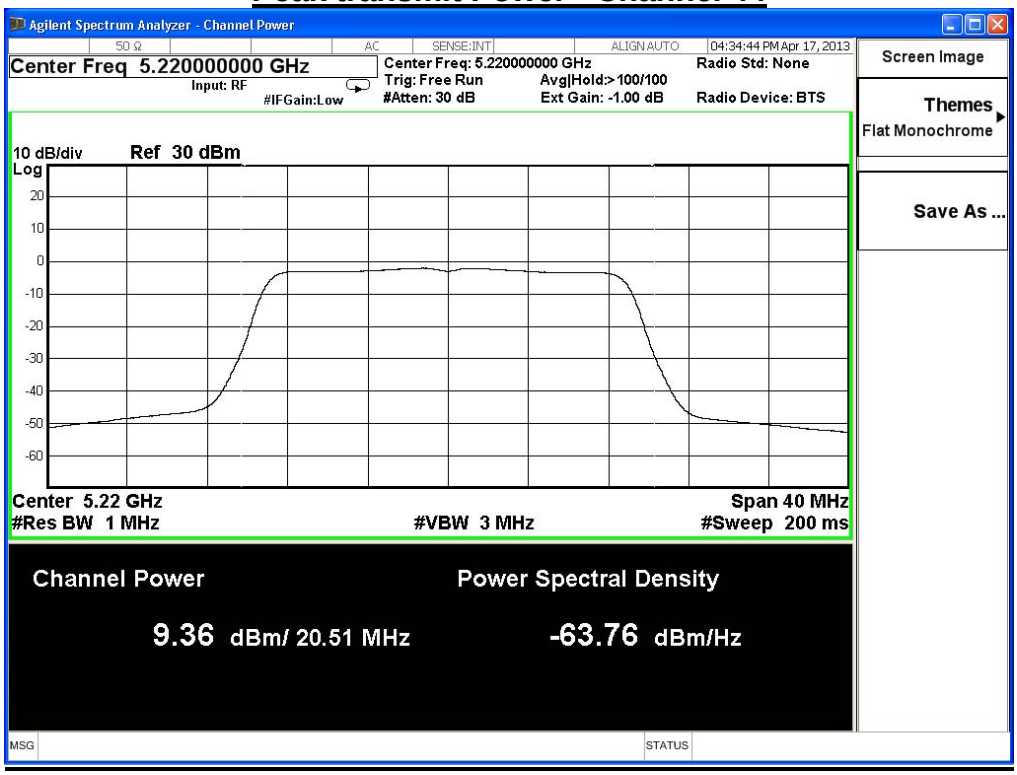
Peak Power Output (dBm)										
MCS Index		16	17	18	19	20	21	22	23	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		19.5	39	58.5	78	117	156	175.5	195	
36	5180	9.13	--	--	--	--	--	--	--	14.19dBm or 4dBm+10logB
44	5220	9.36	9.33	9.30	9.28	9.24	9.20	9.18	9.11	
48	5240	9.45	--	--	--	--	--	--	--	

Note:
Total Gain : 10log(Ant N) + Max Gain = 10log(3)+4.04dBi =8.81dBi
Required Limit = 17dBm - (8.81dBi – 6dBi) = 17 – 2.81 = 14.19 dBm

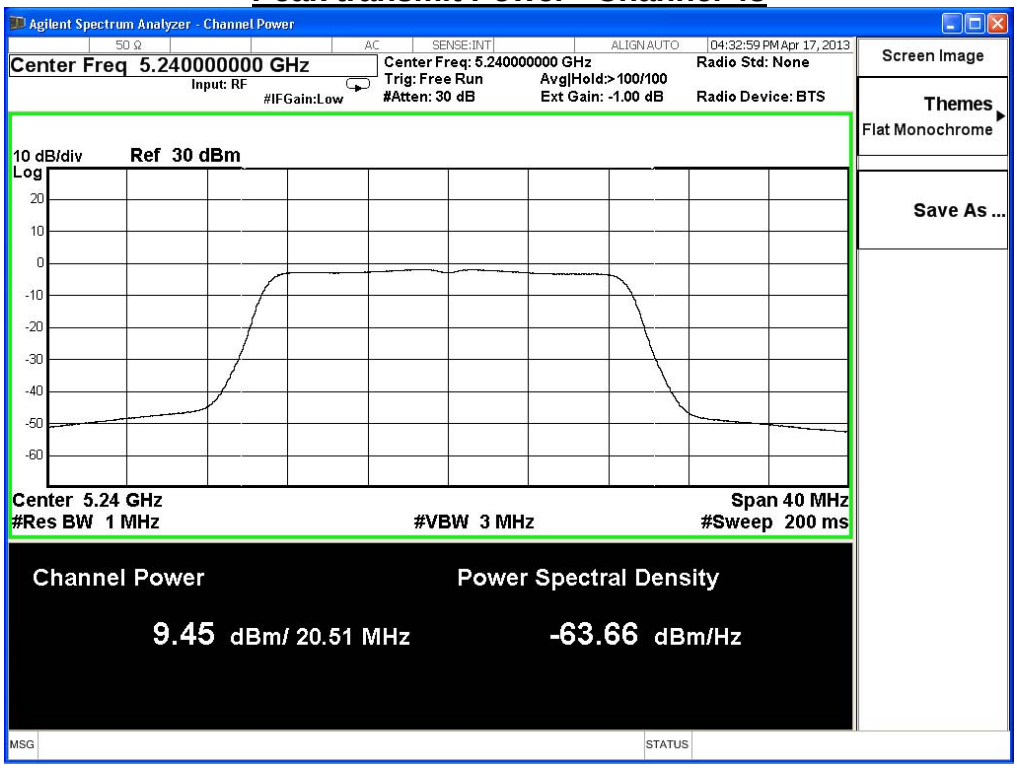
Peak transmit Power - Channel 36



Peak transmit Power - Channel 44



Peak transmit Power - Channel 48



Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 2: Transmit (Beamforming Mode)_Adapter: EXA1206UH		
Date of Test	2012/11/19	Test Site	SR7

IEEE 802.11n(20MHz)_ANT 0+1+2					
Channel No.	Frequency (MHz)	Total Output Power		Required Limit (dBm)	Result
		(mW)	(dBm)		
36	5180	21.65	13.35	≤ 14.19	Pass
44	5220	21.73	13.37	≤ 14.19	Pass
48	5240	21.79	13.38	≤ 14.19	Pass

802.11 n(20M), Antenna 0+1+2

Peak Power Output (dBm)										
MCS Index		16	17	18	19	20	21	22	23	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		19.5	39	58.5	78	117	156	175.5	195	
36	5180	13.35	--	--	--	--	--	--	--	14.19dBm or 4dBm+10logB
44	5220	13.37	13.34	13.30	13.27	13.21	13.16	13.14	13.07	
48	5240	13.38	--	--	--	--	--	--	--	

Note:
Total Gain : 10log(Ant N) + Max Gain = 10log(3)+4.04dBi =8.81dBi
Required Limit = 17dBm - (8.81dBi – 6dBi) = 17 – 2.81 = 14.19 dBm

Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 2: Transmit (Beamforming Mode)_Adapter: EXA1206UH		
Date of Test	2013/04/18	Test Site	SR7

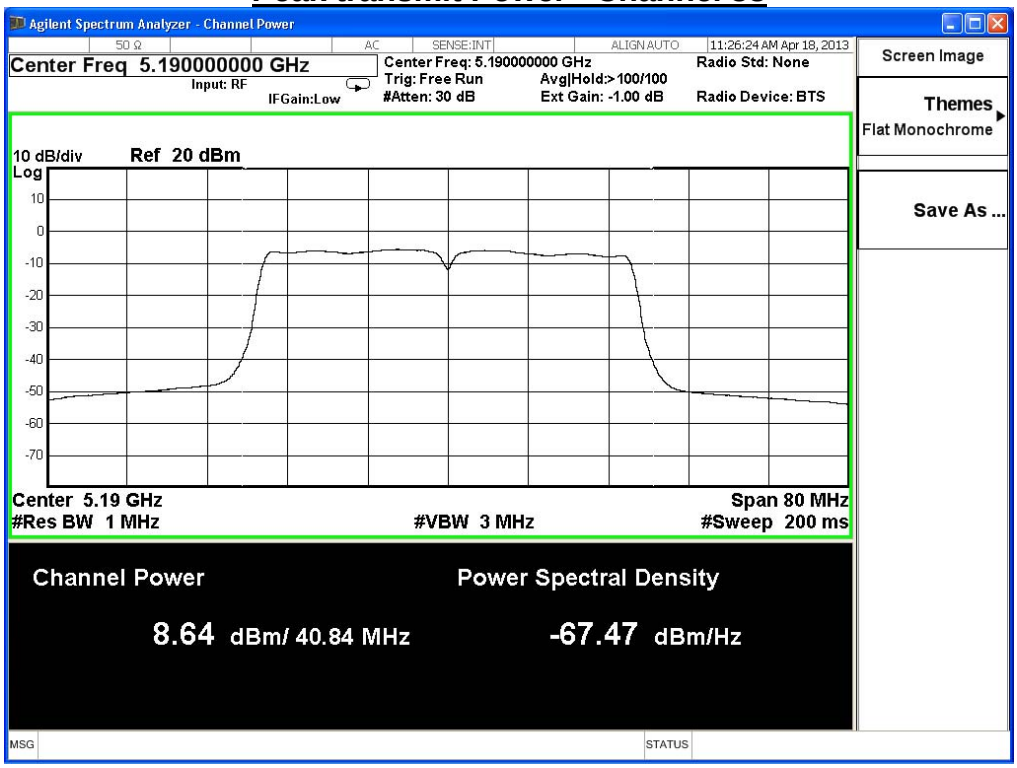
IEEE 802.11n(40MHz)_ANT 0, Power Index : ch38:47, ch46:49						
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
38	5190	40.836	8.64	≤ 14.19	≤20.11	Pass
46	5230	40.826	9.10	≤ 14.19	≤20.10	Pass

The worst emission of data rate is 40.5 Mbps

Peak Power Output (dBm)										
MCS Index		16	17	18	19	20	21	22	23	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		40.5	81	121.5	162	243	324	364.5	405	
38	5190	8.64	8.60	8.55	8.51	8.49	8.41	8.35	8.30	14.19dBm or 4dBm+10logB
46	5230	9.10	--	--	--	--	--	--	--	

Note:
Total Gain : 10log(Ant N) + Max Gain = 10log(3)+4.04dBi =8.81dBi
Required Limit = 17dBm - (8.81dBi – 6dBi) = 17 – 2.81 = 14.19 dBm

Peak transmit Power - Channel 38



Peak transmit Power - Channel 46