FCC Test Report
(Class II Permissive Change)

Product Name	Wireless Access Point
Model No	XR300
FCC ID	SK6-XR320

Applicant	Xirrus, Inc.
Address	2101 Corporate Center Drive, Thousand Oaks, CA 91320

Date of Receipt	Sep. 30, 2014
Issued Date	Dec. 10, 2014
Report No.	14B0157R-RFUSP05V00-A
Report Version	V1.0

ilac-MRA

TAF Testing Laboratory 3023

The test results relate only to the samples tested.
The test results shown in the test report are traceable to the national/international standard through the calibration report of the equipment and evaluated measurement uncertainty herein.
This report must not be used to claim product endorsement by TAF or any agency of the government.
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Test Report

Issued Date: Dec. 10, 2014
Report No.: 14B0157R-RFUSP05V00-A

QuieTek

Product Name	Wireless Access Point
Applicant	Xirrus, Inc.
Address	2101 Corporate Center Drive, Thousand Oaks, CA 91320
Manufacturer	Lite-On Network Communication (Dongguan) Limited
Model No.	XR300
FCC ID.	SK6-XR320
EUT Rated Voltage	DC 48V
EUT Test Voltage	DC 48V
Trade Name	XIRRUS
Applicable Standard	FCC CFR Title 47 Part 15 Subpart E: 2013 ANSI C63.10: 2009 KDB 789033 D01 General UNII Test Procedures v01r04
Test Result	Complied

Documented By : Joanne Lin

(Senior Adm. Specialist / Joanne Lin)

Tested By : Andy Lin

(Engineer / Andy Lin)

Approved By :

(Director / Vincent Lin)

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Attachment 1: EUT Test Photographs

Attachment 2: EUT Detailed Photographs

1. GENERAL INFORMATION

1.1. EUT Description

Product Name	Wireless Access Point
Trade Name	XIRRUS
FCC ID.	SK6-XR320
Model No.	XR300
Frequency Range	802.11a/n-20MHz: 5260-5320MHz, 5500-5700MHz 802.11n-40MHz: 5270-5310MHz, 5510-5670MHz 802.11ac-20MHz: 5720MHz, 802.11ac-40MHz: 5710MHz 802.11ac-80MHz: 5290MHz, 5530-5690MHz
Number of Channels	802.11a/n-20MHz: 12, n-40MHz: 5 802.11ac-20MHz: 1, 802.11ac-40MHz: 1, 802.11ac-80MHz: 3
Data Rate	802.11a/g: 6-54Mbps, 802.11n: up to 300Mbps 802.11ac-80MHz: up to 866.7MHz
Type of Modulation	802.11a/n:OFDM, BPSK, QPSK, 16QAM, 64QAM, 256QAM
Channel Control	Auto
Antenna type	PIFA / Monopole Antenna
Antenna Gain	Refer to the table “Antenna List”

Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	LITE-ON	30100006036D (Ant2)	PIFA	4.6 dBi For 5.25~5.35GHz 4.7 dBi For 5.47~5.725GHz 5.0 dBi For 5.725~5.825GHz
		30100006046D (Ant4)	Monopole	

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 52:	5260 MHz	Channel 56:	5280 MHz	Channel 60:	5300 MHz	Channel 64:	5320 MHz
Channel 100:	5500 MHz	Channel 104:	5520 MHz	Channel 108:	5540 MHz	Channel 112:	5560 MHz
Channel 116:	5580 MHz	Channel 132:	5660 MHz	Channel 136:	5680 MHz	Channel 140:	5700 MHz

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

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 54:	5270 MHz	Channel 62:	5310 MHz	Channel 102:	5510 MHz	Channel 110:	5550 MHz
Channel 134:	5670 MHz						

802.11ac-20MHz Carrier Frequency of Each Channel:

Channel	Frequency
Channel 144:	5720 MHz

802.11ac-40MHz Carrier Frequency of Each Channel:

Channel	Frequency
Channel 142:	5710 MHz

802.11ac-80MHz Center Working Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 58:	5290 MHz	Channel 106:	5530 MHz	Channel 138:	5690 MHz

Note:

1. This device is a Wireless Access Point with a built-in 802.11a/b/g/n/ac WLAN transceiver.
2. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
3. At result of pretests, module supports dual-channel transmission, only the worst case is shown in the report. (802.11a、802.11n and 802.11ac is chain A+chain B)
4. This is requesting a Class II permissive change for FCC ID: SK6-XR320. Originally granted on 10/30/2014.
   The differences are listed as below:
   - Original grant compliance band 1 and bans 3 are following new rule of UNII requirements, add the frequency band from band 2a and band 2C by software, this C2PC is following old rule of UNII requirements.
   - All other hardware is identical with original granted.
5. Lowest and highest data rates are tested in each mode. Only worst case is shown in the report. (802.11a is 6Mbps、802.11n(20M-BW) is 14.4Mbps、802.11n(40M-BW) is 30Mbps、802.11ac(20M-BW) is 14.4Mbps、802.11ac(40M-BW) is 30Mbps and 802.11ac(80M-BW) is 65Mbps)
6. 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.
7. 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) Mode 2: Transmit (802.11n-20BW 14.4Mbps) Mode 3: Transmit (802.11n-40BW 30Mbps) Mode 4 Transmit (802.11ac-80BW-65Mbps) Mode 5 Transmit (802.11ac-20BW-65Mbps) Mode 6 Transmit (802.11ac-40BW-65Mbps)

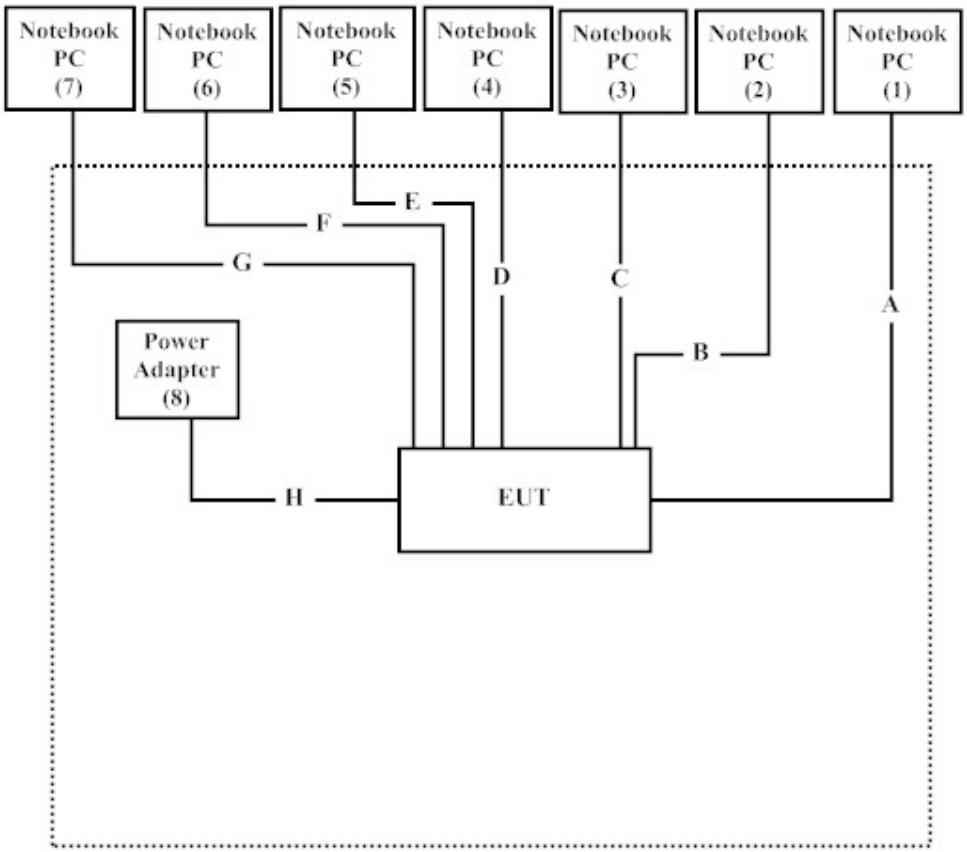
1.3. Tested System Datails

List of support equipment and cables used during testing:

Product		Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook PC	DELL	PPT	N/A	Non-Shielded, 0.8m
2	Notebook PC	DELL	PP18L	36119001664	Non-Shielded, 0.8m
3	Notebook PC	DELL	PP18L	42649348672	Non-Shielded, 0.8m
4	Notebook PC	DELL	PP04X	2D2ZM1S	Non-Shielded, 0.8m
5	Notebook PC	DELL	PP04X	C8YYM1S	Non-Shielded, 0.8m
6	Notebook PC	DELL	PP04X	7607342512	Non-Shielded, 0.8m
7	Notebook PC	DELL	D630	00144-023-351-375	Non-Shielded, 0.8m
8	Power Adapter	HOIOTO	PO25-1AD207A	N/A	N/A

Signal Cable Type		Signal cable Description
A	LAN Cable	Non-Shielded, 3 m
B	LAN Cable	Non-Shielded, 3 m
C	LAN Cable	Non-Shielded, 3 m
D	LAN Cable	Non-Shielded, 3 m
E	LAN Cable	Non-Shielded, 3 m
F	LAN Cable	Non-Shielded, 3 m
G	LAN Cable	Non-Shielded, 3 m
H	Power Cable	Shielded, 1.2m, with one ferrite core bonded.

1.4. Configuration of tested System



1.5. EUT Exercise Software

(1) Setup the EUT as shown in section 1.4

(2) Execute software “ART2-GUI (v2.3)” on the Notebook PC.

(3) Configure the test mode, the test channel, and the data rate.

(4) Press “OK” to start the continuous Transmit.

(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 test site and management system can be downloaded from QuieTek Corporation's Web Site: http://www.quietek.com.tw/chinese/about/certificates.aspx?bval=5

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

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

Site Name: Quietek Corporation
Site Address: 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

FCC Accreditation Number: TW1014

2. Conducted Emission

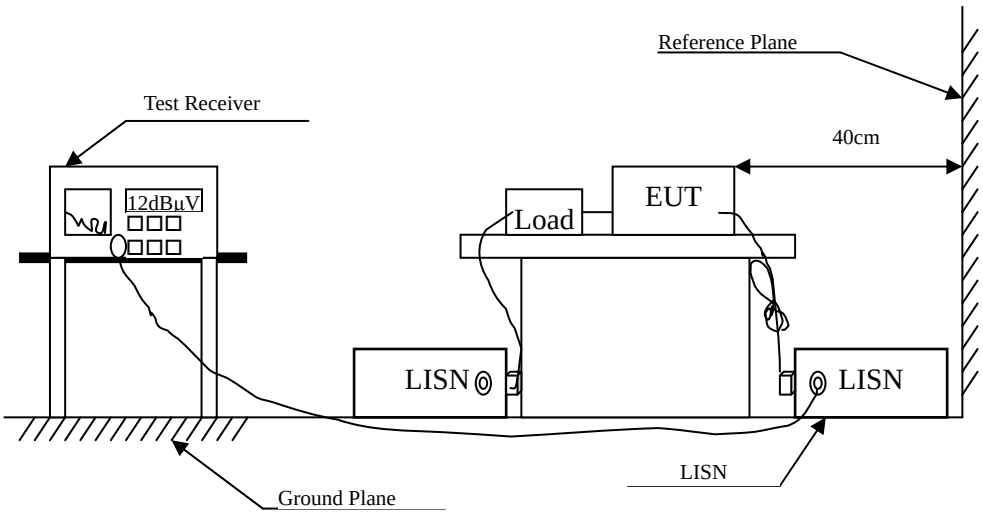
2.1. Test Equipment

	Equipment	Manufacturer	Model No. / Serial No.	Last Cal.	Remark
X	Test Receiver	R & S	ESCS 30 / 825442/018	Sep., 2014	
X	Artificial Mains Network	R & S	ENV4200 / 848411/10	Feb., 2014	Peripherals
X	LISN	R & S	ESH3-Z5 / 825562/002	Feb., 2014	EUT
	DC LISN	Schwarzbeck	8226 / 176	Mar., 2014	EUT
X	Pulse Limiter	R & S	ESH3-Z2 / 357.8810.52	Feb., 2014	
	No.1 Shielded Room				

Note:

1. All equipment is calibrated once a year or as required by manufacturer.
2. All equipment is calibrated to traceable calibration procedures.
3. 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 (dBμV) 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 UNII 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 : Wireless Access Point
Test Item : Conducted Emission Test
Power Line : Line 1
Test Mode : Mode 4 Transmit (802.11ac-80BW-65Mbps) (5290MHz)

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV	Margin dB	Limit dBμV
LINE 1					
Quasi-Peak					
0.185	9.651	38.600	48.251	-16.749	65.000
0.240	9.653	28.020	37.673	-25.756	63.429
0.279	9.655	27.420	37.075	-25.239	62.314
0.365	9.659	24.850	34.509	-25.348	59.857
10.271	9.983	28.150	38.133	-21.867	60.000
17.240	10.127	36.930	47.057	-12.943	60.000
Average					
0.185	9.651	19.100	28.751	-26.249	55.000
0.240	9.653	8.430	18.083	-35.346	53.429
0.279	9.655	10.510	20.165	-32.149	52.314
0.365	9.659	11.340	20.999	-28.858	49.857
10.271	9.983	22.650	32.633	-17.367	50.000
17.240	10.127	31.670	41.797	-8.203	50.000

Note:

1. All Reading Levels are Quasi-Peak or average value.
2. “ “ means the worst emission level.
3. Measurement Level = Reading Level + Correction Factor.

Product : Wireless Access Point
Test Item : Conducted Emission Test
Power Line : Line 2
Test Mode : Mode 4 Transmit (802.11ac-80BW-65Mbps) (5290MHz)

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV	Margin dB	Limit dBμV
LINE 2					
Quasi-Peak					
0.177	9.659	37.970	47.629	-17.600	65.229
0.330	9.657	26.570	36.227	-24.630	60.857
0.517	9.668	19.300	28.968	-27.032	56.000
0.877	9.697	19.540	29.237	-26.763	56.000
3.162	9.812	19.850	29.662	-26.338	56.000
18.349	10.177	35.780	45.957	-14.043	60.000
Average					
0.177	9.659	16.600	26.259	-28.970	55.229
0.330	9.657	10.420	20.077	-30.780	50.857
0.517	9.668	4.760	14.428	-31.572	46.000
0.877	9.697	5.980	15.677	-30.323	46.000
3.162	9.812	9.330	19.142	-26.858	46.000
18.349	10.177	30.410	40.587	-9.413	50.000

Note:

1. All Reading Levels are Quasi-Peak or average value.
2. “ “ means the worst emission level.
3. Measurement Level = Reading Level + Correction Factor.

Product : Wireless Access Point
Test Item : Conducted Emission Test
Power Line : Line 1
Test Mode : Mode 4 Transmit (802.11ac-80BW-65Mbps) (5530MHz)

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV	Margin dB	Limit dBμV
LINE 1					
Quasi-Peak					
0.216	9.651	26.340	35.991	-28.123	64.114
0.349	9.659	26.530	36.189	-24.125	60.314
0.630	9.674	17.220	26.894	-29.106	56.000
0.896	9.688	17.500	27.188	-28.812	56.000
3.420	9.818	18.680	28.498	-27.502	56.000
17.533	10.129	37.000	47.129	-12.871	60.000
Average					
0.216	9.651	8.400	18.051	-36.063	54.114
0.349	9.659	14.510	24.169	-26.145	50.314
0.630	9.674	7.630	17.304	-28.696	46.000
0.896	9.688	4.620	14.308	-31.692	46.000
3.420	9.818	8.750	18.568	-27.432	46.000
17.533	10.129	31.800	41.929	-8.071	50.000

Note:

1. All Reading Levels are Quasi-Peak or average value.
2. “ “ means the worst emission level.
3. Measurement Level = Reading Level + Correction Factor.

Product : Wireless Access Point
Test Item : Conducted Emission Test
Power Line : Line 2
Test Mode : Mode 4 Transmit (802.11ac-80BW-65Mbps) (5530MHz)

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV	Margin dB	Limit dBμV
LINE 2					
Quasi-Peak					
0.197	9.660	35.060	44.720	-19.937	64.657
0.314	9.657	25.210	34.867	-26.447	61.314
0.525	9.668	20.510	30.178	-25.822	56.000
1.173	9.714	18.970	28.684	-27.316	56.000
3.189	9.812	19.320	29.132	-26.868	56.000
17.107	10.155	36.620	46.775	-13.225	60.000
Average					
0.197	9.660	16.220	25.880	-28.777	54.657
0.314	9.657	9.490	19.147	-32.167	51.314
0.525	9.668	6.500	16.168	-29.832	46.000
1.173	9.714	6.800	16.514	-29.486	46.000
3.189	9.812	8.800	18.612	-27.388	46.000
17.107	10.155	31.340	41.495	-8.505	50.000

Note:

1. All Reading Levels are Quasi-Peak or average value.
2. “ “ means the worst emission level.
3. Measurement Level = Reading Level + Correction Factor.

3. Maximun conducted output power

3.1. Test Equipment

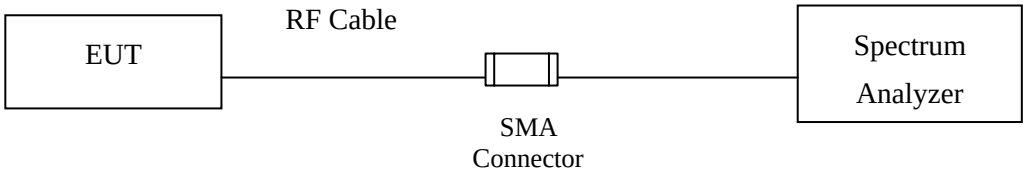
	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
X	Power Meter	Anritsu	ML2495A/6K00003357	May, 2014
X	Power Sensor	Anritsu	MA2411B/0738448	Jun., 2014
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2014

Note:

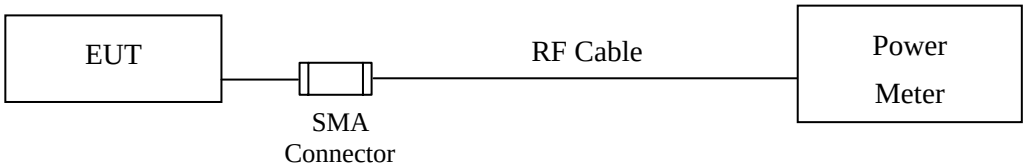
1. All equipment is calibrated once a year or as required by manufacturer.
2. All equipment is calibrated to traceable calibration procedures.
3. The test instruments marked by "X" are used to measure the final test results.

3.2. Test Setup

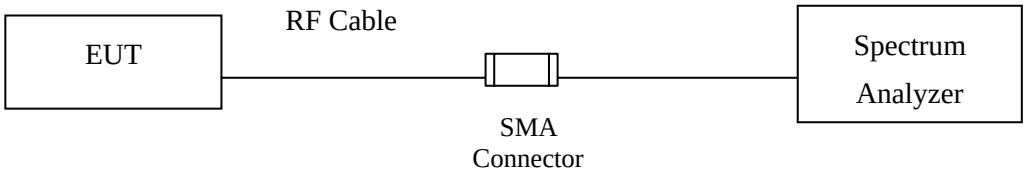
26dBc Occupied Bandwidth



Conduction Power Measurement (for 802.11an)



Conduction Power Measurement (for 802.11ac)



3.3. Limits

- 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.
- 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.
- 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 Procedure

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 the 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.

802.11an (BW≦40MHz) Maximum conducted output power using KDB 789033 section E)3)b) Method PM-G (Measurement using a gated RF average power meter)
Note: the power meter have a video bandwidth that is greater than or equal to the measurement bandwidth, (Anritsu/ MA2411B video bandwidth: 65MHz)

802.11ac (BW=80MHz) Maximum conducted output power using KDB 789033 section E)2)b) Method SA-1 (trace averaging with the EUT transmitting at full power throughout each sweep).

When transmitted signals consist of two or more non-contiguous spectrum segments (e.g., 80+80 MHz mode) or when a single spectrum segment of a transmission crosses the boundary between two adjacent U-NII bands, KDB 644545 D01 section F) procedure is used for measurements.

3.5. Uncertainty

± 1.27 dB

3.6. Test Result of Maximum conducted output power

Product : Wireless Access Point
Test Item : Maximum conducted output power
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11a-6Mbps)

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)								
52	5260	19.31	--	--	--	--	--	--	--	<24dBm
60	5300	19.15	19.05	18.99	18.85	18.79	18.71	18.67	18.62	<24dBm
64	5320	19.11	--	--	--	--	--	--	--	<24dBm
100	5500	19.31	--	--	--	--	--	--	--	<24dBm
116	5580	19.13	19.08	18.93	18.89	18.71	18.68	18.61	18.55	<24dBm
140	5700	19.30	--	--	--	--	--	--	--	<24dBm

Note: 1.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)								
52	5260	19.30	--	--	--	--	--	--	--	<24dBm
60	5300	19.30	19.24	19.18	19.09	18.91	18.88	18.79	18.65	<24dBm
64	5320	19.20	--	--	--	--	--	--	--	<24dBm
100	5500	19.00	--	--	--	--	--	--	--	<24dBm
116	5580	18.90	18.81	18.71	18.63	18.59	18.44	18.39	18.26	<24dBm
140	5700	18.80	--	--	--	--	--	--	--	<24dBm

Note: 1.Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power measurement:

(Chain A+ B)

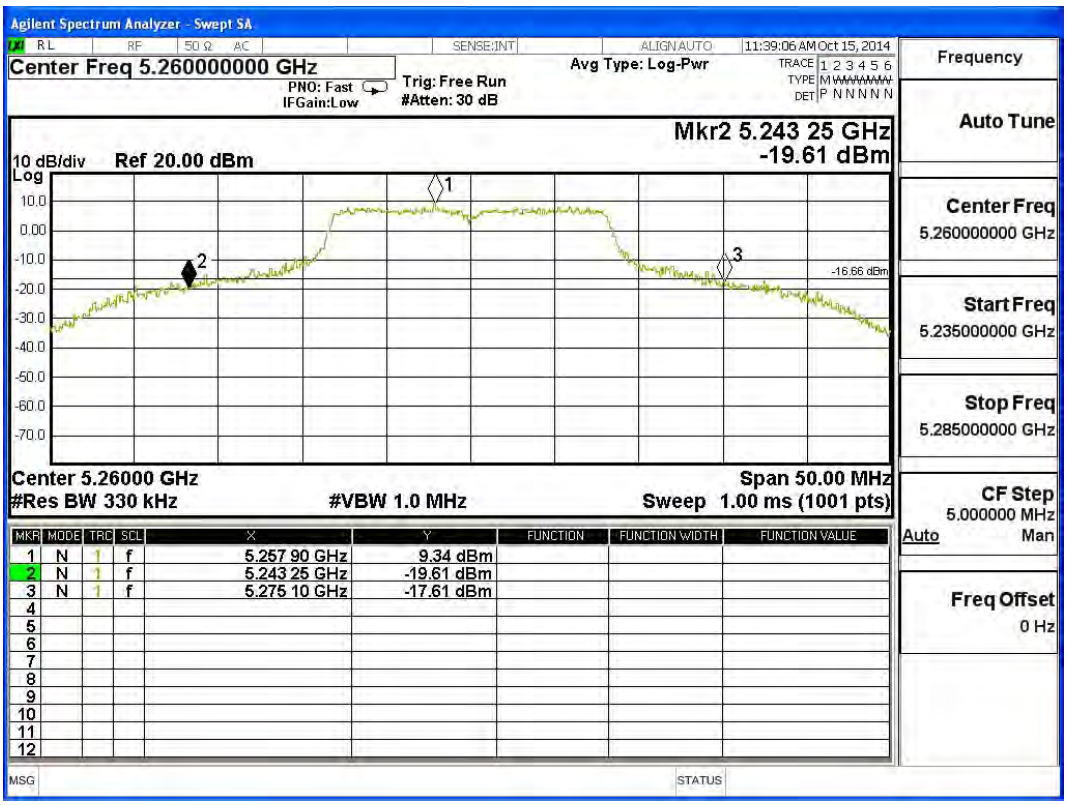
Channel Number	Frequency	26dB Bandwidth	Chain A Power	Chain B Power	Output Power	Output Power Limit	
	(MHz)	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	dBm+10log(BW)
52	5260	27.100	19.31	19.30	22.32	24	25.33
60	5300	25.750	19.15	19.30	22.24	24	25.11
64	5320	28.500	19.11	19.20	22.17	24	25.55
100	5500	31.550	18.98	19.00	22.00	24	25.99
116	5580	25.900	19.13	18.90	22.03	24	25.13
140	5700	24.450	19.30	18.80	22.07	24	24.88

Note:

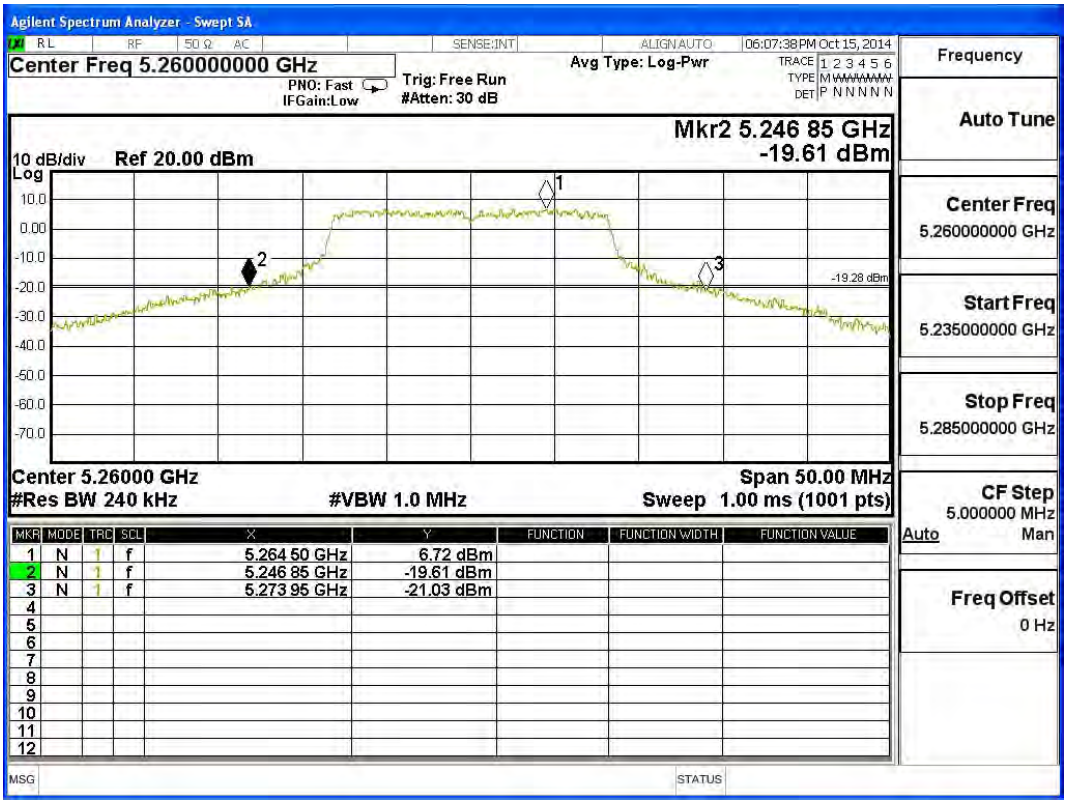
1. Power Output Value =Reading value on average power meter + cable loss
2. Output Power (dBm) = 10LOG (Chain A Power (mW) + Chain B Power (mW))
3. 26 dB Bandwidth is the bandwidth of chain A or chain B whichever is less bandwidth, output power limitation is more stringent.

26dBc Occupied Bandwidth:

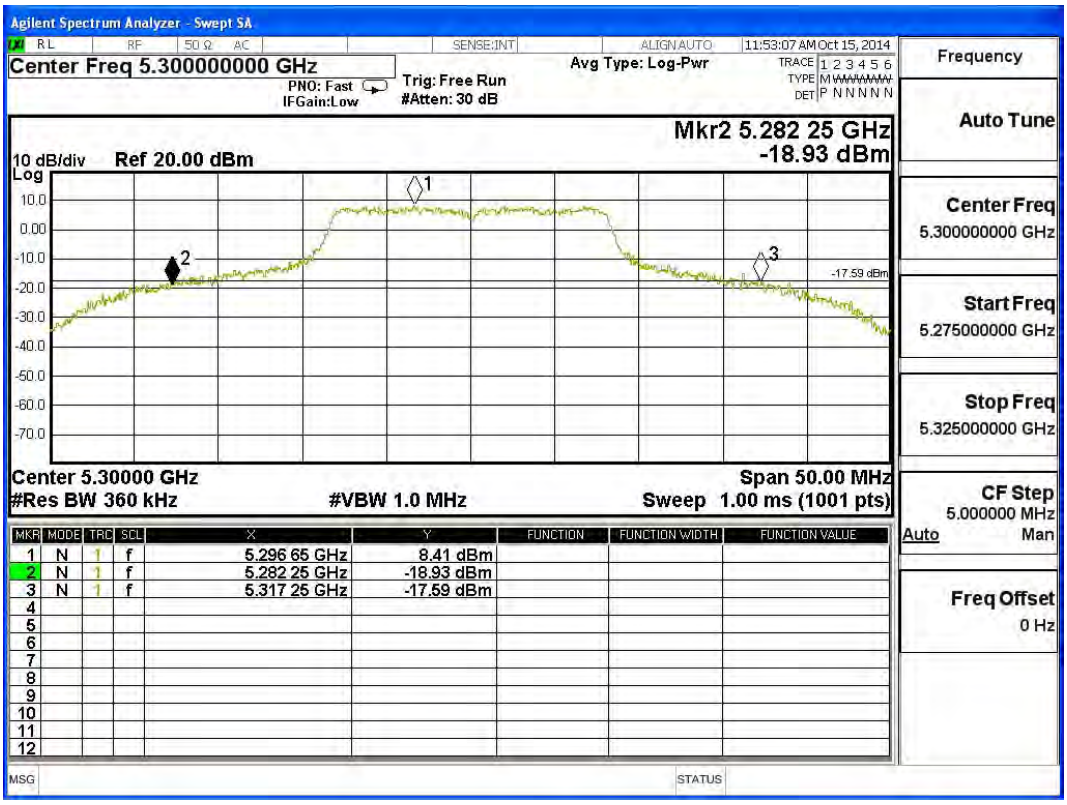
Channel 52: Chain A



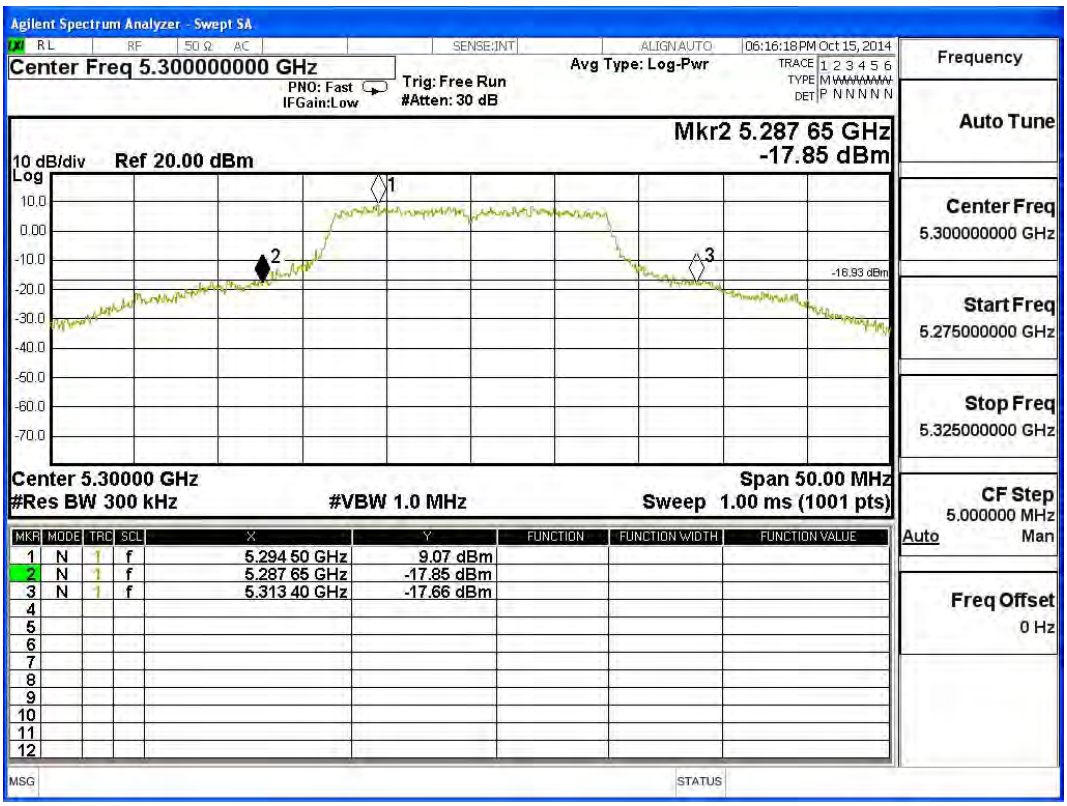
Channel 52: Chain B



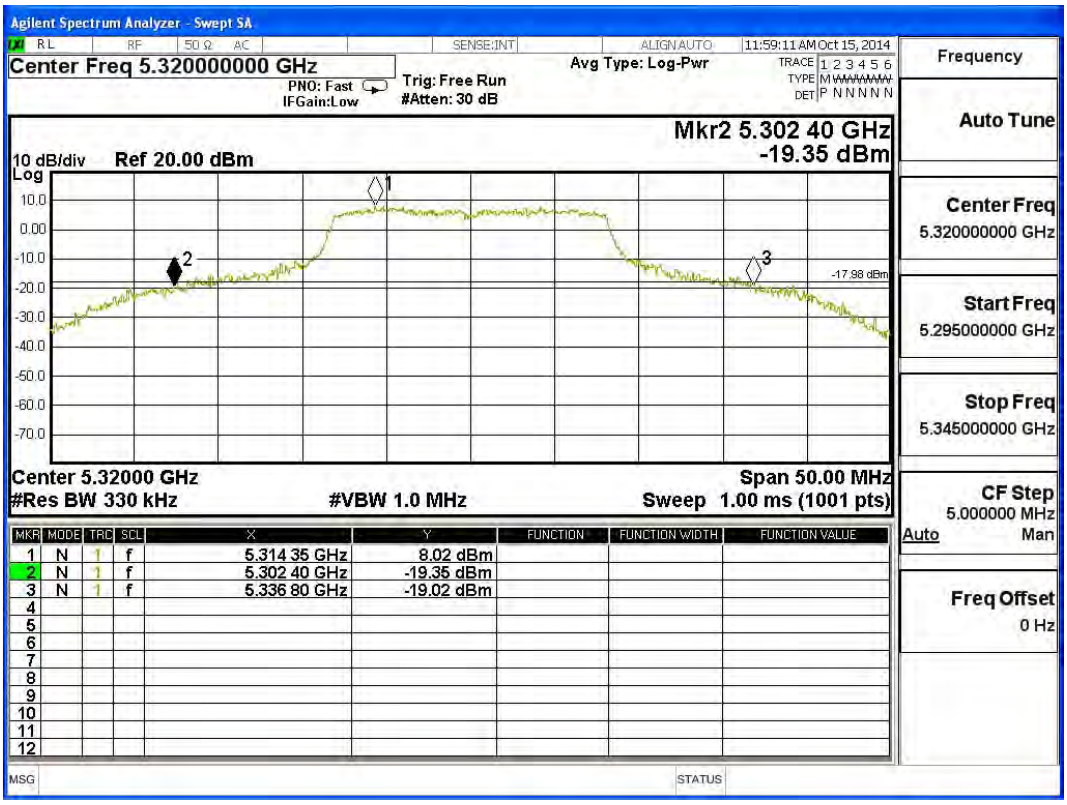
Channel 60: Chain A



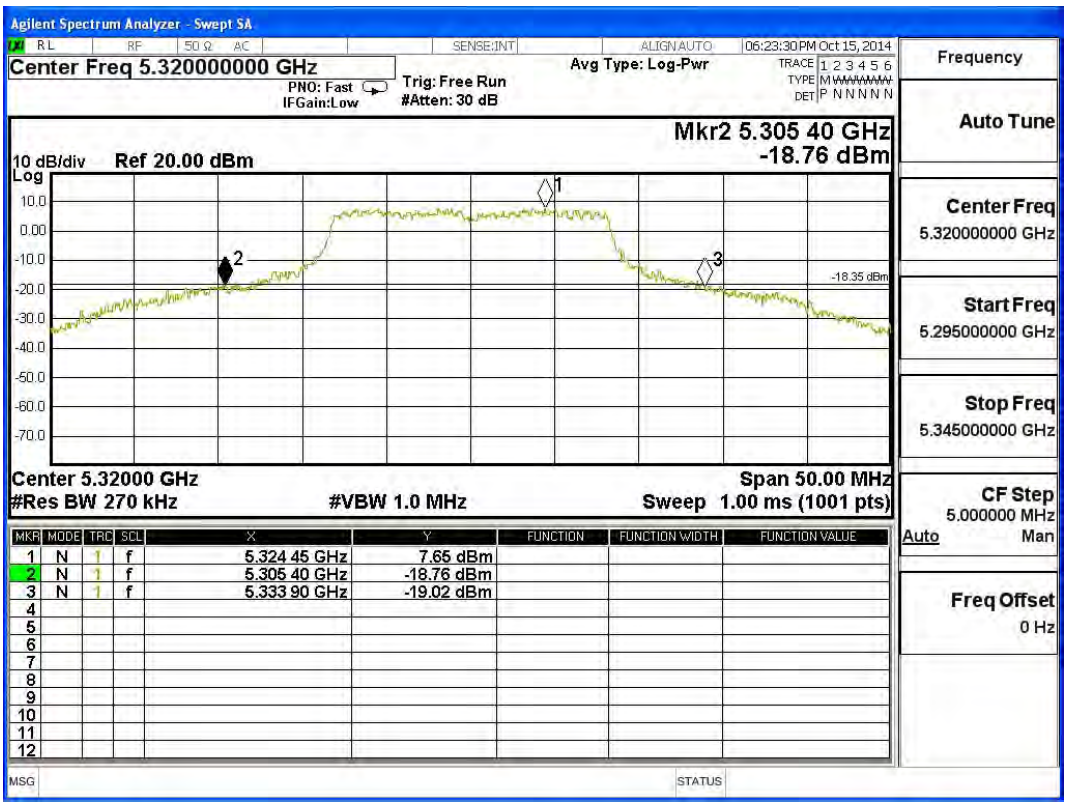
Channel 60: Chain B



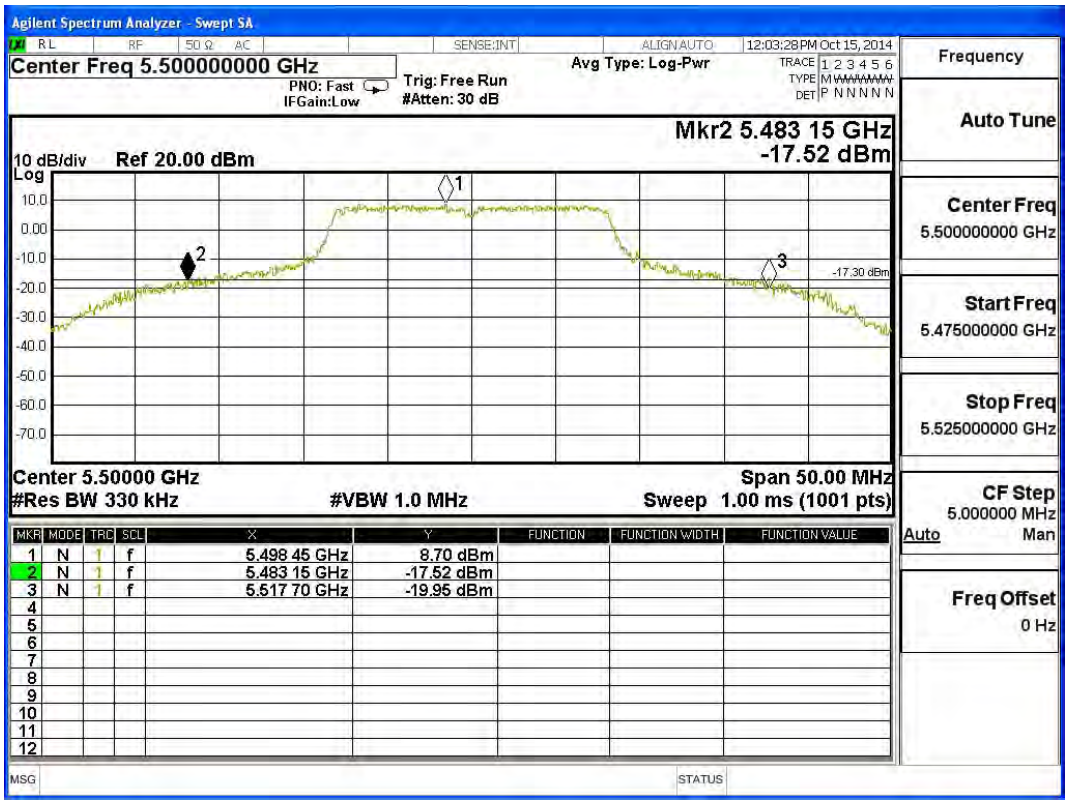
Channel 64: Chain A



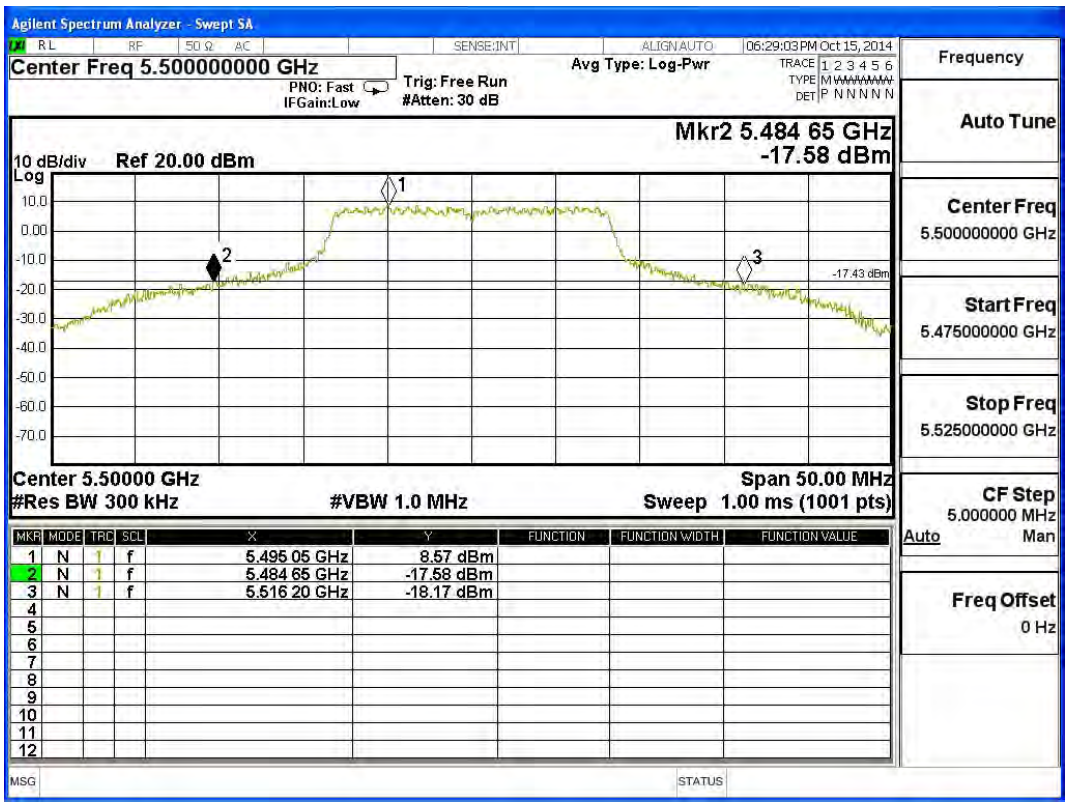
Channel 64: Chain B



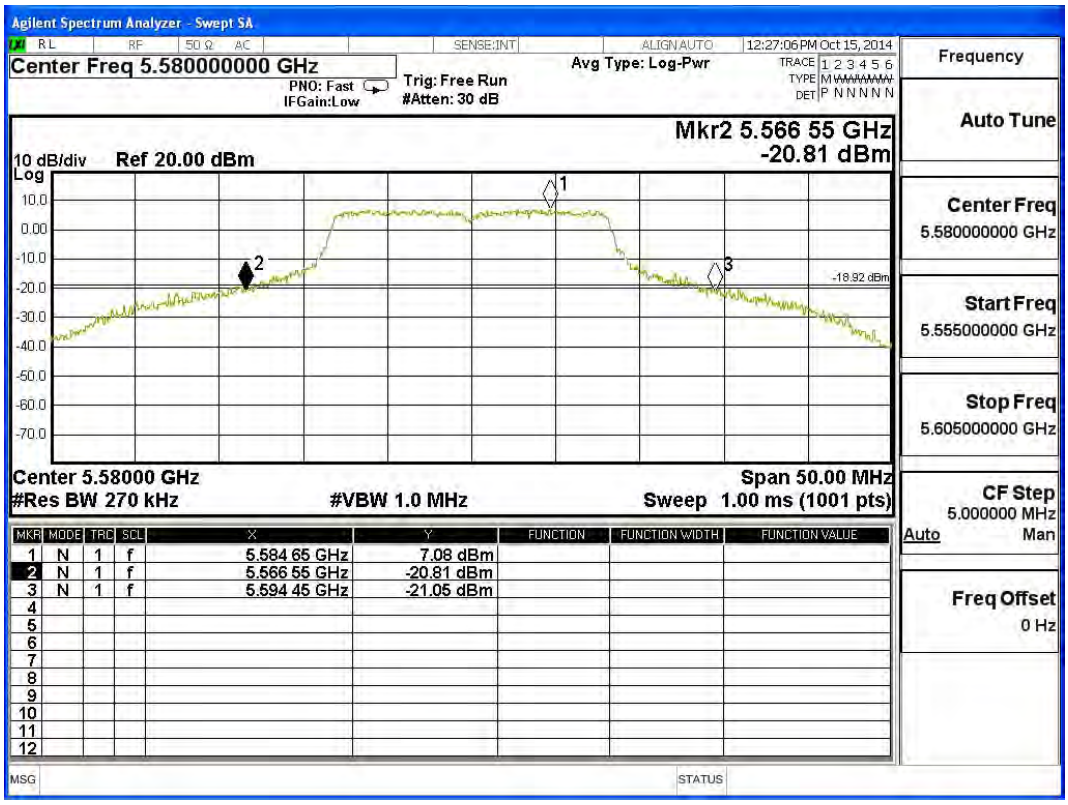
Channel 100: Chain A



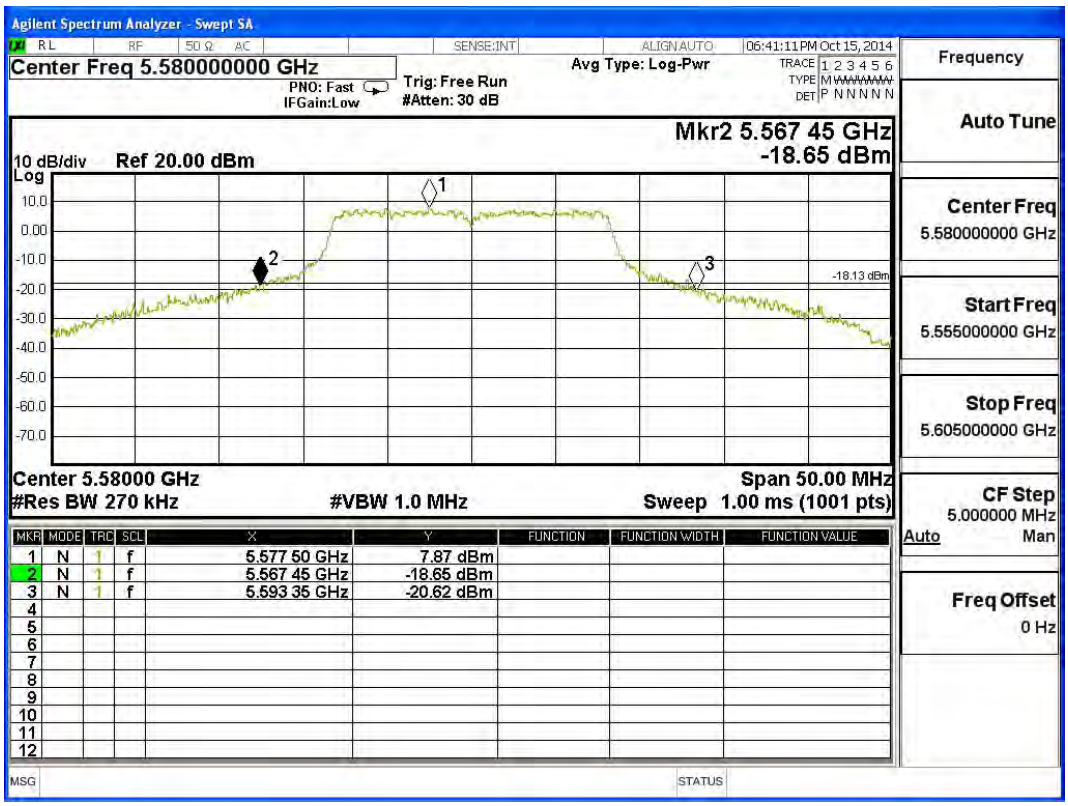
Channel 100: Chain B



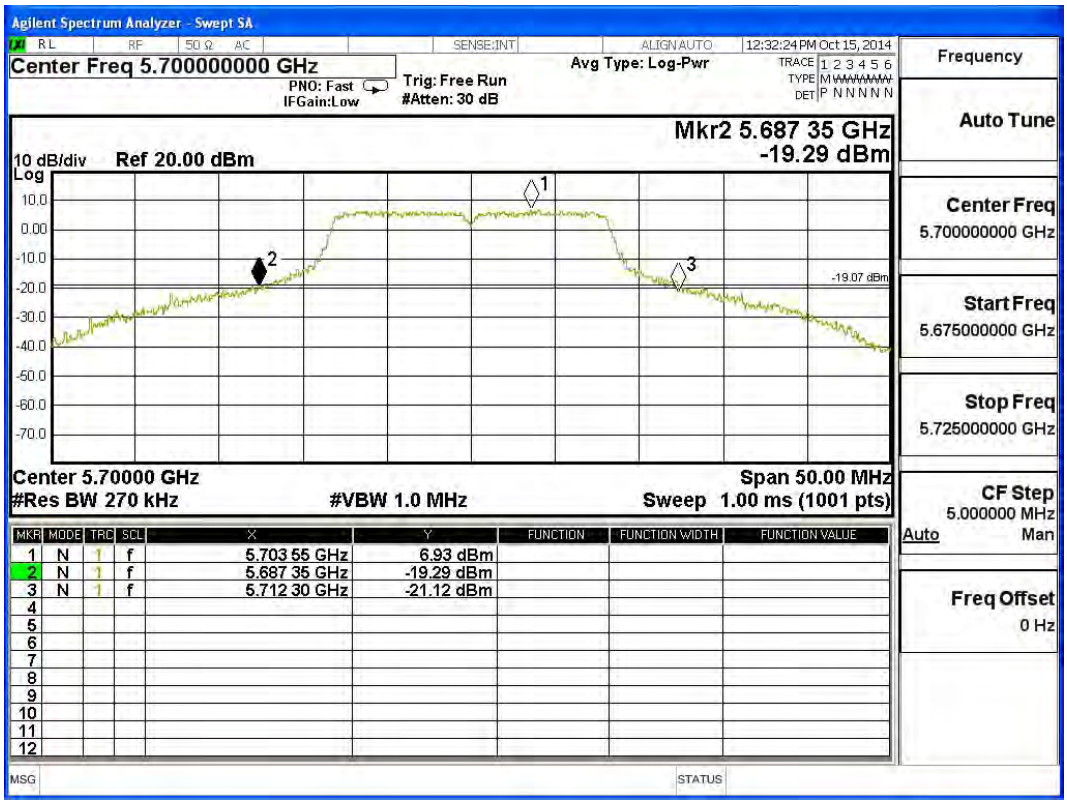
Channel 120: Chain A



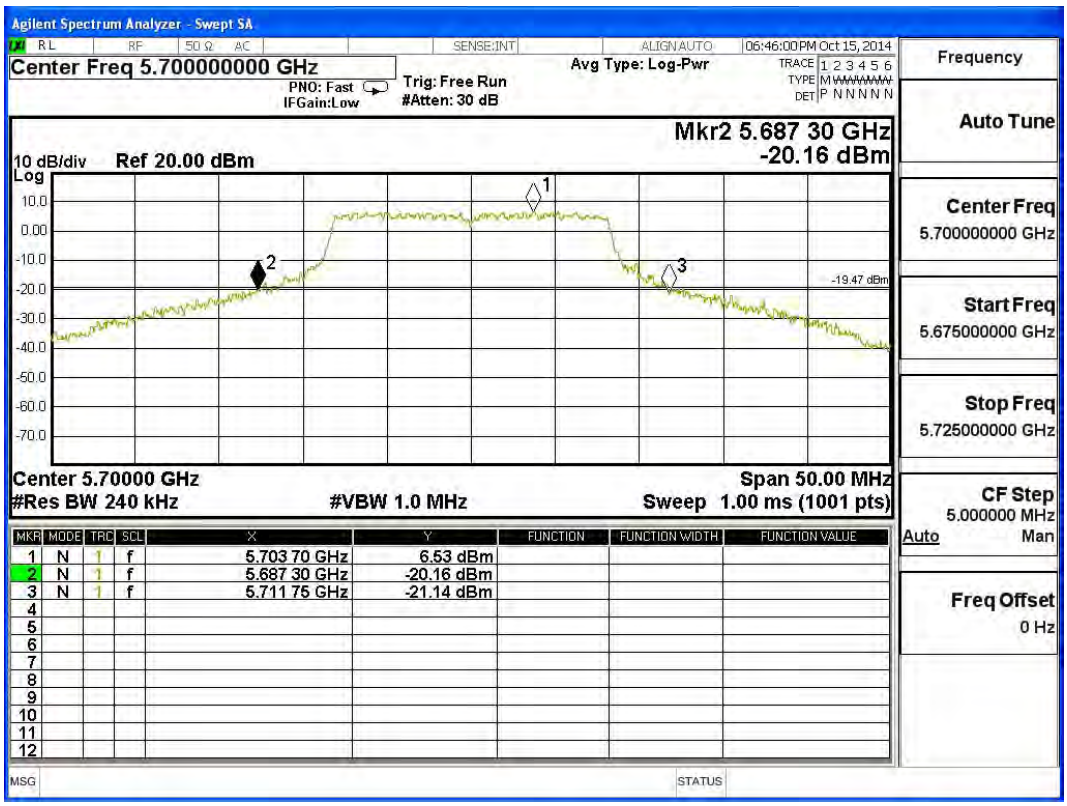
Channel 120: Chain B



Channel 140: Chain A



Channel 140: Chain B



Product : Wireless Access Point
Test Item : Maximum conducted output power
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps)

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)								
52	5260	19.09	--	--	--	--	--	--	--	<24dBm
60	5300	19.01	18.98	18.82	18.79	18.71	18.65	18.51	18.47	<24dBm
64	5320	19.11	--	--	--	--	--	--	--	<24dBm
100	5500	19.06	--	--	--	--	--	--	--	<24dBm
116	5580	19.07	18.99	18.81	18.7	18.66	18.51	18.49	18.32	<24dBm
140	5700	19.20	--	--	--	--	--	--	--	<24dBm

Note: 1.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)								
52	5260	19.14	--	--	--	--	--	--	--	<24dBm
60	5300	19.14	19.02	18.9	18.72	18.65	18.59	18.51	18.42	<24dBm
64	5320	19.31	--	--	--	--	--	--	--	<24dBm
100	5500	19.22	--	--	--	--	--	--	--	<24dBm
116	5580	19.01	18.98	18.82	18.62	18.5	18.41	18.33	18.23	<24dBm
140	5700	19.11	--	--	--	--	--	--	--	<24dBm

Note: 1.Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power measurement:

(Chain A+ B)

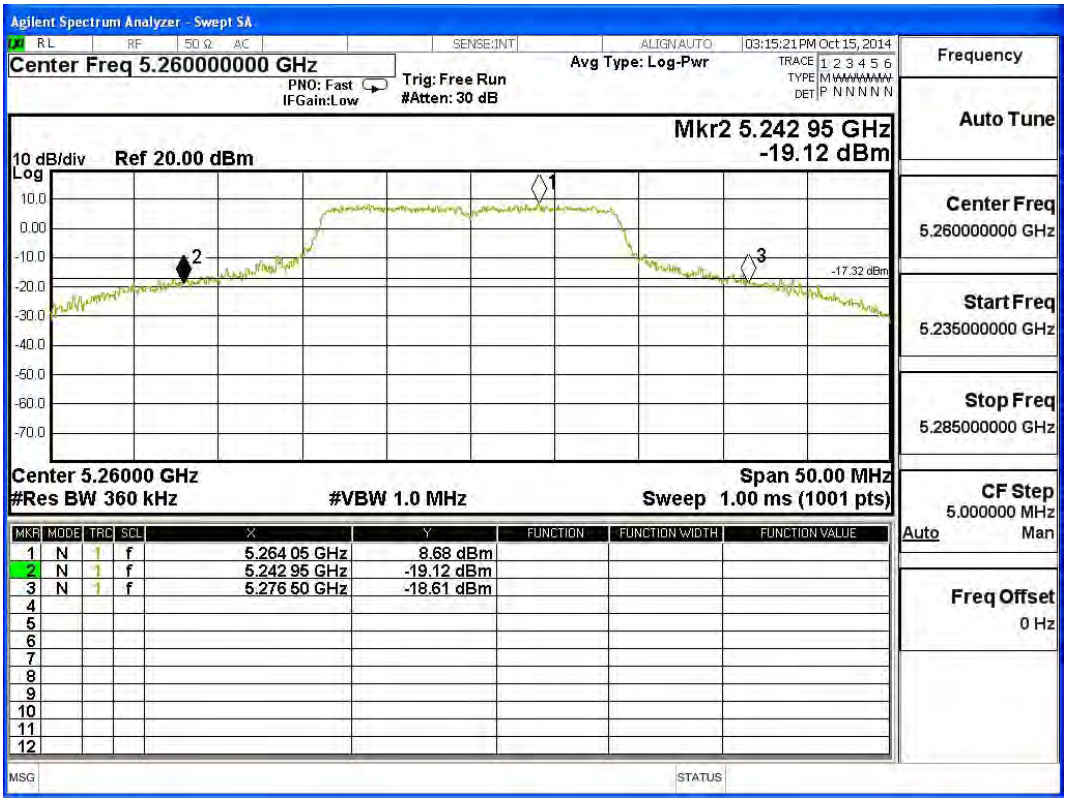
Channel Number	Frequency	26dB Bandwidth	Chain A Power	Chain B Power	Output Power	Output Power Limit	
	(MHz)	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	dBm+10log(BW)
52	5260	27.550	19.09	19.14	22.13	24	25.40
60	5300	28.250	19.01	19.14	22.09	24	25.51
64	5320	31.100	19.11	19.31	22.22	24	25.93
100	5500	29.000	19.01	19.05	22.04	24	25.62
116	5580	24.900	19.07	19.01	22.05	24	24.96
140	5700	43.600	18.92	19.08	22.01	24	27.39

Note:

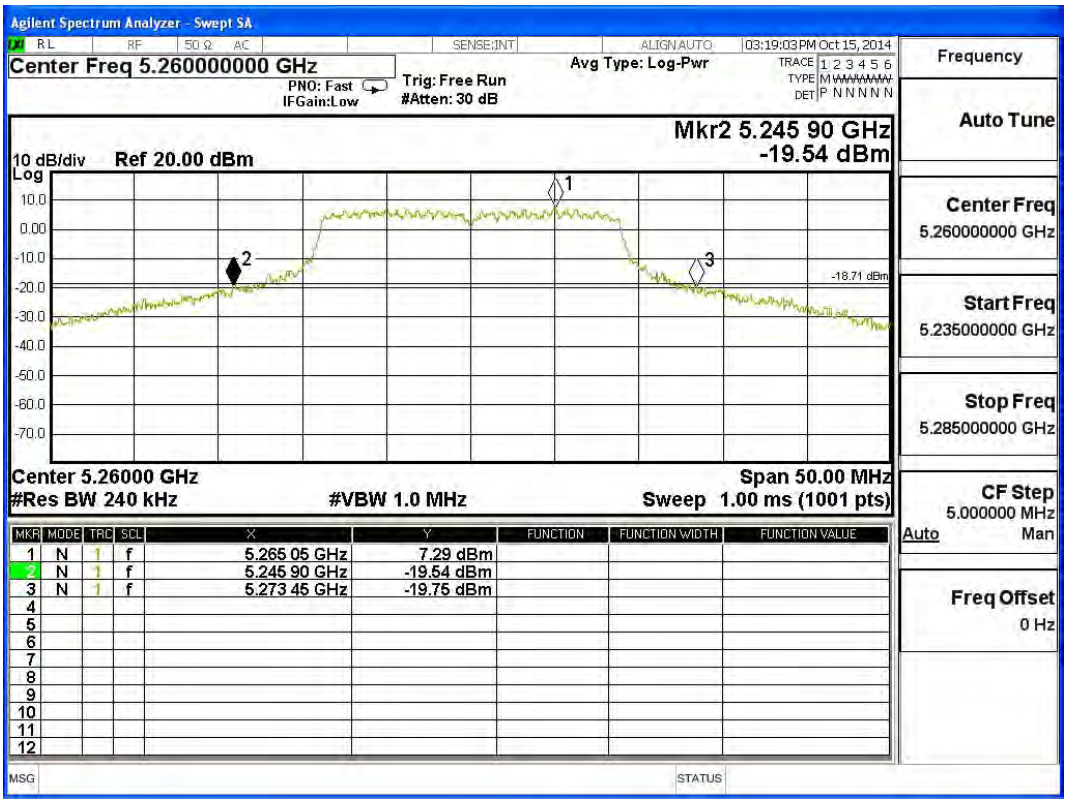
1. Power Output Value =Reading value on average power meter + cable loss
2. Output Power (dBm) = 10LOG (Chain A Power (mW)+ Chain B Power (mW))
3. 26 dB Bandwidth is the bandwidth of chain A or chain B whichever is less bandwidth, output power limitation is more stringent.

26dBc Occupied Bandwidth:

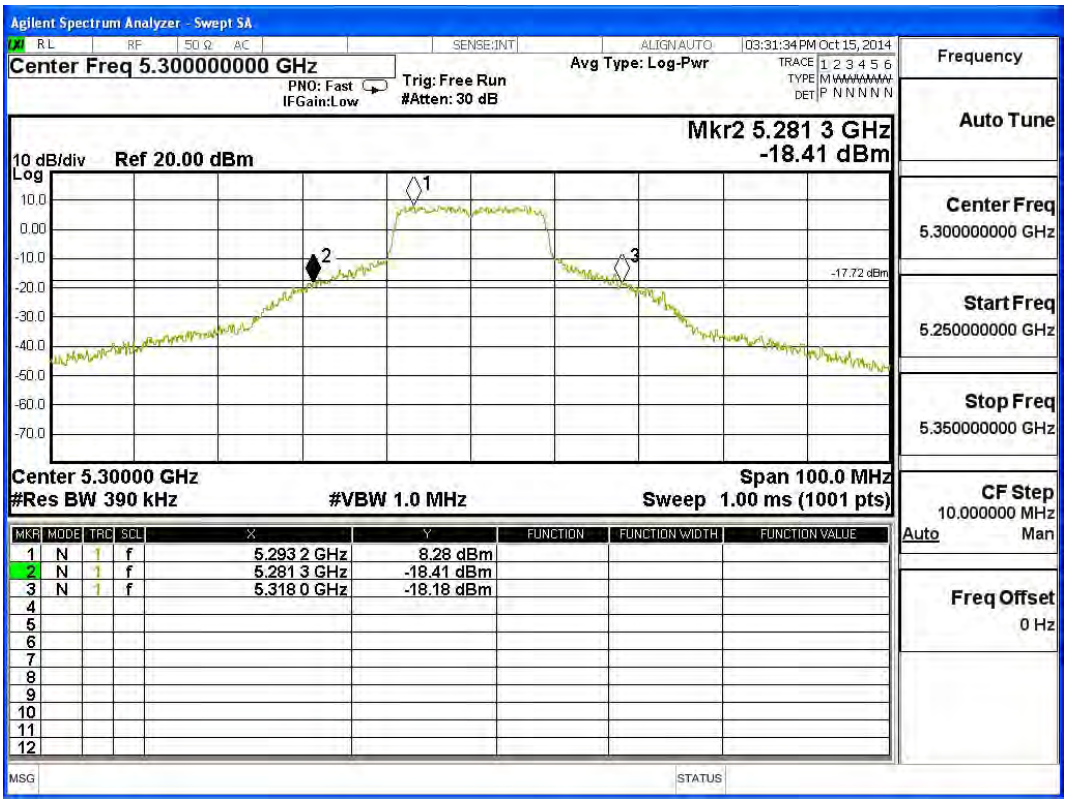
Channel 52: Chain A



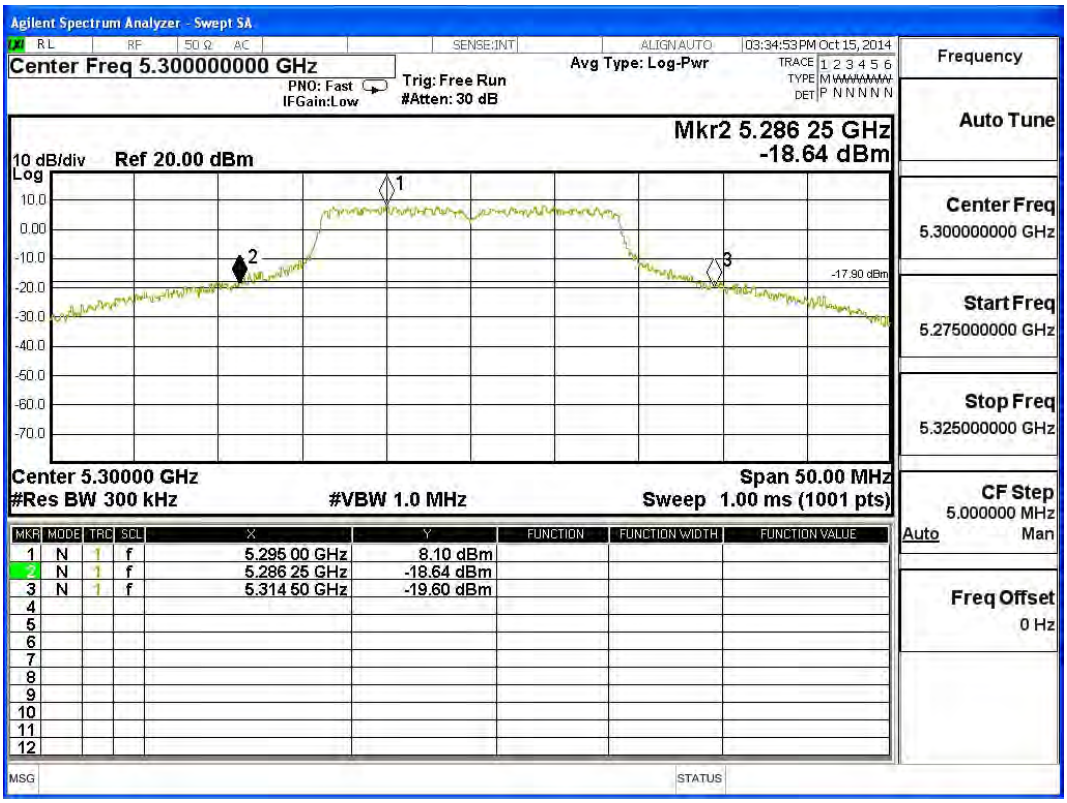
Channel 52: Chain B



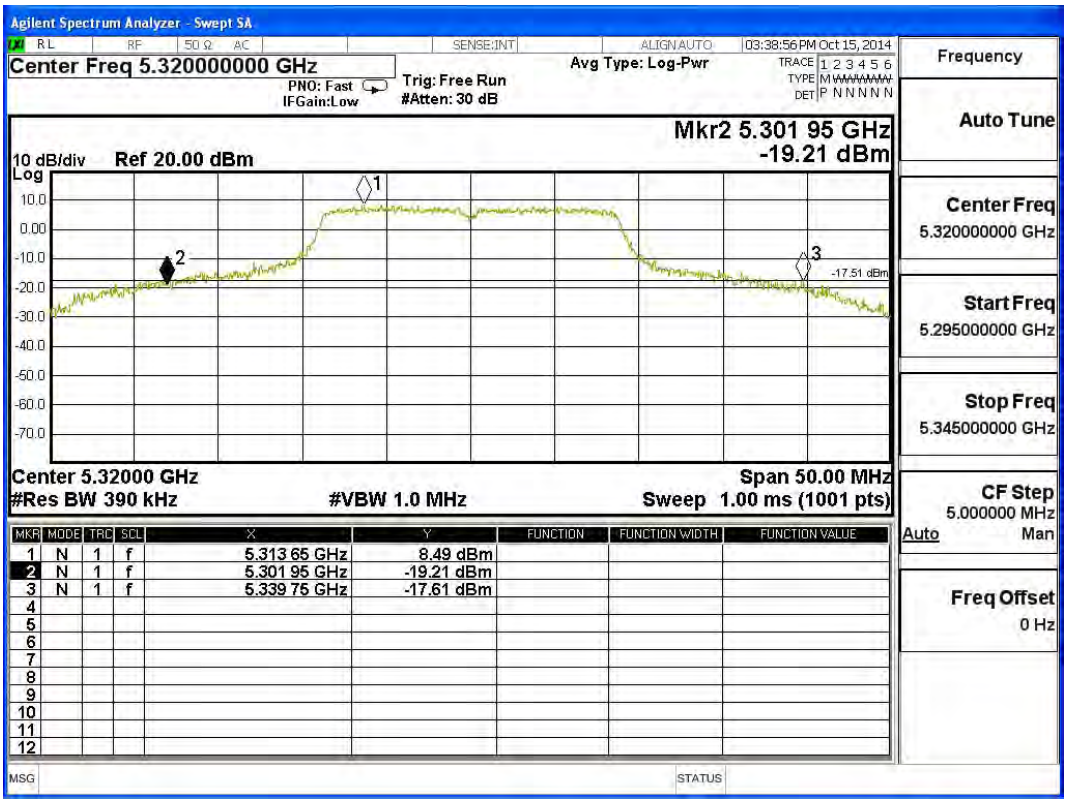
Channel 60: Chain A



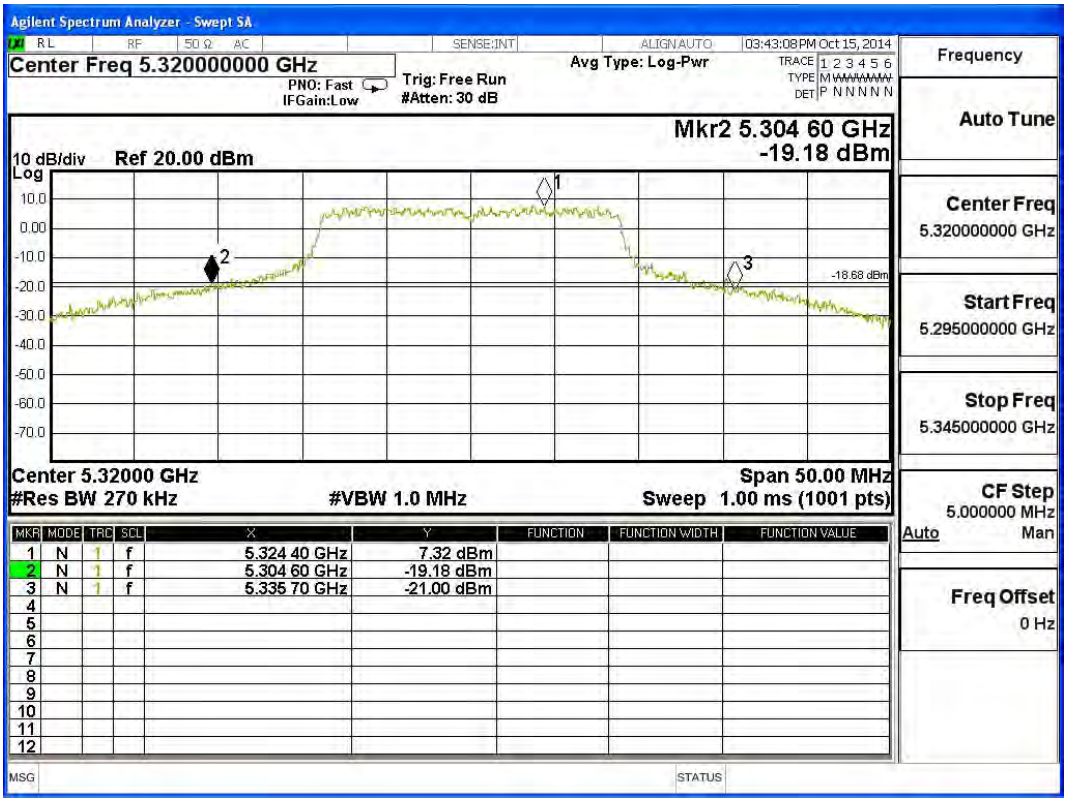
Channel 60: Chain B



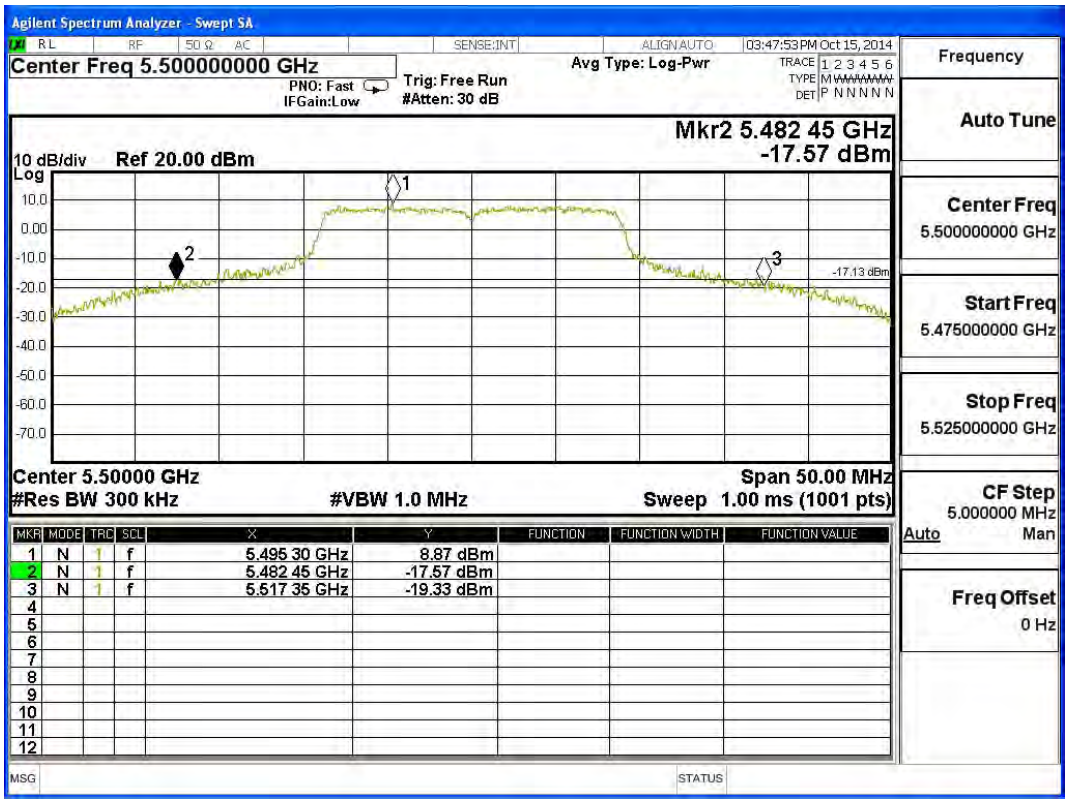
Channel 64: Chain A



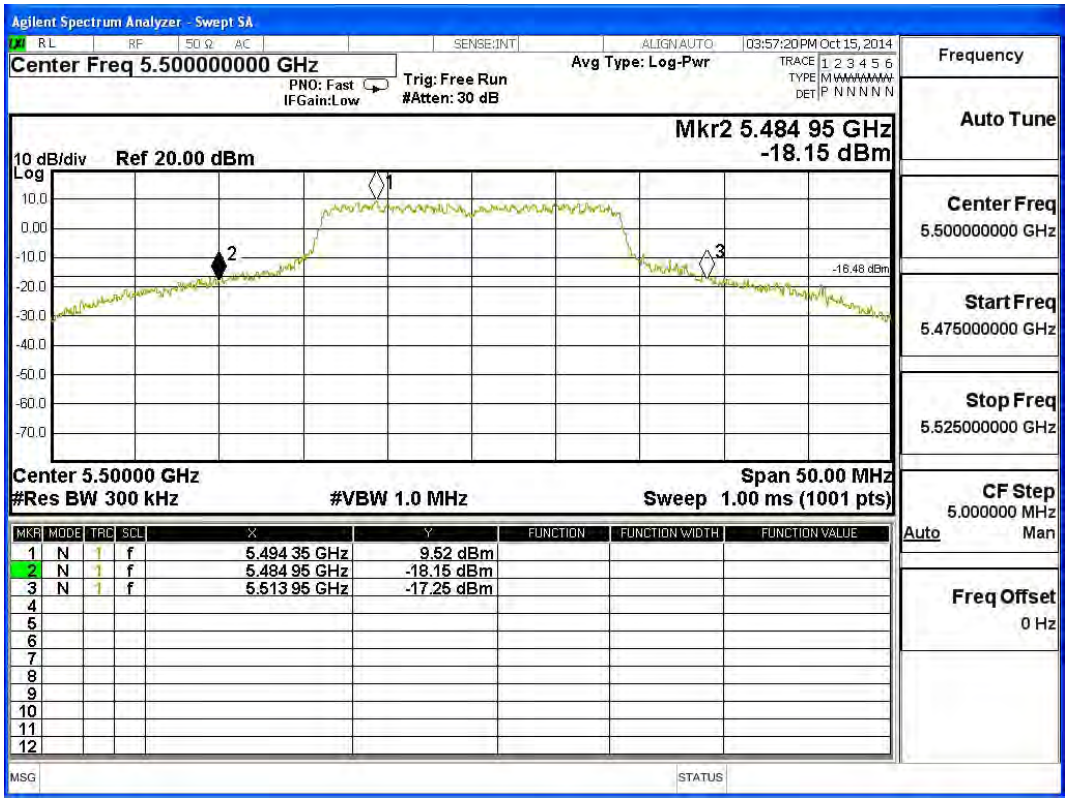
Channel 64: Chain B



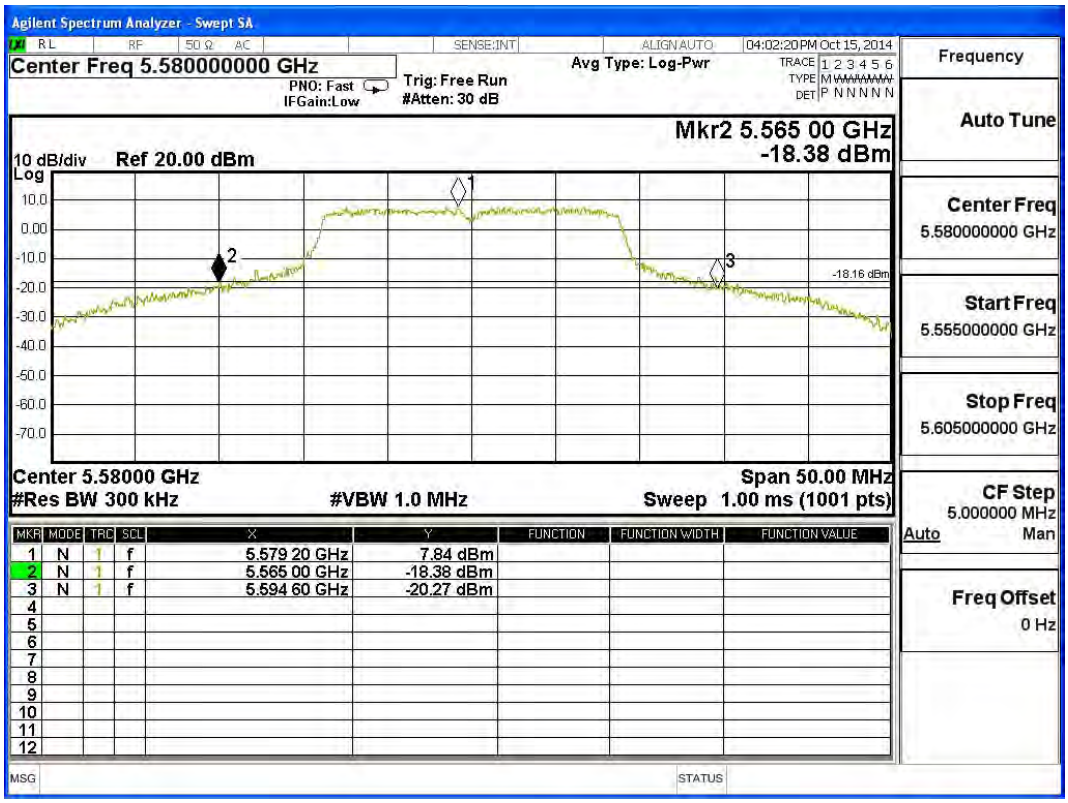
Channel 100: Chain A



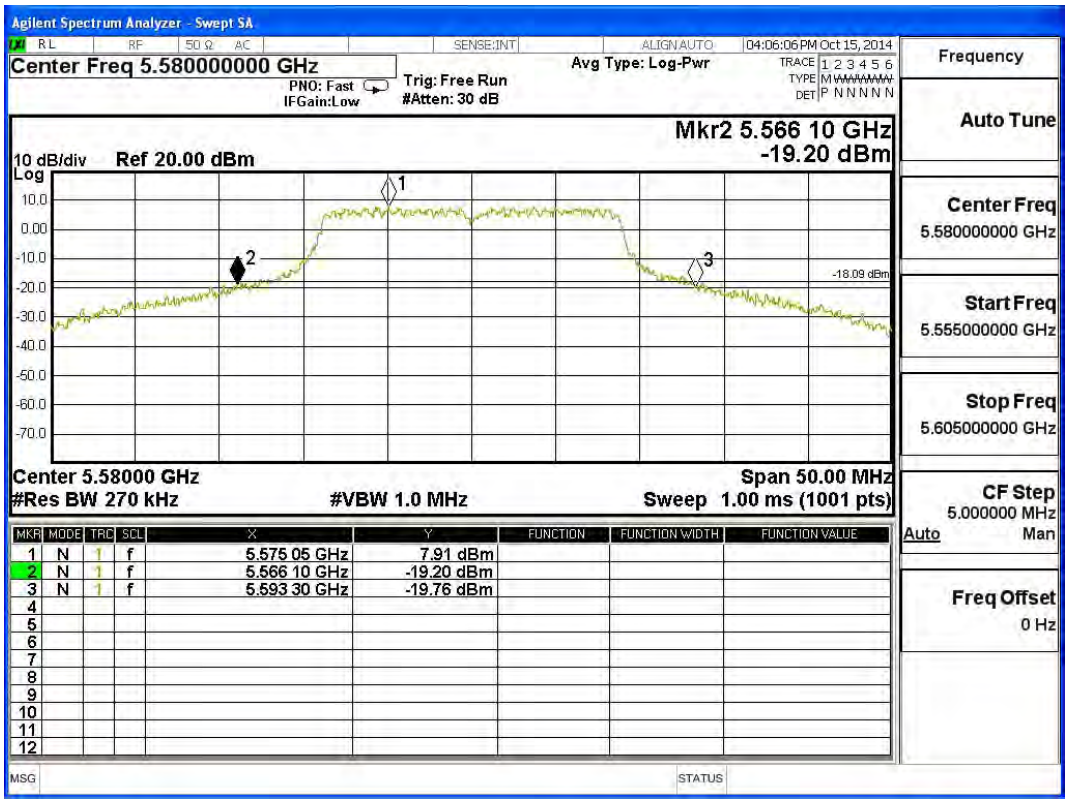
Channel 100: Chain B



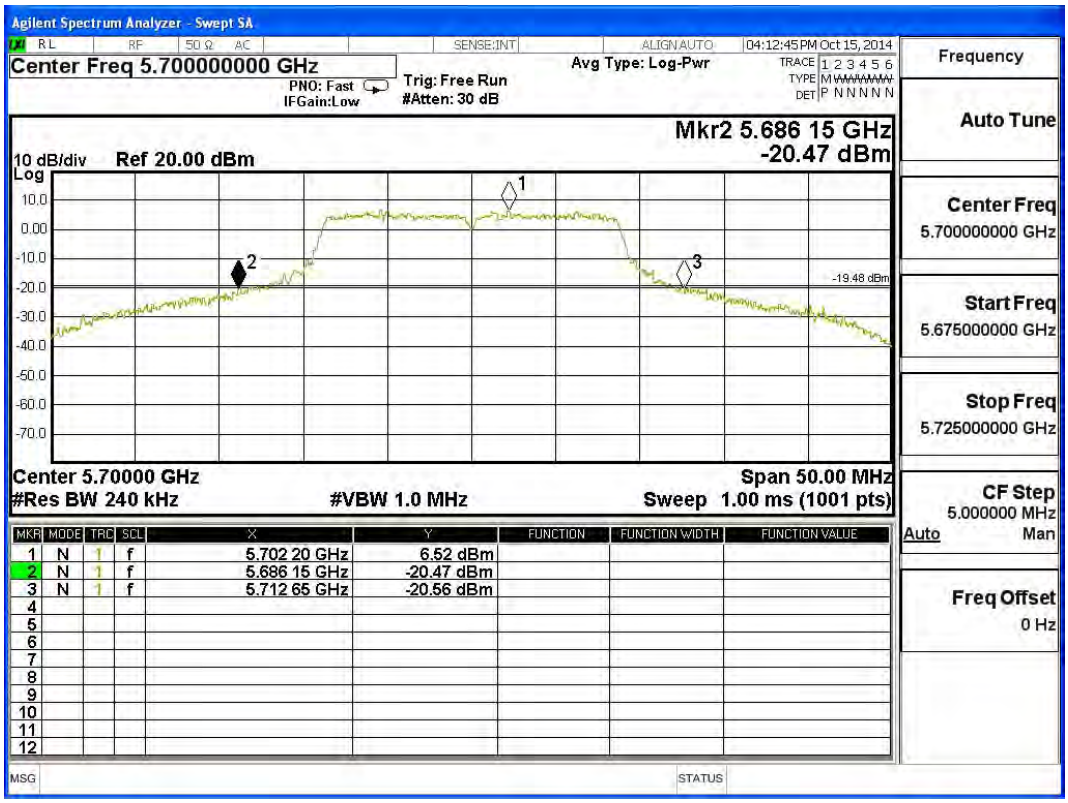
Channel 120: Chain A



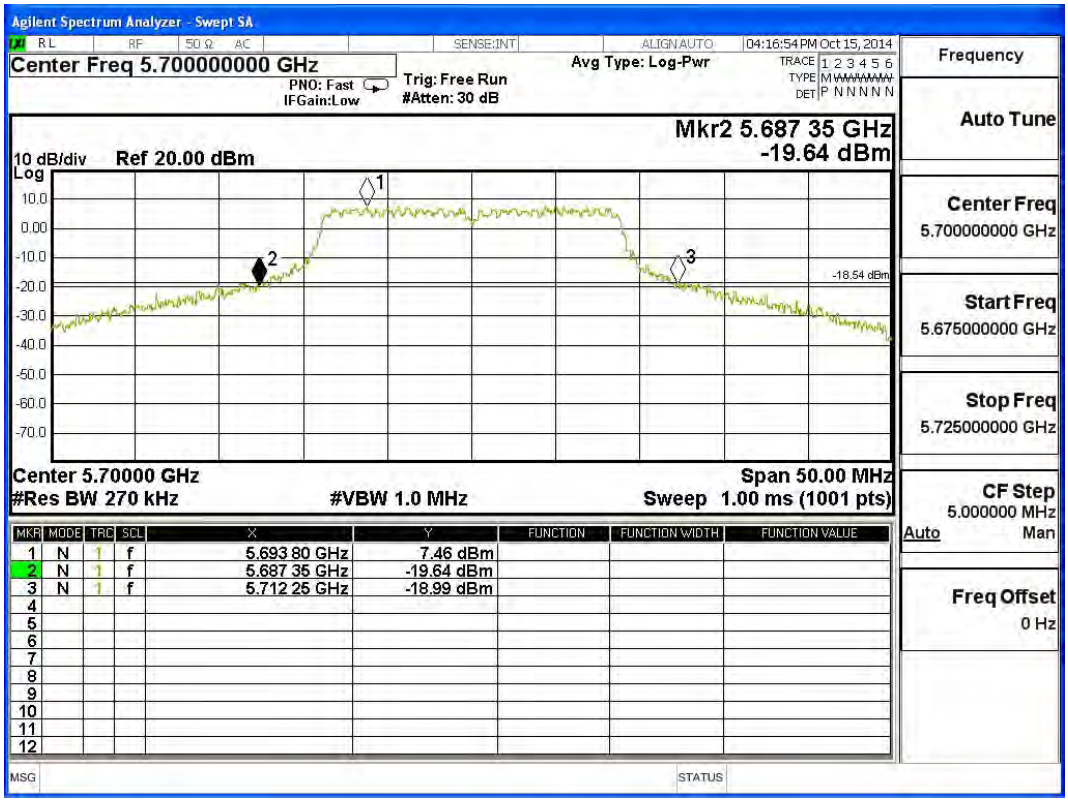
Channel 120: Chain B



Channel 140: Chain A



Channel 140: Chain B



Product : Wireless Access Point
Test Item : Maximum conducted output power
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps)

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)								
54	5270	18.91	--	--	--	--	--	--	--	<24dBm
62	5310	15.83	15.77	15.66	15.57	15.49	15.44	15.39	15.31	<24dBm
102	5510	15.11	--	--	--	--	--	--	--	<24dBm
110	5550	18.89	18.81	18.75	18.69	18.66	18.43	18.36	18.29	<24dBm
134	5670	18.55	--	--	--	--	--	--	--	<24dBm

Note: 1.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)								
54	5270	19.11	--	--	--	--	--	--	--	<24dBm
62	5310	16.68	16.52	16.44	16.39	16.31	16.21	16.19	16.09	<24dBm
102	5510	15.34	--	--	--	--	--	--	--	<24dBm
110	5550	19.03	18.92	18.84	18.76	18.69	18.59	18.47	18.39	<24dBm
134	5670	19.01	--	--	--	--	--	--	--	<24dBm

Note: 1.Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power measurement:

(Chain A+ B)

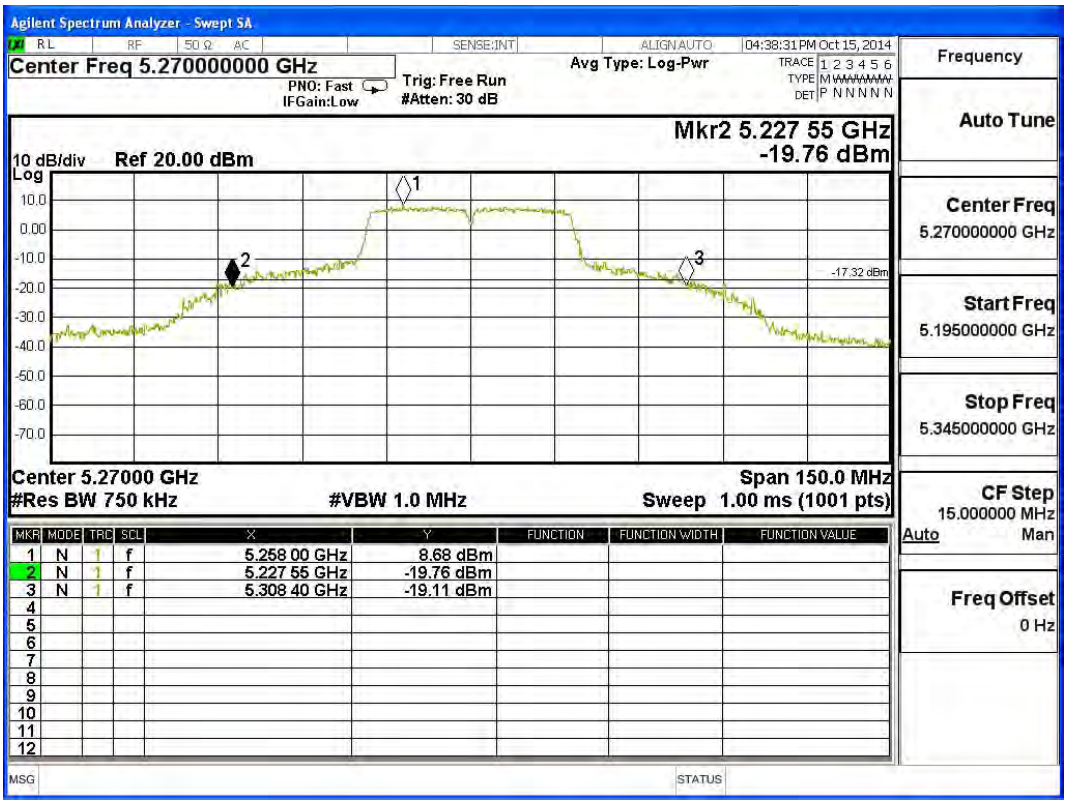
Channel Number	Frequency	26dB Bandwidth	Chain A Power	Chain B Power	Output Power	Output Power Limit	
	(MHz)	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	dBm+10log(BW)
54	5270	62.600	18.91	19.11	22.02	24	28.97
62	5310	43.800	15.83	16.68	19.29	24	27.41
102	5510	44.800	15.11	15.34	18.24	24	27.51
110	5550	65.000	18.89	19.03	21.97	24	29.13
134	5670	45.900	18.55	19.01	21.80	24	27.62

Note:

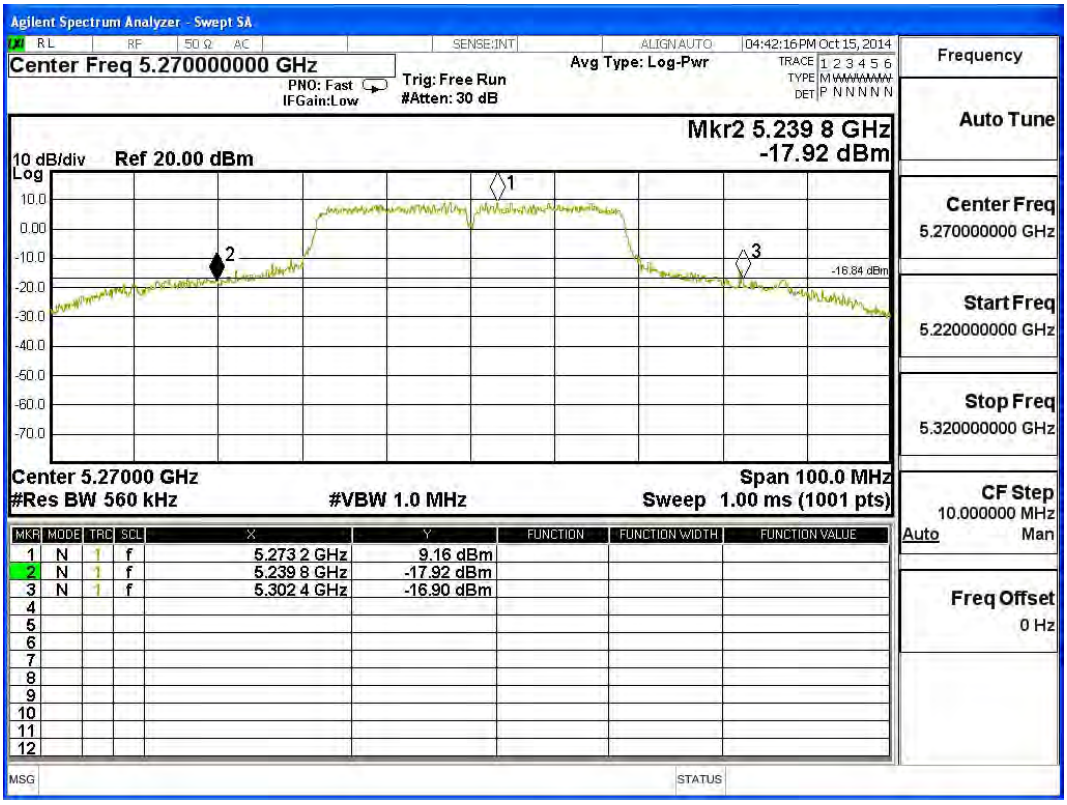
1. Power Output Value =Reading value on average power meter + cable loss
2. Output Power (dBm) = 10LOG (Chain A Power (mW)+ Chain B Power (mW))
3. 26 dB Bandwidth is the bandwidth of chain A or chain B whichever is less bandwidth, output power limitation is more stringent.

26dBc Occupied Bandwidth:

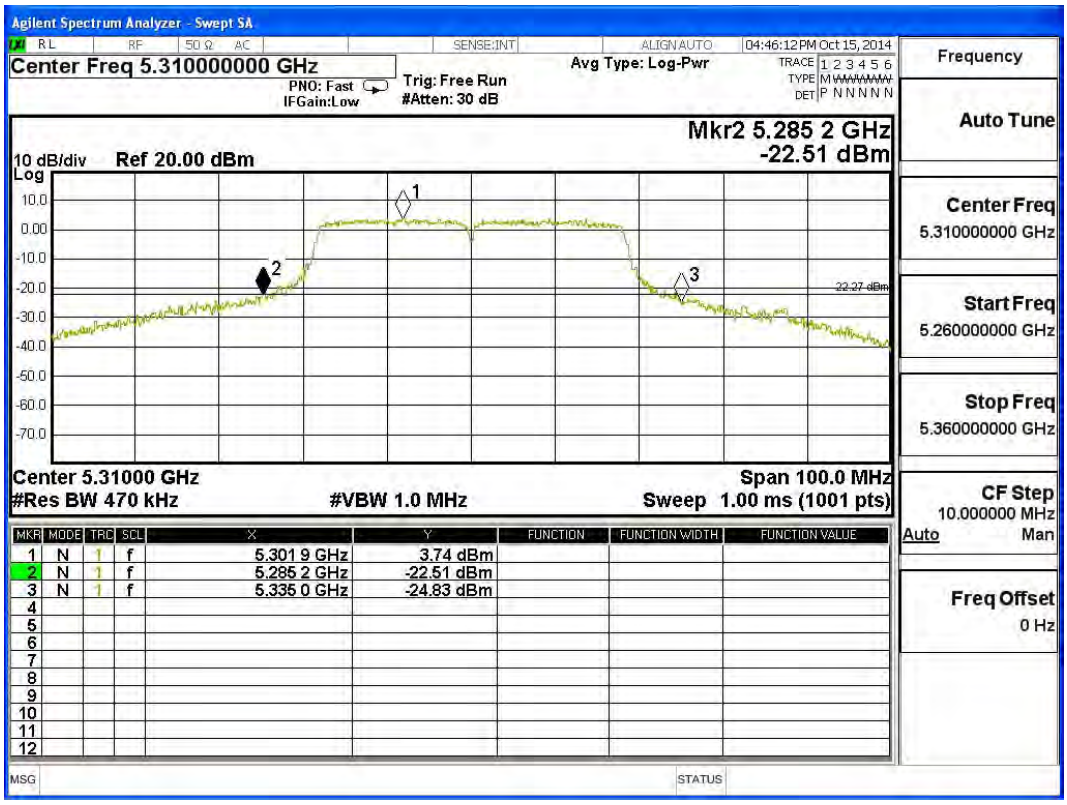
Channel 54: Chain A



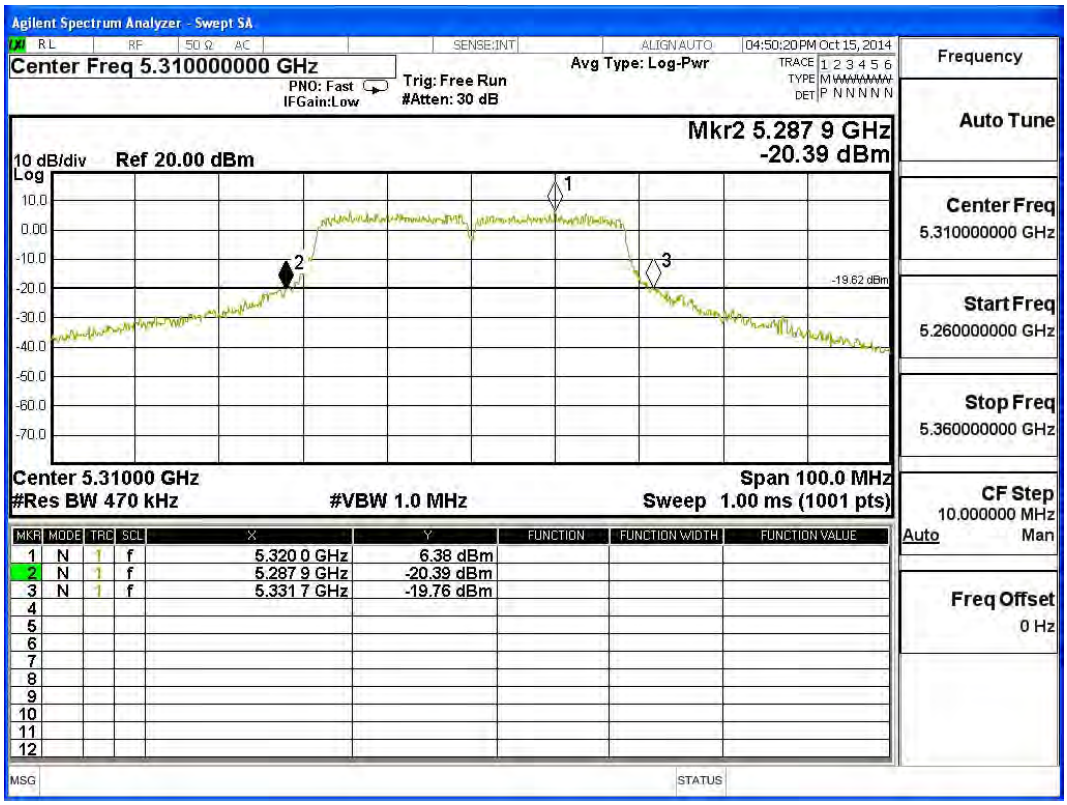
Channel 54: Chain B



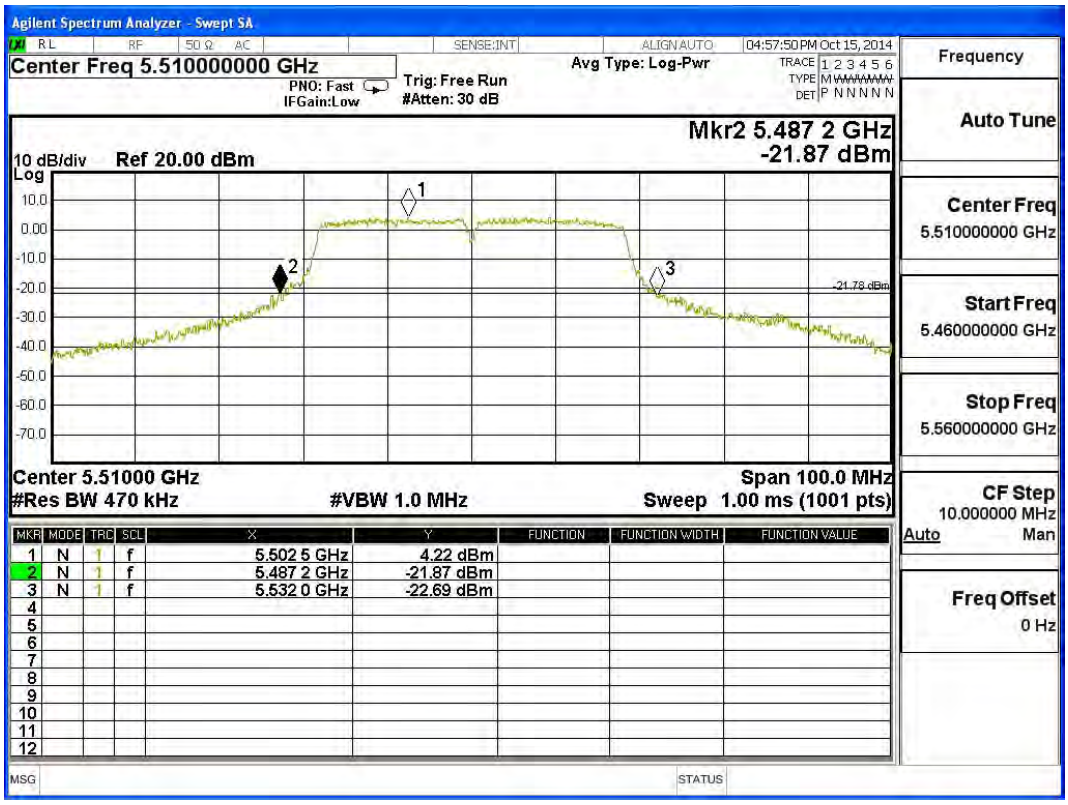
Channel 62: Chain A



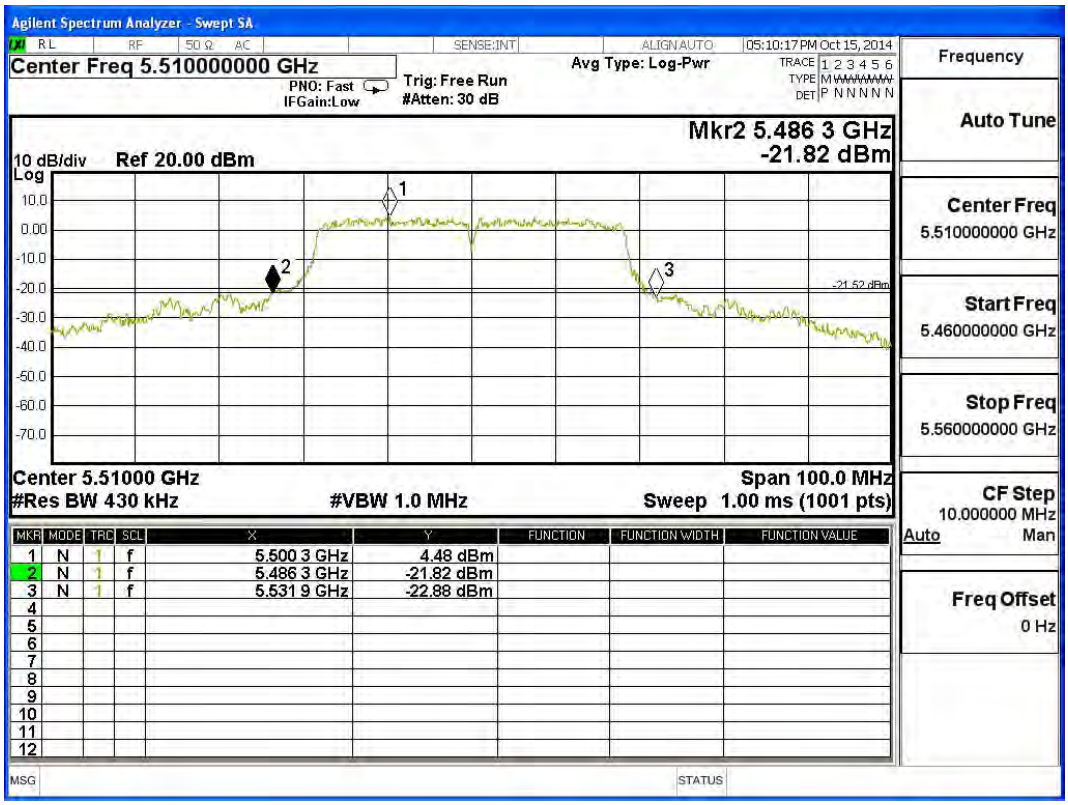
Channel 62: Chain B



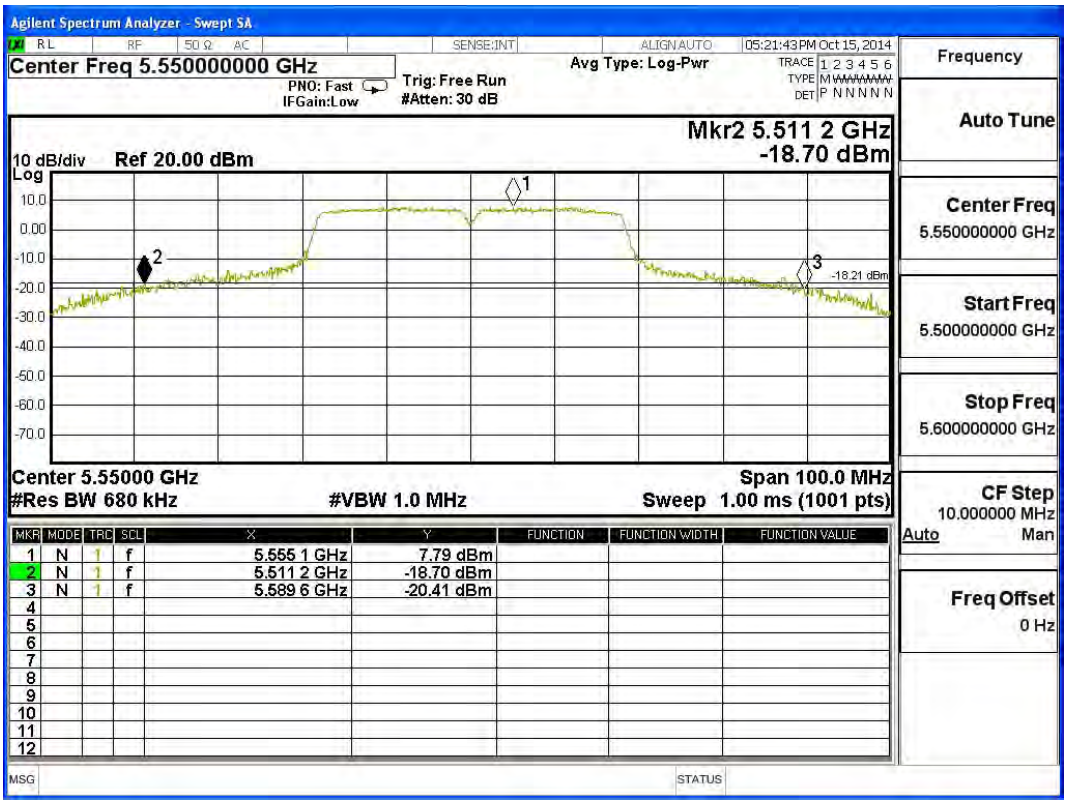
Channel 102: Chain A



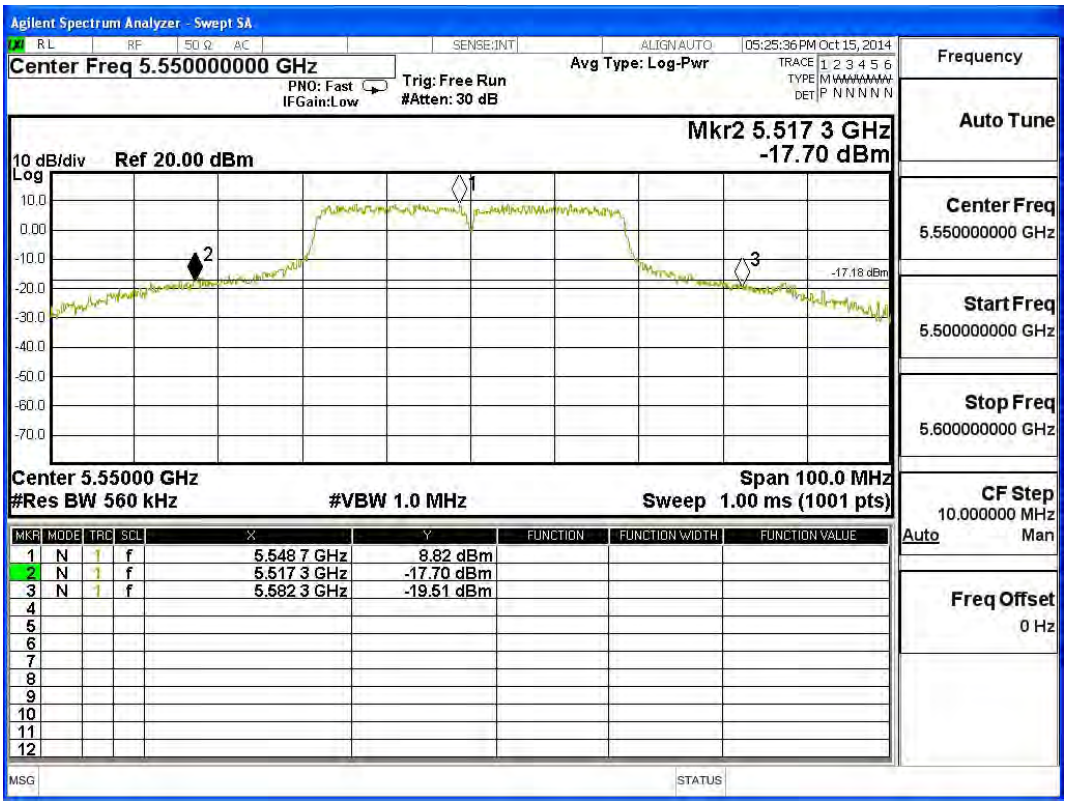
Channel 102: Chain B



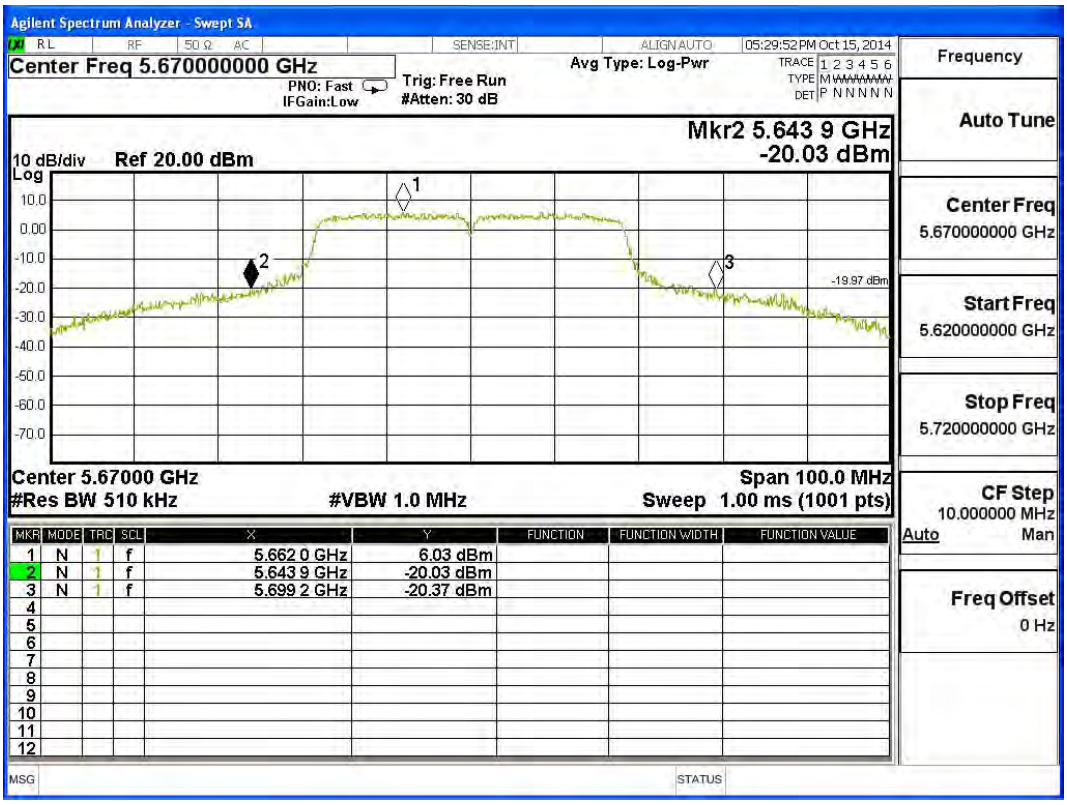
Channel 110: Chain A



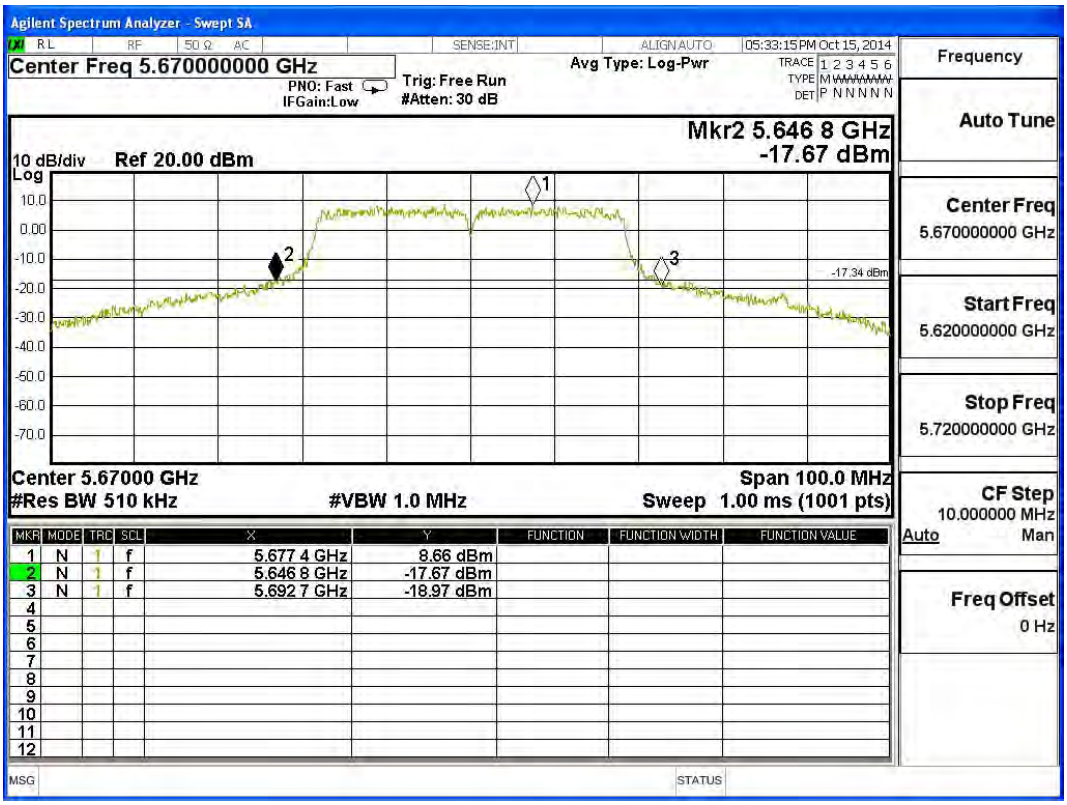
Channel 110: Chain B



Channel 134: Chain A



Channel 134: Chain B



Product : Wireless Access Point
Test Item : Maximum conducted output power
Test Site : No.3 OATS
Test Mode : Mode 5 Transmit (802.11ac-20BW-65Mbps)

Chain A

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	
		Measurement Level (dBm)								
144 (Band3)	5720	17.48	17.33	17.21	17.1	17.05	16.92	16.85	16.74	<24dBm
144 (Band4)	5720	11.95	11.86	11.74	11.65	11.53	11.42	11.38	11.3	<30dBm

Note: 1.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
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	
		Measurement Level (dBm)								
144 (Band3)	5510	17.78	17.66	17.57	17.5	17.43	17.38	17.29	17.21	<24dBm
144 (Band4)	5550	12.25	12.18	12.11	12.06	11.93	11.88	11.81	11.75	<30dBm

Note: 1.Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power measurement:

(Chain A+ B)

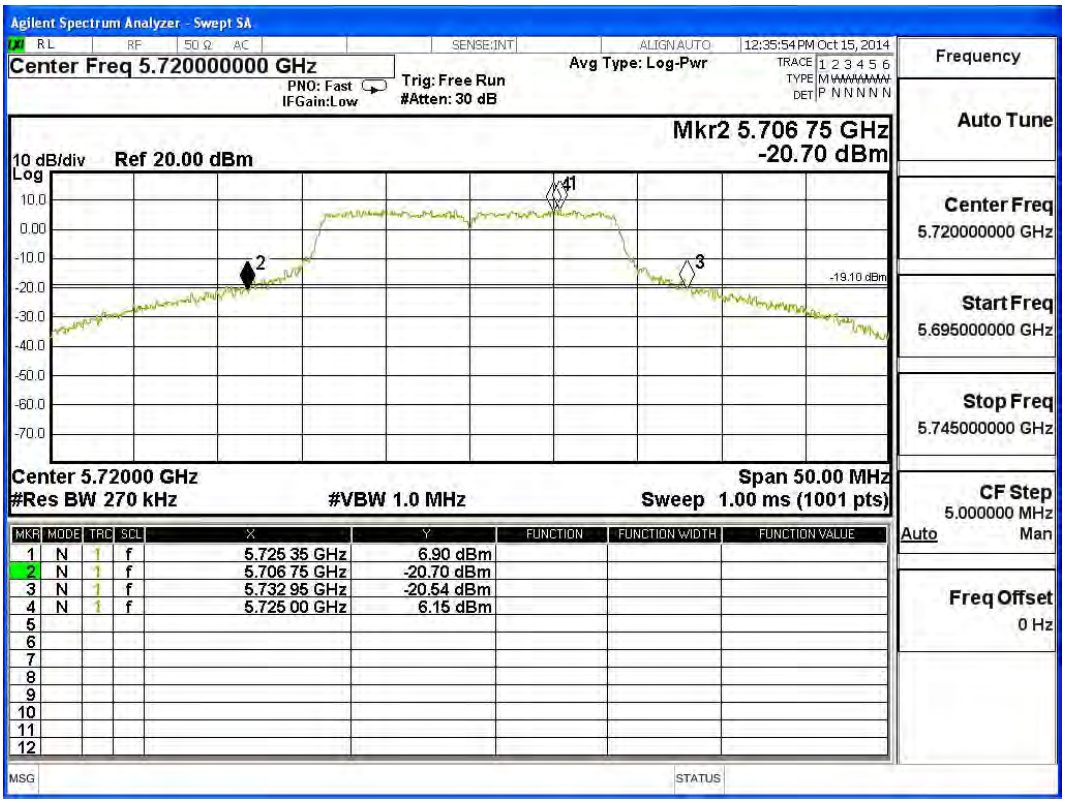
Channel Number	Frequency	26dB Bandwidth	Chain A Power	Chain B Power	Output Power	Output Power Limit	
	(MHz)	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	dBm+10log(BW)
144 (Band3)	5720	18.250	17.48	17.78	20.64	24	23.61
144 (Band4)	5720	7.800	11.95	12.25	15.11	30	19.92

Note:

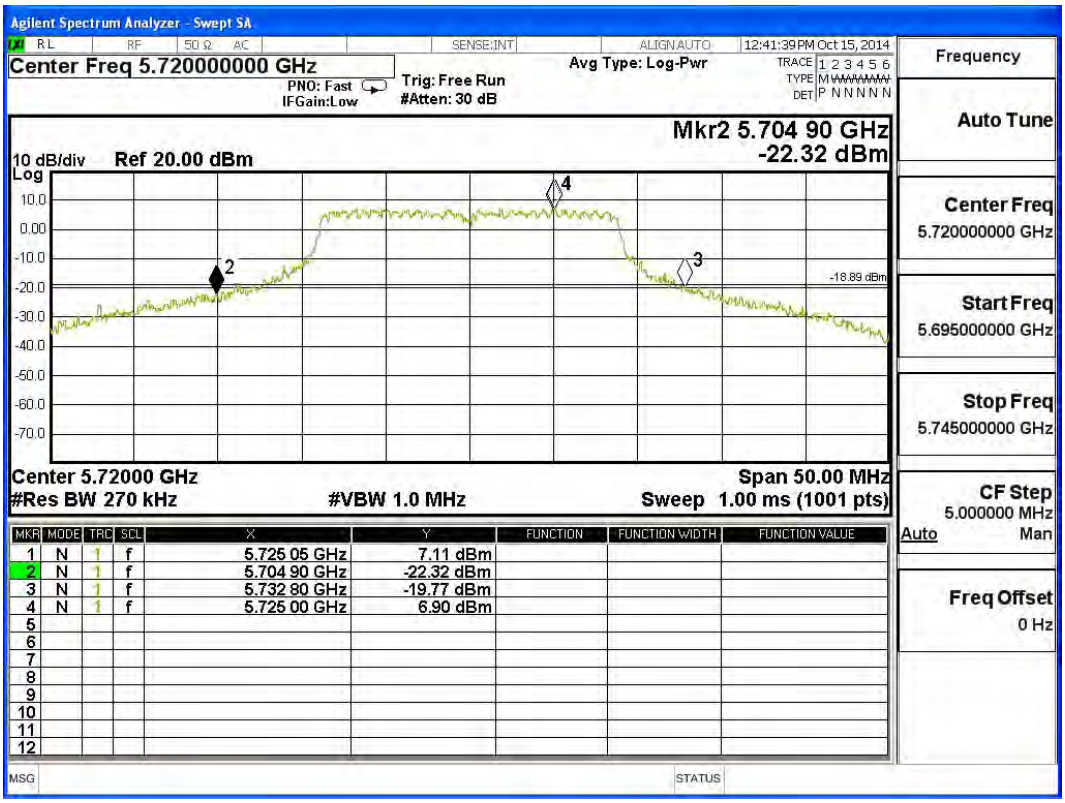
1. Power Output Value =Reading value on average power meter + cable loss
2. Output Power (dBm) = 10LOG (Chain A Power (mW) + Chain B Power (mW))
3. 26 dB Bandwidth is the bandwidth of chain A or chain B whichever is less bandwidth, output power limitation is more stringent.

26dBc Occupied Bandwidth:

Channel 144: Chain A

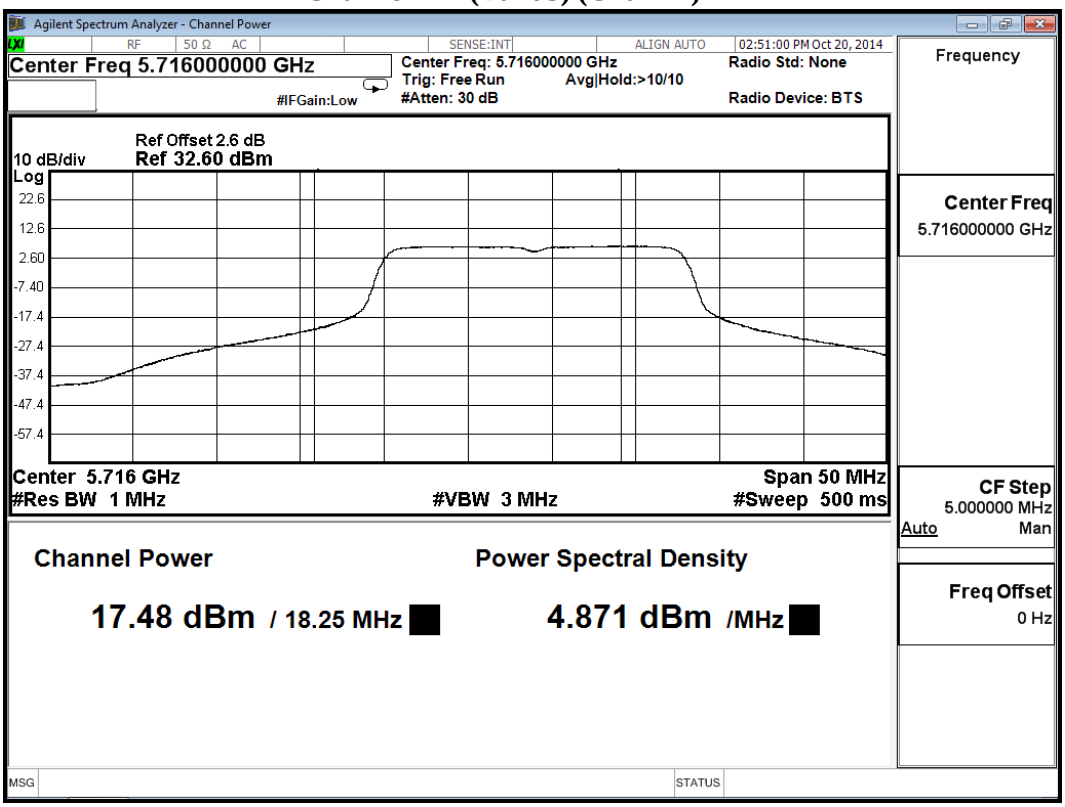


Channel 144: Chain B

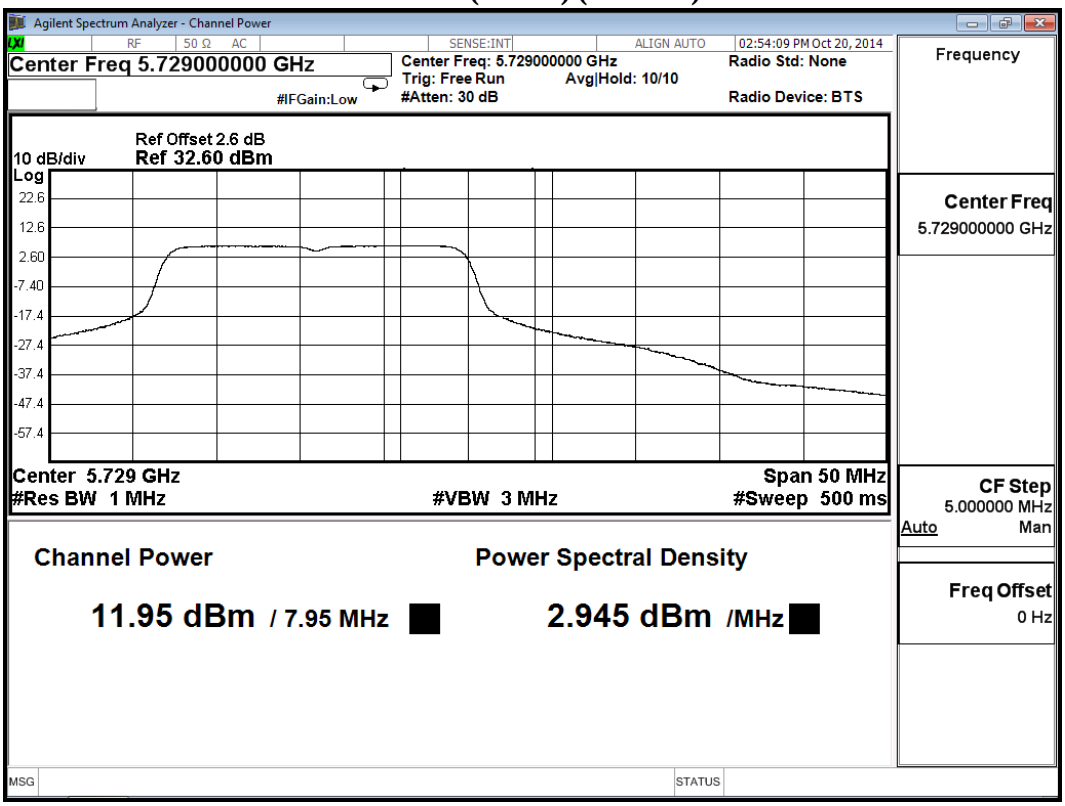


Maximum conducted output power:

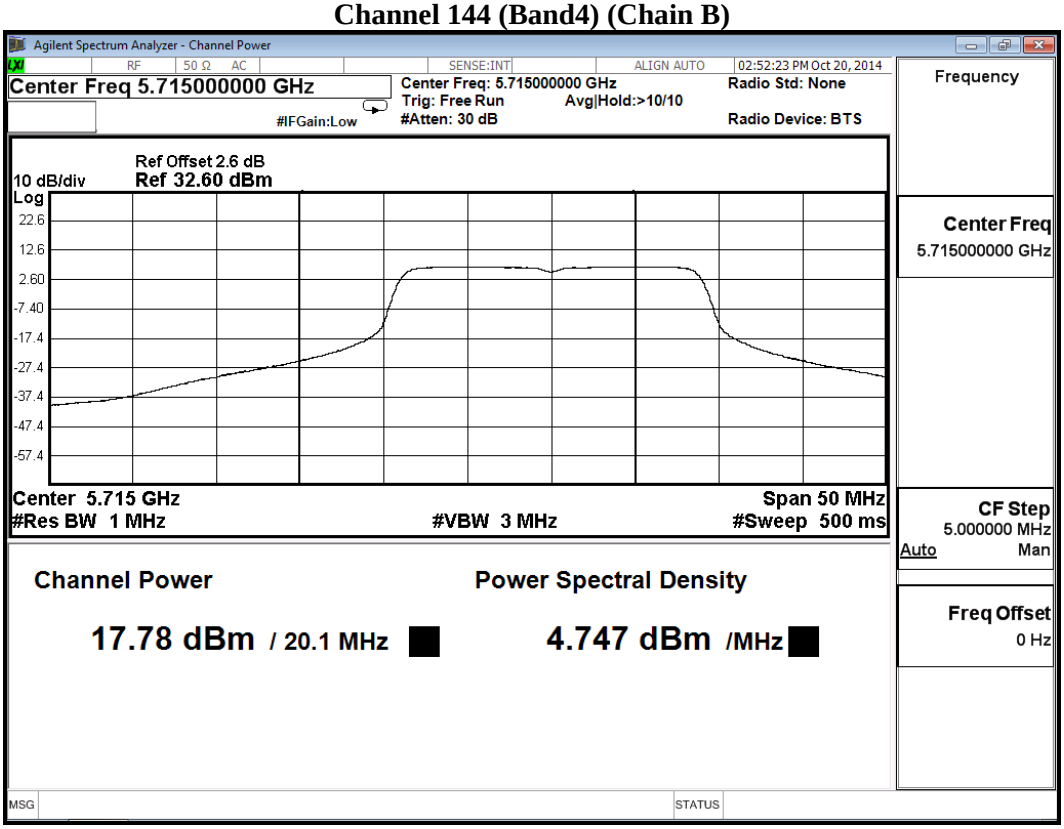
Channel 144 (Band3) (Chain A)



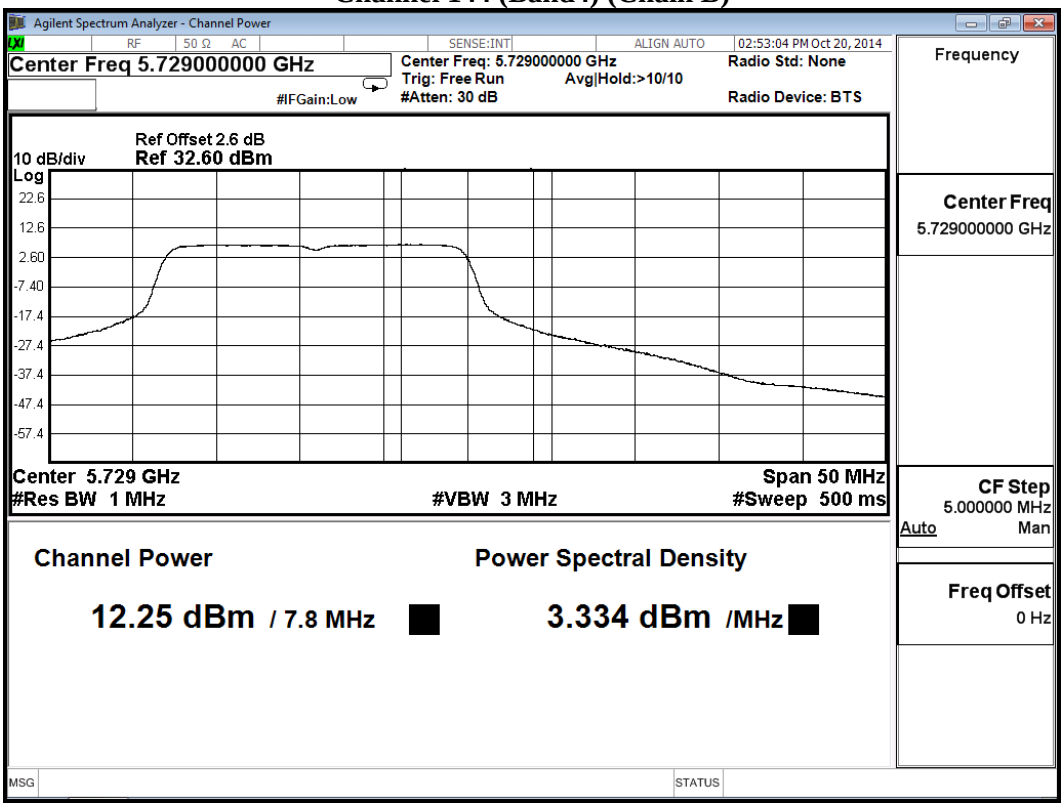
Channel 144 (Band3) (Chain A)



Channel 144 (Band4) (Chain B)



Channel 144 (Band4) (Chain B)



Product : Wireless Access Point
Test Item : Maximum conducted output power
Test Site : No.3 OATS
Test Mode : Mode 6 Transmit (802.11ac-40BW-65Mbps)

Chain A

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
142(Band3)	5710	17.12	17.08	17.01	16.95	16.82	16.79	16.71	16.62	16.58	16.51	<24dBm
142(Band4)	5710	7.51	7.45	7.41	7.29	7.13	7.08	6.92	6.86	6.77	6.61	<30dBm

Note: 1.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
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
142(Band3)	5710	18.02	17.96	17.82	17.65	17.53	17.42	17.38	17.21	17.11	17.05	<24dBm
142(Band4)	5710	8.01	7.9	7.88	7.79	7.71	7.62	7.53	7.48	7.42	7.33	<30dBm

Note: 1.Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power measurement:

(Chain A+ B)

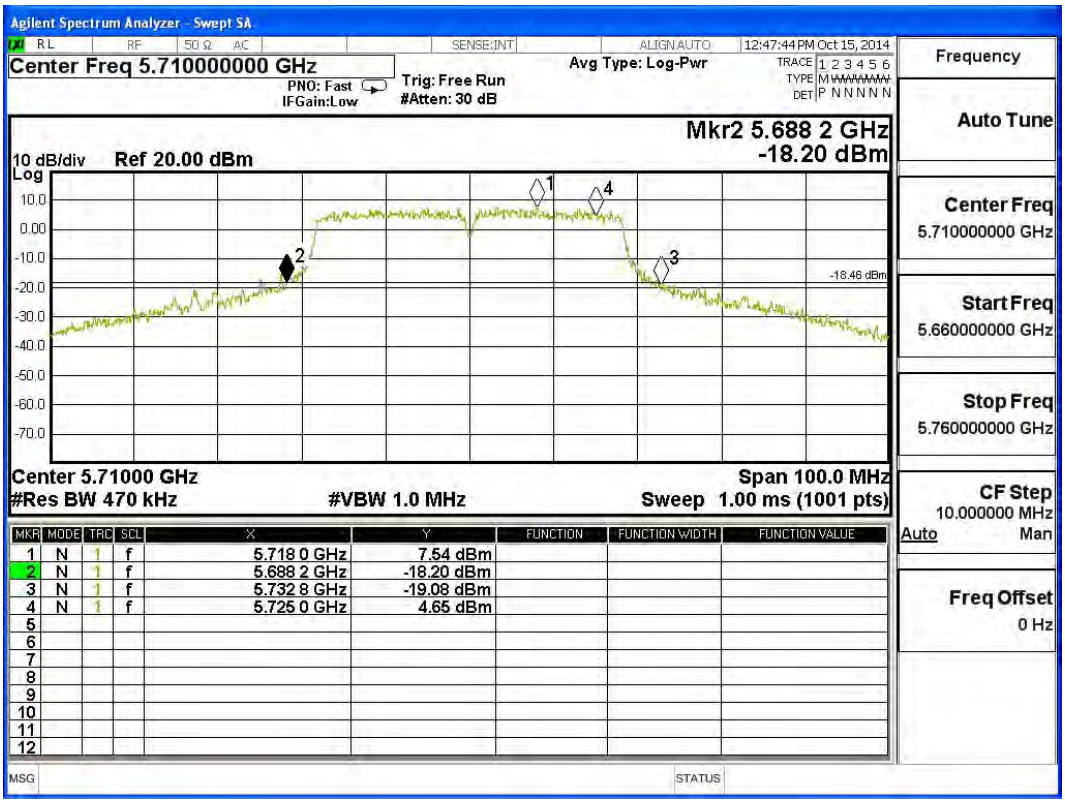
Channel Number	Frequency	26dB Bandwidth	Chain A Power	Chain B Power	Output Power	Output Power Limit	
	(MHz)	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	dBm+10log(BW)
142(Band3)	5710	36.800	17.12	18.02	20.60	24	26.66
142(Band4)	5710	7.800	7.51	8.01	18.18	30	19.92

Note:

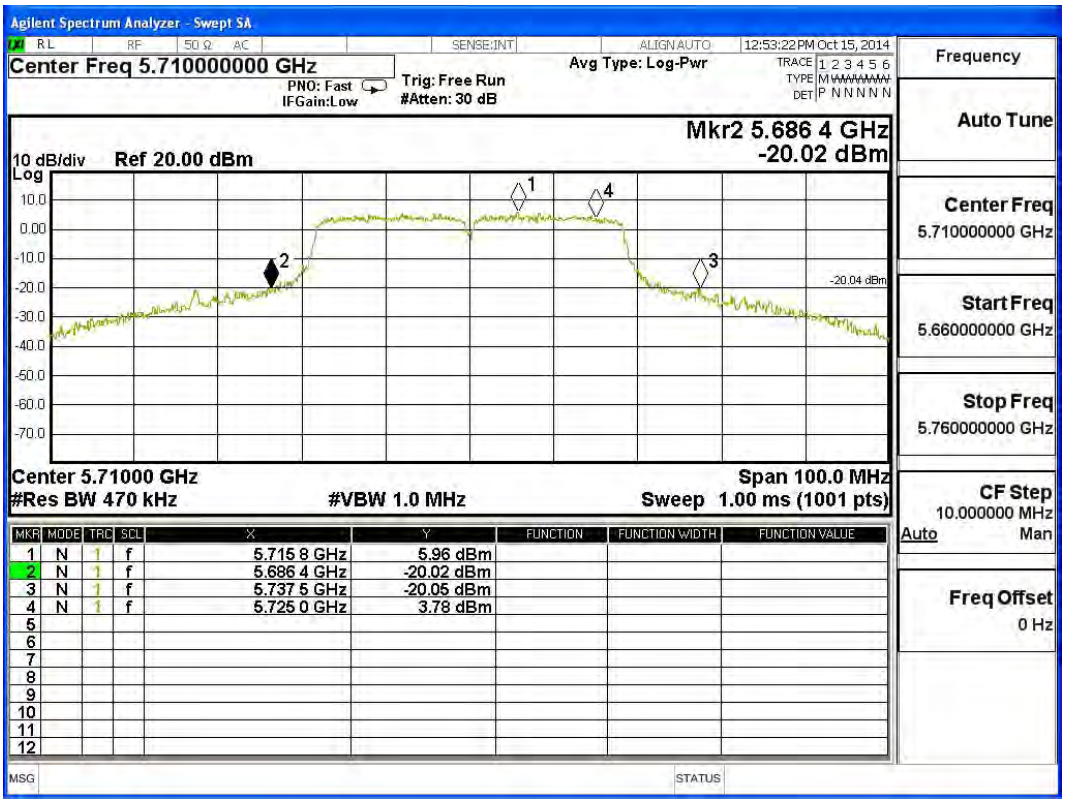
1. Power Output Value =Reading value on average power meter + cable loss
2. Output Power (dBm) = 10LOG (Chain A Power (mW)+ Chain B Power (mW))
3. 26 dB Bandwidth is the bandwidth of chain A or chain B whichever is less bandwidth, output power limitation is more stringent.

26dBc Occupied Bandwidth:

Channel 142: Chain A

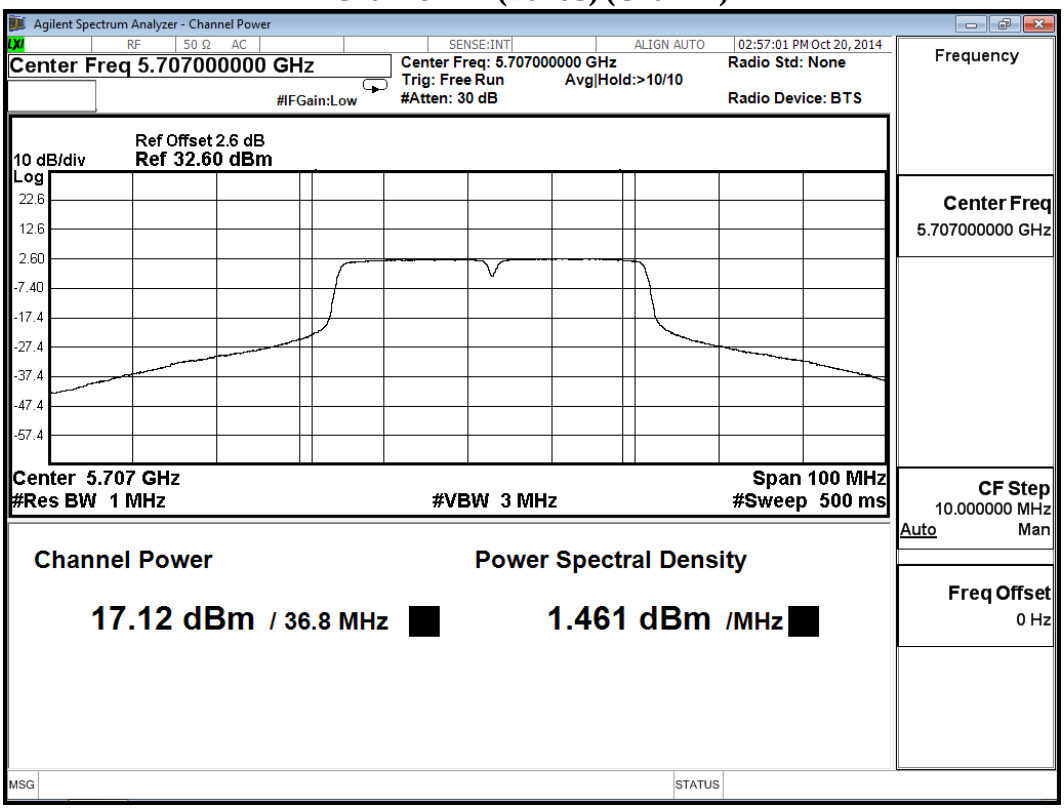


Channel 142: Chain B

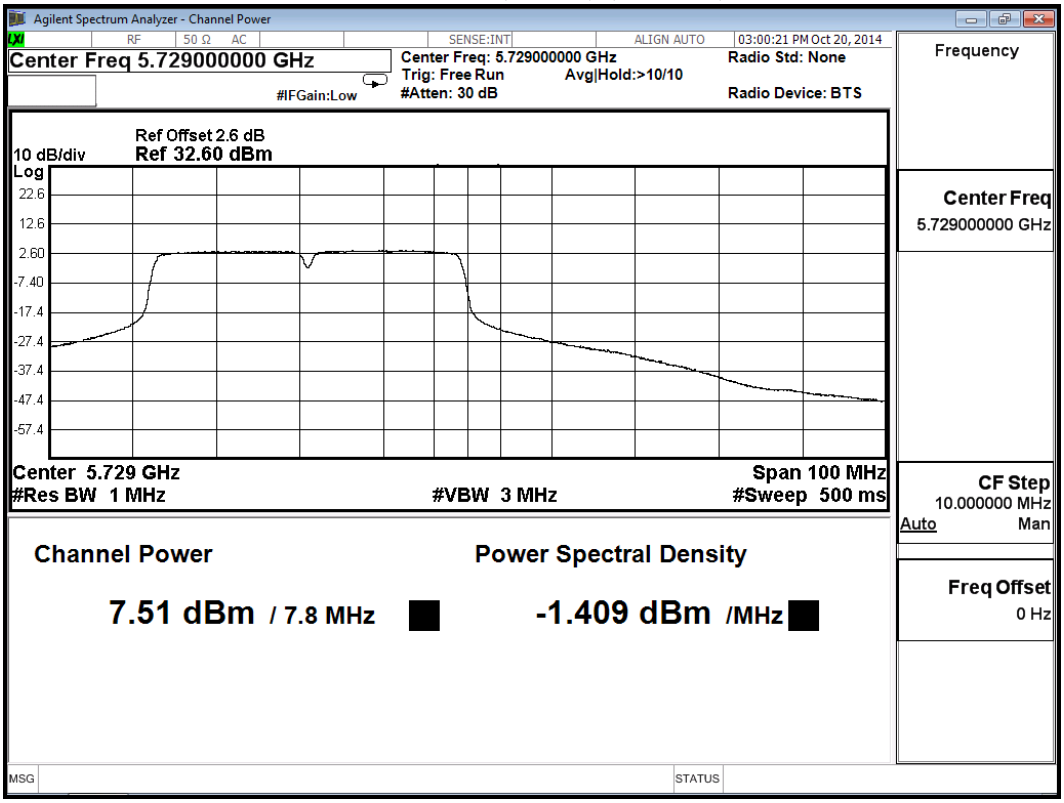


Maximum conducted output power:

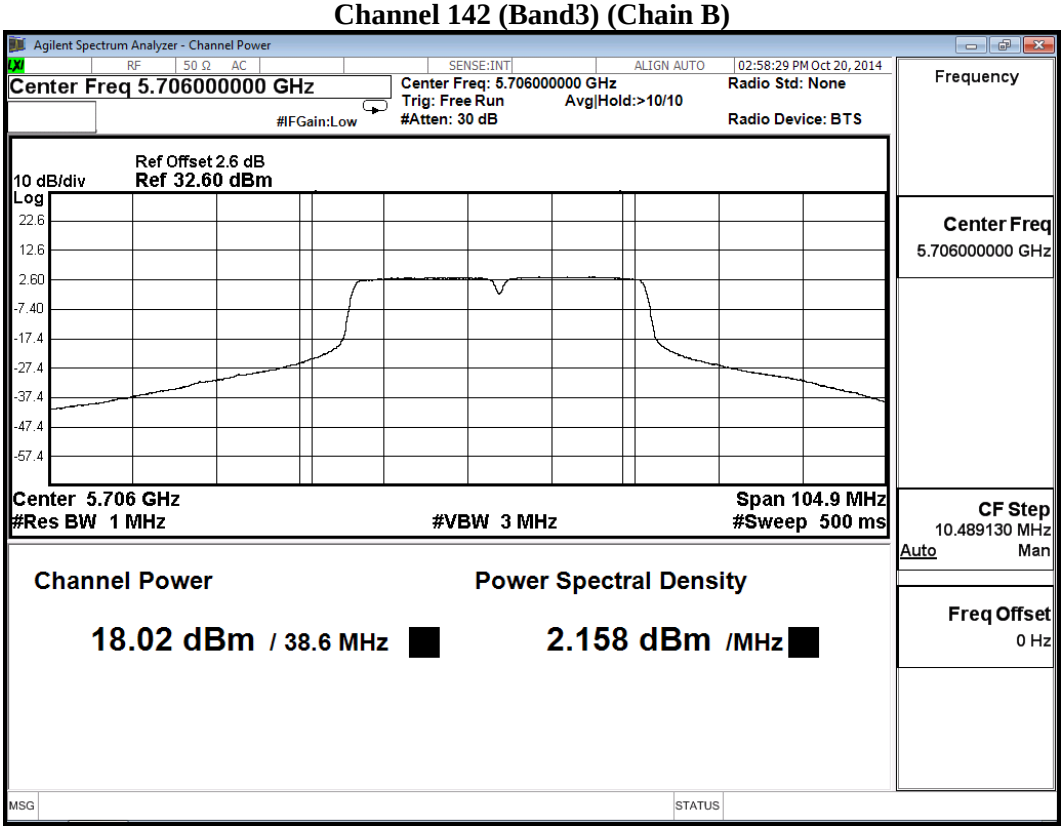
Channel 142 (Band3) (Chain A)



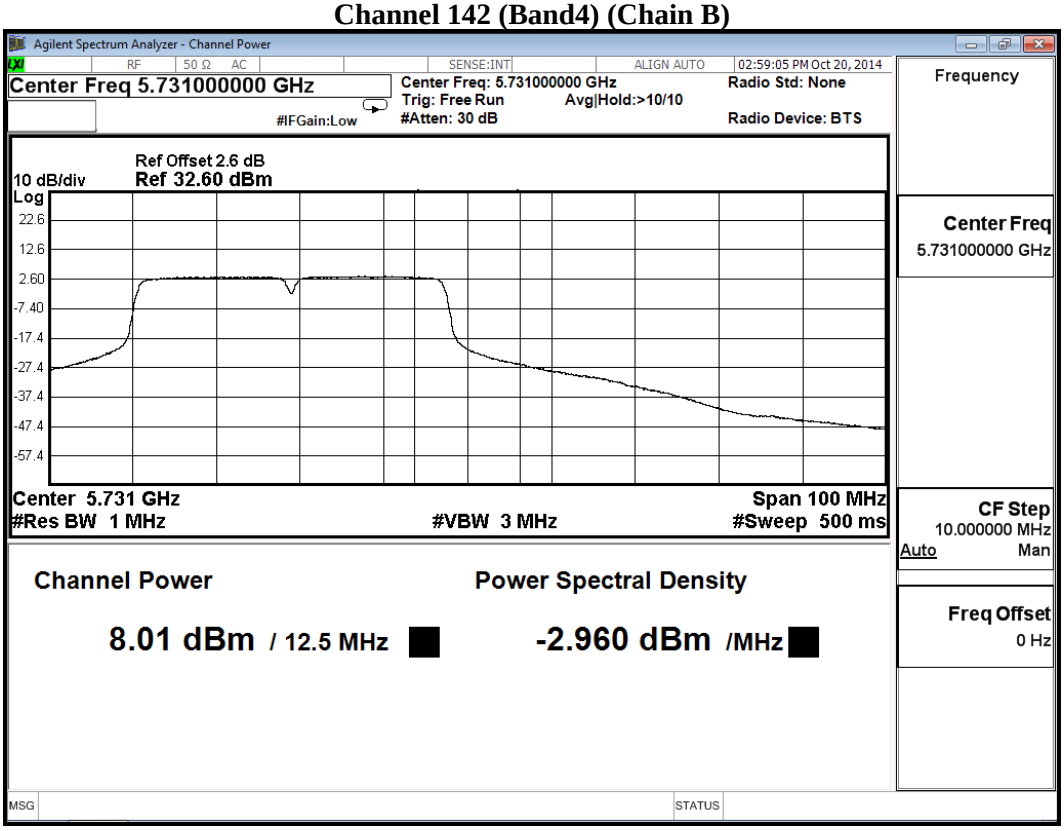
Channel 142 (Band4) (Chain A)



Channel 142 (Band3) (Chain B)



Channel 142 (Band4) (Chain B)



Product : Wireless Access Point
Test Item : Maximum conducted output power
Test Site : No.3 OATS
Test Mode : Mode 4 Transmit (802.11ac-80BW-65Mbps)

Chain A

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
58	5290	13.11	13.05	12.96	12.88	12.74	12.63	12.54	12.47	12.32	12.29	<17dBm
106	5530	14.58	14.44	14.38	14.31	14.25	14.17	14.09	13.93	13.85	13.79	<24dBm
138(Band3)	5690	16.7	16.66	16.59	16.47	16.34	16.29	16.18	16.09	15.99	15.89	<24dBm
138(Band4)	5690	2.58	2.49	2.4	2.36	2.29	2.21	2.13	2.08	1.99	1.87	<30dBm

Note: 1.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
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
58	5290	13.47	13.39	13.31	13.22	13.17	13.05	12.92	12.87	12.69	12.57	<17dBm
106	5530	14.58	14.43	14.39	14.31	14.25	14.17	14.09	13.98	13.82	13.77	<24dBm
138(Band3)	5690	17.42	17.32	17.28	17.19	17.11	17.05	16.89	16.72	16.68	16.5	<24dBm
138(Band4)	5690	2.88	2.71	2.6	2.58	2.43	2.37	2.29	2.16	2.11	2.03	<30dBm

Note: 1.Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power measurement:

(Chain A+ B)

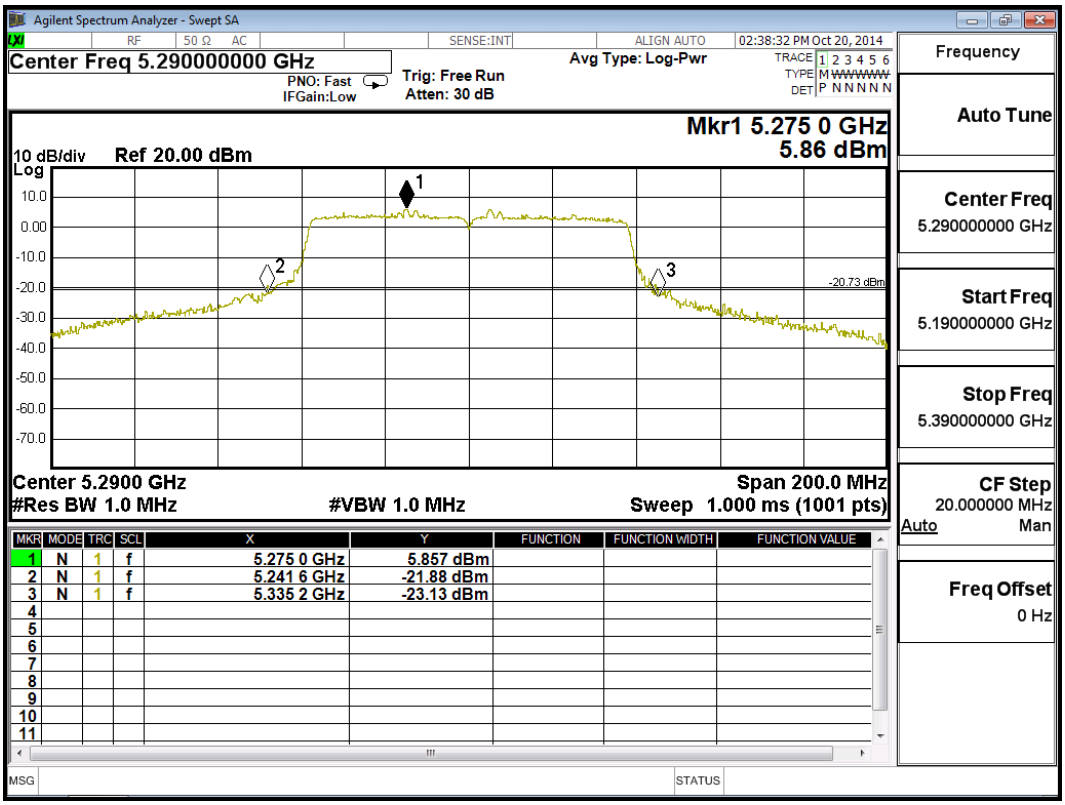
Channel Number	Frequency	26dB Bandwidth	Chain A Power	Chain B Power	Output Power	Output Power Limit	
	(MHz)	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	dBm+10log(BW)
58	5290	92.000	13.11	13.47	16.30	17	30.64
106	5530	83.800	14.58	14.58	17.59	24	30.23
138(Band3)	5690	78.200	16.70	17.42	20.09	24	29.93
138(Band4)	5690	11.400	2.58	2.88	5.74	30	27.57

Note:

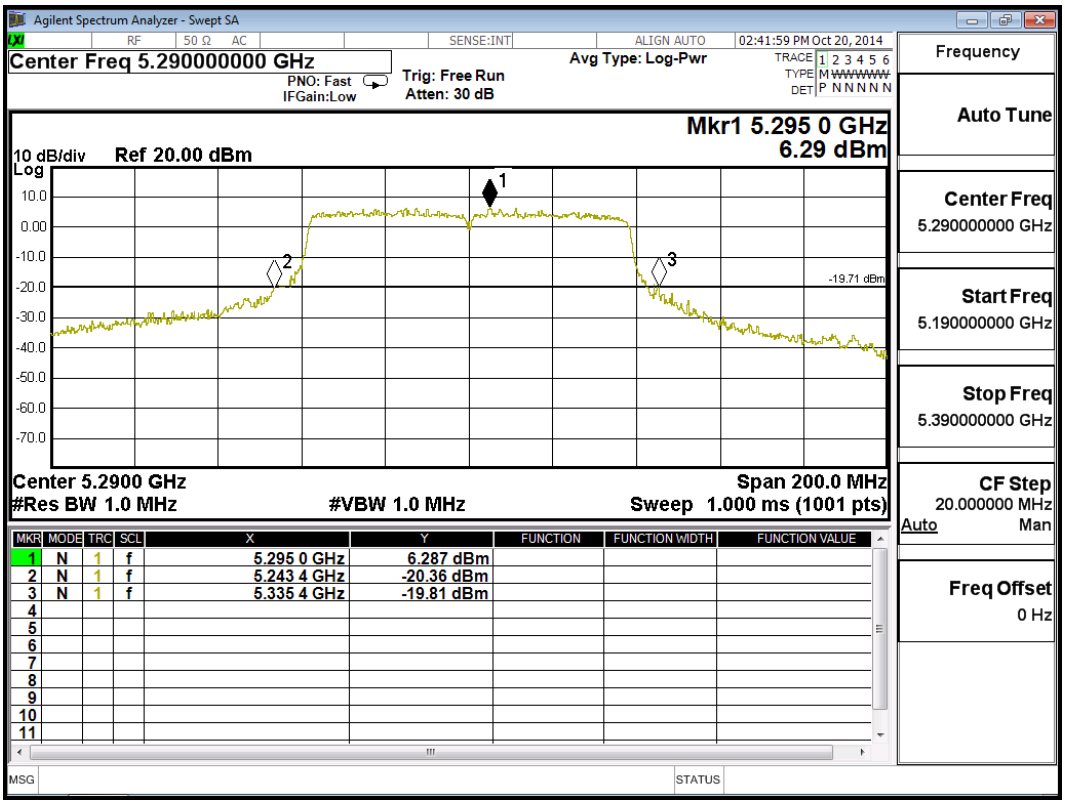
1. Power Output Value =Reading value on average power meter + cable loss
2. Output Power (dBm) = 10LOG (Chain A Power (mW) + Chain B Power (mW))
3. 26 dB Bandwidth is the bandwidth of chain A or chain B whichever is less bandwidth, output power limitation is more stringent.

26dBc Occupied Bandwidth:

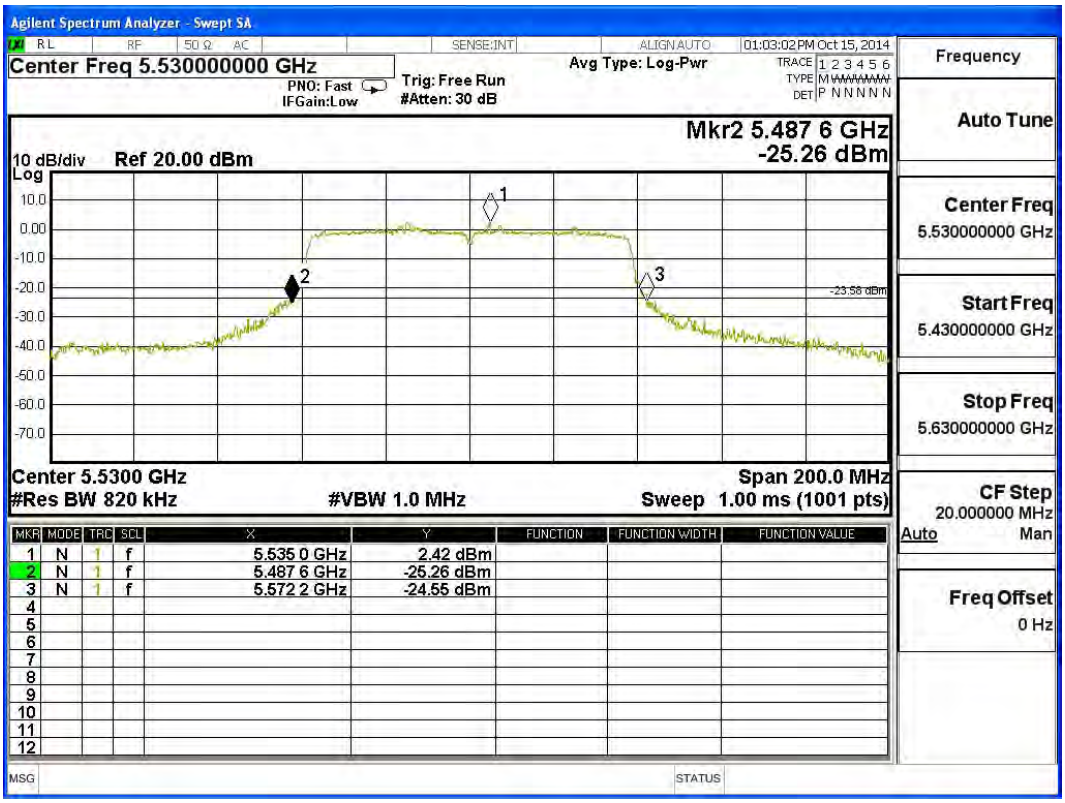
Channel 58: Chain A



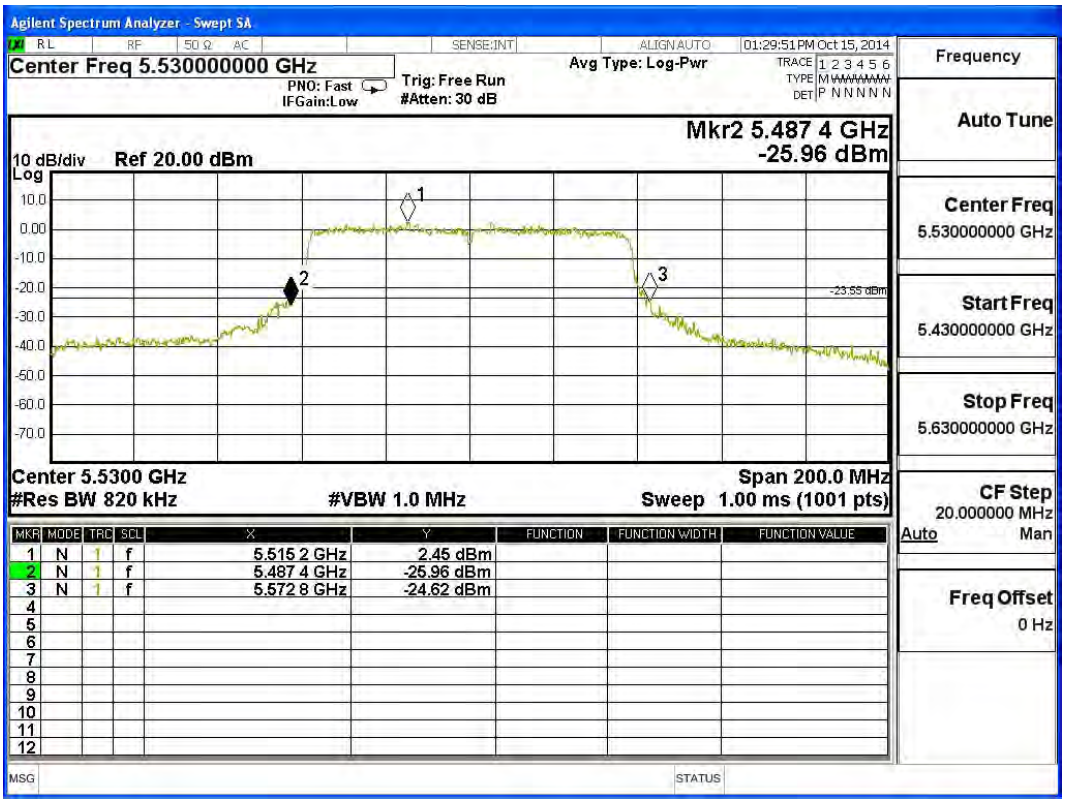
Channel 58: Chain B



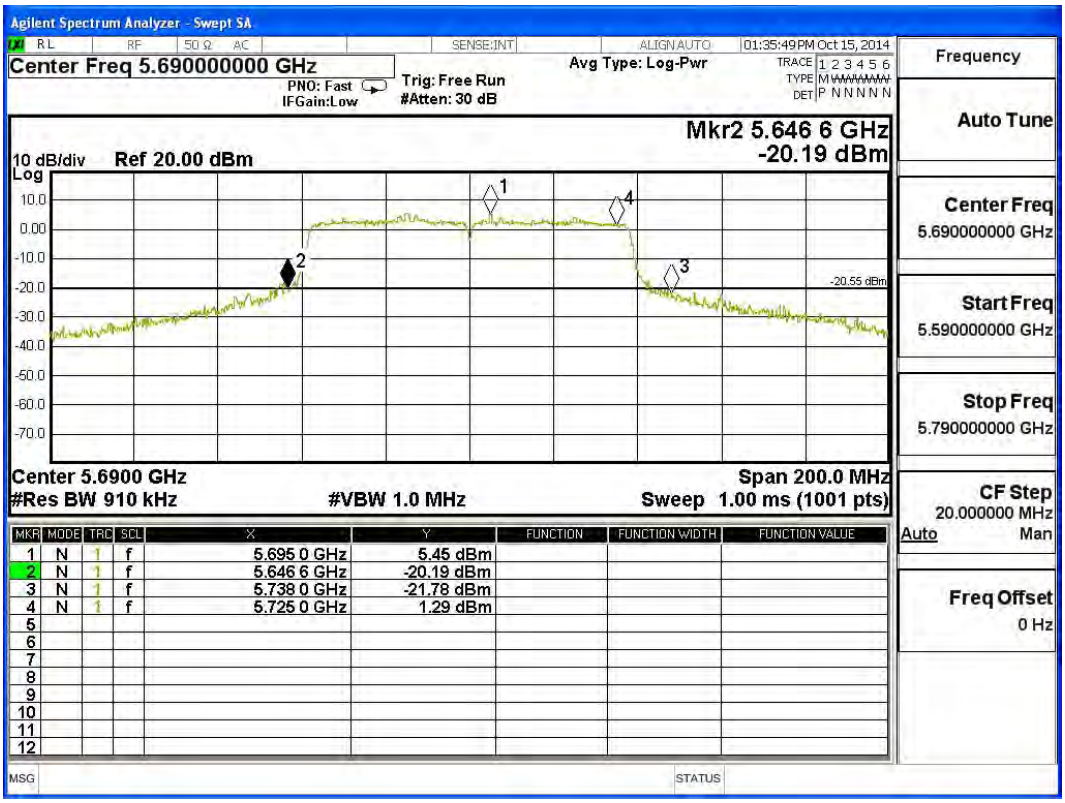
Channel 106: Chain A



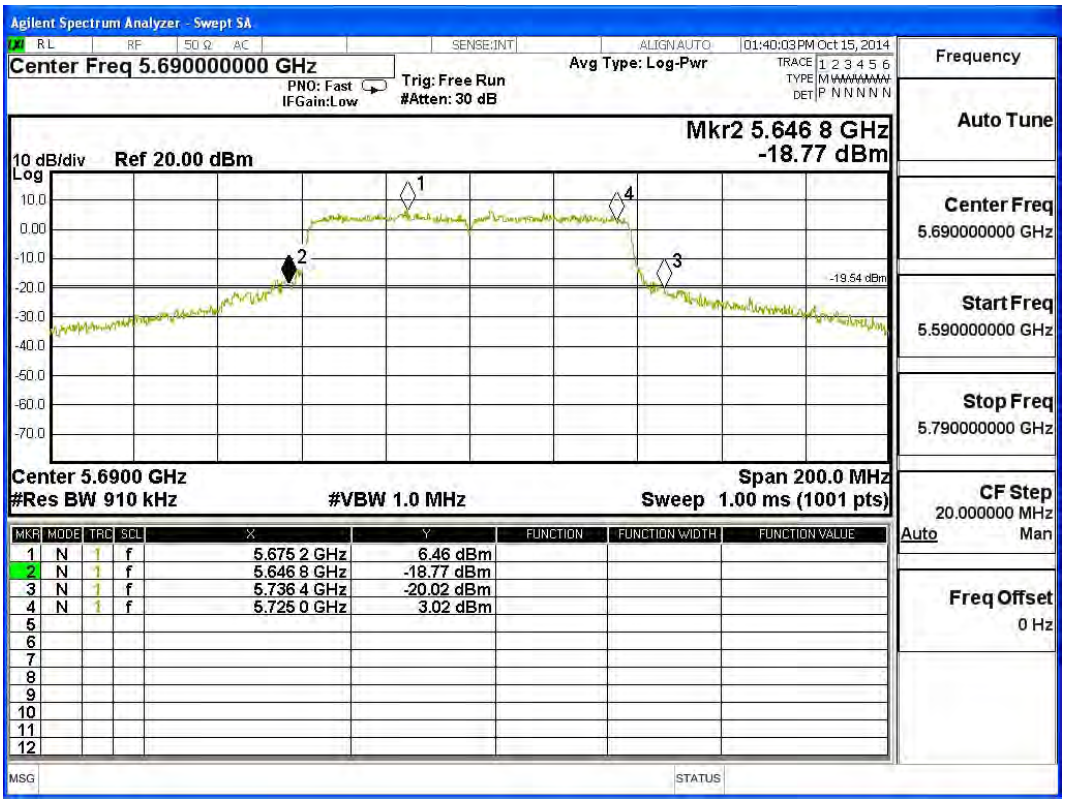
Channel 106: Chain B



Channel 138: Chain A

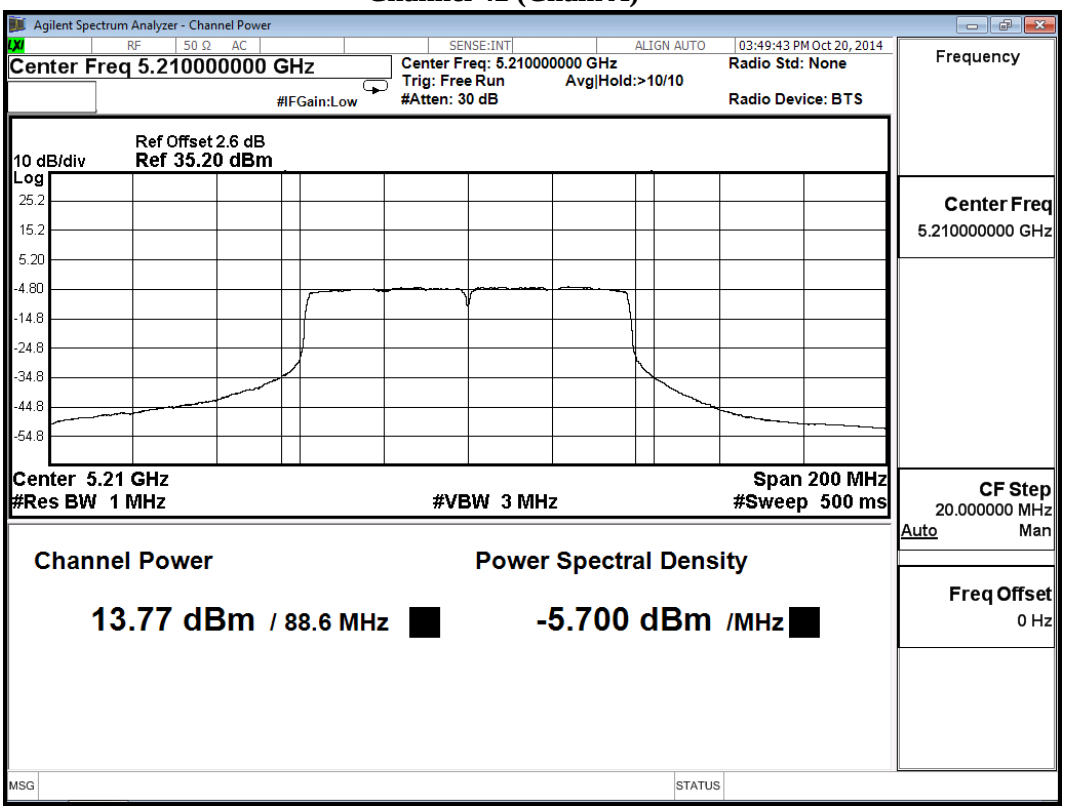


Channel 138: Chain B

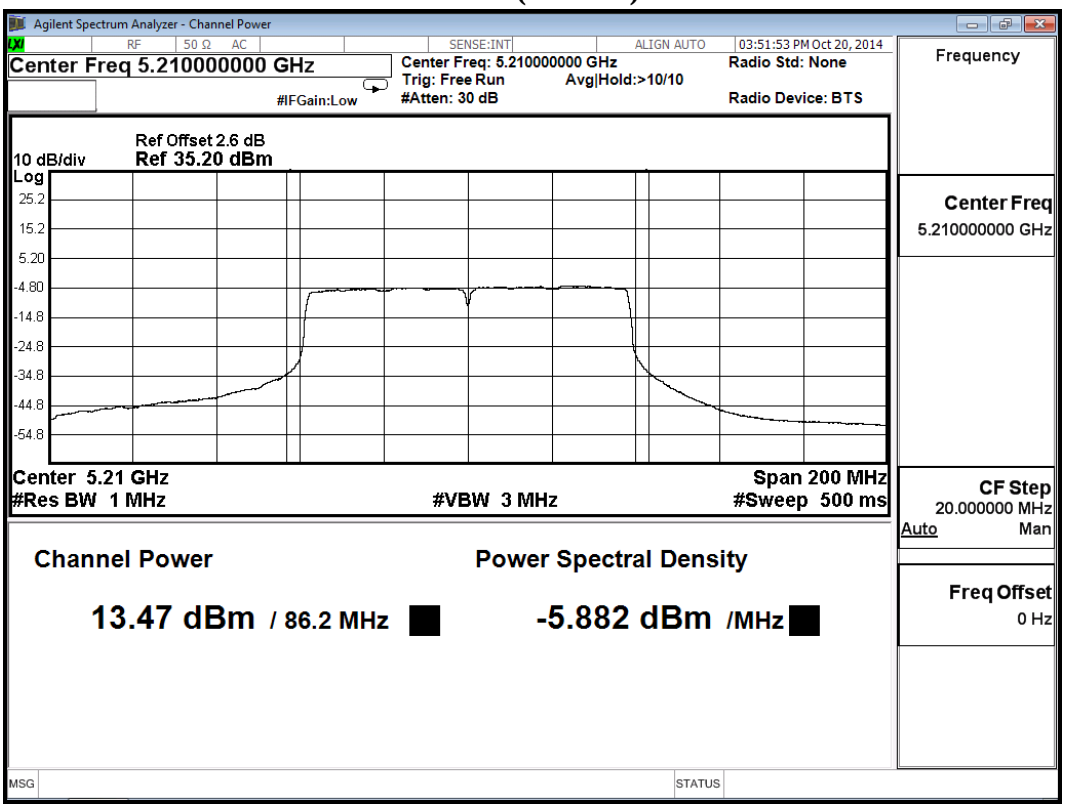


Maximum conducted output power:

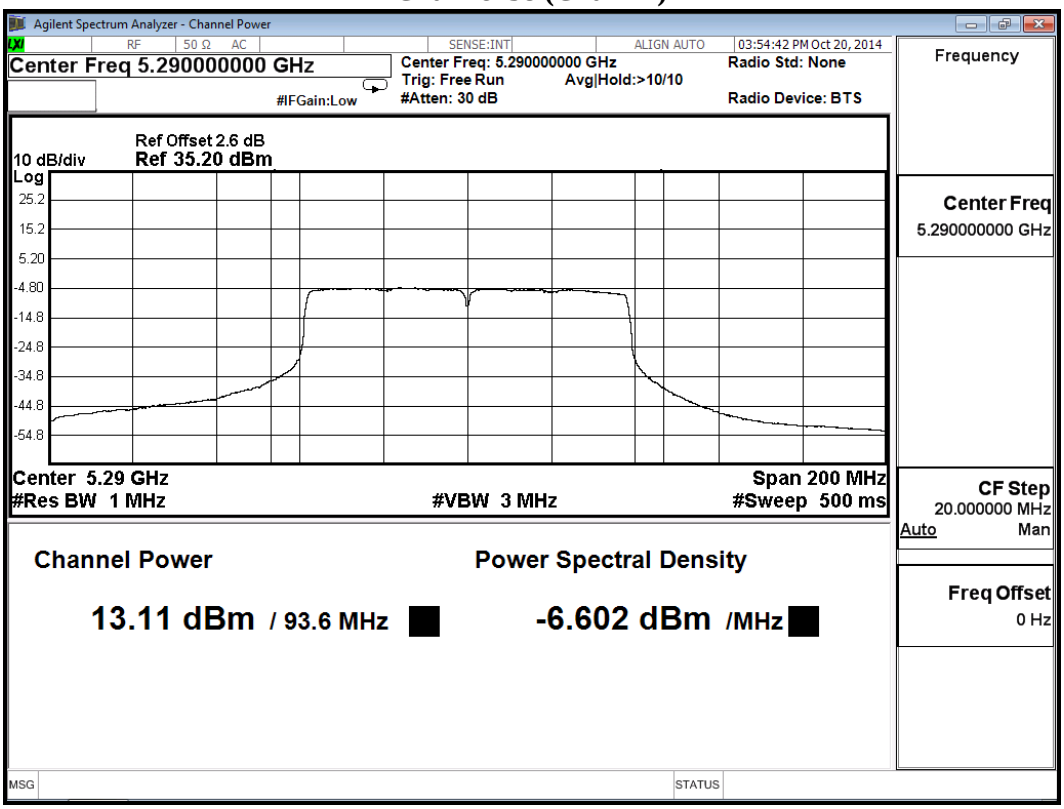
Channel 42 (Chain A)



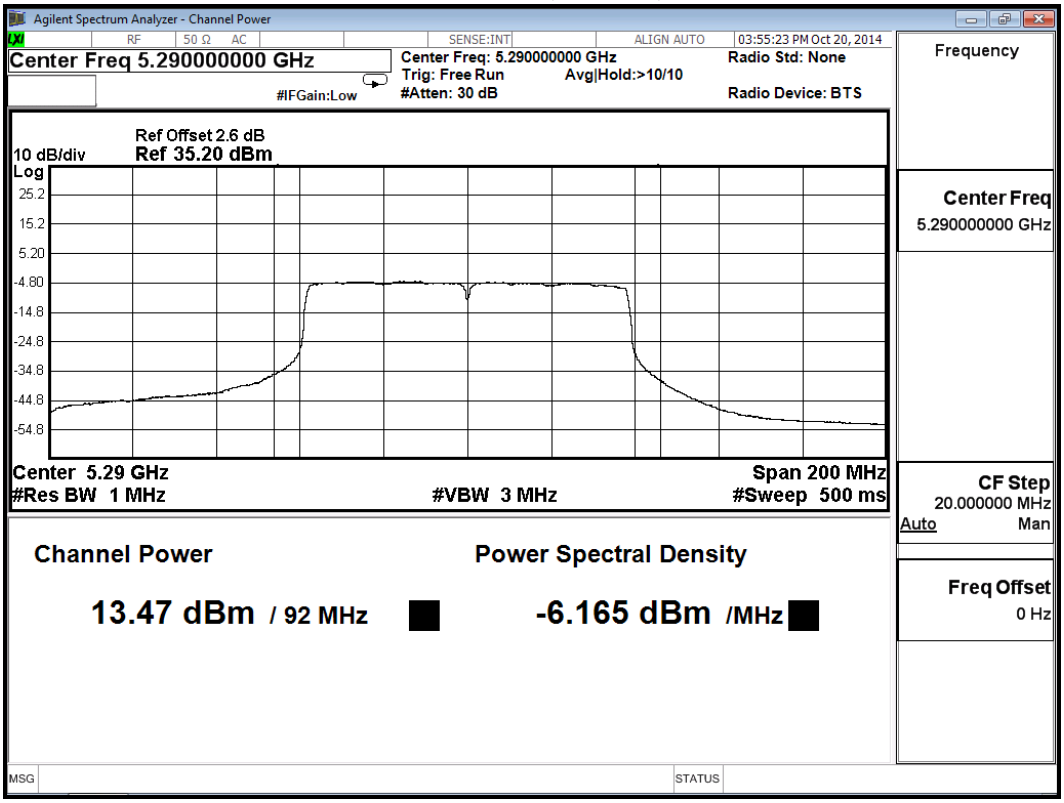
Channel 42 (Chain B)



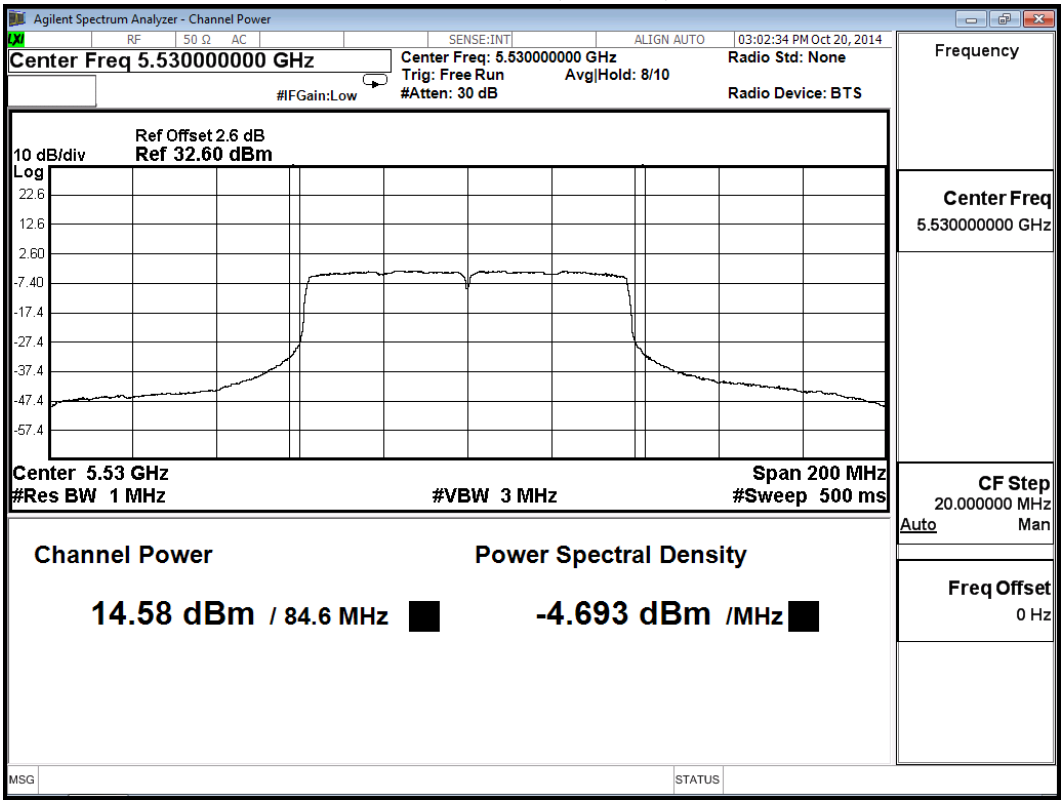
Channel 58 (Chain A)



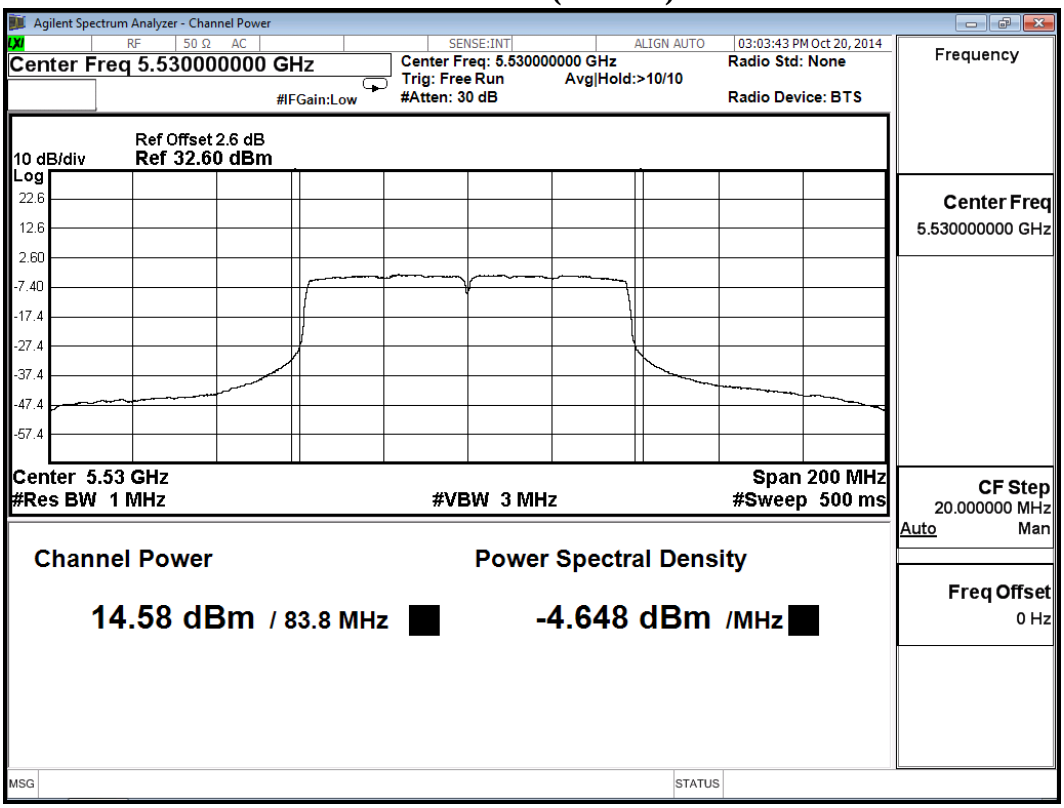
Channel 58 (Chain B)



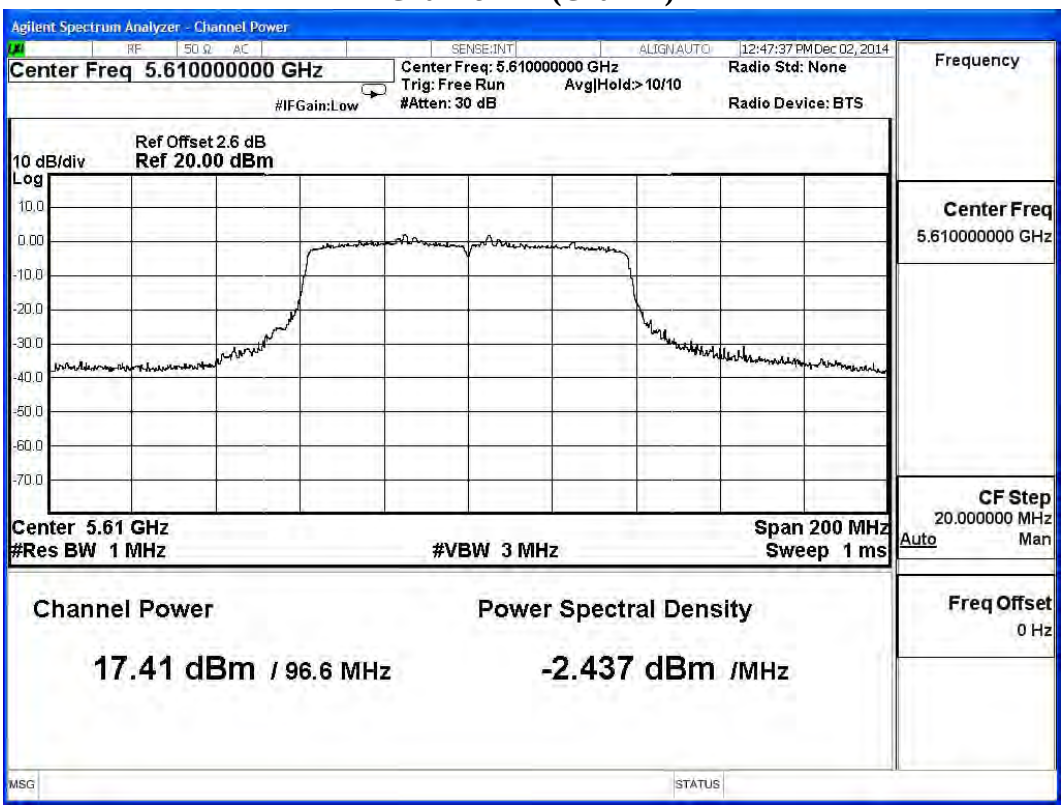
Channel 106 (Chain A)



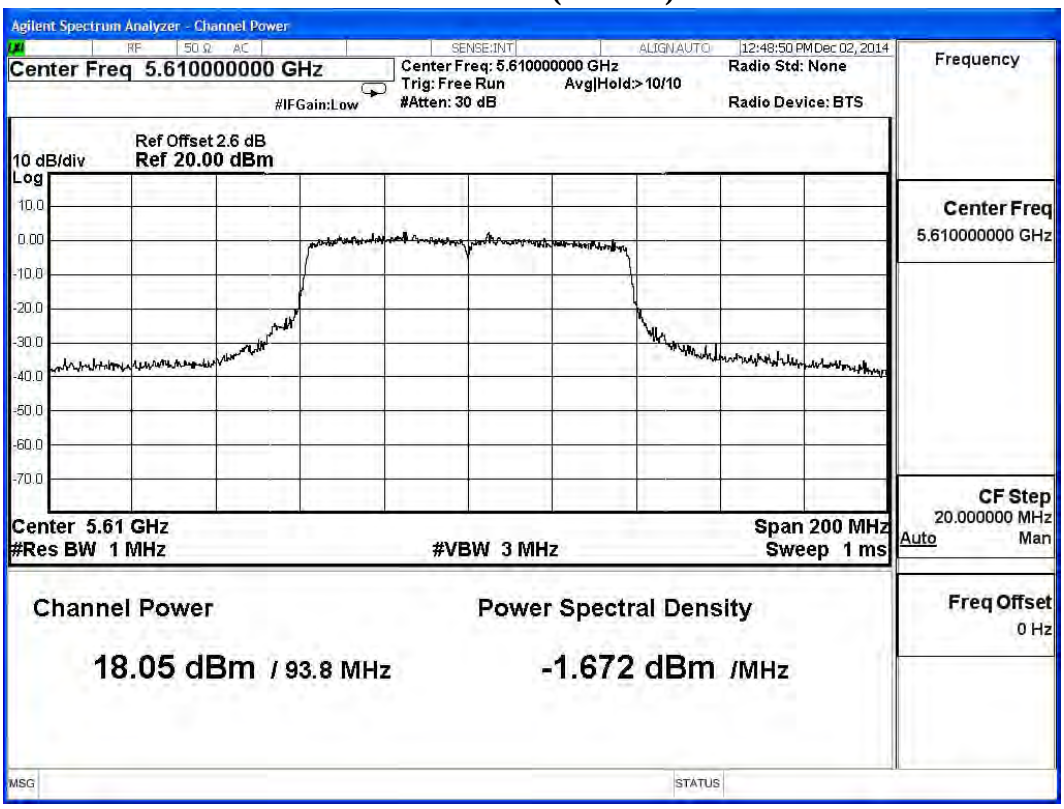
Channel 106 (Chain B)



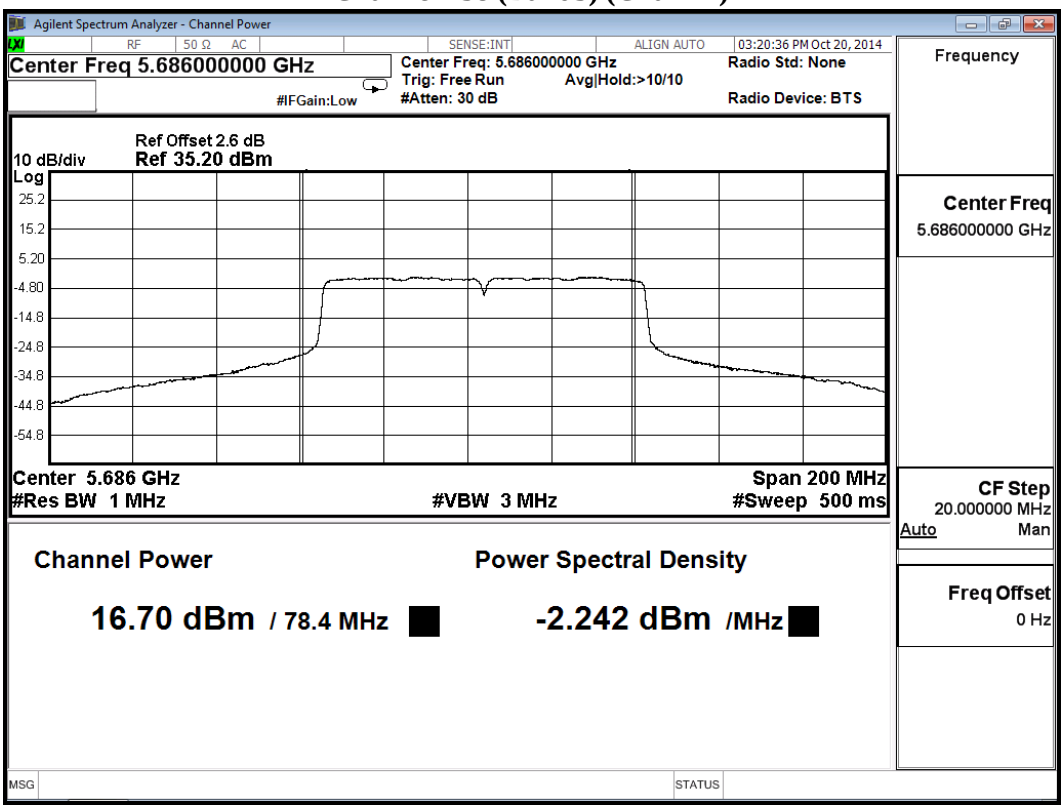
Channel 122 (Chain A)



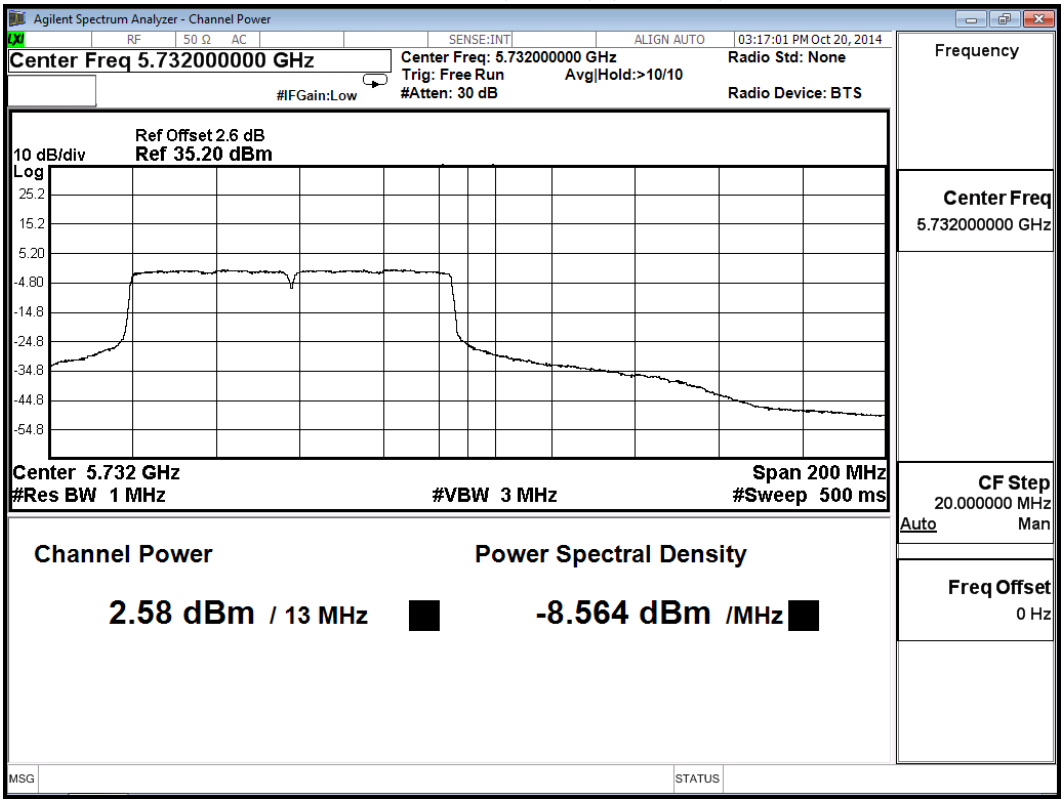
Channel 122 (Chain B)



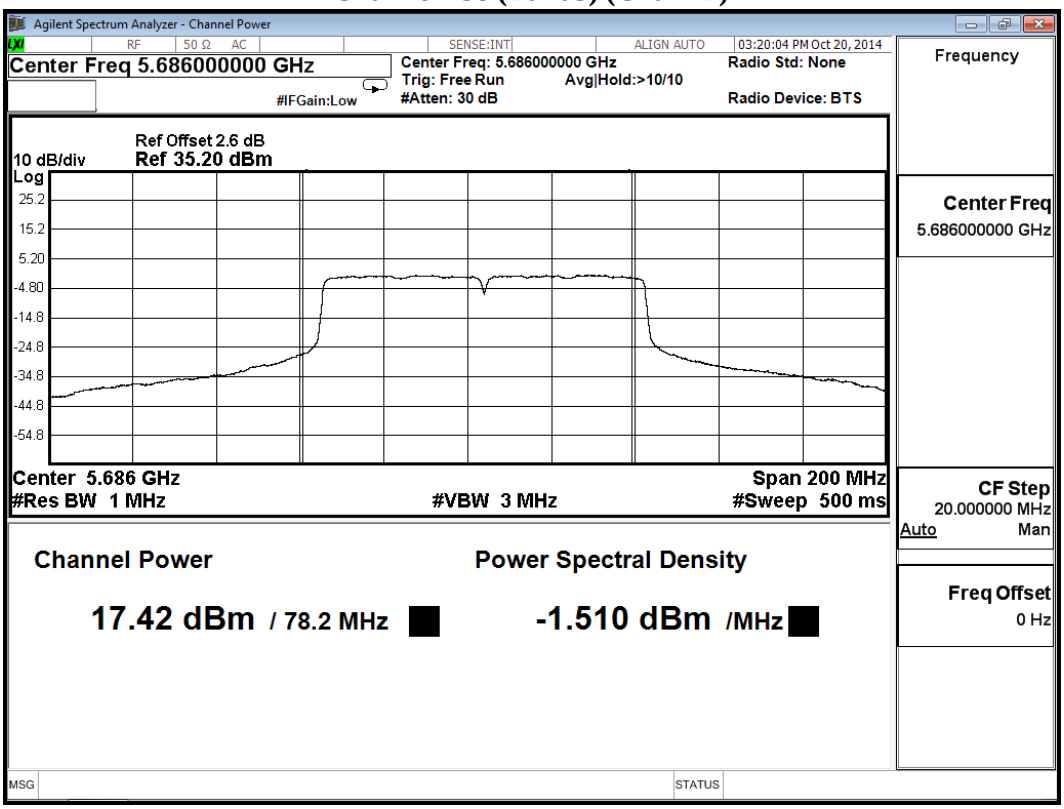
Channel 138 (Band3) (Chain A)



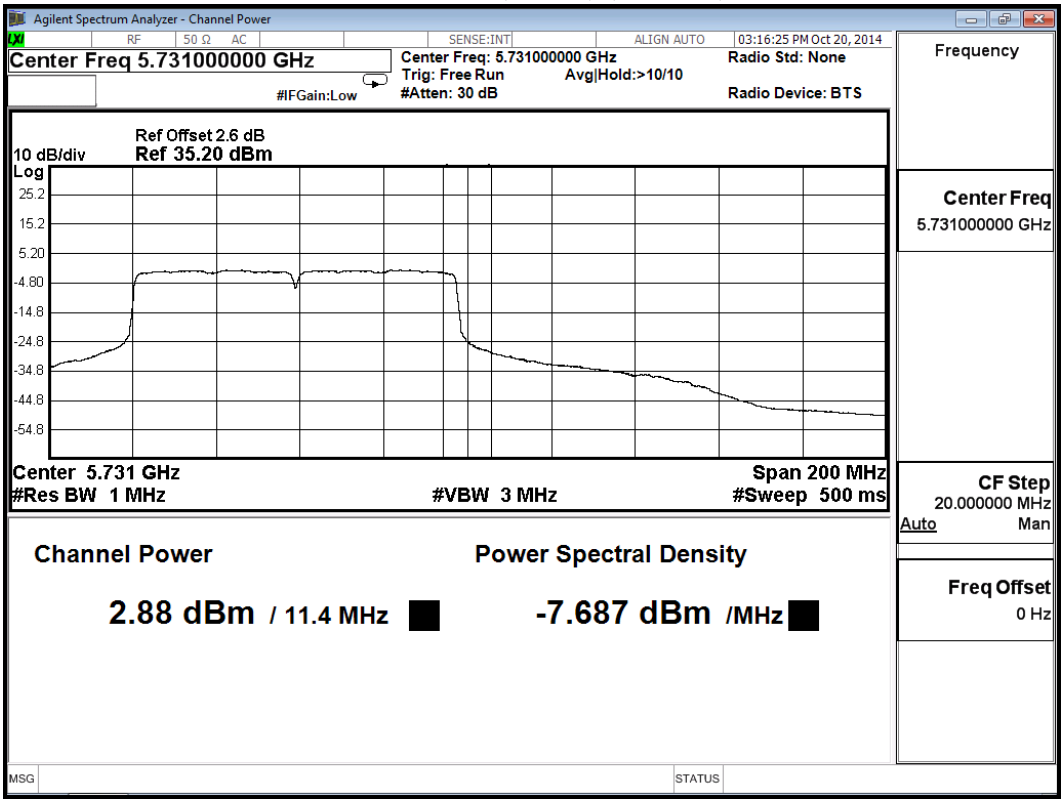
Channel 138 (Band4) (Chain A)



Channel 138 (Band3) (Chain B)



Channel 138 (Band4) (Chain B)



4. Peak Power Spectral Density

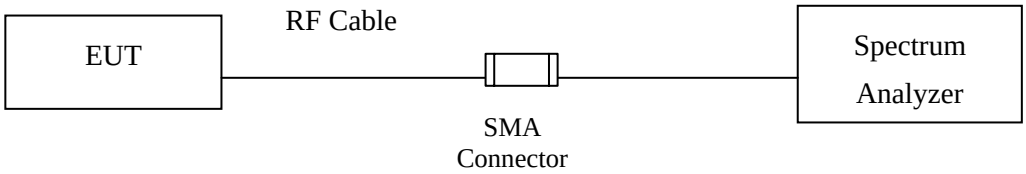
4.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun., 2014
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun., 2014
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2014

Note:

1. All equipment is calibrated once a year or as required by manufacturer.
2. All equipment is calibrated to traceable calibration procedures.
3. The test instruments marked by “X” are used to measure the final test results.

4.2. Test Setup



4.3. Limits

- 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.
- 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.
- 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

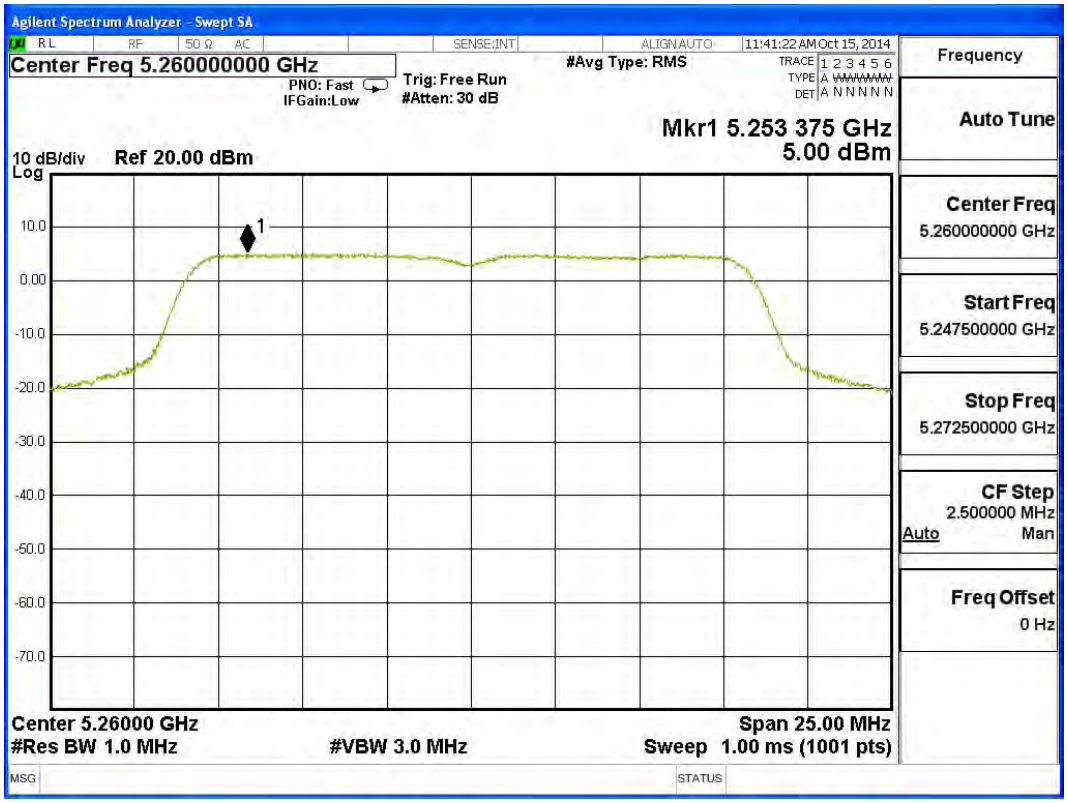
4.6. Test Result of Peak Power Spectral Density

Product : Wireless Access Point
Test Item : Peak Power Spectral Density
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11a-6Mbps)

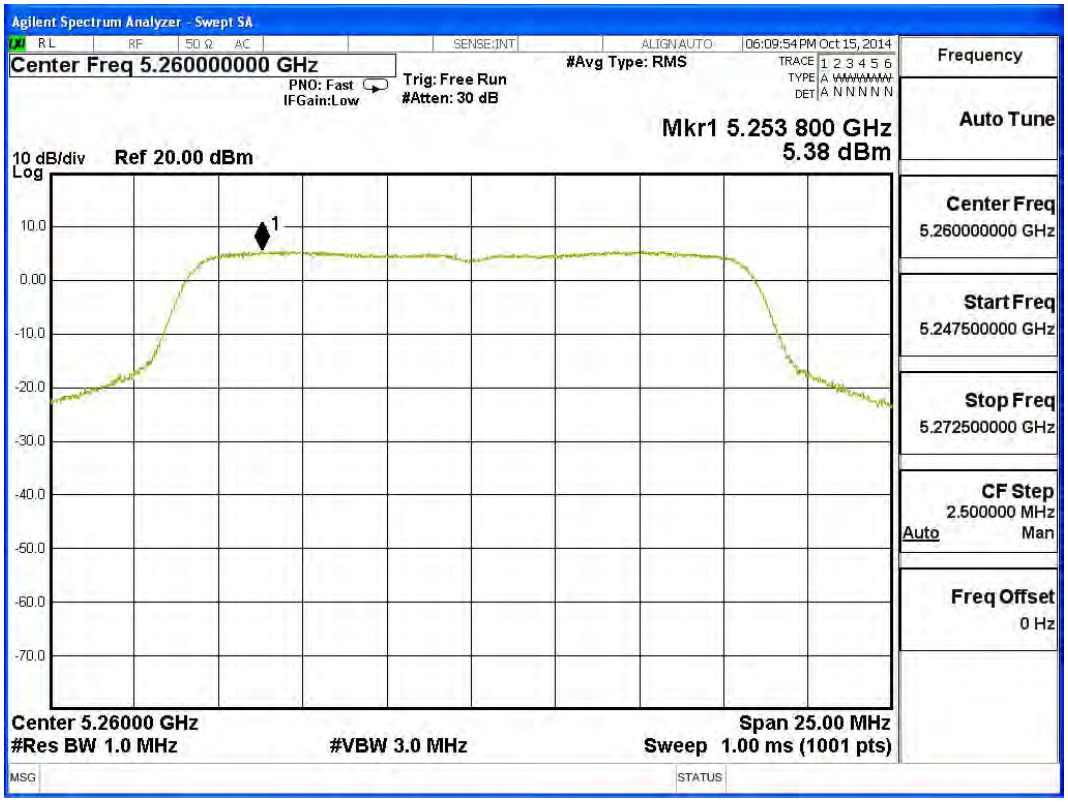
Channel Number	Frequency (MHz)	Chain	PPSD/MHz (dBm)	Total PPSD/MHz (dBm)[1]	Required Limit (dBm)	Result
52	5260	A	5.000	8.010	<11	Pass
		B	5.380	8.390	<11	Pass
60	5300	A	4.660	7.670	<11	Pass
		B	5.770	8.780	<11	Pass
64	5320	A	4.630	7.640	<11	Pass
		B	5.830	8.840	<11	Pass
100	5500	A	5.900	8.910	<11	Pass
		B	6.110	9.120	<11	Pass
116	5580	A	5.490	8.500	<11	Pass
		B	5.140	8.150	<11	Pass
140	5700	A	5.000	8.010	<11	Pass
		B	5.430	8.440	<11	Pass

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

Channel 52: Chain A

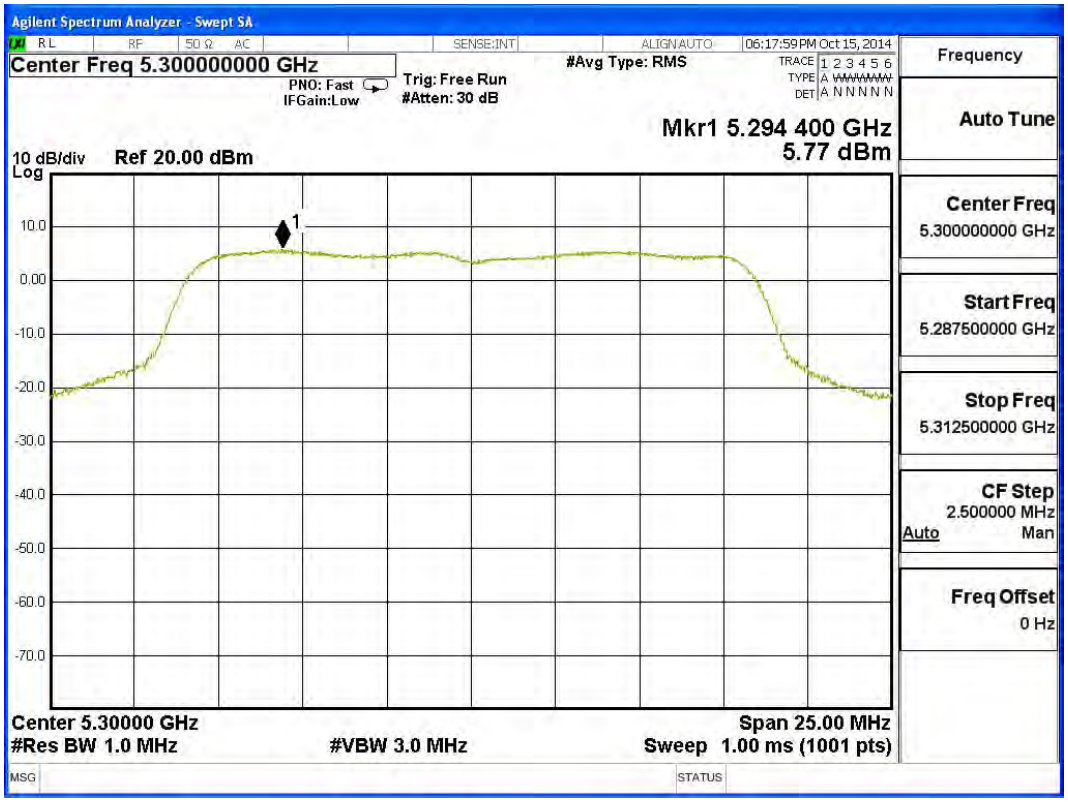


Channel 52: Chain B

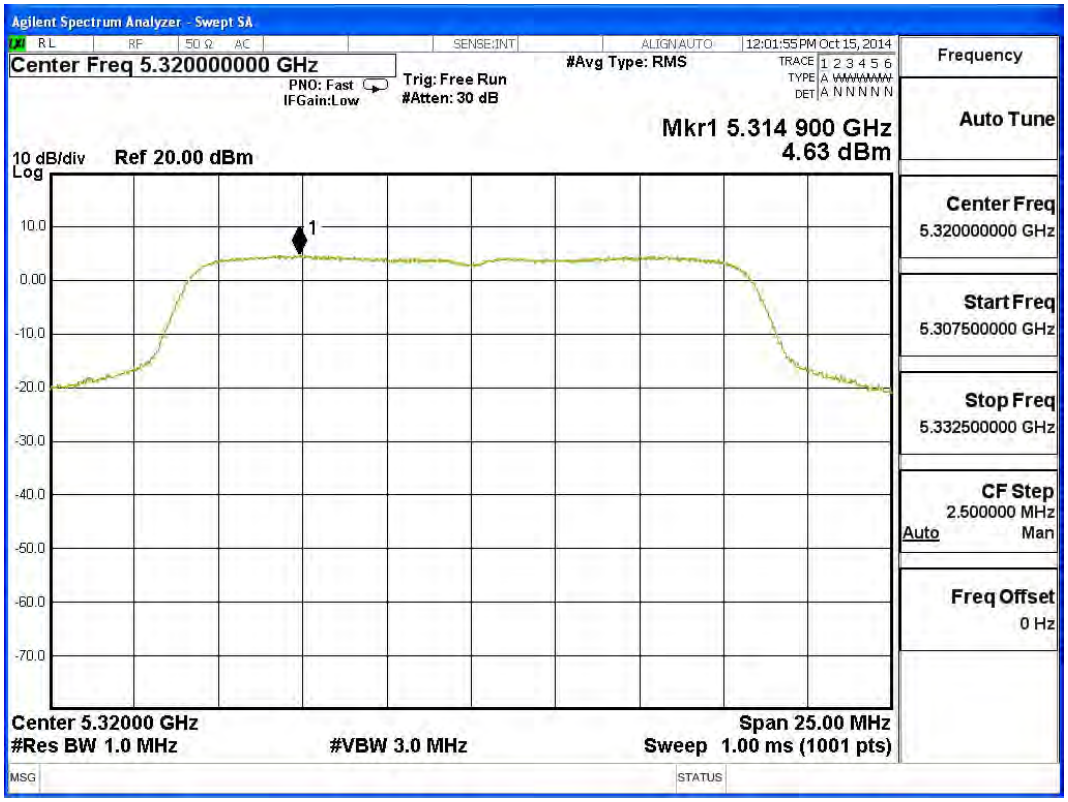


Channel 60: Chain A

Channel 60: Chain B



Channel 64: Chain A

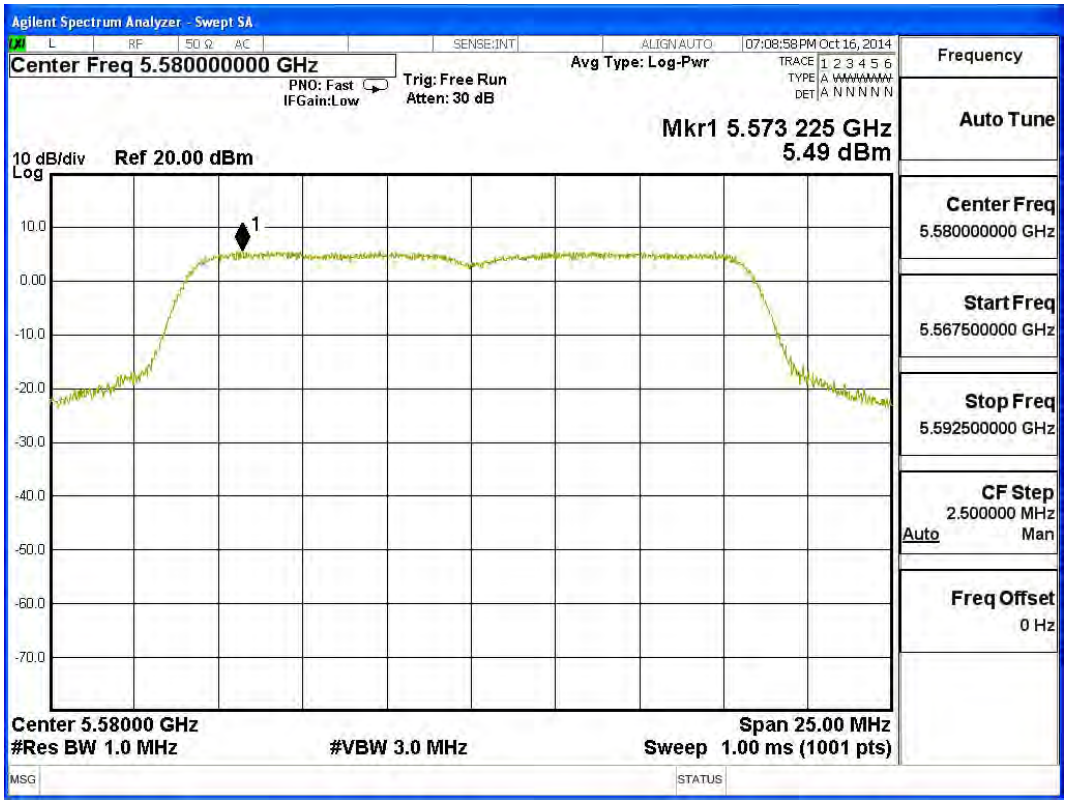


Channel 64: Chain B

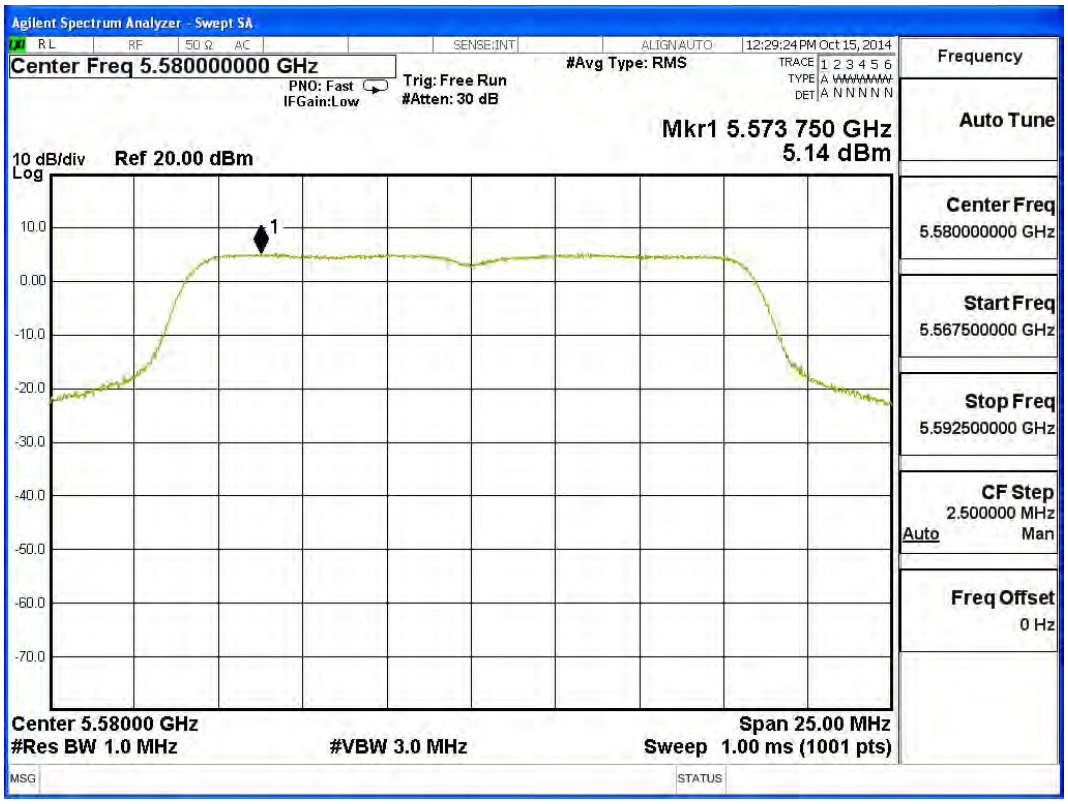
Channel 100: Chain A

Channel 100: Chain B

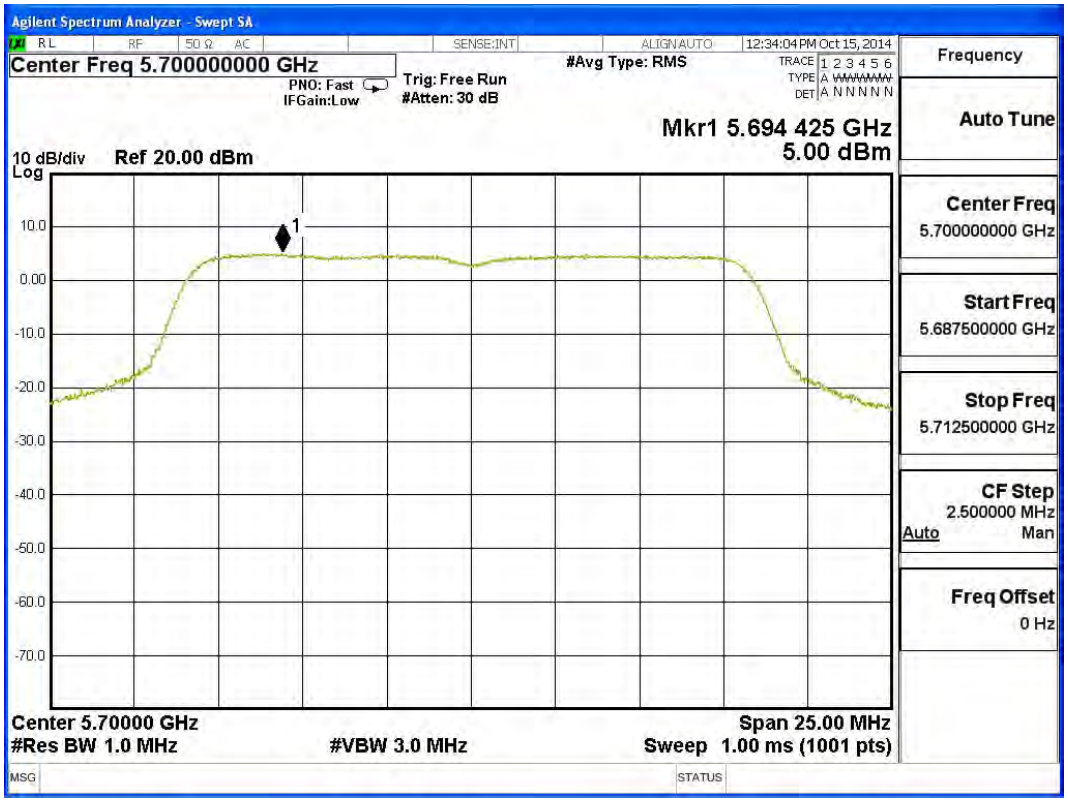
Channel 120: Chain A



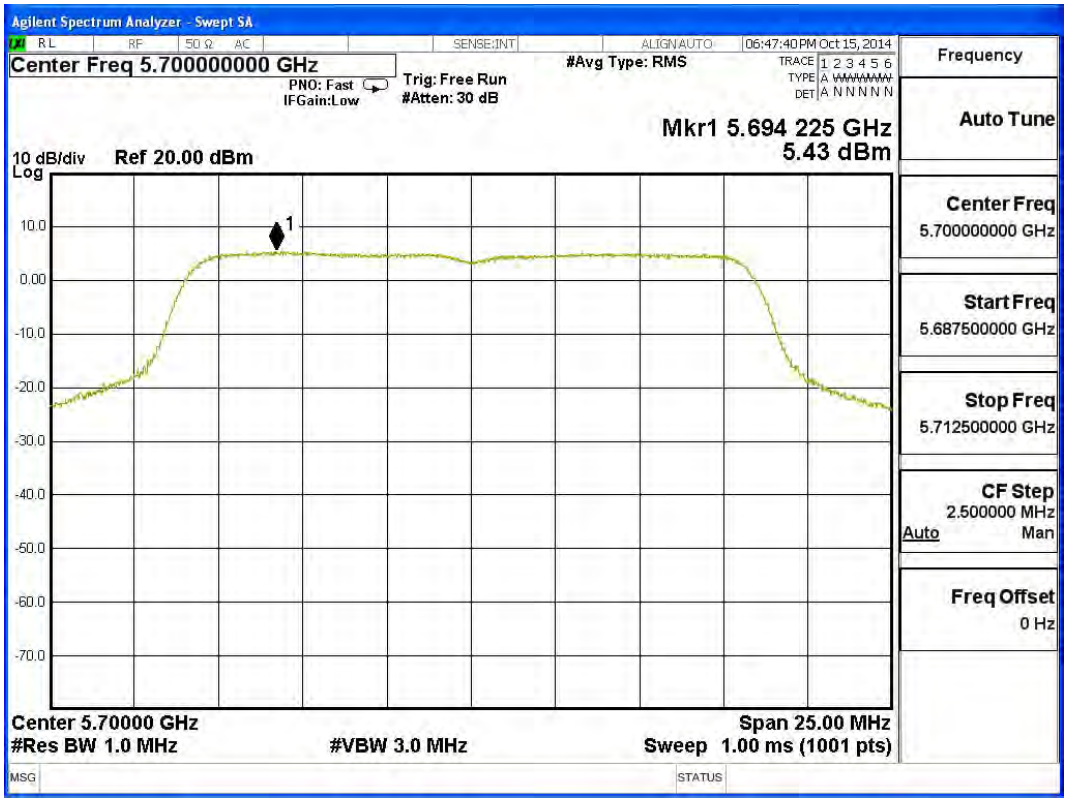
Channel 120: Chain B



Channel 140: Chain A



Channel 140: Chain B

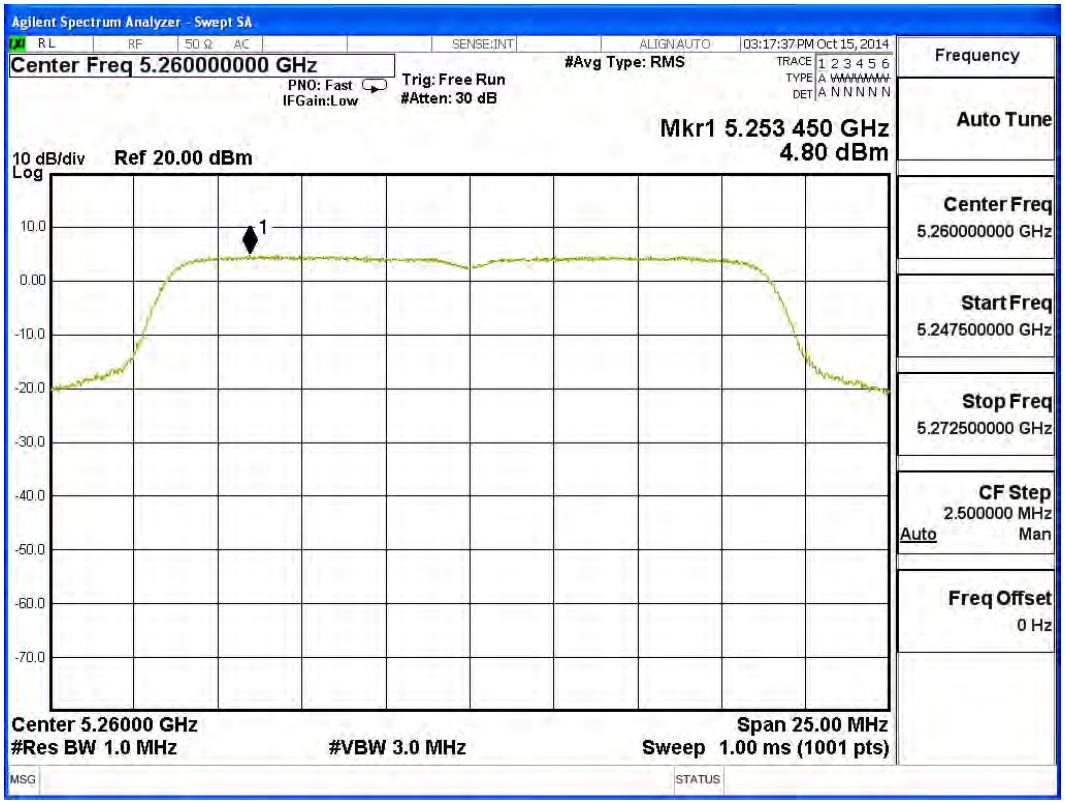


Product : Wireless Access Point
Test Item : Peak Power Spectral Density
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps)

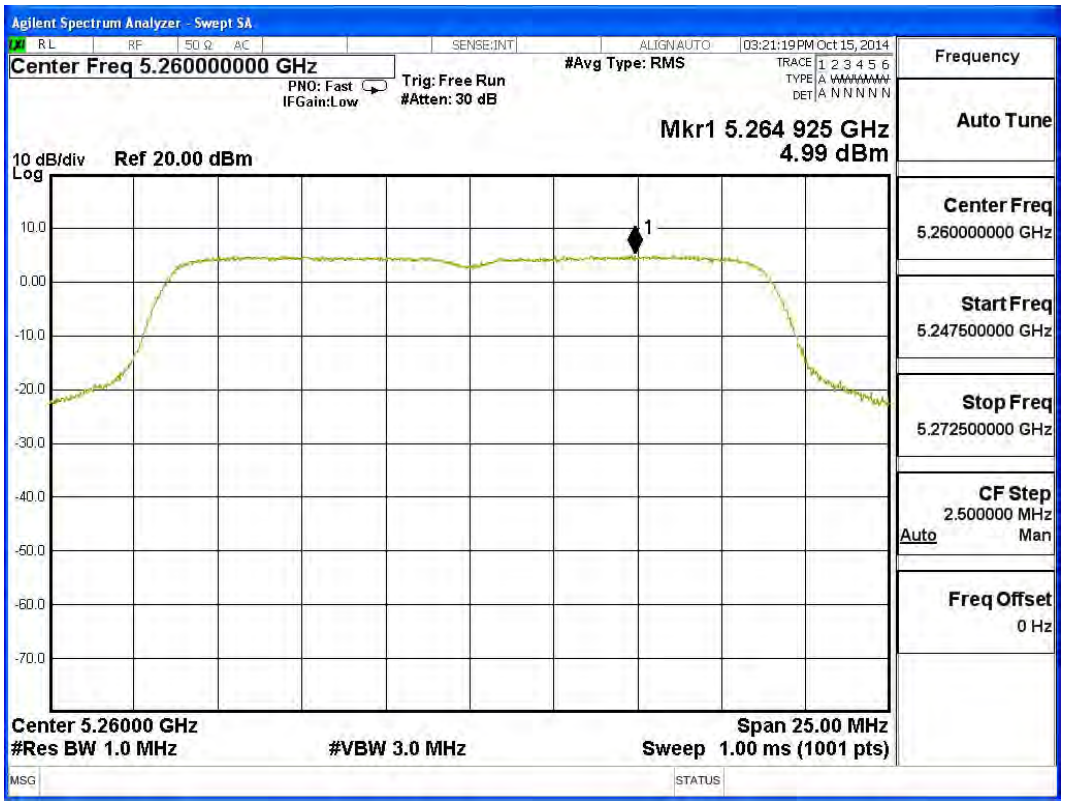
Channel Number	Frequency (MHz)	Chain	PPSD/MHz (dBm)	Total PPSD/MHz (dBm)[1]	Required Limit (dBm)	Result
52	5260	A	4.800	7.810	<11	Pass
		B	4.990	8.000	<11	Pass
60	5300	A	4.360	7.370	<11	Pass
		B	5.080	8.090	<11	Pass
64	5320	A	4.340	7.350	<11	Pass
		B	4.930	7.940	<11	Pass
100	5500	A	5.520	8.530	<11	Pass
		B	5.710	8.720	<11	Pass
116	5580	A	4.800	7.810	<11	Pass
		B	5.410	8.420	<11	Pass
140	5700	A	4.290	7.300	<11	Pass
		B	4.950	7.960	<11	Pass

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

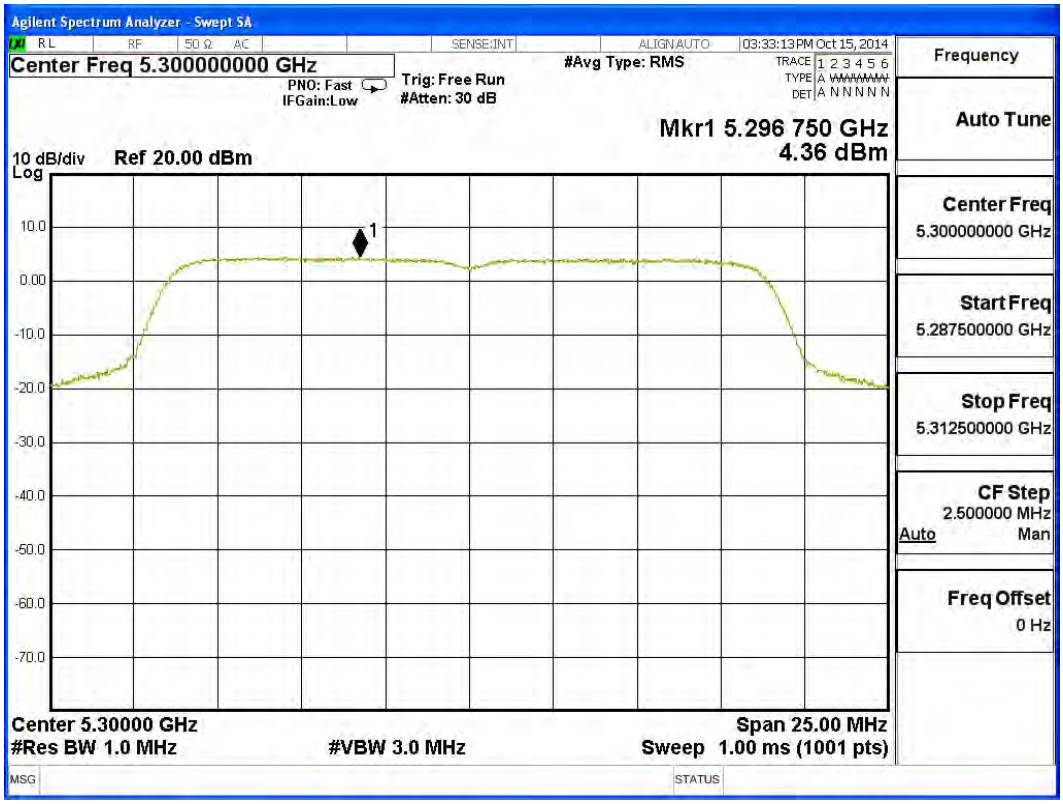
Channel 52: Chain A



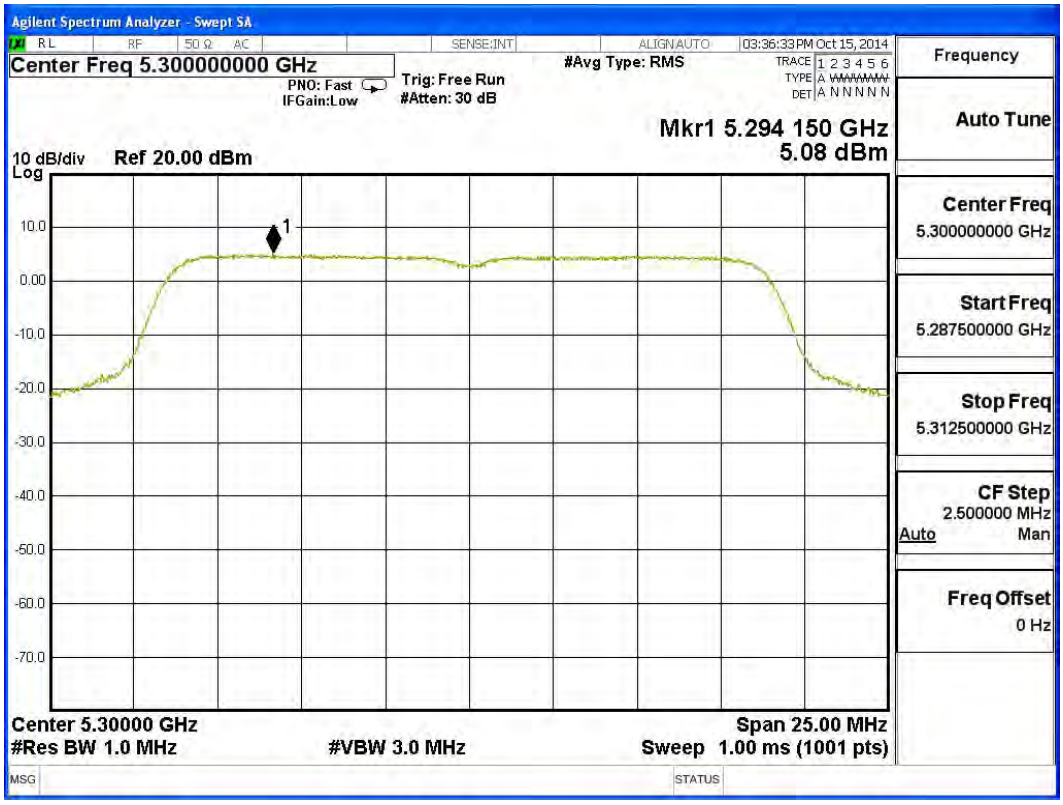
Channel 52: Chain B



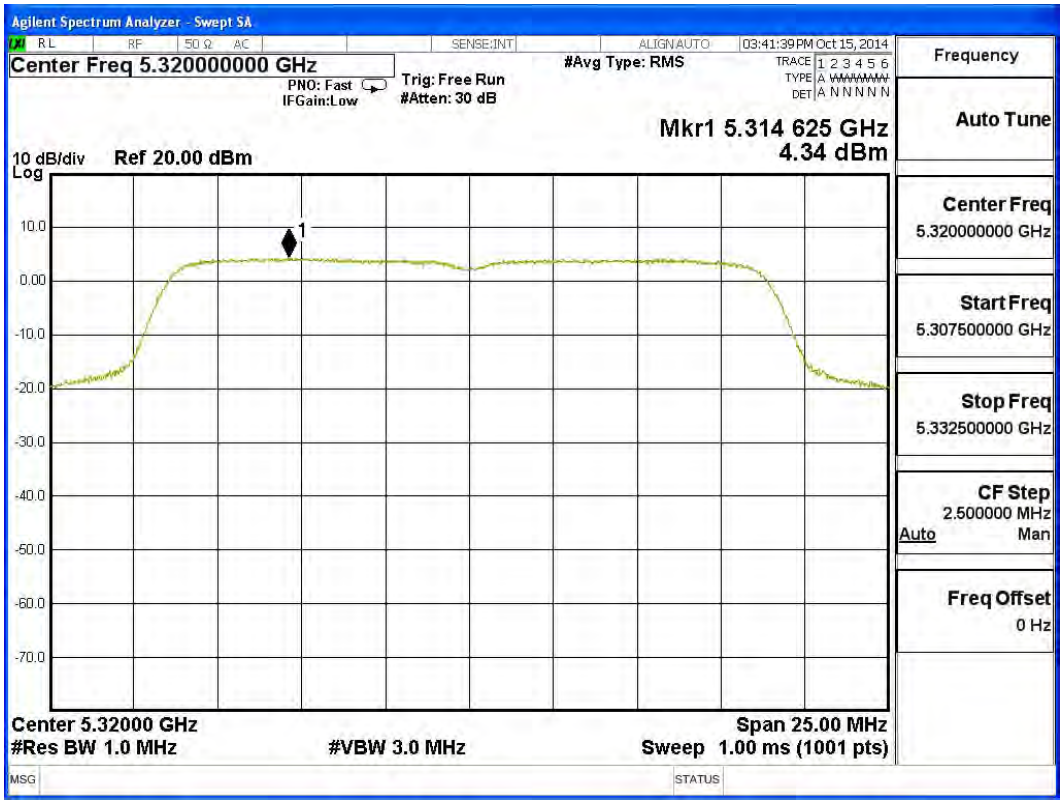
Channel 60: Chain A



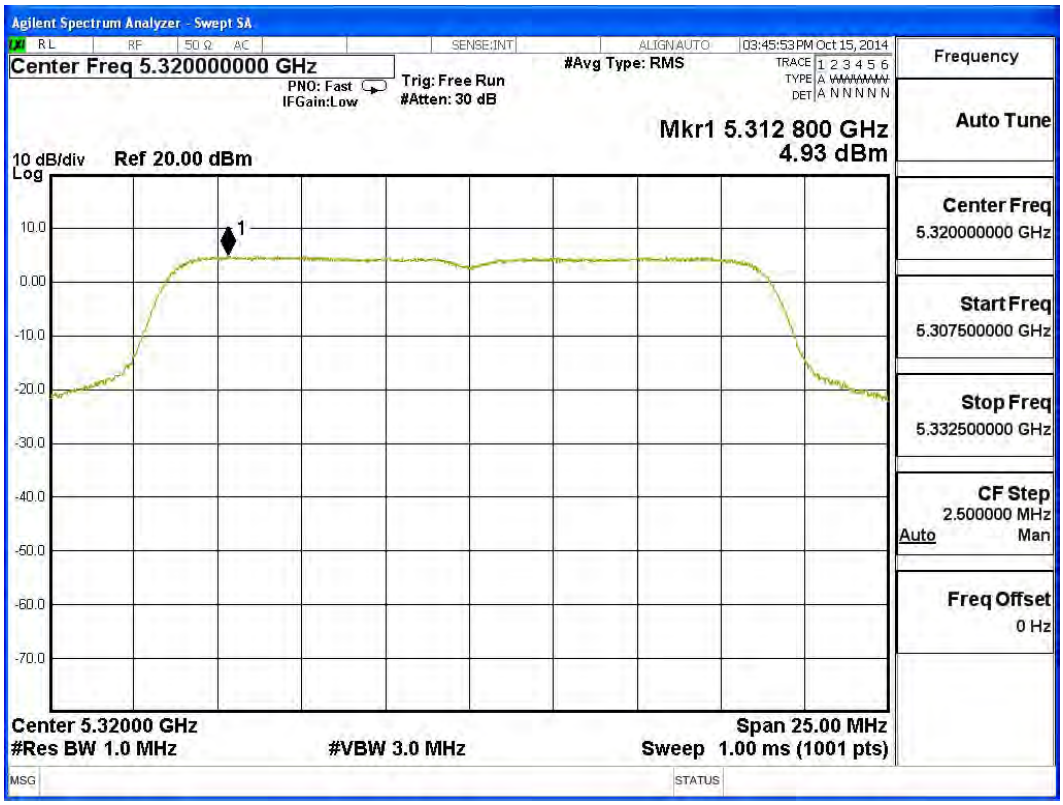
Channel 60: Chain B



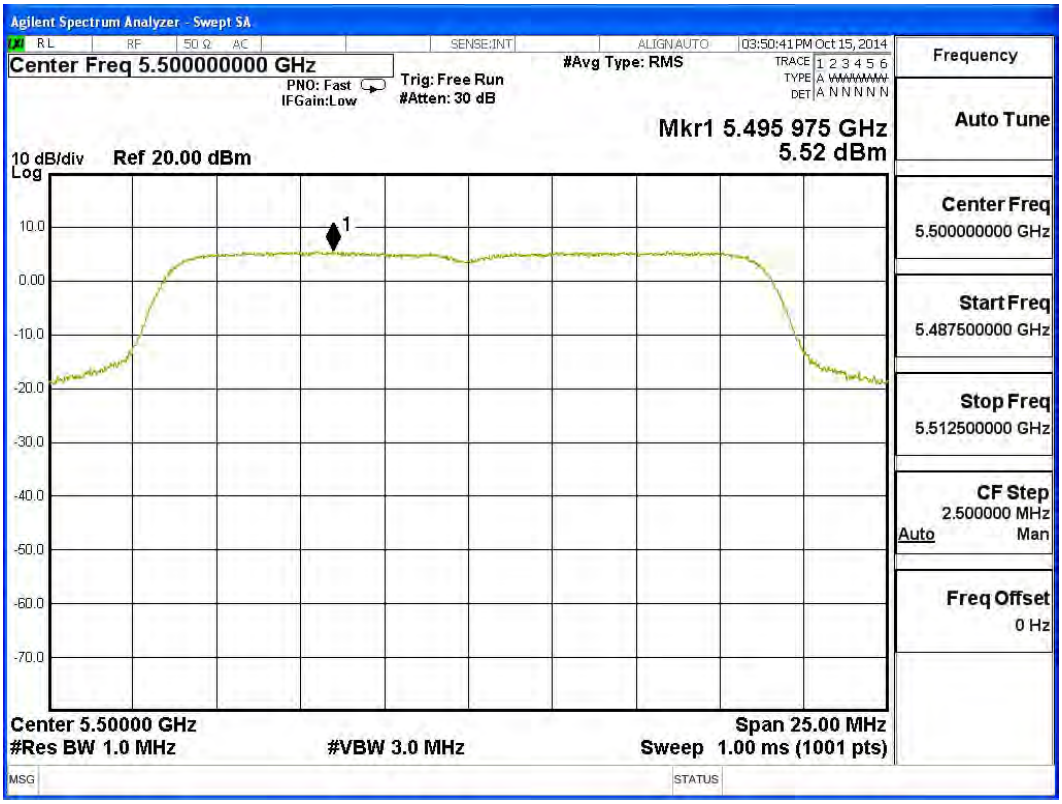
Channel 64: Chain A



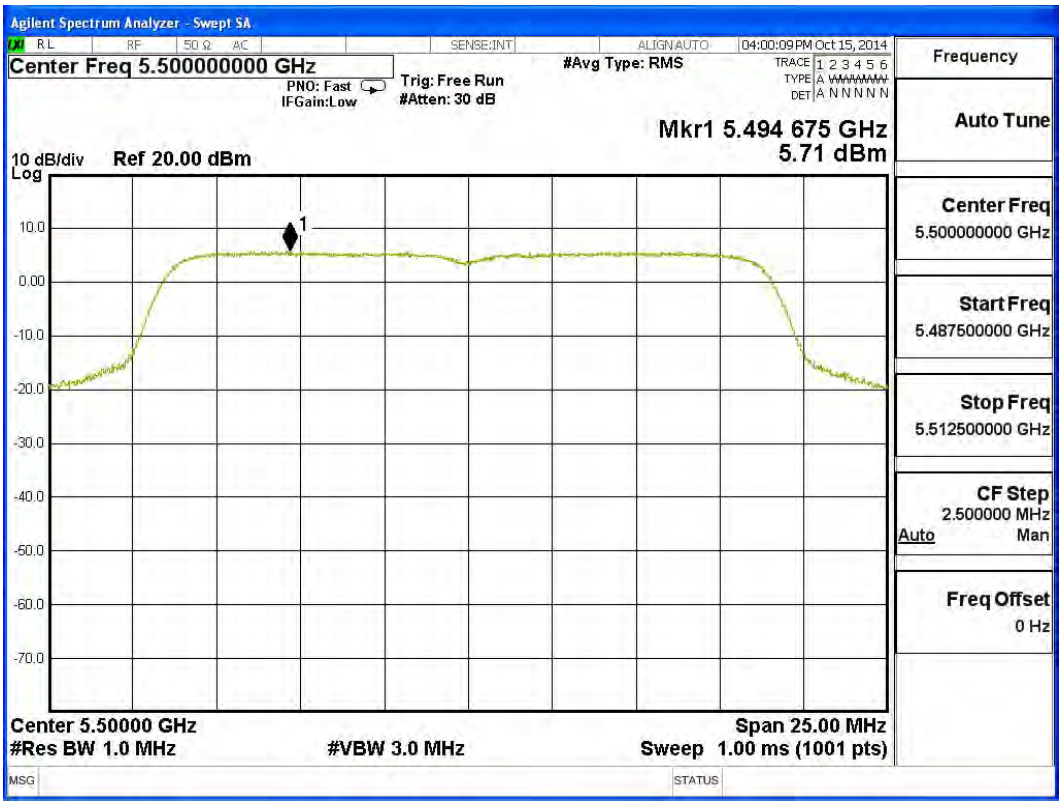
Channel 64: Chain B



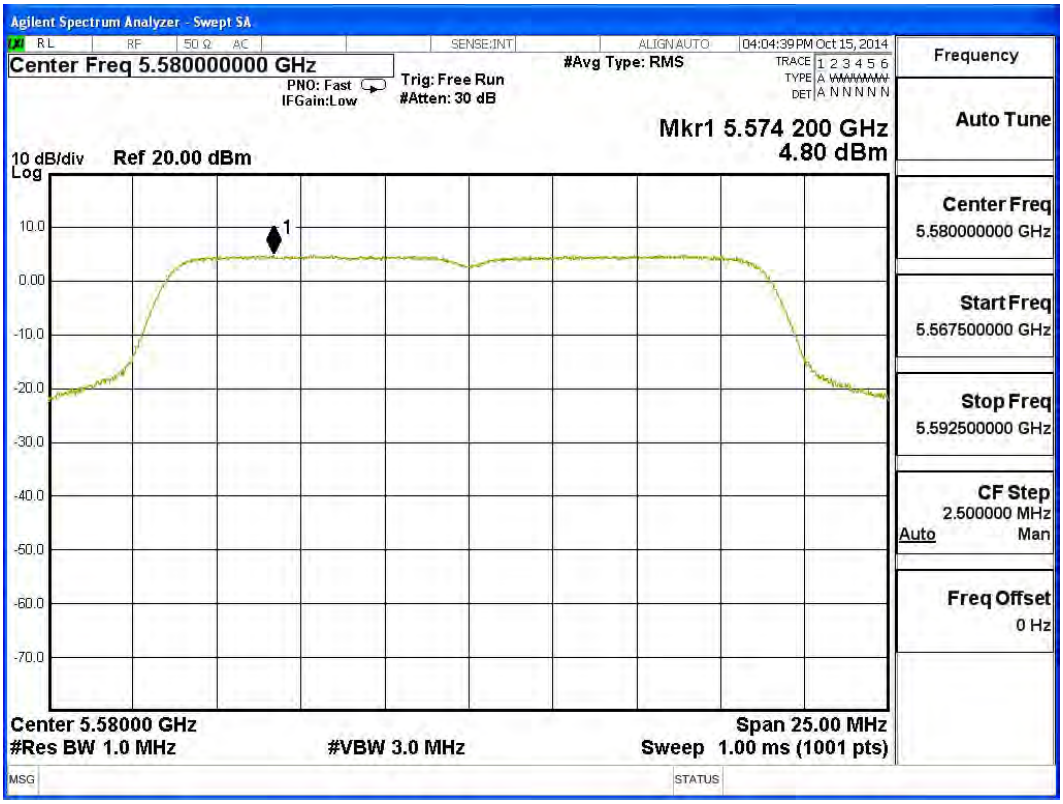
Channel 100: Chain A



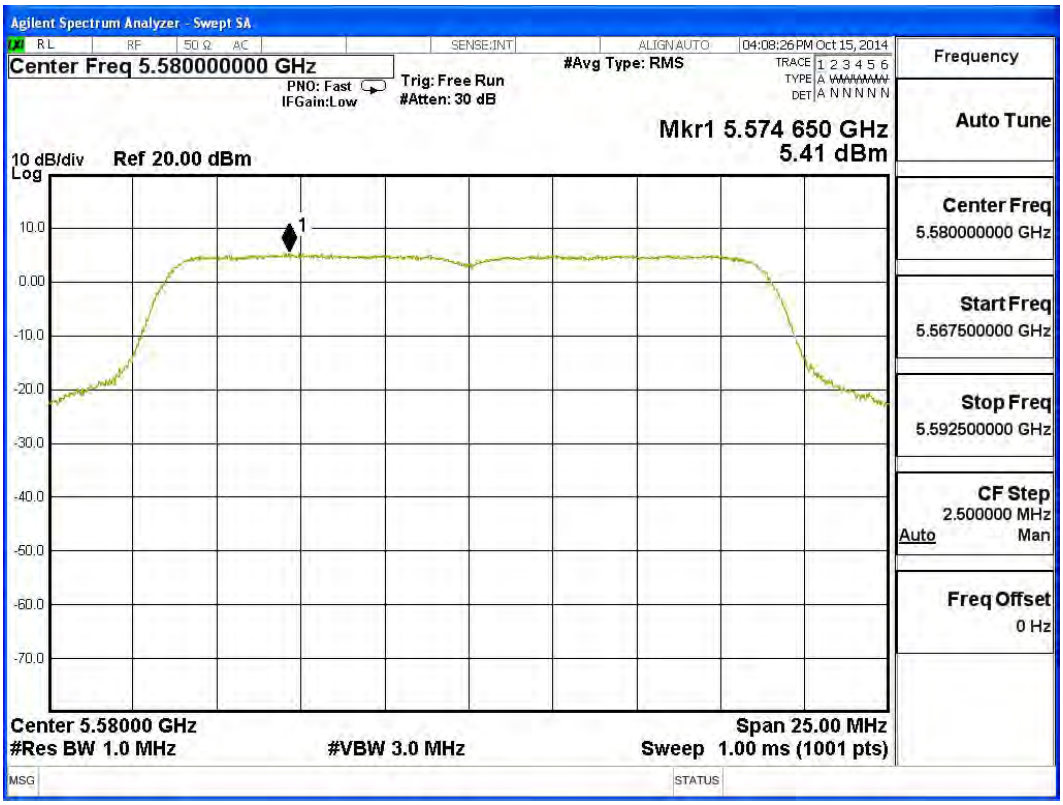
Channel 100: Chain B



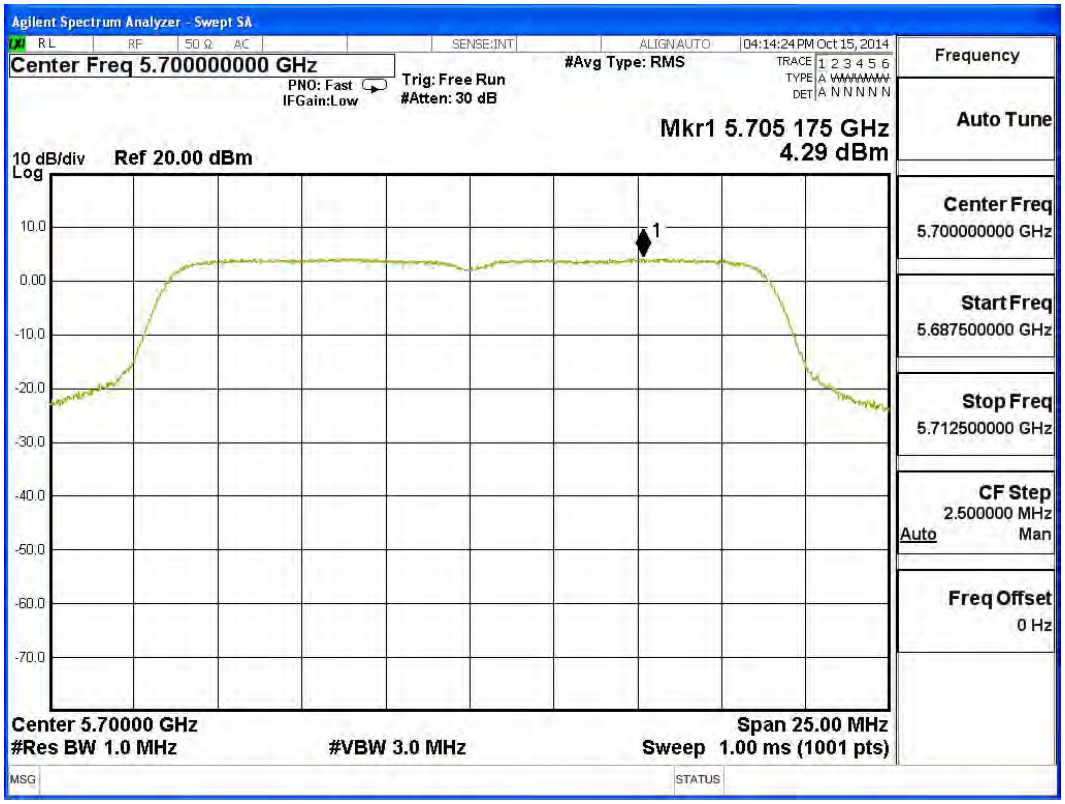
Channel 120: Chain A



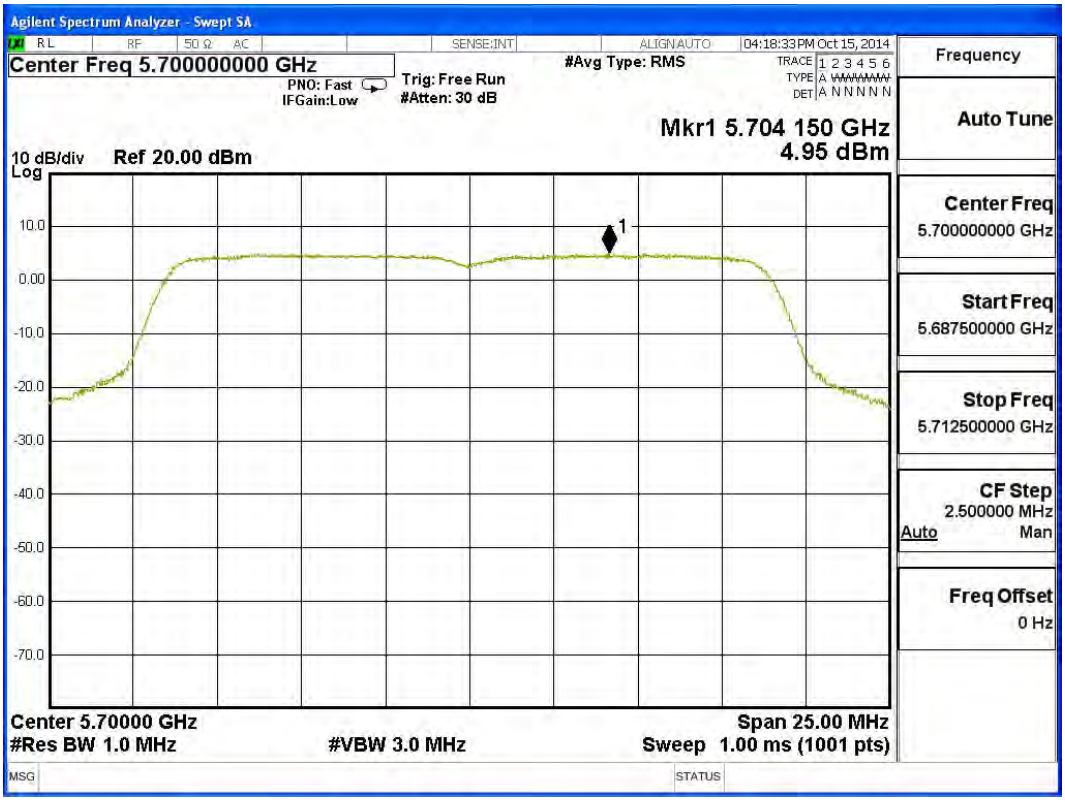
Channel 120: Chain B



Channel 140: Chain A



Channel 140: Chain B



Product : Wireless Access Point
Test Item : Peak Power Spectral Density
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps)

Channel Number	Frequency (MHz)	Chain	PPSD/MHz (dBm)	Total PPSD/MHz (dBm)[1]	Required Limit (dBm)	Result
54	5270	A	1.990	5.000	<11	Pass
		B	2.170	5.180	<11	Pass
62	5310	A	-0.460	2.550	<11	Pass
		B	-0.080	2.930	<11	Pass
102	5510	A	-0.130	2.880	<11	Pass
		B	-1.420	1.590	<11	Pass
110	5550	A	2.330	5.340	<11	Pass
		B	2.470	5.480	<11	Pass
134	5670	A	1.450	4.460	<11	Pass
		B	2.000	5.010	<11	Pass

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

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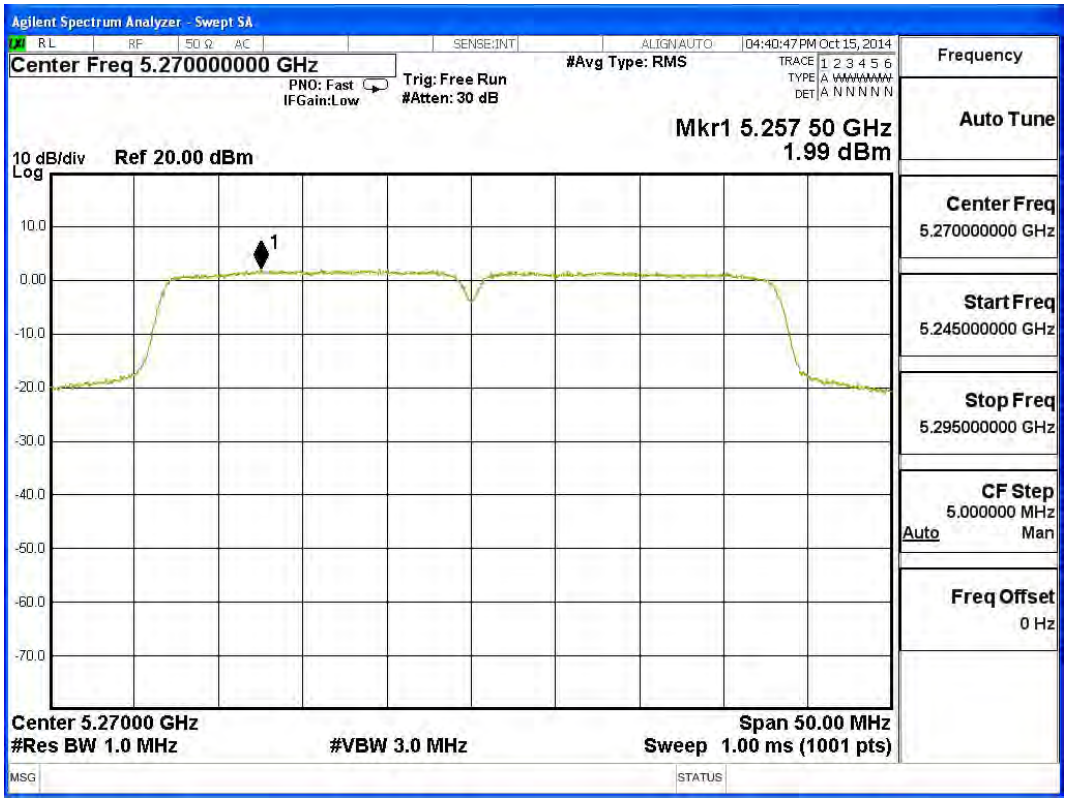
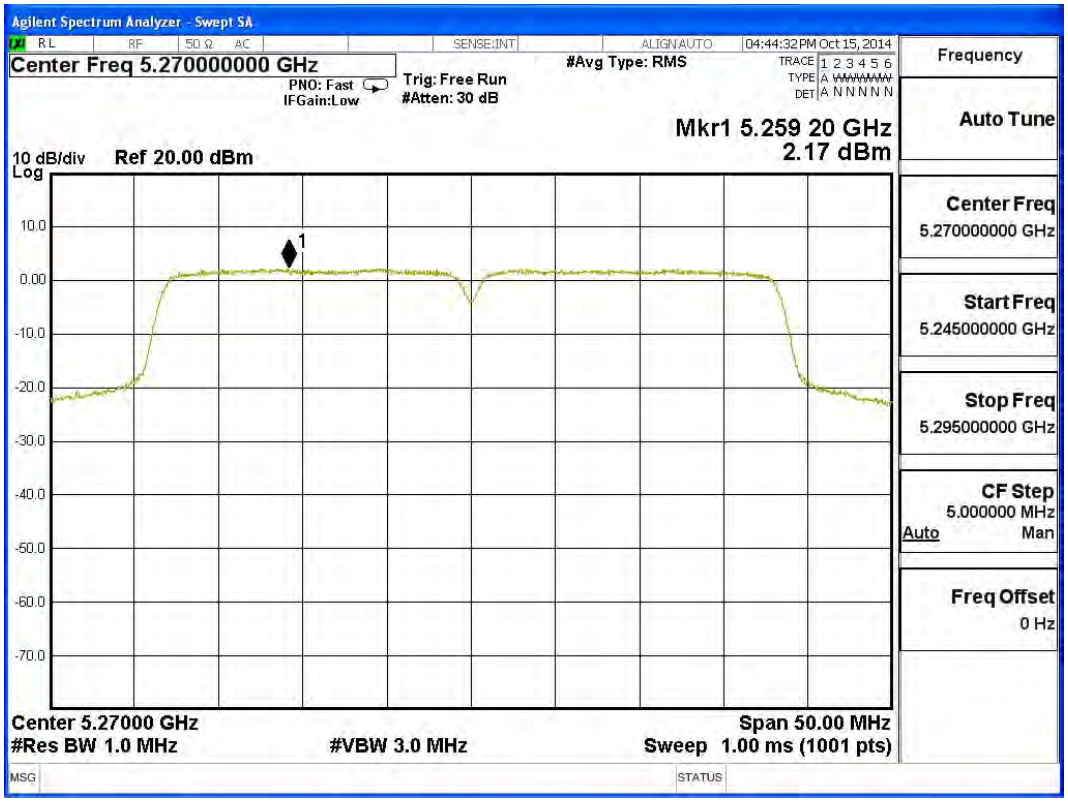
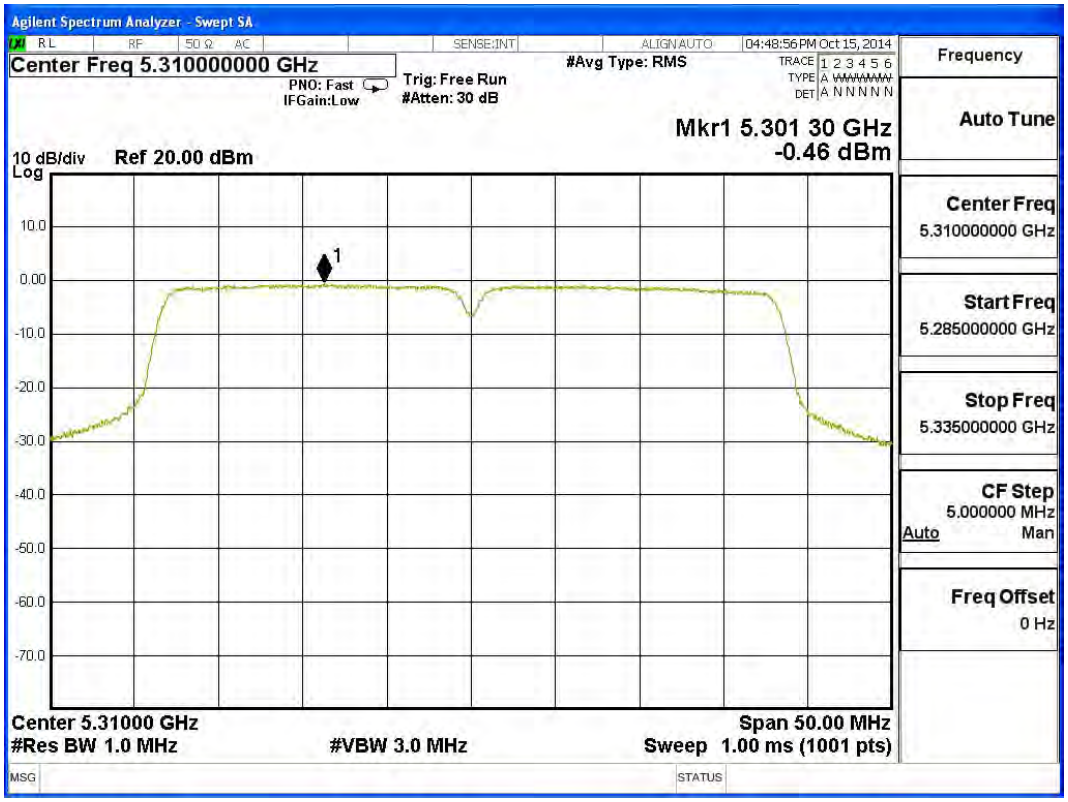
Channel 54: Chain A



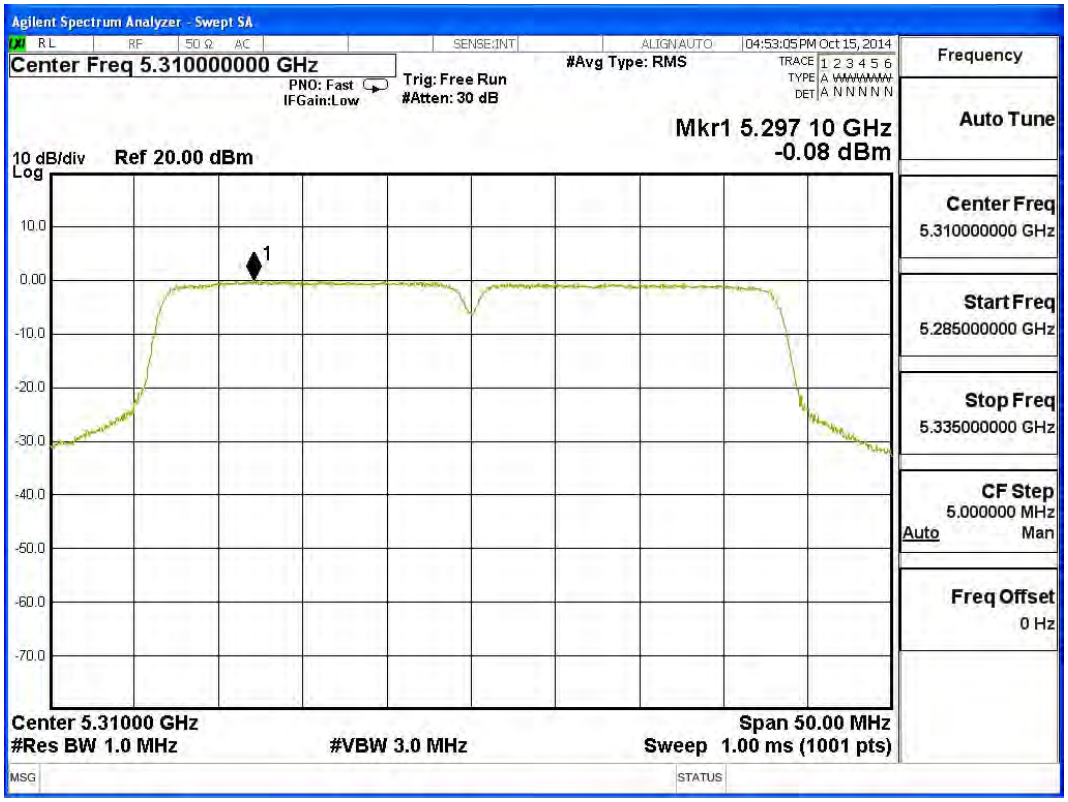
Channel 54: Chain B



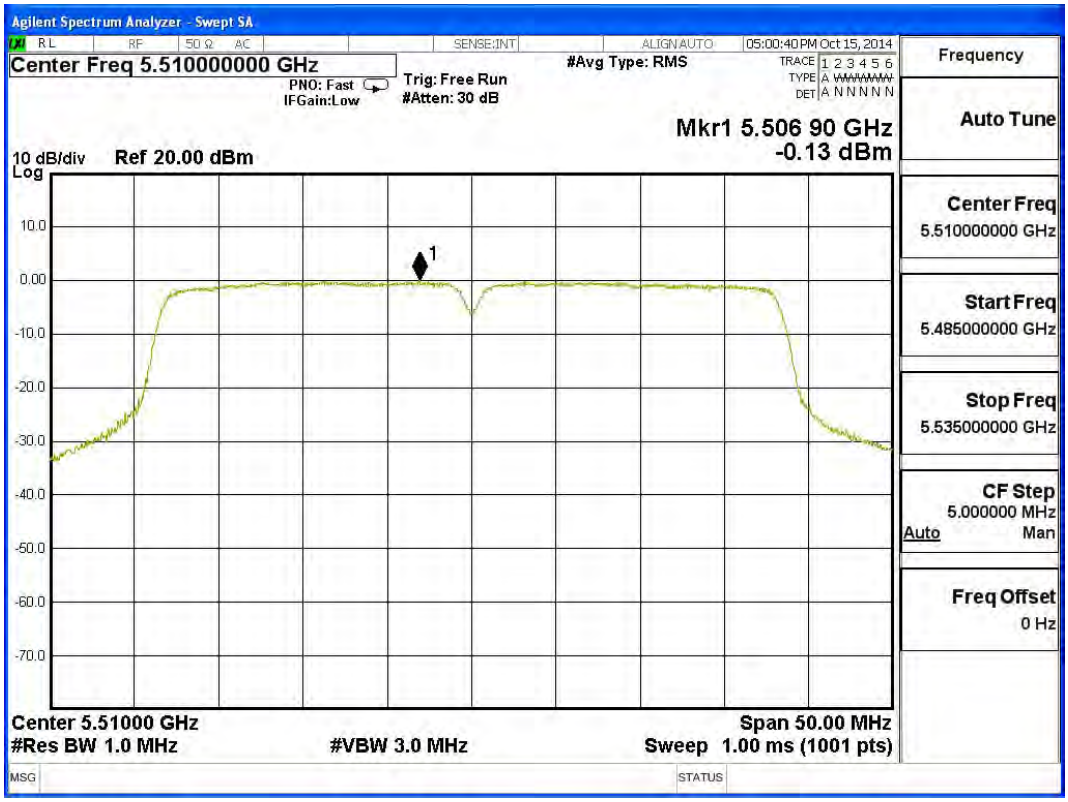
Channel 62: Chain A



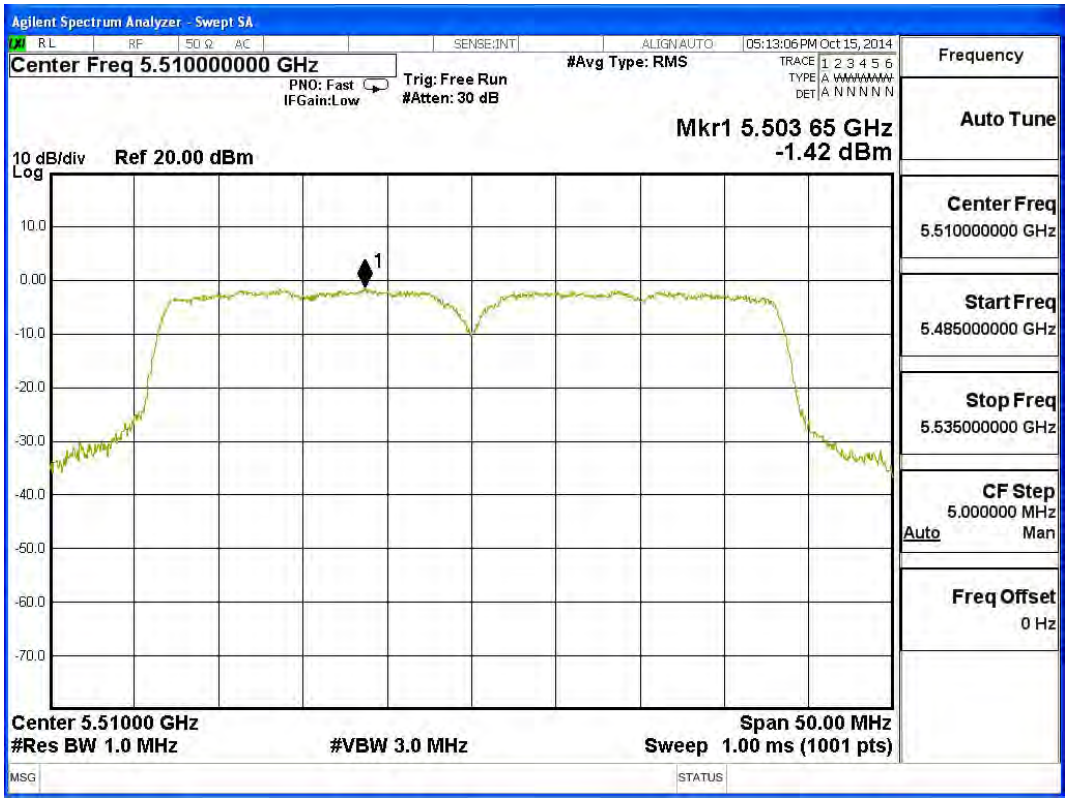
Channel 62: Chain B



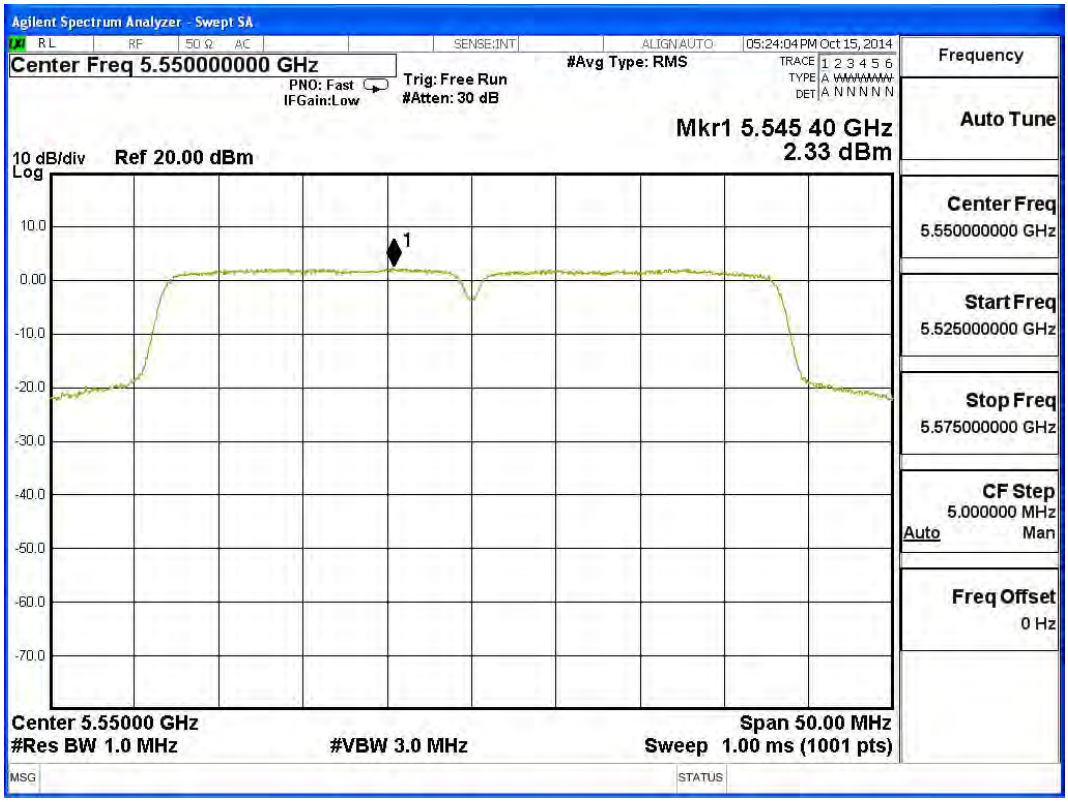
Channel 102: Chain A



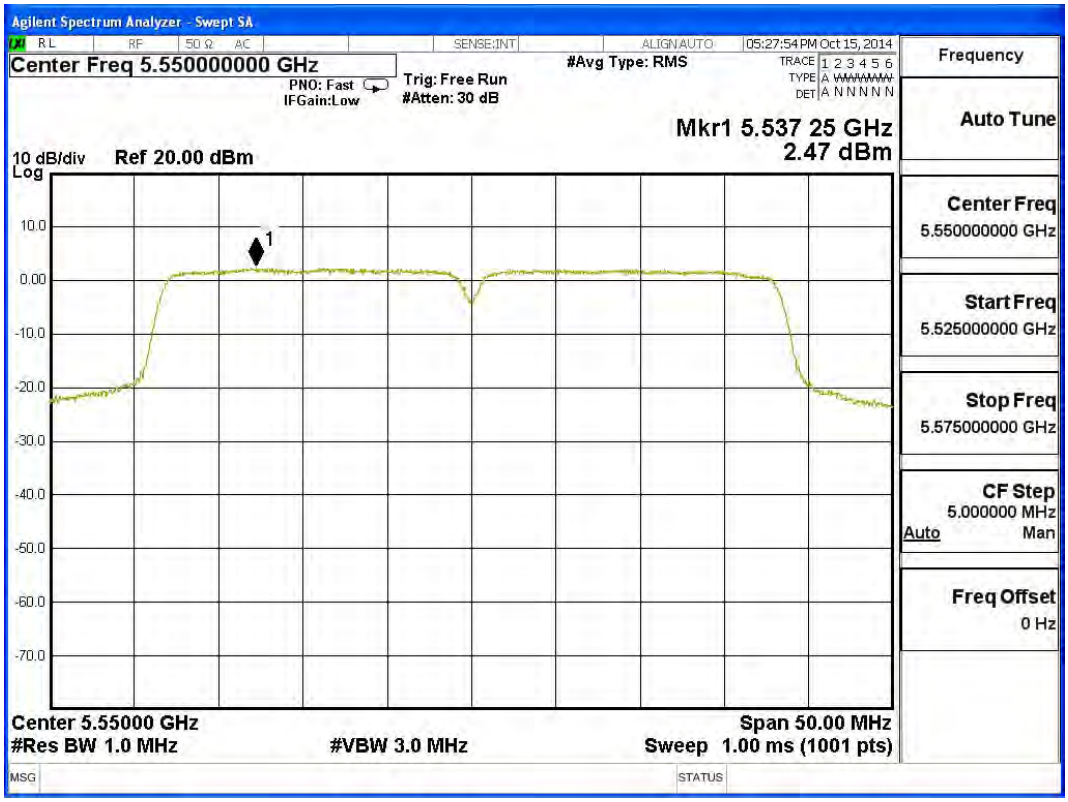
Channel 102: Chain B



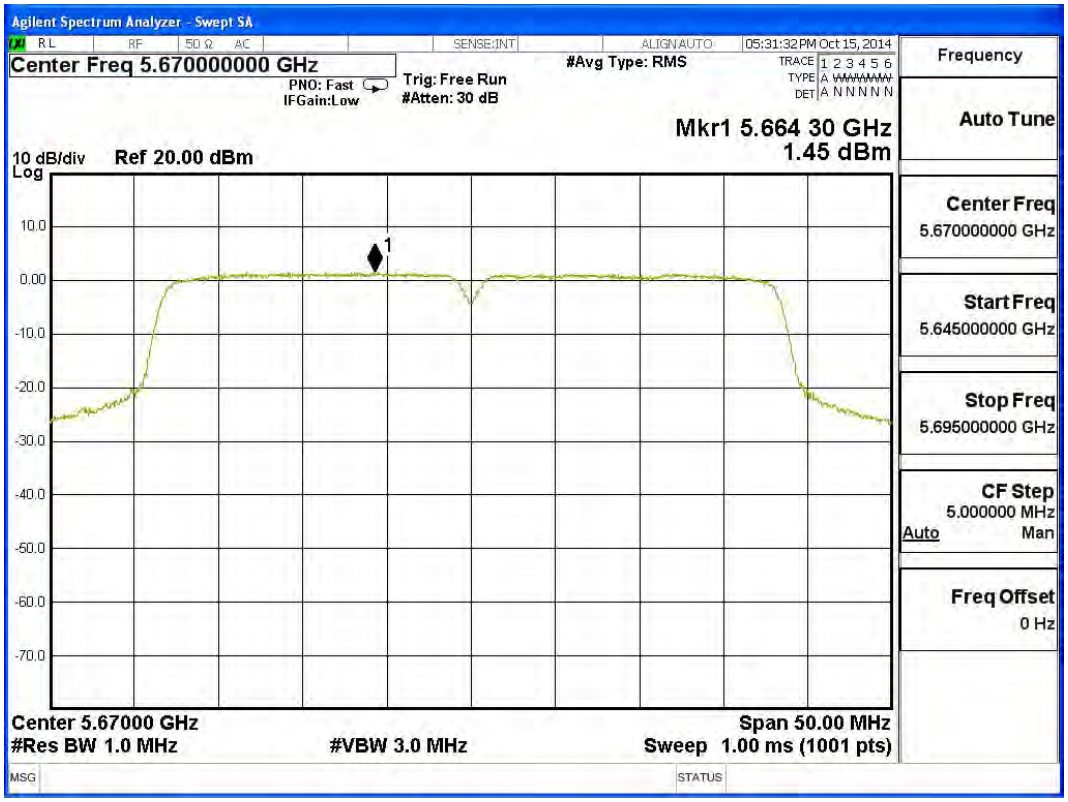
Channel 110: Chain A



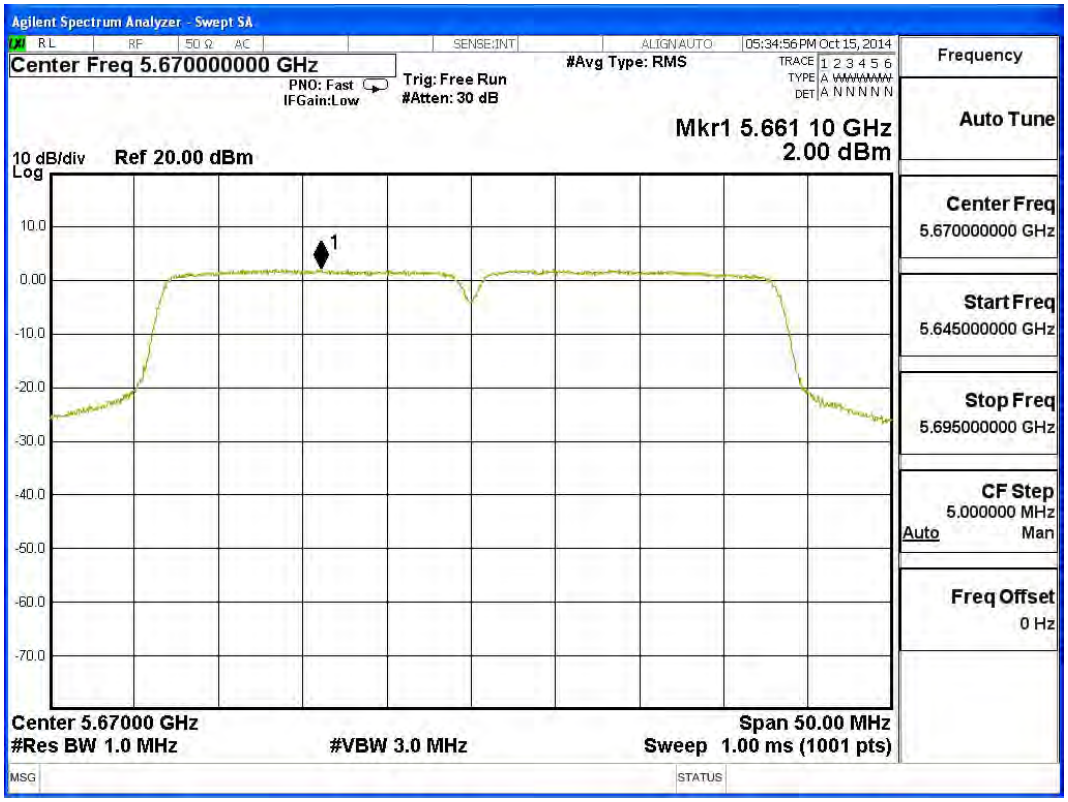
Channel 110: Chain B



Channel 134: Chain A



Channel 134: Chain B

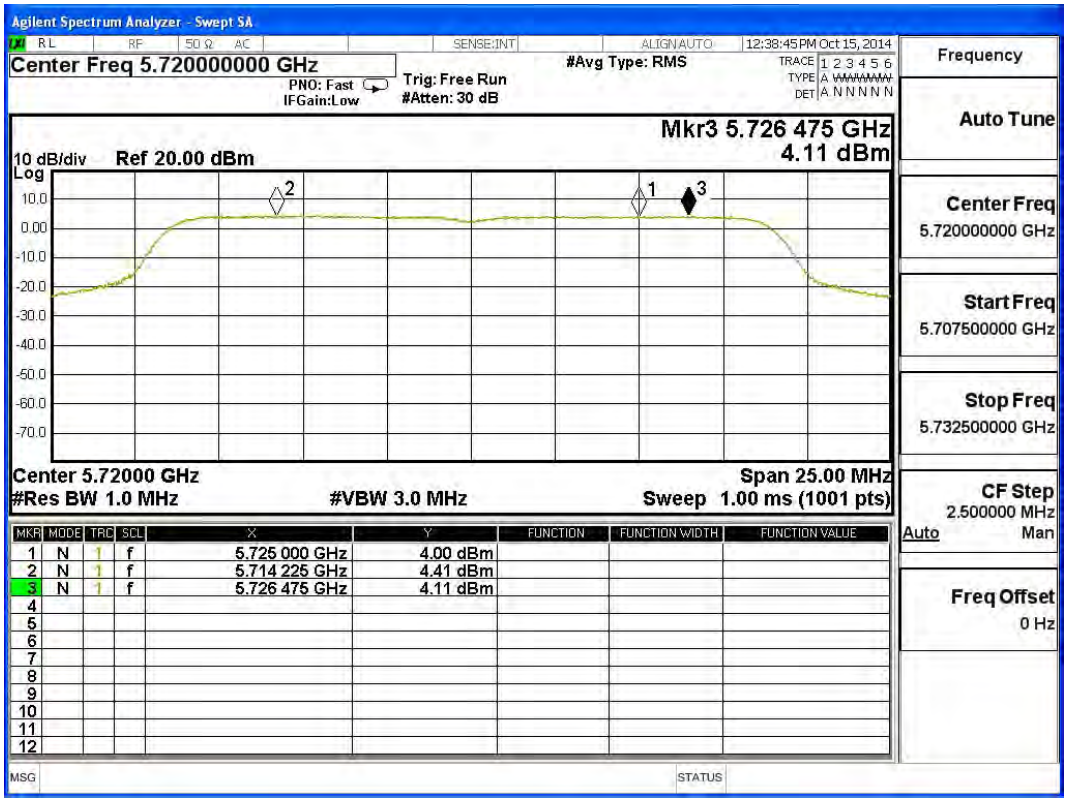


Product : Wireless Access Point
Test Item : Peak Power Spectral Density
Test Site : No.3 OATS
Test Mode : Mode 5 Transmit (802.11ac-20BW-65Mbps)

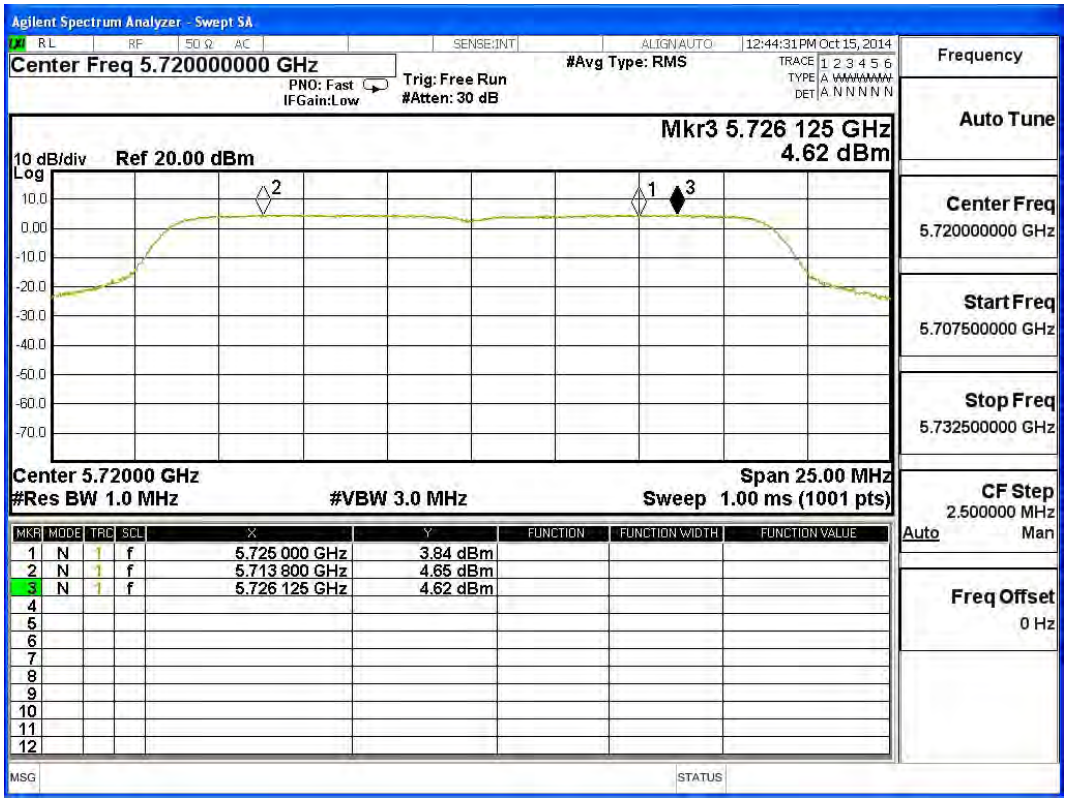
Channel Number	Frequency (MHz)	Chain	PPSD/MHz (dBm)	Total PPSD/MHz (dBm)[1]	Required Limit (dBm)	Result
144	5720	A	4.410	7.420	<11	Pass
		B	4.650	7.660	<11	Pass
144	5720	A	4.110	7.120	<11	Pass
		B	4.620	7.630	<11	Pass

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

Channel 144: Chain A



Channel 144: Chain B

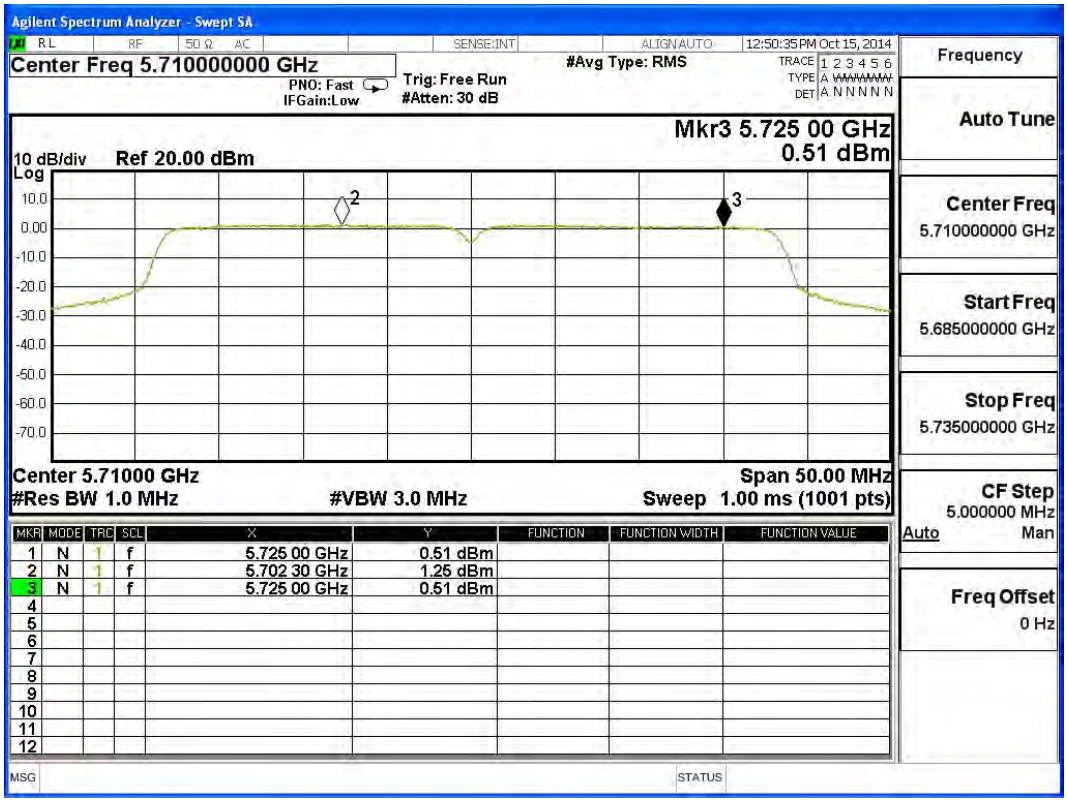


Product : Wireless Access Point
Test Item : Peak Power Spectral Density
Test Site : No.3 OATS
Test Mode : Mode 6 Transmit (802.11ac-40BW-65Mbps)

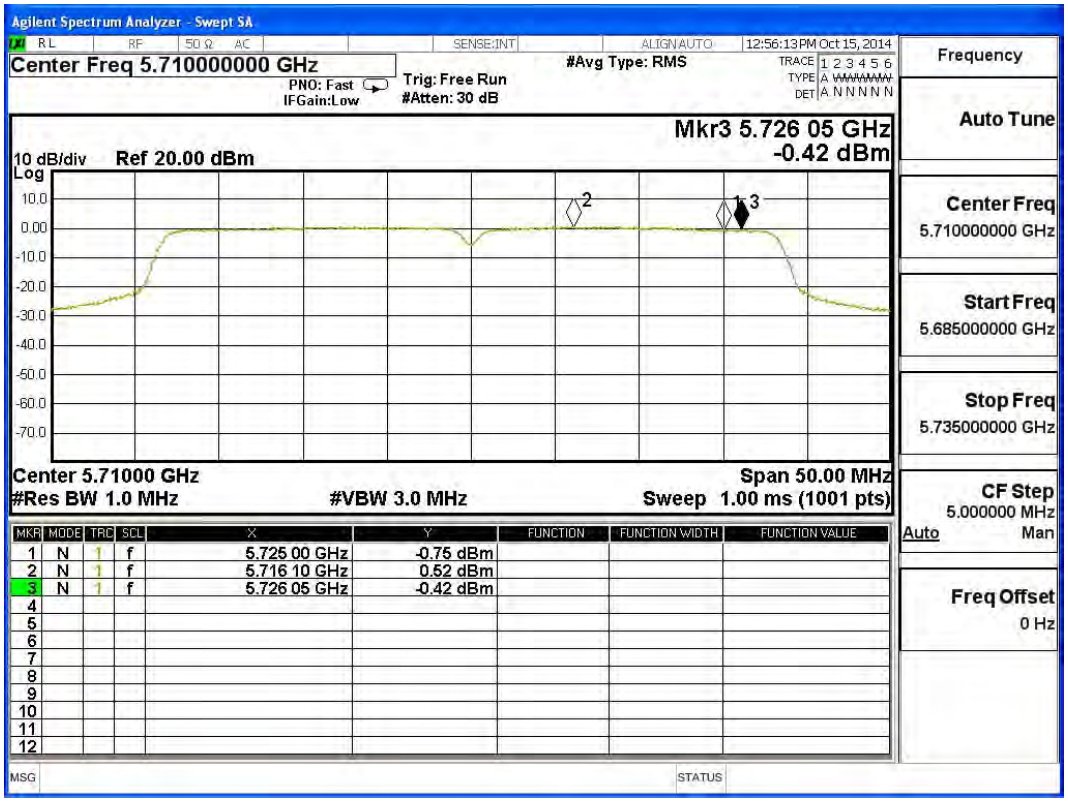
Channel Number	Frequency (MHz)	Chain	PPSD/MHz (dBm)	Total PPSD/MHz (dBm)[1]	Required Limit (dBm)	Result
142	5710	A	1.250	4.260	<11	Pass
		B	0.520	3.530	<11	Pass
142	5710	A	0.510	3.520	<11	Pass
		B	-0.420	2.590	<11	Pass

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

Channel 142: Chain A



Channel 142: Chain B

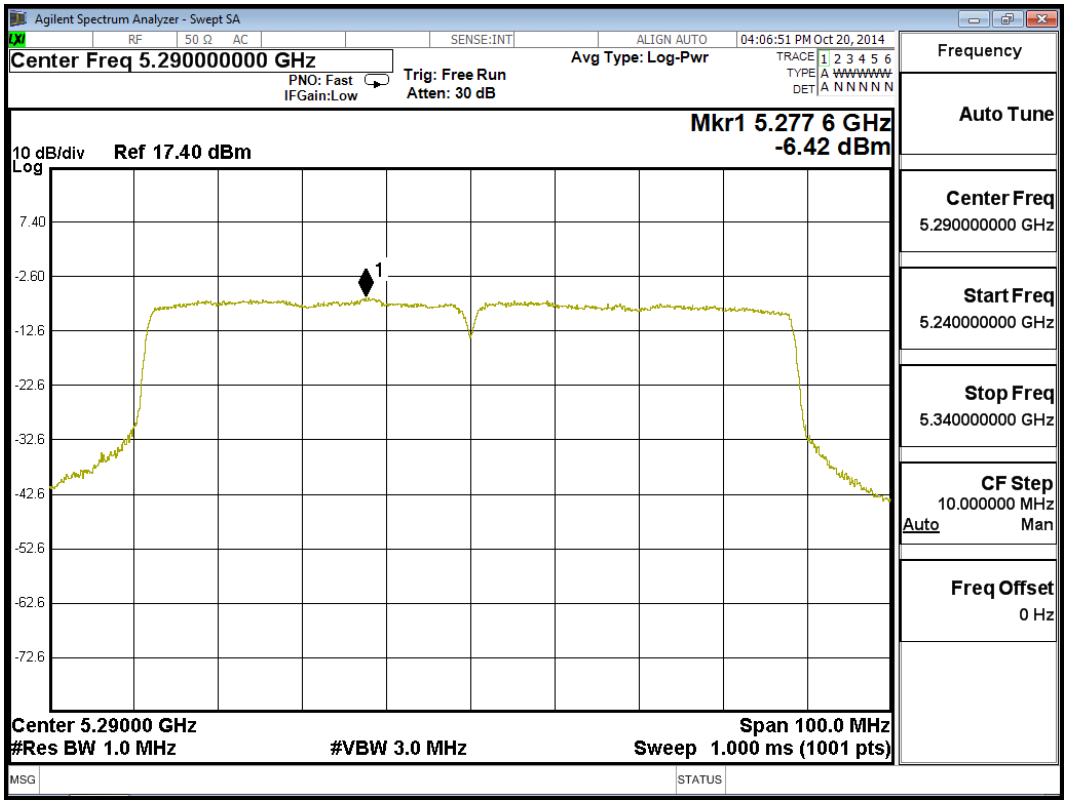


Product : Wireless Access Point
Test Item : Peak Power Spectral Density
Test Site : No.3 OATS
Test Mode : Mode 4 Transmit (802.11ac-80BW-65Mbps)

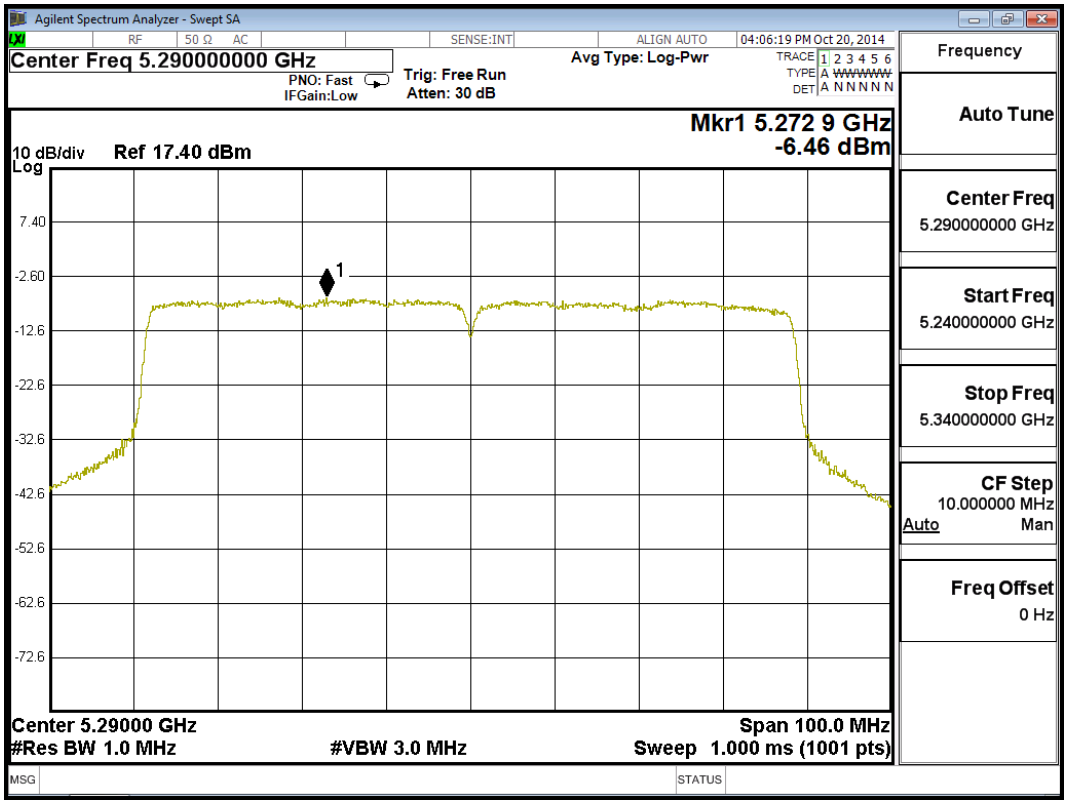
Channel Number	Frequency (MHz)	Chain	PPSD/MHz (dBm)	Total PPSD/MHz (dBm)[1]	Required Limit (dBm)	Result
58	5290	A	-6.420	-3.410	<4	Pass
		B	-6.460	-3.450	<4	Pass
106	5530	A	-5.890	-2.880	<11	Pass
		B	-6.060	-3.050	<11	Pass
138	5690	A	-2.880	0.130	<11	Pass
		B	-2.450	0.560	<11	Pass
138	5690	A	-4.580	-1.570	<17	Pass
		B	-4.130	-1.120	<17	Pass

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

Channel 58: Chain A



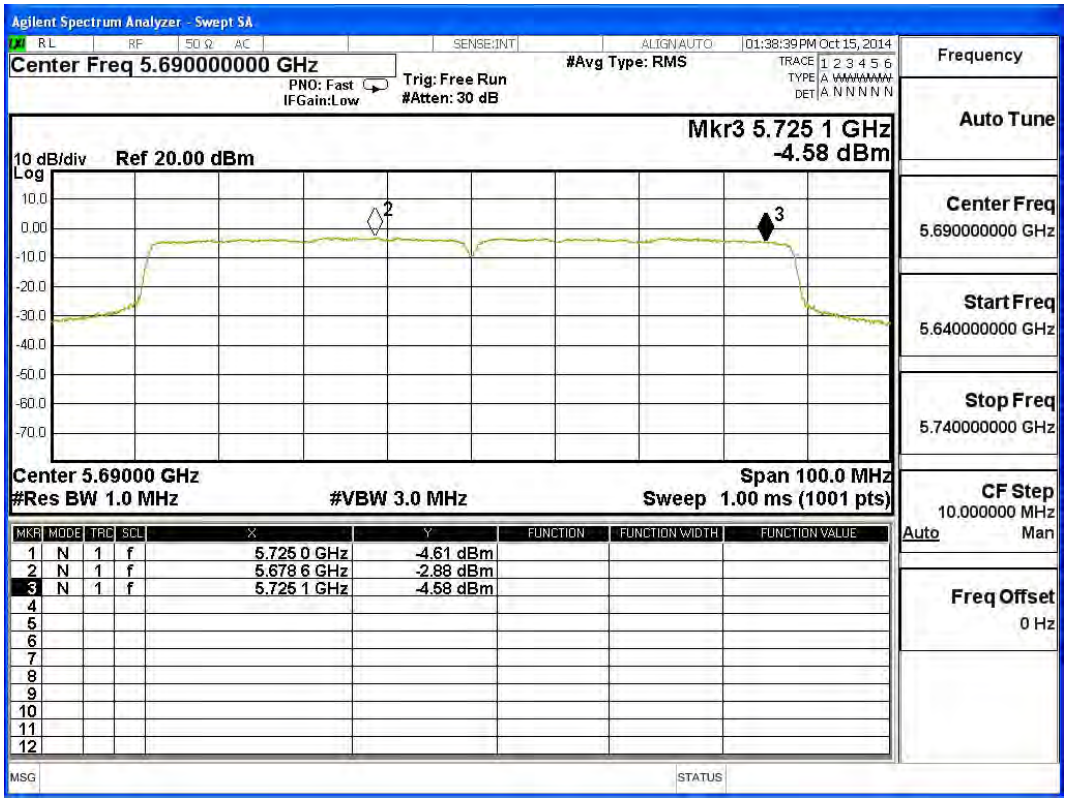
Channel 58: Chain B



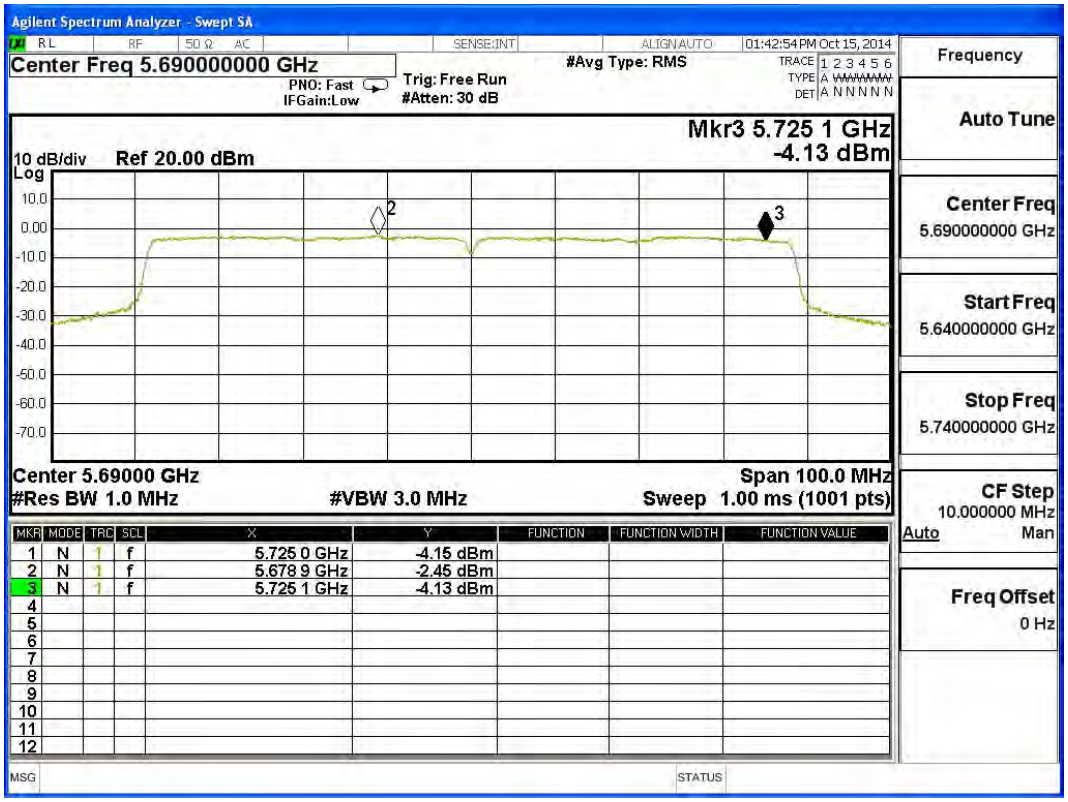
Channel 106: Chain A

Channel 106: Chain B

Channel 138: Chain A



Channel 138: Chain B



5. Peak Excursion

5.1. Test Equipment

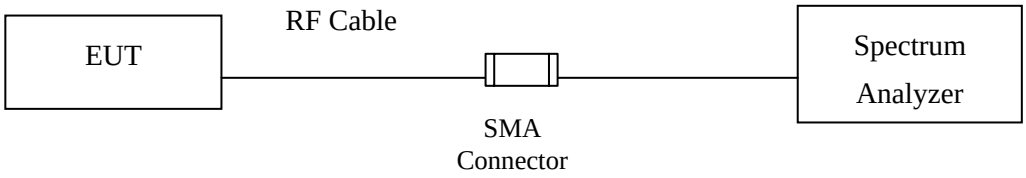
	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun., 2014
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun., 2014
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2014

Note:

1. All equipment is calibrated once a year or as required by manufacturer.
2. All equipment is calibrated to traceable calibration procedures.
3. The test instruments marked by “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 Maximum conducted output 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 : Wireless Access Point
Test Item : Peak Excursion
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11a-6Mbps)

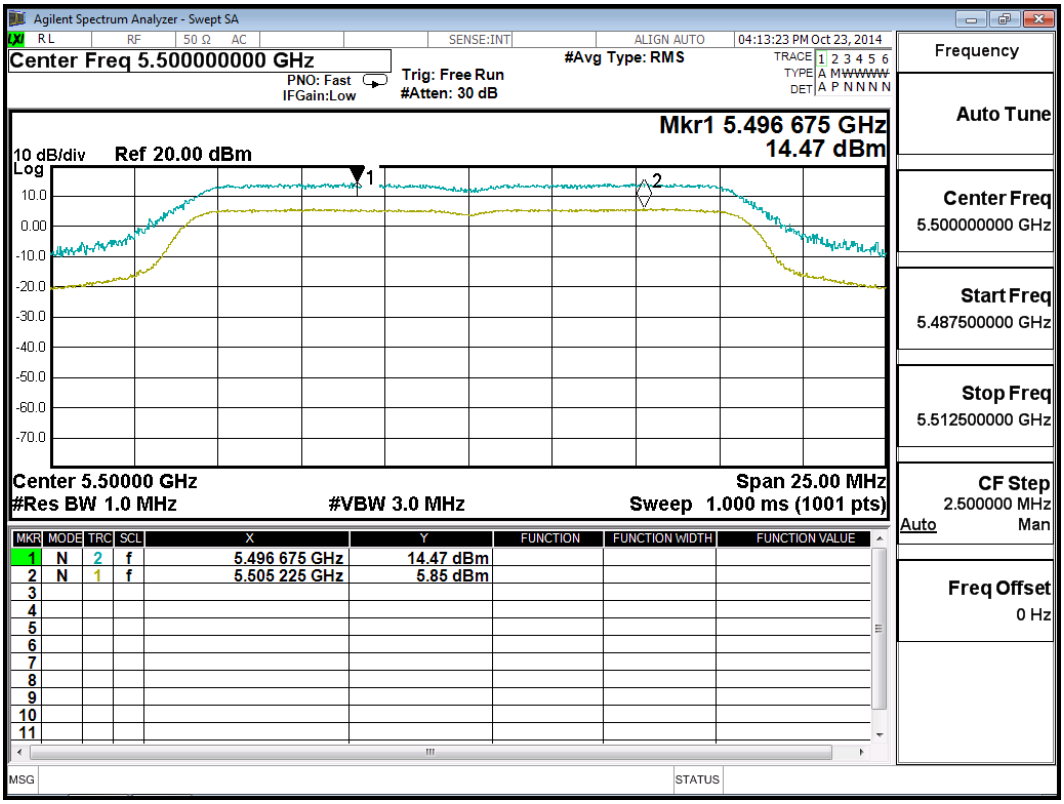
Chain A

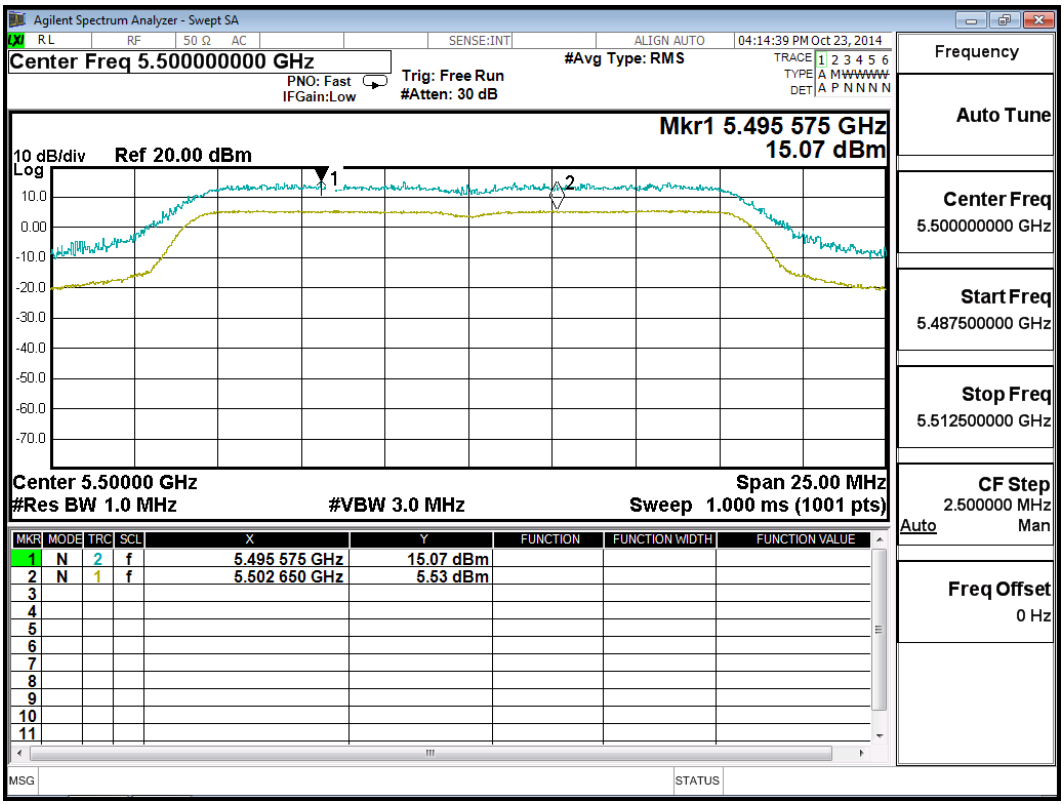
Channel No.	Frequency (MHz)	Data Rate (Mbps)	Measurement Level (dB)	Required Limit (dB)	Result
100	5500	MCS (0)	8.620	<13	Pass
		MCS (2)	9.540	<13	Pass
		MCS (4)	9.890	<13	Pass
		MCS (7)	10.340	<13	Pass

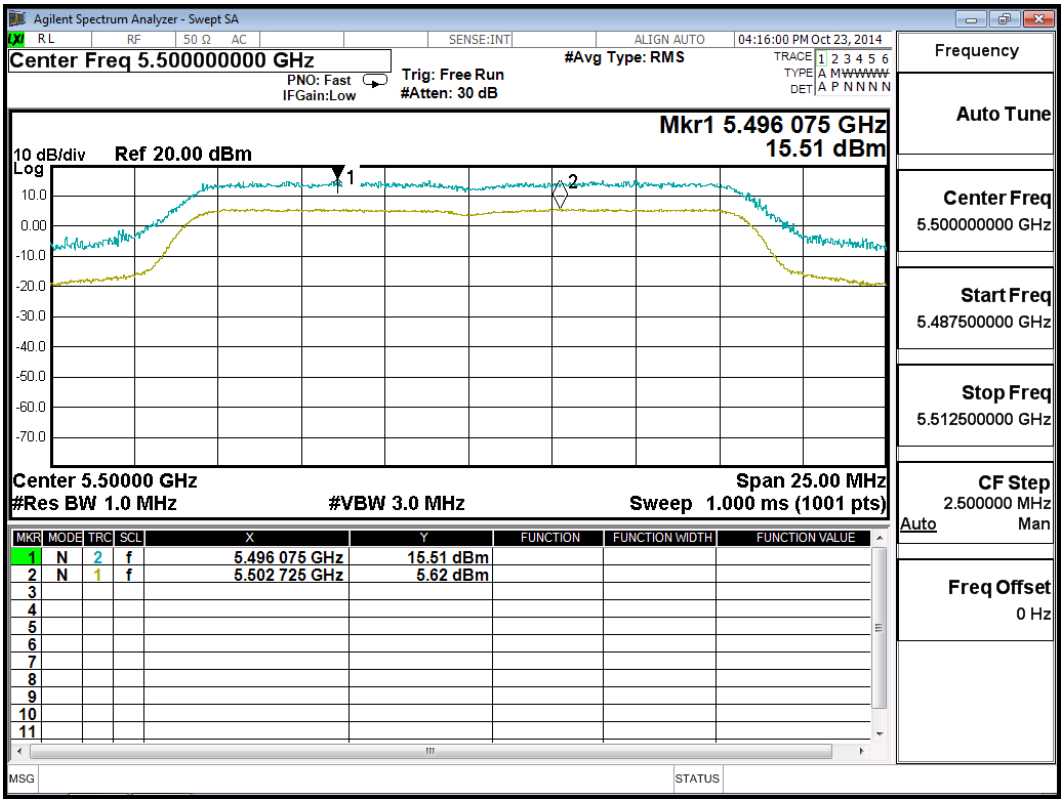
Chain B

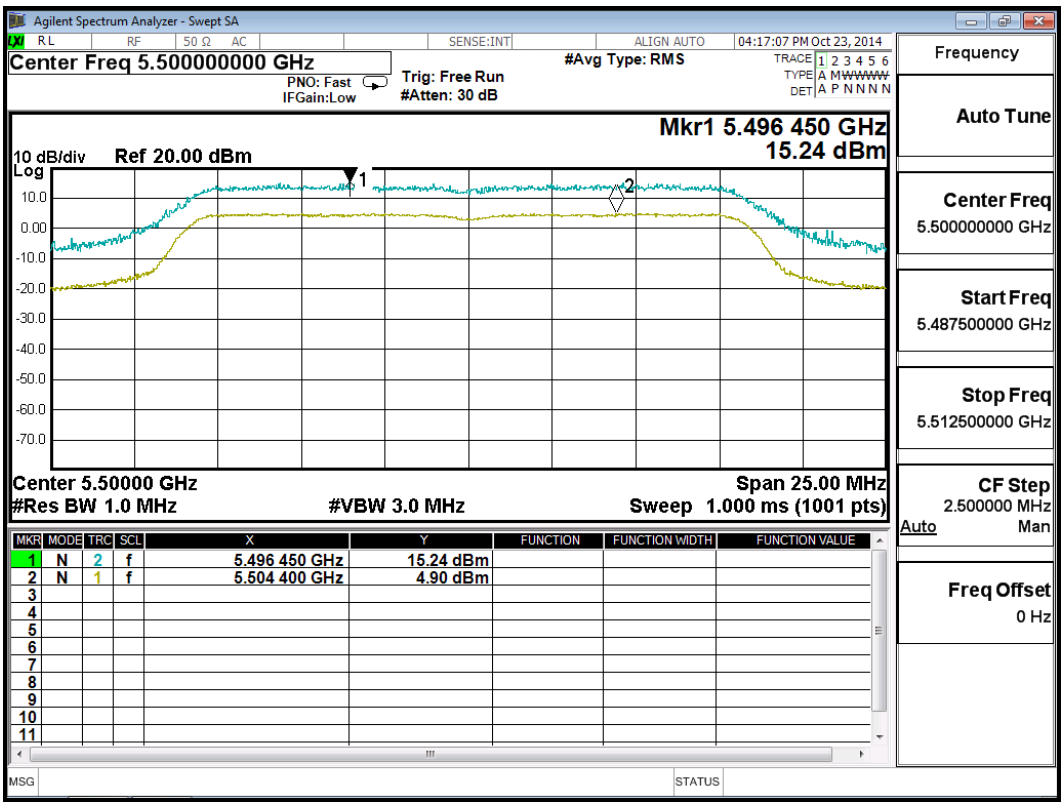
Channel No.	Frequency (MHz)	Data Rate (Mbps)	Measurement Level (dB)	Required Limit (dB)	Result
100	5500	MCS (0)	9.730	<13	Pass
		MCS (2)	9.560	<13	Pass
		MCS (4)	9.700	<13	Pass
		MCS (7)	9.540	<13	Pass

Channel 100: Chain A

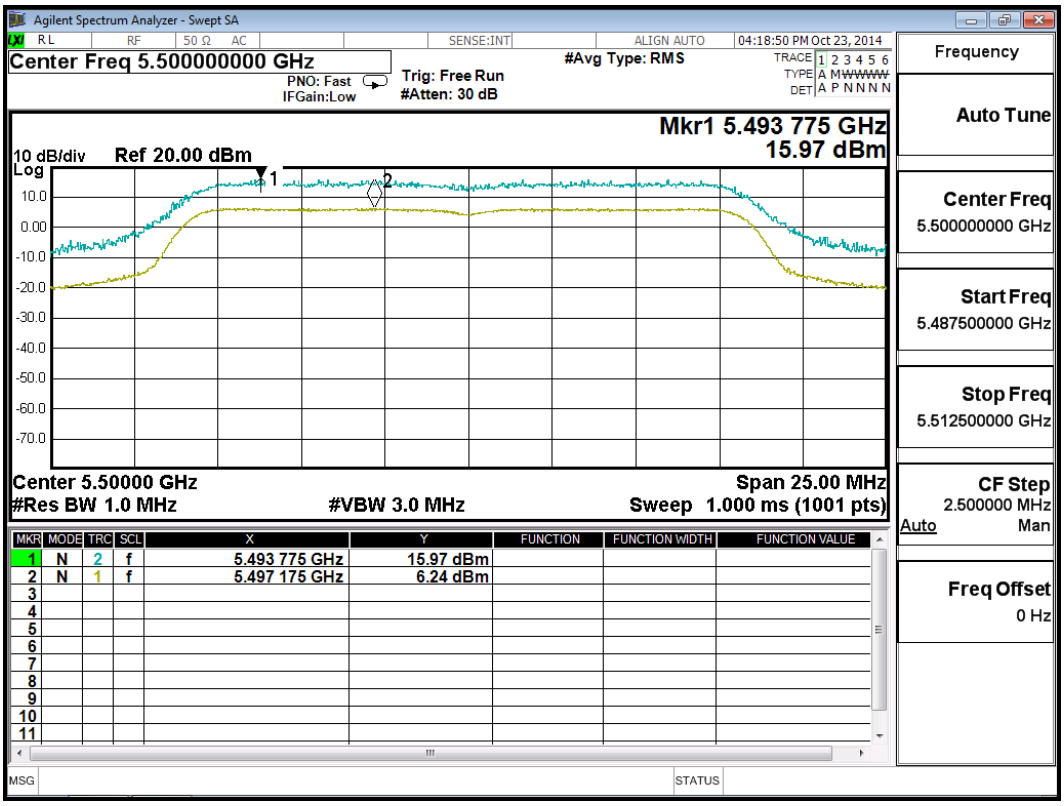


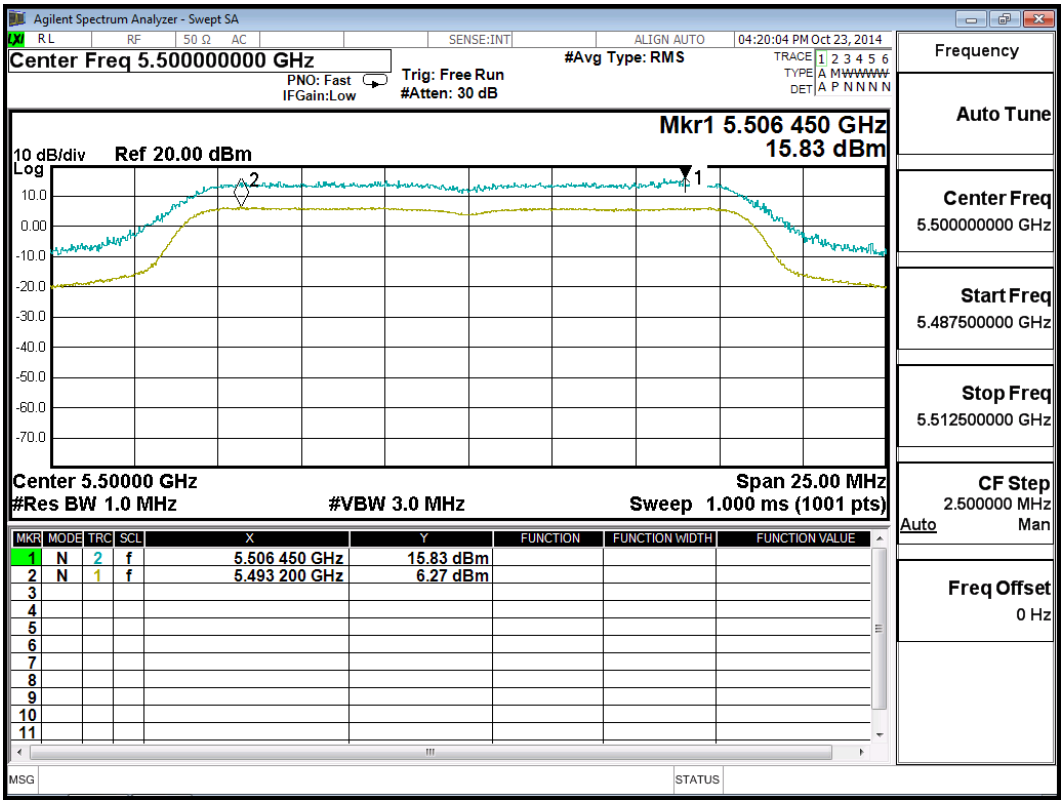


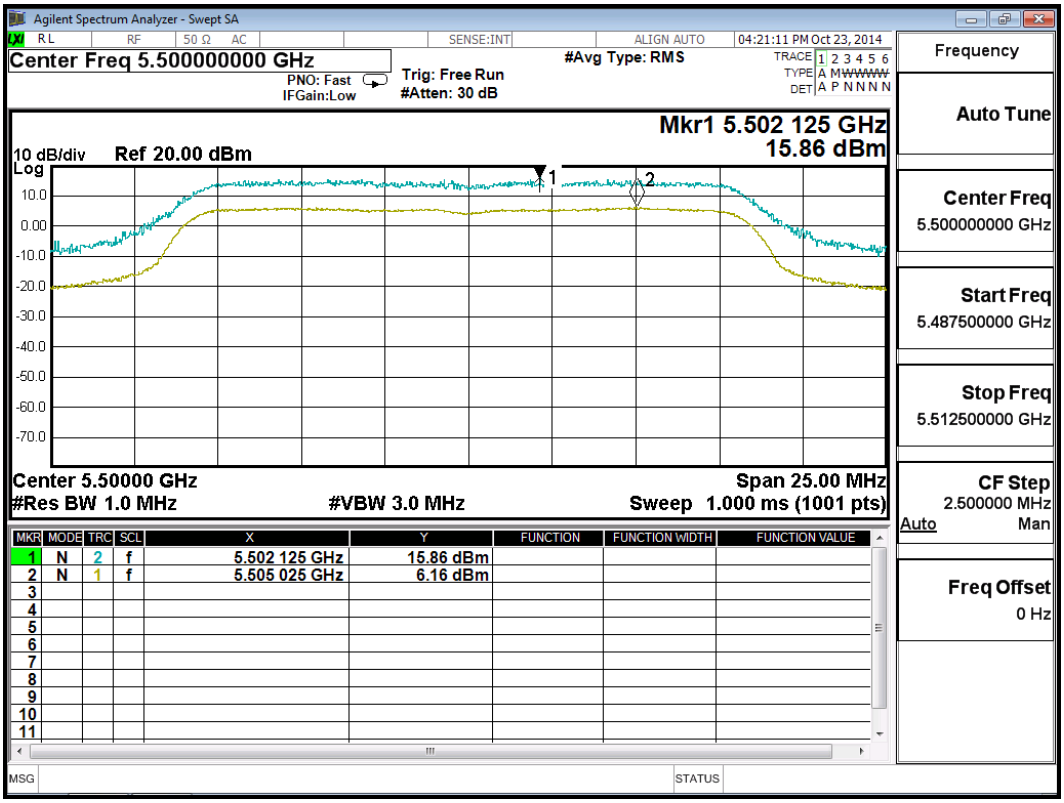

Agilent Spectrum Analyzer - Swept SA
RL RF 50 Ω AC SENSE:INT ALIGN AUTO 04:16:00 PM Oct 23, 2014
Center Freq 5.500000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
TRACE 1 2 3 4 5 6
TYPE A MWWWWW
DET A P N N N N
Mkr1 5.496 075 GHz
15.51 dBm
10 dB/div Ref 20.00 dBm
Log
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center 5.50000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 25.00 MHz
Sweep 1.000 ms (1001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 2 f 5.496 075 GHz 15.51 dBm
2 N 1 f 5.502 725 GHz 5.62 dBm
3
4
5
6
7
8
9
10
11
Frequency
Auto Tune
Center Freq
5.500000000 GHz
Start Freq
5.487500000 GHz
Stop Freq
5.512500000 GHz
CF Step
2.500000 MHz
Auto Man
Freq Offset
0 Hz
MSG
STATUS

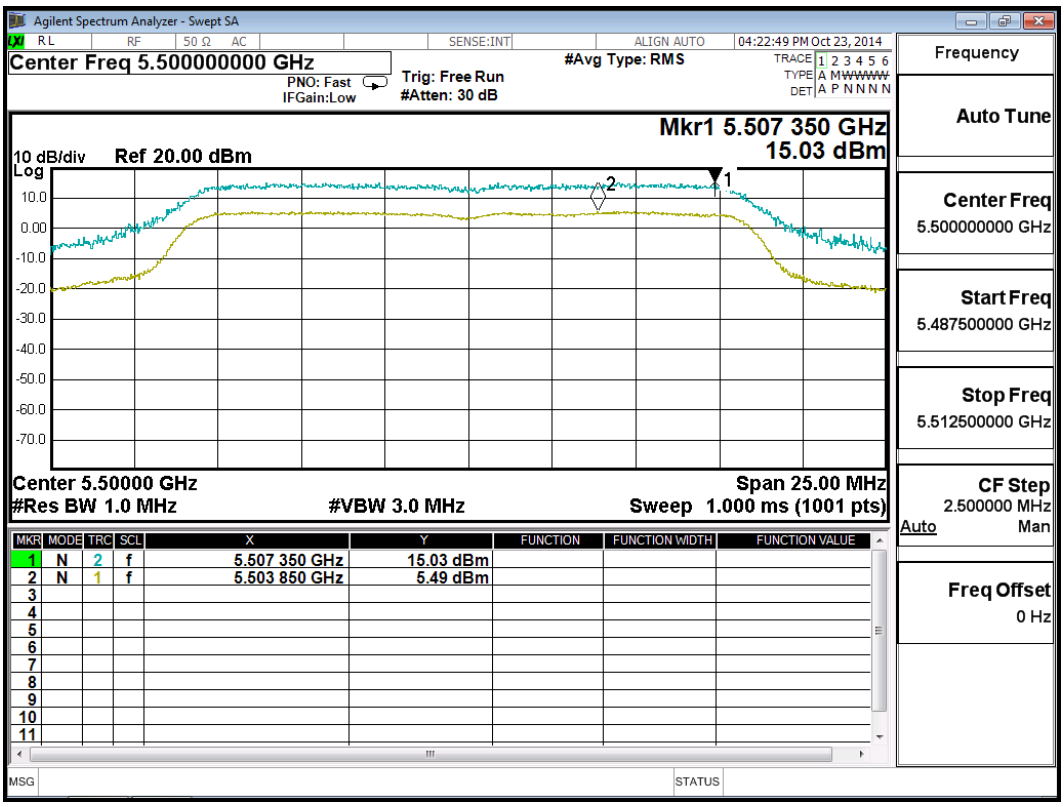

Agilent Spectrum Analyzer - Swept SA
RL RF 50 Ω AC SENSE:INT ALIGN AUTO 04:17:07 PM Oct 23, 2014
Center Freq 5.500000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
TRACE 1 2 3 4 5 6
TYPE A MWWWWW
DET A P N N N N
Mkr1 5.496 450 GHz
15.24 dBm
10 dB/div Ref 20.00 dBm
Log
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center 5.50000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 25.00 MHz
Sweep 1.000 ms (1001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 2 f 5.496 450 GHz 15.24 dBm
2 N 1 f 5.504 400 GHz 4.90 dBm
3
4
5
6
7
8
9
10
11
Frequency
Auto Tune
Center Freq
5.500000000 GHz
Start Freq
5.487500000 GHz
Stop Freq
5.512500000 GHz
CF Step
2.500000 MHz
Auto Man
Freq Offset
0 Hz
MSG
STATUS

Channel 100: Chain B






Agilent Spectrum Analyzer - Swept SA
RL RF 50 Ω AC SENSE:INT ALIGN AUTO 04:21:11 PM Oct 23, 2014
Center Freq 5.500000000 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 5.502 125 GHz
15.86 dBm
10 dB/div Ref 20.00 dBm
Log
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center 5.50000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 25.00 MHz
Sweep 1.000 ms (1001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 2 f 5.502 125 GHz 15.86 dBm
2 N 1 f 5.505 025 GHz 6.16 dBm
3
4
5
6
7
8
9
10
11
MSG
STATUS
Frequency
Auto Tune
Center Freq
5.500000000 GHz
Start Freq
5.487500000 GHz
Stop Freq
5.512500000 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 04:22:49 PM Oct 23, 2014
Center Freq 5.500000000 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 5.507 350 GHz
15.03 dBm
10 dB/div Ref 20.00 dBm
Log
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center 5.50000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 25.00 MHz
Sweep 1.000 ms (1001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 2 f 5.507 350 GHz 15.03 dBm
2 N 1 f 5.503 850 GHz 5.49 dBm
3
4
5
6
7
8
9
10
11
MSG
STATUS
Frequency
Auto Tune
Center Freq
5.500000000 GHz
Start Freq
5.487500000 GHz
Stop Freq
5.512500000 GHz
CF Step
2.500000 MHz
Auto Man
Freq Offset
0 Hz