FCC Part 15.407 Test Report

Product Name	:	AirPcap Nx
Model No.	:	APC-NX
FCC ID	:	VHL-AIRPCAP-NX

Applicant	:	CACE Technologies, Inc.
Address	:	1949 5th Street, Suite 103, Davis, CA 95616 USA

Date of Receipt	:	Sep. 16, 2010
Test Date	:	Sep. 16, 2010 ~ Oct. 24, 2010
Issued Date	:	Oct. 25, 2010
Report No.	:	109S022R-RF-US-P09V01
Report Version	:	V1.1

Test Report Certification

Issued Date : Oct. 25, 2010
Report No. : 109S022R-RF-US-P09V01

Product Name	:	AirPcap Nx
Applicant	:	CACE Technologies, Inc.
Address	:	1949 5th Street, Suite 103, Davis, CA 95616 USA
Manufacturer	:	CACE Technologies, Inc.
Address	:	1949 5th Street, Suite 103, Davis, CA 95616 USA
Model No.	:	APC-NX
FCC ID	:	VHL-AIRPCAP-NX
EUT Voltage	:	DC 5V
Trade Name	:	CACE Technologies
Applicable Standard	:	FCC CFR Title 47 Part 15 Subpart E: 2008
		ANSI C63.4: 2009
		ANSI C63.10: 2009
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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Approved By : Dream Cao
(Engineering Manager: Dream Cao)

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/accepted(audited or listed) by the following related bodies in compliance with ISO 17025, EN 45001 and specified testing scope:

Taiwan R.O.C.	**:**	**BSMI, NCC, TAF**
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://www.quietek.com/tw/ctg/cts/accreditations.htm
The address and introduction of QuieTek Corporation's laboratories can be founded in our Web site : http://www.quietek.com/
If you have any comments, Please don't hesitate to contact us. Our contact information is as below:

HsinChu Testing Laboratory :
No.75-2, 3rd Lin, Wangye Keng, Yonghxing Tsuen, Qionglin Shiang, Hsinchu County 307, Taiwan, R.O.C.
TEL:+886-3-592-8858 / FAX:+886-3-592-8859 E-Mail : service@quietek.com

NVLAP Lab Code : 200347-0

Testing Laboratory 1313

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

NVLAP Lab Code: 200533-0

Testing Laboratory 0914

Suzhou (China) Testing Laboratory :
No. 99 Hongye Rd., Suzhou Industrial Park Loufeng Hi-Tech Development Zone., Suzhou,China.
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NVLAP Lab Code : 200743-0

Testing Laboratory 1596

TABLE OF CONTENTS

1. General Information

1.1. EUT Description

Product Name	AirPcap Nx
Trade Name	CACE Technologies
Model No.	APC-NX
EUT Voltage	DC 5V
Frequency Range	For 2.4GHz Band 802.11b/g/n(20MHz): 2412 - 2462 MHz 802.11n(40MHz): 2422 - 2452 MHz For 5GHz 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 5GHz Band 802.11a/n(20MHz): 24; 802.11n(40MHz): 11
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 300 Mbps
Channel Control	Auto
Antenna Delivery	2*Tx + 2*Rx
Antenna Type	PCB Antenna
Peak Antenna Gain	0dBi for 5GHz

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

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)
Mode 3: Transmit by 802.11n (40MHz)

Note:

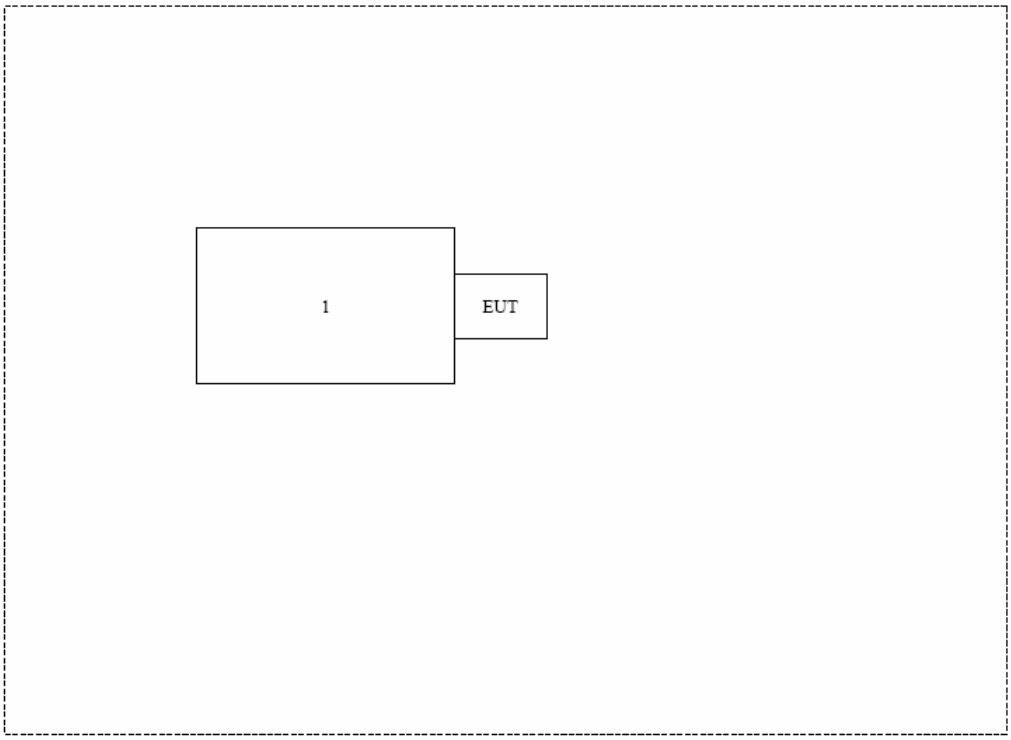
1. Regards to the frequency band operation: the lowest、middle and highest frequency of channel were selected to perform the test, then shown on this report.
2. This device is a composite device in accordance with Part 15 Subpart B regulations. The function for the receiver was measured and made a test report that the report number is 109S022R-RF-US-P02V01.

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	Notebook	DELL	PP19L	JH097 A01	N/A

1.4. Configuration of Tested System

Connection Diagram


Signal Cable Type		Signal cable Description
N/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	Run the RF test software “ART”, and set the test mode and channel, then press OK to start continue Transmit.

2. Technical Test

2.1. 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: 2008 Section 15.207	Yes	No
Radiated Emission	FCC CFR Title 47 Part 15 Subpart C: 2008 Section 15.209	Yes	No
Operation Frequency Range of 20dB Bandwidth	FCC CFR Title 47 Part 15 Subpart C: 2008 15.215(c)	Yes	No
26dB Occupied Bandwidth	FCC CFR Title 47 Part 15 Subpart C: 2008 Section 15.407(a)	Yes	No
Power Output	FCC CFR Title 47 Part 15 Subpart C: 2008 Section 15.407(a)	Yes	No
Peak Power Spectral Density	FCC CFR Title 47 Part 15 Subpart C: 2008 Section 15.407(a)	Yes	No
Peak Excursion	FCC CFR Title 47 Part 15 Subpart C: 2008 Section 15.407(a)(6)	Yes	No
Radiated Emission Band Edge	FCC CFR Title 47 Part 15 Subpart C: 2008 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

2.2. 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

3. Conducted Emission

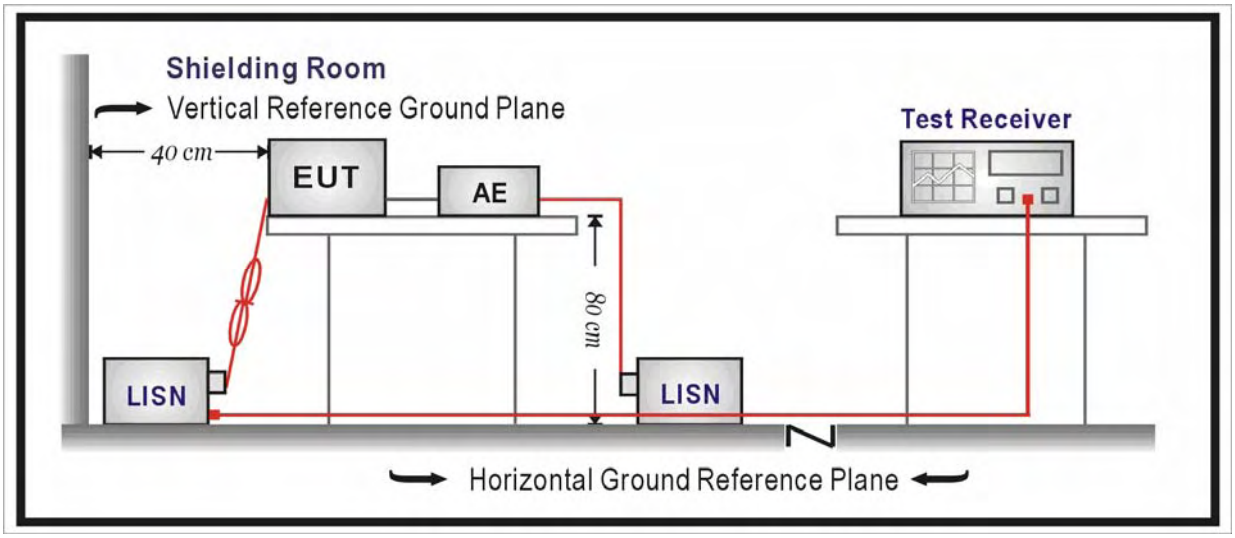
3.1. Test Equipment

Conducted Emission / TR-1

Instrument	Manufacturer	Type No.	Serial No.	Cal. Date
EMI Test Receiver	R&S	ESCI	100726	2010.04.23
Two-Line V-Network	R&S	ENV216	100043	2010.06.18
Two-Line V-Network	R&S	ENV216	100044	2010.09.07
50ohm Coaxial Switch	Anritsu	MP59B	6200464462	2010.05.05
50ohm Termination	SHX	TF2	07081401	2010.09.27
Temperature/Humidity Meter	zhicheng	ZC1-2	TR1-TH	2010.01.14

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

3.2. Test Setup



3.3. 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.

3.4. Test Procedure

The EUT was setup according to ANSI C63.4, 2009 & ANSI C63.10: 2009.

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.

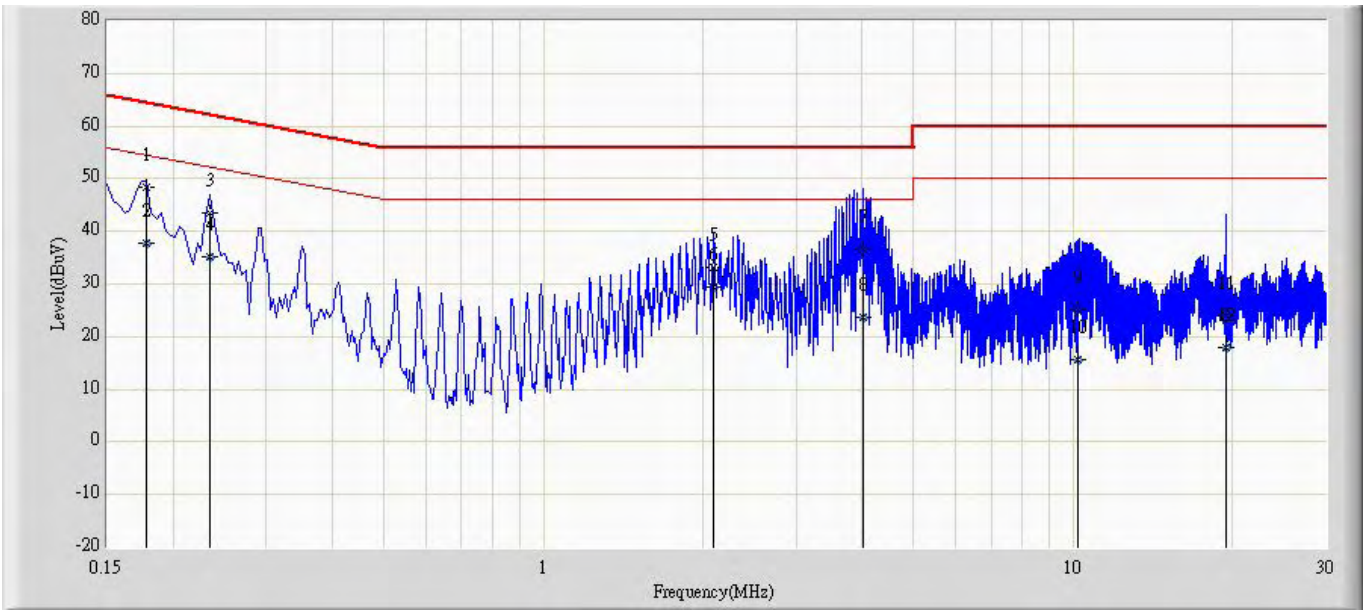
Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

3.5. Uncertainty

The measurement uncertainty is defined as ± 2.02 dB

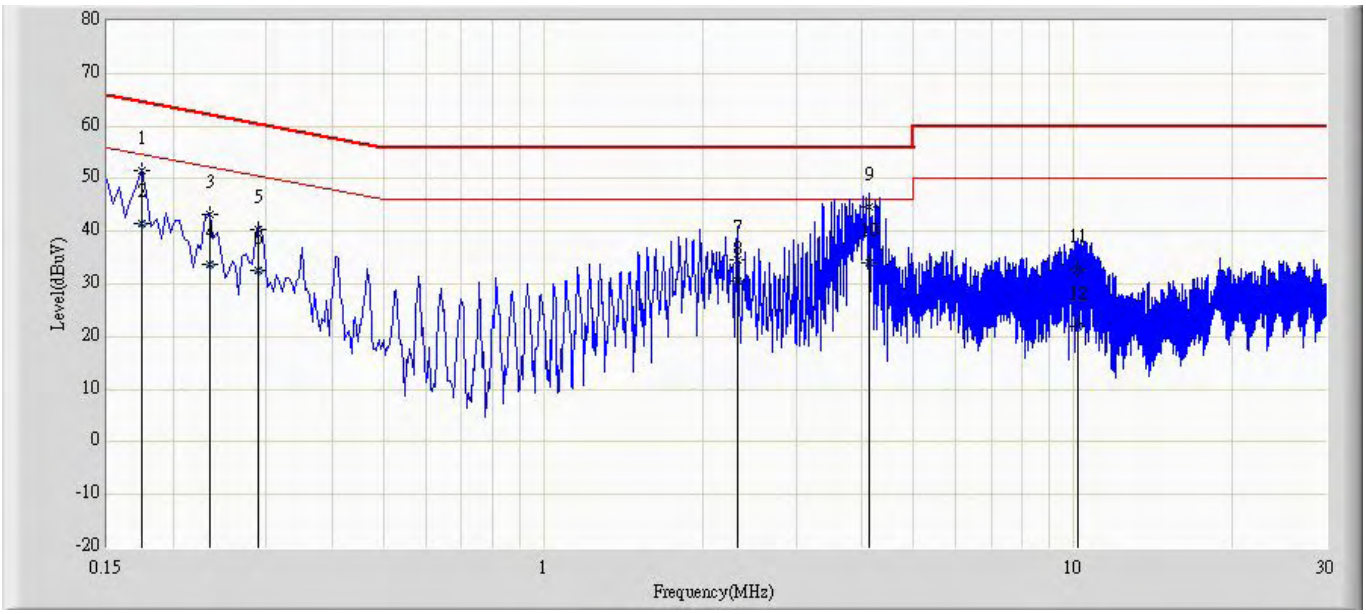
3.6. Test Result

Engineer: Steven	
Site: TR1	Time: 2010/10/23 - 15:45
Limit: FCC_Part15.207_CE_AC Power_ClassB	Margin: 0
Probe: ENV216_101043(0.009-30MHz)	Polarity: Line
EUT: AirPcap Nx	Power: AC 120V/60Hz
Note: Mode 1	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1	*	0.178	48.525	38.898	-16.053	64.578	9.627	QP
2		0.178	37.620	27.993	-16.958	54.578	9.627	AV
3		0.234	43.584	33.904	-18.722	62.307	9.680	QP
4		0.234	35.199	25.519	-17.108	52.307	9.680	AV
5		2.098	33.150	23.419	-22.850	56.000	9.731	QP
6		2.098	29.406	19.675	-16.594	46.000	9.731	AV
7		4.022	36.551	26.761	-19.449	56.000	9.790	QP
8		4.022	23.639	13.848	-22.361	46.000	9.790	AV
9		10.194	25.078	15.114	-34.922	60.000	9.965	QP
10		10.194	15.690	5.725	-34.310	50.000	9.965	AV
11		19.378	23.939	13.721	-36.061	60.000	10.218	QP
12		19.378	17.860	7.641	-32.140	50.000	10.218	AV

Engineer: Steven	
Site: TR1	Time: 2010/10/23 - 15:49
Limit: FCC_Part15.207_CE_AC Power_ClassB	Margin: 0
Probe: ENV216_101043(0.009-30MHz)	Polarity: Neutral
EUT: AirPcap Nx	Power: AC 120V/60Hz
Note: Mode 1	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1		0.174	51.577	41.865	-13.190	64.767	9.712	QP
2		0.174	41.369	31.656	-13.399	54.767	9.712	AV
3		0.234	43.306	33.655	-19.000	62.307	9.651	QP
4		0.234	33.646	23.995	-18.660	52.307	9.651	AV
5		0.290	40.486	30.833	-20.039	60.524	9.653	QP
6		0.290	32.668	23.015	-17.857	50.524	9.653	AV
7		2.326	34.603	24.861	-21.397	56.000	9.742	QP
8		2.326	30.458	20.716	-15.542	46.000	9.742	AV
9	*	4.126	44.559	34.768	-11.441	56.000	9.791	QP
10		4.126	34.040	24.249	-11.960	46.000	9.791	AV
11		10.230	32.860	22.856	-27.140	60.000	10.003	QP
12		10.230	21.999	11.996	-28.001	50.000	10.003	AV

4. Radiated Emission

4.1. Test Equipment

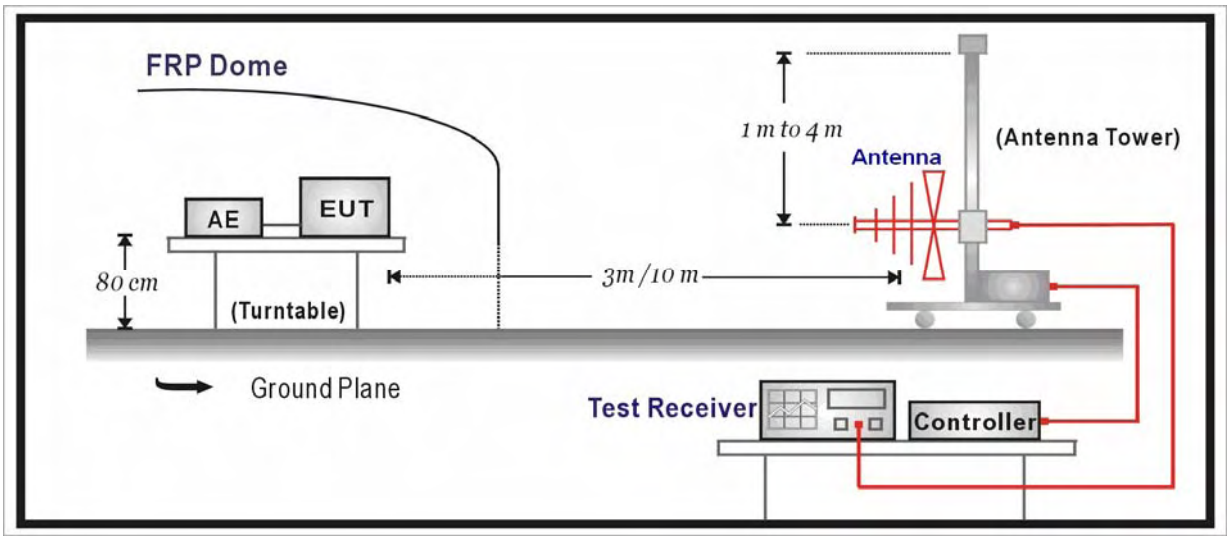
☒Radiated Emission / AC-5

Instrument	Manufacturer	Type No.	Serial No.	Cal. Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2010.04.23
EMI Test Receiver	R&S	ESCI	100906	2010.01.15
Preamplifier	Quietek	AP-180C	CHM-0602013	2010.05.05
Preamplifier	QuieTek	AP-040G	CHM-0906001	2010.05.05
Bilog Antenna	Teseq GmbH	CBL6112D	27612	2010.10.18
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	499	2010.06.11
High-Pass Filter	Wainwright	WHKX2.8/18G-12SS	SN1	2010.03.03
High-Pass Filter	Wainwright	WHKX7.0/18G-8SS	SN16	2010.03.03
Lowpass Filter	Wainwright	WLKS4500-9SS	SN2	2010.03.03
Temperature/Humidity Meter	Zhicheng	ZC1-2	AC5-TH	2010.01.14

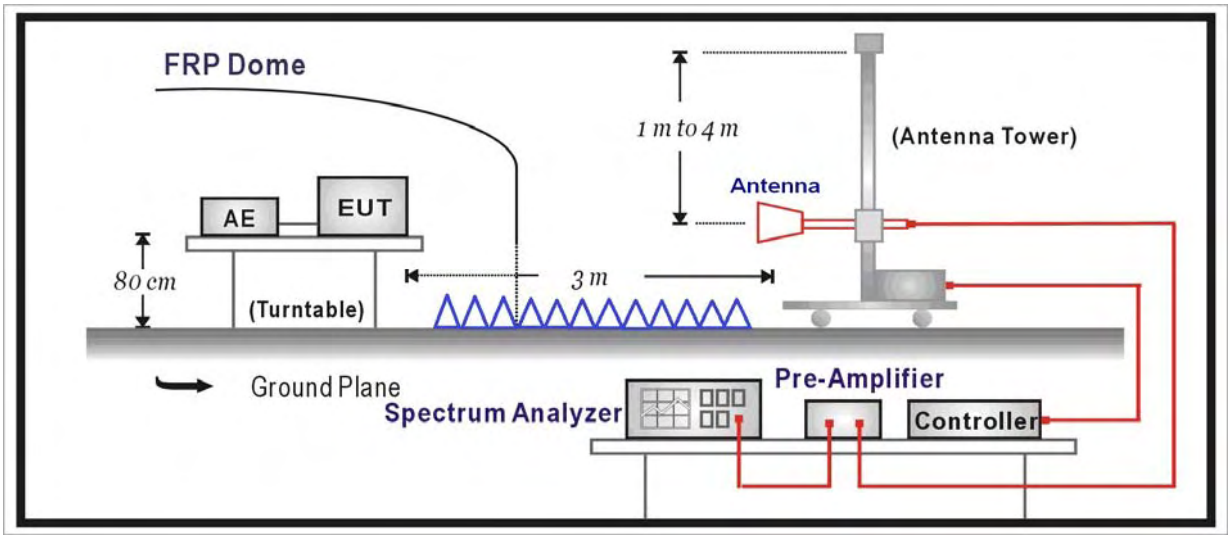
Note 1: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

4.2. Test Setup

Below 1GHz Test Setup:



Above 1GHz Test Setup:



4.3. 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)

4.4. Test Procedure

The EUT was setup according to ANSI C63.4, 2009 & ANSI C63.10: 2009.

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 C63.4:2009 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 60~10 degrees for H-plane and 90~10 degrees for E-plane.

4.5. Uncertainty

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

below 1G is defined as ± 3.8 dB

4.6. Test Result

All of the test result shown indicates the worst case, and spectrum analyzer parameters setting as shown below:
Peak detector: RBW = 1MHz, VBW = 3MHz, sweep time = 200ms;
Average detector: RBW = 1MHz, VBW = 10Hz, sweep time = auto.

802.11a

Chain	CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
Chain 100	36	H	5181.20	66.0	-12.3	101.2	Fundamental	/	PK
		H	230.7	44.9	-11.6	33.3	46	-12.7	QP
		H	633.3	34.6	-1.2	33.4	46	-12.6	QP
		H	7060.5	54.6	-7.1	47.5	54(Note)	-6.5	PK
		H	8403.5	50.2	-2.9	47.3	54(Note)	-6.7	PK
		V	10647.5	48.5	2.4	50.9	54(Note)	-3.1	PK
		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
	40	V	5199.7	65.5	34.2	99.7	Fundamental	/	PK
		H	230.7	44.5	-11.6	32.9	46	-13.1	QP
		H	633.3	32.9	-1.2	31.7	46	-14.3	QP
		H	7145.5	54.3	-6.6	47.7	54(Note)	-6.3	PK
		H	8403.5	50.6	-2.9	47.7	54(Note)	-6.3	PK
		V	10647.5	48.9	2.4	51.3	54(Note)	-2.7	PK
		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
	48	V	5239.6	64.7	33.8	98.5	Fundamental	/	PK
		H	230.7	44.3	-11.6	32.7	46	-13.3	QP
		H	633.3	34.5	-1.2	33.3	46	-12.7	QP
		H	7154.0	53.9	-6.6	47.3	54(Note)	-6.7	PK
		H	8403.5	49.7	-2.9	46.8	54(Note)	-7.2	PK
		V	10647.5	48.5	2.4	50.8	54(Note)	-3.2	PK
		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
	52	V	5260.1	64.0	33.6	97.6	Fundamental	/	PK
		H	230.7	44.6	-11.6	33.0	46	-13.0	QP
		H	633.3	34.9	-1.2	33.7	46	-12.3	QP
		H	7009.5	61.9	-7.2	54.7	74	-19.3	PK
		H	7011.4	58.8	-7.2	51.6	54	-2.4	AV
		H	8403.5	51.8	-2.9	48.9	54(Note)	-5.1	PK
		V	10647.5	49.1	2.4	51.5	54(Note)	-2.5	PK

		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
	60	V	5301.5	63.7	35.4	99.1	Fundamental	/	PK
		H	230.7	44.9	-11.6	33.3	46	-12.7	QP
		H	633.3	34.6	-1.2	33.4	46	-12.6	QP
		V	6423.0	55.3	-10.4	44.9	54(Note)	-9.1	PK
		H	7069.0	61.9	-7.1	54.8	74	-19.2	PK
		H	7066.7	59.9	-7.1	52.8	54	-1.2	AV
		H	8403.5	49.7	-2.9	46.8	54(Note)	-2.1	PK
		V	10647.5	48.8	2.4	51.2	54(Note)	-3.8	PK
	64	H	5326.2	66.3	35.7	99.0	Fundamental	/	PK
		H	230.7	44.6	-11.6	33.0	46	-13.0	QP
		H	633.3	34.6	-1.2	33.4	46	-12.6	QP
		H	7094.5	61.6	-7.2	54.4	74	-19.6	PK
		H	7093.4	59.1	-7.2	51.9	54	-2.1	AV
		H	8403.5	49.9	-2.9	47.0	54(Note)	-7.0	PK
		V	10647.5	49.6	2.4	51.9	54(Note)	-2.1	PK
		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
	100	H	5495.7	60.9	36.0	96.9	Fundamental	/	PK
		H	230.7	44.6	-11.6	33.0	46	-13.0	QP
		H	633.3	34.6	-1.2	33.4	46	-12.6	QP
		V	9746.5	48.3	0.6	48.9	54(Note)	-5.1	PK
		H	7332.5	55.7	-6.0	49.7	54(Note)	-4.3	PK
		H	8403.5	49.1	-2.9	46.2	54(Note)	-7.8	PK
		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
	120	V	5601.3	68.1	28.6	96.7	Fundamental	/	PK
		H	230.7	45.2	-11.6	33.6	46	-12.4	QP
		H	633.3	34.9	-1.2	33.7	46	-12.3	QP
		V	9746.5	49.0	0.6	49.6	54(Note)	-4.4	PK
		H	7468.5	57.1	-5.2	51.9	54(Note)	-2.1	PK
		H	8403.5	48.8	-2.9	45.9	54(Note)	-8.1	PK
		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
	140	H	5696.1	60.6	36.3	96.9	Fundamental	/	PK
		H	230.7	44.4	-11.6	32.8	46	-13.2	QP
		H	633.3	34.4	-1.2	33.2	46	-12.8	QP
		V	9746.5	48.5	0.6	49.1	54(Note)	-4.9	PK
		H	7596.0	56.8	-5.1	51.7	54(Note)	-2.3	PK
		H	8403.5	49.3	-2.9	46.4	54(Note)	-7.6	PK

		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
Chain 001	36	H	5175.9	72.5	35.2	107.7	Fundamental	/	PK
		H	230.7	44.6	-11.6	33.0	46	-13.0	QP
		H	633.3	34.6	-1.2	33.4	46	-12.6	QP
		H	9746.5	49.0	0.6	49.6	54(Note)	-4.4	PK
		H	7579.0	53.2	-5.0	48.2	54(Note)	-5.8	PK
		H	8403.5	50.6	-2.9	47.7	54(Note)	-6.3	PK
		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
	40	V	5201.4	66.5	34.7	101.2	Fundamental	/	PK
		H	230.7	44.7	-11.6	33.1	46	-12.9	QP
		H	633.3	34.6	-1.2	33.4	46	-12.6	QP
		V	9746.5	49.9	0.6	50.5	54(Note)	-3.5	PK
		H	7494.0	53.2	-5.4	47.8	54(Note)	-6.2	PK
		H	8403.5	49.2	-2.9	46.3	54(Note)	-7.7	PK
		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
	48	V	5241.0	66.6	35.1	101.7	Fundamental	/	PK
		H	230.7	44.6	-11.6	33.0	46	-13.0	QP
		H	633.3	34.6	-1.2	33.4	46	-12.6	QP
		H	7094.5	54.1	-7.2	46.9	54(Note)	-7.1	PK
		H	8403.5	49.8	-2.9	46.9	54(Note)	-7.1	PK
		V	10647.5	48.4	2.4	50.7	54(Note)	-3.3	PK
		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
	52	V	5260.7	68.7	35.4	104.1	Fundamental	/	PK
		H	230.7	44.9	-11.6	33.3	46	-12.7	QP
		H	633.3	34.6	-1.2	33.4	46	-12.6	QP
		H	7009.5	61.3	-7.2	54.1	74	-19.9	PK
		H	7013.4	58.0	-7.2	50.9	54	-3.1	AV
		H	8403.5	50.1	-2.9	47.2	54(Note)	-26.8	PK
		V	10647.5	47.9	2.4	50.3	54(Note)	-23.7	PK
		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
	60	V	5301.5	68.7	35.0	103.7	Fundamental	/	PK
		H	230.7	44.9	-11.6	33.3	46	-12.7	QP
		H	633.3	34.7	-1.2	33.5	46	-12.5	QP
		H	7069.0	61.0	-7.1	54.0	54(Note)	0.0	PK
		H	8403.5	48.9	-2.9	46.0	54(Note)	-8.0	PK
		V	10647.5	48.1	2.4	50.5	54(Note)	-3.5	PK
		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK

	64	H	5315.5	71.1	35.7	106.8	Fundamental	/	PK
		H	230.7	44.5	-11.6	32.9	46	-13.1	QP
		H	633.3	34.6	-1.2	33.4	46	-12.6	QP
		H	7069.0	61.0	-7.1	54.0	54(Note)	0.0	PK
		H	8403.5	48.9	-2.9	46.0	54(Note)	-8.0	PK
		V	10647.5	48.1	2.4	50.5	54(Note)	-3.5	PK
		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
	100	H	5502.8	67.5	36.0	103.5	Fundamental	/	PK
		H	230.7	44.6	-11.6	33.0	46	-13.0	QP
		H	633.3	34.6	-1.2	33.4	46	-12.6	QP
		V	9746.5	48.0	0.6	48.6	54(Note)	-5.4	PK
		H	7332.5	58.6	-6.0	52.7	54(Note)	-1.4	PK
		H	8403.5	48.7	-2.9	45.8	54(Note)	-8.2	PK
		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
	120	V	5602.0	66.6	35.1	101.7	Fundamental	/	PK
		H	230.7	44.6	-11.6	33.0	46	-13.0	QP
		H	633.3	34.2	-1.2	33.0	46	-13.0	QP
		V	9746.5	48.3	0.6	48.9	54(Note)	-5.1	PK
		H	7468.5	57.1	-5.2	51.9	54(Note)	-2.1	PK
		H	8403.5	49.4	-2.9	46.5	54(Note)	-7.5	PK
		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
	140	V	5702.9	67.2	36.3	103.5	Fundamental	/	PK
		H	230.7	44.0	-11.6	32.4	46	-13.6	QP
		H	633.3	33.9	-1.2	32.7	46	-13.3	QP
		V	9746.5	49.0	0.6	49.6	54(Note)	-4.4	PK
		H	7596.0	57.1	-5.1	52.1	54(Note)	-1.9	PK
		H	8403.5	49.9	-2.9	46.9	54(Note)	-7.1	PK
		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK

802.11n(20MHz)

Chain	CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
Chain 100	36	H	5183.8	64.3	35.1	99.4	Fundamental	/	PK
		H	230.7	44.3	-11.6	32.7	46	-13.3	QP
		H	633.3	34.0	-1.2	32.8	46	-13.2	QP
		H	7188.0	54.5	-6.0	48.5	54(Note)	-5.5	PK

		H	8403.5	50.8	-2.9	47.9	54(Note)	-6.1	PK
		V	10647.5	48.8	2.4	51.2	54(Note)	-2.8	PK
		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
	40	V	5201.0	66.2	34.8	101.0	Fundamental	/	PK
		H	230.7	44.3	-11.6	32.7	46	-13.3	QP
		H	633.3	34.1	-1.2	32.9	46	-13.1	QP
		H	7179.5	54.2	-6.1	48.1	54(Note)	-5.9	PK
		H	8403.5	50.2	-2.9	47.3	54(Note)	-6.7	PK
		V	10647.5	49.1	2.4	51.5	54(Note)	-2.5	PK
		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
	48	V	5240.1	65.7	35.1	100.8	Fundamental	/	PK
		H	230.7	45.3	-11.6	33.7	46	-12.3	QP
		H	633.3	34.6	-1.2	33.4	46	-12.6	QP
		H	7103.0	54.3	-7.1	47.2	54(Note)	-6.8	PK
		H	8403.5	50.3	-2.9	47.4	54(Note)	-6.6	PK
		V	10647.5	48.2	2.4	50.5	54(Note)	-3.5	PK
		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
	52	V	2560.2	64.5	34.8	99.3	Fundamental	/	PK
		H	230.7	44.7	-11.6	33.1	46	-12.9	QP
		H	633.3	34.6	-1.2	33.4	46	-12.6	QP
		H	7009.5	61.7	-7.2	54.5	74	-19.5	PK
		H	7013.4	58.2	-7.2	51.1	54	-2.9	AV
		H	8403.5	52.0	-2.9	49.1	54(Note)	-24.9	PK
		V	10647.5	48.3	2.4	50.7	54(Note)	-23.3	PK
	60	H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
		V	5301.0	64.9	35.2	100.1	Fundamental	/	PK
		H	230.7	45.3	-11.6	33.7	46	-12.3	QP
		H	633.3	34.5	-1.2	33.3	46	-12.7	QP
		H	7069.0	62.5	-7.1	55.4	74	-18.6	PK
		H	7066.7	59.4	-7.1	52.3	54	-1.7	AV
		H	8403.5	50.1	-2.9	47.2	54(Note)	-6.8	PK
		V	10647.5	49.2	2.4	51.5	54(Note)	-2.5	PK
	64	H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
		H	5315.6	63.3	35.8	99.1	Fundamental	/	PK
		H	230.7	45.0	-11.6	33.4	46	-12.6	QP
		H	633.3	34.9	-1.2	33.7	46	-12.3	QP
		H	7094.5	61.5	-7.2	54.3	74	-19.7	PK

		H	7093.4	58.9	-7.2	51.7	54	-2.3	AV
		H	8403.5	50.2	-2.9	47.3	54(Note)	-6.7	PK
	100	V	10647.5	49.1	2.4	51.4	54(Note)	-2.6	PK
		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
		H	5502.4	61.1	36.0	97.1	Fundamental	/	PK
		H	230.7	44.9	-11.6	33.3	46	-12.7	QP
		H	633.3	34.3	-1.2	33.1	46	-12.9	QP
		V	9746.5	47.7	0.6	48.3	54(Note)	-5.7	PK
		H	7332.5	57.8	-6.0	51.8	54(Note)	-2.2	PK
		H	8403.5	49.9	-2.9	47.0	54(Note)	-7.0	PK
	120	H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
		V	5600.7	63.7	35.7	99.4	Fundamental	/	PK
		H	230.7	44.0	-11.6	32.4	46	-13.6	QP
		H	633.3	34.5	-1.2	33.3	46	-12.7	QP
		V	9746.5	47.7	0.6	48.3	54(Note)	-5.7	PK
		H	7468.5	56.5	-5.2	51.3	54(Note)	-2.7	PK
		H	8403.5	49.7	-2.9	46.8	54(Note)	-7.2	PK
	140	H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
		H	5704.4	59.3	36.4	95.7	Fundamental	/	PK
		H	230.7	44.9	-11.6	33.3	46	-12.7	QP
		H	633.3	34.9	-1.2	33.7	46	-12.3	QP
		V	9746.5	49.4	0.6	50.0	54(Note)	-4.0	PK
		H	7596.0	54.8	-5.1	49.7	54(Note)	-4.3	PK
		H	8403.5	49.7	-2.9	46.8	54(Note)	-7.2	PK
Chain 001	36	V	5182.6	72.7	35.1	107.8	Fundamental	/	PK
		H	230.7	44.3	-11.6	32.7	46.0	-13.3	QP
		H	633.3	34.6	-1.2	33.4	46.0	-12.6	QP
		V	9746.5	49.5	0.6	50.1	54(Note)	-3.9	PK
		H	7273.0	53.4	-6.2	47.2	54(Note)	-6.8	PK
		H	8403.5	50.1	-2.9	47.2	54(Note)	-6.8	PK
		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
	40	V	5200.3	68.3	35.3	103.6	Fundamental	/	PK
		H	230.7	44.9	-11.6	33.3	46.0	-12.7	QP
		H	633.3	34.5	-1.2	33.3	46.0	-12.7	QP
		V	9746.5	49.5	0.6	50.1	54(Note)	-3.9	PK
		H	7392.0	54.1	-5.6	48.6	54(Note)	-5.5	PK
		H	8403.5	48.9	-2.9	46.0	54(Note)	-8.0	PK

		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
	48	V	5240.6	65.5	36.0	101.5	Fundamental	/	PK
		H	230.7	44.4	-11.6	32.8	46.0	-13.2	QP
		H	633.3	34.1	-1.2	32.9	46.0	-13.1	QP
		H	7213.5	53.2	-6.2	47.0	54(Note)	-7.0	PK
		H	8403.5	49.3	-2.9	46.4	54(Note)	-7.6	PK
		V	10647.5	48.1	2.4	50.4	54(Note)	-3.6	PK
		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
	52	V	5260.5	66.2	35.8	102.0	Fundamental	/	PK
		H	230.7	45.7	-11.6	34.1	46.0	-11.9	QP
		H	633.3	34.8	-1.2	33.6	46.0	-12.4	QP
		H	7009.5	60.6	-7.2	53.4	54(Note)	-0.6	PK
		H	8403.5	49.5	-2.9	46.6	54(Note)	-7.4	PK
		V	10647.5	49.1	2.4	51.5	54(Note)	-2.5	PK
		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
	60	V	5300.8	67.4	35.6	103.0	Fundamental	/	PK
		H	230.7	44.7	-11.6	33.1	46.0	-12.9	QP
		H	633.3	34.5	-1.2	33.3	46	-12.7	QP
		H	7069.0	62.0	-7.1	54.9	74	-19.1	PK
		H	7066.7	60.0	-7.1	53.0	54	-1.0	AV
		H	8403.5	49.6	-2.9	46.7	54(Note)	-7.3	PK
		V	10647.5	48.6	2.4	50.9	54(Note)	-3.1	PK
	64	H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
		V	5322.4	71.4	35.7	107.1	Fundamental	/	PK
		H	230.7	44.6	-11.6	33.0	46	-13.0	QP
		H	633.3	34.5	-1.2	33.3	46	-12.7	QP
		H	7094.5	61.8	-7.2	54.6	74	-19.4	PK
		H	7093.4	59.4	-7.2	52.2	54	-1.8	AV
		H	8403.5	49.3	-2.9	46.4	54(Note)	-7.6	PK
	100	V	10647.5	47.9	2.4	50.2	54(Note)	-3.8	PK
		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
		V	5495.6	70.2	36.1	106.3	Fundamental	/	PK
		H	230.7	44.9	-11.6	33.3	46	-12.7	QP
		H	633.3	34.5	-1.2	33.3	46	-12.7	QP
		V	9746.5	48.7	0.6	49.3	54(Note)	-4.7	PK
		H	7332.5	57.7	-6.0	51.7	54(Note)	-2.3	PK
	120	H	8403.5	49.6	-2.9	46.7	54(Note)	-7.3	PK

		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
		V	5601.2	67.4	35.8	103.2	Fundamental	/	PK
		H	230.7	44.5	-11.6	32.9	46	-13.1	QP
		H	633.3	34.2	-1.2	33.0	46	-13.0	QP
		H	7145.5	54.9	-6.6	48.3	54(Note)	-5.7	PK
		H	8403.5	49.7	-2.9	46.8	54(Note)	-7.2	PK
	140	V	10647.5	48.8	2.4	51.1	54(Note)	-2.9	PK
		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
		V	5706.0	65.8	36.3	102.1	Fundamental	/	PK
		H	230.7	43.2	-11.6	31.6	46	-14.4	QP
		H	633.3	33.5	-1.2	32.3	46	-13.7	QP
		V	9746.5	48.7	0.6	49.3	54(Note)	-4.7	PK
		H	7596.0	55.8	-5.3	50.8	54(Note)	-5.1	PK
Chain 101	36	V	5184.3	73.5	35.2	108.7	Fundamental	/	PK
		H	230.7	43.7	-11.6	32.1	46	-13.9	QP
		H	633.3	33.6	-1.2	32.4	46	-13.6	QP
		H	7205.0	53.0	-6.2	46.8	54(Note)	-7.2	PK
		H	8403.5	49.9	-2.9	47.0	54(Note)	-7.0	PK
		V	10647.5	48.1	2.4	50.4	54(Note)	-3.6	PK
		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
	40	V	5200.3	68.6	35.1	103.7	Fundamental	/	PK
		H	230.7	44.7	-11.6	33.1	46	-12.9	QP
		H	633.3	34.9	-1.2	33.7	46	-12.3	QP
		H	7026.5	54.3	-7.2	47.1	54(Note)	-6.9	PK
		H	8403.5	48.9	-2.9	46.0	54(Note)	-8.0	PK
		V	10647.5	48.1	2.4	50.4	54(Note)	-3.6	PK
		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
	48	V	5240.6	69.4	35.1	104.5	Fundamental	/	PK
		H	230.7	44.8	-11.6	33.2	46	-12.8	QP
		H	633.3	34.6	-1.2	33.4	46	-12.6	QP
		H	7154.0	53.7	-6.6	47.1	54(Note)	-6.9	PK
		H	8403.5	49.3	-2.9	46.4	54(Note)	-7.6	PK
		V	10647.5	47.8	2.4	50.1	54(Note)	-3.9	PK
		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
	52	V	5260.2	67.8	35.2	103.0	Fundamental	/	PK
		H	230.7	44.7	-11.6	33.1	46	-12.9	QP
		H	633.3	34.6	-1.2	33.4	46	-12.6	QP

		H	7009.5	58.2	-7.2	51.0	54(Note)	-3.0	PK
		H	8403.5	49.7	-2.9	46.8	54(Note)	-7.2	PK
		V	10647.5	48.3	2.4	50.6	54(Note)	-3.4	PK
		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
	60	V	5300.2	67.7	35.5	103.2	Fundamental	/	PK
		H	230.7	44.6	-11.6	33.0	46	-13.0	QP
		H	633.3	35.0	-1.2	33.8	46	-12.2	QP
		H	7069.0	58.8	-7.1	51.7	54(Note)	-2.3	PK
		H	8403.5	49.3	-2.9	46.4	54(Note)	-7.6	PK
		V	10647.5	48.2	2.4	50.5	54(Note)	-3.5	PK
		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
	64	H	5324.4	72.3	35.7	108.0	Fundamental	/	PK
		H	230.7	43.6	-11.6	32.0	46	-14.0	QP
		H	633.3	34.6	-1.2	33.4	46	-12.6	QP
		H	7094.5	58.6	-7.2	51.4	54(Note)	-2.6	PK
		H	8403.5	51.0	-2.9	48.1	54(Note)	-5.9	PK
		V	10647.5	47.9	2.4	50.2	54(Note)	-3.8	PK
		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
	100	V	5504.5	69.2	36.1	105.3	Fundamental	/	PK
		H	230.7	45.0	-11.6	33.4	46	-12.6	QP
		H	633.3	34.9	-1.2	33.7	46	-12.3	QP
		V	9746.5	49.4	0.6	50.0	54(Note)	-4.0	PK
		H	7332.5	55.8	-6.0	49.8	54(Note)	-4.2	PK
		H	8403.5	50.0	-2.9	47.1	54(Note)	-6.9	PK
		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
	120	V	5600.8	68.7	35.9	104.6	Fundamental	/	PK
		H	230.7	44.7	-11.6	33.1	46	-12.9	QP
		H	633.3	34.5	-1.2	33.3	46	-12.7	QP
		V	9746.5	48.7	0.6	49.3	54(Note)	-4.7	PK
		H	7468.5	56.6	-5.2	51.4	54(Note)	-2.6	PK
		H	8403.5	49.6	-2.9	46.7	54(Note)	-7.3	PK
		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
	140	V	5704.3	65.7	36.3	102.0	Fundamental	/	PK
		H	230.7	43.8	-11.6	32.2	46	-13.8	QP
		H	633.3	33.6	-1.2	32.4	46	-13.6	QP
		V	9746.5	49.9	0.6	50.5	54(Note)	-3.5	PK
		H	7596.0	56.2	-5.1	51.1	54(Note)	-2.9	PK

		H	8403.5	49.8	-2.9	46.9	54(Note)	-7.1	PK
		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK

802.11n(40MHz)

Chain	CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
Chain 100	38	V	5186.7	68.7	35.2	103.9	Fundamental	/	PK
		H	230.7	43.6	-11.6	32.7	46	-14.0	QP
		H	633.3	38.6	-1.2	32.8	46	-8.6	QP
		H	6916.0	56.9	-8.6	48.3	54(Note)	-5.7	PK
		H	8403.5	50.1	-2.9	47.2	54(Note)	-6.8	PK
		V	10647.5	48.7	2.4	51.1	54(Note)	-2.9	PK
		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
	46	V	5230.6	65.9	35.3	101.2	Fundamental	/	PK
		H	230.7	43.7	-11.6	32.7	46	-13.9	QP
		H	633.3	38.9	-1.2	32.8	46	-8.3	QP
		H	7162.5	53.6	-6.3	47.3	54(Note)	-6.7	PK
		H	8403.5	49.8	-2.9	46.9	54(Note)	-7.1	PK
		V	10647.5	48.6	2.4	50.9	54(Note)	-3.1	PK
		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
	54	V	5270.2	69.7	35.2	104.9	Fundamental	/	PK
		H	230.7	43.9	-11.6	32.7	46	-13.7	QP
		H	633.3	33.9	-1.2	32.8	46	-13.3	QP
		H	7026.5	60.3	-7.2	53.1	54(Note)	-0.9	PK
		H	8403.5	47.1	-2.9	44.2	54(Note)	-9.8	PK
		V	10647.5	47.0	2.4	49.3	54(Note)	-4.7	PK
		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
	62	V	5312.6	66.4	35.8	102.2	Fundamental	/	PK
		H	230.7	44.0	-11.6	32.7	46	-13.6	QP
		H	633.3	34.0	-1.2	32.8	46	-13.2	QP
		H	7077.5	61.3	-7.2	54.1	74	-19.9	PK
		H	7080.0	57.8	-7.2	50.6	54	-3.4	AV
		H	8403.5	49.5	-2.9	46.6	54(Note)	-7.4	PK
		V	10647.5	47.8	2.4	50.1	54(Note)	-3.9	PK
	102	H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK

		V	5498.5	65.0	36.0	101.0	Fundamental	/	PK
		H	230.7	44.3	-11.6	32.7	46	-13.3	QP
		H	633.3	33.9	-1.2	32.7	46	-13.3	QP
		V	9746.5	48.3	0.6	48.9	54(Note)	-5.1	PK
		H	7349.5	58.0	-5.9	52.0	54(Note)	-2.0	PK
		H	8403.5	48.9	-2.9	46.0	54(Note)	-8.0	PK
	118	H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
		V	5590.6	67.8	35.7	103.5	Fundamental	/	PK
		H	230.7	43.6	-11.6	32.0	46	-14.0	QP
		H	633.3	33.9	-1.2	32.7	46	-13.3	QP
		H	7205.0	53.9	-6.2	47.7	54(Note)	-6.3	PK
		H	8403.5	49.4	-2.9	46.5	54(Note)	-7.5	PK
		V	10647.5	48.2	2.4	50.5	54(Note)	-3.5	PK
	134	H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
		V	5672.5	62.5	36.3	98.8	Fundamental	/	PK
		H	230.7	44.3	-11.6	32.7	46	-13.3	QP
		H	633.3	34.2	-1.2	33.0	46	-13.0	QP
		V	9746.5	47.9	0.6	48.5	54(Note)	-5.5	PK
		H	7518.6	58.1	-5.3	52.7	54(Note)	-1.3	PK
		H	8403.5	50.7	-2.9	47.8	54(Note)	-6.2	PK
Chain 001	38	V	5179.2	68.9	35.2	104.1	Fundamental	/	PK
		H	230.7	43.6	-11.6	32.0	46	-14.0	QP
		H	633.3	33.6	-1.2	32.4	46	-13.6	QP
		H	7179.5	53.5	-6.1	47.4	54(Note)	-26.6	PK
		H	8403.5	48.4	-2.9	45.5	54(Note)	-28.5	PK
		V	10647.5	48.4	2.4	50.7	54(Note)	-23.3	PK
		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
	46	V	5230.8	67.2	35.3	102.5	Fundamental	/	PK
		H	230.7	43.2	-11.6	31.6	46	-14.4	QP
		H	633.3	33.9	-1.2	32.7	46	-13.3	QP
		H	6975.5	57.9	-7.8	50.1	54(Note)	-3.9	PK
		H	8403.5	50.8	-2.9	47.9	54(Note)	-6.1	PK
		V	10647.5	48.1	2.4	50.4	54(Note)	-3.6	PK
		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
	54	V	5270.6	69.6	35.2	104.8	Fundamental	/	PK
		H	230.7	43.8	-11.6	32.2	46	-13.8	QP
		H	633.3	34.6	-1.2	33.4	46	-12.6	QP

		H	7026.5	60.8	-7.2	53.6	54(Note)	-0.4	PK
		H	8403.5	50.7	-2.9	47.8	54(Note)	-6.2	PK
		V	10647.5	49.1	2.4	51.5	54(Note)	-2.5	PK
		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
	62	V	5319.1	64.3	35.7	100.0	Fundamental	/	PK
		H	230.7	44.5	-11.6	32.9	46	-13.1	QP
		H	633.3	33.9	-1.2	32.7	46	-13.3	QP
		H	7077.5	61.5	-7.2	54.3	74	-19.7	PK
		H	7080.0	59.4	-7.2	52.2	54	-1.9	AV
		H	8403.5	48.7	-2.9	45.8	54(Note)	-28.2	PK
		V	10647.5	48.5	2.4	50.9	54(Note)	-23.1	PK
	102	H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
		V	5512.6	63.7	36.1	99.8	Fundamental	/	PK
		H	230.7	43.6	-11.6	32.0	46	-14.0	QP
		H	633.3	33.8	-1.2	32.6	46	-13.4	QP
		V	9746.5	48.3	0.6	48.9	54(Note)	-5.1	PK
		H	7349.5	57.3	-5.9	51.4	54(Note)	-2.6	PK
		H	8403.5	49.3	-2.9	46.4	54(Note)	-7.6	PK
	118	H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
		V	5590.9	65.7	35.9	101.6	Fundamental	/	PK
		H	230.7	43.8	-11.6	32.2	46	-13.8	QP
		H	633.3	33.6	-1.2	32.4	46	-13.6	QP
		V	9746.5	48.4	0.6	49.0	54(Note)	-5.0	PK
		H	7451.5	56.1	-5.2	50.9	54(Note)	-3.1	PK
		H	8403.5	49.5	-2.9	46.6	54(Note)	-7.4	PK
	134	H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
		H	5673.1	60.6	36.3	96.9	Fundamental	/	PK
		H	230.7	43.8	-11.6	32.2	46	-13.8	QP
		H	633.3	33.9	-1.2	32.7	46	-13.3	QP
		V	9746.5	49.1	0.6	49.7	54(Note)	-4.4	PK
		H	7562.0	56.2	-5.2	51.0	54(Note)	-3.0	PK
		H	8403.5	50.2	-2.9	47.3	54(Note)	-6.7	PK
Chain 101	38	V	5184.5	68.0	35.1	103.1	Fundamental	/	PK
		H	230.7	44.0	-11.6	32.4	46	-13.6	QP
		H	633.3	34.3	-1.2	33.1	46	-12.9	QP
		H	7171.0	53.2	-6.1	47.1	54(Note)	-6.9	PK
		H	8403.5	48.4	-2.9	45.5	54(Note)	-8.5	PK

		V	10647.5	49.4	2.4	51.8	54(Note)	-2.2	PK
		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
	46	V	5230.4	65.7	35.2	100.9	Fundamental	/	PK
		H	230.7	44.9	-11.6	33.3	46	-12.7	QP
		H	633.3	34.5	-1.2	33.3	46	-12.7	QP
		V	9746.5	48.3	0.6	48.9	54(Note)	-5.1	PK
		H	7596.0	54.1	-5.1	49.0	54(Note)	-5.0	PK
		H	8403.5	50.2	-2.9	47.3	54(Note)	-6.7	PK
		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
	54	V	5270.5	69.5	35.3	104.8	Fundamental	/	PK
		H	230.7	44.7	-11.6	33.1	46	-12.9	QP
		H	633.3	34.6	-1.2	33.4	46	-12.6	QP
		H	7026.5	58.3	-7.2	51.1	54(Note)	-2.9	PK
		H	8403.5	49.0	-2.9	46.1	54(Note)	-7.9	PK
		V	10647.5	48.2	2.4	50.6	54(Note)	-3.4	PK
		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
	62	V	5304.2	67.4	35.7	103.1	Fundamental	/	PK
		H	230.7	44.0	-11.6	32.4	46	-13.6	QP
		H	633.3	34.2	-1.2	33.0	46	-13.0	QP
		H	7077.5	58.8	-7.2	51.6	54(Note)	-2.4	PK
		H	8403.5	49.4	-2.9	46.5	54(Note)	-7.5	PK
		V	10647.5	48.7	2.4	51.0	54(Note)	-3.0	PK
		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
	102	H	5503.5	65.1	36.1	101.2	Fundamental	/	PK
		H	230.7	43.9	-11.6	32.3	46	-13.7	QP
		H	633.3	34.6	-1.2	33.4	46	-12.6	QP
		V	9746.5	48.6	0.6	49.2	54(Note)	-4.8	PK
		H	7349.5	56.6	-5.9	50.6	54(Note)	-3.4	PK
		H	8403.5	49.5	-2.9	46.6	54(Note)	-7.4	PK
		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK
	118	V	5590.6	67.1	35.9	103.0	Fundamental	/	PK
		H	230.7	44.6	-11.6	33.0	46	-13.0	QP
		H	633.3	34.8	-1.2	33.6	46	-12.4	QP
		V	9746.5	49.7	0.6	50.3	54(Note)	-3.7	PK
		H	7451.5	55.7	-5.2	50.5	54(Note)	-3.5	PK
		H	8403.5	50.2	-2.9	47.3	54(Note)	-6.7	PK
		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK

	134	V	5673.4	62.7	36.3	99.0	Fundamental	/	PK
		H	230.7	44.5	-11.6	32.9	46	-13.1	QP
		H	633.3	33.7	-1.2	32.5	46	-13.5	QP
		V	9746.5	50.6	0.6	51.2	54(Note)	-3.1	PK
		H	7562.0	56.0	-5.2	50.9	54(Note)	-3.1	PK
		H	8403.5	49.8	-2.9	46.9	54(Note)	-7.1	PK
		H	24000.0	59.1	-8.9	50.2	54(Note)	-3.8	PK

Note: this limit (54dBuV/m) applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

5. Operation Frequency Range of 20dB Bandwidth

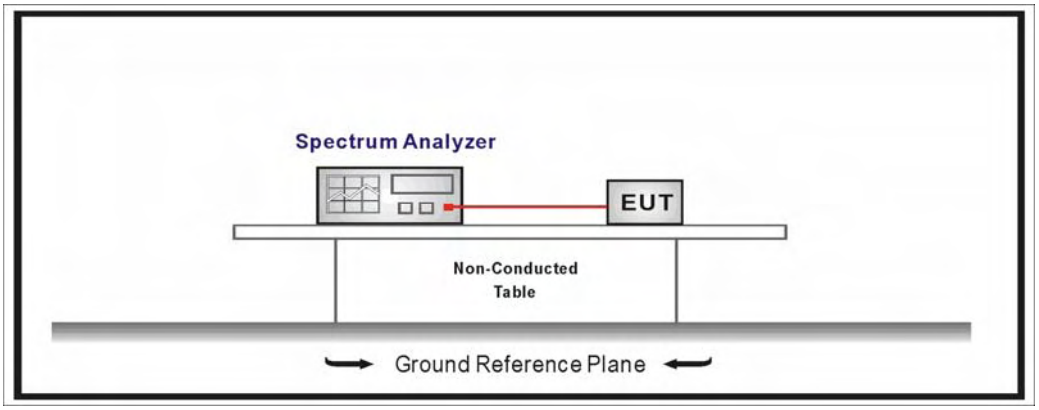
5.1. Test Equipment

Operation Frequency Range of 20dB Bandwidth /TR8

Instrument	Manufacturer	Type No.	Serial No.	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2010.04.30
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH007	2010.05.04

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

20 dB bandwidth of the emission is contained within the operation frequency band. FCC Part15.215(c).

5.4. Test Procedure

The EUT was tested according to UNII test procedure of ANSI C63.10: 2009 for compliance to FCC 47CFR 15.407 requirements.
Set RBW = 100 kHz, Span greater than RBW.

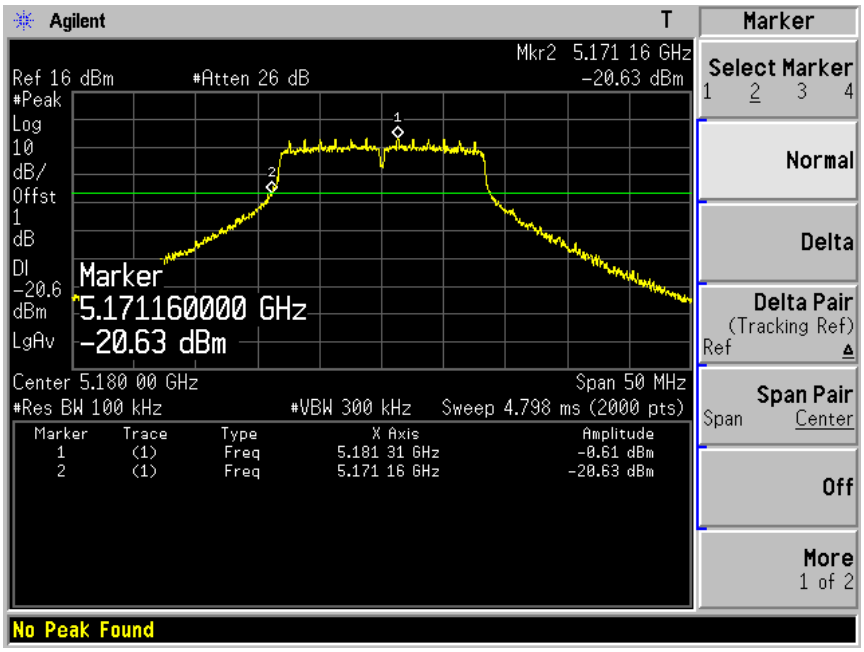
5.5. Uncertainty

The measurement uncertainty is defined as ± 1 kHz

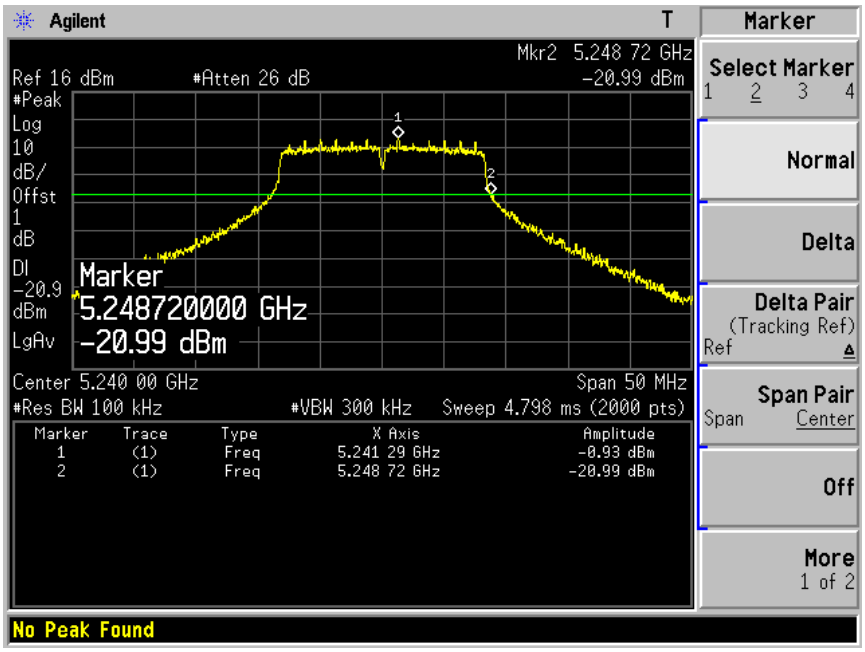
5.6. Test Result

Product	:	AirPcap Nx
Test Item	:	Operation Frequency Range of 20dB Bandwidth
Test Site	:	TR-8
Test Mode	:	Mode 1: Transmit by 802.11a (Chain 100)

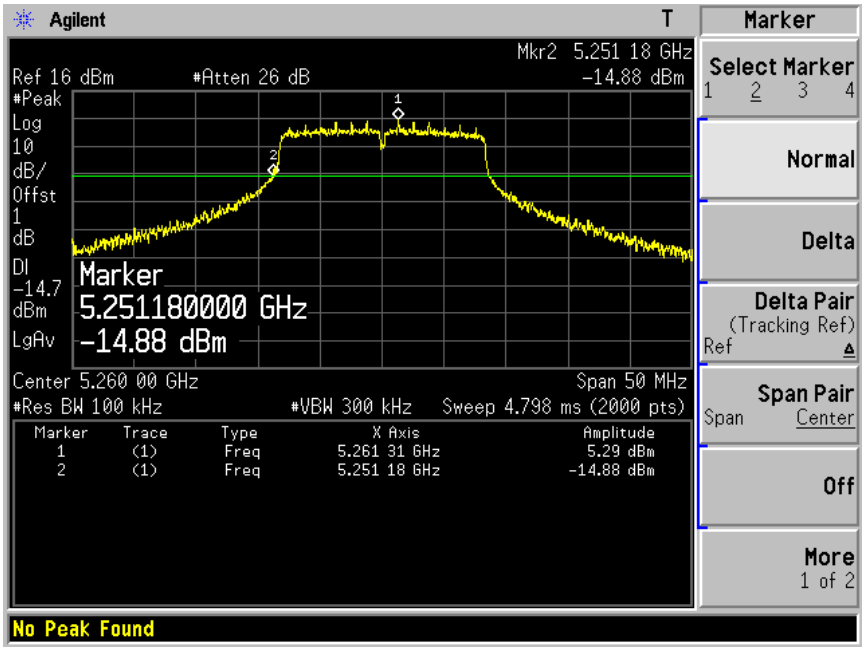
Channel 36 (5180MHz)



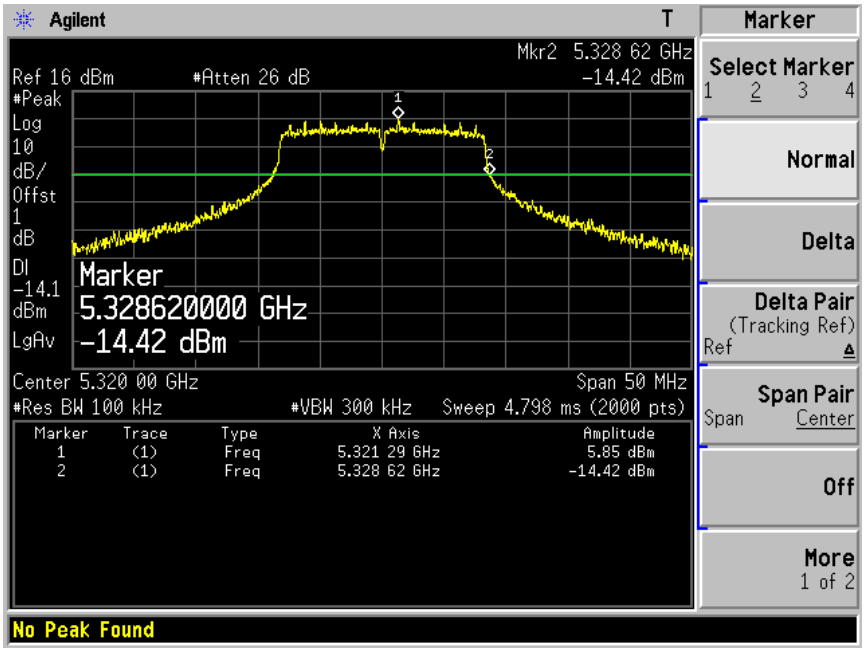
Channel 48 (5240MHz)



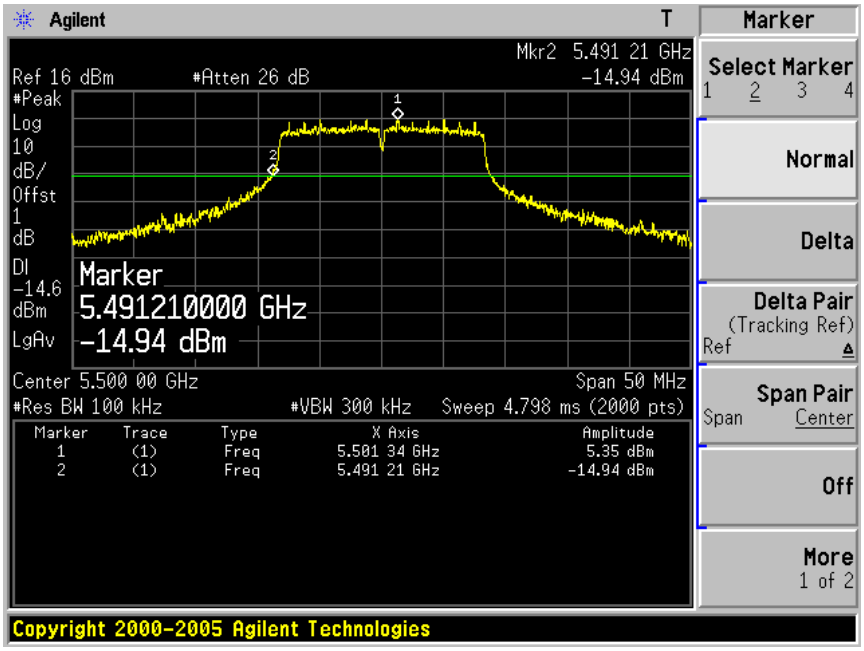
Channel 52 (5260MHz)



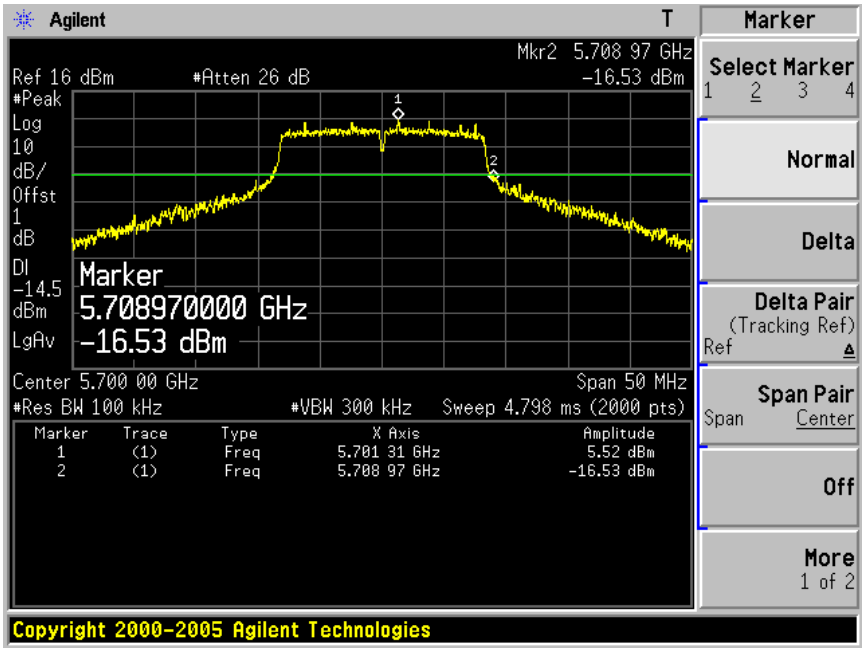
Channel 64 (5320MHz)



Channel 100 (5500MHz)

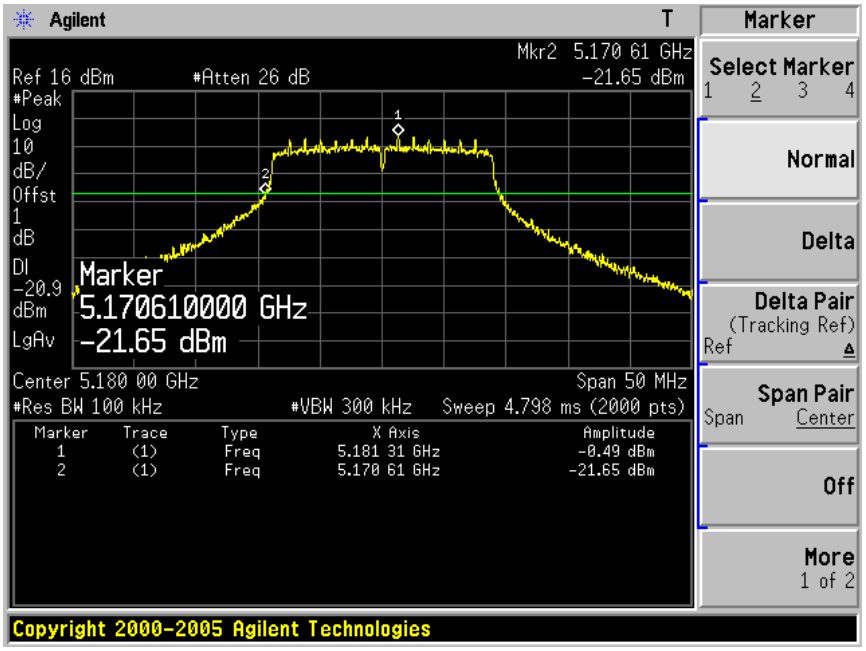


Channel 140 (5700MHz)

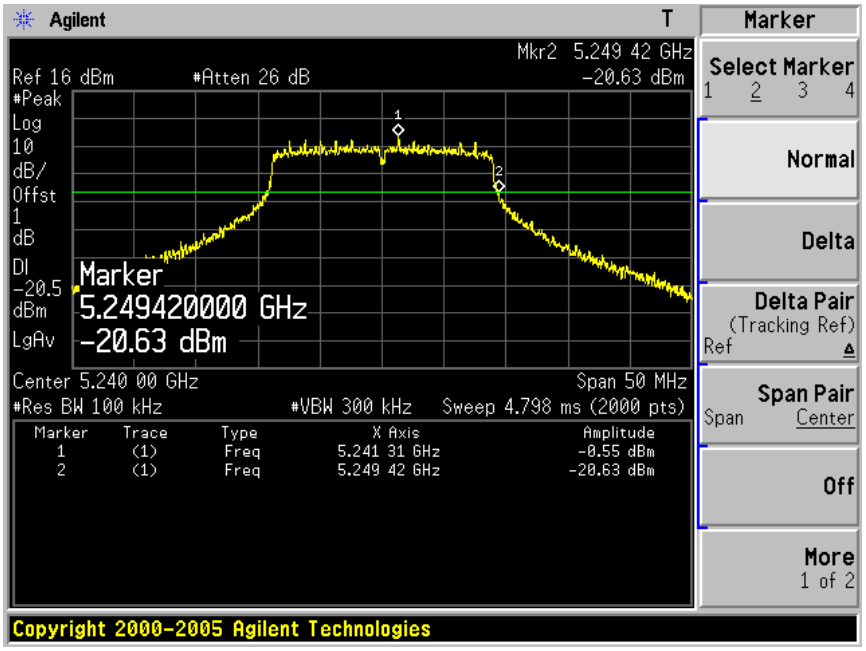


Product	:	AirPcap Nx
Test Item	:	Operation Frequency Range of 20dB Bandwidth
Test Site	:	TR-8
Test Mode	:	Mode 2: Transmit by 802.11n (20MHz) (Chain 100)

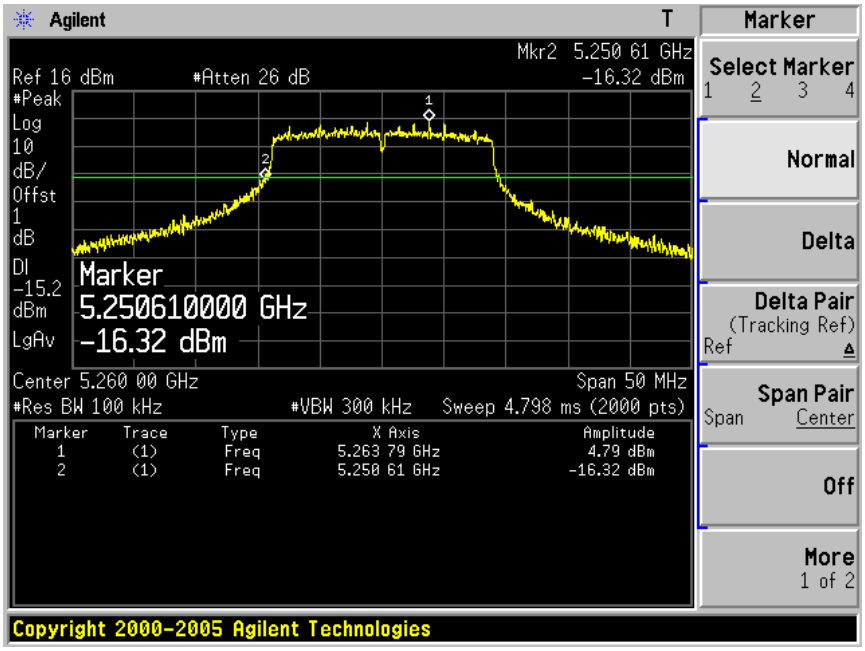
Channel 36 (5180MHz)



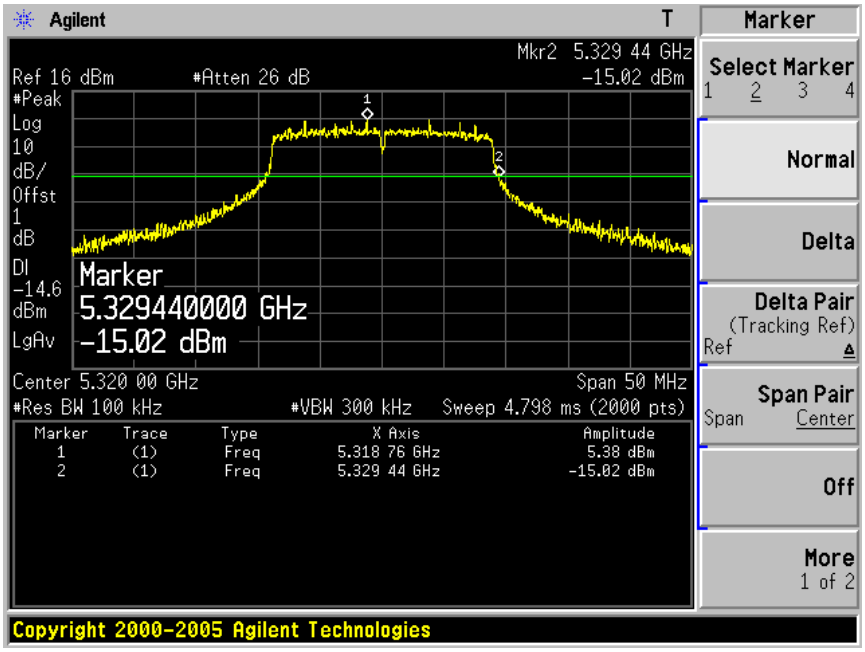
Channel 48 (5240MHz)



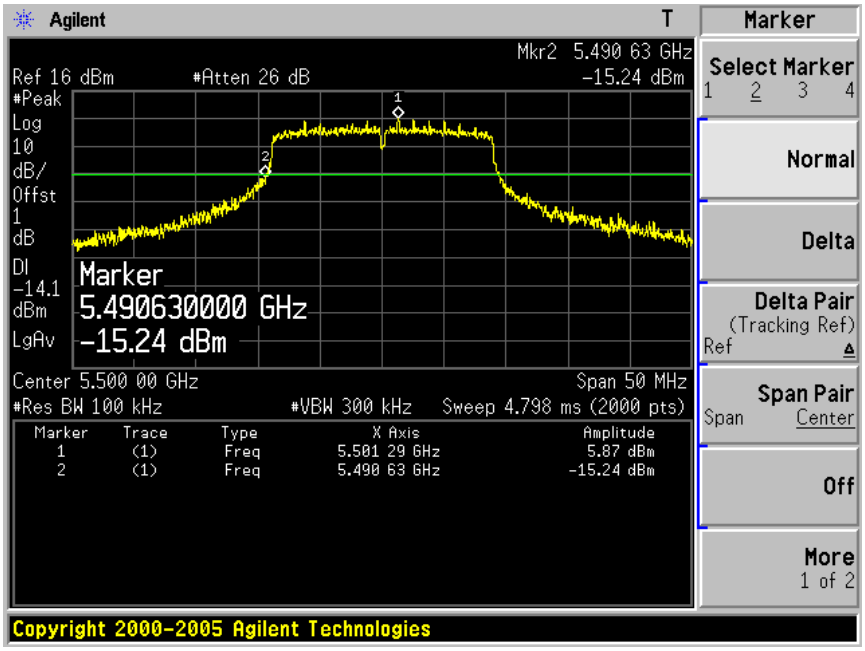
Channel 52 (5260MHz)



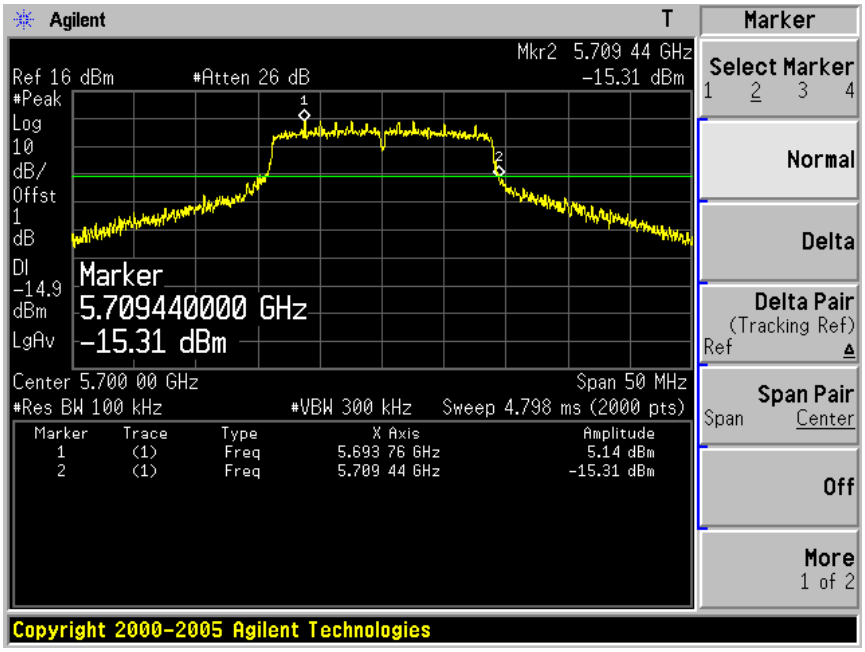
Channel 64 (5320MHz)



Channel 100 (5500MHz)

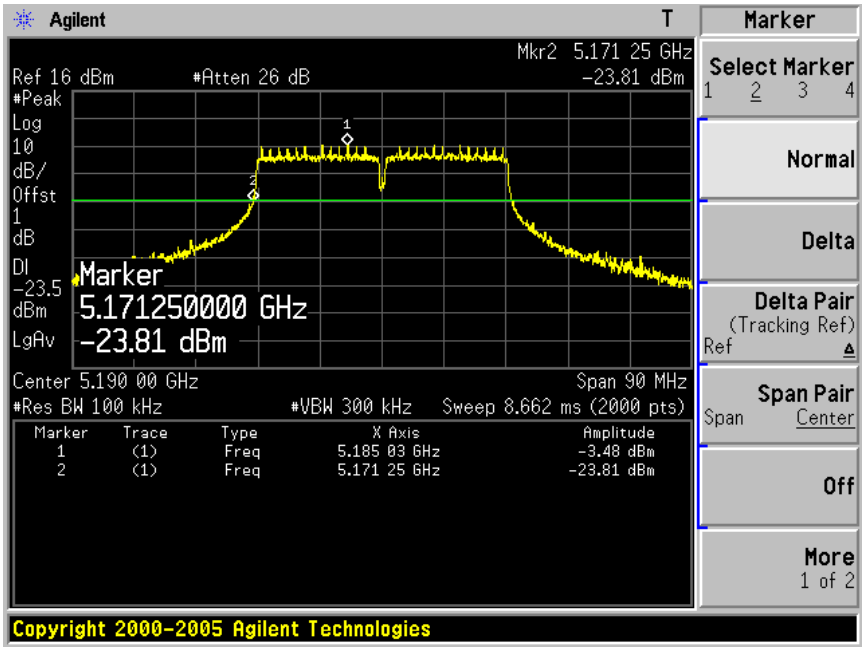


Channel 140 (5700MHz)

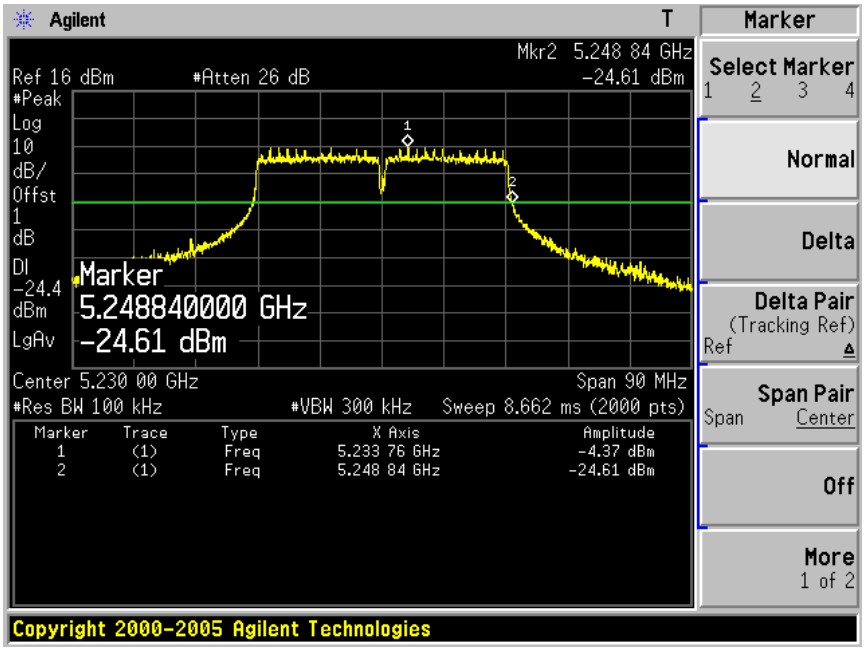


Product	:	AirPcap Nx
Test Item	:	Operation Frequency Range of 20dB Bandwidth
Test Site	:	TR-8
Test Mode	:	Mode 3: Transmit by 802.11n (40MHz) (Chain 100)

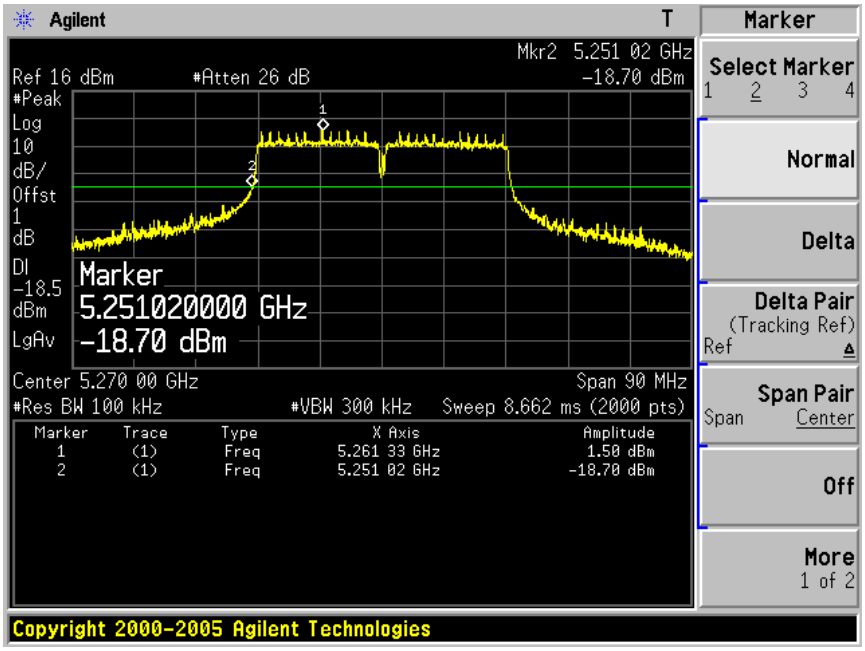
Channel 38 (5190MHz)



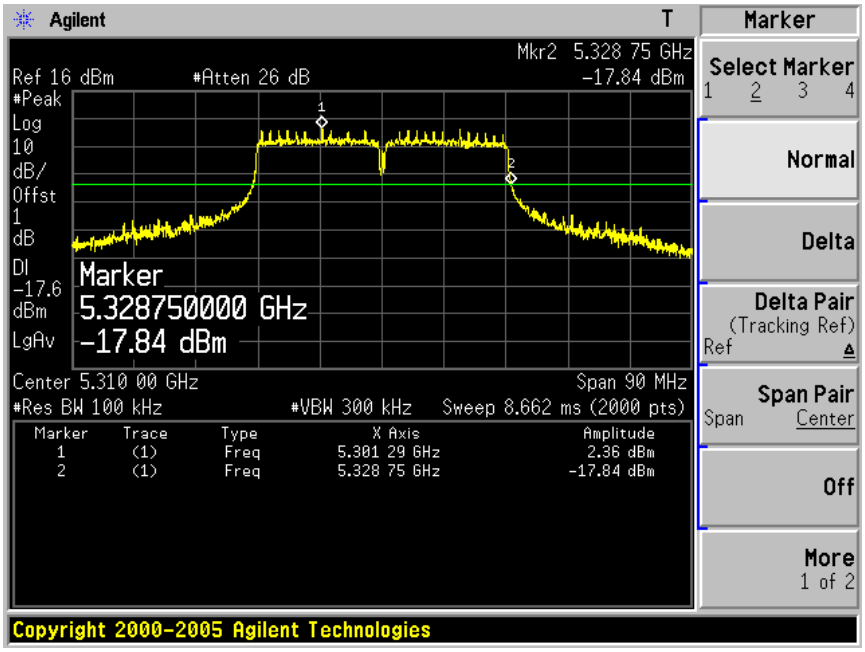
Channel 46 (5230MHz)



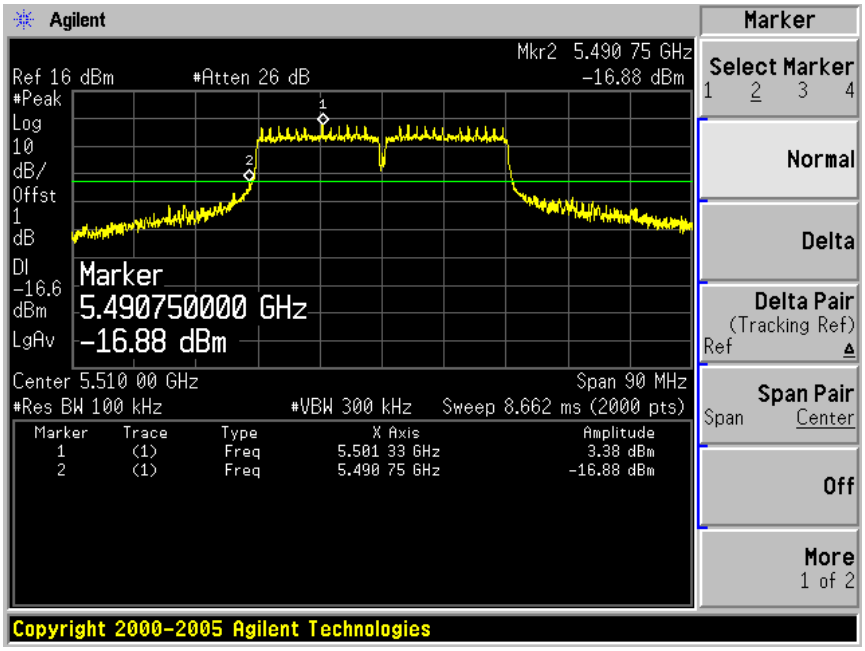
Channel 54 (5270MHz)



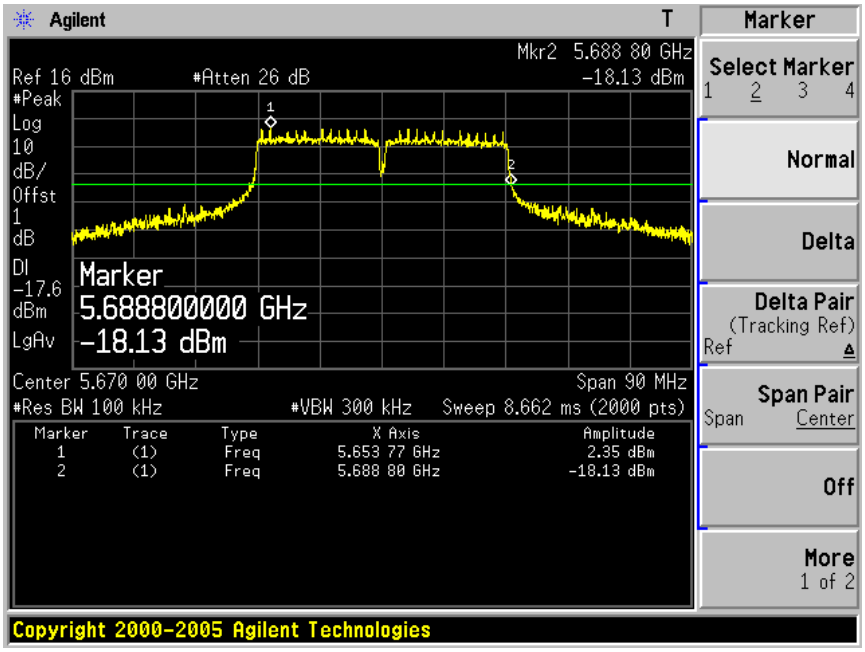
Channel 62 (5310MHz)



Channel 102 (5510MHz)

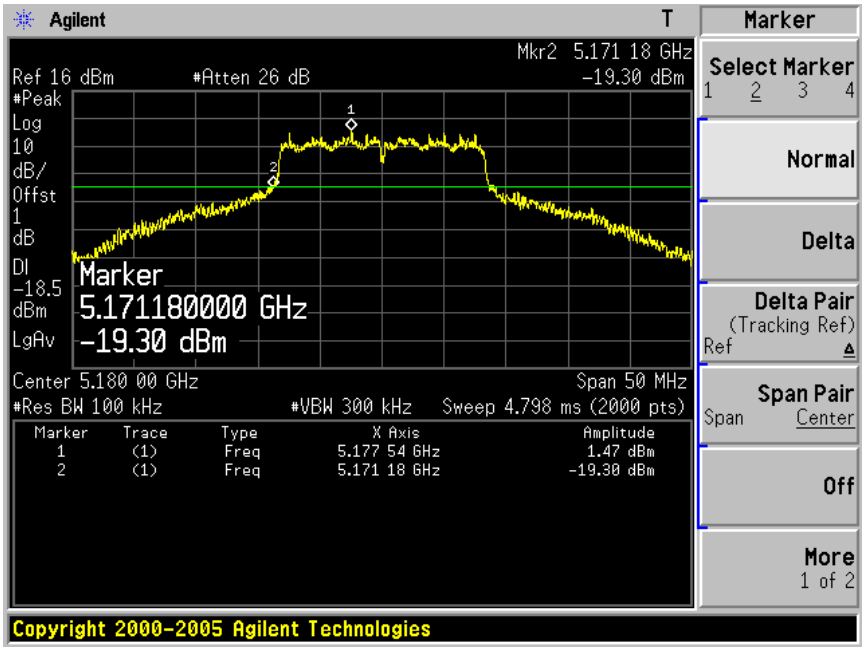


Channel 134 (5670MHz)

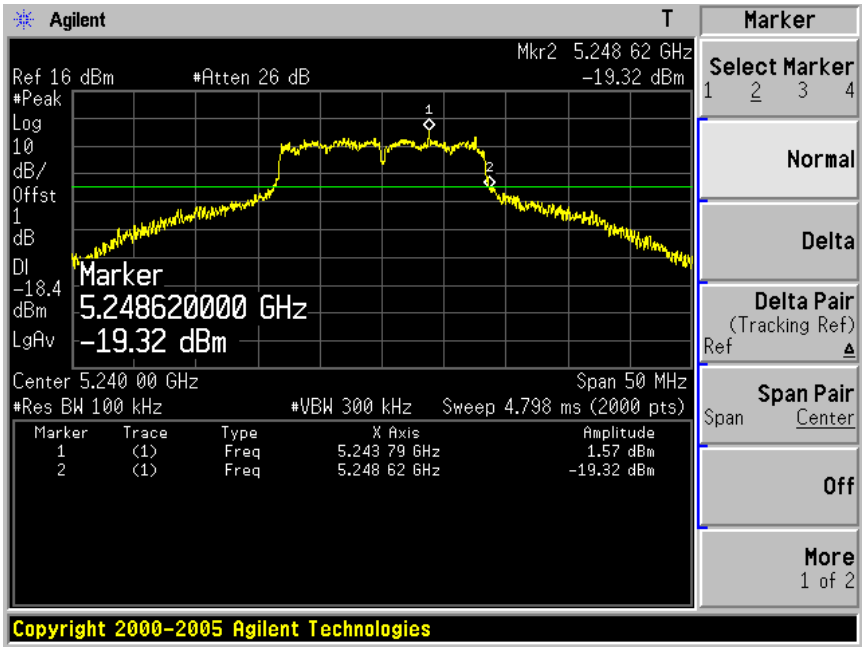


Product	:	AirPcap Nx
Test Item	:	Operation Frequency Range of 20dB Bandwidth
Test Site	:	TR-8
Test Mode	:	Mode 1: Transmit by 802.11a (Chain 001)

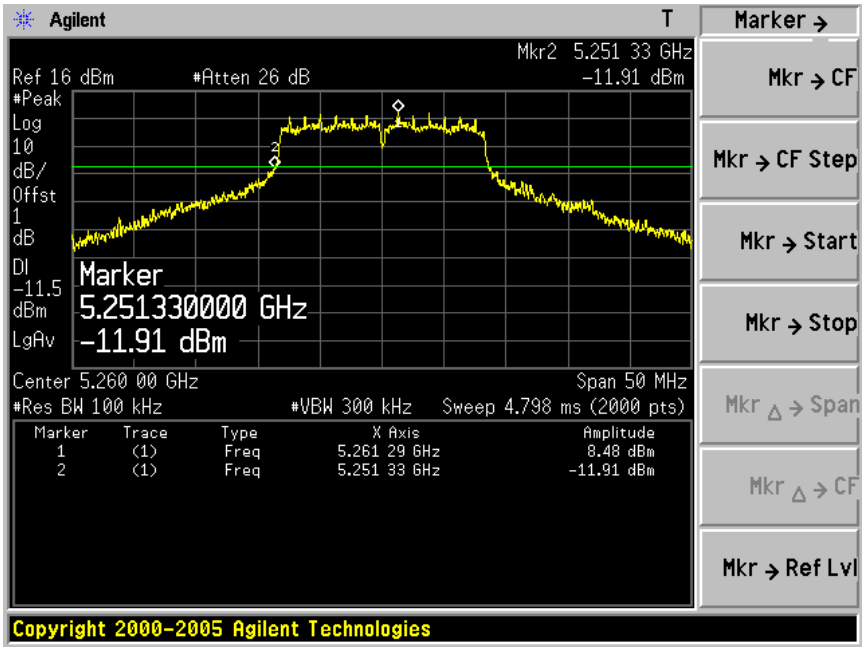
Channel 36 (5180MHz)



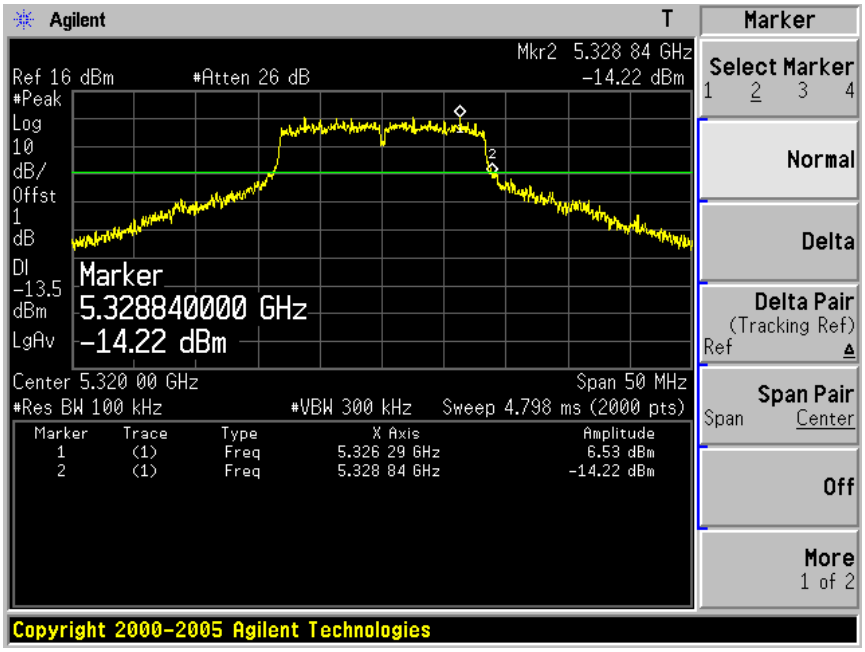
Channel 48 (5240MHz)



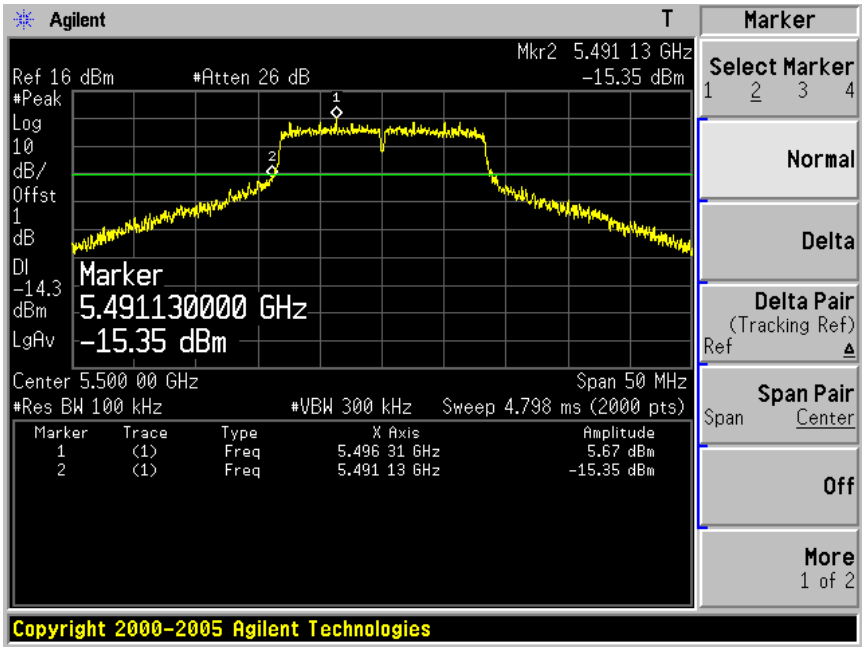
Channel 52 (5260MHz)



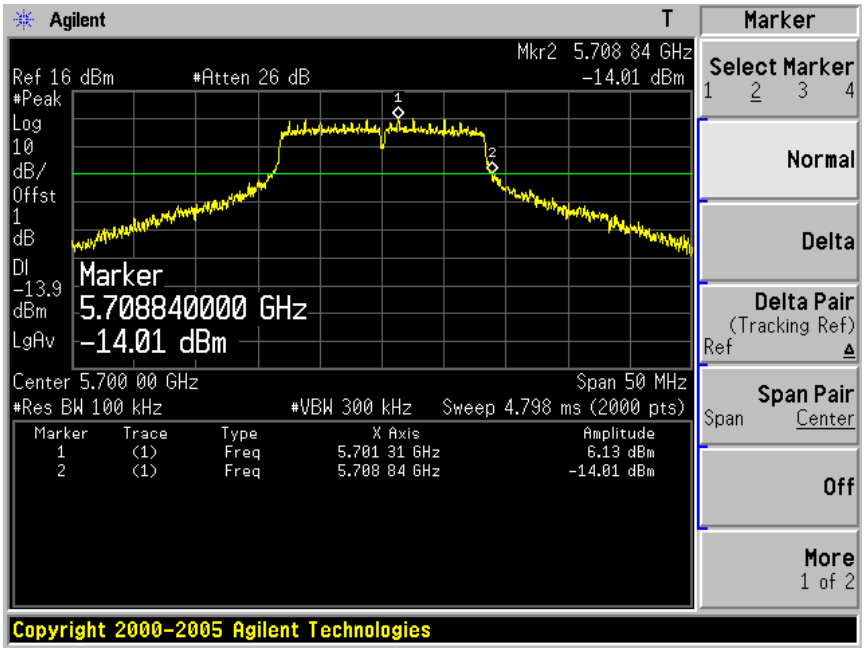
Channel 64 (5320MHz)



Channel 100 (5500MHz)

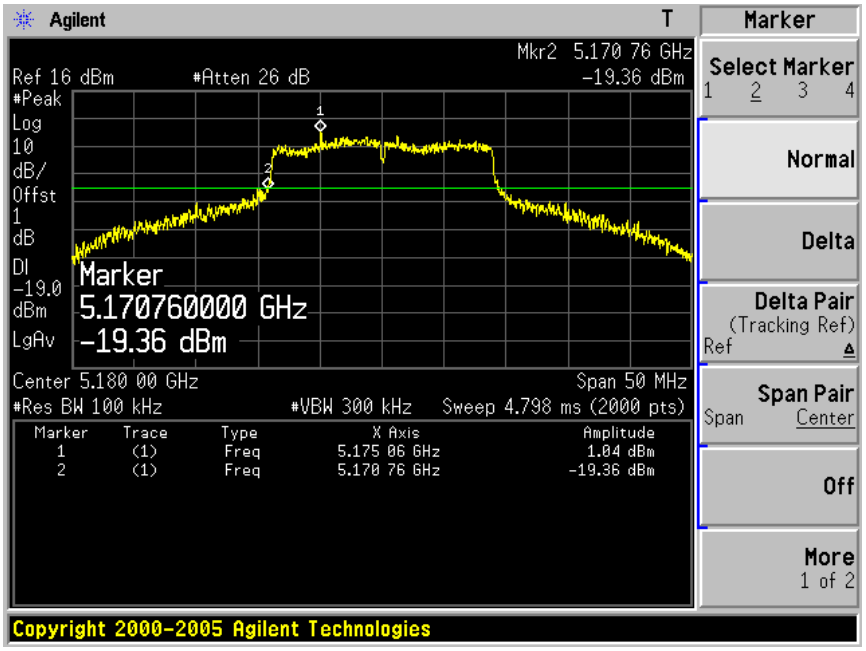


Channel 140 (5700MHz)

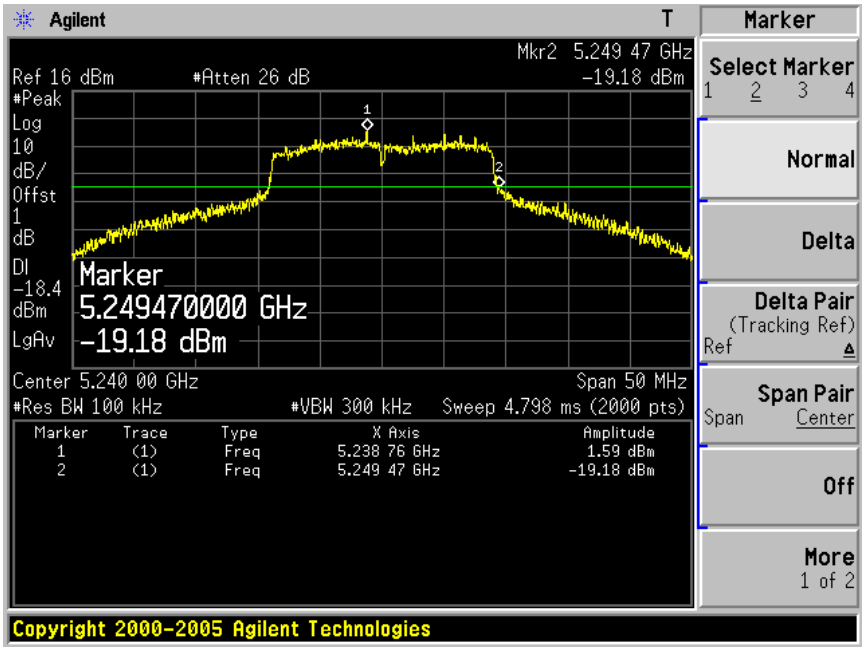


Product	:	AirPcap Nx
Test Item	:	Operation Frequency Range of 20dB Bandwidth
Test Site	:	TR-8
Test Mode	:	Mode 2: Transmit by 802.11n (20MHz) (Chain 001)

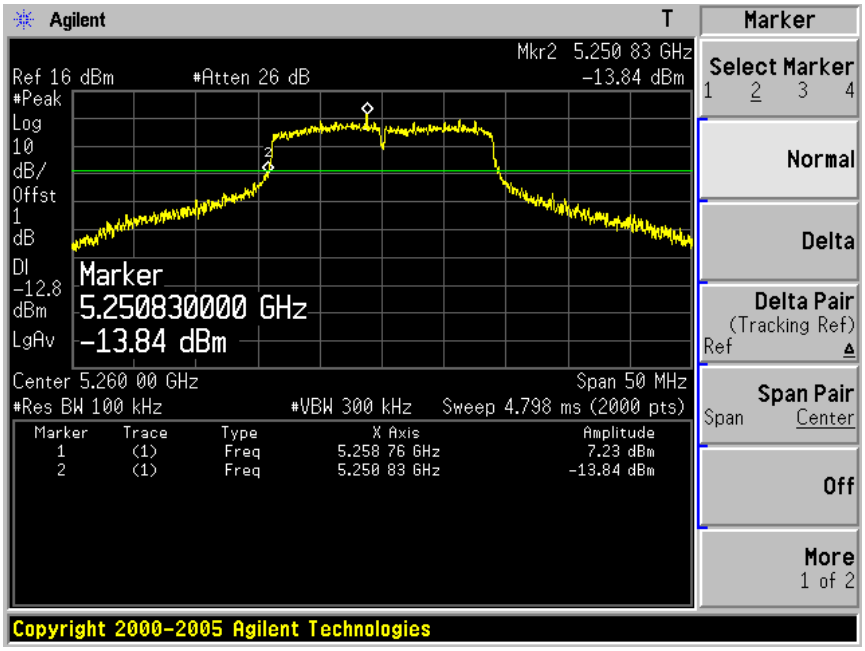
Channel 36 (5180MHz)



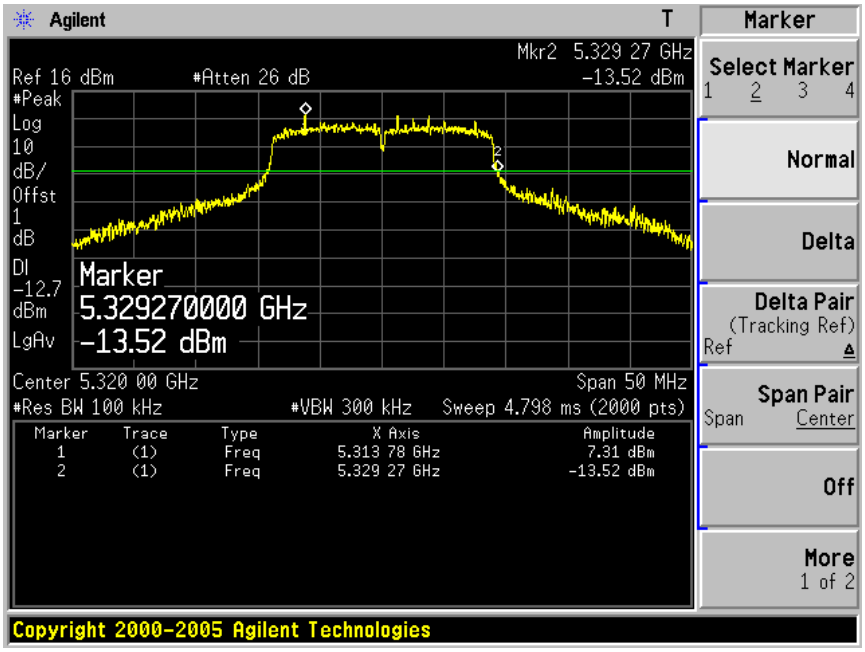
Channel 48 (5240MHz)



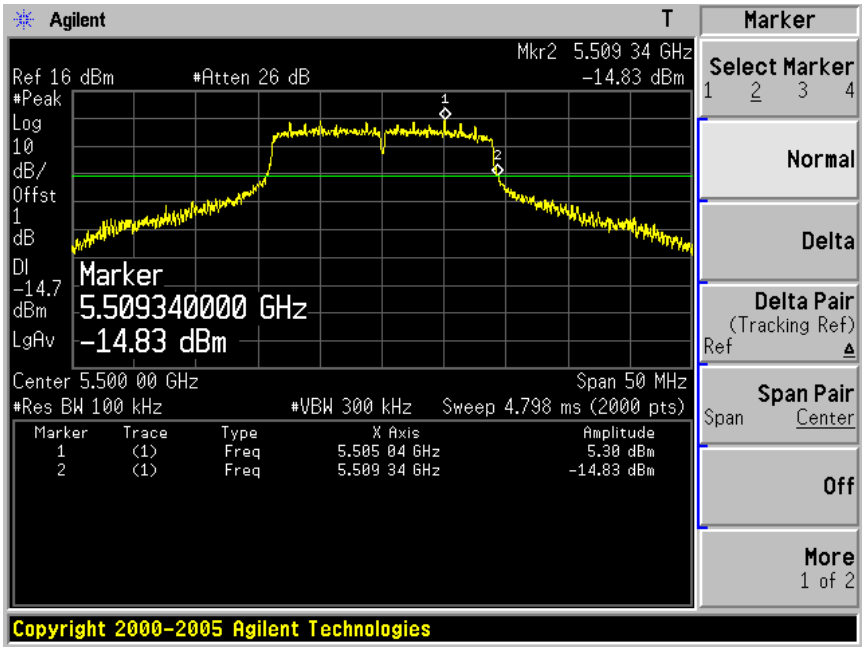
Channel 52 (5260MHz)



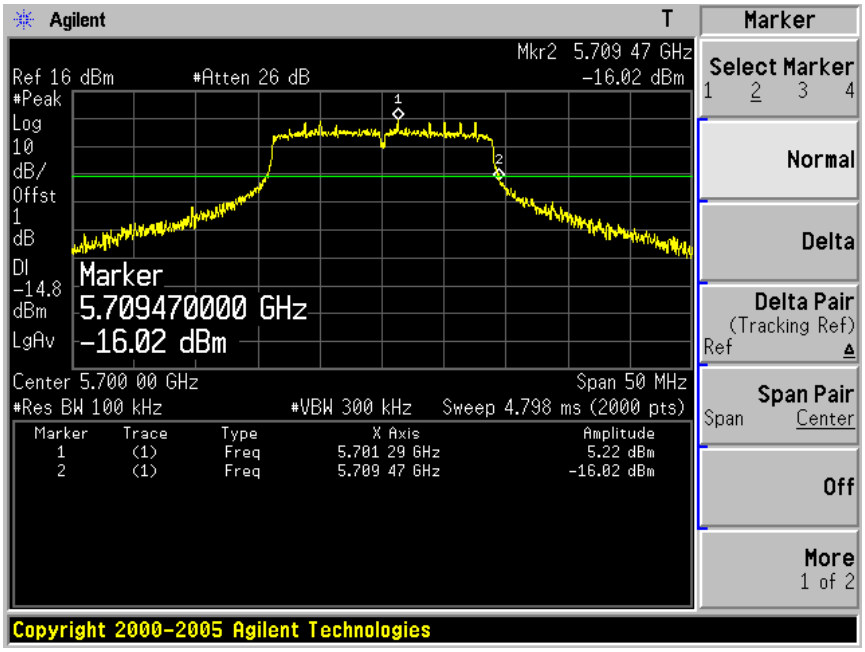
Channel 64 (5320MHz)



Channel 100 (5500MHz)

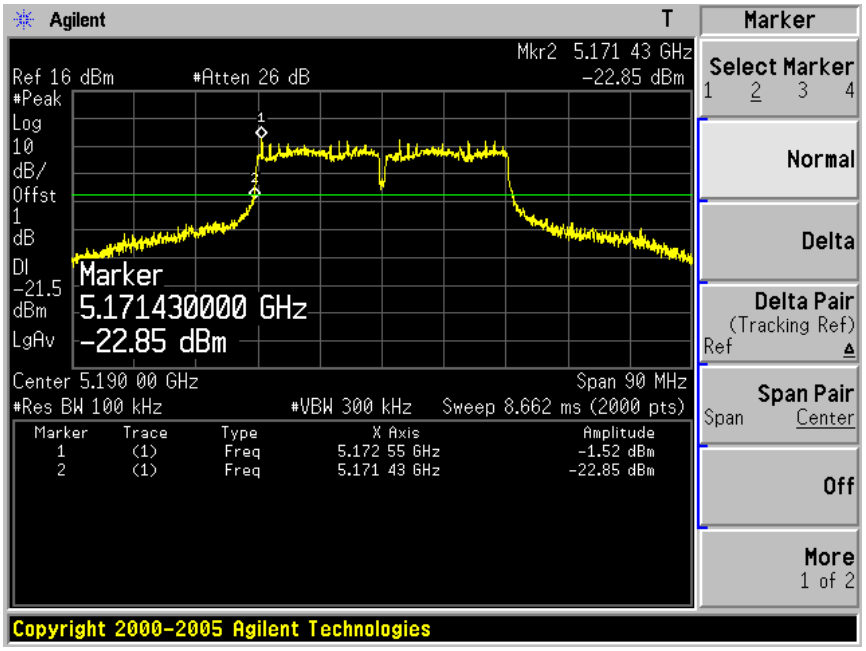


Channel 140 (5700MHz)

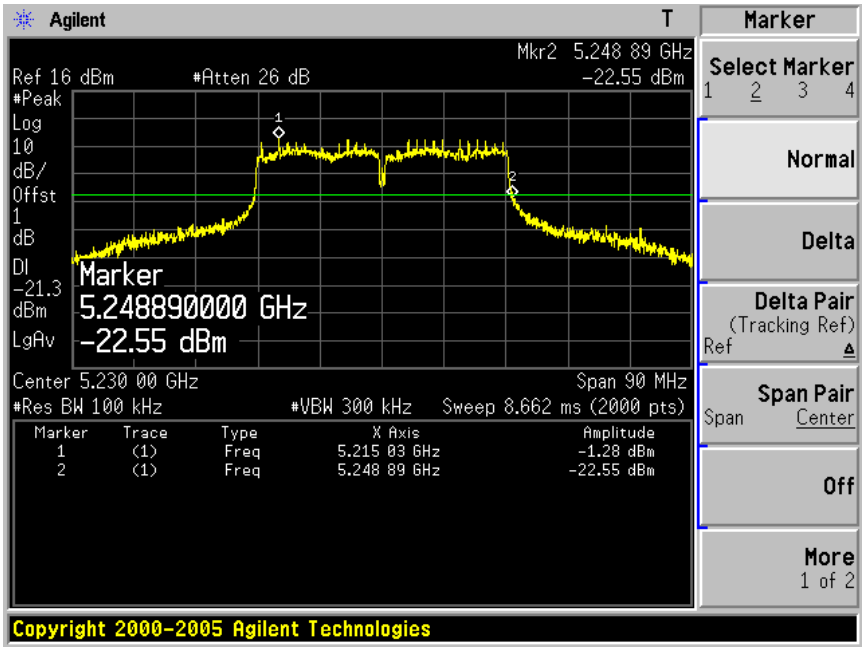


Product	:	AirPcap Nx
Test Item	:	Operation Frequency Range of 20dB Bandwidth
Test Site	:	TR-8
Test Mode	:	Mode 3: Transmit by 802.11n (40MHz) (Chain 001)

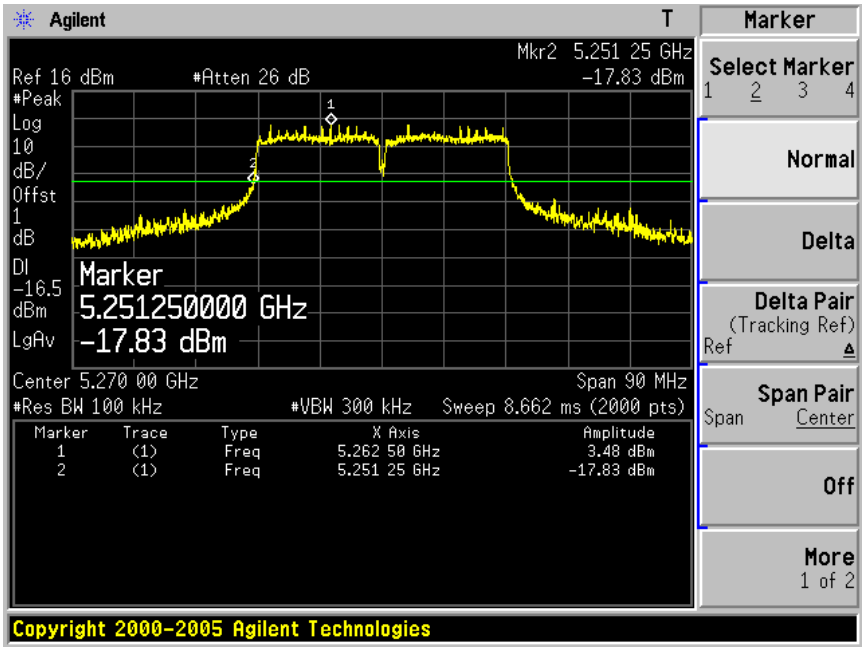
Channel 38 (5190MHz)



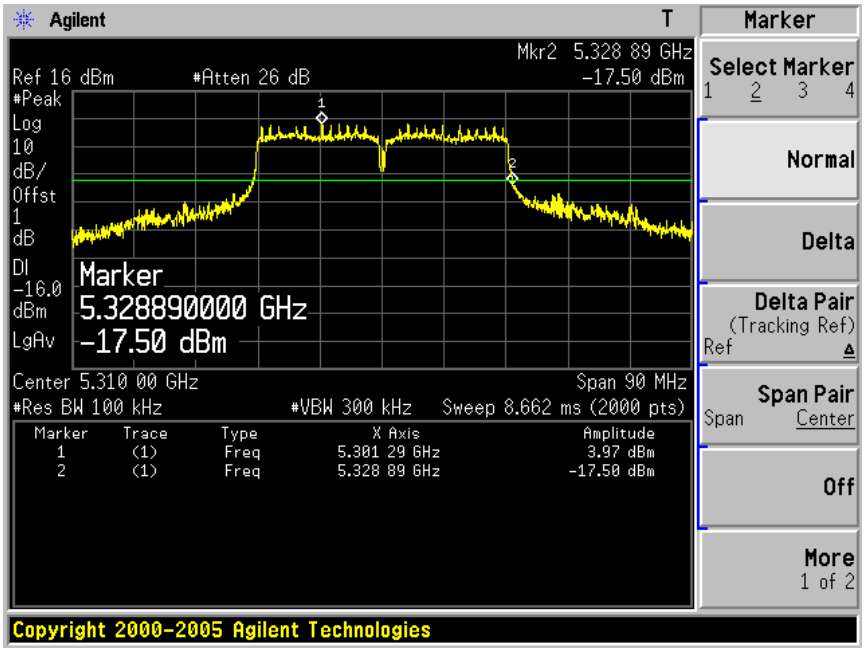
Channel 46 (5230MHz)



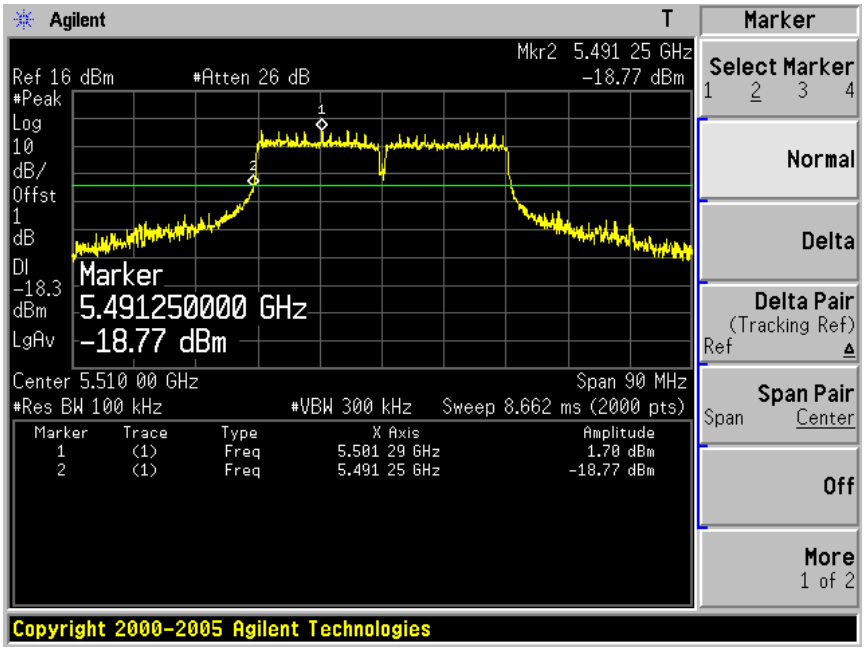
Channel 54 (5270MHz)



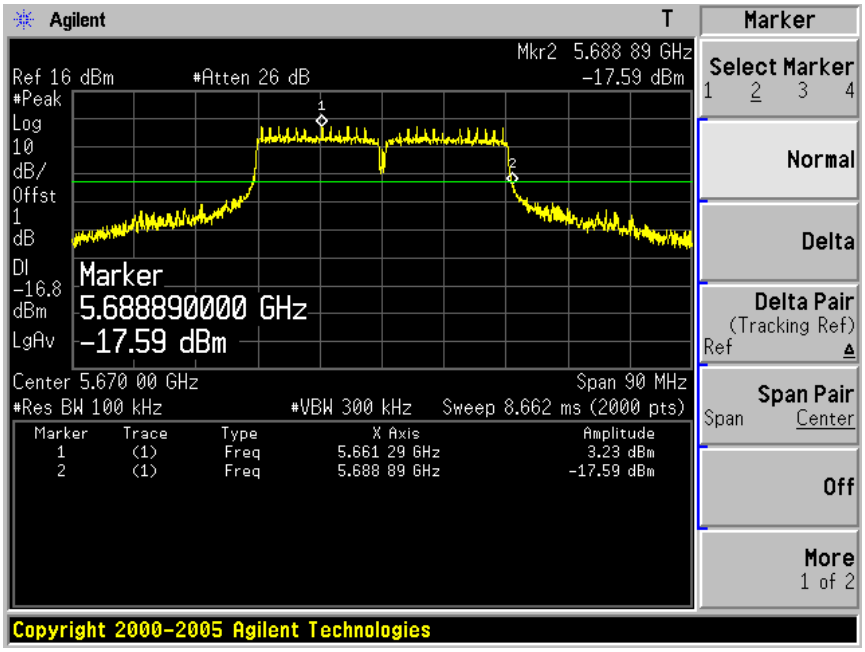
Channel 62 (5310MHz)



Channel 102 (5510MHz)



Channel 134 (5670MHz)



6. Occupied Bandwidth

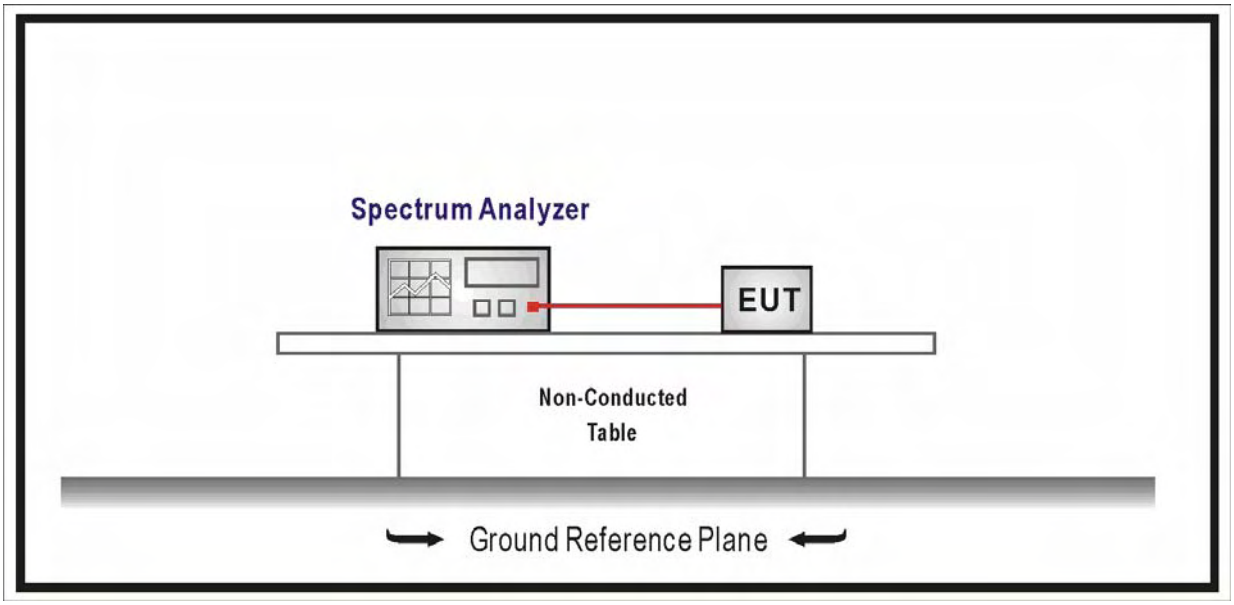
6.1. Test Equipment

Occupied Bandwidth / TR-8

Instrument	Manufacturer	Type No.	Serial No.	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2010.04.30
Temperature/Humidity Meter	zhicheng	ZC1-2	TR8-TH	2010.05.04

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

N/A

6.4. Test Procedure

The EUT was tested according to ANSI C63.10: 2009 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%.

6.5. Uncertainty

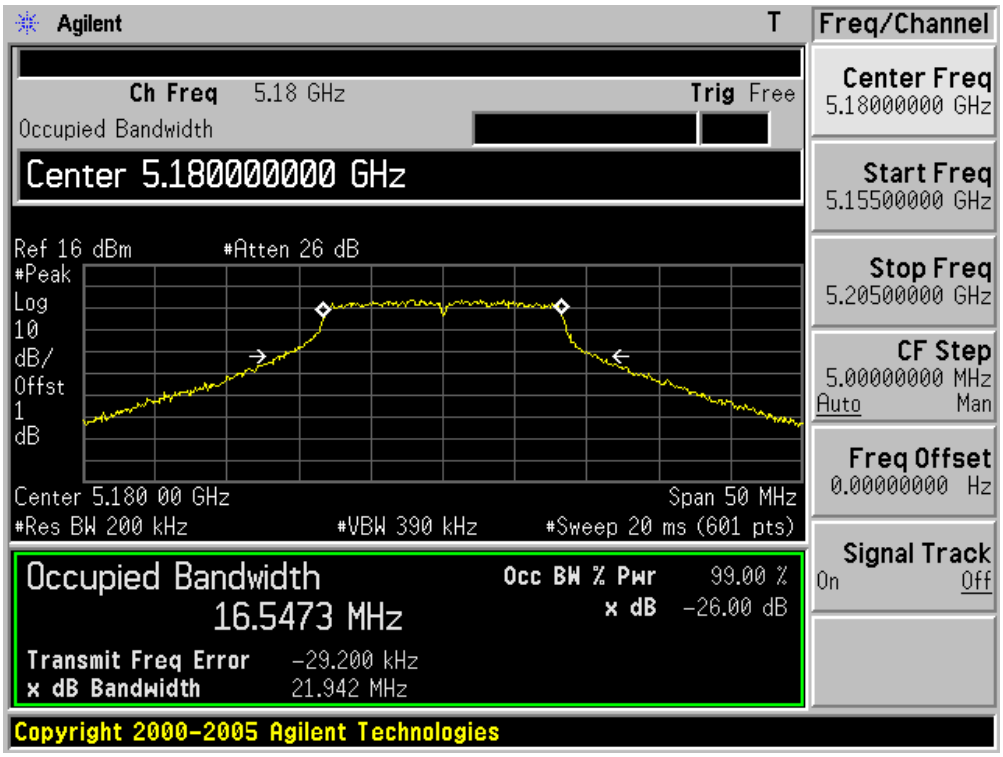
The measurement uncertainty is defined as ± 1 kHz

6.6. Test Result

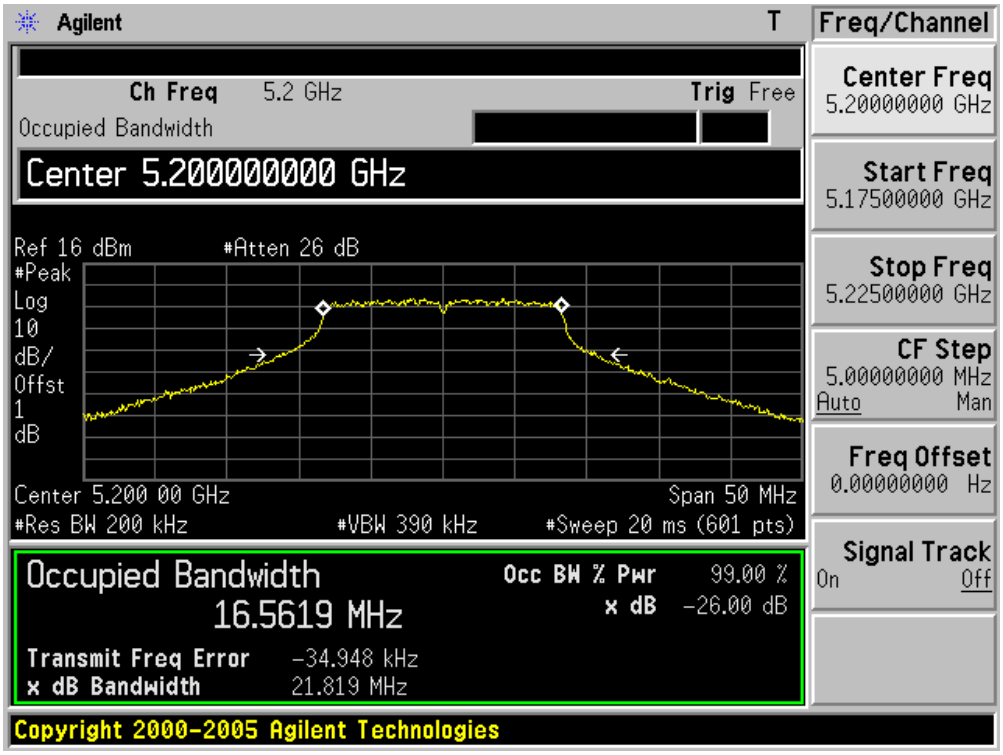
Product	:	AirPcap Nx
Test Item	:	26dB Occupied Bandwidth
Test Site	:	TR-8
Test Mode	:	Mode 1: Transmit by 802.11a (Chain 100)

Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	Limit (MHz)
36	5180	21.94	N/A
40	5200	21.82	N/A
48	5240	21.96	N/A
52	5260	22.21	N/A
60	5300	22.32	N/A
64	5320	22.20	N/A
100	5500	23.38	N/A
120	5600	25.30	N/A
140	5700	27.89	N/A

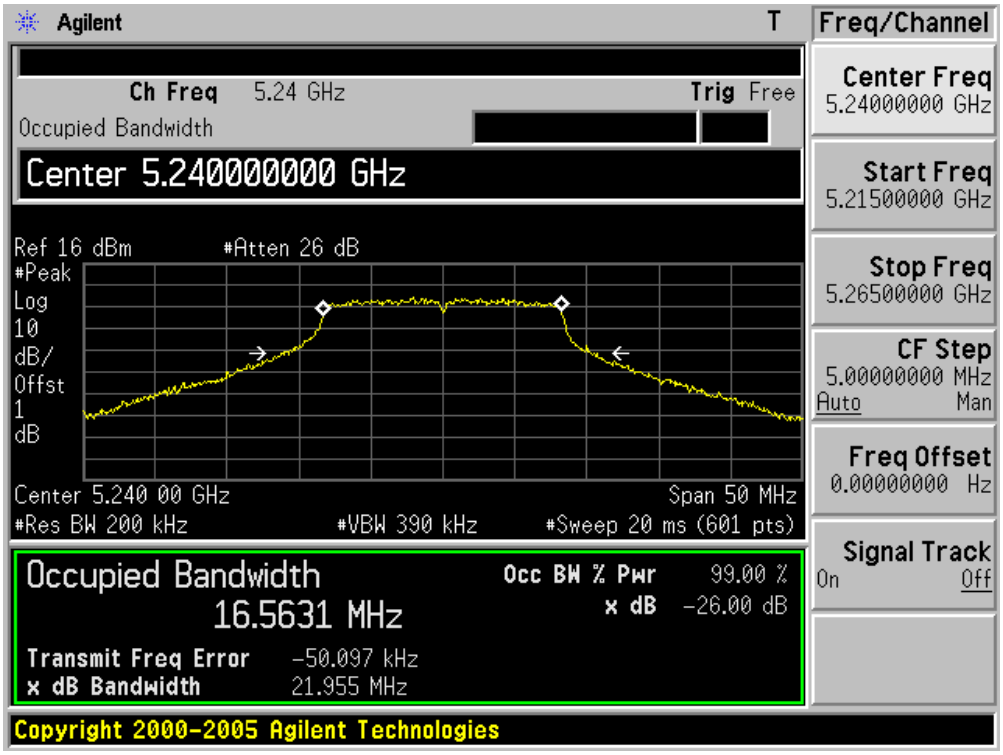
Channel 36 (5180MHz)



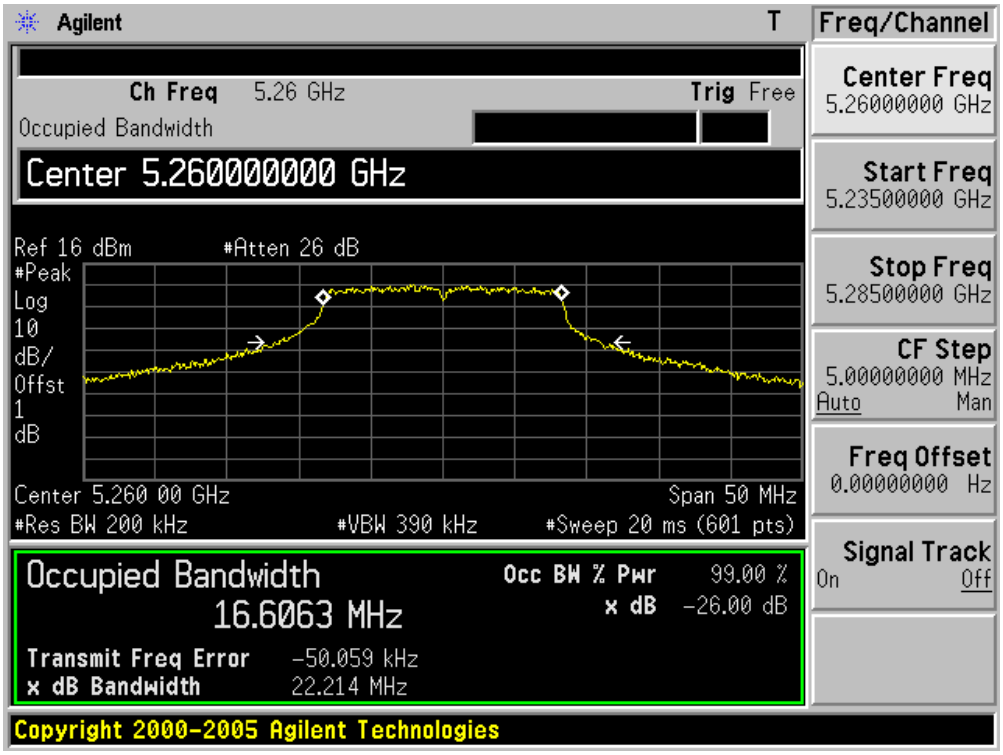
Channel 40 (5200MHz)



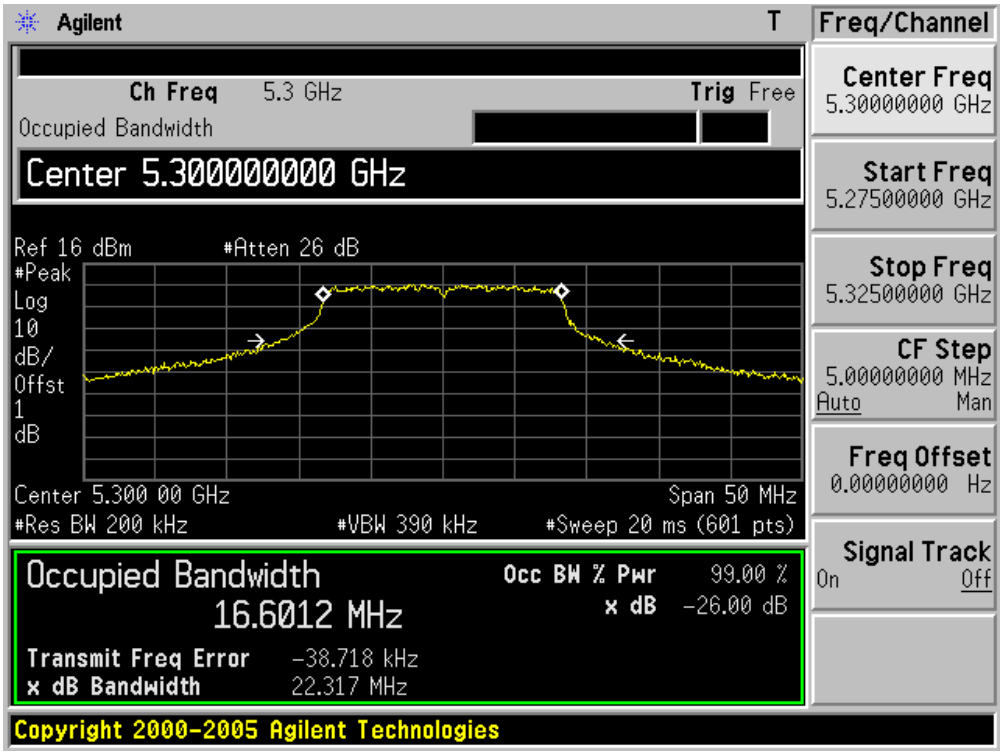
Channel 48 (5240MHz)



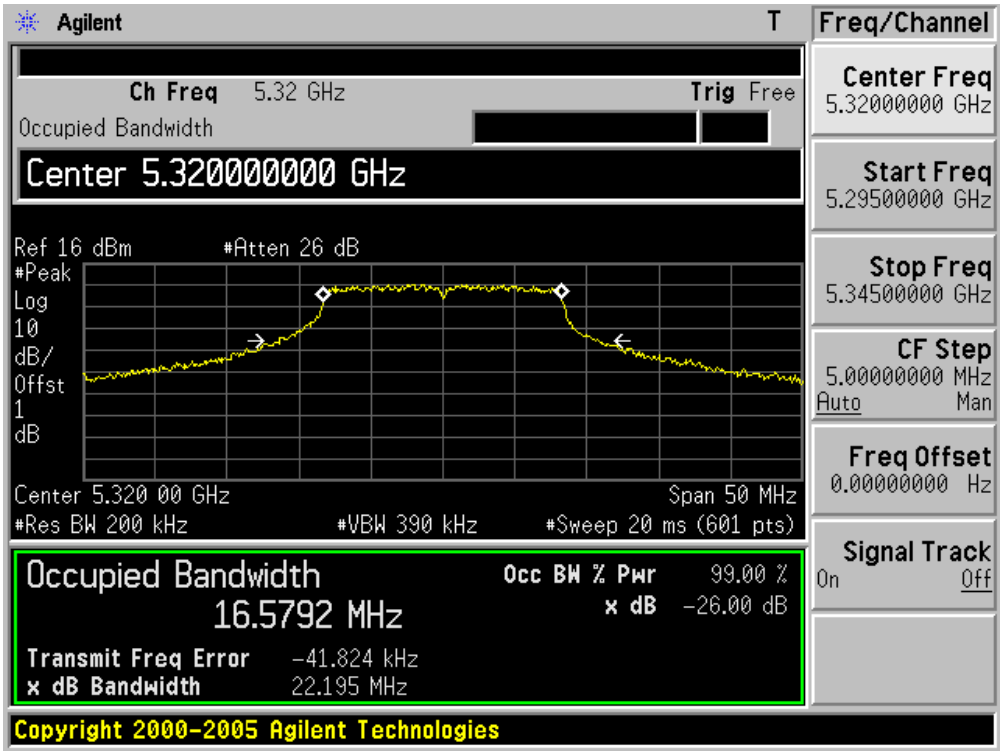
Channel 48 (5260MHz)



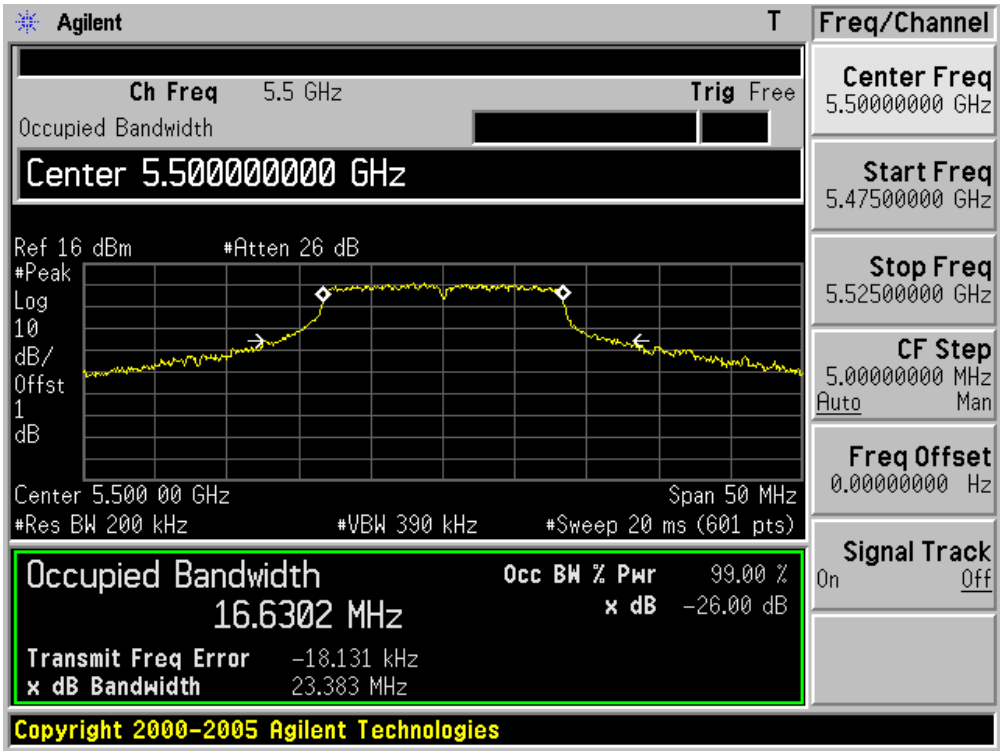
Channel 60 (5300MHz)



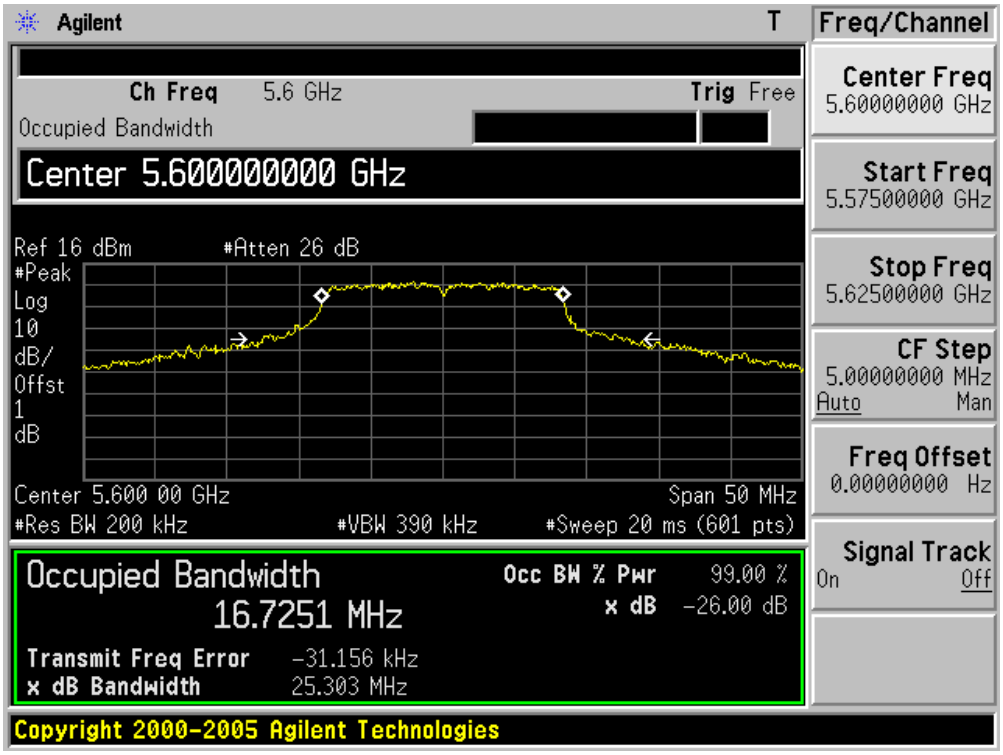
Channel 64 (5320MHz)



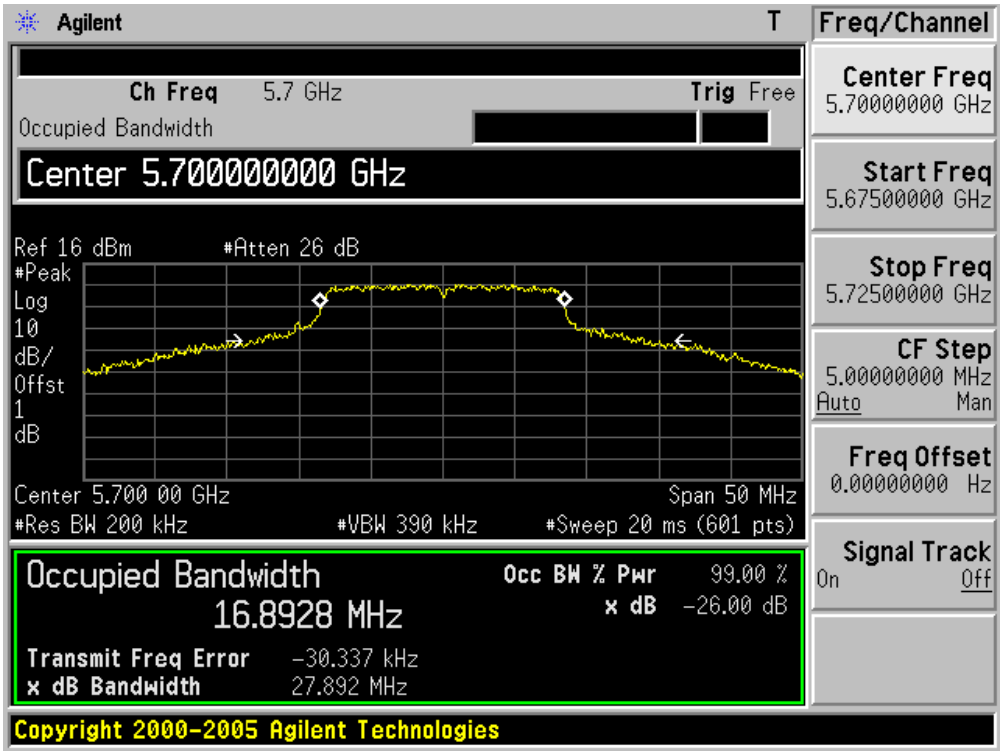
Channel 100 (5500MHz)



Channel 120 (5600MHz)



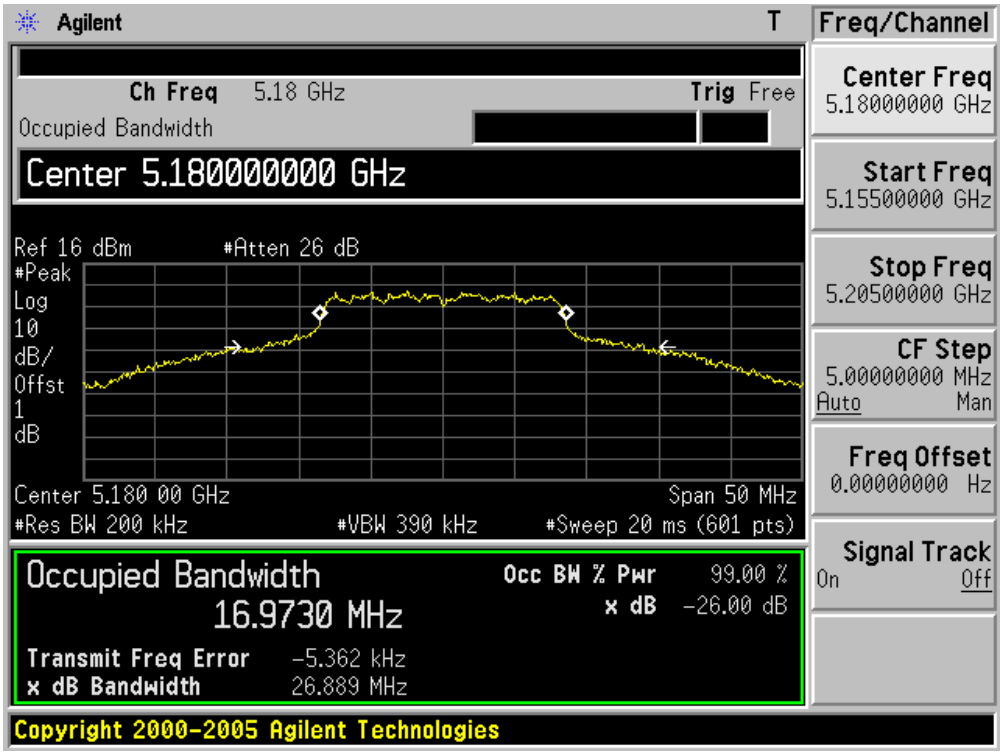
Channel 140 (5700MHz)



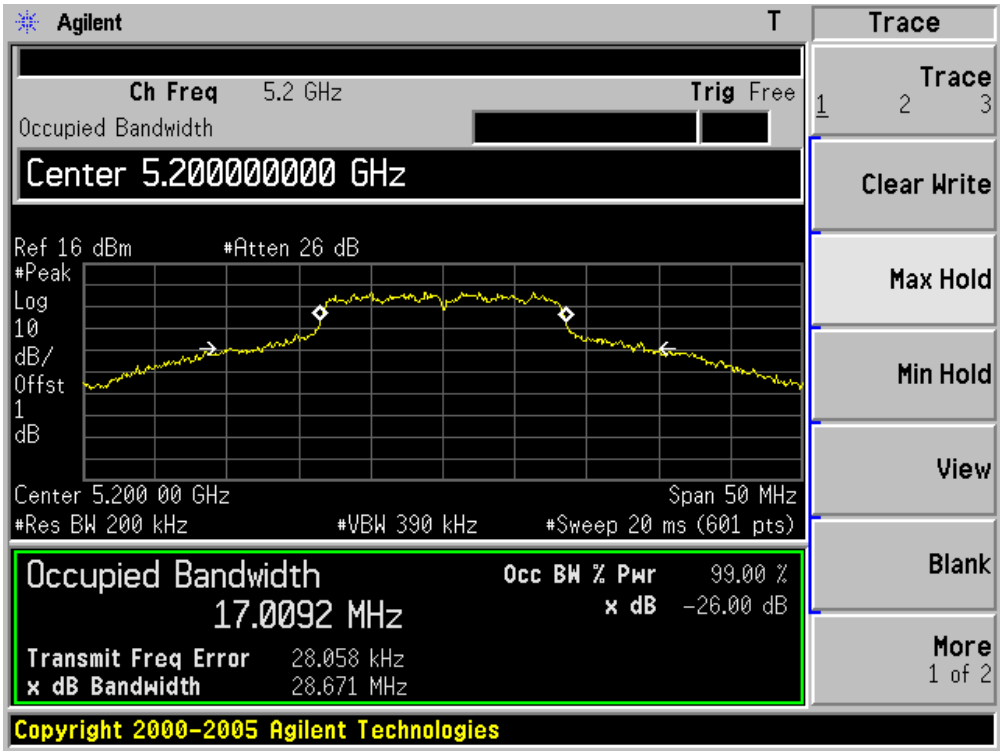
Product	:	AirPcap Nx
Test Item	:	26dB Occupied Bandwidth
Test Site	:	TR-8
Test Mode	:	Mode 1: Transmit by 802.11a (Chain 001)

Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	Limit (MHz)
36	5180	26.89	N/A
40	5200	28.67	N/A
48	5240	29.63	N/A
52	5260	24.76	N/A
60	5300	25.45	N/A
64	5320	25.13	N/A
100	5500	22.23	N/A
120	5600	24.39	N/A
140	5700	25.08	N/A

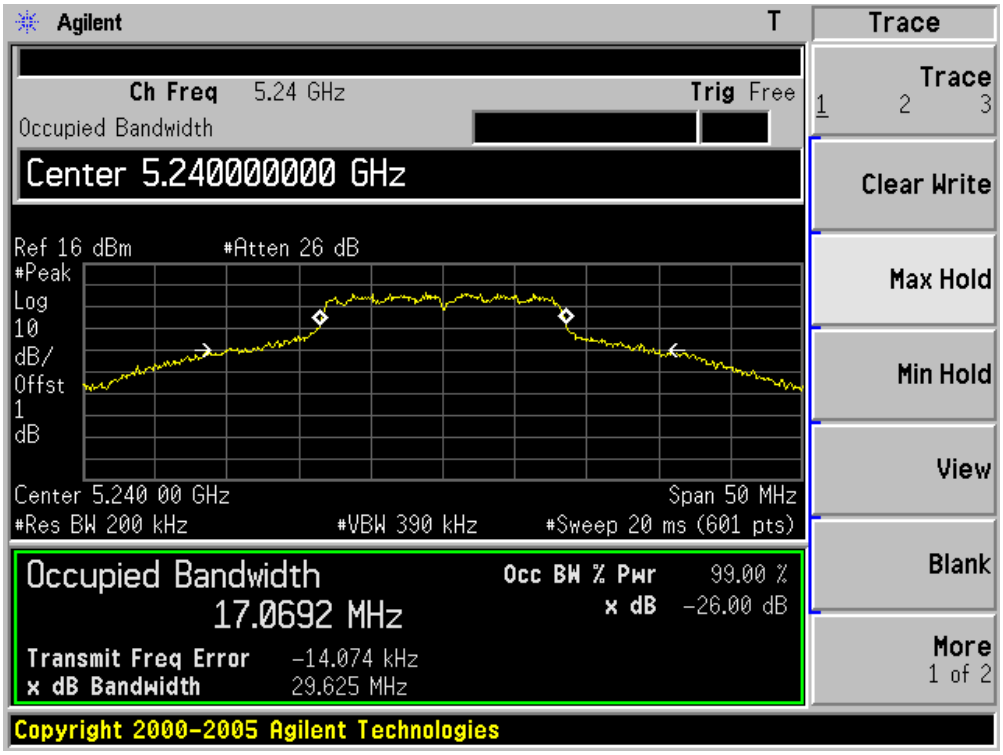
Channel 36 (5180MHz)



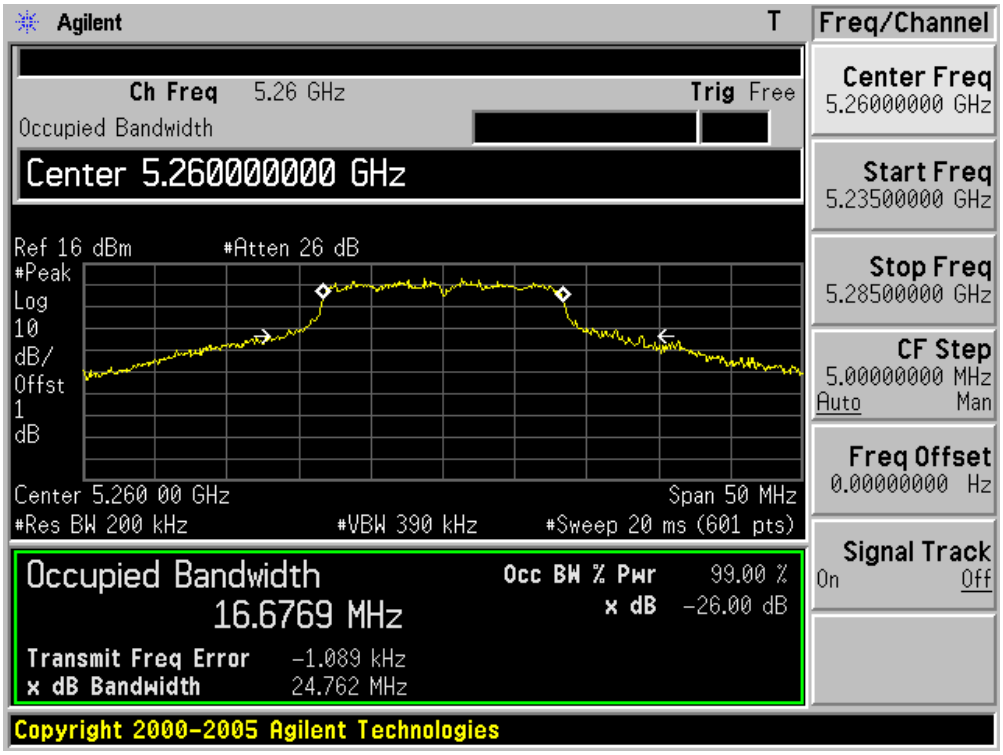
Channel 40 (5200MHz)



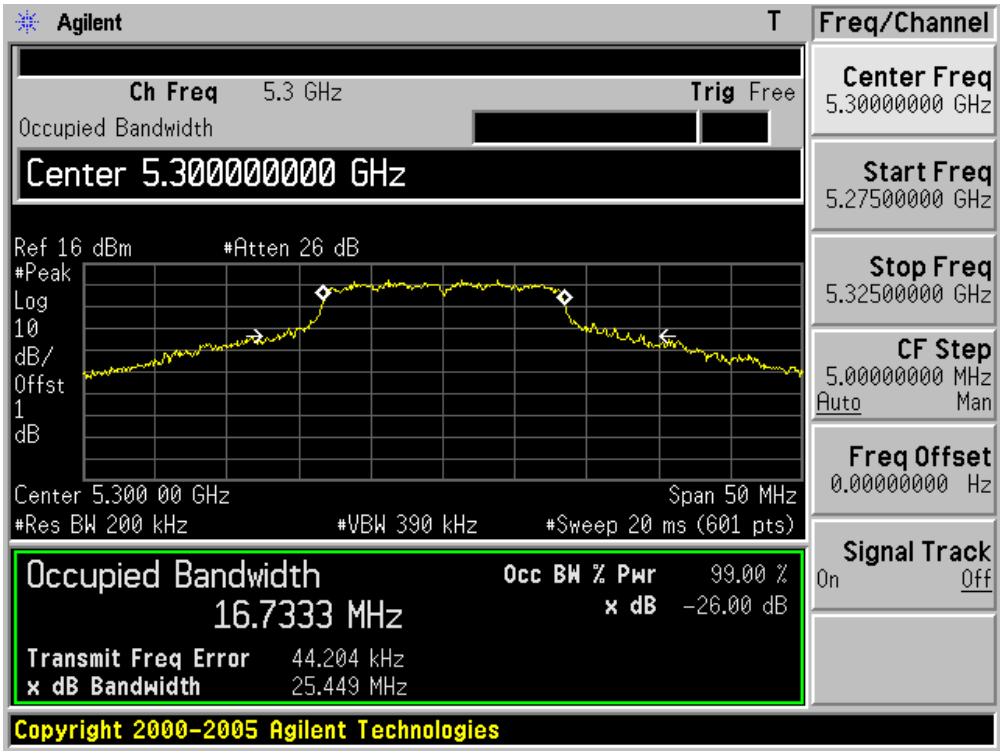
Channel 48 (5240MHz)



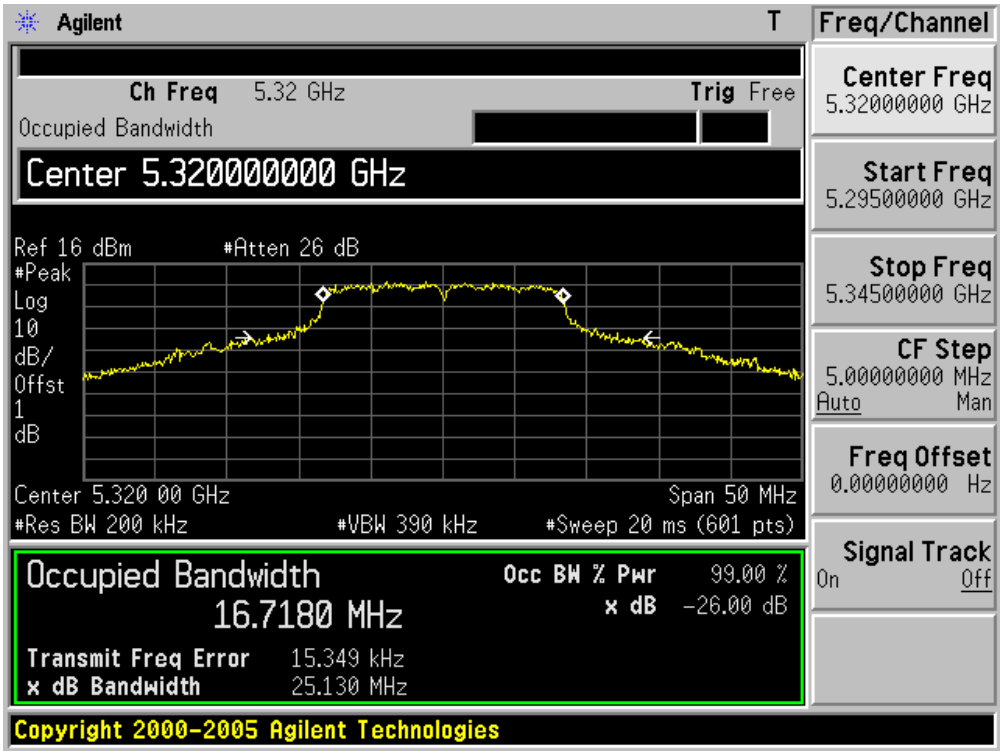
Channel 48 (5260MHz)



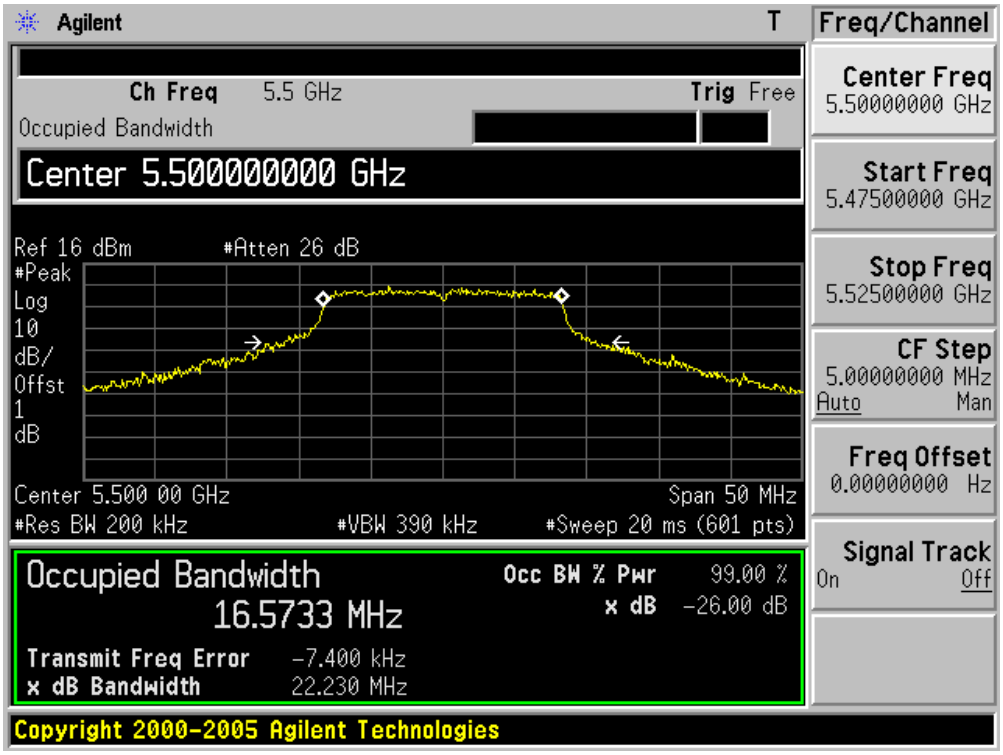
Channel 60 (5300MHz)



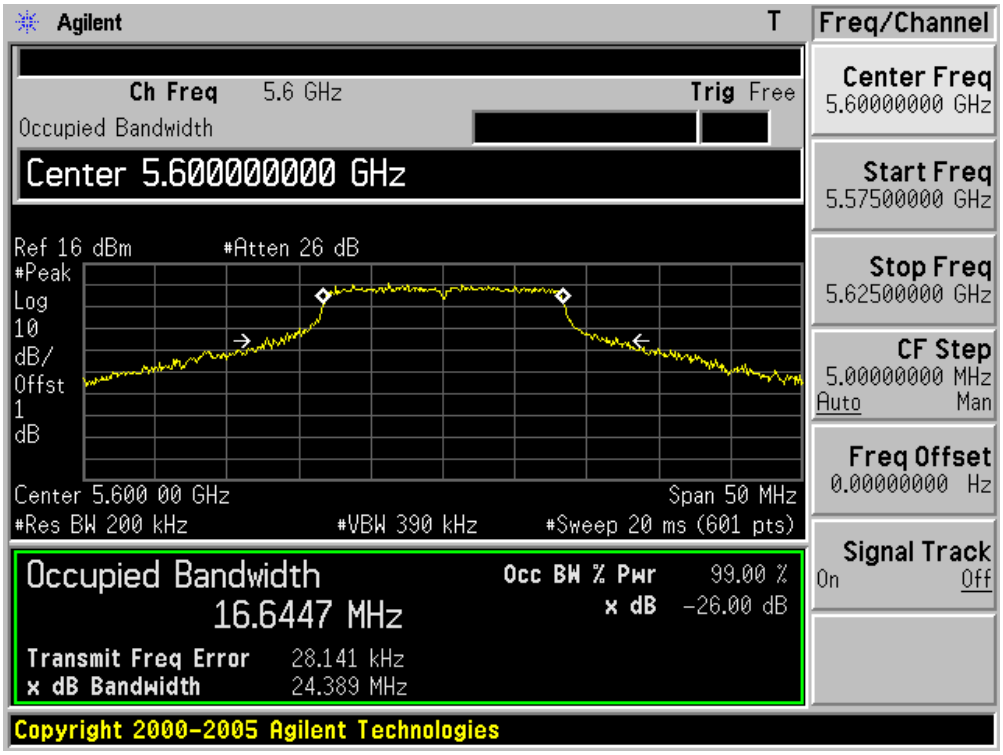
Channel 64 (5320MHz)



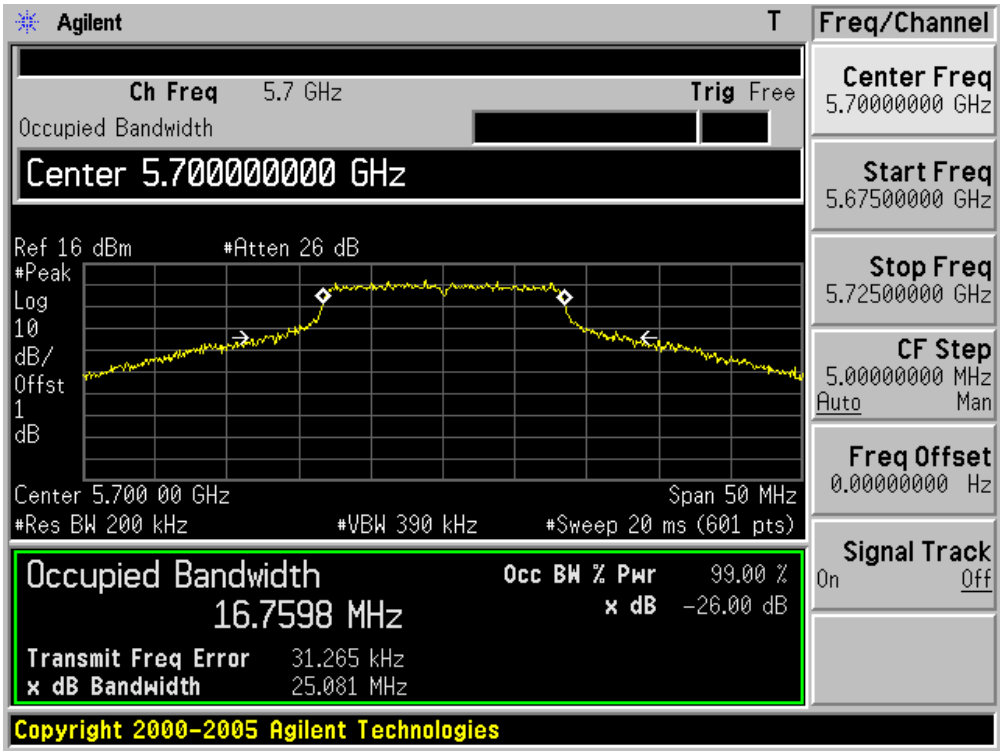
Channel 100 (5500MHz)



Channel 120 (5600MHz)



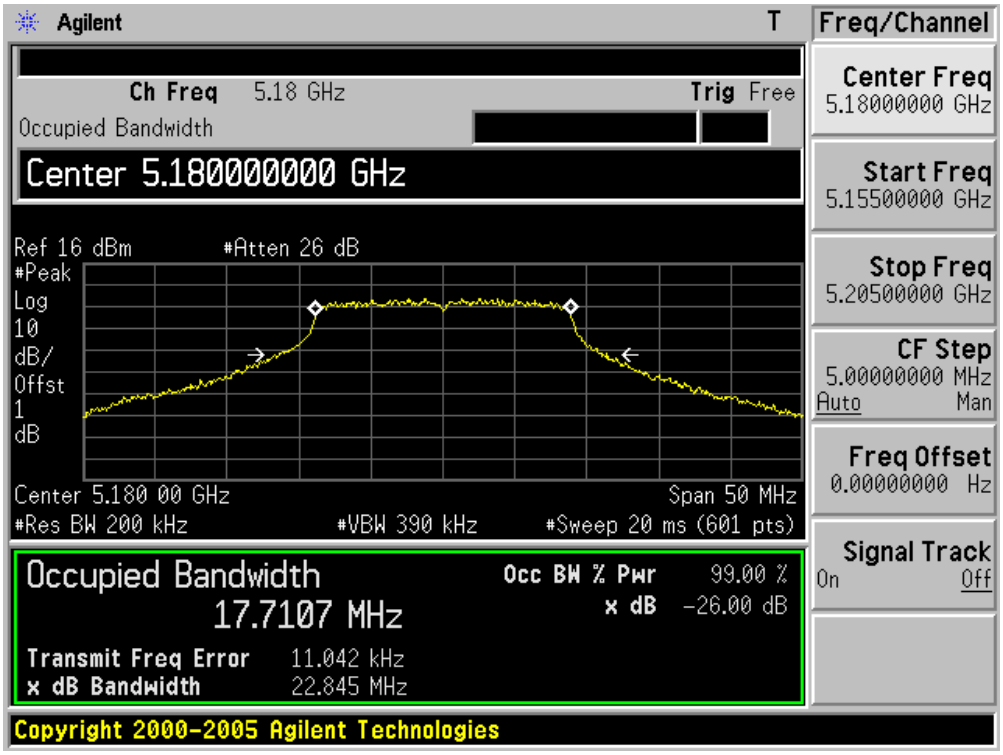
Channel 140 (5700MHz)



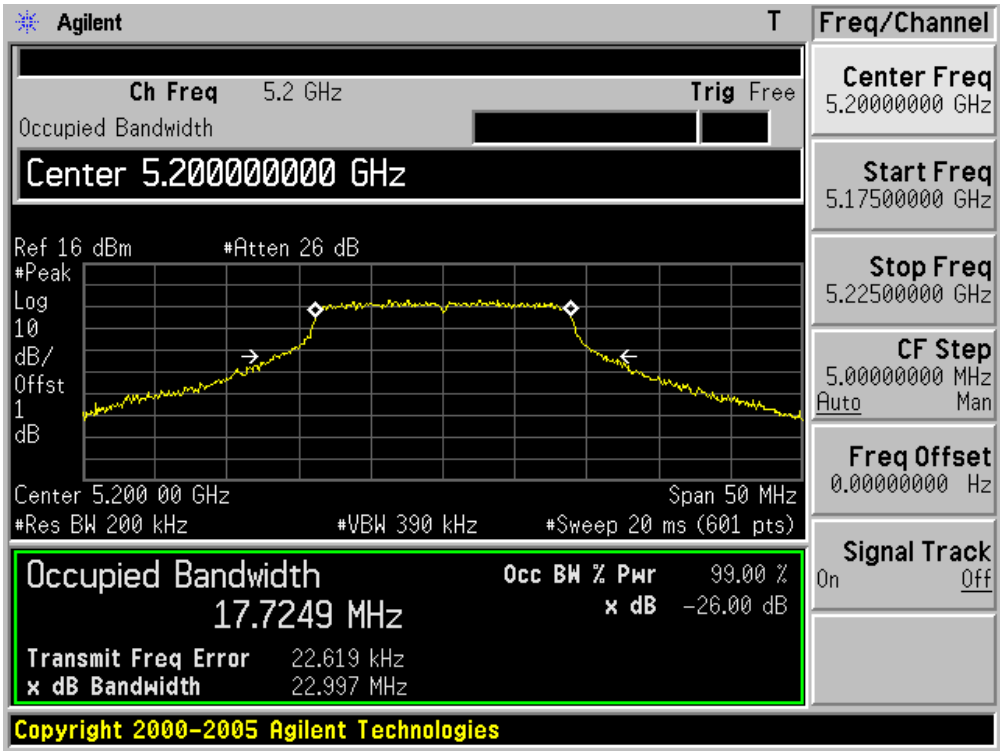
Product	:	AirPcap Nx
Test Item	:	26dB Occupied Bandwidth
Test Site	:	TR-8
Test Mode	:	Mode 2: Transmit by 802.11n (20MHz) (Chain 100)

Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	Limit (MHz)
36	5180	22.85	N/A
40	5200	23.00	N/A
48	5240	23.00	N/A
52	5260	23.26	N/A
60	5300	23.23	N/A
64	5320	24.02	N/A
100	5500	24.05	N/A
120	5600	25.08	N/A
140	5700	29.88	N/A

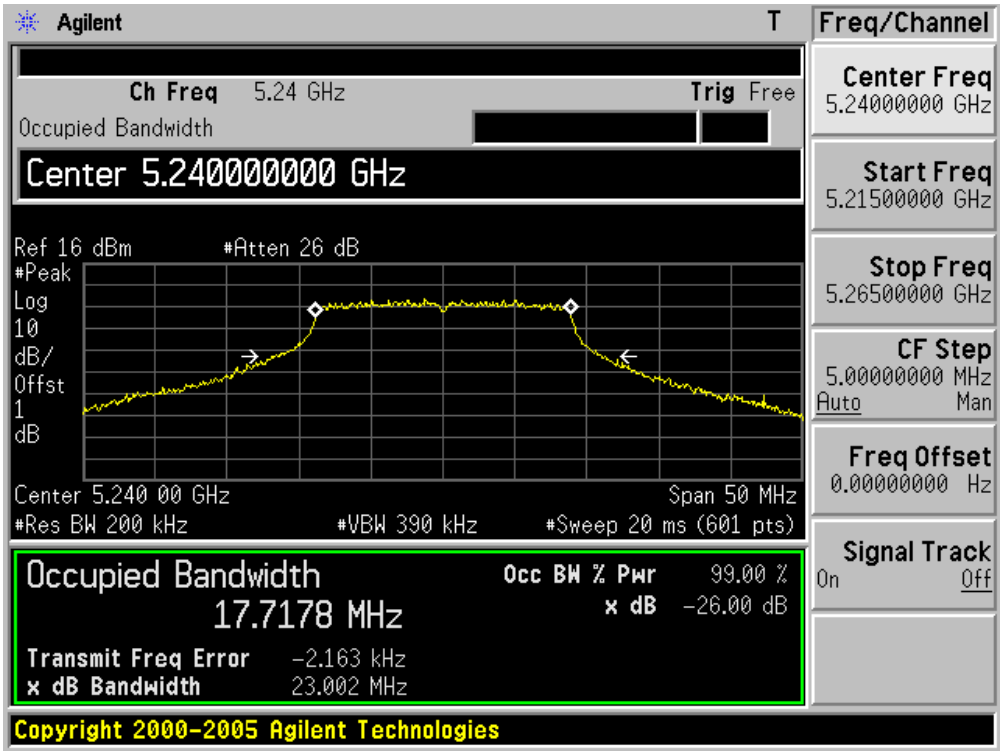
Channel 36 (5180MHz)



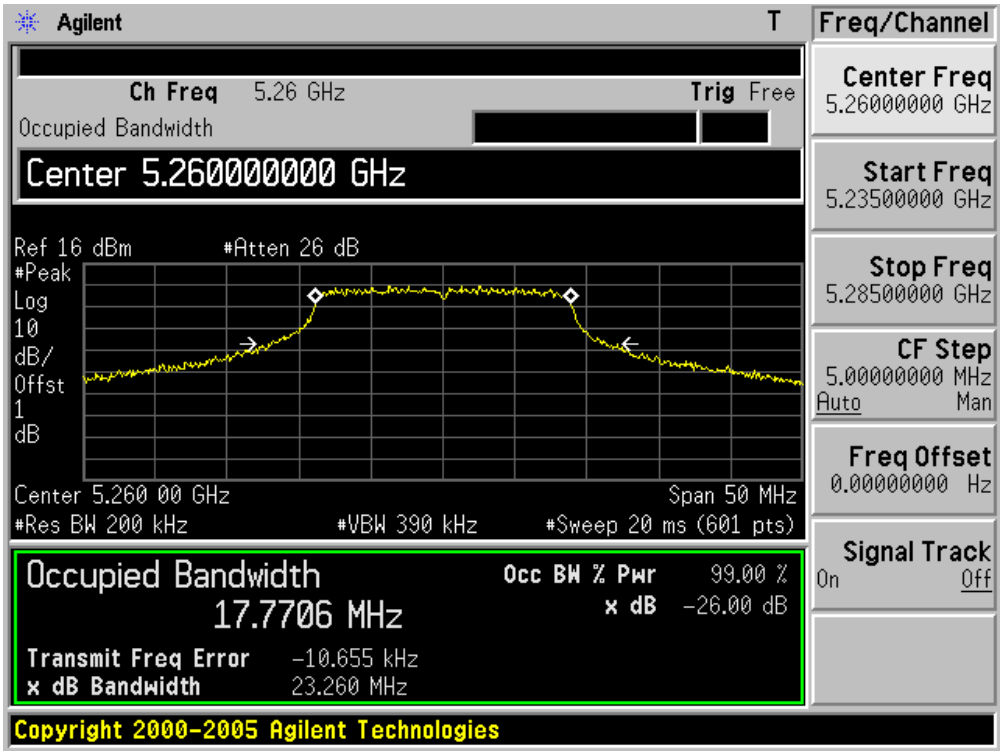
Channel 40 (5200MHz)



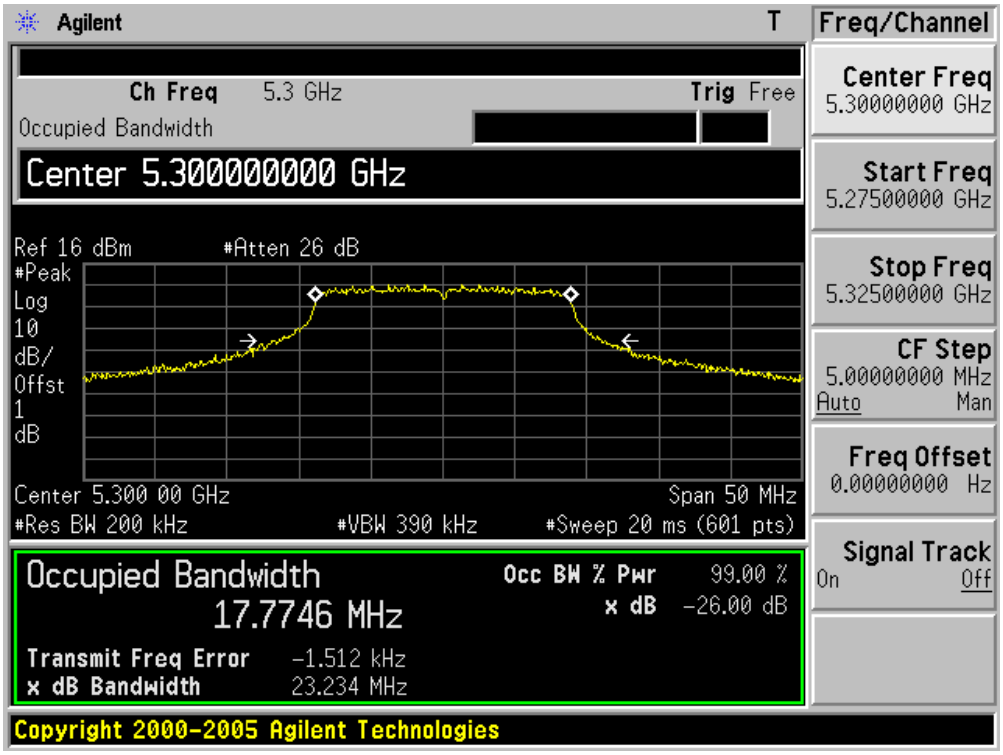
Channel 48 (5240MHz)



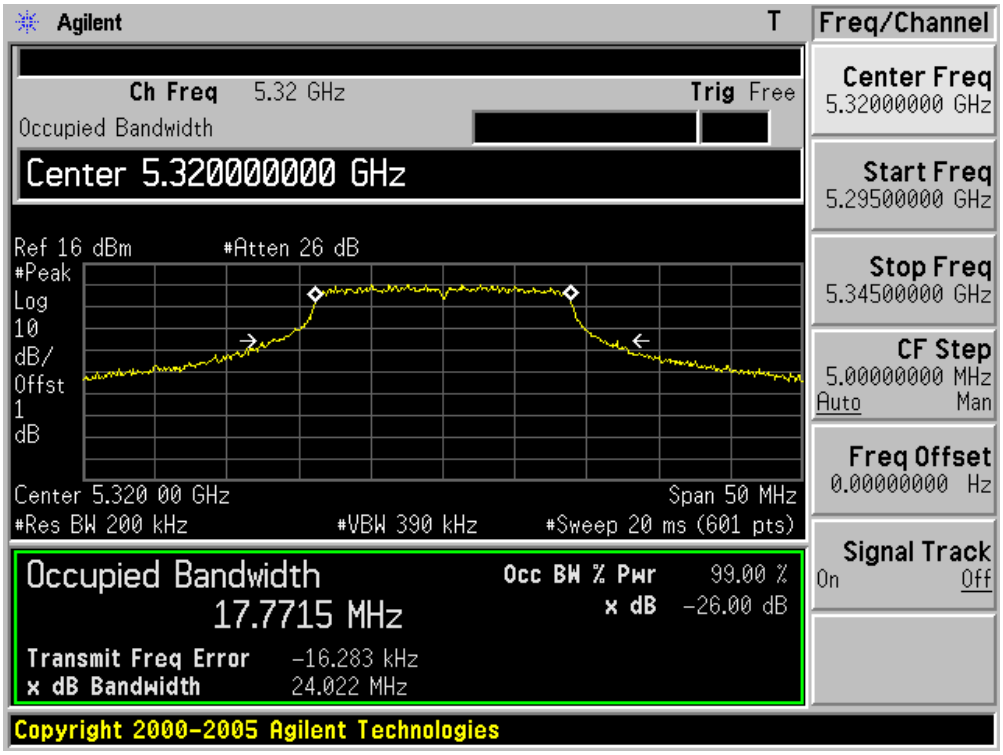
Channel 48 (5260MHz)



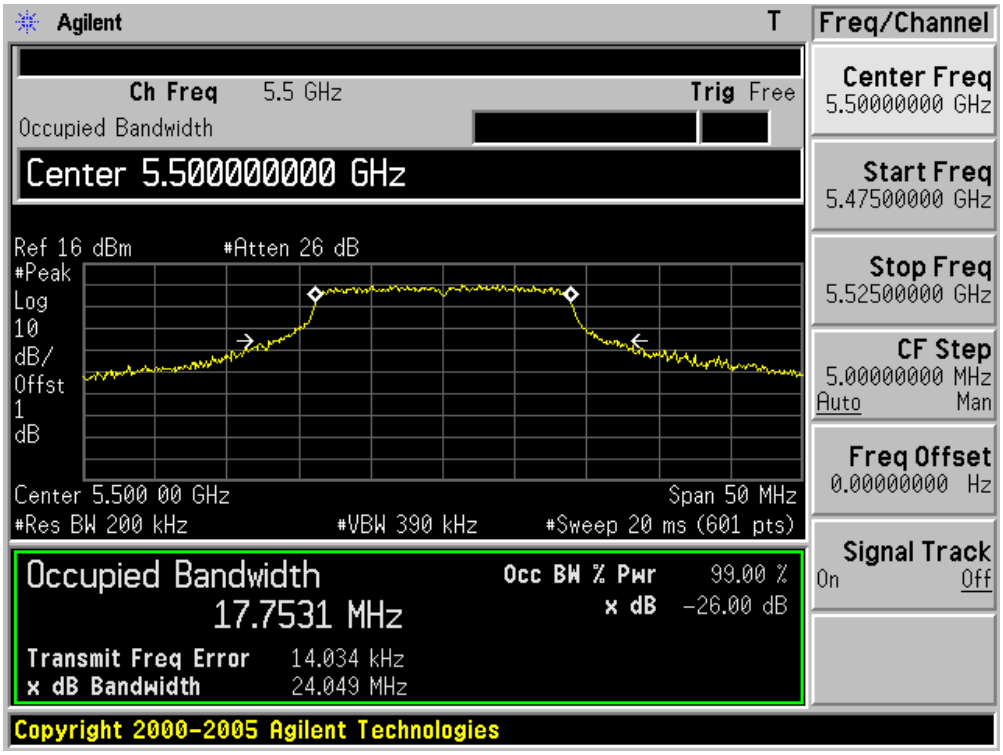
Channel 60 (5300MHz)



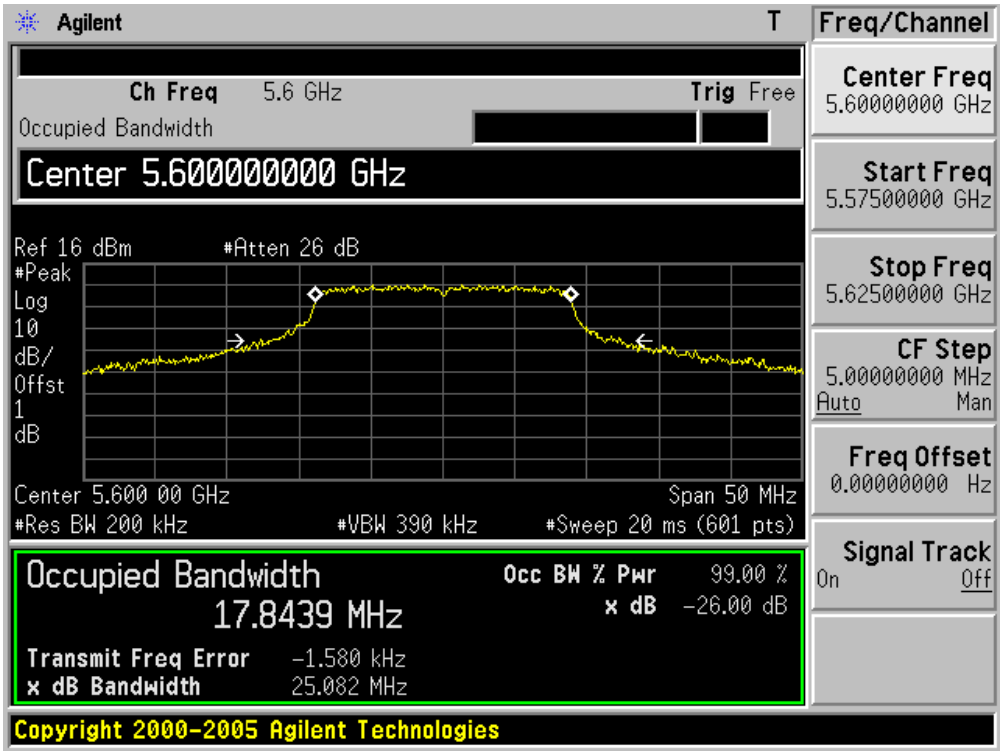
Channel 64 (5320MHz)



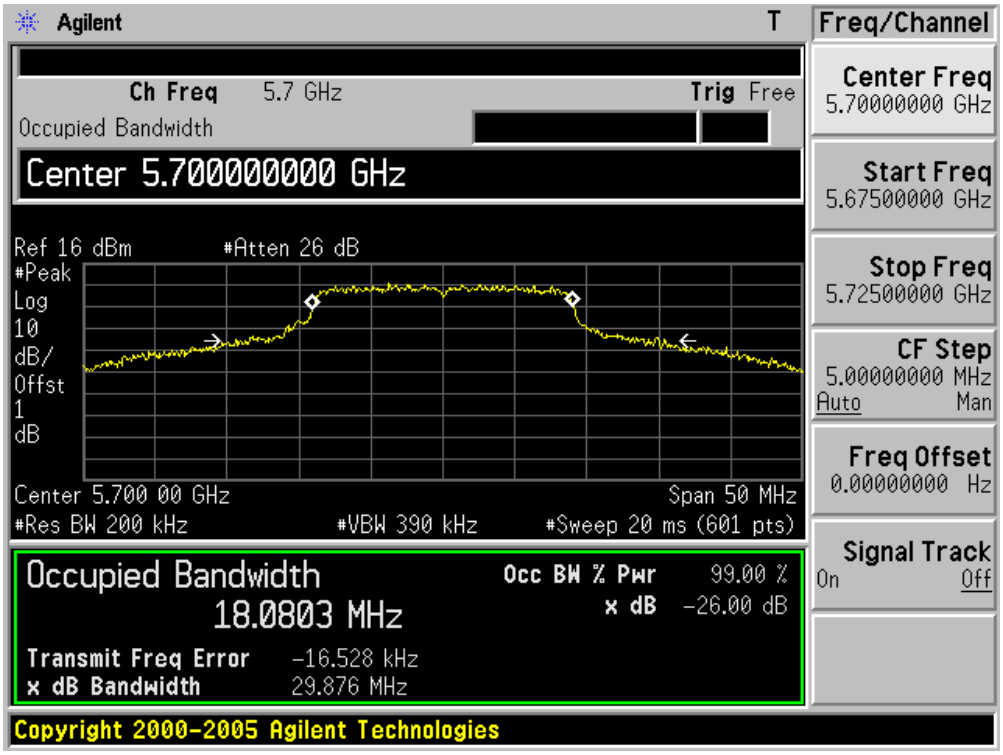
Channel 100 (5500MHz)



Channel 120 (5600MHz)



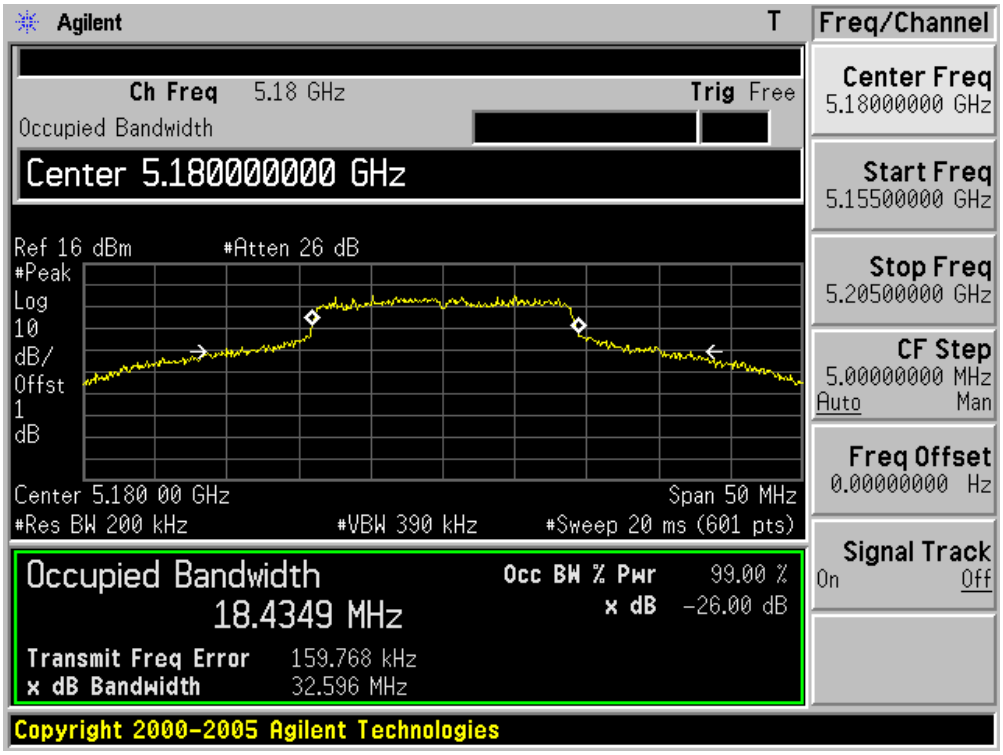
Channel 140 (5700MHz)



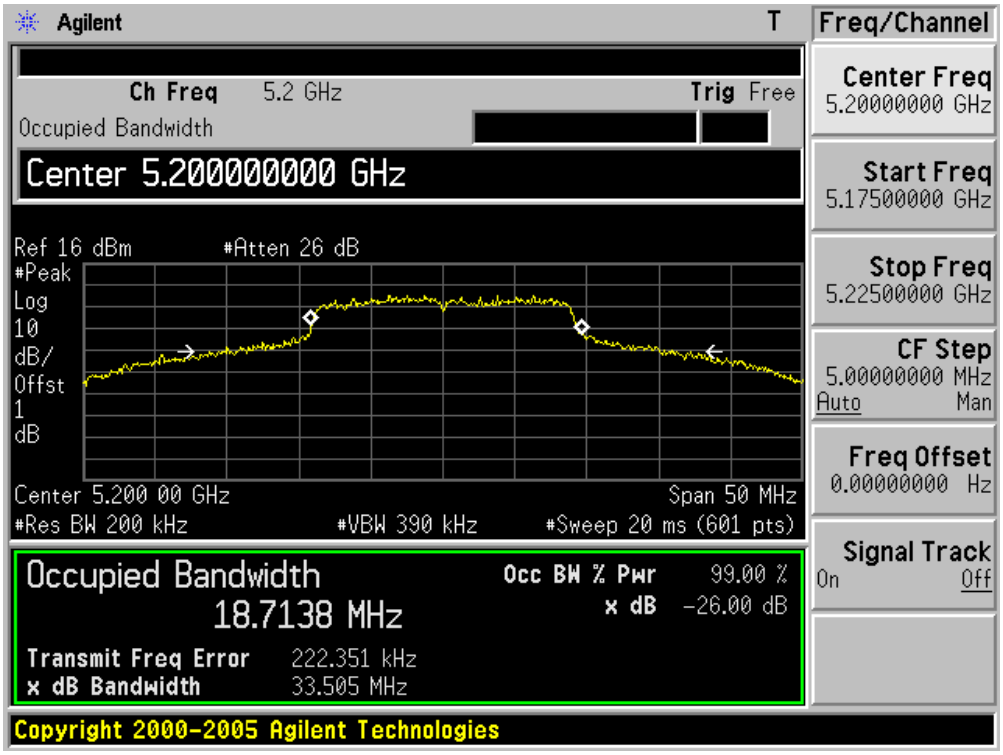
Product	:	AirPcap Nx
Test Item	:	26dB Occupied Bandwidth
Test Site	:	TR-8
Test Mode	:	Mode 2: Transmit by 802.11n (20MHz) (Chain 001)

Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	Limit (MHz)
36	5180	32.60	N/A
40	5200	33.51	N/A
48	5240	30.25	N/A
52	5260	24.56	N/A
60	5300	25.37	N/A
64	5320	26.21	N/A
100	5500	22.52	N/A
120	5600	24.11	N/A
140	5700	25.48	N/A

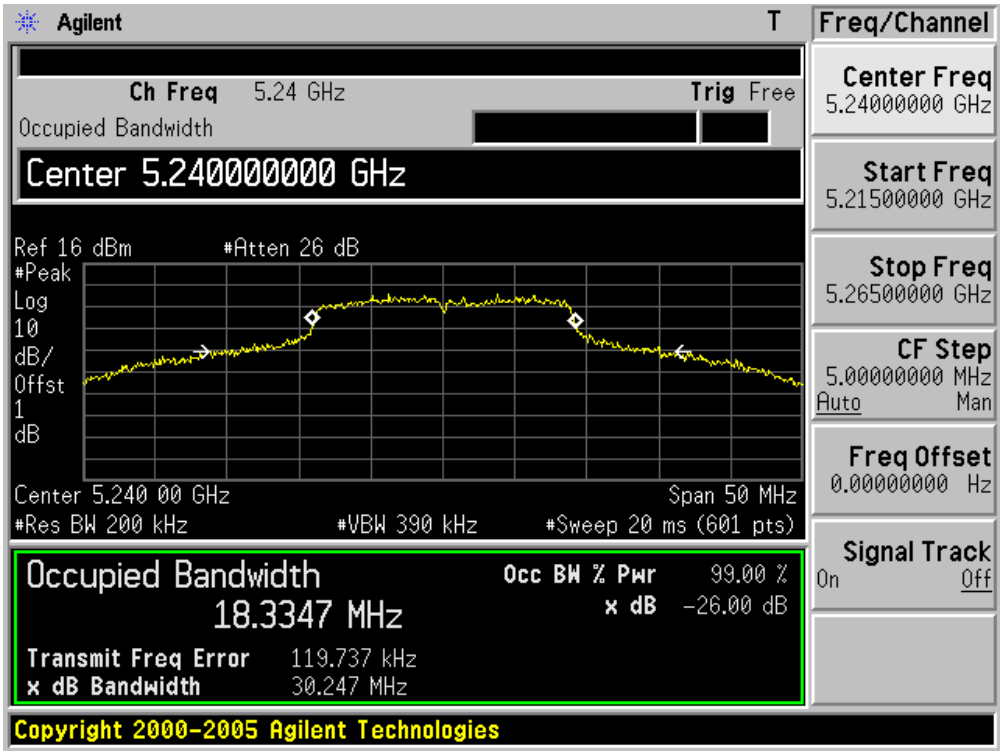
Channel 36 (5180MHz)



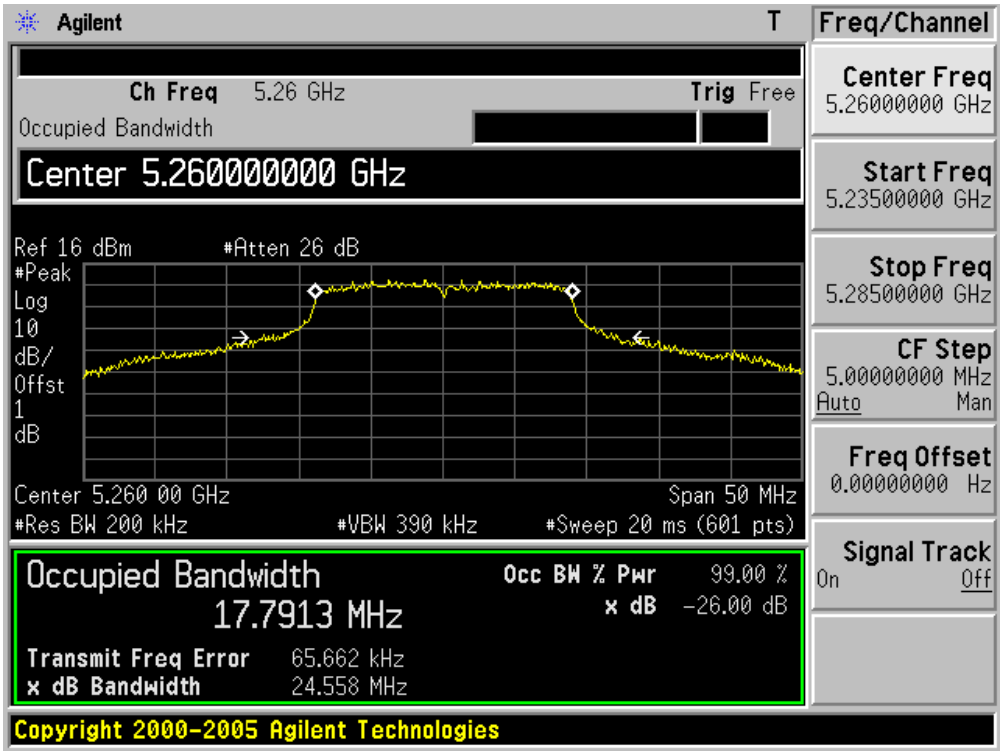
Channel 40 (5200MHz)



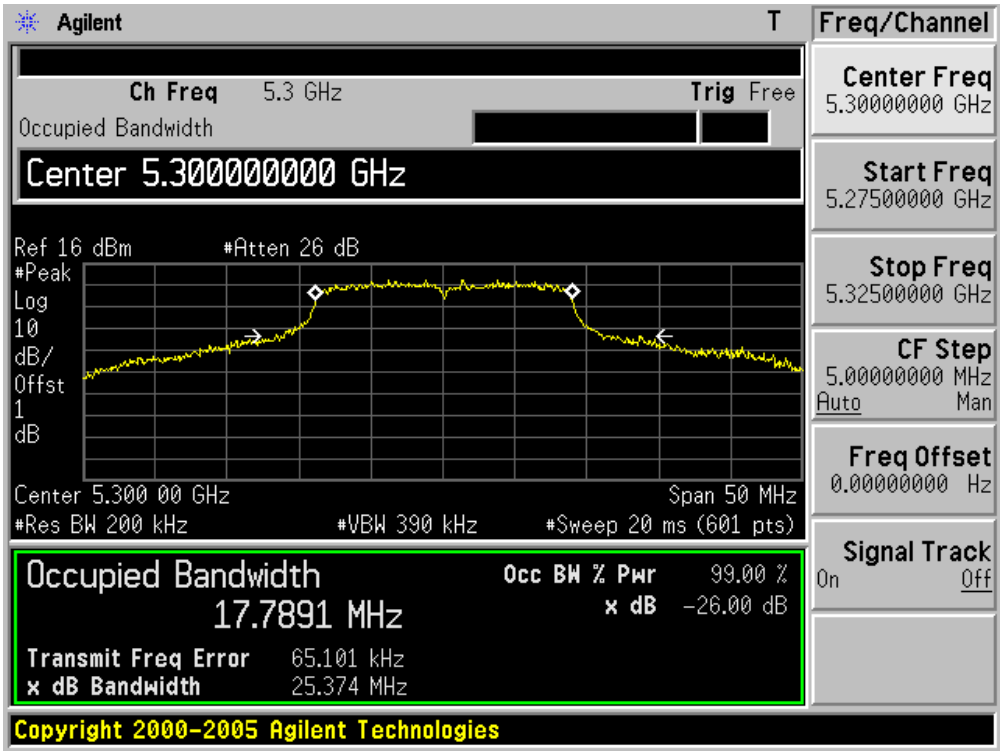
Channel 48 (5240MHz)



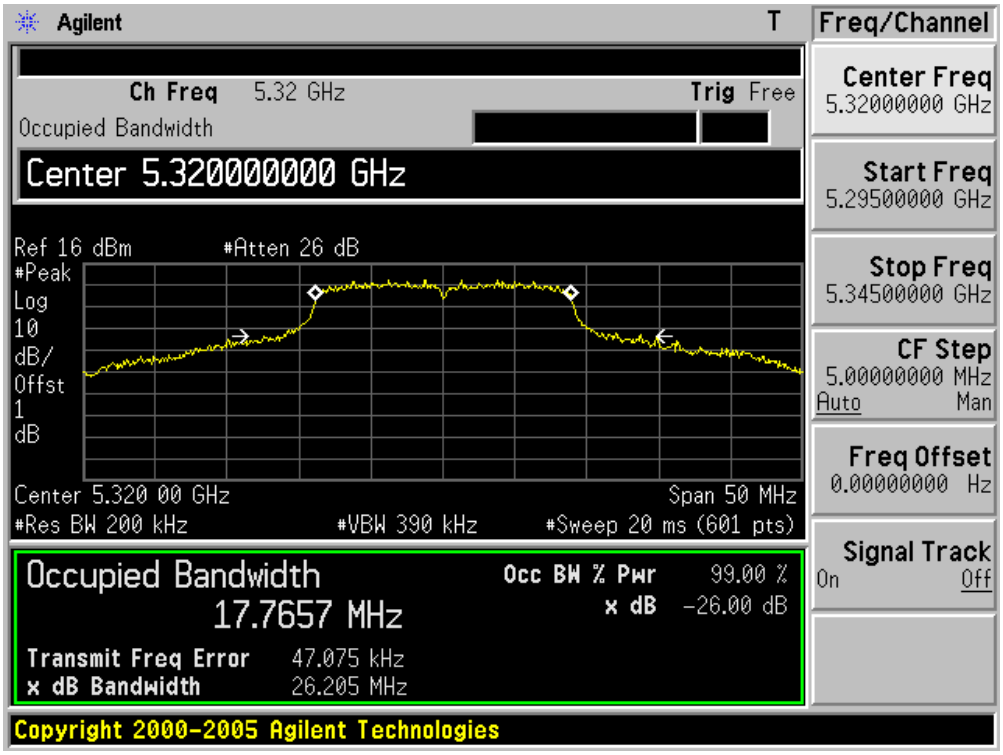
Channel 48 (5260MHz)



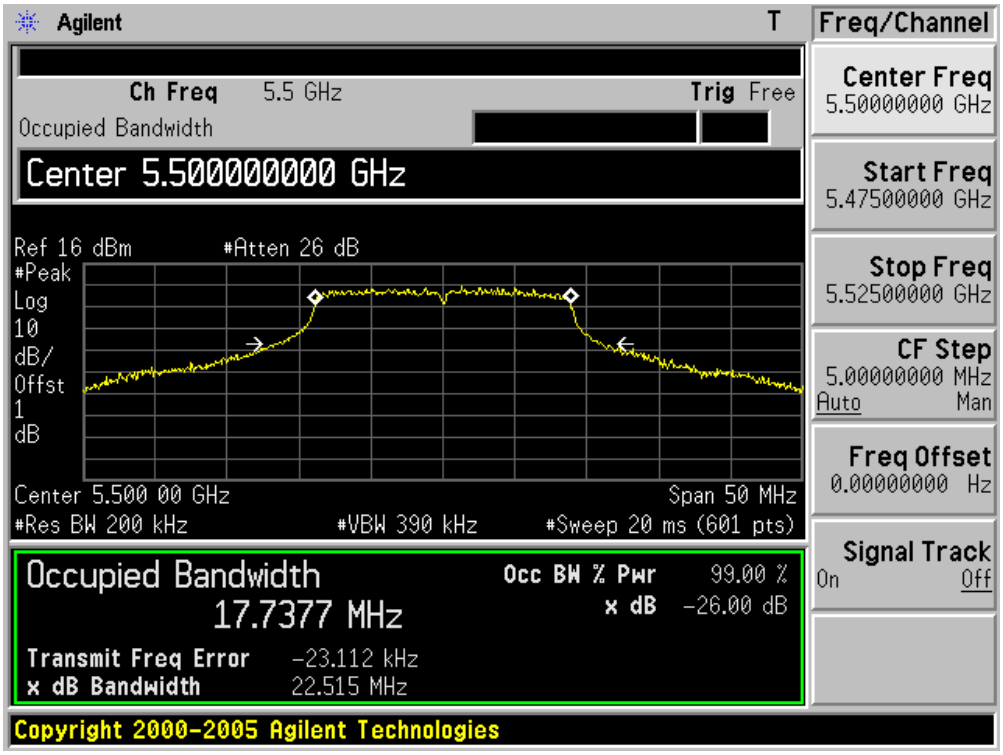
Channel 60 (5300MHz)



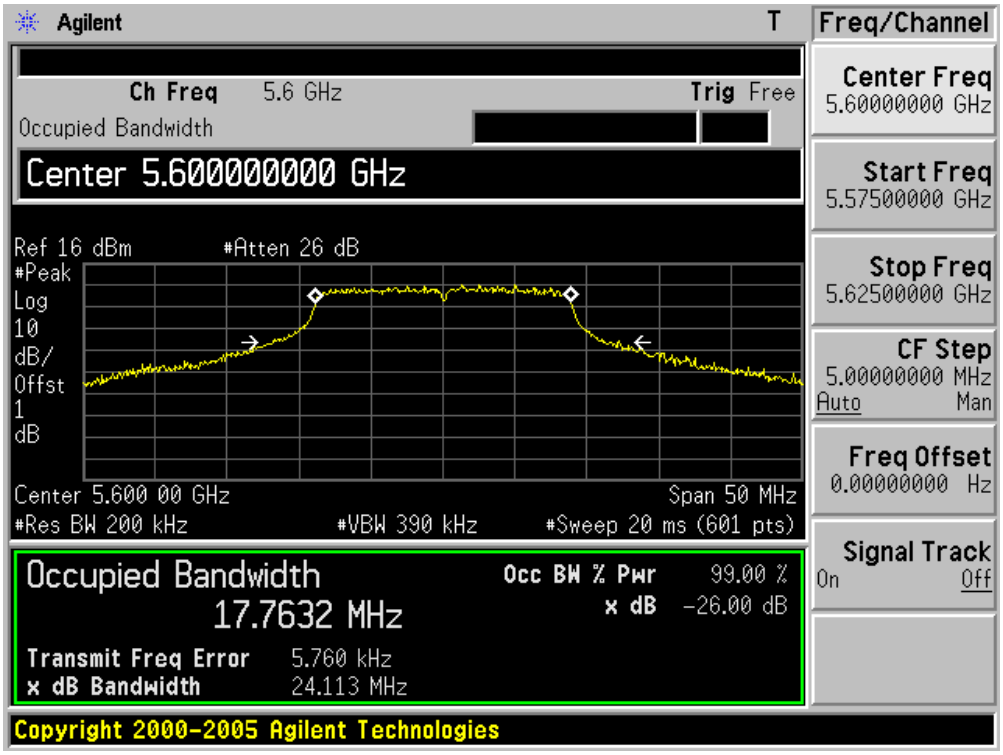
Channel 64 (5320MHz)



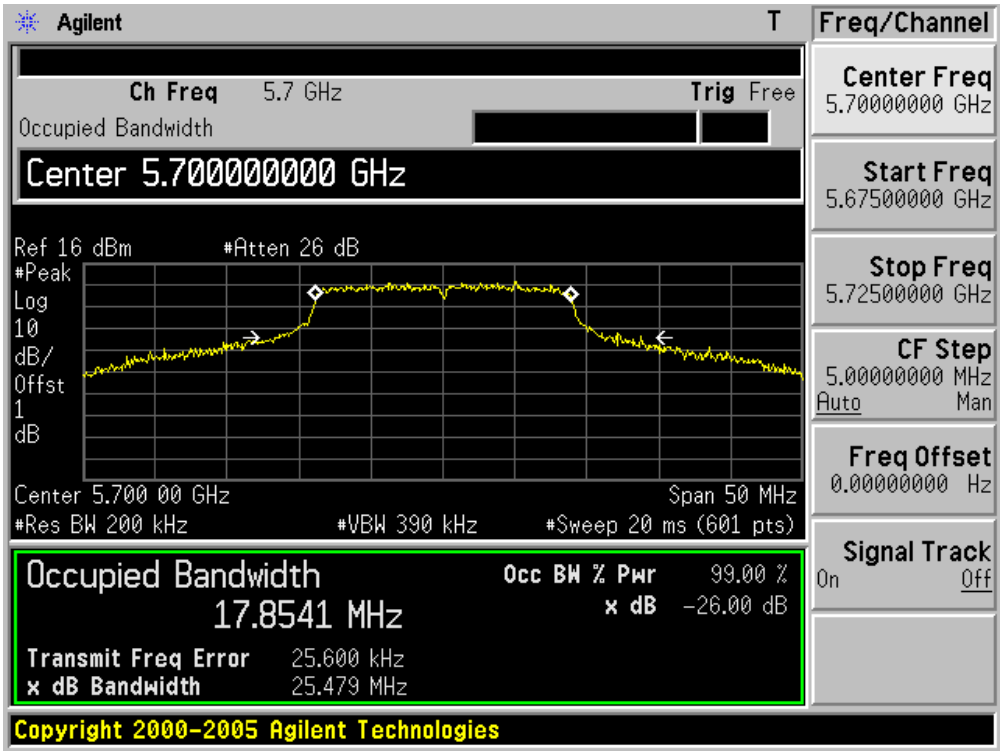
Channel 100 (5500MHz)



Channel 120 (5600MHz)



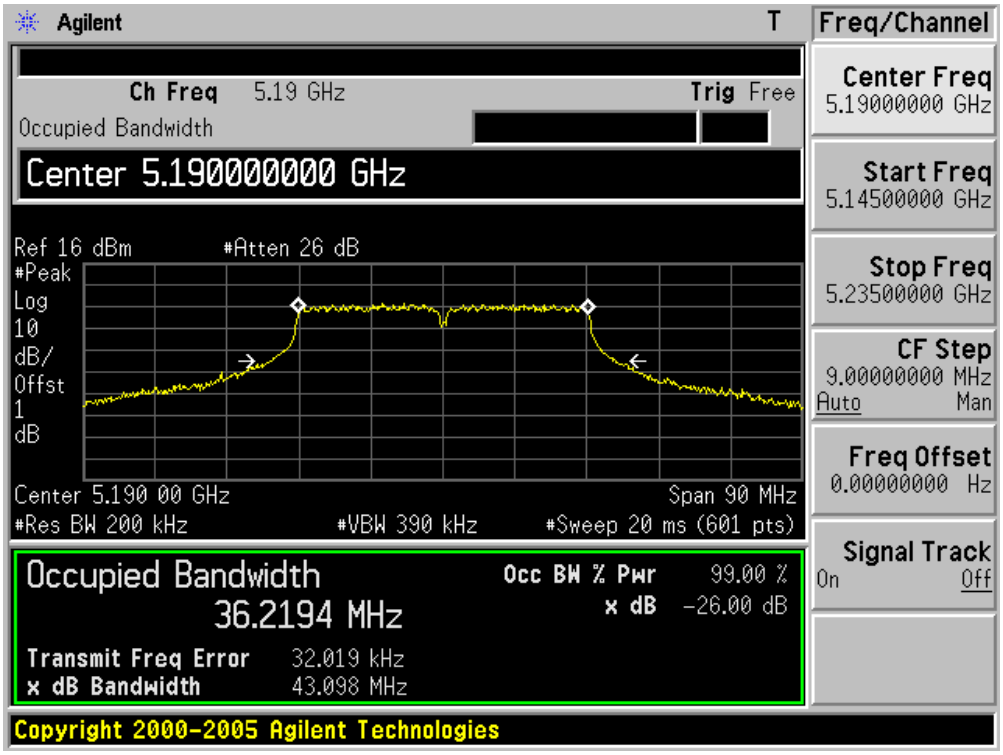
Channel 140 (5700MHz)



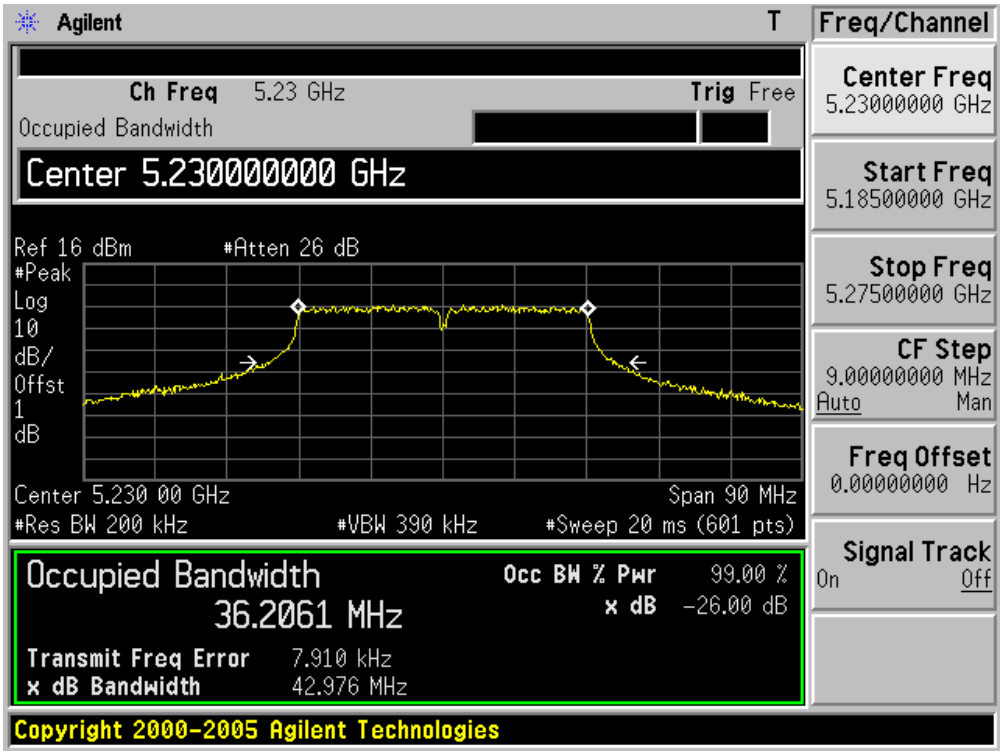
Product	:	AirPcap Nx
Test Item	:	26dB Occupied Bandwidth
Test Site	:	TR-8
Test Mode	:	Mode 3: Transmit by 802.11n (40MHz) (Chain 100)

Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	Limit (MHz)
38	5190	43.10	N/A
46	5230	42.98	N/A
54	5270	43.51	N/A
62	5310	43.15	N/A
102	5510	47.96	N/A
118	5590	45.05	N/A
134	5670	45.65	N/A

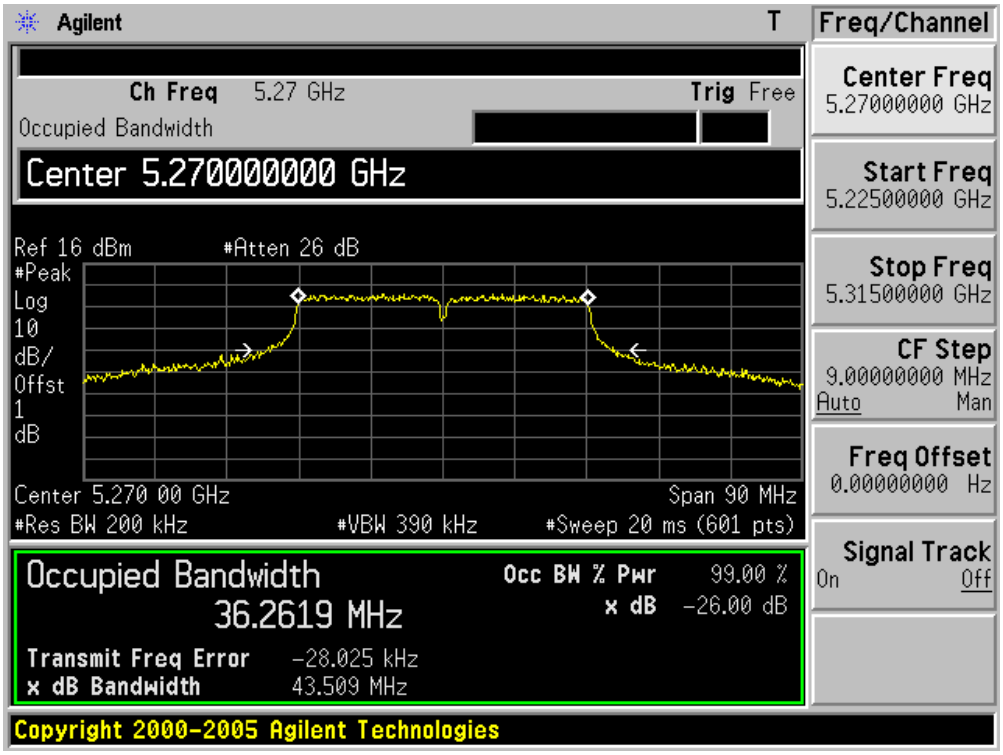
Channel 38 (5190MHz)



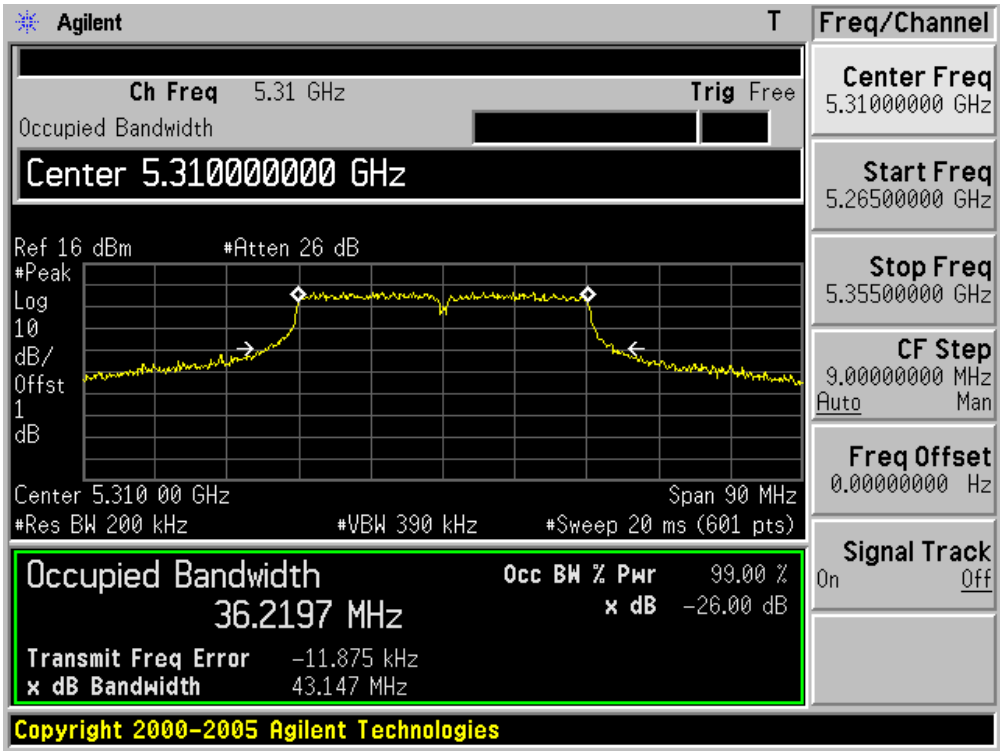
Channel 46 (5230MHz)



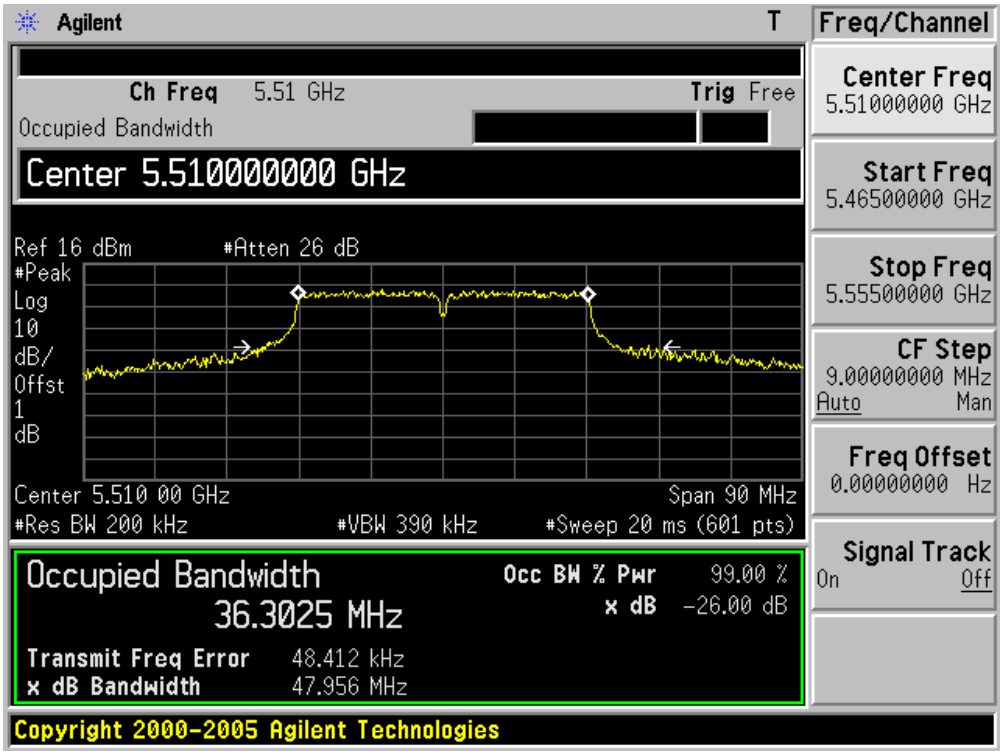
Channel 54 (5270MHz)



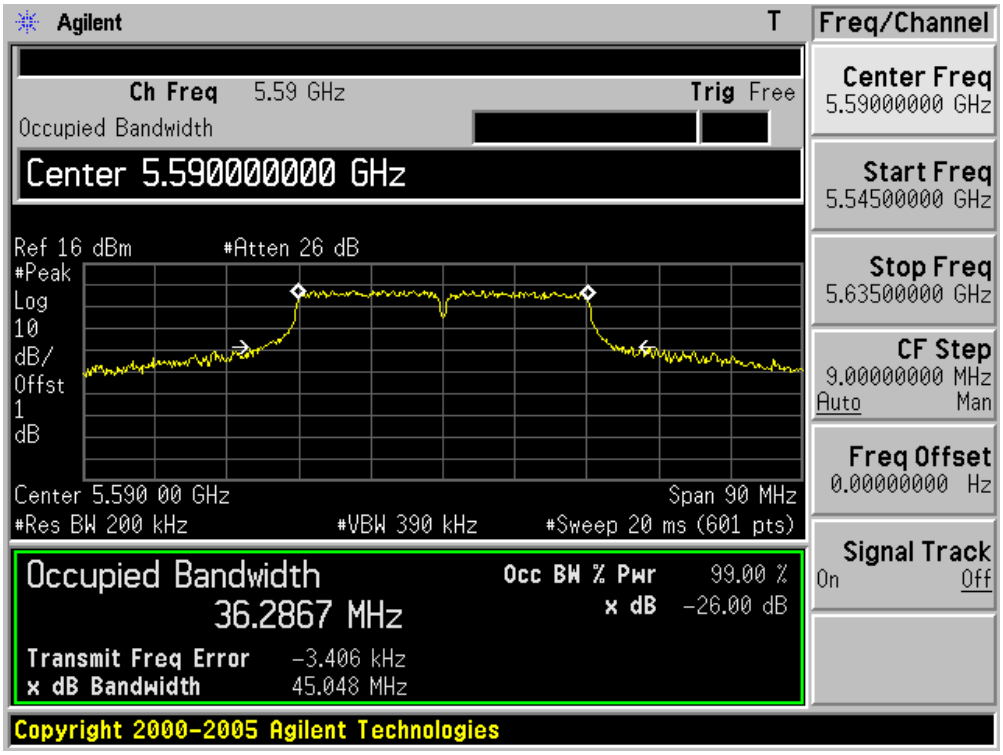
Channel 62 (5310MHz)



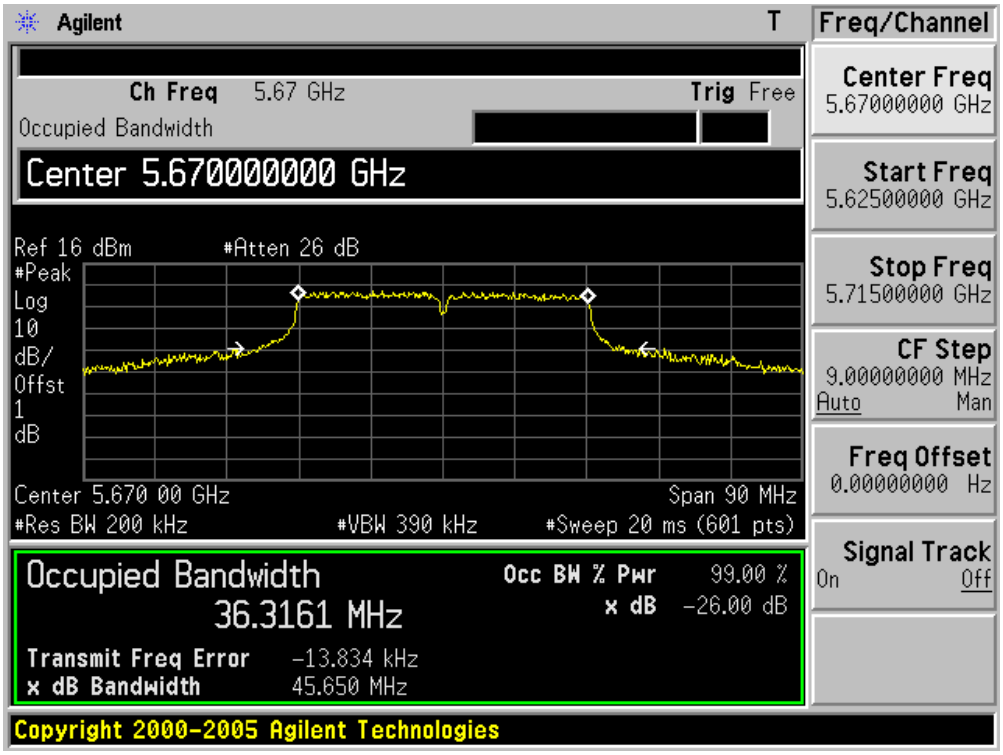
Channel 102 (5510MHz)



Channel 118 (5590MHz)



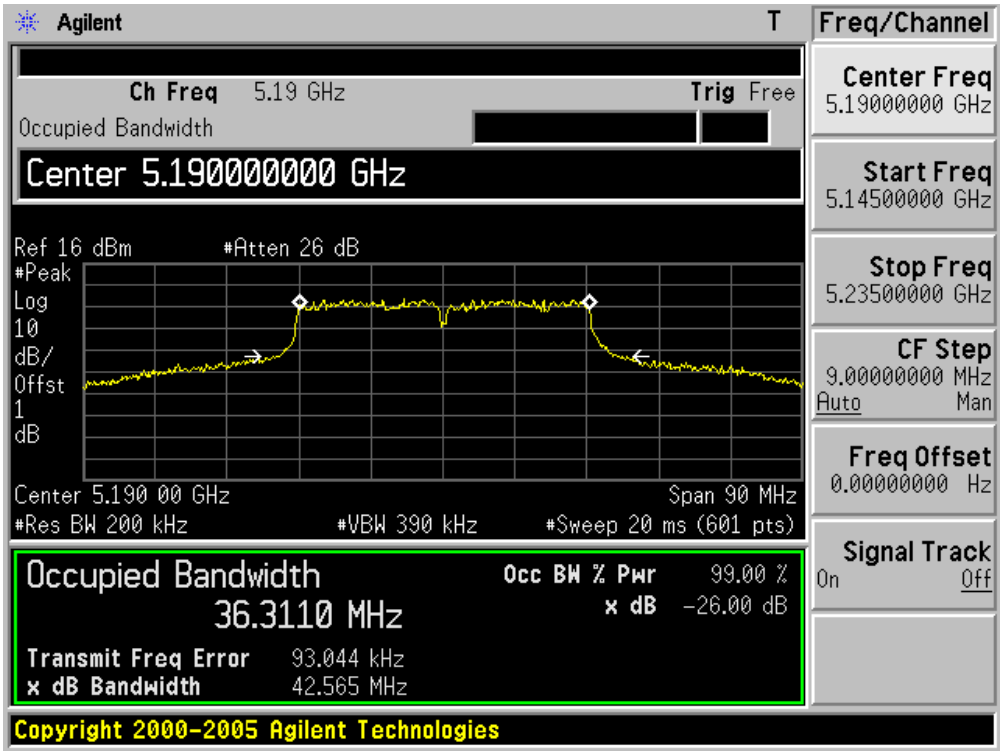
Channel 134 (5670MHz)



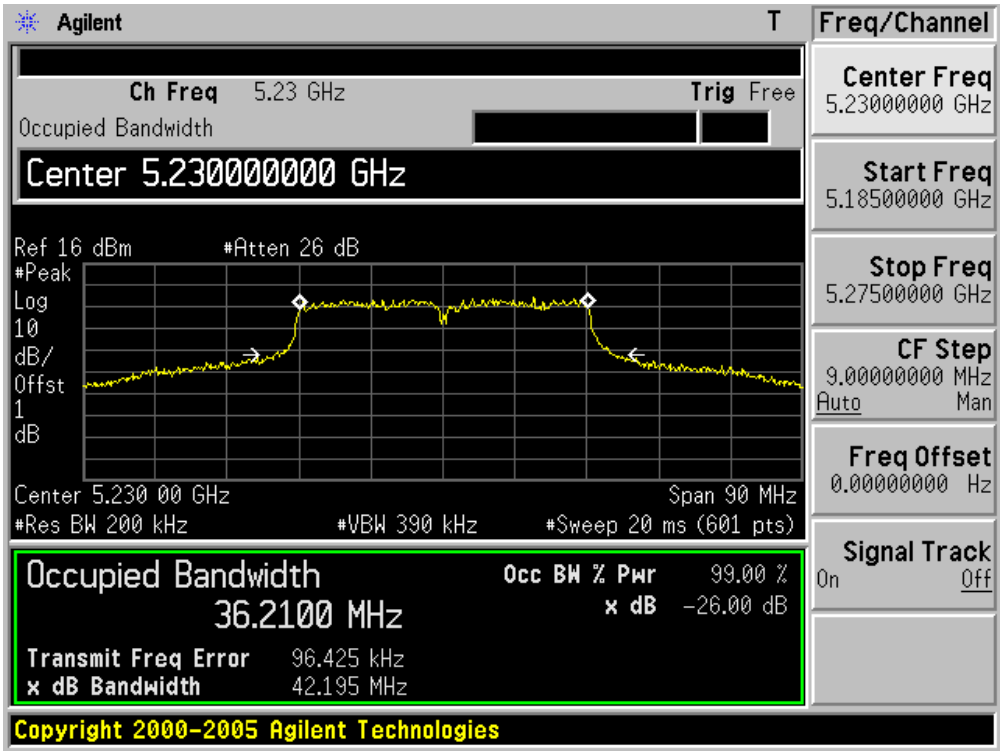
Product	:	AirPcap Nx
Test Item	:	26dB Occupied Bandwidth
Test Site	:	TR-8
Test Mode	:	Mode 3: Transmit by 802.11n (40MHz) (Chain 001)

Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	Limit (MHz)
38	5190	42.57	N/A
46	5230	42.20	N/A
54	5270	46.62	N/A
62	5310	49.41	N/A
102	5510	42.92	N/A
118	5590	48.44	N/A
134	5670	43.43	N/A

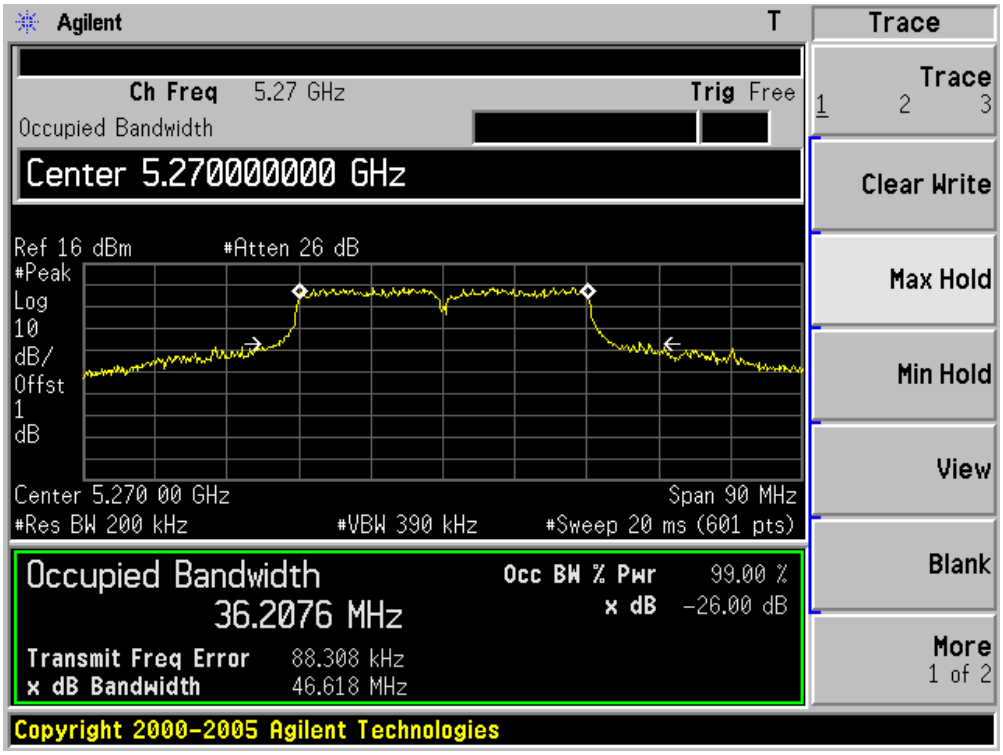
Channel 38 (5190MHz)



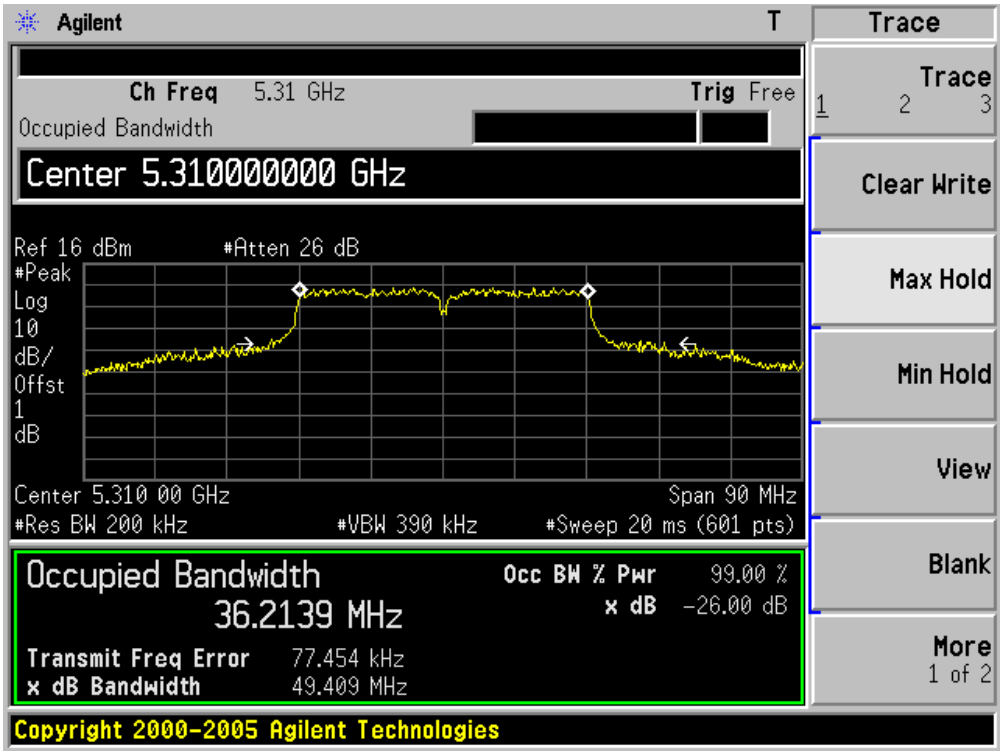
Channel 46 (5230MHz)



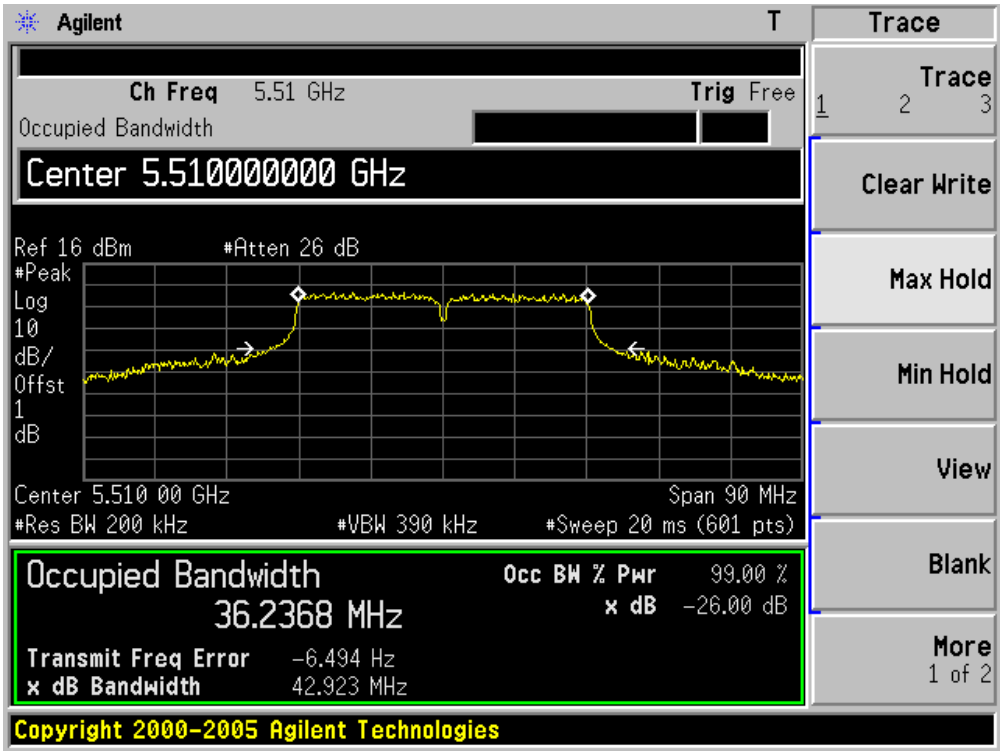
Channel 54 (5270MHz)



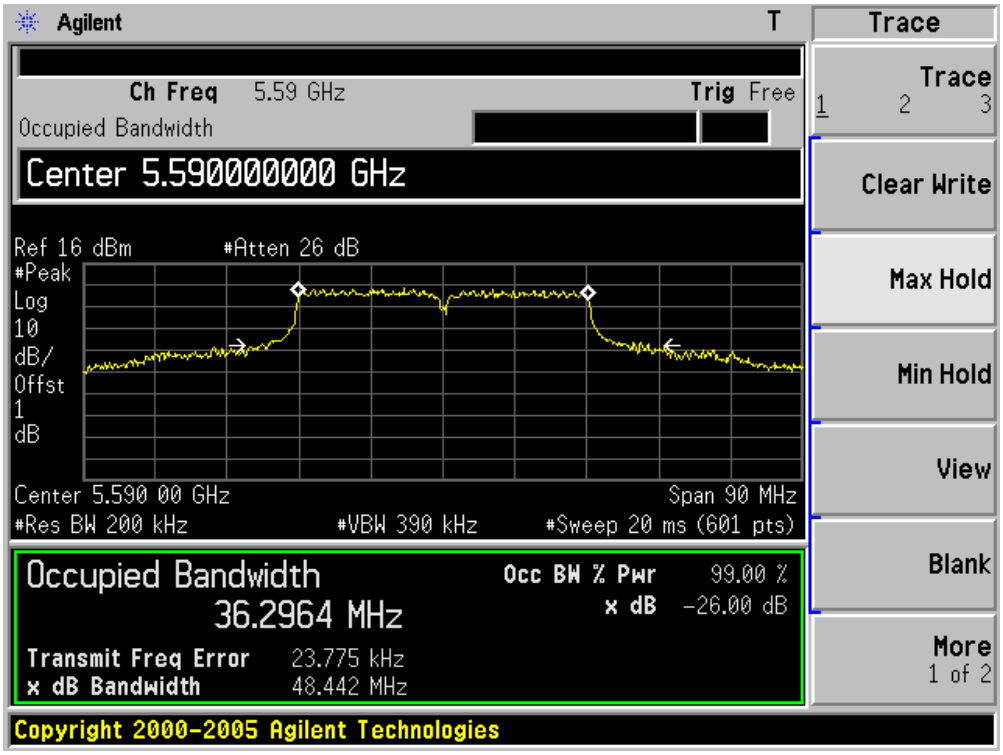
Channel 62 (5310MHz)



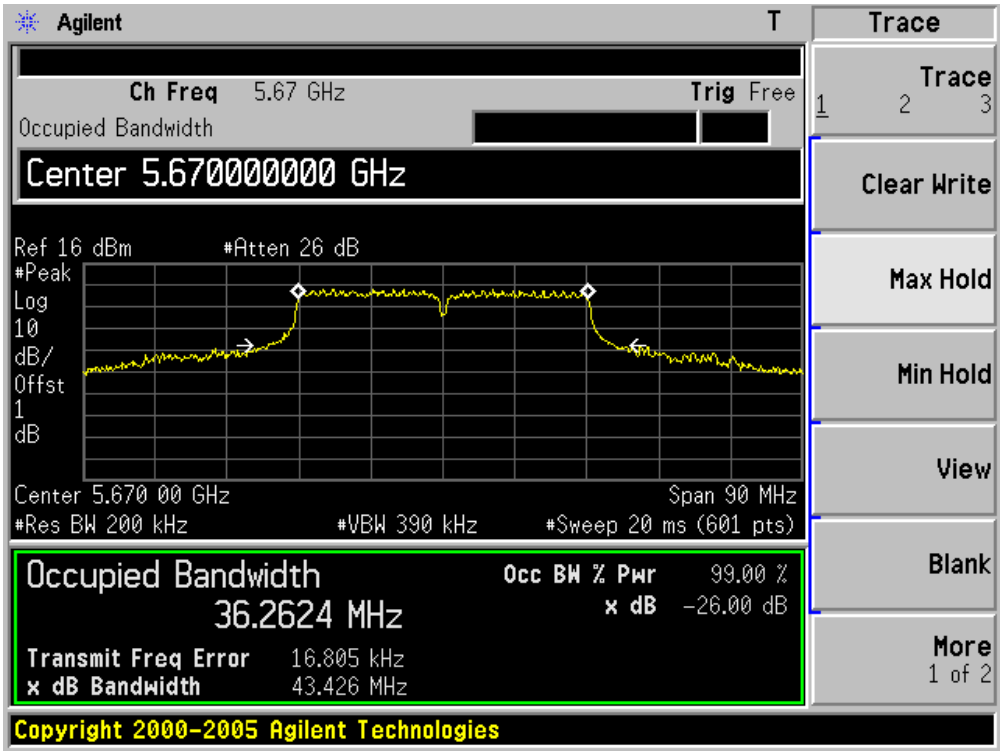
Channel 102 (5510MHz)



Channel 118 (5590MHz)



Channel 134 (5670MHz)



7. Power Output

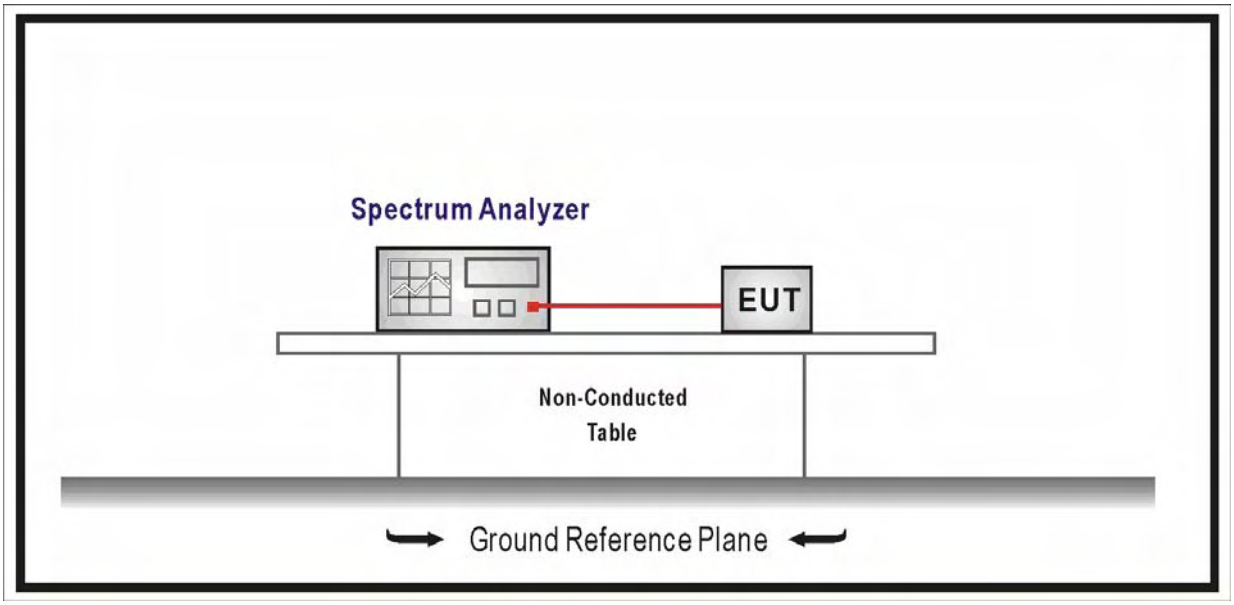
7.1. Test Equipment

Power Output / TR-8

Instrument	Manufacturer	Type No.	Serial No.	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2010.04.30
Temperature/Humidity Meter	zhicheng	ZC1-2	TR8-TH	2010.05.04

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

7.2. Test Setup



7.3. 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.

7.4. Test Procedure

The EUT was tested according to ANSI C63.10: 2009 for compliance to FCC 47CFR 15.407 requirements.

Use the wideband power meter to test peak power and record the result.

7.5. Uncertainty

The measurement uncertainty is defined as ± 1.27 dB

7.6. Test Result

Power output test was verified over all data rates of each mode shown as below, and then choose the maximum power output (blue marker) for final test of each channel.

MCS Index for 802.11n	Spatial Streams	Data Rate (Mbps)				
		802.11a	20MHz Bandwidth		40MHz Bandwidth	
			800ns GI	400ns GI	800ns GI	400ns GI
0	1	6	6.5	7.2	13.5	15.0
1	1	9	13.0	14.4	27.0	30.0
2	1	12	19.5	21.7	40.5	45.0
3	1	18	26.0	28.9	54.0	60.0
4	1	24	39.0	43.3	81.0	90.0
5	1	36	52.0	57.8	108.0	120.0
6	1	48	58.5	65.0	121.5	135.0
7	1	54	65.0	72.2	135.0	150.0
8	2	---	13.0	14.4	27.0	30.0
9	2	---	26.0	28.9	54.0	60.0
10	2	---	39.0	43.3	81.0	90.0
11	2	---	52.0	57.8	108.0	120.0
12	2	---	78.0	86.7	162.0	180.0
13	2	---	104.0	115.6	216.0	240.0
14	2	---	117.0	130.0	243.0	270.0
15	2	---	130.0	144.0	270.0	300.0

Power output at various data rates:

Test Mode	Frequency (MHz)	Channel	Data Rate	Peak Power (dBm)
802.11a (chain 100)	5600	120	6	22.32
			9	22.10
			12	21.86
			18	21.75
			24	21.54
			36	21.28
			48	21.02
			54	20.79
802.11n (20M) (chain 100)	5600	120	6.5	22.19
			13.0	21.78
			19.5	21.63
			26.0	21.46
			39.0	21.33
			52.0	21.15
			58.5	20.89
			65.0	20.75
802.11n (40M) (chain 100)	5590	118	13.5	22.08
			27.0	22.01
			40.5	21.82
			54.0	21.67
			81.0	21.29
			108.0	20.97
			121.5	20.66
			135.0	20.48

Product	:	AirPcap Nx
Test Item	:	Power Output
Test Site	:	TR-8
Test Mode	:	Mode 1: Transmit by 802.11a (Chain 100)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)		Total Power (dBm)	Limit (dBm)	Result
		Chain 100	Chain 001			
36	5180	16.35	N/A	16.35	17.00	Pass
40	5200	16.46	N/A	16.46	17.00	Pass
48	5240	16.36	N/A	16.36	17.00	Pass
52	5260	21.44	N/A	21.44	24.00	Pass
60	5300	21.10	N/A	21.10	24.00	Pass
64	5320	21.90	N/A	21.90	24.00	Pass
100	5500	21.63	N/A	21.63	24.00	Pass
120	5600	22.32	N/A	22.32	24.00	Pass
140	5700	21.94	N/A	21.94	24.00	Pass

Product	:	AirPcap Nx
Test Item	:	Power Output
Test Site	:	TR-8
Test Mode	:	Mode 2: Transmit by 802.11n(20MHz) (Chain 100)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)		Total Power (dBm)	Limit (dBm)	Result
		Chain 100	Chain 001			
36	5180	16.56	N/A	16.56	17.00	Pass
40	5200	16.65	N/A	16.65	17.00	Pass
48	5240	16.48	N/A	16.48	17.00	Pass
52	5260	21.66	N/A	21.66	24.00	Pass
60	5300	22.09	N/A	22.09	24.00	Pass
64	5320	22.17	N/A	22.17	24.00	Pass
100	5500	22.10	N/A	22.10	24.00	Pass
120	5600	22.19	N/A	22.19	24.00	Pass
140	5700	22.20	N/A	22.20	24.00	Pass

Product	:	AirPcap Nx
Test Item	:	Power Output
Test Site	:	TR-8
Test Mode	:	Mode 3: Transmit by 802.11n(40MHz) (Chain 100)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)		Total Power (dBm)	Limit (dBm)	Result
		Chain 100	Chain 001			
38	5190	16.40	N/A	16.40	17.00	Pass
46	5230	16.42	N/A	16.42	17.00	Pass
54	5270	20.95	N/A	20.95	24.00	Pass
62	5310	21.47	N/A	21.47	24.00	Pass
102	5510	22.08	N/A	22.08	24.00	Pass
118	5590	22.22	N/A	22.22	24.00	Pass
134	5670	21.90	N/A	21.90	24.00	Pass

Product	:	AirPcap Nx
Test Item	:	Power Output
Test Site	:	TR-8
Test Mode	:	Mode 1: Transmit by 802.11a (Chain 001)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)		Total Power (dBm)	Limit (dBm)	Result
		Chain 100	Chain 001			
36	5180	N/A	16.72	16.72	17.00	Pass
40	5200	N/A	16.77	16.77	17.00	Pass
48	5240	N/A	16.41	16.41	17.00	Pass
52	5260	N/A	21.74	21.74	24.00	Pass
60	5300	N/A	22.16	22.16	24.00	Pass
64	5320	N/A	22.25	22.25	24.00	Pass
100	5500	N/A	21.70	21.70	24.00	Pass
120	5600	N/A	23.42	23.42	24.00	Pass
140	5700	N/A	23.38	23.38	24.00	Pass

Product	:	AirPcap Nx
Test Item	:	Power Output
Test Site	:	TR-8
Test Mode	:	Mode 2: Transmit by 802.11n(20MHz) (Chain 001)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)		Total Power (dBm)	Limit (dBm)	Result
		Chain 100	Chain 001			
36	5180	N/A	16.65	16.65	17.00	Pass
40	5200	N/A	16.66	16.66	17.00	Pass
48	5240	N/A	16.51	16.51	17.00	Pass
52	5260	N/A	22.02	22.02	24.00	Pass
60	5300	N/A	22.40	22.40	24.00	Pass
64	5320	N/A	22.30	22.30	24.00	Pass
100	5500	N/A	22.15	22.15	24.00	Pass
120	5600	N/A	22.49	22.49	24.00	Pass
140	5700	N/A	22.95	22.95	24.00	Pass

Product	:	AirPcap Nx
Test Item	:	Power Output
Test Site	:	TR-8
Test Mode	:	Mode 3: Transmit by 802.11n(40MHz) (Chain 001)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)		Total Power (dBm)	Limit (dBm)	Result
		Chain 100	Chain 001			
38	5190	N/A	16.48	16.48	17.00	Pass
46	5230	N/A	16.59	16.59	17.00	Pass
54	5270	N/A	21.20	21.20	24.00	Pass
62	5310	N/A	22.21	22.21	24.00	Pass
102	5510	N/A	22.19	22.19	24.00	Pass
118	5590	N/A	22.28	22.28	24.00	Pass
134	5670	N/A	23.02	23.02	24.00	Pass

Product	:	AirPcap Nx
Test Item	:	Power Output
Test Site	:	TR-8
Test Mode	:	Mode 2: Transmit by 802.11n(20MHz) (Chain 101)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)		Total Power (dBm)	Limit (dBm)	Result
		Chain 100	Chain 001			
36	5180	12.90	13.42	16.18	17.00	Pass
40	5200	12.51	13.01	15.78	17.00	Pass
48	5240	12.96	13.45	16.22	17.00	Pass
52	5260	18.16	18.88	21.55	24.00	Pass
60	5300	18.48	19.16	21.84	24.00	Pass
64	5320	18.59	18.85	21.73	24.00	Pass
100	5500	19.55	18.62	22.12	24.00	Pass
120	5600	19.14	19.18	22.17	24.00	Pass
140	5700	18.45	20.23	22.44	24.00	Pass

Product	:	AirPcap Nx
Test Item	:	Power Output
Test Site	:	TR-8
Test Mode	:	Mode 3: Transmit by 802.11n(40MHz) (Chain 101)

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)		Total Power (dBm)	Limit (dBm)	Result
		Chain 100	Chain 001			
38	5190	13.07	13.51	16.31	17.00	Pass
46	5230	13.05	13.52	16.30	17.00	Pass
54	5270	18.48	19.75	22.17	24.00	Pass
62	5310	18.80	19.22	22.03	24.00	Pass
102	5510	19.85	18.24	22.13	24.00	Pass
118	5590	19.41	18.73	22.09	24.00	Pass
134	5670	19.22	20.64	23.00	24.00	Pass

8. Peak Power Spectral Density

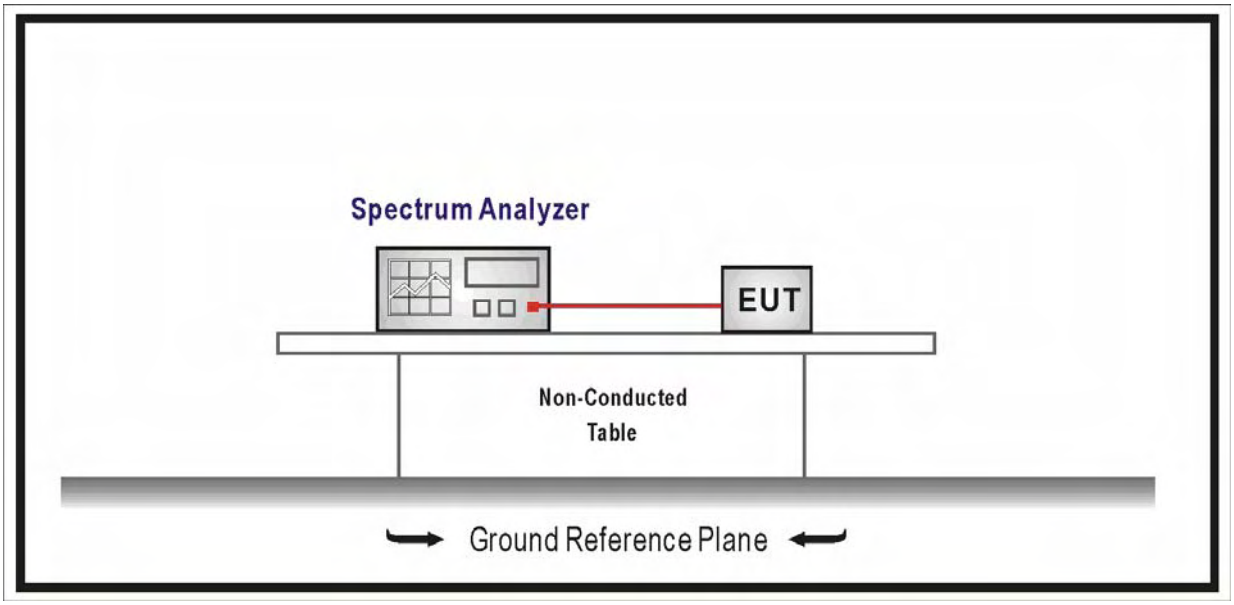
8.1. Test Equipment

Peak Power Spectral Density / TR-8

Instrument	Manufacturer	Type No.	Serial No.	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2010.04.30
Temperature/Humidity Meter	zhicheng	ZC1-2	TR8-TH	2010.05.04

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

8.2. Test Setup



8.3. 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.

8.4. Test Procedure

The EUT was tested according to ANSI C63.10: 2009 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).

8.5. Uncertainty

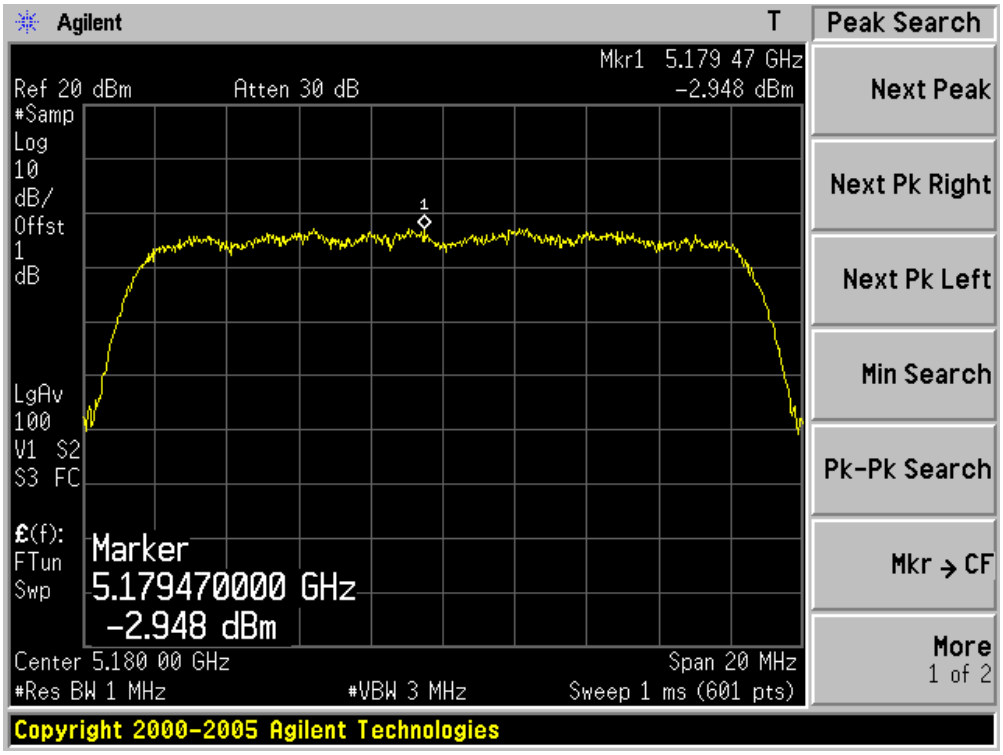
The measurement uncertainty is defined as ± 1.27 dB

8.6. Test Result

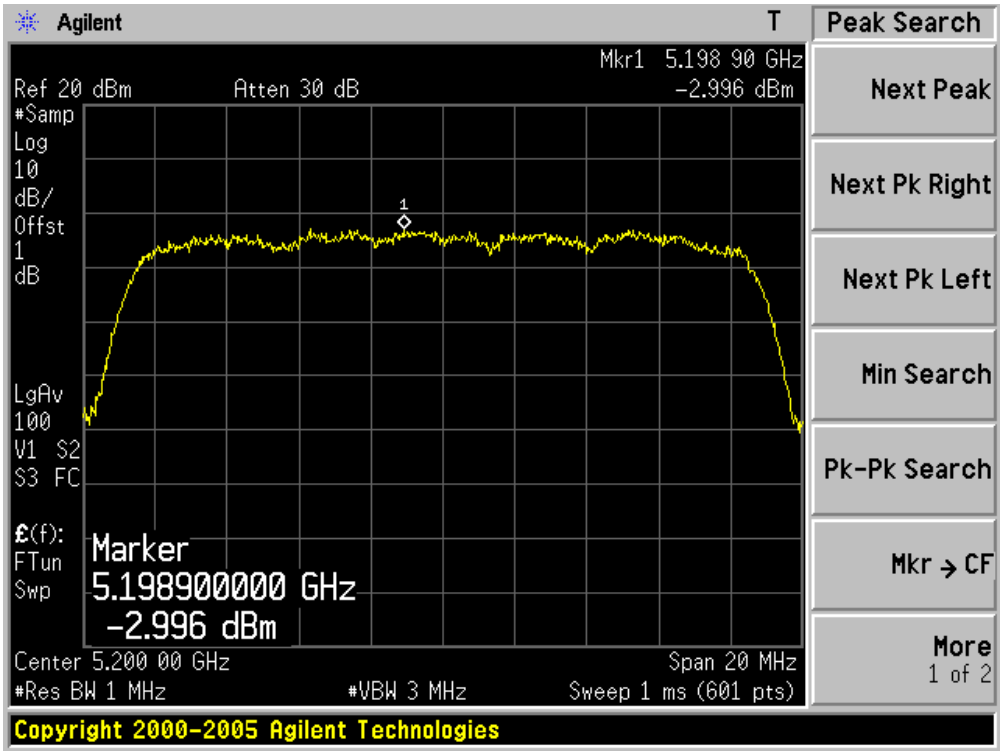
Product	:	AirPcap Nx
Test Item	:	Peak Power Spectral Density
Test Site	:	TR-8
Test Mode	:	Mode 1: Transmit by 802.11a (Chain 100)

Channel No.	Frequency (MHz)	Measurement PPSD (dBm/MHz)		Total PPSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Chain 100	Chain 001			
36	5180	-2.948	N/A	-2.948	4	Pass
40	5200	-2.996	N/A	-2.996	4	Pass
48	5240	-2.523	N/A	-2.523	4	Pass
52	5260	3.251	N/A	3.251	11	Pass
60	5300	3.168	N/A	3.168	11	Pass
64	5320	3.893	N/A	3.893	11	Pass
100	5500	3.787	N/A	3.787	11	Pass
120	5600	3.748	N/A	3.748	11	Pass
140	5700	3.408	N/A	3.408	11	Pass

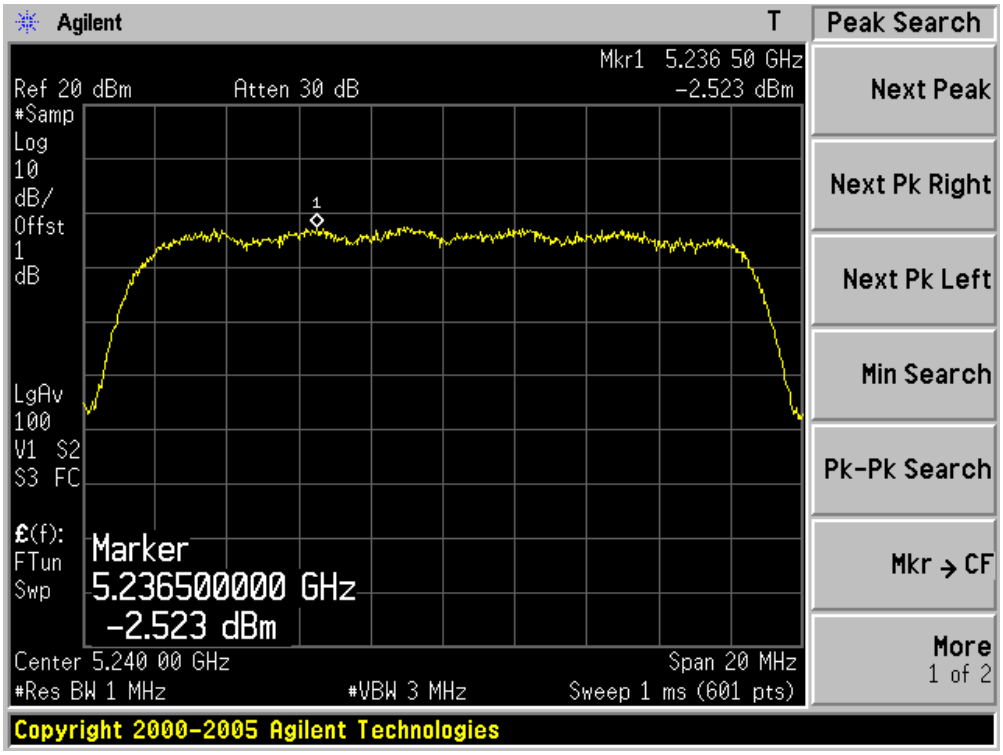
Channel 36 (5180MHz)



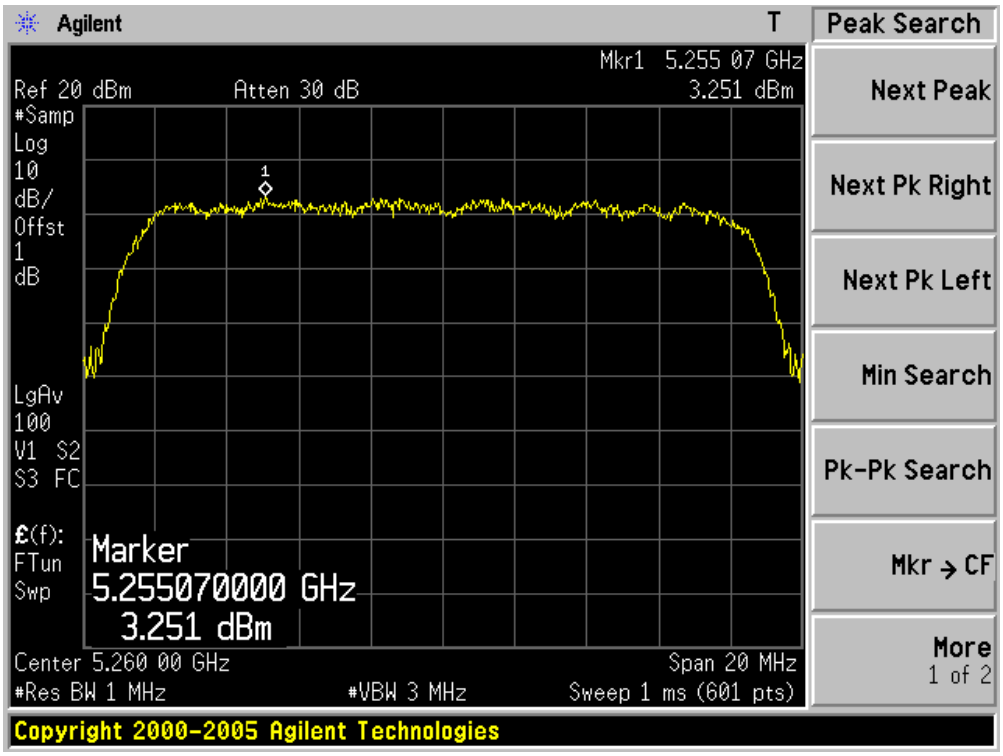
Channel 40 (5200MHz)



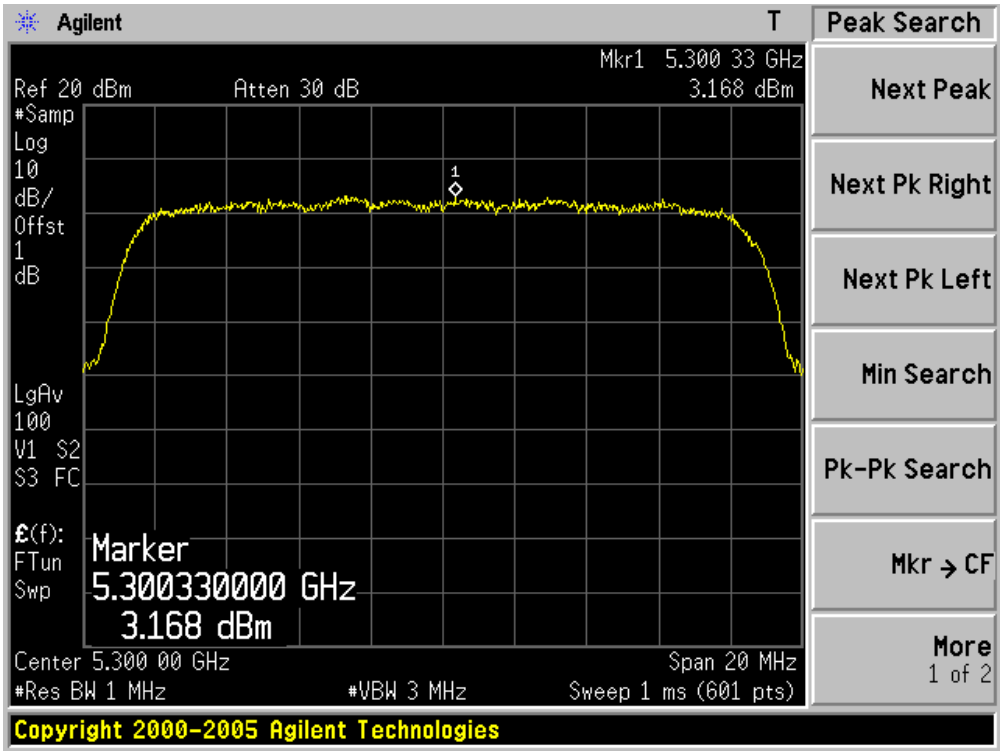
Channel 48 (5240MHz)



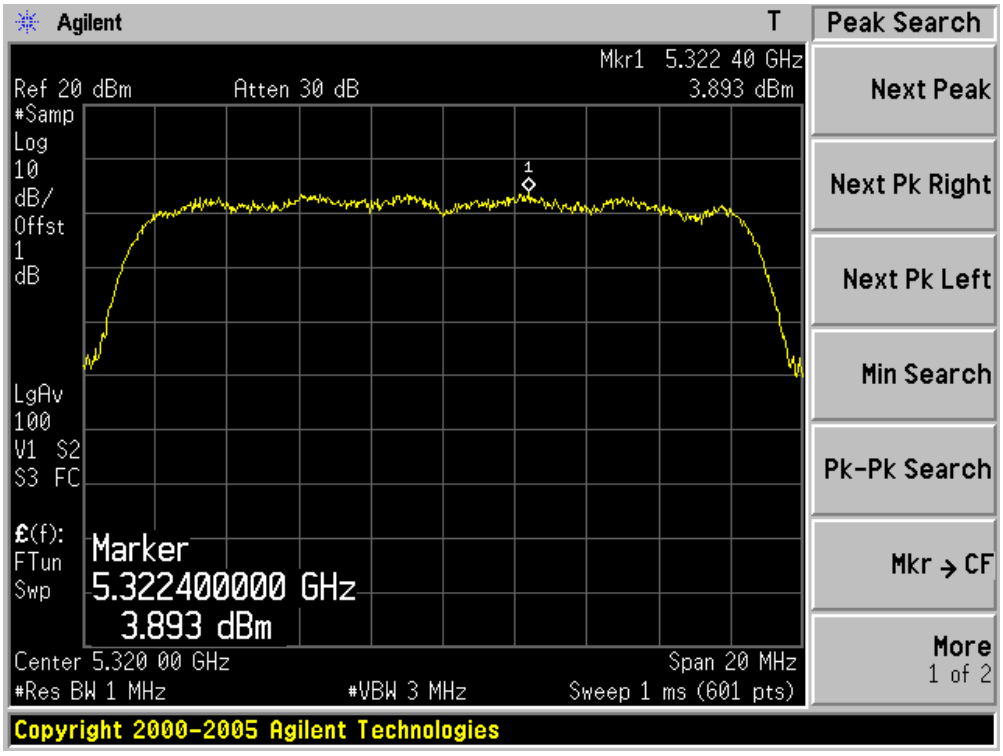
Channel 52 (5260MHz)



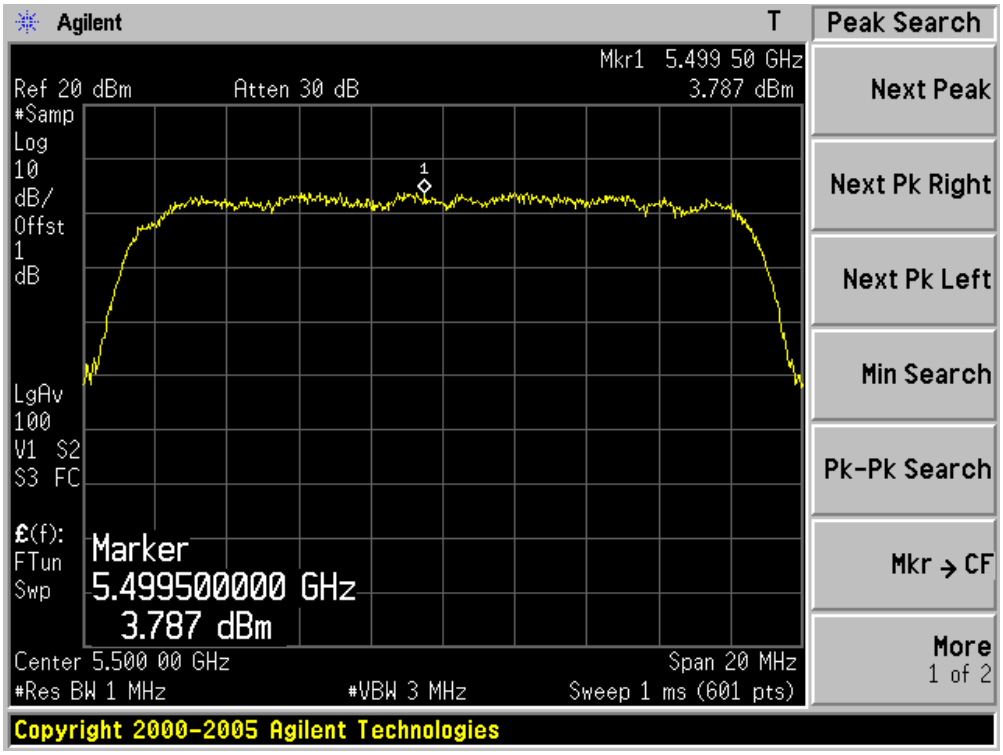
Channel 60 (5300MHz)



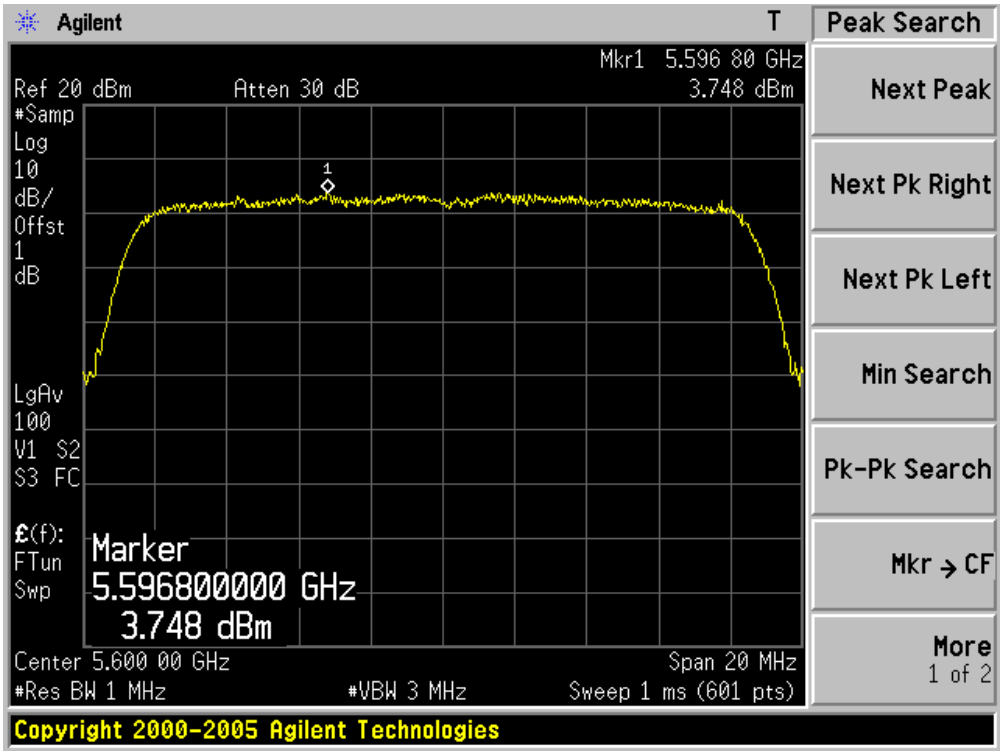
Channel 64 (5320MHz)



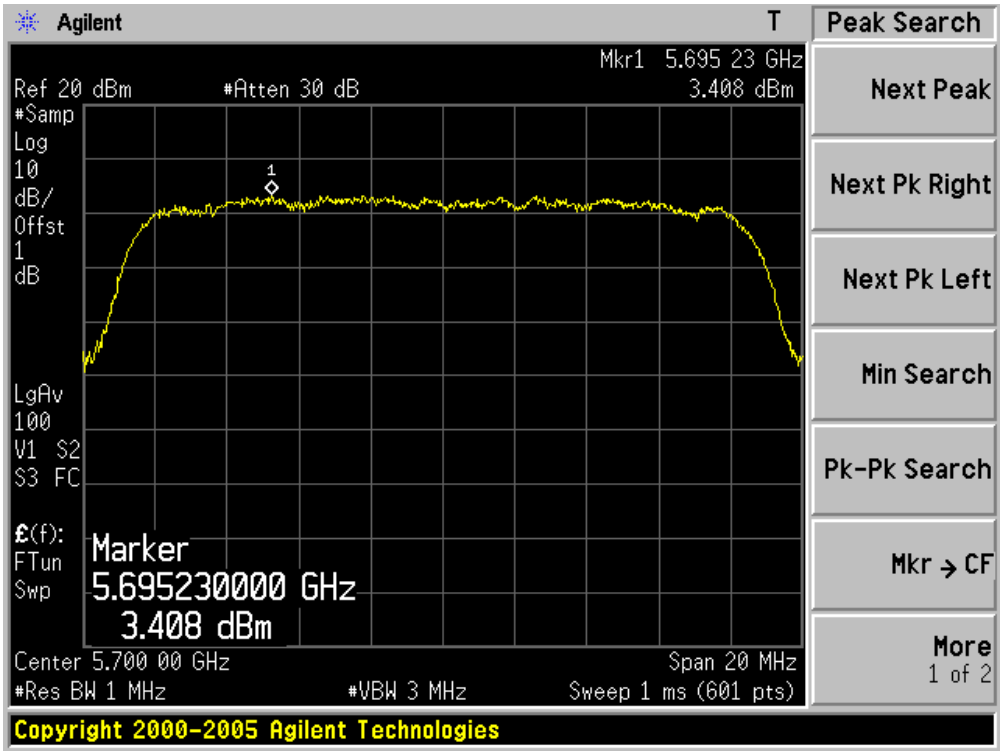
Channel 100 (5500MHz)



Channel 120 (5600MHz)



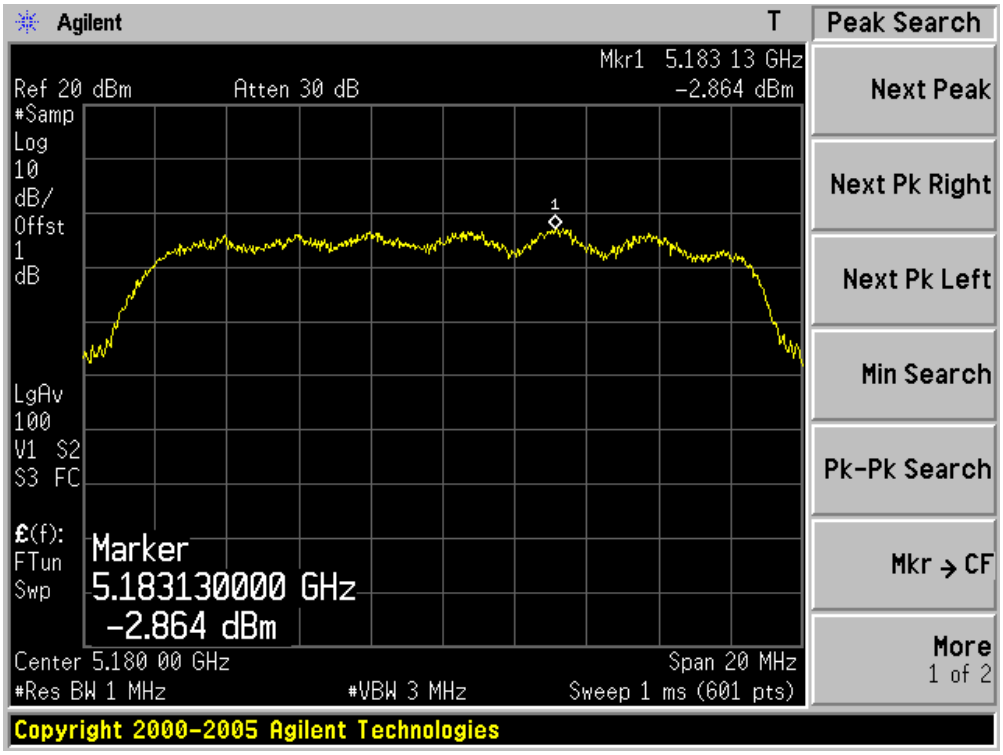
Channel 140 (5700MHz)



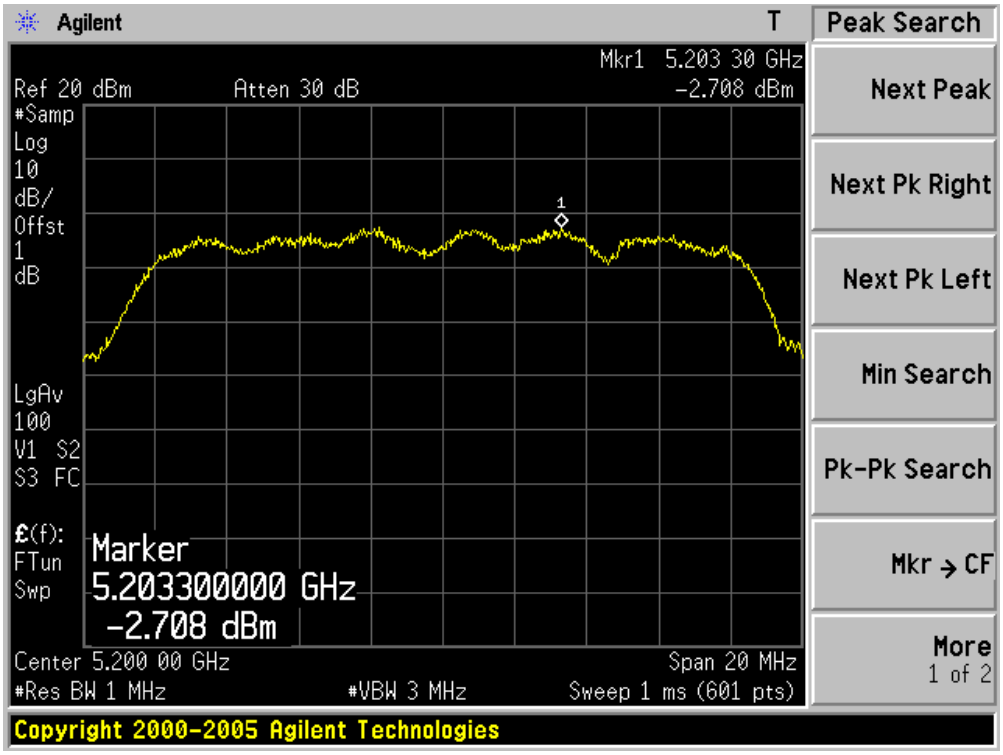
Product	:	AirPcap Nx
Test Item	:	Peak Power Spectral Density
Test Site	:	TR-8
Test Mode	:	Mode 1: Transmit by 802.11a (Chain 001)

Channel No.	Frequency (MHz)	Measurement PPSD (dBm/MHz)		Total PPSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Chain 100	Chain 001			
36	5180	N/A	-2.864	-2.864	4	Pass
40	5200	N/A	-2.708	-2.708	4	Pass
48	5240	N/A	-3.412	-3.412	4	Pass
52	5260	N/A	3.396	3.396	11	Pass
60	5300	N/A	3.911	3.911	11	Pass
64	5320	N/A	3.862	3.862	11	Pass
100	5500	N/A	3.479	3.479	11	Pass
120	5600	N/A	3.923	3.923	11	Pass
140	5700	N/A	4.205	4.205	11	Pass

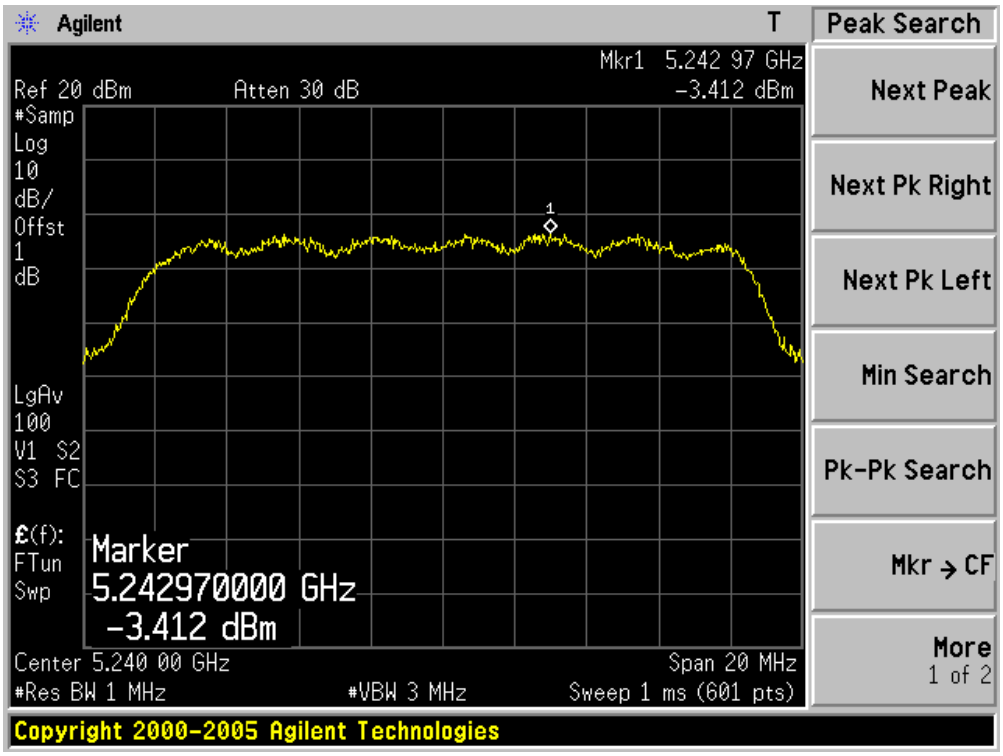
Channel 36 (5180MHz)



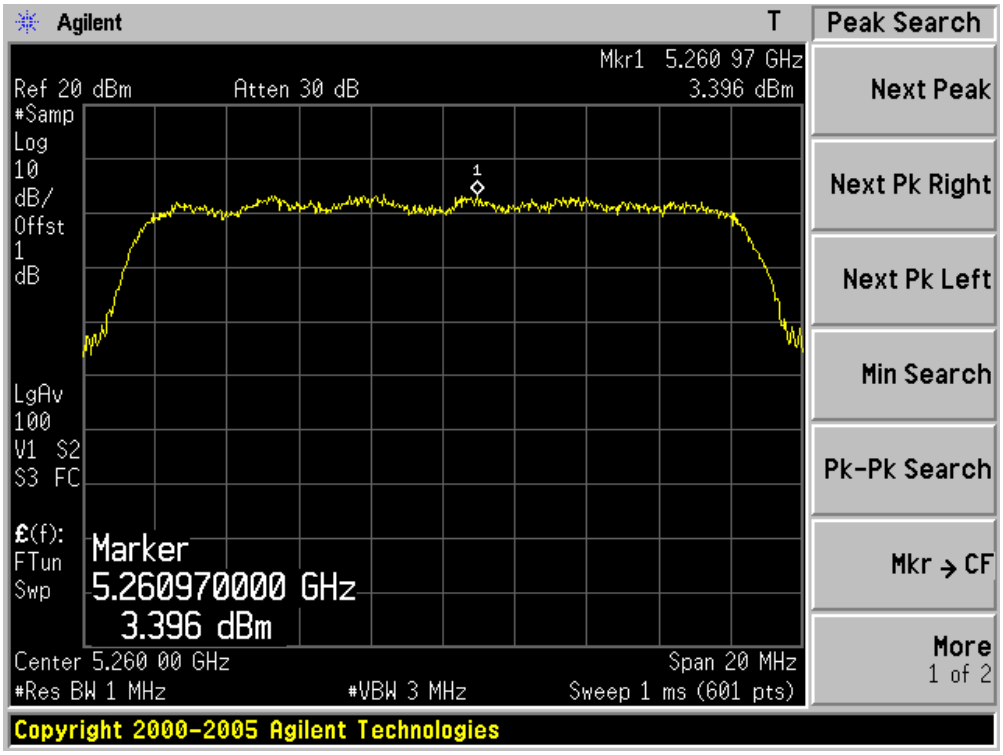
Channel 40 (5200MHz)



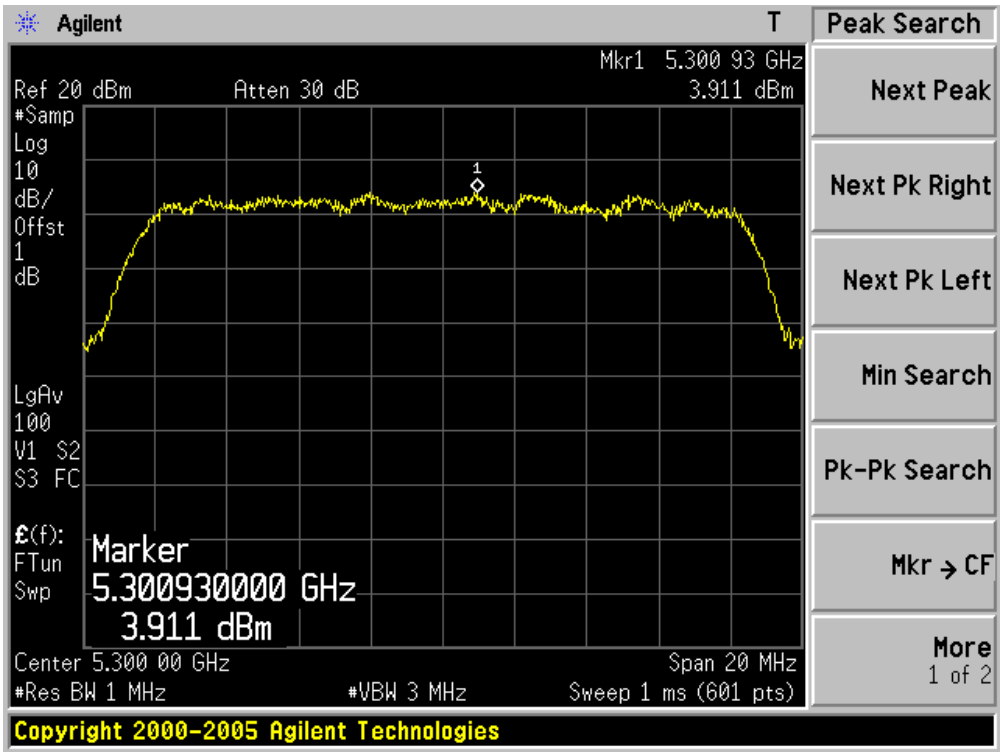
Channel 48 (5240MHz)



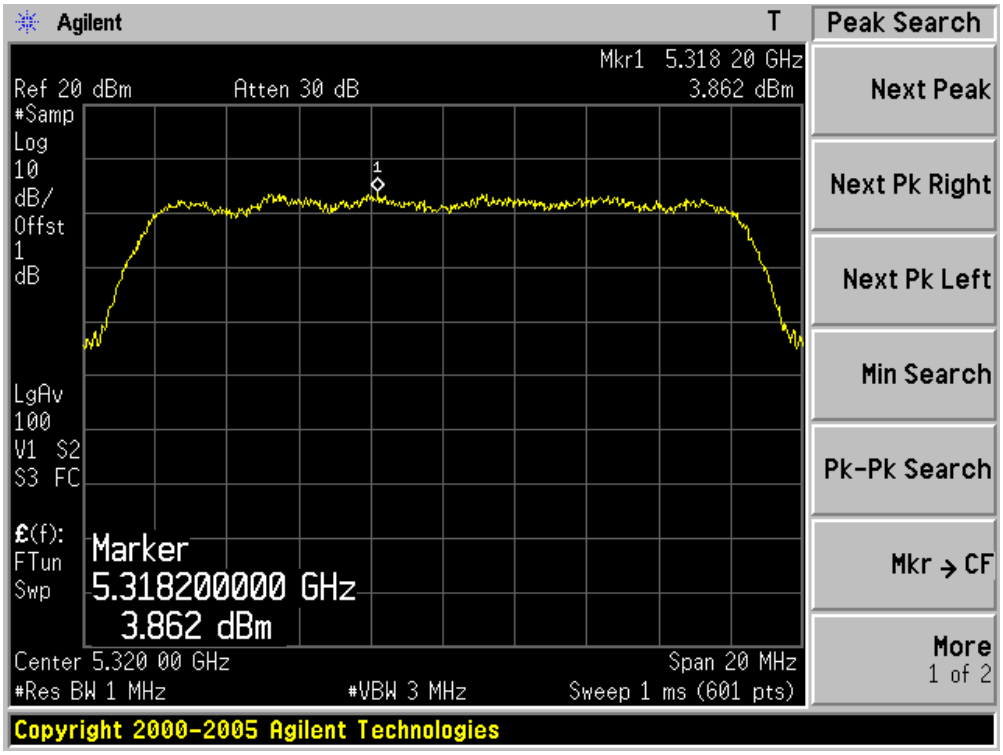
Channel 52 (5260MHz)



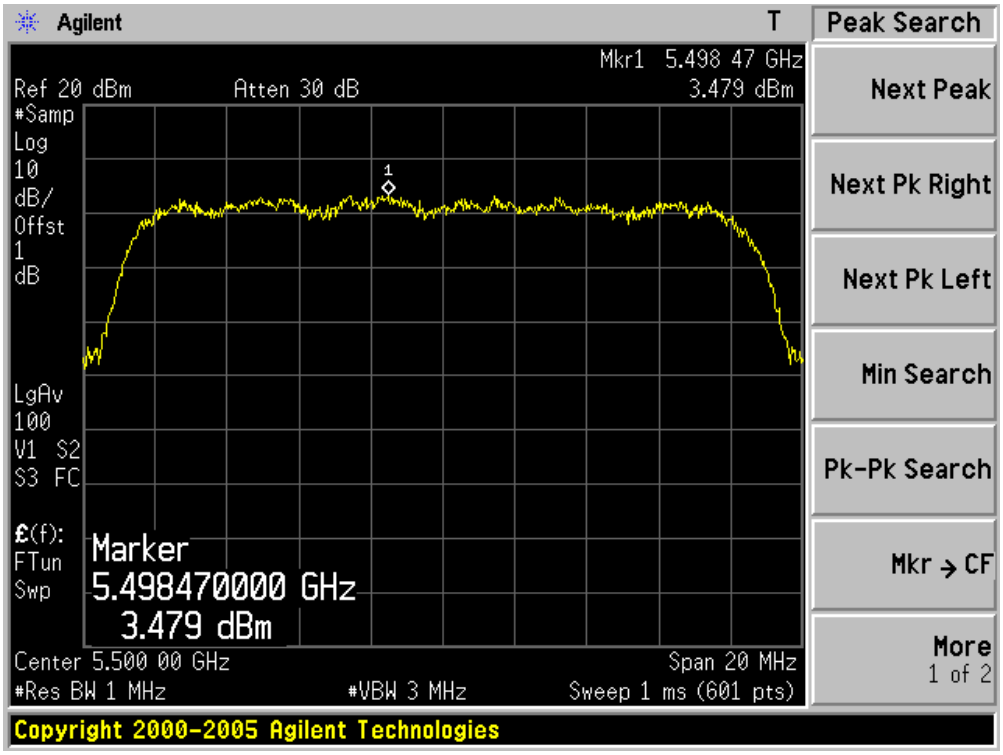
Channel 60 (5300MHz)



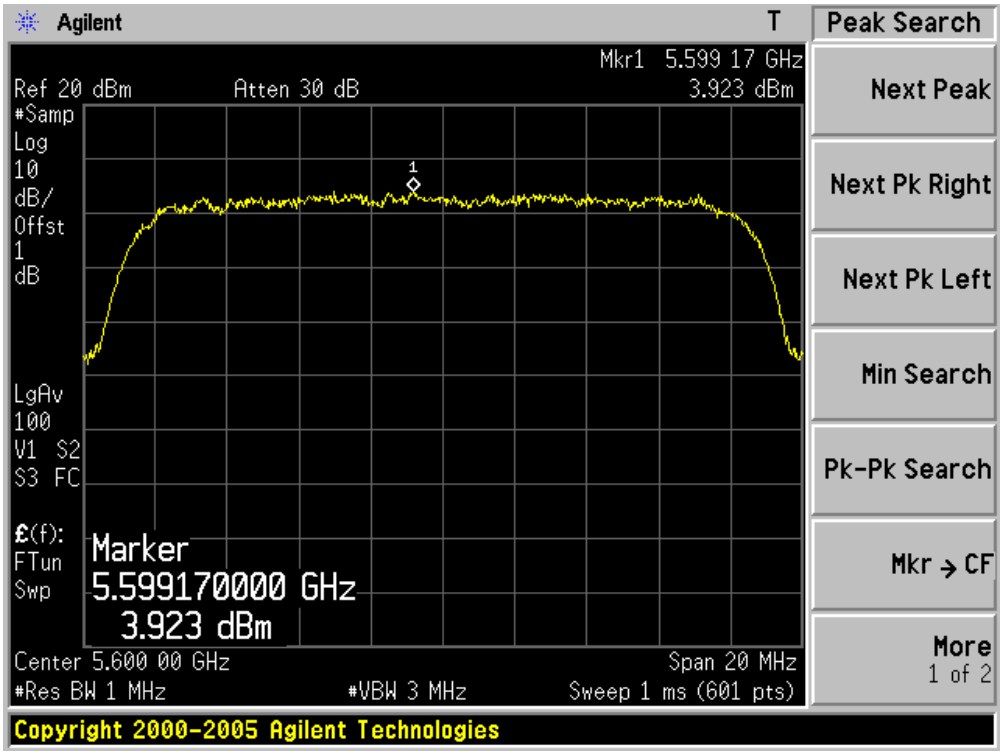
Channel 64 (5320MHz)



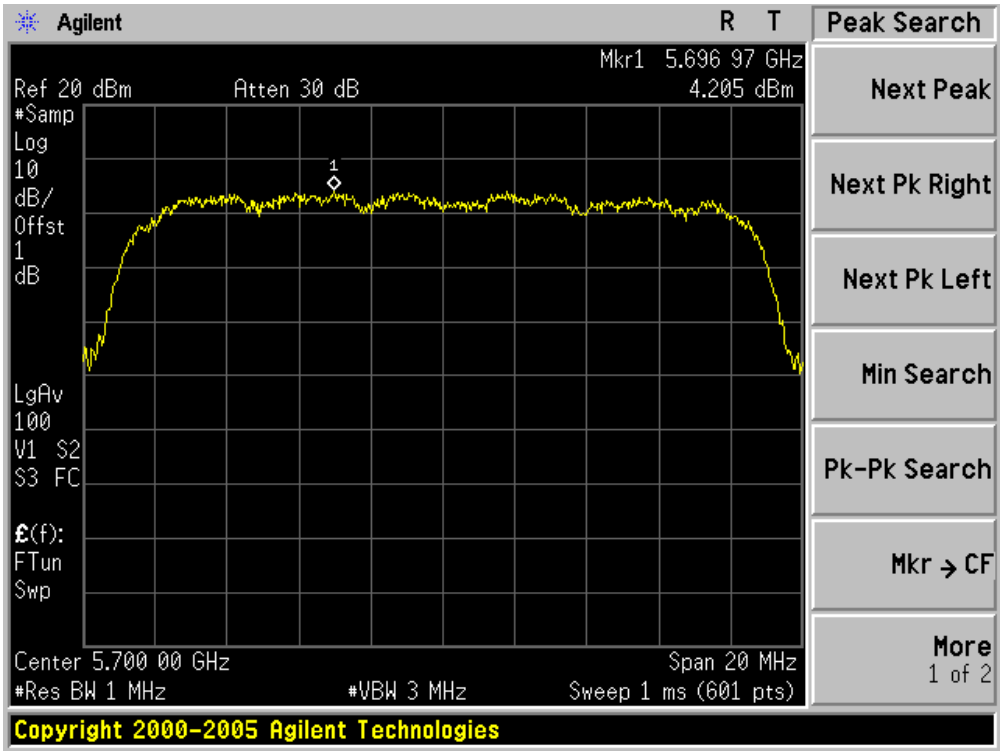
Channel 100 (5500MHz)



Channel 120 (5600MHz)



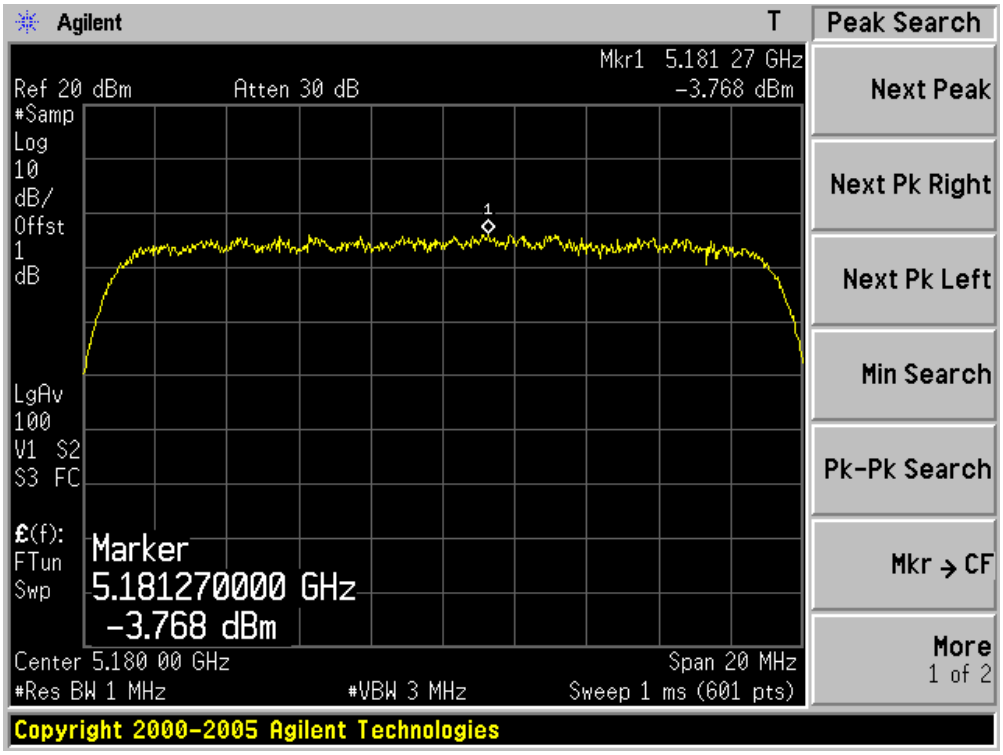
Channel 140 (5700MHz)



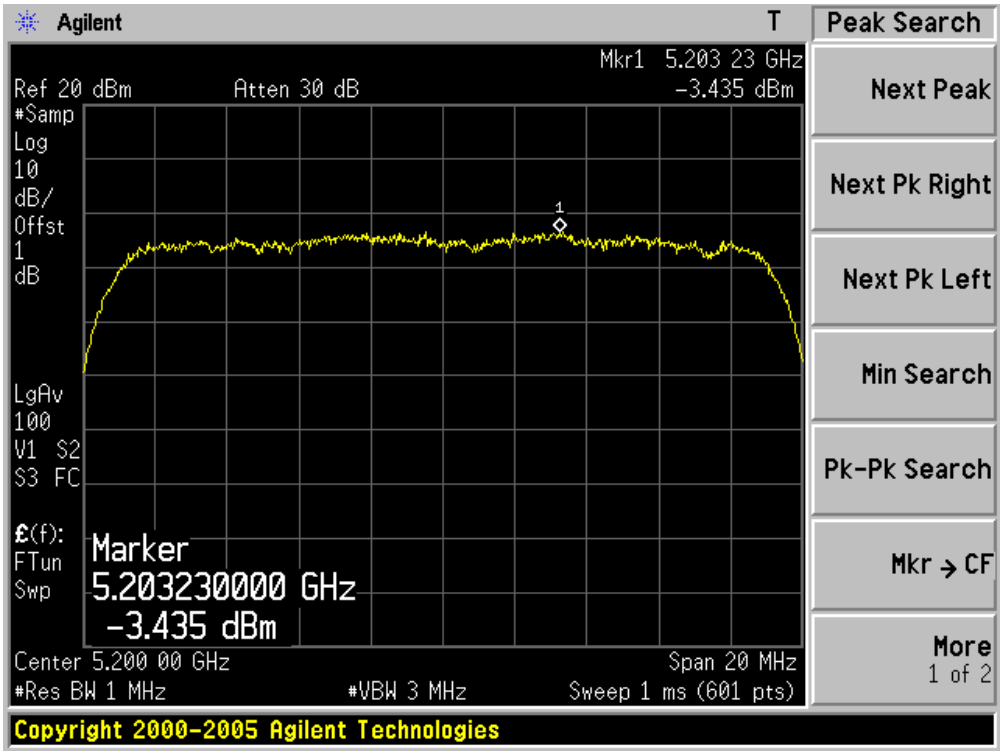
Product	:	AirPcap Nx
Test Item	:	Peak Power Spectral Density
Test Site	:	TR-8
Test Mode	:	Mode 2: Transmit by 802.11n (20MHz) (Chain 100)

Channel No.	Frequency (MHz)	Measurement PPSD (dBm/MHz)		Total PPSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Chain 100	Chain 001			
36	5180	-3.768	N/A	-3.768	4	Pass
40	5200	-3.435	N/A	-3.435	4	Pass
48	5240	-3.839	N/A	-3.839	4	Pass
52	5260	2.292	N/A	2.292	11	Pass
60	5300	2.916	N/A	2.916	11	Pass
64	5320	2.996	N/A	2.996	11	Pass
100	5500	3.285	N/A	3.285	11	Pass
120	5600	3.332	N/A	3.332	11	Pass
140	5700	3.022	N/A	3.022	11	Pass

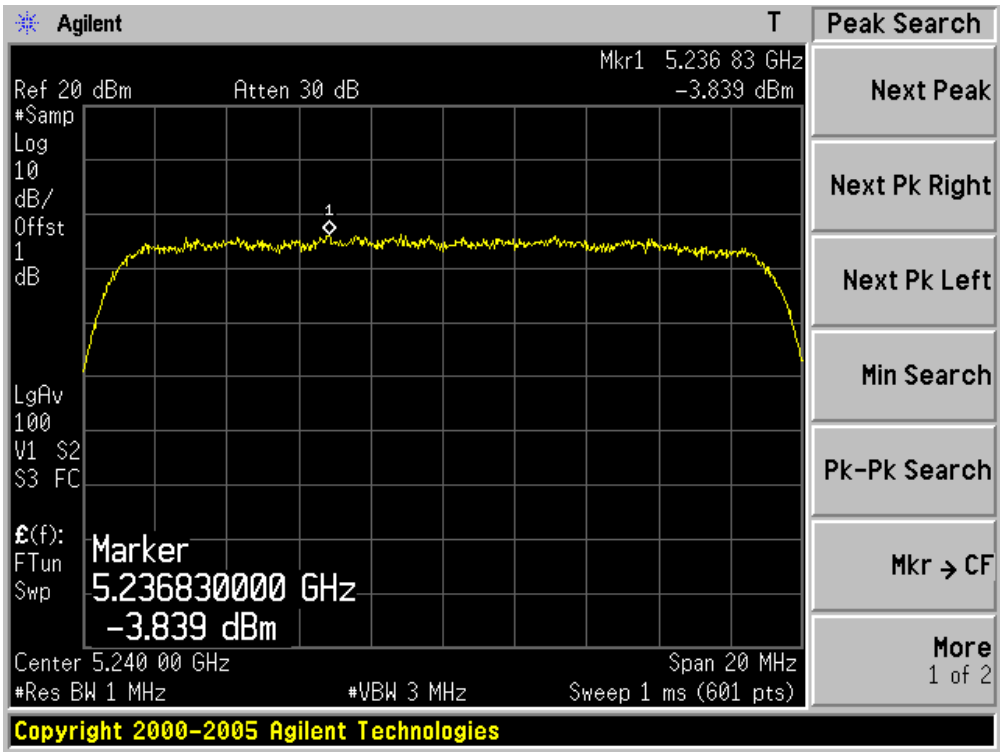
Channel 36 (5180MHz)



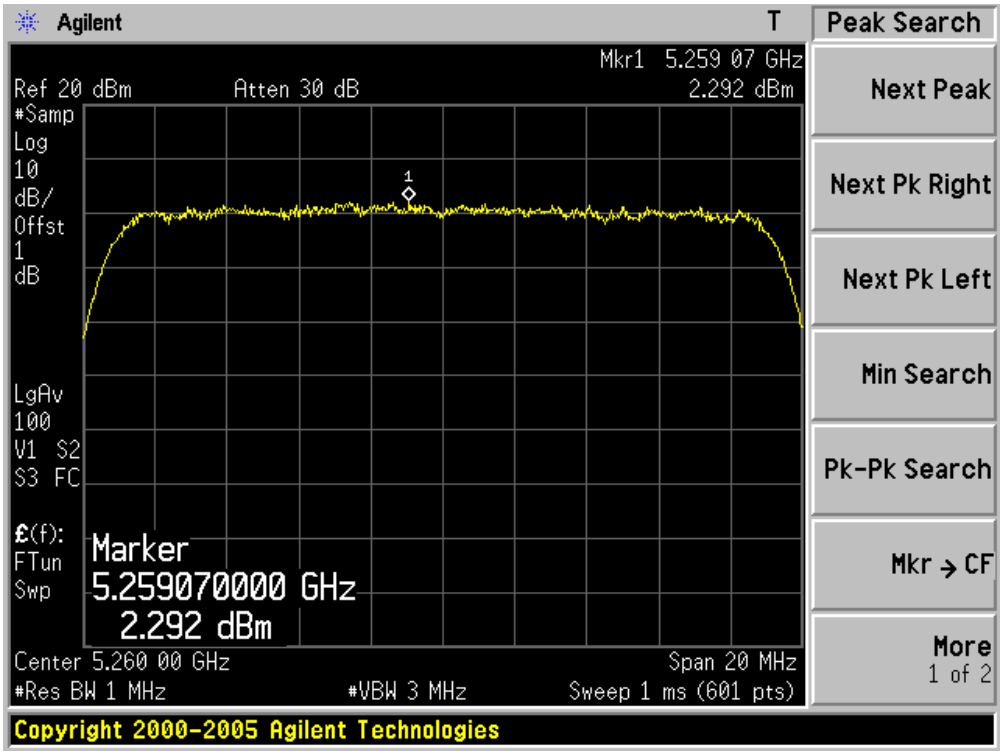
Channel 40 (5200MHz)



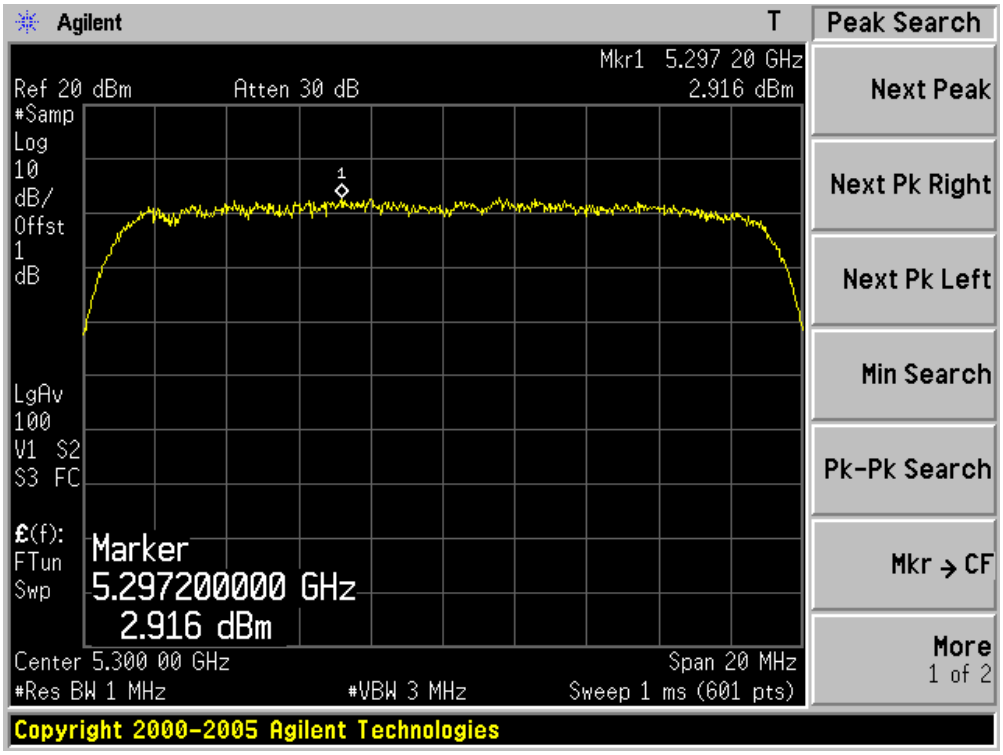
Channel 48 (5240MHz)



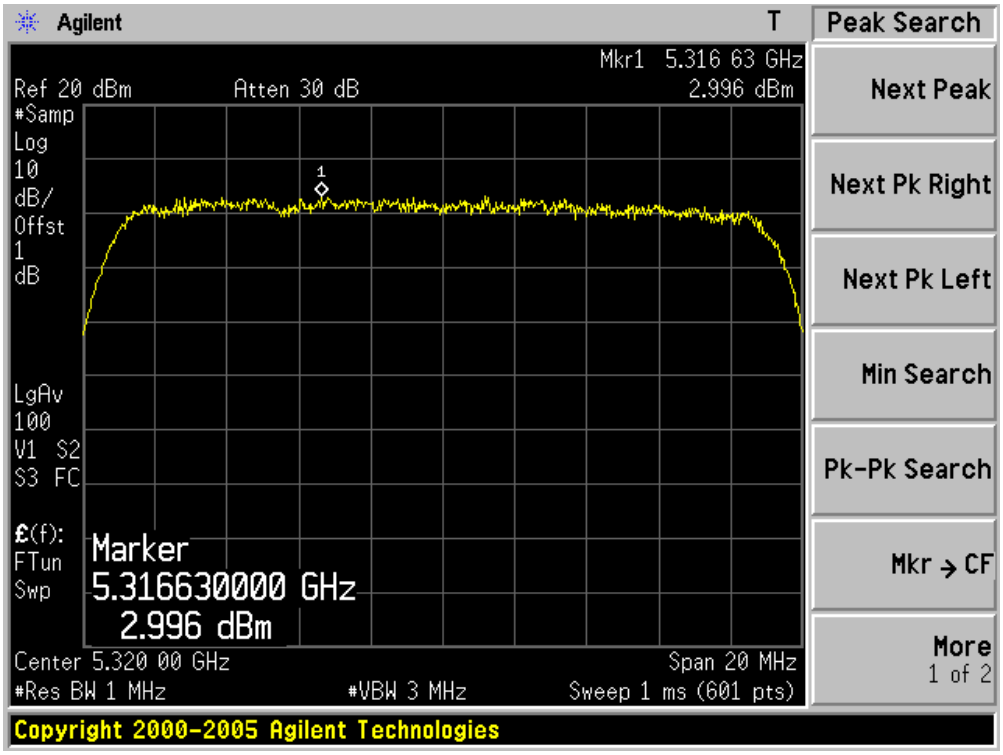
Channel 52 (5260MHz)



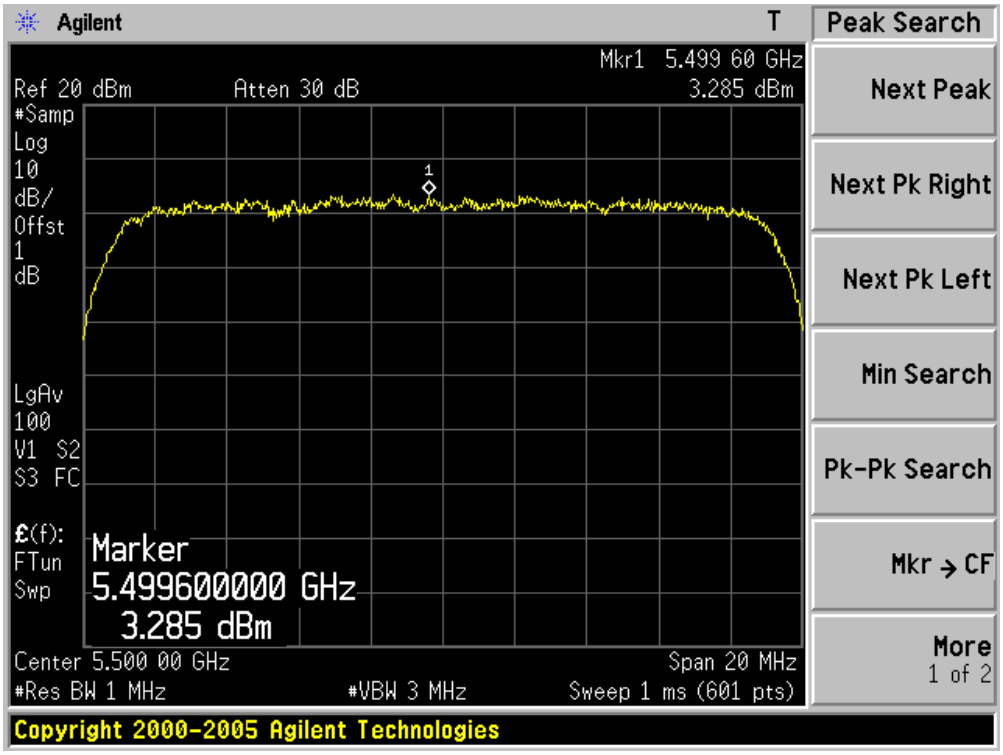
Channel 60 (5300MHz)



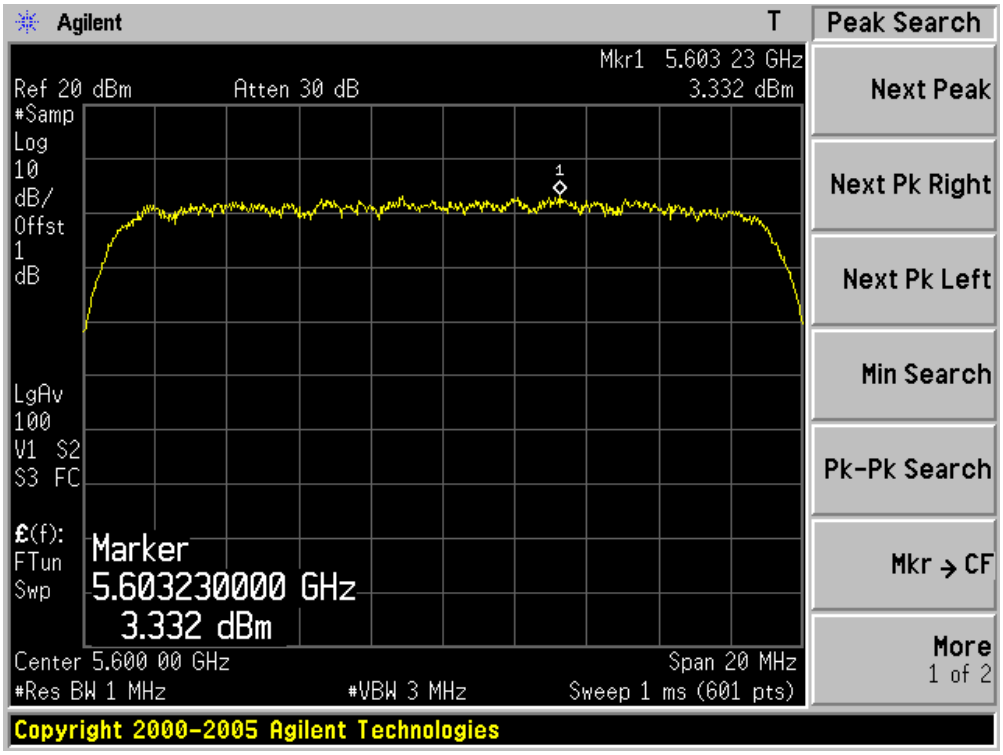
Channel 64 (5320MHz)



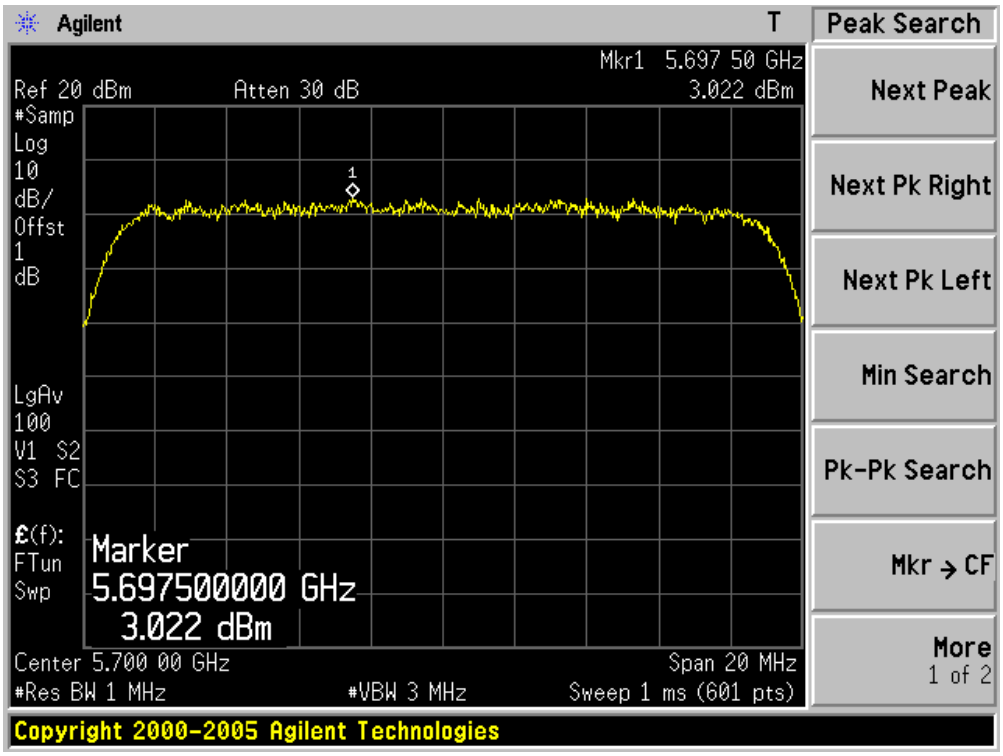
Channel 100 (5500MHz)



Channel 120 (5600MHz)



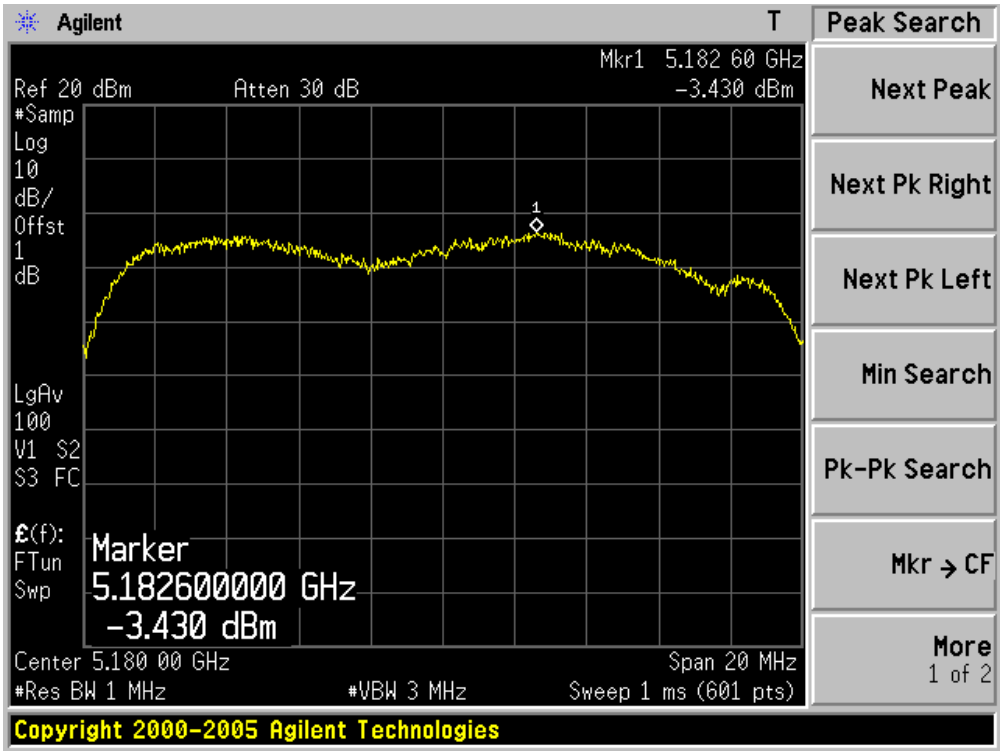
Channel 140 (5700MHz)



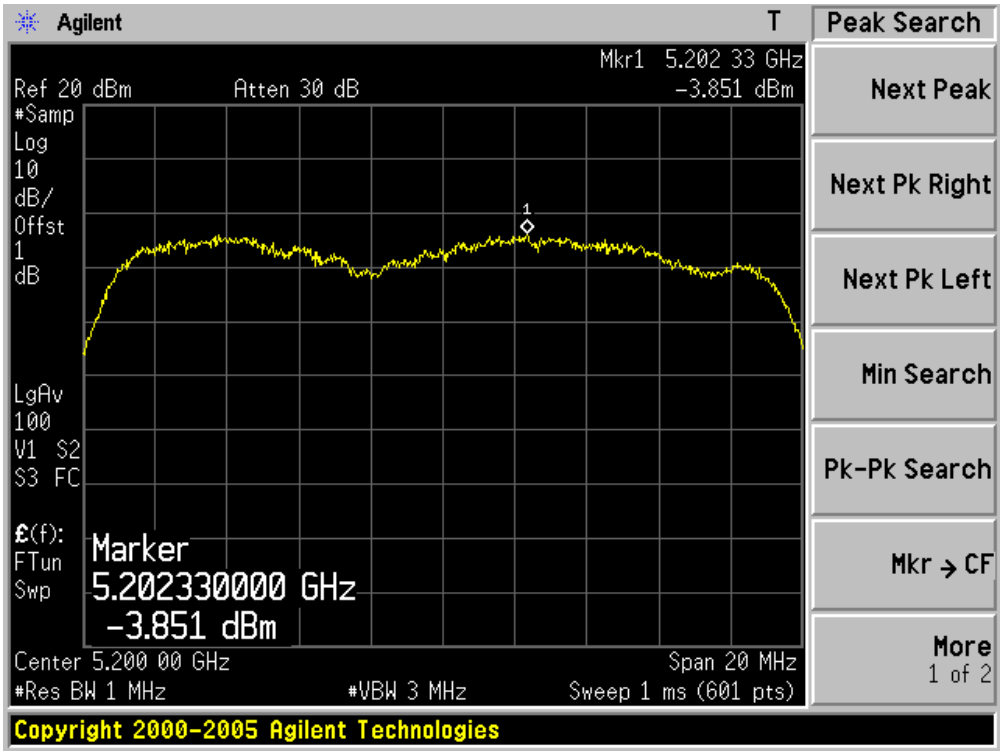
Product	:	AirPcap Nx
Test Item	:	Peak Power Spectral Density
Test Site	:	TR-8
Test Mode	:	Mode 2: Transmit by 802.11n (20MHz) (Chain 001)

Channel No.	Frequency (MHz)	Measurement PPSD (dBm/MHz)		Total PPSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Chain 100	Chain 001			
36	5180	N/A	-3.430	-3.430	4	Pass
40	5200	N/A	-3.851	-3.851	4	Pass
48	5240	N/A	-4.243	-4.243	4	Pass
52	5260	N/A	2.395	2.395	11	Pass
60	5300	N/A	3.227	3.227	11	Pass
64	5320	N/A	2.911	2.911	11	Pass
100	5500	N/A	2.543	2.543	11	Pass
120	5600	N/A	3.826	3.826	11	Pass
140	5700	N/A	3.239	3.239	11	Pass

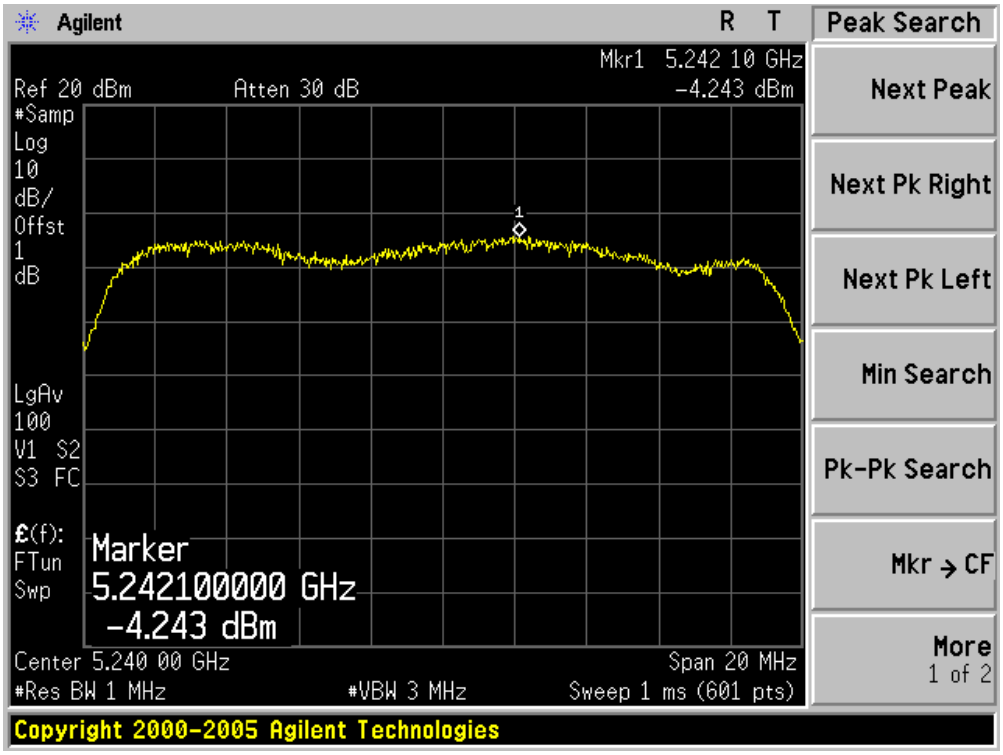
Channel 36 (5180MHz)



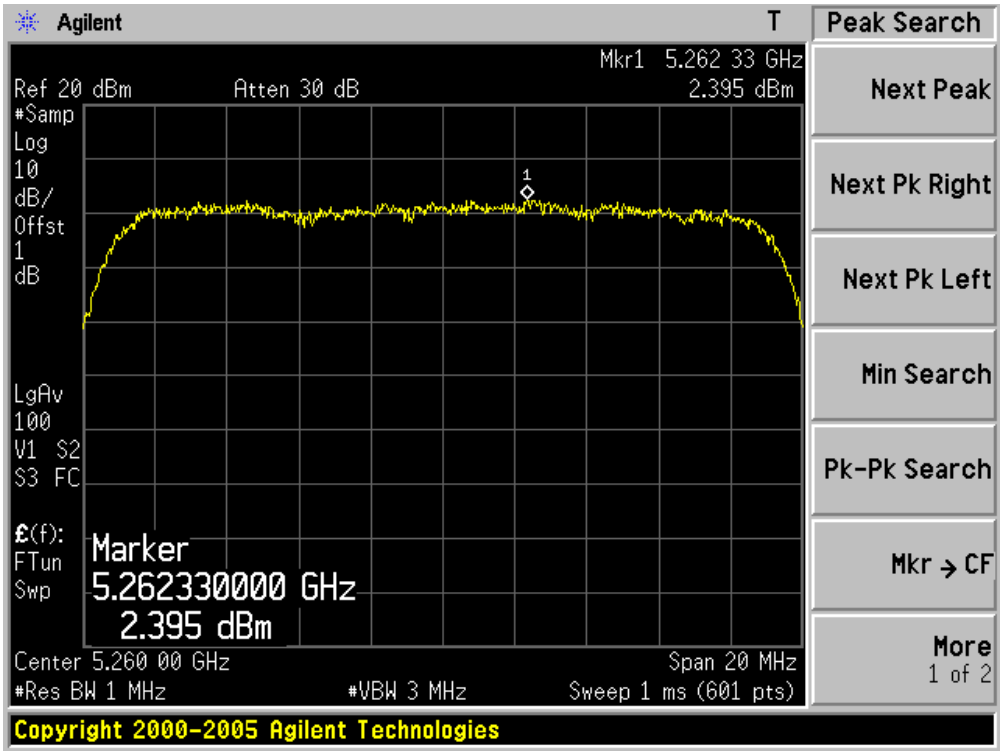
Channel 40 (5200MHz)



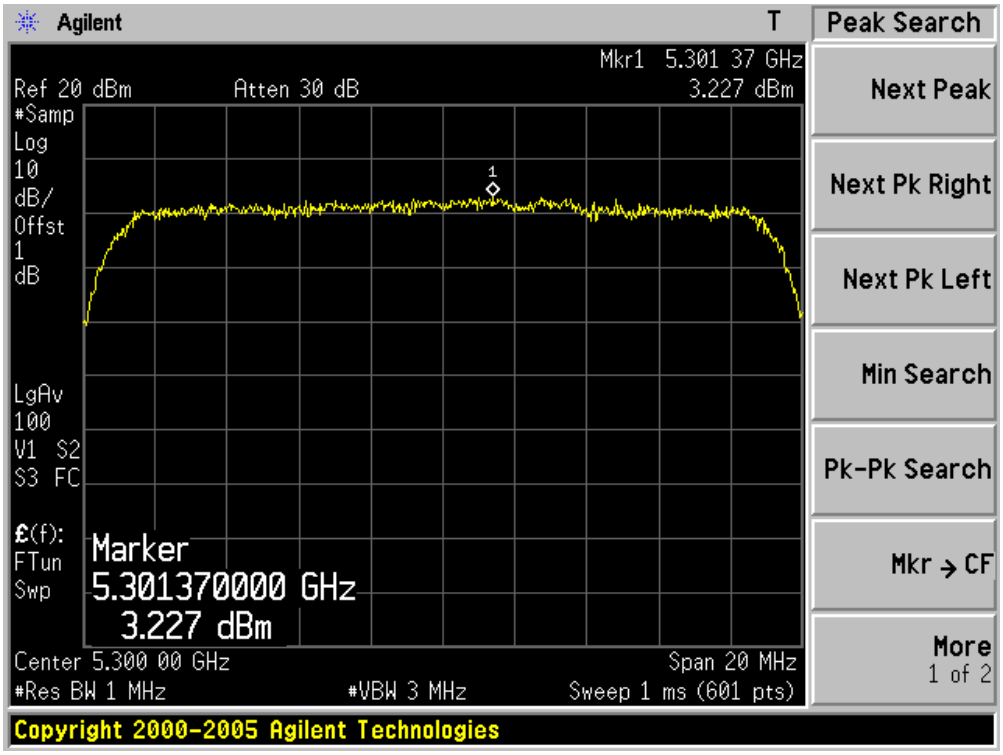
Channel 48 (5240MHz)



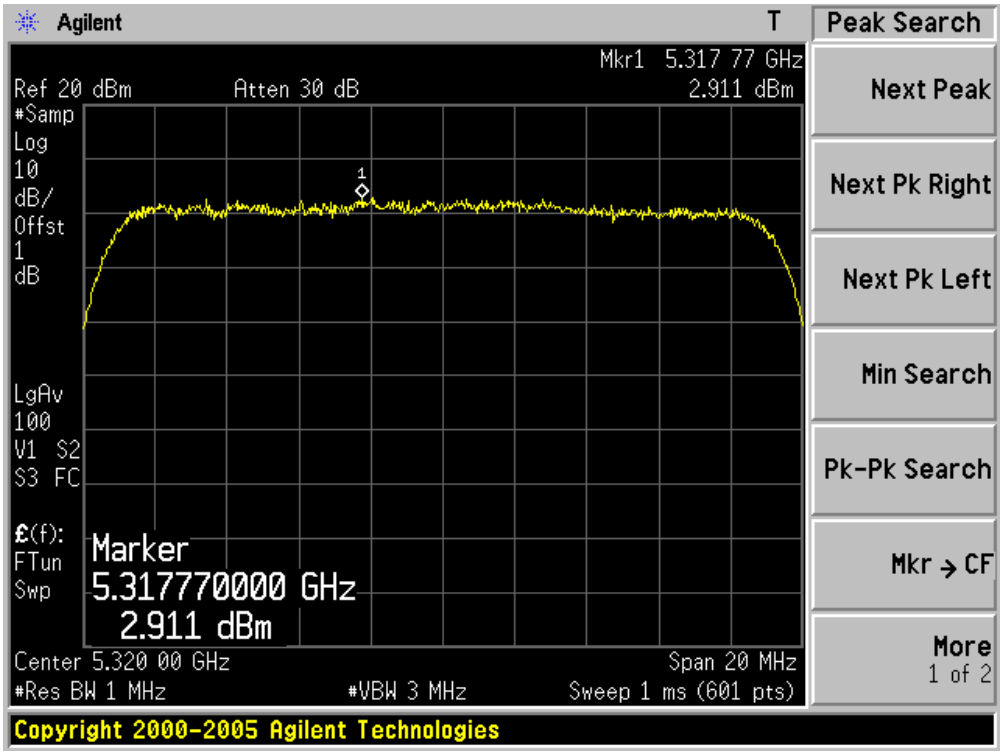
Channel 52 (5260MHz)



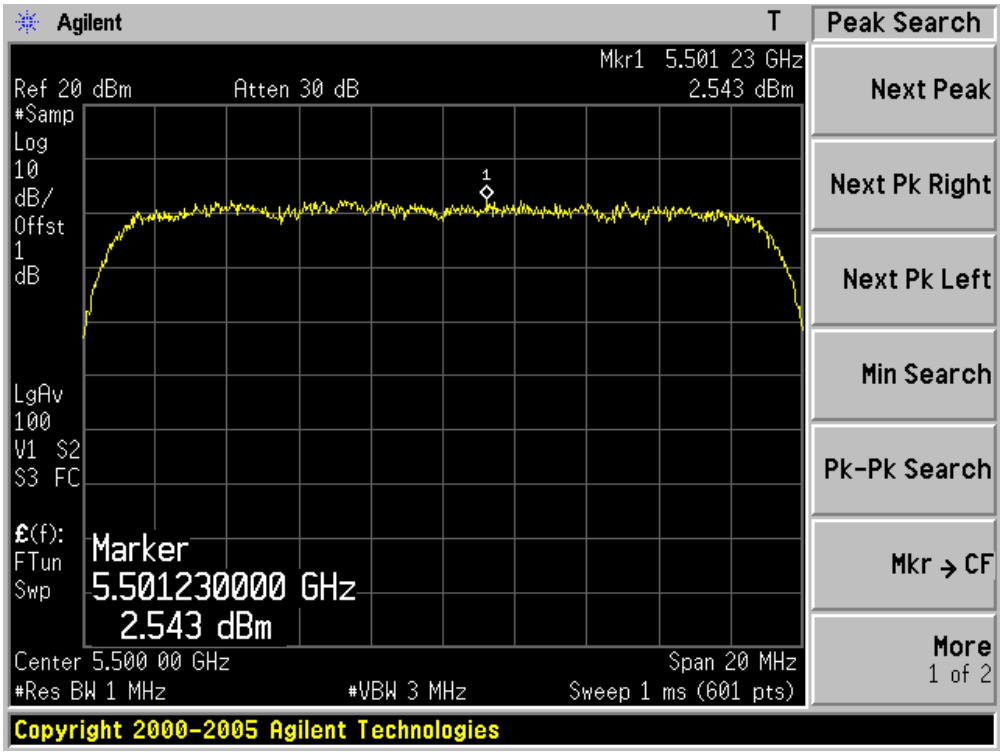
Channel 60 (5300MHz)



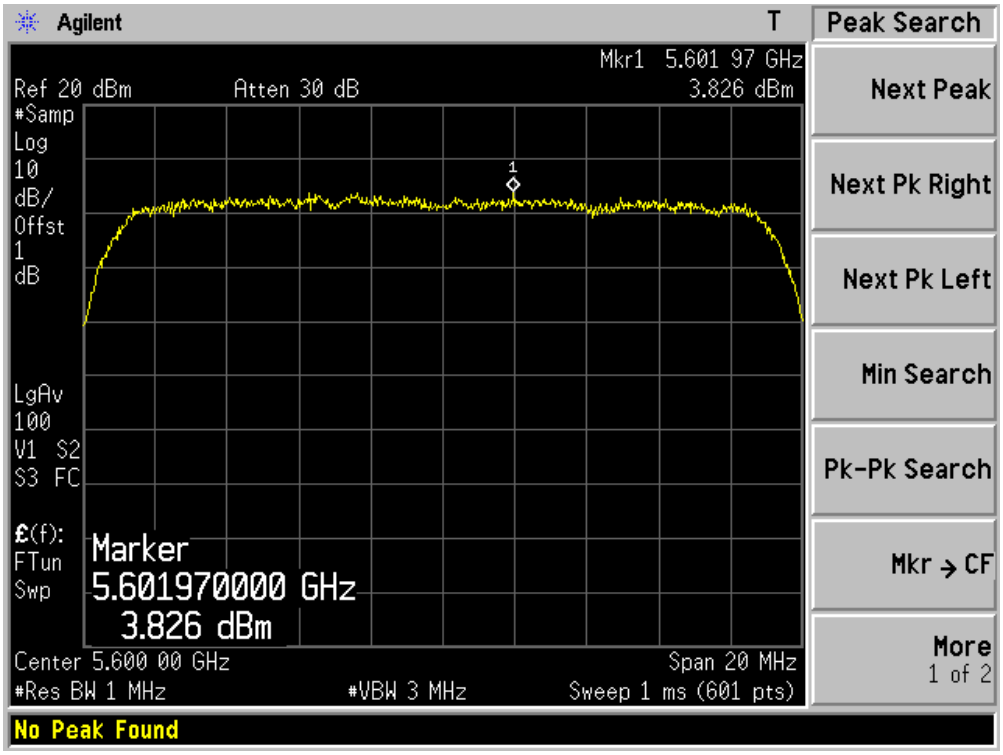
Channel 64 (5320MHz)



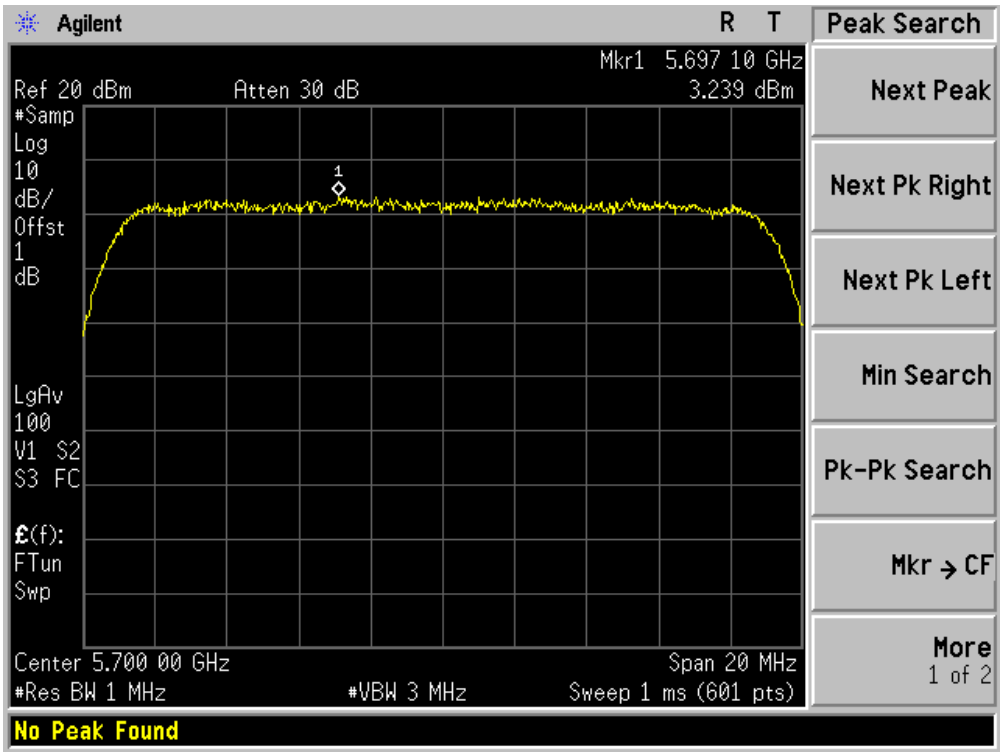
Channel 100 (5500MHz)



Channel 120 (5600MHz)



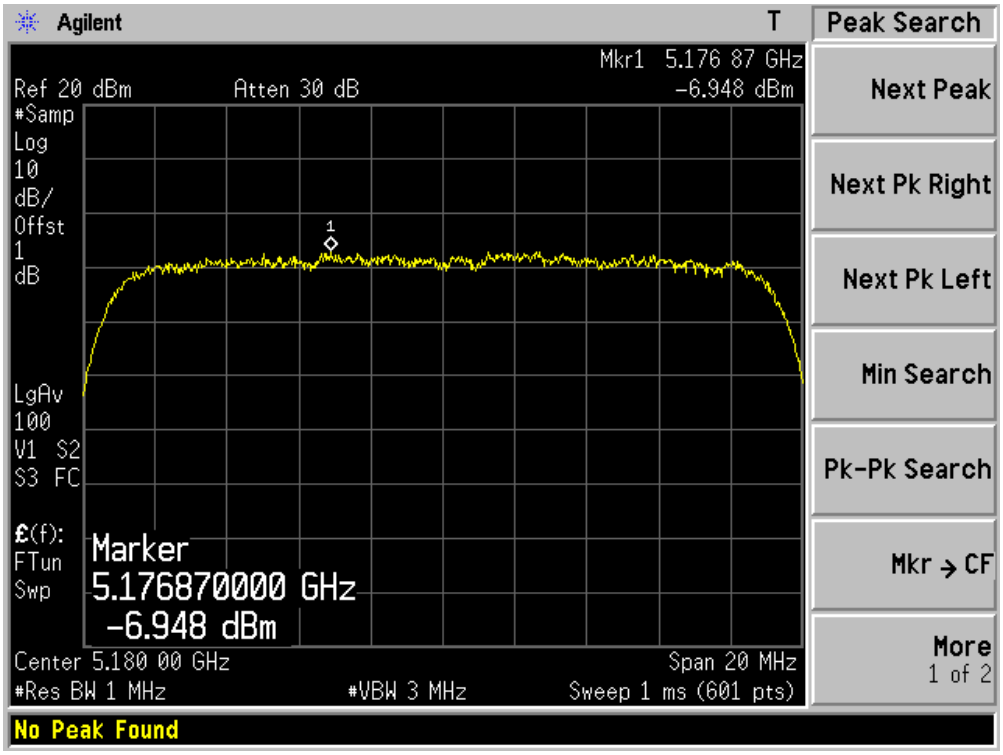
Channel 140 (5700MHz)



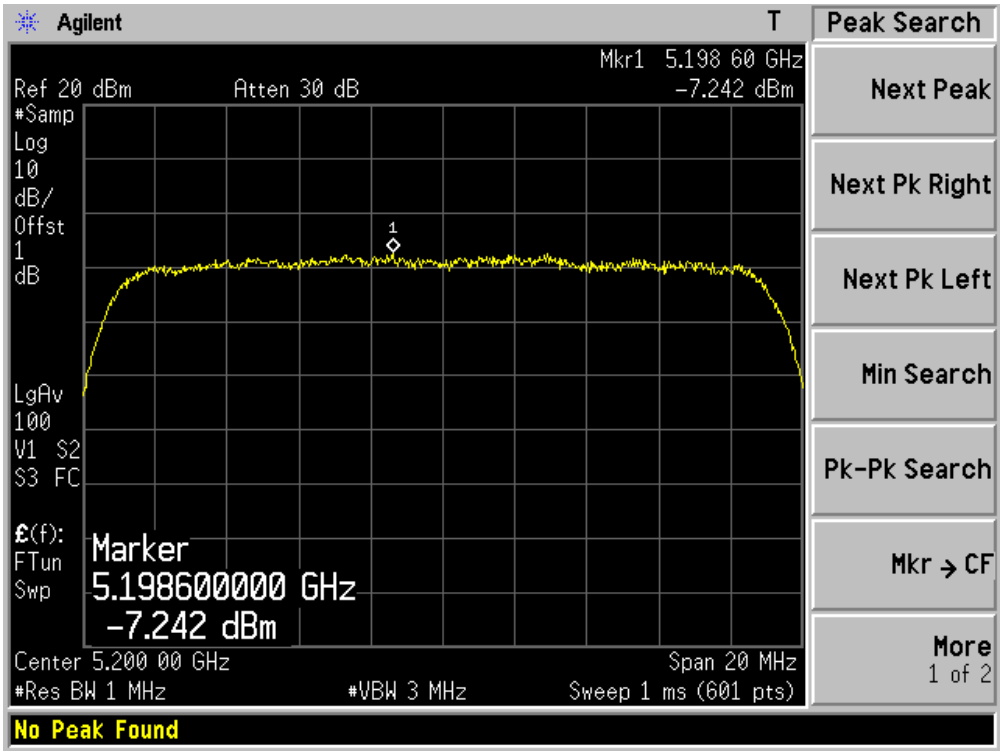
Product	:	AirPcap Nx
Test Item	:	Peak Power Spectral Density
Test Site	:	TR-8
Test Mode	:	Mode 2: Transmit by 802.11n (20MHz) (Chain 101)

Channel No.	Frequency (MHz)	Measurement PPSD (dBm/MHz)		Total PPSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Chain 100	Chain 001			
36	5180	-6.948	-7.544	-4.23	4	Pass
40	5200	-7.242	-7.668	-4.44	4	Pass
48	5240	-6.698	-7.576	-4.10	4	Pass
52	5260	-0.845	-0.542	2.32	11	Pass
60	5300	-0.804	-0.153	2.54	11	Pass
64	5320	-0.197	0.444	3.15	11	Pass
100	5500	0.615	-1.909	2.54	11	Pass
120	5600	0.698	-0.817	3.02	11	Pass
140	5700	-0.751	0.811	3.11	11	Pass

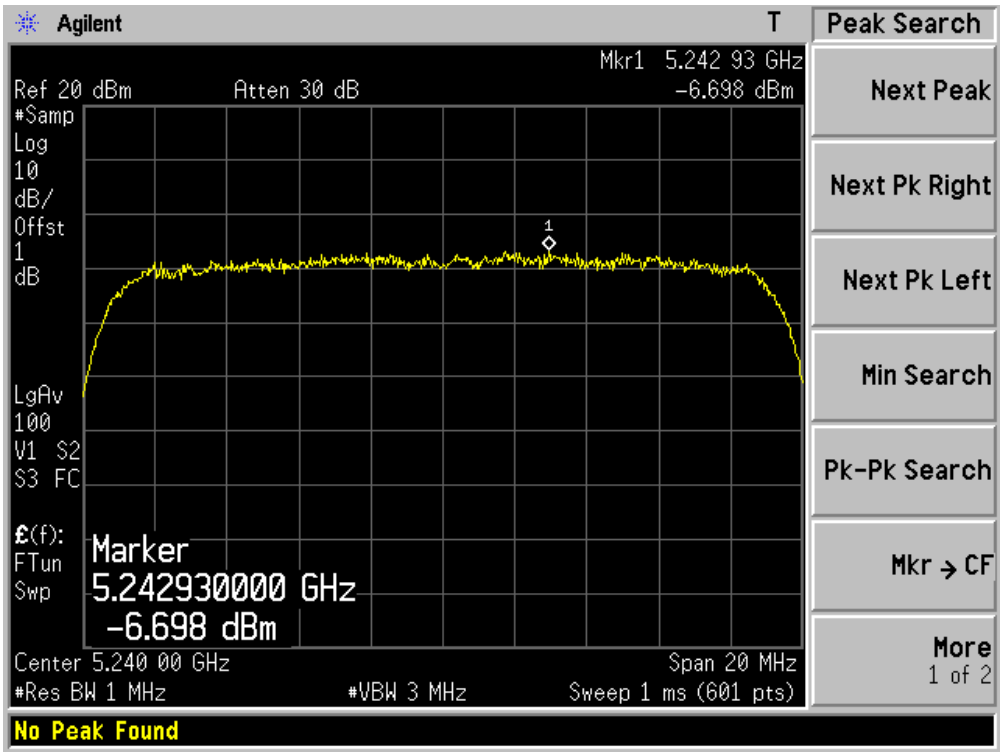
Channel 36 (5180MHz) - Chain 100



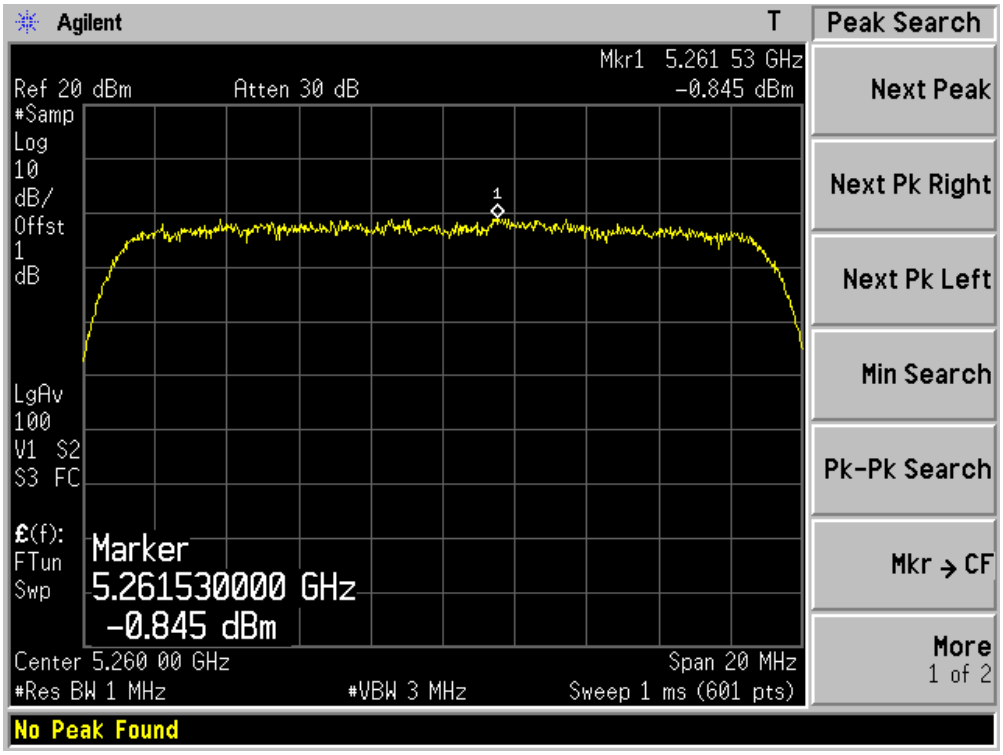
Channel 40 (5200MHz) - Chain 100



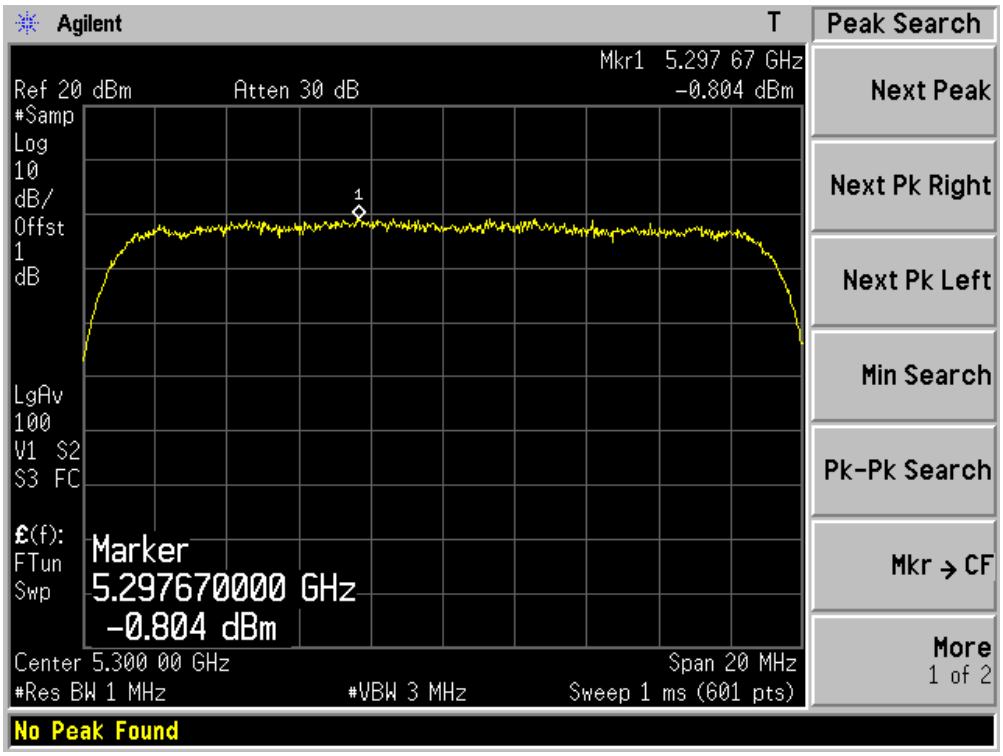
Channel 48 (5240MHz) - Chain 100



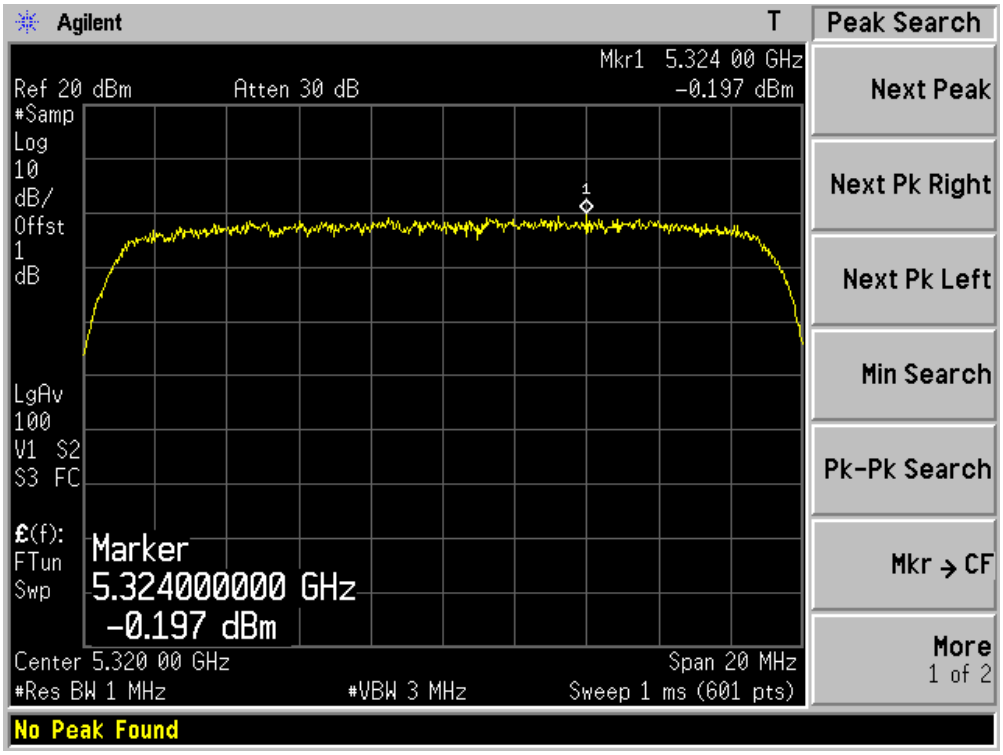
Channel 52 (5260MHz) - Chain 100



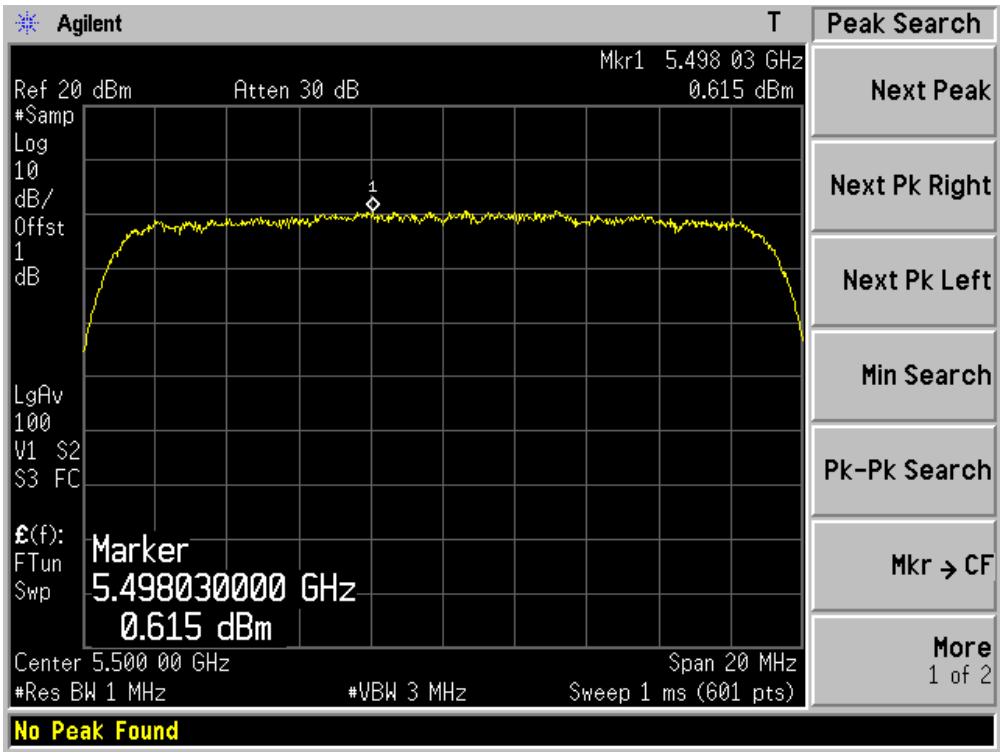
Channel 60 (5300MHz) - Chain 100



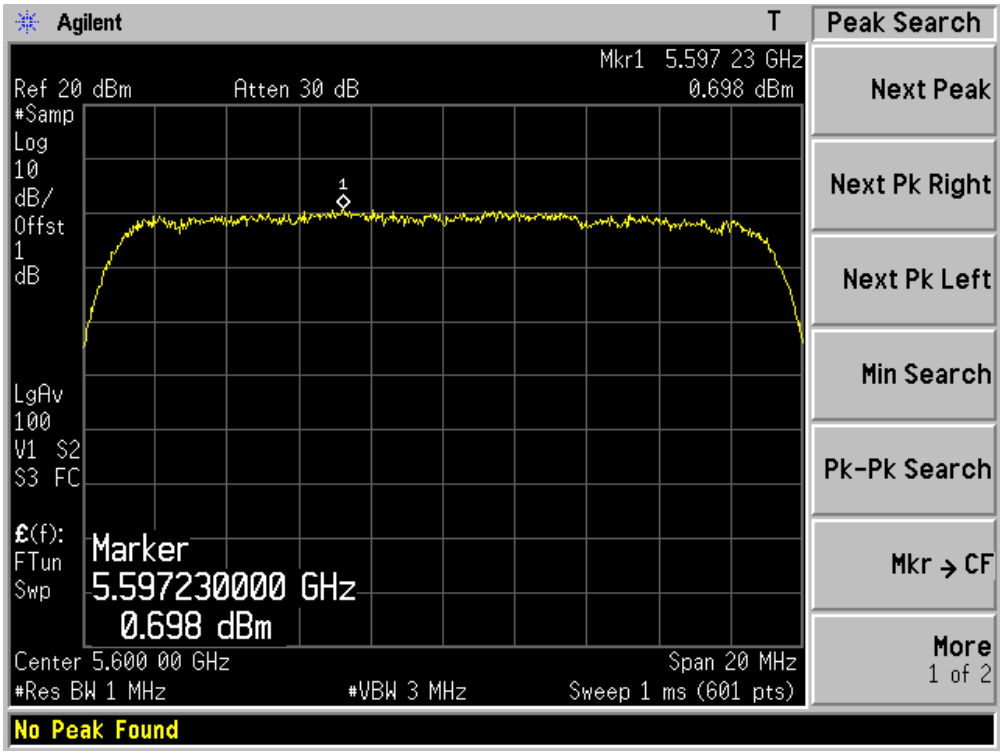
Channel 64 (5320MHz) - Chain 100



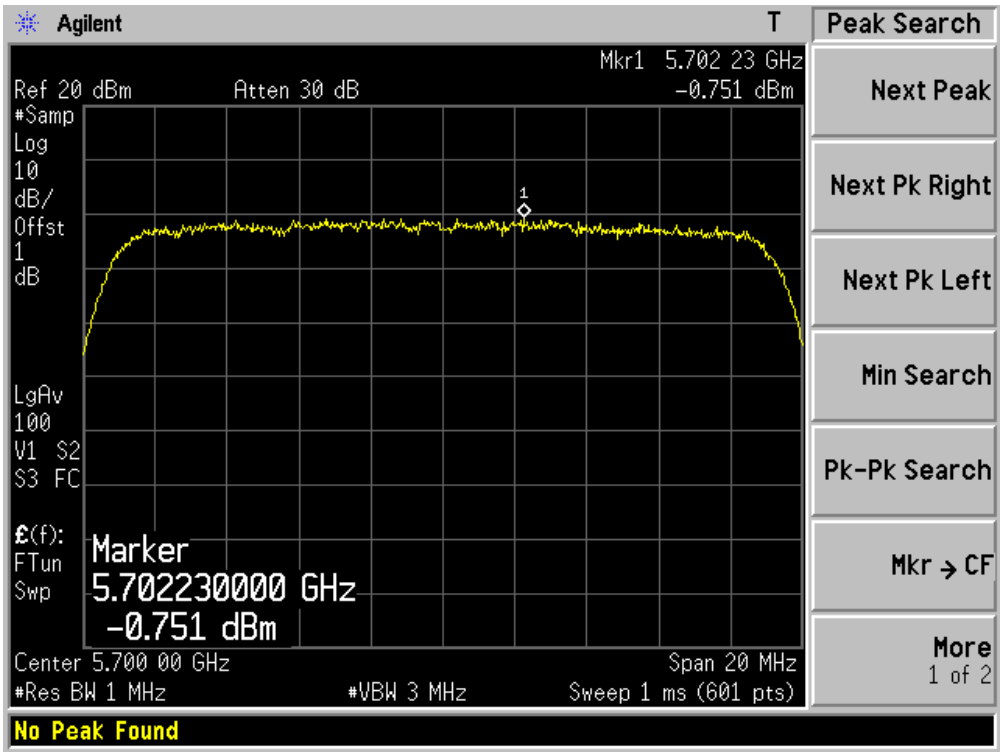
Channel 100 (5500MHz) - Chain 100



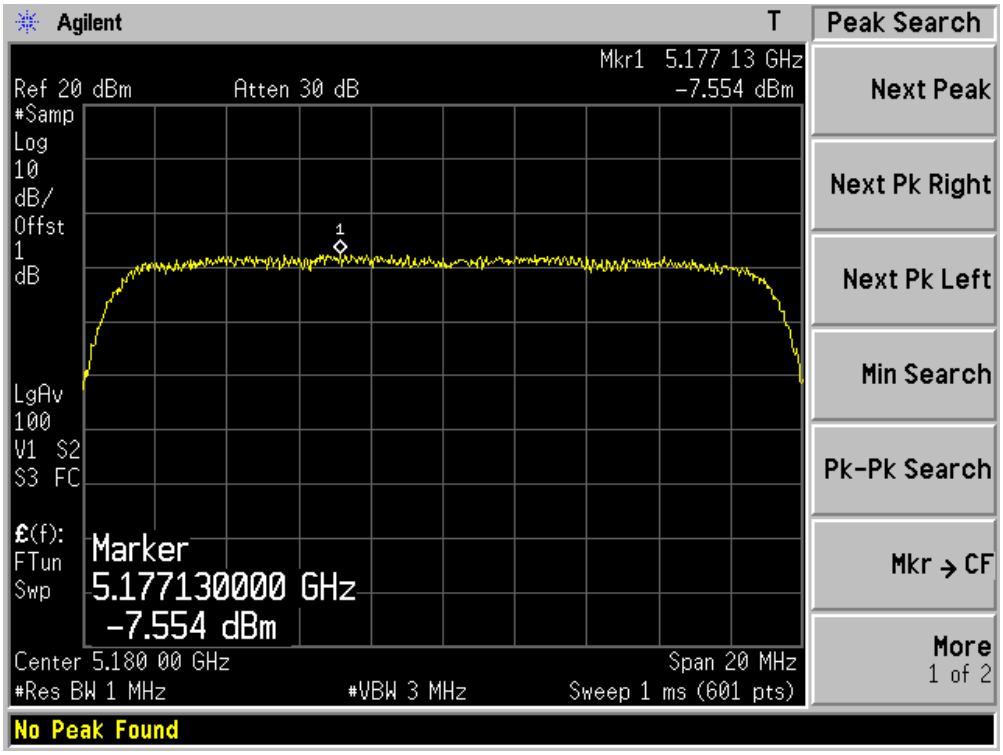
Channel 120 (5600MHz) - Chain 100



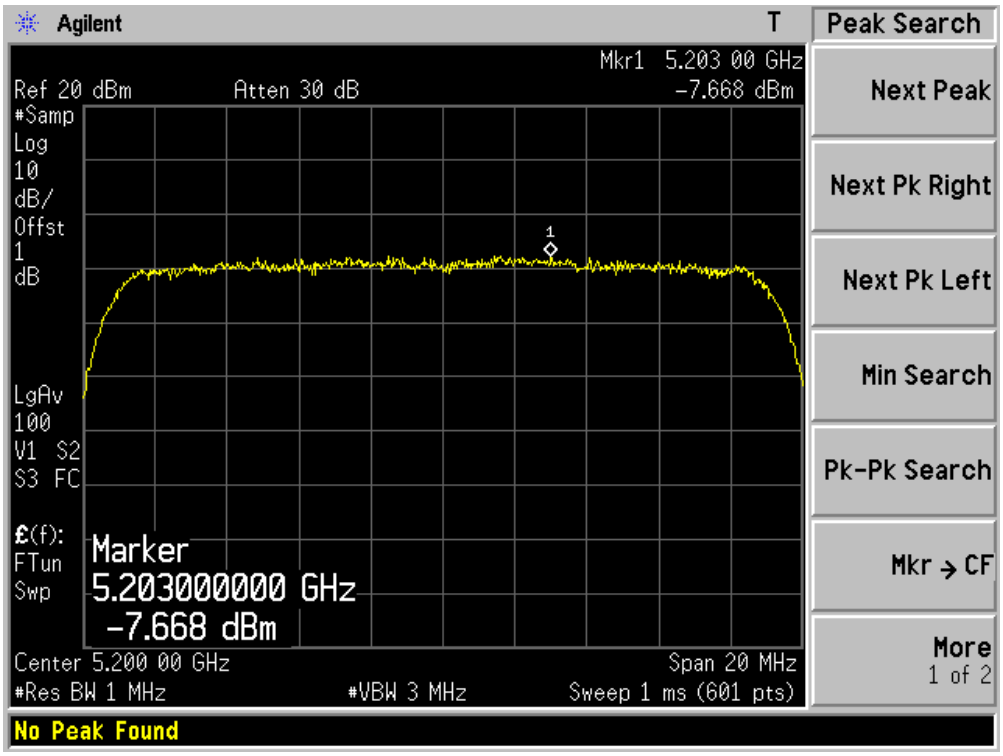
Channel 140 (5700MHz) - Chain 100



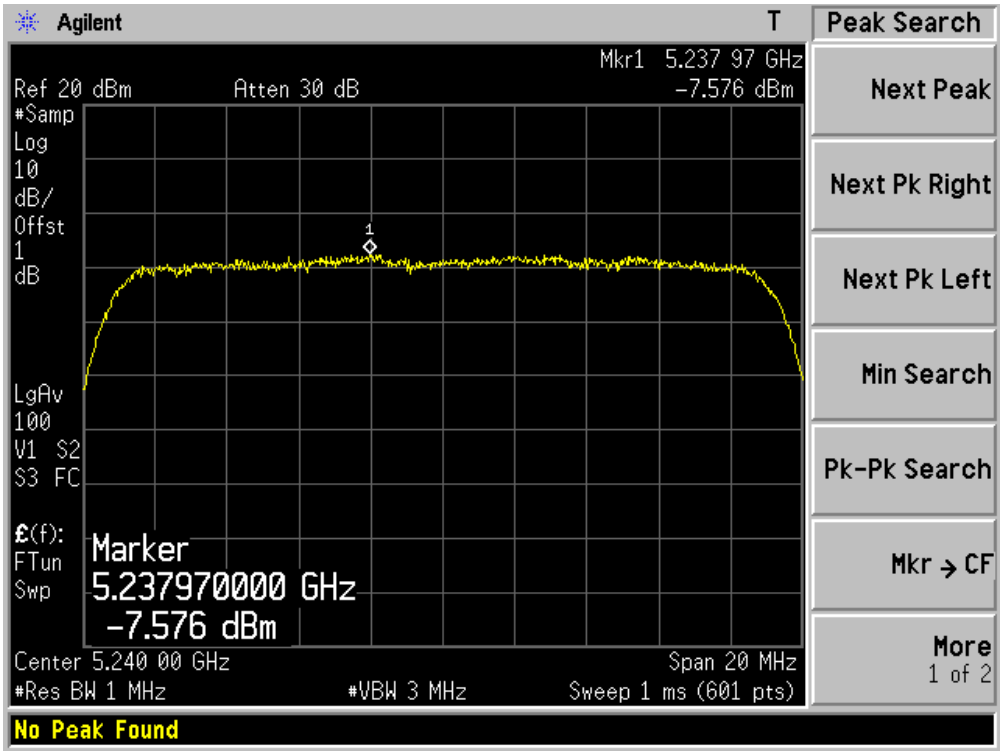
Channel 36 (5180MHz) - Chain 001



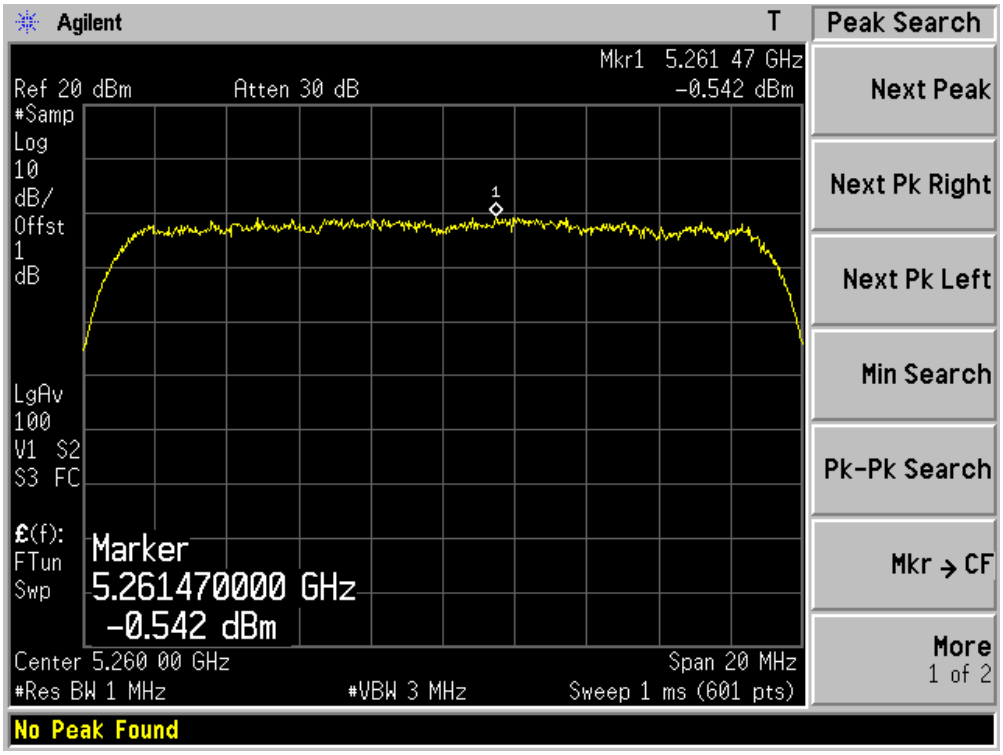
Channel 40 (5200MHz) - Chain 001



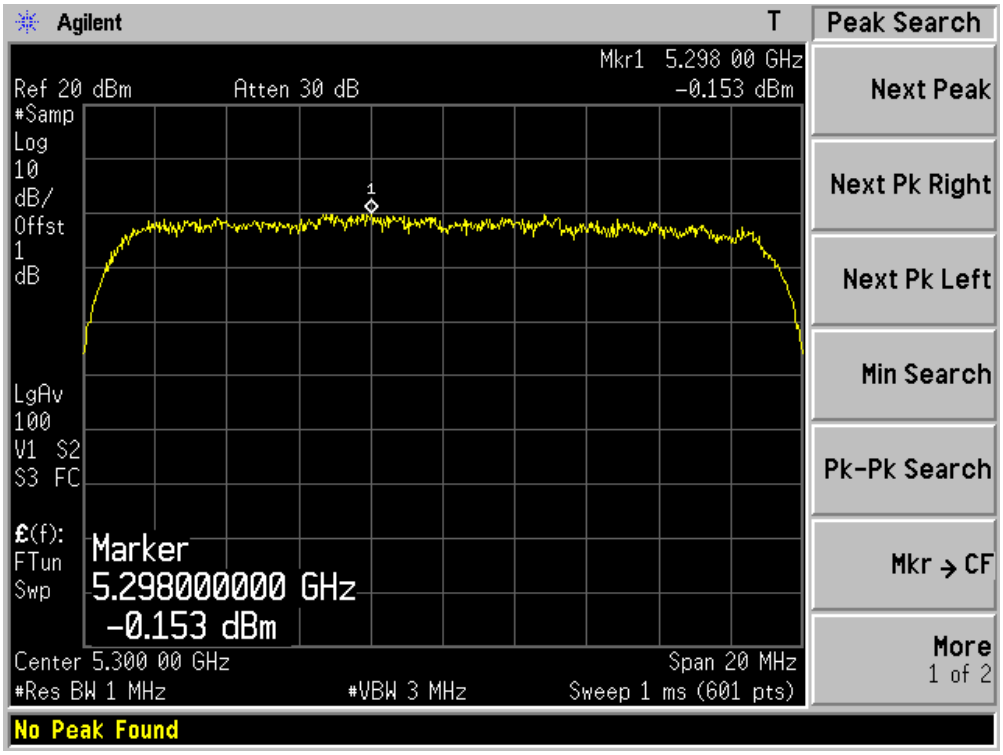
Channel 48 (5240MHz) - Chain 001



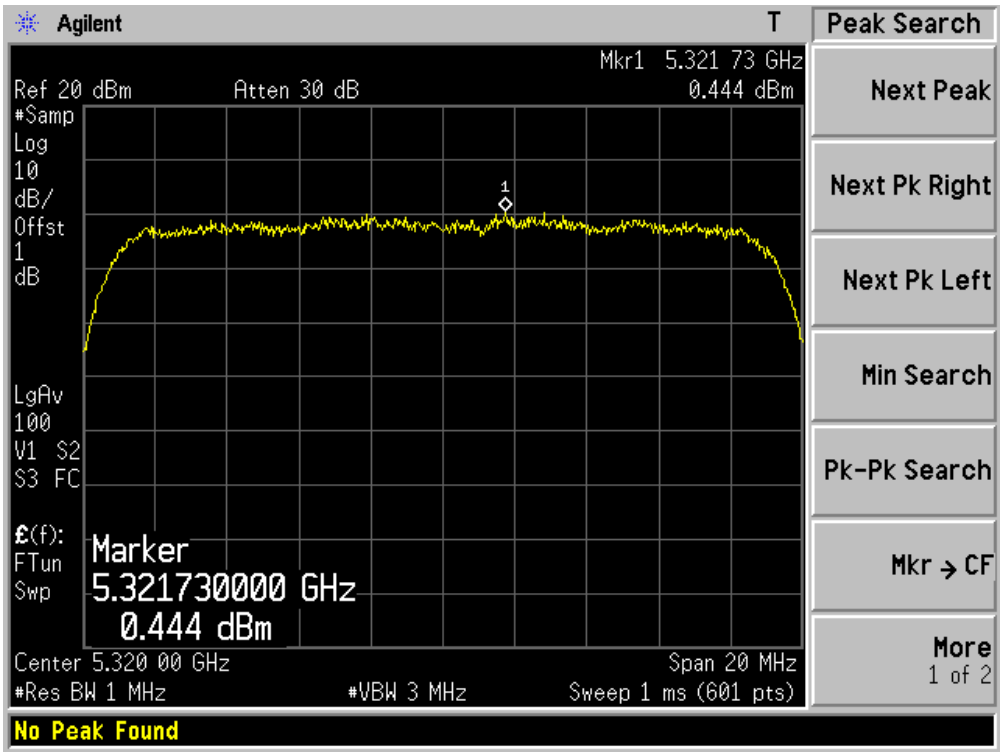
Channel 52 (5260MHz) - Chain 001



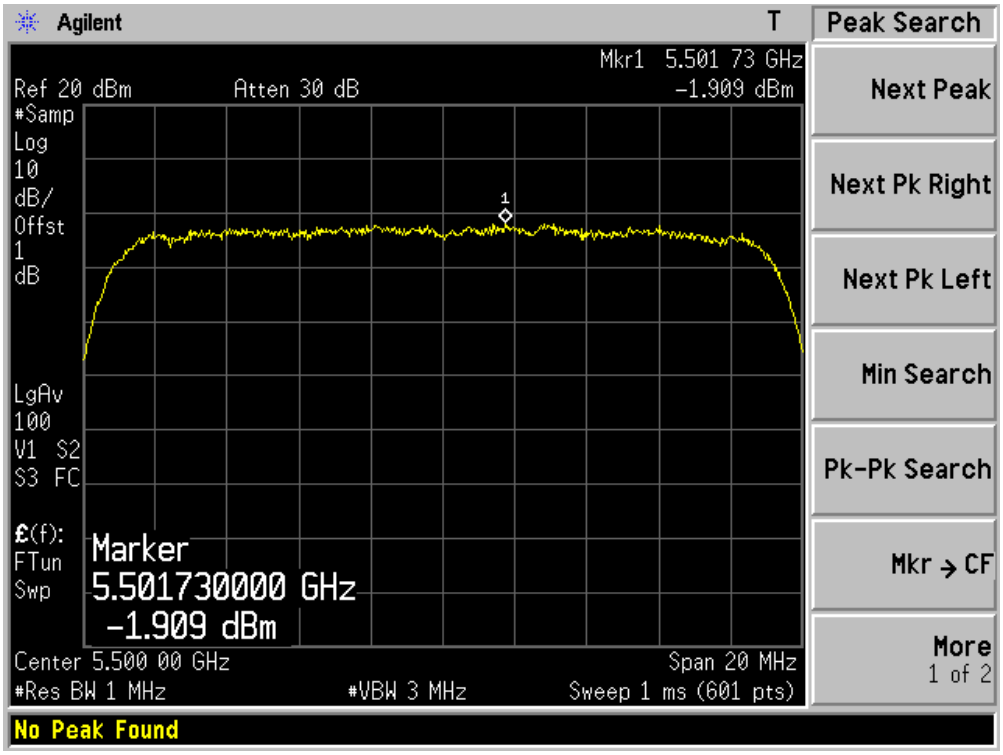
Channel 60 (5300MHz) - Chain 001



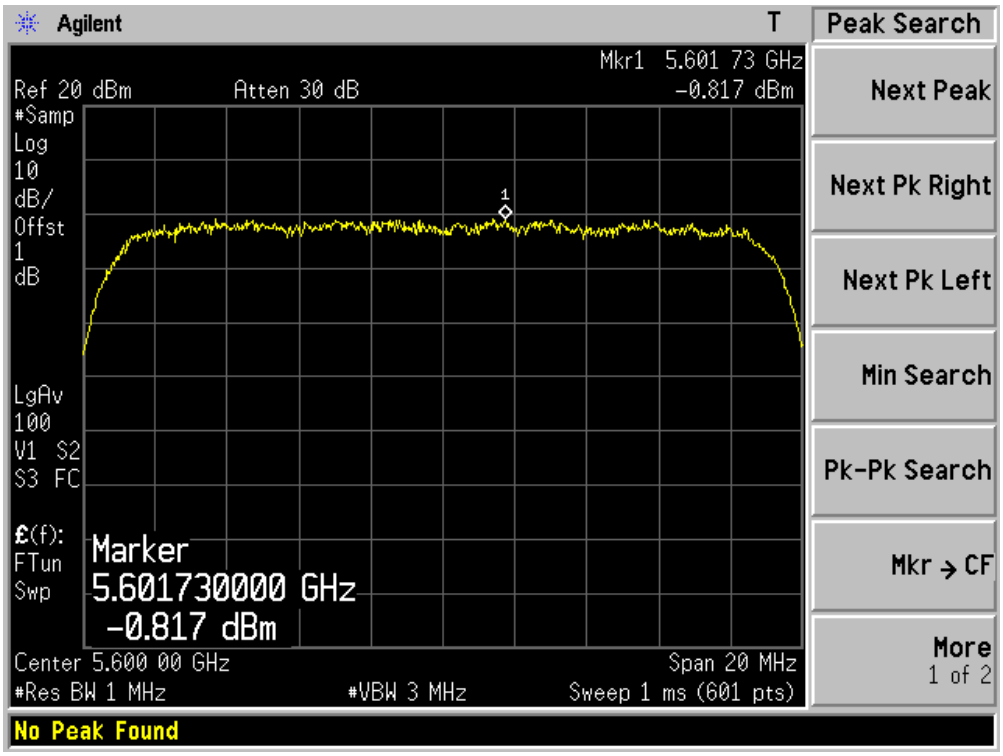
Channel 64 (5320MHz) - Chain 001



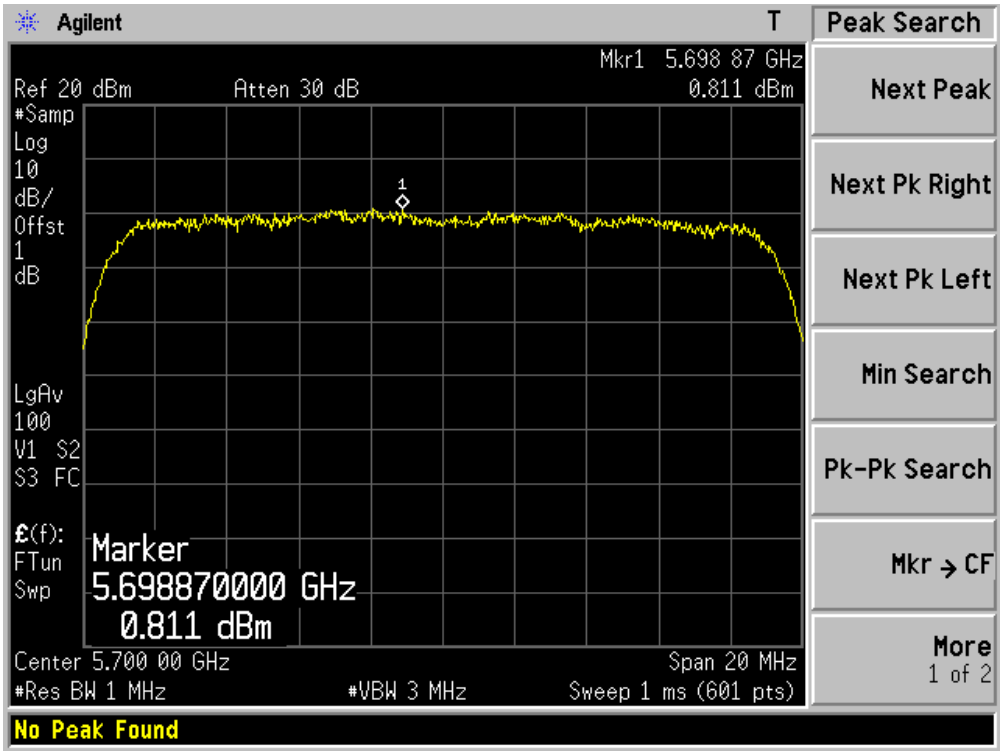
Channel 100 (5500MHz) - Chain 001



Channel 120 (5600MHz) - Chain 001



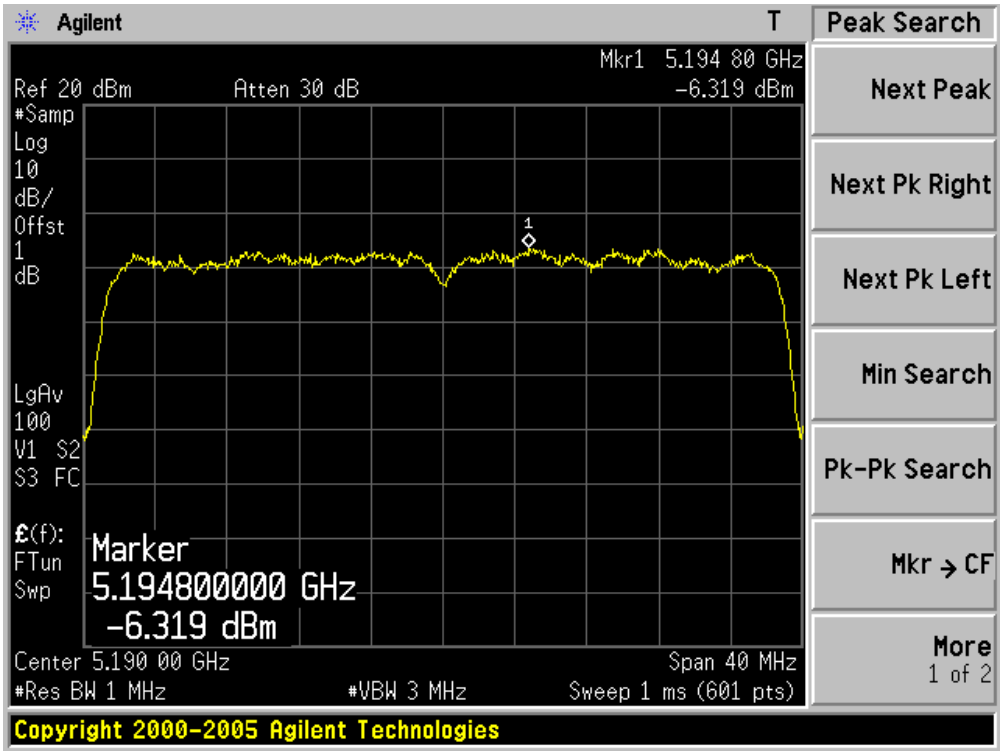
Channel 140 (5700MHz) - Chain 001



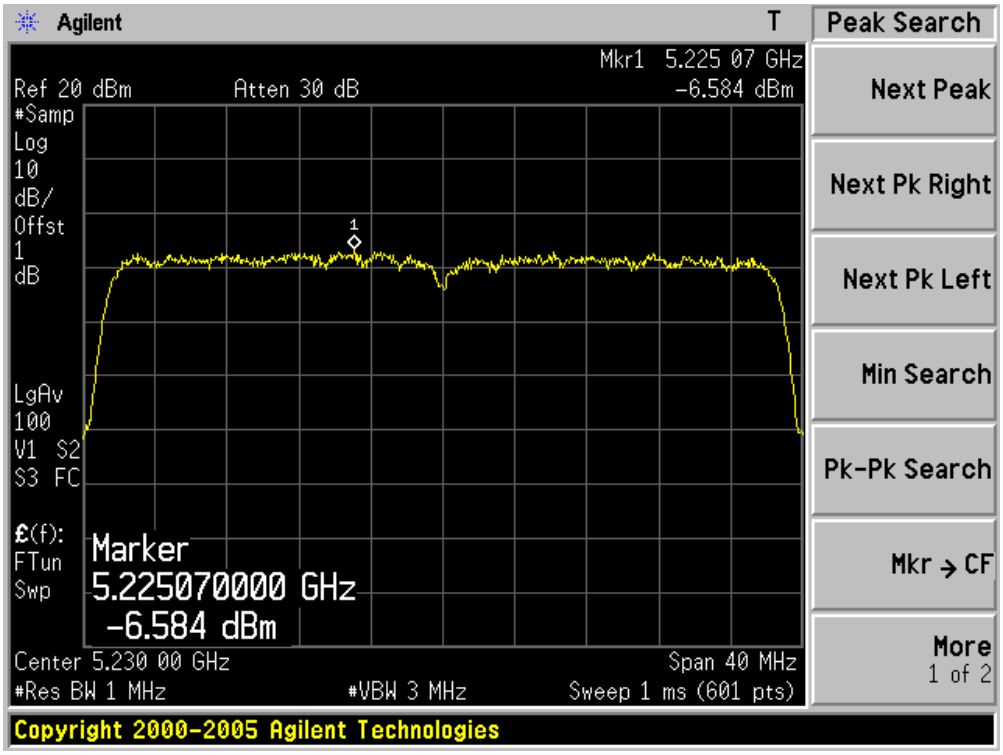
Product	:	AirPcap Nx
Test Item	:	Peak Power Spectral Density
Test Site	:	TR-8
Test Mode	:	Mode 3: Transmit by 802.11n (40MHz) (Chain 100)

Channel No.	Frequency (MHz)	Measurement PPSD (dBm/MHz)		Total PPSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Chain 100	Chain 001			
38	5190	-6.319	N/A	-6.319	4	Pass
46	5230	-6.584	N/A	-6.584	4	Pass
54	5270	-1.350	N/A	-1.350	11	Pass
62	5310	-0.634	N/A	-0.634	11	Pass
102	5510	-0.036	N/A	-0.036	11	Pass
118	5590	4.205	N/A	4.205	11	Pass
134	5670	-0.404	N/A	-0.404	11	Pass

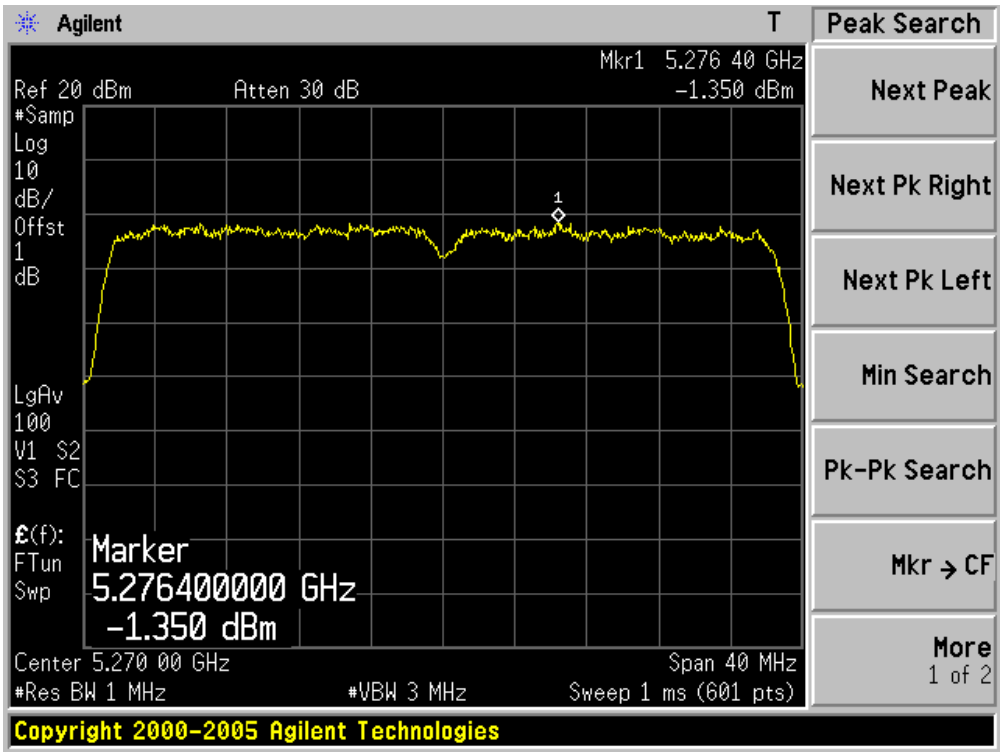
Channel 38 (5190MHz)



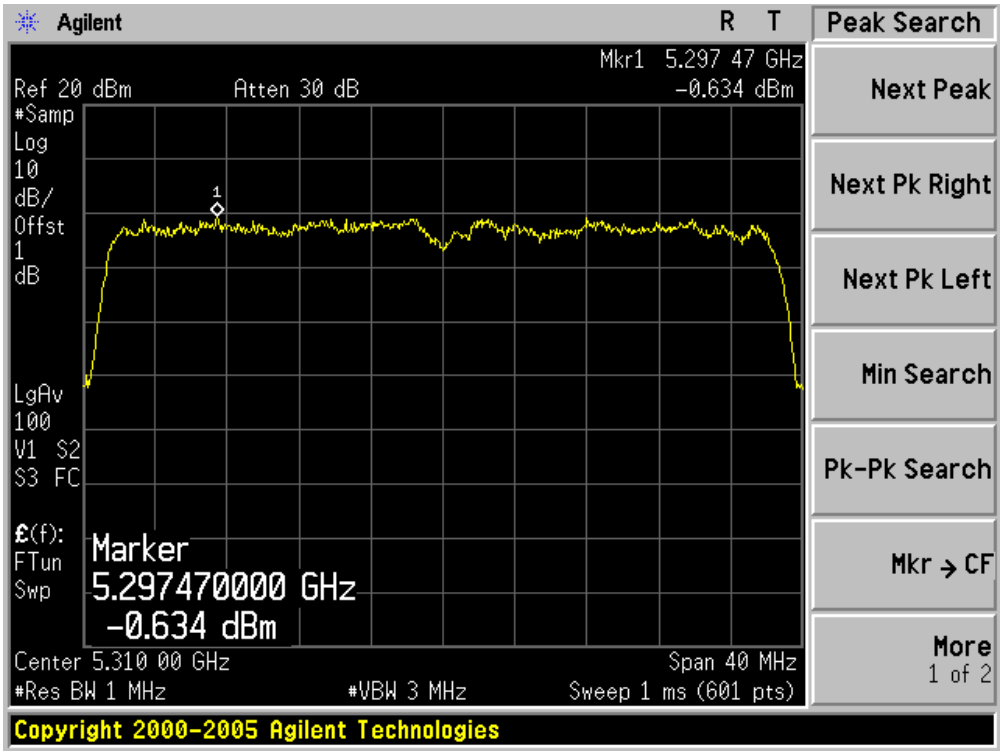
Channel 46 (5230MHz)



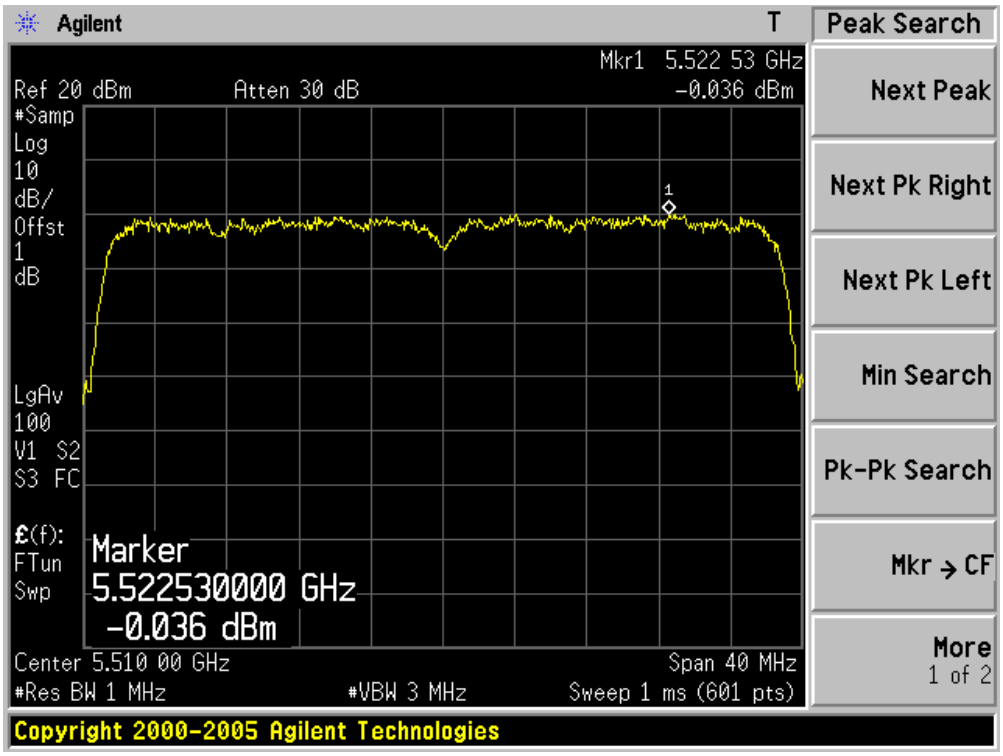
Channel 54 (5270MHz)



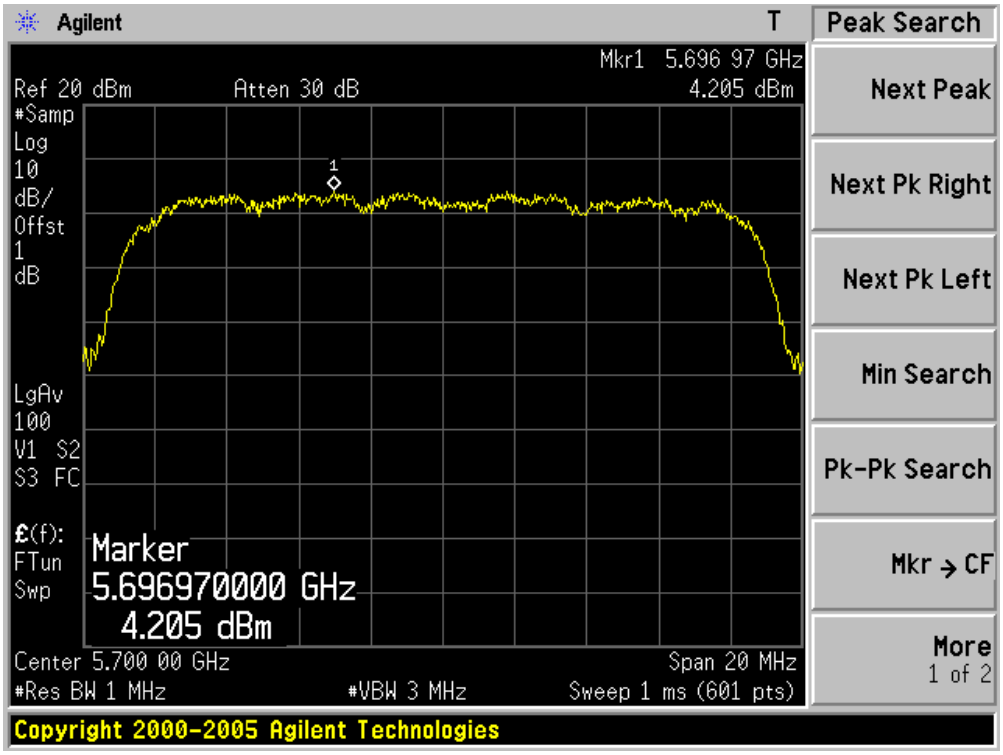
Channel 62 (5310MHz)



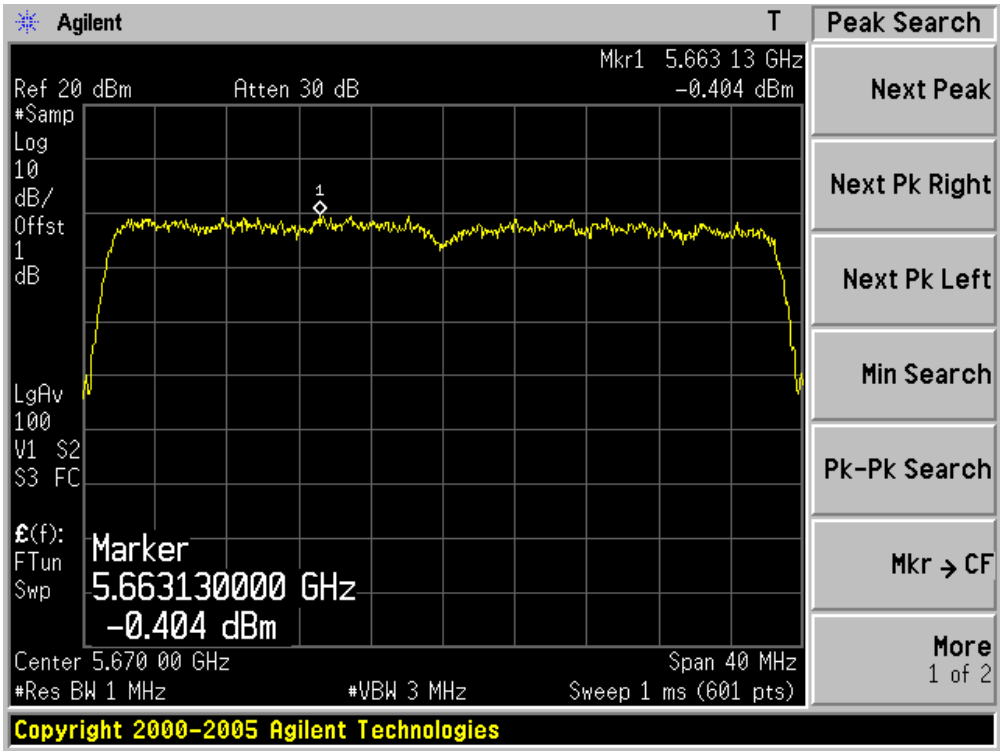
Channel 102 (5510MHz)



Channel 118 (5590MHz)



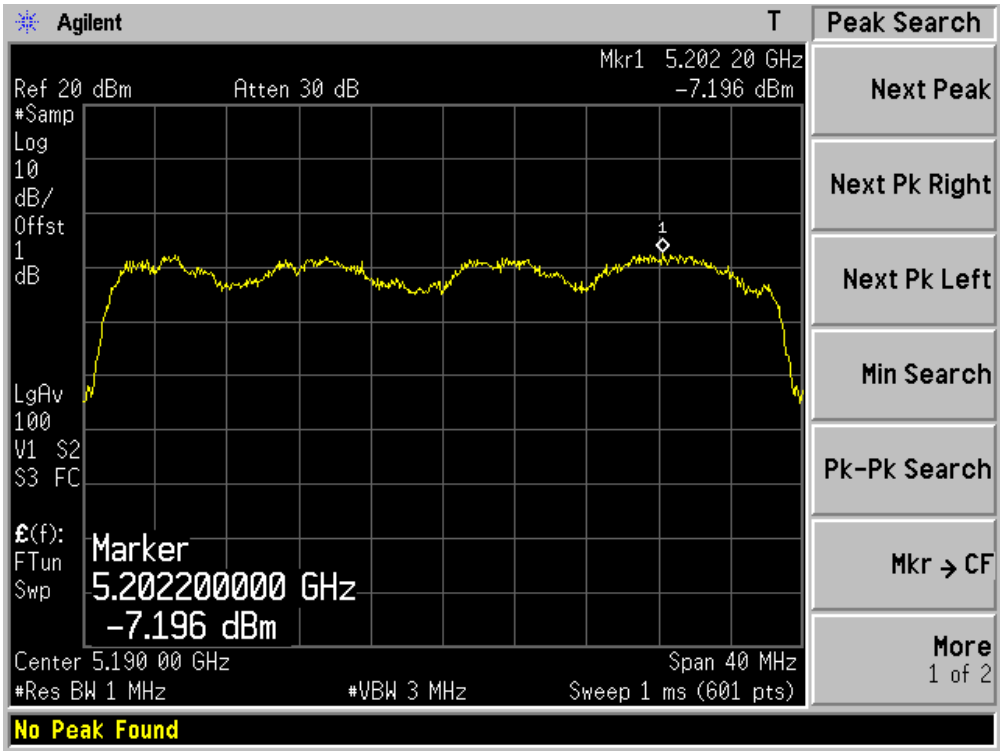
Channel 134 (5670MHz)



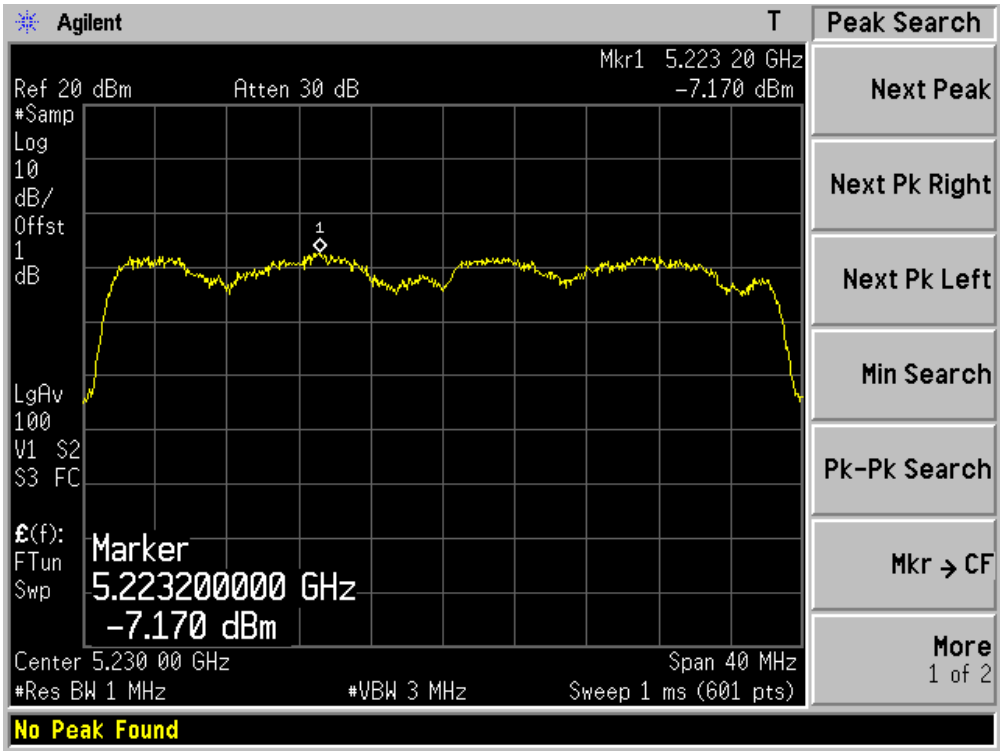
Product	:	AirPcap Nx
Test Item	:	Peak Power Spectral Density
Test Site	:	TR-8
Test Mode	:	Mode 3: Transmit by 802.11n (40MHz) (Chain 001)

Channel No.	Frequency (MHz)	Measurement PPSD (dBm/MHz)		Total PPSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Chain 100	Chain 001			
38	5190	N/A	-7.196	-7.196	4	Pass
46	5230	N/A	-7.170	-7.170	4	Pass
54	5270	N/A	-0.157	-0.157	11	Pass
62	5310	N/A	0.582	0.582	11	Pass
102	5510	N/A	-2.267	-2.267	11	Pass
118	5590	N/A	0.032	0.032	11	Pass
134	5670	N/A	0.540	0.540	11	Pass

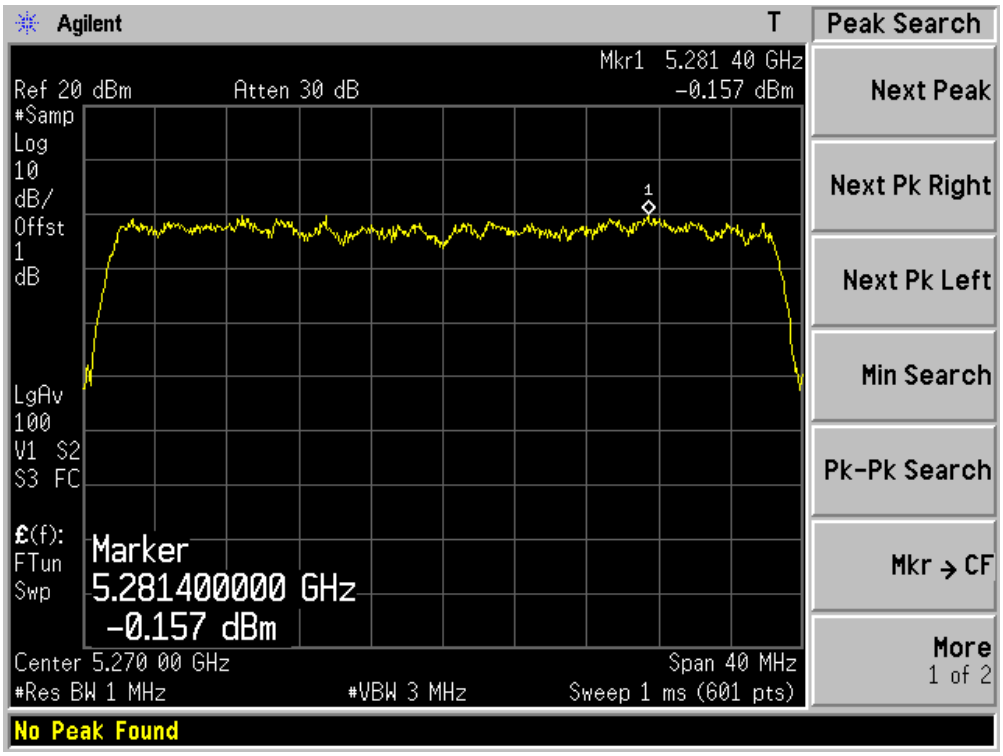
Channel 38 (5190MHz)



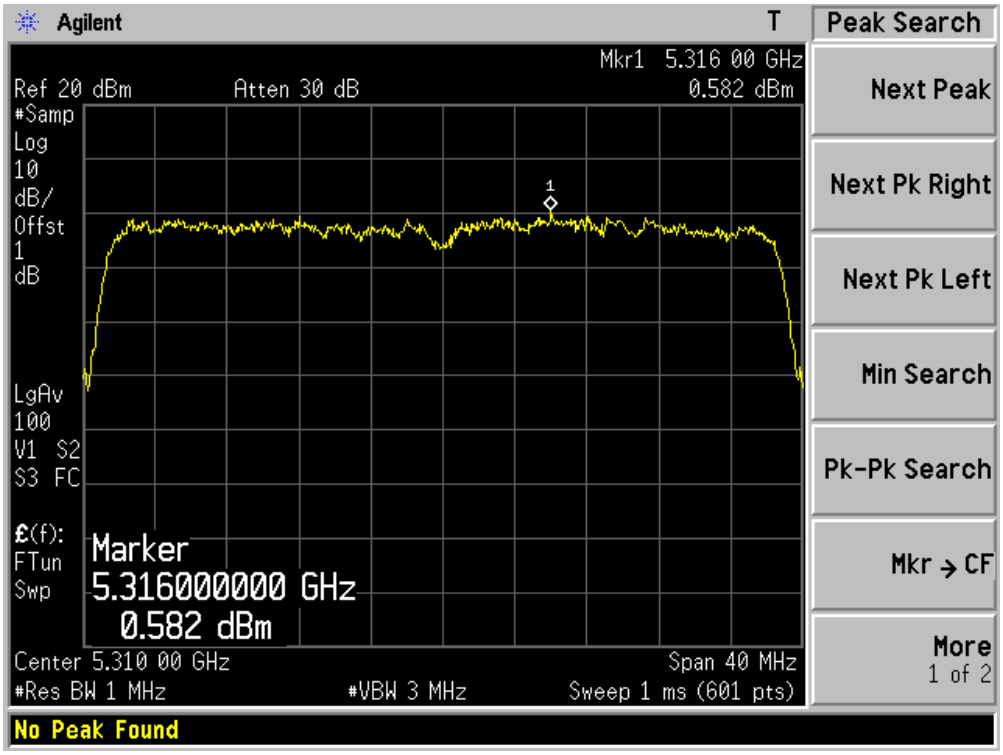
Channel 46 (5230MHz)



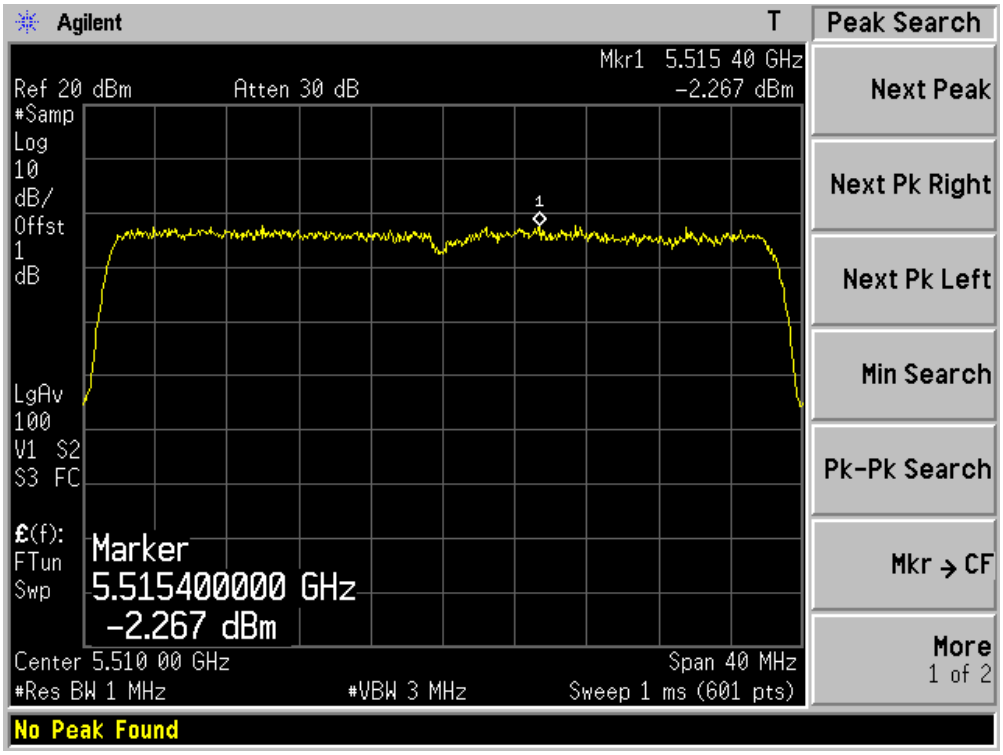
Channel 54 (5270MHz)



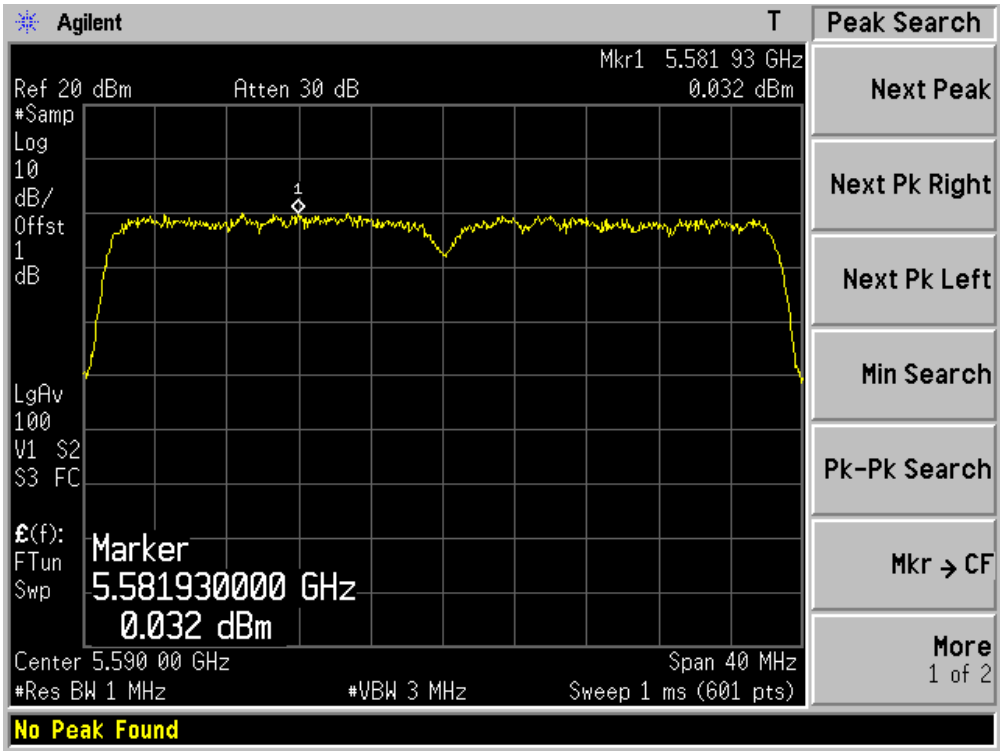
Channel 62 (5310MHz)



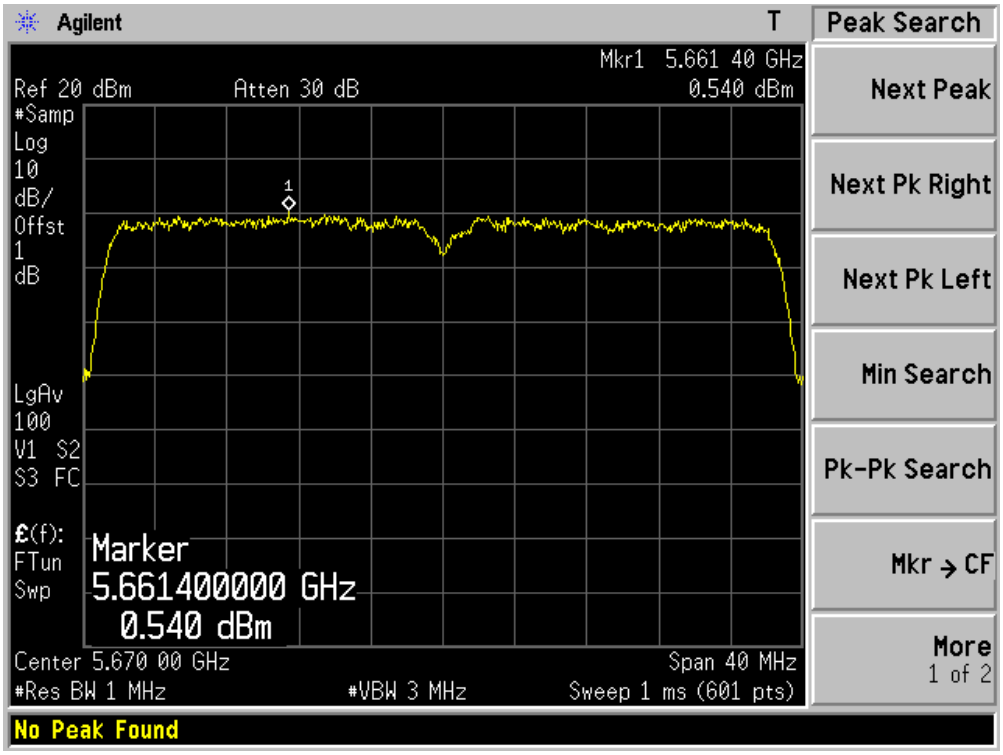
Channel 102 (5510MHz)



Channel 118 (5590MHz)



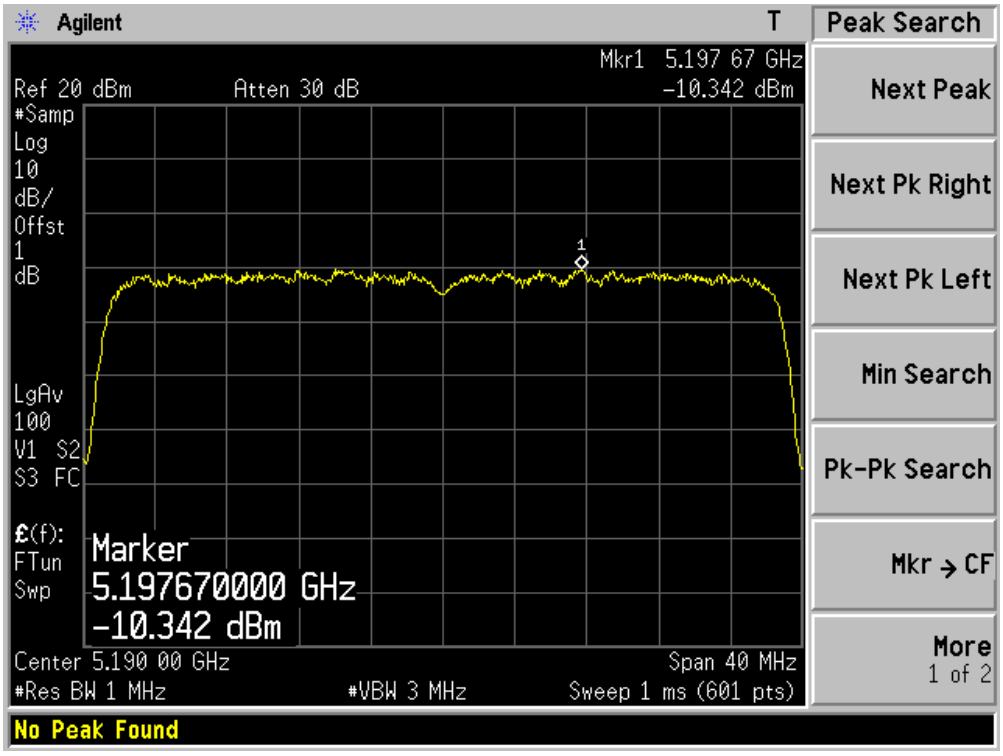
Channel 134 (5670MHz)



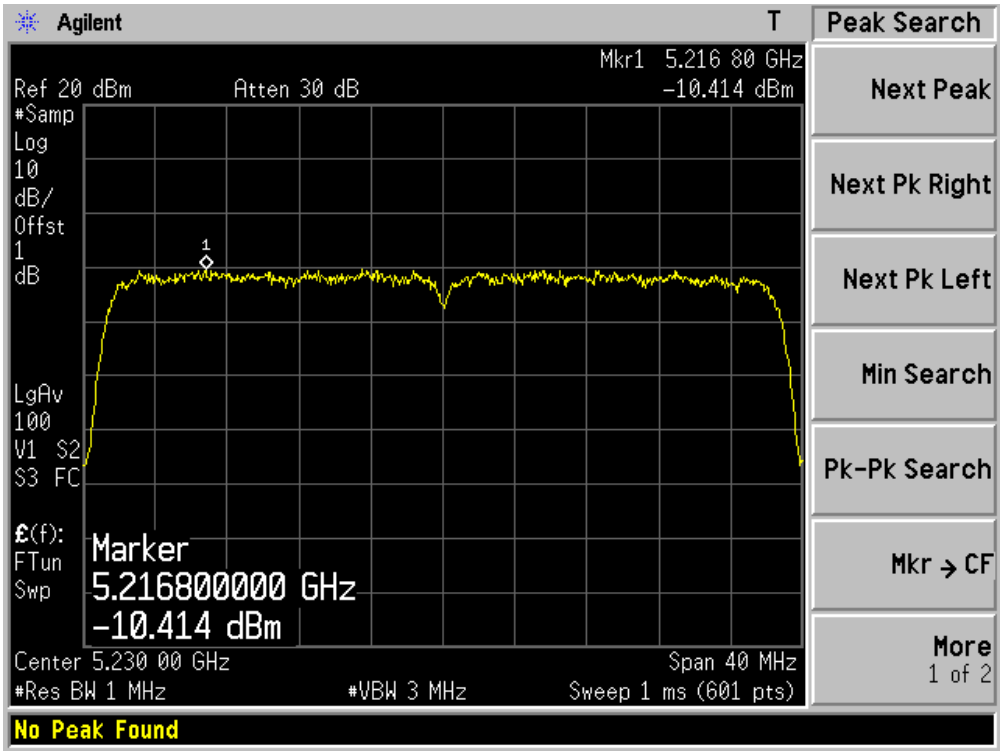
Product	:	AirPcap Nx
Test Item	:	Peak Power Spectral Density
Test Site	:	TR-8
Test Mode	:	Mode 3: Transmit by 802.11n (40MHz) (Chain 101)

Channel No.	Frequency (MHz)	Measurement PPSD (dBm/MHz)		Total PPSD (dBm/MHz)	Limit (dBm/MHz)	Result
		Chain 100	Chain 001			
38	5190	-10.342	-10.102	-7.21	4	Pass
46	5230	-10.414	-9.453	-6.90	4	Pass
54	5270	-3.258	-9.453	-2.32	11	Pass
62	5310	-3.472	-3.535	-0.49	11	Pass
102	5510	-1.671	-4.572	0.13	11	Pass
118	5590	-1.756	-2.801	0.76	11	Pass
134	5670	-2.688	-2.882	0.23	11	Pass

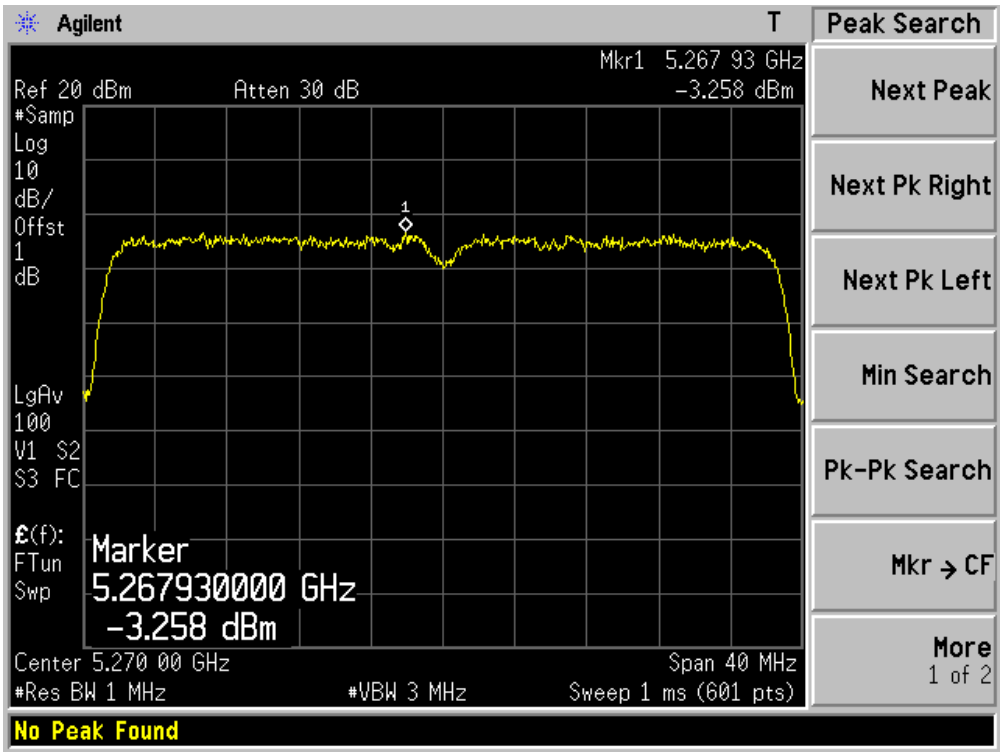
Channel 38 (5190MHz) - Chain 100



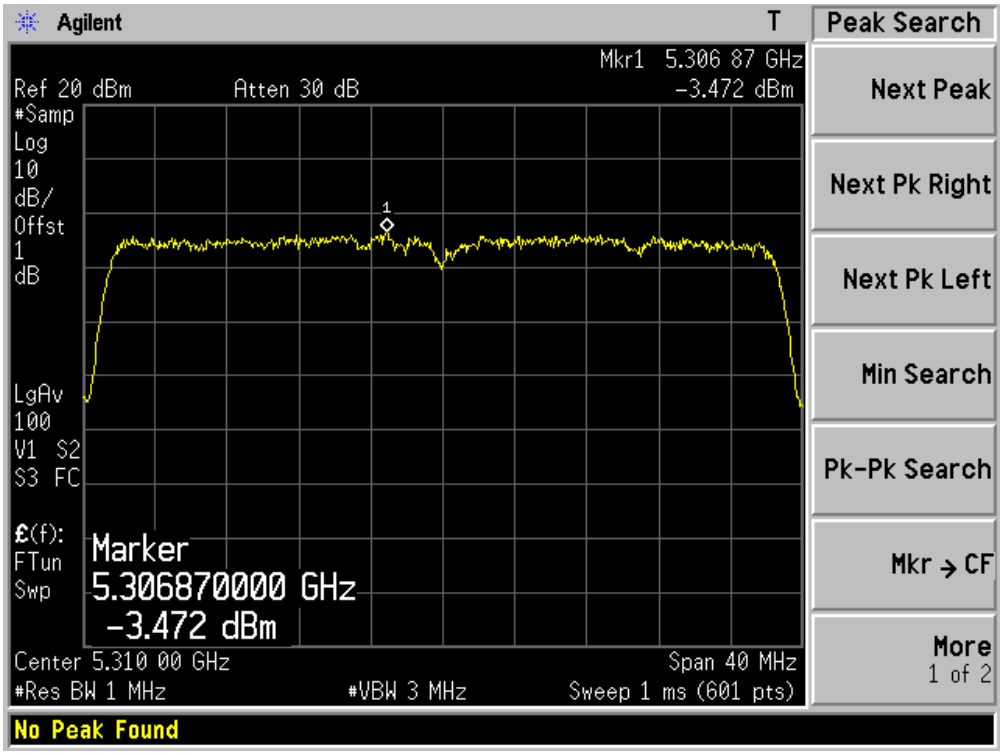
Channel 46 (5230MHz) - Chain 100



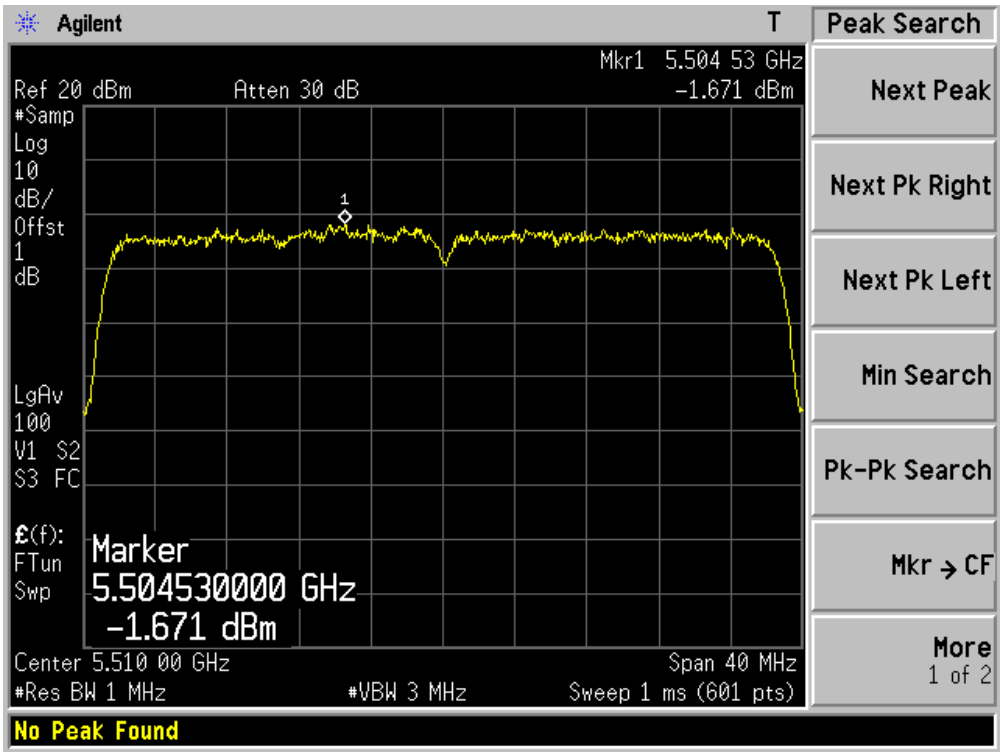
Channel 54 (5270MHz) - Chain 100



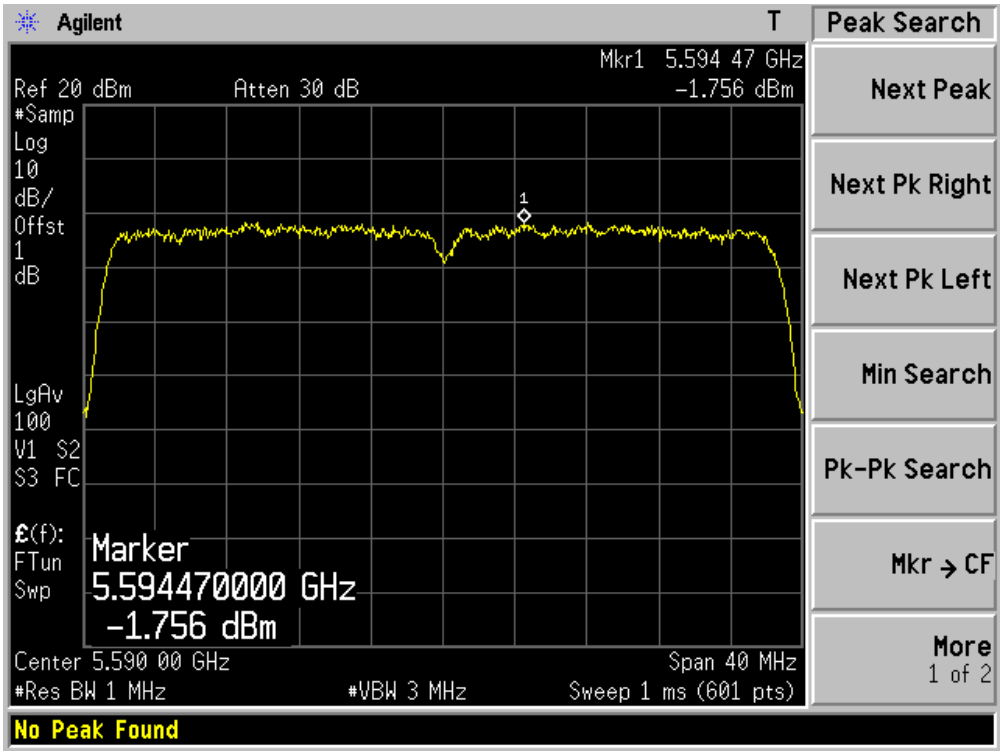
Channel 62 (5310MHz) - Chain 100



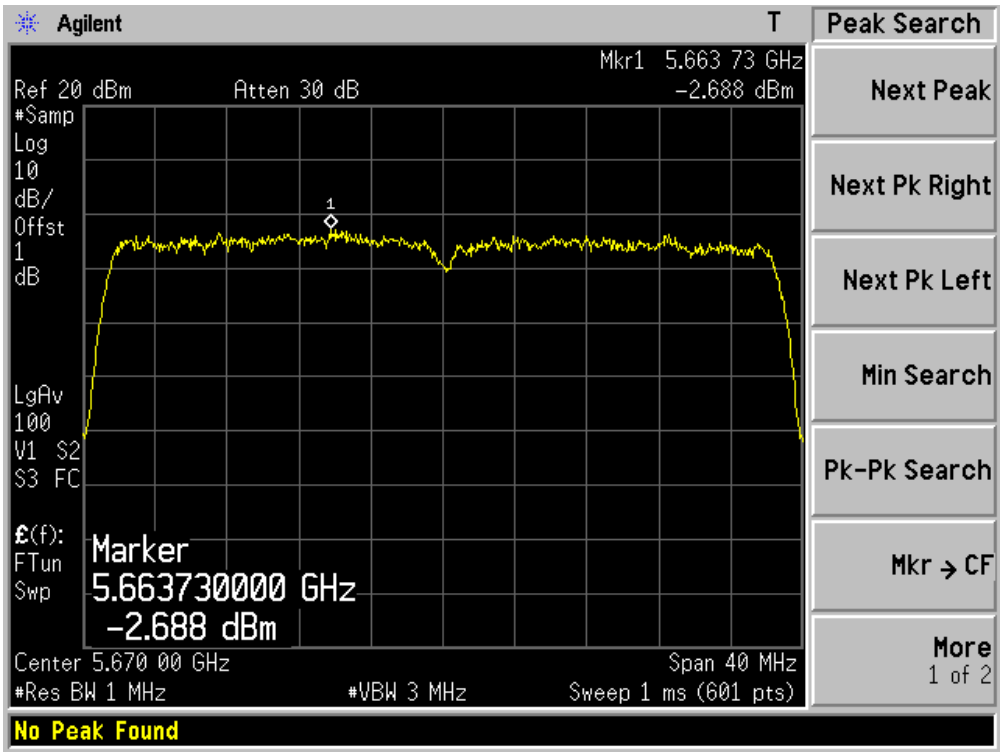
Channel 102 (5510MHz) - Chain 100



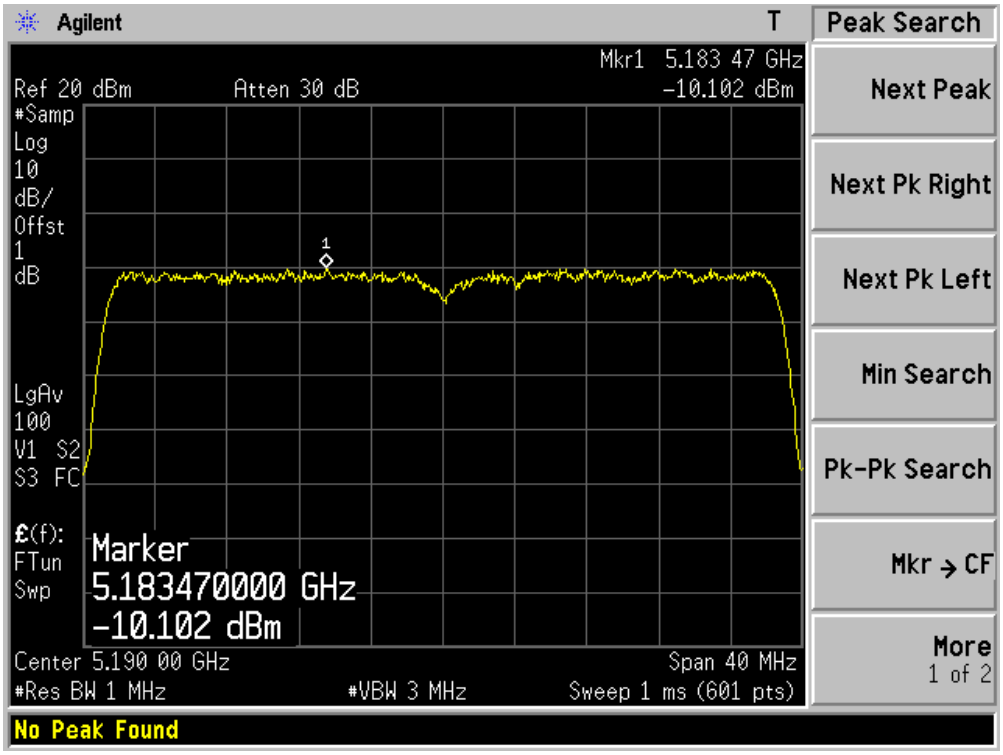
Channel 118 (5590MHz) - Chain 100



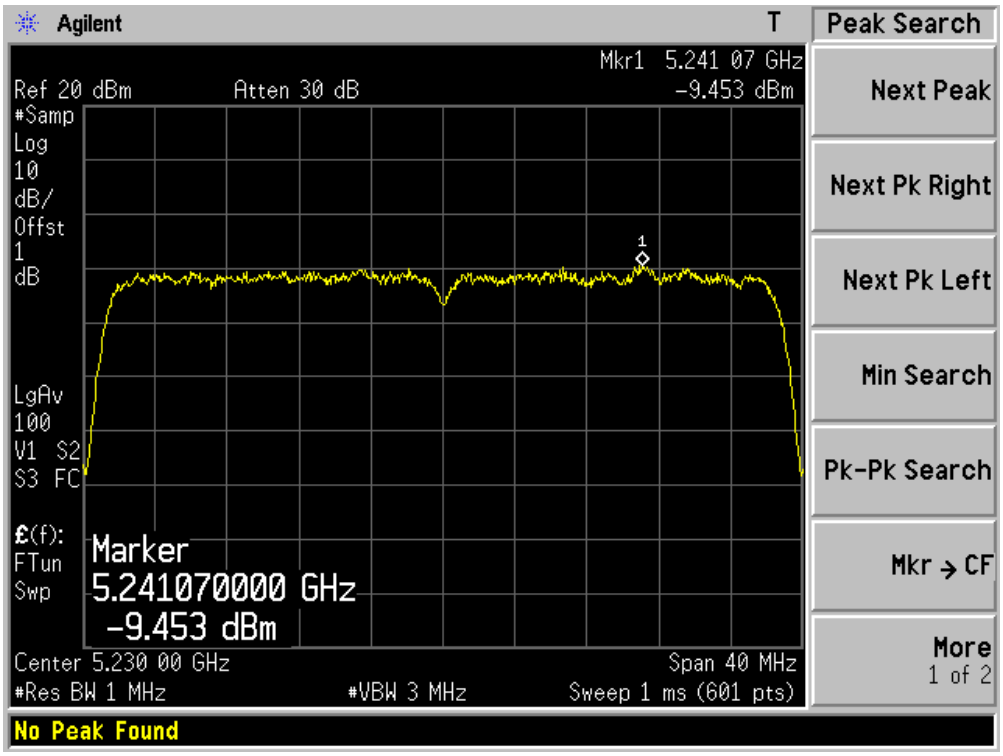
Channel 134 (5670MHz) - Chain 100



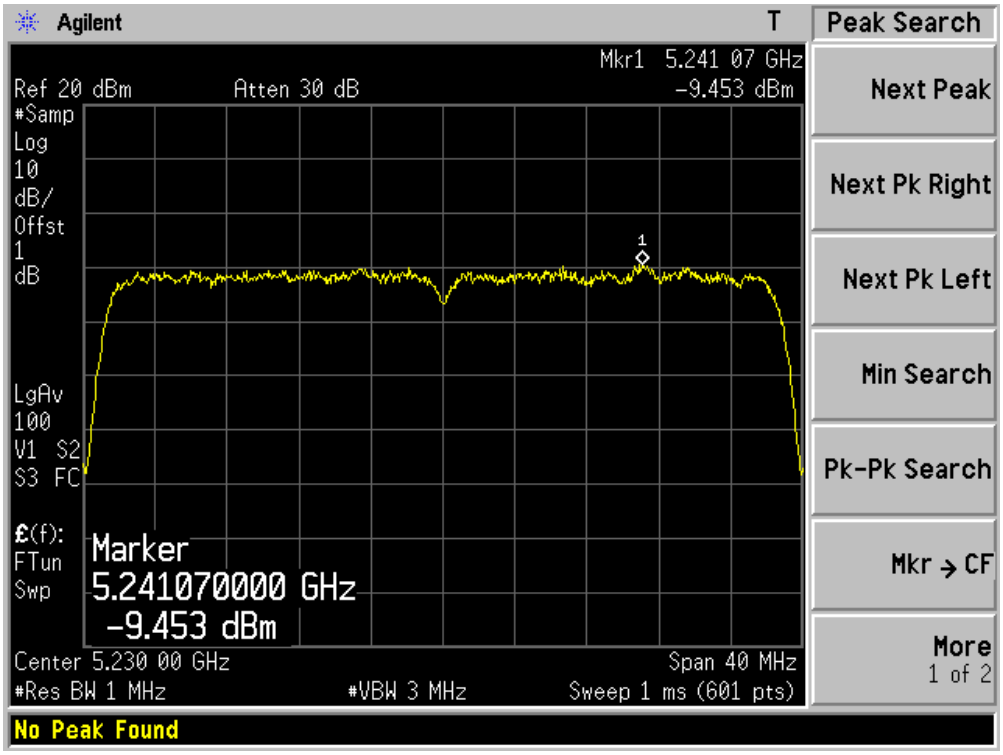
Channel 38 (5190MHz) - Chain 001



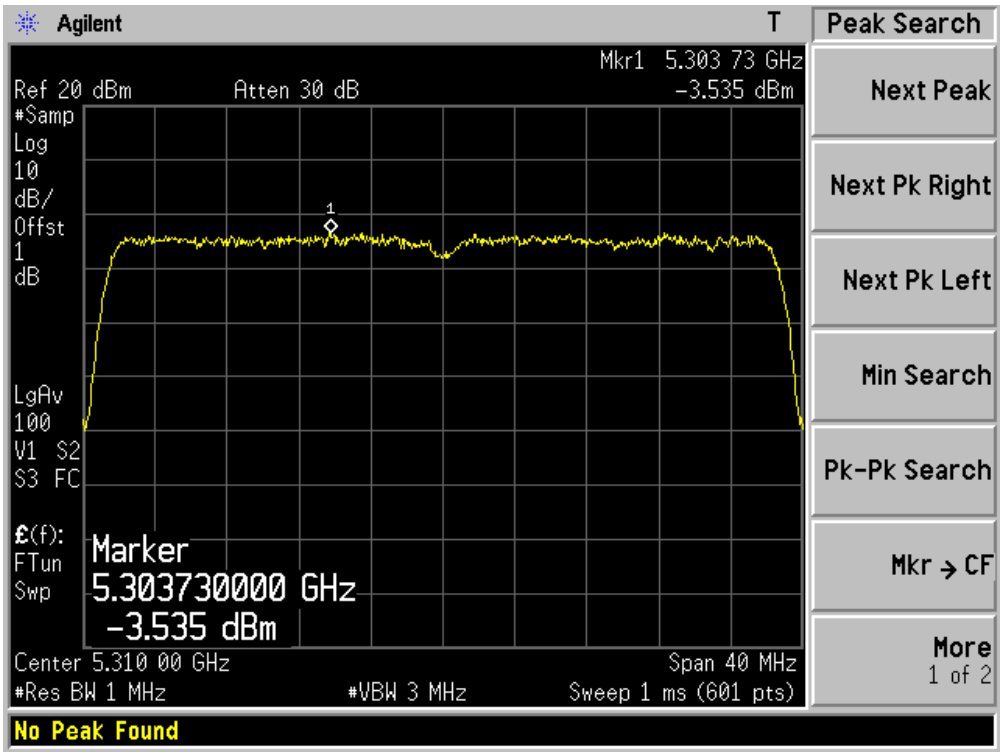
Channel 46 (5230MHz) - Chain 001



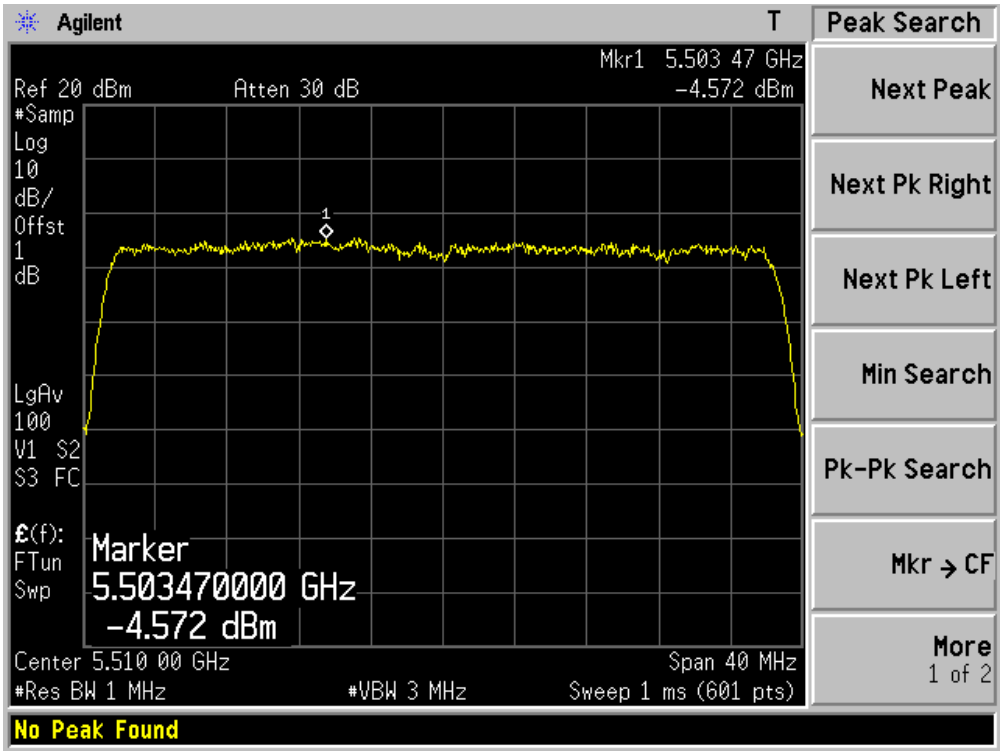
Channel 54 (5270MHz) - Chain 001



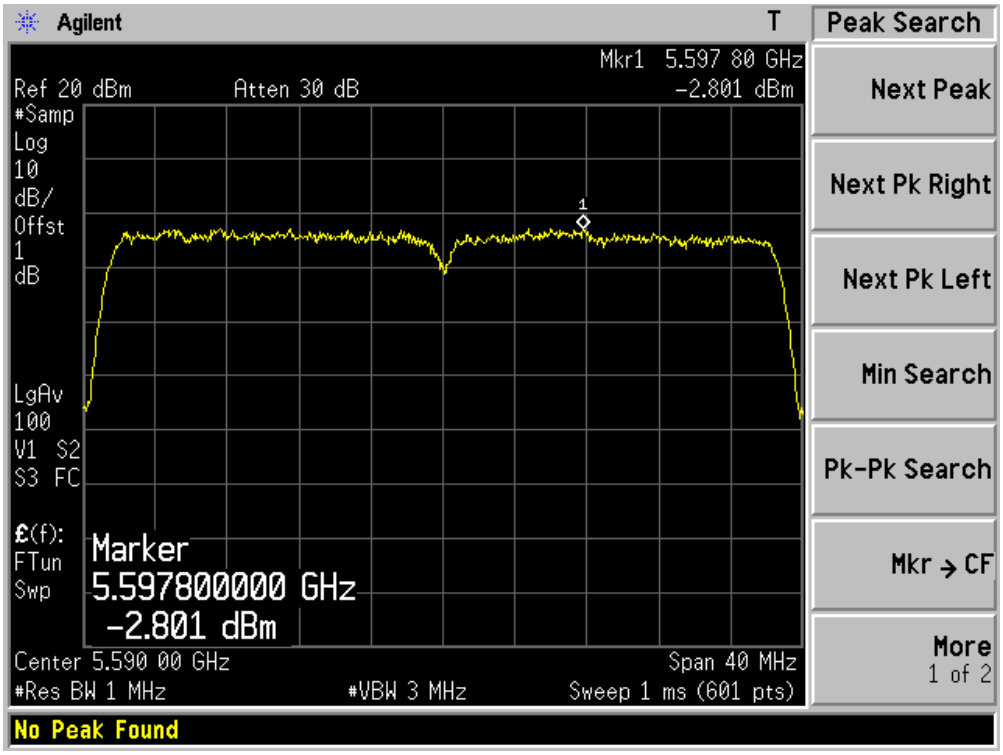
Channel 62 (5310MHz) - Chain 001



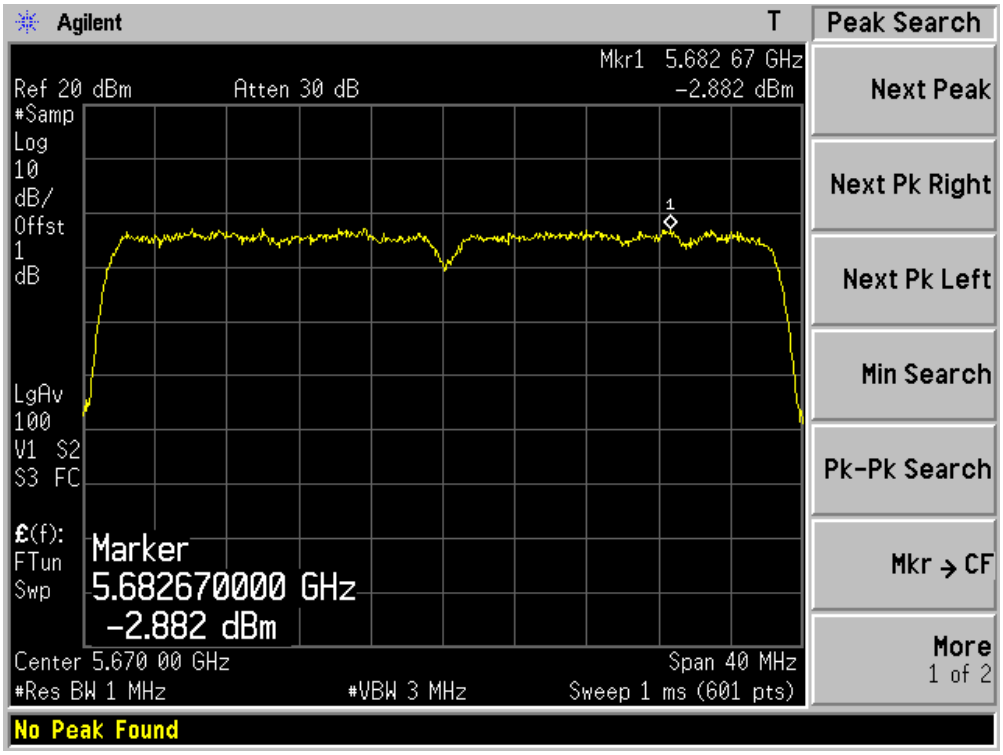
Channel 102 (5510MHz) - Chain 001



Channel 118 (5590MHz) - Chain 001



Channel 134 (5670MHz) - Chain 001



9. Peak Excursion

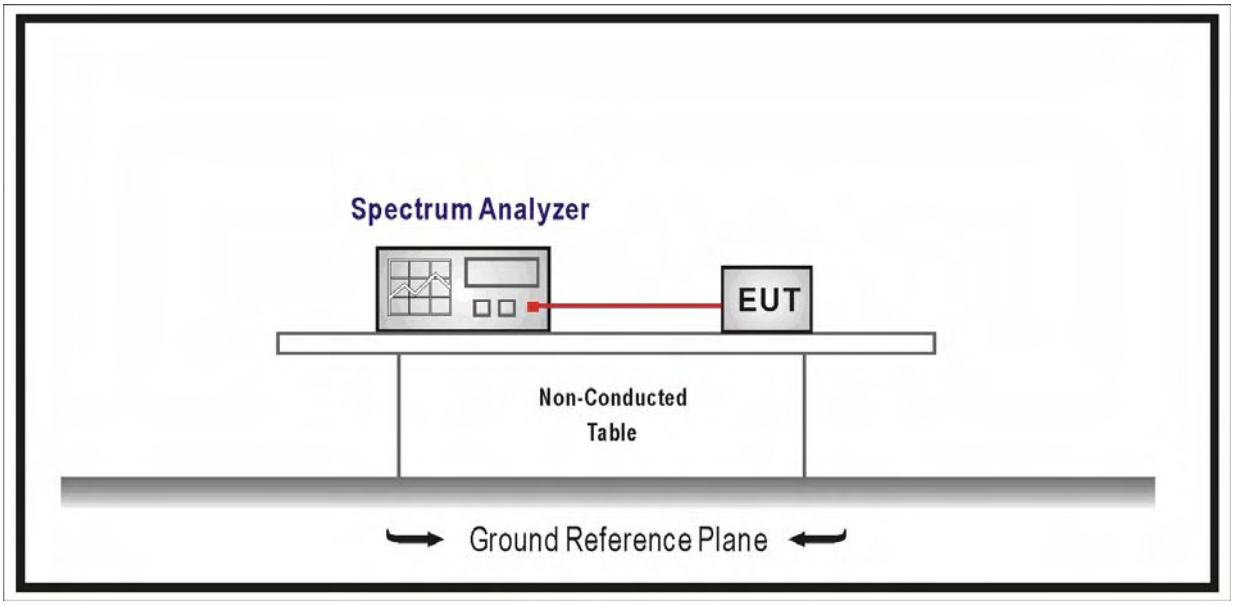
9.1. Test Equipment

Peak Excursion / TR-8

Instrument	Manufacturer	Type No.	Serial No.	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2010.04.30
Temperature/Humidity Meter	zhicheng	ZC1-2	TR8-TH	2010.05.04

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

9.2. Test Setup



9.3. Limit

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

9.4. Test Procedure

The EUT was tested according to ANSI C63.10: 2009 for compliance to FCC 47CFR 15.407 requirements.

Set the spectrum analyzer span to view the entire emission bandwidth. The largest difference between the following two traces must be ≤ 13 dB for all frequencies across the emission bandwidth.

- 1st Trace: Set RBW = 1 MHz, VBW ≥ 3 MHz with peak detector and maxhold settings.
- 2nd Trace: Set RBW = 1 MHz, VBW = 30 kHz with peak detector and maxhold settings.

9.5. Uncertainty

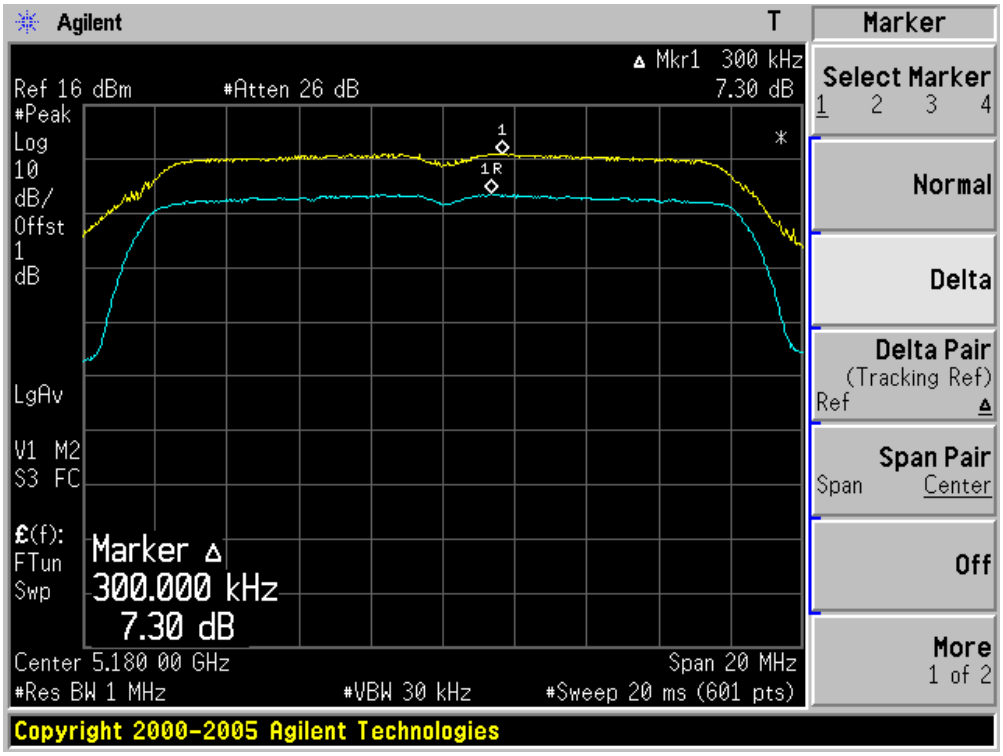
The measurement uncertainty is defined as ± 1.27 dB

9.6. Test Result

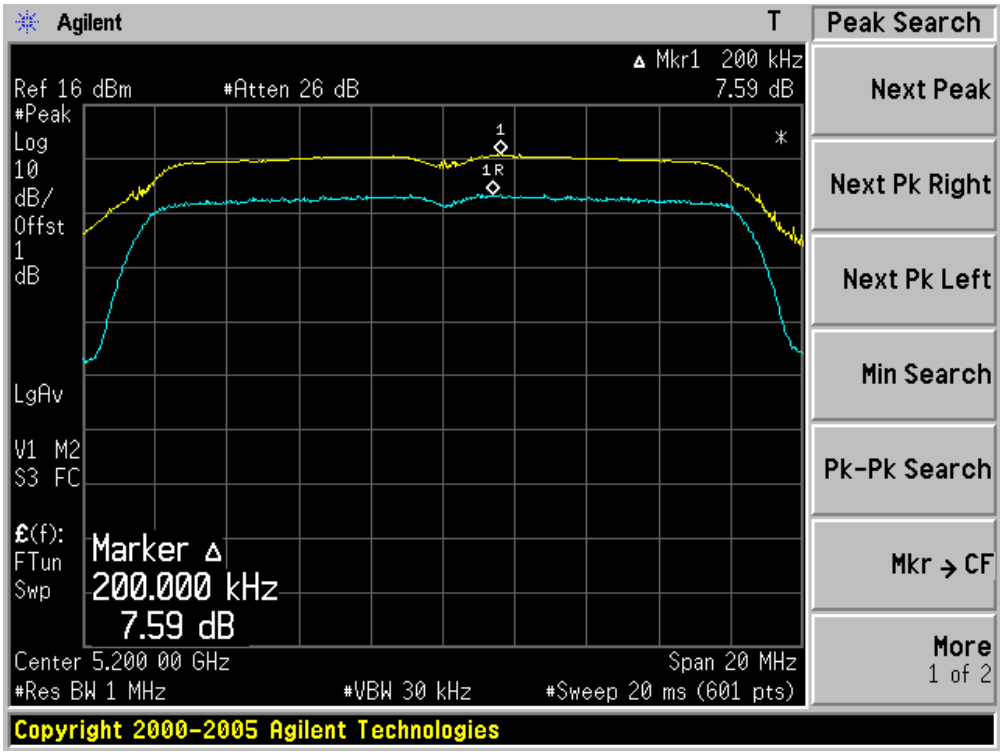
Product	:	AirPcap Nx
Test Item	:	Peak Excursion
Test Site	:	TR-8
Test Mode	:	Mode 1: Transmit by 802.11a (Chain 100)

Channel No.	Frequency (MHz)	Peak Excursion (dB)	Limit (dB)	Result
36	5180	7.30	13	Pass
40	5200	7.59	13	Pass
48	5240	7.79	13	Pass
52	5260	7.94	13	Pass
60	5300	7.41	13	Pass
64	5320	7.57	13	Pass
100	5500	7.50	13	Pass
120	5600	7.43	13	Pass
140	5700	7.48	13	Pass

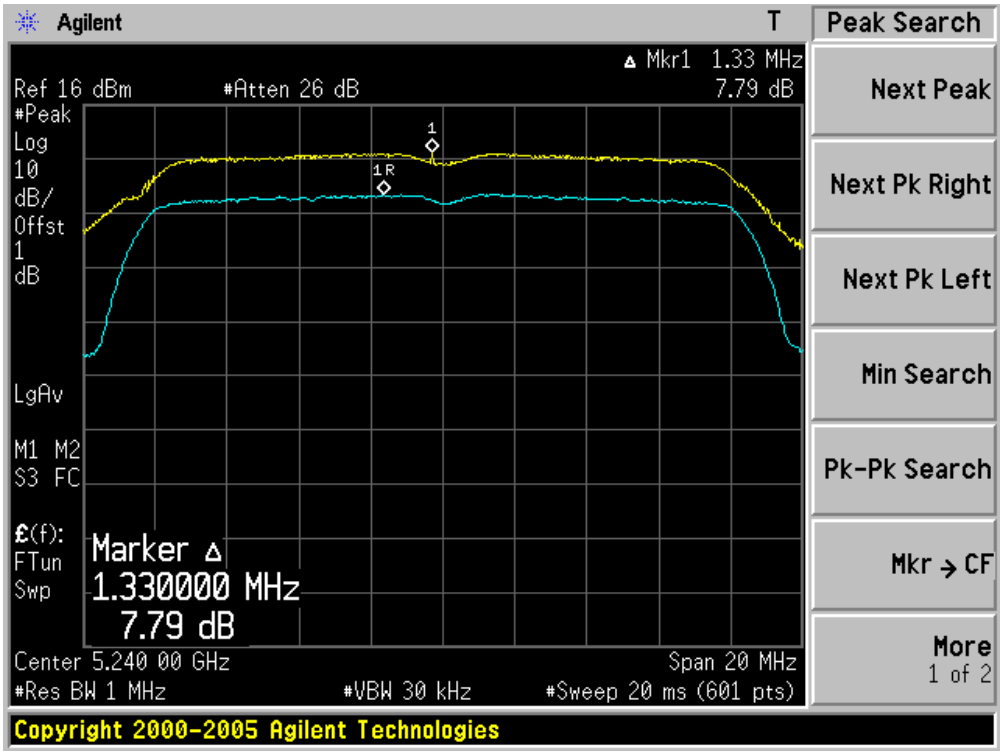
Channel 36 (5180MHz)



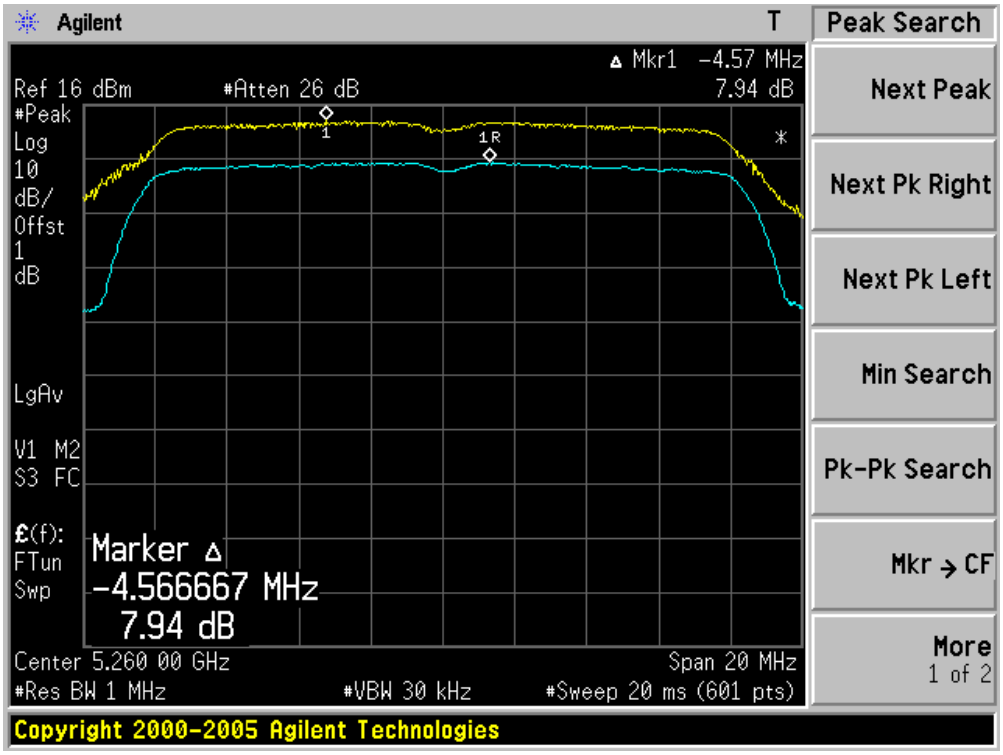
Channel 40 (5200MHz)



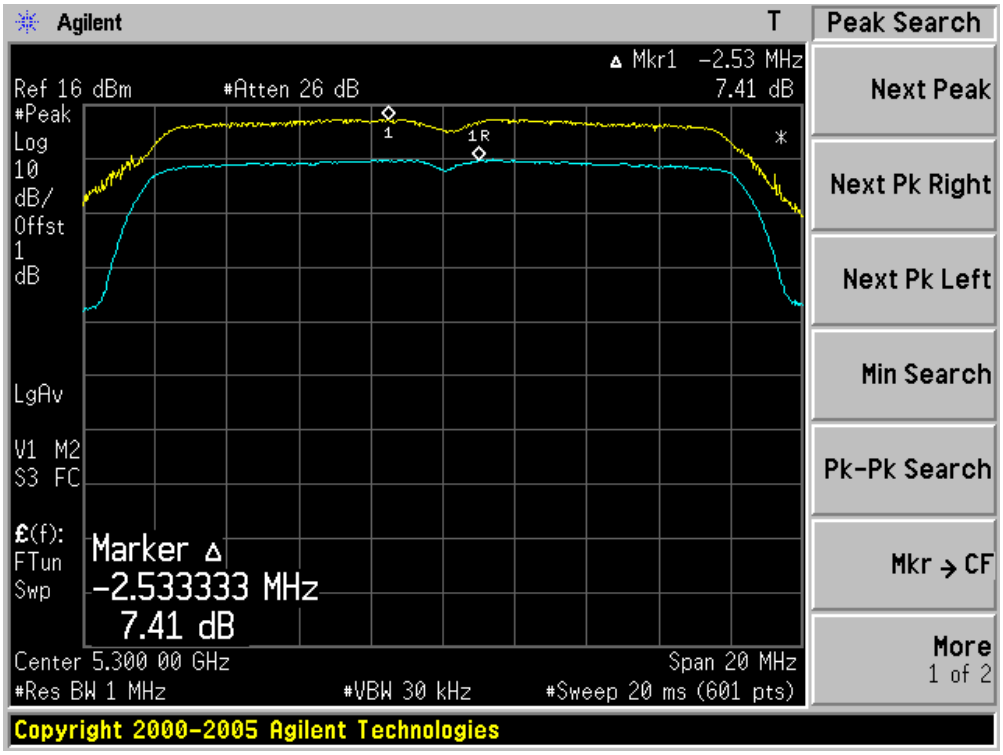
Channel 48 (5240MHz)



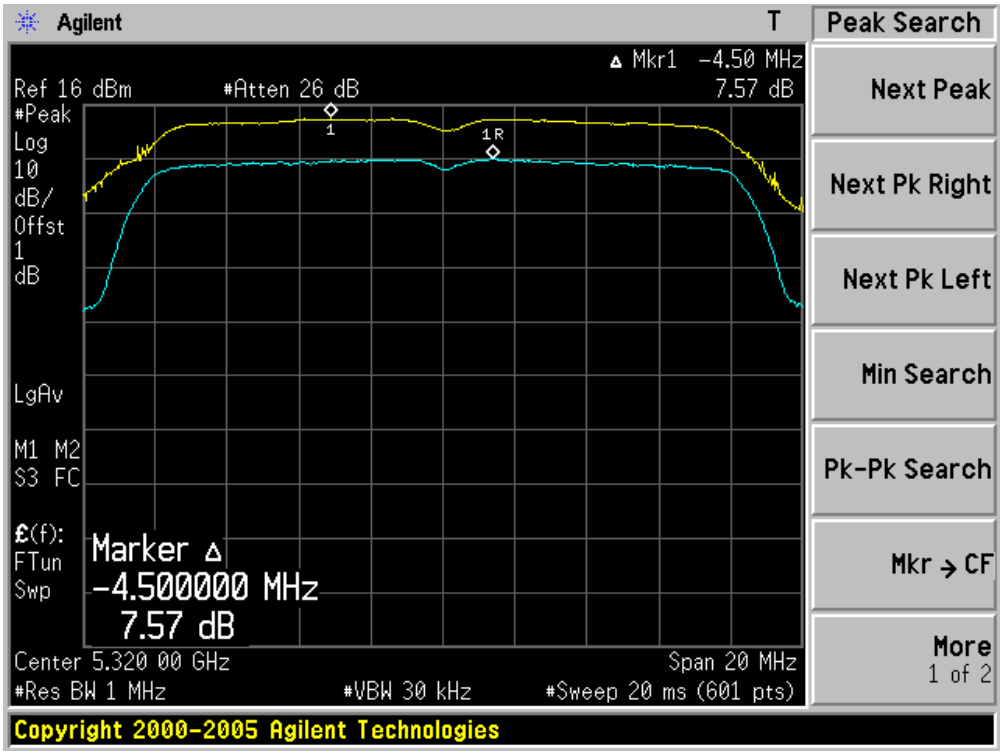
Channel 52 (5260MHz)



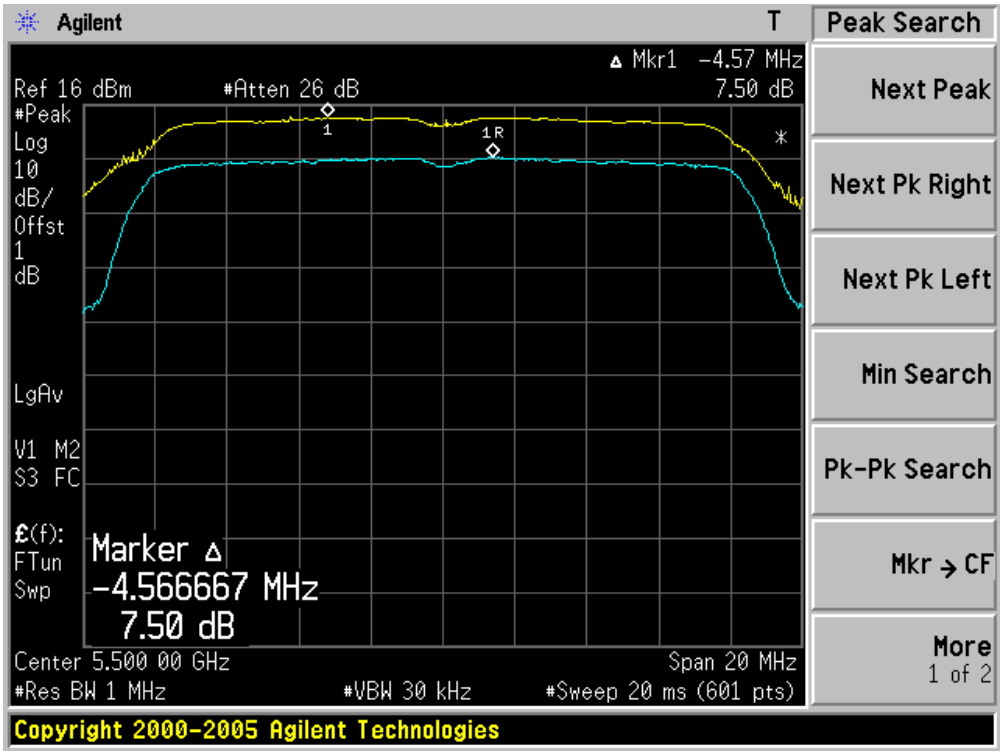
Channel 60 (5300MHz)



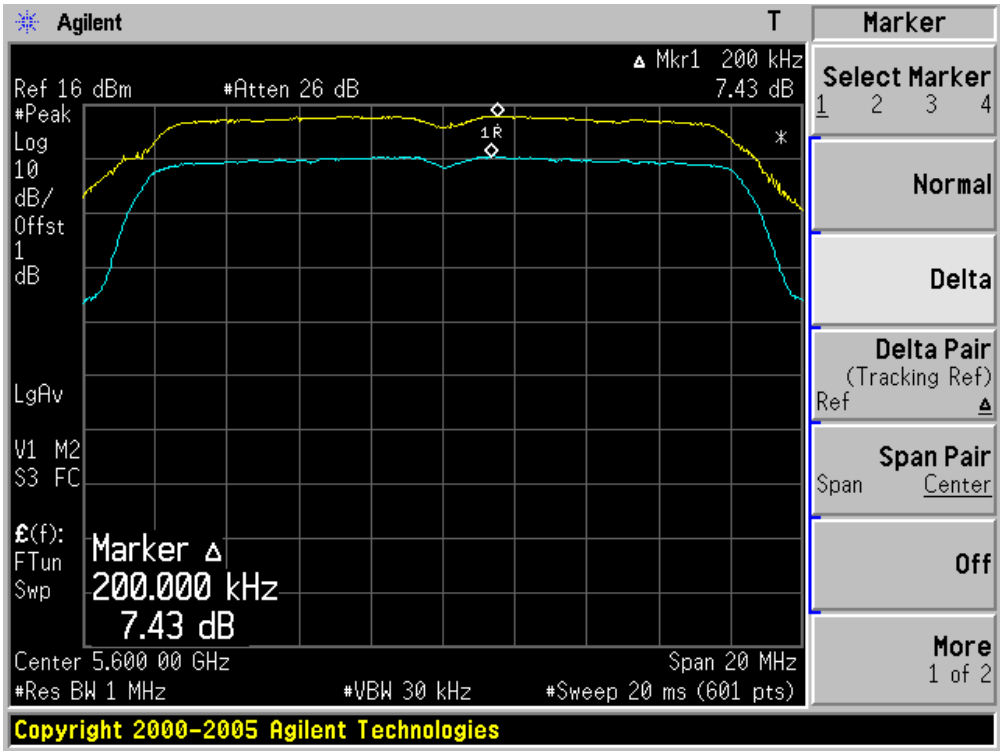
Channel 64 (5320MHz)



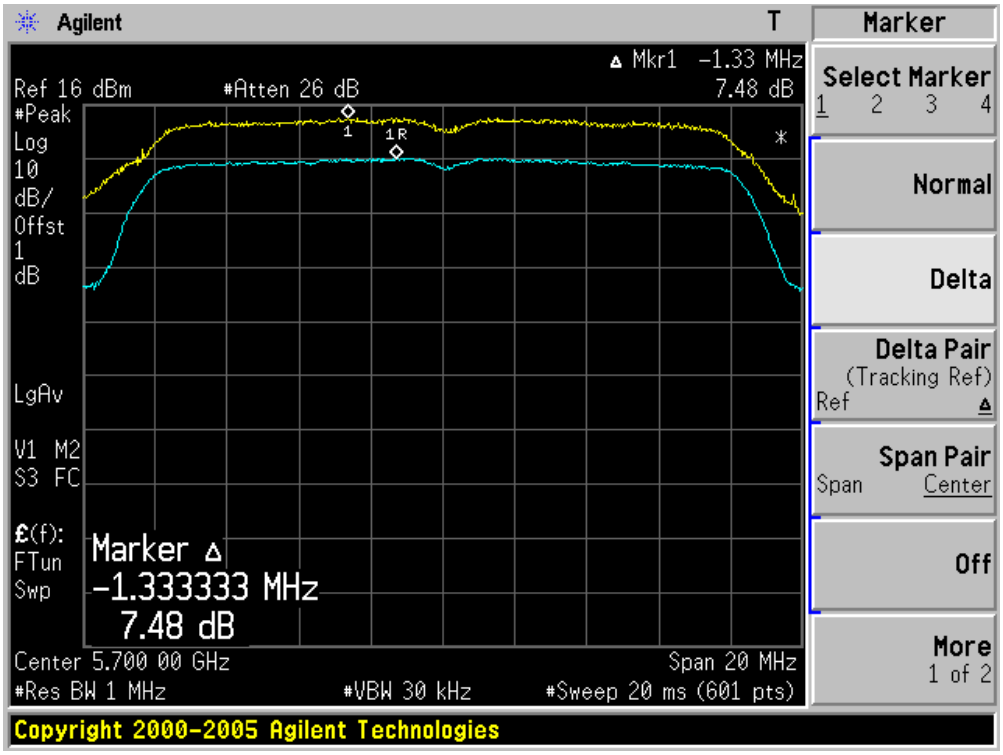
Channel 100 (5500MHz)



Channel 120 (5600MHz)



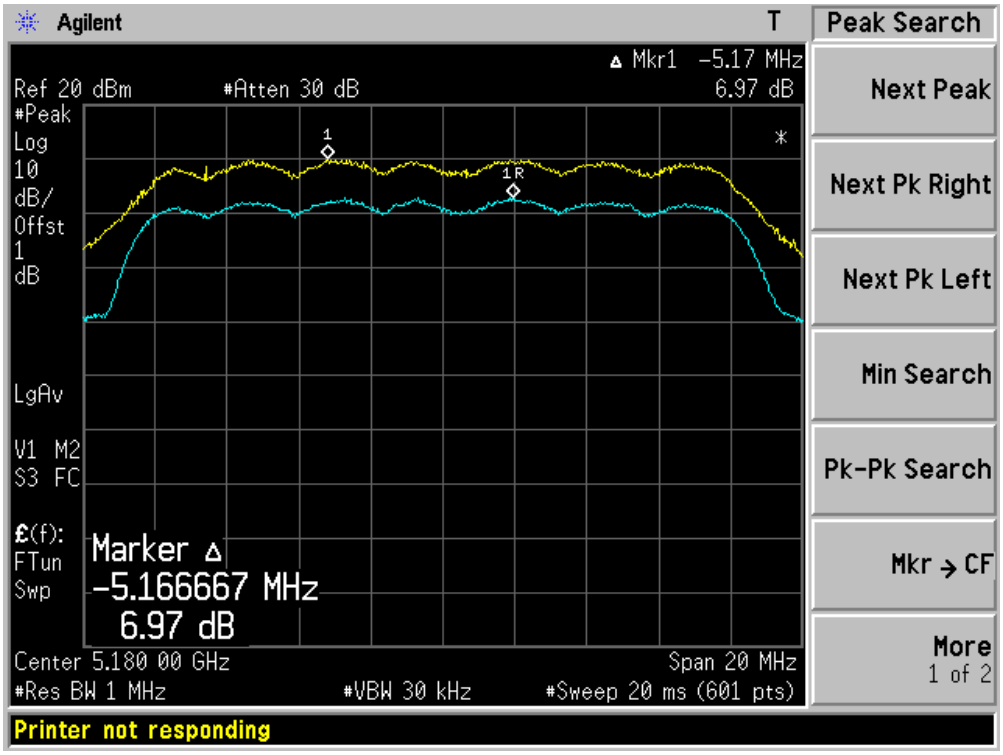
Channel 140 (5700MHz)



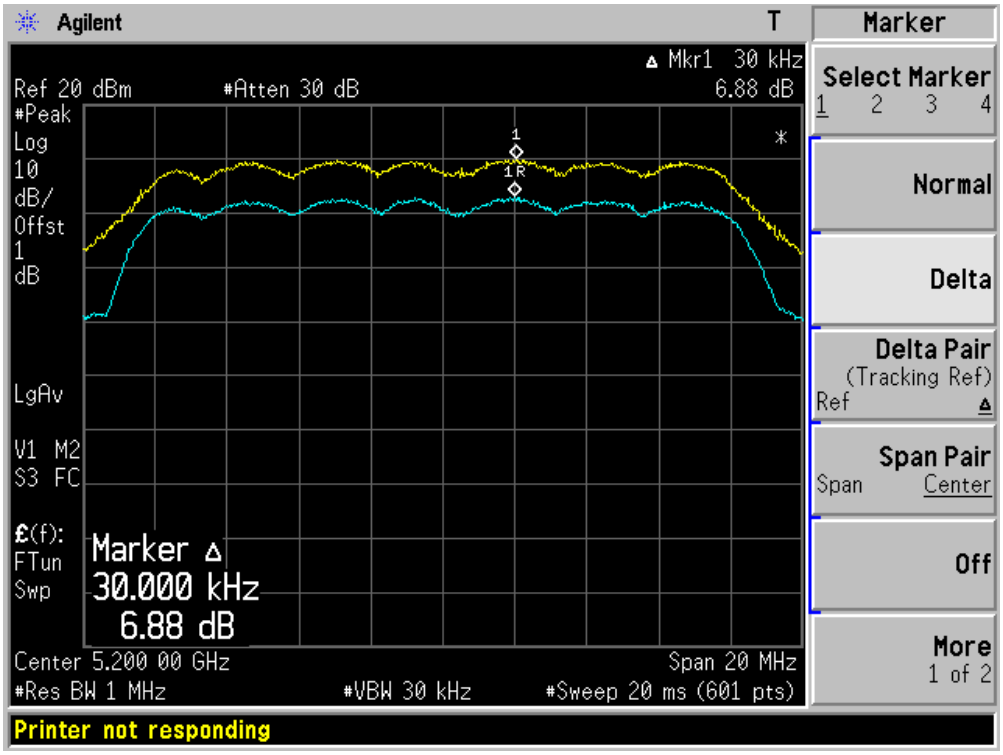
Product	:	AirPcap Nx
Test Item	:	Peak Excursion
Test Site	:	TR-8
Test Mode	:	Mode 1: Transmit by 802.11a (Chain 001)

Channel No.	Frequency (MHz)	Peak Excursion (dB)	Limit (dB)	Result
36	5180	6.97	13	Pass
40	5200	6.88	13	Pass
48	5240	6.87	13	Pass
52	5260	7.24	13	Pass
60	5300	7.37	13	Pass
64	5320	7.45	13	Pass
100	5500	8.27	13	Pass
120	5600	8.21	13	Pass
140	5700	8.28	13	Pass

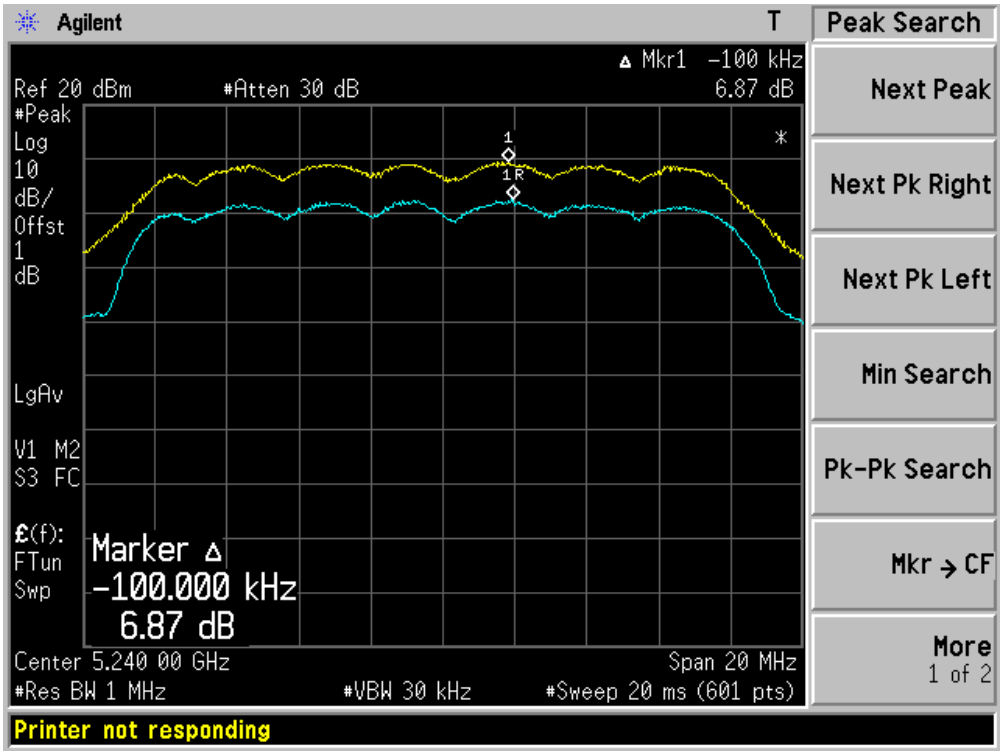
Channel 36 (5180MHz)



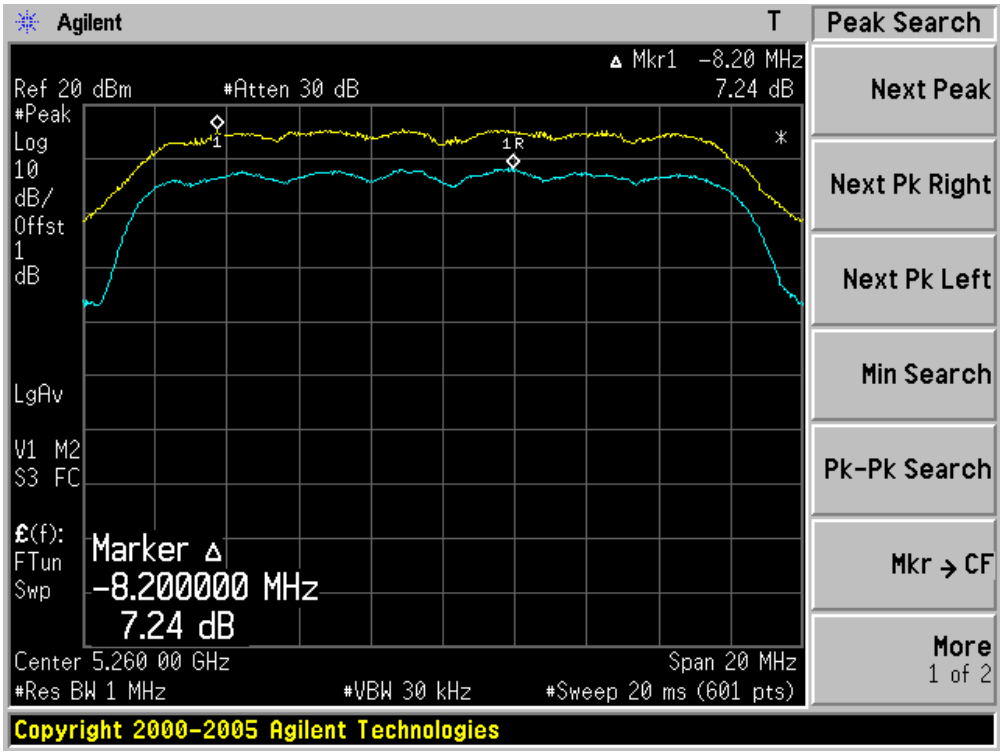
Channel 40 (5200MHz)



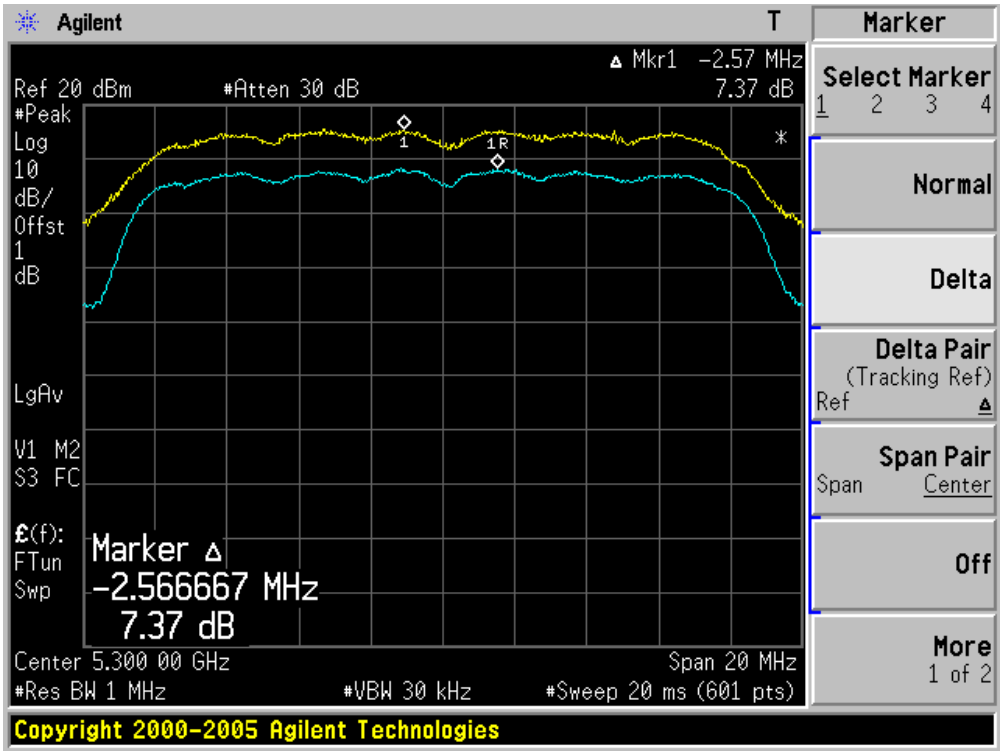
Channel 48 (5240MHz)



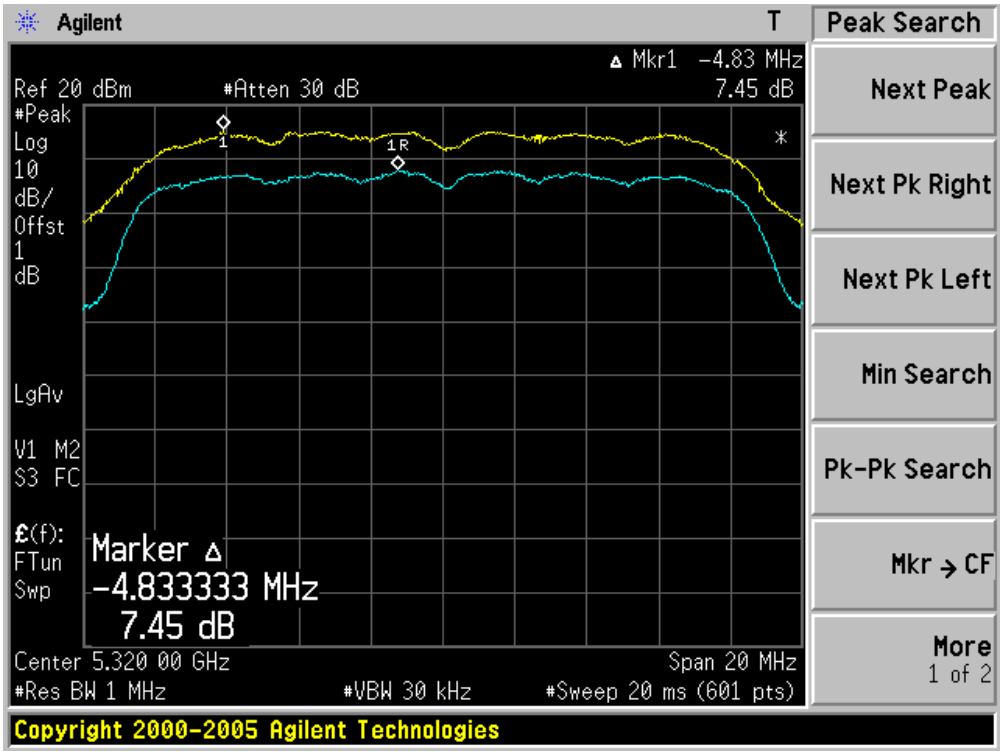
Channel 52 (5260MHz)



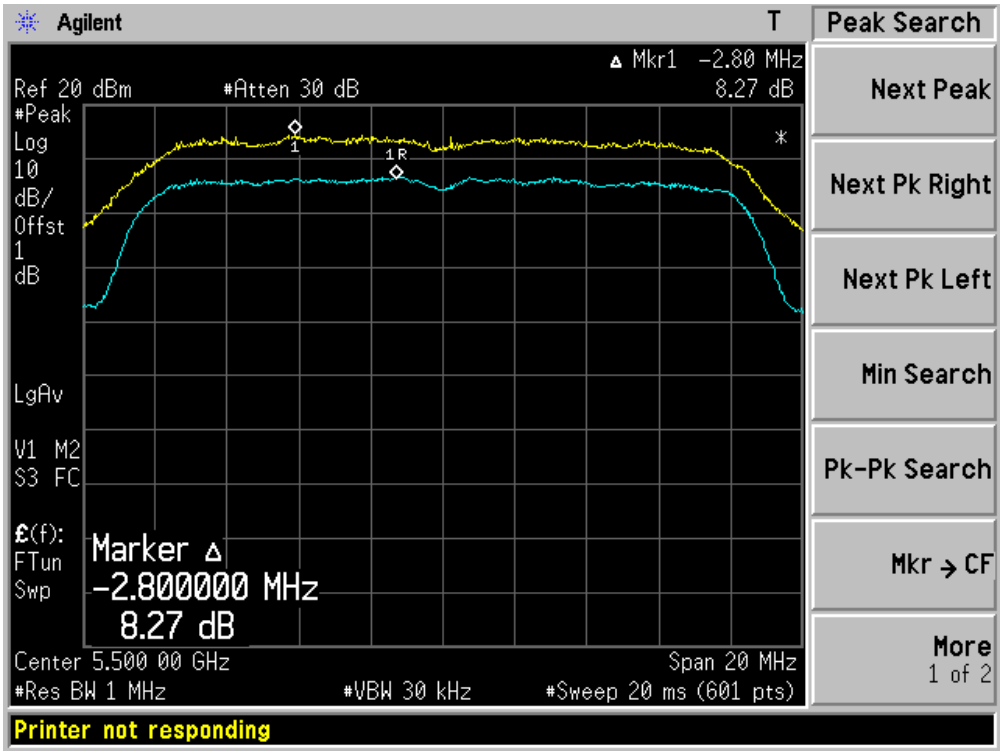
Channel 60 (5300MHz)



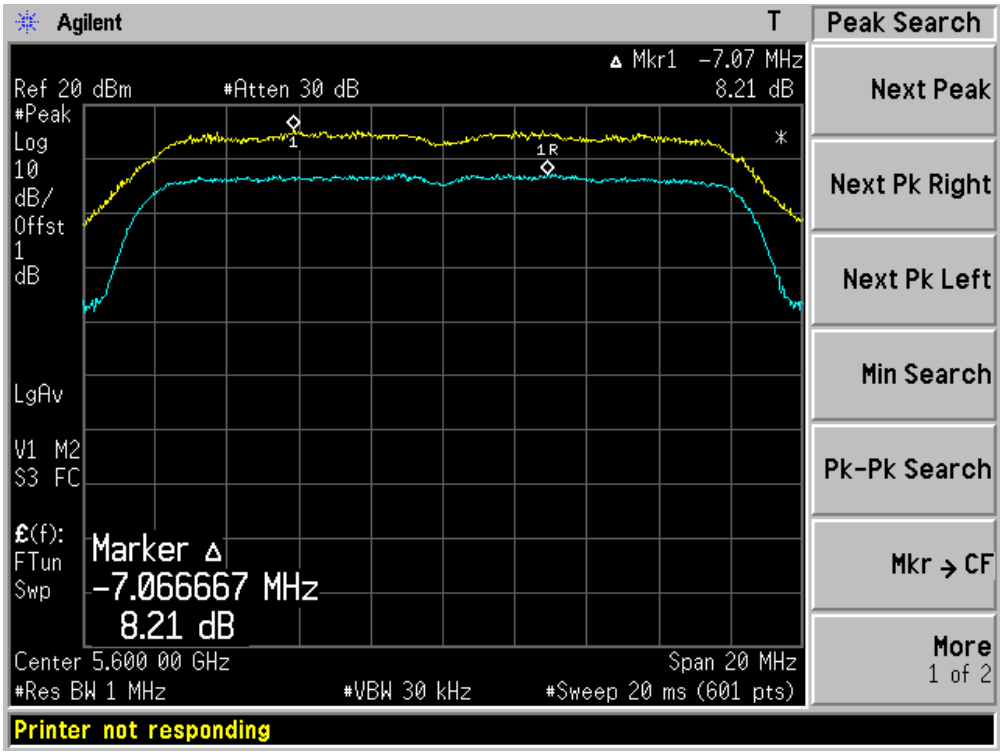
Channel 64 (5320MHz)



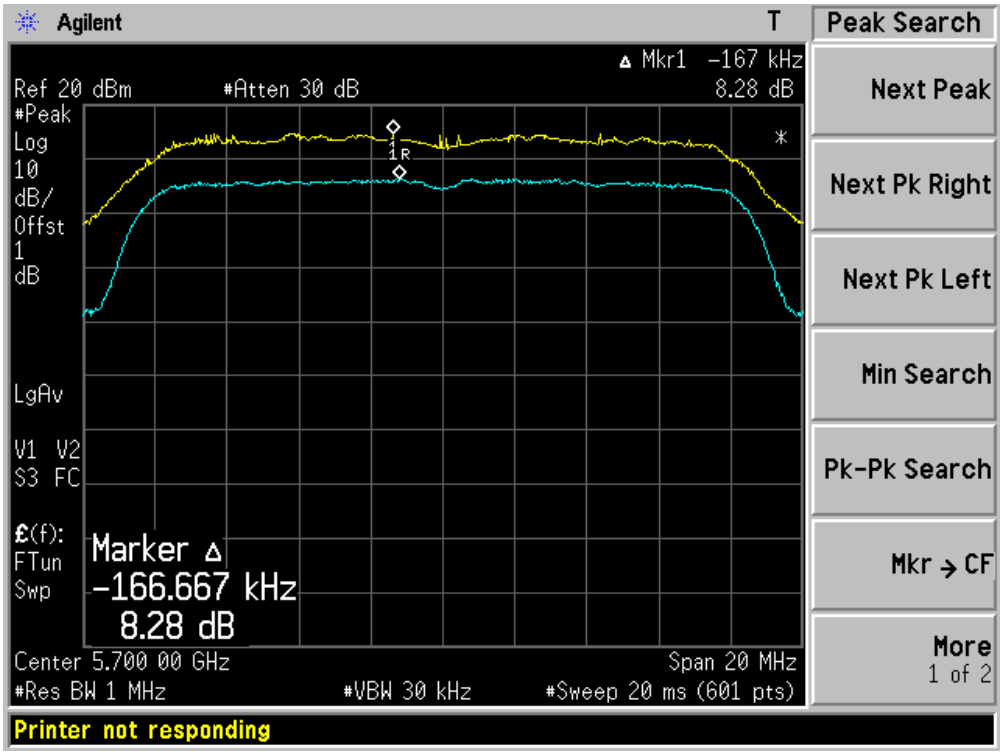
Channel 100 (5500MHz)



Channel 120 (5600MHz)



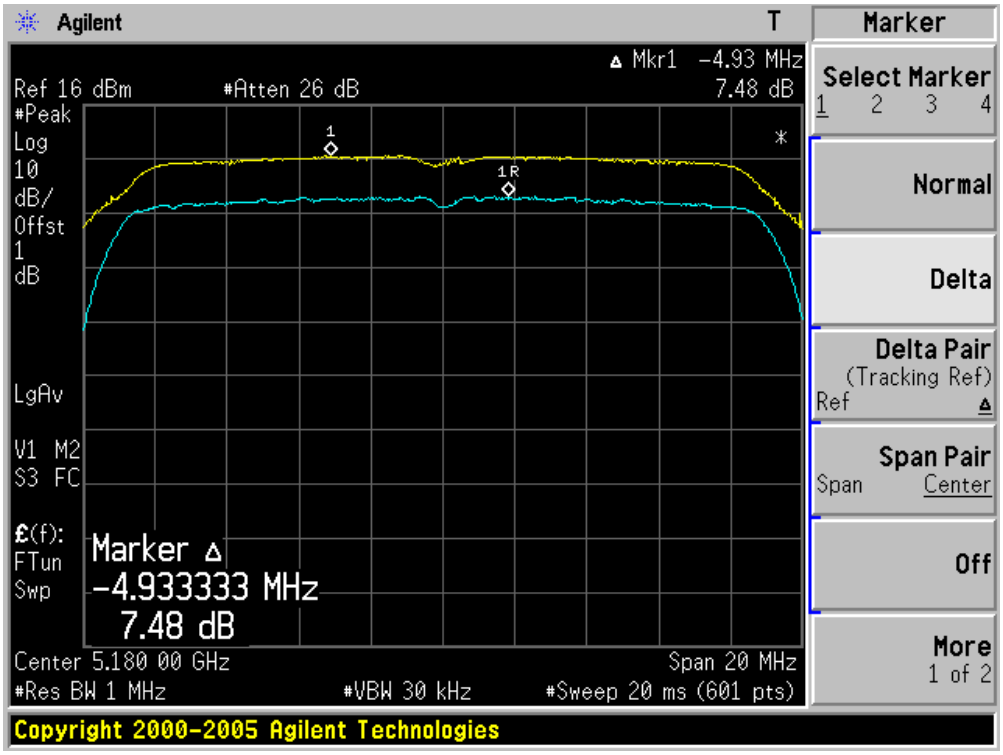
Channel 140 (5700MHz)



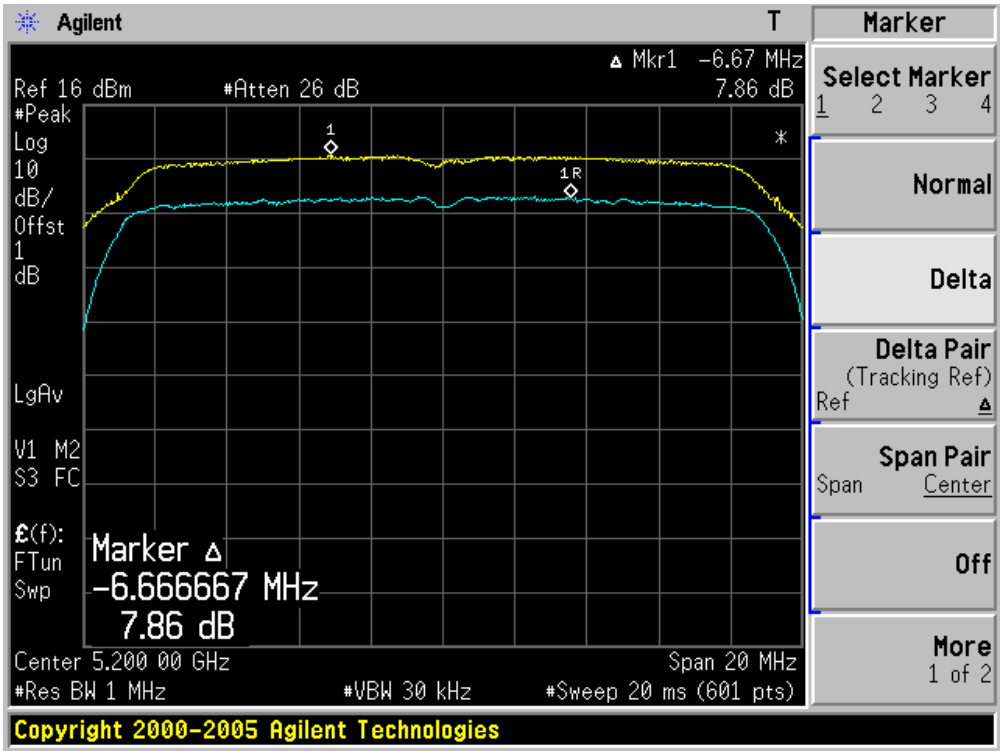
Product	:	AirPcap Nx
Test Item	:	Peak Excursion
Test Site	:	TR-8
Test Mode	:	Mode 2: Transmit by 802.11n (20MHz) (Chain 100)

Channel No.	Frequency (MHz)	Peak Excursion (dB)	Limit (dB)	Result
36	5180	7.48	13	Pass
40	5200	7.86	13	Pass
48	5240	7.86	13	Pass
52	5260	7.81	13	Pass
60	5300	7.83	13	Pass
64	5320	7.82	13	Pass
100	5500	7.70	13	Pass
120	5600	7.70	13	Pass
140	5700	7.48	13	Pass

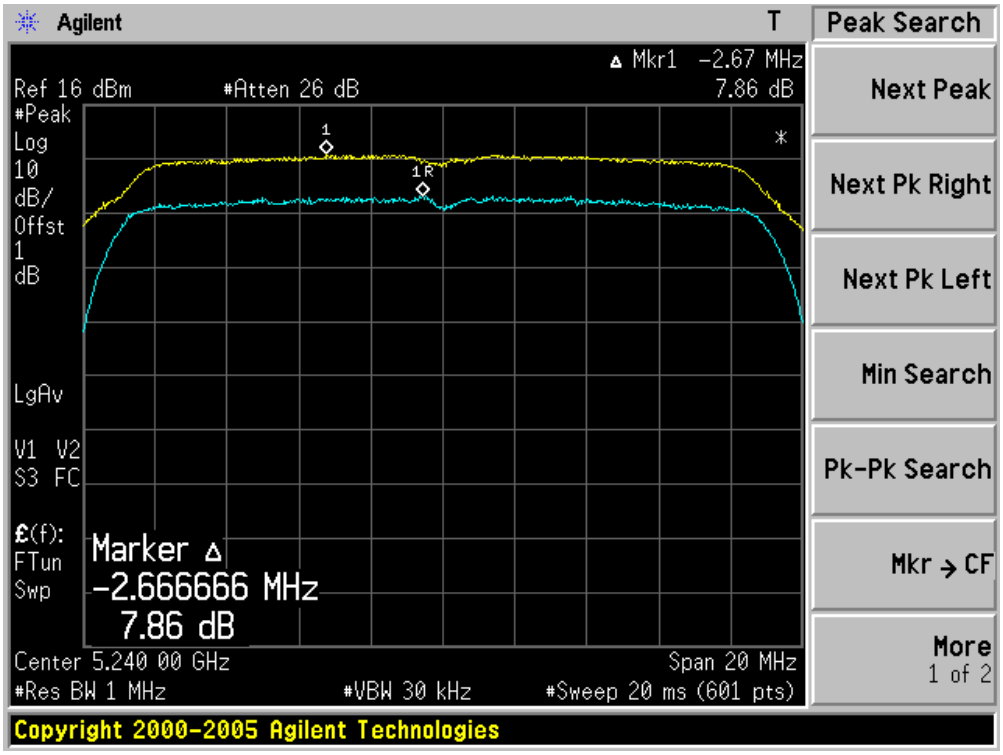
Channel 36 (5180MHz)



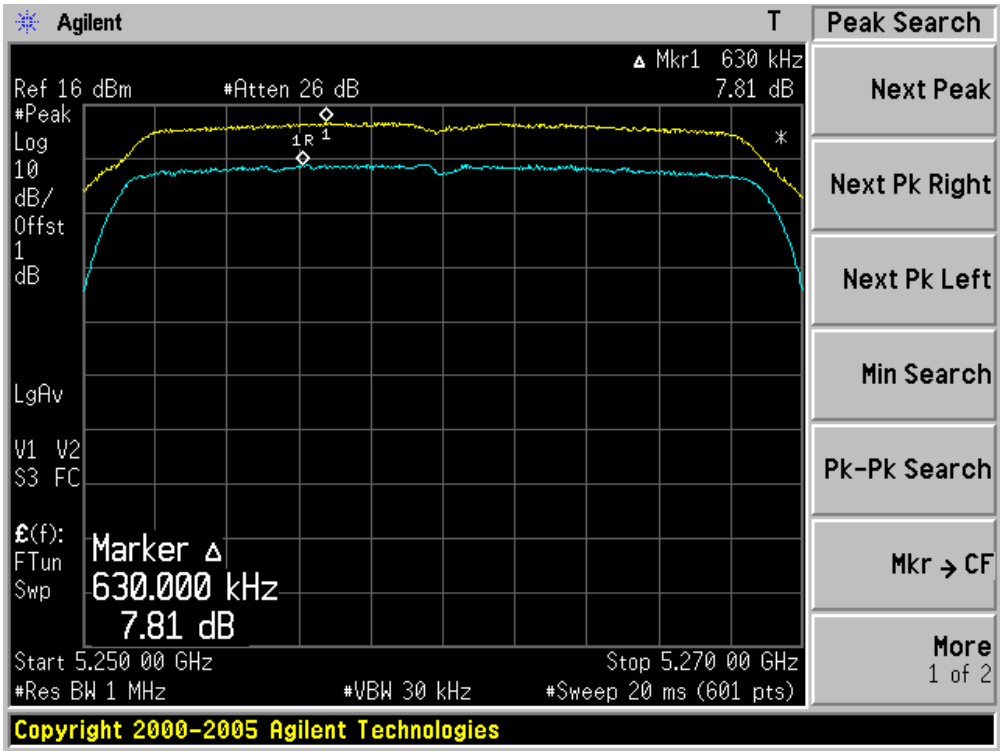
Channel 40 (5200MHz)



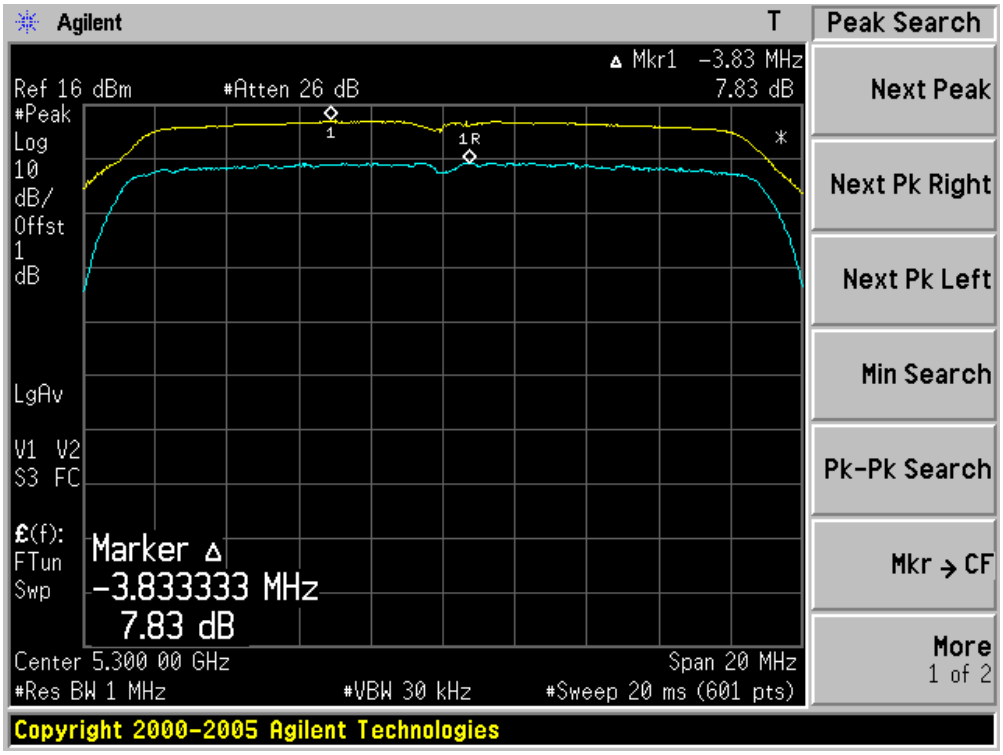
Channel 48 (5240MHz)



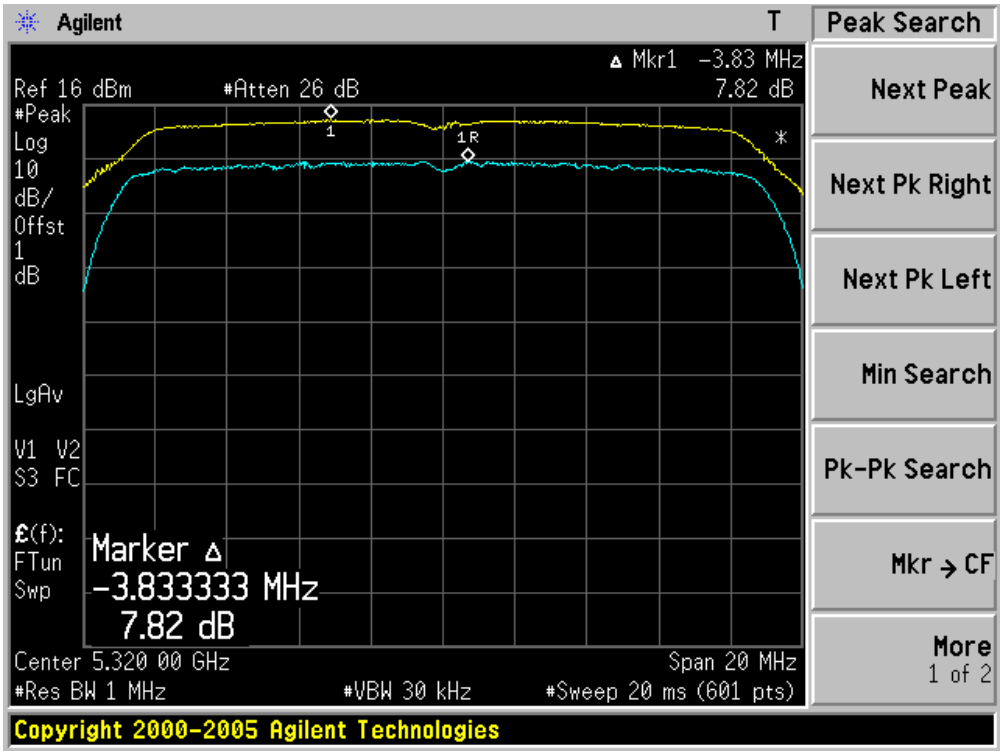
Channel 52 (5260MHz)



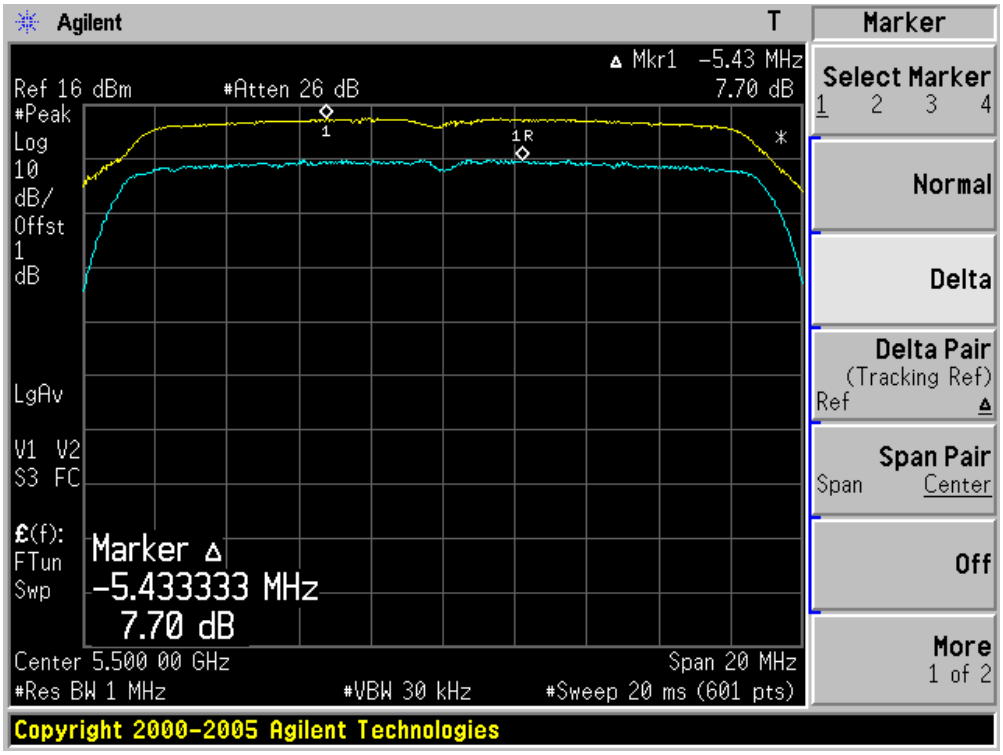
Channel 60 (5300MHz)



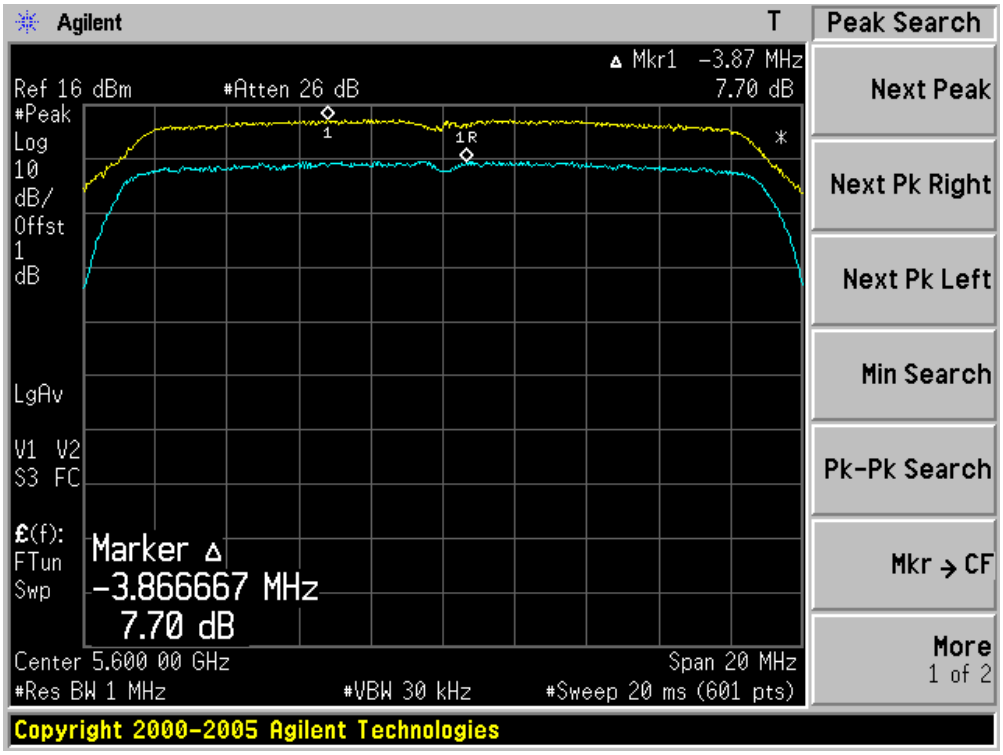
Channel 64 (5320MHz)



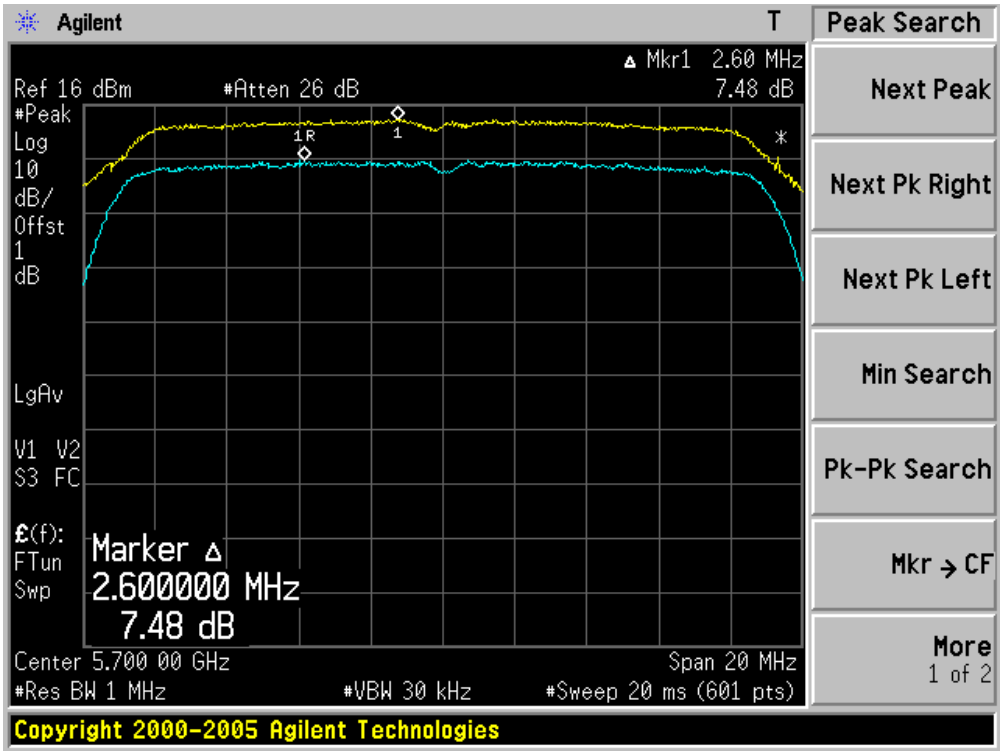
Channel 100 (5500MHz)



Channel 120 (5600MHz)



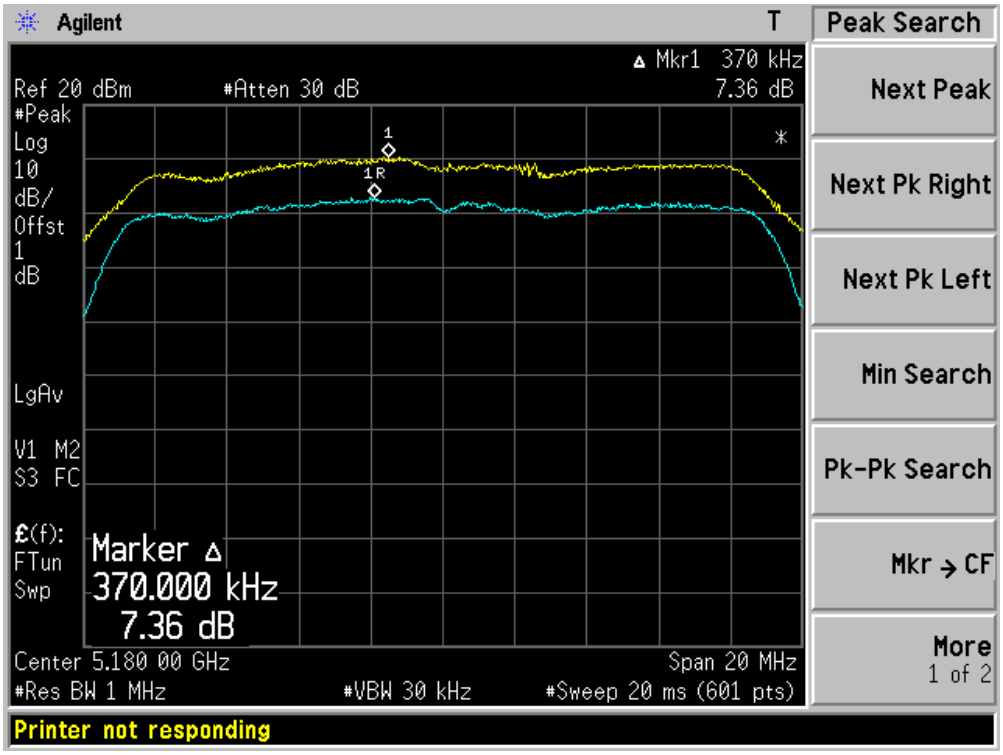
Channel 140 (5700MHz)



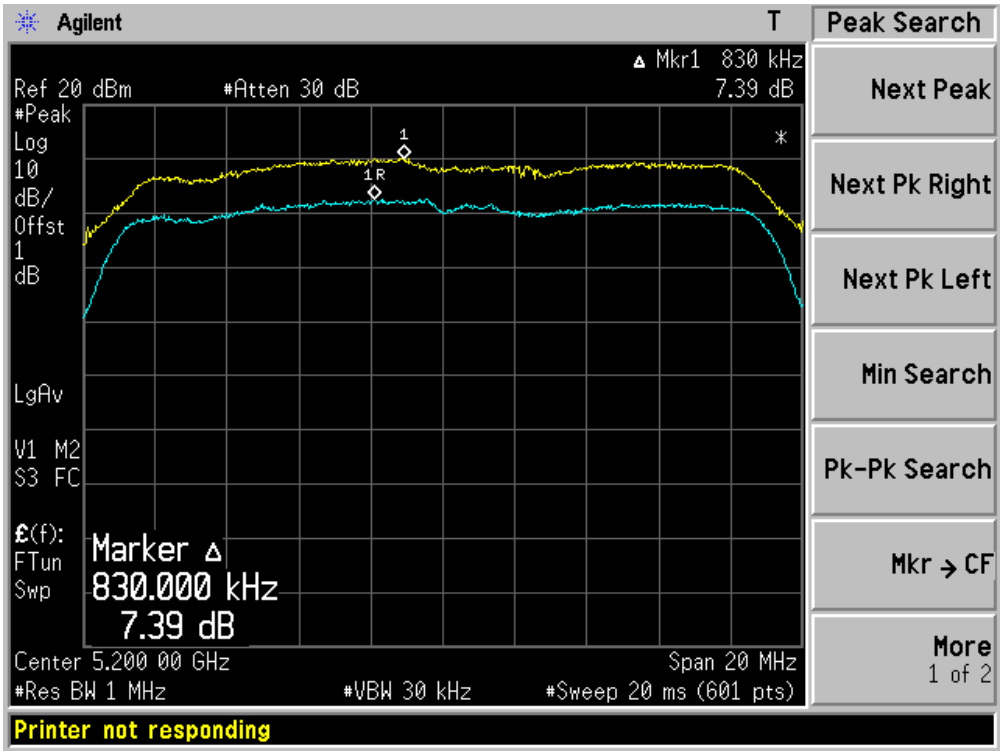
Product	:	AirPcap Nx
Test Item	:	Peak Excursion
Test Site	:	TR-8
Test Mode	:	Mode 2: Transmit by 802.11n (20MHz) (Chain 001)

Channel No.	Frequency (MHz)	Peak Excursion (dB)	Limit (dB)	Result
36	5180	7.36	13	Pass
40	5200	7.39	13	Pass
48	5240	7.84	13	Pass
52	5260	7.48	13	Pass
60	5300	7.91	13	Pass
64	5320	7.80	13	Pass
100	5500	7.80	13	Pass
120	5600	8.03	13	Pass
140	5700	7.93	13	Pass

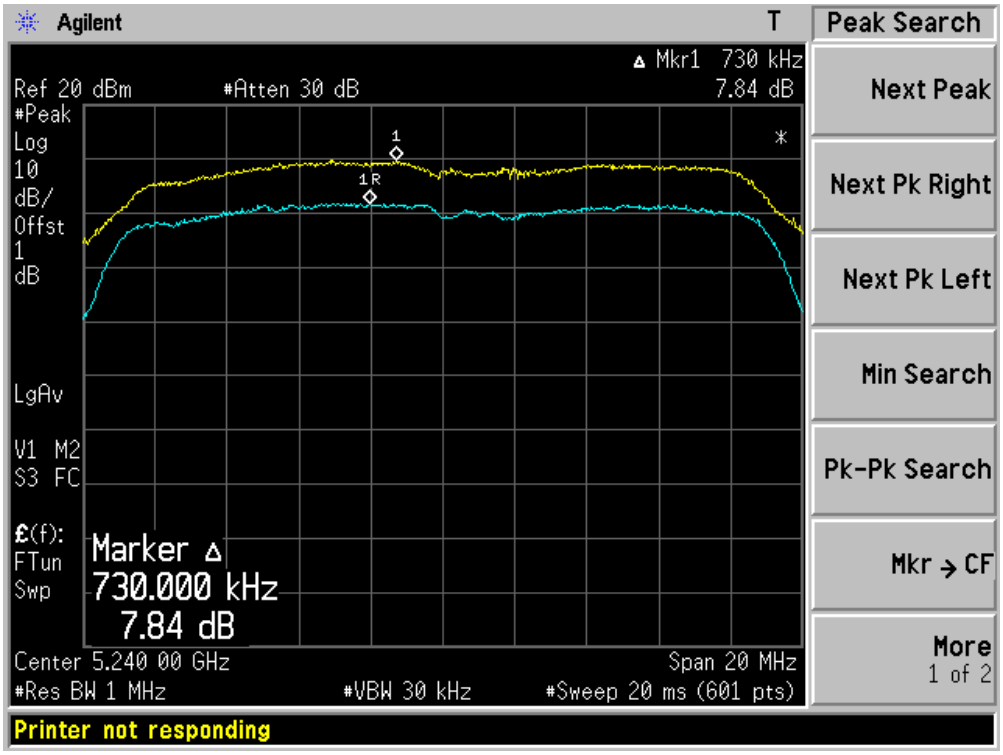
Channel 36 (5180MHz)



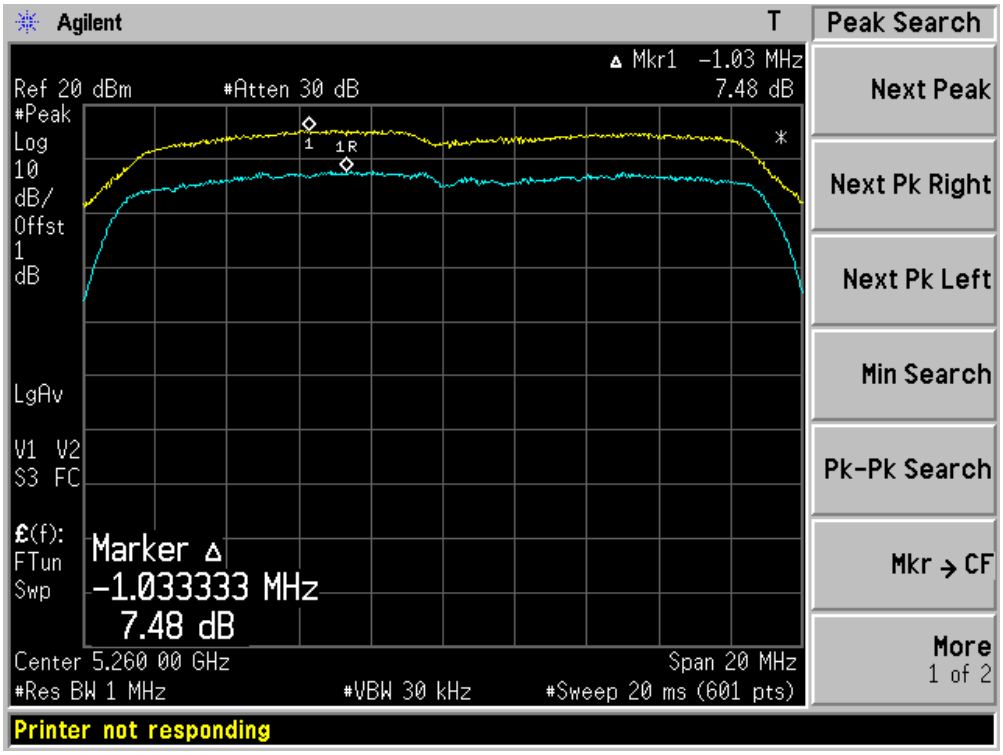
Channel 40 (5200MHz)



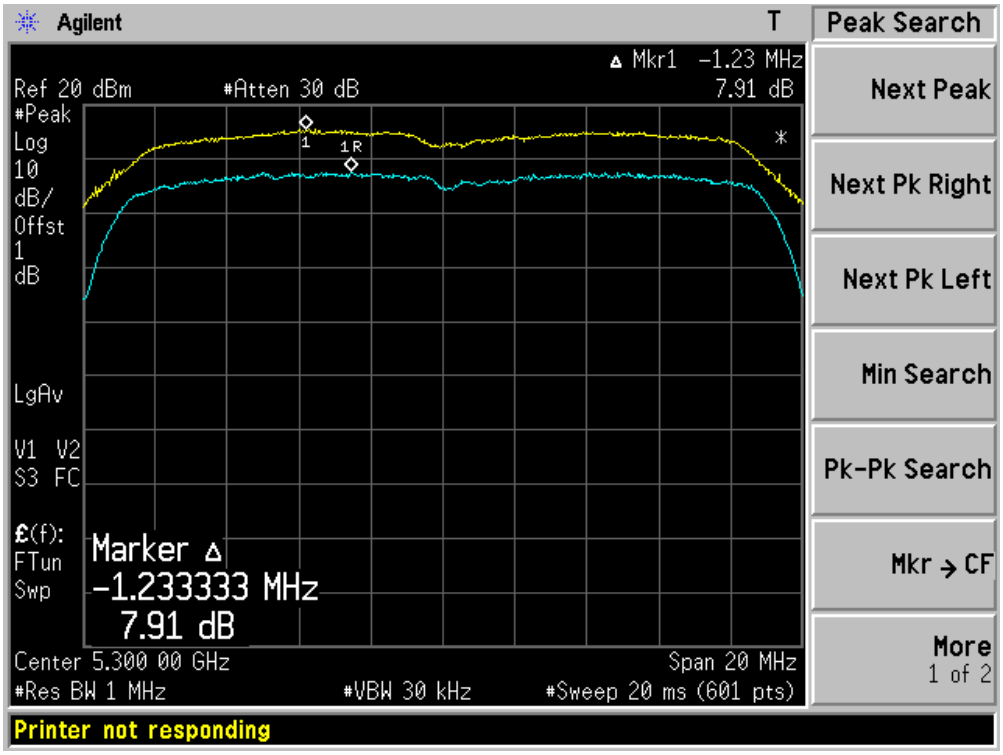
Channel 48 (5240MHz)



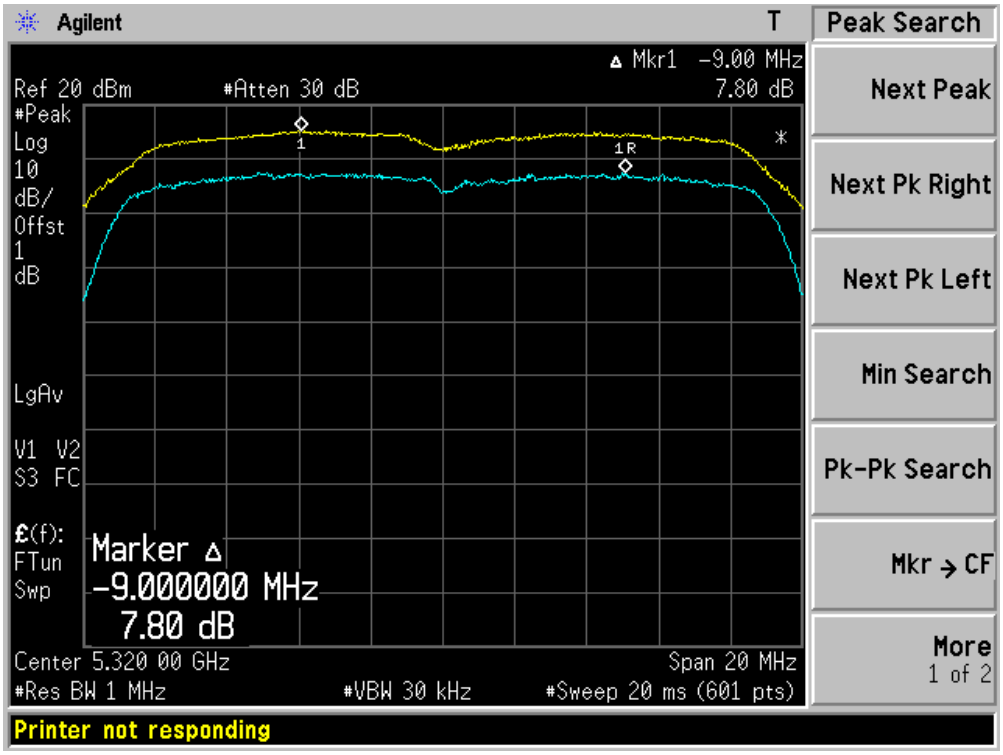
Channel 52 (5260MHz)



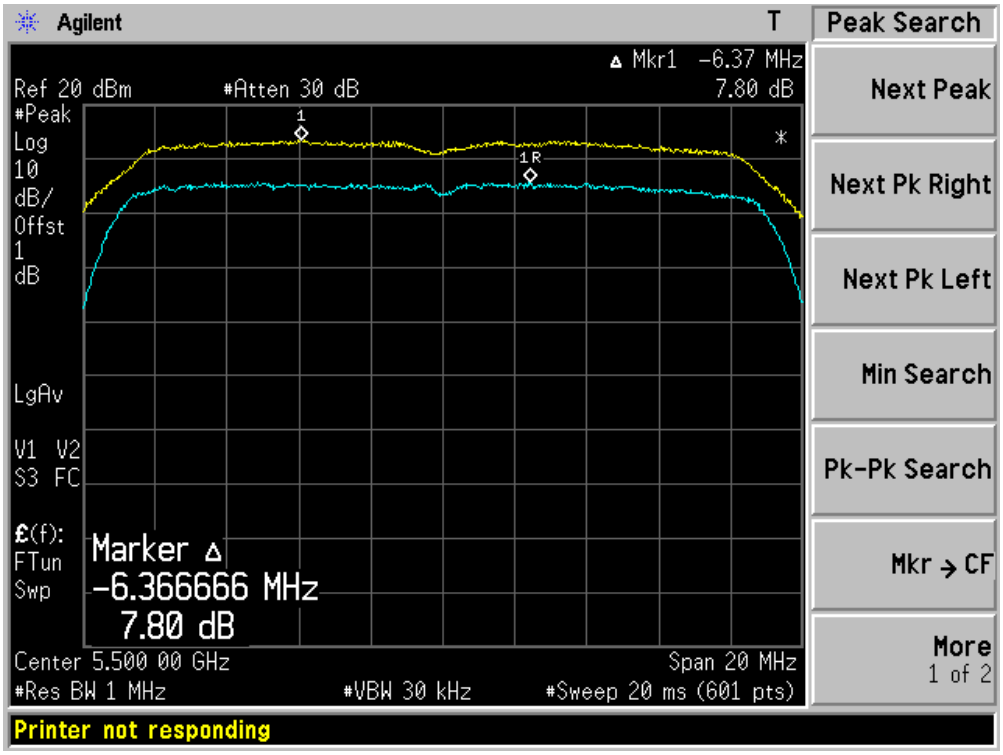
Channel 60 (5300MHz)



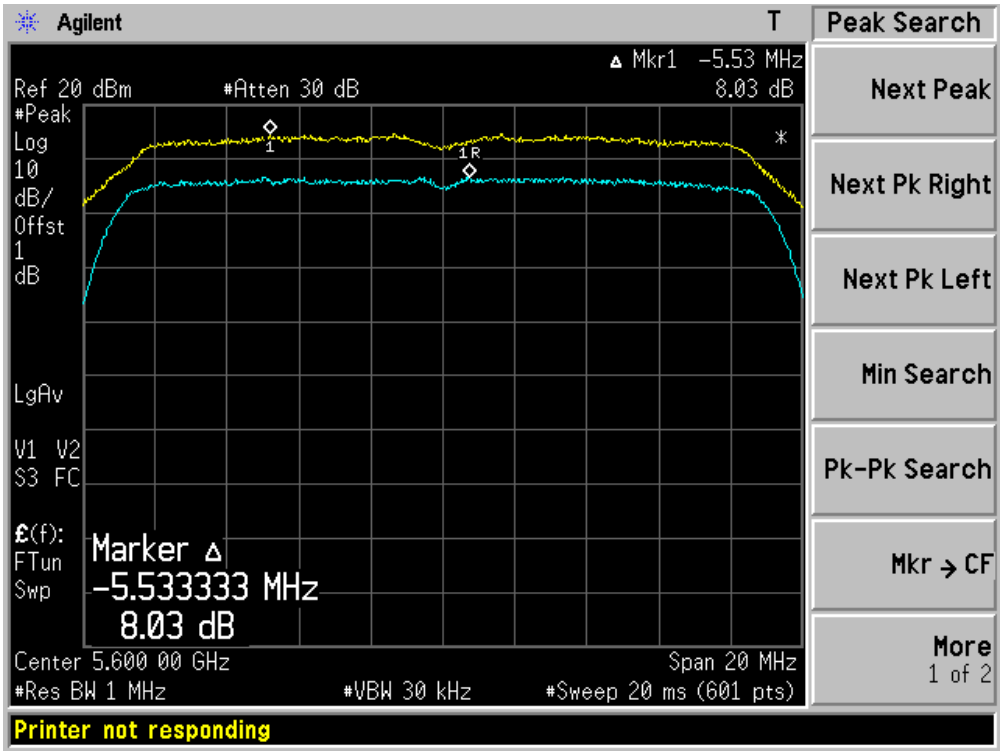
Channel 64 (5320MHz)



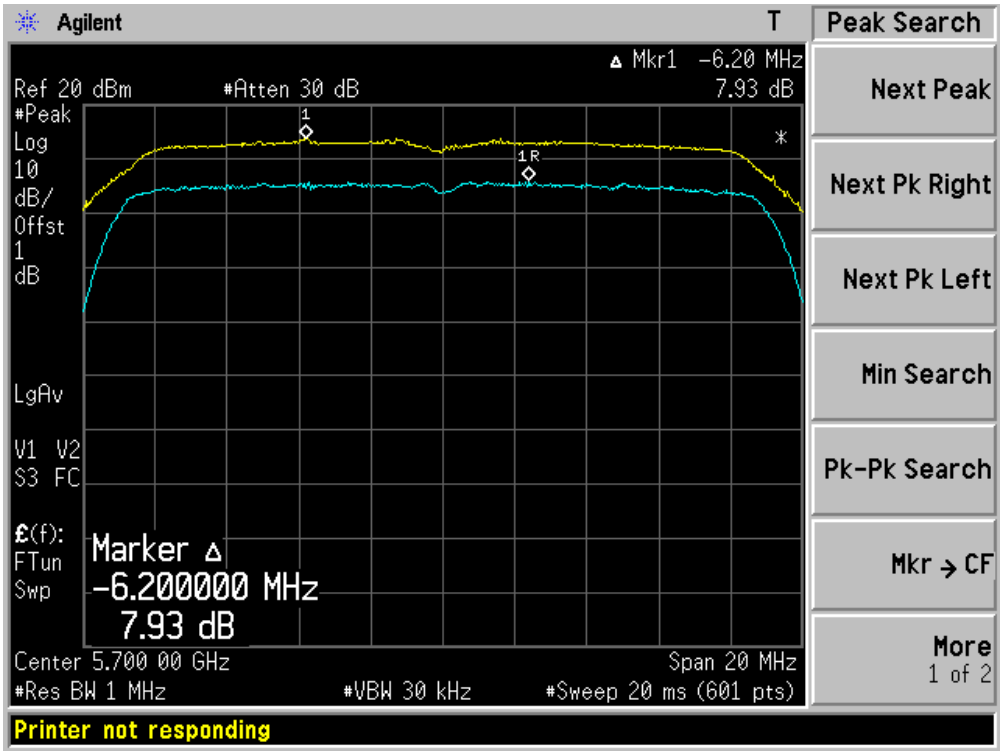
Channel 100 (5500MHz)



Channel 120 (5600MHz)



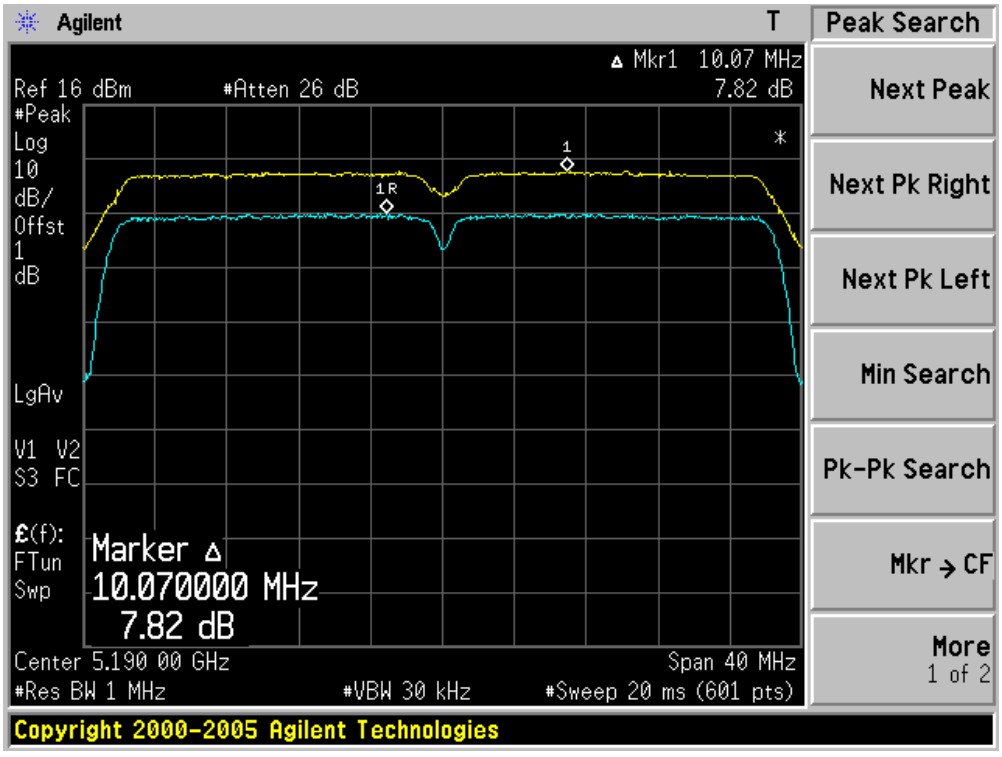
Channel 140 (5700MHz)



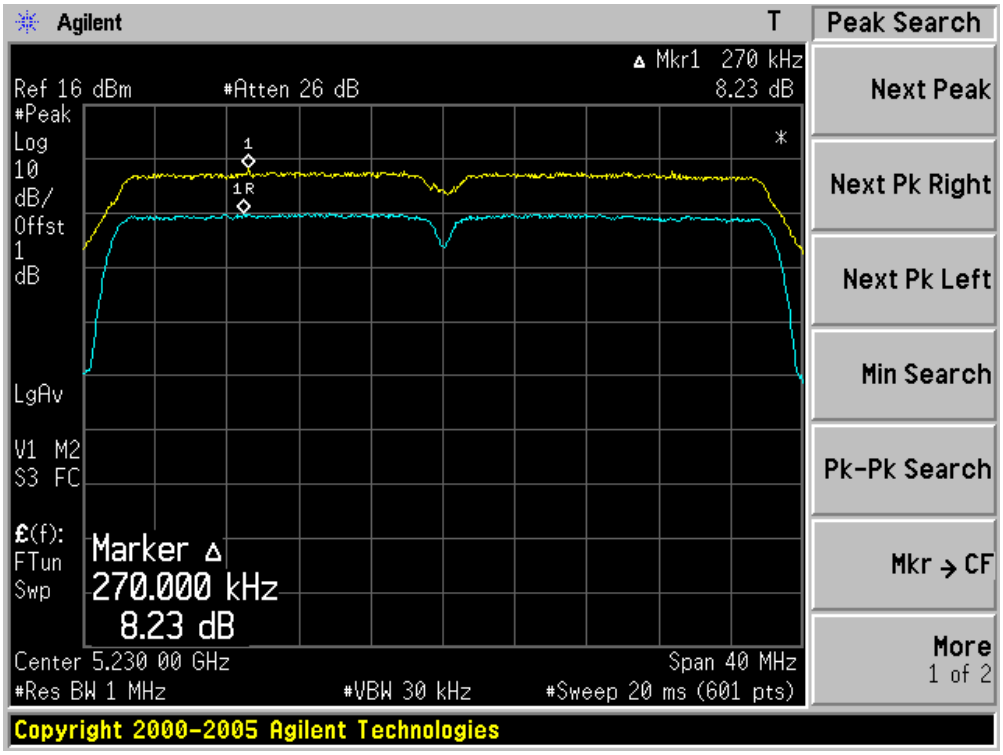
Product	:	AirPcap Nx
Test Item	:	Peak Excursion
Test Site	:	TR-8
Test Mode	:	Mode 3: Transmit by 802.11n (40MHz) (Chain 100)

Channel No.	Frequency (MHz)	Peak Excursion (dB)	Limit (dB)	Result
38	5190	7.82	13	Pass
46	5230	8.23	13	Pass
54	5270	7.97	13	Pass
62	5310	7.65	13	Pass
102	5510	7.73	13	Pass
118	5590	7.47	13	Pass
134	5670	7.68	13	Pass

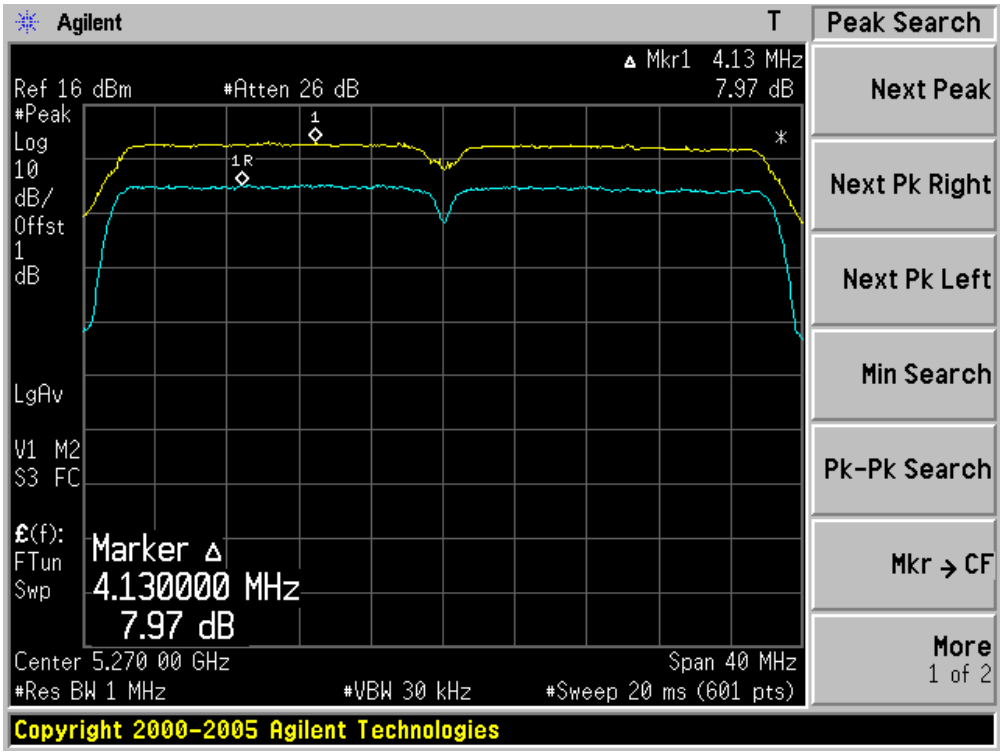
Channel 38 (5190MHz)



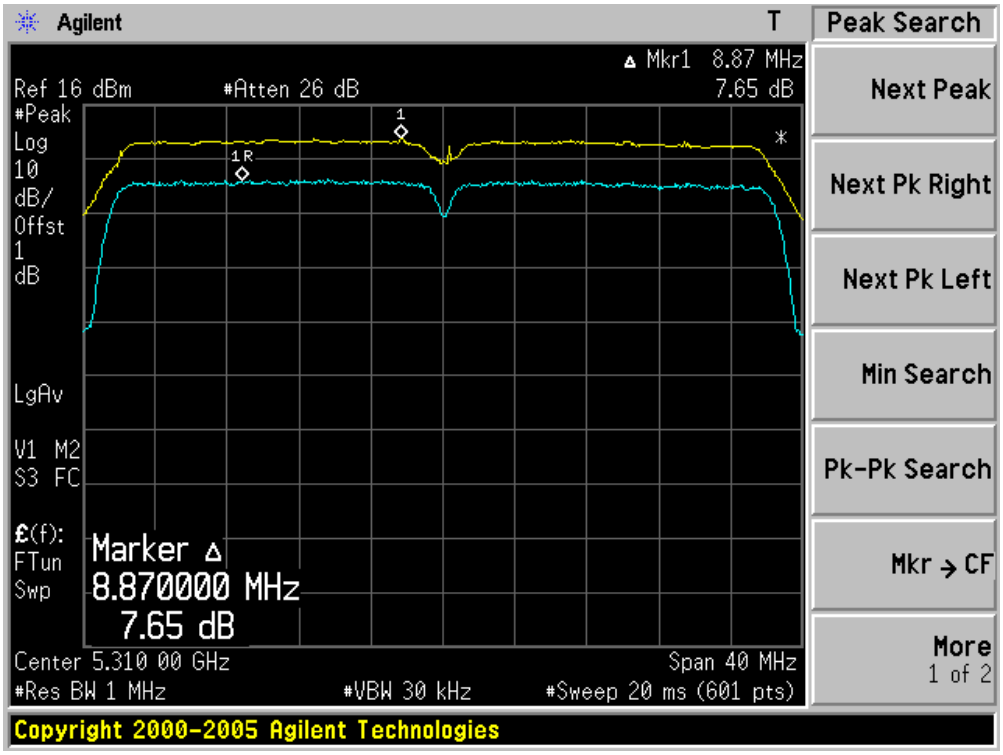
Channel 46 (5230MHz)



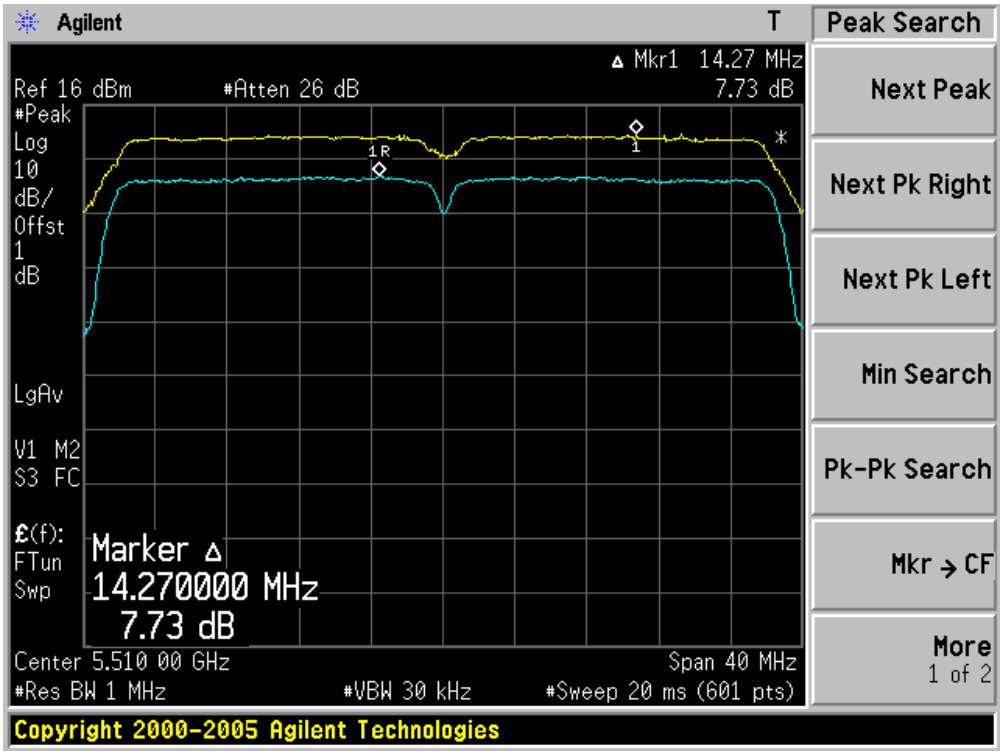
Channel 54 (5270MHz)



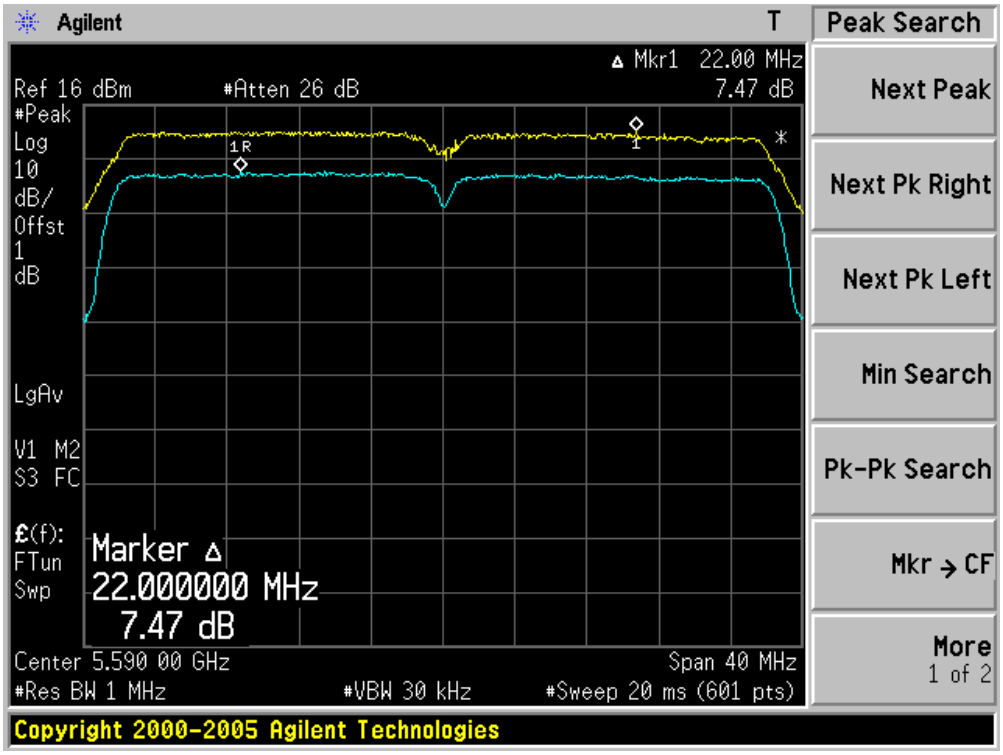
Channel 62 (5310MHz)



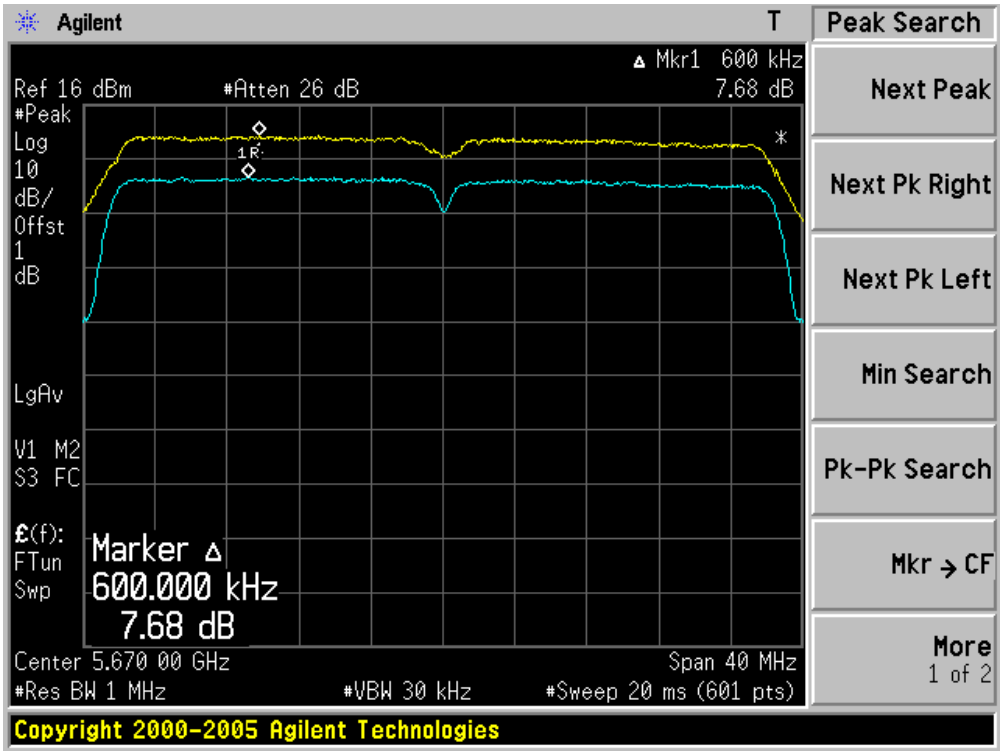
Channel 102 (5510MHz)



Channel 118 (5590MHz)



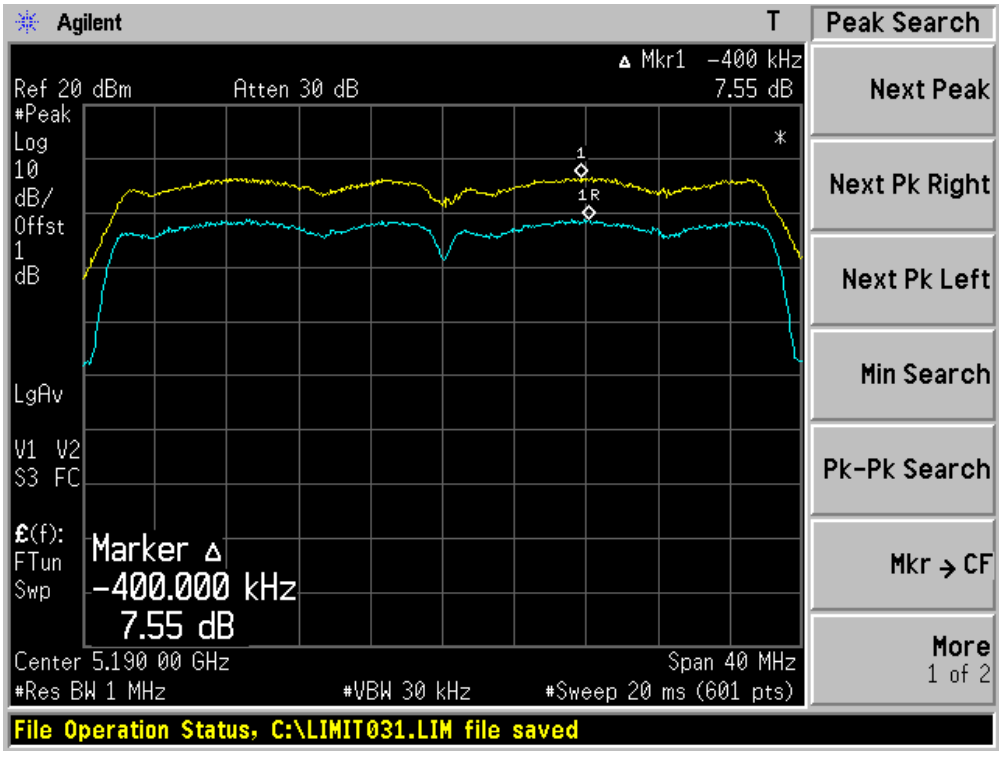
Channel 134 (5670MHz)



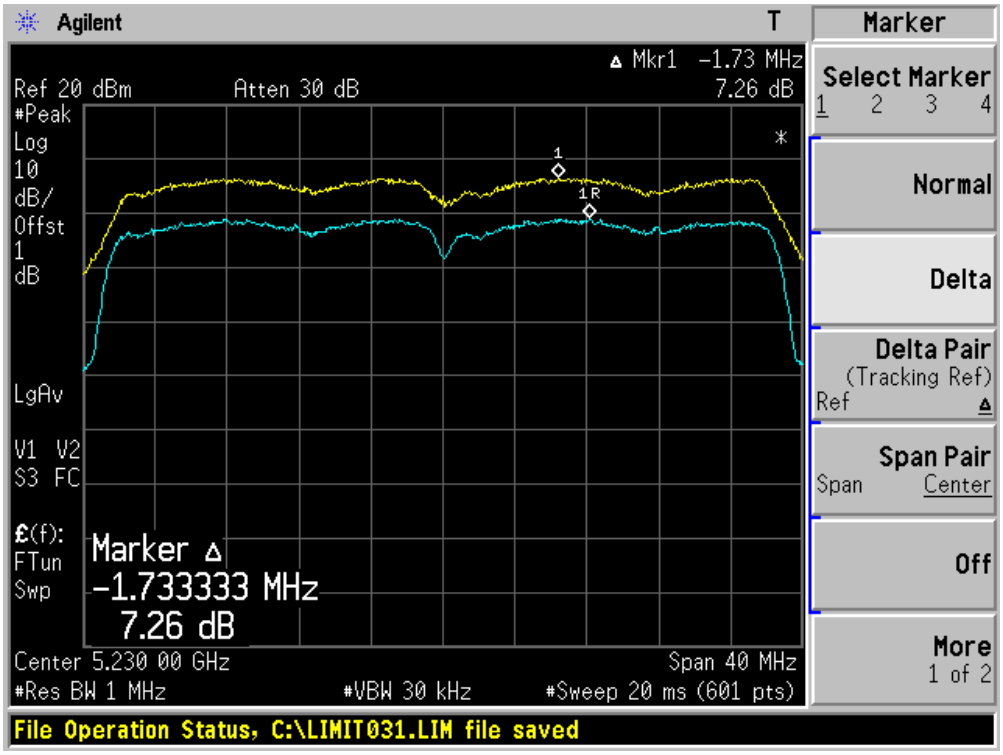
Product	:	AirPcap Nx
Test Item	:	Peak Excursion
Test Site	:	TR-8
Test Mode	:	Mode 3: Transmit by 802.11n (40MHz) (Chain 001)

Channel No.	Frequency (MHz)	Peak Excursion (dB)	Limit (dB)	Result
38	5190	7.55	13	Pass
46	5230	7.26	13	Pass
54	5270	7.46	13	Pass
62	5310	7.65	13	Pass
102	5510	7.65	13	Pass
118	5590	7.52	13	Pass
134	5670	7.63	13	Pass

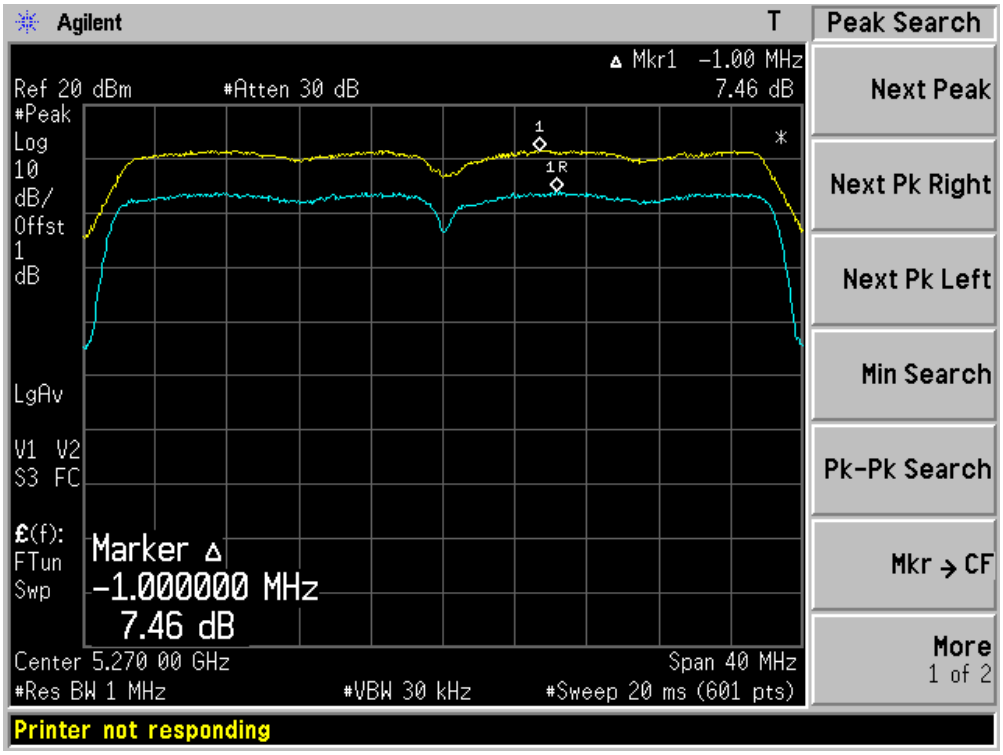
Channel 38 (5190MHz)



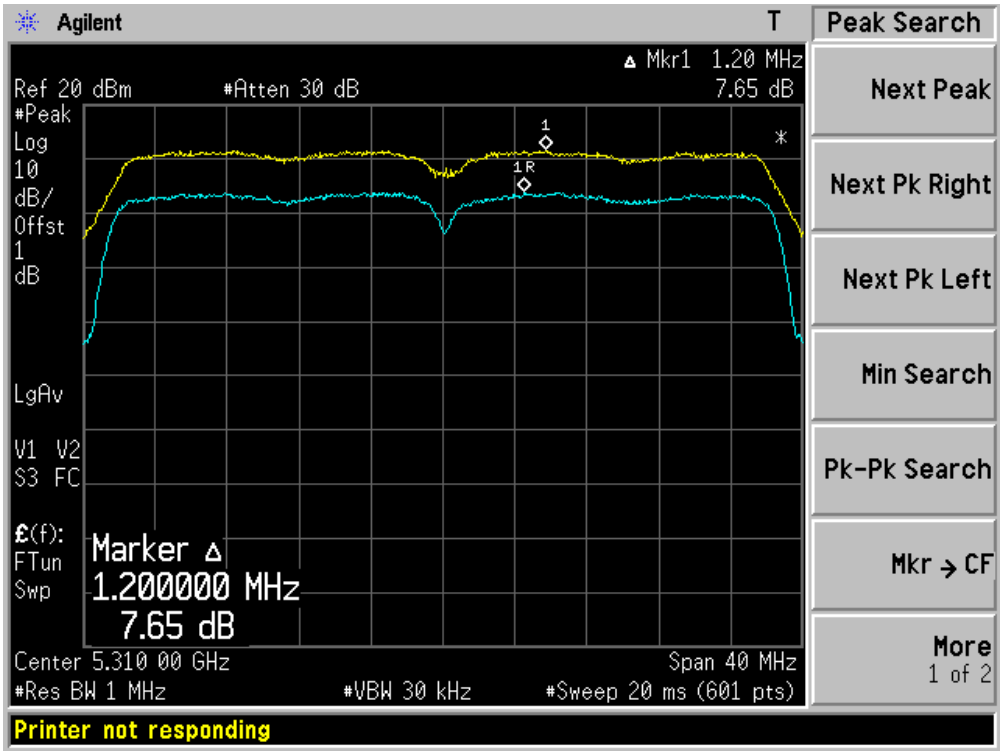
Channel 46 (5230MHz)



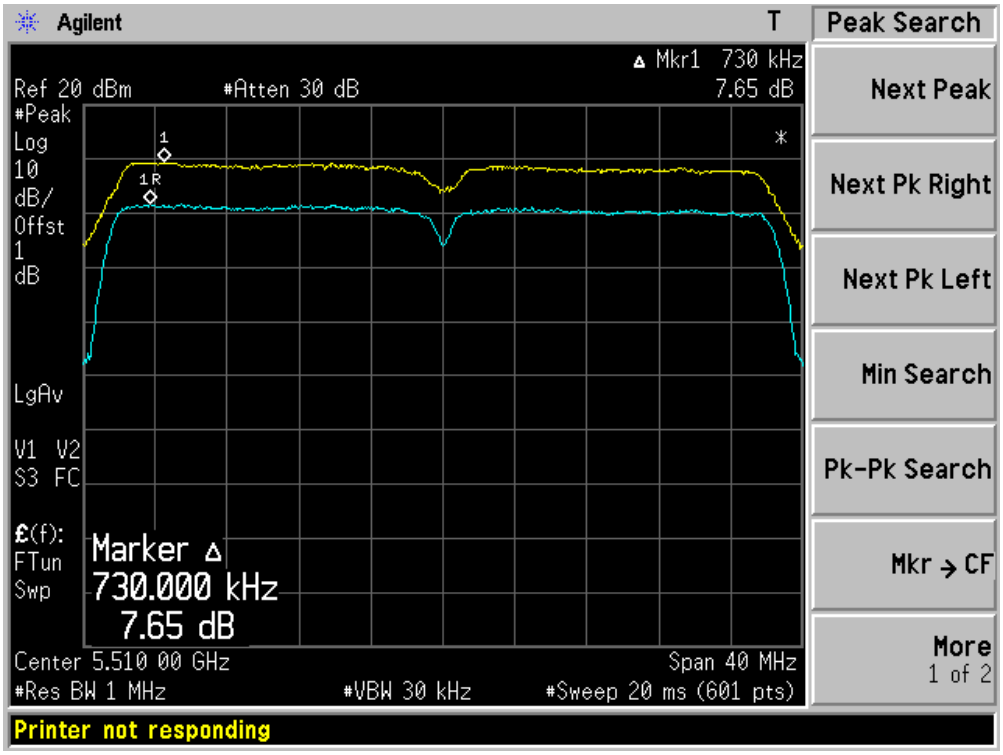
Channel 54 (5270MHz)



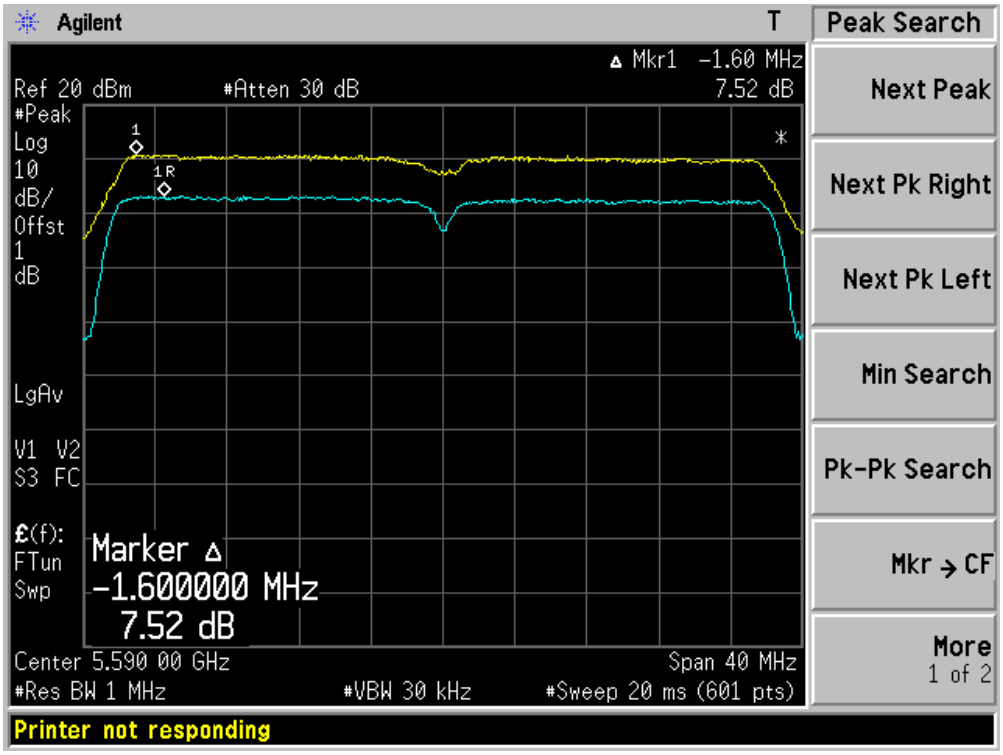
Channel 62 (5310MHz)



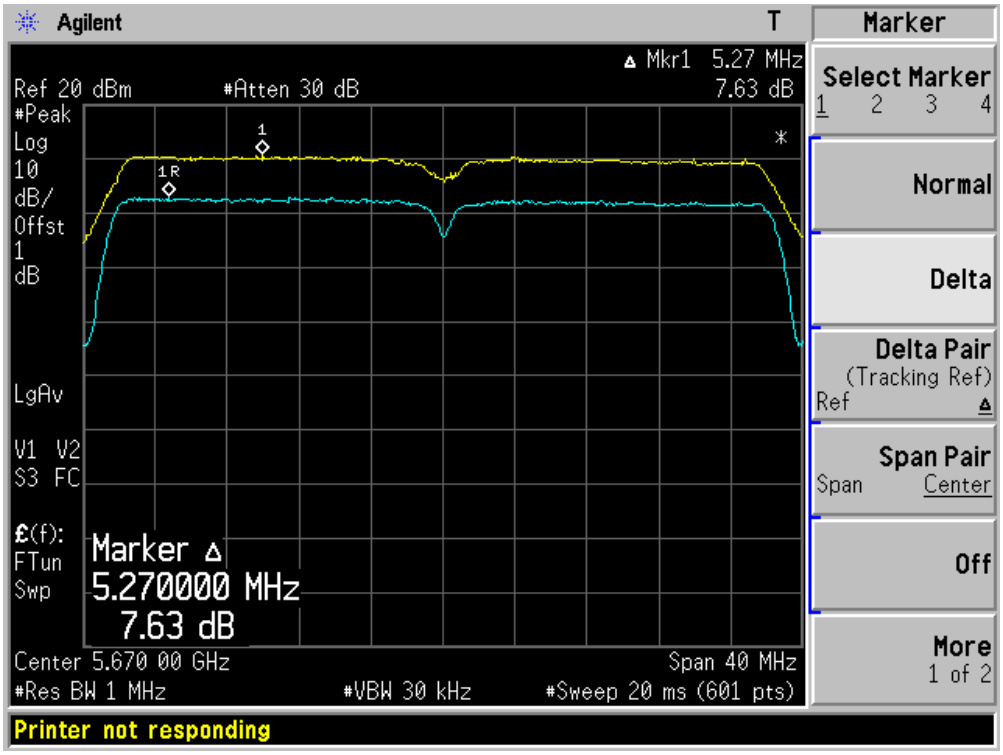
Channel 102 (5510MHz)



Channel 118 (5590MHz)



Channel 134 (5670MHz)



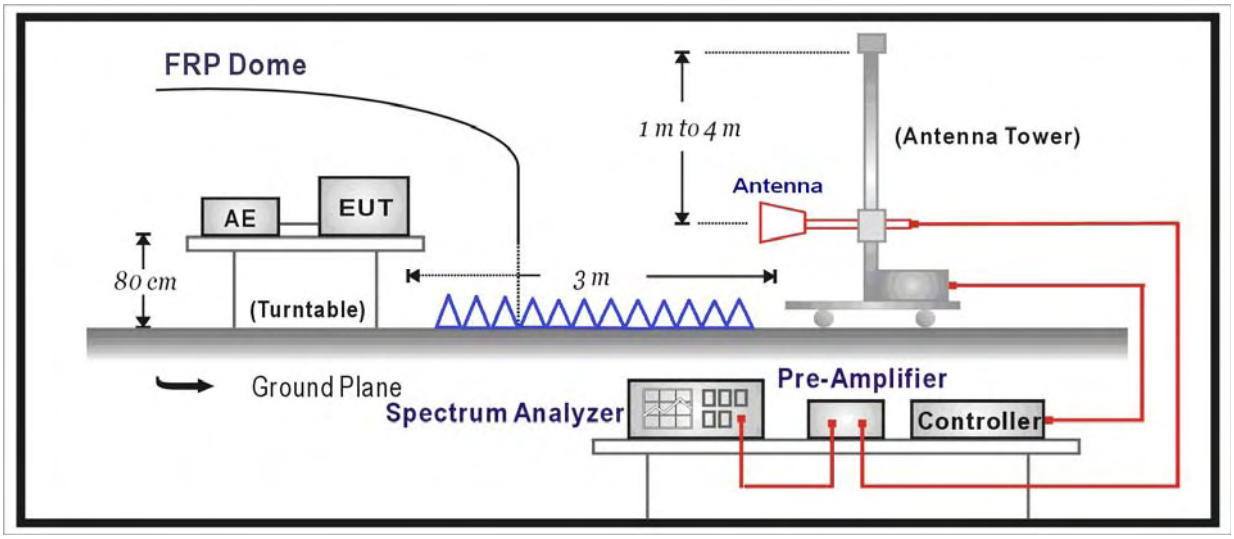
10. Radiated Emission Band Edge

10.1. Test Equipment

☒Radiated Emission Band Edge / AC-5

Instrument	Manufacturer	Type No.	Serial No.	Cal. Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2010.04.23
EMI Test Receiver	R&S	ESCI	100573	2010.04.23
Preamplifier	Quietek	AP-025C	CHM-0511006	2010.05.05
Preamplifier	Quietek	AP-180C	CHM-0602013	2010.05.05
Bilog Type Antenna	Schaffner	CBL6112B	2932	2010.10.18
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	499	2010.06.11
50ohm Coaxial Switch	Anritsu	MP59B	6200464462	2010.05.05
Temperature/Humidity Meter	zhicheng	ZC1-2	AC5-TH	2010.01.14

10.2. Test Setup



10.3. Limit

For 15.205 requirement:

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a) of FCC part 15, must also comply with the radiated emission limits specified in Section 15.209(a).

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
[1]0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	([2])

For 15.407(b) requirement:

- For transmitters operating in the 5.15-5.25 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz.
- For transmitters operating in the 5.25-5.35 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz. Devices operating in the 5.25-5.35 GHz band that generate emissions in the 5.15-5.25 GHz band must meet all applicable technical requirements for operation in the 5.15-5.25 GHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27dBm/MHz in the 5.15-5.25 GHz band.
- For transmitters operating in the 5.47-5.725 GHz band: all emission outside of the 5.47-5725 GHz band shall not exceed an EIRP of -27 dBm/MHz.
- For transmitters operating in the 5.725-5.825 GHz band: all emission within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an EIRP of -17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an EIRP of -27 dBm/MHz.

Operating Frequency Band (MHz)	EIRP Limit (dBm/MHz)	Equivalent Field Strength at 3m (dBuV/m)
5150 - 5250	-27	68.3
5250 - 5350	-27	68.3
5470 - 5725	-27	68.3
5725 - 5825	-27 [Note(1)]	68.3
	-17 [Note(2)]	78.3
Note(1): Outsitde the frequency range 5715 - 5835MHz. Note(2): Within the frequency range from the band edge to 10MHz below or above the band edge, 5715 – 5725MHz and 5825 - 5835MHz.		

10.4. Test Procedure

The EUT was tested according to ANSI C63.10: 2009 for compliance to FCC 47CFR 15.407 requirements.

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 C63.4:2009 on radiated measurement.

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 10~60 degrees for H-plane and 10~90 degrees for E-plane.

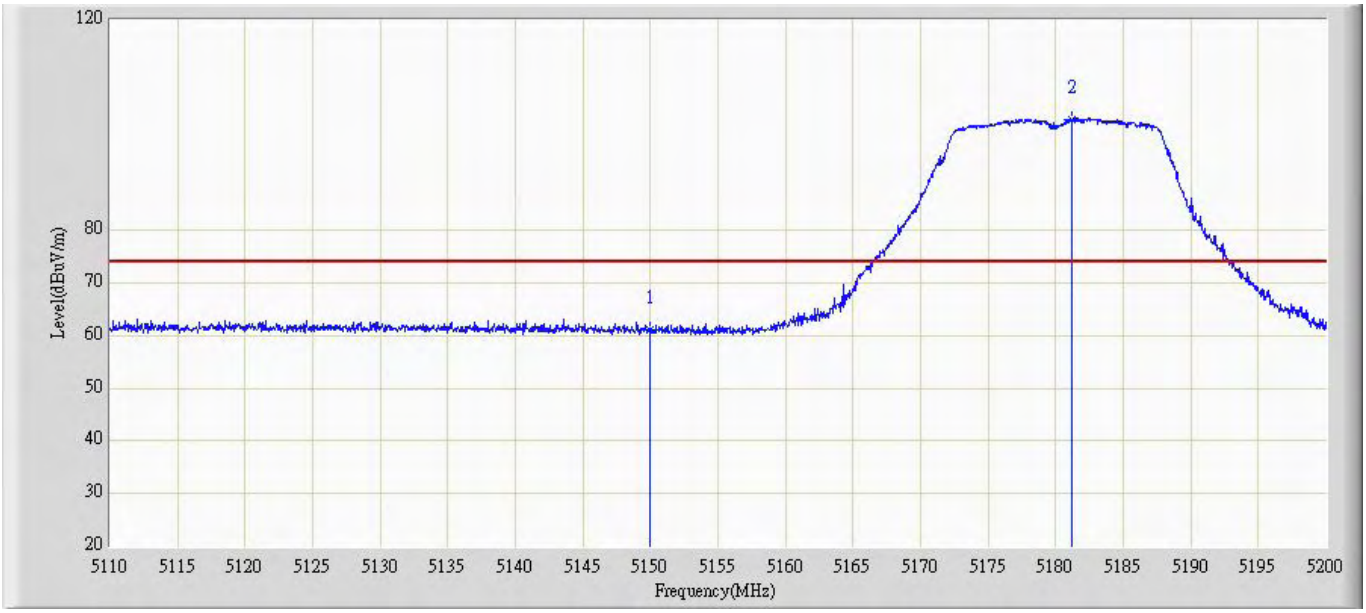
10.5. Uncertainty

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

10.6. Test Result

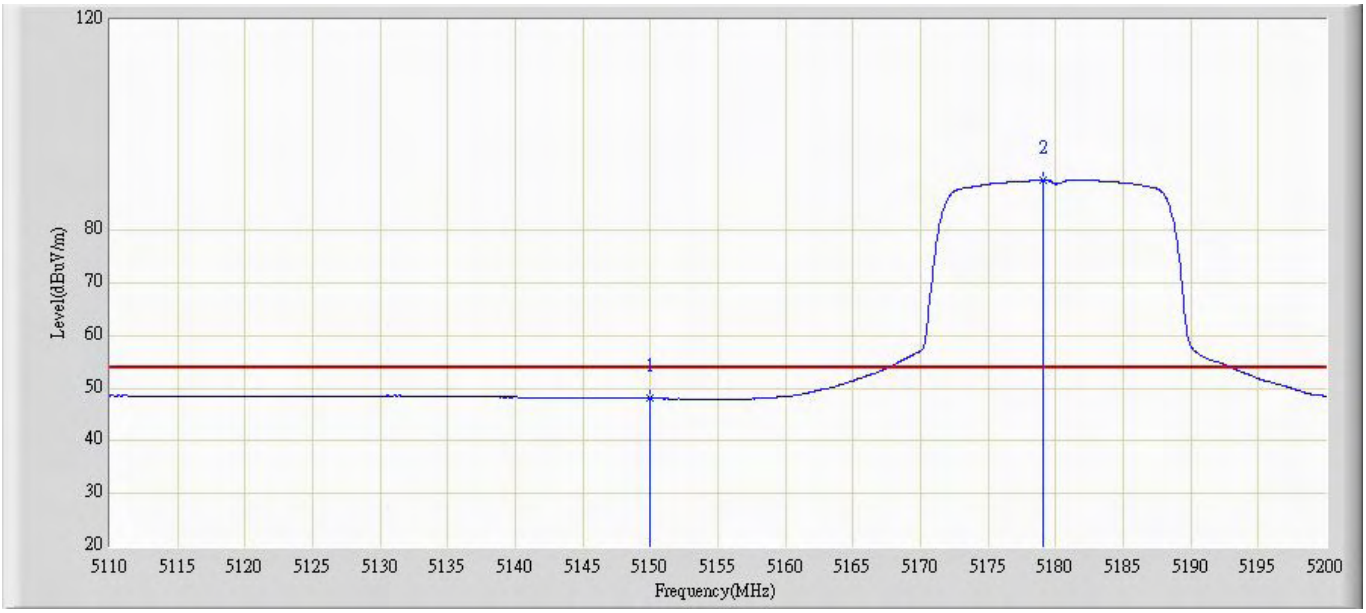
Peak detector: RBW = 1MHz, VBW = 3MHz, sweep time = 200ms;
Average detector: RBW = 1MHz, VBW = 10Hz, sweep time = auto.

Profile: 109S022R	Page No.: 1
Engineer: Aileen	
Site: AC5	Time: 2010/10/16 - 09:36
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D-499(1-18GHz)	Polarity: Horizontal
EUT: AirPcap Nx	Power: AC 120V/60Hz
Note: Mode 1:Transmit at channel 5180MHz by 802.11a (Chain 100)	



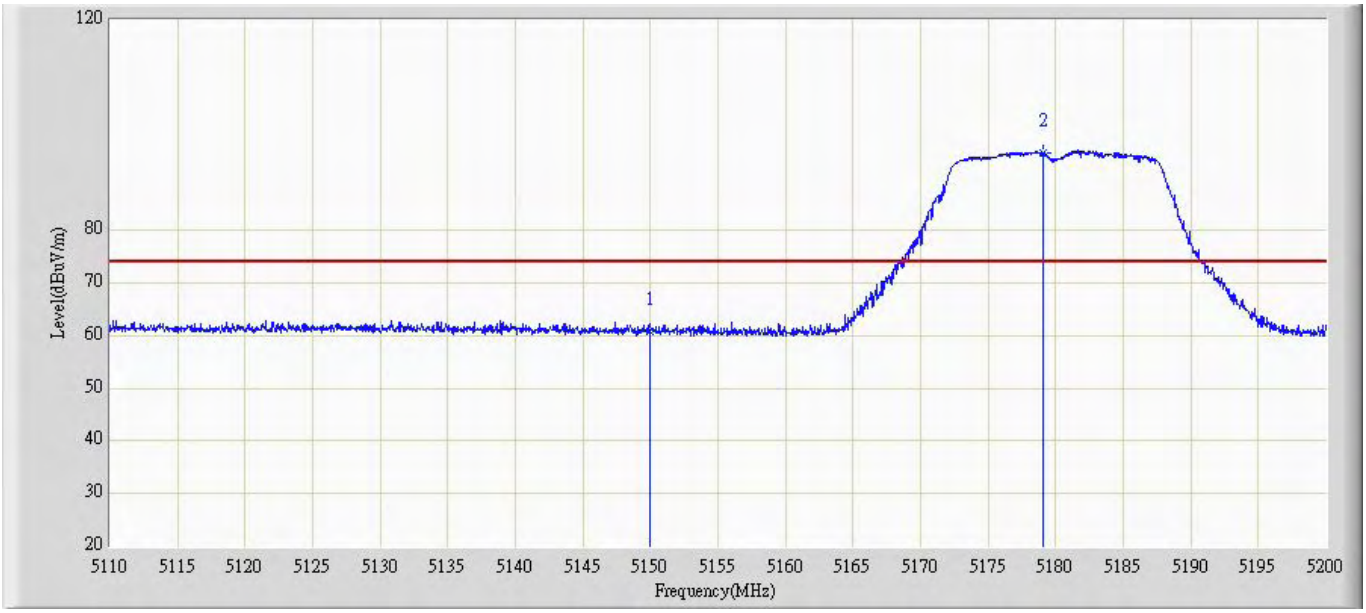
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		5150.000	61.036	25.417	-12.964	74.000	35.619	PK
2	*	5181.235	101.162	66.063	27.162	74.000	35.099	PK

Profile: 109S022R	Page No.: 2
Engineer: Aileen	
Site: AC5	Time: 2010/10/16 - 09:41
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D-499(1-18GHz)	Polarity: Horizontal
EUT: AirPcap Nx	Power: AC 120V/60Hz
Note: Mode 1:Transmit at channel 5180MHz by 802.11a (Chain 100)	



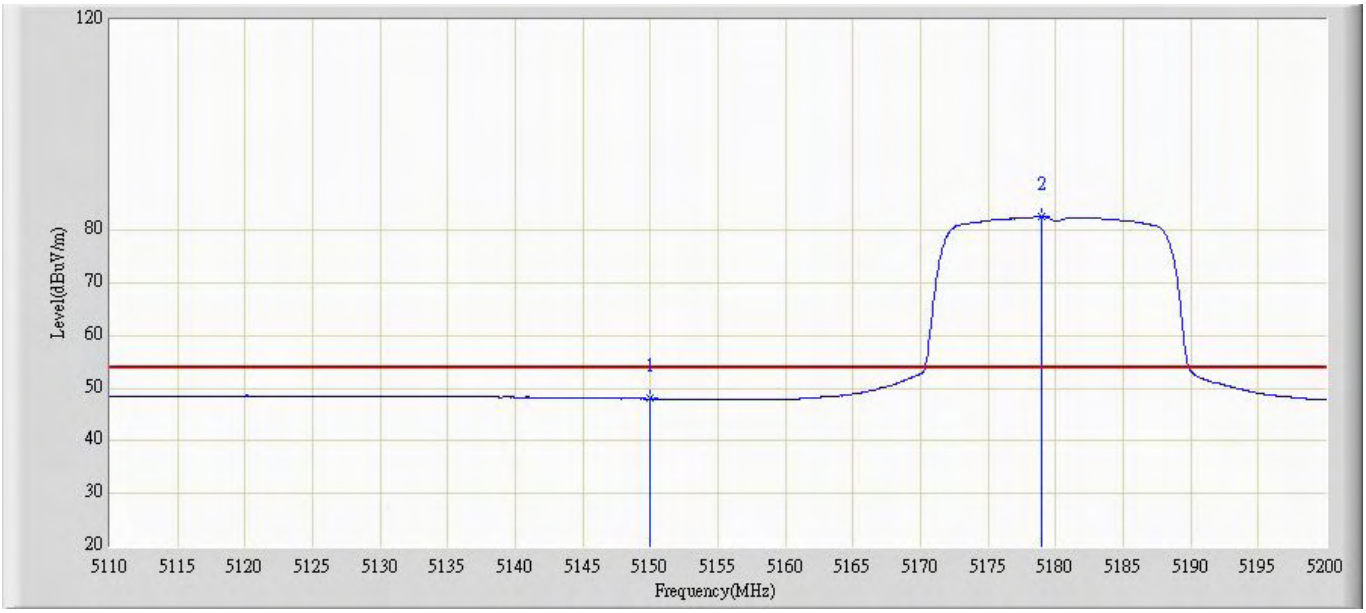
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		5150.000	48.073	12.454	-5.927	54.000	35.619	AV
2	*	5179.120	89.628	54.503	35.628	54.000	35.125	AV

Profile: 109S022R	Page No.: 3
Engineer: Aileen	
Site: AC5	Time: 2010/10/16 - 09:43
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D-499(1-18GHz)	Polarity: Vertical
EUT: AirPcap Nx	Power: AC 120V/60Hz
Note: Mode 1:Transmit at channel 5180MHz by 802.11a (Chain 100)	



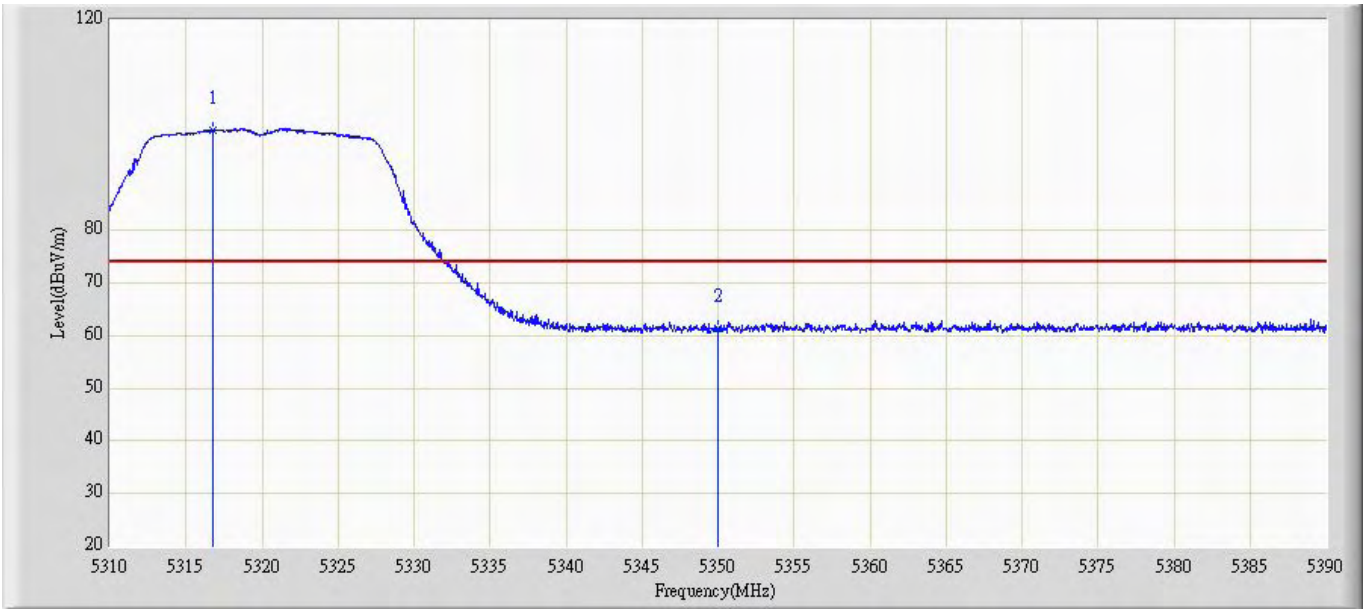
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		5150.000	60.693	25.074	-13.307	74.000	35.619	PK
2	*	5179.030	94.773	59.647	20.773	74.000	35.126	PK

Profile: 109S022R	Page No.: 4
Engineer: Aileen	
Site: AC5	Time: 2010/10/16 - 09:46
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D-499(1-18GHz)	Polarity: Vertical
EUT: AirPcap Nx	Power: AC 120V/60Hz
Note: Mode 1:Transmit at channel 5180MHz by 802.11a (Chain 100)	



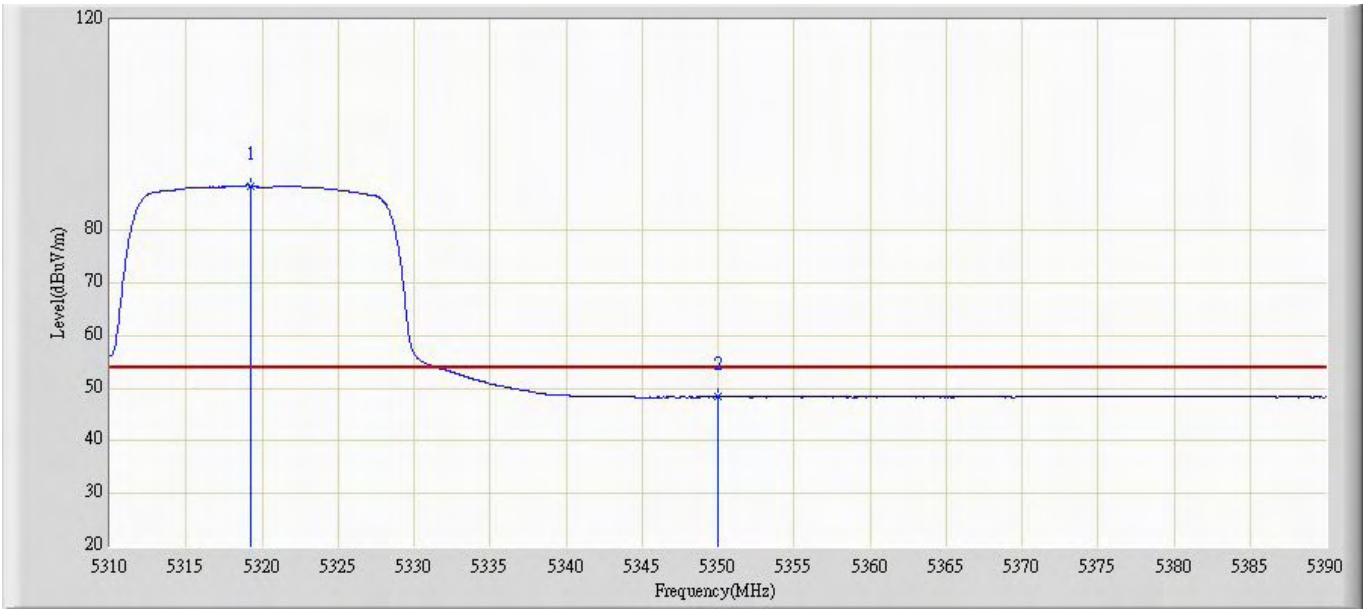
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		5150.000	48.023	12.404	-5.977	54.000	35.619	AV
2	*	5178.985	82.581	47.455	28.581	54.000	35.126	AV

Profile: 109S022R	Page No.: 5
Engineer: Aileen	
Site: AC5	Time: 2010/10/16 - 09:48
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D-499(1-18GHz)	Polarity: Horizontal
EUT: AirPcap Nx	Power: AC 120V/60Hz
Note: Mode 1:Transmit at channel 5320MHz by 802.11a (Chain 100)	



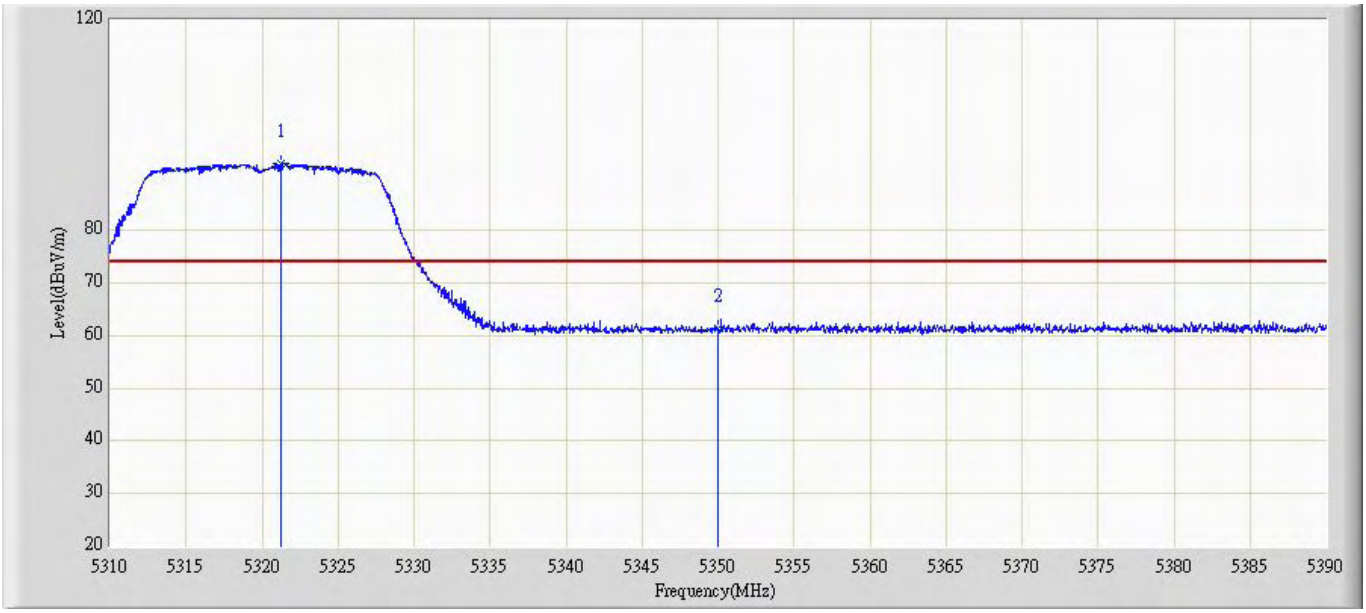
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	5316.720	99.049	63.335	25.049	74.000	35.714	PK
2		5350.000	61.462	25.693	-12.538	74.000	35.769	PK

Profile: 109S022R	Page No.: 6
Engineer: Aileen	
Site: AC5	Time: 2010/10/16 - 09:51
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D-499(1-18GHz)	Polarity: Horizontal
EUT: AirPcap Nx	Power: AC 120V/60Hz
Note: Mode 1:Transmit at channel 5320MHz by 802.11a (Chain 100)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	5319.240	88.512	52.798	34.512	54.000	35.714	AV
2		5350.000	48.376	12.607	-5.624	54.000	35.769	AV

Profile: 109S022R	Page No.: 7
Engineer: Aileen	
Site: AC5	Time: 2010/10/16 - 09:52
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D-499(1-18GHz)	Polarity: Vertical
EUT: AirPcap Nx	Power: AC 120V/60Hz
Note: Mode 1:Transmit at channel 5320MHz by 802.11a (Chain 100)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	5321.280	92.586	56.870	18.586	74.000	35.716	PK
2		5350.000	61.307	25.538	-12.693	74.000	35.769	PK