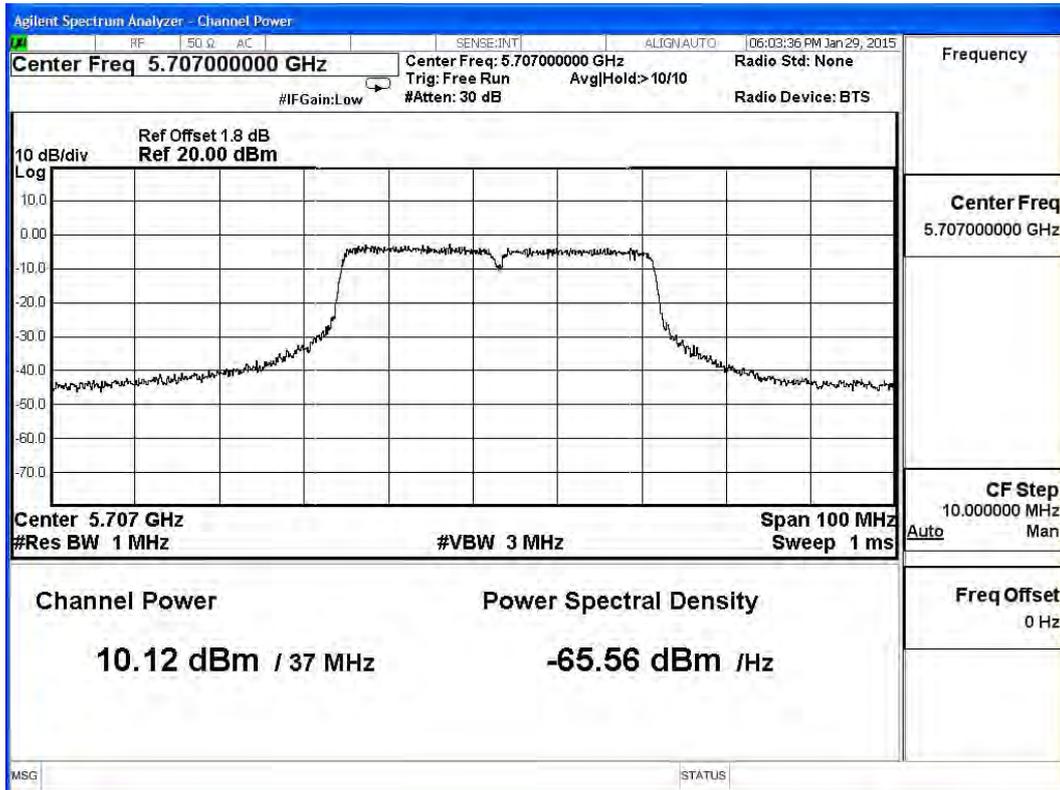
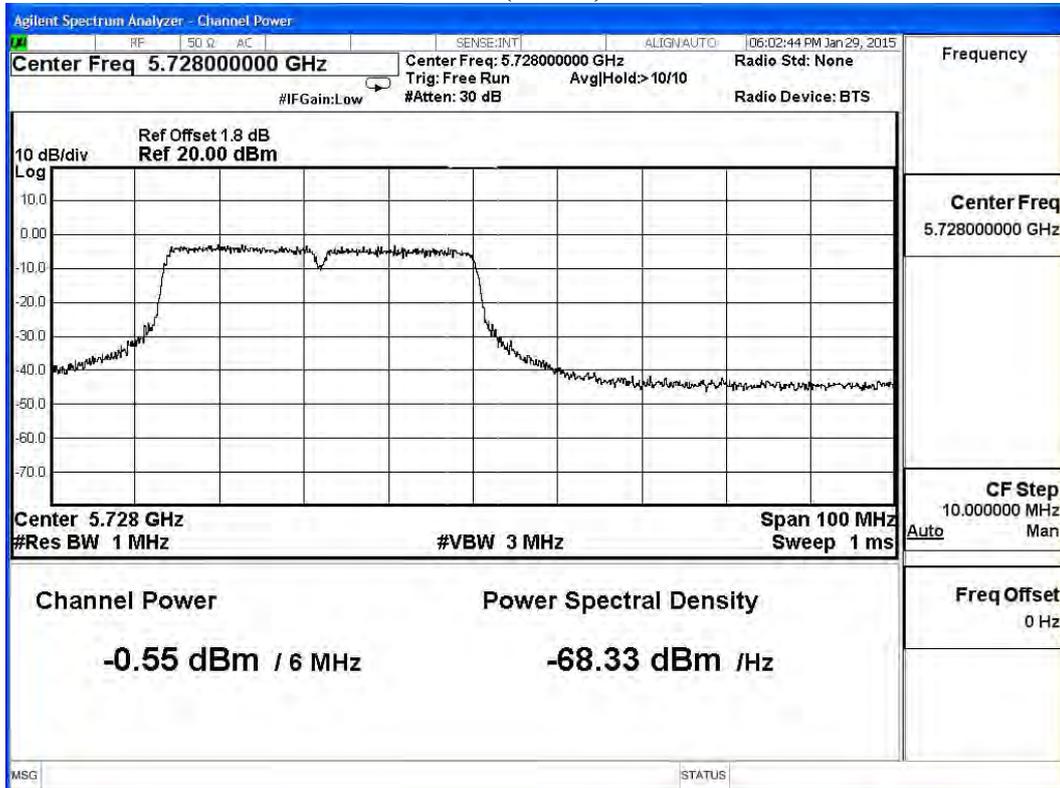


**Maximum conducted output power:
Channel 142 (Band3) – Chain B**



Channel 142 (Band4) – Chain B



Product : Wireless Access Point
 Test Item : Maximum conducted output power
 Test Site : No.3 OATS
 Test Mode : Mode 6: Transmit (802.11ac-80BW-65Mbps) (External Antenna)

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	
42	5210	8.53	8.48	8.43	8.38	8.39	8.28	8.23	8.18	8.13	8.09	<30dBm
58	5290	8.12	8.07	8.02	7.97	7.92	7.87	7.82	7.76	7.72	7.67	<24dBm
106	5530	6.89	6.84	6.79	6.77	6.69	6.61	6.59	6.54	6.49	6.43	<24dBm
138(Band3)	5690	10.29	10.22	10.15	10.08	10.01	9.94	9.87	9.81	9.73	9.66	<24dBm
138(Band4)	5690	-4.37	-4.42	-4.47	-4.55	-4.57	-4.62	-4.67	-4.72	-4.78	-4.82	<30dBm

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
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
42	5210	7.7	7.4	7.12	6.89	6.5	6.22	5.9	5.63	5.32	5.25	<30dBm
58	5290	6.58	6.47	6.36	6.25	6.14	6.03	5.98	5.81	5.7	5.56	<24dBm
106	5530	8.11	8.07	8.03	7.97	7.95	7.91	7.85	7.83	7.79	7.75	<24dBm
138(Band3)	5690	10.7	10.66	10.62	10.58	10.54	10.52	10.46	10.42	10.38	10.36	<24dBm
138(Band4)	5690	-4.33	-4.38	-4.43	-4.48	-4.53	-4.58	-4.61	-4.68	-4.72	-4.78	<30dBm

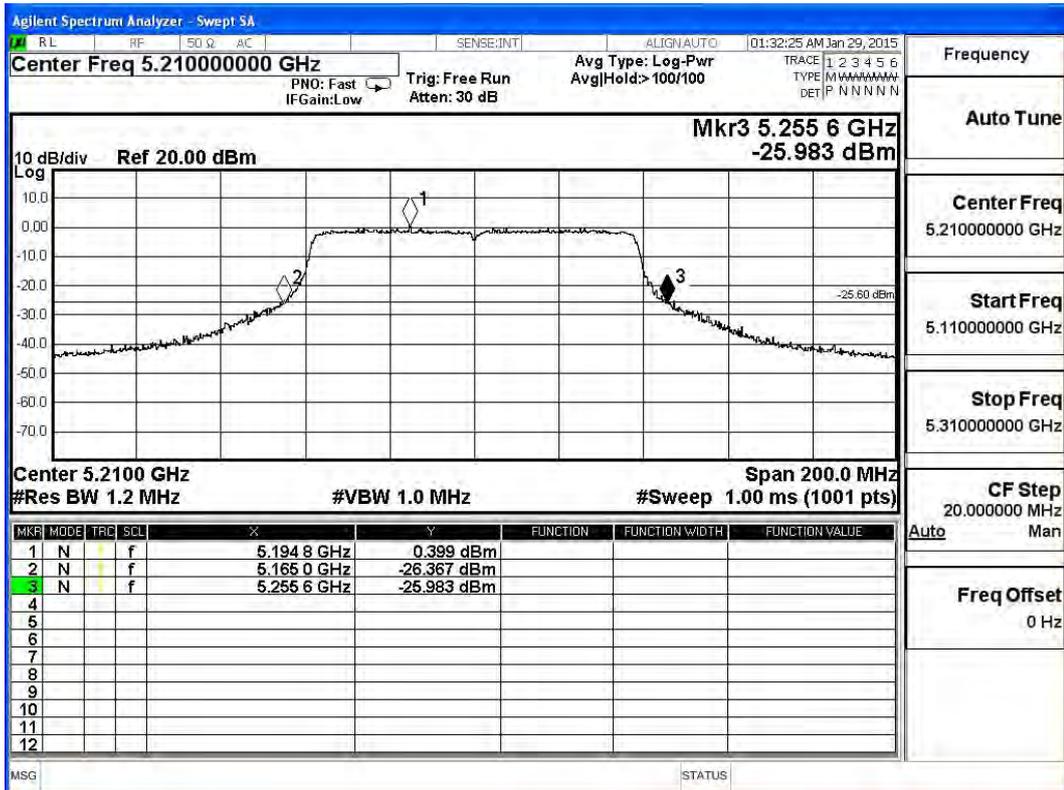
Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:

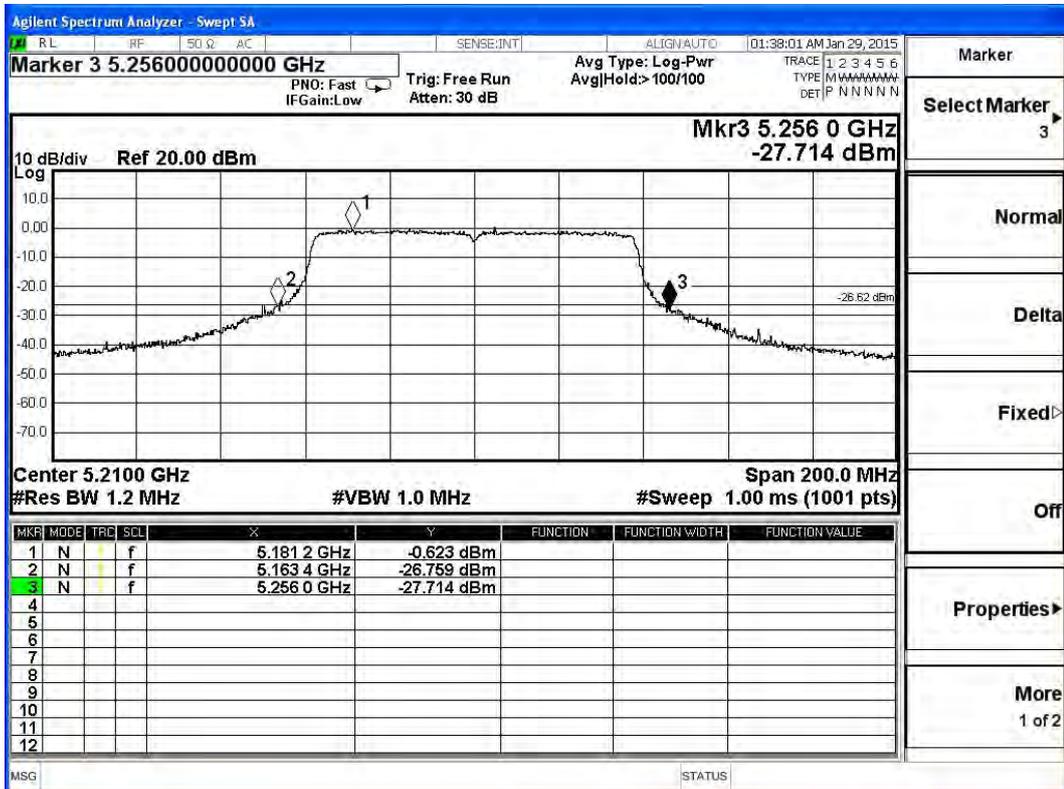
Note: Power Output Value =Reading value on average power meter + cable loss

Channel No	Frequency Range (MHz)	26dB Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Output Power (dBm)	Output Power Limit		Result
						(dBm)	dBm+10log(BW)	
42	5210	90.600	8.53	7.70	11.15	30	--	Pass
58	5290	91.000	8.12	6.58	10.43	24	30.59	Pass
106	5530	90.200	6.89	8.11	10.55	24	30.55	Pass
138(Band3)	5690	80.000	10.29	10.70	13.51	24	30.03	Pass
138(Band4)	5690	8.200	-4.37	-4.33	-1.34	30	--	Pass

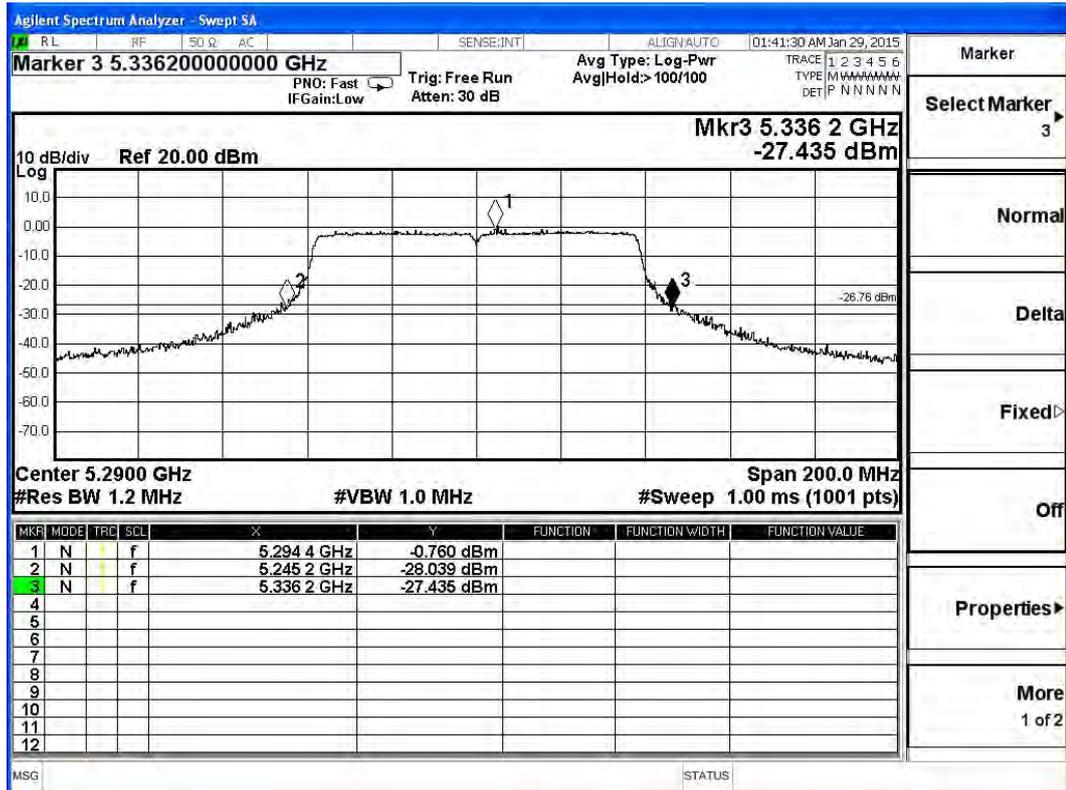
26dBc Occupied Bandwidth: Channel 42 – Chain A



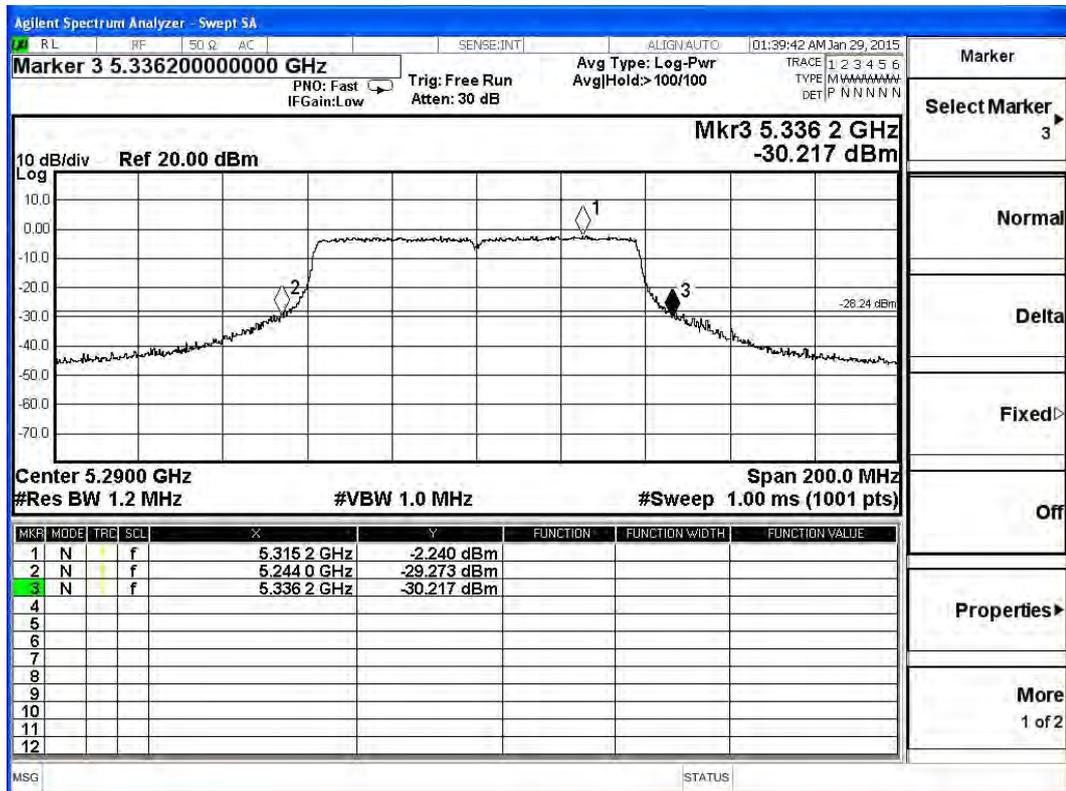
Channel 42 – Chain B



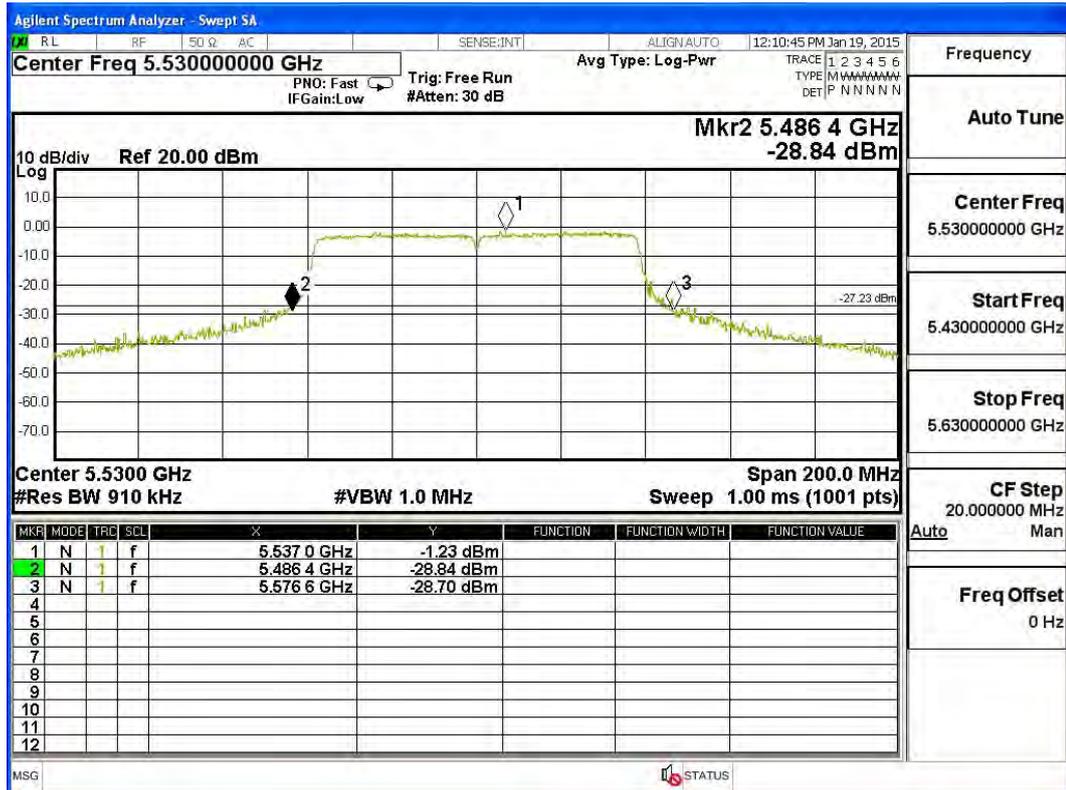
Channel 58 – Chain A



Channel 58 – Chain B

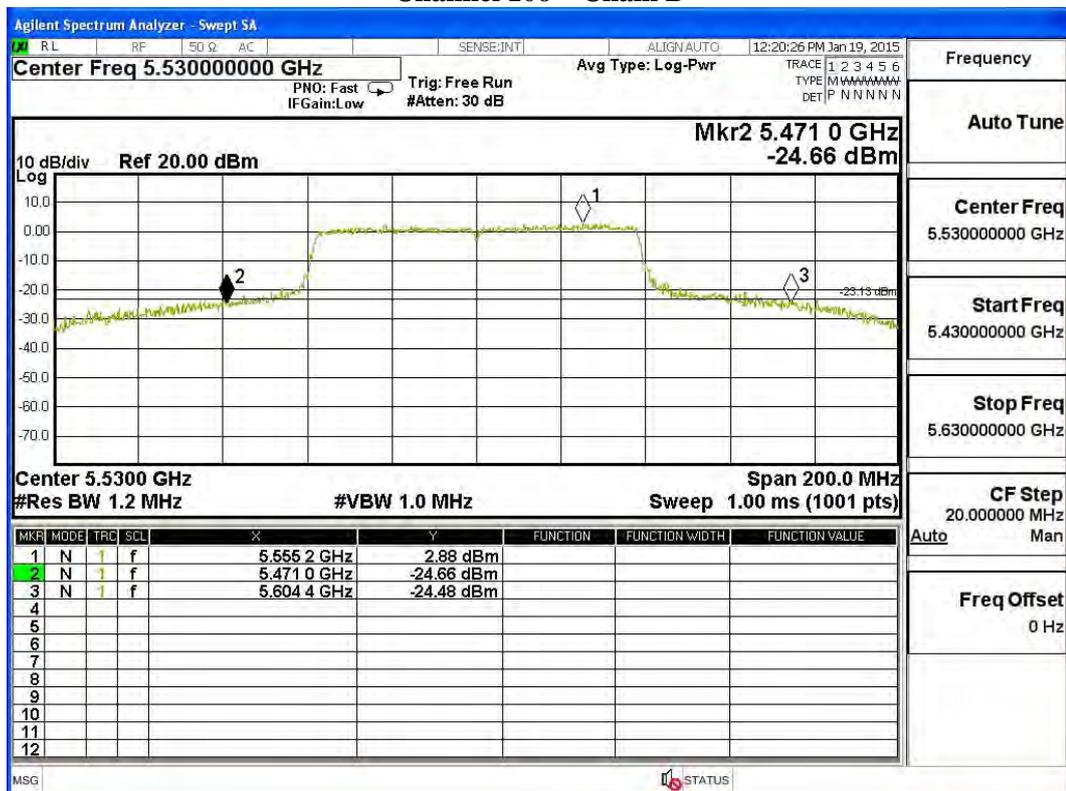


Channel 106 – Chain A



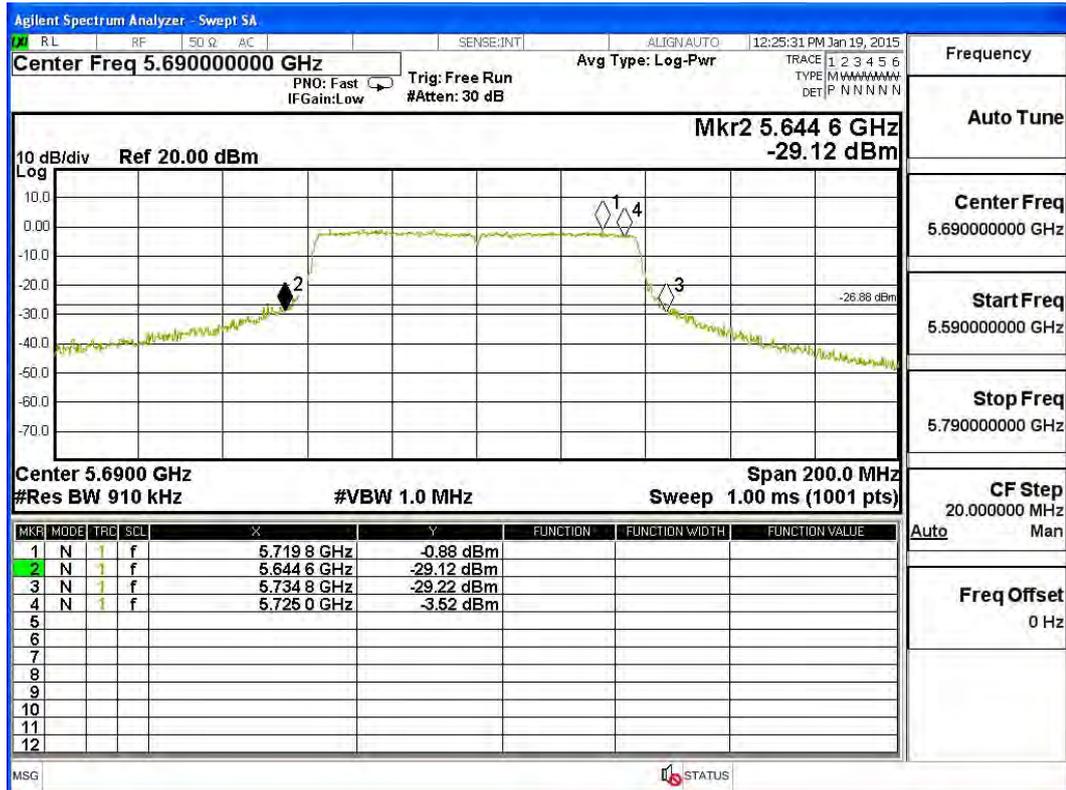
Frequency	
Auto Tune	
Center Freq	5.53000000 GHz
Start Freq	5.43000000 GHz
Stop Freq	5.63000000 GHz
CF Step	20.000000 MHz
Auto Man	
Freq Offset	0 Hz

Channel 106 – Chain B

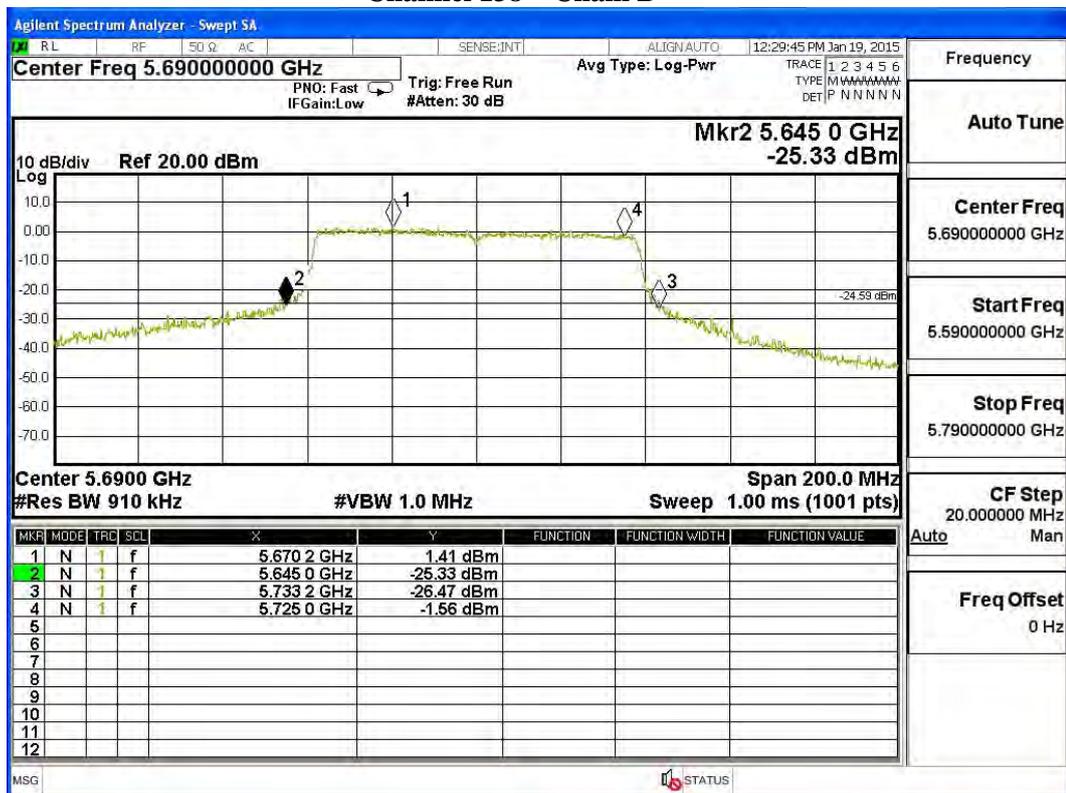


Frequency	
Auto Tune	
Center Freq	5.53000000 GHz
Start Freq	5.43000000 GHz
Stop Freq	5.63000000 GHz
CF Step	20.000000 MHz
Auto Man	
Freq Offset	0 Hz

Channel 138 – Chain A

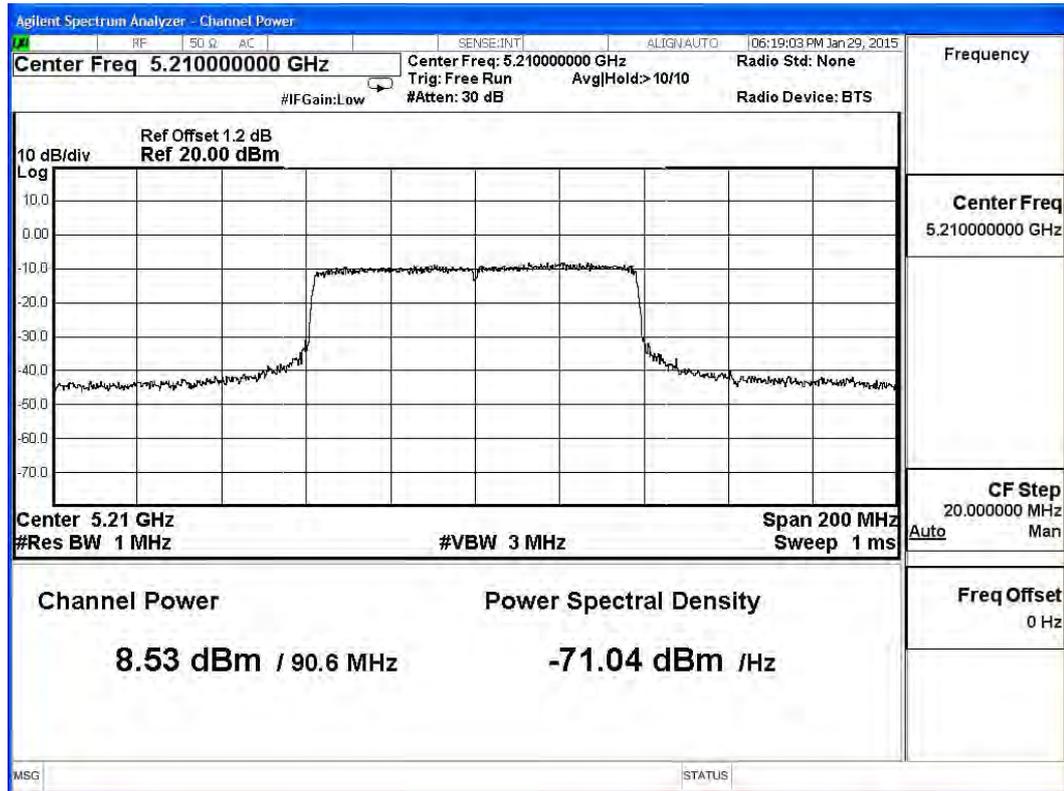


Channel 138 – Chain B



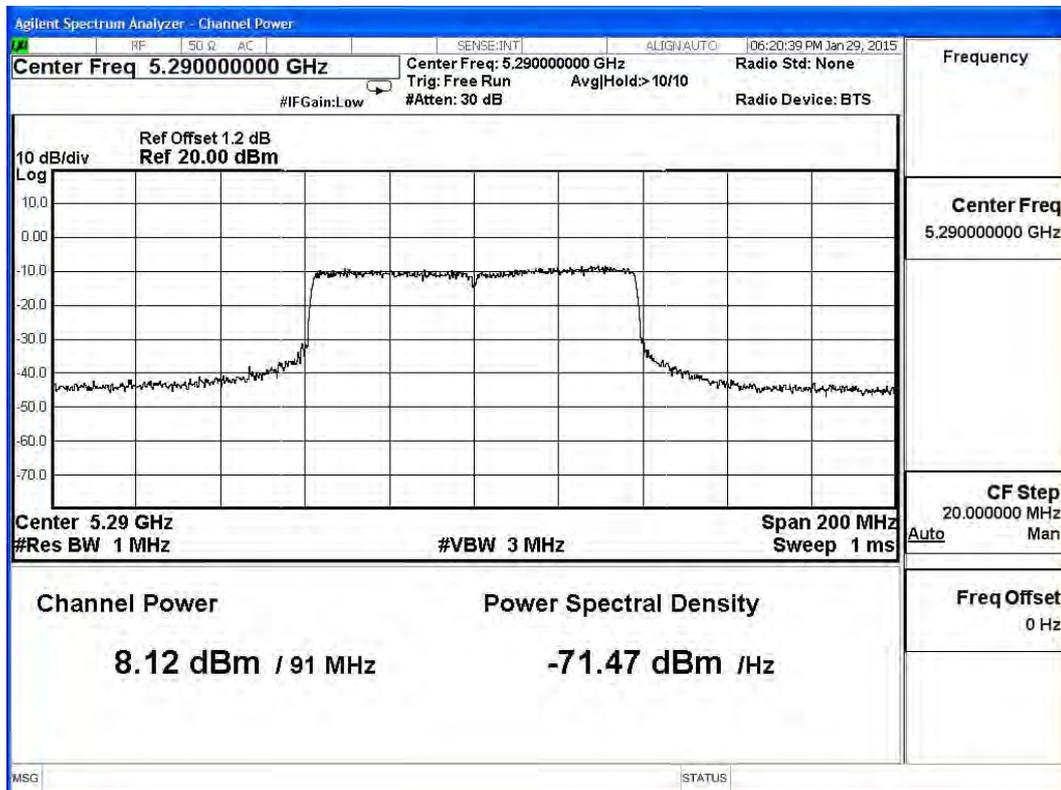
Maximum conducted output power:

Channel 42 – Chain A

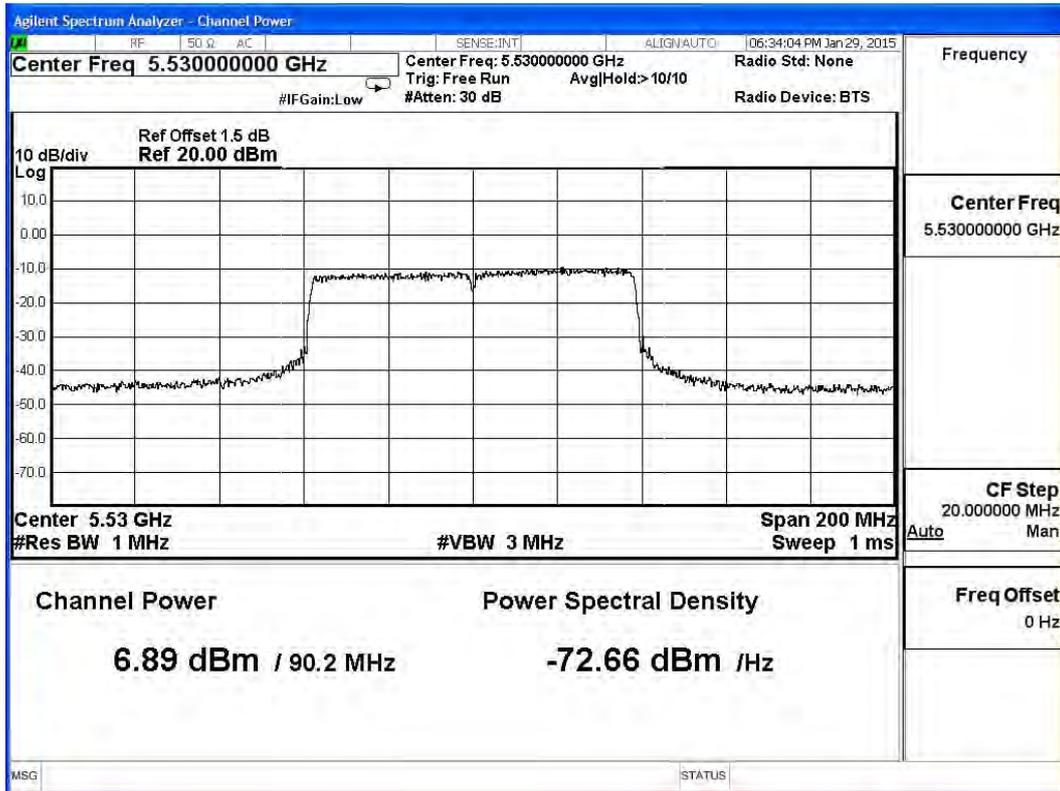


Maximum conducted output power:

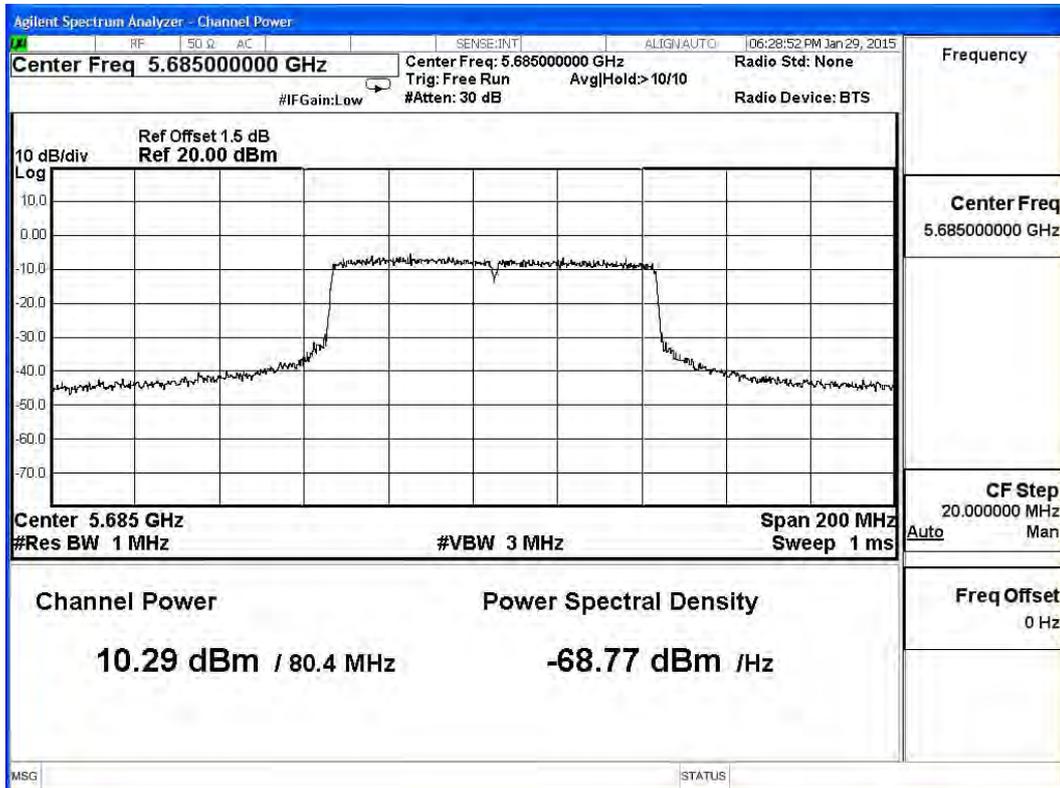
Channel 58 – Chain A



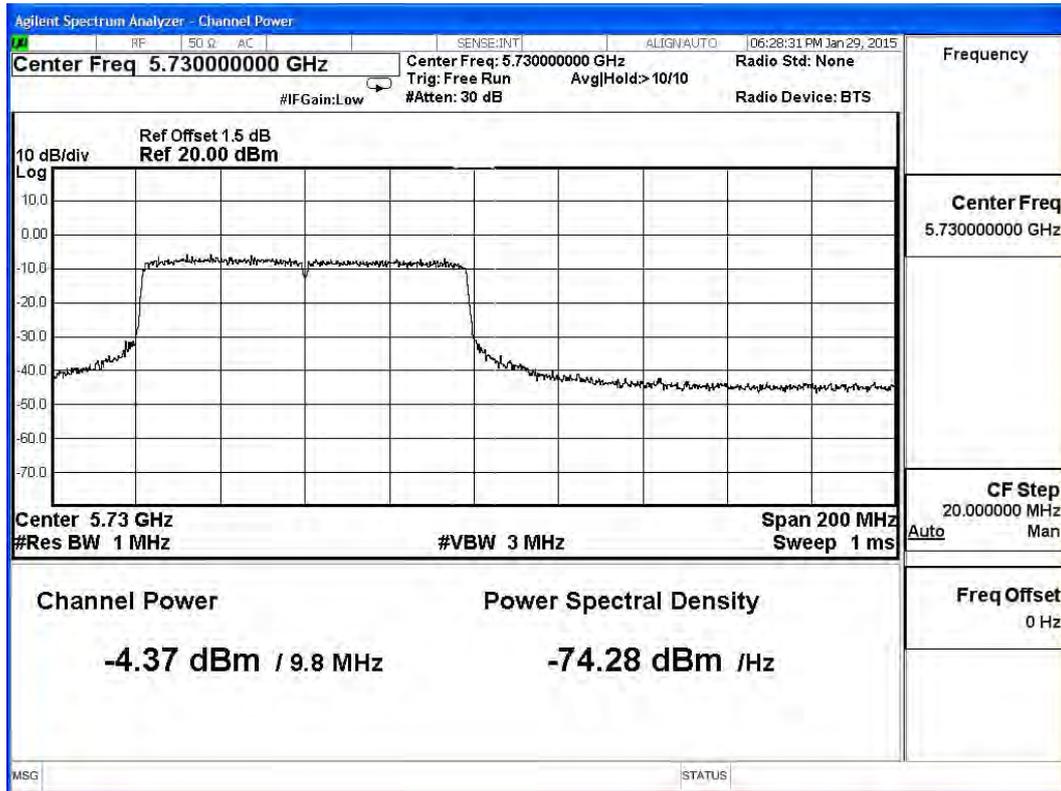
**Maximum conducted output power:
Channel 106 – Chain A**



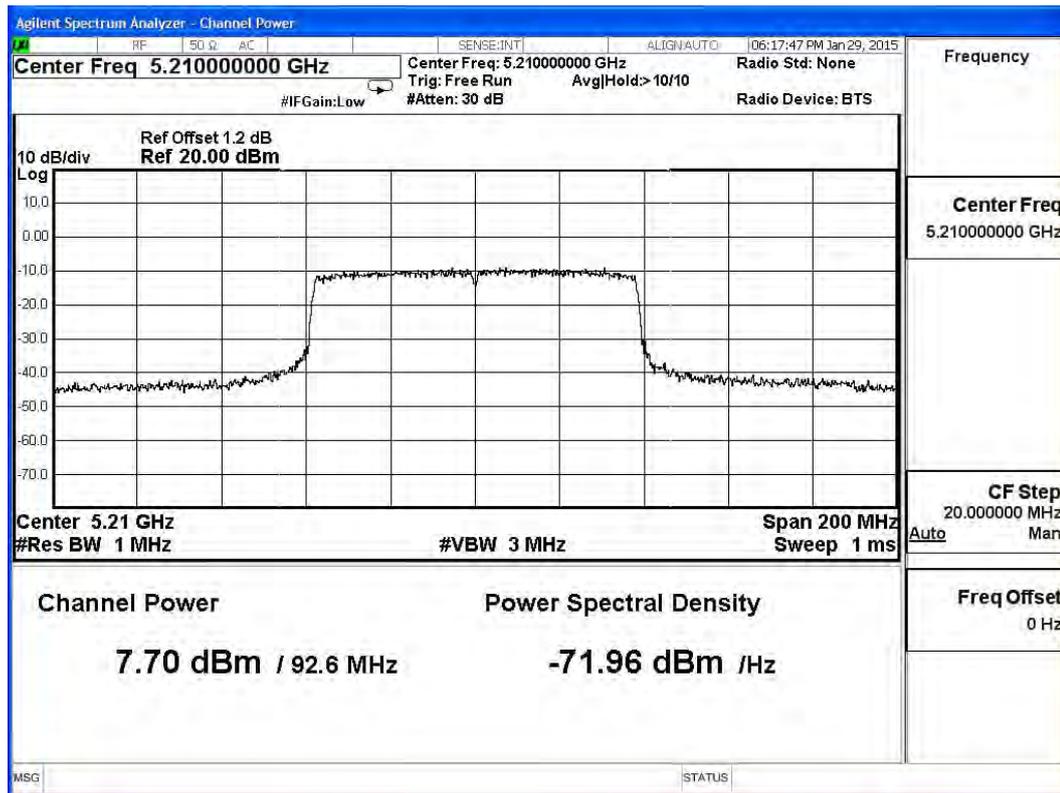
**Maximum conducted output power:
Channel 138 (Band3) – Chain A**



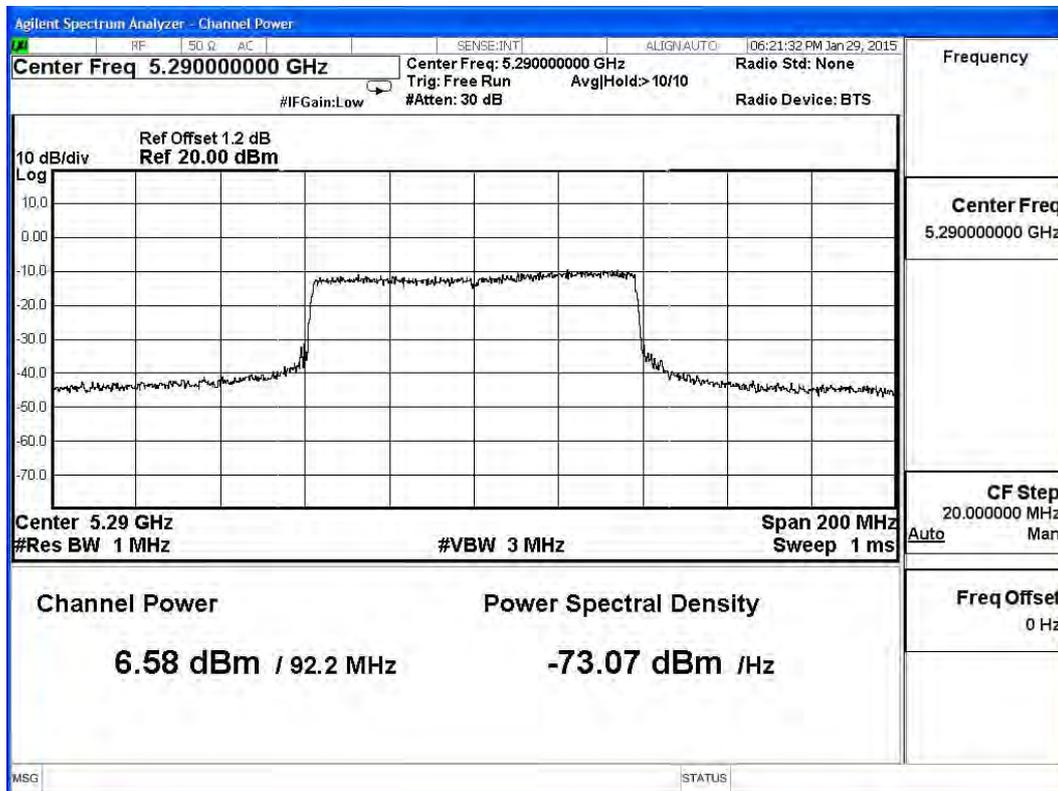
**Maximum conducted output power:
Channel 138 (Band4) – Chain A**



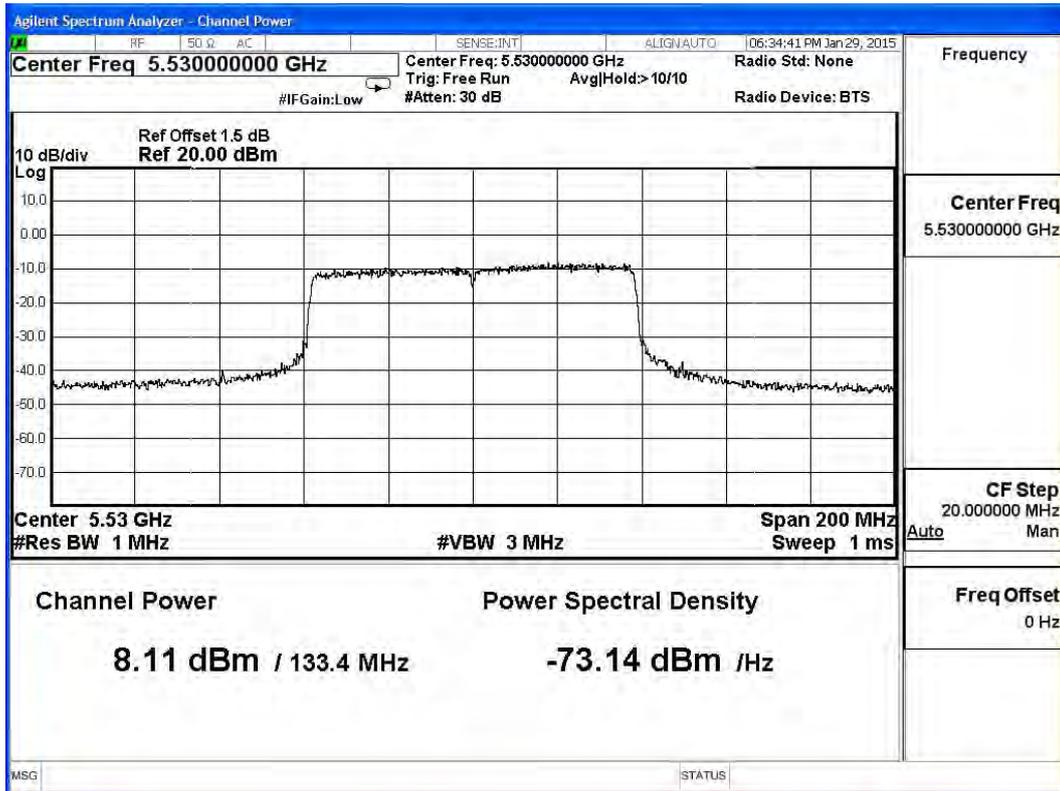
**Maximum conducted output power:
Channel 42 – Chain B**



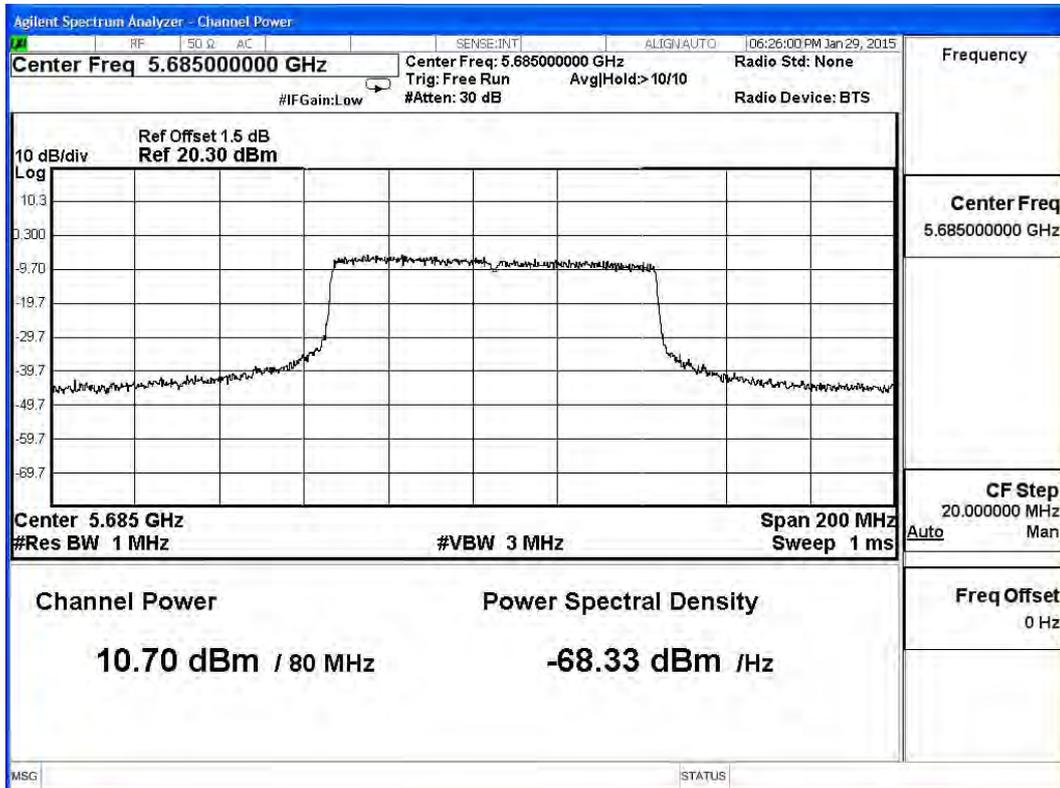
**Maximum conducted output power:
Channel 58 – Chain B**



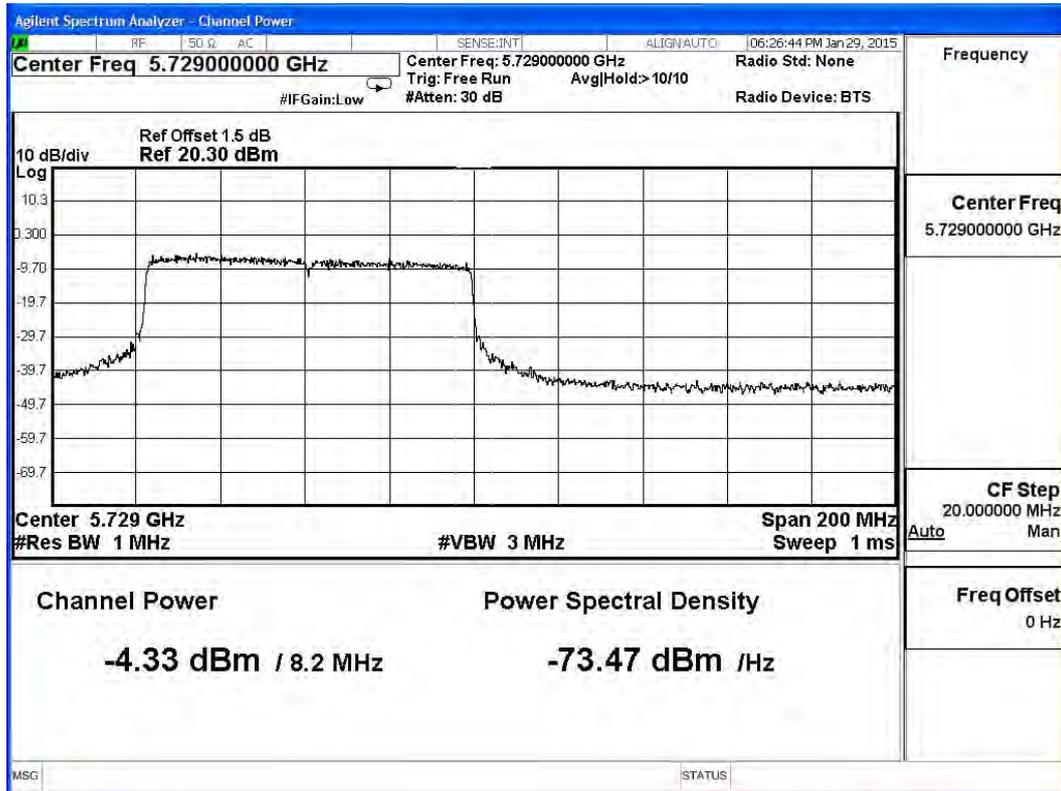
**Maximum conducted output power:
Channel 106 – Chain B**



**Maximum conducted output power:
Channel 138 (Band3) – Chain B**



**Maximum conducted output power:
Channel 138 (Band4) – Chain B**



4. Peak Power Spectral Density

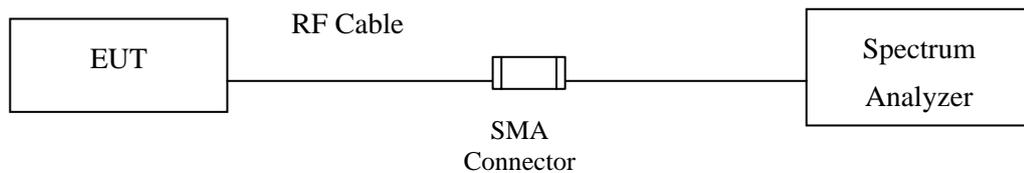
4.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun., 2015
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun., 2015
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2015

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

- (1) For the band 5.15-5.25 GHz,
 - (i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
 - (ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
 - (iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the

equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations. (iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.+

- (2) For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
- (3) For the band 5.725-5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point UNII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

4.4. Test Procedure

The EUT was setup to ANSI C63.10, 2013; tested to UNII 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.

Scale the observed power level to an equivalent value in 500 kHz by adjusting (increase) the measured power by a bandwidth correction factor (BWCF) where $BWCF = 10\log(500\text{ kHz}/100\text{ kHz}) = 6.98\text{ dB}$.

4.5. Uncertainty

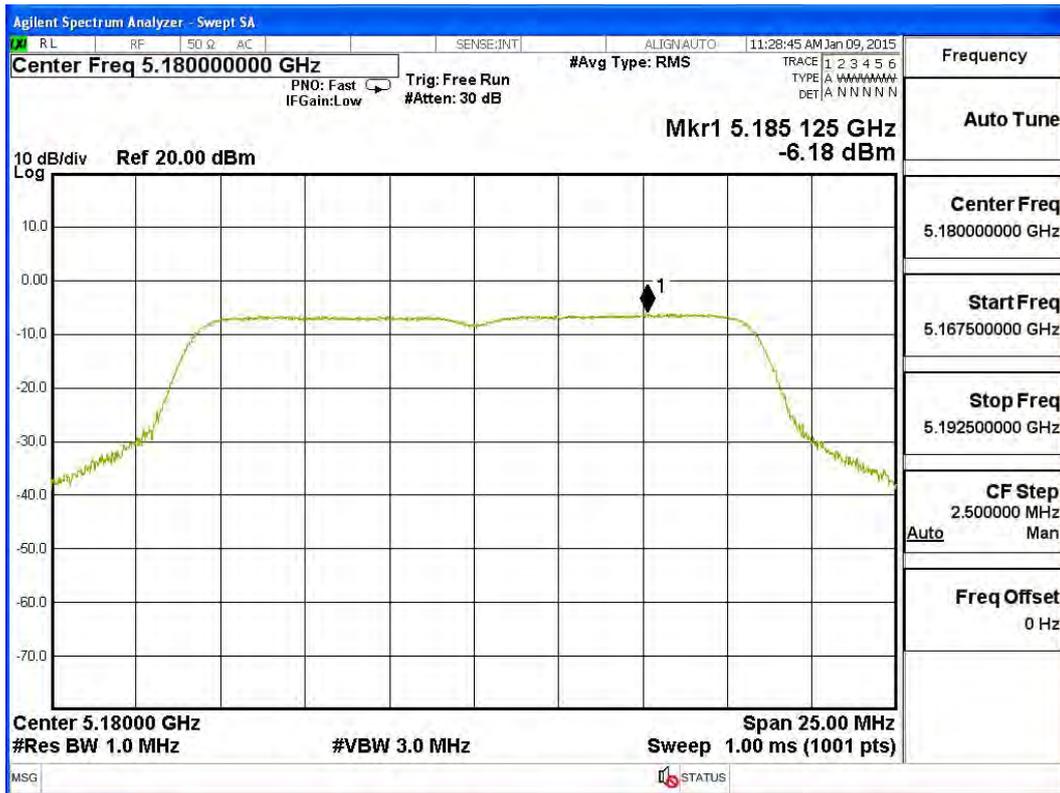
± 1.27 dB

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) (Internal Antenna)

Channel Number	Frequency (MHz)	Data Rata (Mbps)	Reading Level (dBm)	Cable Loss (dB)	Measurement Level (dBm)	Required Limit (dBm)	Result
36	5180	6	-6.18	1.2	-4.98	17	Pass
44	5220	6	-5.90	1.2	-4.70	17	Pass
48	5240	6	-5.27	1.2	-4.07	17	Pass
52	5260	6	-5.26	1.2	-4.06	11	Pass
60	5300	6	-4.30	1.2	-3.10	11	Pass
64	5320	6	-3.64	1.2	-2.44	11	Pass
100	5500	6	-2.36	1.5	-0.86	11	Pass
116	5580	6	-2.04	1.5	-0.54	11	Pass
140	5700	6	-3.45	1.5	-1.95	11	Pass

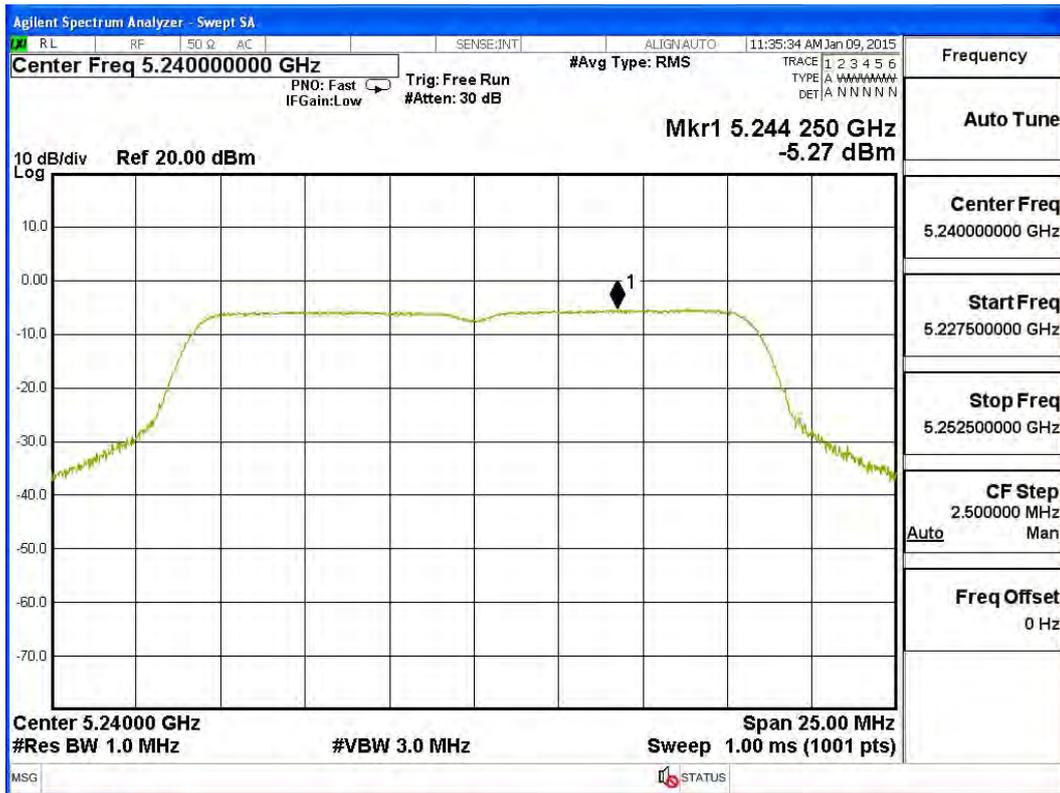
Channel 36:



Channel 44:



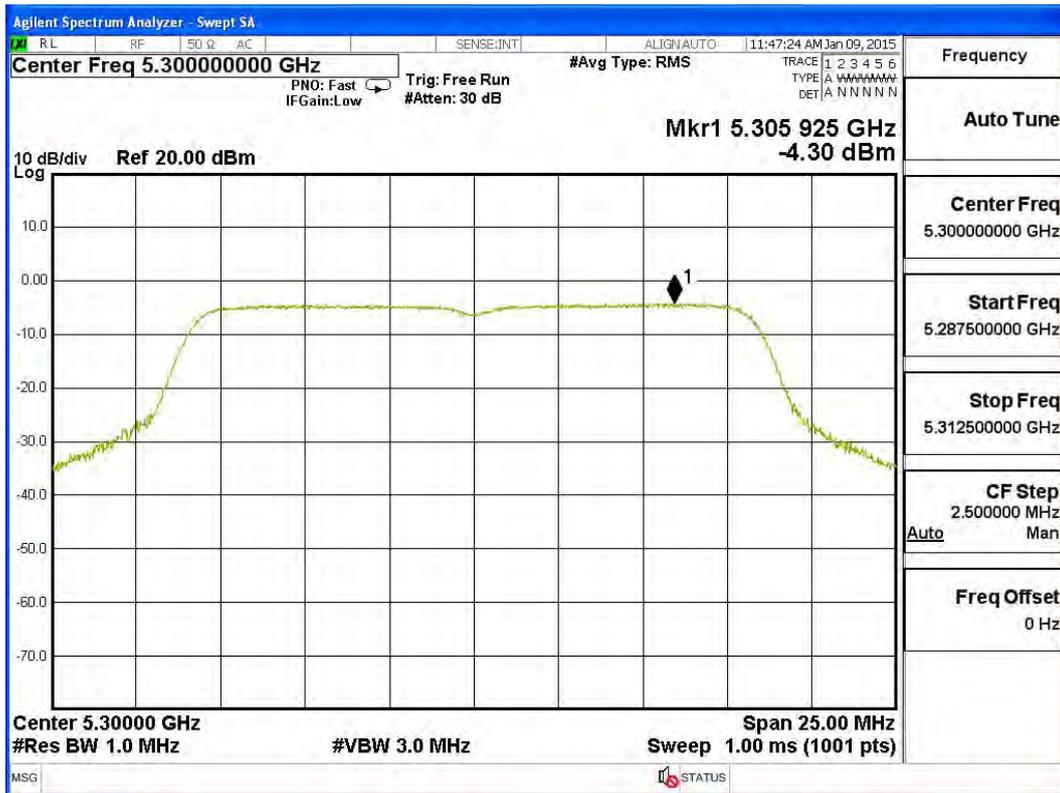
Channel 48:



Channel 52:



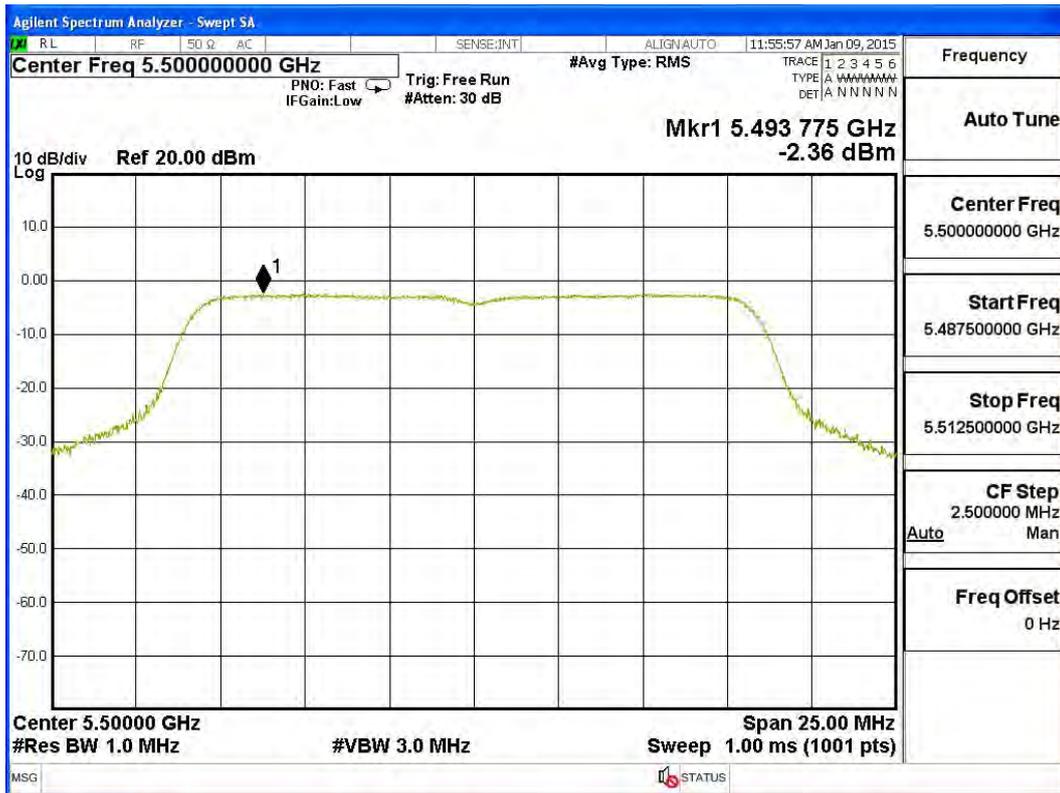
Channel 60:



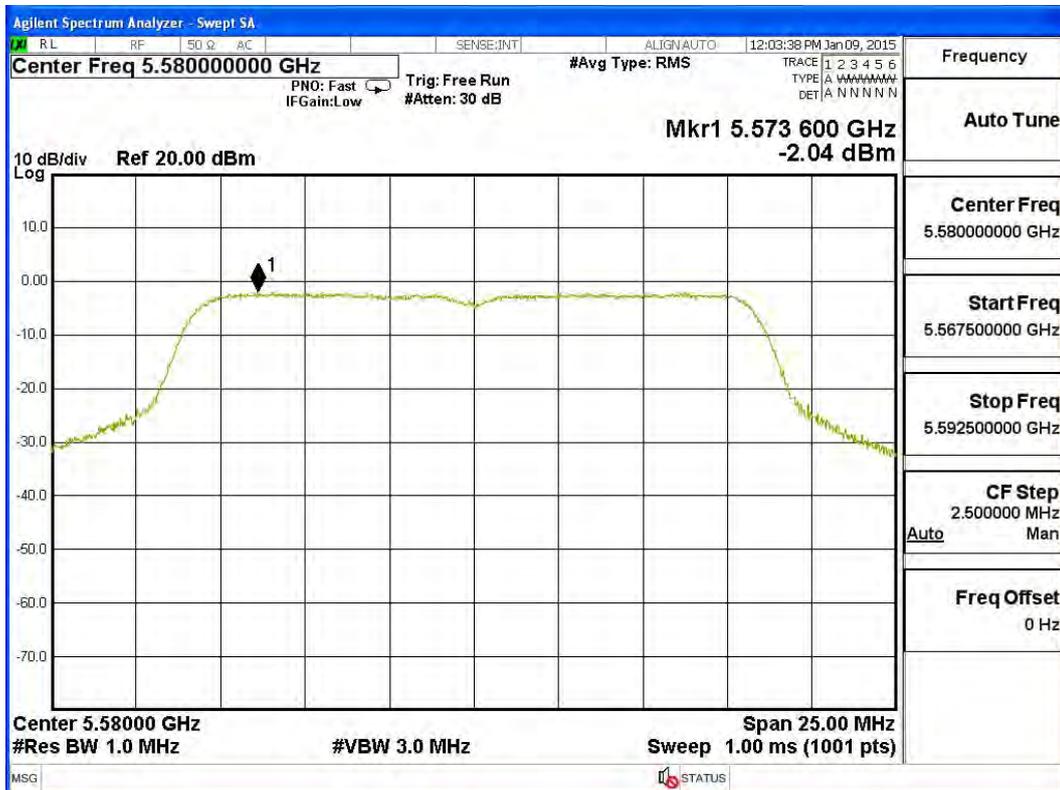
Channel 64:



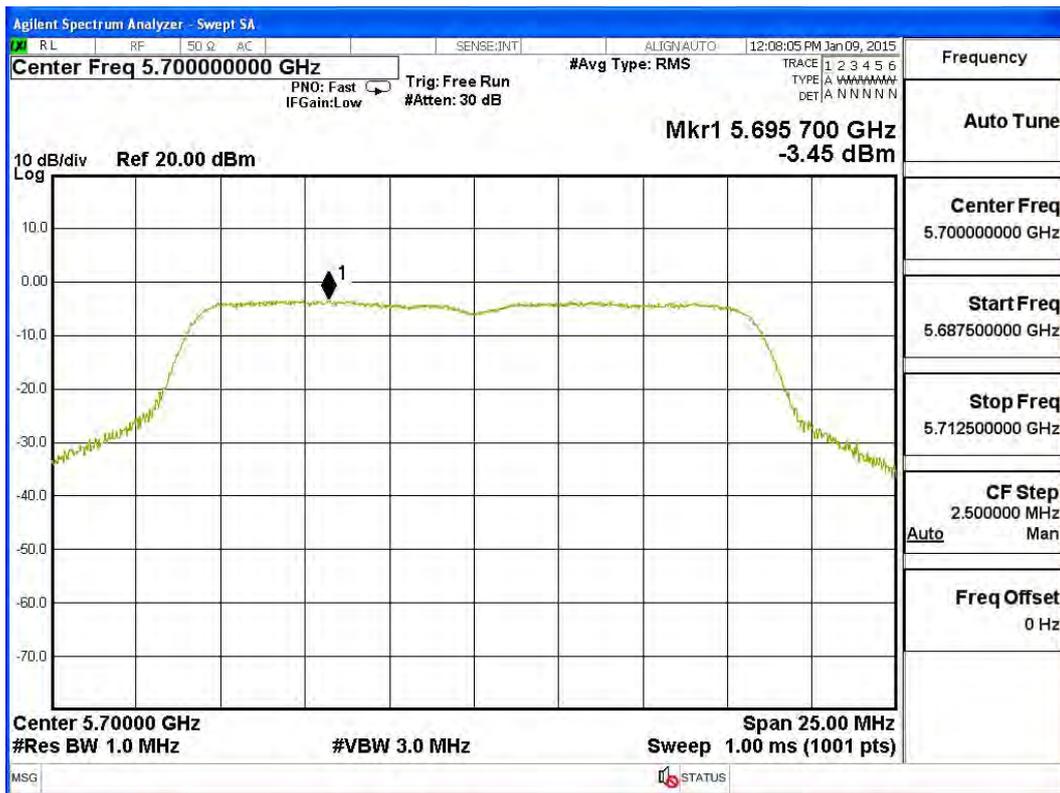
Channel 100:



Channel 116:



Channel 140:

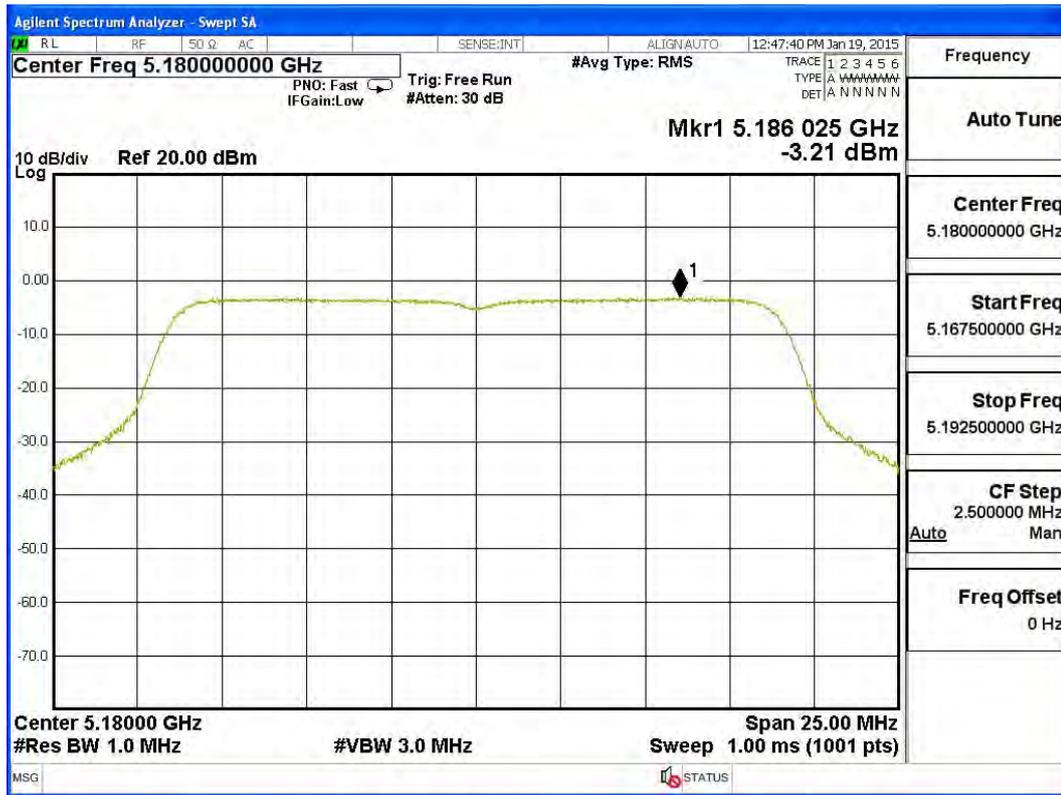


Product : Wireless Access Point
 Test Item : Peak Power Spectral Density
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) (Internal Antenna)

Channel Number	Frequency (MHz)	Chain	Reading PPSD/MHz (dBm)	Cable Loss (dB)	Measurement PPSD/MHz (dBm)	Total PPSD/MHz (dBm)	Required Limit (dBm)	Result
36	5180	A	-3.21	1.2	-2.01	1.00	17	Pass
		B	-5.16	1.2	-3.96	-0.95	17	Pass
44	5220	A	-4.35	1.2	-3.15	-0.14	17	Pass
		B	-4.77	1.2	-3.57	-0.56	17	Pass
48	5240	A	-4.71	1.2	-3.51	-0.50	17	Pass
		B	-5.00	1.2	-3.80	-0.79	17	Pass
52	5260	A	-4.98	1.2	-3.78	-0.77	11	Pass
		B	-4.93	1.2	-3.73	-0.72	11	Pass
60	5300	A	-4.94	1.2	-3.74	-0.73	11	Pass
		B	-4.71	1.2	-3.51	-0.50	11	Pass
64	5320	A	-4.76	1.2	-3.56	-0.55	11	Pass
		B	-4.74	1.2	-3.54	-0.53	11	Pass
100	5500	A	-2.46	1.5	-0.96	2.05	11	Pass
		B	-1.85	1.5	-0.35	2.66	11	Pass
116	5580	A	-1.08	1.5	0.42	3.43	11	Pass
		B	-1.37	1.5	0.13	3.14	11	Pass
140	5700	A	-2.99	1.5	-1.49	1.52	11	Pass
		B	-2.99	1.5	-1.49	1.52	11	Pass

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

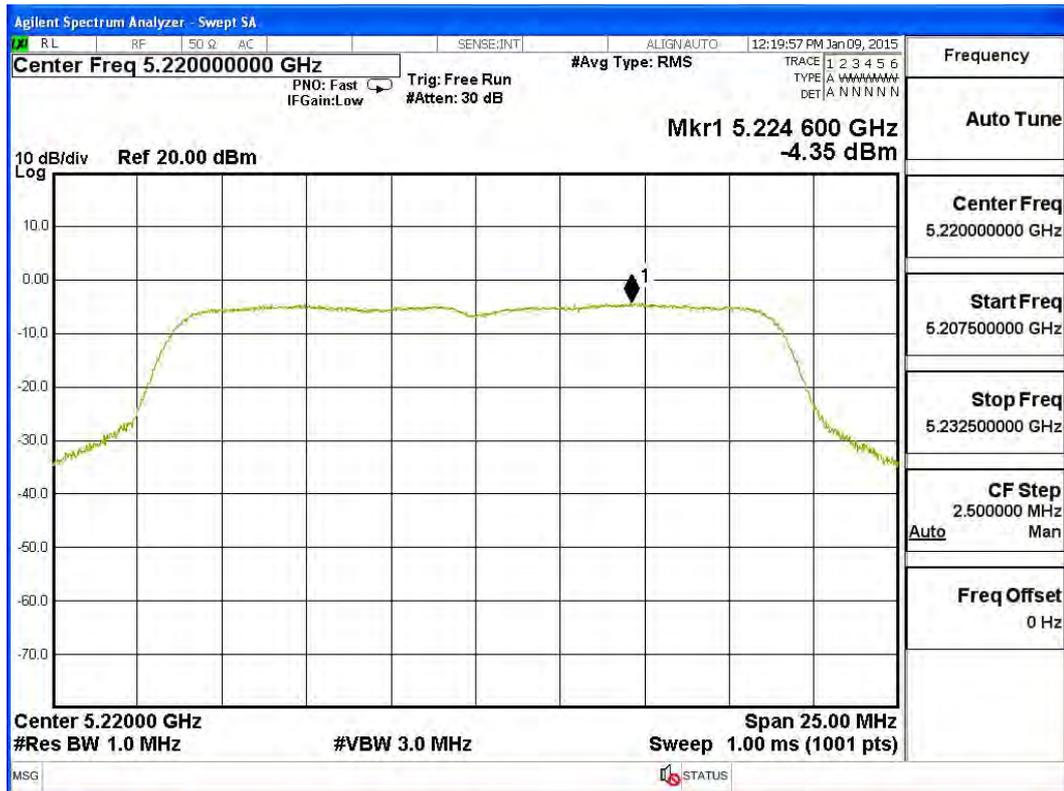
Channel 36 – Chain A



Channel 36 – Chain B



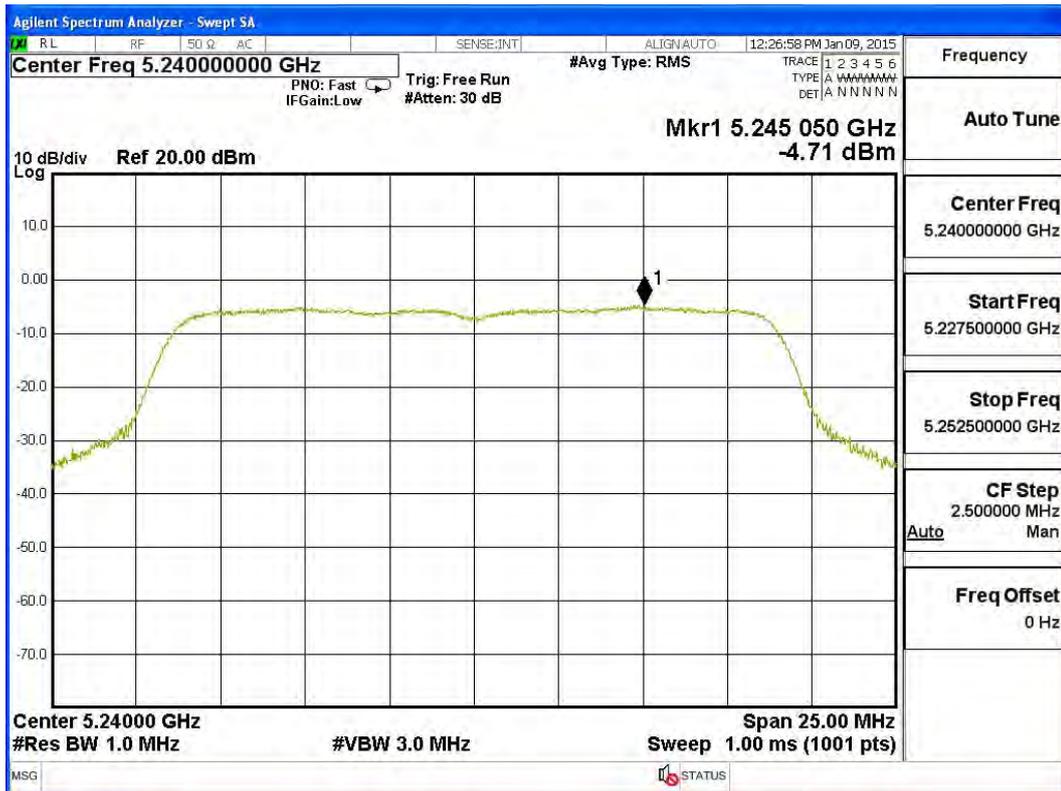
Channel 44 – Chain A



Channel 44 – Chain B



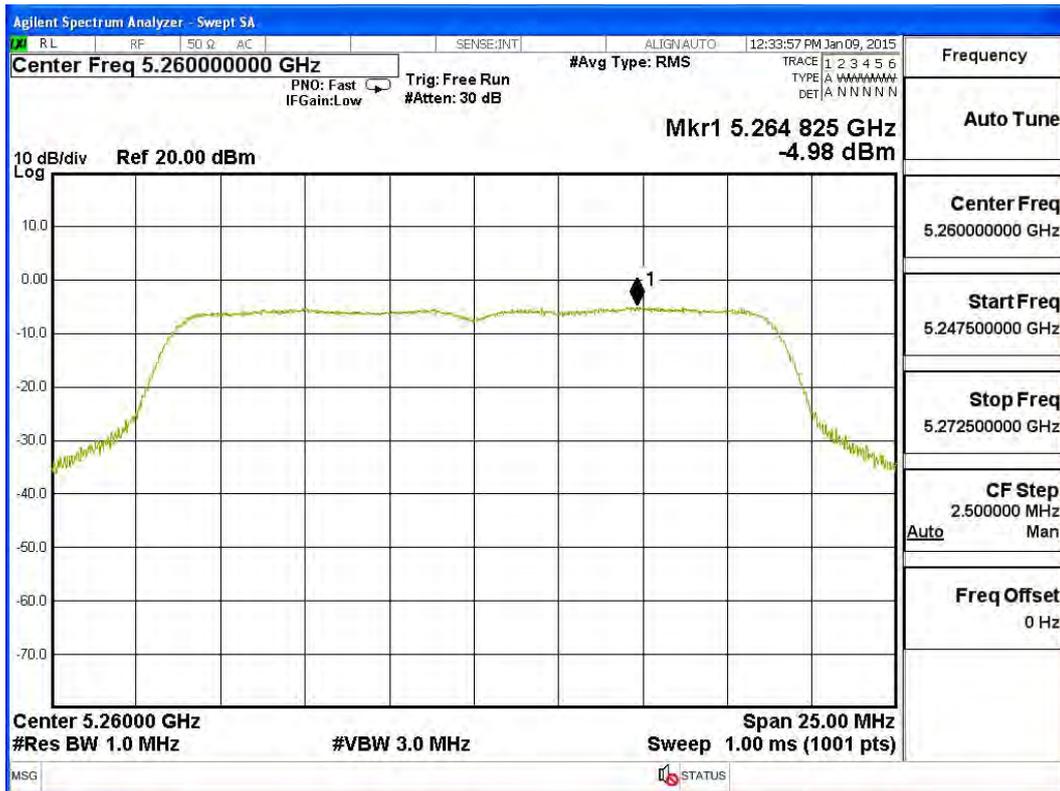
Channel 48 – Chain A



Channel 48 – Chain B



Channel 52 – Chain A



Channel 52 – Chain B



Channel 60 – Chain A



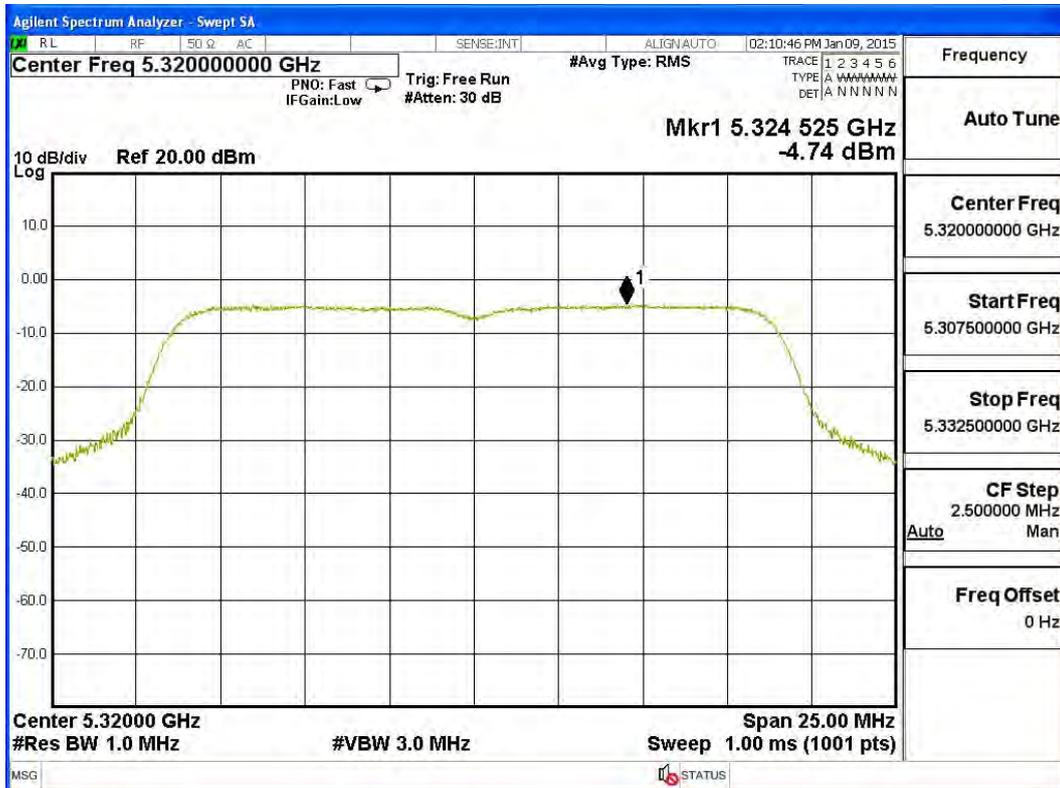
Channel 60 – Chain B



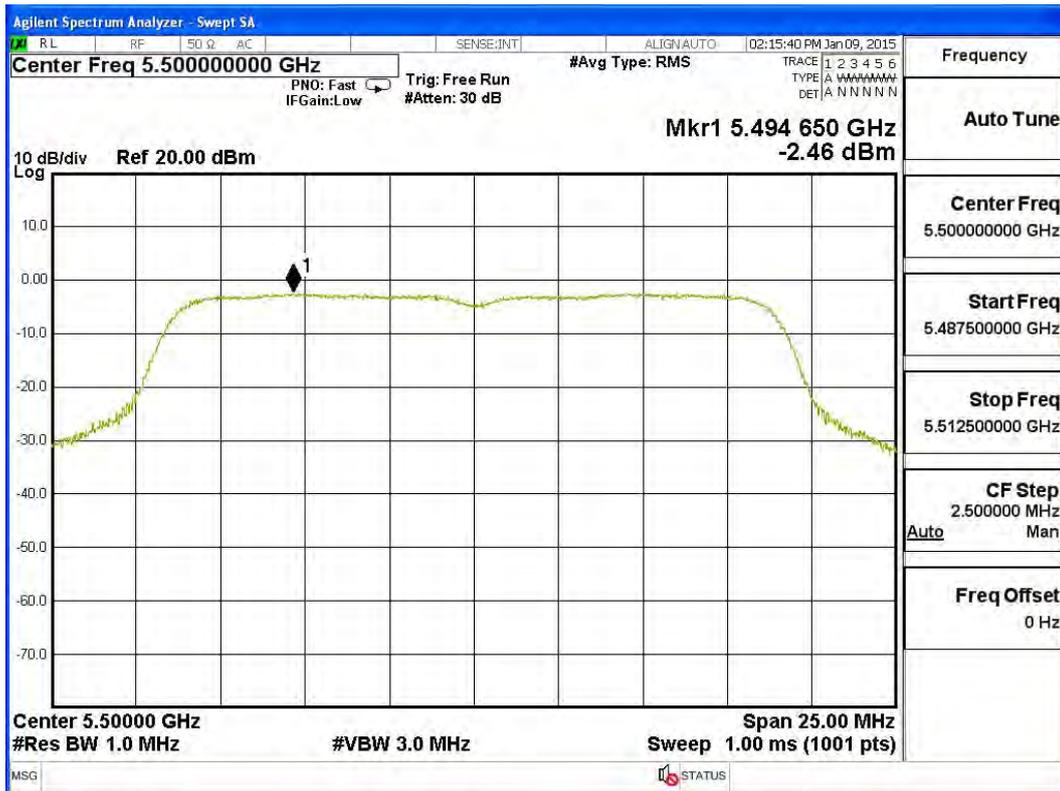
Channel 64 – Chain A



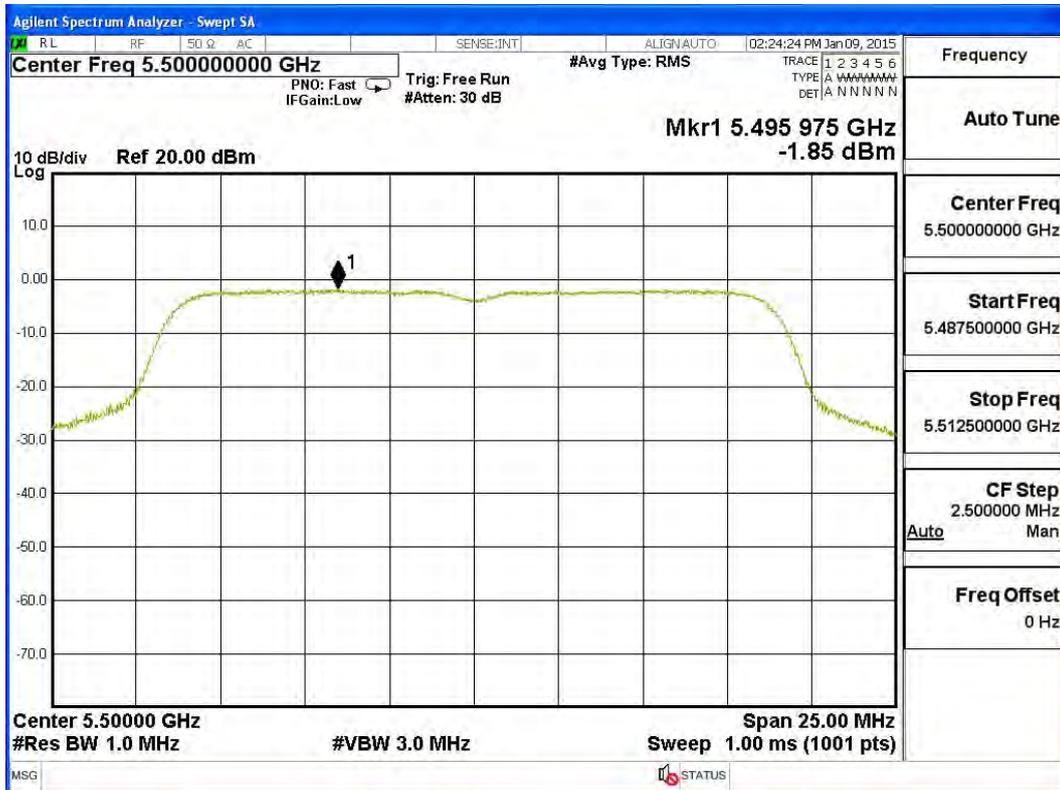
Channel 64 – Chain B



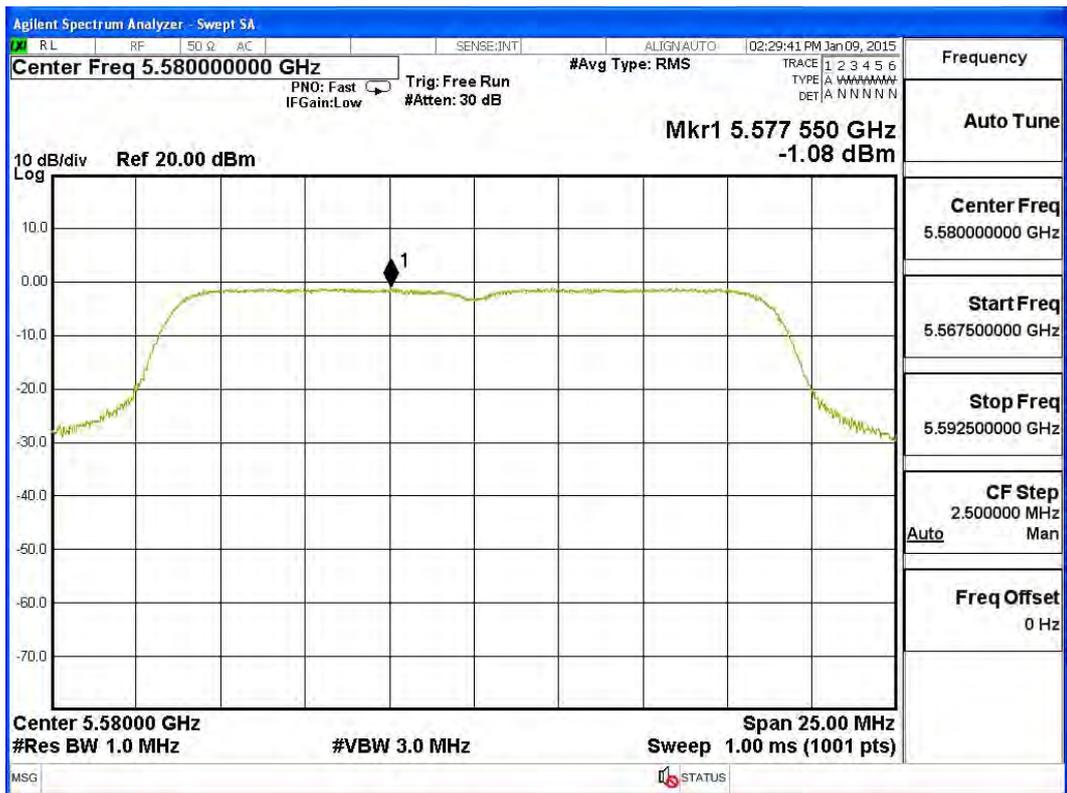
Channel 100 – Chain A



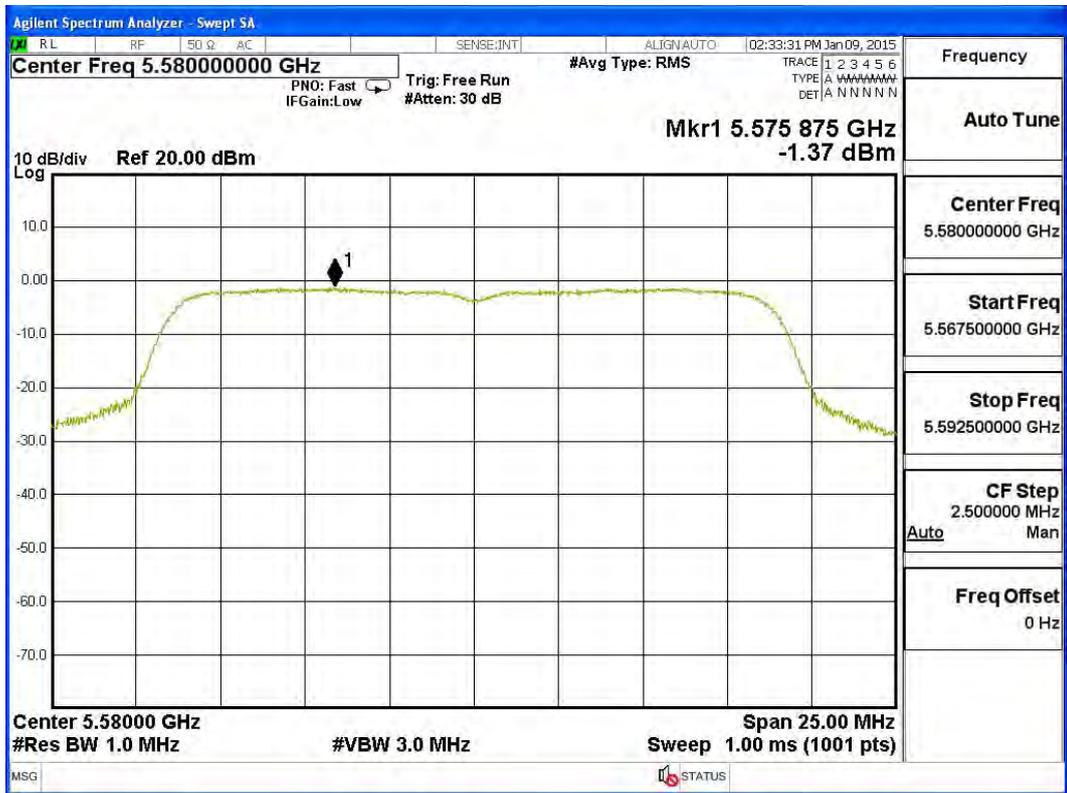
Channel 100 – Chain B



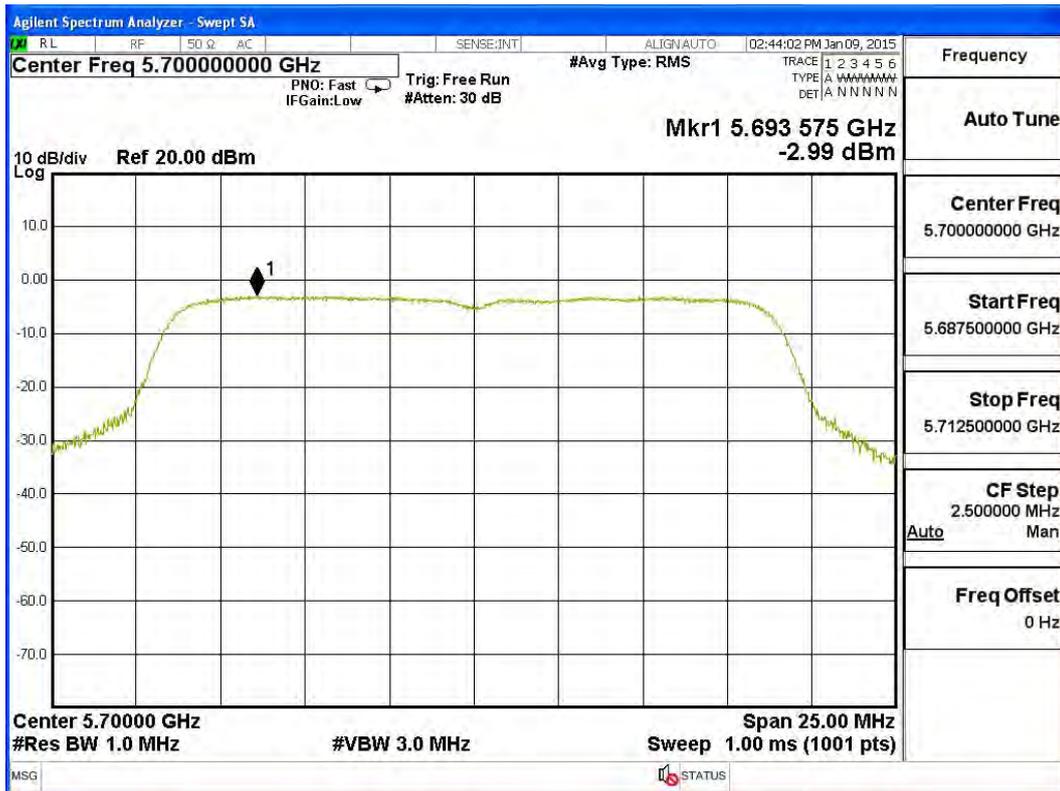
Channel 116 – Chain A



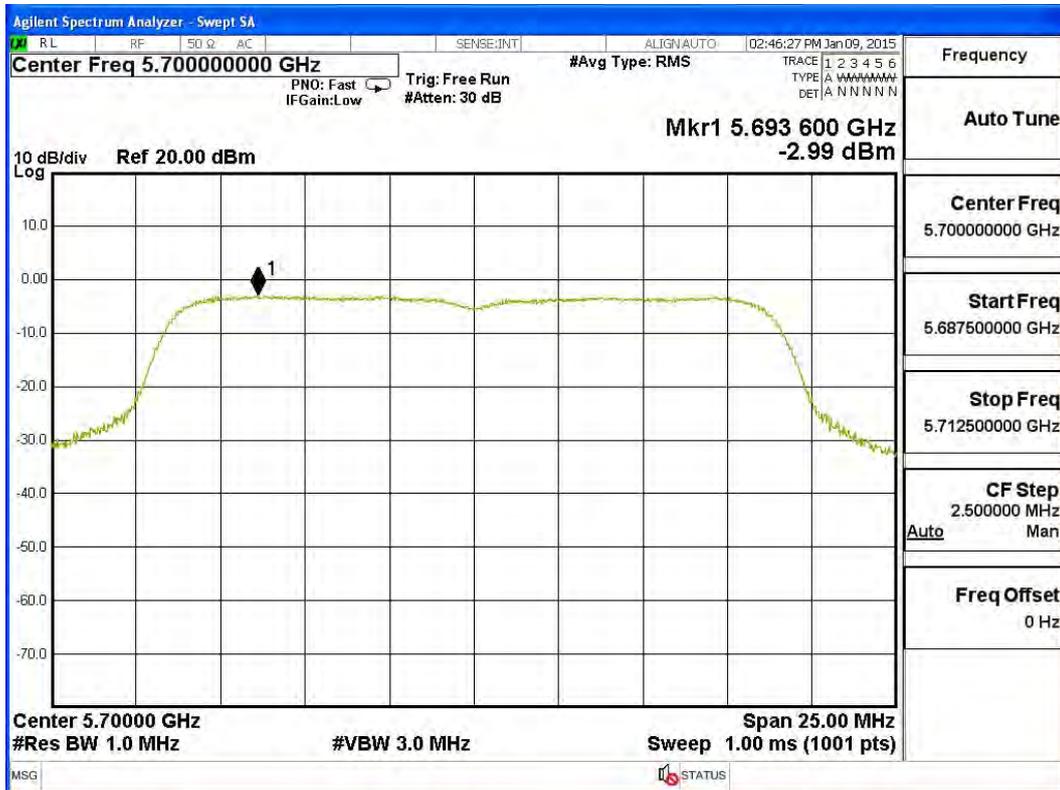
Channel 116 – Chain B



Channel 140 – Chain A



Channel 140 – Chain B

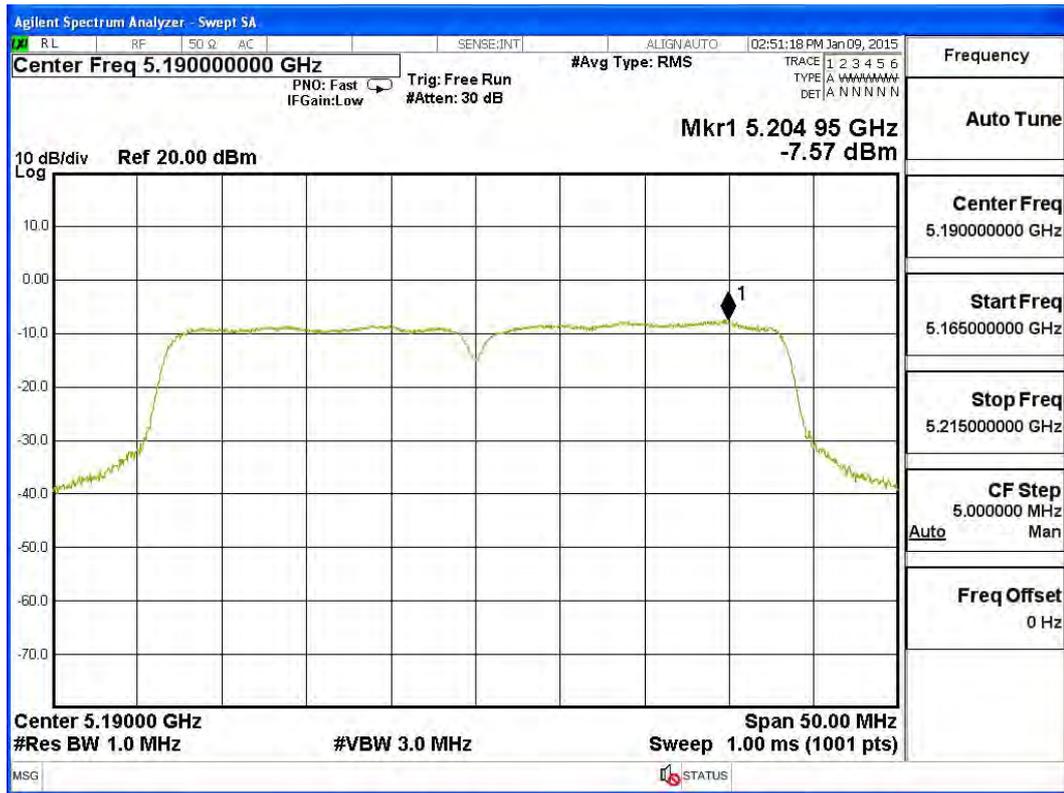


Product : Wireless Access Point
 Test Item : Peak Power Spectral Density
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) (Internal Antenna)

Channel Number	Frequency (MHz)	Chain	Reading PPSD/MHz (dBm)	Cable Loss (dB)	Measurement PPSD/MHz (dBm)	Total PPSD/MHz (dBm)	Required Limit (dBm)	Result
38	5190	A	-7.57	1.2	-6.37	-3.36	17	Pass
		B	-8.4	1.2	-7.2	-4.19	17	Pass
46	5230	A	-8.42	1.2	-7.22	-4.21	17	Pass
		B	-8.35	1.2	-7.15	-4.14	17	Pass

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

Channel 38 – Chain A



Channel 38 – Chain B



Channel 46 – Chain A



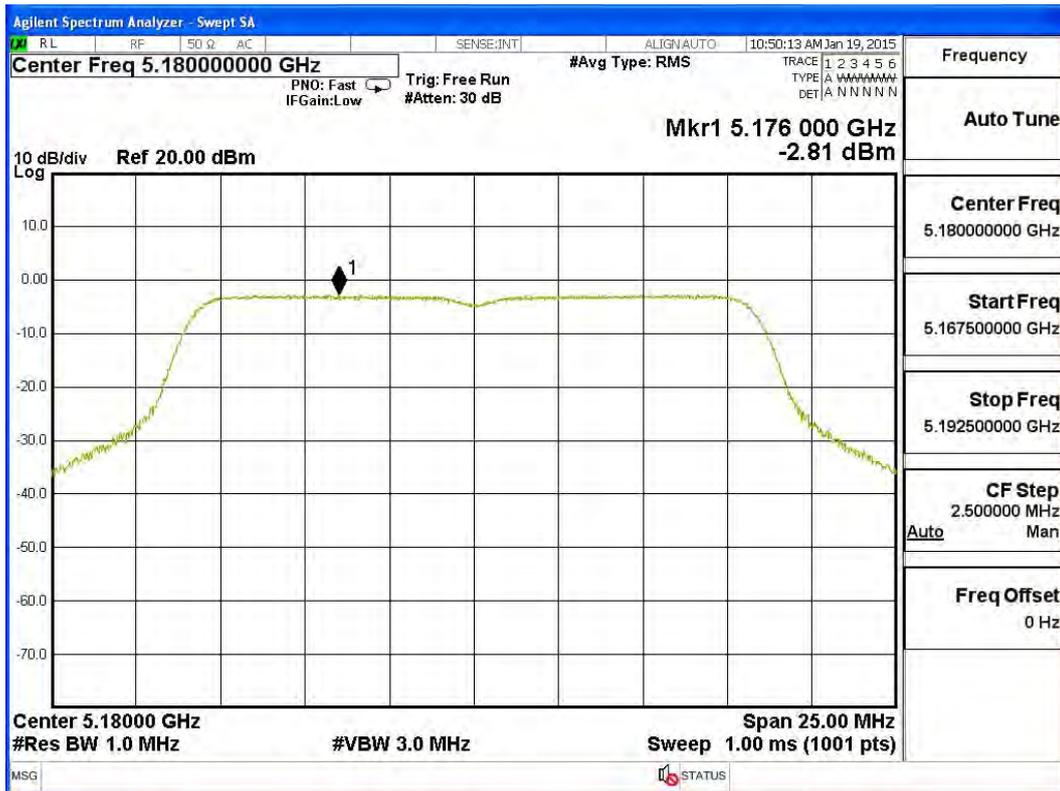
Channel 46 – Chain B



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

Channel Number	Frequency (MHz)	Data Rate (Mbps)	Reading Level (dBm)	Cable Loss (dB)	Measurement Level (dBm)	Required Limit (dBm)	Result
36	5180	6	-2.810	1.2	-1.61	17	Pass
44	5220	6	-2.770	1.2	-1.57	17	Pass
48	5240	6	-2.940	1.2	-1.74	17	Pass
52	5260	6	-2.700	1.2	-1.5	11	Pass
60	5300	6	-2.780	1.2	-1.58	11	Pass
64	5320	6	-3.050	1.2	-1.85	11	Pass
100	5500	6	-2.020	1.5	-0.52	11	Pass
116	5580	6	-0.690	1.5	0.81	11	Pass
140	5700	6	-1.120	1.5	0.38	11	Pass

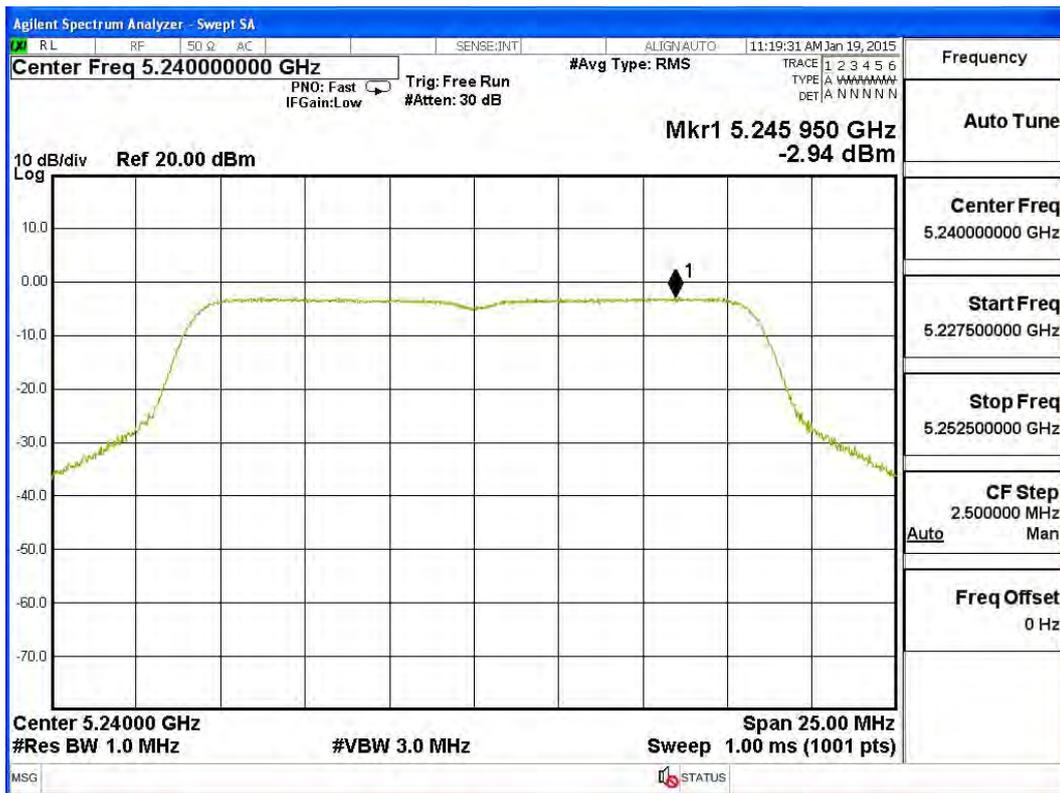
Channel 36:



Channel 44:



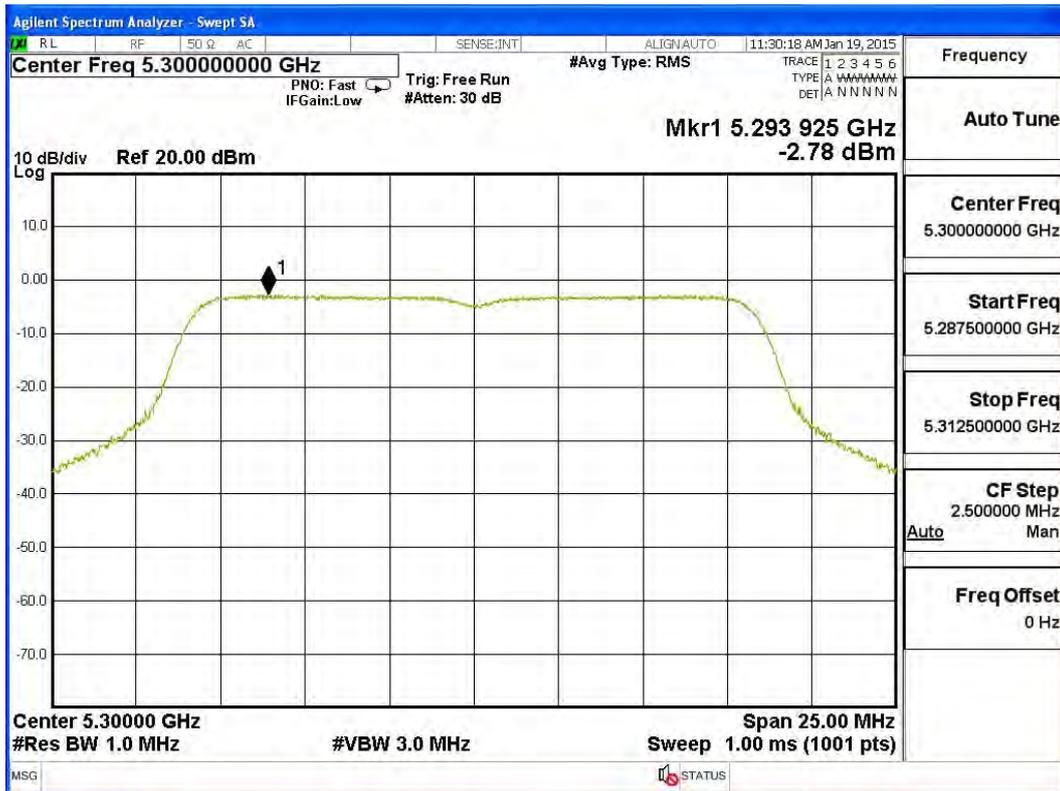
Channel 48:



Channel 52:



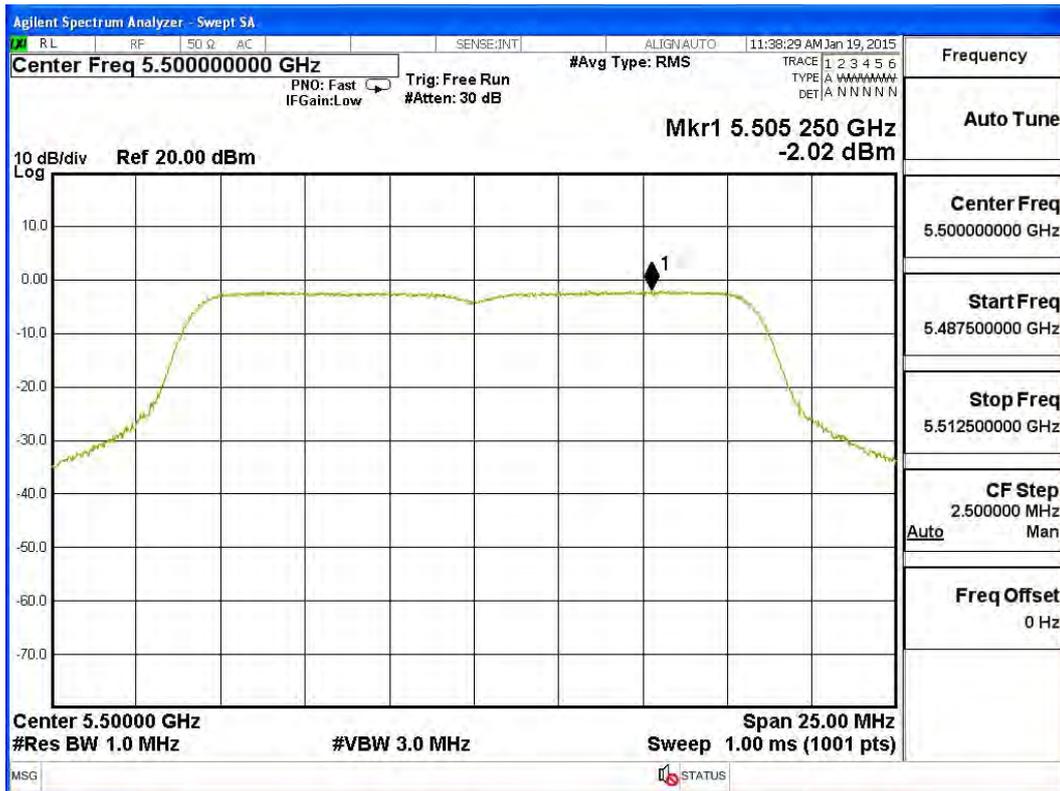
Channel 60:



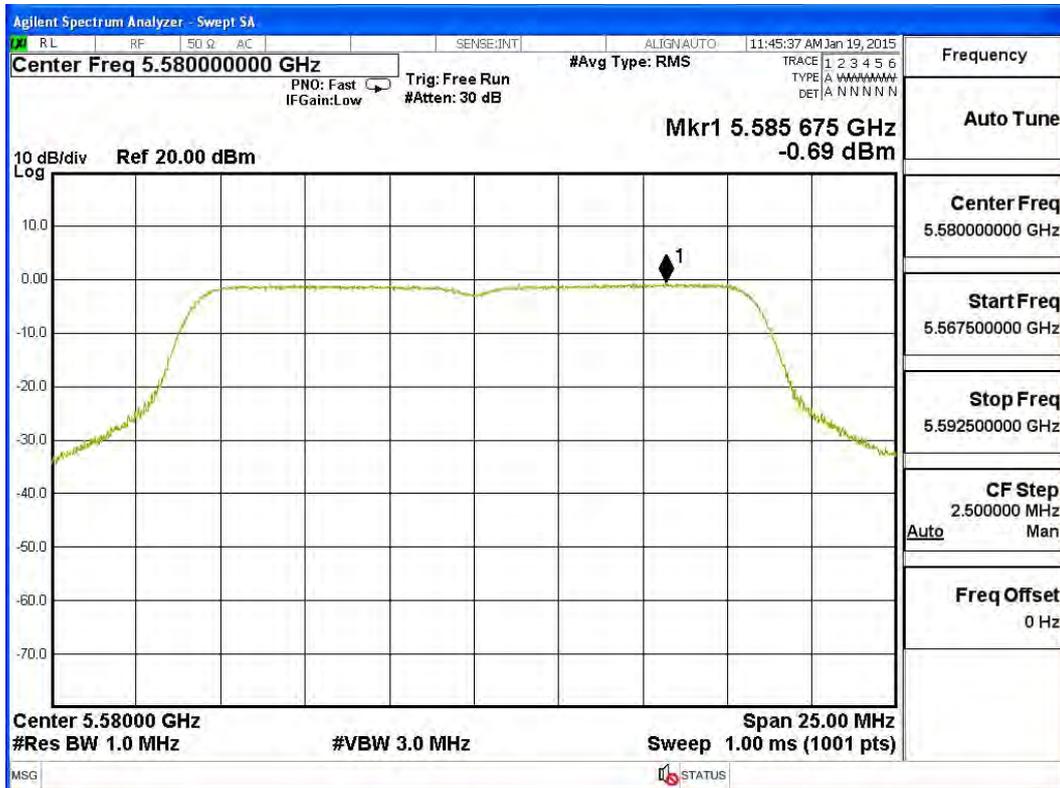
Channel 64:



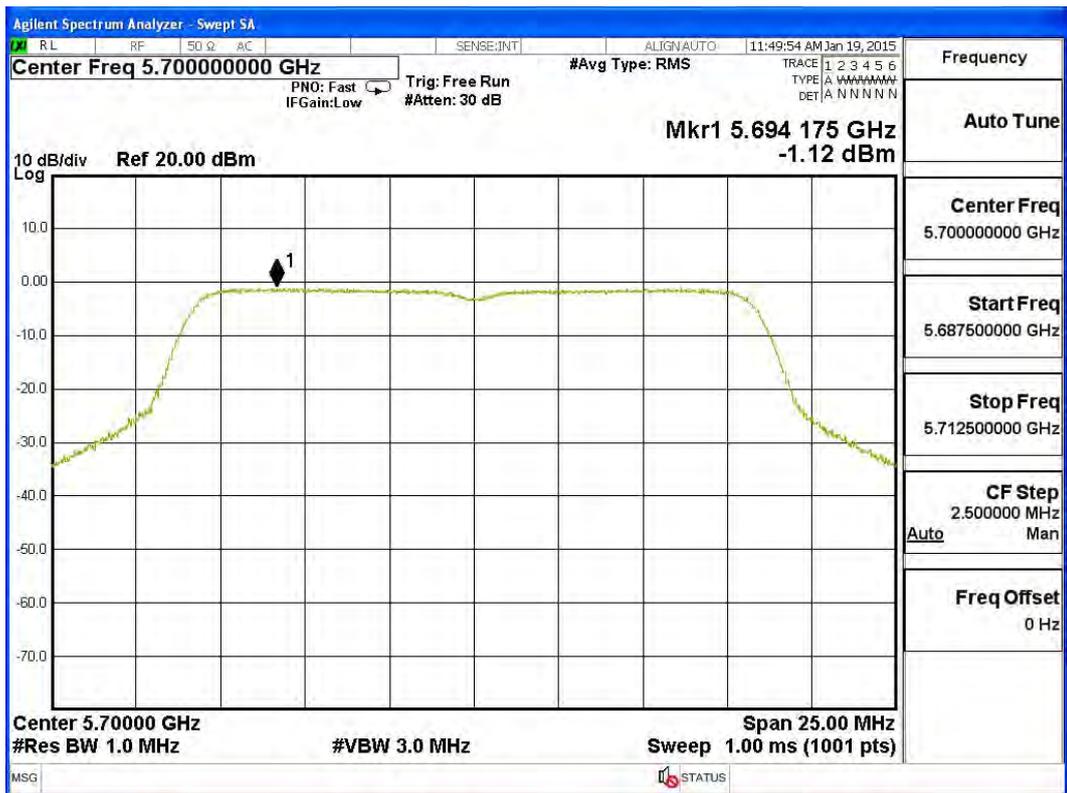
Channel 100:



Channel 116:



Channel 140:

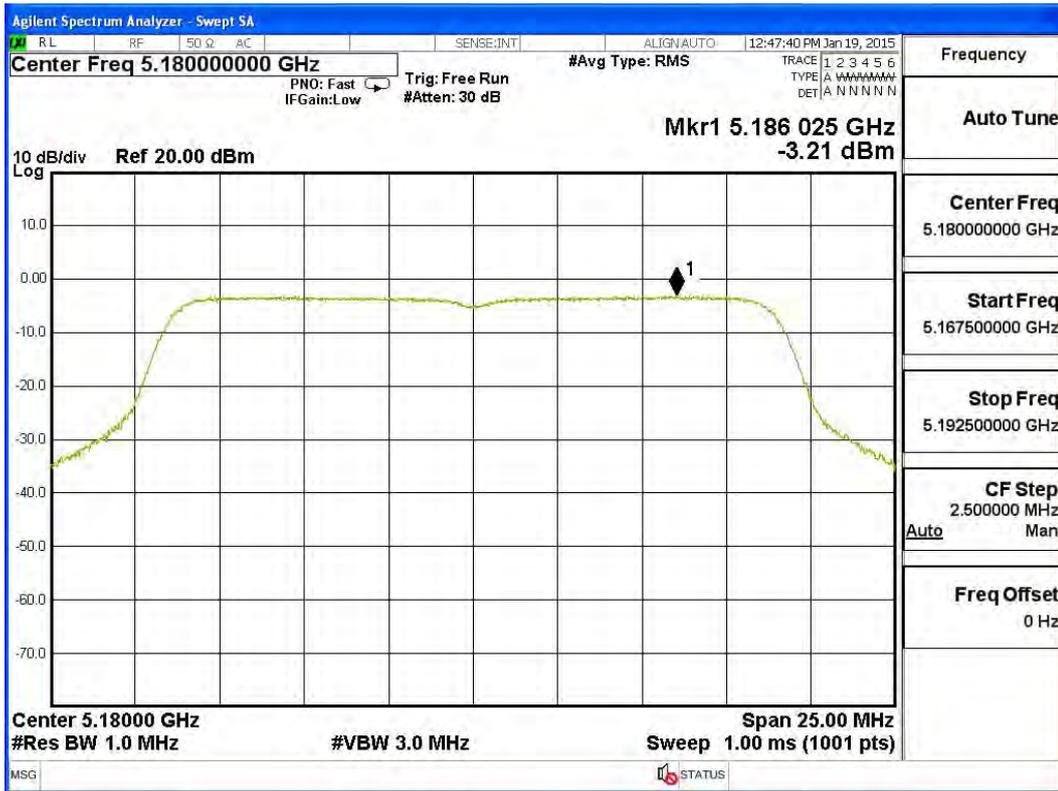


Product : Wireless Access Point
 Test Item : Peak Power Spectral Density
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) (External Antenna)

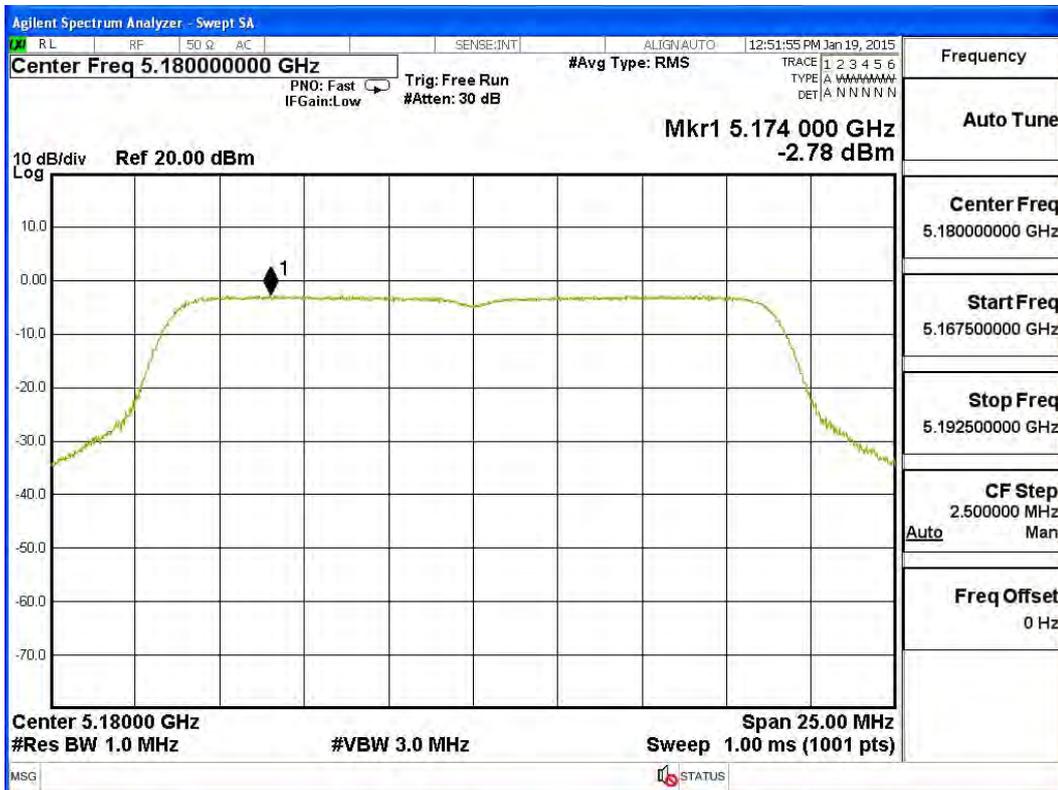
Channel Number	Frequency (MHz)	Chain	Reading PPSD/MHz (dBm)	Cable Loss (dB)	Measurement PPSD/MHz (dBm)	Total PPSD/MHz (dBm)	Required Limit (dBm)	Result
36	5180	A	-3.21	1.2	-2.01	1.00	17	Pass
		B	-2.78	1.2	-1.58	1.43	17	Pass
44	5220	A	-3.14	1.2	-1.94	1.07	17	Pass
		B	-4.05	1.2	-2.85	0.16	17	Pass
48	5240	A	-3.39	1.2	-2.19	0.82	17	Pass
		B	-4.52	1.2	-3.32	-0.31	17	Pass
52	5260	A	-3.20	1.2	-2.00	1.01	11	Pass
		B	-4.65	1.2	-3.45	-0.44	11	Pass
60	5300	A	-3.32	1.2	-2.12	0.89	11	Pass
		B	-5.20	1.2	-4.00	-0.99	11	Pass
64	5320	A	-3.62	1.2	-2.42	0.59	11	Pass
		B	-5.58	1.2	-4.38	-1.37	11	Pass
100	5500	A	-1.99	1.5	-0.49	2.52	11	Pass
		B	-0.44	1.5	1.06	4.07	11	Pass
116	5580	A	-0.81	1.5	0.69	3.70	11	Pass
		B	1.18	1.5	2.68	5.69	11	Pass
140	5700	A	-1.34	1.5	0.16	3.17	11	Pass
		B	0.02	1.5	1.52	4.53	11	Pass

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

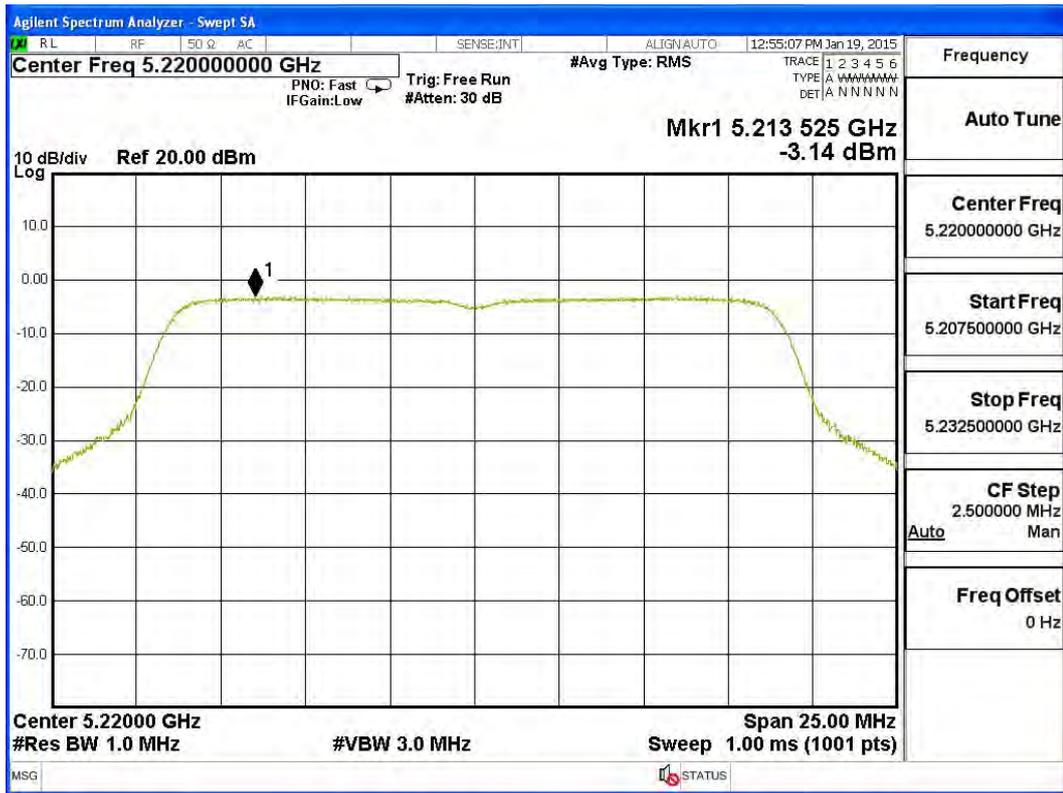
Channel 36 – Chain A



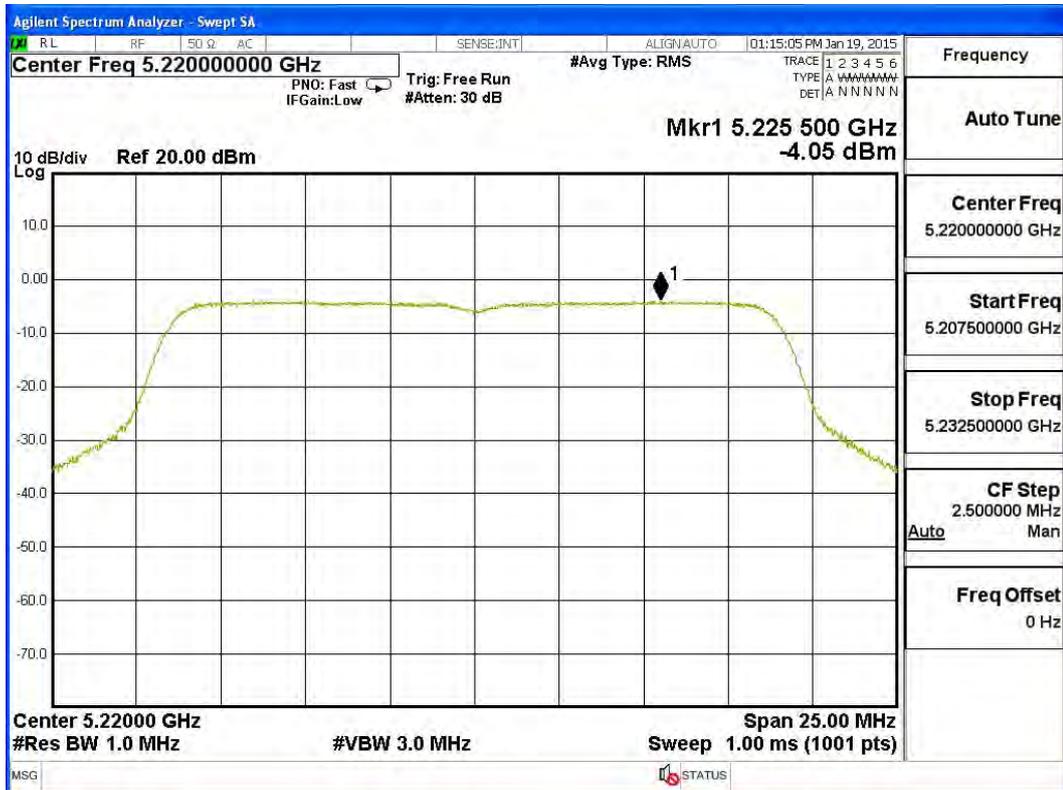
Channel 36 – Chain B



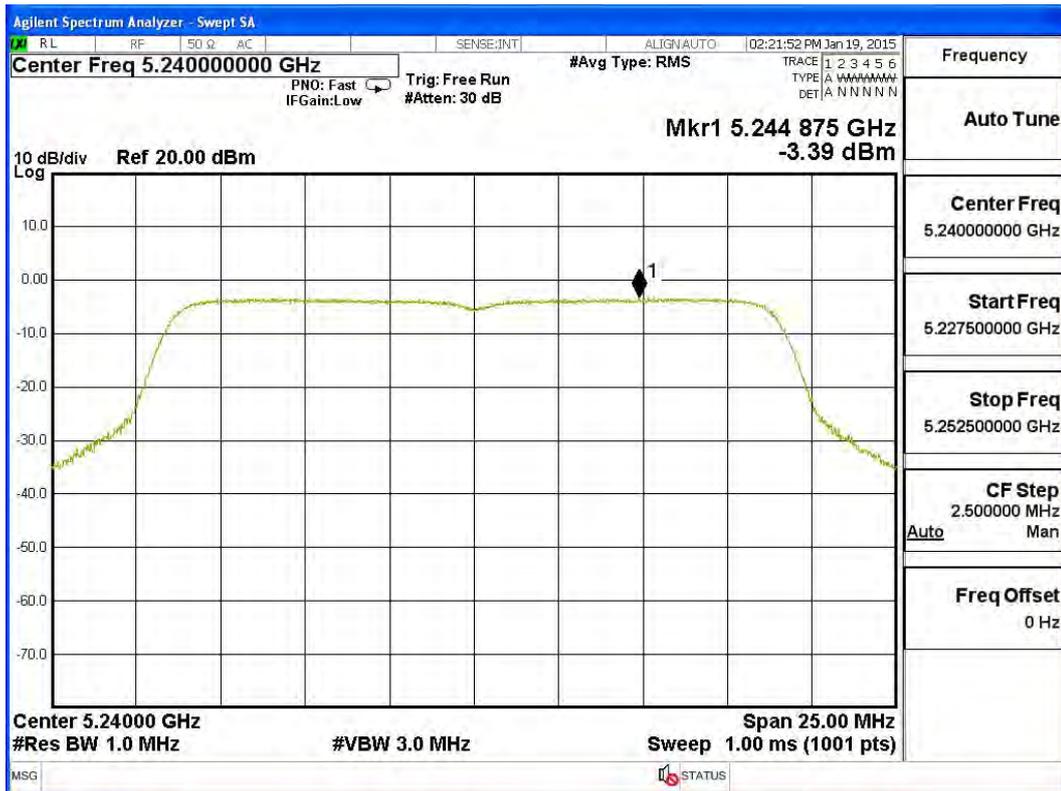
Channel 44 – Chain A



Channel 44 – Chain B



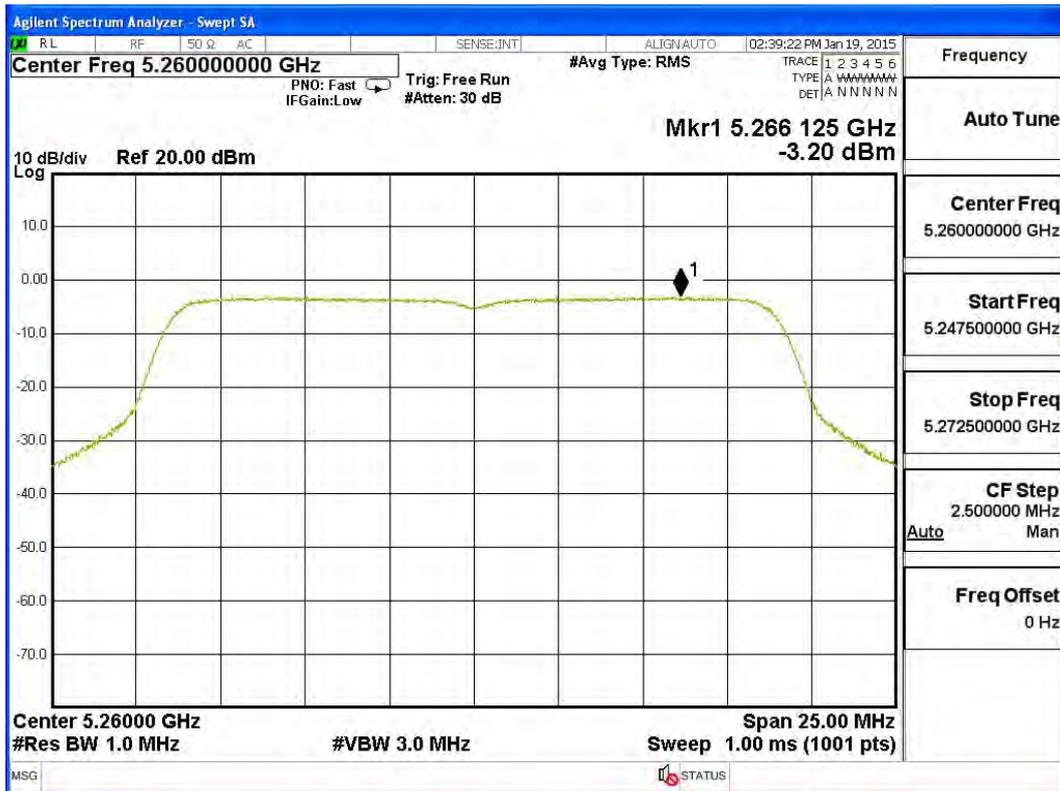
Channel 48 – Chain A



Channel 48 – Chain B



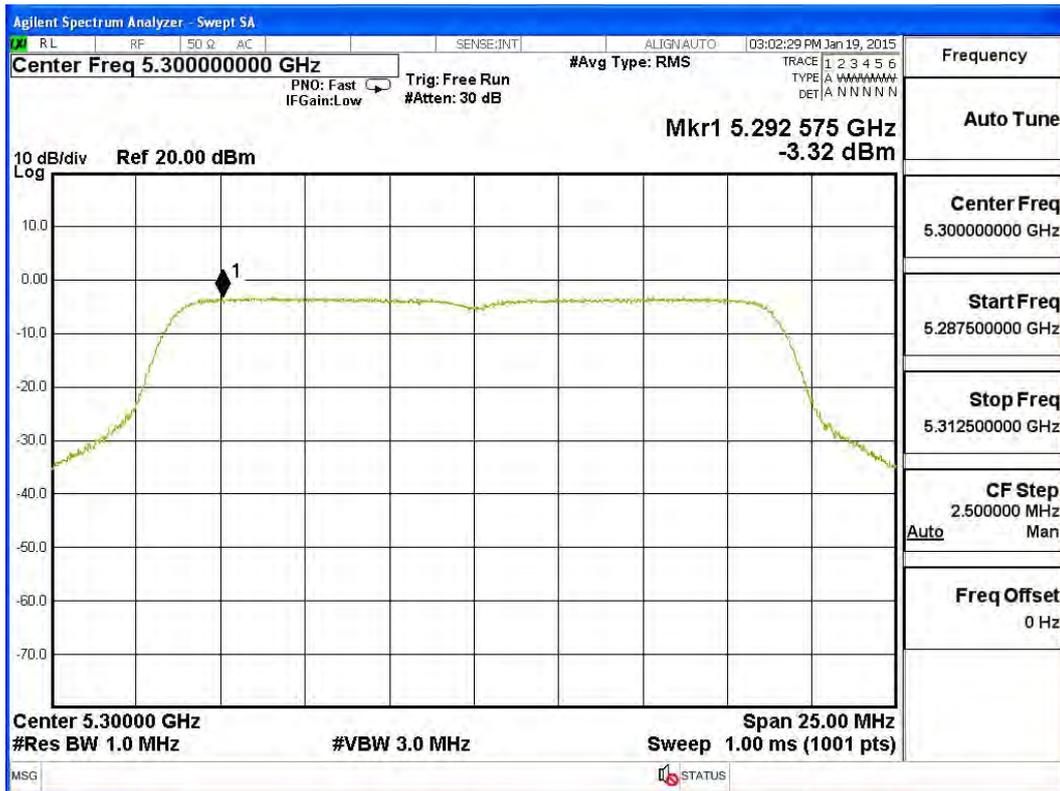
Channel 52 – Chain A



Channel 52 – Chain B



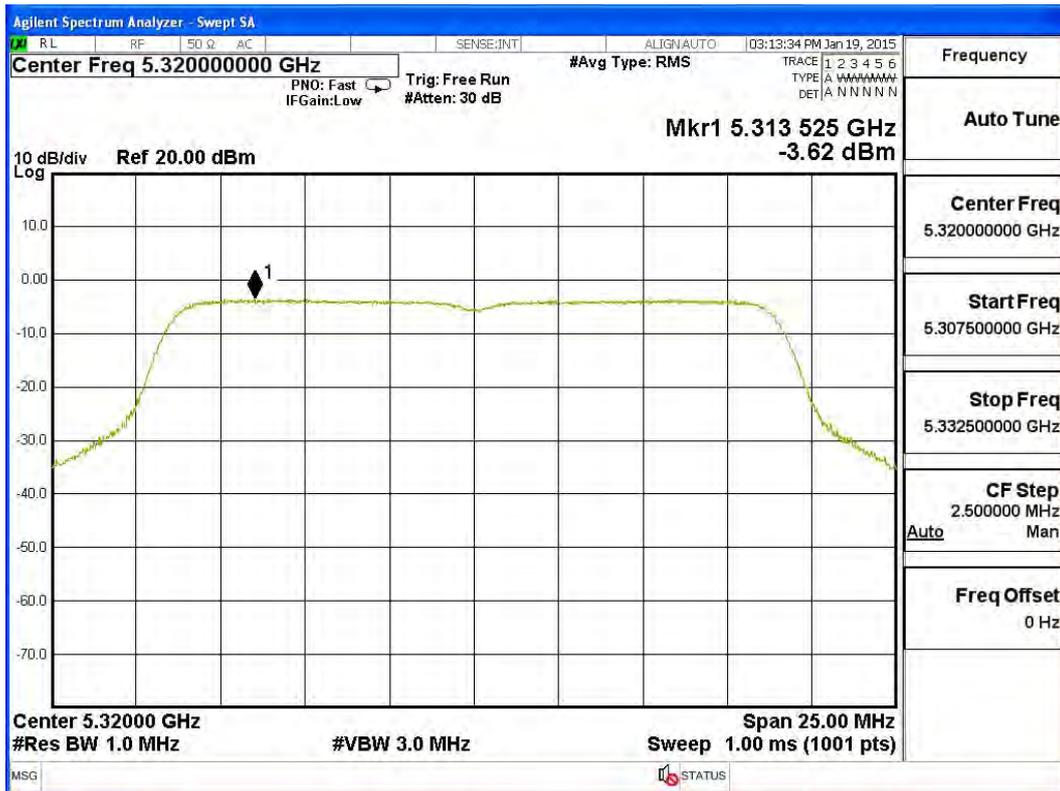
Channel 60 – Chain A



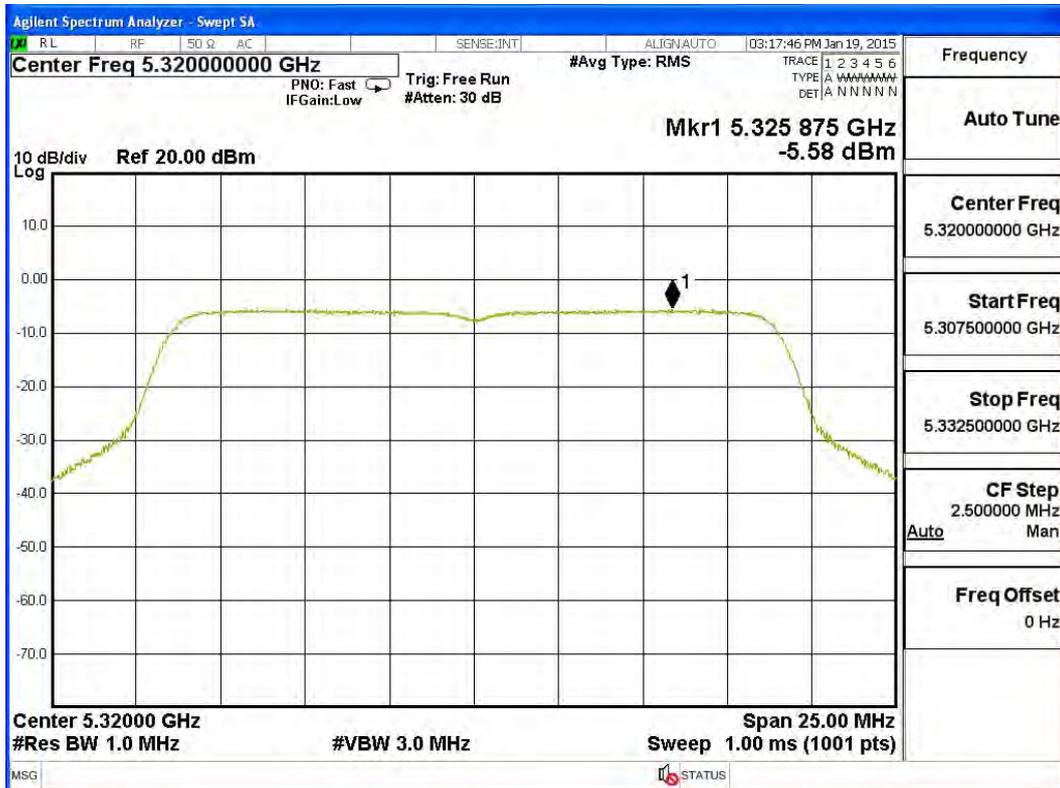
Channel 60 – Chain B



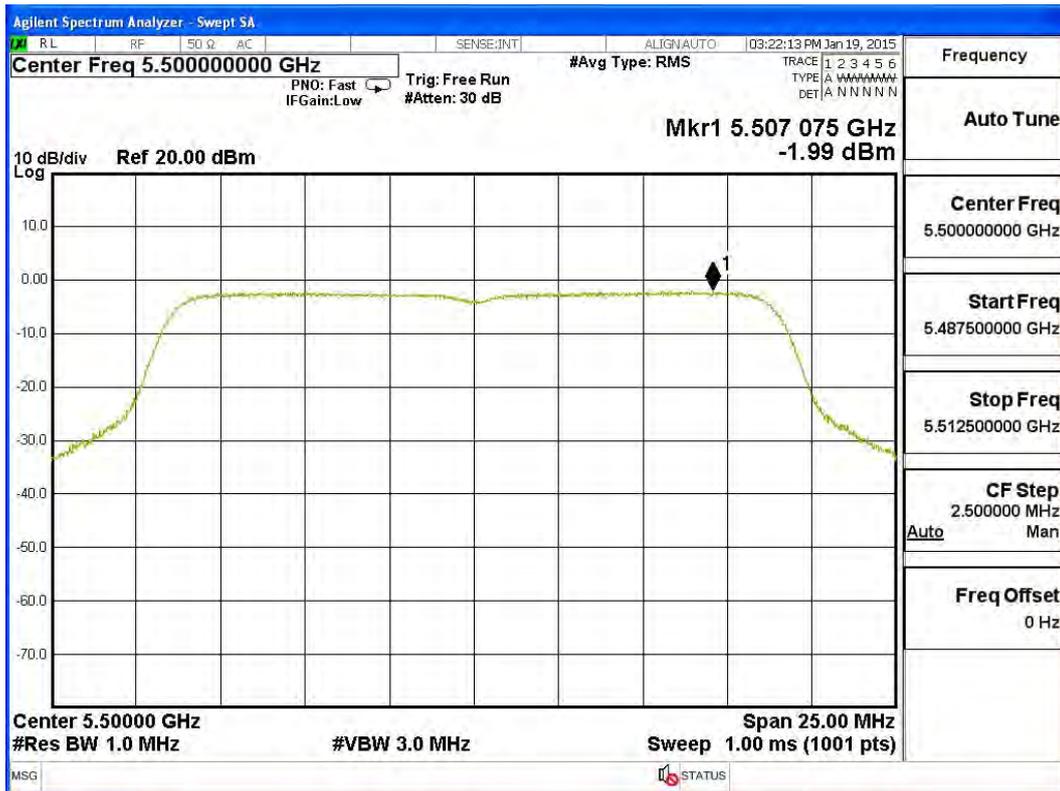
Channel 64 – Chain A



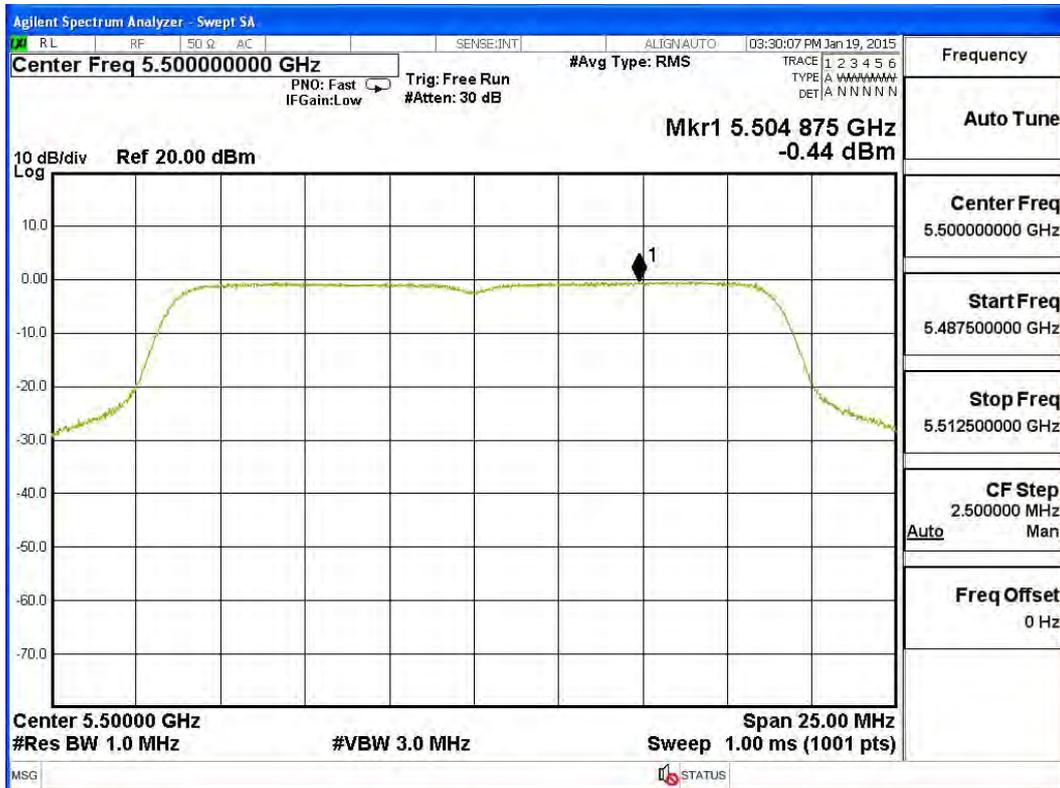
Channel 64 – Chain B



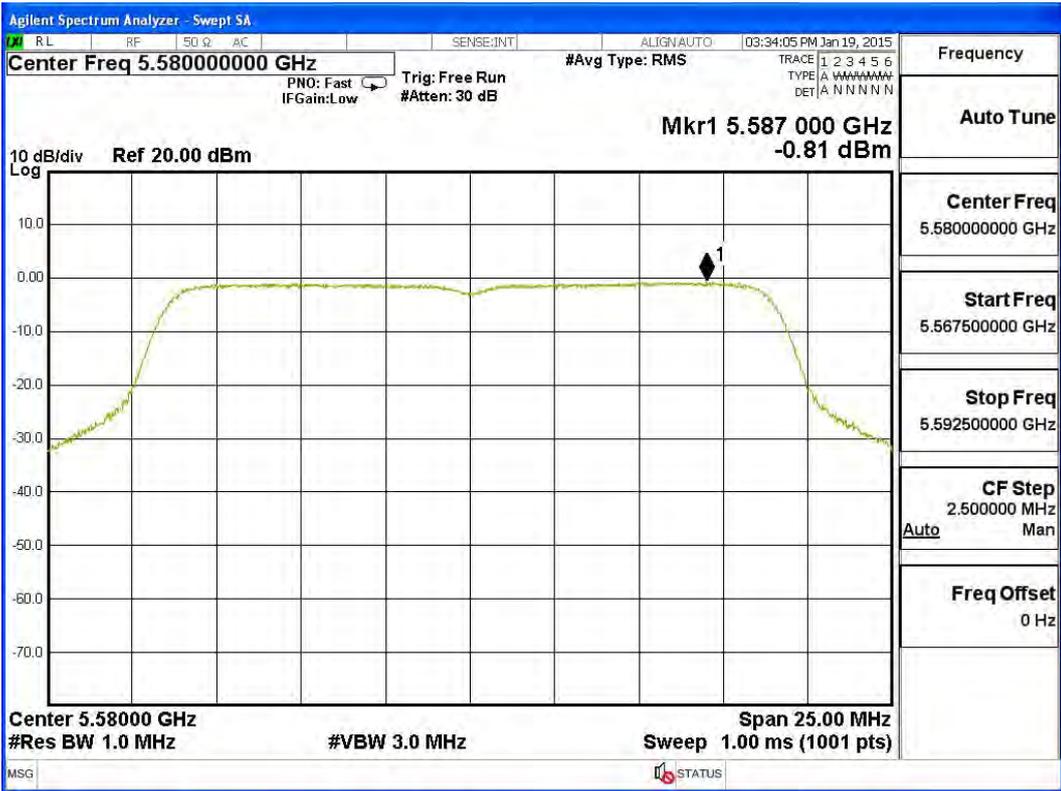
Channel 100 – Chain A



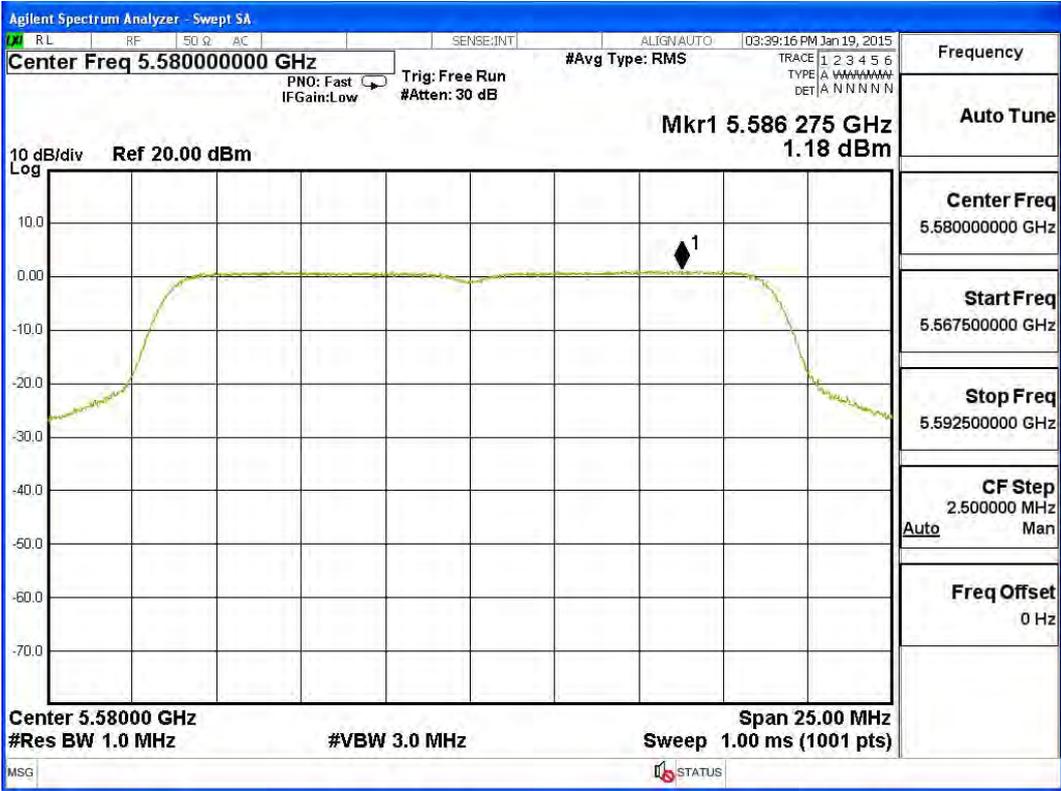
Channel 100 – Chain B



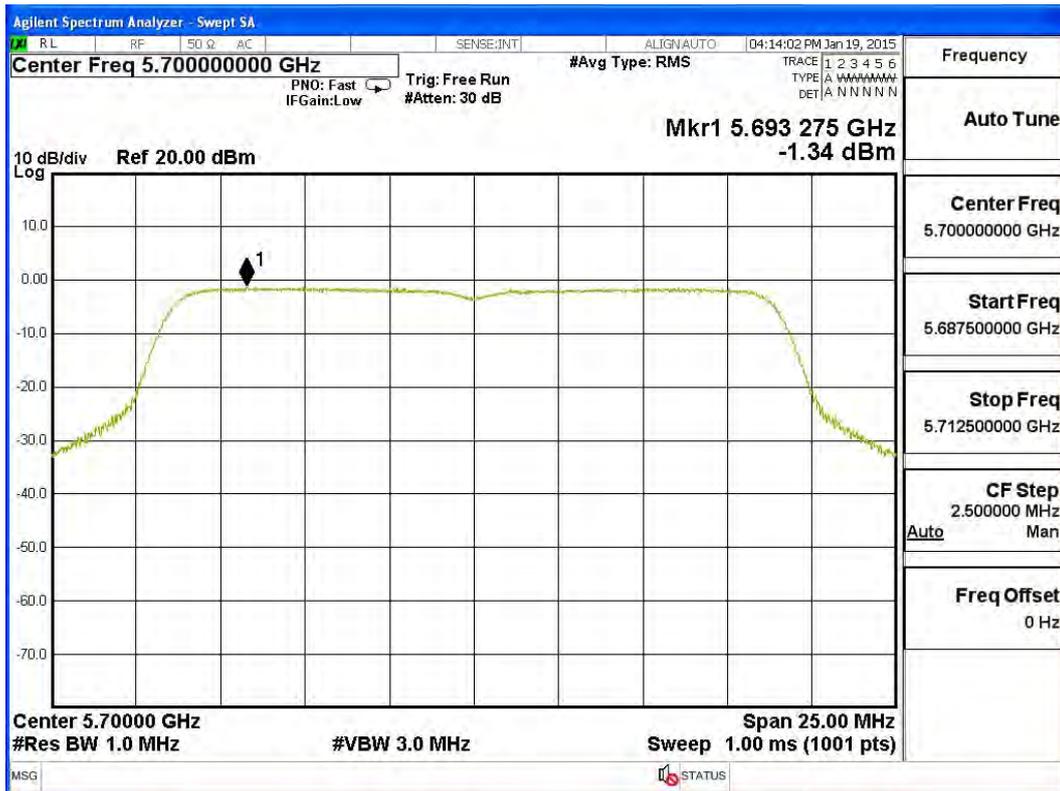
Channel 116 – Chain A



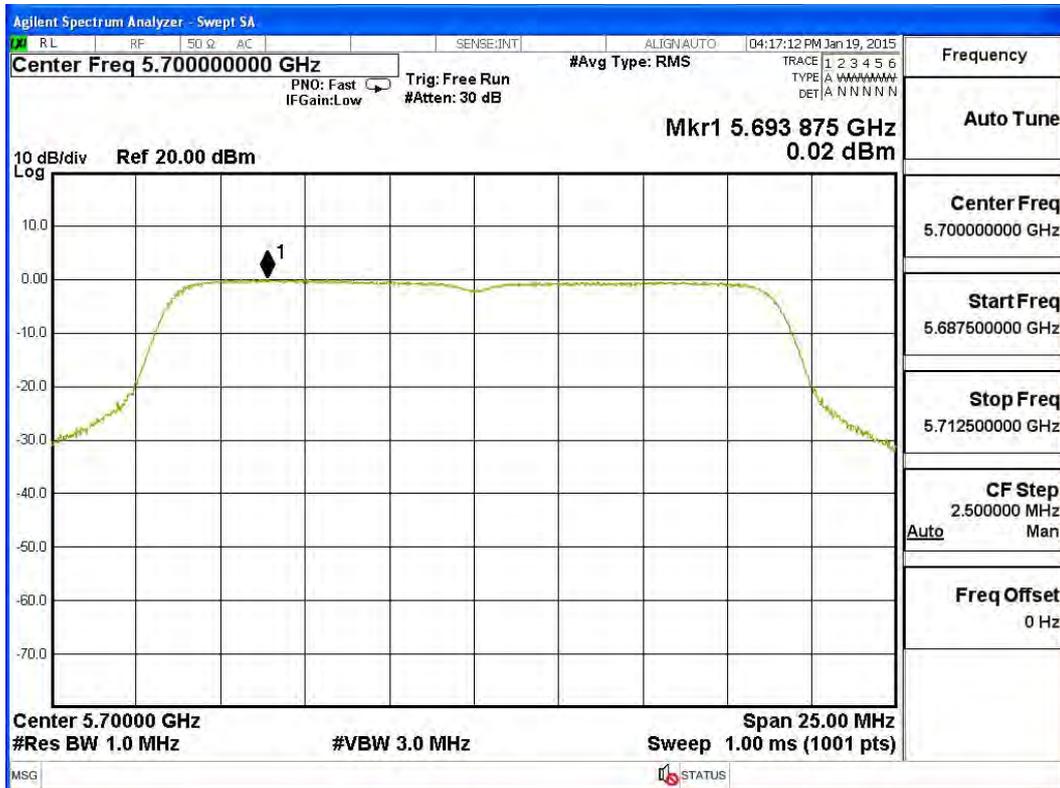
Channel 116 – Chain B



Channel 140 – Chain A



Channel 140 – Chain B

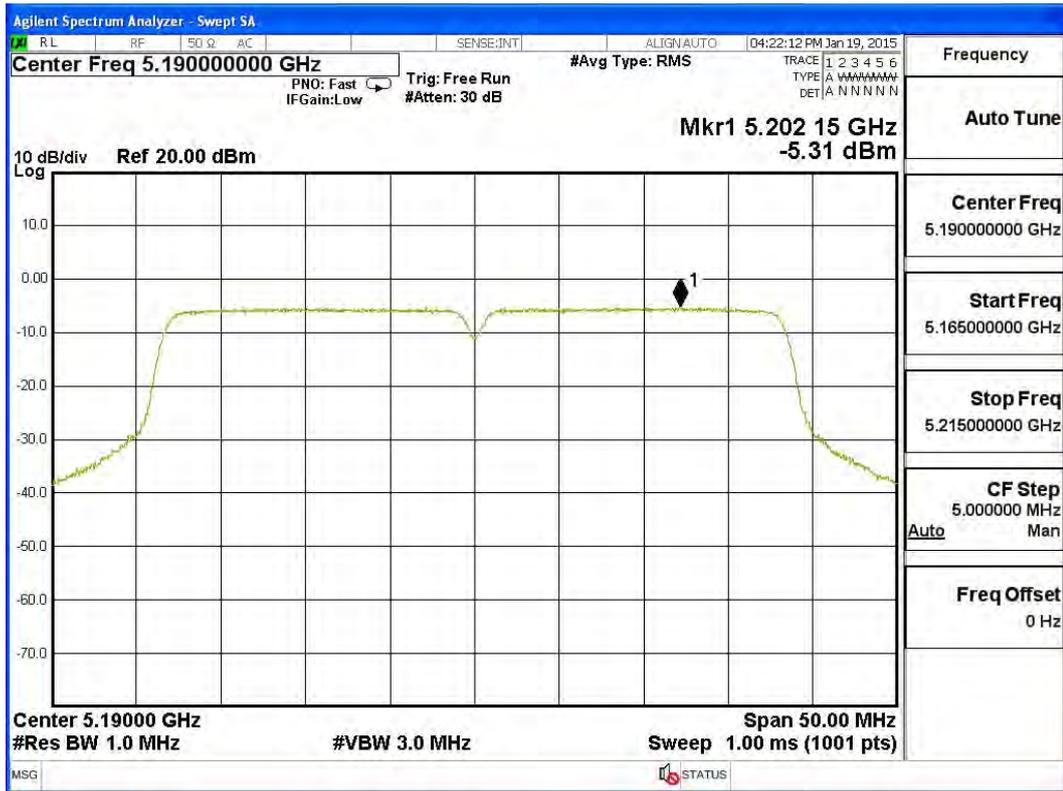


Product : Wireless Access Point
 Test Item : Peak Power Spectral Density
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) (External Antenna)

Channel Number	Frequency (MHz)	Chain	Reading PPSD/MHz (dBm)	Cable Loss (dB)	Measurement PPSD/MHz (dBm)	Total PPSD/MHz (dBm)	Required Limit (dBm)	Result
38	5190	A	-5.31	1.2	-4.11	-1.10	17	Pass
		B	-5.21	1.2	-4.01	-1.00	17	Pass
46	5230	A	-5.62	1.2	-4.42	-1.41	17	Pass
		B	-6.49	1.2	-5.29	-2.28	17	Pass
54	5270	A	-5.68	1.2	-4.48	-1.47	11	Pass
		B	-6.92	1.2	-5.72	-2.71	11	Pass
62	5310	A	-5.85	1.2	-4.65	-1.64	11	Pass
		B	-7.34	1.2	-6.14	-3.13	11	Pass
102	5510	A	-4.35	1.5	-2.85	0.16	11	Pass
		B	-2.79	1.5	-1.29	1.72	11	Pass
110	5550	A	-3.67	1.5	-2.17	0.84	11	Pass
		B	-1.99	1.5	-0.49	2.52	11	Pass
134	5670	A	-3.37	1.5	-1.87	1.14	11	Pass
		B	-1.90	1.5	-0.40	2.61	11	Pass

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

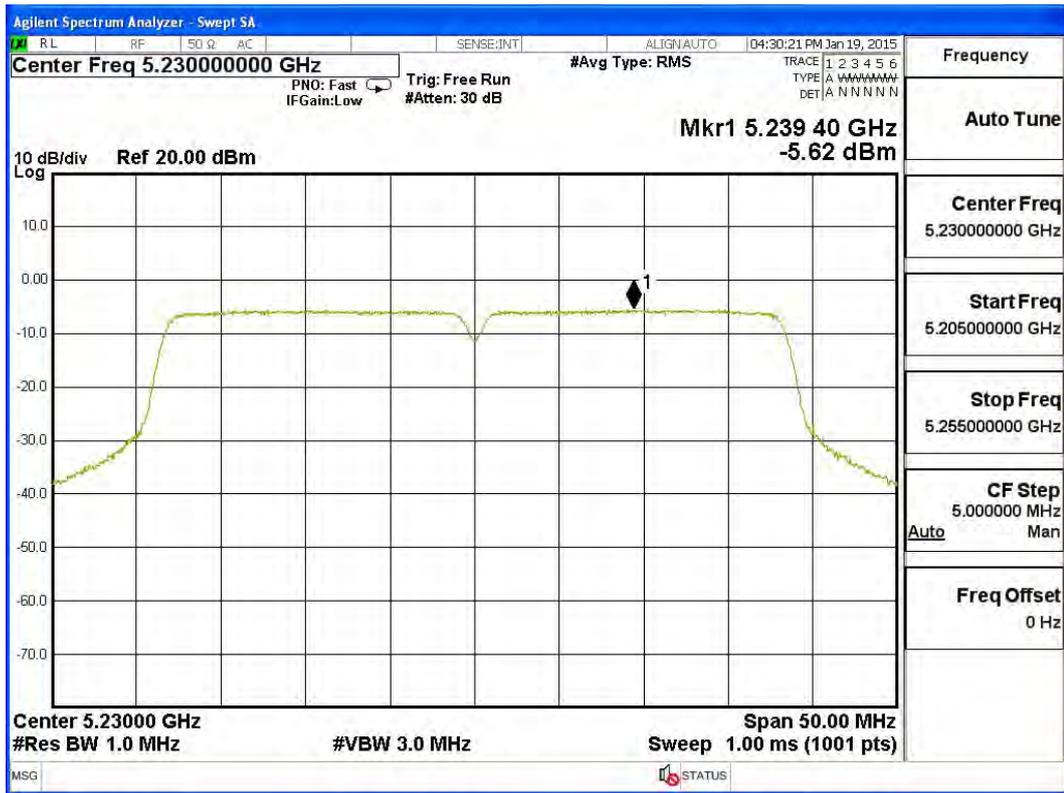
Channel 38 – Chain A



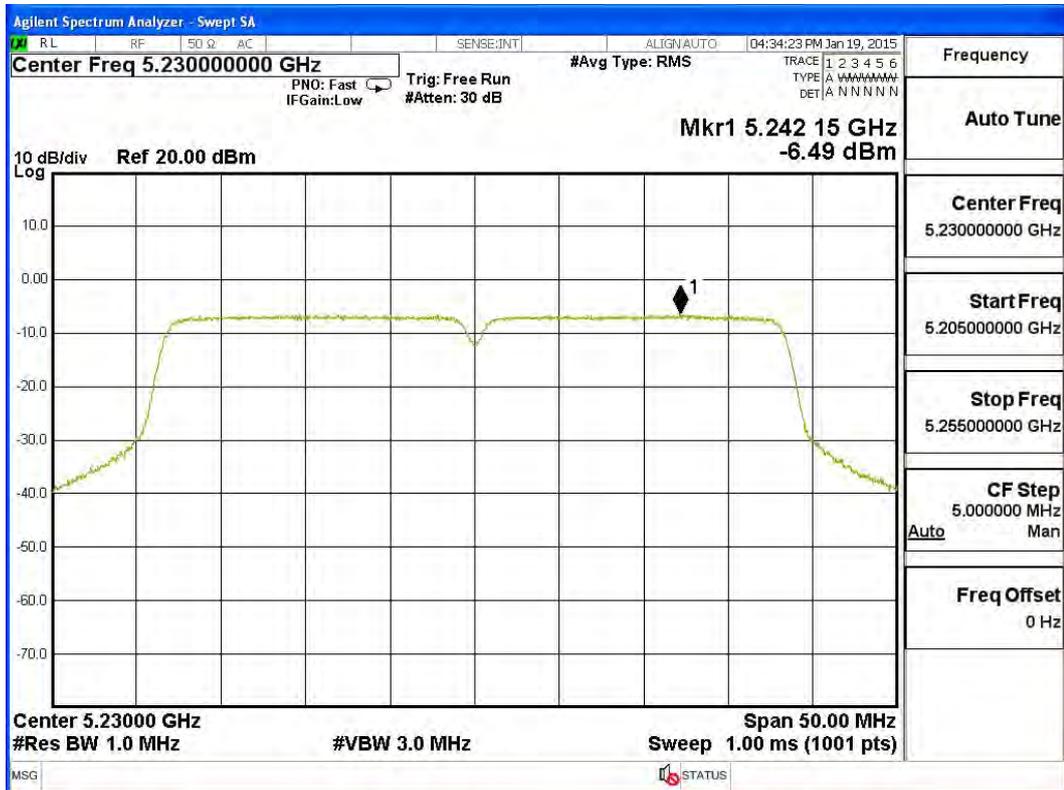
Channel 38 – Chain B



Channel 46 – Chain A



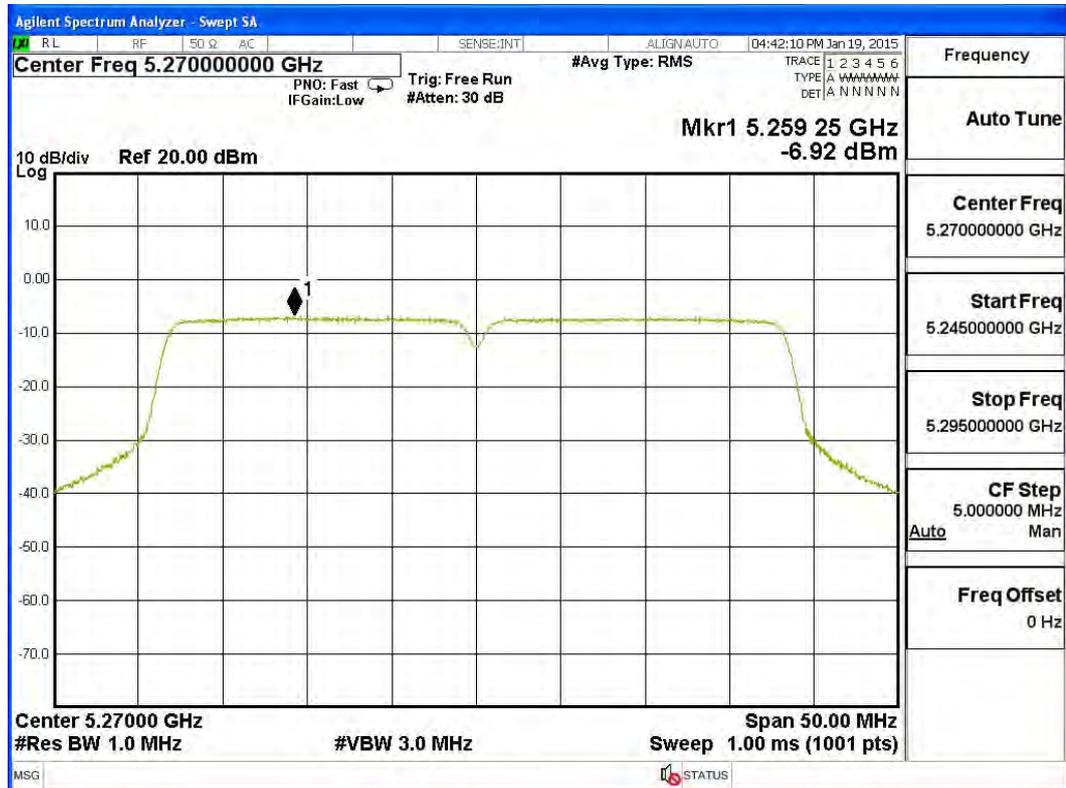
Channel 46 – Chain B



Channel 54 – Chain A



Channel 54 – Chain B



Channel 62 – Chain A



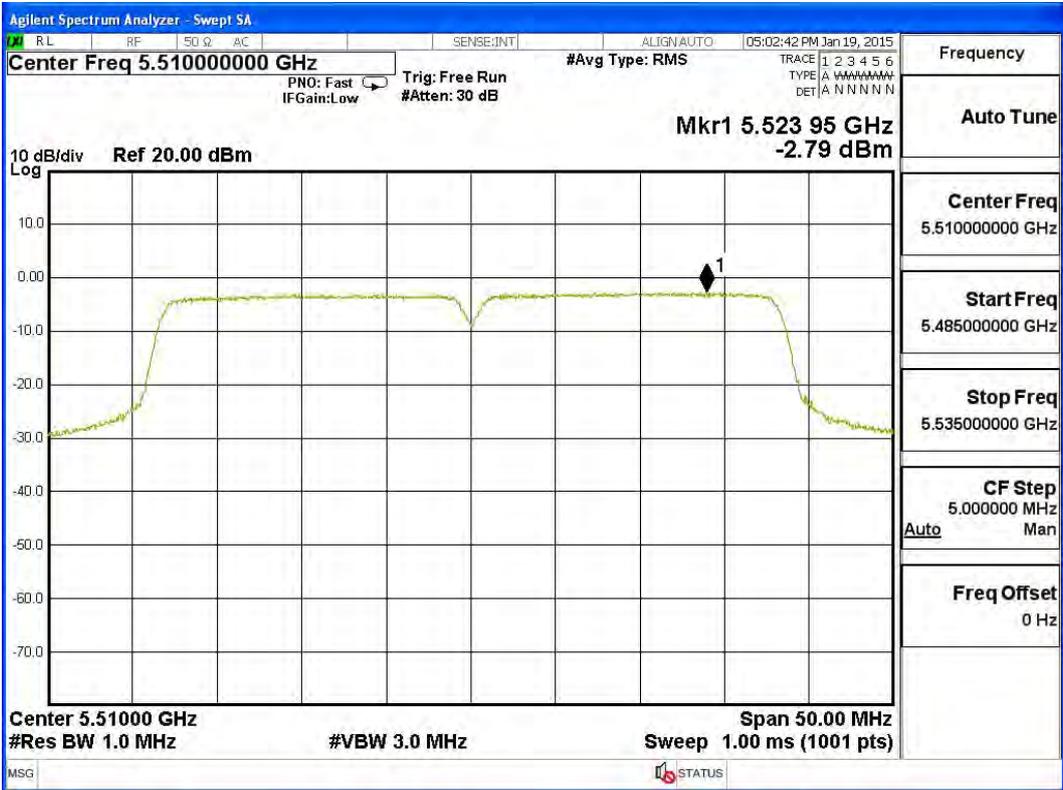
Channel 62 – Chain B



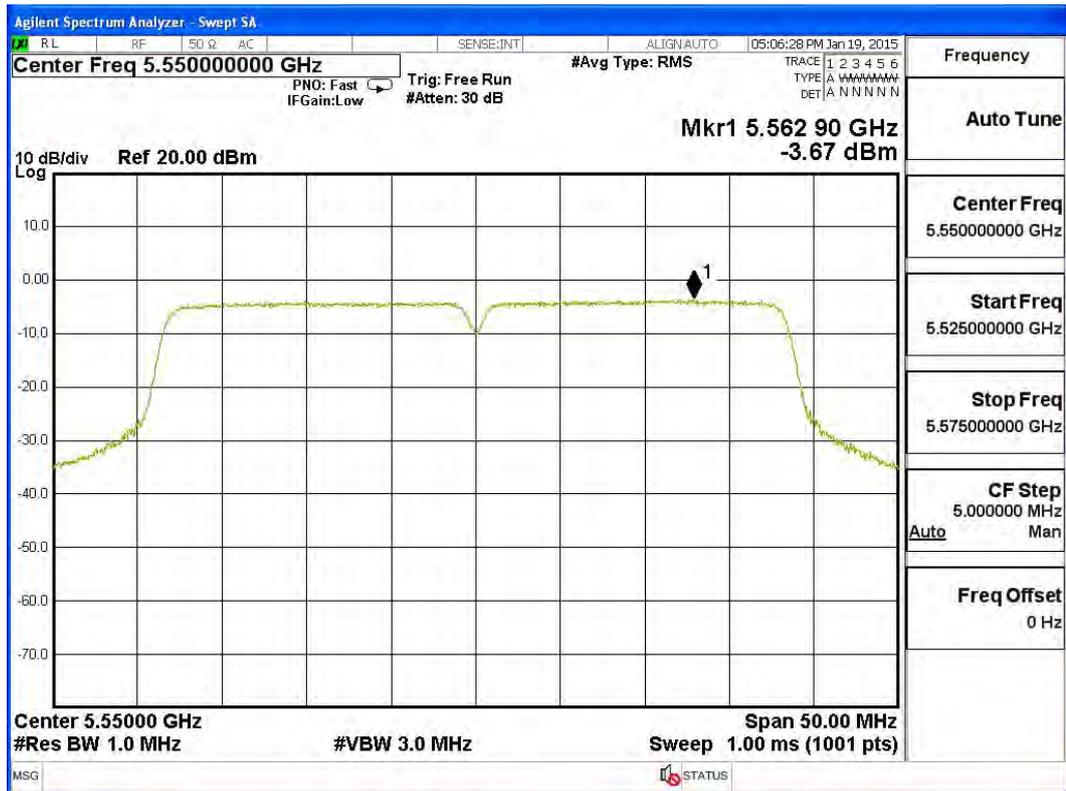
Channel 102 – Chain A



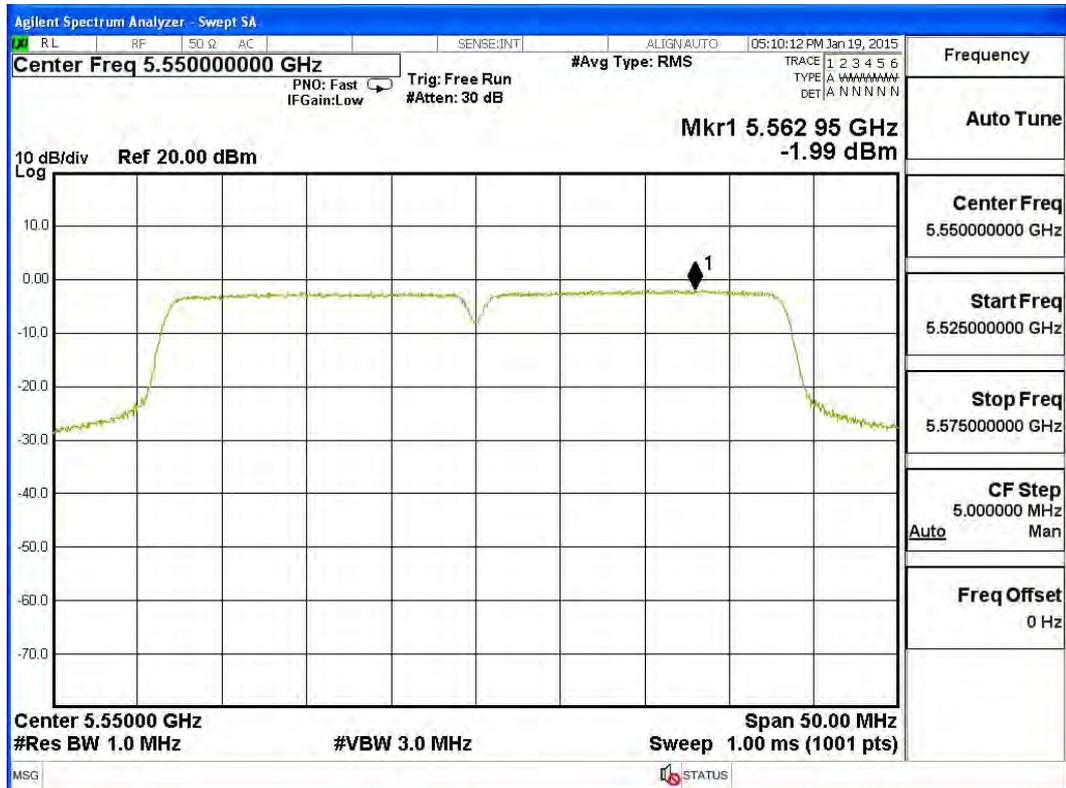
Channel 102 – Chain B



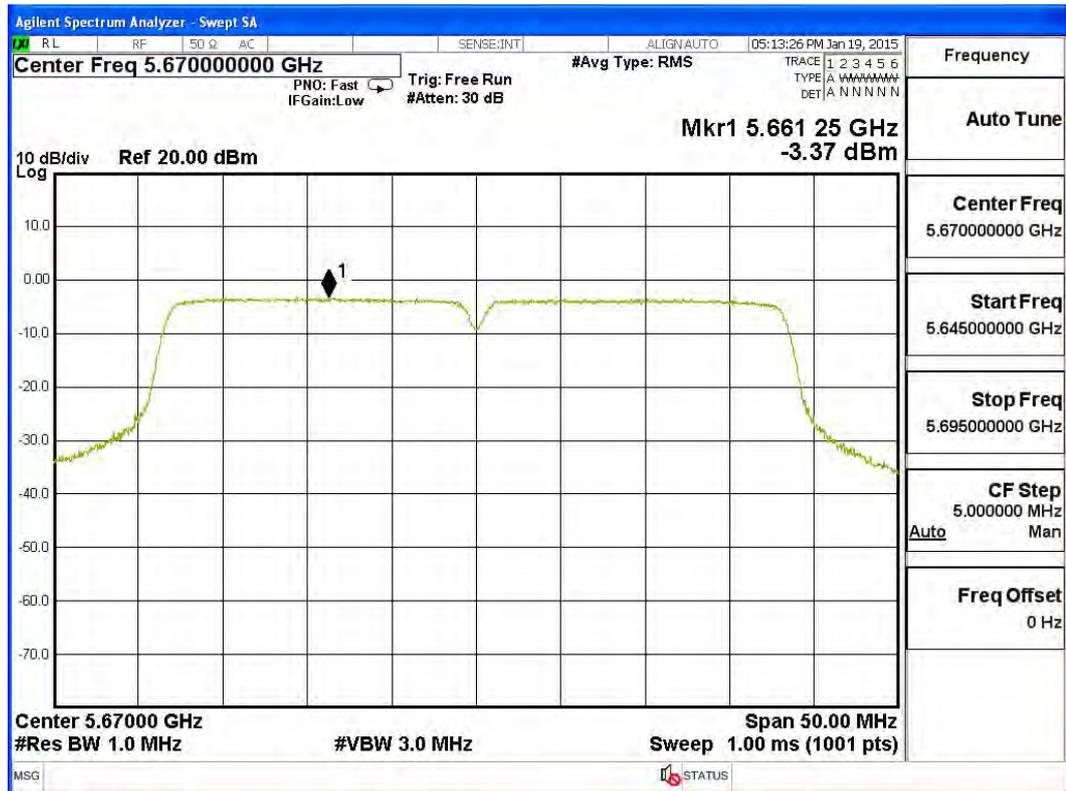
Channel 110 – Chain A



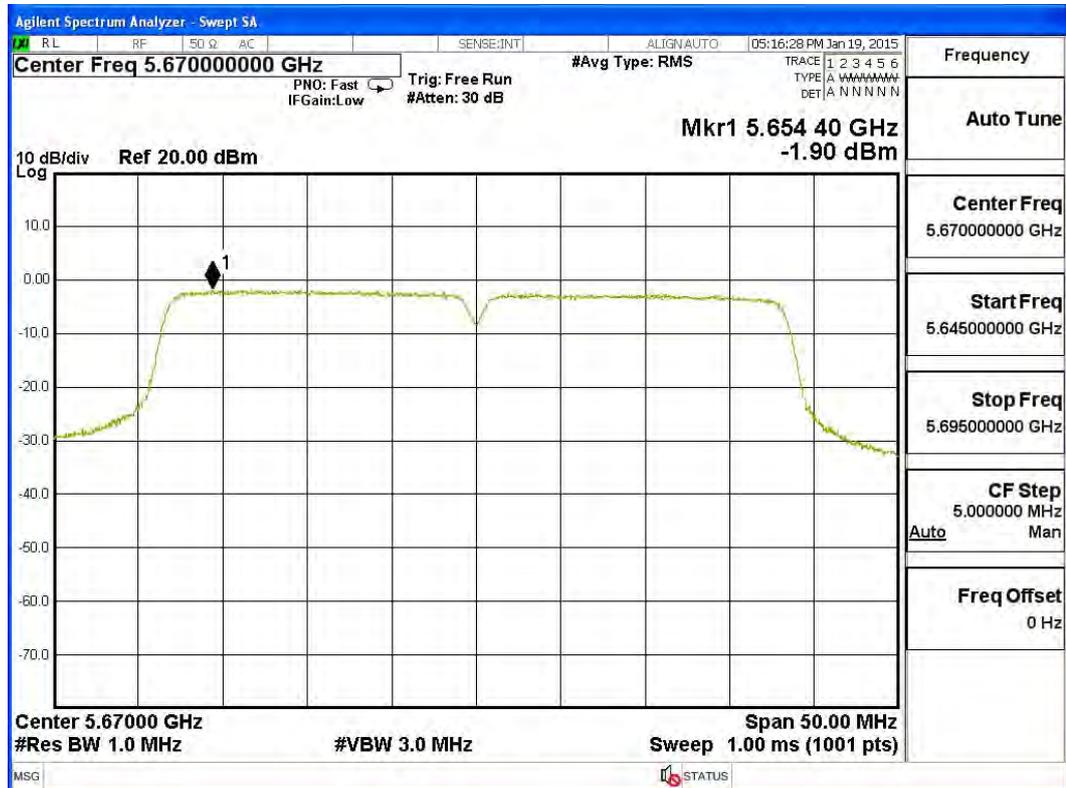
Channel 110 – Chain B



Channel 134 – Chain A



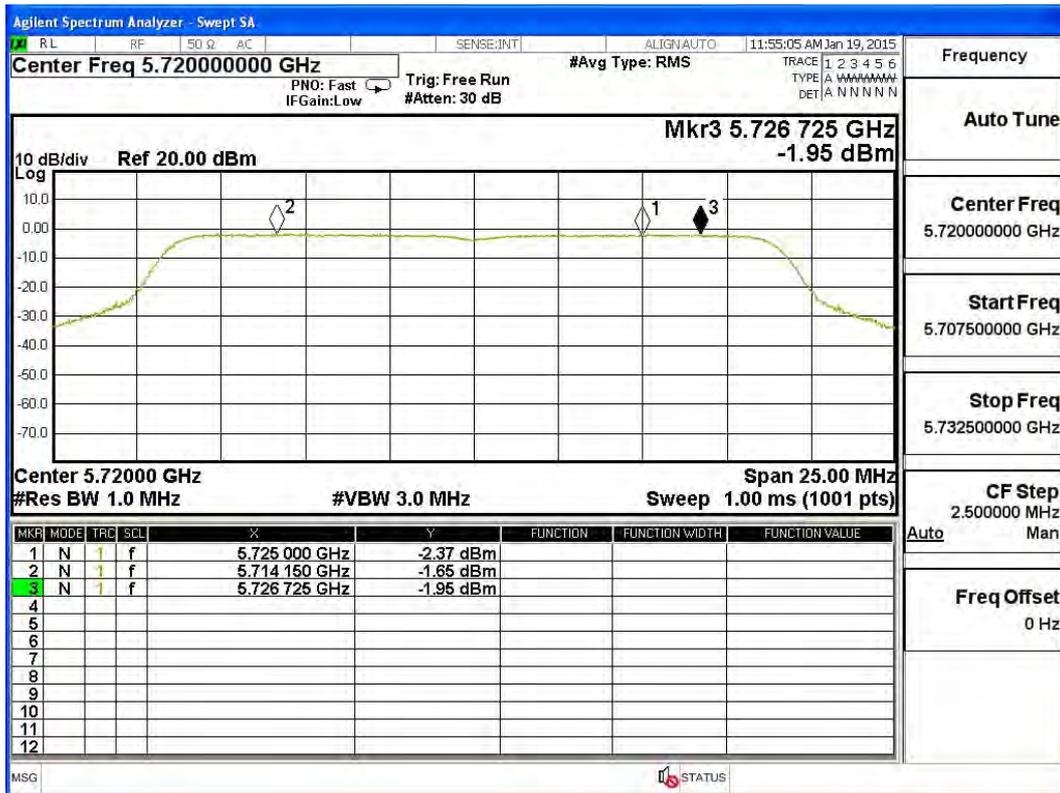
Channel 134 – Chain B



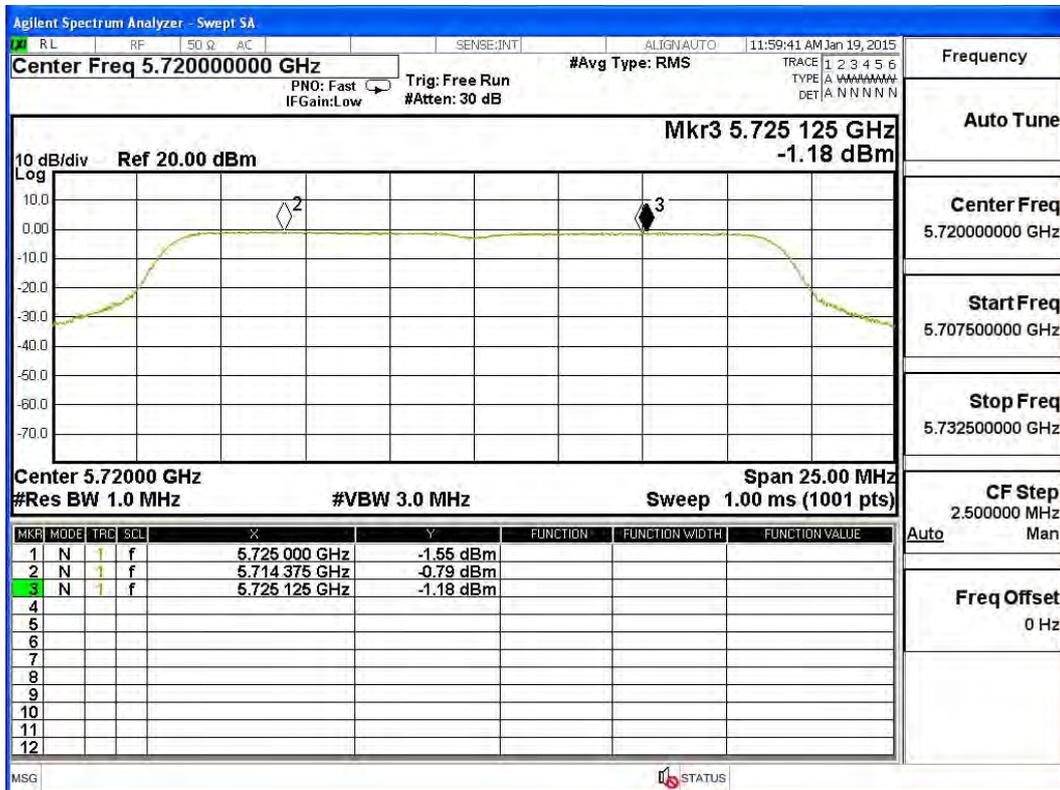
Product : Wireless Access Point
 Test Item : Peak Power Spectral Density
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit (802.11ac-20BW-7.2Mbps) (External Antenna)

Channel Number	Frequency (MHz)	Chain	Reading PPSD/MHz (dBm)	Cable Loss (dB)	Measurement PPSD/MHz (dBm)	Total PPSD/MHz (dBm)	Required Limit (dBm)	Result
144	5720(Band3)	A	-1.65	1.5	-0.15	2.86	<11	Pass
		B	-0.79	1.5	0.71	3.72	<11	Pass
144	5720(Band4)	A	-1.95	1.5	-0.45	2.56	<11	Pass
		B	-1.18	1.5	0.32	3.33	<11	Pass

Channel 144 – Chain A



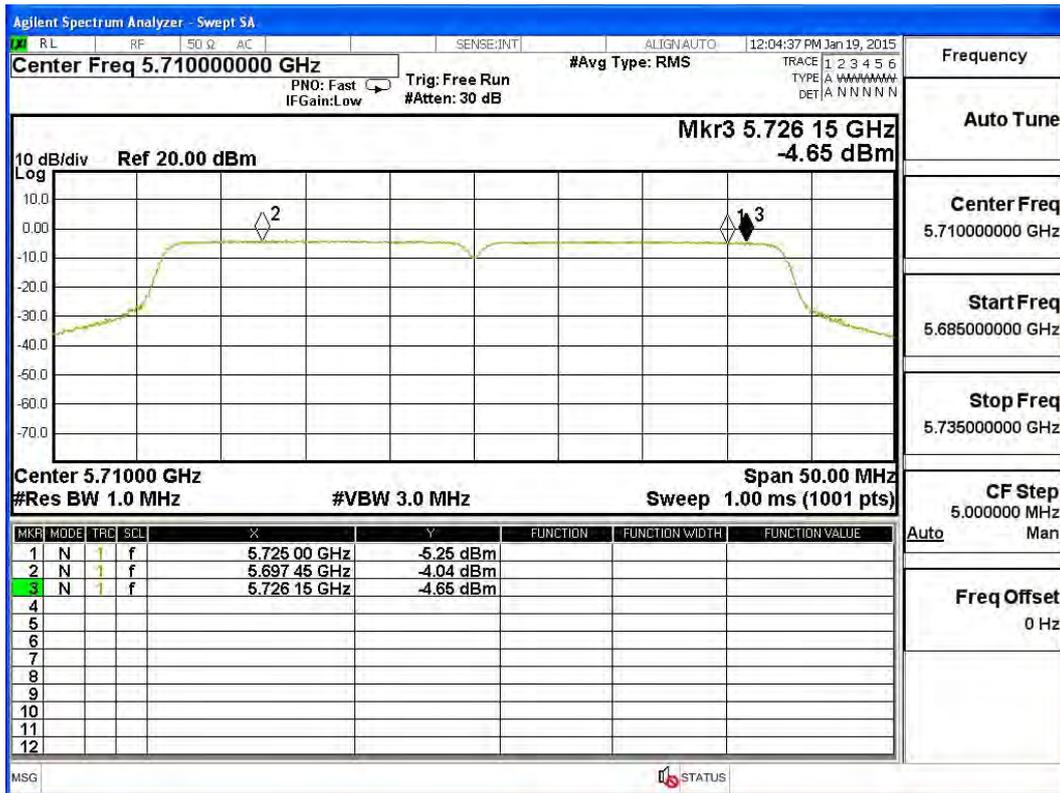
Channel 144 – Chain B



Product : Wireless Access Point
 Test Item : Peak Power Spectral Density
 Test Site : No.3 OATS
 Test Mode : Mode 5: Transmit (802.11ac-40BW-15Mbps) (External Antenna)

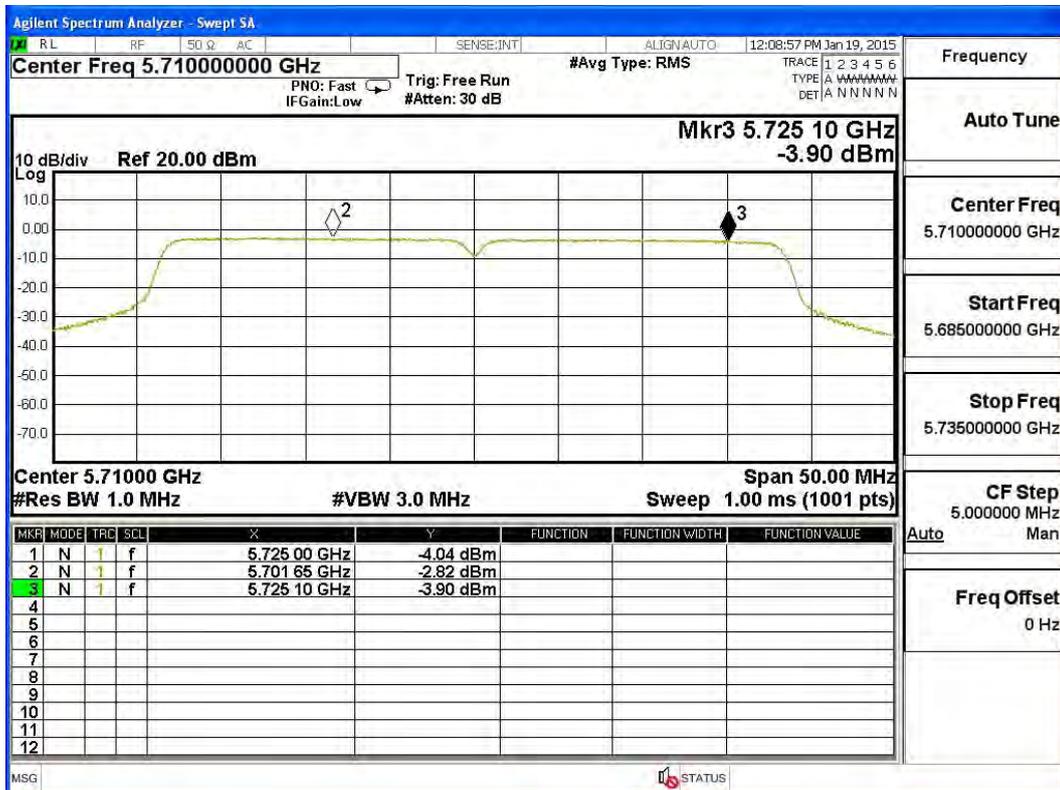
Channel Number	Frequency (MHz)	Chain	Reading PPSD/MHz (dBm)	Cable Loss (dB)	Measurement PPSD/MHz (dBm)	Total PPSD/MHz (dBm)	Required Limit (dBm)	Result
142	5710(Band3)	A	-4.04	1.5	-2.54	0.47	<11	Pass
		B	-2.82	1.5	-1.32	1.69	<11	Pass
142	5710(Band4)	A	-4.65	1.5	-3.15	-0.14	<11	Pass
		B	-3.90	1.5	-2.40	0.61	<11	Pass

Channel 142 – Chain A



Frequency	
Auto Tune	
Center Freq	5.71000000 GHz
Start Freq	5.68500000 GHz
Stop Freq	5.73500000 GHz
CF Step	5.000000 MHz
Auto	Man
Freq Offset	0 Hz

Channel 142 – Chain B



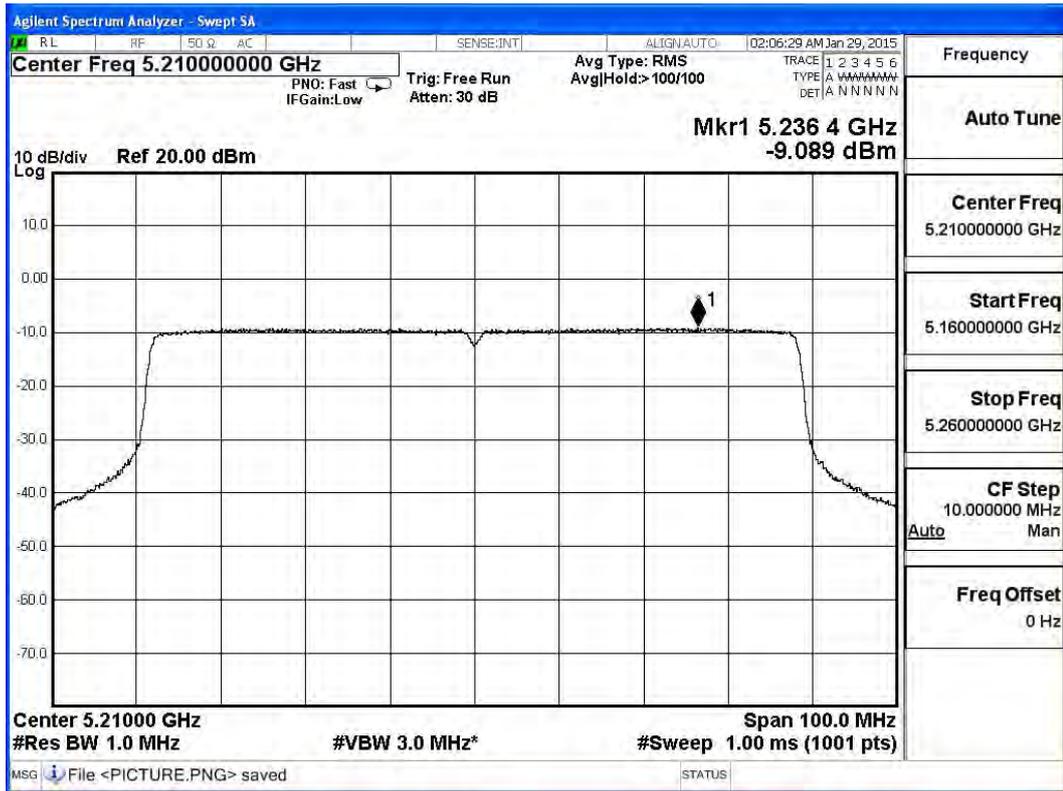
Frequency	
Auto Tune	
Center Freq	5.71000000 GHz
Start Freq	5.68500000 GHz
Stop Freq	5.73500000 GHz
CF Step	5.000000 MHz
Auto	Man
Freq Offset	0 Hz

Product : Wireless Access Point
 Test Item : Peak Power Spectral Density
 Test Site : No.3 OATS
 Test Mode : Mode 6: Transmit (802.11ac-80BW-65Mbps) (External Antenna)

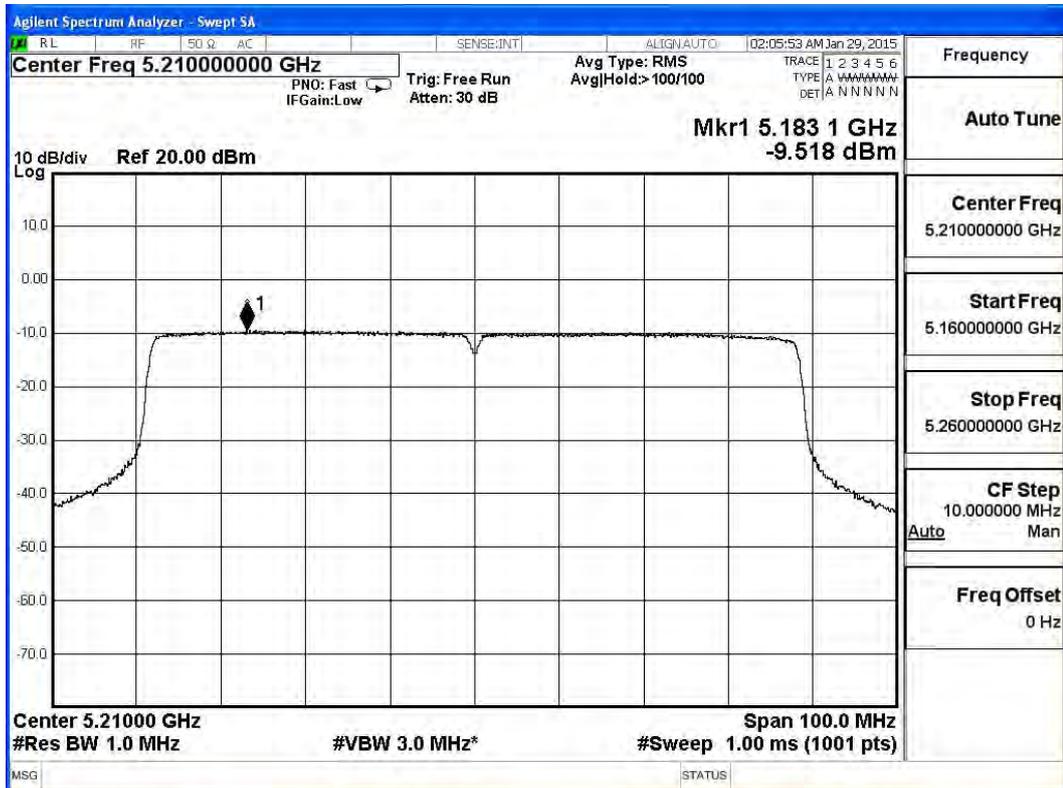
Channel Number	Frequency (MHz)	Chain	Reading PPSD/MHz (dBm)	Cable Loss (dB)	Measurement PPSD/MHz (dBm)	Total PPSD/MHz (dBm)	Required Limit (dBm)	Result
42	5210	A	-9.089	1.5	-7.589	-4.579	<17	Pass
		B	-9.518	1.5	-8.018	-5.008	<17	Pass
58	5290	A	-9.248	1.5	-7.748	-4.738	<17	Pass
		B	-11.209	1.5	-9.709	-6.699	<17	Pass
106	5530	A	-7.61	1.5	-7.589	-4.579	<11	Pass
		B	-5.4	1.5	-8.018	-5.008	<11	Pass
138	5690 (Band3)	A	-7.38	1.5	-7.748	-4.738	<11	Pass
		B	-5.66	1.5	-9.709	-6.699	<11	Pass
138	5690 (Band4)	A	-8.48	1.5	-7.748	-4.738	<17	Pass
		B	-8.04	1.5	-9.709	-6.699	<17	Pass

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

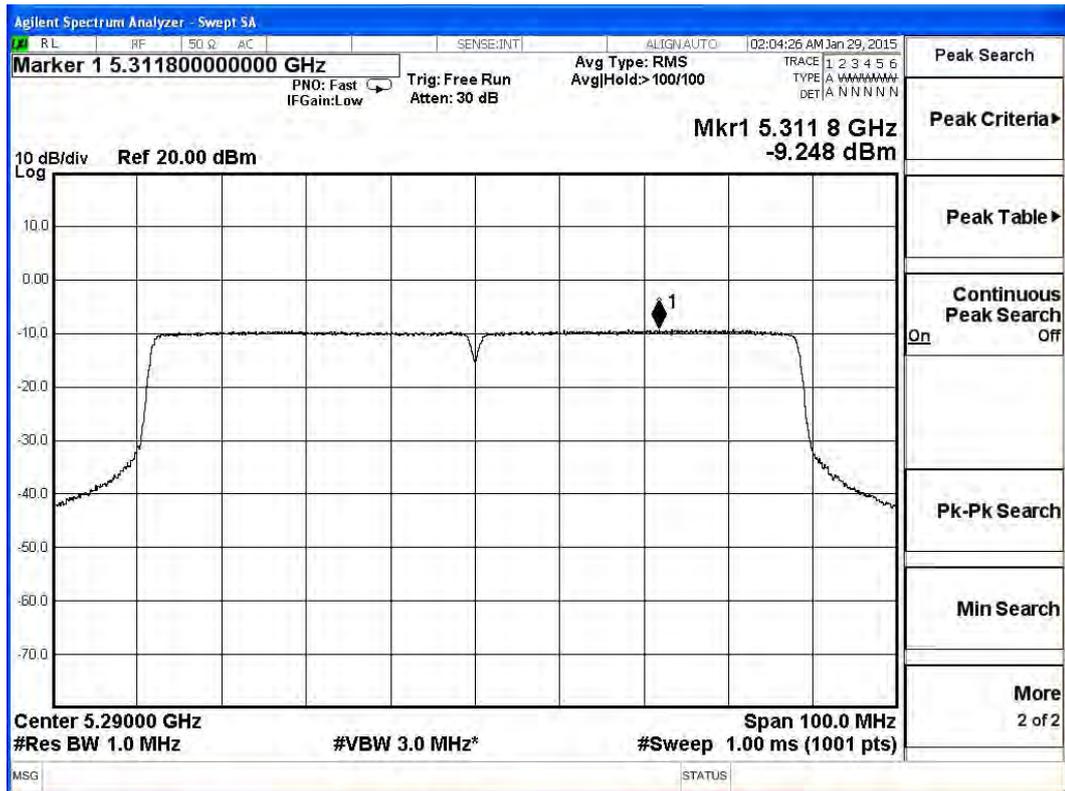
Channel 42 – Chain A



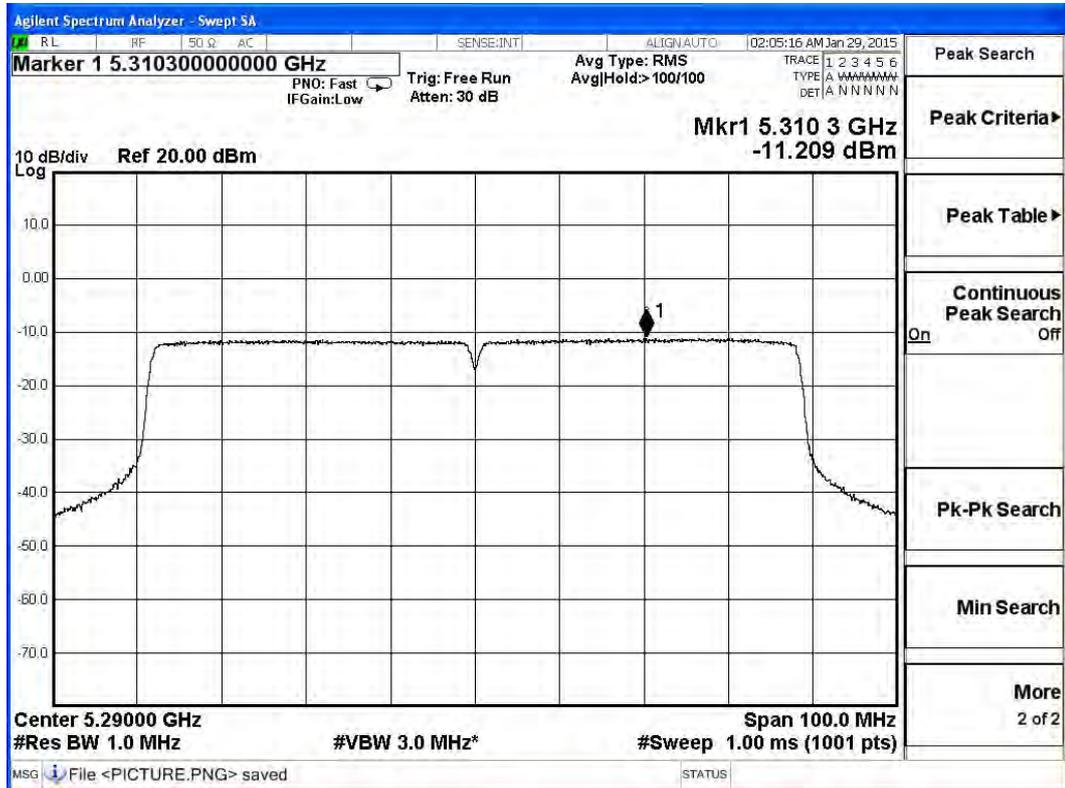
Channel 42 – Chain B



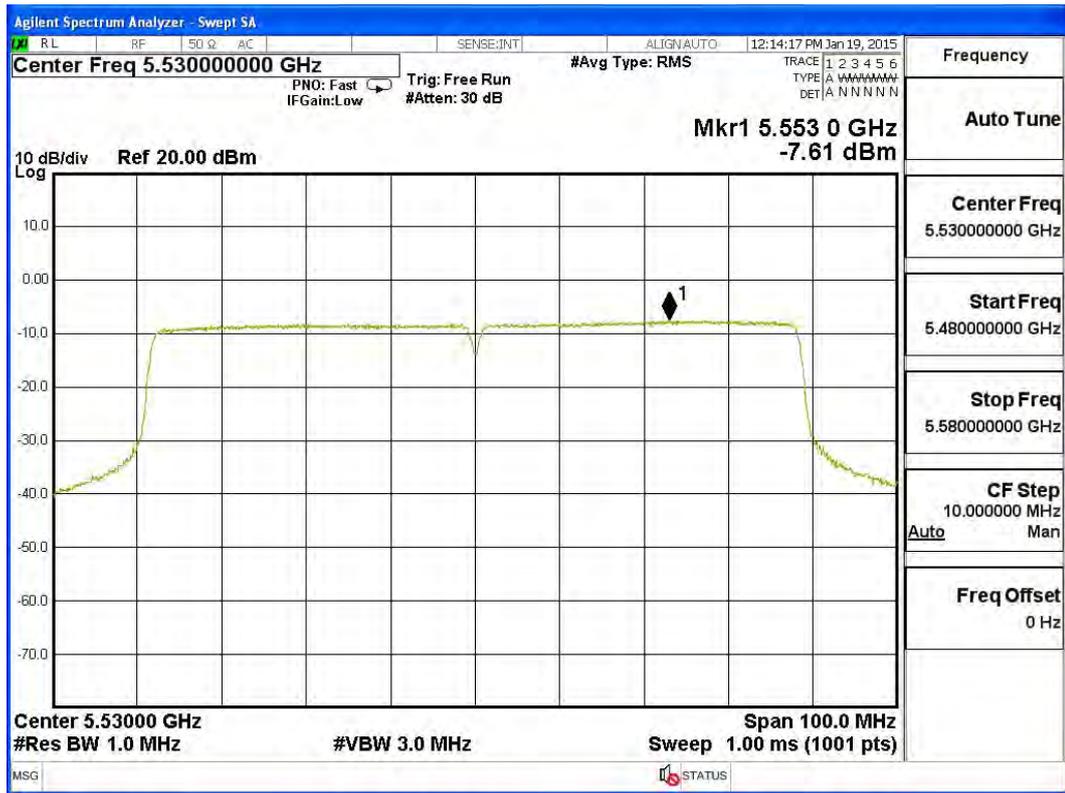
Channel 58 – Chain A



Channel 58 – Chain B



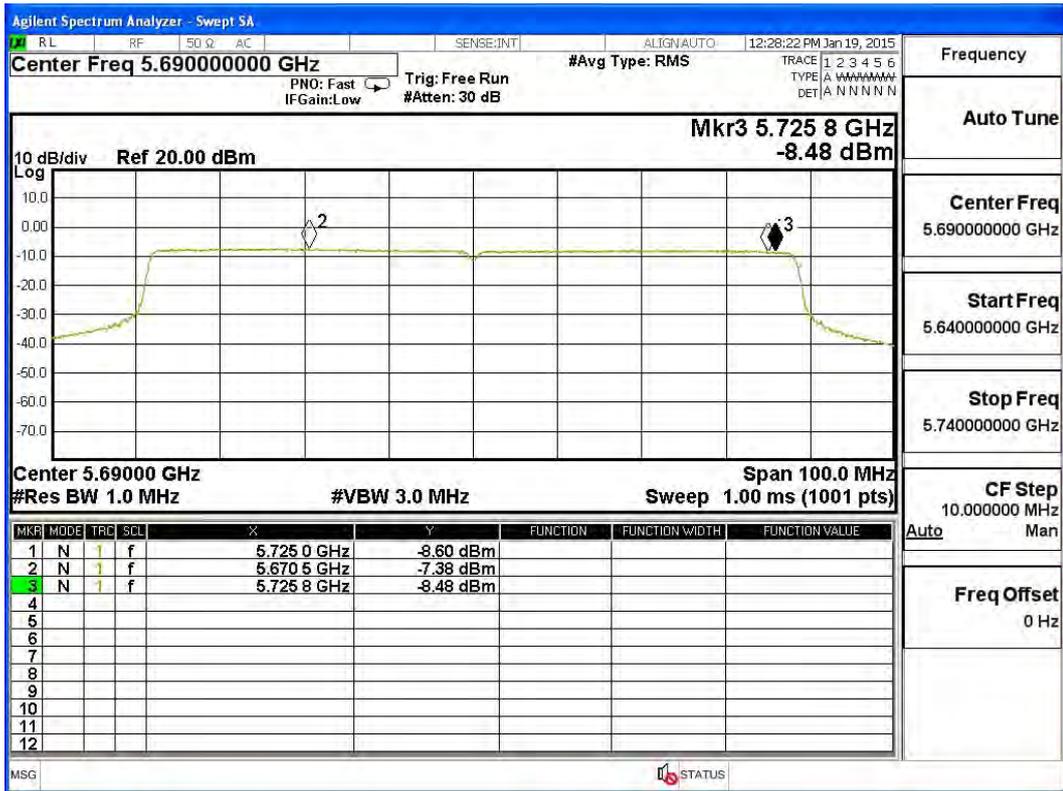
Channel 106 – Chain A



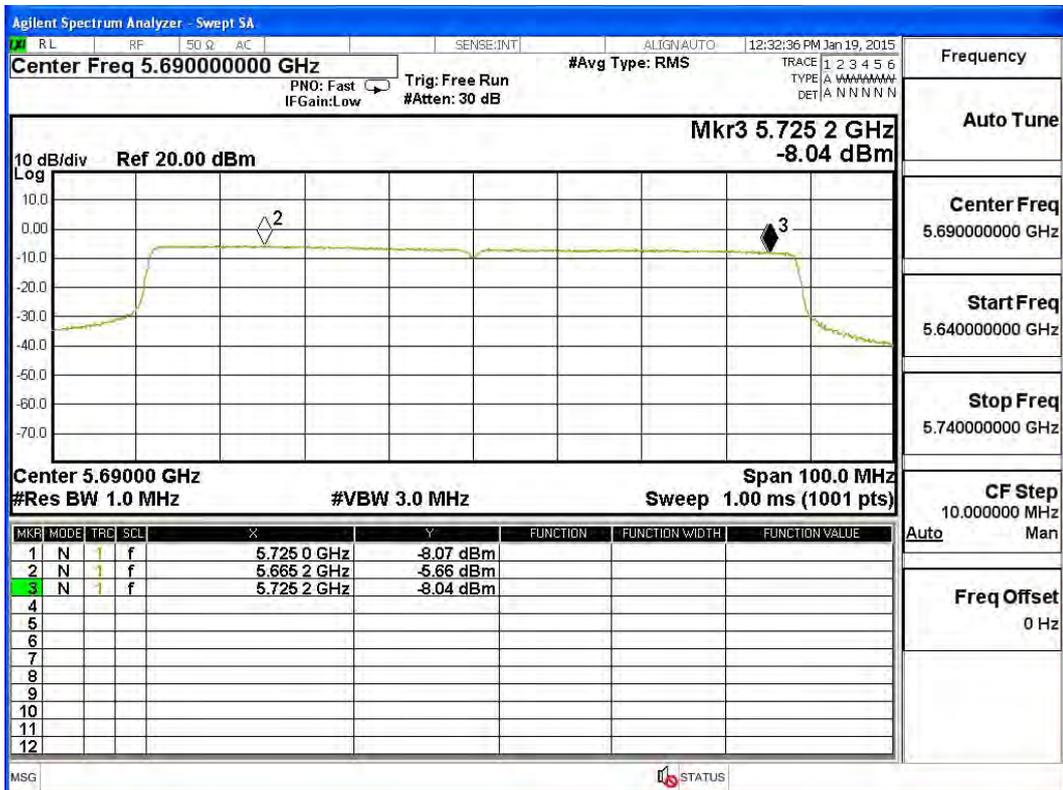
Channel 106 – Chain B



Channel 138 – Chain A



Channel 138 – Chain B



5. Radiated Emission

5.1. Test Equipment

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

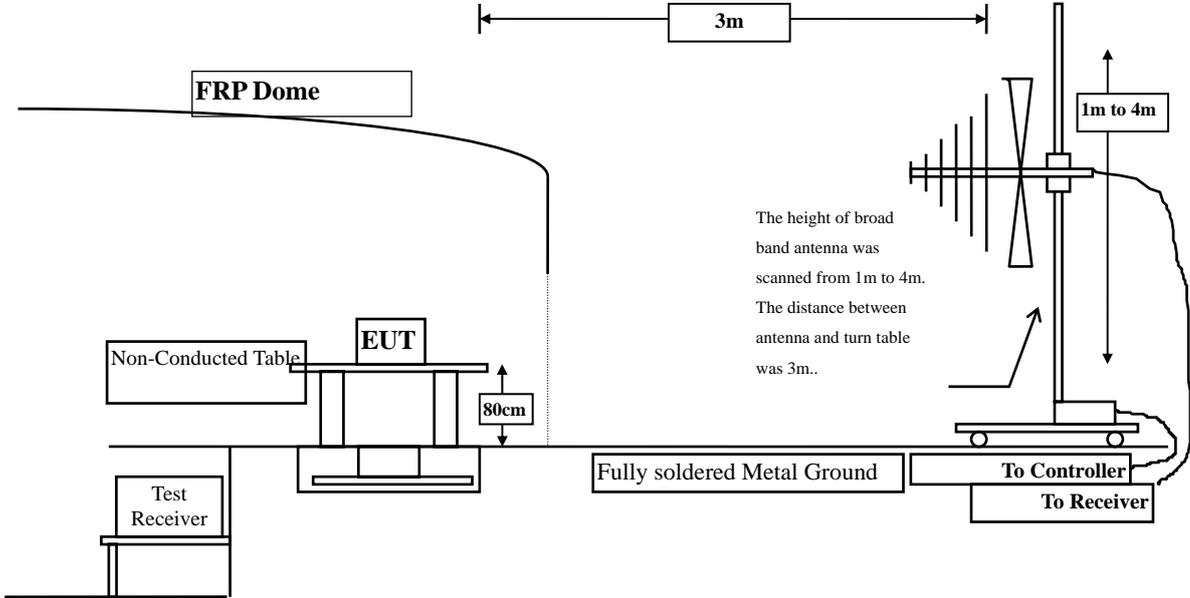
Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
☒ Site # 3	X	Magnetic Loop Antenna	Teseq	HLA6121/ 37133	Sep., 2015
	X	Bilog Antenna	Schaffner Chase	CBL6112B/ 2707	Jun., 2015
	X	EMI Test Receiver	R&S	ESCS 30/838251/ 001	Jun., 2015
	X	Coaxial Cable	QTK(Arnist)	RG 214/ LC003-RG	Jun., 2015
	X	Coaxial signal switch	Arnist	MP59B/ 6200798682	Jun., 2015

Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
☒ CB # 8	X	Spectrum Analyzer	R&S	FSP40/ 100339	Oct., 2014
	X	Horn Antenna	ETS-Lindgren	3117/ 35205	Mar., 2015
	X	Horn Antenna	Schwarzbeck	BBHA9170/209	Jan., 2015
	X	Horn Antenna	TRC	AH-0801/95051	Aug., 2015
	X	Pre-Amplifier	EMCI	EMC012630SE/980210	Jan, 2015
	X	Pre-Amplifier	MITEQ	JS41-001040000-58-5P/153945	Jul., 2015
	X	Pre-Amplifier	NARDA	DBL-1840N506/013	Jul., 2015

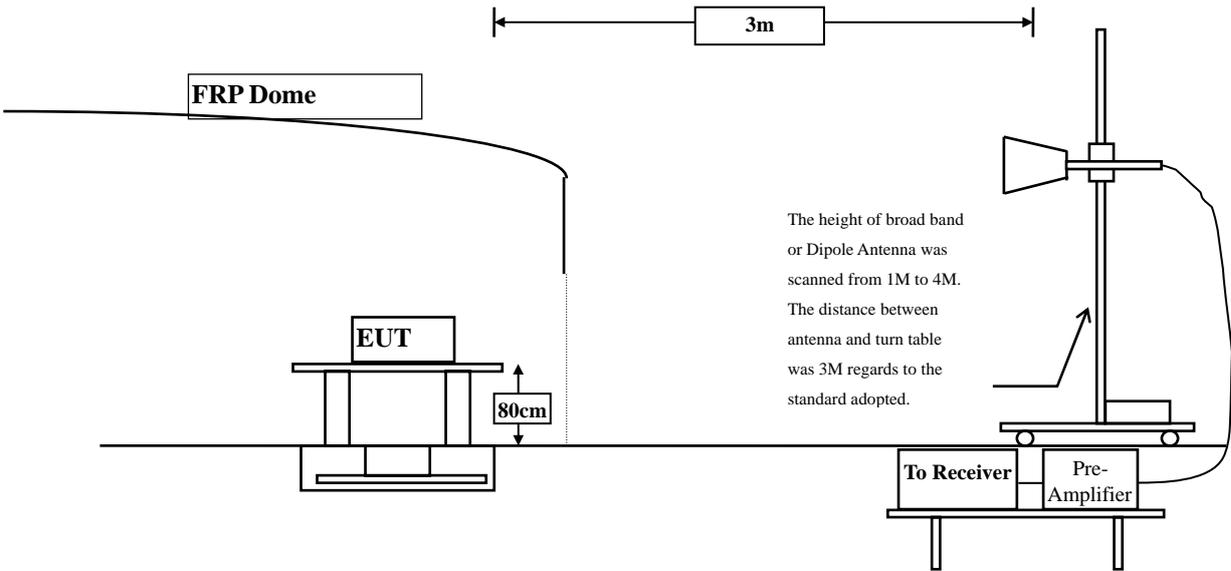
- Note:
1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
 2. The test instruments marked with "X" are used to measure the final test results.

5.2. Test Setup

Radiated Emission Below 1GHz



Radiated Emission Above 1GHz



5.3. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

FCC Part 15 Subpart C Paragraph 15.209(a) Limits		
Frequency MHz	Field strength (microvolts/meter)	Measurement distance (meter)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Remarks: E field strength (dBμV/m) = 20 log E field strength (uV/m)

5.4. Test Procedure

The EUT was setup according to ANSI C63.10, 2013 and tested according to FCC KDB-789033 test procedure for compliance to FCC 47CFR 15. 407 requirements.

Measuring the frequency range below 1GHz, the EUT is placed on a turn table which is 0.8 meter above ground, when measuring the frequency range above 1GHz, the EUT is placed on a turn table which is 1.5 meter above ground.

The turn table is rotated 360 degrees to determine the position of the maximum emission level.

The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna is scanned between 1 meter and 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10: 2013 on radiated measurement.

The resolution bandwidth below 30MHz setting on the field strength meter is 9kHz and 30MHz~1GHz is 120kHz and above 1GHz is 1MHz.

Radiated emission measurements below 30MHz are made using Loop Antenna and 30MHz~1GHz are made using broadband Bilog antenna and above 1GHz are made using Horn Antennas.

The measurement is divided into the Preliminary Measurement and the Final Measurement.

The suspected frequencies are searched for in Preliminary Measurement with the measurement antenna kept pointed at the source of the emission both in azimuth and elevation, with the polarization of the antenna oriented for maximum response. The antenna is pointed at an angle towards the source of the emission, and the EUT is rotated in both height and polarization to maximize the measured emission. The emission is kept within the illumination area of the 3 dB bandwidth of the antenna.

The worst radiated emission is measured in the Open Area Test Site on the Final Measurement.

The measurement frequency range from 9kHz - 10th Harmonic of fundamental was investigated.

5.5. Uncertainty

± 3.8 dB below 1GHz

± 3.9 dB above 1GHz

5.6. Test Result of Radiated Emission

Product : Wireless Access Point
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5180MHz) (Internal Antenna)

Frequency MHz	Correct Factor dB	Reading Level dB μ V	Measurement Level dB μ V/m	Margin dB	Limit dB μ V/m
Horizontal					
Peak Detector:					
10360.000	12.930	38.100	51.030	-22.970	74.000
15540.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
10360.000	13.724	37.700	51.424	-22.576	74.000
15540.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Wireless Access Point
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5220MHz) (Internal Antenna)

Frequency MHz	Correct Factor dB	Reading Level dB μ V	Measurement Level dB μ V/m	Margin dB	Limit dB μ V/m
Horizontal					
Peak Detector:					
10440.000	13.322	38.560	51.882	-22.118	74.000
15660.000	*	*	*	*	74.000
20880.000	*	*	*	*	74.000
26100.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
10440.000	14.245	37.880	52.125	-21.875	74.000
15660.000	*	*	*	*	74.000
20880.000	*	*	*	*	74.000
26100.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Wireless Access Point
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5240MHz) (Internal Antenna)

Frequency MHz	Correct Factor dB	Reading Level dB μ V	Measurement Level dB μ V/m	Margin dB	Limit dB μ V/m
Horizontal					
Peak Detector:					
10480.000	13.693	37.890	51.584	-22.416	74.000
15720.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
10480.000	14.620	37.980	52.601	-21.399	74.000
15720.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.