FCC Test Report

Product Name	TABLET PC
Model No	T70C
FCC ID	ZWMT70C

Applicant	Ubiqconn Technology,Inc.
Address	No. 300 Yang Guang St., NeiHu, Taipei, Taiwan 114

Date of Receipt	Mar. 13, 2013
Issued Date	Apr. 29, 2013
Report No.	133279R-RFUSP45V01
Report Version	V1.0

The test results relate only to the samples tested.
The test report shall not be reproduced except in full without the written approval of QuieTek Corporation.
This report must not be used to claim product endorsement by NVLAP any agency of the U.S. Government

Test Report Certification

Issued Date: Apr. 29, 2013
Report No.: 133279R-RFUSP45V01

Product Name	TABLET PC
Applicant	Ubiqconn Technology,Inc.
Address	No. 300 Yang Guang St., NeiHu, Taipei, Taiwan 114
Manufacturer	Ubiqconn Technology,Inc.
Model No.	T70C
FCC ID.	ZWMT70C
EUT Rated Voltage	AC 100-240V, 50-60Hz
EUT Test Voltage	AC 120V/60Hz
Trade Name	Ubiqconn,UTI
Applicable Standard	FCC CFR Title 47 Part 15 Subpart E: 2012 ANSI C63.4: 2003, , ANSI C63.10: 2009, FCC KDB-789033
Test Result	Complied

The Test Results relate only to the samples tested.
The test report shall not be reproduced except in full without the written approval of QuieTek Corporation.
This report must not be used to claim product endorsement by NVLAP any agency of the U.S. Government

Documented By : Leven Huang

(Senior Adm. Specialist / Leven Huang)

Tested By : Andy Lin

(Engineer / Andy Lin)

Approved By :

(Manager / Vincent Lin)

TABLE OF CONTENTS

1. GENERAL INFORMATION

1.1. EUT Description

Product Name	TABLET PC
Trade Name	Ubiqconn,UTI
FCC ID.	ZWMT70C
Model No.	T70C
Frequency Range	802.11a/n-20MHz: 5180-5320MHz, 5500-5700MHz 802.11n-40MHz: 5190-5310, 5510-5670MHz
Number of Channels	802.11a/n-20MHz: 19; 802.11n-40MHz: 9
Data Rate	802.11a: 6 - 54Mbps 802.11n: up to 300Mbps
Channel Control	Auto
Type of Modulation	802.11a/n:OFDM, BPSK, QPSK, 16QAM, 64QAM
Antenna Type	PCB Antenna
Antenna Gain	Refer to the table “Antenna List”
Power Adapter	MFR: FSP, M/N: FSP065-RAB Input: AC 100-240V, 50-60Hz, 1.5A Output: DC 19V, 3.42A Cable out: Non-Shielded, 1.5m, with one ferrite core bonded.
Power Cable	Non-Shielded, 1.7m
Contain Module	Intel / 62205ANHMW

Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	Ethertronics Inc.	5001237 (Main) 5001244 (Aux)	PCB Antenna	4.5dBi For 5.15~5.35GHz 4.2dBi For 5.47~5.725GHz

Note: The antenna of EUT is conform to FCC 15.203

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

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 36:	5180 MHz	Channel 40:	5200 MHz	Channel 44:	5220 MHz	Channel 48:	5240 MHz
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 120:	5600 MHz	Channel 124:	5620 MHz	Channel 128:	5640 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 38:	5190 MHz	Channel 46:	5230 MHz	Channel 54:	5270 MHz	Channel 62:	5310 MHz
Channel 102:	5510 MHz	Channel 110:	5550 MHz	Channel 118:	5590 MHz	Channel 126:	5630 MHz
Channel 134:	5670 MHz						

Note:

1. This device is a TABLET PC, Contains functions and so on WLAN、Bluetooth, This report for WLAN.
2. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
3. Lowest and highest data rates are tested in each mode. Only worst case is shown in the report. (802.11a is 6Mbps、802.11n(20M-BW) is 14.4Mbps and 、802.11n(40M-BW) is 30Mbps).
4. At result of pretests, module supports dual-channel transmission, only the worst case is shown in the report. (802.11a is chain A)
5. 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.
6. 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)

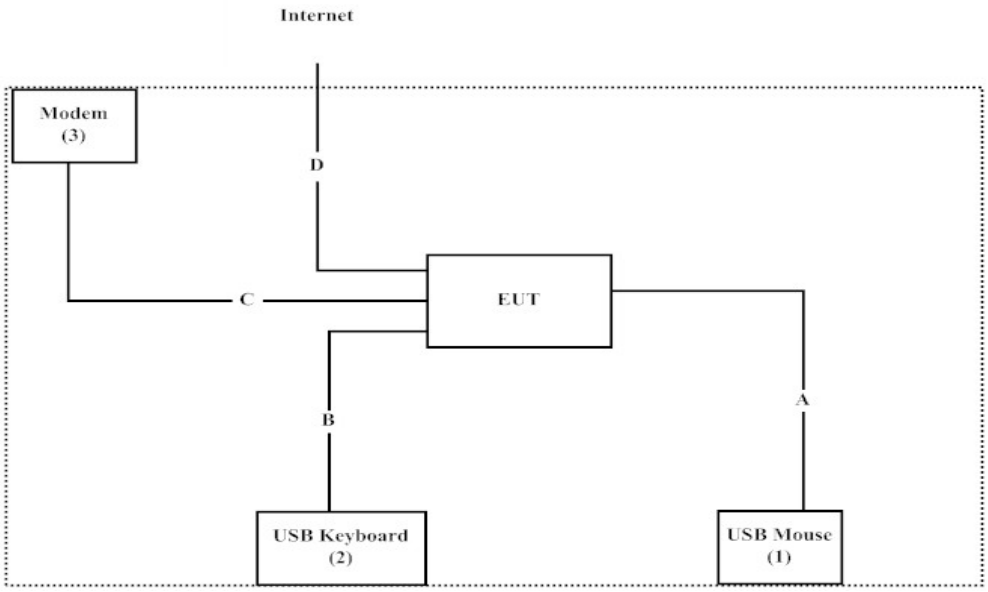
1.3. Tested System Datails

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

Product		Manufacturer	Model No.	Serial No.	Power Cord
(1)	USB Mouse	DELL	MO56UOA	G0Y02ES8	N/A
(2)	USB Keyboard	Logitech	Y-UR83	SY853UK	N/A
(3)	Modem	ACEEX	DM-1414	0102027533	Non-Shielded, 1.8m

Signal Cable Type		Signal cable Description
A	USB Mouse Cable	Non-Shielded, 1.8m
B	USB Keyboard Cable	Non-Shielded, 1.8m
C	Modem Cable	Non-Shielded, 1.5m
D	LAN Cable	Non-Shielded, 1.8m

1.4. Configuration of tested System



1.5. EUT Exercise Software

(1) Setup the EUT as shown in Section 1.4

(2) Execute program “DRTU v1.6.1-556” on the EUT.

(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 about the test site and management system can be downloaded from QuieTek Corporation's Web Site : http://www.quietek.com/tw/ctg/cts/accreditations.htm
The address and introduction of QuieTek Corporation's laboratories can be founded in our Web site : http://www.quietek.com/

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

Accreditation on NVLAP
NVLAP Lab Code: 200533-0

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

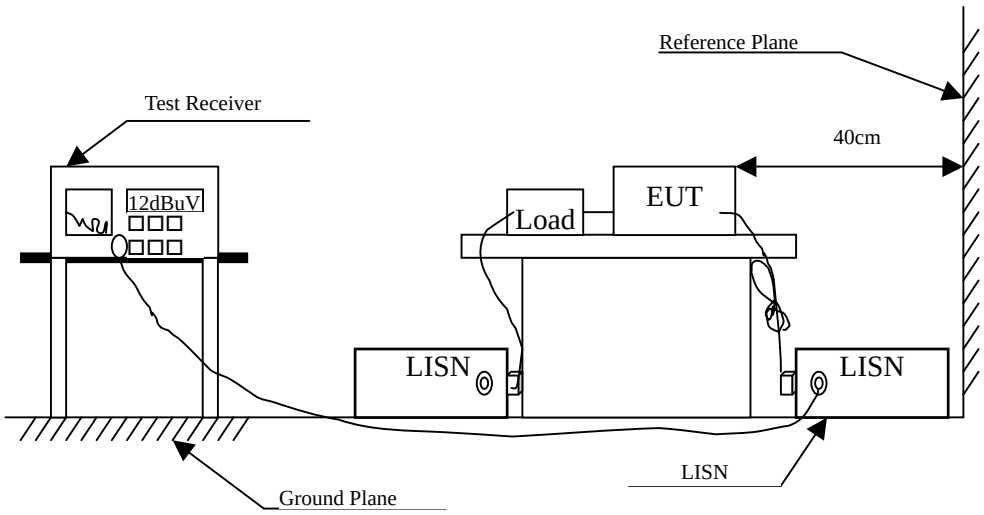
2.1. Test Equipment

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

Note:

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

2.2. Test Setup



2.3. Limits

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

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

2.4. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm /50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs.)

Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2003 on conducted measurement.

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

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

2.5. Uncertainty

± 2.26 dB

2.6. Test Result of Conducted Emission

Product : TABLET PC
Test Item : Conducted Emission Test
Power Line : Line 1
Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) (5190MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
LINE 1					
Quasi-Peak					
0.212	9.790	31.430	41.220	-23.009	64.229
0.318	9.790	25.380	35.170	-26.030	61.200
0.650	9.790	34.860	44.650	-11.350	56.000
1.373	9.800	27.370	37.170	-18.830	56.000
1.830	9.810	27.050	36.860	-19.140	56.000
14.525	10.074	28.320	38.394	-21.606	60.000
Average					
0.212	9.790	22.730	32.520	-21.709	54.229
0.318	9.790	16.440	26.230	-24.970	51.200
0.650	9.790	26.340	36.130	-9.870	46.000
1.373	9.800	15.960	25.760	-20.240	46.000
1.830	9.810	14.650	24.460	-21.540	46.000
14.525	10.074	27.920	37.994	-12.006	50.000

Note:

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

Product : TABLET PC
Test Item : Conducted Emission Test
Power Line : Line 2
Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) (5190MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
LINE 2					
Quasi-Peak					
0.201	9.770	34.960	44.730	-19.813	64.543
0.310	9.770	25.140	34.910	-26.519	61.429
0.634	9.770	34.580	44.350	-11.650	56.000
1.392	9.780	28.520	38.300	-17.700	56.000
2.568	9.800	24.820	34.620	-21.380	56.000
14.525	10.134	28.920	39.054	-20.946	60.000
Average					
0.201	9.770	23.780	33.550	-20.993	54.543
0.310	9.770	16.830	26.600	-24.829	51.429
0.634	9.770	25.620	35.390	-10.610	46.000
1.392	9.780	17.720	27.500	-18.500	46.000
2.568	9.800	13.940	23.740	-22.260	46.000
14.525	10.134	28.730	38.864	-11.136	50.000

Note:

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

Product : TABLET PC
Test Item : Conducted Emission Test
Power Line : Line 1
Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) (5270MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
LINE 1					
Quasi-Peak					
0.205	9.790	32.390	42.180	-22.249	64.429
0.306	9.790	25.200	34.990	-26.553	61.543
0.650	9.790	34.780	44.570	-11.430	56.000
1.384	9.800	28.040	37.840	-18.160	56.000
2.111	9.810	24.850	34.660	-21.340	56.000
14.525	10.074	28.600	38.674	-21.326	60.000
Average					
0.205	9.790	23.900	33.690	-20.739	54.429
0.306	9.790	15.370	25.160	-26.383	51.543
0.650	9.790	26.270	36.060	-9.940	46.000
1.384	9.800	16.970	26.770	-19.230	46.000
2.111	9.810	13.910	23.720	-22.280	46.000
14.525	10.074	28.250	38.324	-11.676	50.000

Note:

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

Product : TABLET PC
Test Item : Conducted Emission Test
Power Line : Line 2
Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) (5270MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
LINE 2					
Quasi-Peak					
0.197	9.770	34.160	43.930	-20.727	64.657
0.318	9.770	25.360	35.130	-26.070	61.200
0.513	9.770	27.530	37.300	-18.700	56.000
0.650	9.770	34.900	44.670	-11.330	56.000
1.384	9.780	28.200	37.980	-18.020	56.000
14.525	10.134	29.040	39.174	-20.826	60.000
Average					
0.197	9.770	22.200	31.970	-22.687	54.657
0.318	9.770	17.040	26.810	-24.390	51.200
0.513	9.770	17.530	27.300	-18.700	46.000
0.650	9.770	26.390	36.160	-9.840	46.000
1.384	9.780	17.270	27.050	-18.950	46.000
14.525	10.134	28.920	39.054	-10.946	50.000

Note:

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

Product : TABLET PC
Test Item : Conducted Emission Test
Power Line : Line 1
Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) (5550MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
LINE 1					
Quasi-Peak					
0.212	9.790	31.410	41.200	-23.029	64.229
0.302	9.790	25.180	34.970	-26.687	61.657
0.634	9.790	34.420	44.210	-11.790	56.000
1.369	9.800	27.070	36.870	-19.130	56.000
1.795	9.810	25.370	35.180	-20.820	56.000
14.525	10.074	28.620	38.694	-21.306	60.000
Average					
0.212	9.790	22.730	32.520	-21.709	54.229
0.302	9.790	15.050	24.840	-26.817	51.657
0.634	9.790	25.470	35.260	-10.740	46.000
1.369	9.800	15.610	25.410	-20.590	46.000
1.795	9.810	14.290	24.100	-21.900	46.000
14.525	10.074	28.300	38.374	-11.626	50.000

Note:

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

Product : TABLET PC
Test Item : Conducted Emission Test
Power Line : Line 2
Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) (5550MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
LINE 2					
Quasi-Peak					
0.205	9.770	34.960	44.730	-19.699	64.429
0.306	9.770	25.060	34.830	-26.713	61.543
0.638	9.770	34.800	44.570	-11.430	56.000
1.392	9.780	28.560	38.340	-17.660	56.000
2.244	9.790	25.180	34.970	-21.030	56.000
14.525	10.134	28.820	38.954	-21.046	60.000
Average					
0.205	9.770	24.800	34.570	-19.859	54.429
0.306	9.770	16.170	25.940	-25.603	51.543
0.638	9.770	26.200	35.970	-10.030	46.000
1.392	9.780	17.720	27.500	-18.500	46.000
2.244	9.790	14.010	23.800	-22.200	46.000
14.525	10.134	28.780	38.914	-11.086	50.000

Note:

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

3. Maximun conducted output power

3.1. Test Equipment

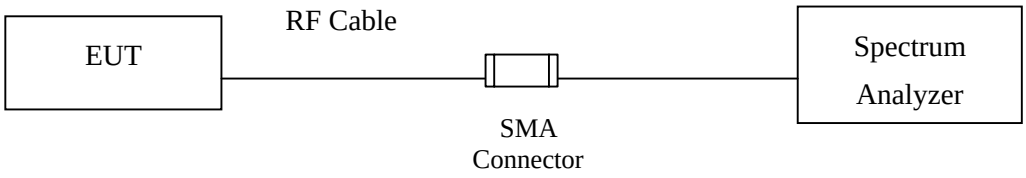
	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
X	Power Meter	Anritsu	ML2495A/6K00003357	May, 2012
X	Power Sensor	Anritsu	MA2411B/0738448	Jun, 2012
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2013

Note:

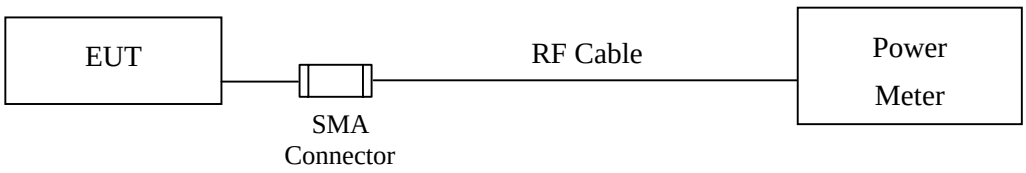
1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
2. The test instruments marked with "X" are used to measure the final test results.

3.2. Test Setup

26dBc Occupied Bandwidth



Conduction Power Measurement



3.3. Limits

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

(2) For the band 5.25-5.35 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or 11 dBm + 10log B, where B is the 26-dB emission bandwidth in MHz. If transmitting antenna of directional gain greater than 6 dBi are used, the Maximum conducted output power shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.

(3) For the band 5.725-5.825 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 1W or 17 dBm + 10log B, where B is the 26-dB emission bandwidth in MHz. If transmitting antenna of directional gain greater than 6 dBi are used, the Maximum conducted output power shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.

3.4. Test Procedur

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

3.5. Uncertainty

± 1.27 dB

3.6. Test Result of Maximum conducted output power

Product : TABLET PC
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)								
36	5180	14.85	--	--	--	--	--	--	--	<17dBm
44	5220	14.82	14.64	14.43	14.21	14.13	14.08	13.99	13.93	<17dBm
48	5240	14.96	--	--	--	--	--	--	--	<17dBm
52	5260	14.98	--	--	--	--	--	--	--	<24dBm
60	5300	15.00	14.7	14.61	14.37	14.25	14.11	14.04	13.86	<24dBm
64	5320	14.89	--	--	--	--	--	--	--	<24dBm
100	5500	14.82	--	--	--	--	--	--	--	<24dBm
116	5580	14.80	14.71	14.58	14.48	14.37	14.24	14.17	13.88	<24dBm
140	5700	15.00	--	--	--	--	--	--	--	<24dBm

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

CHAIN B

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		6	9	12	18	24	36	48	54	
		Measurement Level (dBm)								
36	5180	14.78	--	--	--	--	--	--	--	<17dBm
44	5220	14.81	14.63	14.44	14.25	14.13	14	13.74	13.44	<17dBm
48	5240	14.95	--	--	--	--	--	--	--	<17dBm
52	5260	14.81	--	--	--	--	--	--	--	<24dBm
60	5300	14.75	14.68	14.51	14.38	14.22	14.14	13.92	13.73	<24dBm
64	5320	14.88	--	--	--	--	--	--	--	<24dBm
100	5500	14.8	--	--	--	--	--	--	--	<24dBm
116	5580	14.79	14.7	14.64	14.32	14.19	14.08	13.99	13.8	<24dBm
140	5700	14.85	--	--	--	--	--	--	--	<24dBm

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

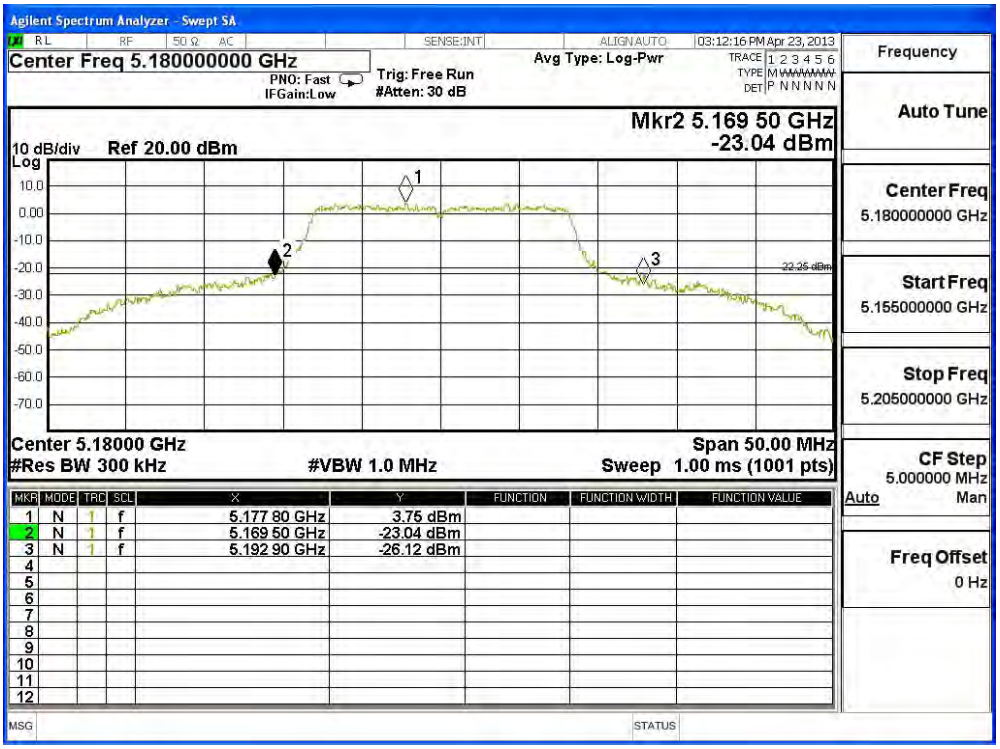
Maximum conducted output power Measurement:

Channel Number	Frequency (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Output Power Limit	
				(dBm)	dBm+10log(BW)
36	5180	23.400	14.85	17	17.69
44	5220	25.700	14.82	17	18.10
48	5240	24.200	14.96	17	17.84
52	5260	27.700	14.98	24	25.42
60	5300	24.550	15.00	24	24.90
64	5320	25.300	14.89	24	25.03
100	5500	25.350	14.82	24	25.04
116	5580	27.950	14.80	24	25.46
140	5700	28.450	15.00	24	25.54

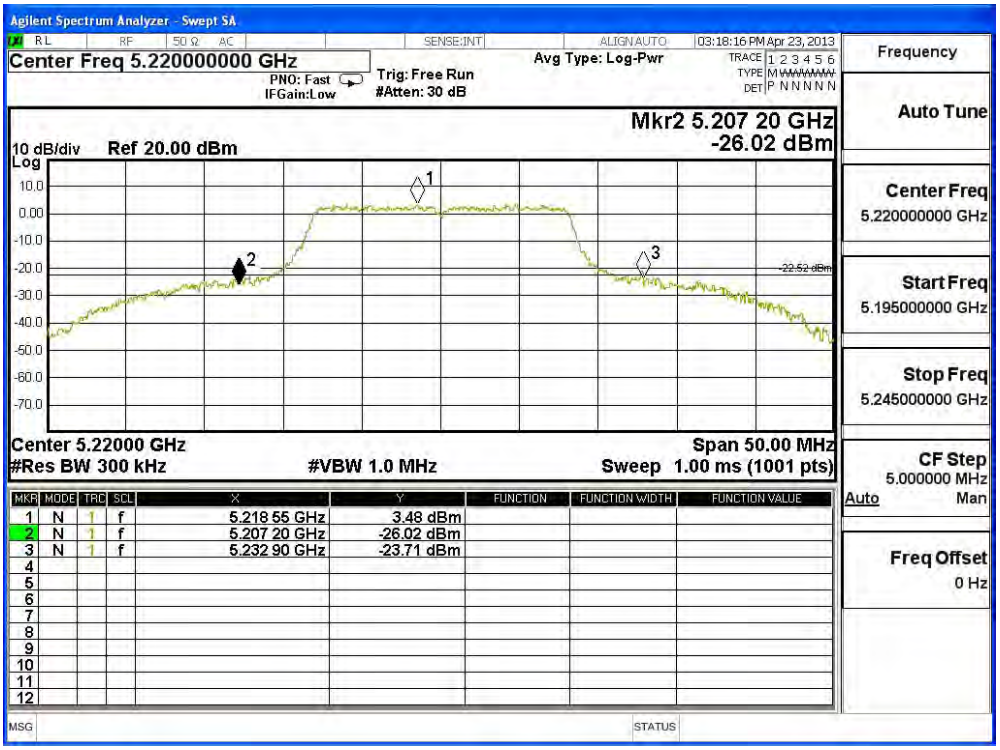
Note: Power Output Value =Reading value on average power meter + cable loss

26dBc Occupied Bandwidth:

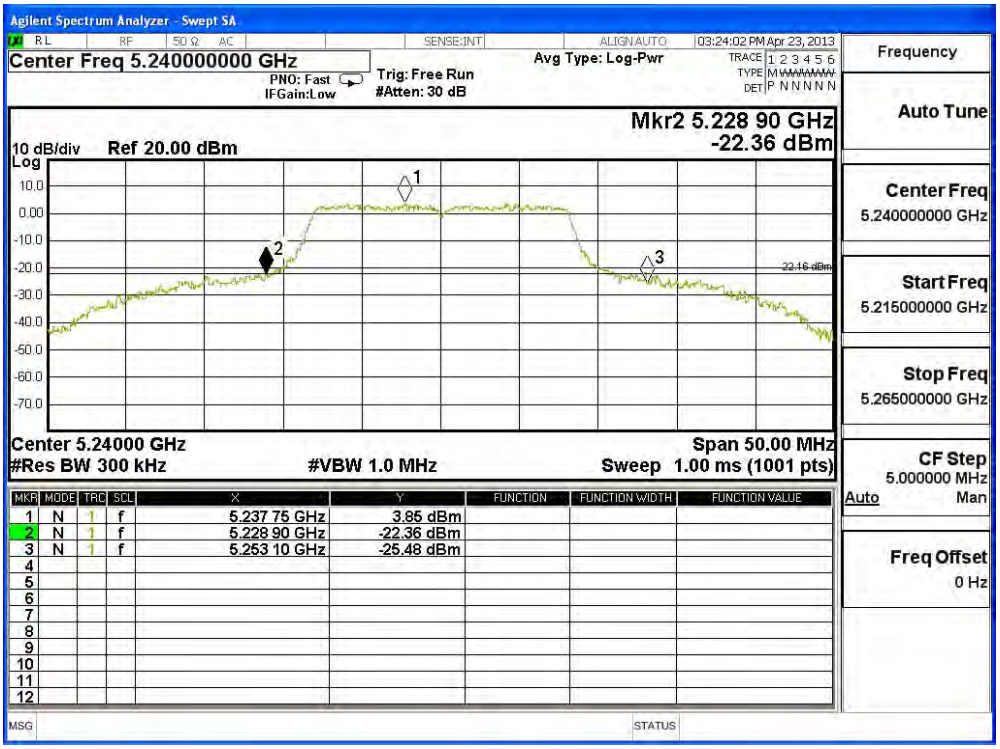
Channel 36



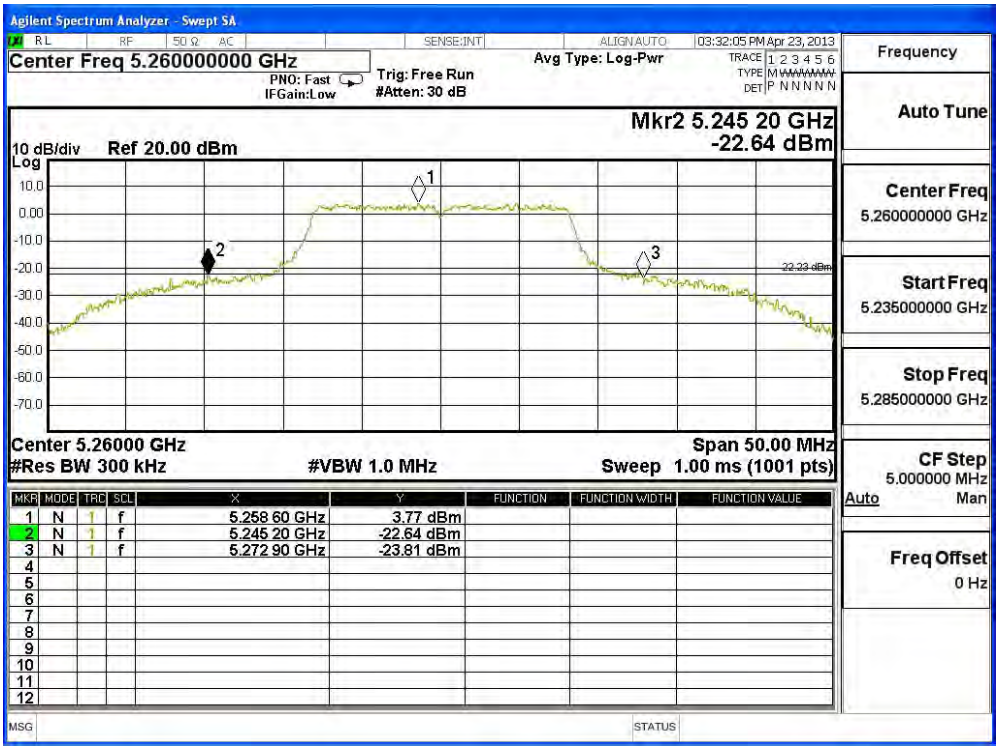
Channel 40



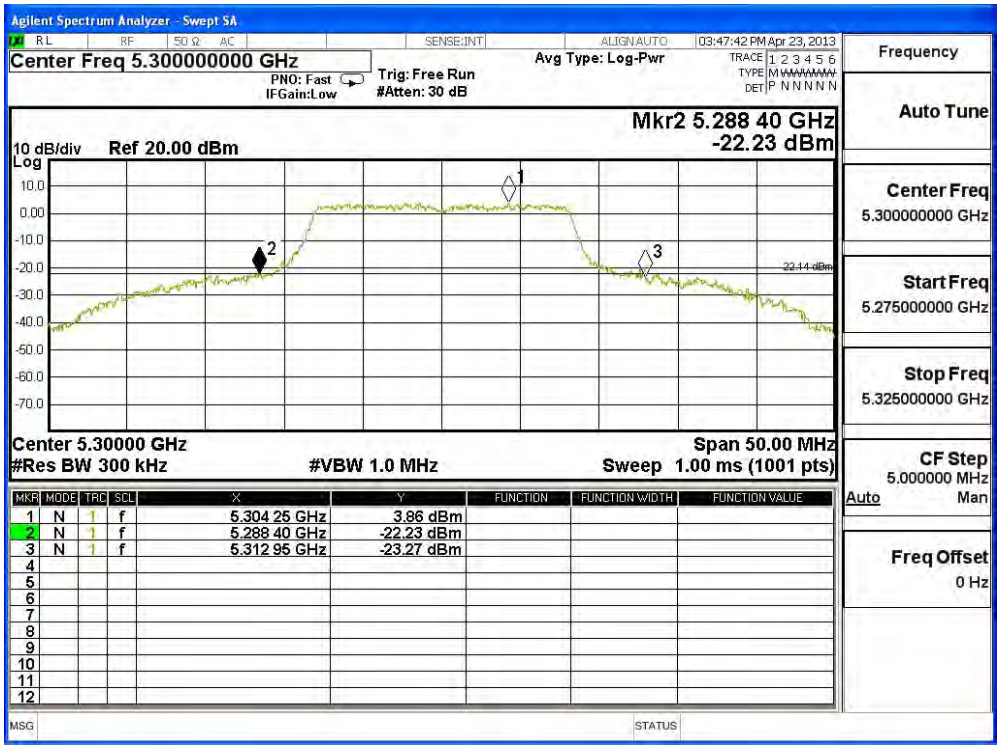
Channel 48



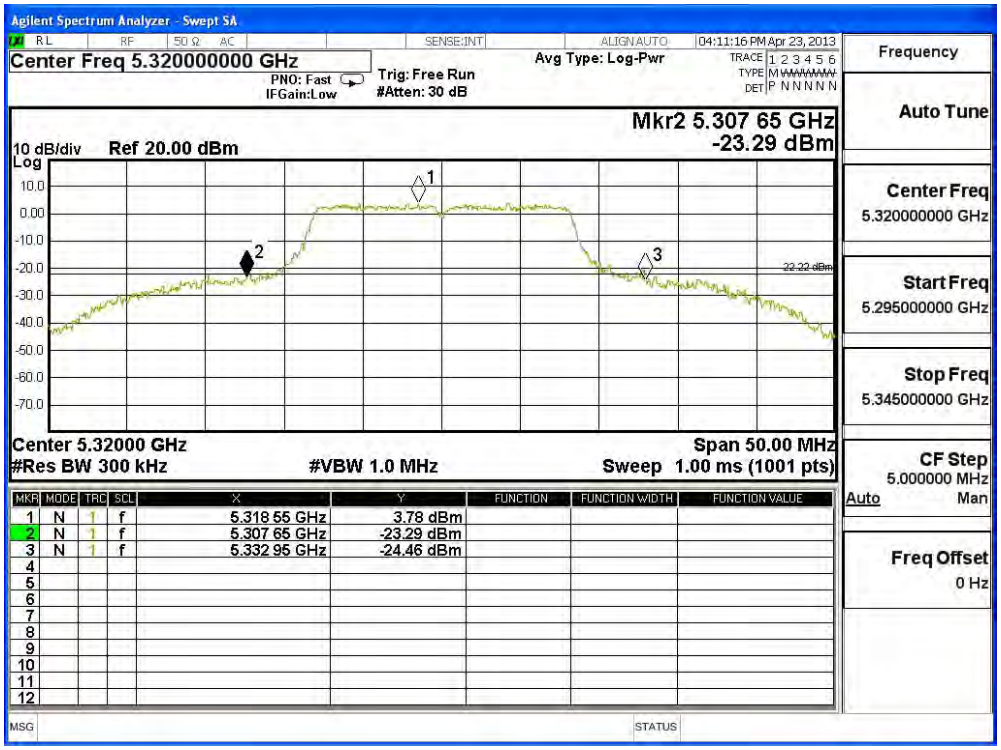
Channel 52



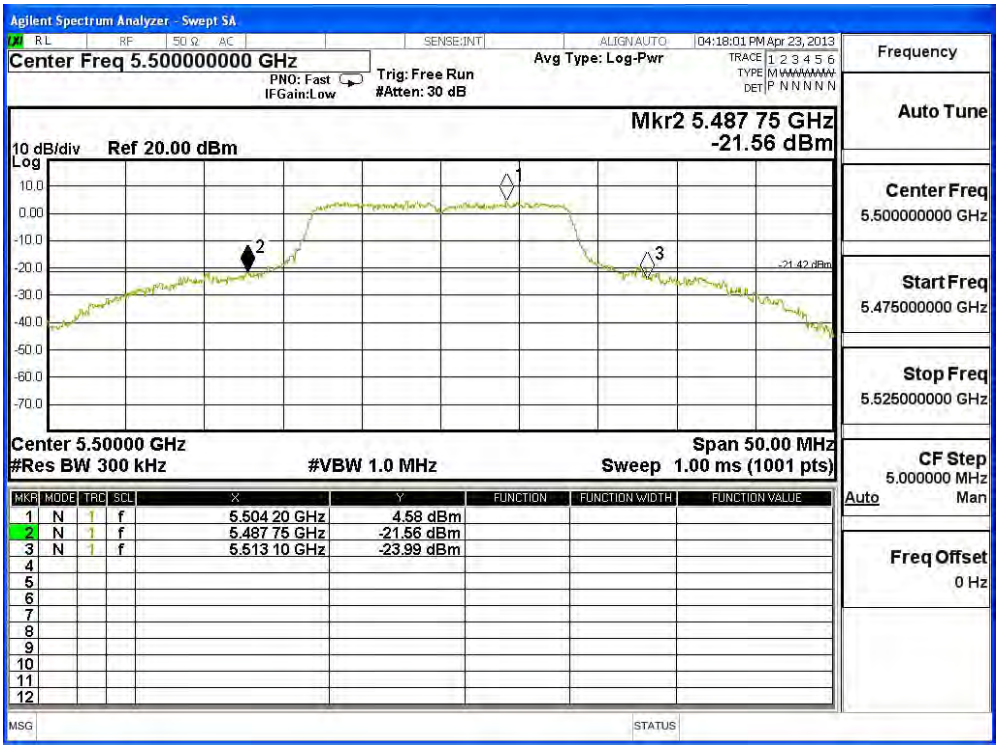
Channel 60



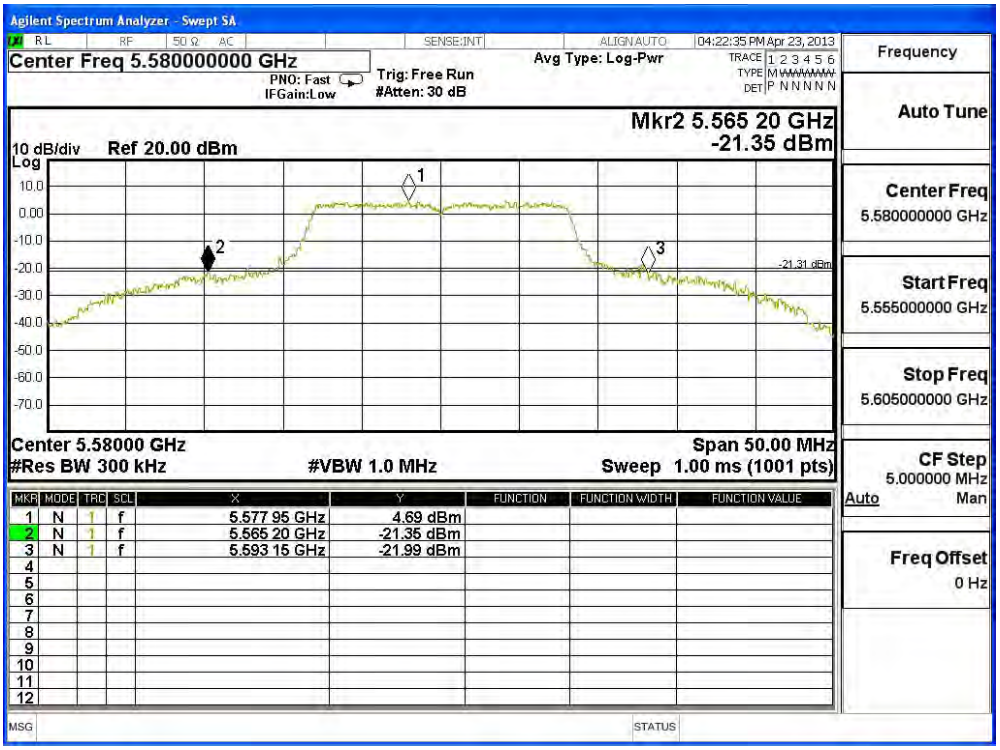
Channel 64



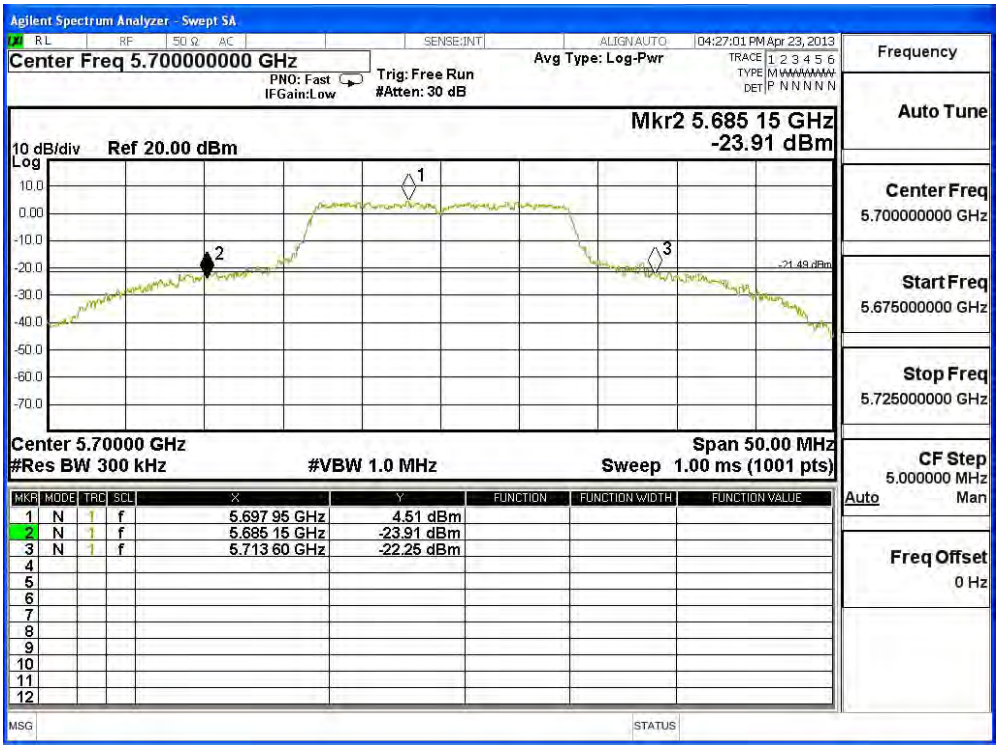
Channel 100



Channel 116



Channel 140


Agilent Spectrum Analyzer - Swept SA
Center Freq 5.700000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
04:27:01 PM Apr 23, 2013
Mkr2 5.685 15 GHz
-23.91 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
-21.49 dBm
Center 5.70000 GHz
#Res BW 300 kHz
#VBW 1.0 MHz
Span 50.00 MHz
Sweep 1.00 ms (1001 pts)
1 N 1 f 5.697 95 GHz 4.51 dBm
2 N 1 f 5.685 15 GHz -23.91 dBm
3 N 1 f 5.713 60 GHz -22.25 dBm
Frequency
Auto Tune
Center Freq
5.700000000 GHz
Start Freq
5.675000000 GHz
Stop Freq
5.725000000 GHz
CF Step
5.000000 MHz
Auto
Man
Freq Offset
0 Hz

Product : TABLET PC
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)								
36	5180	10.90	--	--	--	--	--	--	--	<17dBm
44	5220	11.15	11.02	10.95	10.73	10.52	10.34	10.25	10.08	<17dBm
48	5240	10.98	--	--	--	--	--	--	--	<17dBm
52	5260	10.73	--	--	--	--	--	--	--	<24dBm
60	5300	10.75	10.62	10.44	10.31	10.20	10.14	10.03	9.89	<24dBm
64	5320	10.96	--	--	--	--	--	--	--	<24dBm
100	5500	10.83	--	--	--	--	--	--	--	<24dBm
116	5580	11.06	10.87	10.71	10.51	10.3	10.24	10.16	10.02	<24dBm
140	5700	11.51	--	--	--	--	--	--	--	<24dBm

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

CHAIN B

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		14.4	28.9	43.3	57.8	86.7	115.6	130	144.4	
		Measurement Level (dBm)								
36	5180	10.88	--	--	--	--	--	--	--	<17dBm
44	5220	10.79	10.6	10.48	10.32	10.25	10.11	10.04	9.99	<17dBm
48	5240	10.95	--	--	--	--	--	--	--	<17dBm
52	5260	10.96	--	--	--	--	--	--	--	<24dBm
60	5300	11.03	10.93	10.82	10.74	10.58	10.14	10.02	9.84	<24dBm
64	5320	10.95	--	--	--	--	--	--	--	<24dBm
100	5500	10.98	--	--	--	--	--	--	--	<24dBm
116	5580	10.89	10.80	10.71	10.64	10.40	10.26	10.12	9.88	<24dBm
140	5700	11.30	--	--	--	--	--	--	--	<24dBm

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

Maximum conducted output power Measurement:

CHAIN A+B

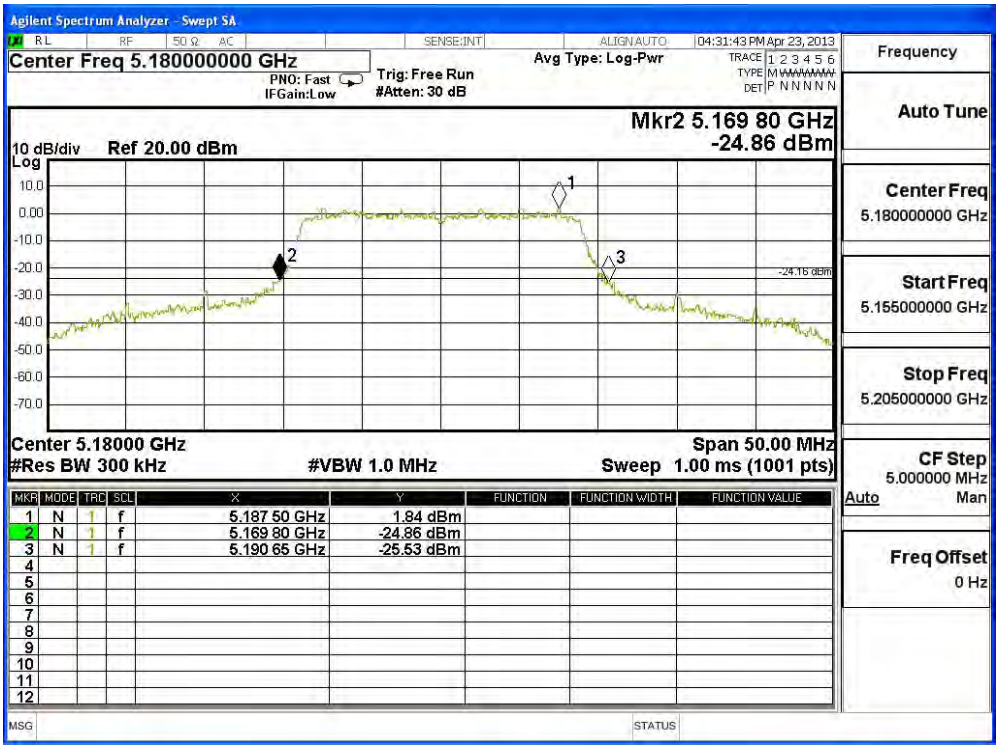
Channel Number	Frequency (MHz)	26dB Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Output Power (dBm)	Output Power Limit	
						(dBm)	dBm+10log(BW)
36	5180	20.650	10.90	10.88	13.90	17	17.15
44	5220	20.450	11.15	10.79	13.98	17	17.11
48	5240	20.450	10.98	10.95	13.98	17	17.11
52	5260	20.550	10.73	10.96	13.86	24	24.13
60	5300	20.450	10.75	11.03	13.90	24	24.11
64	5320	20.550	10.96	10.95	13.97	24	24.13
100	5500	20.650	10.83	10.98	13.92	24	24.15
116	5580	20.400	11.06	10.89	13.99	24	24.10
140	5700	20.700	11.51	11.30	14.42	24	24.16

Note:

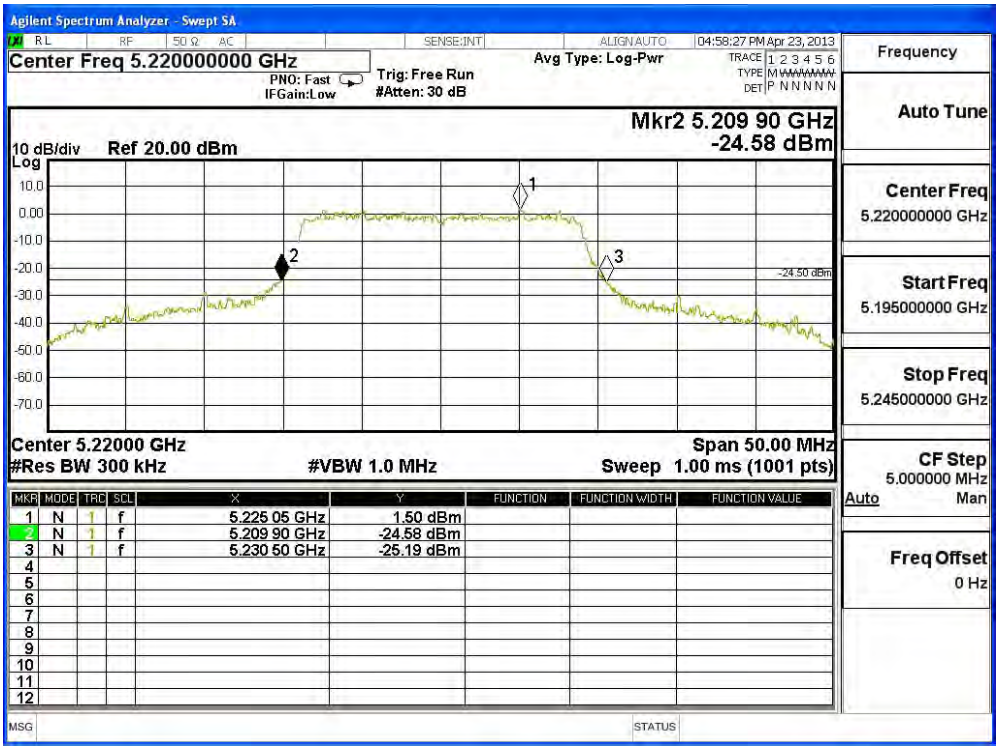
1. Power Output Value =Reading value on average power meter + cable loss
2. Output Power (dBm) = 10*LOG (Chain A Power (mW)+ Chain B Power (mW))
3. 26 dB Bandwidth is the bandwidth of chain A or chain B whichever is less bandwidth, output power limitation is more stringent.

26dBc Occupied Bandwidth:

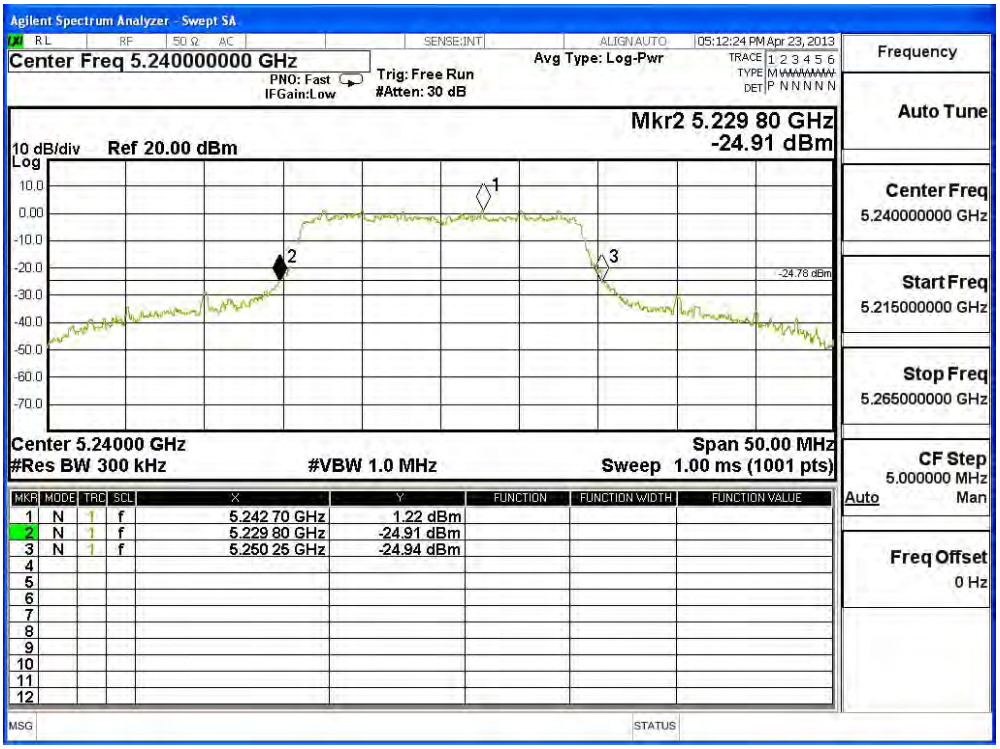
Channel 36 -Chain A



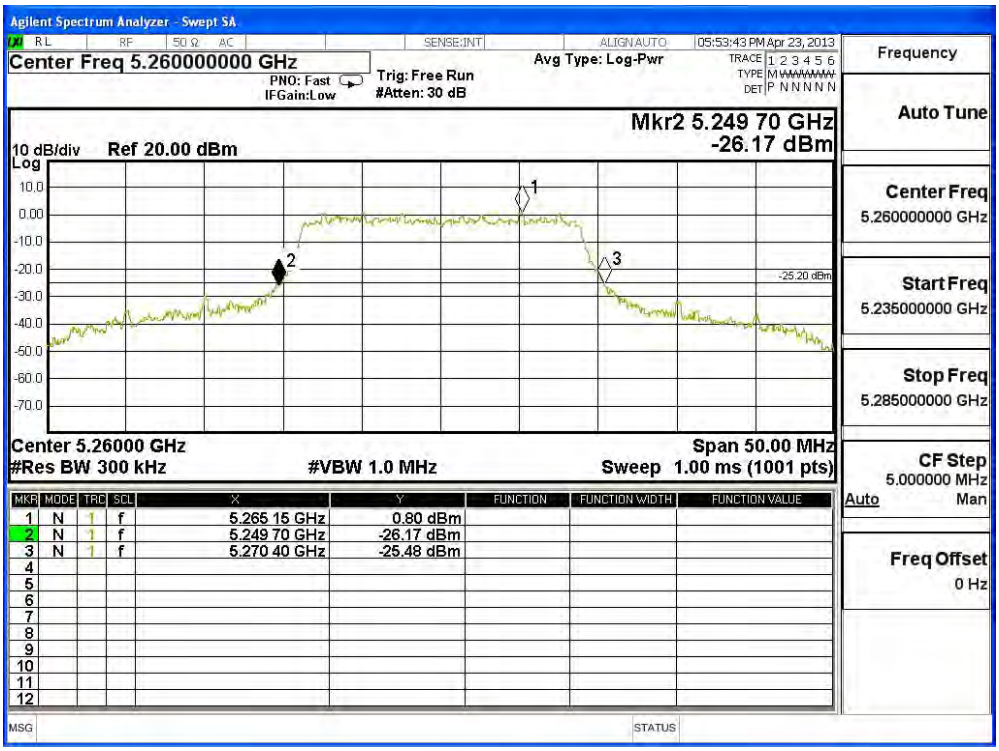
Channel 44 -Chain A



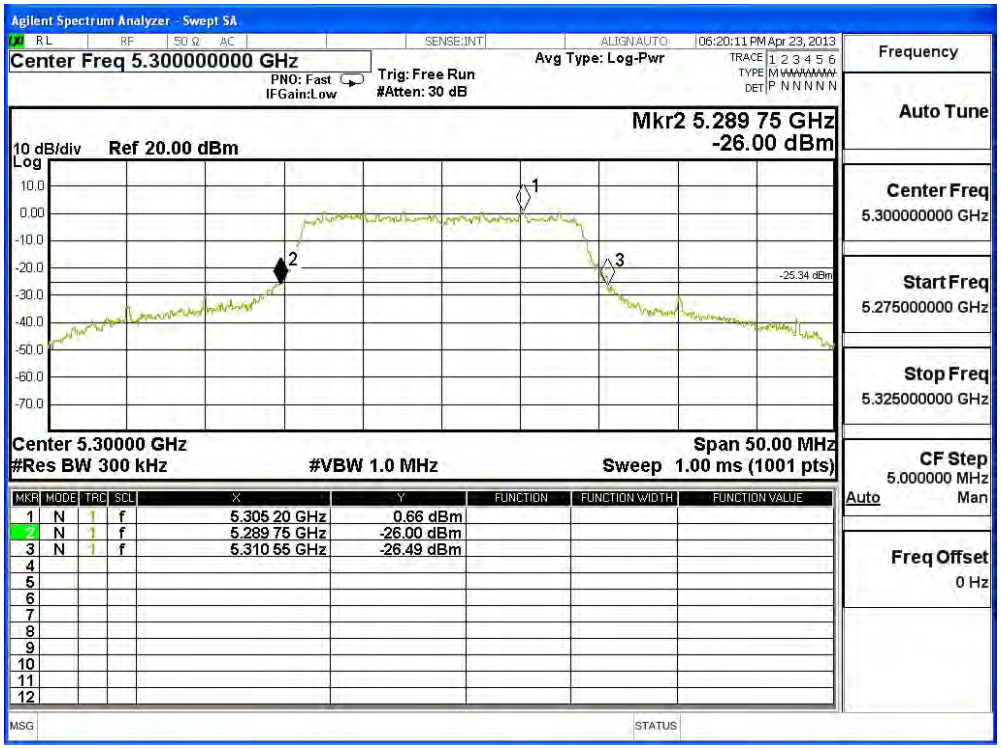
Channel 48 -Chain A



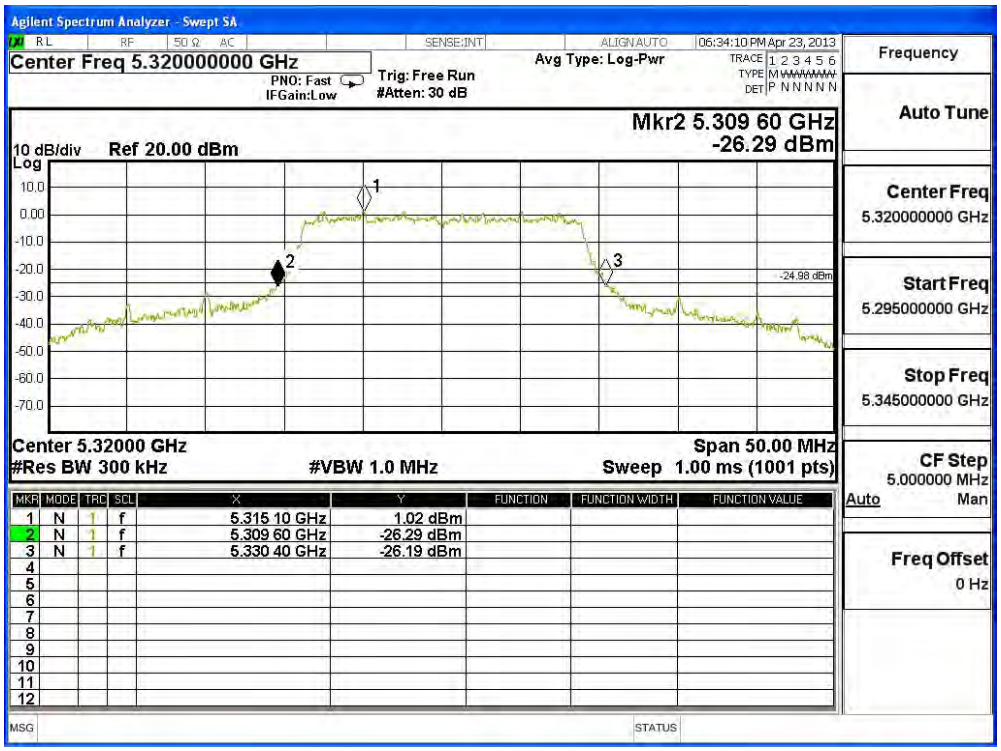
Channel 52 -Chain A



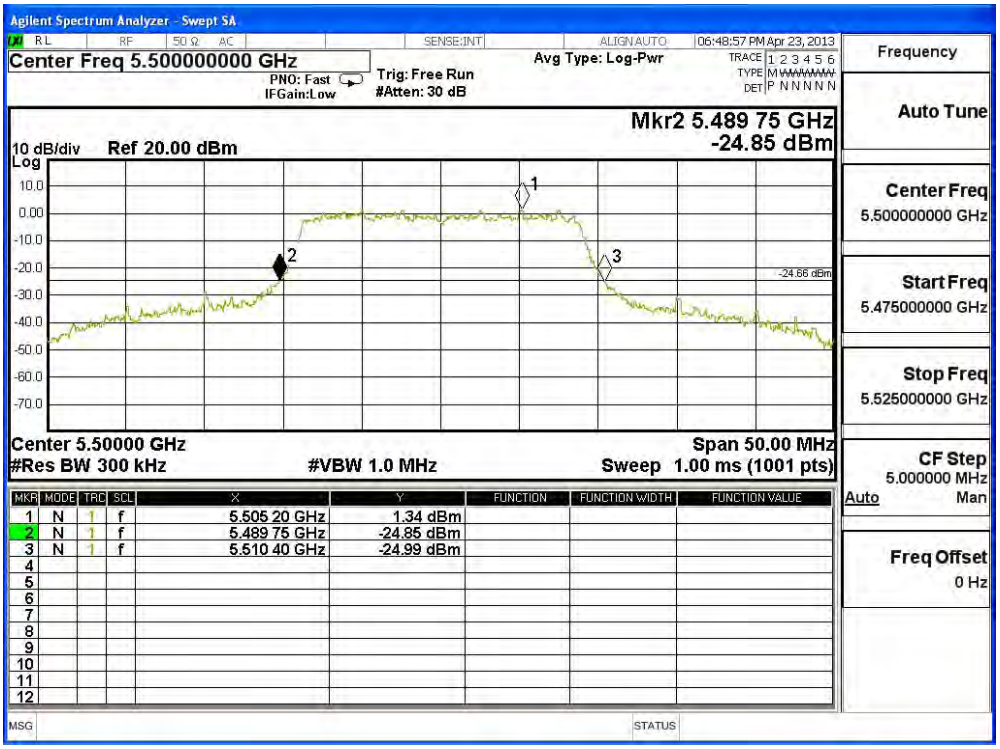
Channel 60 -Chain A



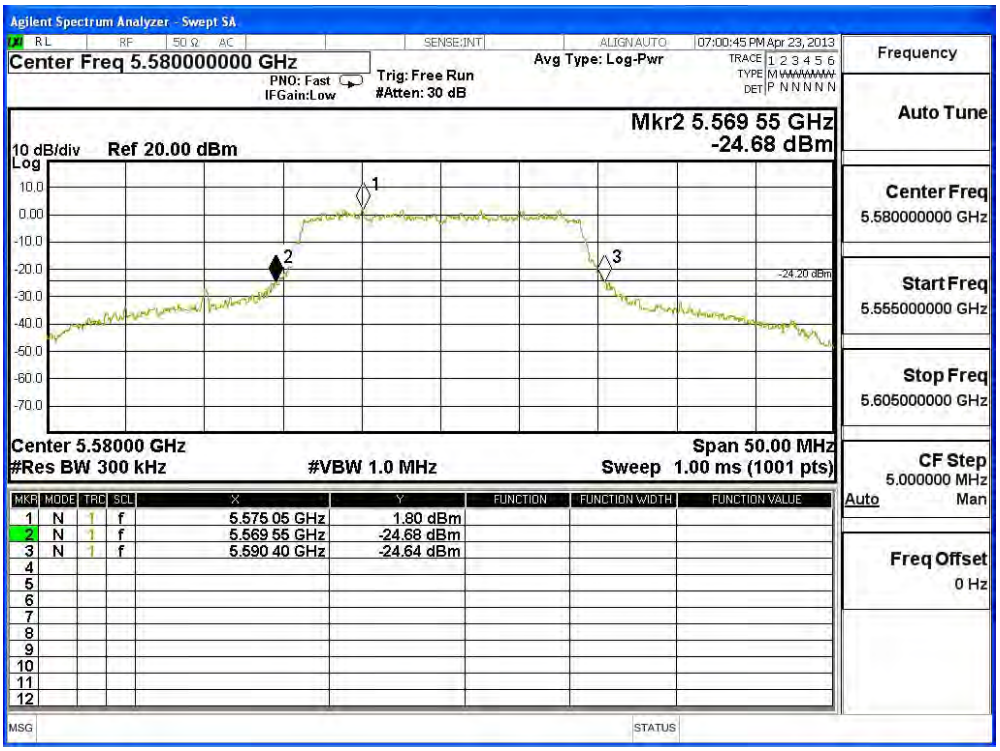
Channel 64 -Chain A



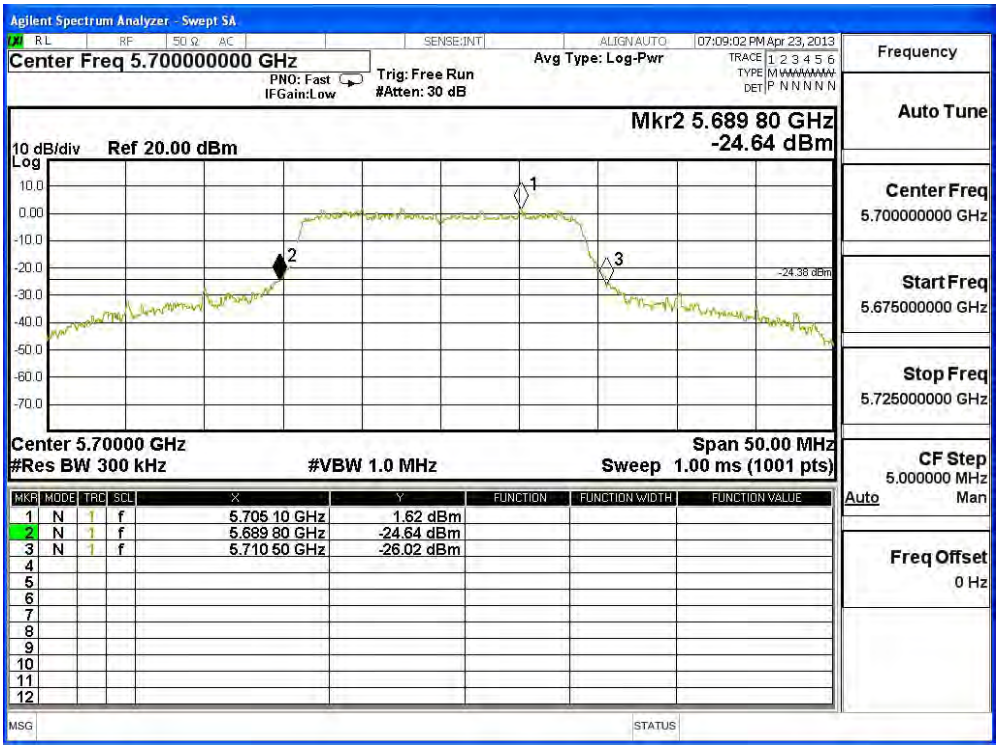
Channel 100 -Chain A



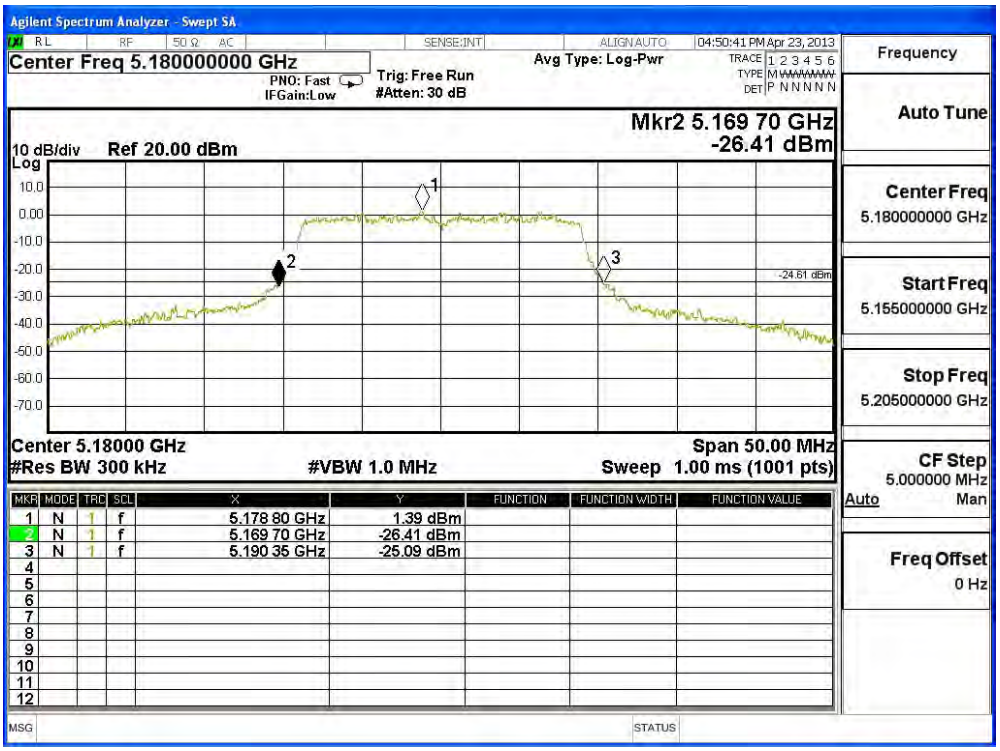
Channel 116 -Chain A



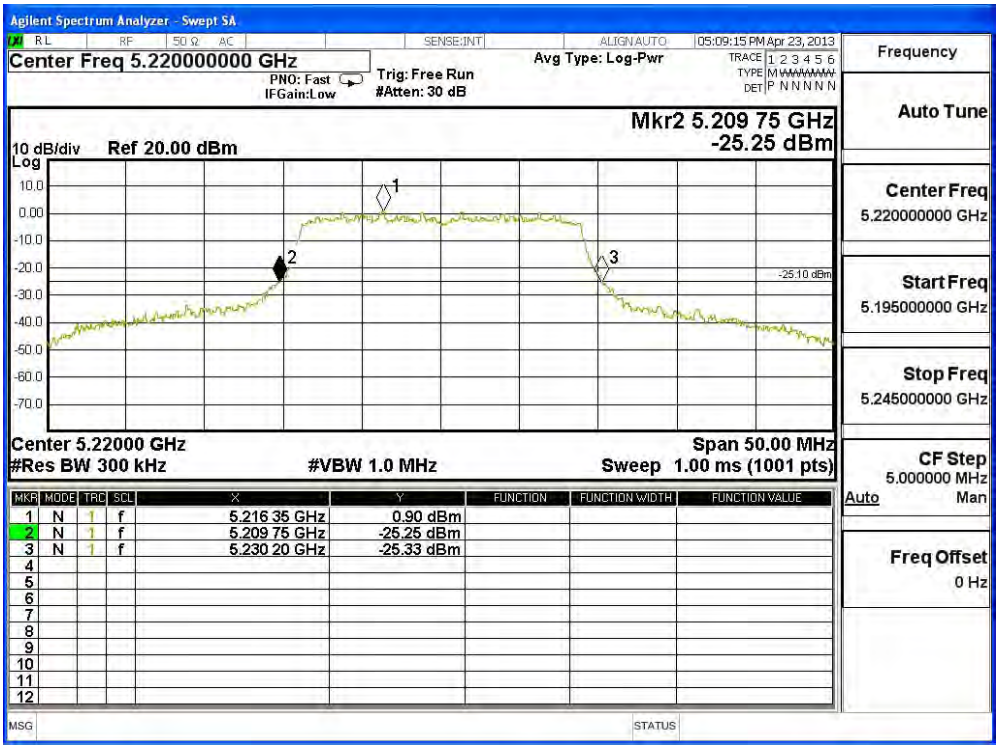
Channel 140 -Chain A



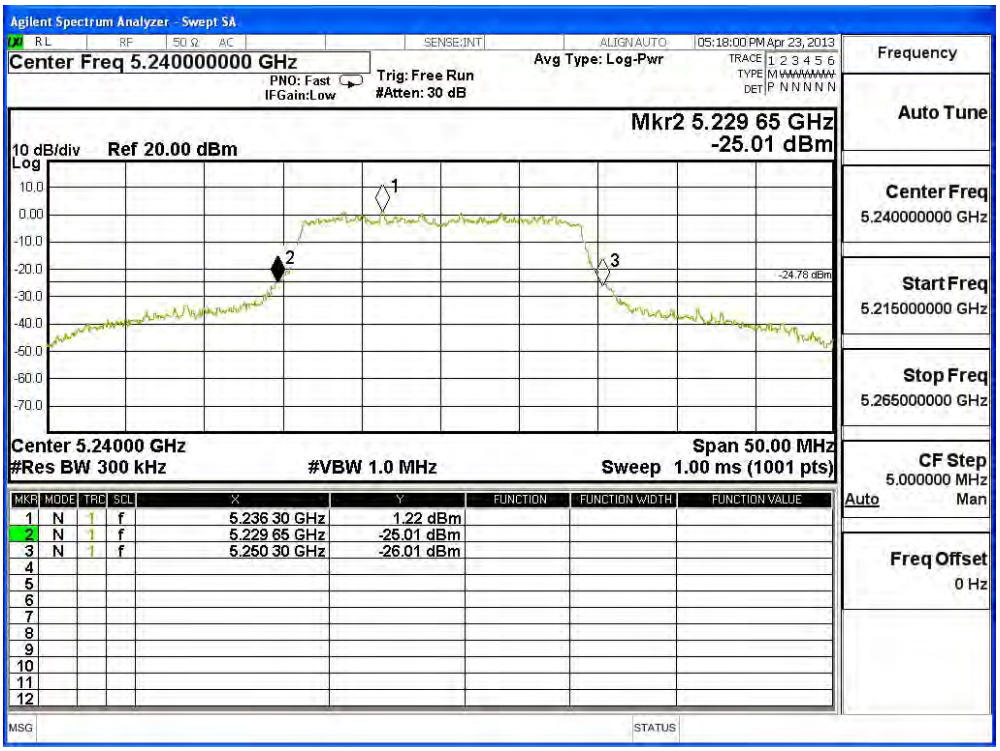
Channel 36 -Chain B



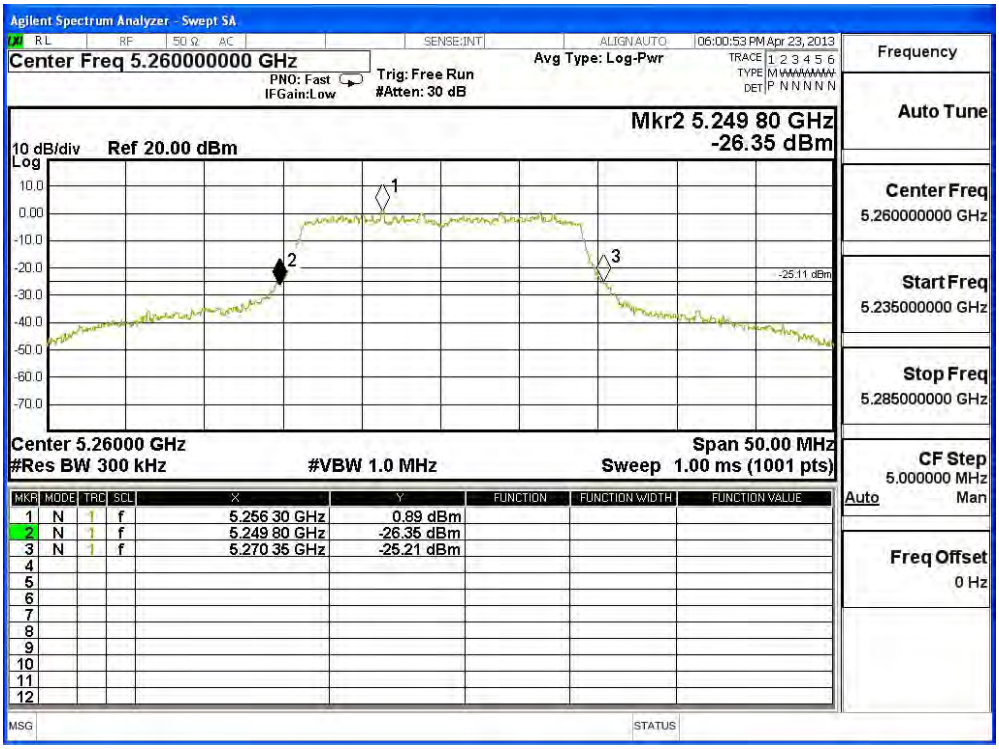
Channel 44 -Chain B



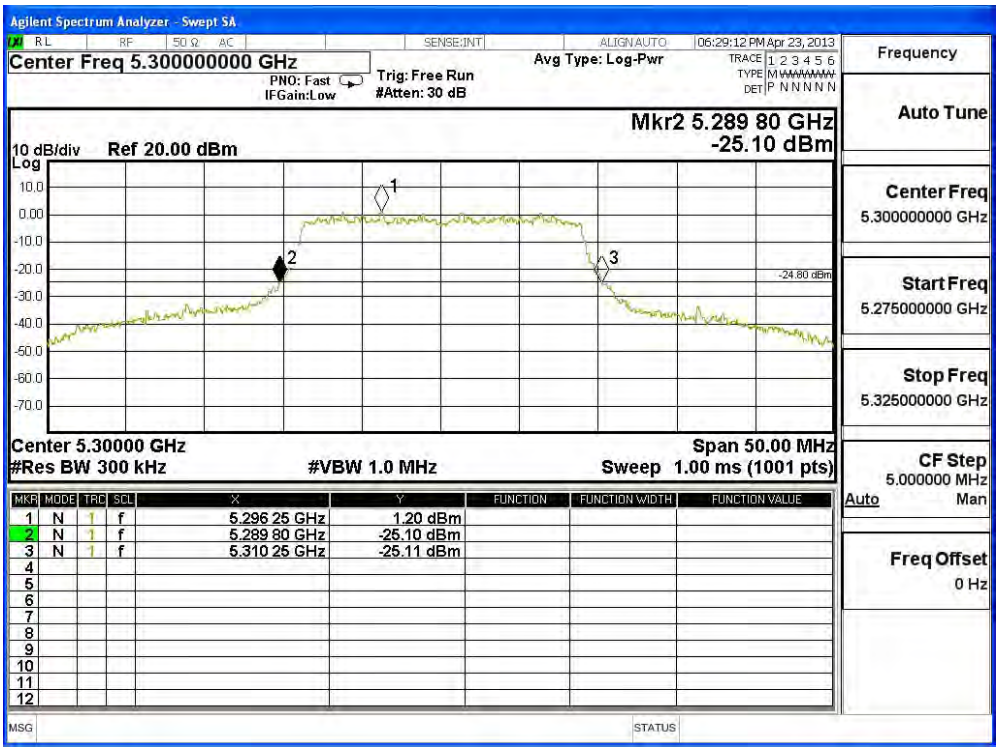
Channel 48 -Chain B



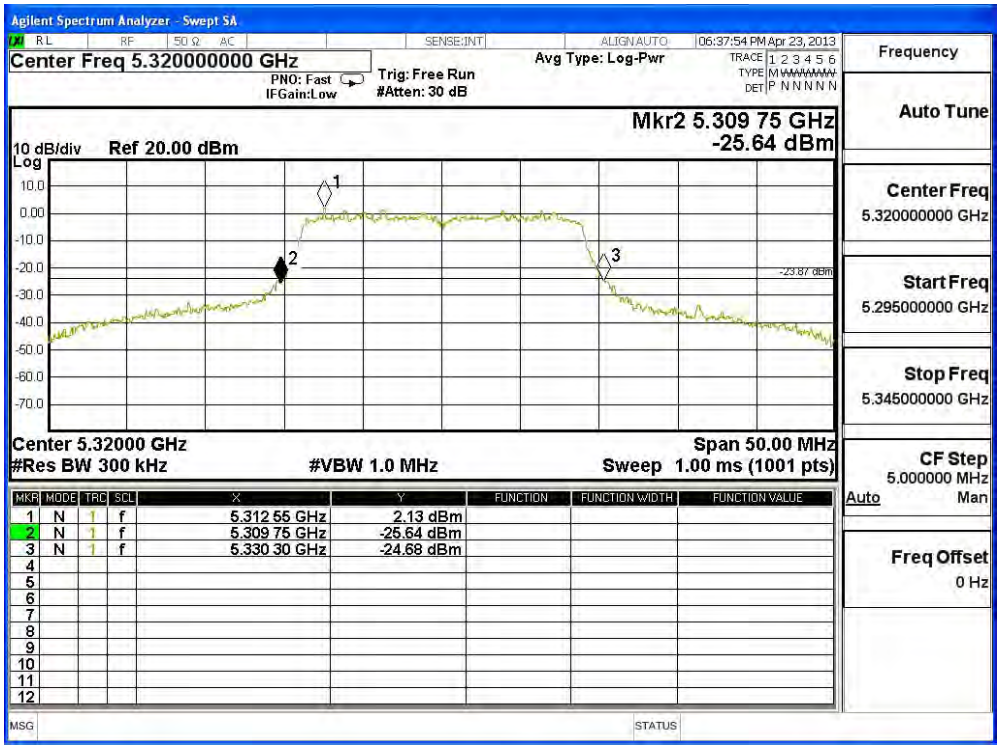
Channel 52 -Chain B



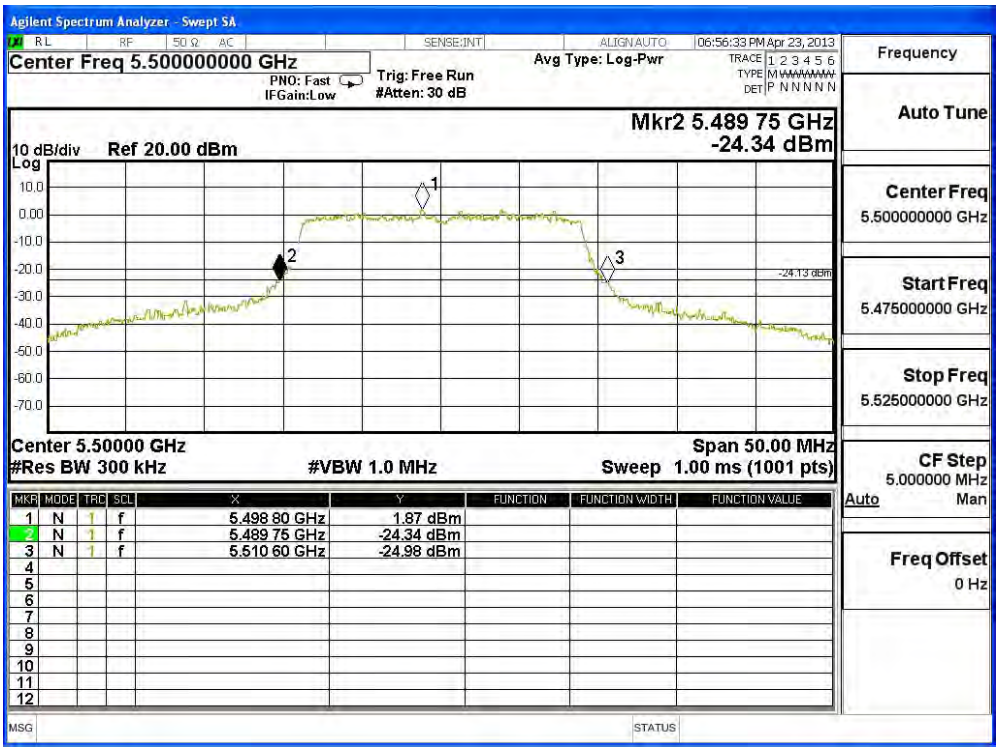
Channel 60 -Chain B



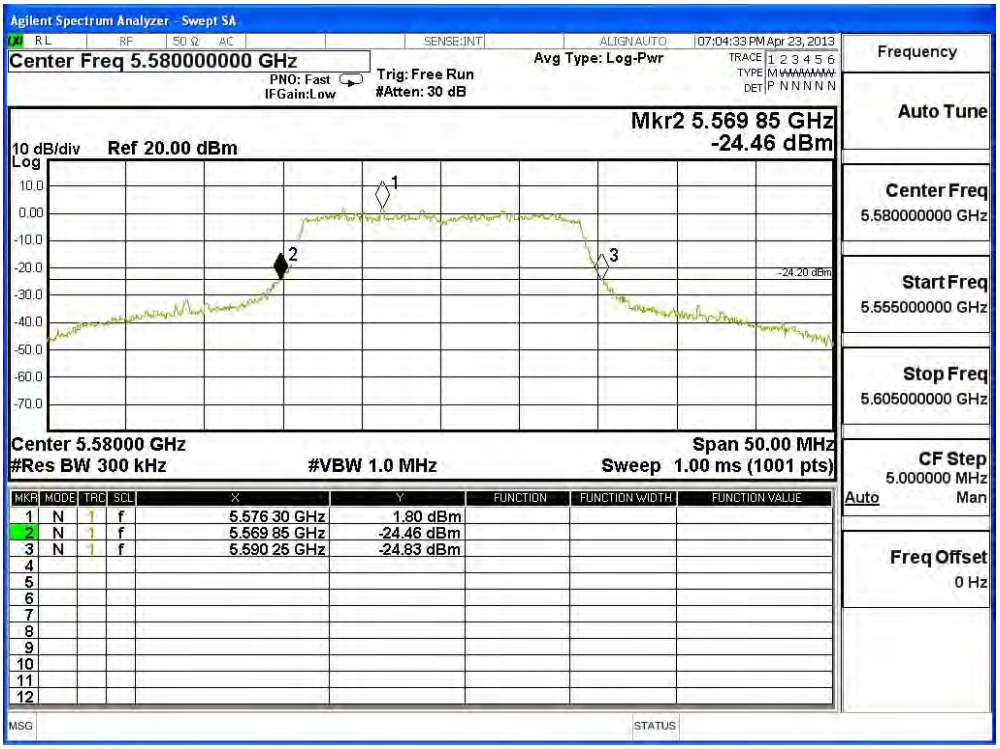
Channel 64 -Chain B



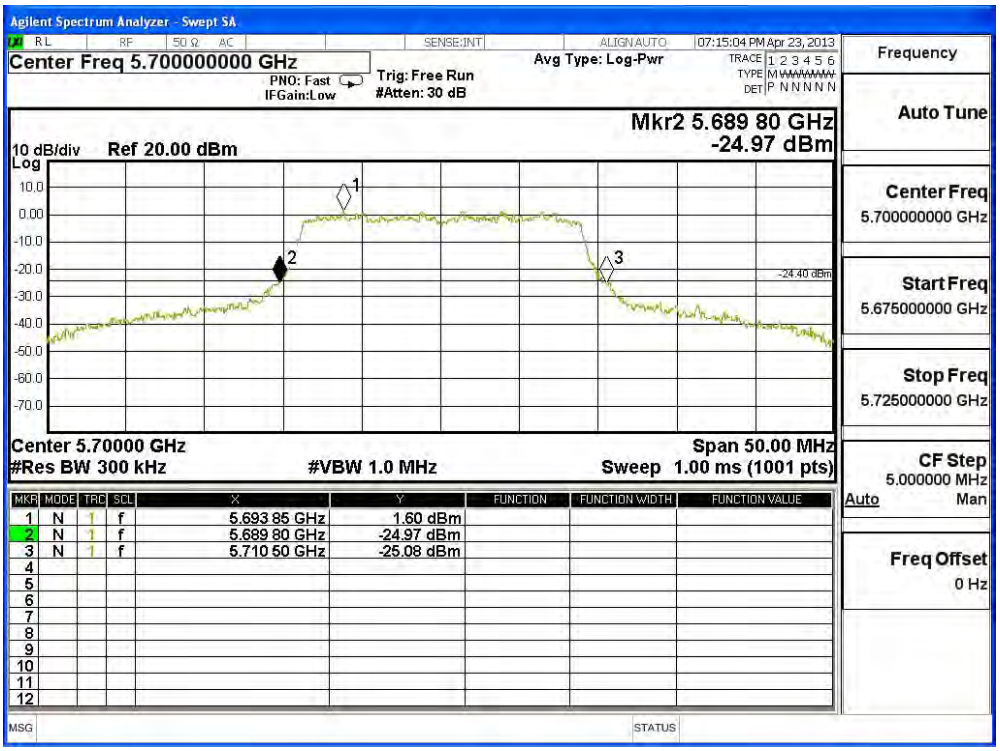
Channel 100 -Chain B



Channel 116 -Chain B



Channel 140 -Chain B



Product : TABLET PC
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)								
38	5190	8.32	--	--	--	--	--	--	--	<17dBm
46	5230	11.5	10.98	10.81	10.65	10.49	10.21	10.12	10.01	<17dBm
54	5270	11.51	--	--	--	--	--	--	--	<17dBm
62	5310	8.5	8.42	8.3	8.27	8.13	8.07	7.65	7.34	<24dBm
102	5510	11.44	--	--	--	--	--	--	--	<24dBm
110	5550	11.33	11.18	11.02	10.89	10.62	10.37	10.2	10.05	<24dBm
134	5670	11.48	--	--	--	--	--	--	--	<24dBm

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

CHAIN B

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		30	60	90	120	180	240	270	300	
		Measurement Level (dBm)								
38	5190	8.64	--	--	--	--	--	--	--	<17dBm
46	5230	11.48	11.27	11.13	10.94	10.73	10.55	10.31	10.08	<17dBm
54	5270	11.43	--	--	--	--	--	--	--	<17dBm
62	5310	8.48	8.32	8.24	8.15	8.09	8	7.89	7.71	<24dBm
102	5510	11.48	--	--	--	--	--	--	--	<24dBm
110	5550	11.43	11.03	10.89	10.78	10.51	10.38	10.17	10.02	<24dBm
134	5670	11.44	--	--	--	--	--	--	--	<24dBm

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

Maximum conducted output power Measurement:

CHAIN A+B

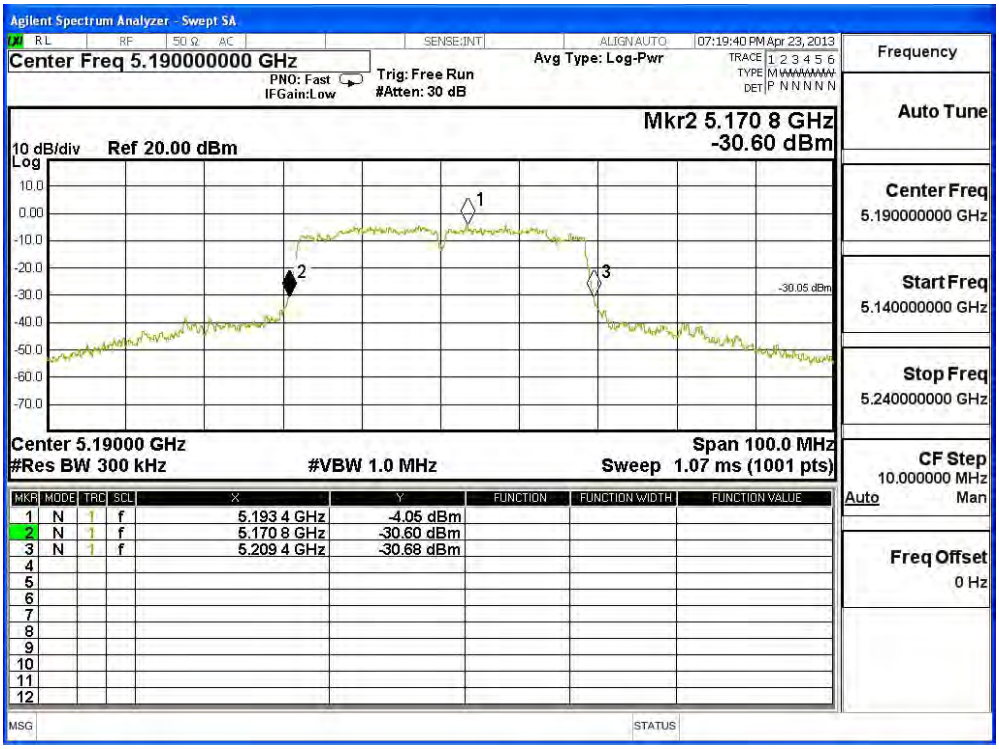
Channel Number	Frequency (MHz)	26dB Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Output Power (dBm)	Output Power Limit	
						(dBm)	dBm+10log(BW)
38	5190	38.600	8.32	8.64	11.49	17	19.87
46	5230	38.600	11.50	11.48	14.50	17	19.87
54	5270	38.800	11.51	11.43	14.48	24	26.89
62	5310	38.700	8.50	8.48	11.50	24	26.88
102	5510	38.800	11.44	11.48	14.47	24	26.89
110	5550	38.600	11.33	11.43	14.39	24	26.87
134	5670	38.700	11.48	11.44	14.47	24	26.88

Note:

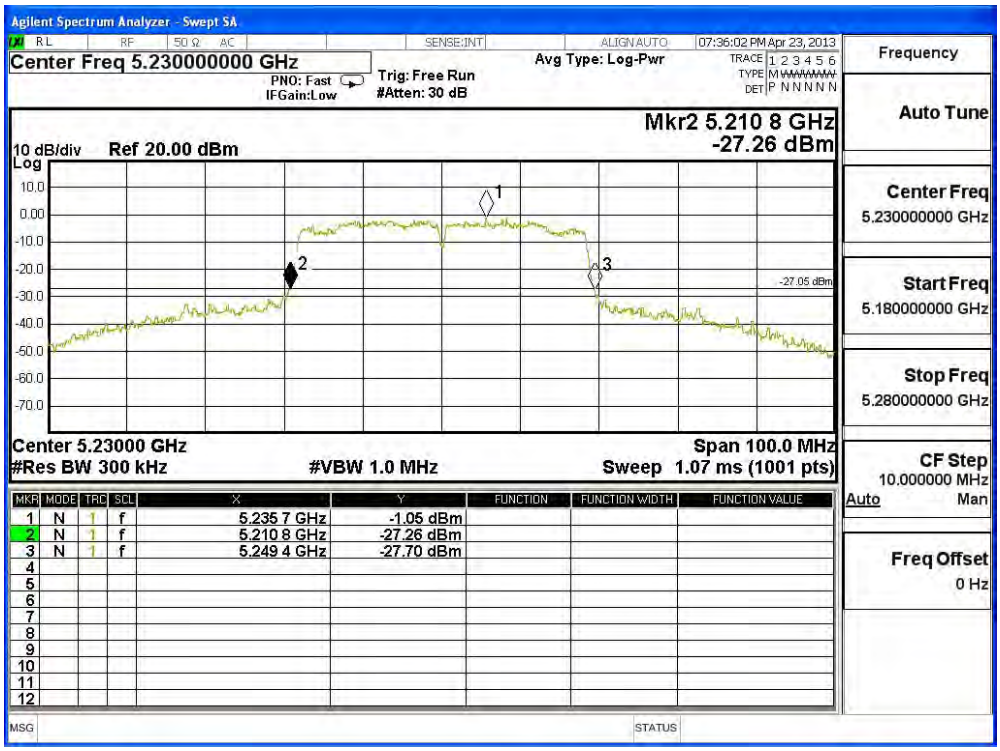
1. Power Output Value =Reading value on average power meter + cable loss
2. Output Power (dBm) = 10LOG (Chain A Power (mW)+ Chain B Power (mW)
3. 26 dB Bandwidth is the bandwidth of chain A or chain B whichever is less bandwidth, output power limitation is more stringent.

26dBc Occupied Bandwidth:

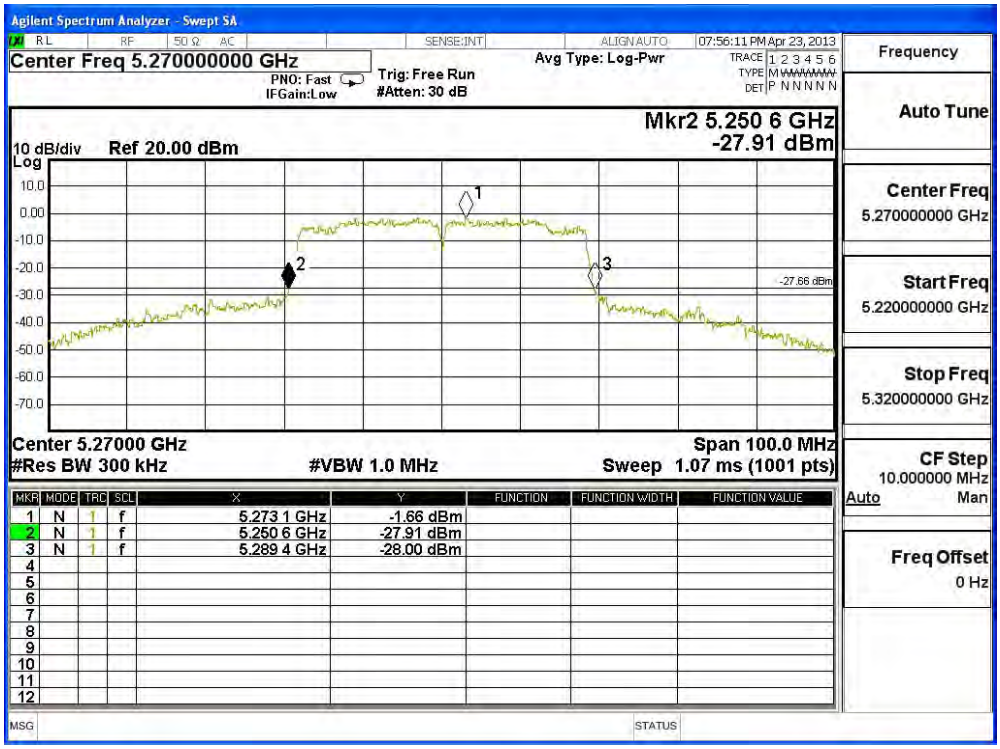
Channel 38 – Chain A



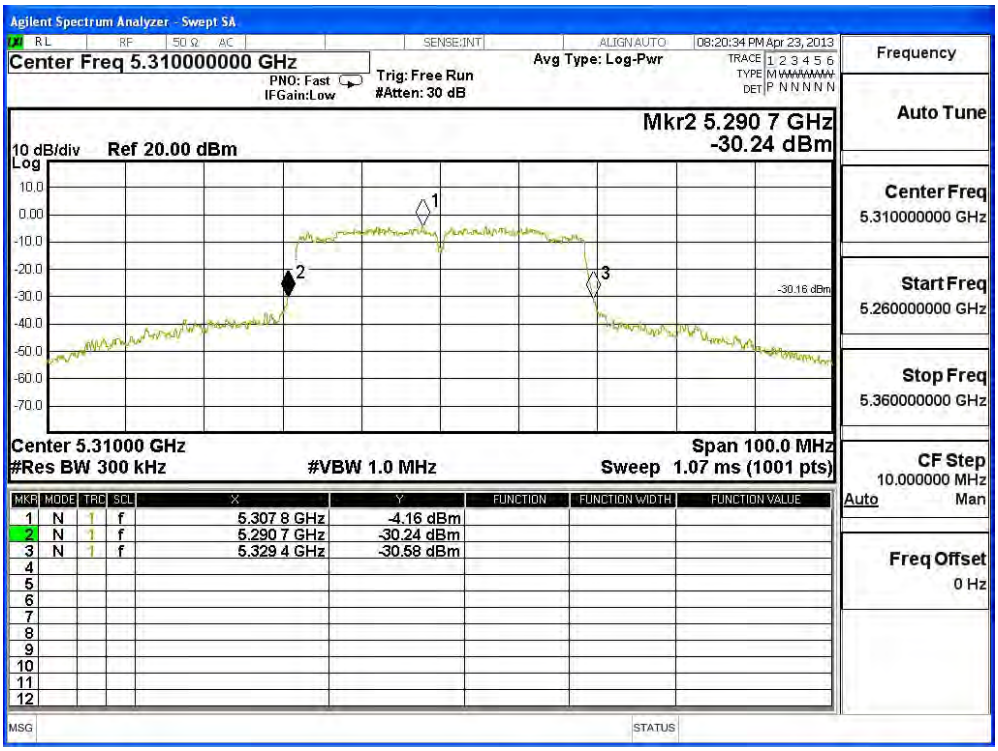
Channel 46 – Chain A



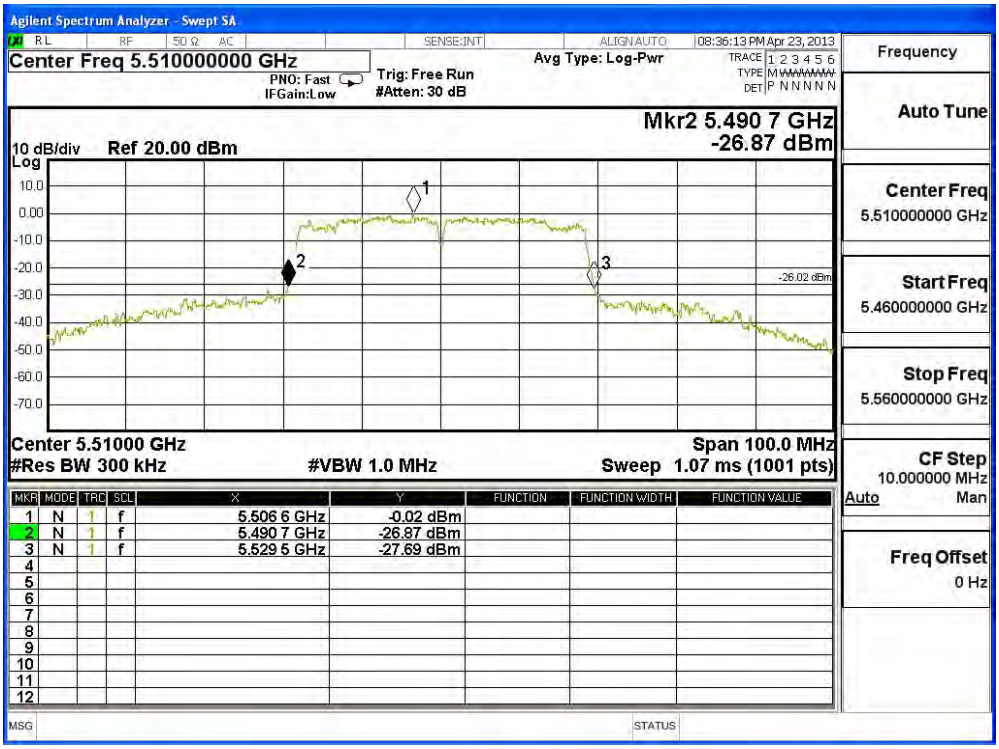
Channel 54 – Chain A



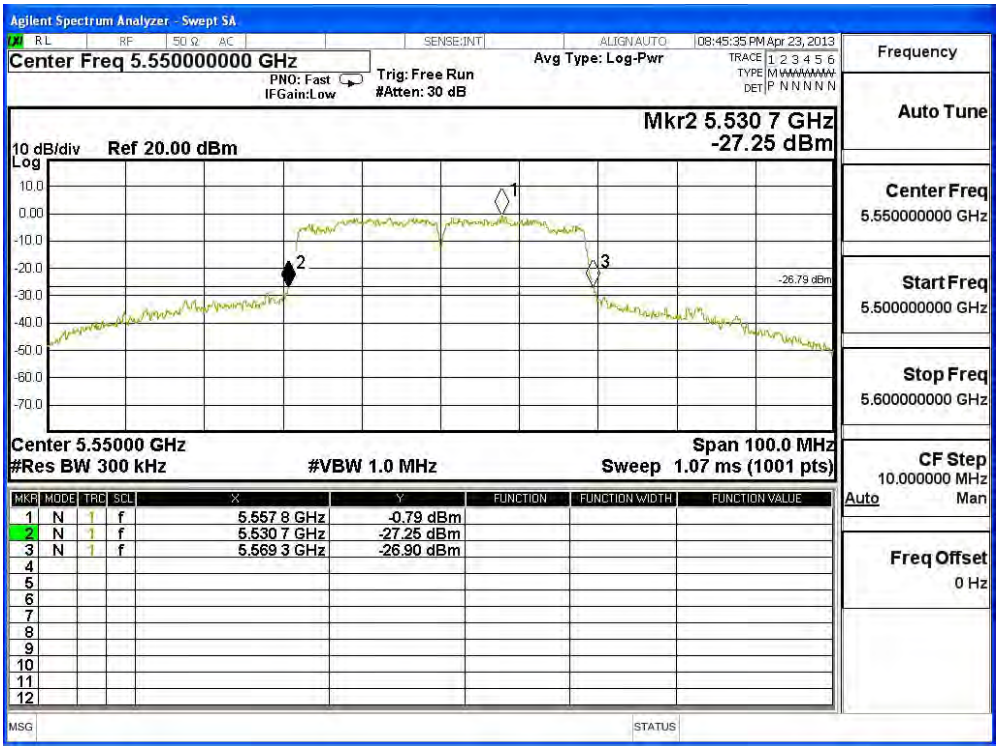
Channel 62 – Chain A



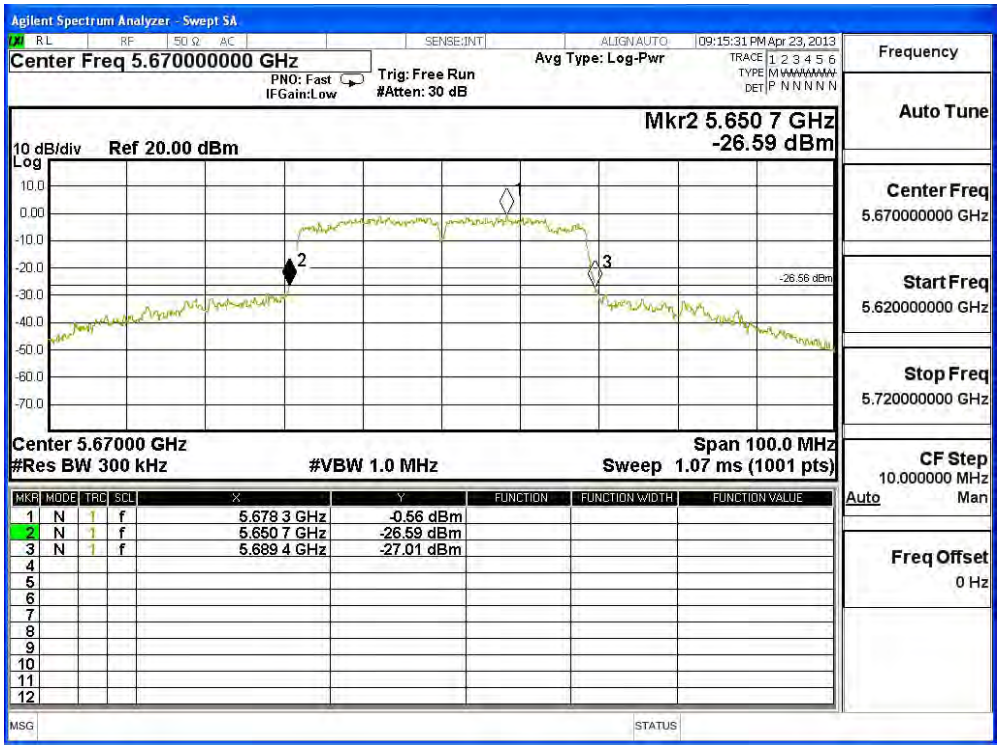
Channel 102 – Chain A



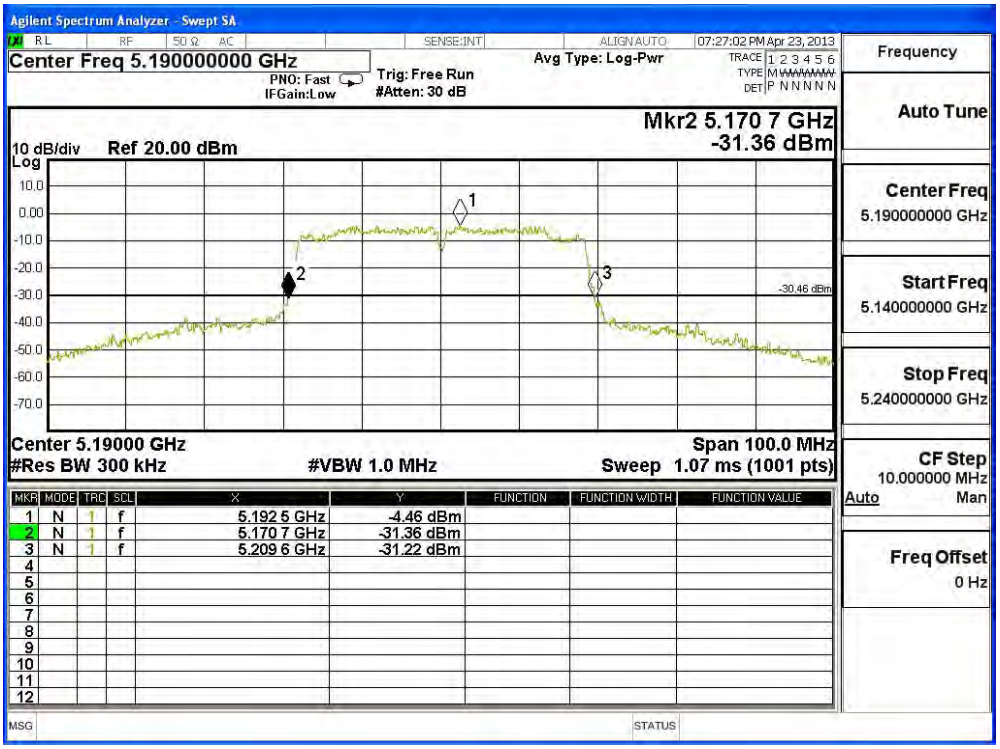
Channel 110 – Chain A



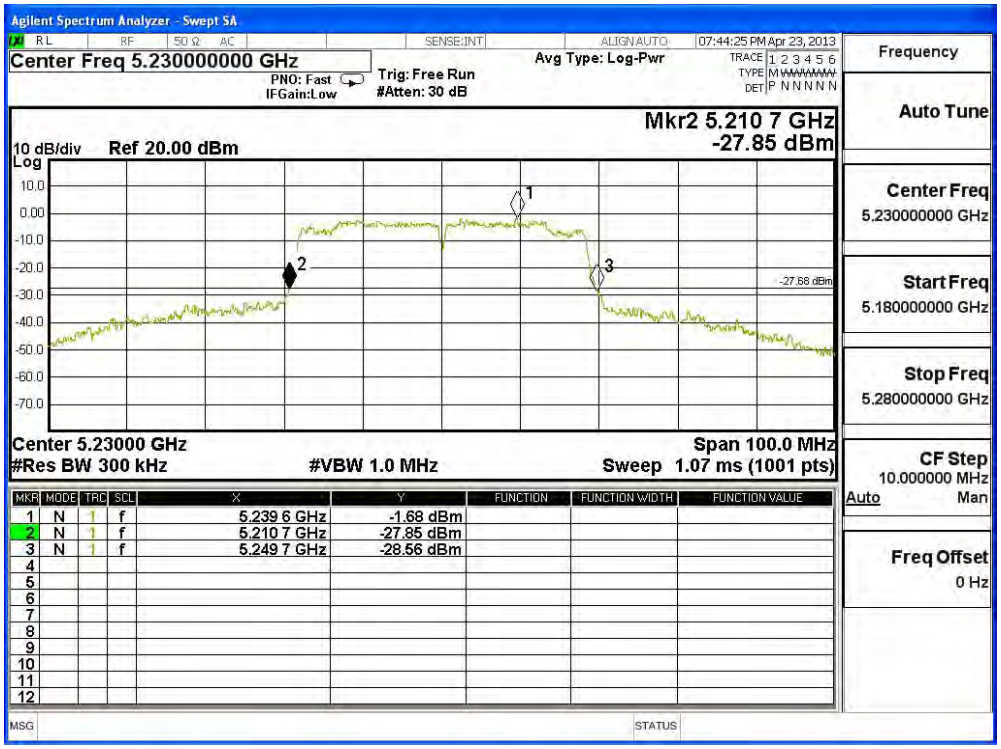
Channel 134 – Chain A



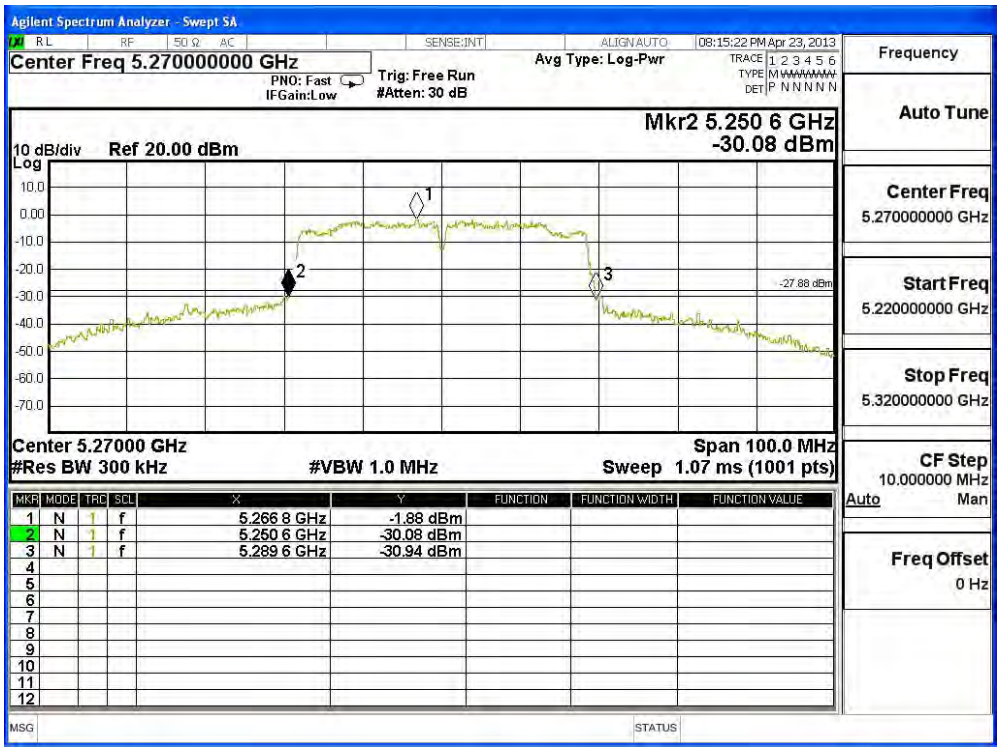
Channel 38 – Chain B



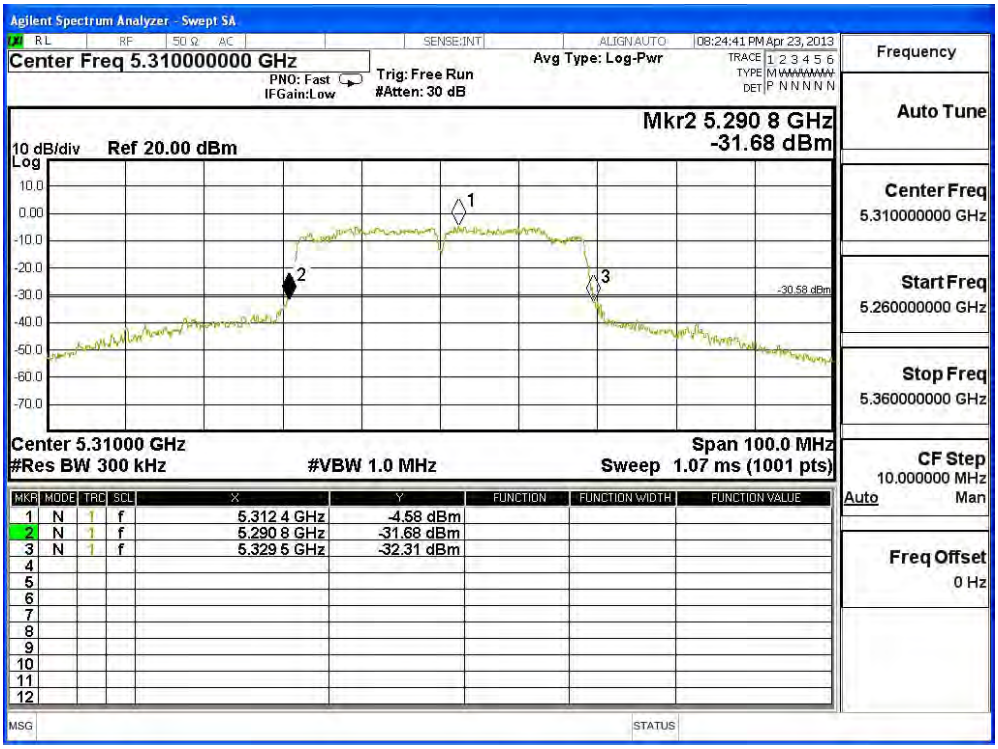
Channel 46 – Chain B



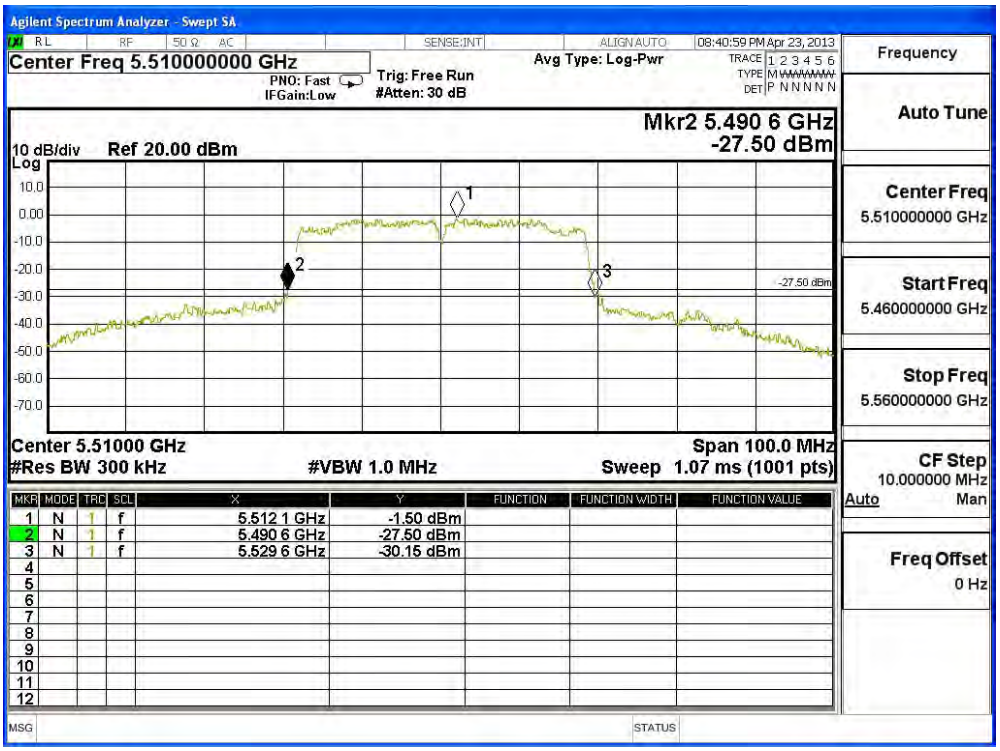
Channel 54 – Chain B



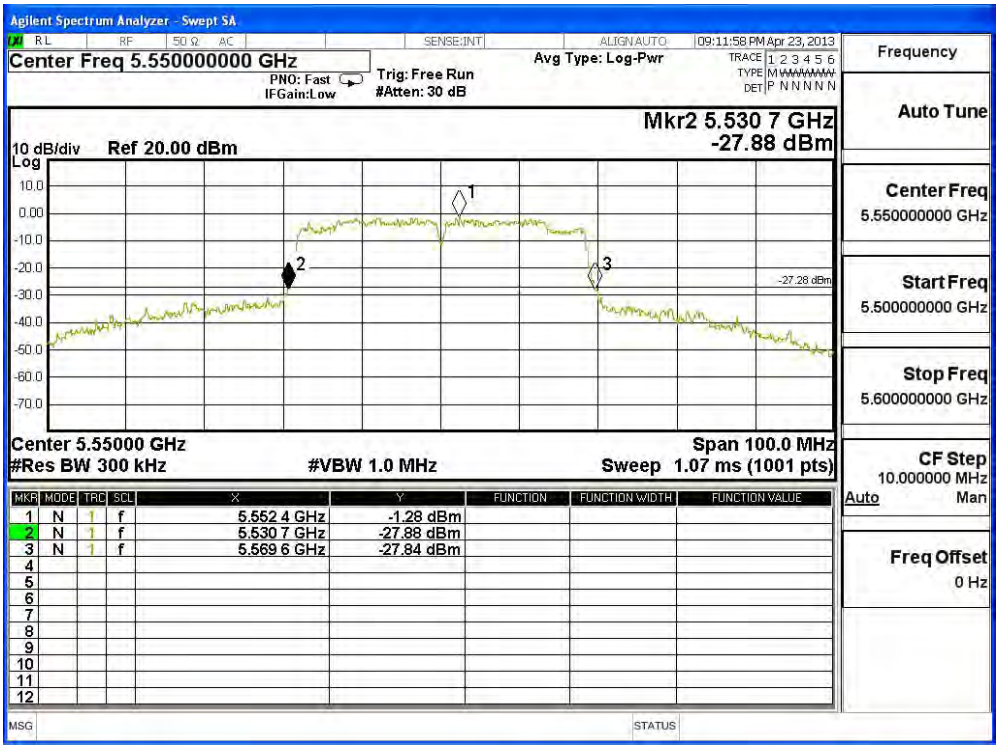
Channel 62 – Chain B



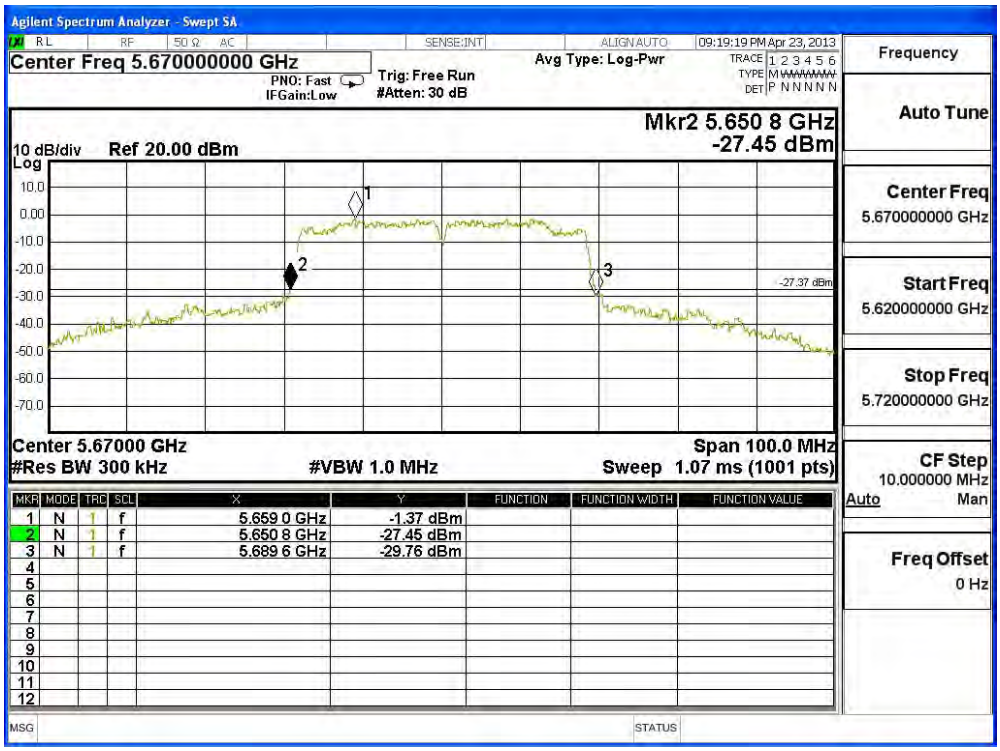
Channel 102 – Chain B



Channel 110 – Chain B



Channel 134 – Chain B



4. Peak Power Spectral Density

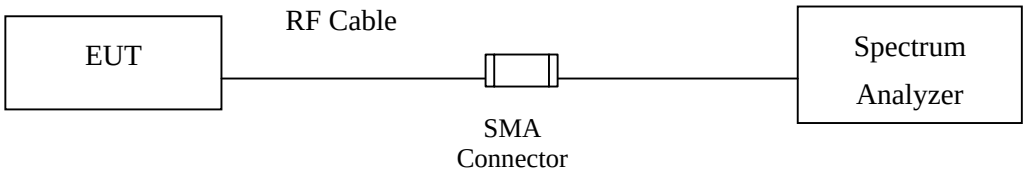
4.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2012
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2012
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr, 2013

Note:

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

4.2. Test Setup



4.3. Limits

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

(5) For the band 5.25-5.35 GHz, the peak power spectral density shall not exceed 11 dBm in any 1-MHz band. If transmitting antenna of directional gain greater than 6 dBi are used, the peak power spectral density shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.

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

4.4. Test Procedure

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

4.5. Uncertainty

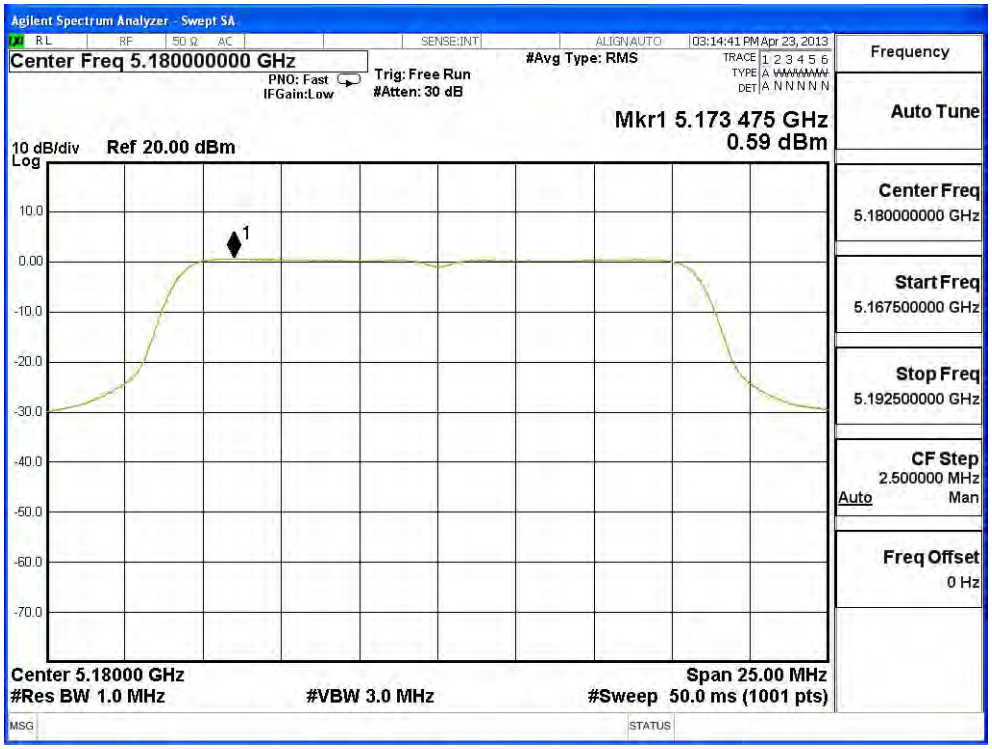
± 1.27 dB

4.6. Test Result of Peak Power Spectral Density

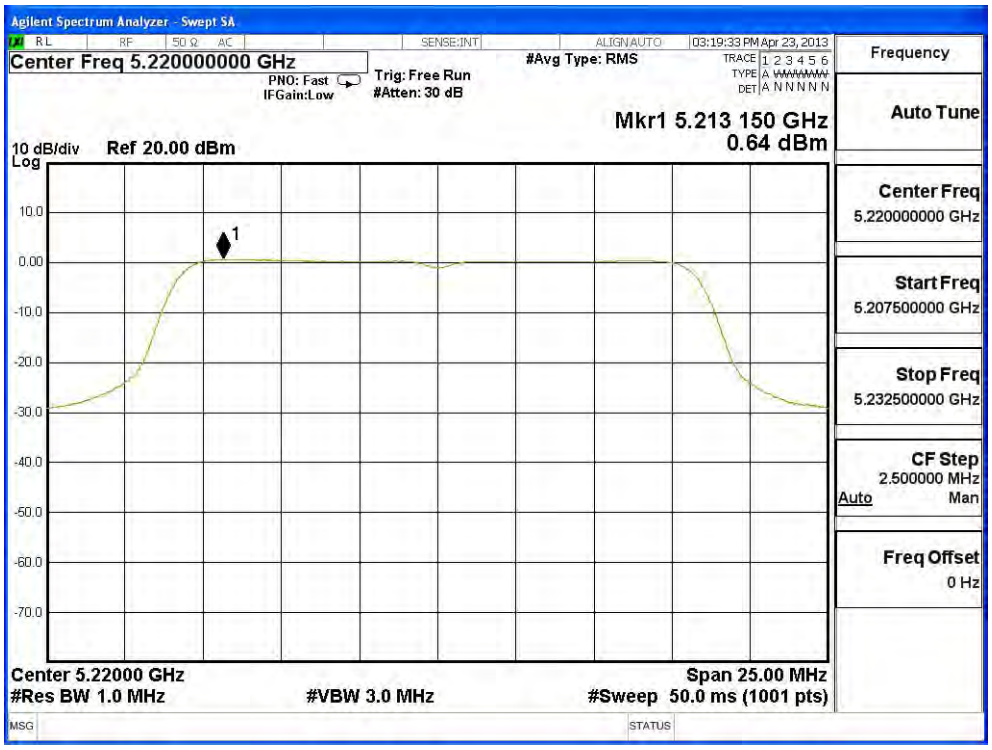
Product : TABLET PC
Test Item : Peak Power Spectral Density
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11a-6Mbps)

Channel Number	Frequency (MHz)	Measurement Level (dBm)	Required Limit	Result
36	5180	0.590	< 4dBm	Pass
44	5220	0.640	< 4dBm	Pass
48	5240	0.740	< 4dBm	Pass
52	5260	0.970	< 11dBm	Pass
60	5300	1.070	< 11dBm	Pass
64	5320	1.030	< 11dBm	Pass
100	5500	1.510	< 11dBm	Pass
116	5580	1.600	< 11dBm	Pass
140	5700	1.500	< 11dBm	Pass

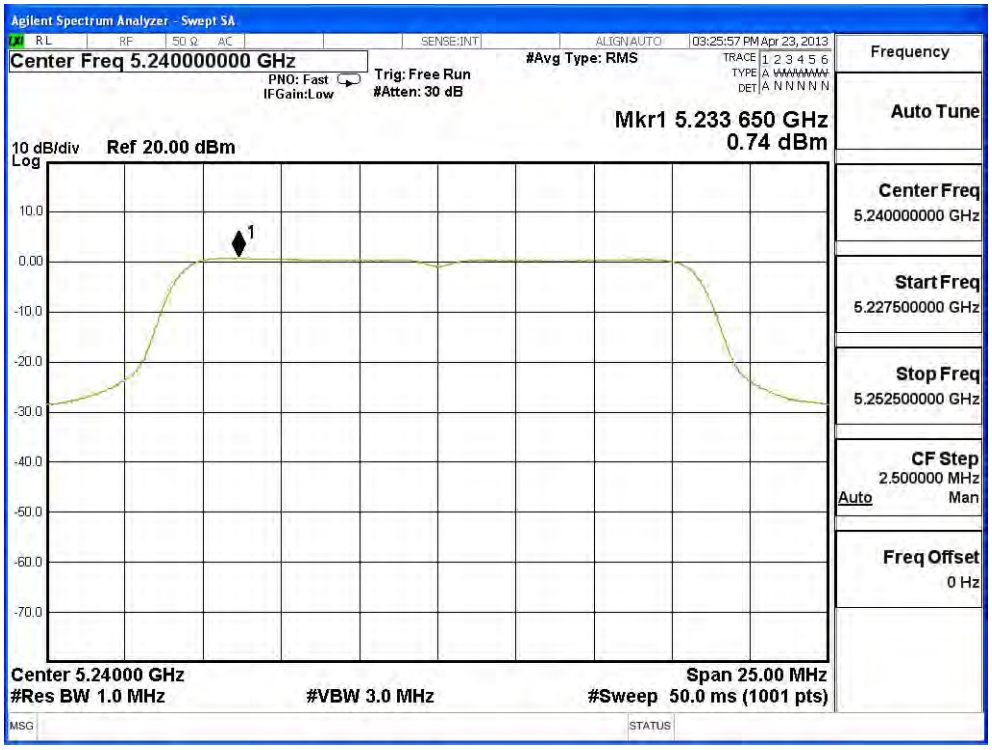
Channel 36:



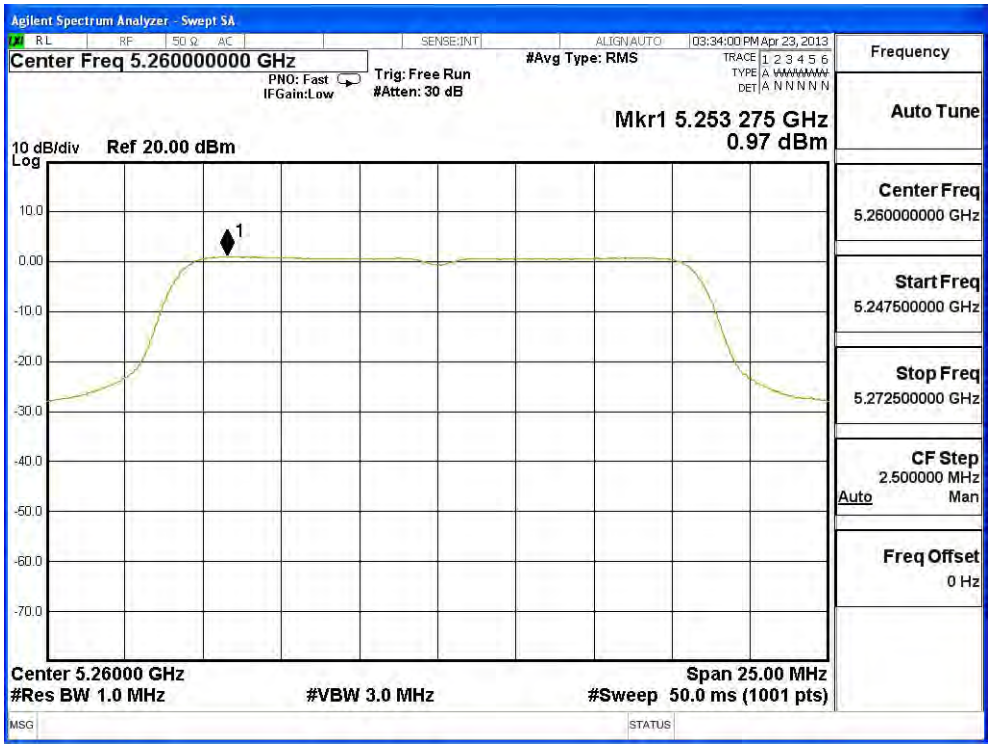
Channel 44:



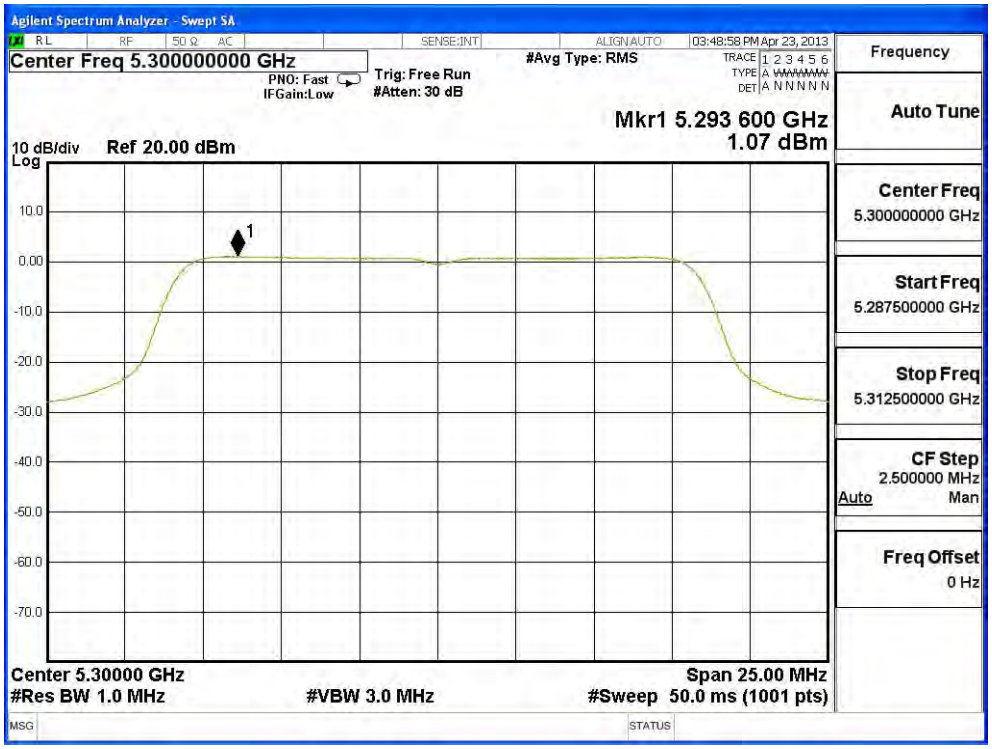
Channel 48:



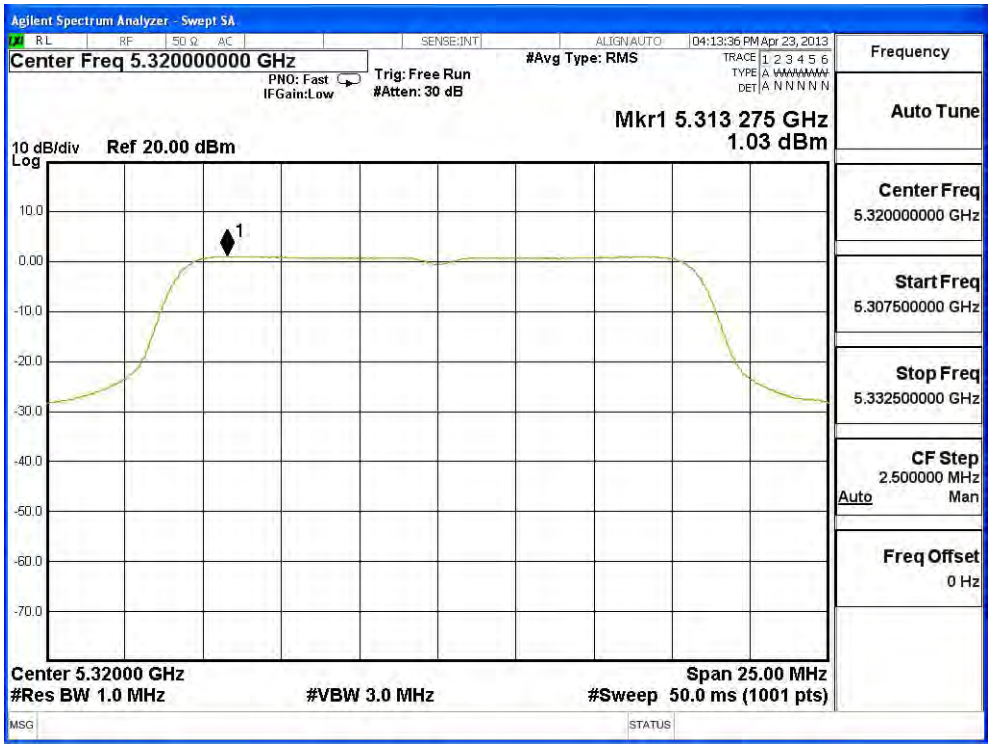
Channel 52:



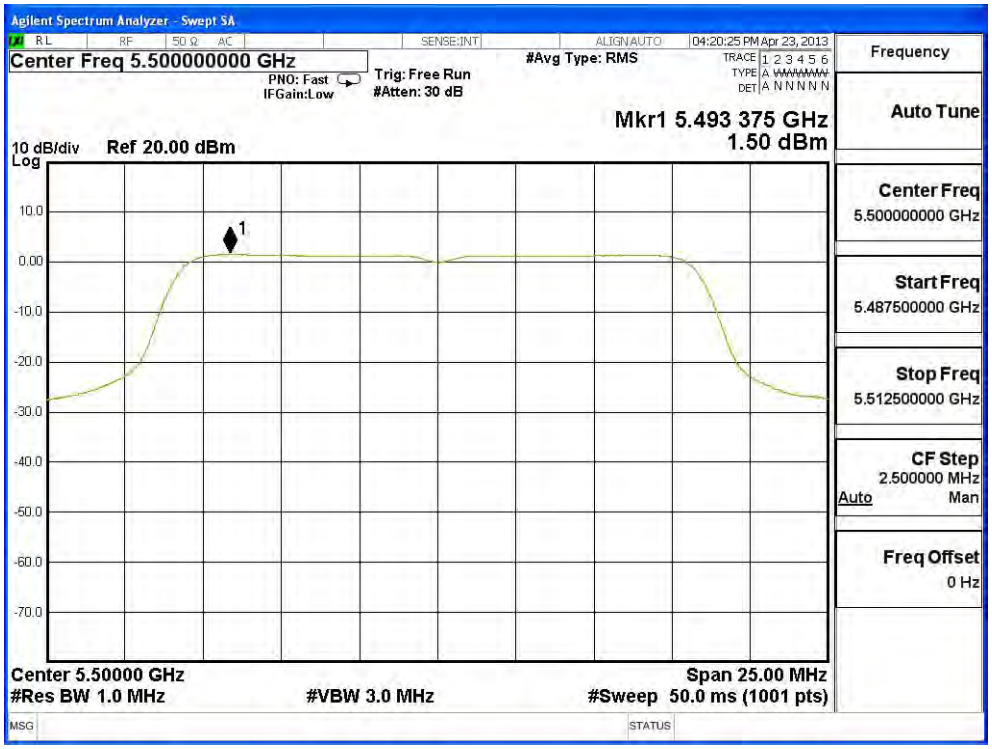
Channel 60:



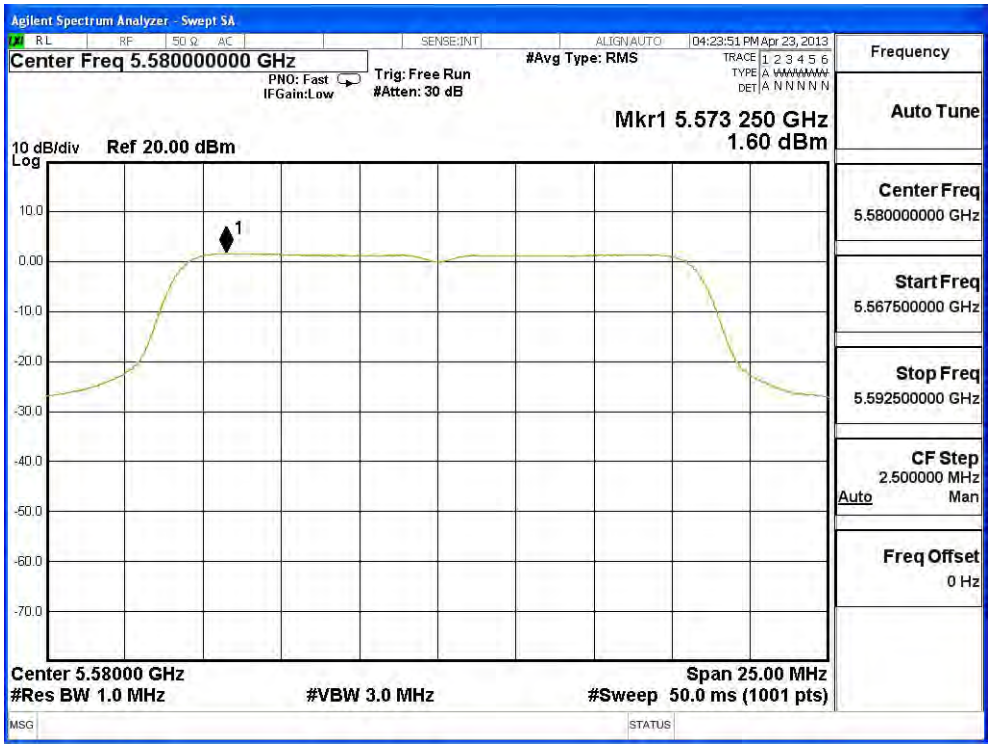
Channel 64:



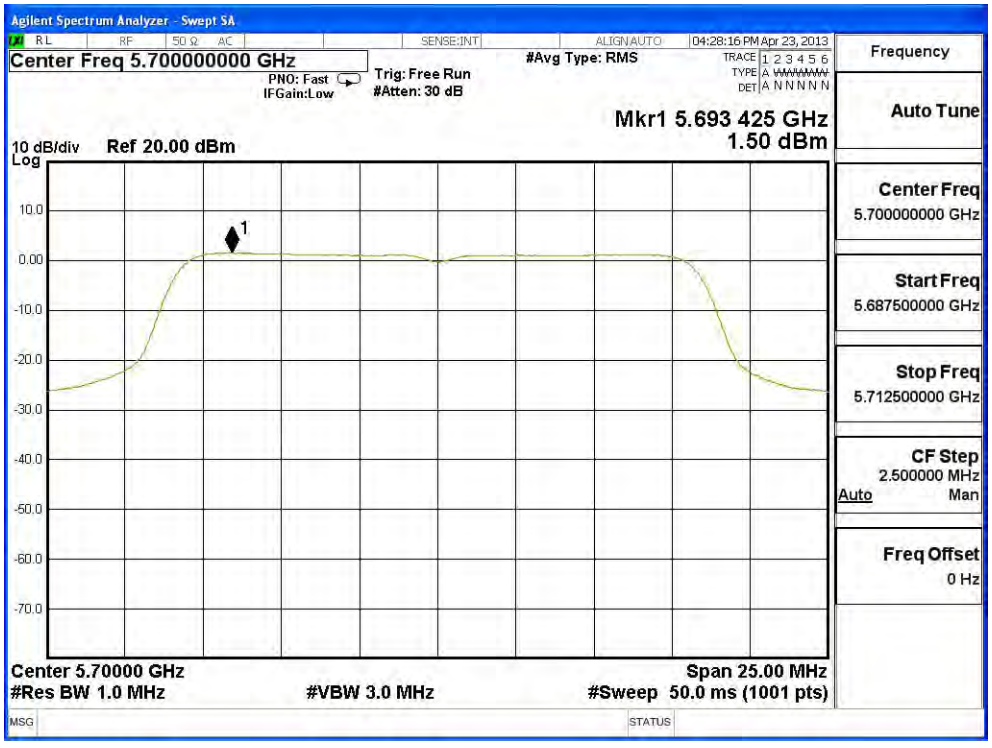
Channel 100:



Channel 116:



Channel 140:

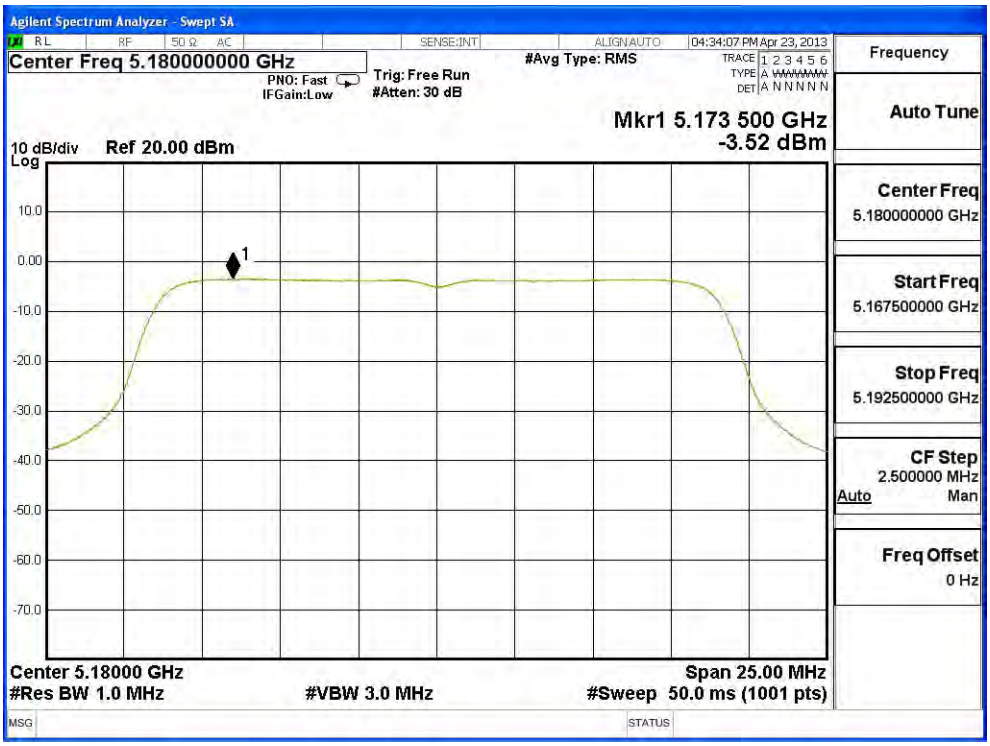


Product : TABLET PC
Test Item : Peak Power Spectral Density
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps)

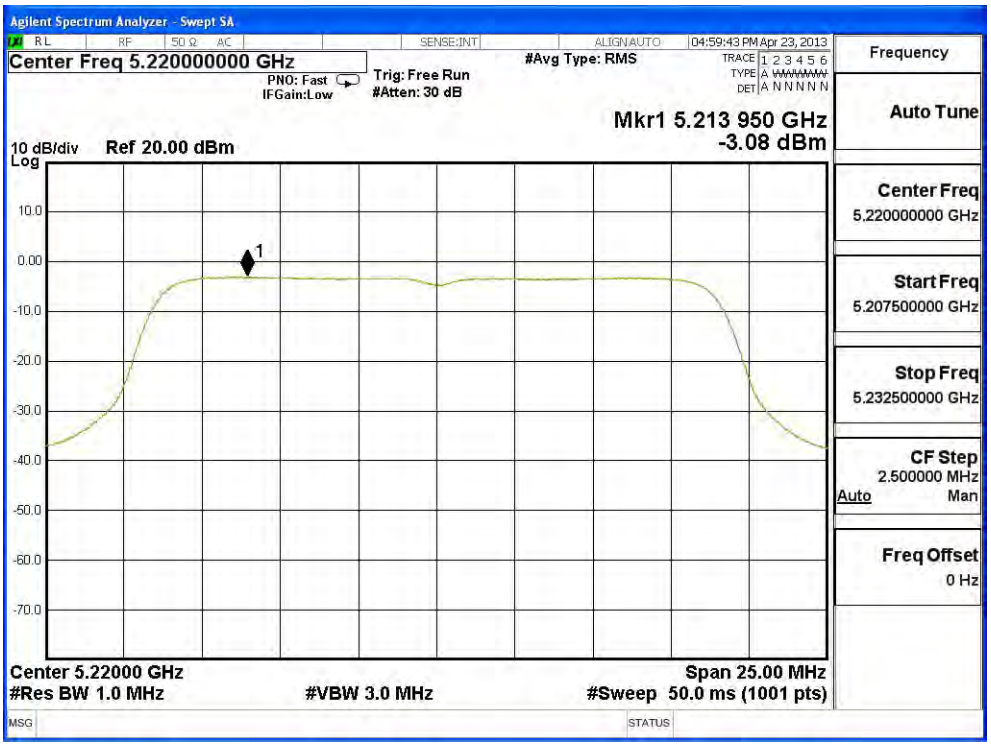
Channel No.	Frequency (MHz)	Chain	PPSD/MHz (dBm)	10*log(2) (dB)	Total PPSD/MHz (dBm)	Required Limit	Result
36	5180	A	-3.520	3.010	-0.510	< 4dBm	Pass
		B	-3.120	3.010	-0.110		Pass
44	5220	A	-3.080	3.010	-0.070	< 4dBm	Pass
		B	-3.630	3.010	-0.620		Pass
48	5240	A	-3.410	3.010	-0.400	< 4dBm	Pass
		B	-3.540	3.010	-0.530		Pass
52	5260	A	-3.740	3.010	-0.730	< 11dBm	Pass
		B	-3.900	3.010	-0.890		Pass
60	5300	A	-3.640	3.010	-0.630	< 11dBm	Pass
		B	-3.530	3.010	-0.520		Pass
64	5320	A	-3.490	3.010	-0.480	< 11dBm	Pass
		B	-3.230	3.010	-0.220		Pass
100	5500	A	-3.170	3.010	-0.160	< 11dBm	Pass
		B	-2.550	3.010	0.460		Pass
116	5580	A	-2.730	3.010	0.280	< 11dBm	Pass
		B	-3.040	3.010	-0.030		Pass
140	5700	A	-2.810	3.010	0.200	< 11dBm	Pass
		B	-2.950	3.010	0.060		Pass

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

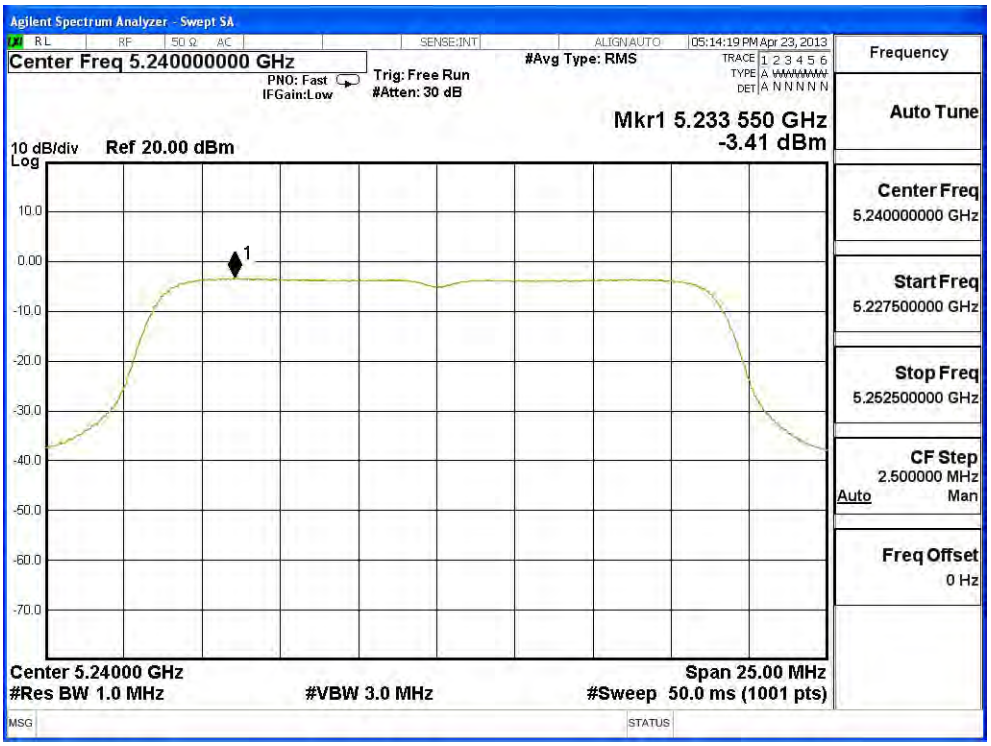
Channel 36 – Chain A



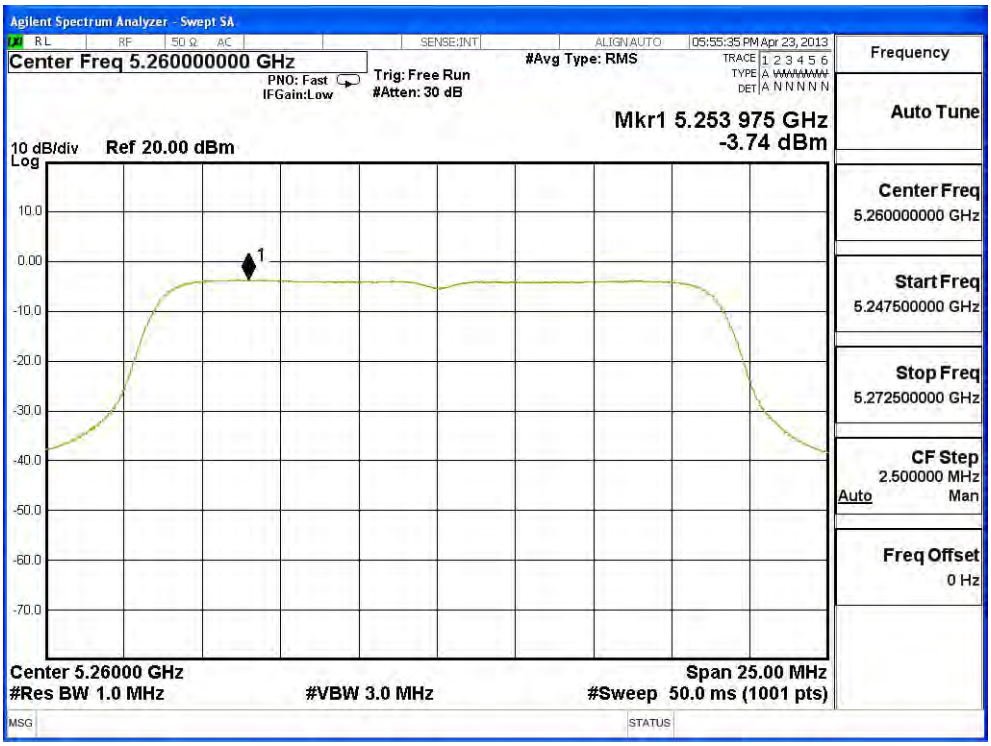
Channel 44 – Chain A



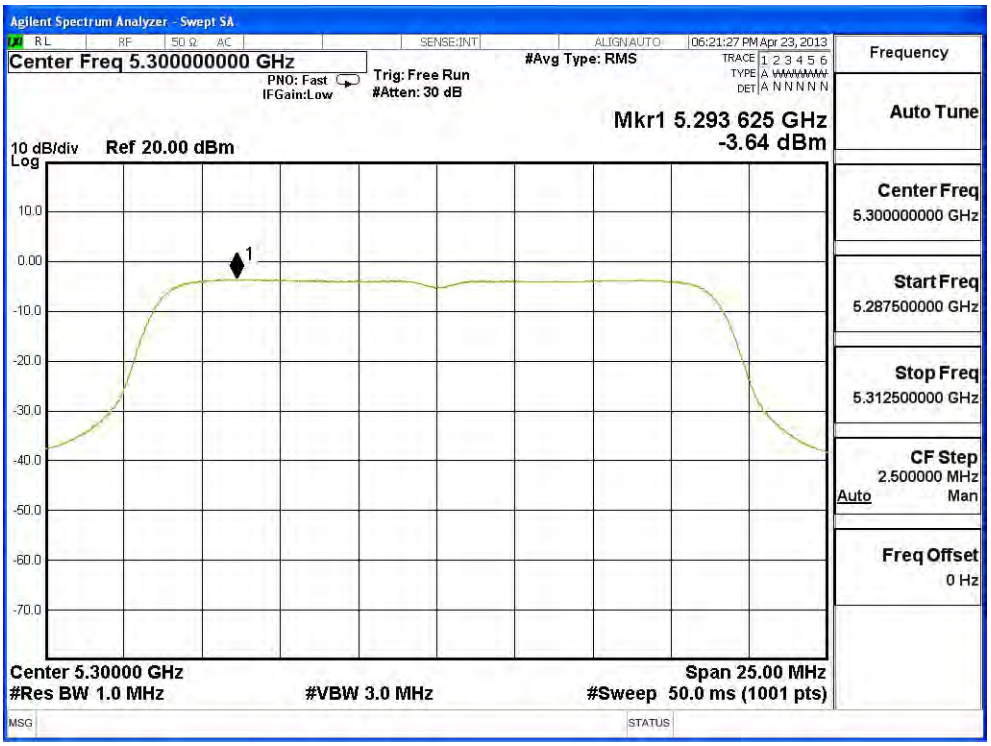
Channel 48 – Chain A



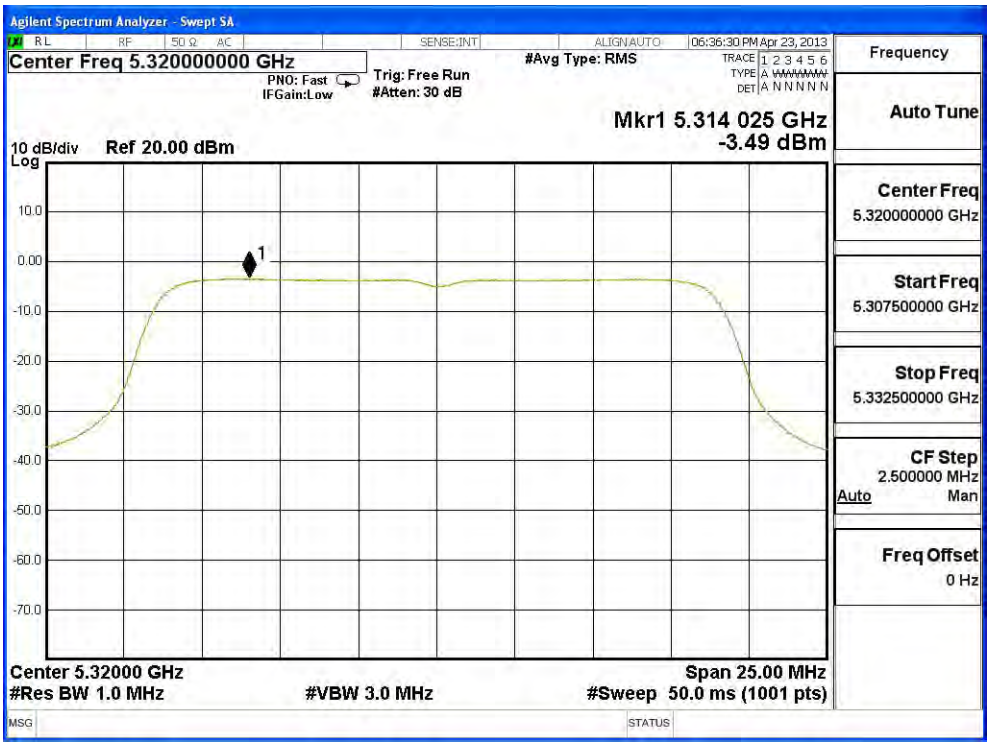
Channel 52 – Chain A



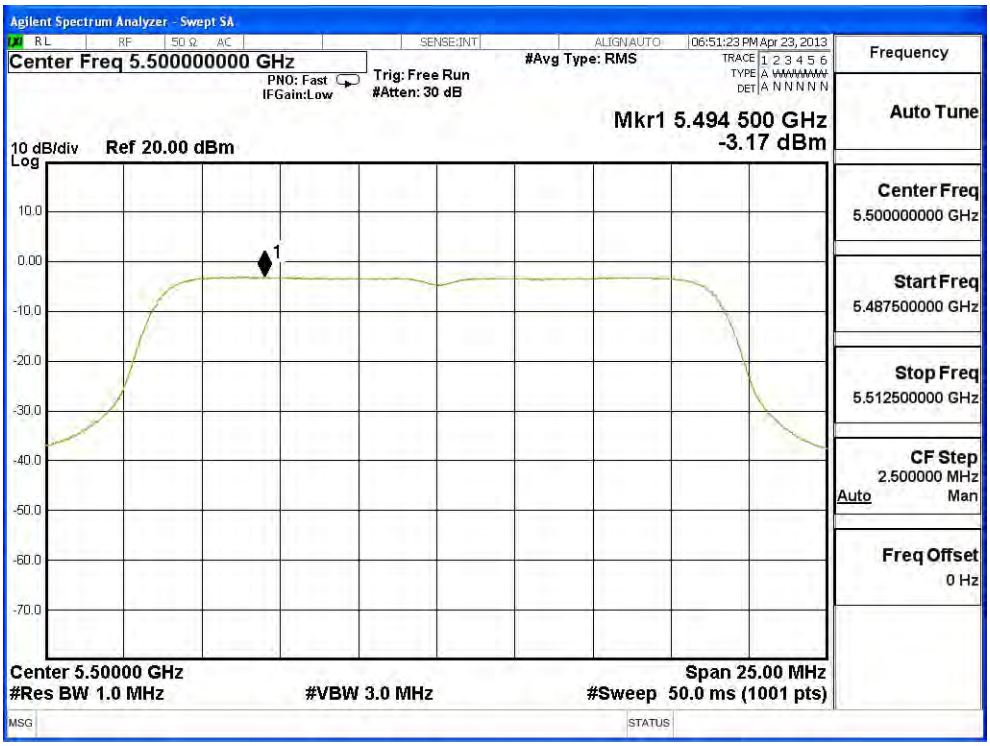
Channel 60 – Chain A



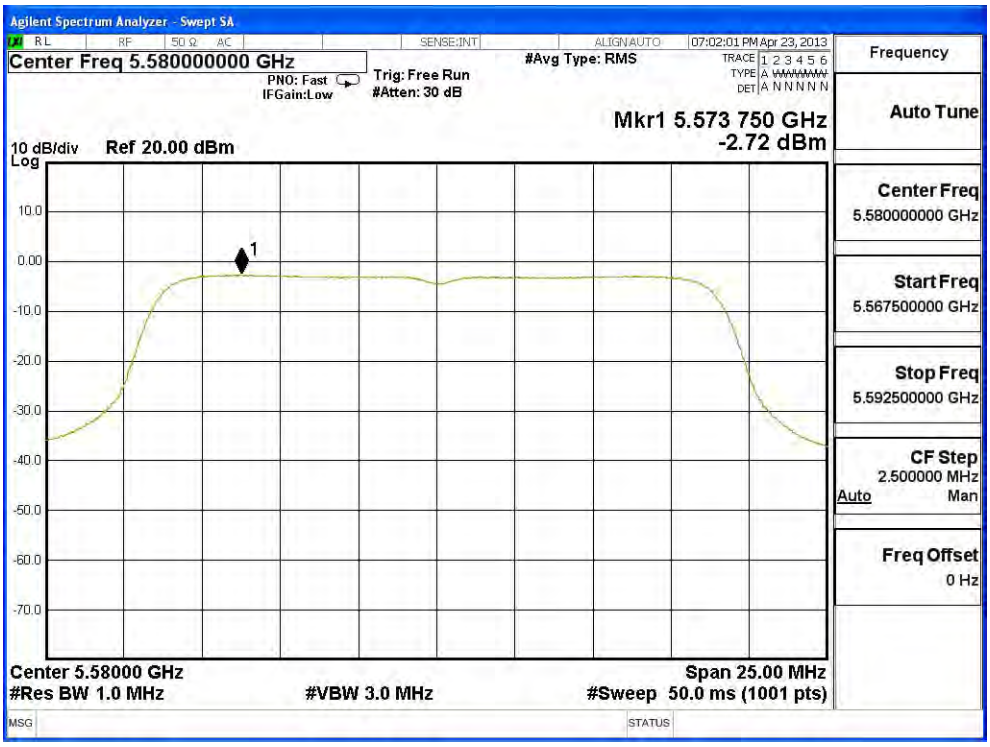
Channel 64 – Chain A



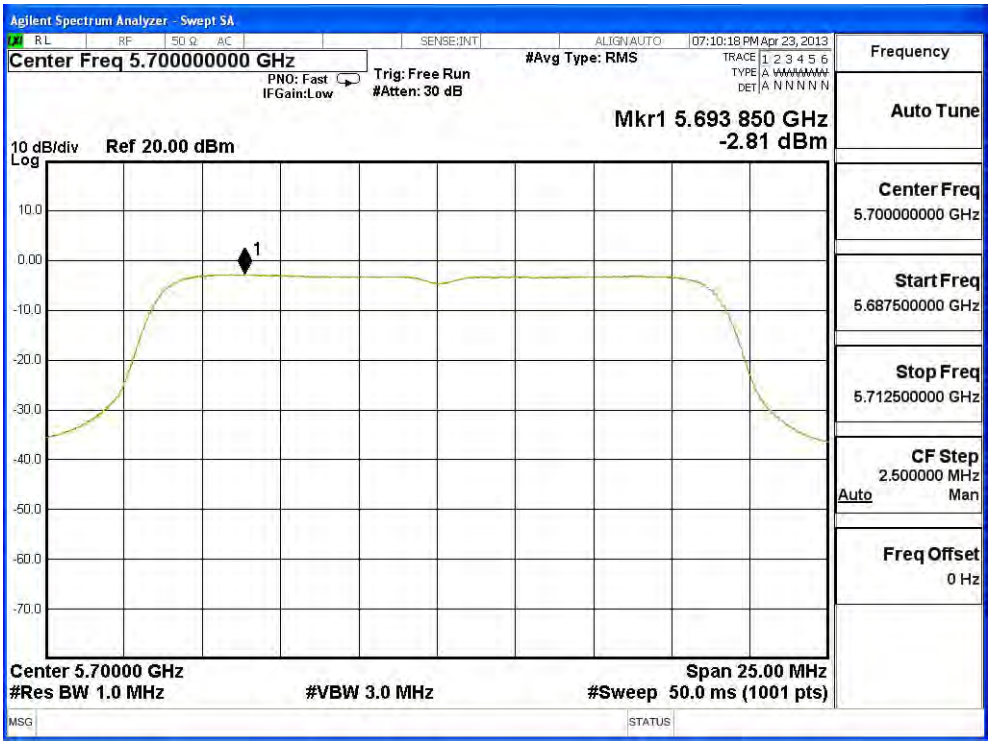
Channel 100 – Chain A



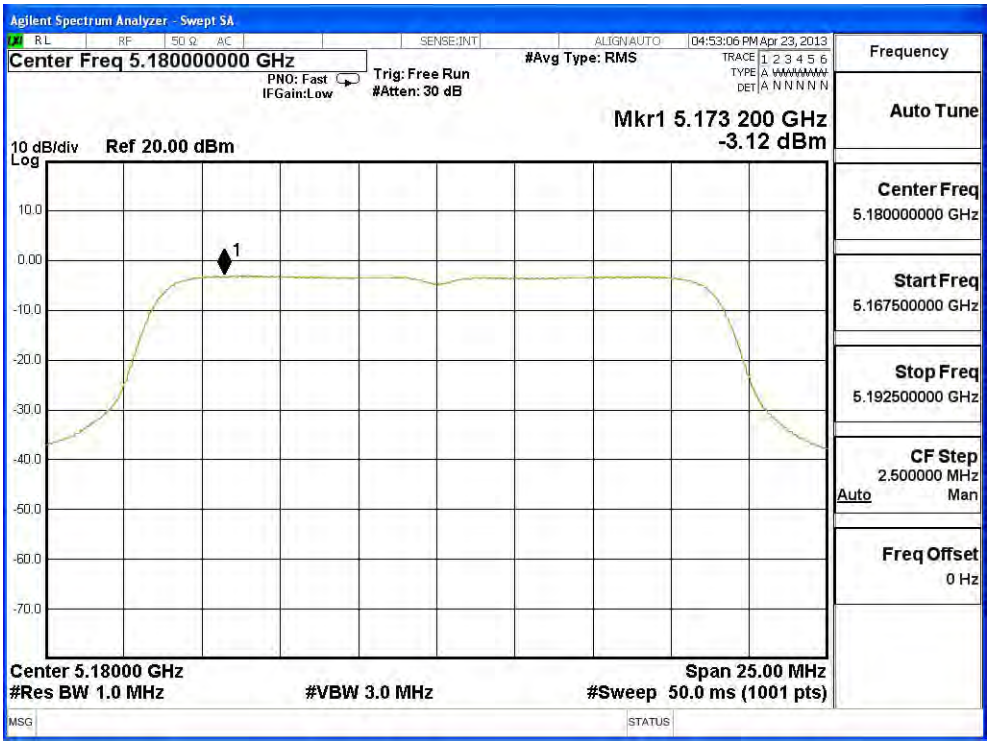
Channel 116 – Chain A



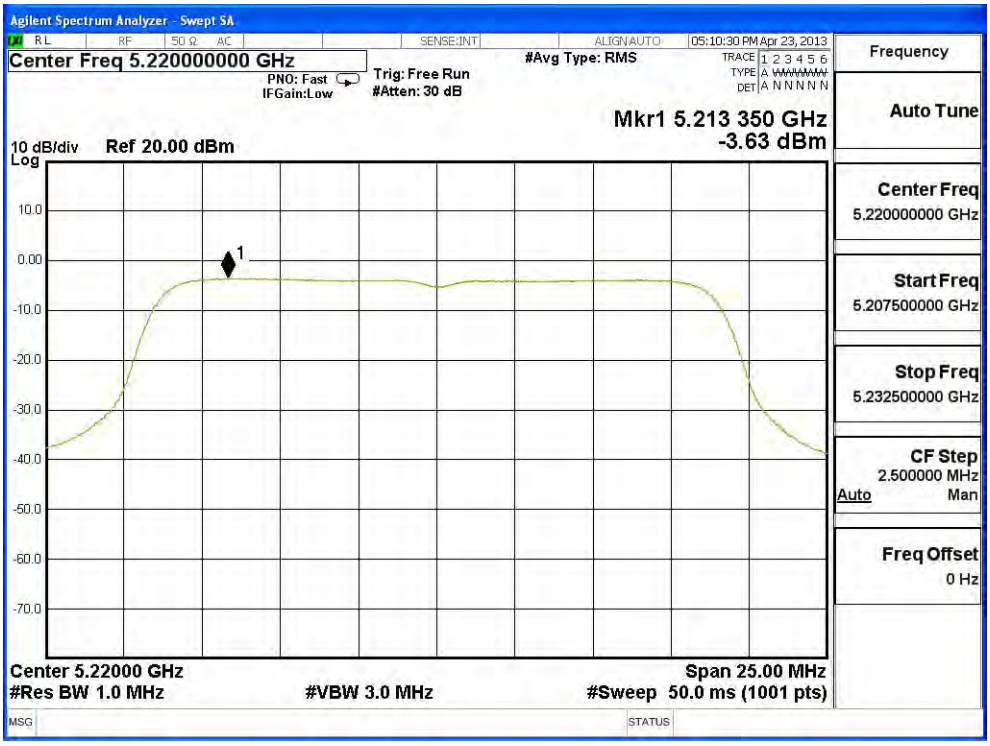
Channel 140 – Chain A



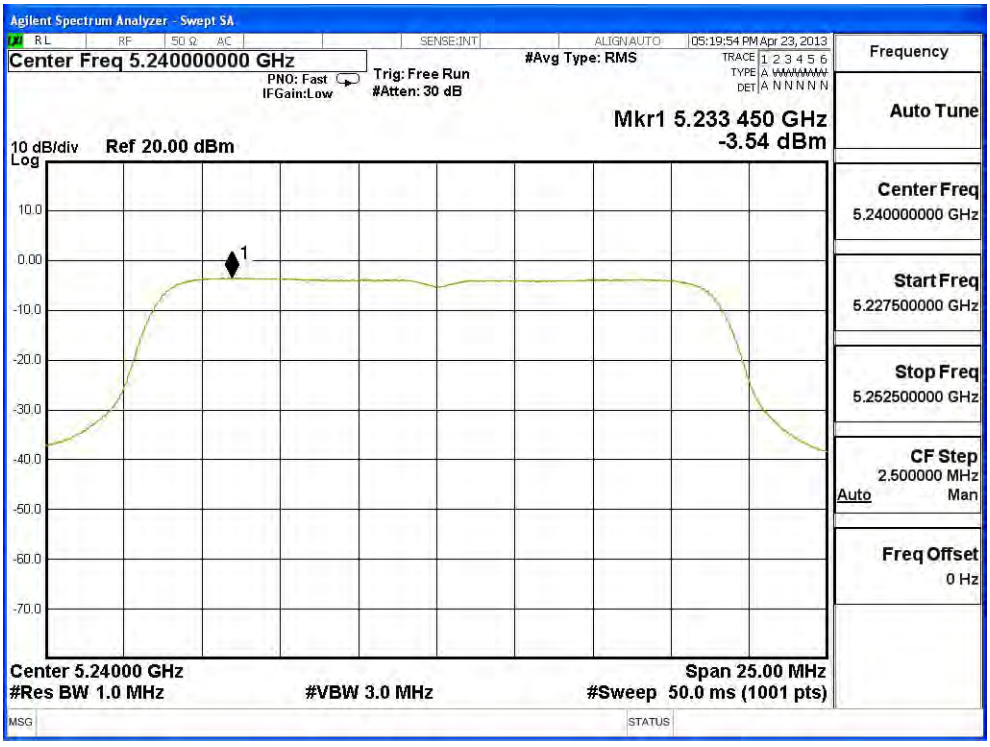
Channel 36 – Chain B



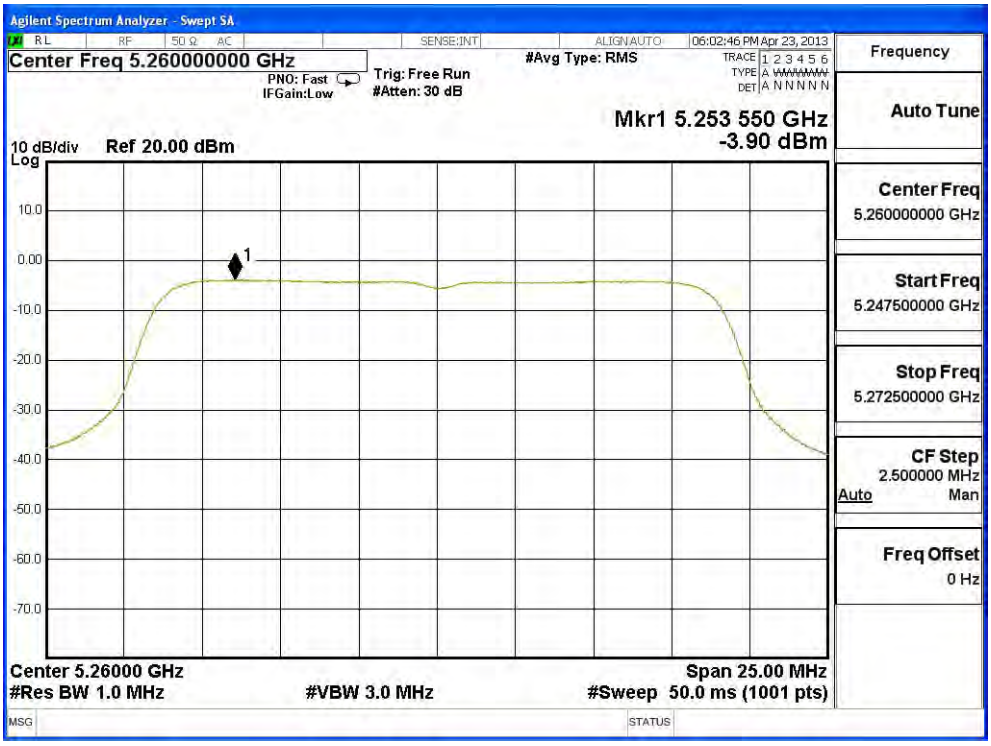
Channel 44 – Chain B



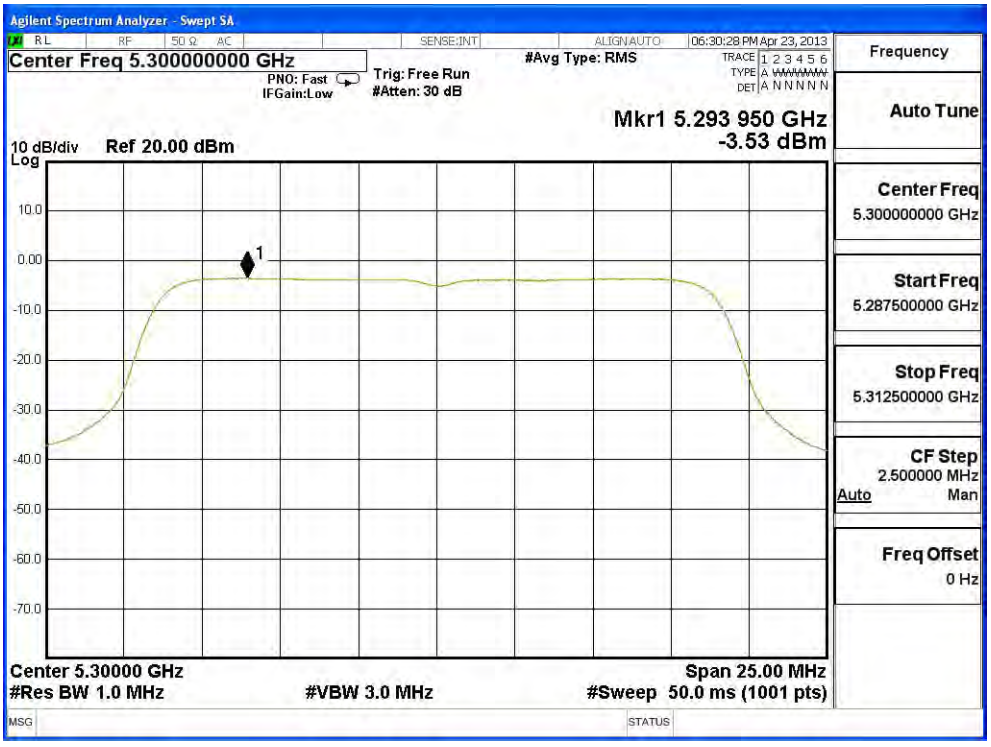
Channel 48 – Chain B



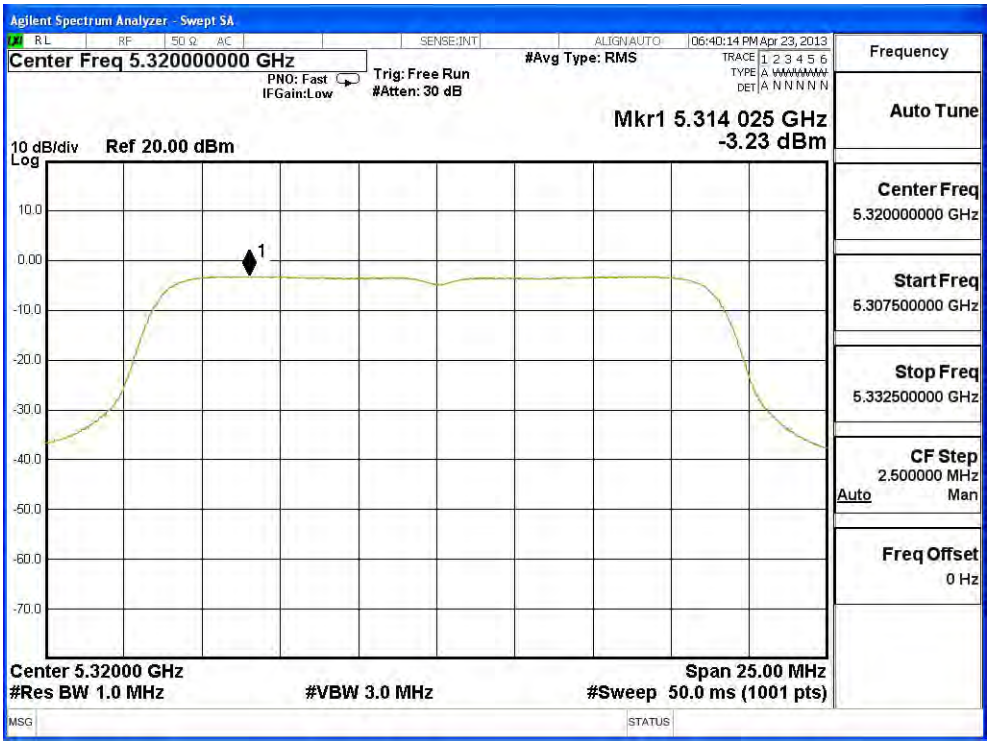
Channel 52 – Chain B



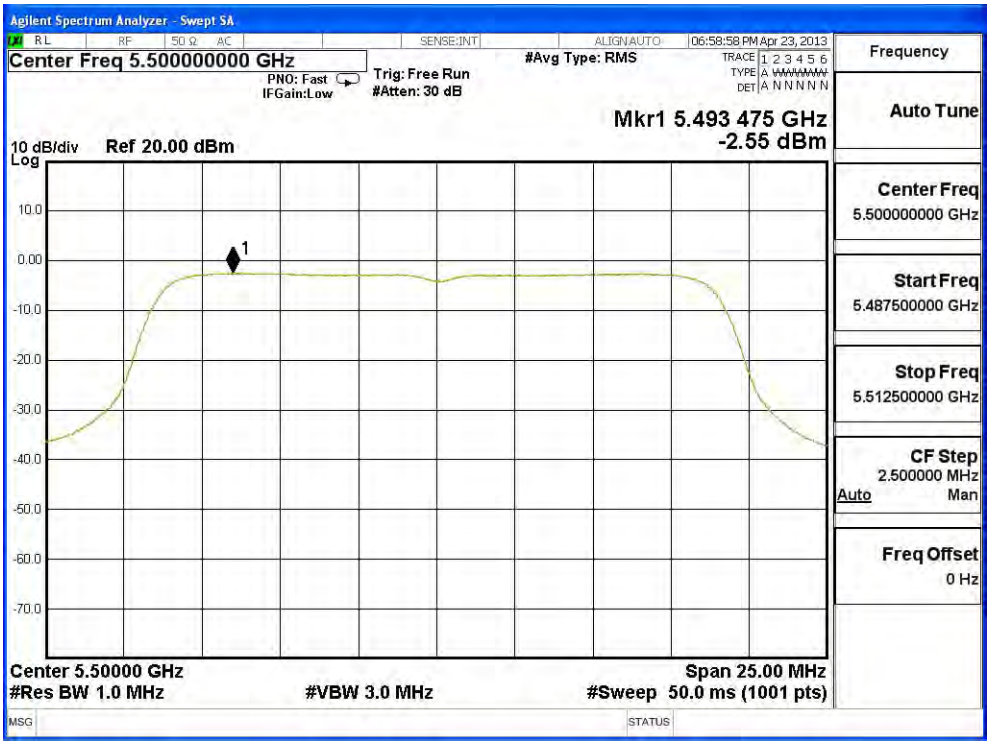
Channel 60 – Chain B



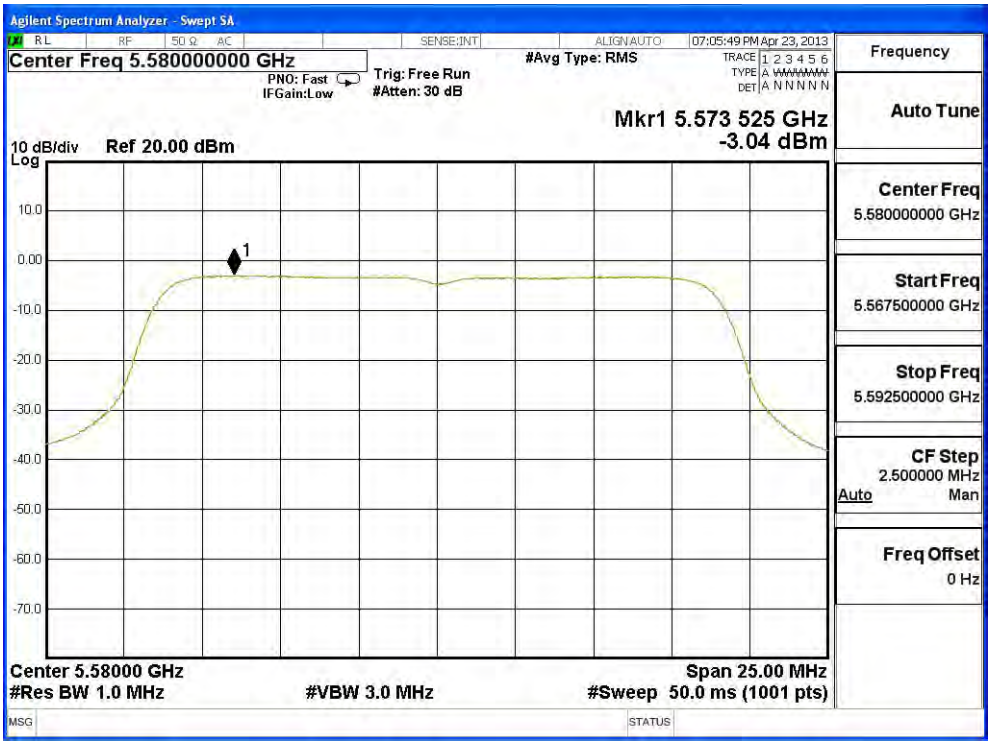
Channel 64 – Chain B



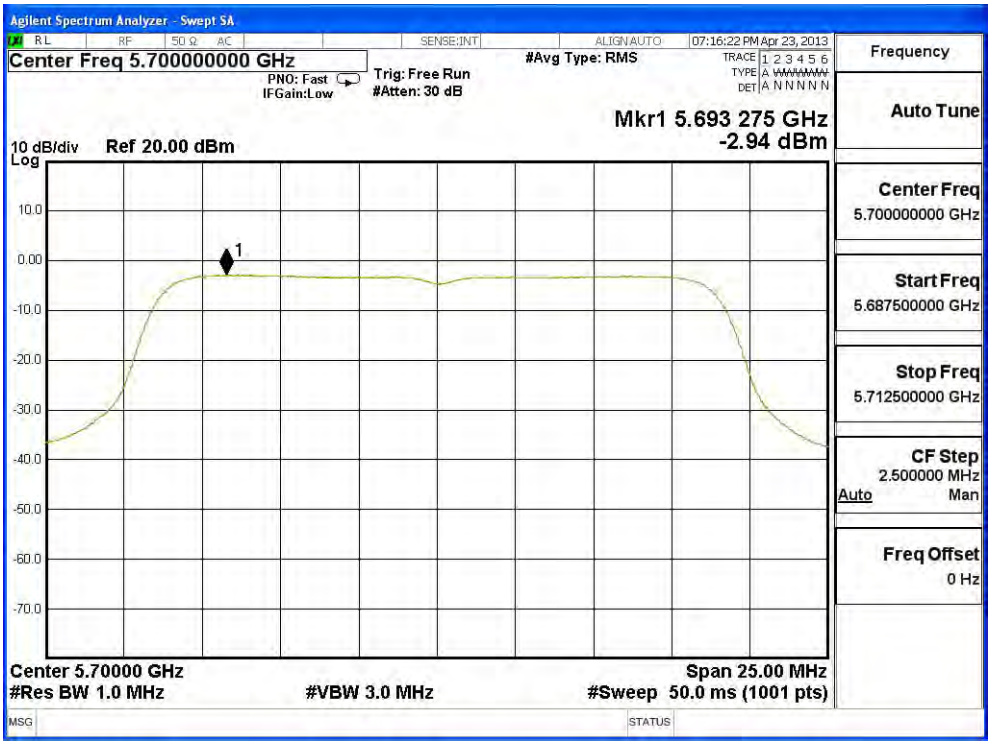
Channel 100 – Chain B



Channel 116 – Chain B



Channel 140 – Chain B

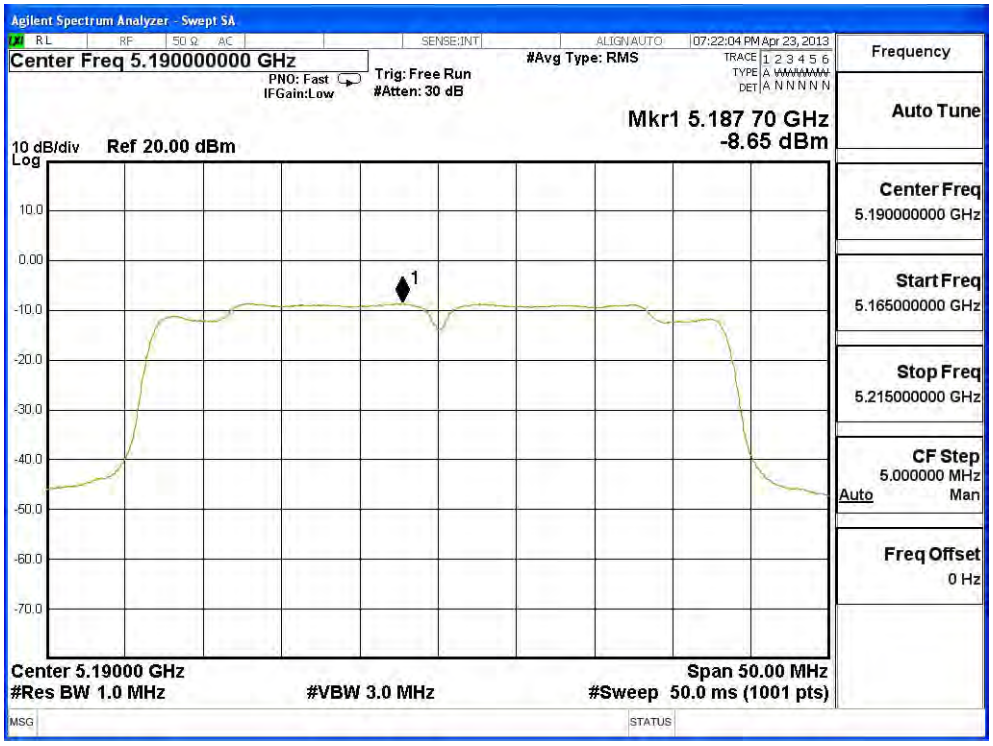


Product : TABLET PC
Test Item : Peak Power Spectral Density
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps)

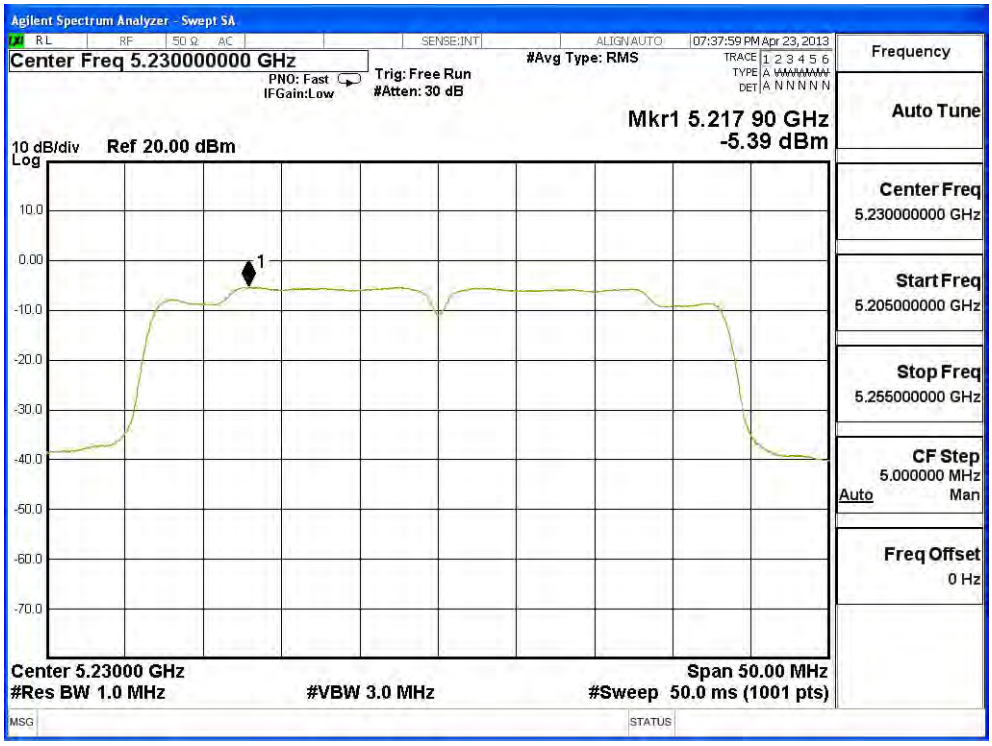
Channel No.	Frequency (MHz)	Chain	PPSD/MHz (dBm)	10*log(2) (dB)	Total PPSD/MHz (dBm)	Required Limit	Result
38	5190	A	-8.650	3.010	-5.640	< 4dBm	Pass
		B	-8.000	3.010	-4.990		Pass
46	5230	A	-5.390	3.010	-2.380	< 4dBm	Pass
		B	-5.390	3.010	-2.380		Pass
54	5270	A	-5.300	3.010	-2.290	< 11dBm	Pass
		B	-5.520	3.010	-2.510		Pass
62	5310	A	-8.350	3.010	-5.340	< 11dBm	Pass
		B	-8.310	3.010	-5.300		Pass
102	5510	A	-4.380	3.010	-1.370	< 11dBm	Pass
		B	-4.850	3.010	-1.840		Pass
110	5550	A	-4.850	3.010	-1.840	< 11dBm	Pass
		B	-4.810	3.010	-1.800		Pass
134	5670	A	-4.500	3.010	-1.490	< 11dBm	Pass
		B	-4.810	3.010	-1.800		Pass

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

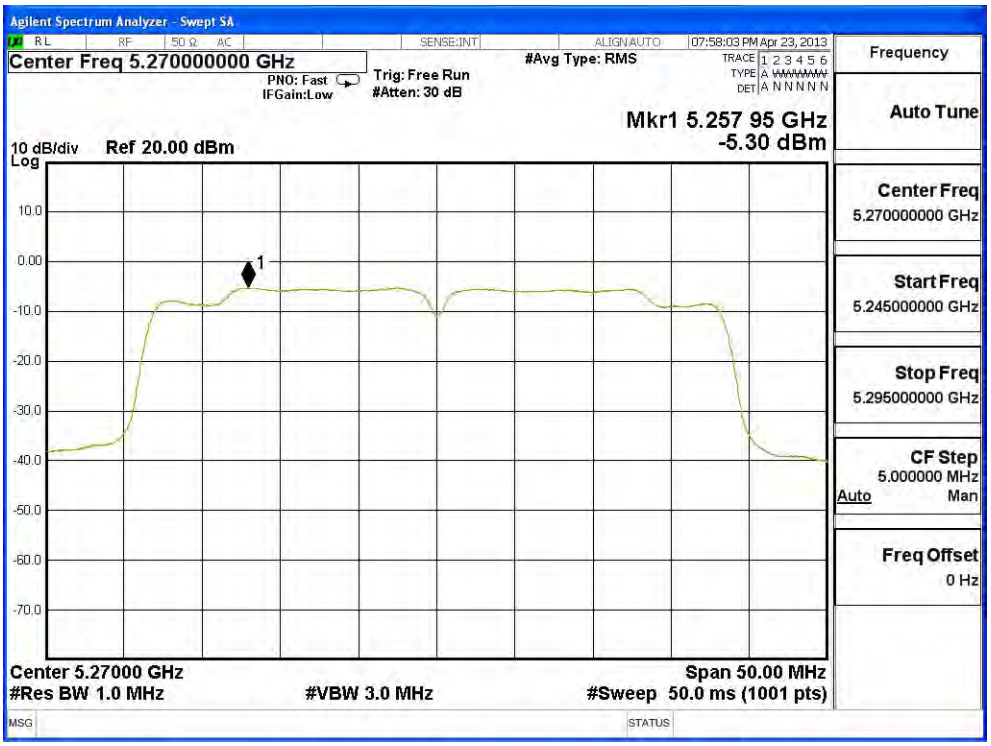
Channel 38 – Chain A



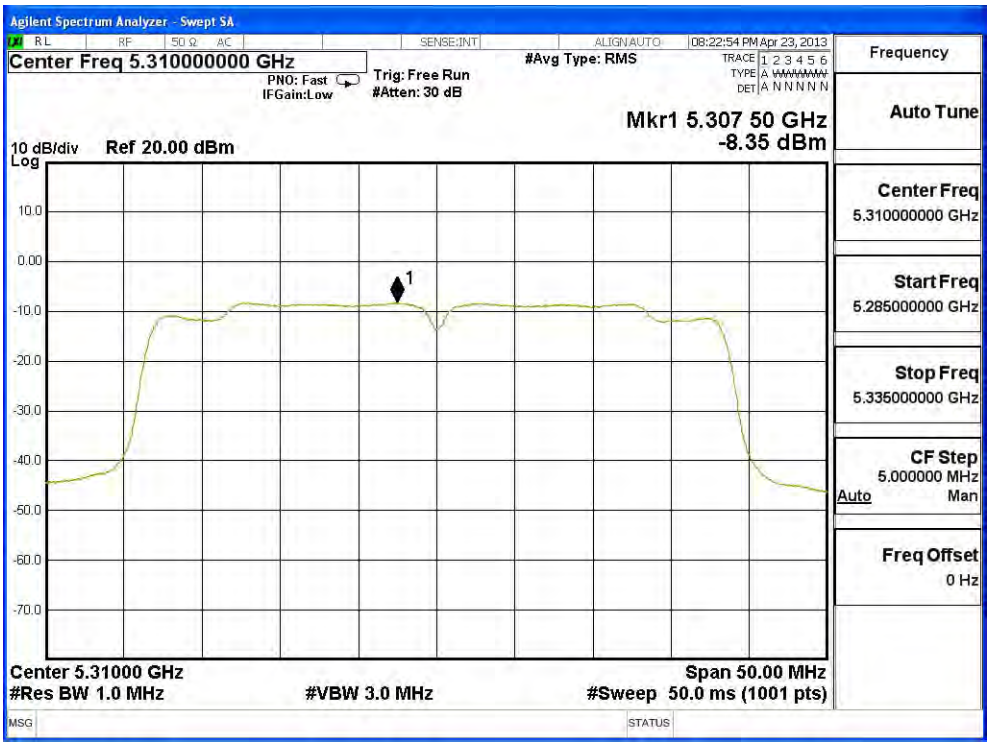
Channel 46 – Chain A



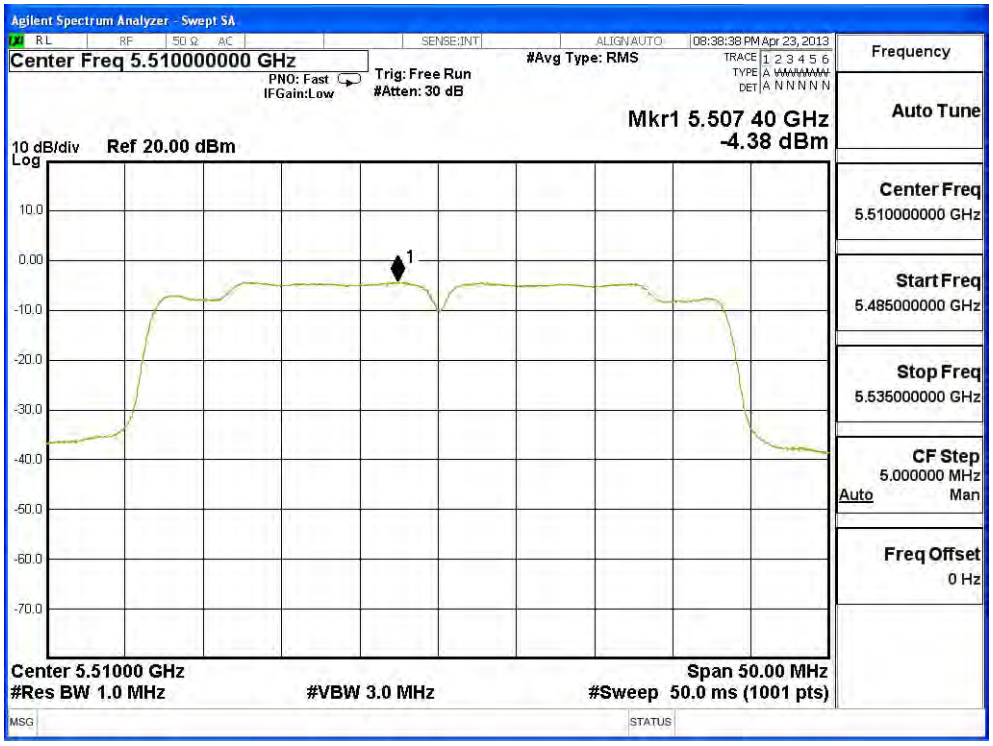
Channel 54 – Chain A



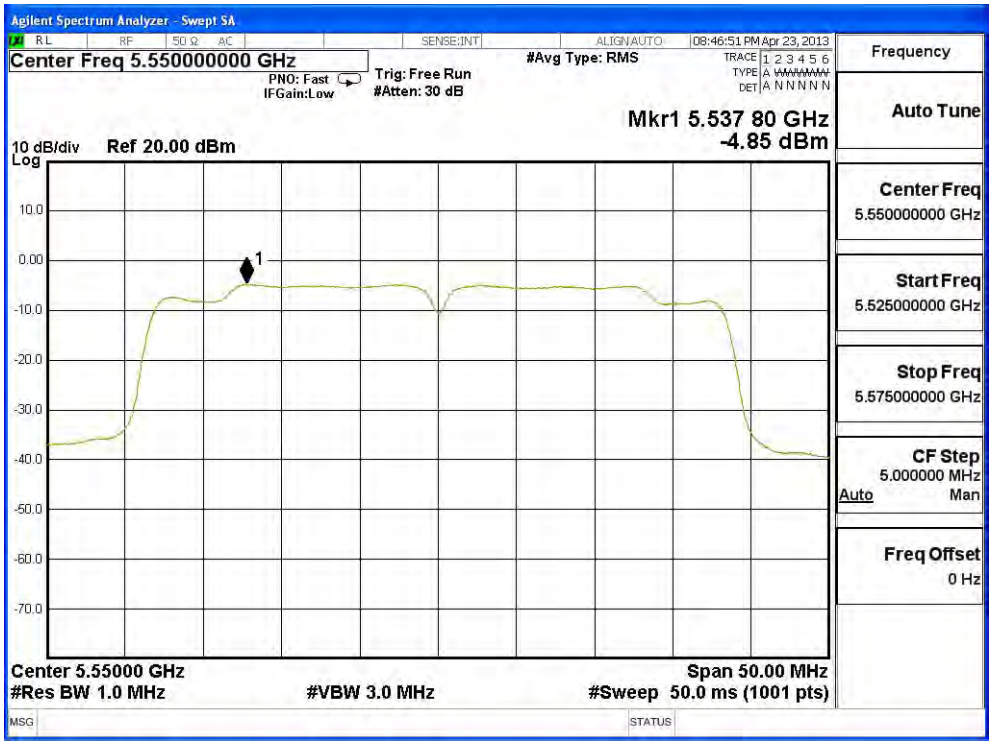
Channel 62 – Chain A



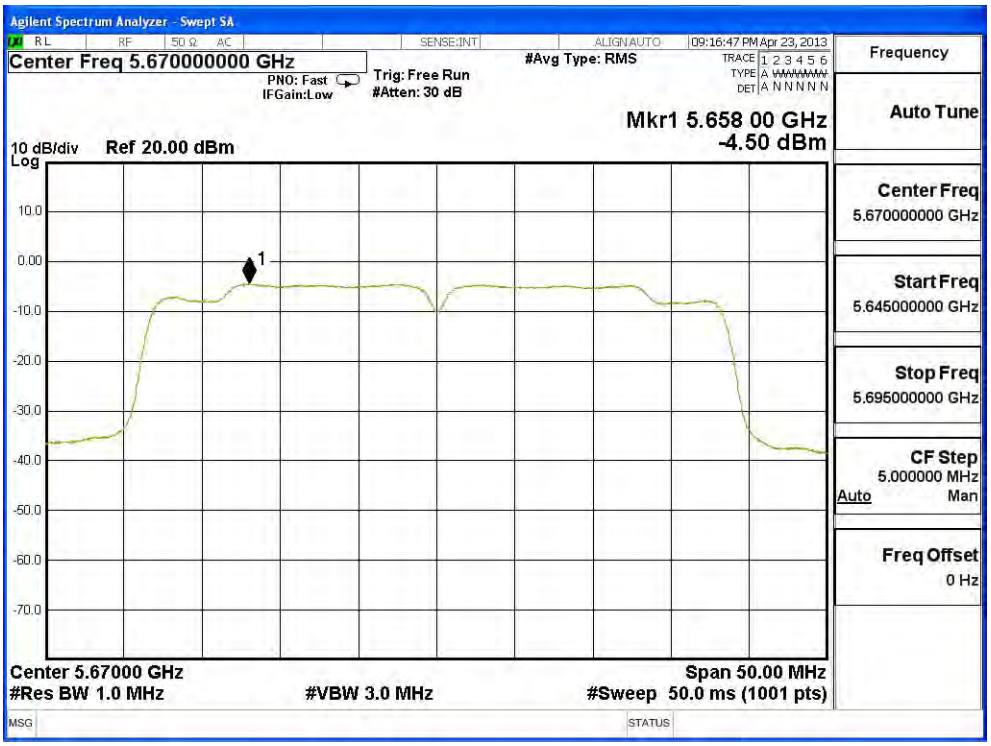
Channel 102 – Chain A



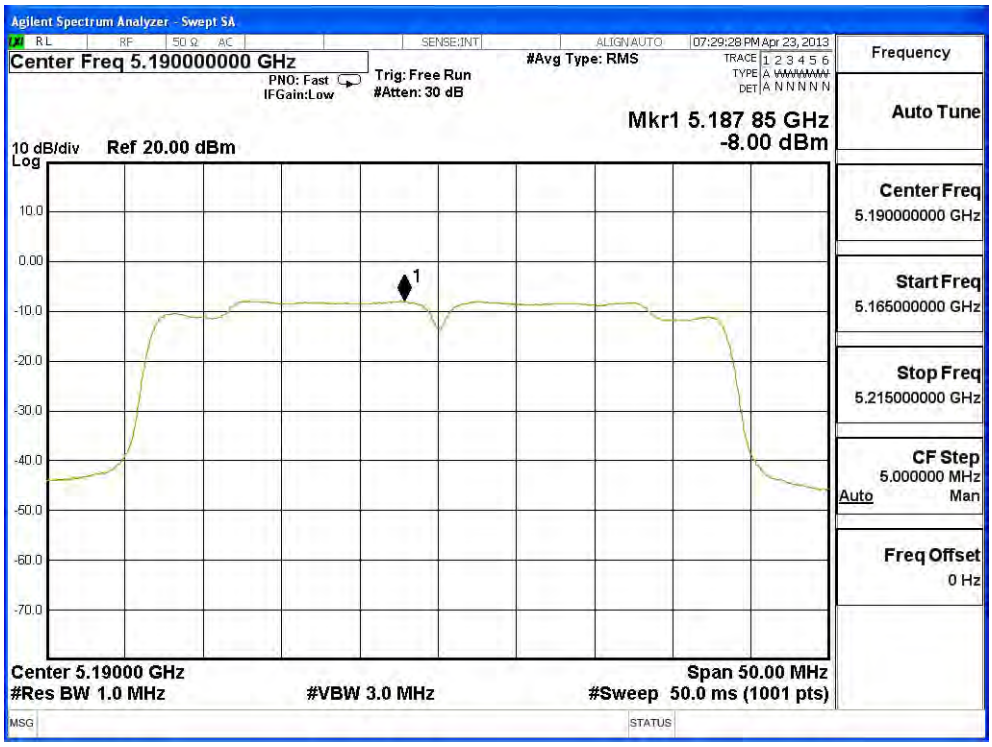
Channel 110 – Chain A



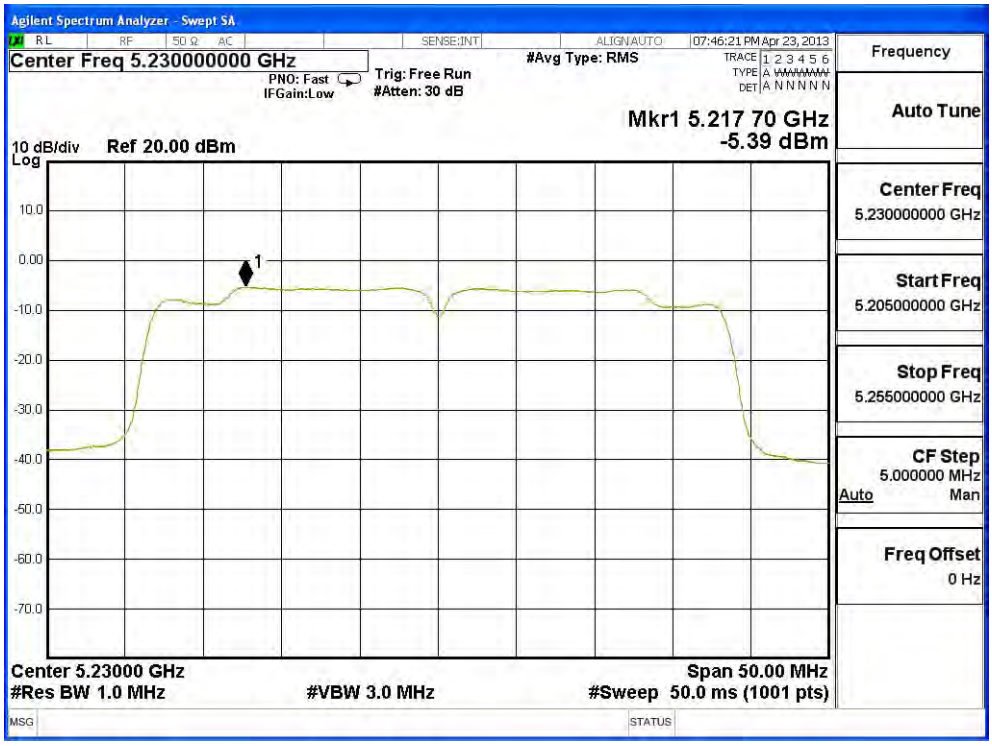
Channel 134 – Chain A



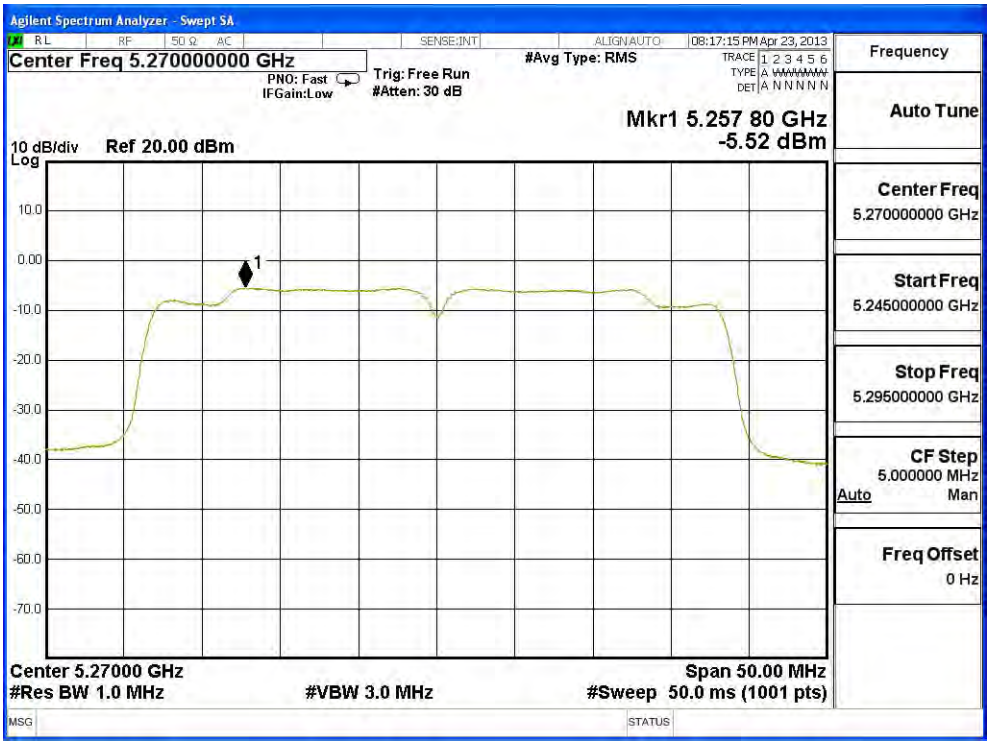
Channel 38 – Chain B



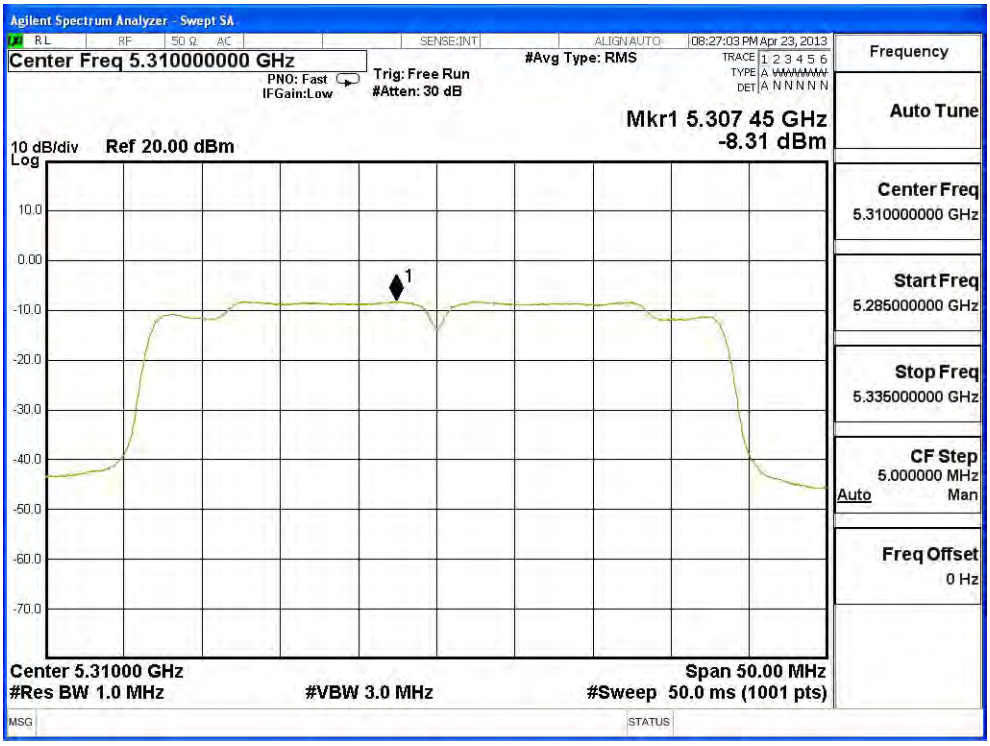
Channel 46 – Chain B



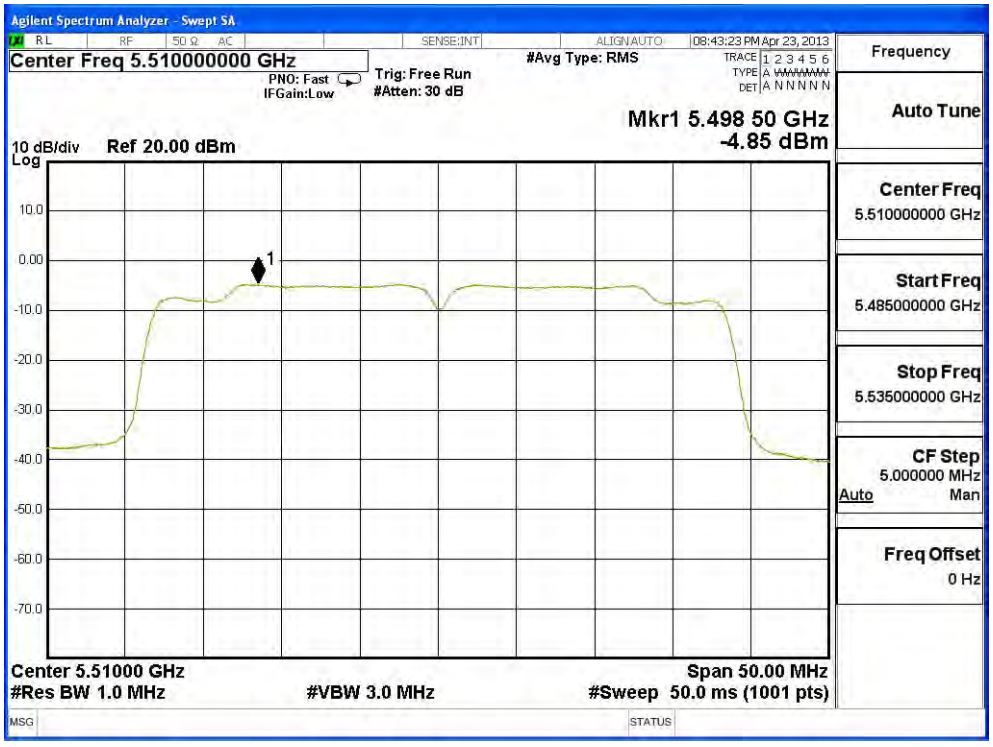
Channel 54 – Chain B



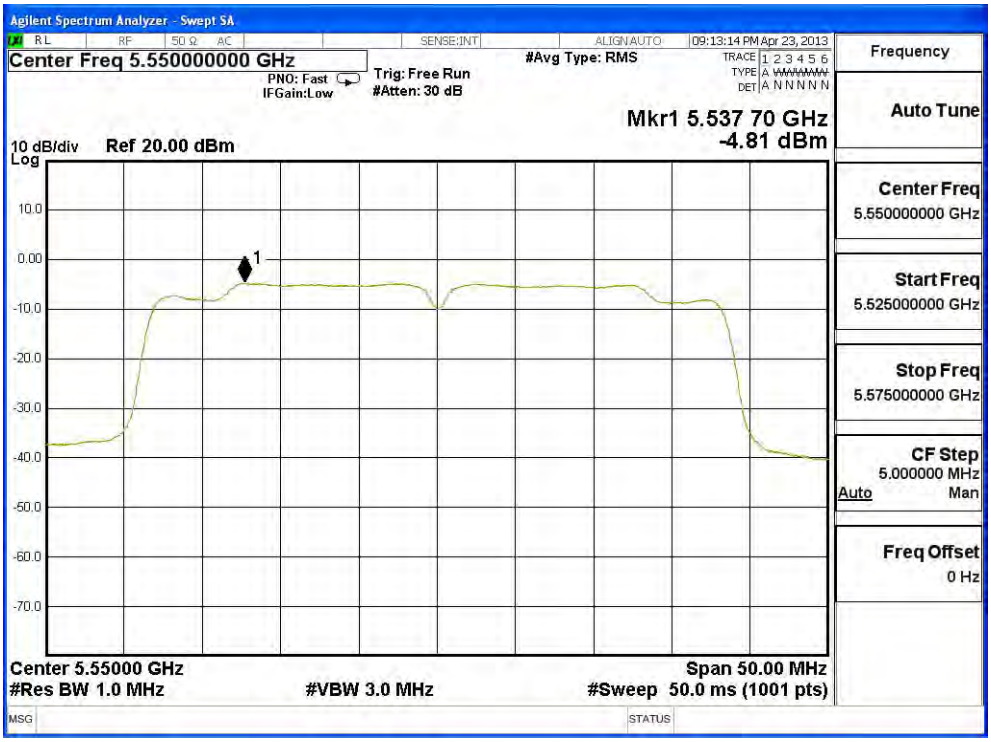
Channel 62 – Chain B



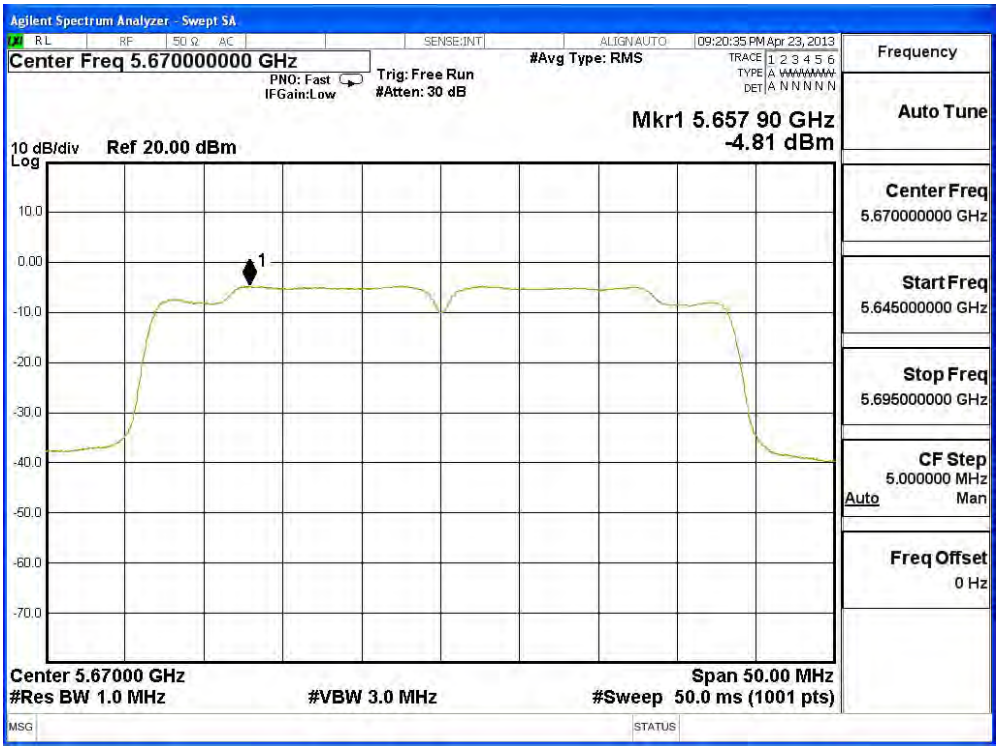
Channel 102 – Chain B



Channel 110 – Chain B



Channel 134 – Chain B



5. Peak Excursion

5.1. Test Equipment

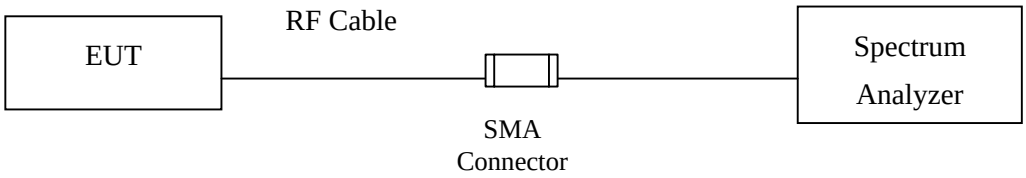
	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2012
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2012
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2013

Note:

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

5.2. Test Setup

Conduction Power Measurement



5.3. Limits

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

5.4. Test Procedure

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

5.5. Uncertainty

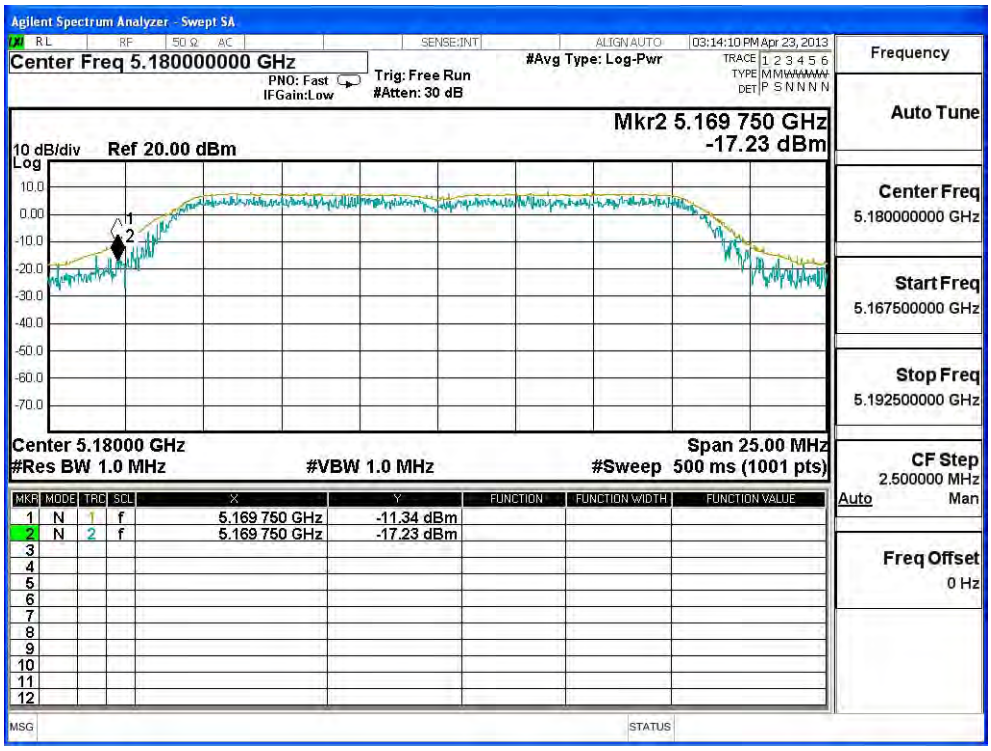
± 1.27 dB

5.6. Test Result of Peak Excursion

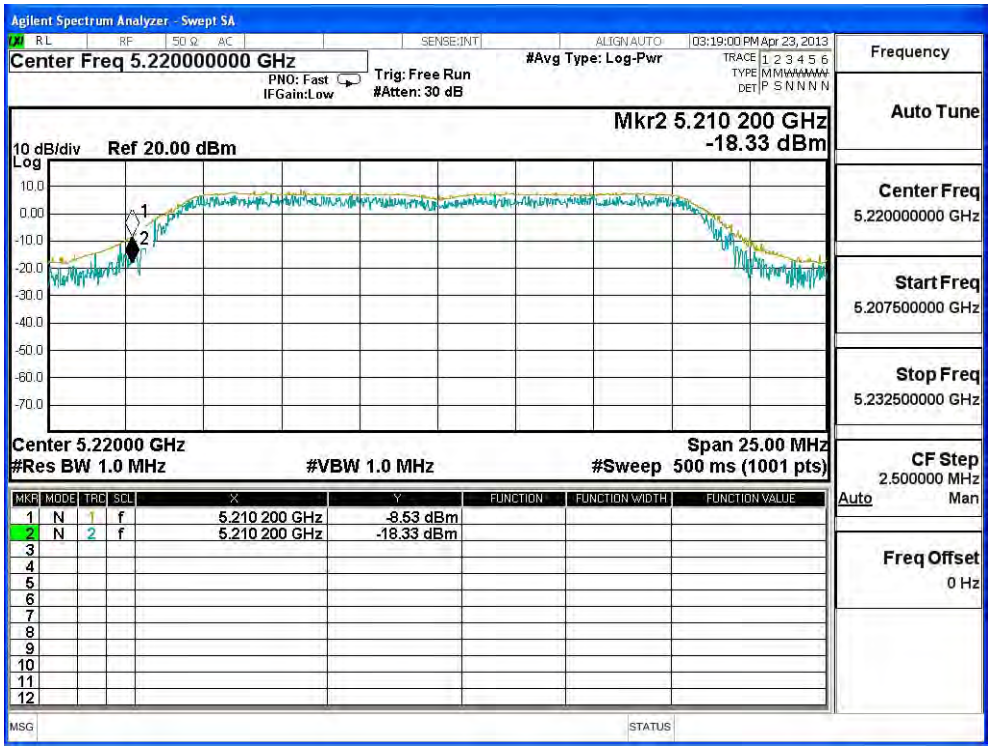
Product : TABLET PC
Test Item : Peak Excursion
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11a-6Mbps)

Channel No.	Frequency (MHz)	Measurement Level (dB)	Required Limit (dB)	Result
36	5180	5.900	<13	Pass
44	5220	9.800	<13	Pass
48	5240	11.210	<13	Pass
52	5260	7.420	<13	Pass
60	5300	9.490	<13	Pass
64	5320	6.400	<13	Pass
100	5500	7.840	<13	Pass
116	5580	4.640	<13	Pass
140	5700	3.810	<13	Pass

Channel 36:

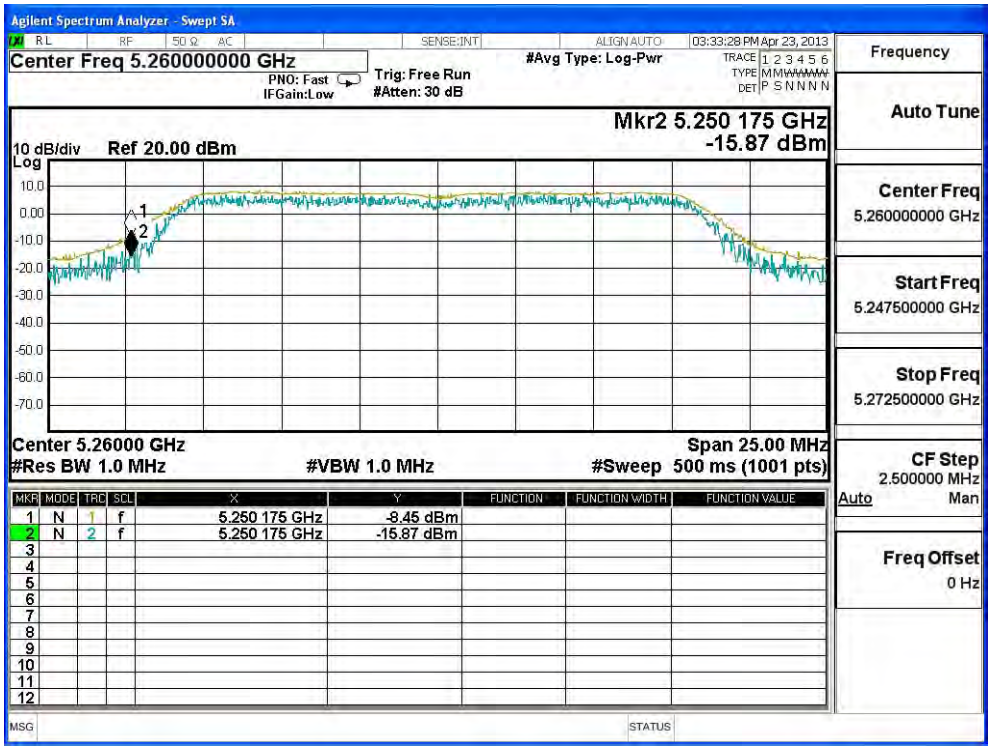


Channel 44:

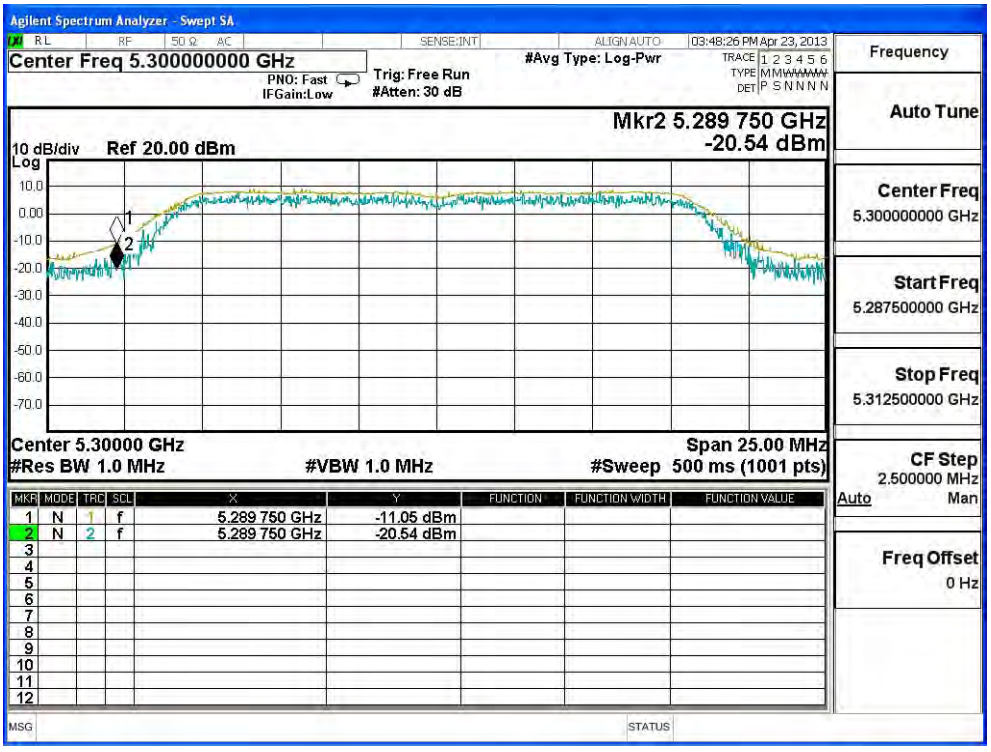


Channel 48:

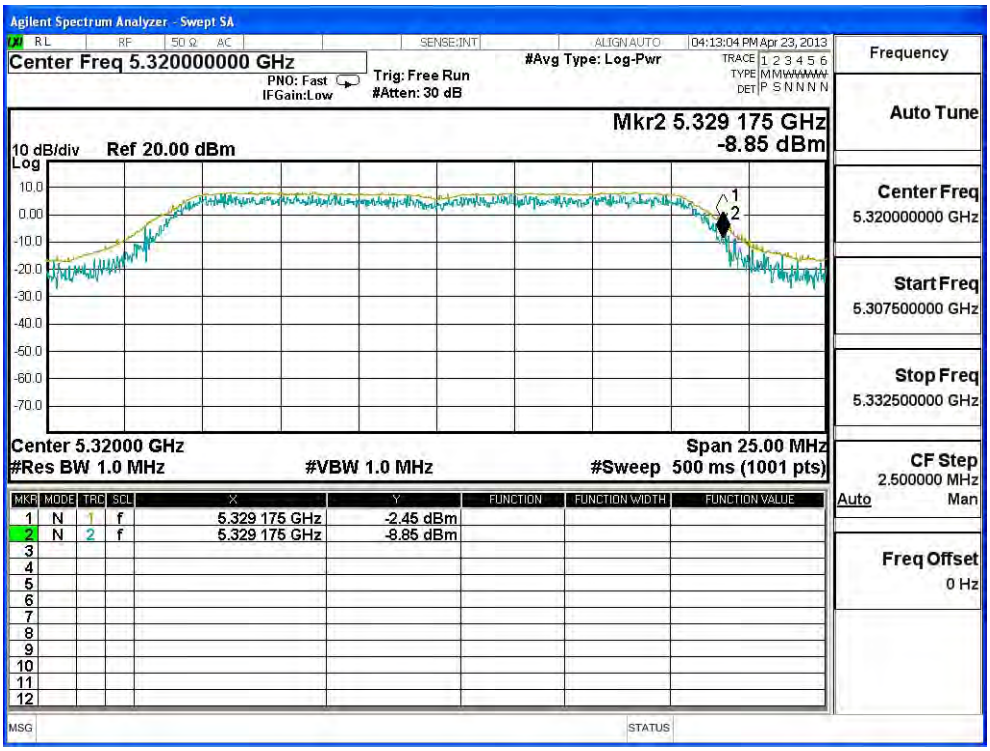
Channel 52:



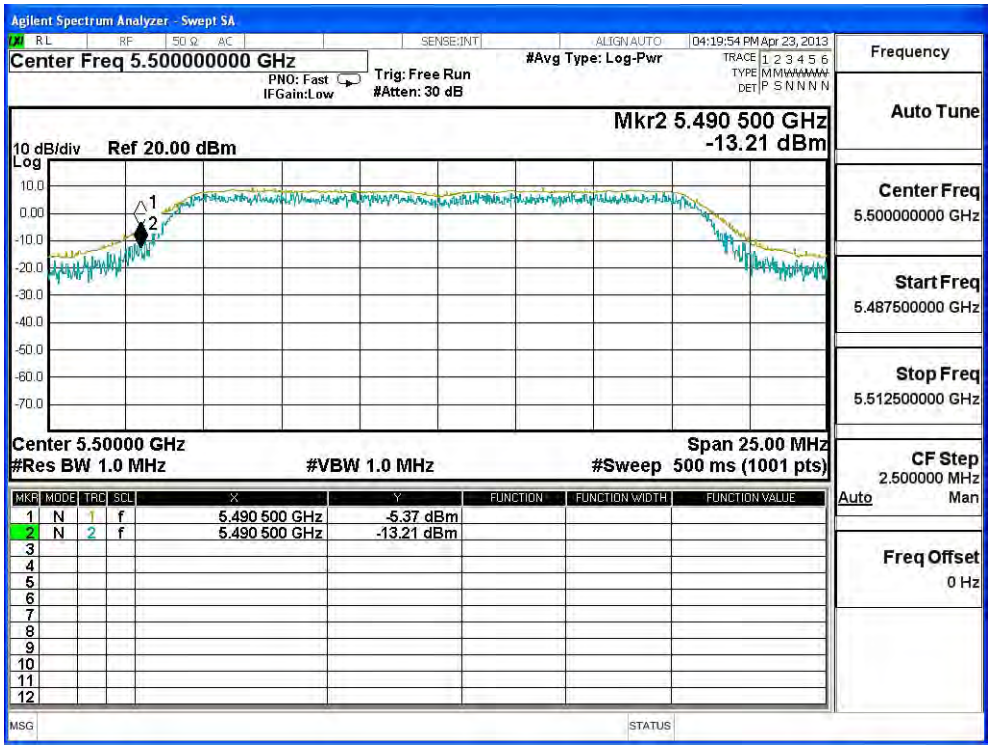
Channel 60:



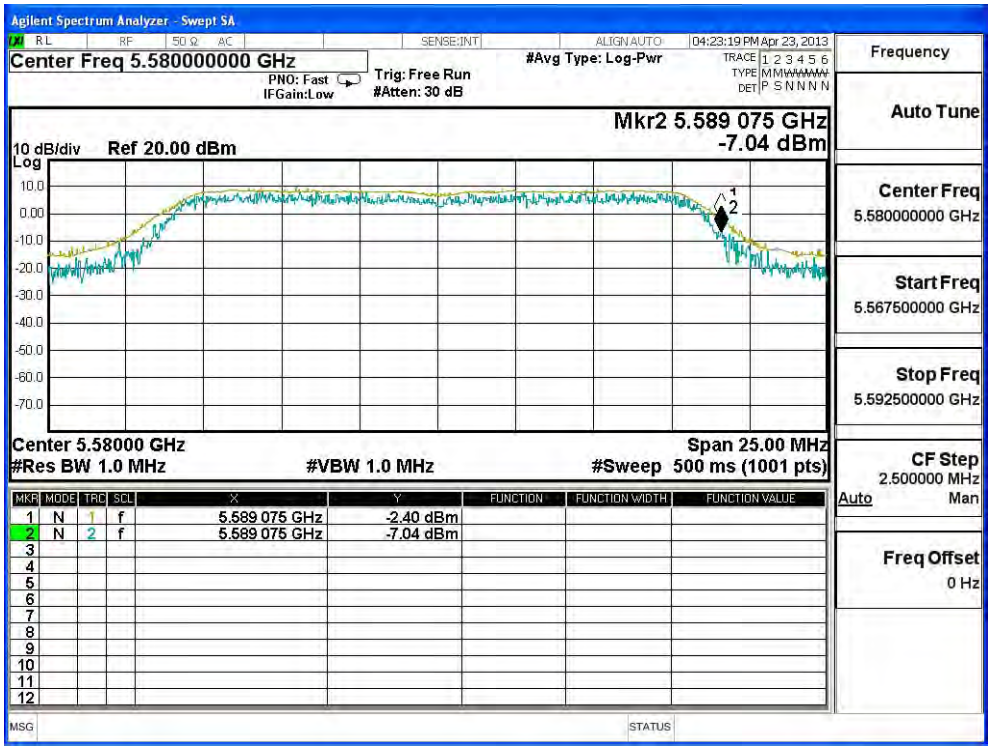
Channel 64:



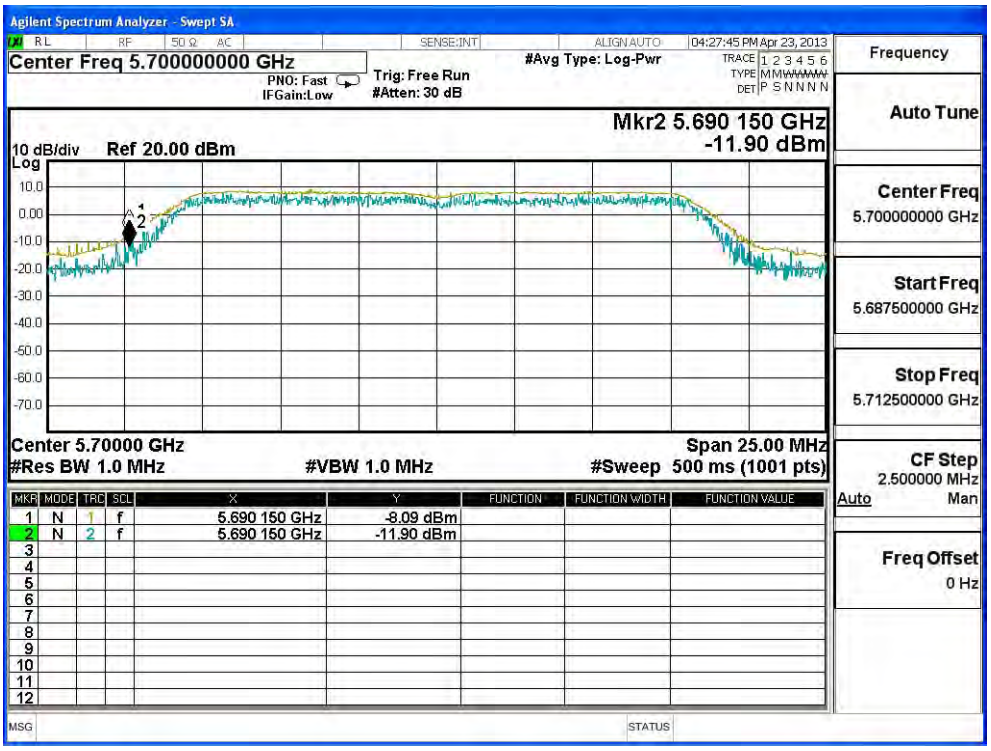
Channel 100:



Channel 116:



Channel 140:

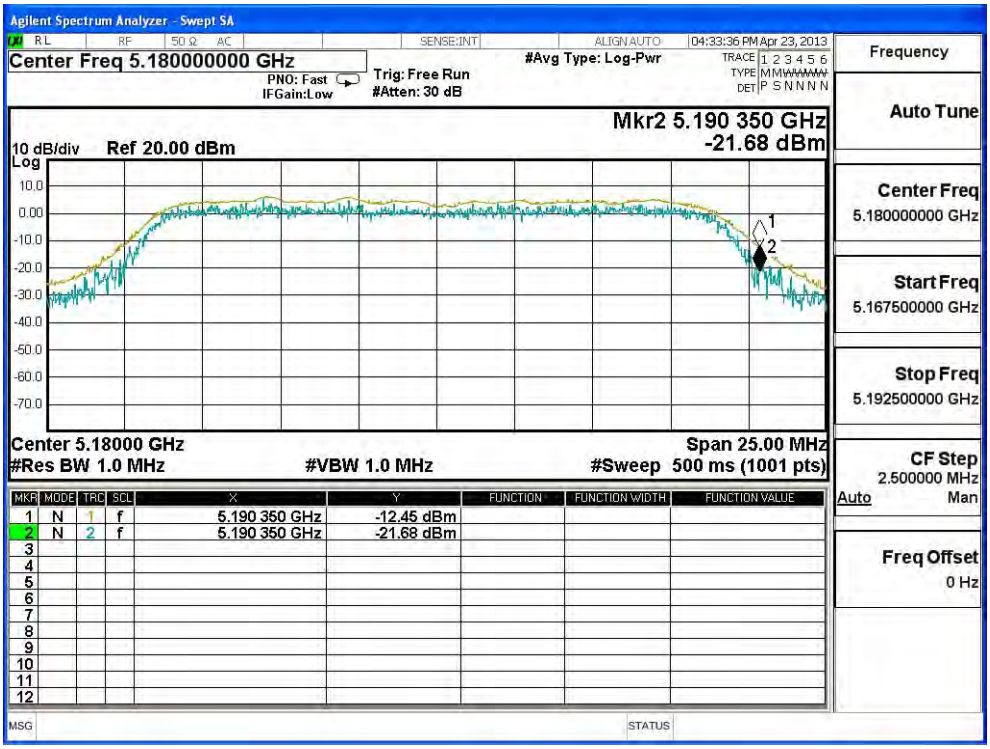


Product : TABLET PC
Test Item : Peak Excursion
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps)

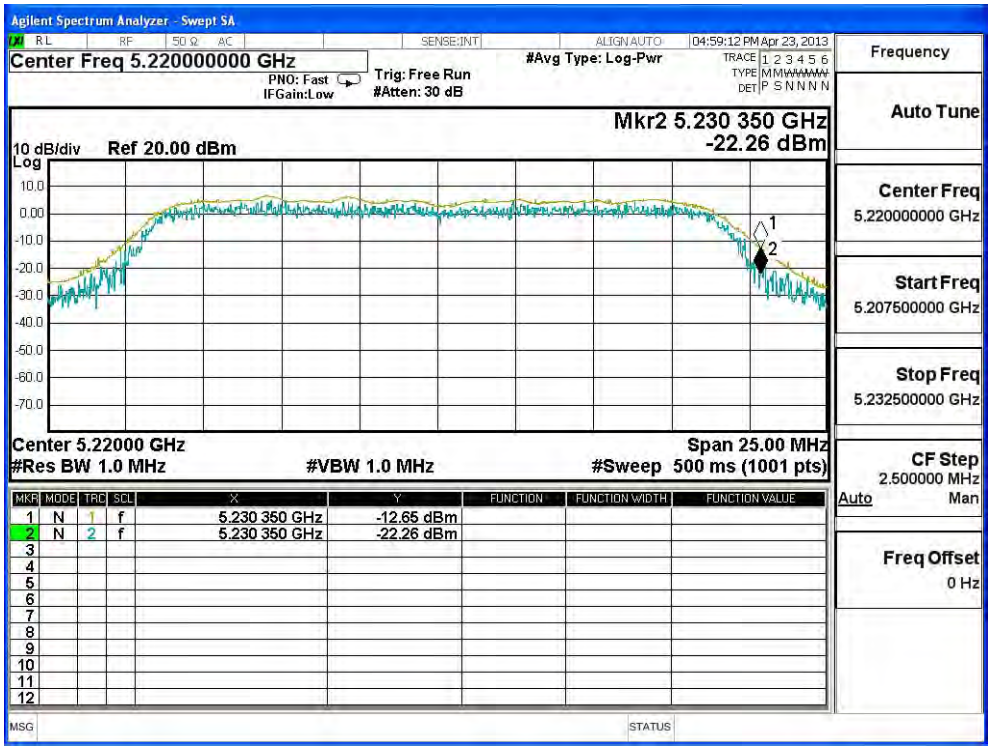
Chain A

Channel No.	Frequency (MHz)	Measurement Level (dB)	Required Limit (dB)	Result
36	5180	9.240	<13	Pass
44	5220	9.610	<13	Pass
48	5240	8.080	<13	Pass
52	5260	3.530	<13	Pass
60	5300	4.230	<13	Pass
64	5320	7.740	<13	Pass
100	5500	8.290	<13	Pass
116	5580	12.320	<13	Pass
140	5700	7.950	<13	Pass

Channel 36:

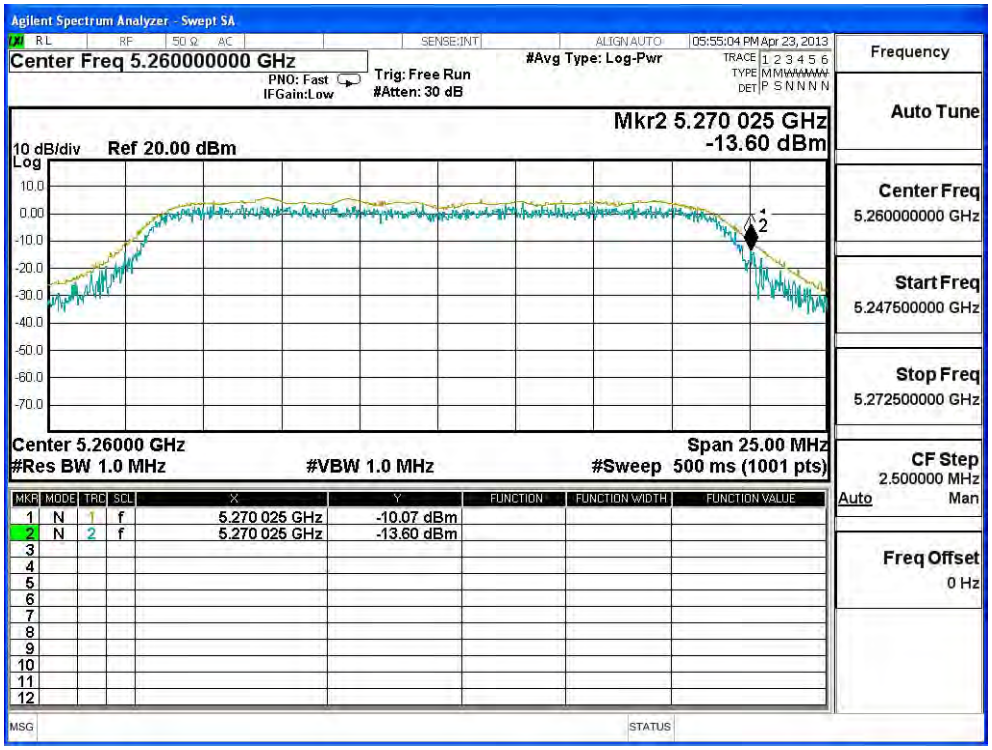


Channel 44:

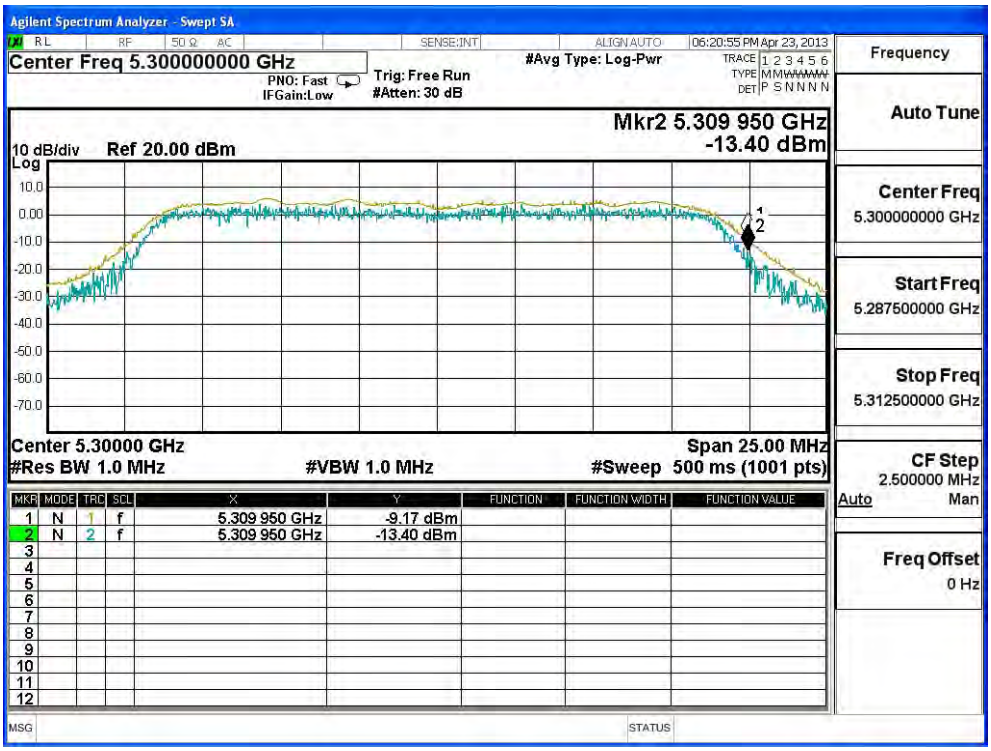


Channel 48:

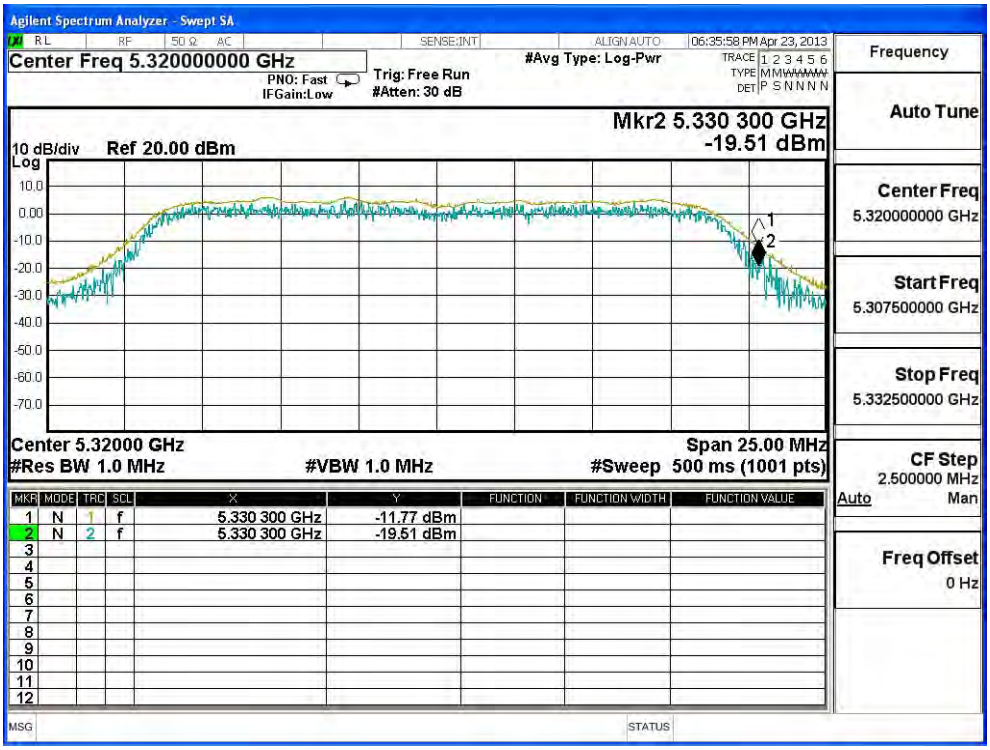
Channel 52:



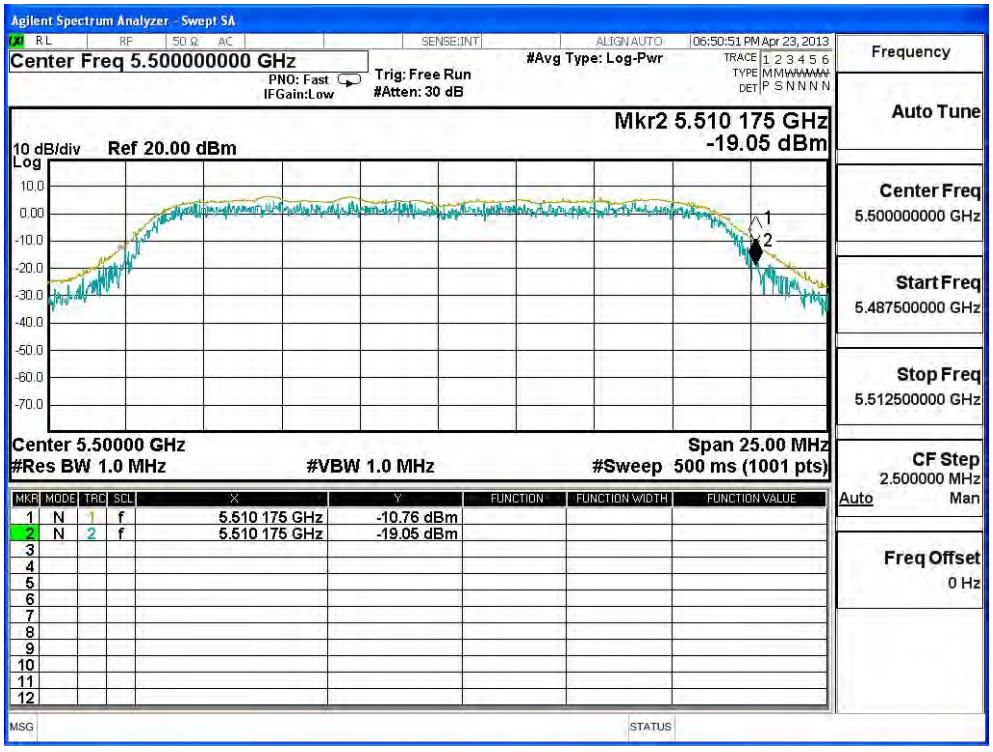
Channel 60:



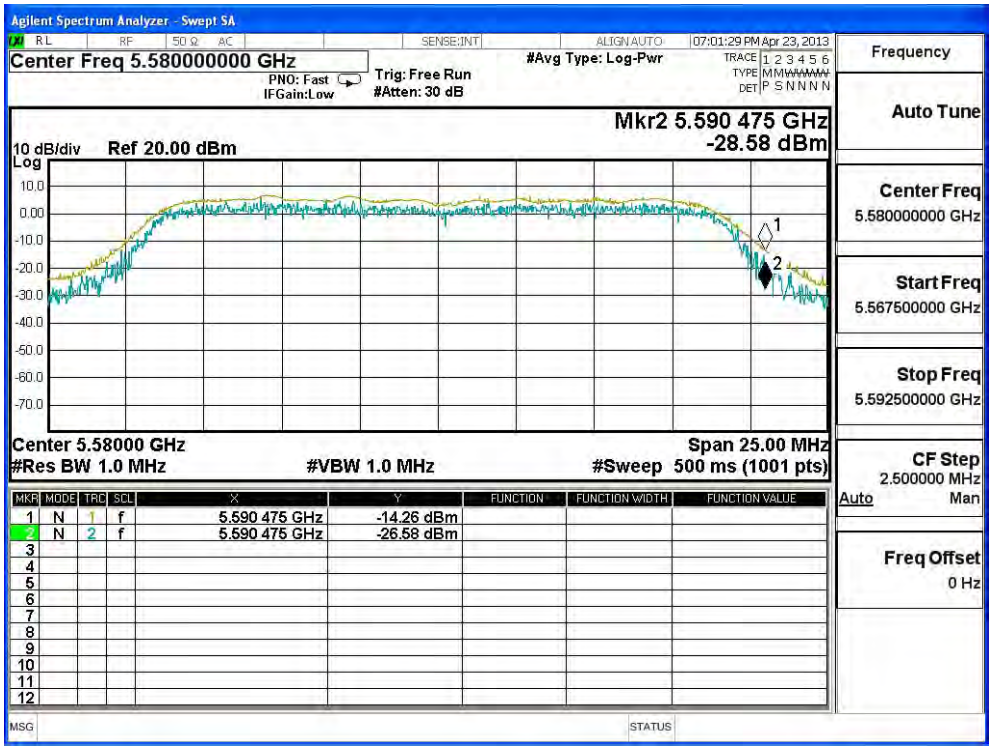
Channel 64:



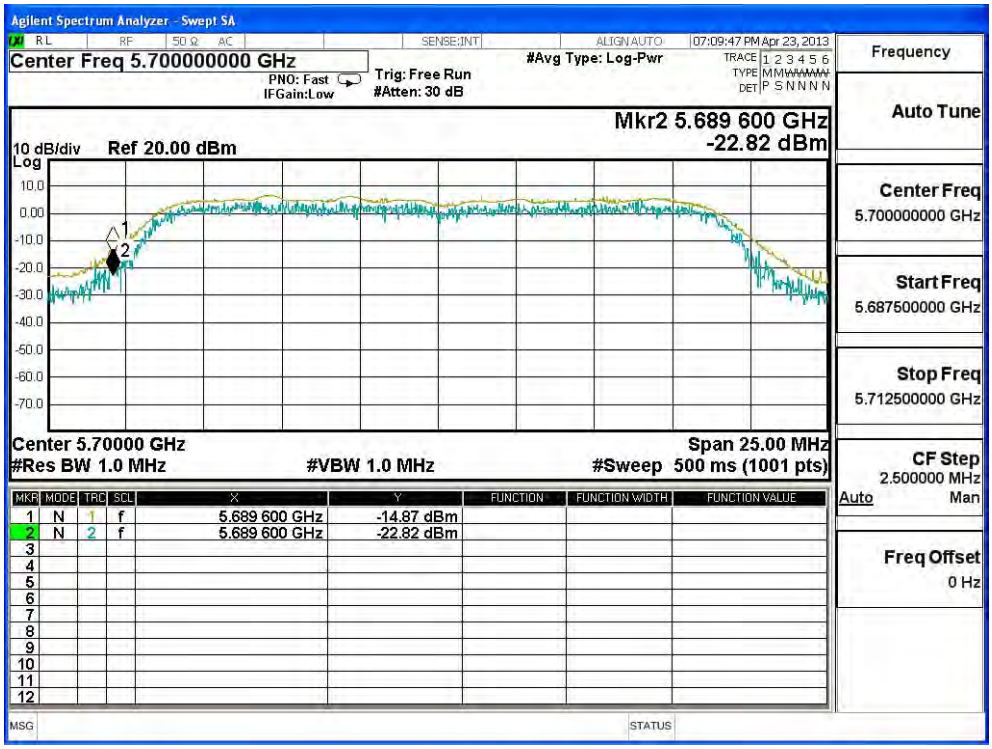
Channel 100:



Channel 116:



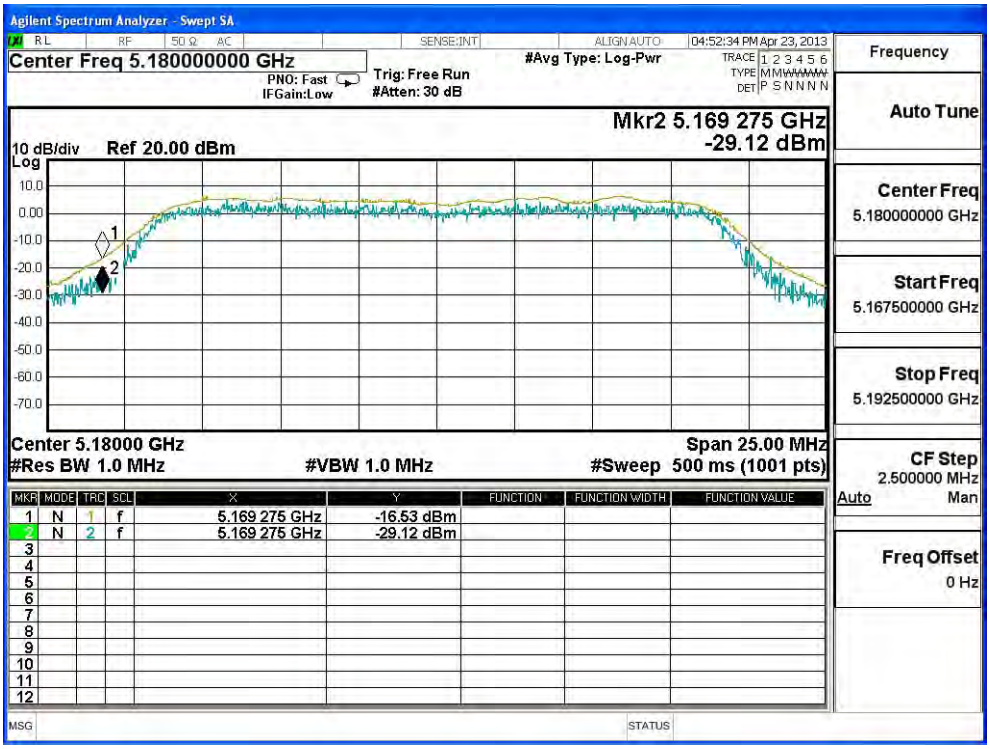
Channel 140:



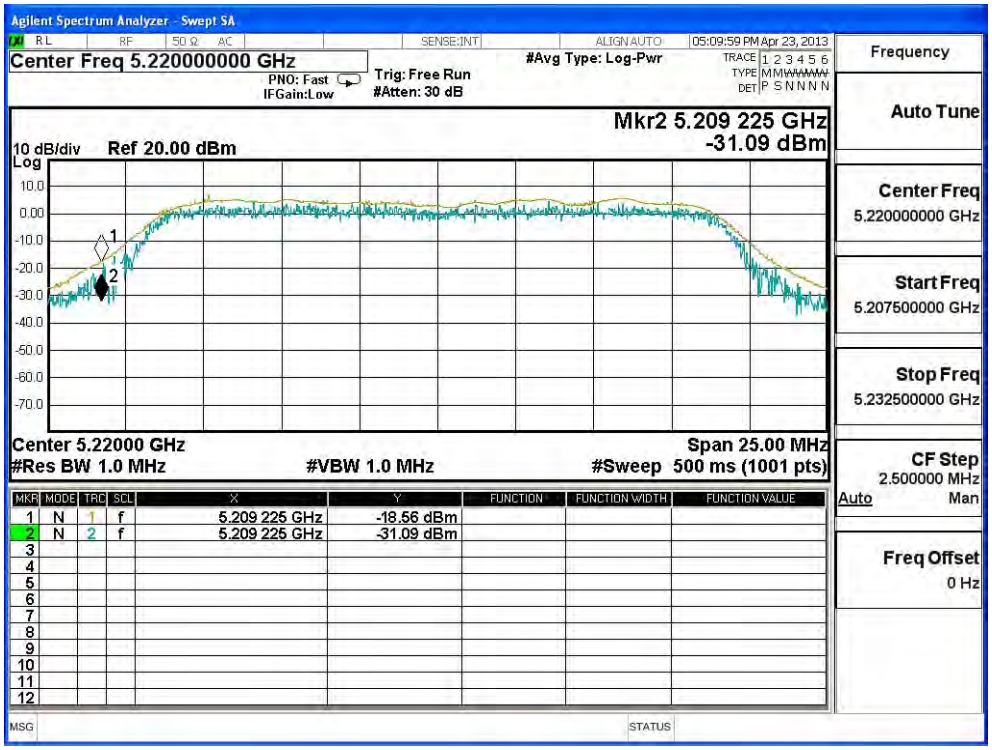
Chain B

Channel No.	Frequency (MHz)	Measurement Level (dB)	Required Limit (dB)	Result
36	5180	12.590	<13	Pass
44	5220	12.530	<13	Pass
48	5240	5.660	<13	Pass
52	5260	11.160	<13	Pass
60	5300	7.700	<13	Pass
64	5320	8.420	<13	Pass
100	5500	8.470	<13	Pass
116	5580	3.110	<13	Pass
140	5700	9.370	<13	Pass

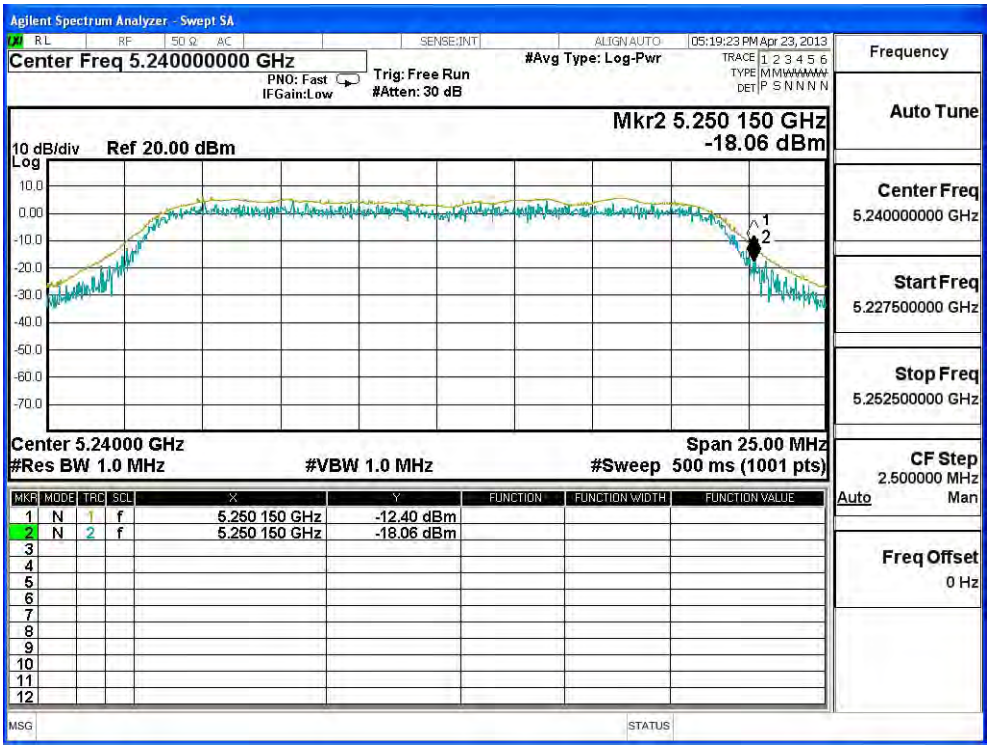
Channel 36:



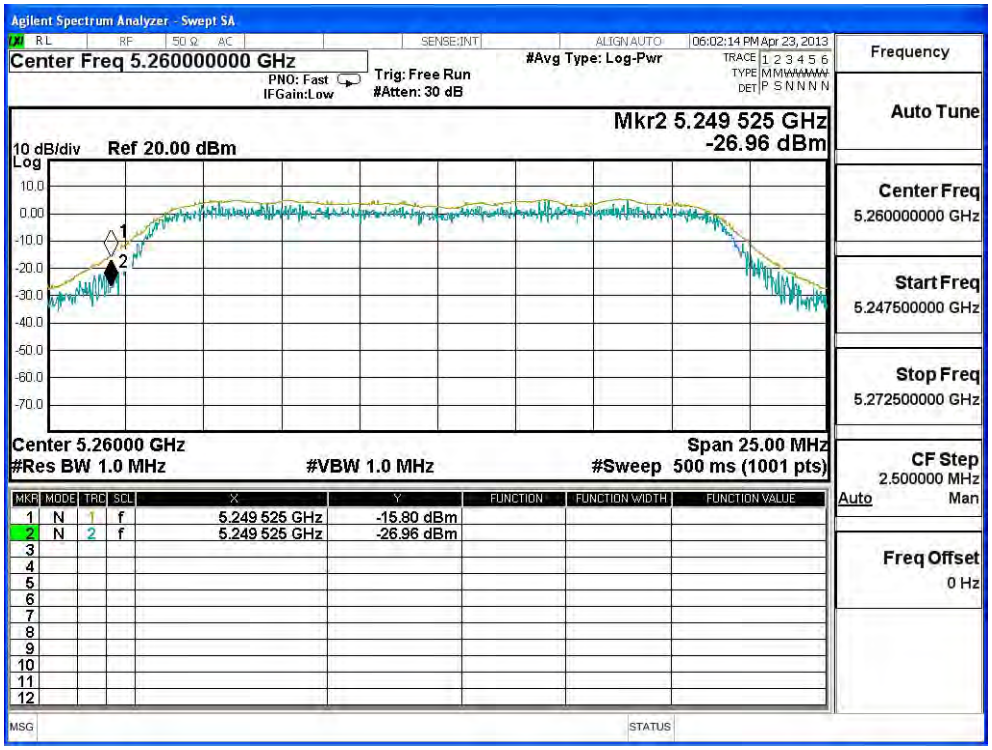
Channel 44:



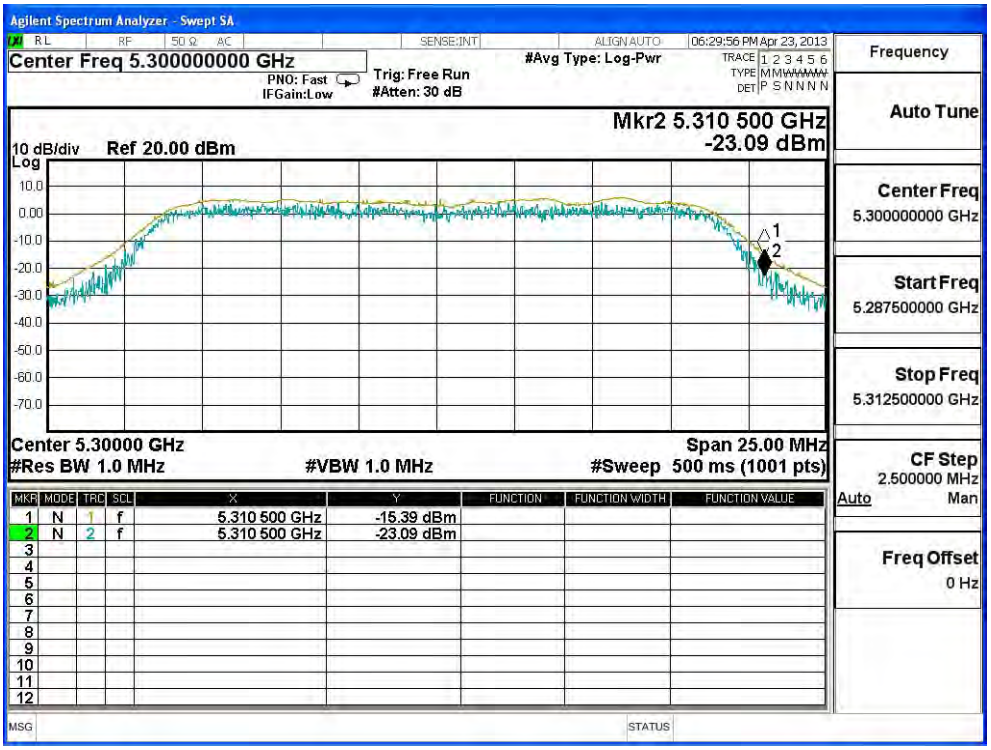
Channel 48:



Channel 52:

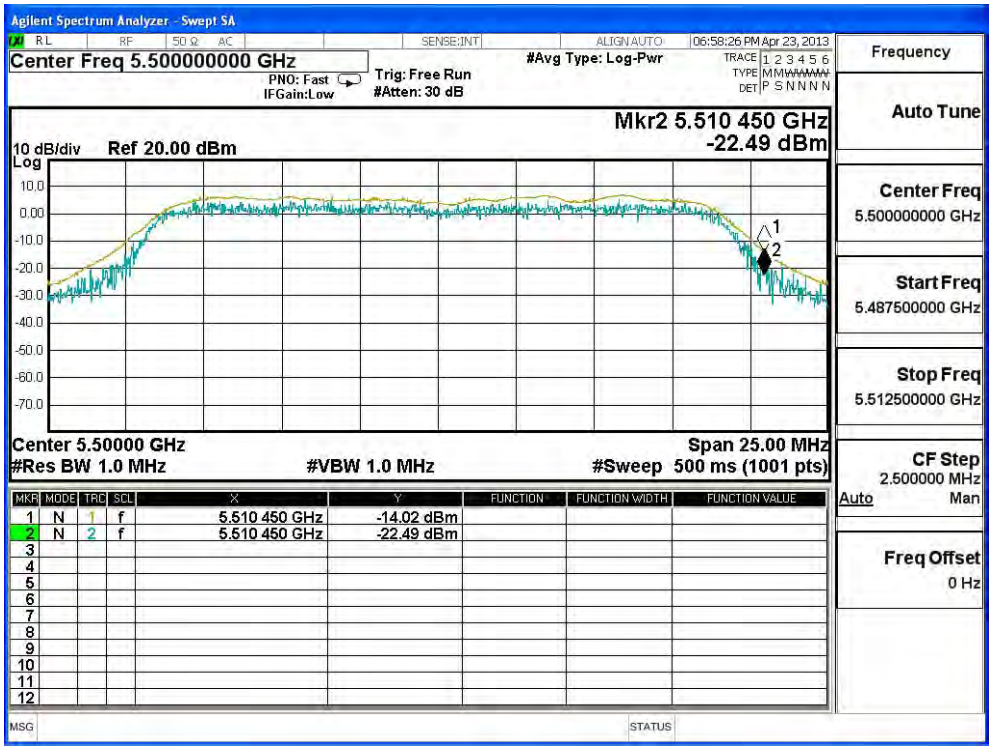


Channel 60:

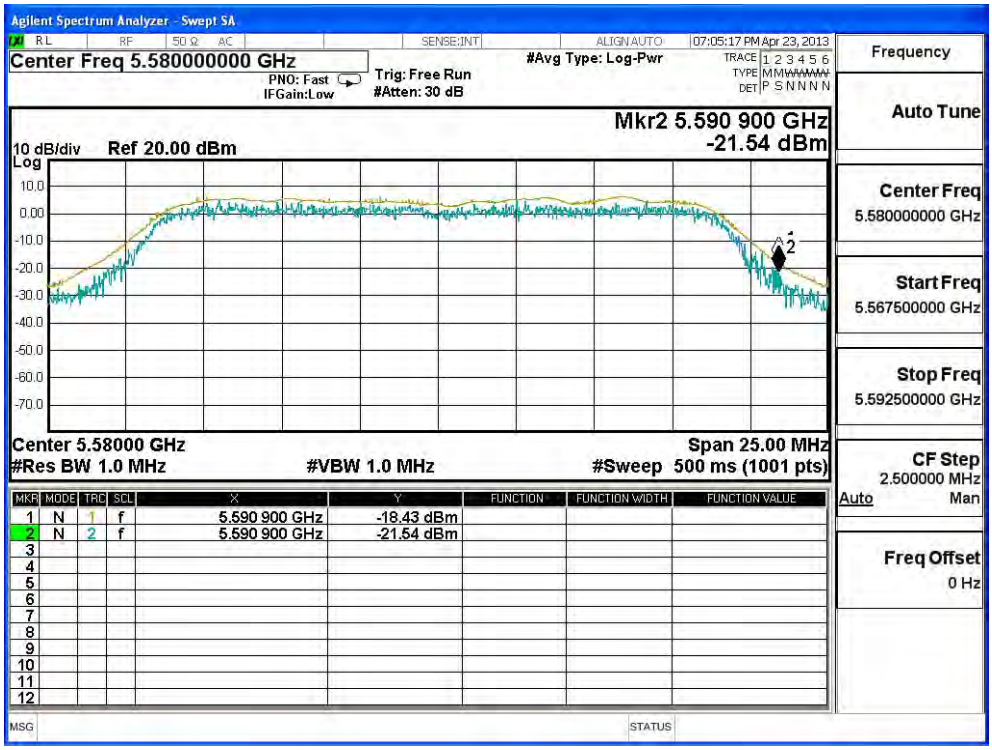


Channel 64:

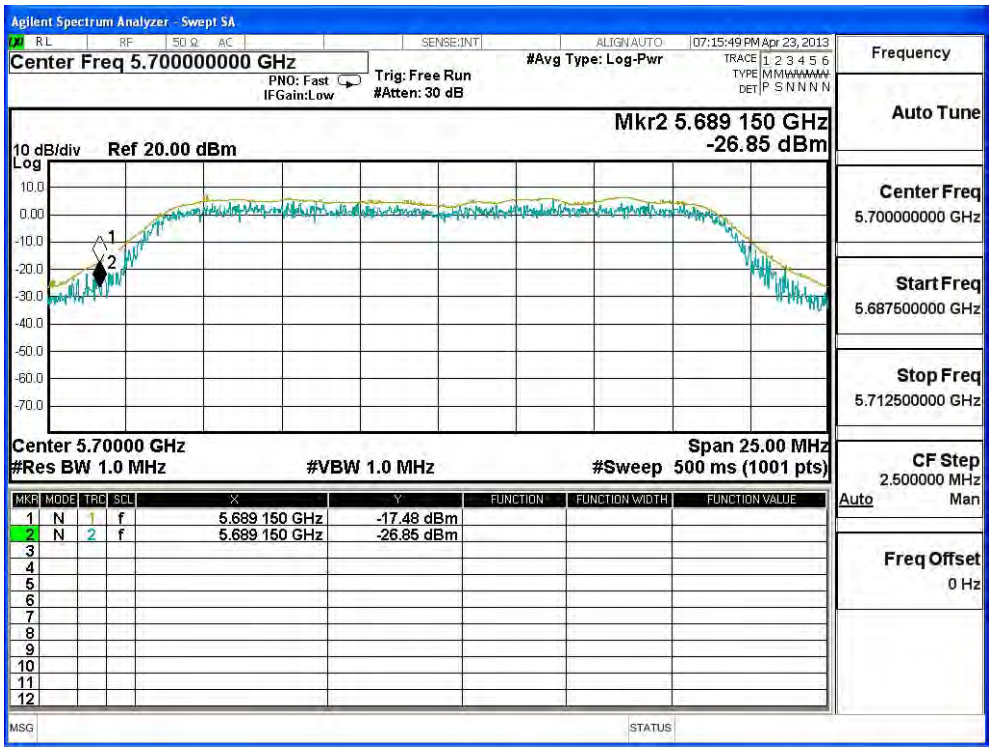
Channel 100:



Channel 116:



Channel 140:

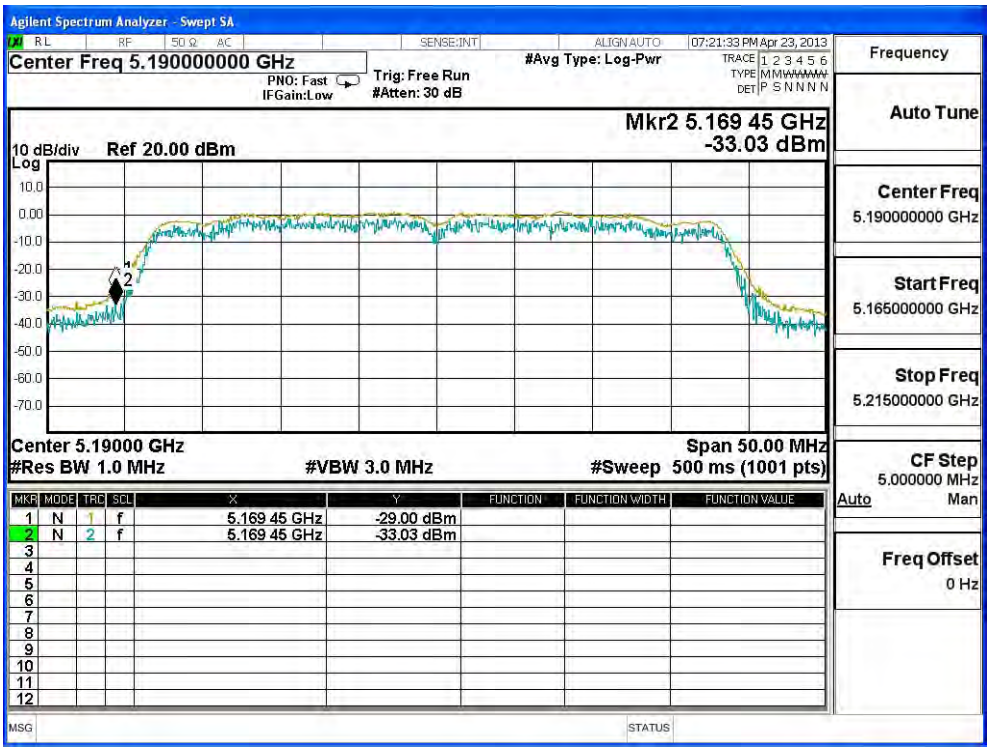


Product : TABLET PC
Test Item : Peak Excursion
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps)

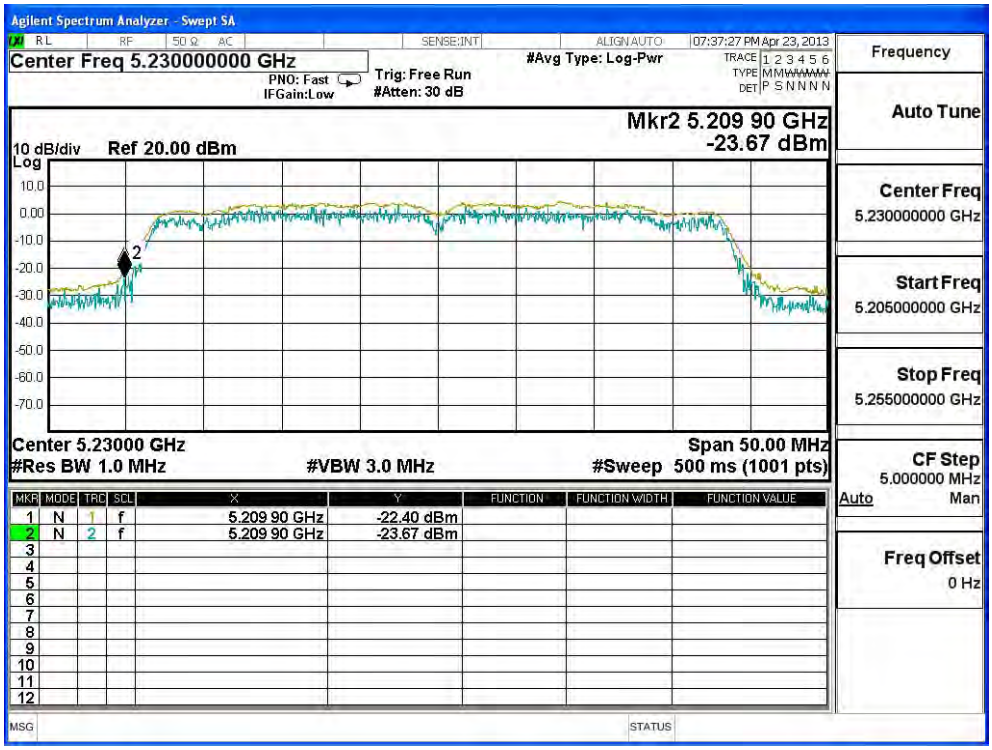
Chain A

Channel No.	Frequency (MHz)	Measurement Level (dB)	Required Limit (dB)	Result
38	5190	4.030	<13	Pass
46	5230	1.270	<13	Pass
54	5270	8.110	<13	Pass
62	5310	2.440	<13	Pass
102	5510	7.130	<13	Pass
110	5550	6.580	<13	Pass
134	5670	6.450	<13	Pass

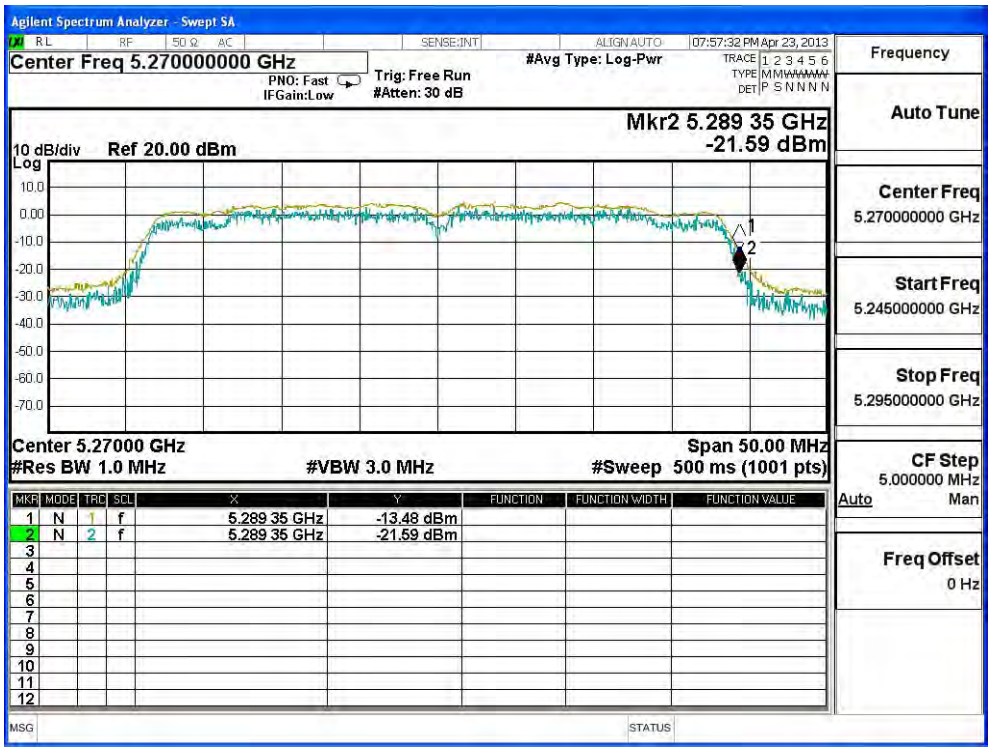
Channel 38:



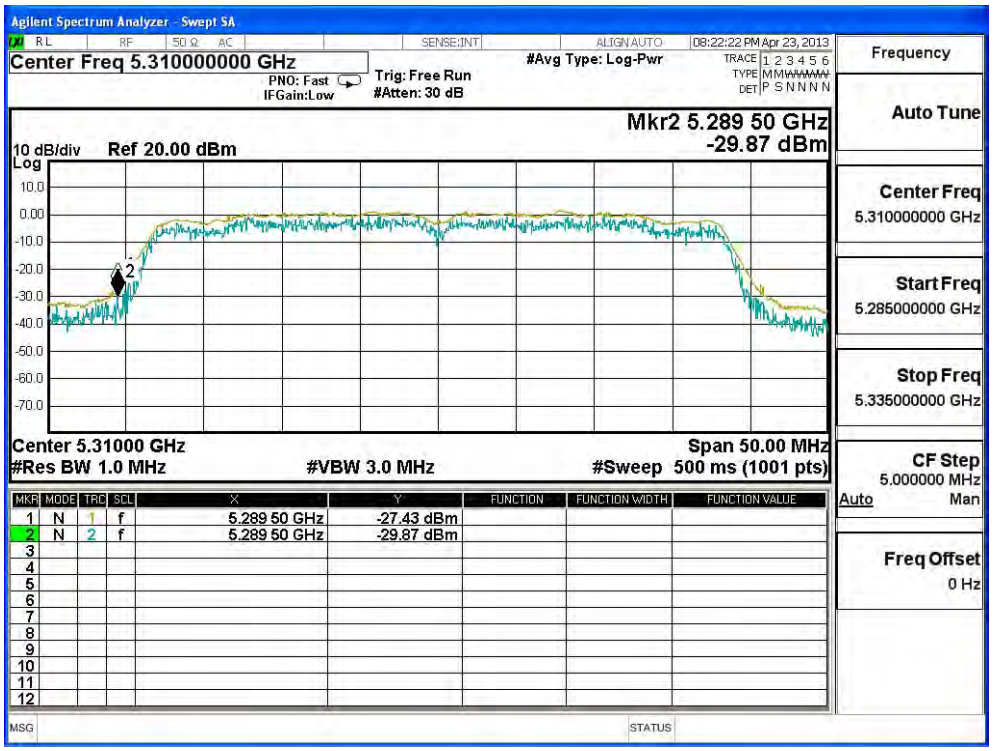
Channel 46:



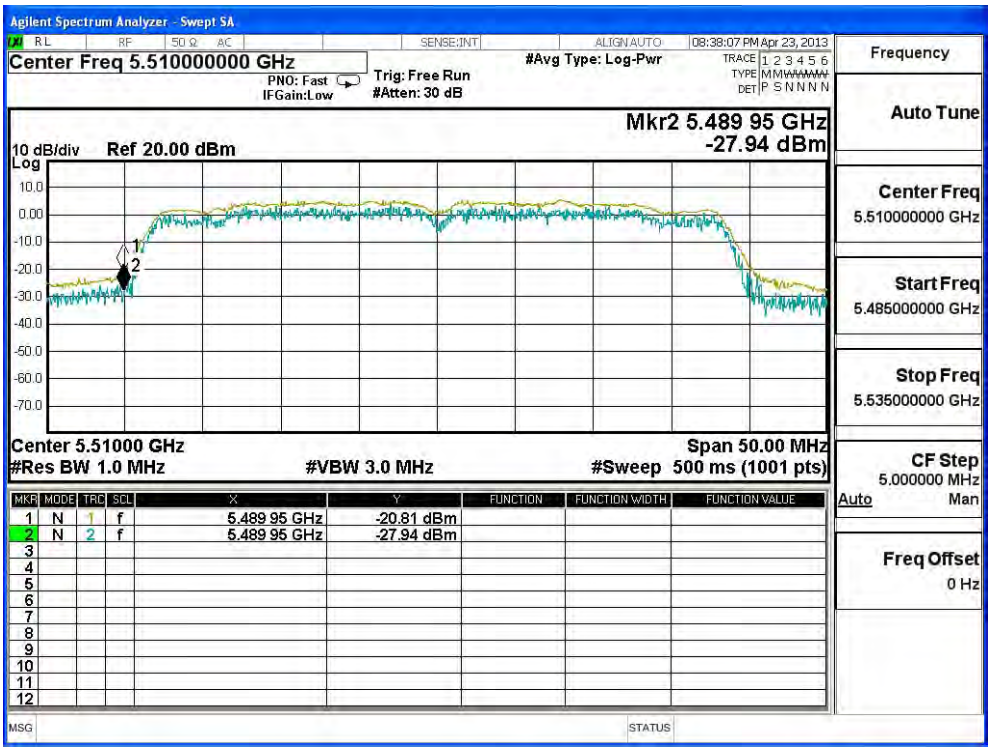
Channel 54:



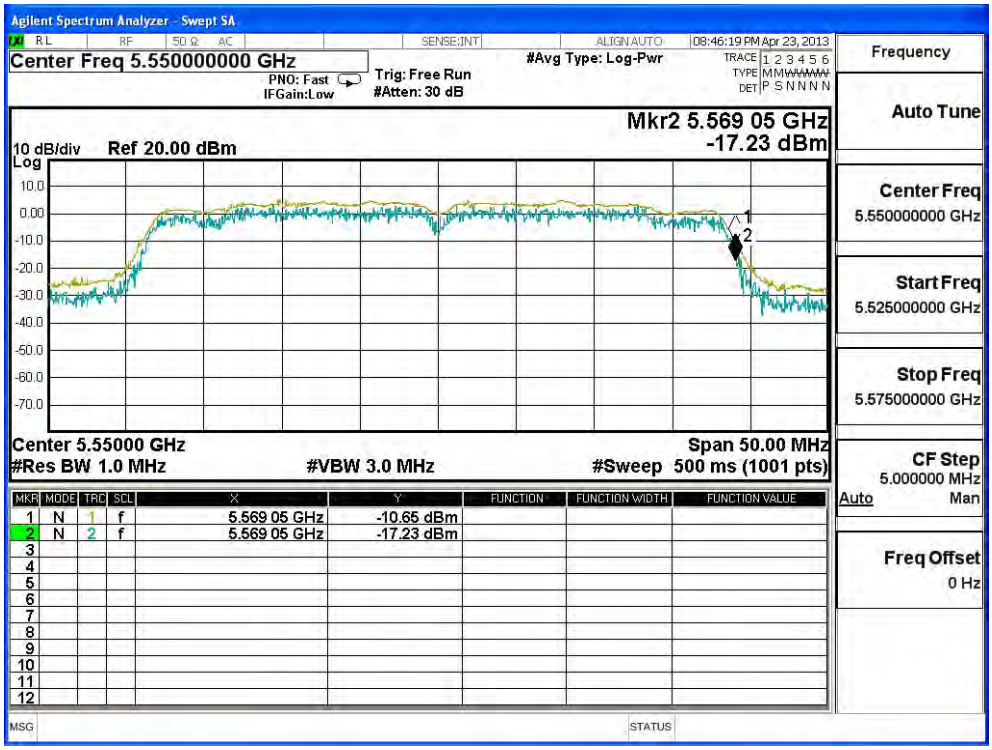
Channel 62:



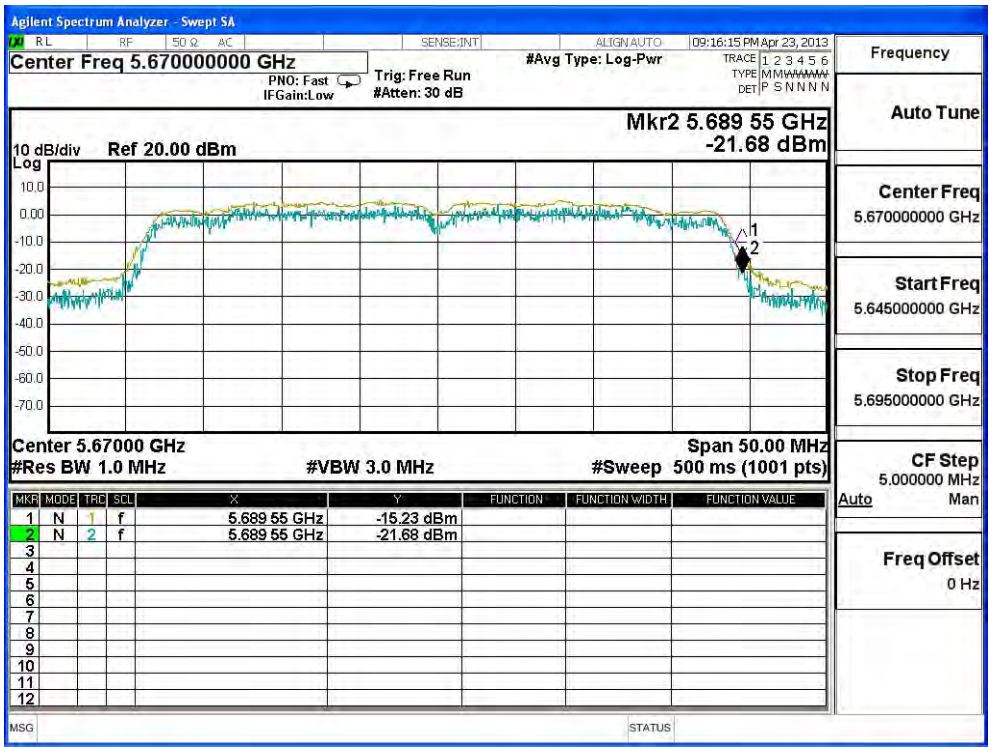
Channel 102:



Channel 110:



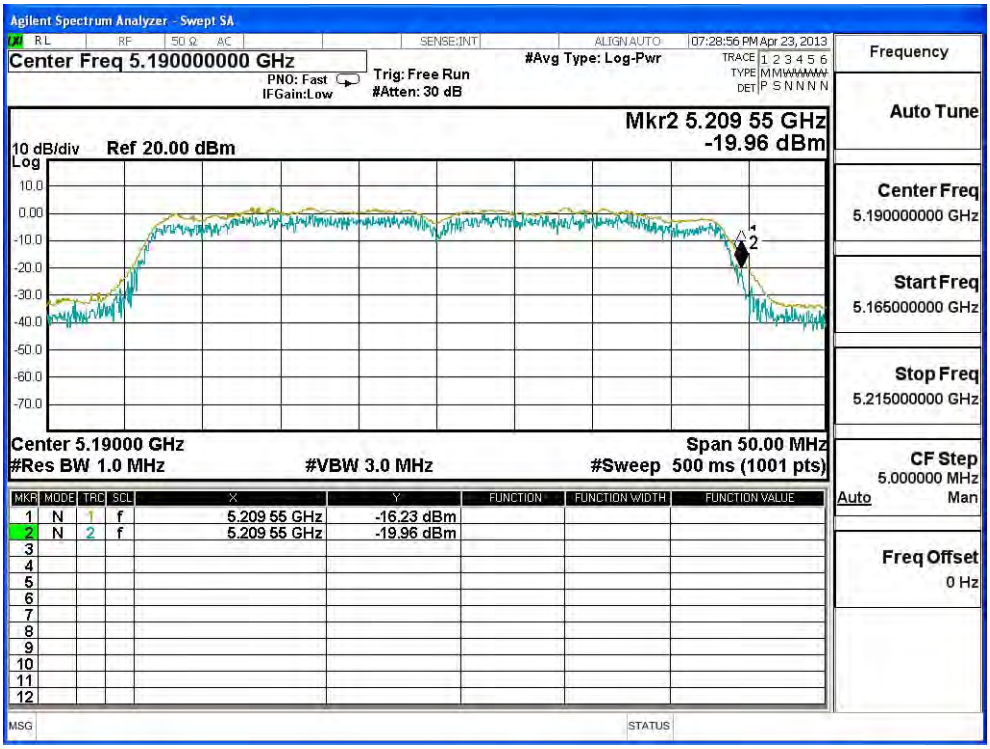
Channel 134:



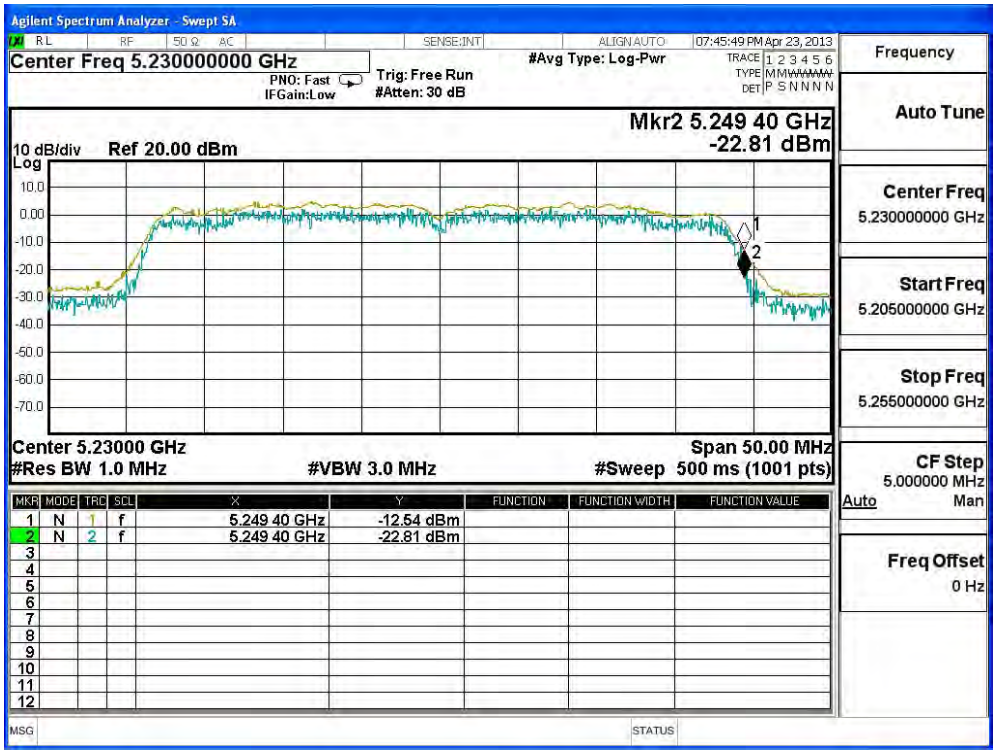
Chain B

Channel No.	Frequency (MHz)	Measurement Level (dB)	Required Limit (dB)	Result
38	5190	3.730	<13	Pass
46	5230	10.270	<13	Pass
54	5270	5.890	<13	Pass
62	5310	6.340	<13	Pass
102	5510	11.700	<13	Pass
110	5550	4.460	<13	Pass
134	5670	5.160	<13	Pass

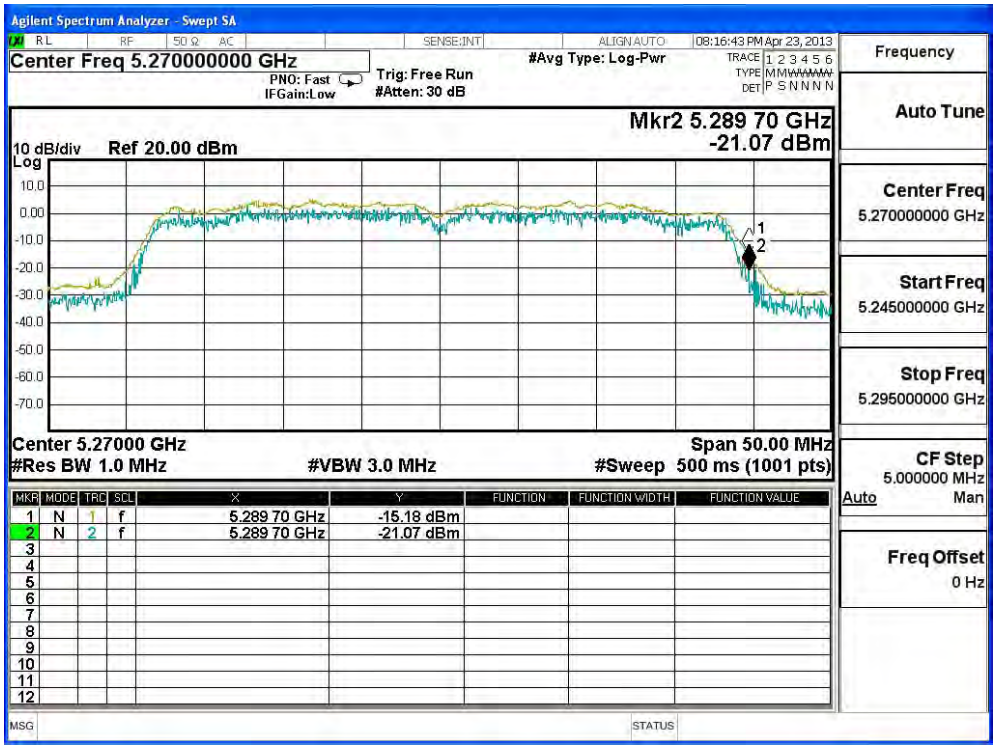
Channel 38:



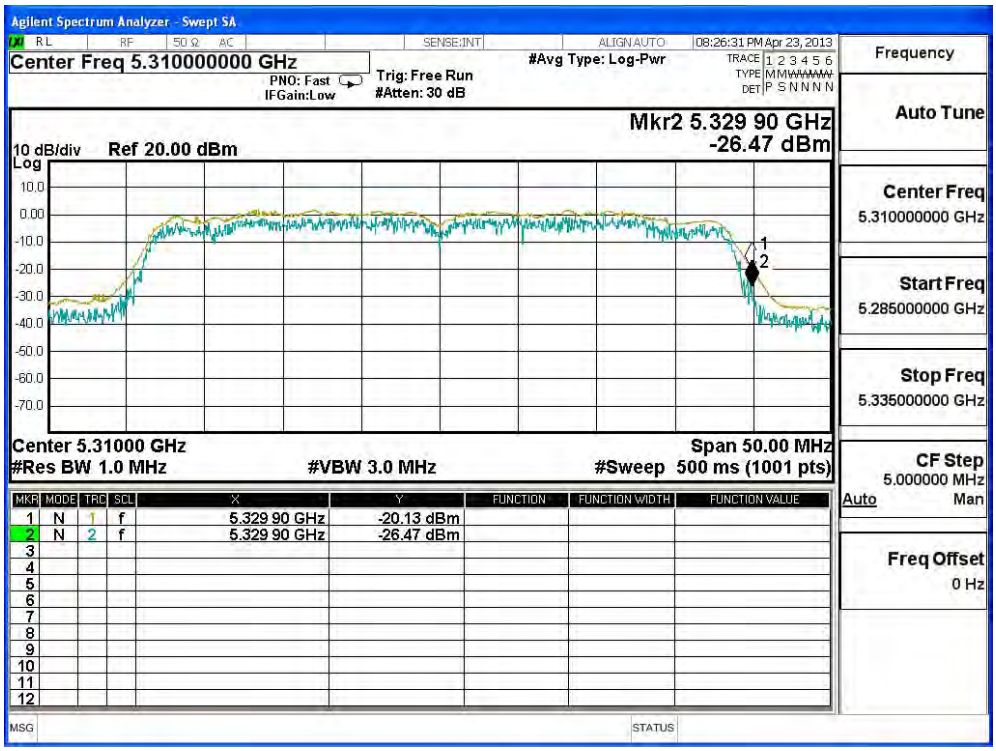
Channel 46:



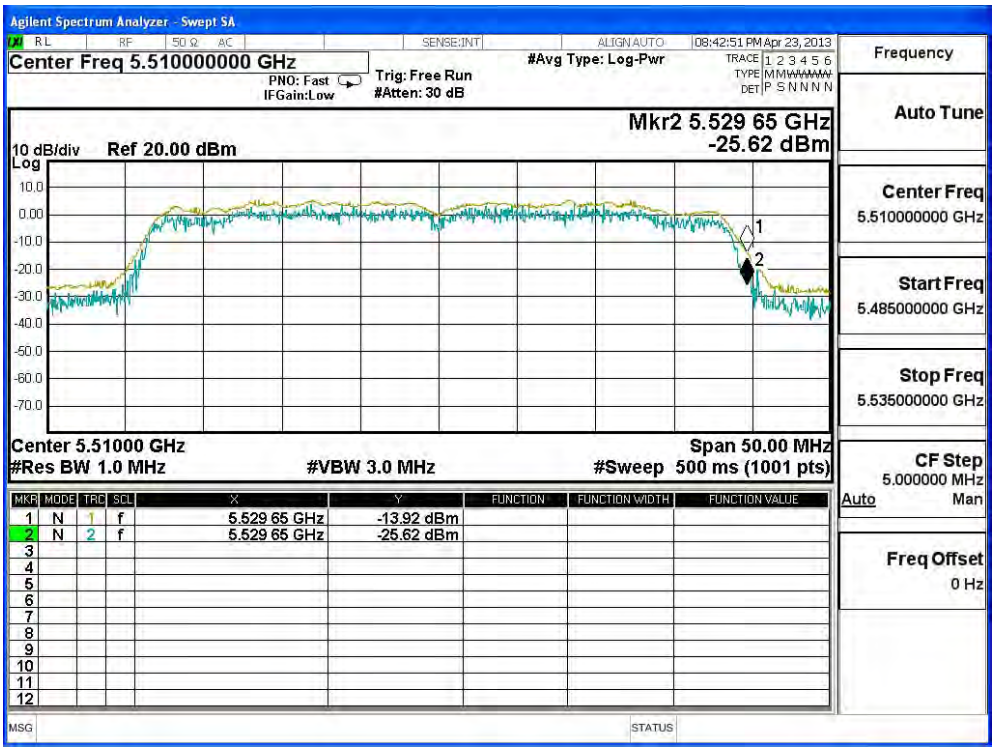
Channel 54:



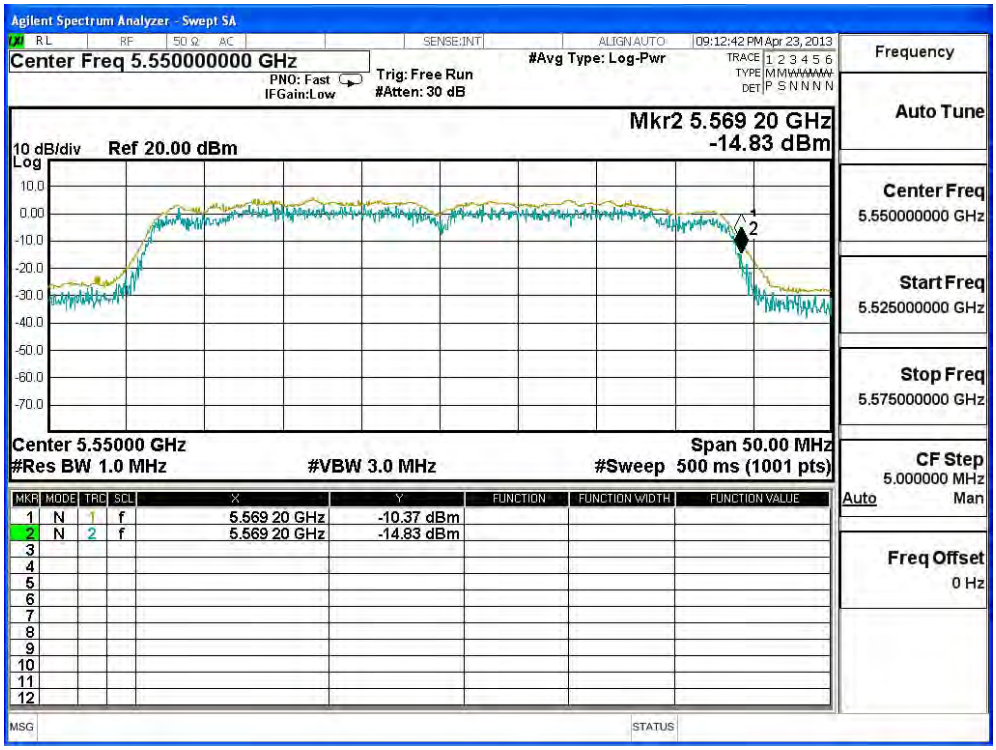
Channel 62:



Channel 102:



Channel 110:



Channel 134: