FCC Test Report

Product Name : Wireless-AC1900 Dual Band Gigabit Router

Model No. : RT-AC68U, RT-AC68R, RT-AC68RW, TM-AC1900

FCC ID. : MSQ-RTAC68U

Applicant : ASUSTeK COMPUTER INC.

Address : 4F, No. 150, Li-Te Rd., Peitou, Taipei, Taiwan

Date of Receipt : 2014/06/17

Issued Date : 2014/07/10

Report No. : 1460476R-RFUSP59V00

Report Version : V1.0

The test results relate only to the samples tested.
The test report shall not be reproduced except in full without the written approval of QuieTek Corporation.

Test Report Certification

Issued Date : 2014/07/10
Report No. : 1460476R-RFUSP59V00

Product Name	:	Wireless-AC1900 Dual Band Gigabit Router
Applicant	:	ASUSTeK COMPUTER INC.
Address	:	4F, No. 150, Li-Te Rd., Peitou, Taipei, Taiwan
Manufacturer	:	Askey Technology (Jiangsu) Ltd.
Model No.	:	RT-AC68U, RT-AC68R, RT-AC68RW, TM-AC1900
FCC ID.	:	MSQ-RTAC68U
EUT Voltage	:	AC 100-240V, 50-60Hz
Trade Name	:	ASUS
Applicable Standard	:	FCC CFR Title 47 Part 15 Subpart E Section 15.407: 2013 ANSI C63.10
Test Result	:	Complied

The test results relate only to the samples tested.
The test report shall not be reproduced except in full without the written approval of QuieTek Corporation.

Documented By :

(Demi Chang / Engineering Adm. Specialist)

Reviewed By :

(Bruno Tsai / Assistant Engineer)

Approved By :

(Roy Wang / Director)

Laboratory Information

We, **QuieTek Corporation**, are an independent RF consultancy that was established the whole facility in our laboratories. The test facility has been accredited/accepted (audited or listed) by the following related bodies in compliance with ISO 17025 specified testing scopes:

Taiwan R.O.C.	**:**	**TAF, Accreditation Number: 1313**
USA	**:**	**FCC, Registration Number: 365520**
Canada	**:**	**IC, Submission No: 150981**

The related certificate for our laboratories about the test site and management system can be downloaded from QuieTek Corporation's Web Site:http://www.quietek.com/tw/ctg/cts/accreditations.htm
The address and introduction of QuieTek Corporation's laboratories can be founded in our Web site : http://www.quietek.com/
If you have any comments, Please don't hesitate to contact us. Our contact information is as below:

HsinChu Testing Laboratory:
No.75-2, 3rd Lin, Wangye Keng, Yonghxing Tsuen, Qionglin Shiang, Hsinchu County 307, Taiwan, R.O.C.
TEL:+886-3-592-8858 / FAX:+886-3-592-8859 E-Mail : service@quietek.com

LinKou Testing Laboratory:
No.5-22, Ruishukeng, Linkou Dist., New Taipei City 24451, Taiwan, R.O.C.
TEL : 886-2-8601-3788 / FAX : 886-2-8601-3789 E-Mail : service@quietek.com

TABLE OF CONTENTS

1. General Information

1.1. EUT Description

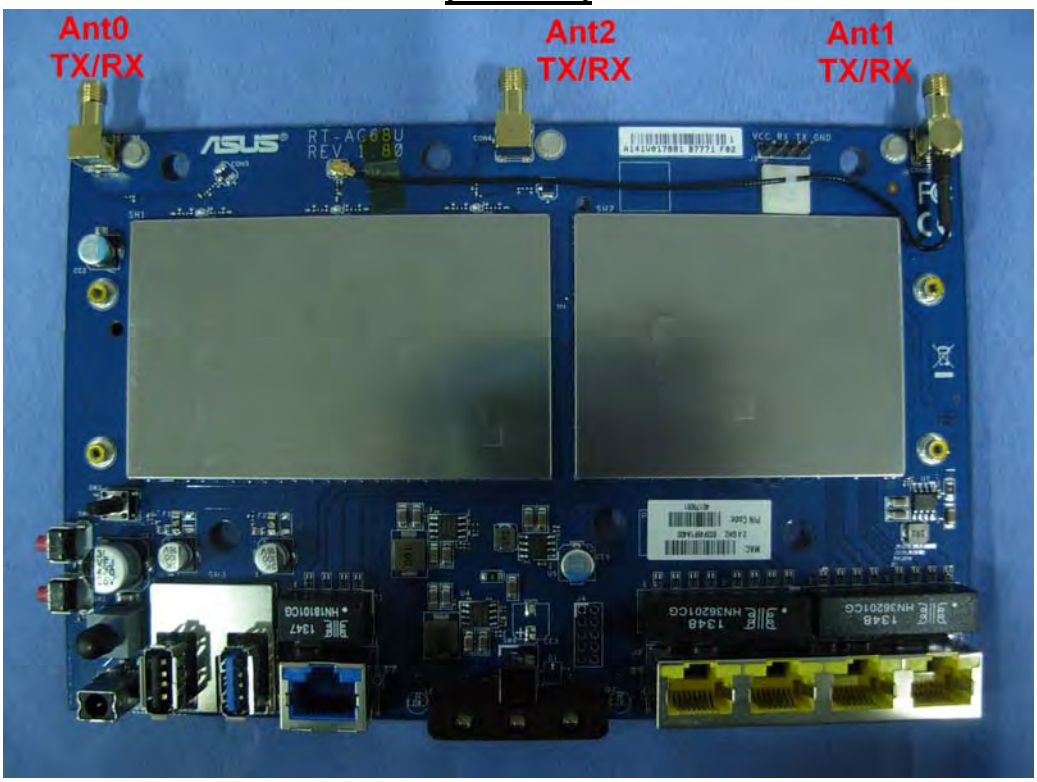
Product Name	Wireless-AC1900 Dual Band Gigabit Router
Product Type	WLAN (3TX, 3RX)
Trade Name	ASUS
Model No.	RT-AC68U, RT-AC68R, RT-AC68RW, TM-AC1900
Frequency Range/ Channel Number -IEEE 802.11a & IEEE 802.11n (20MHz)	5180~5240MHz / 4 Channels
Frequency Range/Channel Number -IEEE 802.11n/ac (40MHz)	5190~5230MHz / 2 Channels
Frequency Range/ Channel Number -IEEE 802.11ac (80MHz)	5210~5210MHz / 1 Channel
Type of Modulation (IEEE 802.11a/n/ac)	Orthogonal Frequency Division Multiplexing (OFDM)
Data Speed (IEEE 802.11a)	6Mbps,9Mbps,12Mbps,18Mbps,24Mbps,36Mbps,48Mbps,54Mbps
Data Speed (IEEE 802.11n)	Support a subset of the combination of GI, MCS 0~MCS 23 and bandwidth defined in 802.11n
Data Speed (IEEE 802.11ac)	Support a subset of the combination of GI, MCS 0~MCS 9 and bandwidth defined in 802.11ac
Antenna Gain	WAISIN, RFDPA141000SBLB802 / MAG., EDA-1410-25GR2-A1 Antenna: Ant0: 4.04dBi, Ant1: 4.04dBi, Ant2: 4.04dBi Master Wave, 98611PRSX003 Antenna: Ant0: 3.89dBi, Ant1: 3.89dBi, Ant2: 3.89dBi
Beamforming Gain	4.77dB
Antenna Type	Dipole Antenna

Component	
LAN Cable	Non-Shielded, 1.5m
Dipole Antenna	WAISIN, RFDPA141000SBLB802, 3pcs
Dipole Antenna	MAG., EDA-1410-25GR2-A1, 3pcs
Dipole Antenna	Master Wave, 98611PRSX003, 3pcs
Power Adapter	Enertronix, EXA1206UH I/P: 100-240V~50/60Hz, 1.0A O/P: 19V⎓1.75A Cable In: Non-Shielded, 2.4m
Power Adapter	PIE, AD8900326 I/P: 100-240V~50/60Hz, 0.8A O/P: 19V⎓1.75A Cable In: Non-Shielded, 2.4m
Power Adapter	Delta, ADP-33AW I/P: 100-240V~50/60Hz, 1.0A O/P: 19V⎓1.75A Cable Out: Non-Shielded, 2.2m

ANT-TX / RX & Bandwidth

ANT-TX / RX	TX			RX		
Mode/ Channel Bandwidth	20MHz	40MHz	80MHz	20MHz	40MHz	80MHz
IEEE802.11a	✓			✓		
IEEE802.11n	✓	✓		✓	✓	
IEEE802.11ac	✓	✓	✓	✓	✓	✓

(3TX /3RX)



IEEE 802.11n

MCS Index	Modulation	R	N_{BPSCS}	N_{CBPS}		N_{DBPS}		Data Rate(Mb/s)			
				20MHz	40MHz	20MHz	40MHz	800ns GI		400ns GI	
								20MHz	40MHz	20MHz	40MHz
0	BPSK	1/2	1	52	108	26	54	6.5	13.5	7.2	15.0
1	QPSK	1/2	2	104	216	52	108	13.0	27.0	14.4	30.0
2	QPSK	3/4	2	104	216	78	162	19.5	40.5	21.7	45.0
3	16-QAM	1/2	4	208	432	104	216	26.0	54.0	28.9	60.0
4	16-QAM	3/4	4	208	432	156	324	39.0	81.0	43.3	90.0
5	64-QAM	2/3	6	312	648	208	432	52.0	108.0	57.8	120.0
6	64-QAM	3/4	6	312	648	234	486	58.5	121.5	65.0	135.0
7	64-QAM	5/6	6	312	648	260	540	65.0	135.0	72.2	150.0
Note 1: Support of 400ns GI is optional on transmit and receive.											

Table 1 – MCS parameters for TX Antenna number = 1

MCS Index	Modulation	R	N_{BPSCS}	N_{CBPS}		N_{DBPS}		Data Rate(Mb/s)			
				20MHz	40MHz	20MHz	40MHz	800ns GI		400ns GI	
								20MHz	40MHz	20MHz	40MHz
8	BPSK	1/2	1	104	216	52	108	13.0	27.0	14.4	30.0
9	QPSK	1/2	2	208	432	104	216	26.0	54.0	28.9	60.0
10	QPSK	3/4	2	208	432	156	324	39.0	81.0	43.3	90.0
11	16-QAM	1/2	4	416	864	208	432	52.0	108.0	57.8	120.0
12	16-QAM	3/4	4	416	864	312	648	78.0	162.0	86.7	180.0
13	64-QAM	2/3	6	624	1296	416	864	104.0	216.0	115.6	240.0
14	64-QAM	3/4	6	624	1296	468	972	117.0	243.0	130.0	270.0
15	64-QAM	5/6	6	624	1296	520	1080	130.0	270.0	144.4	300.0
Note 1: Support of 400ns GI is optional on transmit and receive.											

Table 2 – MCS parameters for TX Antenna number = 2

MCS Index	Modulation	R	N_{BPSCS}	N_{CBPS}		N_{DBPS}		Data Rate(Mb/s)			
				20MHz	40MHz	20MHz	40MHz	800ns GI		400ns GI	
								20MHz	40MHz	20MHz	40MHz
16	BPSK	1/2	1	156	324	78	162	19.5	40.5	21.7	45.0
17	QPSK	1/2	2	312	648	156	324	39.0	81.0	43.3	90.0
18	QPSK	3/4	2	312	648	234	486	58.5	121.5	65.0	135.0
19	16-QAM	1/2	4	624	1296	312	648	78.0	162.0	86.7	180.0
20	16-QAM	3/4	4	624	1296	468	972	117.0	243.0	130.0	270.0
21	64-QAM	2/3	6	936	1944	624	1296	156.0	324.0	173.3	360.0
22	64-QAM	3/4	6	936	1944	702	1458	175.5	364.5	195.0	405.0
23	64-QAM	5/6	6	936	1944	780	1620	195.0	405.0	216.7	450.0
Note 1: Support of 400ns GI is optional on transmit and receive.											

Table 3 – MCS parameters for TX Antenna number = 3

Symbol	Explanation
R	Code rate
N_{BPSC}	Number of coded bits per single carrier
N_{CBPS}	Number of coded bits per symbol
N_{DBPS}	Number of data bits per symbol
GI	guard interval

Draft IEEE 802.11ac Data Rate

Spatial Streams (Note1)	MCS Index	Modulation type	Coding rate	Data Rate(Mb/s)							
				20 MHz		40 MHz		80 MHz		160 MHz	
				Guard Interval		Guard Interval		Guard Interval		Guard Interval	
				800ns	400ns	800ns	400ns	800ns	400ns	800ns	400ns
1	0	BPSK	1/2	6.5	7.2	13.5	15	29.3	32.5	58.5	65
	1	QPSK	1/2	13	14.4	27	30	58.5	65	117	130
	2	QPSK	3/4	19.5	21.7	40.5	45	87.8	97.5	175.5	195
	3	16-QAM	1/2	26	28.9	54	60	117	130	234	260
	4	16-QAM	3/4	39	43.3	81	90	175.5	195	351	390
	5	64-QAM	2/3	52	57.8	108	120	234	260	468	520
	6	64-QAM	3/4	58.5	65	121.5	135	263.3	292.5	526.5	585
	7	64-QAM	5/6	65	72.2	135	150	292.5	325	585	650
	8	256-QAM	3/4	78	86.7	162	180	351	390	702	780
	9	256-QAM	5/6	N/A	N/A	180	200	390	433.3	780	866.7
2	0	BPSK	1/2	13	14.4	27	30	58.6	65	117	130
	1	QPSK	1/2	26	28.8	54	60	117	130	234	260
	2	QPSK	3/4	39	43.4	81	90	175.6	195	351	390
	3	16-QAM	1/2	52	57.8	108	120	234	260	468	520
	4	16-QAM	3/4	78	86.6	162	180	351	390	702	780
	5	64-QAM	2/3	104	115.6	216	240	468	520	936	1040
	6	64-QAM	3/4	117	130	243	270	526.6	585	1053	1170
	7	64-QAM	5/6	130	144.4	270	300	585	650	1170	1300
	8	256-QAM	3/4	156	173.4	324	360	702	780	1404	1560
	9	256-QAM	5/6	N/A	N/A	360	400	780	866.6	1560	1733.4
3	0	BPSK	1/2	19.5	21.6	40.5	45	87.9	97.5	175.5	195
	1	QPSK	1/2	39	43.2	81	90	175.5	195	351	390
	2	QPSK	3/4	58.5	65.1	121.5	135	263.4	292.5	526.5	585
	3	16-QAM	1/2	78	86.7	162	180	351	390	702	780
	4	16-QAM	3/4	117	129.9	243	270	526.5	585	1053	1170
	5	64-QAM	2/3	156	173.4	324	360	702	780	1404	1560
	6	64-QAM	3/4	175.5	195	364.5	405	789.9	877.5	1579.5	1755
	7	64-QAM	5/6	195	216.6	405	450	877.5	975	1755	1950
	8	256-QAM	3/4	234	260.1	486	540	1053	1170	2106	2340
	9	256-QAM	5/6	N/A	N/A	540	600	1170	1299.9	2340	2600.1

IEEE 802.11a & IEEE 802.11n/ac (20MHz)

Working Frequency of Each Channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
36	5180MHz	40	5200MHz	44	5220MHz	48	5240MHz

IEEE 802.11n/ac (40MHz)

Working Frequency of Each Channel			
Channel	Frequency	Channel	Frequency
38	5190MHz	46	5230MHz

IEEE 802.11ac (80MHz)

Working Frequency of Each Channel	
Channel	Frequency
42	5210MHz

Note:

1. This device is a Wireless-AC1900 Dual Band Gigabit Router including 2.4GHz b/g/n and 5GHz a/n/ac (3x3) transmitting and receiving function.
2. These test results on a sample of the device are for the purpose of demonstrating Compliance with Part 15 Subpart E Paragraph 15.407.
3. Regards to the frequency band operation; the lowest、middle and highest frequency of channel were selected to perform the test, and then shown on this report.
4. The function of the 2.4GHz and 5.8GHz transmitting is measured and makes a test report of the report number: 1460476R-RFUSP28V00.
5. This device is a composite device in accordance with Part 15 regulations. The receiving function receiving was tested and its test report number is 1430116R-RFUSP37V02 under Declaration of Conformity.
6. This power index value is only suitable for testing samples, it is not suitable for products of the market sells.
7. The variation of model number is for different strategy of marketing.
8. This report is class II Change from 1430116R.

1.2. Test Mode

QuieTek has verified the construction and function in typical operation. The preliminary tests were performed in different data rate, and to find the worst condition, which was shown in this test report. The following table is the final test mode.

TX	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH Mode 2: Transmit (Beamforming Mode)_Adapter: EXA1206UH Mode 3: Transmit (CDD Mode)_Adapter: AD890326 Mode 4: Transmit (CDD Mode)_Adapter: ADP-33AW

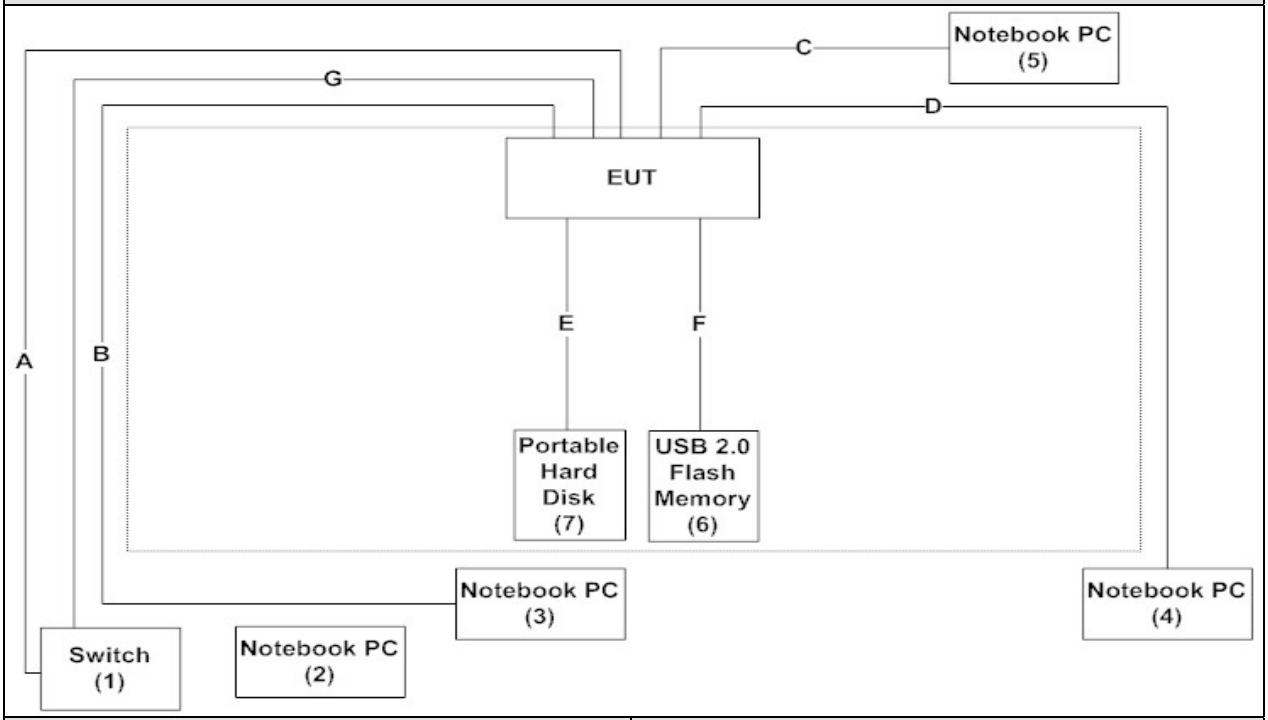
Test Items	Mode	Modulation	Channel	Antenna	Result
Conducted Emission	1/3/4	11ac (80MHz)	42	0+1+2	Complies
99 % & 26dB Bandwidth	1	a	36/44/48	0/1/2	Complies
	1/2	11n/ac (20MHz)	36/44/48	0/1/2	Complies
	1/2	11n/ac (40MHz)	38/46	0/1/2	Complies
	1/2	11ac (80MHz)	42	0/1/2	Complies
Peak Transmit Output	1	a	36/44/48	0+1+2	Complies
	1/2	11n/ac (20MHz)	36/44/48	0+1+2	Complies
	1/2	11n/ac (40MHz)	38/46	0+1+2	Complies
	1/2	11ac (80MHz)	42	0+1+2	Complies
Peak Power Spectrum Density	1	a	36/44/48	0+1+2	Complies
	1/2	11n/ac (20MHz)	36/44/48	0+1+2	Complies
	1/2	11n/ac (40MHz)	38/46	0+1+2	Complies
	1/2	11ac (80MHz)	42	0+1+2	Complies
Power Excursion	1	a	36/44/48	0/1/2	Complies
	1	11n/ac (20MHz)	36/44/48	0/1/2	Complies
	1	11n/ac (40MHz)	38/46	0/1/2	Complies
	1	11ac (80MHz)	42	0/1/2	Complies
Radiated Emission	1/3/4	a	36/44/48	0+1+2	Complies
	1/3/4	11n/ac (20MHz)	36/44/48	0+1+2	Complies
	1/3/4	11n/ac (40MHz)	38/46	0+1+2	Complies
	1/3/4	11ac (80MHz)	42	0+1+2	Complies
Band Edge	1	a	36	0+1+2	Complies
	1	11n/ac (20MHz)	36	0+1+2	Complies
	1	11n/ac (40MHz)	38	0+1+2	Complies
	1	11ac (80MHz)	42	0+1+2	Complies
Frequency Stability	1	a	36/48	0/1/2	Complies
	1	11n/ac (20MHz)	36/48	0/1/2	Complies
	1	11n/ac (40MHz)	38/46	0/1/2	Complies
	1	11ac (80MHz)	42	0/1/2	Complies

1.3. Tested System Details

The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

Product		Manufacturer	Model No.	Serial No.	FCC ID	Power Cord
1	Switch	D-Link	DGS1216T	F360298000042	DoC	Non-Shielded, 1.8m
2	Notebook PC	DELL	Vostro3400	7F808N1	DoC	Non-Shielded, 1.8m
3	Notebook PC	HP Compaq	NX6320FF	CNU7020BXT	DoC	Non-Shielded, 1.8m
4	Notebook PC	DELL	Precision M65	28G9NIS	DoC	Non-Shielded, 1.8m
5	Notebook PC	DELL	PP37L	CD8BNG1	DoC	Non-Shielded, 1.8m
6	USB 2.0 Flash Memory	Apacer	AH223	N/A	DoC	--
7	Portable Hard Disk	WD	My Passport	WXE1AB0M5632	DoC	--

1.4. Configuration of tested System

Connection Diagram


Signal Cable Type		Signal cable Description
A	LAN Cable	Non-Shielded, 1.5m
B	LAN Cable	Non-Shielded, 1.5m
C	LAN Cable	Non-Shielded, 1.5m
D	LAN Cable	Non-Shielded, 1.5m
E	Portable Hard Disk Cable	Shielded, 1m
F	USB 2.0 Flash Memory Cable	Shielded, 1m
G	LAN Cable	Non-Shielded, 1.5m

1.5. EUT Exercise Software

1	Setup the EUT as shown in Section 1.4.
2	Execute the test program “MTool V2.0.0.7” on the Notebook.
3	Configure the test mode, the test channel, and the data rate.
4	Press “Start TX” to start the continuous transmitting.
5	Verify that the EUT works properly.

1.6. Test Facility

Ambient conditions in the laboratory:

Items	Test Item	Required (IEC 68-1)	Actual
Temperature (°C)	FCC PART 15 E 15.407 Conducted Emission	15 - 35	20
Humidity (%RH)		25 - 75	50
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 E 15.407 99 % & 26dB Bandwidth	15 - 35	25
Humidity (%RH)		25 - 75	48
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 E 15.407 Peal Transmit Power	15 - 35	25
Humidity (%RH)		25 - 75	65
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 E 15.407 Peak Power Spectrum Density	15 - 35	24
Humidity (%RH)		25 - 75	49
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 E 15.407 Power Excursion	15 - 35	25
Humidity (%RH)		25 - 75	48
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 E 15.407 Radiated Emission	15 - 35	25
Humidity (%RH)		25 - 75	48
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 E 15.407 Band Edge	15 - 35	25
Humidity (%RH)		25 - 75	48
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 E 15.407 Frequency Stability	15 - 35	25
Humidity (%RH)		25 - 75	48
Barometric pressure (mbar)		860 - 1060	950-1000

2. Conducted Emission

2.1. Test Equipment

The following test equipments are used during the test:

Conducted Emission / SR3 (Mode3)

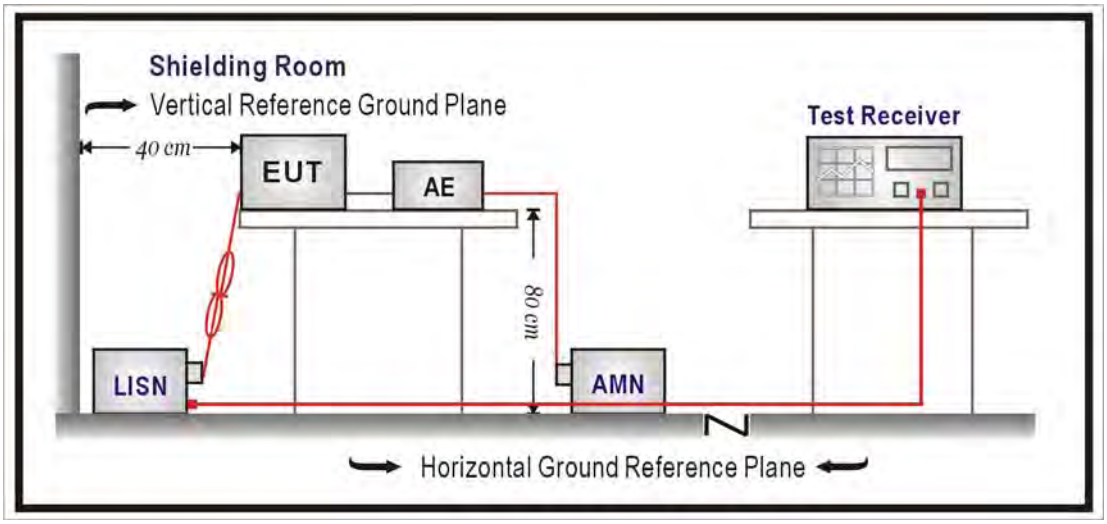
Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
LISN	R&S	ENV216	100096	2013/08/12
LISN	R&S	ESH3-Z5	836679/022	2014/01/20
Test Receiver	R&S	ESCS 30	825442/017	2014/01/01

Conducted Emission / SR2 (Mode1、4)

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Artificial Mains Network	R&S	ENV4200	848411/010	2015/02/09
LISN	R&S	ENV216	100092	2014/08/08
Test Receiver	R&S	ESCS 30	825442/014	2014/07/30

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

2.2. Test Setup



2.3. Limits

FCC Part 15 Subpart C Paragraph 15.207 Limits (dBuV)		
Frequency MHz	QP	AV
0.15 - 0.50	66-56	56-46
0.50 - 5.0	56	46
5.0 - 30	60	50

Remarks: In the above table, the tighter limit applies at the band edges.

2.4. Test Procedure

The EUT was setup according to ANSI C63.10. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface. The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs.)

Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.

The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.

Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.

2.5. Test Specification

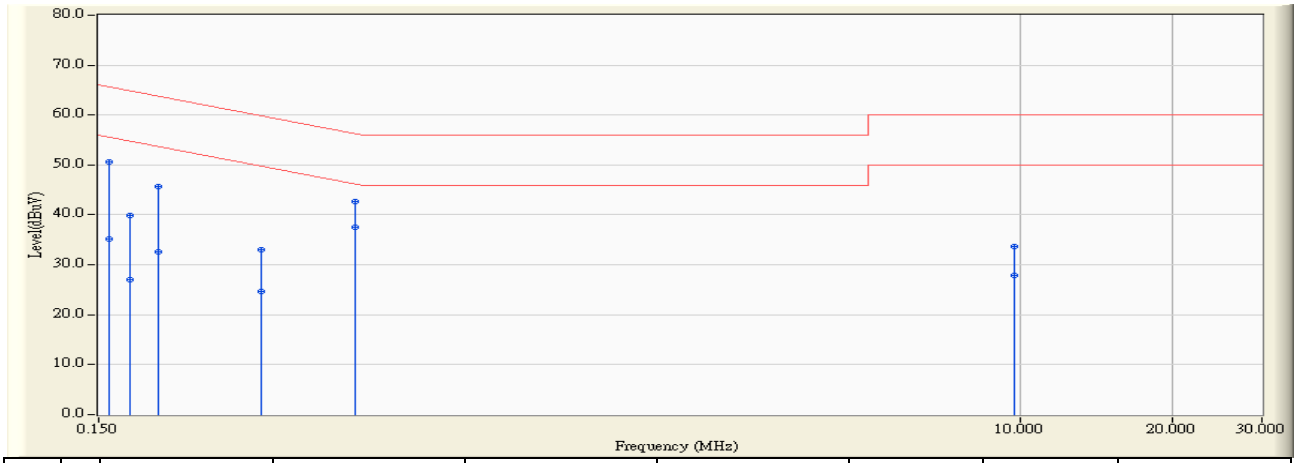
According to FCC Part 15 Subpart C Paragraph 15.207: 2013

2.6. Uncertainty

The measurement uncertainty is defined as ± 2.26 dB.

2.7. Test Result

Site : SR2	**Time : 2014/06/30 - 16:37**
Limit : CISPR_B_00M_QP	**Margin : 10**
Probe : SR2_LISN(16A)-3_0822 - Line1	**Power : AC 120V / 60 Hz**
EUT : Wireless-AC1900 Dual Band Gigabit Router	**Note : Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH-802.11ac(80M)_5210MHz**

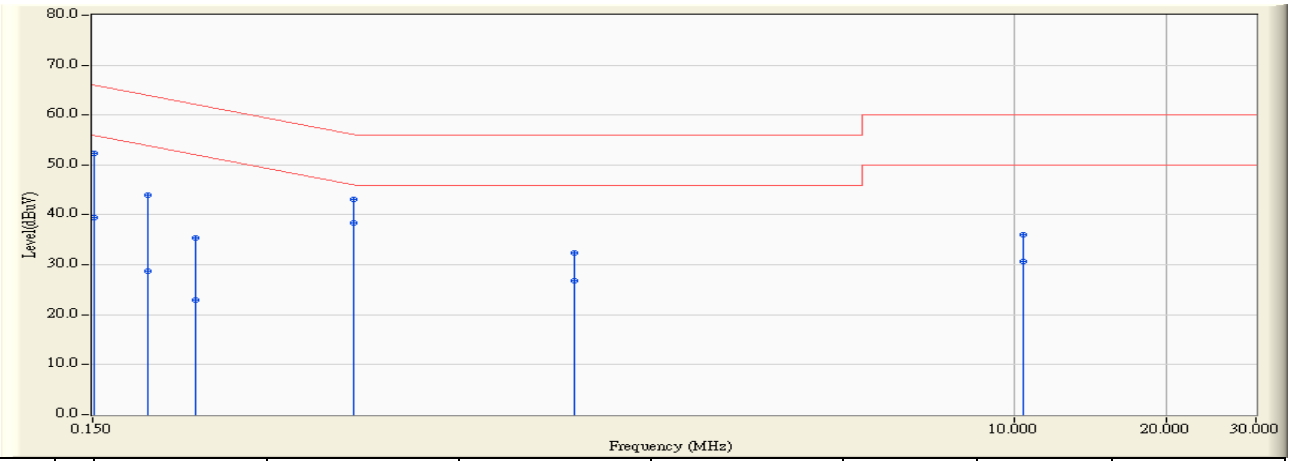


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.158	9.636	40.900	50.537	-15.042	65.578	QUASIPEAK
2		0.158	9.636	25.480	35.117	-20.462	55.578	AVERAGE
3		0.173	9.639	30.170	39.809	-24.985	64.794	QUASIPEAK
4		0.173	9.639	17.410	27.049	-27.745	54.794	AVERAGE
5		0.197	9.644	35.970	45.614	-18.127	63.741	QUASIPEAK
6		0.197	9.644	22.850	32.494	-21.247	53.741	AVERAGE
7		0.314	9.677	23.380	33.057	-26.806	59.862	QUASIPEAK
8		0.314	9.677	15.080	24.757	-25.106	49.862	AVERAGE
9		0.482	9.726	32.910	42.636	-13.668	56.304	QUASIPEAK
10	*	0.482	9.726	27.720	37.446	-8.858	46.304	AVERAGE
11		9.693	10.101	23.500	33.601	-26.399	60.000	QUASIPEAK
12		9.693	10.101	17.810	27.911	-22.089	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : SR2	**Time : 2014/06/30 - 16:41**
Limit : CISPR_B_00M_QP	**Margin : 10**
Probe : SR2_LISN(16A)-3_0822 - Line2	**Power : AC 120V / 60 Hz**
EUT : Wireless-AC1900 Dual Band Gigabit Router	**Note : Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH-802.11ac(80M)_5210MHz**

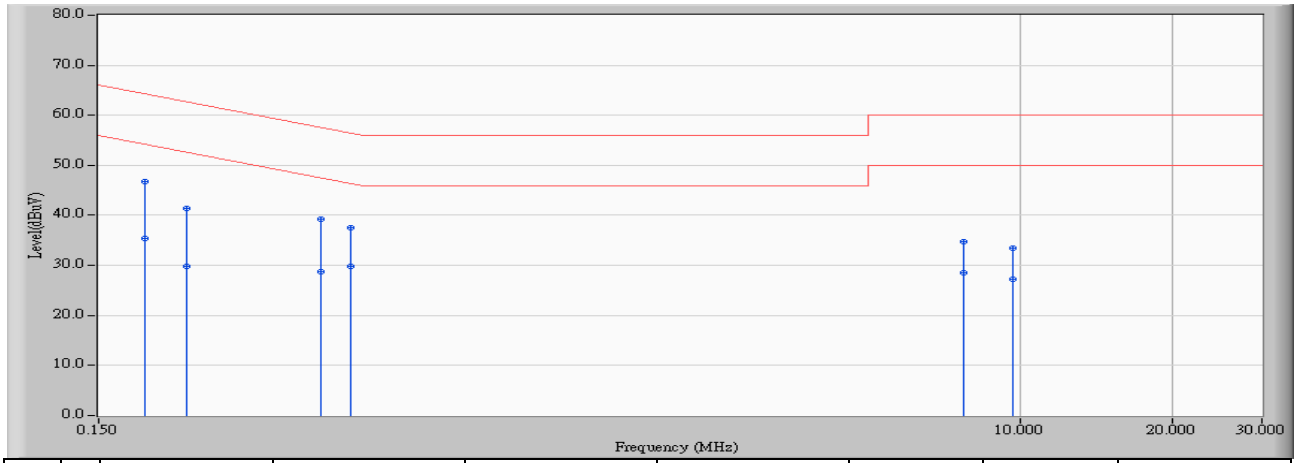


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.151	9.622	42.720	52.342	-13.591	65.933	QUASIPEAK
2		0.151	9.622	29.930	39.552	-16.381	55.933	AVERAGE
3		0.193	9.632	34.320	43.952	-19.956	63.908	QUASIPEAK
4		0.193	9.632	19.160	28.792	-25.116	53.908	AVERAGE
5		0.240	9.643	25.760	35.404	-26.698	62.102	QUASIPEAK
6		0.240	9.643	13.220	22.864	-29.238	52.102	AVERAGE
7		0.494	9.709	33.410	43.119	-12.986	56.104	QUASIPEAK
8	*	0.494	9.709	28.650	38.359	-7.746	46.104	AVERAGE
9		1.349	9.758	22.630	32.388	-23.612	56.000	QUASIPEAK
10		1.349	9.758	17.040	26.798	-19.202	46.000	AVERAGE
11		10.373	10.141	25.840	35.982	-24.018	60.000	QUASIPEAK
12		10.373	10.141	20.510	30.652	-19.348	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : SR3	**Time : 2013/05/01 - 10:51**
Limit : CISPR_B_00M_QP	**Margin : 10**
Probe : SR3_LISN(16A)-2_0813 - Line1	**Power : AC 120V/60Hz**
EUT : Wireless-AC1900 Dual Band Gigabit Router	**Note : Mode 3: Transmit (CDD Mode)_Adapter: AD890326-802.11ac(80M)_5210MHz**

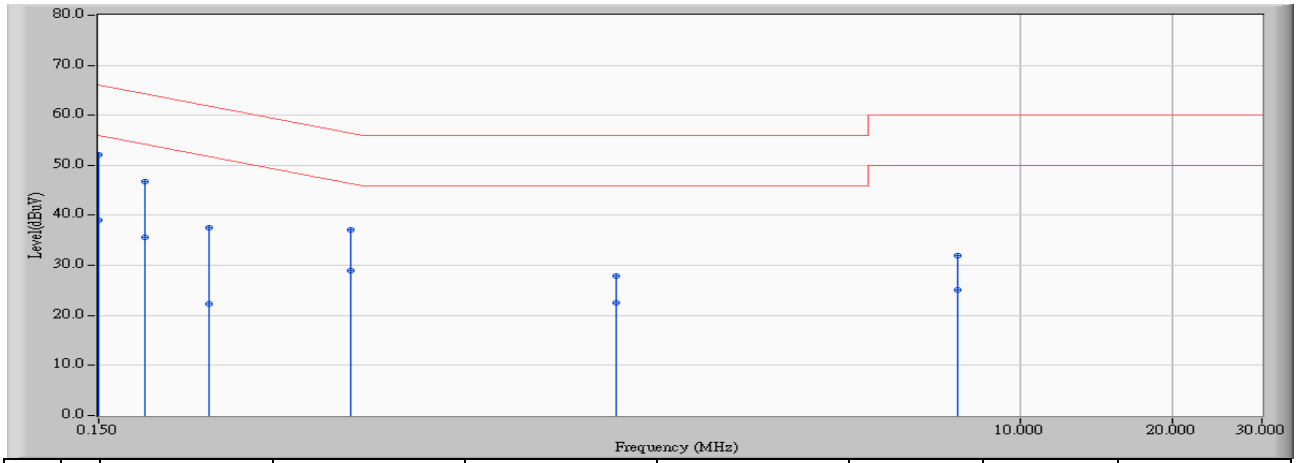


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.185	9.710	36.960	46.670	-17.581	64.251	QUASIPEAK
2		0.185	9.710	25.600	35.310	-18.941	54.251	AVERAGE
3		0.224	9.672	31.740	41.412	-21.249	62.661	QUASIPEAK
4		0.224	9.672	20.170	29.842	-22.819	52.661	AVERAGE
5		0.412	9.779	29.410	39.189	-18.424	57.614	QUASIPEAK
6		0.412	9.779	18.950	28.729	-18.884	47.614	AVERAGE
7		0.474	9.816	27.660	37.476	-18.964	56.440	QUASIPEAK
8	*	0.474	9.816	20.020	29.836	-16.604	46.440	AVERAGE
9		7.732	10.110	24.720	34.830	-25.170	60.000	QUASIPEAK
10		7.732	10.110	18.340	28.450	-21.550	50.000	AVERAGE
11		9.638	10.110	23.300	33.410	-26.590	60.000	QUASIPEAK
12		9.638	10.110	17.060	27.170	-22.830	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : SR3	**Time : 2013/05/01 - 10:53**
Limit : CISPR_B_00M_QP	**Margin : 10**
Probe : SR3_LISN(16A)-2_0813 - Line2	**Power : AC 120V/60Hz**
EUT : Wireless-AC1900 Dual Band Gigabit Router	**Note : Mode 3: Transmit (CDD Mode)_Adapter: AD890326-802.11ac(80M)_5210MHz**

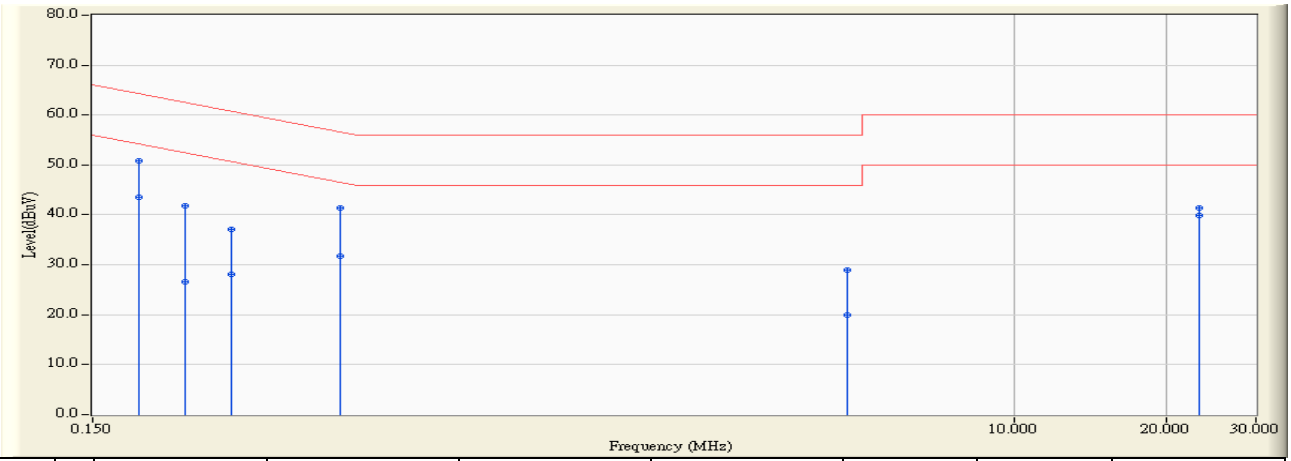


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.150	9.638	42.450	52.089	-13.911	66.000	QUASIPEAK
2		0.150	9.638	29.420	39.059	-16.941	56.000	AVERAGE
3		0.185	9.652	37.200	46.851	-17.400	64.251	QUASIPEAK
4		0.185	9.652	26.030	35.681	-18.570	54.251	AVERAGE
5		0.248	9.683	27.750	37.433	-24.402	61.835	QUASIPEAK
6		0.248	9.683	12.580	22.263	-29.572	51.835	AVERAGE
7		0.474	9.806	27.200	37.006	-19.434	56.440	QUASIPEAK
8		0.474	9.806	19.250	29.056	-17.384	46.440	AVERAGE
9		1.584	9.936	17.960	27.896	-28.104	56.000	QUASIPEAK
10		1.584	9.936	12.520	22.456	-23.544	46.000	AVERAGE
11		7.513	10.113	21.760	31.873	-28.127	60.000	QUASIPEAK
12		7.513	10.113	15.050	25.163	-24.837	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : SR2	**Time : 2014/07/03 - 16:37**
Limit : CISPR_B_00M_QP	**Margin : 10**
Probe : SR2_LISN(16A)-3_0822 - Line1	**Power : AC 120V / 60 Hz**
EUT : Wireless-AC1900 Dual Band Gigabit Router	**Note : Mode 4: Transmit (CDD Mode)_Adapter: ADP-33AW-802.11ac(80M)_5210MHz**

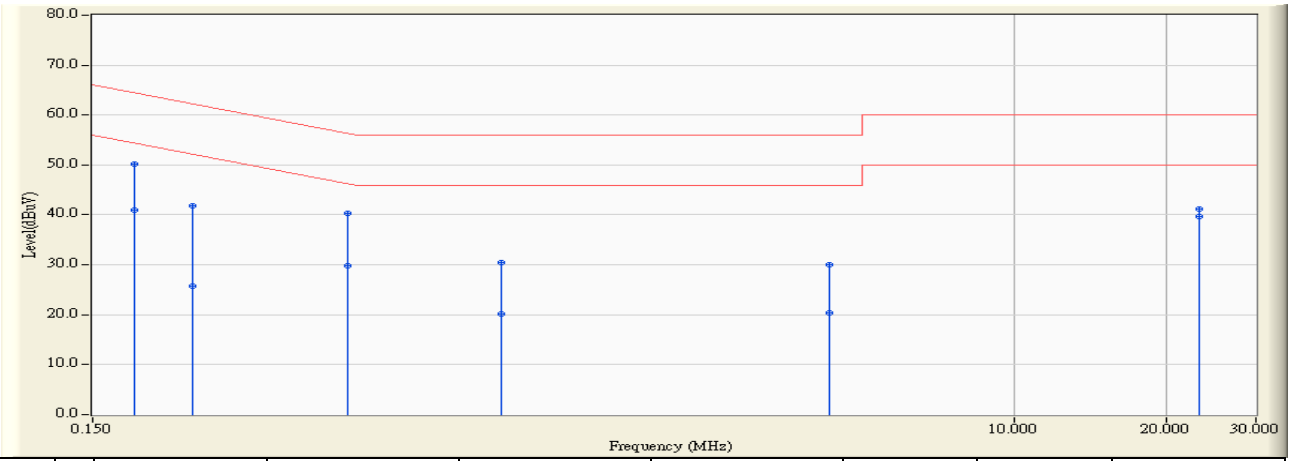


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.185	9.642	41.120	50.761	-13.490	64.251	QUASIPEAK
2		0.185	9.642	33.900	43.541	-10.710	54.251	AVERAGE
3		0.228	9.652	32.180	41.832	-20.686	62.518	QUASIPEAK
4		0.228	9.652	16.840	26.492	-26.026	52.518	AVERAGE
5		0.283	9.668	27.340	37.008	-23.725	60.733	QUASIPEAK
6		0.283	9.668	18.430	28.098	-22.635	50.733	AVERAGE
7		0.463	9.720	31.650	41.370	-15.278	56.648	QUASIPEAK
8		0.463	9.720	21.920	31.640	-15.008	46.648	AVERAGE
9		4.650	9.953	19.000	28.954	-27.046	56.000	QUASIPEAK
10		4.650	9.953	9.980	19.934	-26.066	46.000	AVERAGE
11		23.127	10.171	31.180	41.351	-18.649	60.000	QUASIPEAK
12	*	23.127	10.171	29.790	39.961	-10.039	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : SR2	**Time : 2014/07/03 - 16:41**
Limit : CISPR_B_00M_QP	**Margin : 10**
Probe : SR2_LISN(16A)-3_0822 - Line2	**Power : AC 120V / 60 Hz**
EUT : Wireless-AC1900 Dual Band Gigabit Router	**Note : Mode 4: Transmit (CDD Mode)_Adapter: ADP-33AW-802.11ac(80M)_5210MHz**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.181	9.629	40.580	50.209	-14.217	64.426	QUASIPEAK
2		0.181	9.629	31.290	40.919	-13.507	54.426	AVERAGE
3		0.236	9.642	32.120	41.763	-20.475	62.238	QUASIPEAK
4		0.236	9.642	16.080	25.723	-26.515	52.238	AVERAGE
5		0.478	9.704	30.520	40.225	-16.147	56.372	QUASIPEAK
6		0.478	9.704	20.060	29.765	-16.607	46.372	AVERAGE
7		0.963	9.719	20.650	30.369	-25.631	56.000	QUASIPEAK
8		0.963	9.719	10.480	20.199	-25.801	46.000	AVERAGE
9		4.295	9.930	20.200	30.130	-25.870	56.000	QUASIPEAK
10		4.295	9.930	10.420	20.350	-25.650	46.000	AVERAGE
11		23.127	10.307	30.940	41.248	-18.752	60.000	QUASIPEAK
12	*	23.127	10.307	29.430	39.738	-10.262	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

3. 99% & 26dB Bandwidth

3.1. Test Equipment

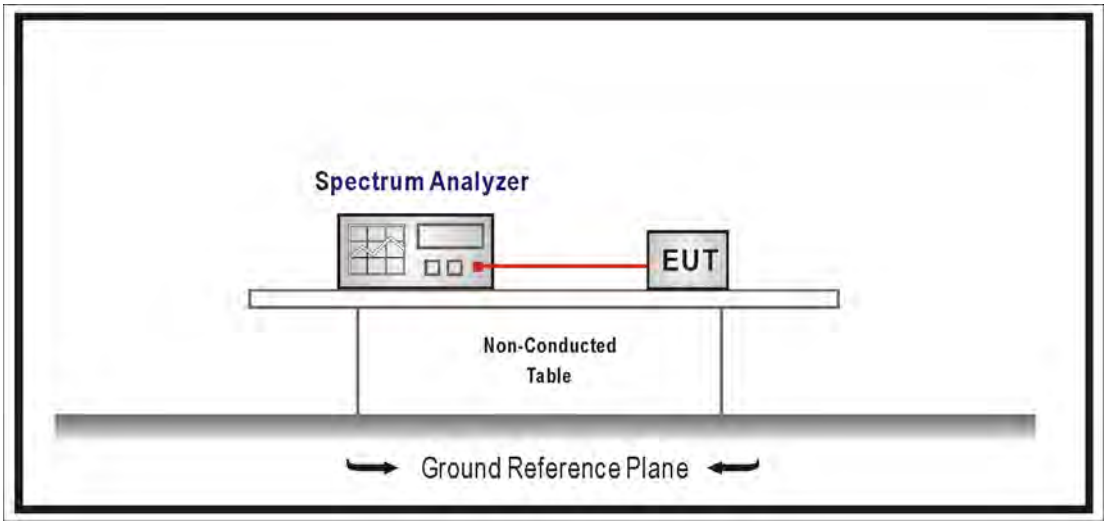
The following test equipments are used during the radiated emission tests:

99% & 26dB Bandwidth / 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.

3.2. Test Setup



3.3. Limits

No Required

3.4. Test Procedure

The EUT was tested according to U-NII test procedure of KDB 789033.
Set RBW 1% of the emission bandwidth, VBW equal to 3 times the RBW.

3.5. Uncertainty

The measurement uncertainty is defined as ±150Hz

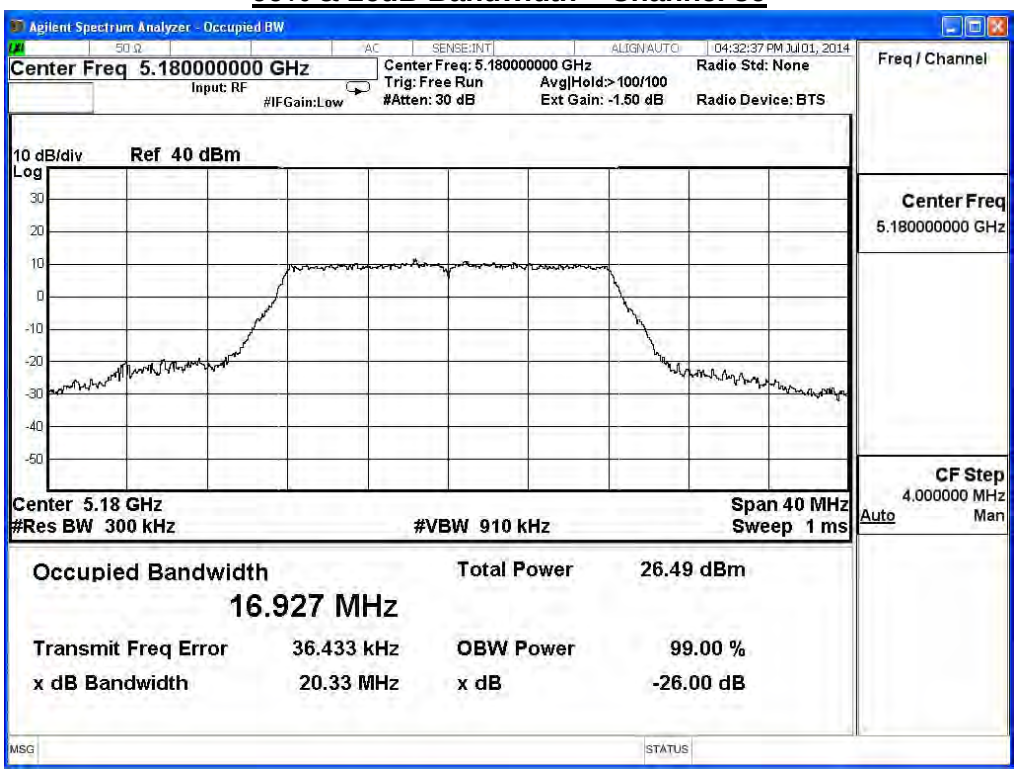
3.6. Test Result

Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	99% & 26dB Bandwidth		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

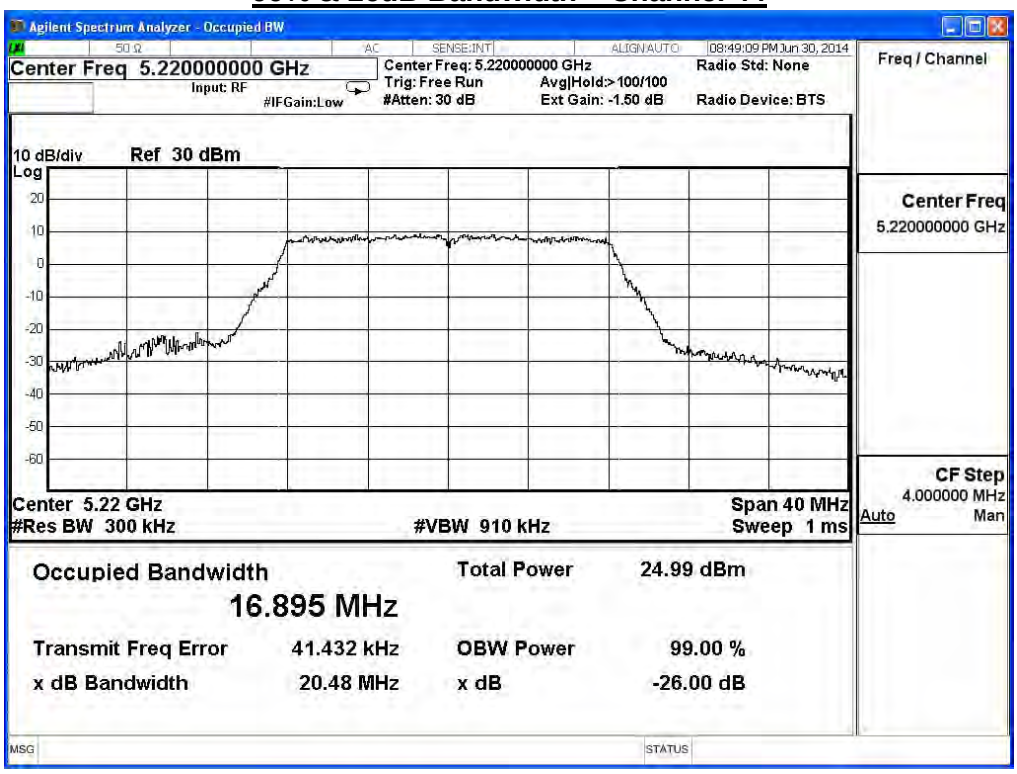
802.11a (ANT0)

Channel No.	Frequency (MHz)	26dB BW (MHz)	99 % OBW (MHz)	Required Limit (MHz)	Result
36	5180	20.330	16.927	--	Pass
44	5220	20.480	16.895	--	Pass
48	5240	20.360	16.933	--	Pass

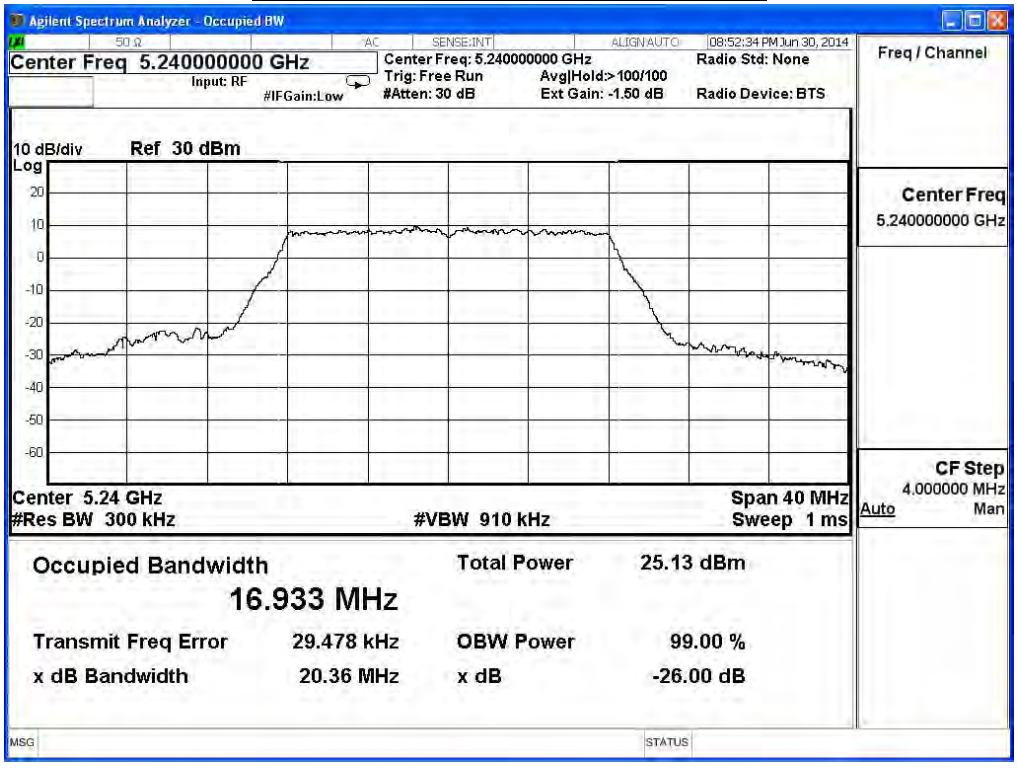
99% & 26dB Bandwidth – Channel 36



99% & 26dB Bandwidth – Channel 44



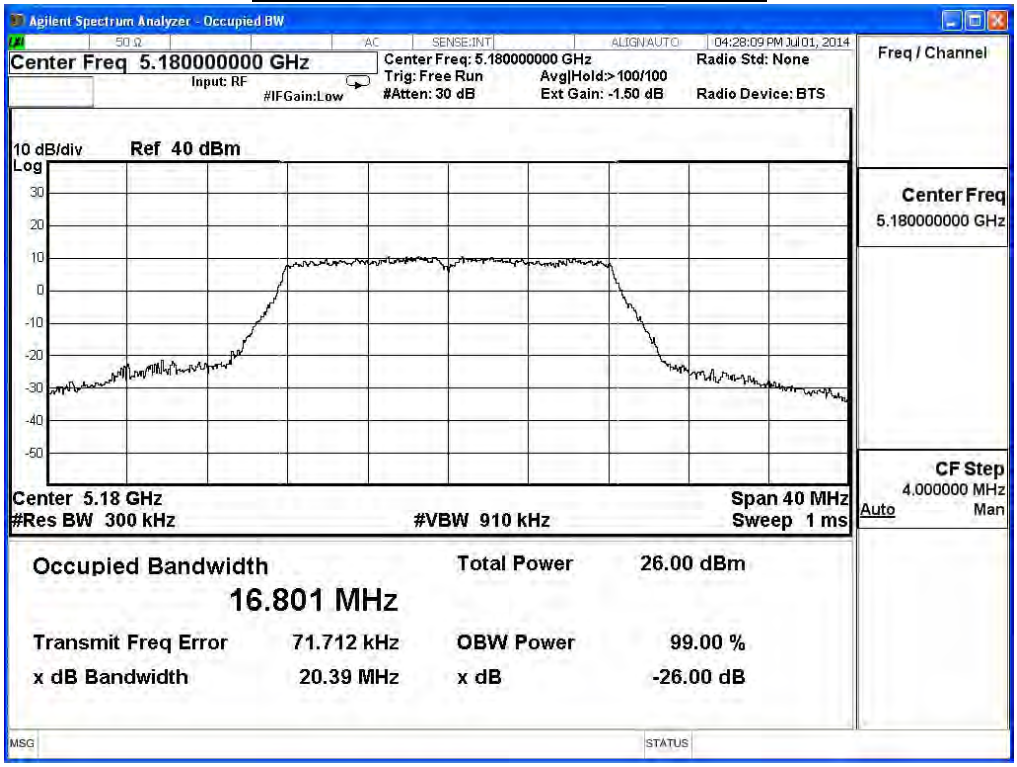
99% & 26dB Bandwidth – Channel 48



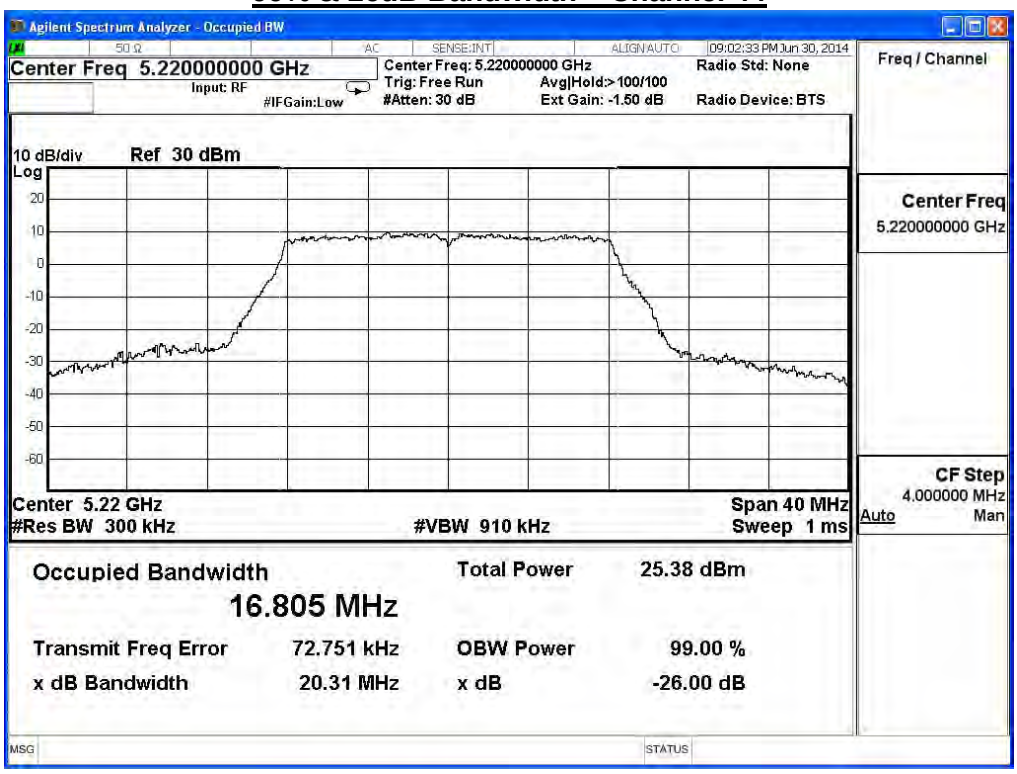
Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	99% & 26dB Bandwidth		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

802.11a (ANT1)					
Channel No.	Frequency (MHz)	26dB BW (MHz)	99 % OBW (MHz)	Required Limit (MHz)	Result
36	5180	20.390	16.801	--	Pass
44	5220	20.310	16.805	--	Pass
48	5240	20.390	16.819	--	Pass

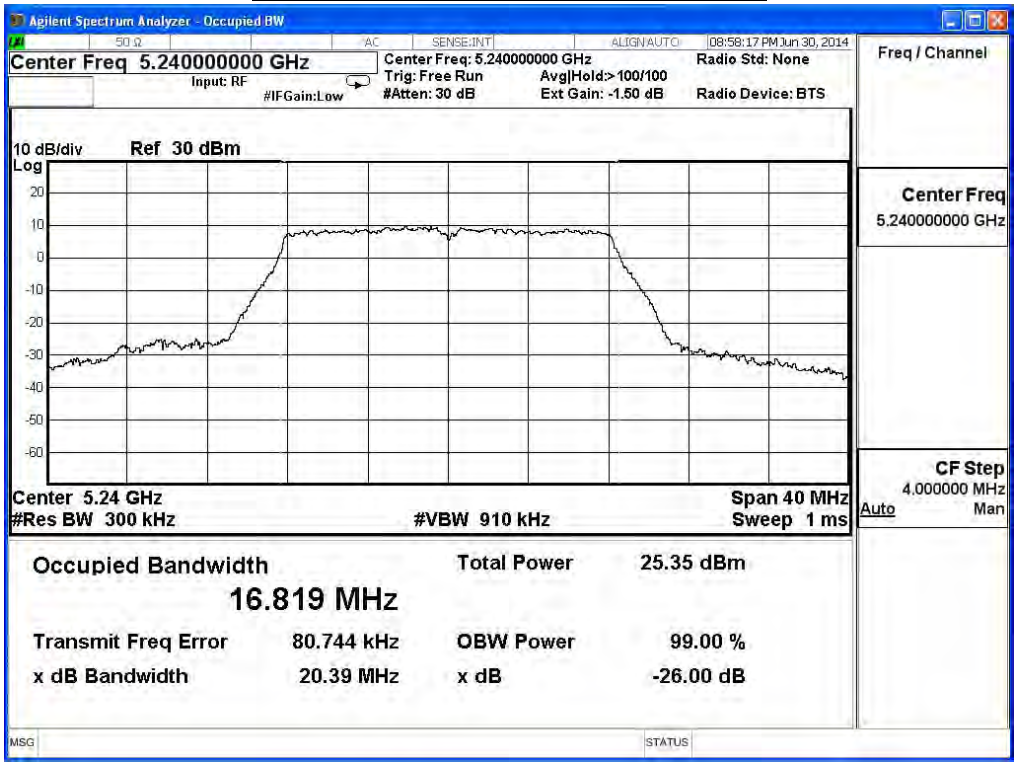
99% & 26dB Bandwidth – Channel 36



99% & 26dB Bandwidth – Channel 44



99% & 26dB Bandwidth – Channel 48

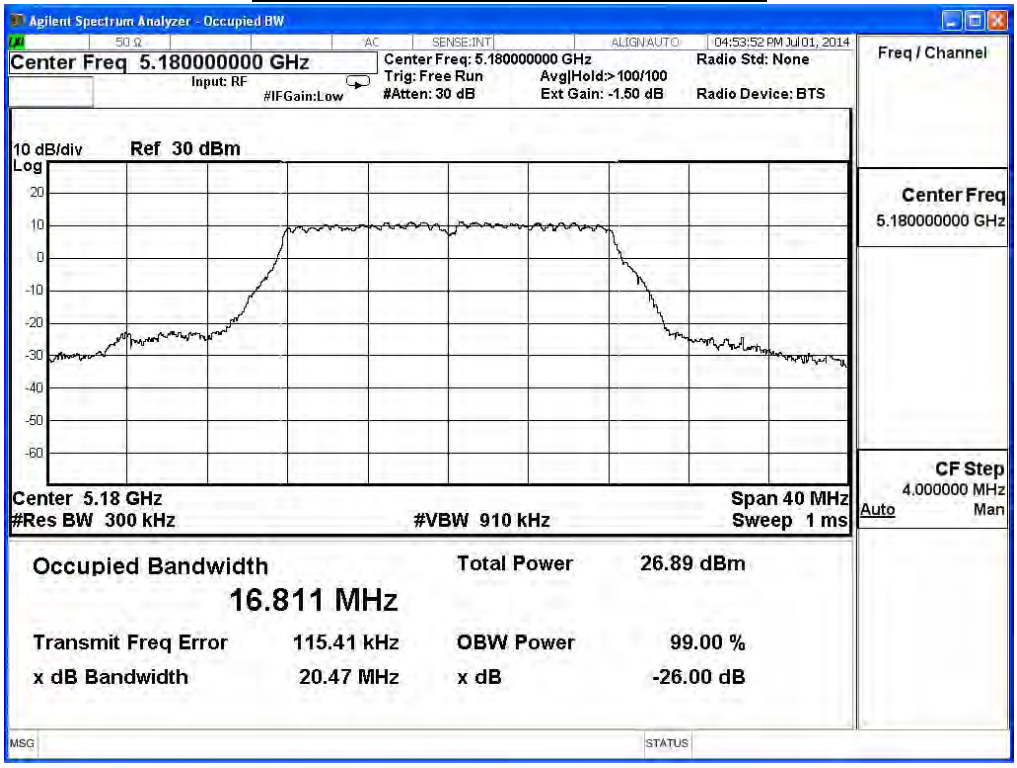


Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	99% & 26dB Bandwidth		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

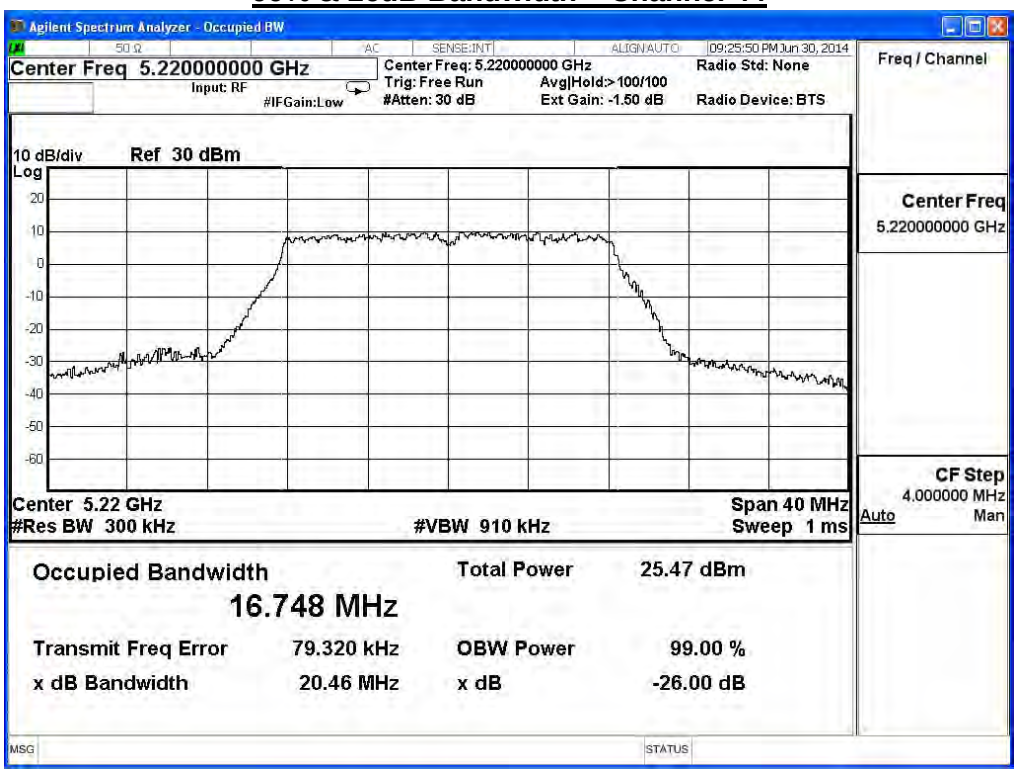
802.11a (ANT2)

Channel No.	Frequency (MHz)	26dB BW (MHz)	99 % OBW (MHz)	Required Limit (MHz)	Result
36	5180	20.470	16.811	--	Pass
44	5220	20.460	16.748	--	Pass
48	5240	20.430	16.815	--	Pass

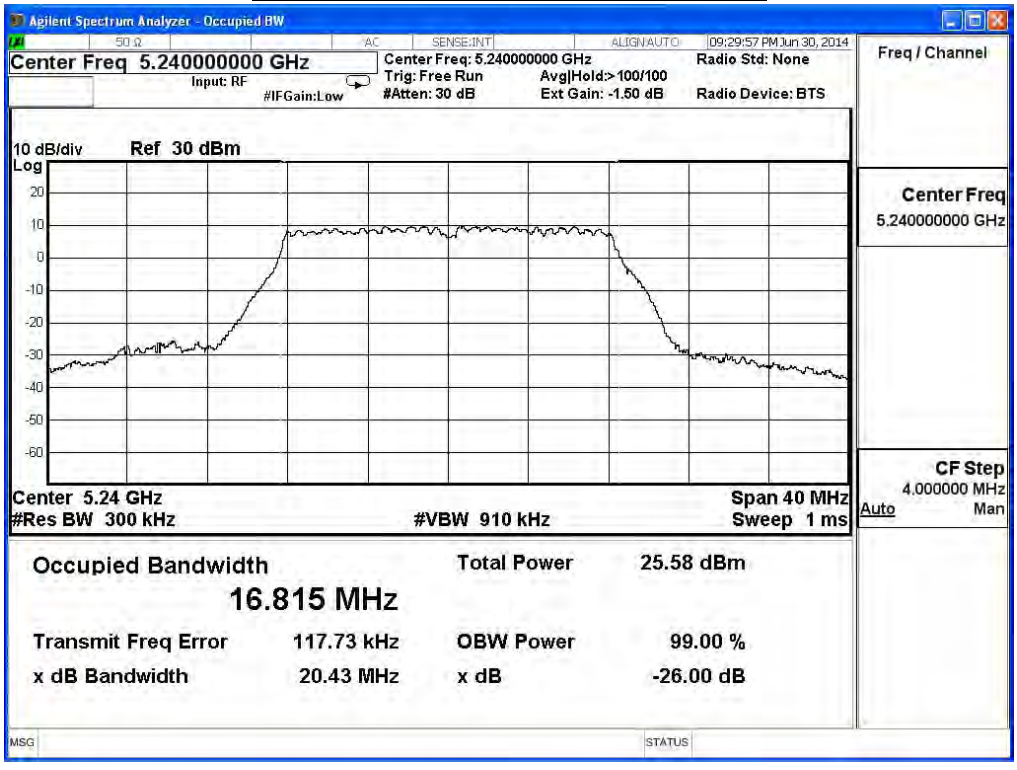
99% & 26dB Bandwidth – Channel 36



99% & 26dB Bandwidth – Channel 44



99% & 26dB Bandwidth – Channel 48

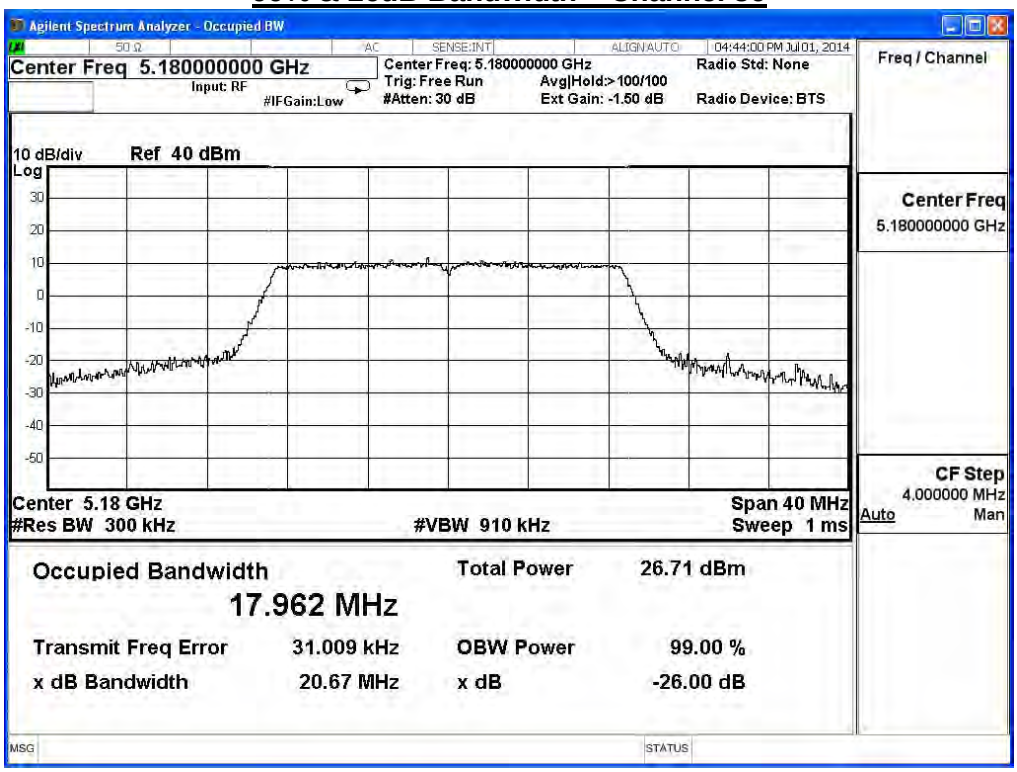


Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	99% & 26dB Bandwidth		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

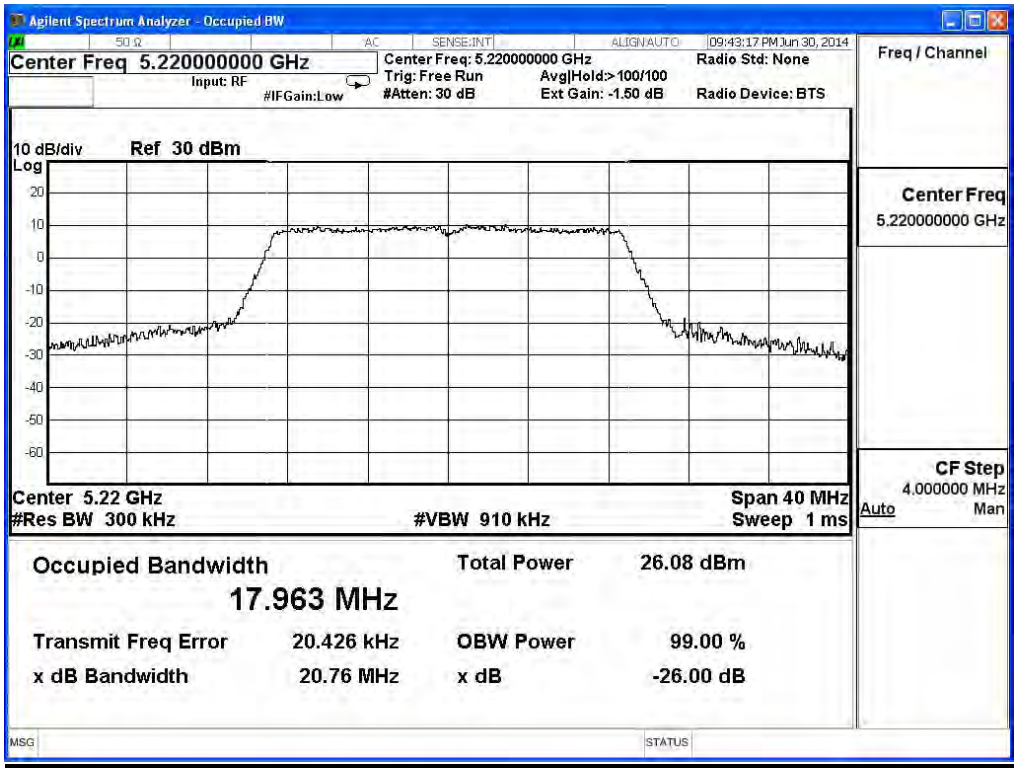
802.11n_20M(ANT 0)

Channel No.	Frequency (MHz)	26dB BW (MHz)	99 % OBW (MHz)	Required Limit (MHz)	Result
36	5180	20.670	17.962	--	Pass
44	5220	20.760	17.963	--	Pass
48	5240	20.680	17.936	--	Pass

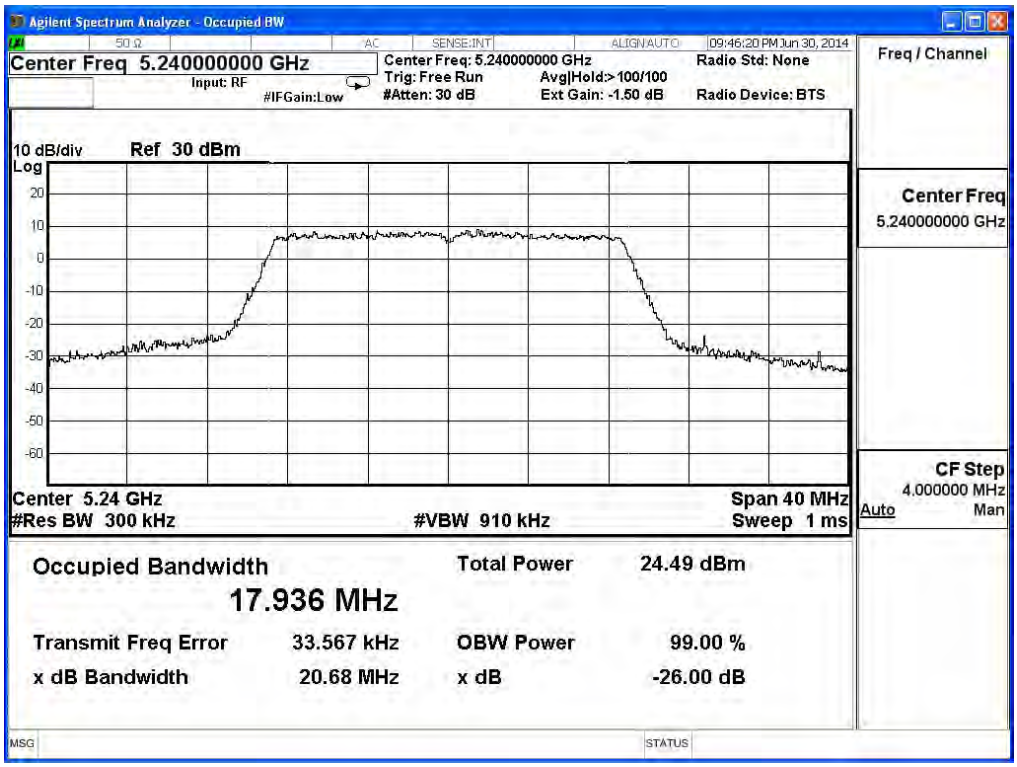
99% & 26dB Bandwidth – Channel 36



99% & 26dB Bandwidth – Channel 44



99% & 26dB Bandwidth – Channel 48

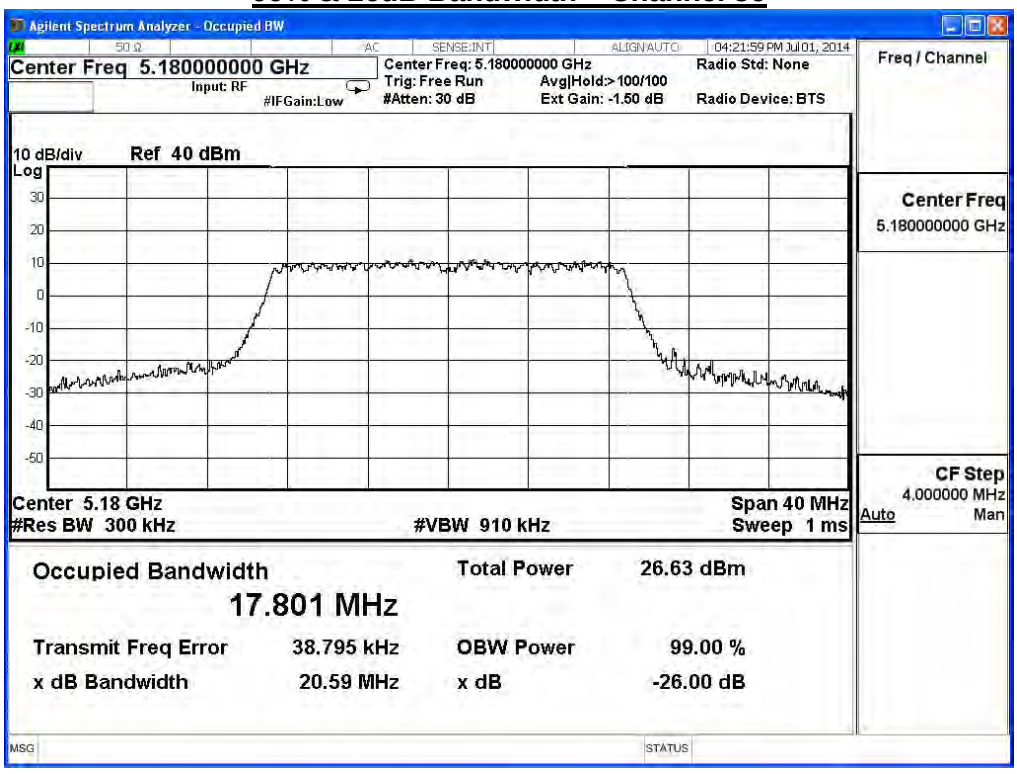


Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	99% & 26dB Bandwidth		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

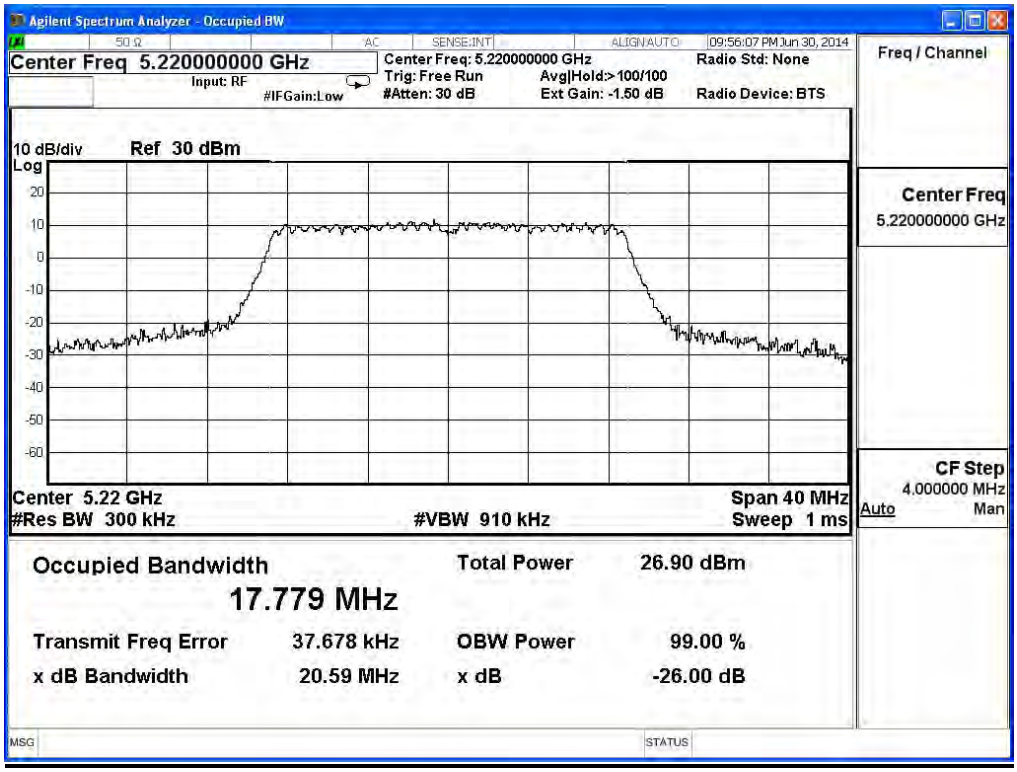
802.11n_20M(ANT 1)

Channel No.	Frequency (MHz)	26dB BW (MHz)	99 % OBW (MHz)	Required Limit (MHz)	Result
36	5180	20.590	17.801	--	Pass
44	5220	20.590	17.779	--	Pass
48	5240	20.420	17.772	--	Pass

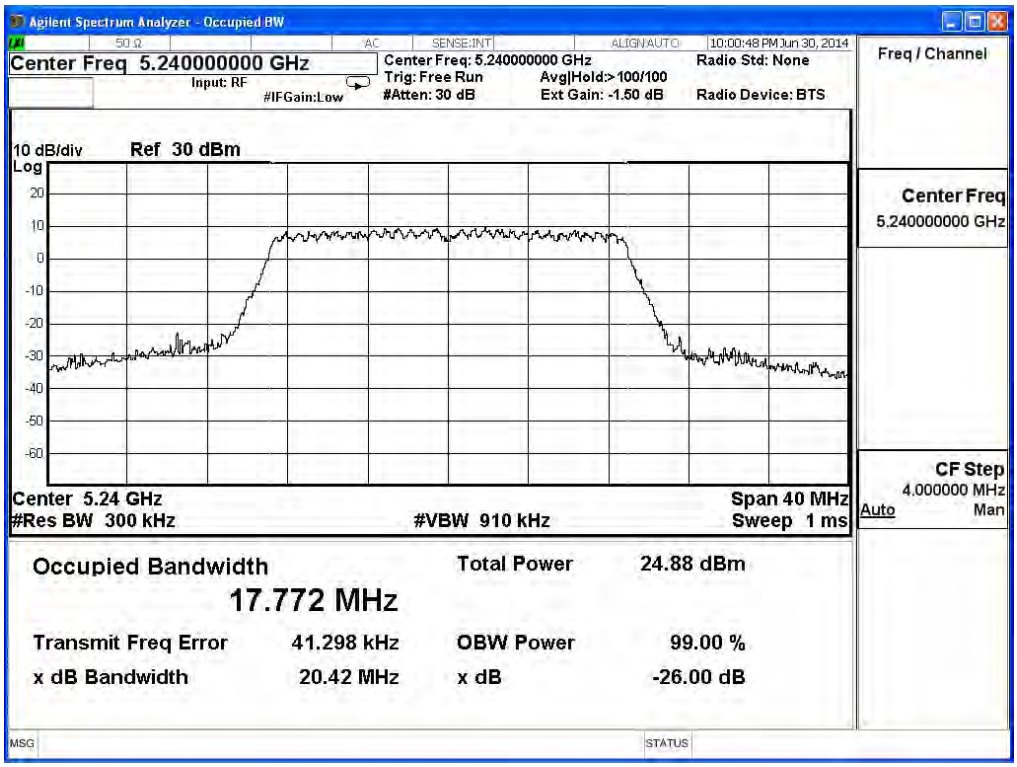
99% & 26dB Bandwidth – Channel 36



99% & 26dB Bandwidth – Channel 44



99% & 26dB Bandwidth – Channel 48

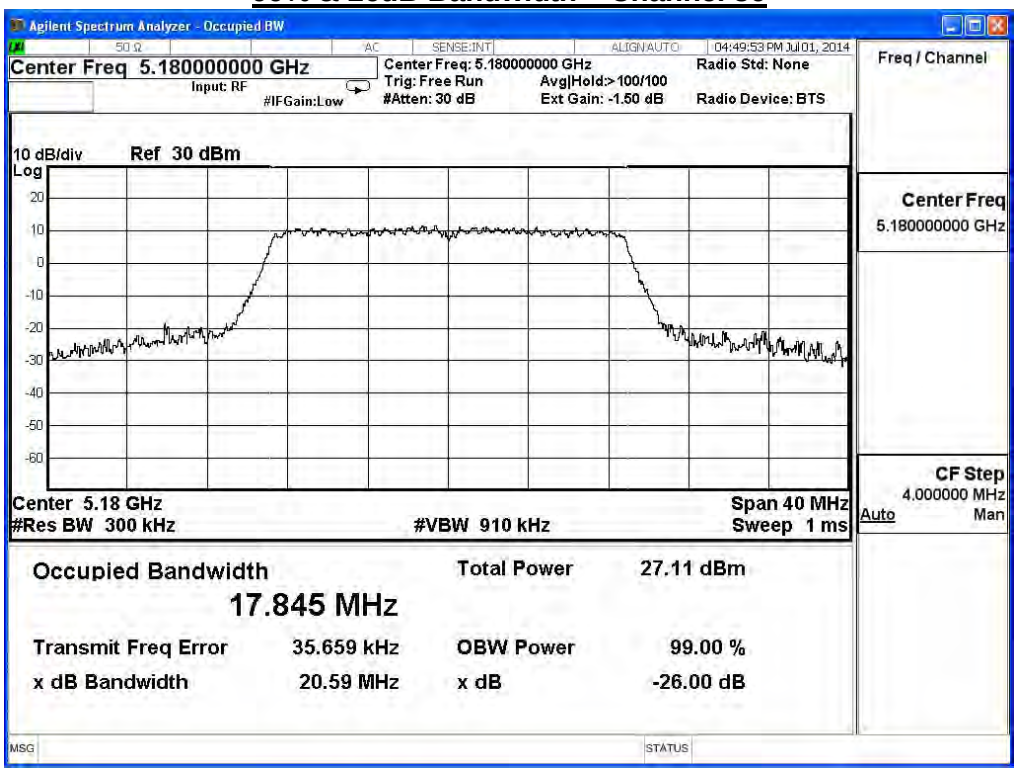


Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	99% & 26dB Bandwidth		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

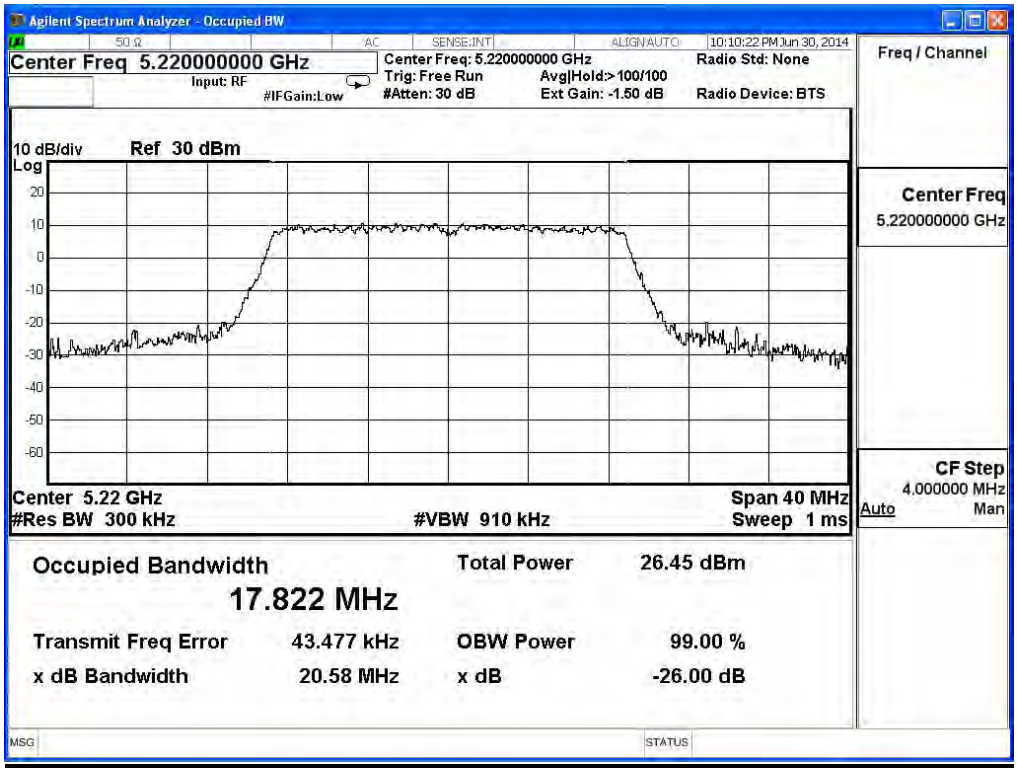
802.11n_20M(ANT 2)

Channel No.	Frequency (MHz)	26dB BW (MHz)	99 % OBW (MHz)	Required Limit (MHz)	Result
36	5180	20.590	17.845	--	Pass
44	5220	20.580	17.822	--	Pass
48	5240	20.680	17.825	--	Pass

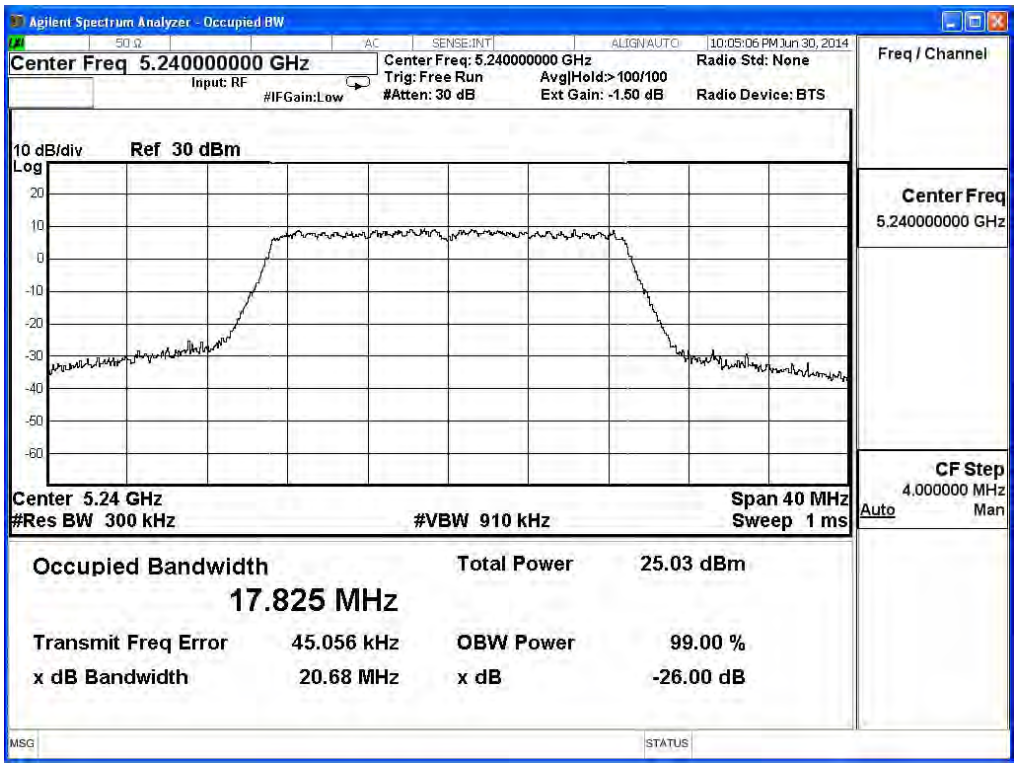
99% & 26dB Bandwidth – Channel 36



99% & 26dB Bandwidth – Channel 44



99% & 26dB Bandwidth – Channel 48

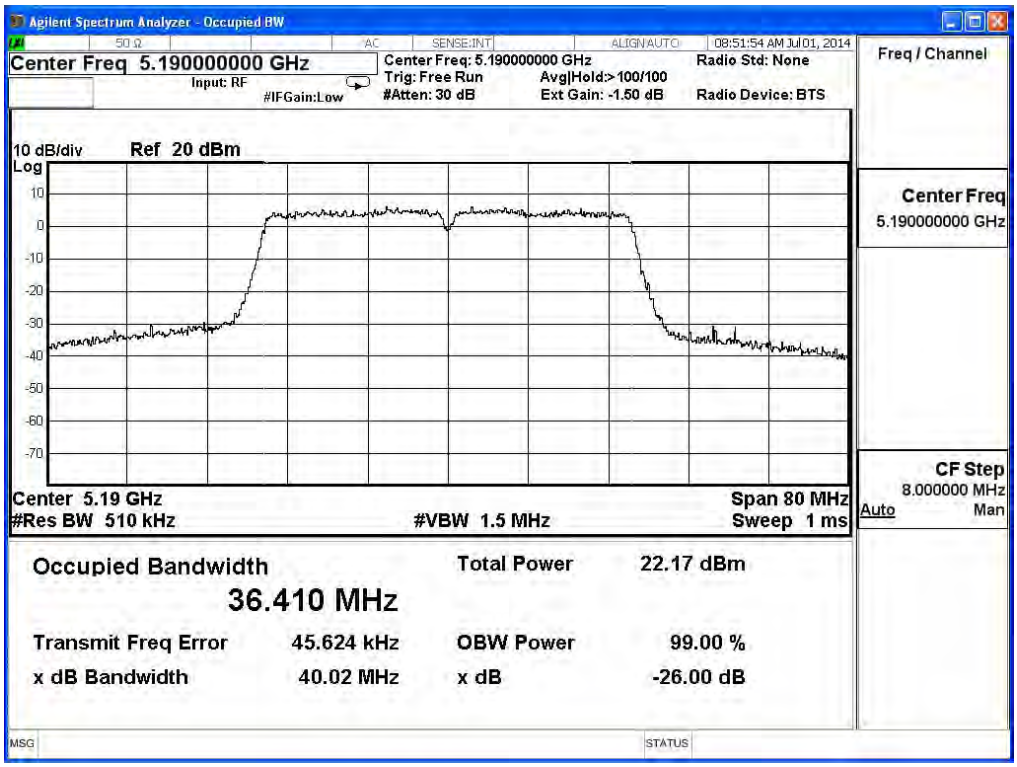


Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	99% & 26dB Bandwidth		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

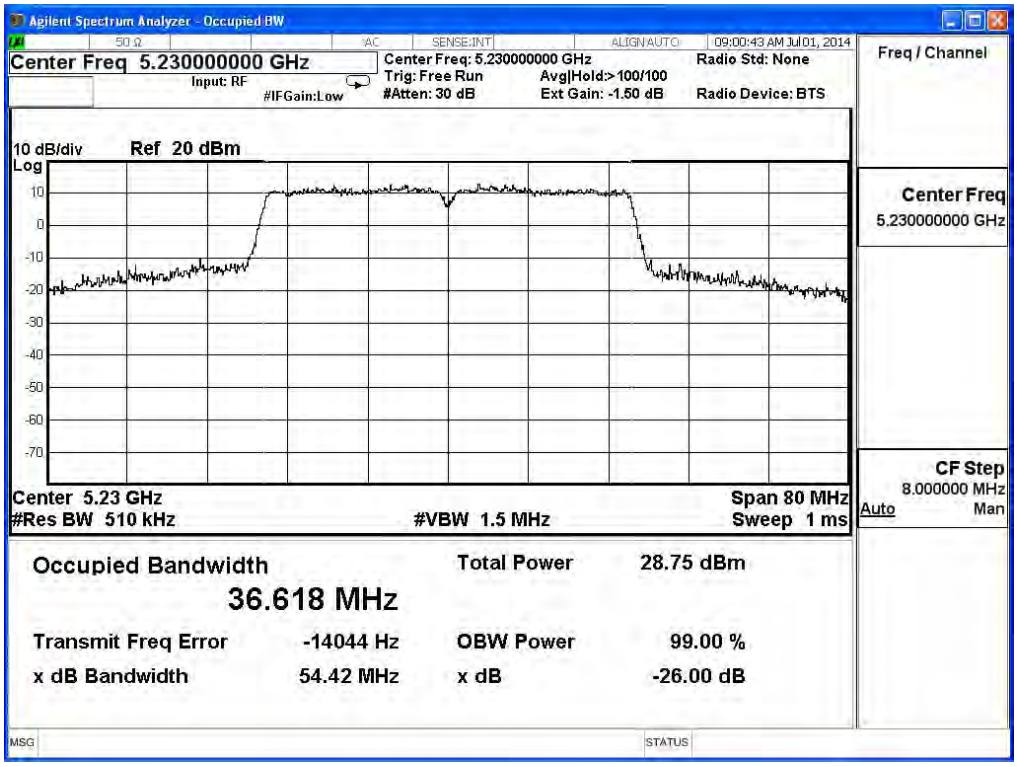
802.11n_40M(ANT 0)

Channel No.	Frequency (MHz)	26dB BW (MHz)	99 % OBW (MHz)	Required Limit (MHz)	Result
38	5190	40.020	36.410	--	Pass
46	5230	54.420	36.618	--	Pass

99% & 26dB Bandwidth – Channel 38



99% & 26dB Bandwidth – Channel 46

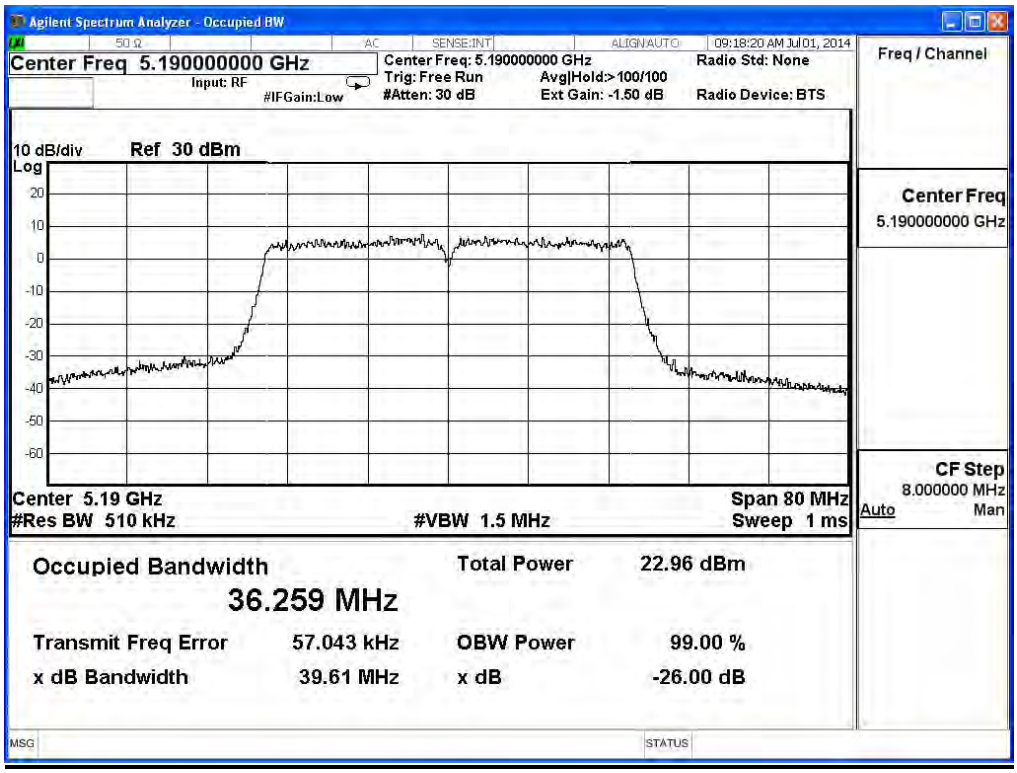


Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	99% & 26dB Bandwidth		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

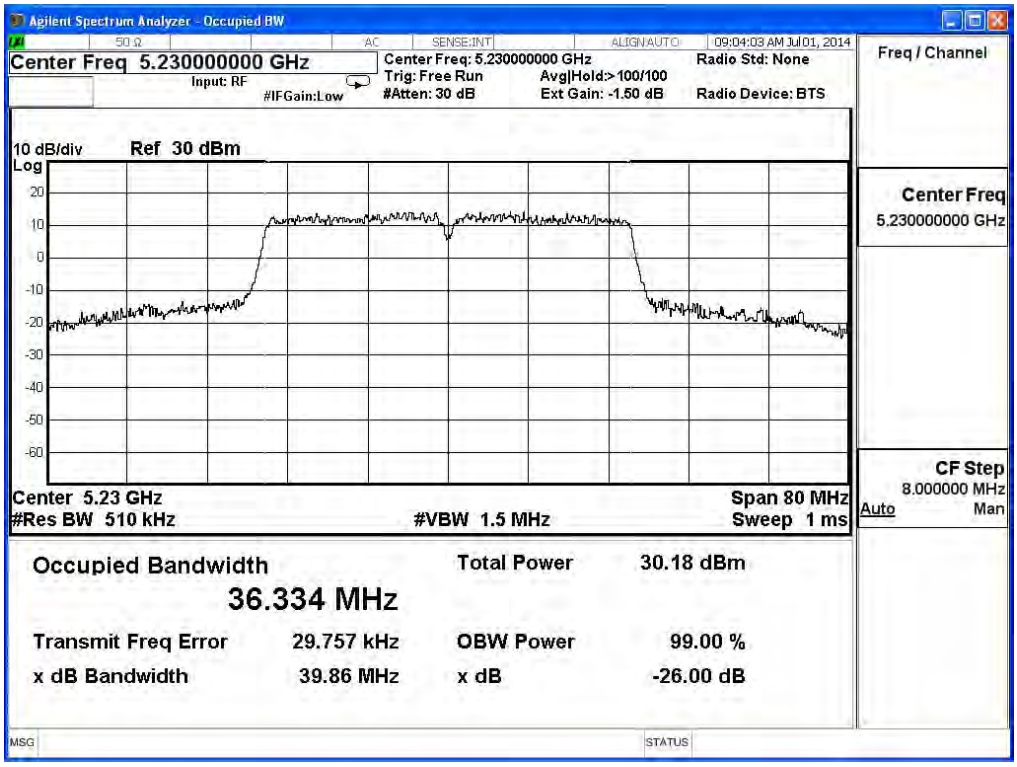
802.11n_40M(ANT 1)

Channel No.	Frequency (MHz)	26dB BW (MHz)	99 % OBW (MHz)	Required Limit (MHz)	Result
38	5190	39.610	36.259	--	Pass
46	5230	39.860	36.334	--	Pass

99% & 26dB Bandwidth – Channel 38



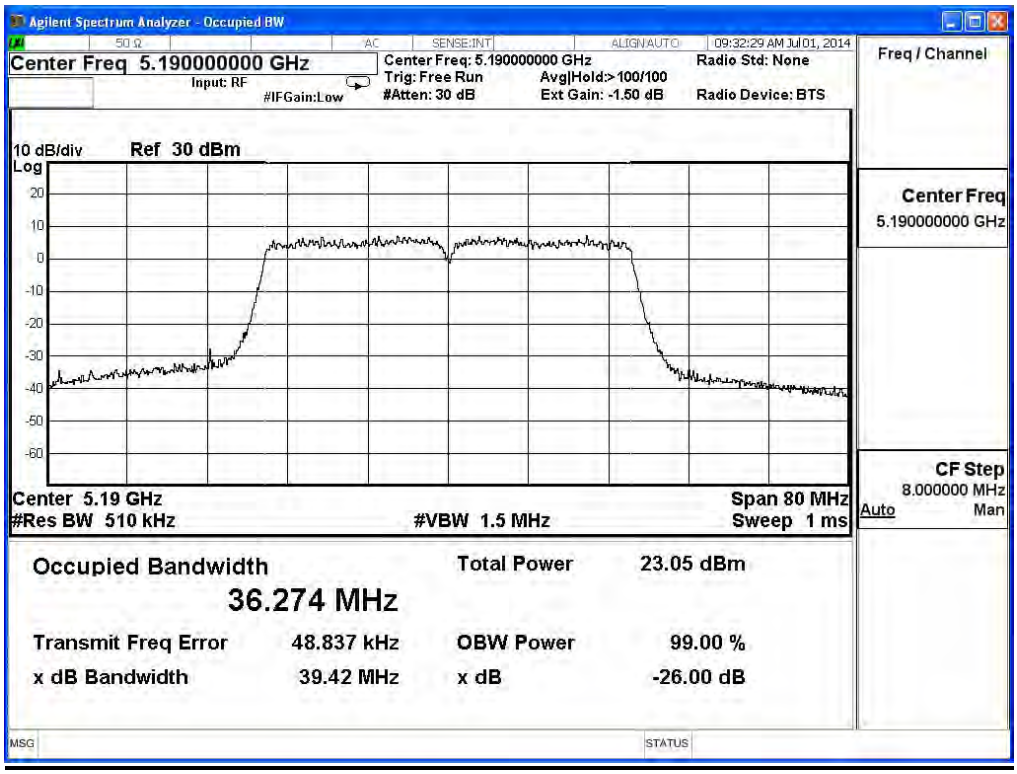
99% & 26dB Bandwidth – Channel 46



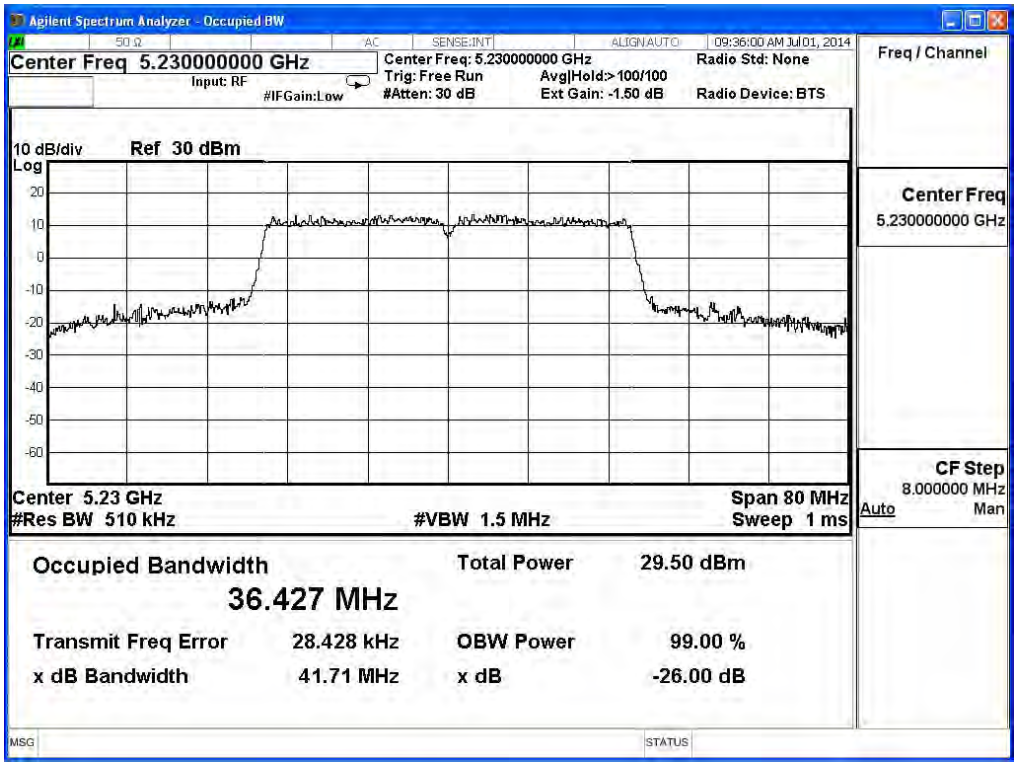
Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	99% & 26dB Bandwidth		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

802.11n_40M(ANT 2)					
Channel No.	Frequency (MHz)	26dB BW (MHz)	99 % OBW (MHz)	Required Limit (MHz)	Result
38	5190	39.420	36.274	--	Pass
46	5230	41.710	36.427	--	Pass

99% & 26dB Bandwidth – Channel 38



99% & 26dB Bandwidth – Channel 46

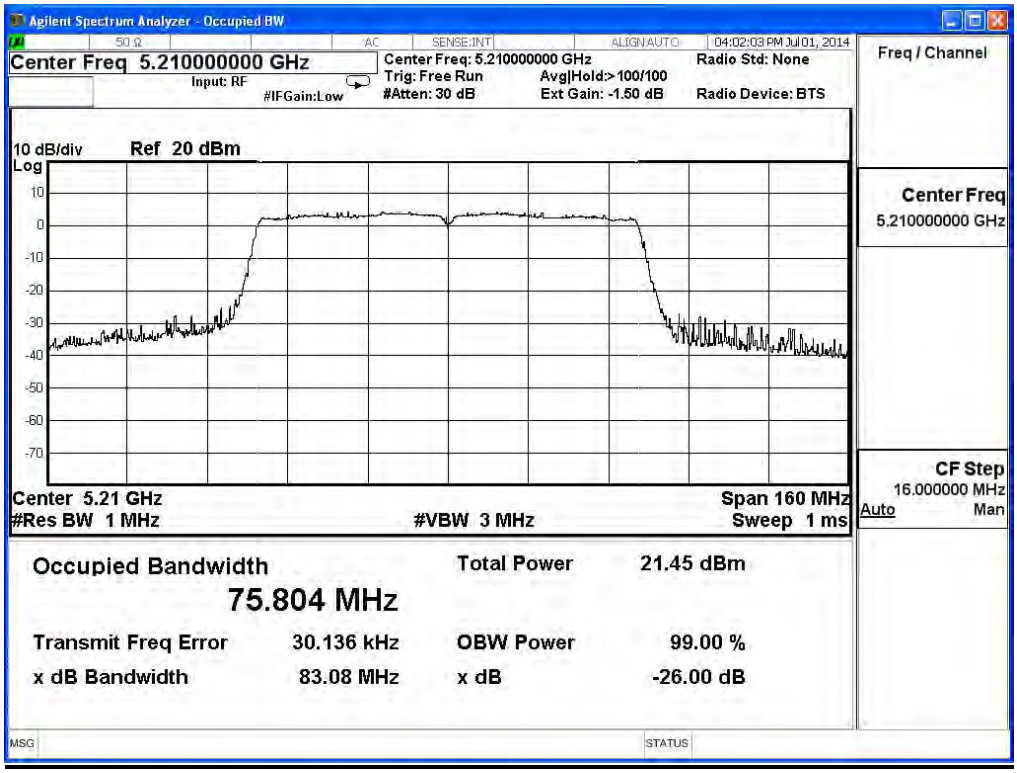


Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	99% & 26dB Bandwidth		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

802.11ac_80M(ANT 0)

Channel No.	Frequency (MHz)	26dB BW (MHz)	99 % OBW (MHz)	Required Limit (MHz)	Result
42	5210	83.080	75.804	--	Pass

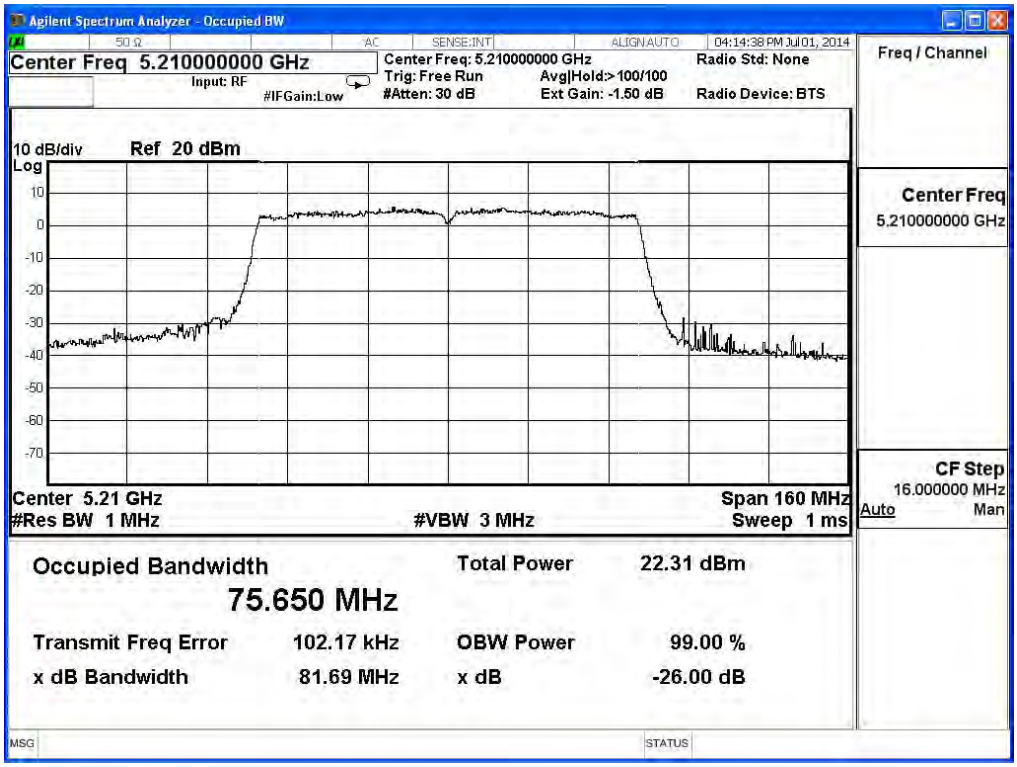
99% & 26dB Bandwidth – Channel 42



Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	99% & 26dB Bandwidth		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

802.11ac_80M(ANT 1)					
Channel No.	Frequency (MHz)	26dB BW (MHz)	99 % OBW (MHz)	Required Limit (MHz)	Result
42	5210	81.690	75.650	--	Pass

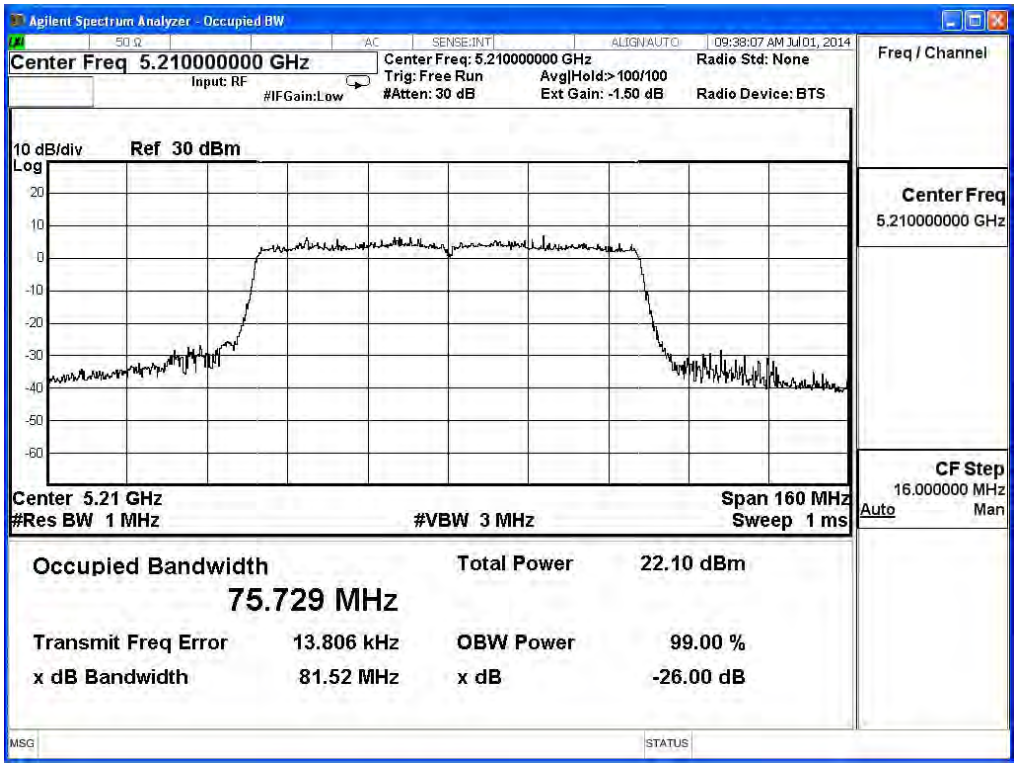
99% & 26dB Bandwidth – Channel 42



Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	99% & 26dB Bandwidth		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

802.11ac_80M(ANT 2)					
Channel No.	Frequency (MHz)	26dB BW (MHz)	99 % OBW (MHz)	Required Limit (MHz)	Result
42	5210	81.520	75.729	--	Pass

99% & 26dB Bandwidth – Channel 42

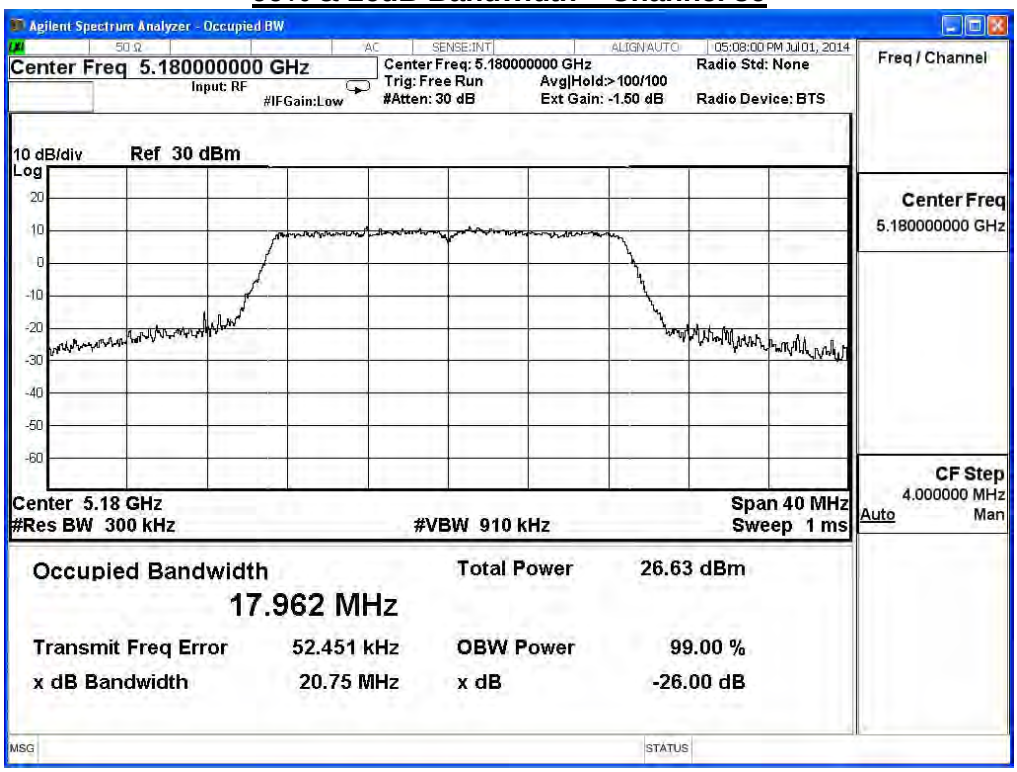


Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	99% & 26dB Bandwidth		
Test Mode	Mode 2: Transmit (Beamforming Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

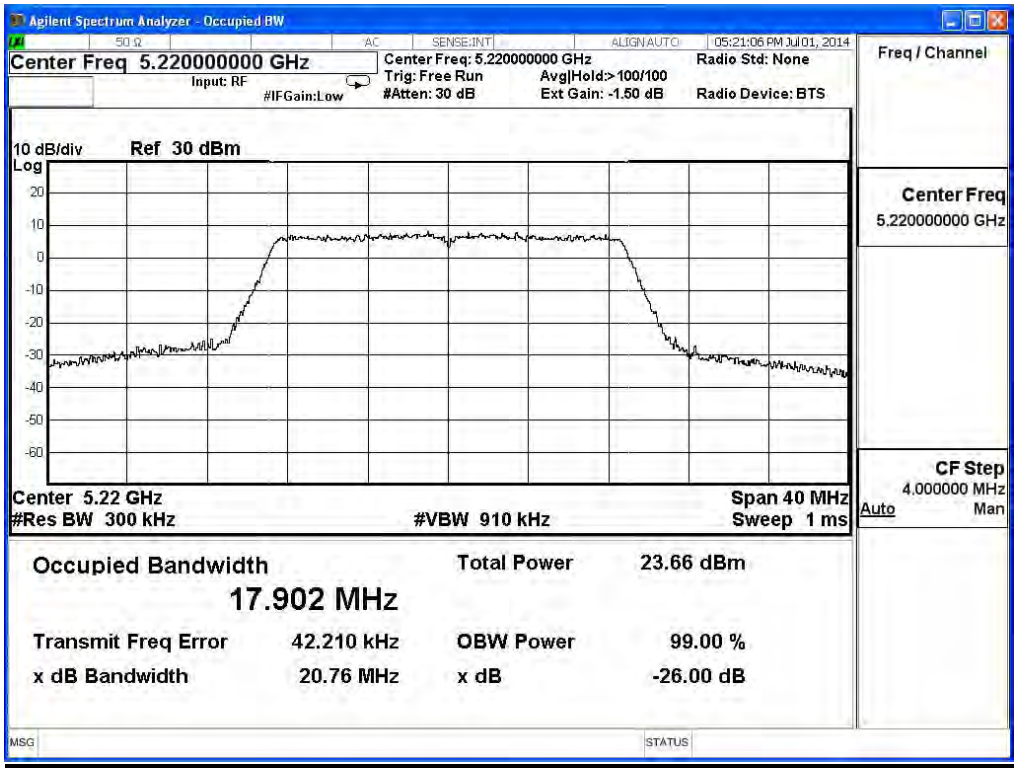
802.11n_20M(ANT 0)

Channel No.	Frequency (MHz)	26dB BW (MHz)	99 % OBW (MHz)	Required Limit (MHz)	Result
36	5180	20.750	17.962	--	Pass
44	5220	20.760	17.902	--	Pass
48	5240	20.720	17.979	--	Pass

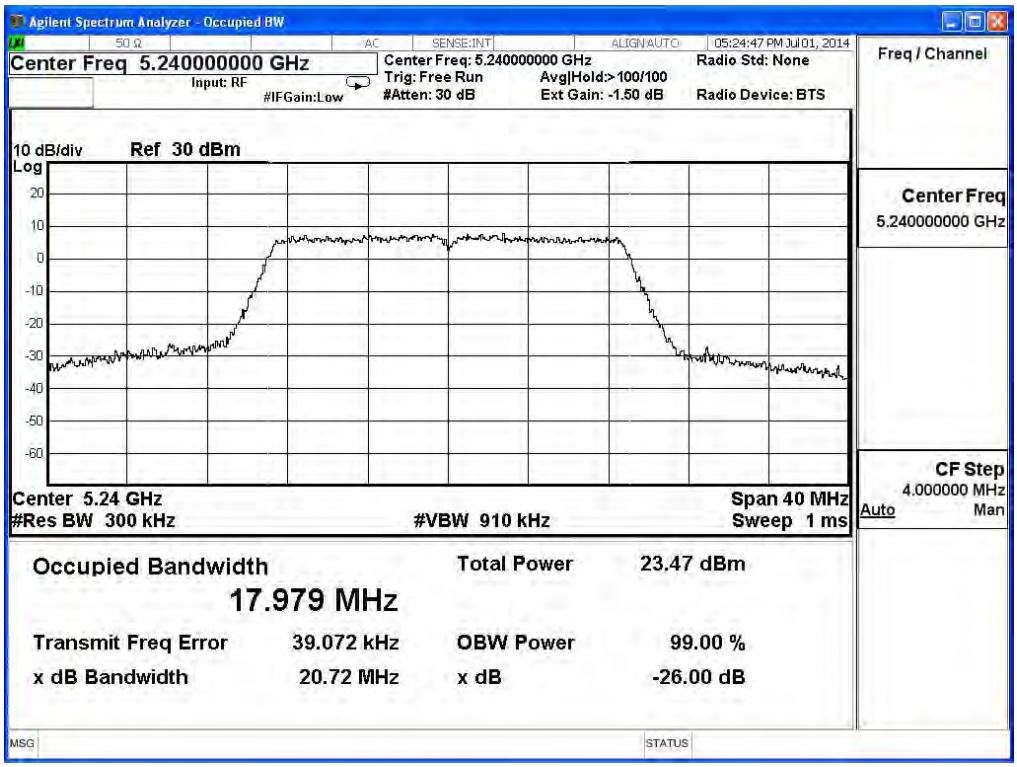
99% & 26dB Bandwidth – Channel 36



99% & 26dB Bandwidth – Channel 44



99% & 26dB Bandwidth – Channel 48

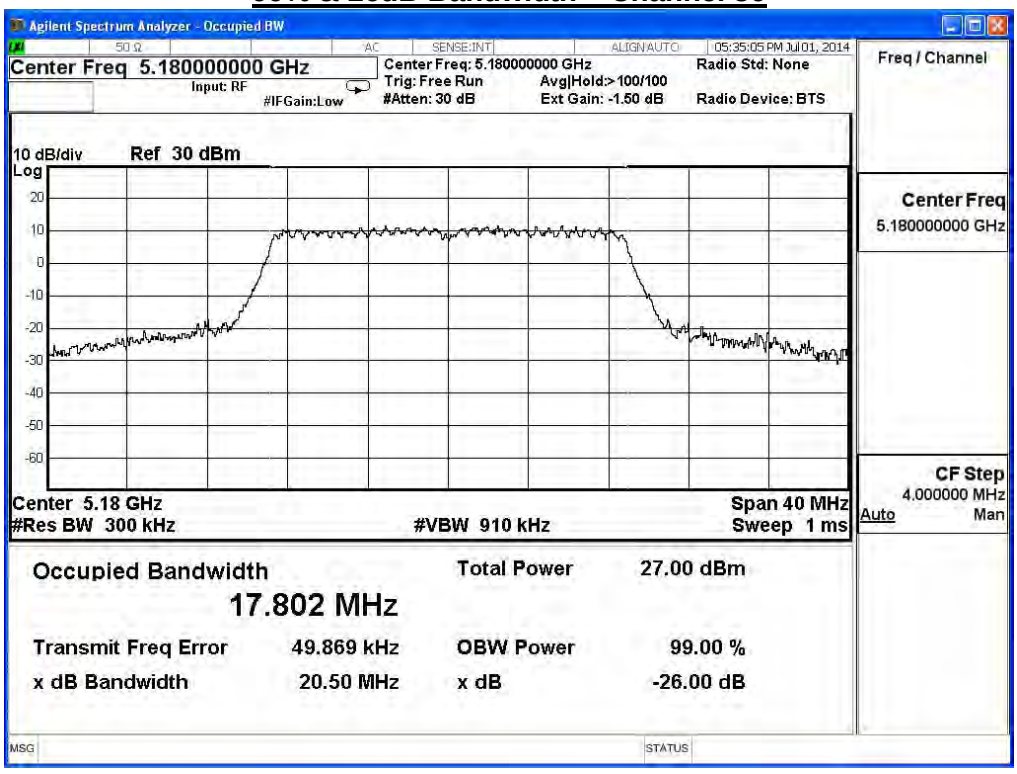


Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	99% & 26dB Bandwidth		
Test Mode	Mode 2: Transmit (Beamforming Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

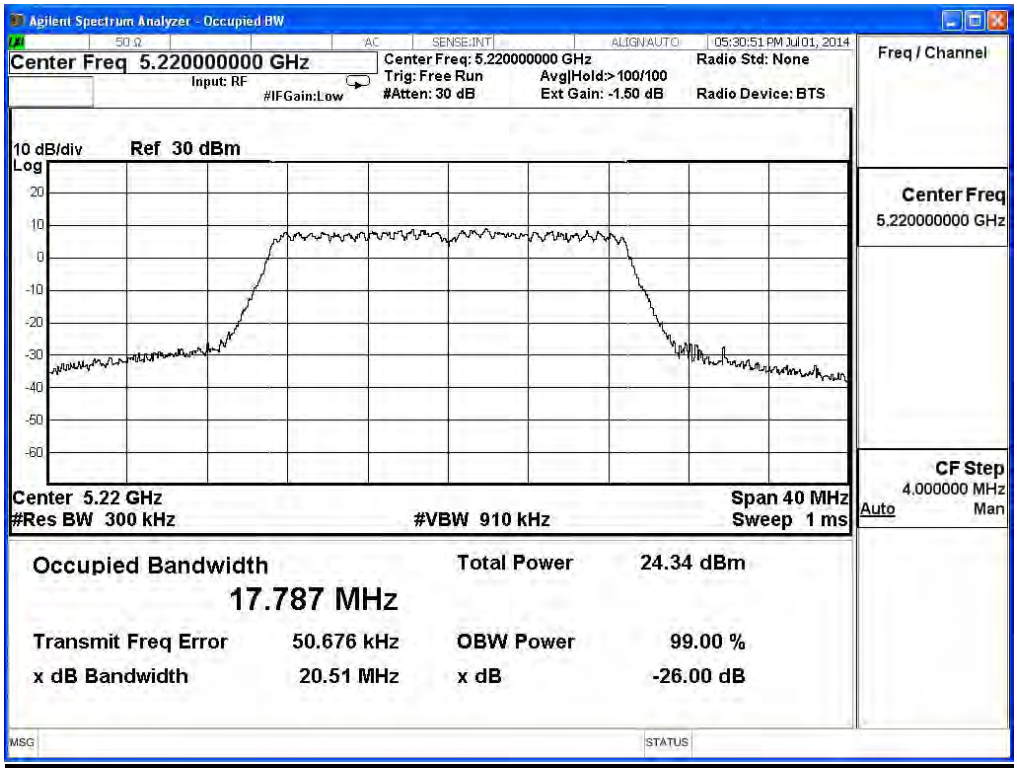
802.11n_20M(ANT 1)

Channel No.	Frequency (MHz)	26dB BW (MHz)	99 % OBW (MHz)	Required Limit (MHz)	Result
36	5180	20.500	17.802	--	Pass
44	5220	20.510	17.787	--	Pass
48	5240	20.480	17.780	--	Pass

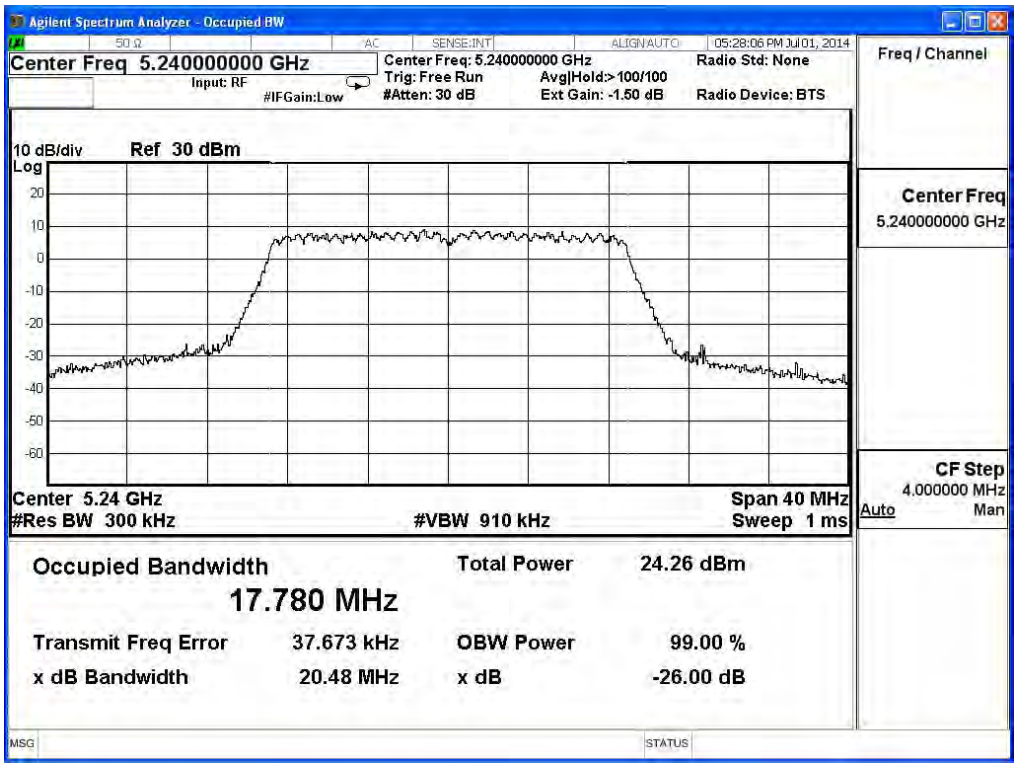
99% & 26dB Bandwidth – Channel 36



99% & 26dB Bandwidth – Channel 44



99% & 26dB Bandwidth – Channel 48

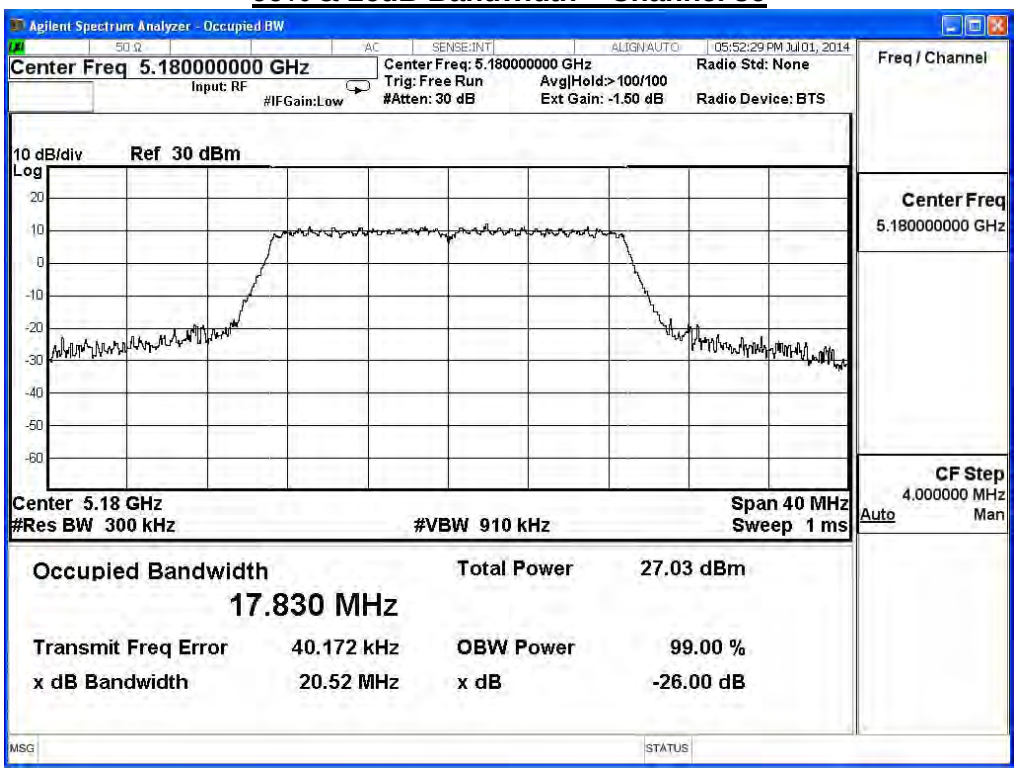


Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	99% & 26dB Bandwidth		
Test Mode	Mode 2: Transmit (Beamforming Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

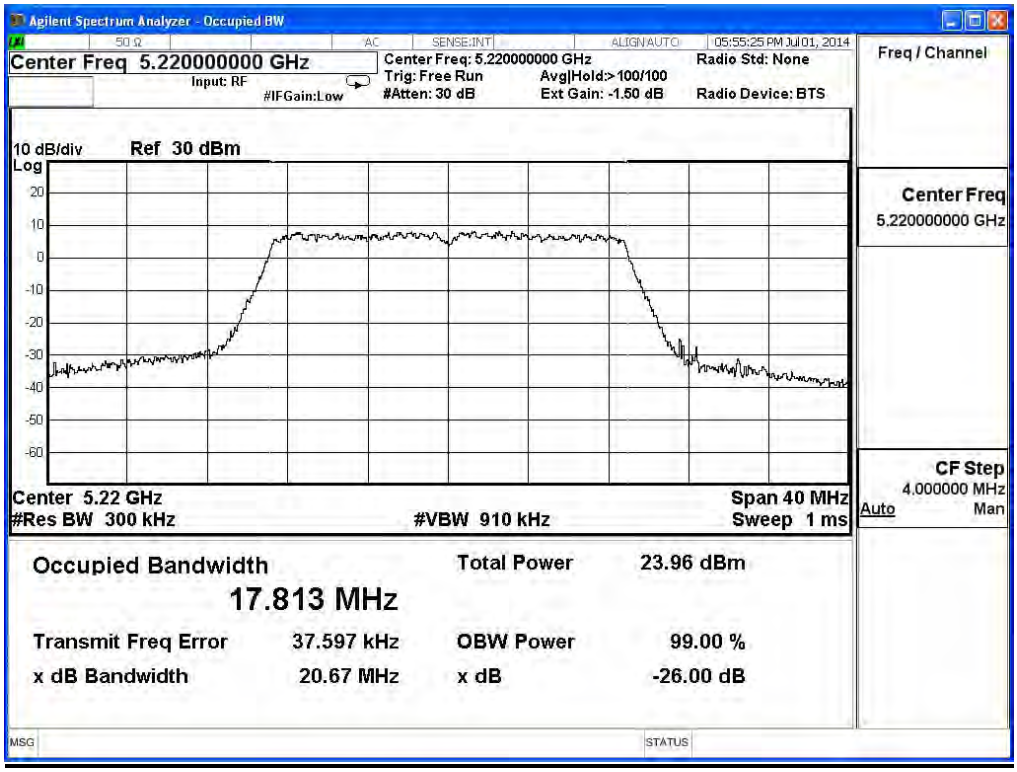
802.11n_20M(ANT 2)

Channel No.	Frequency (MHz)	26dB BW (MHz)	99 % OBW (MHz)	Required Limit (MHz)	Result
36	5180	20.520	17.830	--	Pass
44	5220	20.670	17.813	--	Pass
48	5240	20.590	17.802	--	Pass

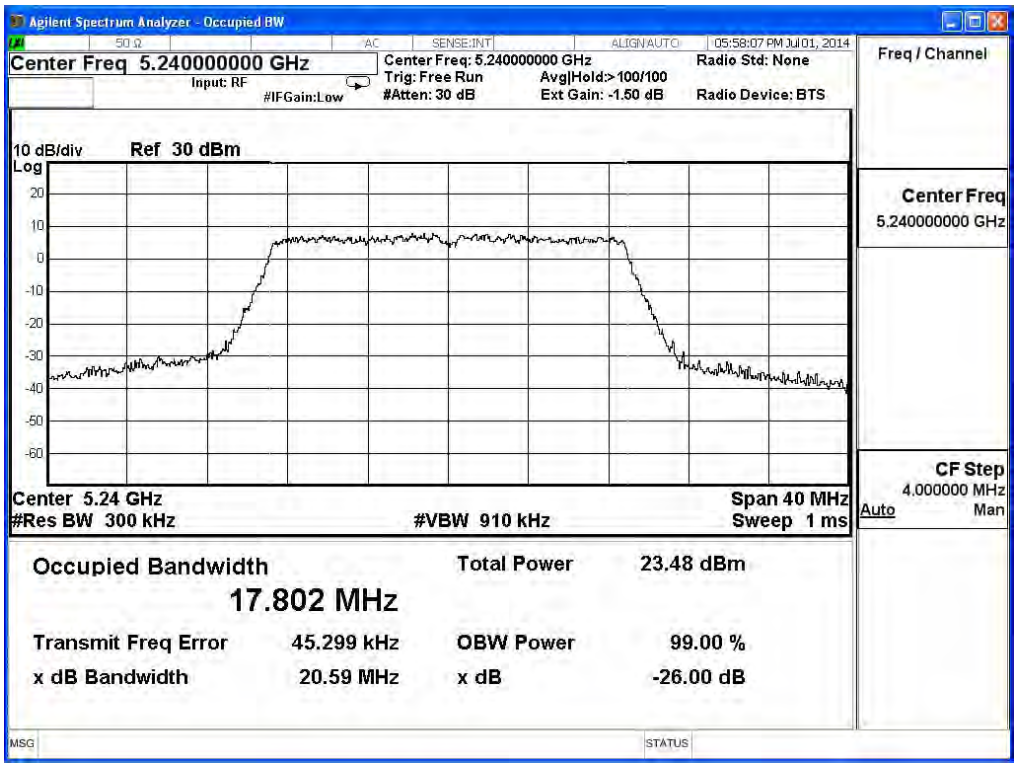
99% & 26dB Bandwidth – Channel 36



99% & 26dB Bandwidth – Channel 44



99% & 26dB Bandwidth – Channel 48

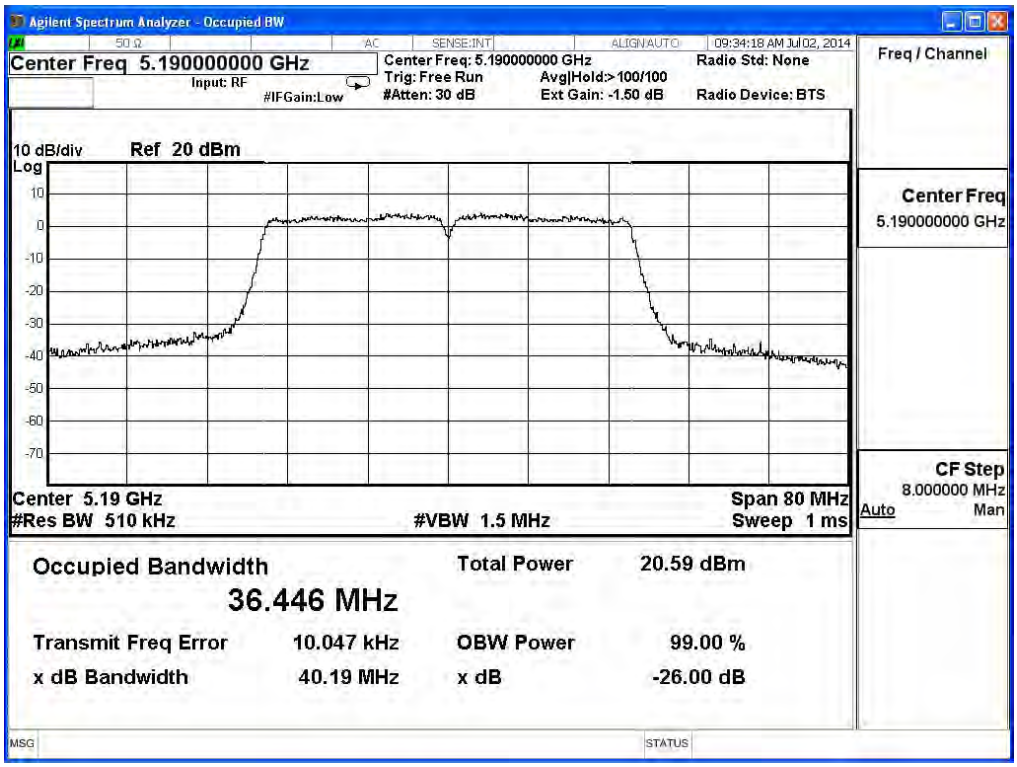


Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	99% & 26dB Bandwidth		
Test Mode	Mode 2: Transmit (Beamforming Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

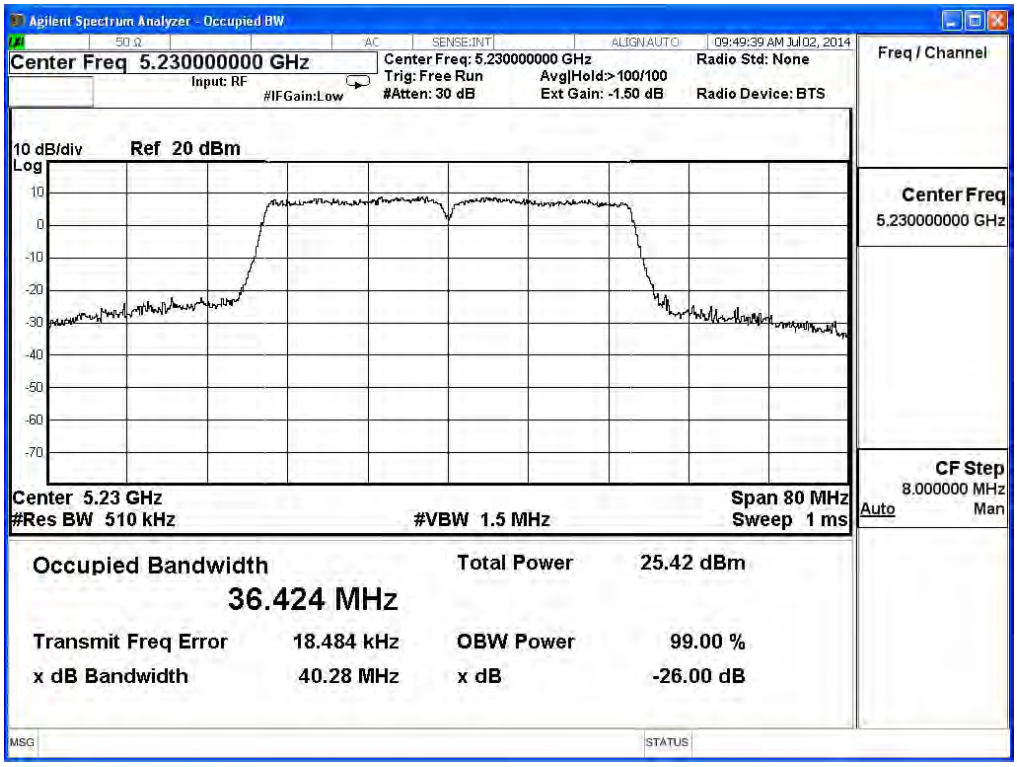
802.11n_40M(ANT 0)

Channel No.	Frequency (MHz)	26dB BW (MHz)	99 % OBW (MHz)	Required Limit (MHz)	Result
38	5190	40.190	36.446	--	Pass
46	5230	40.280	36.424	--	Pass

99% & 26dB Bandwidth – Channel 38



99% & 26dB Bandwidth – Channel 46

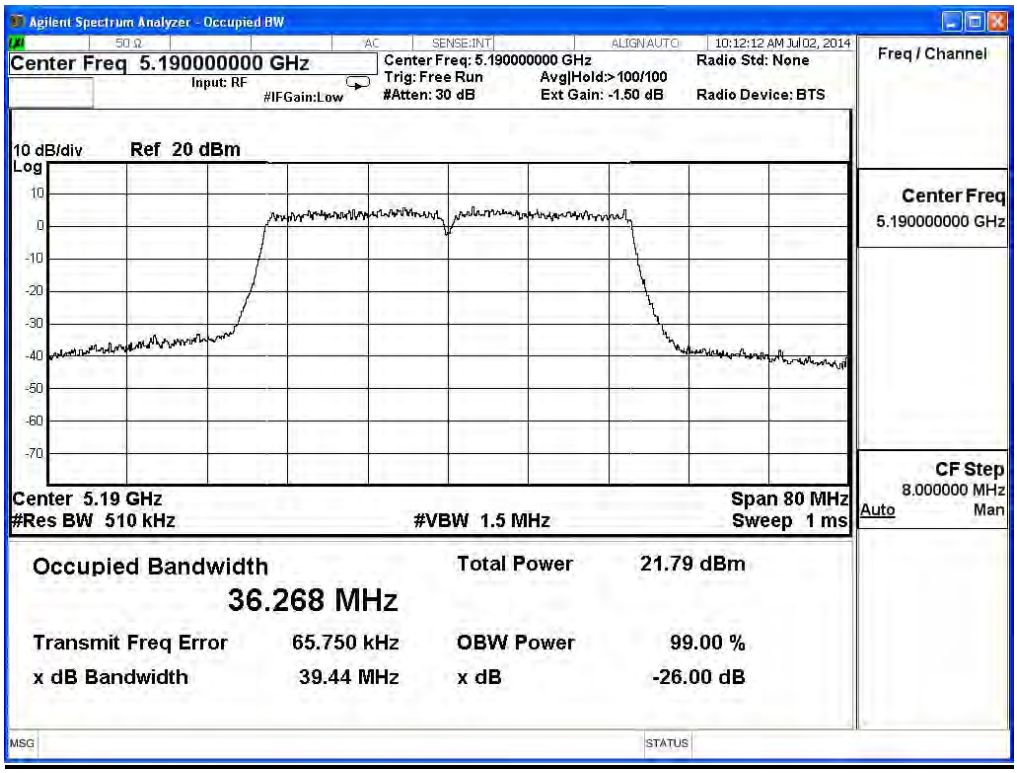


Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	99% & 26dB Bandwidth		
Test Mode	Mode 2: Transmit (Beamforming Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

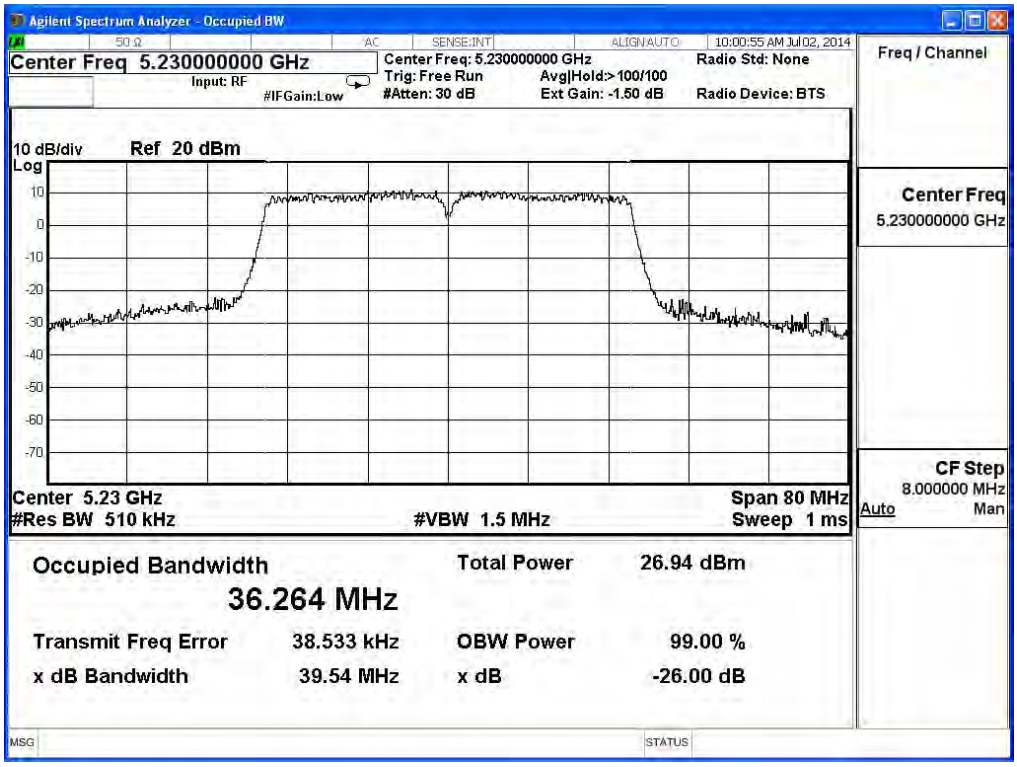
802.11n_40M(ANT 1)

Channel No.	Frequency (MHz)	26dB BW (MHz)	99 % OBW (MHz)	Required Limit (MHz)	Result
38	5190	39.440	36.268	--	Pass
46	5230	39.540	36.264	--	Pass

99% & 26dB Bandwidth – Channel 38



99% & 26dB Bandwidth – Channel 46

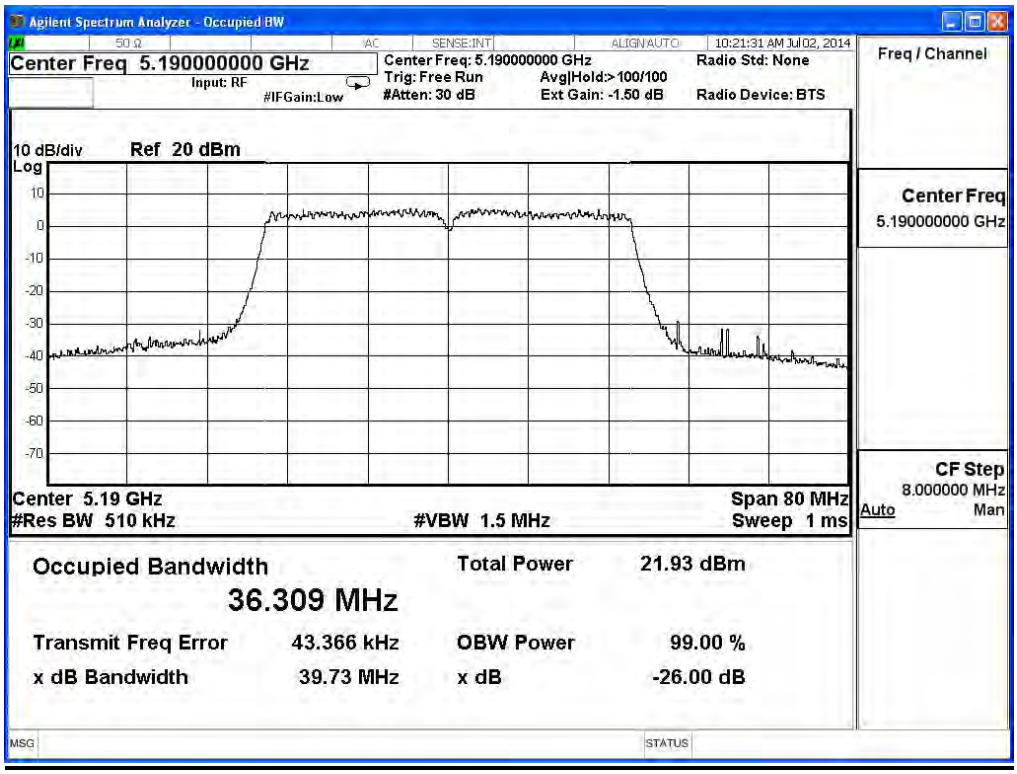


Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	99% & 26dB Bandwidth		
Test Mode	Mode 2: Transmit (Beamforming Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

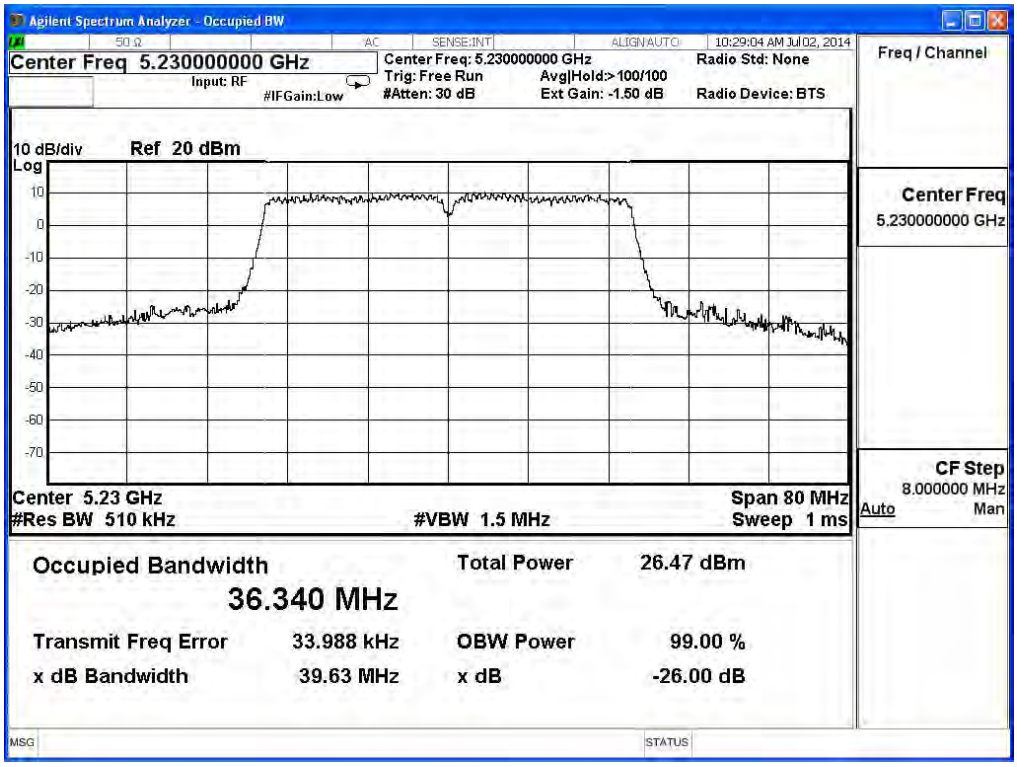
802.11n_40M(ANT 2)

Channel No.	Frequency (MHz)	26dB BW (MHz)	99 % OBW (MHz)	Required Limit (MHz)	Result
38	5190	39.730	36.309	--	Pass
46	5230	39.630	36.340	--	Pass

99% & 26dB Bandwidth – Channel 38



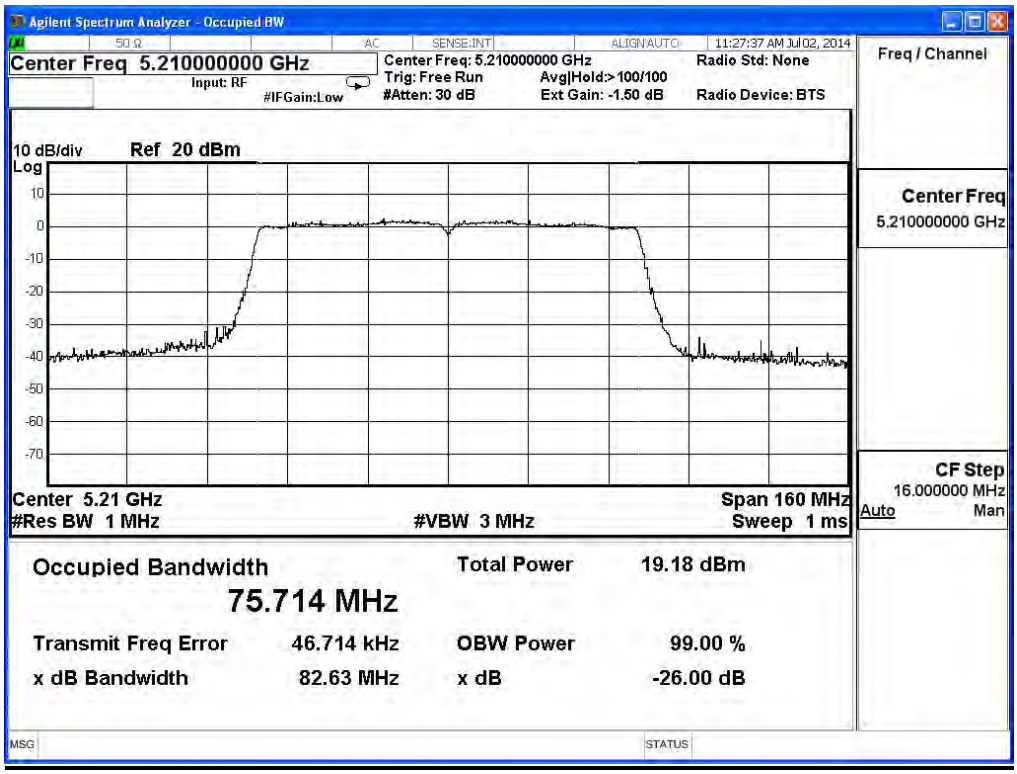
99% & 26dB Bandwidth – Channel 46



Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	99% & 26dB Bandwidth		
Test Mode	Mode 2: Transmit (Beamforming Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

802.11ac_80M(ANT 0)					
Channel No.	Frequency (MHz)	26dB BW (MHz)	99 % OBW (MHz)	Required Limit (MHz)	Result
42	5210	82.630	75.714	--	Pass

99% & 26dB Bandwidth – Channel 42

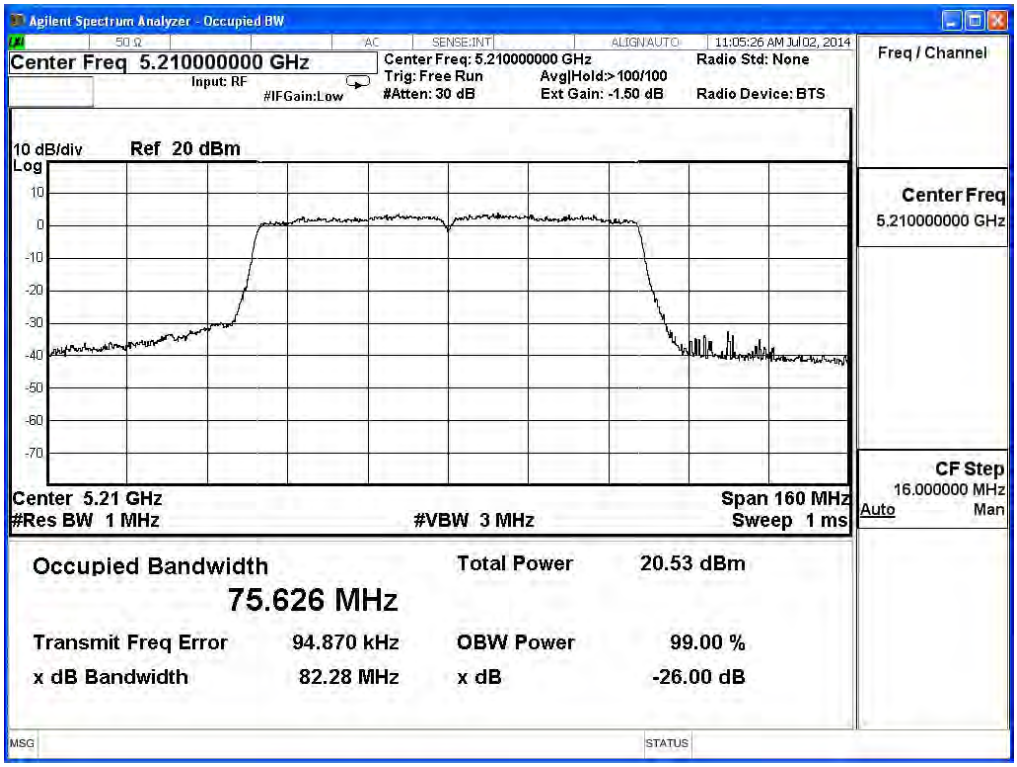


Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	99% & 26dB Bandwidth		
Test Mode	Mode 2: Transmit (Beamforming Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

802.11ac_80M(ANT 1)

Channel No.	Frequency (MHz)	26dB BW (MHz)	99 % OBW (MHz)	Required Limit (MHz)	Result
42	5210	82.280	75.626	--	Pass

99% & 26dB Bandwidth – Channel 42

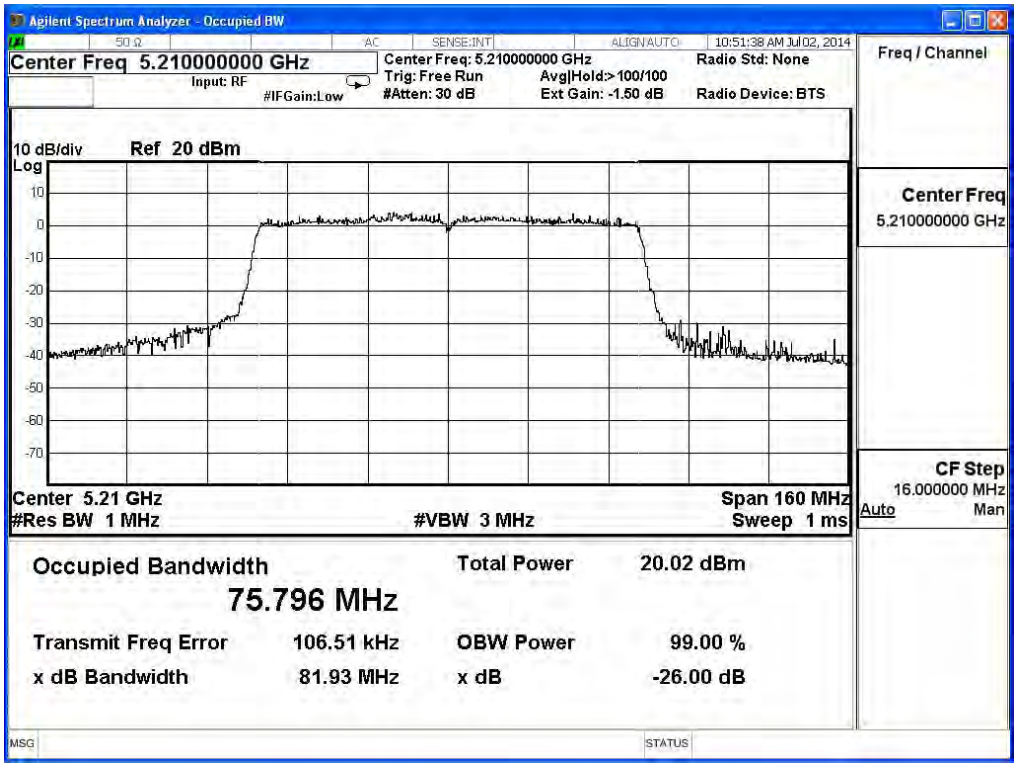


Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	99% & 26dB Bandwidth		
Test Mode	Mode 2: Transmit (Beamforming Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

802.11ac_80M(ANT 2)

Channel No.	Frequency (MHz)	26dB BW (MHz)	99 % OBW (MHz)	Required Limit (MHz)	Result
42	5210	81.930	75.796	--	Pass

99% & 26dB Bandwidth – Channel 42



4. Peak Transmit Output

4.1. Test Equipment

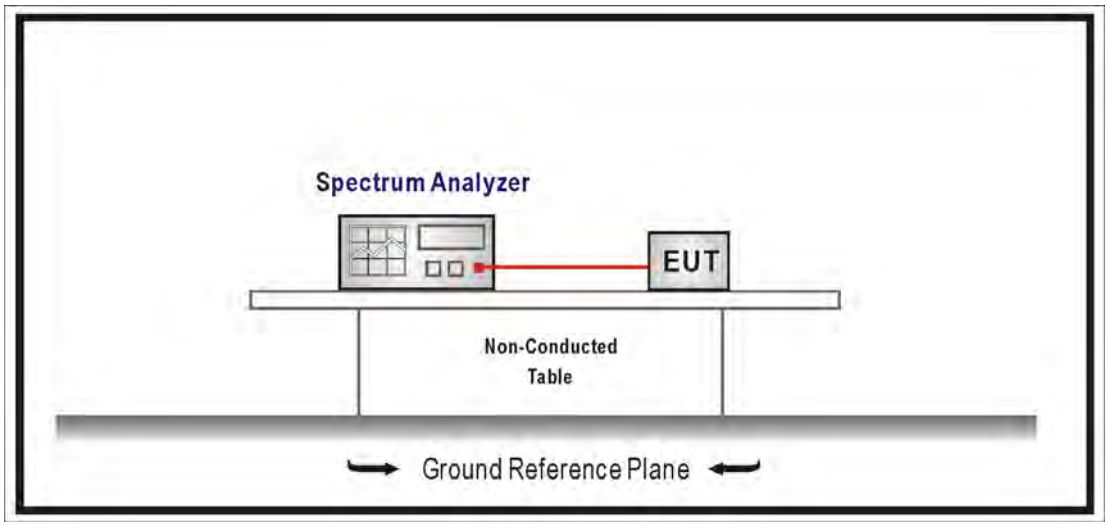
The following test equipments are used during the conducted tests:

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 1W or 30 dBm , 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 5.725-5.850 GHz, the peak transmit power over the frequency band of operation shall not exceed the lesser of 1W or 30dBm, 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 C63.10; tested to U-NII test procedure of 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	2014/07/01	Test Site	SR7

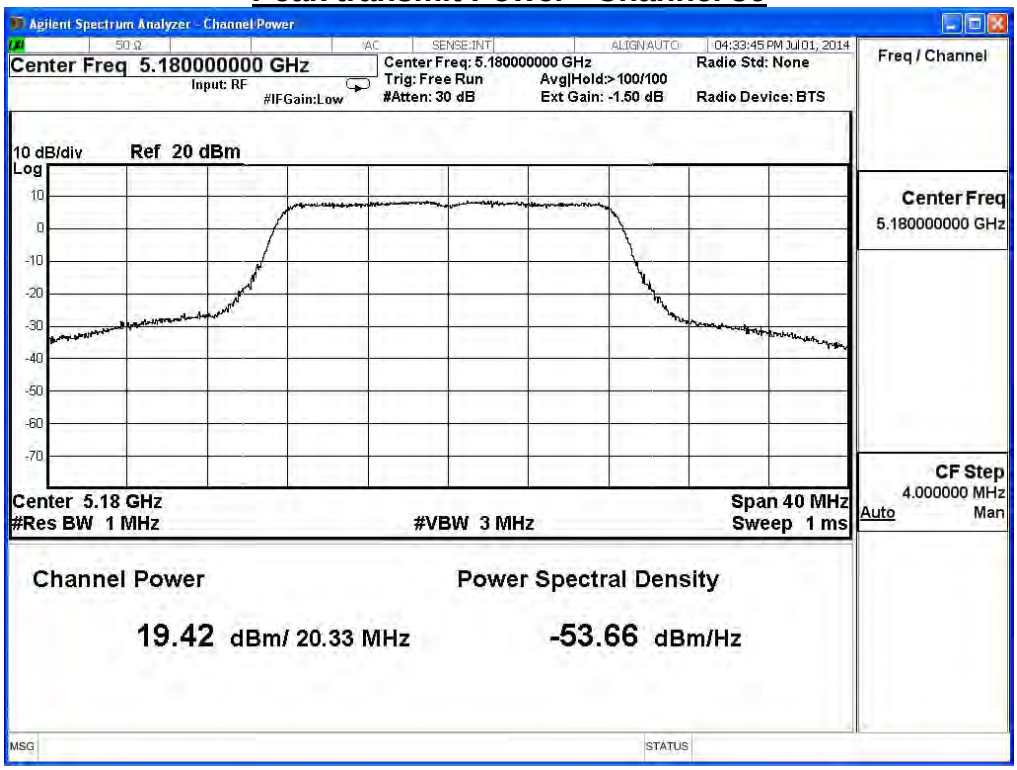
802.11a (ANT0) , Power Index : ch.36:78 ch.44:74 ch.48:73

Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit	Result
36	5180	20.330	19.420	≤30	Pass
44	5220	20.480	18.210	≤30	Pass
48	5240	20.360	17.890	≤30	Pass

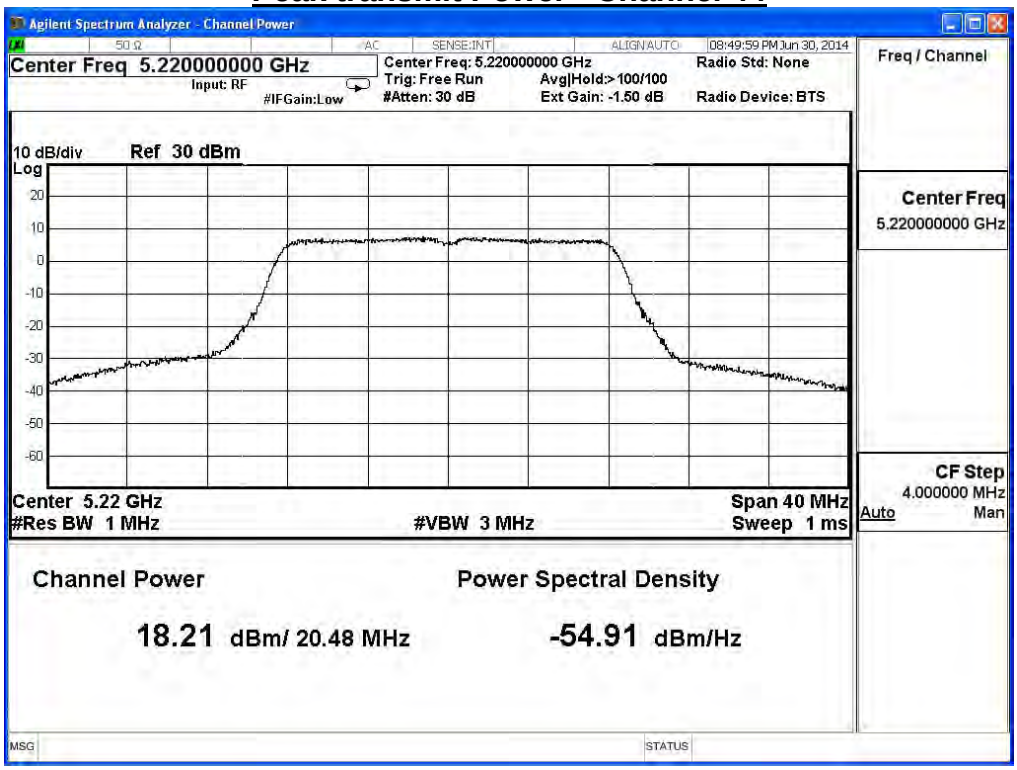
The worst emission of data rate is 6 Mbps.

Peak Power Output (dBm)									
Channel No	Frequency (MHz)	Data Rate							Required Limit
		6	12	18	24	36	48	54	
36	5180	19.42	--	--	--	--	--	--	30dBm
44	5220	18.21	18.11	18.01	17.91	17.71	17.47	17.35	
48	5240	17.89	--	--	--	--	--	--	

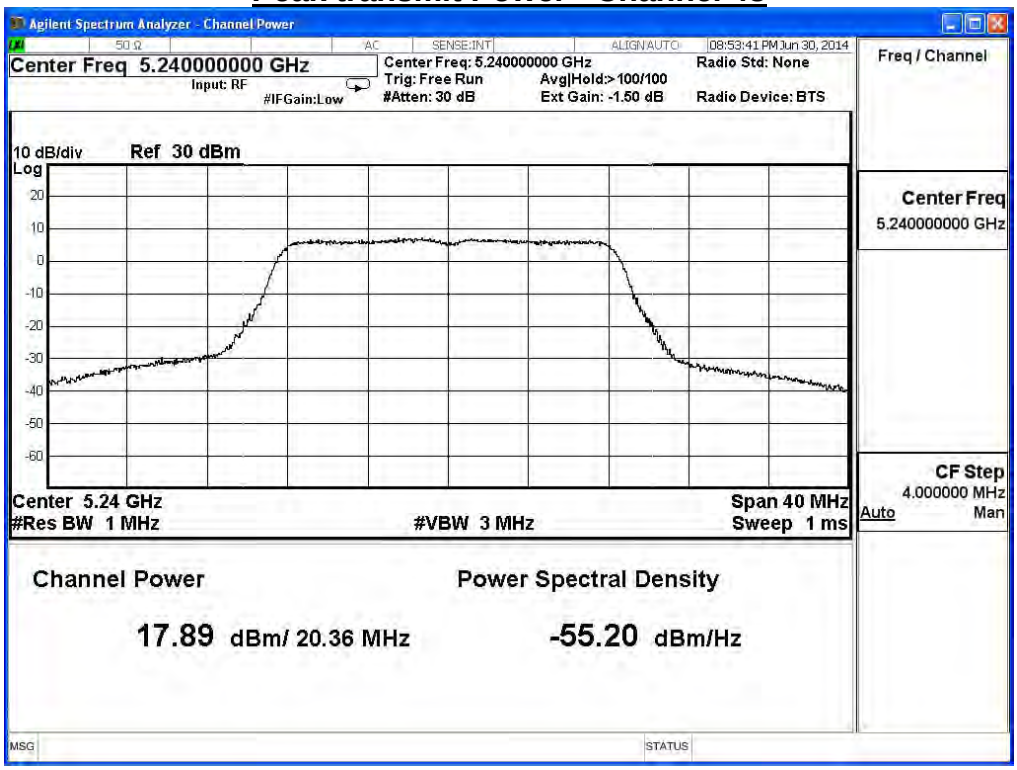
Peak transmit Power - Channel 36



Peak transmit Power - Channel 44



Peak transmit Power - Channel 48



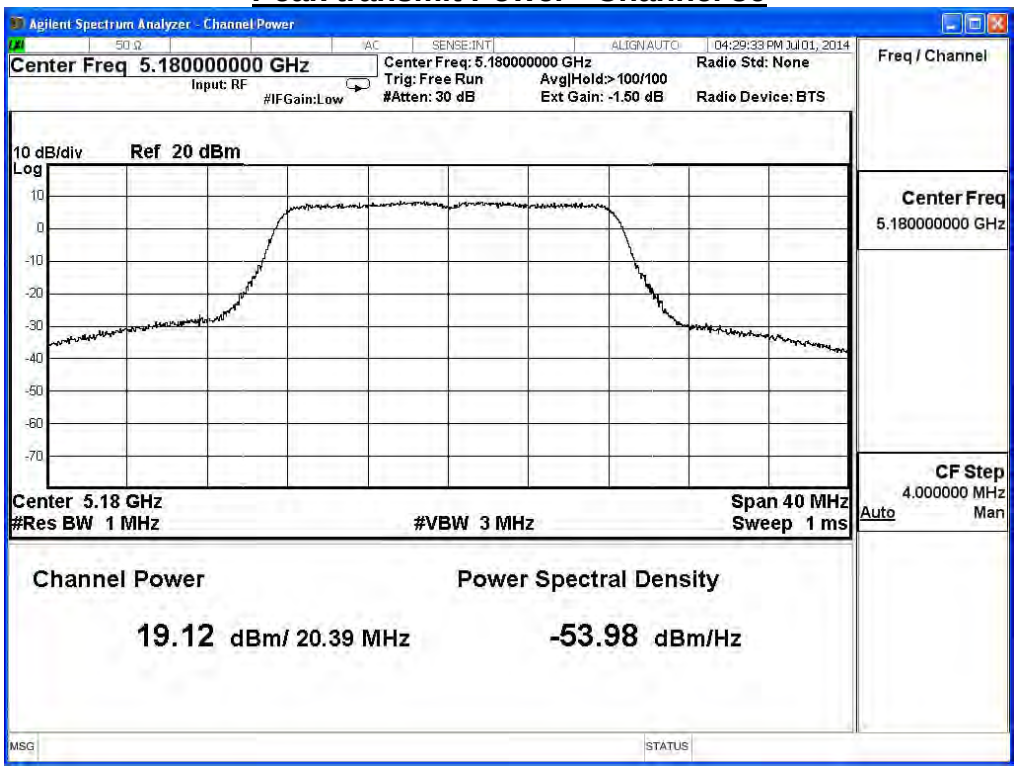
Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

802.11a (ANT1) , Power Index : ch.36:78 ch.44:74 ch.48:73					
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit	Result
36	5180	20.390	19.120	≤30	Pass
44	5220	20.310	18.140	≤30	Pass
48	5240	20.390	17.970	≤30	Pass

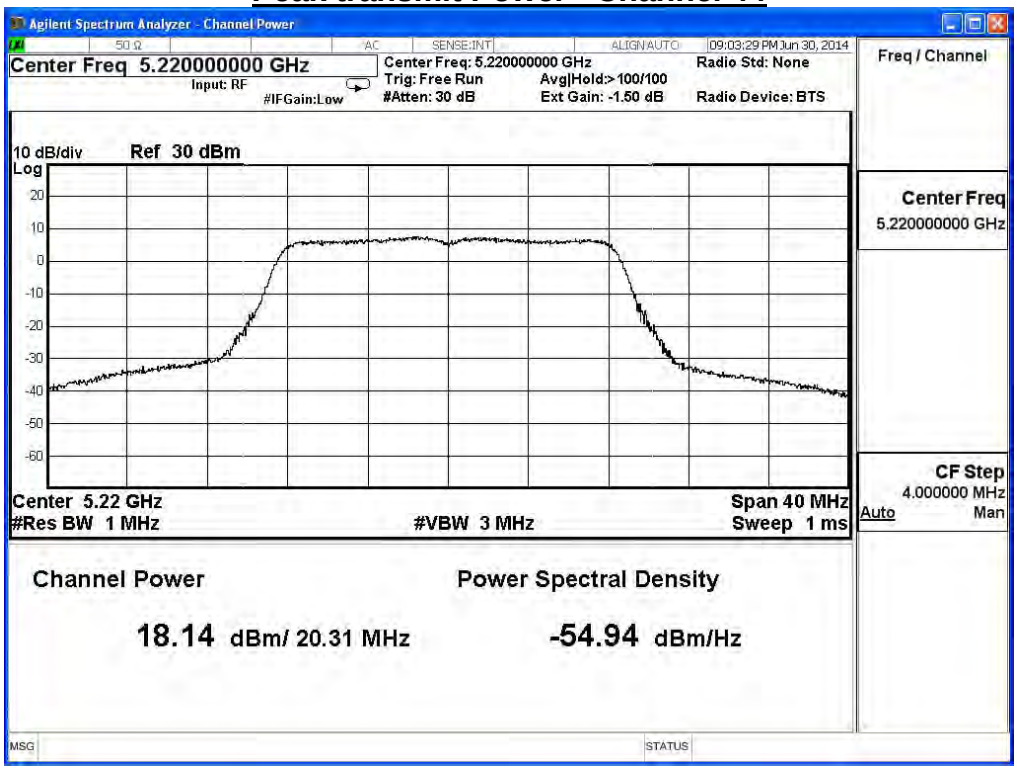
The worst emission of data rate is 6 Mbps.

Peak Power Output (dBm)									
Channel No	Frequency (MHz)	Data Rate							Required Limit
		6	12	18	24	36	48	54	
36	5180	19.12	--	--	--	--	--	--	30dBm
44	5220	18.14	18.04	17.84	17.64	17.54	17.42	17.18	
48	5240	17.97	--	--	--	--	--	--	

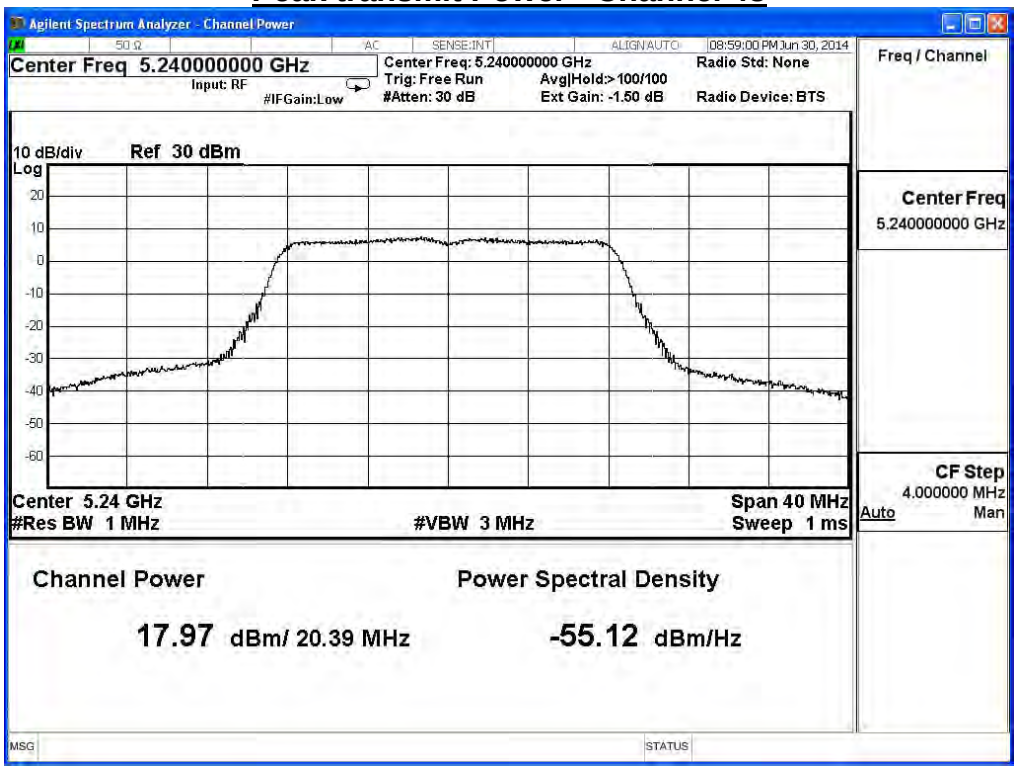
Peak transmit Power - Channel 36



Peak transmit Power - Channel 44



Peak transmit Power - Channel 48



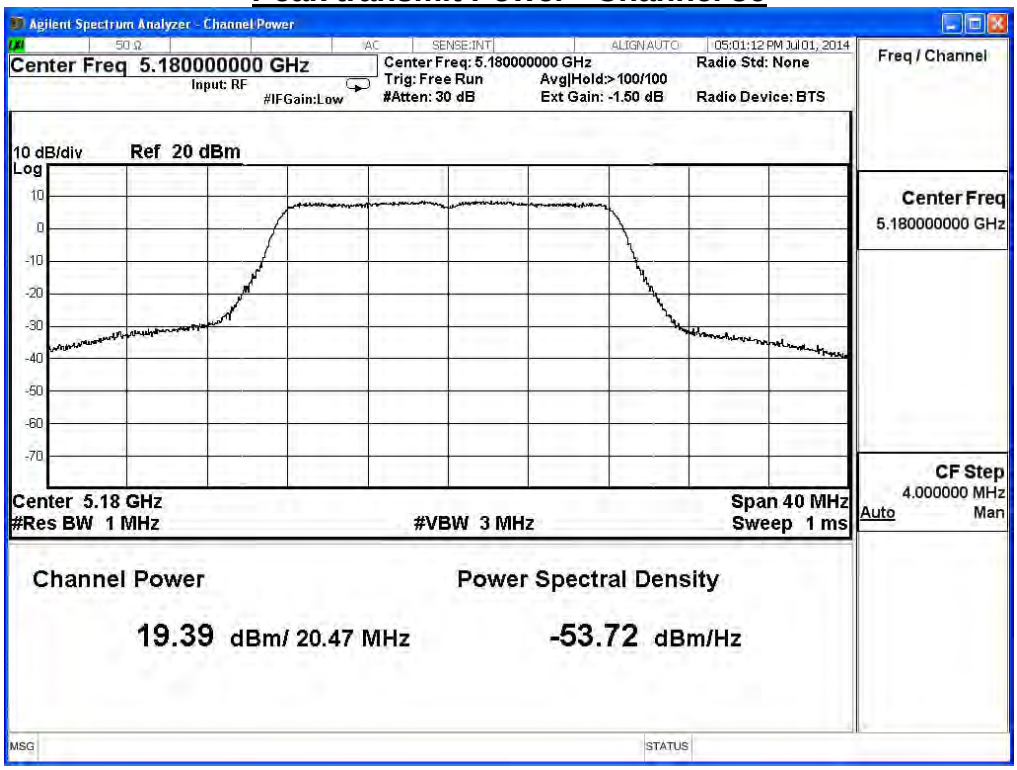
Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

802.11a (ANT2) , Power Index : ch.36:78 ch.44:74 ch.48:73					
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit	Result
36	5180	20.470	19.390	≤30	Pass
44	5220	20.460	18.270	≤30	Pass
48	5240	20.430	17.920	≤30	Pass

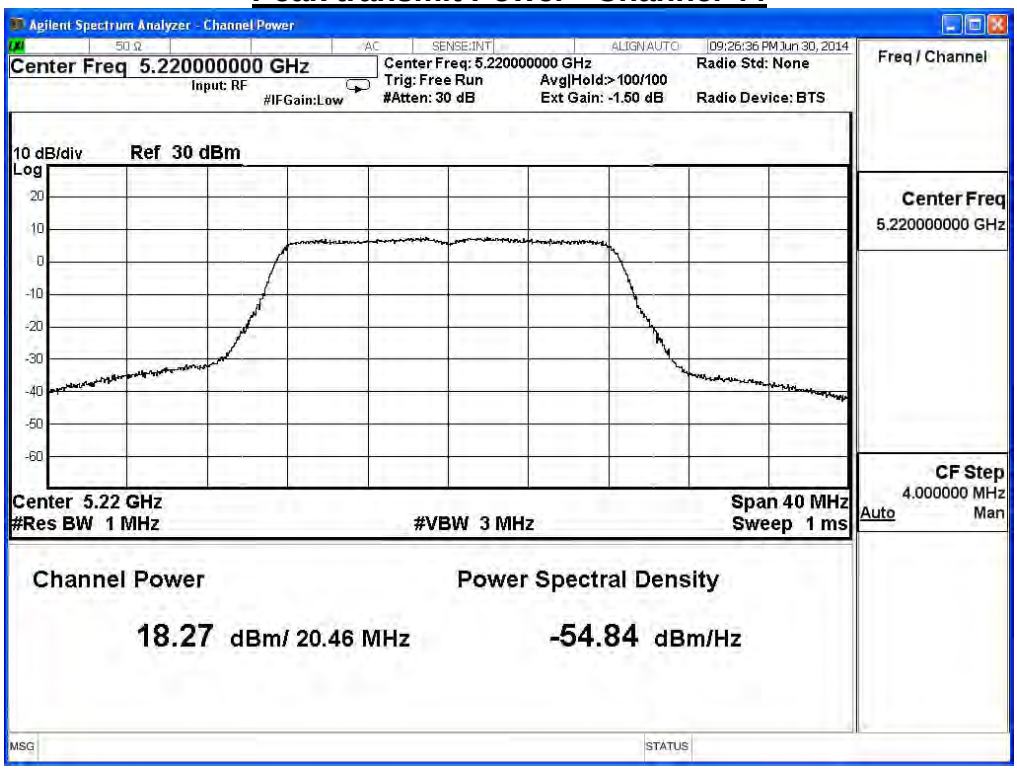
The worst emission of data rate is 6 Mbps.

Peak Power Output (dBm)									
Channel No	Frequency (MHz)	Data Rate							Required Limit
		6	12	18	24	36	48	54	
36	5180	19.39	--	--	--	--	--	--	30dBm
44	5220	18.27	18.07	17.97	17.87	17.67	17.55	17.31	
48	5240	17.92	--	--	--	--	--	--	

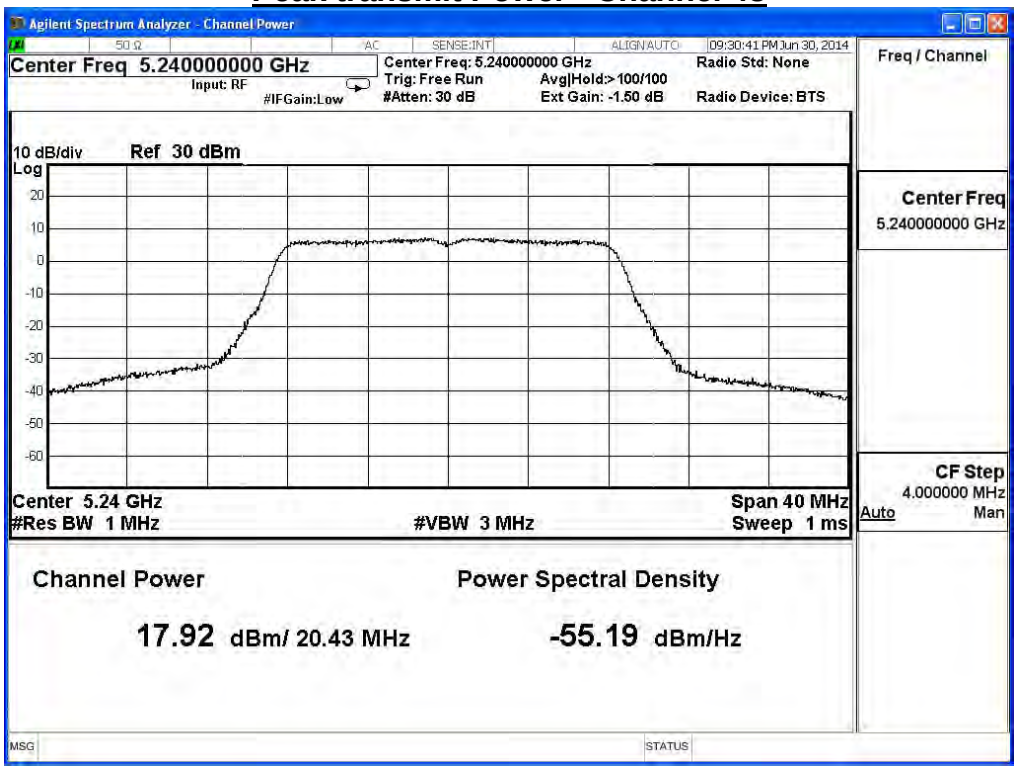
Peak transmit Power - Channel 36



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	2014/07/01	Test Site	SR7

802.11a (ANT0+1+2)					
Channel No.	Frequency (MHz)	Total Output Power		Required Limit (dBm)	Result
		(mW)	(dBm)		
36	5180	256.053	24.083	≤30	Pass
44	5220	198.527	22.978	≤30	Pass
48	5240	186.123	22.698	≤30	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	24.08	--	--	--	--	--	--	30dBm
44	5220	22.98	22.84	22.71	22.58	22.41	22.25	22.05	
48	5240	22.70	--	--	--	--	--	--	

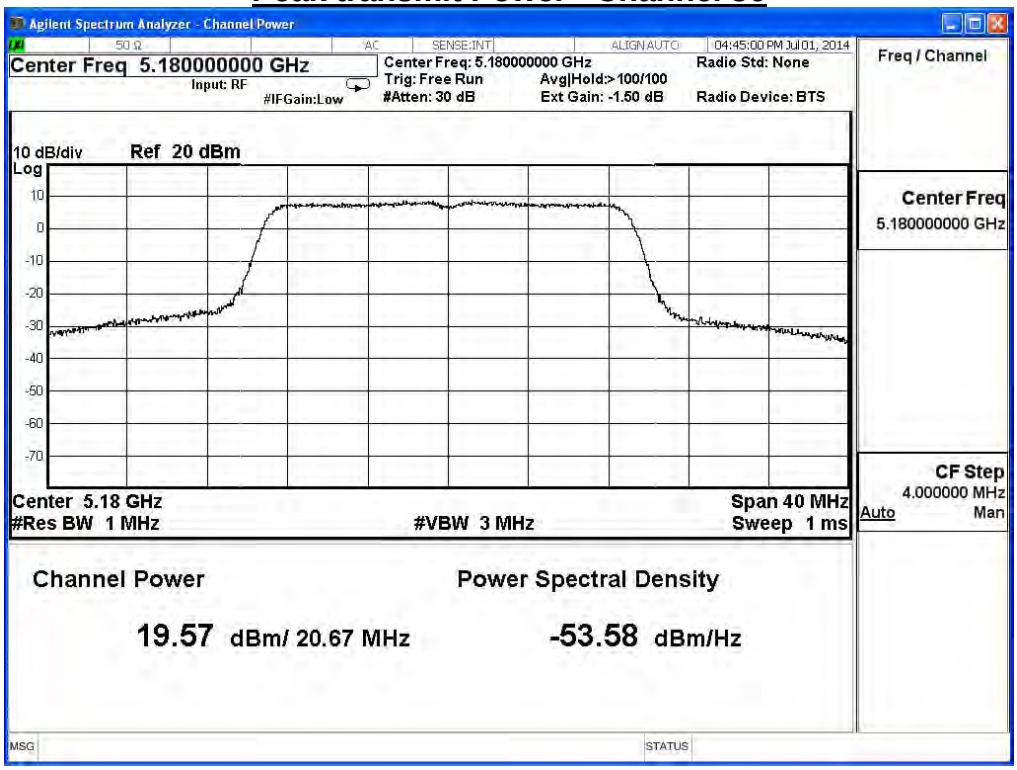
Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

IEEE 802.11n(20MHz)_ANT 0, Power Index : ch.36:79 ch.44:77 ch.48:71					
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit	Result
36	5180	20.670	19.570	≤30	Pass
44	5220	20.760	18.960	≤30	Pass
48	5240	20.680	17.320	≤30	Pass

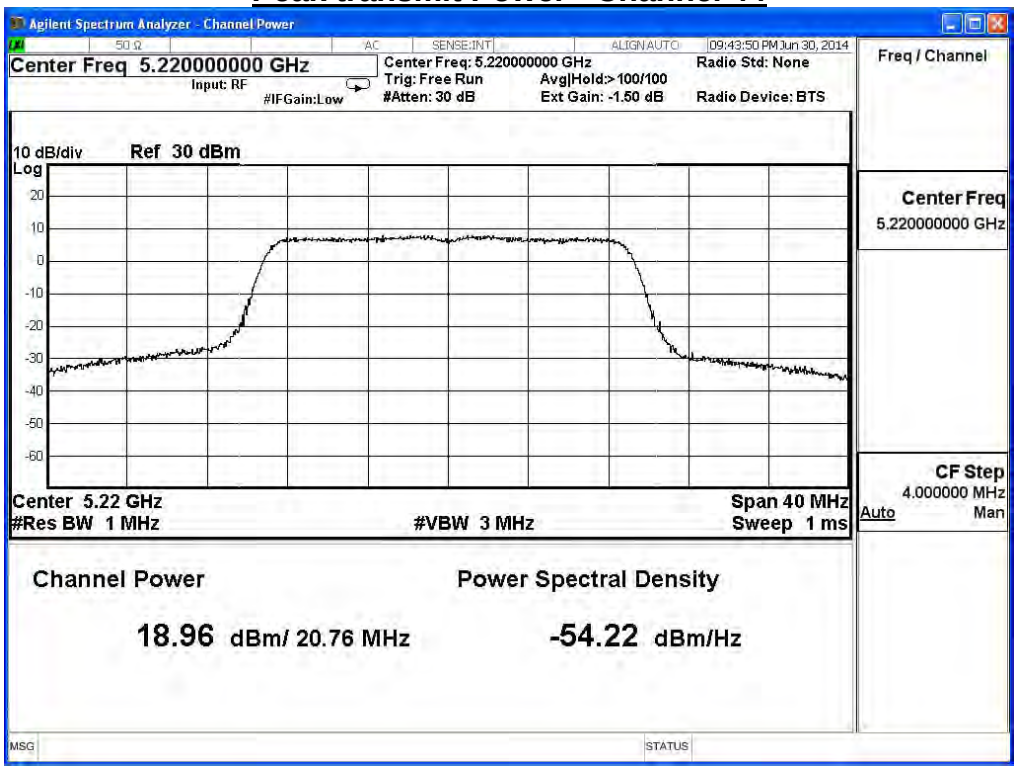
The worst emission of data rate is 6.5Mbps.

Peak Power Output (dBm)										
MCS Index		0	1	2	3	4	5	6	7	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		6.5	13	19.5	26	39	52	58.5	65	
36	5180	19.57	--	--	--	--	--	--	--	30dBm
44	5220	18.96	18.76	18.56	18.36	18.26	18.14	17.90	17.78	
48	5240	17.32	--	--	--	--	--	--	--	

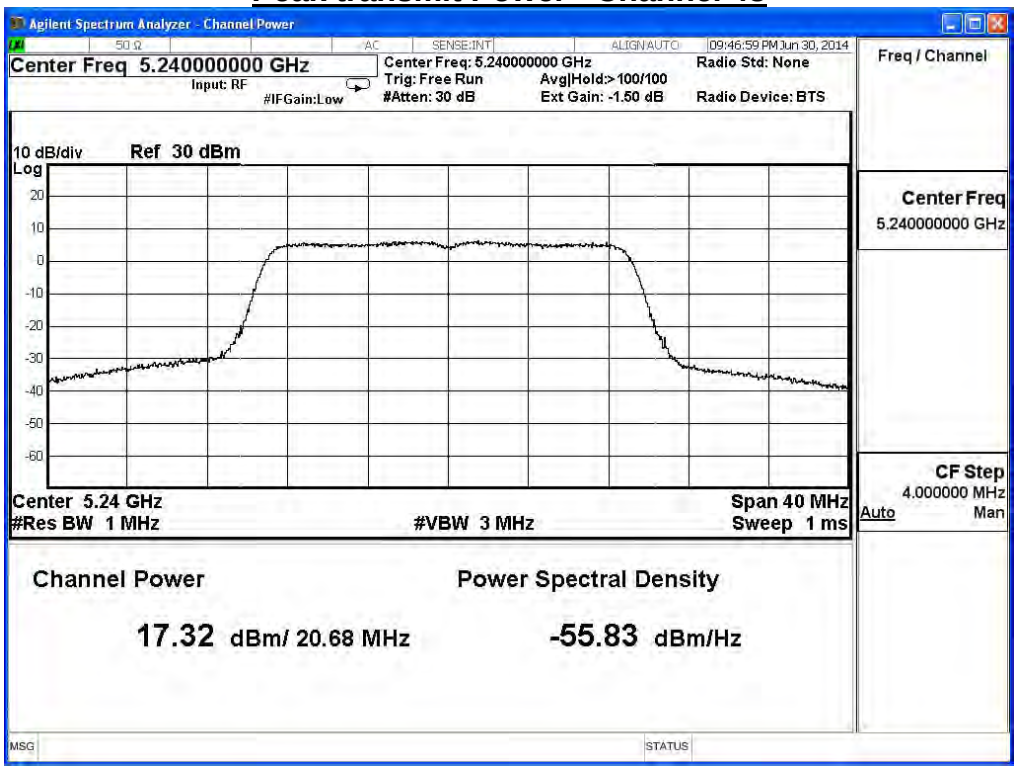
Peak transmit Power - Channel 36



Peak transmit Power - Channel 44



Peak transmit Power - Channel 48



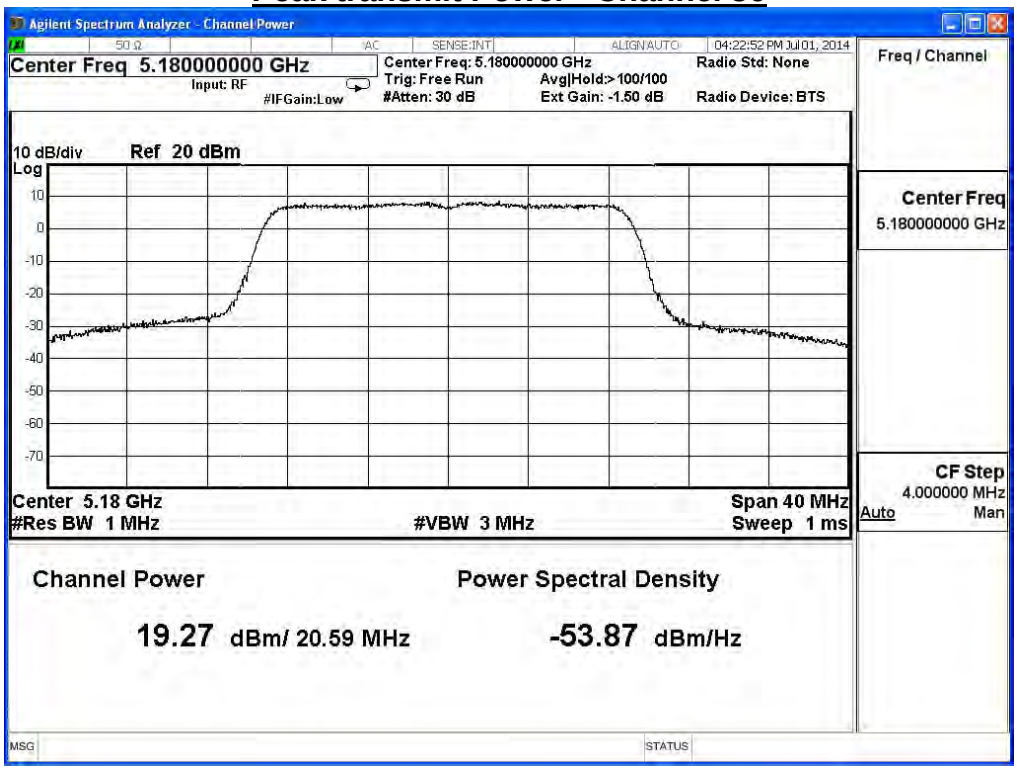
Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

IEEE 802.11n(20MHz)_ANT 1, Power Index : ch.36:79 ch.44:77 ch.48:71					
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit	Result
36	5180	20.590	19.270	≤30	Pass
44	5220	20.590	18.770	≤30	Pass
48	5240	20.420	17.440	≤30	Pass

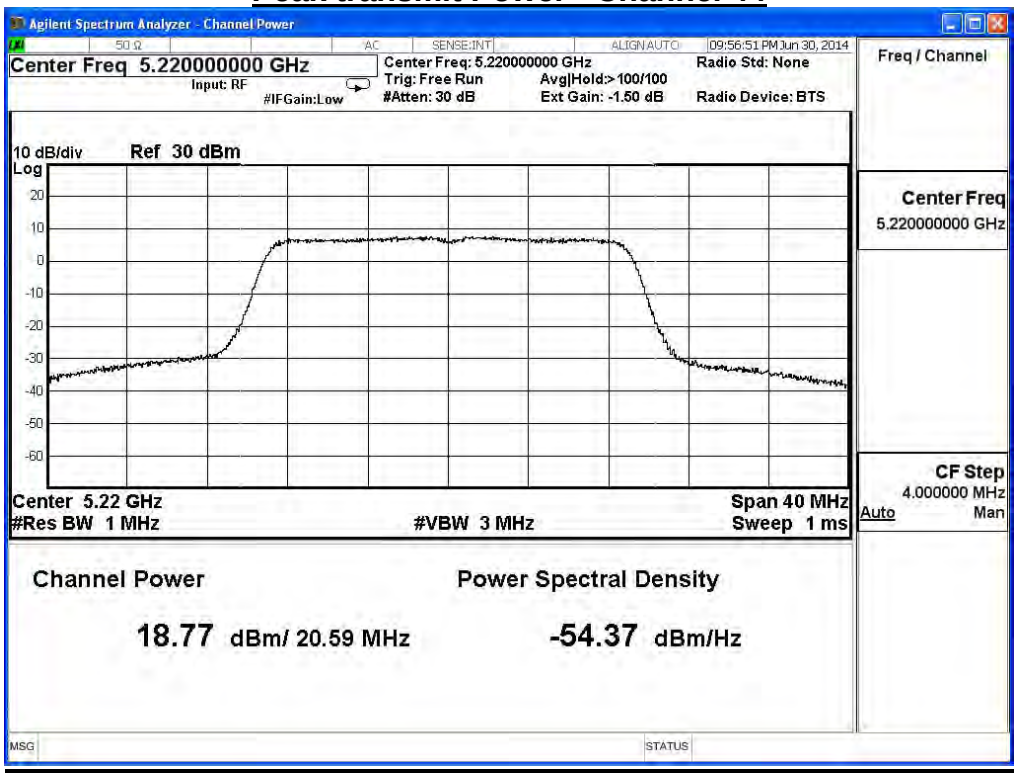
The worst emission of data rate is 6.5Mbps.

Peak Power Output (dBm)										
MCS Index		0	1	2	3	4	5	6	7	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		6.5	13	19.5	26	39	52	58.5	65	
36	5180	19.27	--	--	--	--	--	--	--	30dBm
44	5220	18.77	18.57	18.37	18.17	17.97	17.73	17.49	17.37	
48	5240	17.44	--	--	--	--	--	--	--	

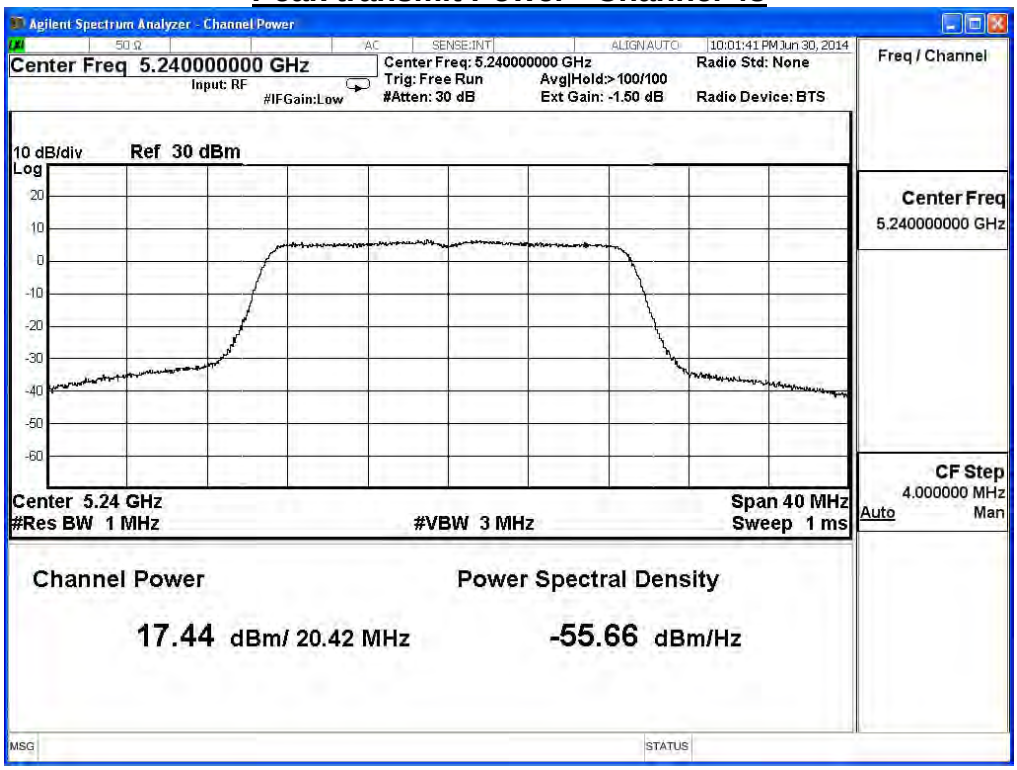
Peak transmit Power - Channel 36



Peak transmit Power - Channel 44



Peak transmit Power - Channel 48



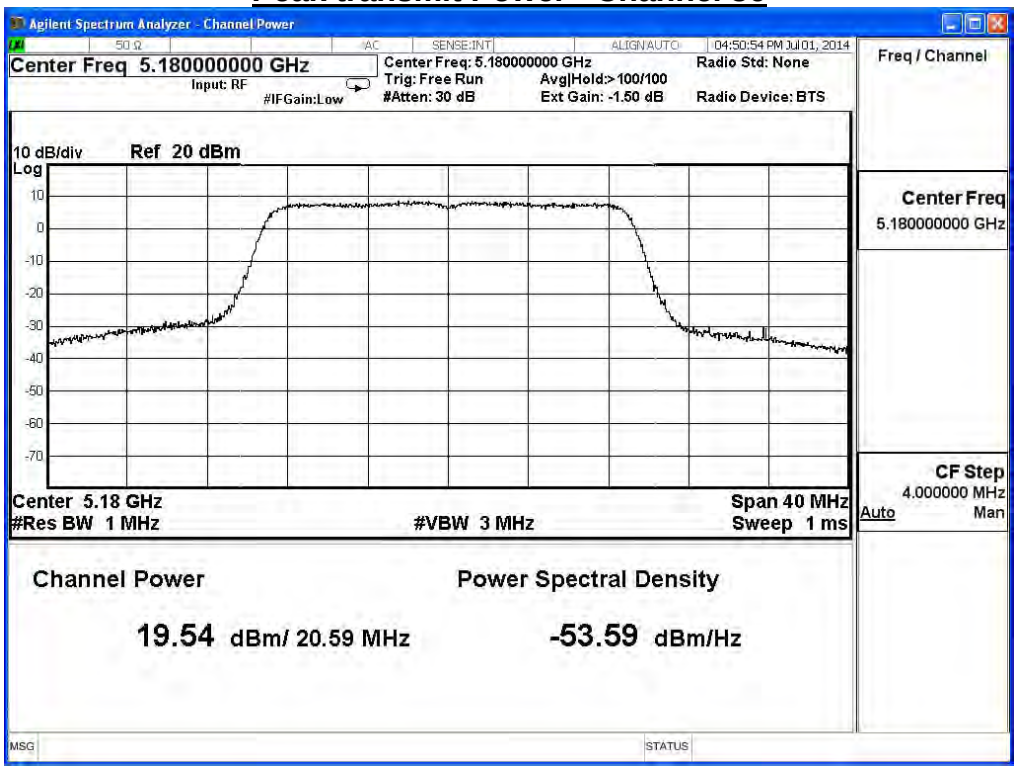
Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

IEEE 802.11n(20MHz)_ANT 2, Power Index : ch.36:79 ch.44:77 ch.48:71					
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit	Result
36	5180	20.590	19.540	≤30	Pass
44	5220	20.580	18.960	≤30	Pass
48	5240	20.680	17.520	≤30	Pass

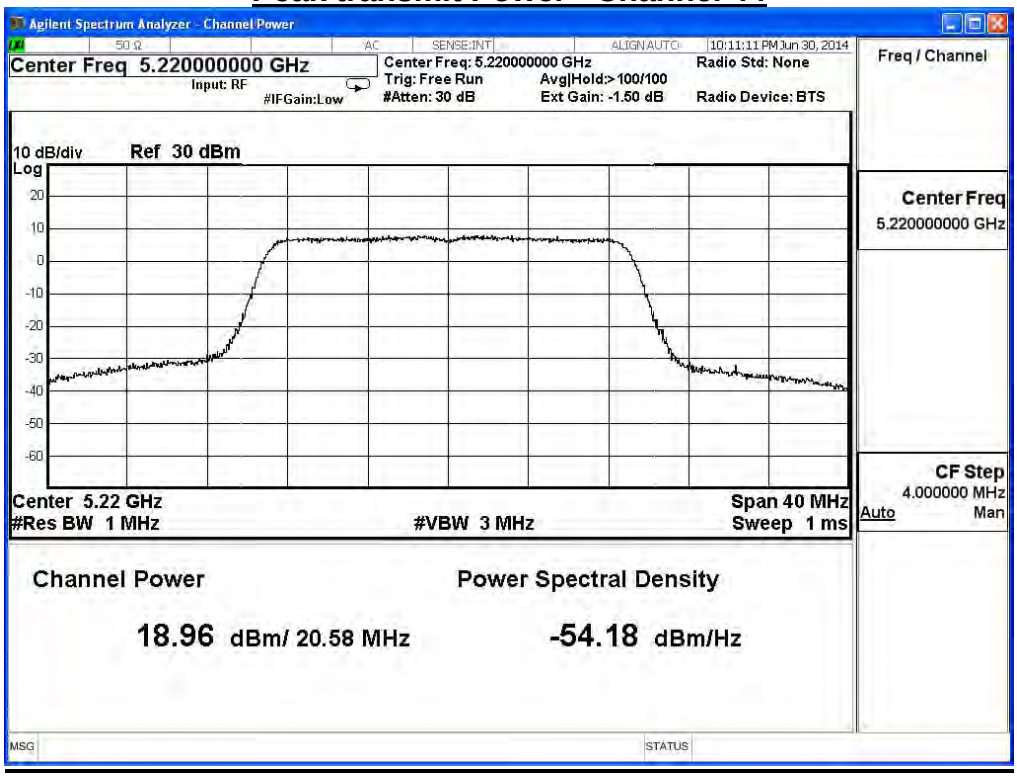
The worst emission of data rate is 6.5Mbps.

Peak Power Output (dBm)										
MCS Index		0	1	2	3	4	5	6	7	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		6.5	13	19.5	26	39	52	58.5	65	
36	5180	19.54	--	--	--	--	--	--	--	30dBm
44	5220	18.96	18.76	18.56	18.36	18.16	17.92	17.68	17.56	
48	5240	17.52	--	--	--	--	--	--	--	

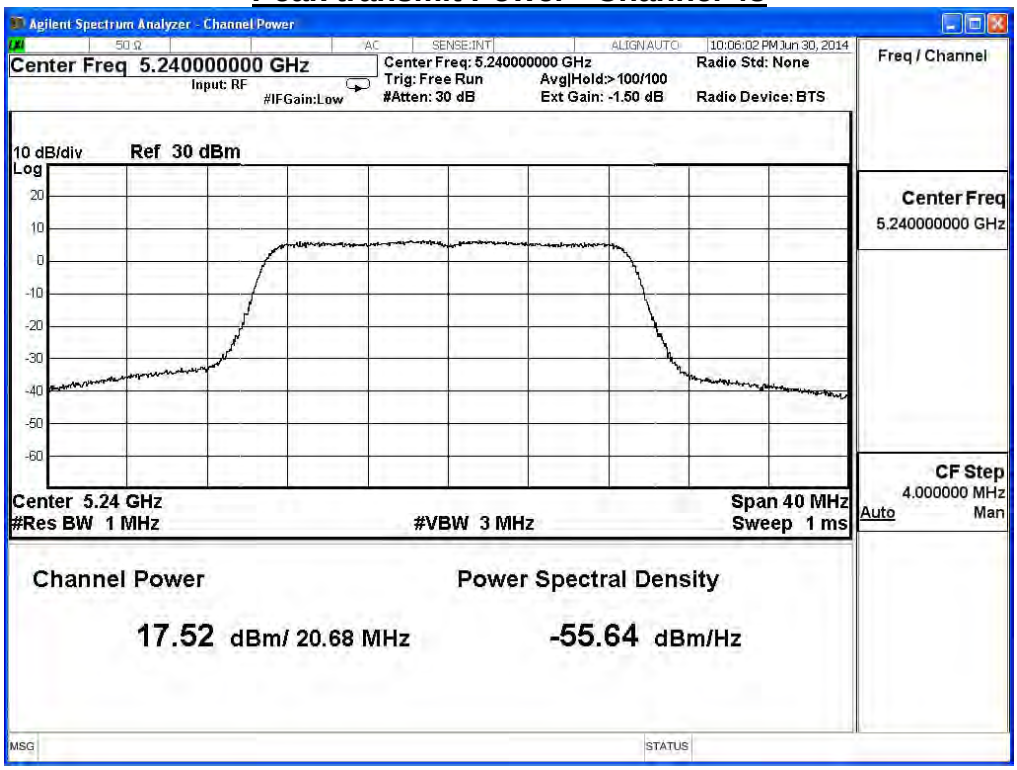
Peak transmit Power - Channel 36



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	2014/07/01	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	265.051	24.233	≤30	Pass
44	5220	232.745	23.669	≤30	Pass
48	5240	165.907	22.199	≤30	Pass

The worst emission of data rate is 6.5Mbps.

Peak Power Output (dBm)										
MCS Index		0	1	2	3	4	5	6	7	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		6.5	13	19.5	26	39	52	58.5	65	
36	5180	24.23	--	--	--	--	--	--	--	30dBm
44	5220	23.67	23.47	23.27	23.07	22.90	22.70	22.46	22.34	
48	5240	22.20	--	--	--	--	--	--	--	

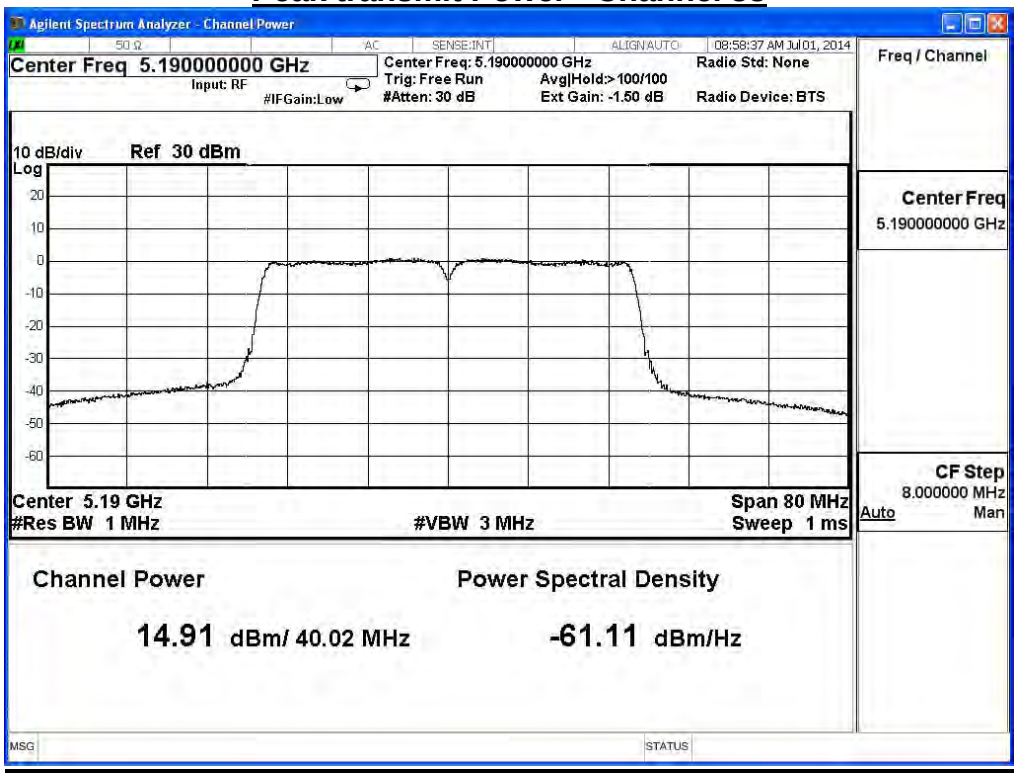
Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

IEEE 802.11n(40MHz)_ANT 0, Power Index : ch.38:58 ch.46:88					
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit	Result
38	5190	40.020	14.910	≤30	Pass
46	5230	54.420	21.640	≤30	Pass

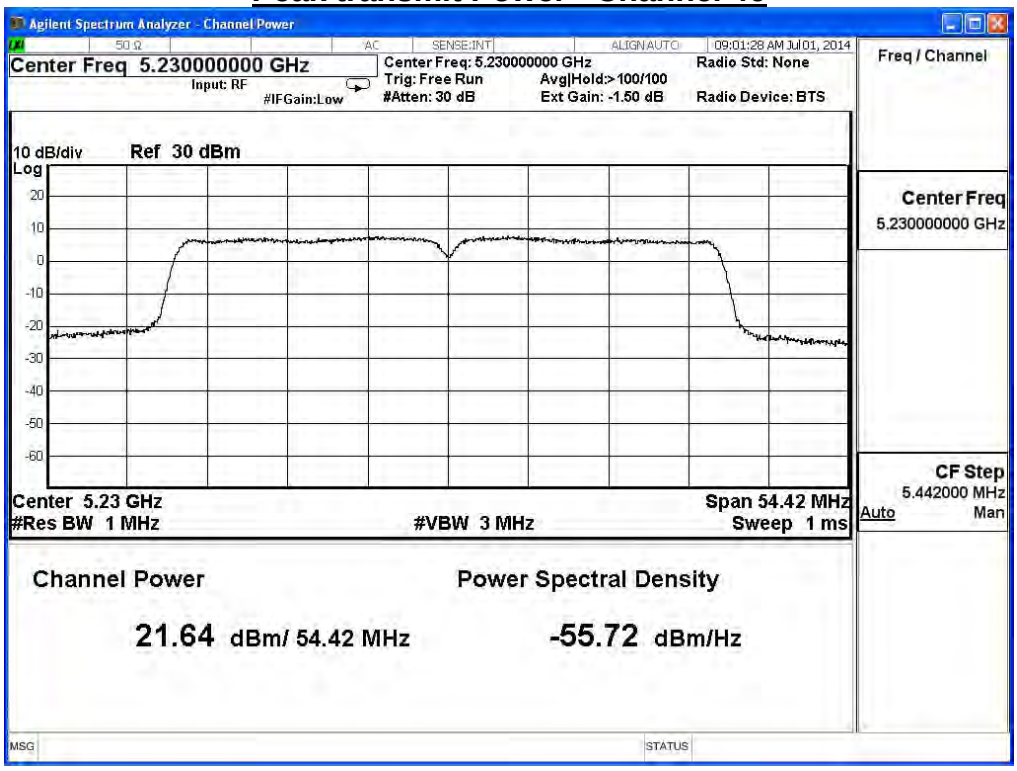
The worst emission of data rate is 13.5 Mbps

Peak Power Output (dBm)										
MCS Index		0	1	2	3	4	5	6	7	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		13.5	27	40.5	54	81	108	121.5	135	
38	5190	14.91	--	--	--	--	--	--	--	30dBm
46	5230	21.64	21.44	21.34	21.24	21.04	20.80	20.68	20.56	

Peak transmit Power - Channel 38



Peak transmit Power - Channel 46



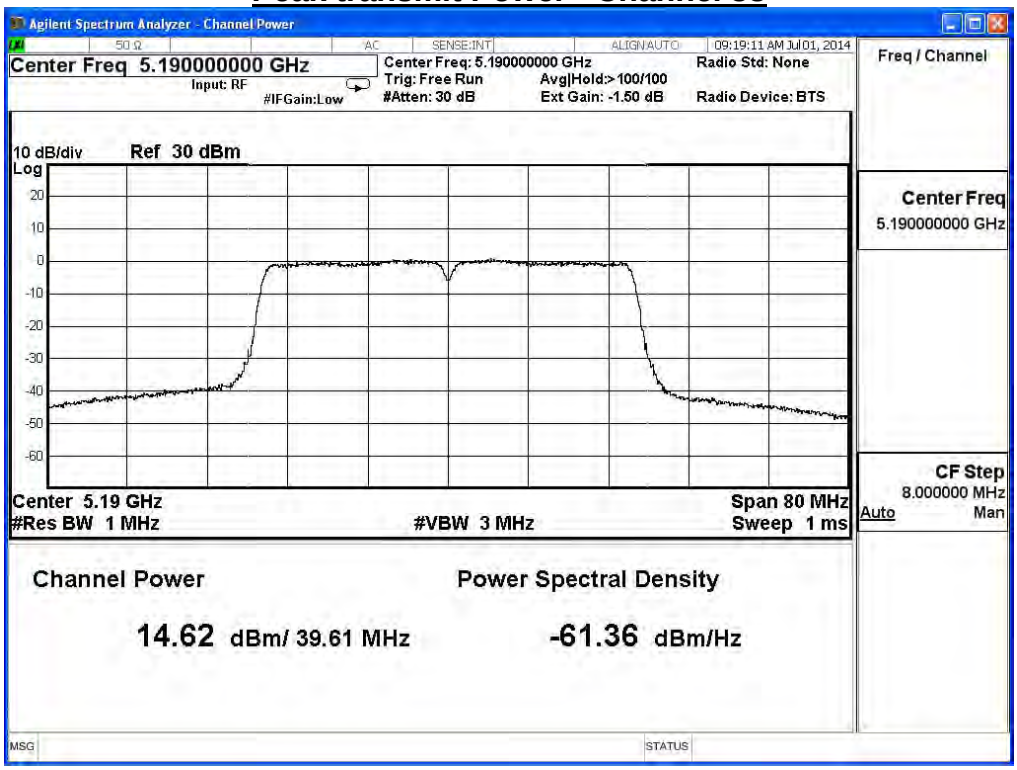
Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

IEEE 802.11n(40MHz)_ANT 1, Power Index : ch.38:58 ch.46:88					
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit	Result
38	5190	39.610	14.620	≤30	Pass
46	5230	39.860	21.470	≤30	Pass

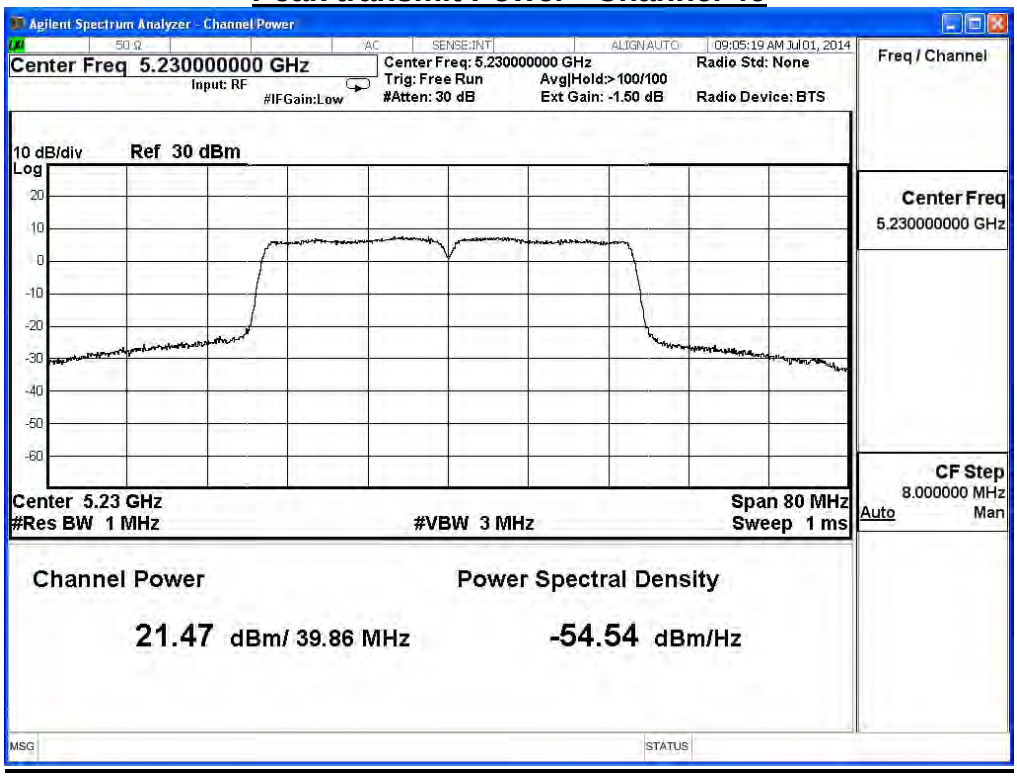
The worst emission of data rate is 13.5 Mbps

Peak Power Output (dBm)										
MCS Index		0	1	2	3	4	5	6	7	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		13.5	27	40.5	54	81	108	121.5	135	
38	5190	14.62	--	--	--	--	--	--	--	30dBm
46	5230	21.47	21.37	21.17	21.07	20.87	20.75	20.51	20.39	

Peak transmit Power - Channel 38



Peak transmit Power - Channel 46



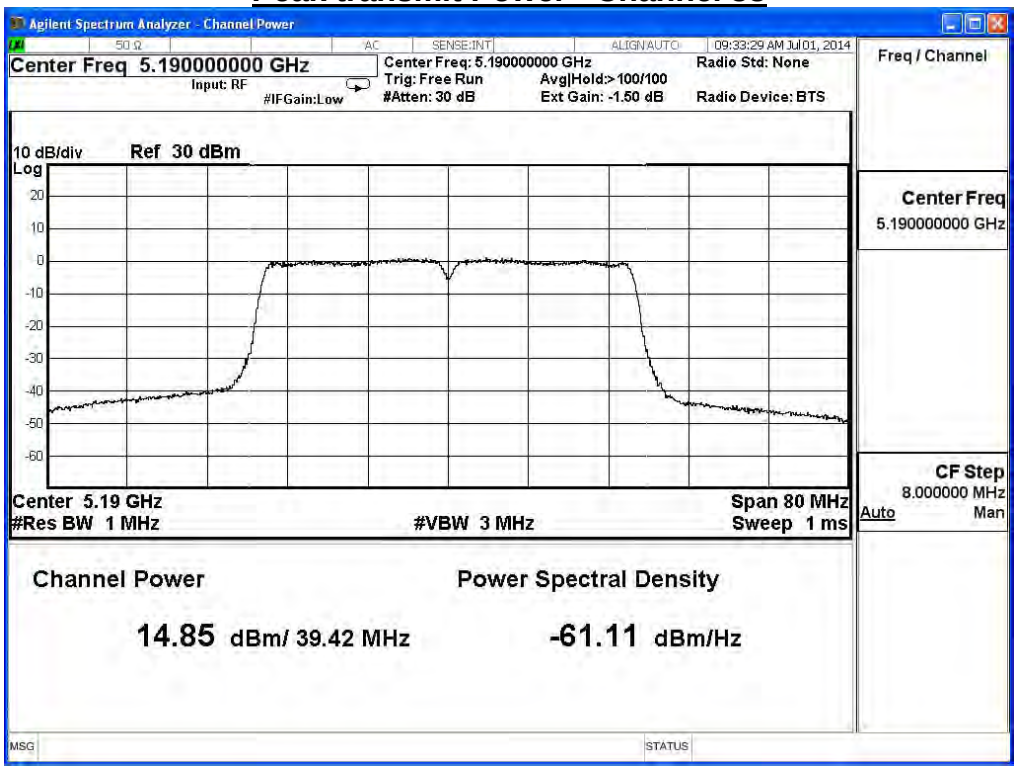
Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

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
38	5190	39.420	14.850	≤30	Pass
46	5230	41.710	21.480	≤30	Pass

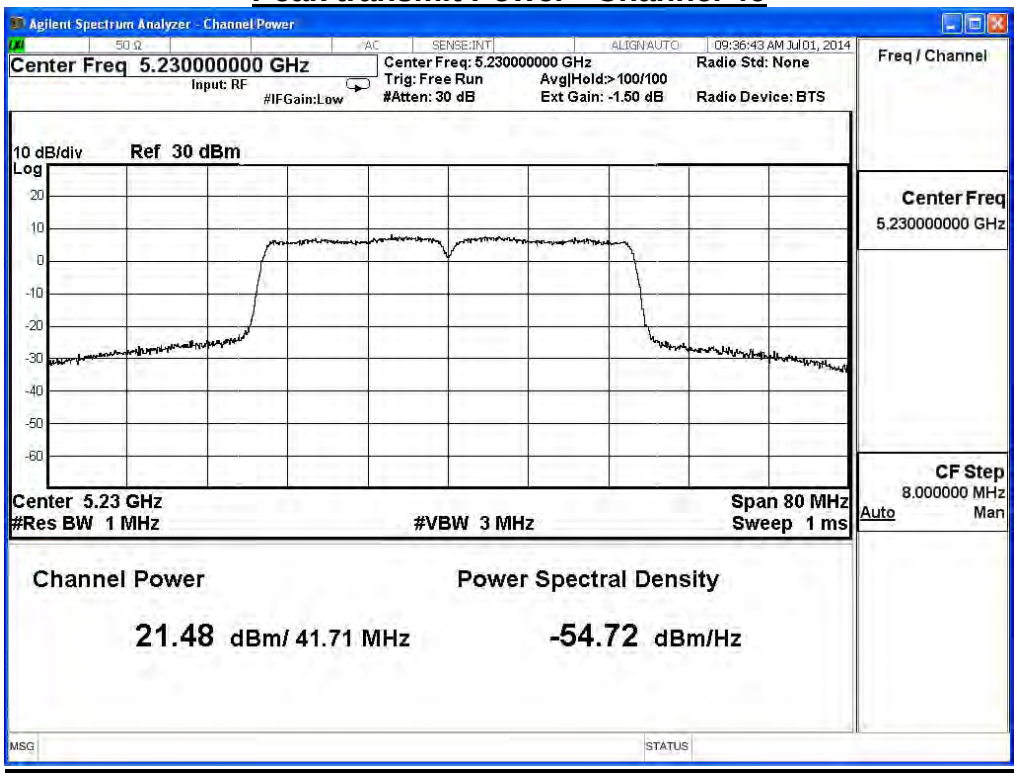
The worst emission of data rate is 13.5 Mbps

Peak Power Output (dBm)										
MCS Index		0	1	2	3	4	5	6	7	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		13.5	27	40.5	54	81	108	121.5	135	
38	5190	14.85	--	--	--	--	--	--	--	30dBm
46	5230	21.48	21.28	21.18	21.08	20.98	20.74	20.62	20.38	

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	2014/07/01	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	90.497	19.566	≤30	Pass
46	5230	426.768	26.302	≤30	Pass

The worst emission of data rate is 13.5 Mbps

Peak Power Output (dBm)										
MCS Index		0	1	2	3	4	5	6	7	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		13.5	27	40.5	54	81	108	121.5	135	
38	5190	19.57	--	--	--	--	--	--	--	30dBm
46	5230	26.30	26.14	26.00	25.90	25.74	25.53	25.38	25.22	

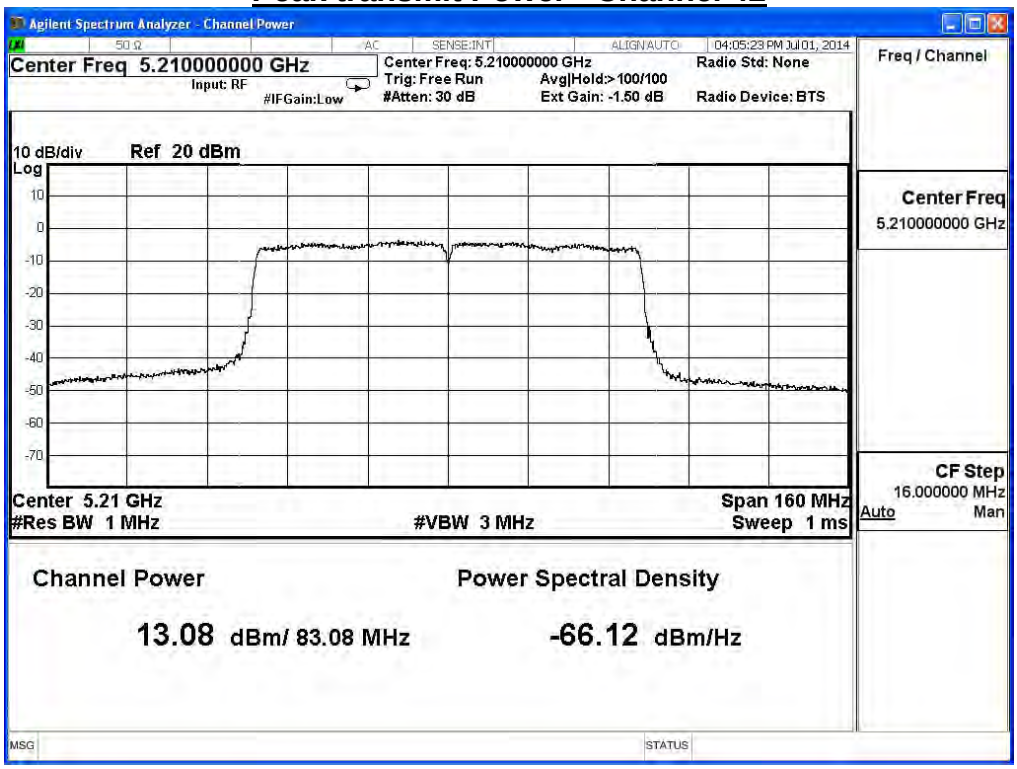
Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

IEEE 802.11ac(80MHz)_ANT 0, Power Index : ch.42:54					
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit	Result
42	5210	83.080	13.08	≤30	Pass

The worst emission of data rate is 29.3 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										
		29.3	58.5	87.8	117	175.5	234	263.3	292.5	351	390	
42	5210	13.08	12.98	12.88	12.68	12.48	12.28	12.16	11.92	11.68	11.44	30dBm

Peak transmit Power - Channel 42



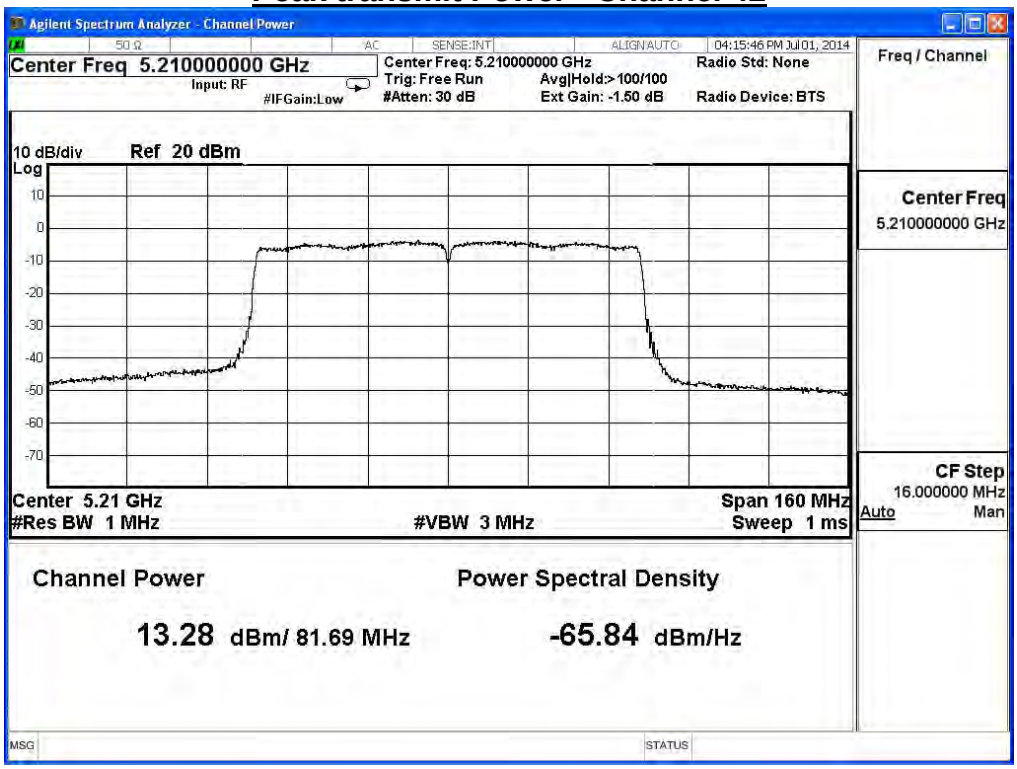
Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

IEEE 802.11ac(40MHz)_ANT 1, Power Index : ch.42:54					
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit	Result
42	5210	81.69	13.28	≤30	Pass

The worst emission of data rate is 29.3 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										
		29.3	58.5	87.8	117	175.5	234	263.3	292.5	351	390	
42	5210	13.28	13.18	12.98	12.78	12.58	12.48	12.36	12.12	11.88	11.64	30dBm

Peak transmit Power - Channel 42



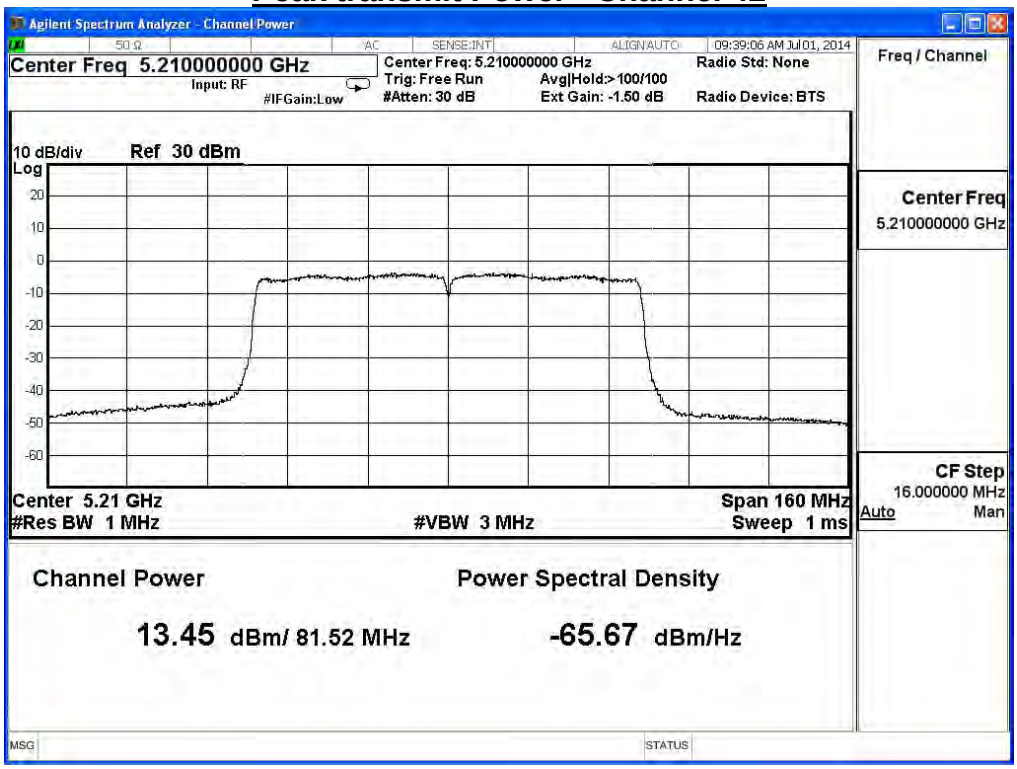
Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

IEEE 802.11ac(40MHz)_ANT 2, Power Index : ch.42:54					
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit	Result
42	5210	81.52	13.45	≤30	Pass

The worst emission of data rate is 29.3 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										
		29.3	58.5	87.8	117	175.5	234	263.3	292.5	351	390	
42	5210	13.45	13.35	13.25	13.15	12.95	12.75	12.63	12.51	12.27	12.15	30dBm

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	2014/07/01	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	63.736	18.044	≤30	Pass

The worst emission of data rate is 29.3 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										
		29.3	58.5	87.8	117	175.5	234	263.3	292.5	351	390	
42	5210	18.04	17.94	17.81	17.65	17.45	17.28	17.16	16.96	16.72	16.52	30dBm

Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 2: Transmit (Beamforming Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

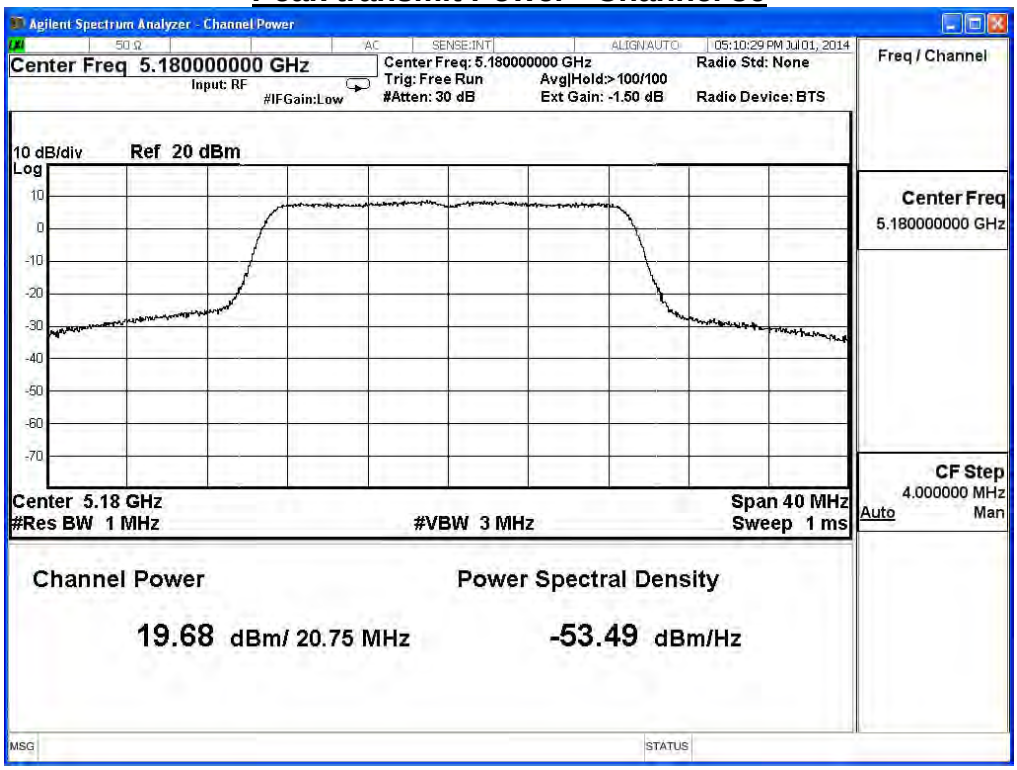
IEEE 802.11n(20MHz)_ANT 0, Power Index : ch.36:79 ch.44:67 ch.48:67					
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit	Result
36	5180	20.750	19.680	≤26.79	Pass
44	5220	20.760	16.490	≤26.79	Pass
48	5240	20.720	16.490	≤26.79	Pass

The worst emission of data rate is 19.5Mbps.

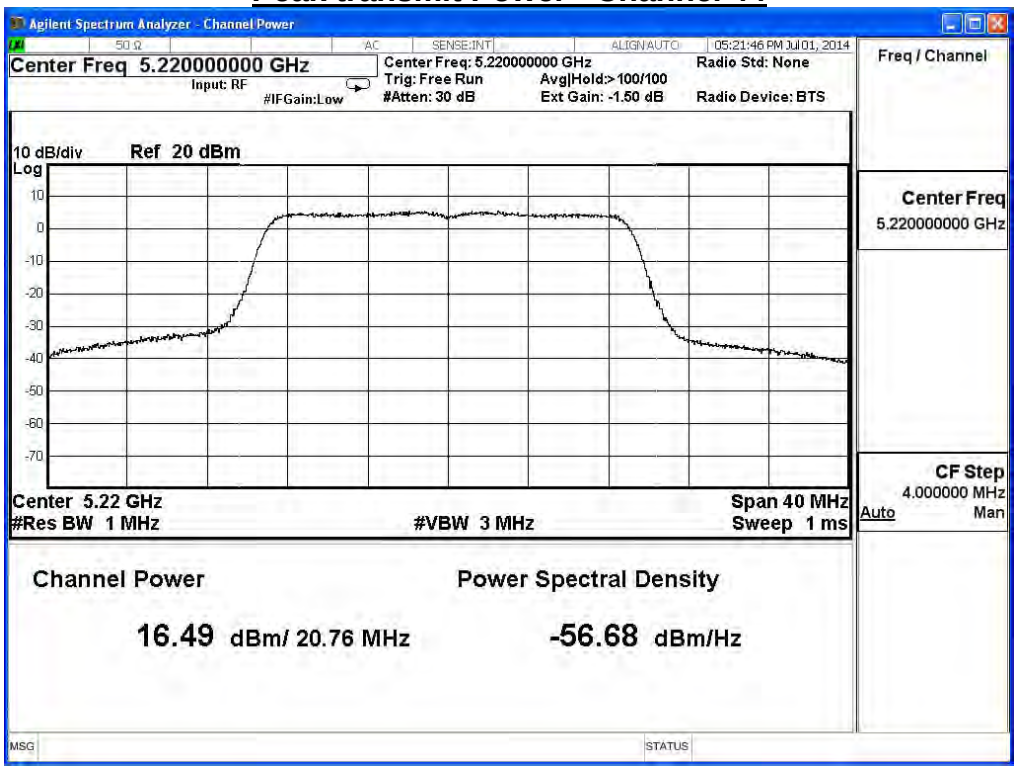
Peak Power Output (dBm)										
MCS Index		0	1	2	3	4	5	6	7	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		19.5	39	58.5	78	117	156	175.5	195	
36	5180	19.680	--	--	--	--	--	--	--	26.79dBm
44	5220	16.490	16.390	16.190	16.090	15.890	15.770	15.650	15.530	
48	5240	16.490	--	--	--	--	--	--	--	

Note:
Directional Gain : 10log(Ant N) + Max Gain = 8.81dBi
Required Limit = 30dBm - (9.21dBi – 6dB) = 26.79 dBm

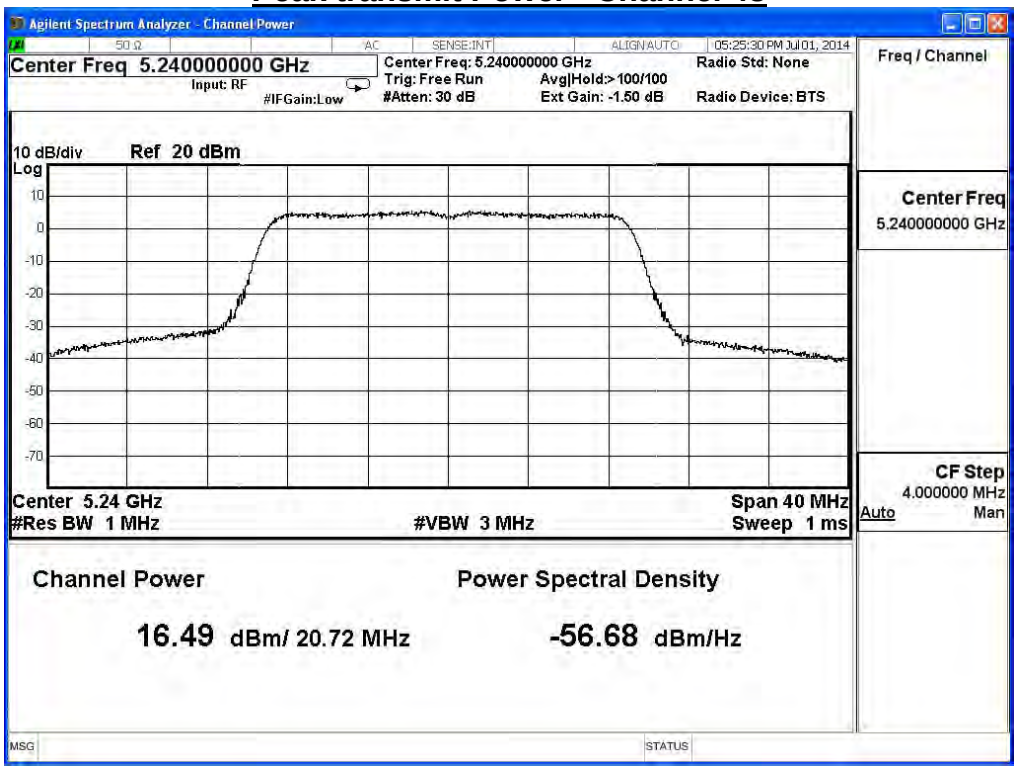
Peak transmit Power - Channel 36



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	2014/07/01	Test Site	SR7

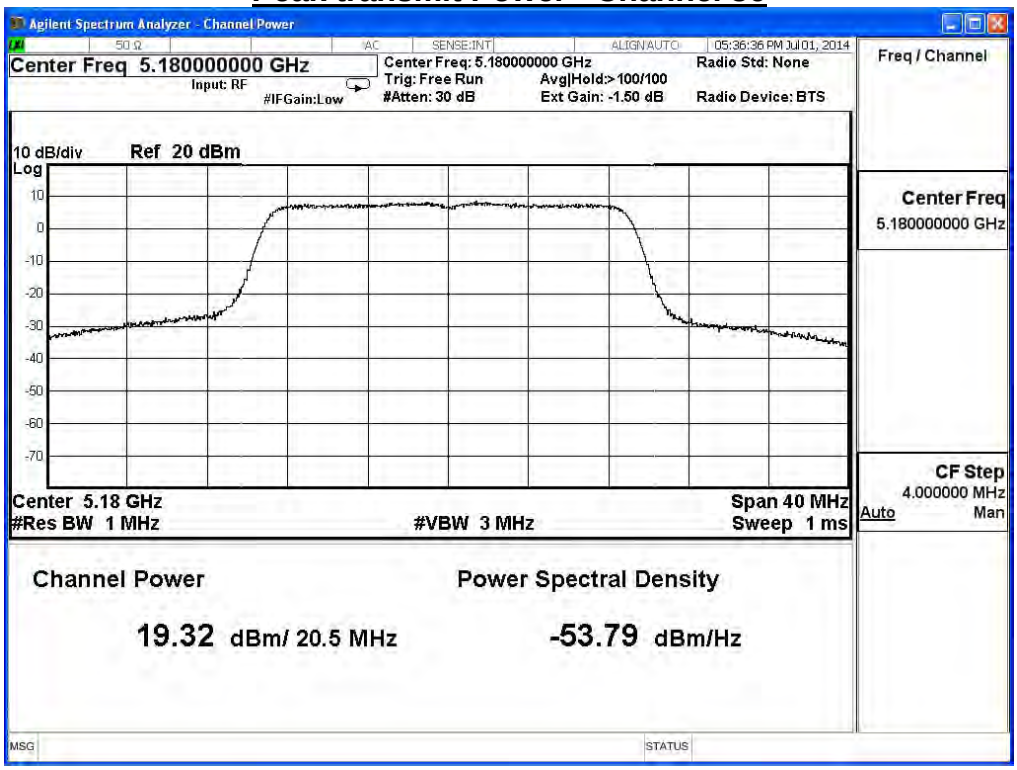
IEEE 802.11n(20MHz)_ANT 1, Power Index : ch.36:79 ch.44:67 ch.48:67					
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit	Result
36	5180	20.500	19.320	≤26.79	Pass
44	5220	20.510	16.630	≤26.79	Pass
48	5240	20.480	16.620	≤26.79	Pass

The worst emission of data rate is 19.5Mbps.

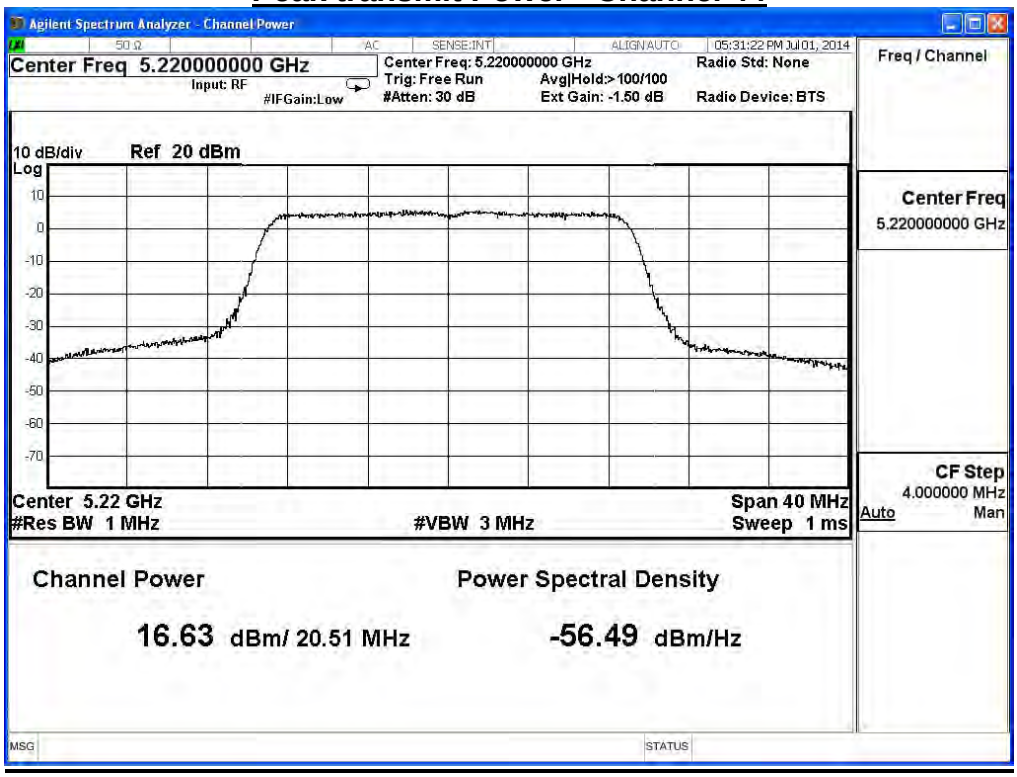
Peak Power Output (dBm)										
MCS Index		0	1	2	3	4	5	6	7	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		19.5	39	58.5	78	117	156	175.5	195	
36	5180	19.320	--	--	--	--	--	--	--	26.79dBm
44	5220	16.630	16.530	16.430	16.330	16.230	16.110	15.990	15.870	
48	5240	16.620	--	--	--	--	--	--	--	

Note:
Directional Gain : 10log(Ant N) + Max Gain = 8.81dBi
Required Limit = 30dBm - (9.21dBi - 6dB) = 26.79 dBm

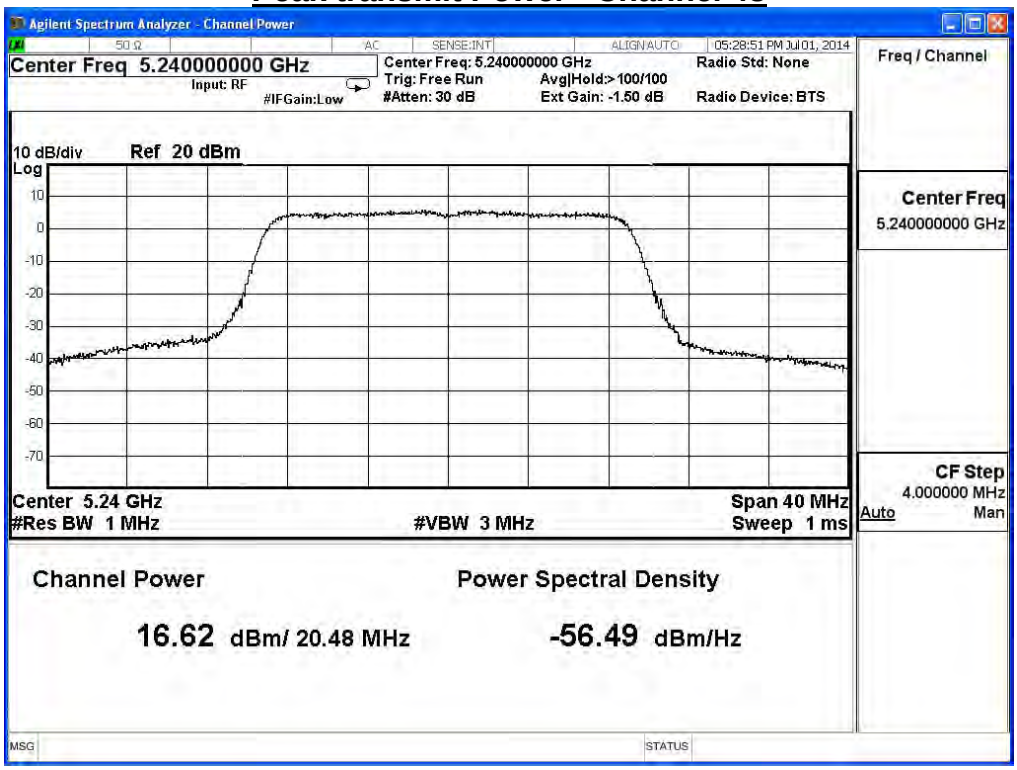
Peak transmit Power - Channel 36



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	2014/07/01	Test Site	SR7

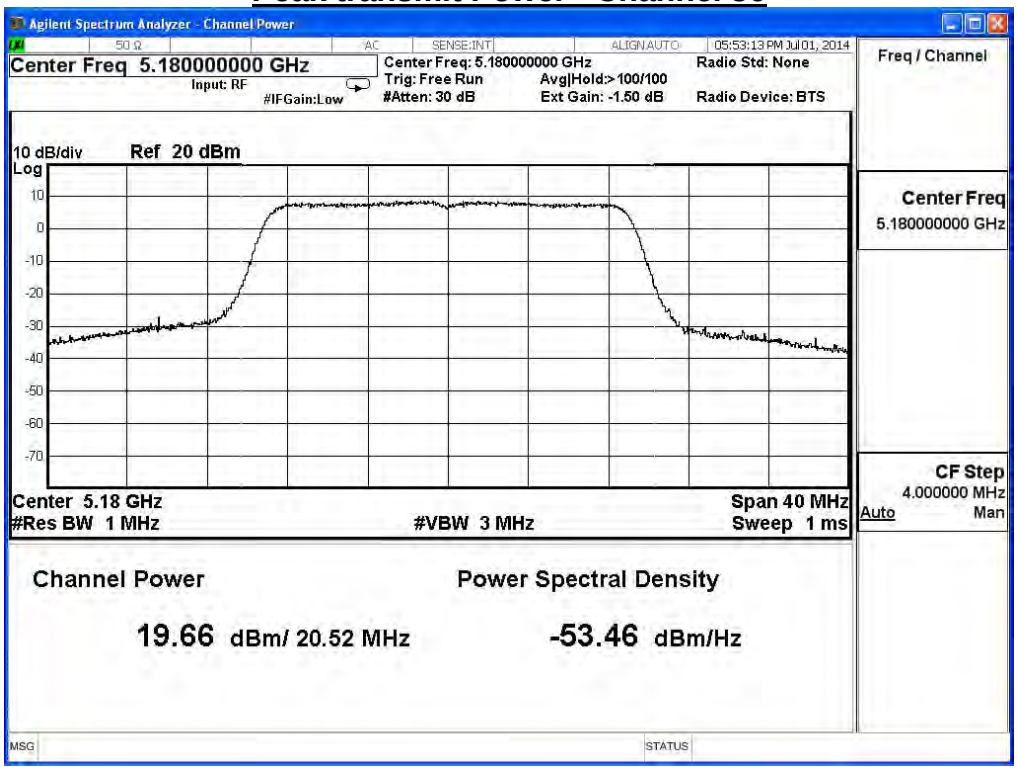
IEEE 802.11n(20MHz)_ANT 2, Power Index : ch.36:79 ch.44:67 ch.48:67					
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit	Result
36	5180	20.520	19.660	≤26.79	Pass
44	5220	20.670	16.610	≤26.79	Pass
48	5240	20.590	16.560	≤26.79	Pass

The worst emission of data rate is 19.5Mbps.

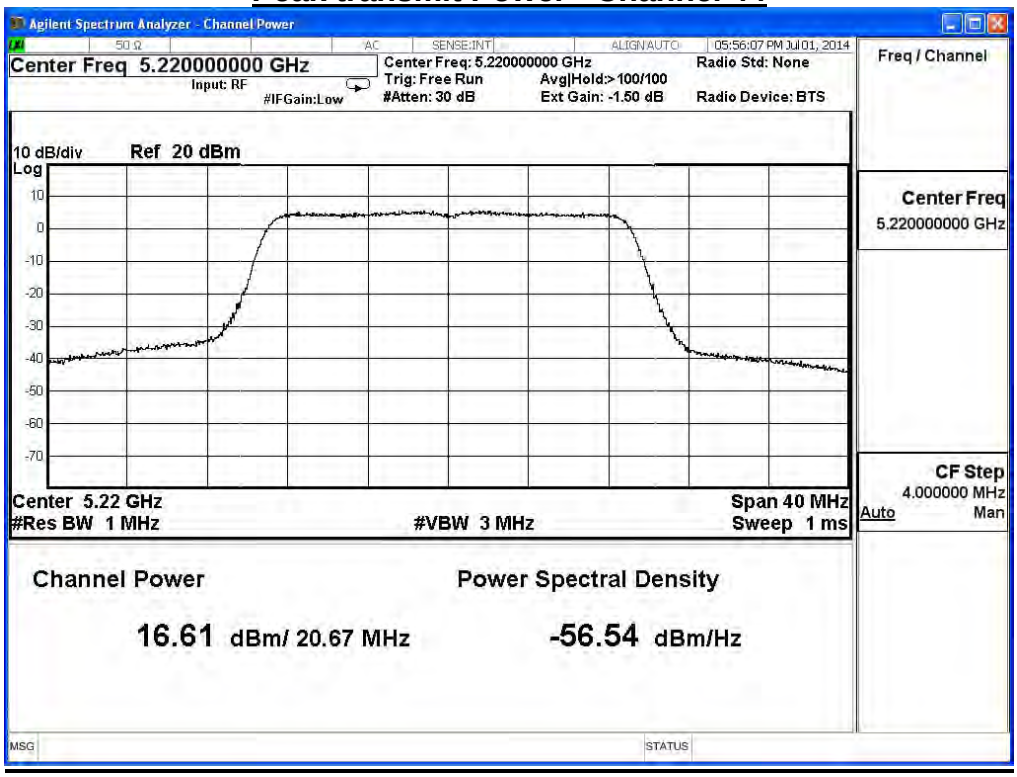
Peak Power Output (dBm)										
MCS Index		0	1	2	3	4	5	6	7	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		19.5	39	58.5	78	117	156	175.5	195	
36	5180	19.660	--	--	--	--	--	--	--	26.79dBm
44	5220	16.610	16.510	16.410	16.210	16.110	15.990	15.750	15.510	
48	5240	16.560	--	--	--	--	--	--	--	

Note:
Directional Gain : 10log(Ant N) + Max Gain = 8.81dBi
Required Limit = 30dBm - (9.21dBi – 6dB) = 26.79 dBm

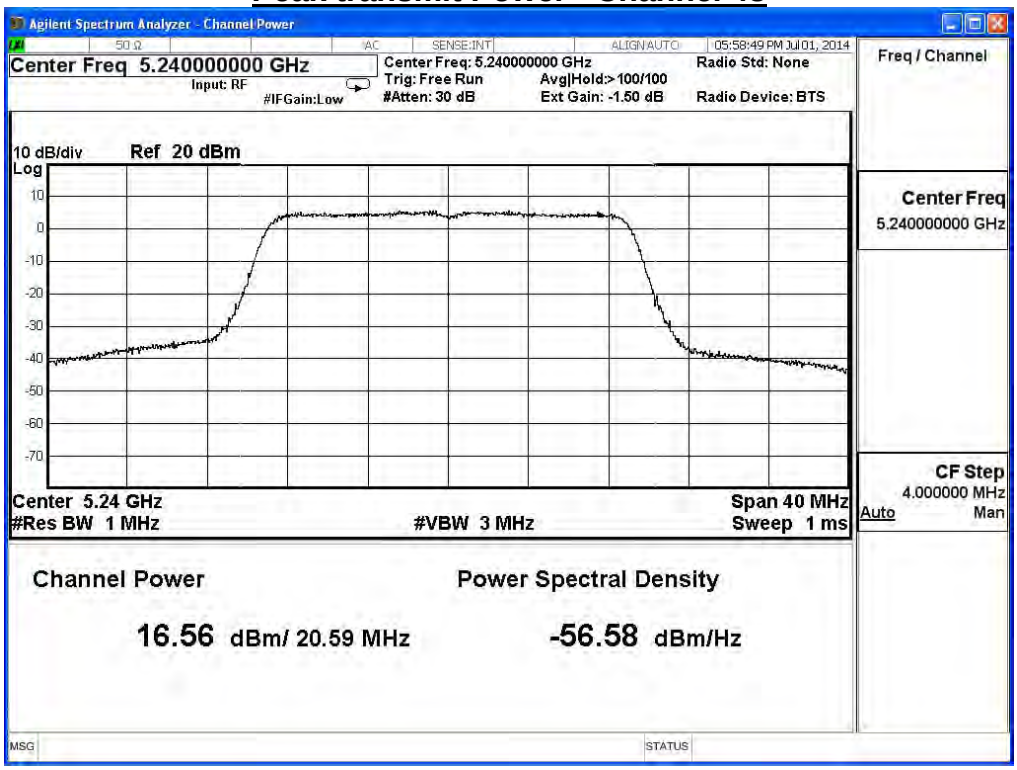
Peak transmit Power - Channel 36



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	2014/07/01	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	270.873	24.328	≤26.79	Pass
44	5220	136.405	21.348	≤26.79	Pass
48	5240	135.775	21.328	≤26.79	Pass

The worst emission of data rate is 19.5Mbps.

Peak Power Output (dBm)										
MCS Index		0	1	2	3	4	5	6	7	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		19.5	39	58.5	78	117	156	175.5	195	
36	5180	22.680	--	--	--	--	--	--	--	26.79dBm
44	5220	19.561	21.248	21.116	20.982	20.850	20.730	20.570	20.411	
48	5240	19.535	--	--	--	--	--	--	--	

Note:
Directional Gain : 10log(Ant N) + Max Gain = 8.81dBi
Required Limit = 30dBm - (9.21dBi - 6dB) = 26.79 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	2014/07/01	Test Site	SR7

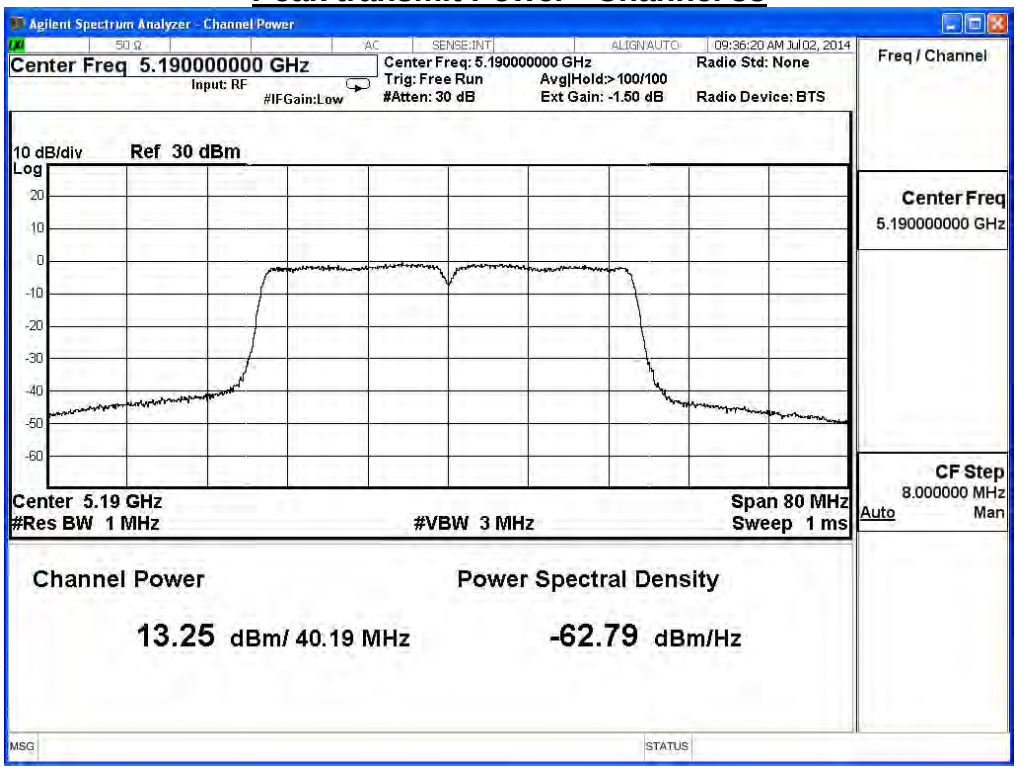
IEEE 802.11n(40MHz)_ANT 0, Power Index : ch.38:51 ch.46:72					
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit	Result
38	5190	40.190	13.250	≤26.79	Pass
46	5230	40.280	17.930	≤26.79	Pass

The worst emission of data rate is 40.5 Mbps

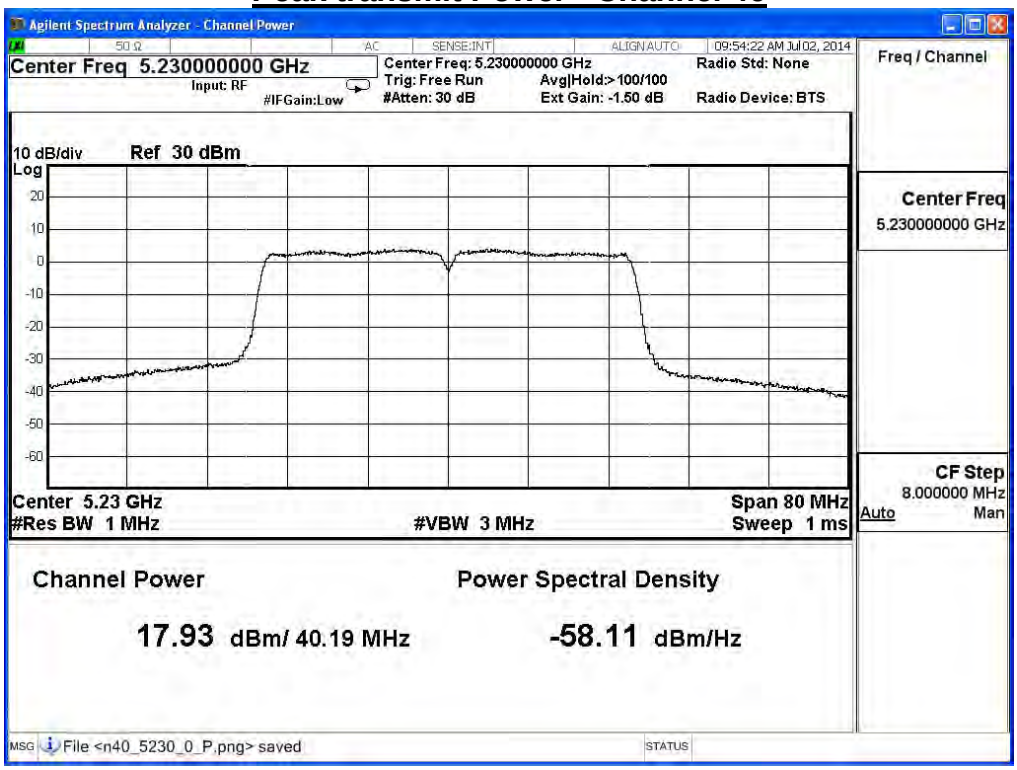
Peak Power Output (dBm)										
MCS Index		0	1	2	3	4	5	6	7	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		40.5	81	121.5	162	243	324	364.5	405	
38	5190	13.250	--	--	--	--	--	--	--	26.79dBm
46	5230	17.930	17.73	17.53	17.43	17.23	16.99	16.87	16.75	

Note:
Directional Gain : 10log(Ant N) + Max Gain = 8.81dBi
Required Limit = 30dBm - (9.21dBi - 6dB) = 26.79 dBm

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 2: Transmit (Beamforming Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

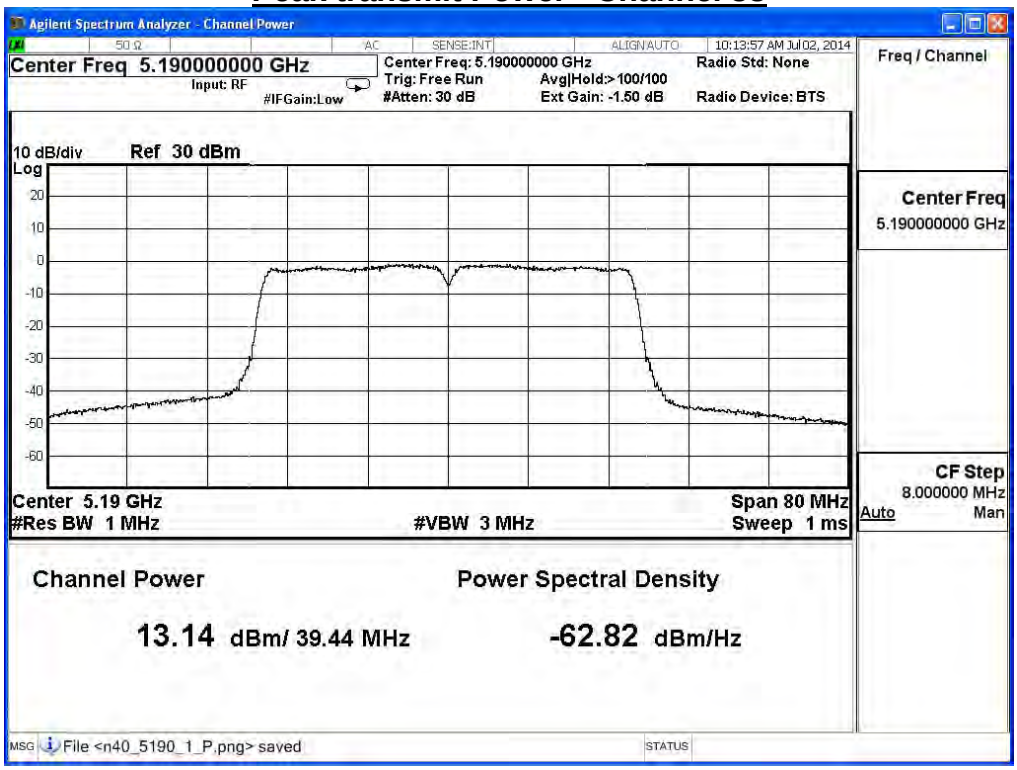
IEEE 802.11n(40MHz)_ANT 1, Power Index : ch.38:51 ch.46:72					
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit	Result
38	5190	39.440	13.140	≤26.79	Pass
46	5230	39.540	17.890	≤26.79	Pass

The worst emission of data rate is 40.5 Mbps

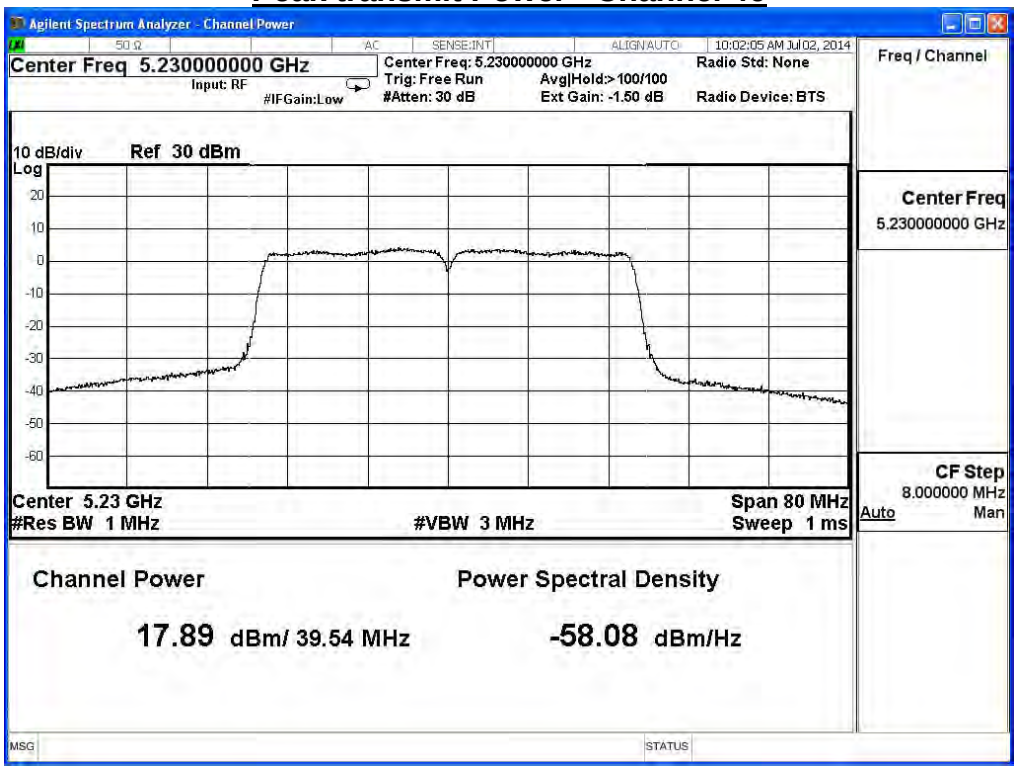
Peak Power Output (dBm)										
MCS Index		0	1	2	3	4	5	6	7	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		40.5	81	121.5	162	243	324	364.5	405	
38	5190	13.140	--	--	--	--	--	--	--	26.79dBm
46	5230	17.890	17.79	17.59	17.39	17.19	17.07	16.95	16.71	

Note:
Directional Gain : 10log(Ant N) + Max Gain = 8.81dBi
Required Limit = 30dBm - (9.21dBi - 6dB) = 26.79 dBm

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 2: Transmit (Beamforming Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

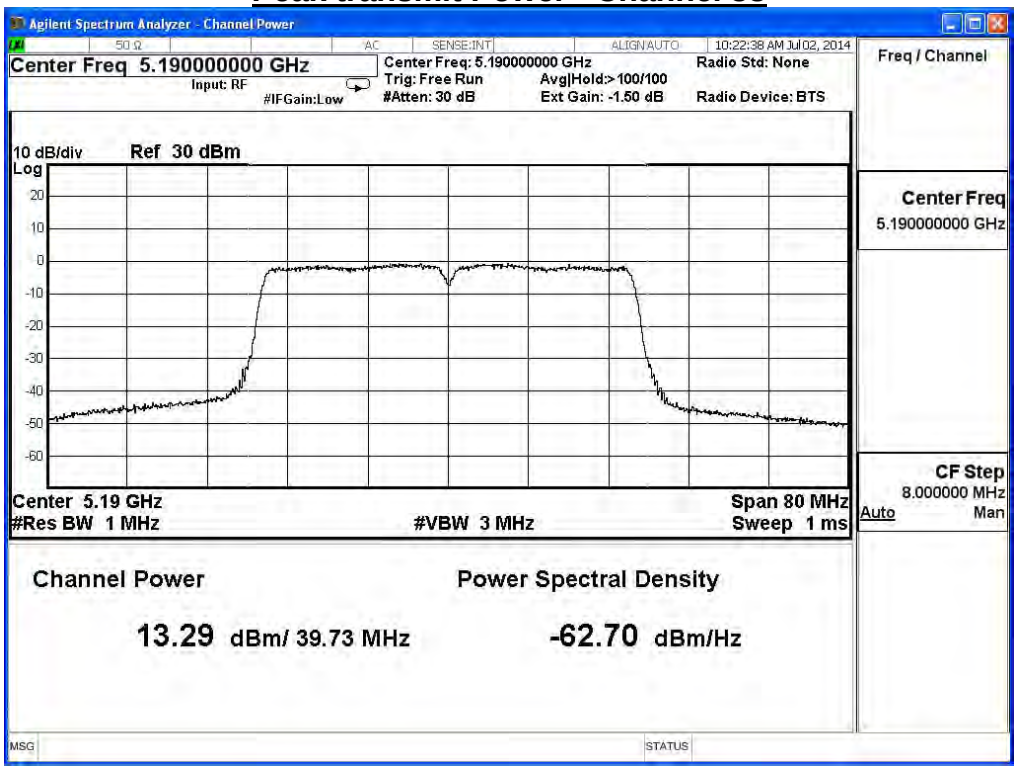
IEEE 802.11n(40MHz)_ANT 2, Power Index : ch.38:51 ch.46:72					
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit	Result
38	5190	39.730	13.290	≤26.79	Pass
46	5230	39.630	17.930	≤26.79	Pass

The worst emission of data rate is 40.5 Mbps

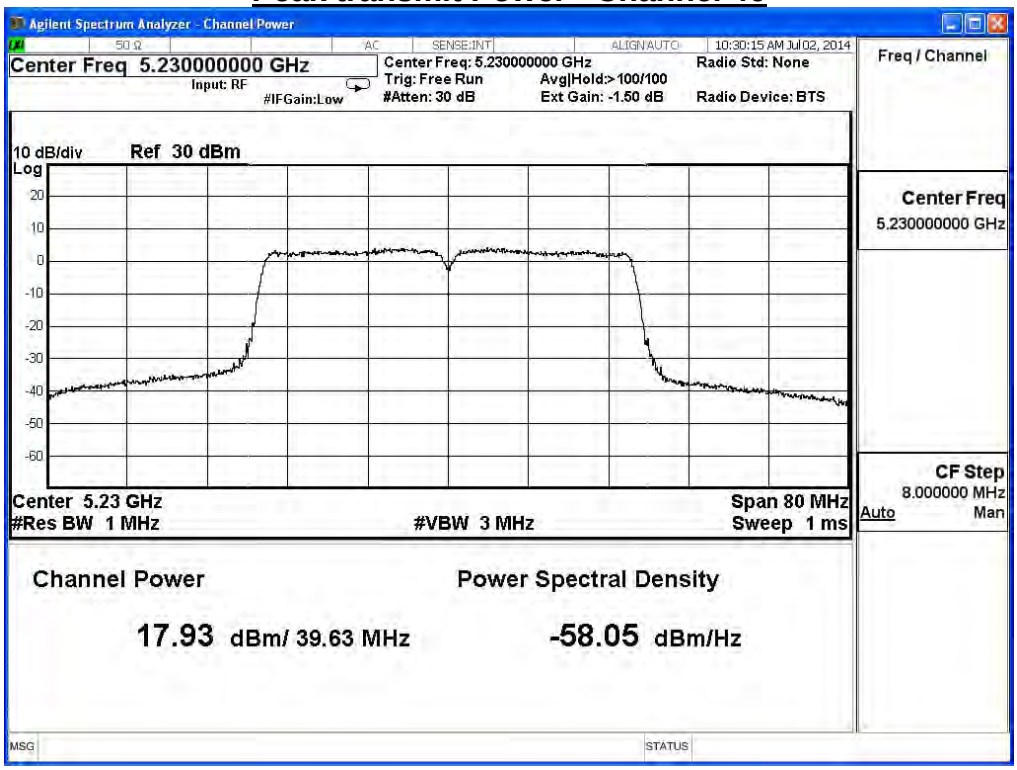
Peak Power Output (dBm)										
MCS Index		0	1	2	3	4	5	6	7	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		40.5	81	121.5	162	243	324	364.5	405	
38	5190	13.290	--	--	--	--	--	--	--	26.79dBm
46	5230	17.930	17.83	17.63	17.53	17.33	17.09	16.97	16.85	

Note:
Directional Gain : 10log(Ant N) + Max Gain = 8.81dBi
Required Limit = 30dBm - (9.21dBi - 6dB) = 26.79 dBm

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 2: Transmit (Beamforming Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	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	63.072	17.998	≤26.79	Pass
46	5230	185.691	22.688	≤26.79	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	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		40.5	81	121.5	162	243	324	364.5	405	
38	5190	17.998	--	--	--	--	--	--	--	26.79dBm
46	5230	22.688	22.55	22.39	22.29	22.12	21.92	21.72	21.60	

Note:
Directional Gain : 10log(Ant N) + Max Gain = 8.81dBi
Required Limit = 30dBm - (9.21dBi - 6dB) = 26.79 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	2014/07/01	Test Site	SR7

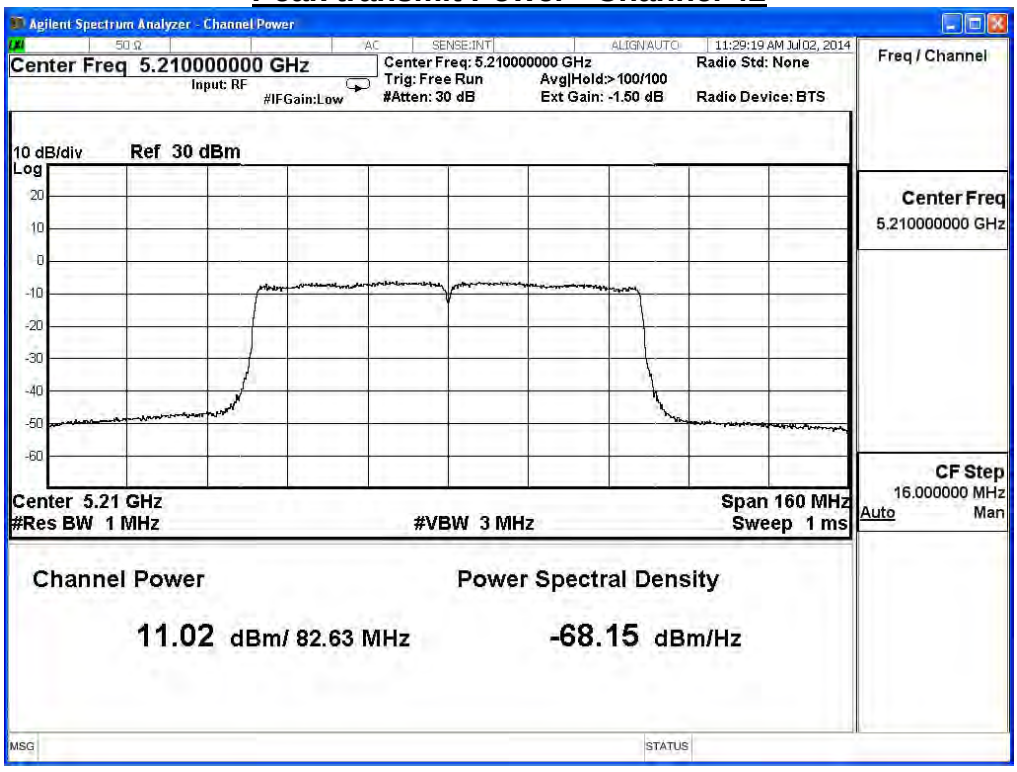
IEEE 802.11ac(80MHz)_ANT 0, Power Index : ch.42:46					
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit	Result
42	5210	82.630	11.020	≤26.79	Pass

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	789.2	877.5	1053	1170	
42	5210	11.02	10.92	10.82	10.62	10.52	10.42	10.30	10.06	9.82	9.70	26.79dBm

Note:
Directional Gain : 10log(Ant N) + Max Gain = 8.81dBi
Required Limit = 30dBm - (9.21dBi - 6dB) = 26.79 dBm

Peak transmit Power - Channel 42



Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 2: Transmit (Beamforming Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

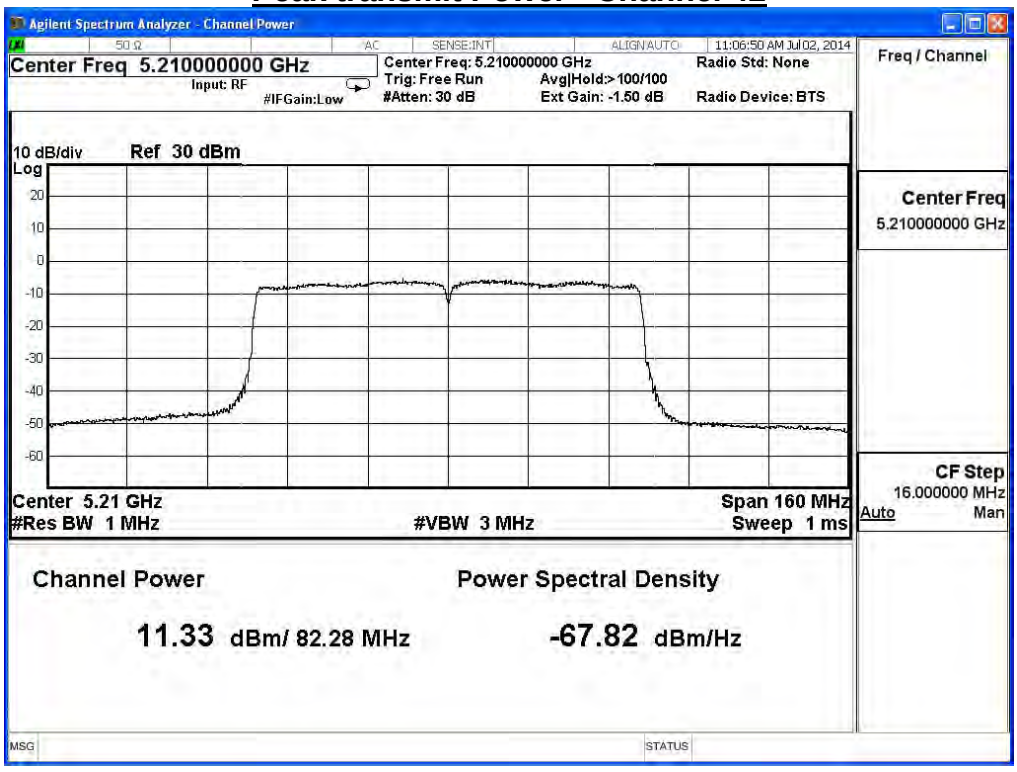
IEEE 802.11ac(80MHz)_ANT 1, Power Index : ch.42:46					
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit	Result
42	5210	82.280	11.330	≤26.79	Pass

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	789.2	877.5	1053	1170	
42	5210	11.33	11.13	11.03	10.83	10.73	10.63	10.51	10.27	10.15	10.03	26.79dBm

Note:
Directional Gain : 10log(Ant N) + Max Gain = 8.81dBi
Required Limit = 30dBm - (9.21dBi - 6dB) = 26.79 dBm

Peak transmit Power - Channel 42



Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 2: Transmit (Beamforming Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

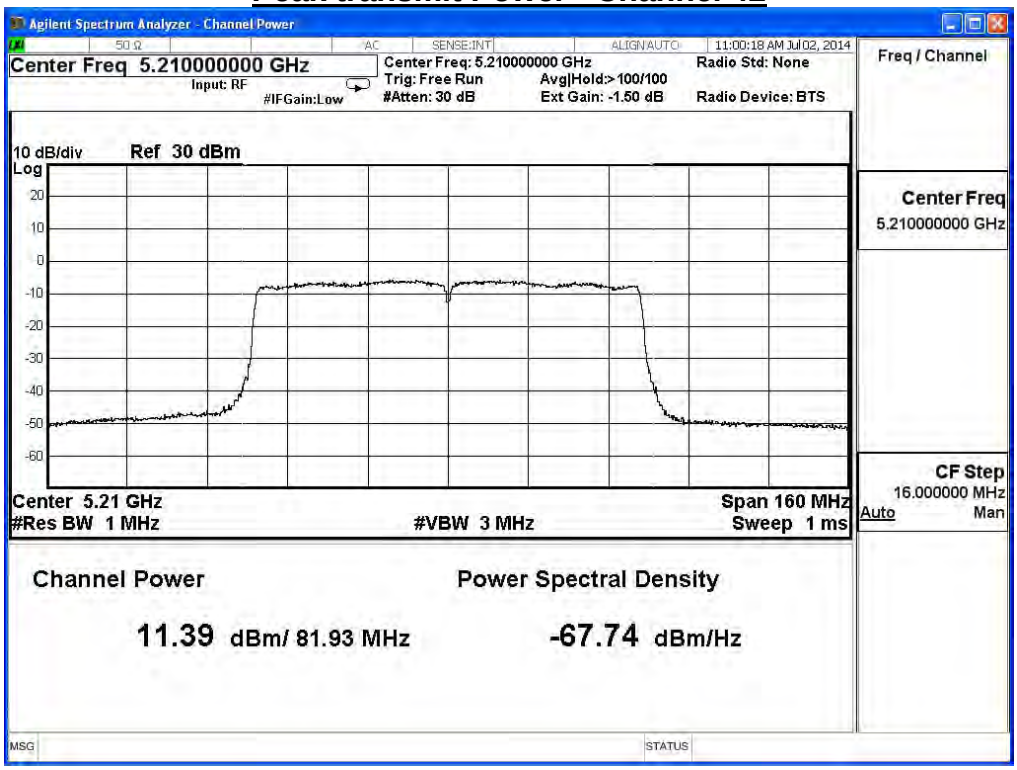
IEEE 802.11ac(80MHz)_ANT 2, Power Index : ch.42:46					
Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Required Limit	Result
42	5210	81.930	11.390	≤26.79	Pass

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	789.2	877.5	1053	1170	
42	5210	11.39	11.29	11.19	10.99	10.89	10.69	10.45	10.21	10.09	9.97	26.79dBm

Note:
Directional Gain : 10log(Ant N) + Max Gain = 8.81dBi
Required Limit = 30dBm - (9.21dBi - 6dB) = 26.79 dBm

Peak transmit Power - Channel 42



Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Transmit Output		
Test Mode	Mode 2: Transmit (Beamforming Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	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	40.003	16.021	≤26.79	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	789.2	877.5	1053	1170	
42	5210	16.02	15.89	15.79	15.59	15.49	15.35	15.19	14.95	14.79	14.67	26.79dBm

Note:
Directional Gain : 10log(Ant N) + Max Gain = 8.81dBi
Required Limit = 30dBm - (9.21dBi - 6dB) = 26.79 dBm

5. Peak Power Spectrum Density

5.1. Test Equipment

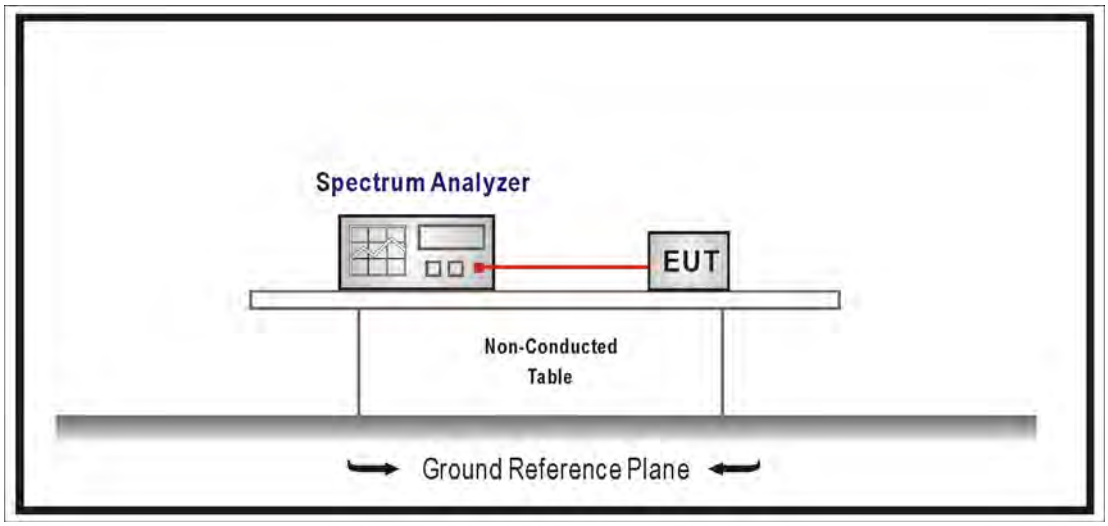
The following test equipments are used during the conducted tests:

Peak Power Spectrum Density / 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.

5.2. Test Setup



5.3. Limits

1. For the band 5.15-5.25 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.
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 5.725-5.850 GHz, the peak power spectral density shall not exceed 30 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 C63.10; tested to U-NII test procedure of 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

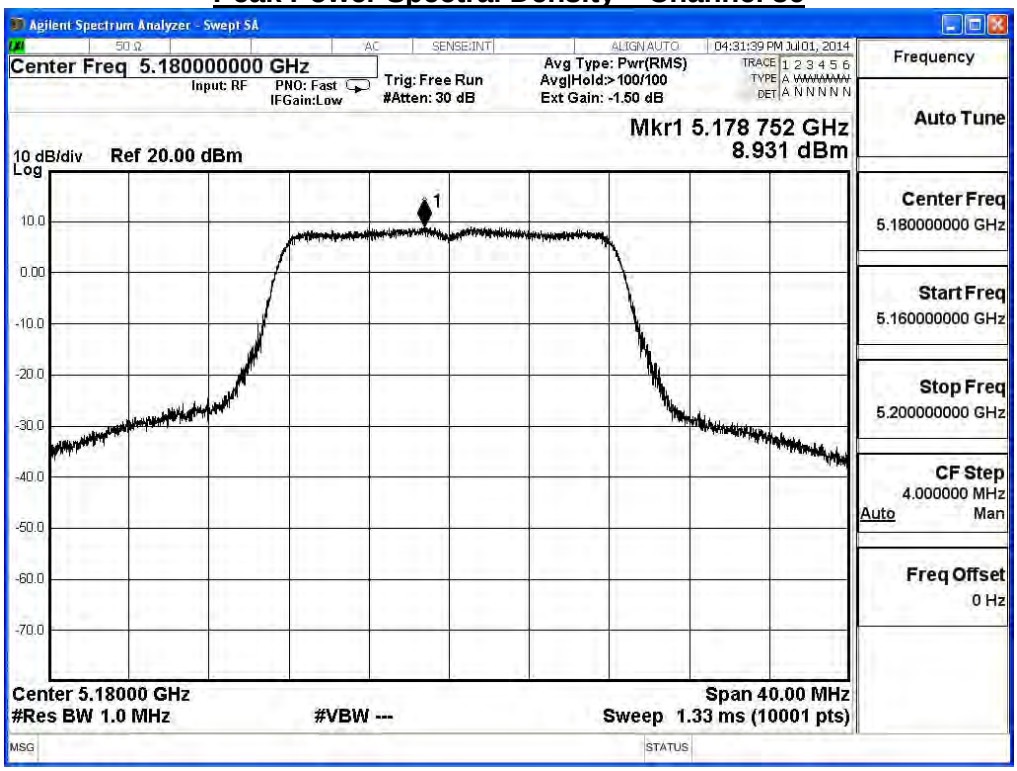
5.6. Test Result

Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Power Spectral Density		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

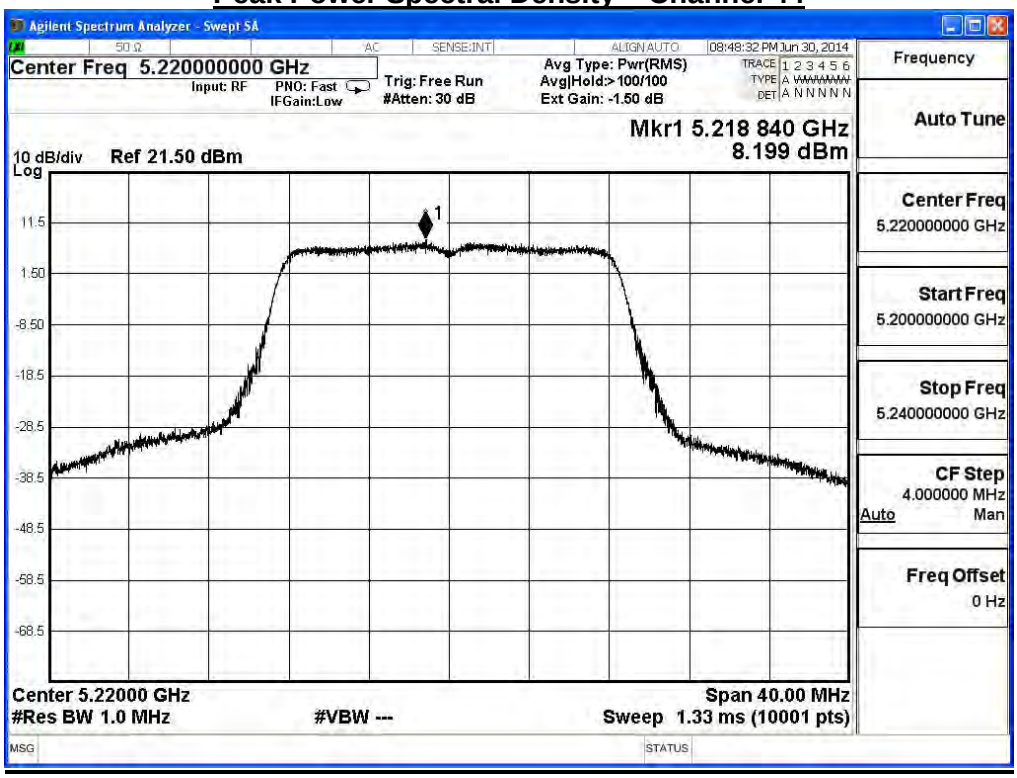
IEEE 802.11a (ANT0)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Required Limit (dBm)	Result
36	5180	8.931	≦14.19	Pass
44	5220	8.199	≦14.19	Pass
48	5240	7.717	≦14.19	Pass

Note:
Directional Gain = 10log(Ant N) + Max Gain = 8.81dBi
Required Limit = 17dBm-(8.81dBi -6dB) = 14.19dBm

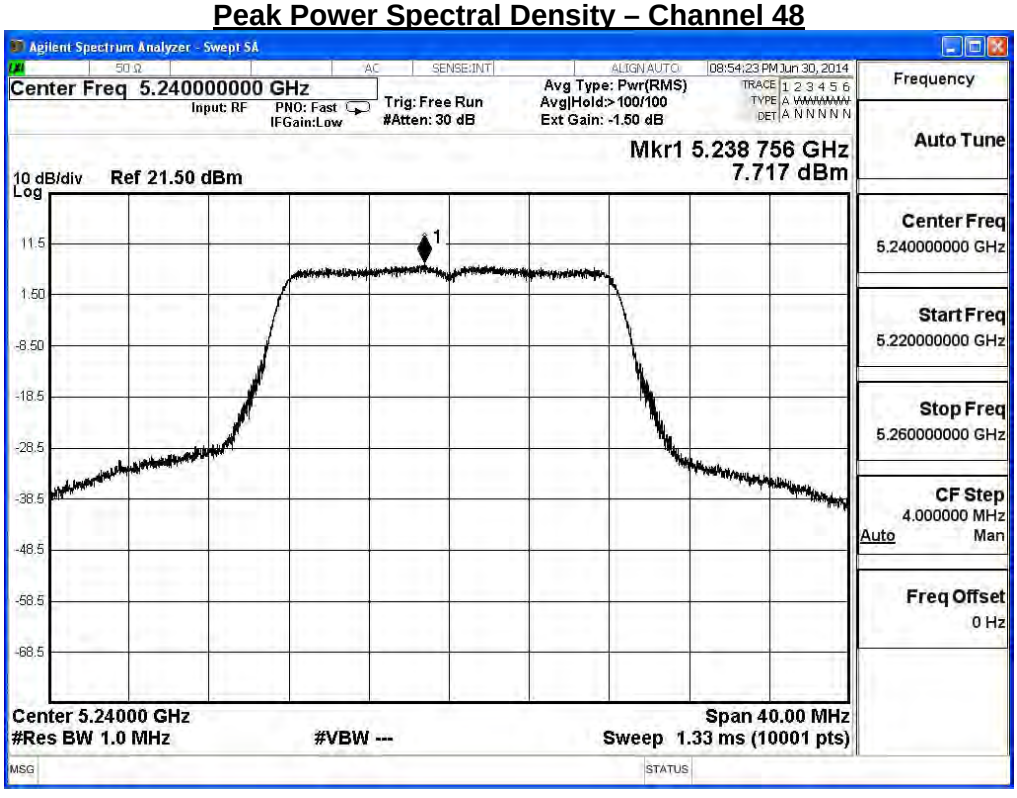
Peak Power Spectral Density – Channel 36



Peak Power Spectral Density – Channel 44



Peak Power Spectral Density – Channel 48

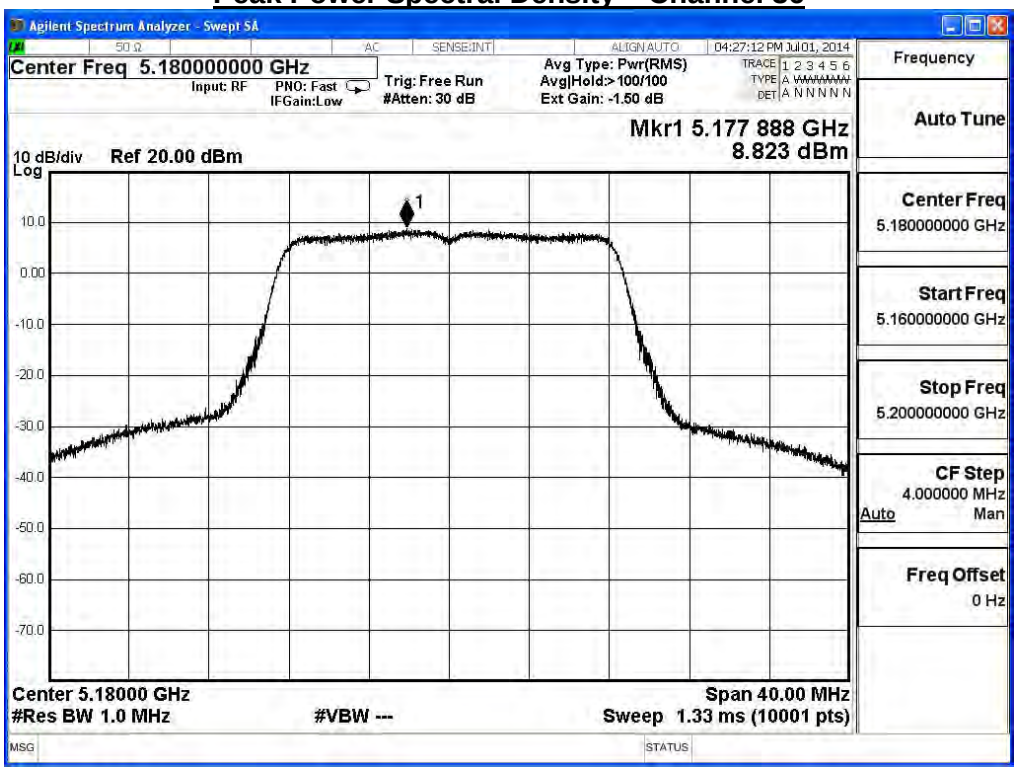


Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Power Spectral Density		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

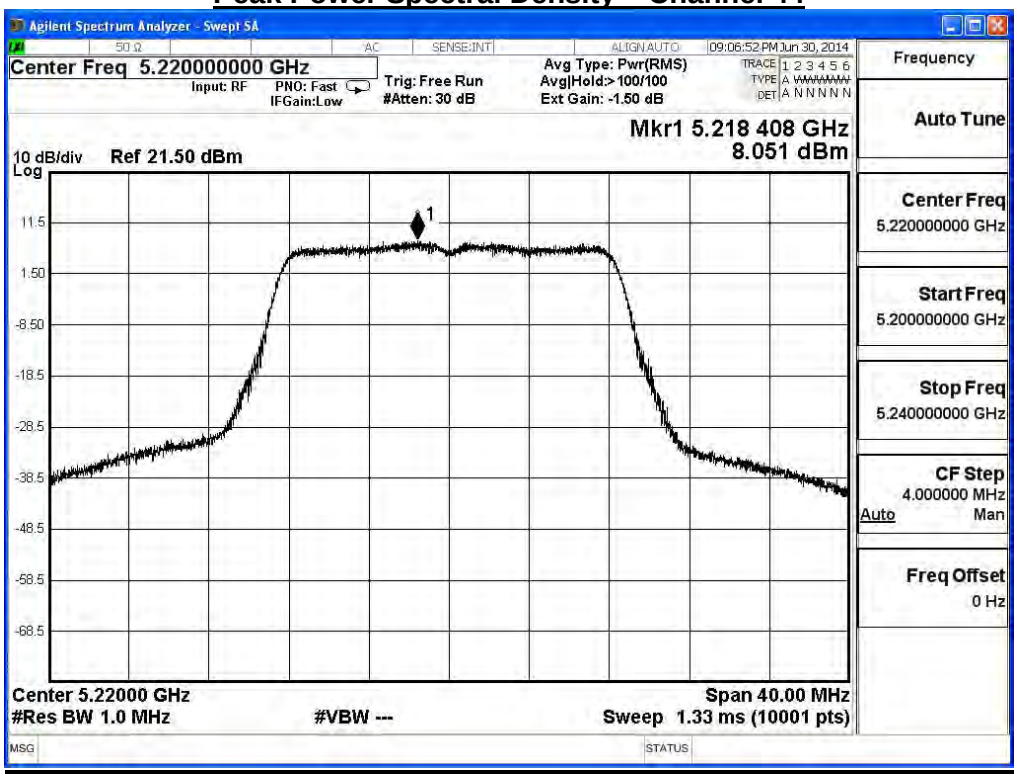
IEEE 802.11a (ANT1)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Required Limit (dBm)	Result
36	5180	8.823	≦14.19	Pass
44	5220	8.051	≦14.19	Pass
48	5240	7.980	≦14.19	Pass

Note:
Directional Gain = 10log(Ant N) + Max Gain = 8.81dBi
Required Limit = 17dBm-(8.81dBi -6dB) = 14.19dBm

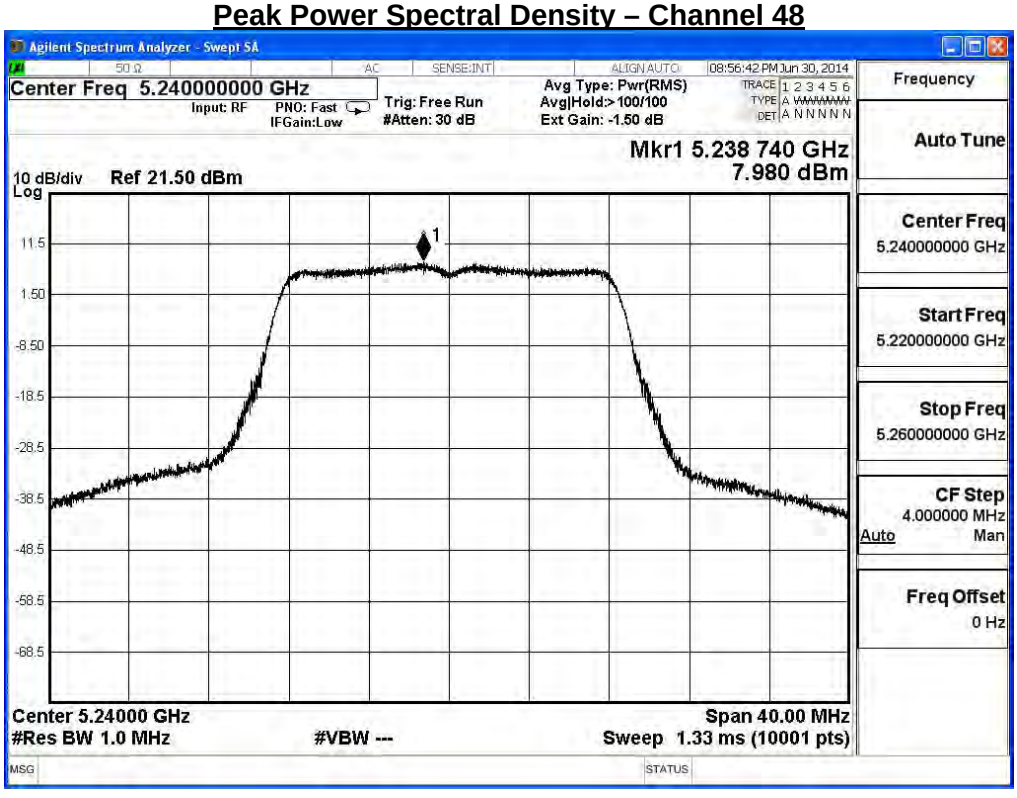
Peak Power Spectral Density – Channel 36



Peak Power Spectral Density – Channel 44



Peak Power Spectral Density – Channel 48

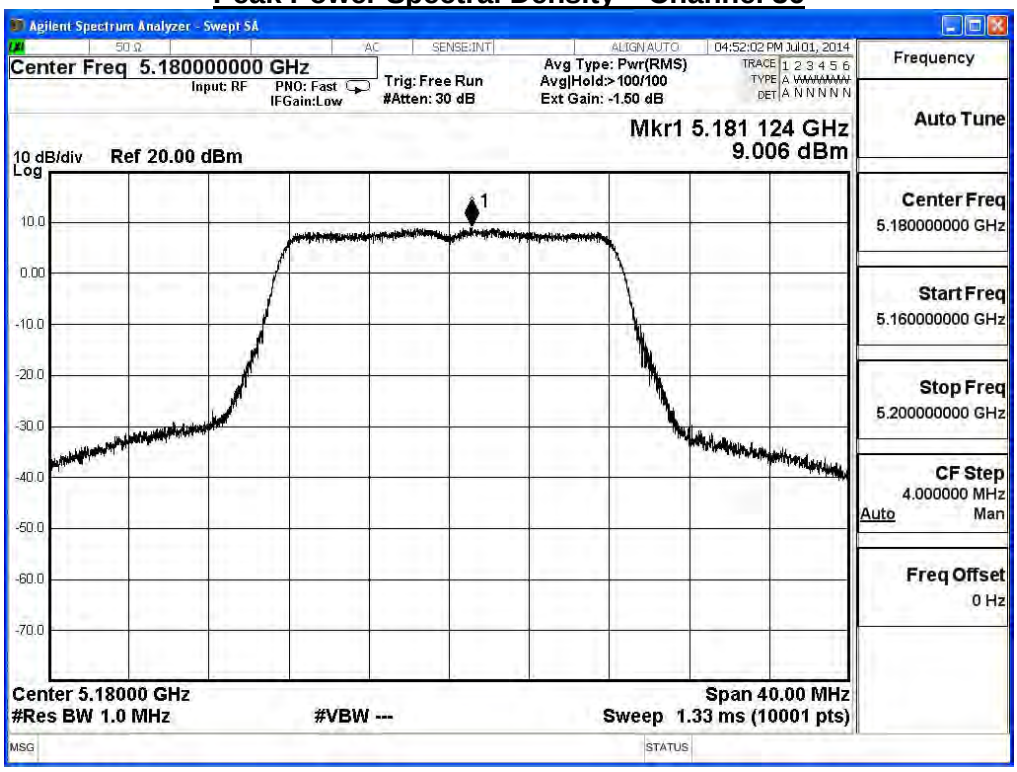


Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Power Spectral Density		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

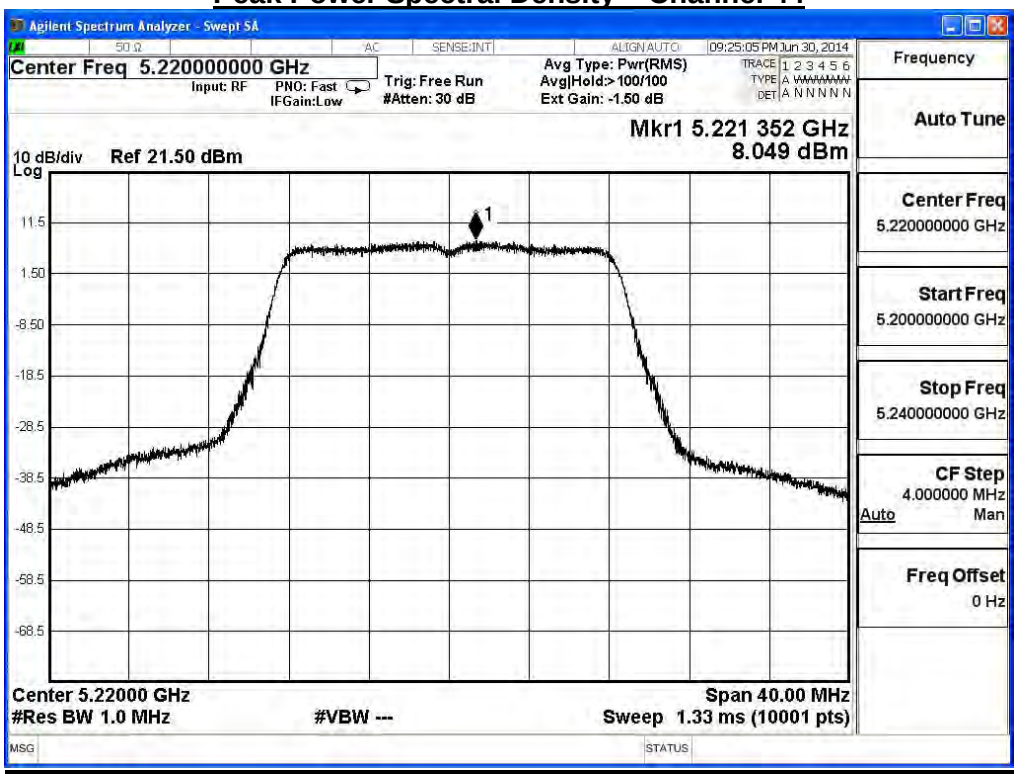
IEEE 802.11a (ANT2)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Required Limit (dBm)	Result
36	5180	9.006	≦14.19	Pass
44	5220	8.049	≦14.19	Pass
48	5240	7.577	≦14.19	Pass

Note:
Directional Gain = 10log(Ant N) + Max Gain = 8.81dBi
Required Limit = 17dBm-(8.81dBi -6dB) = 14.19dBm

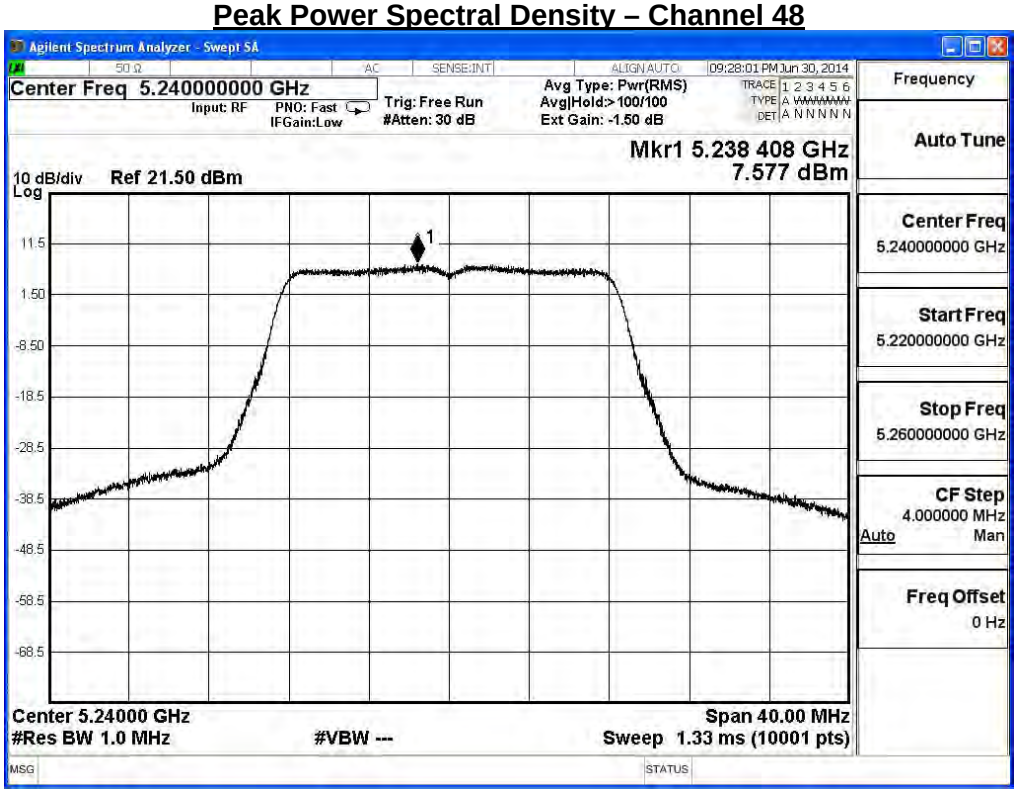
Peak Power Spectral Density – Channel 36



Peak Power Spectral Density – Channel 44



Peak Power Spectral Density – Channel 48



Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Power Spectral Density		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

IEEE 802.11a (ANT 0+1+2)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Required Limit (dBm)	Result
36	5180	13.692	≦14.19	Pass
44	5220	12.871	≦14.19	Pass
48	5240	12.532	≦14.19	Pass

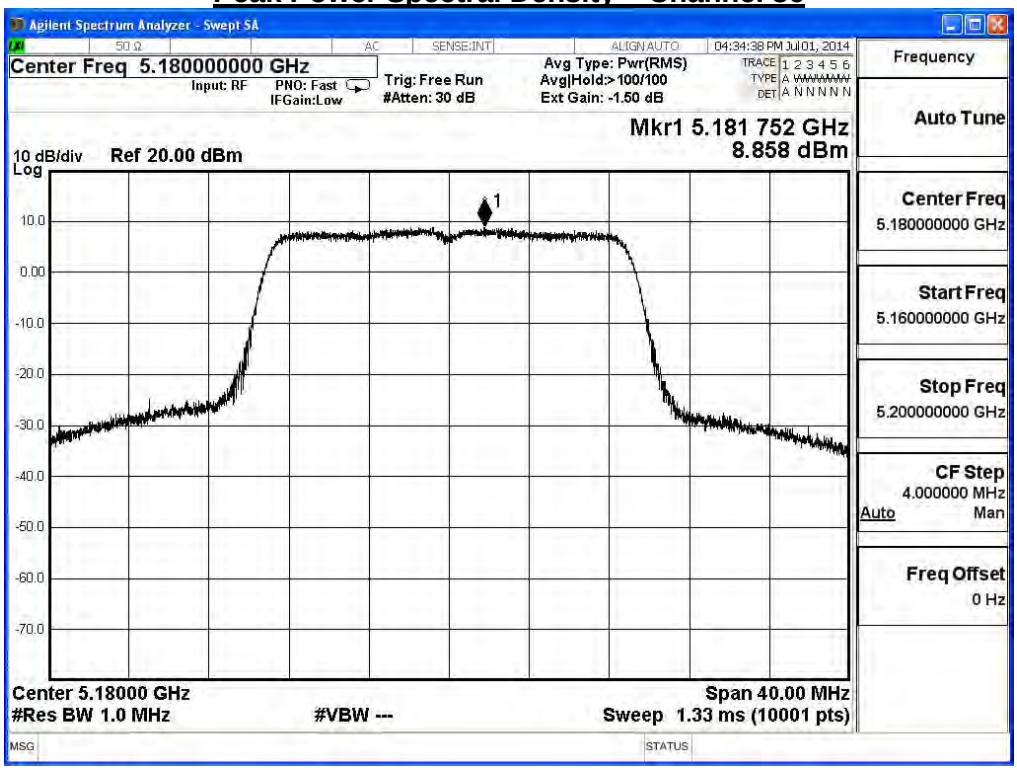
Note:
Directional Gain = 10log(Ant N) + Max Gain = 8.81dBi
Required Limit = 17dBm-(8.81dBi -6dB) = 14.19dBm

Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Power Spectral Density		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

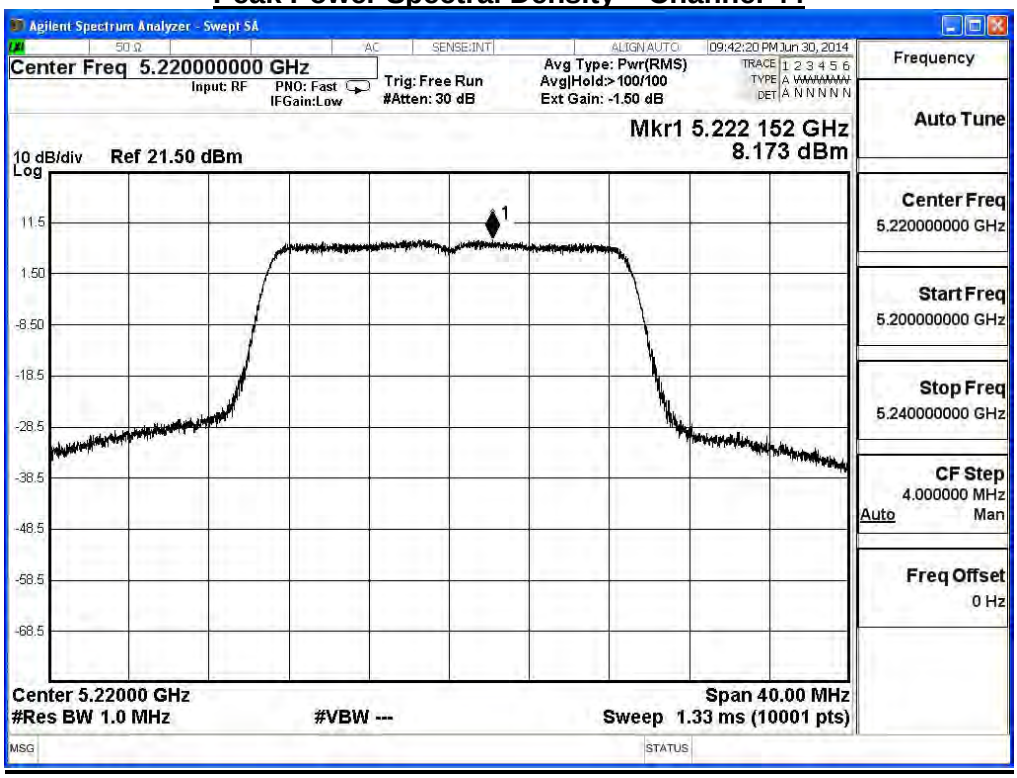
IEEE 802.11n_20M(ANT 0)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Required Limit (dBm)	Result
36	5180	8.858	≦14.19	Pass
44	5220	8.173	≦14.19	Pass
48	5240	6.574	≦14.19	Pass

Note:
Directional Gain = 10log(Ant N) + Max Gain = 8.81dBi
Required Limit = 17dBm-(8.81dBi -6dB) = 14.19dBm

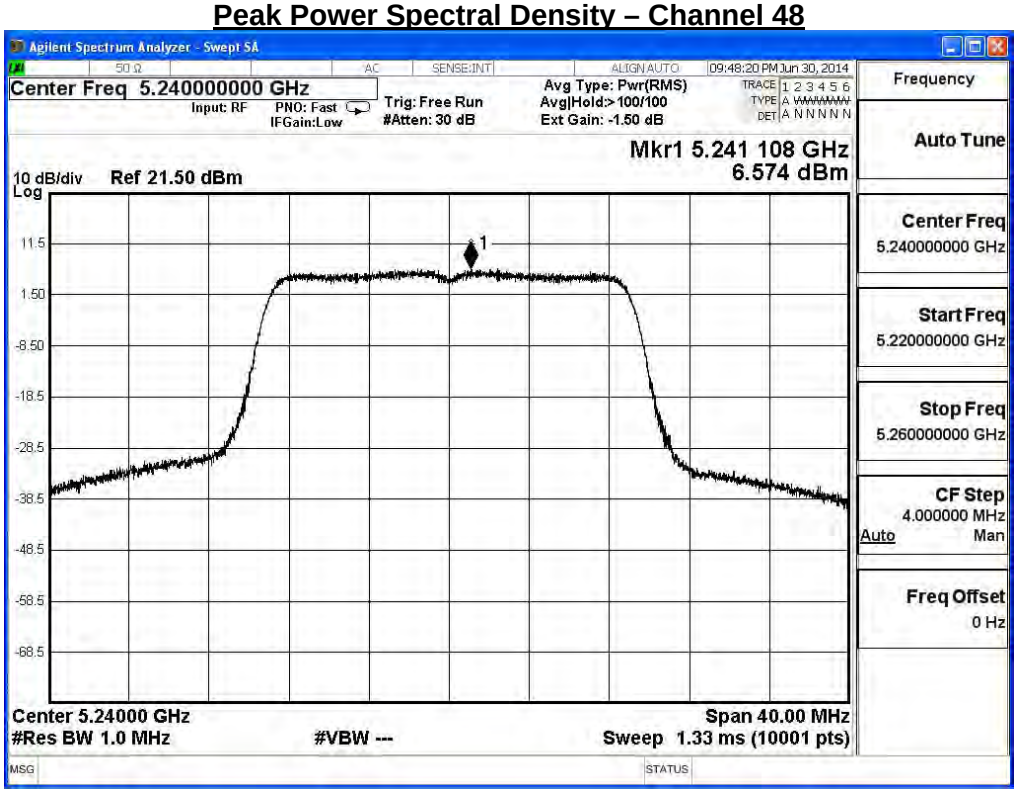
Peak Power Spectral Density – Channel 36



Peak Power Spectral Density – Channel 44



Peak Power Spectral Density – Channel 48

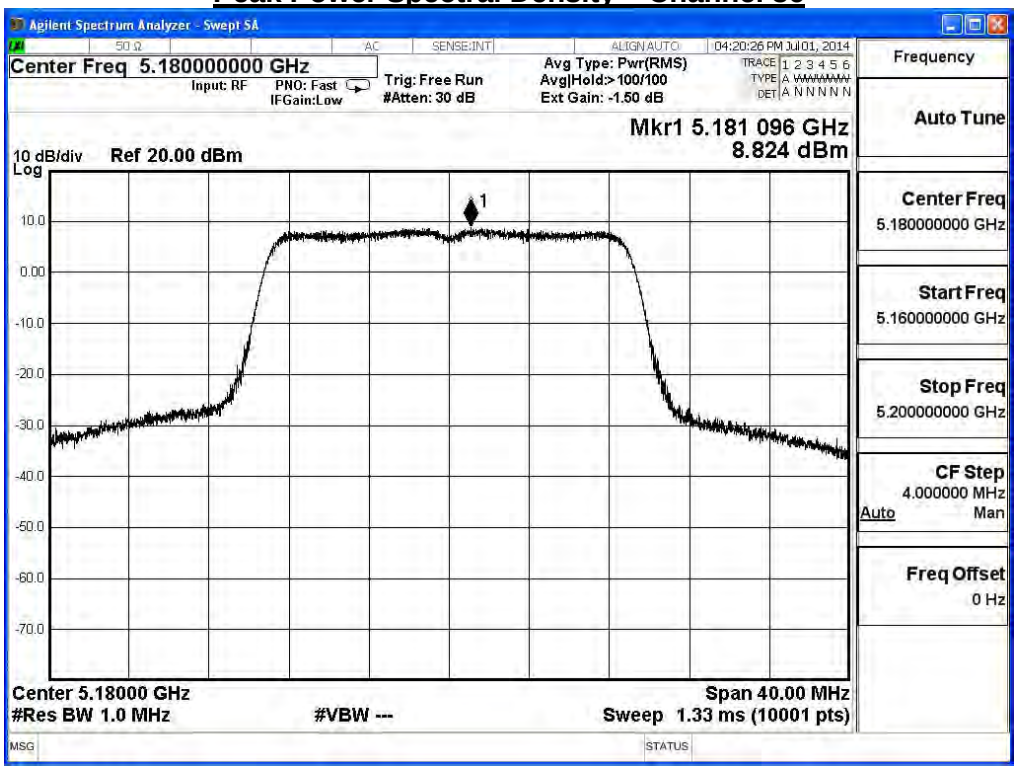


Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Power Spectral Density		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

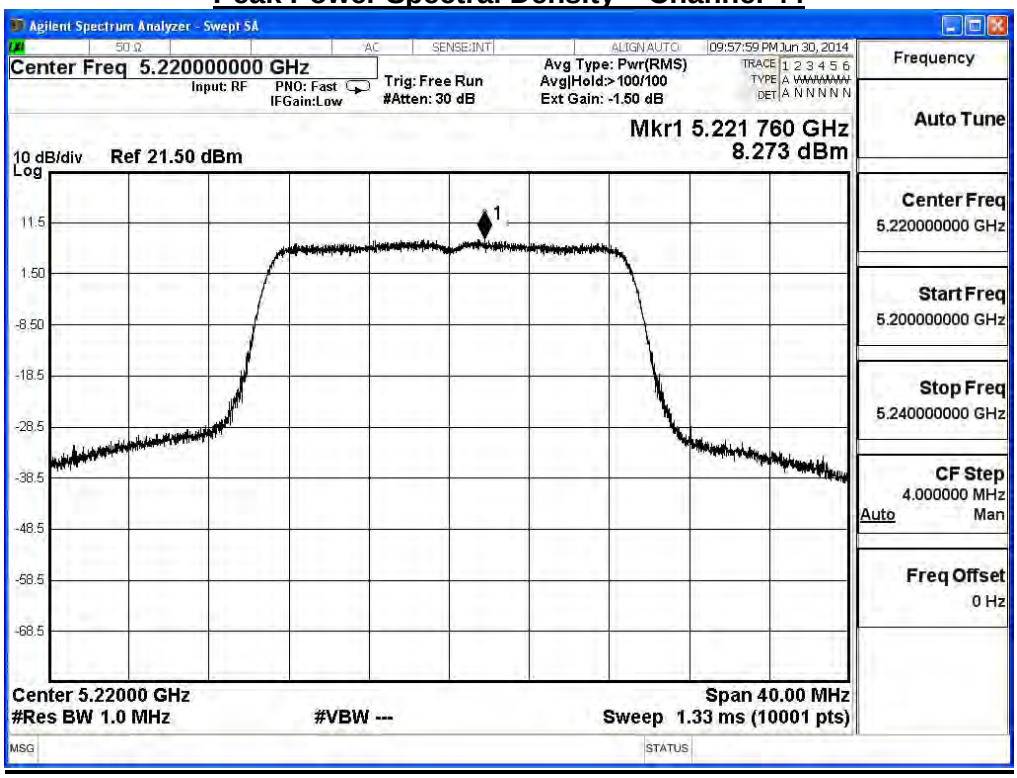
IEEE 802.11n_20M(ANT 1)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Required Limit (dBm)	Result
36	5180	8.824	≦14.19	Pass
44	5220	8.273	≦14.19	Pass
48	5240	6.781	≦14.19	Pass

Note:
Directional Gain = 10log(Ant N) + Max Gain = 8.81dBi
Required Limit = 17dBm-(8.81dBi -6dB) = 14.19dBm

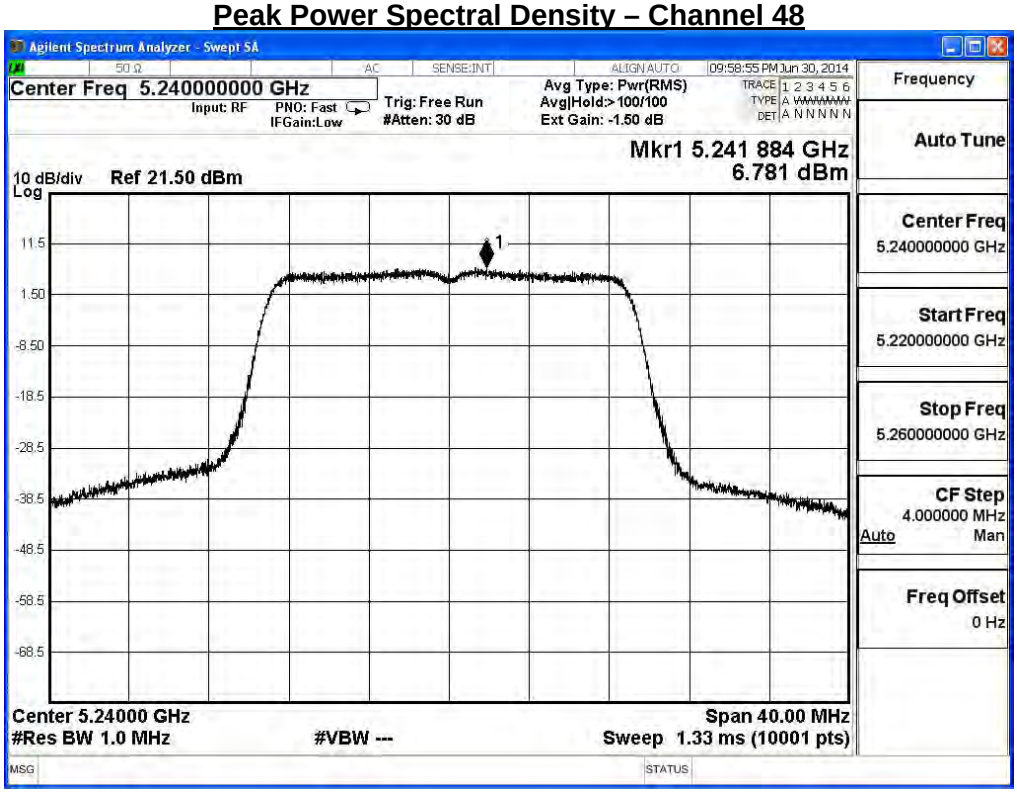
Peak Power Spectral Density – Channel 36



Peak Power Spectral Density – Channel 44



Peak Power Spectral Density – Channel 48

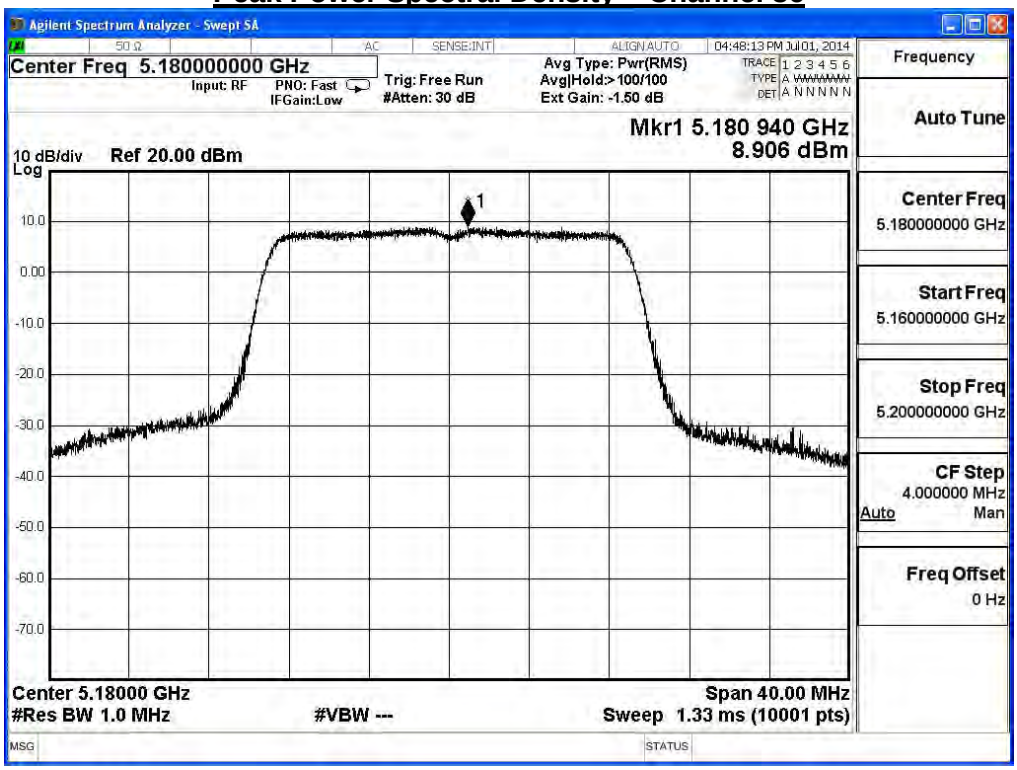


Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Power Spectral Density		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

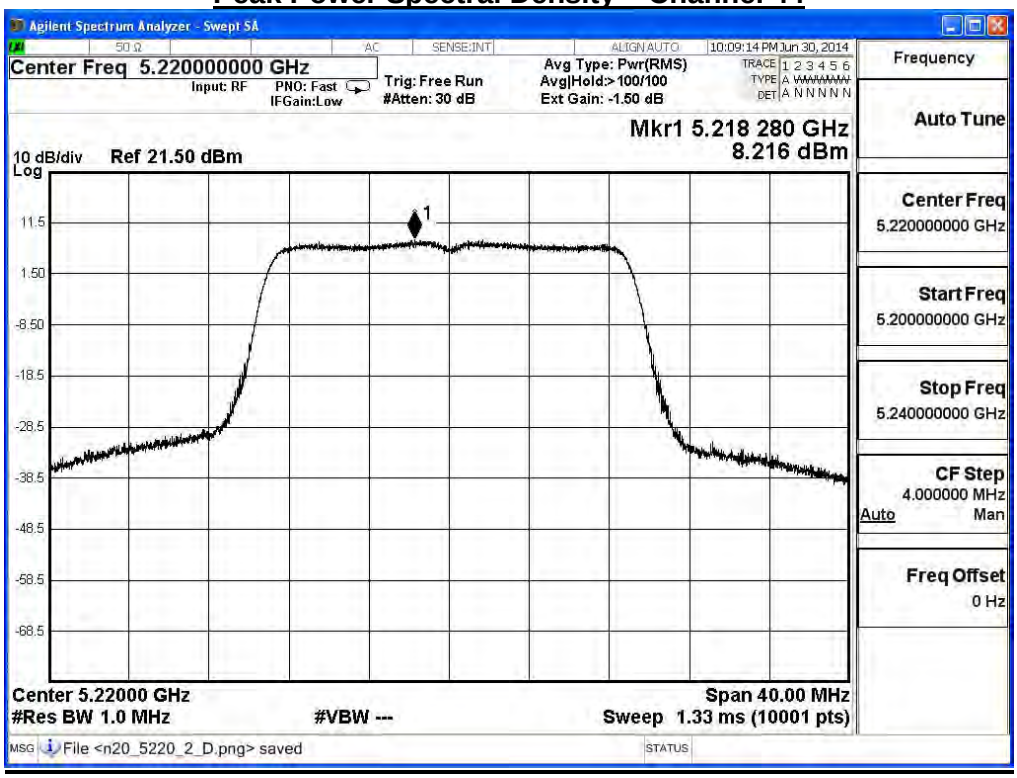
IEEE 802.11n_20M(ANT 2)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Required Limit (dBm)	Result
36	5180	8.906	≦14.19	Pass
44	5220	8.216	≦14.19	Pass
48	5240	6.756	≦14.19	Pass

Note:
Directional Gain = 10log(Ant N) + Max Gain = 8.81dBi
Required Limit = 17dBm-(8.81dBi -6dB) = 14.19dBm

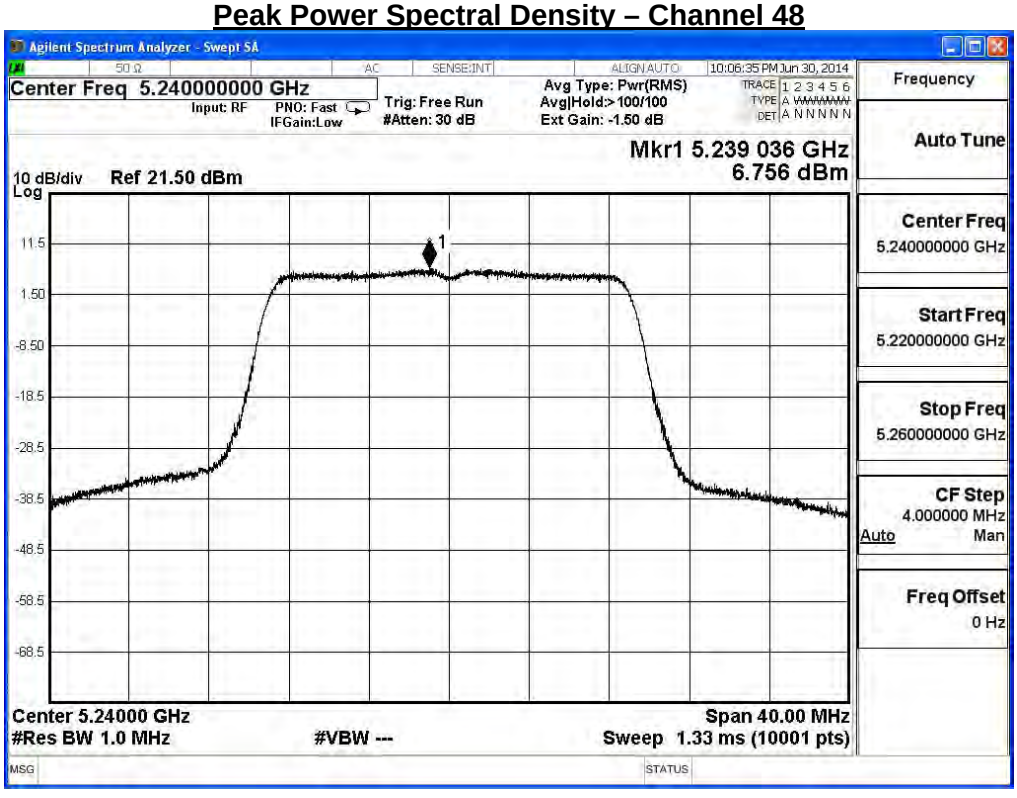
Peak Power Spectral Density – Channel 36



Peak Power Spectral Density – Channel 44



Peak Power Spectral Density – Channel 48



Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Power Spectral Density		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

IEEE 802.11n_20M(ANT 0+1+2)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Required Limit (dBm)	Result
36	5180	13.634	≦14.19	Pass
44	5220	12.992	≦14.19	Pass
48	5240	11.476	≦14.19	Pass

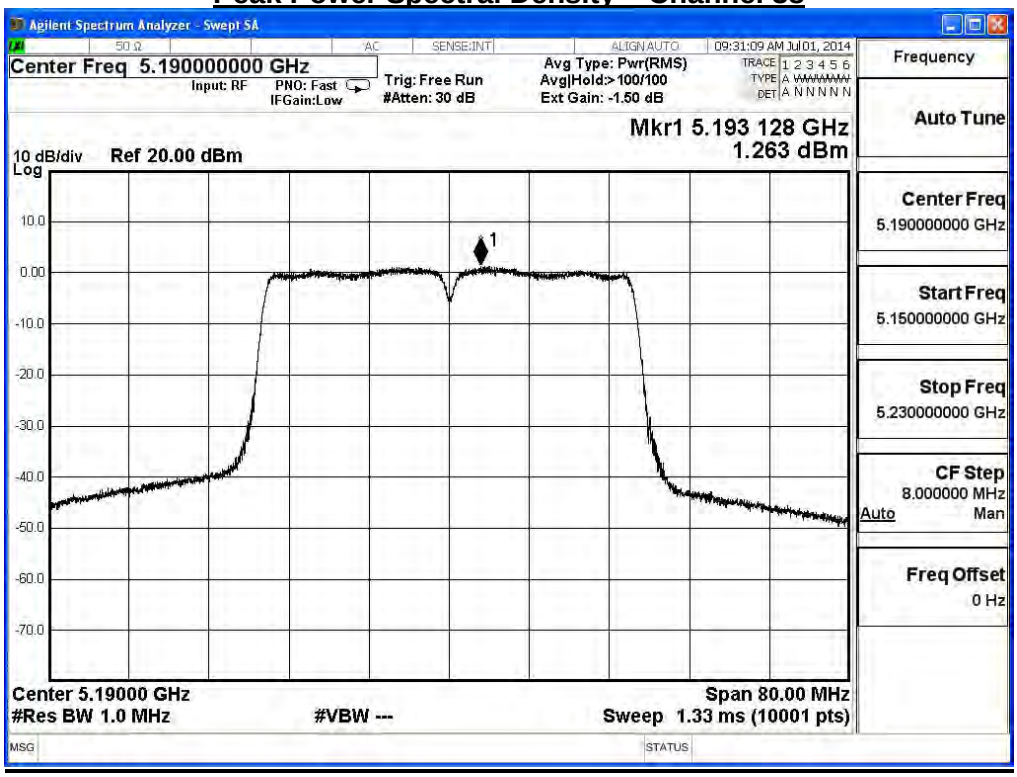
Note:
Directional Gain = 10log(Ant N) + Max Gain = 8.81dBi
Required Limit = 17dBm-(8.81dBi -6dB) = 14.19dBm

Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Power Spectral Density		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

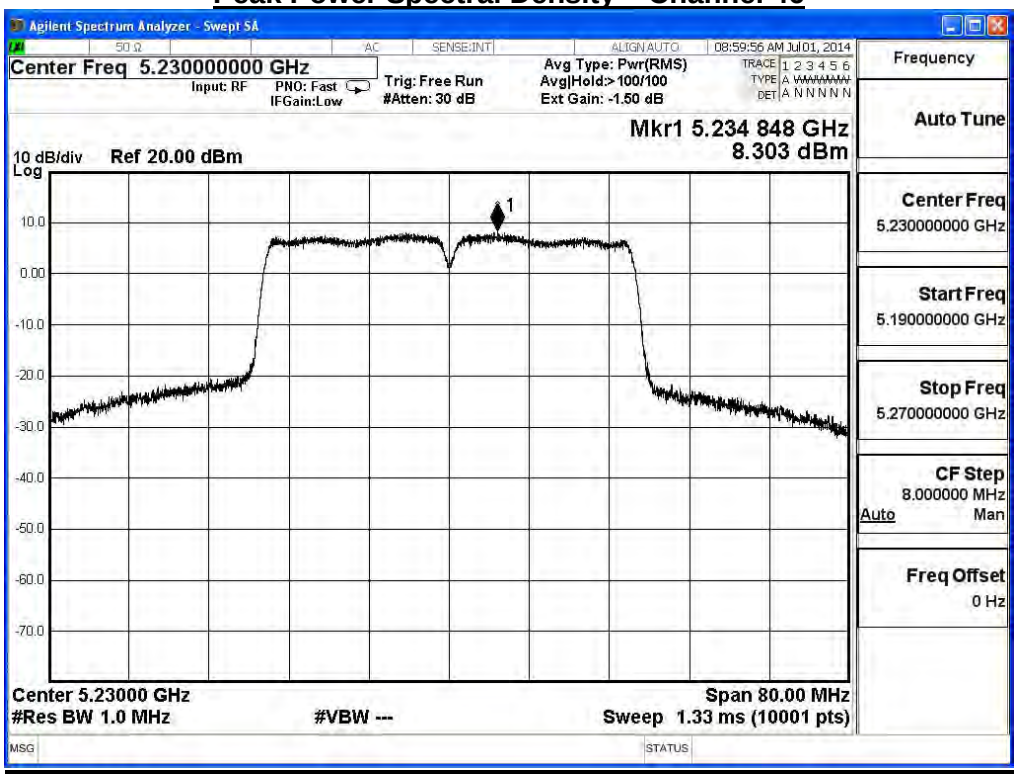
IEEE 802.11n_40M(ANT 0)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Required Limit (dBm)	Result
38	5190	1.263	≦14.19	Pass
46	5230	8.303	≦14.19	Pass

Note:
Directional Gain = 10log(Ant N) + Max Gain = 8.81dBi
Required Limit = 17dBm-(8.81dBi -6dB) = 14.19dBm

Peak Power Spectral Density – Channel 38



Peak Power Spectral Density – Channel 46

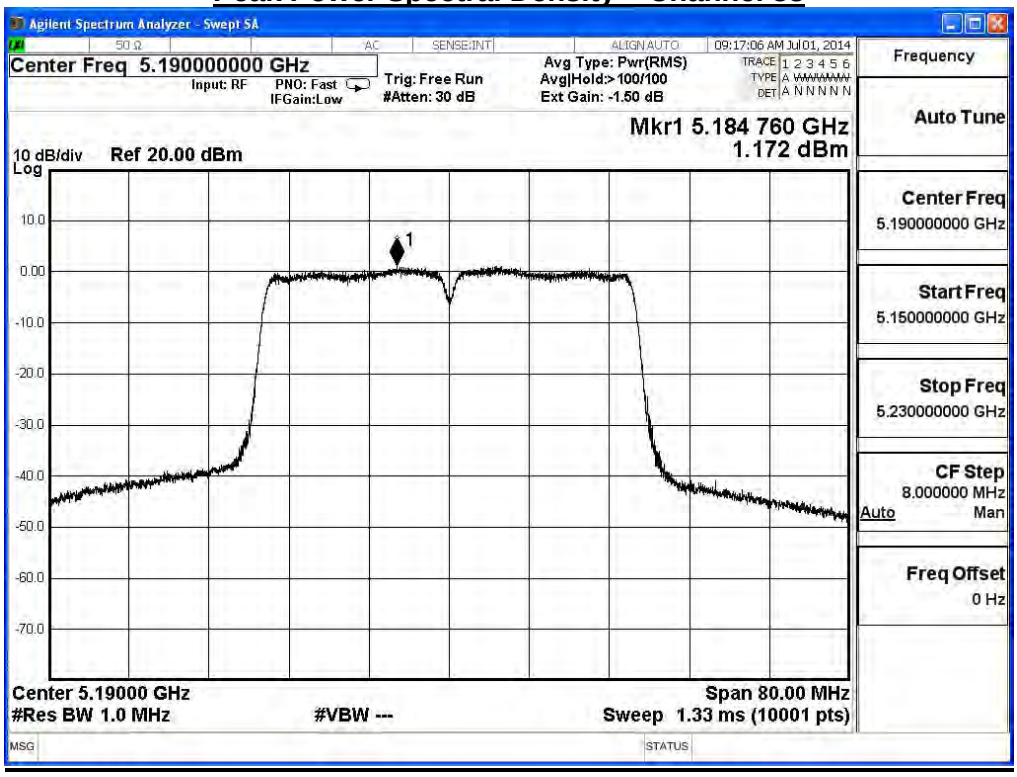


Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Power Spectral Density		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

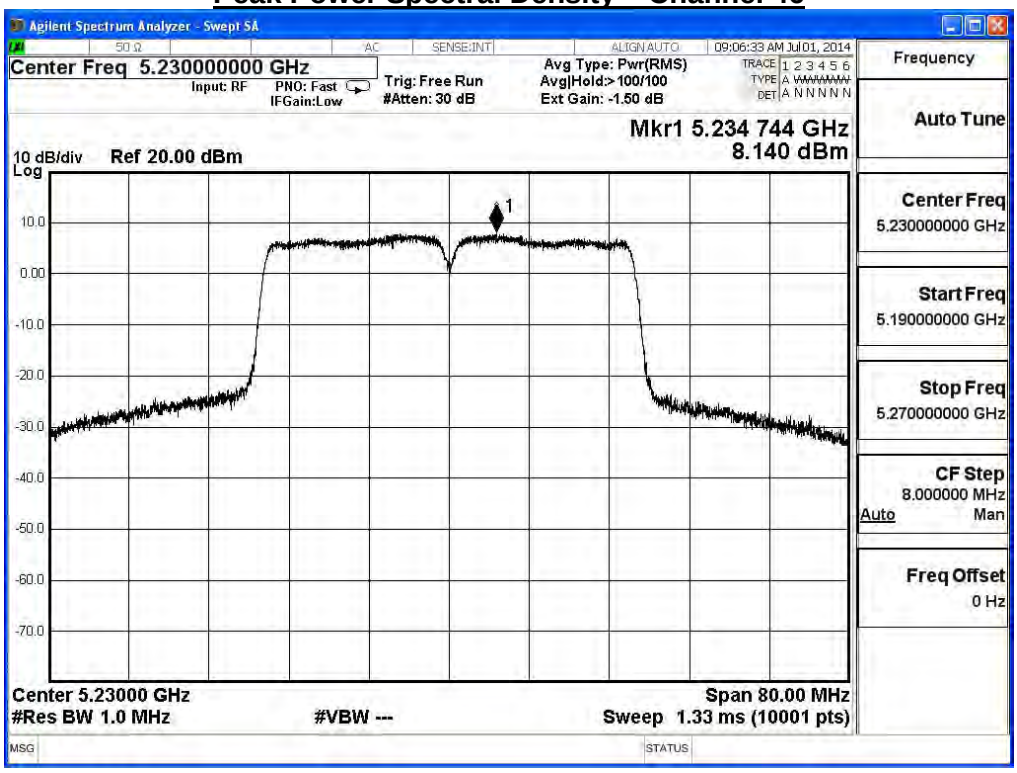
IEEE 802.11n_40M(ANT 1)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Required Limit (dBm)	Result
38	5190	1.172	≦14.19	Pass
46	5230	8.140	≦14.19	Pass

Note:
Directional Gain = 10log(Ant N) + Max Gain = 8.81dBi
Required Limit = 17dBm-(8.81dBi -6dB) = 14.19dBm

Peak Power Spectral Density – Channel 38



Peak Power Spectral Density – Channel 46

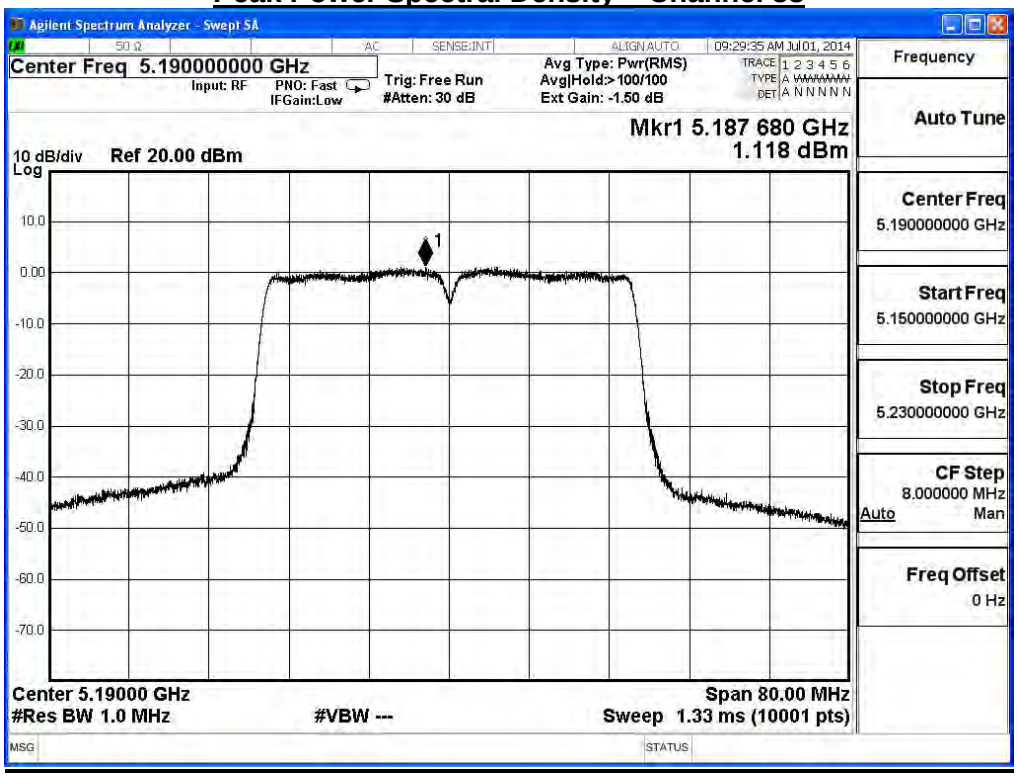


Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Power Spectral Density		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

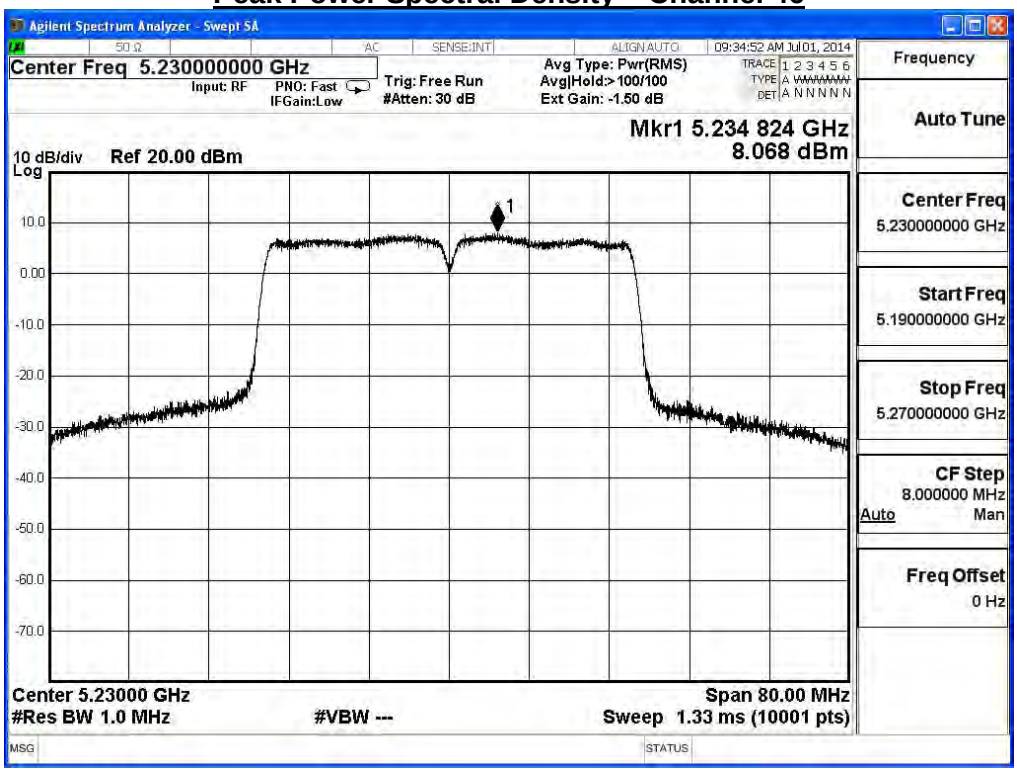
IEEE 802.11n_40M(ANT 2)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Required Limit (dBm)	Result
38	5190	1.118	≦14.19	Pass
46	5230	8.068	≦14.19	Pass

Note:
Directional Gain = 10log(Ant N) + Max Gain = 8.81dBi
Required Limit = 17dBm-(8.81dBi -6dB) = 14.19dBm

Peak Power Spectral Density – Channel 38



Peak Power Spectral Density – Channel 46



Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Power Spectral Density		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

IEEE 802.11n_40M(ANT 0+1+2)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Required Limit (dBm)	Result
38	5190	5.956	≦14.19	Pass
46	5230	12.943	≦14.19	Pass

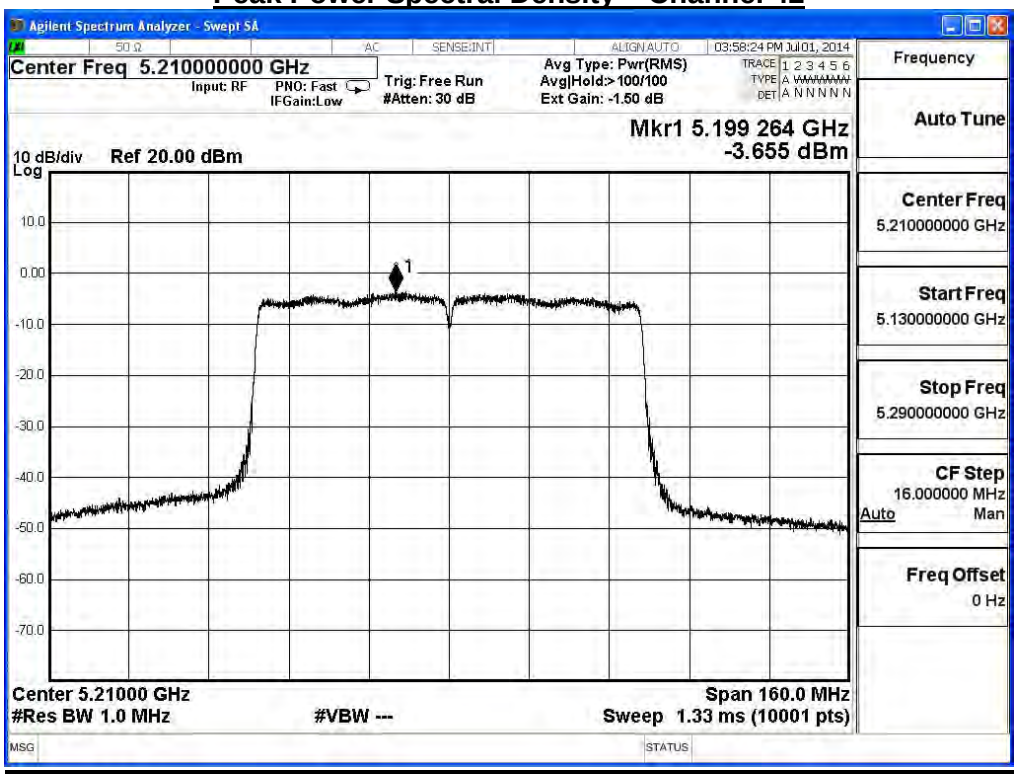
Note:
Directional Gain = 10log(Ant N) + Max Gain = 8.81dBi
Required Limit = 17dBm-(8.81dBi -6dB) = 14.19dBm

Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Power Spectral Density		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2013/07/01	Test Site	SR7

IEEE 802.11ac_80M(ANT 0)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Required Limit (dBm)	Result
42	5210	-3.655	≦14.19	Pass

Note:
Directional Gain = 10log(Ant N) + Max Gain = 8.81dBi
Required Limit = 17dBm-(8.81dBi -6dB) = 14.19dBm

Peak Power Spectral Density – Channel 42

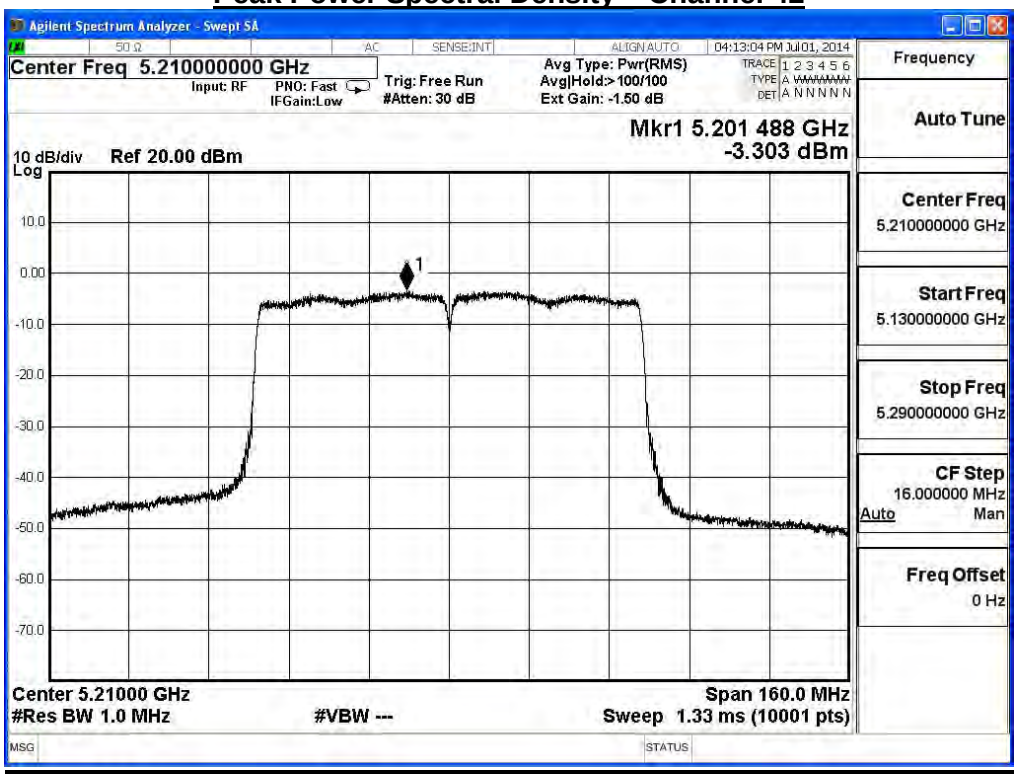


Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Power Spectral Density		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

IEEE 802.11ac_80M(ANT 1)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Required Limit (dBm)	Result
42	5210	-3.303	≦14.19	Pass

Note:
Directional Gain = 10log(Ant N) + Max Gain = 8.81dBi
Required Limit = 17dBm-(8.81dBi -6dB) = 14.19dBm

Peak Power Spectral Density – Channel 42

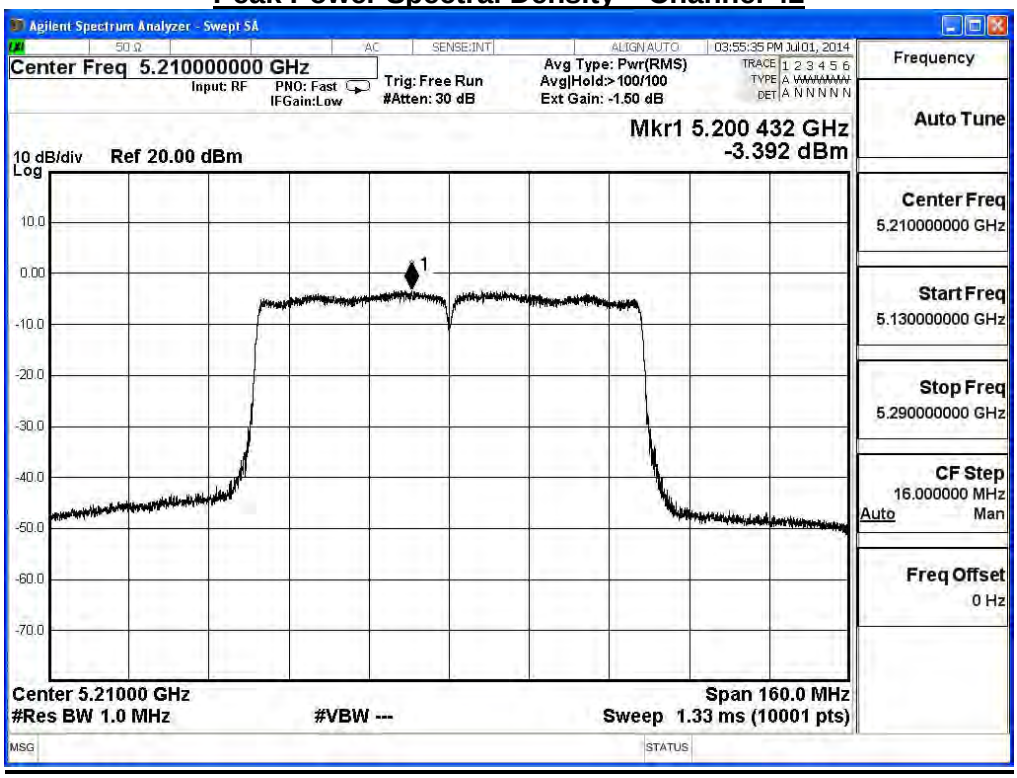


Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Power Spectral Density		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

IEEE 802.11ac_80M(ANT 2)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Required Limit (dBm)	Result
42	5210	-3.392	≦14.19	Pass

Note:
Directional Gain = 10log(Ant N) + Max Gain = 8.81dBi
Required Limit = 17dBm-(8.81dBi -6dB) = 14.19dBm

Peak Power Spectral Density – Channel 42



Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Power Spectral Density		
Test Mode	Mode 1: Transmit (CDD Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

IEEE 802.11ac_80M(ANT 0+1+2)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Required Limit (dBm)	Result
42	5210	1.324	≦14.19	Pass

Note:
Directional Gain = 10log(Ant N) + Max Gain = 8.81dBi
Required Limit = 17dBm-(8.81dBi -6dB) = 14.19dBm

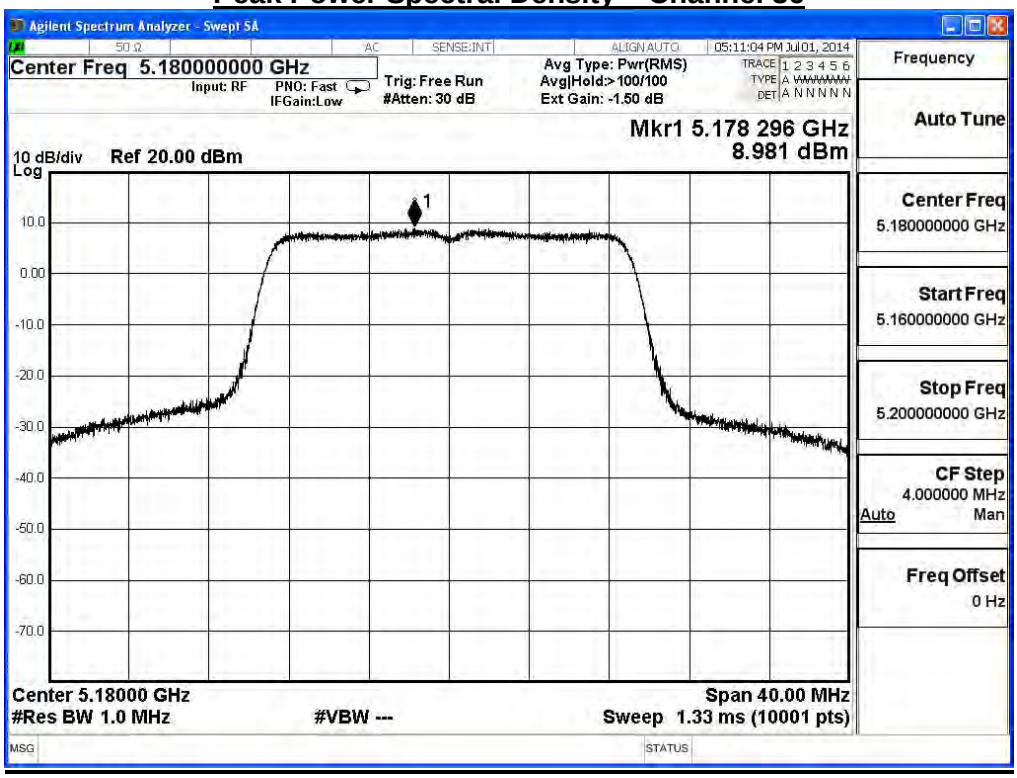
Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Power Spectral Density		
Test Mode	Mode 2: Transmit (Beamforming Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

IEEE 802.11n_20M(ANT 0)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Required Limit (dBm)	Result
36	5180	8.981	≦14.19	Pass
44	5220	5.939	≦14.19	Pass
48	5240	5.763	≦14.19	Pass

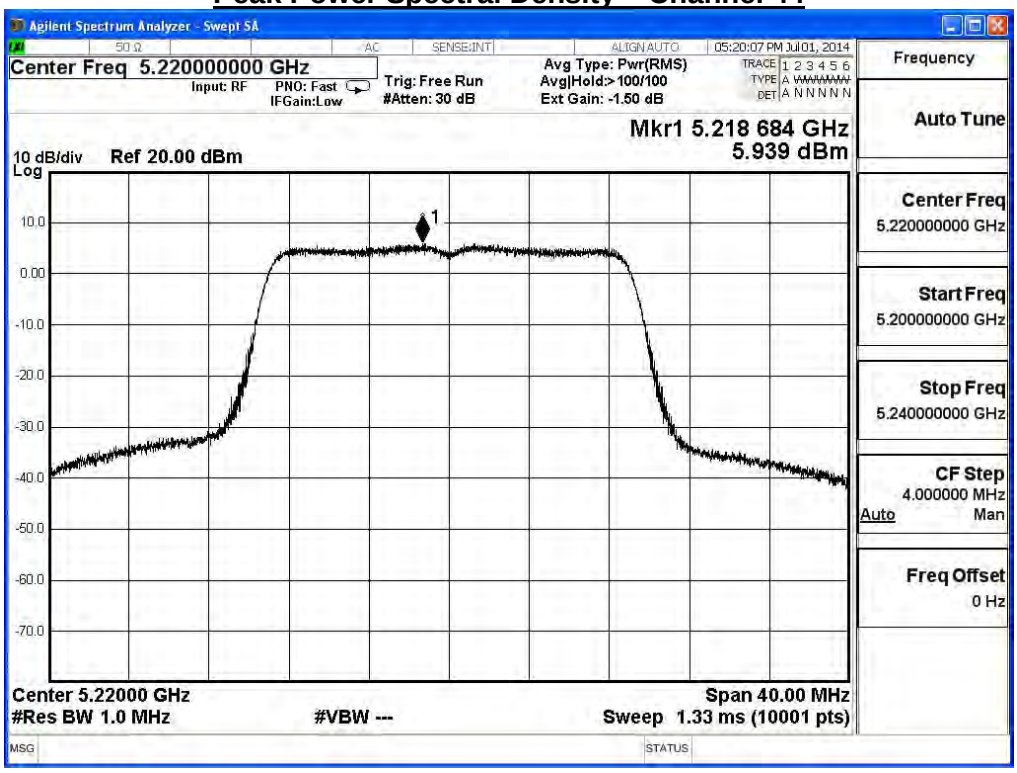
Note:

Directional Gain : 10log(Ant N) + Max Gain = 8.81dBi
Required Limit = 17dBm-(8.81dBi -6dB) = 14.19dBm

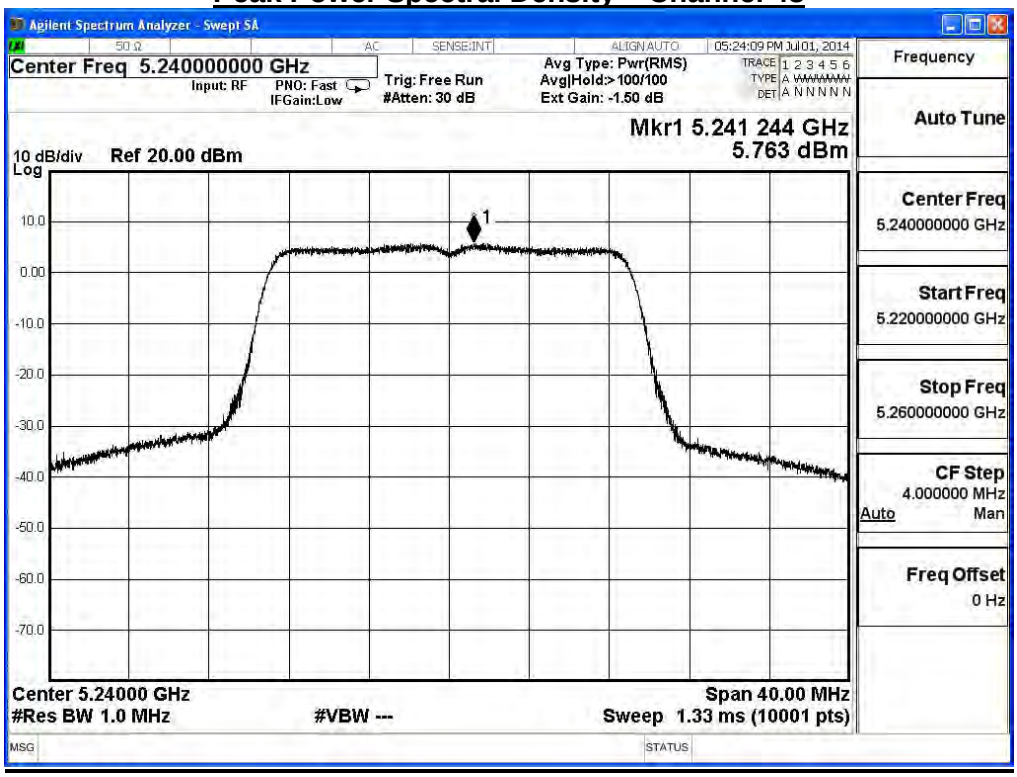
Peak Power Spectral Density – Channel 36



Peak Power Spectral Density – Channel 44



Peak Power Spectral Density – Channel 48



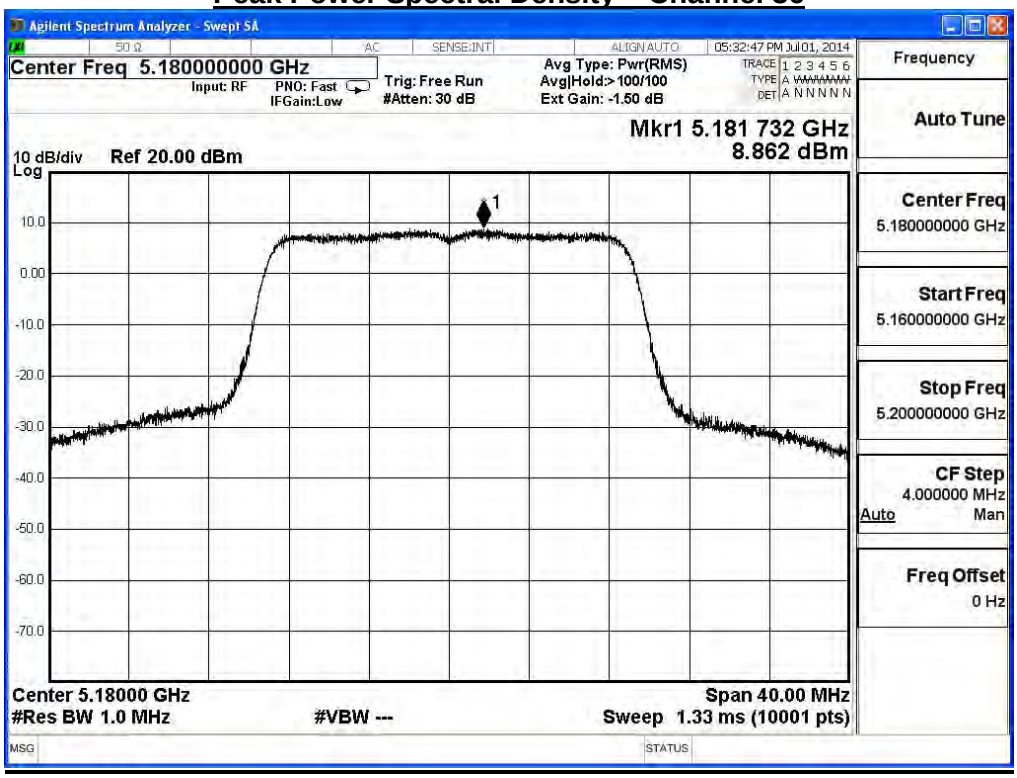
Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Power Spectral Density		
Test Mode	Mode 2: Transmit (Beamforming Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

IEEE 802.11n_20M(ANT 1)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Required Limit (dBm)	Result
36	5180	8.862	≦14.19	Pass
44	5220	6.066	≦14.19	Pass
48	5240	6.029	≦14.19	Pass

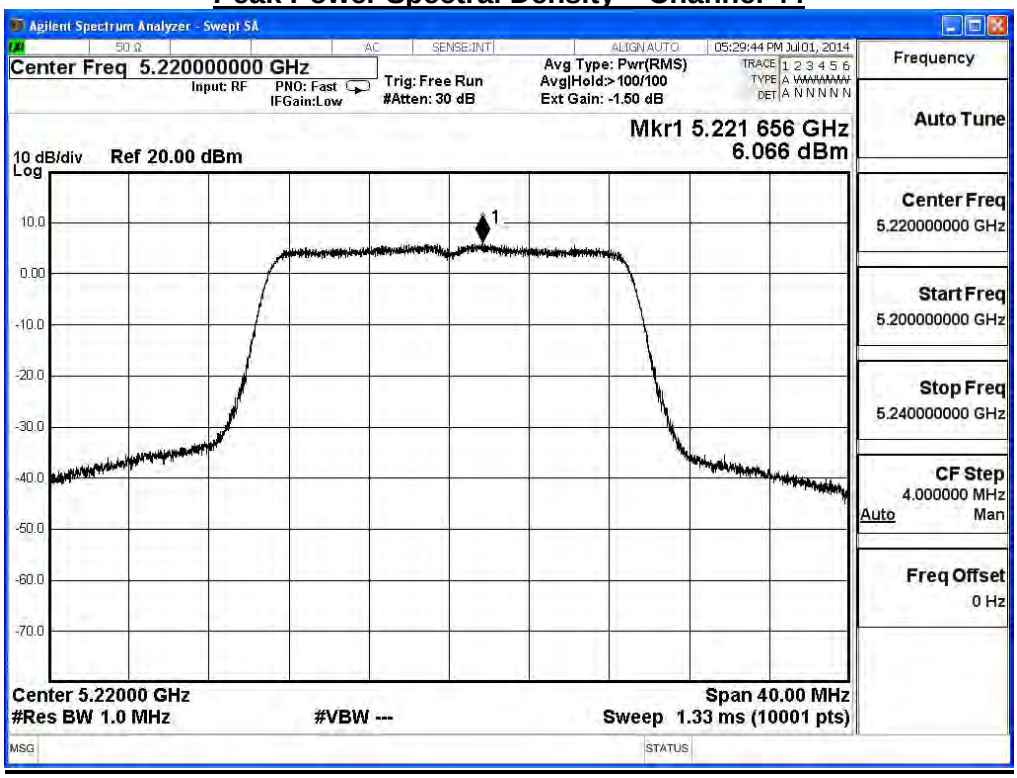
Note:

Directional Gain : 10log(Ant N) + Max Gain = 8.81dBi
Required Limit = 17dBm-(8.81dBi -6dB) = 14.19dBm

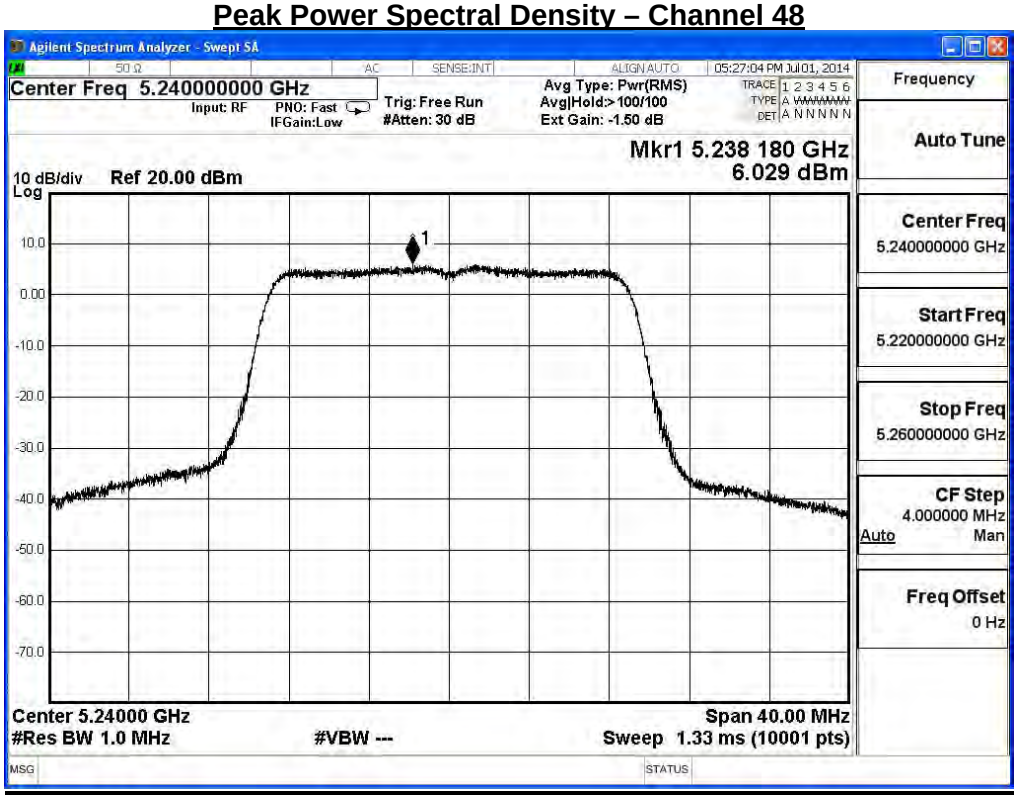
Peak Power Spectral Density – Channel 36



Peak Power Spectral Density – Channel 44



Peak Power Spectral Density – Channel 48



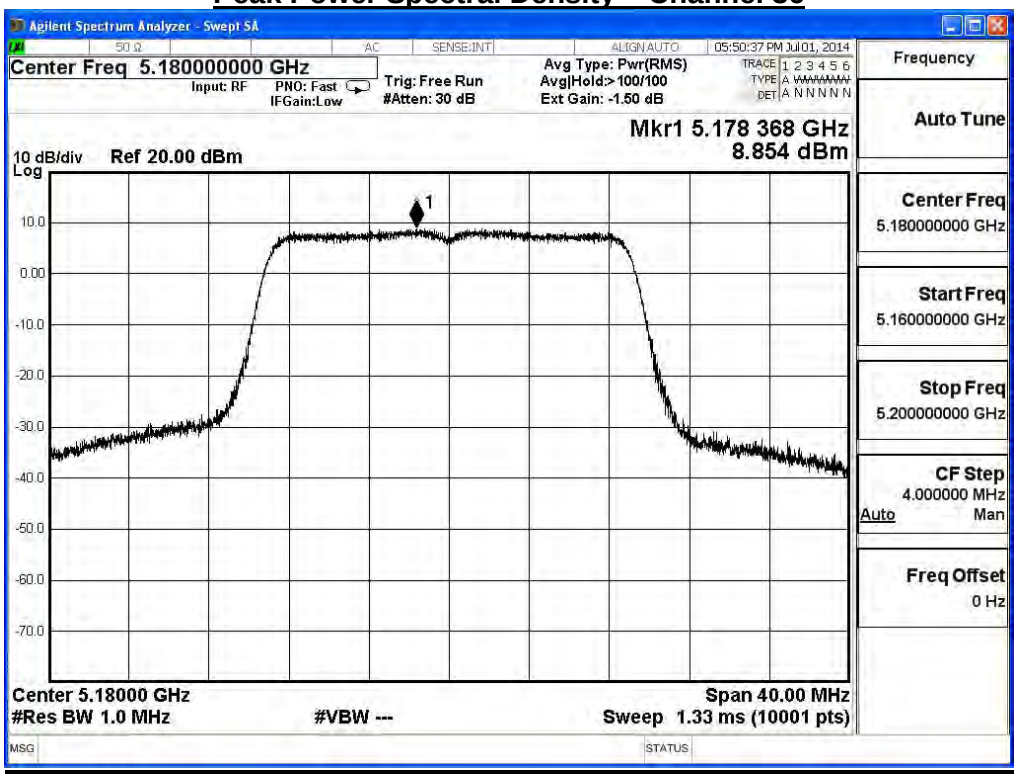
Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Power Spectral Density		
Test Mode	Mode 2: Transmit (Beamforming Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

IEEE 802.11n_20M(ANT 2)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Required Limit (dBm)	Result
36	5180	8.854	≦14.19	Pass
44	5220	5.839	≦14.19	Pass
48	5240	6.009	≦14.19	Pass

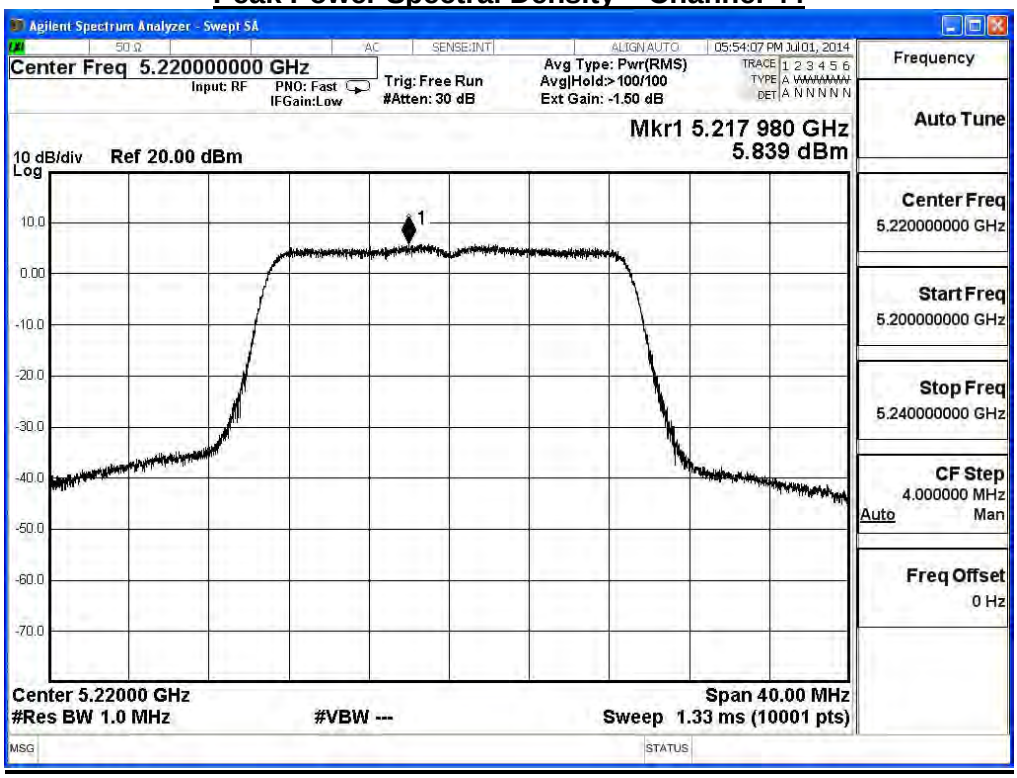
Note:

Directional Gain : 10log(Ant N) + Max Gain = 8.81dBi
Required Limit = 17dBm-(8.81dBi -6dB) = 14.19dBm

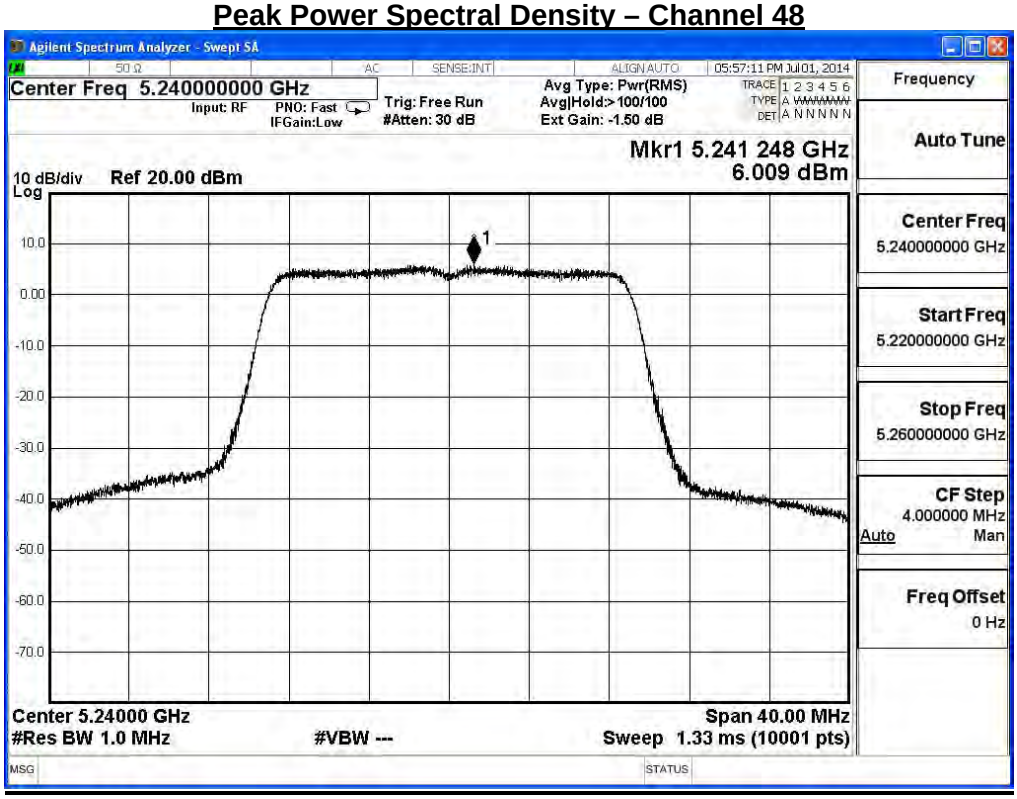
Peak Power Spectral Density – Channel 36



Peak Power Spectral Density – Channel 44



Peak Power Spectral Density – Channel 48



Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Power Spectral Density		
Test Mode	Mode 2: Transmit (Beamforming Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

IEEE 802.11n_20M(ANT 0+1+2)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Required Limit (dBm)	Result
36	5180	13.671	≦14.19	Pass
44	5220	10.720	≦14.19	Pass
48	5240	10.707	≦14.19	Pass

Note:

Directional Gain : 10log(Ant N) + Max Gain = 8.81dBi
Required Limit = 17dBm-(8.81dBi -6dB) = 14.19dBm

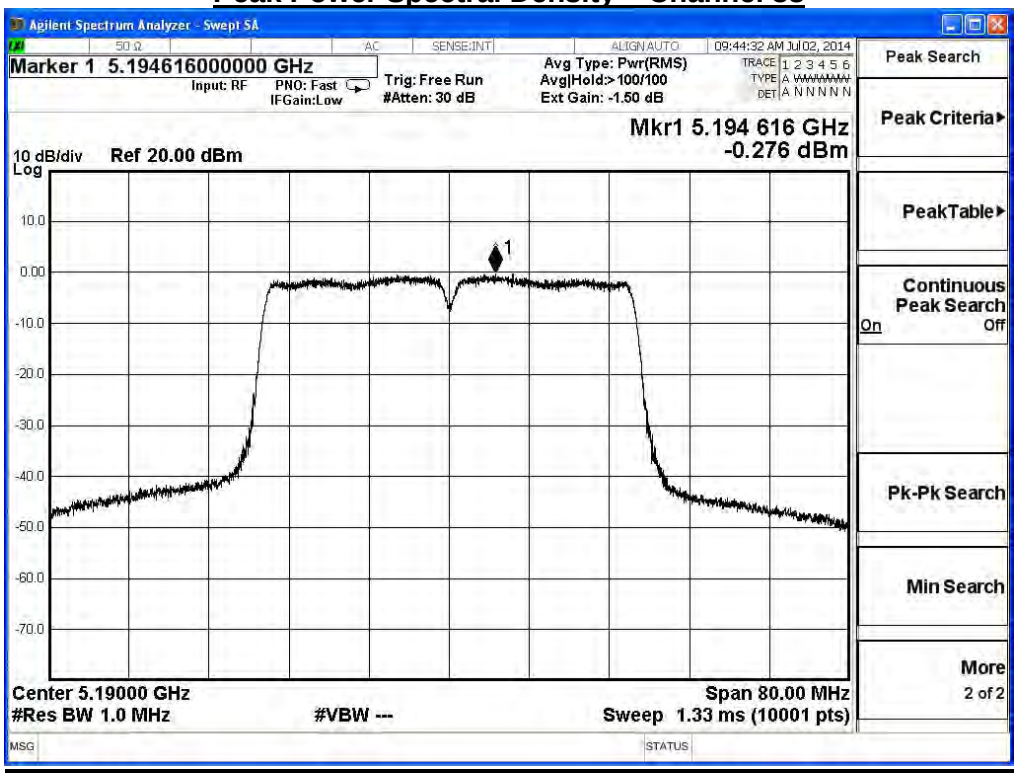
Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Power Spectral Density		
Test Mode	Mode 2: Transmit (Beamforming Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

IEEE 802.11n_40M(ANT 0)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Required Limit (dBm)	Result
38	5190	-0.276	≦14.19	Pass
46	5230	4.168	≦14.19	Pass

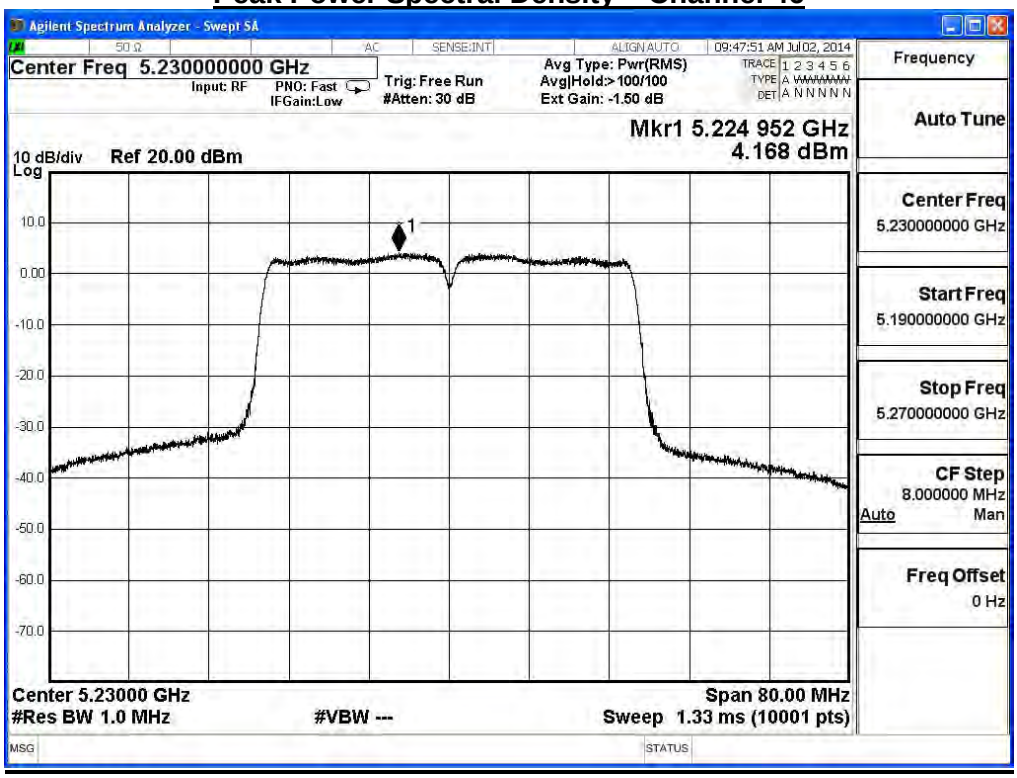
Note:

Directional Gain : 10log(Ant N) + Max Gain = 8.81dBi
Required Limit = 17dBm-(8.81dBi -6dB) = 14.19dBm

Peak Power Spectral Density – Channel 38



Peak Power Spectral Density – Channel 46



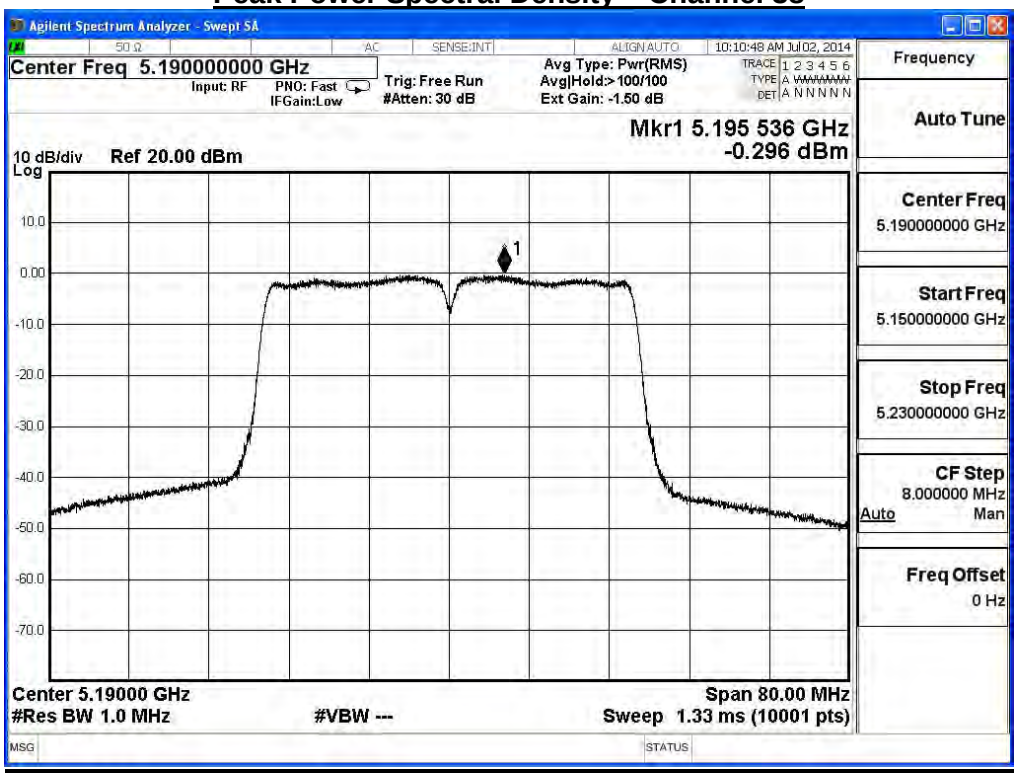
Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Power Spectral Density		
Test Mode	Mode 2: Transmit (Beamforming Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

IEEE 802.11n_40M(ANT 1)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Required Limit (dBm)	Result
38	5190	-0.296	≦14.19	Pass
46	5230	4.293	≦14.19	Pass

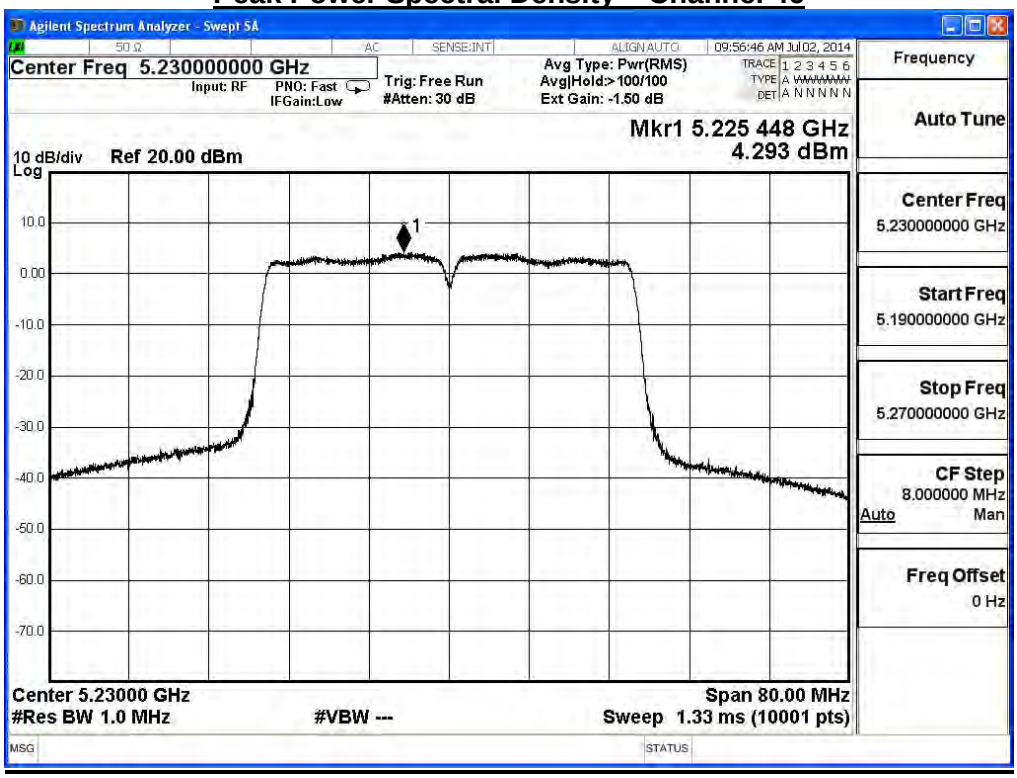
Note:

Directional Gain : 10log(Ant N) + Max Gain = 8.81dBi
Required Limit = 17dBm-(8.81dBi -6dB) = 14.19dBm

Peak Power Spectral Density – Channel 38



Peak Power Spectral Density – Channel 46



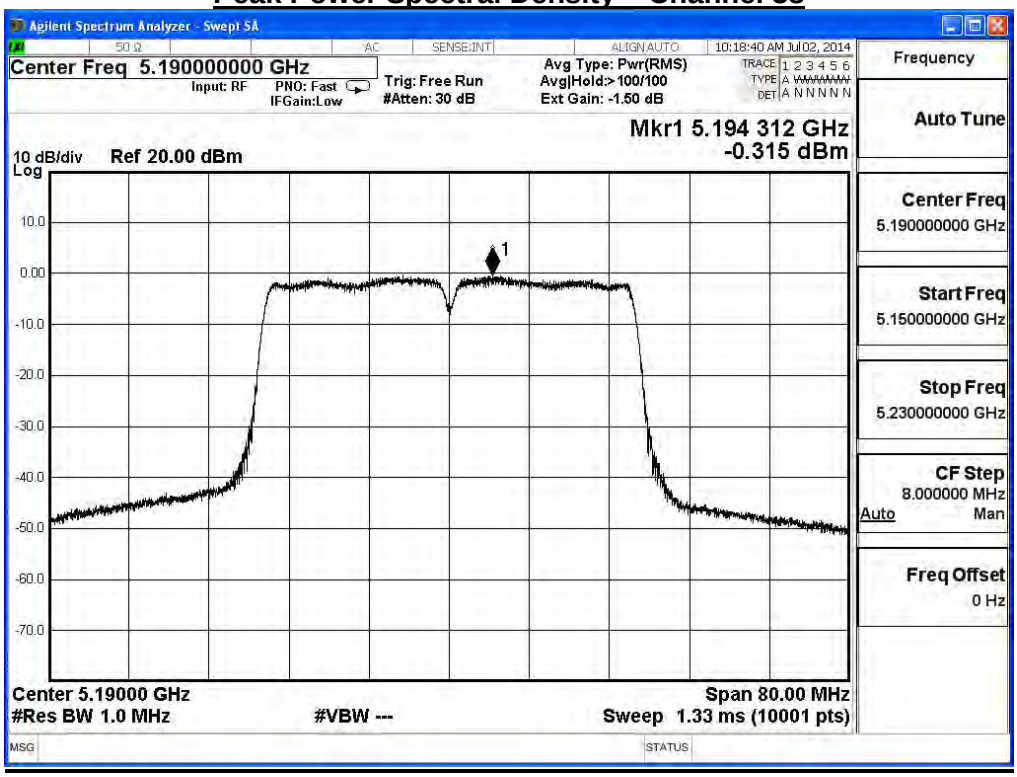
Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Power Spectral Density		
Test Mode	Mode 2: Transmit (Beamforming Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

IEEE 802.11n_40M(ANT 2)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Required Limit (dBm)	Result
38	5190	-0.315	≦14.19	Pass
46	5230	4.114	≦14.19	Pass

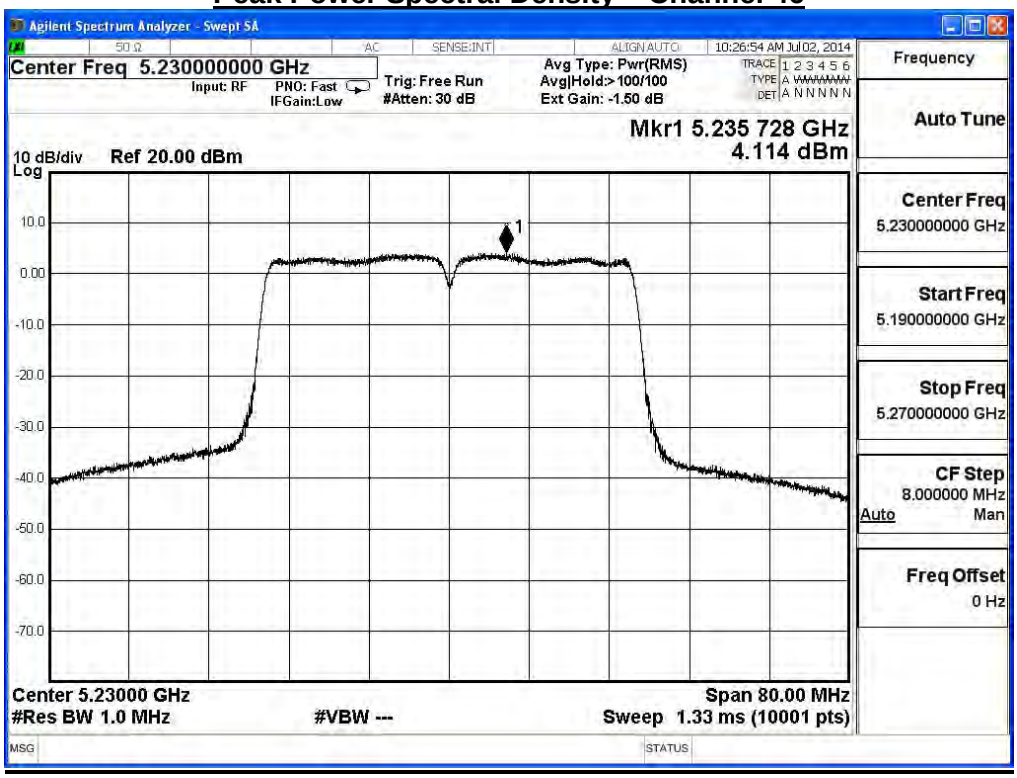
Note:

Directional Gain : 10log(Ant N) + Max Gain = 8.81dBi
Required Limit = 17dBm-(8.81dBi -6dB) = 14.19dBm

Peak Power Spectral Density – Channel 38



Peak Power Spectral Density – Channel 46



Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Power Spectral Density		
Test Mode	Mode 2: Transmit (Beamforming Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

IEEE 802.11n_40M(ANT 0+1+2)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Required Limit (dBm)	Result
38	5190	4.476	≦14.19	Pass
46	5230	8.964	≦14.19	Pass

Note:

Directional Gain : 10log(Ant N) + Max Gain = 8.81dBi
Required Limit = 17dBm-(8.81dBi -6dB) = 14.19dBm

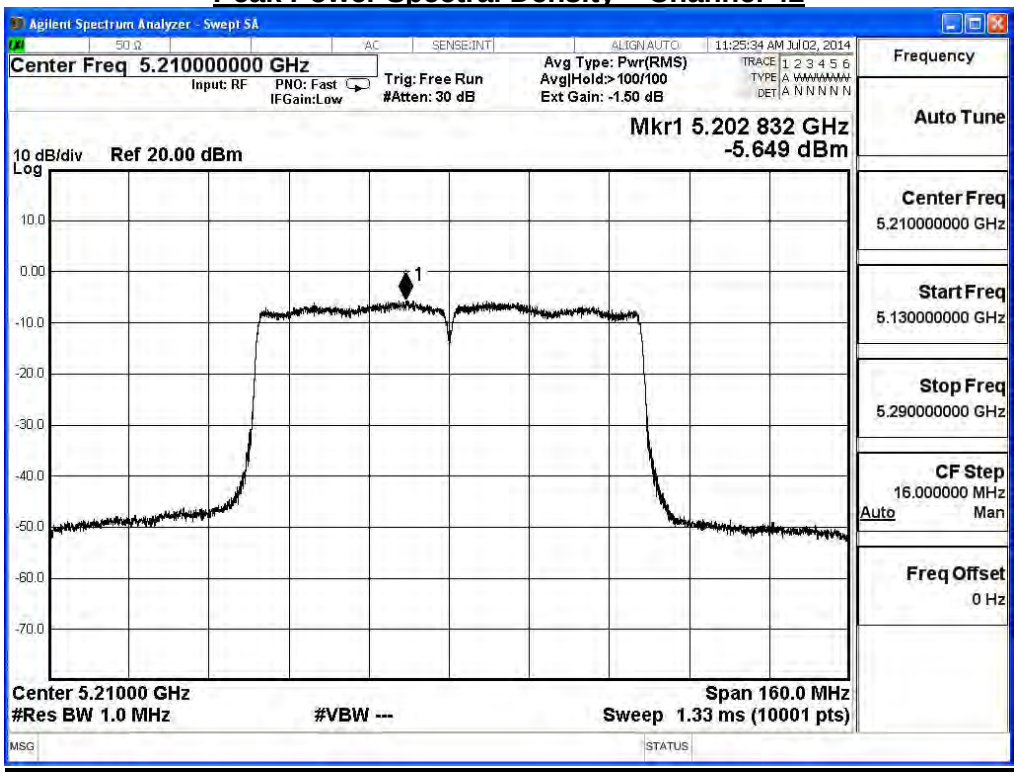
Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Power Spectral Density		
Test Mode	Mode 2: Transmit (Beamforming Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

IEEE 802.11ac_80M(ANT 0)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Required Limit (dBm)	Result
42	5210	-5.649	≦14.19	Pass

Note:

Directional Gain : 10log(Ant N) + Max Gain = 8.81dBi
Required Limit = 17dBm-(8.81dBi -6dB) = 14.19dBm

Peak Power Spectral Density – Channel 42



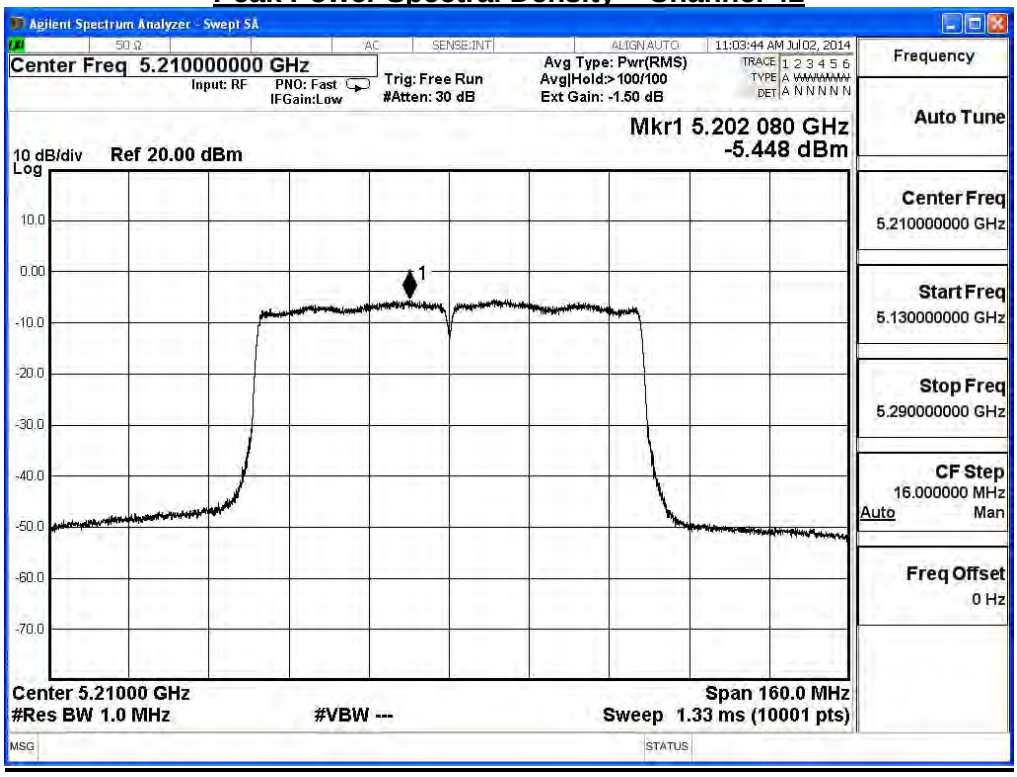
Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Power Spectral Density		
Test Mode	Mode 2: Transmit (Beamforming Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

IEEE 802.11ac_80M(ANT 1)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Required Limit (dBm)	Result
42	5210	-5.448	≦14.19	Pass

Note:

Directional Gain : 10log(Ant N) + Max Gain = 8.81dBi
Required Limit = 17dBm-(8.81dBi -6dB) = 14.19dBm

Peak Power Spectral Density – Channel 42



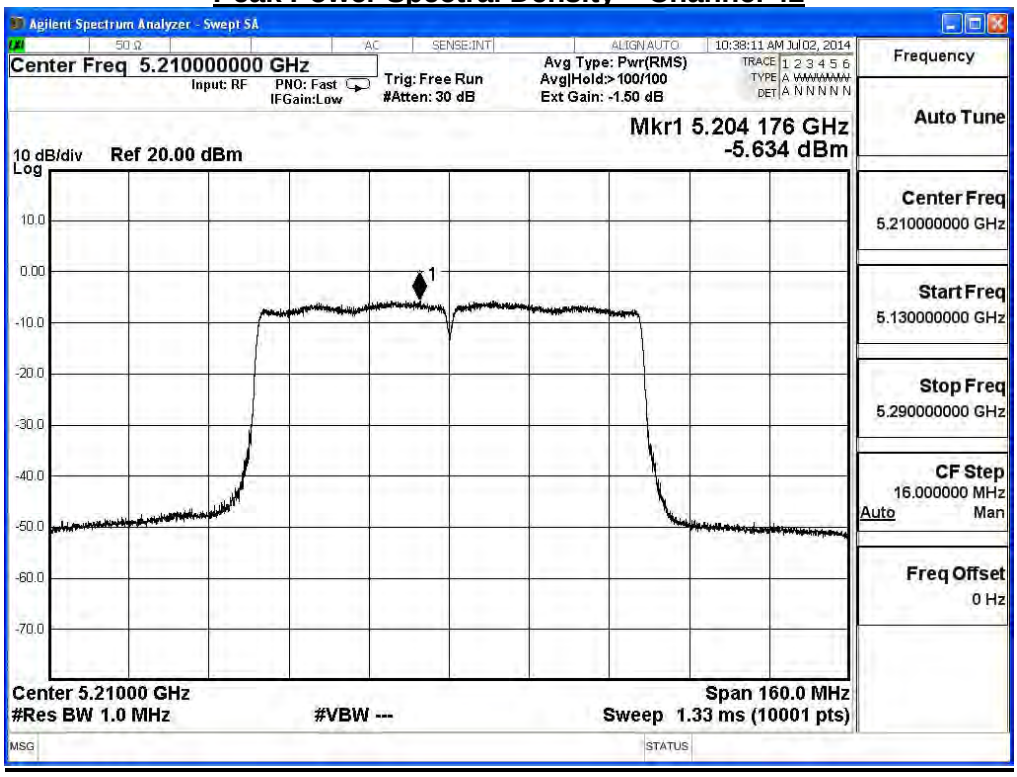
Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Power Spectral Density		
Test Mode	Mode 2: Transmit (Beamforming Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

IEEE 802.11ac_80M(ANT 2)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Required Limit (dBm)	Result
42	5210	-5.634	≦14.19	Pass

Note:

Directional Gain : 10log(Ant N) + Max Gain = 8.81dBi
Required Limit = 17dBm-(8.81dBi -6dB) = 14.19dBm

Peak Power Spectral Density – Channel 42



Product	Wireless-AC1900 Dual Band Gigabit Router		
Test Item	Peak Power Spectral Density		
Test Mode	Mode 2: Transmit (Beamforming Mode)_Adapter: EXA1206UH		
Date of Test	2014/07/01	Test Site	SR7

IEEE 802.11ac_80M(ANT 0+1+2)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Required Limit (dBm)	Result
42	5210	-0.805	≦14.19	Pass

Note:

Directional Gain : 10log(Ant N) + Max Gain = 8.81dBi

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