Test Report

Product Name	:	Notebook Computer
Model No.	:	S21IIX(X=0~9,A~Z,or Blank); S21IXY(X=0~9,A~Z,or Blank;Y=0~9,A~Z,or Blank);AVERATEC ES-200; 2700 Series
FCC ID	:	WL6-S21IXY5300

Applicant	:	ELITEGROUP COMPUTER SYSTEMS CO., LTD
Address	:	No.239, Sec.2, Ti Ding Blvd., Taipei, Taiwan

Date of Receipt	:	2008/08/07
Issued Date	:	2008/08/28
Report No.	:	088S056-RF-US-P09V01

Test Report Certification

Issued Date : 2008/08/28
Report No. : 088S056-RF-US-P09V01

QuieTek

Product Name	:	Notebook Computer
Applicant	:	ELITEGROUP COMPUTER SYSTEMS CO.,LTD
Address	:	No.239, Sec.2, Ti Ding Blvd., Taipei, Taiwan
Manufacturer	:	UNIWILL COMPUTER(SIP) Co.,LTD
Address	:	Export Processing Zone, Central SuHong Road, Suzhou Industrial Park, JiangSu, P.R.China Shang Hai
Model No.	:	S21IIX(X=0~9,A~Z,or Blank); S21IXY(X=0~9,A~Z,or Blank;Y=0~9,A~Z,or Blank);AVERATEC ES-200; 2700 Series
FCC ID	:	WL6-S21IXY5300
Rated Voltage	:	AC 120 V / 60 Hz
EUT Voltage	:	AC 100-240 V / 50-60 Hz
Trade Name	:	UNIWILL;ECS;ELITEGROUP;AVERATEC
Applicable Standard	:	FCC CFR Title 47 Part 15 Subpart E: 2007 ANSI C63.4: 2003
Test Result	:	Complied
Performed Location	:	SuZhou EMC laboratory No.99 Hongye Rd., Suzhou Industrial Park Loufeng Hi-Tech Development Zone., SuZhou, China TEL: +86-512-6251-5088 / FAX: +86-512-6251-5098 FCC Registration Number: 800392

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Laboratory Information

We , **QuieTek Corporation**, are an independent EMC and safety consultancy that was established the whole facility in our laboratories. The test facility has been accredited by the following accreditation Bodies in compliance with ISO 17025, EN 45001 and Guide 25:

Taiwan R.O.C.	**:**	**BSMI, DGT, CNLA**
Germany	**:**	**TUV Rheinland**
Norway	**:**	**Nemko, DNV**
USA	**:**	**FCC, NVLAP**
Japan	**:**	**VCCI**

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

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NVLAP Lab Code : 200743-0
1596

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1. General Information

1.1. EUT Description

Product Name	Notebook Computer
Trade Name	UNIWILL;ECS;ELITEGROUP;AVERATEC
Model No.	S21IIX(X=0~9,A~Z,or Blank); S21IXY(X=0~9,A~Z,or Blank;Y=0~9,A~Z,or Blank);AVERATEC ES-200; 2700 Series
FCC ID	WL6-S21IXY5300

Note:
This product includes several model names as shown above, the only difference of them is the color of the appearance.

Component	
Power Supply	Manufacturer: LI SHIN INTERNATIONAL ENTERPRISE CORP. M/N: 0335C2065 Input: AC 100-240V~, 50/60Hz, 1.7A Output: DC 20V, 3.25A

WLAN	Intel / Shirley Peak 5300
Working Voltage	DC 3.3V
Frequency Range	**For 2.4GHz Band** 802.11b/g/n(20MHz): 2412 - 2462 MHz 802.11n(40MHz): 2422 - 2452 MHz **For 5.0GHz Band** 802.11a/n(20MHz): 5180 - 5320 MHz, 5500 - 5700 MHz, 5745 - 5825MHz 802.11n(40MHz): 5190 - 5310 MHz, 5510 - 5670 MHz, 5755 - 5795 MHz
Channel Number	**For 2.4GHz Band** 802.11b/g/n(20MHz): 11 802.11n(40MHz): 7 **For 5.0GHz Band** 802.11a/n(20MHz): 24 802.11n(40MHz): 11
Type of Modulation	802.11b: DSSS
	802.11a/g/n: OFDM
Data Rate	802.11a/g: 6/9/12/18/24/36/48/54 Mbps
	802.11b: 1/2/5.5/11 Mbps
	802.11n: up to 450 Mbps
Channel Control	Auto
Antenna Type	PIFA
Antenna Gain	Refer to the “Antenna List”

For 2.4GHz Band

802.11b/g/n(20MHz) Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
01	2412 MHz	02	2417 MHz	03	2422 MHz	04	2427 MHz
05	2432 MHz	06	2437 MHz	07	2442 MHz	08	2447 MHz
09	2452 MHz	10	2457 MHz	11	2462 MHz	N/A	N/A

802.11n(40MHz) Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
03	2422 MHz	04	2427 MHz	05	2432 MHz	06	2437 MHz
07	2442 MHz	08	2447 MHz	09	2452 MHz	N/A	N/A

For 5.0GHz Band

802.11a/n(20MHz) Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
36	5180 MHz	40	5200 MHz	44	5220 MHz	48	5240 MHz
52	5260 MHz	56	5280 MHz	60	5300 MHz	64	5320 MHz
100	5500 MHz	104	5520 MHz	108	5540 MHz	112	5560 MHz
116	5580 MHz	120	5600 MHz	124	5620 MHz	128	5640 MHz
132	5660 MHz	136	5680 MHz	140	5700 MHz	149	5745 MHz
153	5765 MHz	157	5785 MHz	161	5805 MHz	165	5825 MHz

802.11n(40MHz) Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz	54	5270 MHz	62	5310 MHz
102	5510 MHz	110	5550 MHz	118	5590 MHz	126	5630 MHz
134	5670 MHz	151	5755 MHz	159	5795 MHz	N/A	N/A

802.11a/b/g/n Antenna List

Antenna	Manufacturer	Model No.	Peak Gain
Main Antenna	ECS COMPUTER CORP.	K05008006801	2.4GHz: -1.33dBi 5GHz: 0.27dBi
Aux Antenna	ECS COMPUTER CORP.	K05008006701	2.4GHz: -0.74dBi 5GHz: -0.53dBi
MIMO Antenna	ECS COMPUTER CORP.	K05008006601	2.4GHz: -0.97dBi 5GHz: 0.94 dBi

1.2. Mode of Operation

QuieTek has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

Test Mode
Mode 1: Transmit by 802.11a
Mode 2: Transmit by 802.11n (20MHz Bandwidth)
Mode 3: Transmit by 802.11n (40MHz Bandwidth)

Note:

1. Regards to the frequency band operation: the lowest、middle and highest frequency of channel were selected to perform the test, then shown on this report.
2. This device is a composite device in accordance with Part 15 Subpart B regulations. The function for the receiver was measured and made a test report that the report number is 084S019-IT-US-P01V02, certified under Declaration of Conformity.

1.3. Tested System Details

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

Product		Manufacturer	Model No.	Serial No.	Power Cord
1	N/A	N/A	N/A	N/A	N/A

1.4. Configuration of Tested System

Connection Diagram


Signal Cable Type		Signal cable Description
A	N/A	N/A

1.5. EUT Exercise Software

1	Setup the EUT and simulators as shown on above.
2	Turn on the power of equipment.
3	Execute the CRTU (Ver 5.0.52.0000) test program on the PC.
4	Setup the test channel and the test mode press ok to start the continue transmit.

Software Control Gain Setting Value

Mode 1: 802.11a								
Channel	Frequency (MHz)	Register Setting			Power (dBm)			Total Power (dBm)
		Chain A	Chain B	Chain C	Chain A	Chain B	Chain C	
36	5180	28	N/A	N/A	14.57	N/A	N/A	14.57
40	5200	27.5	N/A	N/A	14.70	N/A	N/A	14.70
48	5240	26	N/A	N/A	14.61	N/A	N/A	14.61
52	5260	28	N/A	N/A	16.51	N/A	N/A	16.51
60	5300	26.5	N/A	N/A	16.52	N/A	N/A	16.52
64	5320	26	N/A	N/A	16.44	N/A	N/A	16.44
100	5500	24.5	N/A	N/A	16.72	N/A	N/A	16.72
120	5600	24.5	N/A	N/A	16.70	N/A	N/A	16.70
140	5700	25	N/A	N/A	16.62	N/A	N/A	16.62

Mode 1: 802.11a								
Channel	Frequency (MHz)	Register Setting			Power (dBm)			Total Power (dBm)
		Chain A	Chain B	Chain C	Chain A	Chain B	Chain C	
36	5180	N/A	28.5	N/A	N/A	14.42	N/A	14.42
40	5200	N/A	28	N/A	N/A	14.54	N/A	14.54
48	5240	N/A	26.5	N/A	N/A	14.60	N/A	14.60
52	5260	N/A	28.5	N/A	N/A	16.67	N/A	16.67
60	5300	N/A	27	N/A	N/A	16.36	N/A	16.36
64	5320	N/A	26.5	N/A	N/A	16.43	N/A	16.43
100	5500	N/A	26	N/A	N/A	16.59	N/A	16.59
120	5600	N/A	25.5	N/A	N/A	16.57	N/A	16.57
140	5700	N/A	25.5	N/A	N/A	16.39	N/A	16.39

Mode 1: 802.11a								
Channel	Frequency (MHz)	Register Setting			Average Power (dBm)			Total AV Power (dBm)
		Chain A	Chain B	Chain C	Chain A	Chain B	Chain C	
36	5180	N/A	N/A	28.5	N/A	N/A	14.33	14.33
40	5200	N/A	N/A	28	N/A	N/A	14.56	14.56
48	5240	N/A	N/A	27.5	N/A	N/A	14.34	14.34
52	5260	N/A	N/A	29.5	N/A	N/A	16.39	16.39
60	5300	N/A	N/A	29	N/A	N/A	16.58	16.58
64	5320	N/A	N/A	28.5	N/A	N/A	16.41	16.41
100	5500	N/A	N/A	27	N/A	N/A	16.55	16.55
120	5600	N/A	N/A	26	N/A	N/A	16.61	16.61
140	5700	N/A	N/A	26	N/A	N/A	16.44	16.44

Mode 2: 802.11n (20MHz Bandwidth)								
Channel	Frequency (MHz)	Register Setting			Power (dBm)			Total Power (dBm)
		Chain A	Chain B	Chain C	Chain A	Chain B	Chain C	
36	5180	28	N/A	N/A	14.57	N/A	N/A	14.57
40	5200	27.5	N/A	N/A	14.67	N/A	N/A	14.67
48	5240	26	N/A	N/A	14.62	N/A	N/A	14.62
52	5260	28	N/A	N/A	16.65	N/A	N/A	16.65
60	5300	26.5	N/A	N/A	16.46	N/A	N/A	16.46
64	5320	26	N/A	N/A	16.49	N/A	N/A	16.49
100	5500	24.5	N/A	N/A	16.65	N/A	N/A	16.65
120	5600	24.5	N/A	N/A	16.60	N/A	N/A	16.60
140	5700	25	N/A	N/A	16.61	N/A	N/A	16.61

Mode 2: 802.11n (20MHz Bandwidth)								
Channel	Frequency (MHz)	Register Setting			Power (dBm)			Total Power (dBm)
		Chain A	Chain B	Chain C	Chain A	Chain B	Chain C	
36	5180	N/A	29	N/A	N/A	14.67	N/A	14.67
40	5200	N/A	28	N/A	N/A	14.49	N/A	14.49
48	5240	N/A	26.5	N/A	N/A	14.56	N/A	14.56
52	5260	N/A	28.5	N/A	N/A	16.65	N/A	16.65
60	5300	N/A	27	N/A	N/A	16.37	N/A	16.37
64	5320	N/A	26.5	N/A	N/A	16.32	N/A	16.32
100	5500	N/A	26	N/A	N/A	16.54	N/A	16.54
120	5600	N/A	25.5	N/A	N/A	16.52	N/A	16.52
140	5700	N/A	25.5	N/A	N/A	16.37	N/A	16.37

Mode 2: 802.11n (20MHz Bandwidth)								
Channel	Frequency (MHz)	Register Setting			Power (dBm)			Total Power (dBm)
		Chain A	Chain B	Chain C	Chain A	Chain B	Chain C	
36	5180	N/A	N/A	28.5	N/A	N/A	14.59	14.59
40	5200	N/A	N/A	28.5	N/A	N/A	14.52	14.52
48	5240	N/A	N/A	27.5	N/A	N/A	14.26	14.26
52	5260	N/A	N/A	29.5	N/A	N/A	16.32	16.32
60	5300	N/A	N/A	29	N/A	N/A	16.55	16.55
64	5320	N/A	N/A	28.5	N/A	N/A	16.36	16.36
100	5500	N/A	N/A	27	N/A	N/A	16.52	16.52
120	5600	N/A	N/A	26	N/A	N/A	16.59	16.59
140	5700	N/A	N/A	26.5	N/A	N/A	16.40	16.40

Mode 2: 802.11n (20MHz Bandwidth)								
Channel	Frequency (MHz)	Register Setting			Power (dBm)			Total Power (dBm)
		Chain A	Chain B	Chain C	Chain A	Chain B	Chain C	
36	5180	26	26	N/A	10.35	10.31	N/A	13.34
40	5200	25.5	25.5	N/A	10.50	10.42	N/A	13.47
48	5240	24	24	N/A	10.49	10.28	N/A	13.40
52	5260	26	26	N/A	12.96	12.82	N/A	15.90
60	5300	25	25.5	N/A	12.99	12.95	N/A	15.98
64	5320	24.5	25	N/A	12.89	12.96	N/A	15.94
100	5500	23	23.5	N/A	12.85	12.94	N/A	15.91
120	5600	24	23	N/A	12.82	12.94	N/A	15.89
140	5700	25	23.5	N/A	13.13	12.84	N/A	16.00

Mode 2: 802.11n (20MHz Bandwidth)								
Channel	Frequency (MHz)	Register Setting			Power (dBm)			Total Power (dBm)
		Chain A	Chain B	Chain C	Chain A	Chain B	Chain C	
36	5180	26	N/A	26	10.35	N/A	10.43	13.40
40	5200	25.5	N/A	26	10.50	N/A	10.32	13.42
48	5240	24	N/A	25	10.54	N/A	10.50	13.53
52	5260	26	N/A	27.5	13.12	N/A	13.03	16.09
60	5300	25	N/A	27	13.04	N/A	12.98	16.02
64	5320	24.5	N/A	26.5	12.89	N/A	12.99	15.95
100	5500	23	N/A	24.5	13.01	N/A	13.04	16.04
120	5600	24	N/A	24.5	12.98	N/A	12.89	15.95
140	5700	25	N/A	24.5	12.87	N/A	12.92	15.91

Mode 2: 802.11n (20MHz Bandwidth)								
Channel	Frequency (MHz)	Register Setting			Power (dBm)			Total Power (dBm)
		Chain A	Chain B	Chain C	Chain A	Chain B	Chain C	
36	5180	N/A	25.5	26	N/A	10.57	10.26	13.43
40	5200	N/A	25	26	N/A	10.34	10.58	13.47
48	5240	N/A	24	25	N/A	10.58	10.30	13.45
52	5260	N/A	26	27.5	N/A	13.11	13.05	16.09
60	5300	N/A	25.5	26.5	N/A	12.99	12.93	15.97
64	5320	N/A	24.5	26.5	N/A	12.93	12.98	15.97
100	5500	N/A	23.5	25	N/A	13.02	13.06	16.05
120	5600	N/A	23	24.5	N/A	13.02	13.01	16.03
140	5700	N/A	23	24.5	N/A	12.98	13.03	16.02

Mode 2: 802.11n (20MHz Bandwidth)								
Channel	Frequency (MHz)	Register Setting			Power (dBm)			Total Power (dBm)
		Chain A	Chain B	Chain C	Chain A	Chain B	Chain C	
36	5180	26	26	26.5	8.52	8.45	8.34	13.21
40	5200	25.5	25	26.5	8.48	8.39	8.42	13.20
48	5240	24.5	24	26	8.38	8.47	8.35	13.17
52	5260	26	26	28.5	11.20	11.22	11.19	15.97
60	5300	25.5	25.5	27.5	11.20	11.23	11.21	15.98
64	5320	25	24.5	27.5	11.23	10.24	11.19	15.68
100	5500	23	23	25	11.23	10.21	11.18	15.67
120	5600	23	23.5	25.5	11.22	10.17	11.16	15.65
140	5700	24	24	25.5	11.18	10.22	11.24	15.68

Mode 3: 802.11n (40MHz Bandwidth)								
Channel	Frequency (MHz)	Register Setting			Power (dBm)			Total Power (dBm)
		Chain A	Chain B	Chain C	Chain A	Chain B	Chain C	
38	5190	27	N/A	N/A	14.46	N/A	N/A	14.46
46	5230	25.5	N/A	N/A	14.32	N/A	N/A	14.32
54	5270	27	N/A	N/A	16.12	N/A	N/A	16.12
62	5310	26	N/A	N/A	16.11	N/A	N/A	16.11
102	5510	24	N/A	N/A	16.18	N/A	N/A	16.18
118	5590	24	N/A	N/A	16.19	N/A	N/A	16.19
134	5670	24.5	N/A	N/A	16.22	N/A	N/A	16.22

Mode 3: 802.11n (40MHz Bandwidth)								
Channel	Frequency (MHz)	Register Setting			Power (dBm)			Total Power (dBm)
		Chain A	Chain B	Chain C	Chain A	Chain B	Chain C	
38	5190	N/A	27.5	N/A	N/A	14.24	N/A	14.24
46	5230	N/A	26	N/A	N/A	14.43	N/A	14.43
54	5270	N/A	28	N/A	N/A	14.34	N/A	14.34
62	5310	N/A	26.5	N/A	N/A	16.29	N/A	16.29
102	5510	N/A	25.5	N/A	N/A	16.44	N/A	16.44
118	5590	N/A	25	N/A	N/A	16.53	N/A	16.53
134	5670	N/A	25	N/A	N/A	16.46	N/A	16.46

Mode 3: 802.11n (40MHz Bandwidth)								
Channel	Frequency (MHz)	Register Setting			Power (dBm)			Total Power (dBm)
		Chain A	Chain B	Chain C	Chain A	Chain B	Chain C	
38	5190	N/A	N/A	28	N/A	N/A	14.49	14.49
46	5230	N/A	N/A	27	N/A	N/A	14.87	14.87
54	5270	N/A	N/A	28.5	N/A	N/A	16.28	16.28
62	5310	N/A	N/A	28	N/A	N/A	16.36	16.36
102	5510	N/A	N/A	26.5	N/A	N/A	16.38	16.38
118	5590	N/A	N/A	26	N/A	N/A	16.42	16.42
134	5670	N/A	N/A	26	N/A	N/A	16.49	16.49

Mode 3: 802.11n (40MHz Bandwidth)								
Channel	Frequency (MHz)	Register Setting			Power (dBm)			Total Power (dBm)
		Chain A	Chain B	Chain C	Chain A	Chain B	Chain C	
38	5190	25	25	N/A	10.62	10.54	N/A	13.59
46	5230	24	24	N/A	10.41	10.58	N/A	13.51
54	5270	25	25.5	N/A	13.13	13.18	N/A	16.17
62	5310	24.5	25	N/A	13.04	13.14	N/A	16.10
102	5510	23	23.5	N/A	13.15	13.23	N/A	16.20
118	5590	24	23	N/A	13.18	13.14	N/A	16.17
134	5670	25	23.5	N/A	13.18	13.08	N/A	16.14

Mode 3: 802.11n (40MHz Bandwidth)								
Channel	Frequency (MHz)	Register Setting			Power (dBm)			Total Power (dBm)
		Chain A	Chain B	Chain C	Chain A	Chain B	Chain C	
38	5190	25.5	N/A	25.5	10.19	N/A	10.16	13.19
46	5230	24	N/A	24.5	10.02	N/A	10.03	13.04
54	5270	25	N/A	27	13.04	N/A	13.11	16.09
62	5310	24	N/A	26	13.04	N/A	13.02	16.04
102	5510	22.5	N/A	24.5	13.12	N/A	13.08	16.11
118	5590	23.5	N/A	23.5	13.13	N/A	13.06	16.11
134	5670	24.5	N/A	24	13.09	N/A	13.07	16.09

Mode 3: 802.11n (40MHz Bandwidth)								
Channel	Frequency (MHz)	Register Setting			Power (dBm)			Total Power (dBm)
		Chain A	Chain B	Chain C	Chain A	Chain B	Chain C	
38	5190	N/A	25	25.5	N/A	10.17	10.06	13.13
46	5230	N/A	23.5	24.5	N/A	10.08	10.02	13.06
54	5270	N/A	25.5	26.5	N/A	13.14	13.07	16.12
62	5310	N/A	24.5	26	N/A	13.13	13.06	16.11
102	5510	N/A	23	24.5	N/A	13.17	13.08	16.14
118	5590	N/A	22.5	23.5	N/A	13.07	13.14	16.12
134	5670	N/A	22.5	25	N/A	13.02	13.08	16.06

Mode 3: 802.11n (40MHz Bandwidth)								
Channel	Frequency (MHz)	Register Setting			Power (dBm)			Total Power (dBm)
		Chain A	Chain B	Chain C	Chain A	Chain B	Chain C	
38	5190	25	25	26.5	8.62	8.53	8.64	13.37
46	5230	24	24.5	25.5	8.72	8.63	8.56	13.41
54	5270	25.5	25.5	28	11.48	11.47	11.54	16.27
62	5310	24.5	24.5	27	11.38	11.36	11.29	16.11
102	5510	22.5	22.5	25.5	11.29	11.47	11.53	16.20
118	5590	22.5	23	25.5	11.36	11.39	11.47	16.18
134	5670	23	23.5	25	11.48	11.36	11.53	16.23

Note: All of the test items are performed at low data rate (as shown below) and getting the maximum power output.

Mode 1: 802.11a --- 6Mbps
Mode 2: 802.11n (20MHz Bandwidth) --- HT0
Mode 3: 802.11n (40MHz Bandwidth) --- HT0

Technical Test

1.6. Summary of Test Result

☒ No deviations from the test standards

☐ Deviations from the test standards as below description:

Performed Test Item	Normative References	Test Performed	Deviation
Conducted Emission	FCC CFR Title 47 Part 15 Subpart C: 2007 Section 15.207	Yes	No
Radiated Emission	FCC CFR Title 47 Part 15 Subpart C: 2007 Section 15.209	Yes	No
26dB Occupied Bandwidth	FCC CFR Title 47 Part 15 Subpart C: 2007 Section 15.407(a)	Yes	No
Power Output	FCC CFR Title 47 Part 15 Subpart C: 2007 Section 15.407(a)	Yes	No
Peak Power Spectral Density	FCC CFR Title 47 Part 15 Subpart C: 2007 Section 15.407(a)	Yes	No
Peak Excursion	FCC CFR Title 47 Part 15 Subpart C: 2007 Section 15.407(a)(6)	Yes	No
Radiated Emission Band Edge	FCC CFR Title 47 Part 15 Subpart C: 2007 Section 15.205, 15.407(b)	Yes	No
Frequency Stability	FCC CFR Title 47 Part 15 Subpart C: 2007 Section 15.407(g)	Yes	No

1.7. Test Environment

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	21
Humidity (%RH)	25-75	50
Barometric pressure (mbar)	860-1060	950-1000

2. Conducted Emission

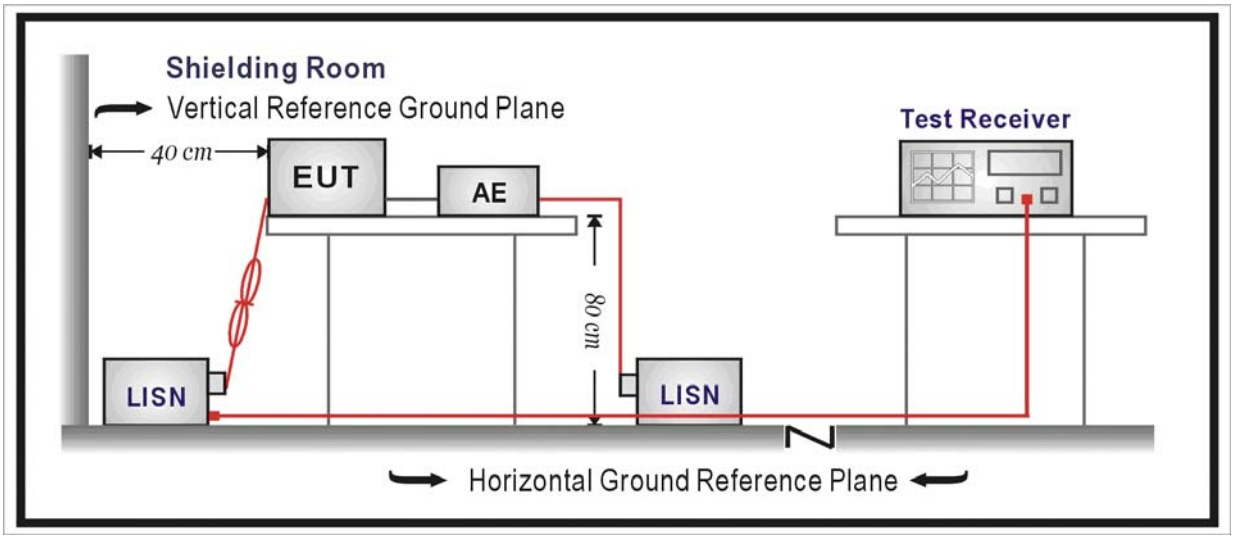
2.1. Test Equipment

Conducted Emission / SR-1

Instrument	Manufacturer	Type No.	Serial No.	Cal. Date
EMI Test Receiver	R&S	ESCI	100726	2008/06/28
Two-Line V-Network	R&S	ENV216	100013	2008/06/28
Two-Line V-Network	R&S	ENV216	100014	2008/06/28
50ohm Coaxial Switch	Anritsu	MP59B	6200464462	2007/11/25
50ohm Termination	SHX	TF2	07081401	2007/10/19
Coaxial Cable	Luthi	RG214	519358	2007/11/25
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH004	2008/03/31

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

2.2. Test Setup



2.3. Limit

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

Note 1: The lower limit shall apply at the transition frequencies.

Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

2.4. Test Procedure

The EUT was setup according to ANSI C63.4, 2003.

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

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

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

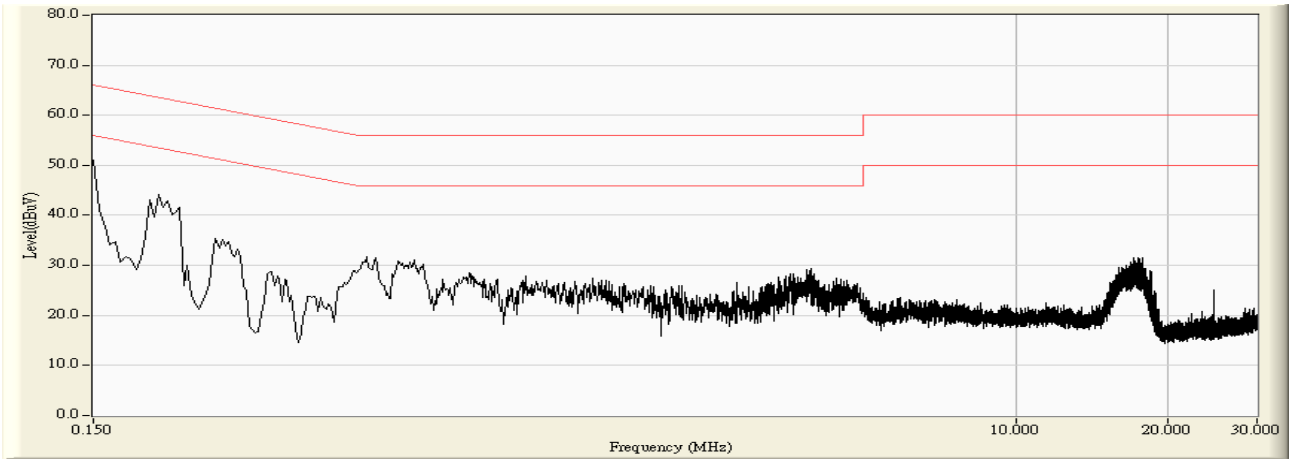
Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

2.5. Uncertainty

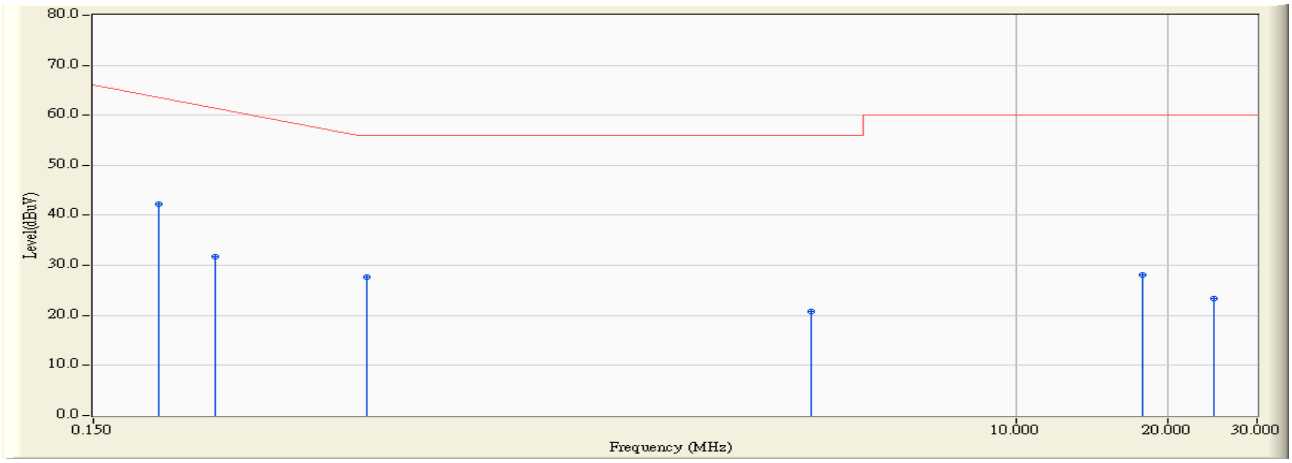
The measurement uncertainty is defined as ± 2.02 dB

2.6. Test Result

Engineer : Jame	
Site : SR-1 (Conducted Emission and Power Disturbance Test)	**Time : 2008/08/19 - 10:25**
Limit : FCC_Part15.207_00M_QP	**Margin : 10**
EUT : Notebook(Intel 5300)	**Probe : ENV216_100014(0.009-30MHz) - Line1**
Power : AC 120V/60Hz	**Note : Model 2: Transmit by 802.11n(20MHz) - Chain A+B+C**



Engineer : Jame	
Site : SR-1 (Conducted Emission and Power Disturbance Test)	**Time : 2008/08/19 - 10:28**
Limit : FCC_Part15.207_00M_QP	**Margin : 0**
EUT : Notebook(Intel 5300)	**Probe : ENV216_100014(0.009-30MHz) - Line1**
Power : AC 120V/60Hz	**Note : Model 2: Transmit by 802.11n(20MHz) - Chain A+B+C**

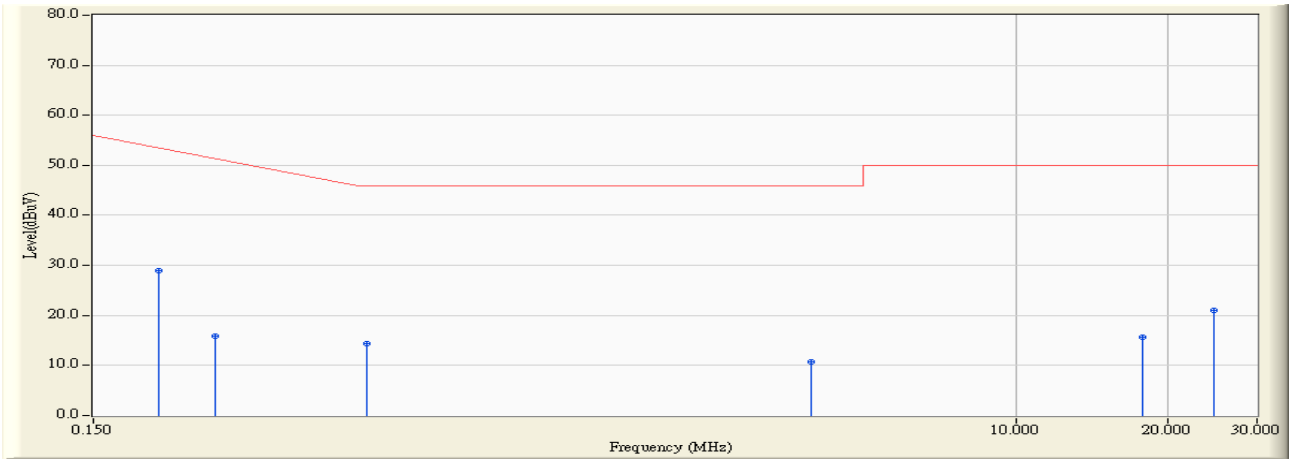


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.202	9.553	32.600	42.153	-22.361	64.514	QUASIPEAK
2		0.262	9.469	22.300	31.769	-31.031	62.800	QUASIPEAK
3		0.522	9.631	18.100	27.731	-28.269	56.000	QUASIPEAK
4		3.946	9.810	11.100	20.910	-35.090	56.000	QUASIPEAK
5		17.798	10.090	18.100	28.190	-31.810	60.000	QUASIPEAK
6		24.578	10.370	13.100	23.470	-36.530	60.000	QUASIPEAK

Note:

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

Engineer : Jame	
Site : SR-1 (Conducted Emission and Power Disturbance Test)	**Time : 2008/08/19 - 10:28**
Limit : FCC_Part15.207_00M_AV	**Margin : 0**
EUT : Notebook(Intel 5300)	**Probe : ENV216_100014(0.009-30MHz) - Line1**
Power : AC 120V/60Hz	**Note : Model 2: Transmit by 802.11n(20MHz) - Chain A+B+C**

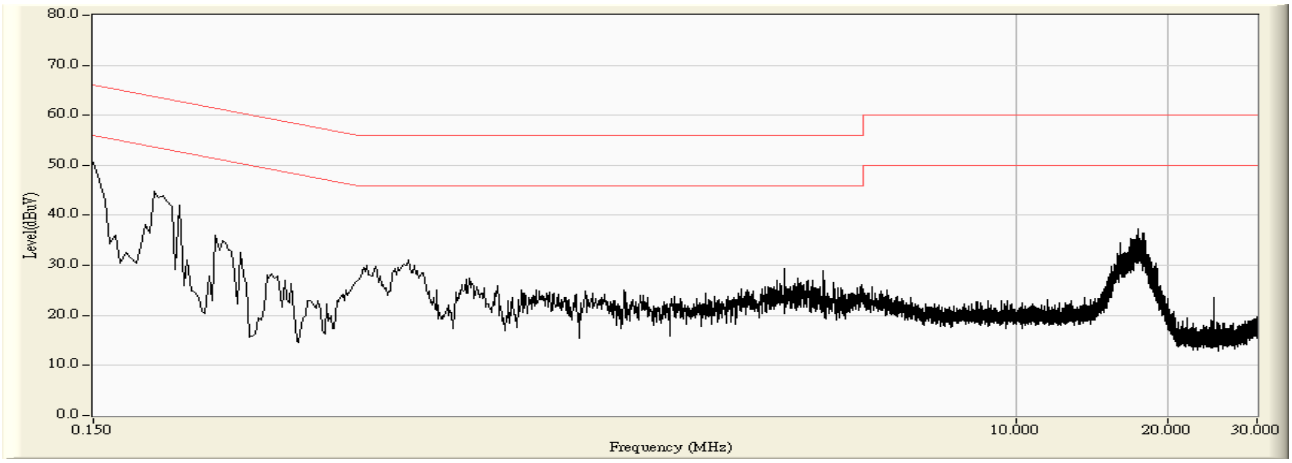


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.202	9.553	19.500	29.053	-25.461	54.514	AVERAGE
2		0.262	9.469	6.400	15.869	-36.931	52.800	AVERAGE
3		0.522	9.631	4.800	14.431	-31.569	46.000	AVERAGE
4		3.946	9.810	0.900	10.710	-35.290	46.000	AVERAGE
5		17.798	10.090	5.500	15.590	-34.410	50.000	AVERAGE
6		24.578	10.370	10.700	21.070	-28.930	50.000	AVERAGE

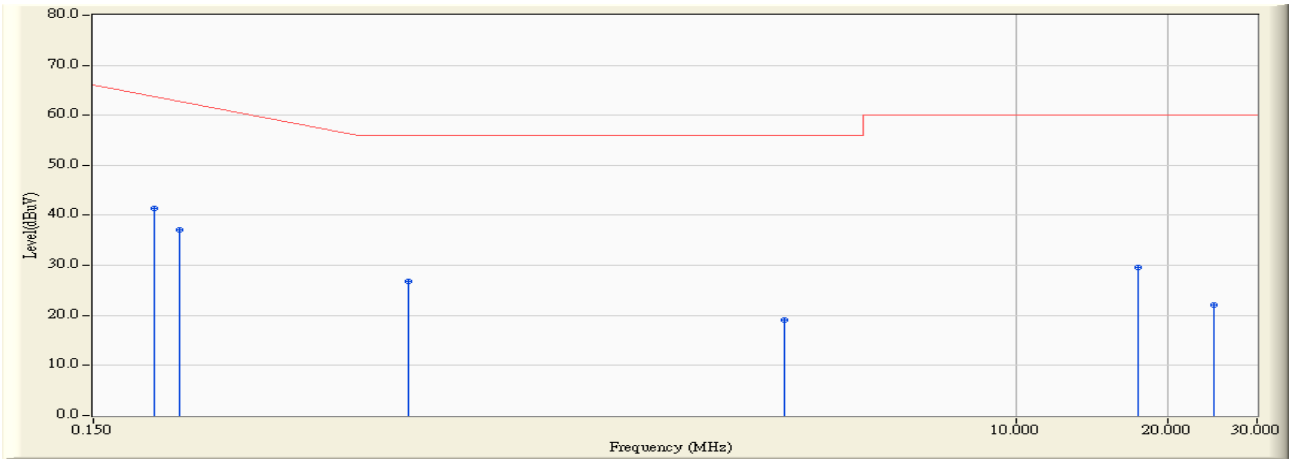
Note:

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

Engineer : Jame	
Site : SR-1 (Conducted Emission and Power Disturbance Test)	**Time : 2008/08/19 - 10:32**
Limit : FCC_Part15.207_00M_QP	**Margin : 10**
EUT : Notebook(Intel 5300)	**Probe : ENV216_100014(0.009-30MHz) - Line2**
Power : AC 120V/60Hz	**Note : Model 2: Transmit by 802.11n(20MHz) - Chain A+B+C**



Engineer : Jame	
Site : SR-1 (Conducted Emission and Power Disturbance Test)	**Time : 2008/08/19 - 10:34**
Limit : FCC_Part15.207_00M_QP	**Margin : 0**
EUT : Notebook(Intel 5300)	**Probe : ENV216_100014(0.009-30MHz) - Line2**
Power : AC 120V/60Hz	**Note : Model 2: Transmit by 802.11n(20MHz) - Chain A+B+C**

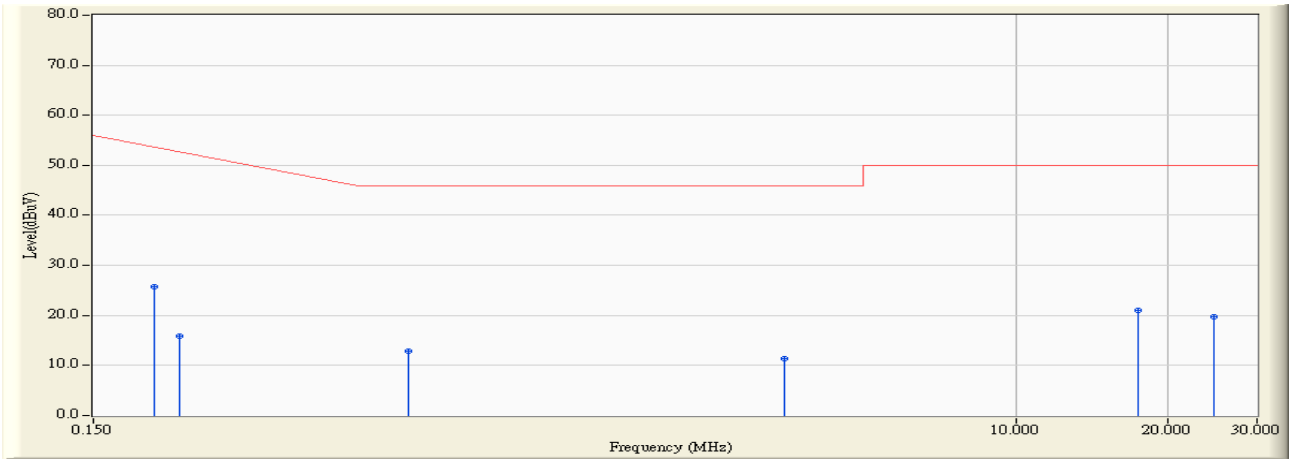


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.198	9.664	31.800	41.464	-23.165	64.629	QUASIPEAK
2		0.222	9.580	27.600	37.180	-26.763	63.943	QUASIPEAK
3		0.630	9.724	17.000	26.724	-29.276	56.000	QUASIPEAK
4		3.490	9.691	9.300	18.991	-37.009	56.000	QUASIPEAK
5		17.426	10.130	19.500	29.630	-30.370	60.000	QUASIPEAK
6		24.578	10.320	11.800	22.120	-37.880	60.000	QUASIPEAK

Note:

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

Engineer : Jame	
Site : SR-1 (Conducted Emission and Power Disturbance Test)	**Time : 2008/08/19 - 10:34**
Limit : FCC_Part15.207_00M_AV	**Margin : 0**
EUT : Notebook(Intel 5300)	**Probe : ENV216_100014(0.009-30MHz) - Line2**
Power : AC 120V/60Hz	**Note : Model 2: Transmit by 802.11n(20MHz) - Chain A+B+C**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.198	9.664	16.100	25.764	-28.865	54.629	AVERAGE
2		0.222	9.580	6.300	15.880	-38.063	53.943	AVERAGE
3		0.630	9.724	3.200	12.924	-33.076	46.000	AVERAGE
4		3.490	9.691	1.700	11.391	-34.609	46.000	AVERAGE
5		17.426	10.130	10.900	21.030	-28.970	50.000	AVERAGE
6		24.578	10.320	9.400	19.720	-30.280	50.000	AVERAGE

Note:

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

3. Radiated Emission

3.1. Test Equipment

☒Radiated Emission / AC-2

Instrument	Manufacturer	Type No.	Serial No.	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2008/06/11
EMI Test Receiver	R&S	ESCI	100573	2008/05/10
Preamplifier	Quietek	AP-025C	QT-AP003	2007/11/25
Preamplifier	Quietek	AP-180C	CHM-0602012	2007/11/25
Bilog Type Antenna	Schaffner	CBL6112B	2932	2007/11/22
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	496	2007/11/25
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2007/11/25
High-Pass Filter	Wainwright	WHKX7.0/18G-8SS	SN16	2008/03/03
Low-Pass Filter	Wainwright	WLKS4500-9SS	SN2	2008/03/03
50ohm Coaxial Switch	Anritsu	MP59B	6200447304	2007/11/25
Coaxial Cable	Huber+Suhner	AC2-C	04	2007/11/25
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH002	2008/03/31

☐Radiated Emission / AC-3

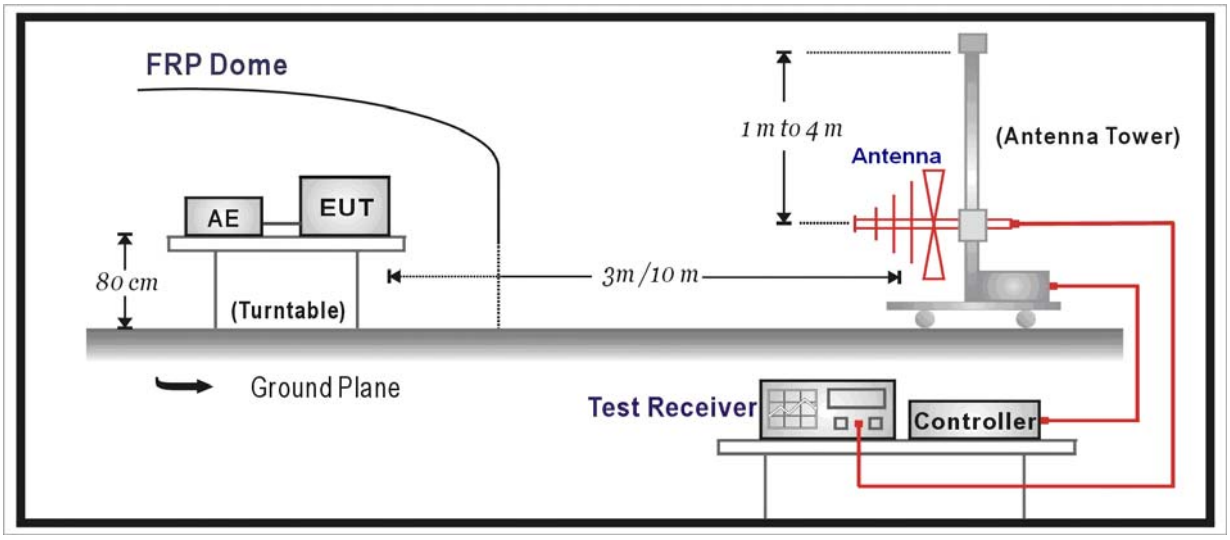
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2008/06/11
EMI Test Receiver	R&S	ESCI	100176	2007/11/15
Preamplifier	Quietek	AP-025C	QT-AP004	2007/11/25
Preamplifier	Quietek	AP-180C	CHM-0602012	2007/11/25
Bilog Type Antenna	Schaffner	CBL6112D	22254	2007/11/22
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	496	2007/11/25
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2007/11/25
High-Pass Filter	Wainwright	WHKX7.0/18G-8SS	SN16	2008/03/03
Low-Pass Filter	Wainwright	WLKS4500-9SS	SN2	2008/03/03
50ohm Coaxial Switch	Anritsu	MP59B	6200464463	2007/11/25
Coaxial Cable	Huber+Suhner	AC3-C	05	2007/11/25
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH003	2008/03/31

Note 1: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

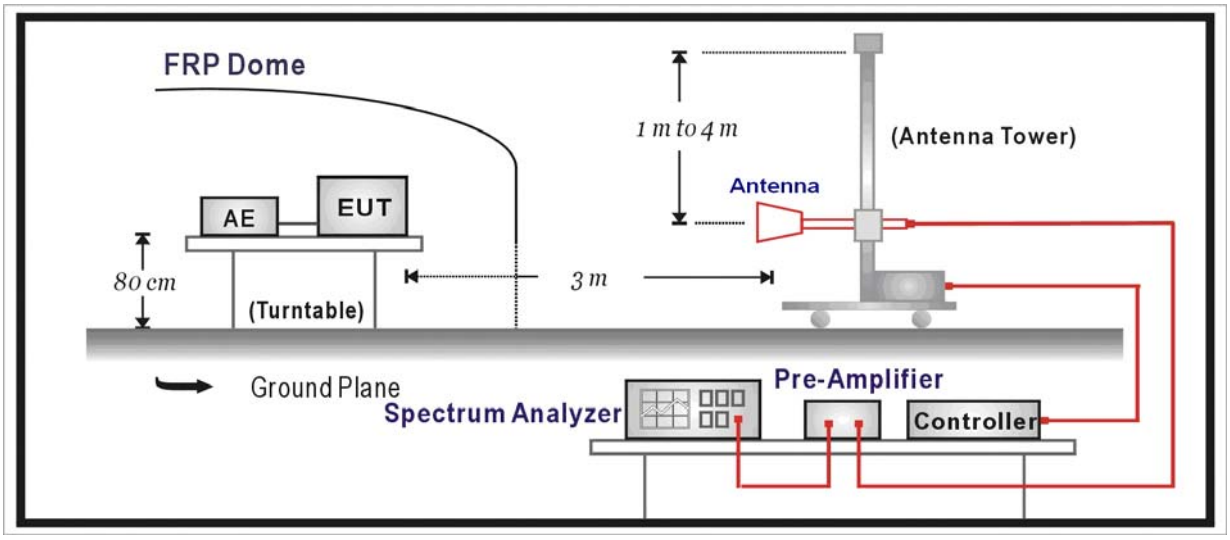
Note 2: The test instruments marked with “X” are used to measure the final test results.

3.2. Test Setup

Under 1GHz Test Setup:



Above 1GHz Test Setup:



3.3. Limit

FCC Part 15 Subpart C Paragraph 15.209		
Frequency (MHz)	Distance (m)	Level (dBuV/m)
30 - 88	3	40
88 - 216	3	43.5
216 - 960	3	46
Above 960	3	54

Note 1: The lower limit shall apply at the transition frequency.

Note 2: Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

Note 3: E field strength (dBuV/m) = 20 log E field strength (uV/m)

3.4. Test Procedure

The EUT was setup according to ANSI C63.4, 2003.

The EUT is placed on a turn table which is 0.8 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 from 1 meter to 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 C63.4:2003 on radiated measurement.

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

The frequency range from 30MHz to 10th harmonic is checked.

Note: When doing emission measurement above 1GHz, the horn antenna will be bended down a little (as horn antenna has the narrow beamwidth) in order to keeping the antenna in the “cone of radiation” of EUT. The 3dB beamwidth is 60 degrees for H-plane and 90 degrees for E-plane.

3.5. Uncertainty

The measurement uncertainty above 1G is defined as ± 3.9 dB

below 1G is defined as ± 3.8 dB

3.6. Test Result

Mode 1: 802.11a (Chain A)							
Frequency (MHz)	Polarization (H/V)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (degree)
Channel 36 (5180MHz)							
1595	H	44.55	74	-29.45	PK	120.50	65.80
1595	H	26.35	54	-27.65	AV	120.50	65.80
1595	V	47.03	74	-26.97	PK	114.20	144.80
1595	V	30.02	54	-23.98	AV	114.20	144.80
Channel 40 (5200MHz)							
1991.67	H	47.22	74	-26.78	PK	100.00	165.20
1991.67	H	29.31	54	-24.69	AV	100.00	165.20
1991.67	V	50.27	74	-23.73	PK	100.00	205.00
1991.67	V	32.84	54	-21.16	AV	100.00	205.00
Channel 48 (5240MHz)							
1595	H	43.85	74	-30.15	PK	100.00	187.00
1595	H	24.39	54	-29.61	AV	100.00	187.00
1595	V	48.27	74	-25.73	PK	106.00	328.00
1595	V	30.58	54	-23.42	AV	106.00	328.00
Channel 52 (5260MHz)							
2501.67	H	46.71	74	-27.29	PK	105.00	113.60
2501.67	H	28.48	54	-25.52	AV	105.00	113.60
2501.67	V	47.24	74	-26.76	PK	100.00	165.00
2501.67	V	29.54	54	-24.46	AV	100.00	165.00
Channel 60 (5300MHz)							
1991.67	H	45.03	74	-28.97	PK	103.60	72.80
1991.67	H	27.38	54	-26.62	AV	103.60	72.80
1991.67	V	53.45	74	-20.55	PK	105.40	117.50
1991.67	V	35.49	54	-18.51	AV	105.40	117.50
Channel 64 (5320MHz)							
2501.67	H	47.50	74	-26.50	PK	100.00	166.80
2501.67	H	28.23	54	-25.77	AV	100.00	166.80
2501.67	V	47.63	74	-26.37	PK	100.00	93.40
2501.67	V	29.51	54	-24.49	AV	100.00	93.40
Channel 100 (5500MHz)							
1991.67	H	47.24	74	-26.76	PK	108.00	65.90
1991.67	H	28.09	54	-25.91	AV	108.00	65.90

1991.67	V	52.35	74	-21.65	PK	100.00	245.00
1991.67	V	34.68	54	-19.32	AV	100.00	245.00
Channel 120 (5600MHz)							
1991.67	H	46.93	74	-27.07	PK	100.00	122.00
1991.67	H	28.49	54	-25.51	AV	100.00	122.00
1991.67	V	51.28	74	-22.72	PK	105.80	94.00
1991.67	V	33.52	54	-20.48	AV	105.80	94.00
Channel 140 (5700MHz)							
1595	H	47.44	74	-26.56	PK	100.00	114.50
1595	H	28.94	54	-25.06	AV	100.00	114.50
1595	V	46.86	74	-27.14	PK	100.00	168.40
1595	V	28.24	54	-25.76	AV	100.00	168.40

Mode 1: 802.11a (Chain B)							
Frequency (MHz)	Polarization (H/V)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (degree)
Channel 36 (5180MHz)							
1595	H	43.45	74	-30.55	PK	105.40	114.70
1595	H	25.33	54	-28.67	AV	105.40	114.70
1595	V	47.43	74	-26.57	PK	103.50	63.80
1595	V	30.42	54	-23.58	AV	103.50	63.80
Channel 40 (5200MHz)							
1991.67	H	48.02	74	-25.98	PK	100.00	84.90
1991.67	H	29.38	54	-24.62	AV	100.00	84.90
1991.67	V	50.47	74	-23.53	PK	100.00	185.00
1991.67	V	33.14	54	-20.86	AV	100.00	185.00
Channel 48 (5240MHz)							
1595	H	44.85	74	-29.15	PK	100.00	153.00
1595	H	25.09	54	-28.91	AV	100.00	153.00
1595	V	50.27	74	-23.73	PK	104.00	206.00
1595	V	31.48	54	-22.52	AV	104.00	206.00
Channel 52 (5260MHz)							
2501.67	H	45.78	74	-28.22	PK	103.50	166.80
2501.67	H	28.38	54	-25.62	AV	103.50	166.80
2501.67	V	47.64	74	-26.36	PK	100.00	152.00
2501.67	V	29.22	54	-24.78	AV	100.00	152.00
Channel 60 (5300MHz)							

1991.67	H	45.53	74	-28.47	PK	100.00	196.00
1991.67	H	27.78	54	-26.22	AV	100.00	196.00
1991.67	V	53.26	74	-20.74	PK	100.00	144.00
1991.67	V	36.29	54	-17.71	AV	100.00	144.00
Channel 64 (5320MHz)							
2501.67	H	47.83	74	-26.17	PK	102.50	116.70
2501.67	H	28.66	54	-25.34	AV	102.50	116.70
2501.67	V	47.73	74	-26.27	PK	106.40	158.00
2501.67	V	29.82	54	-24.18	AV	106.40	158.00
Channel 100 (5500MHz)							
1991.67	H	46.24	74	-27.76	PK	105.40	188.40
1991.67	H	28.39	54	-25.61	AV	105.40	188.40
1991.67	V	51.75	74	-22.25	PK	103.00	136.00
1991.67	V	32.88	54	-21.12	AV	103.00	136.00
Channel 120 (5600MHz)							
1991.67	H	47.03	74	-26.97	PK	100.00	169.00
1991.67	H	28.99	54	-25.01	AV	100.00	169.00
1991.67	V	52.18	74	-21.82	PK	102.40	25.60
1991.67	V	33.92	54	-20.08	AV	102.40	25.60
Channel 140 (5700MHz)							
1595	H	47.28	74	-26.72	PK	100.00	152.00
1595	H	28.74	54	-25.26	AV	100.00	152.00
1595	V	45.96	74	-28.04	PK	100.00	185.00
1595	V	26.64	54	-27.36	AV	100.00	185.00

Mode 1: 802.11a (Chain C)							
Frequency (MHz)	Polarization (H/V)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (degree)
Channel 36 (5180MHz)							
1595	H	44.25	74	-29.75	PK	100.00	169.00
1595	H	26.83	54	-27.17	AV	100.00	169.00
1595	V	48.14	74	-25.86	PK	100.00	167.40
1595	V	30.63	54	-23.37	AV	100.00	167.40
Channel 40 (5200MHz)							
1991.67	H	47.52	74	-26.48	PK	114.50	172.50
1991.67	H	29.53	54	-24.47	AV	114.50	172.50
1991.67	V	51.77	74	-22.23	PK	100.00	185.40

1991.67	V	33.62	54	-20.38	AV	100.00	185.40
Channel 48 (5240MHz)							
1595	H	45.25	74	-28.75	PK	100.00	133.50
1595	H	26.39	54	-27.61	AV	100.00	133.50
1595	V	52.47	74	-21.53	PK	103.40	114.60
1595	V	33.68	54	-20.32	AV	103.40	114.60
Channel 52 (5260MHz)							
2501.67	H	45.73	74	-28.27	PK	100.00	152.60
2501.67	H	28.37	54	-25.63	AV	100.00	152.60
2501.67	V	46.93	74	-27.07	PK	100.00	242.50
2501.67	V	29.42	54	-24.58	AV	100.00	242.50
Channel 60 (5300MHz)							
1991.67	H	45.28	74	-28.72	PK	120.50	304.00
1991.67	H	27.35	54	-26.65	AV	120.50	304.00
1991.67	V	53.83	74	-20.17	PK	109.40	65.80
1991.67	V	36.42	54	-17.58	AV	109.40	65.80
Channel 64 (5320MHz)							
2501.67	H	47.36	74	-26.64	PK	100.00	103.80
2501.67	H	28.45	54	-25.55	AV	100.00	103.80
2501.67	V	47.62	74	-26.38	PK	100.00	142.40
2501.67	V	29.75	54	-24.25	AV	100.00	142.40
Channel 100 (5500MHz)							
1991.67	H	45.64	74	-28.36	PK	105.10	94.00
1991.67	H	27.19	54	-26.81	AV	105.10	94.00
1991.67	V	52.45	74	-21.55	PK	100.00	284.00
1991.67	V	34.68	54	-19.32	AV	100.00	284.00
Channel 120 (5600MHz)							
1991.67	H	46.33	74	-27.67	PK	110.40	258.00
1991.67	H	28.19	54	-25.81	AV	110.40	258.00
1991.67	V	51.48	74	-22.52	PK	103.60	84.00
1991.67	V	33.59	54	-20.41	AV	103.60	84.00
Channel 140 (5700MHz)							
1595	H	45.68	74	-28.32	PK	100.00	162.00
1595	H	27.04	54	-26.96	AV	100.00	162.00
1595	V	43.96	74	-30.04	PK	100.00	77.40
1595	V	25.84	54	-28.16	AV	100.00	77.40

Mode 2: 802.11n (20MHz Bandwidth) (Chain A)							
Frequency (MHz)	Polarization (H/V)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (degree)
Channel 36 (5180MHz)							
1595	H	44.36	74	-29.64	PK	100.00	169.00
1595	H	26.53	54	-27.47	AV	100.00	169.00
1595	V	48.35	74	-25.65	PK	100.00	167.40
1595	V	30.47	54	-23.53	AV	100.00	167.40
Channel 40 (5200MHz)							
1991.67	H	45.62	74	-28.38	PK	102.50	116.70
1991.67	H	28.43	54	-25.57	AV	102.50	116.70
1991.67	V	50.57	74	-23.43	PK	106.40	158.00
1991.67	V	32.12	54	-21.88	AV	106.40	158.00
Channel 48 (5240MHz)							
1595	H	44.55	74	-29.45	PK	110.40	258.00
1595	H	26.29	54	-27.71	AV	110.40	258.00
1595	V	52.15	74	-21.85	PK	103.60	84.00
1595	V	33.58	54	-20.42	AV	103.60	84.00
Channel 52 (5260MHz)							
2501.67	H	45.83	74	-28.17	PK	100.00	152.00
2501.67	H	28.34	54	-25.66	AV	100.00	152.60
2501.67	V	46.63	74	-27.37	PK	100.00	242.50
2501.67	V	29.17	54	-24.83	AV	100.00	242.50
Channel 60 (5300MHz)							
1991.67	H	45.41	74	-28.59	PK	120.50	65.80
1991.67	H	27.73	54	-26.27	AV	120.00	65.80
1991.67	V	53.58	74	-20.42	PK	114.20	144.80
1991.67	V	36.27	54	-17.73	AV	114.20	144.80
Channel 64 (5320MHz)							
2501.67	H	47.72	74	-26.28	PK	110.50	60.80
2501.67	H	28.52	54	-25.48	AV	110.50	60.80
2501.67	V	47.22	74	-26.78	PK	104.20	124.80
2501.67	V	29.46	54	-24.54	AV	104.20	124.80
Channel 100 (5500MHz)							
1991.67	H	45.54	74	-28.46	PK	120.50	304.00
1991.67	H	27.23	54	-26.77	AV	120.50	304.00
1991.67	V	52.15	74	-21.85	PK	109.40	65.80

1991.67	V	34.75	54	-19.25	AV	109.40	65.80
Channel 120 (5600MHz)							
1991.67	H	46.74	74	-27.26	PK	100.00	152.00
1991.67	H	28.42	54	-25.58	AV	100.00	152.00
1991.67	V	51.68	74	-22.32	PK	100.00	185.00
1991.67	V	33.37	54	-20.63	AV	100.00	185.00
Channel 140 (5700MHz)							
1595	H	45.29	74	-28.71	PK	105.40	188.40
1595	H	27.35	54	-26.65	AV	105.40	188.40
1595	V	43.93	74	-30.07	PK	103.00	136.00
1595	V	25.64	54	-28.36	AV	103.00	136.00

Mode 2: 802.11n (20MHz Bandwidth) (Chain B)							
Frequency (MHz)	Polarization (H/V)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (degree)
Channel 36 (5180MHz)							
1595	H	43.26	74	-30.74	PK	100.00	196.00
1595	H	25.94	54	-28.06	AV	100.00	196.00
1595	V	47.35	74	-26.65	PK	100.00	144.00
1595	V	30.67	54	-23.33	AV	100.00	144.00
Channel 40 (5200MHz)							
1991.67	H	47.53	74	-26.47	PK	120.50	304.00
1991.67	H	29.13	54	-24.87	AV	120.50	304.00
1991.67	V	51.67	74	-22.33	PK	109.40	65.80
1991.67	V	33.82	54	-20.18	AV	109.40	65.80
Channel 48 (5240MHz)							
1595	H	42.55	74	-31.45	PK	100.00	103.80
1595	H	25.79	54	-28.21	AV	100.00	103.80
1595	V	53.65	74	-20.35	PK	100.00	142.40
1595	V	34.68	54	-19.32	AV	100.00	142.40
Channel 52 (5260MHz)							
2501.67	H	47.03	74	-26.97	PK	100.00	187.00
2501.67	H	29.42	54	-24.58	AV	100.00	187.00
2501.67	V	46.23	74	-27.77	PK	106.00	328.00
2501.67	V	28.57	54	-25.43	AV	106.00	328.00
Channel 60 (5300MHz)							
1991.67	H	46.31	74	-27.69	PK	100.00	162.00

1991.67	H	27.33	54	-26.67	AV	100.00	162.00
1991.67	V	52.68	74	-21.32	PK	100.00	77.40
1991.67	V	35.77	54	-18.23	AV	100.00	77.40
Channel 64 (5320MHz)							
2501.67	H	48.22	74	-25.78	PK	100.00	169.00
2501.67	H	29.02	54	-24.98	AV	100.00	169.00
2501.67	V	48.13	74	-25.87	PK	100.00	167.40
2501.67	V	28.42	54	-25.58	AV	100.00	167.40
Channel 100 (5500MHz)							
1991.67	H	46.25	74	-27.75	PK	105.40	188.40
1991.67	H	28.03	54	-25.97	AV	105.40	188.40
1991.67	V	51.57	74	-22.43	PK	103.00	136.00
1991.67	V	32.65	54	-21.35	AV	103.00	136.00
Channel 120 (5600MHz)							
1991.67	H	46.36	74	-27.64	PK	105.10	94.00
1991.67	H	28.58	54	-25.42	AV	105.10	94.00
1991.67	V	51.27	74	-22.73	PK	100.00	284.00
1991.67	V	33.97	54	-20.03	AV	100.00	284.00
Channel 140 (5700MHz)							
1595	H	46.39	74	-27.61	PK	100.00	153.00
1595	H	28.32	54	-25.68	AV	100.00	153.00
1595	V	43.95	74	-30.05	PK	104.00	206.00
1595	V	25.36	54	-28.64	AV	104.00	206.00

Mode 2: 802.11n (20MHz Bandwidth) (Chain C)							
Frequency (MHz)	Polarization (H/V)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (degree)
Channel 36 (5180MHz)							
1595	H	43.54	74	-30.46	PK	100.00	169.00
1595	H	25.34	54	-28.66	AV	100.00	169.00
1595	V	47.75	74	-26.25	PK	100.00	167.40
1595	V	30.34	54	-23.66	AV	100.00	167.40
Channel 40 (5200MHz)							
1991.67	H	47.38	74	-26.62	PK	100.00	169.00
1991.67	H	29.74	54	-24.26	AV	100.00	169.00
1991.67	V	51.64	74	-22.36	PK	102.40	25.60
1991.67	V	33.26	54	-20.74	AV	102.40	25.60

Channel 48 (5240MHz)							
1595	H	42.47	74	-31.53	PK	105.10	94.00
1595	H	25.36	54	-28.64	AV	105.10	94.00
1595	V	53.44	74	-20.56	PK	100.00	284.00
1595	V	34.38	54	-19.62	AV	100.00	284.00
Channel 52 (5260MHz)							
2501.67	H	47.73	74	-26.27	PK	100.00	187.00
2501.67	H	29.79	54	-24.21	AV	100.00	187.00
2501.67	V	46.34	74	-27.66	PK	106.00	328.00
2501.67	V	28.69	54	-25.31	AV	106.00	328.00
Channel 60 (5300MHz)							
1991.67	H	46.37	74	-27.63	PK	105.00	113.60
1991.67	H	27.83	54	-26.17	AV	105.00	113.60
1991.67	V	52.47	74	-21.53	PK	100.00	165.00
1991.67	V	35.38	54	-18.62	AV	100.00	165.00
Channel 64 (5320MHz)							
2501.67	H	48.47	74	-25.53	PK	103.60	72.80
2501.67	H	29.27	54	-24.73	AV	103.60	72.80
2501.67	V	48.46	74	-25.54	PK	105.40	117.50
2501.67	V	28.93	54	-25.07	AV	105.40	117.50
Channel 100 (5500MHz)							
1991.67	H	46.47	74	-27.53	PK	105.40	188.40
1991.67	H	28.35	54	-25.65	AV	105.40	188.40
1991.67	V	51.46	74	-22.54	PK	103.00	136.00
1991.67	V	32.26	54	-21.74	AV	103.00	136.00
Channel 120 (5600MHz)							
1991.67	H	46.19	74	-27.81	PK	110.40	258.00
1991.67	H	28.74	54	-25.26	AV	110.40	258.00
1991.67	V	51.48	74	-22.52	PK	103.60	84.00
1991.67	V	33.82	54	-20.18	AV	103.60	84.00
Channel 140 (5700MHz)							
1595	H	46.34	74	-27.66	PK	100.00	153.00
1595	H	28.52	54	-25.48	AV	100.00	153.00
1595	V	43.57	74	-30.43	PK	104.00	206.00
1595	V	25.45	54	-28.55	AV	104.00	206.00

Mode 2: 802.11n (20MHz Bandwidth) (Chain A+B)							
Frequency (MHz)	Polarization (H/V)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (degree)
Channel 36 (5180MHz)							
1595	H	43.76	74	-30.24	PK	105.40	114.70
1595	H	25.83	54	-28.17	AV	105.40	114.70
1595	V	47.55	74	-26.45	PK	103.50	63.80
1595	V	30.32	54	-23.68	AV	103.50	63.80
Channel 40 (5200MHz)							
1991.67	H	46.52	74	-27.48	PK	105.10	94.00
1991.67	H	29.53	54	-24.47	AV	105.10	94.00
1991.67	V	51.32	74	-22.68	PK	100.00	284.00
1991.67	V	33.72	54	-20.28	AV	100.00	284.00
Channel 48 (5240MHz)							
1595	H	45.25	74	-28.75	PK	100.00	153.00
1595	H	27.09	54	-26.91	AV	100.00	153.00
1595	V	53.73	74	-20.27	PK	104.00	206.00
1595	V	34.87	54	-19.13	AV	104.00	206.00
Channel 52 (5260MHz)							
2501.67	H	45.47	74	-28.53	PK	110.50	60.80
2501.67	H	27.54	54	-26.46	AV	110.50	60.80
2501.67	V	46.83	74	-27.17	PK	104.20	124.80
2501.67	V	28.34	54	-25.66	AV	104.20	124.80
Channel 60 (5300MHz)							
1991.67	H	46.21	74	-27.79	PK	100.00	196.00
1991.67	H	28.08	54	-25.92	AV	100.00	196.00
1991.67	V	52.74	74	-21.26	PK	100.00	144.00
1991.67	V	34.73	54	-19.27	AV	100.00	144.00
Channel 64 (5320MHz)							
2501.67	H	45.77	74	-28.23	PK	100.00	187.00
2501.67	H	27.52	54	-26.48	AV	100.00	187.00
2501.67	V	48.57	74	-25.43	PK	106.00	328.00
2501.67	V	30.72	54	-23.28	AV	106.00	328.00
Channel 100 (5500MHz)							
1991.67	H	45.37	74	-28.63	PK	100.00	84.90
1991.67	H	27.85	54	-26.15	AV	100.00	84.90
1991.67	V	52.68	74	-21.32	PK	100.00	185.00

1991.67	V	34.63	54	-19.37	AV	100.00	185.00
Channel 120 (5600MHz)							
1991.67	H	46.57	74	-27.43	PK	100.00	196.00
1991.67	H	28.73	54	-25.27	AV	100.00	196.00
1991.67	V	51.57	74	-22.43	PK	100.00	144.00
1991.67	V	33.78	54	-20.22	AV	100.00	144.00
Channel 140 (5700MHz)							
1595	H	45.57	74	-28.43	PK	103.50	166.80
1595	H	27.26	54	-26.74	AV	103.50	166.80
1595	V	43.47	74	-30.53	PK	100.00	152.00
1595	V	25.83	54	-28.17	AV	100.00	152.00

Mode 2: 802.11n (20MHz Bandwidth) (Chain A+C)							
Frequency (MHz)	Polarization (H/V)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (degree)
Channel 36 (5180MHz)							
1595	H	45.73	74	-28.27	PK	105.40	114.70
1595	H	26.57	54	-27.43	AV	105.40	114.70
1595	V	48.85	74	-25.15	PK	103.50	63.80
1595	V	30.23	54	-23.77	AV	103.50	63.80
Channel 40 (5200MHz)							
1991.67	H	45.35	74	-28.65	PK	110.40	258.00
1991.67	H	27.53	54	-26.47	AV	110.40	258.00
1991.67	V	50.46	74	-23.54	PK	103.60	84.00
1991.67	V	32.36	54	-21.64	AV	103.60	84.00
Channel 48 (5240MHz)							
1595	H	44.63	74	-29.37	PK	100.00	153.00
1595	H	26.47	54	-27.53	AV	100.00	153.00
1595	V	52.67	74	-21.33	PK	104.00	206.00
1595	V	33.49	54	-20.51	AV	104.00	206.00
Channel 52 (5260MHz)							
2501.67	H	45.17	74	-28.83	PK	100.00	26.40
2501.67	H	28.43	54	-25.57	AV	100.00	26.40
2501.67	V	46.46	74	-27.54	PK	118.00	96.30
2501.67	V	29.58	54	-24.42	AV	118.00	96.30
Channel 60 (5300MHz)							
1991.67	H	45.25	74	-28.75	PK	100.00	196.00

1991.67	H	27.46	54	-26.54	AV	100.00	196.00
1991.67	V	53.83	74	-20.17	PK	100.00	144.00
1991.67	V	36.67	54	-17.33	AV	100.00	144.00
Channel 64 (5320MHz)							
2501.67	H	47.46	74	-26.54	PK	100.00	146.00
2501.67	H	28.48	54	-25.52	AV	100.00	146.00
2501.67	V	47.82	74	-26.18	PK	102.60	193.00
2501.67	V	29.36	54	-24.64	AV	102.60	193.00
Channel 100 (5500MHz)							
1991.67	H	46.95	74	-27.05	PK	105.40	188.40
1991.67	H	28.52	54	-25.48	AV	105.40	188.40
1991.67	V	51.76	74	-22.24	PK	103.00	136.00
1991.67	V	33.62	54	-20.38	AV	103.00	136.00
Channel 120 (5600MHz)							
1991.67	H	46.45	74	-27.55	PK	102.50	184.00
1991.67	H	28.43	54	-25.57	AV	102.50	184.00
1991.67	V	51.45	74	-22.55	PK	103.60	193.00
1991.67	V	33.56	54	-20.44	AV	103.60	193.00
Channel 140 (5700MHz)							
1595	H	45.34	74	-28.66	PK	100.00	152.00
1595	H	27.57	54	-26.43	AV	100.00	152.00
1595	V	43.65	74	-30.35	PK	100.00	185.00
1595	V	25.82	54	-28.18	AV	100.00	185.00

Mode 2: 802.11n (20MHz Bandwidth) (Chain B+C)							
Frequency (MHz)	Polarization (H/V)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (degree)
Channel 36 (5180MHz)							
1595	H	46.36	74	-27.64	PK	102.50	116.70
1595	H	28.53	54	-25.47	AV	102.50	116.70
1595	V	48.93	74	-25.07	PK	106.40	158.00
1595	V	30.26	54	-23.74	AV	106.40	158.00
Channel 40 (5200MHz)							
1991.67	H	46.32	74	-27.68	PK	120.50	304.00
1991.67	H	27.93	54	-26.07	AV	120.50	304.00
1991.67	V	50.36	74	-23.64	PK	109.40	65.80
1991.67	V	32.35	54	-21.65	AV	109.40	65.80

Channel 48 (5240MHz)							
1595	H	45.82	74	-28.18	PK	100.00	169.00
1595	H	26.45	54	-27.55	AV	100.00	169.00
1595	V	53.73	74	-20.27	PK	102.40	25.60
1595	V	34.88	54	-19.12	AV	102.40	25.60
Channel 52 (5260MHz)							
2501.67	H	46.74	74	-27.26	PK	100.00	187.00
2501.67	H	28.23	54	-25.77	AV	100.00	187.00
2501.67	V	47.94	74	-26.06	PK	106.00	328.00
2501.67	V	29.43	54	-24.57	AV	106.00	328.00
Channel 60 (5300MHz)							
1991.67	H	45.82	74	-28.18	PK	100.00	162.00
1991.67	H	27.37	54	-26.63	AV	100.00	162.00
1991.67	V	53.94	74	-20.06	PK	100.00	77.40
1991.67	V	35.34	54	-18.66	AV	100.00	77.40
Channel 64 (5320MHz)							
2501.67	H	47.78	74	-26.22	PK	103.50	166.80
2501.67	H	28.54	54	-25.46	AV	103.50	166.80
2501.67	V	47.36	74	-26.64	PK	100.00	152.00
2501.67	V	29.47	54	-24.53	AV	100.00	152.00
Channel 100 (5500MHz)							
1991.67	H	45.28	74	-28.72	PK	105.40	188.40
1991.67	H	27.95	54	-26.05	AV	105.40	188.40
1991.67	V	52.46	74	-21.54	PK	103.00	136.00
1991.67	V	34.47	54	-19.53	AV	103.00	136.00
Channel 120 (5600MHz)							
1991.67	H	46.73	74	-27.27	PK	100.00	84.90
1991.67	H	28.25	54	-25.75	AV	100.00	84.90
1991.67	V	51.37	74	-22.63	PK	100.00	185.00
1991.67	V	33.18	54	-20.82	AV	100.00	185.00
Channel 140 (5700MHz)							
1595	H	45.16	74	-28.84	PK	100.00	153.00
1595	H	27.47	54	-26.53	AV	100.00	153.00
1595	V	43.39	74	-30.61	PK	104.00	206.00
1595	V	25.47	54	-28.53	AV	104.00	206.00

Mode 2: 802.11n (20MHz Bandwidth) (Chain A+B+C)							
Frequency (MHz)	Polarization (H/V)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (degree)
Channel 36 (5180MHz)							
1595	H	46.33	74	-27.67	PK	100.00	196.00
1595	H	28.53	54	-25.47	AV	100.00	196.00
1595	V	47.35	74	-26.65	PK	100.00	144.00
1595	V	29.85	54	-24.15	AV	100.00	144.00
Channel 40 (5200MHz)							
1991.67	H	45.92	74	-28.08	PK	105.40	114.70
1991.67	H	28.23	54	-25.77	AV	105.40	114.70
1991.67	V	51.74	74	-22.26	PK	103.50	63.80
1991.67	V	32.26	54	-21.74	AV	103.50	63.80
Channel 48 (5240MHz)							
1595	H	44.27	74	-29.73	PK	100.00	103.80
1595	H	26.46	54	-27.54	AV	100.00	103.80
1595	V	52.84	74	-21.16	PK	100.00	142.40
1595	V	33.56	54	-20.44	AV	100.00	142.40
Channel 52 (5260MHz)							
2501.67	H	45.85	74	-28.15	PK	100.00	184.00
2501.67	H	28.38	54	-25.62	AV	100.00	184.00
2501.67	V	46.37	74	-27.63	PK	102.00	117.00
2501.67	V	29.97	54	-24.03	AV	102.00	117.00
Channel 60 (5300MHz)							
1991.67	H	45.67	74	-28.33	PK	100.00	26.40
1991.67	H	27.39	54	-26.61	AV	100.00	26.40
1991.67	V	53.37	74	-20.63	PK	118.00	96.30
1991.67	V	36.48	54	-17.52	AV	118.00	96.30
Channel 64 (5320MHz)							
2501.67	H	47.93	74	-26.07	PK	105.40	188.40
2501.67	H	28.46	54	-25.54	AV	105.40	188.40
2501.67	V	47.37	74	-26.63	PK	103.00	136.00
2501.67	V	29.58	54	-24.42	AV	103.00	136.00
Channel 100 (5500MHz)							
1991.67	H	45.28	74	-28.72	PK	100.00	169.00
1991.67	H	27.75	54	-26.25	AV	100.00	169.00
1991.67	V	52.56	74	-21.44	PK	100.00	167.40

1991.67	V	33.75	54	-20.25	AV	100.00	167.40
Channel 120 (5600MHz)							
1991.67	H	46.83	74	-27.17	PK	104.00	62.00
1991.67	H	28.46	54	-25.54	AV	104.00	62.00
1991.67	V	51.73	74	-22.27	PK	120.00	147.00
1991.67	V	33.27	54	-20.73	AV	120.00	147.00
Channel 140 (5700MHz)							
1595	H	45.74	74	-28.26	PK	105.10	94.00
1595	H	27.73	54	-26.27	AV	105.10	94.00
1595	V	43.46	74	-30.54	PK	100.00	284.00
1595	V	25.44	54	-28.56	AV	100.00	284.00

Mode 3: 802.11n (40MHz Bandwidth) (Chain A)							
Frequency (MHz)	Polarization (H/V)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (degree)
Channel 38 (5190MHz)							
1595	H	45.73	74	-28.27	PK	100.00	198.00
1595	H	27.56	54	-26.44	AV	100.00	198.00
1595	V	48.25	74	-25.75	PK	100.00	126.00
1595	V	29.45	54	-24.55	AV	100.00	126.00
Channel 46 (5230MHz)							
1595	H	46.43	74	-27.57	PK	100.00	153.00
1595	H	28.47	54	-25.53	AV	100.00	153.00
1595	V	52.34	74	-21.66	PK	104.00	206.00
1595	V	33.35	54	-20.65	AV	104.00	206.00
Channel 54 (5270MHz)							
2501.67	H	45.35	74	-28.65	PK	100.00	196.00
2501.67	H	28.67	54	-25.33	AV	100.00	196.00
2501.67	V	46.73	74	-27.27	PK	100.00	144.00
2501.67	V	29.42	54	-24.58	AV	100.00	144.00
Channel 62 (5310MHz)							
2501.67	H	46.43	74	-27.57	PK	100.00	84.90
2501.67	H	28.63	54	-25.37	AV	100.00	84.90
2501.67	V	47.57	74	-26.43	PK	100.00	185.00
2501.67	V	29.36	54	-24.64	AV	100.00	185.00
Channel 102 (5510MHz)							
1991.67	H	45.47	74	-28.53	PK	100.00	184.00

1991.67	H	27.83	54	-26.17	AV	100.00	184.00
1991.67	V	52.28	74	-21.72	PK	102.00	117.00
1991.67	V	33.05	54	-20.95	AV	102.00	117.00
Channel 118 (5590MHz)							
1991.67	H	46.64	74	-27.36	PK	102.50	116.70
1991.67	H	28.42	54	-25.58	AV	102.50	116.70
1991.67	V	51.28	74	-22.72	PK	106.00	158.00
1991.67	V	33.57	54	-20.43	AV	106.40	158.00
Channel 134 (5670MHz)							
1595	H	45.84	74	-28.16	PK	120.50	304.00
1595	H	27.76	54	-26.24	AV	120.50	304.00
1595	V	43.63	74	-30.37	PK	109.40	65.80
1595	V	25.53	54	-28.47	AV	109.40	65.80

Mode 3: 802.11n (40MHz Bandwidth) (Chain B)							
Frequency (MHz)	Polarization (H/V)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (degree)
Channel 38 (5190MHz)							
1595	H	46.36	74	-27.64	PK	104.00	62.00
1595	H	28.67	54	-25.33	AV	104.00	62.00
1595	V	47.45	74	-26.55	PK	120.00	147.00
1595	V	29.34	54	-24.66	AV	120.00	147.00
Channel 46 (5230MHz)							
1595	H	44.57	74	-29.43	PK	110.40	208.00
1595	H	26.67	54	-27.33	AV	110.40	208.00
1595	V	52.54	74	-21.46	PK	105.10	163.60
1595	V	33.34	54	-20.66	AV	105.10	163.60
Channel 54 (5270MHz)							
2501.67	H	45.39	74	-28.61	PK	105.10	94.00
2501.67	H	28.58	54	-25.42	AV	105.10	94.00
2501.67	V	46.47	74	-27.53	PK	100.00	284.00
2501.67	V	29.98	54	-24.02	AV	100.00	284.00
Channel 62 (5310MHz)							
2501.67	H	47.67	74	-26.33	PK	105.60	124.00
2501.67	H	28.36	54	-25.64	AV	105.60	124.00
2501.67	V	47.46	74	-26.54	PK	106.20	144.00
2501.67	V	29.64	54	-24.36	AV	106.20	144.00

Channel 102 (5510MHz)							
1991.67	H	45.47	74	-28.53	PK	100.00	185.00
1991.67	H	27.57	54	-26.43	AV	100.00	185.00
1991.67	V	52.54	74	-21.46	PK	102.60	225.00
1991.67	V	33.46	54	-20.54	AV	102.60	225.00
Channel 118 (5590MHz)							
1991.67	H	46.48	74	-27.52	PK	100.00	196.00
1991.67	H	28.74	54	-25.26	AV	100.00	196.00
1991.67	V	51.54	74	-22.46	PK	100.00	93.40
1991.67	V	33.38	54	-20.62	AV	100.00	93.40
Channel 134 (5670MHz)							
1595	H	45.74	74	-28.26	PK	100.00	184.00
1595	H	27.45	54	-26.55	AV	100.00	184.00
1595	V	43.49	74	-30.51	PK	102.00	117.00
1595	V	25.27	54	-28.73	AV	102.00	117.00

Mode 3: 802.11n (40MHz Bandwidth) (Chain C)							
Frequency (MHz)	Polarization (H/V)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (degree)
Channel 38 (5190MHz)							
1595	H	46.67	74	-27.33	PK	100.00	198.00
1595	H	28.93	54	-25.07	AV	100.00	198.00
1595	V	47.45	74	-26.55	PK	100.00	126.00
1595	V	29.83	54	-24.17	AV	100.00	126.00
Channel 46 (5230MHz)							
1595	H	44.49	74	-29.51	PK	100.00	185.00
1595	H	26.78	54	-27.22	AV	100.00	185.00
1595	V	52.73	74	-21.27	PK	105.40	216.00
1595	V	33.55	54	-20.45	AV	105.40	216.00
Channel 54 (5270MHz)							
2501.67	H	45.37	74	-28.63	PK	102.40	167.00
2501.67	H	28.58	54	-25.42	AV	102.40	167.00
2501.67	V	46.74	74	-27.26	PK	106.00	115.00
2501.67	V	29.66	54	-24.34	AV	106.00	115.00
Channel 62 (5310MHz)							
2501.67	H	47.87	74	-26.13	PK	100.00	167.00
2501.67	H	28.46	54	-25.54	AV	100.00	167.00

2501.67	V	47.45	74	-26.55	PK	100.00	196.00
2501.67	V	29.38	54	-24.62	AV	100.00	196.00
Channel 102 (5510MHz)							
1991.67	H	45.57	74	-28.43	PK	100.00	184.00
1991.67	H	27.63	54	-26.37	AV	100.00	184.00
1991.67	V	52.83	74	-21.17	PK	102.00	117.00
1991.67	V	33.60	54	-20.40	AV	102.00	117.00
Channel 118 (5590MHz)							
1991.67	H	46.59	74	-27.41	PK	110.40	208.00
1991.67	H	28.58	54	-25.42	AV	110.40	208.00
1991.67	V	51.43	74	-22.57	PK	105.10	163.60
1991.67	V	33.49	54	-20.51	AV	105.10	163.60
Channel 134 (5670MHz)							
1595	H	45.58	74	-28.42	PK	105.60	124.00
1595	H	27.07	54	-26.93	AV	105.60	124.00
1595	V	43.53	74	-30.47	PK	106.20	144.00
1595	V	25.45	54	-28.55	AV	106.20	144.00

Mode 3: 802.11n (40MHz Bandwidth) (Chain A+B)							
Frequency (MHz)	Polarization (H/V)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (degree)
Channel 38 (5190MHz)							
1595	H	44.27	74	-29.73	PK	106.20	63.00
1595	H	26.46	54	-27.54	AV	106.20	63.00
1595	V	47.85	74	-26.15	PK	105.60	307.00
1595	V	29.27	54	-24.73	AV	105.60	307.00
Channel 46 (5230MHz)							
1595	H	44.57	74	-29.43	PK	100.00	123.50
1595	H	26.46	54	-27.54	AV	100.00	123.50
1595	V	52.44	74	-21.56	PK	102.50	134.70
1595	V	33.84	54	-20.16	AV	102.50	134.70
Channel 54 (5270MHz)							
2501.67	H	45.25	74	-28.75	PK	100.00	84.90
2501.67	H	28.34	54	-25.66	AV	100.00	84.90
2501.67	V	46.54	74	-27.46	PK	100.00	185.00
2501.67	V	29.85	54	-24.15	AV	100.00	185.00
Channel 62 (5310MHz)							

2501.67	H	47.46	74	-26.54	PK	113.00	154.00
2501.67	H	28.62	54	-25.38	AV	113.00	154.00
2501.67	V	47.18	74	-26.82	PK	100.00	193.00
2501.67	V	29.73	54	-24.27	AV	100.00	193.00
Channel 102 (5510MHz)							
1991.67	H	45.35	74	-28.65	PK	100.00	187.00
1991.67	H	27.45	54	-26.55	AV	100.00	187.00
1991.67	V	52.56	74	-21.44	PK	106.00	328.00
1991.67	V	33.43	54	-20.57	AV	106.00	328.00
Channel 118 (5590MHz)							
1991.67	H	46.85	74	-27.15	PK	100.00	196.00
1991.67	H	28.53	54	-25.47	AV	100.00	196.00
1991.67	V	51.44	74	-22.56	PK	100.00	93.40
1991.67	V	33.53	54	-20.47	AV	100.00	93.40
Channel 134 (5670MHz)							
1595	H	45.45	74	-28.55	PK	100.00	149.30
1595	H	27.53	54	-26.47	AV	100.00	149.30
1595	V	43.74	74	-30.26	PK	112.40	207.00
1595	V	25.46	54	-28.54	AV	112.40	207.00

Mode 3: 802.11n (40MHz Bandwidth) (Chain A+C)							
Frequency (MHz)	Polarization (H/V)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (degree)
Channel 38 (5190MHz)							
1595	H	46.85	74	-27.15	PK	103.50	94.80
1595	H	28.74	54	-25.26	AV	103.00	94.80
1595	V	47.64	74	-26.36	PK	103.00	168.00
1595	V	29.43	54	-24.57	AV	103.00	168.00
Channel 46 (5230MHz)							
1595	H	44.25	74	-29.75	PK	100.00	84.00
1595	H	26.46	54	-27.54	AV	100.00	84.00
1595	V	52.84	74	-21.16	PK	101.40	74.90
1595	V	33.53	54	-20.47	AV	101.40	74.90
Channel 54 (5270MHz)							
2501.67	H	45.83	74	-28.17	PK	117.50	96.20
2501.67	H	28.58	54	-25.42	AV	117.50	96.20
2501.67	V	46.57	74	-27.43	PK	115.00	49.70

2501.67	V	29.57	54	-24.43	AV	115.00	49.70
Channel 62 (5310MHz)							
2501.67	H	47.37	74	-26.63	PK	100.00	94.00
2501.67	H	28.45	54	-25.55	AV	100.00	94.80
2501.67	V	47.57	74	-26.43	PK	104.00	299.50
2501.67	V	29.48	54	-24.52	AV	104.00	299.50
Channel 102 (5510MHz)							
1991.67	H	45.64	74	-28.36	PK	115.40	236.00
1991.67	H	27.35	54	-26.65	AV	115.40	236.00
1991.67	V	52.59	74	-21.41	PK	119.00	238.00
1991.67	V	33.72	54	-20.28	AV	119.00	238.00
Channel 118 (5590MHz)							
1991.67	H	46.24	74	-27.76	PK	117.00	85.00
1991.67	H	28.42	54	-25.58	AV	117.00	85.00
1991.67	V	51.70	74	-22.30	PK	106.00	83.40
1991.67	V	33.22	54	-20.78	AV	106.00	83.40
Channel 134 (5670MHz)							
1595	H	45.44	74	-28.56	PK	100.00	147.00
1595	H	27.53	54	-26.47	AV	100.00	147.00
1595	V	43.41	74	-30.59	PK	106.00	83.60
1595	V	25.24	54	-28.76	AV	106.00	83.60

Mode 3: 802.11n (40MHz Bandwidth) (Chain B+C)							
Frequency (MHz)	Polarization (H/V)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (degree)
Channel 38 (5190MHz)							
1595	H	45.63	74	-28.37	PK	100.00	198.00
1595	H	27.87	54	-26.13	AV	100.00	198.00
1595	V	47.25	74	-26.75	PK	100.00	126.00
1595	V	29.14	54	-24.86	AV	100.00	126.00
Channel 46 (5230MHz)							
1595	H	44.45	74	-29.55	PK	110.40	208.00
1595	H	26.47	54	-27.53	AV	110.40	208.00
1595	V	52.57	74	-21.43	PK	105.10	163.60
1595	V	33.73	54	-20.27	AV	105.10	163.60
Channel 54 (5270MHz)							
2501.67	H	45.53	74	-28.47	PK	105.40	85.00

2501.67	H	28.48	54	-25.52	AV	105.40	85.00
2501.67	V	46.38	74	-27.62	PK	105.10	174.00
2501.67	V	29.39	54	-24.61	AV	105.10	174.00
Channel 62 (5310MHz)							
2501.67	H	47.74	74	-26.26	PK	100.00	152.60
2501.67	H	28.47	54	-25.53	AV	100.00	152.60
2501.67	V	47.78	74	-26.22	PK	102.50	16.50
2501.67	V	29.89	54	-24.11	AV	102.50	16.50
Channel 102 (5510MHz)							
1991.67	H	45.23	74	-28.77	PK	113.60	228.00
1991.67	H	27.64	54	-26.36	AV	113.60	228.00
1991.67	V	52.48	74	-21.52	PK	101.10	133.60
1991.67	V	33.38	54	-20.62	AV	101.10	133.60
Channel 118 (5590MHz)							
1991.67	H	46.33	74	-27.67	PK	100.00	153.00
1991.67	H	28.64	54	-25.36	AV	100.00	153.00
1991.67	V	51.23	74	-22.77	PK	104.00	206.00
1991.67	V	33.47	54	-20.53	AV	104.00	206.00
Channel 134 (5670MHz)							
1595	H	45.73	74	-28.27	PK	100.00	185.00
1595	H	27.35	54	-26.65	AV	100.00	185.00
1595	V	43.43	74	-30.57	PK	102.60	225.00
1595	V	25.40	54	-28.60	AV	102.60	225.00

Mode 3: 802.11n (40MHz Bandwidth) (Chain A+B+C)							
Frequency (MHz)	Polarization (H/V)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (degree)
Channel 38 (5190MHz)							
1595	H	46.16	74	-27.84	PK	100.00	133.50
1595	H	28.85	54	-25.15	AV	100.00	133.50
1595	V	47.25	74	-26.75	PK	103.40	114.60
1595	V	29.22	54	-24.78	AV	103.40	114.60
Channel 46 (5230MHz)							
1595	H	44.94	74	-29.06	PK	100.00	123.50
1595	H	26.46	54	-27.54	AV	100.00	123.50
1595	V	52.22	74	-21.78	PK	102.50	134.70
1595	V	33.35	54	-20.65	AV	102.50	134.70

Channel 54 (5270MHz)							
2501.67	H	45.37	74	-28.63	PK	102.40	167.00
2501.67	H	28.45	54	-25.55	AV	102.40	167.00
2501.67	V	46.56	74	-27.44	PK	106.00	115.00
2501.67	V	29.63	54	-24.37	AV	106.00	115.00
Channel 62 (5310MHz)							
2501.67	H	47.85	74	-26.15	PK	100.00	167.00
2501.67	H	28.43	54	-25.57	AV	100.00	167.00
2501.67	V	47.38	74	-26.62	PK	100.00	196.00
2501.67	V	29.52	54	-24.48	AV	100.00	196.00
Channel 102 (5510MHz)							
1991.67	H	45.24	74	-28.76	PK	113.00	154.00
1991.67	H	27.55	54	-26.45	AV	113.00	154.00
1991.67	V	52.59	74	-21.41	PK	100.00	193.00
1991.67	V	33.05	54	-20.95	AV	100.00	193.00
Channel 118 (5590MHz)							
1991.67	H	46.27	74	-27.73	PK	106.20	63.00
1991.67	H	28.46	54	-25.54	AV	106.20	63.00
1991.67	V	51.75	74	-22.25	PK	105.60	307.00
1991.67	V	33.22	54	-20.78	AV	105.60	307.00
Channel 134 (5670MHz)							
1595	H	45.38	74	-28.62	PK	100.00	84.00
1595	H	27.43	54	-26.57	AV	100.00	84.00
1595	V	43.47	74	-30.53	PK	101.40	74.90
1595	V	25.41	54	-28.59	AV	101.40	74.90

4. 26dB Occupied Bandwidth

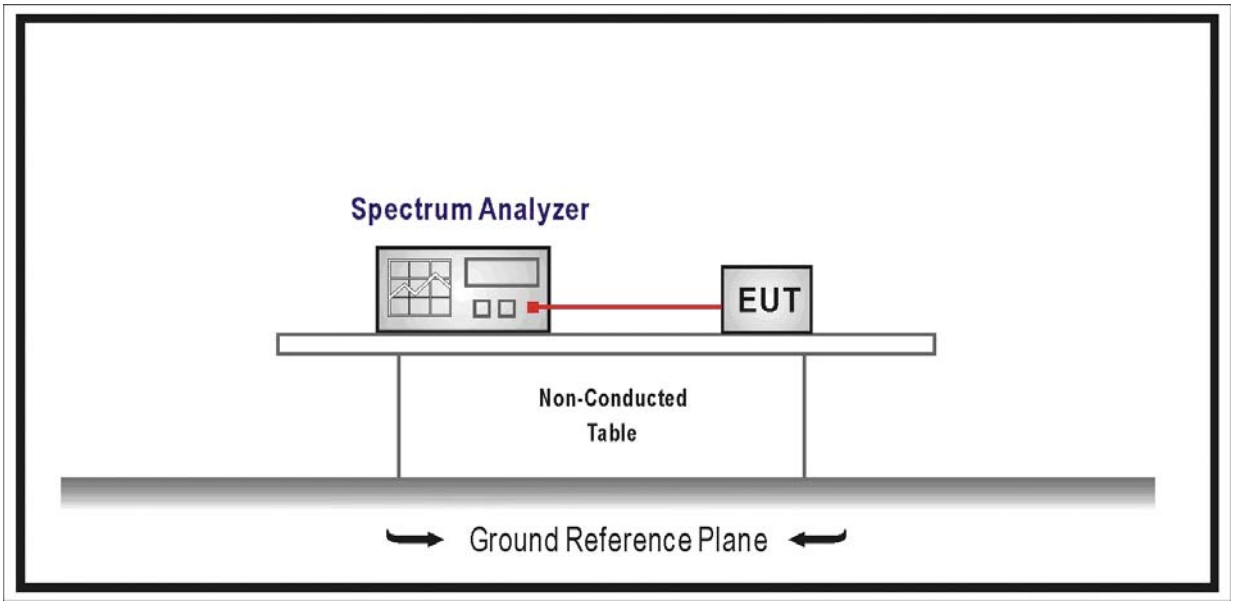
4.1. Test Equipment

26dB Occupied Bandwidth / AC-4

Instrument	Manufacturer	Type No.	Serial No.	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2008/06/11
Coaxial Cable	Huber+Suhner	AC4-RF	09	2007/11/25
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH007	2008/03/09

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

4.2. Test Setup



4.3. Limit

N/A

4.4. Test Procedure

The EUT was tested according to FCC Public Notice DA 02-2138, August 30, 2002 for compliance to FCC 47CFR 15.407 requirements.

Emission bandwidth “B” MHz.

- Use a RBW = approximately 1% of the emission bandwidth.
- Set the VBW > RBW
- Use a peak detector.
- Do not use the Max Hold function. Rather, use the view button to capture the emission.
- Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

4.5. Uncertainty

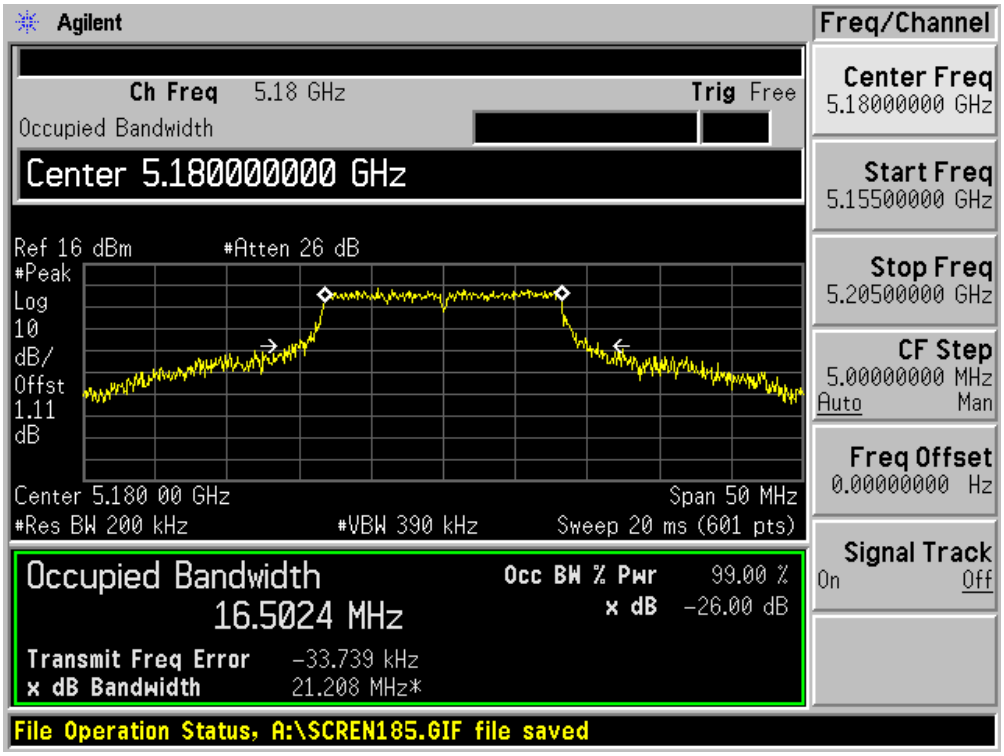
The measurement uncertainty is defined as ± 1 kHz

4.6. Test Result

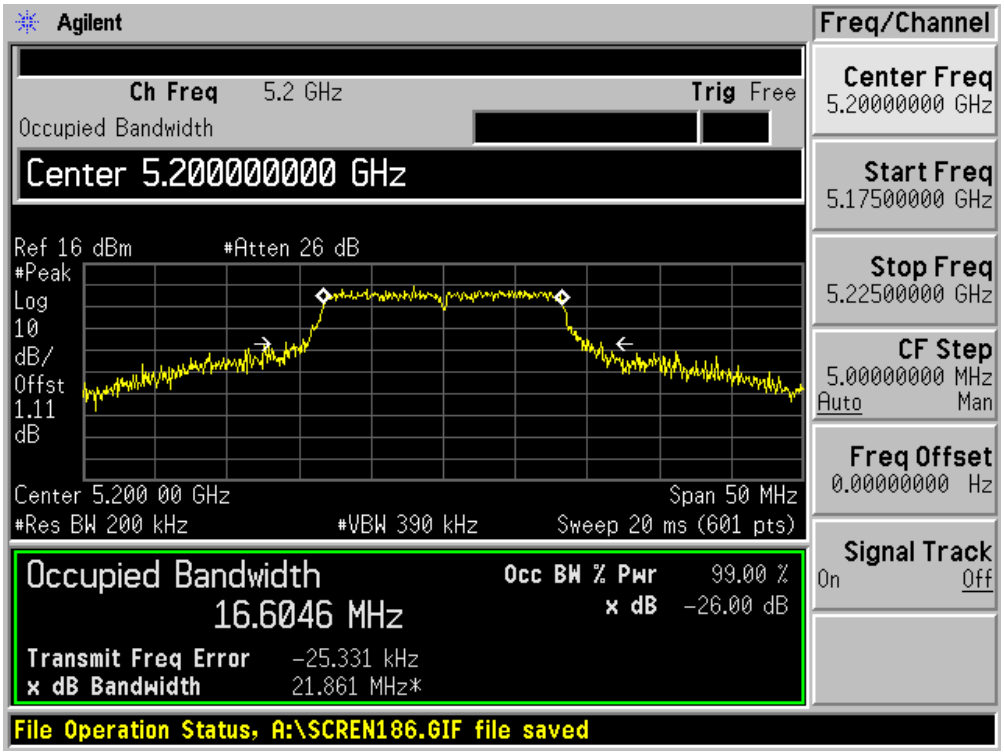
Product	:	Notebook Computer
Test Item	:	26dB Occupied Bandwidth
Test Site	:	AC-4
Test Mode	:	Mode 1: Transmit by 802.11a (Chain A)

Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	Limit (MHz)	Result
36	5180	21.208	N/A	Pass
40	5200	21.861	N/A	Pass
48	5240	20.943	N/A	Pass
52	5260	20.638	N/A	Pass
60	5300	20.128	N/A	Pass
64	5320	20.296	N/A	Pass
100	5500	20.127	N/A	Pass
120	5600	20.091	N/A	Pass
140	5700	20.171	N/A	Pass

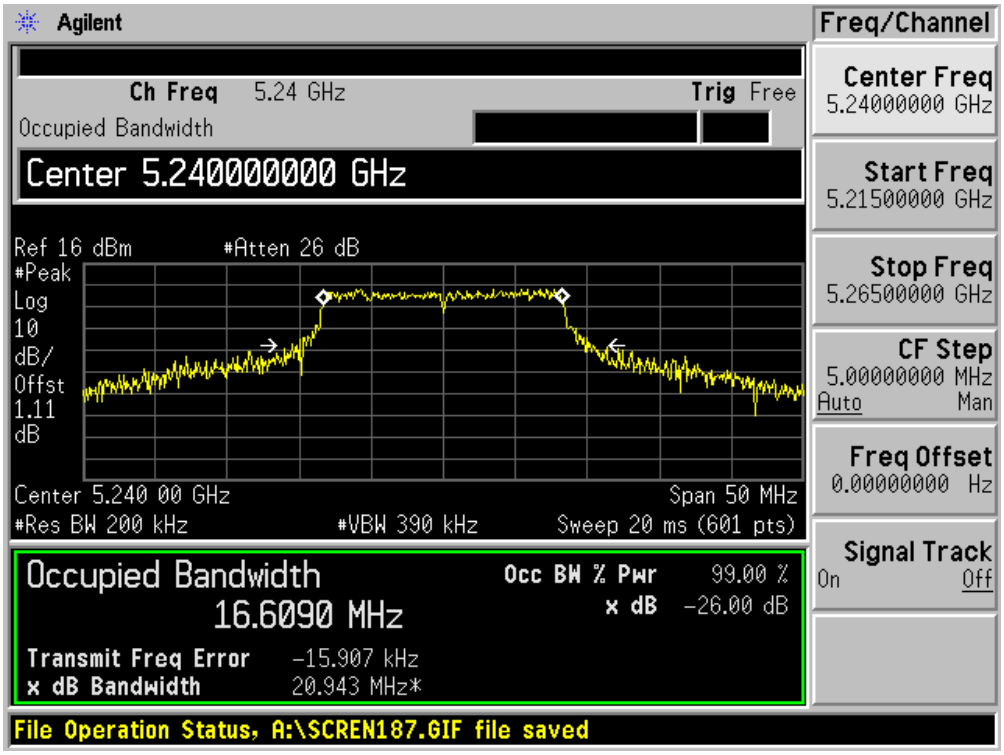
Channel 36 (5180MHz)



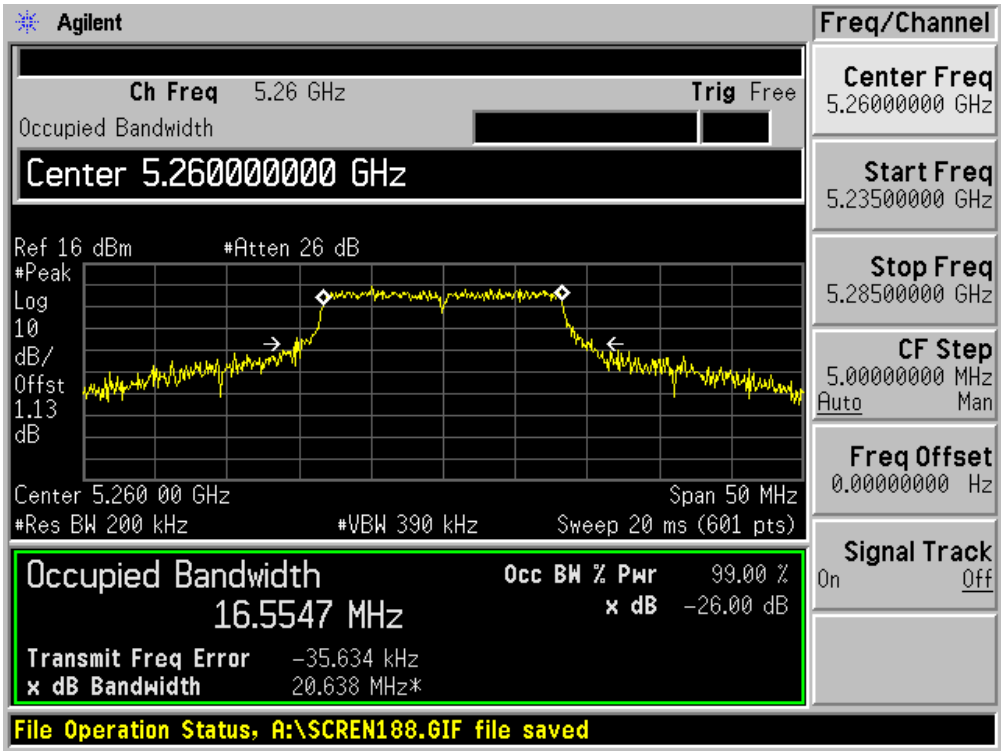
Channel 40 (5200MHz)



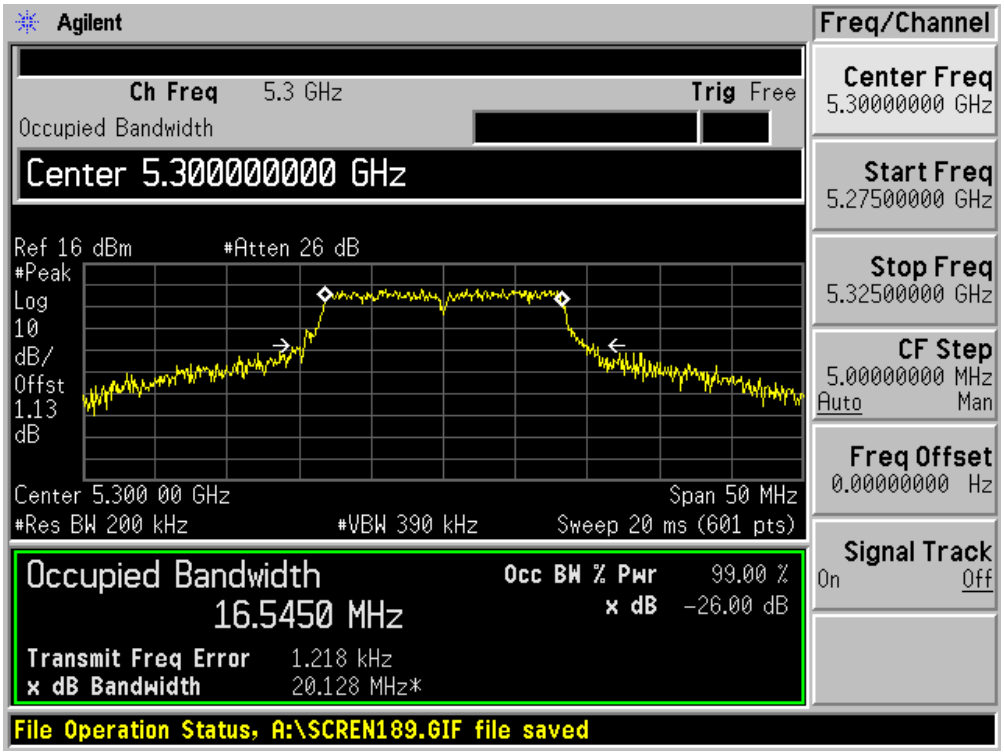
Channel 48 (5240MHz)



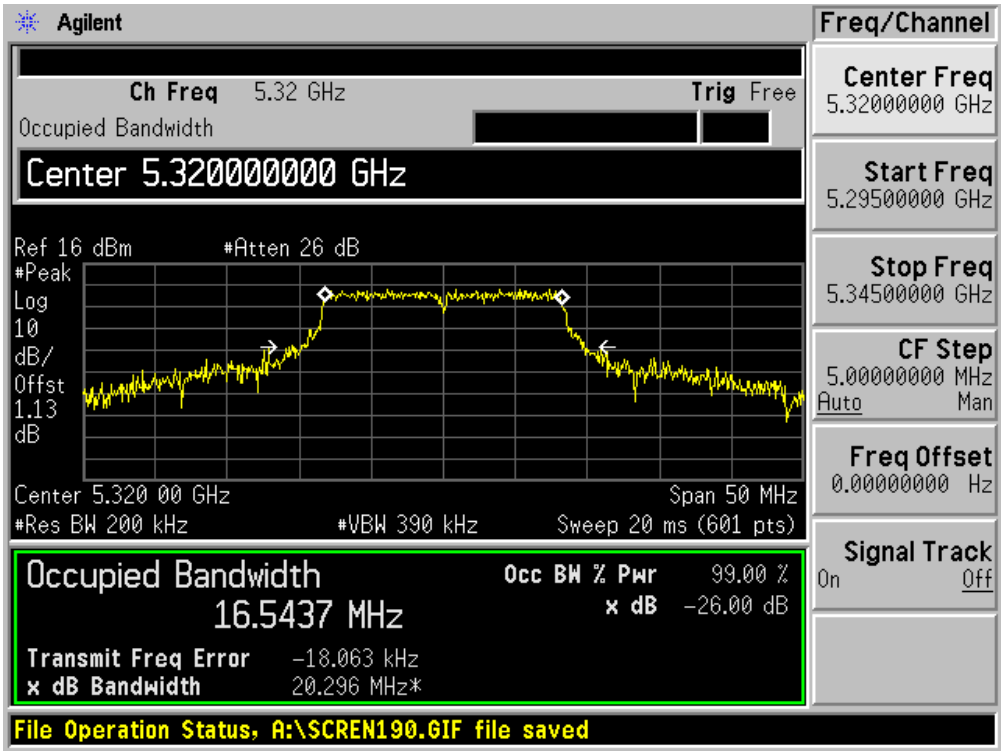
Channel 52 (5260MHz)



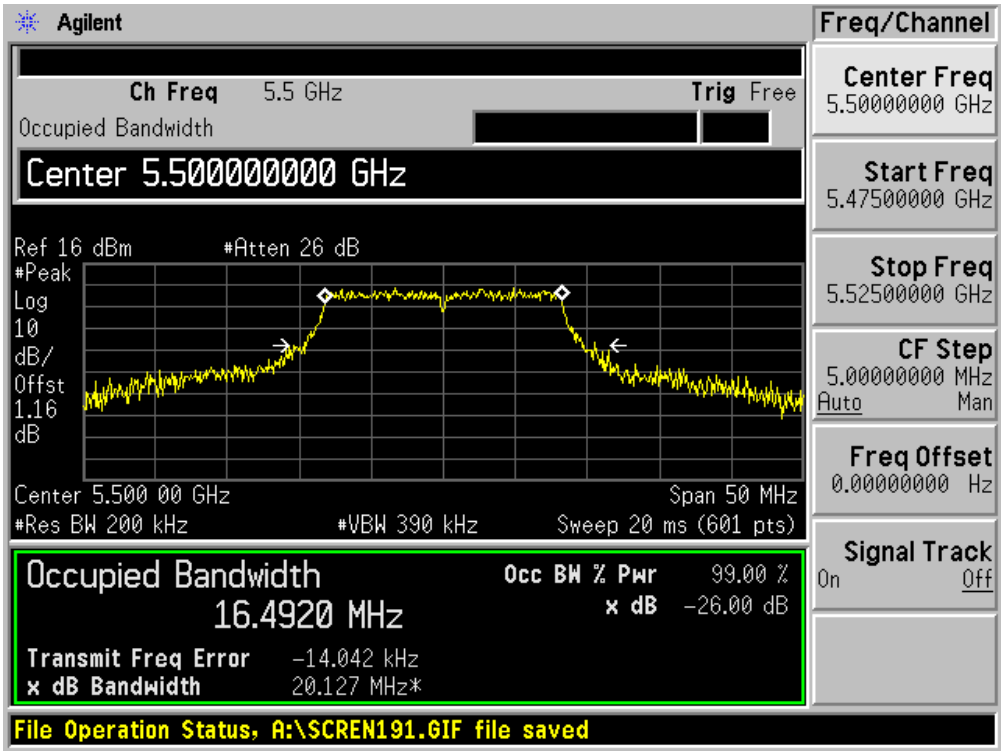
Channel 60 (5300MHz)



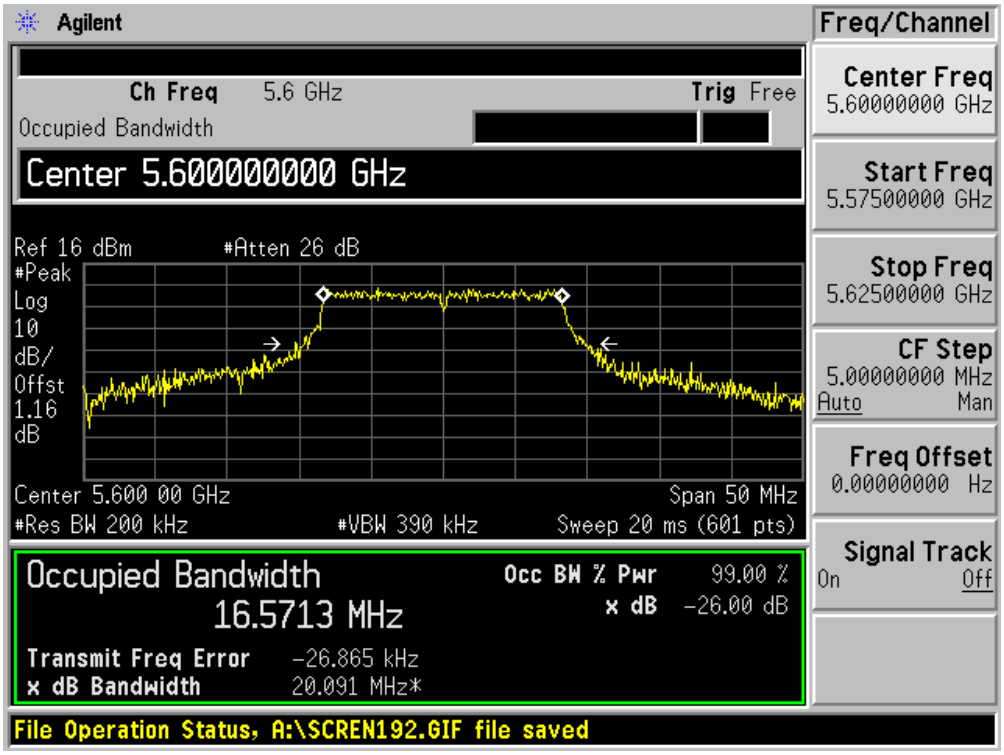
Channel 64 (5320MHz)



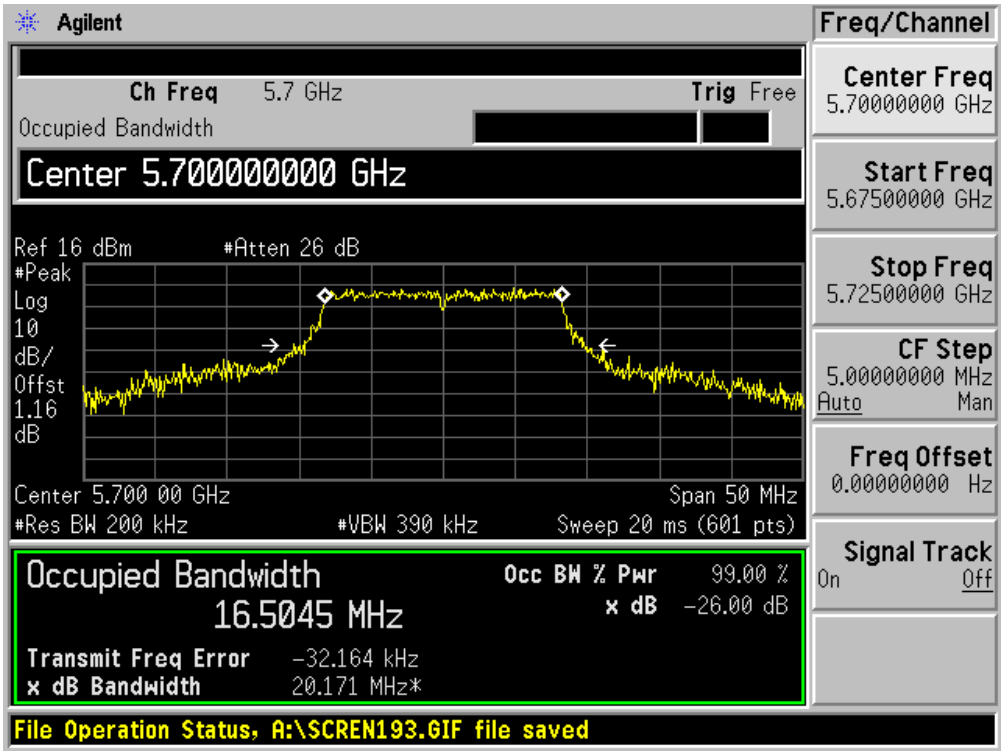
Channel 100 (5500MHz)



Channel 120 (5600MHz)



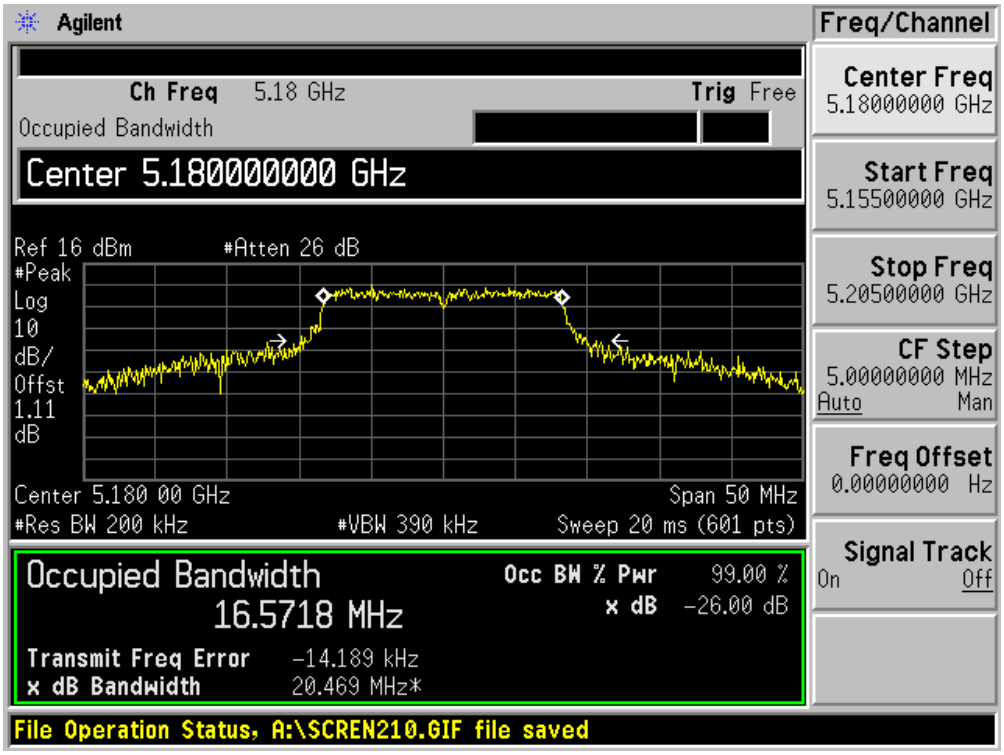
Channel 140 (5700MHz)



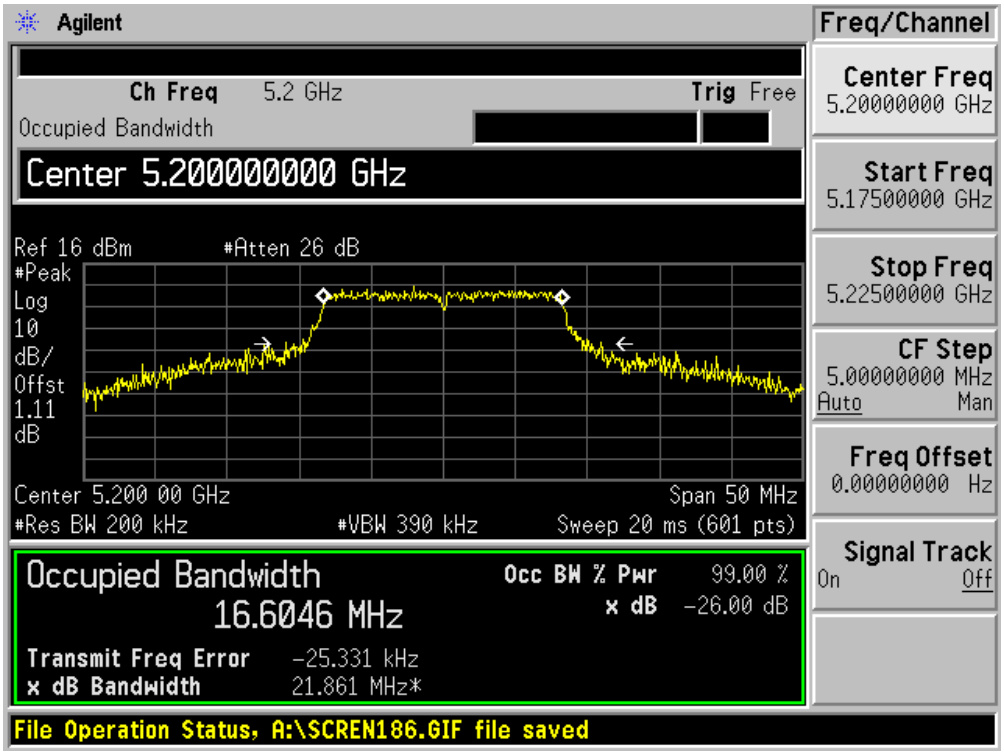
Product	:	Notebook Computer
Test Item	:	26dB Occupied Bandwidth
Test Site	:	AC-4
Test Mode	:	Mode 1: Transmit by 802.11a (Chain B)

Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	Limit (MHz)	Result
36	5180	20.469	N/A	Pass
40	5200	21.724	N/A	Pass
48	5240	20.863	N/A	Pass
52	5260	21.990	N/A	Pass
60	5300	20.034	N/A	Pass
64	5320	22.023	N/A	Pass
100	5500	21.395	N/A	Pass
120	5600	20.009	N/A	Pass
140	5700	20.046	N/A	Pass

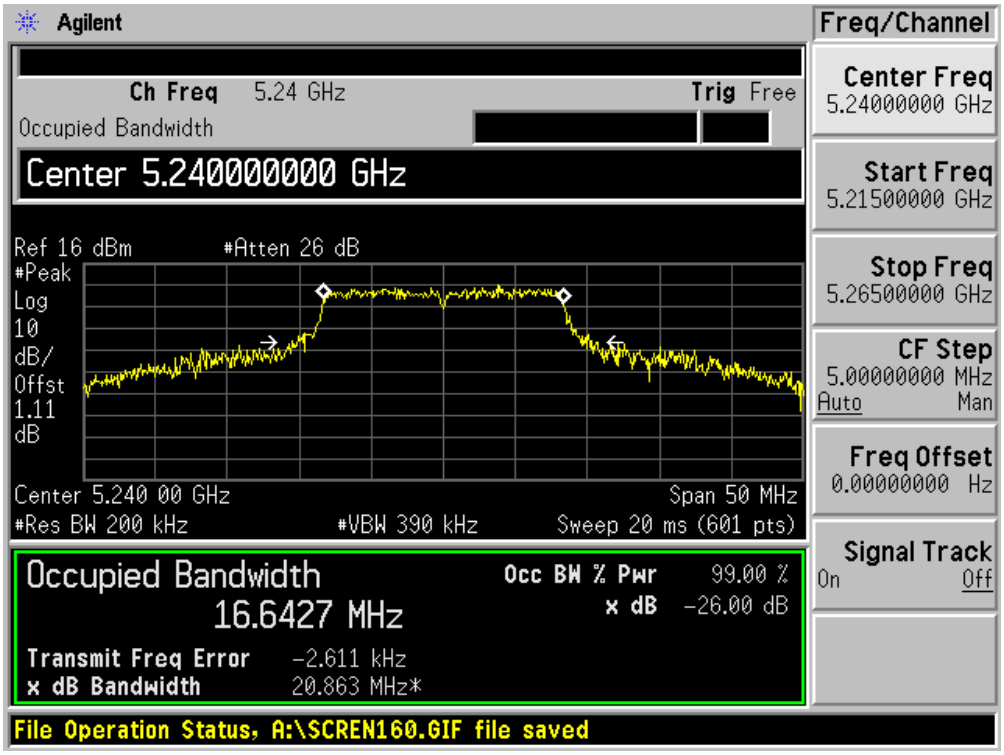
Channel 36 (5180MHz)



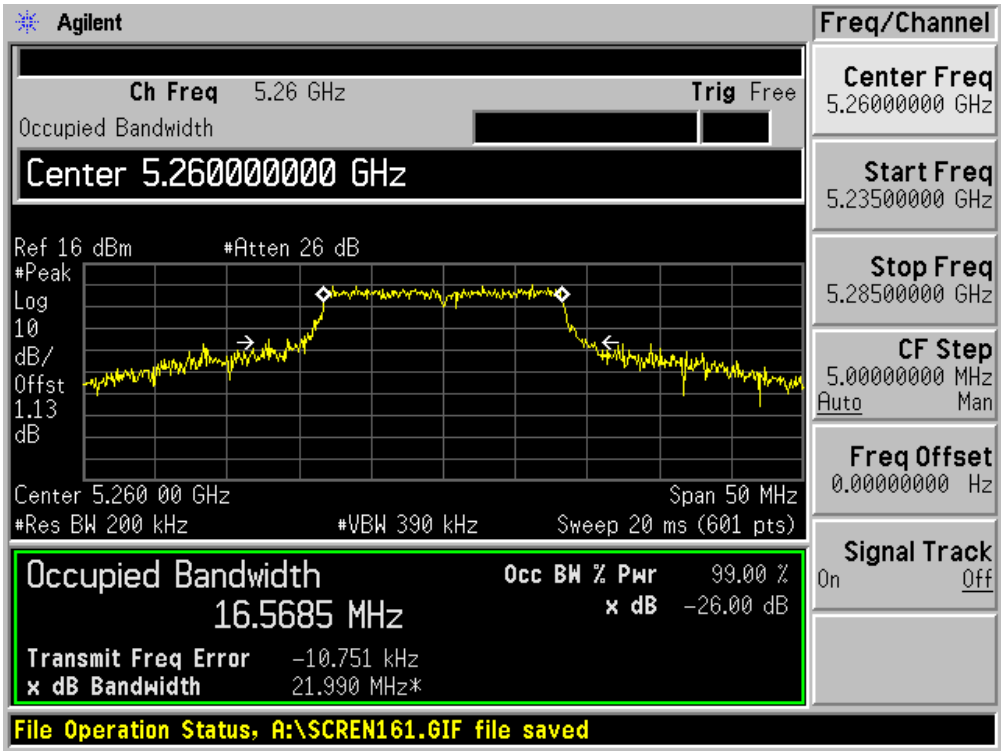
Channel 40 (5200MHz)



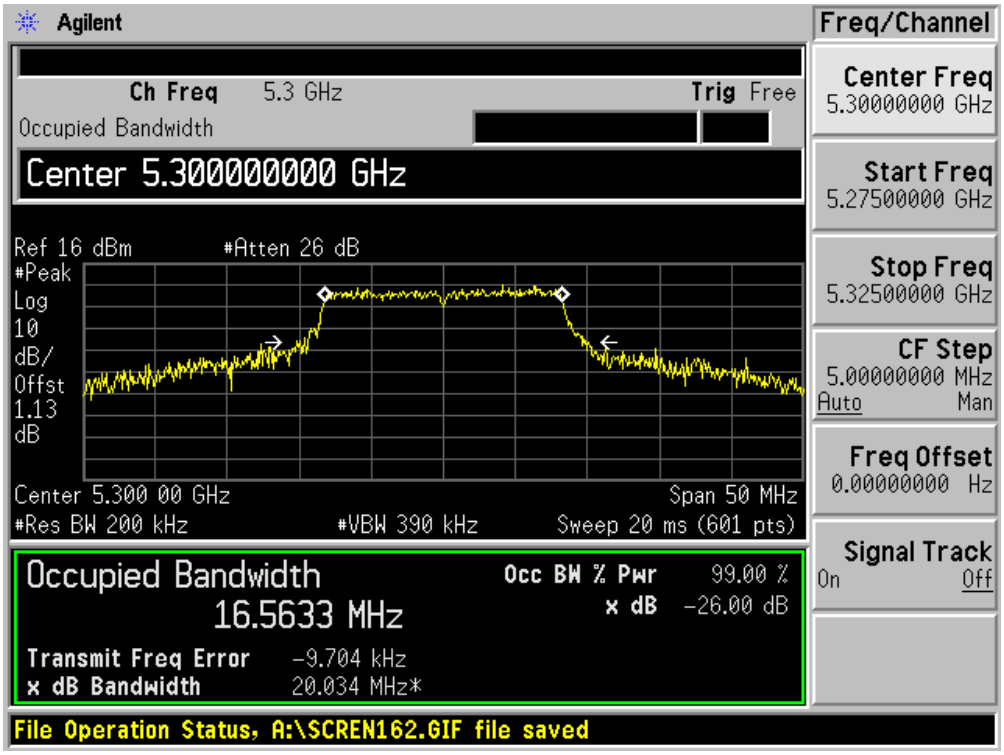
Channel 48 (5240MHz)



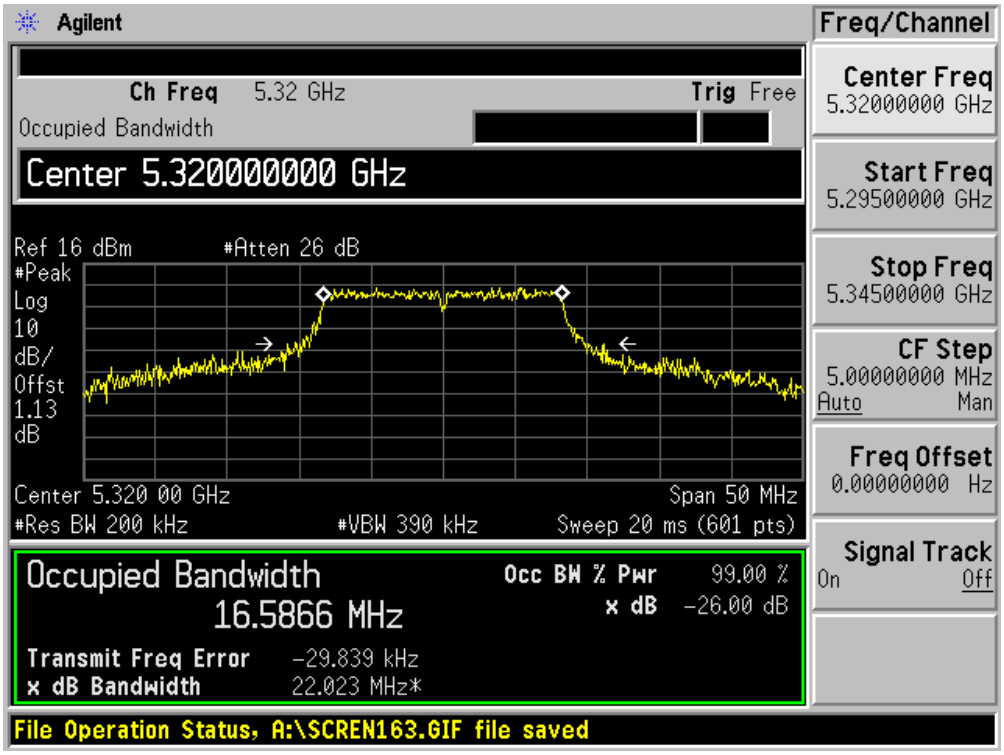
Channel 52 (5260MHz)



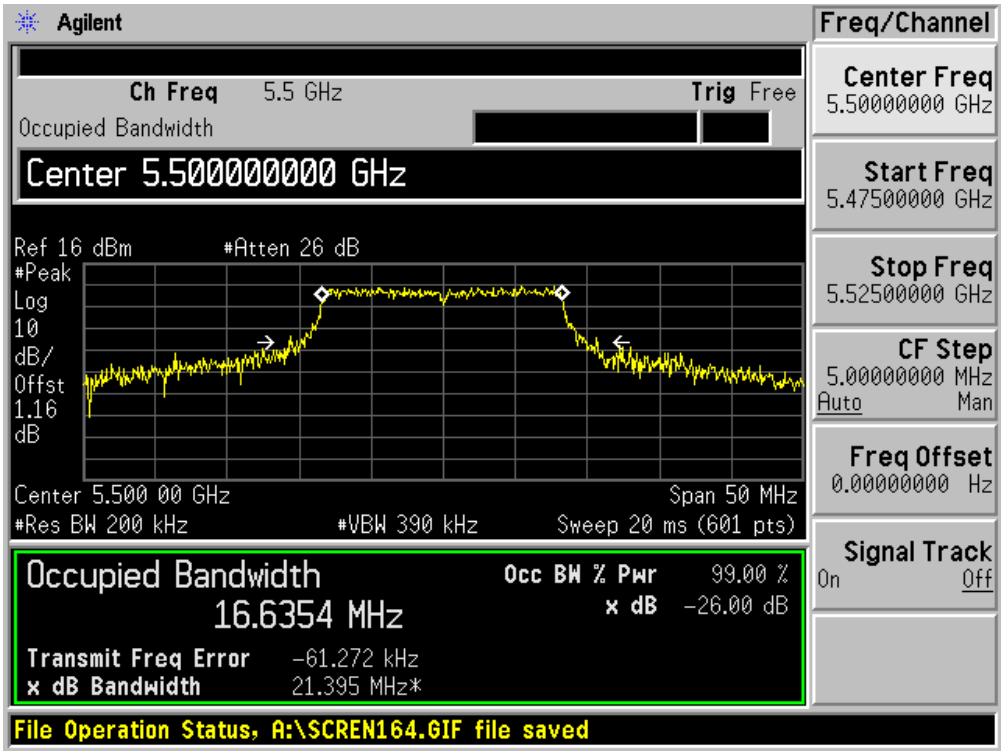
Channel 60 (5300MHz)



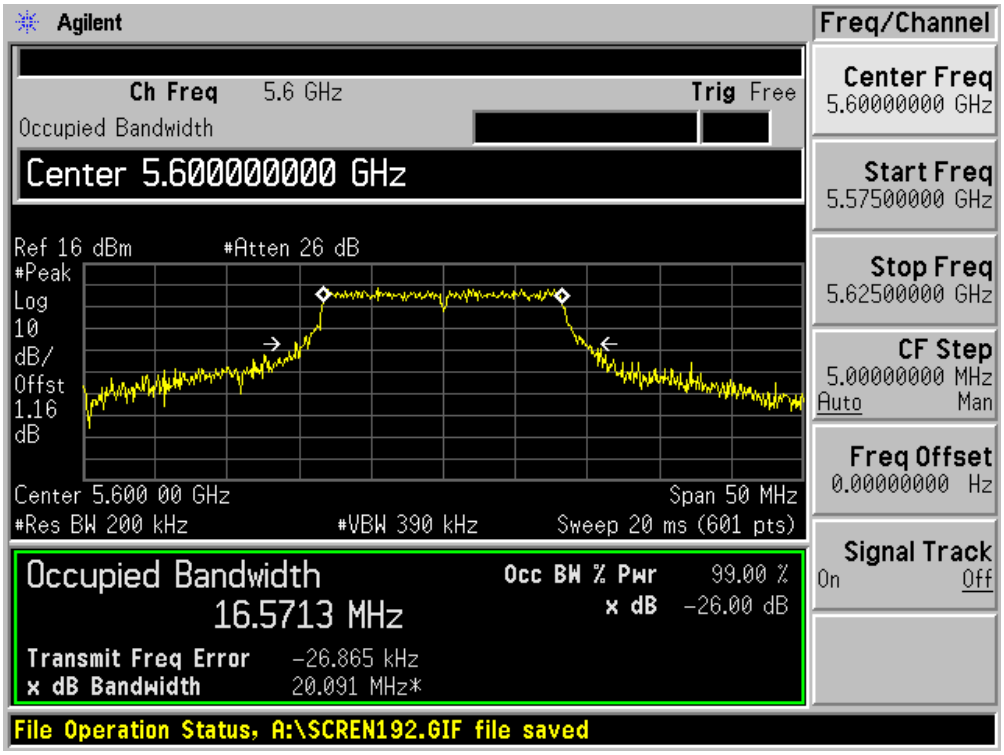
Channel 64 (5320MHz)



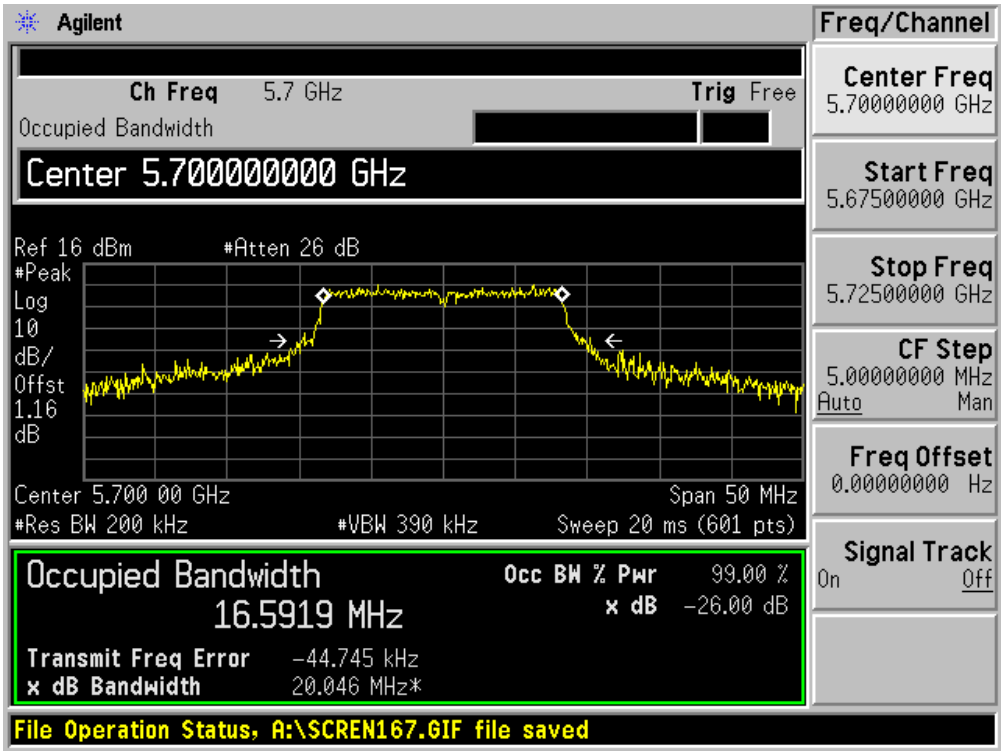
Channel 100 (5500MHz)



Channel 120 (5600MHz)



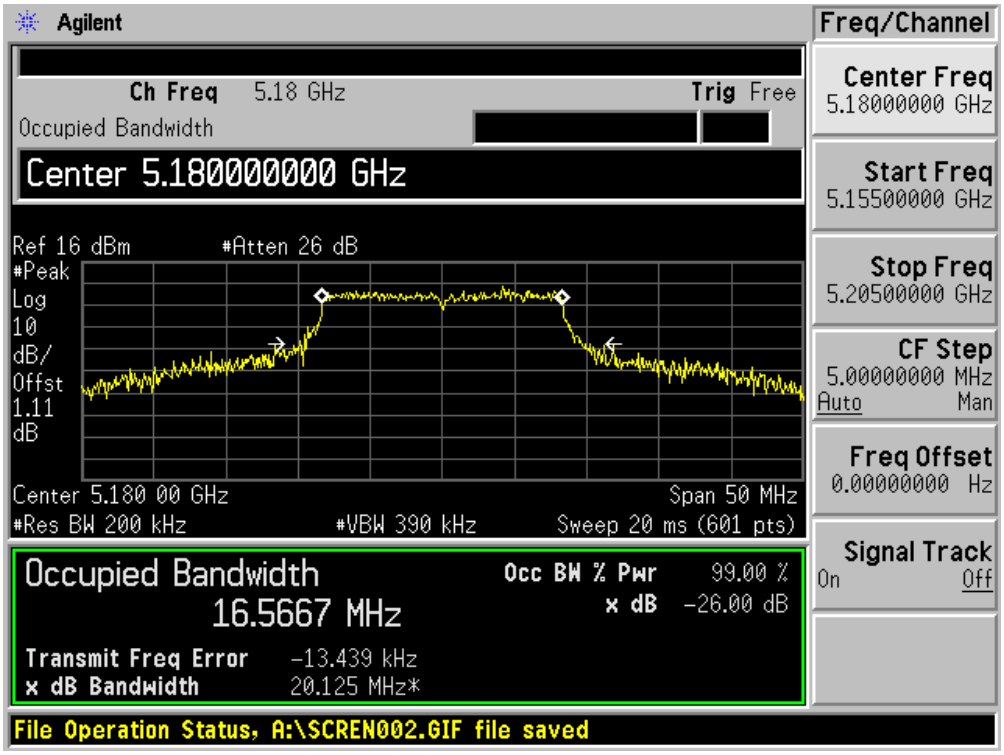
Channel 140 (5700MHz)



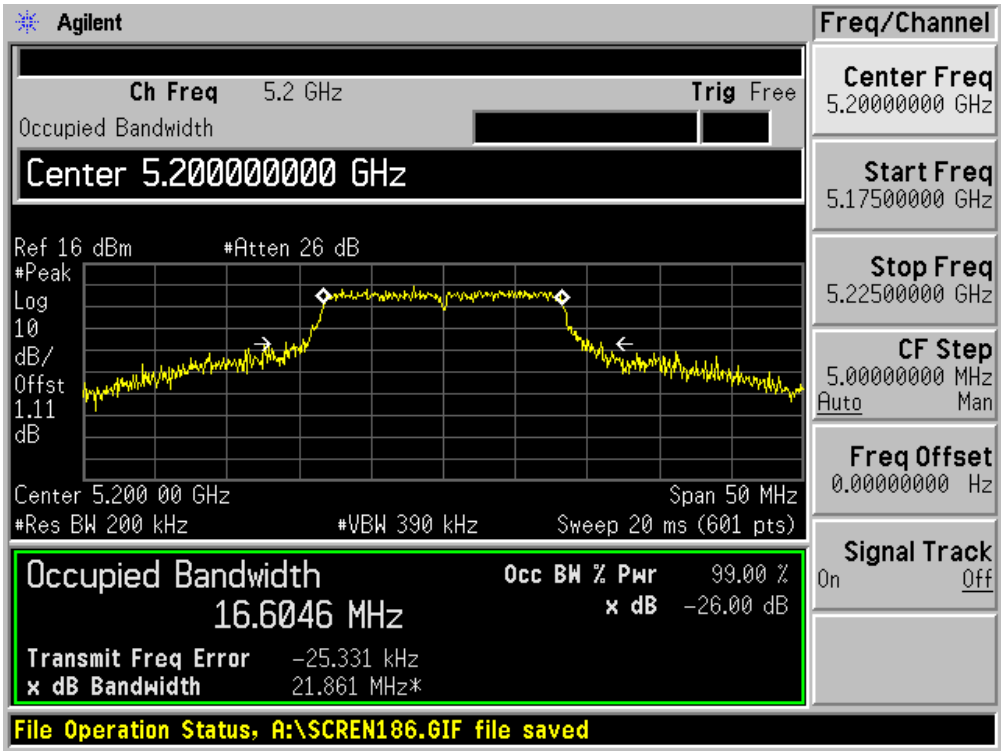
Product	:	Notebook Computer
Test Item	:	26dB Occupied Bandwidth
Test Site	:	AC-4
Test Mode	:	Mode 1: Transmit by 802.11a (Chain C)

Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	Limit (MHz)	Result
36	5180	20.125	N/A	Pass
40	5200	20.060	N/A	Pass
48	5240	21.129	N/A	Pass
52	5260	20.262	N/A	Pass
60	5300	21.244	N/A	Pass
64	5320	21.122	N/A	Pass
100	5500	20.542	N/A	Pass
120	5600	20.125	N/A	Pass
140	5700	20.211	N/A	Pass

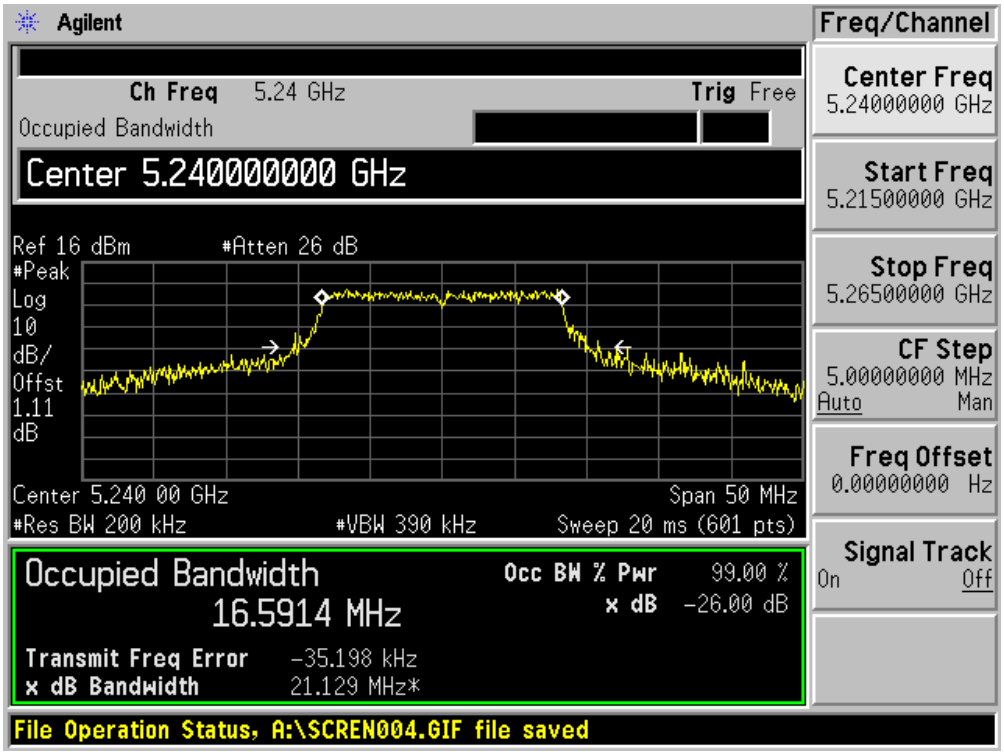
Channel 36 (5180MHz)



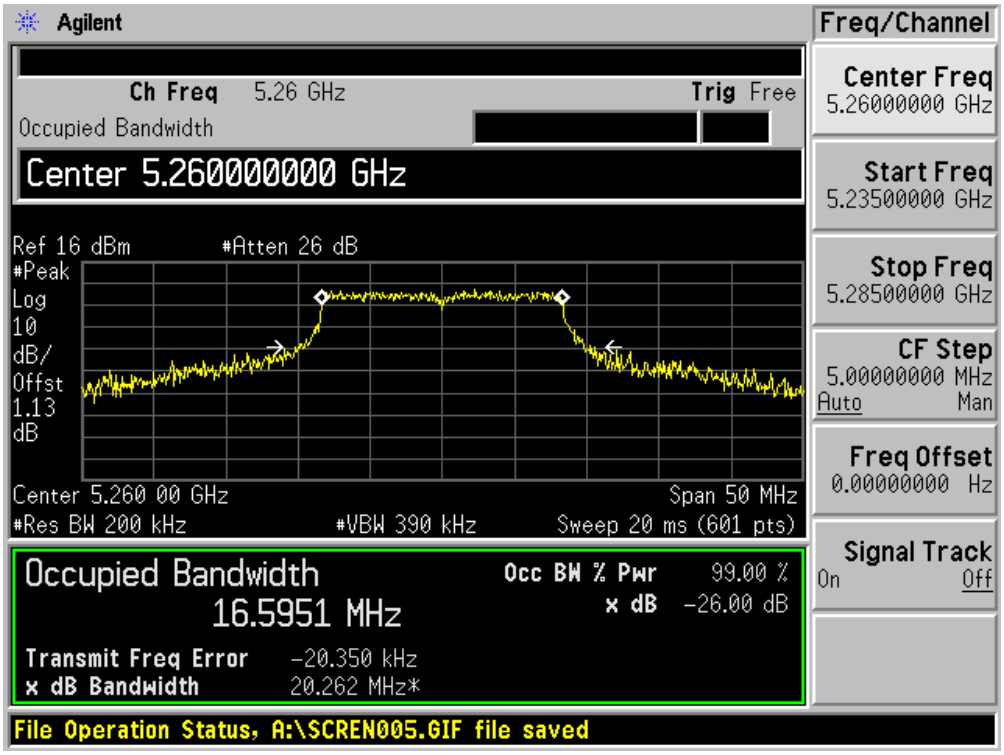
Channel 40 (5200MHz)



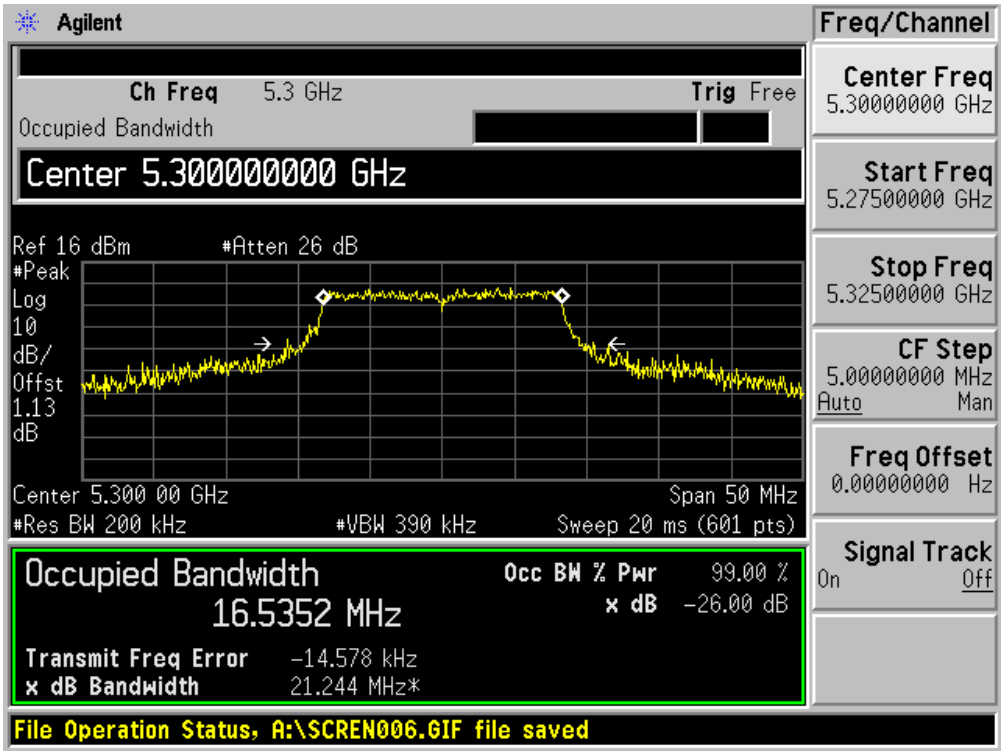
Channel 48 (5240MHz)



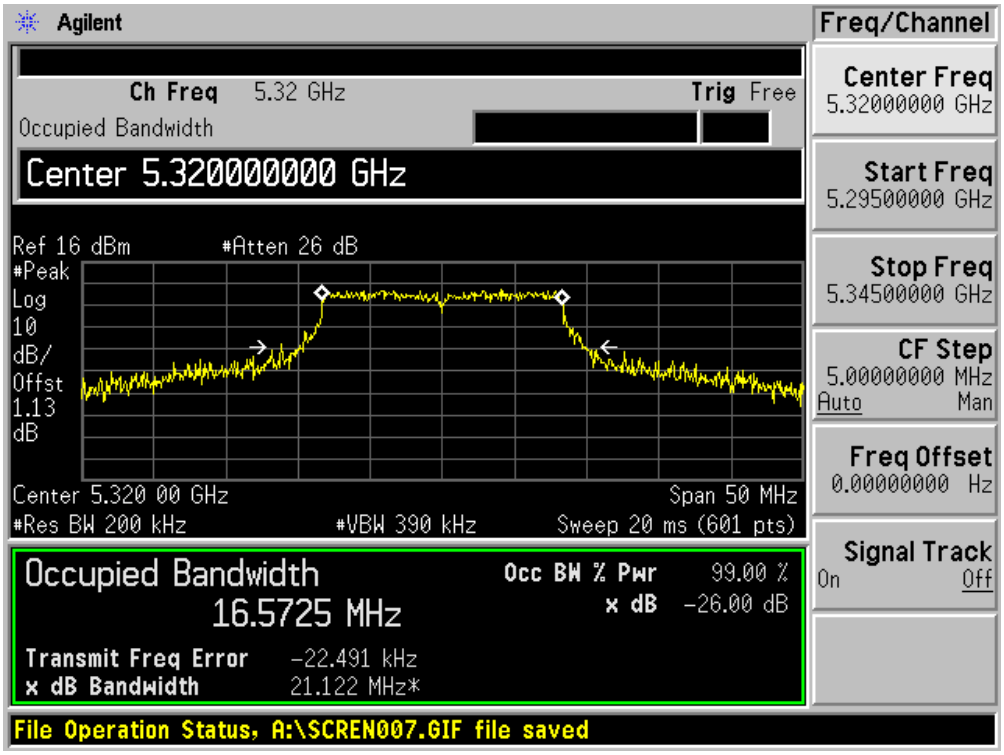
Channel 52 (5260MHz)



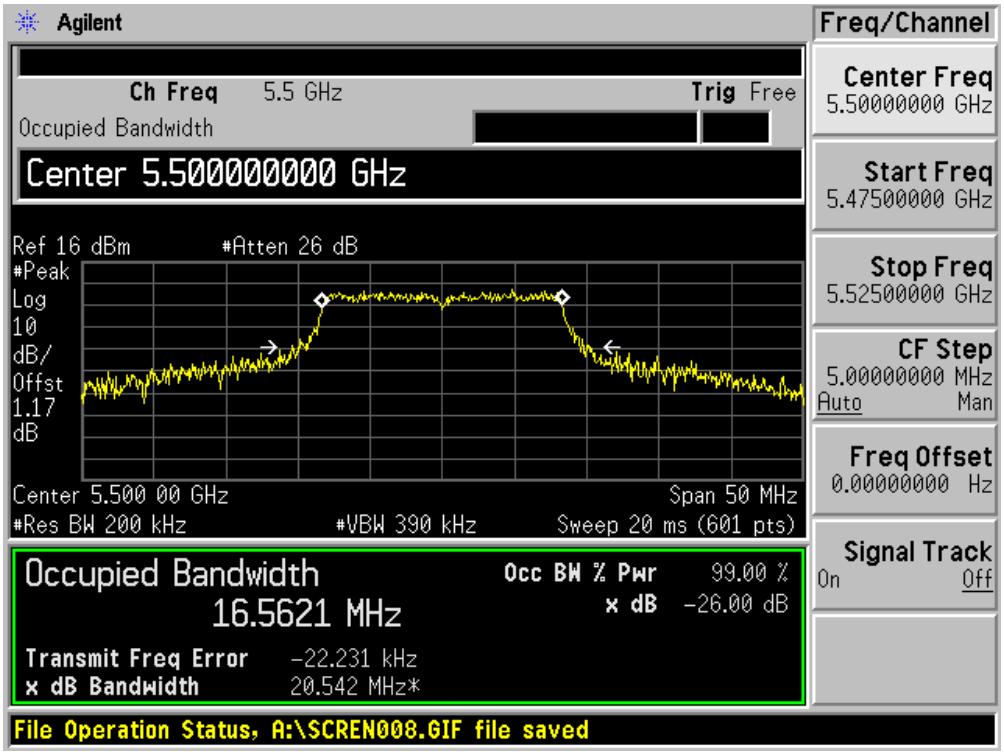
Channel 60 (5300MHz)



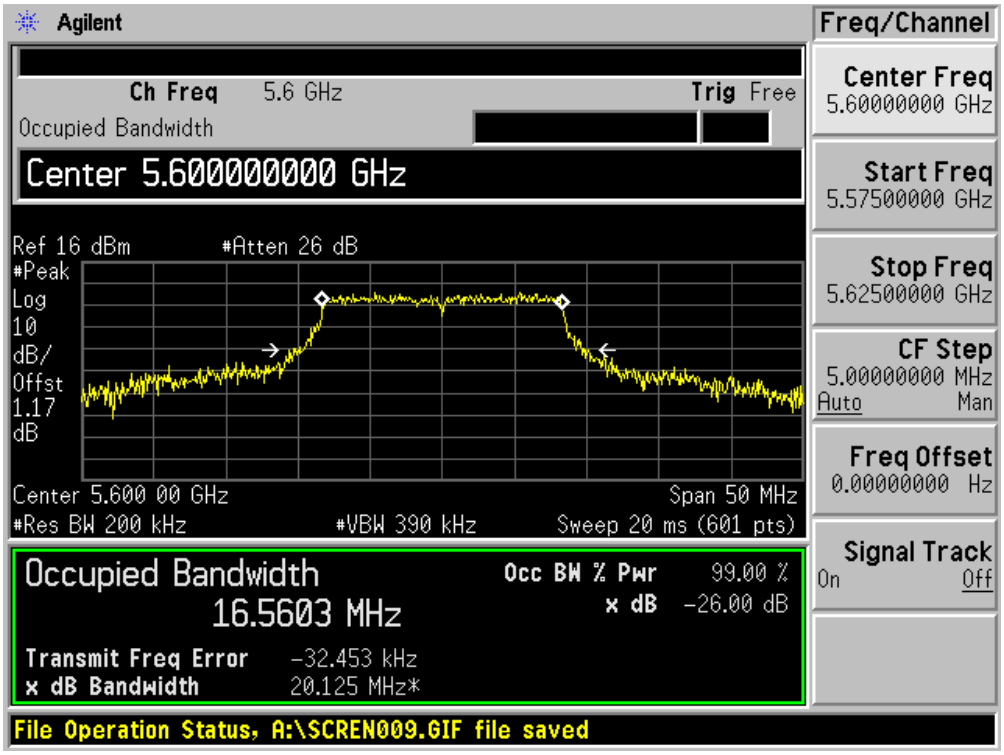
Channel 64 (5320MHz)



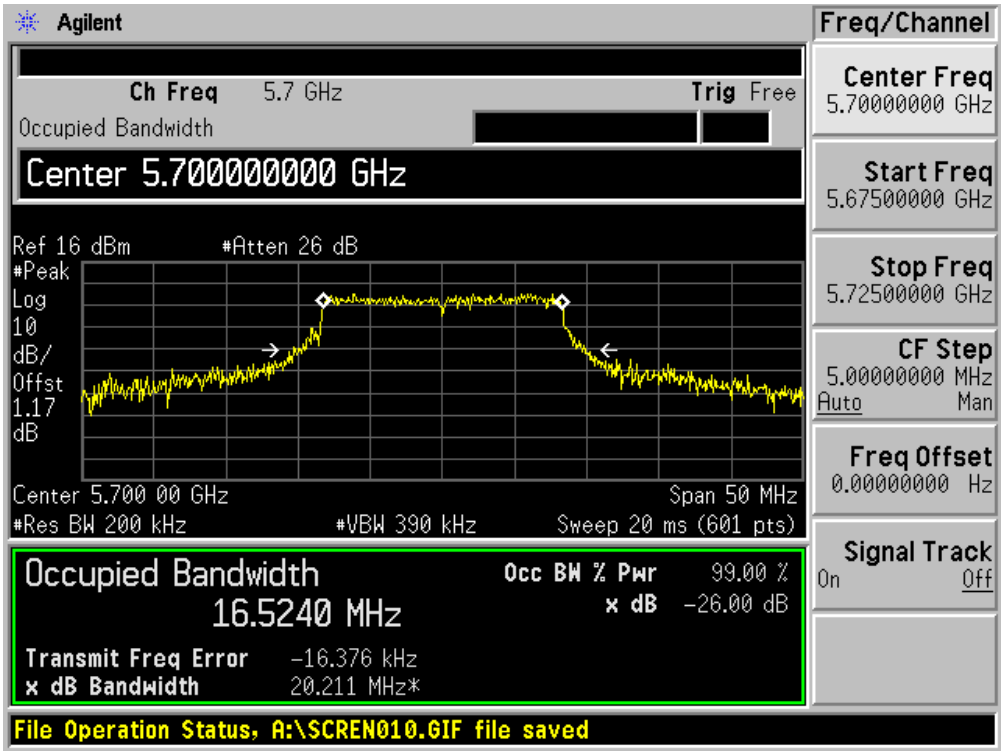
Channel 100 (5500MHz)



Channel 120 (5600MHz)



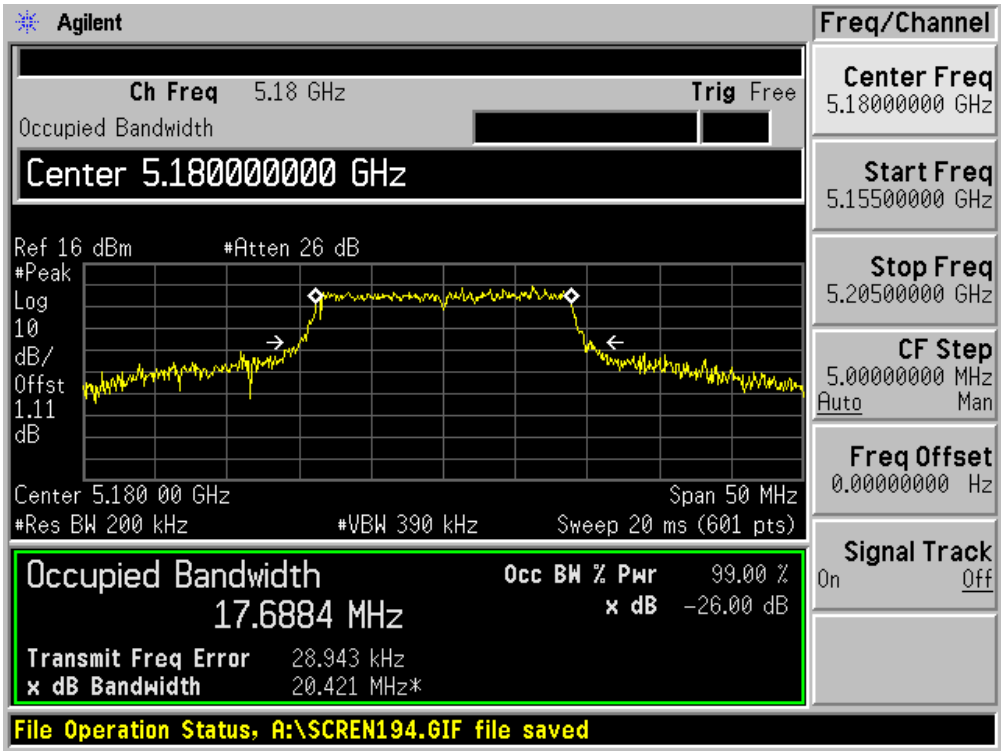
Channel 140 (5700MHz)



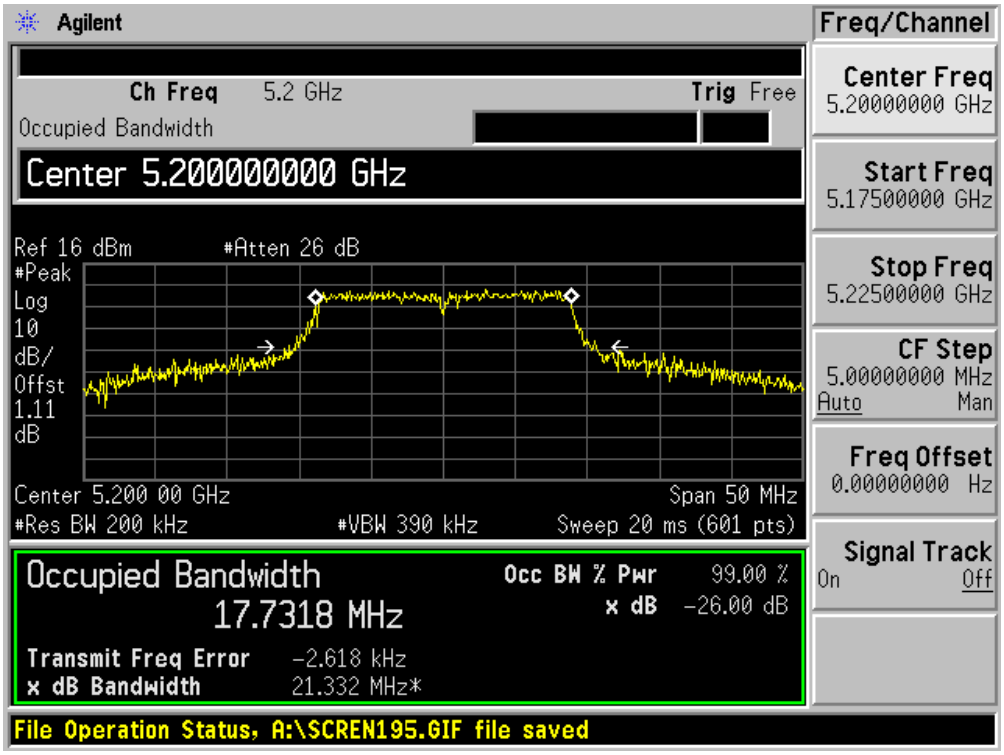
Product	:	Notebook Computer
Test Item	:	26dB Occupied Bandwidth
Test Site	:	AC-4
Test Mode	:	Mode 2: Transmit by 802.11n (20MHz Bandwidth) (Chain A)

Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	Limit (MHz)	Result
36	5180	20.421	N/A	Pass
40	5200	21.332	N/A	Pass
48	5240	21.091	N/A	Pass
52	5260	20.259	N/A	Pass
60	5300	20.870	N/A	Pass
64	5320	21.330	N/A	Pass
100	5500	20.158	N/A	Pass
120	5600	20.624	N/A	Pass
140	5700	20.454	N/A	Pass

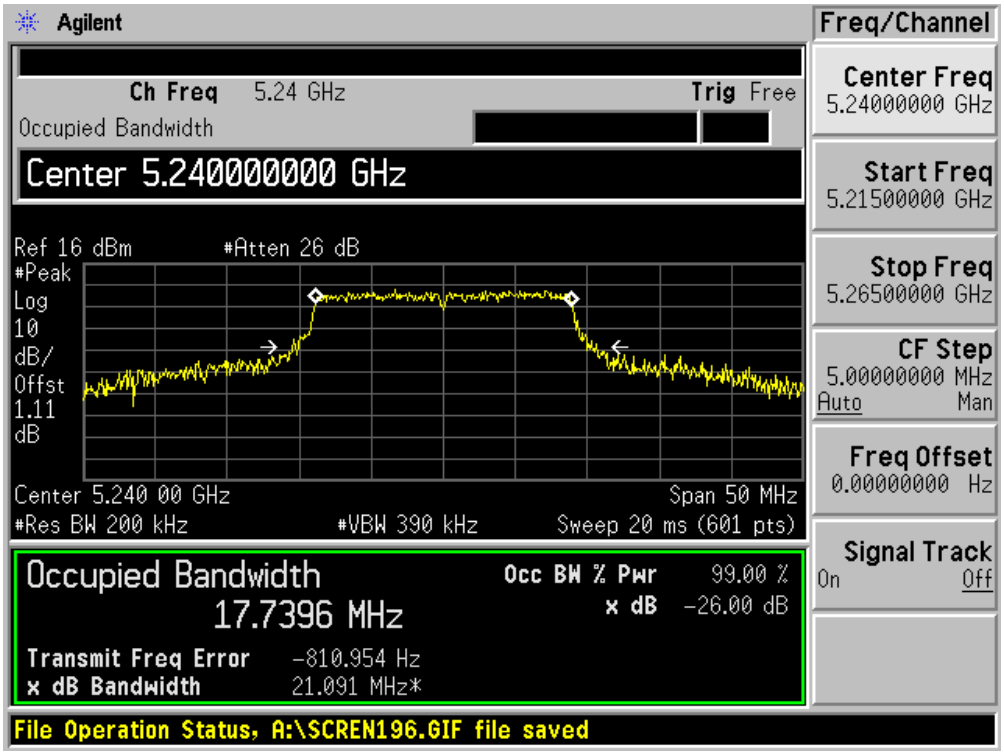
Channel 36 (5180MHz)



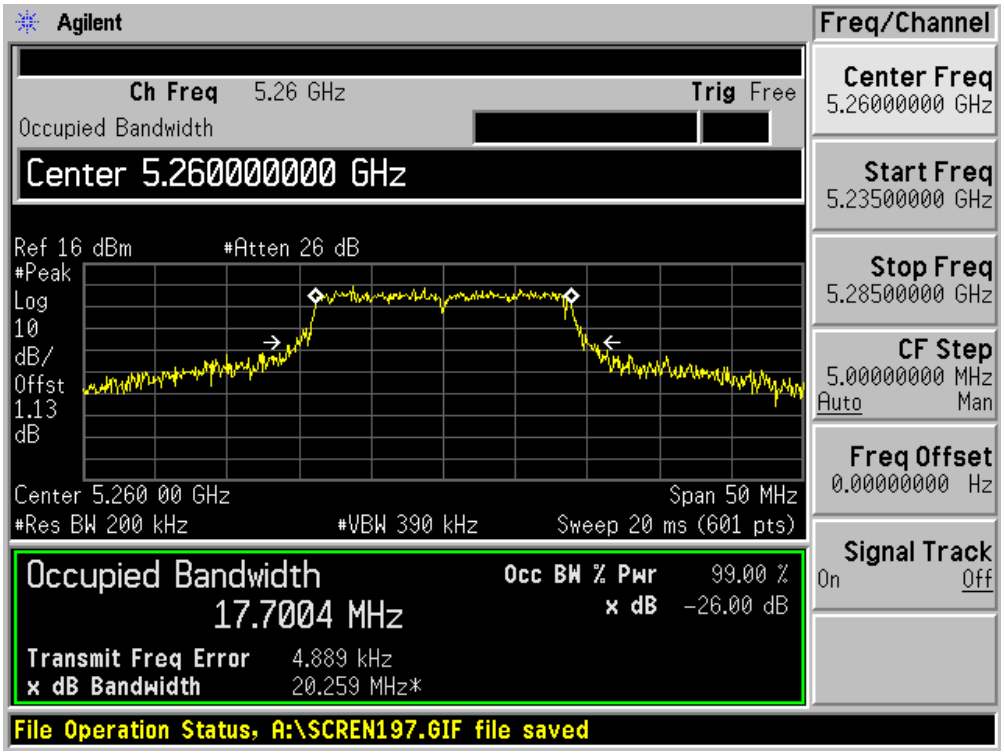
Channel 40 (5200MHz)



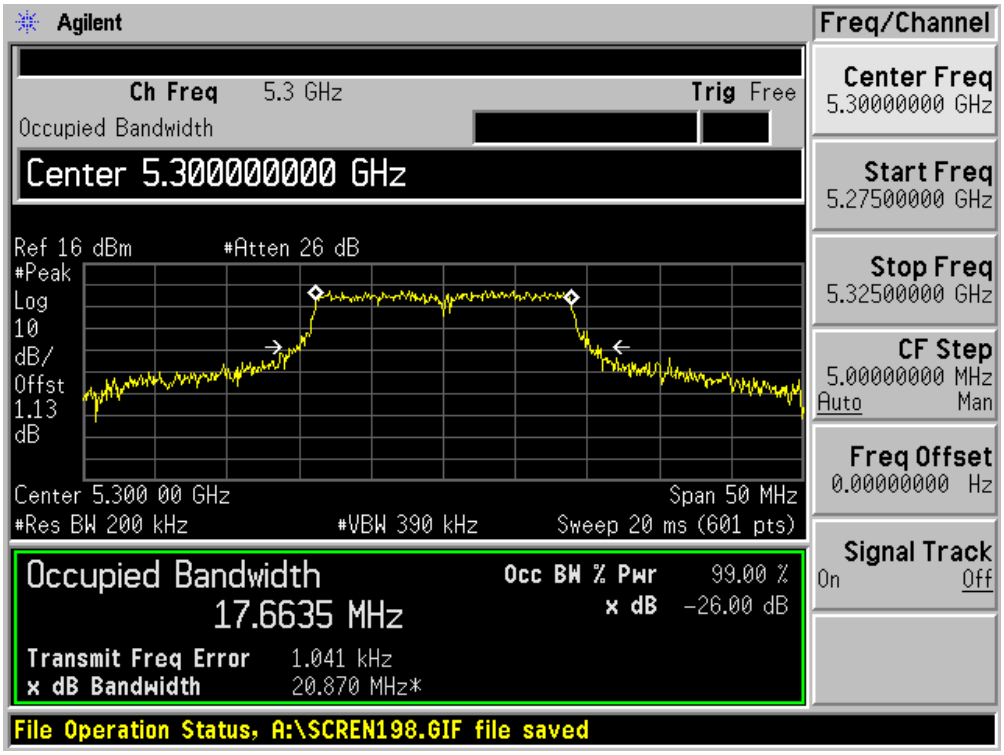
Channel 48 (5240MHz)



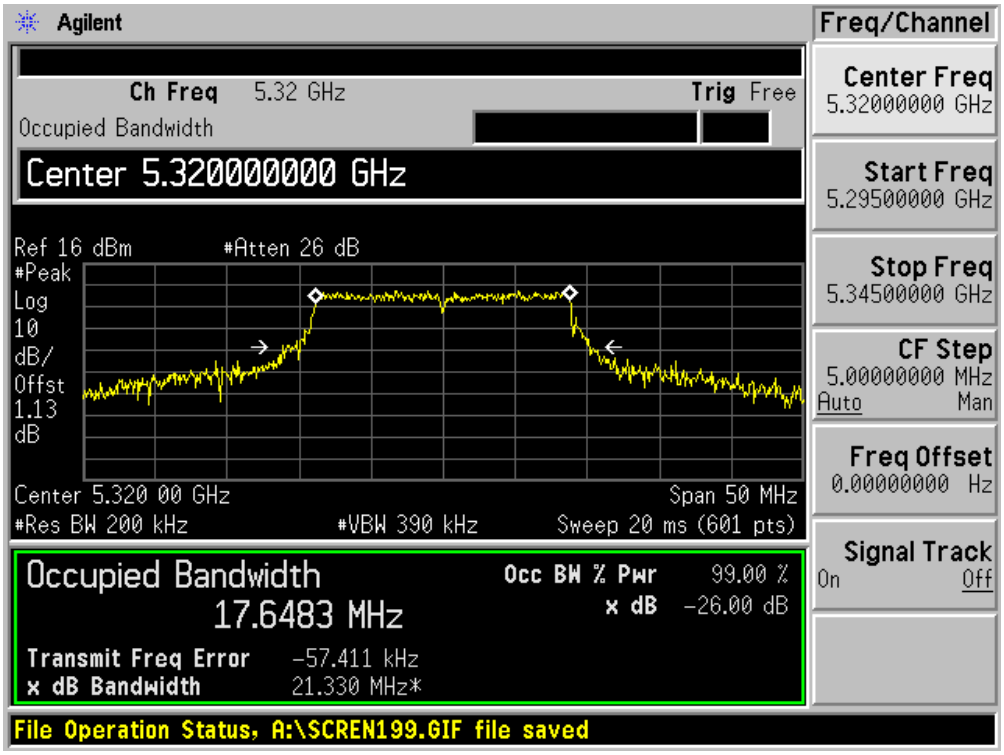
Channel 52 (5260MHz)



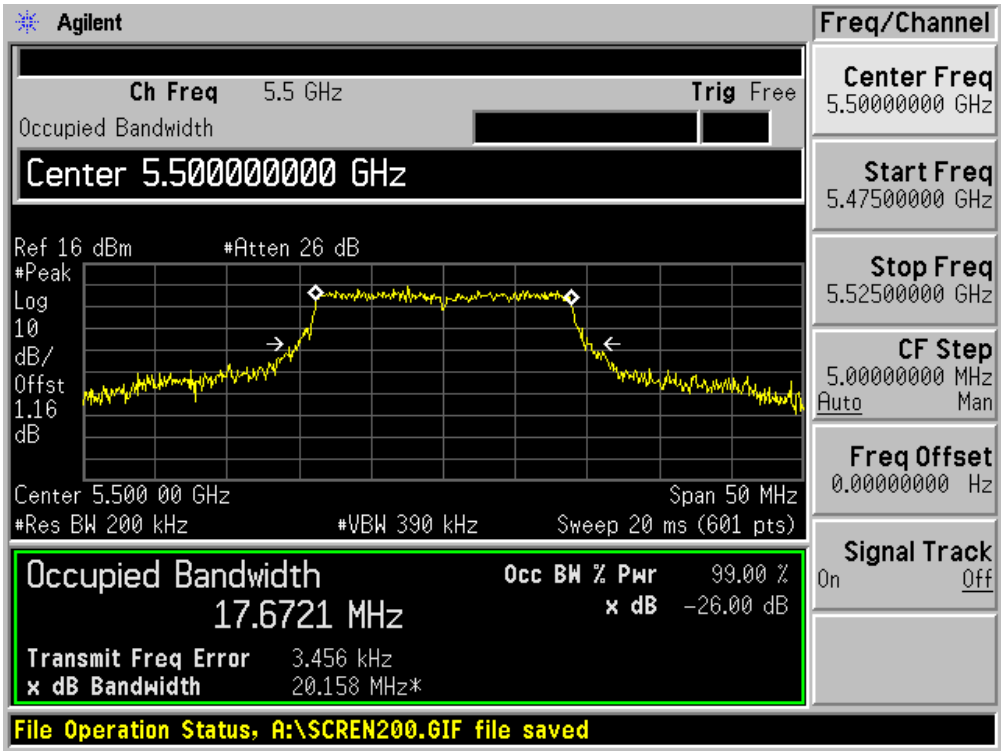
Channel 60 (5300MHz)



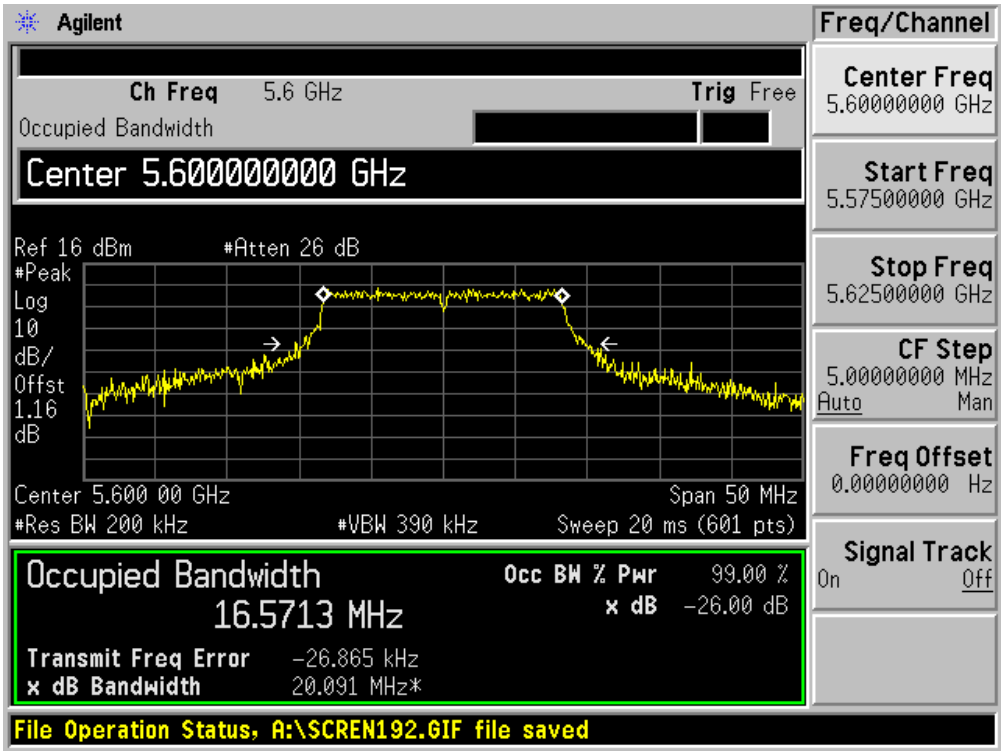
Channel 64 (5320MHz)



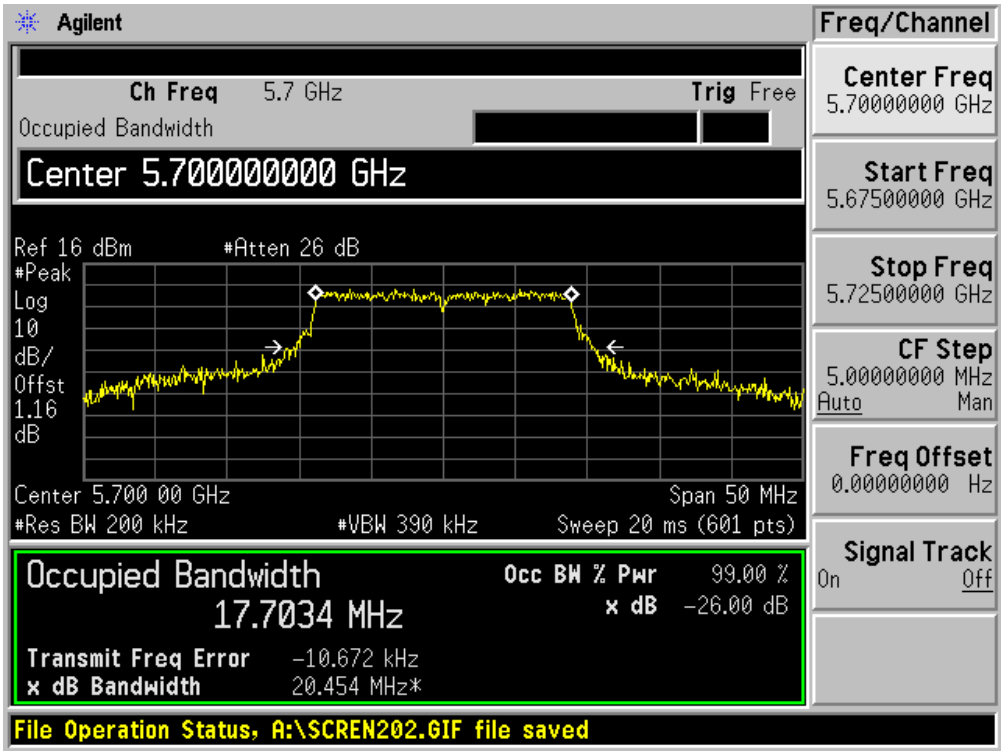
Channel 100 (5500MHz)



Channel 120 (5600MHz)



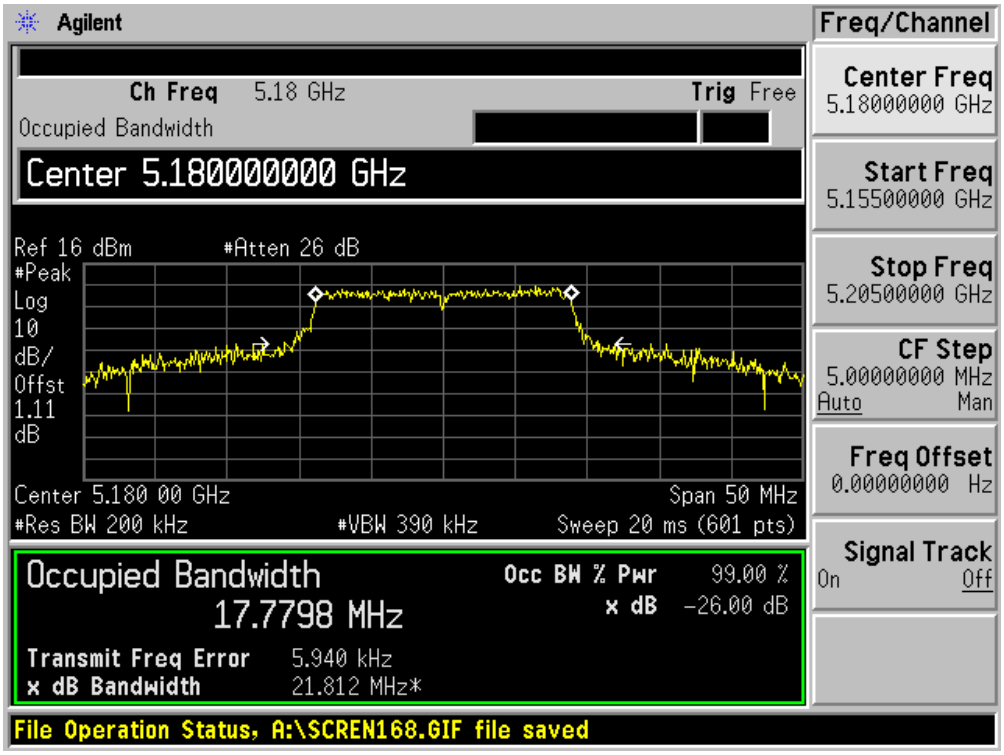
Channel 140 (5700MHz)



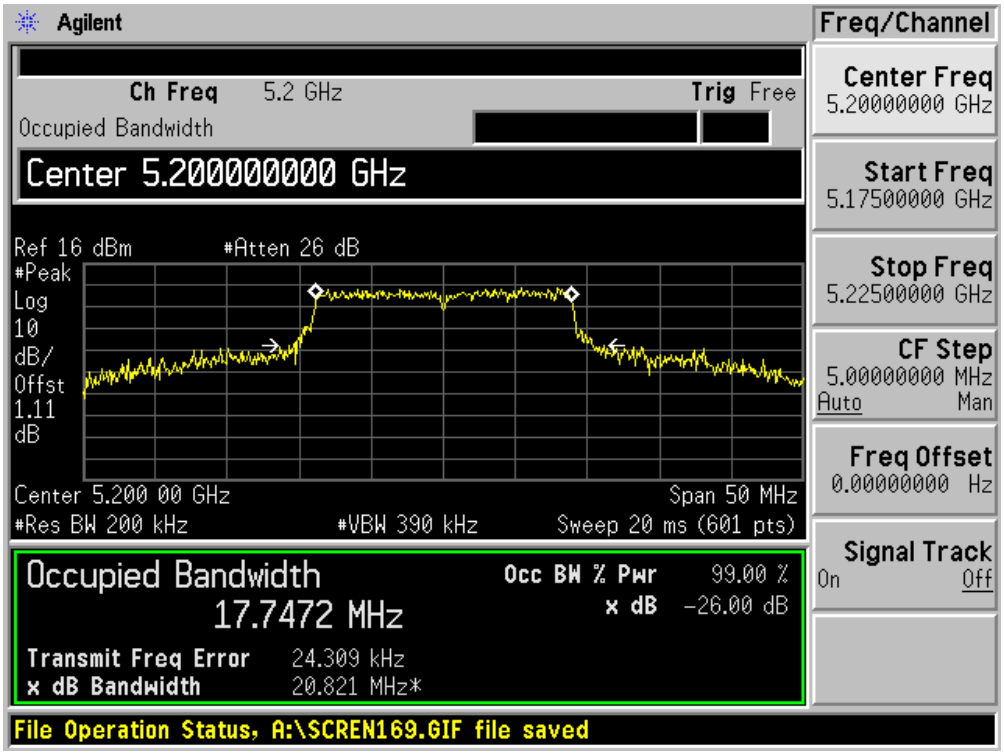
Product	:	Notebook Computer
Test Item	:	26dB Occupied Bandwidth
Test Site	:	AC-4
Test Mode	:	Mode 2: Transmit by 802.11n (20MHz Bandwidth) (Chain B)

Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	Limit (MHz)	Result
36	5180	21.812	N/A	Pass
40	5200	20.821	N/A	Pass
48	5240	21.372	N/A	Pass
52	5260	20.698	N/A	Pass
60	5300	20.899	N/A	Pass
64	5320	20.984	N/A	Pass
100	5500	20.718	N/A	Pass
120	5600	20.864	N/A	Pass
140	5700	20.692	N/A	Pass

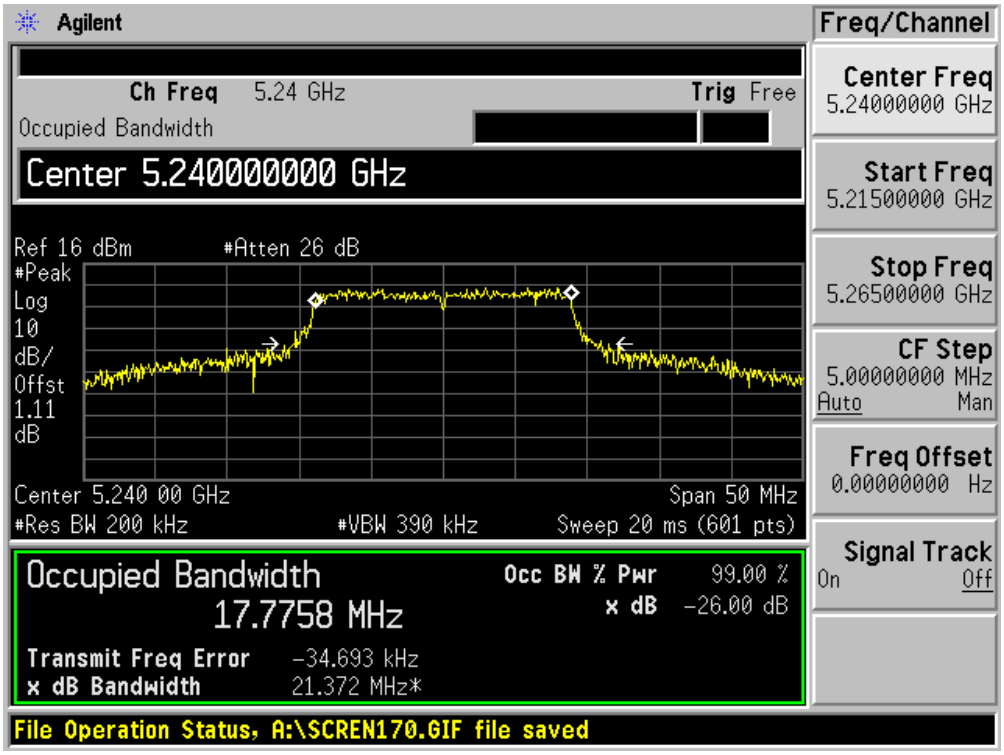
Channel 36 (5180MHz)



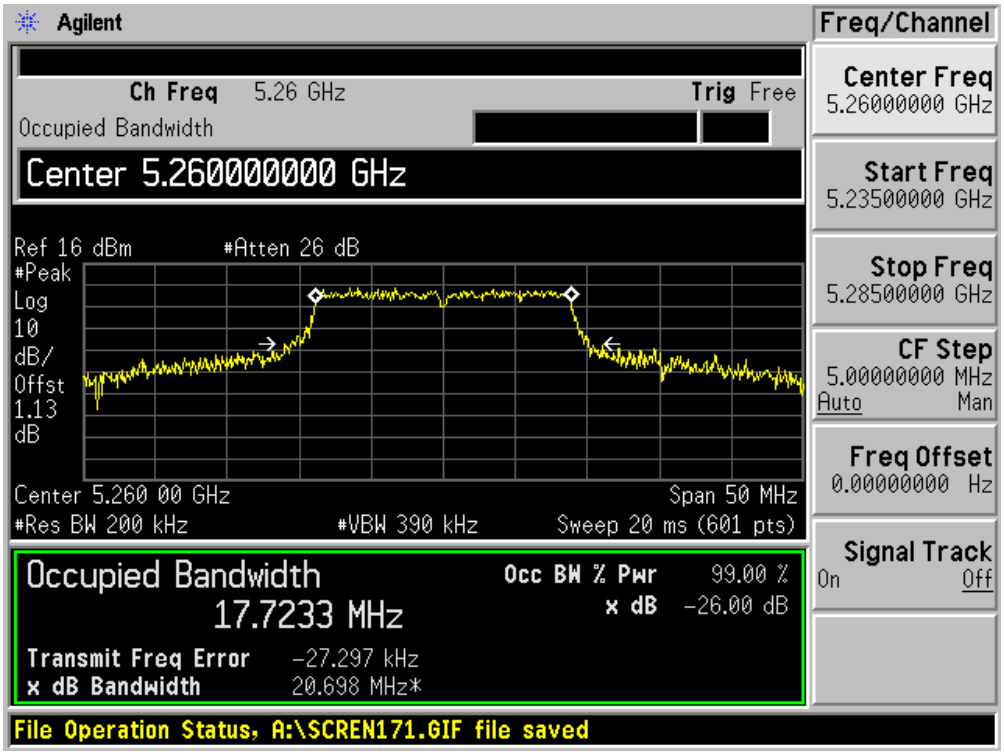
Channel 40 (5200MHz)



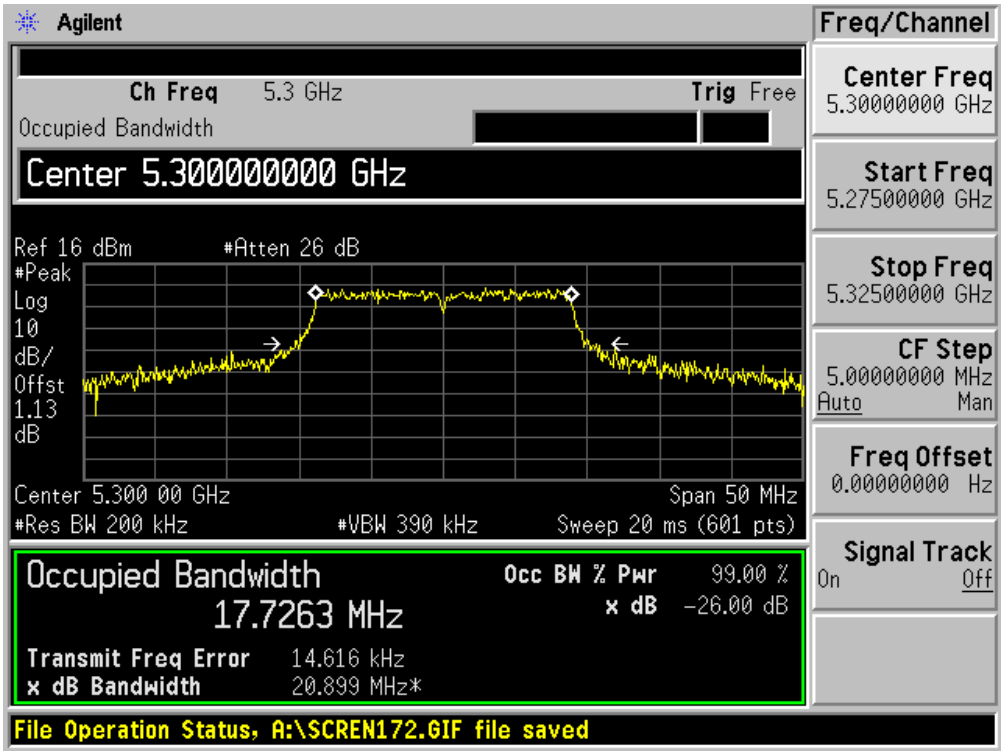
Channel 48 (5240MHz)



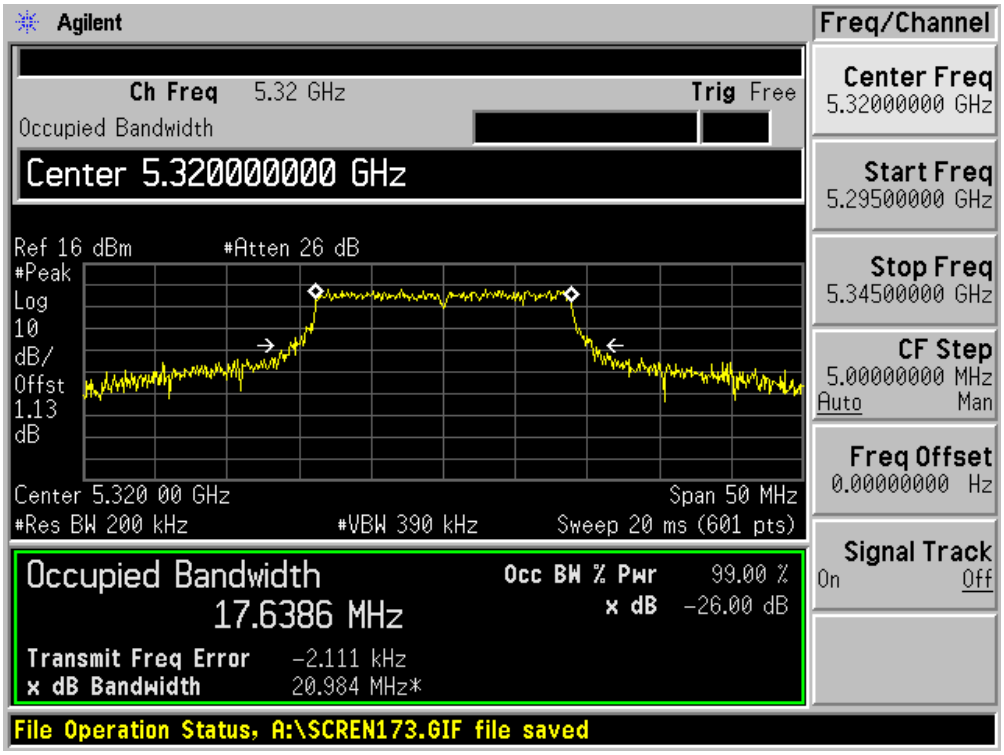
Channel 52 (5260MHz)



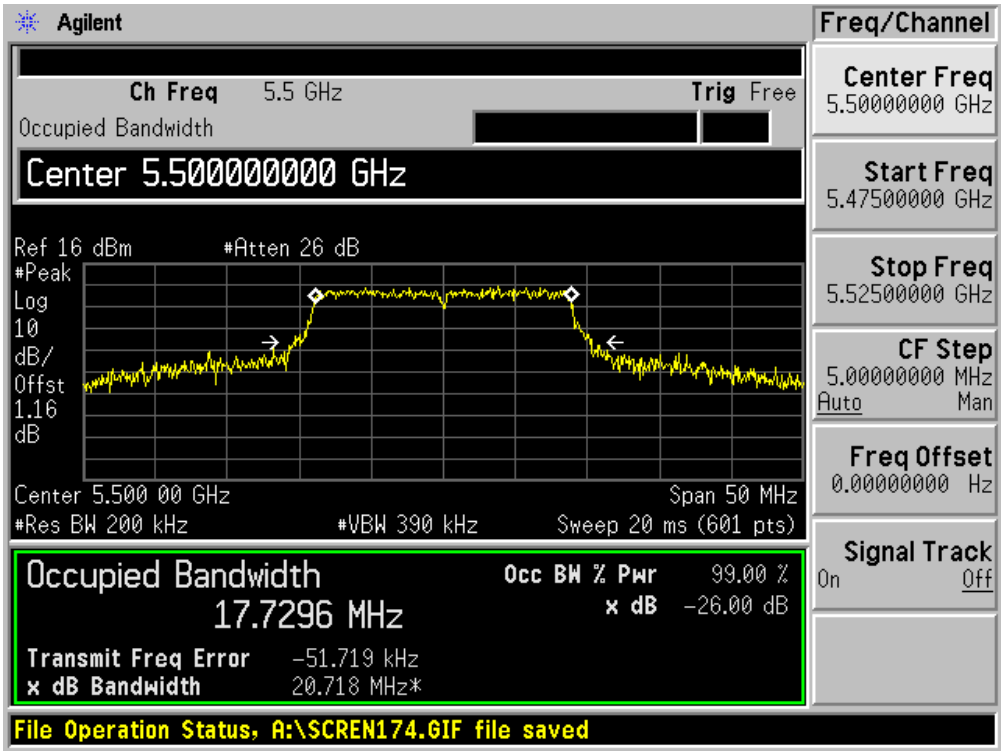
Channel 60 (5300MHz)



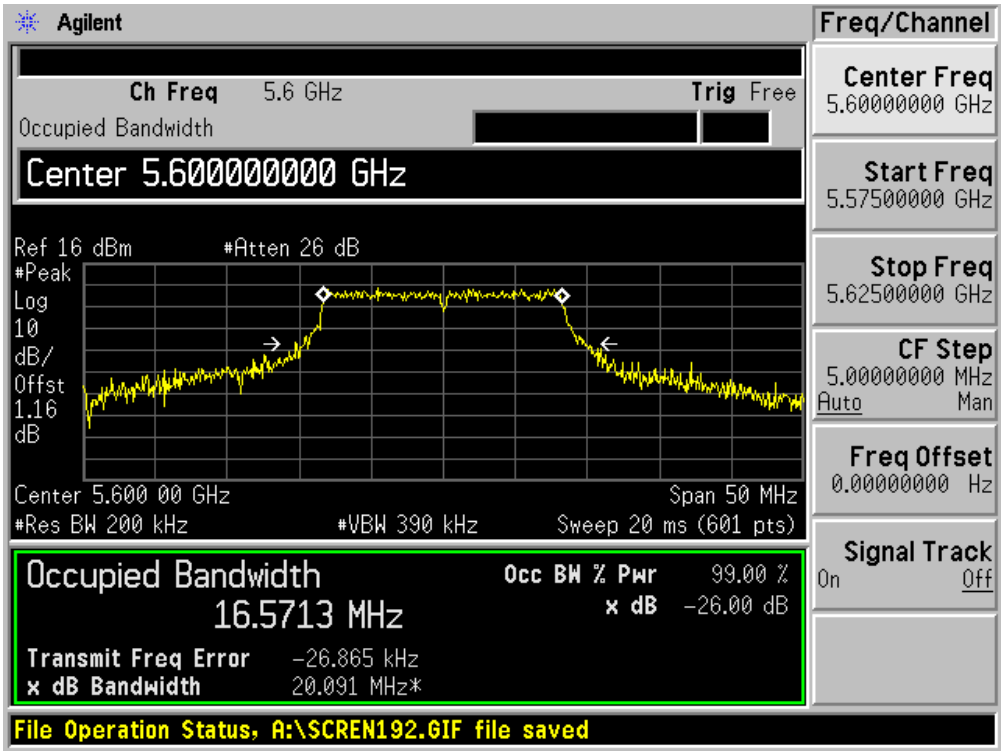
Channel 64 (5320MHz)



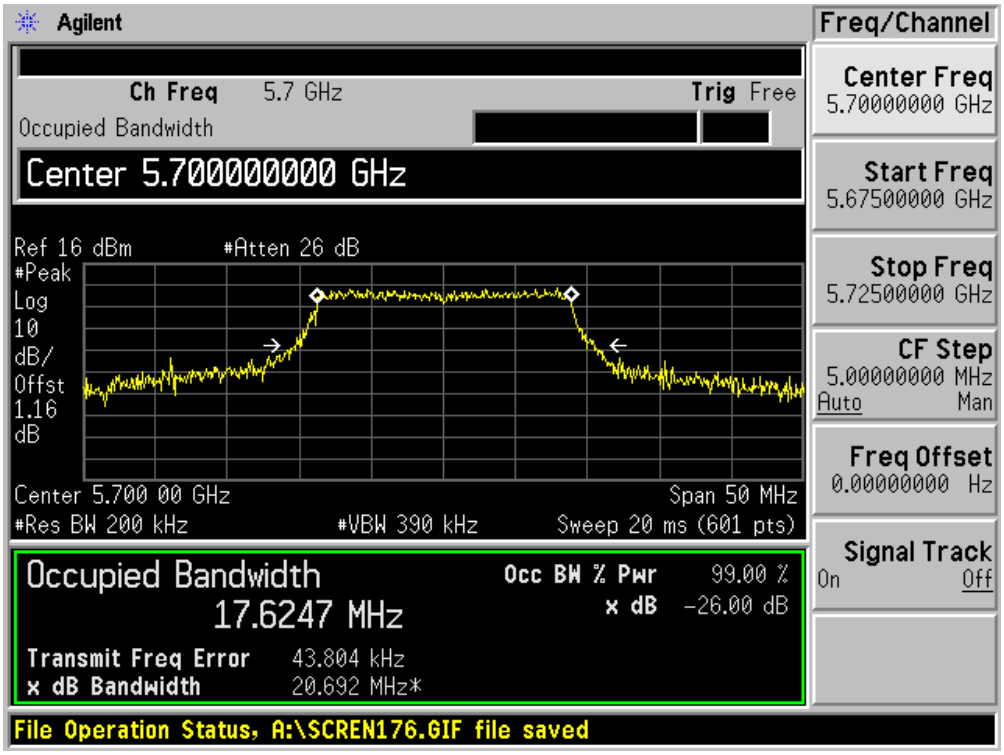
Channel 100 (5500MHz)



Channel 120 (5600MHz)



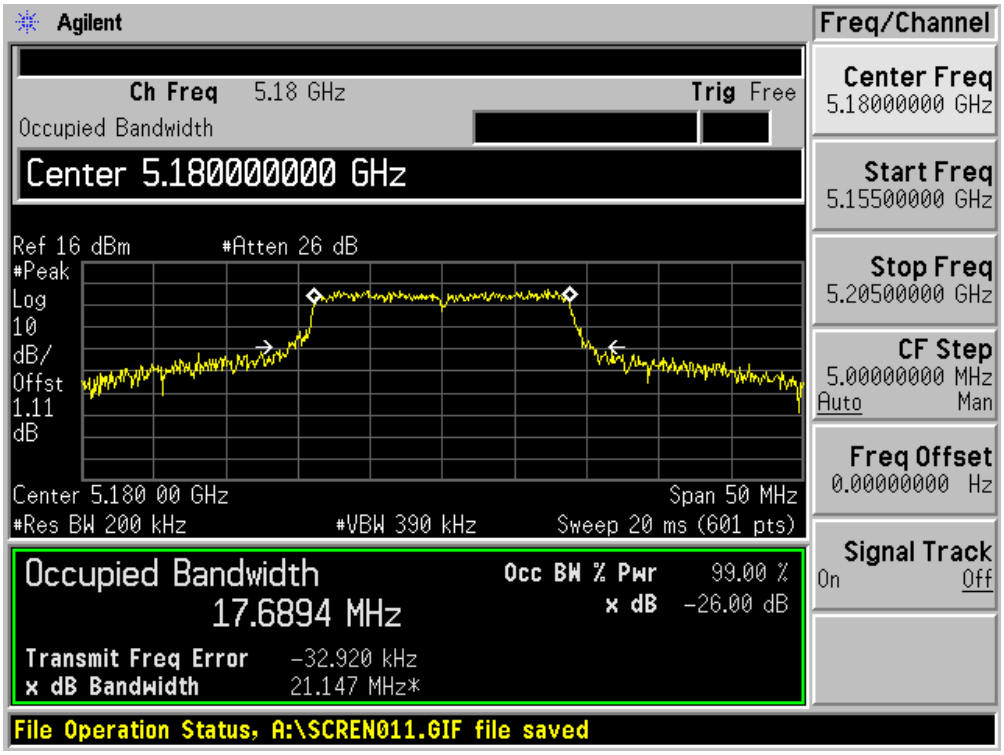
Channel 140 (5700MHz)



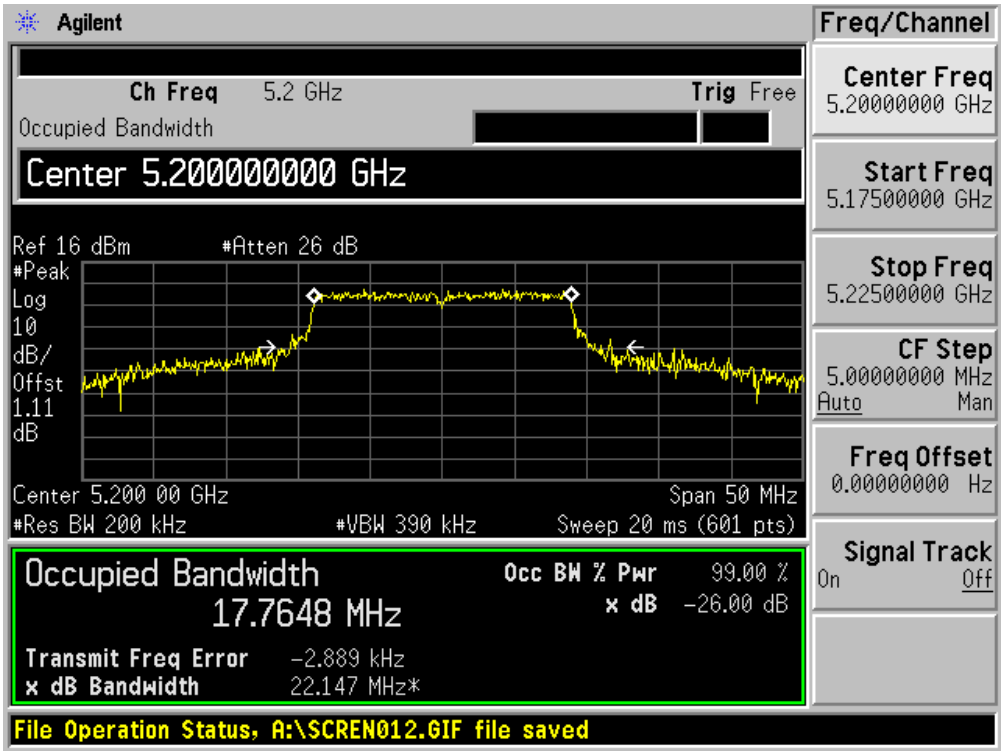
Product	:	Notebook Computer
Test Item	:	26dB Occupied Bandwidth
Test Site	:	AC-4
Test Mode	:	Mode 2: Transmit by 802.11n (20MHz Bandwidth) (Chain C)

Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	Limit (MHz)	Result
36	5180	21.147	N/A	Pass
40	5200	22.147	N/A	Pass
48	5240	21.047	N/A	Pass
52	5260	20.743	N/A	Pass
60	5300	20.735	N/A	Pass
64	5320	20.739	N/A	Pass
100	5500	20.881	N/A	Pass
120	5600	20.798	N/A	Pass
140	5700	20.454	N/A	Pass

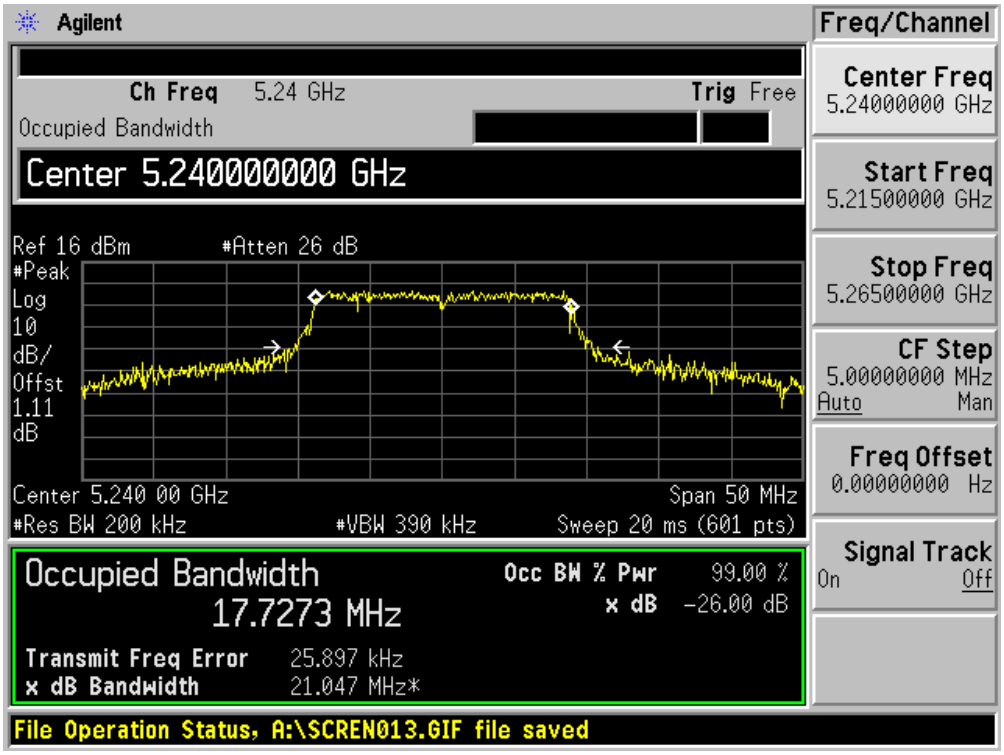
Channel 36 (5180MHz)



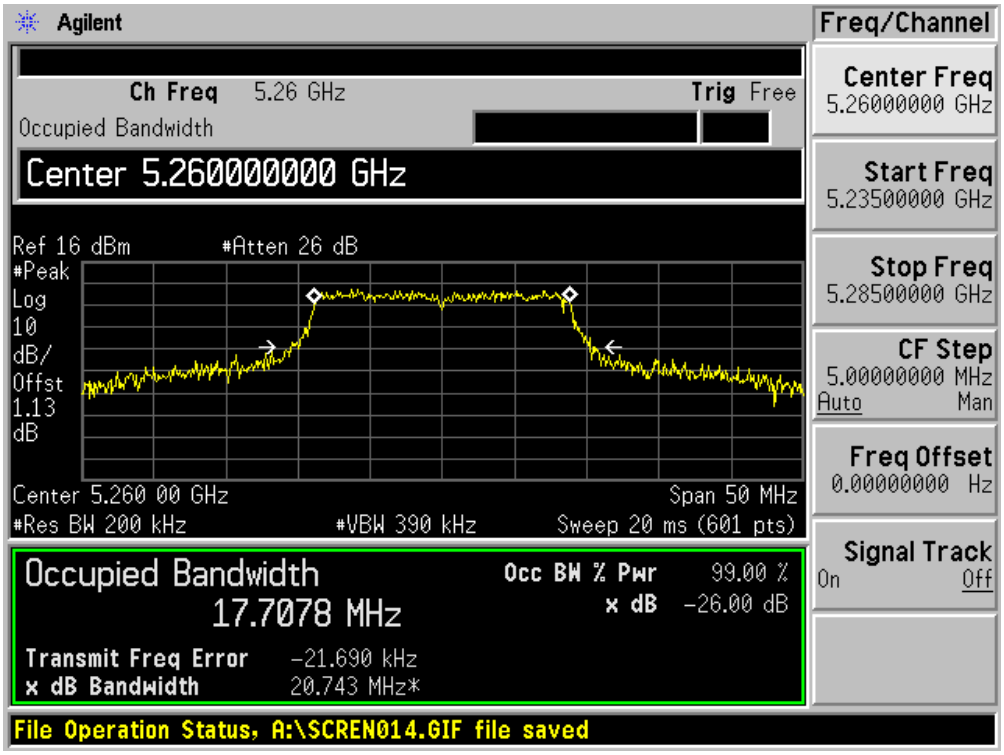
Channel 40 (5200MHz)



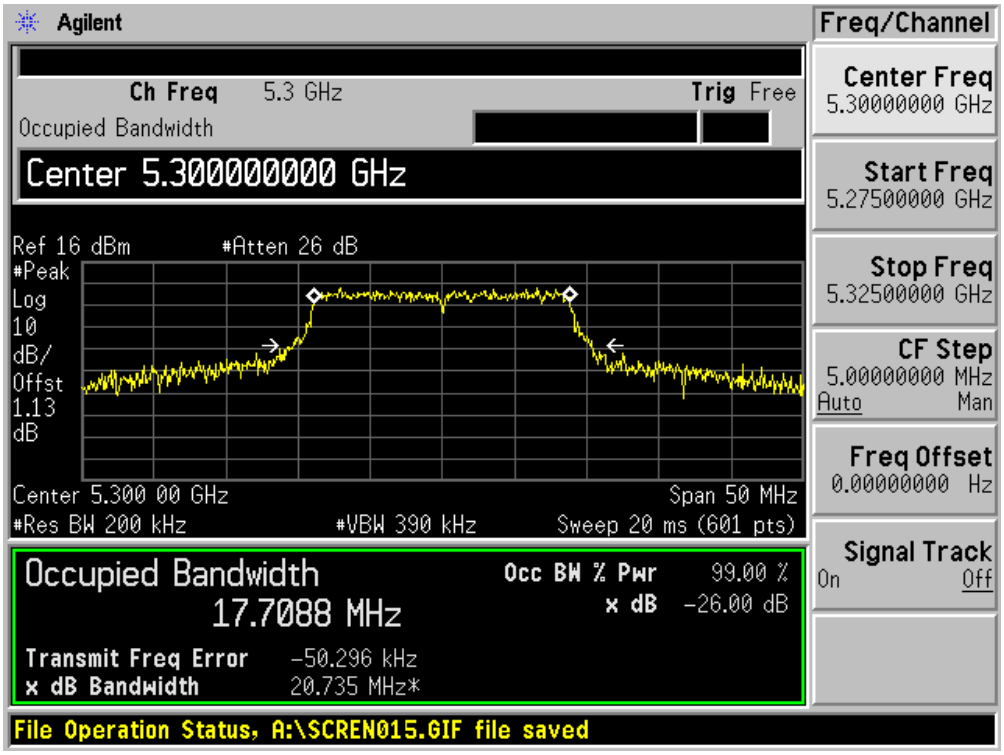
Channel 48 (5240MHz)



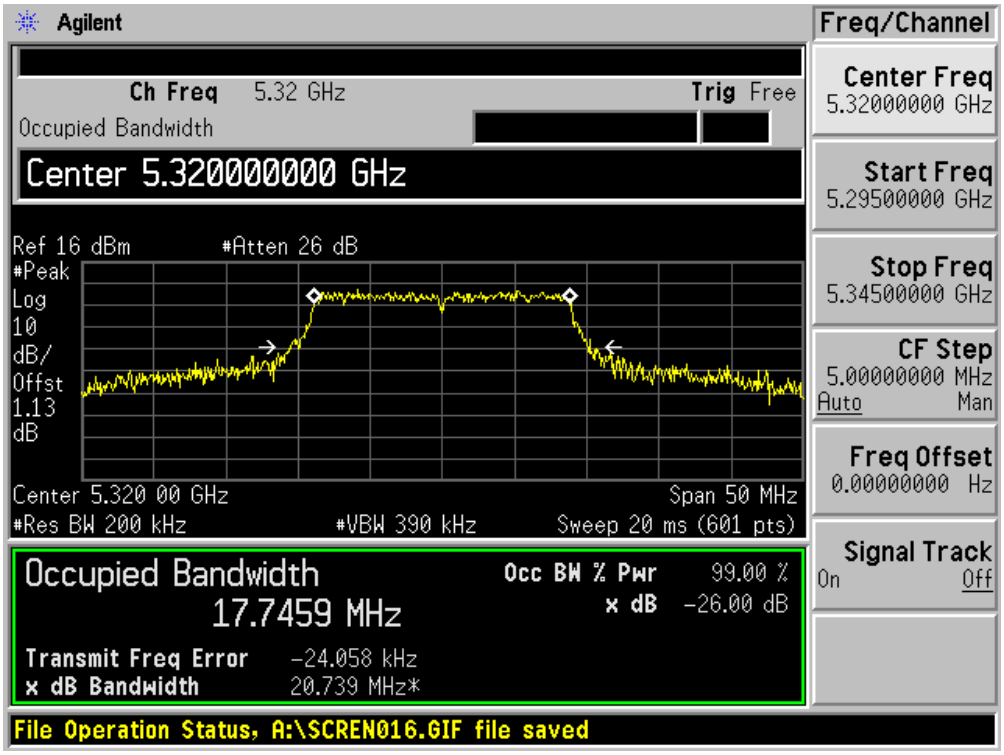
Channel 52 (5260MHz)



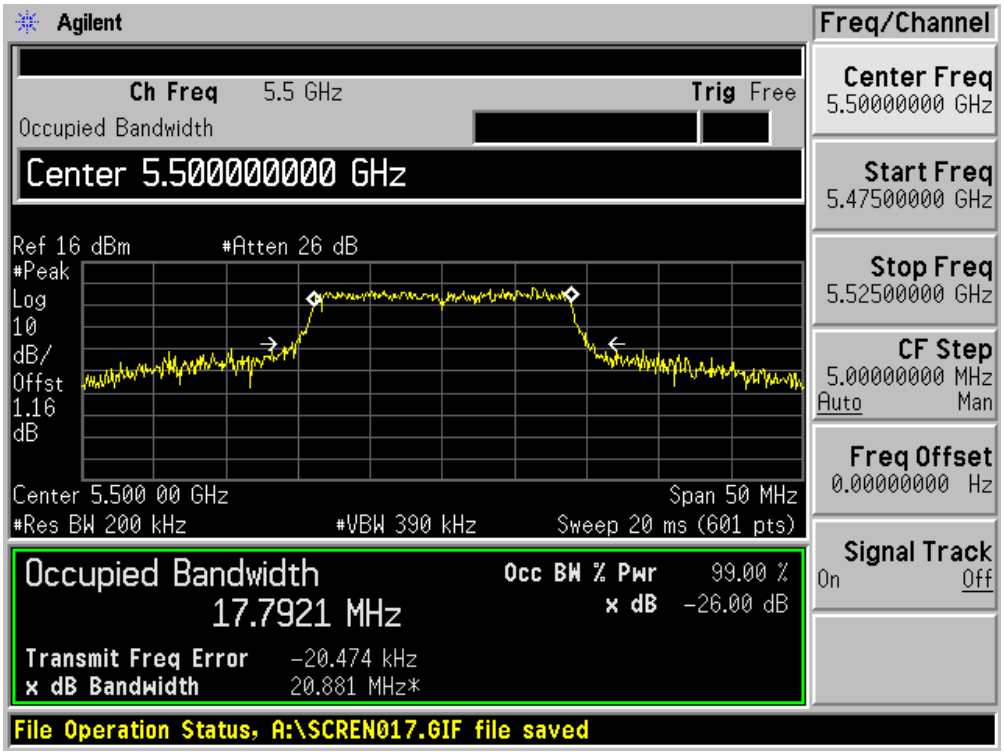
Channel 60 (5300MHz)



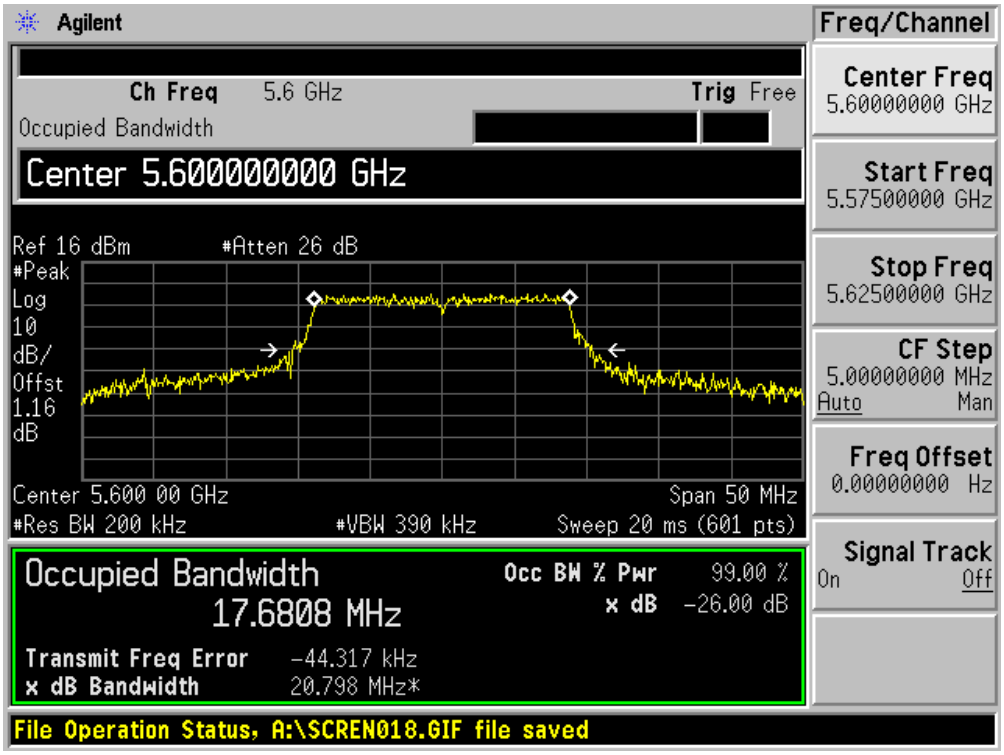
Channel 64 (5320MHz)



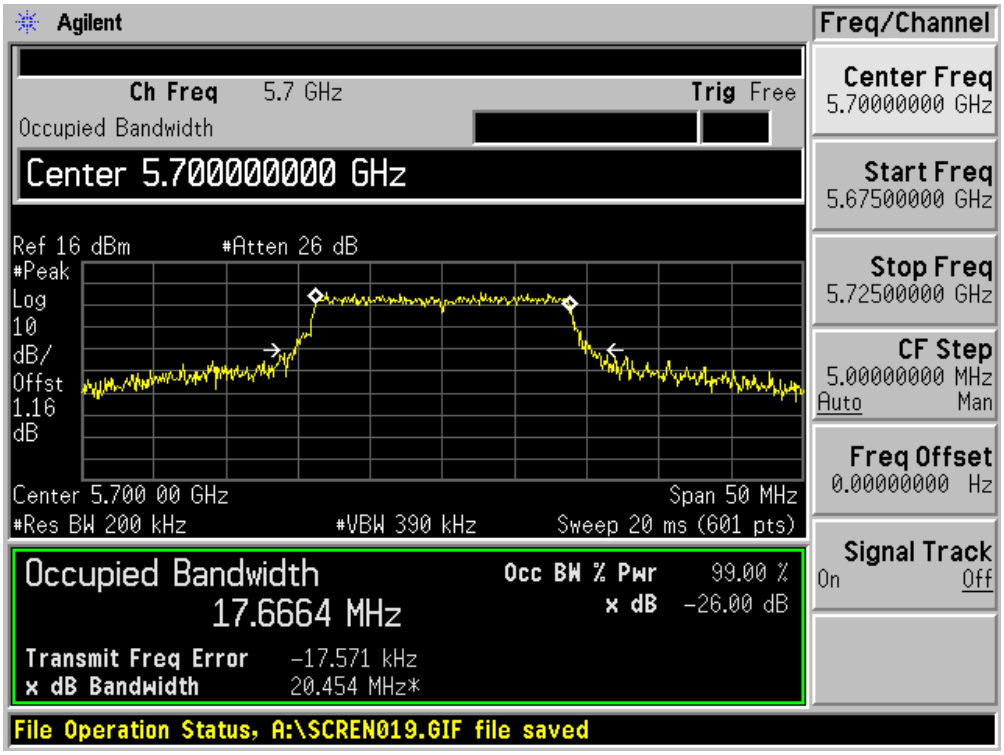
Channel 100 (5500MHz)



Channel 120 (5600MHz)



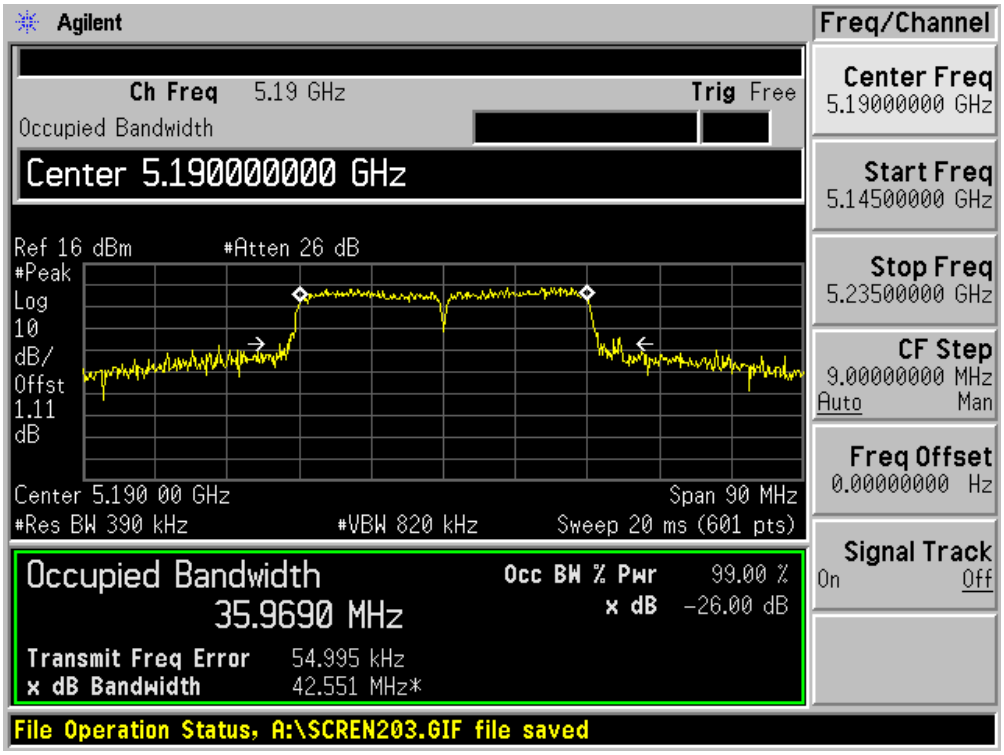
Channel 140 (5700MHz)



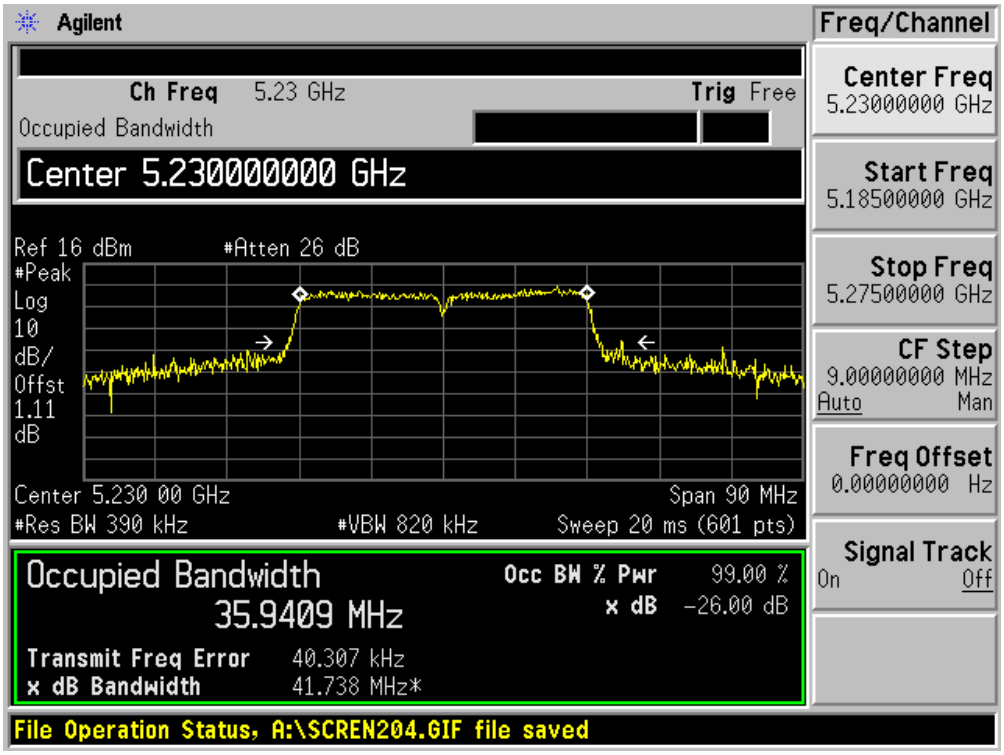
Product	:	Notebook Computer
Test Item	:	26dB Occupied Bandwidth
Test Site	:	AC-4
Test Mode	:	Mode 3: Transmit by 802.11n (40MHz Bandwidth) (Chain A)

Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	Limit (MHz)	Result
38	5190	42.551	N/A	Pass
46	5230	41.738	N/A	Pass
54	5270	42.576	N/A	Pass
62	5310	40.854	N/A	Pass
102	5510	39.287	N/A	Pass
118	5590	39.115	N/A	Pass
134	5670	39.291	N/A	Pass

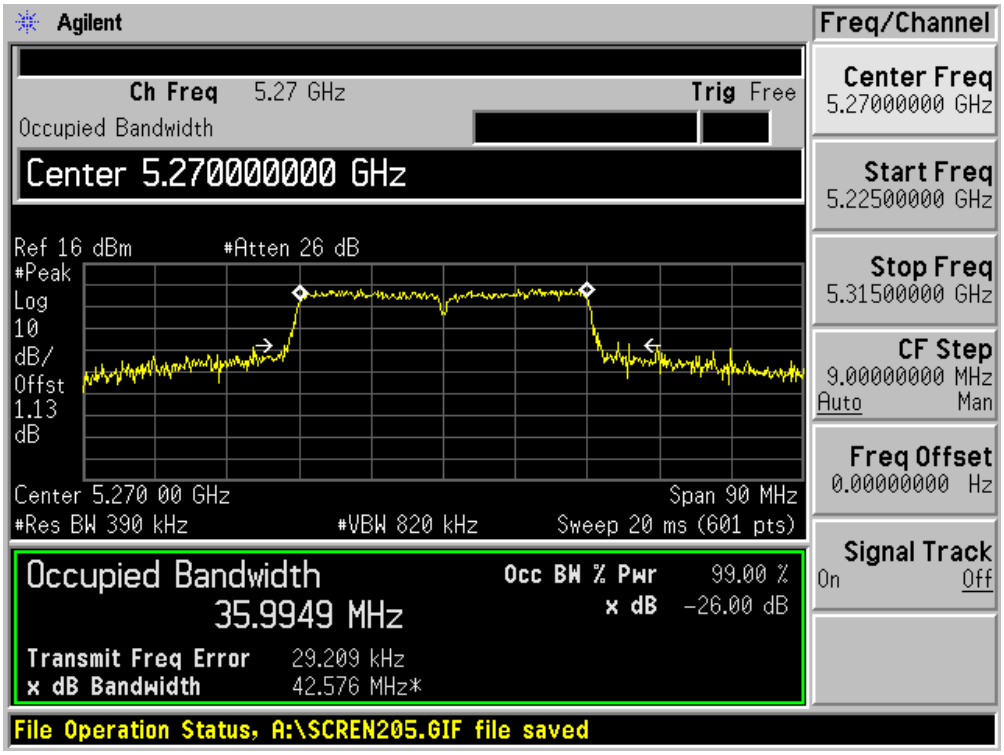
Channel 38 (5190MHz)



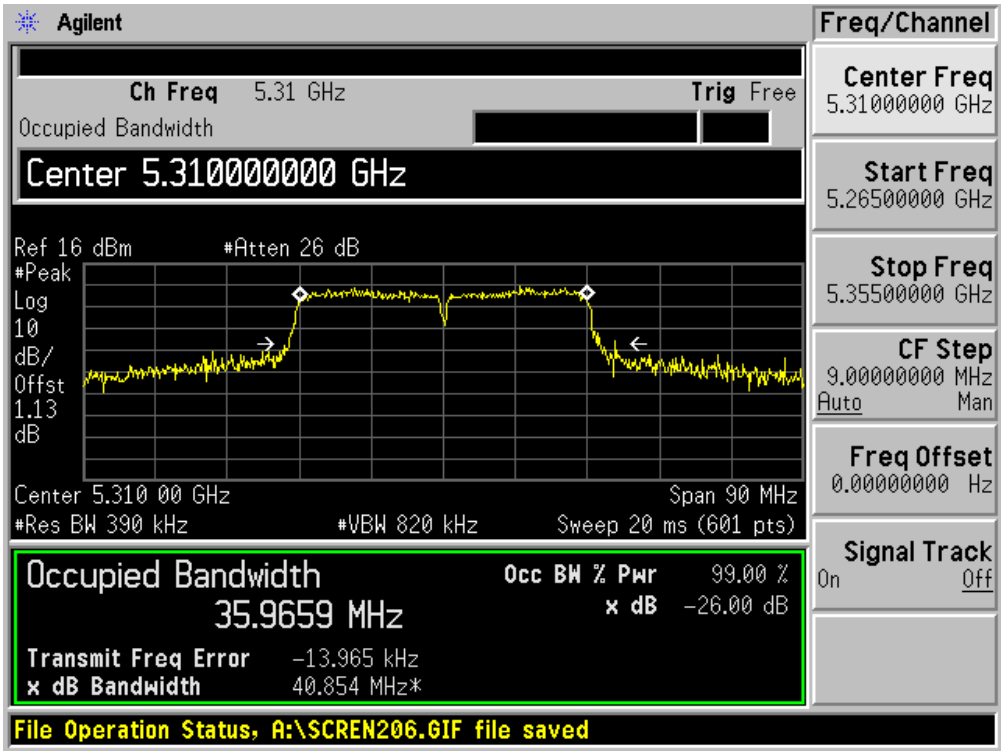
Channel 46 (5230MHz)



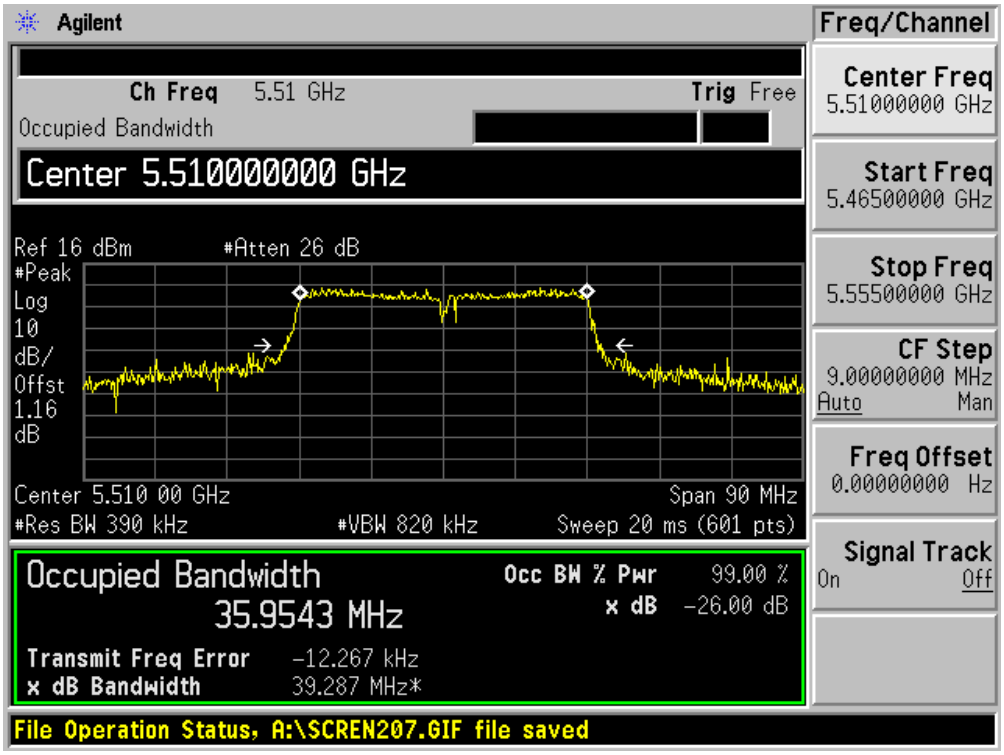
Channel 54 (5270MHz)



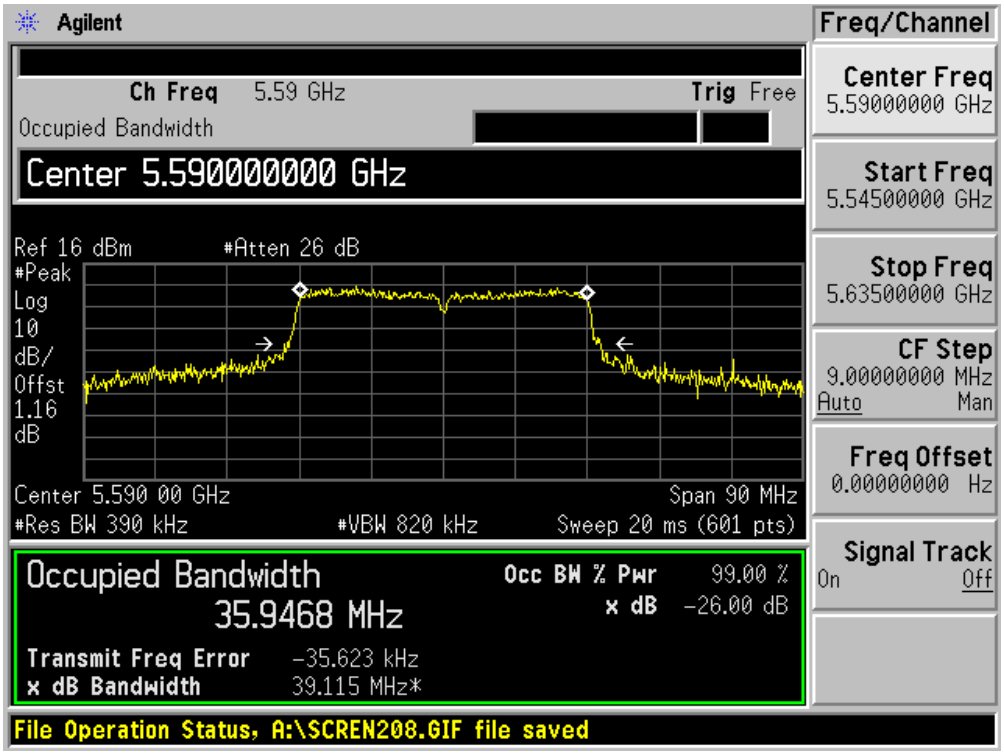
Channel 62 (5310MHz)



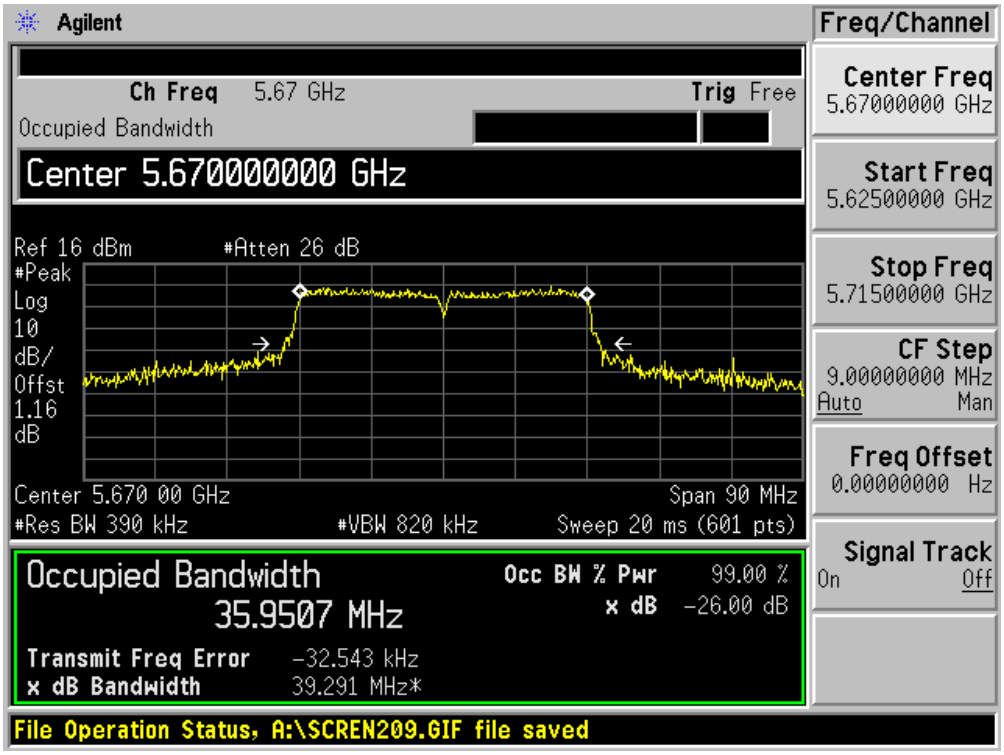
Channel 102 (5510MHz)



Channel 118 (5590MHz)



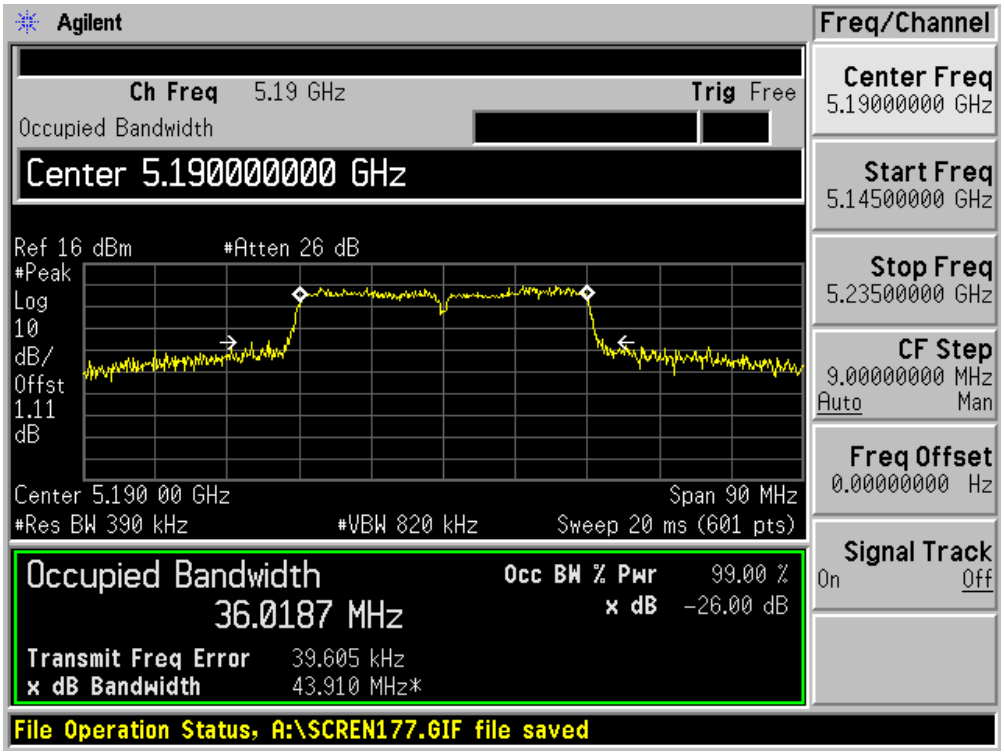
Channel 134 (5670MHz)



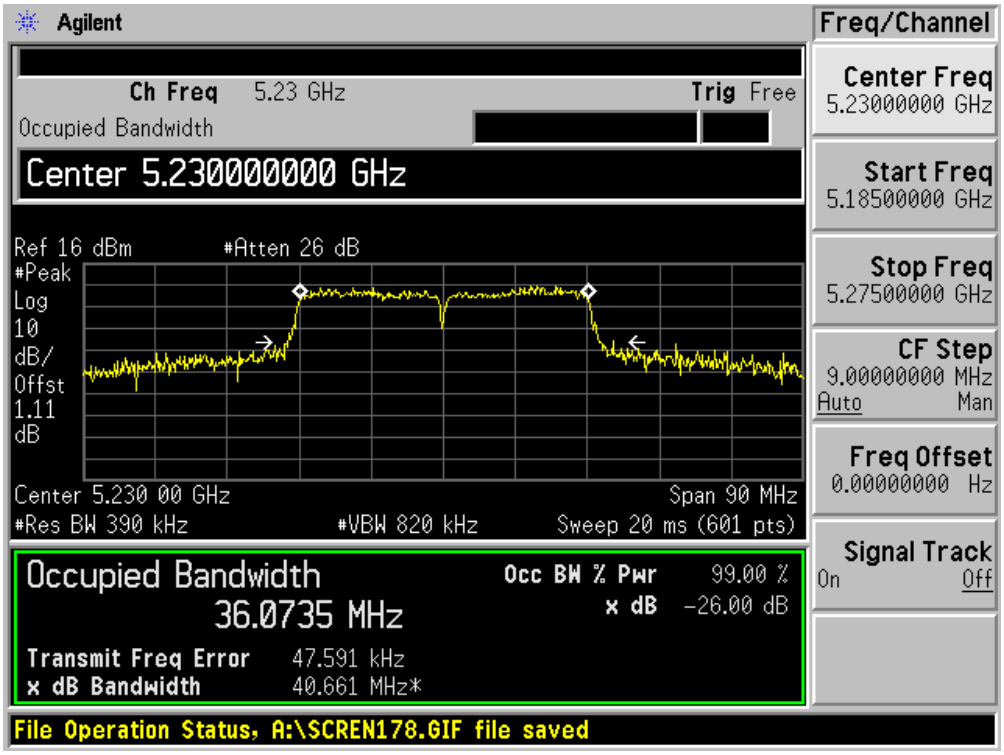
Product	:	Notebook Computer
Test Item	:	26dB Occupied Bandwidth
Test Site	:	AC-4
Test Mode	:	Mode 3: Transmit by 802.11n (40MHz Bandwidth) (Chain B)

Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	Limit (MHz)	Result
38	5190	43.910	N/A	Pass
46	5230	40.661	N/A	Pass
54	5270	41.479	N/A	Pass
62	5310	41.970	N/A	Pass
102	5510	42.483	N/A	Pass
118	5590	42.019	N/A	Pass
134	5670	39.222	N/A	Pass

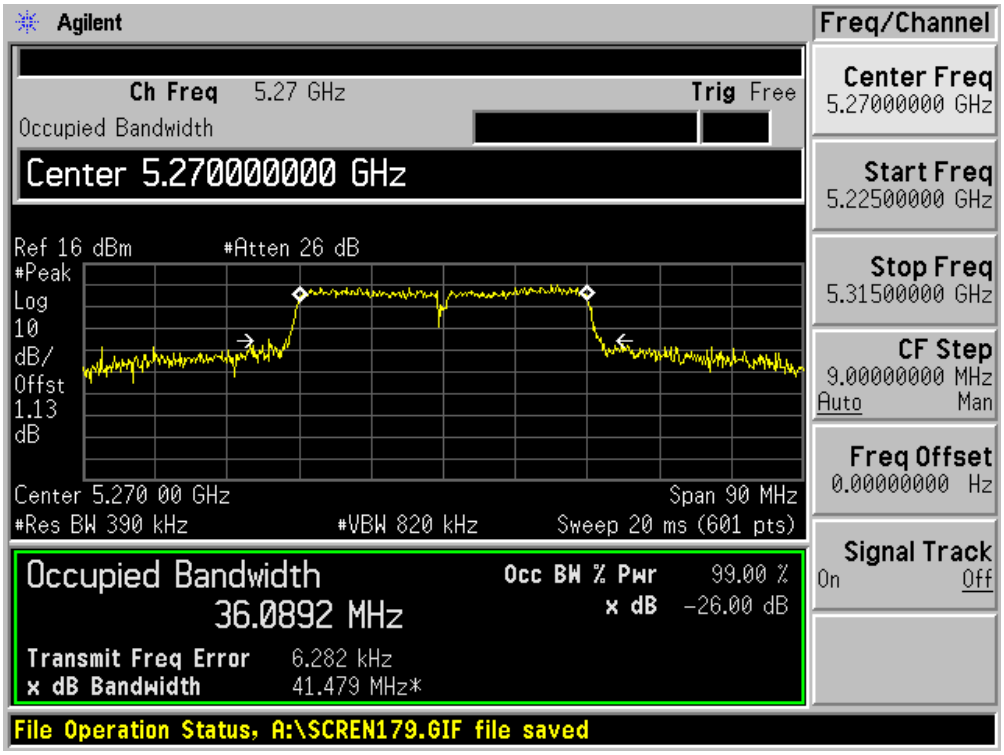
Channel 38 (5190MHz)



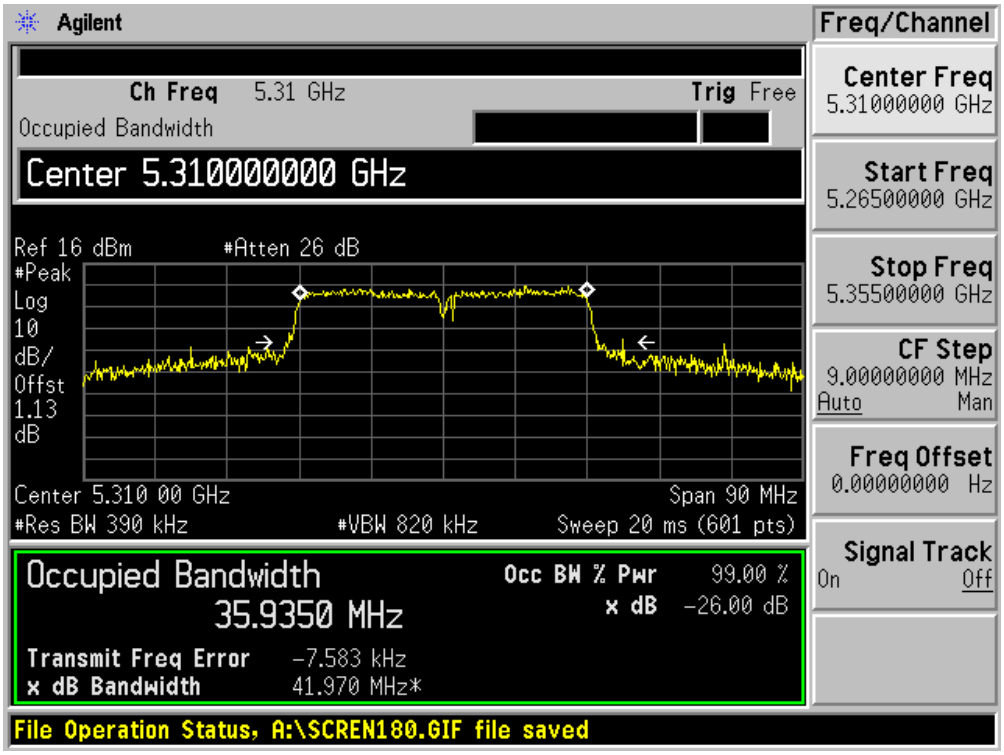
Channel 46 (5230MHz)



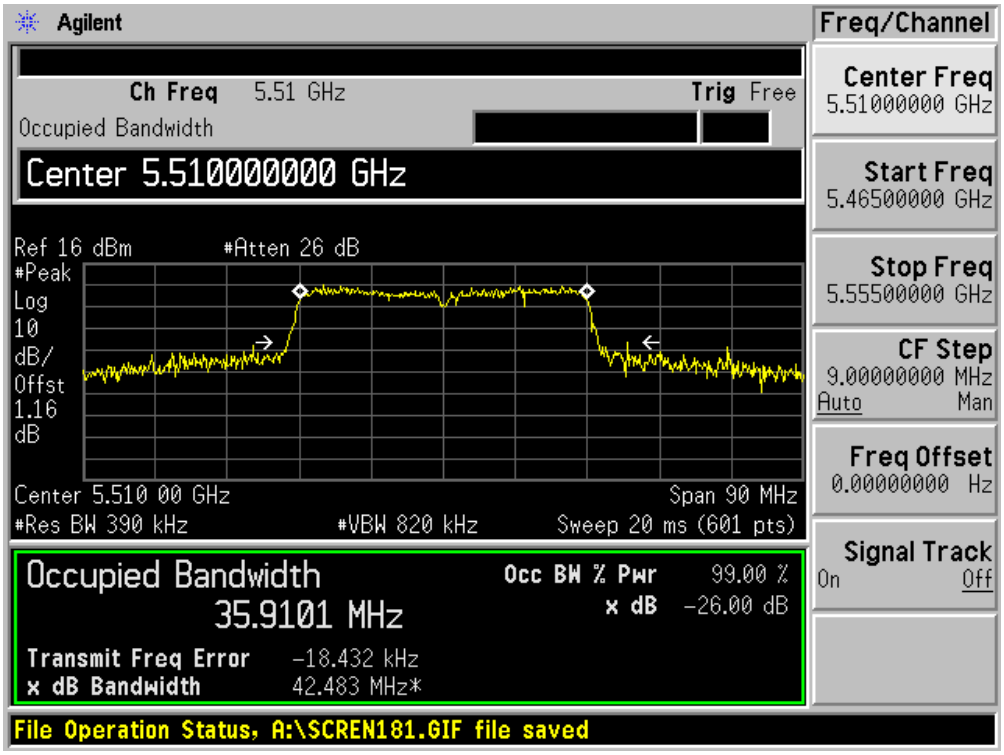
Channel 54 (5270MHz)



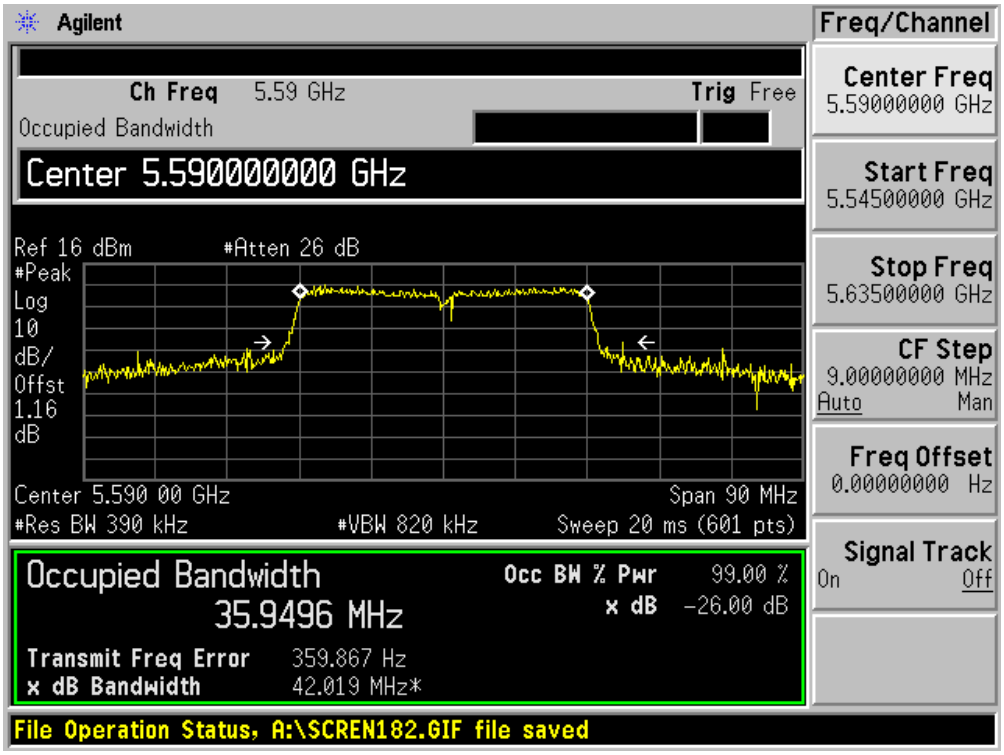
Channel 62 (5310MHz)



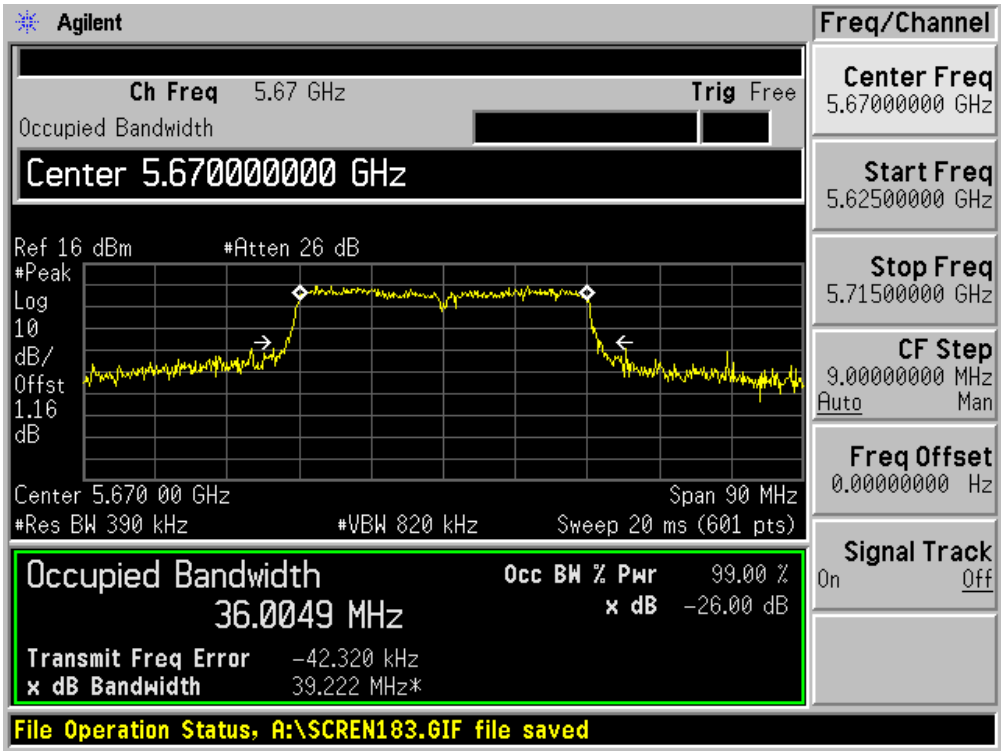
Channel 102 (5510MHz)



Channel 118 (5590MHz)



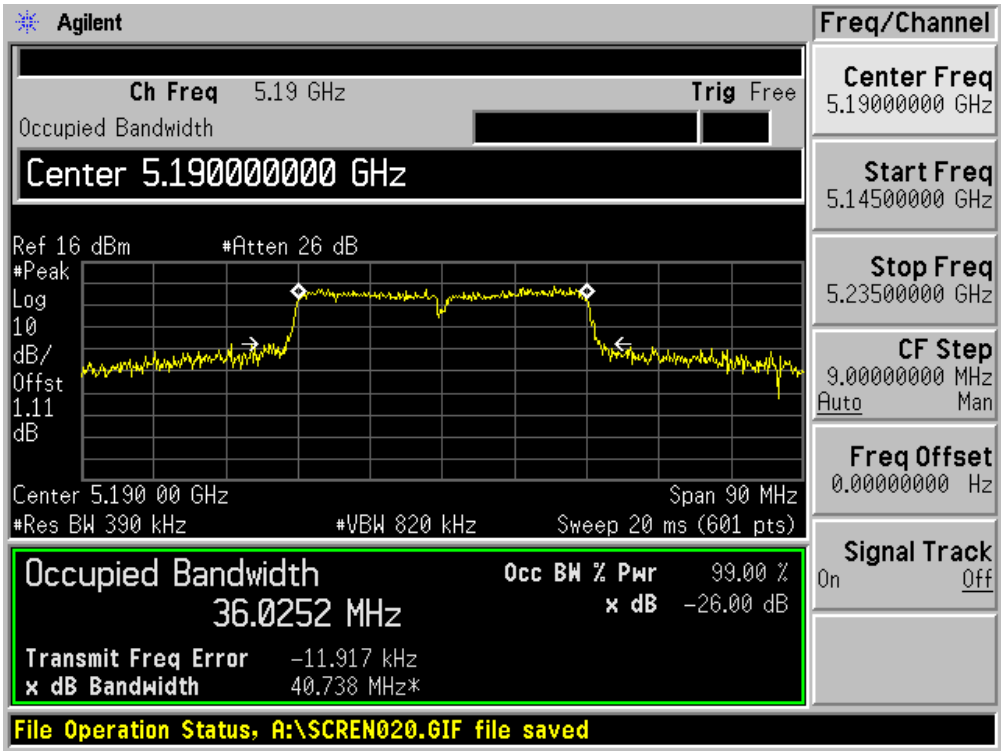
Channel 134 (5670MHz)



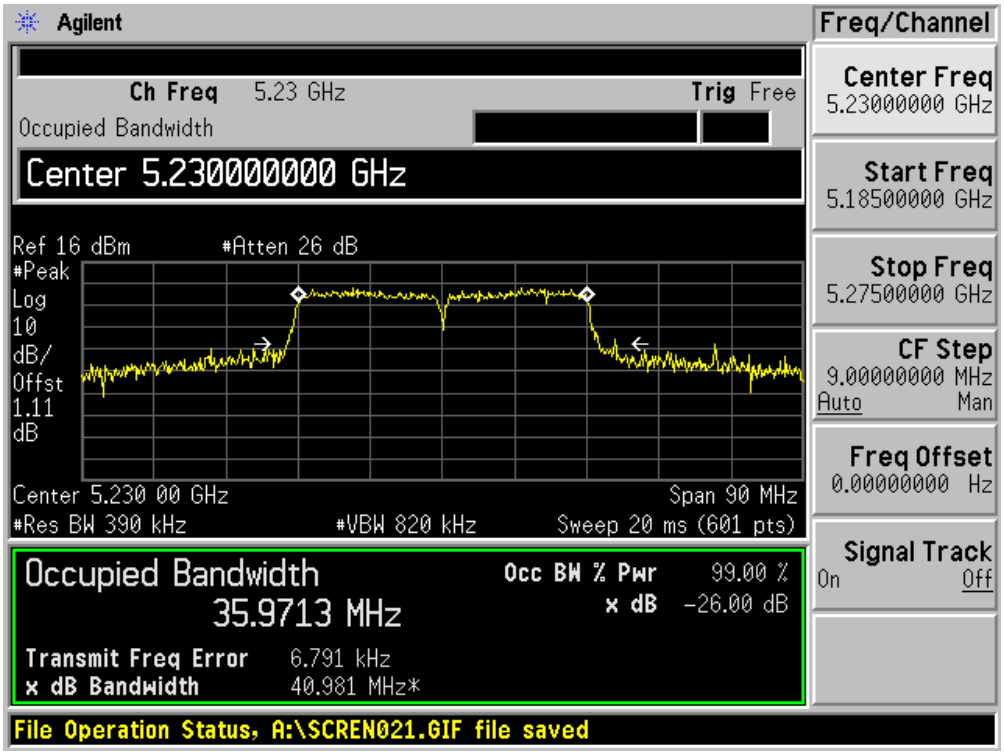
Product	:	Notebook Computer
Test Item	:	26dB Occupied Bandwidth
Test Site	:	AC-4
Test Mode	:	Mode 3: Transmit by 802.11n (40MHz Bandwidth) (Chain C)

Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	Limit (MHz)	Result
38	5190	40.738	N/A	Pass
46	5230	40.981	N/A	Pass
54	5270	41.076	N/A	Pass
62	5310	38.649	N/A	Pass
102	5510	41.129	N/A	Pass
118	5590	40.930	N/A	Pass
134	5670	39.450	N/A	Pass

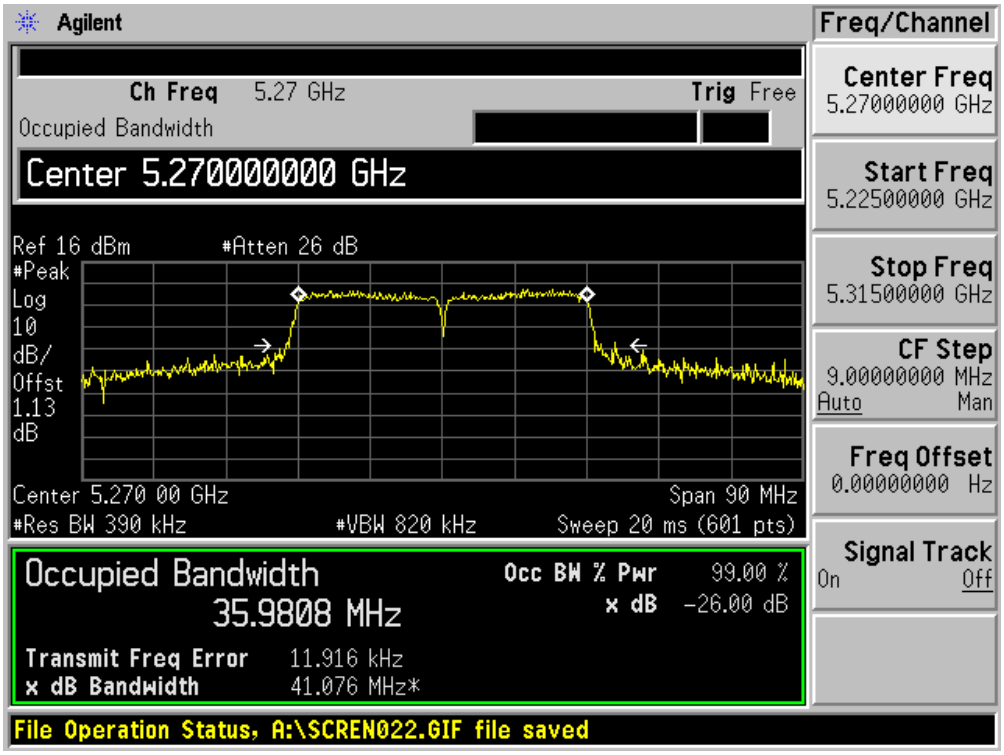
Channel 38 (5190MHz)



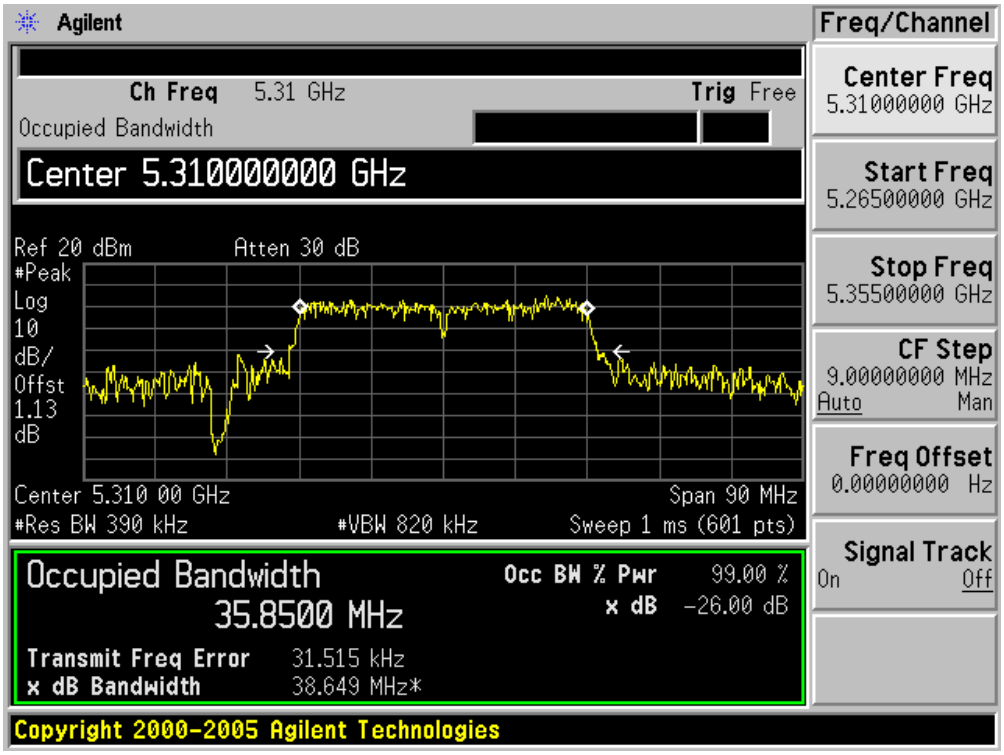
Channel 46 (5230MHz)



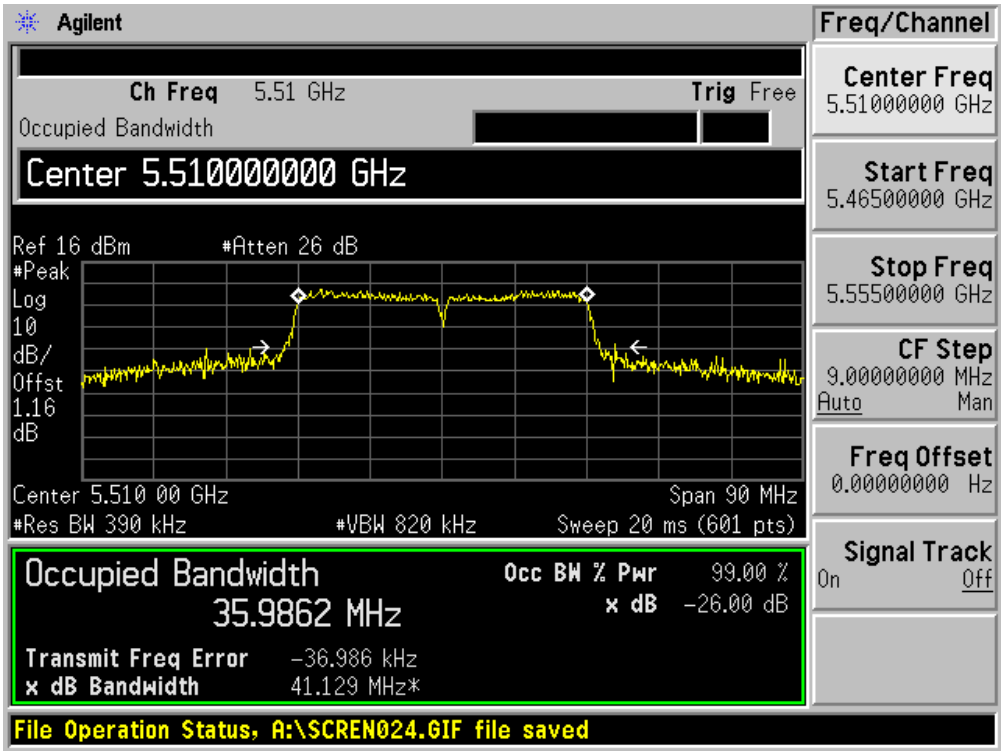
Channel 54 (5270MHz)



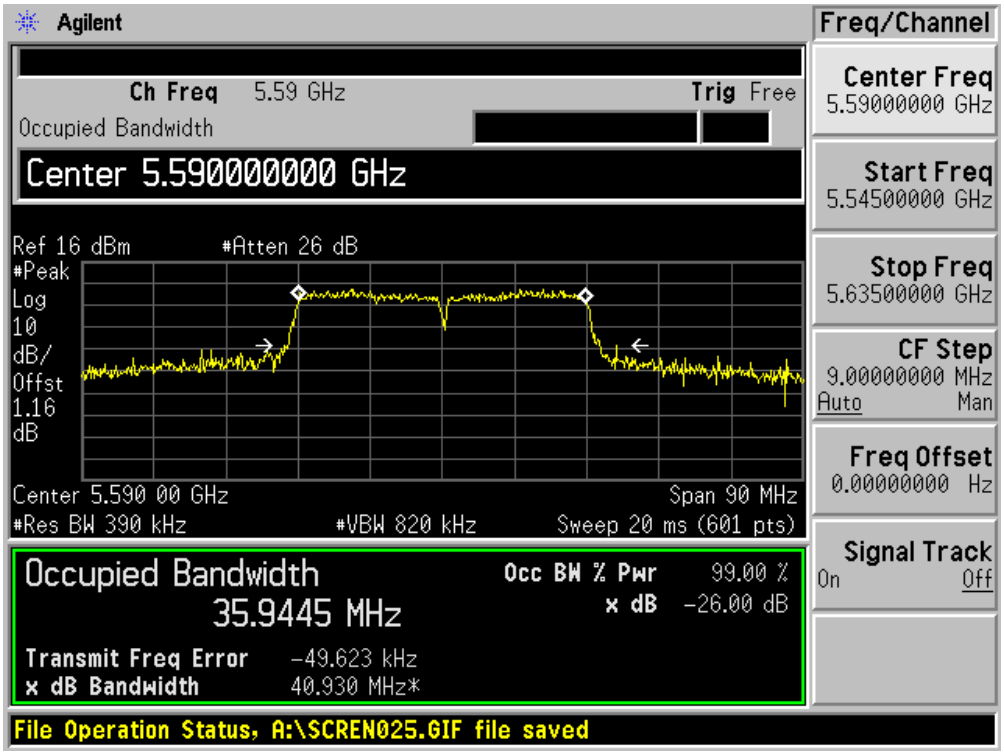
Channel 62 (5310MHz)



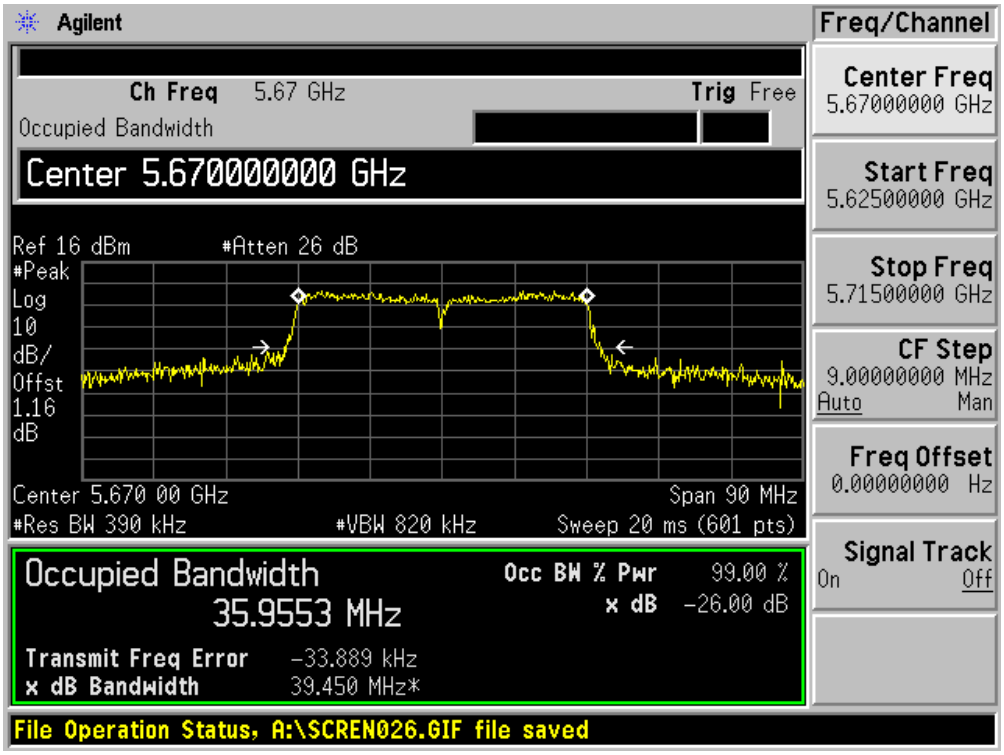
Channel 102 (5510MHz)



Channel 118 (5590MHz)



Channel 134 (5670MHz)



5. Power Output

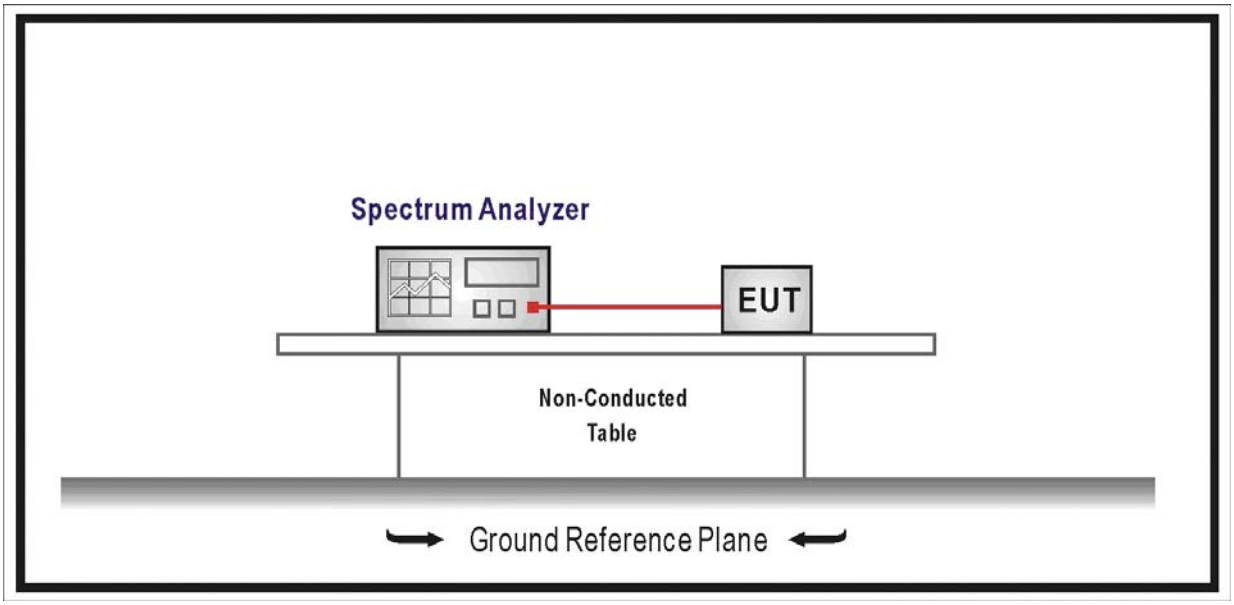
5.1. Test Equipment

Power Output / AC-4

Instrument	Manufacturer	Type No.	Serial No.	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2008/06/11
Coaxial Cable	Huber+Suhner	AC4-RF	09	2007/11/25
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH007	2008/03/09

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

5.2. Test Setup



5.3. Limit

- 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.
- For the band 5.25-5.35 GHz and 5.47-5725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10log B, where B is the 26 dB emission bandwidth in megahertz. 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.

- 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 1 W 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. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain up to 23 dBi without any corresponding reduction in the transmitter peak output power. For fixed, point-to-point U-NII transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in peak transmitter power for each 1 dB of antenna gain in excess of 23 dBi would be required.

5.4. Test Procedure

The EUT was tested according to FCC Public Notice DA 02-2138, August 30, 2002 for compliance to FCC 47CFR 15.407 requirements.
Power output measurement allowed per Section 15.407(a).
In the following, “T” is the transmission pulse duration over which the transmitter is on and transmitting at its maximum power control level. Measurements are performed with a spectrum analyzer. Three methods are provided to accommodate measurement limitations of the spectrum analyzer depending on signal parameters. Set resolution bandwidth (RBW) = 1 MHz. Set span to encompass the entire emission bandwidth (EBW) of the signal. Use automatic setting for analyzer sweep time. Check the sweep time to determine which procedure to use.

As “T” ≧ sweep time, the test procedure will be used as following:

- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 1 MHz.
- Set VBW ≥ 3 MHz.
- Use sample detector mode if bin width (i.e., span/number of points in spectrum display) < 0.5 RBW. Otherwise use peak detector mode
- Use a video trigger with the trigger level set to enable triggering only on full power pulses. Transmitter must operate at full control power for entire sweep of every sweep. If the device transmits continuously, with no off intervals or reduced power intervals, the trigger may be set to “free run”.
- Trace average 100 traces in power averaging mode.
- Compute power by integrating the spectrum across the 26 dB EBW of the signal. The integration can be performed using the spectrum analyzer’s band power measurement

function with band limits set equal to the EBW band edges or by summing power levels in each 1 MHz band in linear power terms. The 1 MHz band power levels to be summed can be obtained by averaging, in linear power terms, power levels in each frequency bin across the 1 MHz.

5.5. Uncertainty

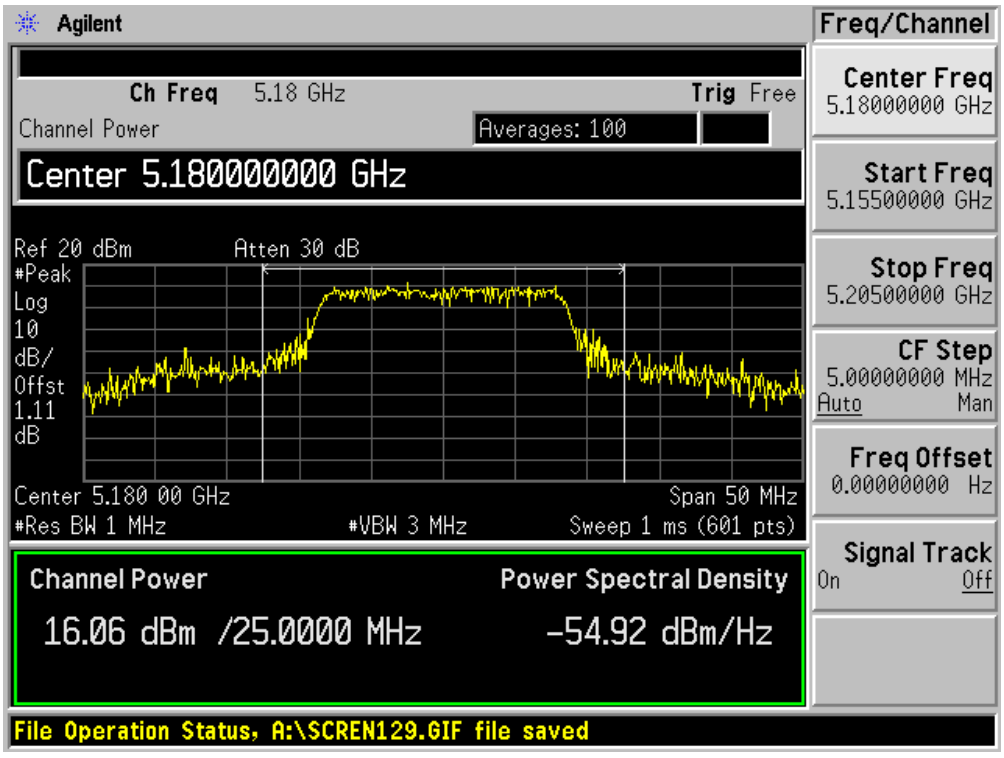
The measurement uncertainty is defined as ± 1.27 dB

5.6. Test Result

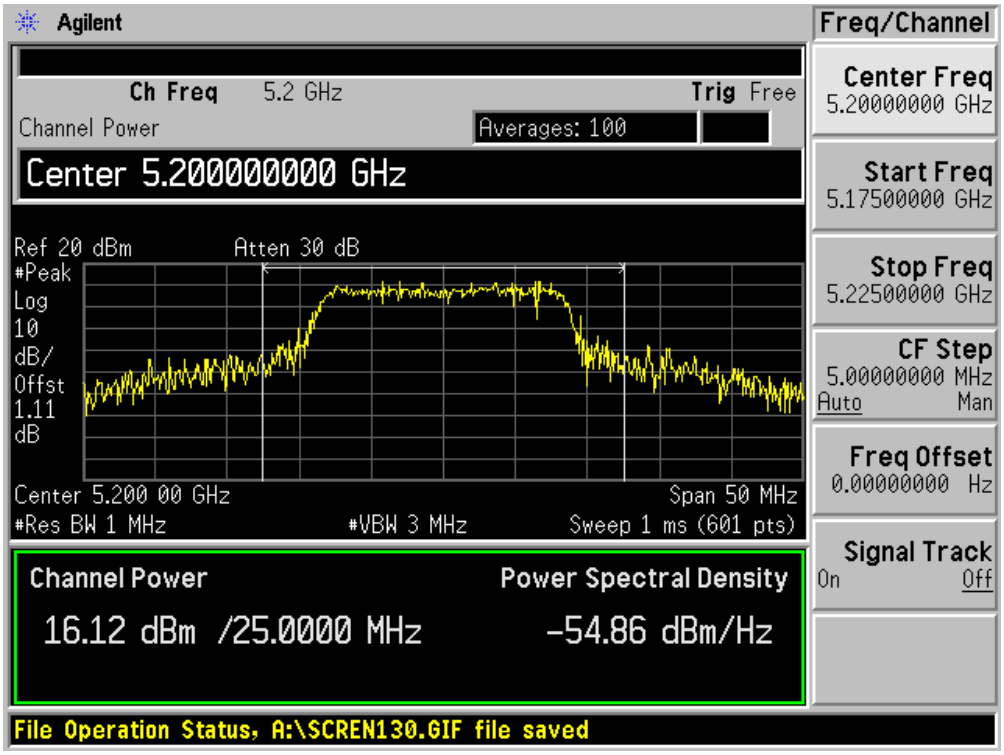
Product	:	Notebook Computer
Test Item	:	Power Output
Test Site	:	AC-4
Test Mode	:	Mode 1: Transmit by 802.11a (Chain A)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)			Total Power (dBm)	Limit (dBm)	Result
		Chain A	Chain B	Chain C			
36	5180	16.06	N/A	N/A	16.06	17.00	Pass
40	5200	16.12	N/A	N/A	16.12	17.00	Pass
48	5240	15.99	N/A	N/A	15.99	17.00	Pass
52	5260	19.17	N/A	N/A	19.17	24.00	Pass
60	5300	19.07	N/A	N/A	19.07	24.00	Pass
64	5320	18.99	N/A	N/A	18.99	24.00	Pass
100	5500	19.28	N/A	N/A	19.28	24.00	Pass
120	5600	19.10	N/A	N/A	19.10	24.00	Pass
140	5700	19.02	N/A	N/A	19.02	24.00	Pass

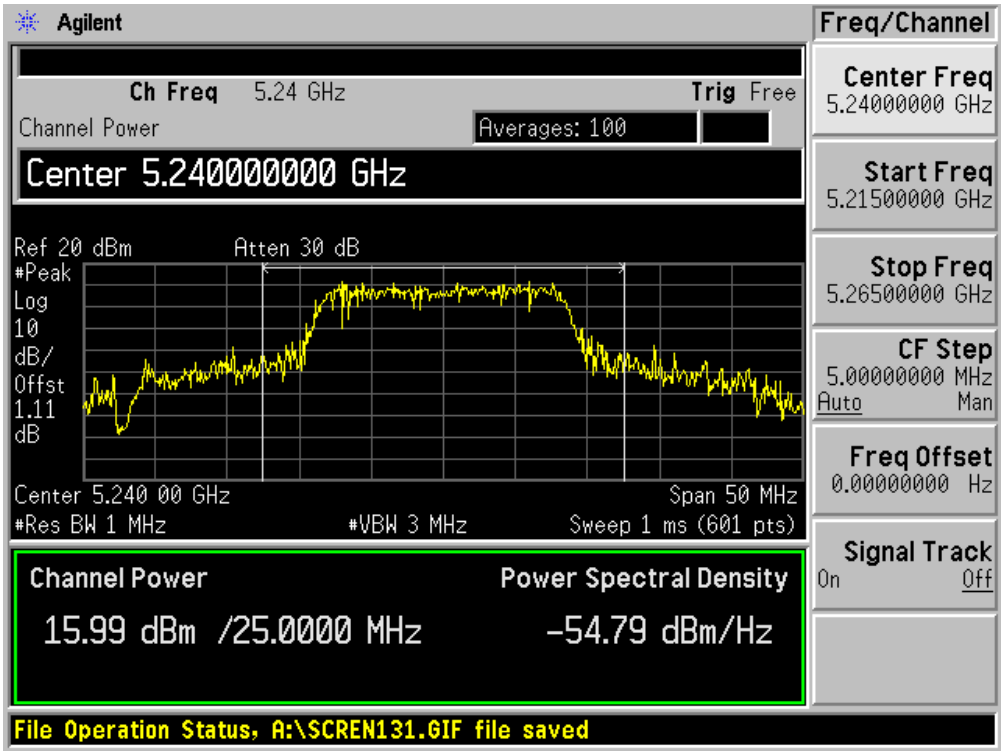
Channel 36 (5180MHz)



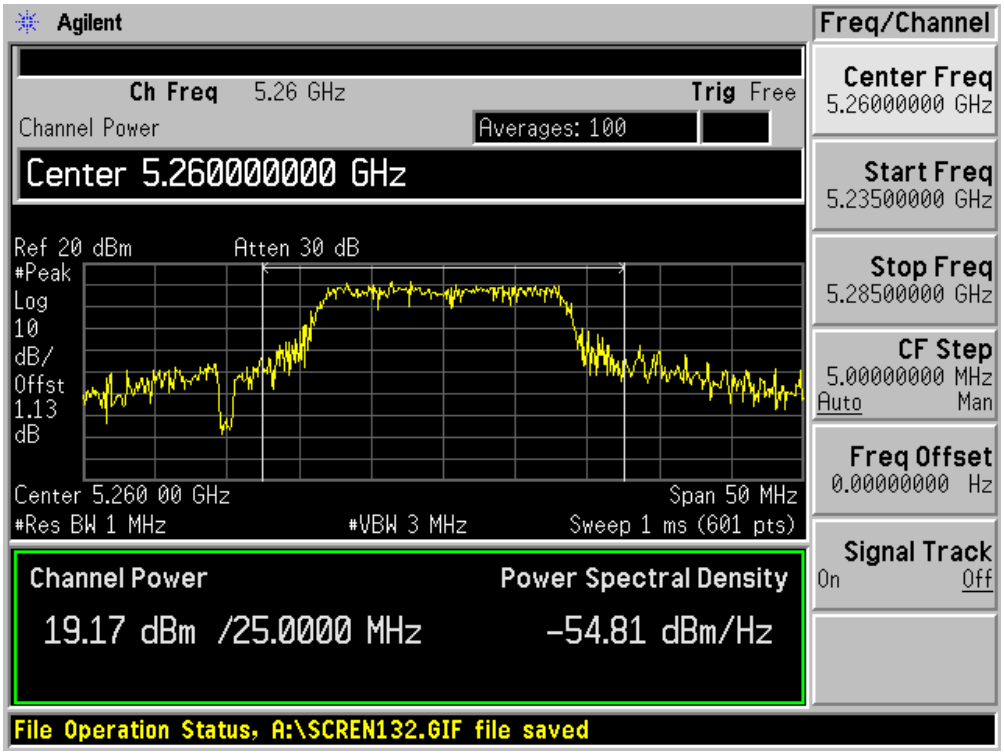
Channel 40 (5200MHz)



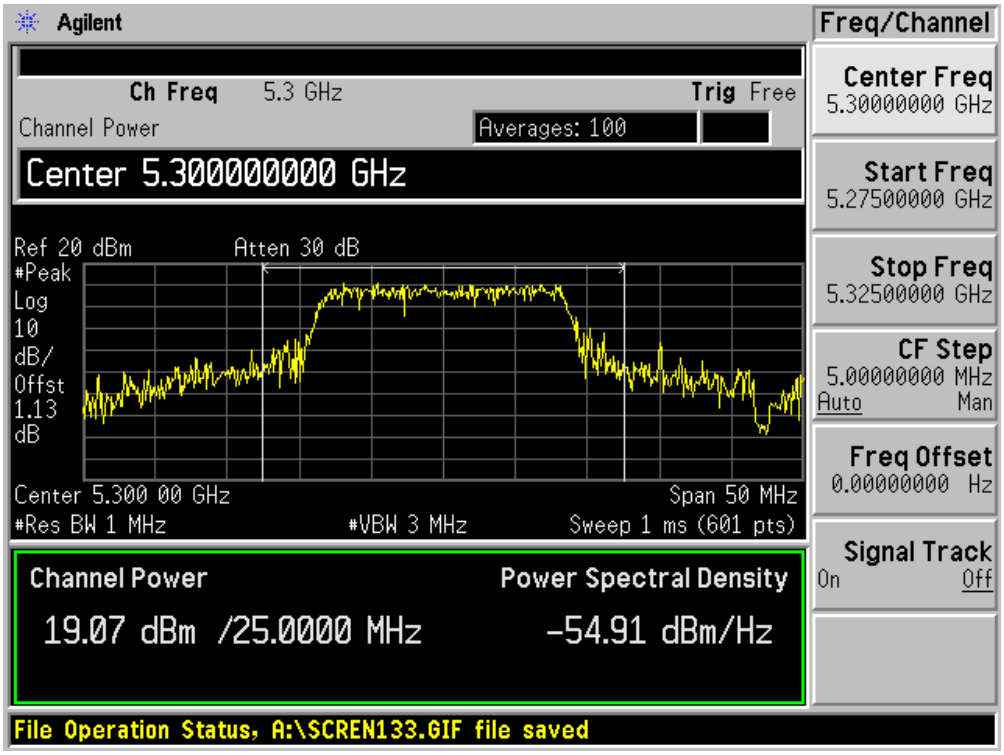
Channel 48 (5240MHz)



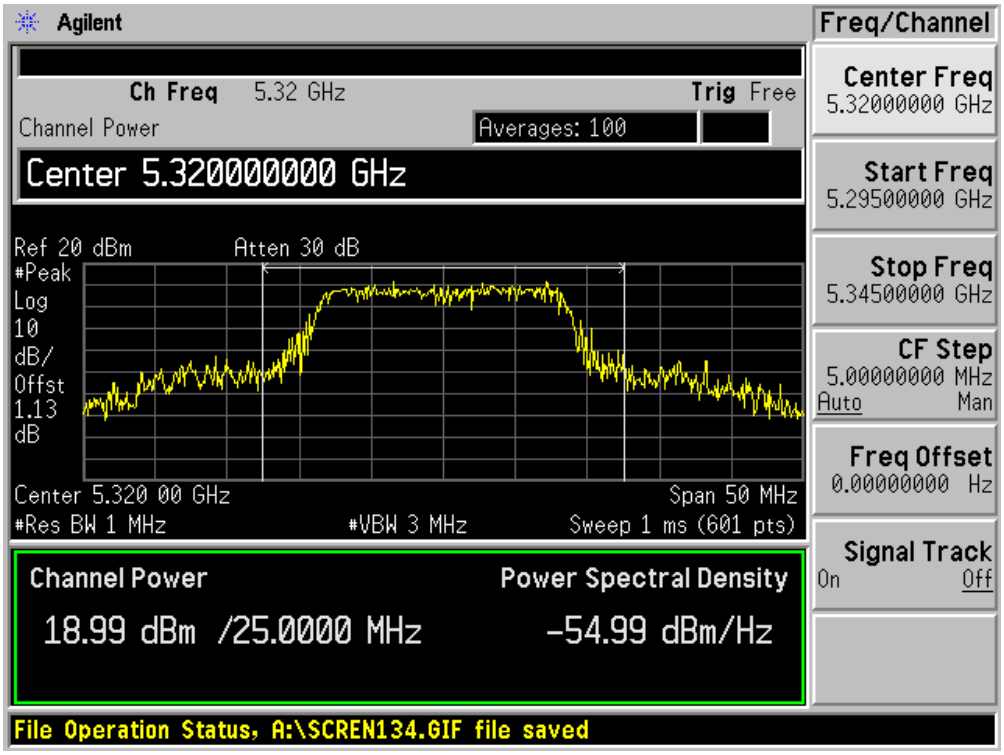
Channel 52 (5260MHz)



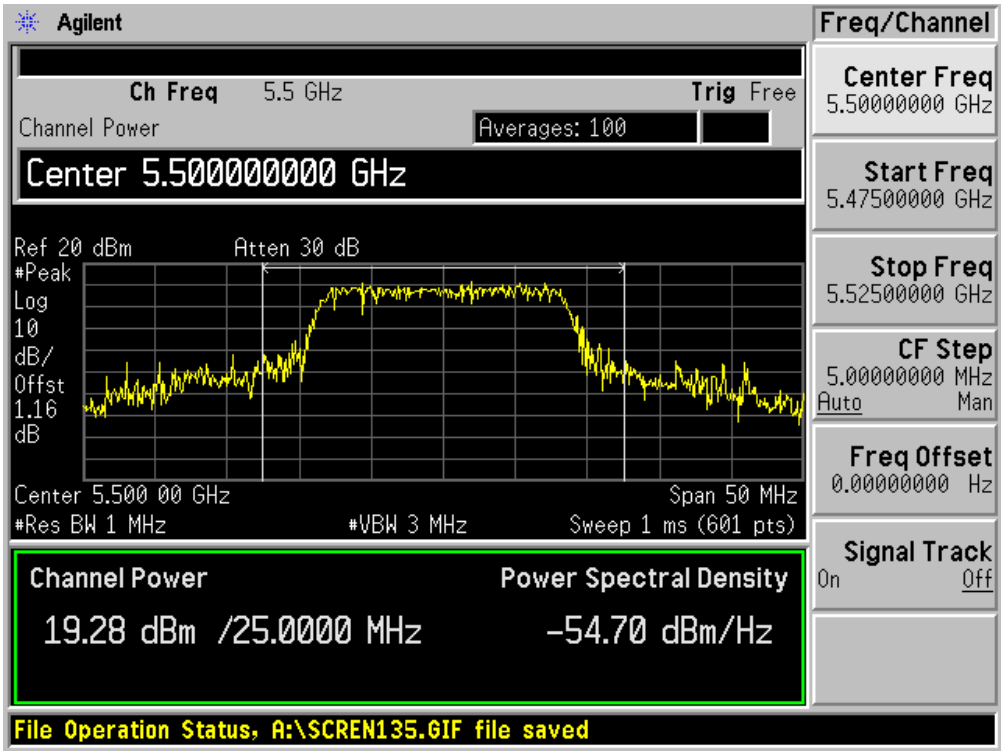
Channel 60 (5300MHz)



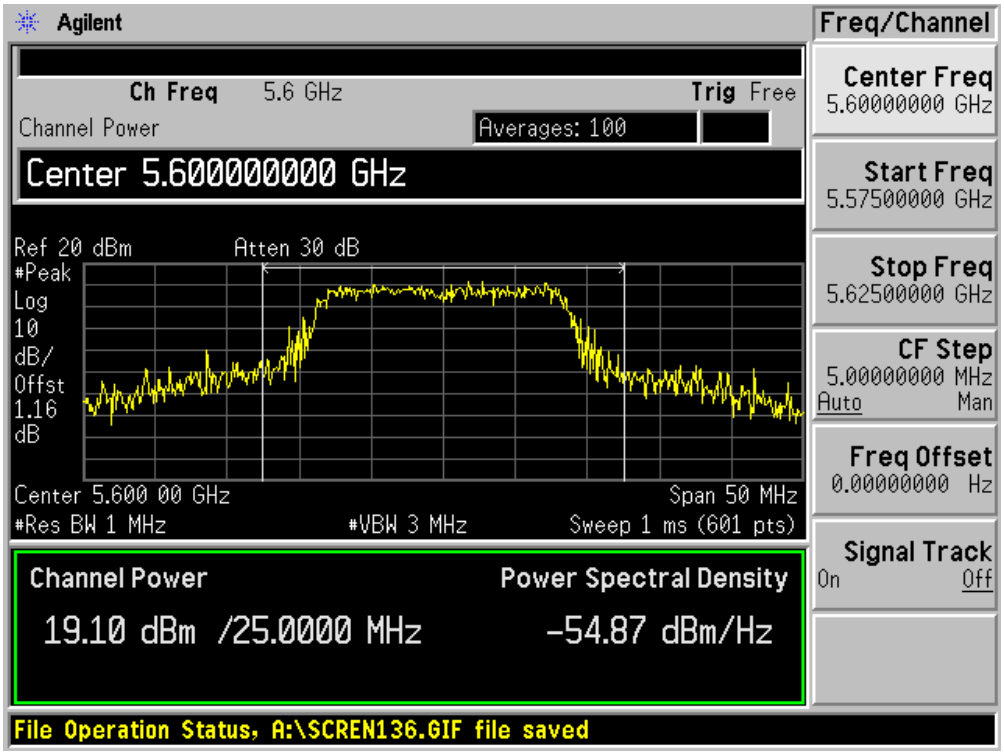
Channel 64 (5320MHz)



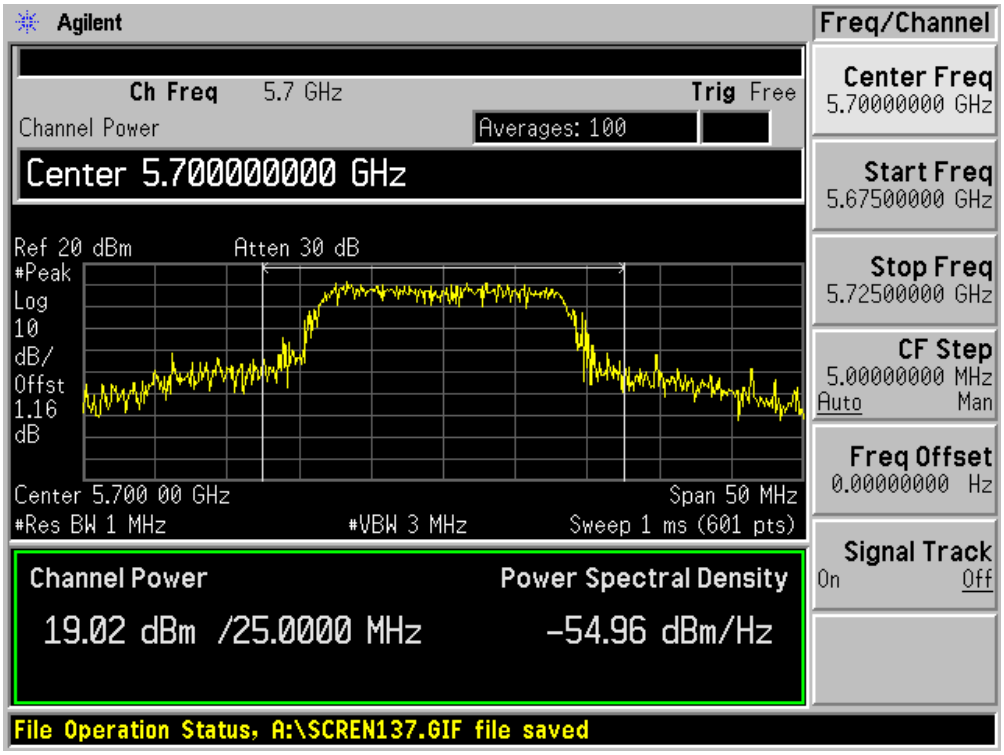
Channel 100 (5500MHz)



Channel 120 (5600MHz)



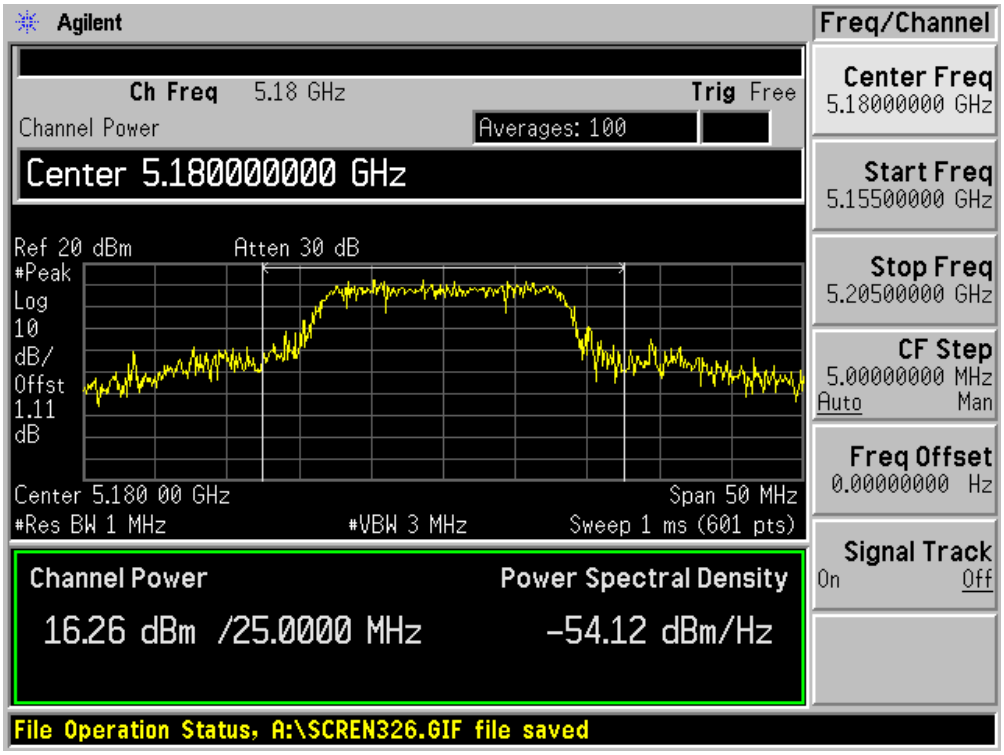
Channel 140 (5700MHz)



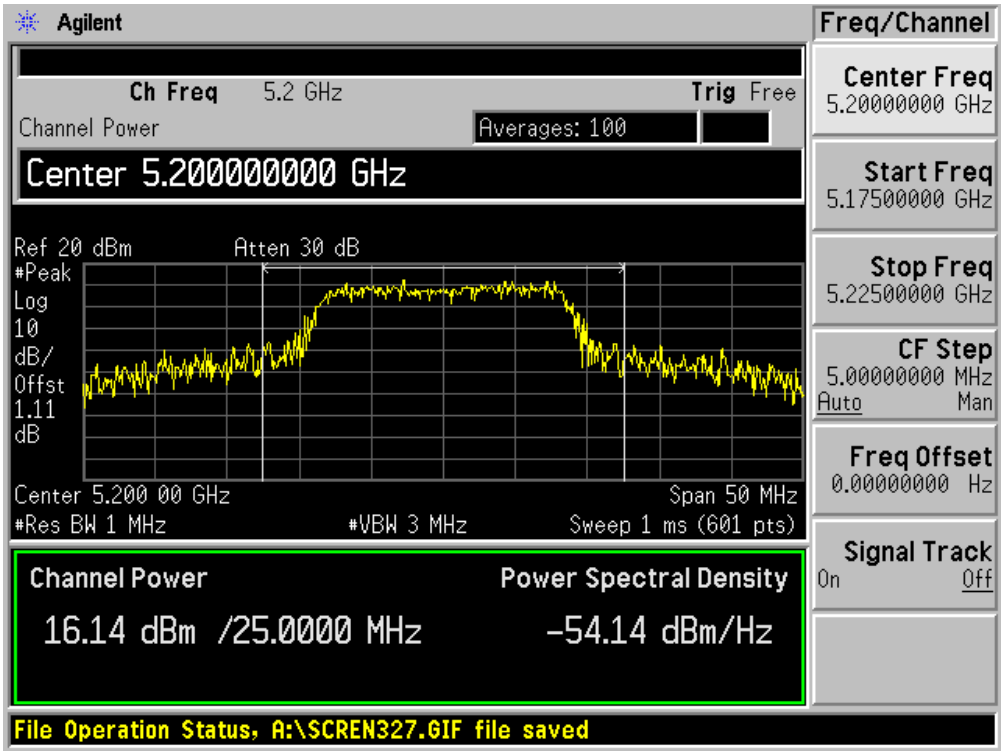
Product	:	Notebook Computer
Test Item	:	Power Output
Test Site	:	AC-4
Test Mode	:	Mode 1: Transmit by 802.11a (Chain B)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)			Total Power (dBm)	Limit (dBm)	Result
		Chain A	Chain B	Chain C			
36	5180	N/A	16.26	N/A	16.26	17.00	Pass
40	5200	N/A	16.14	N/A	16.14	17.00	Pass
48	5240	N/A	16.33	N/A	16.33	17.00	Pass
52	5260	N/A	19.52	N/A	19.52	24.00	Pass
60	5300	N/A	19.24	N/A	19.24	24.00	Pass
64	5320	N/A	19.09	N/A	19.09	24.00	Pass
100	5500	N/A	19.87	N/A	19.87	24.00	Pass
120	5600	N/A	19.74	N/A	19.74	24.00	Pass
140	5700	N/A	19.51	N/A	19.51	24.00	Pass

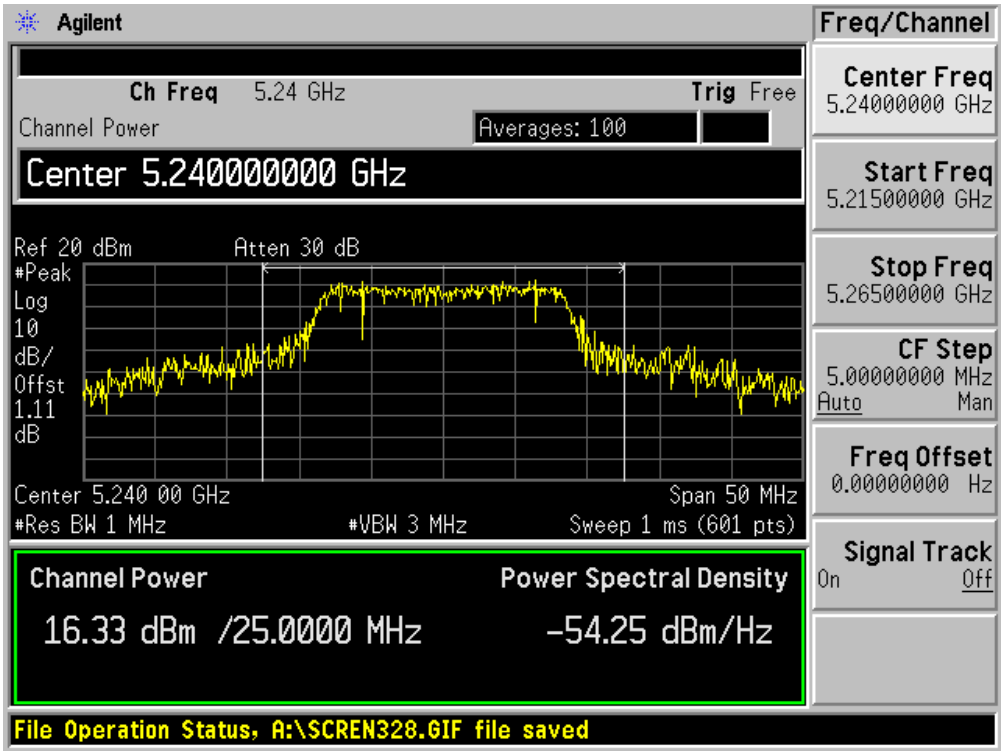
Channel 36 (5180MHz)



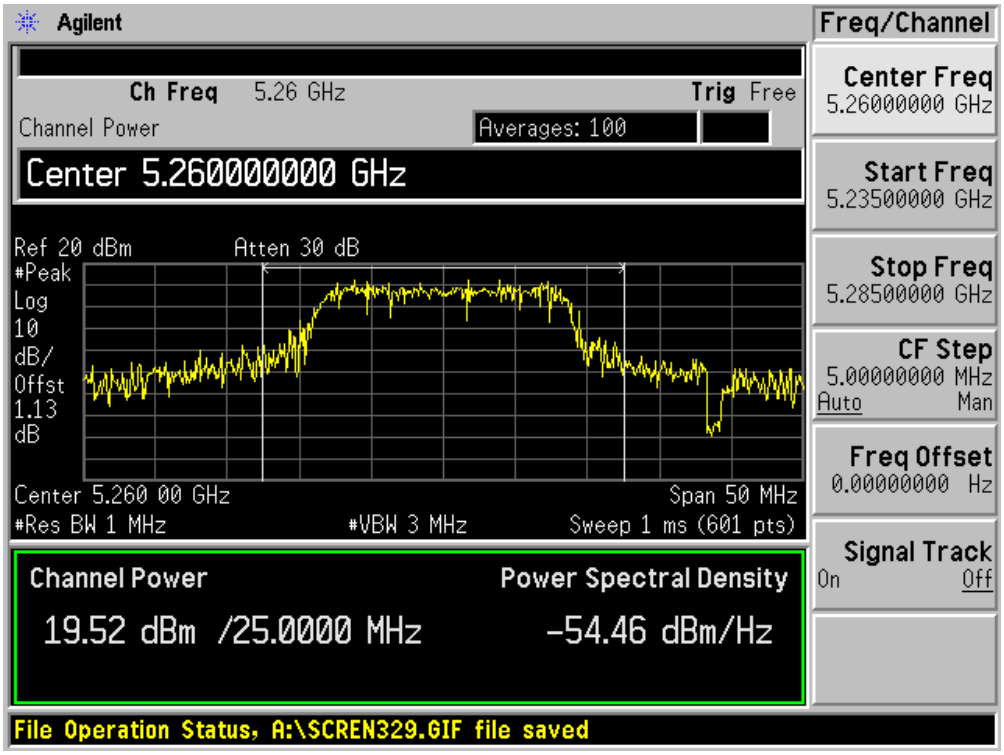
Channel 40 (5200MHz)



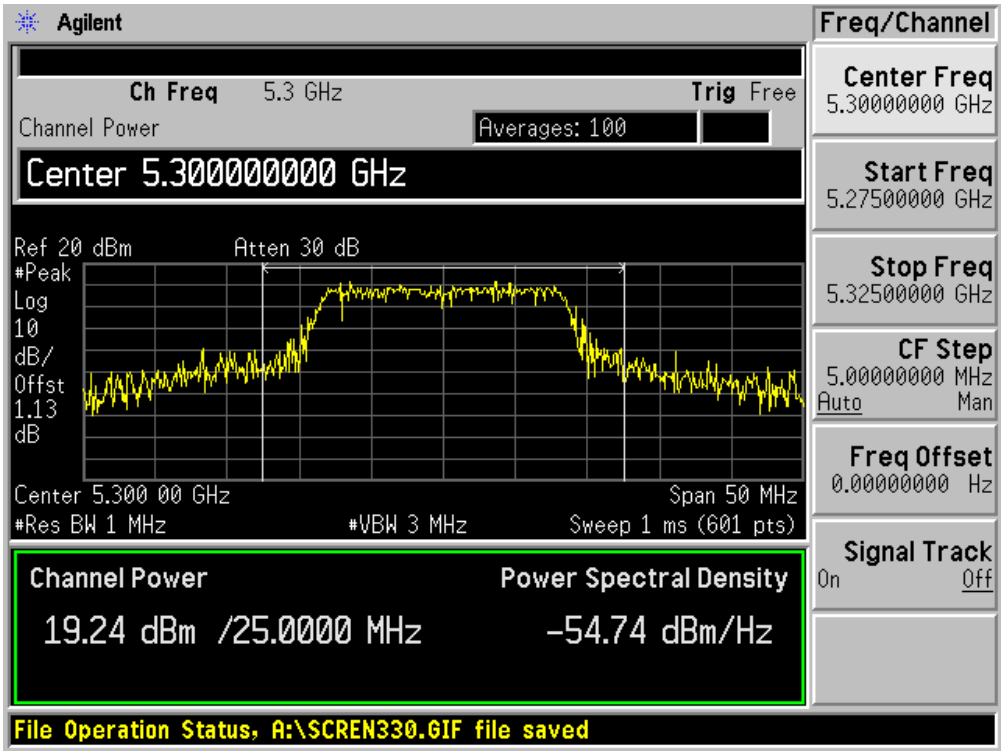
Channel 48 (5240MHz)



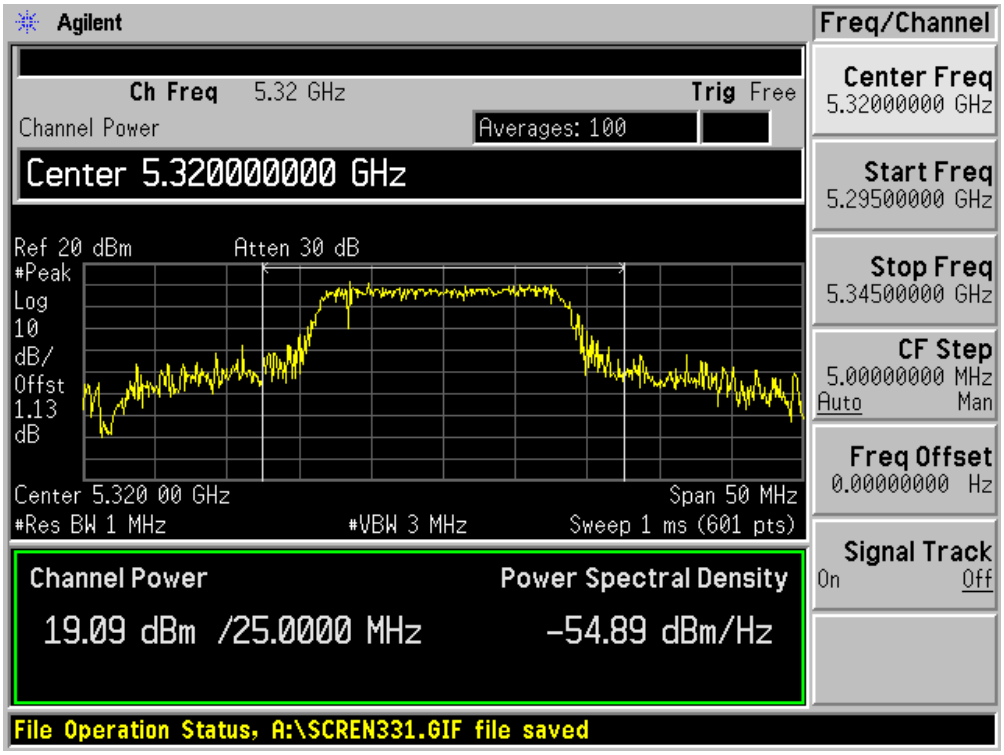
Channel 52 (5260MHz)



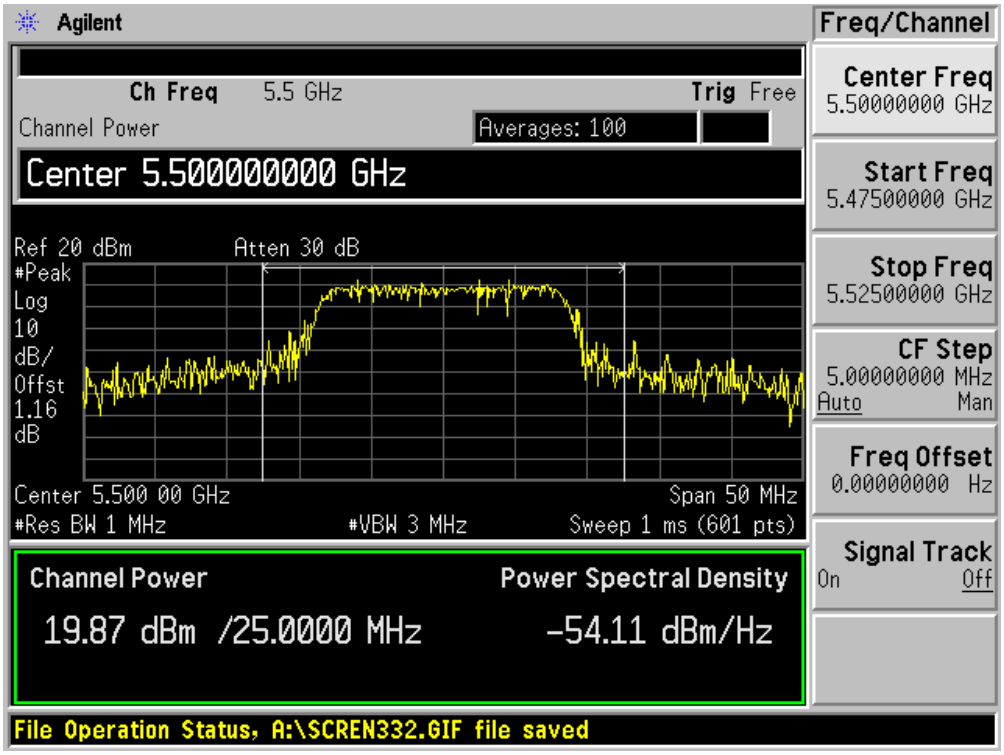
Channel 60 (5300MHz)



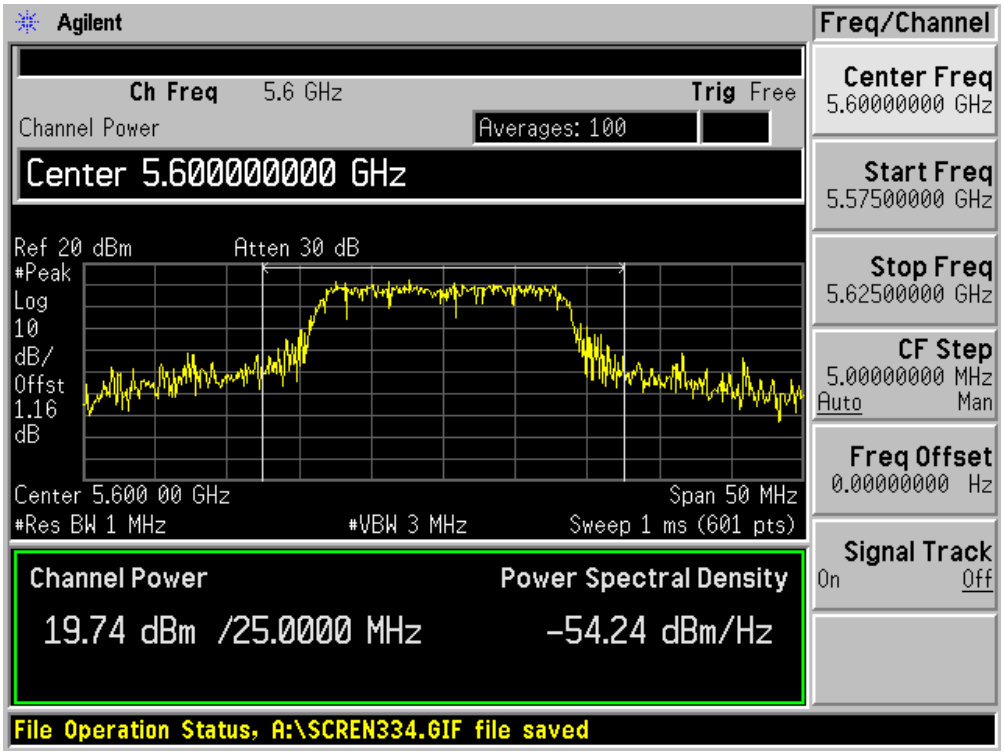
Channel 64 (5320MHz)



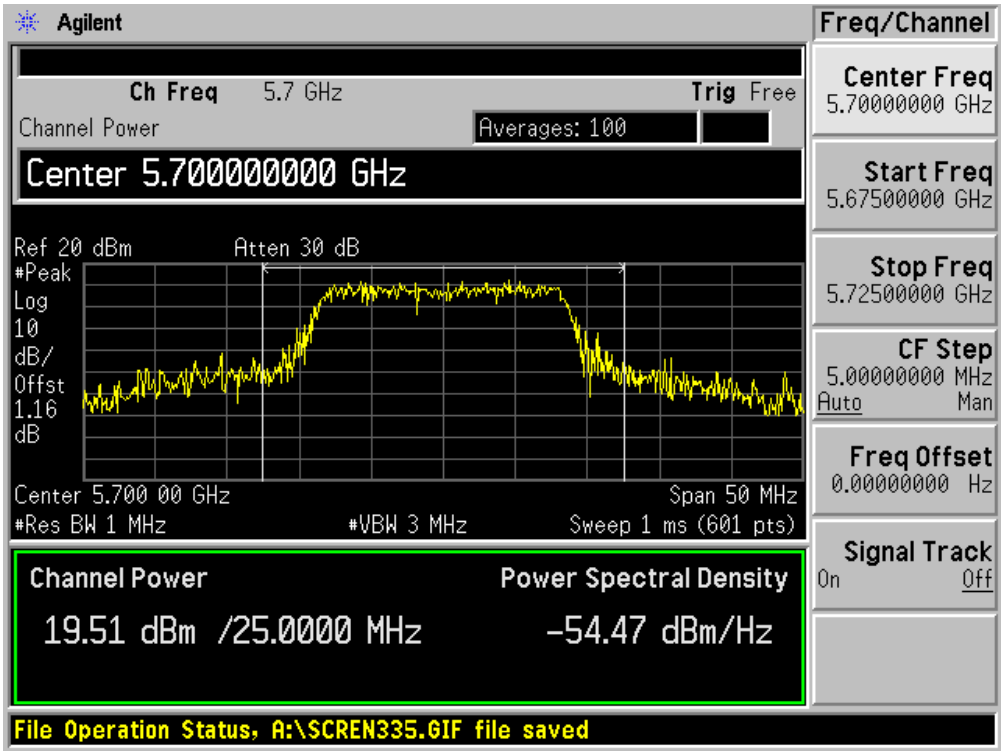
Channel 100 (5500MHz)



Channel 120 (5600MHz)



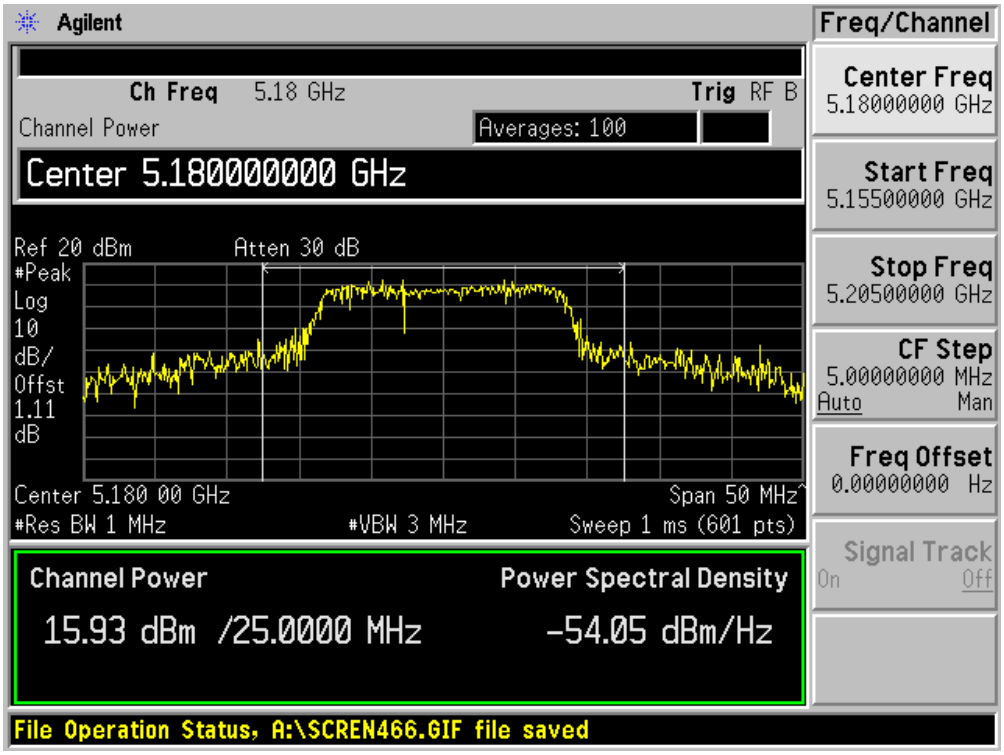
Channel 140 (5700MHz)



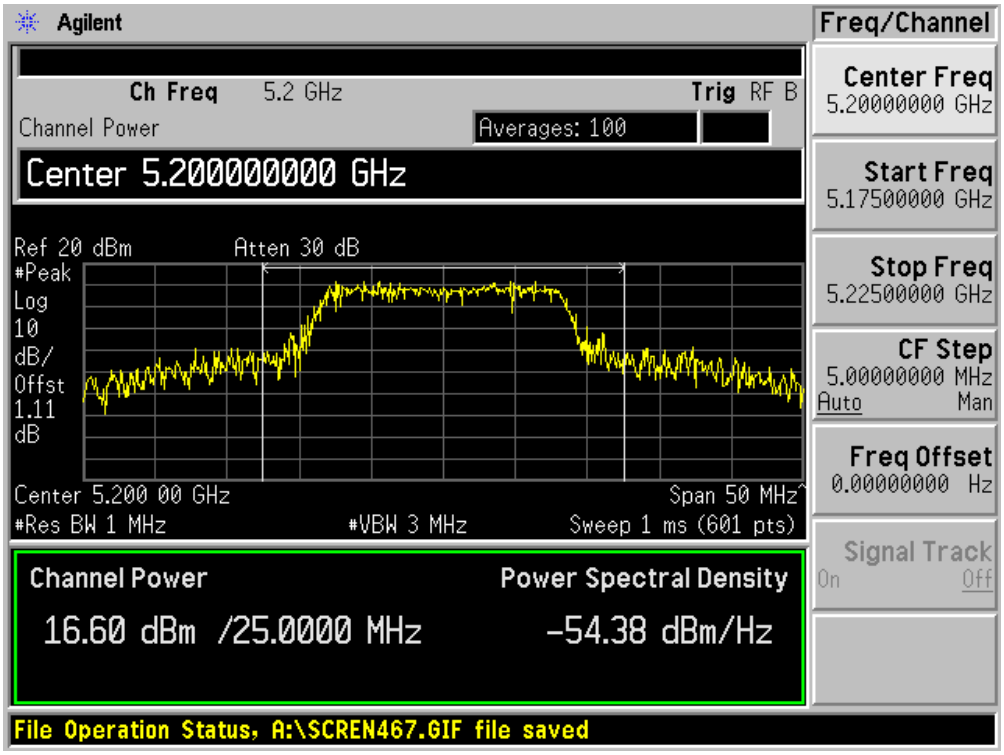
Product	:	Notebook Computer
Test Item	:	Power Output
Test Site	:	AC-4
Test Mode	:	Mode 1: Transmit by 802.11a (Chain C)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)			Total Power (dBm)	Limit (dBm)	Result
		Chain A	Chain B	Chain C			
36	5180	N/A	N/A	15.93	15.93	17.00	Pass
40	5200	N/A	N/A	16.60	16.60	17.00	Pass
48	5240	N/A	N/A	16.63	16.63	17.00	Pass
52	5260	N/A	N/A	19.39	19.39	24.00	Pass
60	5300	N/A	N/A	19.69	19.69	24.00	Pass
64	5320	N/A	N/A	19.53	19.53	24.00	Pass
100	5500	N/A	N/A	20.12	20.12	24.00	Pass
120	5600	N/A	N/A	19.83	19.83	24.00	Pass
140	5700	N/A	N/A	19.87	19.87	24.00	Pass

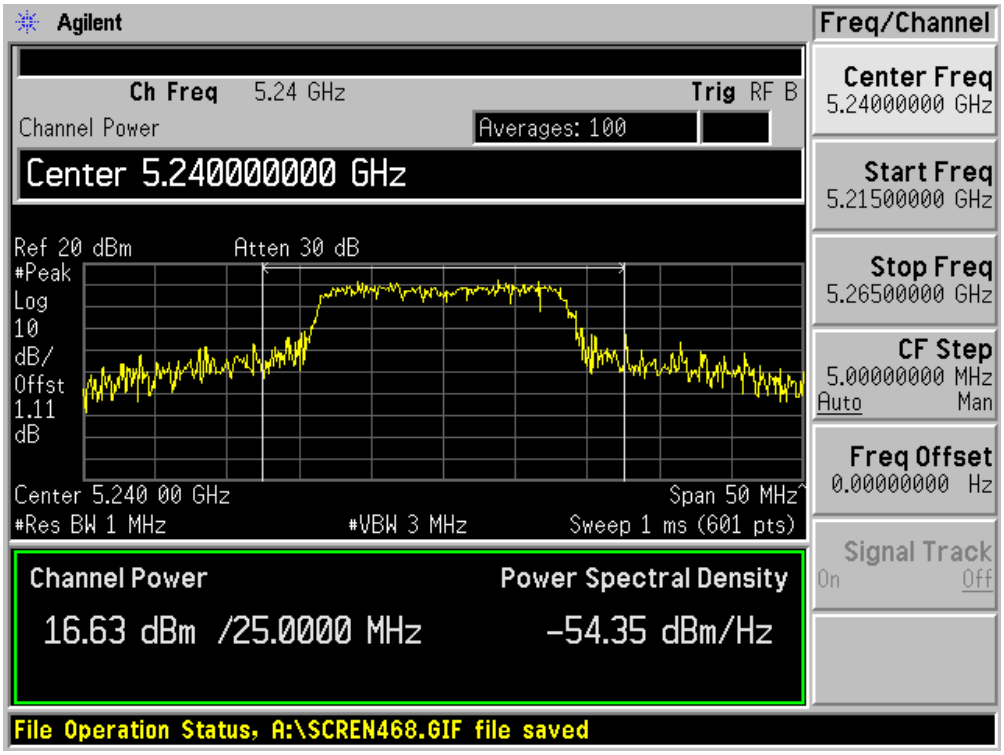
Channel 36 (5180MHz)



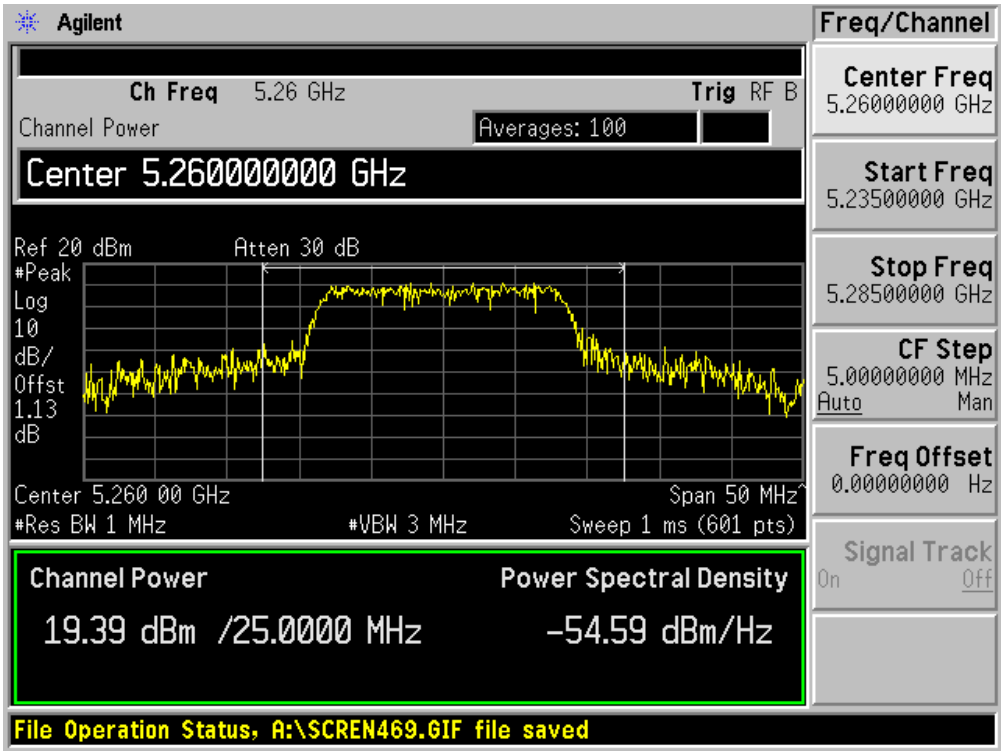
Channel 40 (5200MHz)



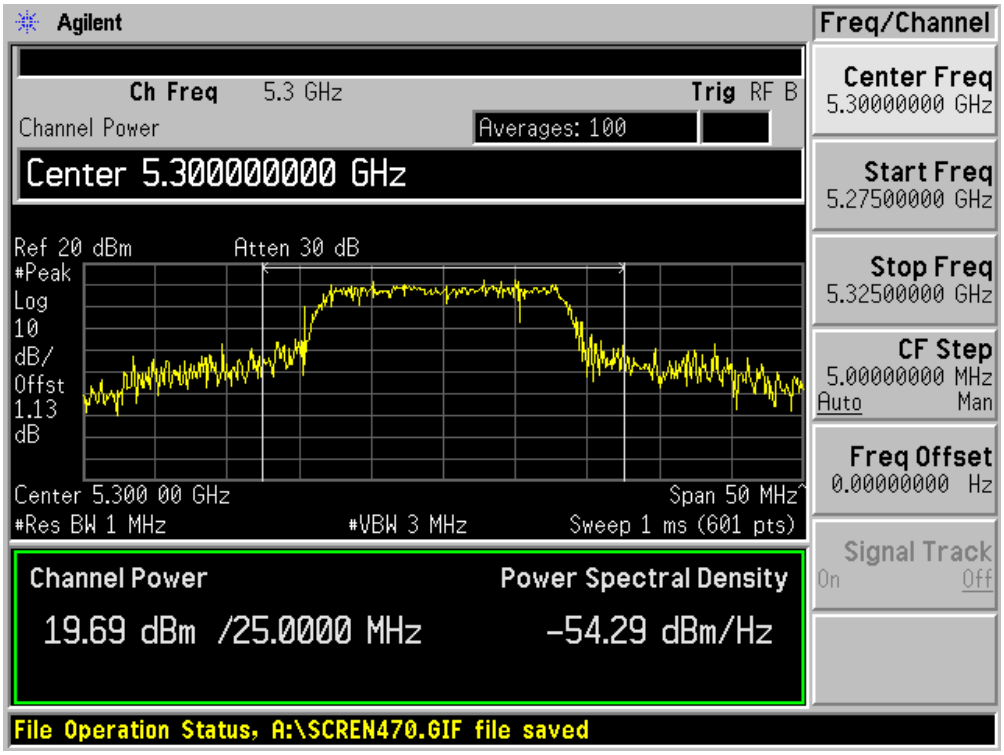
Channel 48 (5240MHz)



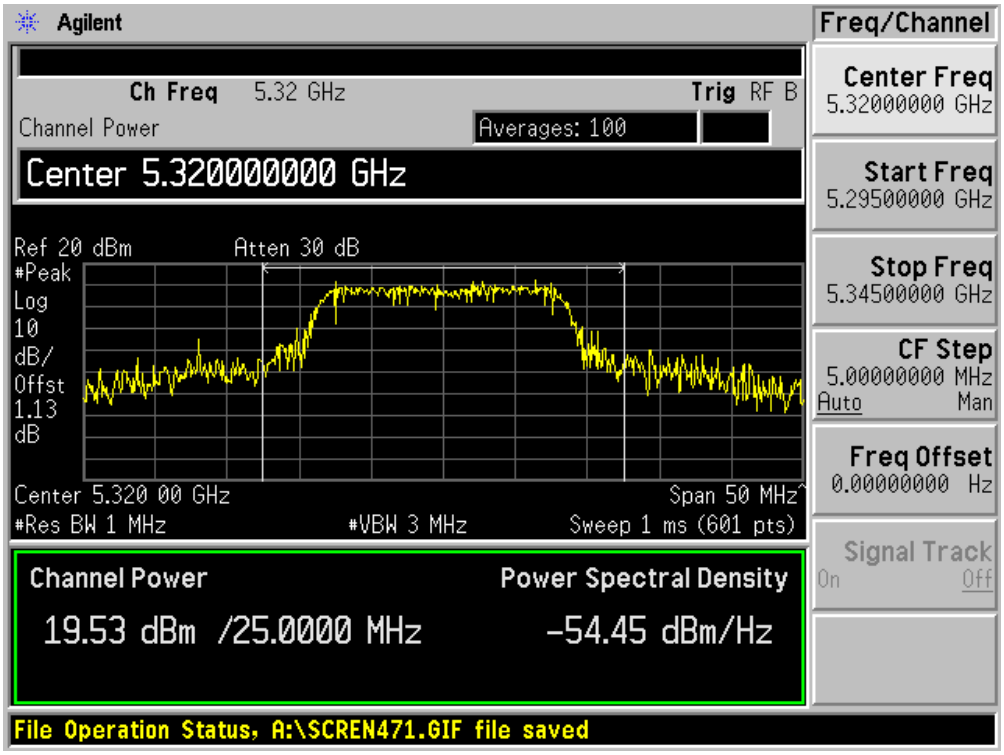
Channel 52 (5260MHz)



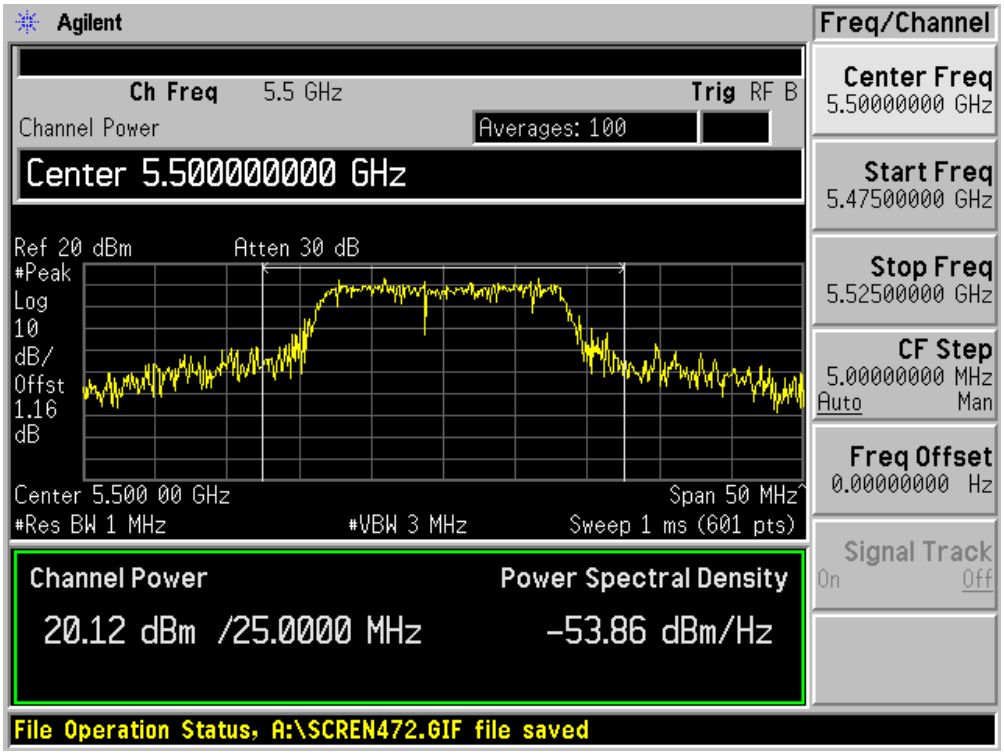
Channel 60 (5300MHz)



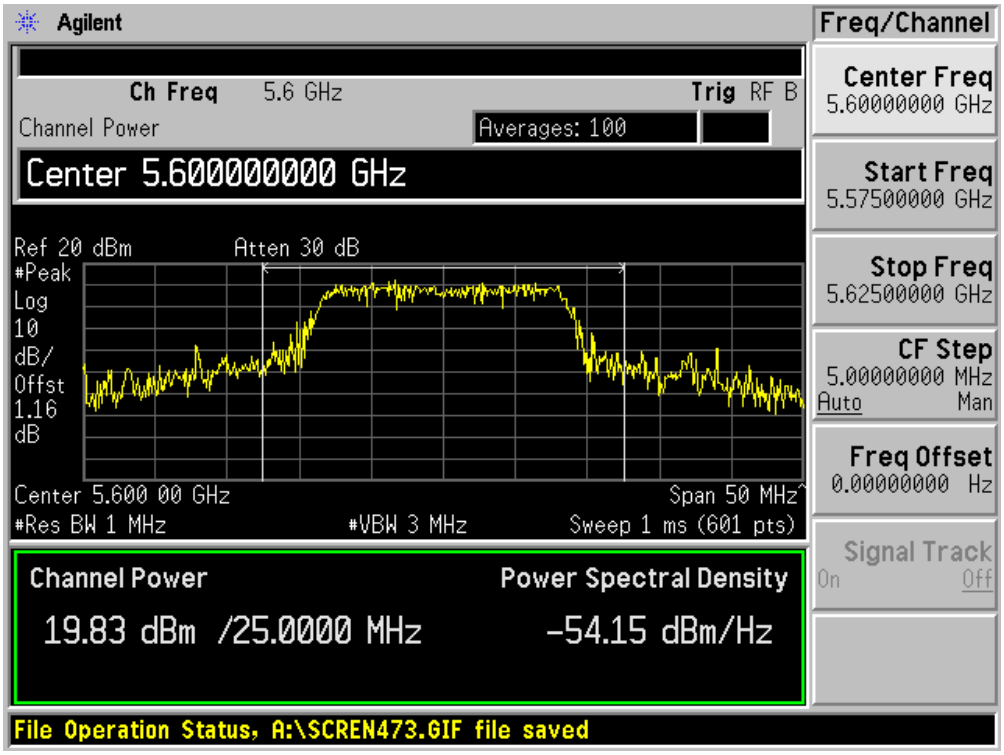
Channel 64 (5320MHz)



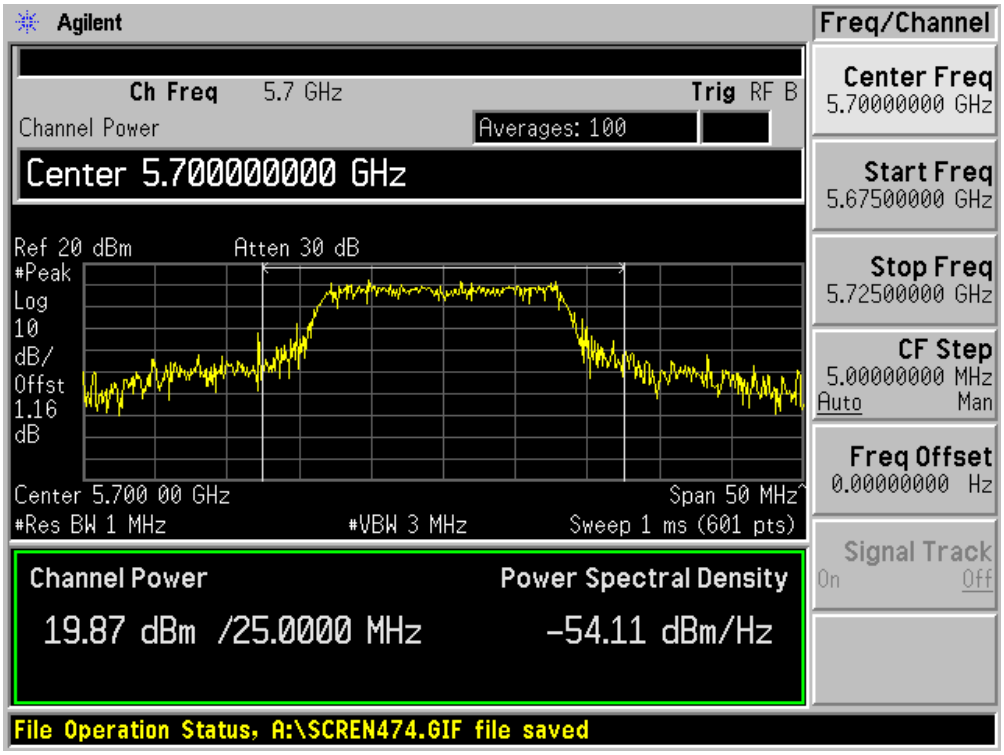
Channel 100 (5500MHz)



Channel 120 (5600MHz)



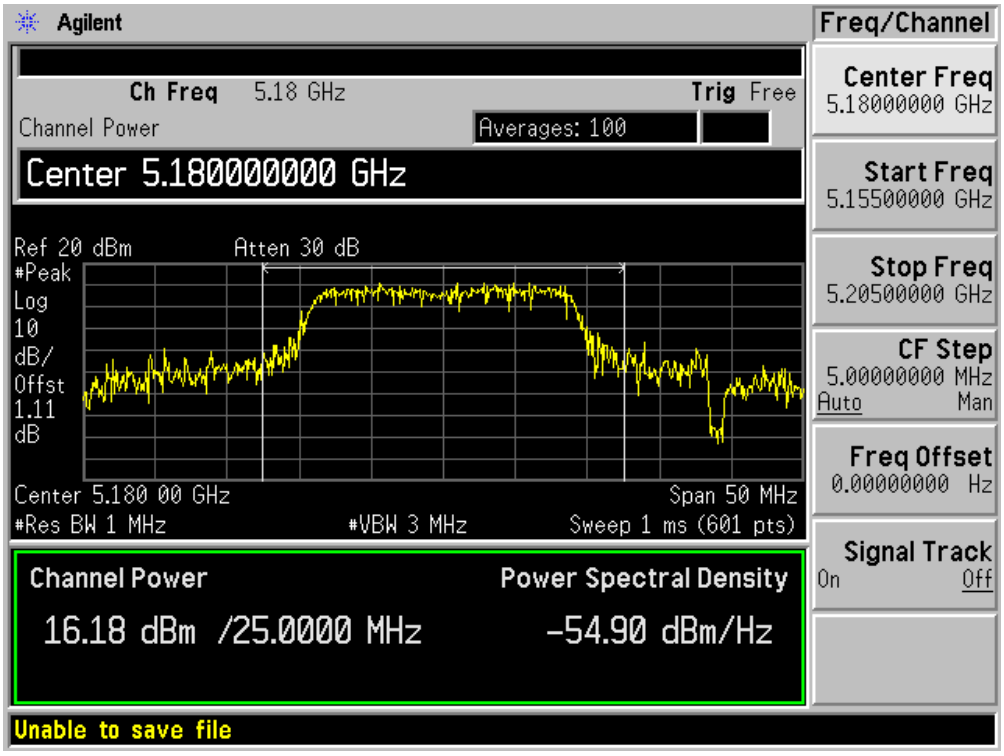
Channel 140 (5700MHz)



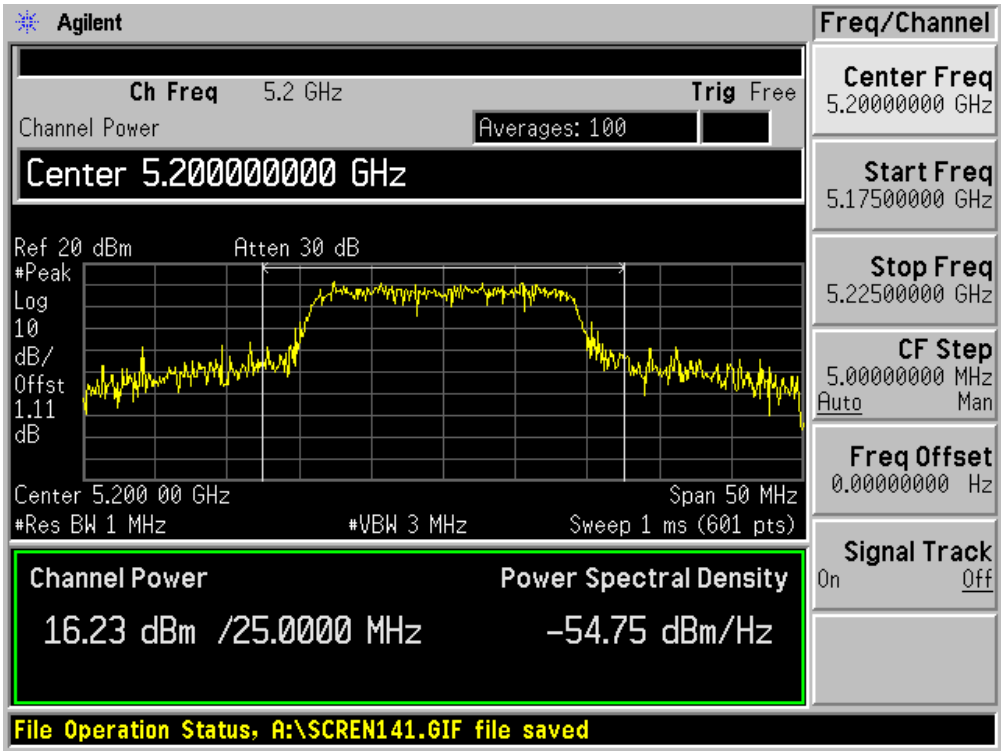
Product	:	Notebook Computer
Test Item	:	Power Output
Test Site	:	AC-4
Test Mode	:	Mode 2: Transmit by 802.11n (20MHz Bandwidth) (Chain A)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)			Total Power (dBm)	Limit (dBm)	Result
		Chain A	Chain B	Chain C			
36	5180	16.18	N/A	N/A	16.18	17.00	Pass
40	5200	16.23	N/A	N/A	16.23	17.00	Pass
48	5240	16.11	N/A	N/A	16.11	17.00	Pass
52	5260	18.98	N/A	N/A	18.98	24.00	Pass
60	5300	18.86	N/A	N/A	18.86	24.00	Pass
64	5320	18.83	N/A	N/A	18.83	24.00	Pass
100	5500	18.85	N/A	N/A	18.85	24.00	Pass
120	5600	18.95	N/A	N/A	18.95	24.00	Pass
140	5700	18.83	N/A	N/A	18.83	24.00	Pass

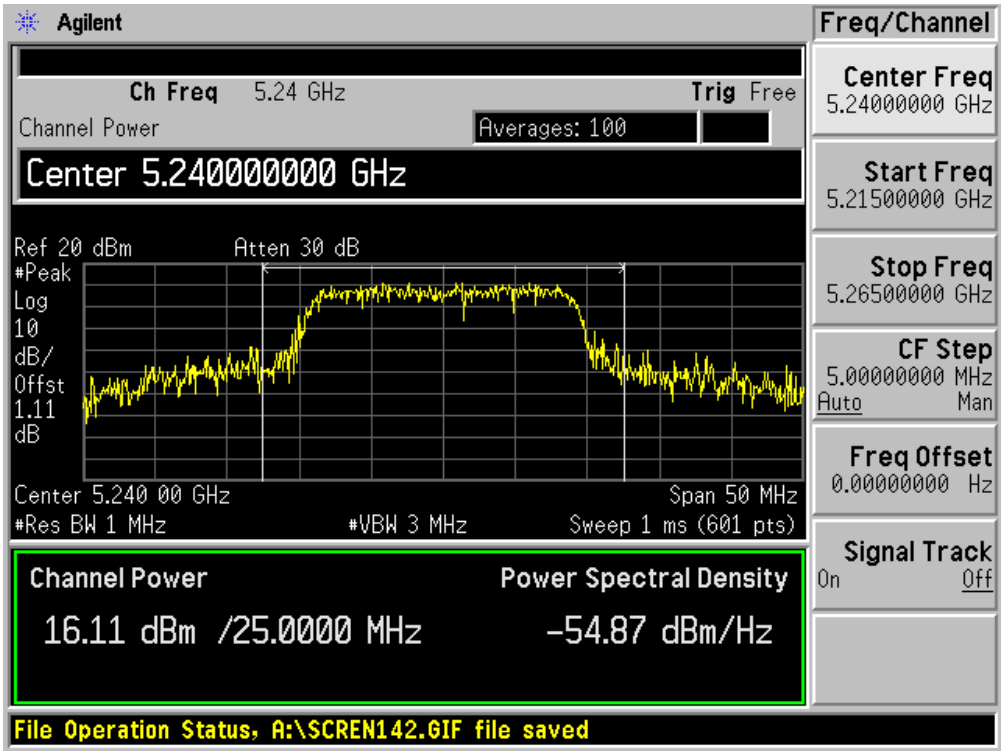
Channel 36 (5180MHz)



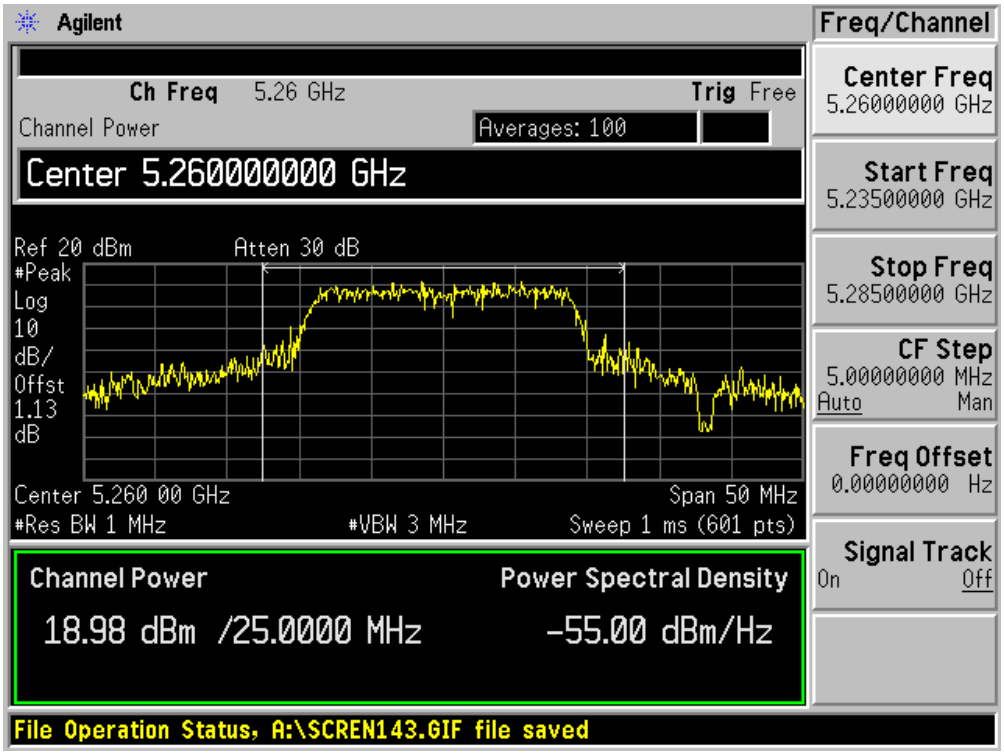
Channel 40 (5200MHz)



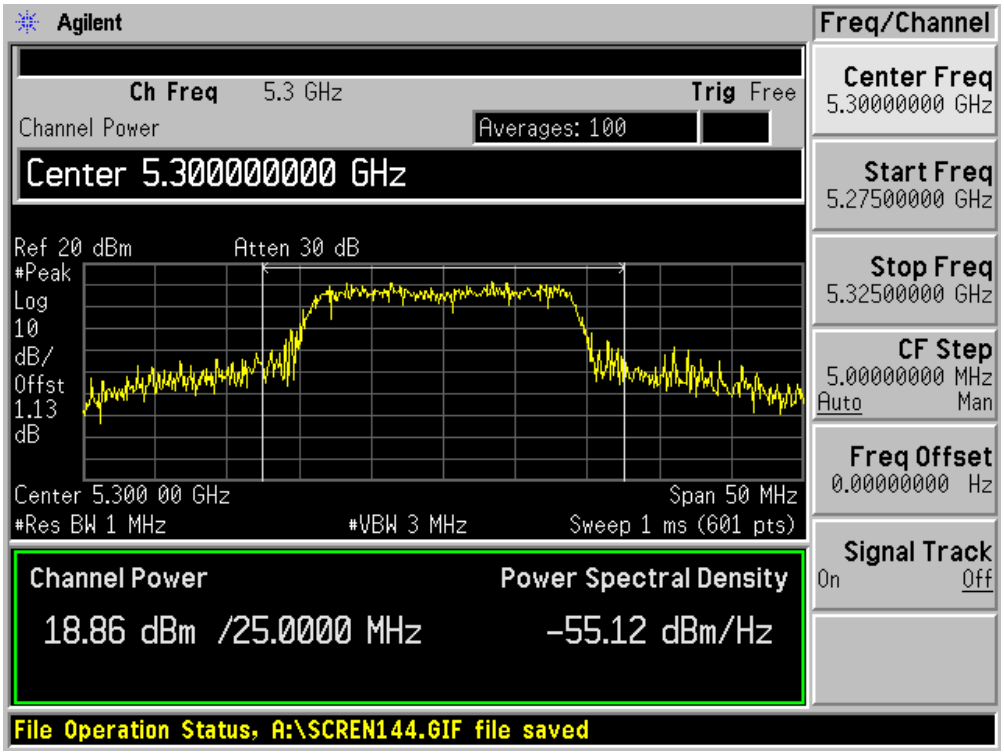
Channel 48 (5240MHz)



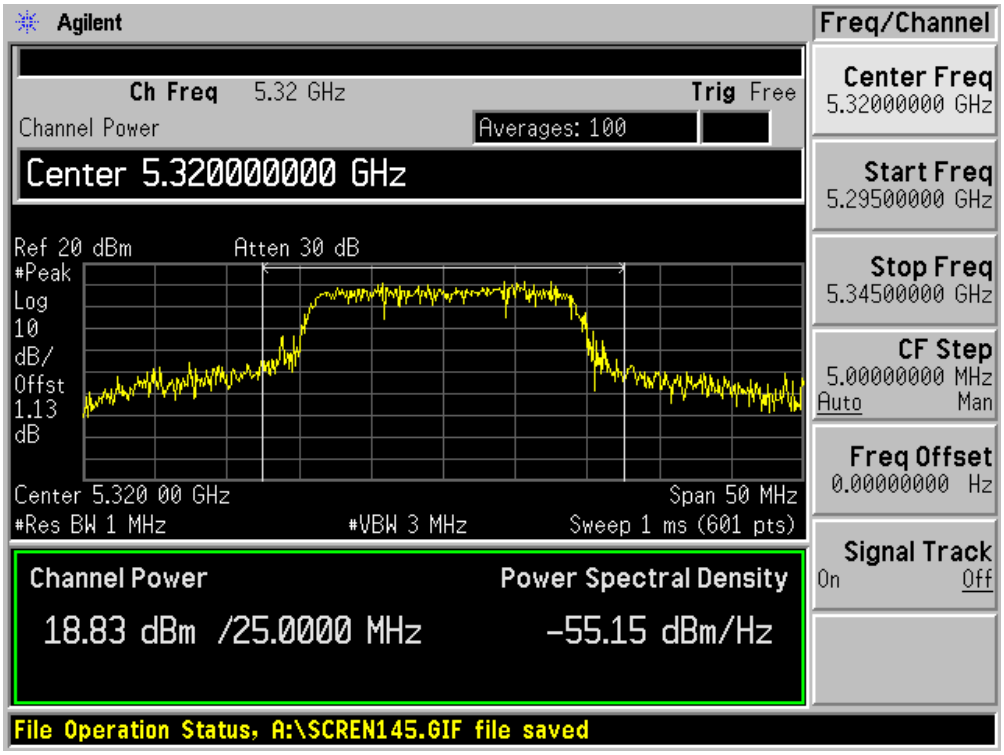
Channel 52 (5260MHz)



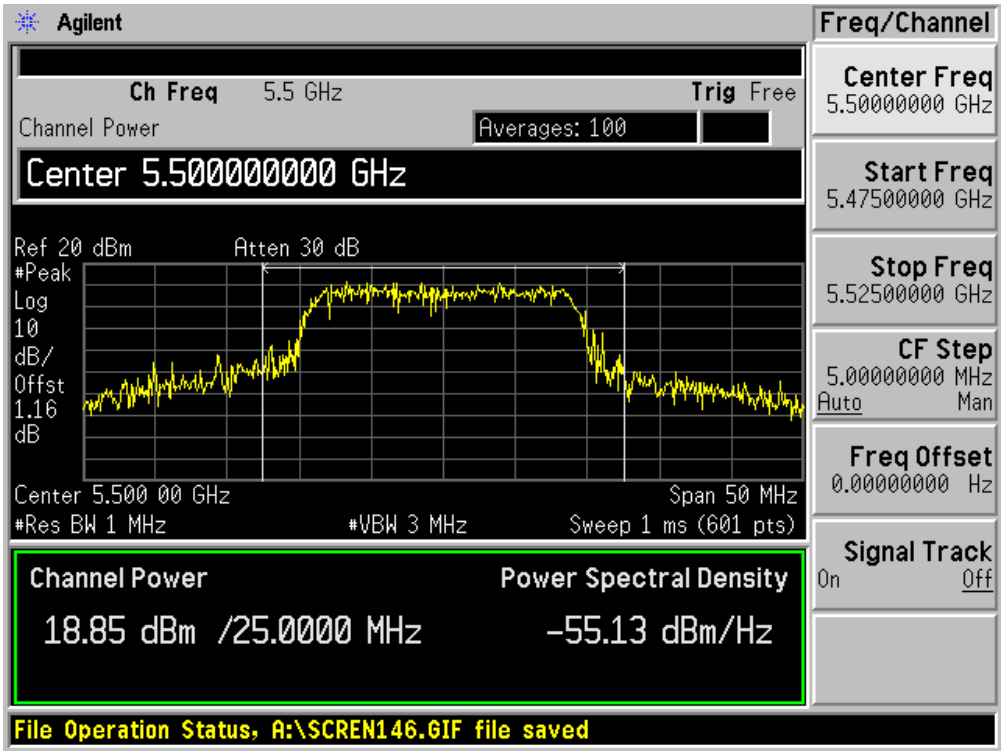
Channel 60 (5300MHz)



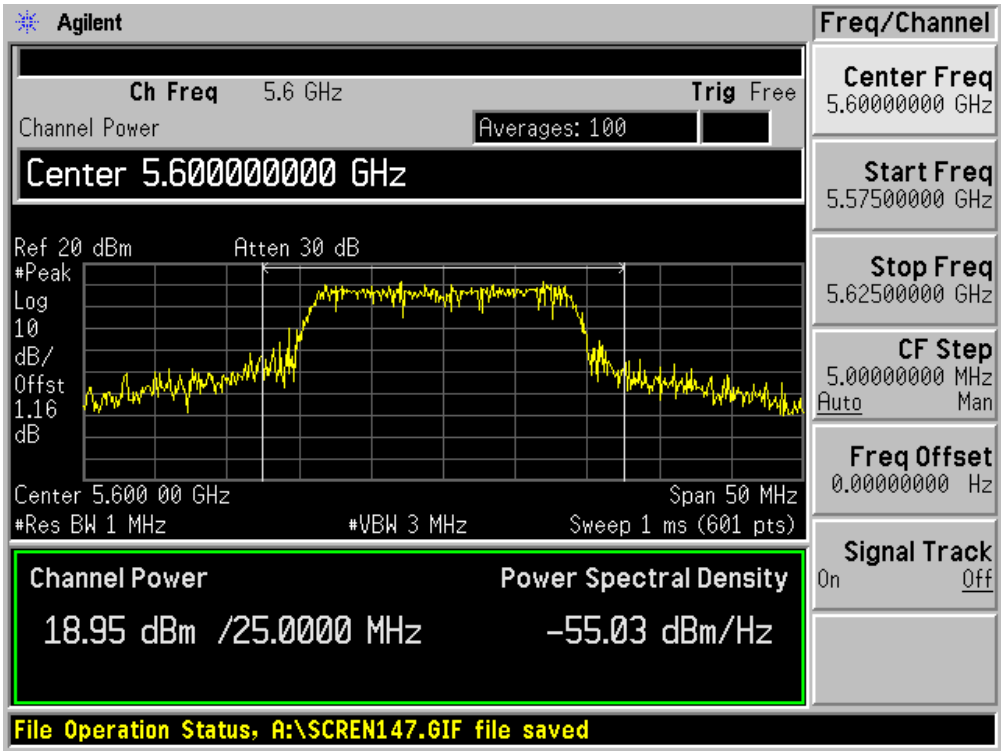
Channel 64 (5320MHz)



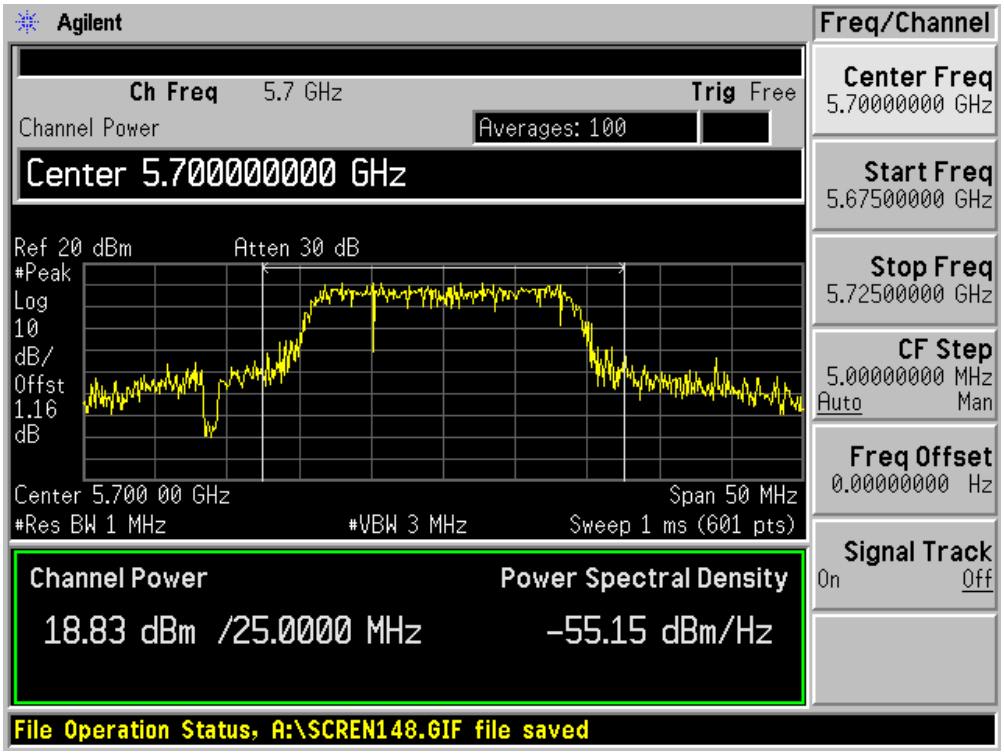
Channel 100 (5500MHz)



Channel 120 (5600MHz)



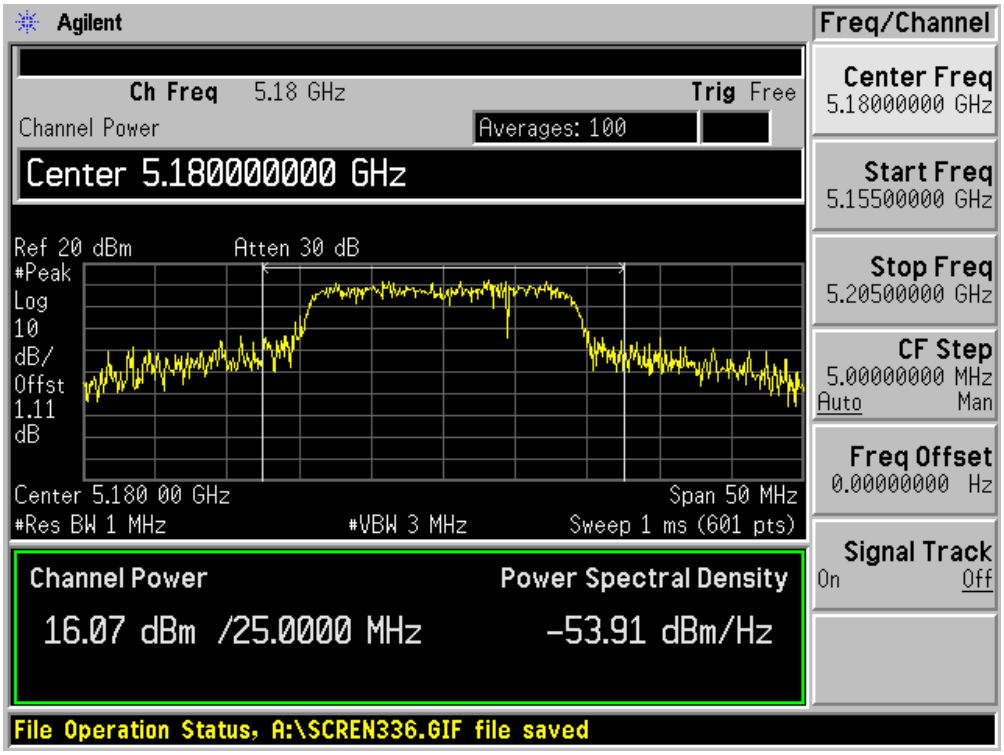
Channel 140 (5700MHz)



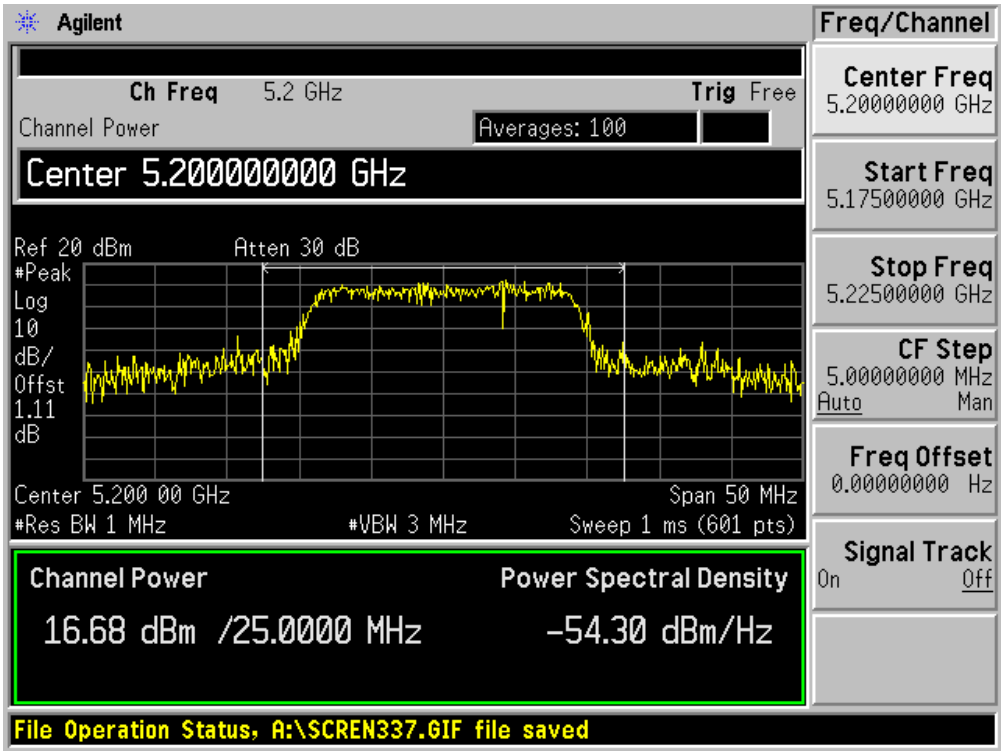
Product	:	Notebook Computer
Test Item	:	Power Output
Test Site	:	AC-4
Test Mode	:	Mode 2: Transmit by 802.11n (20MHz Bandwidth) (Chain B)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)			Total Power (dBm)	Limit (dBm)	Result
		Chain A	Chain B	Chain C			
36	5180	N/A	16.07	N/A	16.07	17.00	Pass
40	5200	N/A	16.68	N/A	16.68	17.00	Pass
48	5240	N/A	16.55	N/A	16.55	17.00	Pass
52	5260	N/A	19.39	N/A	19.39	24.00	Pass
60	5300	N/A	19.11	N/A	19.11	24.00	Pass
64	5320	N/A	19.04	N/A	19.04	24.00	Pass
100	5500	N/A	19.78	N/A	19.78	24.00	Pass
120	5600	N/A	19.77	N/A	19.77	24.00	Pass
140	5700	N/A	19.55	N/A	19.55	24.00	Pass

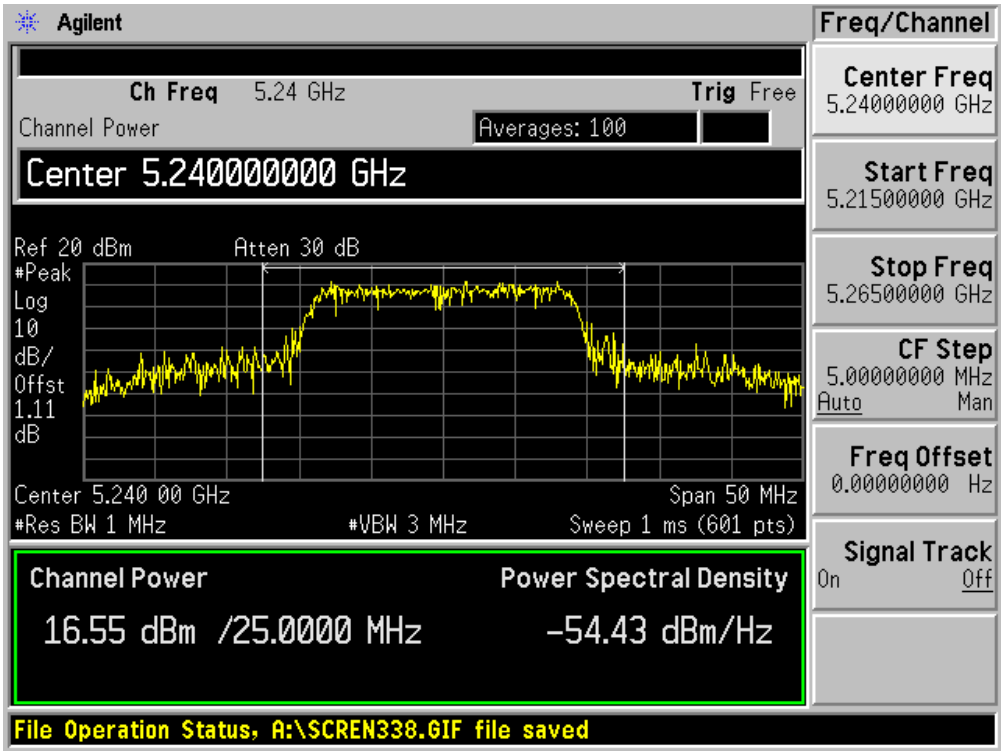
Channel 36 (5180MHz)



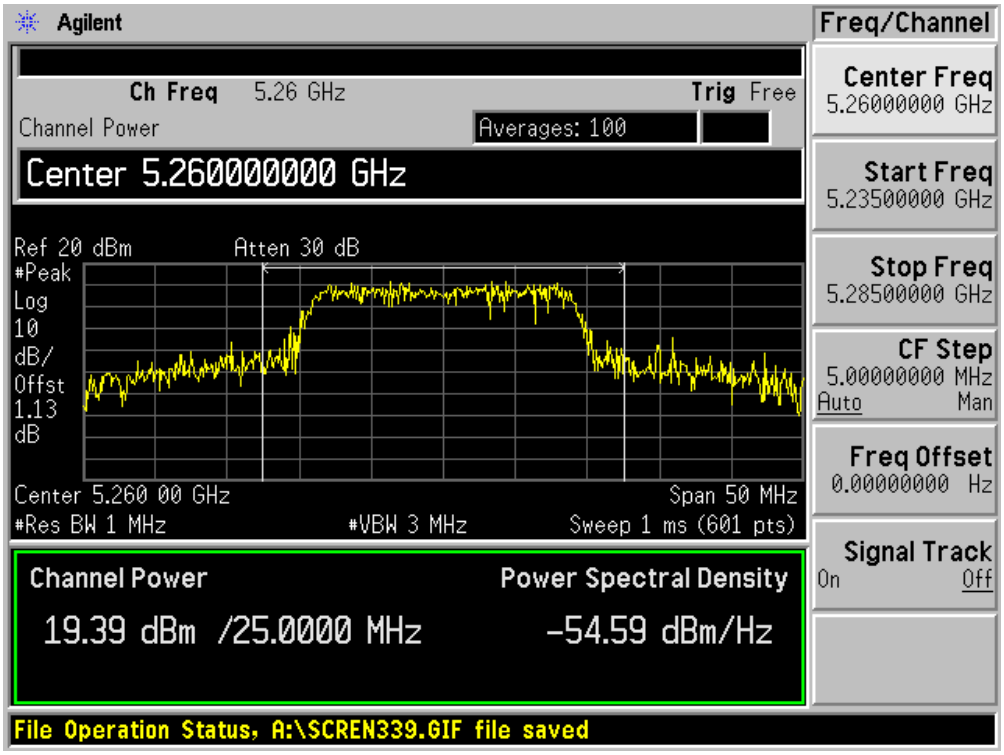
Channel 40 (5200MHz)



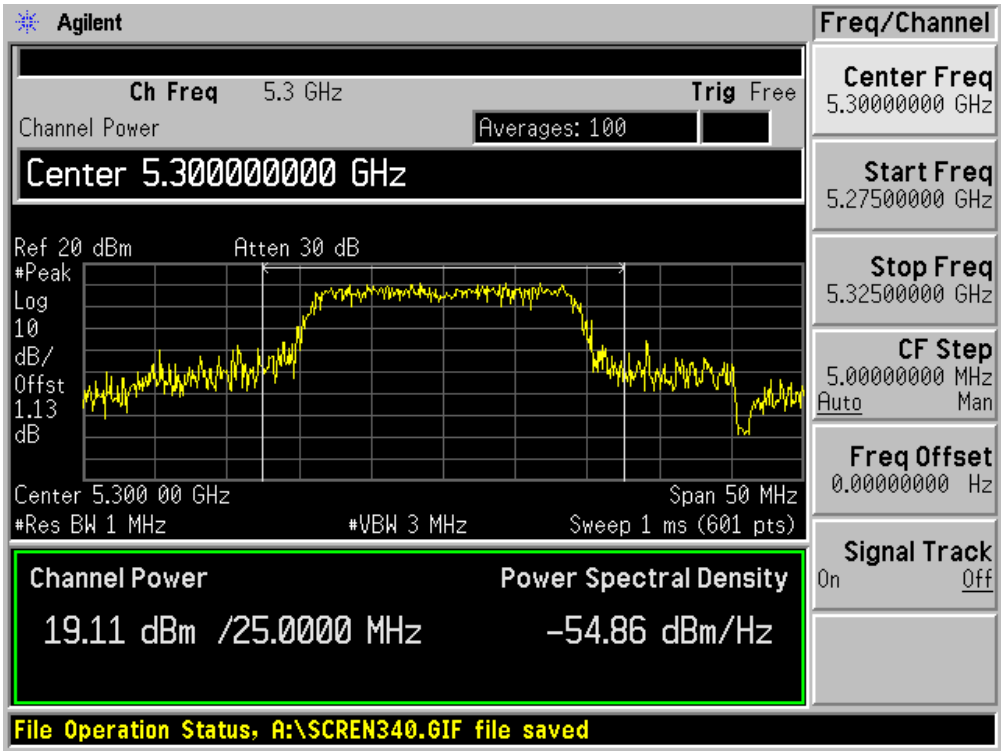
Channel 48 (5240MHz)



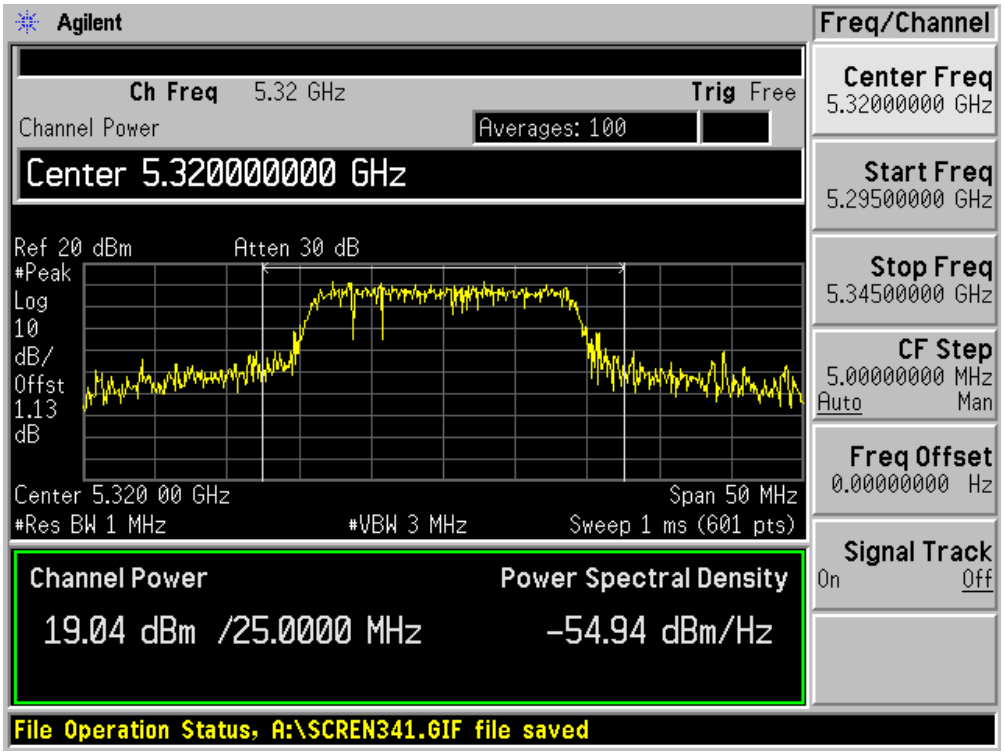
Channel 52 (5260MHz)



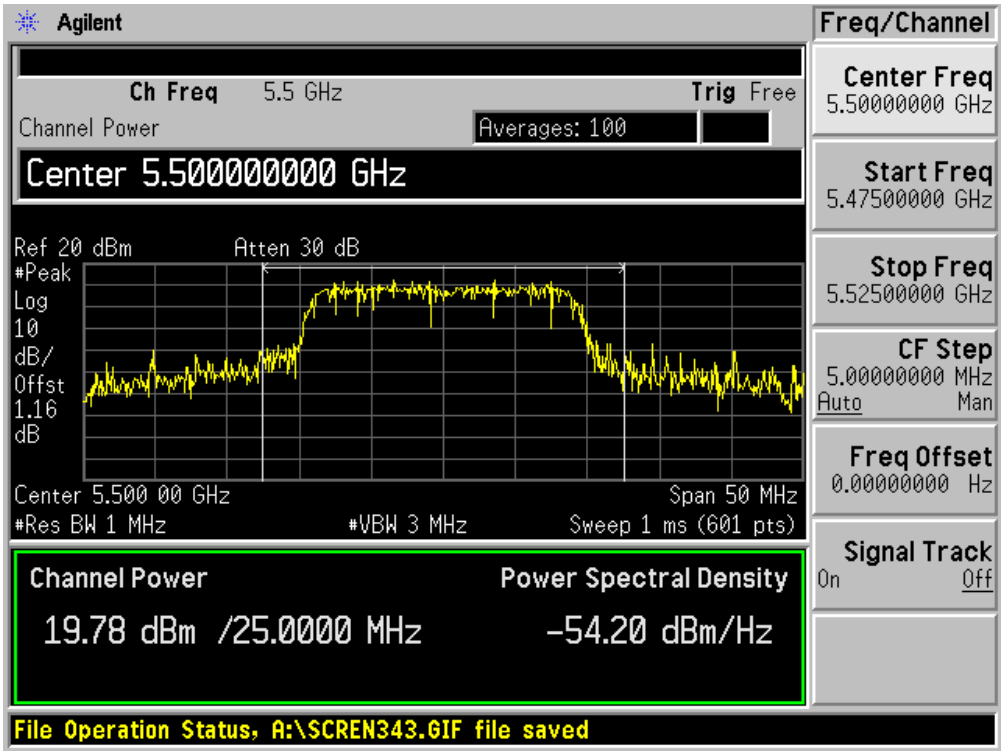
Channel 60 (5300MHz)



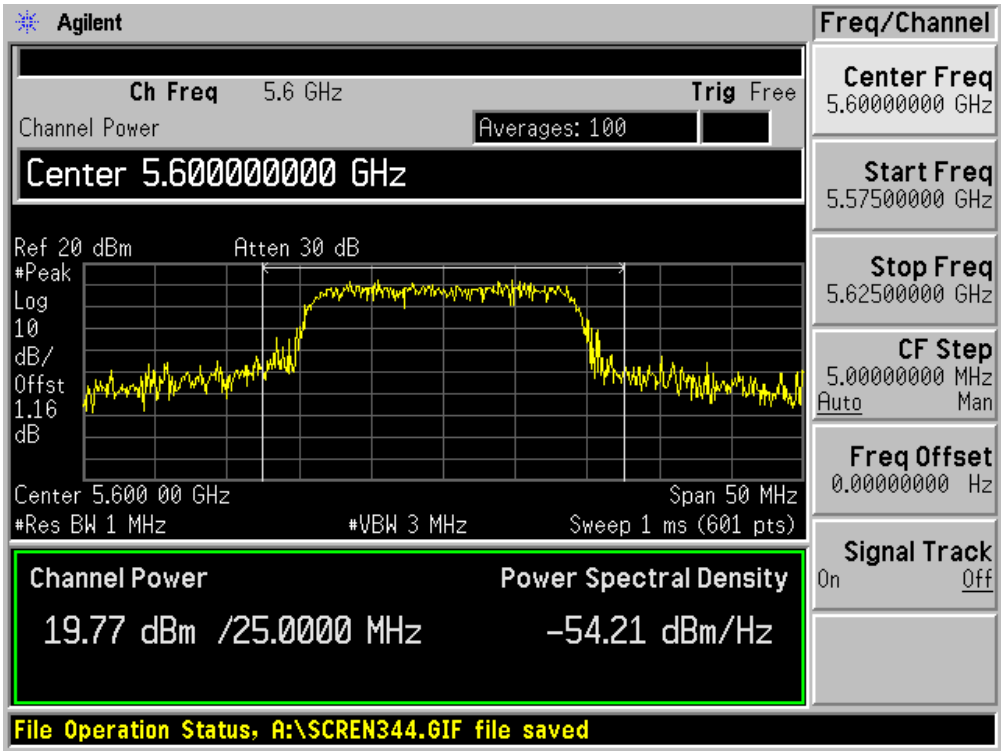
Channel 64 (5320MHz)



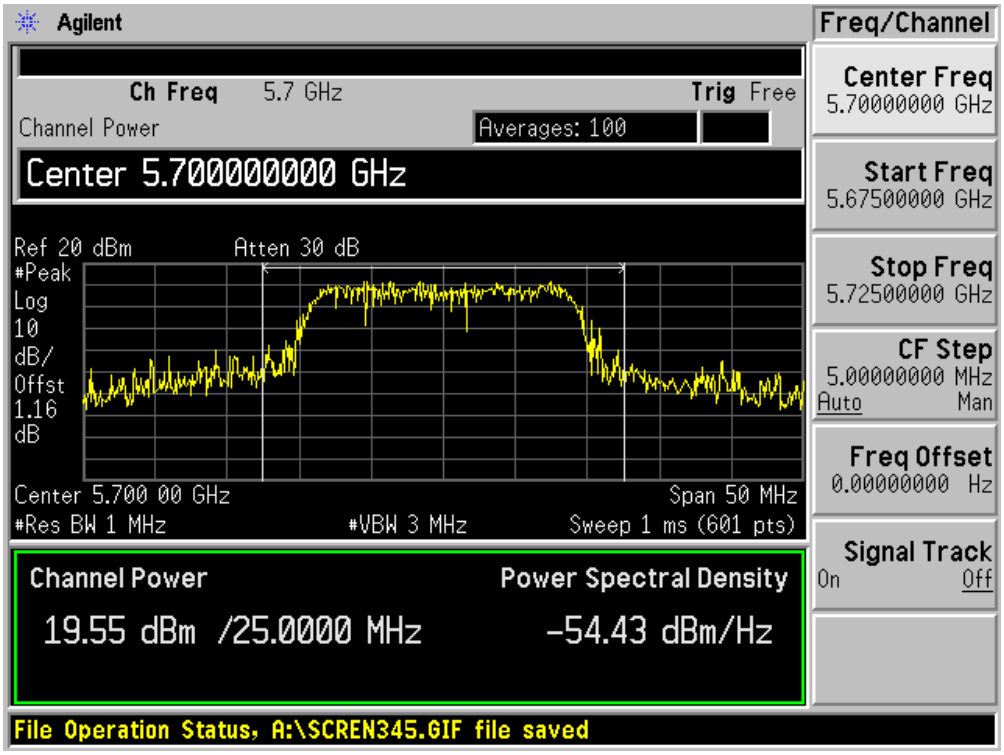
Channel 100 (5500MHz)



Channel 120 (5600MHz)



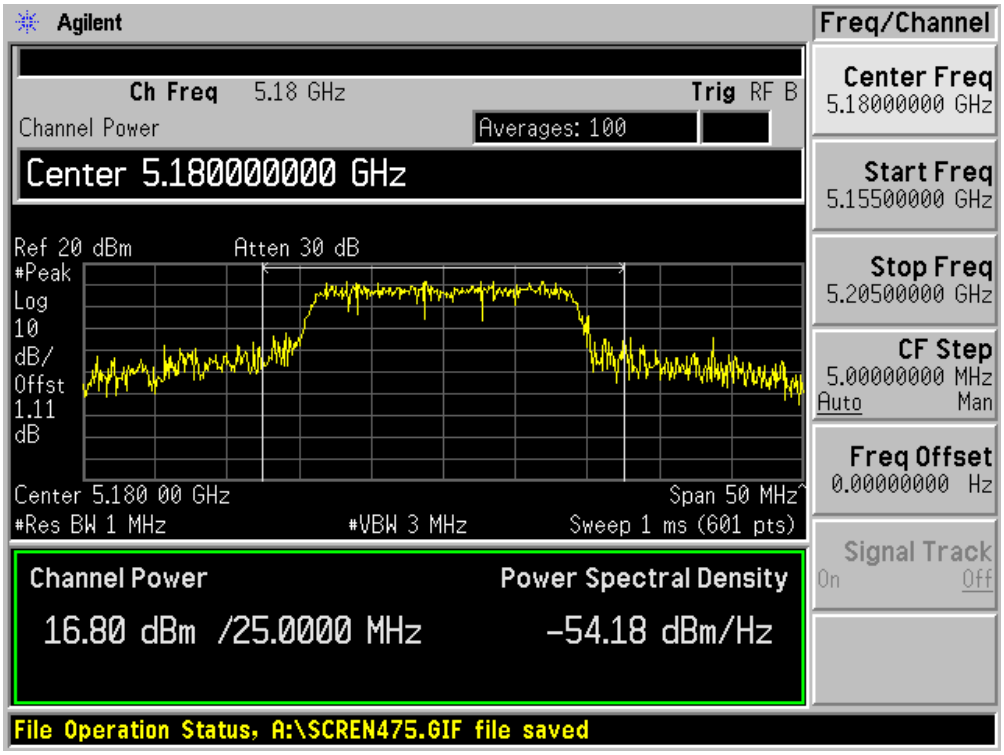
Channel 140 (5700MHz)



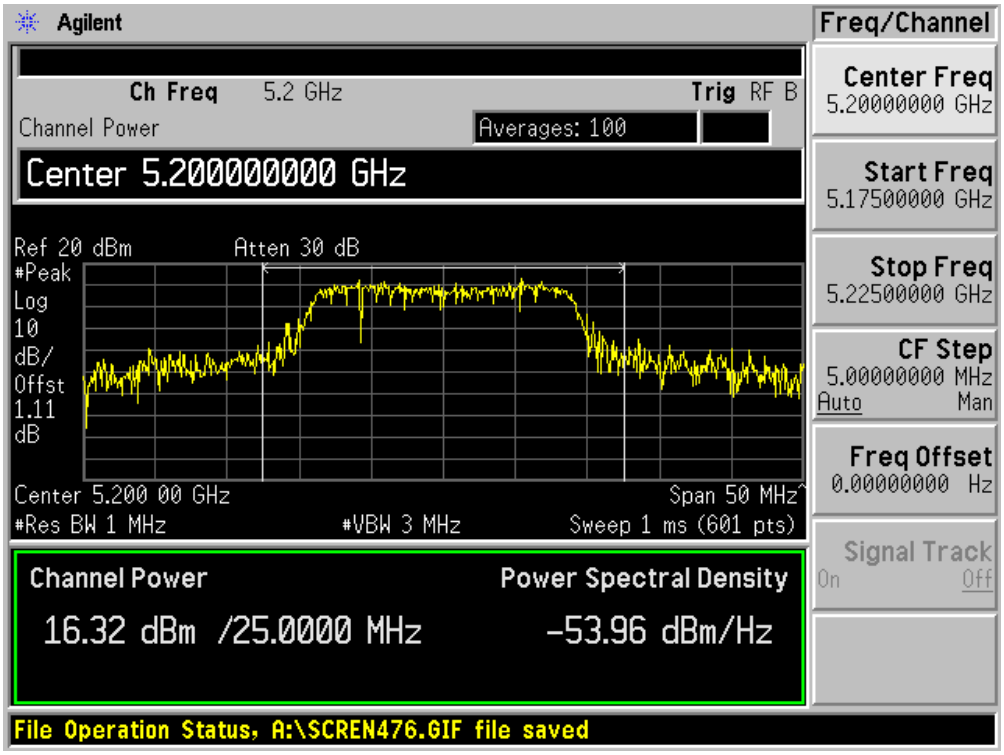
Product	:	Notebook Computer
Test Item	:	Power Output
Test Site	:	AC-4
Test Mode	:	Mode 2: Transmit by 802.11n (20MHz Bandwidth) (Chain C)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)			Total Power (dBm)	Limit (dBm)	Result
		Chain A	Chain B	Chain C			
36	5180	N/A	N/A	16.80	16.80	17.00	Pass
40	5200	N/A	N/A	16.32	16.32	17.00	Pass
48	5240	N/A	N/A	16.65	16.65	17.00	Pass
52	5260	N/A	N/A	19.37	19.37	24.00	Pass
60	5300	N/A	N/A	19.78	19.78	24.00	Pass
64	5320	N/A	N/A	19.56	19.56	24.00	Pass
100	5500	N/A	N/A	20.08	20.08	24.00	Pass
120	5600	N/A	N/A	19.68	19.68	24.00	Pass
140	5700	N/A	N/A	20.02	20.02	24.00	Pass

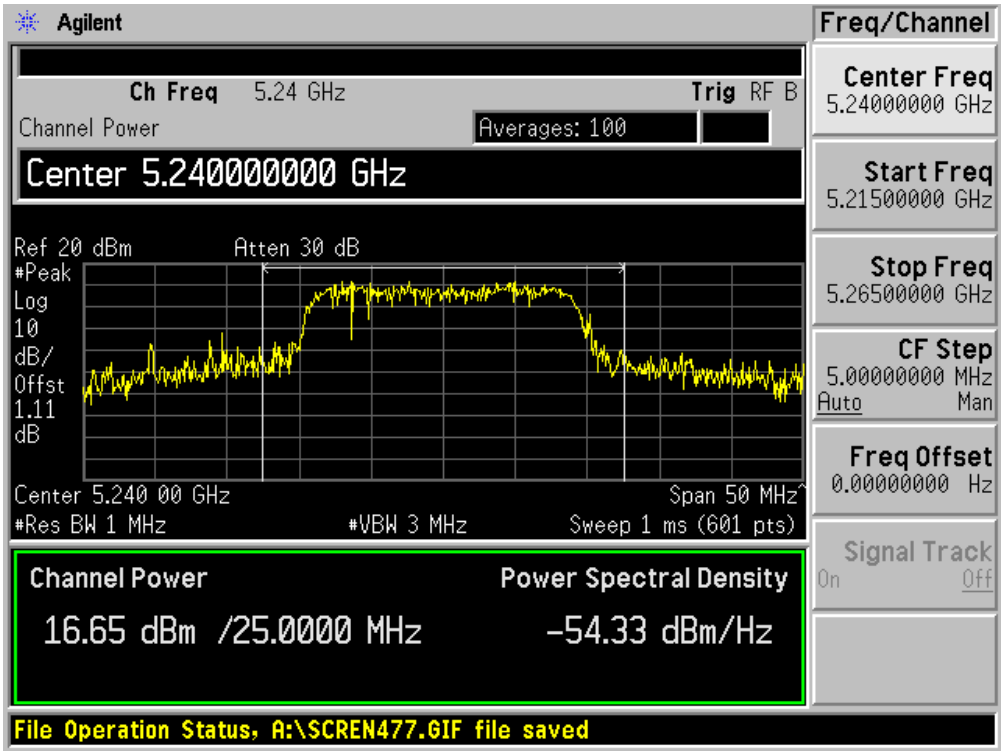
Channel 36 (5180MHz)



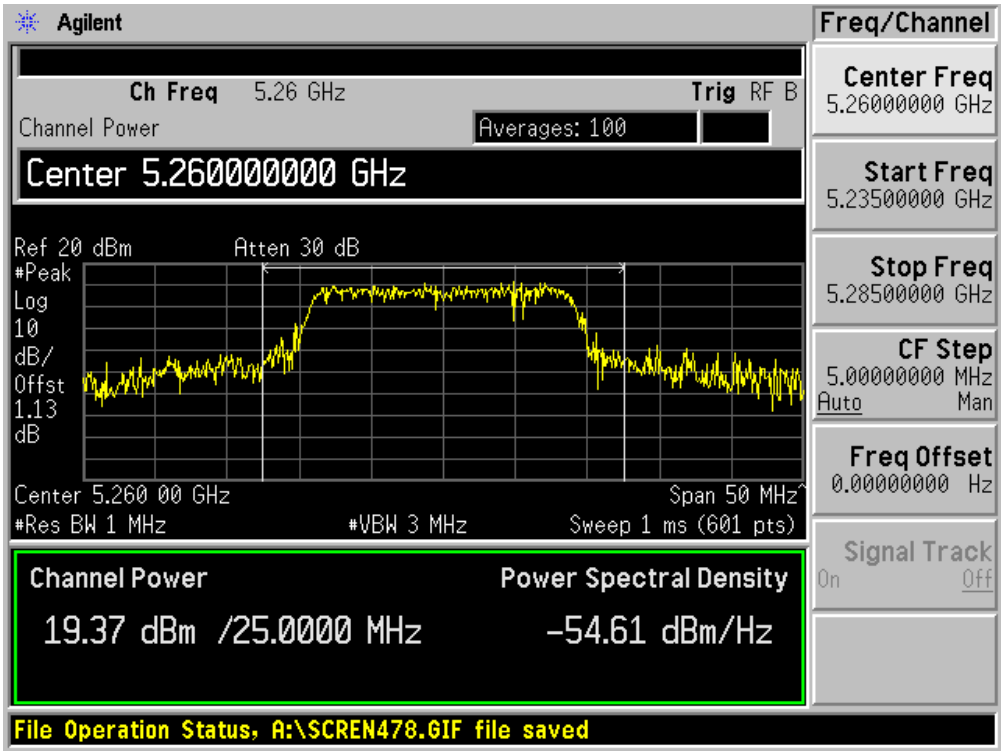
Channel 40 (5200MHz)



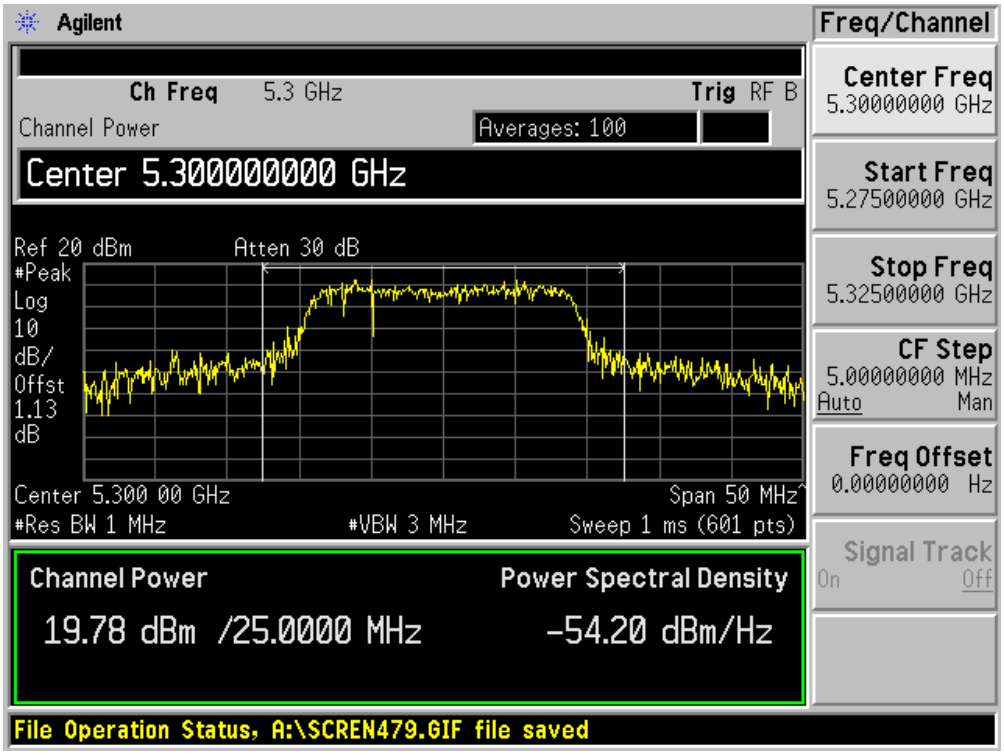
Channel 48 (5240MHz)



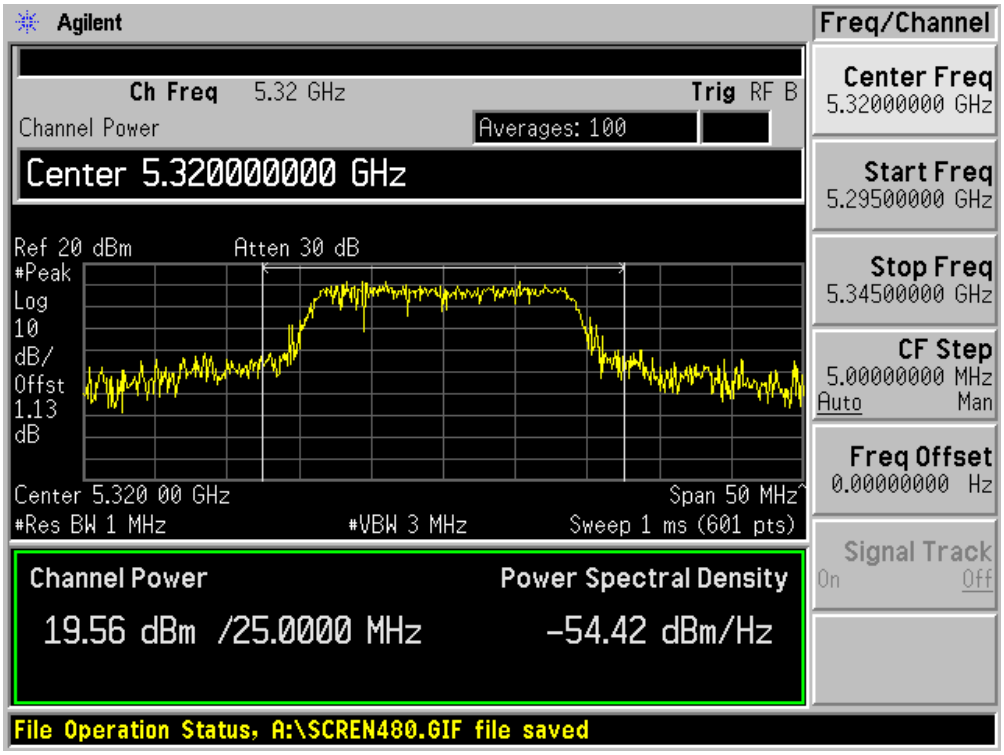
Channel 52 (5260MHz)



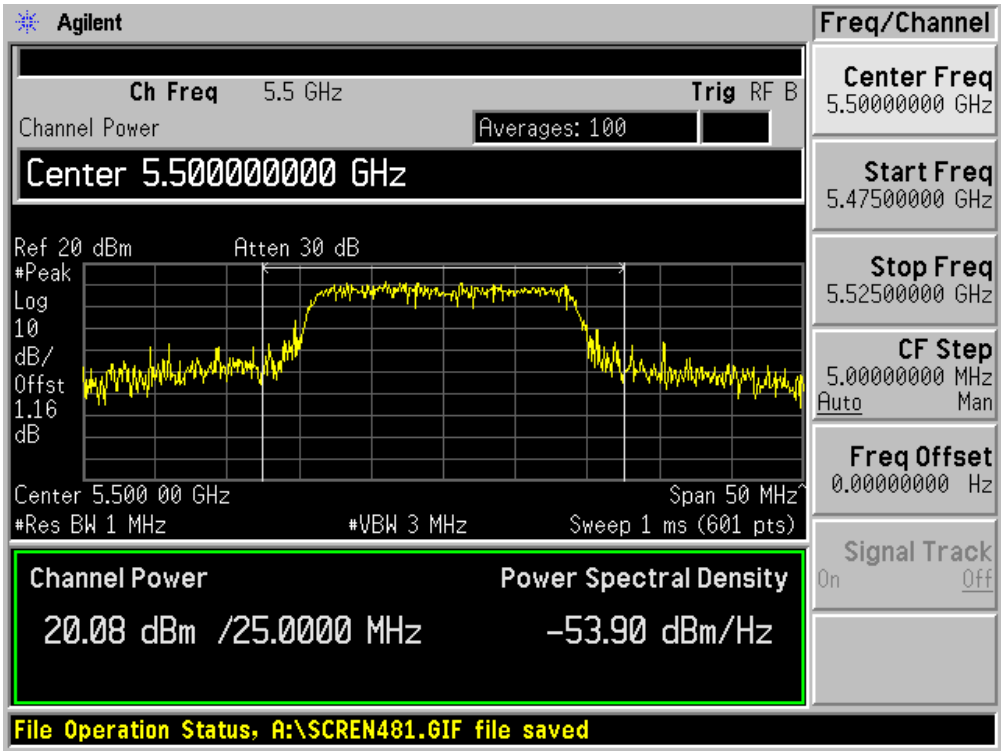
Channel 60 (5300MHz)



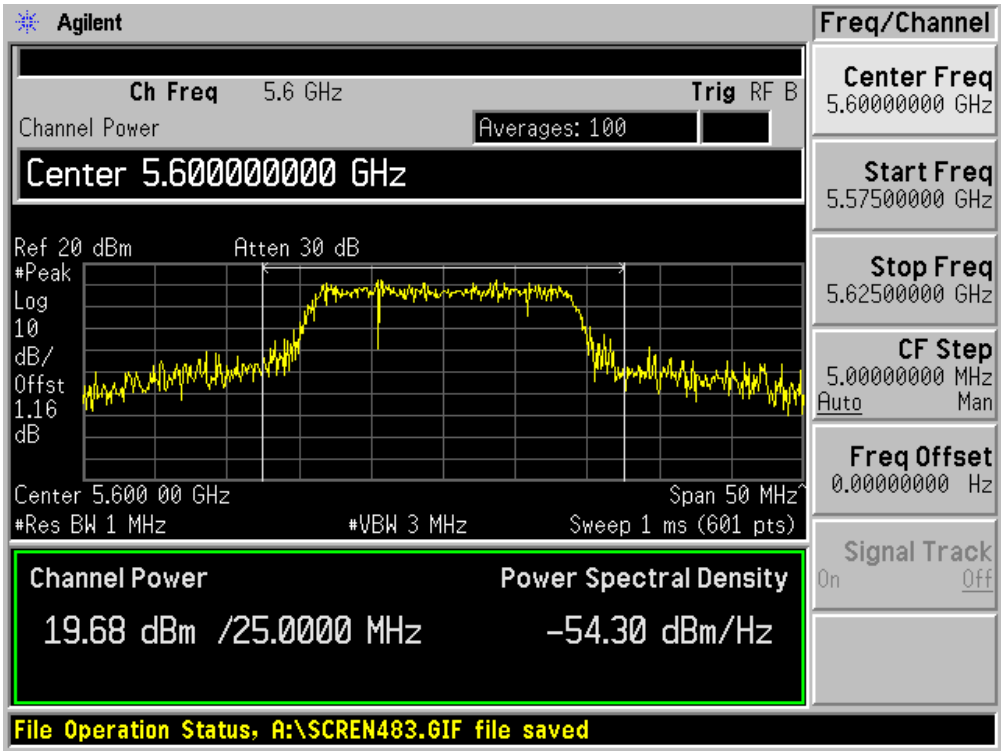
Channel 64 (5320MHz)



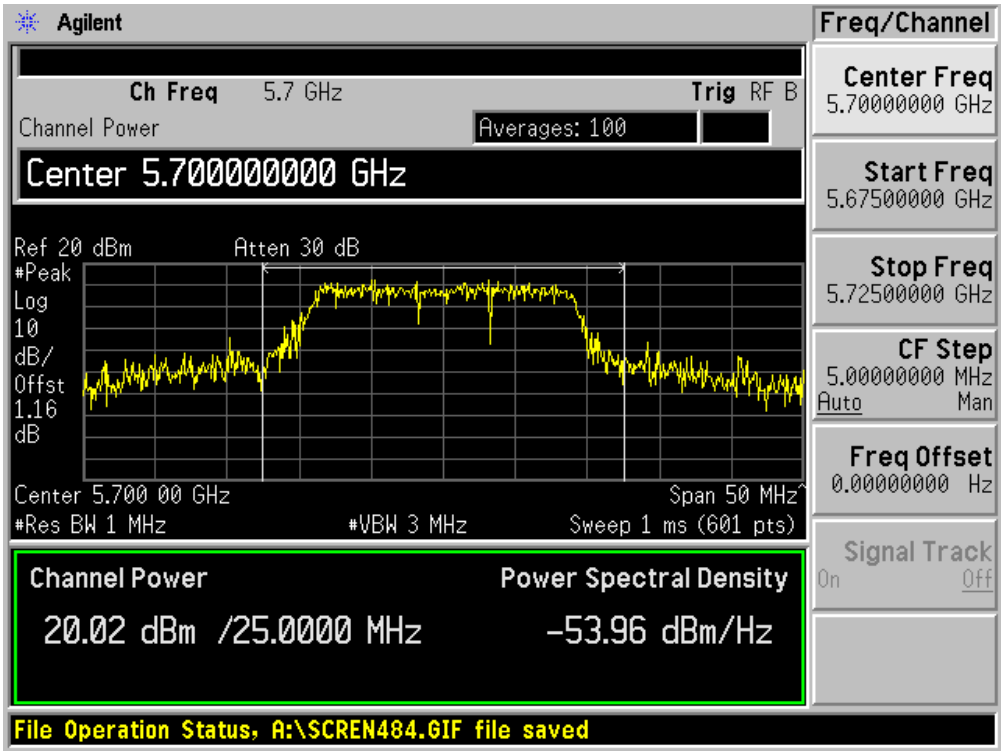
Channel 100 (5500MHz)



Channel 120 (5600MHz)



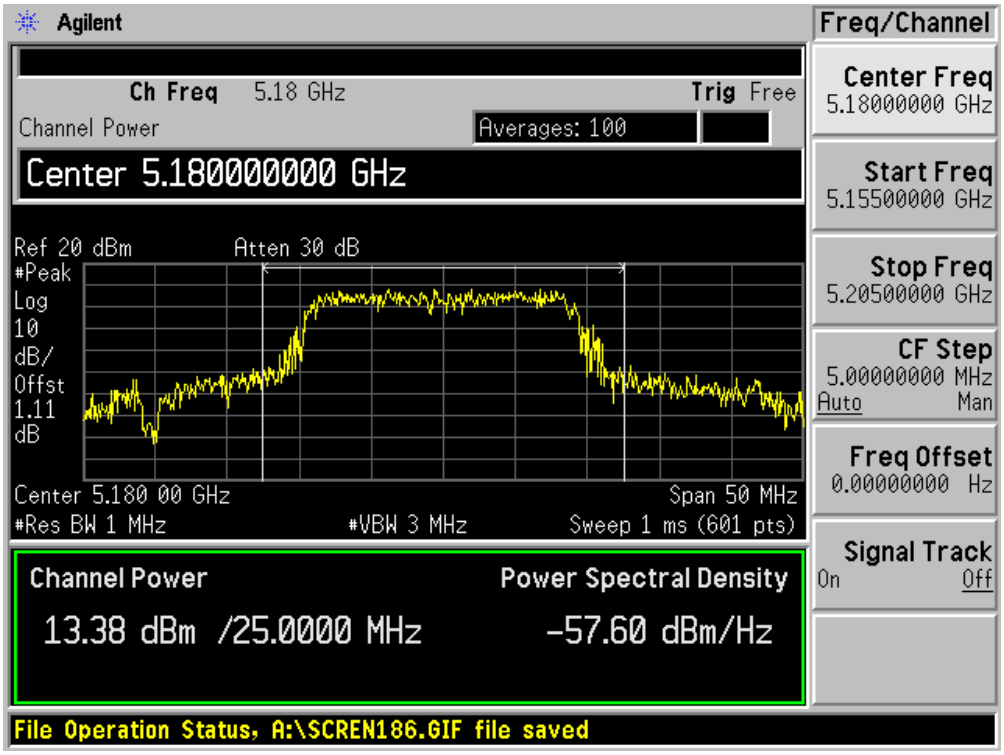
Channel 140 (5700MHz)



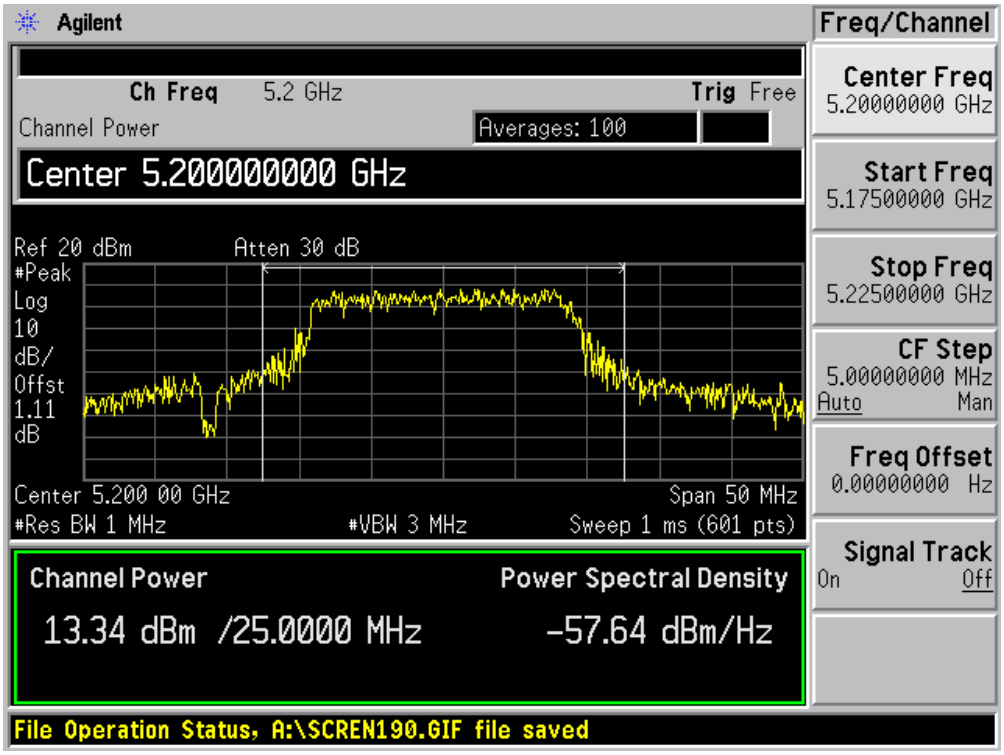
Product	:	Notebook Computer
Test Item	:	Power Output
Test Site	:	AC-4
Test Mode	:	Mode 2: Transmit by 802.11n (20MHz Bandwidth) (Chain A+B)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)			Total Power (dBm)	Limit (dBm)	Result
		Chain A	Chain B	Chain C			
36	5180	13.38	13.56	N/A	16.48	17.00	Pass
40	5200	13.34	13.44	N/A	16.40	17.00	Pass
48	5240	13.26	13.54	N/A	16.41	17.00	Pass
52	5260	16.34	16.20	N/A	19.28	24.00	Pass
60	5300	16.48	16.67	N/A	19.59	24.00	Pass
64	5320	16.43	16.49	N/A	19.47	24.00	Pass
100	5500	16.86	16.44	N/A	19.67	24.00	Pass
120	5600	17.49	16.42	N/A	20.00	24.00	Pass
140	5700	17.89	16.60	N/A	20.30	24.00	Pass

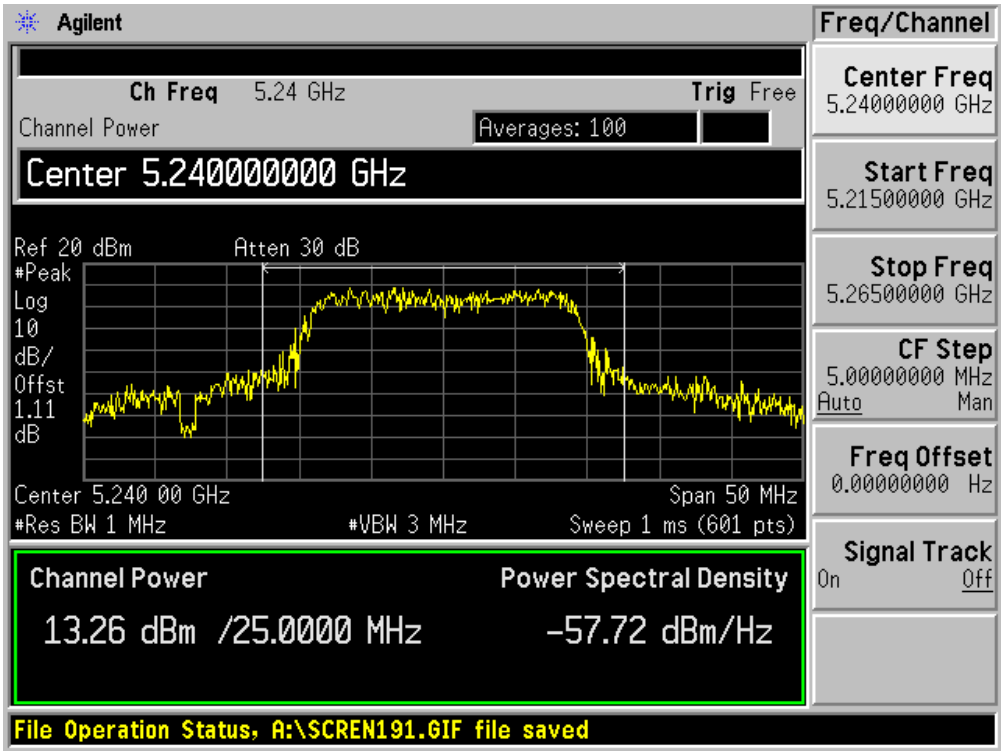
Channel 36 (5180MHz) - Chain A



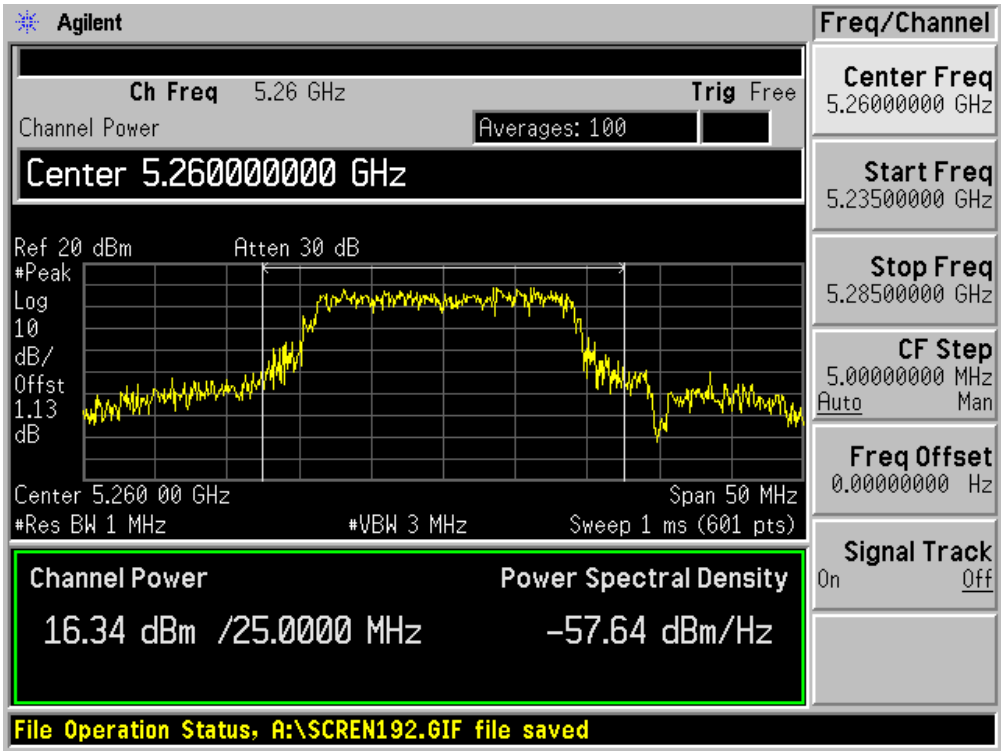
Channel 40 (5200MHz) - Chain A



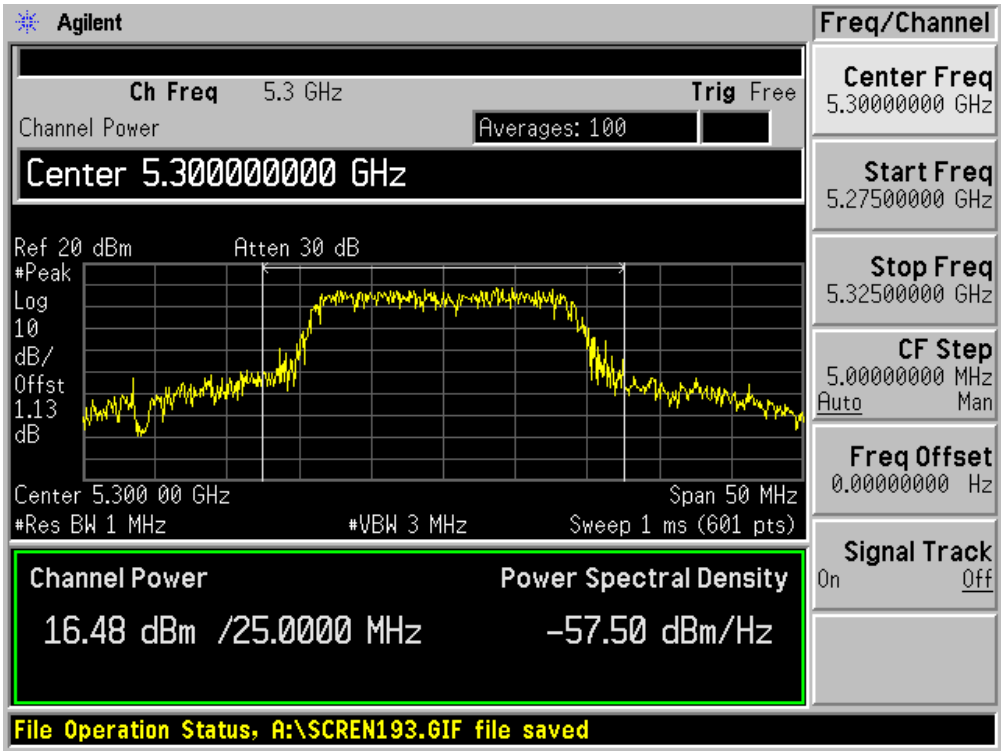
Channel 48 (5240MHz) - Chain A



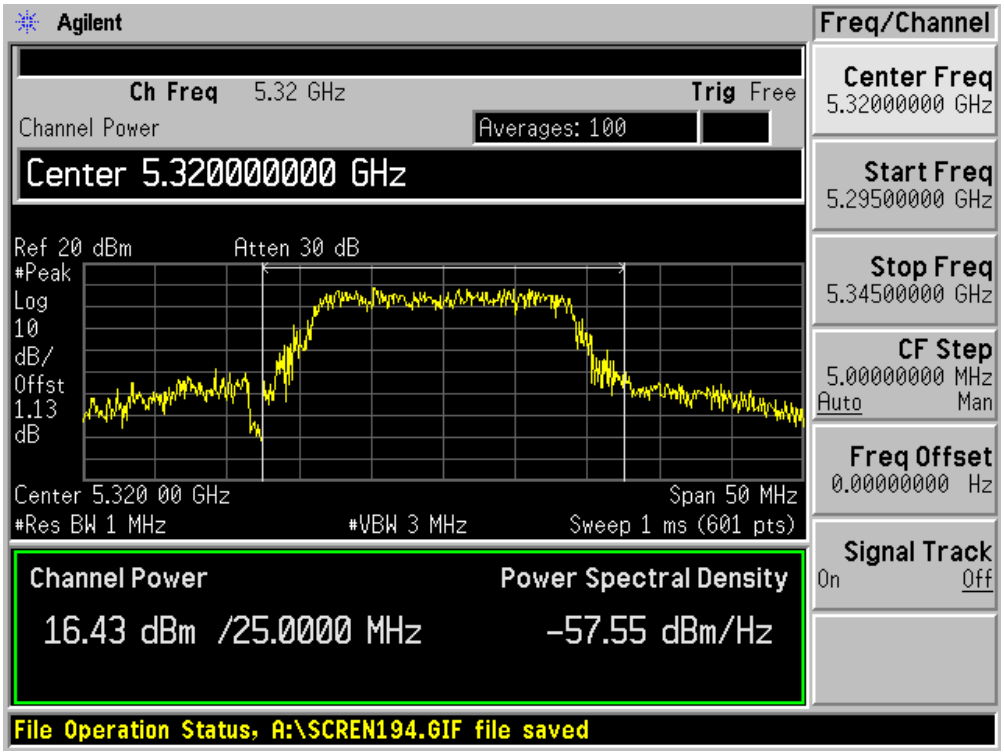
Channel 52 (5260MHz) - Chain A



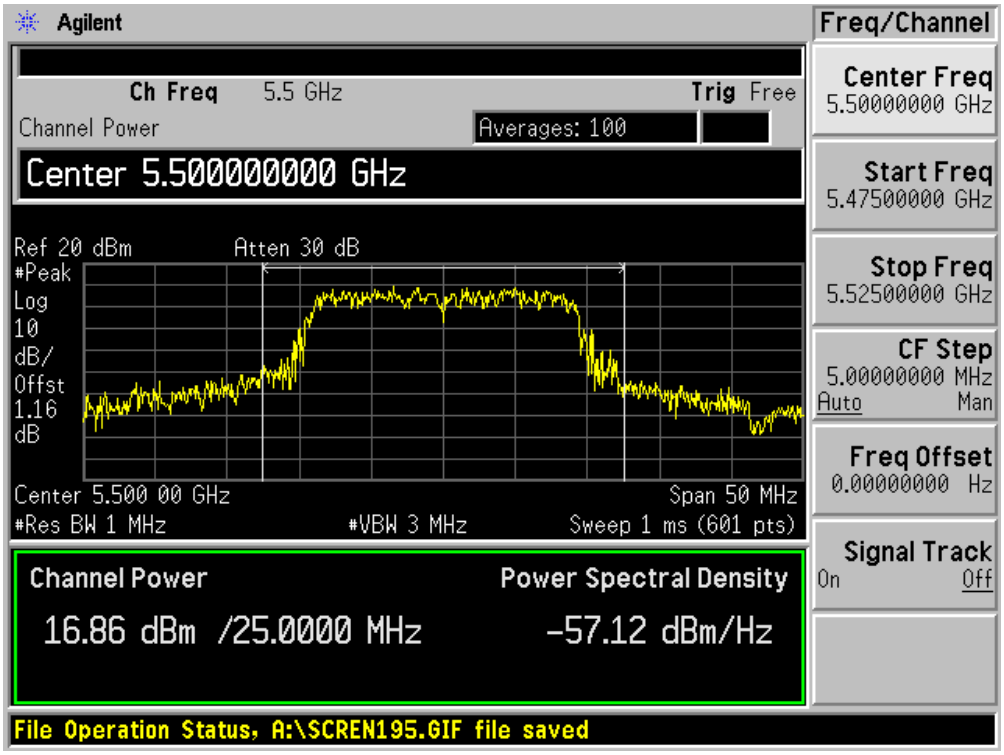
Channel 60 (5300MHz) - Chain A



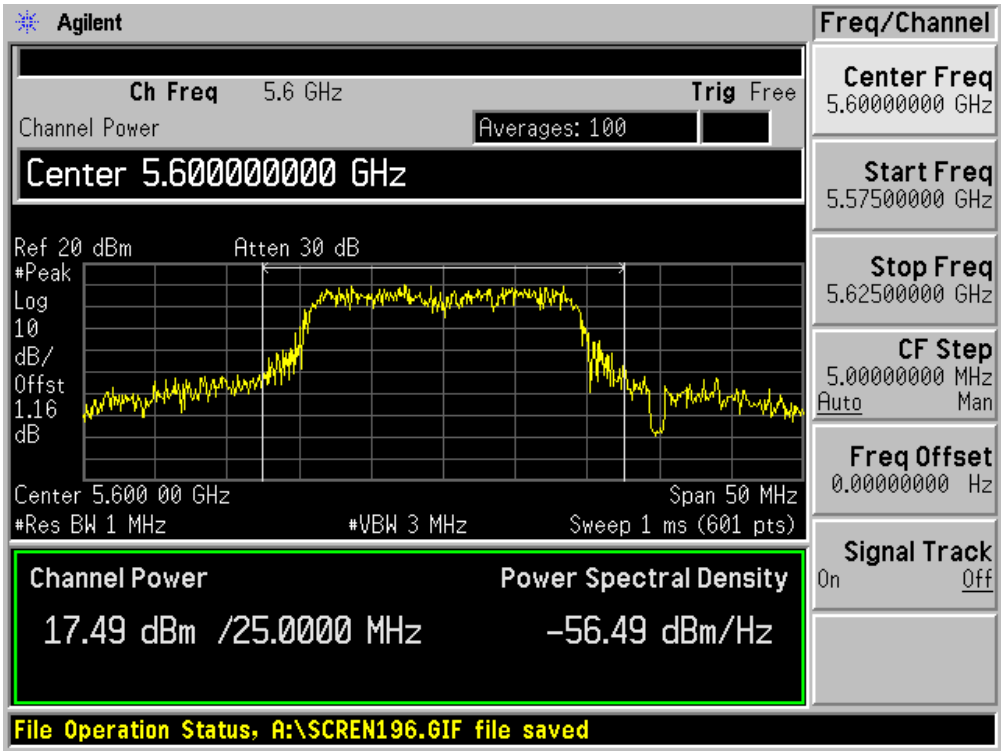
Channel 64 (5320MHz) - Chain A



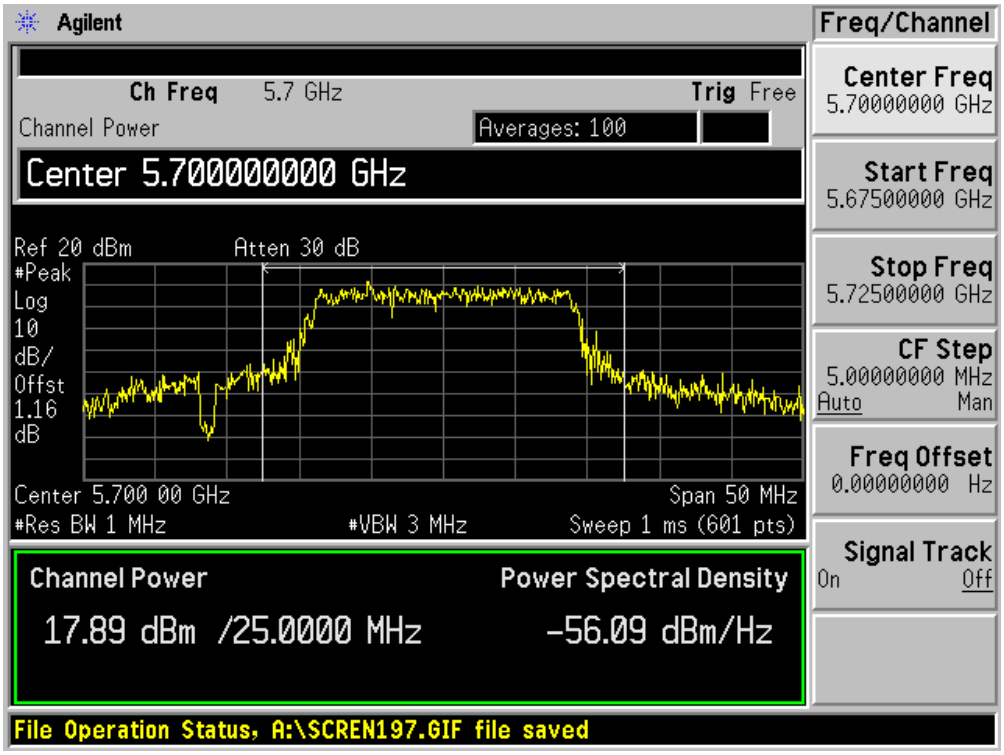
Channel 100 (5500MHz) - Chain A



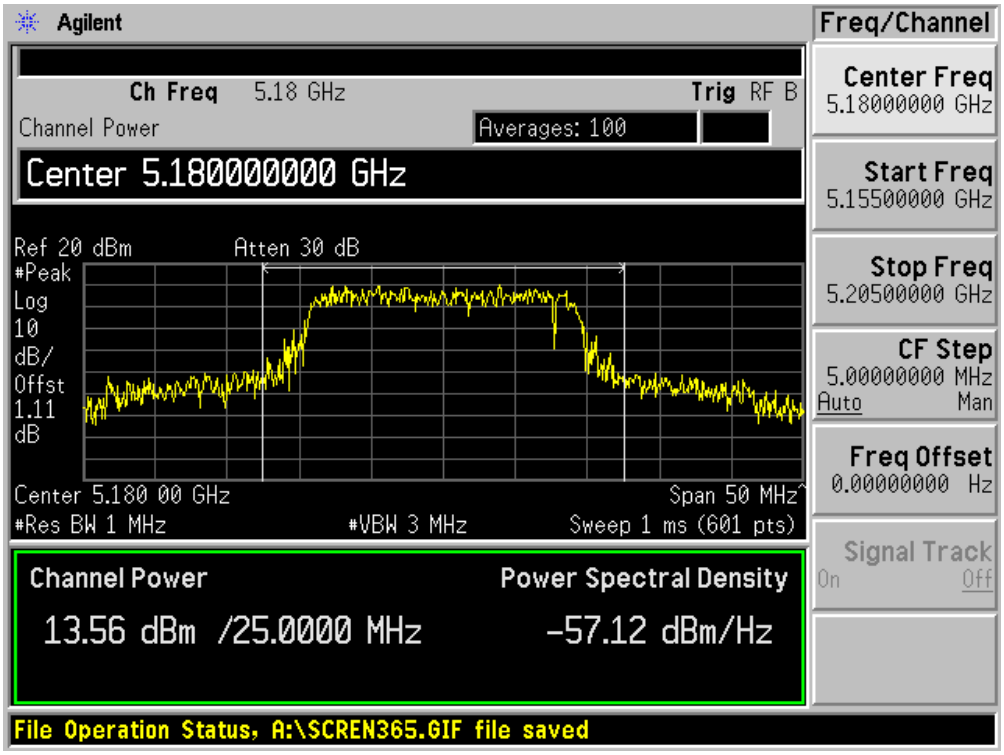
Channel 120 (5600MHz) - Chain A



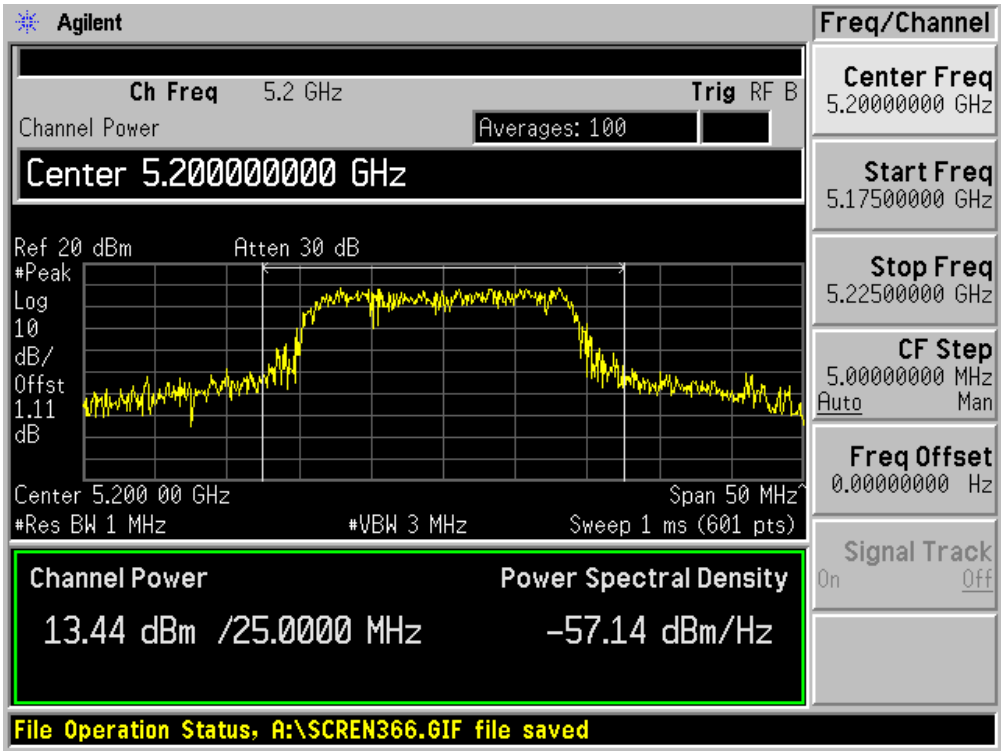
Channel 140 (5700MHz) - Chain A



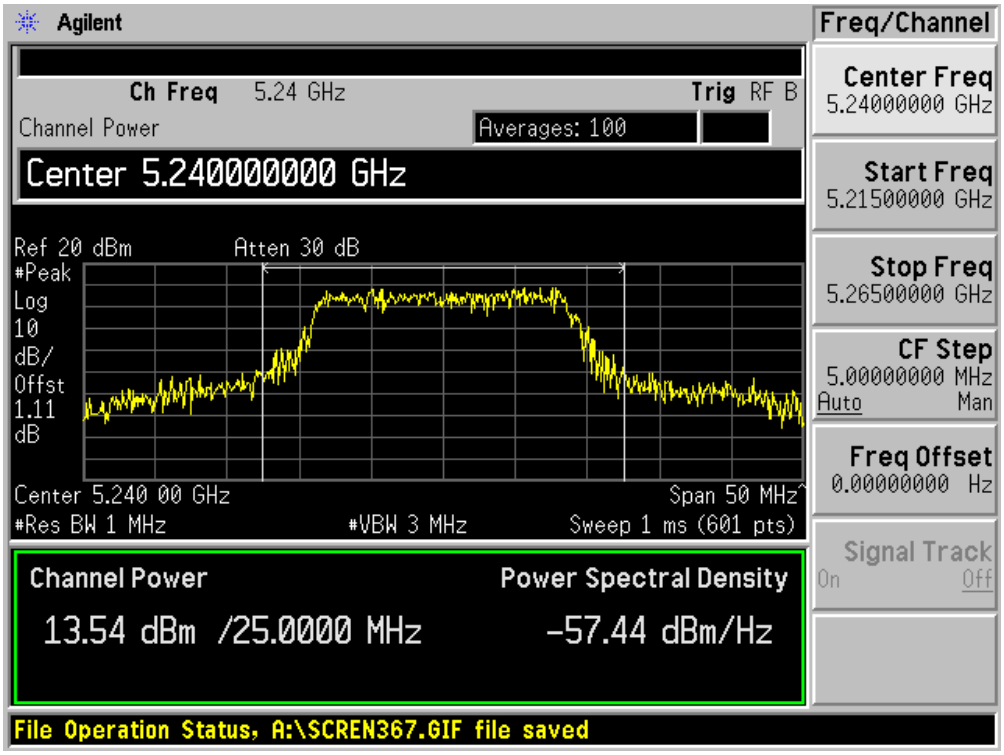
Channel 36 (5180MHz) - Chain B



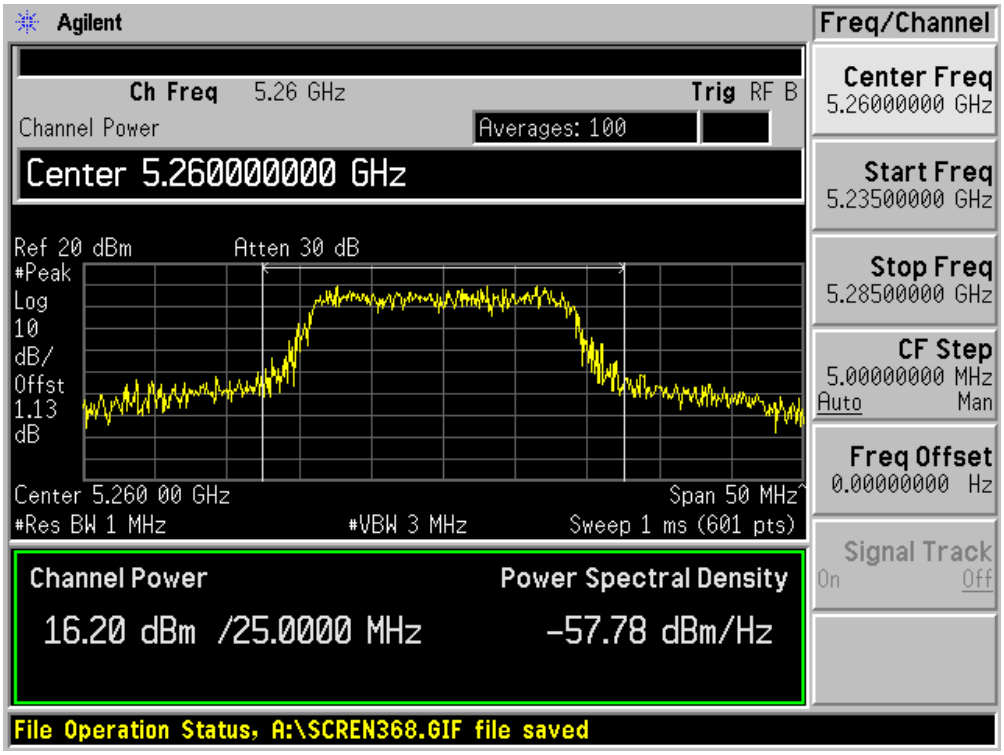
Channel 40 (5200MHz) - Chain B



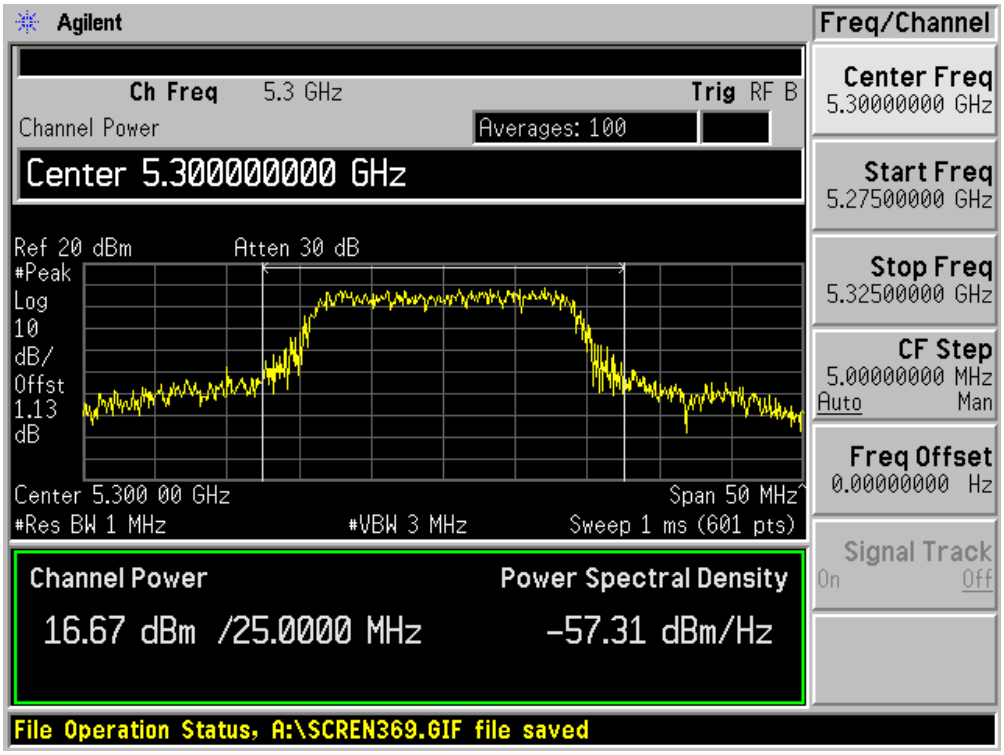
Channel 48 (5240MHz) - Chain B



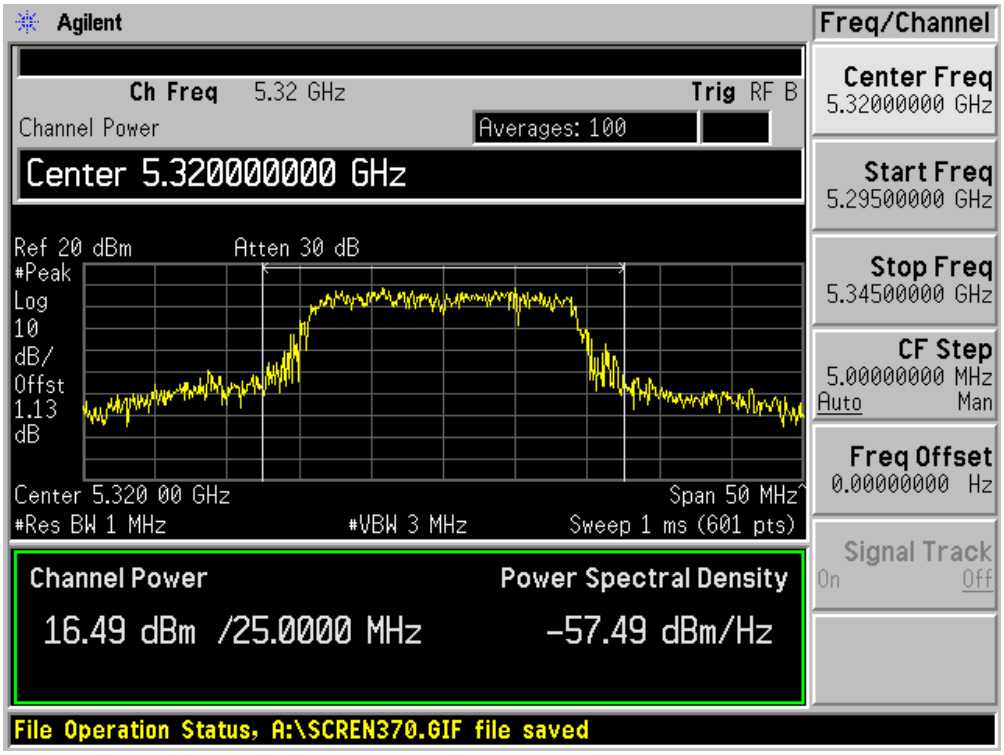
Channel 52 (5260MHz) - Chain B



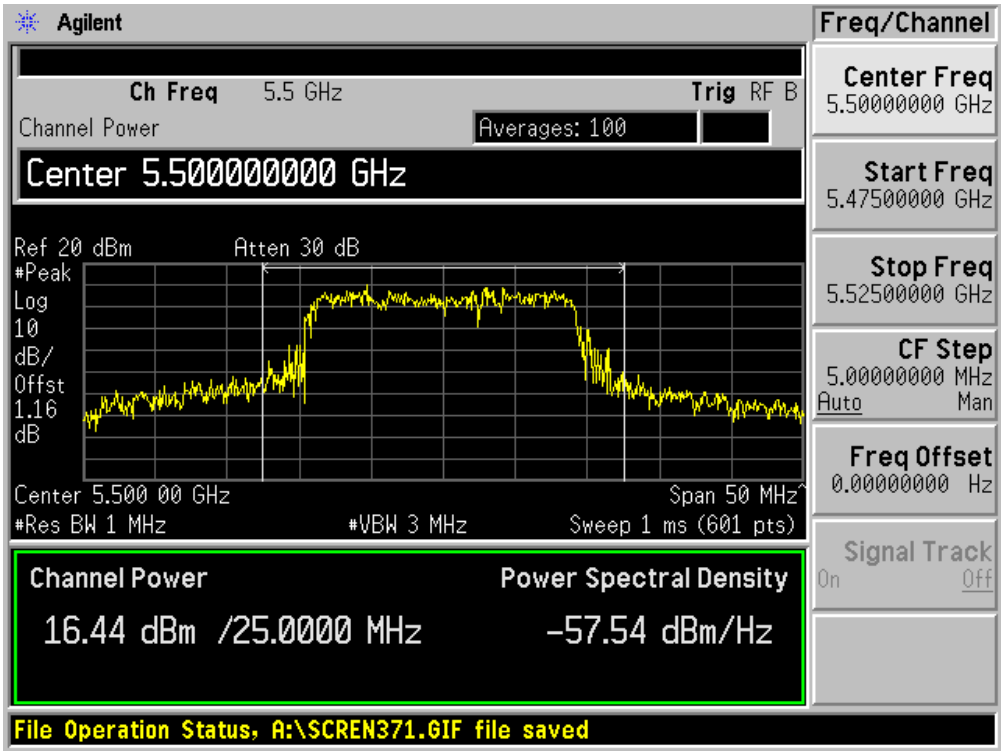
Channel 60 (5300MHz) - Chain B



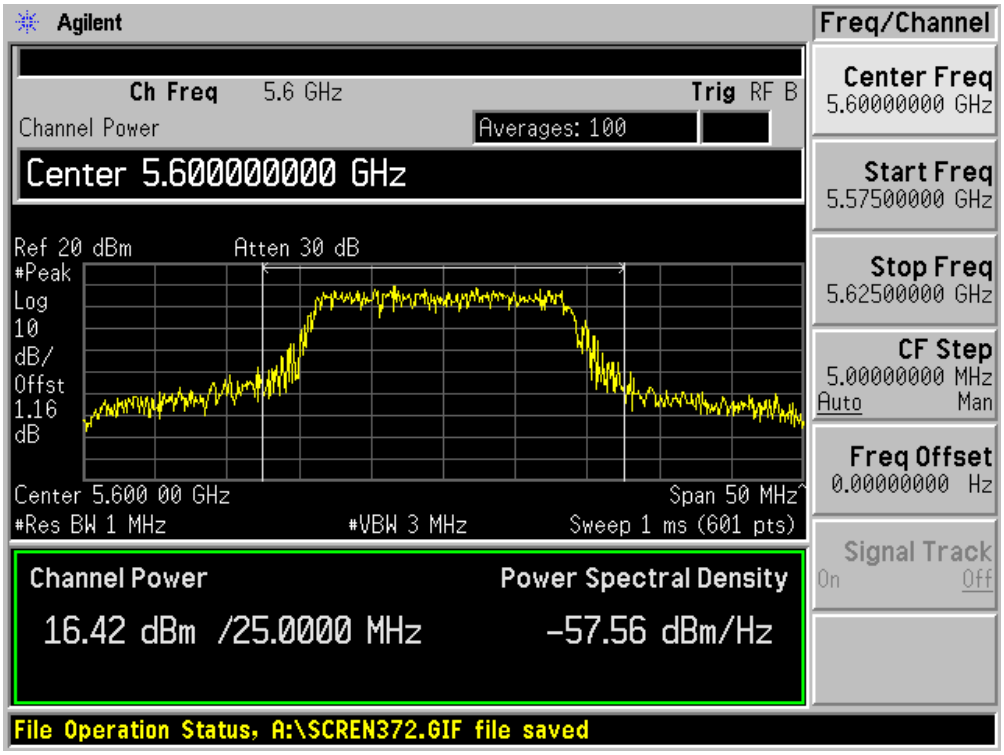
Channel 64 (5320MHz) - Chain B



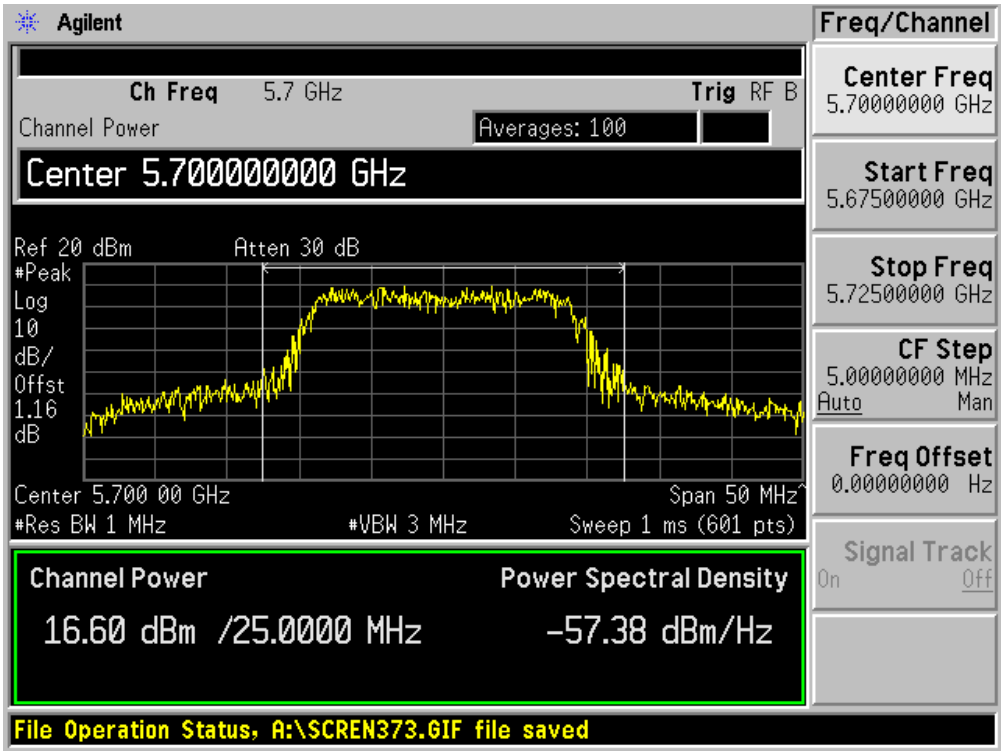
Channel 100 (5500MHz) - Chain B



Channel 120 (5600MHz) - Chain B



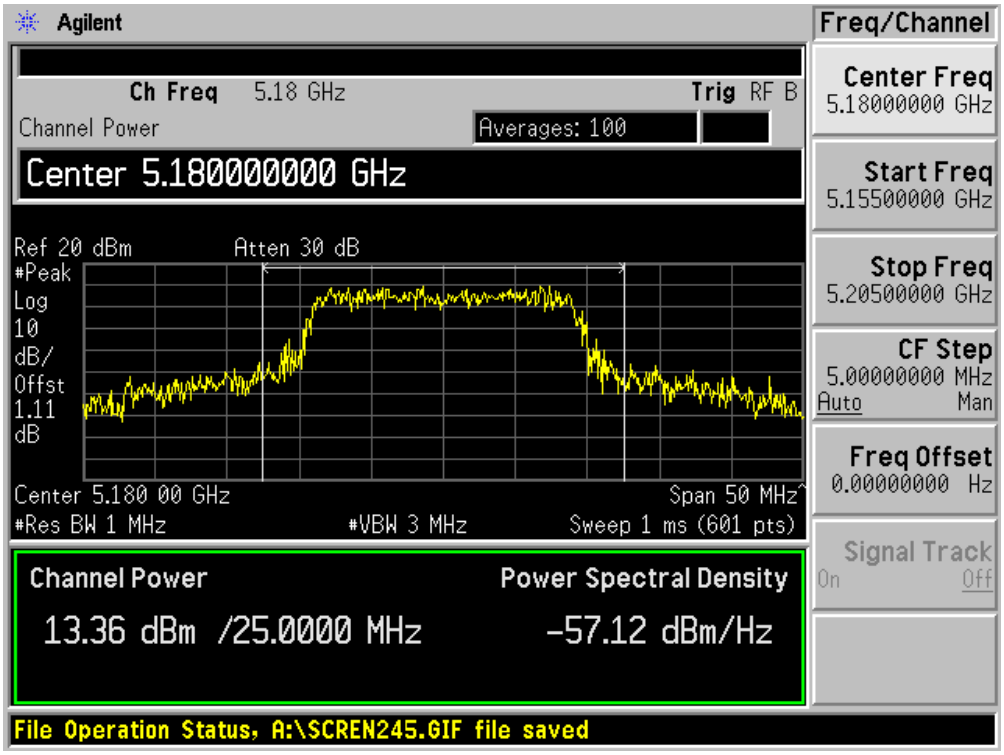
Channel 140 (5700MHz) - Chain B



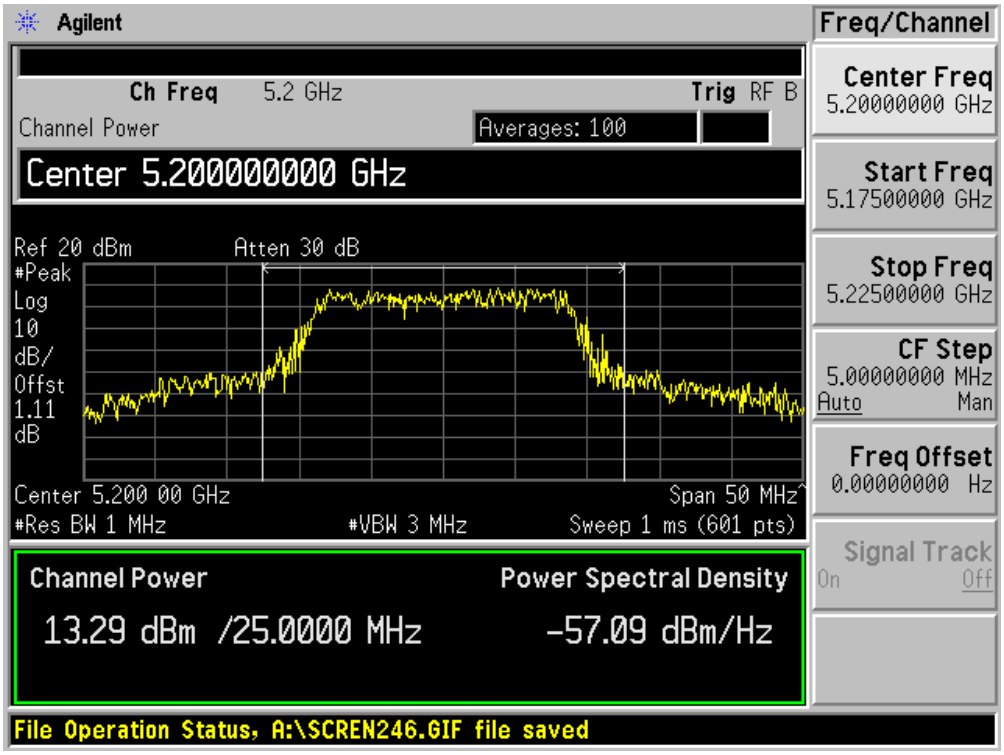
Product	:	Notebook Computer
Test Item	:	Power Output
Test Site	:	AC-4
Test Mode	:	Mode 2: Transmit by 802.11n (20MHz Bandwidth) (Chain A+C)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)			Total Power (dBm)	Limit (dBm)	Result
		Chain A	Chain B	Chain C			
36	5180	13.36	N/A	13.69	16.54	17.00	Pass
40	5200	13.29	N/A	13.80	16.56	17.00	Pass
48	5240	13.59	N/A	13.60	16.61	17.00	Pass
52	5260	16.61	N/A	16.75	19.69	24.00	Pass
60	5300	16.67	N/A	16.94	19.82	24.00	Pass
64	5320	16.52	N/A	16.70	19.62	24.00	Pass
100	5500	16.87	N/A	16.42	19.66	24.00	Pass
120	5600	17.52	N/A	17.02	20.29	24.00	Pass
140	5700	18.06	N/A	16.89	20.52	24.00	Pass

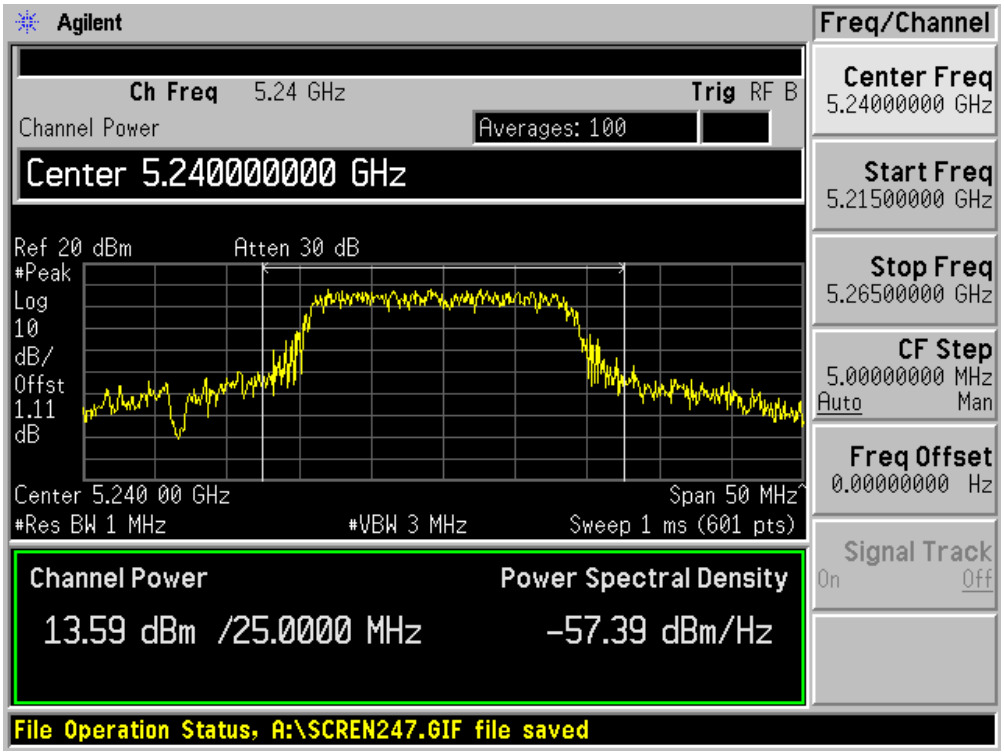
Channel 36 (5180MHz) - Chain A



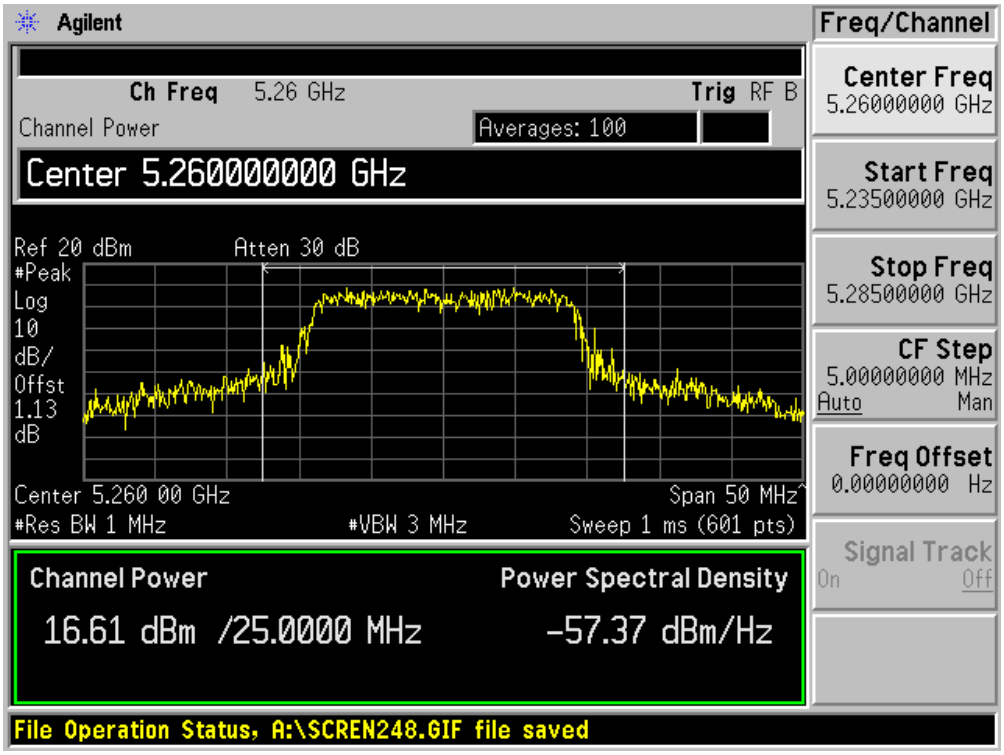
Channel 40 (5200MHz) - Chain A



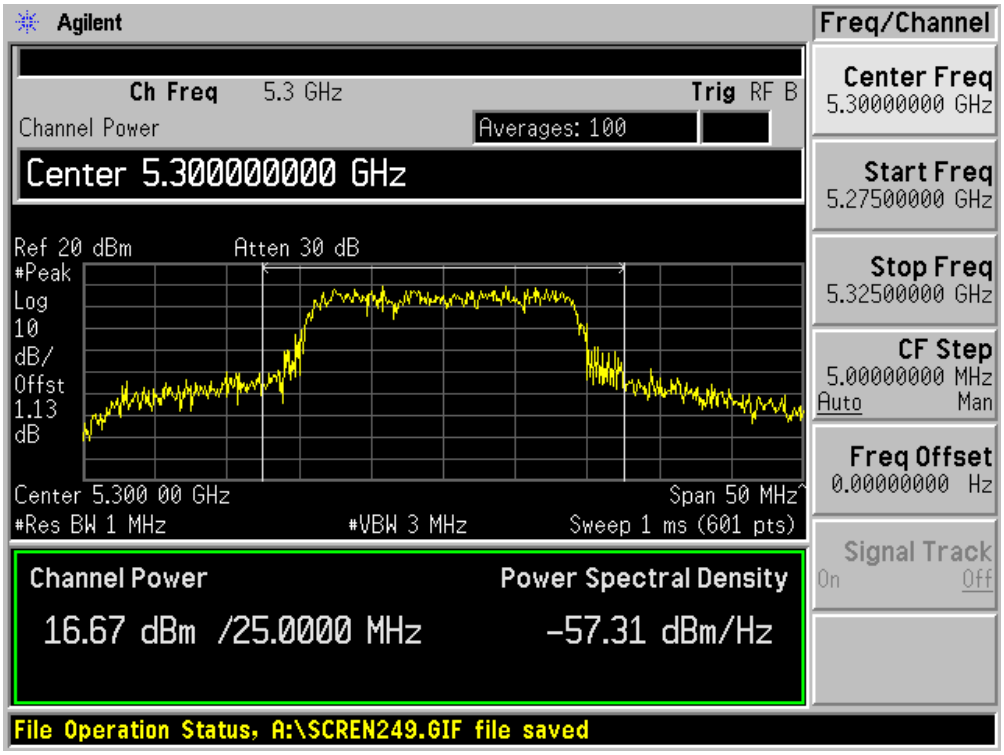
Channel 48 (5240MHz) - Chain A



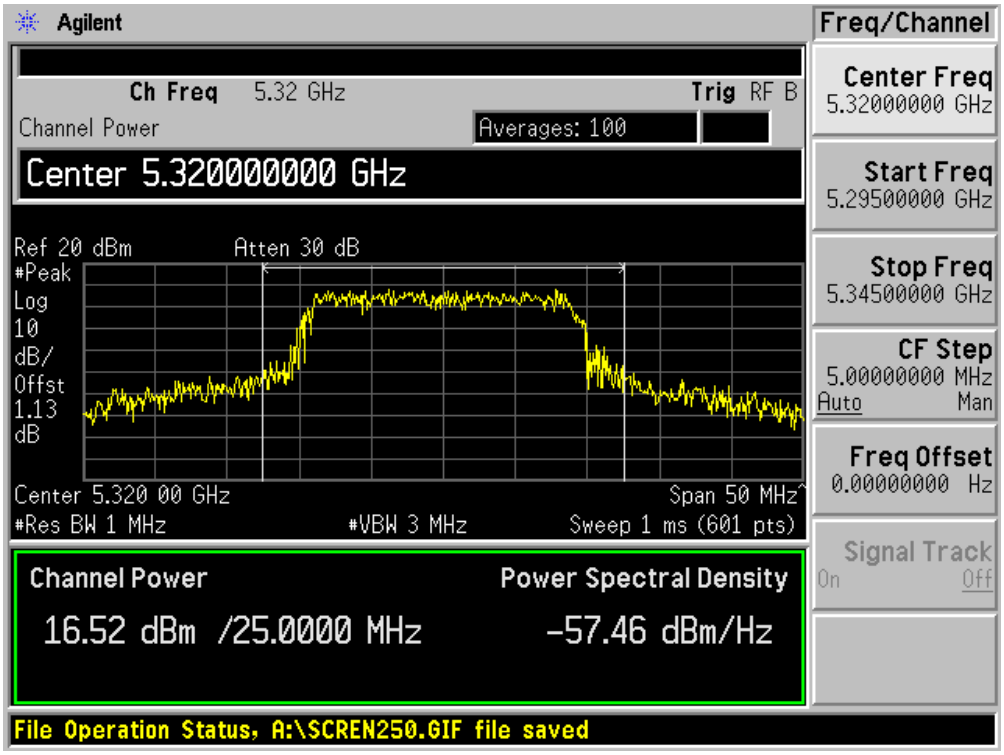
Channel 52 (5260MHz) - Chain A



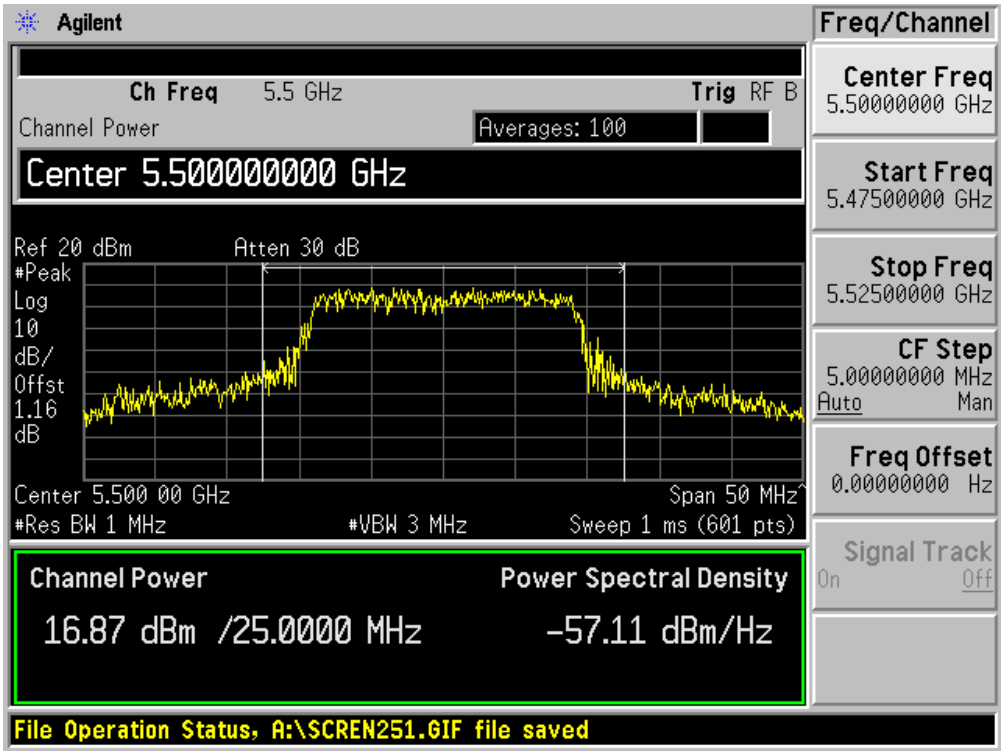
Channel 60 (5300MHz) - Chain A



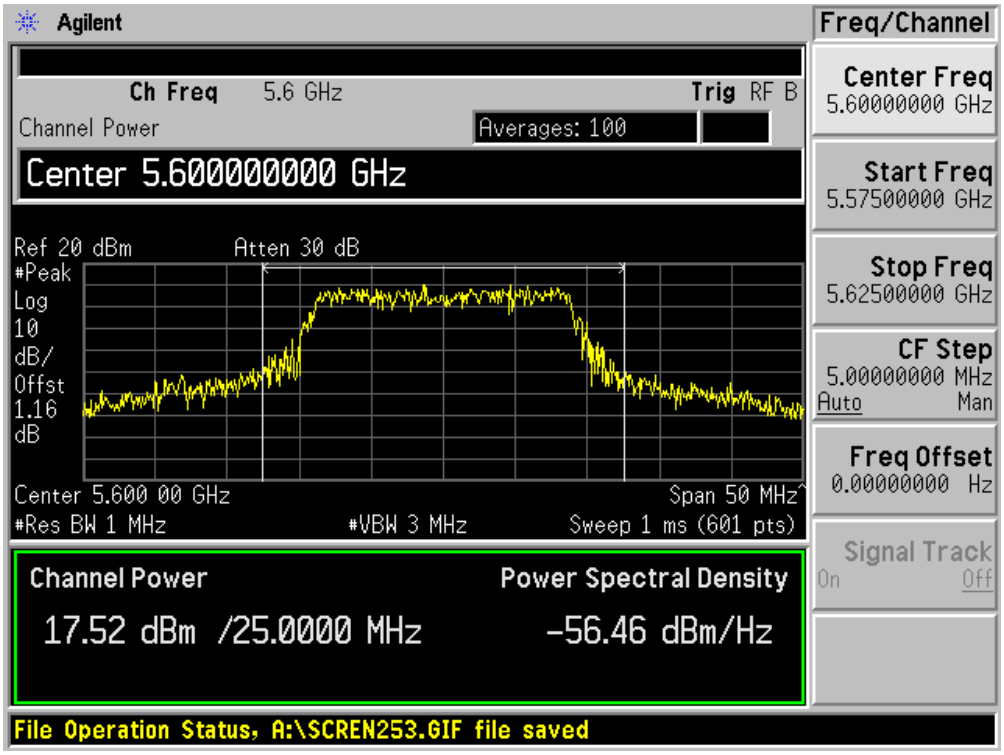
Channel 64 (5320MHz) - Chain A



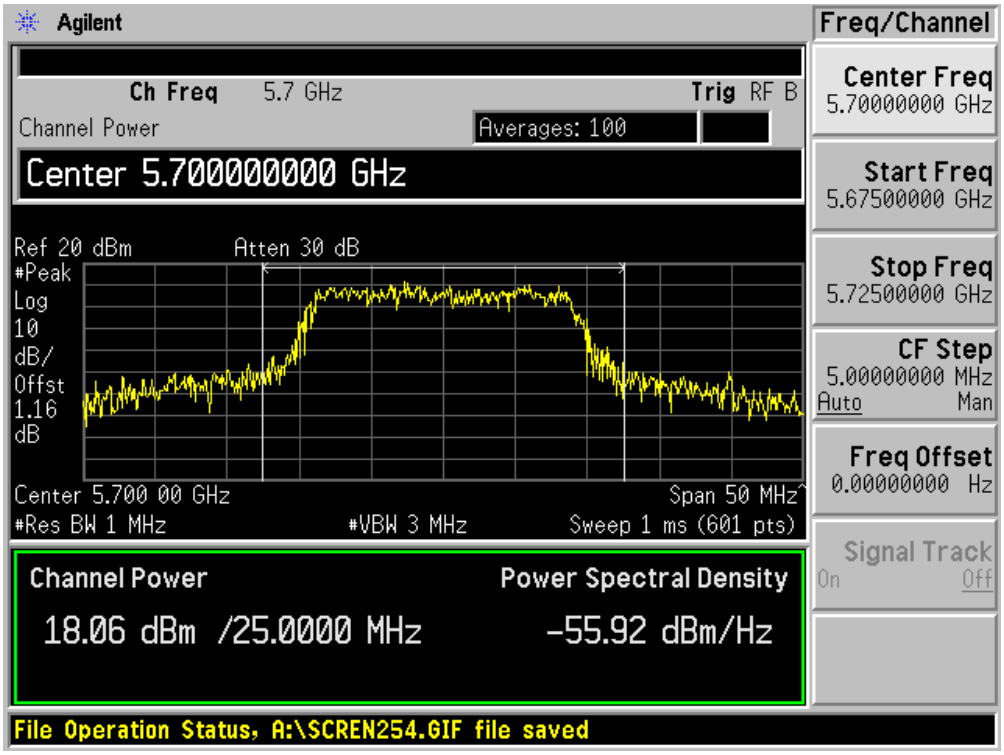
Channel 100 (5500MHz) - Chain A



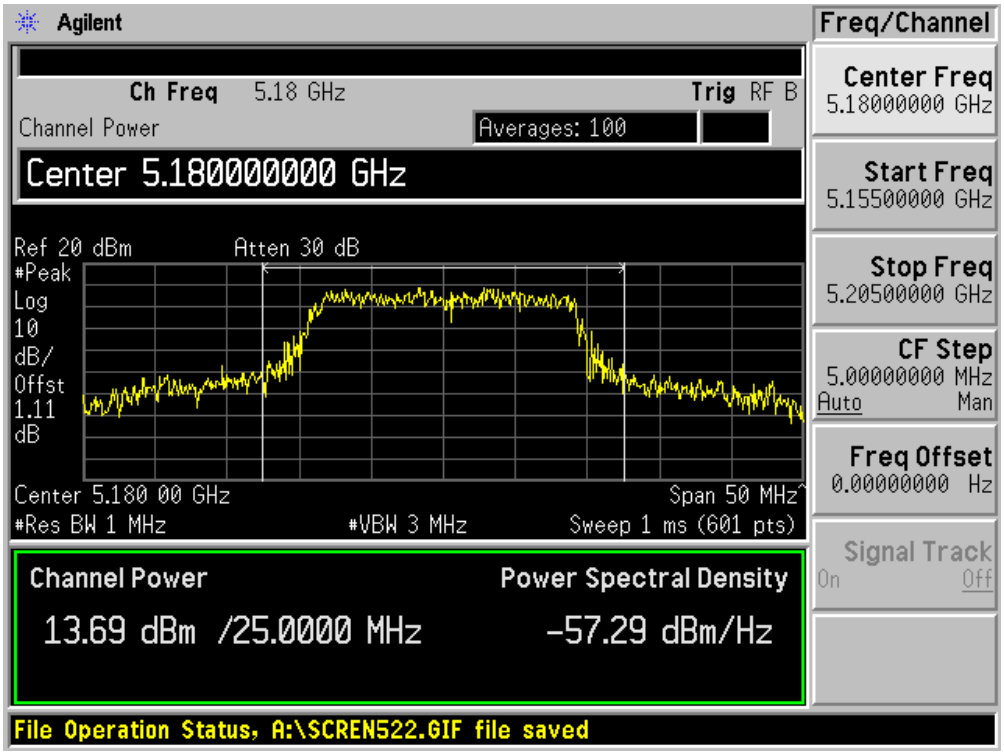
Channel 120 (5600MHz) - Chain A



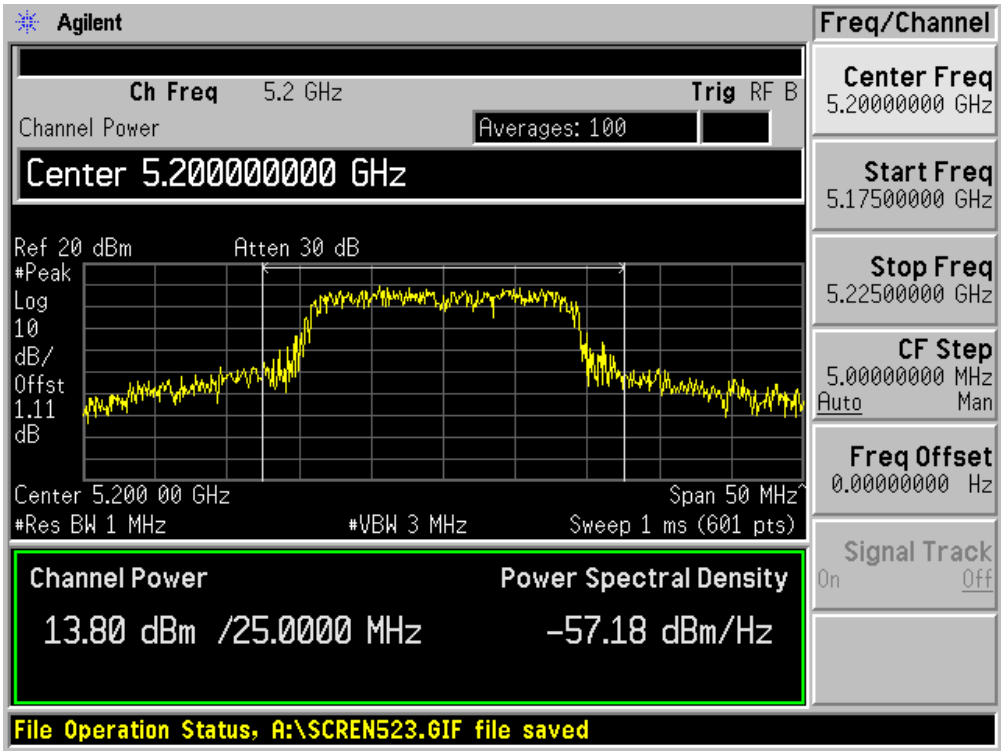
Channel 140 (5700MHz) - Chain A



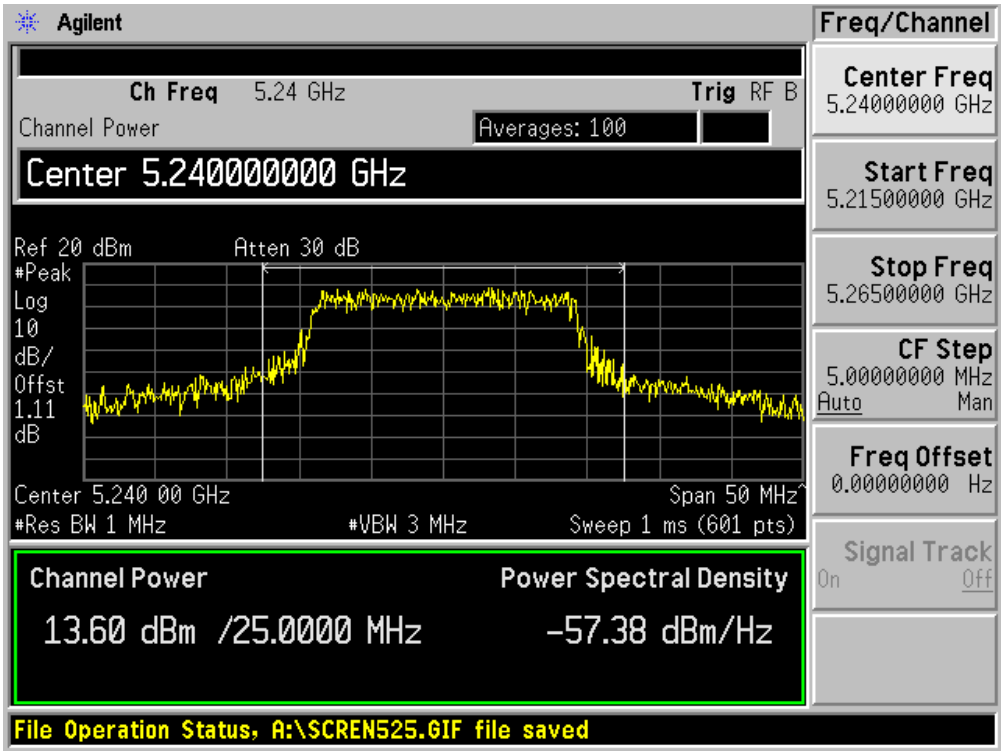
Channel 36 (5180MHz) - Chain C



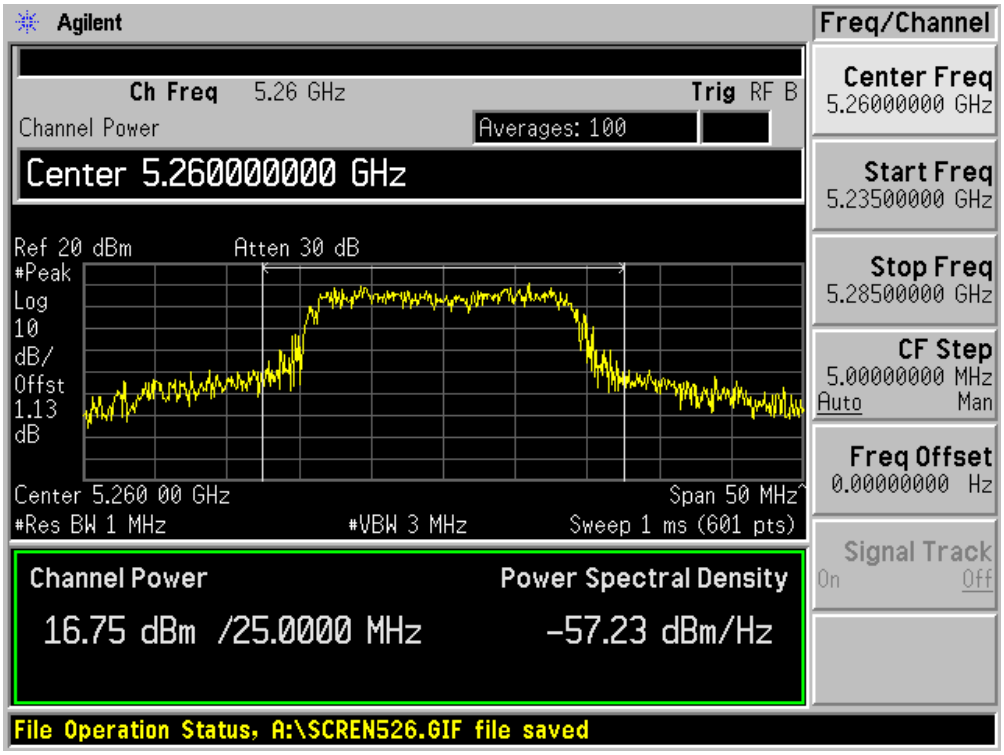
Channel 40 (5200MHz) - Chain C



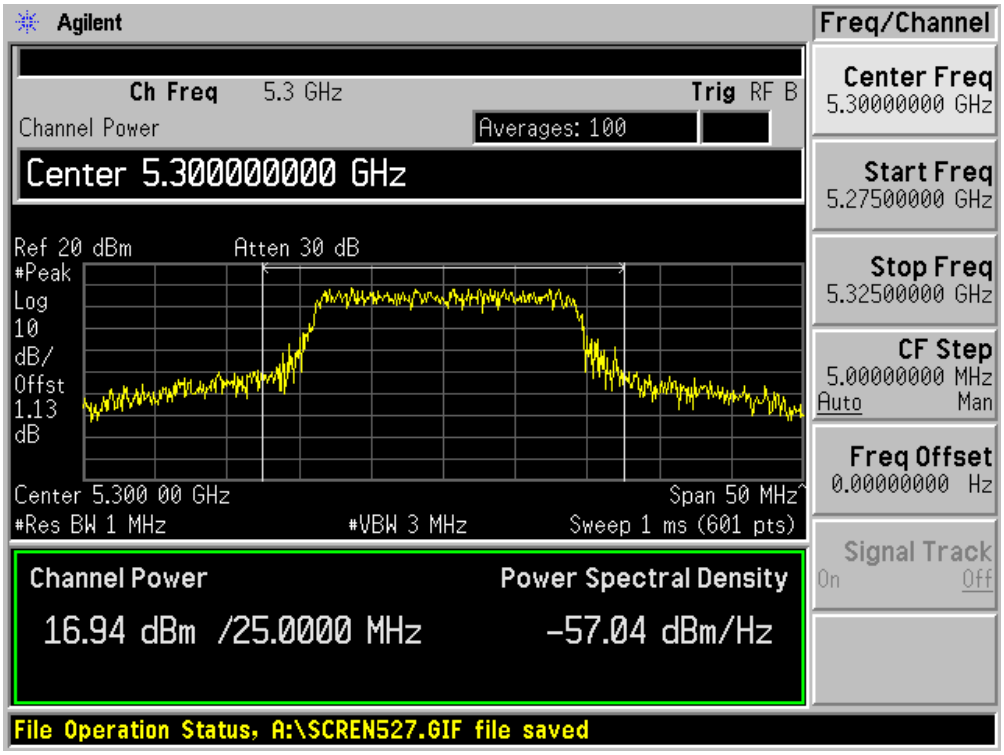
Channel 48 (5240MHz) - Chain C



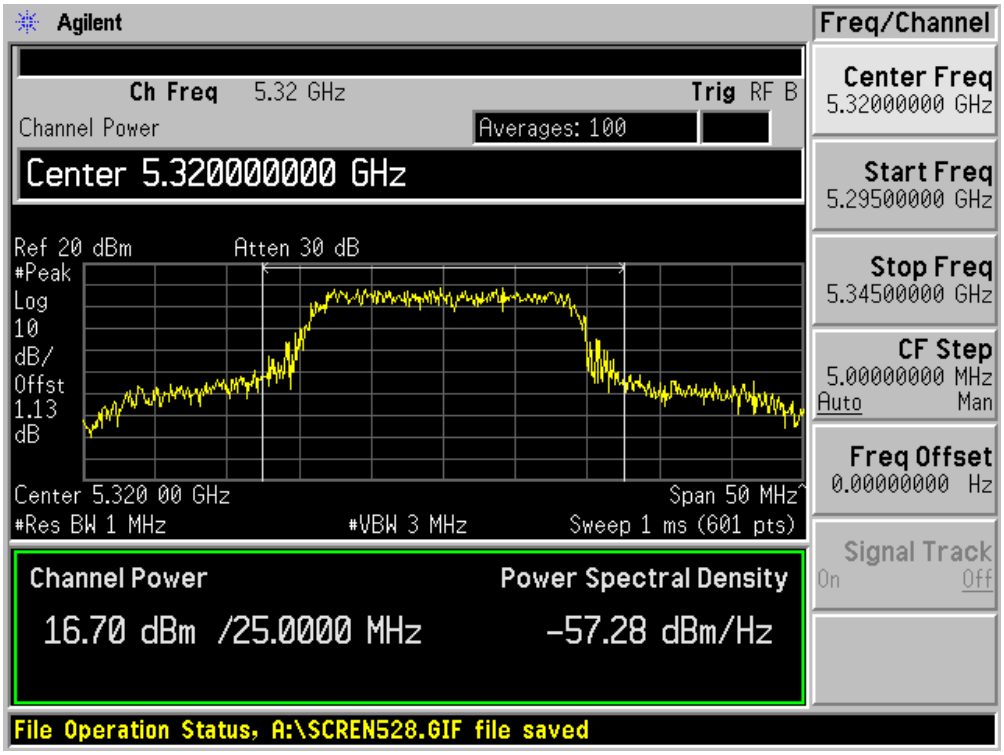
Channel 52 (5260MHz) - Chain C



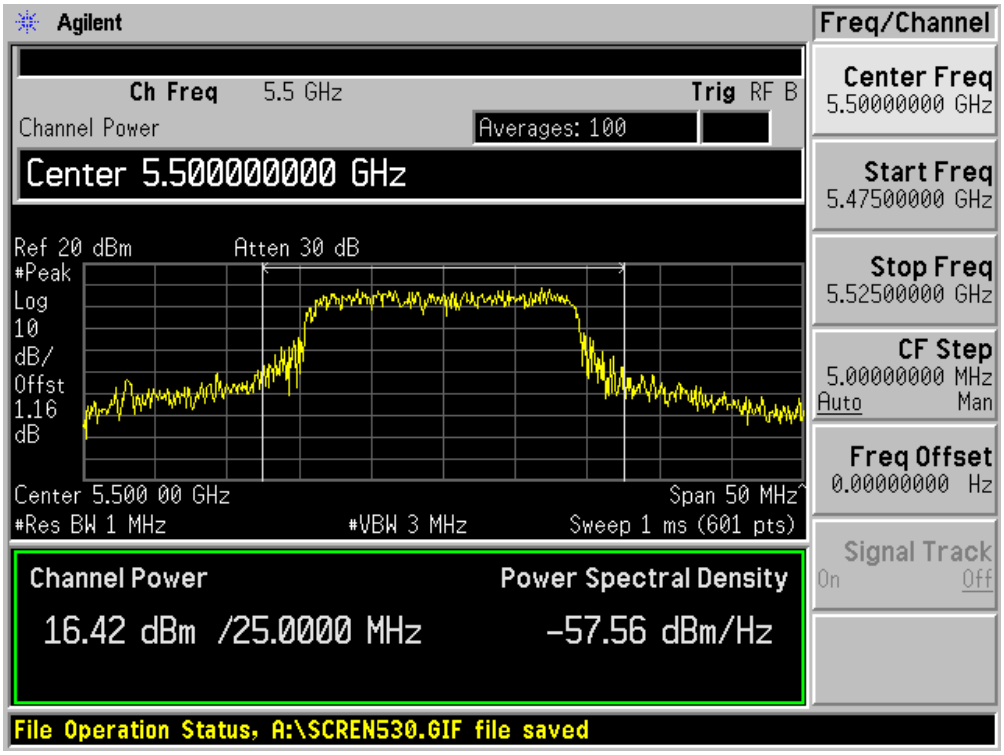
Channel 60 (5300MHz) - Chain C



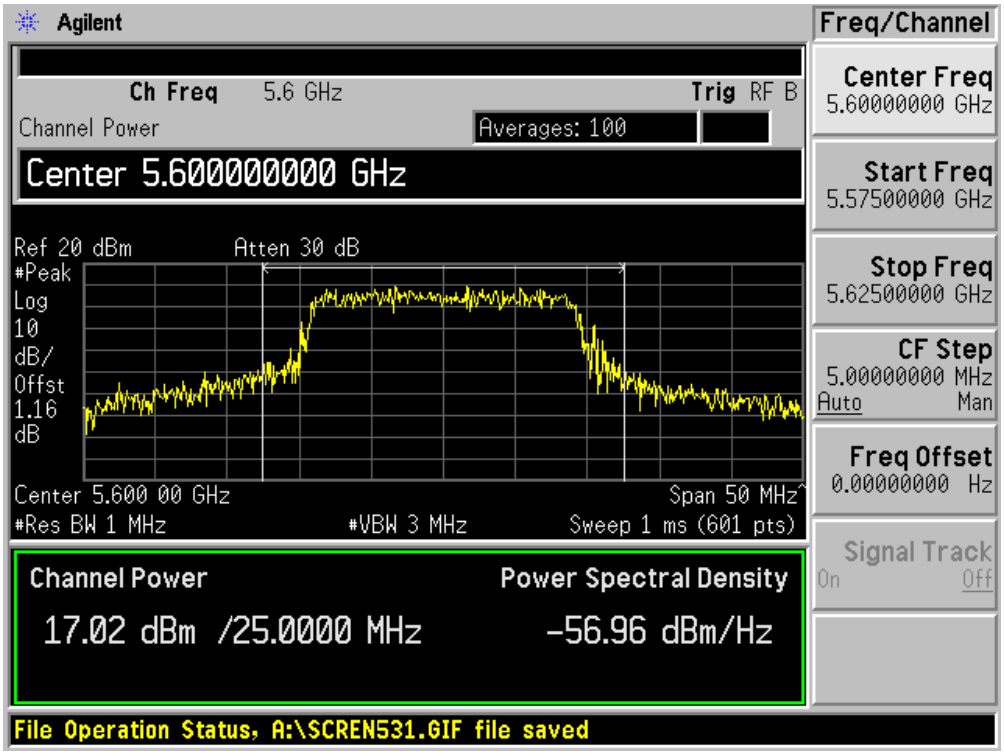
Channel 64 (5320MHz) - Chain C



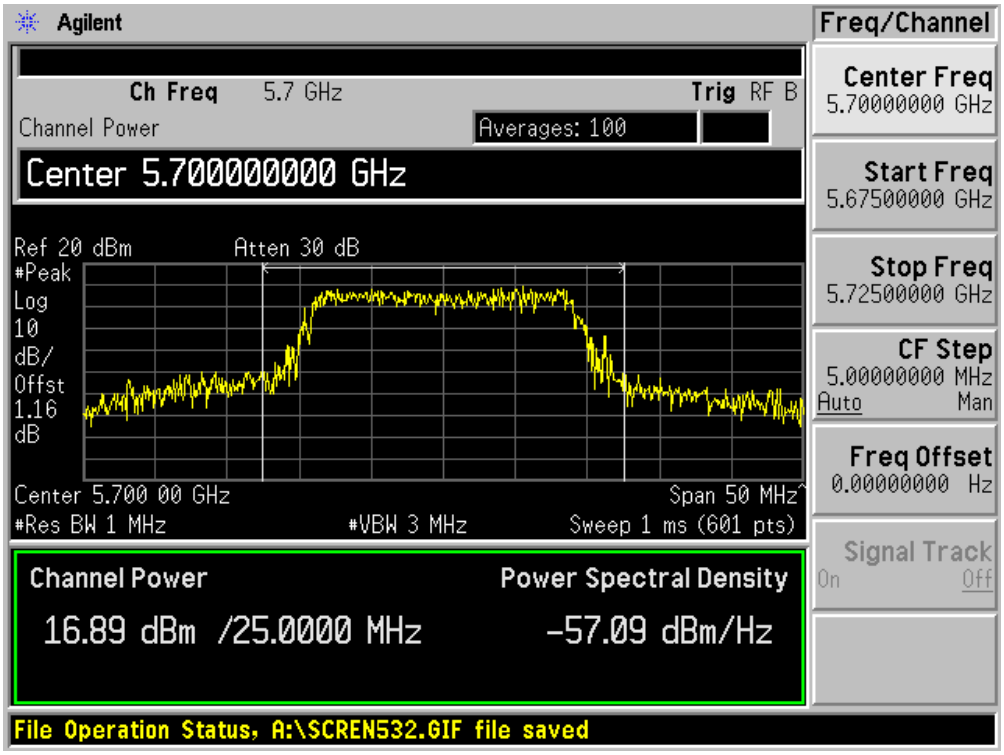
Channel 100 (5500MHz) - Chain C



Channel 120 (5600MHz) - Chain C



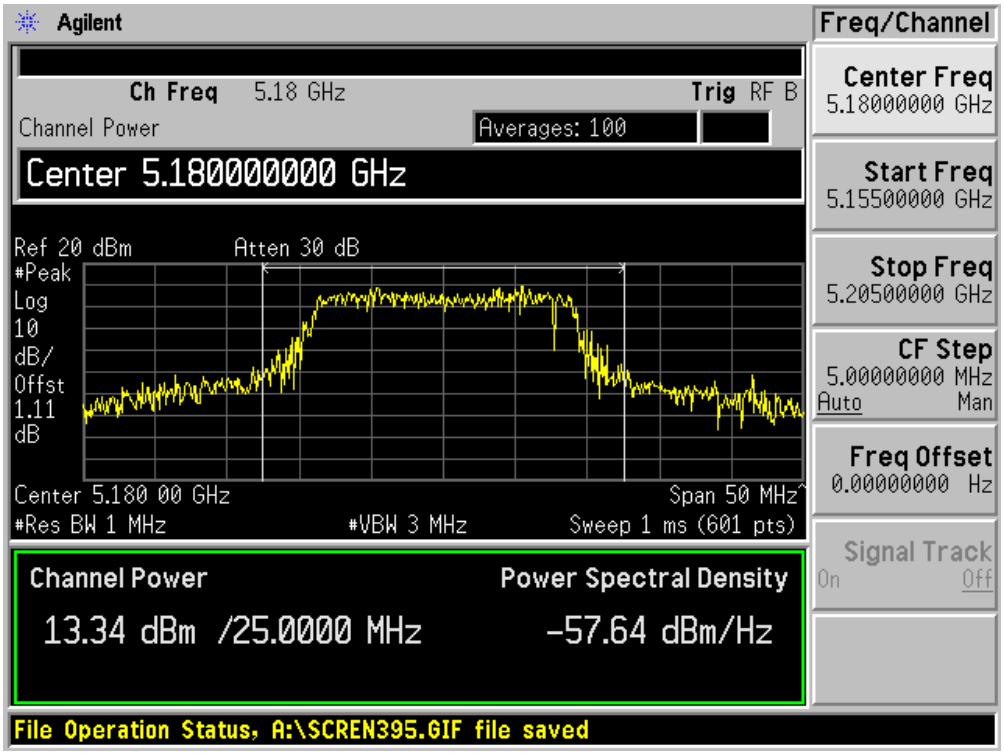
Channel 140 (5700MHz) - Chain C



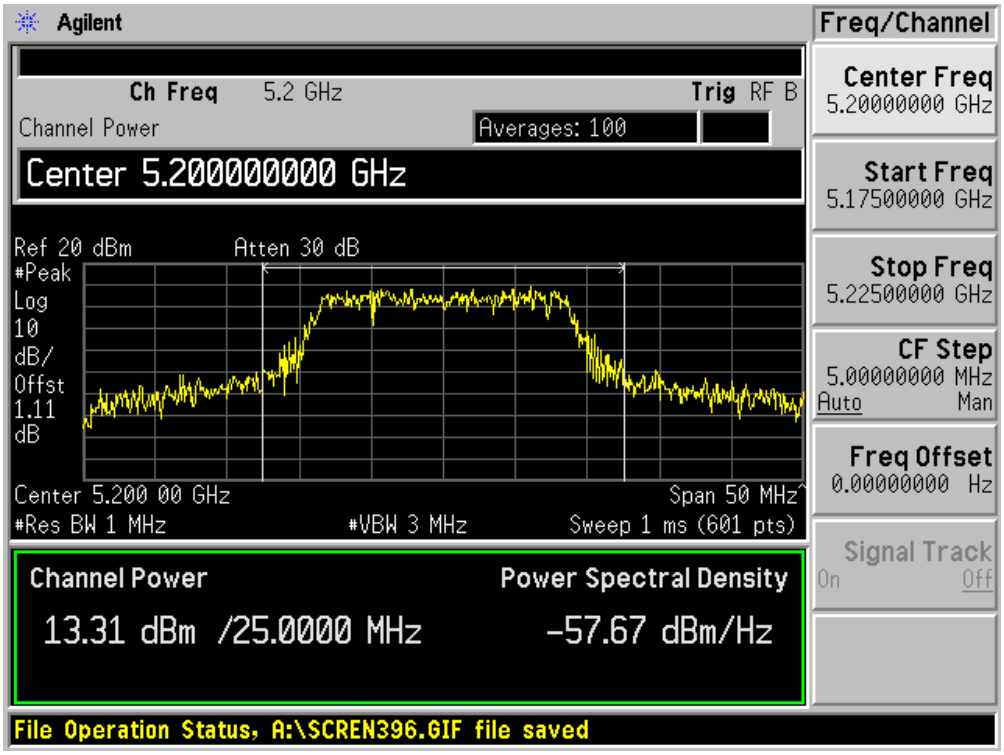
Product	:	Notebook Computer
Test Item	:	Power Output
Test Site	:	AC-4
Test Mode	:	Mode 2: Transmit by 802.11n (20MHz Bandwidth) (Chain B+C)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)			Total Power (dBm)	Limit (dBm)	Result
		Chain A	Chain B	Chain C			
36	5180	N/A	13.34	13.60	16.48	17.00	Pass
40	5200	N/A	13.31	13.75	16.55	17.00	Pass
48	5240	N/A	13.46	13.45	16.47	17.00	Pass
52	5260	N/A	16.33	16.60	19.48	24.00	Pass
60	5300	N/A	16.59	16.33	19.47	24.00	Pass
64	5320	N/A	16.65	16.59	19.63	24.00	Pass
100	5500	N/A	16.43	16.83	19.64	24.00	Pass
120	5600	N/A	16.51	16.98	19.76	24.00	Pass
140	5700	N/A	16.22	16.78	19.52	24.00	Pass

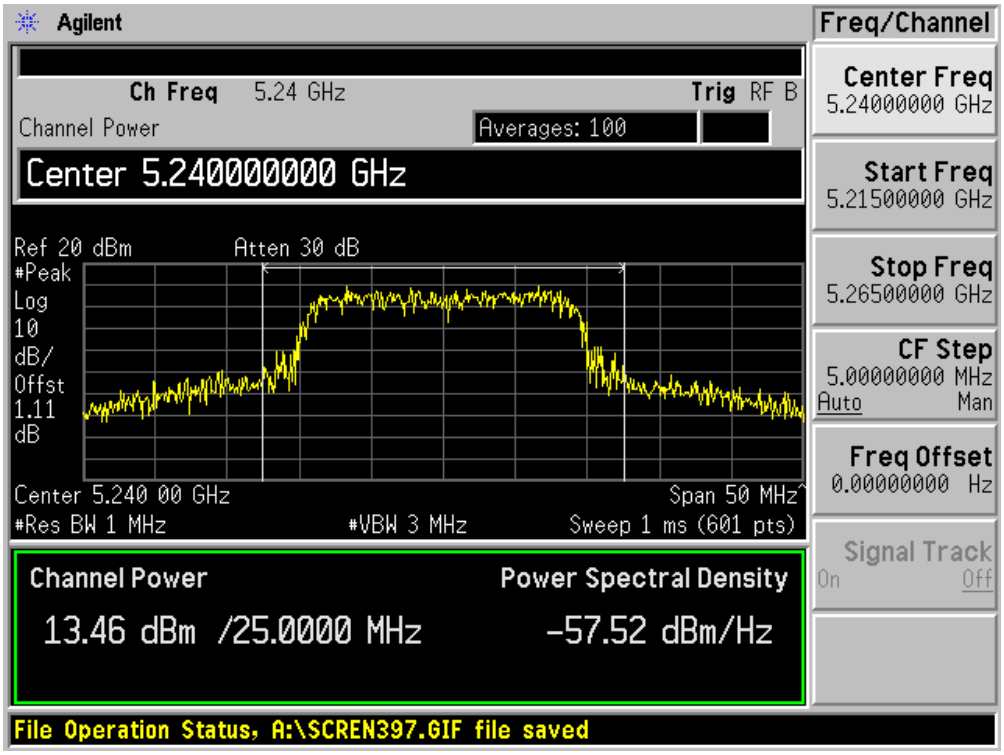
Channel 36 (5180MHz) - Chain B



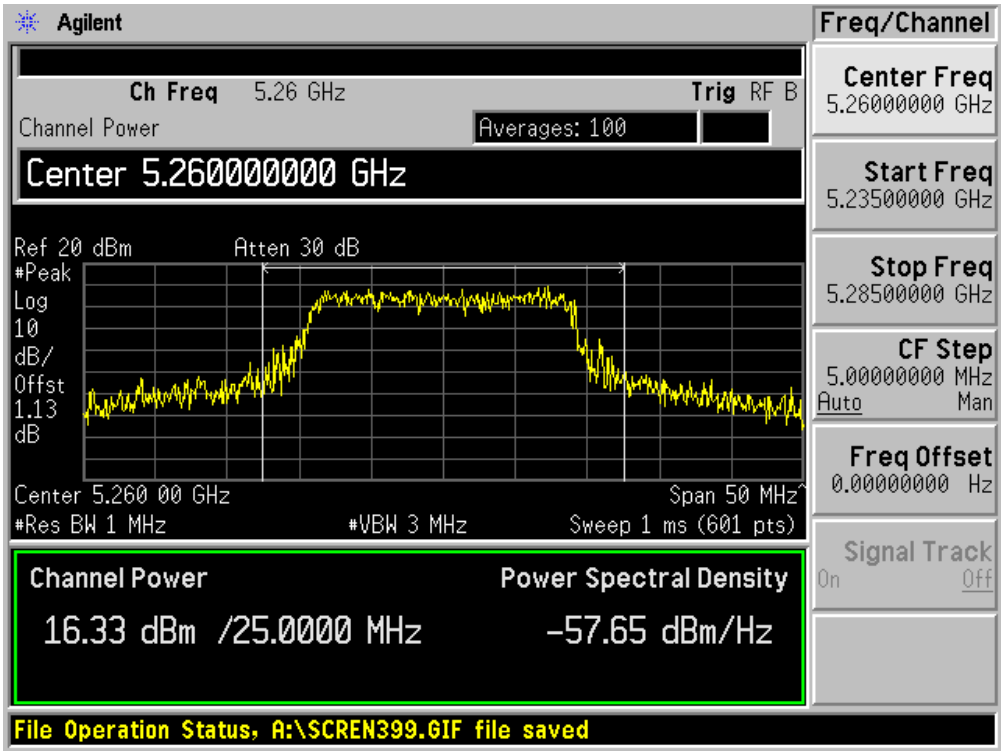
Channel 40 (5200MHz) - Chain B



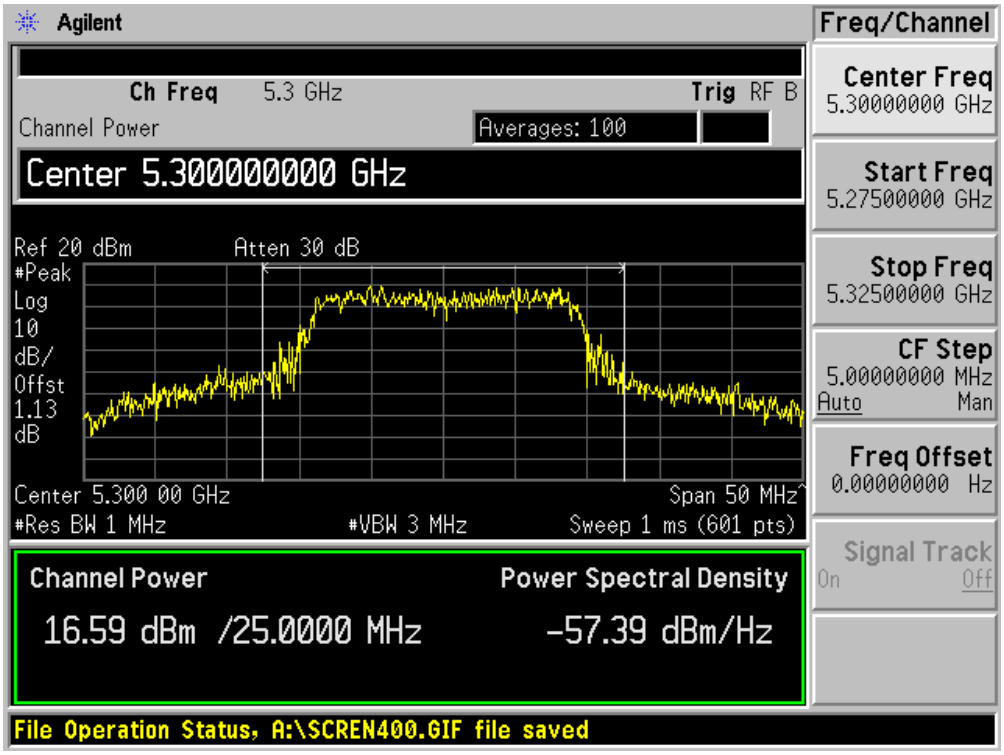
Channel 48 (5240MHz) - Chain B



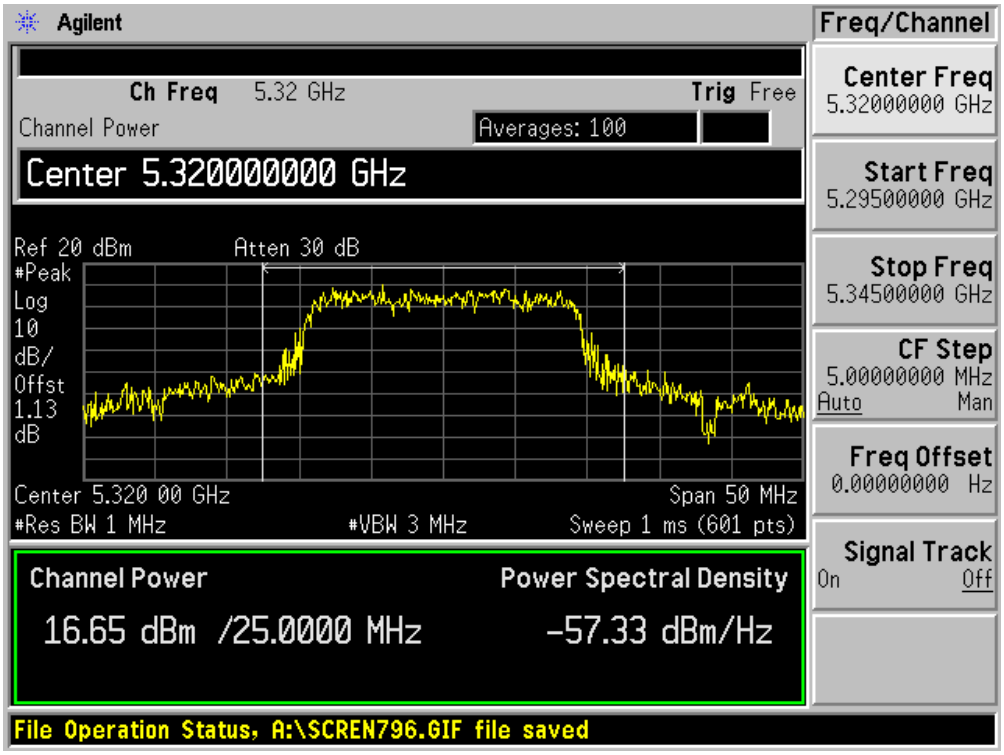
Channel 52 (5260MHz) - Chain B



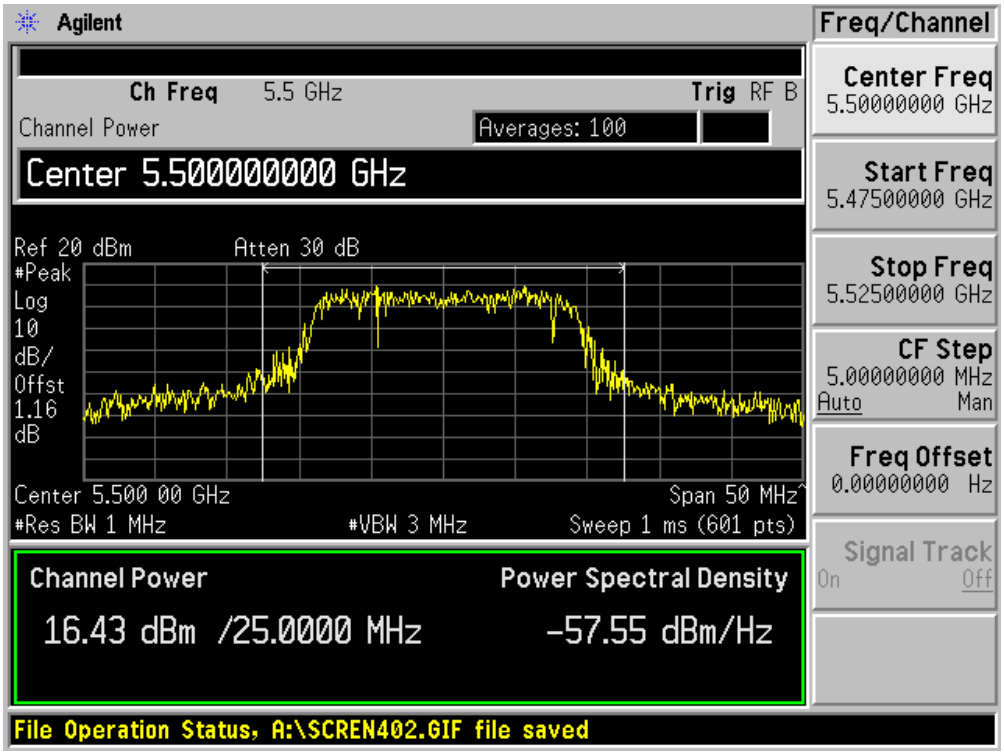
Channel 60 (5300MHz) - Chain B



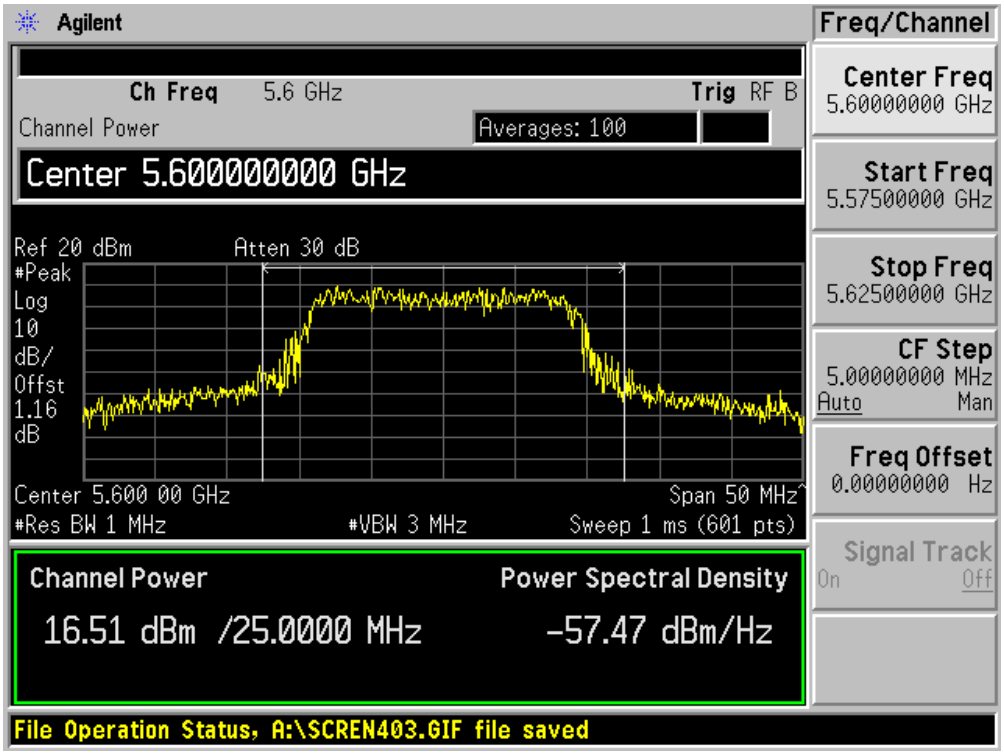
Channel 64 (5320MHz) - Chain B



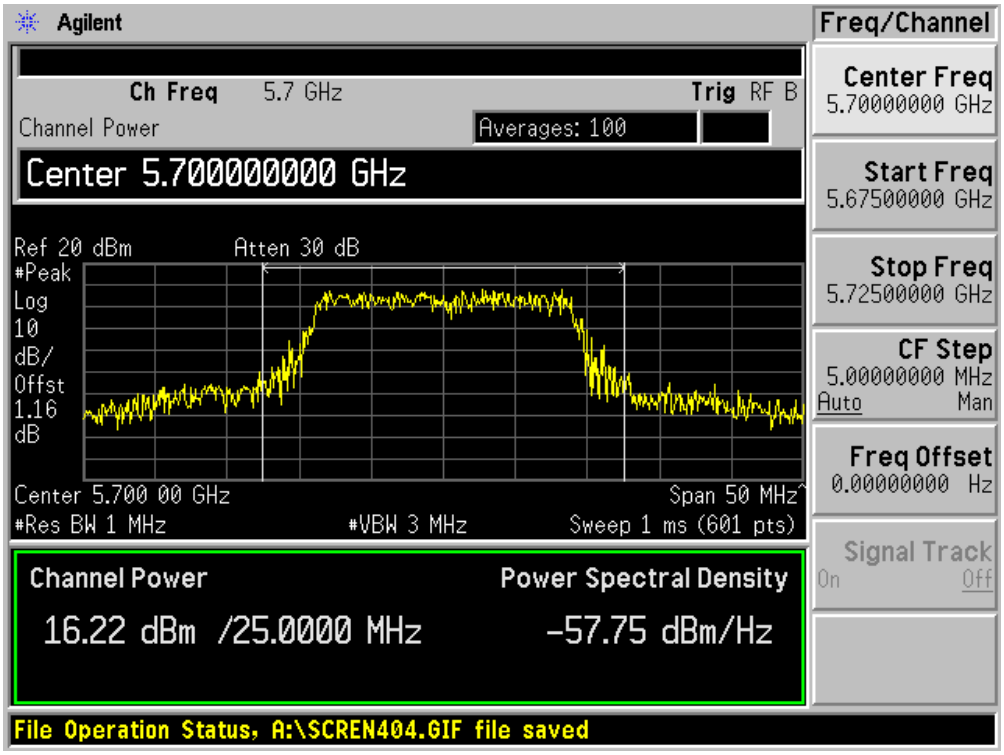
Channel 100 (5500MHz) - Chain B



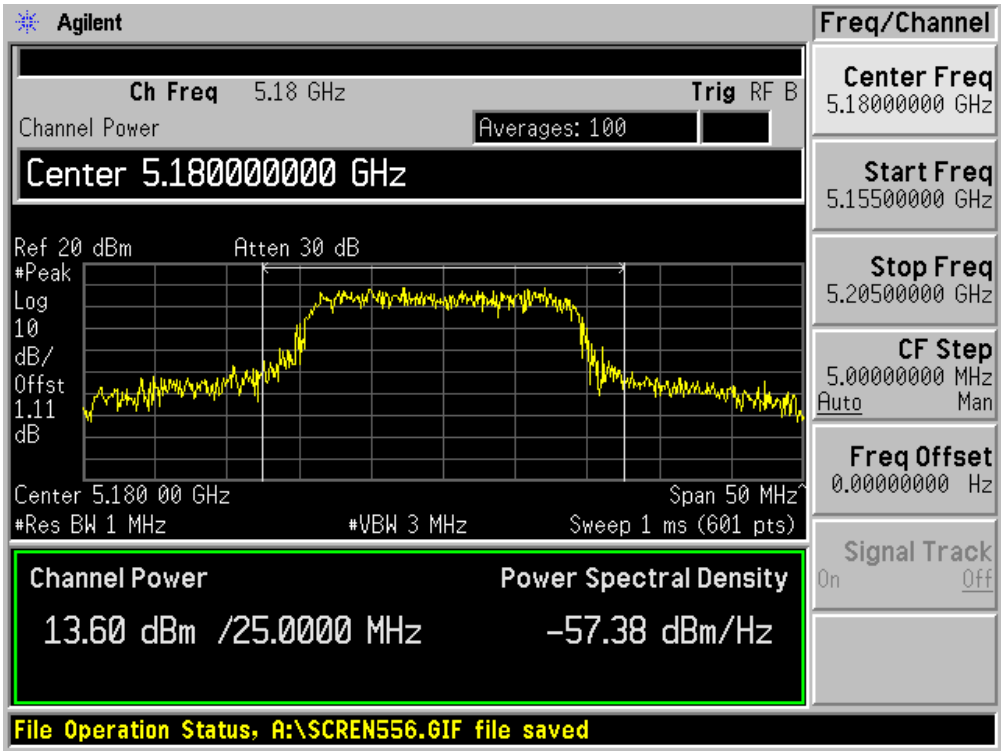
Channel 120 (5600MHz) - Chain B



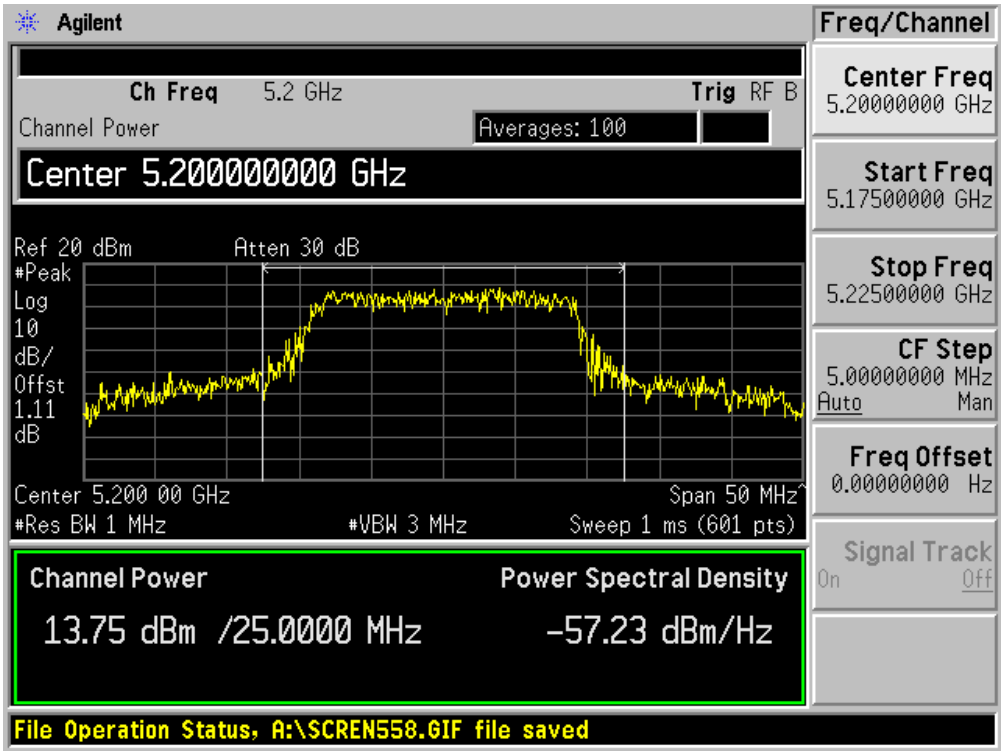
Channel 140 (5700MHz) - Chain B



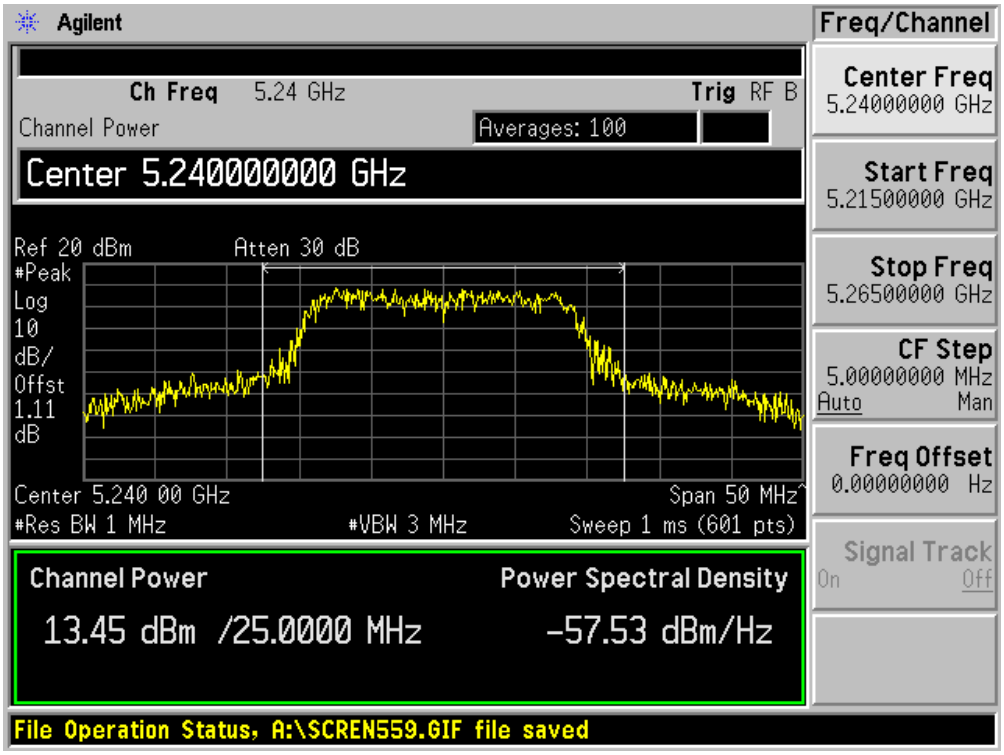
Channel 36 (5180MHz) - Chain C



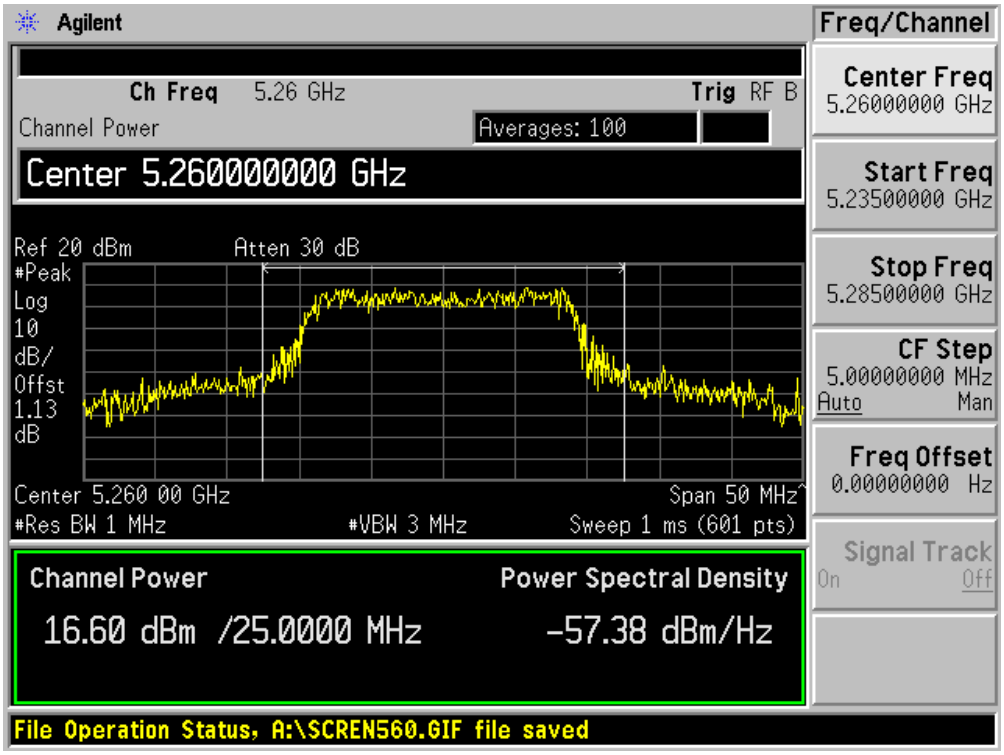
Channel 40 (5200MHz) - Chain C



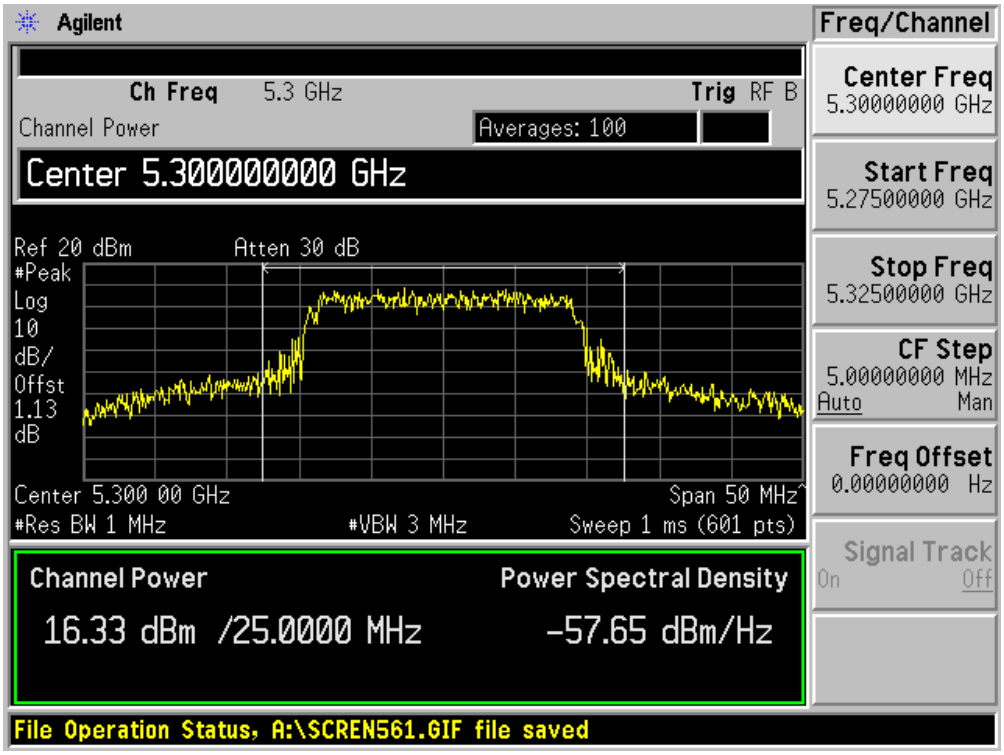
Channel 48 (5240MHz) - Chain C



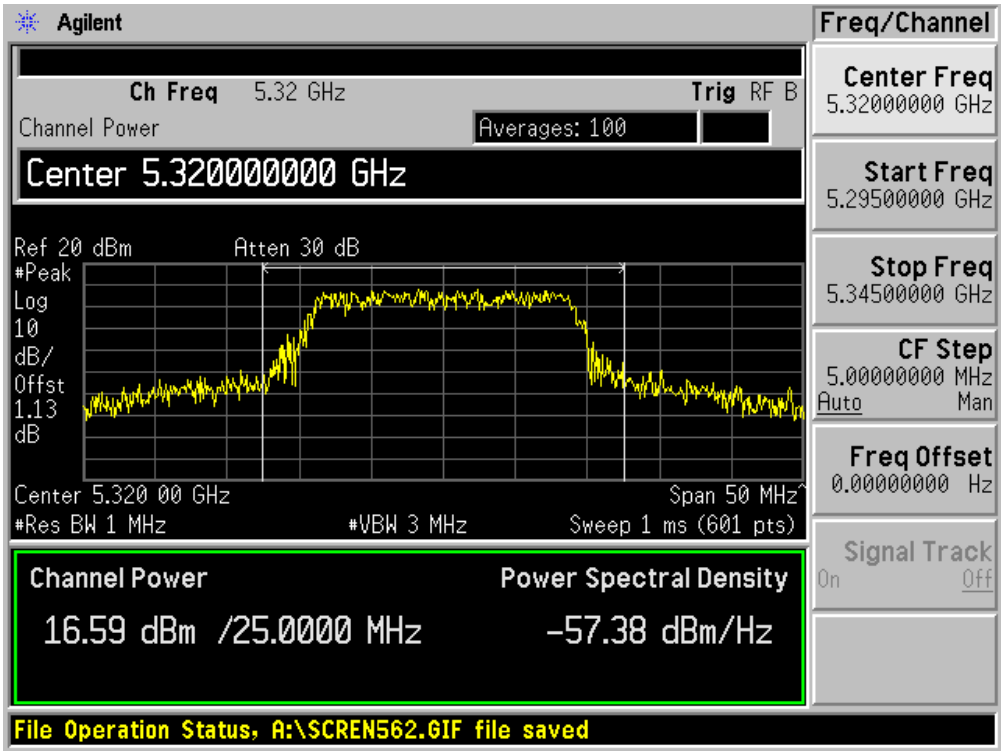
Channel 52 (5260MHz) - Chain C



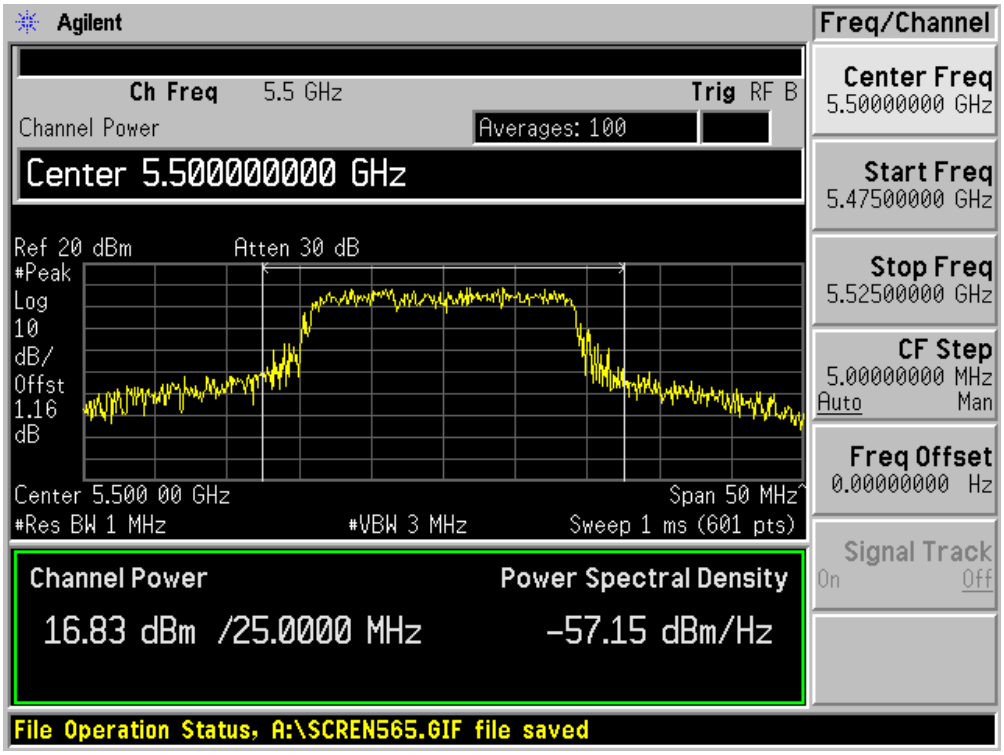
Channel 60 (5300MHz) - Chain C



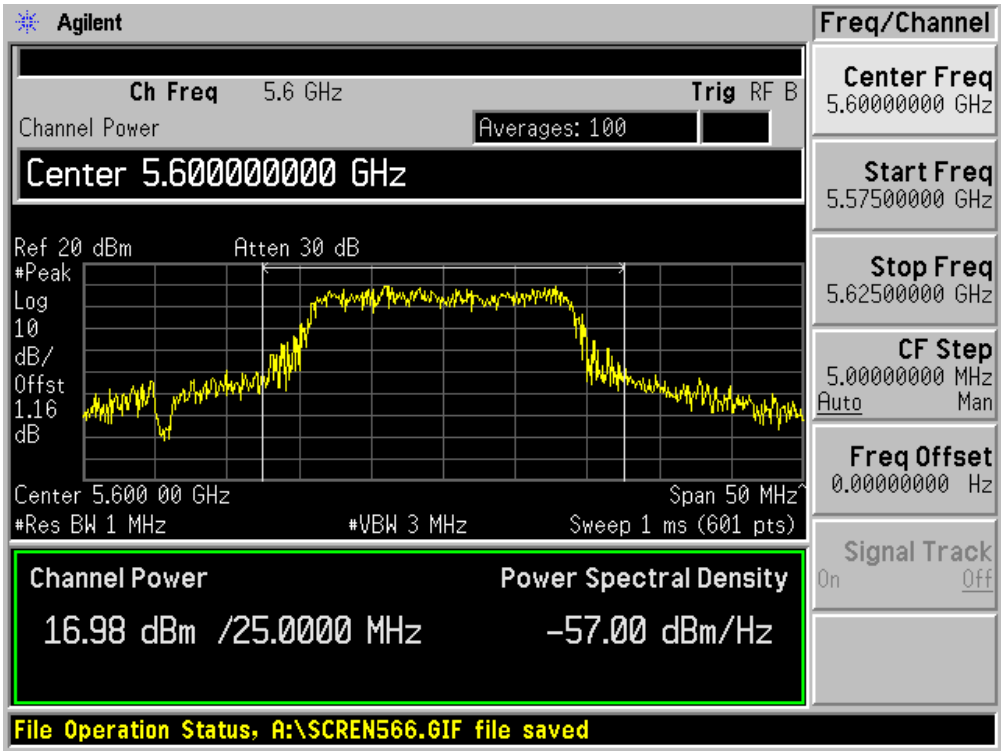
Channel 64 (5320MHz) - Chain C



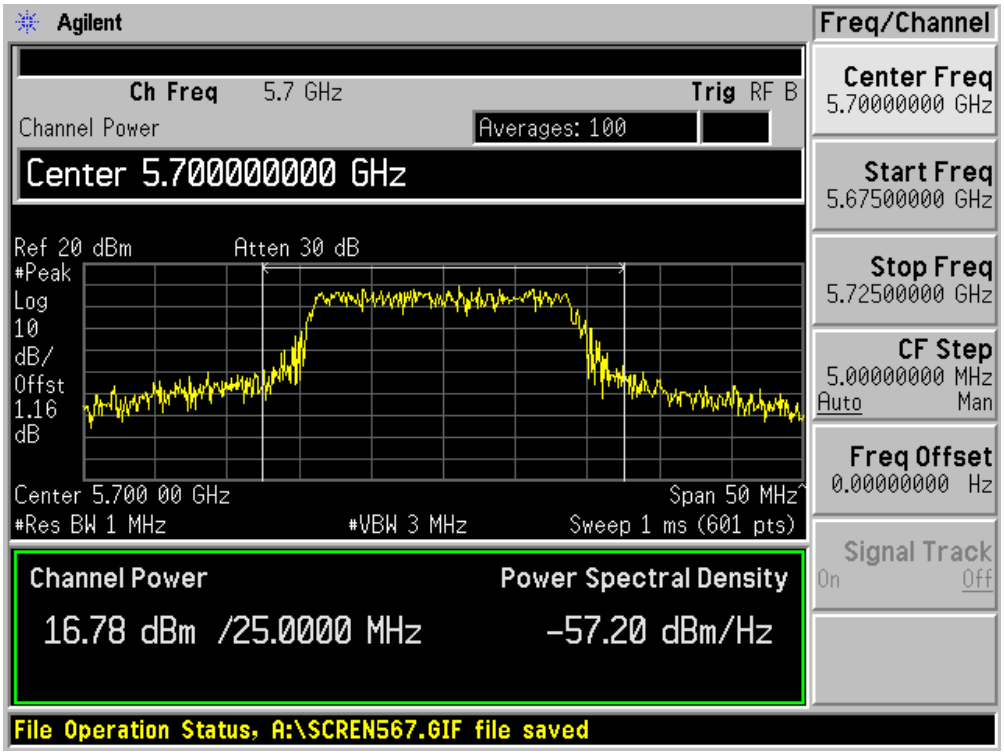
Channel 100 (5500MHz) - Chain C



Channel 120 (5600MHz) - Chain C



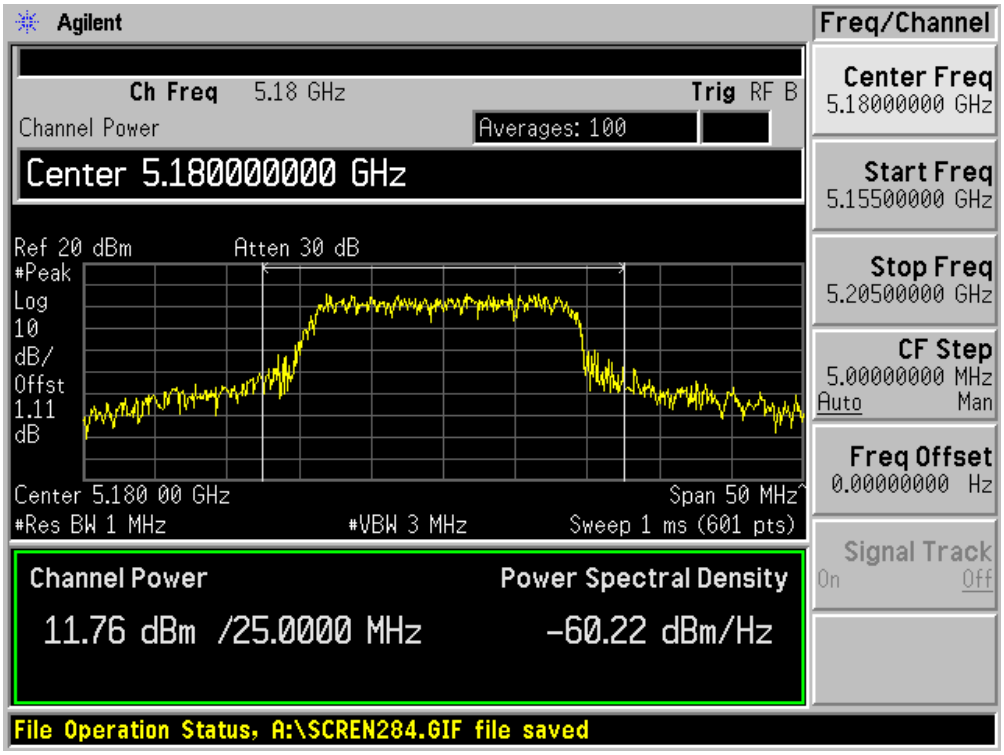
Channel 140 (5700MHz) - Chain C



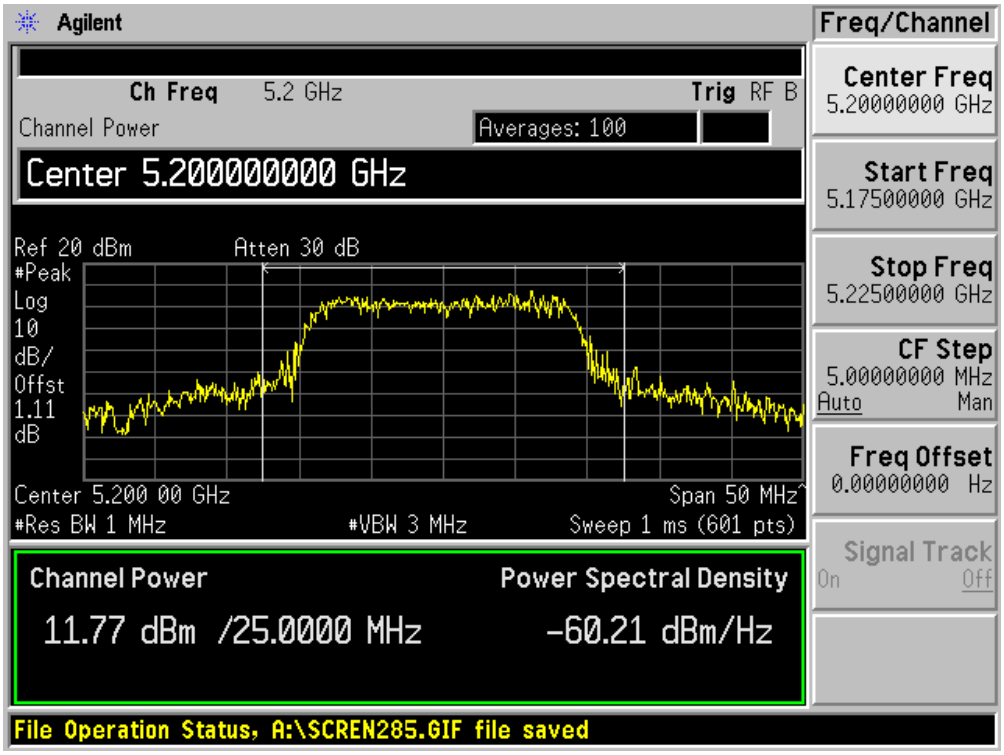
Product	:	Notebook Computer
Test Item	:	Power Output
Test Site	:	AC-4
Test Mode	:	Mode 2: Transmit by 802.11n (20MHz Bandwidth) (Chain A+B+C)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)			Total Power (dBm)	Limit (dBm)	Result
		Chain A	Chain B	Chain C			
36	5180	11.76	11.98	12.00	16.69	17.00	Pass
40	5200	11.77	12.06	12.03	16.73	17.00	Pass
48	5240	11.52	12.09	12.01	16.65	17.00	Pass
52	5260	13.43	13.88	15.38	19.08	24.00	Pass
60	5300	14.05	14.23	15.09	19.25	24.00	Pass
64	5320	13.54	13.52	15.31	18.98	24.00	Pass
100	5500	13.46	13.38	14.79	18.70	24.00	Pass
120	5600	13.84	14.12	15.32	19.25	24.00	Pass
140	5700	13.50	13.97	15.11	19.02	24.00	Pass

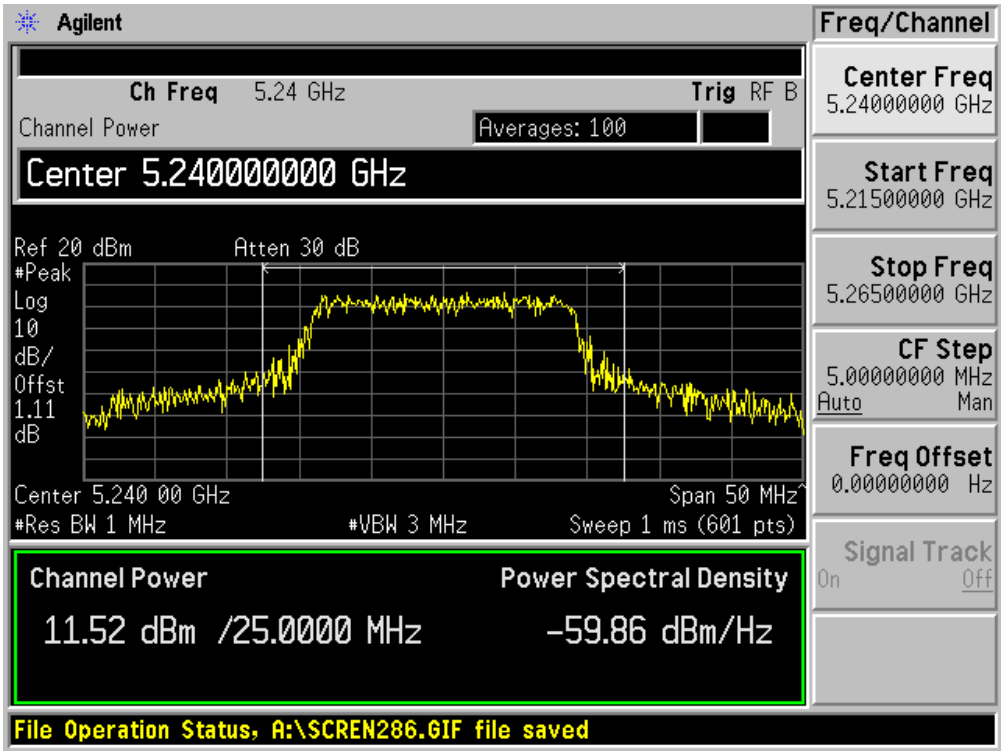
Channel 36 (5180MHz) - Chain A



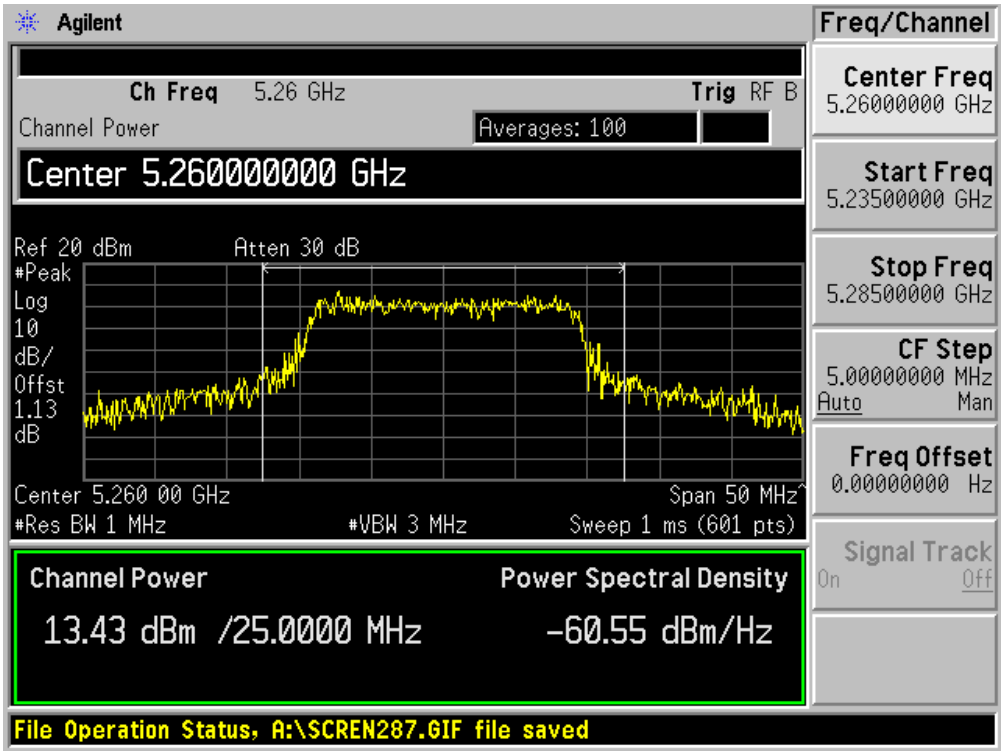
Channel 40 (5200MHz) - Chain A



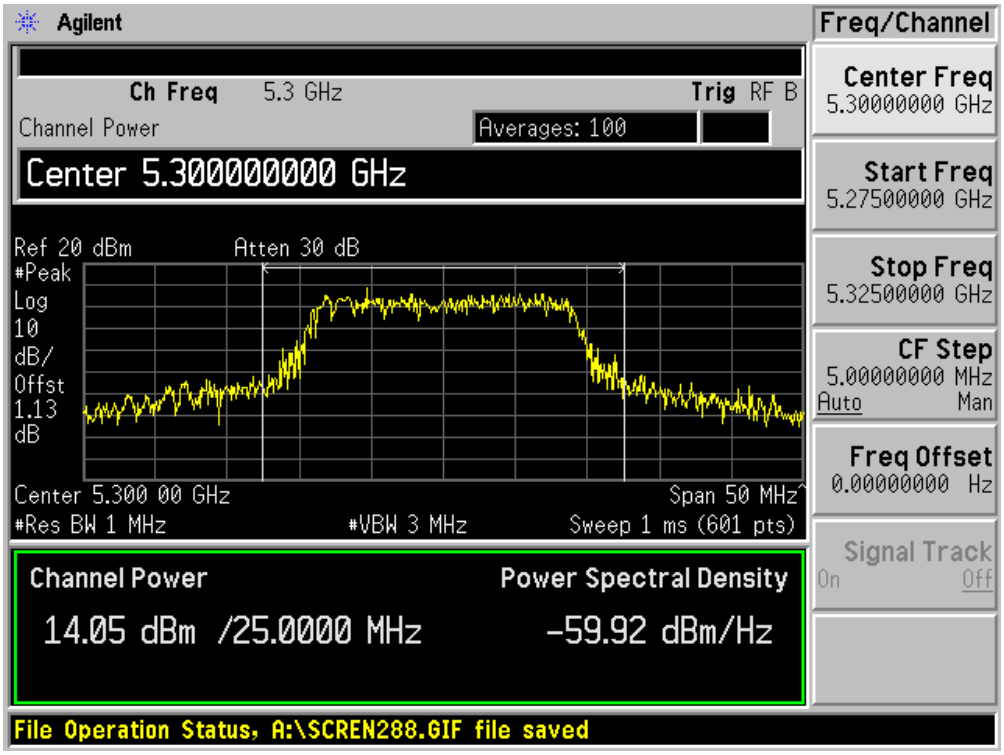
Channel 48 (5240MHz) - Chain A



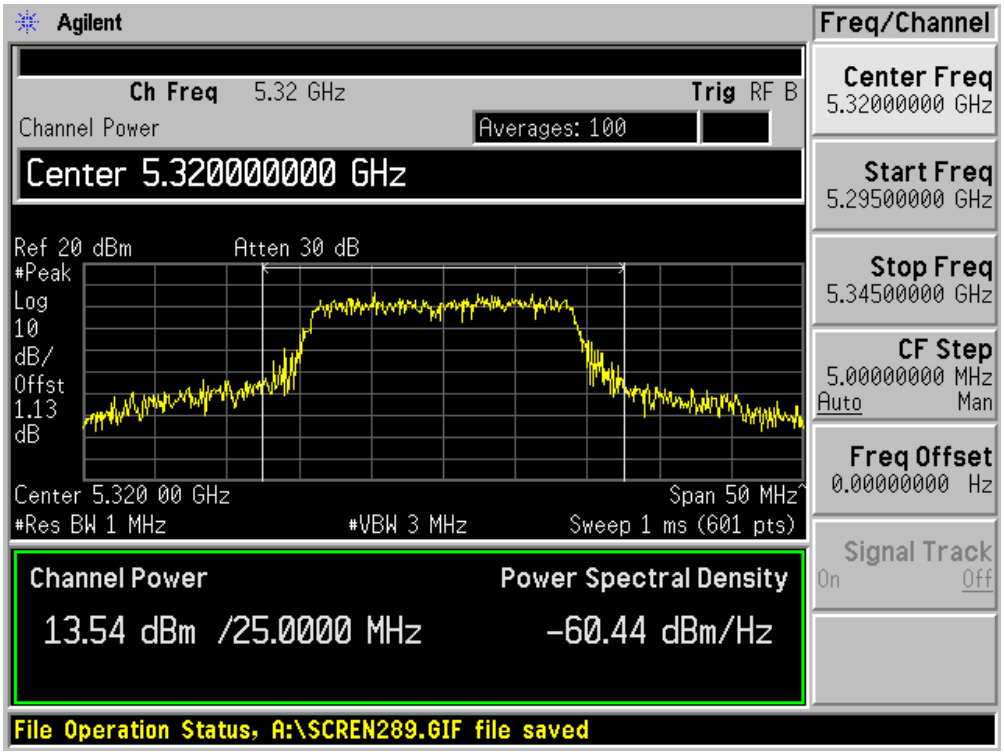
Channel 52 (5260MHz) - Chain A



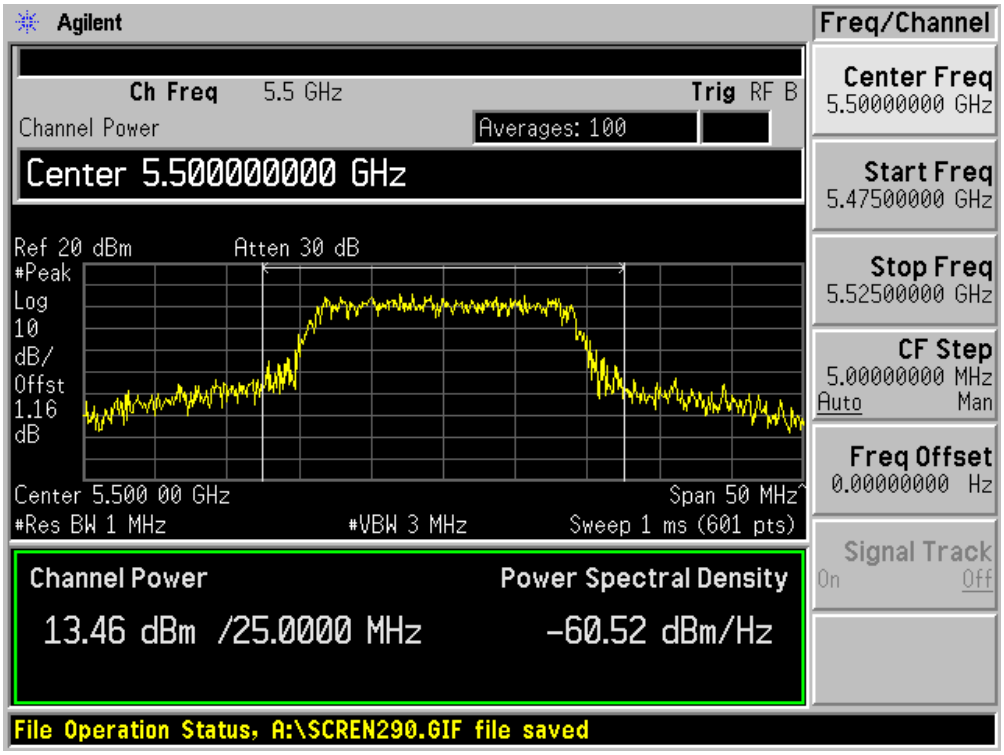
Channel 60 (5300MHz) - Chain A



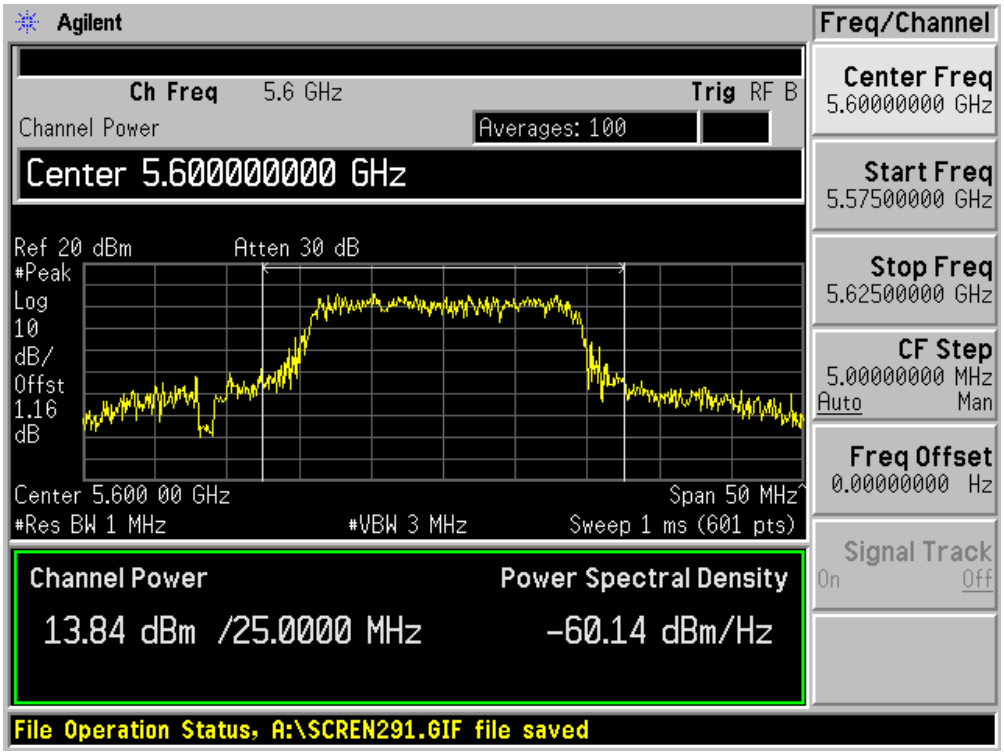
Channel 64 (5320MHz) - Chain A



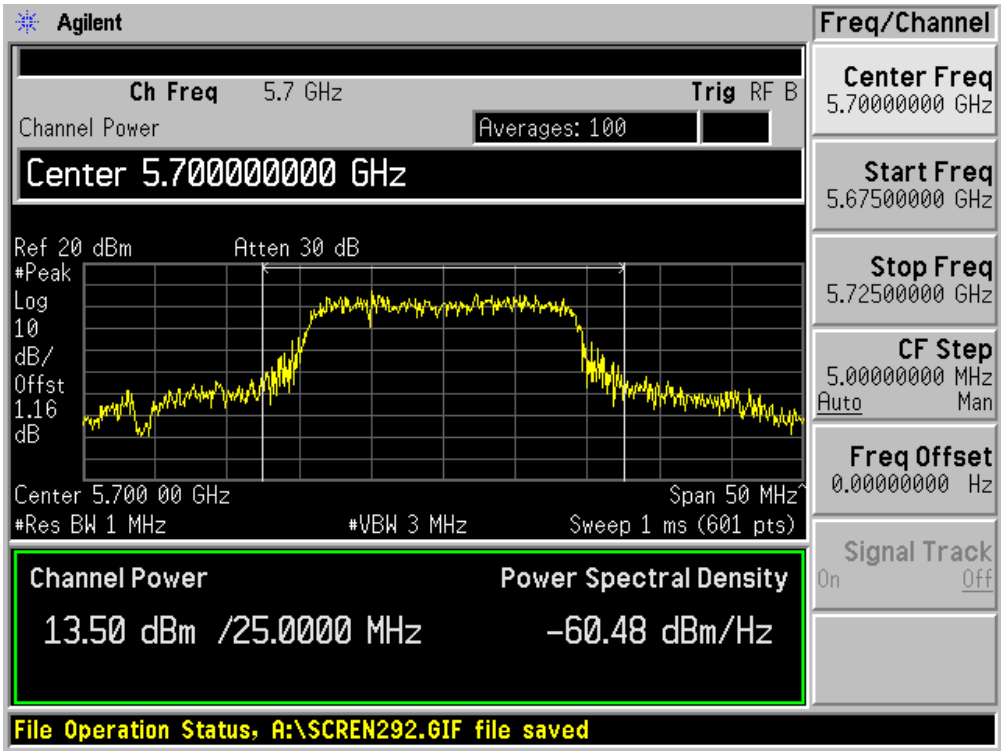
Channel 100 (5500MHz) - Chain A



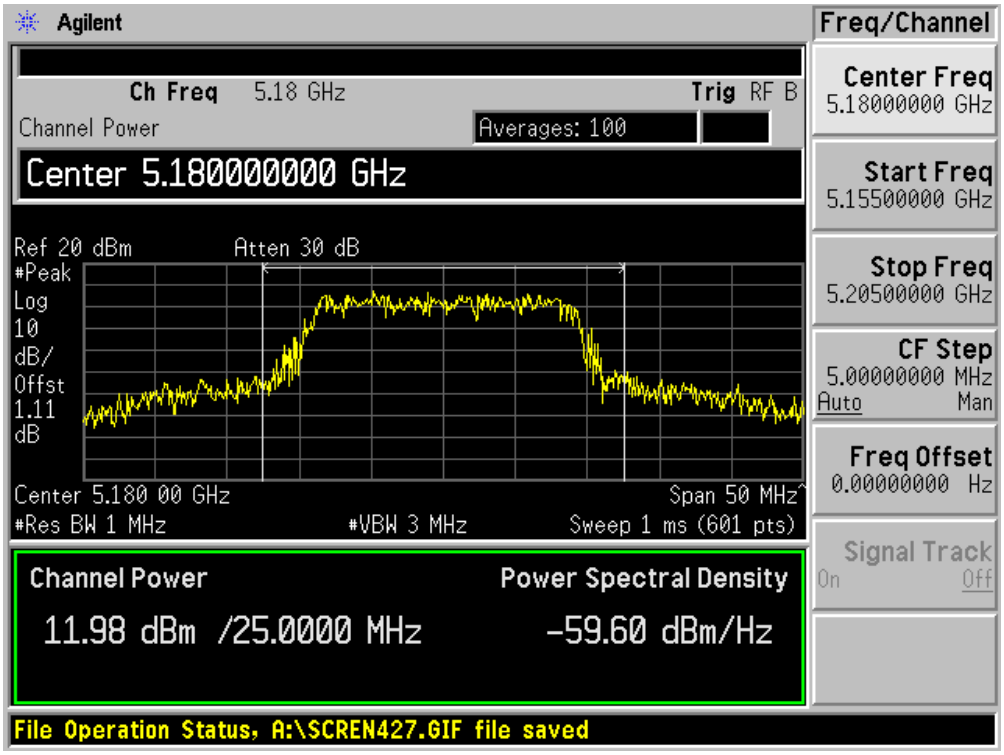
Channel 120 (5600MHz) - Chain A



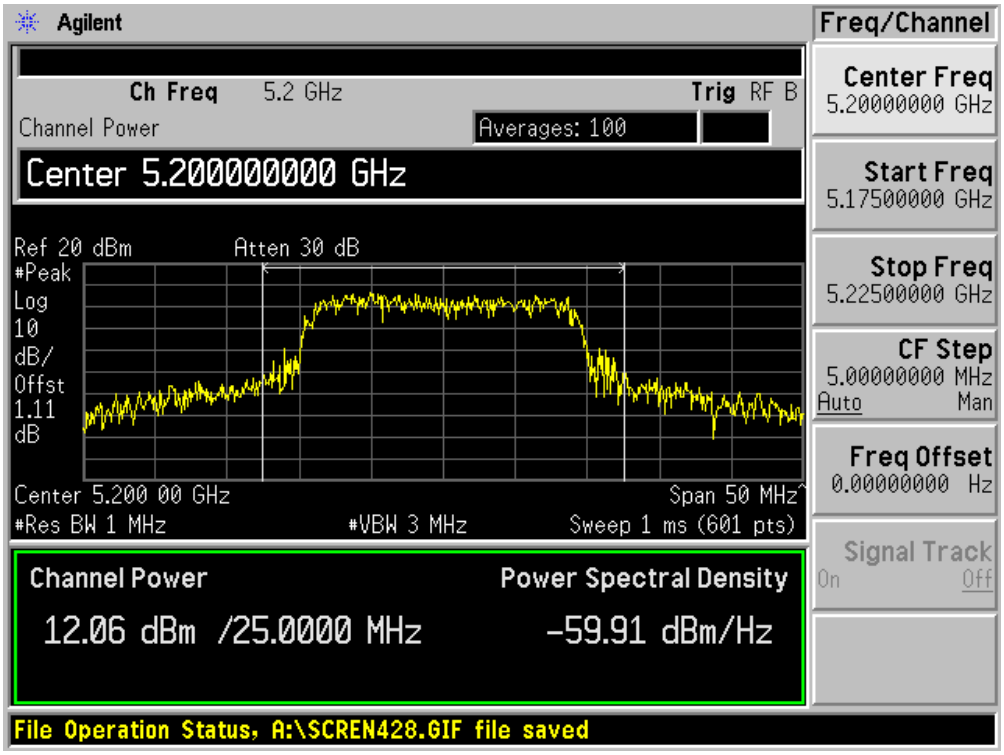
Channel 140 (5700MHz) - Chain A



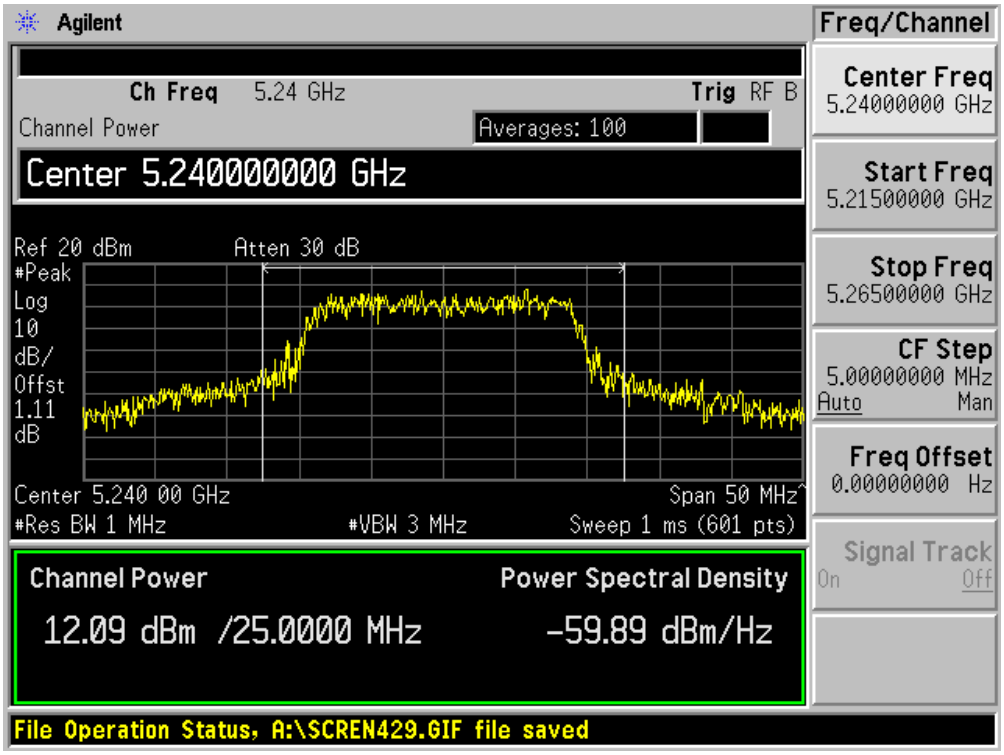
Channel 36 (5180MHz) - Chain B



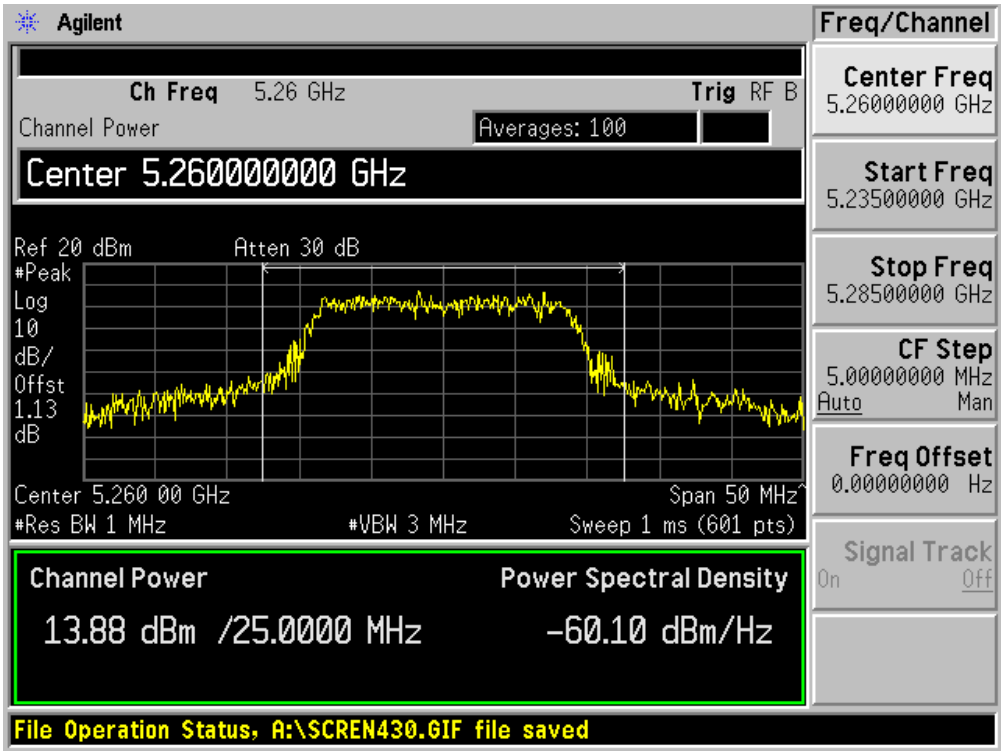
Channel 40 (5200MHz) - Chain B



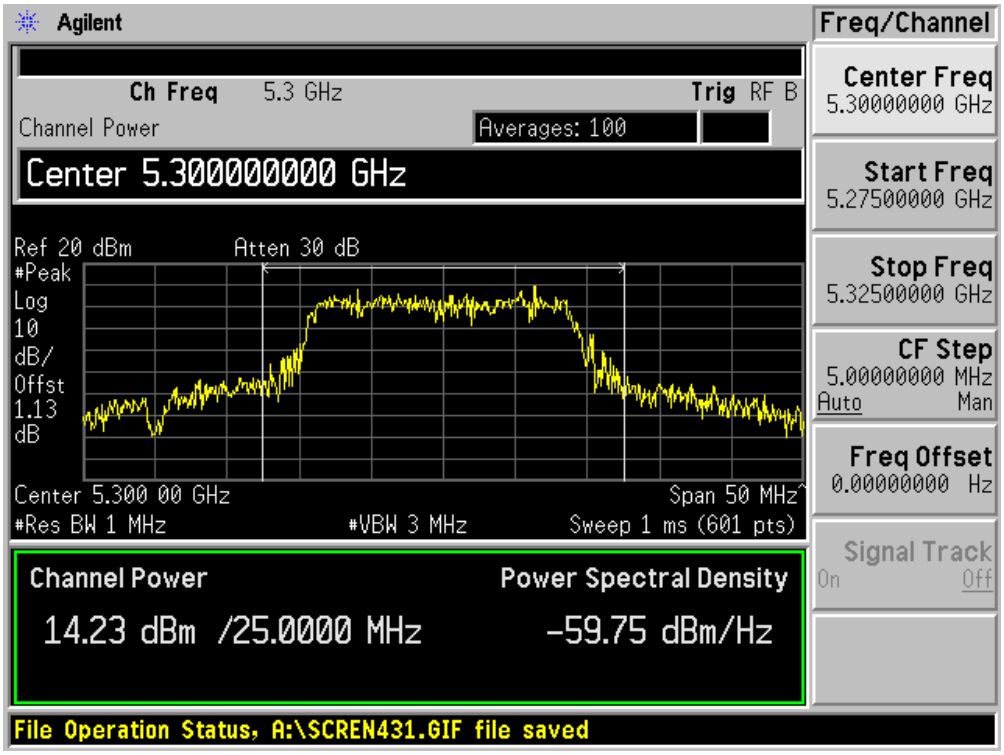
Channel 48 (5240MHz) - Chain B



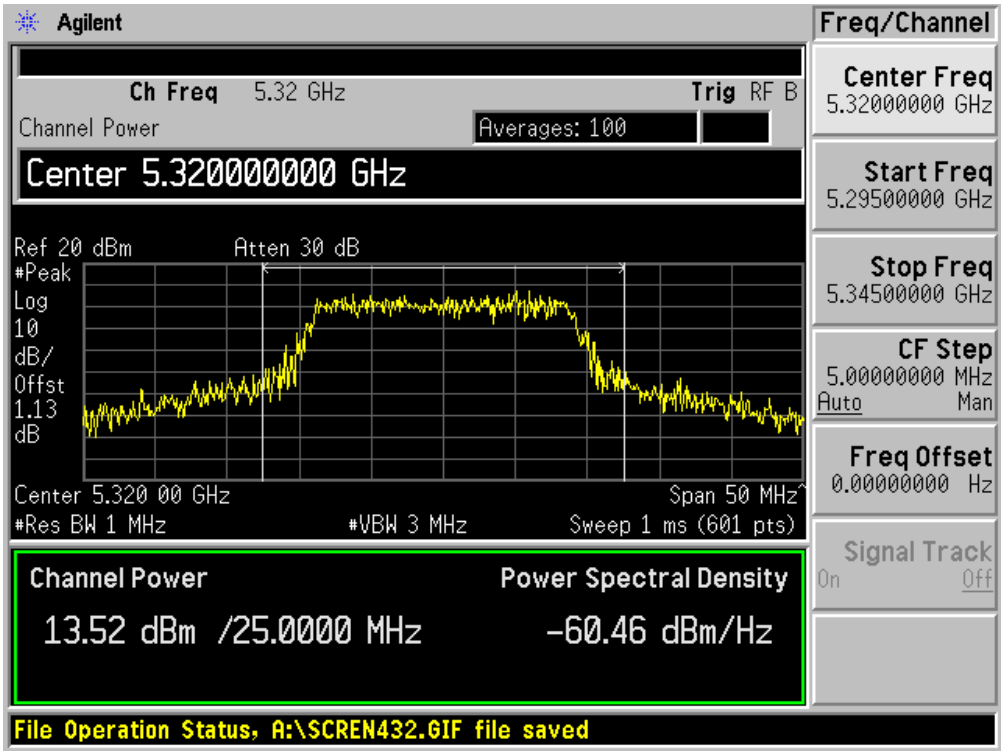
Channel 52 (5260MHz) - Chain B



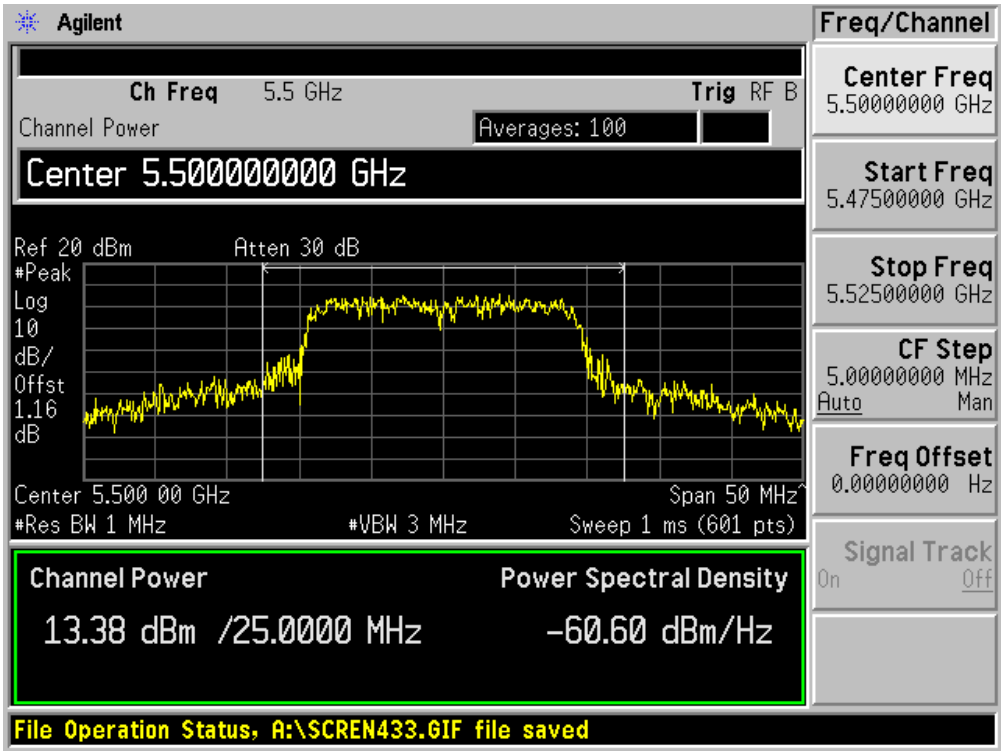
Channel 60 (5300MHz) - Chain B



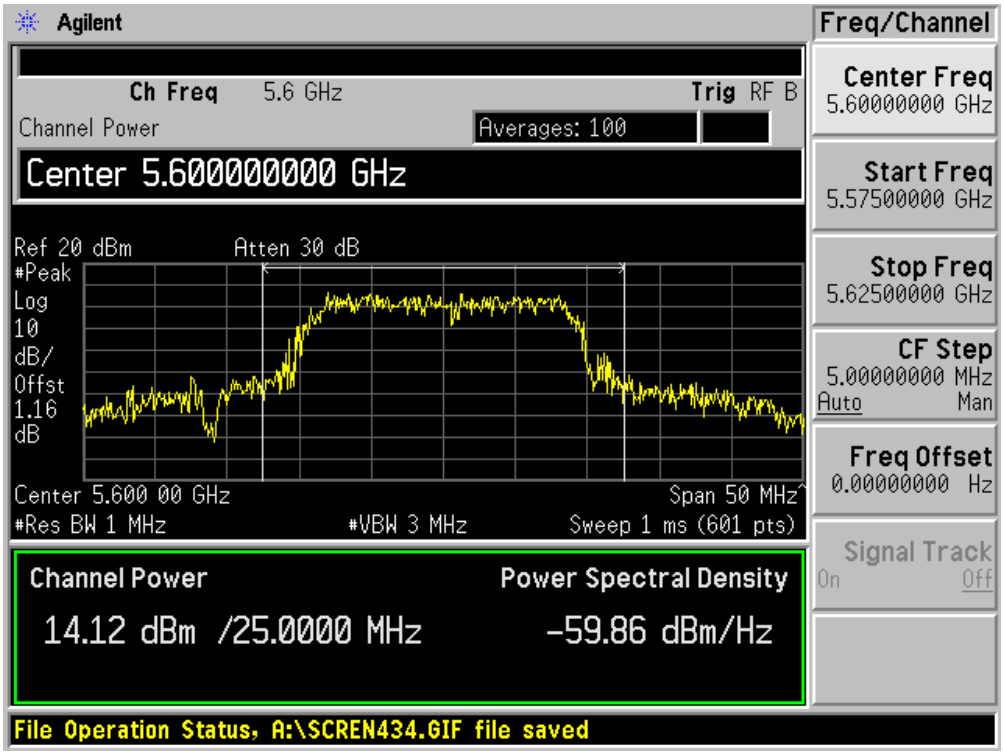
Channel 64 (5320MHz) - Chain B



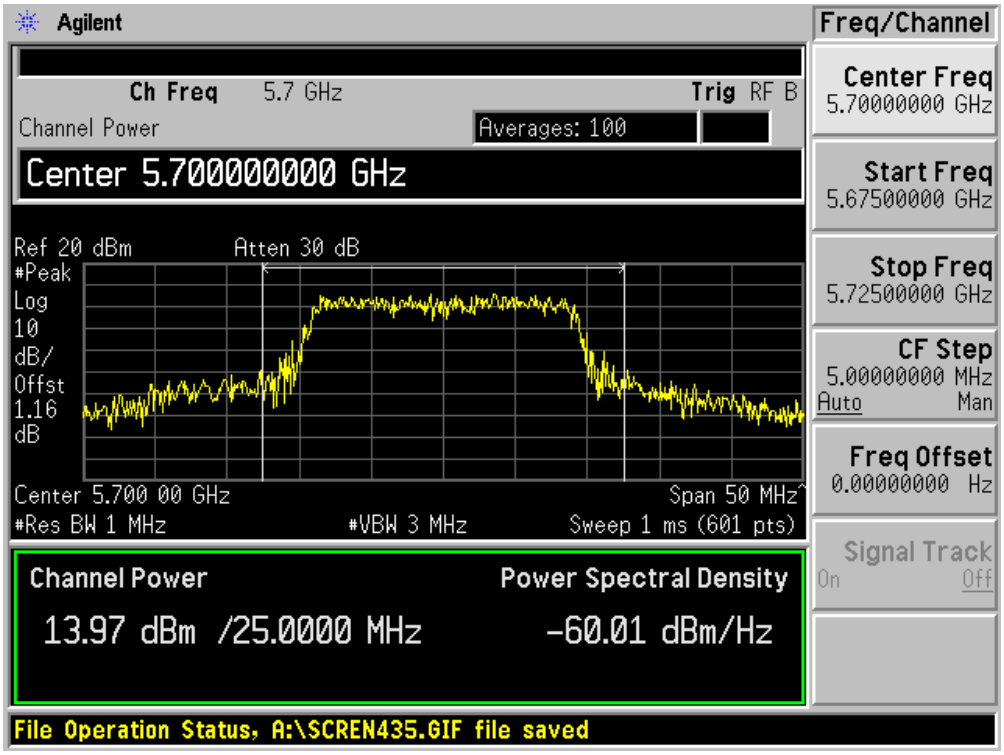
Channel 100 (5500MHz) - Chain B



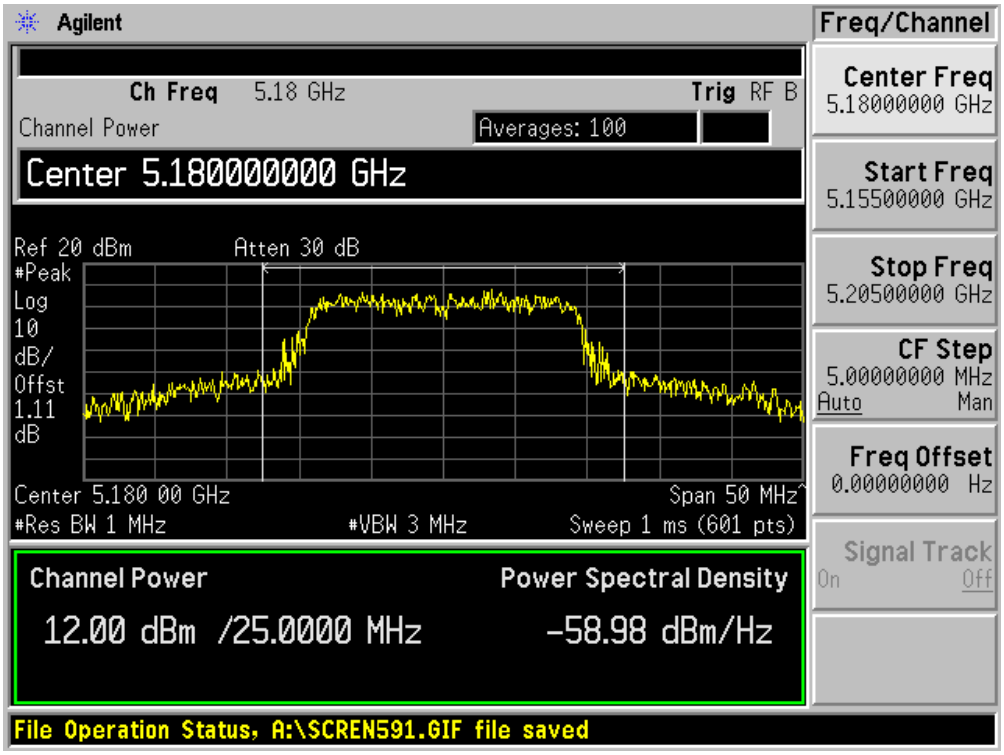
Channel 120 (5600MHz) - Chain B



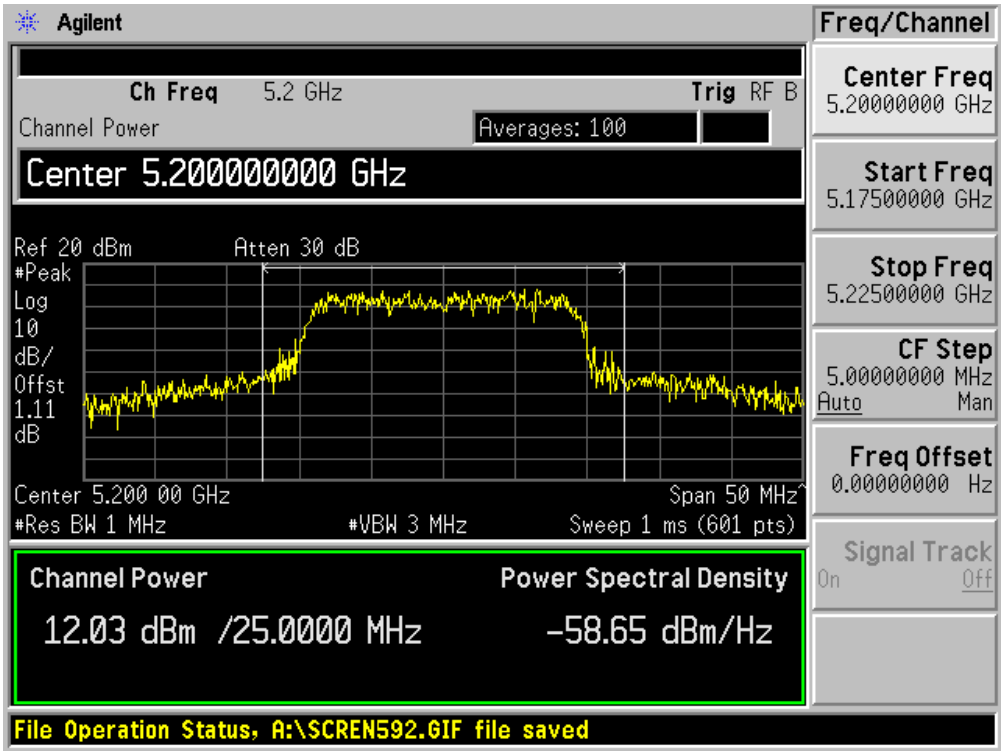
Channel 140 (5700MHz) - Chain B



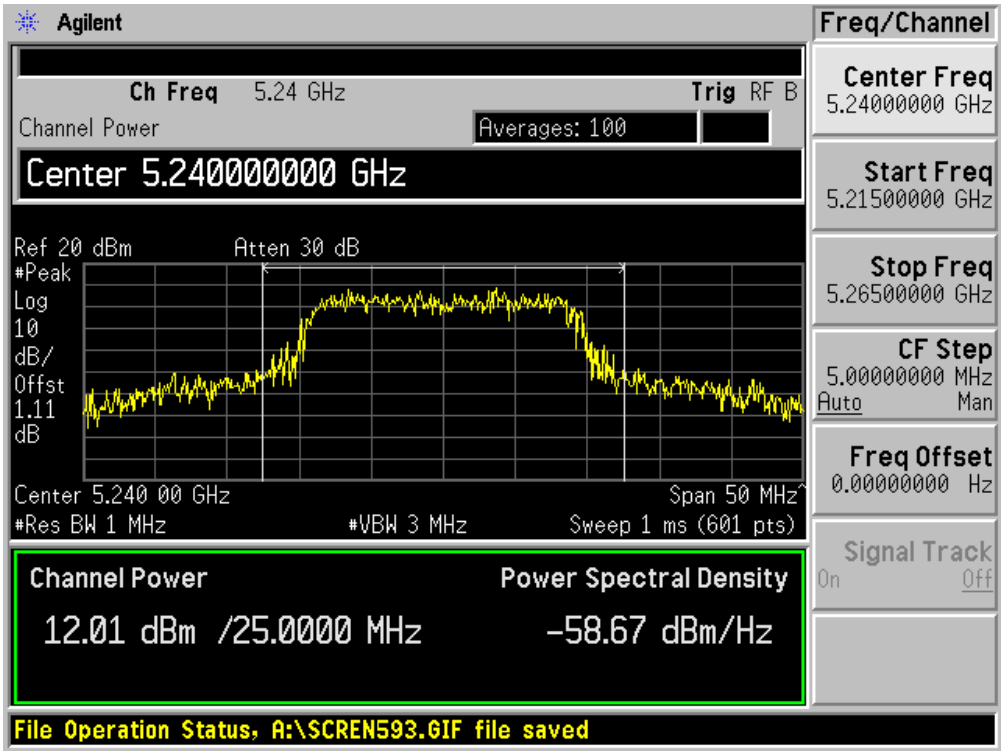
Channel 36 (5180MHz) - Chain C



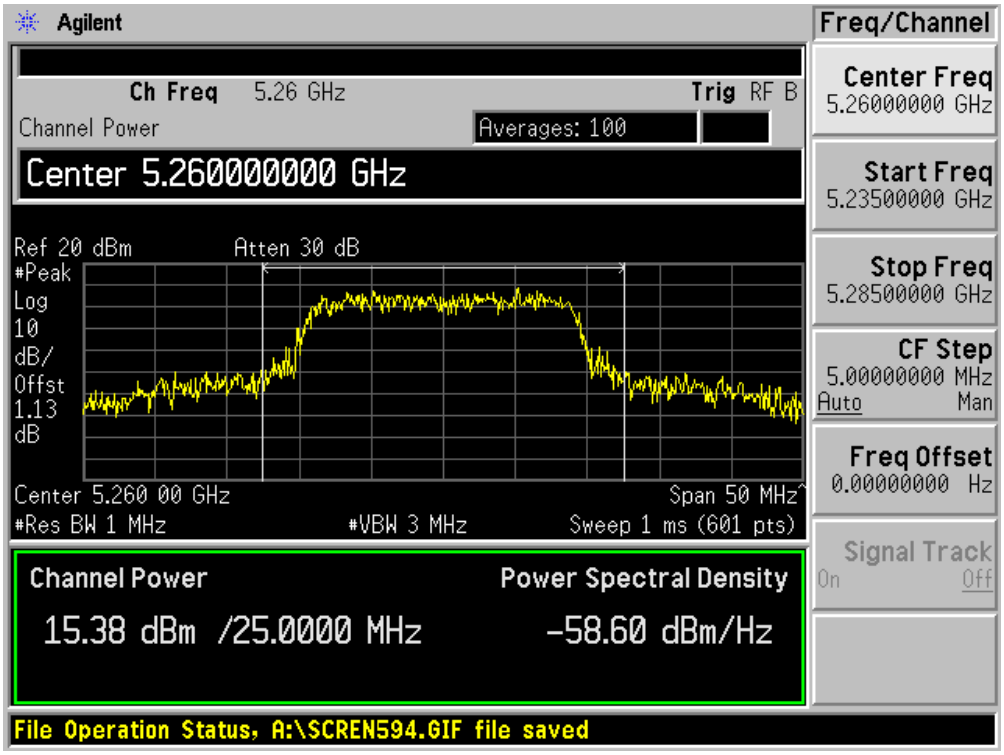
Channel 40 (5200MHz) - Chain C



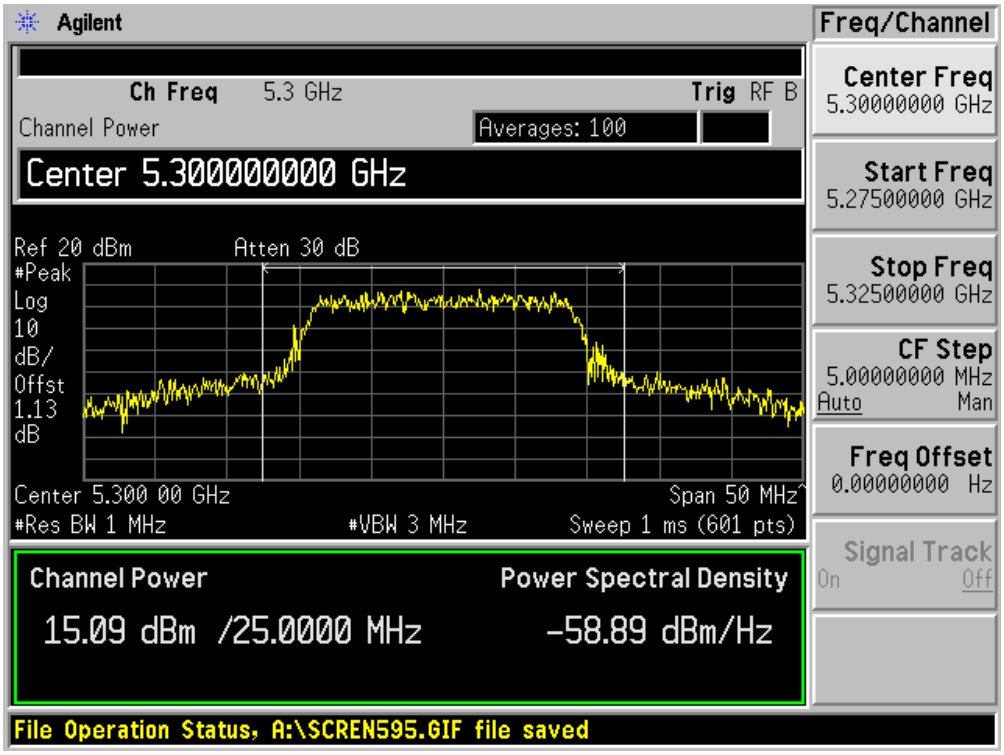
Channel 48 (5240MHz) - Chain C



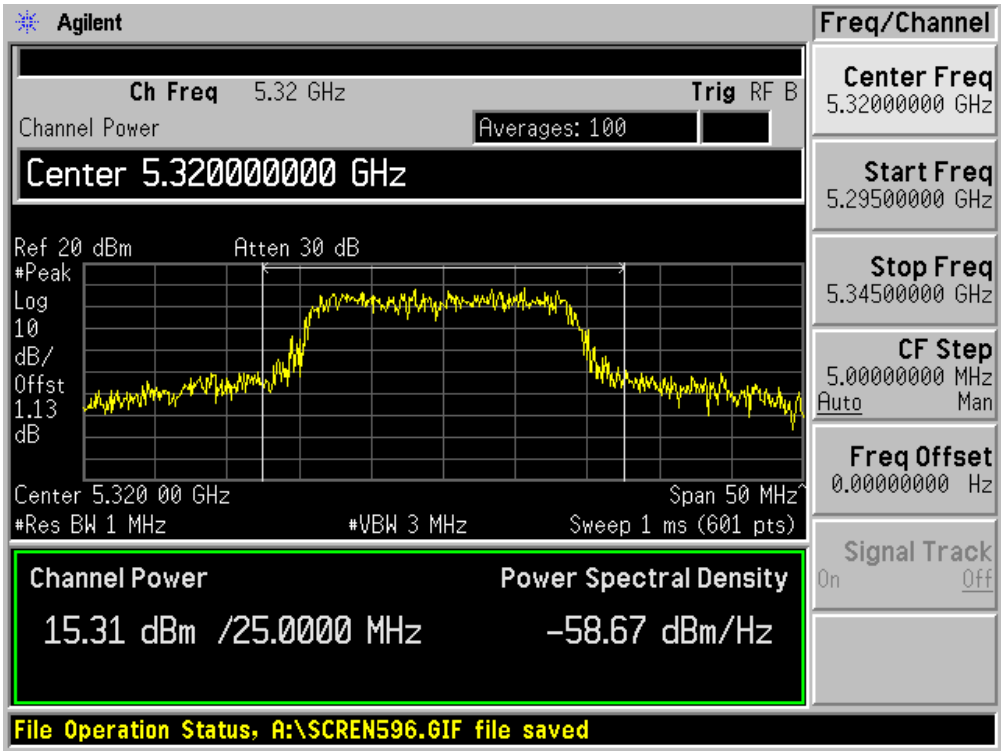
Channel 52 (5260MHz) - Chain C



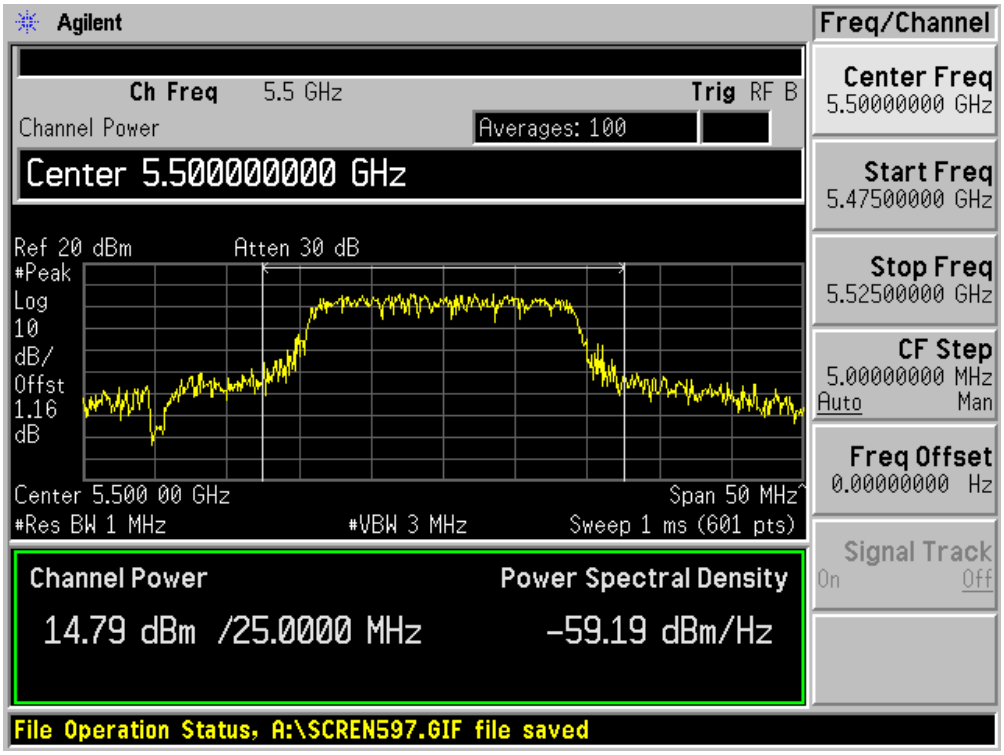
Channel 60 (5300MHz) - Chain C



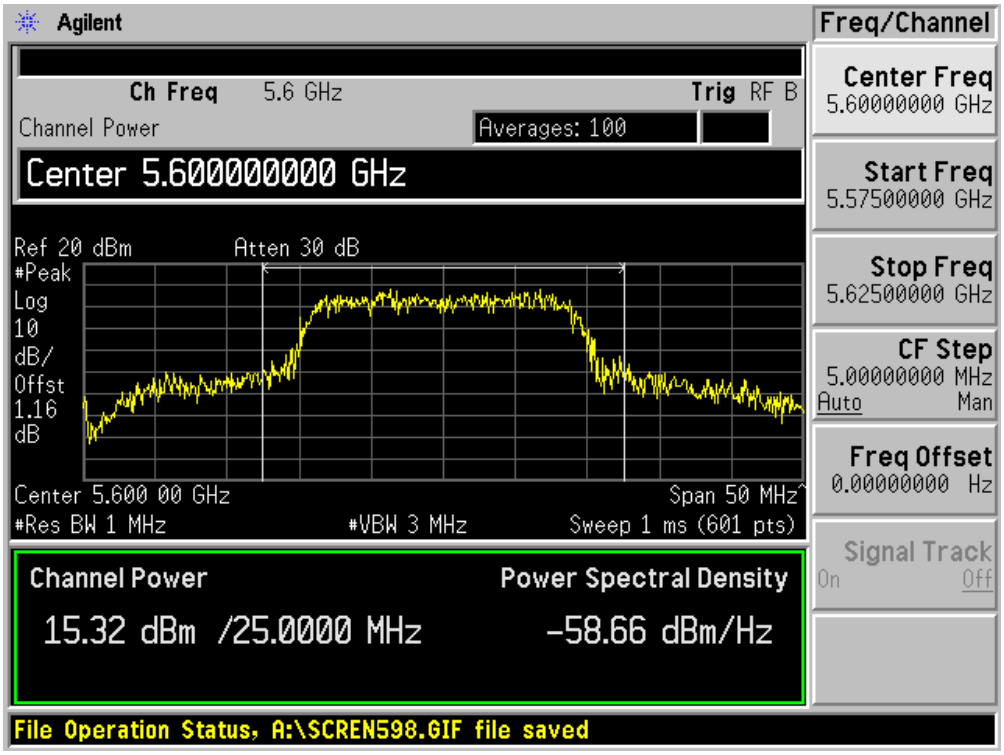
Channel 64 (5320MHz) - Chain C



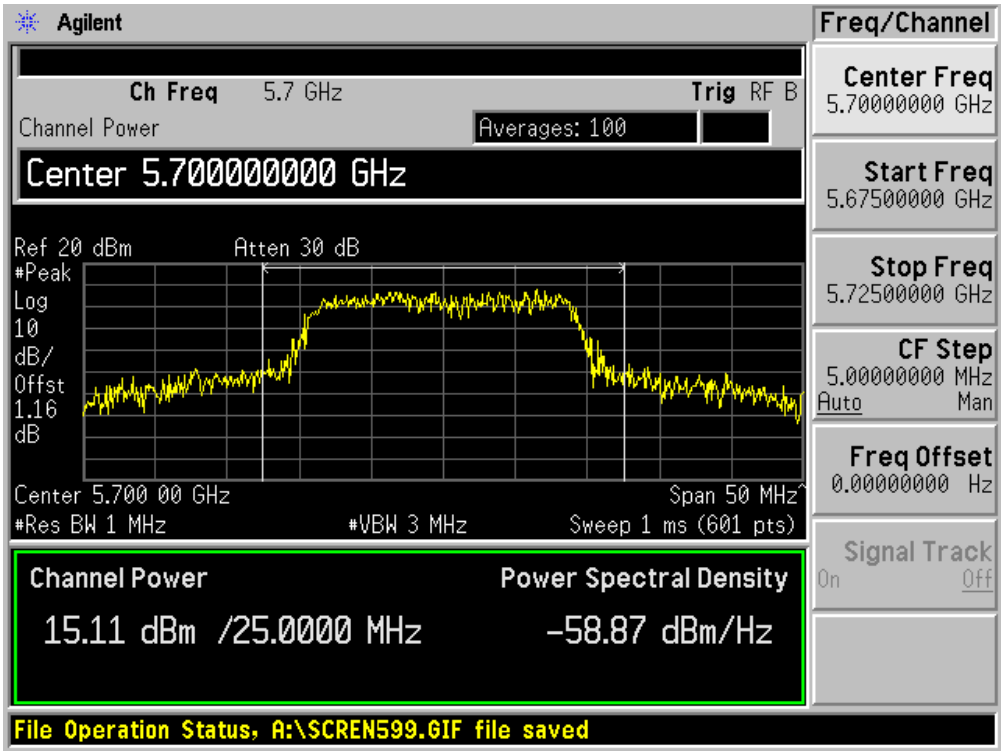
Channel 100 (5500MHz) - Chain C



Channel 120 (5600MHz) - Chain C



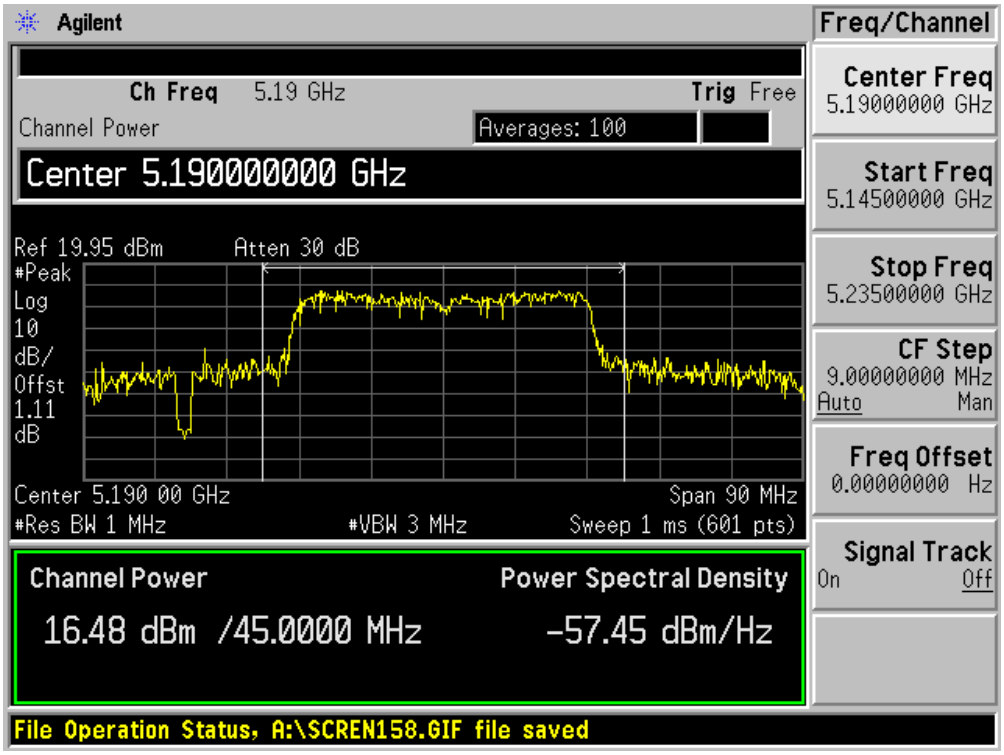
Channel 140 (5700MHz) - Chain C



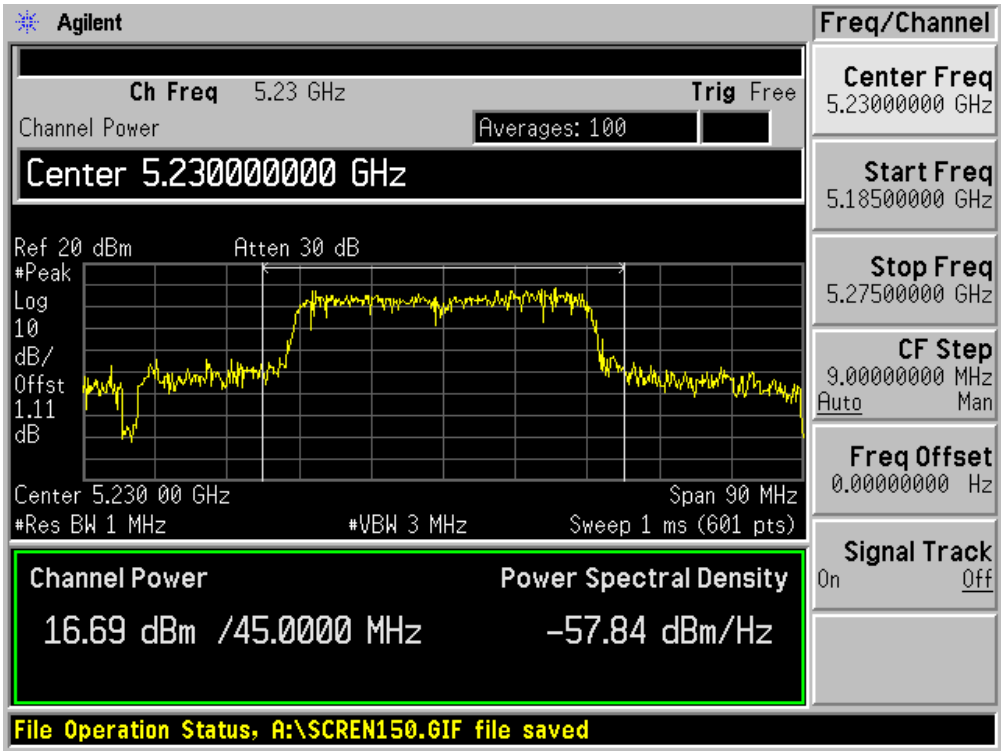
Product	:	Notebook Computer
Test Item	:	Power Output
Test Site	:	AC-4
Test Mode	:	Mode 3: Transmit by 802.11n (40MHz Bandwidth) (Chain A)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)			Total Power (dBm)	Limit (dBm)	Result
		Chain A	Chain B	Chain C			
38	5190	16.48	N/A	N/A	16.48	17.00	Pass
46	5230	16.69	N/A	N/A	16.69	17.00	Pass
54	5270	18.81	N/A	N/A	18.81	24.00	Pass
62	5310	18.82	N/A	N/A	18.82	24.00	Pass
102	5510	18.82	N/A	N/A	18.82	24.00	Pass
118	5590	19.01	N/A	N/A	19.01	24.00	Pass
134	5670	19.20	N/A	N/A	19.20	24.00	Pass

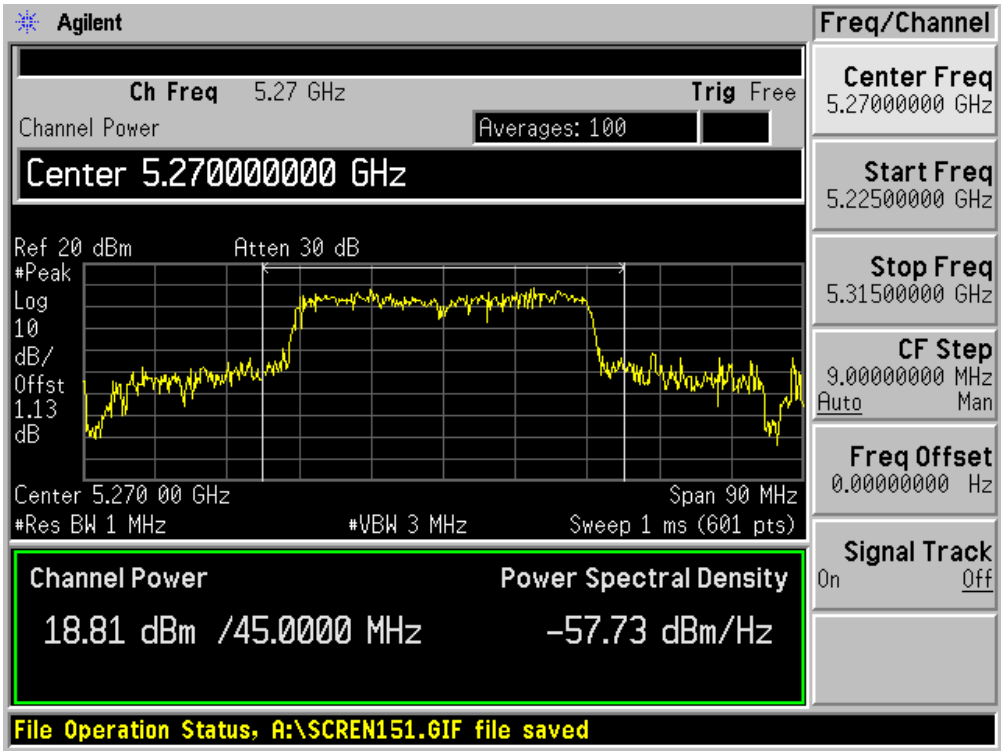
Channel 38 (5190MHz)



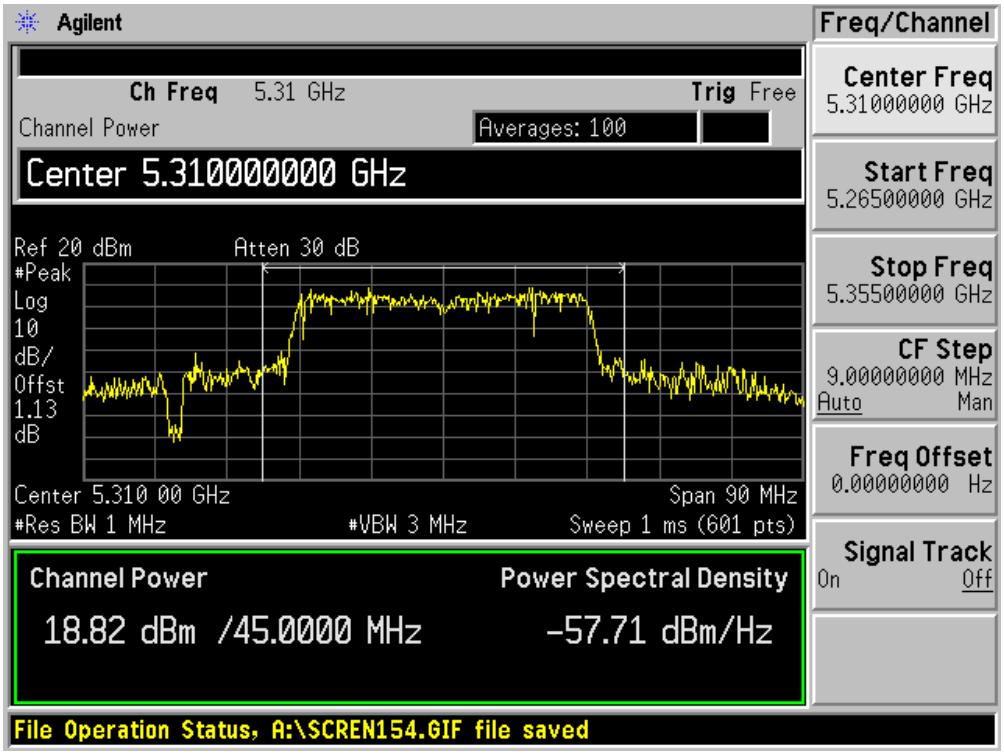
Channel 46 (5230MHz)



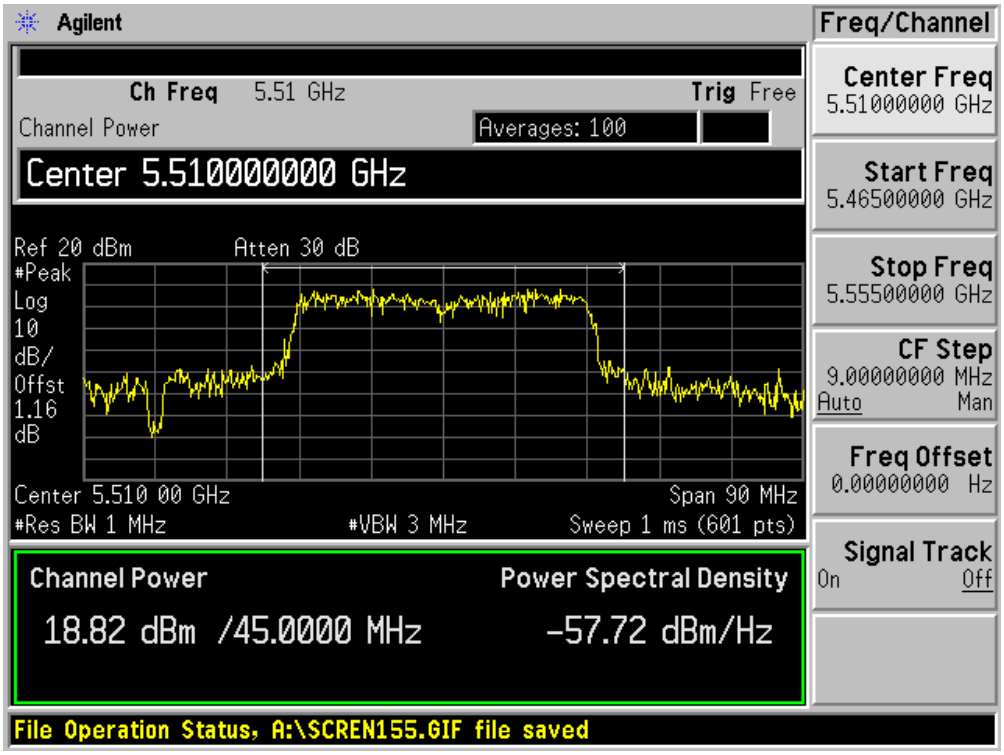
Channel 54 (5270MHz)



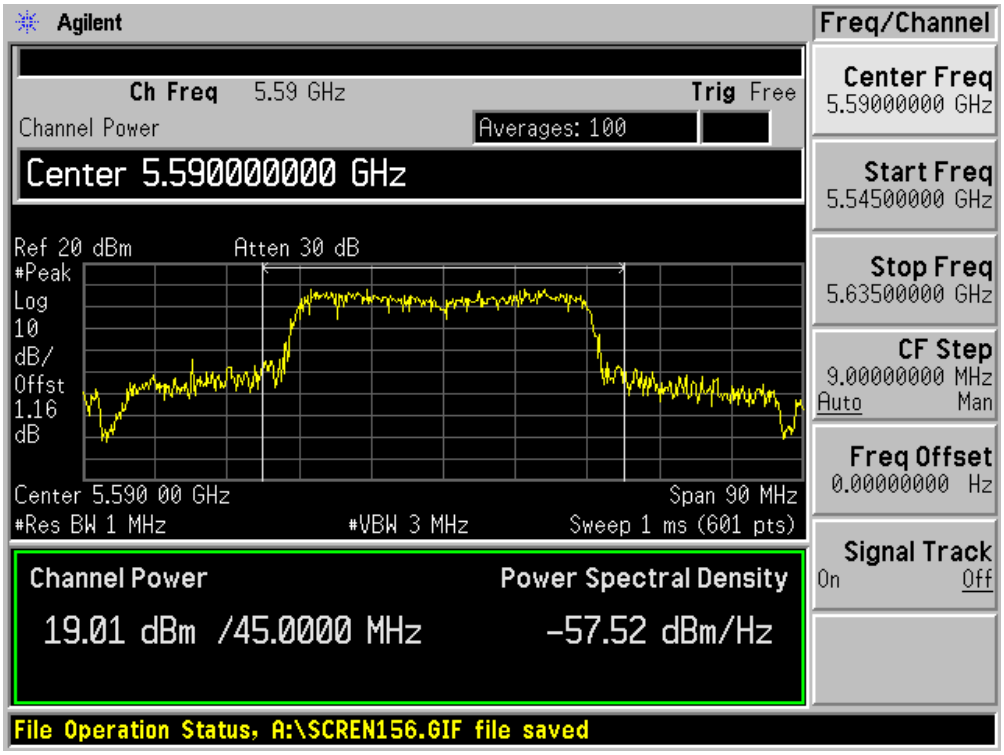
Channel 62 (5310MHz)



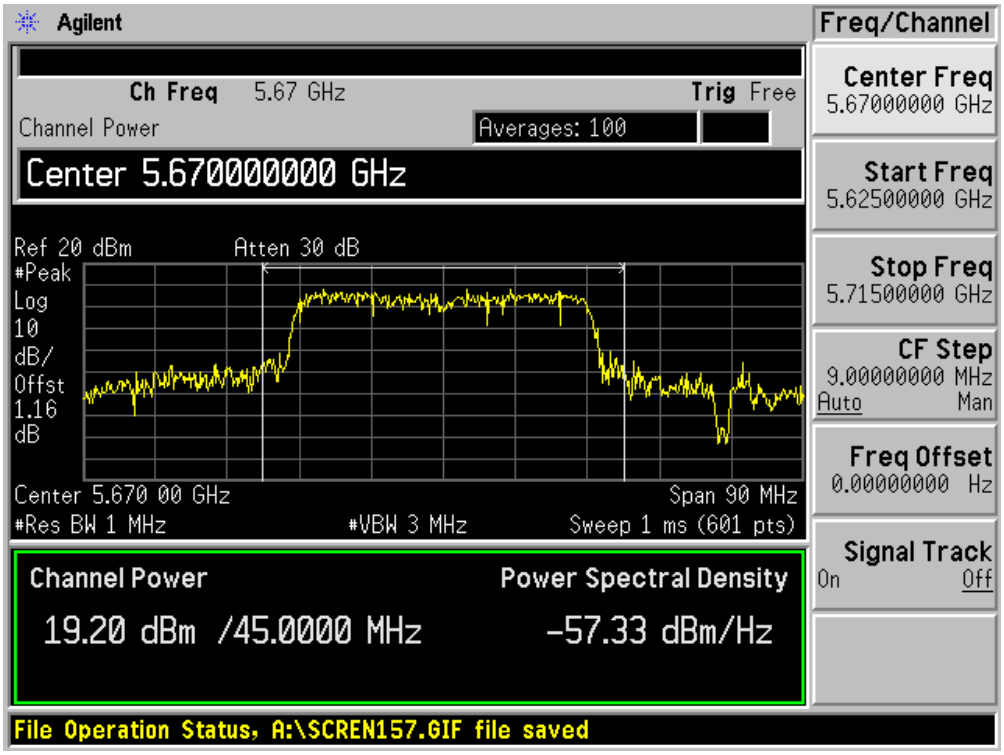
Channel 102 (5510MHz)



Channel 118 (5590MHz)



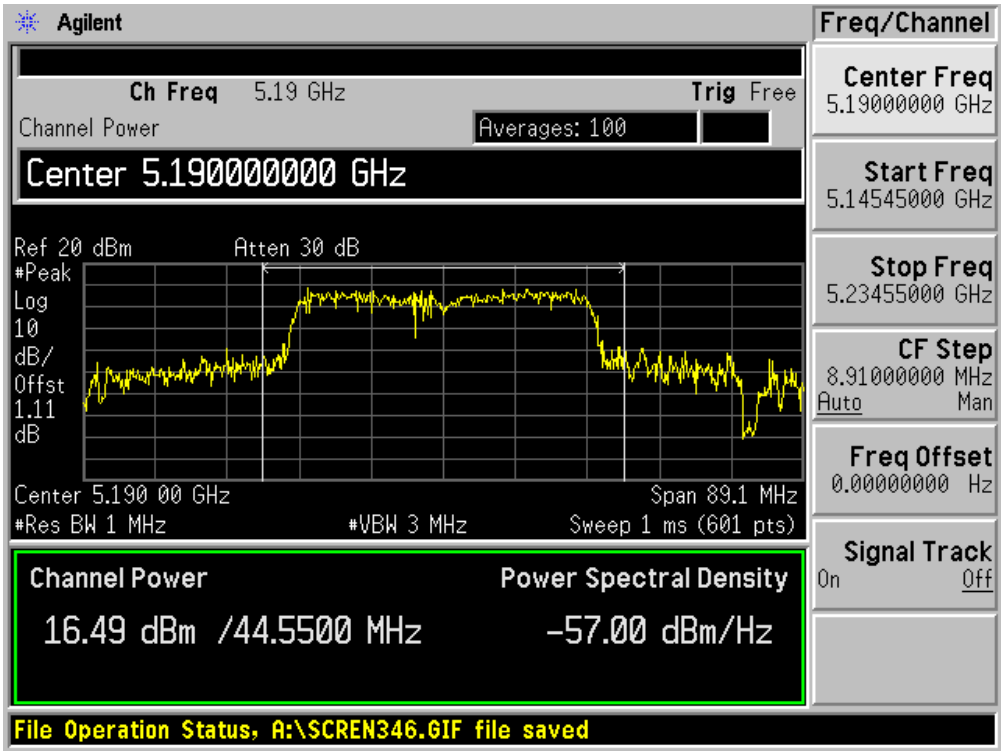
Channel 134 (5670MHz)



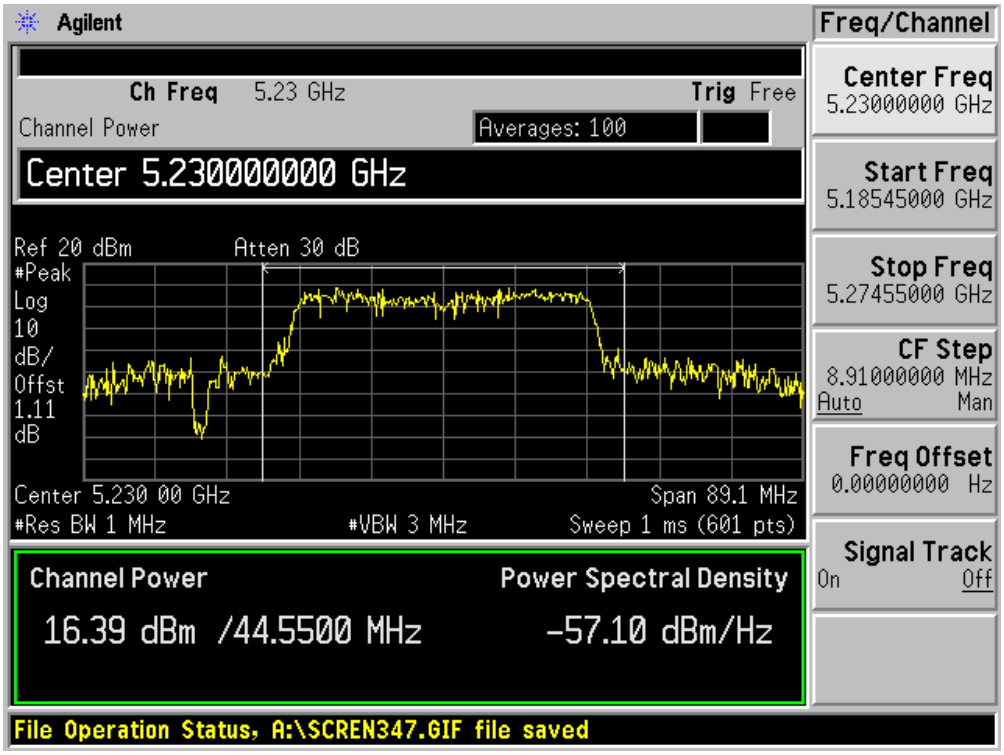
Product	:	Notebook Computer
Test Item	:	Power Output
Test Site	:	AC-4
Test Mode	:	Mode 3: Transmit by 802.11n (40MHz Bandwidth) (Chain B)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)			Total Power (dBm)	Limit (dBm)	Result
		Chain A	Chain B	Chain C			
38	5190	N/A	16.49	N/A	16.49	17.00	Pass
46	5230	N/A	16.39	N/A	16.39	17.00	Pass
54	5270	N/A	19.71	N/A	19.71	24.00	Pass
62	5310	N/A	19.56	N/A	19.56	24.00	Pass
102	5510	N/A	19.90	N/A	19.90	24.00	Pass
118	5590	N/A	19.88	N/A	19.88	24.00	Pass
134	5670	N/A	19.72	N/A	19.72	24.00	Pass

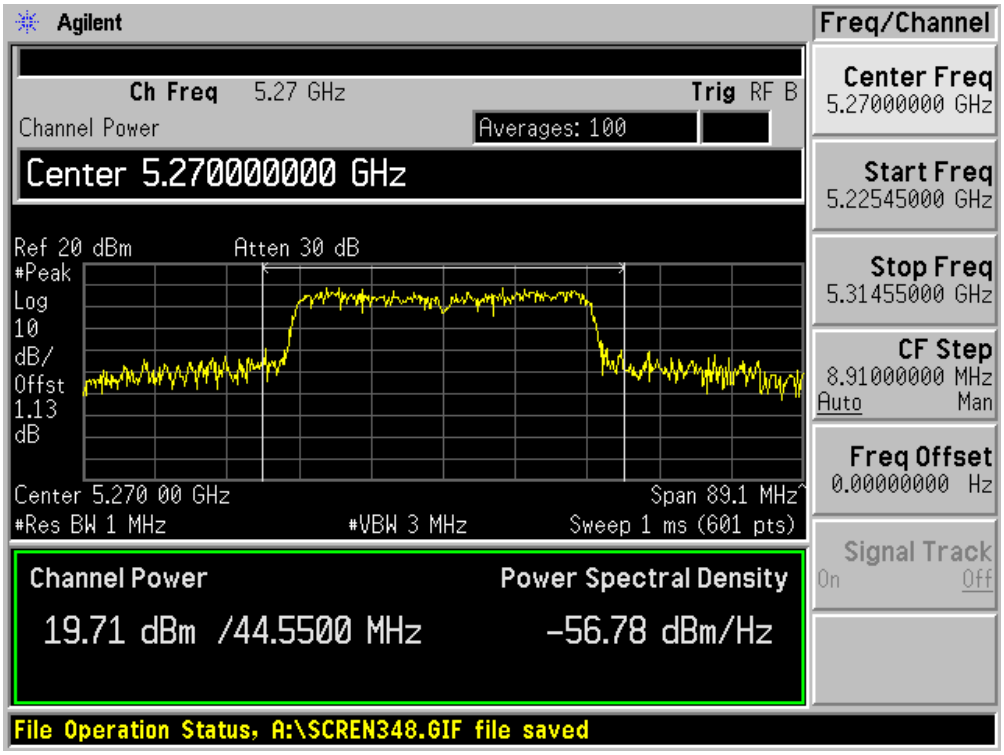
Channel 38 (5190MHz)



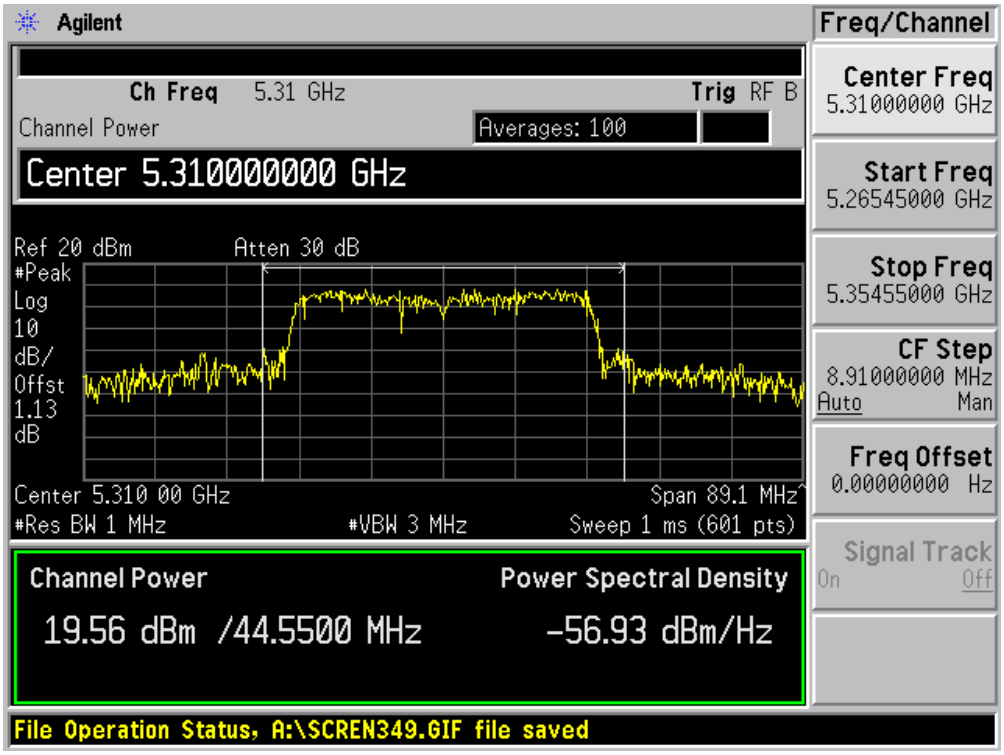
Channel 46 (5230MHz)



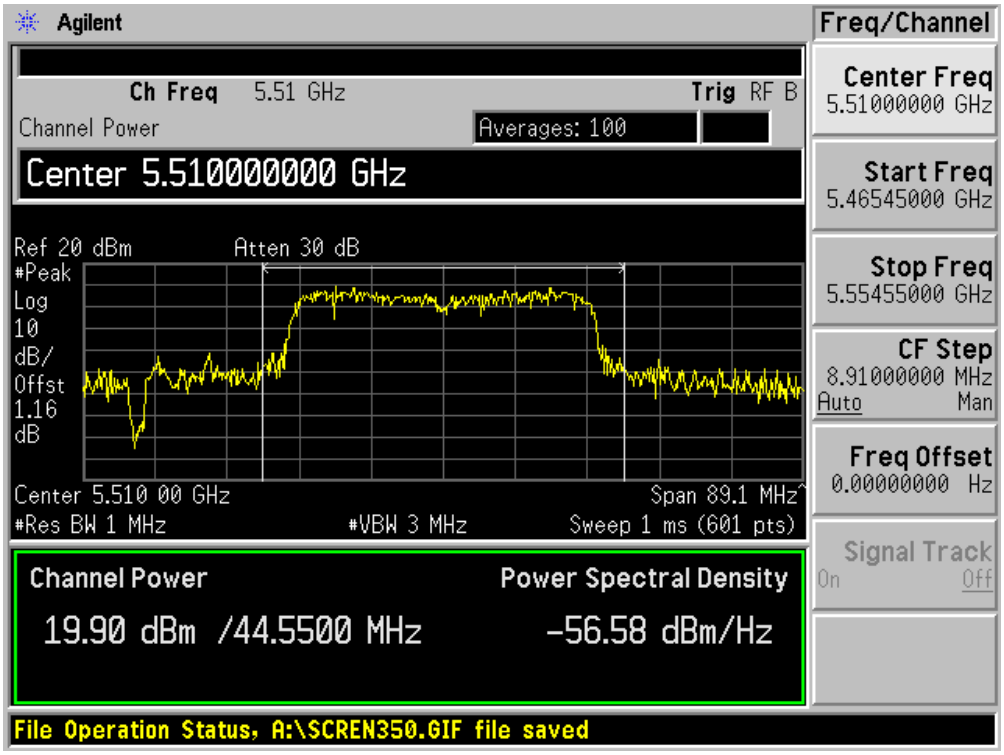
Channel 54 (5270MHz)



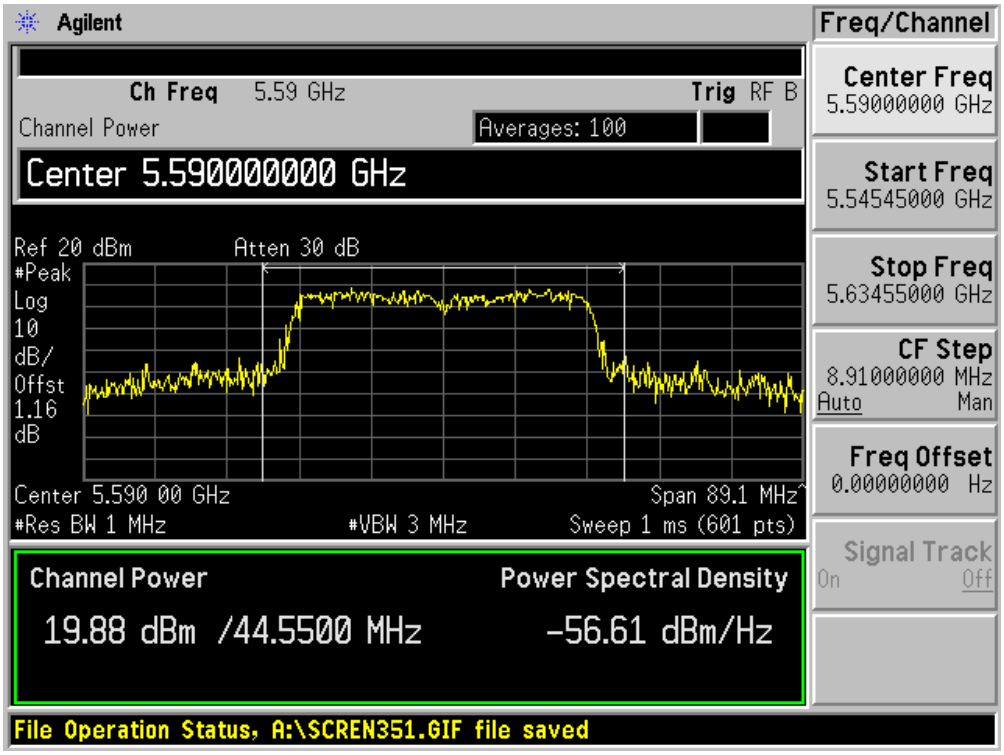
Channel 62 (5310MHz)



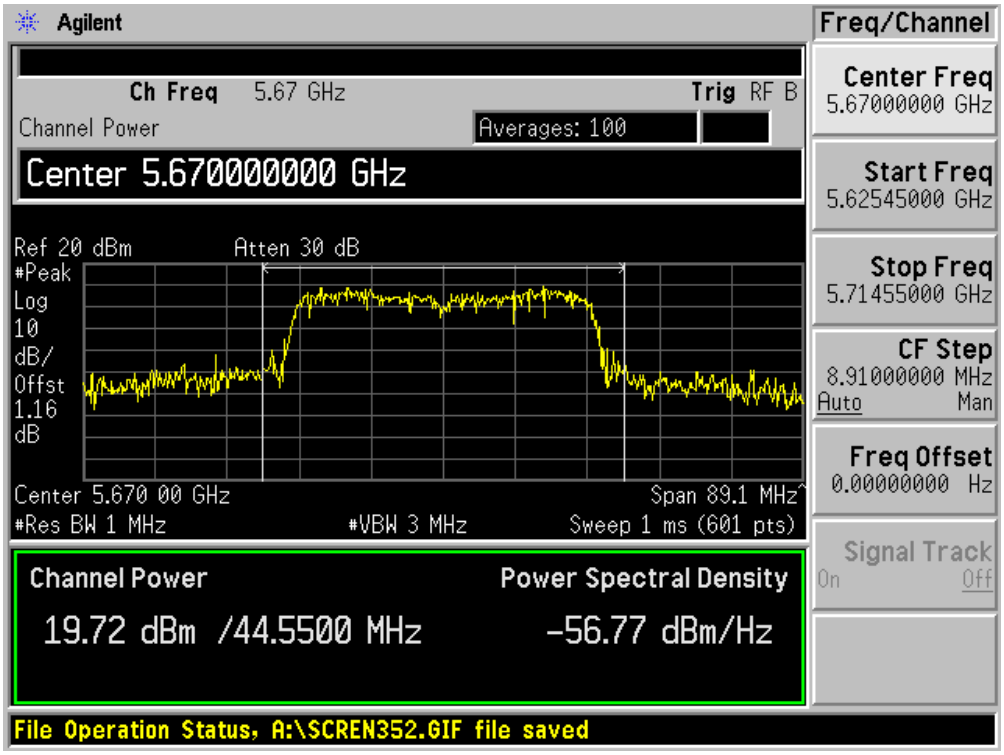
Channel 102 (5510MHz)



Channel 118 (5590MHz)



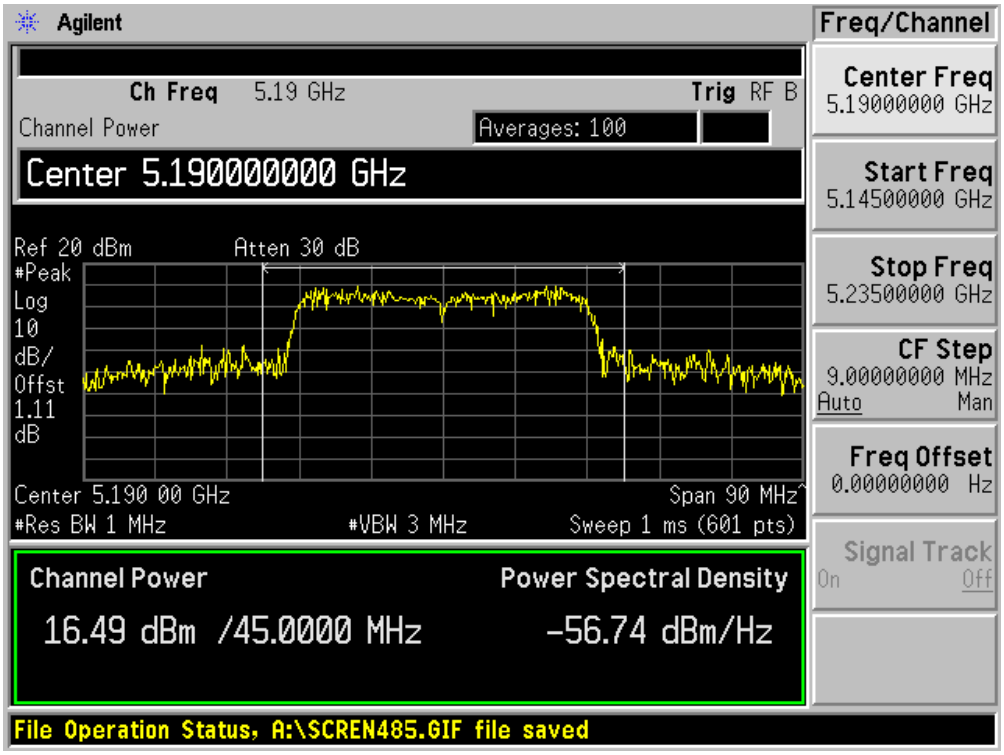
Channel 134 (5670MHz)



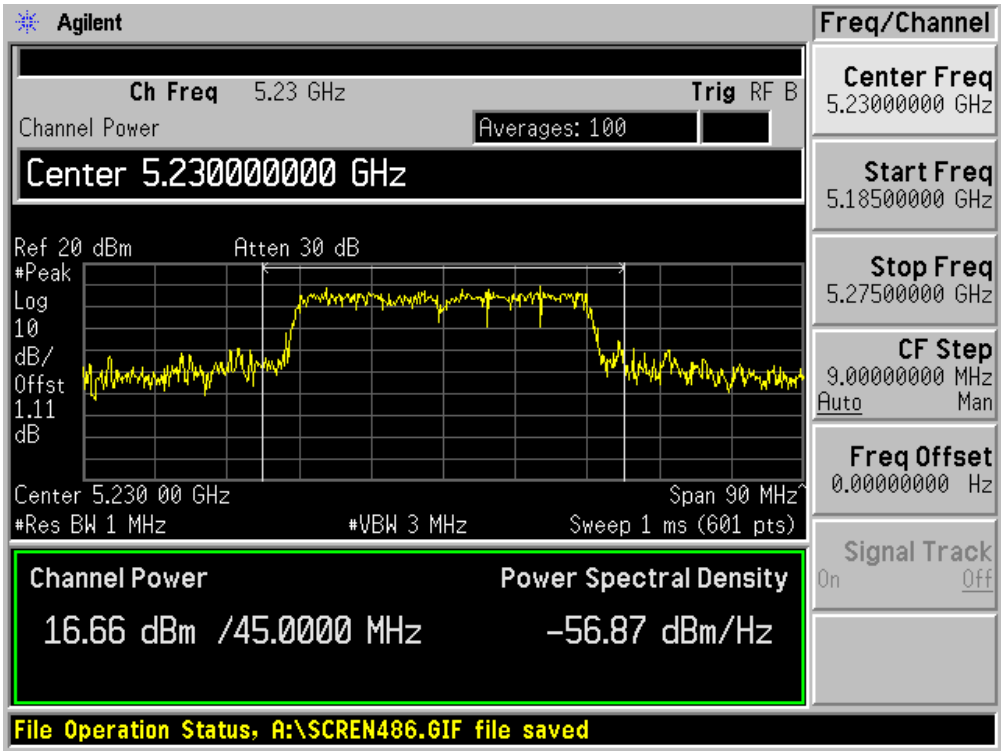
Product	:	Notebook Computer
Test Item	:	Power Output
Test Site	:	AC-4
Test Mode	:	Mode 3: Transmit by 802.11n (40MHz Bandwidth) (Chain C)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)			Total Power (dBm)	Limit (dBm)	Result
		Chain A	Chain B	Chain C			
38	5190	N/A	N/A	16.49	16.49	17.00	Pass
46	5230	N/A	N/A	16.66	16.66	17.00	Pass
54	5270	N/A	N/A	19.21	19.21	24.00	Pass
62	5310	N/A	N/A	19.41	19.41	24.00	Pass
102	5510	N/A	N/A	19.99	19.99	24.00	Pass
118	5590	N/A	N/A	20.04	20.04	24.00	Pass
134	5670	N/A	N/A	20.10	20.10	24.00	Pass

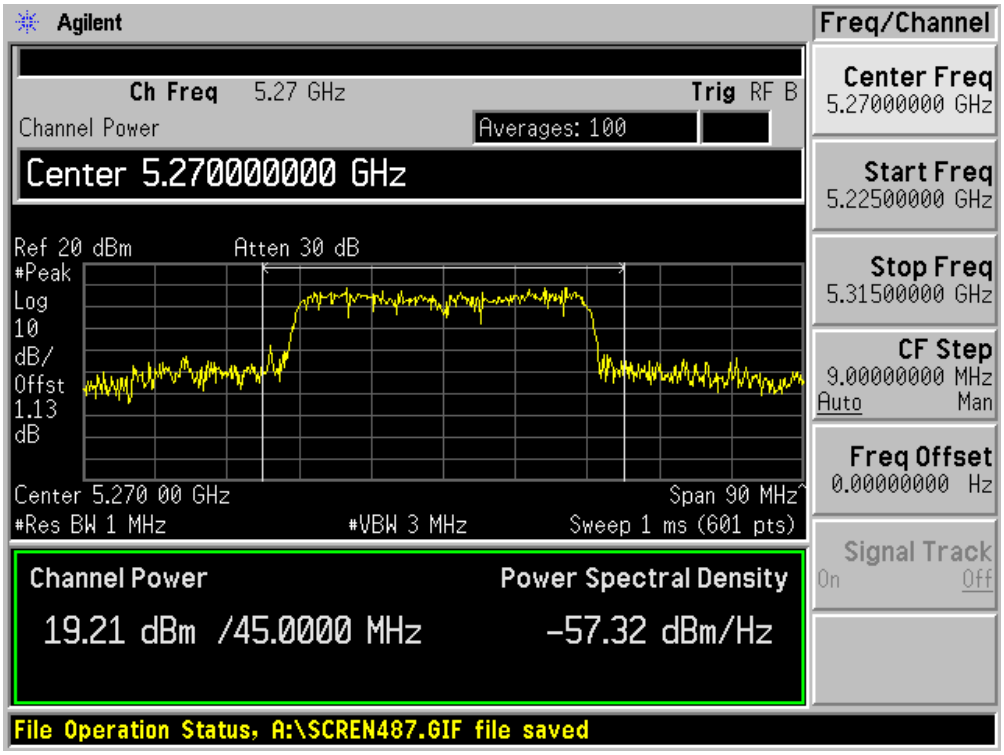
Channel 38 (5190MHz)



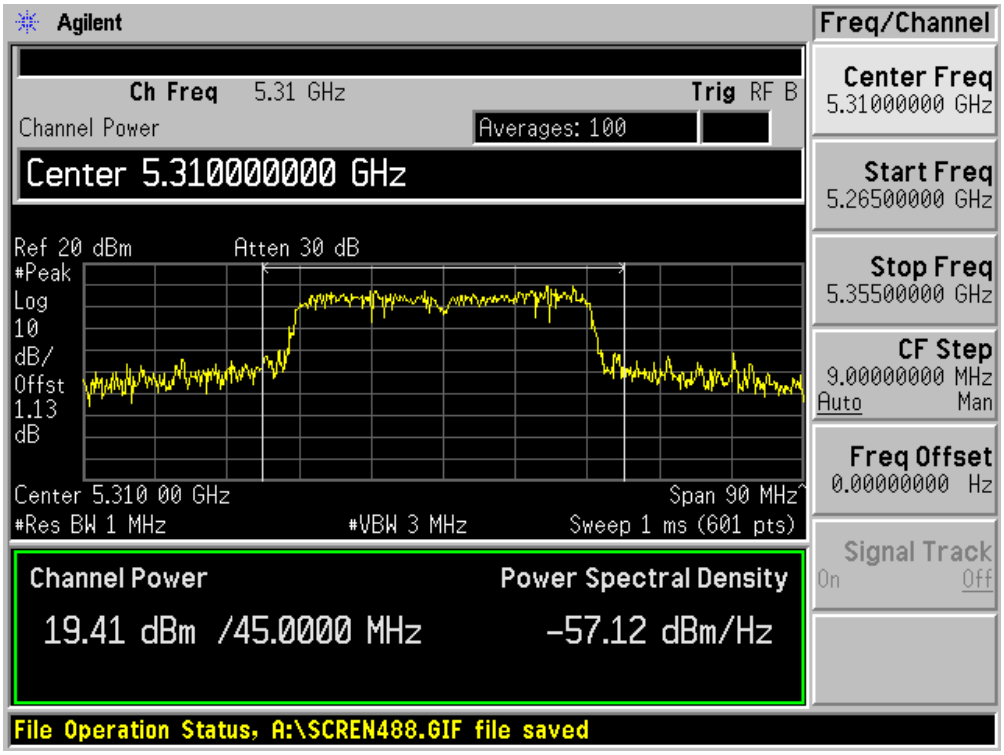
Channel 46 (5230MHz)



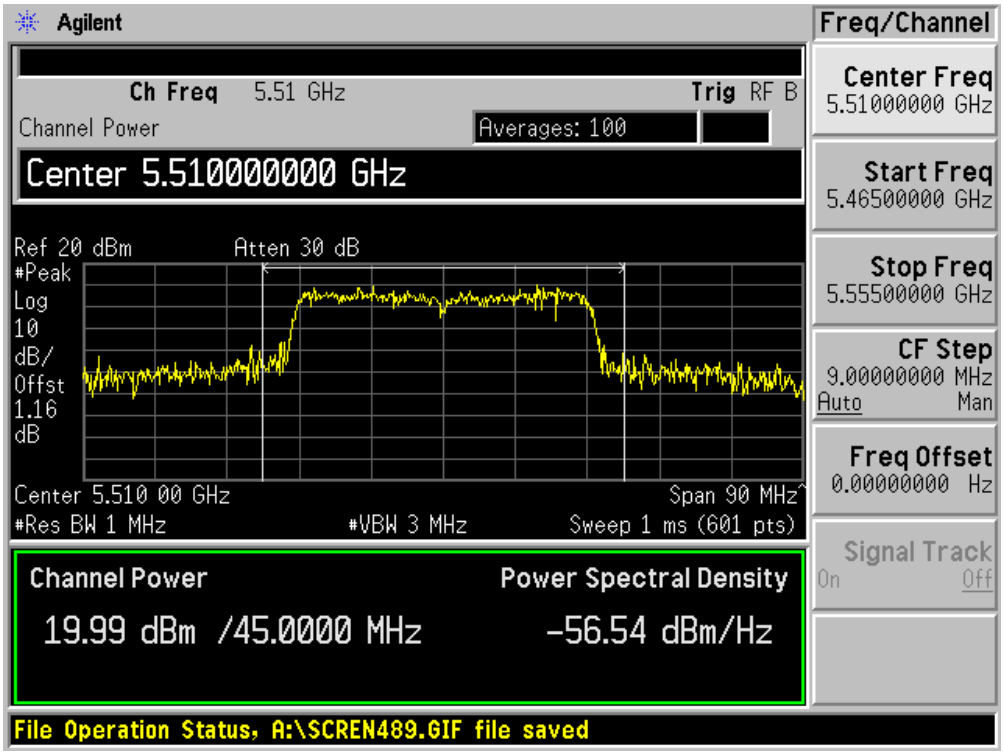
Channel 54 (5270MHz)



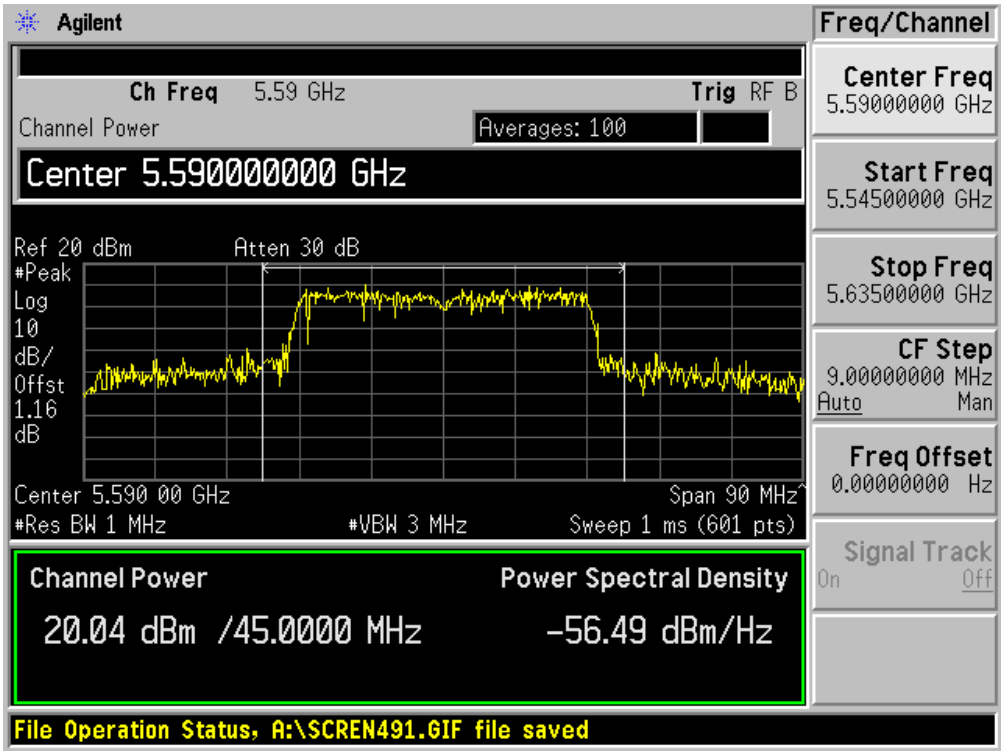
Channel 62 (5310MHz)



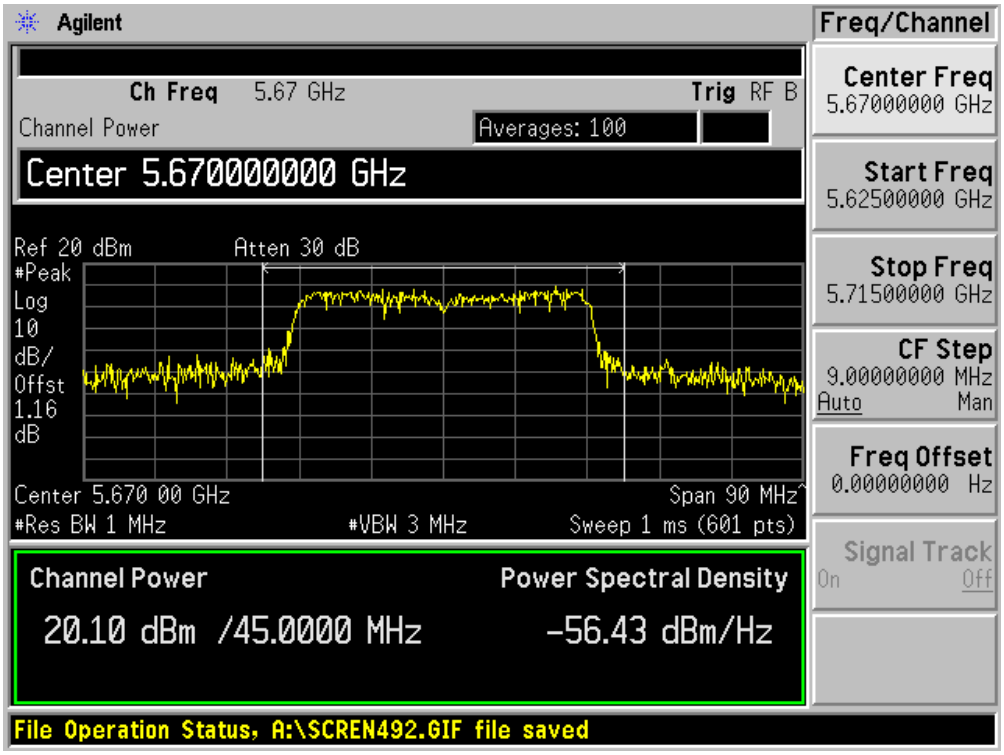
Channel 102 (5510MHz)



Channel 118 (5590MHz)



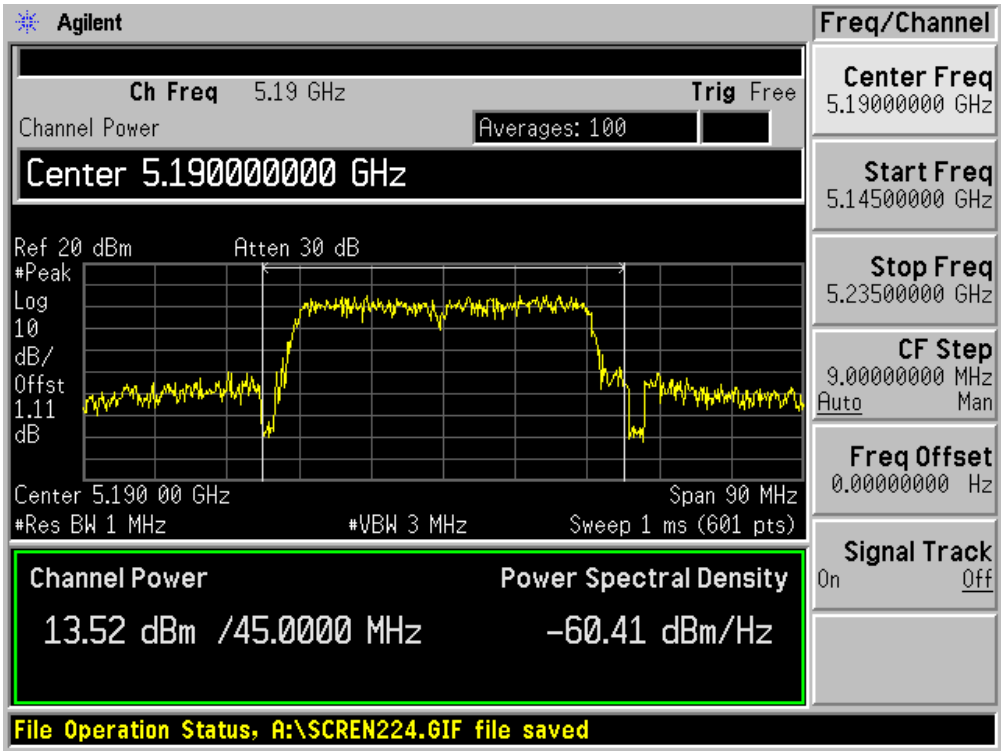
Channel 134 (5670MHz)



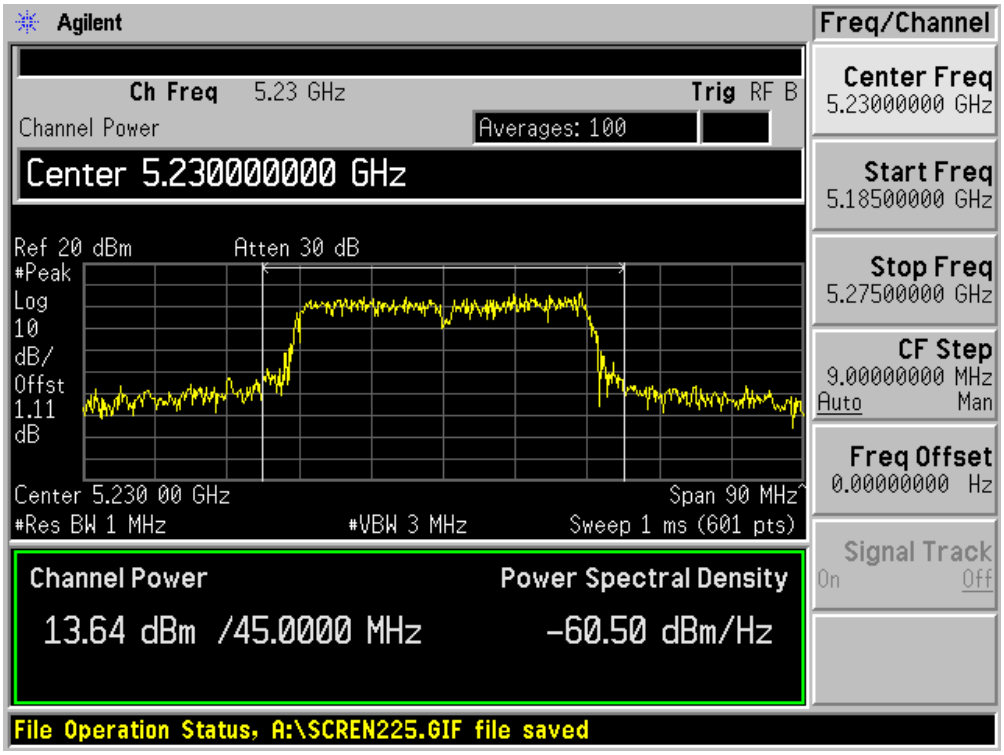
Product	:	Notebook Computer
Test Item	:	Power Output
Test Site	:	AC-4
Test Mode	:	Mode 3: Transmit by 802.11n (40MHz Bandwidth) (Chain A+B)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)			Total Power (dBm)	Limit (dBm)	Result
		Chain A	Chain B	Chain C			
38	5190	13.52	13.70	N/A	16.62	17.00	Pass
46	5230	13.64	13.39	N/A	16.53	17.00	Pass
54	5270	16.06	16.32	N/A	19.20	24.00	Pass
62	5310	16.20	16.37	N/A	19.30	24.00	Pass
102	5510	16.46	15.99	N/A	19.24	24.00	Pass
118	5590	17.16	16.46	N/A	19.83	24.00	Pass
134	5670	17.67	16.29	N/A	20.04	24.00	Pass

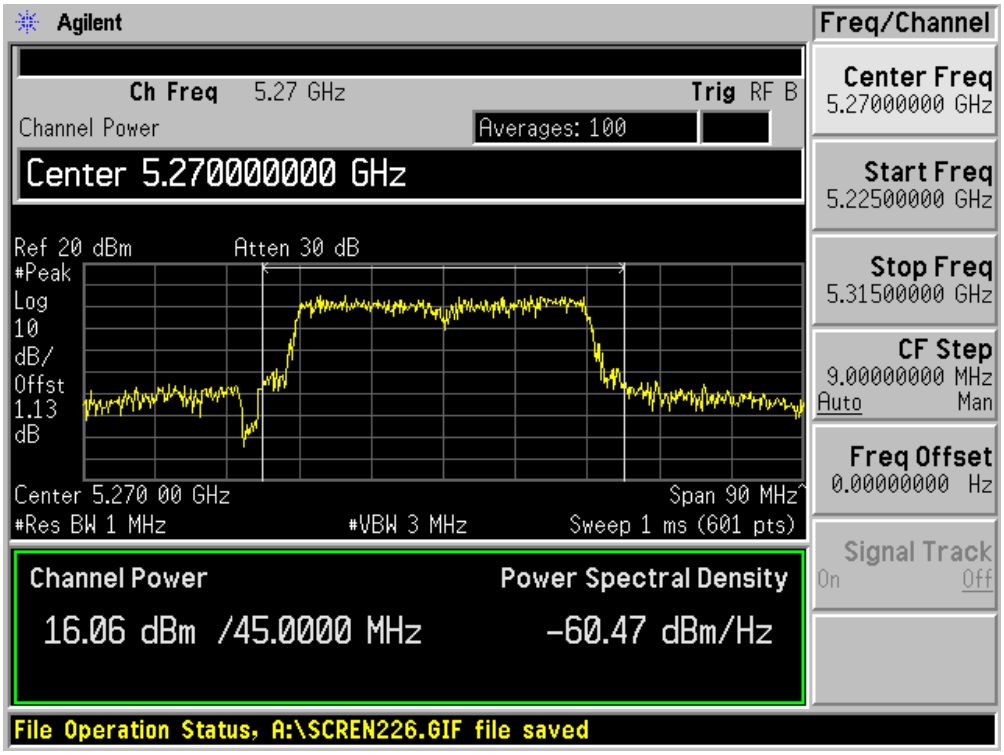
Channel 38 (5190MHz) - Chain A



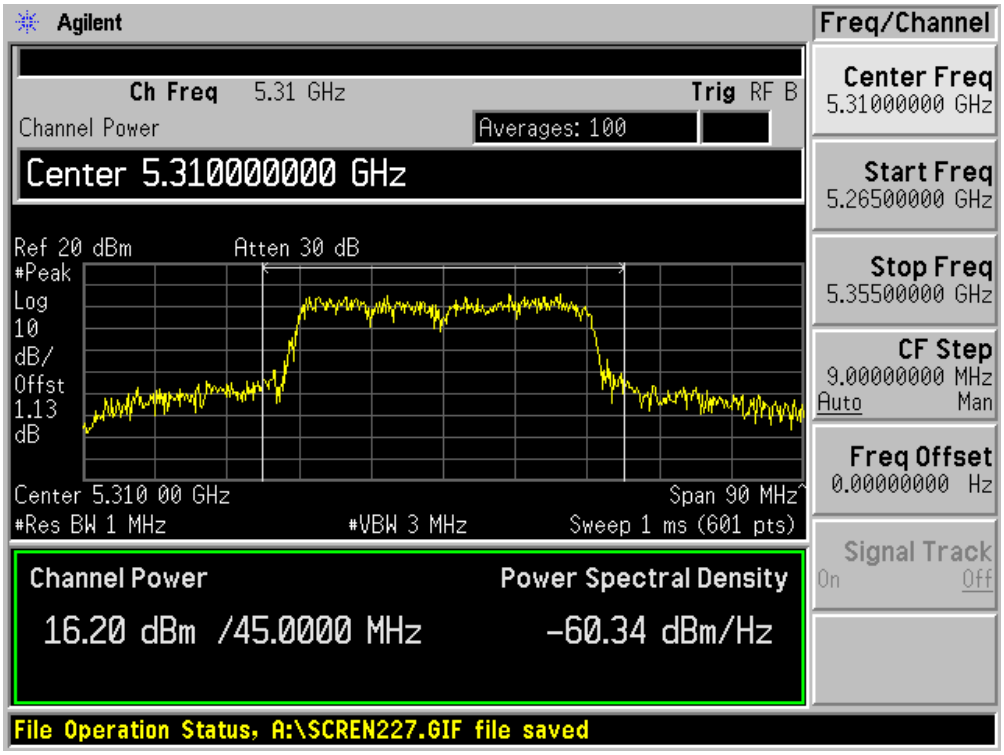
Channel 46 (5230MHz) - Chain A



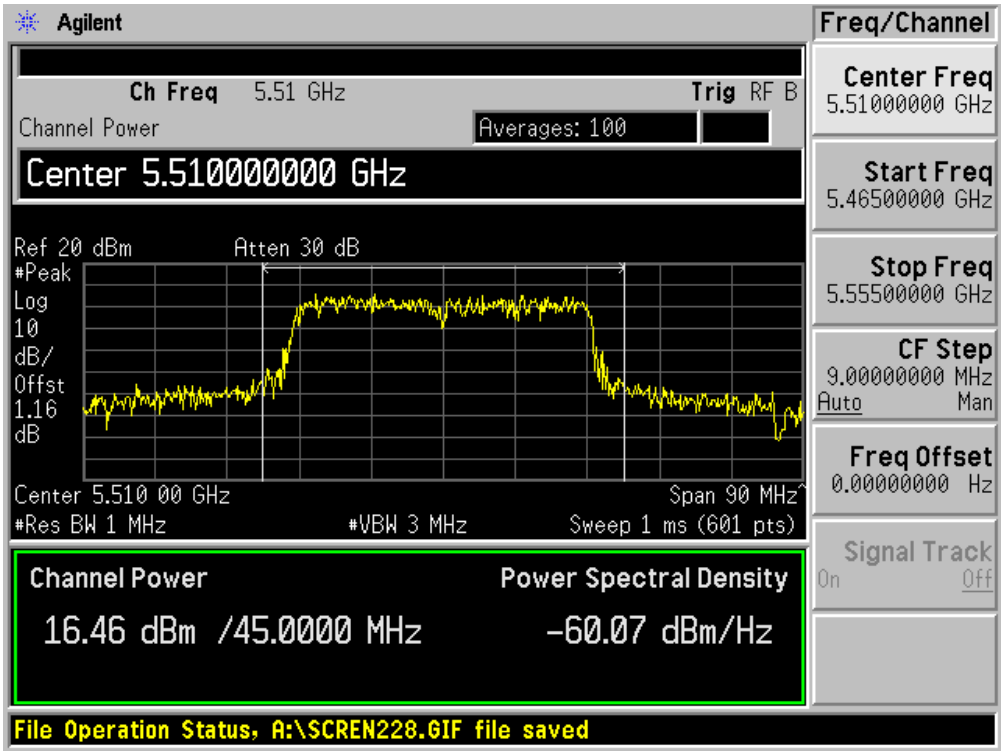
Channel 54 (5270MHz) - Chain A



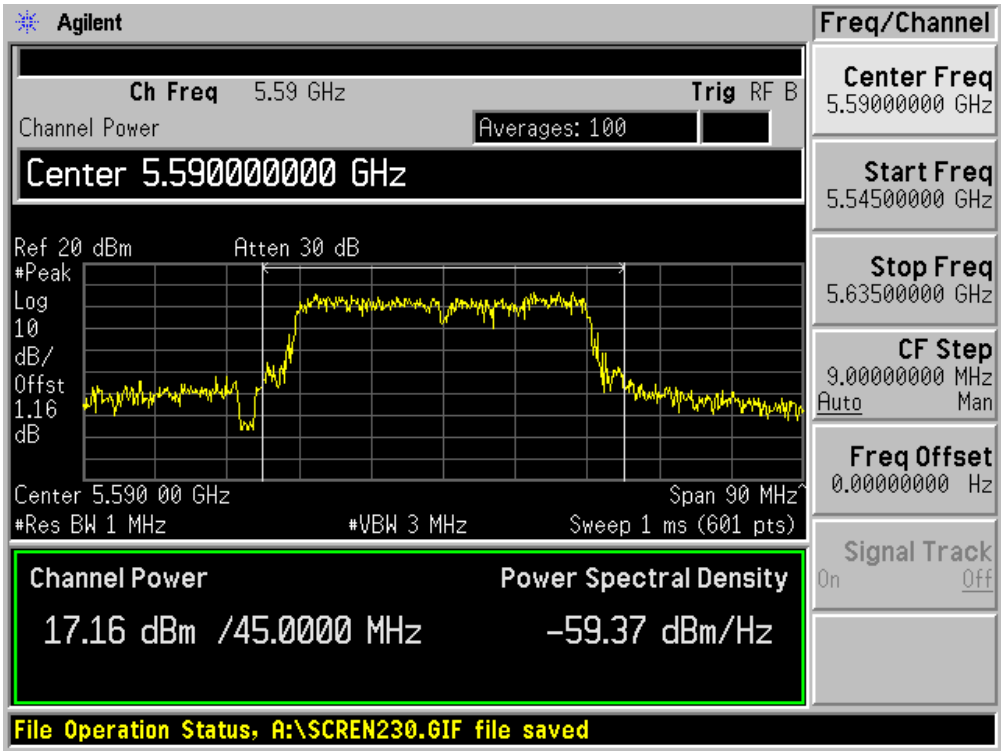
Channel 62 (5310MHz) - Chain A



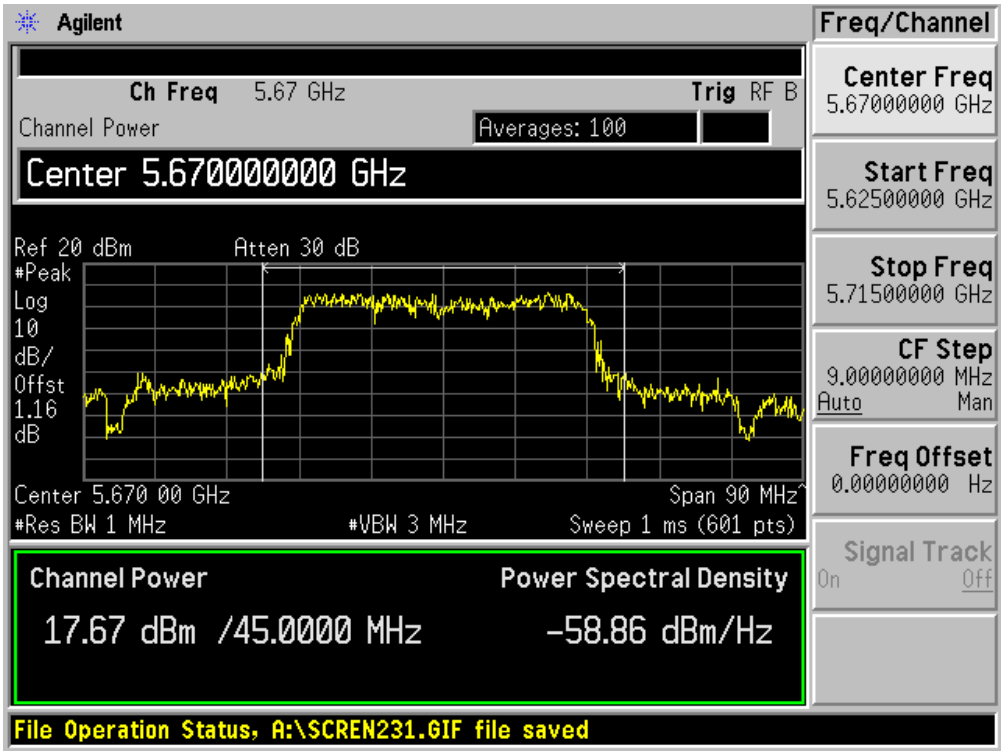
Channel 102 (5510MHz) - Chain A



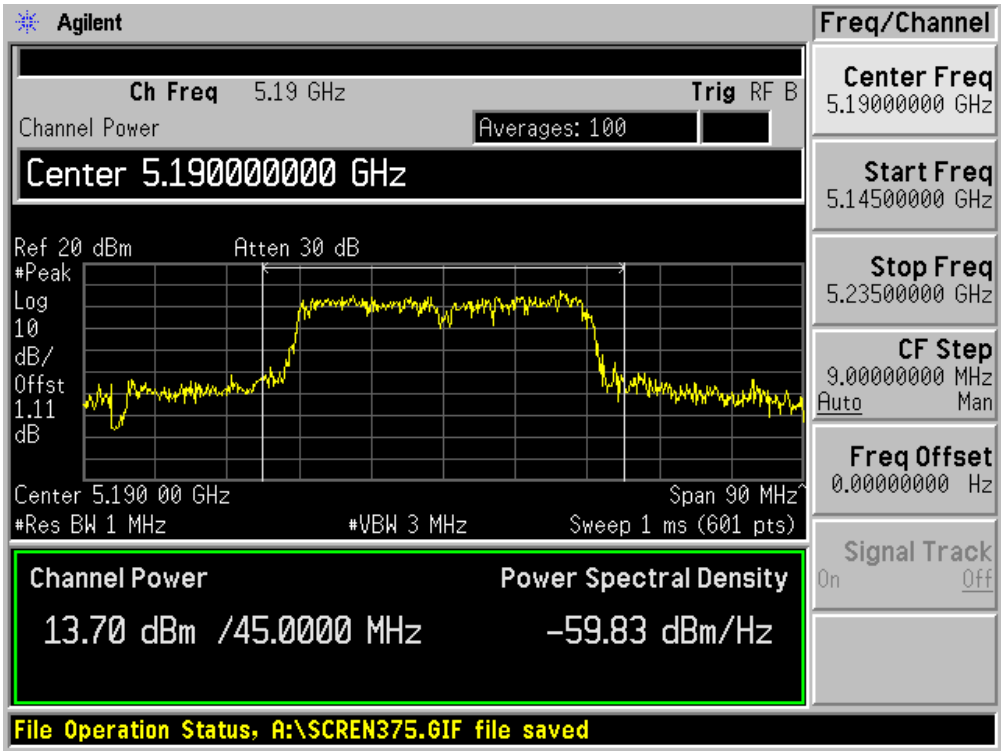
Channel 118 (5590MHz) - Chain A



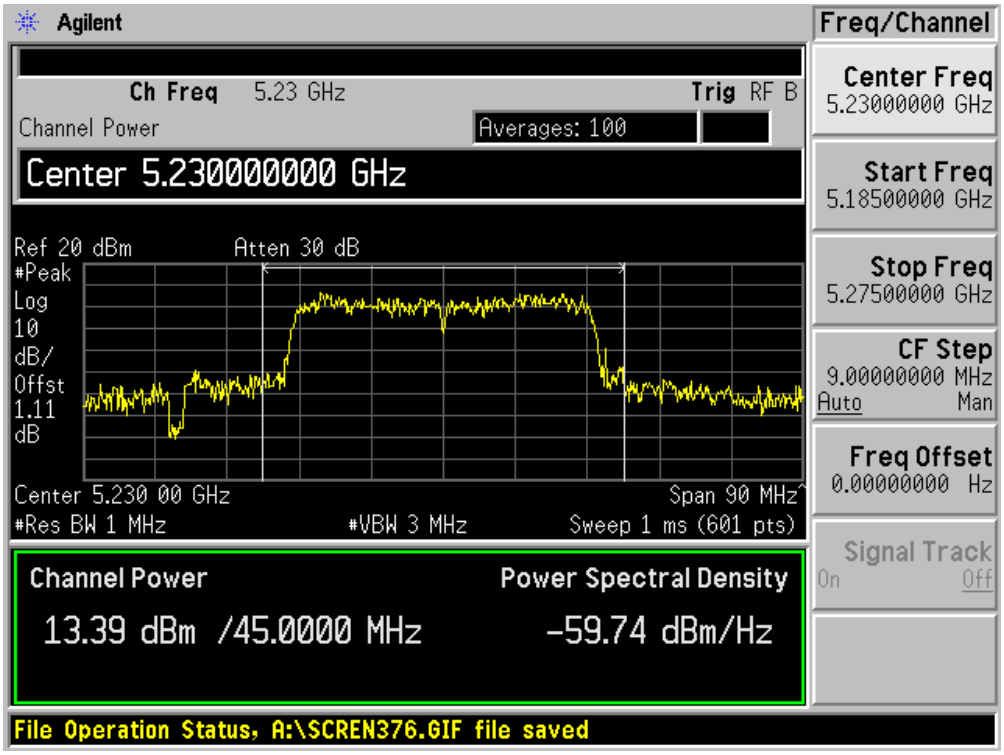
Channel 134 (5670MHz) - Chain A



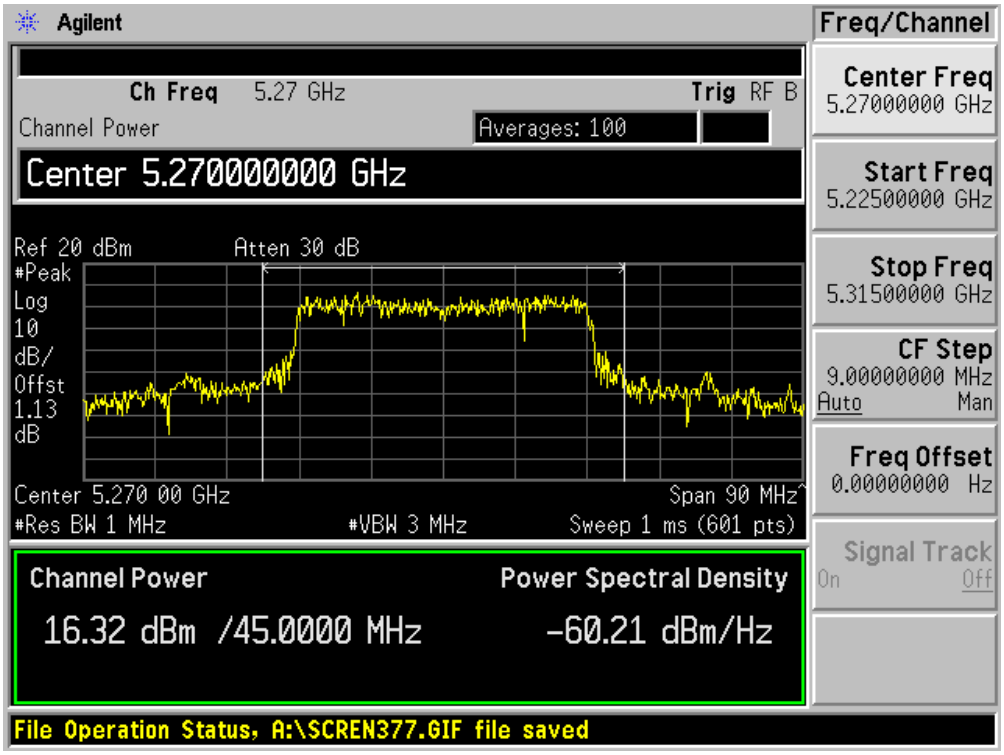
Channel 38 (5190MHz) - Chain B



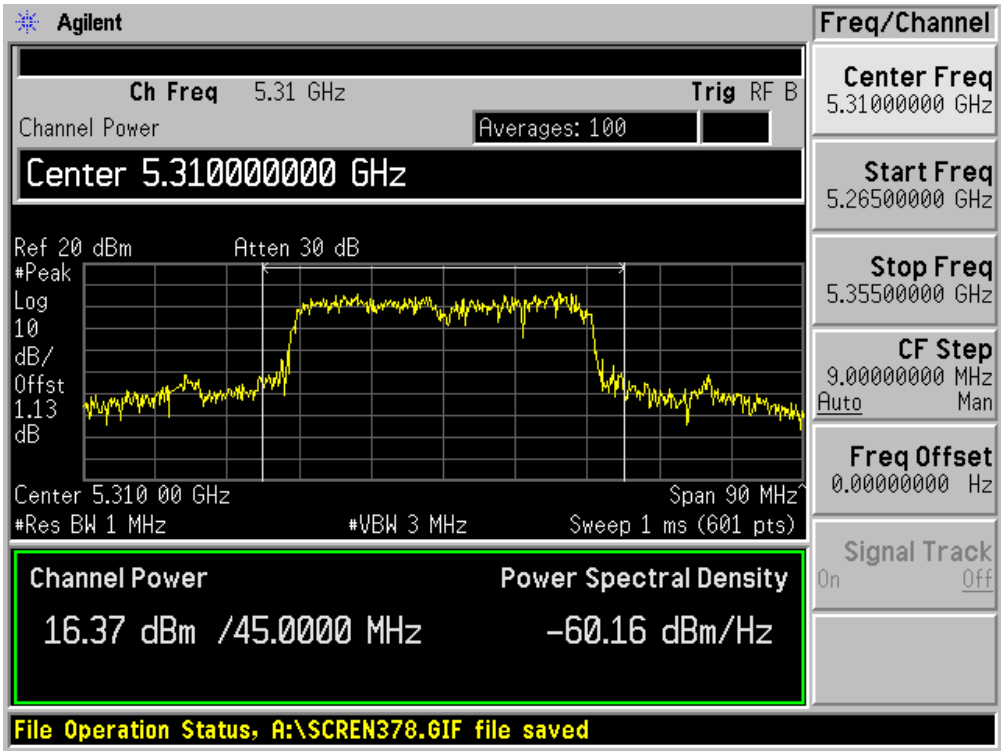
Channel 46 (5230MHz) - Chain B



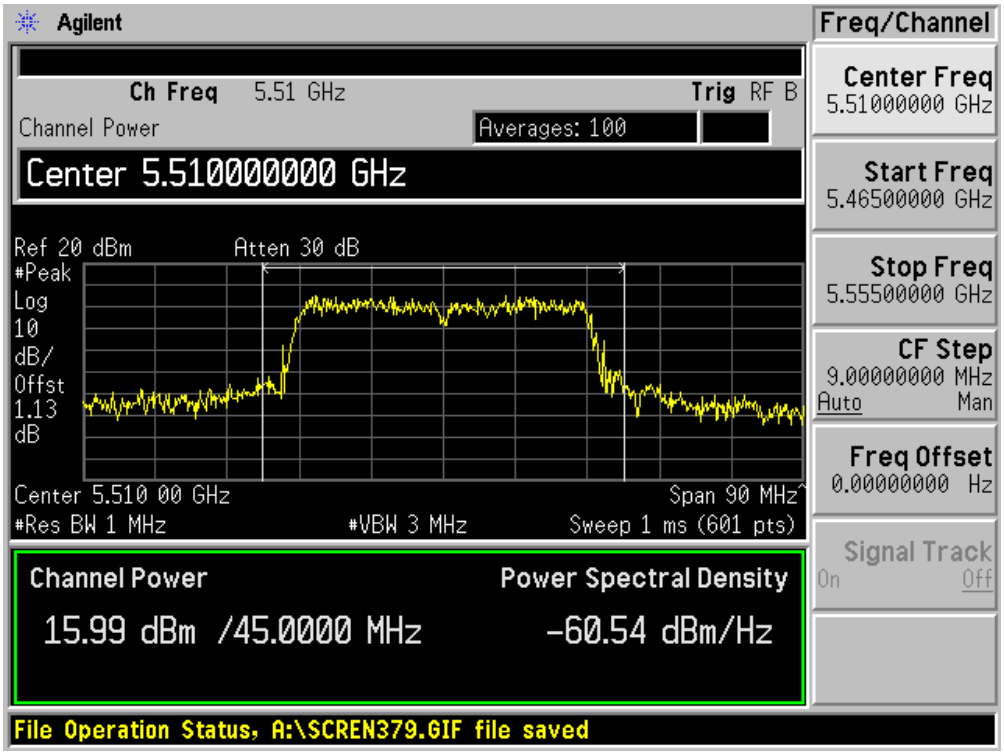
Channel 54 (5270MHz) - Chain B



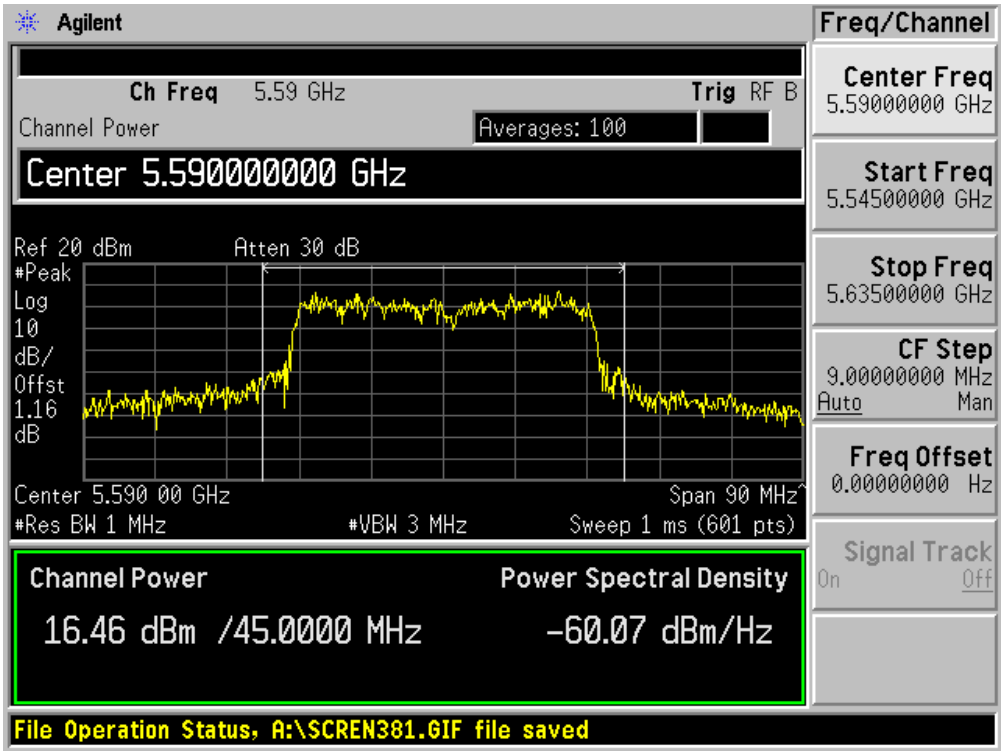
Channel 62 (5310MHz) - Chain B



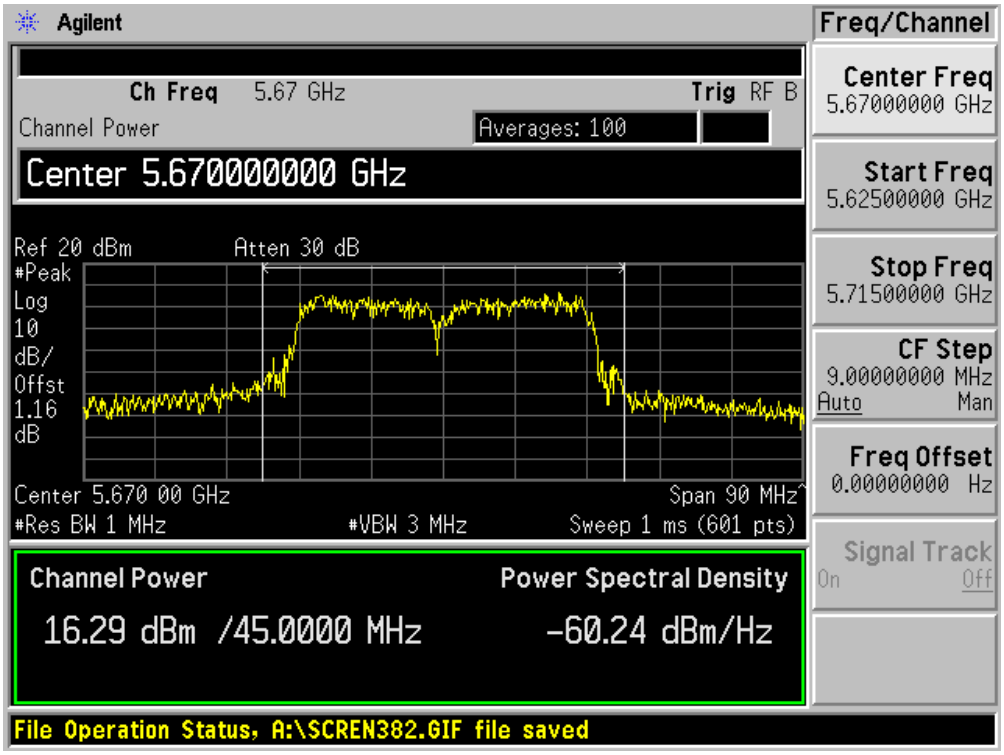
Channel 102 (5510MHz) - Chain B



Channel 118 (5590MHz) - Chain B



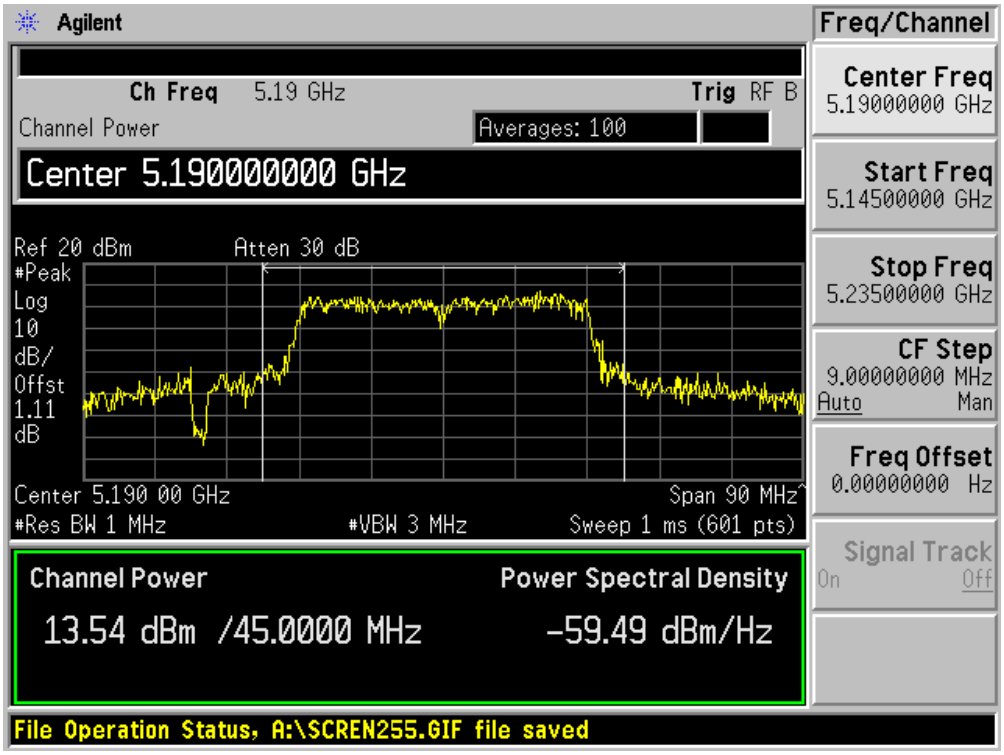
Channel 134 (5670MHz) - Chain B



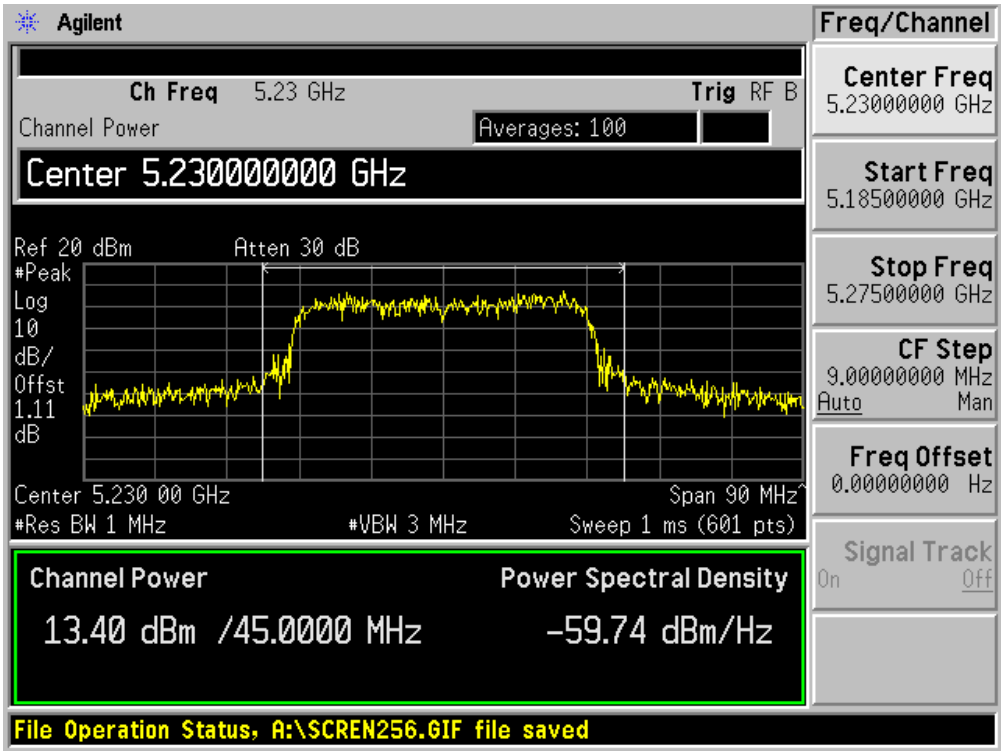
Product	:	Notebook Computer
Test Item	:	Power Output
Test Site	:	AC-4
Test Mode	:	Mode 3: Transmit by 802.11n (40MHz Bandwidth) (Chain A+C)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)			Total Power (dBm)	Limit (dBm)	Result
		Chain A	Chain B	Chain C			
38	5190	13.54	N/A	13.63	16.60	17.00	Pass
46	5230	13.40	N/A	13.48	16.45	17.00	Pass
54	5270	16.33	N/A	16.85	19.61	24.00	Pass
62	5310	16.50	N/A	16.48	19.50	24.00	Pass
102	5510	16.56	N/A	16.92	19.75	24.00	Pass
118	5590	17.63	N/A	16.68	20.19	24.00	Pass
134	5670	18.17	N/A	16.68	20.50	24.00	Pass

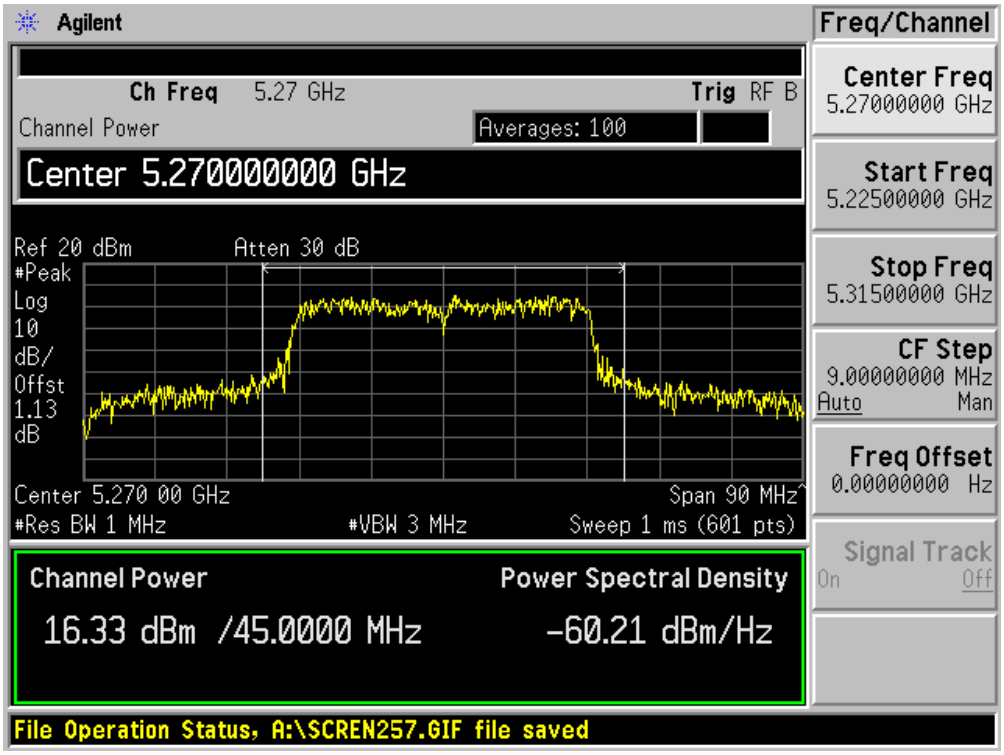
Channel 38 (5190MHz) - Chain A



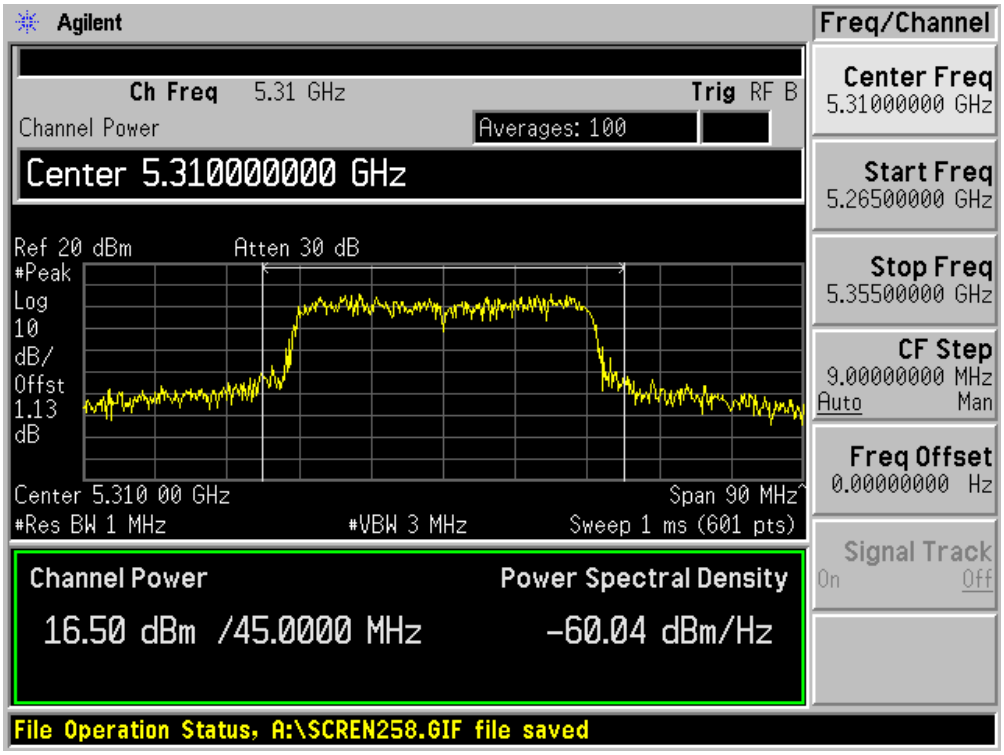
Channel 46 (5230MHz) - Chain A



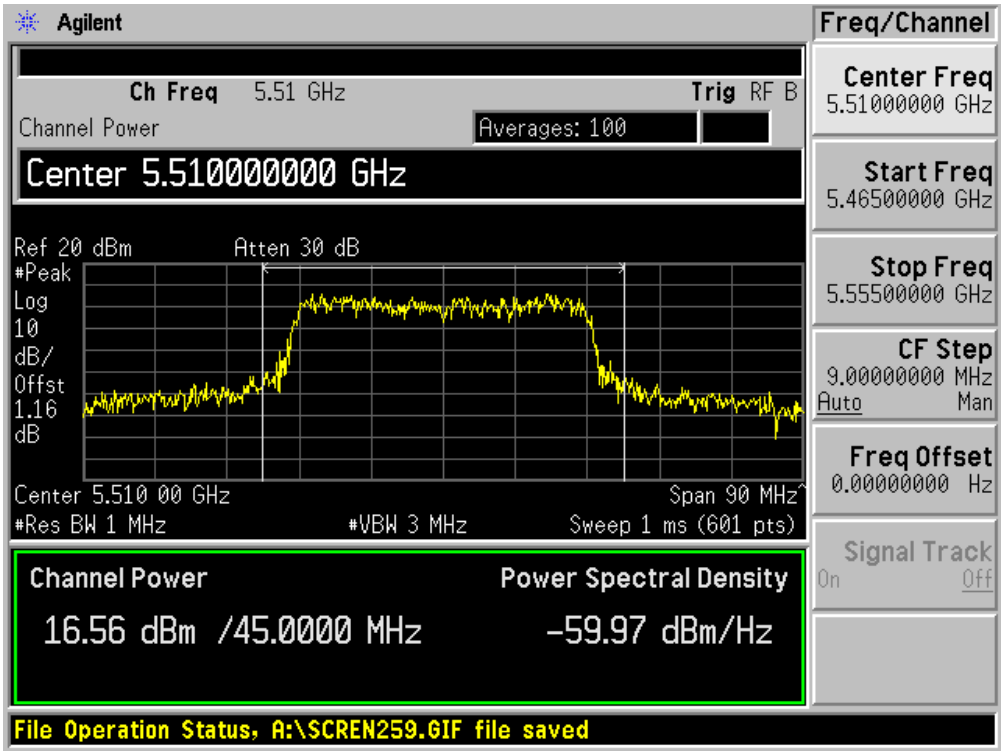
Channel 54 (5270MHz) - Chain A



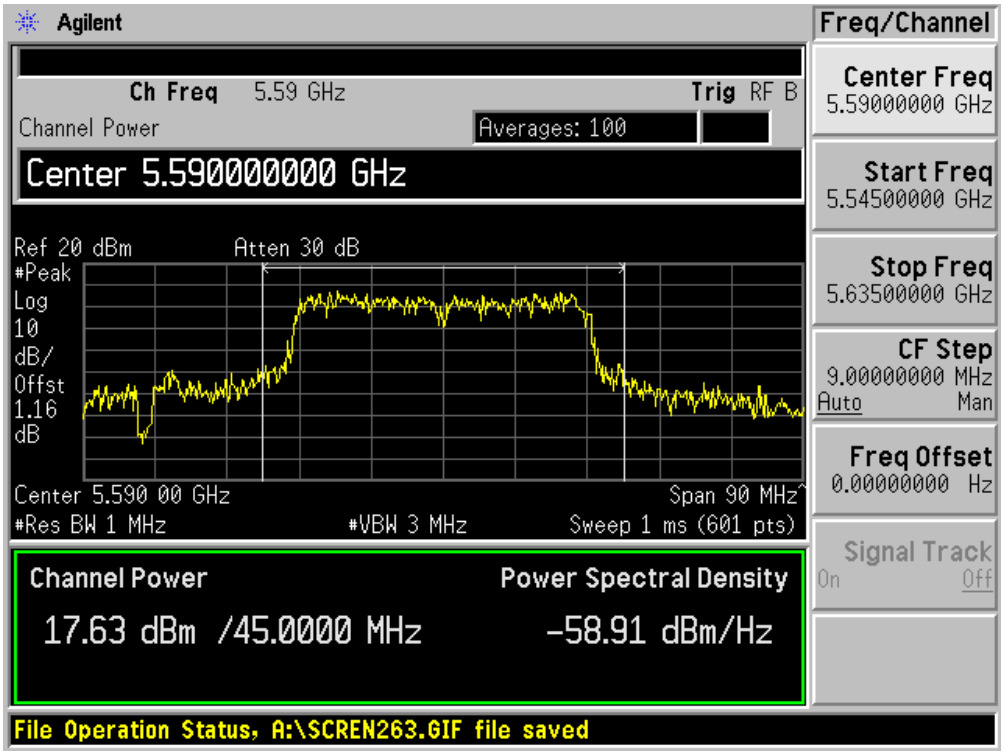
Channel 62 (5310MHz) - Chain A



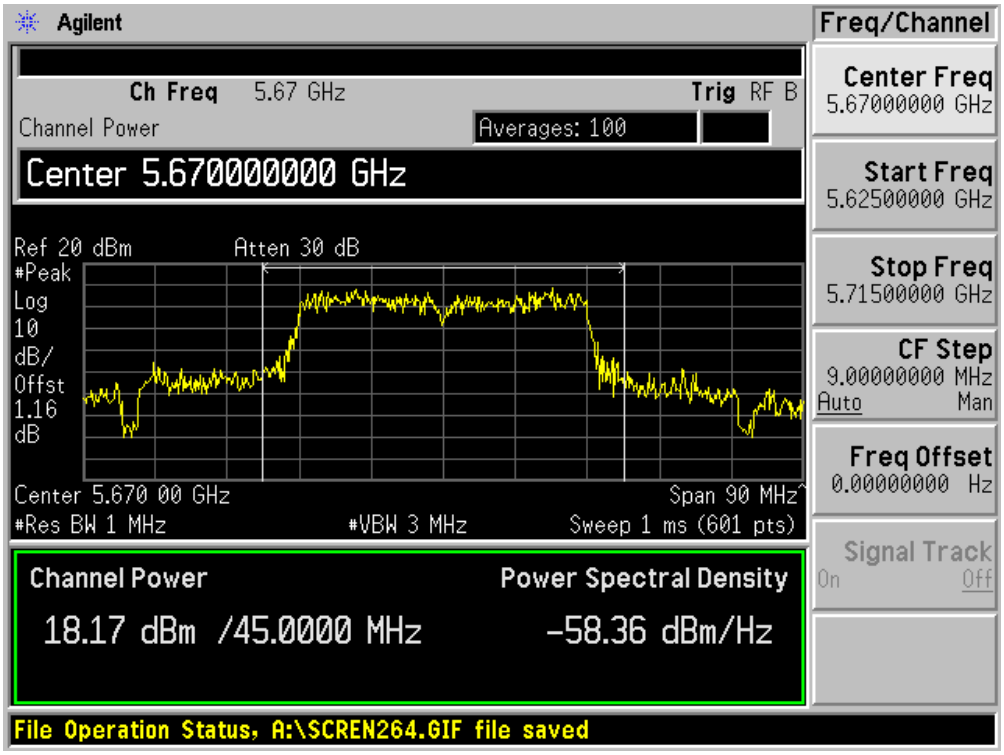
Channel 102 (5510MHz) - Chain A



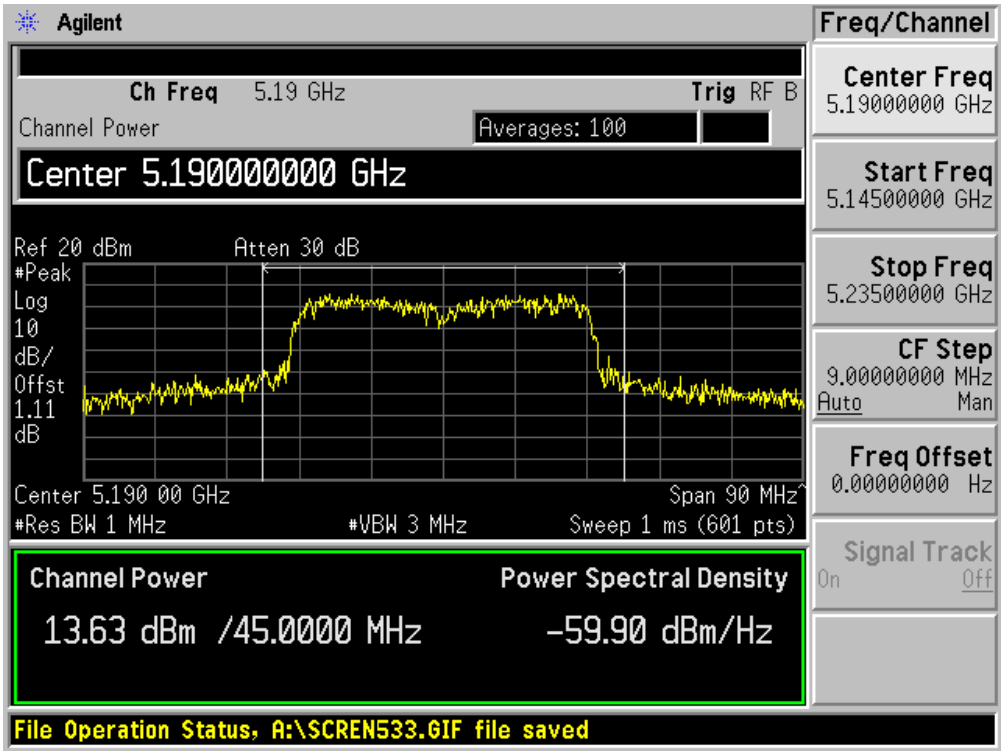
Channel 118 (5590MHz) - Chain A



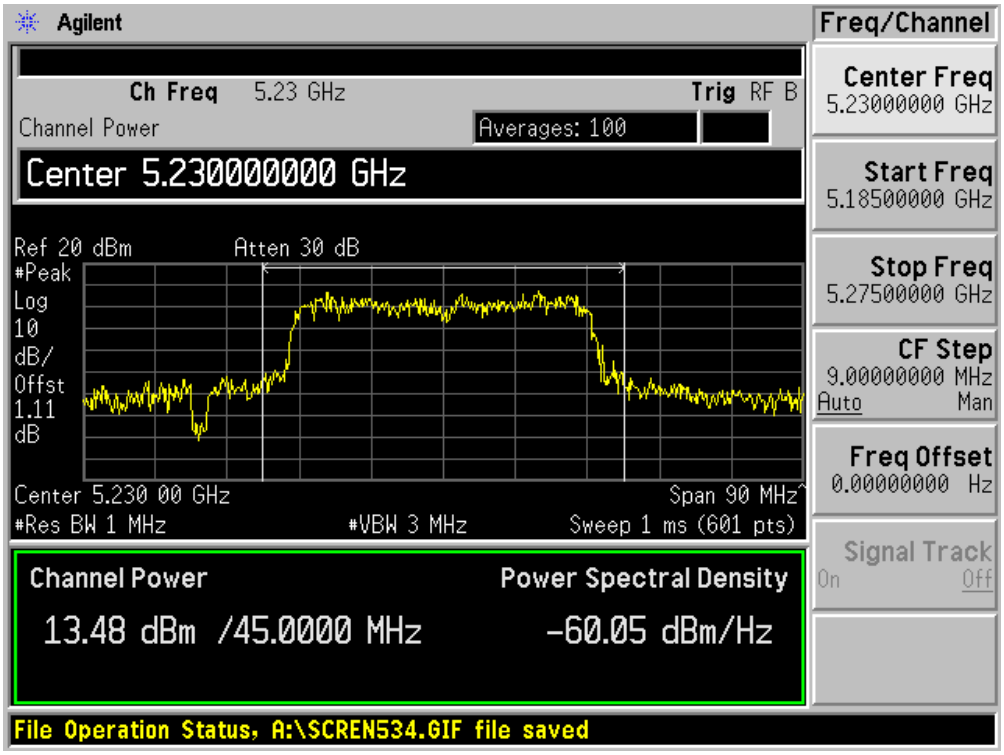
Channel 134 (5670MHz) - Chain A



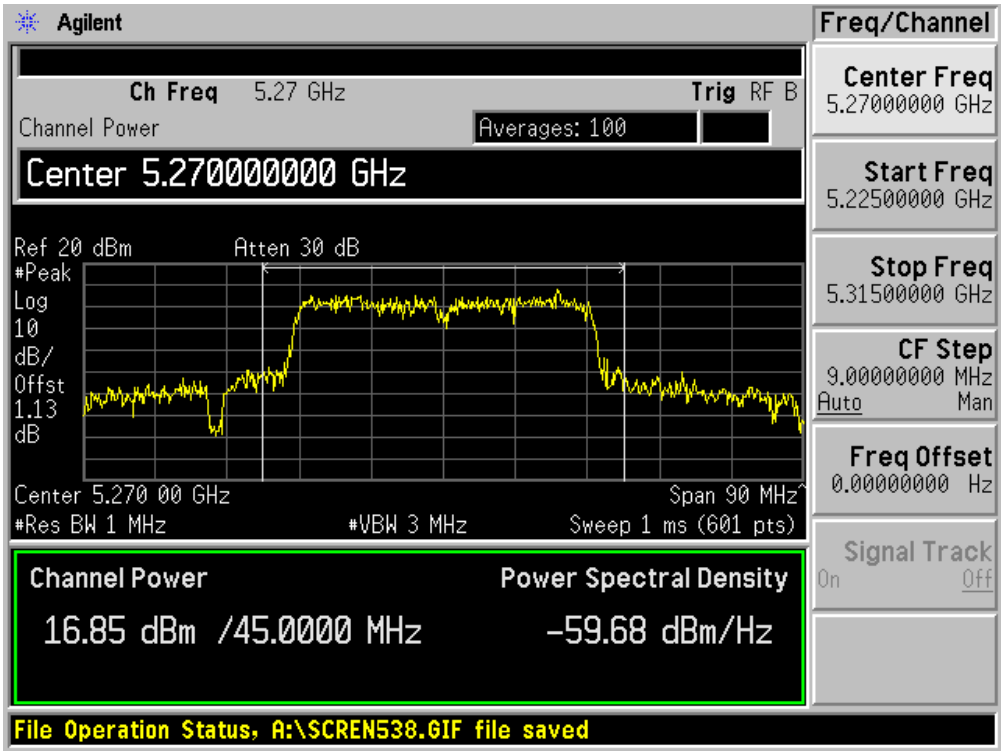
Channel 38 (5190MHz) - Chain C



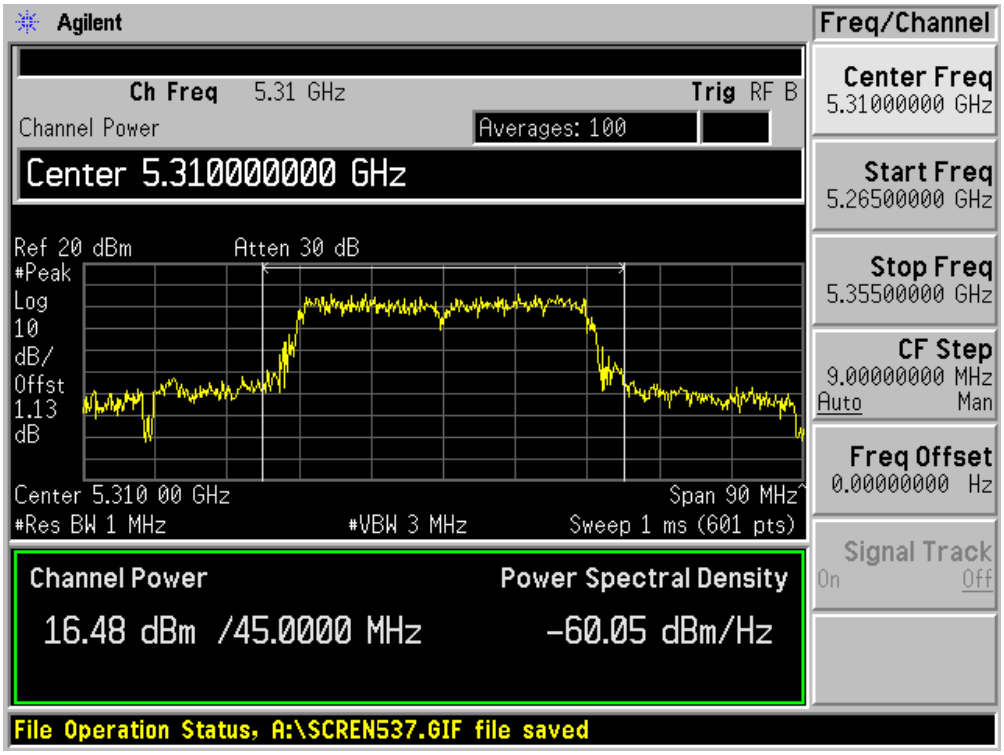
Channel 46 (5230MHz) - Chain C



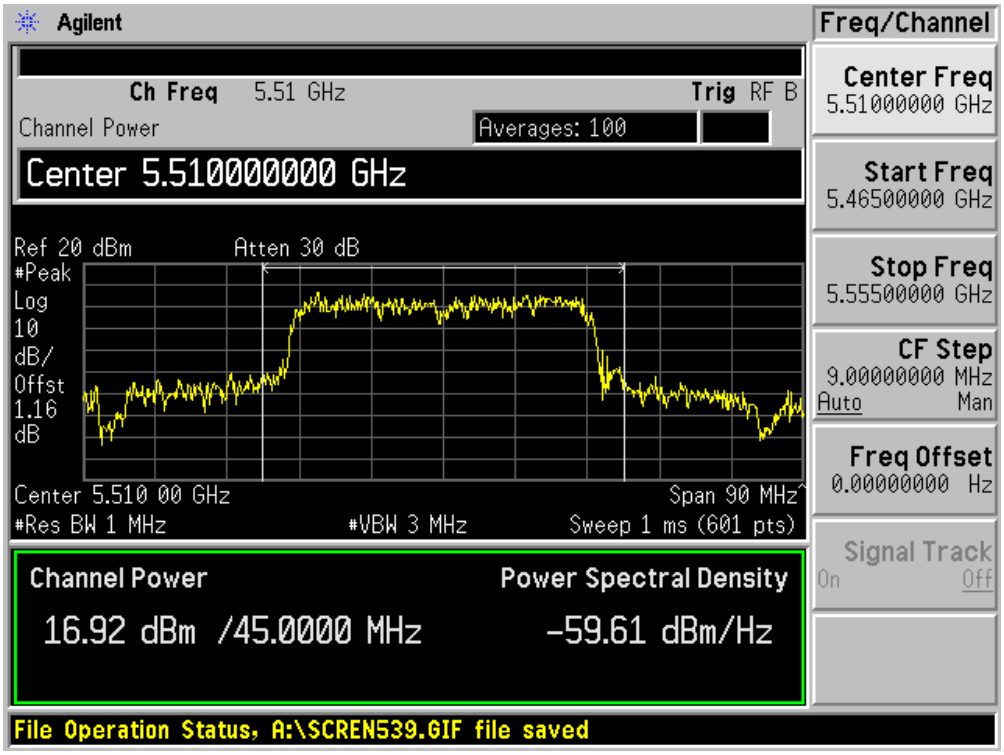
Channel 54 (5270MHz) - Chain C



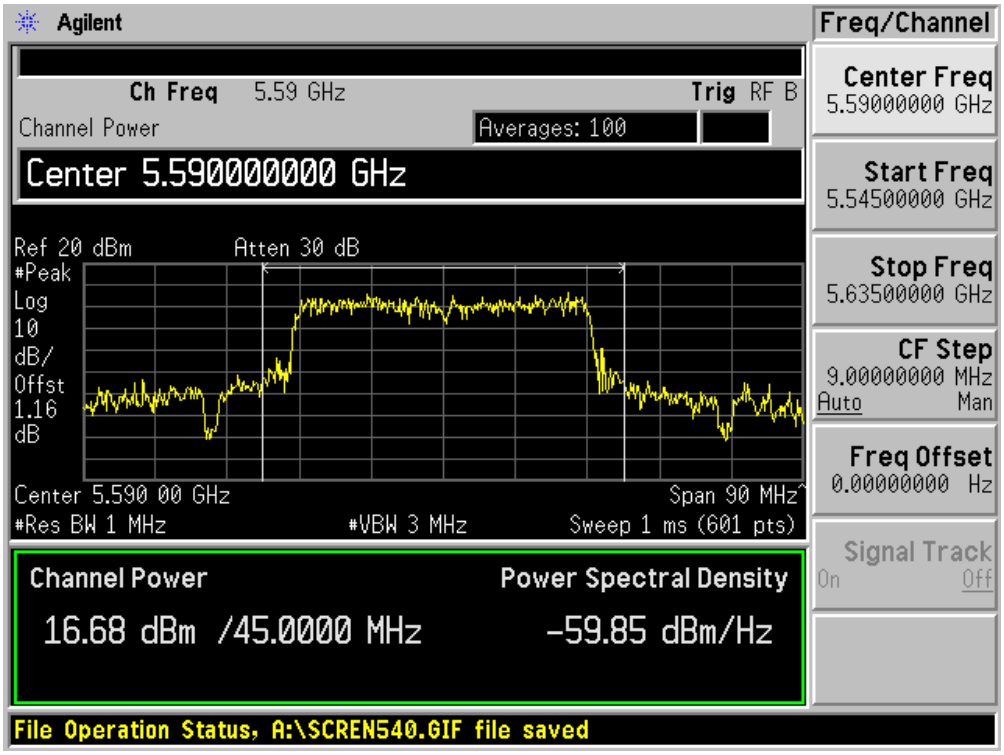
Channel 62 (5310MHz) - Chain C



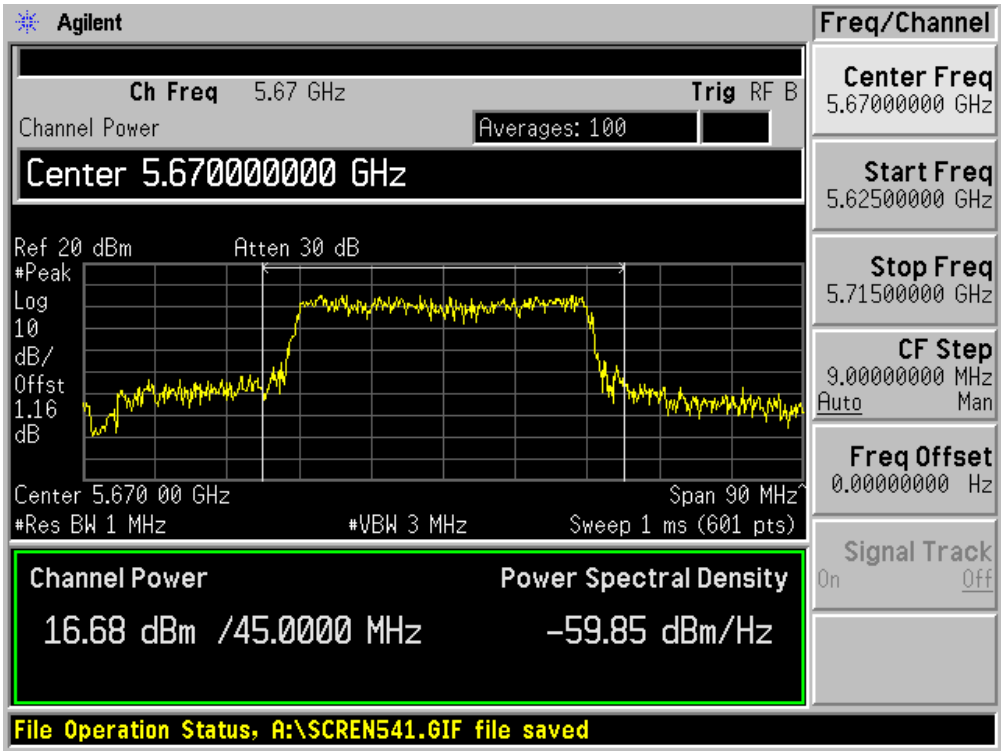
Channel 102 (5510MHz) - Chain C



Channel 118 (5590MHz) - Chain C



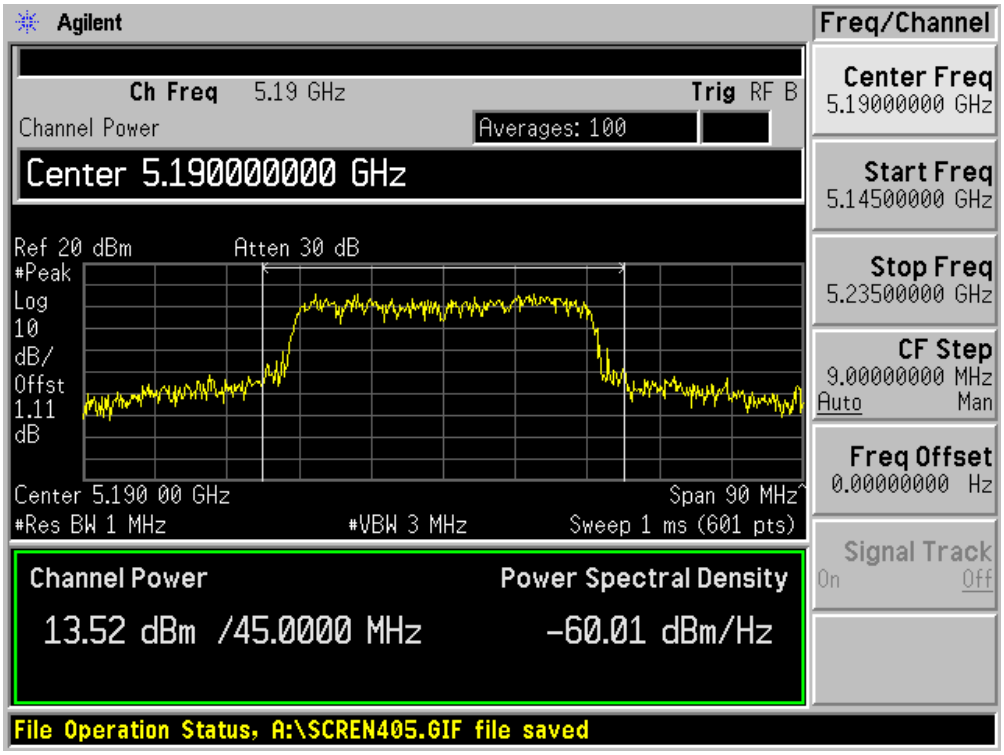
Channel 134 (5670MHz) - Chain C



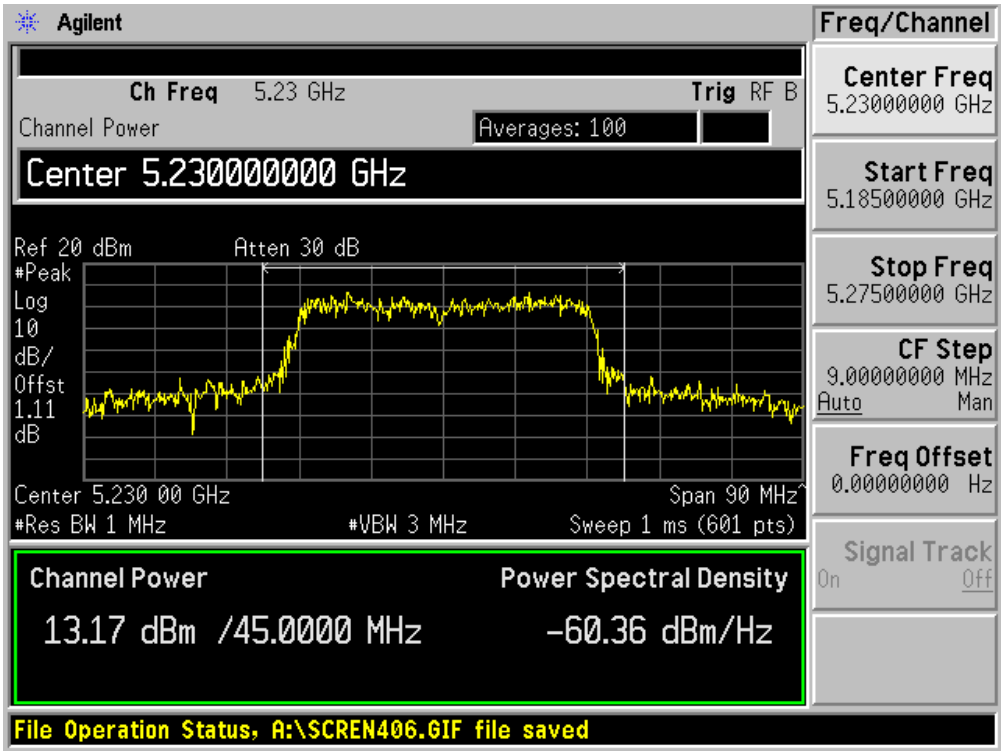
Product	:	Notebook Computer
Test Item	:	Power Output
Test Site	:	AC-4
Test Mode	:	Mode 3: Transmit by 802.11n (40MHz Bandwidth) (Chain B+C)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)			Total Power (dBm)	Limit (dBm)	Result
		Chain A	Chain B	Chain C			
38	5190	N/A	13.52	13.60	16.57	17.00	Pass
46	5230	N/A	13.17	13.43	16.31	17.00	Pass
54	5270	N/A	16.31	16.36	19.35	24.00	Pass
62	5310	N/A	16.40	16.56	19.49	24.00	Pass
102	5510	N/A	16.55	16.88	19.73	24.00	Pass
118	5590	N/A	16.44	16.60	19.53	24.00	Pass
134	5670	N/A	16.26	16.66	19.47	24.00	Pass

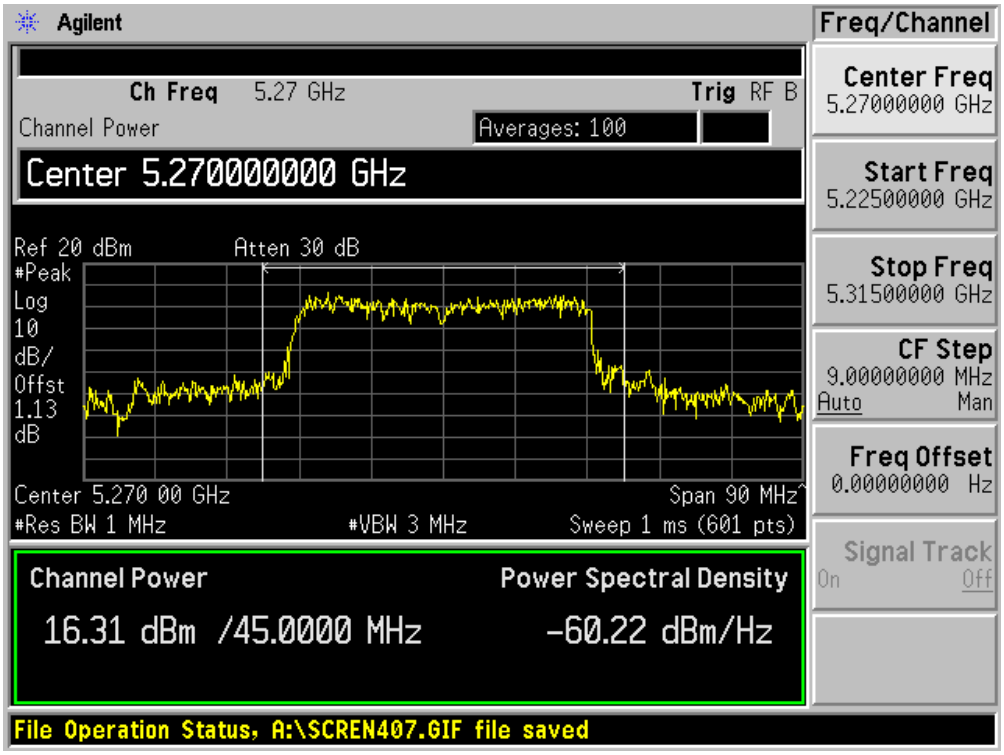
Channel 38 (5190MHz) - Chain B



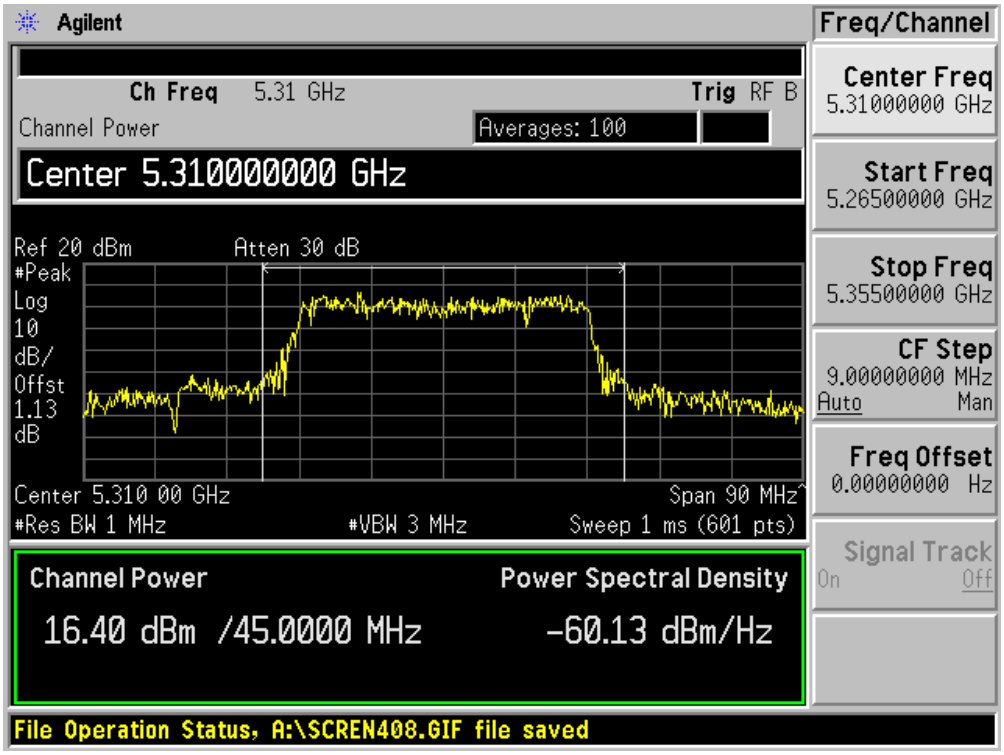
Channel 46 (5230MHz) - Chain B



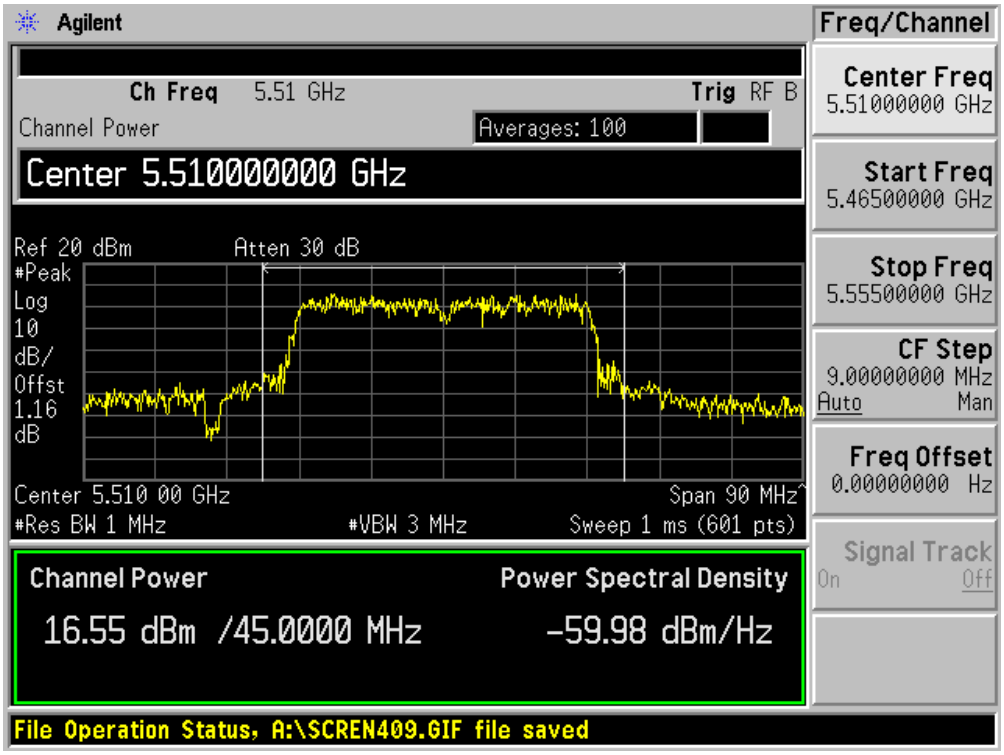
Channel 54 (5270MHz) - Chain B



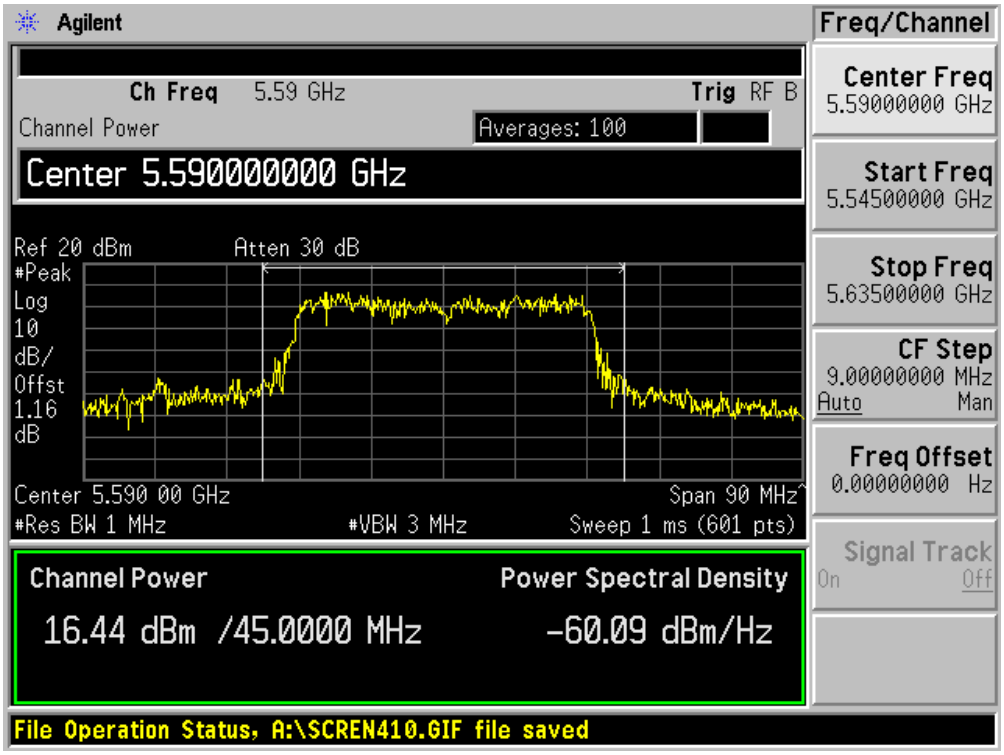
Channel 62 (5310MHz) - Chain B



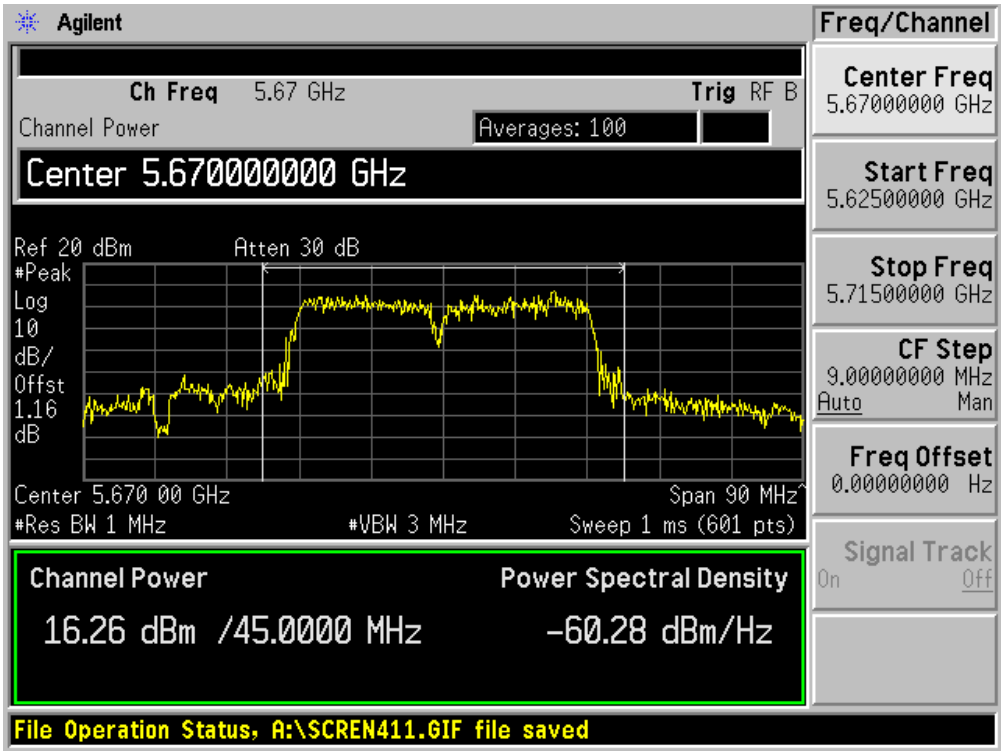
Channel 102 (5510MHz) - Chain B



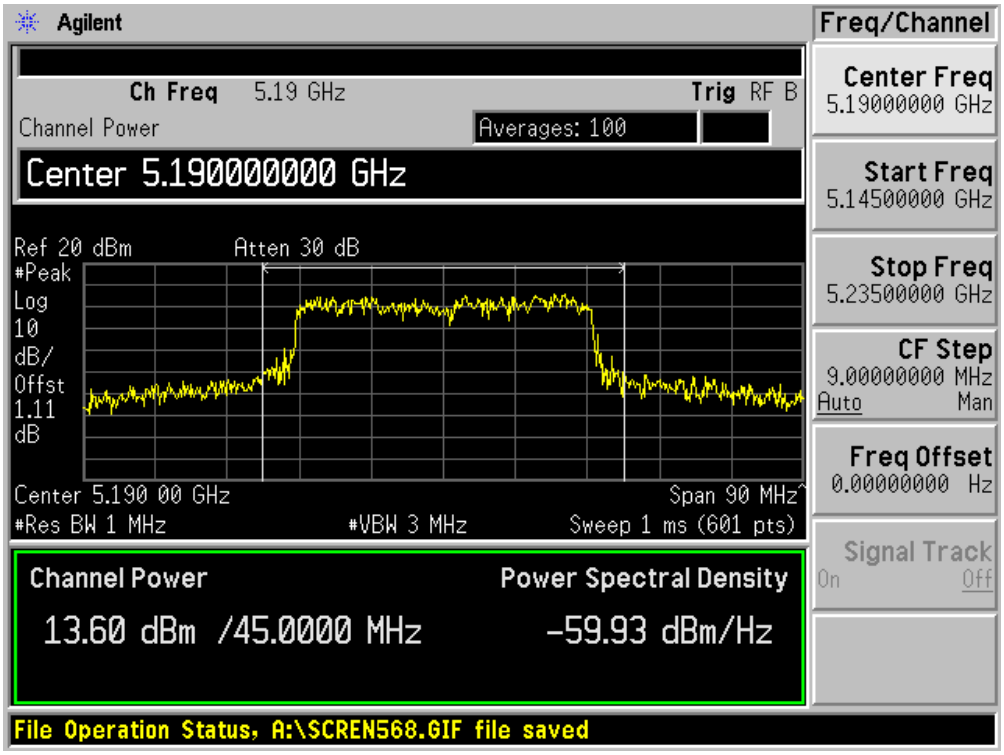
Channel 118 (5590MHz) - Chain B



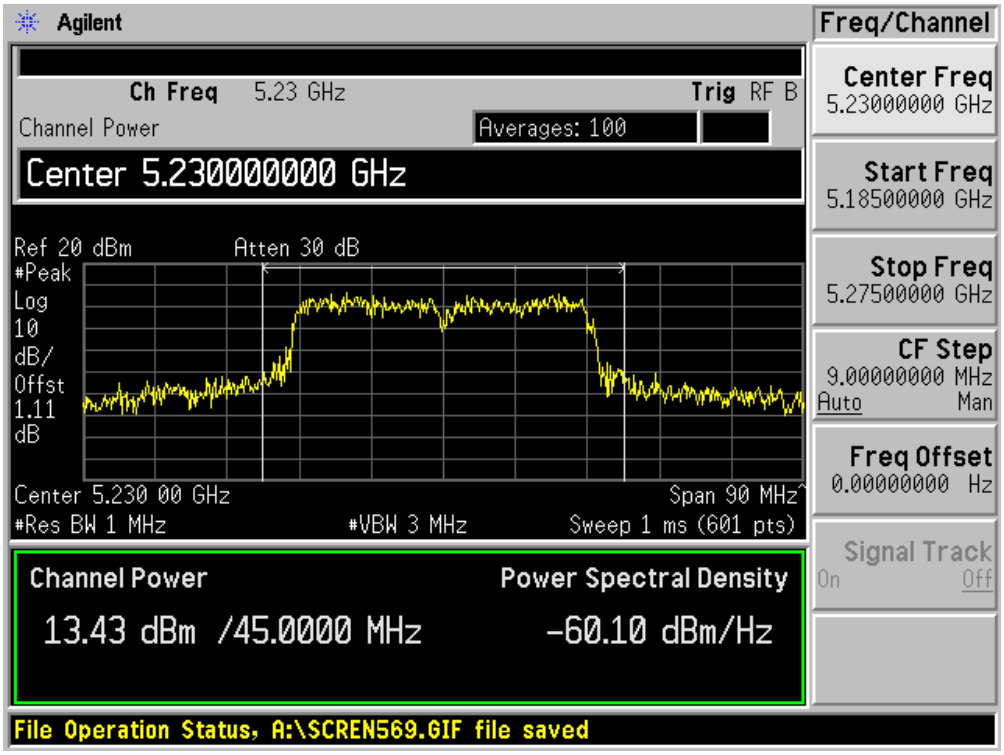
Channel 134 (5670MHz) - Chain B



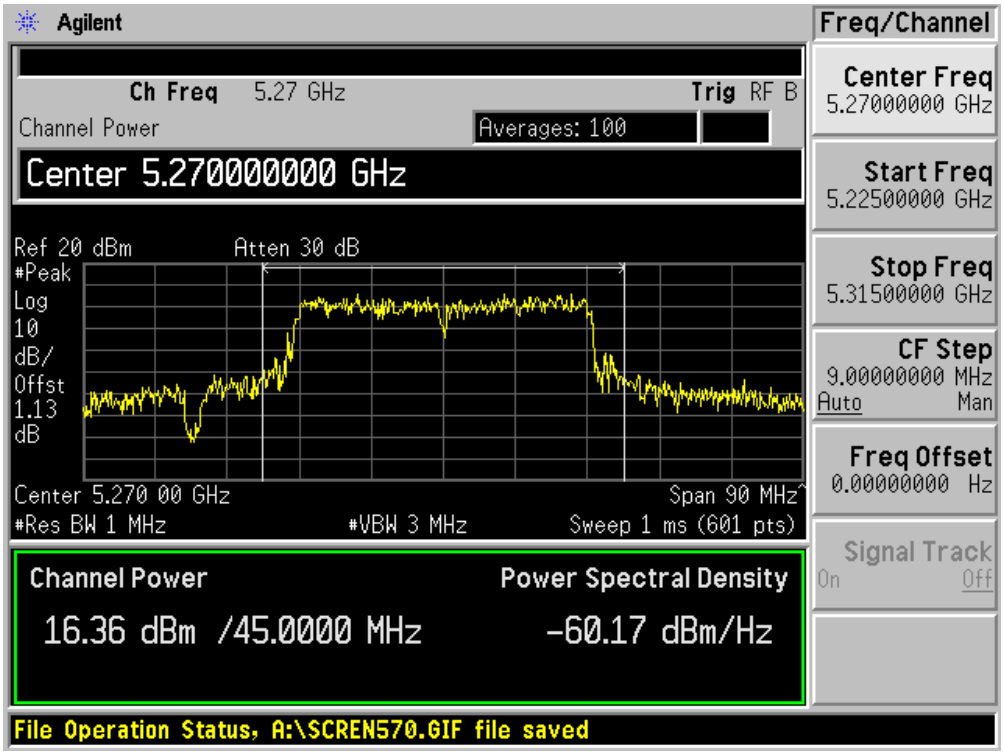
Channel 38 (5190MHz) - Chain C



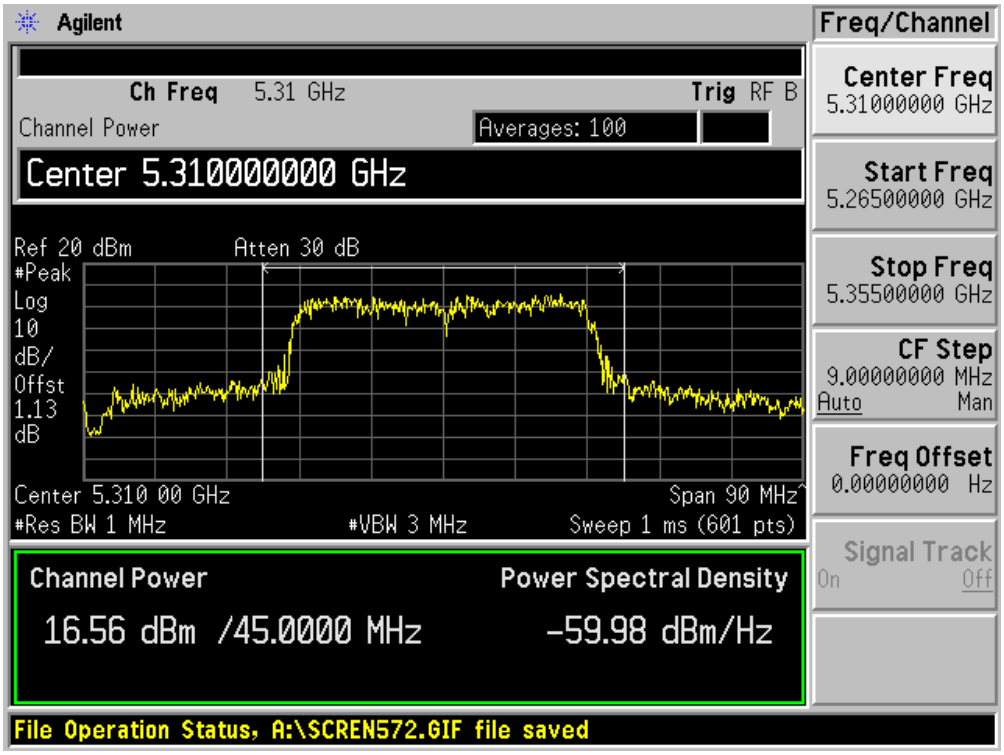
Channel 46 (5230MHz) - Chain C



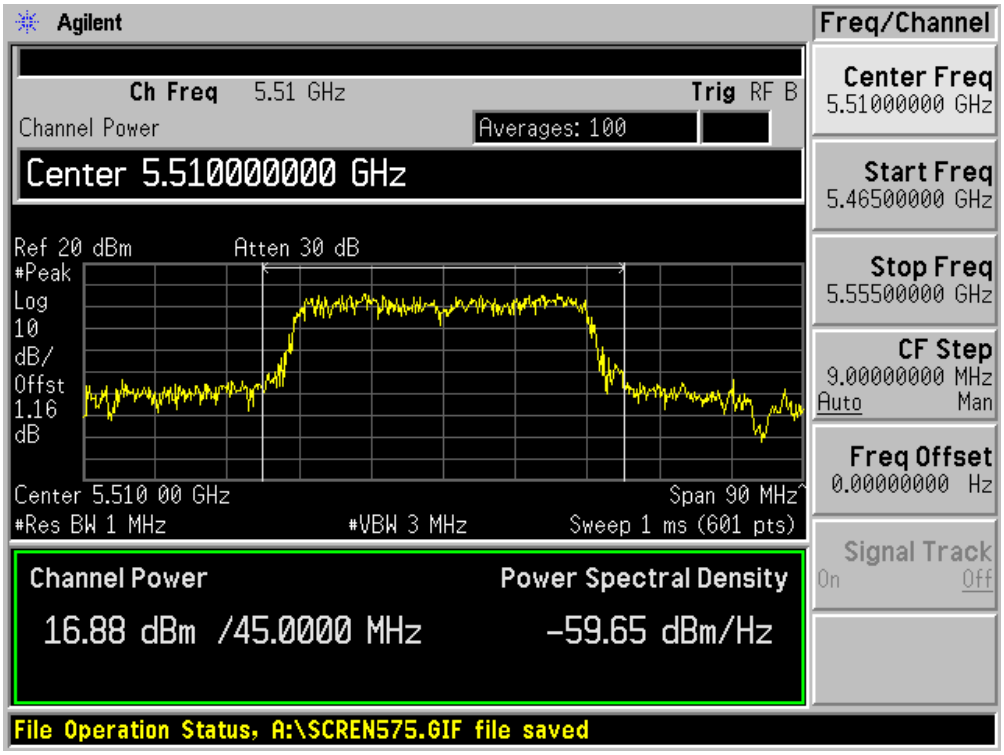
Channel 54 (5270MHz) - Chain C



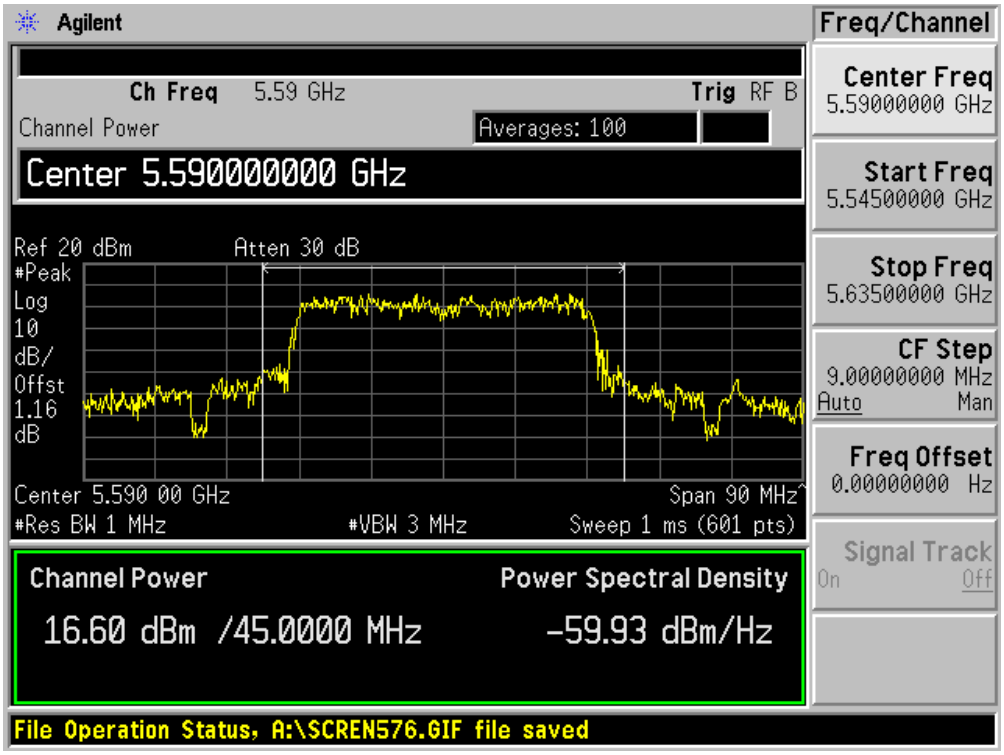
Channel 62 (5310MHz) - Chain C



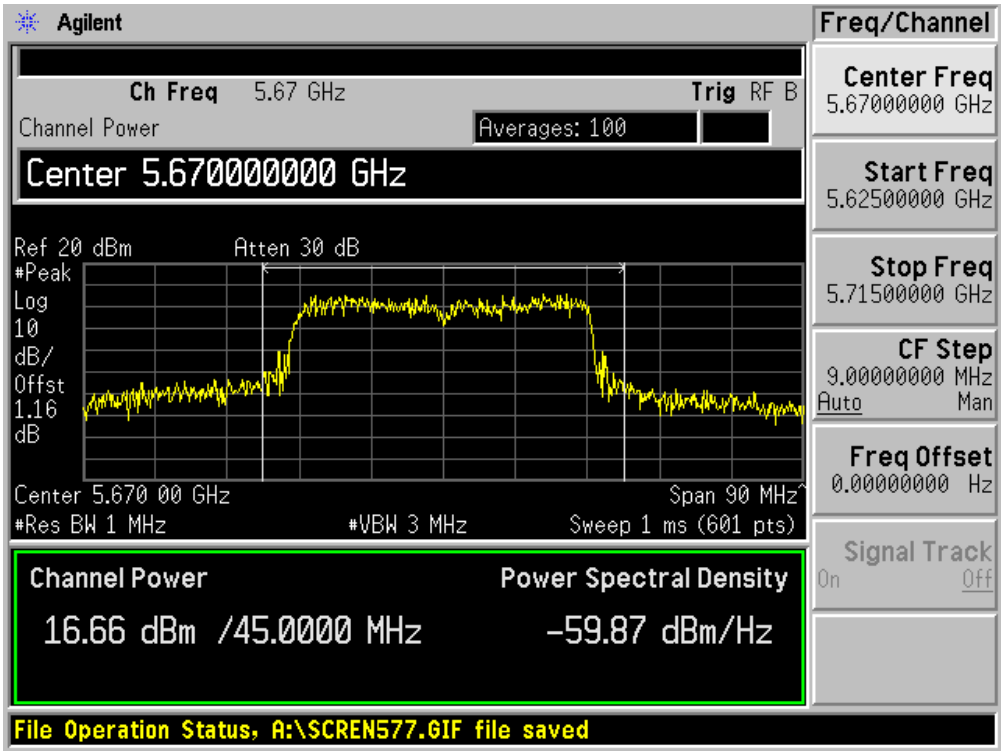
Channel 102 (5510MHz) - Chain C



Channel 118 (5590MHz) - Chain C



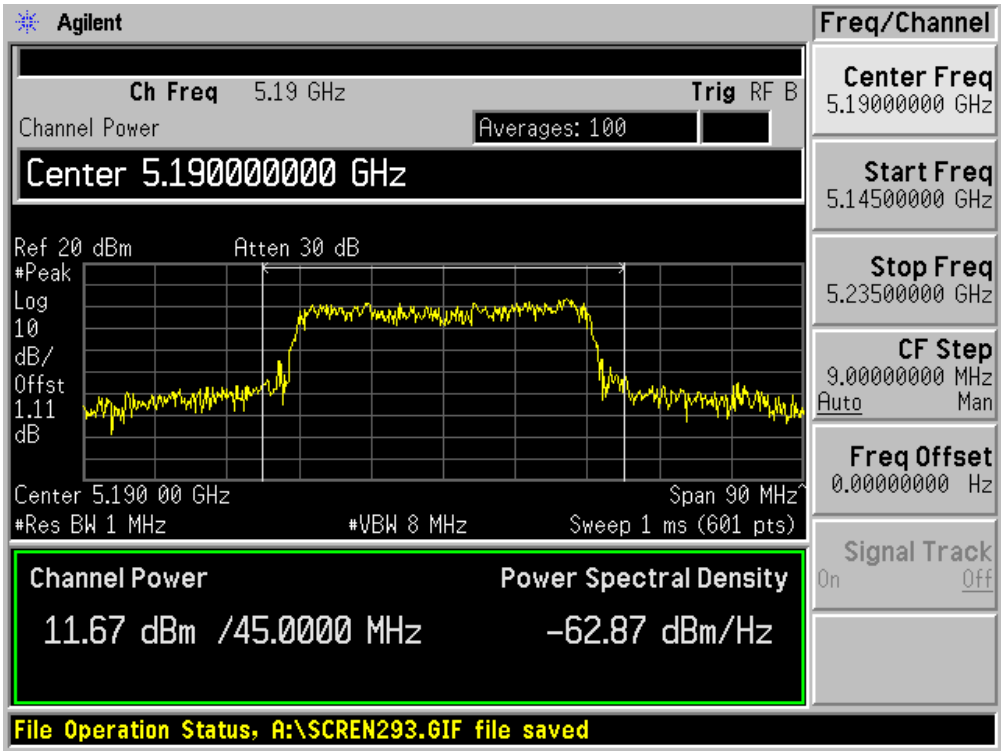
Channel 134 (5670MHz) - Chain C



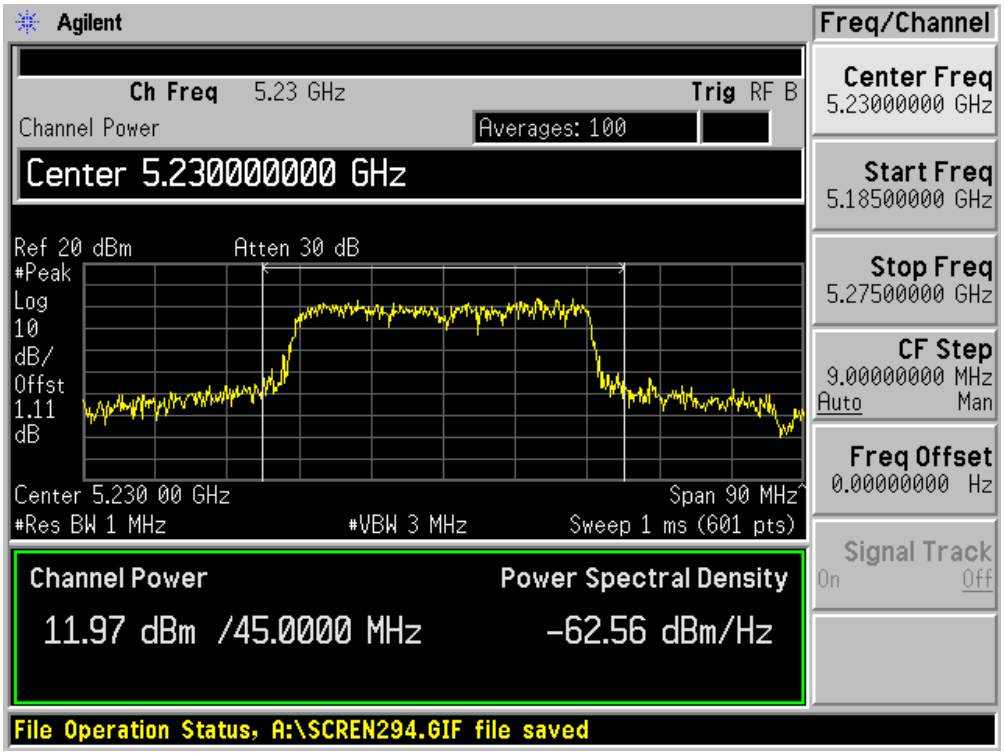
Product	:	Notebook Computer
Test Item	:	Power Output
Test Site	:	AC-4
Test Mode	:	Mode 3: Transmit by 802.11n (40MHz Bandwidth) (Chain A+B+C)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)			Total Power (dBm)	Limit (dBm)	Result
		Chain A	Chain B	Chain C			
38	5190	11.67	11.53	12.01	16.51	17.00	Pass
46	5230	11.97	11.38	11.96	16.55	17.00	Pass
54	5270	13.78	13.93	15.08	19.07	24.00	Pass
62	5310	13.99	13.85	14.83	19.02	24.00	Pass
102	5510	13.34	13.46	15.12	18.82	24.00	Pass
118	5590	13.53	14.15	15.46	19.23	24.00	Pass
134	5670	13.55	14.46	14.99	19.14	24.00	Pass

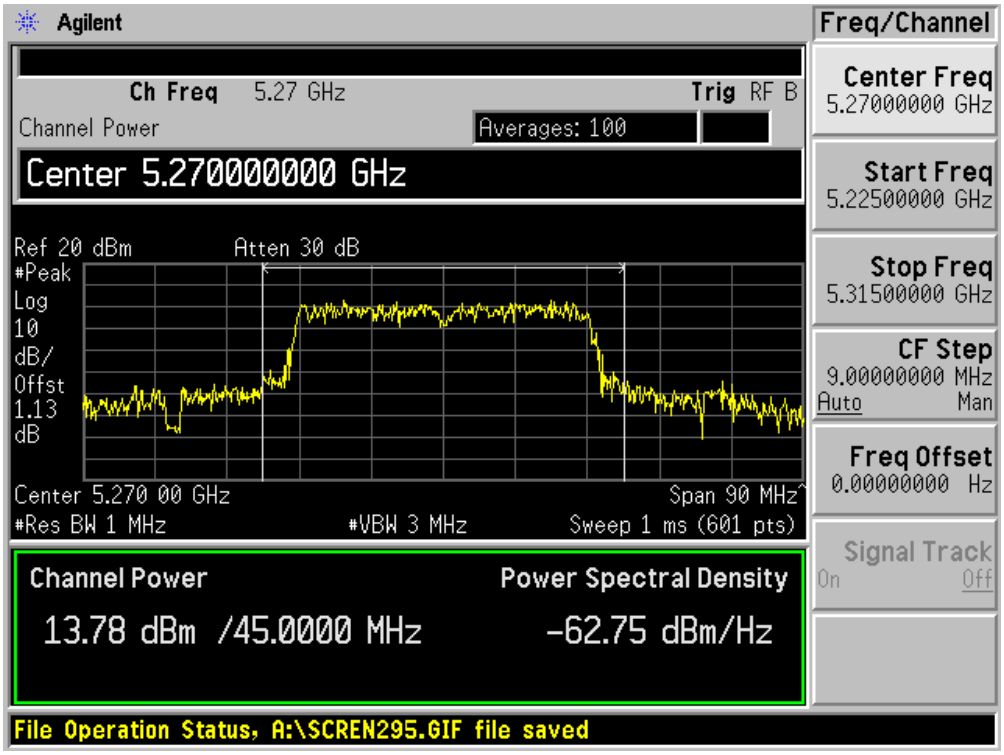
Channel 38 (5190MHz) - Chain A



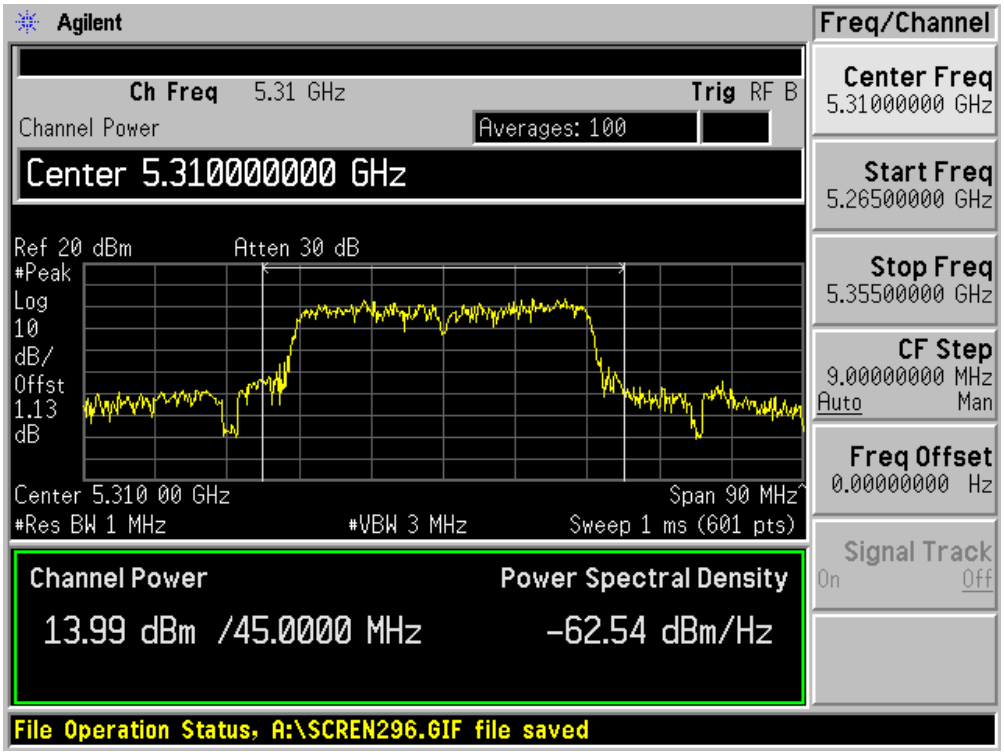
Channel 46 (5230MHz) - Chain A



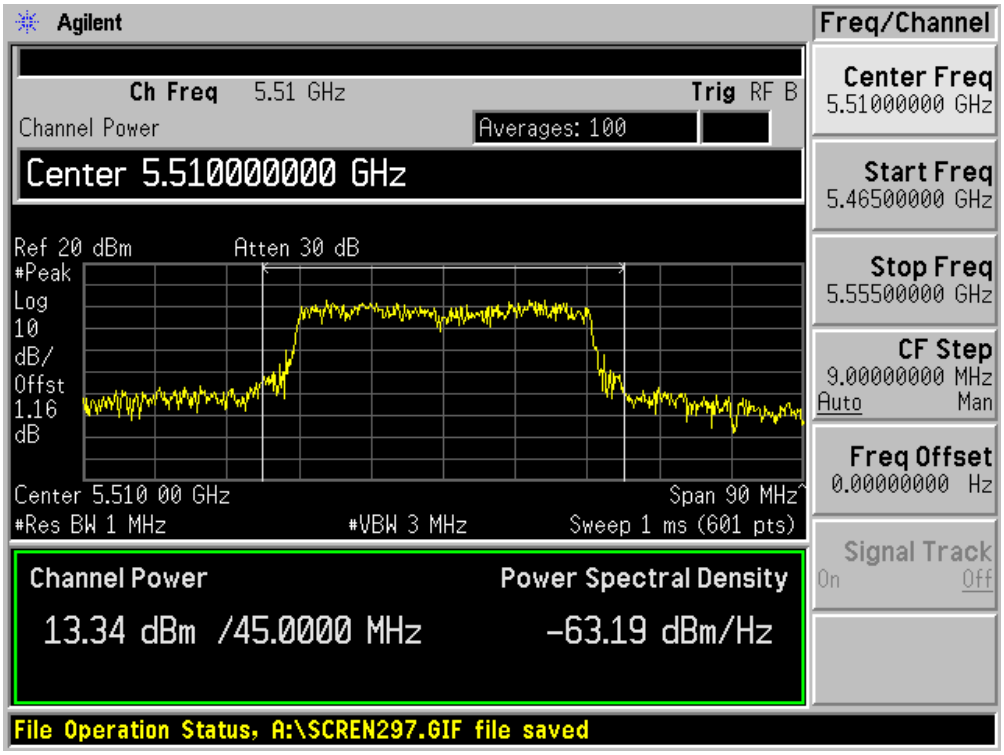
Channel 54 (5270MHz) - Chain A



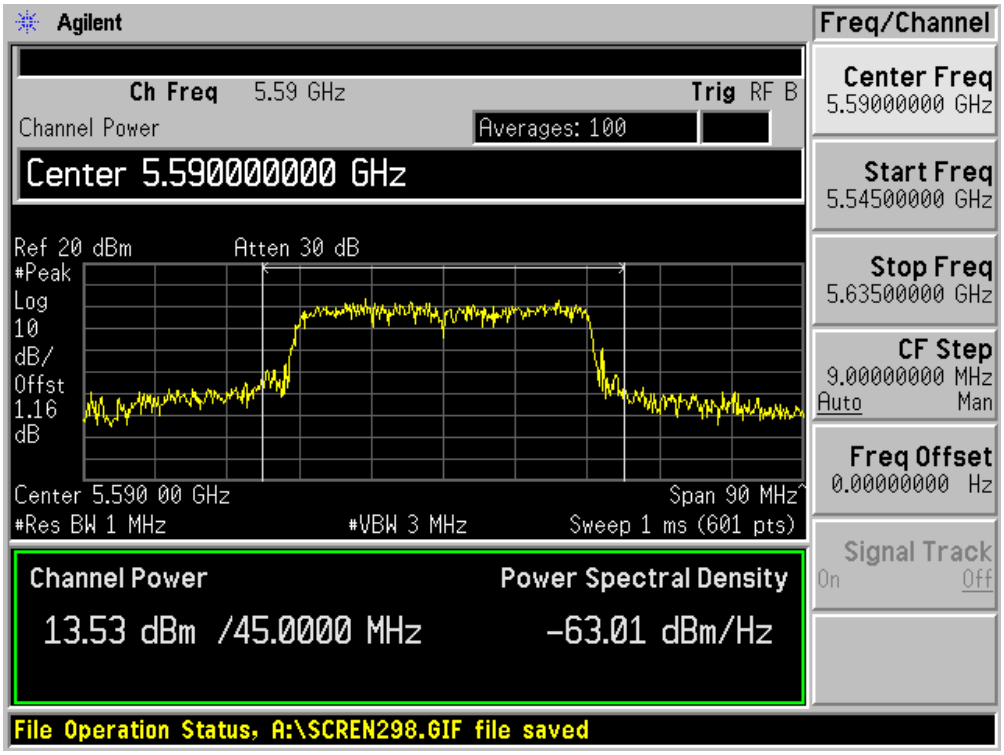
Channel 62 (5310MHz) - Chain A



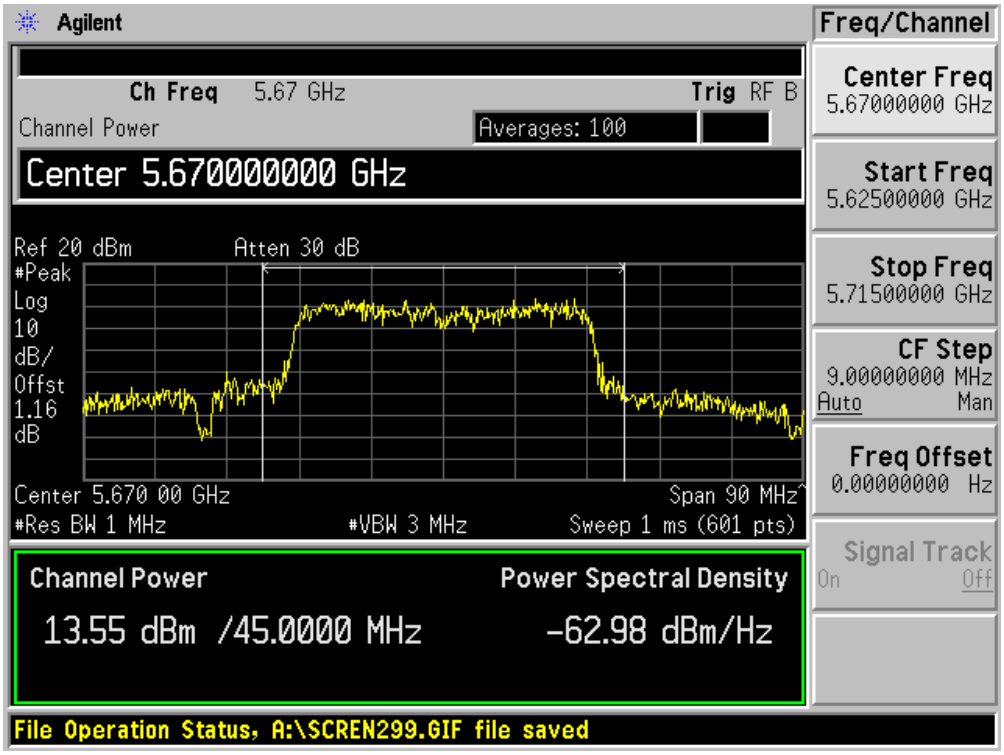
Channel 102 (5510MHz) - Chain A



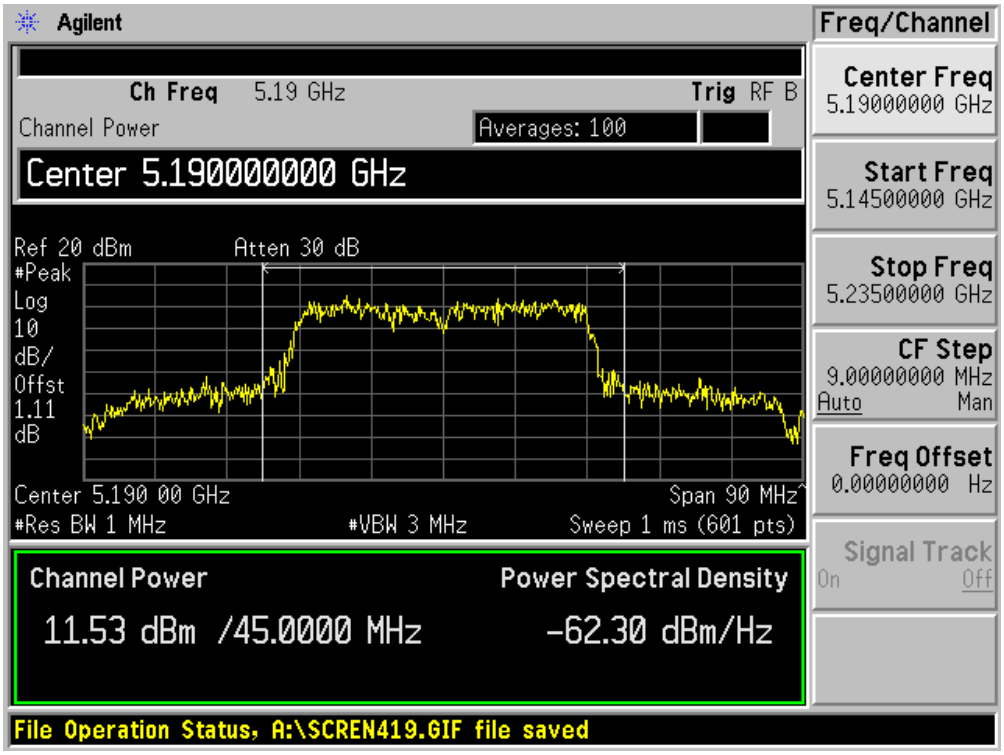
Channel 118 (5590MHz) - Chain A



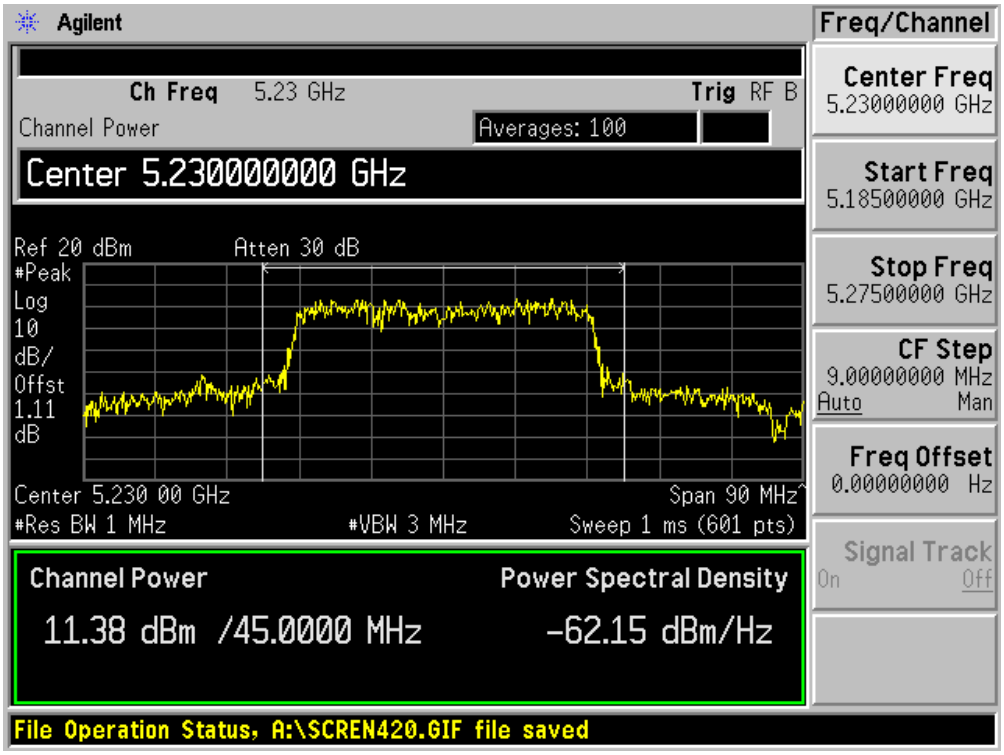
Channel 134 (5670MHz) - Chain A



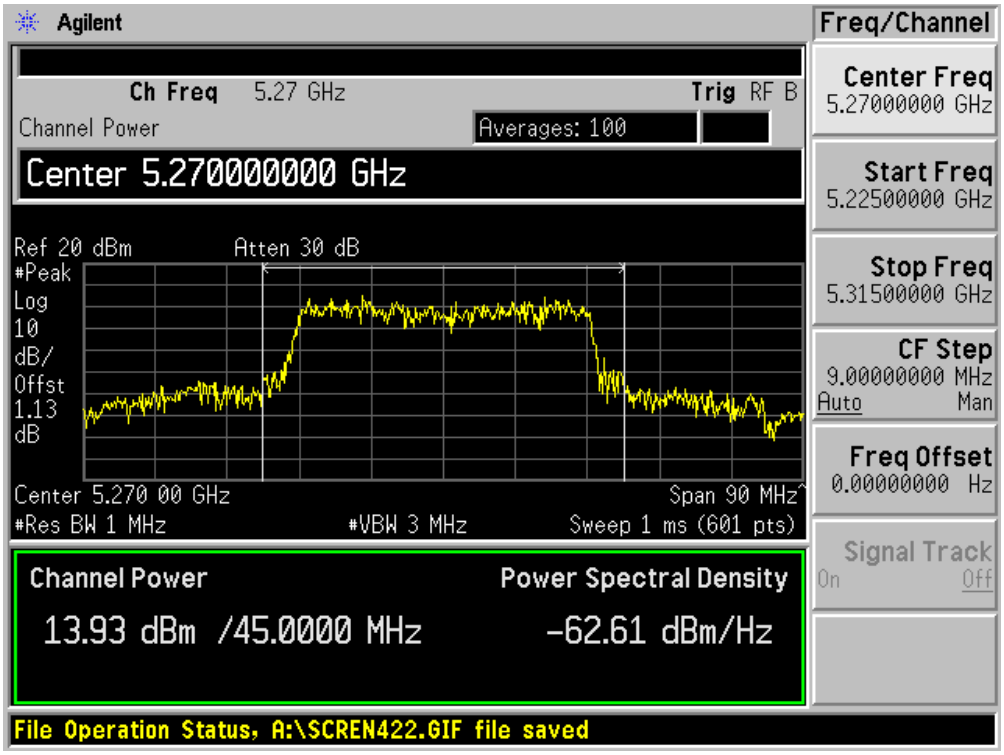
Channel 38 (5190MHz) - Chain B



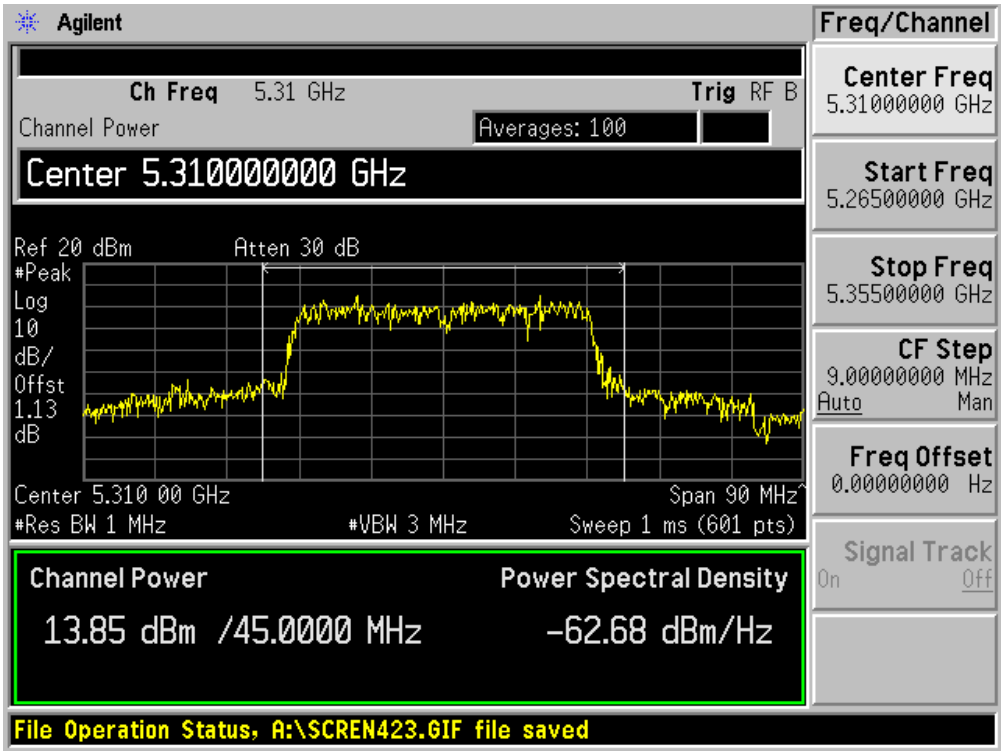
Channel 46 (5230MHz) - Chain B



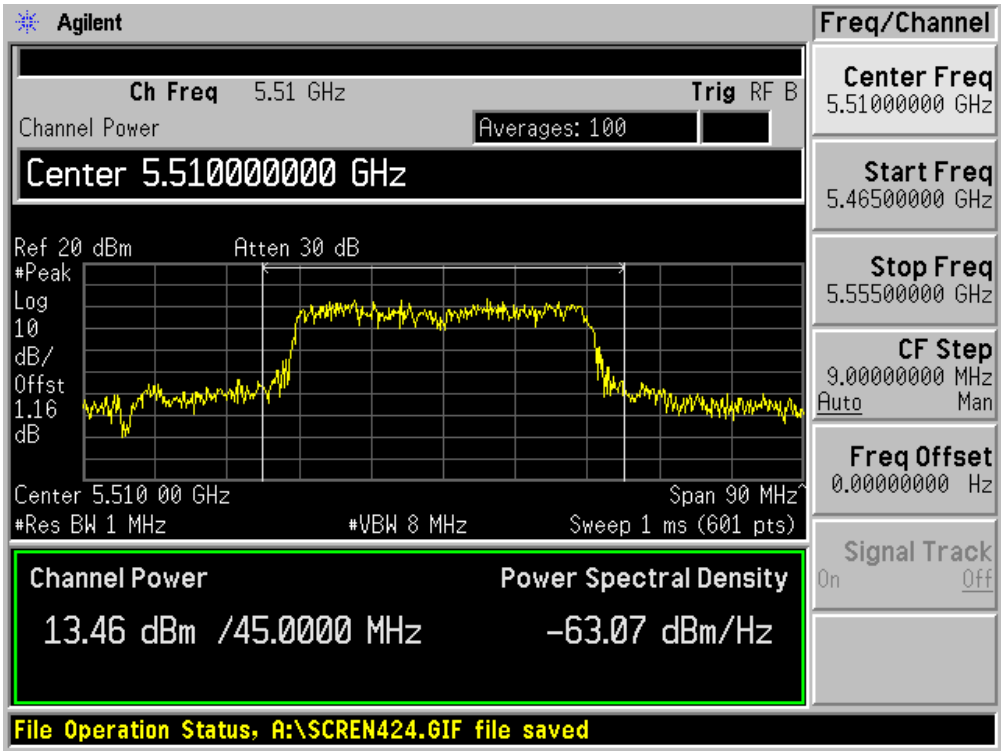
Channel 54 (5270MHz) - Chain B



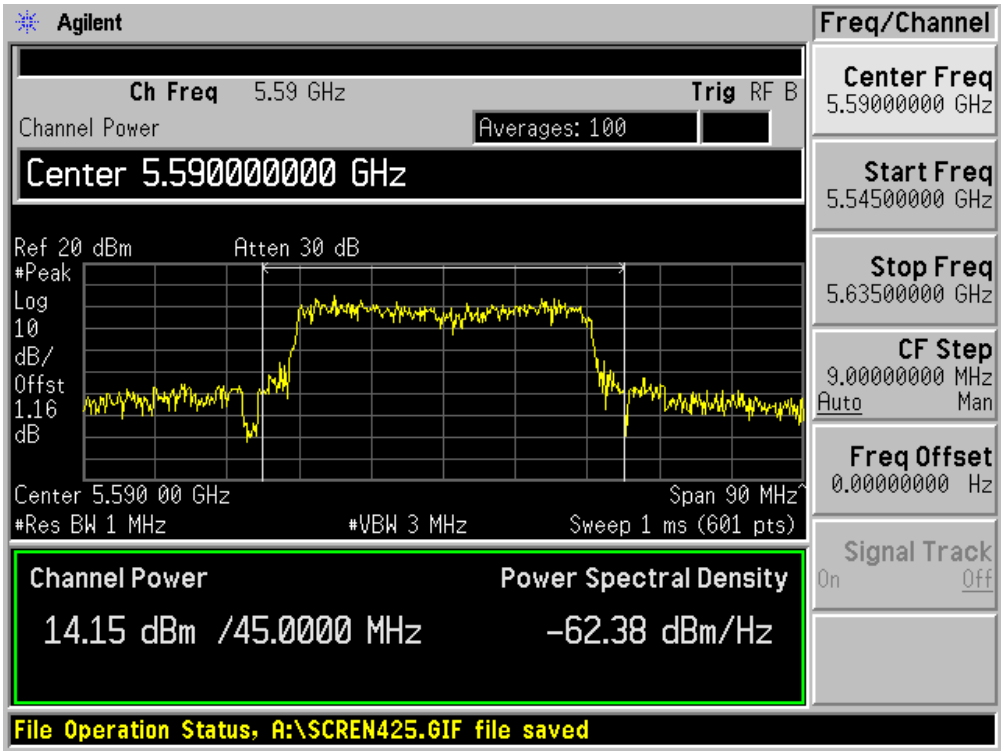
Channel 62 (5310MHz) - Chain B



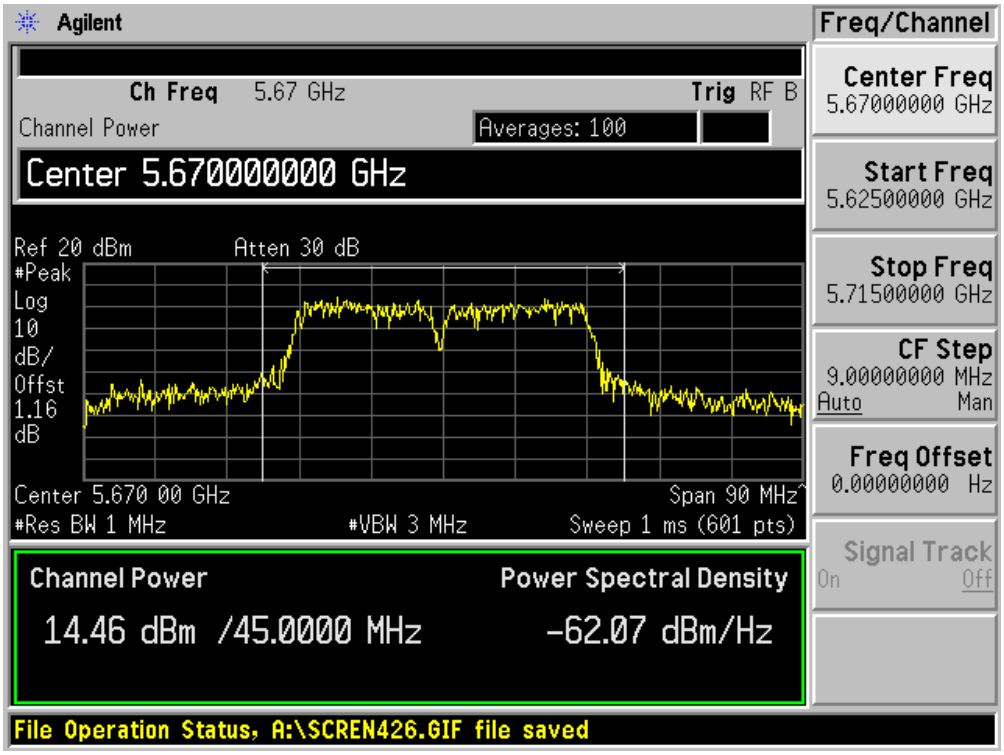
Channel 102 (5510MHz) - Chain B



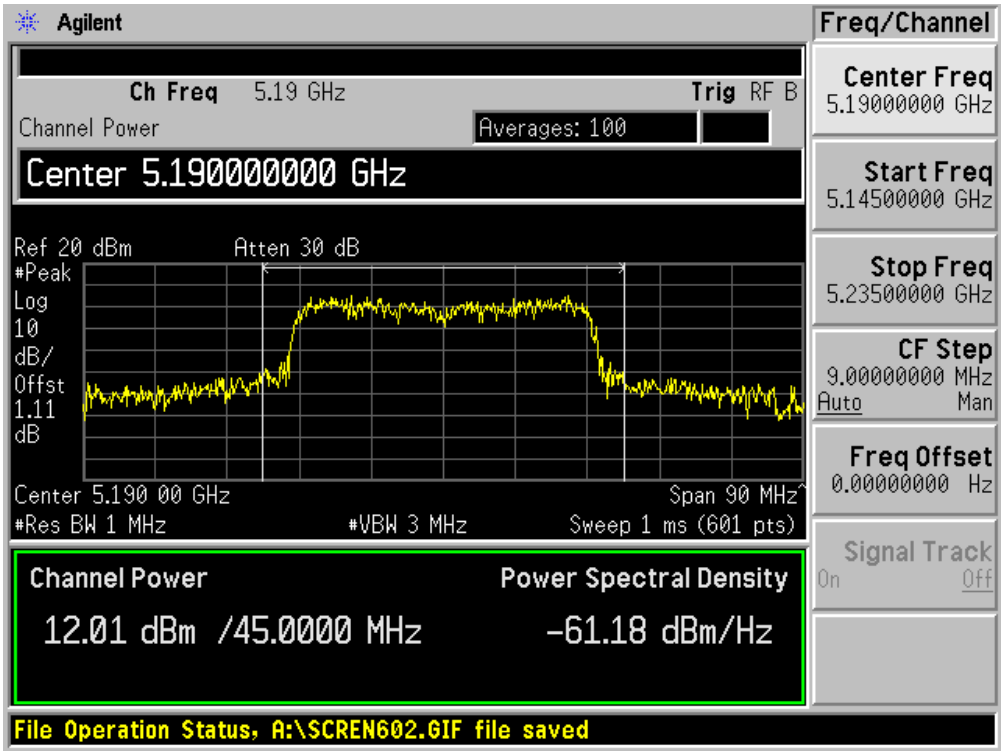
Channel 118 (5590MHz) - Chain B



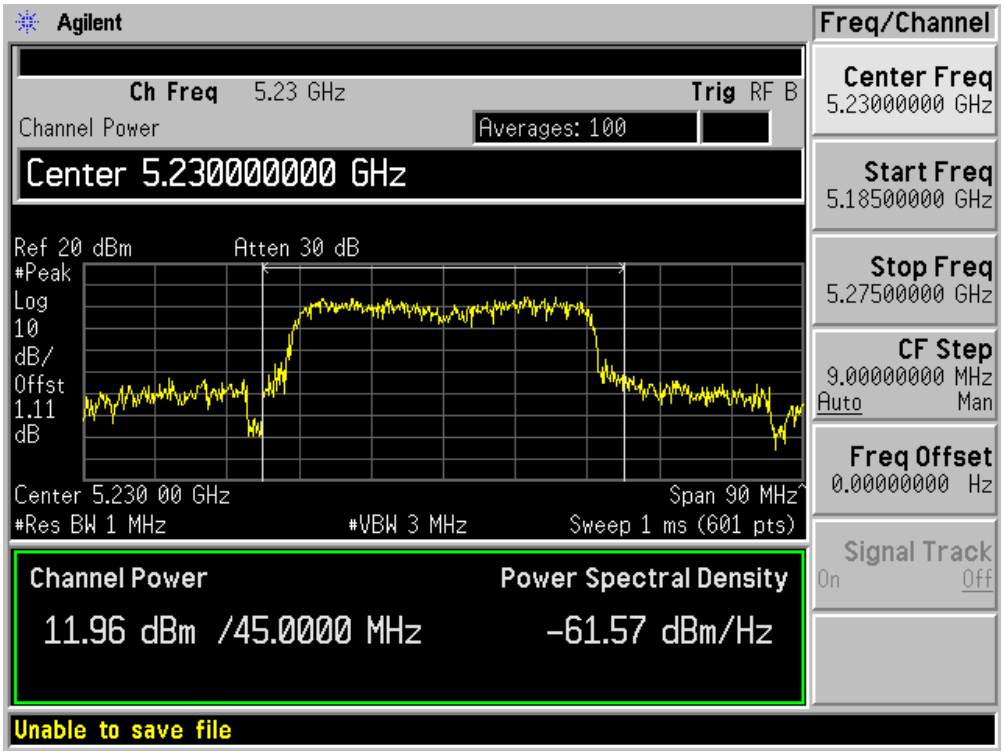
Channel 134 (5670MHz) - Chain B



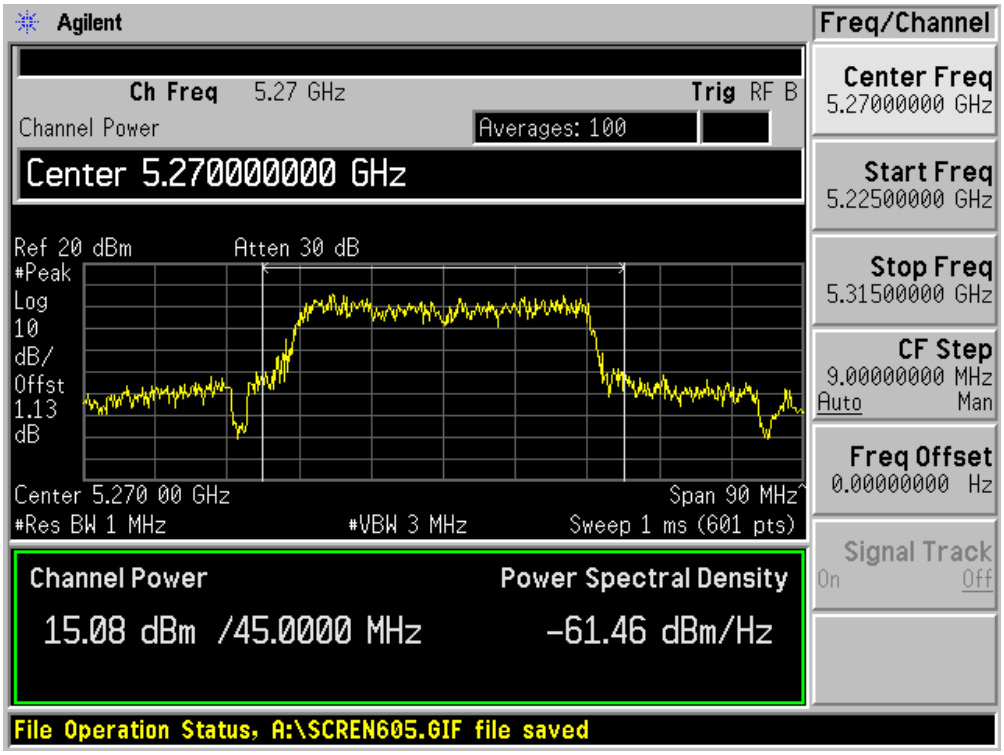
Channel 38 (5190MHz) - Chain C



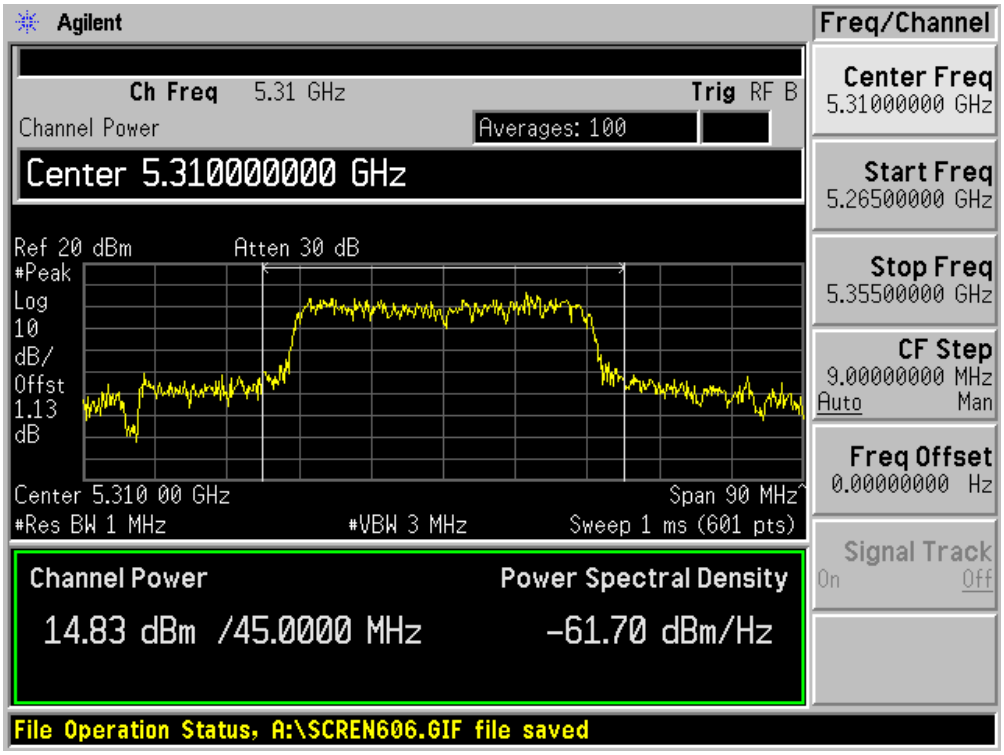
Channel 46 (5230MHz) - Chain C



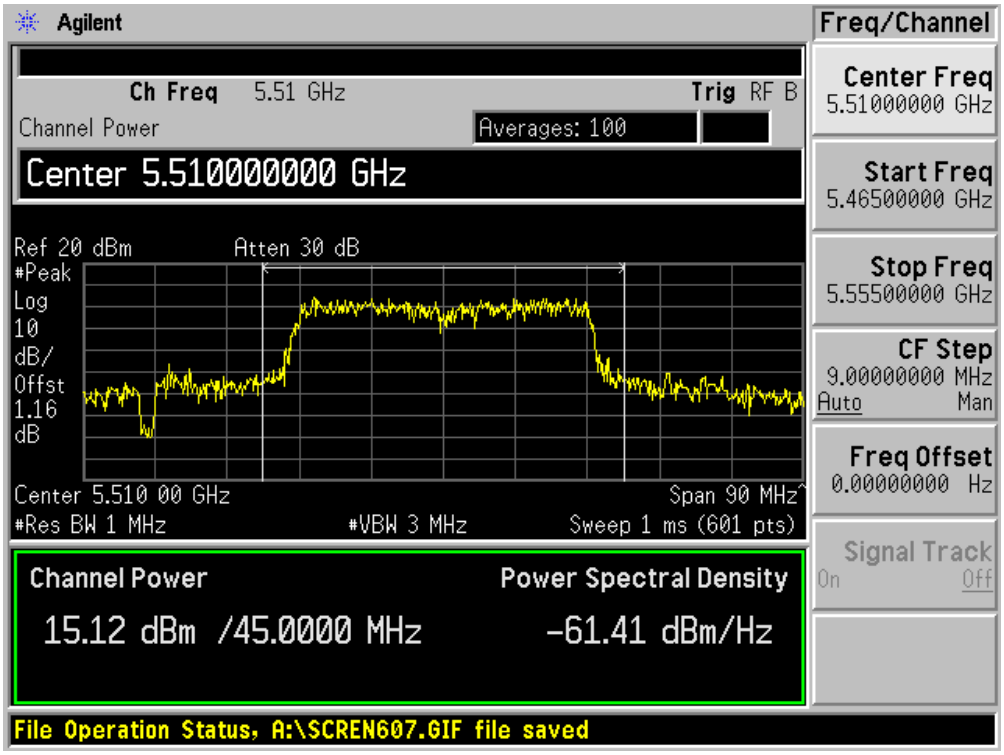
Channel 54 (5270MHz) - Chain C



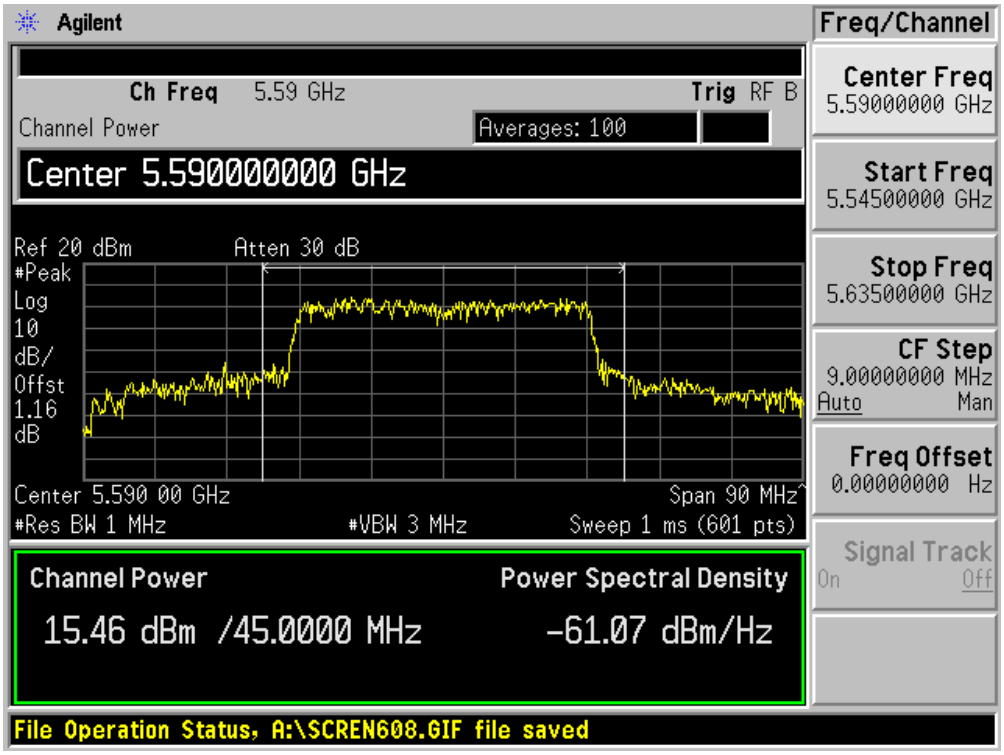
Channel 62 (5310MHz) - Chain C



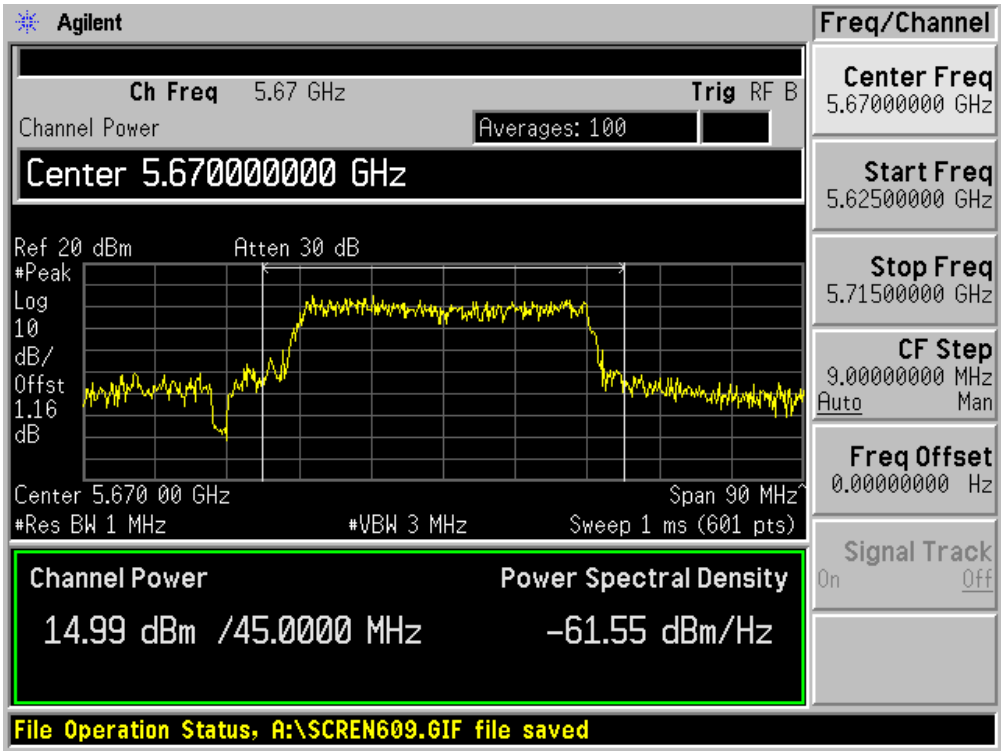
Channel 102 (5510MHz) - Chain C



Channel 118 (5590MHz) - Chain C



Channel 134 (5670MHz) - Chain C



6. Peak Power Spectral Density

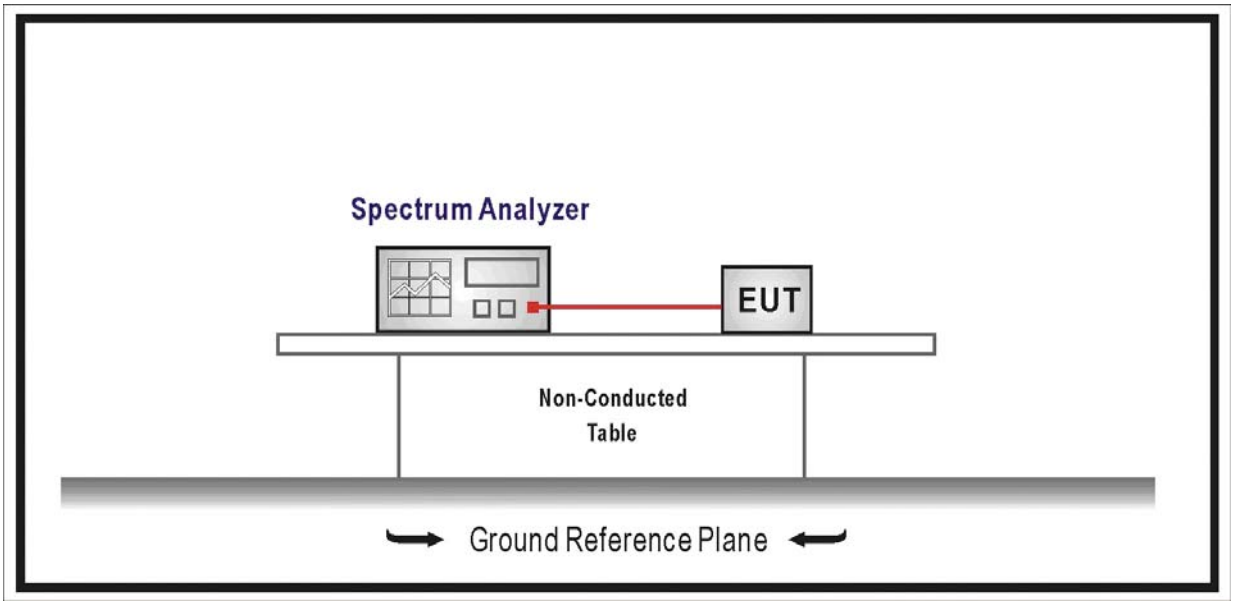
6.1. Test Equipment

Peak Power Spectral Density / AC-4

Instrument	Manufacturer	Type No.	Serial No.	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2008/06/11
Coaxial Cable	Huber+Suhner	AC4-RF	09	2007/11/25
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH007	2008/03/09

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

6.2. Test Setup



6.3. Limit

- 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.
- For the band 5.25-5.35 GHz and 5.47-5725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10log B, where B is the 26 dB emission bandwidth in megahertz. 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.

- 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 1 W 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. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain up to 23 dBi without any corresponding reduction in the transmitter peak output power. For fixed, point-to-point U-NII transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in peak transmitter power for each 1 dB of antenna gain in excess of 23 dBi would be required.

6.4. Test Procedure

The EUT was tested according to FCC Public Notice DA 02-2138, August 30, 2002 for compliance to FCC 47CFR 15.407 requirements.
Use sample detector and power averaging (not video averaging) mode. Set RBW= 1 MHz*, VBW > 1 MHz. The PPSD is the highest level found across the emission in any 1-MHz band after 100 sweeps of averaging. This method is permitted only if the transmission pulse or sequence of pulses remains at maximum transmit power throughout each of the 100 sweeps of averaging and that the interval between pulses is not included in any of the sweeps (e.g., 100 sweeps should occur during one transmission, or each sweep gated to occur during a transmission).

6.5. Uncertainty

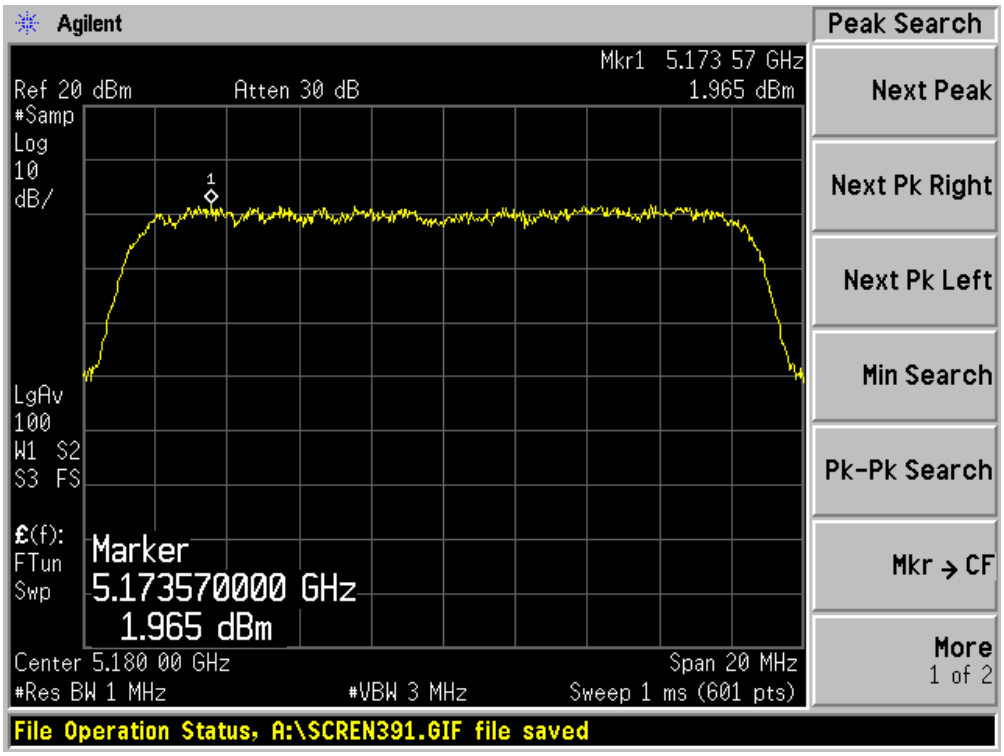
The measurement uncertainty is defined as ± 1.27 dB

6.6. Test Result

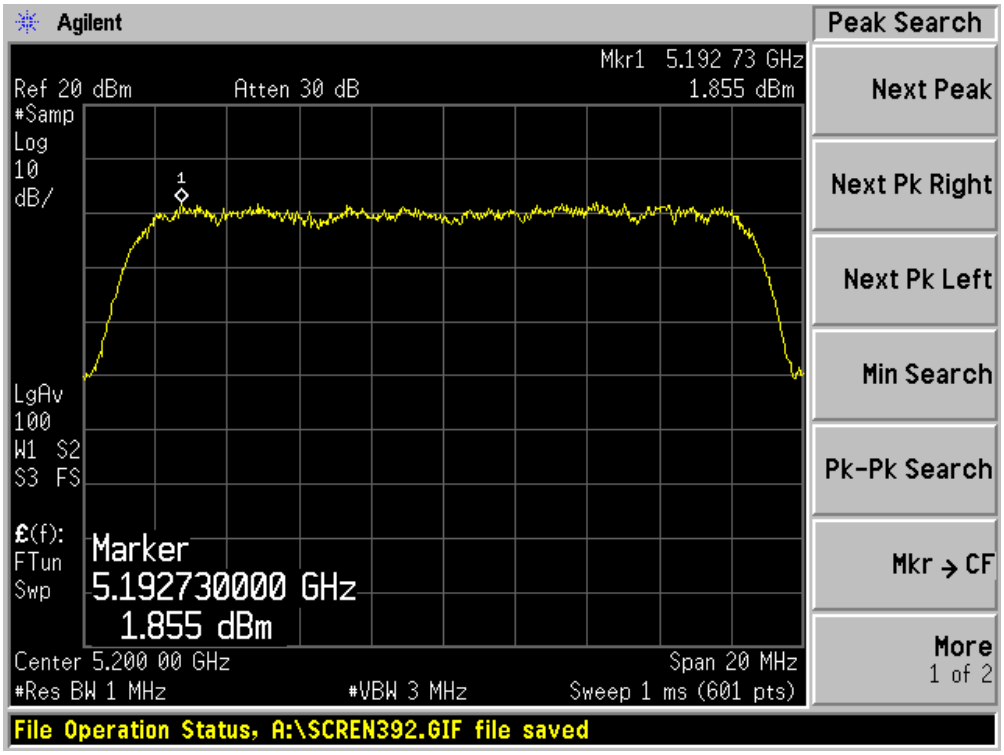
Product	:	Notebook Computer
Test Item	:	Peak Power Spectral Density
Test Site	:	AC-4
Test Mode	:	Mode 1: Transmit by 802.11a (Chain A)

Channel No.	Frequency (MHz)	Measurement PPSD (dBm/MHz)			Total PPSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Chain A	Chain B	Chain C			
36	5180	1.965	N/A	N/A	1.965	4	Pass
40	5200	1.855	N/A	N/A	1.855	4	Pass
48	5240	1.845	N/A	N/A	1.845	4	Pass
52	5260	1.850	N/A	N/A	1.850	11	Pass
60	5300	1.725	N/A	N/A	1.725	11	Pass
64	5320	1.385	N/A	N/A	1.385	11	Pass
100	5500	1.660	N/A	N/A	1.660	11	Pass
120	5600	1.630	N/A	N/A	1.630	11	Pass
140	5700	1.350	N/A	N/A	1.350	11	Pass

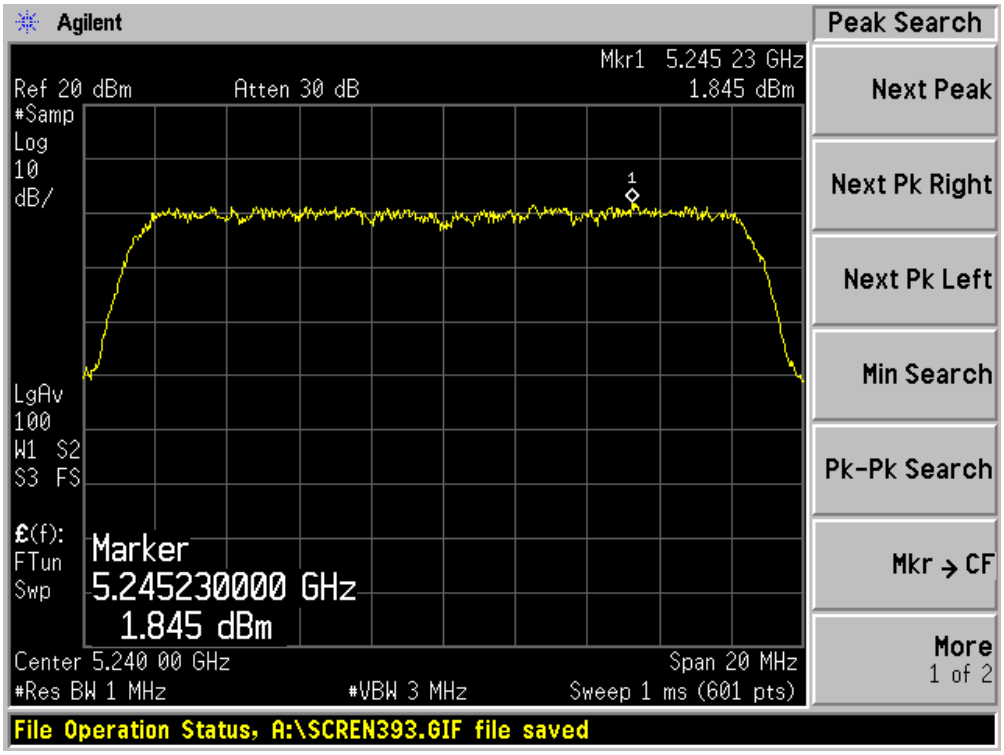
Channel 36 (5180MHz)



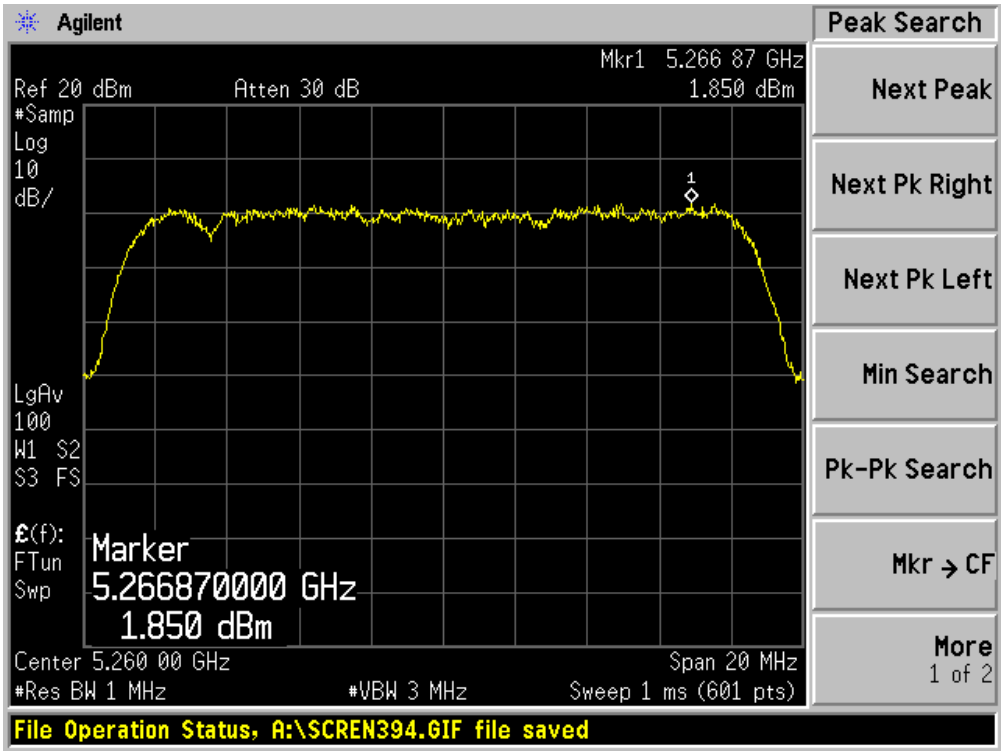
Channel 40 (5200MHz)



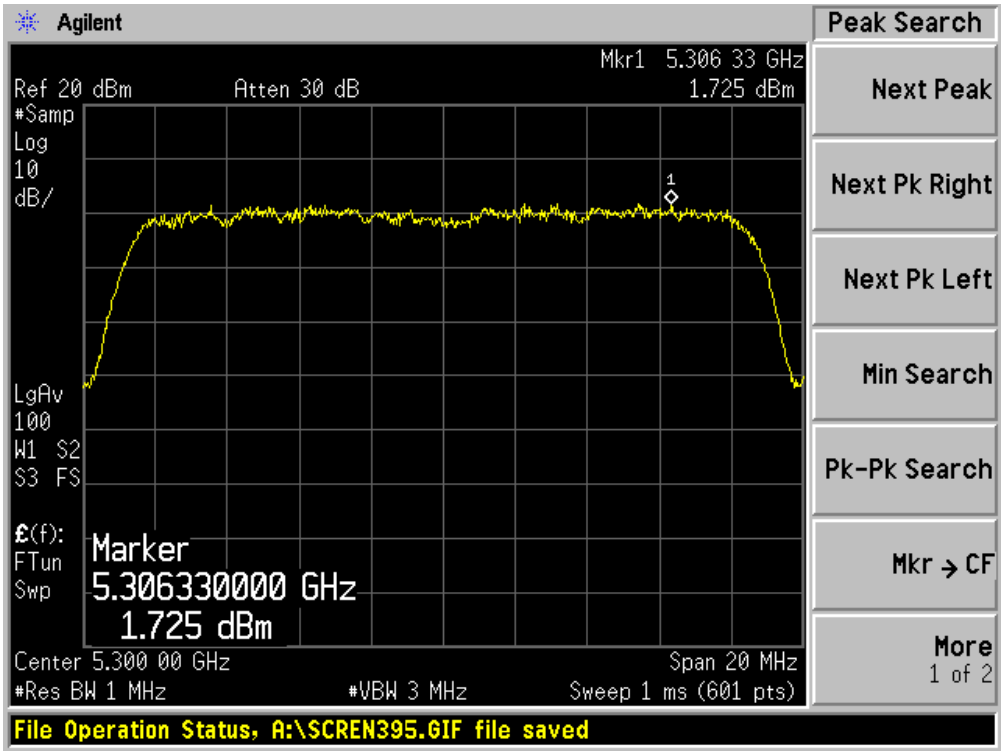
Channel 48 (5240MHz)



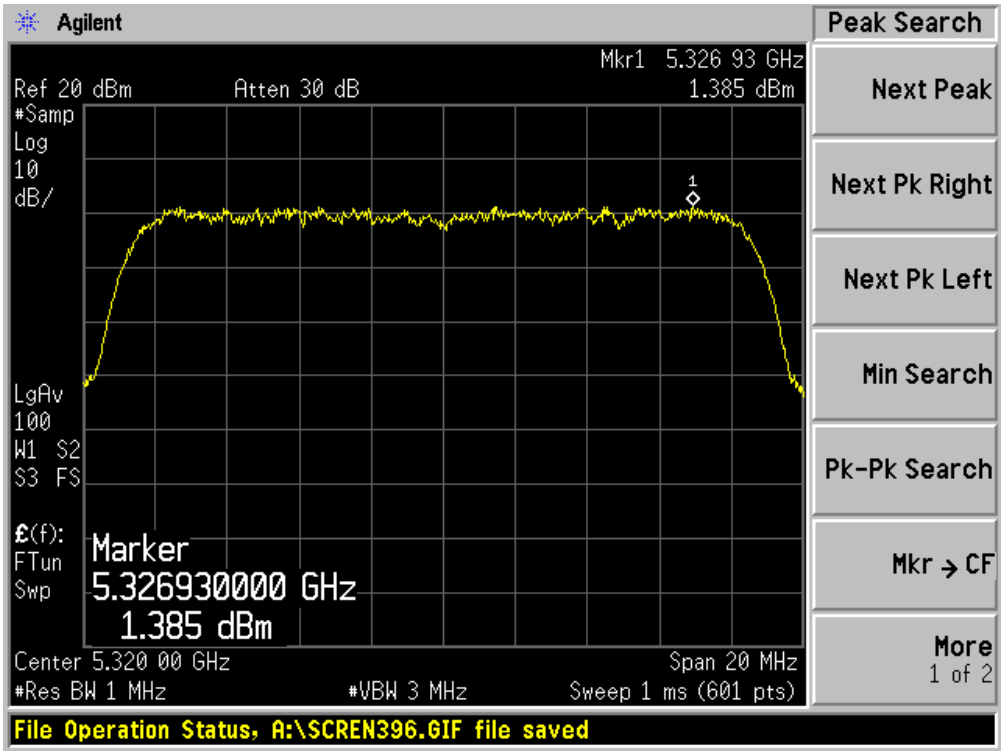
Channel 52 (5260MHz)



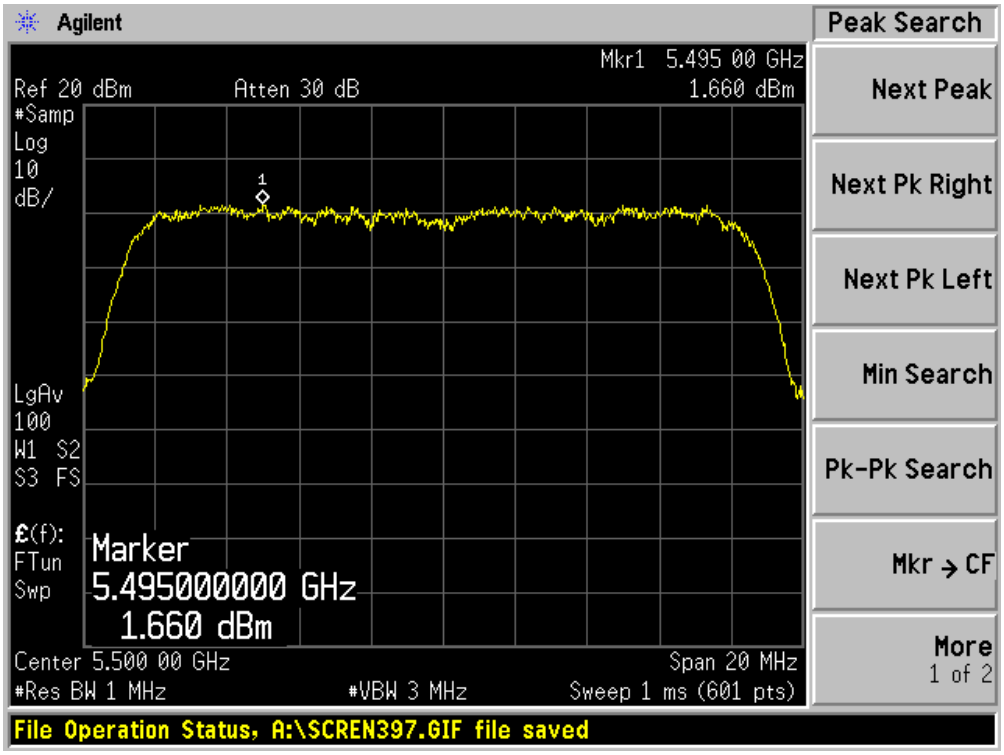
Channel 60 (5300MHz)



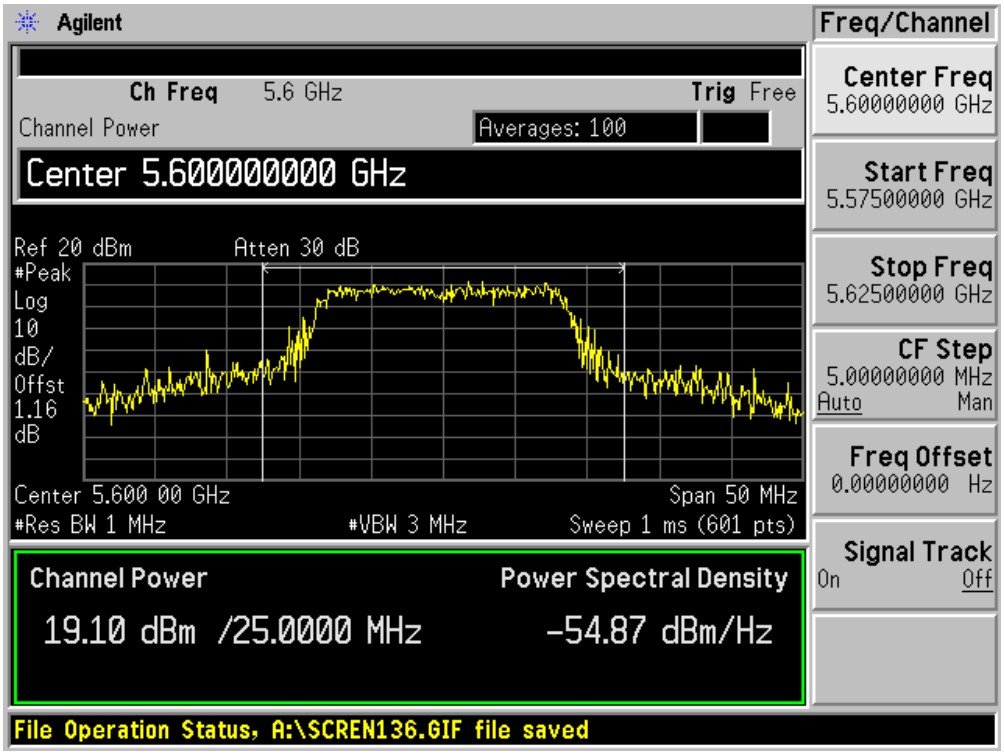
Channel 64 (5320MHz)



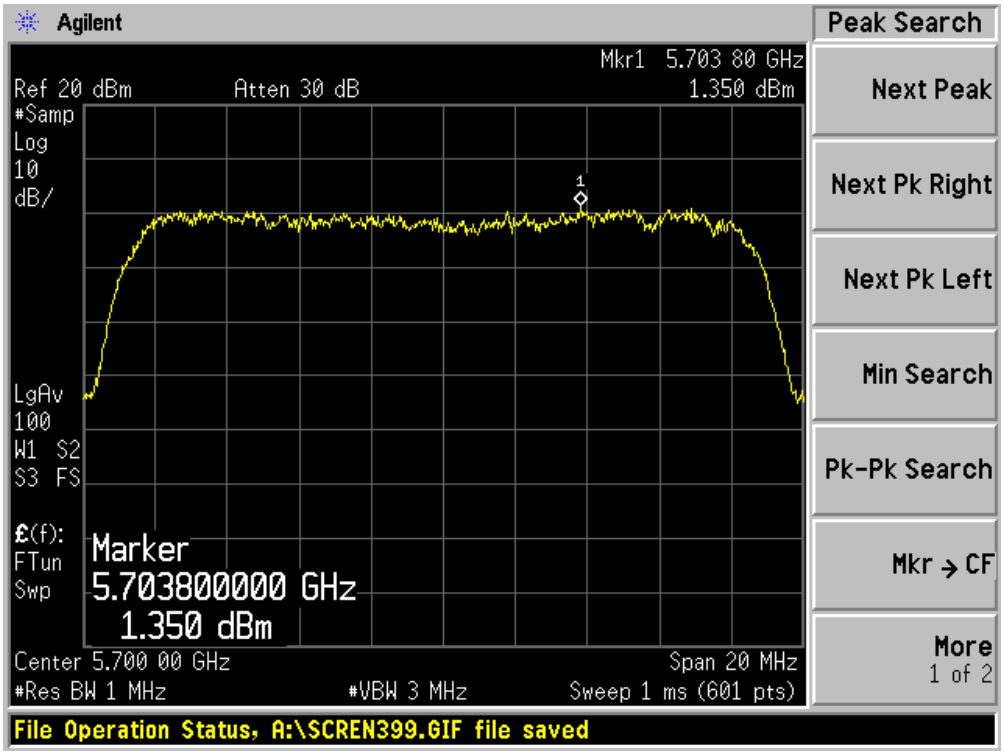
Channel 100 (5500MHz)



Channel 120 (5600MHz)



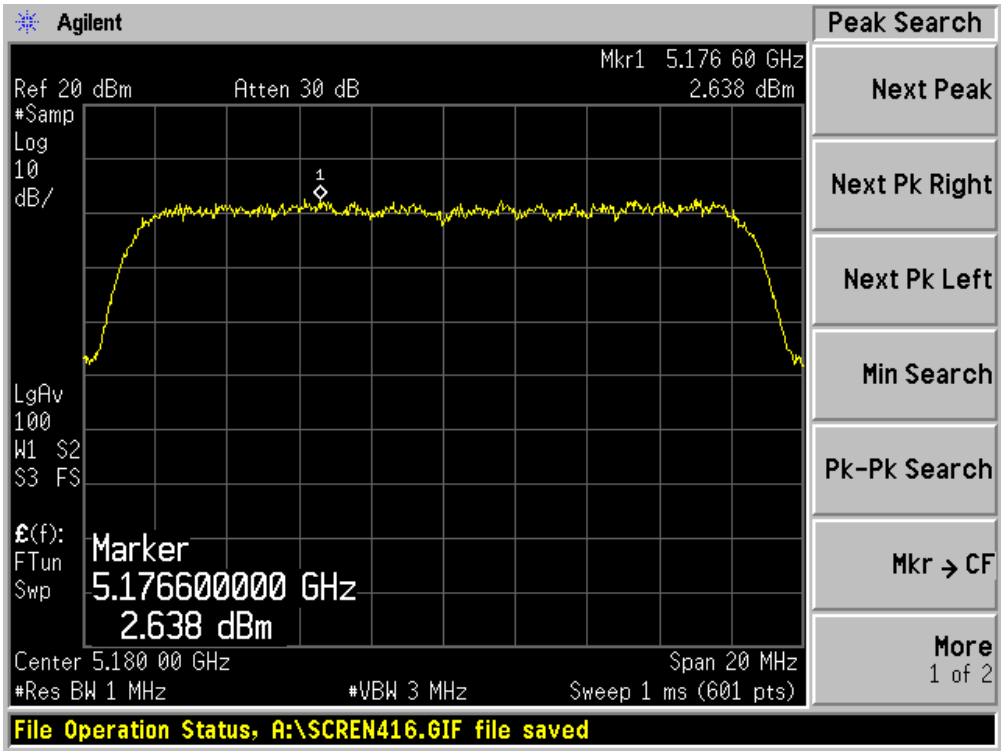
Channel 140 (5700MHz)



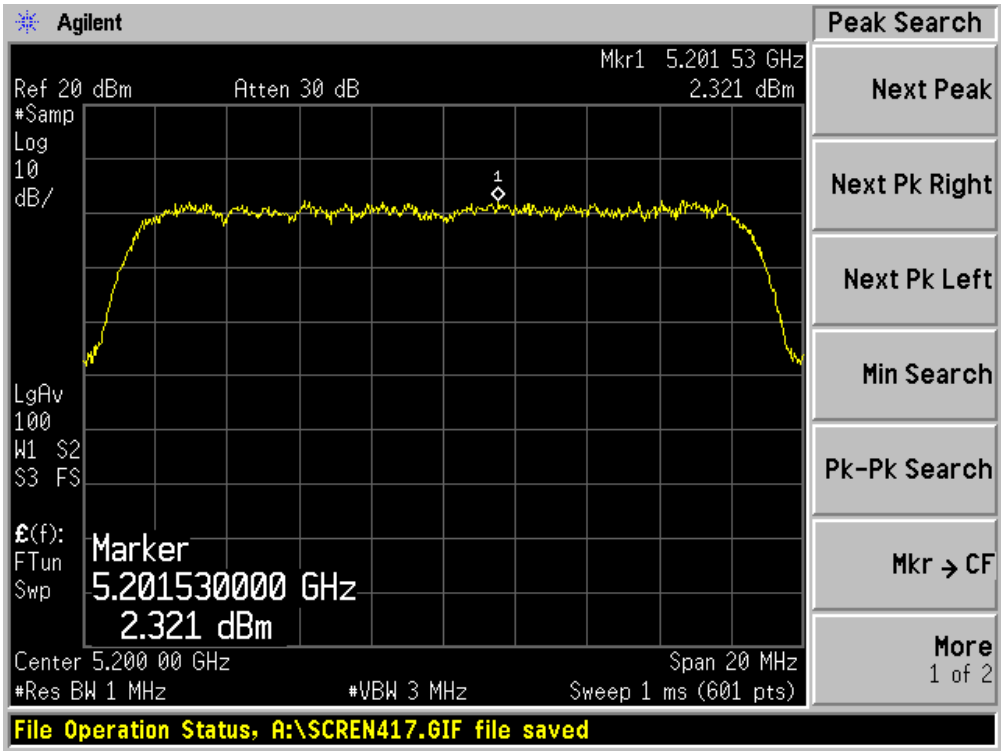
Product	:	Notebook Computer
Test Item	:	Power Output
Test Site	:	AC-4
Test Mode	:	Mode 1: Transmit by 802.11a (Chain B)

Channel No.	Frequency (MHz)	Measurement PPSD (dBm/MHz)			Total PPSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Chain A	Chain B	Chain C			
36	5180	N/A	2.638	N/A	2.638	4	Pass
40	5200	N/A	2.321	N/A	2.321	4	Pass
48	5240	N/A	2.793	N/A	2.793	4	Pass
52	5260	N/A	2.642	N/A	2.642	11	Pass
60	5300	N/A	2.068	N/A	2.068	11	Pass
64	5320	N/A	2.074	N/A	2.074	11	Pass
100	5500	N/A	2.856	N/A	2.856	11	Pass
120	5600	N/A	2.182	N/A	2.182	11	Pass
140	5700	N/A	1.690	N/A	1.690	11	Pass

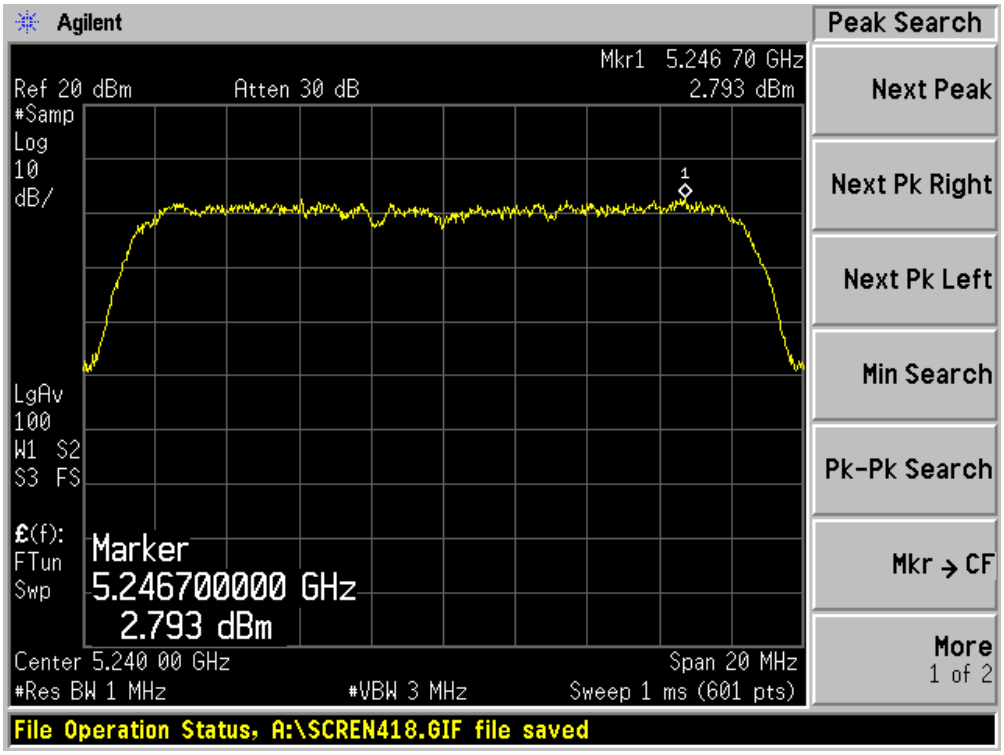
Channel 36 (5180MHz)



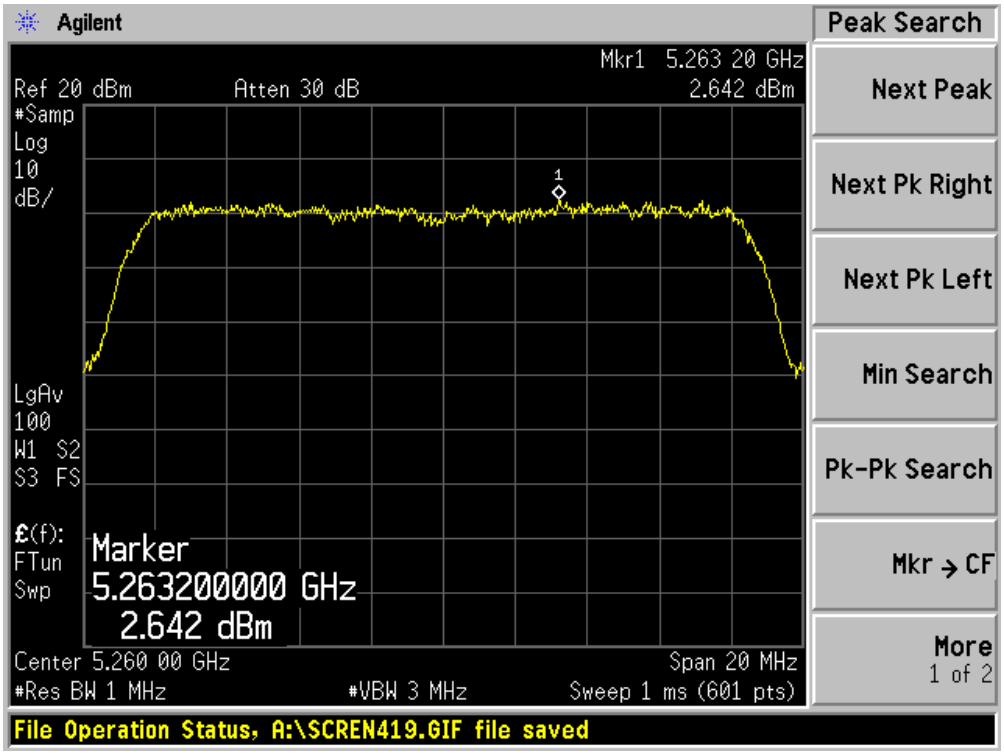
Channel 40 (5200MHz)



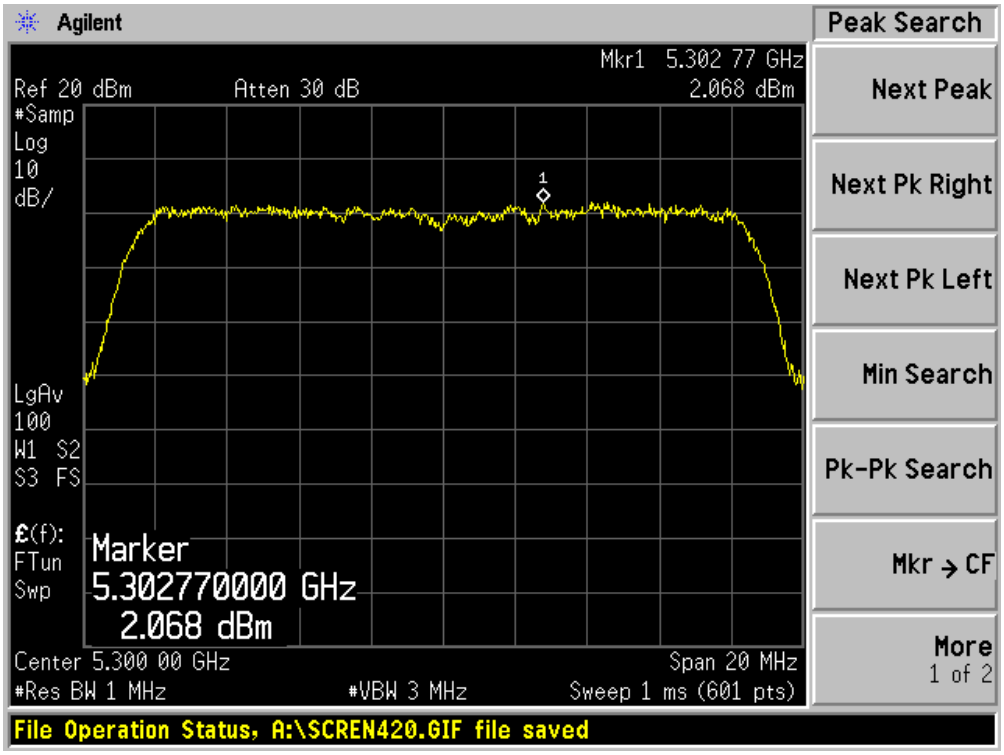
Channel 48 (5240MHz)



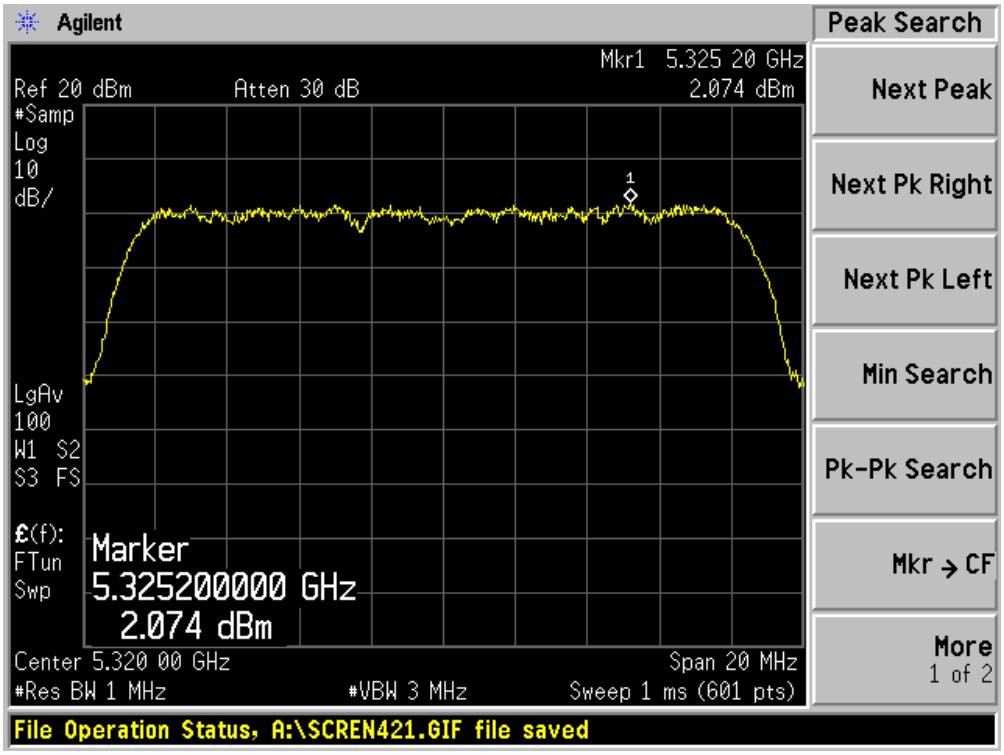
Channel 52 (5260MHz)



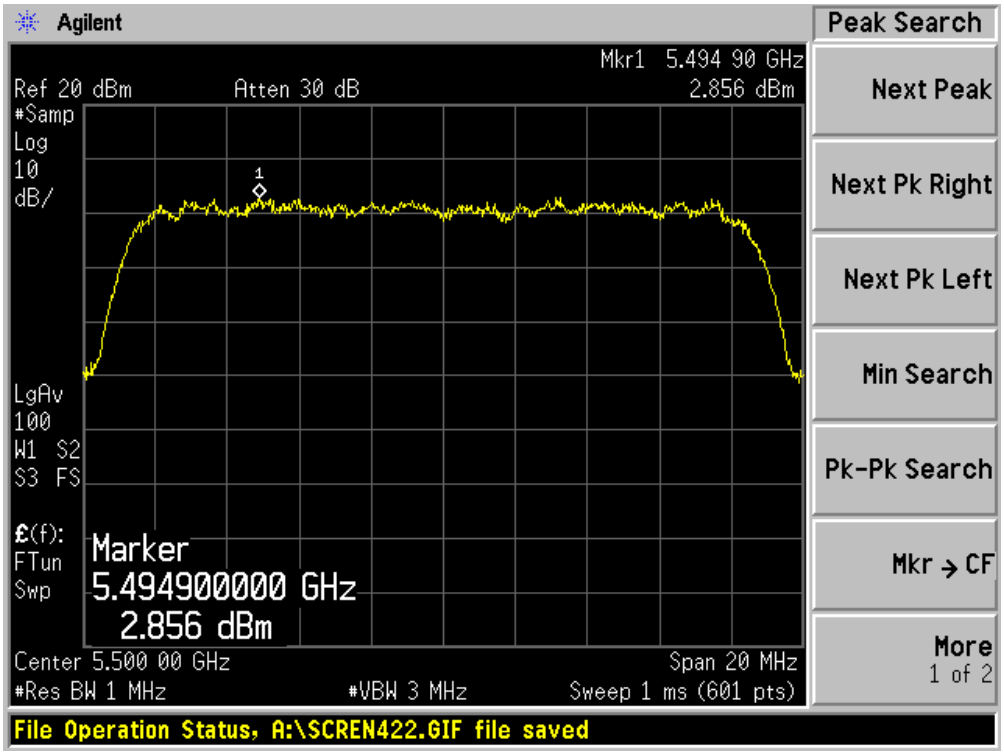
Channel 60 (5300MHz)



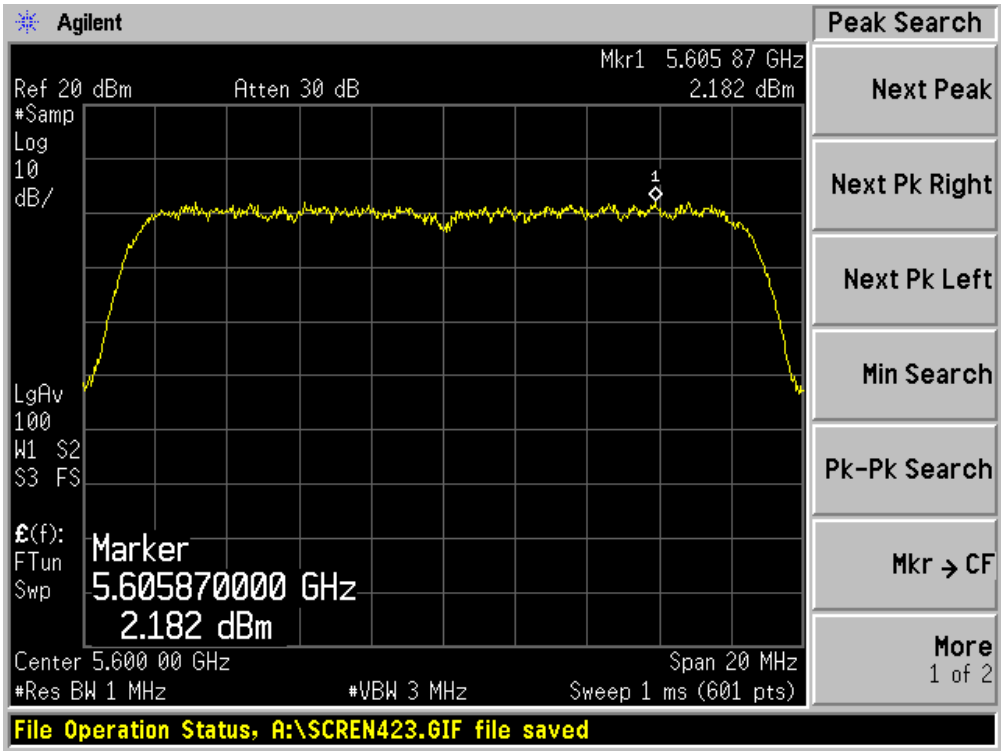
Channel 64 (5320MHz)



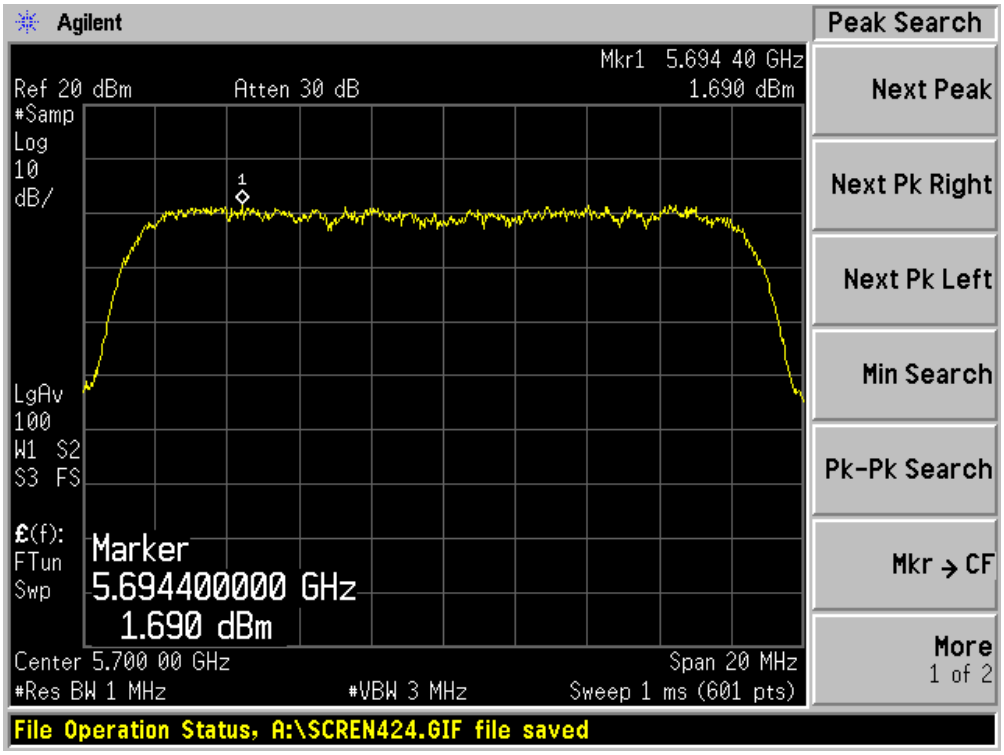
Channel 100 (5500MHz)



Channel 120 (5600MHz)



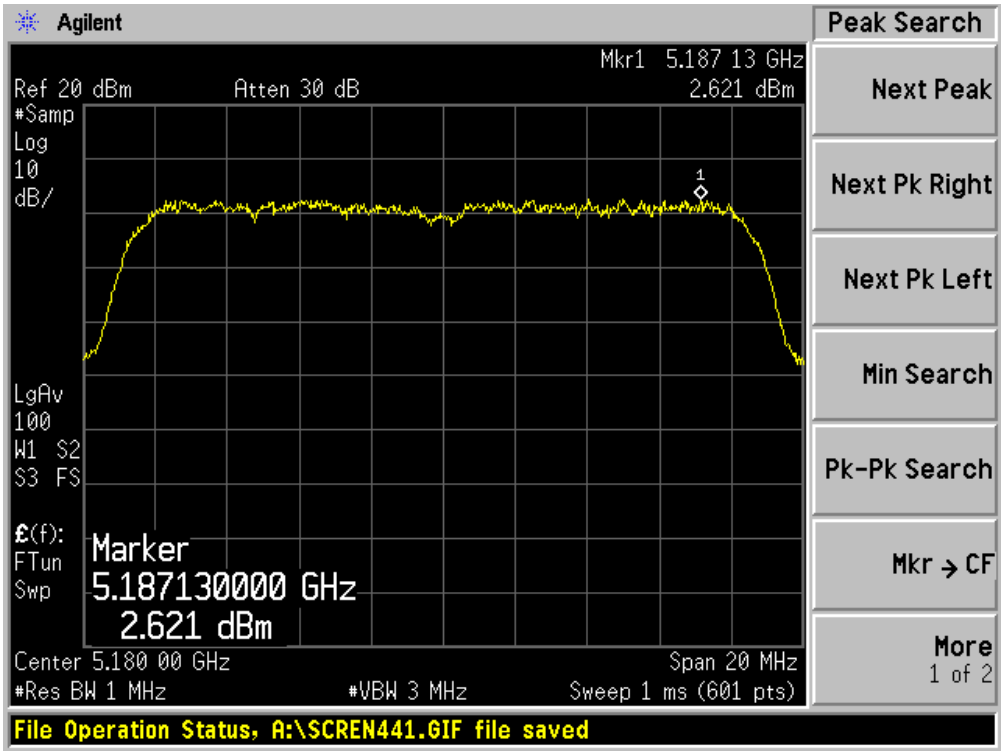
Channel 140 (5700MHz)



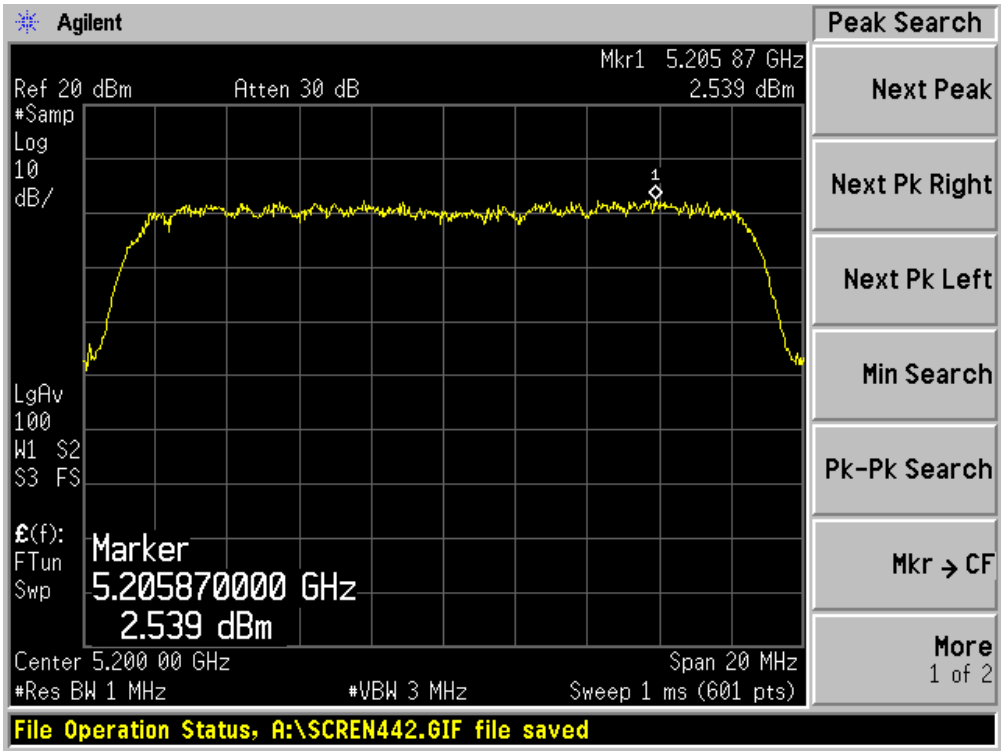
Product	:	Notebook Computer
Test Item	:	Power Output
Test Site	:	AC-4
Test Mode	:	Mode 1: Transmit by 802.11a (Chain C)

Channel No.	Frequency (MHz)	Measurement PPSD (dBm/MHz)			Total PPSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Chain A	Chain B	Chain C			
36	5180	N/A	N/A	2.621	2.621	4	Pass
40	5200	N/A	N/A	2.539	2.539	4	Pass
48	5240	N/A	N/A	2.602	2.602	4	Pass
52	5260	N/A	N/A	2.193	2.193	11	Pass
60	5300	N/A	N/A	2.489	2.489	11	Pass
64	5320	N/A	N/A	2.354	2.354	11	Pass
100	5500	N/A	N/A	3.328	3.328	11	Pass
120	5600	N/A	N/A	2.760	2.760	11	Pass
140	5700	N/A	N/A	3.076	3.076	11	Pass

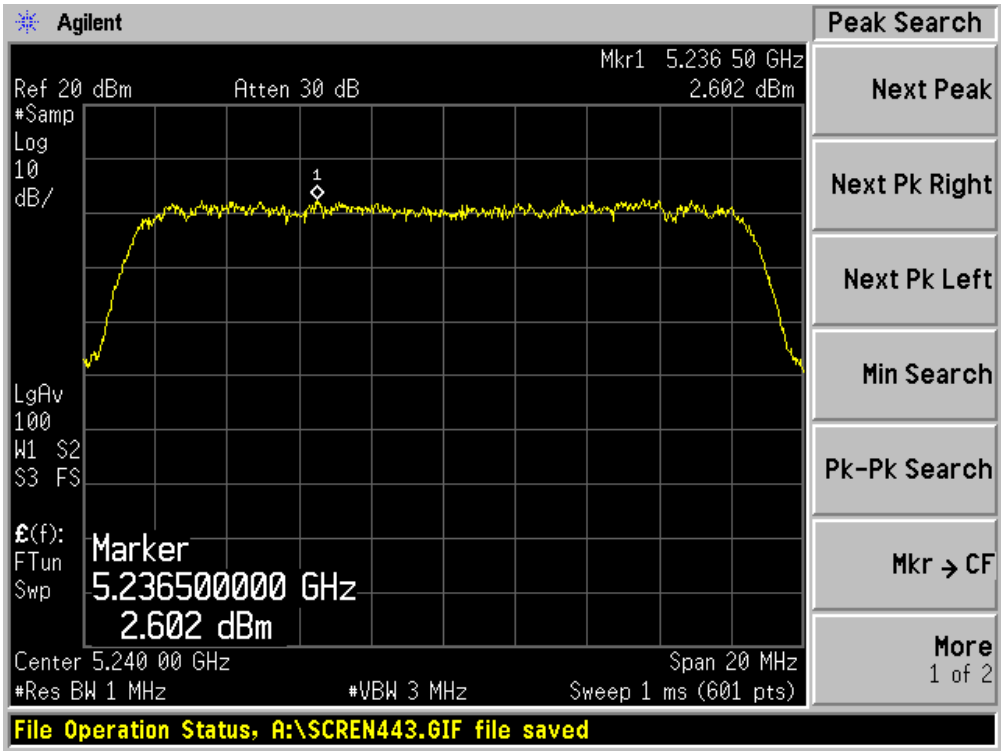
Channel 36 (5180MHz)



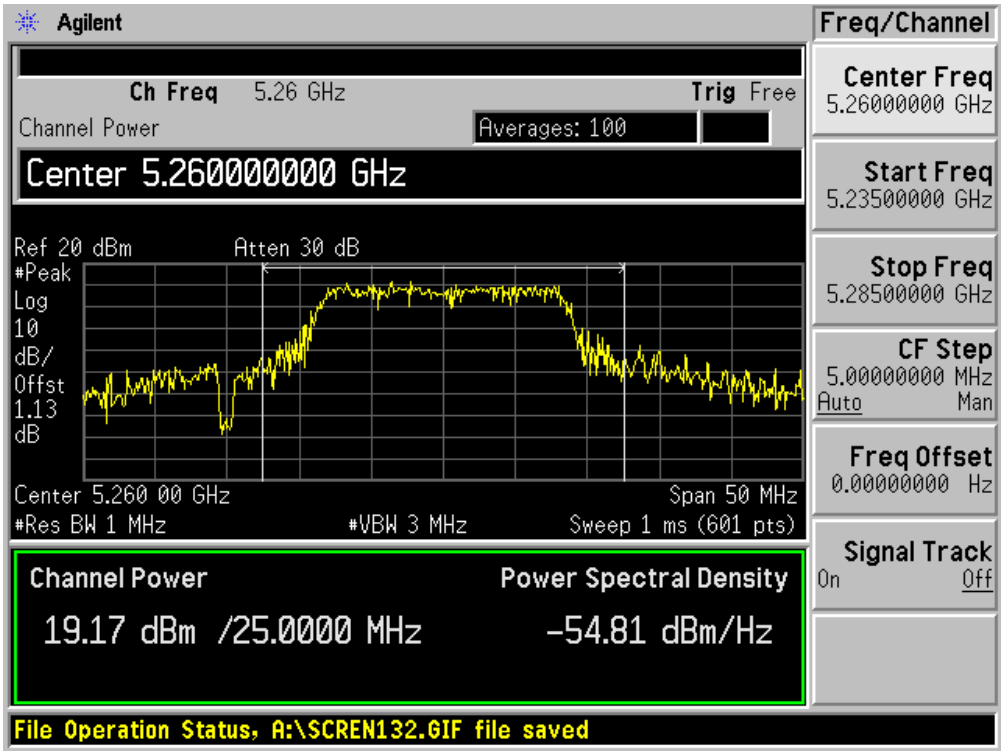
Channel 40 (5200MHz)



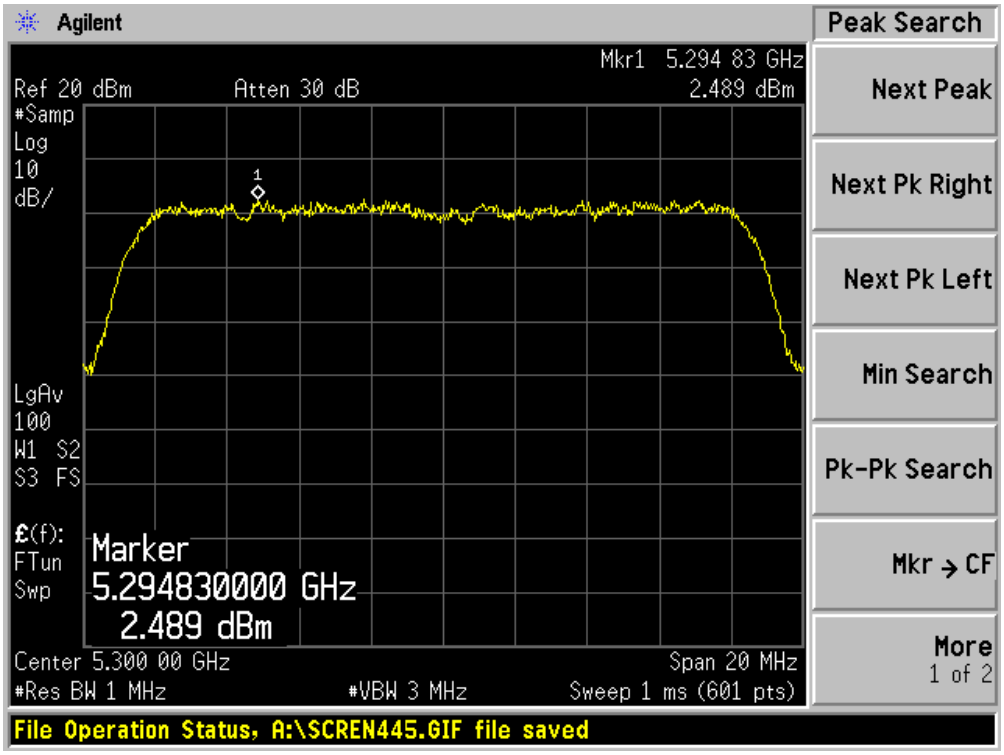
Channel 48 (5240MHz)



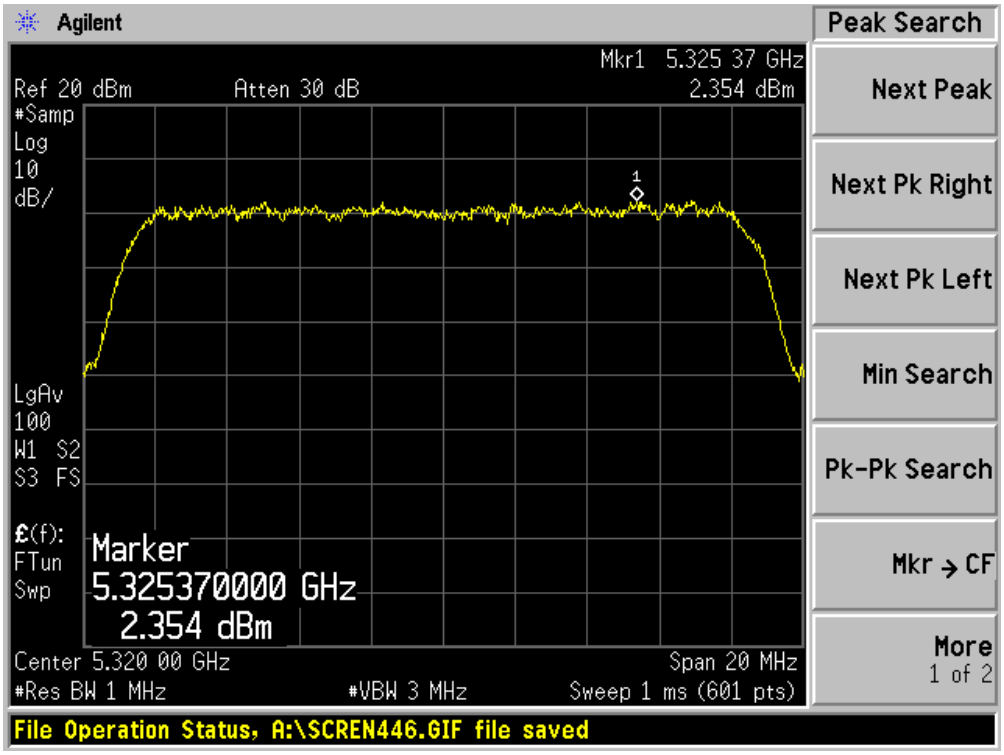
Channel 52 (5260MHz)



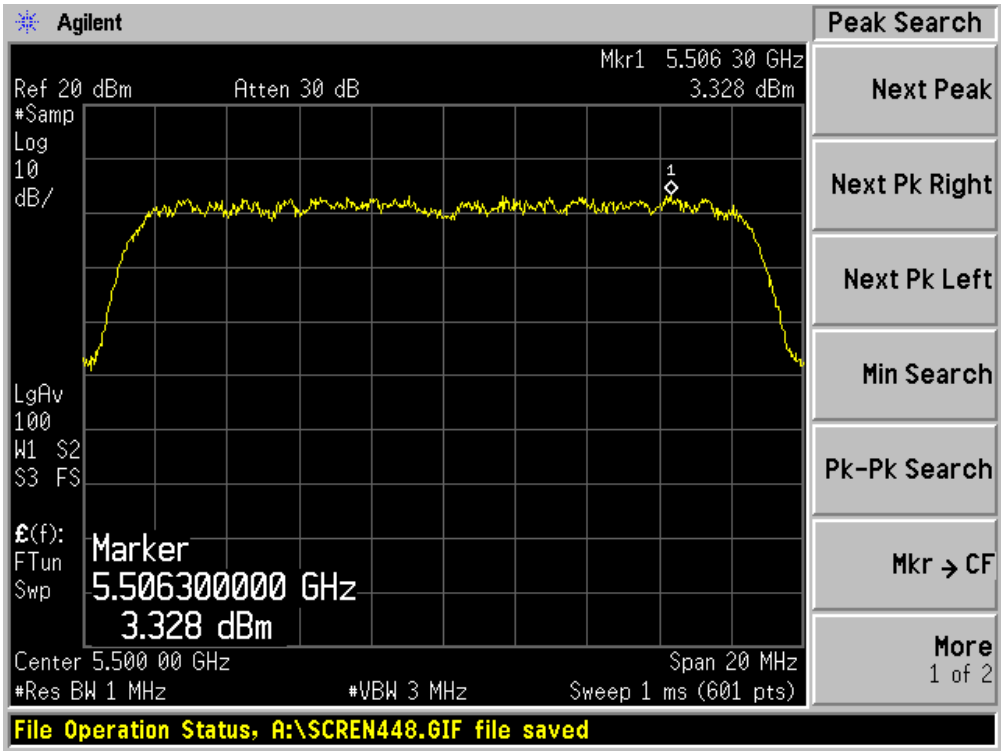
Channel 60 (5300MHz)



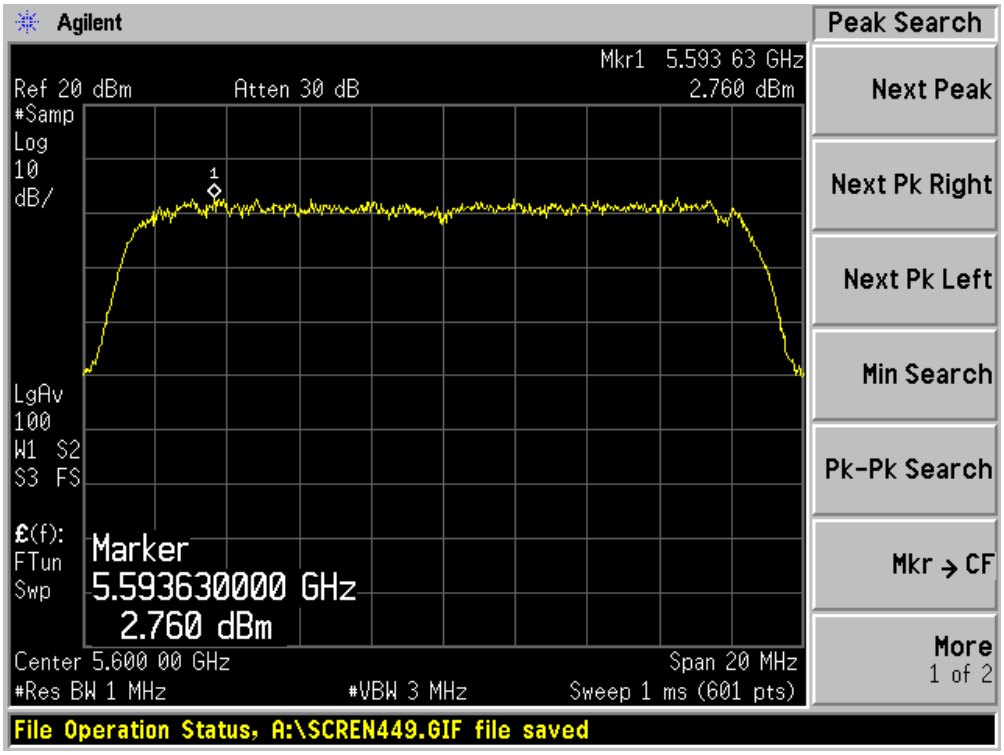
Channel 64 (5320MHz)



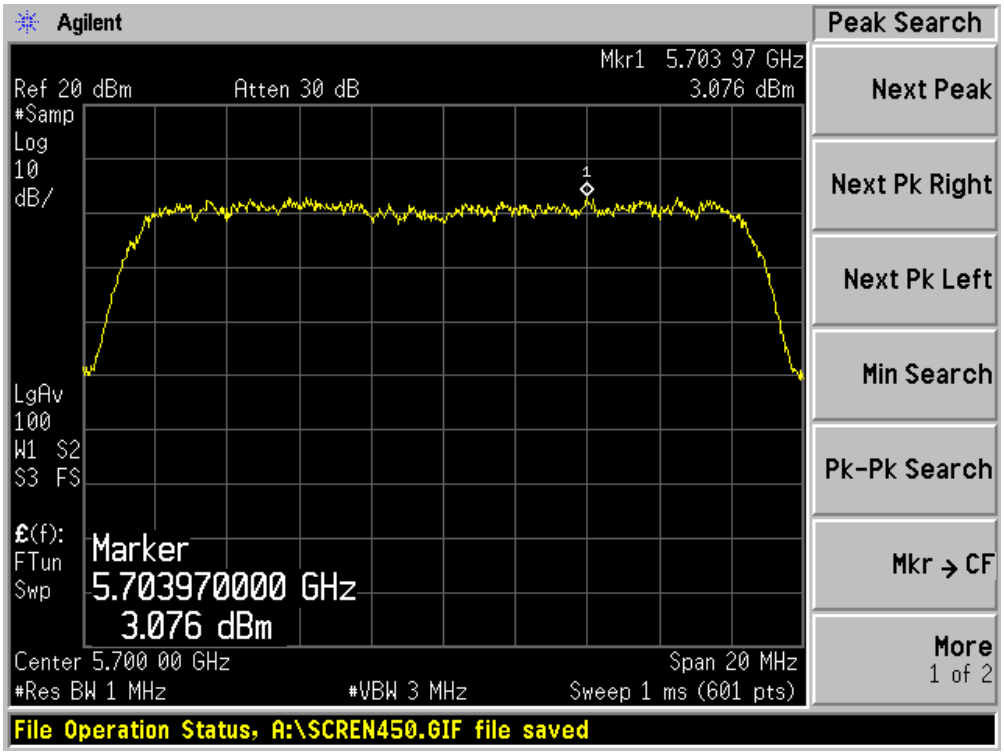
Channel 100 (5500MHz)



Channel 120 (5600MHz)



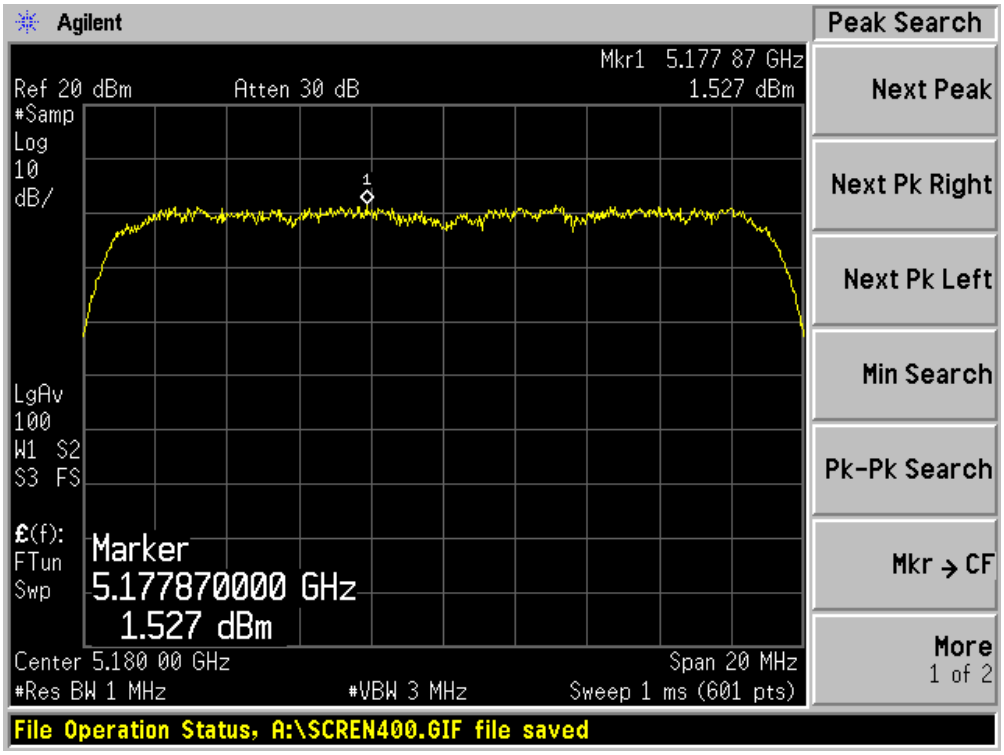
Channel 140 (5700MHz)



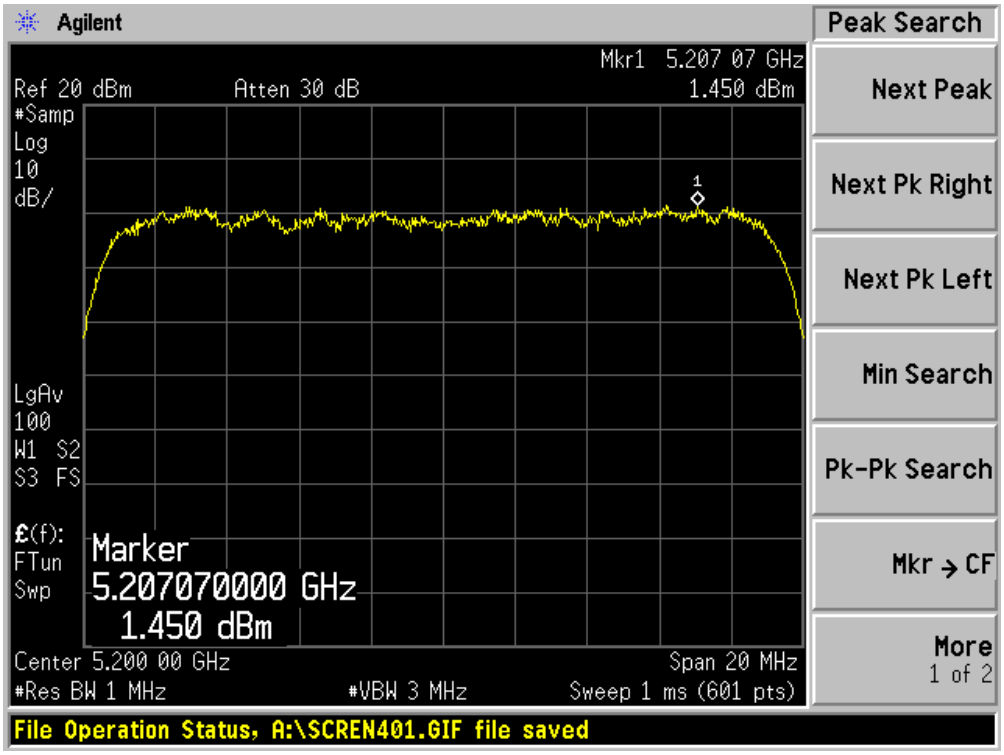
Product	:	Notebook Computer
Test Item	:	Power Output
Test Site	:	AC-4
Test Mode	:	Mode 2: Transmit by 802.11n (20MHz Bandwidth) (Chain A)

Channel No.	Frequency (MHz)	Measurement PPSD (dBm/MHz)			Total PPSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Chain A	Chain B	Chain C			
36	5180	1.527	N/A	N/A	1.527	4	Pass
40	5200	1.450	N/A	N/A	1.450	4	Pass
48	5240	1.551	N/A	N/A	1.551	4	Pass
52	5260	1.174	N/A	N/A	1.174	11	Pass
60	5300	1.014	N/A	N/A	1.014	11	Pass
64	5320	0.970	N/A	N/A	0.970	11	Pass
100	5500	1.152	N/A	N/A	1.152	11	Pass
120	5600	1.519	N/A	N/A	1.519	11	Pass
140	5700	0.217	N/A	N/A	0.217	11	Pass

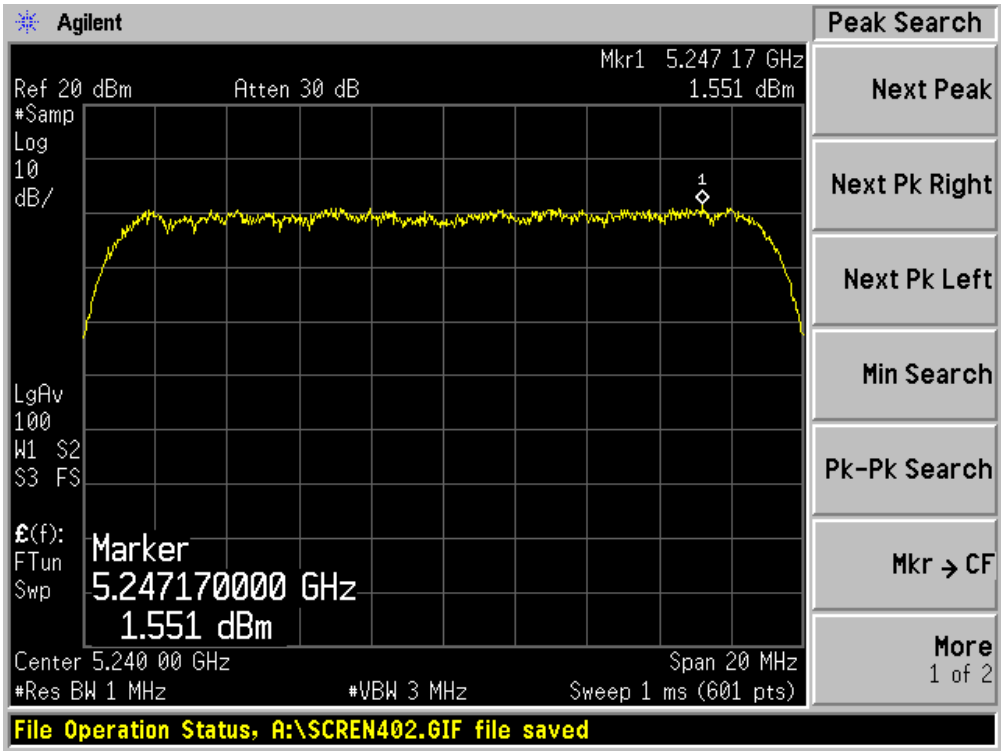
Channel 36 (5180MHz)



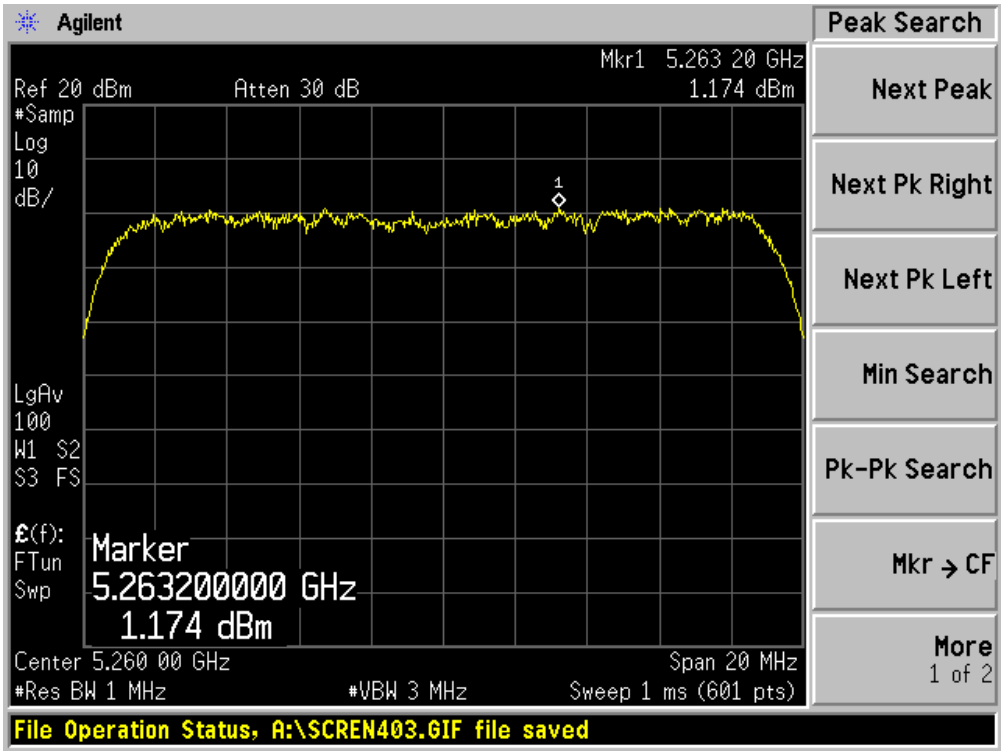
Channel 40 (5200MHz)



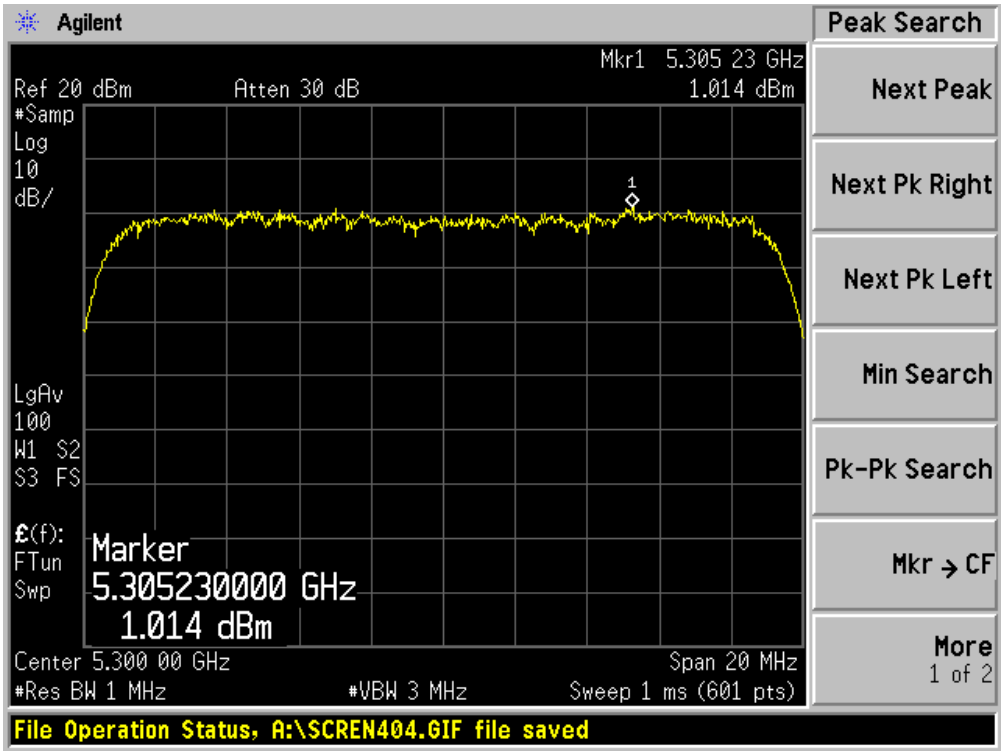
Channel 48 (5240MHz)



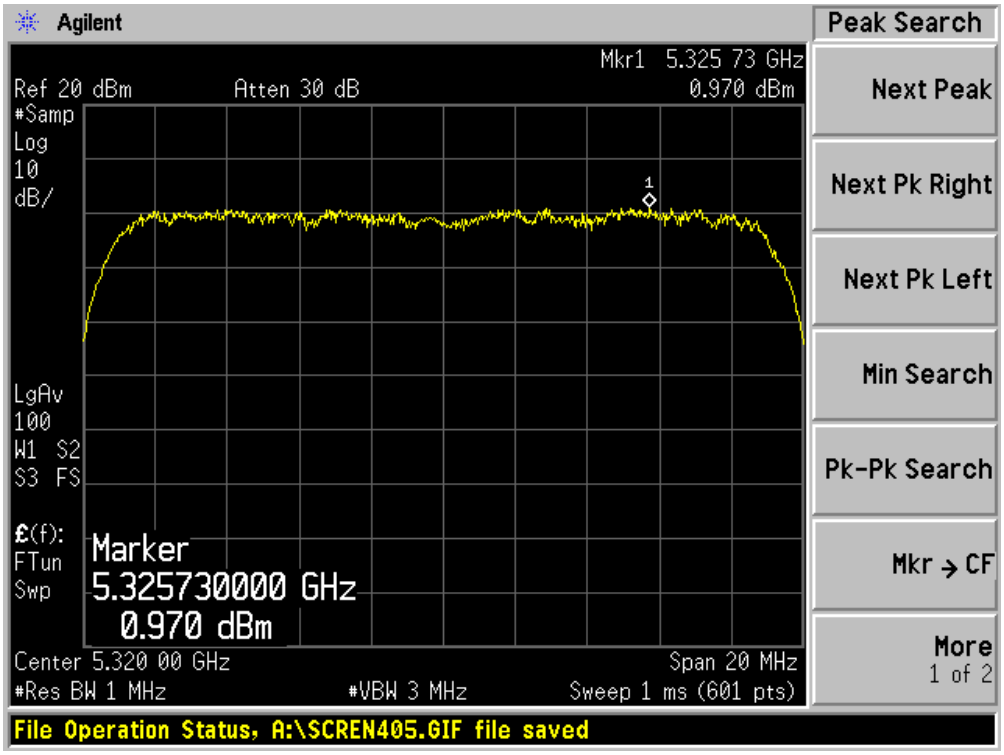
Channel 52 (5260MHz)



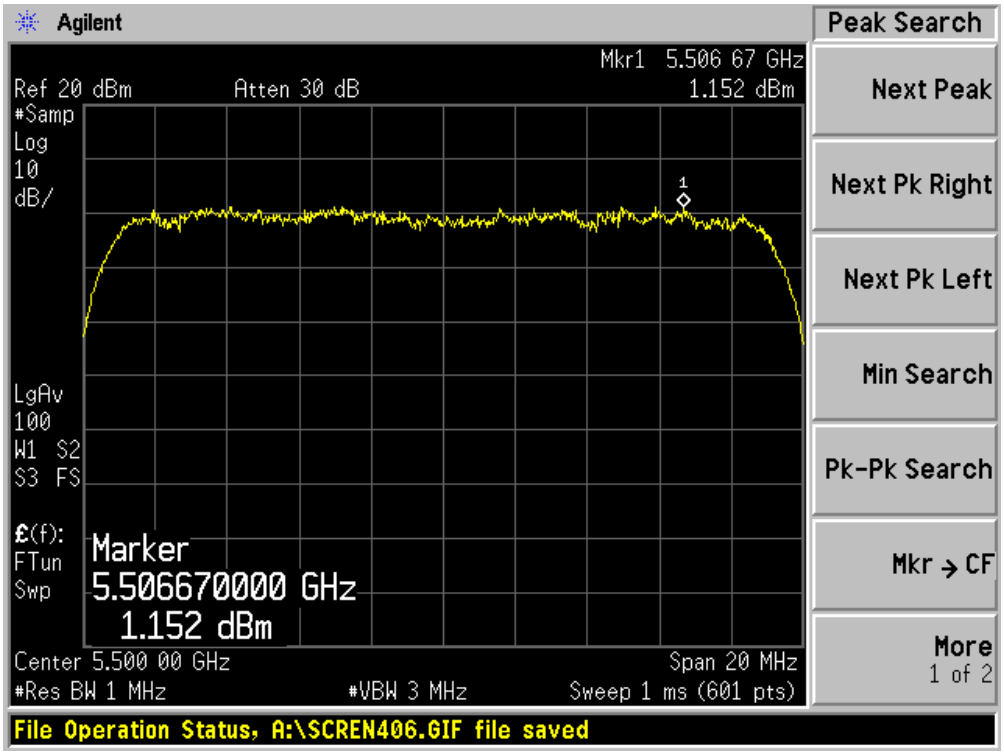
Channel 60 (5300MHz)



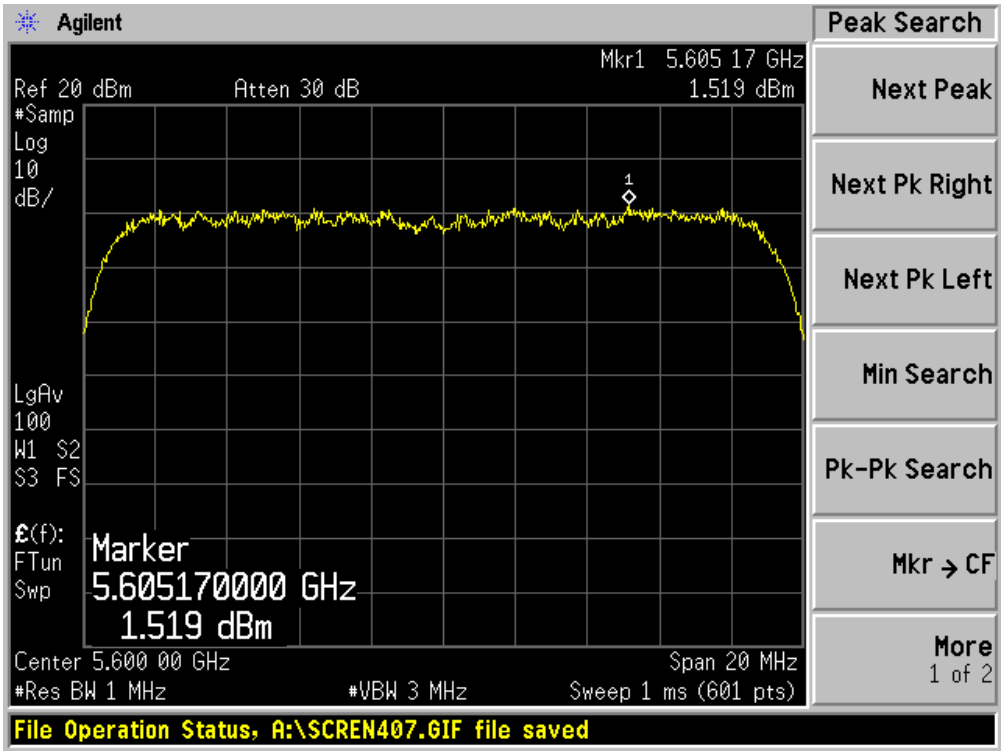
Channel 64 (5320MHz)



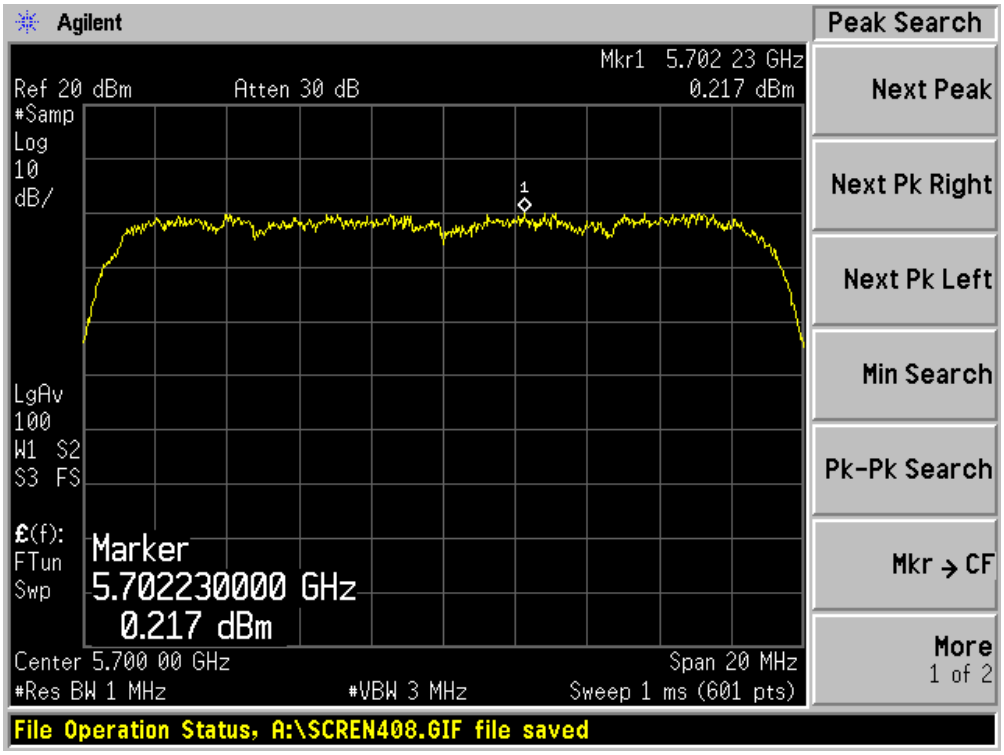
Channel 100 (5500MHz)



Channel 120 (5600MHz)



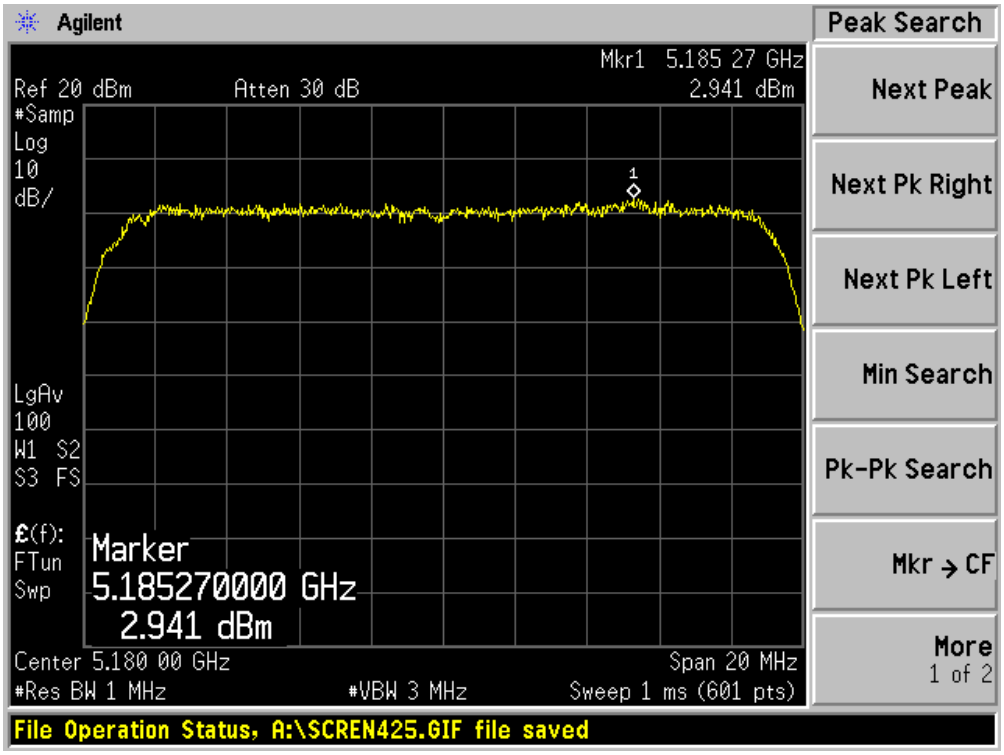
Channel 140 (5700MHz)



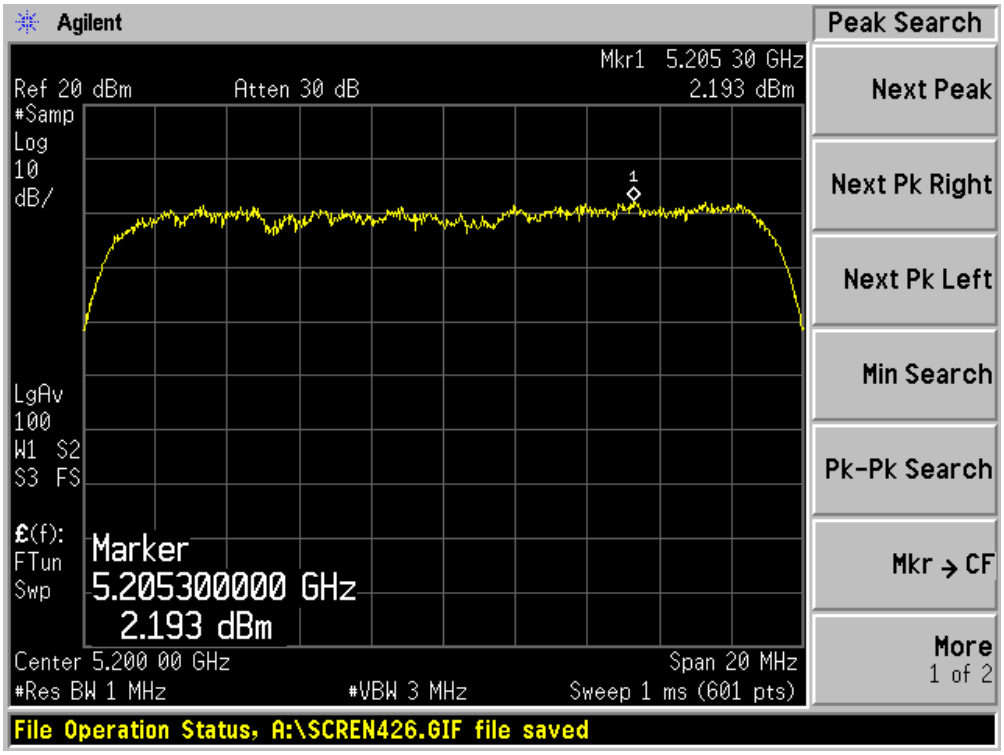
Product	:	Notebook Computer
Test Item	:	Power Output
Test Site	:	AC-4
Test Mode	:	Mode 2: Transmit by 802.11n (20MHz Bandwidth) (Chain B)

Channel No.	Frequency (MHz)	Measurement PPSD (dBm/MHz)			Total PPSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Chain A	Chain B	Chain C			
36	5180	N/A	2.941	N/A	2.941	4	Pass
40	5200	N/A	2.193	N/A	2.193	4	Pass
48	5240	N/A	1.922	N/A	1.922	4	Pass
52	5260	N/A	2.401	N/A	2.401	11	Pass
60	5300	N/A	1.512	N/A	1.512	11	Pass
64	5320	N/A	1.416	N/A	1.416	11	Pass
100	5500	N/A	2.327	N/A	2.327	11	Pass
120	5600	N/A	2.837	N/A	2.837	11	Pass
140	5700	N/A	1.754	N/A	1.754	11	Pass

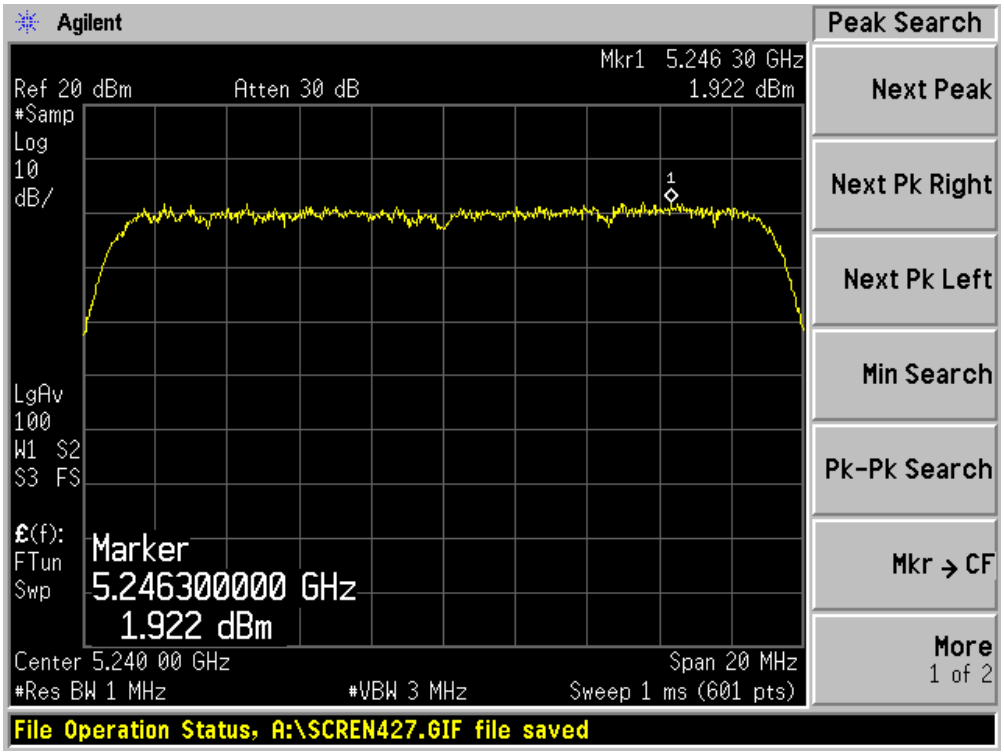
Channel 36 (5180MHz)



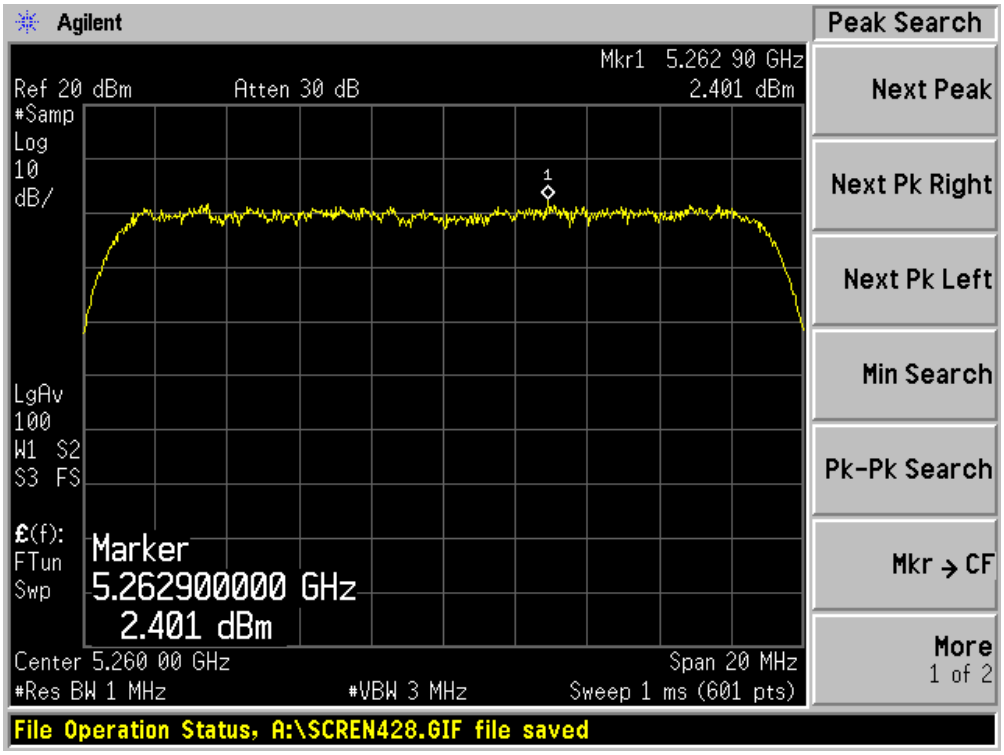
Channel 40 (5200MHz)



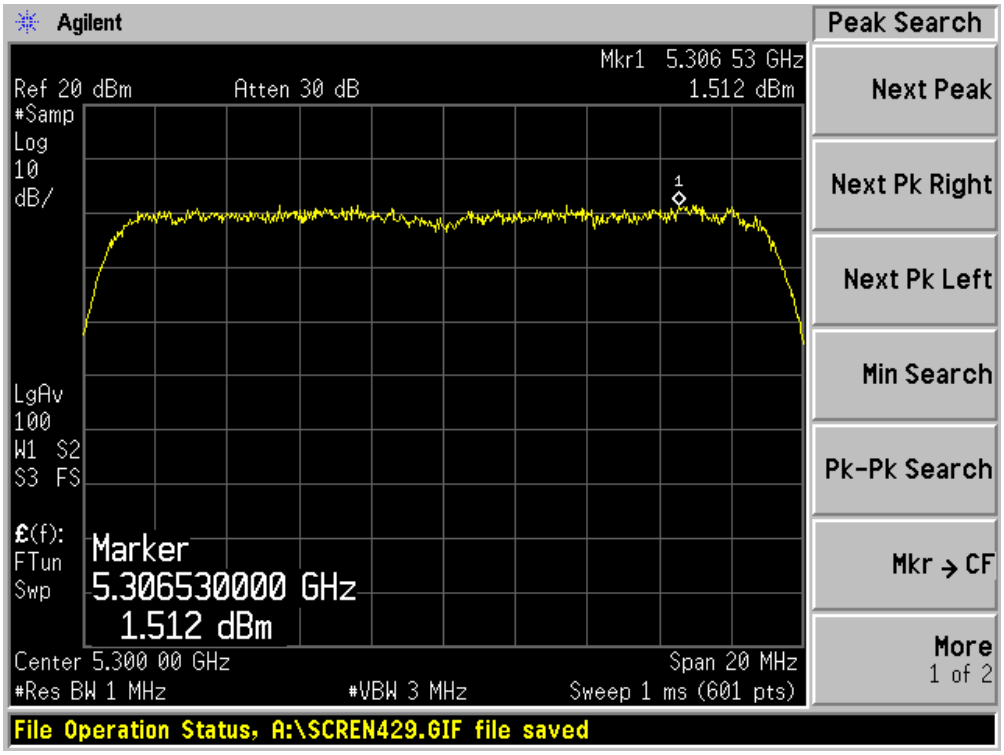
Channel 48 (5240MHz)



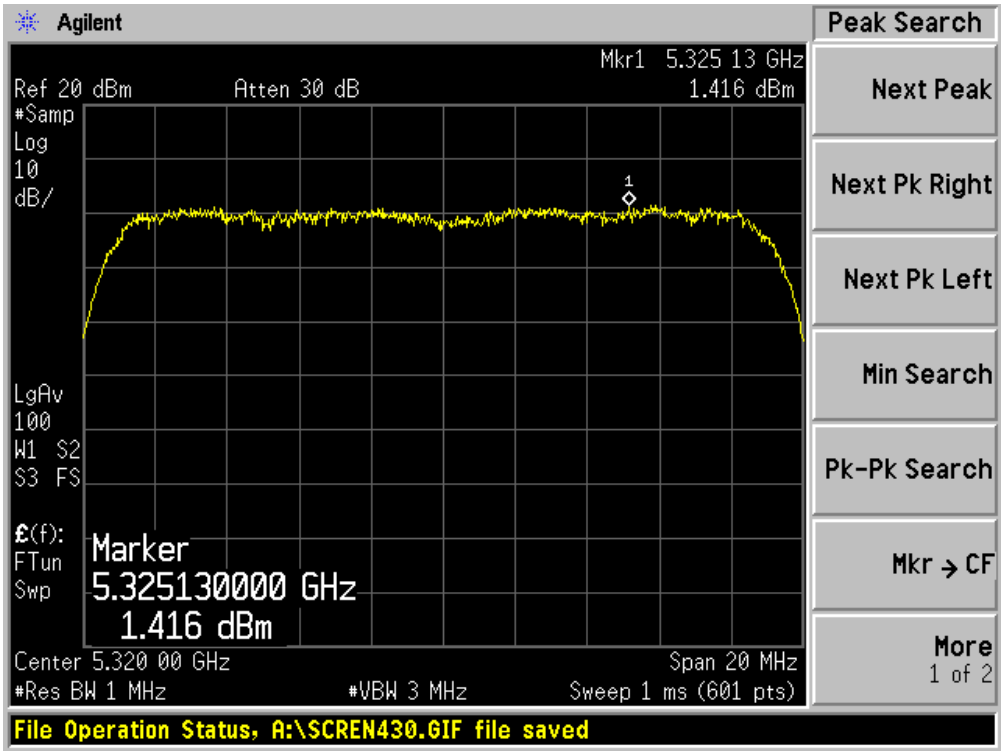
Channel 52 (5260MHz)



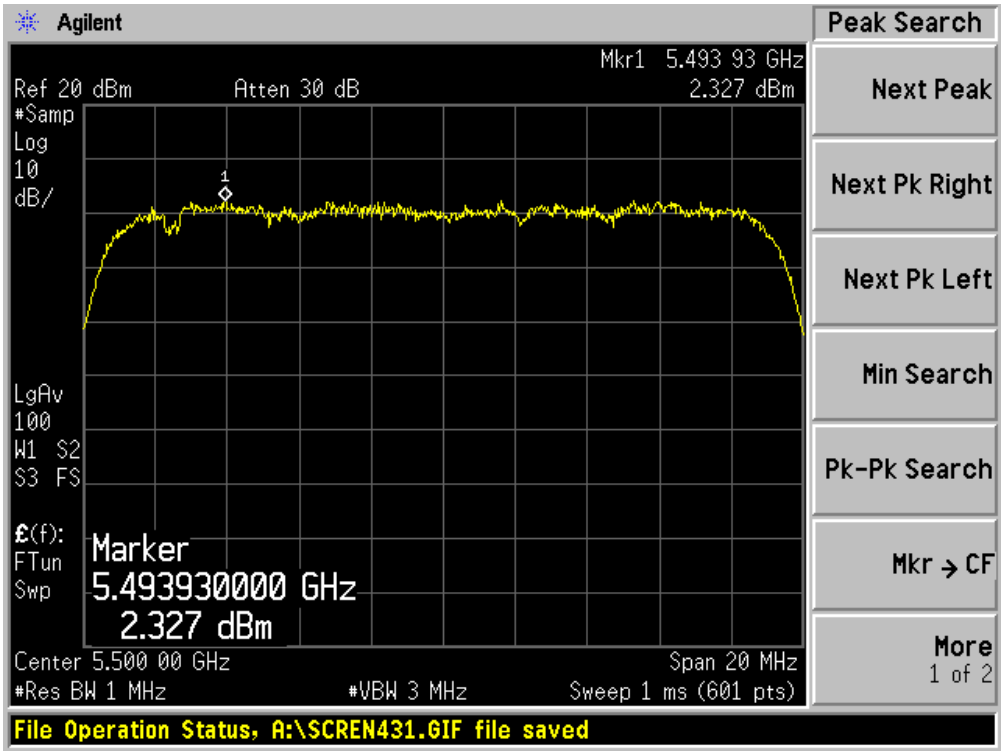
Channel 60 (5300MHz)



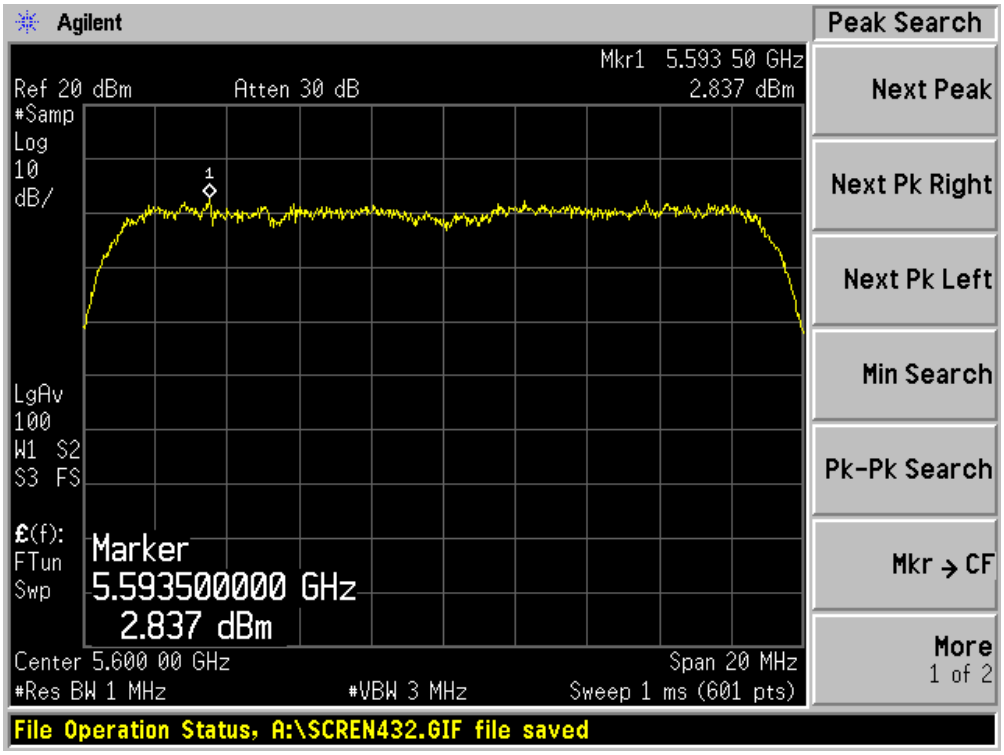
Channel 64 (5320MHz)



Channel 100 (5500MHz)



Channel 120 (5600MHz)



Channel 140 (5700MHz)