FCC Test Report

Product Name	SpectraGuard® Access Point / Sensor
Model No	SS-300AT-C-60
FCC ID	TOR-SS300ATC60

Applicant	AirTight Networks, Inc.
Address	339 N. Bernardo Avenue, Suite #200, Mountain View, California, USA

Date of Receipt	July 03, 2013
Issued Date	Aug. 20, 2013
Report No.	137146R-RFUSP31V01-A
Report Version	V1.0

Testing Laboratory
0914

The test results relate only to the samples tested.

Test Report Certification

Issued Date: Aug. 20, 2013
Report No.: 137146R-RFUSP31V01-A

Product Name	SpectraGuard® Access Point / Sensor
Applicant	AirTight Networks, Inc.
Address	339 N. Bernardo Avenue, Suite #200, Mountain View, California, USA
Manufacturer	DONG GUAN G-COM COMPUTER CO., LTD.
Model No.	SS-300AT-C-60
FCC ID.	TOR-SS300ATC60
EUT Rated Voltage	DC 12V
EUT Test Voltage	AC 120V/60Hz
Trade Name	AirTight
Applicable Standard	FCC CFR Title 47 Part 15 Subpart E: 2012 ANSI C63.4: 2003, ANSI C63.10: 2009, FCC KDB-789033
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 : Leven Huang

(Senior Adm. Specialist / Leven Huang)

Tested By : Jack Hsu

(Engineer / Jack Hsu)

Approved By :

(Manager / Vincent Lin)

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1. GENERAL INFORMATION

1.1. EUT Description

Product Name	SpectraGuard® Access Point / Sensor
Trade Name	AirTight
FCC ID.	TOR-SS300ATC60
Model No.	SS-300AT-C-60
Frequency Range	802.11a/n-20MHz: 5180-5240MHz 802.11n-40MHz: 5190-5230MHz
Number of Channels	802.11a/n-20MHz: 4, n-40MHz: 2
Data Rate	802.11a/g: 6-54Mbps, 802.11n: up to 300Mbps
Channel Control	Auto
Type of Modulation	802.11a/n:OFDM, BPSK, QPSK, 16QAM, 64QAM
Antenna type	PIFA / Dipole
Antenna Gain	Refer to the table “Antenna List”

Antenna List

No.	Manufacturer	Part No.	Peak Gain	Note
1.	JOYMAX	JWX-614XRSXX-361 JWX-614XRSXX-361	5dBi for 5.15~5.25GHz	External Antenna (Dipole)
2.	MAG.LAYERS	MSA-3810-2G4C1-A36 MSA-3810-2G4C1-A38	2.64dBi for 5.15~5.25GHz	Internal Antenna (PIFA)

Note: The antenna of EUT is conform to FCC 15.203

802.11a/n-20MHz Center Working Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 36:	5180 MHz	Channel 40:	5200 MHz	Channel 44:	5220 MHz	Channel 48:	5240 MHz

802.11n-40MHz Center Working Frequency of Each Channel:

Channel	Frequency	Channel	Frequency
Channel 38:	5190 MHz	Channel 46:	5230 MHz

Note:

1. This device is a SpectraGuard® Access Point / Sensor with a built-in two WLAN module, module 1 support 2T2R, module 2 support 3T3R technology, this report for 2T2R module.
2. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
3. Lowest and highest data rates are tested in each mode. Only worst case is shown in the report. (802.11a is 6Mbps, 802.11n-20BW is 14.4Mbps and 802.11n-40BW are 30Mbps)
4. These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with Part 15 Subpart E for Unlicensed National Information Infrastructure devices.
5. The radiation measurements are performed in X, Y, Z axis positioning. Only the worst case is shown in the report.

Test Mode	Mode 1: Transmit (802.11a-6Mbps)(Dipole Antenna)
	Mode 2: Transmit (802.11n-20BW 14.4Mbps)(Dipole Antenna)
	Mode 3: Transmit (802.11n-40BW 30Mbps)(Dipole Antenna)
	Mode 4: Transmit (802.11a-6Mbps)(PIFA Antenna)
	Mode 5: Transmit (802.11n-20BW 14.4Mbps)(PIFA Antenna)
	Mode 6: Transmit (802.11n-40BW 30Mbps)(PIFA Antenna)

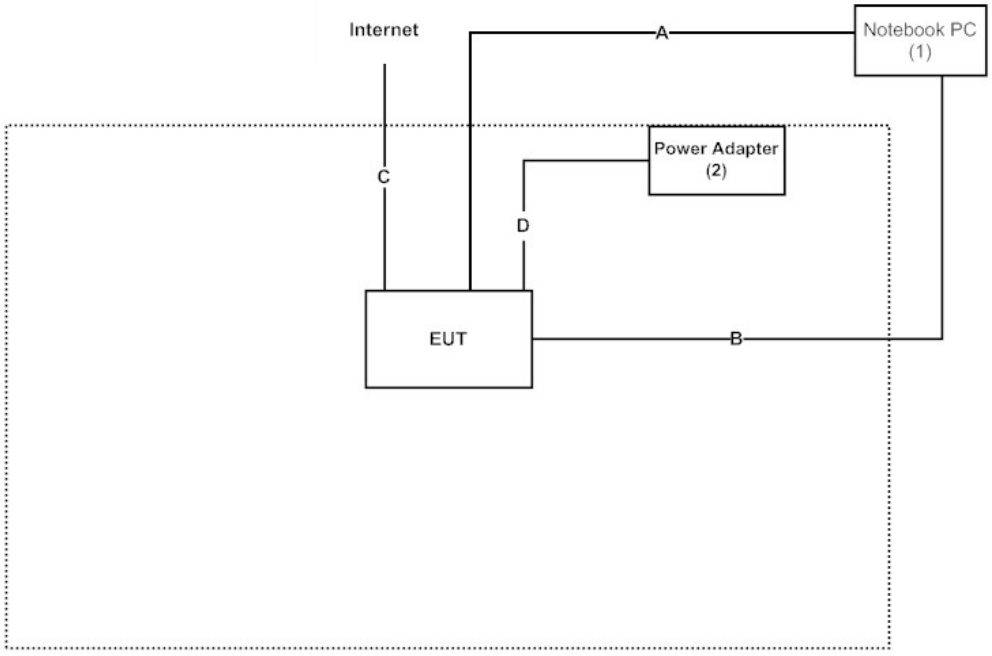
1.3. Tested System Datails

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

Product		Manufacturer	Model No.	Serial No.	Power Cord
(1)	Notebook PC	DELL	PPT	N/A	Non-Shielded, 0.8m
(2)	Power Adapter	DVE	DSA-15P-12 US 120150	N/A	Non-Shielded, 1.7m

Signal Cable Type		Signal cable Description
A	RJ45 Cable	Non-Shielded, 5.0m
B	RJ45 to RS-232 Cable	Non-Shielded, 5.0m
C	RJ45 Cable	Non-Shielded, 5.0m
D	Power Cable	Non-Shielded, 1.7m

1.4. Configuration of tested System



1.5. EUT Exercise Software

(1) Connect EUT and Notebook via RJ45 & RS232 Cable
(2) Execute “Art2-GUI V2.3” program on the Notebook PC.
(3) Configure the test mode, the test channel, and the data rate.
(4) Start the continuous transmission.
(5) Verify that the EUT works properly.

1.6. Test Facility

Ambient conditions in the laboratory:

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	20-35
Humidity (%RH)	25-75	50-65
Barometric pressure (mbar)	860-1060	950-1000

The related certificate for our laboratories about the test site and management system can be downloaded from QuieTek Corporation's Web Site : http://tw.quietek.com/modules/myalbum/

The address and introduction of QuieTek Corporation's laboratories can be founded in our Web site : http://www.quietek.com/

Site Description: File on
Federal Communications Commission
FCC Engineering Laboratory
7435 Oakland Mills Road
Columbia, MD 21046
Registration Number: 92195

Site Name: Quietek Corporation
Site Address: No. 5-22, Ruei-Shu Valley, Ruei-Ping Tsuen,
Lin-Kou Shiang, Taipei,
Taiwan, R.O.C.
TEL: 886-2-8601-3788 / FAX : 886-2-8601-3789
E-Mail : service@quietek.com

FCC Accreditation Number: TW1014

2. Conducted Emission

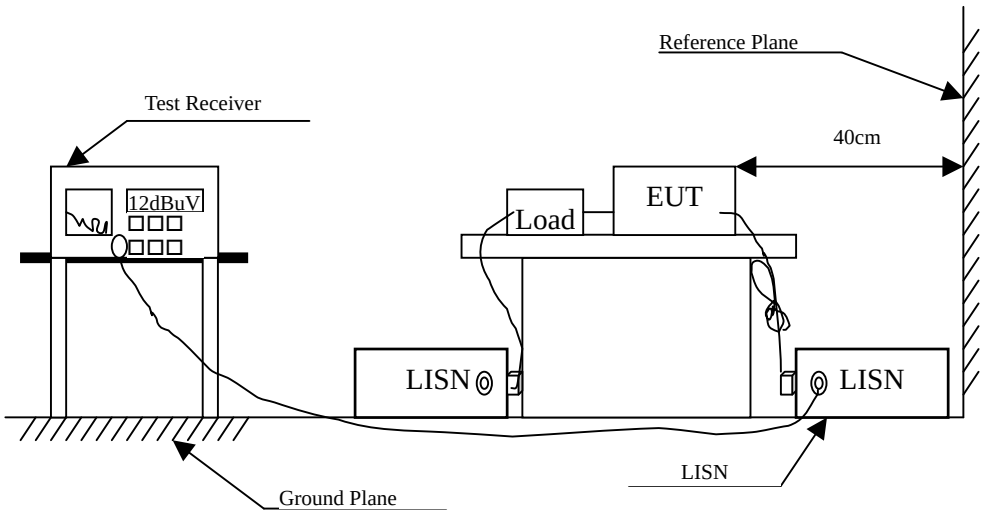
2.1. Test Equipment

	Equipment	Manufacturer	Model No. / Serial No.	Last Cal.	Remark
X	Test Receiver	R & S	ESCS 30 / 825442/018	Sep., 2012	
X	Artificial Mains Network	R & S	ENV4200 / 848411/10	Feb., 2013	Peripherals
X	LISN	R & S	ESH3-Z5 / 825562/002	Feb., 2013	EUT
	DC LISN	Schwarzbeck	8226 / 176	Mar, 2013	EUT
X	Pulse Limiter	R & S	ESH3-Z2 / 357.8810.52	Feb., 2013	
	No.1 Shielded Room				

Note:

1. All equipments are calibrated every one year.
2. The test instruments marked by “X” are used to measure the final test results.

2.2. Test Setup



2.3. Limits

FCC Part 15 Subpart C Paragraph 15.207 (dBuV) Limit		
Frequency MHz	Limits	
	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 and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm /50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs.)

Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10:2009 on conducted measurement.

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

The EUT was setup to ANSI C63.10, 2009; tested to DTS test procedure of FCC KDB-789033 for compliance to FCC 47CFR Subpart E requirements.

2.5. Uncertainty

± 2.26 dB

2.6. Test Result of Conducted Emission

Product : SpectraGuard® Access Point / Sensor
Test Item : Conducted Emission Test
Power Line : Line 1
Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps)(Dipole Antenna) (5190MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
LINE 1					
Quasi-Peak					
0.162	9.947	38.430	48.377	-17.280	65.657
0.197	9.915	34.230	44.145	-20.512	64.657
0.232	9.900	30.910	40.810	-22.847	63.657
0.267	9.888	28.380	38.268	-24.389	62.657
0.345	9.868	25.380	35.248	-25.181	60.429
10.775	10.180	32.710	42.890	-17.110	60.000
Average					
0.162	9.947	9.120	19.067	-36.590	55.657
0.197	9.915	6.520	16.435	-38.222	54.657
0.232	9.900	5.950	15.850	-37.807	53.657
0.267	9.888	8.060	17.948	-34.709	52.657
0.345	9.868	19.960	29.828	-20.601	50.429
10.775	10.180	25.370	35.550	-14.450	50.000

Note:

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

Product : SpectraGuard® Access Point / Sensor
Test Item : Conducted Emission Test
Power Line : Line 2
Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps)(Dipole Antenna) (5190MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
LINE 2					
Quasi-Peak					
0.158	9.809	40.690	50.499	-15.272	65.771
0.189	9.770	38.420	48.190	-16.696	64.886
0.236	9.756	30.930	40.686	-22.857	63.543
0.310	9.750	26.030	35.780	-25.649	61.429
0.552	9.760	13.950	23.710	-32.290	56.000
11.252	10.080	27.640	37.720	-22.280	60.000
Average					
0.158	9.809	11.540	21.349	-34.422	55.771
0.189	9.770	7.840	17.610	-37.276	54.886
0.236	9.756	5.290	15.046	-38.497	53.543
0.310	9.750	10.780	20.530	-30.899	51.429
0.552	9.760	2.840	12.600	-33.400	46.000
11.252	10.080	18.790	28.870	-21.130	50.000

Note:

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

Product : SpectraGuard® Access Point / Sensor
Test Item : Conducted Emission Test
Power Line : Line 1
Test Mode : Mode 6: Transmit (802.11n-40BW 30Mbps)(PIFA Antenna) (5190MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
LINE 1					
Quasi-Peak					
0.306	9.871	25.090	34.961	-26.582	61.543
0.353	9.865	23.180	33.045	-27.155	60.200
0.466	9.853	14.950	24.803	-32.168	56.971
0.795	9.772	17.720	27.492	-28.508	56.000
3.564	9.780	17.870	27.650	-28.350	56.000
11.123	10.210	33.500	43.710	-16.290	60.000
Average					
0.306	9.871	18.630	28.501	-23.042	51.543
0.353	9.865	12.470	22.335	-27.865	50.200
0.466	9.853	4.180	14.033	-32.938	46.971
0.795	9.772	8.310	18.082	-27.918	46.000
3.564	9.780	9.290	19.070	-26.930	46.000
11.123	10.210	26.400	36.610	-13.390	50.000

Note:

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

Product : SpectraGuard® Access Point / Sensor
Test Item : Conducted Emission Test
Power Line : Line 2
Test Mode : Mode 6: Transmit (802.11n-40BW 30Mbps)(PIFA Antenna) (5190MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
LINE 2					
Quasi-Peak					
0.216	9.752	32.770	42.522	-21.592	64.114
0.314	9.752	22.920	32.672	-28.642	61.314
0.373	9.761	18.490	28.251	-31.378	59.629
0.595	9.760	13.690	23.450	-32.550	56.000
0.888	9.773	15.240	25.013	-30.987	56.000
10.728	10.080	26.990	37.070	-22.930	60.000
Average					
0.216	9.752	3.930	13.682	-40.432	54.114
0.314	9.752	8.330	18.082	-33.232	51.314
0.373	9.761	1.590	11.351	-38.278	49.629
0.595	9.760	2.500	12.260	-33.740	46.000
0.888	9.773	3.800	13.573	-32.427	46.000
10.728	10.080	17.700	27.780	-22.220	50.000

Note:

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

3. Maximun conducted output power

3.1. Test Equipment

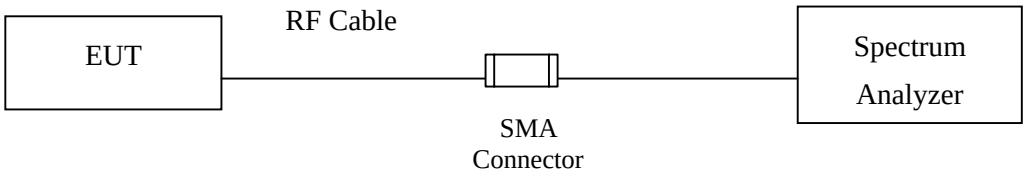
	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
X	Power Meter	Anritsu	ML2495A/6K00003357	May, 2013
X	Power Sensor	Anritsu	MA2411B/0738448	Jun, 2013
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2013

Note:

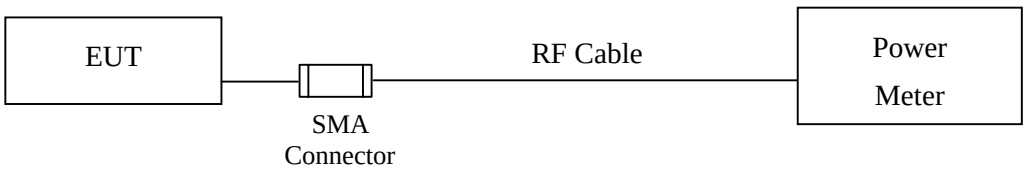
1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
2. The test instruments marked with “X” are used to measure the final test results.

3.2. Test Setup

26dBc Occupied Bandwidth



Conduction Power Measurement



3.3. Limits

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

(3) For the band 5.725-5.825 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 1W or 17 dBm + 10log B, where B is the 26-dB 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.

3.4. Test Procedur

As an alternative to FCC KDB-789033, the EUT maximum conducted output power was measured with an average power meter employing a video bandwidth greater than 6dB BW of the emission under test. Maximum conducted output power was read directly from the meter across all data rates, and across three channels within each sub-band. Special care was used to make sure that the EUT was transmitting in continuous mode. This method exceeds the limitations of FCC KDB-789033, and provides more accurate measurements.
The Maximum conducted output power using KDB 789033 section E)3)b) Method PM-G (Measurement using a gated RF average power meter).

3.5. Uncertainty

± 1.27 dB

3.6. Test Result of Maximum conducted output power

Product : SpectraGuard® Access Point / Sensor
Test Item : Maximum conducted output power
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11a-6Mbps)(Dipole Antenna)

CHAIN A

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		6	9	12	18	24	36	48	54	
		Measurement Level (dBm)								
36	5180	8.81	--	--	--	--	--	--	--	<17dBm
44	5220	9.03	8.91	8.77	8.56	8.44	8.32	8.19	8.06	<17dBm
48	5240	9.03	--	--	--	--	--	--	--	<17dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN B

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		6	9	12	18	24	36	48	54	
		Measurement Level (dBm)								
36	5180	10.51	--	--	--	--	--	--	--	<17dBm
44	5220	11.01	10.93	10.78	10.64	10.49	10.33	10.21	10.07	<17dBm
48	5240	10.03	--	--	--	--	--	--	--	<17dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:

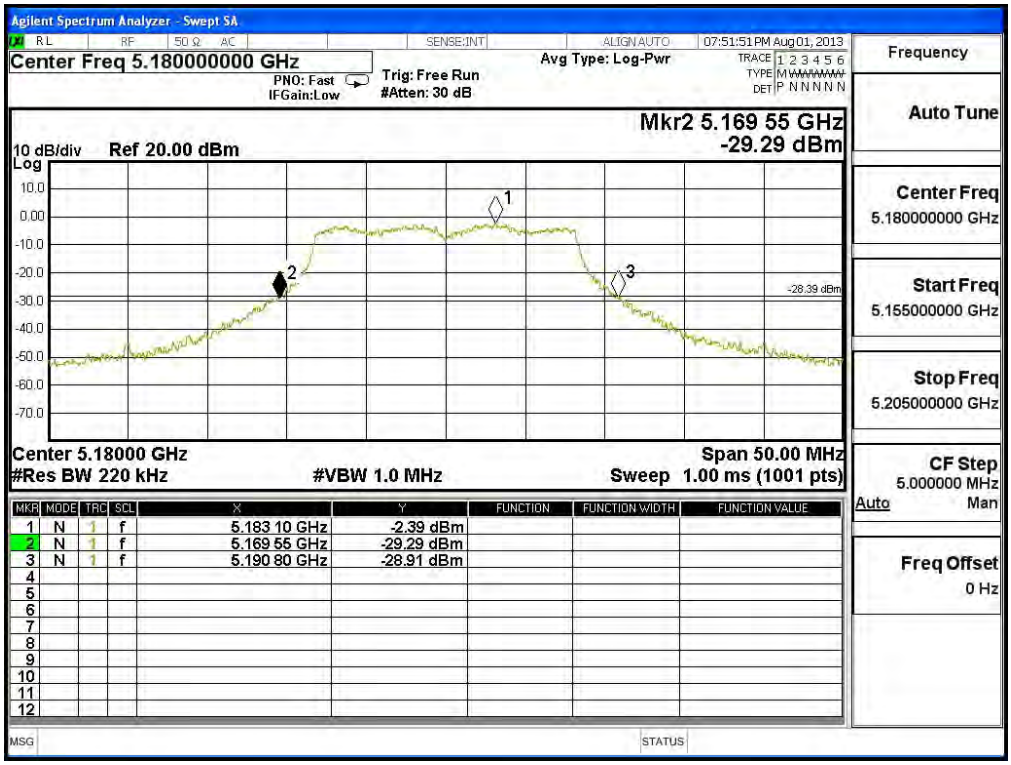
(CHAIN A+ B)

Channel Number	Frequency (MHz)	26dB Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Output Power (dBm)	Output Power Limit	
						(dBm)	dBm+10log(BW)
36	5180	21.250	8.81	10.51	12.75	17	17.27
44	5220	21.700	9.03	11.01	13.14	17	17.36
48	5240	21.650	9.03	10.03	12.57	17	17.35

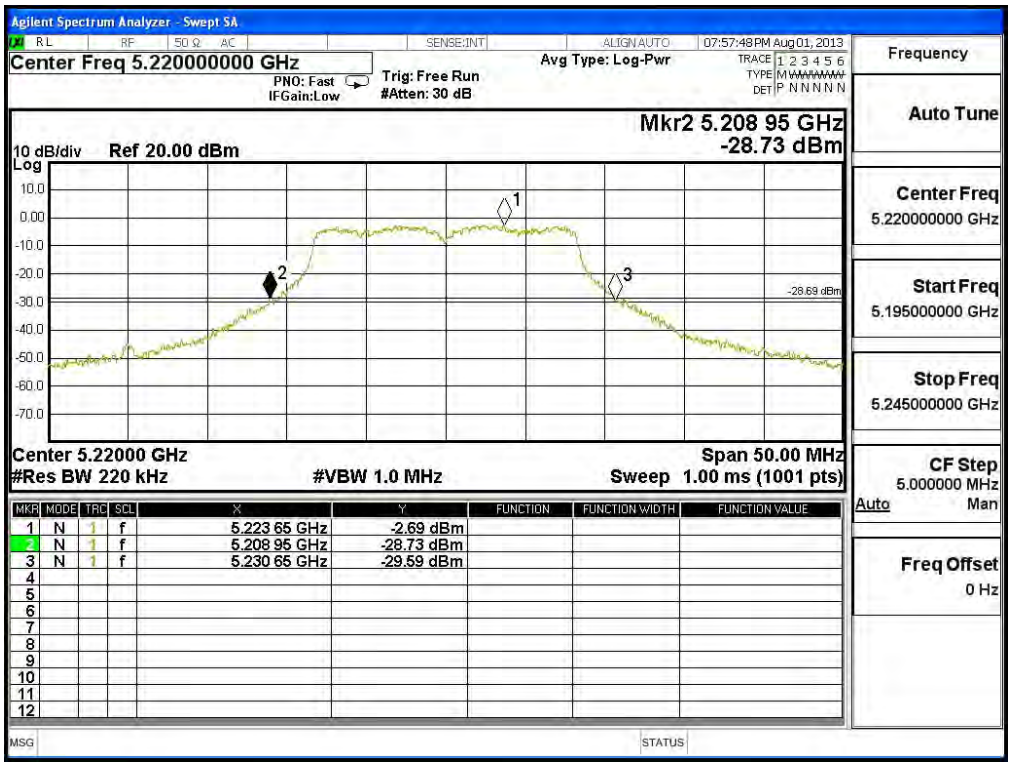
Note:

1. Power Output Value =Reading value on average power meter + cable loss
2. Output Power (dBm) = 10LOG (Chain A Power (mW)+ Chain B Power (mW))
3. 26 dB Bandwidth is the bandwidth of chain A or chain B whichever is less bandwidth, output power limitation is more stringent.

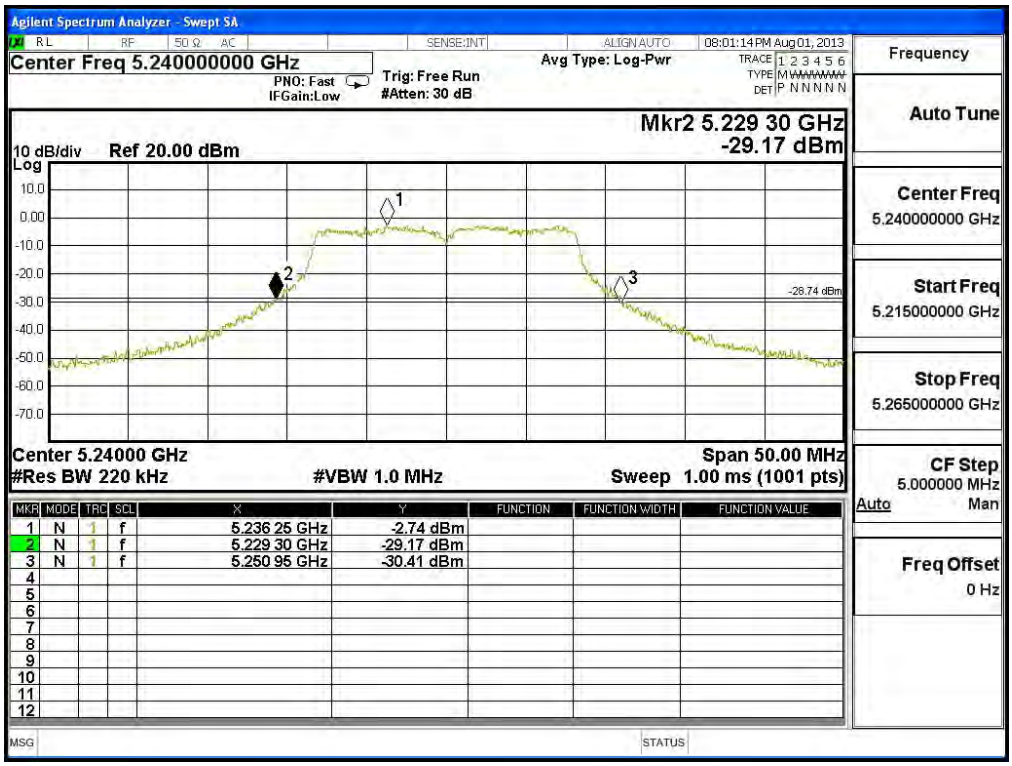
26dBc Occupied Bandwidth:
Channel 36: CHAIN A



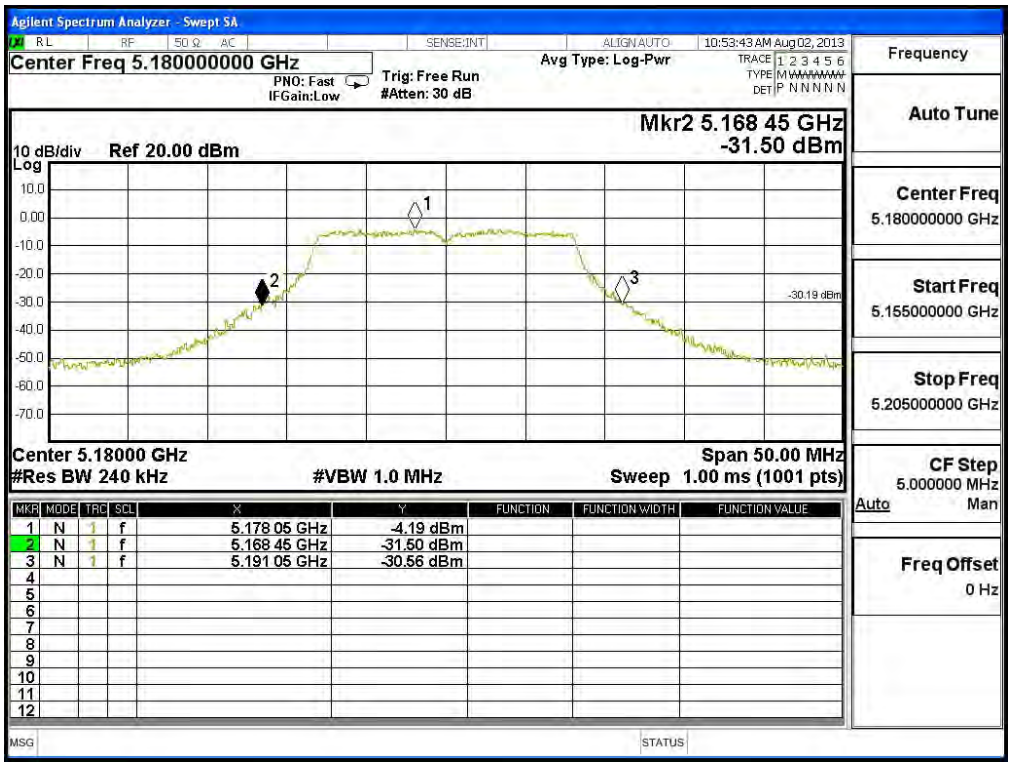
Channel 40: CHAIN A



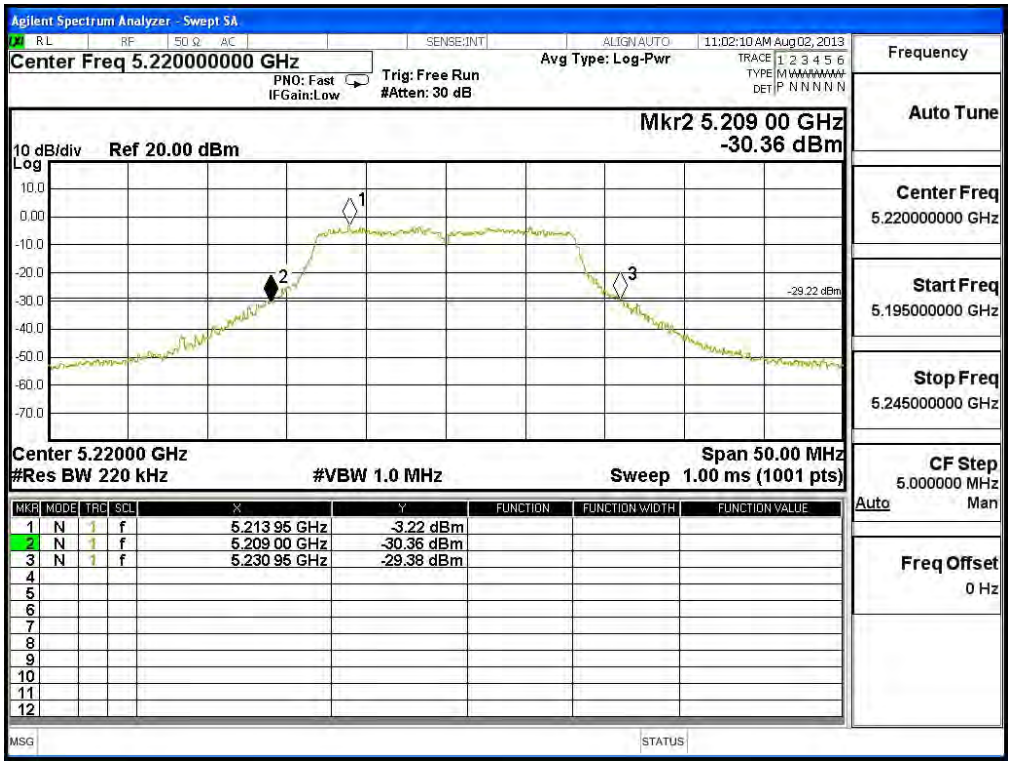
Channel 48: CHAIN A



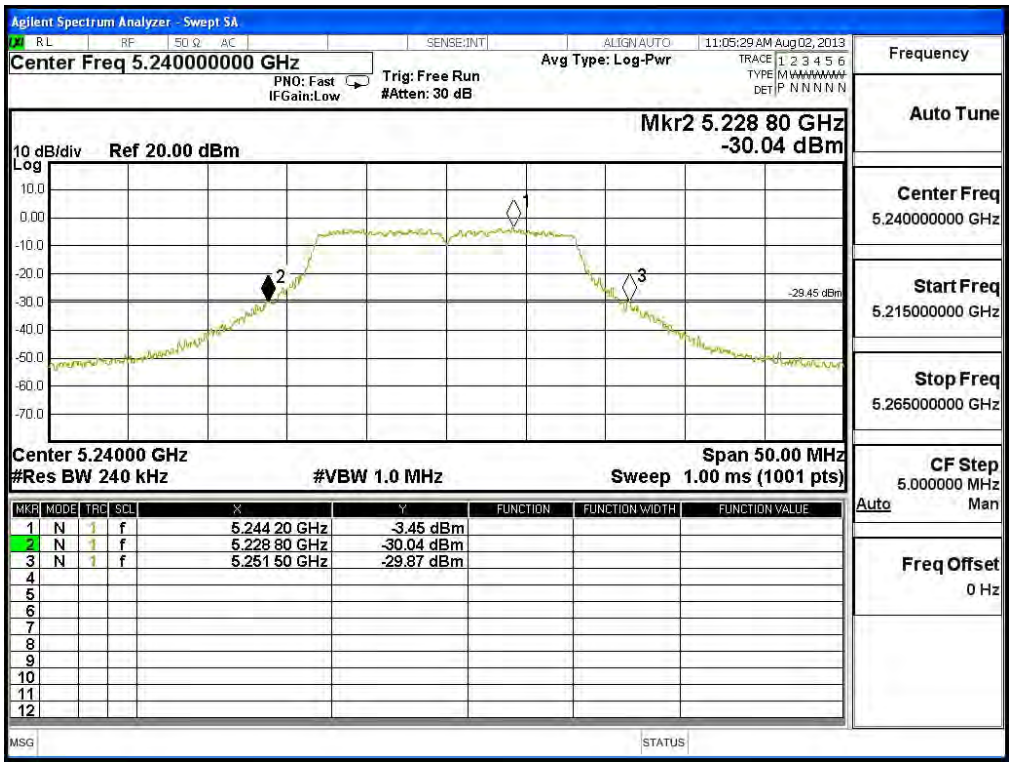
26dBc Occupied Bandwidth:
Channel 36: CHAIN B



Channel 40: CHAIN B



Channel 48: CHAIN B



Product : SpectraGuard® Access Point / Sensor
Test Item : Maximum conducted output power
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps)(Dipole Antenna)

CHAIN A

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		14.4	28.9	43.3	57.8	86.7	115.6	130	144.4	
		Measurement Level (dBm)								
36	5180	10.03	--	--	--	--	--	--	--	<17dBm
44	5220	10.01	9.88	9.73	9.62	9.54	9.39	9.21	9.08	<17dBm
48	5240	9.67	--	--	--	--	--	--	--	<17dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN B

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		14.4	28.9	43.3	57.8	86.7	115.6	130	144.4	
		Measurement Level (dBm)								
36	5180	12.01	--	--	--	--	--	--	--	<17dBm
44	5220	11.50	11.39	11.24	11.1	10.98	10.78	10.66	10.45	<17dBm
48	5240	11.27	--	--	--	--	--	--	--	<17dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:

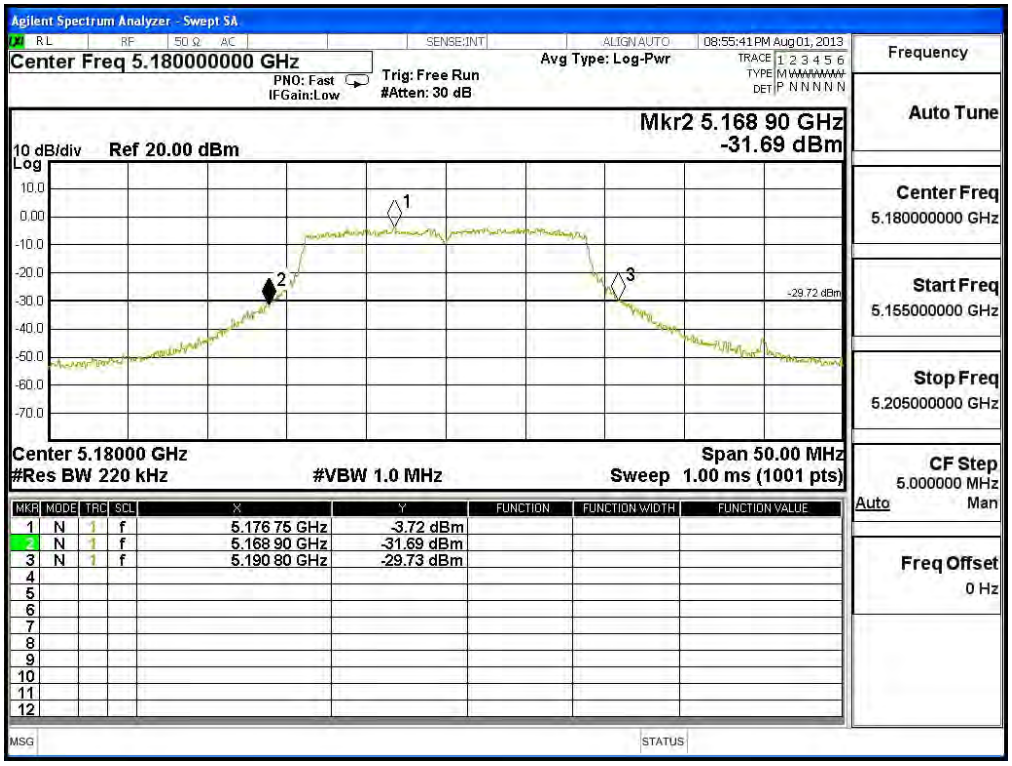
(CHAIN A+ B)

Channel Number	Frequency (MHz)	26dB Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Output Power (dBm)	Output Power Limit	
						(dBm)	dBm+10log(BW)
36	5180	21.900	10.03	12.01	14.14	17	17.40
44	5220	22.000	10.01	11.50	13.83	17	17.42
48	5240	21.850	9.67	11.27	13.55	17	17.39

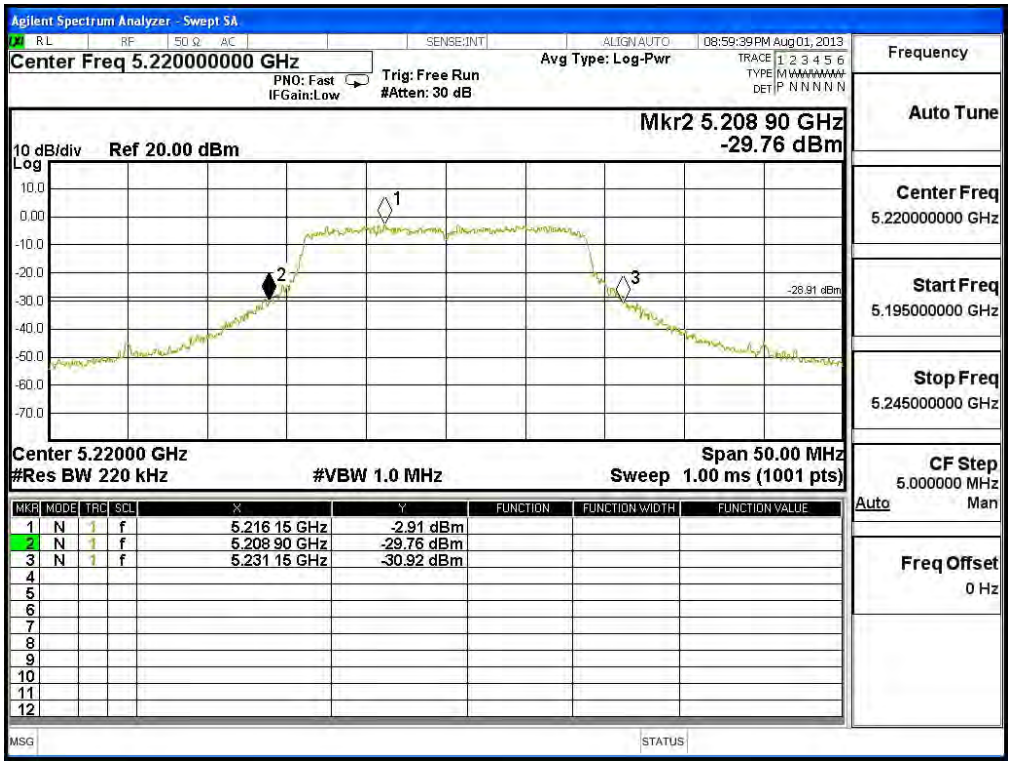
Note:

1. Power Output Value =Reading value on average power meter + cable loss
2. Output Power (dBm) = 10LOG (Chain A Power (mW)+ Chain B Power (mW))
3. 26 dB Bandwidth is the bandwidth of chain A or chain B whichever is less bandwidth, output power limitation is more stringent.

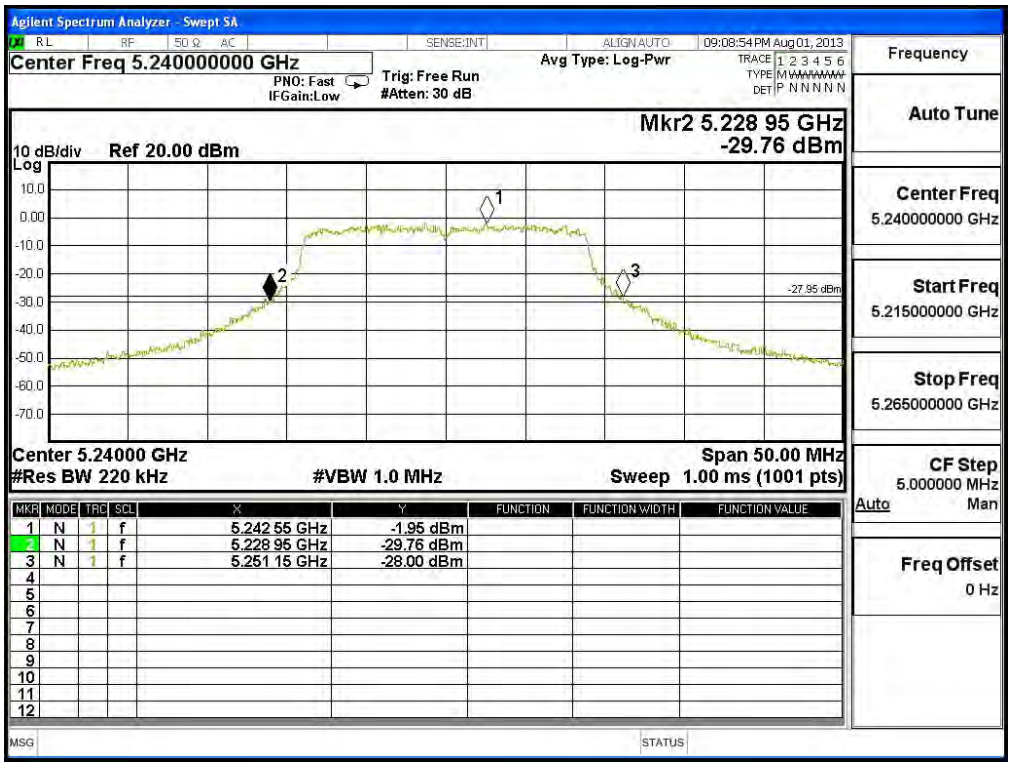
26dBc Occupied Bandwidth:
Channel 36 -Chain A



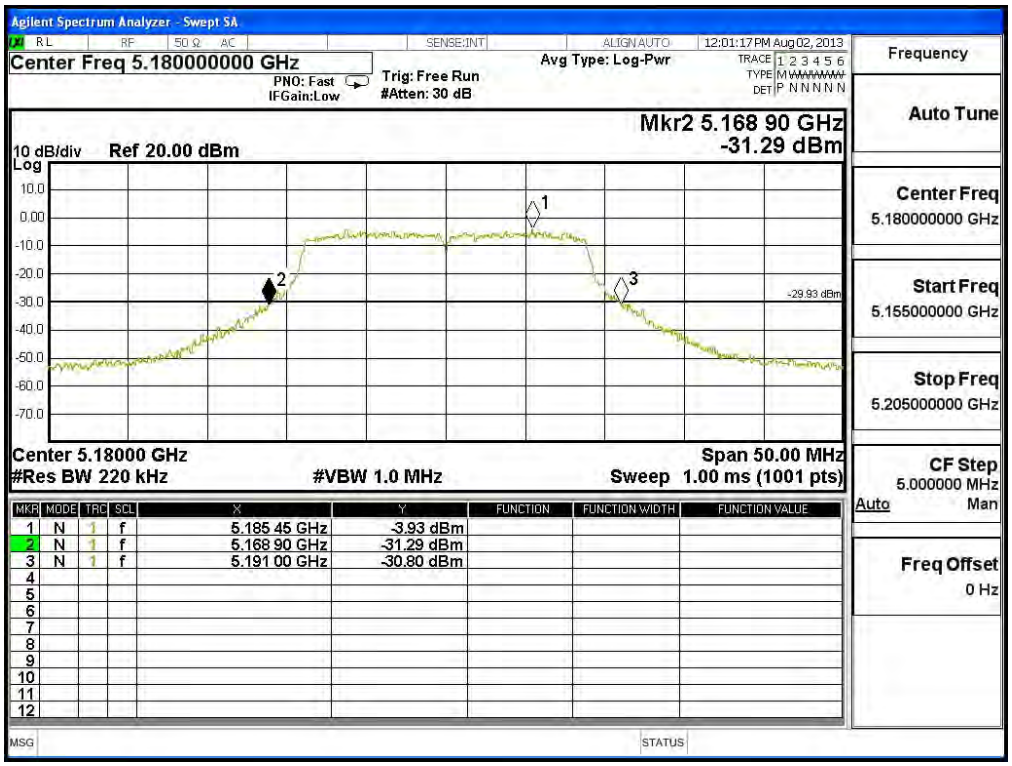
Channel 44 -Chain A



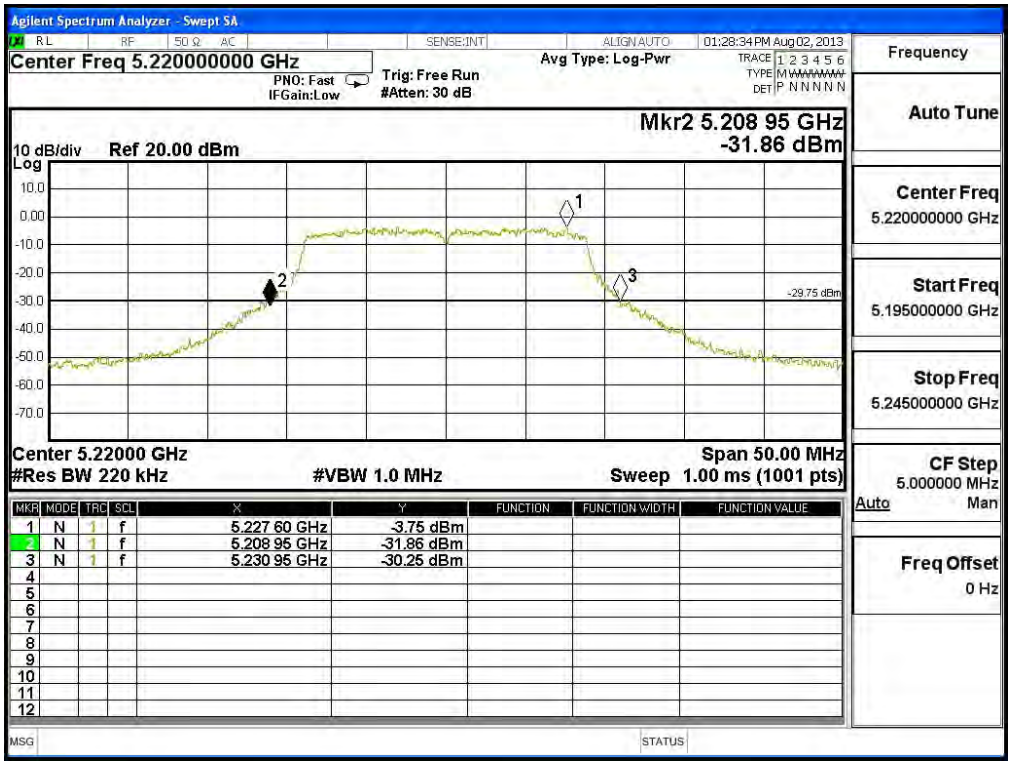
Channel 48 -Chain A



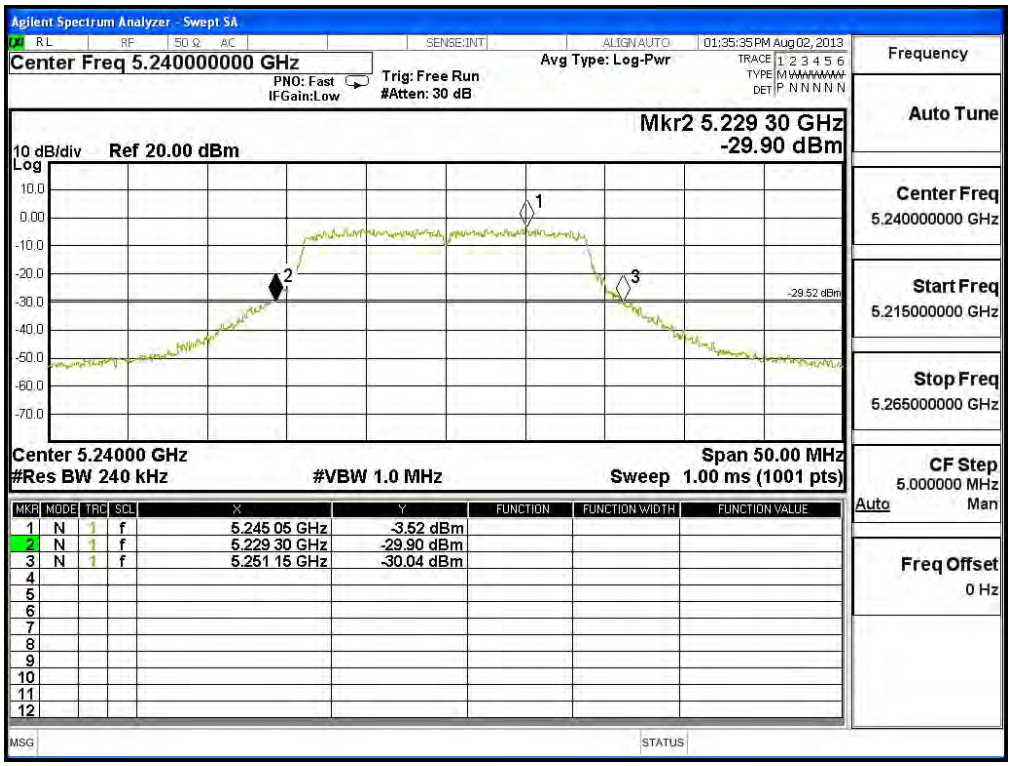
26dBc Occupied Bandwidth:
Channel 36 -Chain B



Channel 44 -Chain B



Channel 48 -Chain B



Product : SpectraGuard® Access Point / Sensor
Test Item : Maximum conducted output power
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps)(Dipole Antenna)

CHAIN A

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		30	60	90	120	180	240	270	300	
		Measurement Level (dBm)								
38	5190	10.21	--	--	--	--	--	--	--	<17dBm
46	5230	10.11	10.03	9.88	9.76	9.57	9.43	9.29	9.21	<17dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN B

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		30	60	90	120	180	240	270	300	
		Measurement Level (dBm)								
38	5190	12.60	--	--	--	--	--	--	--	<17dBm
46	5230	12.03	11.91	11.86	11.77	11.64	11.51	11.34	11.29	<17dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:

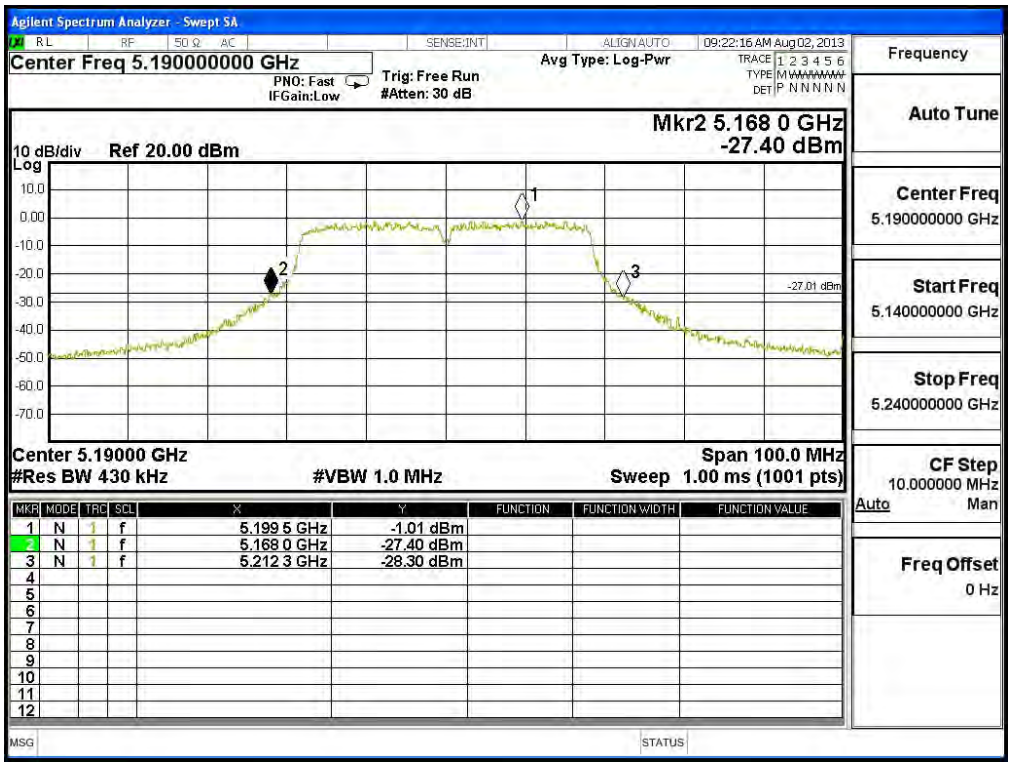
(CHAIN A+ B)

Channel Number	Frequency (MHz)	26dB Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Output Power (dBm)	Output Power Limit	
						(dBm)	dBm+10log(BW)
38	5190	43.600	10.21	12.60	14.58	17	20.39
46	5230	43.000	10.11	12.03	14.19	17	20.33

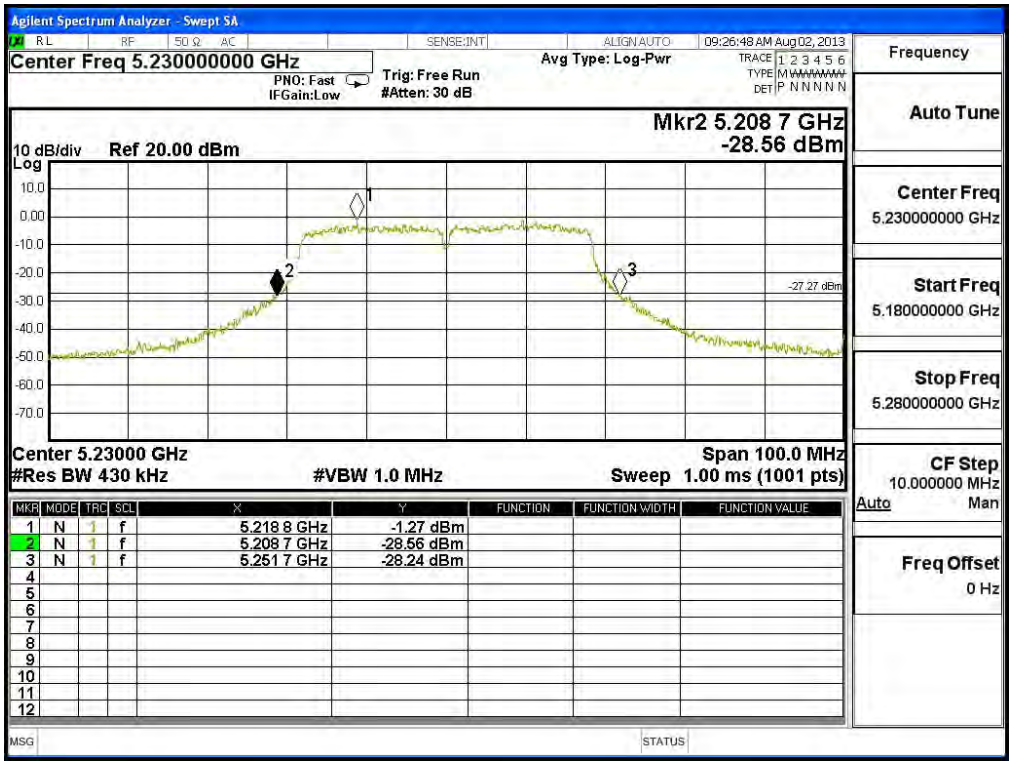
Note:

1. Power Output Value =Reading value on average power meter + cable loss
2. Output Power (dBm) = 10LOG (Chain A Power (mW)+ Chain B Power (mW))
3. 26 dB Bandwidth is the bandwidth of chain A or chain B whichever is less bandwidth, output power limitation is more stringent.

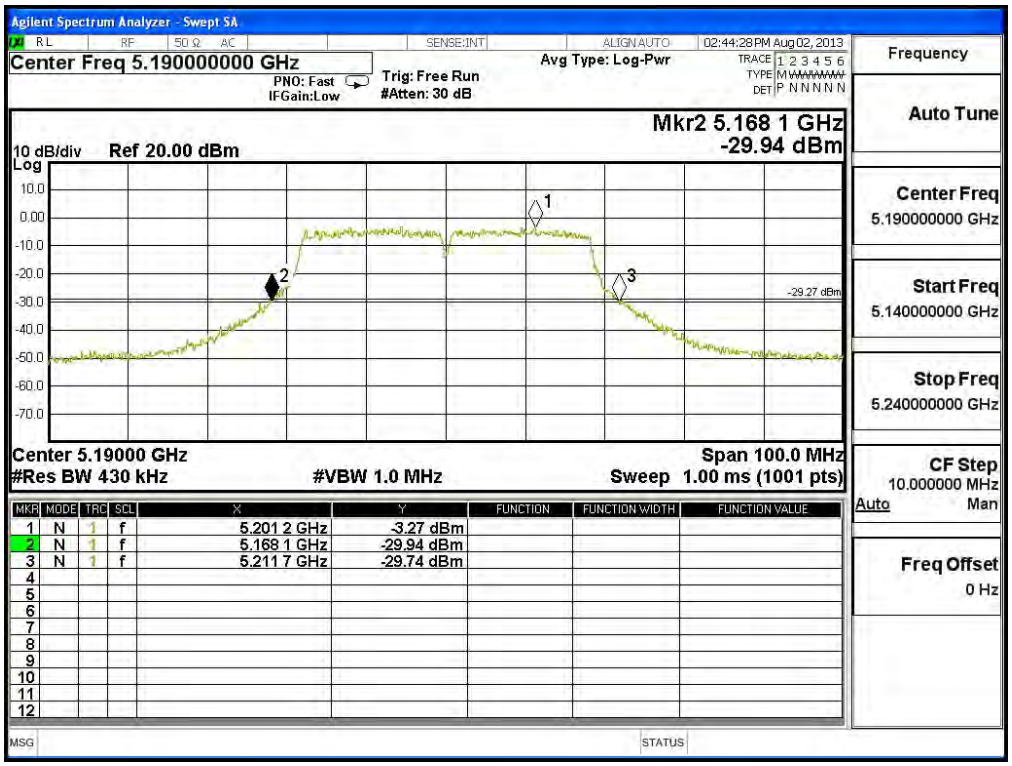
26dBc Occupied Bandwidth:
Channel 38 – Chain A



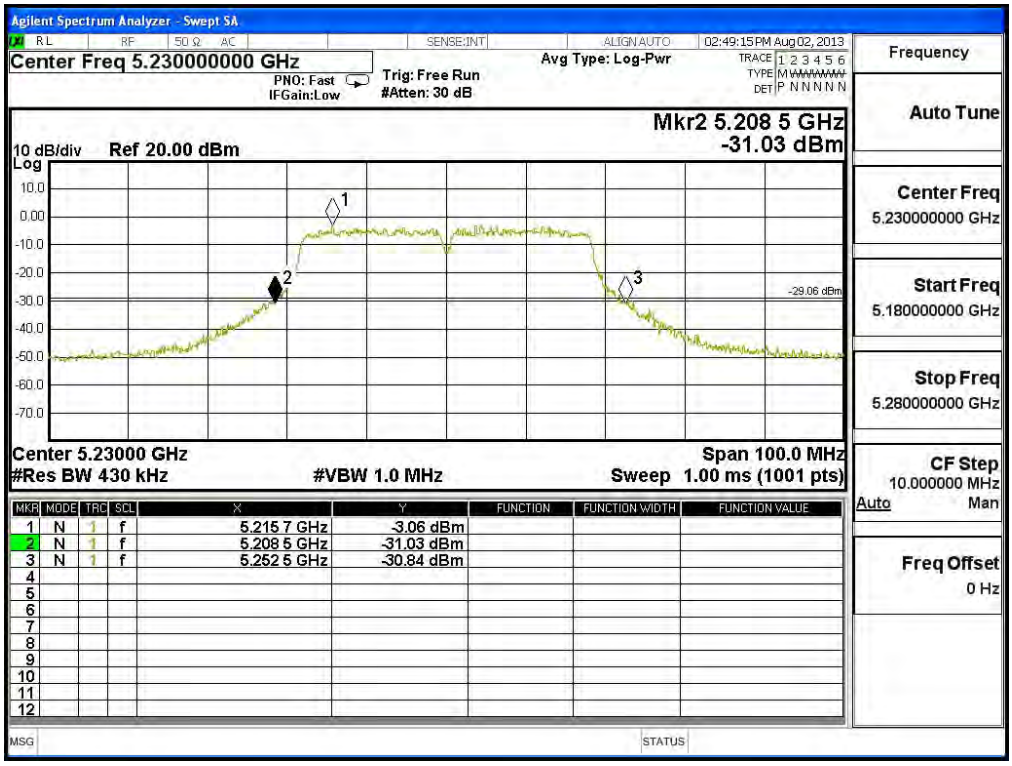
Channel 46 – Chain A



26dBc Occupied Bandwidth:
Channel 38 – Chain B



Channel 46 – Chain B



Product : SpectraGuard® Access Point / Sensor
Test Item : Maximum conducted output power
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11a-6Mbps)(PIFA Antenna)

CHAIN A

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		6	9	12	18	24	36	48	54	
		Measurement Level (dBm)								
36	5180	12.74	--	--	--	--	--	--	--	<17dBm
44	5220	13.44	13.3	13.19	13.06	12.93	12.81	12.68	12.56	<17dBm
48	5240	13.54	--	--	--	--	--	--	--	<17dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN B

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		6	9	12	18	24	36	48	54	
		Measurement Level (dBm)								
36	5180	14.77	--	--	--	--	--	--	--	<17dBm
44	5220	13.69	13.52	13.38	13.22	13.07	12.91	12.76	12.60	<17dBm
48	5240	13.71	--	--	--	--	--	--	--	<17dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:

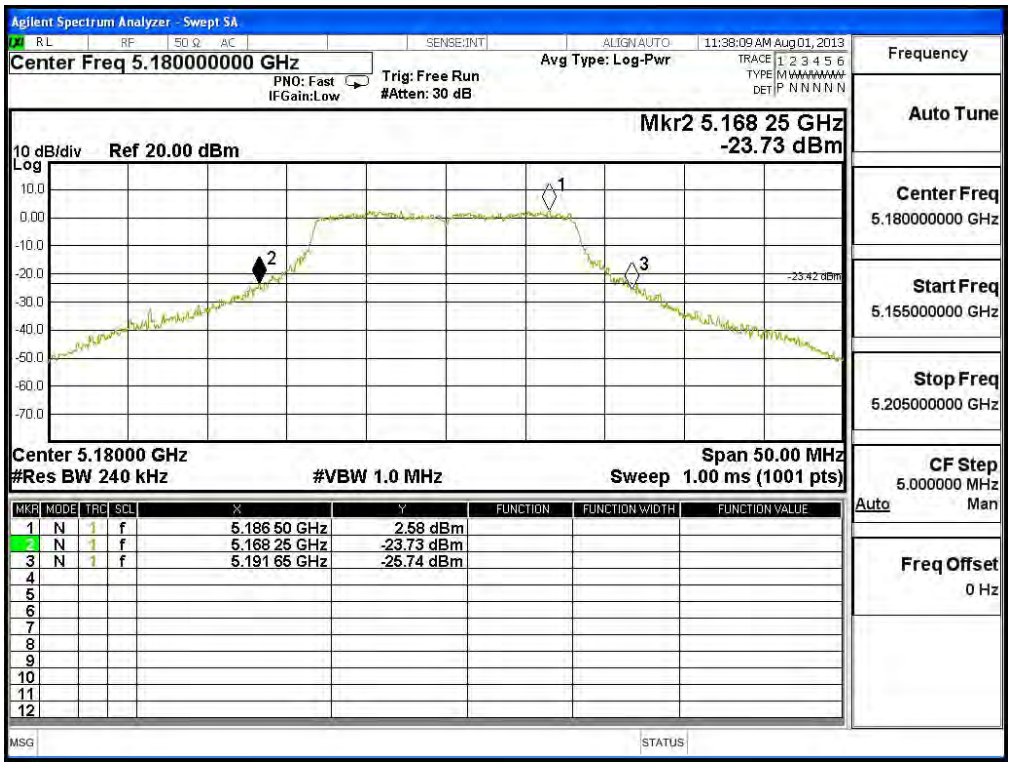
(CHAIN A+ B)

Channel Number	Frequency (MHz)	26dB Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Output Power (dBm)	Output Power Limit	
						(dBm)	dBm+10log(BW)
36	5180	23.150	12.74	14.77	16.88	17	17.65
44	5220	23.250	13.44	13.69	16.58	17	17.66
48	5240	23.000	13.54	13.71	16.64	17	17.62

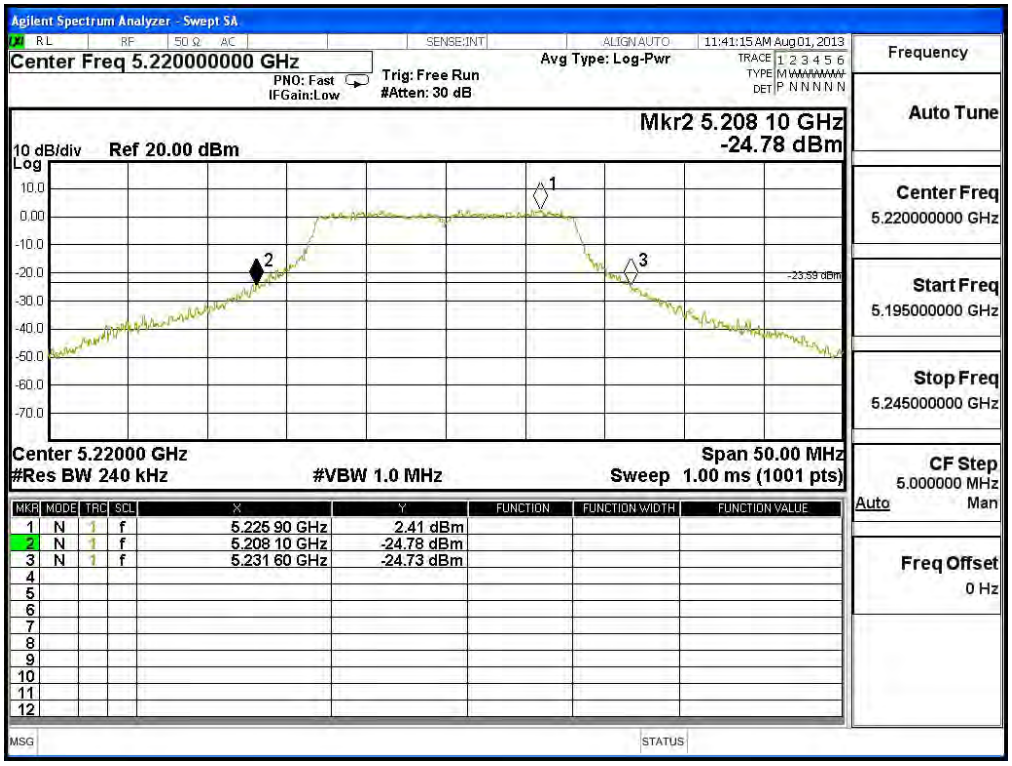
Note:

1. Power Output Value =Reading value on average power meter + cable loss
2. Output Power (dBm) = 10LOG (Chain A Power (mW)+ Chain B Power (mW))
3. 26 dB Bandwidth is the bandwidth of chain A or chain B whichever is less bandwidth, output power limitation is more stringent.

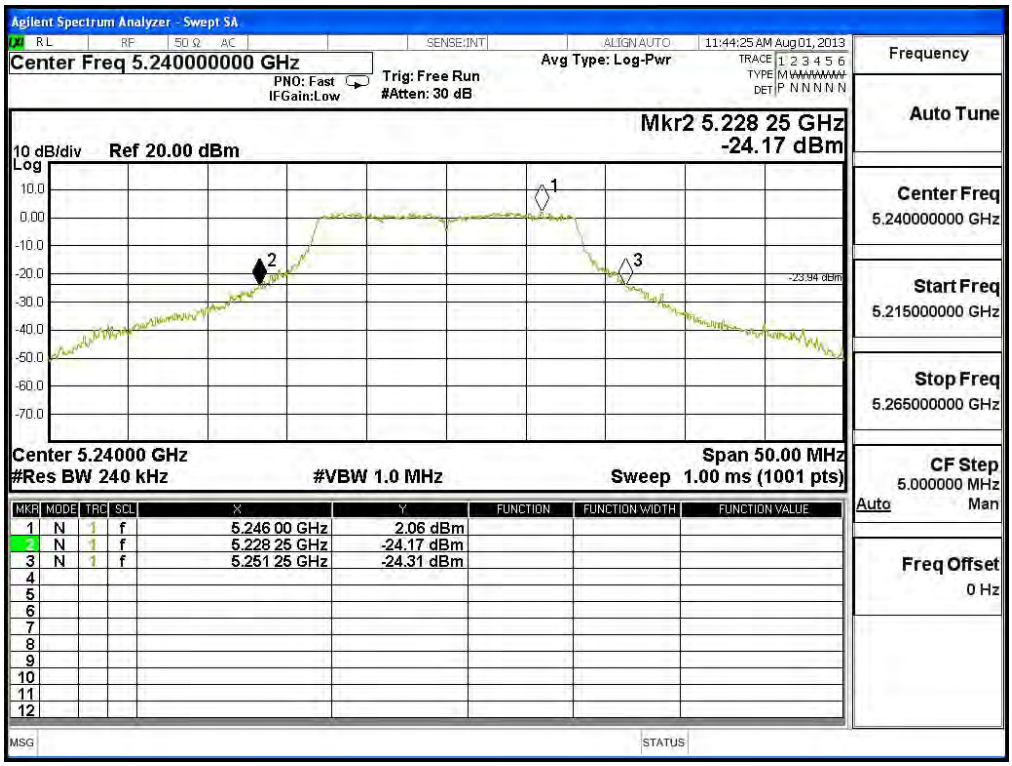
26dBc Occupied Bandwidth:
Channel 36: CHAIN A



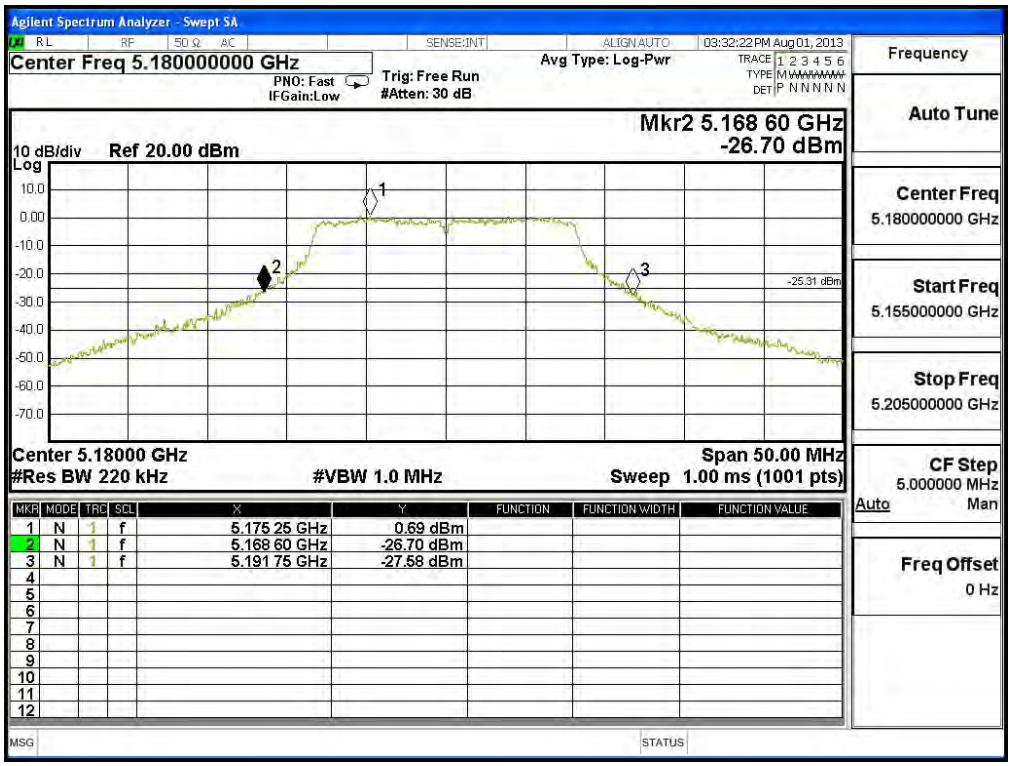
Channel 40: CHAIN A



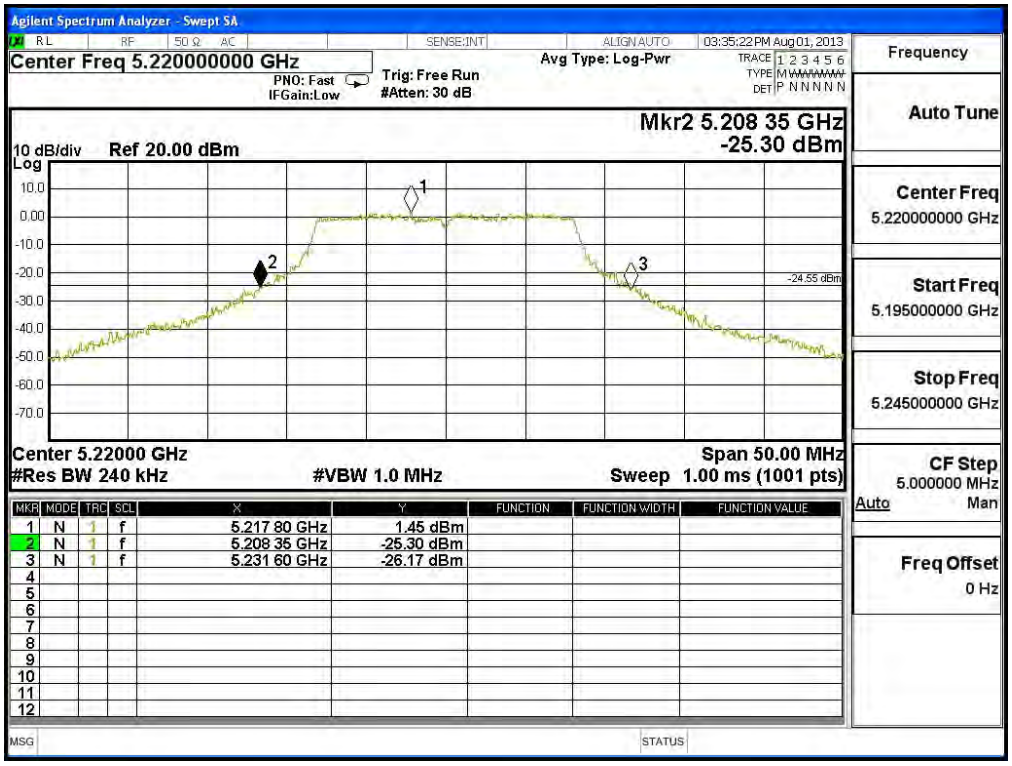
Channel 48: CHAIN A



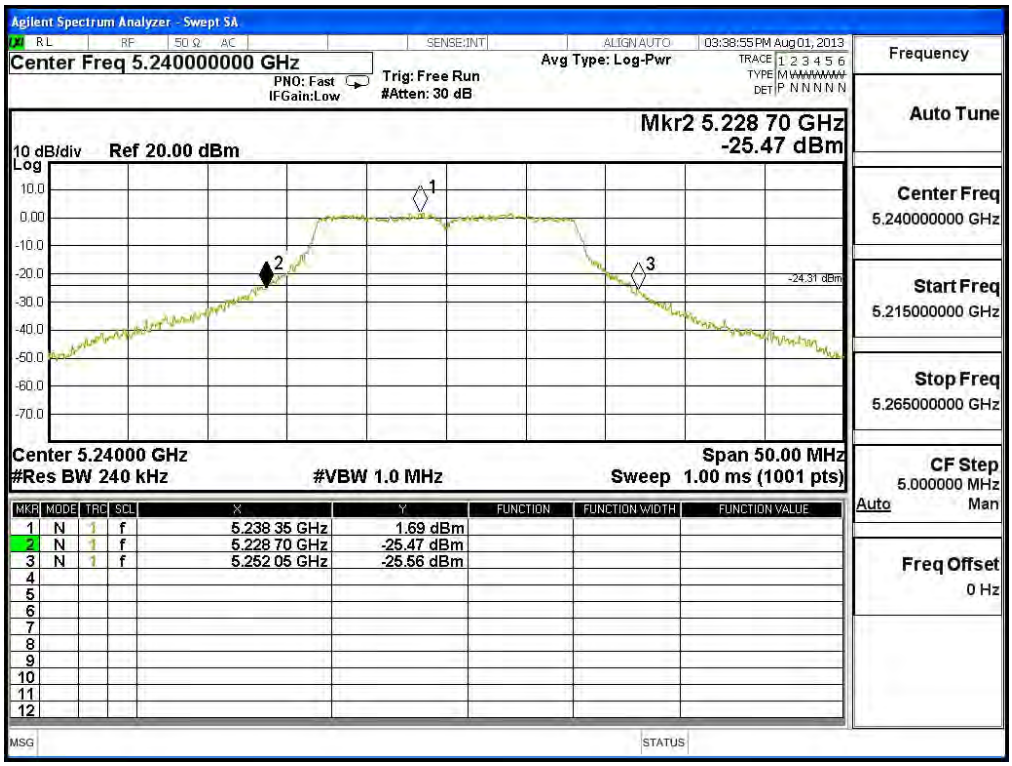
26dBc Occupied Bandwidth:
Channel 36: CHAIN B



Channel 40: CHAIN B



Channel 48: CHAIN B



Product : SpectraGuard® Access Point / Sensor
Test Item : Maximum conducted output power
Test Site : No.3 OATS
Test Mode : Mode 5: Transmit (802.11n-20BW 14.4Mbps)(PIFA Antenna)

CHAIN A

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		14.4	28.9	43.3	57.8	86.7	115.6	130	144.4	
		Measurement Level (dBm)								
36	5180	13.58	--	--	--	--	--	--	--	<17dBm
44	5220	13.66	13.54	13.39	13.26	13.13	12.99	12.86	12.72	<17dBm
48	5240	13.71	--	--	--	--	--	--	--	<17dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN B

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		14.4	28.9	43.3	57.8	86.7	115.6	130	144.4	
		Measurement Level (dBm)								
36	5180	13.44	--	--	--	--	--	--	--	<17dBm
44	5220	13.76	13.62	13.54	13.42	13.31	13.2	13.09	12.98	<17dBm
48	5240	13.46	--	--	--	--	--	--	--	<17dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:

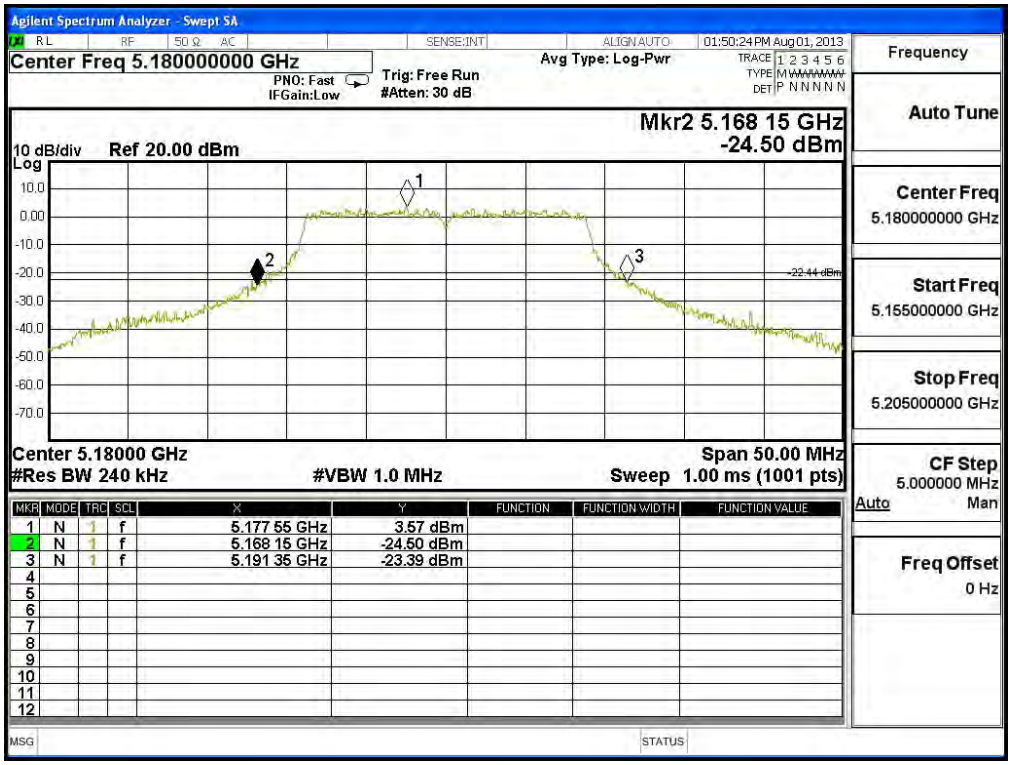
(CHAIN A+ B)

Channel Number	Frequency (MHz)	26dB Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Output Power (dBm)	Output Power Limit	
						(dBm)	dBm+10log(BW)
36	5180	23.200	13.58	13.44	16.52	17	17.65
44	5220	22.650	13.66	13.76	16.72	17	17.55
48	5240	22.950	13.71	13.46	16.60	17	17.61

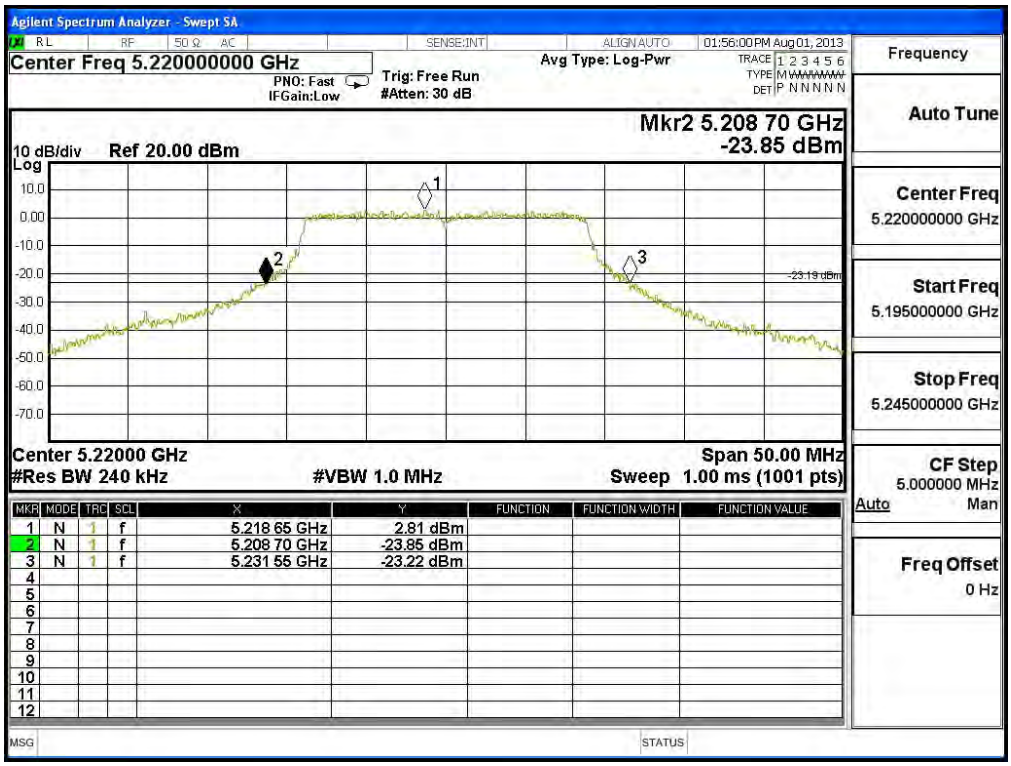
Note:

1. Power Output Value =Reading value on average power meter + cable loss
2. Output Power (dBm) = 10LOG (Chain A Power (mW)+ Chain B Power (mW))
3. 26 dB Bandwidth is the bandwidth of chain A or chain B whichever is less bandwidth, output power limitation is more stringent.

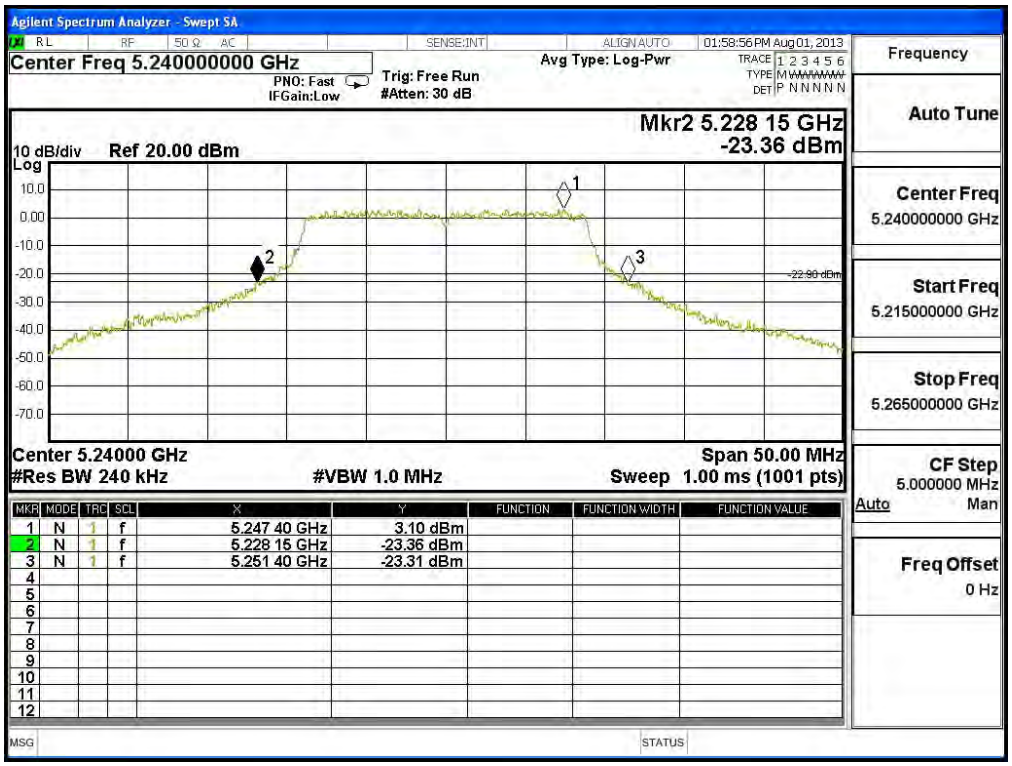
26dBc Occupied Bandwidth:
Channel 36 -Chain A



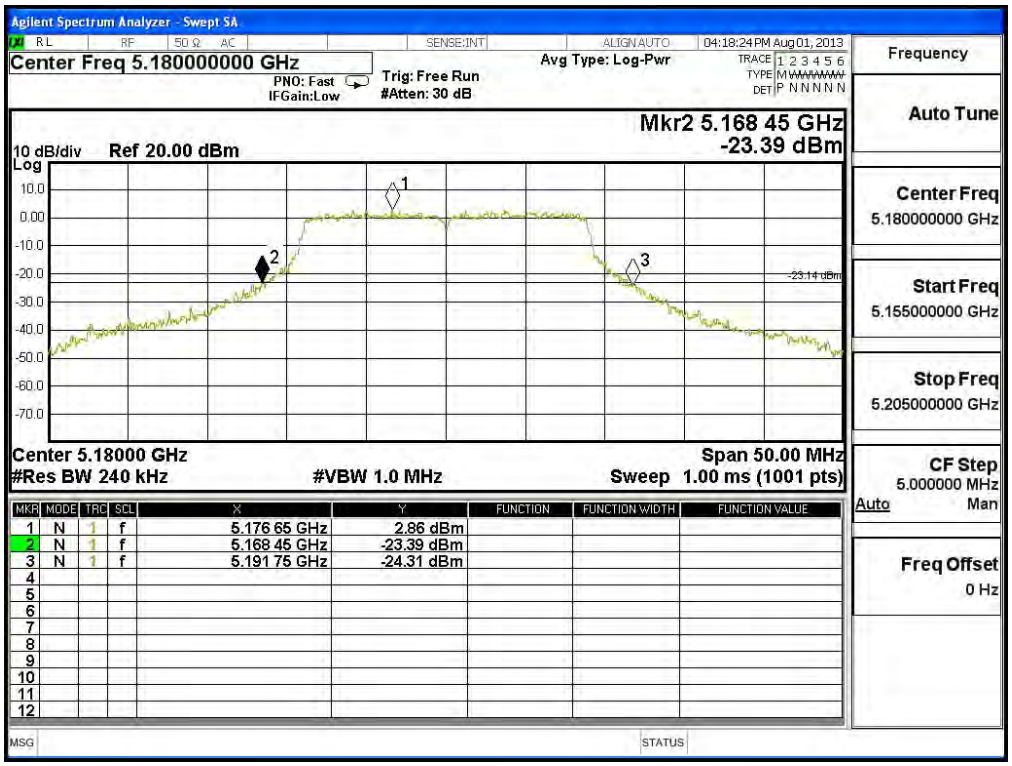
Channel 44 -Chain A



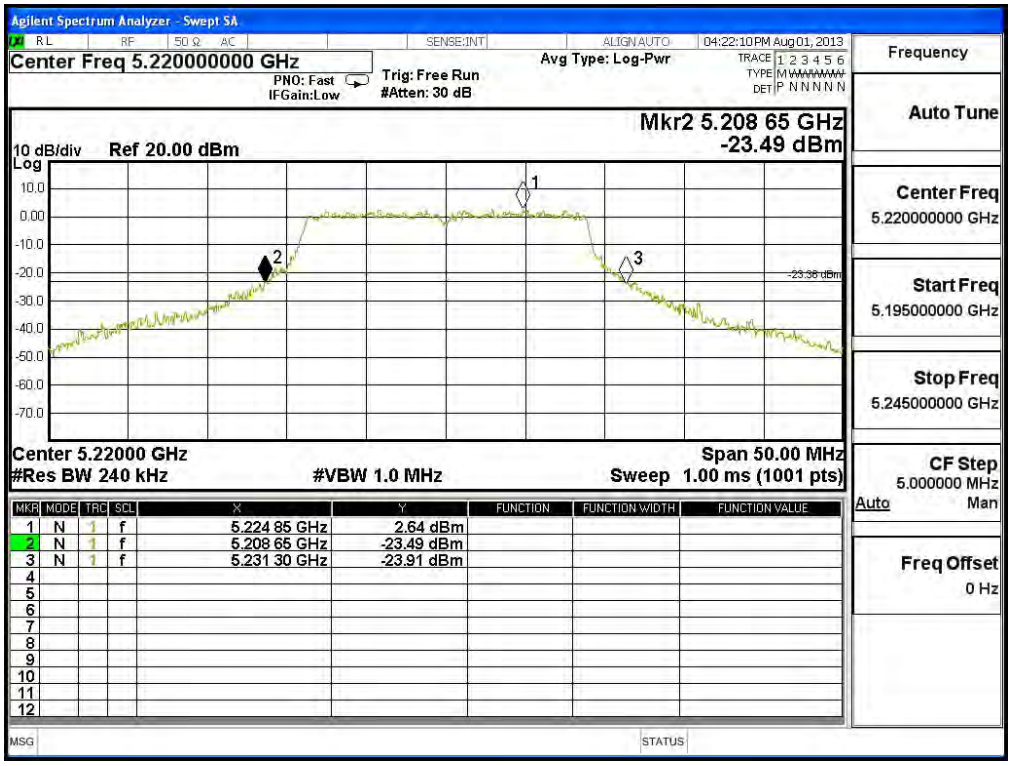
Channel 48 -Chain A



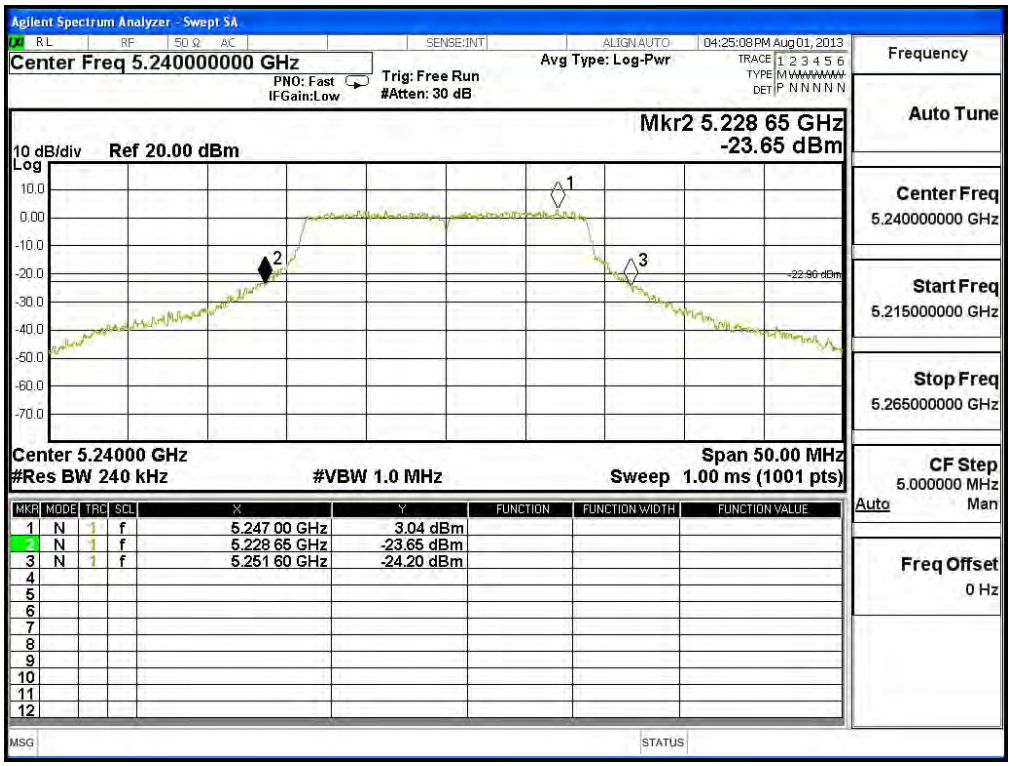
26dBc Occupied Bandwidth:
Channel 36 -Chain B



Channel 44 -Chain B



Channel 48 -Chain B



Product : SpectraGuard® Access Point / Sensor
Test Item : Maximum conducted output power
Test Site : No.3 OATS
Test Mode : Mode 6: Transmit (802.11n-40BW 30Mbps)(PIFA Antenna)

CHAIN A

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		30	60	90	120	180	240	270	300	
		Measurement Level (dBm)								
38	5190	13.55	--	--	--	--	--	--	--	<17dBm
46	5230	13.72	13.55	13.39	13.22	13.06	12.89	12.73	12.56	<17dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN B

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		30	60	90	120	180	240	270	300	
		Measurement Level (dBm)								
38	5190	13.54	--	--	--	--	--	--	--	<17dBm
46	5230	13.42	13.31	13.18	13.06	12.94	12.82	12.70	12.58	<17dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:

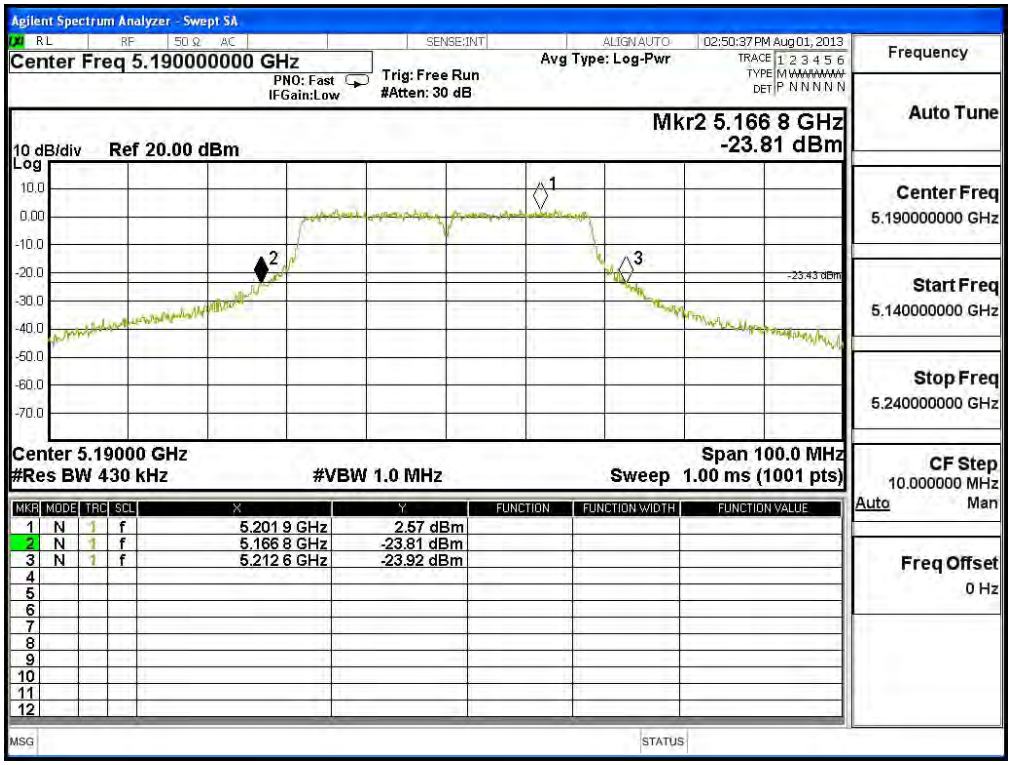
(CHAIN A+ B)

Channel Number	Frequency (MHz)	26dB Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Output Power (dBm)	Output Power Limit	
						(dBm)	dBm+10log(BW)
38	5190	45.000	13.55	13.54	16.56	17	20.53
46	5230	45.700	13.72	13.42	16.58	17	20.60

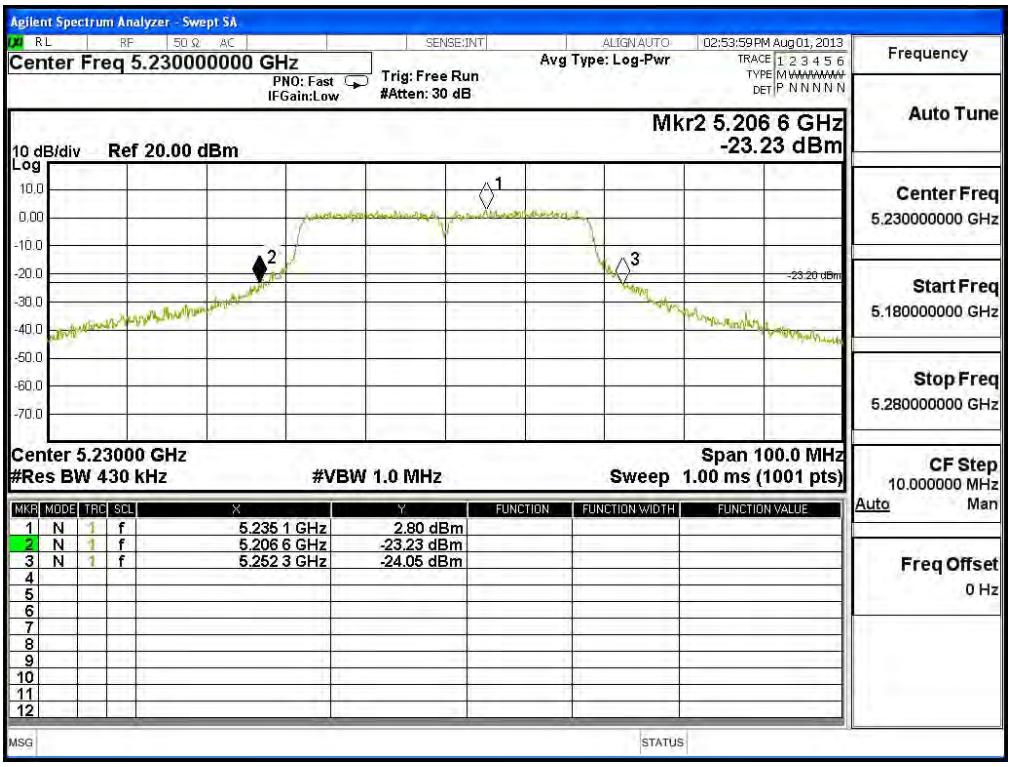
Note:

1. Power Output Value =Reading value on average power meter + cable loss
2. Output Power (dBm) = 10LOG (Chain A Power (mW)+ Chain B Power (mW))
3. 26 dB Bandwidth is the bandwidth of chain A or chain B whichever is less bandwidth, output power limitation is more stringent.

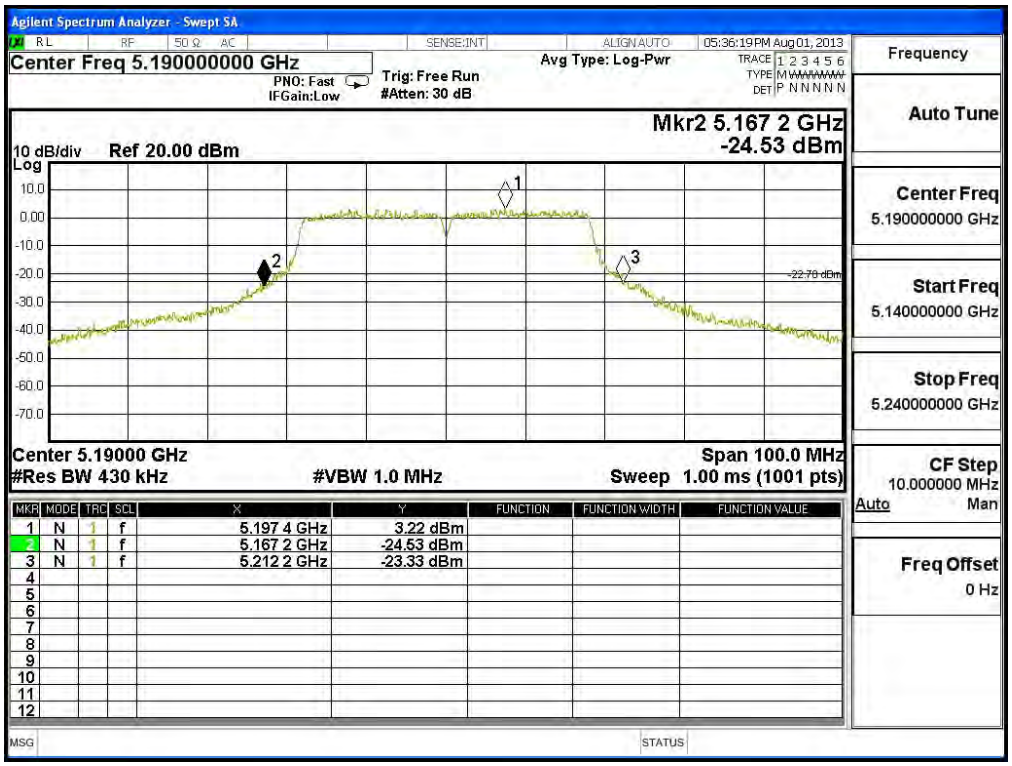
26dBc Occupied Bandwidth:
Channel 38 – Chain A



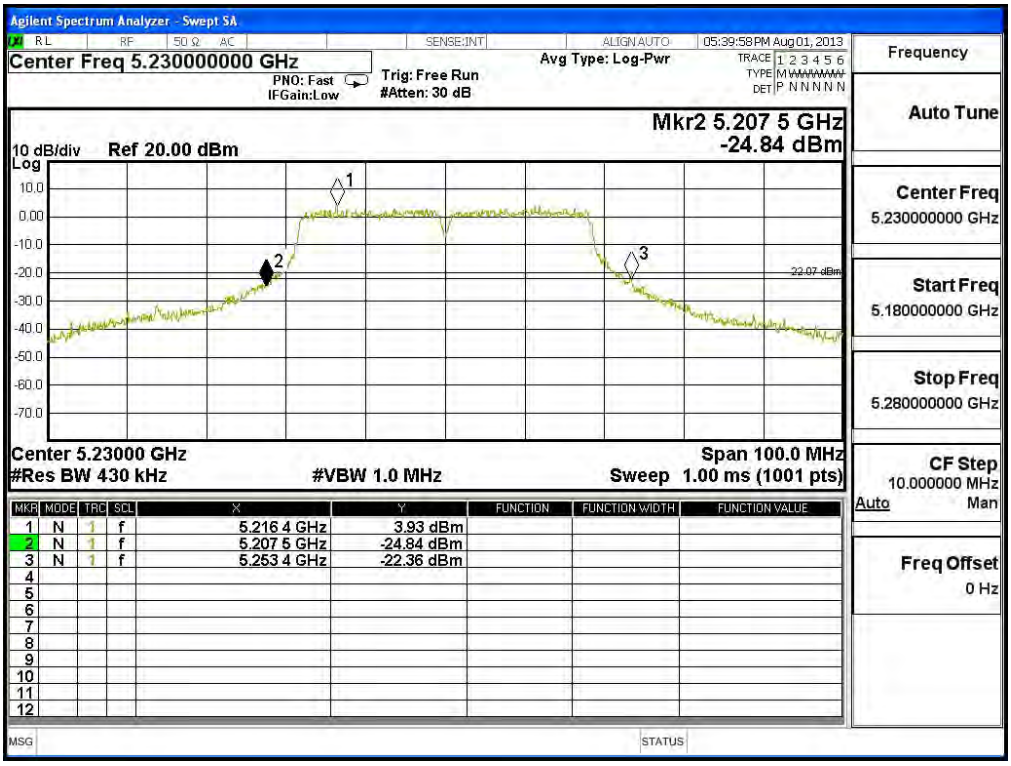
Channel 46 – Chain A



26dBc Occupied Bandwidth:
Channel 38 – Chain B



Channel 46 – Chain B



4. Peak Power Spectral Density

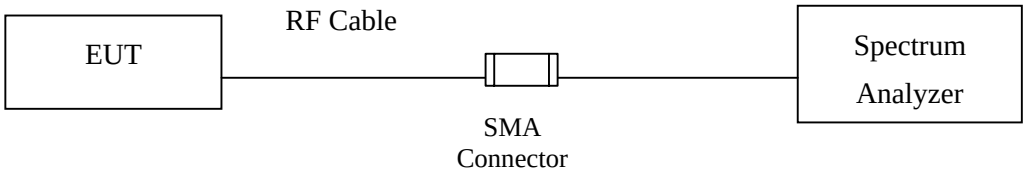
4.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2013
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2013
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr, 2013

Note:

1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
2. The test instruments marked with "X" are used to measure the final test results.

4.2. Test Setup



4.3. Limits

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

(5) 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.

(6) For the band 5.725-5.825 GHz, the peak power spectral density shall not exceed 17 dBm in any 1-MHz band. If transmitting antenna of directional gain greater than 6 dBi are used, the peak power spectral density shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.

4.4. Test Procedure

The EUT was setup to ANSI C63.10, 2009; tested to DTS test procedure of FCC KDB-789033 for compliance to FCC 47CFR Subpart E requirements.
The Peak Power Spectral Density using KDB 789033 section F) procedure, Create an average power spectrum for the EUT operating mode being tested by following the instructions in section E)2) for measuring maximum conducted output power using a spectrum analyzer.
SA-1 method is selected to run the test.

4.5. Uncertainty

± 1.27 dB

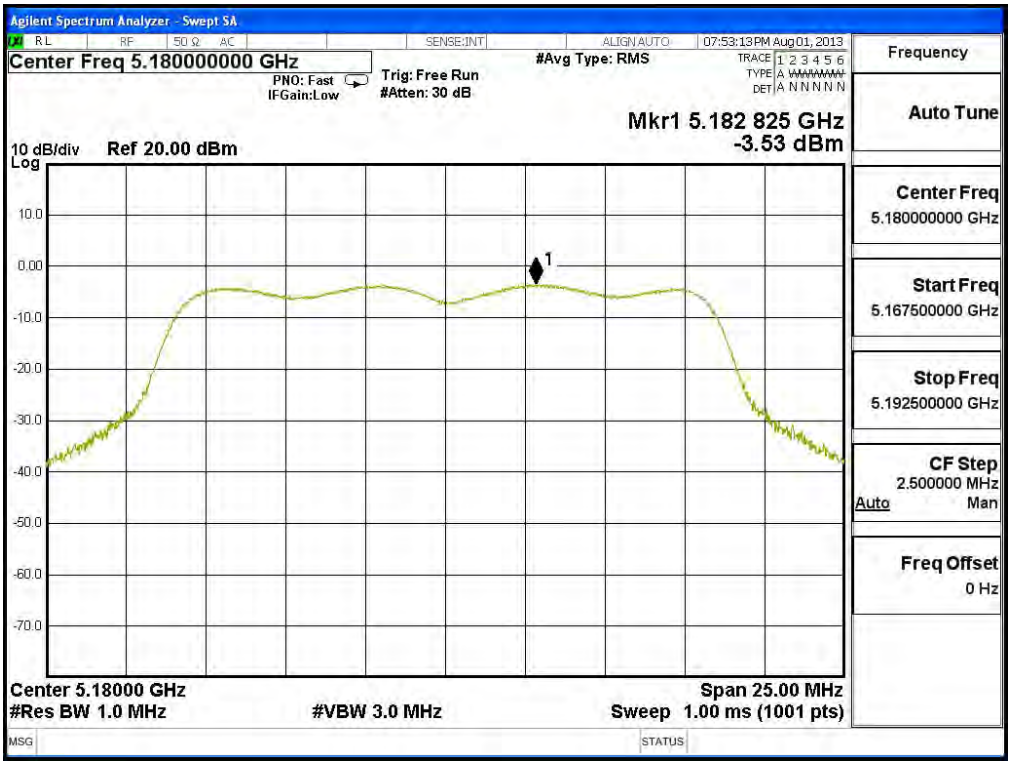
4.6. Test Result of Peak Power Spectral Density

Product : SpectraGuard® Access Point / Sensor
Test Item : Peak Power Spectral Density
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11a-6Mbps)(Dipole Antenna)

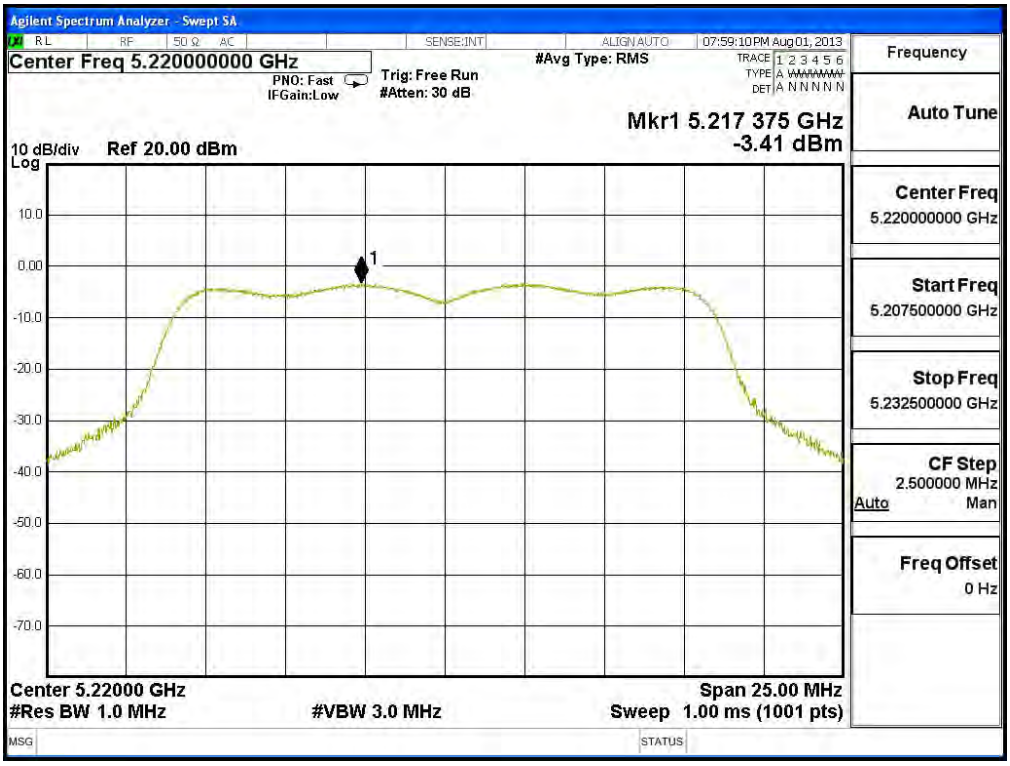
Channel Number	Frequency (MHz)	Chain	PPSD/MHz (dBm)	Total PPSD/MHz (dBm)[1]	Required Limit (dBm)	Result
36	5180	A	-3.530	-0.520	<4	Pass
		B	-5.250	-2.240	<4	Pass
44	5220	A	-3.410	-0.400	<4	Pass
		B	-4.550	-1.540	<4	Pass
48	5240	A	-3.380	-0.370	<4	Pass
		B	-4.890	-1.880	<4	Pass

Note 1: The quantity 10*log 2 (two antennas) is added to the spectrum peak value according to document 662911 D01.

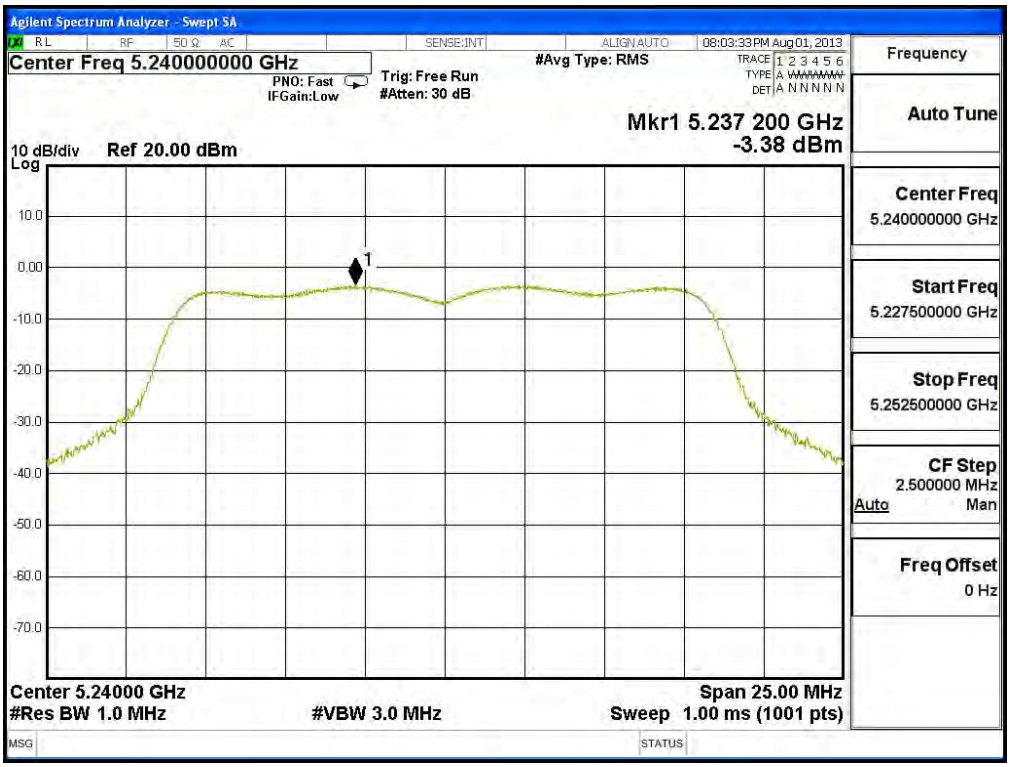
Channel 36: CHAIN A



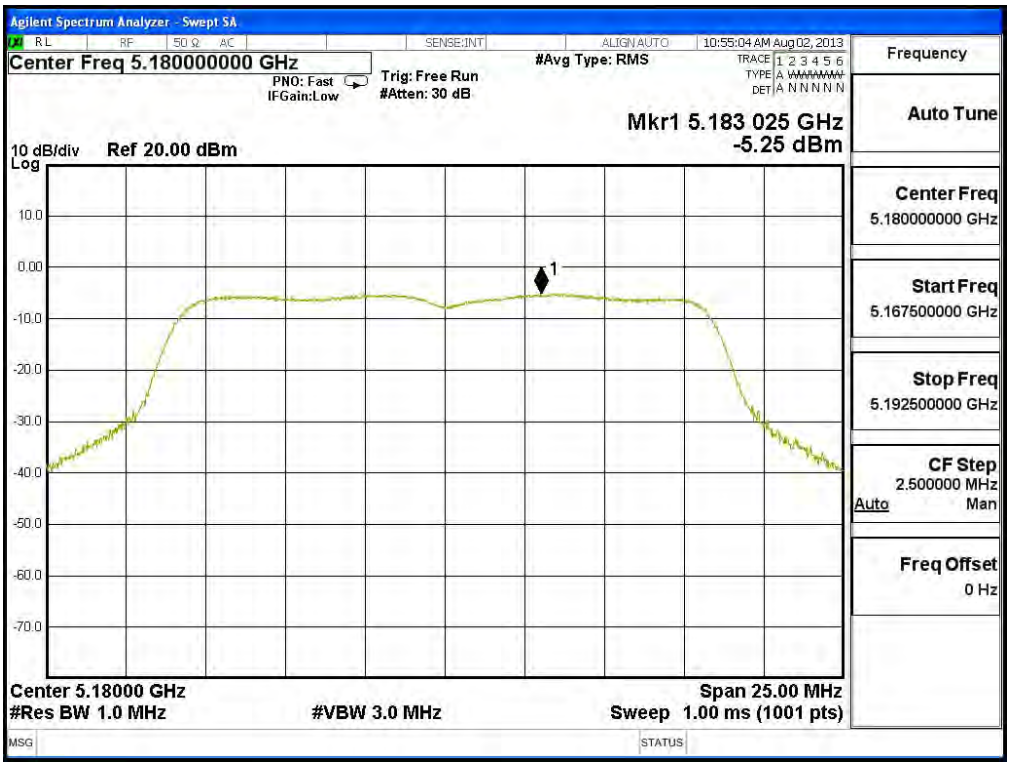
Channel 44: CHAIN A



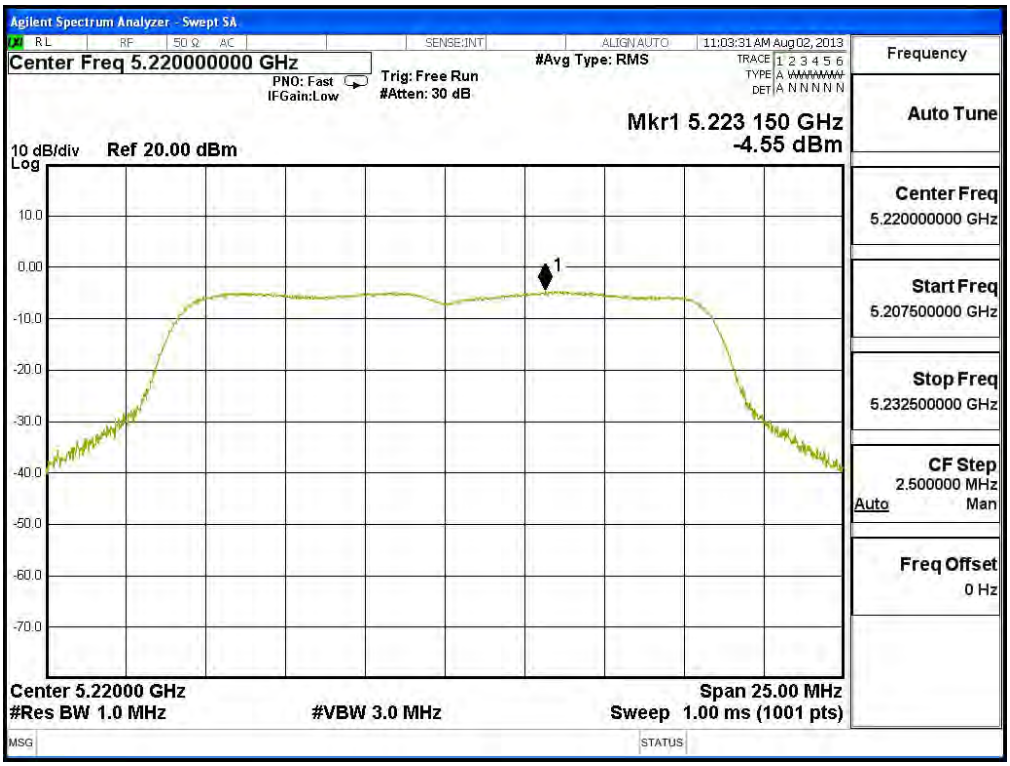
Channel 48: CHAIN A



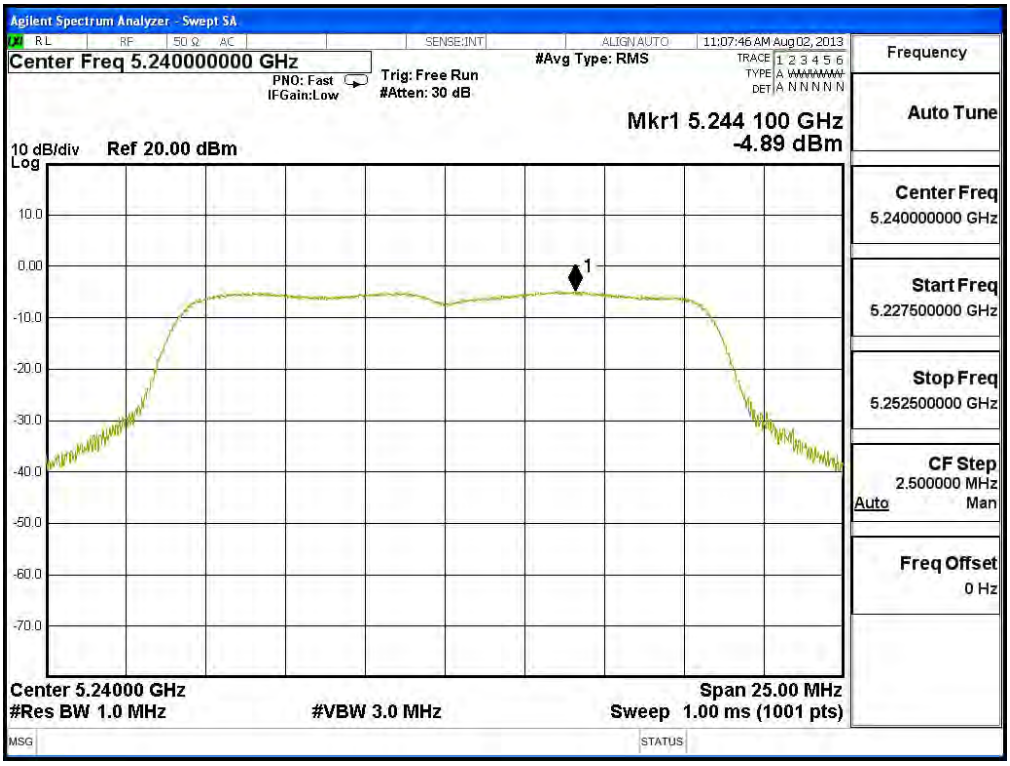
Channel 36: CHAIN B



Channel 44: CHAIN B



Channel 48: CHAIN B

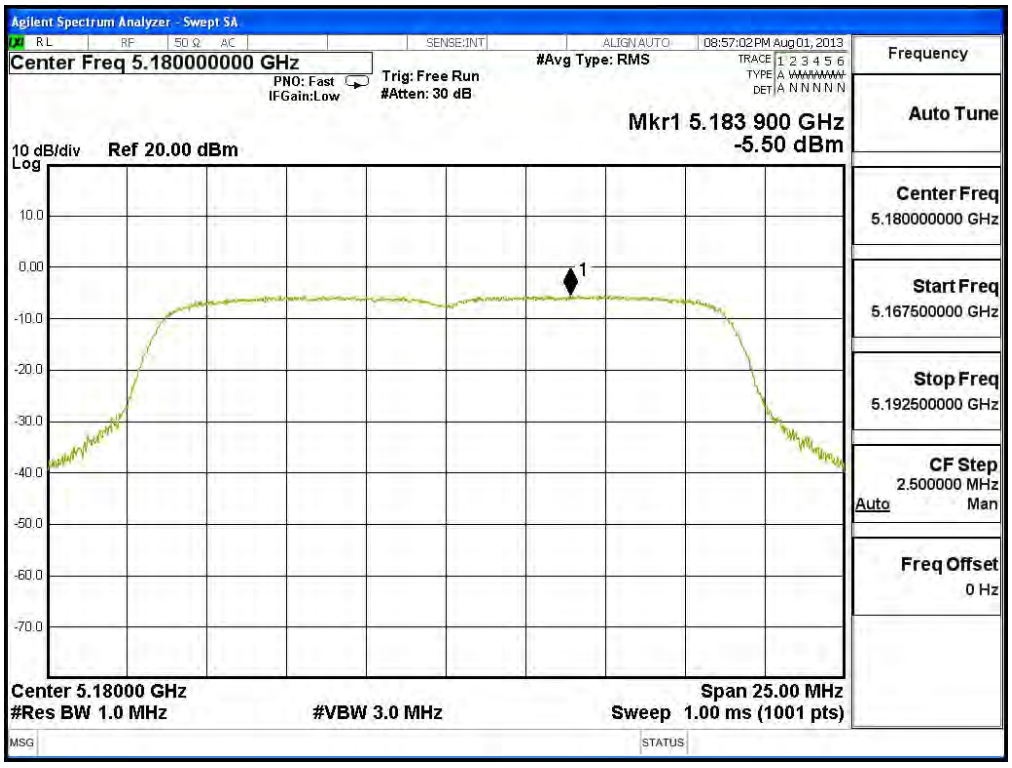


Product : SpectraGuard® Access Point / Sensor
Test Item : Peak Power Spectral Density
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps)(Dipole Antenna)

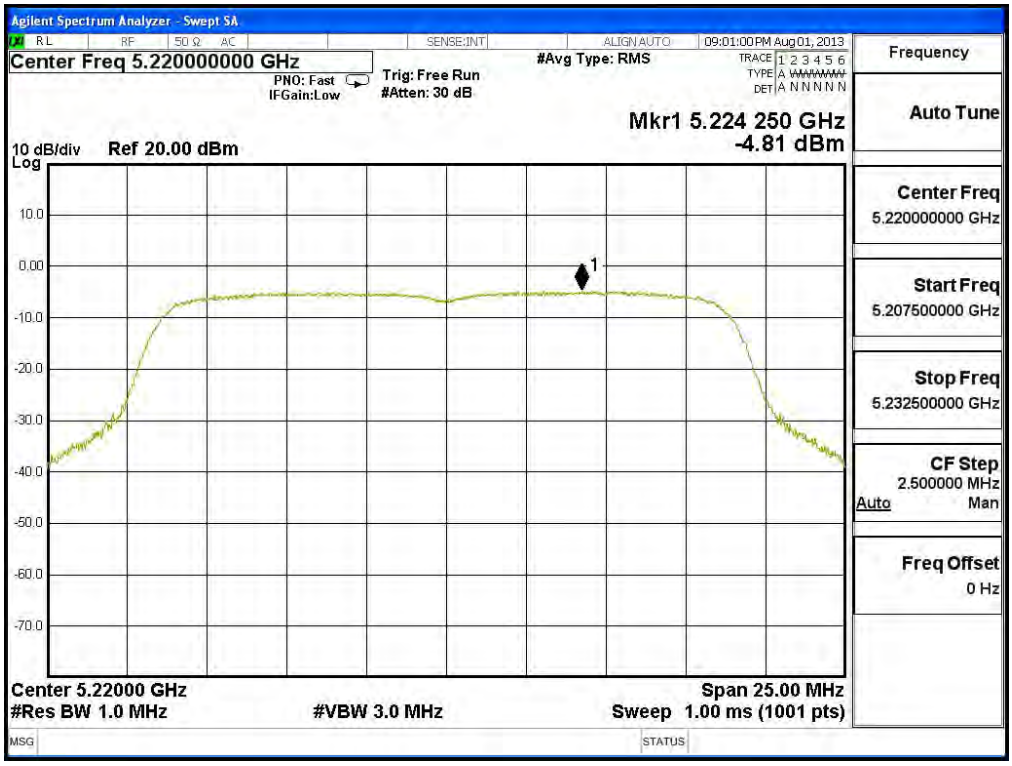
Channel Number	Frequency (MHz)	Chain	PPSD/MHz (dBm)	Total PPSD/MHz (dBm)1	Required Limit (dBm)	Result
36	5180	A	-5.500	-2.490	<4	Pass
		B	-6.490	-3.480	<4	Pass
44	5220	A	-4.810	-1.800	<4	Pass
		B	-5.620	-2.610	<4	Pass
48	5240	A	-4.430	-1.420	<4	Pass
		B	-5.980	-2.970	<4	Pass

Note 1: The quantity 10*log 2 (two antennas) is added to the spectrum peak value according to document 662911 D01.

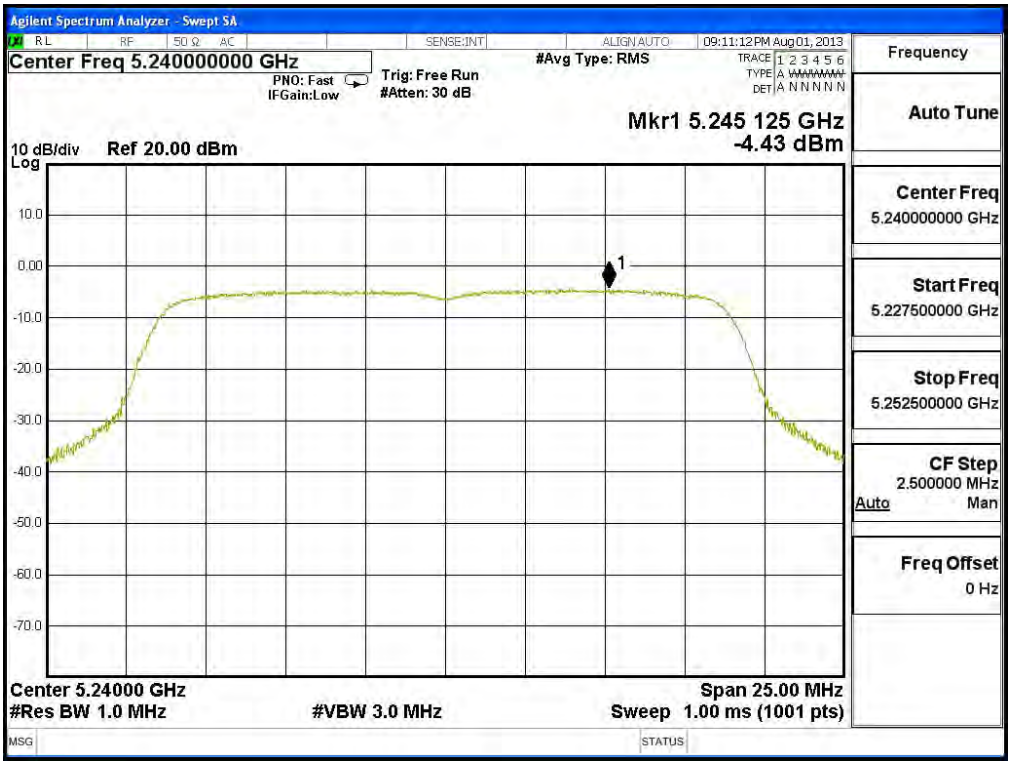
Channel 36 – Chain A



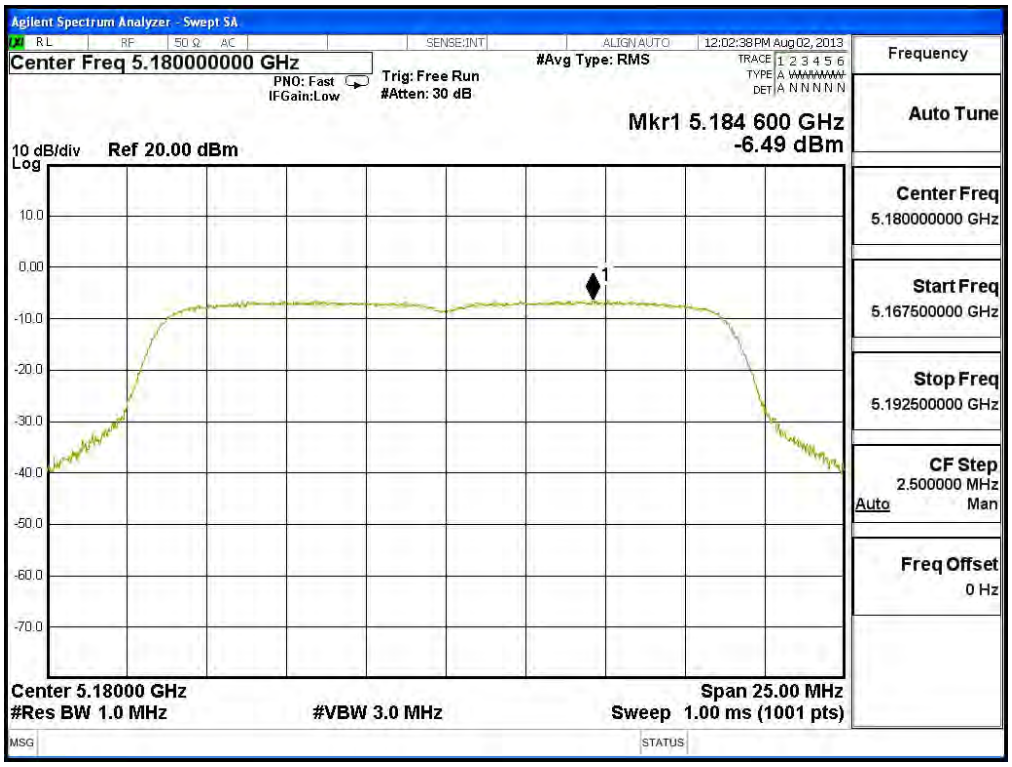
Channel 44 – Chain A



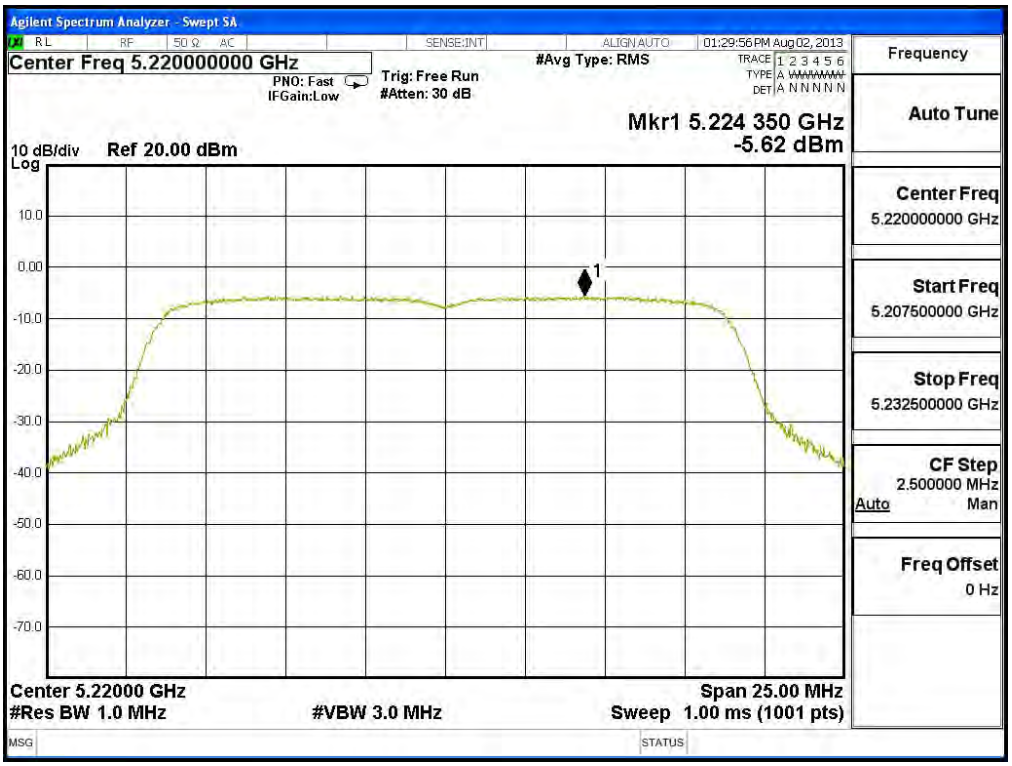
Channel 48 – Chain A



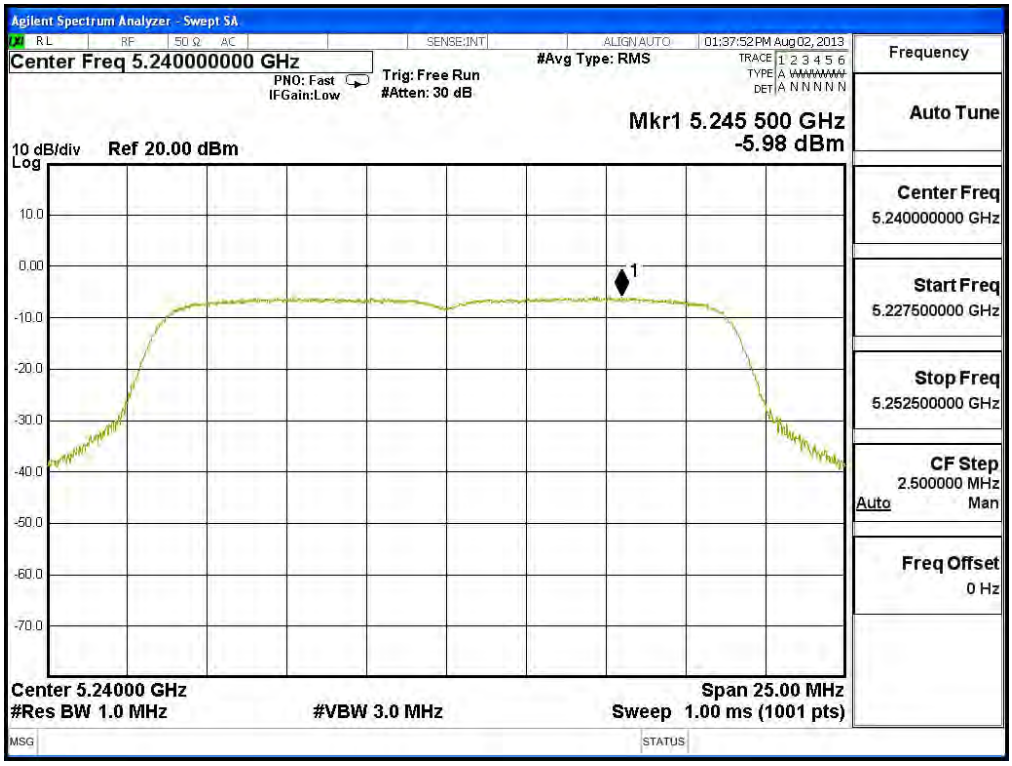
Channel 36 – Chain B



Channel 44 – Chain B



Channel 48 – Chain B

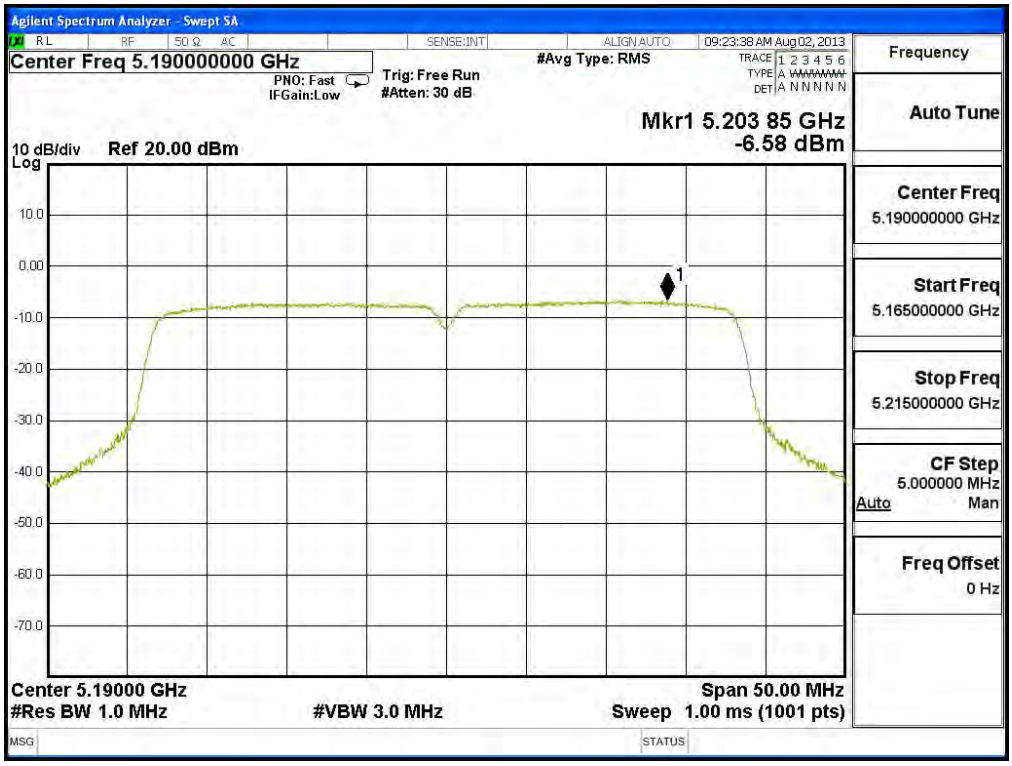


Product : SpectraGuard® Access Point / Sensor
Test Item : Peak Power Spectral Density
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps)(Dipole Antenna)

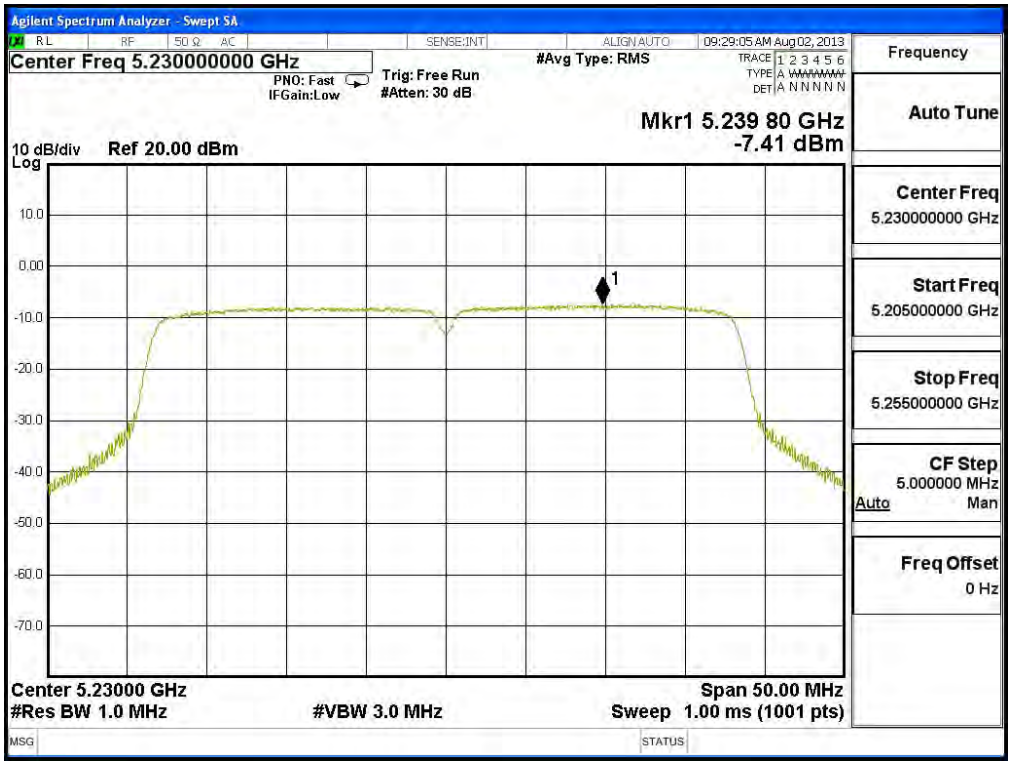
Channel Number	Frequency (MHz)	Chain	PPSD/MHz (dBm)	Total PPSD/MHz (dBm)[1]	Required Limit (dBm)	Result
38	5190	A	-6.580	-3.570	<4	Pass
		B	-8.600	-5.590	<4	Pass
46	5230	A	-7.410	-4.400	<4	Pass
		B	-8.540	-5.530	<4	Pass

Note 1: The quantity 10*log 2 (two antennas) is added to the spectrum peak value according to document 662911 D01.

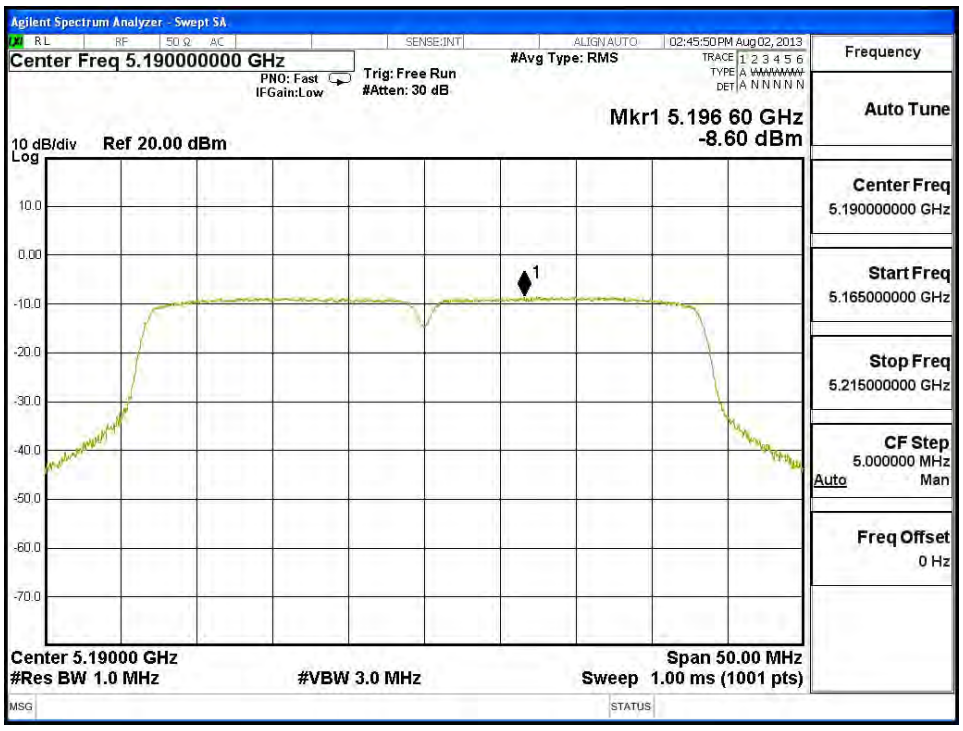
Channel 38 – Chain A



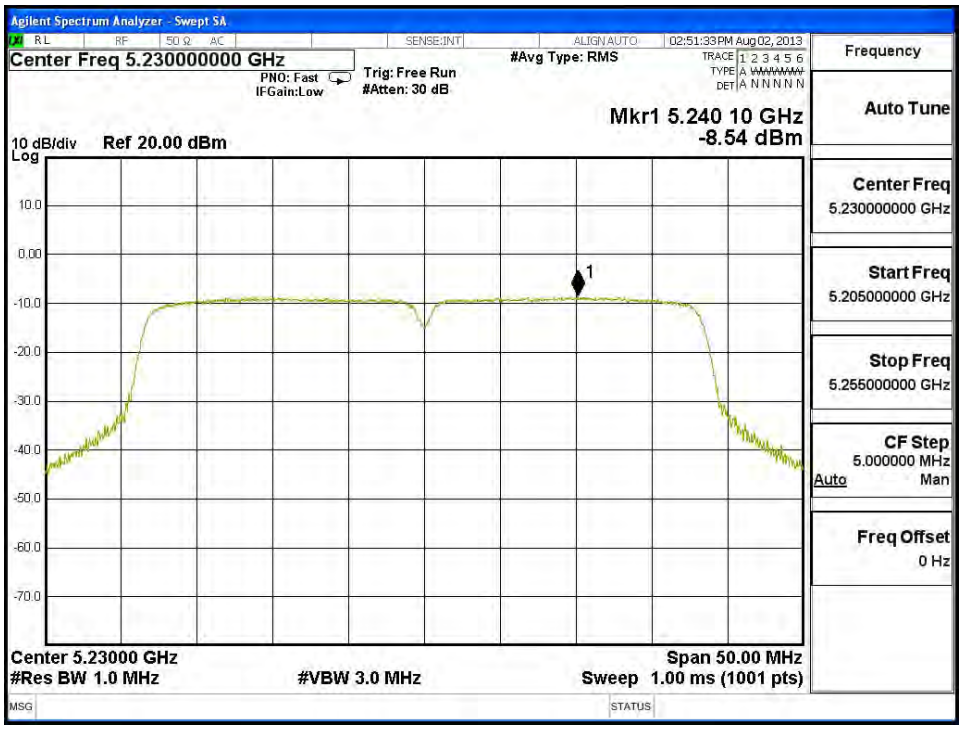
Channel 46 – Chain A



Channel 38 – Chain B



Channel 46 – Chain B

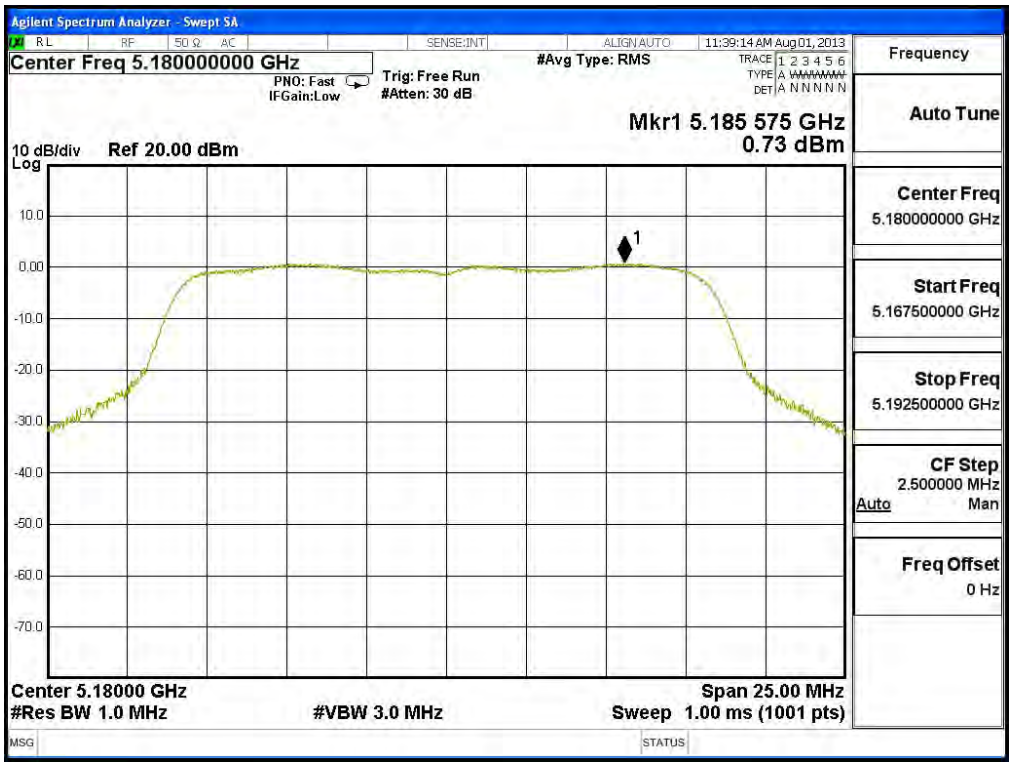


Product : SpectraGuard® Access Point / Sensor
Test Item : Peak Power Spectral Density
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11a-6Mbps)(PIFA Antenna)

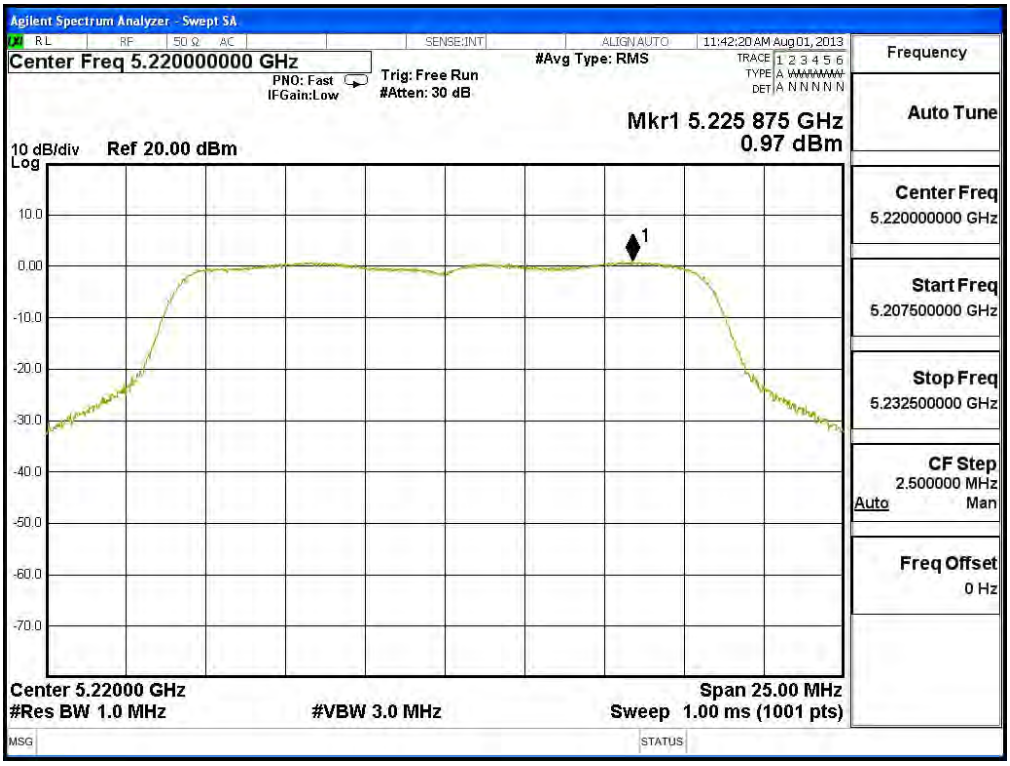
Channel Number	Frequency (MHz)	Chain	PPSD/MHz (dBm)	Total PPSD/MHz (dBm)1	Required Limit (dBm)	Result
36	5180	A	0.730	3.740	<4	Pass
		B	-0.430	2.580	<4	Pass
44	5220	A	0.970	3.980	<4	Pass
		B	0.210	3.220	<4	Pass
48	5240	A	0.890	3.900	<4	Pass
		B	0.000	3.010	<4	Pass

Note 1: The quantity 10*log 2 (two antennas) is added to the spectrum peak value according to document 662911 D01.

Channel 36: CHAIN A

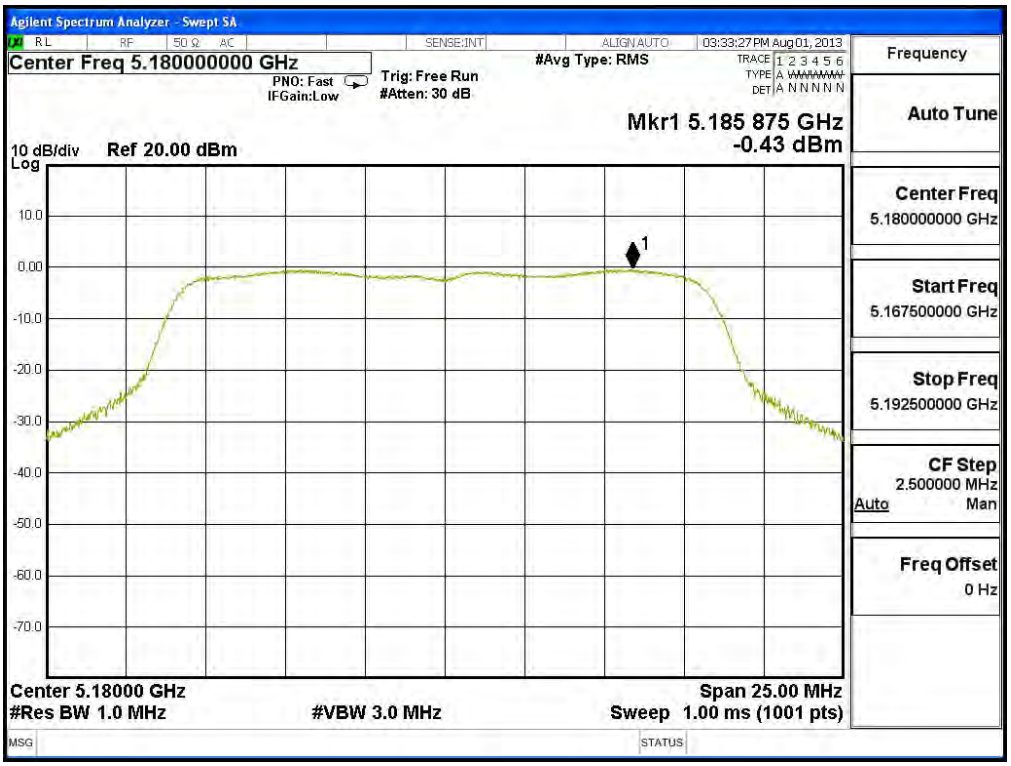


Channel 44: CHAIN A

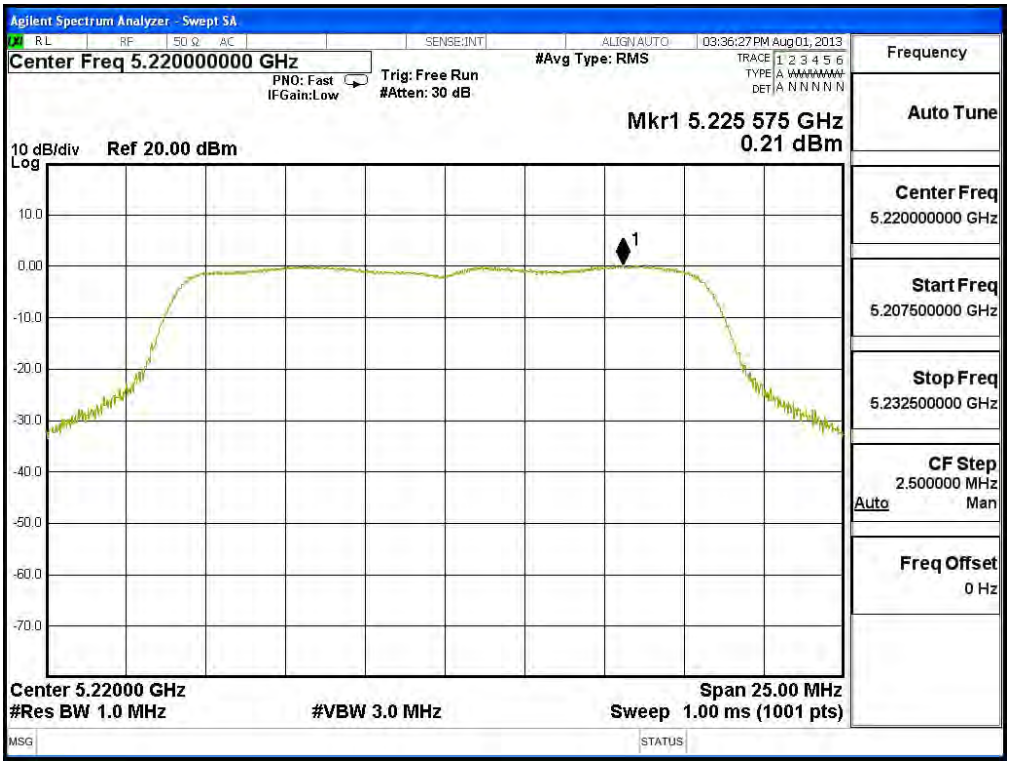


Channel 48: CHAIN A

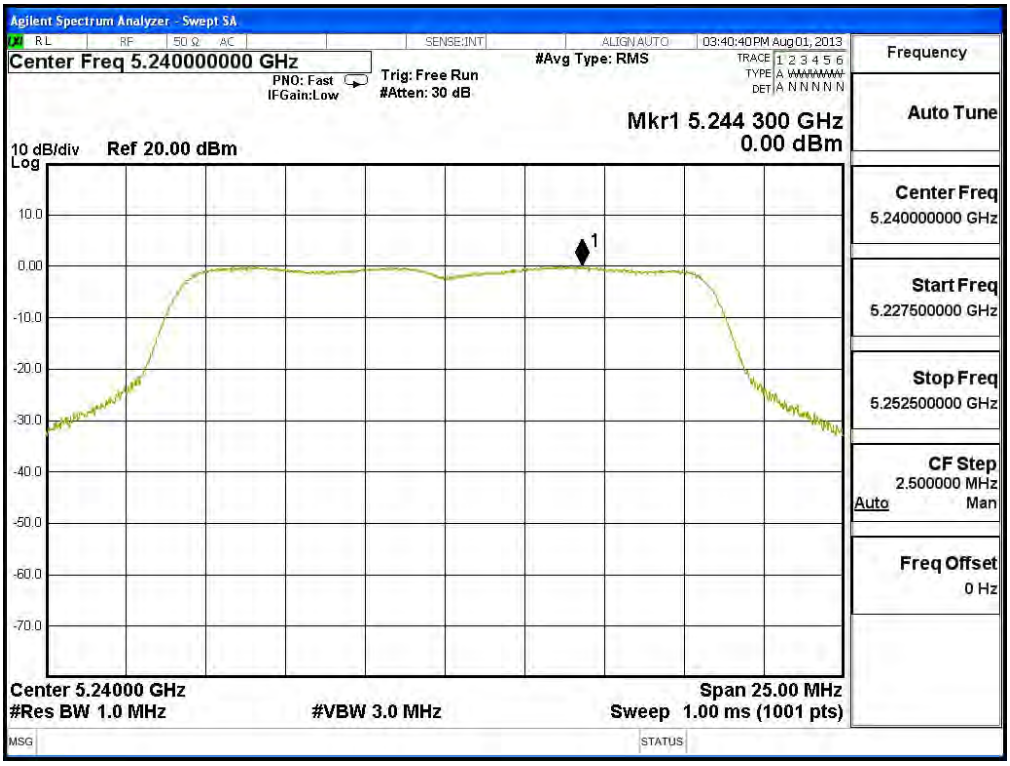
Channel 36: CHAIN B



Channel 44: CHAIN B



Channel 48: CHAIN B

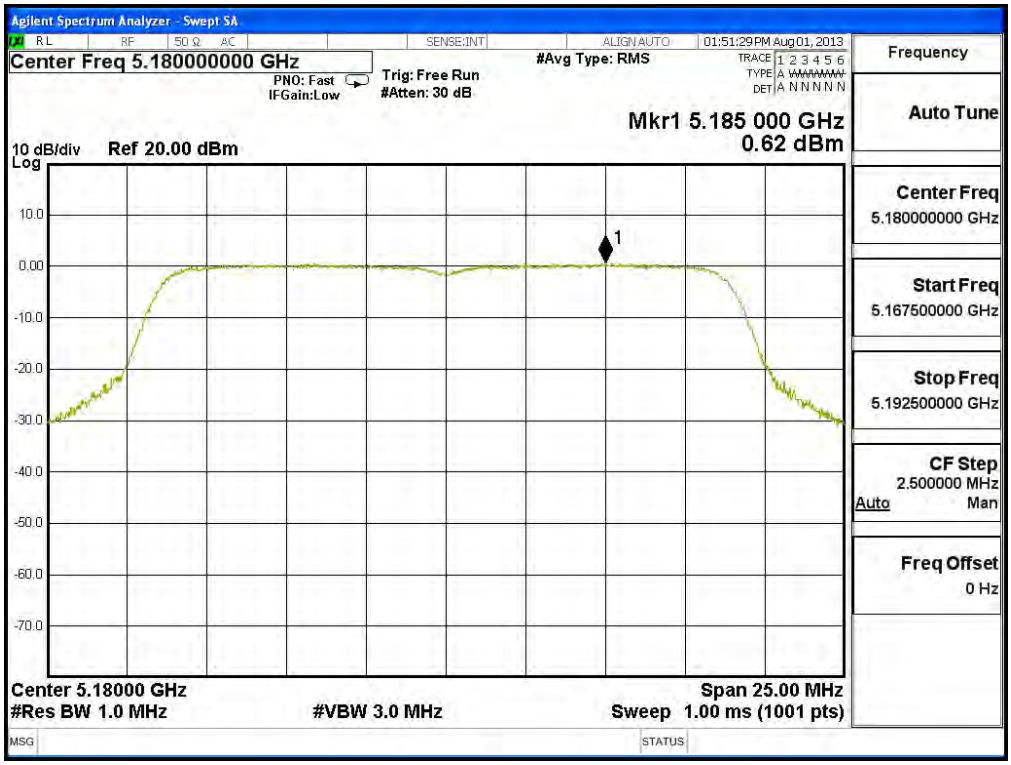


Product : SpectraGuard® Access Point / Sensor
Test Item : Peak Power Spectral Density
Test Site : No.3 OATS
Test Mode : Mode 5: Transmit (802.11n-20BW 14.4Mbps)(PIFA Antenna)

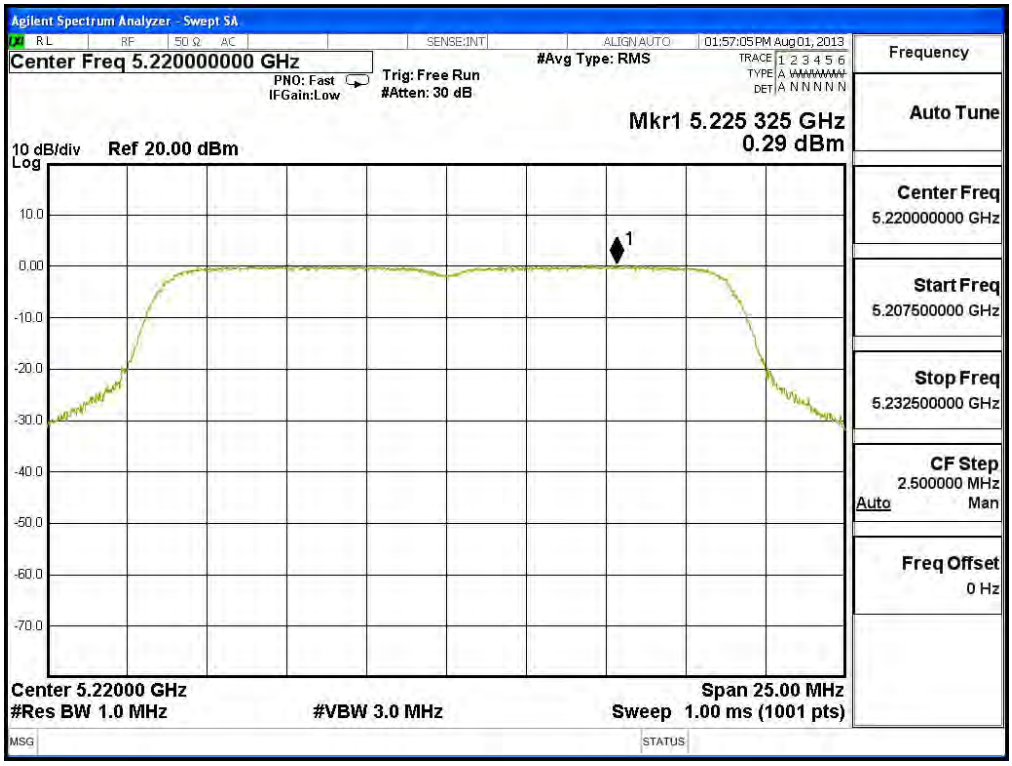
Channel Number	Frequency (MHz)	Chain	PPSD/MHz (dBm)	Total PPSD/MHz (dBm)[1]	Required Limit (dBm)	Result
36	5180	A	0.620	3.630	<4	Pass
		B	0.100	3.110	<4	Pass
44	5220	A	0.290	3.300	<4	Pass
		B	0.070	3.080	<4	Pass
48	5240	A	0.390	3.400	<4	Pass
		B	0.260	3.270	<4	Pass

Note 1: The quantity 10*log 2 (two antennas) is added to the spectrum peak value according to document 662911 D01.

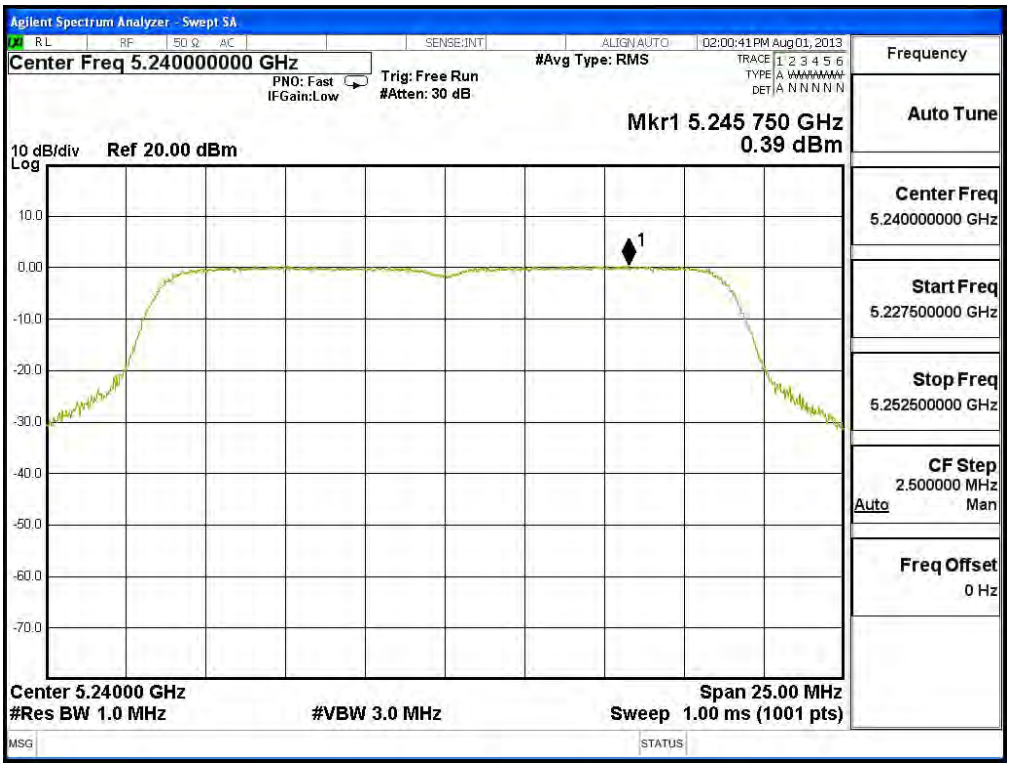
Channel 36 – Chain A



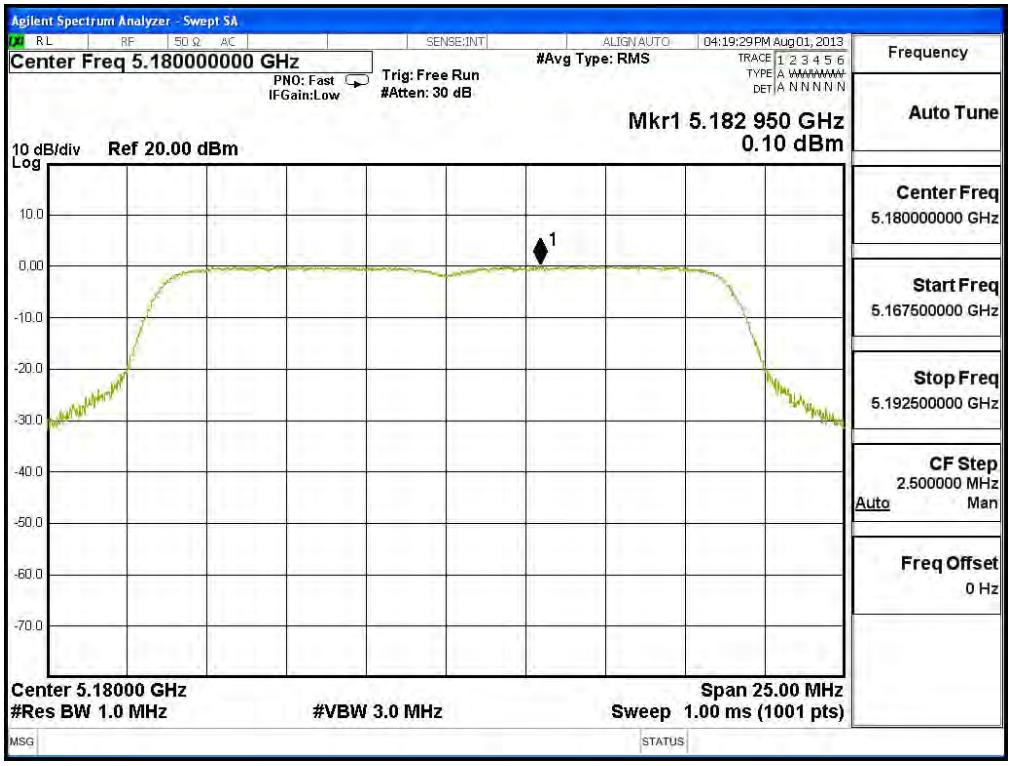
Channel 44 – Chain A



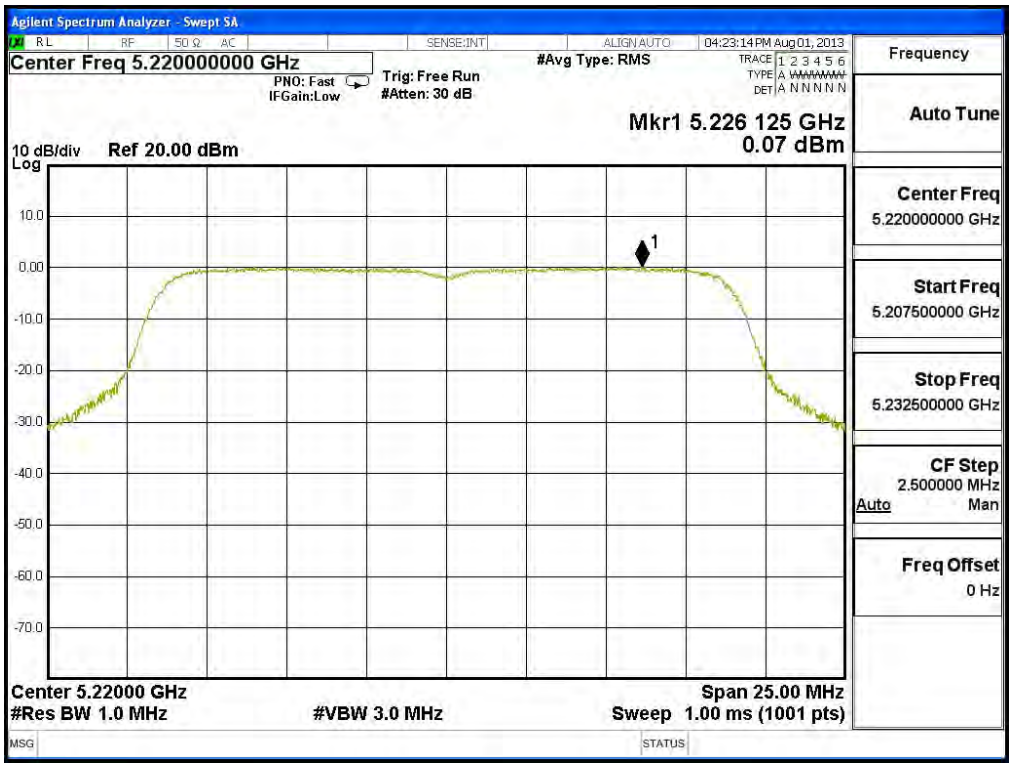
Channel 48 – Chain A



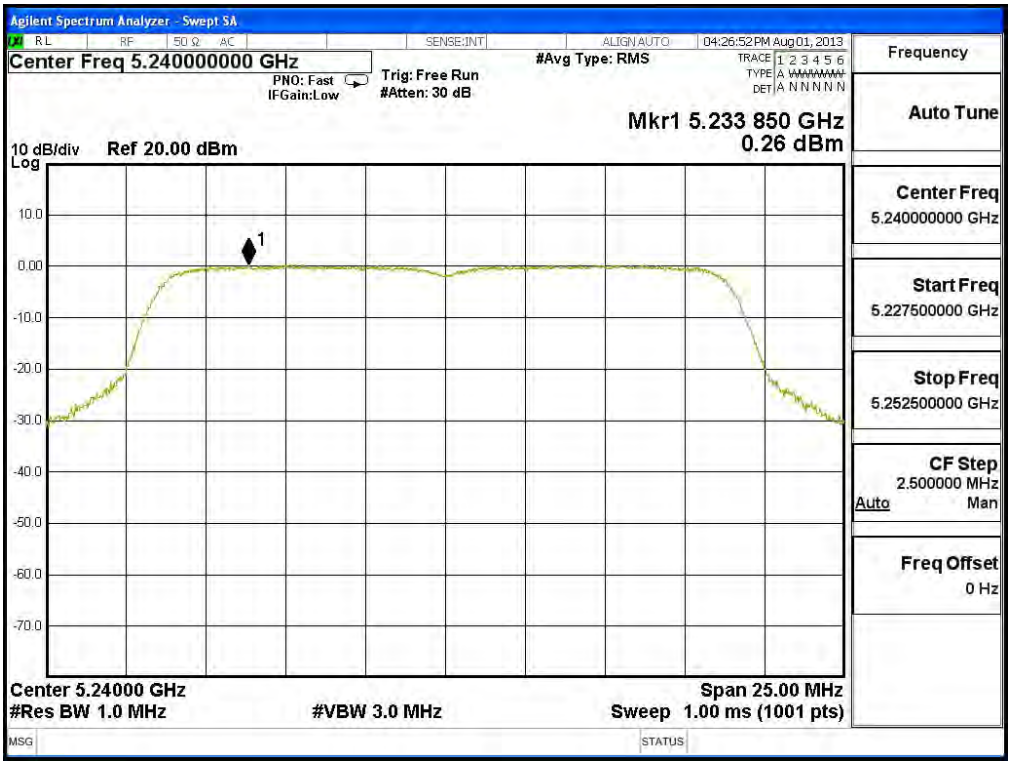
Channel 36 – Chain B



Channel 44 – Chain B



Channel 48 – Chain B

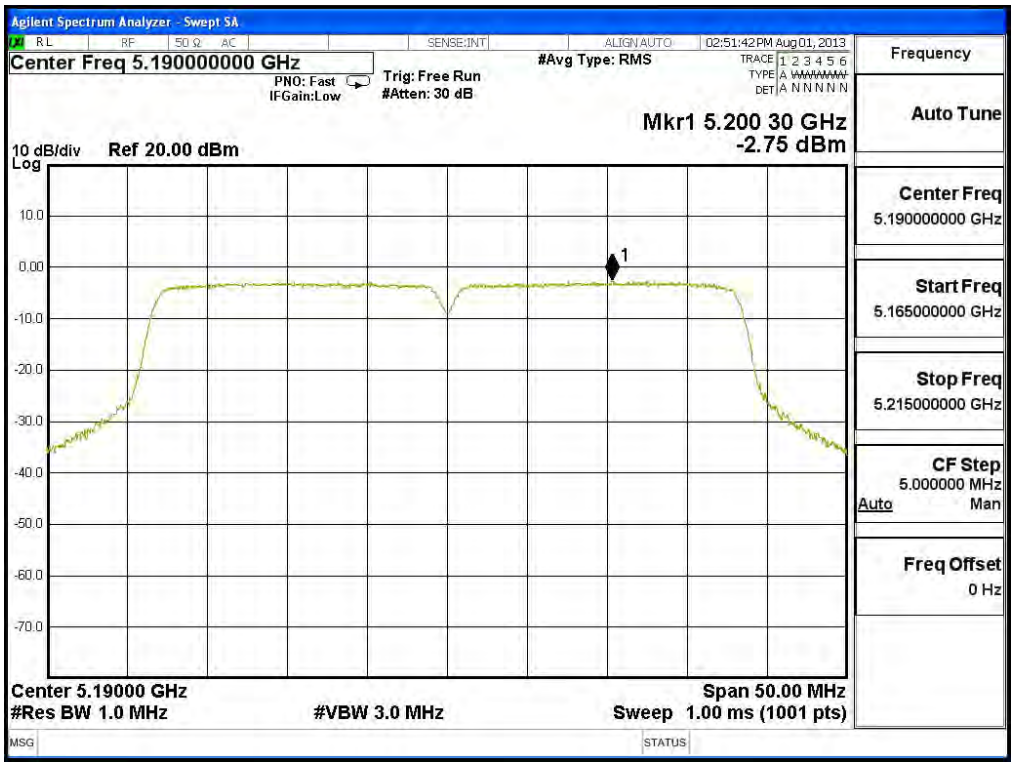


Product : SpectraGuard® Access Point / Sensor
Test Item : Peak Power Spectral Density
Test Site : No.3 OATS
Test Mode : Mode 6: Transmit (802.11n-40BW 30Mbps)(PIFA Antenna)

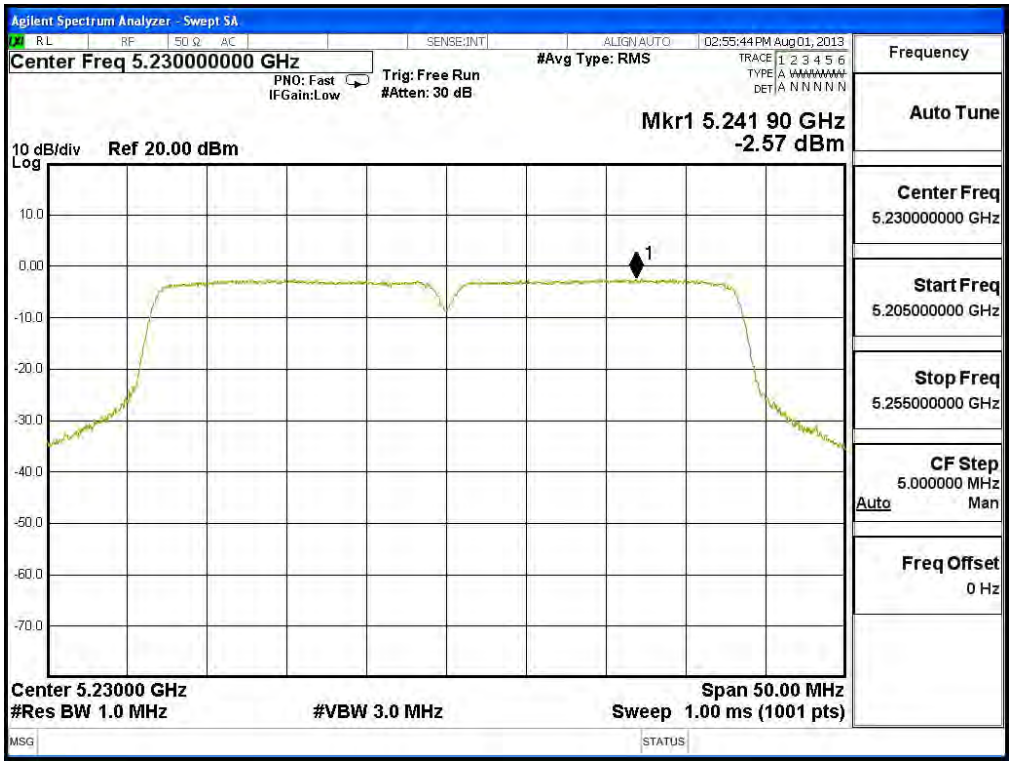
Channel Number	Frequency (MHz)	Chain	PPSD/MHz (dBm)	Total PPSD/MHz (dBm)[1]	Required Limit (dBm)	Result
38	5190	A	-2.750	0.260	<4	Pass
		B	-2.000	1.010	<4	Pass
46	5230	A	-2.570	0.440	<4	Pass
		B	-1.980	1.030	<4	Pass

Note 1: The quantity 10*log 2 (two antennas) is added to the spectrum peak value according to document 662911 D01.

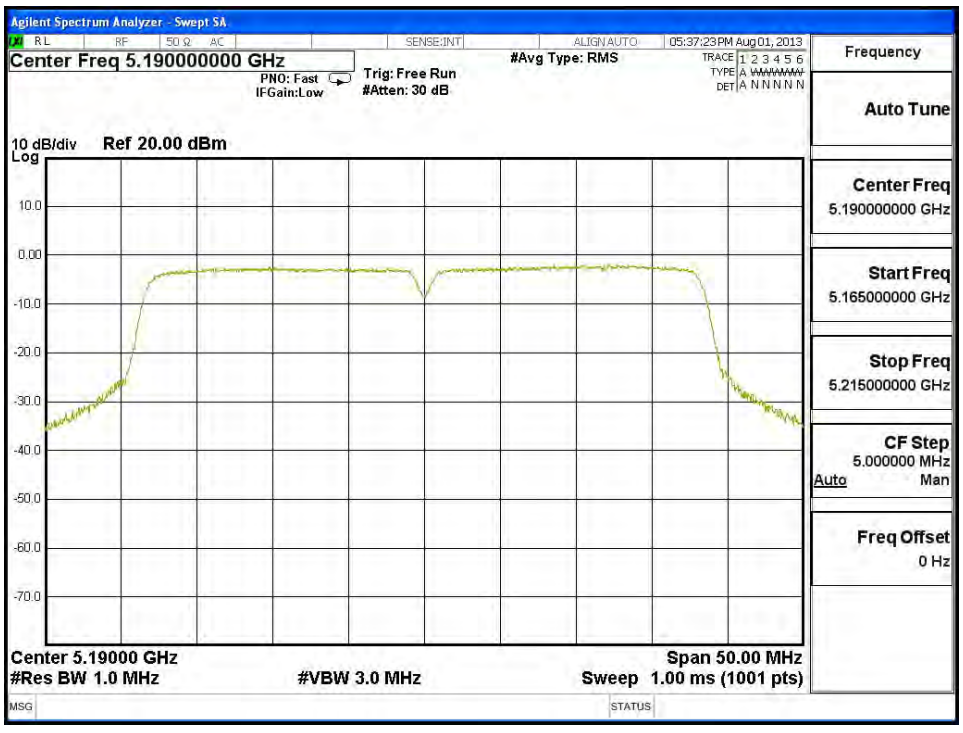
Channel 38 – Chain A



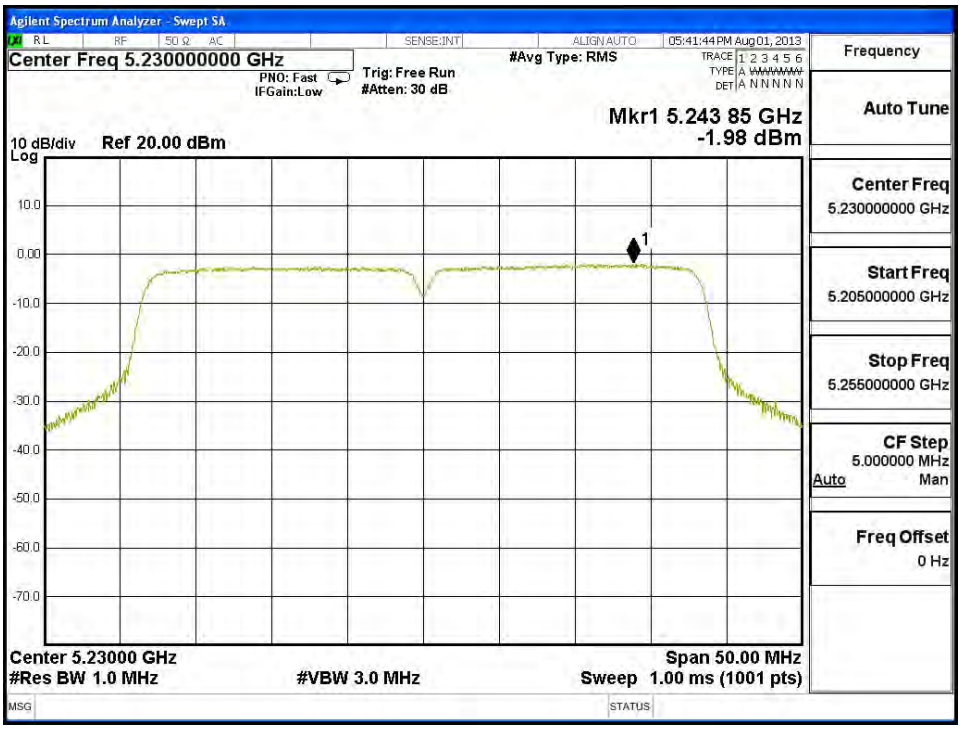
Channel 46 – Chain A



Channel 38 – Chain B



Channel 46 – Chain B



5. Peak Excursion

5.1. Test Equipment

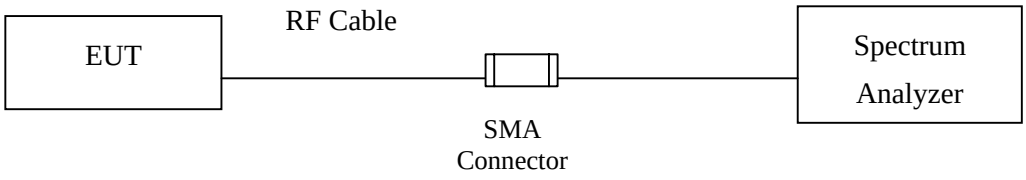
	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2013
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2013
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2013

Note:

1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
2. The test instruments marked with "X" are used to measure the final test results.

5.2. Test Setup

Conduction Power Measurement



5.3. Limits

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

5.4. Test Procedure

The EUT was setup to ANSI C63.10, 2009; tested to DTS test procedure of FCC KDB-789033 for compliance to FCC 47CFR Subpart E requirements.

Step 1: Set the spectrum analyzer or EMI receiver span to view the entire emission bandwidth.
Step 2: Find the maximum of the peak-max-hold spectrum.
(Set RBW = 1 MHz, VBW ≥ 3 MHz, Detector = peak, Trace mode = max-hold, Allow the sweeps to continue until the trace stabilizes,Use the peak search function to find the peak of the spectrum.)
Step 3: Use the procedure found under KDB-789033 F) to measure the PPSD.
Step 4: Compute the ratio of the maximum of the peak-max-hold spectrum to the PPSD.

5.5. Uncertainty

± 1.27 dB

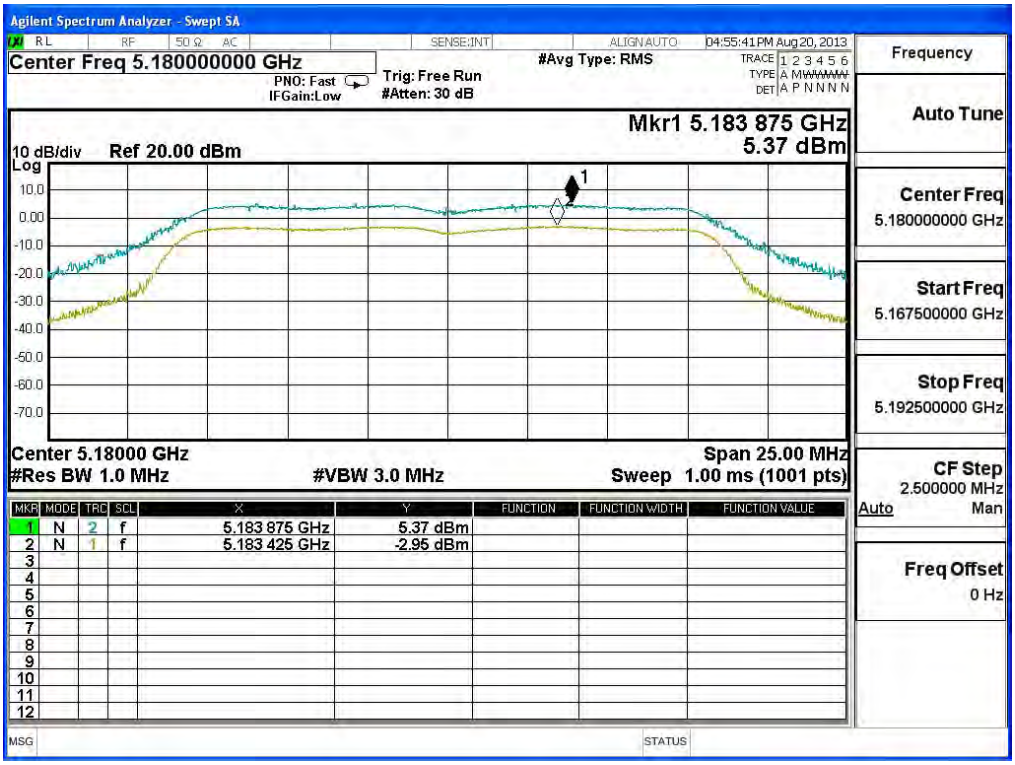
5.6. Test Result of Peak Excursion

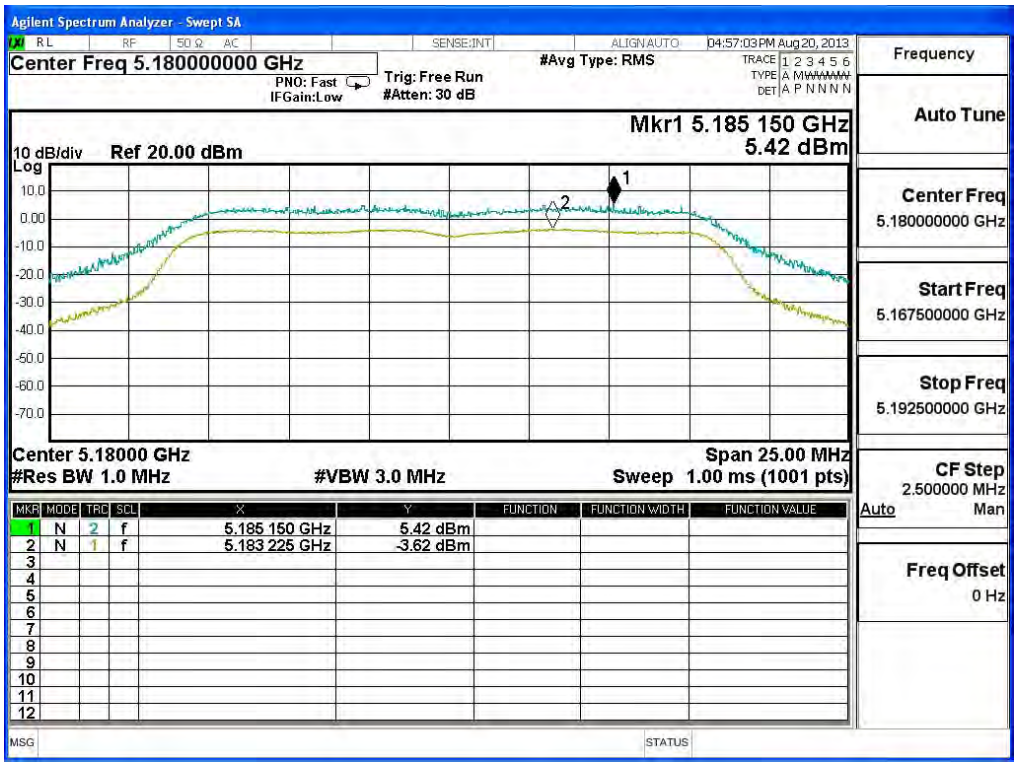
Product : SpectraGuard® Access Point / Sensor
Test Item : Peak Excursion
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11a-6Mbps)(Dipole Antenna)

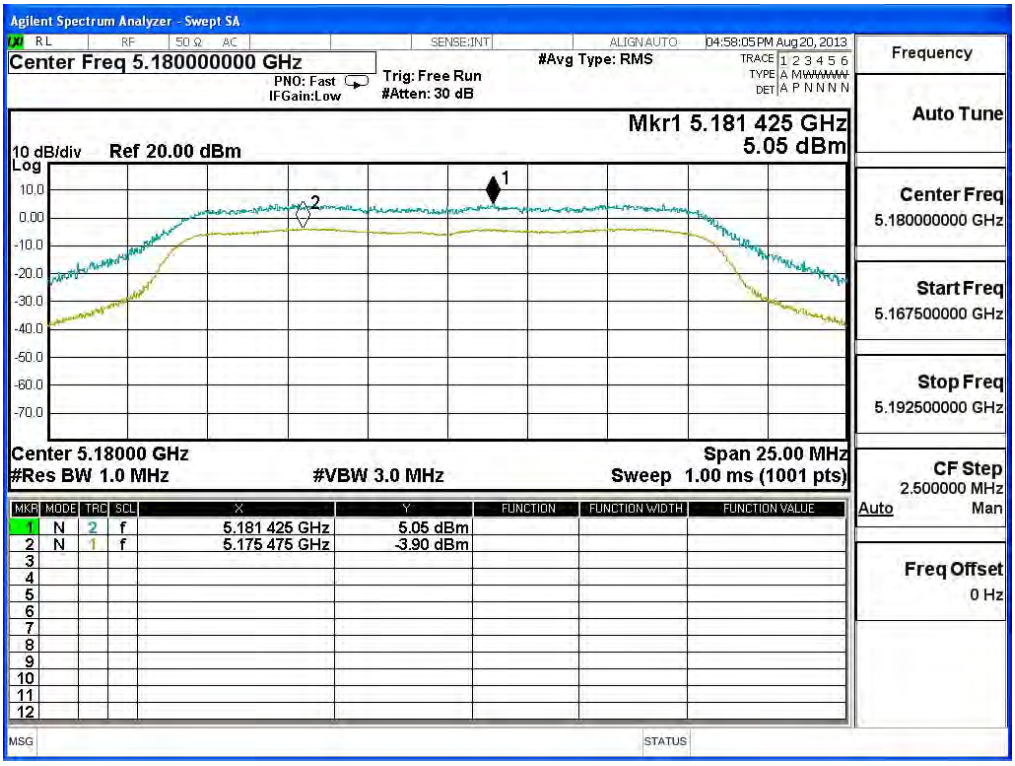
CHAIN A

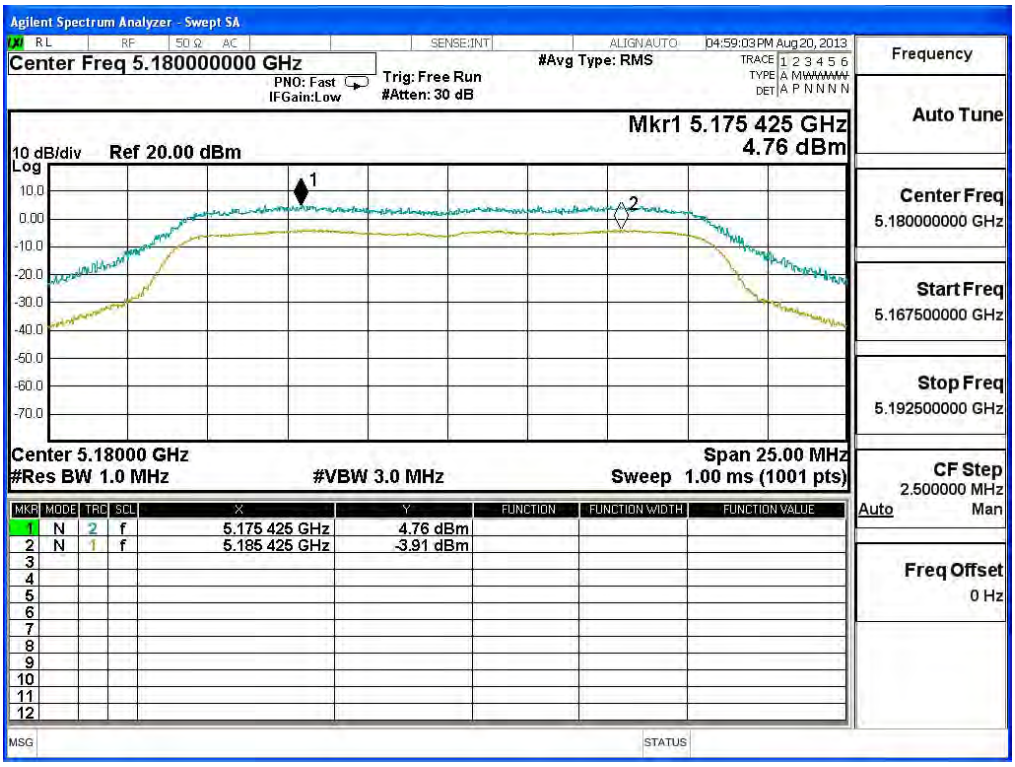
Channel No.	Frequency (MHz)	Data Rate (Mbps)	Measurement Level (dB)	Required Limit (dB)	Result
36	5180	MCS (0)	8.330	<13	Pass
		MCS (2)	9.040	<13	Pass
		MCS (4)	8.950	<13	Pass
		MCS (7)	8.670	<13	Pass

Channel 36:




Agilent Spectrum Analyzer - Swept SA
Center Freq 5.180000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
04:57:03 PM Aug 20, 2013
Mkr1 5.185 150 GHz
5.42 dBm
10 dB/div
Ref 20.00 dBm
Log
Center 5.18000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 25.00 MHz
Sweep 1.00 ms (1001 pts)
1 N 2 f 5.185 150 GHz 5.42 dBm
2 N 1 f 5.183 225 GHz -3.62 dBm
Frequency
Auto Tune
Center Freq
5.180000000 GHz
Start Freq
5.167500000 GHz
Stop Freq
5.192500000 GHz
CF Step
2.500000 MHz
Auto
Man
Freq Offset
0 Hz

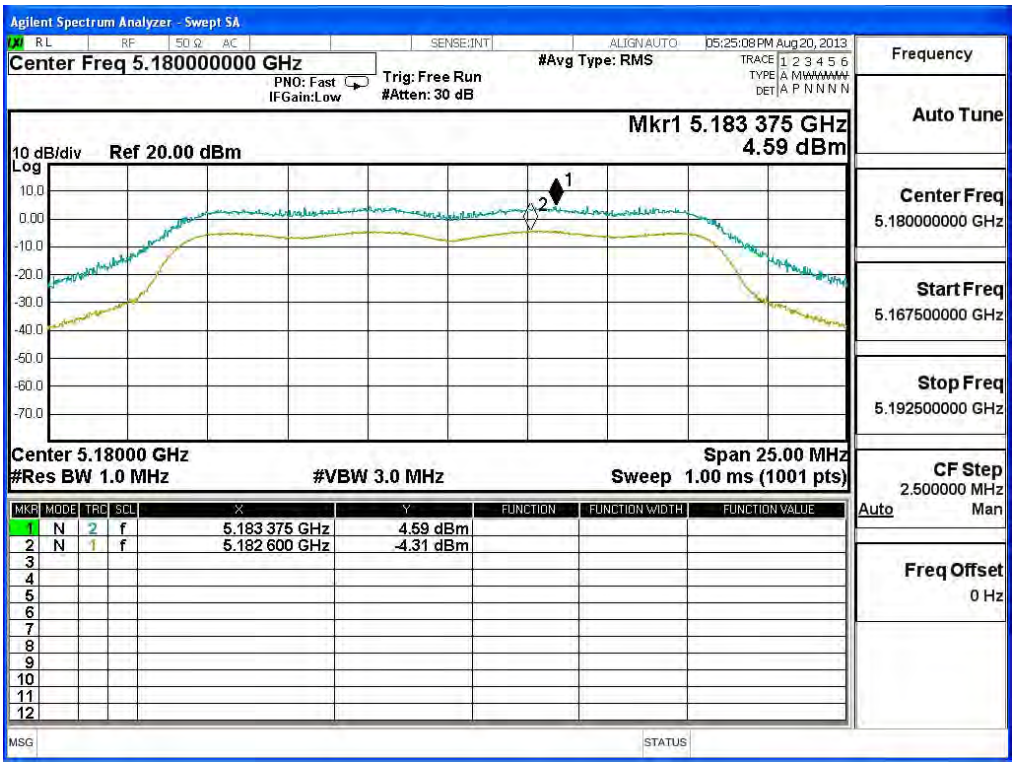

Agilent Spectrum Analyzer - Swept SA
Center Freq 5.180000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
04:58:05 PM Aug 20, 2013
Mkr1 5.181 425 GHz
5.05 dBm
10 dB/div
Ref 20.00 dBm
Log
Center 5.18000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 25.00 MHz
Sweep 1.00 ms (1001 pts)
1 N 2 f 5.181 425 GHz 5.05 dBm
2 N 1 f 5.175 475 GHz -3.90 dBm
Frequency
Auto Tune
Center Freq
5.180000000 GHz
Start Freq
5.167500000 GHz
Stop Freq
5.192500000 GHz
CF Step
2.500000 MHz
Auto
Man
Freq Offset
0 Hz

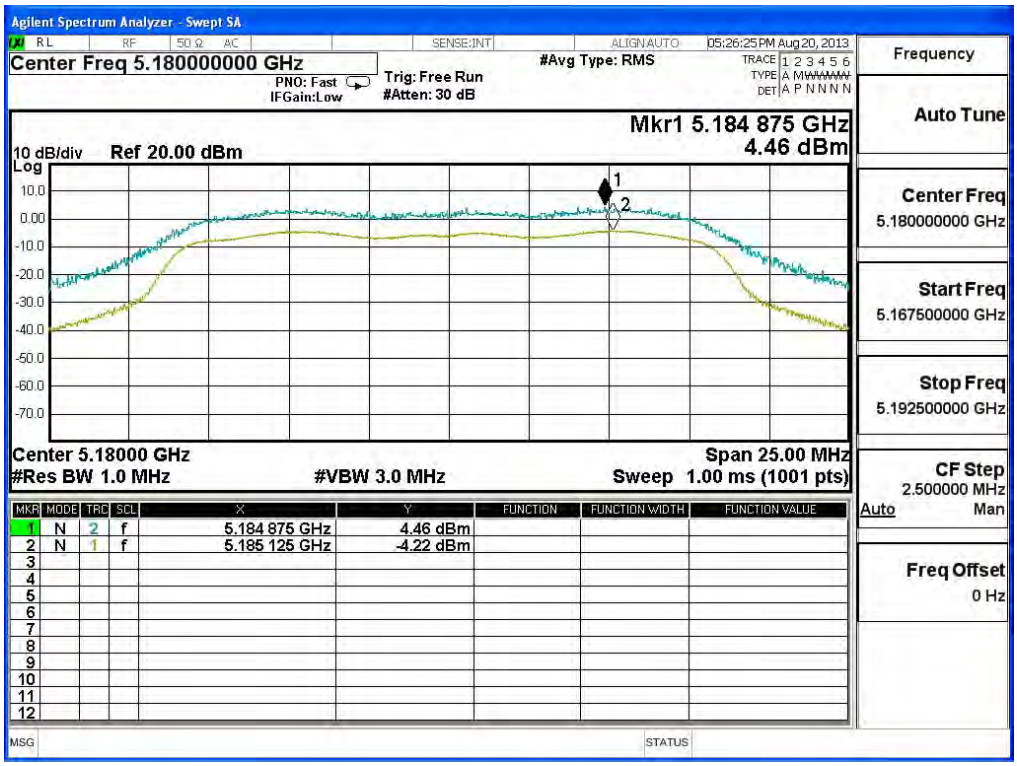

Agilent Spectrum Analyzer - Swept SA
RL
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
04:59:03 PM Aug 20, 2013
Center Freq 5.180000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
TRACE 1 2 3 4 5 6
TYPE A MWWWWW
DET A P N N N N
Mkr1 5.175 425 GHz
4.76 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center 5.18000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 25.00 MHz
Sweep 1.00 ms (1001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 2 f 5.175 425 GHz 4.76 dBm
2 N 1 f 5.185 425 GHz -3.91 dBm
3
4
5
6
7
8
9
10
11
12
MSG
STATUS
Frequency
Auto Tune
Center Freq
5.180000000 GHz
Start Freq
5.167500000 GHz
Stop Freq
5.192500000 GHz
CF Step
2.500000 MHz
Auto
Man
Freq Offset
0 Hz

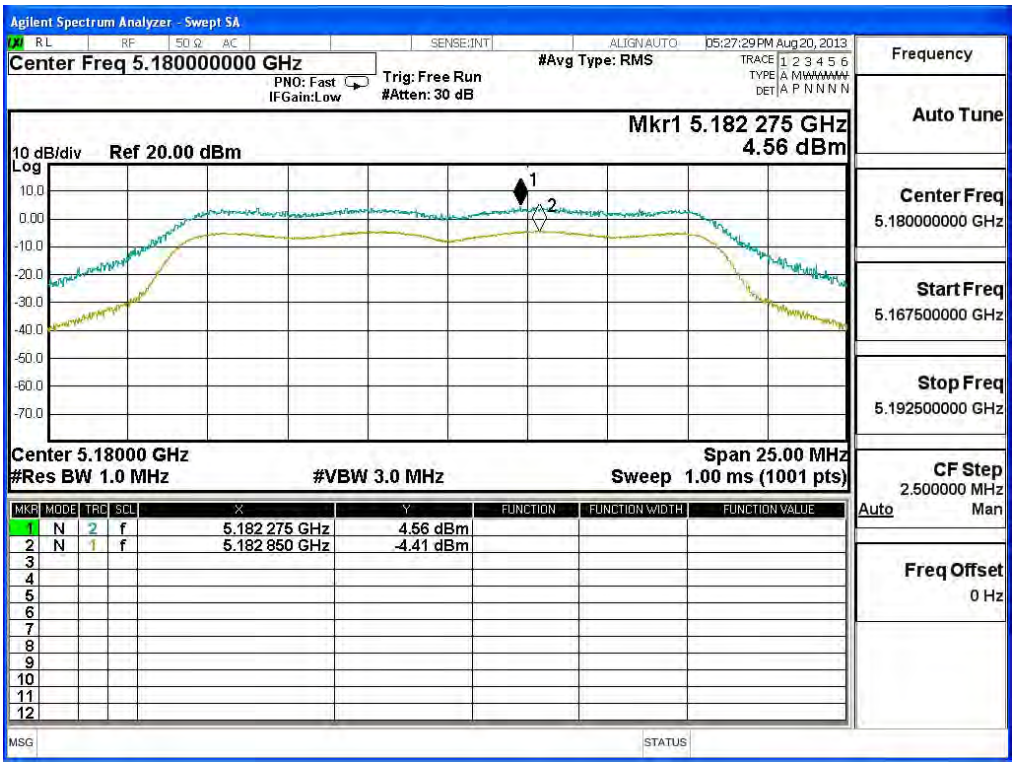
CHAIN B

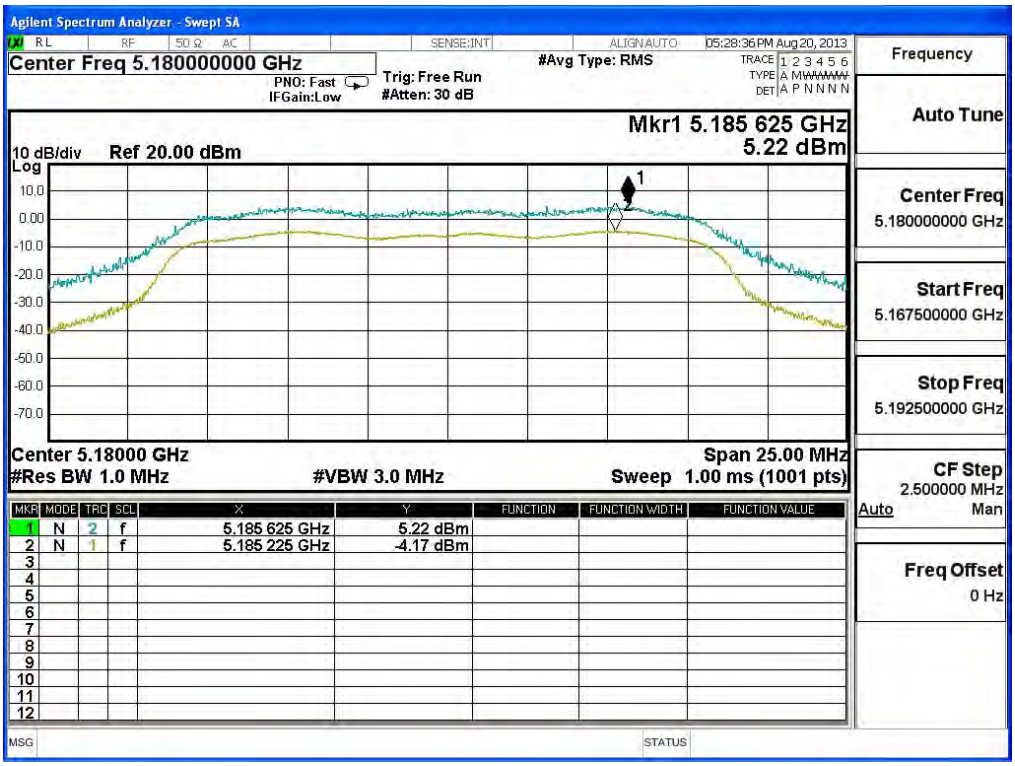
Channel No.	Frequency (MHz)	Data Rate (Mbps)	Measurement Level (dB)	Required Limit (dB)	Result
36	5180	MCS (0)	8.900	<13	Pass
		MCS (2)	8.680	<13	Pass
		MCS (4)	8.970	<13	Pass
		MCS (7)	9.390	<13	Pass

Channel 36:




Agilent Spectrum Analyzer - Swept SA
Center Freq 5.180000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
05:26:25 PM Aug 20, 2013
Mkr1 5.184 875 GHz
4.46 dBm
10 dB/div
Log
Ref 20.00 dBm
Center 5.18000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 25.00 MHz
Sweep 1.00 ms (1001 pts)
1 N 2 f 5.184 875 GHz 4.46 dBm
2 N 1 f 5.185 125 GHz -4.22 dBm
Frequency
Auto Tune
Center Freq
5.180000000 GHz
Start Freq
5.167500000 GHz
Stop Freq
5.192500000 GHz
CF Step
2.500000 MHz
Auto
Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
Center Freq 5.180000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
05:27:29 PM Aug 20, 2013
Mkr1 5.182 275 GHz
4.56 dBm
10 dB/div
Log
Ref 20.00 dBm
Center 5.18000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 25.00 MHz
Sweep 1.00 ms (1001 pts)
1 N 2 f 5.182 275 GHz 4.56 dBm
2 N 1 f 5.182 950 GHz -4.41 dBm
Frequency
Auto Tune
Center Freq
5.180000000 GHz
Start Freq
5.167500000 GHz
Stop Freq
5.192500000 GHz
CF Step
2.500000 MHz
Auto
Man
Freq Offset
0 Hz

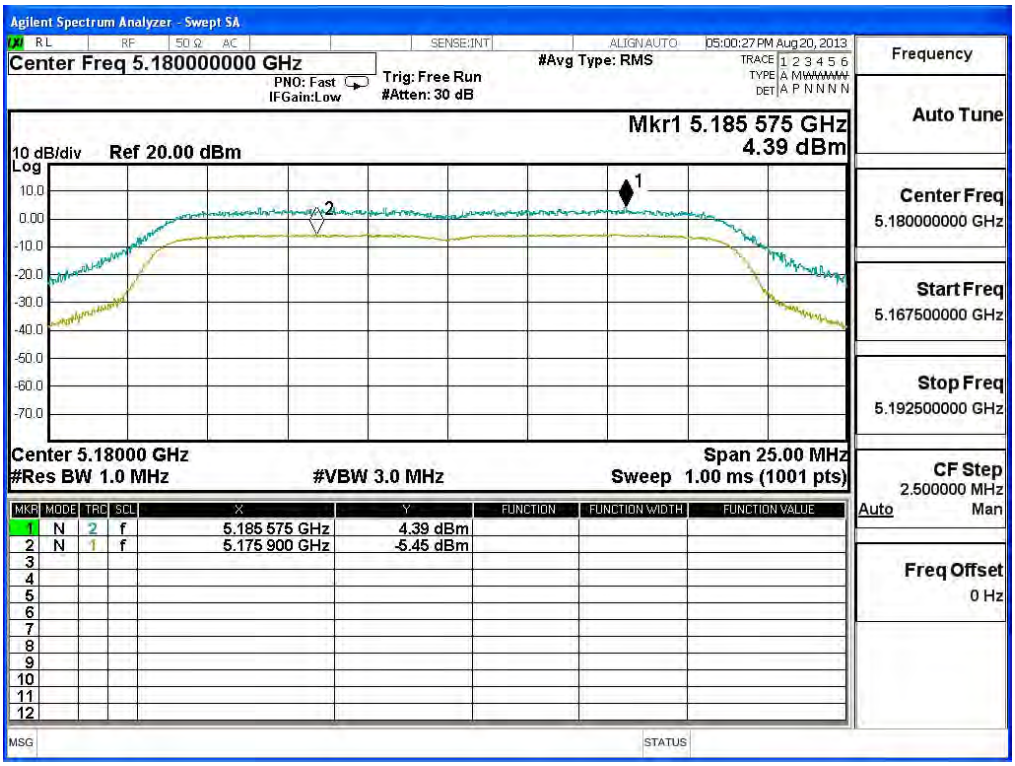

Agilent Spectrum Analyzer - Swept SA
RL
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
05:28:36 PM Aug 20, 2013
Center Freq 5.180000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
TRACE 1 2 3 4 5 6
TYPE A MWWWWW
DET A P N N N N
Mkr1 5.185 625 GHz
5.22 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center 5.18000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 25.00 MHz
Sweep 1.00 ms (1001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 2 f 5.185 625 GHz 5.22 dBm
2 N 1 f 5.185 225 GHz -4.17 dBm
3
4
5
6
7
8
9
10
11
12
MSG
STATUS
Frequency
Auto Tune
Center Freq
5.180000000 GHz
Start Freq
5.167500000 GHz
Stop Freq
5.192500000 GHz
CF Step
2.500000 MHz
Auto
Man
Freq Offset
0 Hz

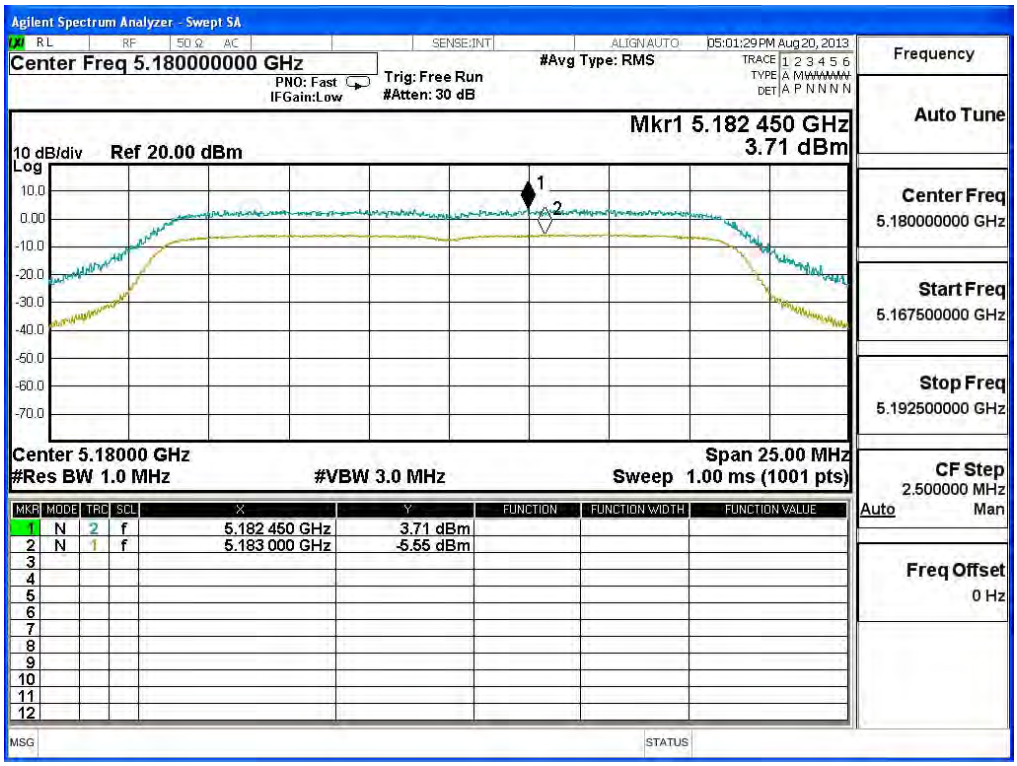
Product : SpectraGuard® Access Point / Sensor
Test Item : Peak Excursion
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps)(Dipole Antenna)

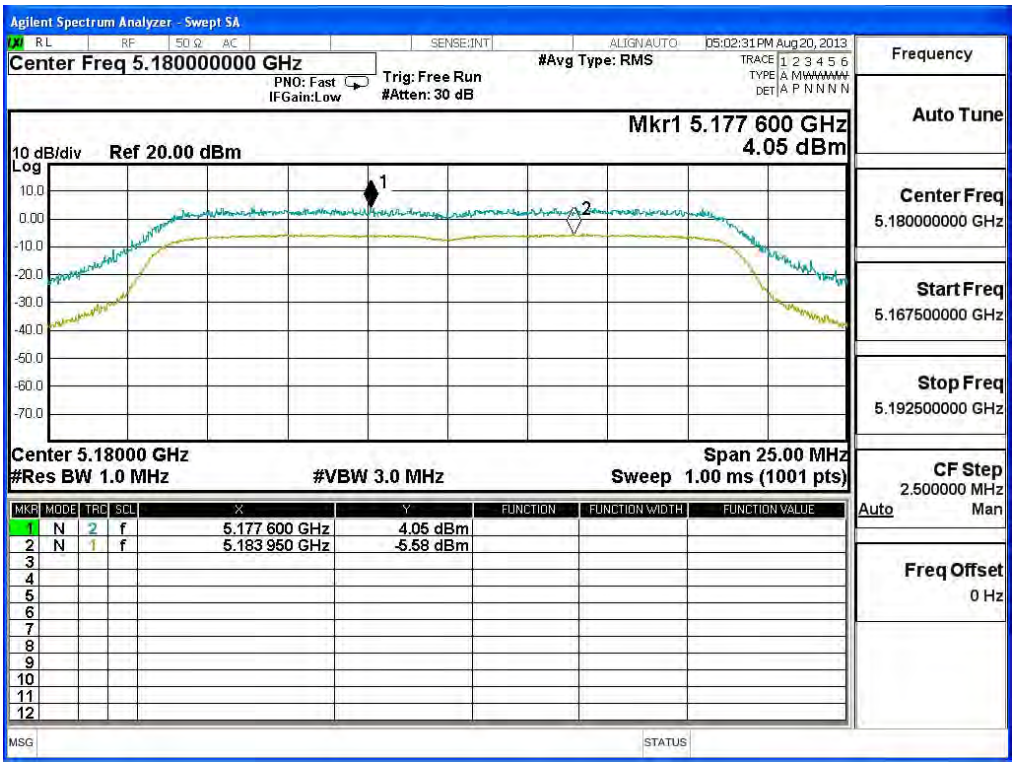
Chain A

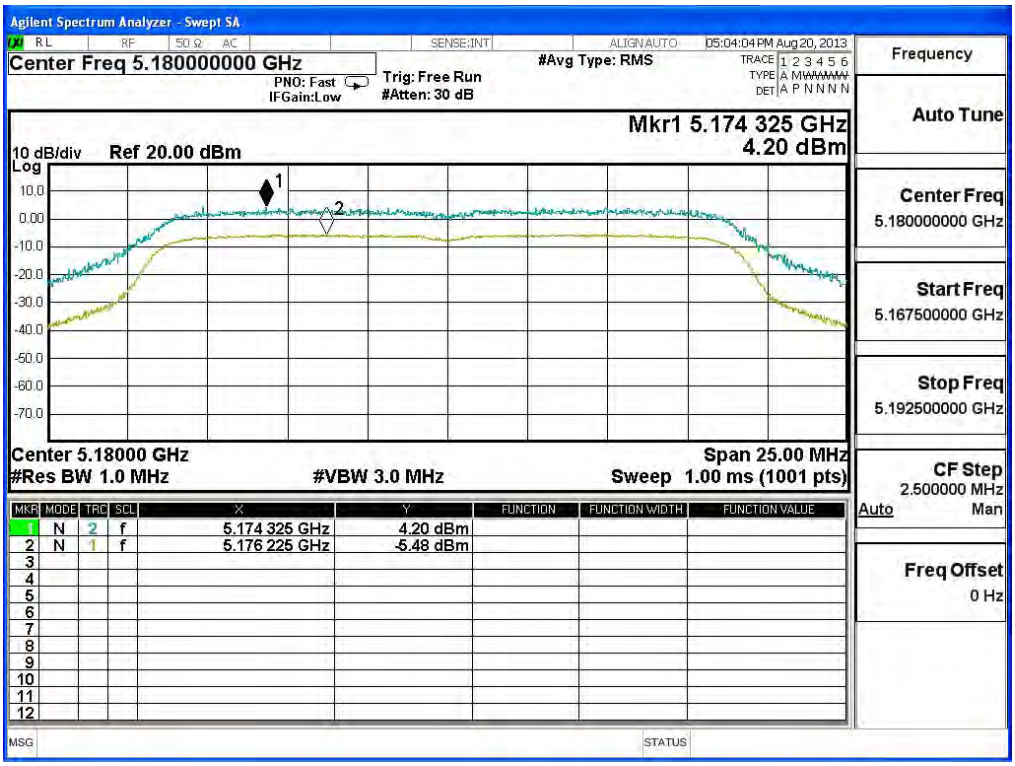
Channel No.	Frequency (MHz)	Data Rate (Mbps)	Measurement Level (dB)	Required Limit (dB)	Result
36	5180	MCS (0)	9.840	<13	Pass
		MCS (2)	9.260	<13	Pass
		MCS (4)	9.630	<13	Pass
		MCS (7)	9.680	<13	Pass

Channel 36:




Agilent Spectrum Analyzer - Swept SA
Center Freq 5.180000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
05:01:29 PM Aug 20, 2013
Mkr1 5.182 450 GHz
3.71 dBm
10 dB/div
Ref 20.00 dBm
Log
Center 5.18000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 25.00 MHz
Sweep 1.00 ms (1001 pts)
1 N 2 f 5.182 450 GHz 3.71 dBm
2 N 1 f 5.183 000 GHz -5.55 dBm
Frequency
Auto Tune
Center Freq
5.180000000 GHz
Start Freq
5.167500000 GHz
Stop Freq
5.192500000 GHz
CF Step
2.500000 MHz
Auto
Man
Freq Offset
0 Hz

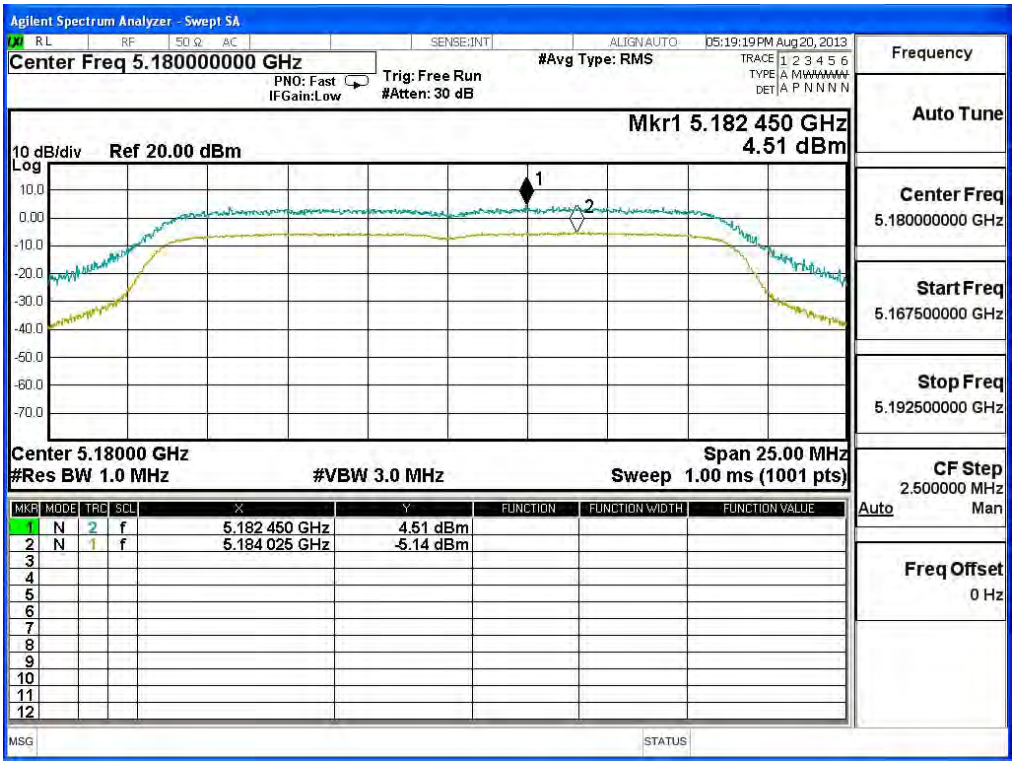

Agilent Spectrum Analyzer - Swept SA
Center Freq 5.180000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
05:02:31 PM Aug 20, 2013
Mkr1 5.177 600 GHz
4.05 dBm
10 dB/div
Ref 20.00 dBm
Log
Center 5.18000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 25.00 MHz
Sweep 1.00 ms (1001 pts)
1 N 2 f 5.177 600 GHz 4.05 dBm
2 N 1 f 5.183 950 GHz -5.58 dBm
Frequency
Auto Tune
Center Freq
5.180000000 GHz
Start Freq
5.167500000 GHz
Stop Freq
5.192500000 GHz
CF Step
2.500000 MHz
Auto
Man
Freq Offset
0 Hz

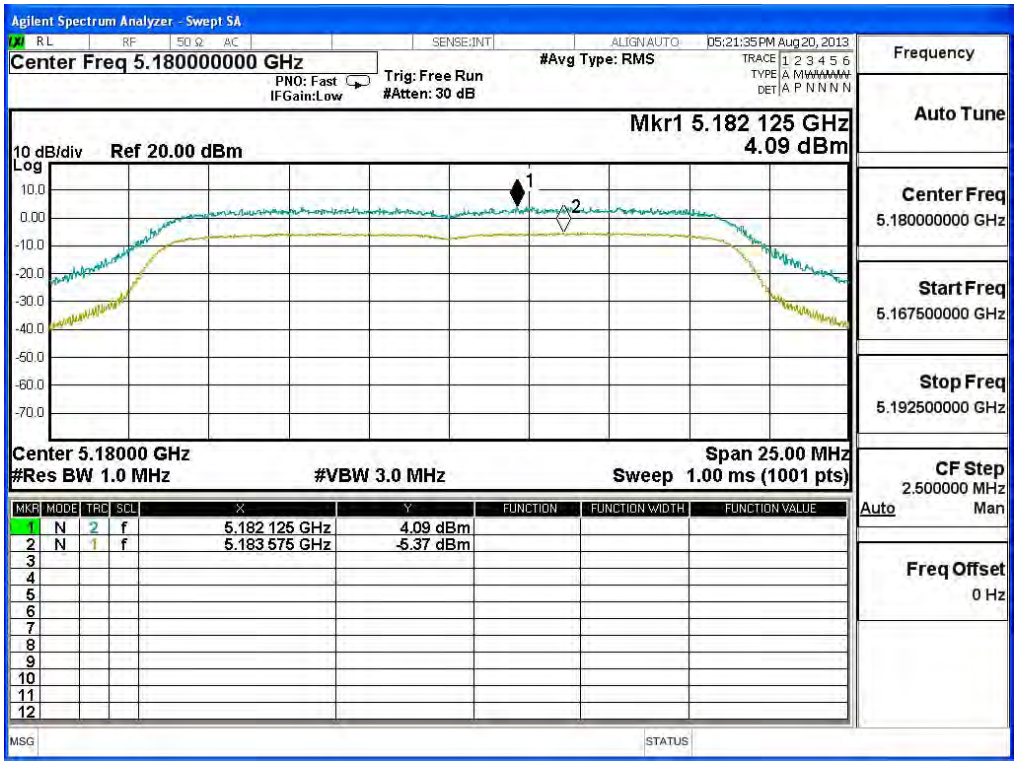

Agilent Spectrum Analyzer - Swept SA
RL
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
05:04:04 PM Aug 20, 2013
Center Freq 5.180000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
TRACE 1 2 3 4 5 6
TYPE A MWWWWW
DET A P N N N N
Mkr1 5.174 325 GHz
4.20 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center 5.18000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 25.00 MHz
Sweep 1.00 ms (1001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 2 f 5.174 325 GHz 4.20 dBm
2 N 1 f 5.176 225 GHz -5.48 dBm
3
4
5
6
7
8
9
10
11
12
MSG
STATUS
Frequency
Auto Tune
Center Freq
5.180000000 GHz
Start Freq
5.167500000 GHz
Stop Freq
5.192500000 GHz
CF Step
2.500000 MHz
Auto
Man
Freq Offset
0 Hz

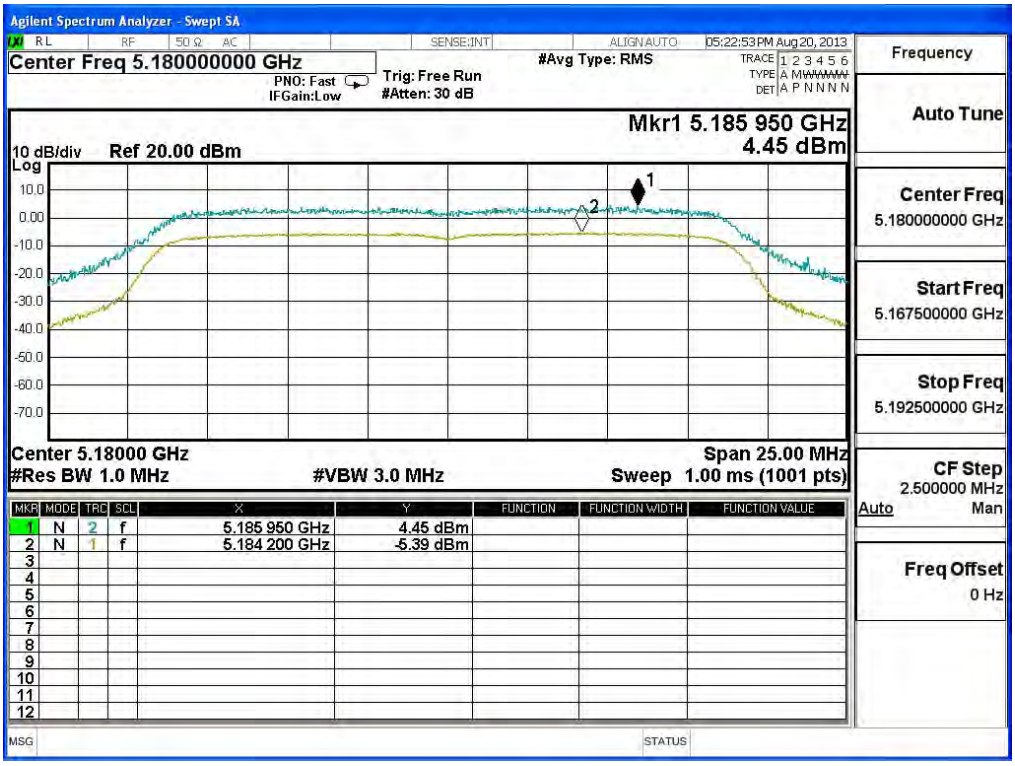
Chain B

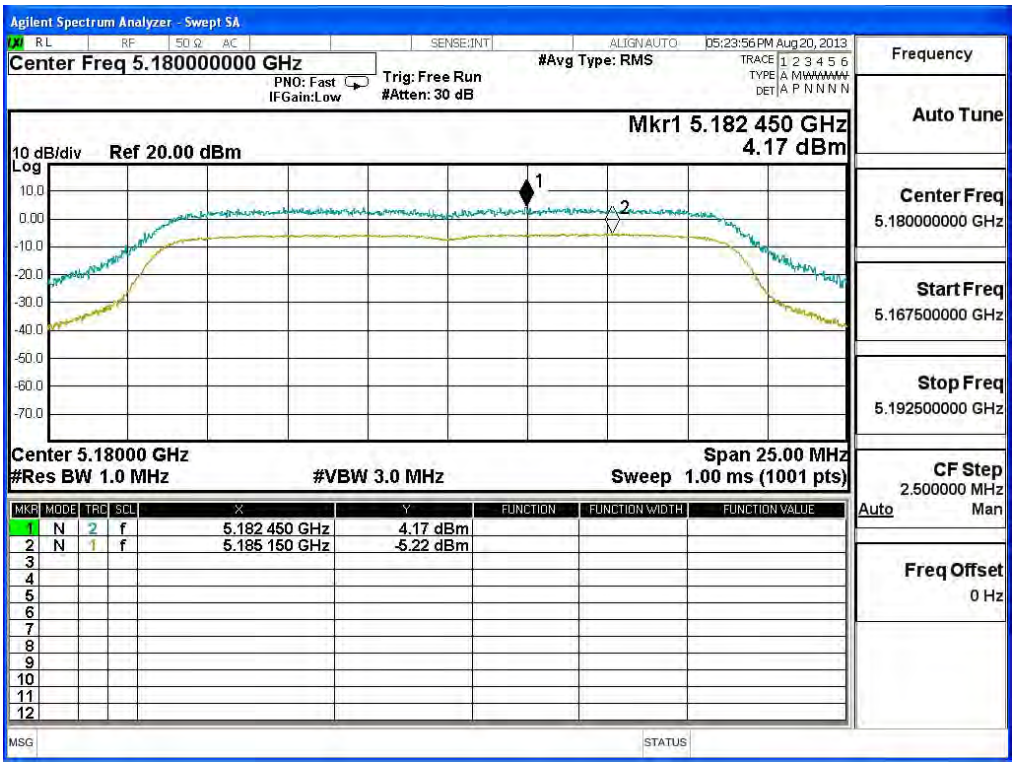
Channel No.	Frequency (MHz)	Data Rate (Mbps)	Measurement Level (dB)	Required Limit (dB)	Result
36	5180	MCS (0)	9.650	<13	Pass
		MCS (2)	9.460	<13	Pass
		MCS (4)	9.840	<13	Pass
		MCS (7)	9.390	<13	Pass

Channel 36:




Agilent Spectrum Analyzer - Swept SA
Center Freq 5.180000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
05:21:35 PM Aug 20, 2013
Mkr1 5.182 125 GHz
4.09 dBm
10 dB/div
Ref 20.00 dBm
Log
Center 5.18000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 25.00 MHz
Sweep 1.00 ms (1001 pts)
1 N 2 f 5.182 125 GHz 4.09 dBm
2 N 1 f 5.183 575 GHz -5.37 dBm
Frequency
Auto Tune
Center Freq
5.180000000 GHz
Start Freq
5.167500000 GHz
Stop Freq
5.192500000 GHz
CF Step
2.500000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS


Agilent Spectrum Analyzer - Swept SA
Center Freq 5.180000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
05:22:53 PM Aug 20, 2013
Mkr1 5.185 950 GHz
4.45 dBm
10 dB/div
Ref 20.00 dBm
Log
Center 5.18000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 25.00 MHz
Sweep 1.00 ms (1001 pts)
1 N 2 f 5.185 950 GHz 4.45 dBm
2 N 1 f 5.184 200 GHz -5.39 dBm
Frequency
Auto Tune
Center Freq
5.180000000 GHz
Start Freq
5.167500000 GHz
Stop Freq
5.192500000 GHz
CF Step
2.500000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

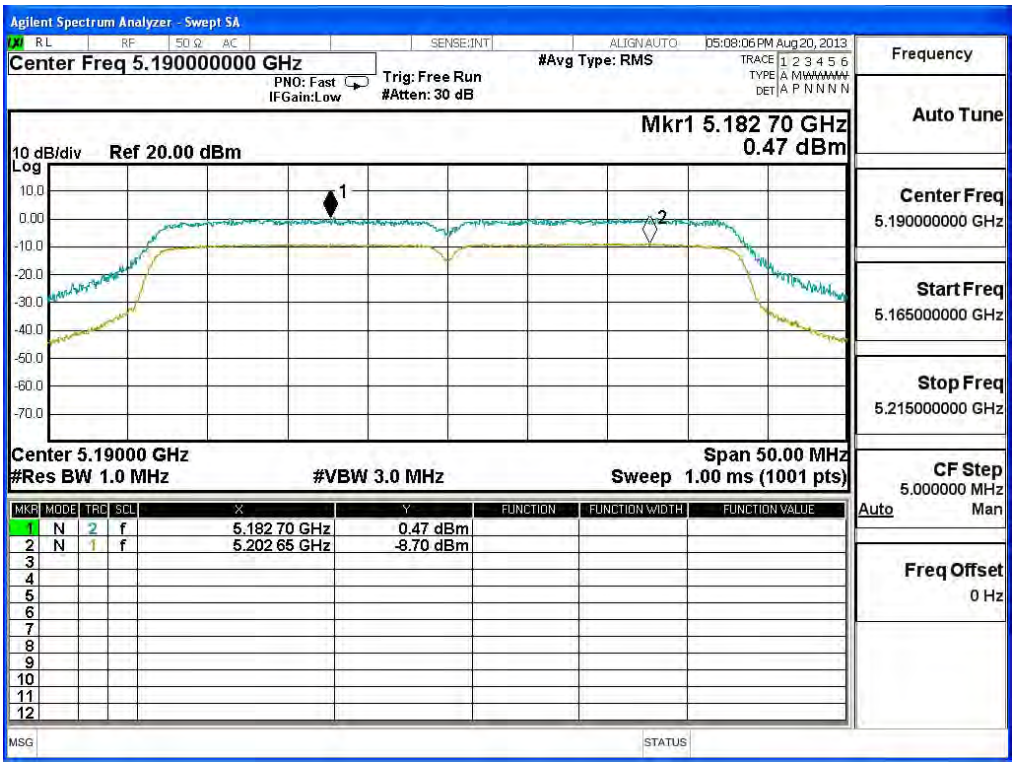

Agilent Spectrum Analyzer - Swept SA
RL
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
05:23:56 PM Aug 20, 2013
Center Freq 5.180000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
TRACE 1 2 3 4 5 6
TYPE A MWWWWW
DET A P N N N N
Mkr1 5.182 450 GHz
4.17 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center 5.18000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 25.00 MHz
Sweep 1.00 ms (1001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 2 f 5.182 450 GHz 4.17 dBm
2 N 1 f 5.185 150 GHz -5.22 dBm
3
4
5
6
7
8
9
10
11
12
MSG
STATUS
Frequency
Auto Tune
Center Freq
5.180000000 GHz
Start Freq
5.167500000 GHz
Stop Freq
5.192500000 GHz
CF Step
2.500000 MHz
Auto
Man
Freq Offset
0 Hz

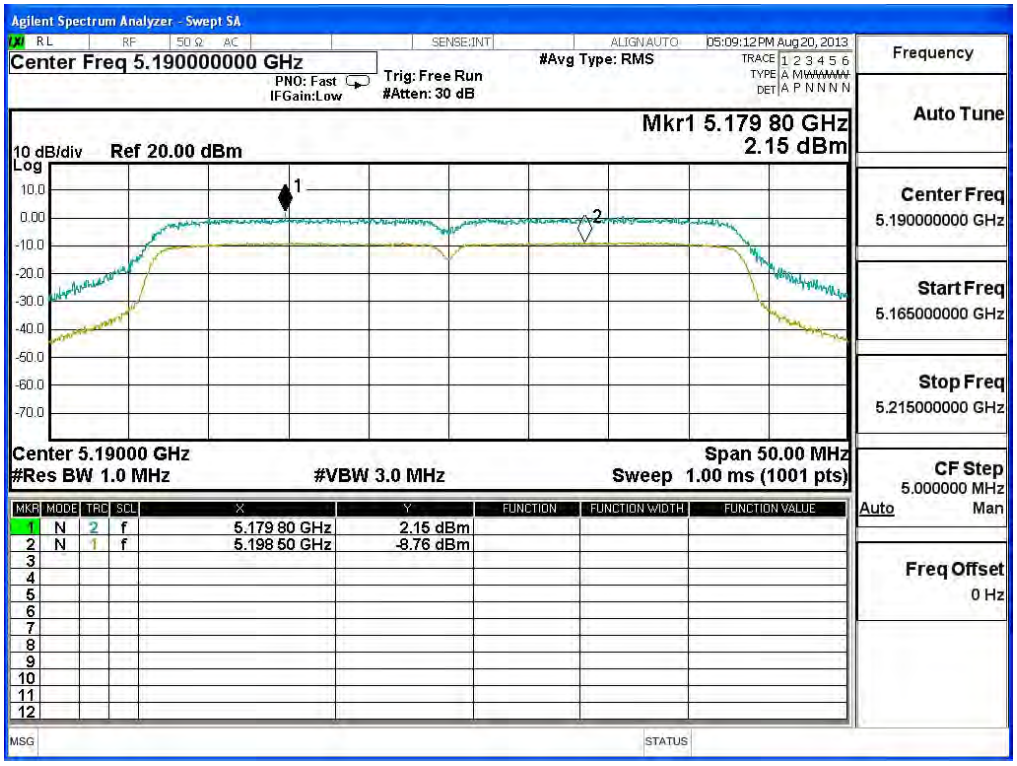
Product : SpectraGuard® Access Point / Sensor
Test Item : Peak Excursion
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps)(Dipole Antenna)

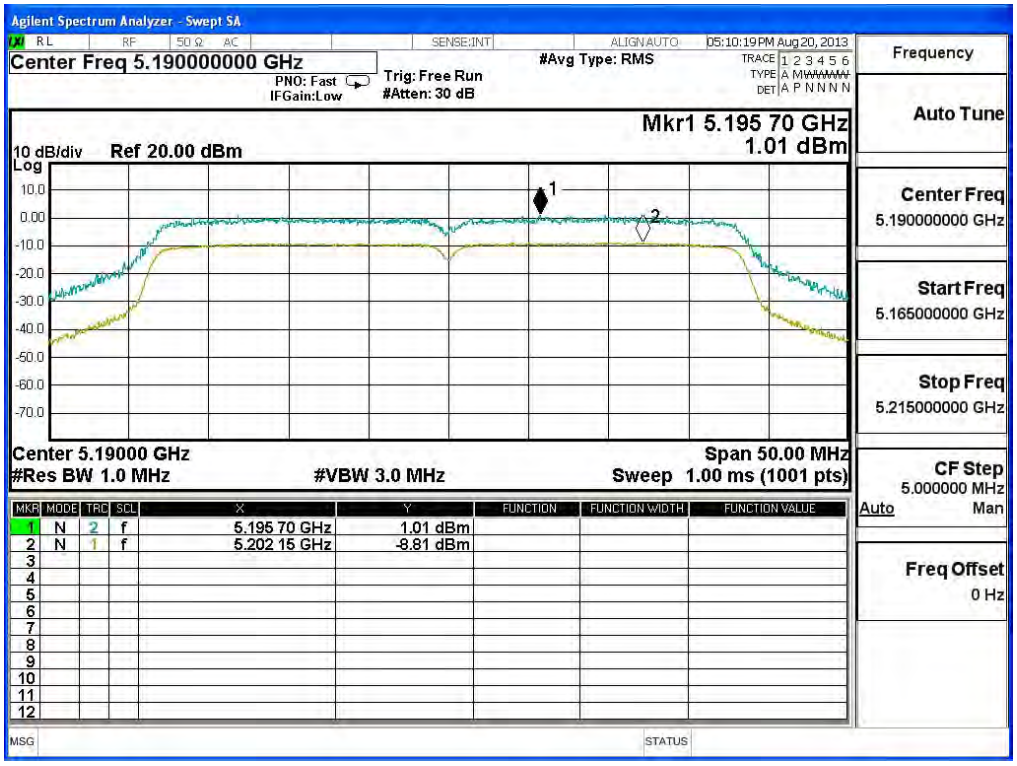
Chain A

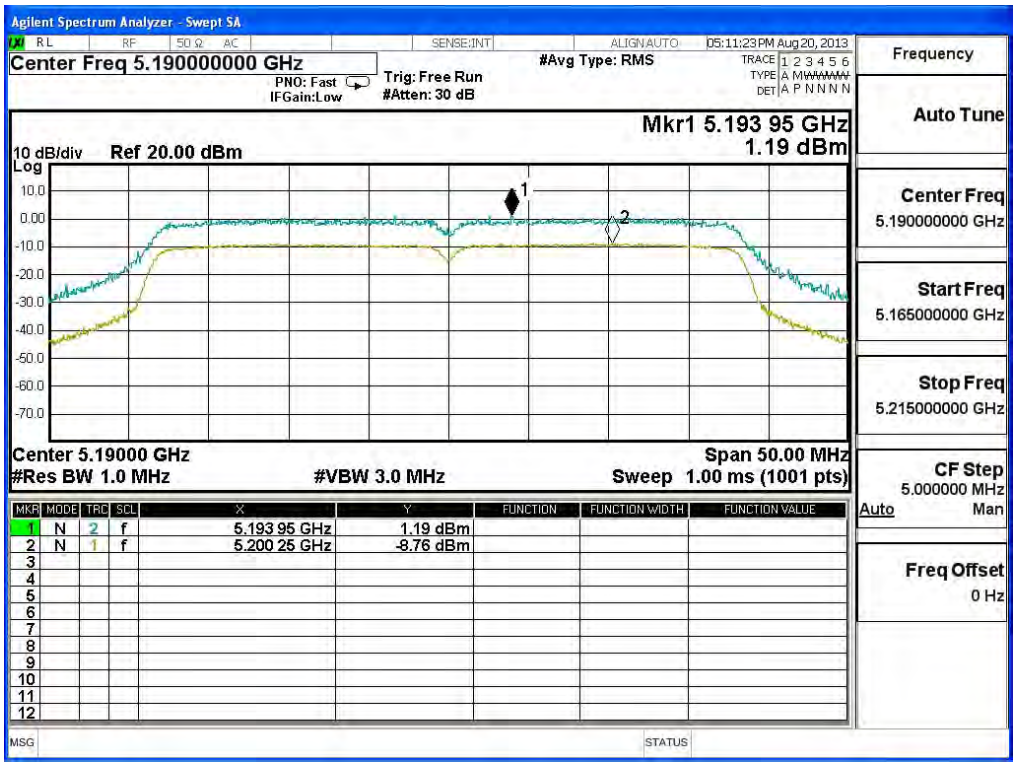
Channel No.	Frequency (MHz)	Data Rate (Mbps)	Measurement Level (dB)	Required Limit (dB)	Result
38	5190	MCS (0)	9.170	<13	Pass
		MCS (2)	10.910	<13	Pass
		MCS (4)	9.820	<13	Pass
		MCS (7)	9.950	<13	Pass

Channel 38:




Agilent Spectrum Analyzer - Swept SA
Center Freq 5.190000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
05:09:12 PM Aug 20, 2013
Mkr1 5.179 80 GHz
2.15 dBm
10 dB/div
Ref 20.00 dBm
Log
Center 5.19000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 50.00 MHz
Sweep 1.00 ms (1001 pts)
1 N 2 f 5.179 80 GHz 2.15 dBm
2 N 1 f 5.198 50 GHz -8.76 dBm
Frequency
Auto Tune
Center Freq
5.190000000 GHz
Start Freq
5.165000000 GHz
Stop Freq
5.215000000 GHz
CF Step
5.000000 MHz
Auto
Man
Freq Offset
0 Hz

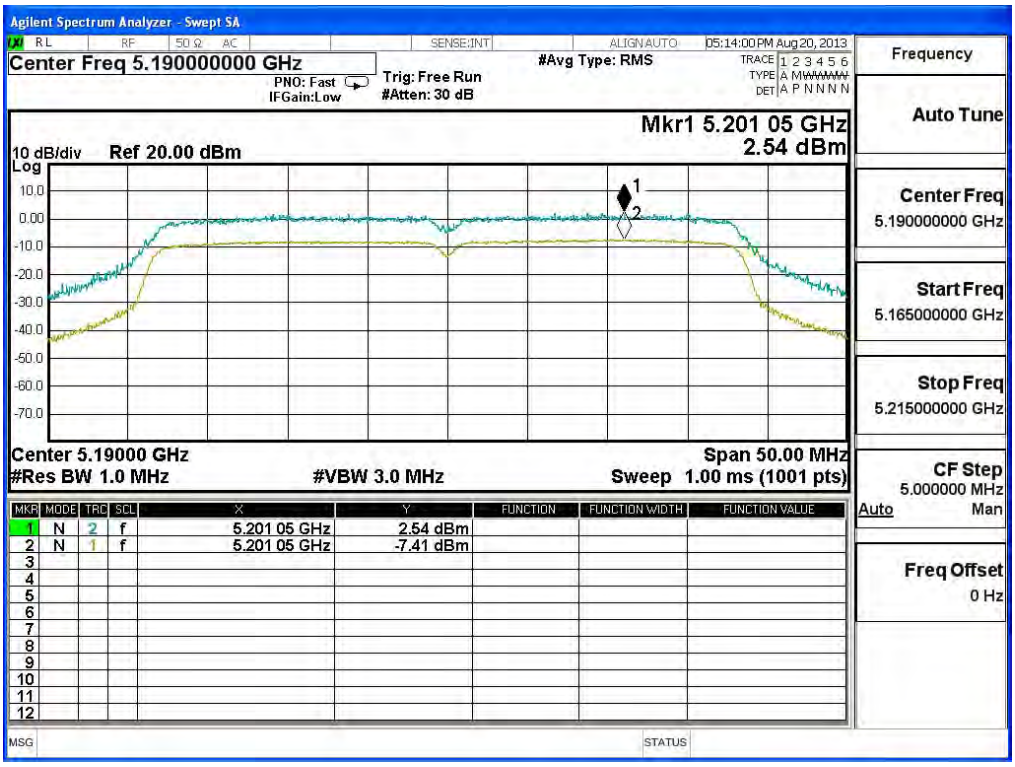

Agilent Spectrum Analyzer - Swept SA
Center Freq 5.190000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
05:10:19 PM Aug 20, 2013
Mkr1 5.195 70 GHz
1.01 dBm
10 dB/div
Ref 20.00 dBm
Log
Center 5.19000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 50.00 MHz
Sweep 1.00 ms (1001 pts)
1 N 2 f 5.195 70 GHz 1.01 dBm
2 N 1 f 5.202 15 GHz -8.81 dBm
Frequency
Auto Tune
Center Freq
5.190000000 GHz
Start Freq
5.165000000 GHz
Stop Freq
5.215000000 GHz
CF Step
5.000000 MHz
Auto
Man
Freq Offset
0 Hz

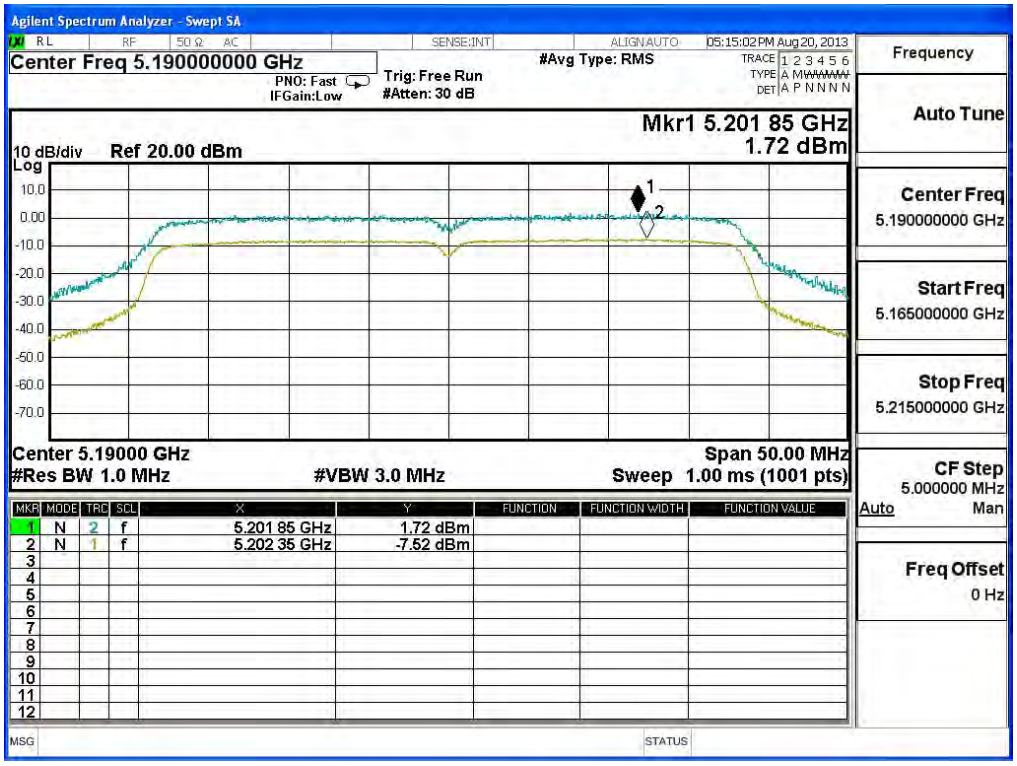

Agilent Spectrum Analyzer - Swept SA
RL
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
05:11:23 PM Aug 20, 2013
Center Freq 5.190000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
TRACE 1 2 3 4 5 6
TYPE A M
DET A P N N N N
Mkr1 5.193 95 GHz
1.19 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center 5.19000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 50.00 MHz
Sweep 1.00 ms (1001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 2 f 5.193 95 GHz 1.19 dBm
2 N 1 f 5.200 25 GHz -8.76 dBm
Frequency
Auto Tune
Center Freq
5.190000000 GHz
Start Freq
5.165000000 GHz
Stop Freq
5.215000000 GHz
CF Step
5.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

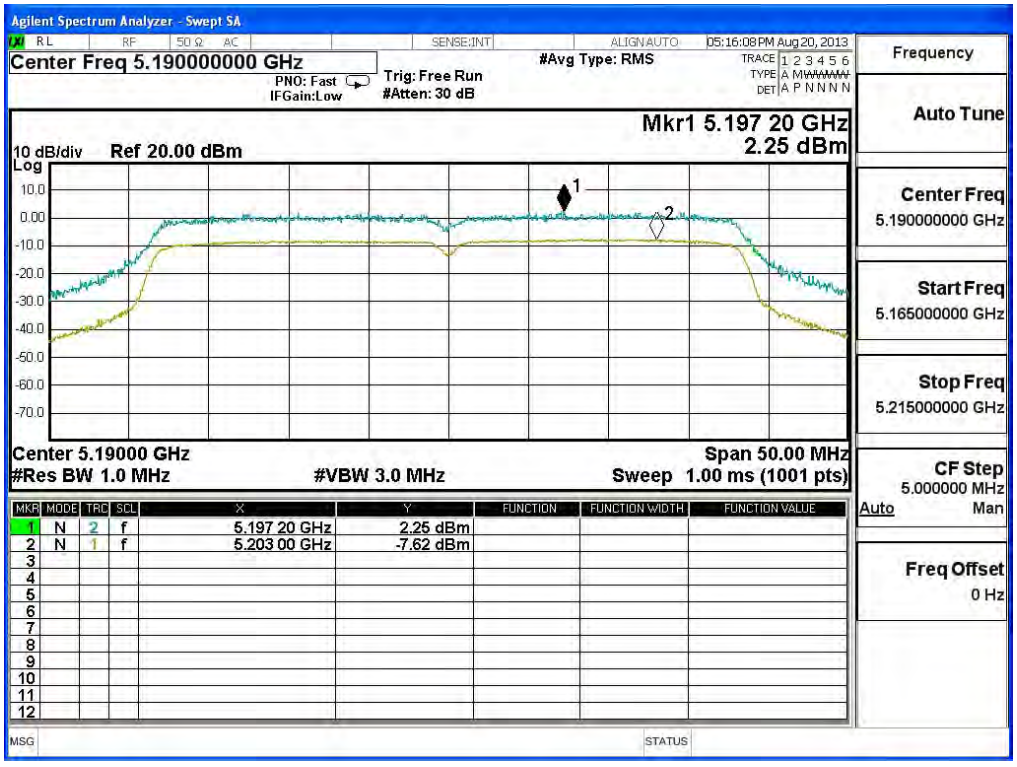
Chain B

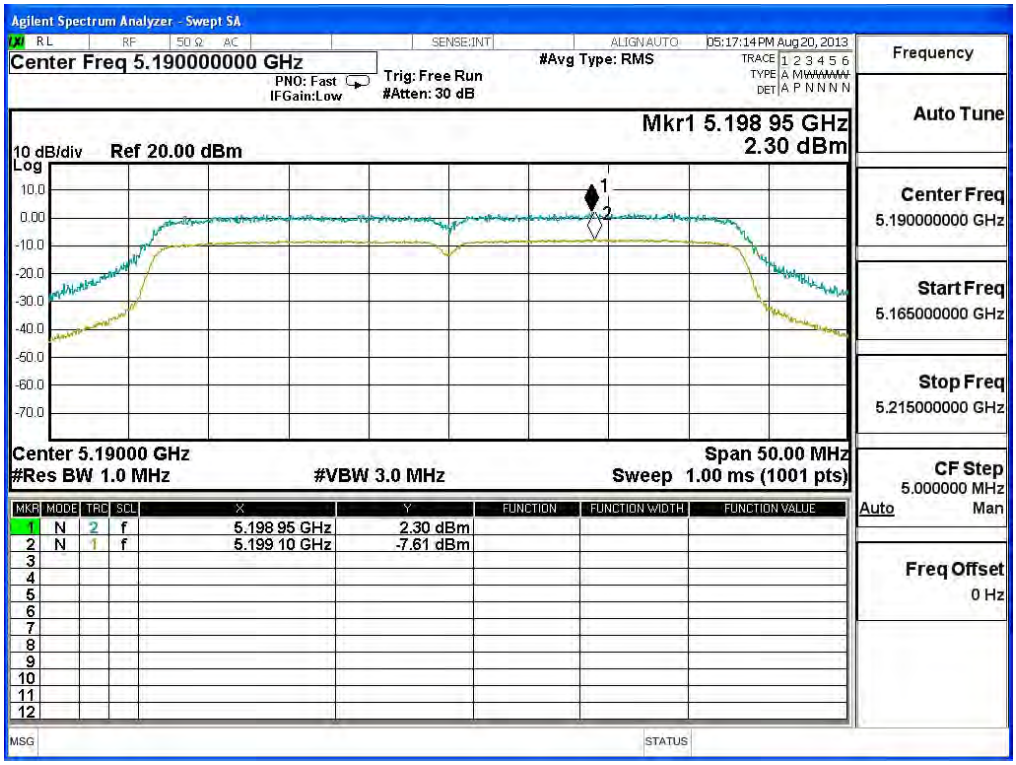
Channel No.	Frequency (MHz)	Data Rate (Mbps)	Measurement Level (dB)	Required Limit (dB)	Result
38	5190	MCS (0)	9.950	<13	Pass
		MCS (2)	9.240	<13	Pass
		MCS (4)	9.870	<13	Pass
		MCS (7)	9.910	<13	Pass

Channel 38:




Agilent Spectrum Analyzer - Swept SA
Center Freq 5.190000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
05:15:02 PM Aug 20, 2013
Mkr1 5.201 85 GHz
1.72 dBm
10 dB/div
Ref 20.00 dBm
Log
Center 5.19000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 50.00 MHz
Sweep 1.00 ms (1001 pts)
1 N 2 f 5.201 85 GHz 1.72 dBm
2 N 1 f 5.202 35 GHz -7.52 dBm
Frequency
Auto Tune
Center Freq
5.190000000 GHz
Start Freq
5.165000000 GHz
Stop Freq
5.215000000 GHz
CF Step
5.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS


Agilent Spectrum Analyzer - Swept SA
Center Freq 5.190000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
05:16:08 PM Aug 20, 2013
Mkr1 5.197 20 GHz
2.25 dBm
10 dB/div
Ref 20.00 dBm
Log
Center 5.19000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 50.00 MHz
Sweep 1.00 ms (1001 pts)
1 N 2 f 5.197 20 GHz 2.25 dBm
2 N 1 f 5.203 00 GHz -7.62 dBm
Frequency
Auto Tune
Center Freq
5.190000000 GHz
Start Freq
5.165000000 GHz
Stop Freq
5.215000000 GHz
CF Step
5.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

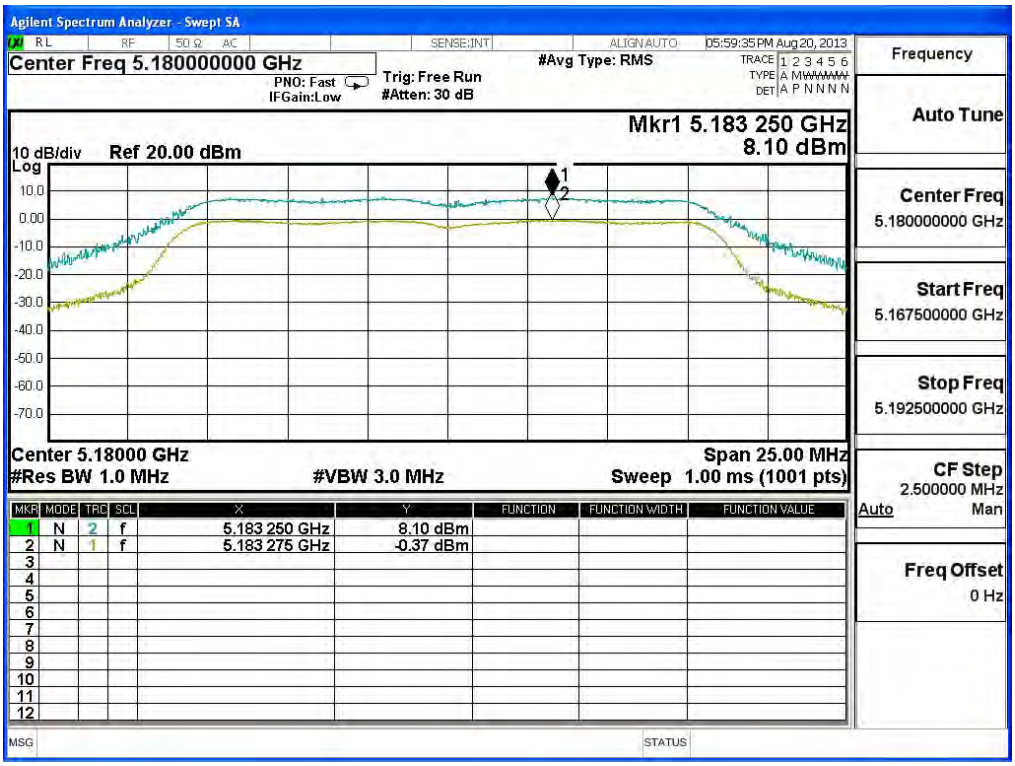

Agilent Spectrum Analyzer - Swept SA
RL
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
05:17:14 PM Aug 20, 2013
Center Freq 5.190000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
TRACE 1 2 3 4 5 6
TYPE A MWWWWW
DET A P N N N N
Mkr1 5.198 95 GHz
2.30 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center 5.19000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 50.00 MHz
Sweep 1.00 ms (1001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 2 f 5.198 95 GHz 2.30 dBm
2 N 1 f 5.199 10 GHz -7.61 dBm
3
4
5
6
7
8
9
10
11
12
MSG
STATUS
Frequency
Auto Tune
Center Freq
5.190000000 GHz
Start Freq
5.165000000 GHz
Stop Freq
5.215000000 GHz
CF Step
5.000000 MHz
Auto
Man
Freq Offset
0 Hz

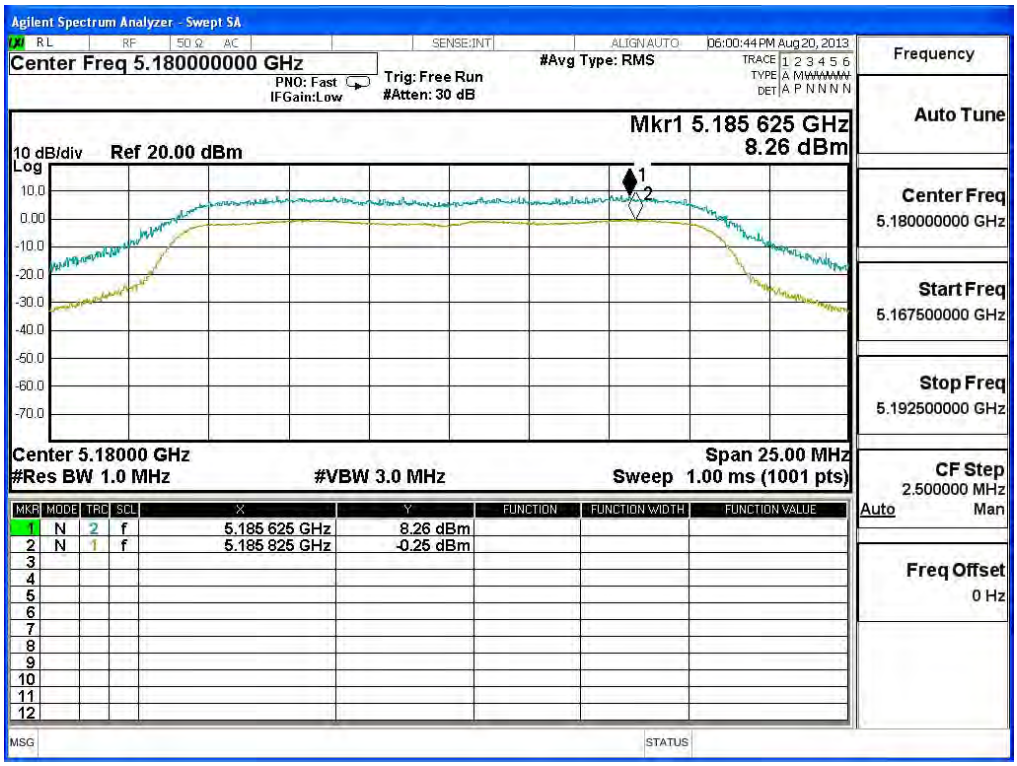
Product : SpectraGuard® Access Point / Sensor
Test Item : Peak Excursion
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11a-6Mbps)(PIFA Antenna)

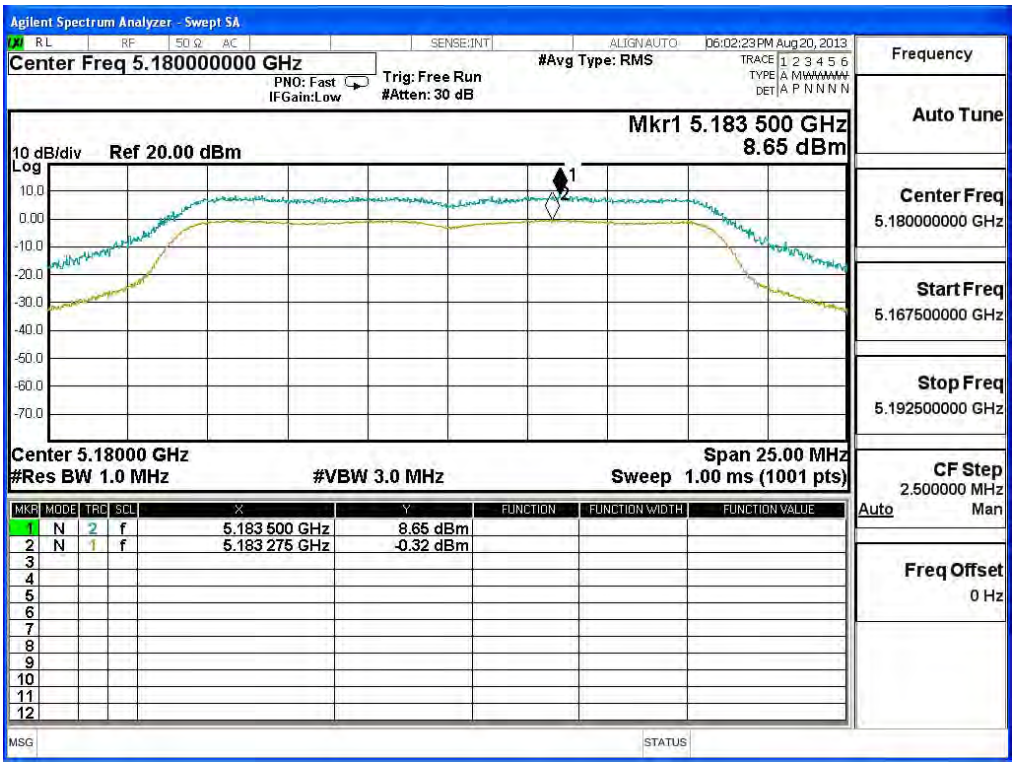
CHAIN A

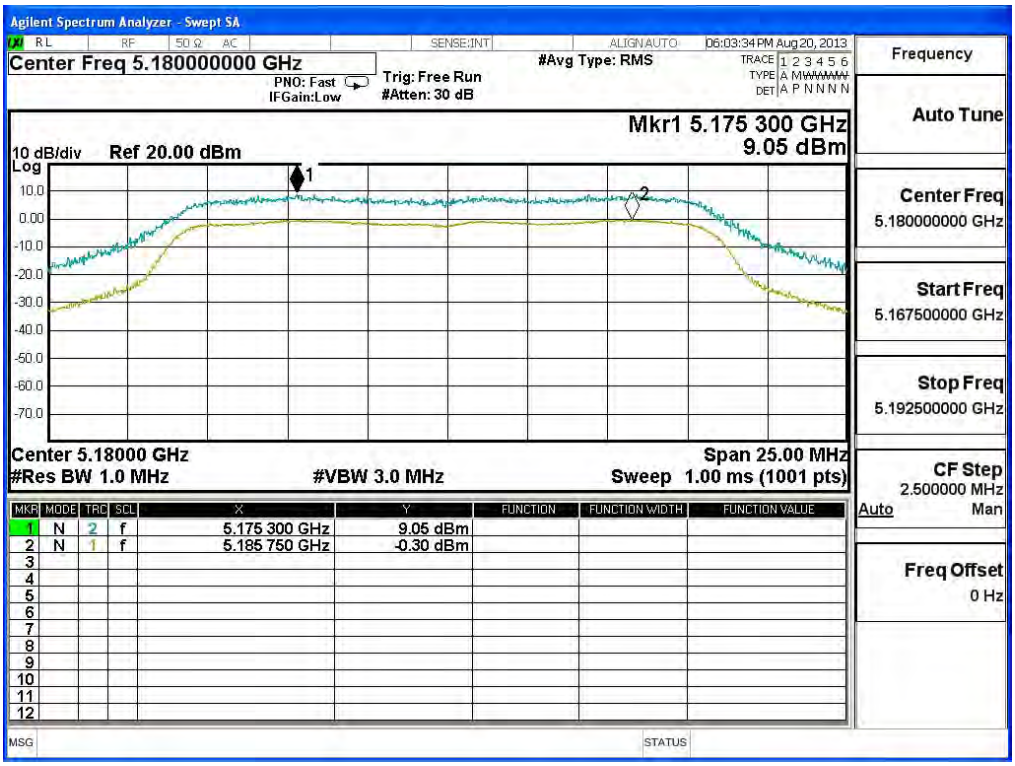
Channel No.	Frequency (MHz)	Data Rate (Mbps)	Measurement Level (dB)	Required Limit (dB)	Result
36	5180	MCS (0)	8.470	<13	Pass
		MCS (2)	8.510	<13	Pass
		MCS (4)	8.870	<13	Pass
		MCS (7)	9.350	<13	Pass

Channel 36:




Agilent Spectrum Analyzer - Swept SA
Center Freq 5.180000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
06:00:44 PM Aug 20, 2013
Mkr1 5.185 625 GHz
8.26 dBm
10 dB/div
Log
Ref 20.00 dBm
Center 5.18000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 25.00 MHz
Sweep 1.00 ms (1001 pts)
1 N 2 f 5.185 625 GHz 8.26 dBm
2 N 1 f 5.185 825 GHz -0.25 dBm
Frequency
Auto Tune
Center Freq
5.180000000 GHz
Start Freq
5.167500000 GHz
Stop Freq
5.192500000 GHz
CF Step
2.500000 MHz
Auto
Man
Freq Offset
0 Hz

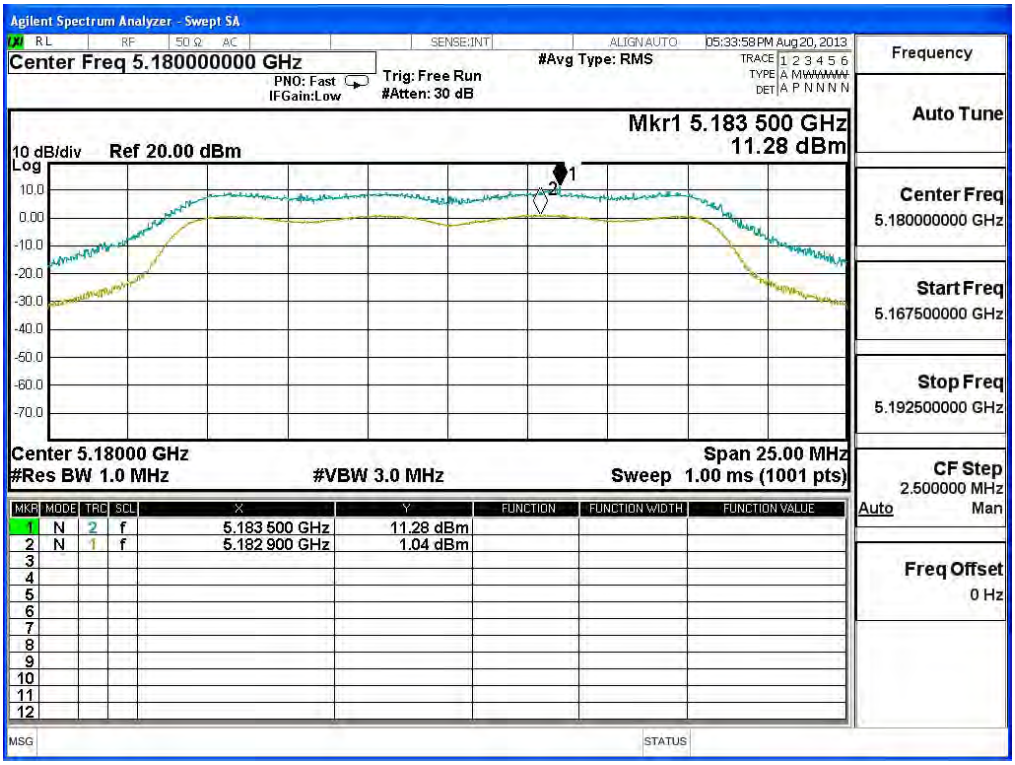

Agilent Spectrum Analyzer - Swept SA
Center Freq 5.180000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
06:02:23 PM Aug 20, 2013
Mkr1 5.183 500 GHz
8.65 dBm
10 dB/div
Log
Ref 20.00 dBm
Center 5.18000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 25.00 MHz
Sweep 1.00 ms (1001 pts)
1 N 2 f 5.183 500 GHz 8.65 dBm
2 N 1 f 5.183 275 GHz -0.32 dBm
Frequency
Auto Tune
Center Freq
5.180000000 GHz
Start Freq
5.167500000 GHz
Stop Freq
5.192500000 GHz
CF Step
2.500000 MHz
Auto
Man
Freq Offset
0 Hz

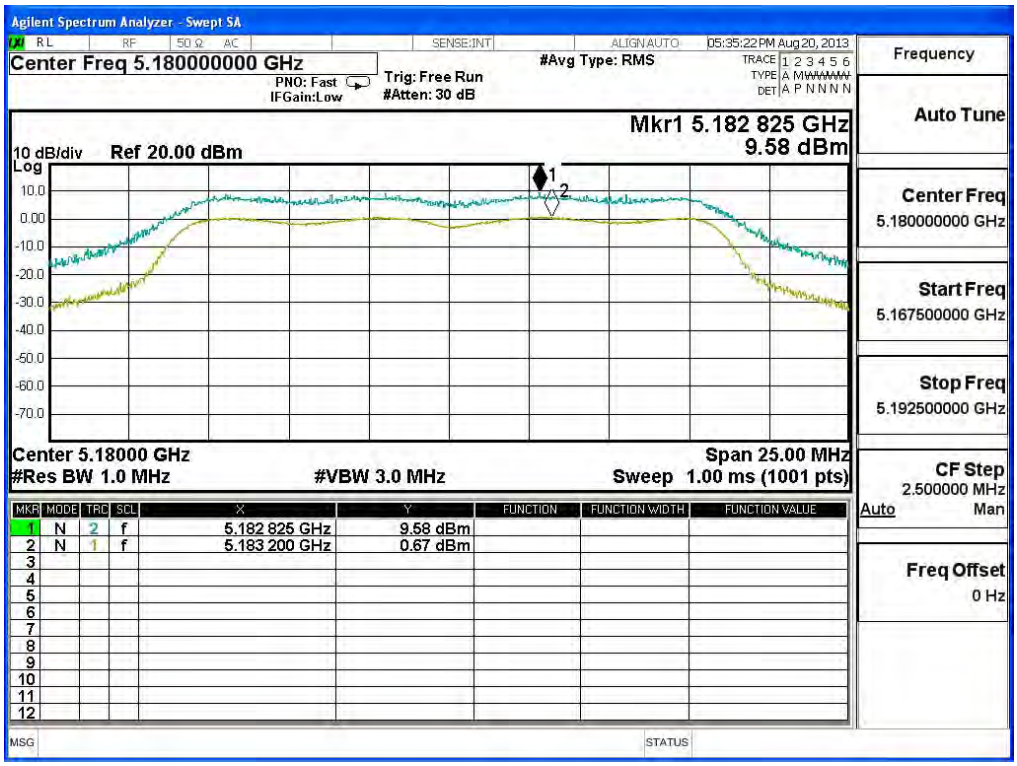

Agilent Spectrum Analyzer - Swept SA
RL
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
06:03:34 PM Aug 20, 2013
Center Freq 5.180000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
TRACE 1 2 3 4 5 6
TYPE A M
DET A P N N N N
Mkr1 5.175 300 GHz
9.05 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center 5.18000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 25.00 MHz
Sweep 1.00 ms (1001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 2 f 5.175 300 GHz 9.05 dBm
2 N 1 f 5.185 750 GHz -0.30 dBm
3
4
5
6
7
8
9
10
11
12
MSG
STATUS
Frequency
Auto Tune
Center Freq
5.180000000 GHz
Start Freq
5.167500000 GHz
Stop Freq
5.192500000 GHz
CF Step
2.500000 MHz
Auto
Man
Freq Offset
0 Hz

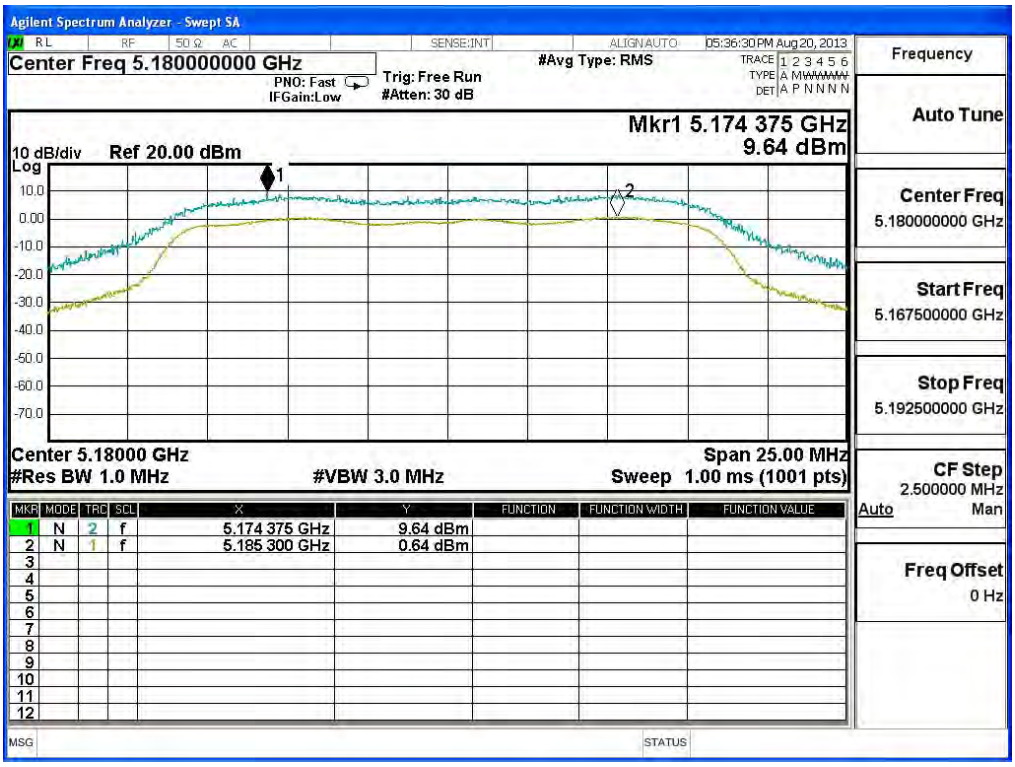
CHAIN B

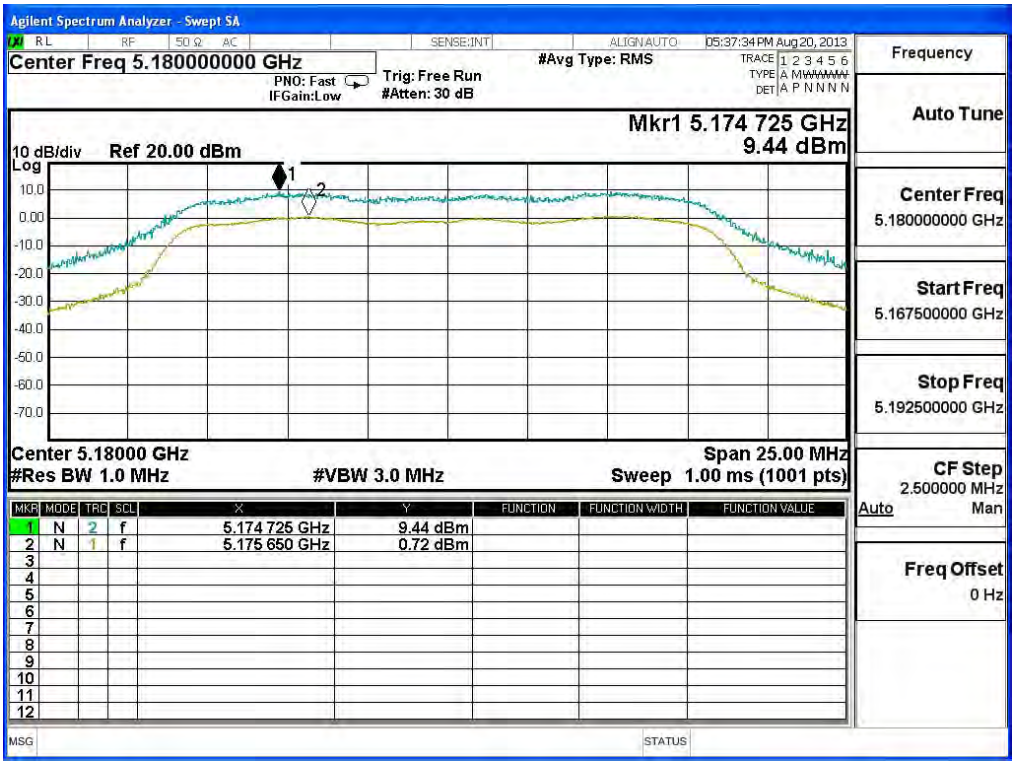
Channel No.	Frequency (MHz)	Data Rate (Mbps)	Measurement Level (dB)	Required Limit (dB)	Result
36	5180	MCS (0)	10.240	<13	Pass
		MCS (2)	8.910	<13	Pass
		MCS (4)	9.000	<13	Pass
		MCS (7)	8.720	<13	Pass

Channel 36:




Agilent Spectrum Analyzer - Swept SA
Center Freq 5.180000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
05:35:22 PM Aug 20, 2013
Mkr1 5.182 825 GHz
9.58 dBm
10 dB/div
Log
Ref 20.00 dBm
Center 5.18000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 25.00 MHz
Sweep 1.00 ms (1001 pts)
1 N 2 f 5.182 825 GHz 9.58 dBm
2 N 1 f 5.183 200 GHz 0.67 dBm
Frequency
Auto Tune
Center Freq
5.180000000 GHz
Start Freq
5.167500000 GHz
Stop Freq
5.192500000 GHz
CF Step
2.500000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS


Agilent Spectrum Analyzer - Swept SA
Center Freq 5.180000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
05:36:30 PM Aug 20, 2013
Mkr1 5.174 375 GHz
9.64 dBm
10 dB/div
Log
Ref 20.00 dBm
Center 5.18000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 25.00 MHz
Sweep 1.00 ms (1001 pts)
1 N 2 f 5.174 375 GHz 9.64 dBm
2 N 1 f 5.185 300 GHz 0.64 dBm
Frequency
Auto Tune
Center Freq
5.180000000 GHz
Start Freq
5.167500000 GHz
Stop Freq
5.192500000 GHz
CF Step
2.500000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

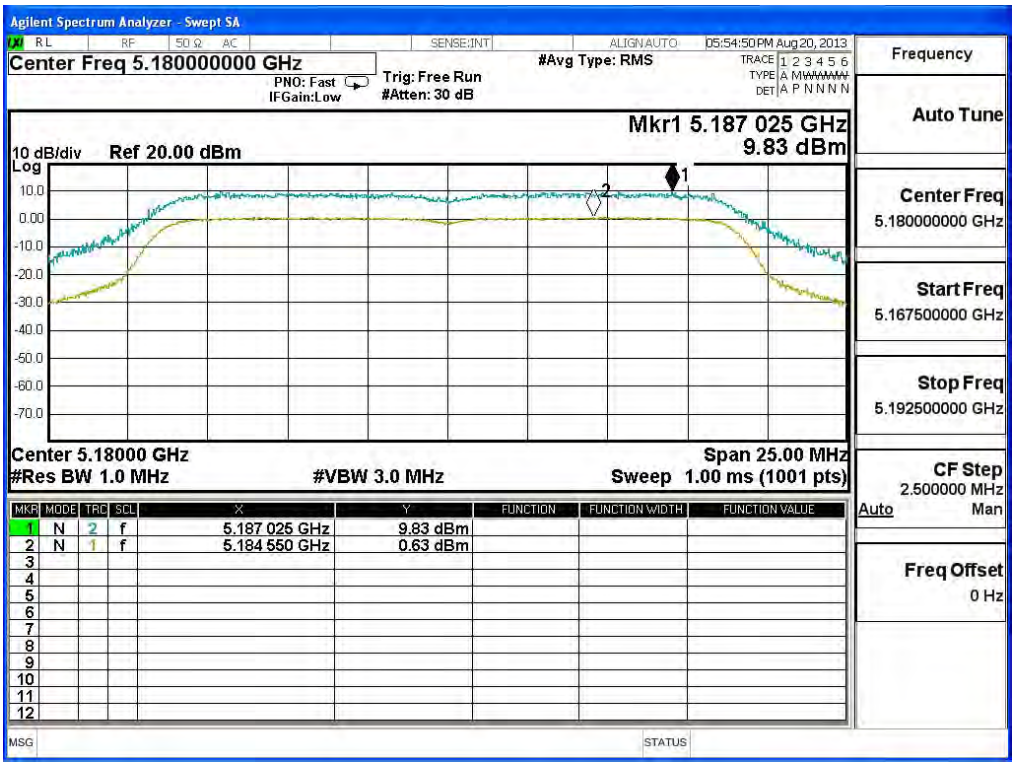

Agilent Spectrum Analyzer - Swept SA
RL
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
05:37:34 PM Aug 20, 2013
Center Freq 5.180000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
TRACE 1 2 3 4 5 6
TYPE A MWWWWW
DET A P N N N N
Mkr1 5.174 725 GHz
9.44 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center 5.18000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 25.00 MHz
Sweep 1.00 ms (1001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 2 f 5.174 725 GHz 9.44 dBm
2 N 1 f 5.175 650 GHz 0.72 dBm
3
4
5
6
7
8
9
10
11
12
MSG
STATUS
Frequency
Auto Tune
Center Freq
5.180000000 GHz
Start Freq
5.167500000 GHz
Stop Freq
5.192500000 GHz
CF Step
2.500000 MHz
Auto
Man
Freq Offset
0 Hz

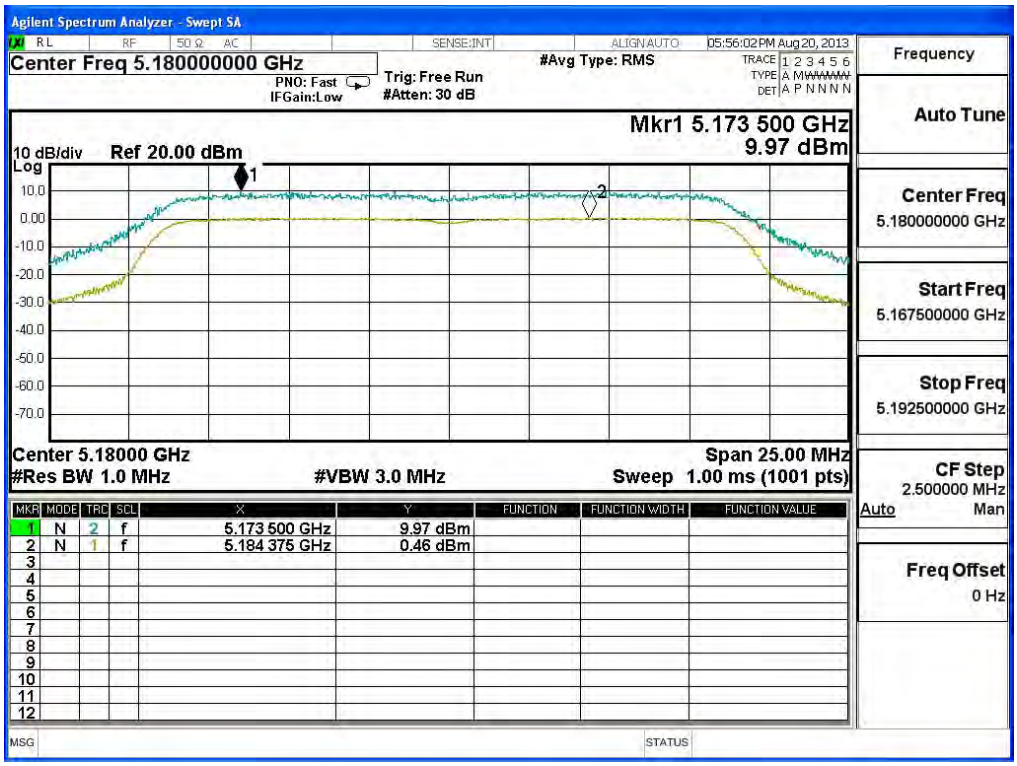
Product : SpectraGuard® Access Point / Sensor
Test Item : Peak Excursion
Test Site : No.3 OATS
Test Mode : Mode 5: Transmit (802.11n-20BW 14.4Mbps)(PIFA Antenna)

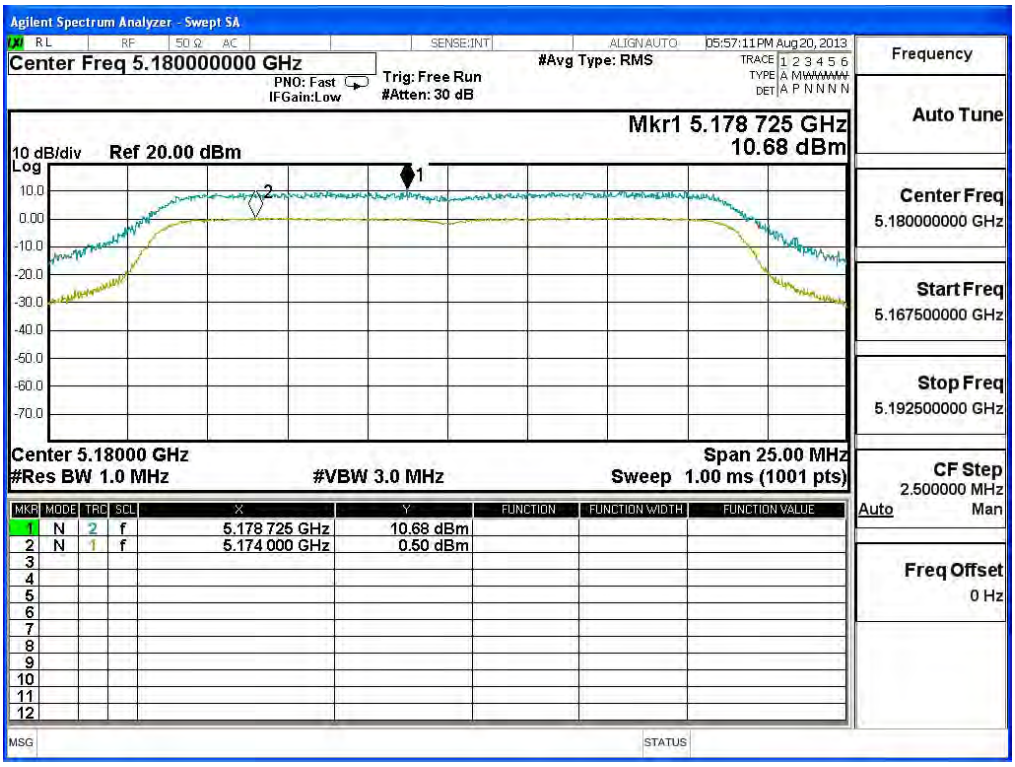
Chain A

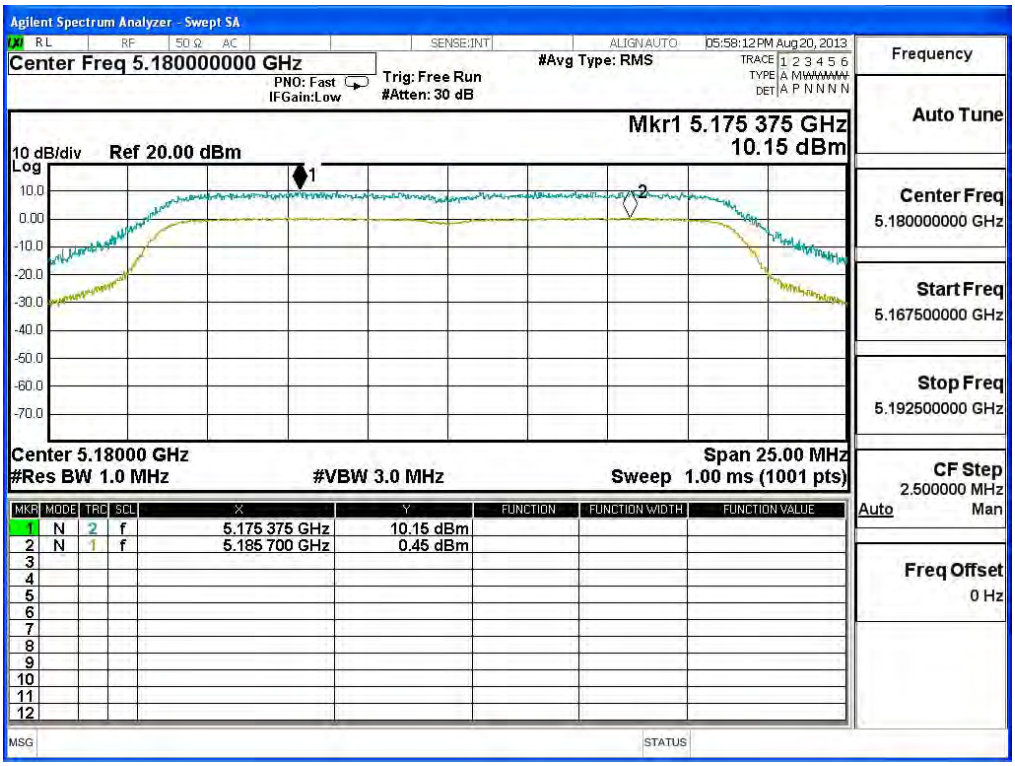
Channel No.	Frequency (MHz)	Data Rate (Mbps)	Measurement Level (dB)	Required Limit (dB)	Result
36	5180	MCS (0)	9.200	<13	Pass
		MCS (2)	9.510	<13	Pass
		MCS (4)	10.180	<13	Pass
		MCS (7)	9.700	<13	Pass

Channel 36:




Agilent Spectrum Analyzer - Swept SA
Center Freq 5.180000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
05:56:02 PM Aug 20, 2013
Mkr1 5.173 500 GHz
9.97 dBm
10 dB/div
Log
Ref 20.00 dBm
Center 5.18000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 25.00 MHz
Sweep 1.00 ms (1001 pts)
1 N 2 f 5.173 500 GHz 9.97 dBm
2 N 1 f 5.184 375 GHz 0.46 dBm
Frequency
Auto Tune
Center Freq
5.180000000 GHz
Start Freq
5.167500000 GHz
Stop Freq
5.192500000 GHz
CF Step
2.500000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

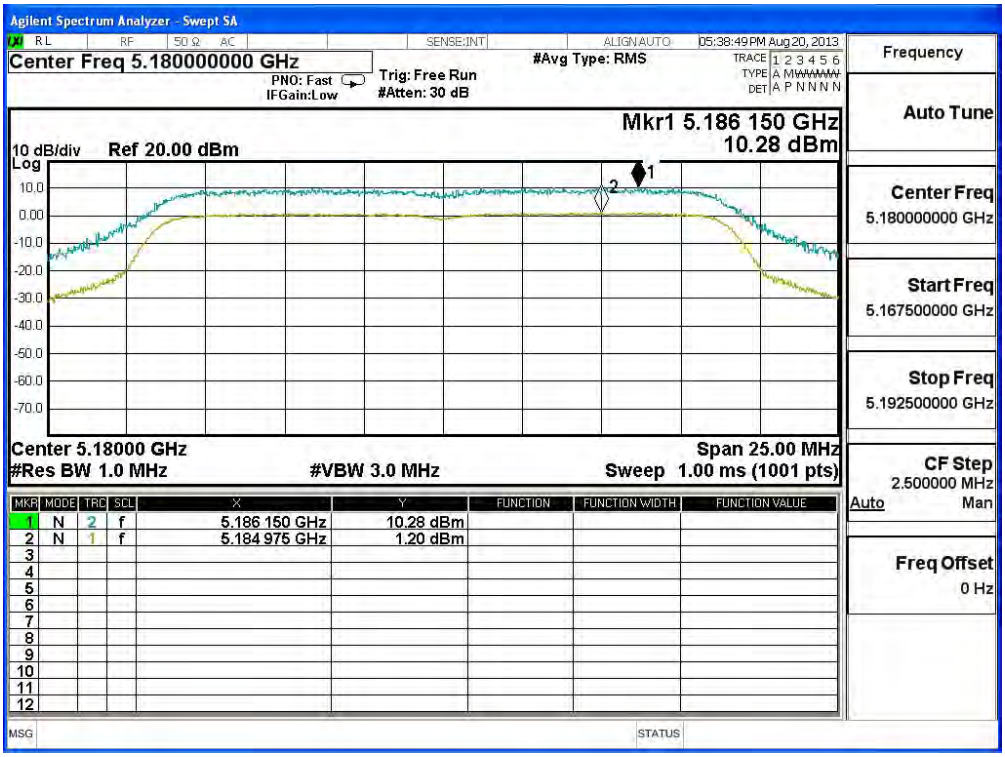

Agilent Spectrum Analyzer - Swept SA
Center Freq 5.180000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
05:57:11 PM Aug 20, 2013
Mkr1 5.178 725 GHz
10.68 dBm
10 dB/div
Log
Ref 20.00 dBm
Center 5.18000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 25.00 MHz
Sweep 1.00 ms (1001 pts)
1 N 2 f 5.178 725 GHz 10.68 dBm
2 N 1 f 5.174 000 GHz 0.50 dBm
Frequency
Auto Tune
Center Freq
5.180000000 GHz
Start Freq
5.167500000 GHz
Stop Freq
5.192500000 GHz
CF Step
2.500000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

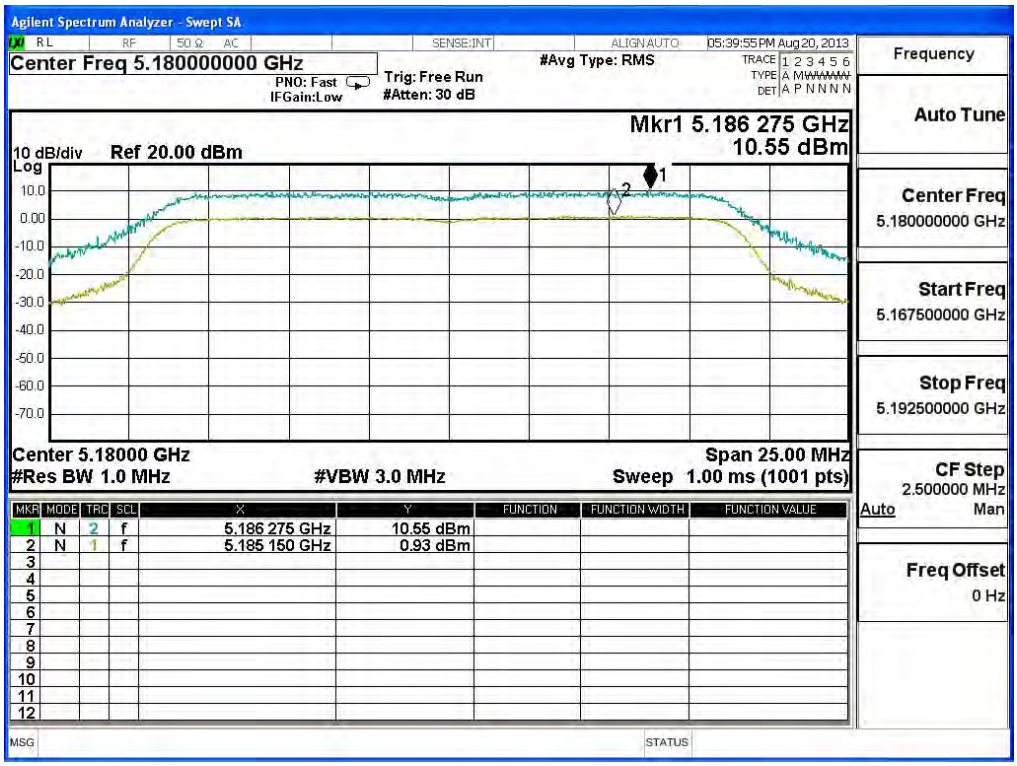

Agilent Spectrum Analyzer - Swept SA
RL
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
05:58:12 PM Aug 20, 2013
Center Freq 5.180000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
TRACE 1 2 3 4 5 6
TYPE A MWWWWW
DET A P N N N N
Mkr1 5.175 375 GHz
10.15 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center 5.18000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 25.00 MHz
Sweep 1.00 ms (1001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 2 f 5.175 375 GHz 10.15 dBm
2 N 1 f 5.185 700 GHz 0.45 dBm
3
4
5
6
7
8
9
10
11
12
MSG
STATUS
Frequency
Auto Tune
Center Freq
5.180000000 GHz
Start Freq
5.167500000 GHz
Stop Freq
5.192500000 GHz
CF Step
2.500000 MHz
Auto
Man
Freq Offset
0 Hz

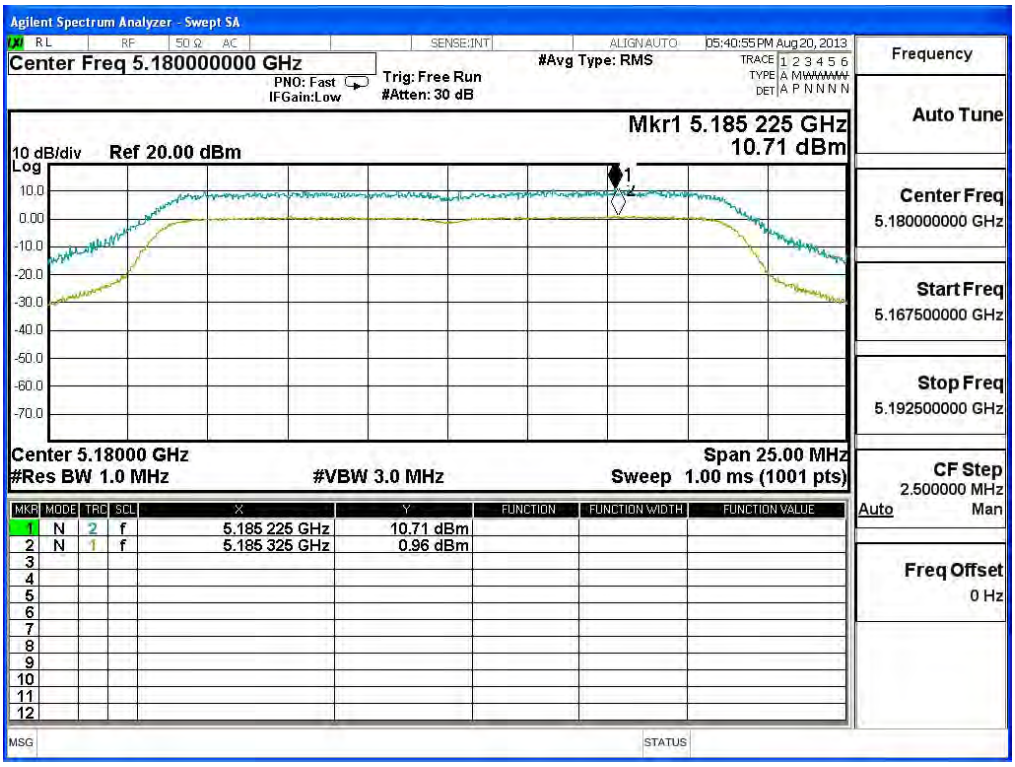
Chain B

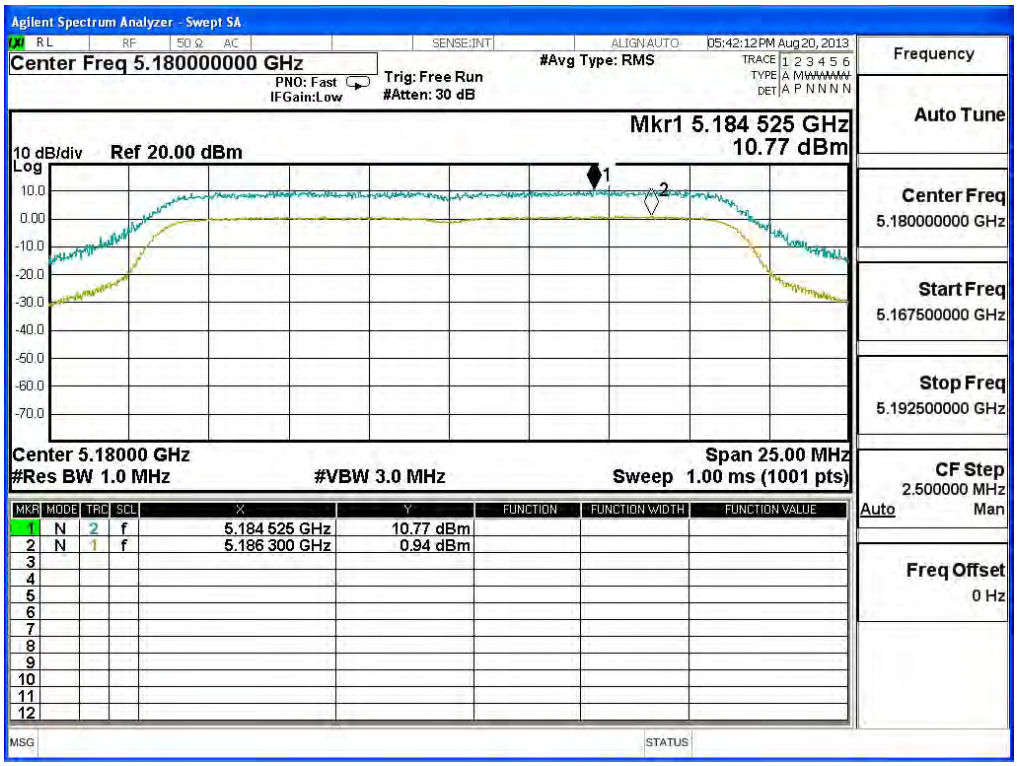
Channel No.	Frequency (MHz)	Data Rate (Mbps)	Measurement Level (dB)	Required Limit (dB)	Result
36	5180	MCS (0)	9.080	<13	Pass
		MCS (2)	9.620	<13	Pass
		MCS (4)	9.750	<13	Pass
		MCS (7)	9.830	<13	Pass

Channel 36:




Agilent Spectrum Analyzer - Swept SA
Center Freq 5.180000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
05:39:55 PM Aug 20, 2013
Mkr1 5.186 275 GHz
10.55 dBm
10 dB/div
Log
Ref 20.00 dBm
Center 5.18000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 25.00 MHz
Sweep 1.00 ms (1001 pts)
1 N 2 f 5.186 275 GHz 10.55 dBm
2 N 1 f 5.185 150 GHz 0.93 dBm
Frequency
Auto Tune
Center Freq
5.180000000 GHz
Start Freq
5.167500000 GHz
Stop Freq
5.192500000 GHz
CF Step
2.500000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS


Agilent Spectrum Analyzer - Swept SA
Center Freq 5.180000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
05:40:55 PM Aug 20, 2013
Mkr1 5.185 225 GHz
10.71 dBm
10 dB/div
Log
Ref 20.00 dBm
Center 5.18000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 25.00 MHz
Sweep 1.00 ms (1001 pts)
1 N 2 f 5.185 225 GHz 10.71 dBm
2 N 1 f 5.185 325 GHz 0.96 dBm
Frequency
Auto Tune
Center Freq
5.180000000 GHz
Start Freq
5.167500000 GHz
Stop Freq
5.192500000 GHz
CF Step
2.500000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS


Agilent Spectrum Analyzer - Swept SA
RL
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
05:42:12 PM Aug 20, 2013
Center Freq 5.180000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
TRACE 1 2 3 4 5 6
TYPE A MWWWWW
DET A P N N N N
Mkr1 5.184 525 GHz
10.77 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center 5.18000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 25.00 MHz
Sweep 1.00 ms (1001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 2 f 5.184 525 GHz 10.77 dBm
2 N 1 f 5.186 300 GHz 0.94 dBm
3
4
5
6
7
8
9
10
11
12
MSG
STATUS
Frequency
Auto Tune
Center Freq
5.180000000 GHz
Start Freq
5.167500000 GHz
Stop Freq
5.192500000 GHz
CF Step
2.500000 MHz
Auto
Man
Freq Offset
0 Hz

Product : SpectraGuard® Access Point / Sensor
Test Item : Peak Excursion
Test Site : No.3 OATS
Test Mode : Mode 6: Transmit (802.11n-40BW 30Mbps)(PIFA Antenna)

Chain A

Channel No.	Frequency (MHz)	Data Rate (Mbps)	Measurement Level (dB)	Required Limit (dB)	Result
38	5190	MCS (0)	8.920	<13	Pass
		MCS (2)	9.810	<13	Pass
		MCS (4)	10.630	<13	Pass
		MCS (7)	9.910	<13	Pass

hannel 38: