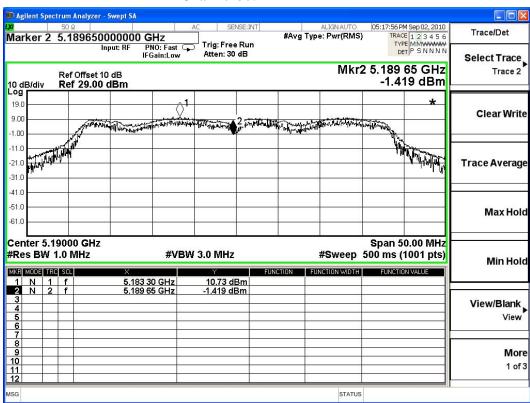


Test Item : Peak Excursion
Test Site : No.3 OATS

Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps)

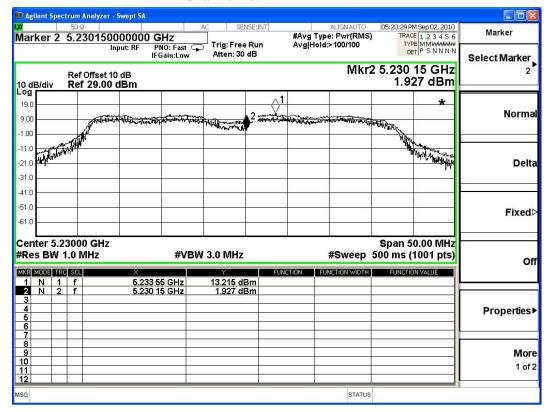
Channel No.	Frequency (MHz)	Measurement Level (dB)	Required Limit (dB)	Result
38	5190	12.15	<13	Pass
46	5230	11.29	<13	Pass
54	5270	11.00	<13	Pass
62	5310	12.05	<13	Pass
102	5510	12.70	<13	Pass
118	5590	10.72	<13	Pass
134	5670	11.57	<13	Pass

### Channel 38:

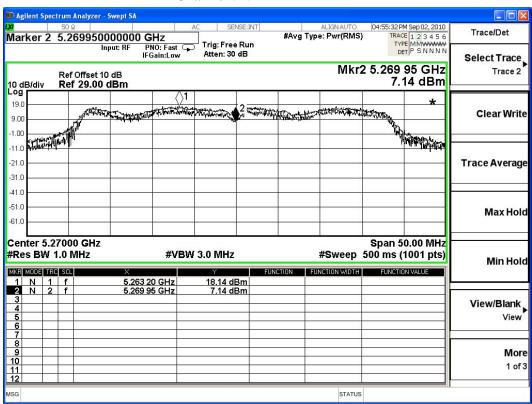




#### Channel 46:

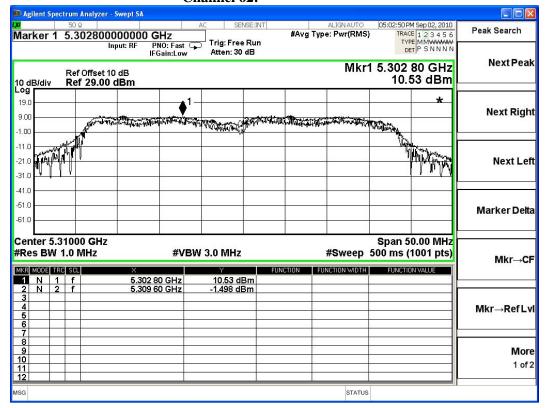


### **Channel 54:**

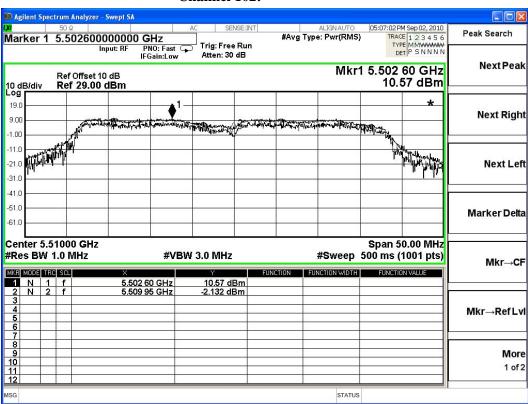




# Channel 62:

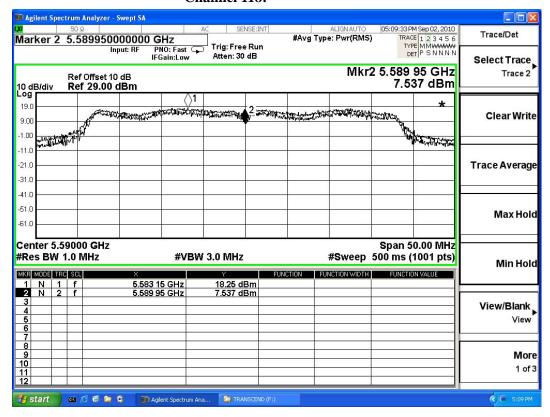


# Channel 102:

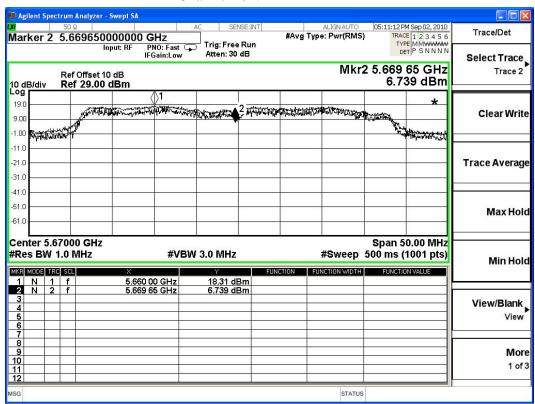




#### Channel 118:



### Channel 134:





# 6. Radiated Emission

# **6.1.** Test Equipment

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

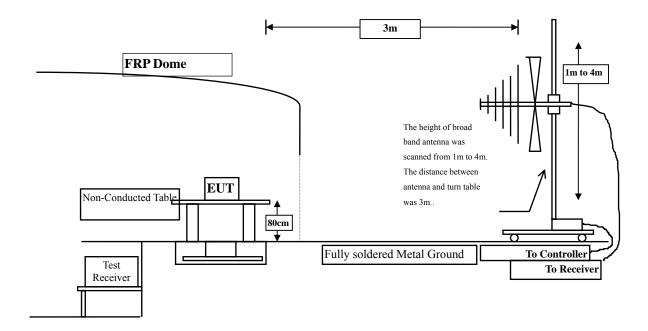
Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
⊠Site # 3	X	Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2010
	X	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2010
	X	Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2010
	X	Pre-Amplifier	Agilent	8447D/2944A09549	Sep., 2010
	X	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2010
	X	Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2010
	X	Coaxial Cable	QuieTek	QTK-CABLE/ CAB5	Feb., 2010
	X	Controller	QuieTek	QTK-CONTROLLER/ CTRL3	N/A
	X	Coaxial Switch	Anritsu	MP59B/6200265729	N/A

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.

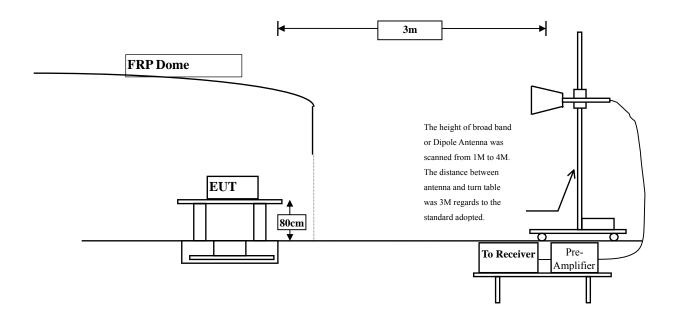
# 6.2. Test Setup

Radiated Emission Below 1GHz





Radiated Emission Above 1GHz



# 6.3. Limits

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

FCC Part 15 Subpart C Paragraph 15.209(a) Limits						
Frequency MHz	uV/m @3m	dBuV/m@3m				
30-88	100	40				
88-216	150	43.5				
216-960	200	46				
Above 960	500	54				

Remarks: E field strength  $(dBuV/m) = 20 \log E$  field strength (uV/m)



#### 6.4. **Test Procedure**

The EUT was setup according to ANSI C63.4, 2003 and tested according to FCC Public Notice DA 02-2138 test procedure 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 C63.4:2003 on radiated measurement.

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

Radiated emission measurements below 1GHz are made using broadband Bilog antenna and above 1GHz are made using Horn Antennas.

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

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

The measurement frequency range form 30MHz - 10th Harmonic of fundamental was investigated.

#### 6.5. Uncertainty

- + 3.8 dB below 1GHz
- ± 3.9 dB above 1GHz



### 6.6. Test Result of Radiated Emission

Product : SpectraGuard Sensor

Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5180MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
10360.000	12.930	39.130	52.060	-21.940	74.000
15540.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
10360.000	*	*	*	*	54.000
15540.000	*	*	*	*	54.000
20720.000	*	*	*	*	54.000
25900.000	*	*	*	*	54.000
31080.000	*	*	*	*	54.000
36260.000	*	*	*	*	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5180MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
Peak Detector:					
10360.000	13.724	43.400	57.124	-16.876	74.000
15540.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
10360.000	13.724	29.420	43.144	-10.856	54.000
15540.000	*	*	*	*	54.000
20720.000	*	*	*	*	54.000
25900.000	*	*	*	*	54.000
31080.000	*	*	*	*	54.000
36260.000	*	*	*	*	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5220MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
10440.000	13.322	43.400	56.722	-17.278	74.000
15660.000	*	*	*	*	74.000
20880.000	*	*	*	*	74.000
26100.000	*	*	*	*	74.000
31320.000	*	*	*	*	74.000
36540.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
10440.000	13.322	28.550	41.872	-12.128	54.000
15660.000	*	*	*	*	54.000
20880.000	*	*	*	*	54.000
26100.000	*	*	*	*	54.000
31320.000	*	*	*	*	54.000
36540.000	*	*	*	*	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5220MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
Peak Detector:					
10440.000	14.245	46.680	60.925	-13.075	74.000
15660.000	*	*	*	*	74.000
20880.000	*	*	*	*	74.000
26100.000	*	*	*	*	74.000
31320.000	*	*	*	*	74.000
36540.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
10440.000	14.245	32.850	47.095	-6.905	54.000
15660.000	*	*	*	*	54.000
20880.000	*	*	*	*	54.000
26100.000	*	*	*	*	54.000
31320.000	*	*	*	*	54.000
36540.000	*	*	*	*	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5240MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
<b>Peak Detector:</b>					
10480.000	13.693	44.750	58.444	-15.556	74.000
15720.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
31440000	*	*	*	*	74.000
36680.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
10480.000	13.693	28.870	42.564	-11.436	54.000
15720.000	*	*	*	*	54.000
20960.000	*	*	*	*	54.000
26200.000	*	*	*	*	54.000
31440000	*	*	*	*	54.000
36680.000	*	*	*	*	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5240MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
<b>Peak Detector:</b>					
10480.000	14.620	49.730	64.351	-9.649	74.000
15720.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
31440000	*	*	*	*	74.000
36680.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
10480.000	14.620	34.830	49.451	-4.549	54.000
15720.000	*	*	*	*	54.000
20960.000	*	*	*	*	54.000
26200.000	*	*	*	*	54.000
31440000	*	*	*	*	54.000
36680.000	*	*	*	*	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5260MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
<b>Peak Detector:</b>					
10520.000	14.015	39.630	53.645	-20.355	74.000
15780.000	*	*	*	*	74.000
21040.000	*	*	*	*	74.000
26300.000	*	*	*	*	74.000
31560.000	*	*	*	*	74.000
36820.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
10520.000	*	*	*	*	74.000
15780.000	*	*	*	*	54.000
21040.000	*	*	*	*	54.000
26300.000	*	*	*	*	54.000
31560.000	*	*	*	*	54.000
36820.000	*	*	*	*	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5260MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
Peak Detector:					
10520.000	14.818	41.980	56.798	-17.202	74.000
15780.000	*	*	*	*	74.000
21040.000	*	*	*	*	74.000
26300.000	*	*	*	*	74.000
31560.000	*	*	*	*	74.000
36820.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
10520.000	14.818	28.560	43.378	-10.622	54.000
15780.000	*	*	*	*	54.000
21040.000	*	*	*	*	54.000
26300.000	*	*	*	*	54.000
31560.000	*	*	*	*	54.000
36820.000	*	*	*	*	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5300MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
<b>Peak Detector:</b>					
10600.000	14.550	37.810	52.359	-21.641	74.000
15900.000	*	*	*	*	74.000
21200.000	*	*	*	*	74.000
26500.000	*	*	*	*	74.000
31800.000	*	*	*	*	74.000
37100.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
10600.000	*	*	*	*	54.000
15900.000	*	*	*	*	54.000
21200.000	*	*	*	*	54.000
26500.000	*	*	*	*	54.000
31800.000	*	*	*	*	54.000
37100.000	*	*	*	*	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5300MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
<b>Peak Detector:</b>					
10600.000	14.881	40.420	55.301	-18.699	74.000
15900.000	*	*	*	*	74.000
21200.000	*	*	*	*	74.000
26500.000	*	*	*	*	74.000
31800.000	*	*	*	*	74.000
37100.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
10600.000	14.881	28.510	43.391	-10.609	54.000
15900.000	*	*	*	*	54.000
21200.000	*	*	*	*	54.000
26500.000	*	*	*	*	54.000
31800.000	*	*	*	*	54.000
37100.000	*	*	*	*	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5320MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
<b>Peak Detector:</b>					
10640.000	14.690	37.100	51.790	-22.210	74.000
15960.000	*	*	*	*	74.000
21280.000	*	*	*	*	74.000
26600.000	*	*	*	*	74.000
31920.000	*	*	*	*	74.000
37240.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
10640.000	*	*	*	*	54.000
15960.000	*	*	*	*	54.000
21280.000	*	*	*	*	54.000
26600.000	*	*	*	*	54.000
31920.000	*	*	*	*	54.000
37240.000	*	*	*	*	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5320MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
<b>Peak Detector:</b>					
10640.000	15.083	38.290	53.373	-20.627	74.000
15960.000	*	*	*	*	74.000
21280.000	*	*	*	*	74.000
26600.000	*	*	*	*	74.000
31920.000	*	*	*	*	74.000
37240.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
10640.000	*	*	*	*	54.000
15960.000	*	*	*	*	54.000
21280.000	*	*	*	*	54.000
26600.000	*	*	*	*	54.000
31920.000	*	*	*	*	54.000
37240.000	*	*	*	*	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5500MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
11000.000	16.399	39.540	55.939	-18.061	74.000
16500.000	*	*	*	*	74.000
22000.000	*	*	*	*	74.000
27500.000	*	*	*	*	74.000
33000.000	*	*	*	*	74.000
38500.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
11000.000	16.399	26.370	42.769	-11.231	54.000
16500.000	*	*	*	*	54.000
22000.000	*	*	*	*	54.000
27500.000	*	*	*	*	54.000
33000.000	*	*	*	*	54.000
38500.000	*	*	*	*	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5500MHz)

Limit
dBuV/m
74.000
74.000
74.000
74.000
74.000
74.000
54.000
54.000
54.000
54.000
54.000
54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5600MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
<b>Peak Detector:</b>					
11200.000	16.656	42.960	59.616	-14.384	74.000
16800.000	*	*	*	*	74.000
22400.000	*	*	*	*	74.000
28000.000	*	*	*	*	74.000
33600.000	*	*	*	*	74.000
39200.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
11200.000	16.656	28.150	44.806	-9.194	54.000
16800.000	*	*	*	*	54.000
22400.000	*	*	*	*	54.000
28000.000	*	*	*	*	54.000
33600.000	*	*	*	*	54.000
39200.000	*	*	*	*	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5600MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
<b>Peak Detector:</b>					
11200.000	17.726	41.310	59.036	-14.964	74.000
16800.000	*	*	*	*	74.000
22400.000	*	*	*	*	74.000
28000.000	*	*	*	*	74.000
33600.000	*	*	*	*	74.000
39200.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
11200.000	17.726	27.840	45.566	-8.434	54.000
16800.000	*	*	*	*	54.000
22400.000	*	*	*	*	54.000
28000.000	*	*	*	*	54.000
33600.000	*	*	*	*	54.000
39200.000	*	*	*	*	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5700MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
11400.000	16.530	41.410	57.941	-16.059	74.000
17100.000	*	*	*	*	74.000
22800.000	*	*	*	*	74.000
28500.000	*	*	*	*	74.000
34200.000	*	*	*	*	74.000
39900.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
11400.000	16.530	27.930	44.461	-9.539	54.000
17100.000	*	*	*	*	54.000
22800.000	*	*	*	*	54.000
28500.000	*	*	*	*	54.000
34200.000	*	*	*	*	54.000
39900.000	*	*	*	*	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5700MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
<b>Peak Detector:</b>					
11400.000	17.138	41.140	58.278	-15.722	74.000
17100.000	*	*	*	*	74.000
22800.000	*	*	*	*	74.000
28500.000	*	*	*	*	74.000
34200.000	*	*	*	*	74.000
39900.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
11400.000	17.138	26.530	43.668	-10.332	54.000
17100.000	*	*	*	*	54.000
22800.000	*	*	*	*	54.000
28500.000	*	*	*	*	54.000
34200.000	*	*	*	*	54.000
39900.000	*	*	*	*	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11n-20BW 21.6Mbps) (5180MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
10360.000	12.930	37.450	50.380	-23.620	74.000
15540.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
10360.000	*	*	*	*	54.000
15540.000	*	*	*	*	54.000
20720.000	*	*	*	*	54.000
25900.000	*	*	*	*	54.000
31080.000	*	*	*	*	54.000
36260.000	*	*	*	*	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11n-20BW 21.6Mbps) (5180MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
-	uБ	uDu v	dDu v/III	αБ	dDu v/III
Vertical					
Peak Detector:					
10360.000	13.724	39.780	53.504	-20.496	74.000
15540.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
10360.000	*	*	*	*	54.000
15540.000	*	*	*	*	54.000
20720.000	*	*	*	*	54.000
25900.000	*	*	*	*	54.000
31080.000	*	*	*	*	54.000
36260.000	*	*	*	*	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11n-20BW 21.6Mbps) (5220MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
<b>Peak Detector:</b>					
10440.000	13.322	39.940	53.262	-20.738	74.000
15660.000	*	*	*	*	74.000
20880.000	*	*	*	*	74.000
26100.000	*	*	*	*	74.000
31320.000	*	*	*	*	74.000
36540.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
10440.000	*	*	*	*	54.000
15660.000	*	*	*	*	54.000
20880.000	*	*	*	*	54.000
26100.000	*	*	*	*	54.000
31320.000	*	*	*	*	54.000
36540.000	*	*	*	*	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11n-20BW 21.6Mbps) (5220MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
<b>Peak Detector:</b>					
10440.000	14.245	44.640	58.885	-15.115	74.000
15660.000	*	*	*	*	74.000
20880.000	*	*	*	*	74.000
26100.000	*	*	*	*	74.000
31320.000	*	*	*	*	74.000
36540.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
10440.000	14.245	29.720	43.965	-10.035	54.000
15660.000	*	*	*	*	54.000
20880.000	*	*	*	*	54.000
26100.000	*	*	*	*	54.000
31320.000	*	*	*	*	54.000
36540.000	*	*	*	*	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11n-20BW 21.6Mbps) (5240MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
<b>Peak Detector:</b>					
10480.000	13.693	40.480	54.174	-19.826	74.000
15720.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
31440.000	*	*	*	*	74.000
36680.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
10480.000	13.693	26.090	39.784	-14.216	54.000
15720.000	*	*	*	*	54.000
20960.000	*	*	*	*	54.000
26200.000	*	*	*	*	54.000
31440.000	*	*	*	*	54.000
36680.000	*	*	*	*	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11n-20BW 21.6Mbps) (5240MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
Peak Detector:					
10480.000	14.620	42.060	56.681	-17.319	74.000
15720.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
31440.000	*	*	*	*	74.000
36680.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
10480.000	14.620	28.640	43.261	-10.739	54.000
15720.000	*	*	*	*	54.000
20960.000	*	*	*	*	54.000
26200.000	*	*	*	*	54.000
31440.000	*	*	*	*	54.000
36680.000	*	*	*	*	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11n-20BW 21.6Mbps) (5260MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
<b>Peak Detector:</b>					
10520.000	14.015	38.550	52.565	-21.435	74.000
15780.000	*	*	*	*	74.000
21040.000	*	*	*	*	74.000
26300.000	*	*	*	*	74.000
31560.000	*	*	*	*	74.000
36820.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
10520.000	*	*	*	*	54.000
15780.000	*	*	*	*	54.000
21040.000	*	*	*	*	54.000
26300.000	*	*	*	*	54.000
31560.000	*	*	*	*	54.000
36820.000	*	*	*	*	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11n-20BW 21.6Mbps) (5260MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
<b>Peak Detector:</b>					
10520.000	14.818	41.170	55.988	-18.012	74.000
15780.000	*	*	*	*	74.000
21040.000	*	*	*	*	74.000
26300.000	*	*	*	*	74.000
31560.000	*	*	*	*	74.000
36820.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
10520.000	14.818	27.230	42.048	-11.952	54.000
15780.000	*	*	*	*	54.000
21040.000	*	*	*	*	54.000
26300.000	*	*	*	*	54.000
31560.000	*	*	*	*	54.000
36820.000	*	*	*	*	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11n-20BW 21.6Mbps) (5300MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
<b>Peak Detector:</b>					
10600.000	14.550	38.520	53.069	-20.931	74.000
15900.000	*	*	*	*	74.000
21200.000	*	*	*	*	74.000
26500000	*	*	*	*	74.000
31800.000	*	*	*	*	74.000
37100.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
10600.000	*	*	*	*	54.000
15900.000	*	*	*	*	54.000
21200.000	*	*	*	*	54.000
26500000	*	*	*	*	54.000
31800.000	*	*	*	*	54.000
37100.000	*	*	*	*	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11n-20BW 21.6Mbps) (5300MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
<b>Peak Detector:</b>					
10600.000	14.881	39.180	54.061	-19.939	74.000
15900.000	*	*	*	*	74.000
21200.000	*	*	*	*	74.000
26500000	*	*	*	*	74.000
31800.000	*	*	*	*	74.000
37100.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
10600.000	14.881	25.710	40.591	-13.409	54.000
15900.000	*	*	*	*	54.000
21200.000	*	*	*	*	54.000
26500000	*	*	*	*	54.000
31800.000	*	*	*	*	54.000
37100.000	*	*	*	*	54.000
Average Detector: 10600.000 15900.000 21200.000 26500000 31800.000	14.881 * * * *	25.710 * * *	40.591 * * * *	-13.409 * * * *	54.000 54.000 54.000 54.000 54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11n-20BW 21.6Mbps) (5320MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
<b>Peak Detector:</b>					
10640.000	14.690	35.840	50.530	-23.470	74.000
15960.000	*	*	*	*	74.000
21280.000	*	*	*	*	74.000
26600.000	*	*	*	*	74.000
31920.000	*	*	*	*	74.000
37240.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
10640.000	*	*	*	*	54.000
15960.000	*	*	*	*	54.000
21280.000	*	*	*	*	54.000
26600.000	*	*	*	*	54.000
31920.000	*	*	*	*	54.000
37240.000	*	*	*	*	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11n-20BW 21.6Mbps) (5320MHz)

Correct	Reading	Measurement	Margin	Limit
Factor	Level	Level		
dB	dBuV	dBuV/m	dB	dBuV/m
15.083	37.090	52.173	-21.827	74.000
*	*	*	*	74.000
*	*	*	*	74.000
*	*	*	*	74.000
*	*	*	*	74.000
*	*	*	*	74.000
*	*	*	*	54.000
*	*	*	*	54.000
*	*	*	*	54.000
*	*	*	*	54.000
*	*	*	*	54.000
*	*	*	*	54.000
	Factor dB  15.083  *  *  *  *  *  *  *  *	Factor Level dBuV  15.083 37.090  * * *  * * *  * *  * *  * *  * *  *	Factor Level dBuV/m  15.083 37.090 52.173  * * *  * *  * *  * *  * *  * *  * *	Factor Level dBuV dBuV/m dB  15.083 37.090 52.173 -21.827  * * * * * *  * * * *  * * * * *  * * * * *  * * * * *  * * * * *  * * * * *  * * * *  * * * * *  * * * * *  * * * *  * * * * *  * * * * *  * * * * *  * * * * *  * * * * *  * * * * *  * * * * *  * * * * *  * * * *  * * * * *  * * * * *  * * * * *  * * * * *  * * * * *  * * * *  * * * * *  * * * * *  * * *  * * * *  * *  * * *  * * *  * *

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11n-20BW 21.6Mbps) (5500MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
<b>Peak Detector:</b>					
11000.000	16.399	38.840	55.239	-18.761	74.000
16500.000	*	*	*	*	74.000
22000.000	*	*	*	*	74.000
27500.000	*	*	*	*	74.000
33000.000	*	*	*	*	74.000
38500.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
11000.000	16.399	24.980	41.379	-12.621	54.000
16500.000	*	*	*	*	54.000
22000.000	*	*	*	*	54.000
27500.000	*	*	*	*	54.000
33000.000	*	*	*	*	54.000
38500.000	*	*	*	*	54.000
NI-4					

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11n-20BW 21.6Mbps) (5500MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
<b>Peak Detector:</b>					
11000.000	17.132	36.750	53.882	-20.118	74.000
16500.000	*	*	*	*	74.000
22000.000	*	*	*	*	74.000
27500.000	*	*	*	*	74.000
33000.000	*	*	*	*	74.000
38500.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
11000.000	*	*	*	*	54.000
16500.000	*	*	*	*	54.000
22000.000	*	*	*	*	54.000
27500.000	*	*	*	*	54.000
33000.000	*	*	*	*	54.000
38500.000	*	*	*	*	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11n-20BW 21.6Mbps) (5600MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
11200.000	16.656	43.150	59.806	-14.194	74.000
16800.000	*	*	*	*	74.000
22400.000	*	*	*	*	74.000
28000.000	*	*	*	*	74.000
33600.000	*	*	*	*	74.000
39200.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
11200.000	16.656	27.930	44.586	-9.414	54.000
16800.000	*	*	*	*	54.000
22400.000	*	*	*	*	54.000
28000.000	*	*	*	*	54.000
33600.000	*	*	*	*	54.000
39200.000	*	*	*	*	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11n-20BW 21.6Mbps) (5600MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
<b>Peak Detector:</b>					
11200.000	17.726	41.690	59.416	-14.584	74.000
16800.000	*	*	*	*	74.000
22400.000	*	*	*	*	74.000
28000.000	*	*	*	*	74.000
33600.000	*	*	*	*	74.000
39200.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
11200.000	17.726	25.850	43.576	-10.424	54.000
16800.000	*	*	*	*	54.000
22400.000	*	*	*	*	54.000
28000.000	*	*	*	*	54.000
33600.000	*	*	*	*	54.000
39200.000	*	*	*	*	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11n-20BW 21.6Mbps) (5700MHz)

Correct	Reading	Measurement	Margin	Limit
Factor	Level	Level		
dB	dBuV	dBuV/m	dB	dBuV/m
16.530	41.350	57.881	-16.119	74.000
*	*	*	*	74.000
*	*	*	*	74.000
*	*	*	*	74.000
*	*	*	*	74.000
*	*	*	*	74.000
16.530	26.320	42.851	-11.149	54.000
*	*	*	*	54.000
*	*	*	*	54.000
*	*	*	*	54.000
*	*	*	*	54.000
*	*	*	*	54.000
	Factor dB  16.530  *  *  *  *  *  *  *  *  *  *  *  *  *	Factor Level dBuV  16.530 41.350  * * *  * *  * *  * *  * *  * *  * *	Factor Level dBuV dBuV/m  16.530 41.350 57.881  * * * *  * * *  * * *  * * *  * *	Factor Level Level dBuV/m dB  16.530 41.350 57.881 -16.119  * * * * *  * * * *  * * * *  * * * *  * * * *  * * * *  * * * *  16.530 26.320 42.851 -11.149  * * * *  * *  * * *  * * *  * *  * * *  * *  * * *  * *

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11n-20BW 21.6Mbps) (5700MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
<b>Peak Detector:</b>					
11400.000	17.138	41.460	58.598	-15.402	74.000
17100.000	*	*	*	*	74.000
22800.000	*	*	*	*	74.000
28500.000	*	*	*	*	74.000
34200.000	*	*	*	*	74.000
39900.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
11400.000	17.138	25.800	42.938	-11.062	54.000
17100.000	*	*	*	*	54.000
22800.000	*	*	*	*	54.000
28500.000	*	*	*	*	54.000
34200.000	*	*	*	*	54.000
39900.000	*	*	*	*	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5190MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
10380.000	12.939	37.810	50.749	-23.251	74.000
15570.000	*	*	*	*	74.000
20760.000	*	*	*	*	74.000
25950.000	*	*	*	*	74.000
31140.000	*	*	*	*	74.000
36330.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
10380.000	*	*	*	*	54.000
15570.000	*	*	*	*	54.000
20760.000	*	*	*	*	54.000
25950.000	*	*	*	*	54.000
31140.000	*	*	*	*	54.000
36330.000	*	*	*	*	54.000
NT-4					

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5190MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
<b>Peak Detector:</b>					
10380.000	13.796	38.820	52.616	-21.384	74.000
15570.000	*	*	*	*	74.000
20760.000	*	*	*	*	74.000
25950.000	*	*	*	*	74.000
31140.000	*	*	*	*	74.000
36330.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
10380.000	*	*	*	*	54.000
15570.000	*	*	*	*	54.000
20760.000	*	*	*	*	54.000
25950.000	*	*	*	*	54.000
31140.000	*	*	*	*	54.000
36330.000	*	*	*	*	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5230MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
10460.000	13.508	37.110	50.618	-23.382	74.000
15690.000	*	*	*	*	74.000
20920.000	*	*	*	*	74.000
26150.000	*	*	*	*	74.000
31380.000	*	*	*	*	74.000
36610.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
10460.000	*	*	*	*	54.000
15690.000	*	*	*	*	54.000
20920.000	*	*	*	*	54.000
26150.000	*	*	*	*	54.000
31380.000	*	*	*	*	54.000
36610.000	*	*	*	*	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5230MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
<b>Peak Detector:</b>					
10460.000	14.433	41.280	55.713	-18.287	74.000
15690.000	*	*	*	*	74.000
20920.000	*	*	*	*	74.000
26150.000	*	*	*	*	74.000
31380.000	*	*	*	*	74.000
36610.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
10460.000	14.433	28.440	42.873	-11.127	54.000
15690.000	*	*	*	*	54.000
20920.000	*	*	*	*	54.000
26150.000	*	*	*	*	54.000
31380.000	*	*	*	*	54.000
36610.000	*	*	*	*	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5270MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
<b>Peak Detector:</b>					
10540.000	14.151	35.730	49.880	-24.120	74.000
15810.000	*	*	*	*	74.000
21080.000	*	*	*	*	74.000
26350.000	*	*	*	*	74.000
31620.000	*	*	*	*	74.000
36890.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
10540.000	*	*	*	*	54.000
15810.000	*	*	*	*	54.000
21080.000	*	*	*	*	54.000
26350.000	*	*	*	*	54.000
31620.000	*	*	*	*	54.000
36890.000	*	*	*	*	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5270MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
<b>Peak Detector:</b>					
10540.000	14.829	39.680	54.508	-19.492	74.000
15810.000	*	*	*	*	74.000
21080.000	*	*	*	*	74.000
26350.000	*	*	*	*	74.000
31620.000	*	*	*	*	74.000
36890.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
10540.000	14.829	22.380	37.208	-16.792	54.000
15810.000	*	*	*	*	54.000
21080.000	*	*	*	*	54.000
26350.000	*	*	*	*	54.000
31620.000	*	*	*	*	54.000
36890.000	*	*	*	*	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5310MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
10620.000	14.623	35.630	50.253	-23.747	74.000
15930.000	*	*	*	*	74.000
21240.000	*	*	*	*	74.000
26550.000	*	*	*	*	74.000
31860.000	*	*	*	*	74.000
37170.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
10620.000	*	*	*	*	54.000
15930.000	*	*	*	*	54.000
21240.000	*	*	*	*	54.000
26550.000	*	*	*	*	54.000
31860.000	*	*	*	*	54.000
37170.000	*	*	*	*	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5310MHz)

dBuV/m
74.000
74.000
74.000
74.000
74.000
74.000
54.000
54.000
54.000
54.000
54.000
54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5510MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
<b>Peak Detector:</b>					
11020.000	16.474	35.210	51.683	-22.317	74.000
16530.000	*	*	*	*	74.000
22040.000	*	*	*	*	74.000
27550.000	*	*	*	*	74.000
33060.000	*	*	*	*	74.000
38570.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
11020.000	*	*	*	*	54.000
16530.000	*	*	*	*	54.000
22040.000	*	*	*	*	54.000
27550.000	*	*	*	*	54.000
33060.000	*	*	*	*	54.000
38570.000	*	*	*	*	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5510MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
<b>Peak Detector:</b>					
11020.000	17.224	35.690	52.914	-21.086	74.000
16530.000	*	*	*	*	74.000
22040.000	*	*	*	*	74.000
27550.000	*	*	*	*	74.000
33060.000	*	*	*	*	74.000
38570.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
11020.000	*	*	*	*	54.000
16530.000	*	*	*	*	54.000
22040.000	*	*	*	*	54.000
27550.000	*	*	*	*	54.000
33060.000	*	*	*	*	54.000
38570.000	*	*	*	*	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5590MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
11180.000	16.657	34.750	51.406	-22.594	74.000
16770.000	*	*	*	*	74.000
22360.000	*	*	*	*	74.000
27950.000	*	*	*	*	74.000
33540.000	*	*	*	*	74.000
39130.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
11180.000	*	*	*	*	54.000
16770.000	*	*	*	*	54.000
22360.000	*	*	*	*	54.000
27950.000	*	*	*	*	54.000
33540.000	*	*	*	*	54.000
39130.000	*	*	*	*	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5590MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
<b>Peak Detector:</b>					
11180.000	17.681	34.690	52.370	-21.630	74.000
16770.000	*	*	*	*	74.000
22360.000	*	*	*	*	74.000
27950.000	*	*	*	*	74.000
33540.000	*	*	*	*	74.000
39130.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
11180.000	*	*	*	*	54.000
16770.000	*	*	*	*	54.000
22360.000	*	*	*	*	54.000
27950.000	*	*	*	*	54.000
33540.000	*	*	*	*	54.000
39130.000	*	*	*	*	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5670MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
<b>Peak Detector:</b>					
11340.000	16.408	35.170	51.577	-22.423	74.000
17010.000	*	*	*	*	74.000
22680.000	*	*	*	*	74.000
28350.000	*	*	*	*	74.000
34020.000	*	*	*	*	74.000
39690.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
11340.000	*	*	*	*	54.000
17010.000	*	*	*	*	54.000
22680.000	*	*	*	*	54.000
28350.000	*	*	*	*	54.000
34020.000	*	*	*	*	54.000
39690.000	*	*	*	*	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : Harmonic Radiated Emission Data

Test Site : No.3 OATS

Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5670MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
<b>Peak Detector:</b>					
11340.000	17.167	34.880	52.047	-21.953	74.000
17010.000	*	*	*	*	74.000
22680.000	*	*	*	*	74.000
28350.000	*	*	*	*	74.000
34020.000	*	*	*	*	74.000
39690.000	*	*	*	*	74.000
Average					
<b>Detector:</b>					
11340.000	*	*	*	*	54.000
17010.000	*	*	*	*	54.000
22680.000	*	*	*	*	54.000
28350.000	*	*	*	*	54.000
34020.000	*	*	*	*	54.000
39690.000	*	*	*	*	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "\*", means this data is the too weak instrument of signal is unable to test.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Item : General Radiated Emission

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5220MHz)

Correct	Reading	Measurement	Margin	Limit
Factor	Level	Level		
dB	dBuV	dBuV/m	dB	dBuV/m
-9.696	44.684	34.988	-8.512	43.500
-1.209	35.277	34.068	-11.932	46.000
0.048	32.987	33.035	-12.965	46.000
1.770	37.414	39.184	-6.816	46.000
5.271	32.670	37.941	-8.059	46.000
9.119	28.998	38.117	-15.883	54.000
-7.204	41.102	33.898	-9.602	43.500
-7.634	34.657	27.023	-18.977	46.000
-2.029	29.400	27.371	-18.629	46.000
-0.852	34.189	33.337	-12.663	46.000
2.510	29.839	32.349	-13.651	46.000
8.071	22.366	30.437	-23.563	54.000
	Factor dB  -9.696 -1.209 0.048 1.770 5.271 9.119  -7.204 -7.634 -2.029 -0.852 2.510	Factor Level dBuV  -9.696	Factor Level dBuV dBuV/m  -9.696 44.684 34.988 -1.209 35.277 34.068 0.048 32.987 33.035 1.770 37.414 39.184 5.271 32.670 37.941 9.119 28.998 38.117  -7.204 41.102 33.898 -7.634 34.657 27.023 -2.029 29.400 27.371 -0.852 34.189 33.337 2.510 29.839 32.349	Factor dB dBuV dBuV/m dB  -9.696 44.684 34.988 -8.512 -1.209 35.277 34.068 -11.932 0.048 32.987 33.035 -12.965 1.770 37.414 39.184 -6.816 5.271 32.670 37.941 -8.059 9.119 28.998 38.117 -15.883  -7.204 41.102 33.898 -9.602 -7.634 34.657 27.023 -18.977 -2.029 29.400 27.371 -18.629 -0.852 34.189 33.337 -12.663 2.510 29.839 32.349 -13.651

- 1. All Readings below 1GHz are Quasi-Peak, above are average value.
- 2. "means the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor
- 4. The radiated emissions below 1GHz of the lowest, middle, highest frequency are pretested. Only the worst case is shown on the report.



Product : SpectraGuard Sensor
Test Item : General Radiated Emission

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5300MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					_
<b>Peak Detector</b>					
375.320	-1.209	34.461	33.252	-12.748	46.000
499.480	0.048	31.911	31.959	-14.041	46.000
625.580	1.770	37.290	39.060	-6.940	46.000
749.740	3.320	31.358	34.678	-11.322	46.000
875.840	5.271	33.356	38.627	-7.373	46.000
935.980	6.421	33.681	40.102	-5.898	46.000
749.740 875.840	3.320 5.271	31.358 33.356	34.678 38.627	-11.322 -7.373	46.000 46.000

## Vertical

## **Peak Detector**

161.920	-6.696	42.283	35.588	-7.912	43.500
375.320	-2.029	31.063	29.034	-16.966	46.000
499.480	-0.852	35.045	34.193	-11.807	46.000
749.740	2.510	31.279	33.789	-12.211	46.000
875.840	1.621	28.180	29.801	-16.199	46.000
965.080	7.932	22.936	30.868	-23.132	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above are average value.
- 2. "means the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor
- 4. The radiated emissions below 1GHz of the lowest, middle, highest frequency are pretested. Only the worst case is shown on the report.



Test Item : General Radiated Emission

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5500MHz)

Frequency	Correct	ct Reading Measurement		Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
<b>Peak Detector</b>					
183.260	-12.294	42.773	30.479	-13.021	43.500
375.320	-1.209	35.012	33.803	-12.197	46.000
499.480	0.048	31.869	31.917	-14.083	46.000
625.580	1.770	37.739	39.509	-6.491	46.000
875.840	5.271	31.784	37.055	-8.945	46.000
1000.000	9.119	29.177	38.296	-15.704	54.000
Vertical					
<b>Peak Detector</b>					
161.920	-6.696	43.823	37.128	-6.372	43.500
375.320	-2.029	30.886	28.857	-17.143	46.000
499.480	-0.852	33.811	32.959	-13.041	46.000
600.360	-2.833	29.801	26.968	-19.032	46.000
625.580	-2.600	29.137	26.537	-19.463	46.000
968.960	8.191	22.131	30.322	-23.678	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above are average value.
- 2. " means the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor
- 4. The radiated emissions below 1GHz of the lowest, middle, highest frequency are pretested. Only the worst case is shown on the report.



Test Item : General Radiated Emission

Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11n-20BW 21.6Mbps) (5220MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
<b>Peak Detector</b>					
375.320	-1.209	35.434	34.225	-11.775	46.000
499.480	0.048	32.604	32.652	-13.348	46.000
625.580	1.770	36.785	38.555	-7.445	46.000
749.740	3.320	30.687	34.007	-11.993	46.000
875.840	5.271	32.806	38.077	-7.923	46.000
1000.000	9.119	28.666	37.785	-16.215	54.000
Vertical					
Peak Detector					
161.920	-6.696	42.215	35.520	-7.980	43.500
375.320	-2.029	32.354	30.325	-15.675	46.000
499.480	-0.852	34.027	33.175	-12.825	46.000
625.580	-2.600	29.915	27.315	-18.685	46.000
749.740	2.510	27.134	29.644	-16.356	46.000
1000.000	4.329	24.279	28.608	-25.392	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above are average value.
- 2. "means the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor
- 4. The radiated emissions below 1GHz of the lowest, middle, highest frequency are pretested. Only the worst case is shown on the report.



Test Item : General Radiated Emission

Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11n-20BW 21.6Mbps) (5300MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
<b>Peak Detector</b>					
41.640	-3.949	37.037	33.088	-6.912	40.000
375.320	-1.209	35.353	34.144	-11.856	46.000
499.480	0.048	32.738	32.786	-13.214	46.000
625.580	1.770	38.004	39.774	-6.226	46.000
875.840	5.271	32.965	38.236	-7.764	46.000
1000.000	9.119	27.827	36.946	-17.054	54.000
Vertical					
Peak Detector					
161.920	-6.696	42.260	35.565	-7.935	43.500
375.320	-2.029	30.788	28.759	-17.241	46.000
499.480	-0.852	34.185	33.333	-12.667	46.000
625.580	-2.600	29.924	27.324	-18.676	46.000
749.740	2.510	29.255	31.765	-14.235	46.000
1000.000	4.329	25.210	29.539	-24.461	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above are average value.
- 2. "means the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor
- 4. The radiated emissions below 1GHz of the lowest, middle, highest frequency are pretested. Only the worst case is shown on the report.



Test Item : General Radiated Emission

Test Site : No.3 OATS

Test Mode : Mode 2: Transmit (802.11n-20BW 21.6Mbps) (5500MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
<b>Peak Detector</b>					
88.200	-9.696	44.381	34.685	-8.815	43.500
375.320	-1.209	35.545	34.336	-11.664	46.000
499.480	0.048	32.175	32.223	-13.777	46.000
625.580	1.770	36.204	37.974	-8.026	46.000
883.600	6.146	33.633	39.778	-6.222	46.000
1000.000	9.119	33.553	42.672	-11.328	54.000
Vertical					
Peak Detector					
161.920	-6.696	42.255	35.560	-7.940	43.500
375.320	-2.029	30.118	28.089	-17.911	46.000
499.480	-0.852	35.236	34.384	-11.616	46.000
625.580	-2.600	29.800	27.200	-18.800	46.000
749.740	2.510	30.448	32.958	-13.042	46.000
1000.000	4.329	26.649	30.978	-23.022	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above are average value.
- 2. "means the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor
- 4. The radiated emissions below 1GHz of the lowest, middle, highest frequency are pretested. Only the worst case is shown on the report.



Test Item : General Radiated Emission

Test Site : No.3 OATS

Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5190MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit	
	Factor	Level	Level			
MHz	dB	dBuV	dBuV/m	dB	dBuV/m	
Horizontal						
<b>Peak Detector</b>						
375.320	-1.209	35.347	34.138	-11.862	46.000	
499.480	0.048	33.010	33.058	-12.942	46.000	
625.580	1.770	37.122	38.892	-7.108	46.000	
749.740	3.320	30.494	33.814	-12.186	46.000	
875.840	5.271	33.105	38.376	-7.624	46.000	
1000.000	9.119	28.019	37.138	-16.862	54.000	
Vertical						
<b>Peak Detector</b>						
163.860	-7.204	42.531	35.327	-8.173	43.500	
375.320	-2.029	30.652	28.623	-17.377	46.000	
499.480	-0.852	34.760	33.908	-12.092	46.000	
600.360	-2.833	36.389	33.556	-12.444	46.000	
749.740	2.510	30.607	33.117	-12.883	46.000	
968.960	8.191	22.336	30.527	-23.473	54.000	

- 1. All Readings below 1GHz are Quasi-Peak, above are average value.
- 2. "means the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor
- 4. The radiated emissions below 1GHz of the lowest, middle, highest frequency are pretested. Only the worst case is shown on the report.



Test Item : General Radiated Emission

Test Site : No.3 OATS

Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5270MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
<b>Peak Detector</b>					
375.320	-1.209	35.123	33.914	-12.086	46.000
499.480	0.048	33.313	33.361	-12.639	46.000
625.580	1.770	38.095	39.865	-6.135	46.000
749.740	3.320	31.183	34.503	-11.497	46.000
875.840	5.271	33.066	38.337	-7.663	46.000
1000.000	9.119	27.572	36.691	-17.309	54.000
Vertical					
Peak Detector					
161.920	-6.696	42.140	35.445	-8.055	43.500
375.320	-2.029	31.283	29.254	-16.746	46.000
499.480	-0.852	34.361	33.509	-12.491	46.000
625.580	-2.600	31.320	28.720	-17.280	46.000
749.740	2.510	30.281	32.791	-13.209	46.000
967.020	8.071	21.706	29.777	-24.223	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above are average value.
- 2. "means the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor
- 4. The radiated emissions below 1GHz of the lowest, middle, highest frequency are pretested. Only the worst case is shown on the report.



Test Item : General Radiated Emission

Test Site : No.3 OATS

Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5590MHz)

Frequency	Correct	Reading	Reading Measurement		Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
<b>Peak Detector</b>					
90.140	-9.449	43.322	33.873	-9.627	43.500
375.320	-1.209	35.521	34.312	-11.688	46.000
499.480	0.048	33.003	33.051	-12.949	46.000
625.580	1.770	37.360	39.130	-6.870	46.000
875.840	5.271	32.459	37.730	-8.270	46.000
1000.000	9.119	27.673	36.792	-17.208	54.000
Vertical					
<b>Peak Detector</b>					
163.860	-7.204	43.421	36.217	-7.283	43.500
375.320	-2.029	31.005	28.976	-17.024	46.000
499.480	-0.852	35.155	34.303	-11.697	46.000
625.580	-2.600	30.670	28.070	-17.930	46.000
749.740	2.510	31.416	33.926	-12.074	46.000
1000.000	4.329	26.383	30.712	-23.288	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above are average value.
- 2. "means the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor
- 4. The radiated emissions below 1GHz of the lowest, middle, highest frequency are pretested. Only the worst case is shown on the report.



# 7. Band Edge

# 7.1. Test Equipment

## **RF** Conducted Measurement

The following test equipments are used during the band edge tests:

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2010
	Spectrum Analyzer	Agilent	E4407B / US39440758	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. The power combiner is used for measure 11n mode.

## **RF Radiated Measurement:**

The following test equipments are used during the band edge tests:

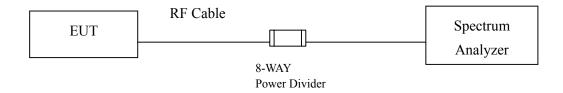
Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
⊠Site # 3	Bilog Antenna S		Schaffner Chase	CBL6112B/2673	Sep., 2010
	X	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2010
		Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2010
	X Pre-Amplifier		Agilent	8447D/2944A09549	Sep., 2010
	X	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2010
		Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2010
	X	Coaxial Cable	QuieTek	QTK-CABLE/ CAB5	Feb., 2010
	X	Controller	QuieTek	QTK-CONTROLLER/ CTRL3	N/A
	X	Coaxial Switch	Anritsu	MP59B/6200265729	N/A

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

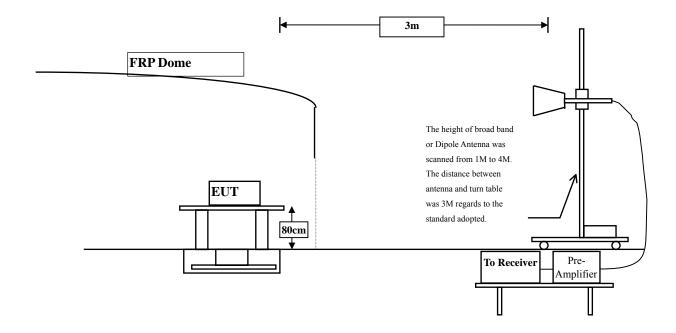


# 7.2. Test Setup

## **RF Conducted Measurement**



## **RF Radiated Measurement:**





#### 7.3. Limits

The provisions of Section 15.205 of this part apply to intentional radiators operating under this section.

Radiated emissions which fall in the restricted bands, as defined in Section 15.205, must also comply with the radiated emission limits specified in Section 15.209:

FCC Part 15 Subpart C Paragraph 15.209 Limits								
Frequency MHz	uV/m @3m	dBuV/m@3m						
30-88	100	40						
88-216	150	43.5						
216-960	200	46						
Above 960	500	54						

- Remarks: 1. RF Voltage (dBuV) = 20 log RF Voltage (uV)
  - 2. In the Above Table, the tighter limit applies at the band edges.
  - 3. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

#### 7.4. **Test Procedure**

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 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 can move up and down between 1 meter and 4 meters to find out the maximum

emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.4:2003 on radiated measurement.

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

#### 7.5. Uncertainty

- $\pm$  3.8 dB below 1GHz
- ± 3.9 dB above 1GHz



# 7.6. Test Result of Band Edge

Product : SpectraGuard Sensor
Test Item : Band Edge Data
Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11a-6Mbps)-Channel 36

Fundamental Filed Strength

Antenna	Antenna Frequency Reading		Correction Factor	Emission Level	Detector
Pole	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	
Horizontal	5180	34.966	70.42	105.386	Peak
Horizontal	5180	34.966	59.43	94.396	Average
Vertical	5180	37.073	70.05	107.124	Peak
Vertical	5180	37.073	60.11	97.184	Average

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz Average detector: RBW=1MHz, VBW=30Hz

Band Edge Test Data

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	Δ (dB)	Band Edge Field Strength (dBuV/m)	Requiqment Limit (dBuV/m)	Detector
Horizontal	5150	105.386	58.291	47.095	74.000	Peak
Horizontal	5150	94.396	59.705	34.691	54.000	Average
Vertical	5150	107.124	58.291	48.833	74.000	Peak
Vertical	5150	97.184	59.705	37.479	54.000	Average

## Note:

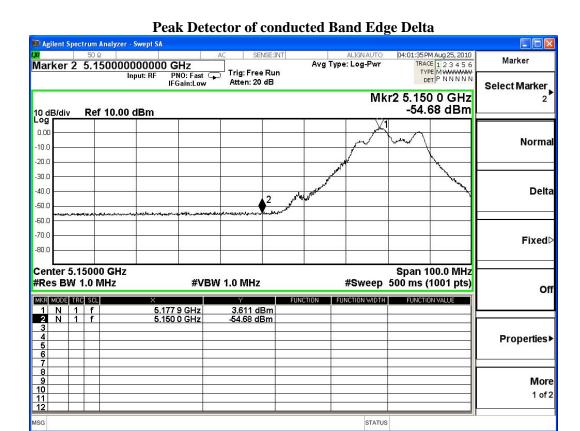
The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

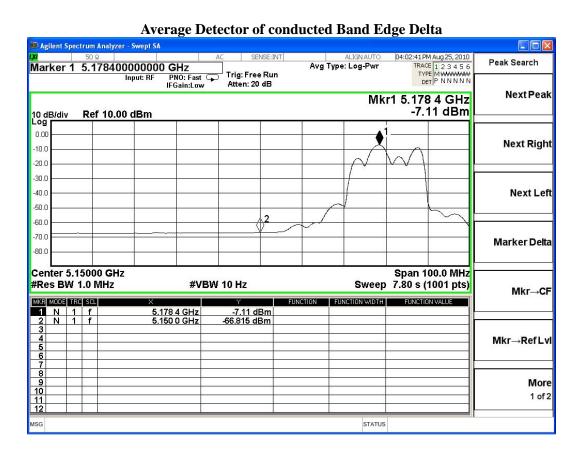
Band Edge field Strength =  $F - \Delta$ 

F = Fundamental field Strength (Peak or Average)

 $\Delta$  = Conducted Band Edge Delta (Peak or Average)





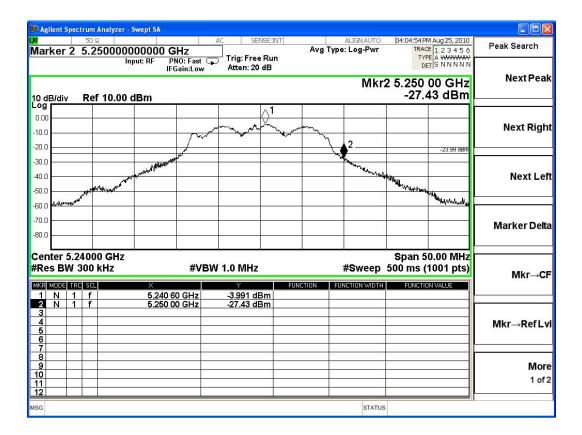




Test Mode : Mode 1: Transmit (802.11a-6Mbps)-Channel 48

Test Frequency	Measurement Level	Limit	Result
(MHz)	$(\Delta dB)$	(dB)	
5250	23.439	>20	PASS

NOTE: Accordance with 15.215 requirement.

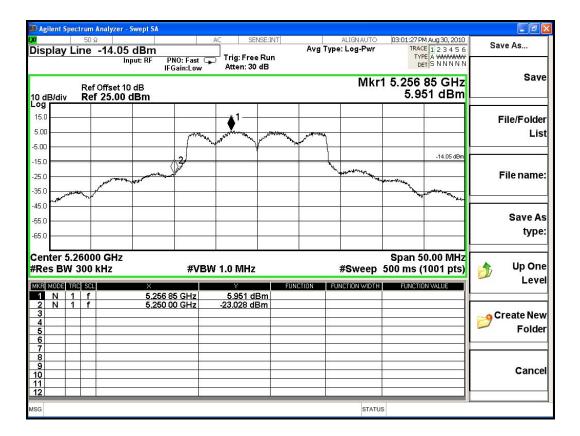




Test Mode : Mode 1: Transmit (802.11a-6Mbps)-Channel 52

Test Frequency	Measurement Level	Limit	Result
(MHz)	$(\Delta dB)$	(dB)	
5250	28.979	>20	PASS

NOTE: Accordance with 15.215 requirement.





Test Mode : Mode 1: Transmit (802.11a-6Mbps) -Channel 64

Fundamental Filed Strength

Antenna	Frequency Reading Level		Correction Factor	Emission Level	Detector
Pole	[MHz] [dB(uV)]		[dB/m]	[dB(uV/m)]	
Horizontal	5320	35.635	78.52	114.154	Peak
Horizontal	5320	35.635	67.4	103.034	Average
Vertical	5320	37.552	78.12	115.671	Peak
Vertical	5320	37.552	67.54	105.091	Average

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz
Average detector: RBW=1MHz, VBW=30Hz

Band Edge Test Data

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	Δ (dB)	Band Edge Field Strength (dBuV/m)	Requiqment Limit (dBuV/m)	Detector
Horizontal	5356.7	114.154	47.147	67.007	74.000	Peak
Horizontal	5350	103.034	52.86	50.174	54.000	Average
Vertical	5356.7	115.671	47.147	68.524	74.000	Peak
Vertical	5350	105.091	52.86	52.231	54.000	Average

## Note:

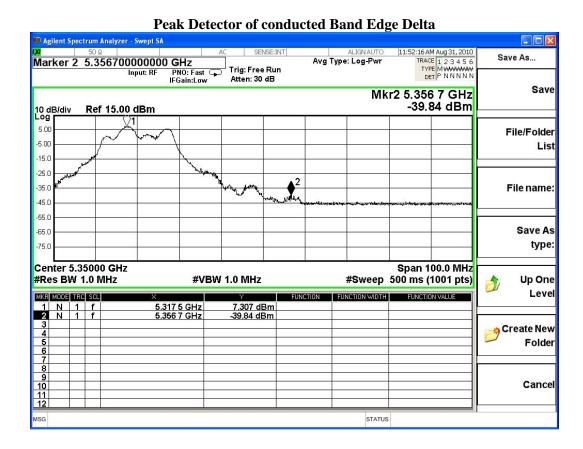
The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

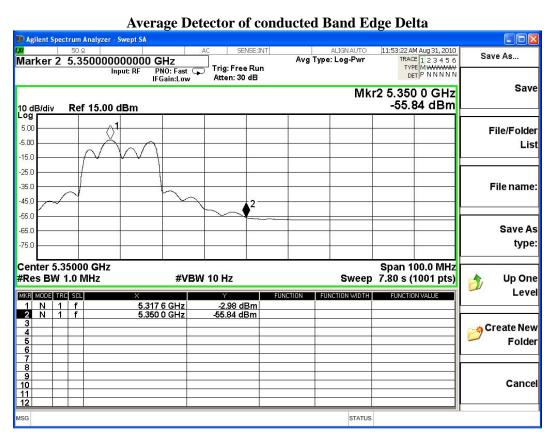
Band Edge field Strength =  $F - \Delta$ 

F = Fundamental field Strength (Peak or Average)

 $\Delta$  = Conducted Band Edge Delta (Peak or Average)









Test Mode : Mode 1: Transmit (802.11a-6Mbps) -Channel 100

# Fundamental Filed Strength

Antenna	Frequency	Reading Level	Correction Factor	Emission Level	Detector
Pole	[MHz]	$[dB(uV)] \qquad [dB/m]$		[dB(uV/m)]	
Horizontal	5500	34.949	79.89	116.574	Peak
Horizontal	5500	34.949	68.94	105.624	Average
Vertical	5500	38.145	79.86	118.005	Peak
Vertical	5500	38.145	69.52	107.665	Average

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz
Average detector: RBW=1MHz, VBW=30Hz

# Band Edge Test Data

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	Δ (dB)	Band Edge Field Strength (dBuV/m)	Requiqment Limit (dBuV/m)	Detector
Horizontal	5453.3	116.574	47.28	69.294	74.000	Peak
Horizontal	5459.3	105.624	58.23	47.394	54.000	Average
Vertical	5453.3	118.005	47.28	70.725	74.000	Peak
Vertical	5459.3	107.665	58.23	49.435	54.000	Average

## Note:

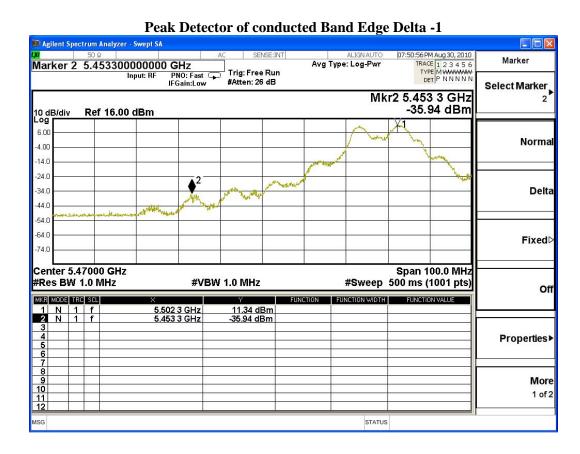
The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

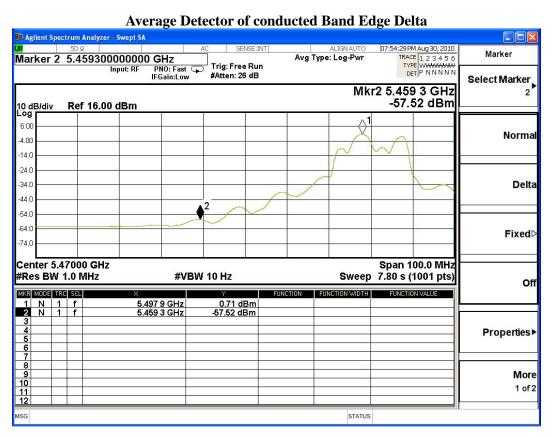
Band Edge field Strength =  $F - \Delta$ 

F = Fundamental field Strength (Peak or Average)

 $\Delta$  = Conducted Band Edge Delta (Peak or Average)









Test Mode : Mode 1: Transmit (802.11a-6Mbps) -Channel 100

# **RF** Radiated Measurement:

	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
Horizontal	5470.000	18.334	-55.840	-37.506	-10.506	-27.000	Pass

	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
Vertical	5470.000	19.335	-47.450	-28.115	-1.115	-27.000	Pass



Test Mode : Mode 1: Transmit (802.11a-6Mbps) -Channel 140

## **RF Radiated Measurement:**

	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
Horizontal	5725.000	18.649	-56.150	-37.501	-10.501	-27.000	Pass

	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
Vertical	5725.000	19.372	-60.650	-41.278	-14.278	-27.000	Pass



Test Mode : Mode 2: Transmit (802.11n-20BW 21.6Mbps) -Channel 36

Fundamental Filed Strength

Antenna	Frequency	Reading Level	Reading Level Correction Factor		Detector
Pole	[MHz]	[dBuV]	[dB/m]	[dBuV/m]	
Horizontal	5180	34.966	71.12	106.086	Peak
Horizontal	5180	34.966	34.966 57.64 92.606		Average
Vertical	5180	37.073 71.16 1		108.234	Peak
Vertical	5180	37.073	59.37	96.444	Average

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz
Average detector: RBW=1MHz, VBW=30Hz

Band Edge Test Data

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	Δ (dB)	Band Edge Field Strength (dBuV/m)	Requiqment Limit (dBuV/m)	Detector
Horizontal	5150	106.086	57.136	48.95	74.000	Peak
Horizontal	5150	92.606	57.198	35.408	54.000	Average
Vertical	5150	108.234	57.136	51.098	74.000	Peak
Vertical	5150	96.444	57.198	39.246	54.000	Average

## Note:

The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

Band Edge field Strength =  $F - \Delta$ 

F = Fundamental field Strength (Peak or Average)

 $\Delta$  = Conducted Band Edge Delta (Peak or Average)



