



Test Report

Product Name	SpectraGuard Sensor
Model No	SS-300-AT-C-50
FCC ID	TOR-SS300ATC50

Applicant	AirTight Networks, Inc.
Address	339 N. Bernardo Avenue, Suite #200 Mountain View, CA United States 94043

Date of Receipt	Aug. 30, 2010
Issued Date	Sep. 17, 2010
Report No.	109037R-RFUSP32V01
Report Version	V1.0

The test results relate only to the samples tested.

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Test Report Certification

Issued Date: Sep. 17, 2010

Report No.: 109037R-RFUSP32V01



Product Name	SpectraGuard Sensor
Applicant	AirTight Networks, Inc.
Address	339 N. Bernardo Avenue, Suite #200 Mountain View, CA United States 94043
Manufacturer	Dong Guan G-Com Computer Co., Ltd.
Model No.	SS-300-AT-C-50
FCC ID.	TOR-SS300ATC50
EUT Rated Voltage	AC 100-240V, 50/60Hz
EUT Test Voltage	AC 120V/60Hz
Trade Name	AirTight Networks
Applicable Standard	FCC CFR Title 47 Part 15 Subpart E: 2009 ANSI C63.4: 2003
Test Result	Complied



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1. GENERAL INFORMATION

1.1. EUT Description

Product Name	SpectraGuard Sensor
Trade Name	AirTight Networks
FCC ID.	TOR-SS300ATC50
Model No.	SS-300-AT-C-50
Frequency Range	802.11a/n-20MHz: 5180-5320MHz, 5500-5700MHz 802.11n-40MHz: 5190-5310MHz, 5510-5670MHz
Number of Channels	802.11a/n-20MHz: 19; 802.11n-40MHz: 9
Data Rate	802.11a: 6 - 54Mbps , 802.11n: up to 450Mbps
Channel Control	Auto
Type of Modulation	802.11a/n:OFDM, BPSK, QPSK, 16QAM, 64QAM
Antenna type	PCB Antenna
Antenna Gain	Refer to the table “Antenna List”
Power Adapter	MFR: DVE, M/N: DSA-15P-12 US 120150 Input: AC 100-240V ~ 50/60Hz, 0.5A Output: DC 12V, 1.25A

Antenna List

No.	Manufacturer	Part No.	Peak Gain
1	WIESON	GY196HT0220-014	6.24dBi in 5.15~5.35GHz 6.30dBi in 5.47~5.725GHz

Note: The antenna of EUT is conforming to FCC 15.203.

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

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 36:	5180 MHz	Channel 40:	5200 MHz	Channel 44:	5220 MHz	Channel 48:	5240 MHz
Channel 52:	5260 MHz	Channel 56:	5280 MHz	Channel 60:	5300 MHz	Channel 64:	5320 MHz
Channel 100:	5500 MHz	Channel 104:	5520 MHz	Channel 108:	5540 MHz	Channel 112:	5560 MHz
Channel 116:	5580 MHz	Channel 120:	5600 MHz	Channel 124:	5620 MHz	Channel 128:	5640 MHz
Channel 132:	5660 MHz	Channel 136:	5680 MHz	Channel 140:	5700 MHz		

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

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 38:	5190 MHz	Channel 46:	5230 MHz	Channel 54:	5270 MHz	Channel 62:	5310 MHz
Channel 102:	5510 MHz	Channel 110:	5550 MHz	Channel 118:	5590 MHz	Channel 126:	5630 MHz
Channel 134:	5670 MHz						

Note:

1. This device is a SpectraGuard Sensor with a built-in 2.4GHz and 5GHz WLAN transceiver, 802.11a/b/g/n all functions support 3(Transmit) × 3(Receive) technology.
2. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test. Lowest and highest data rates are tested in each mode. Only worst case is shown in the report. (802.11a is 6Mbps, 802.11n-20BW is 21.6Mbps and 802.11n-40BW are 45Mbps)
3. These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with Part 15 Subpart E for Unlicensed National Information Infrastructure devices.

1.2. Operational Description

The EUT is a SpectraGuard Sensor with a built-in 2.4GHz and 5GHz WLAN card. This device provided four kinds of transmitting speed 1, 2, 5.5 and 11Mbps and the device of RF carrier is DBPSK, DQPSK and CCK (IEEE 802.11b). The device provided of eight kinds of transmitting speed 6, 9, 12, 18, 24, 36, 48 and 54Mbps the device of RF carrier is BPSK, QPSK, 16QAM and 64QAM (IEEE 802.11a/g).

The device provided of eight kinds of transmitting speed 21.6,43.2,65.1,86.7,129.9,173.4,195 and 216Mbps in 802.11n(20M-BW) mode and 45,90,135,180,270,360,405 and 450 Mbps(40M-BW) the device of RF carrier is BPSK, QPSK, 16QAM and 64QAM (IEEE 802.11n), the IEEE 802.11n is Multiple In, Multiple Out" (MIMO) technology.

The device adapts direct sequence spread spectrum modulation. The antenna provides diversity function to improve the receiving function and the antennas to support 3(Transmit) × 3(Receive) MIMO technology.

This SpectraGuard Sensor, compliant with IEEE 802.11b and IEEE 802.11a/g/n, is a high-efficiency Wireless LAN adapter. It allows your computer to connect to a wireless network and to share resources, such as files or printers without being bound to the network wires. Operation in 2.4GHz Direct Sequence Spread Spectrum (DSSS) radio transmission, the SpectraGuard Sensor Wired Equivalent Protection (WEP) algorithm is used. In addition, its standard compliance ensures that it can communicate with any IEEE 802.11b and IEEE 802.11a/g/n network.

The Device no radar detection and no ad-hoc operation in the DFS band, another information please refer to users manual.

Test Mode	Mode 1: Transmit (802.11a-6Mbps) Mode 2: Transmit (802.11n-20BW 21.6Mbps) Mode 3: Transmit (802.11n-40BW 45Mbps)
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NOTE: The power combiner is used for conducted test, the factor of combiner is 10dB and offset it in test instrument.

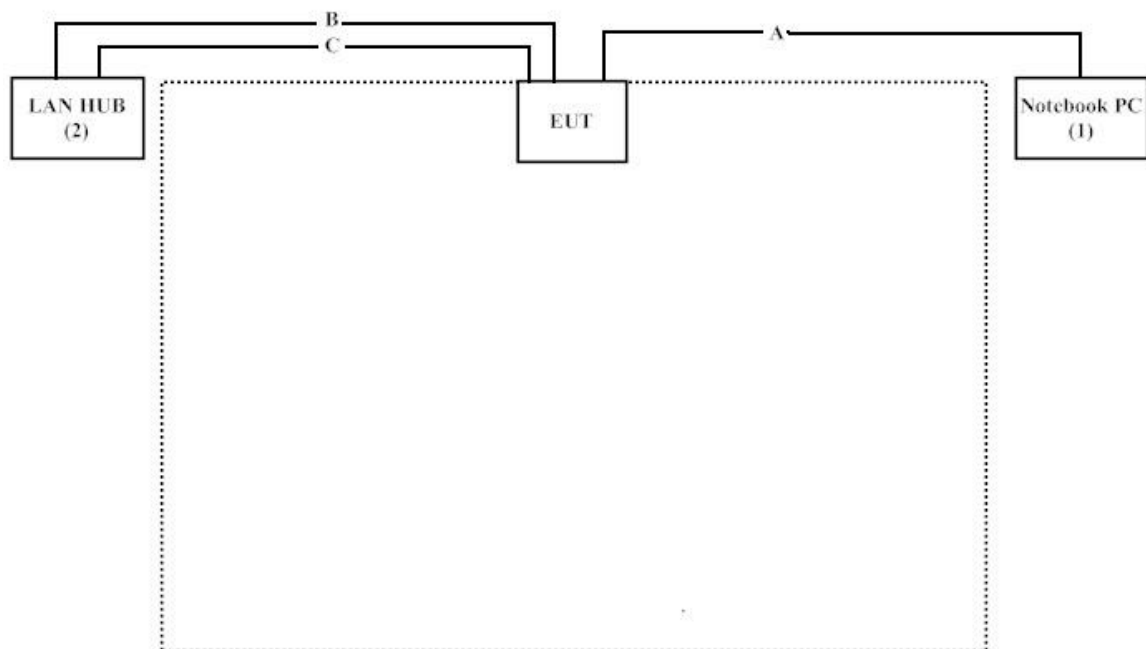
1.3. Tested System Details

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

Product	Manufacturer	Model No.	Serial No.	Power Cord
1	NOTEBOOK PC	DELL	D400	N/A
2	LAN HUB	D-Link	DES-1008D	DR9R16C002163

Signal Cable Type	Signal cable Description
A	LAN CABLE
B	LAN CABLE
C	LAN CABLE

1.4. Configuration of tested System



1.5. EUT Exercise Software

- (1) Setup the EUT as shown in Section 1.4
- (2) Execute the ART program (Version 07B30) on the EUT
- (3) Configure the test mode, the test channel, and the data rate.
- (4) Press "OK" to start the continuous Transmitter.
- (5) Verify that the EUT works properly.

1.6. Test Facility

Ambient conditions in the laboratory:

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	20-35
Humidity (%RH)	25-75	50-65
Barometric pressure (mbar)	860-1060	950-1000

The related certificate for our laboratories about the test site and management system can be downloaded from Quietek Corporation's Web Site : <http://www.quietek.com/tw/ctg/cts/accreditations.htm>

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

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



Accreditation on NVLAP
NVLAP Lab Code: 200533-0



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FCC Accreditation Number: TW1014



2. Conducted Emission

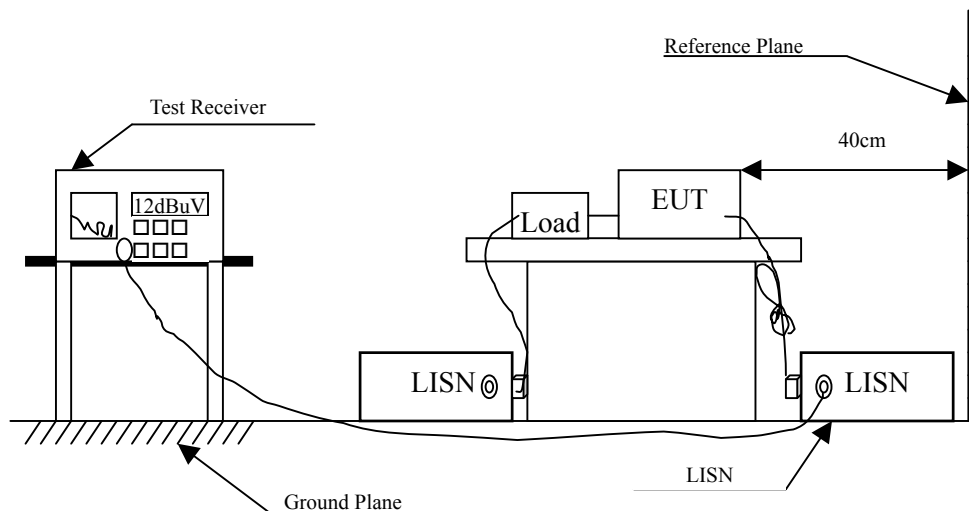
2.1. Test Equipment

The following test equipment are used during the conducted emission test:

Item	Instrument	Manufacturer	Type No./Serial No	Last Cal.	Remark
1	Test Receiver	R & S	ESCS 30/825442/17	May, 2010	
2	L.I.S.N.	R & S	ESH3-Z5/825016/6	May, 2010	EUT
3	L.I.S.N.	Kyoritsu	KNW-407/8-1420-3	May, 2010	Peripherals
4	Pulse Limiter	R & S	ESH3-Z2	May, 2010	
5	No.1 Shielded Room			N/A	

Note: All equipments are calibrated every one year.

2.2. Test Setup



2.3. Limits

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

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

2.4. Test Procedure

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

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

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

The EUT was setup to ANSI C63.4, 2003; tested to DTS test procedure of Aug 2002 DA 02-2138 for compliance to FCC 47CFR Subpart E requirements.

2.5. Uncertainty

± 2.26 dB

2.6. Test Result of Conducted Emission

Product : SpectraGuard Sensor
 Test Item : Conducted Emission Test
 Power Line : Line 1
 Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5190MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV	Margin dB	Limit dBuV
LINE 1					
Quasi-Peak					
0.162	9.750	34.400	44.150	-21.507	65.657
0.279	9.657	42.410	52.067	-10.247	62.314
0.314	9.650	41.800	51.450	-9.864	61.314
0.439	9.640	35.860	45.500	-12.243	57.743
1.060	9.670	30.480	40.150	-15.850	56.000
12.927	9.910	28.360	38.270	-21.730	60.000
Average					
0.162	9.750	25.280	35.030	-20.627	55.657
0.279	9.657	30.620	40.277	-12.037	52.314
0.314	9.650	30.870	40.520	-10.794	51.314
0.439	9.640	21.640	31.280	-16.463	47.743
1.060	9.670	15.880	25.550	-20.450	46.000
12.927	9.910	19.820	29.730	-20.270	50.000

Note:

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

Product : SpectraGuard Sensor
 Test Item : Conducted Emission Test
 Power Line : Line 2
 Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5190MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBuV	dBuV	dB	dBuV
LINE 2					
Quasi-Peak					
0.158	9.756	32.040	41.796	-23.975	65.771
0.275	9.669	36.880	46.549	-15.880	62.429
0.310	9.660	34.510	44.170	-17.259	61.429
0.521	9.640	21.230	30.870	-25.130	56.000
1.025	9.670	23.030	32.700	-23.300	56.000
2.986	9.690	18.840	28.530	-27.470	56.000
Average					
0.158	9.756	24.780	34.536	-21.235	55.771
0.275	9.669	26.870	36.539	-15.890	52.429
0.310	9.660	22.360	32.020	-19.409	51.429
0.521	9.640	4.220	13.860	-32.140	46.000
1.025	9.670	8.110	17.780	-28.220	46.000
2.986	9.690	5.760	15.450	-30.550	46.000

Note:

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

Product : SpectraGuard Sensor
 Test Item : Conducted Emission Test
 Power Line : Line 1
 Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5270MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBuV	dBuV	dB	dBuV
LINE 1					
Quasi-Peak					
0.263	9.667	42.890	52.557	-10.214	62.771
0.318	9.650	40.450	50.100	-11.100	61.200
0.466	9.640	34.160	43.800	-13.171	56.971
0.869	9.667	35.890	45.557	-10.443	56.000
6.466	9.740	30.100	39.840	-20.160	60.000
11.291	9.850	30.260	40.110	-19.890	60.000
Average					
0.263	9.667	25.520	35.187	-17.584	52.771
0.318	9.650	30.650	40.300	-10.900	51.200
0.466	9.640	12.280	21.920	-25.051	46.971
0.869	9.667	23.510	33.177	-12.823	46.000
6.466	9.740	23.050	32.790	-17.210	50.000
11.291	9.850	23.200	33.050	-16.950	50.000

Note:

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

Product : SpectraGuard Sensor
 Test Item : Conducted Emission Test
 Power Line : Line 2
 Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5270MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBuV	dBuV	dB	dBuV
LINE 2					
Quasi-Peak					
0.154	9.760	33.990	43.751	-22.135	65.886
0.259	9.680	41.910	51.590	-11.296	62.886
0.310	9.660	40.210	49.870	-11.559	61.429
0.474	9.640	33.600	43.240	-13.503	56.743
0.705	9.650	31.300	40.950	-15.050	56.000
6.361	9.730	27.220	36.950	-23.050	60.000
Average					
0.154	9.760	27.780	37.541	-18.345	55.886
0.259	9.680	32.850	42.530	-10.356	52.886
0.310	9.660	21.530	31.190	-20.239	51.429
0.474	9.640	22.830	32.470	-14.273	46.743
0.705	9.650	18.200	27.850	-18.150	46.000
6.361	9.730	21.390	31.120	-18.880	50.000


Note:

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

Product : SpectraGuard Sensor
 Test Item : Conducted Emission Test
 Power Line : Line 1
 Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5590MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBuV	dBuV	dB	dBuV
LINE 1					
Quasi-Peak					
0.158	9.756	32.350	42.106	-23.665	65.771
0.267	9.665	43.150	52.815	-9.842	62.657
0.310	9.650	40.870	50.520	-10.909	61.429
0.361	9.650	40.420	50.070	-9.901	59.971
0.615	9.630	34.100	43.730	-12.270	56.000
11.170	9.850	30.150	40.000	-20.000	60.000
Average					
0.158	9.756	26.560	36.316	-19.455	55.771
0.267	9.665	36.050	45.715	-6.942	52.657
0.310	9.650	18.510	28.160	-23.269	51.429
0.361	9.650	26.320	35.970	-14.001	49.971
0.615	9.630	14.590	24.220	-21.780	46.000
11.170	9.850	23.730	33.580	-16.420	50.000

Note:

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

Product : SpectraGuard Sensor
 Test Item : Conducted Emission Test
 Power Line : Line 2
 Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5590MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level		
	dB	dBuV	dBuV	dB	dBuV
LINE 2					
Quasi-Peak					
0.322	9.660	39.720	49.380	-11.706	61.086
0.361	9.653	39.870	49.523	-10.448	59.971
0.873	9.672	34.680	44.352	-11.648	56.000
1.443	9.670	26.100	35.770	-20.230	56.000
5.033	9.700	17.640	27.340	-32.660	60.000
6.361	9.730	30.460	40.190	-19.810	60.000
Average					
0.322	9.660	29.210	38.870	-12.216	51.086
0.361	9.653	28.770	38.423	-11.548	49.971
0.873	9.672	28.940	38.612	-7.388	46.000
1.443	9.670	8.570	18.240	-27.760	46.000
5.033	9.700	11.260	20.960	-29.040	50.000
6.361	9.730	17.610	27.340	-22.660	50.000

Note:

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

3. Peak Transmit Power

3.1. Test Equipment

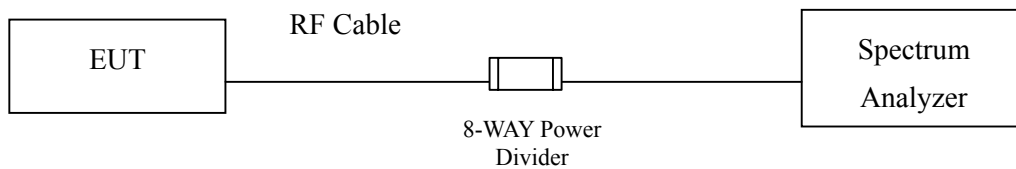
	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
X	Power Meter	Anritsu	ML2495A/6K00003357	May, 2010
X	Power Sensor	Anritsu	MA2411B/0738448	Jun, 2010
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2010
X	8-WAY Power Divider	JFW	50PD-647 / 526770 0916	Apr., 2010

Note:

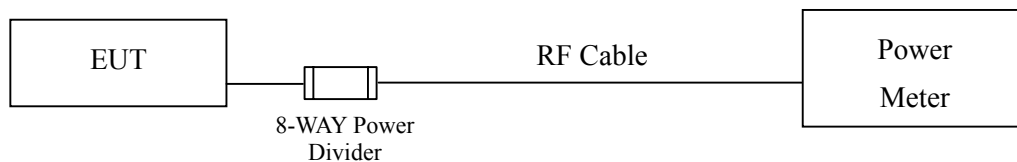
1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
2. The test instruments marked with “X” are used to measure the final test results.

3.2. Test Setup

26dBc Occupied Bandwidth



Conduction Power Measurement



3.3. Limits

- (1) For the band 5.15-5.25 GHz, the peak transmit power over the frequency band of operation shall not exceed the lesser of 50 mW or $4 \text{ dBm} + 10\log B$, where B is the 26-dB emission bandwidth in MHz. If transmitting antenna of directional gain greater than 6 dBi are used, the peak transmit power shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.
- (2) For the band 5.25-5.35 GHz, the peak transmit power over the frequency band of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10\log B$, where B is the 26-dB emission bandwidth in MHz. If transmitting antenna of directional gain greater than 6 dBi are used, the peak transmit power shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.
- (3) For the band 5.725-5.825 GHz, the peak transmit power over the frequency band of operation shall not exceed the lesser of 1W or $17 \text{ dBm} + 10\log B$, where B is the 26-dB emission bandwidth in MHz. If transmitting antenna of directional gain greater than 6 dBi are used, the peak transmit power shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.

3.4. Test Procedur

As an alternative to DA 02-2138, the EUT peak power was measured with a peak power meter employing a video bandwidth greater than 6dB BW of the emission under test. Peak output power was read directly from the meter across all data rates, and across three channels within each sub-band. Special care was used to make sure that the EUT was transmitting in continuous mode. This method exceeds the limitations of DA 02-2138, and provides more accurate measurements.

3.5. Uncertainty

$\pm 1.27 \text{ dB}$

3.6. Test Result of Peak Transmit Power

Product : SpectraGuard Sensor
 Test Item : Peak Transmit Power
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps)

Cable loss=1dB		Peak Power Output								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		6	9	12	18	24	36	48	54	
		Measurement Level (dBm)								
36	5180	12.41	--	--	--	--	--	--	--	<17dBm
44	5220	12.80	12.65	12.51	12.41	12.06	11.99	12.23	12.68	<17dBm
48	5240	12.53	--	--	--	--	--	--	--	<17dBm
52	5260	19.89								<24dBm
60	5300	21.24	21.06	20.87	20.98	21.09	21.14	20.91	20.82	<24dBm
64	5320	18.17	--	--	--	--	--	--	--	<24dBm
100	5500	20.14	--	--	--	--	--	--	--	<24dBm
120	5600	22.39	21.89	22.15	22.03	22.24	21.91	21.98	22.15	<24dBm
140	5700	21.48	--	--	--	--	--	--	--	<24dBm

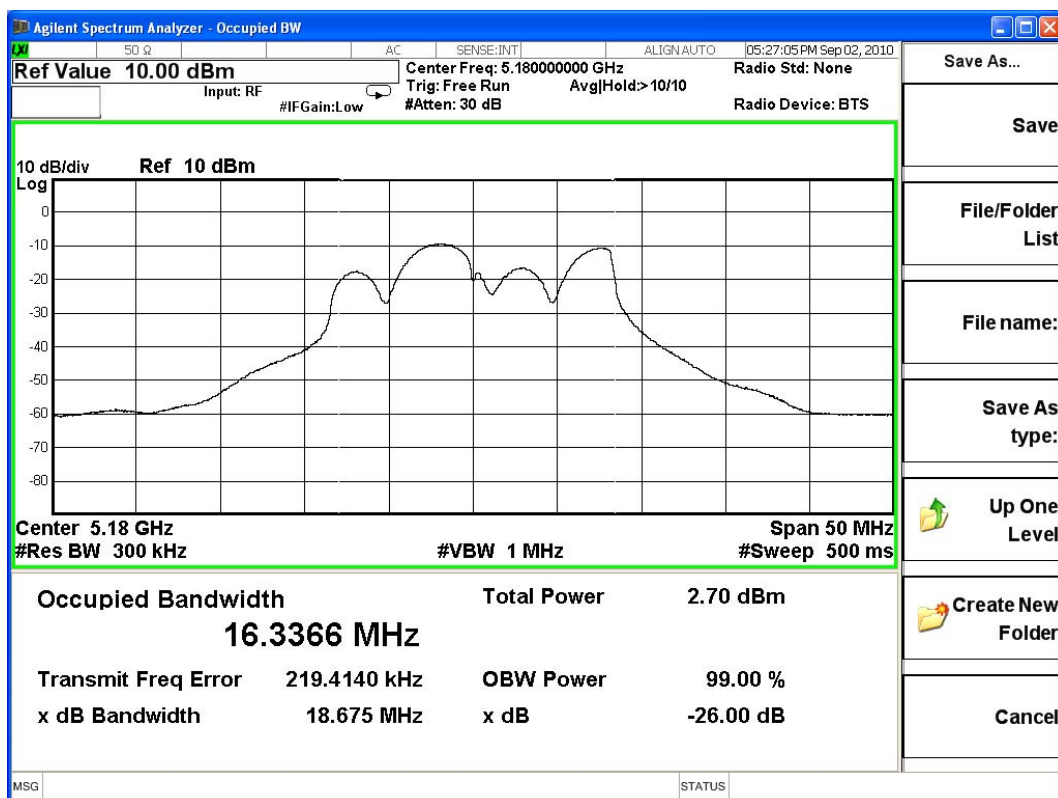
Note: Peak Power Output Value =Reading value on peak power meter + cable loss

Peak Transmit Power Measurement:

Channel No	Frequency Range (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Output Power Limit		Result
				(dBm)	dBm+10log(BW)	
36	5180	18.675	12.41	17	16.71	Pass

26dBc Occupied Bandwidth:

Channel 36

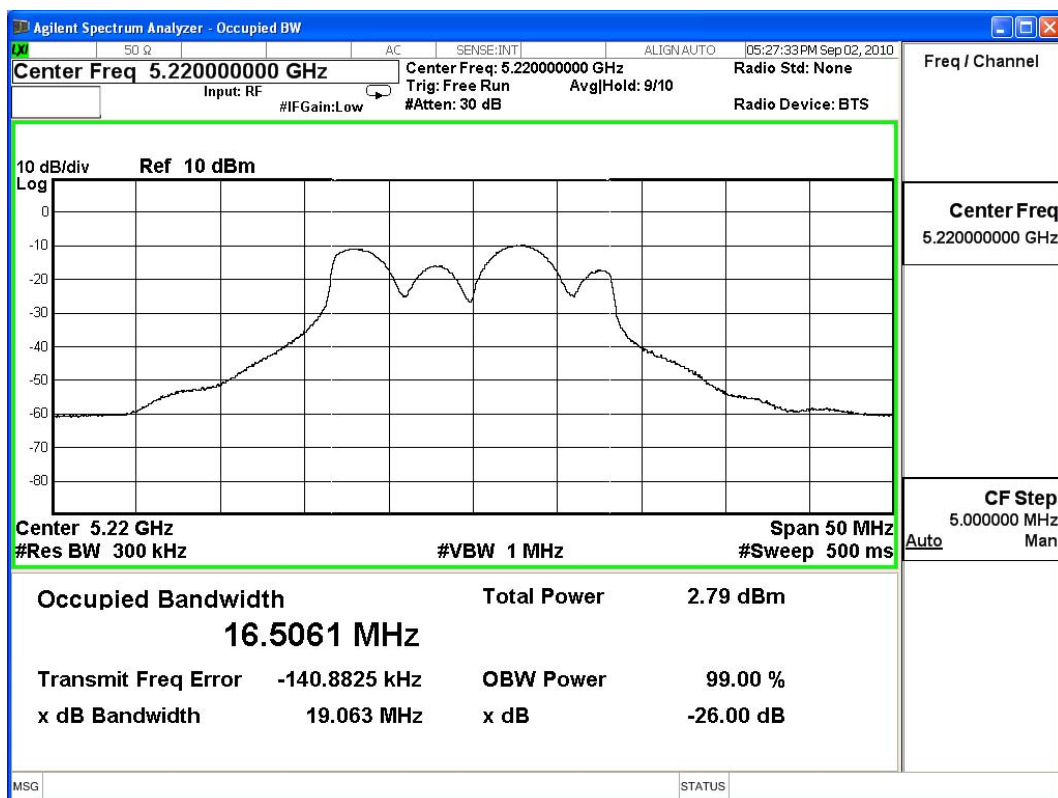


Peak Transmit Power Measurement:

Channel No	Frequency Range (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Output Power Limit		Result
				(dBm)	dBm+10log(BW)	
44	5220	19.063	12.8	17	16.80	Pass

26dBc Occupied Bandwidth:

Channel 40

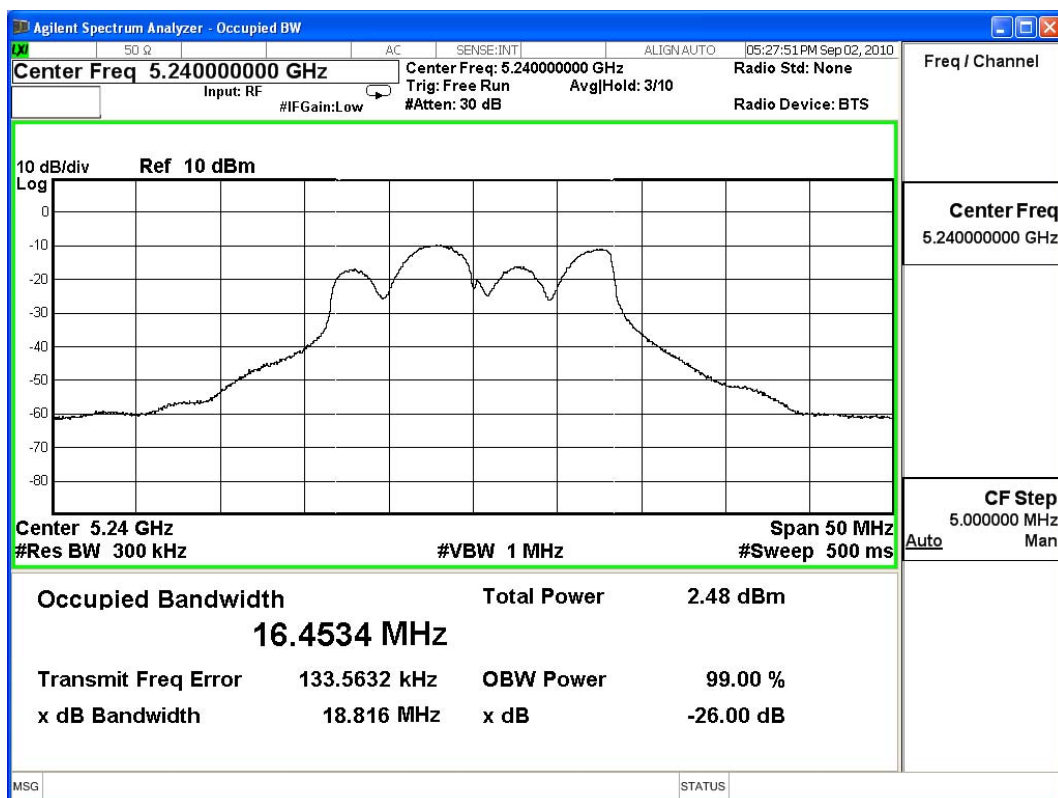


Peak Transmit Power Measurement:

Channel No	Frequency Range (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Output Power Limit		Result
				(dBm)	dBm+10log(BW)	
48	5240	18.816	12.53	17	16.75	Pass

26dBc Occupied Bandwidth:

Channel 48

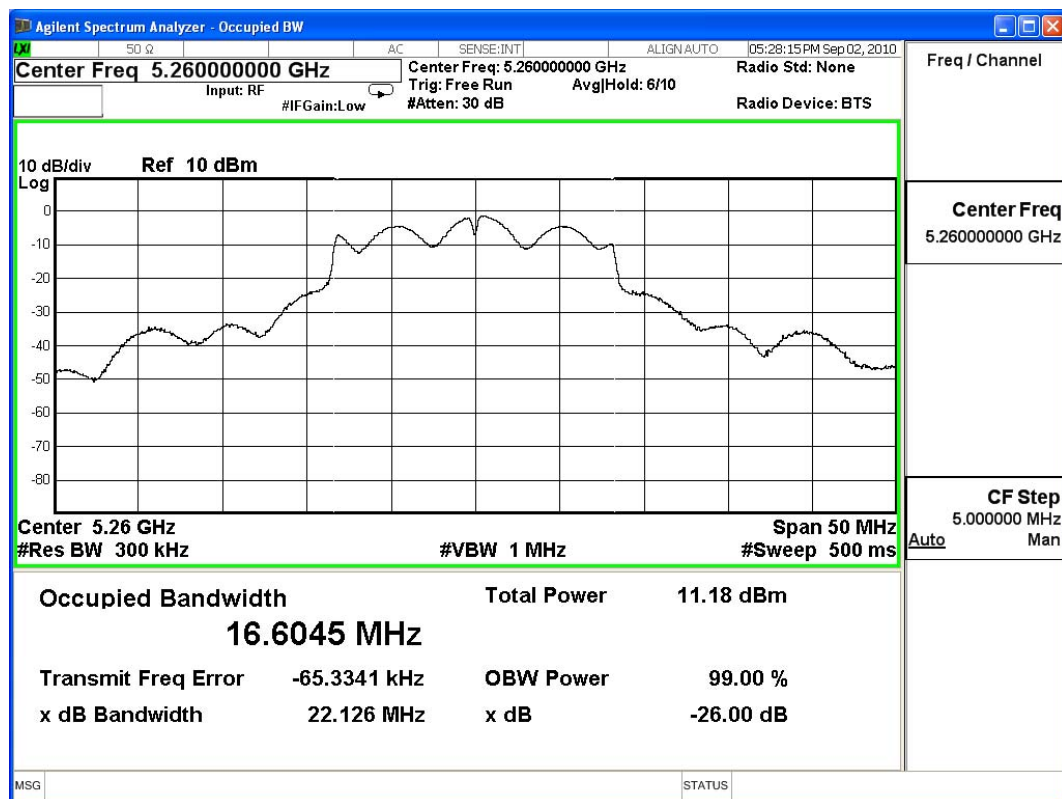


Peak Transmit Power Measurement:

Channel No	Frequency Range (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Output Power Limit		Result
				(dBm)	dBm+10log(BW)	
52	5260	22.126	19.89	24	24.45	Pass

26dBc Occupied Bandwidth:

Channel 52

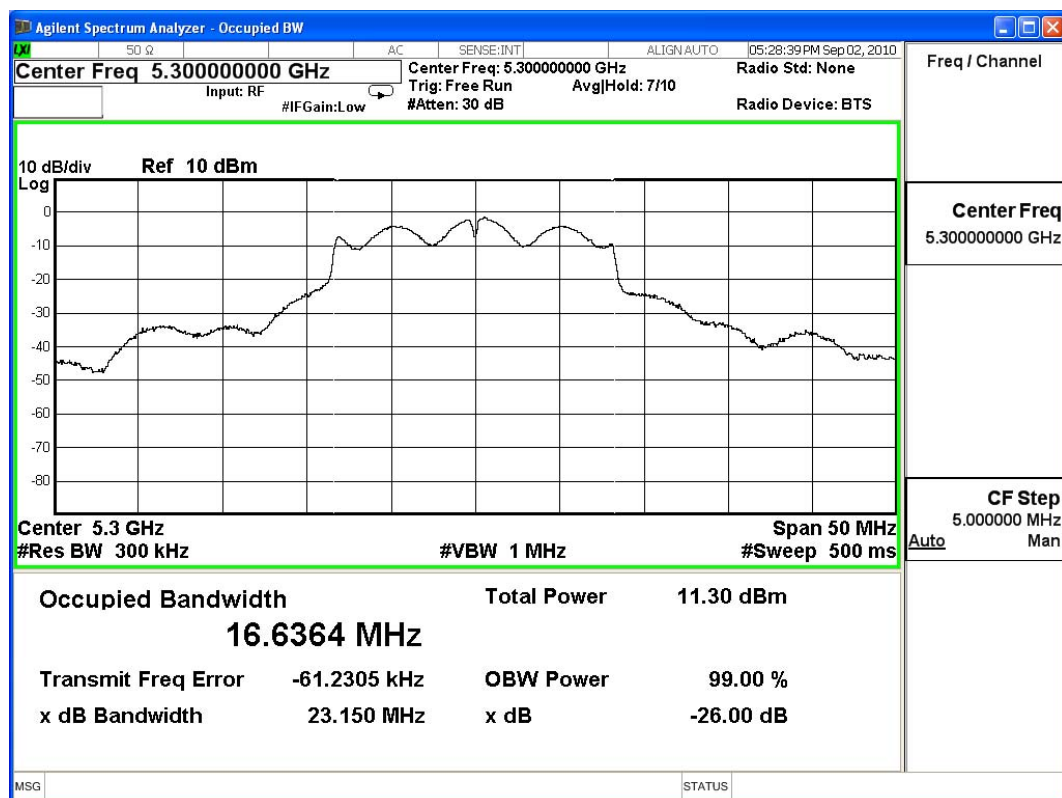


Peak Transmit Power Measurement:

Channel No	Frequency Range (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Output Power Limit		Result
				(dBm)	dBm+10log(BW)	
60	5300	23.15	21.24	24	24.65	Pass

26dBc Occupied Bandwidth:

Channel 60

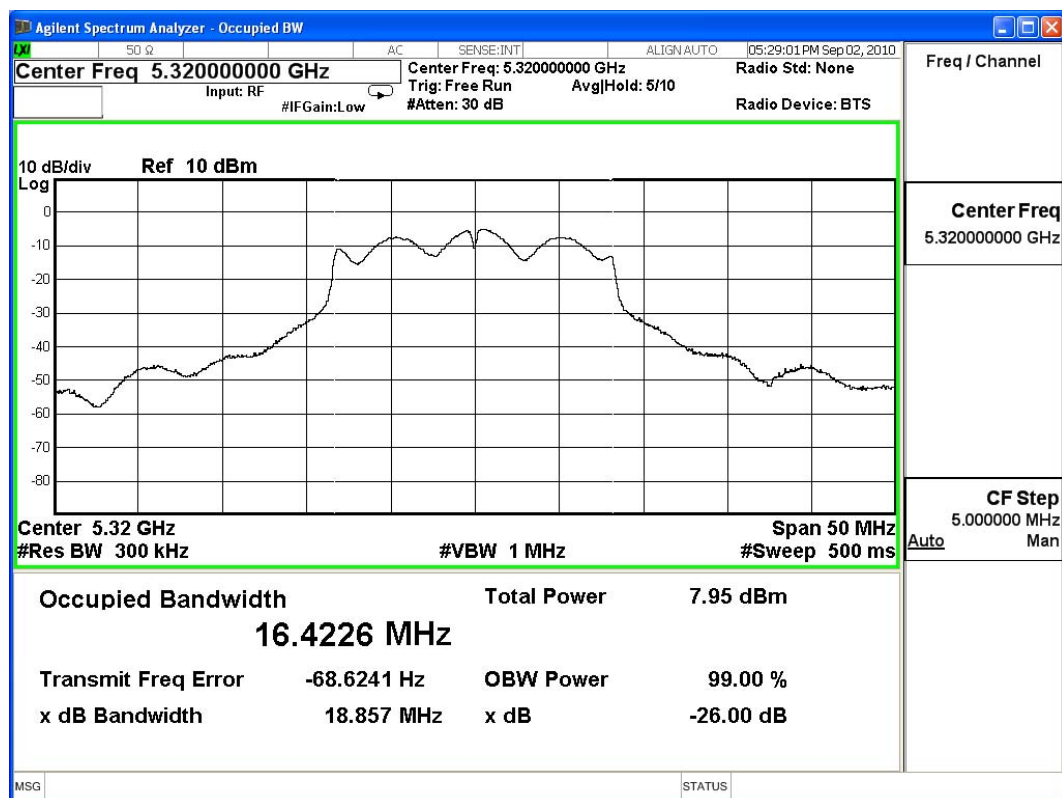


Peak Transmit Power Measurement:

Channel No	Frequency Range (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Output Power Limit		Result
				(dBm)	dBm+10log(BW)	
64	5320	18.857	18.17	24	23.75	Pass

26dBc Occupied Bandwidth:

Channel 64

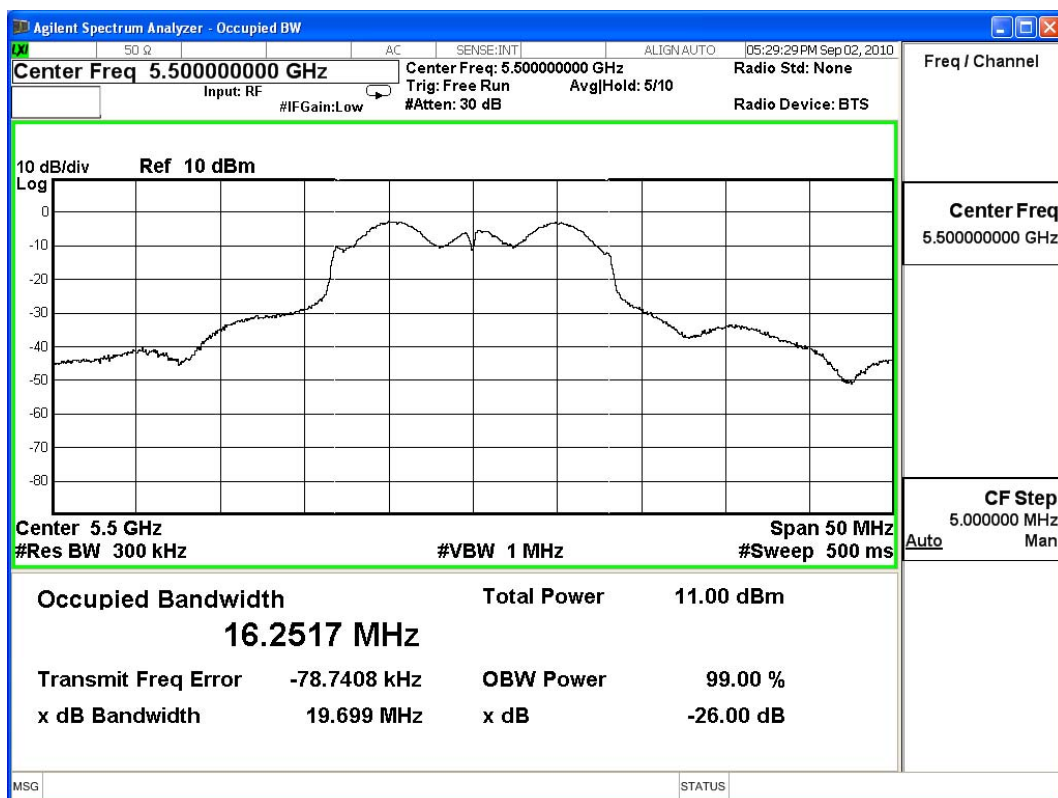


Peak Transmit Power Measurement:

Channel No	Frequency Range (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Output Power Limit		Result
				(dBm)	dBm+10log(BW)	
100	5500	19.699	20.14	24	23.94	Pass

26dBc Occupied Bandwidth:

Channel 100

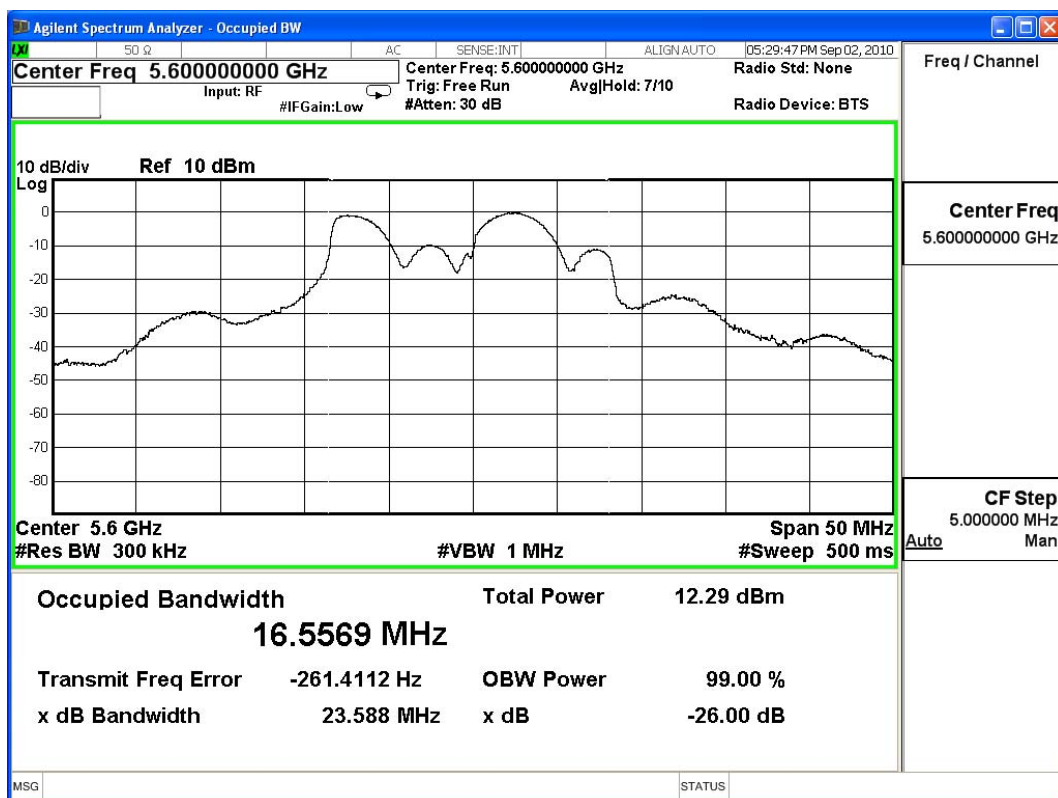


Peak Transmit Power Measurement:

Channel No	Frequency Range (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Output Power Limit		Result
				(dBm)	dBm+10log(BW)	
120	5600	23.588	22.39	24	24.73	Pass

26dBc Occupied Bandwidth:

Channel 120

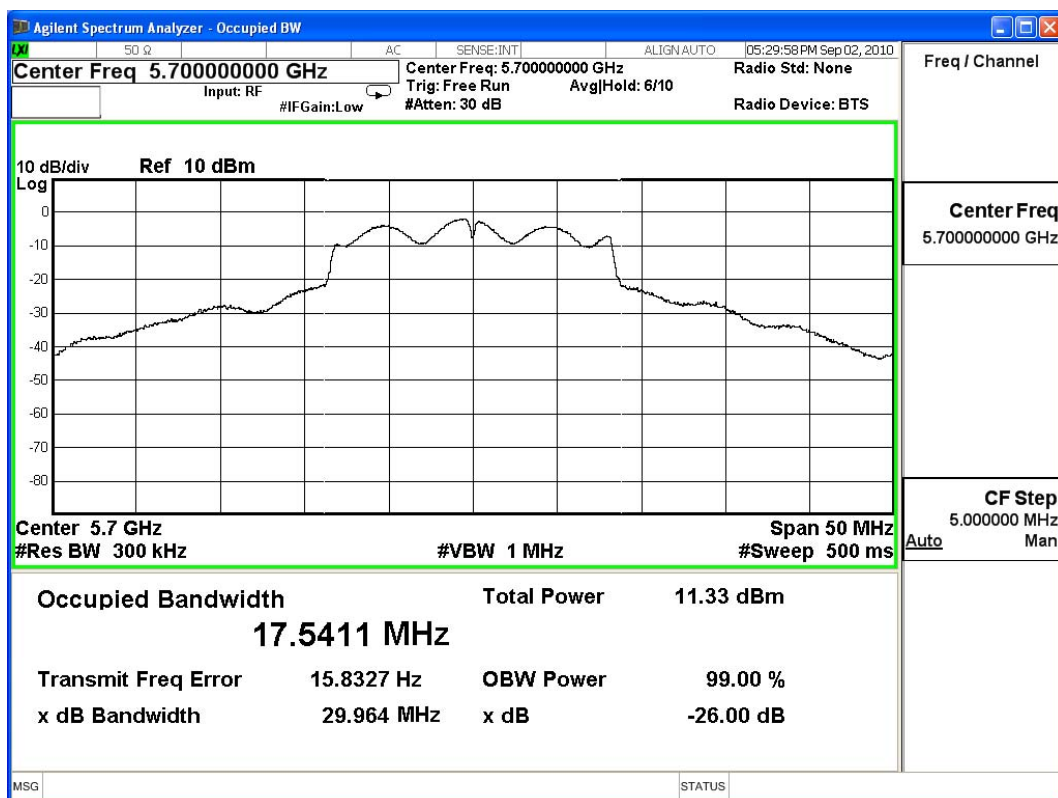


Peak Transmit Power Measurement:

Channel No	Frequency Range (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Output Power Limit		Result
				(dBm)	dBm+10log(BW)	
140	5700	29.964	21.48	24	25.77	Pass

26dBc Occupied Bandwidth:

Channel 140



Product : SpectraGuard Sensor
 Test Item : Peak Transmit Power
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 21.6Mbps)

Cable loss=1dB		Peak Power Output								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		21.6	43.2	65.1	86.7	129.9	173.4	195	216.6	
		Measurement Level (dBm)								
36	5180	13.54	13.21	13.26	13.06	12.46	12.76	12.48	13.05	<17dBm
44	5220	13.30	--	--	--	--	--	--	--	<17dBm
48	5240	13.41	--	--	--	--	--	--	--	<17dBm
52	5260	20.79	--	--	--	--	--	--	--	<24dBm
60	5300	21.09	20.86	20.52	20.43	19.93	20.4	20.64	20.12	<24dBm
64	5320	18.22	--	--	--	--	--	--	--	<24dBm
100	5500	19.30	--	--	--	--	--	--	--	<24dBm
120	5600	21.62	21.45	21.5	21.05	20.94	20.81	21.16	21.05	<24dBm
140	5700	21.49	--	--	--	--	--	--	--	<24dBm

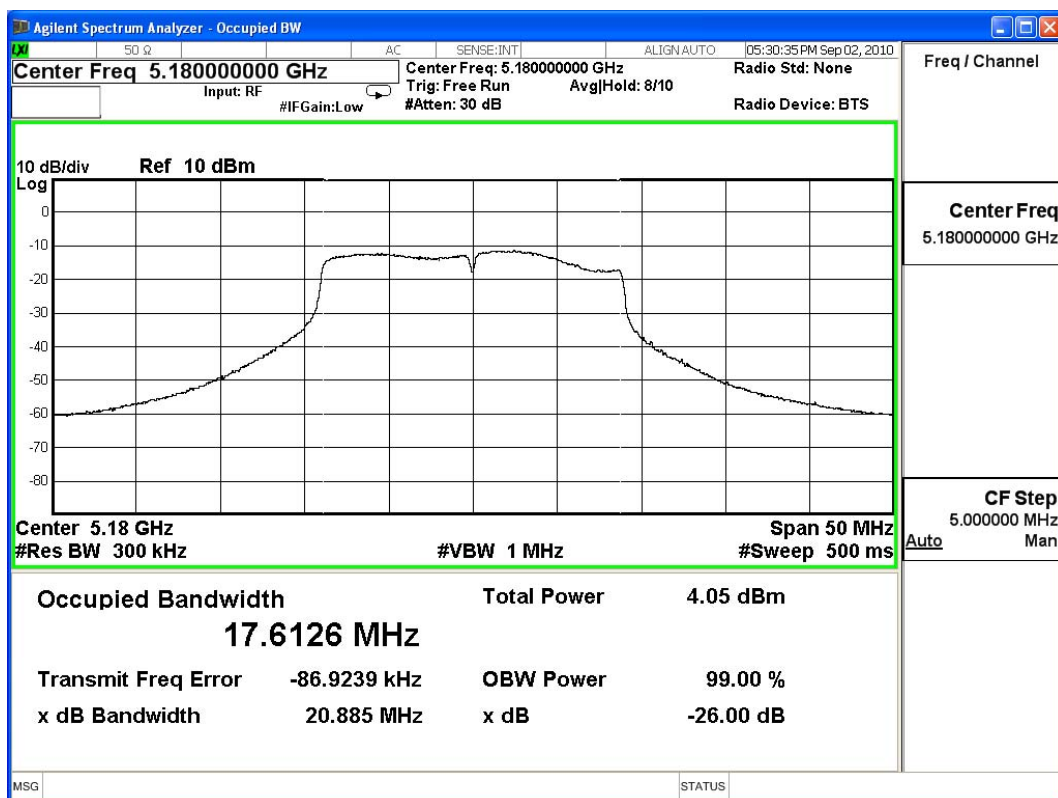
Note: Peak Power Output Value =Reading value on peak power meter + cable loss

Peak Transmit Power Measurement:

Channel No	Frequency Range (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Output Power Limit		Result
				(dBm)	dBm+10log(BW)	
36	5180	20.885	13.54	17	17.20	Pass

26dBc Occupied Bandwidth:

Channel 36

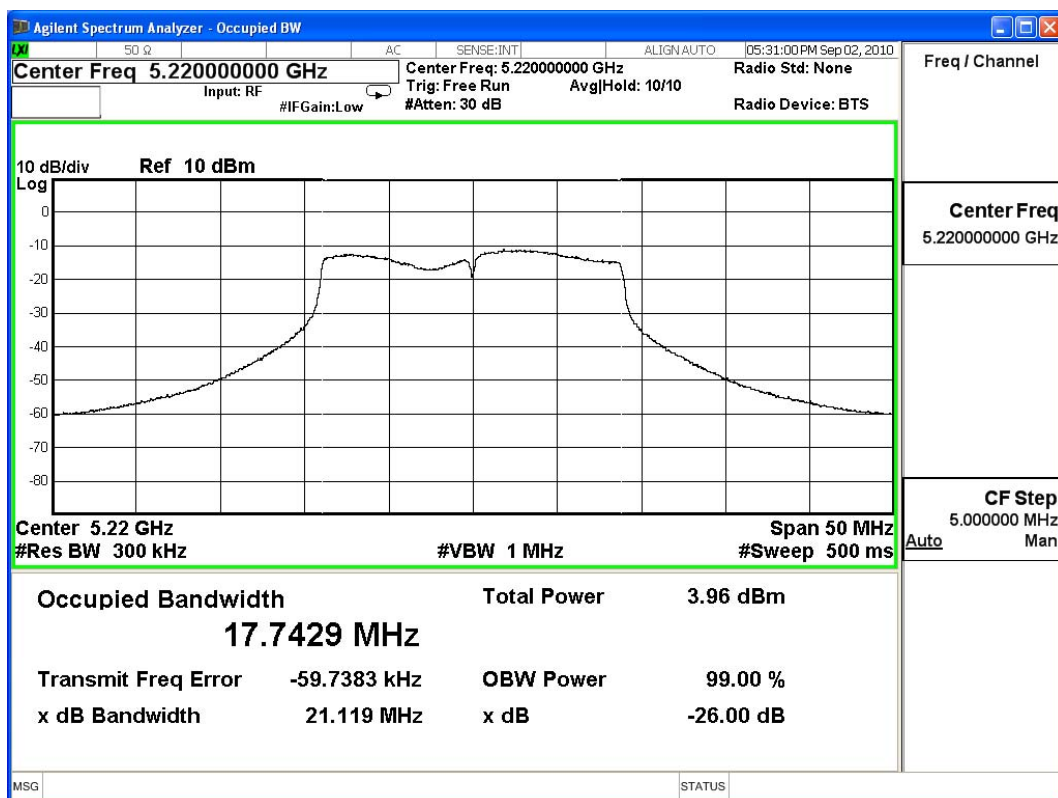


Peak Transmit Power Measurement:

Channel No	Frequency Range (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Output Power Limit		Result
				(dBm)	dBm+10log(BW)	
44	5220	21.119	13.3	17	17.25	Pass

26dBc Occupied Bandwidth:

Channel 44

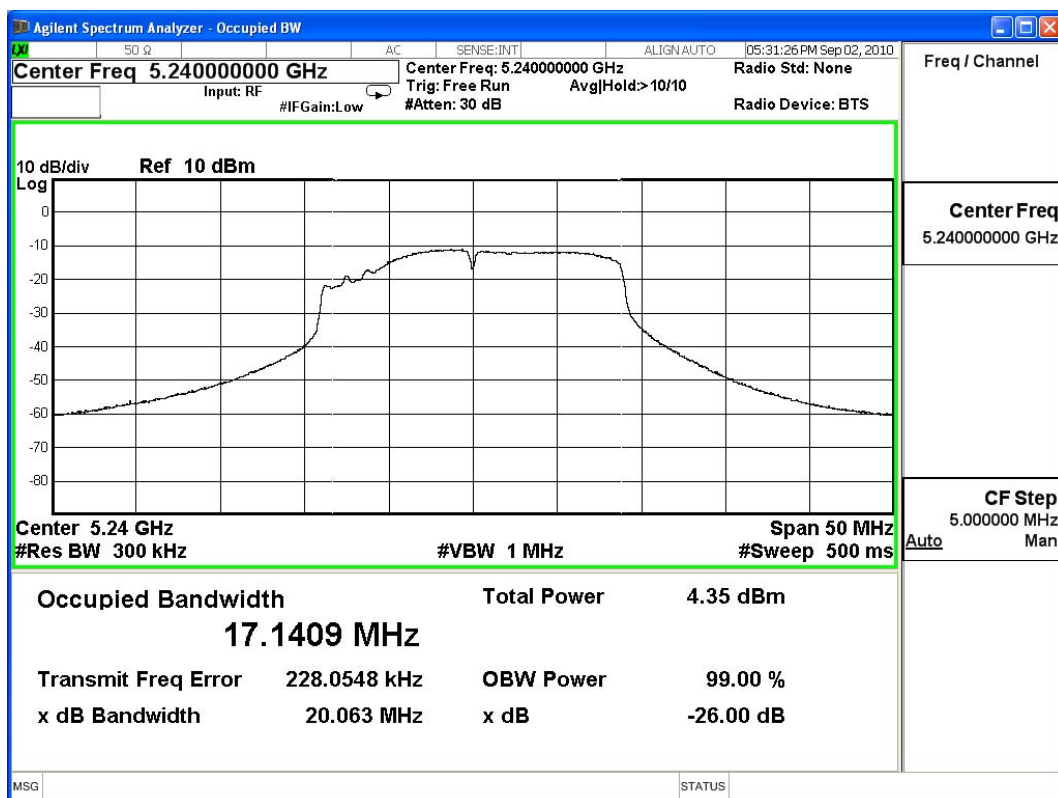


Peak Transmit Power Measurement:

Channel No	Frequency Range (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Output Power Limit		Result
				(dBm)	dBm+10log(BW)	
48	5240	20.063	13.41	17	17.02	Pass

26dBc Occupied Bandwidth:

Channel 48

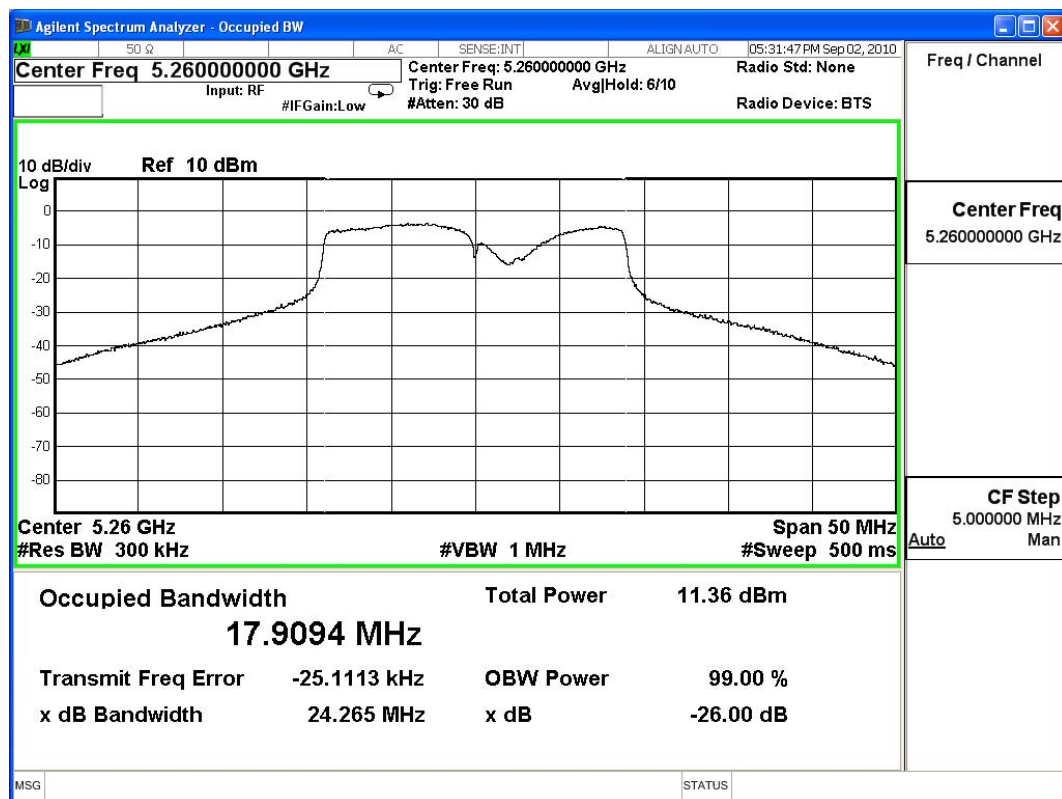


Peak Transmit Power Measurement:

Channel No	Frequency Range (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Output Power Limit		Result
				(dBm)	dBm+10log(BW)	
52	5260	24.265	20.79	24	24.85	Pass

26dBc Occupied Bandwidth:

Channel 52

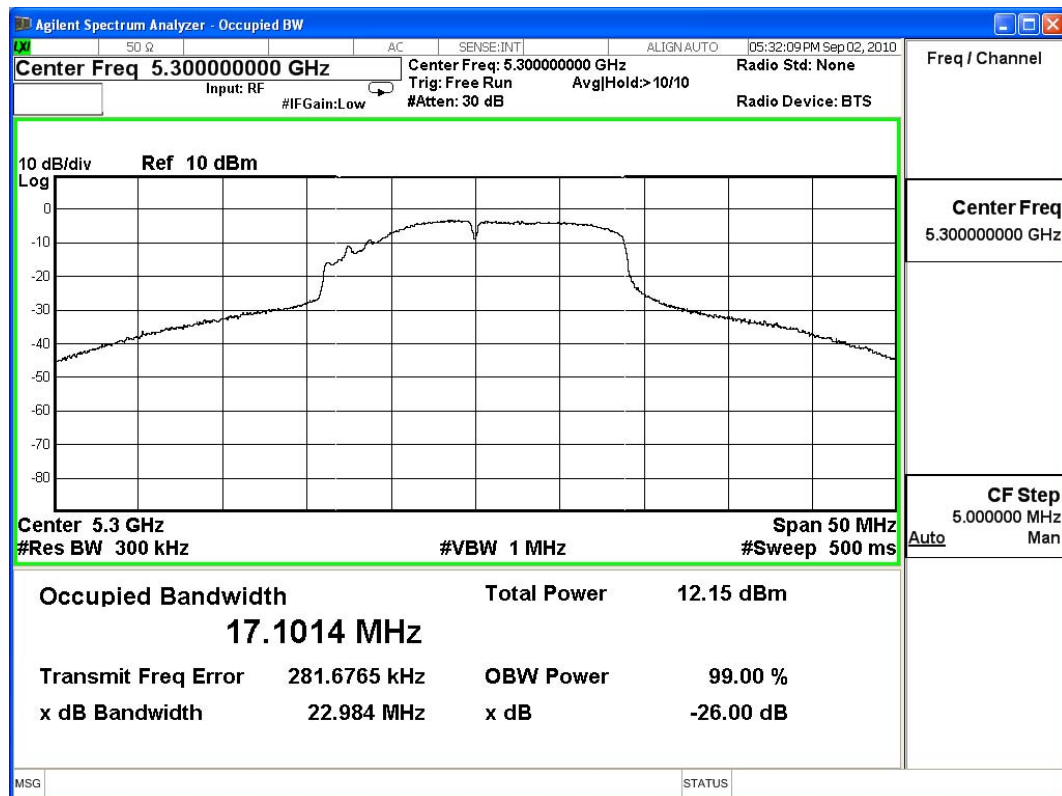


Peak Transmit Power Measurement:

Channel No	Frequency Range (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Output Power Limit		Result
				(dBm)	dBm+10log(BW)	
60	5300	22.984	21.09	24	24.61	Pass

26dBc Occupied Bandwidth:

Channel 60

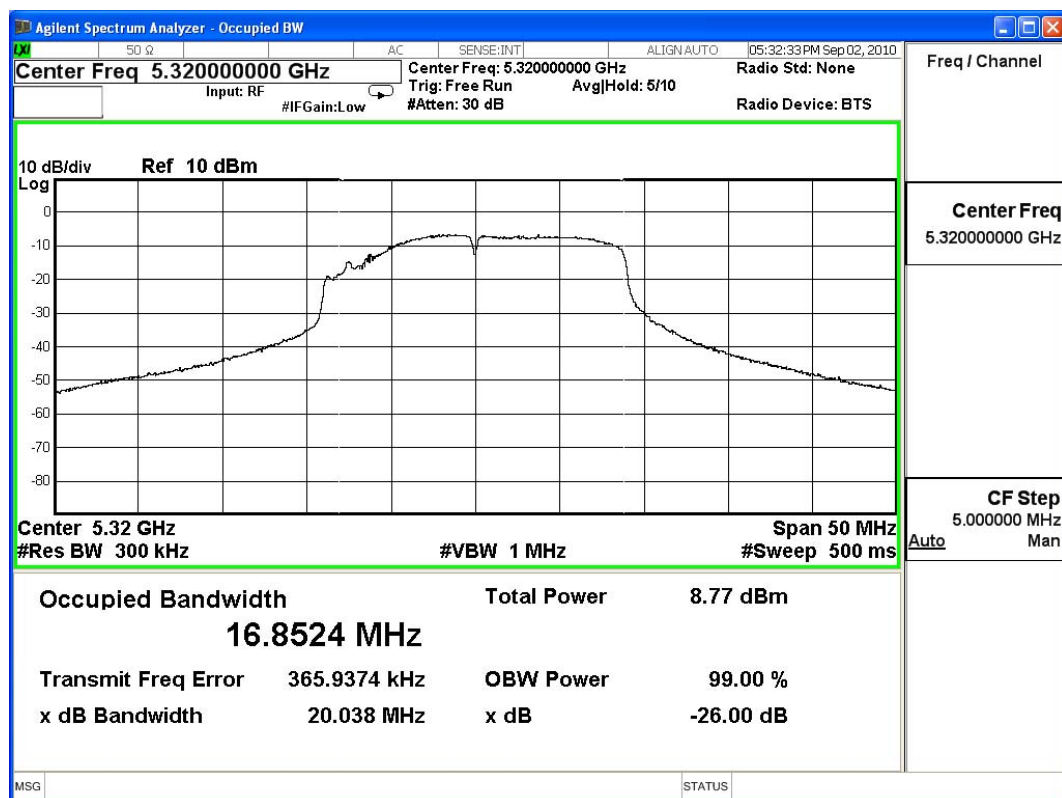


Peak Transmit Power Measurement:

Channel No	Frequency Range (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Output Power Limit		Result
				(dBm)	dBm+10log(BW)	
64	5320	20.038	18.22	24	24.02	Pass

26dBc Occupied Bandwidth:

Channel 64

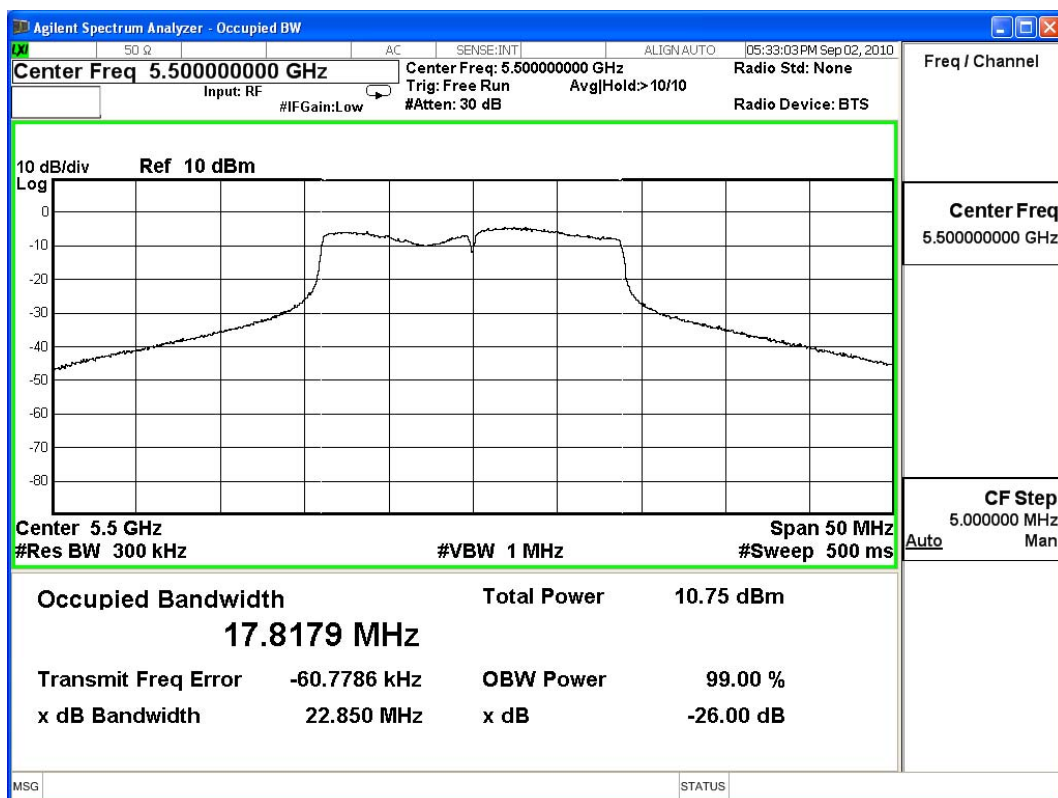


Peak Transmit Power Measurement:

Channel No	Frequency Range (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Output Power Limit		Result
				(dBm)	dBm+10log(BW)	
100	5500	22.85	19.3	24	24.59	Pass

26dBc Occupied Bandwidth:

Channel 100

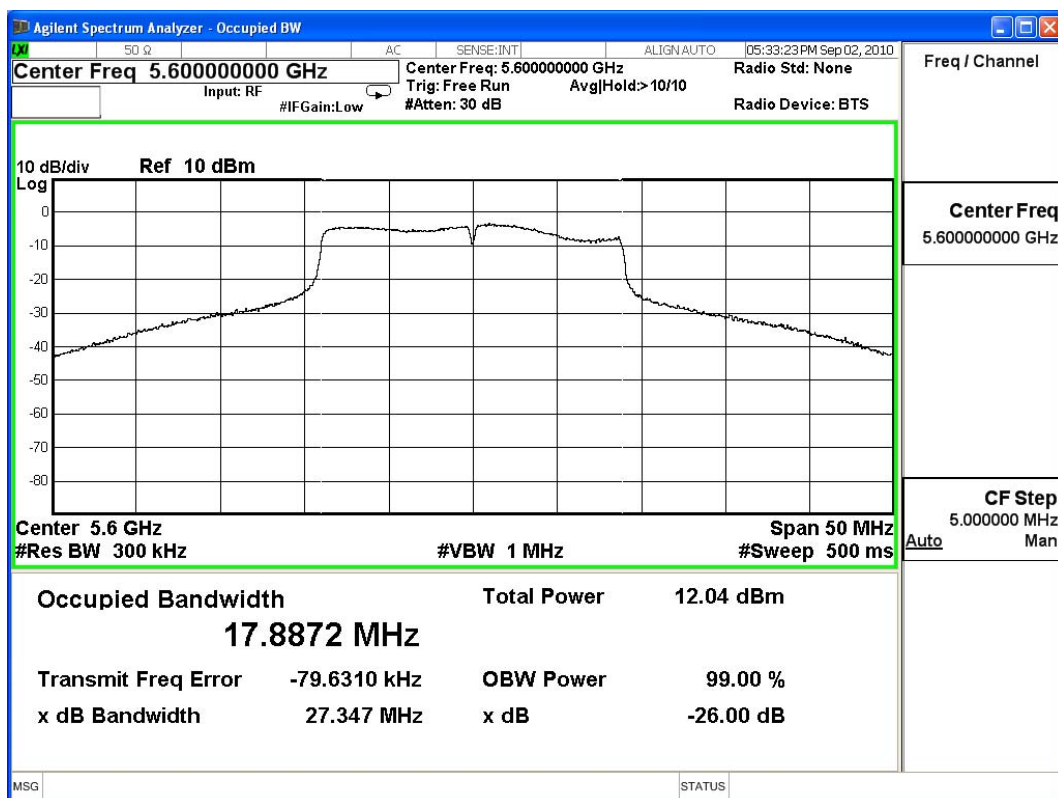


Peak Transmit Power Measurement:

Channel No	Frequency Range (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Output Power Limit		Result
				(dBm)	dBm+10log(BW)	
120	5600	27.347	21.62	24	25.37	Pass

26dBc Occupied Bandwidth:

Channel 120

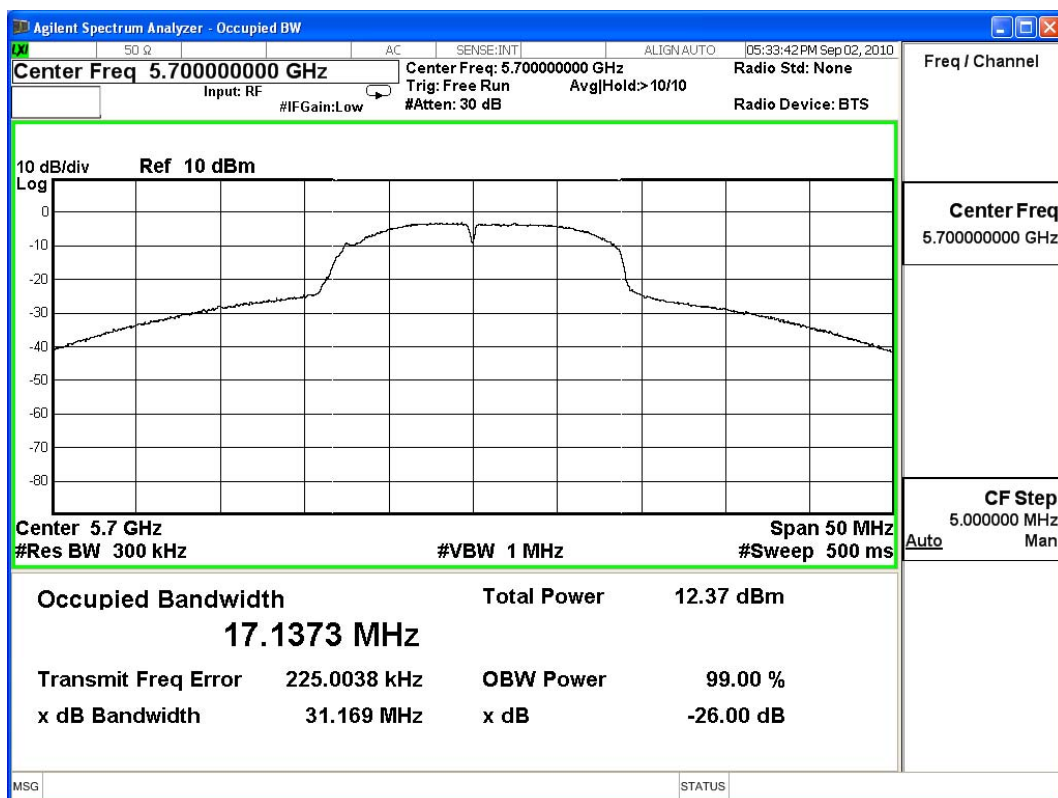


Peak Transmit Power Measurement:

Channel No	Frequency Range (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Output Power Limit		Result
				(dBm)	dBm+10log(BW)	
140	5700	31.169	21.49	24	25.94	Pass

26dBc Occupied Bandwidth:

Channel 140



Product : SpectraGuard Sensor
 Test Item : Peak Transmit Power
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps)

Cable loss=1dB		Peak Power Output								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		45	90	135	180	270	360	405	450	
		Measurement Level (dBm)								
38	5190	13.85	--	--	--	--	--	--	--	<17dBm
46	5230	15.56	15.36	15.37	15.38	15.39	15.4	15.41	15.42	<17dBm
54	5270	21.57	21.35	21.07	20.83	20.93	21.4	20.91	21.04	<24dBm
62	5310	14.35	--	--	--	--	--	--	--	<24dBm
102	5510	14.35	--	--	--	--	--	--	--	<24dBm
118	5590	14.36	--	--	--	--	--	--	--	<24dBm
134	5670	22.27	22.05	22.14	21.79	21.85	21.95	22.03	21.98	<24dBm

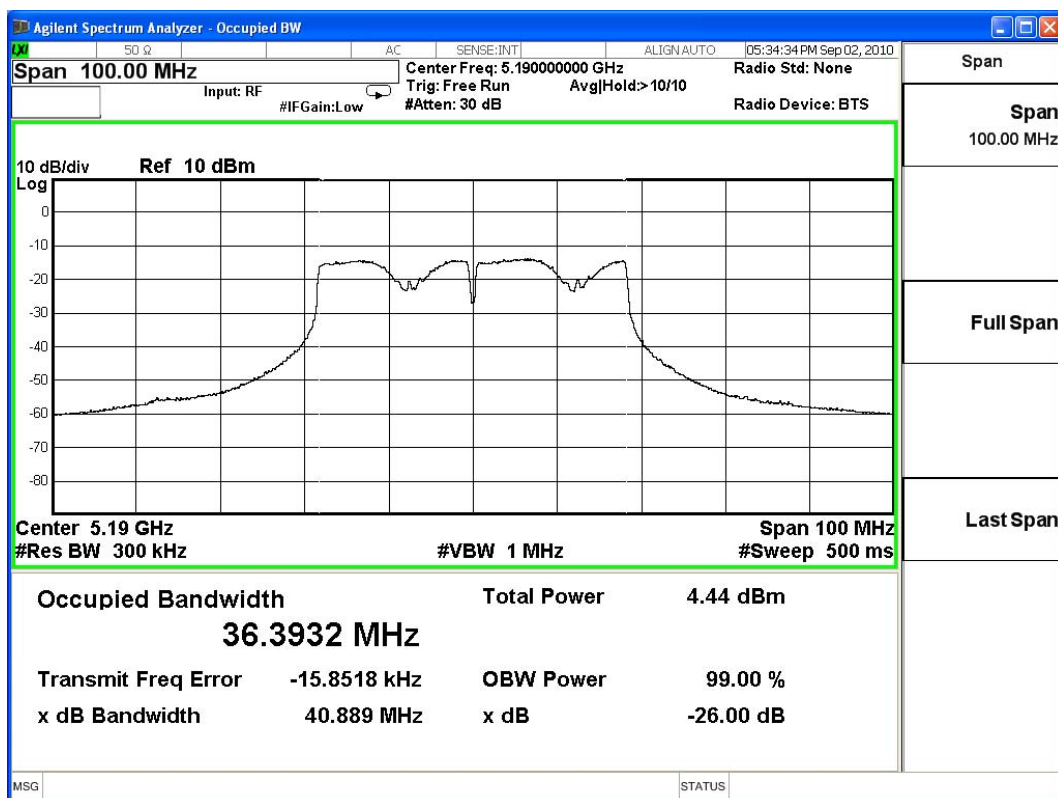
Note: Peak Power Output Value =Reading value on peak power meter + cable loss

Peak Transmit Power Measurement:

Channel No	Frequency Range (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Output Power Limit		Result
				(dBm)	dBm+10log(BW)	
38	5190	40.889	13.85	17	20.12	Pass

26dBc Occupied Bandwidth:

Channel 38

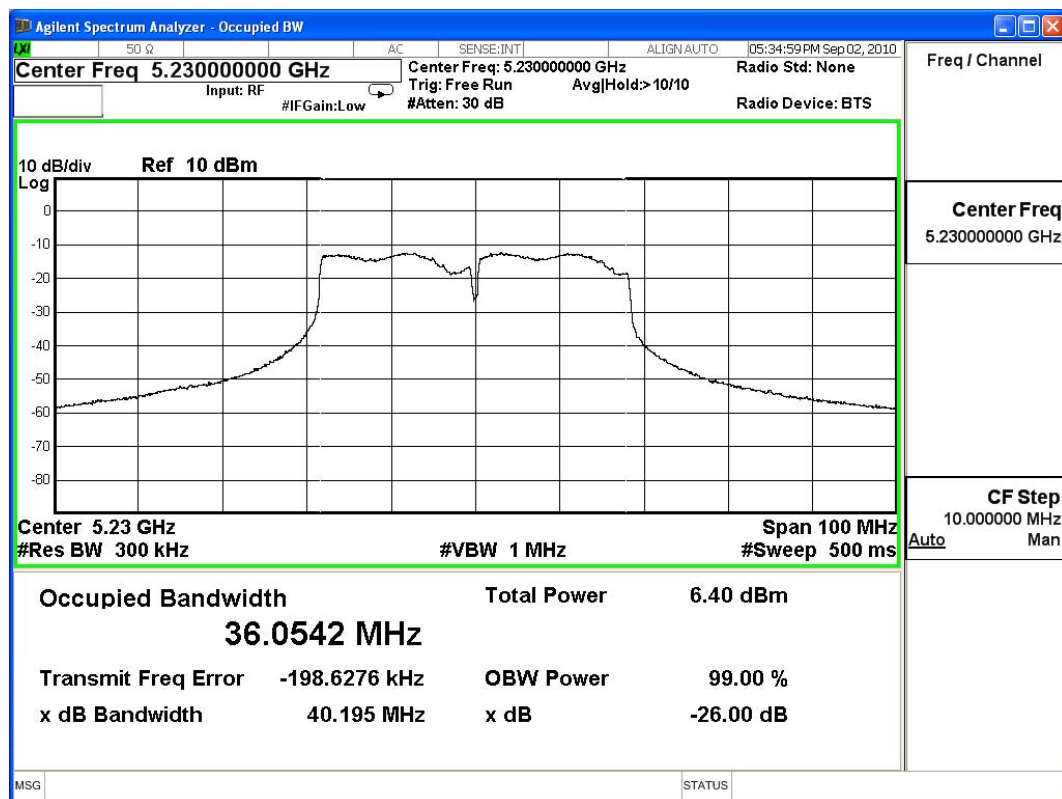


Peak Transmit Power Measurement:

Channel No	Frequency Range (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Output Power Limit		Result
				(dBm)	dBm+10log(BW)	
46	5230	40.195	15.56	17	20.04	Pass

26dBc Occupied Bandwidth:

Channel 46

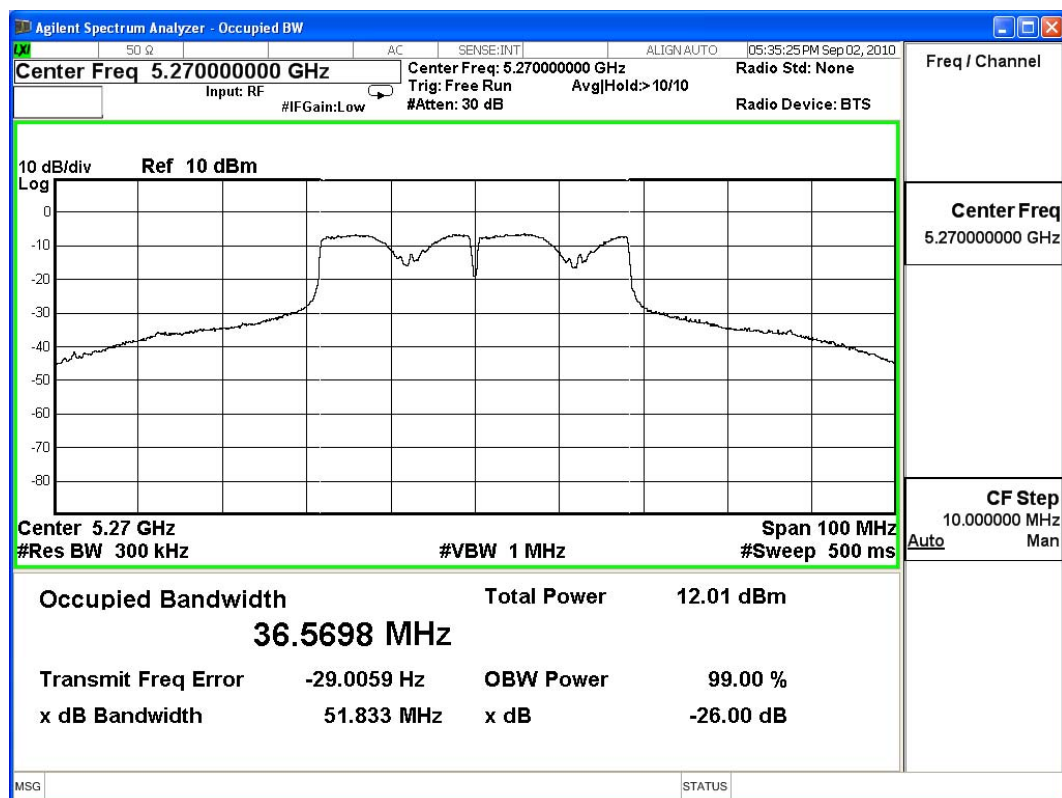


Peak Transmit Power Measurement:

Channel No	Frequency Range (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Output Power Limit		Result
				(dBm)	dBm+10log(BW)	
54	5270	51.883	21.57	24	28.15	Pass

26dBc Occupied Bandwidth:

Channel 54

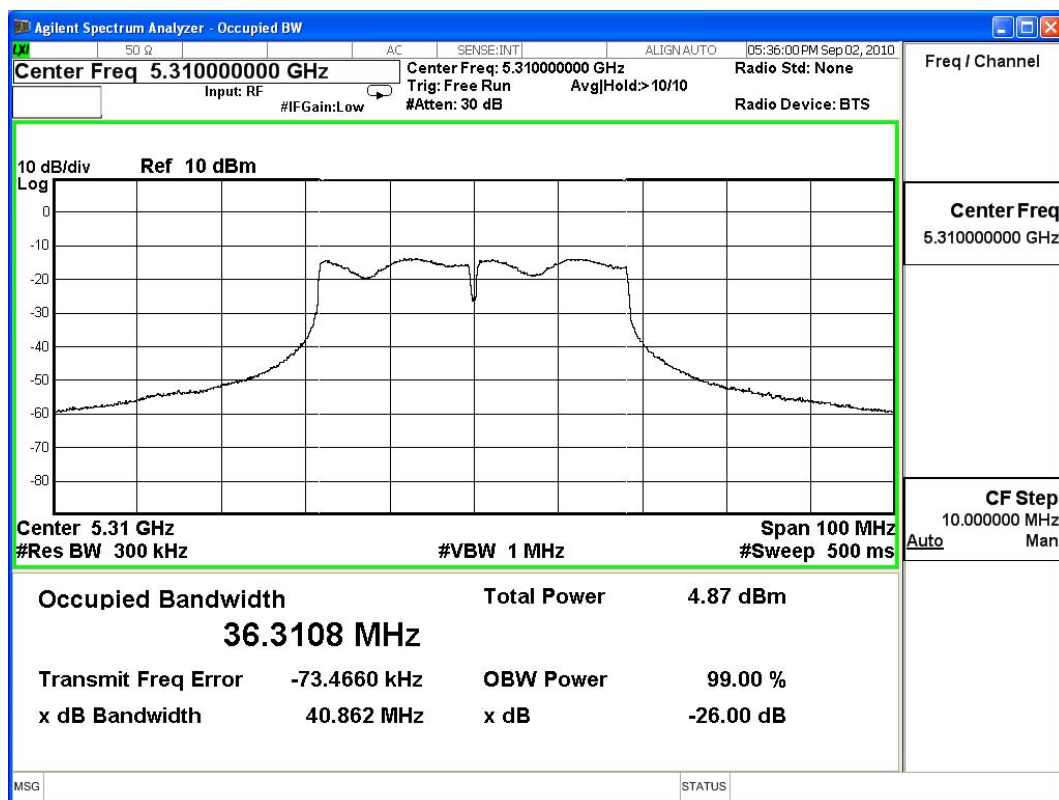


Peak Transmit Power Measurement:

Channel No	Frequency Range (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Output Power Limit		Result
				(dBm)	dBm+10log(BW)	
62	5310	40.862	14.35	24	27.11	Pass

26dBc Occupied Bandwidth:

Channel 62



Peak Transmit Power Measurement:

Channel No	Frequency Range (MHz)	26dB Bandwidth (MHz)	Output Power (dBm)	Output Power Limit		Result
				(dBm)	dBm+10log(BW)	
102	5510	40.694	14.35	24	27.10	Pass

26dBc Occupied Bandwidth:

Channel 102

