

4. Peak Transmit Output

4.1. Test Equipment

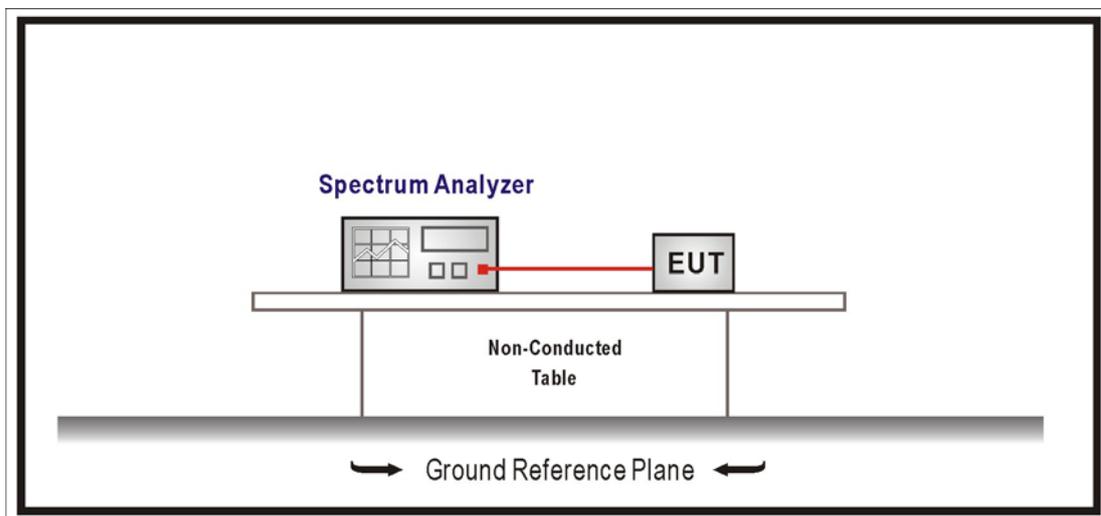
The following test equipments are used during the radiated emission tests:

Peak Transmit Output / SR7

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	R&S	FSP	100561	2013/02/19

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 $4 \text{ dBm} + 10\log B$, 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 $11 \text{ dBm} + 10\log B$, 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 $17 \text{ dBm} + 10\log B$, 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 $\pm 1.27 \text{ dB}$

4.6. Test Result

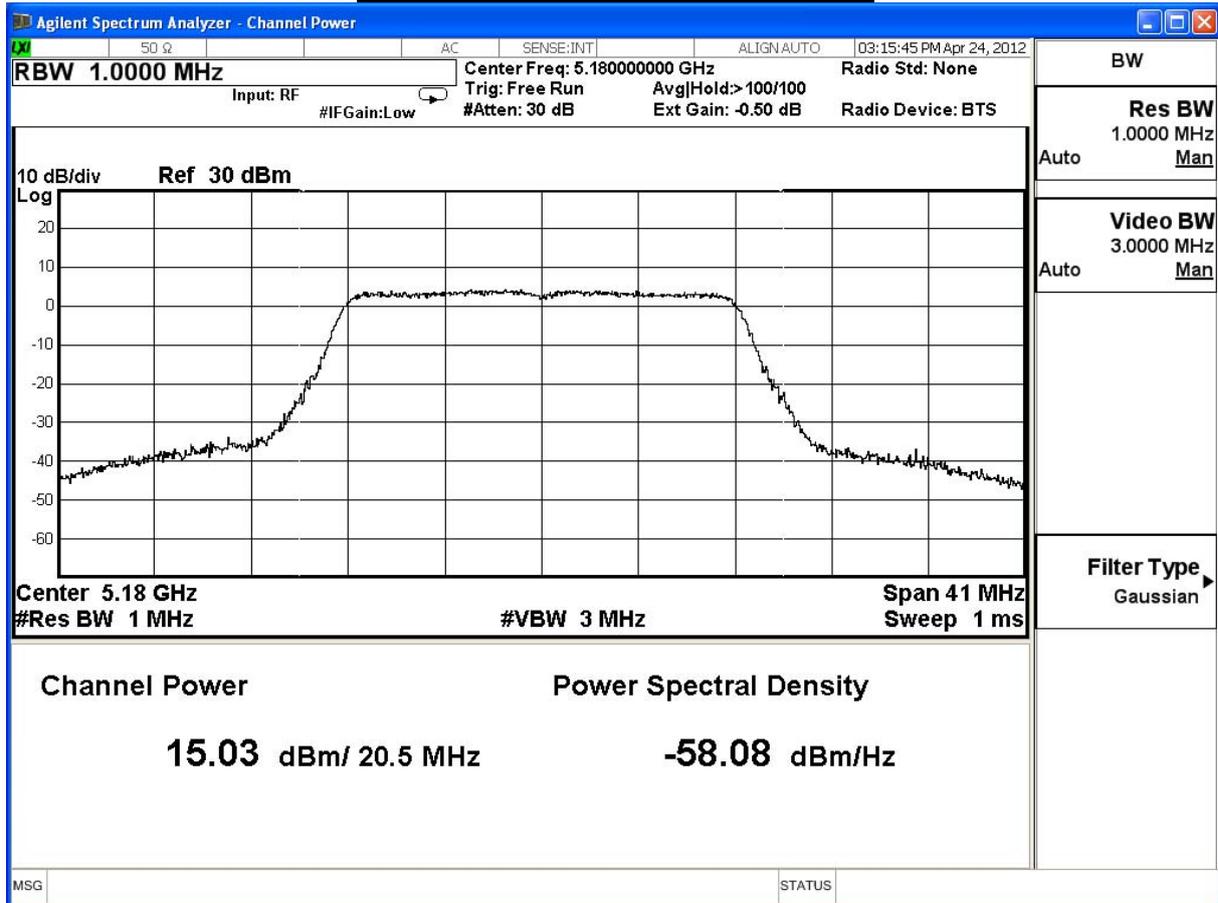
Product	Dual Band 3x3 802.11AC Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (Adapter: EXA1004UH)		
Date of Test	2012/04/24	Test Site	SR7

802.11a						
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
36	5180	20.50	15.03	≤17	≤17.11	Pass
44	5220	20.51	15.22	≤ 17	≤17.11	Pass
48	5240	20.44	14.85	≤ 17	≤17.10	Pass

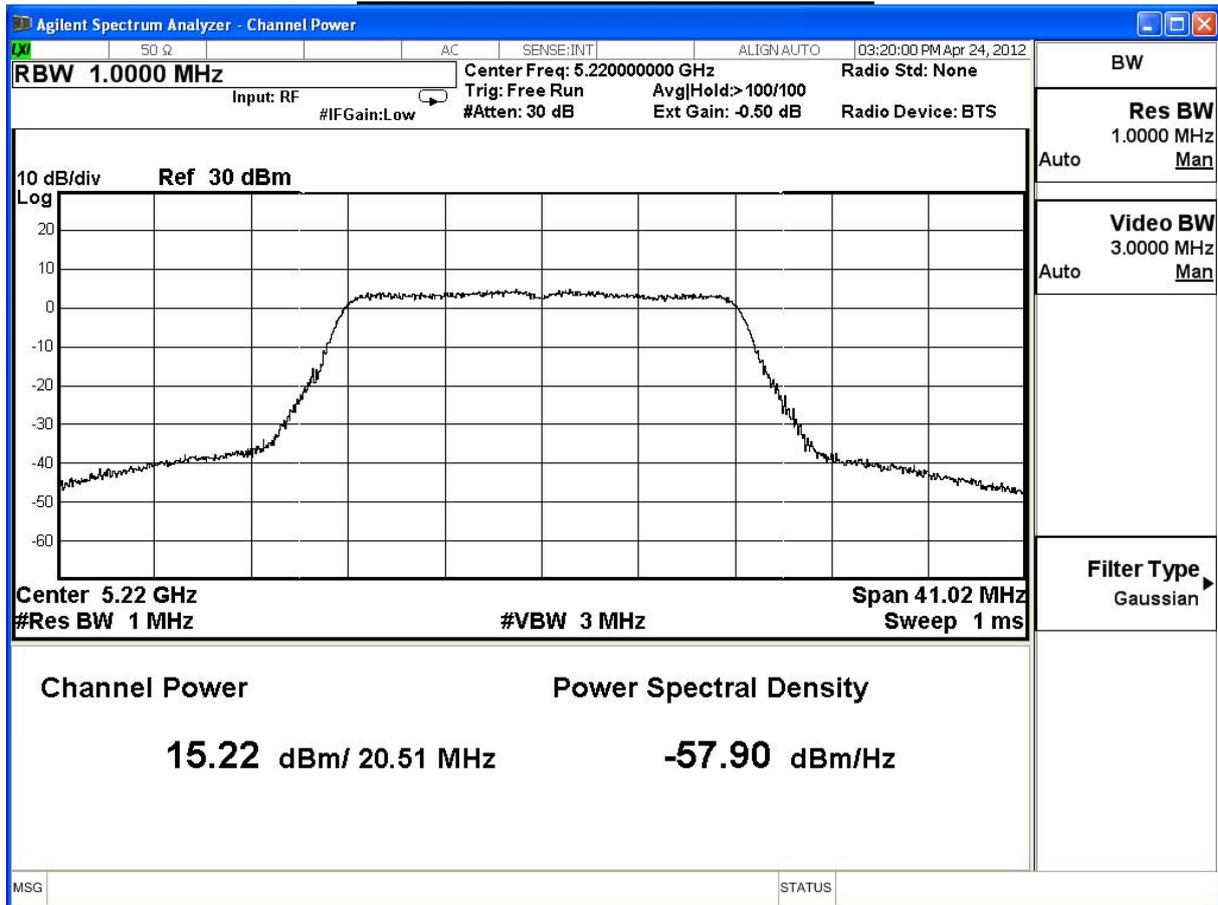
The worst emission of data rate is 6 Mbps.

Peak Power Output (dBm)									
Channel No	Frequency (MHz)	Data Rate							Required Limit
		6	12	18	24	36	48	54	
36	5180	15.03	--	--	--	--	--	--	17dBm or 4dBm+10logB
44	5220	15.22	15.21	15.19	15.17	15.14	15.10	15.09	
48	5240	14.85	--	--	--	--	--	--	

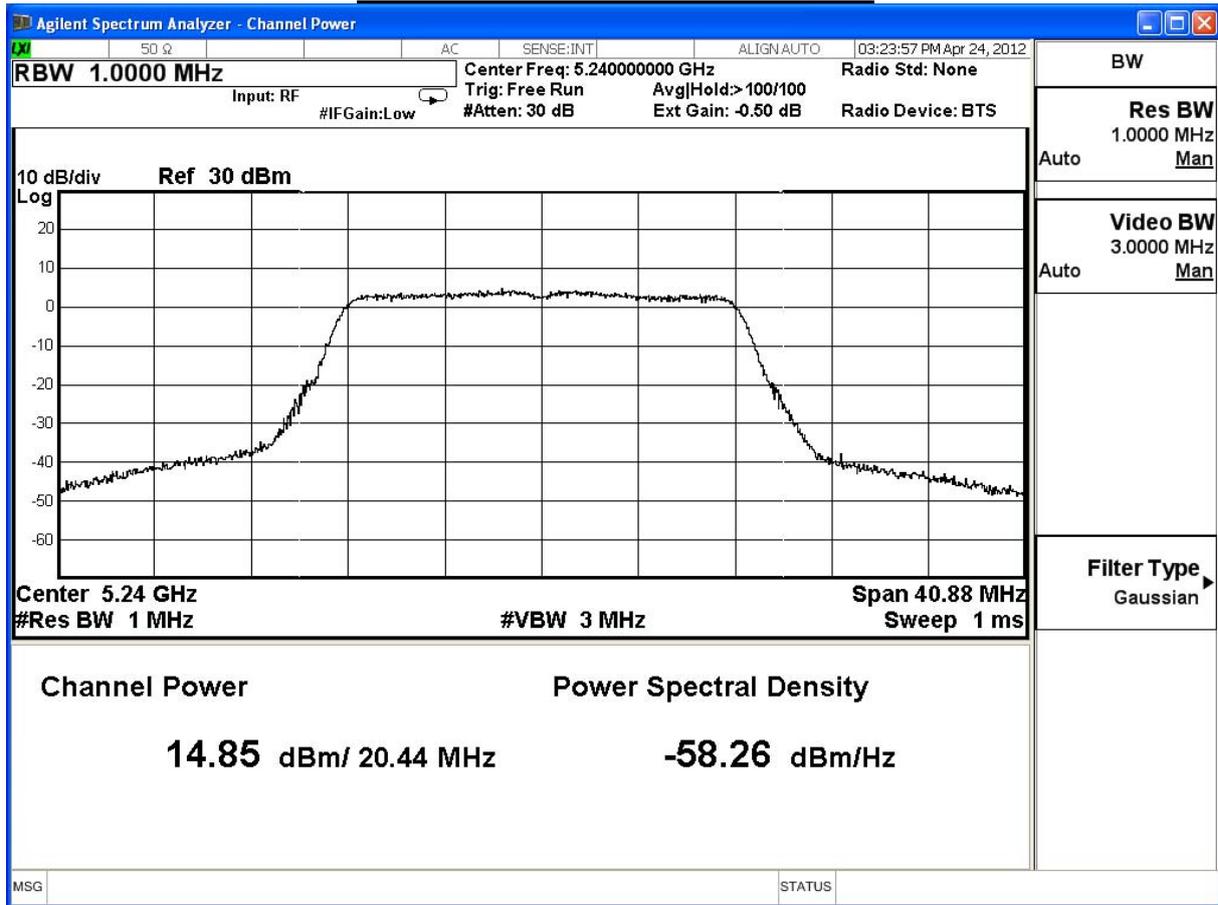
Peak transmit Power - Channel 36



Peak transmit Power - Channel 44



Peak transmit Power - Channel 48



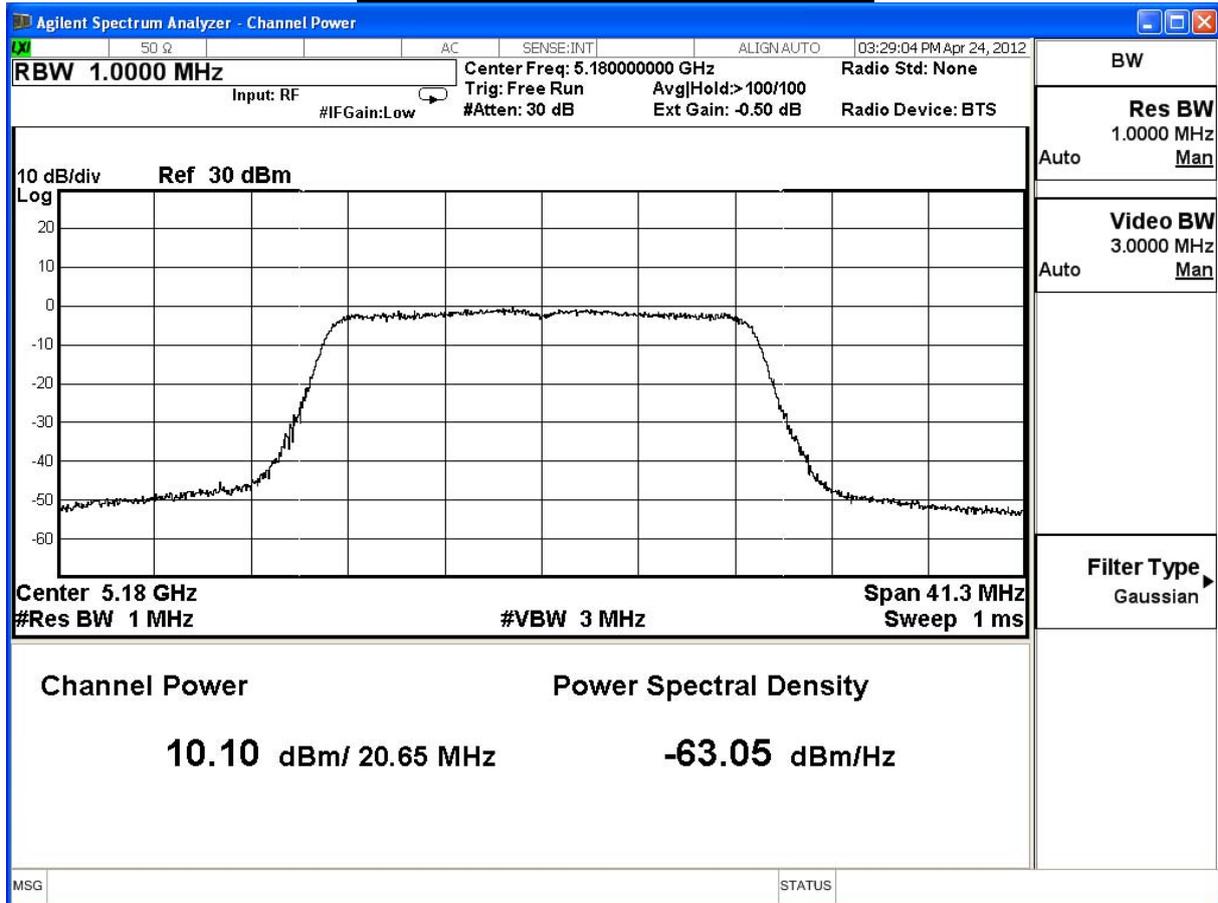
Product	Dual Band 3x3 802.11AC Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (Adapter: EXA1004UH)		
Date of Test	2012/04/24	Test Site	SR7

IEEE 802.11n(20MHz)_ANT 0						
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
36	5180	20.65	10.10	≤17	≤17.14	Pass
44	5220	20.59	10.40	≤ 17	≤17.13	Pass
48	5240	20.55	10.46	≤ 17	≤17.12	Pass

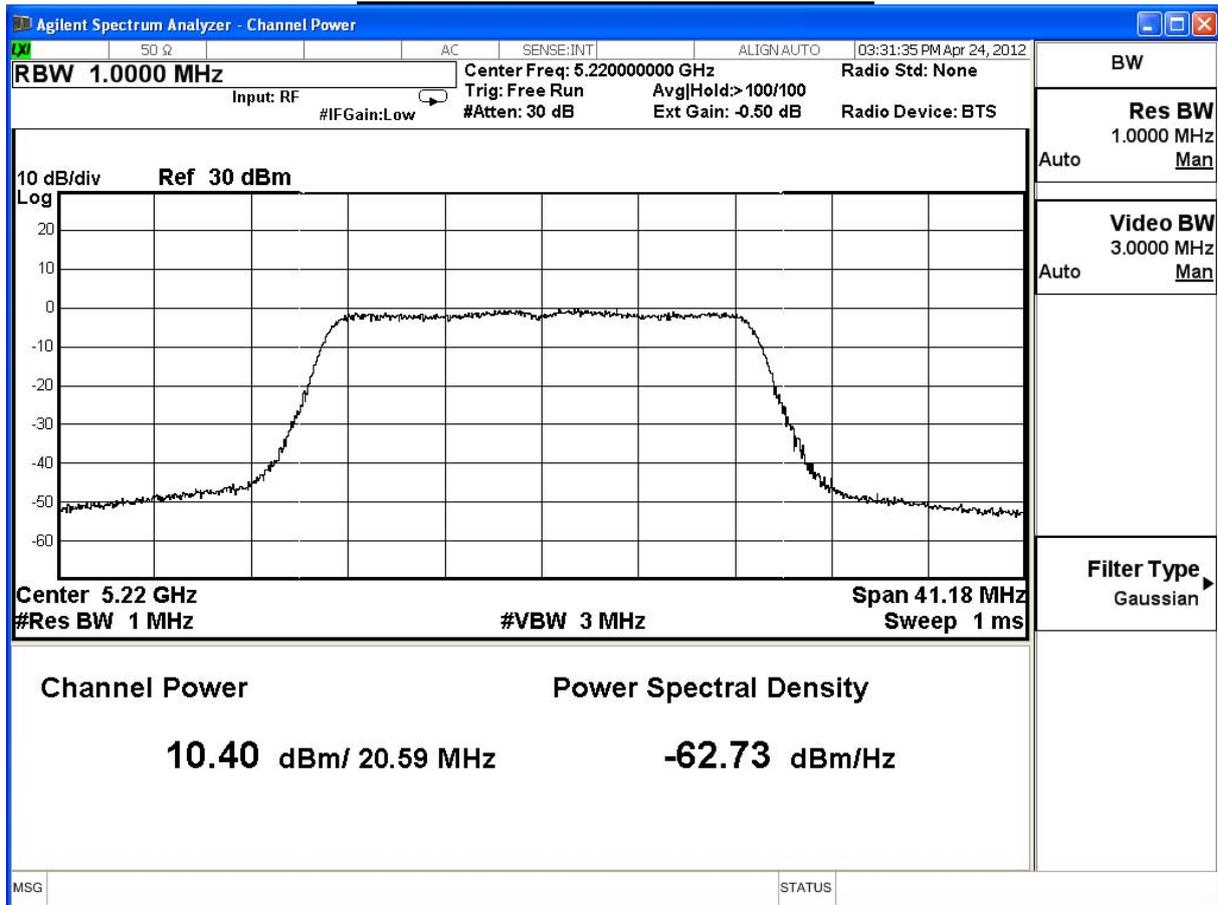
The worst emission of data rate is 19.5Mbps.

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	10.10	--	--	--	--	--	--	--	17dBm or 4dBm+10logB
44	5220	10.40	10.38	10.35	10.32	10.30	10.28	10.24	10.21	
48	5240	10.46	--	--	--	--	--	--	--	

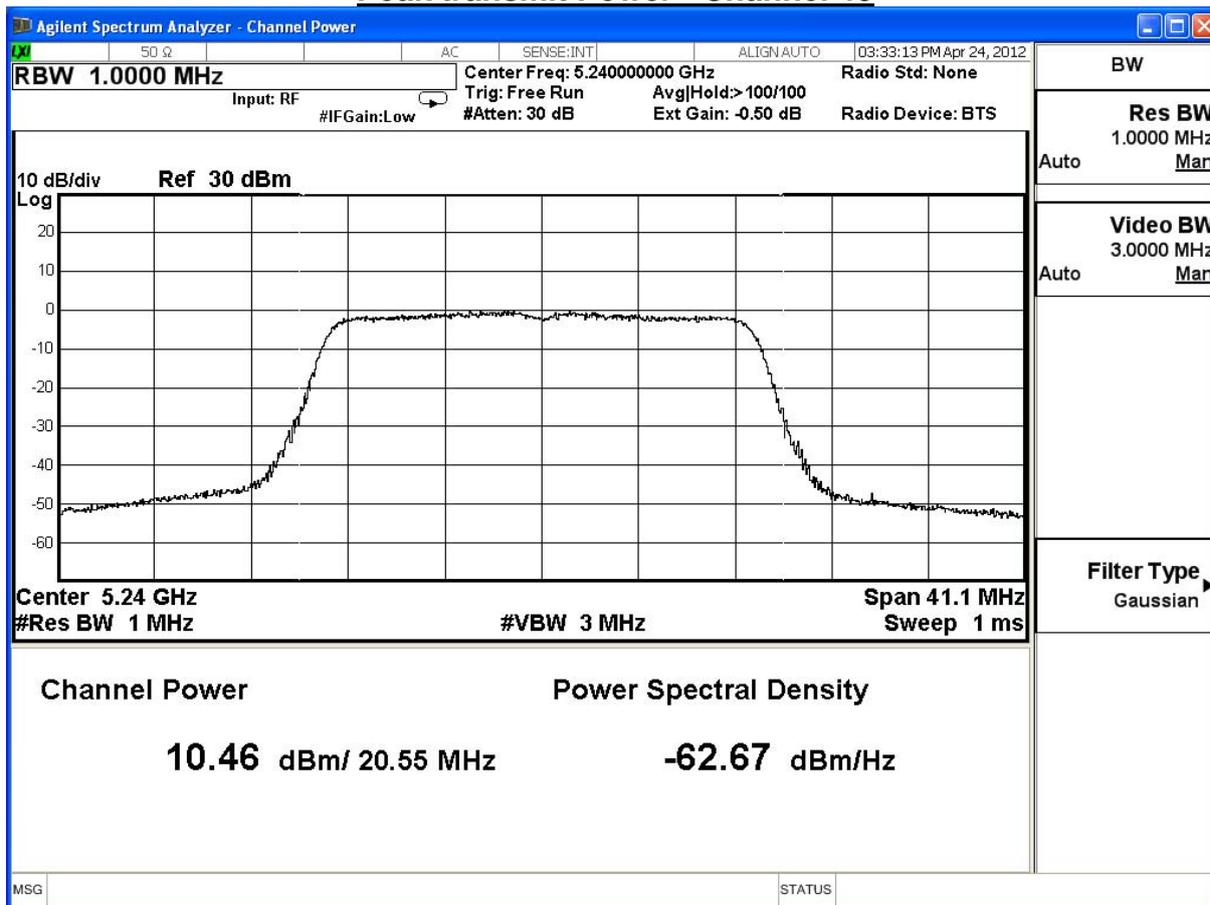
Peak transmit Power - Channel 36



Peak transmit Power - Channel 44



Peak transmit Power - Channel 48



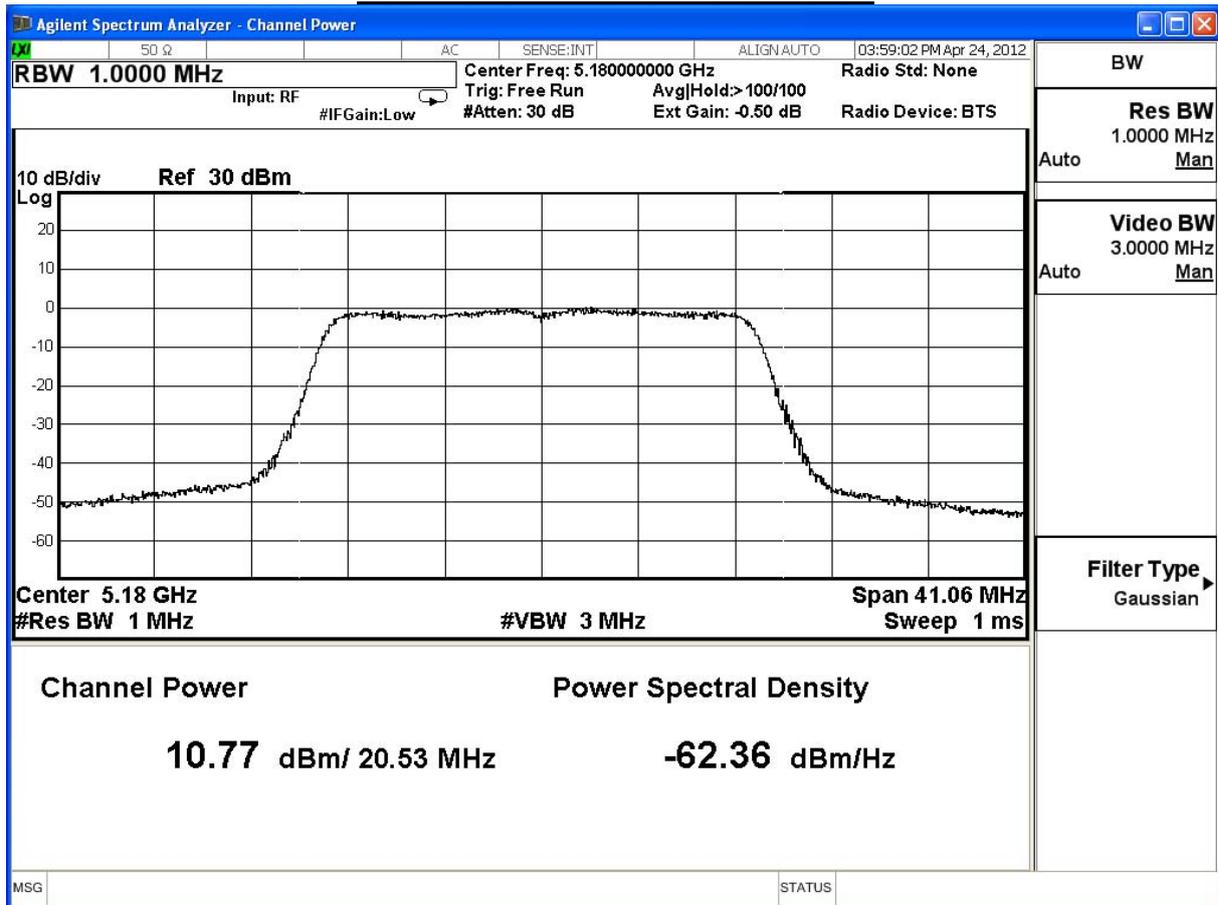
Product	Dual Band 3x3 802.11AC Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (Adapter: EXA1004UH)		
Date of Test	2012/04/24	Test Site	SR7

IEEE 802.11n(20MHz)_ANT 1						
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
36	5180	20.53	10.77	≤17	≤17.12	Pass
44	5220	20.53	10.99	≤ 17	≤17.12	Pass
48	5240	20.53	10.96	≤ 17	≤17.12	Pass

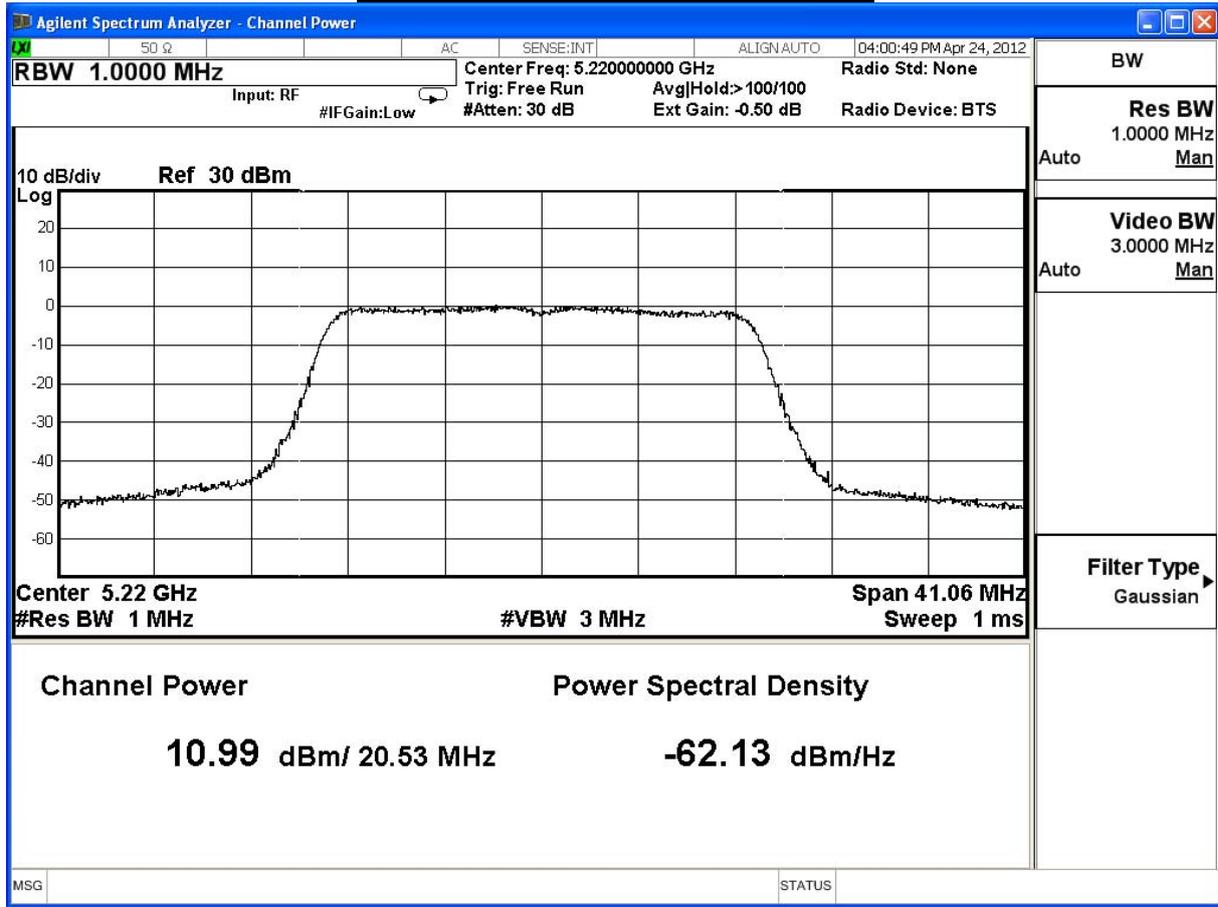
The worst emission of data rate is 19.5Mbps.

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	10.77	--	--	--	--	--	--	--	17dBm or 4dBm+10logB
44	5220	10.99	10.94	10.91	10.88	10.86	10.82	10.77	10.76	
48	5240	10.96	--	--	--	--	--	--	--	

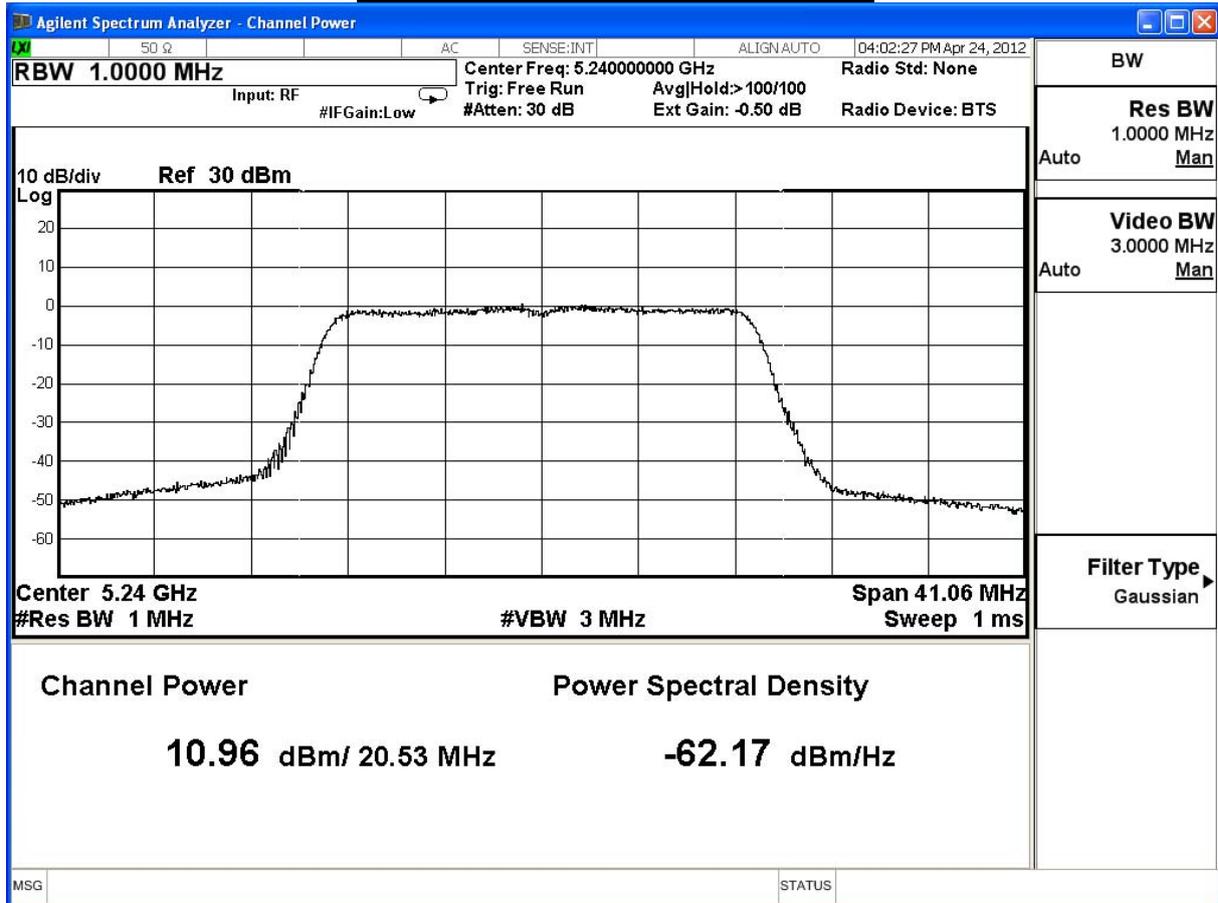
Peak transmit Power - Channel 36



Peak transmit Power - Channel 44



Peak transmit Power - Channel 48



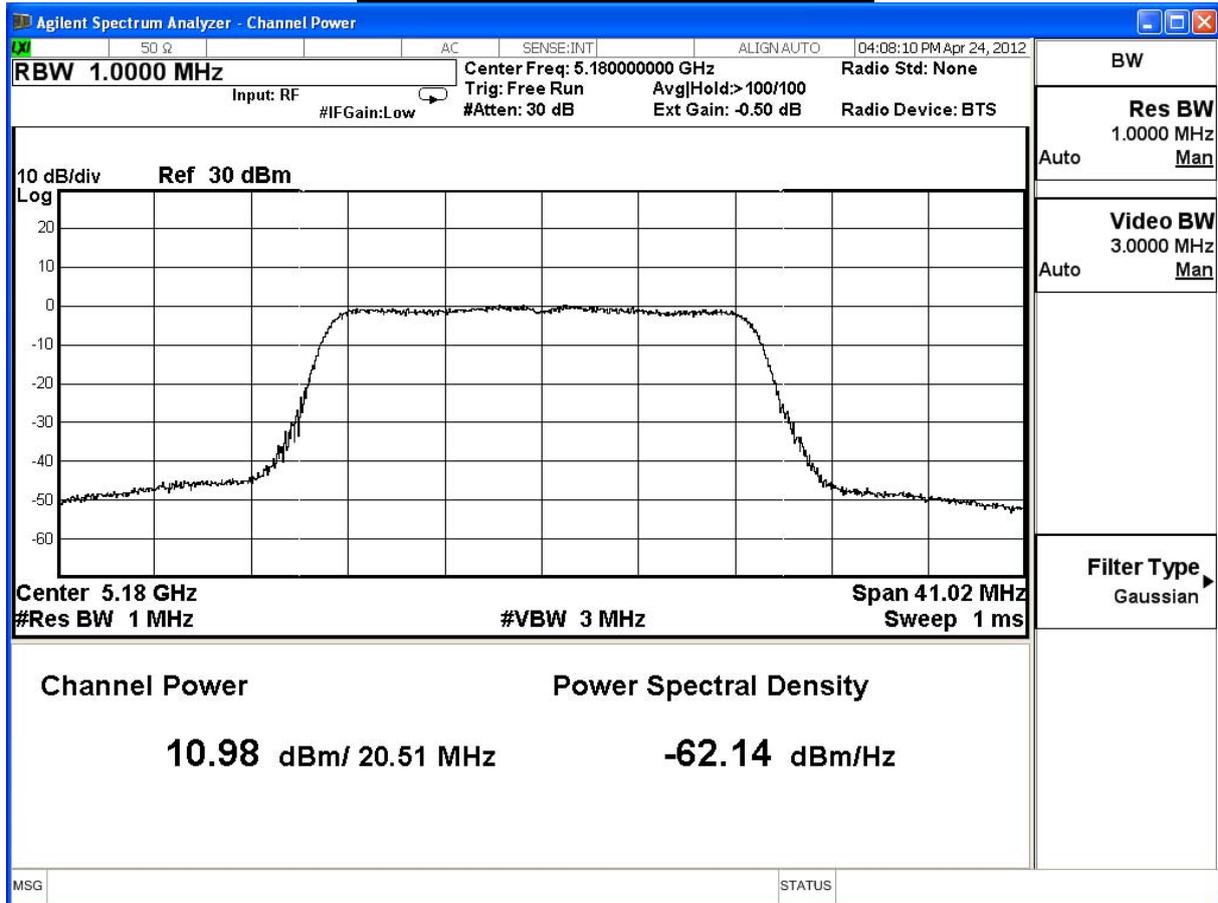
Product	Dual Band 3x3 802.11AC Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (Adapter: EXA1004UH)		
Date of Test	2012/04/24	Test Site	SR7

IEEE 802.11n(20MHz)_ANT 2						
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
36	5180	20.51	10.98	≤17	≤17.11	Pass
44	5220	20.56	10.88	≤ 17	≤17.13	Pass
48	5240	20.42	10.71	≤ 17	≤17.10	Pass

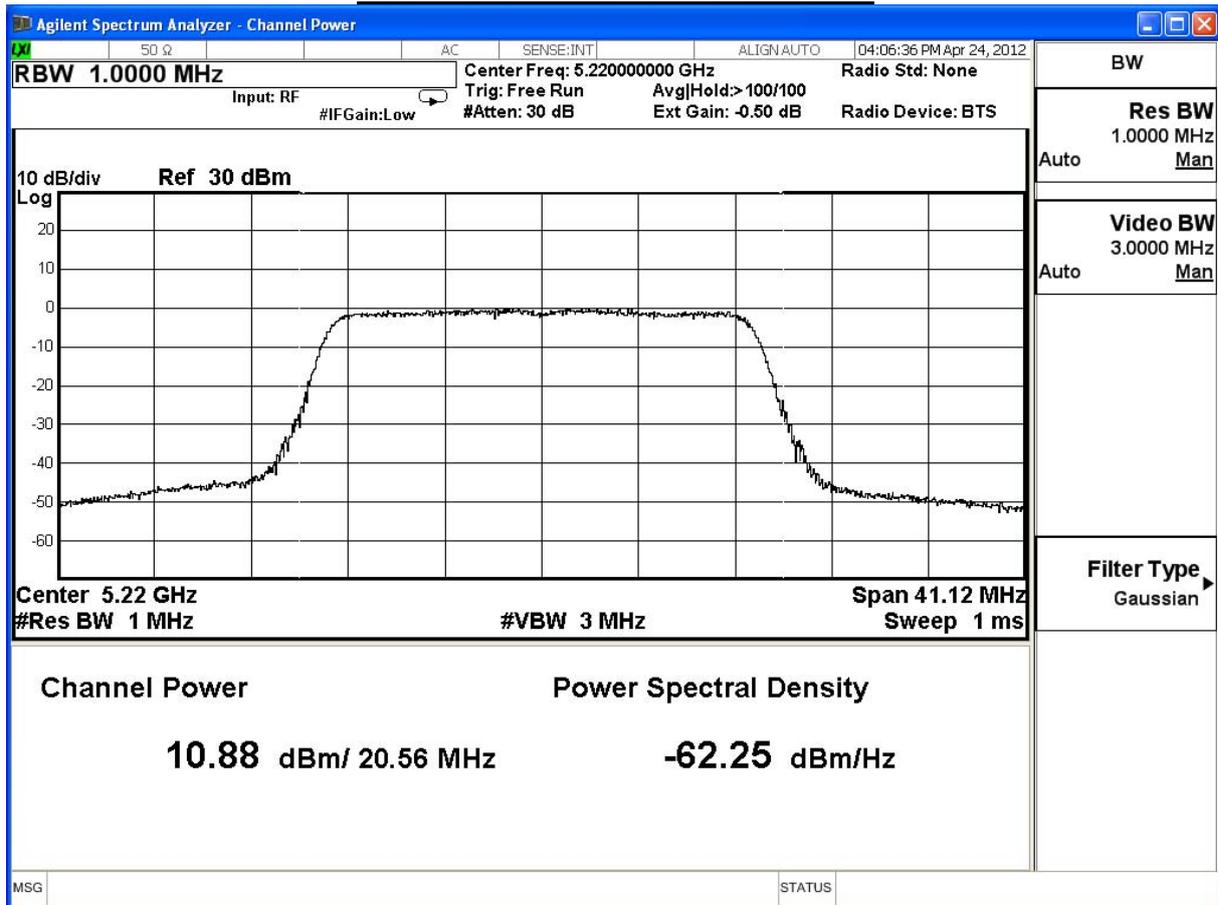
The worst emission of data rate is 19.5Mbps.

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	10.98	--	--	--	--	--	--	--	17dBm or 4dBm+10logB
44	5220	10.88	10.87	10.83	10.81	10.76	10.74	10.72	10.70	
48	5240	10.71	--	--	--	--	--	--	---	

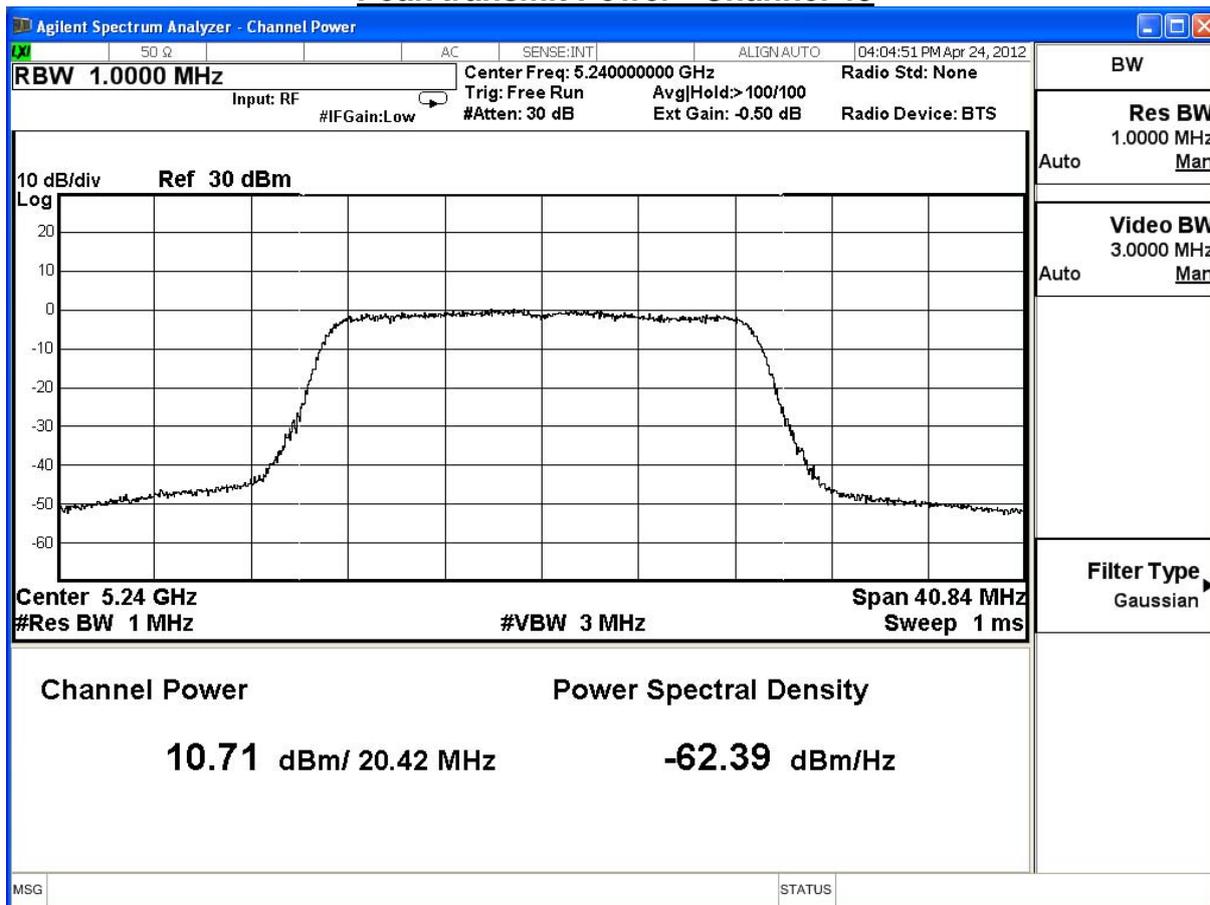
Peak transmit Power - Channel 36



Peak transmit Power - Channel 44



Peak transmit Power - Channel 48



Product	Dual Band 3x3 802.11AC Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (Adapter: EXA1004UH)		
Date of Test	2012/04/24	Test Site	SR7

IEEE 802.11n(20MHz)_ANT 0+1+2					
Channel No.	Frequency (MHz)	Total Output Power		Required Limit (dBm)	Result
		(dBm)	(mW)		
36	5180	15.40	34.67	≤17	Pass
44	5220	15.54	35.80	≤ 17	Pass
48	5240	15.49	35.39	≤ 17	Pass

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	15.40	--	--	--	--	--	--	--	30dBm
44	5220	15.54	15.51	15.47	15.45	15.42	15.39	15.35	15.33	30dBm
48	5240	15.49	--	--	--	--	--	--	--	30dBm

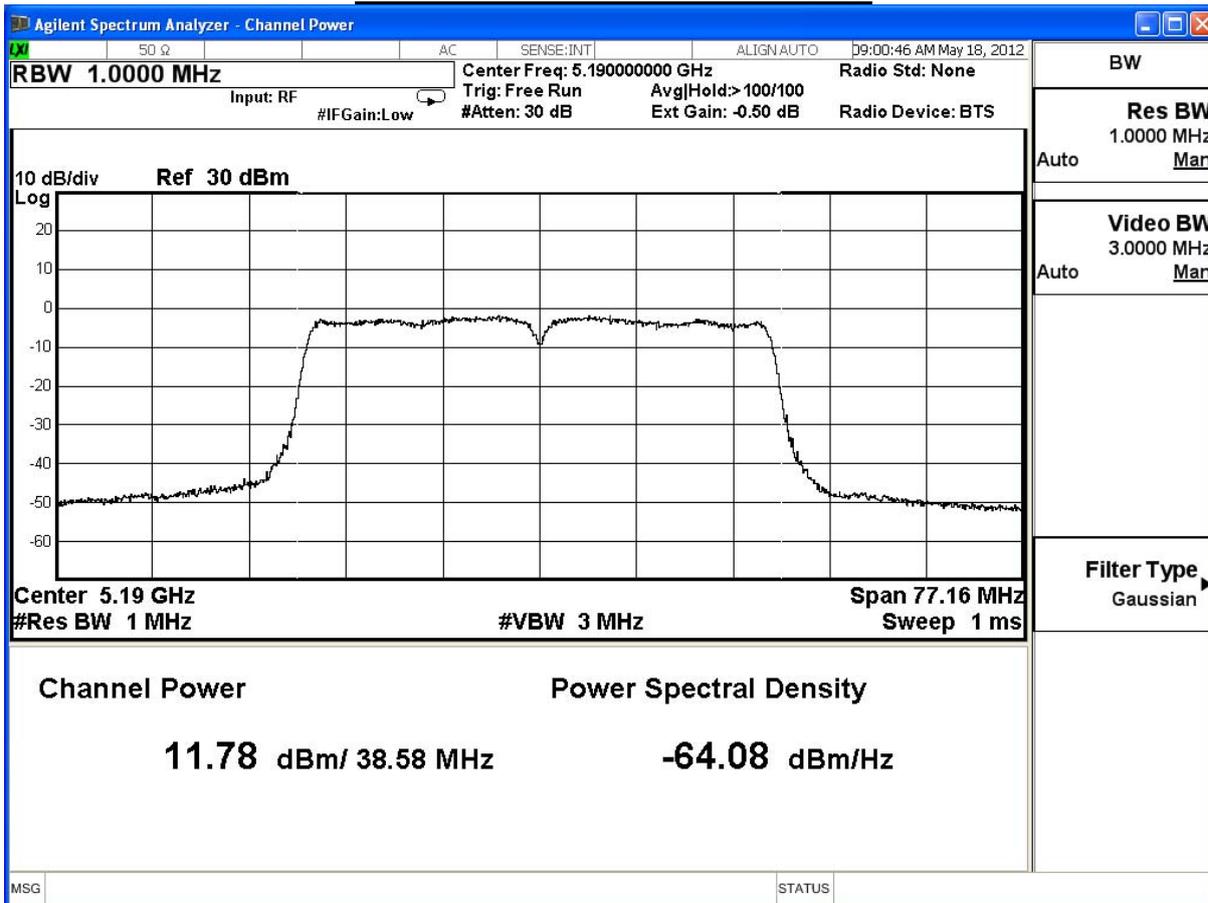
Product	Dual Band 3x3 802.11AC Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (Adapter: EXA1004UH)		
Date of Test	2012/05/18	Test Site	SR7

IEEE 802.11n(40MHz)_ANT 0						
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
38	5190	38.58	11.78	≤17	≤19.86	Pass
46	5230	38.59	10.75	≤ 17	≤19.86	Pass

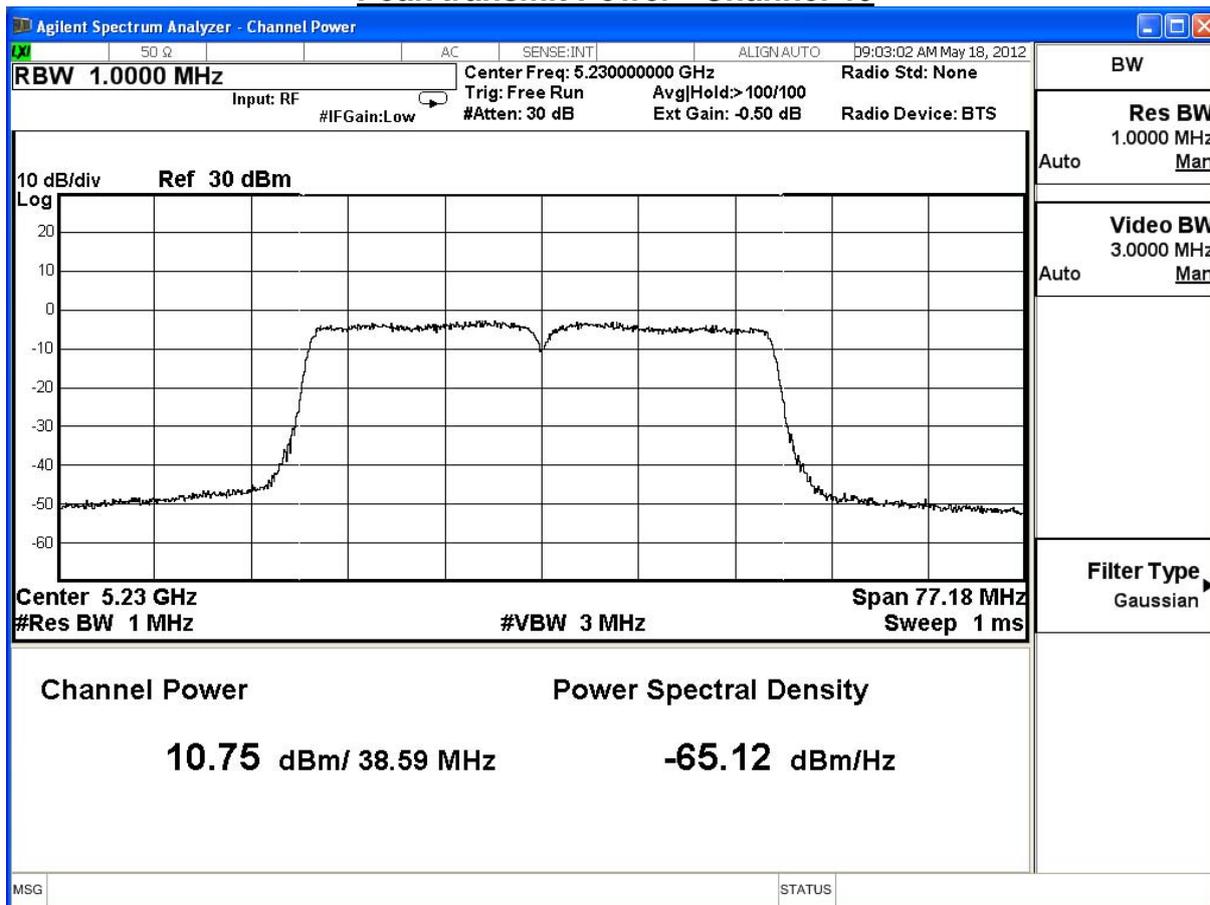
The worst emission of data rate is 40.5 Mbps

Peak Power Output (dBm)										
MCS Index		16	17	18	19	20	21	22	23	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		40.5	81.0	121.5	162.0	243.0	324.0	364.5	405.0	
38	5190	11.78	11.76	11.74	11.72	11.70	11.68	11.62	11.61	17dBm or
46	5230	10.75	--	--	--	--	--	--	--	4dBm+10logB

Peak transmit Power - Channel 38



Peak transmit Power - Channel 46



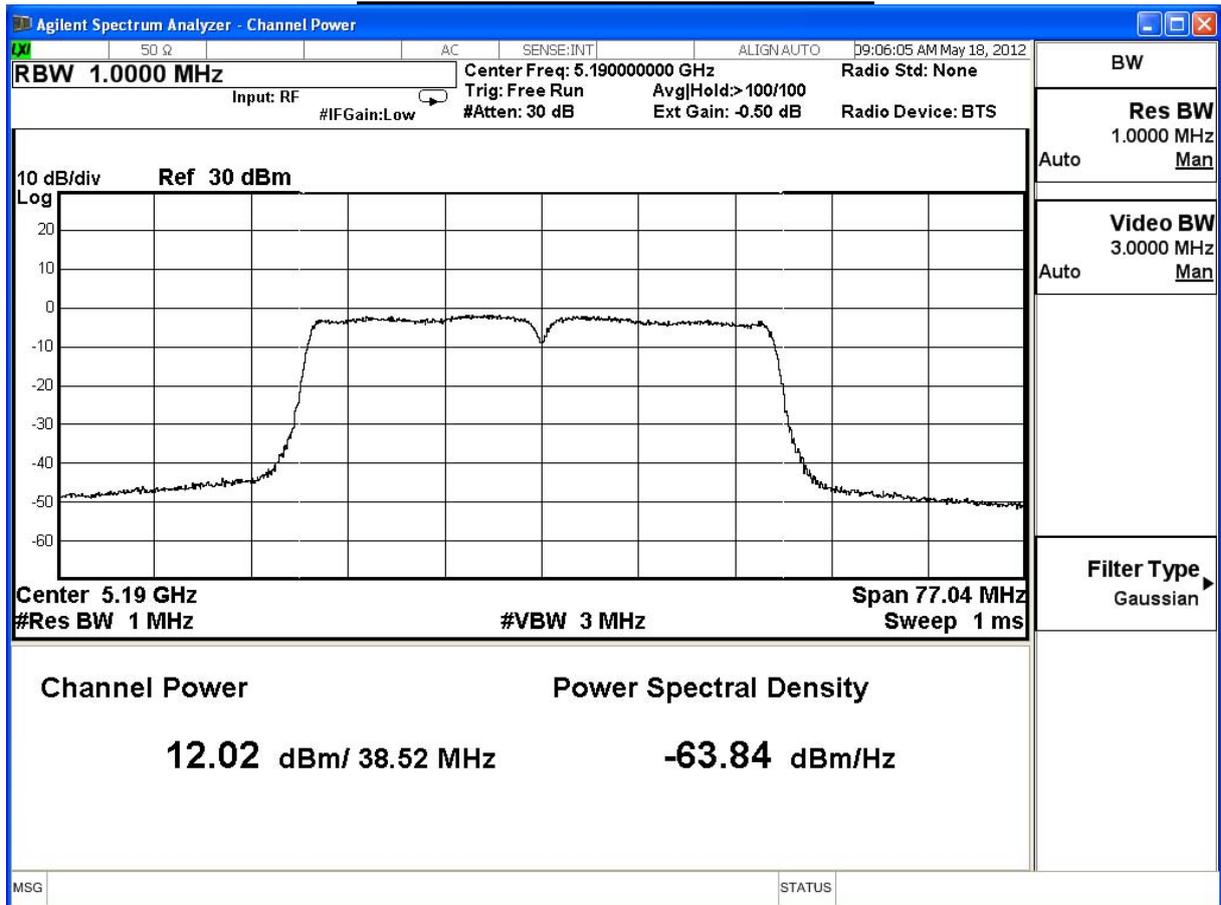
Product	Dual Band 3x3 802.11AC Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (Adapter: EXA1004UH)		
Date of Test	2012/05/18	Test Site	SR7

IEEE 802.11n(40MHz)_ANT 1						
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
38	5190	38.52	12.02	≤17	≤19.85	Pass
46	5230	38.73	12.06	≤ 17	≤19.88	Pass

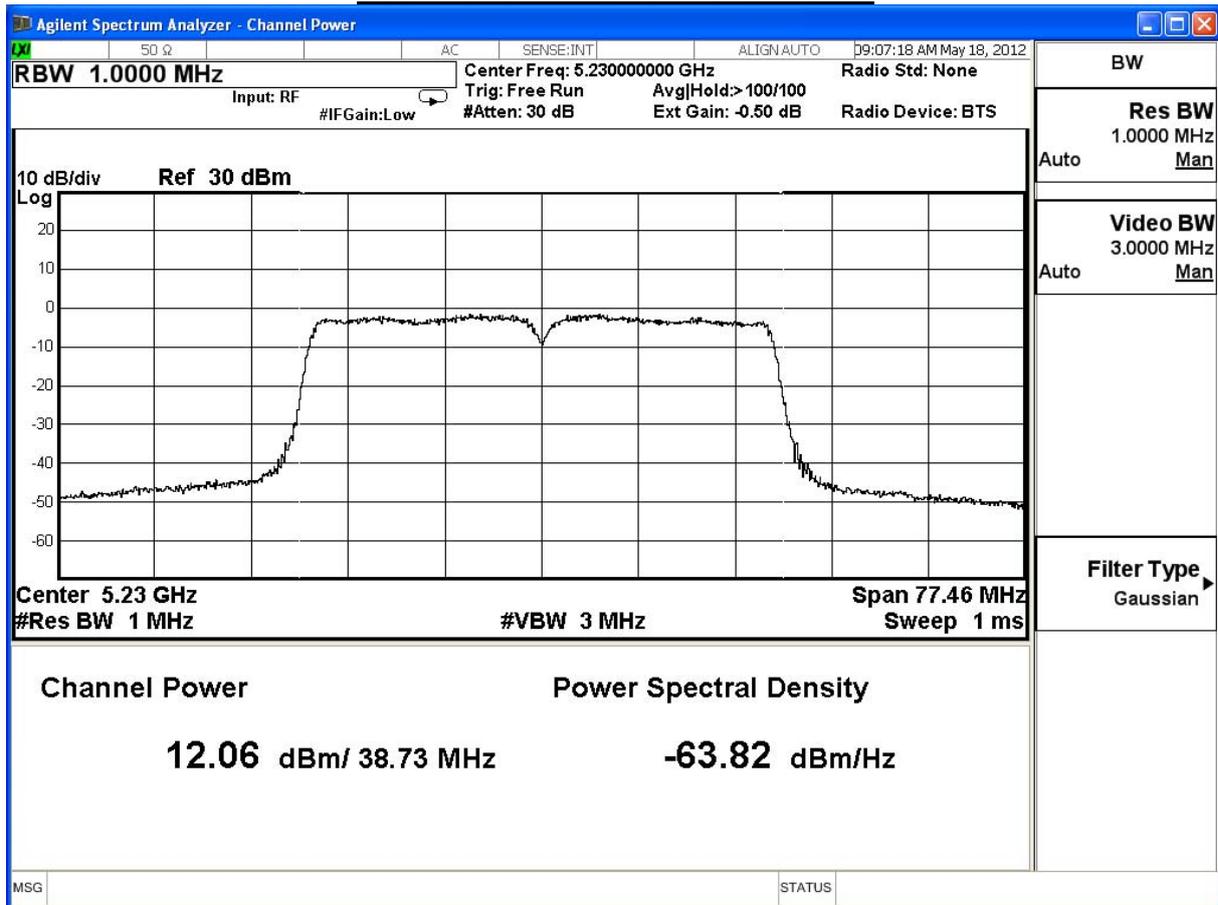
The worst emission of data rate is 40.5 Mbps

Peak Power Output (dBm)										
MCS Index		16	17	18	19	20	21	22	23	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		40.5	81.0	121.5	162.0	243.0	324.0	364.5	405.0	
38	5190	12.02	11.94	11.92	11.89	11.87	11.82	11.81	11.78	17dBm or 4dBm+10logB
46	5230	12.06	--	--	--	--	--	--	--	

Peak transmit Power - Channel 38



Peak transmit Power - Channel 46



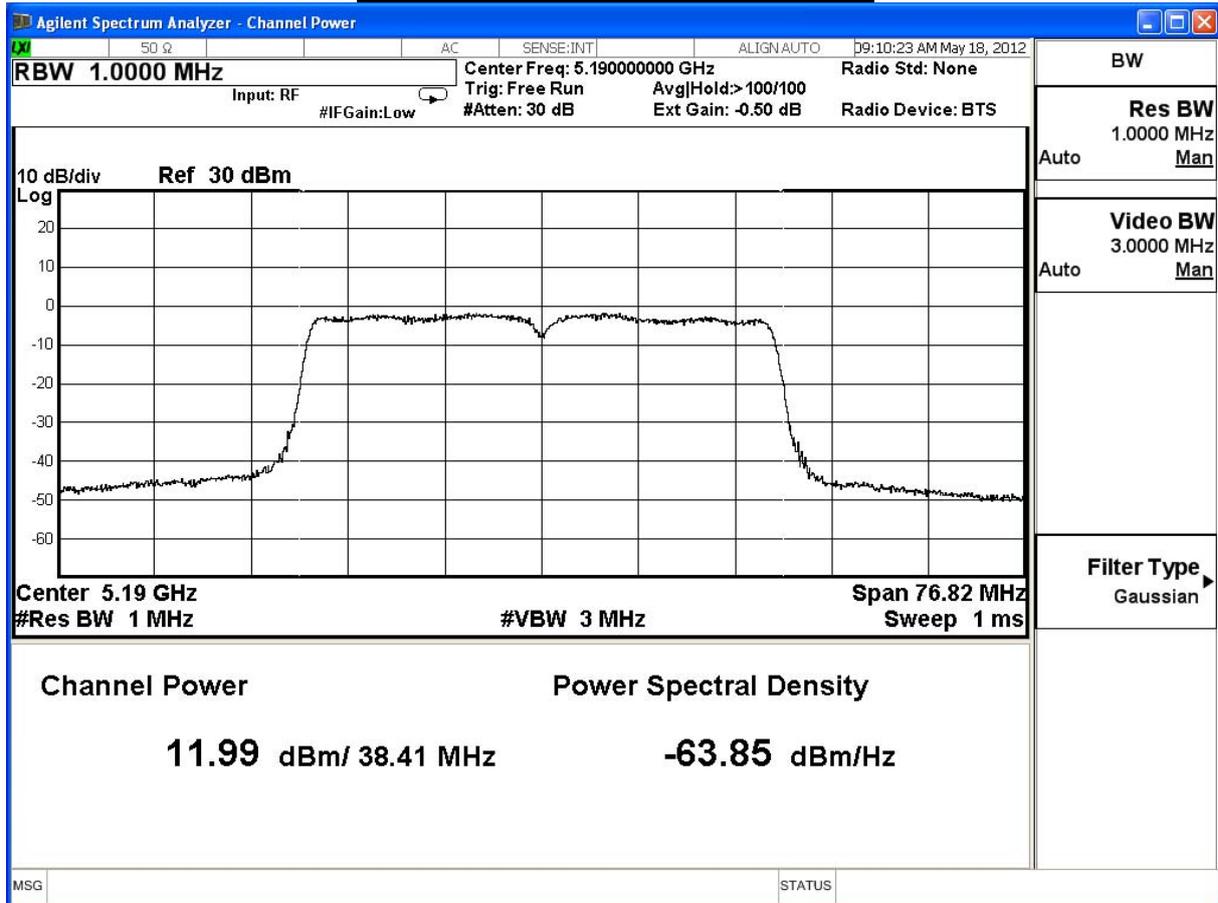
Product	Dual Band 3x3 802.11AC Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (Adapter: EXA1004UH)		
Date of Test	2012/05/18	Test Site	SR7

IEEE 802.11n(40MHz)_ANT 2						
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
38	5190	38.41	11.99	≤17	≤19.80	Pass
46	5230	38.55	12.16	≤ 17	≤19.86	Pass

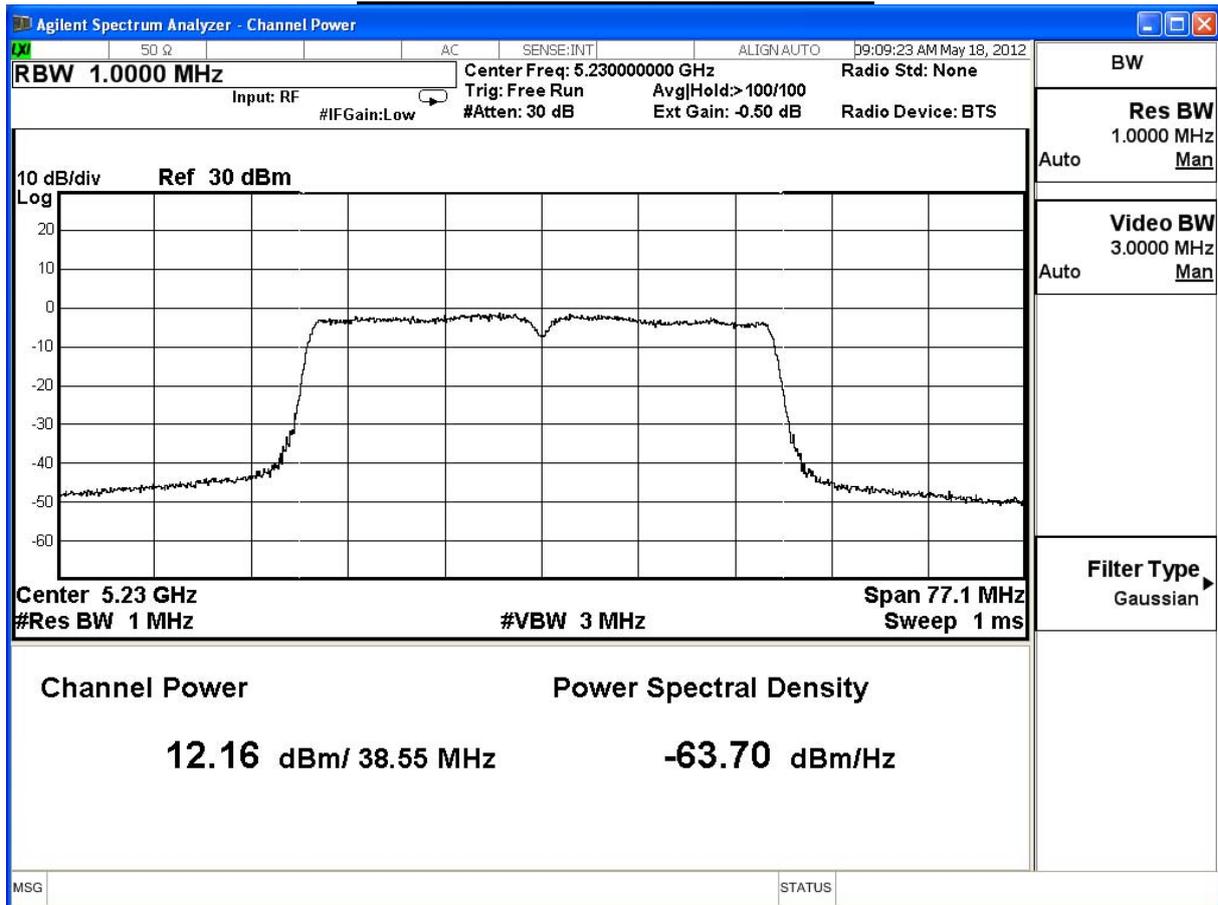
The worst emission of data rate is 40.5 Mbps

Peak Power Output (dBm)										
MCS Index		16	17	18	19	20	21	22	23	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		40.5	81.0	121.5	162.0	243.0	324.0	364.5	405.0	
38	5190	11.99	11.92	11.88	11.84	11.81	11.78	11.74	11.71	17dBm or 4dBm+10logB
46	5230	12.16	--	--	--	--	--	--	--	

Peak transmit Power - Channel 38



Peak transmit Power - Channel 46



Product	Dual Band 3x3 802.11AC Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (Adapter: EXA1004UH)		
Date of Test	2012/05/18	Test Site	SR7

IEEE 802.11n(40MHz)_ANT 0+1+2					
Channel No.	Frequency (MHz)	Total Output Power		Required Limit (dBm)	Result
		(dBm)	(mW)		
38	5190	16.70	46.77	≤17	Pass
46	5230	16.47	44.36	≤ 17	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	81.0	121.5	162.0	243.0	324.0	364.5	405.0	
38	5190	16.70	16.65	16.62	16.59	16.57	16.53	16.50	16.47	17dBm or 4dBm+10logB
46	5230	16.47	--	--	--	--	--	--	--	

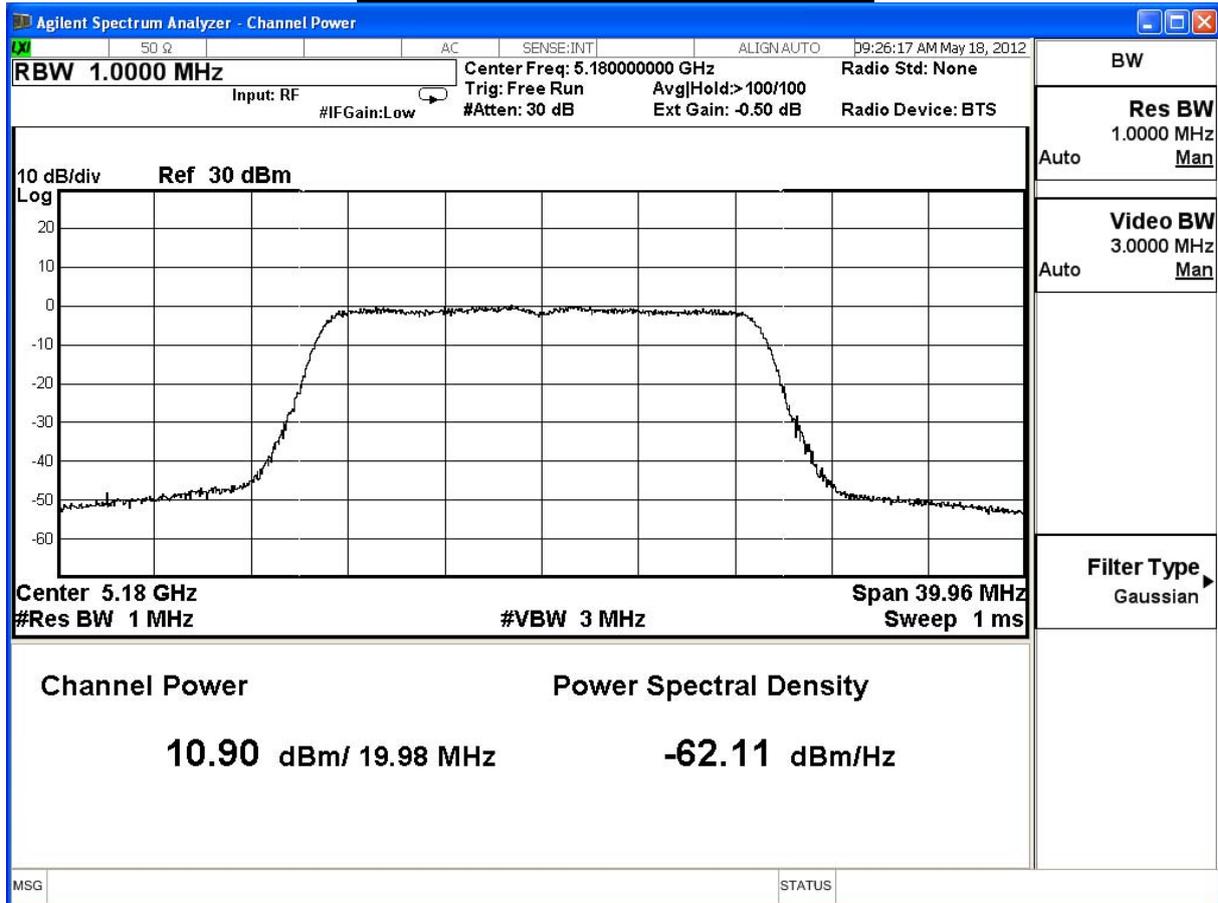
Product	Dual Band 3x3 802.11AC Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (Adapter: EXA1004UH)		
Date of Test	2012/05/18	Test Site	SR7

IEEE 802.11ac(20MHz)_ANT 0						
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
36	5180	19.98	10.90	≤17	≤ 17.00	Pass
44	5220	19.88	11.00	≤17	≤ 16.98	Pass
48	5240	19.85	10.83	≤17	≤ 16.97	Pass

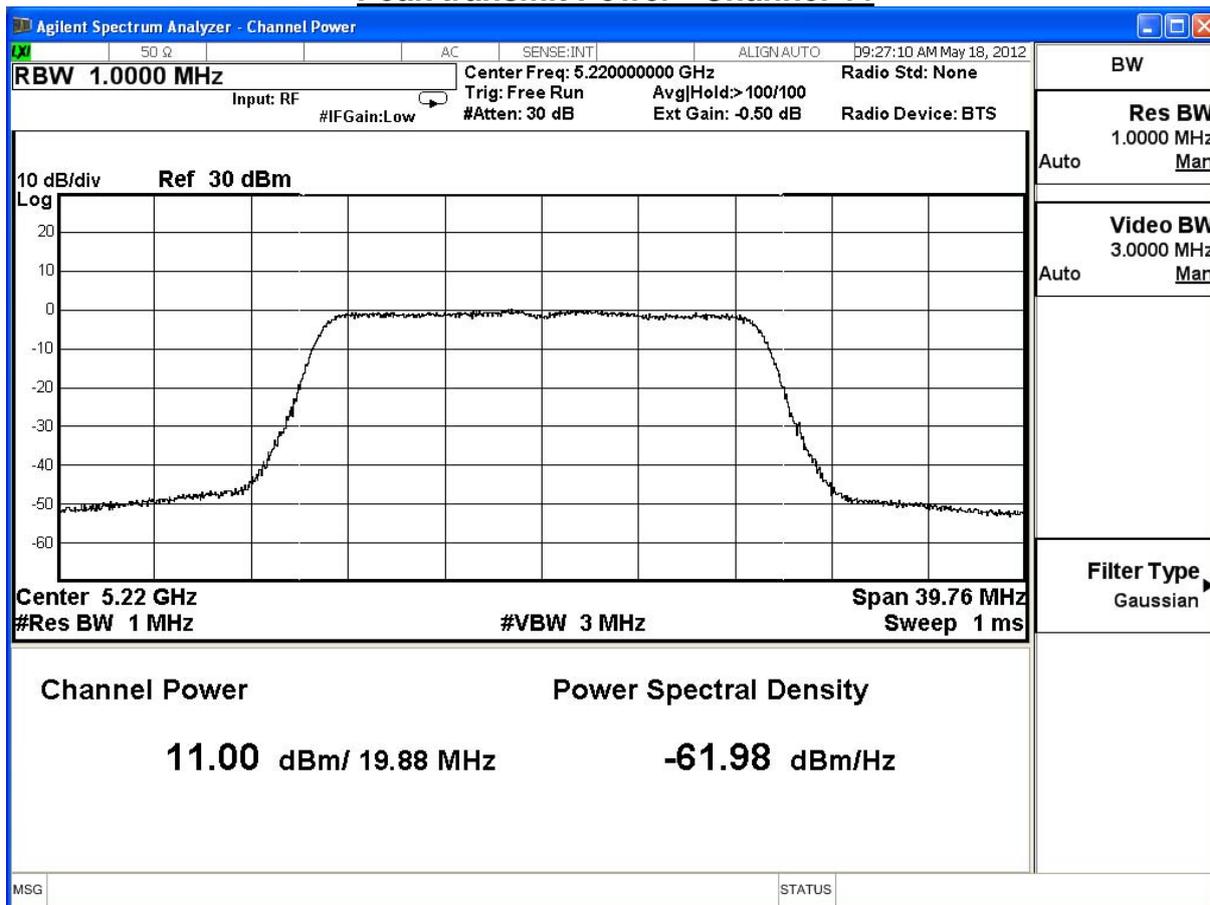
The worst emission of data rate is 19.5Mbps.

Peak Power Output (dBm)												
MCS Index		0	1	2	3	4	5	6	7	8	9	Required Limit
Channel No	Frequency (MHz)	Data Rate										
		19.5	39	58.5	78	117	156	175.5	195	234	N/A	
36	5180	10.90	--	--	--	--	--	--	--	--	--	17dBm or 4dBm+10logB
44	5220	11.00	10.98	10.95	10.92	10.90	10.88	10.84	10.81	10.67	--	
48	5240	10.83	--	--	--	--	--	--	--	--	--	

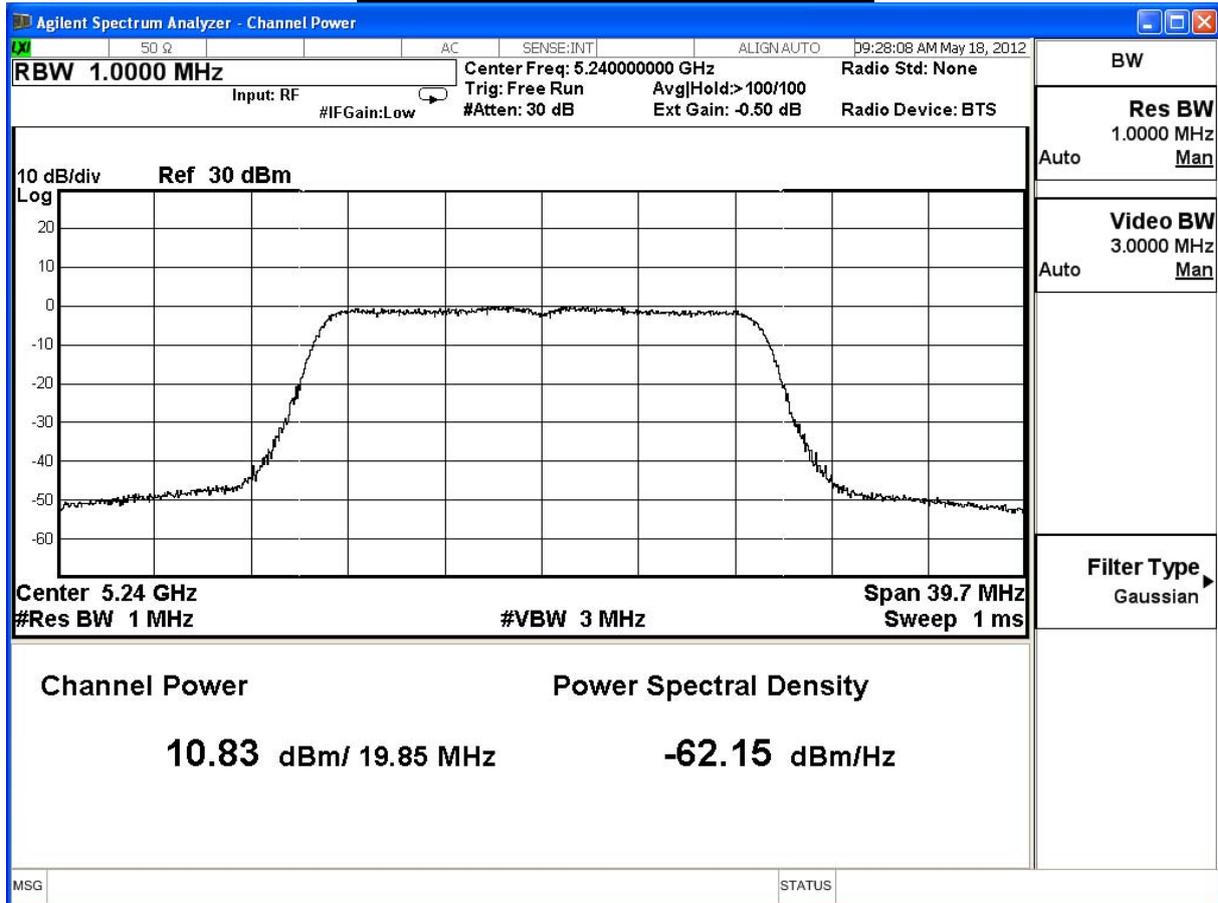
Peak transmit Power - Channel 36



Peak transmit Power - Channel 44



Peak transmit Power - Channel 48



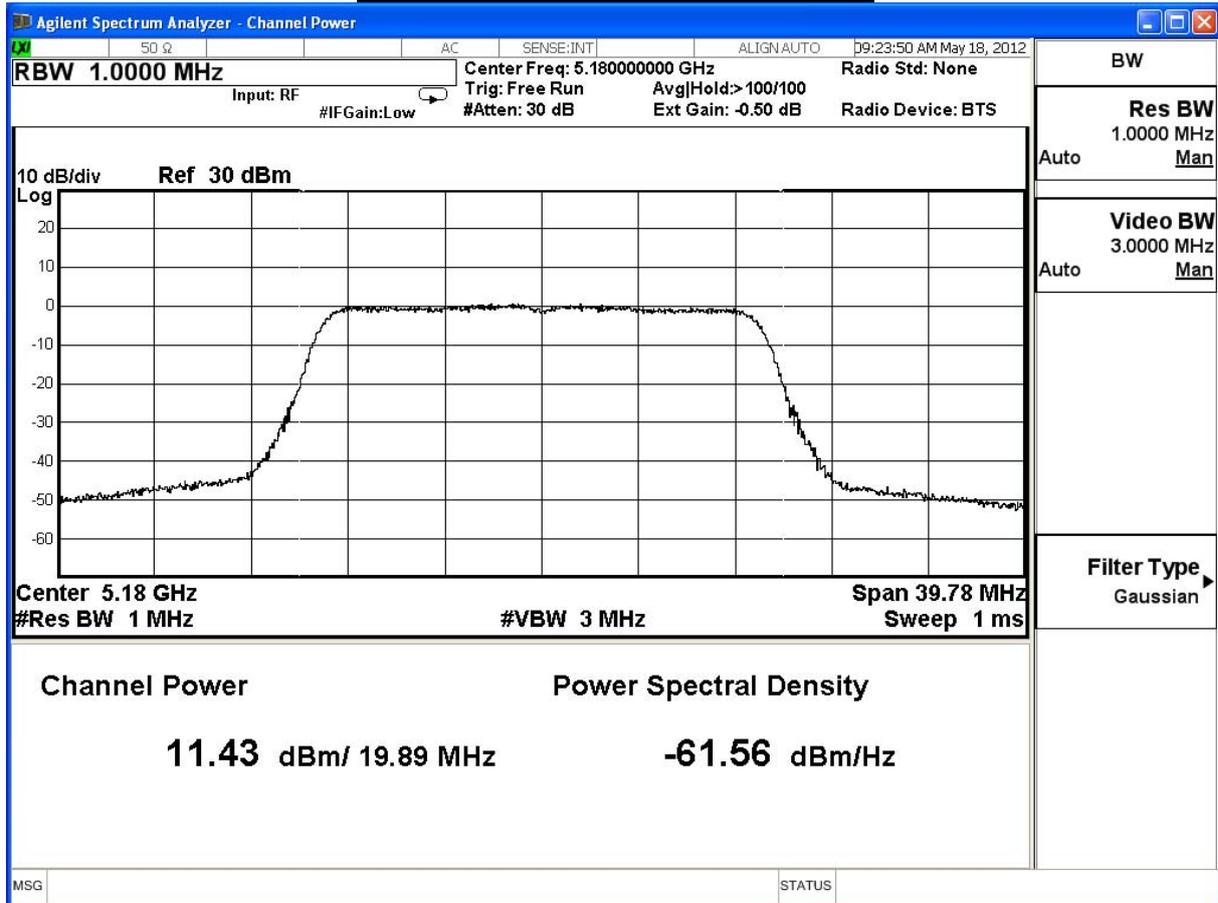
Product	Dual Band 3x3 802.11AC Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (Adapter: EXA1004UH)		
Date of Test	2012/05/18	Test Site	SR7

IEEE 802.11ac(20MHz)_ANT 1						
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
36	5180	19.89	11.43	≤17	≤ 16.98	Pass
44	5220	19.94	11.35	≤17	≤ 16.99	Pass
48	5240	19.87	11.37	≤17	≤ 16.98	Pass

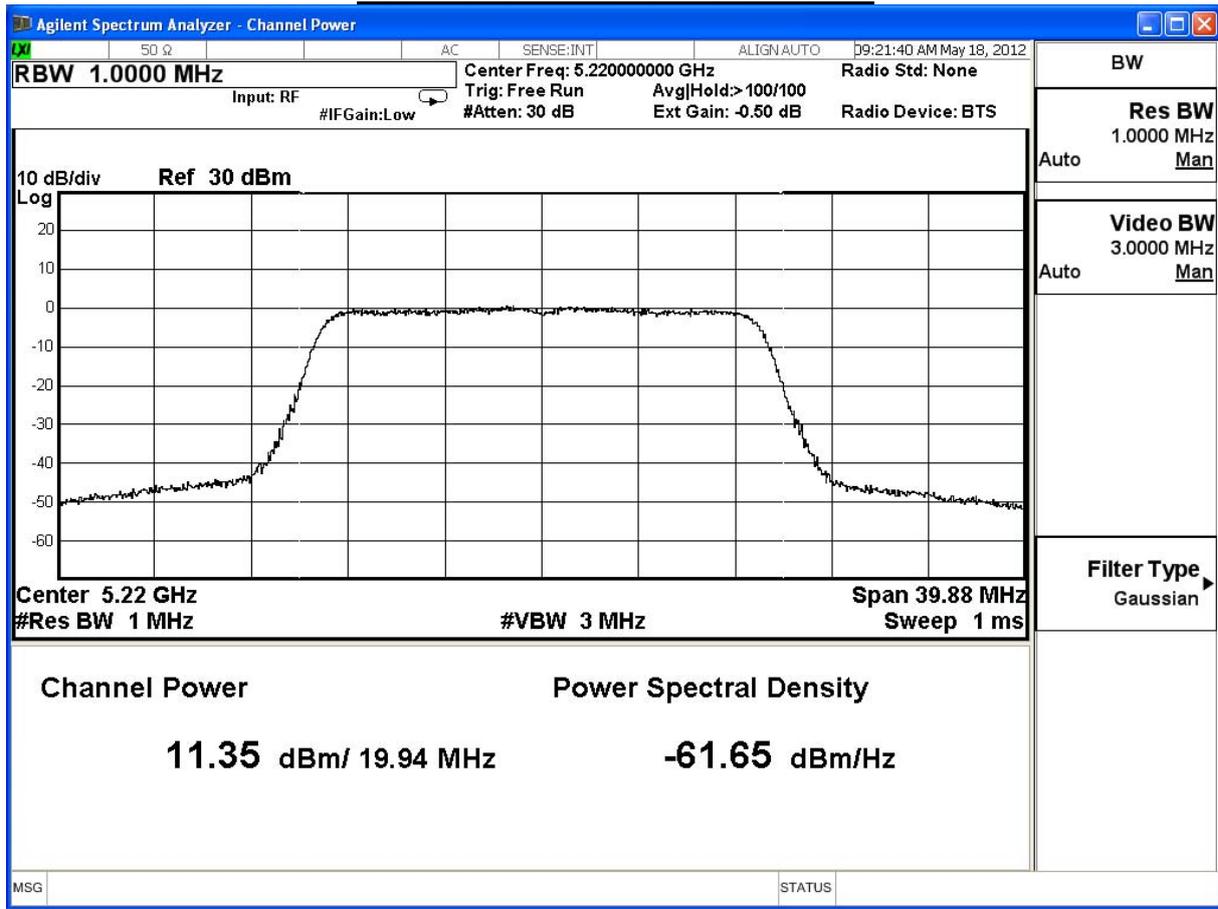
The worst emission of data rate is 19.5Mbps.

Peak Power Output (dBm)												
MCS Index		0	1	2	3	4	5	6	7	8	9	Required Limit
Channel No	Frequency (MHz)	Data Rate										
		19.5	39	58.5	78	117	156	175.5	195	234	N/A	
36	5180	11.43	--	--	--	--	--	--	--	--	--	17dBm or 4dBm+10logB
44	5220	11.35	11.34	11.31	11.28	11.26	11.22	11.17	11.16	11.10	--	
48	5240	11.37	--	--	--	--	--	--	--	--	--	

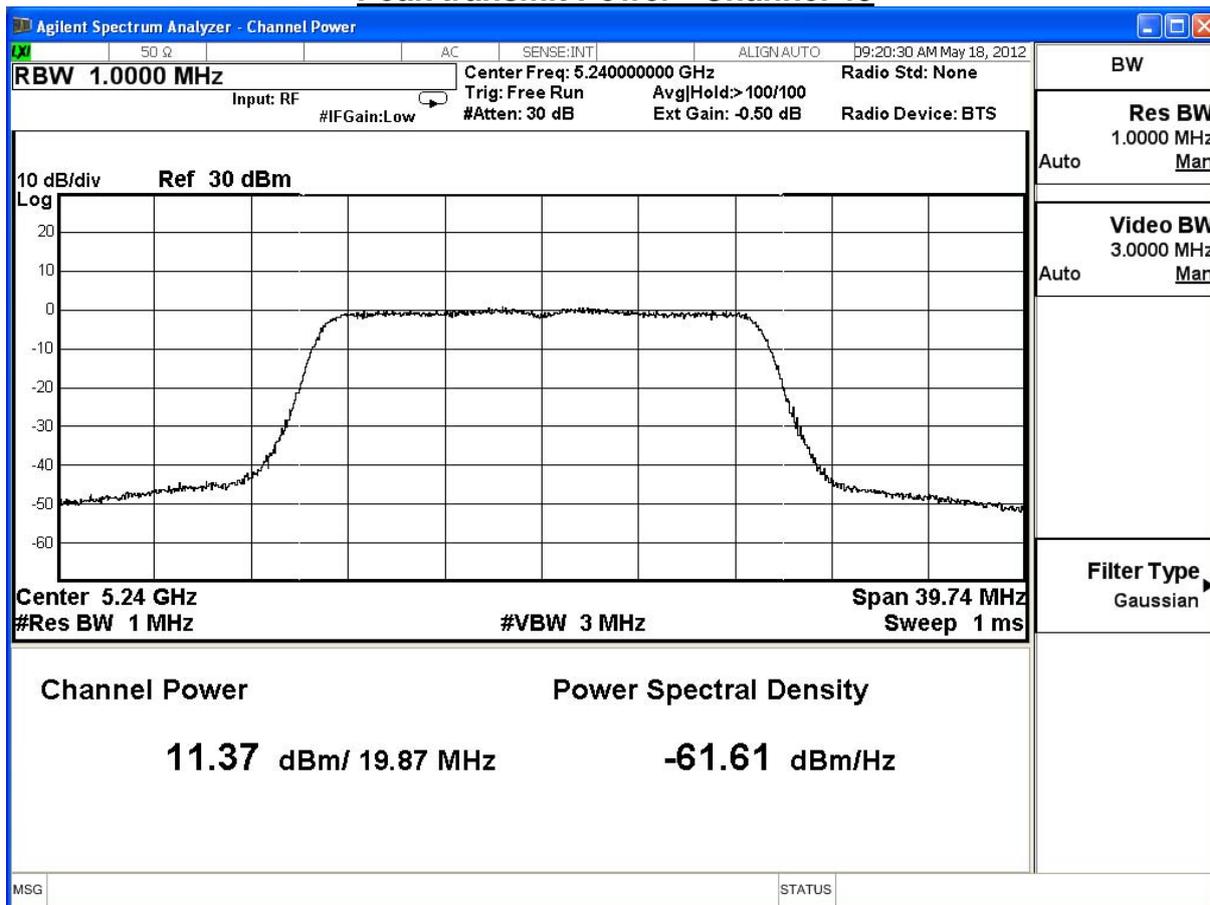
Peak transmit Power - Channel 36



Peak transmit Power - Channel 44



Peak transmit Power - Channel 48



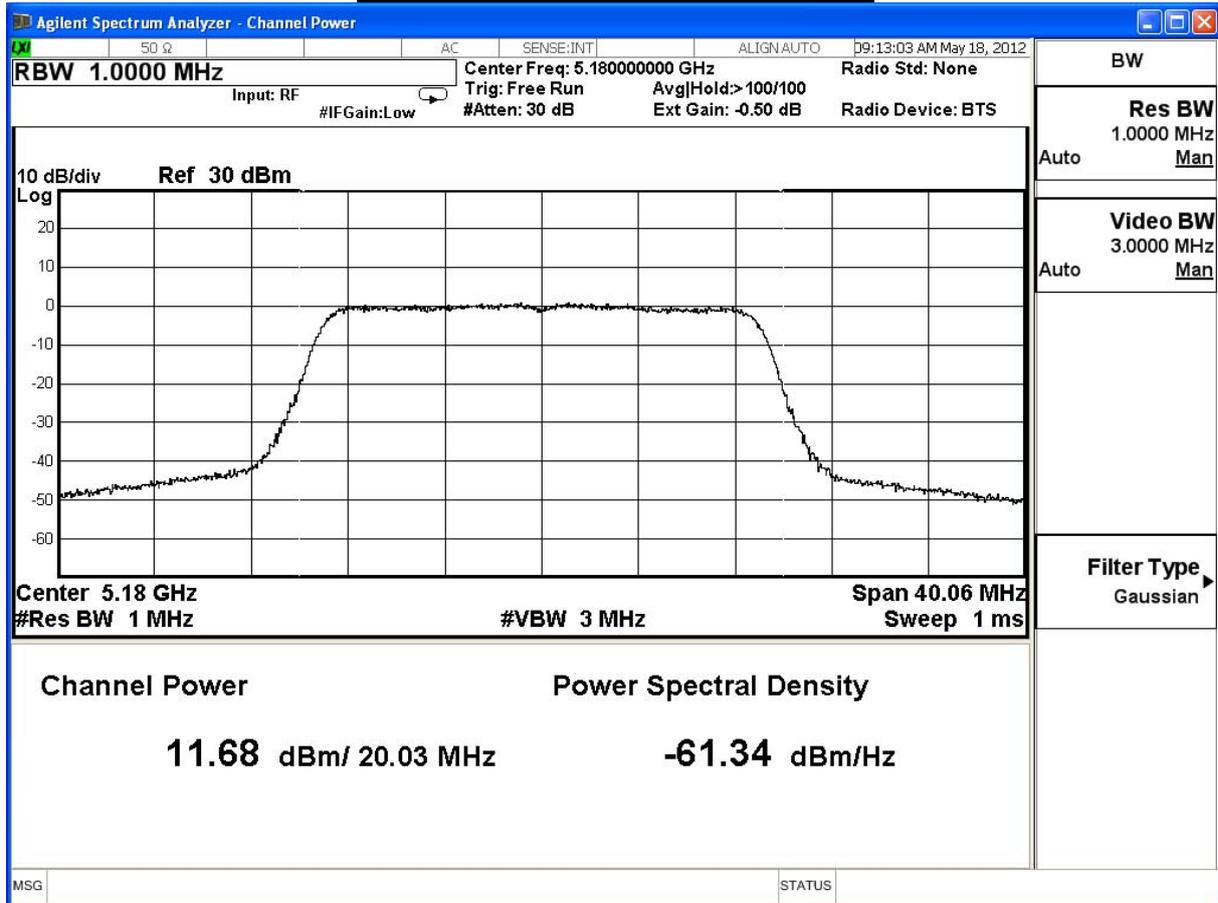
Product	Dual Band 3x3 802.11AC Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (Adapter: EXA1004UH)		
Date of Test	2012/05/18	Test Site	SR7

IEEE 802.11ac(20MHz)_ANT 2						
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
36	5180	20.03	11.68	≤17	≤ 17.01	Pass
44	5220	20.04	11.63	≤17	≤ 17.01	Pass
48	5240	19.98	11.51	≤17	≤ 17.00	Pass

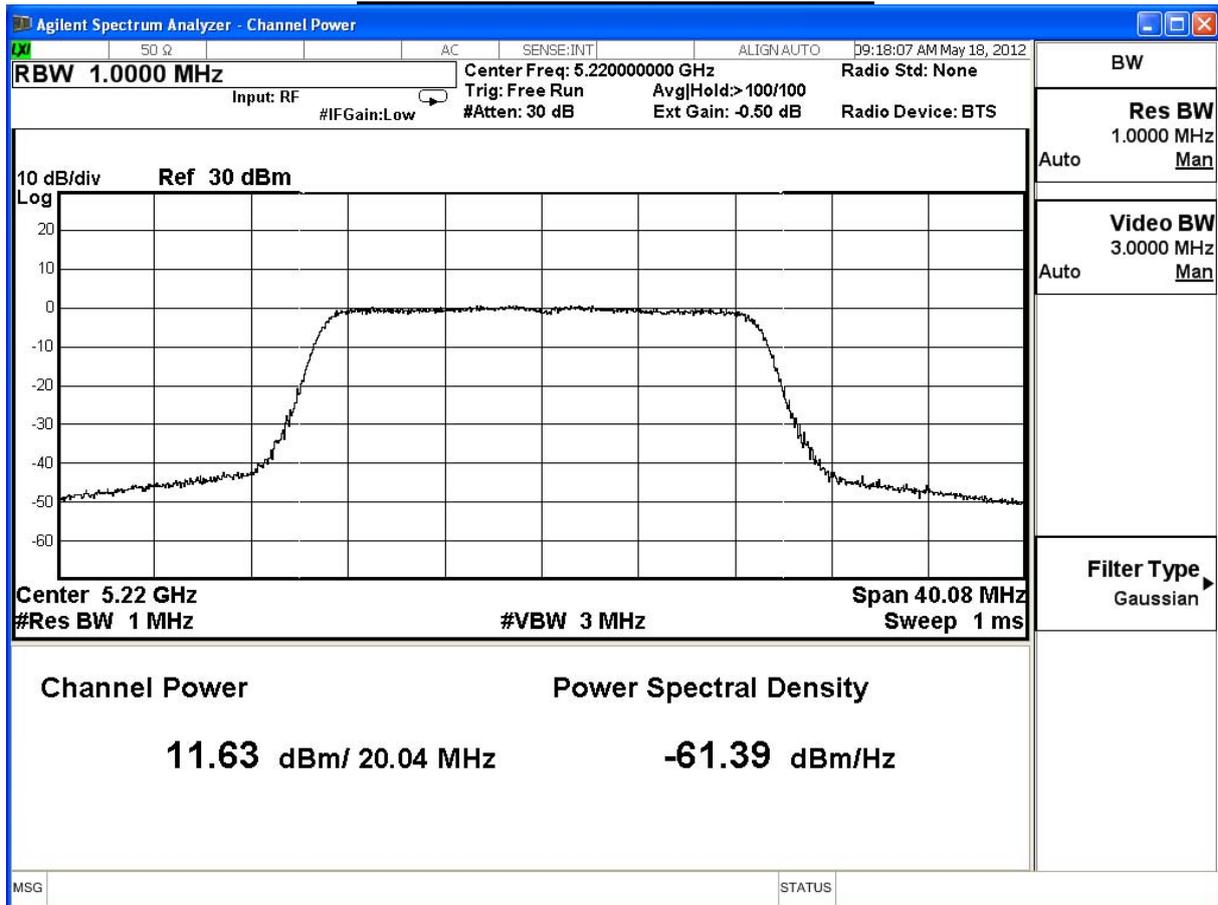
The worst emission of data rate is 19.5Mbps.

Peak Power Output (dBm)												
MCS Index		0	1	2	3	4	5	6	7	8	9	Required Limit
Channel No	Frequency (MHz)	Data Rate										
		19.5	39	58.5	78	117	156	175.5	195	234	N/A	
36	5180	11.68	--	--	--	--	--	--	--	--	--	17dBm or 4dBm+10logB
44	5220	11.63	11.57	11.53	11.51	11.46	11.44	11.42	11.40	11.37	--	
48	5240	11.51	--	--	--	--	--	--	--	--	--	

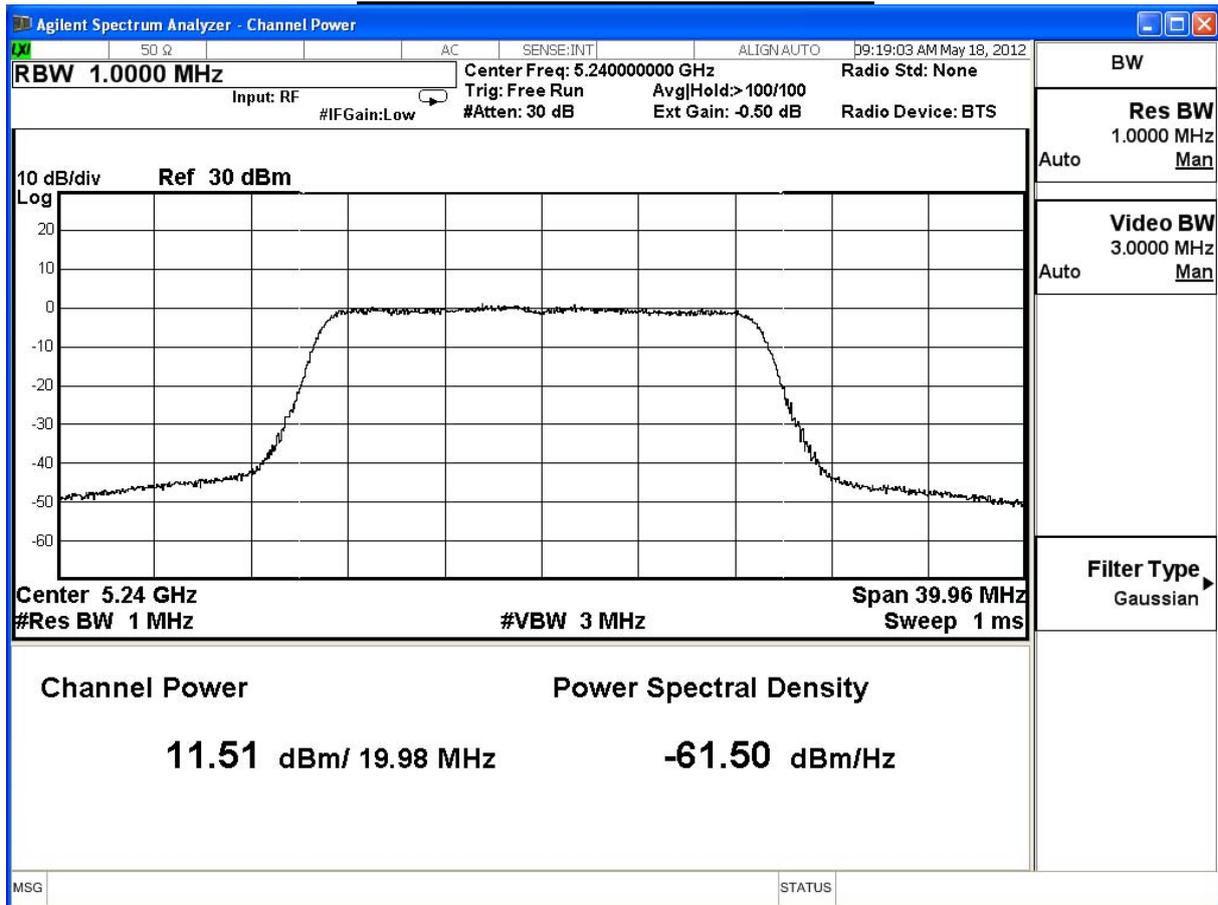
Peak transmit Power - Channel 36



Peak transmit Power - Channel 44



Peak transmit Power - Channel 48



Product	Dual Band 3x3 802.11AC Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (Adapter: EXA1004UH)		
Date of Test	2012/05/18	Test Site	SR7

IEEE 802.11ac(20MHz)_ANT 0+1+2					
Channel No.	Frequency (MHz)	Total Output Power		Required Limit (dBm)	Result
		(dBm)	(mW)		
36	5180	16.12	40.93	≤16.83	Pass
44	5220	16.11	40.83	≤ 16.95	Pass
48	5240	16.02	39.99	≤ 16.91	Pass

Peak Power Output (dBm)												
MCS Index		0	1	2	3	4	5	6	7	8	9	Required Limit
Channel No	Frequency (MHz)	Data Rate										
		19.5	39	58.5	78	117	156	175.5	195	234	N/A	
36	5180	16.12	--	--	--	--	--	--	--	--	--	17dBm or 4dBm+10logB
44	5220	16.11	16.07	16.04	16.01	15.98	15.96	15.92	15.90	15.83	--	
48	5240	16.02	--	--	--	--	--	--	--	--	--	

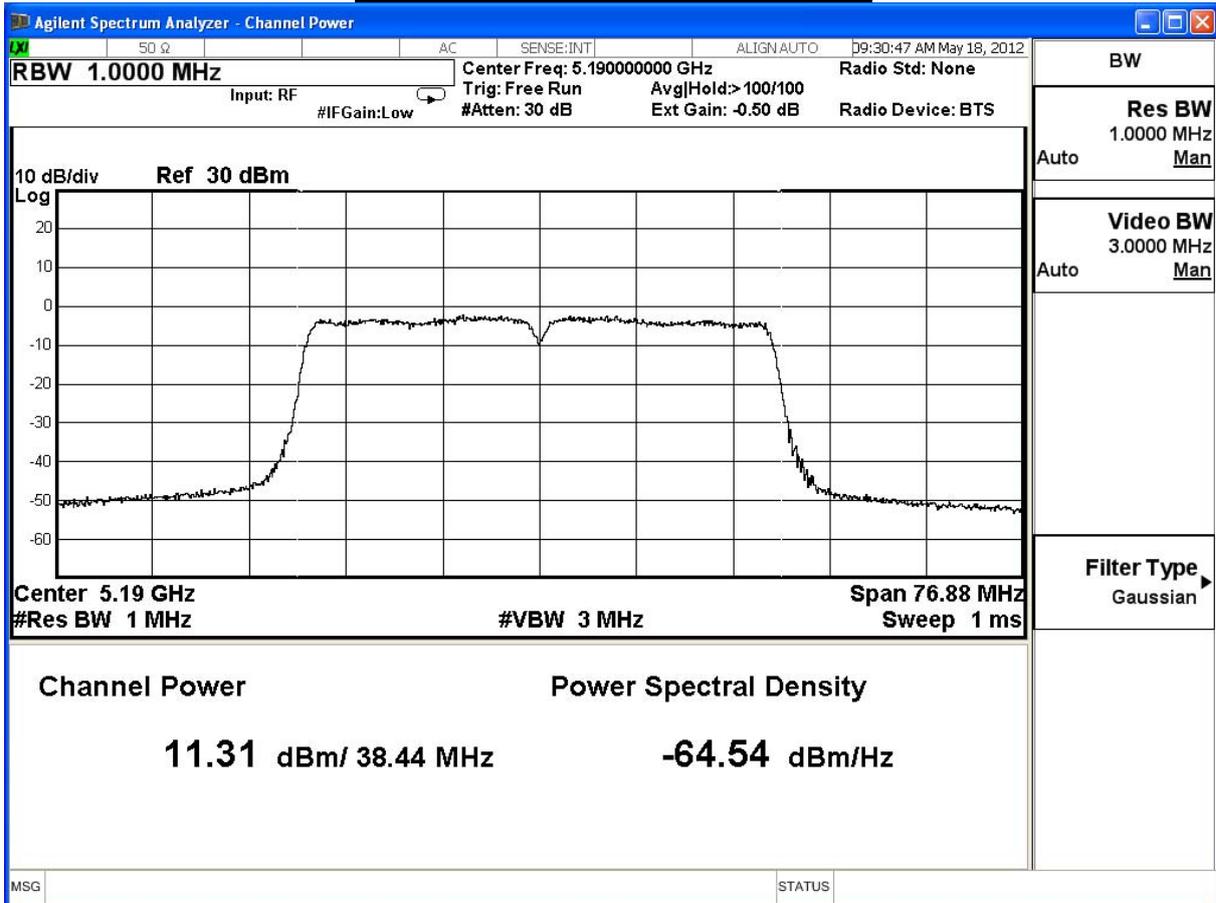
Product	Dual Band 3x3 802.11AC Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (Adapter: EXA1004UH)		
Date of Test	2012/05/18	Test Site	SR7

IEEE 802.11ac(40MHz)_ANT 0						
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
38	5190	38.44	11.31	≤17	≤ 19.84	Pass
46	5230	38.71	11.23	≤17	≤ 17.87	Pass

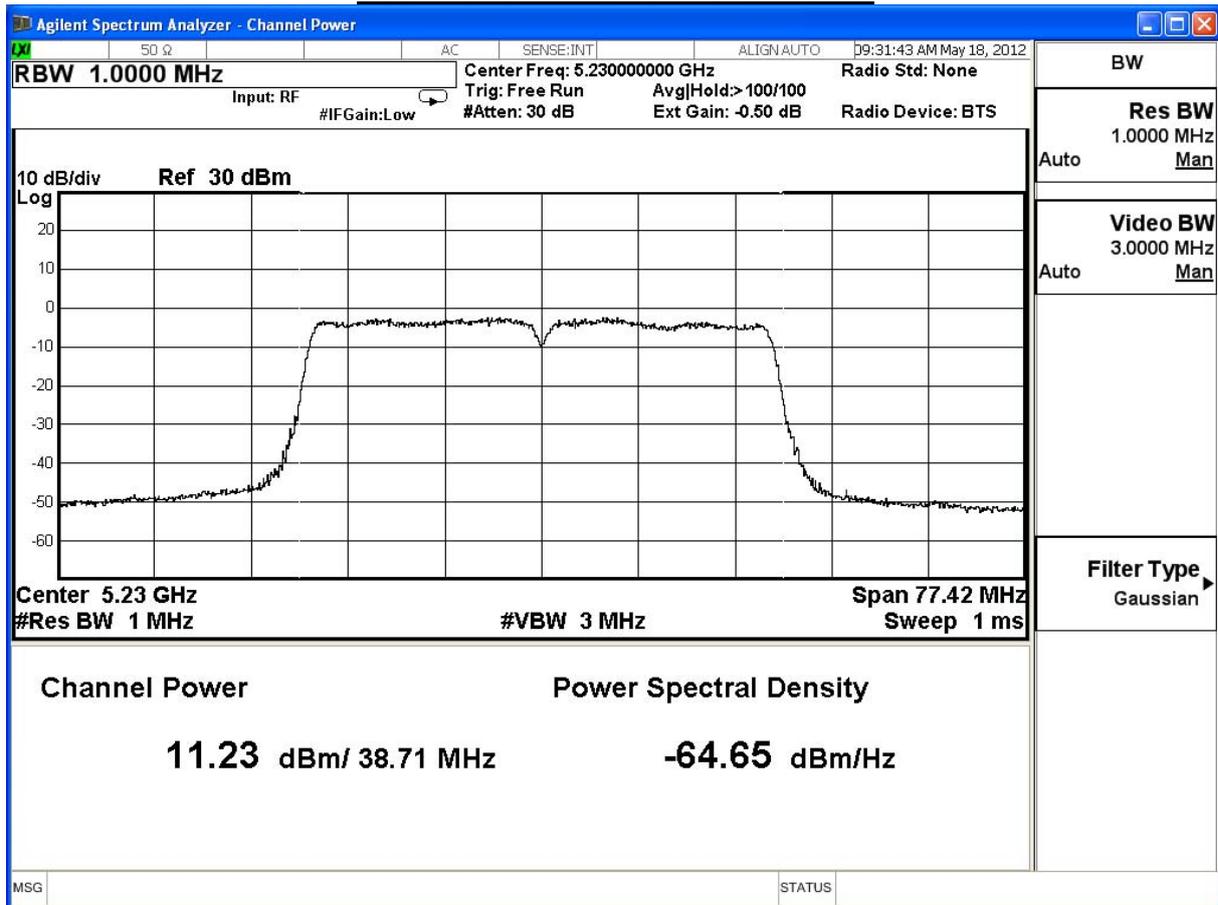
The worst emission of data rate is 40.5 Mbps

Peak Power Output (dBm)												
MCS Index		0	1	2	3	4	5	6	7	8	9	Required Limit
Channel No	Frequency (MHz)	Data Rate										
		40.5	81	121.5	162	243	324	364.5	405	486	540	
38	5190	11.31	11.28	11.24	11.22	11.20	11.18	11.12	11.11	11.09	11.06	17dBm or
46	5230	11.23	--	--	--	--	--	--	--	--	--	4dBm+10logB

Peak transmit Power - Channel 38



Peak transmit Power - Channel 46



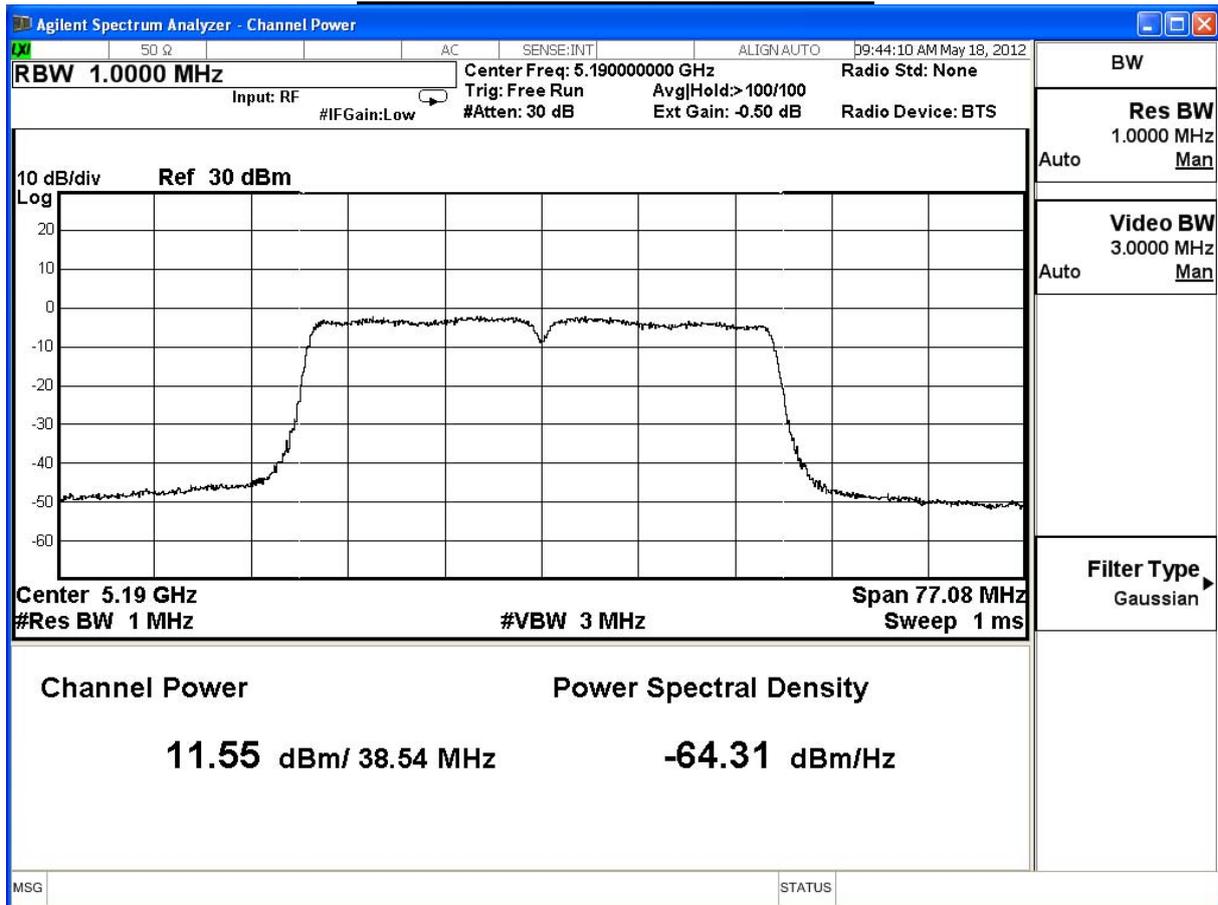
Product	Dual Band 3x3 802.11AC Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (Adapter: EXA1004UH)		
Date of Test	2012/05/18	Test Site	SR7

IEEE 802.11ac(40MHz)_ANT 1						
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
38	5190	38.54	11.55	≤17	≤ 19.85	Pass
46	5230	38.50	11.44	≤17	≤ 19.85	Pass

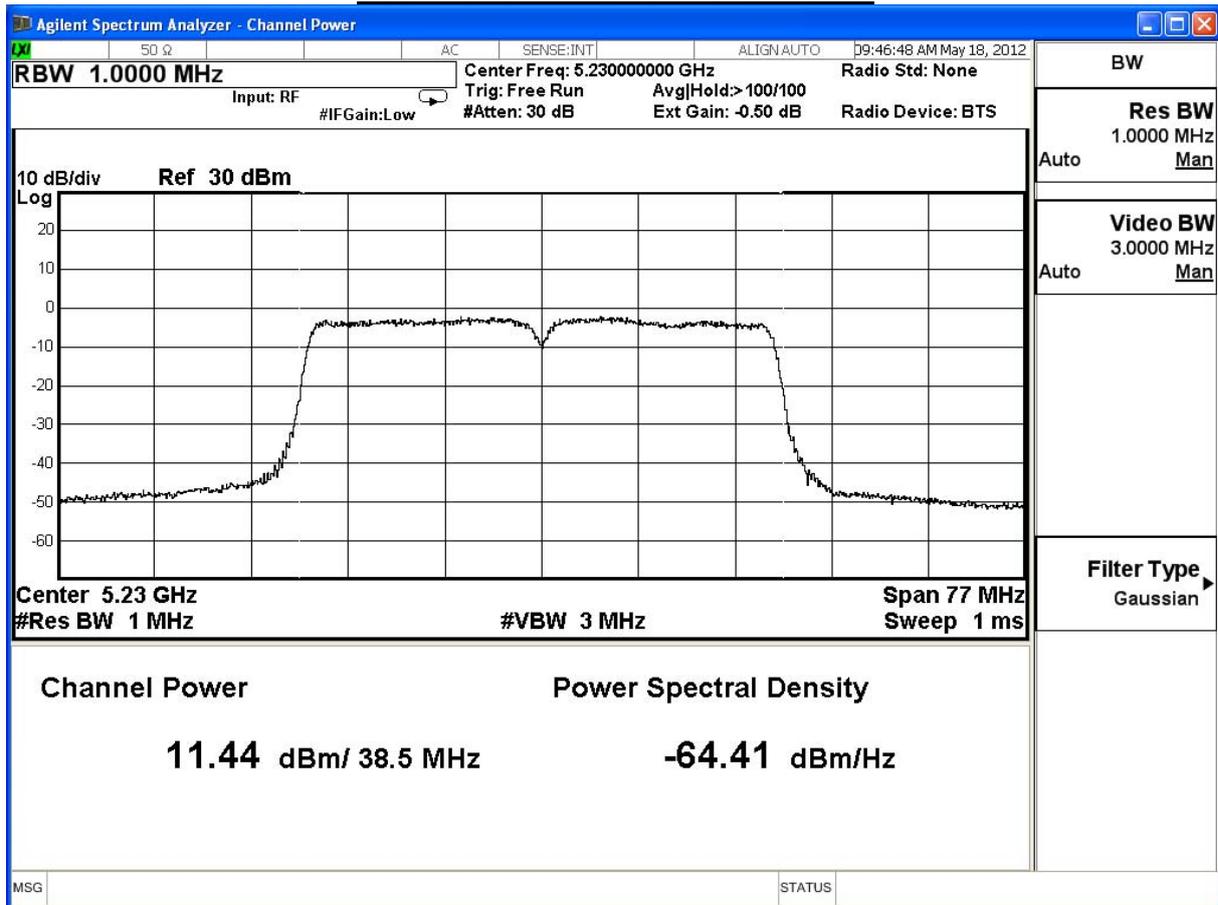
The worst emission of data rate is 40.5 Mbps

Peak Power Output (dBm)												
MCS Index		0	1	2	3	4	5	6	7	8	9	Required Limit
Channel No	Frequency (MHz)	Data Rate										
		40.5	81	121.5	162	243	324	364.5	405	486	540	
38	5190	11.55	11.54	11.52	11.49	11.47	11.42	11.41	11.38	11.35	11.31	17dBm or 4dBm+10logB
46	5230	11.44	--	--	--	--	--	--	--	--	--	

Peak transmit Power - Channel 38



Peak transmit Power - Channel 46



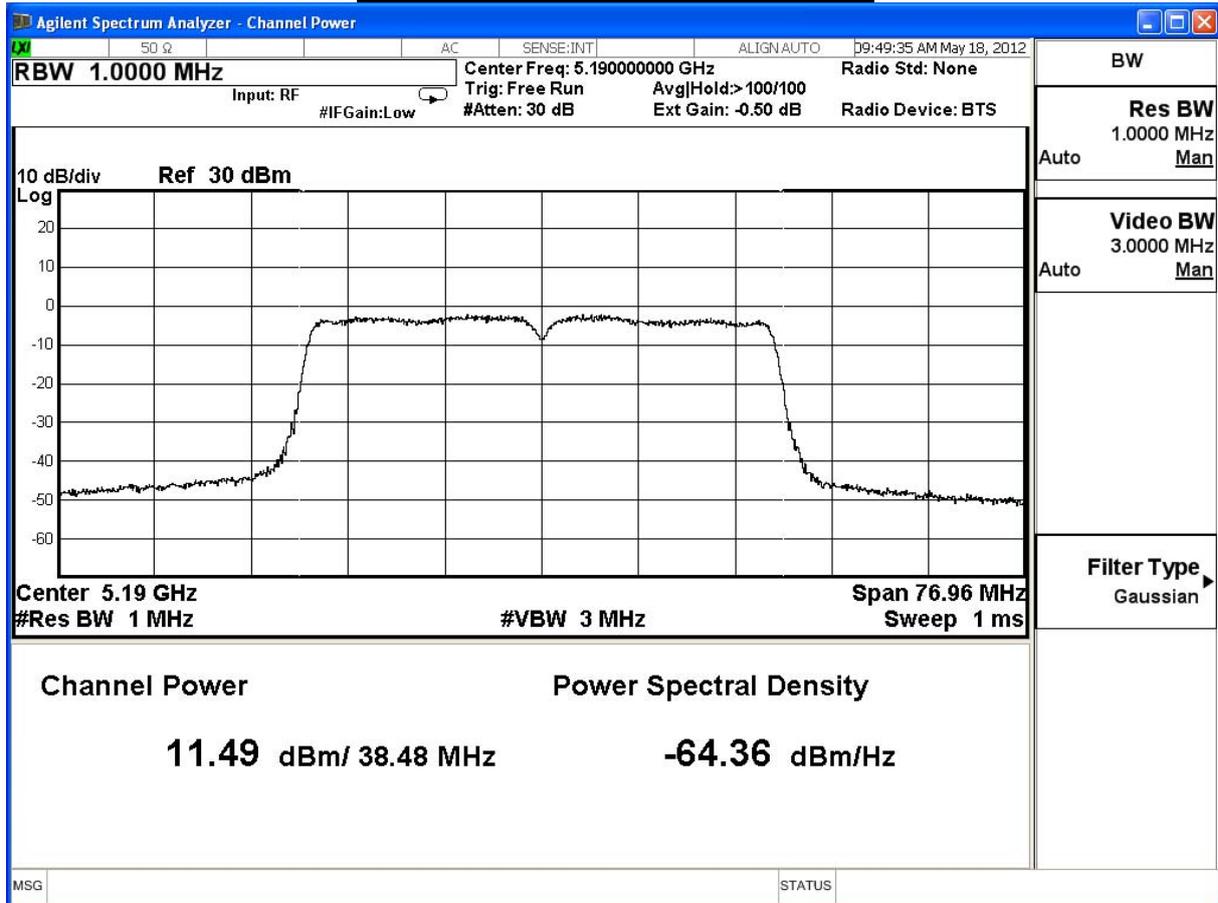
Product	Dual Band 3x3 802.11AC Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (Adapter: EXA1004UH)		
Date of Test	2012/05/18	Test Site	SR7

IEEE 802.11ac(40MHz)_ANT 2						
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
38	5190	38.48	11.49	≤17	≤ 19.85	Pass
46	5230	38.38	11.56	≤17	≤ 19.84	Pass

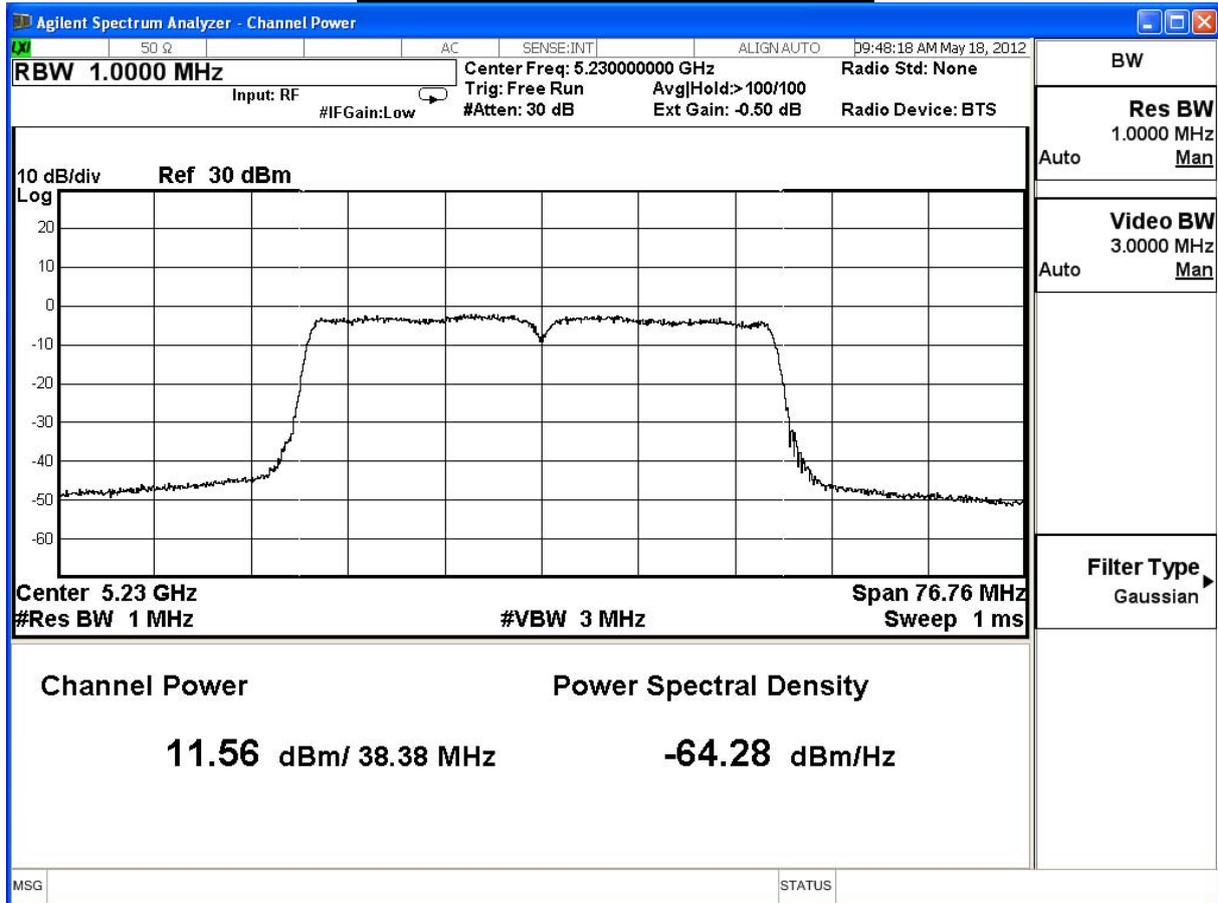
The worst emission of data rate is 40.5 Mbps

Peak Power Output (dBm)												
MCS Index		0	1	2	3	4	5	6	7	8	9	Required Limit
Channel No	Frequency (MHz)	Data Rate										
		40.5	81	121.5	162	243	324	364.5	405	486	540	
38	5190	11.49	11.42	11.38	11.34	11.31	11.28	11.24	11.21	11.17	11.13	17dBm or 4dBm+10logB
46	5230	11.56	--	--	--	--	--	--	--	--	--	

Peak transmit Power - Channel 38



Peak transmit Power - Channel 46



Product	Dual Band 3x3 802.11AC Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (Adapter: EXA1004UH)		
Date of Test	2012/05/18	Test Site	SR7

IEEE 802.11ac(40MHz)_ANT 0+1+2					
Channel No.	Frequency (MHz)	Total Output Power		Required Limit (dBm)	Result
		(dBm)	(mW)		
38	5190	16.22	41.88	≤17	Pass
46	5230	16.18	41.50	≤ 17	Pass

The worst emission of data rate is 40.5 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										
		40.5	81	121.5	162	243	324	364.5	405	486	540	
38	5190	16.22	16.19	16.15	16.12	16.1	16.07	16.03	16.01	15.98	15.94	17dBm or 4dBm+10logB
46	5230	16.18	--	--	--	--	--	--	--	--	--	

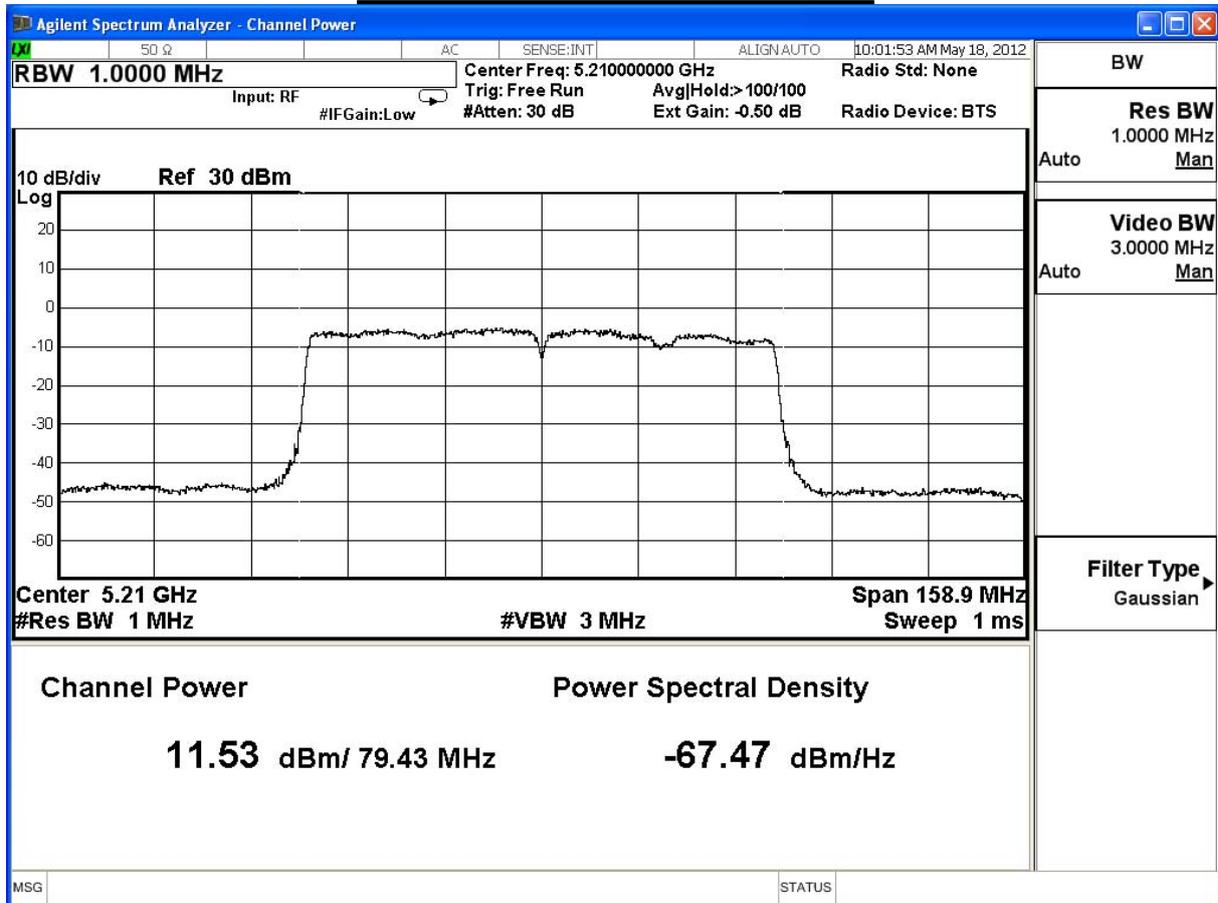
Product	Dual Band 3x3 802.11AC Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (Adapter: EXA1004UH)		
Date of Test	2012/05/18	Test Site	SR7

IEEE 802.11ac(80MHz)_ANT 0						
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
42	5210	79.43	11.53	≤17	≤ 22.99	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										
		42	5210	87.9	175.5	263.4	351	526.5	702	789.9	877.5	

Peak transmit Power - Channel 42



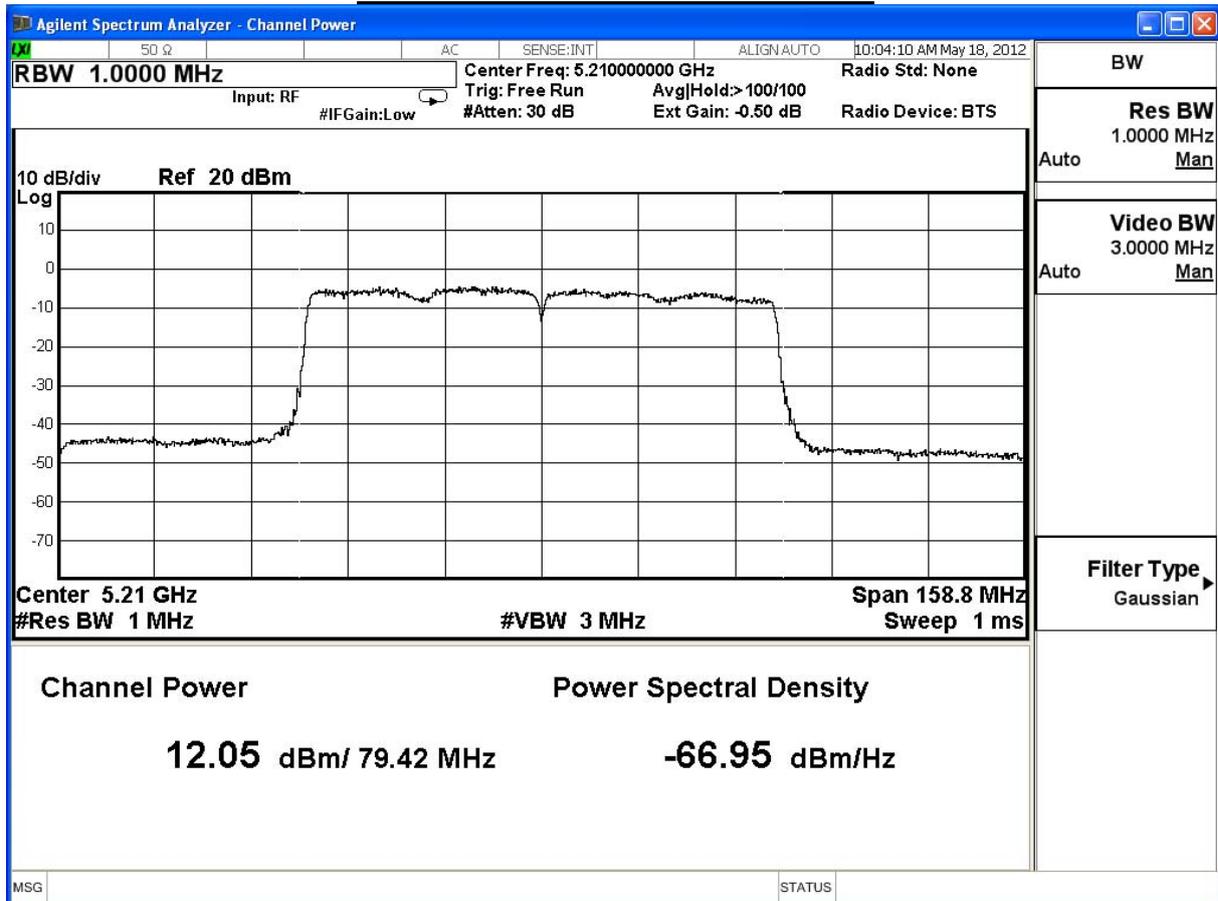
Product	Dual Band 3x3 802.11AC Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (Adapter: EXA1004UH)		
Date of Test	2012/05/18	Test Site	SR7

IEEE 802.11ac(80MHz)_ANT 1						
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
42	5210	79.42	12.05	≤17	≤ 22.99	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	12.05	12.01	11.94	11.91	11.88	11.84	11.82	11.81	11.78	11.74	≤17

Peak transmit Power - Channel 42



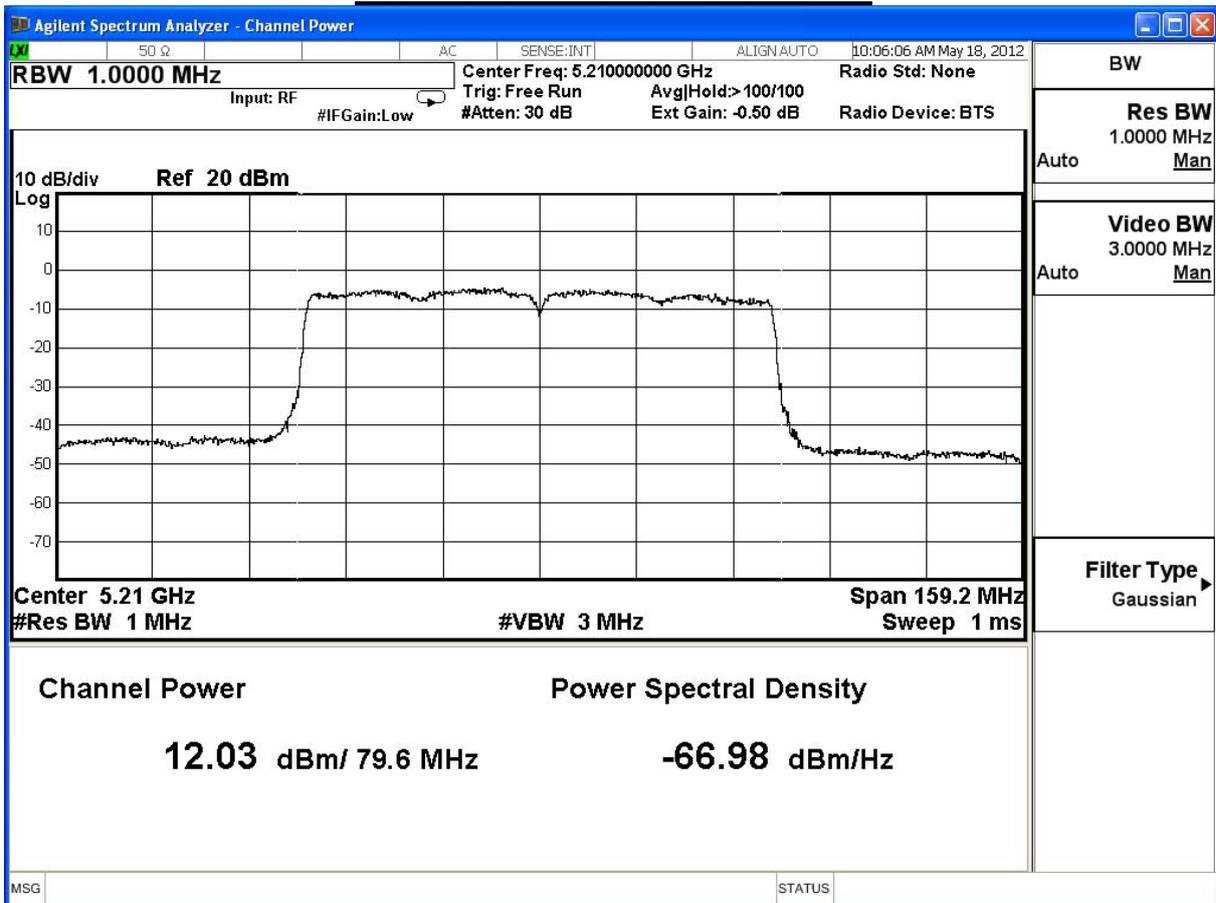
Product	Dual Band 3x3 802.11AC Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (Adapter: EXA1004UH)		
Date of Test	2012/05/18	Test Site	SR7

IEEE 802.11ac(80MHz)_ANT 2						
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit		Result
				Fixed Limit (dBm)	4+10logB Limit (dBm)	
42	5210	79.60	12.03	≤17	≤ 23.00	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										
		42	5210	87.9	175.5	263.4	351	526.5	702	789.9	877.5	

Peak transmit Power - Channel 42



Product	Dual Band 3x3 802.11AC Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (Adapter: EXA1004UH)		
Date of Test	2012/05/18	Test Site	SR7

IEEE 802.11ac(80MHz)_ANT 0+1+2					
Channel No.	Frequency (MHz)	Total Output Power		Required Limit (dBm)	Result
		(dBm)	(mW)		
42	5210	16.65	46.23	≤17	Pass

The worst emission of data rate is 40.5 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	16.65	16.62	16.57	16.54	16.52	16.48	16.44	16.42	16.38	16.34	≤17

5. Peak Power Spectrum Density

5.1. Test Equipment

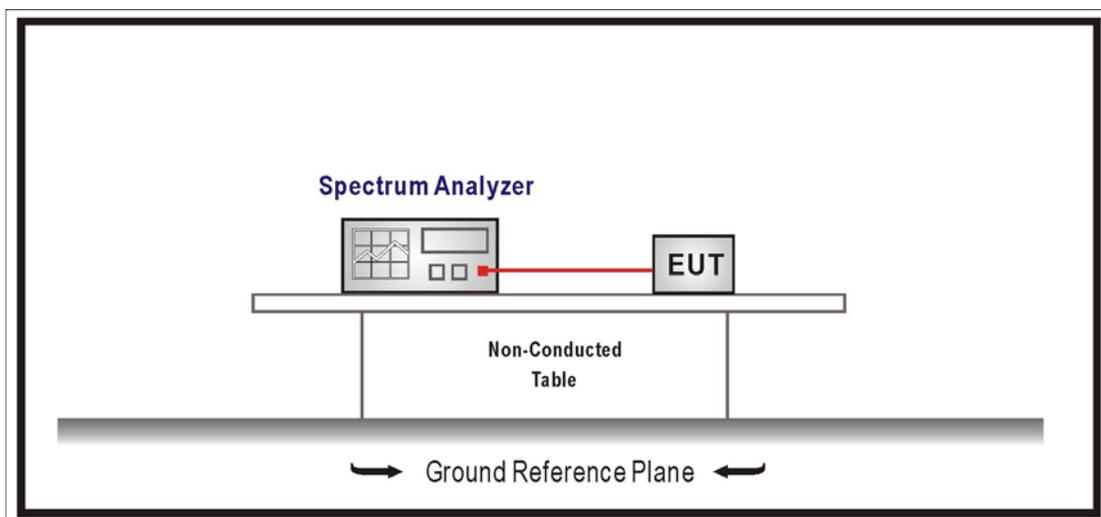
The following test equipments are used during the radiated emission tests:

Peak Power Spectrum Density / SR7

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	R&S	FSP	100561	2013/02/19

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

5.2. Test Setup



5.3. Limits

1. For the band 5.15-5.25 GHz, the peak power spectral density shall not exceed 4 dBm in any 1-MHz band. If transmitting antenna of directional gain greater than 6 dBi are used, the peak power spectral density 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 power spectral density shall not exceed 11 dBm in any 1-MHz band. If transmitting antenna of directional gain greater than 6 dBi are used, the peak power spectral density 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 power spectral density shall not exceed 17 dBm in any 1-MHz band. If transmitting antenna of directional gain greater than 6 dBi are used, the peak power spectral density shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.

5.4. 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.

Set RBW=1MHz, VBW=3MHz with RMS detector. The PPSD is the highest level found across the emission in any 1-MHz band after 100 sweeps of averaging.

5.5. Uncertainty

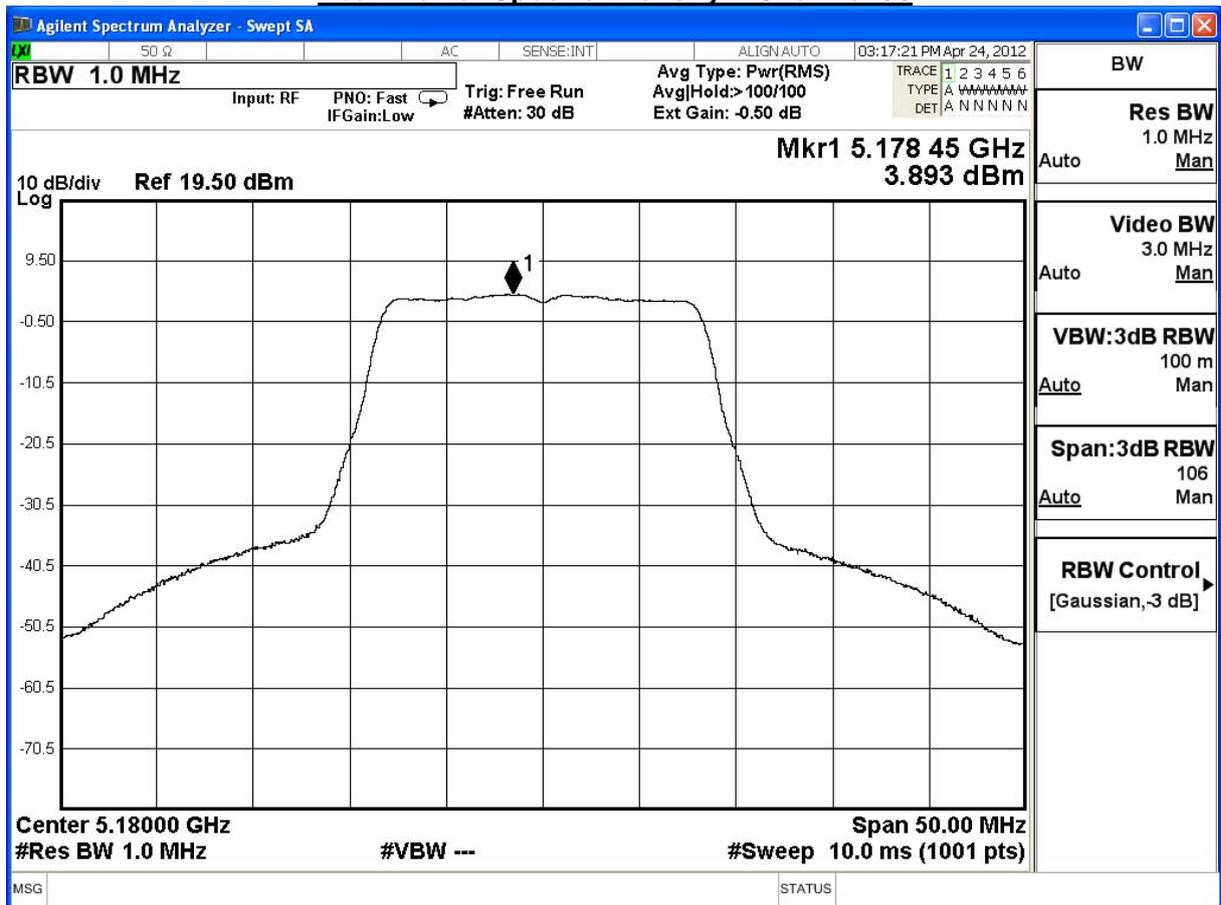
The measurement uncertainty is defined as ± 1.27 dB

5.6. Test Result

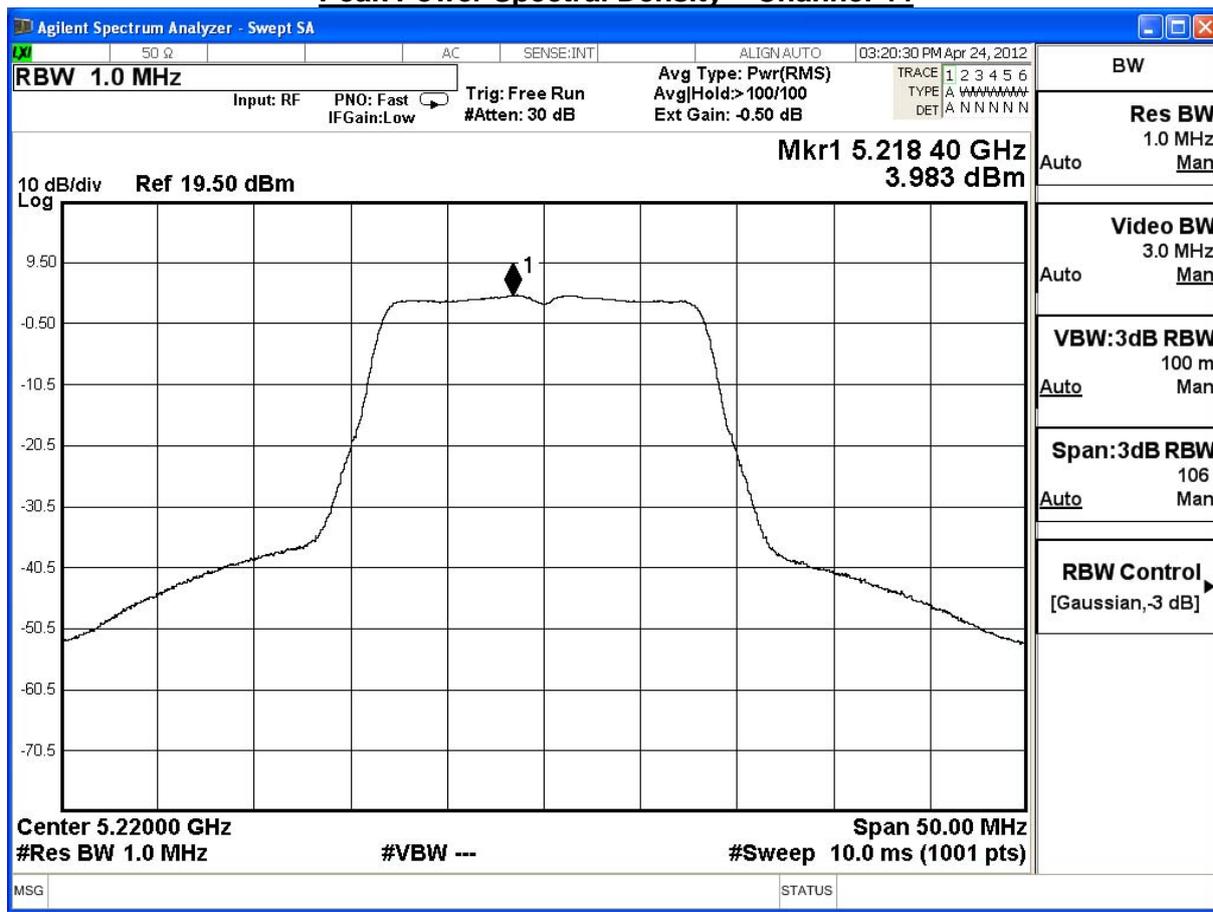
Product	Dual Band 3x3 802.11AC Gigabit Router		
Test Item	Peak Power Spectral Density		
Test Mode	Mode 1: Transmit (Adapter: EXA1004UH)		
Date of Test	2012/04/24	Test Site	SR7

IEEE 802.11a				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Required Limit (dBm)	Result
36	5180	3.89	≤ 4	Pass
44	5220	3.98	≤ 4	Pass
48	5240	3.84	≤ 4	Pass

Peak Power Spectral Density – Channel 36



Peak Power Spectral Density – Channel 44



Peak Power Spectral Density – Channel 48

