

6. Band Edge

6.1. 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, 2012
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2012
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2012

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.

RF Radiated Measurement:

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

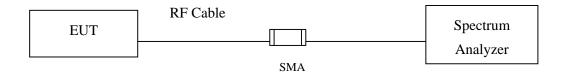
Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
⊠Site # 3		Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2012
	X	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2012
		Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2012
	Pre-Amplifier		QTK	QTK-AMP-03 / 0003	May, 2012
	X	Pre-Amplifier	QTK	AP-180C / CHM_0906076	Sep., 2012
		Pre-Amplifier	MITEQ	AMF-4D-180400-45-6P/ 925975	Mar, 2012
	X	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2012
		Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2012
	X Coaxial Cable		QuieTek	QTK-CABLE/ CAB5	Feb., 2012
	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.

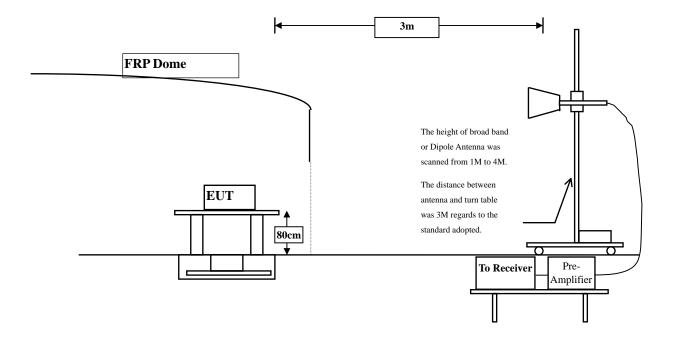


6.2. Test Setup

RF Conducted Measurement



RF Radiated Measurement:



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.



6.4. Test Procedure

The EUT was setup according to ANSI C63.4, 2003 and tested according to DTS test procedure of ANSI C63.10: 2009 for compliance to FCC 47CFR 15.247 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.

6.5. Uncertainty

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



6.6. Test Result of Band Edge

Product : TABLET PC
Test Item : Band Edge
Test Site : No.3 OATS

Test Mode : Mode 1: Transmit - 802.11b 1Mbps

RF Radiated Measurement (Horizontal):

		, ,					
Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
Chamilei No.	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Kesuit
01 (Peak)	2389.200	31.506	27.824	59.330	74.00	54.00	Pass
01 (Peak)	2390.000	31.509	26.362	57.871	74.00	54.00	Pass
01 (Peak)	2413.800	31.651	72.455	104.107			Pass
01 (Average)	2390.000	31.509	12.199	43.708	74.00	54.00	Pass
01 (Average)	2414.800	31.660	67.655	99.315			Pass

Figure Channel 01:

Horizontal (Peak)

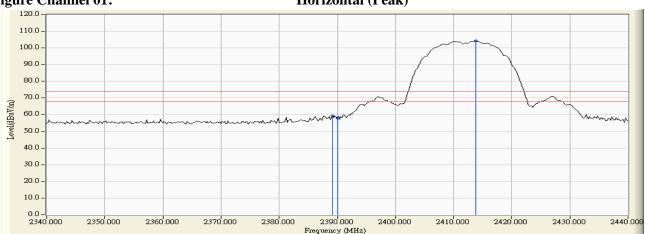


Figure Channel 01:

Horizontal (Average)



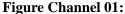
- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
 - 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
 - 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
 - 4. "*", means this data is the worst emission level.
 - 5. Measurement Level = Reading Level + Correct Factor.
 - 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Test Mode : Mode 1: Transmit - 802.11b 1Mbps

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2390.000	30.915	25.329	56.244	74.00	54.00	Pass
01 (Peak)	2413.800	30.961	69.925	100.886			Pass
01 (Average)	2390.000	30.915	11.939	42.854	74.00	54.00	Pass
01 (Average)	2414.800	30.968	65.215	96.183			Pass



Vertical (Peak)

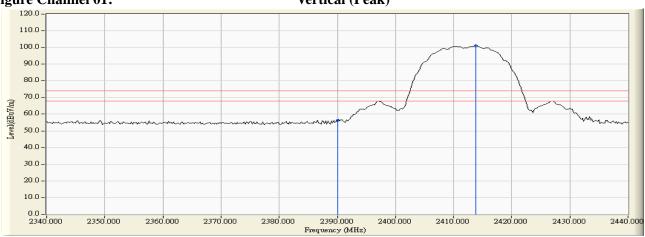


Figure Channel 01:

Vertical (Average)



- Note:1. All readings 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 worst emission level.
 - 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.



Test Mode Mode 1: Transmit - 802.11b 1Mbps

RF Radiated Measurement (Horizontal):

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Kesuit
11 (Peak)	2463.700	32.032	75.196	107.228			Pass
11 (Peak)	2483.500	32.182	29.907	62.089	74.00	54.00	Pass
11 (Peak)	2484.100	32.186	30.599	62.786	74.00	54.00	Pass
11 (Average)	2461.300	32.014	70.479	102.493			Pass
11 (Average)	2483.500	32.182	13.674	45.856	74.00	54.00	Pass



Horizontal (Peak)

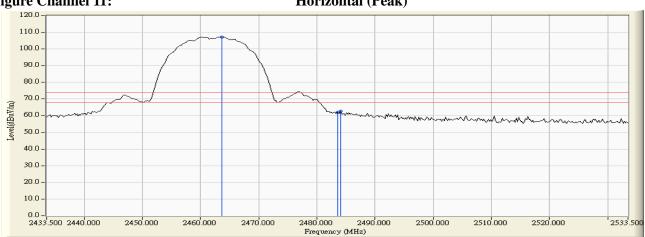
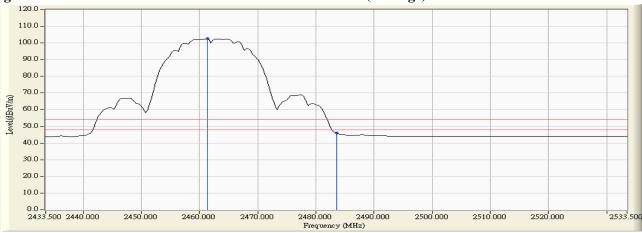


Figure Channel 11:

Horizontal (Average)



- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto. 3.
- "*", means this data is the worst emission level. 4.
- 5. Measurement Level = Reading Level + Correct Factor.
- The average measurement was not performed when the peak measured data under the limit of average detection.



Test Mode : Mode 1: Transmit - 802.11b 1Mbps

RF Radiated Measurement (Vertical):

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	D14
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
11 (Peak)	2463.700	31.302	74.010	105.312			Pass
11 (Peak)	2483.500	31.435	30.165	61.600	74.00	54.00	Pass
11 (Average)	2462.700	31.295	69.238	100.533			Pass
11 (Average)	2483.500	31.435	13.324	44.759	74.00	54.00	Pass



Vertical (Peak)

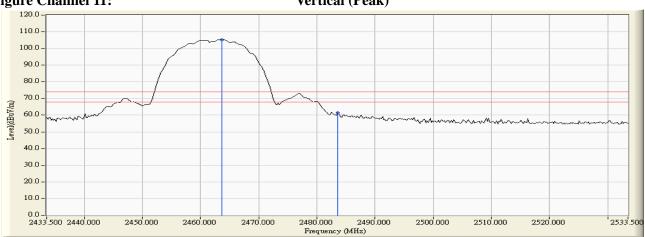
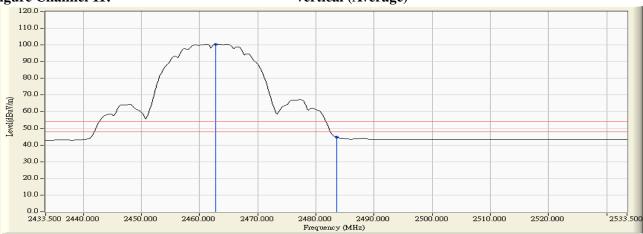


Figure Channel 11:

Vertical (Average)



- Note: 1. All readings 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 worst emission level.
 - 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.



Test Mode : Mode 2: Transmit - 802.11g 6Mbps

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2390.000	31.509	34.419	65.928	74.00	54.00	Pass
01 (Peak)	2413.800	31.651	74.330	105.982			Pass
01(Average)	2390.000	31.509	16.171	47.680	74.00	54.00	Pass
01(Average)	2416.000	31.670	63.825	95.494			Pass

Figure Channel 01:

Horizontal (Peak)

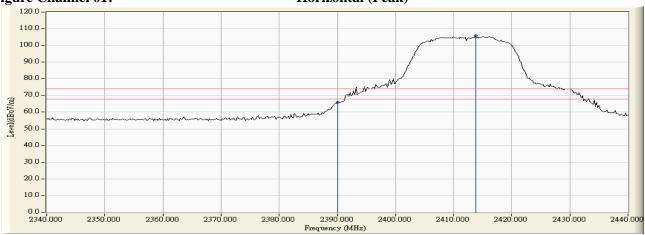


Figure Channel 01:

Horizontal (Average)



- Note:1. All readings 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 worst emission level.
 - 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.



Test Mode : Mode 2: Transmit - 802.11g 6Mbps

RF Radiated Measurement (Vertical):

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Kesuit
01 (Peak)	2390.000	30.915	31.594	62.509	74.00	54.00	Pass
01 (Peak)	2416.200	30.978	71.324	102.302			Pass
01 (Average)	2390.000	30.915	14.555	45.470	74.00	54.00	Pass
01 (Average)	2416.000	30.977	61.603	92.579			Pass



Vertical (Peak)

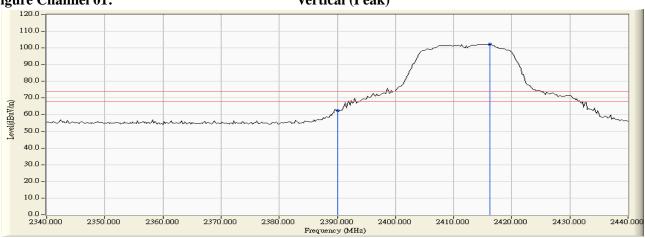
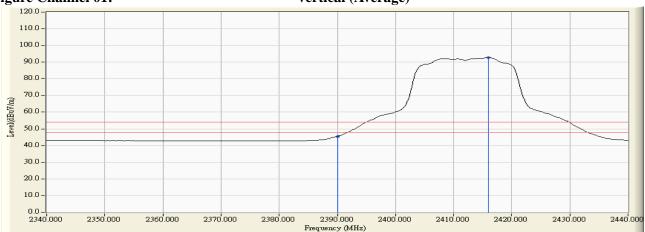


Figure Channel 01:

Vertical (Average)



- Note:1. All readings 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 worst emission level.
 - 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.



Test Mode : Mode 2: Transmit - 802.11g 6Mbps

RF Radiated Measurement (Horizontal):

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Kesuit
11 (Peak)	2461.900	32.018	76.446	108.465			Pass
11 (Peak)	2483.500	32.182	38.615	70.797	74.00	54.00	Pass
11 (Average)	2466.100	32.051	66.635	98.685			Pass
11 (Average)	2483.500	32.182	19.973	52.155	74.00	54.00	Pass



Horizontal (Peak)

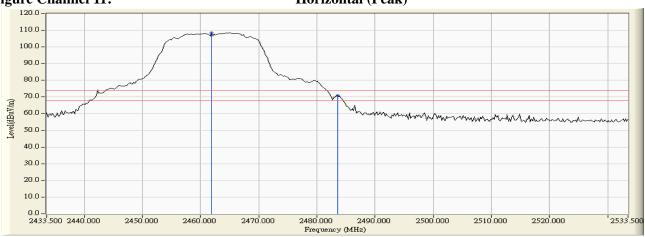
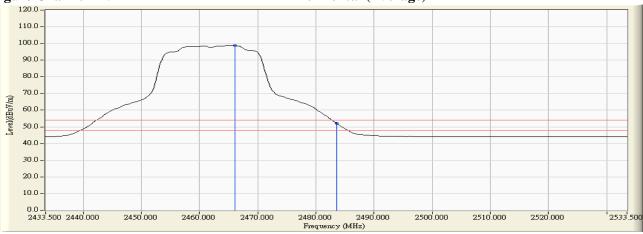


Figure Channel 11:

Horizontal (Average)



- Note: 1. All readings 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 worst emission level.
 - 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.



Test Mode : Mode 2: Transmit - 802.11g 6Mbps

RF Radiated Measurement (Vertical):

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Kesuit
11 (Peak)	2465.100	31.312	74.796	106.107			Pass
11 (Peak)	2483.500	31.435	37.183	68.618	74.00	54.00	Pass
11 (Average)	2465.900	31.317	65.084	96.401			Pass
11 (Average)	2483.500	31.435	19.053	50.488	74.00	54.00	Pass



Vertical (Peak)

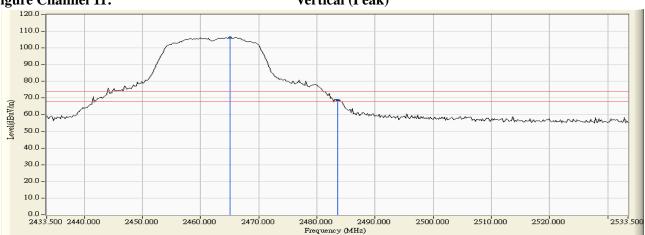
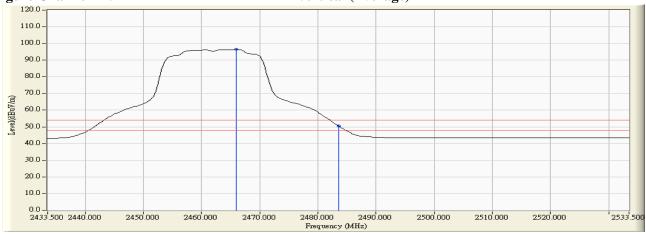


Figure Channel 11:

Vertical (Average)



- 1. All readings 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 worst emission level.
- 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.



Test Mode : Mode 4: Transmit - 802.11n-20BW_14.4Mbps(2.4G Band)

RF Radiated Measurement (Horizontal):

Channel No.	1	Correct Factor	0	Emission Level		0	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
01 (Peak)	2390.000	31.509	30.074	61.583	74.00	54.00	Pass
01 (Peak)	2409.200	31.619	72.635	104.254	-	1	Pass
01 (Average)	2390.000	31.509	14.727	46.236	74.00	54.00	Pass
01 (Average)	2416.000	31.670	60.523	92.192			Pass



Horizontal (Peak)

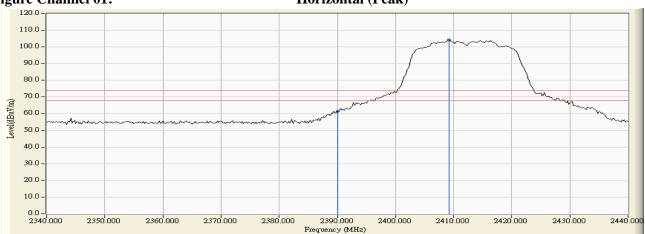
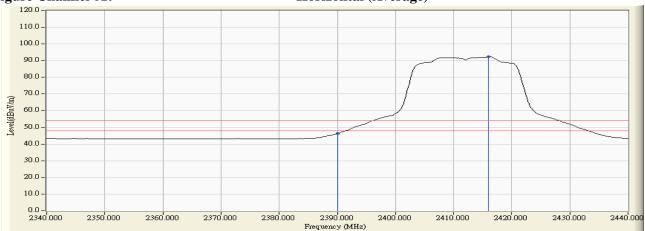


Figure Channel 01:

Horizontal (Average)



- 1. All readings 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 worst emission level.
- 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.



Test Mode : Mode 4: Transmit - 802.11n-20BW_14.4Mbps(2.4G Band)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
04 (70 1)	(/	(/			(/	` /	
01 (Peak)	2390.000	30.915	28.245	59.160	74.00	54.00	Pass
01 (Peak)	2410.800	30.942	73.294	104.236	-		Pass
01 (Average)	2390.000	30.915	14.751	45.666	74.00	54.00	Pass
01 (Average)	2415.400	30.972	60.875	91.847			Pass

Figure Channel 01:

Vertical (Peak)

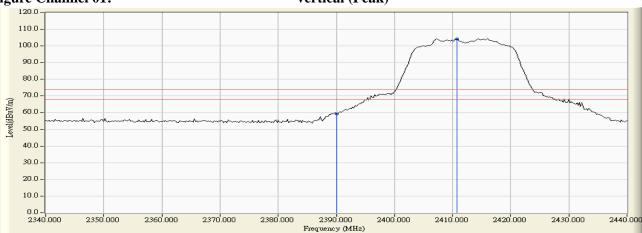


Figure Channel 01:

Vertical (Average)



- 1. All readings 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 worst emission level.
- 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.



Test Mode : Mode 4: Transmit - 802.11n-20BW_14.4Mbps(2.4G Band)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11 (Peak)	2459.300	31.999	74.895	106.894			Pass
11 (Peak)	2483.500	32.182	34.052	66.234	74.00	54.00	Pass
11 (Average)	2466.100	32.051	62.834	94.884			Pass
11 (Average)	2483.500	32.182	16.758	48.940	74.00	54.00	Pass

Figure Channel 11:

Horizontal (Peak)

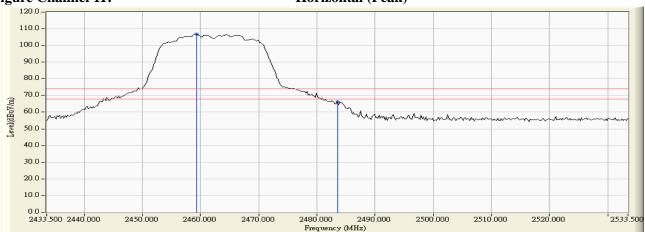
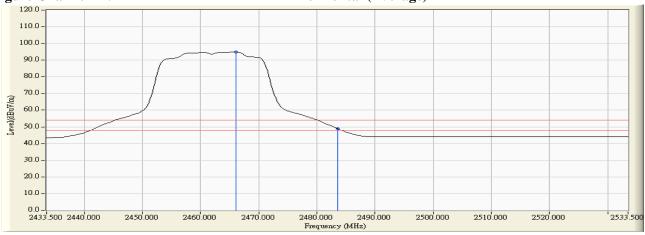


Figure Channel 11:

Horizontal (Average)



- 1. All readings 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 worst emission level.
- 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.



Test Mode : Mode 4: Transmit - 802.11n-20BW_14.4Mbps(2.4G Band)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11 (Peak)	2459.100	31.271	74.351	105.622			
11 (Peak)	2483.500	31.435	32.112	63.547	74.00	54.00	Pass
11 (Average)	2465.900	31.317	62.070	93.387			
11 (Average)	2483.500	31.435	16.631	48.066	74.00	54.00	Pass



Vertical (Peak)

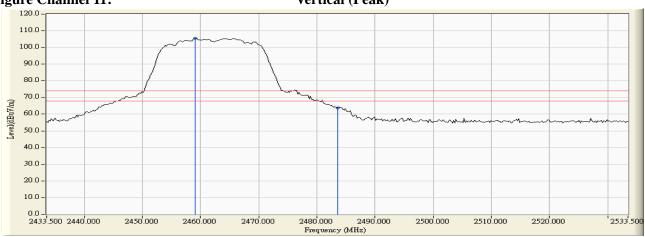
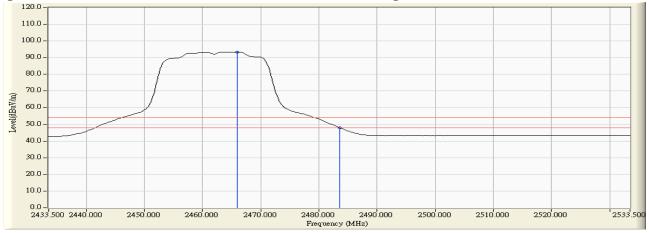


Figure Channel 11:

Vertical (Average)



- 1. All readings 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 worst emission level.
- 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.



Test Mode : Mode 5: Transmit - 802.11n-40BW_30Mbps(2.4G Band)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
Chamilei No.	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Kesuit
01 (Peak)	2390.000	31.509	32.526	64.035	74.00	54.00	Pass
01 (Peak)	2429.800	31.775	66.760	98.535			Pass
01 (Average)	2390.000	31.509	16.012	47.521	74.00	54.00	Pass
01 (Average)	2434.400	31.809	53.676	85.486			Pass

Figure Channel 01:

Horizontal (Peak)

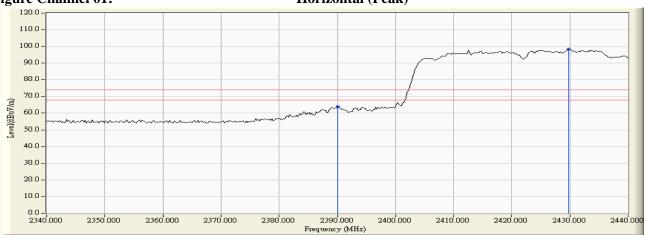
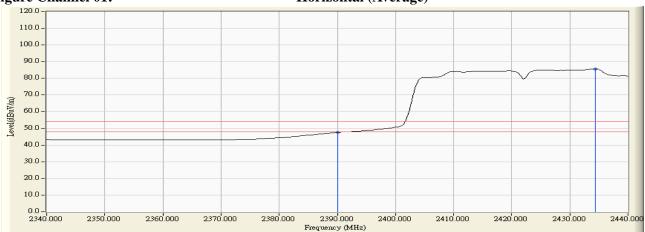


Figure Channel 01:

Horizontal (Average)



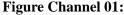
- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Test Mode : Mode 5: Transmit - 802.11n-40BW_30Mbps(2.4G Band)

RF Radiated Measurement (Vertical):

Channel No.	1		_	Emission Level		0	Result
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
01 (Peak)	2390.000	30.915	32.737	63.652	74.00	54.00	Pass
01 (Peak)	2434.600	31.102	66.307	97.410			Pass
01 (Average)	2390.000	30.915	15.405	46.320	74.00	54.00	Pass
01 (Average)	2434.400	31.101	53.123	84.224			Pass



Vertical (Peak)

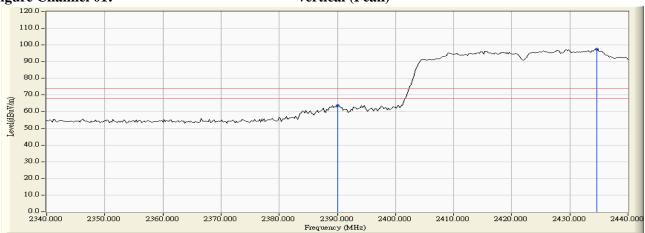
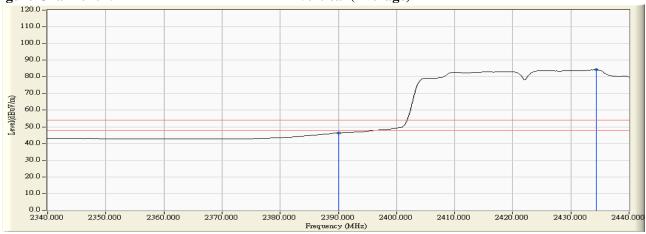


Figure Channel 01:

Vertical (Average)



- 1. All readings 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 worst emission level.
- 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.



Test Mode : Mode 5: Transmit - 802.11n-40BW_30Mbps(2.4G Band)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
07 (Peak)	2459.900	32.003	69.071	101.074			Pass
07 (Peak)	2483.500	32.182	33.139	65.321	74.00	54.00	Pass
07 (Average)	2464.100	32.036	55.872	87.907			Pass
07 (Average)	2483.500	32.182	17.258	49.440	74.00	54.00	Pass



Horizontal (Peak)

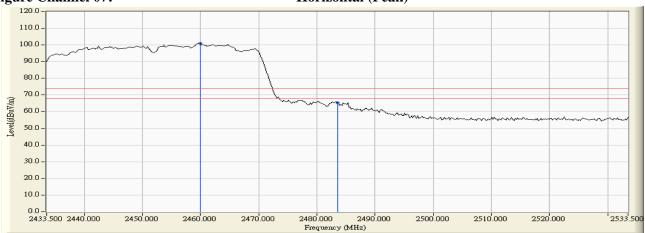
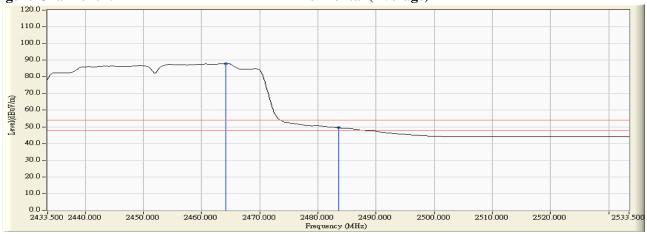


Figure Channel 07:

Horizontal (Average)



- 1. All readings 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 worst emission level.
- 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.



Test Mode : Mode 5: Transmit - 802.11n-40BW_30Mbps(2.4G Band)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
07 (Peak)	2459.700	31.275	69.038	100.313			Pass
07 (Peak)	2483.500	31.435	34.523	65.958	74.00	54.00	Pass
07 (Average)	2464.300	31.306	55.750	87.056			Pass
07 (Average)	2483.500	31.435	16.921	48.356	74.00	54.00	Pass

Figure Channel 07:

Vertical (Peak)

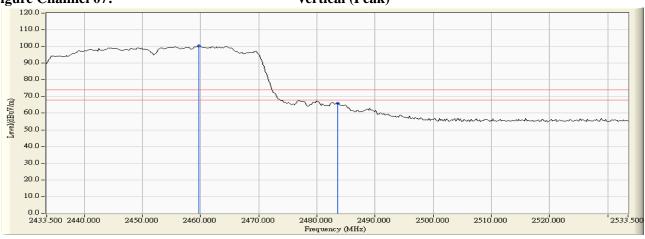
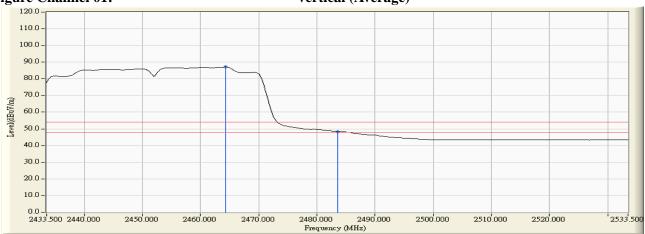


Figure Channel 01:

Vertical (Average)

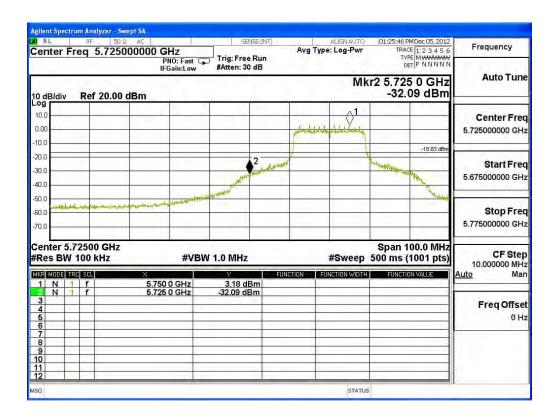


- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Test Mode : Mode 3: Transmit - 802.11a 6Mbps

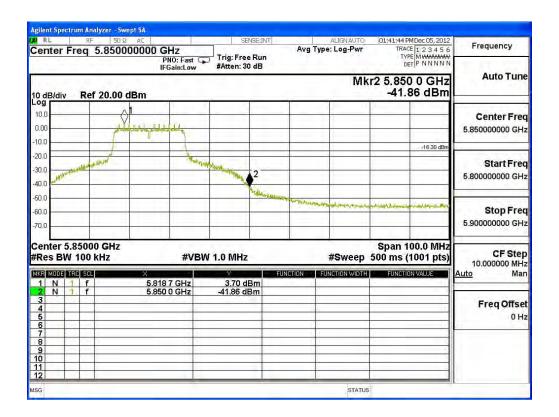
Test Frequency	Measurement Level	Limit	Result
(MHz)	$\Delta (\mathrm{dB})$	Δ (dB)	
5745	35.27	>20	PASS





Test Mode : Mode 3: Transmit - 802.11a 6Mbps

Test Frequency	Measurement Level	Limit	Result
(MHz)	Δ (dB)	Δ (dB)	
5825	45.56	>20	PASS

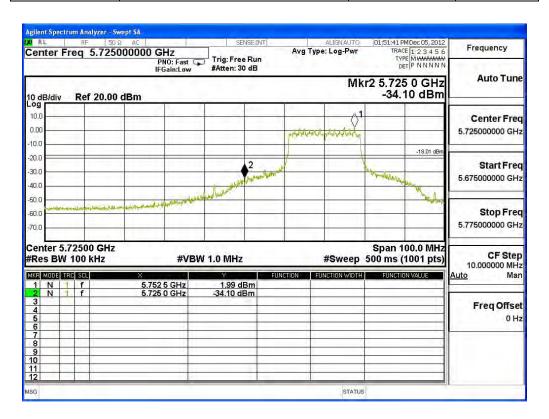




Test Mode : Mode 6: Transmit - 802.11n-20BW_14.4Mbps(5G Band)

Chain A

Test Frequency	Measurement Level	Limit	Result
(MHz)	Δ (dB)	Δ (dB)	
5745	36.09	>20	PASS





Test Mode : Mode 6: Transmit - 802.11n-20BW_14.4Mbps(5G Band)

Chain B

Test Frequency	Measurement Level	Limit	Result
(MHz)	Δ (dB)	Δ (dB)	
5745	40.79	>20	PASS

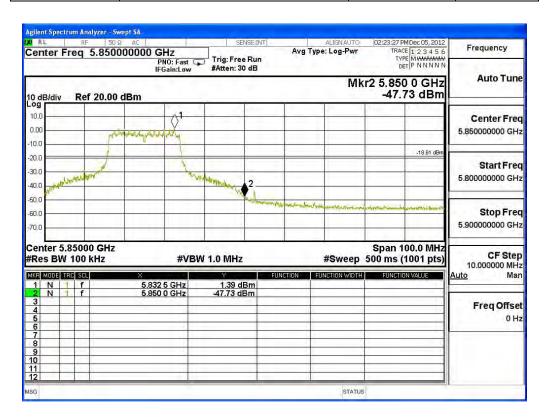




Test Mode : Mode 6: Transmit - 802.11n-20BW_14.4Mbps(5G Band)

Chain A

Test Frequency	Measurement Level	Limit	Result
(MHz)	$\Delta \left(\mathrm{dB}\right)$	Δ (dB)	
5825	49.12	>20	PASS

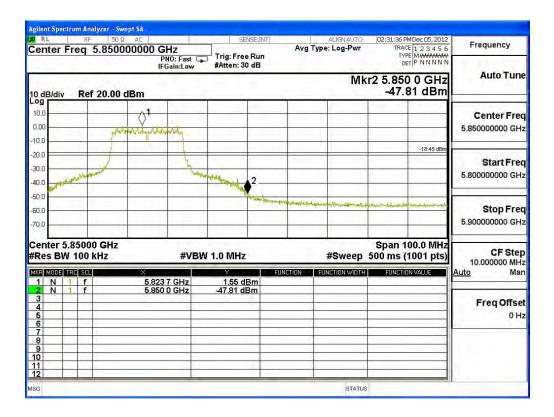




Test Mode : Mode 6: Transmit - 802.11n-20BW_14.4Mbps(5G Band)

Chain B

Test Frequency	Measurement Level	Limit	Result
(MHz)	Δ (dB)	Δ (dB)	
5825	49.36	>20	PASS

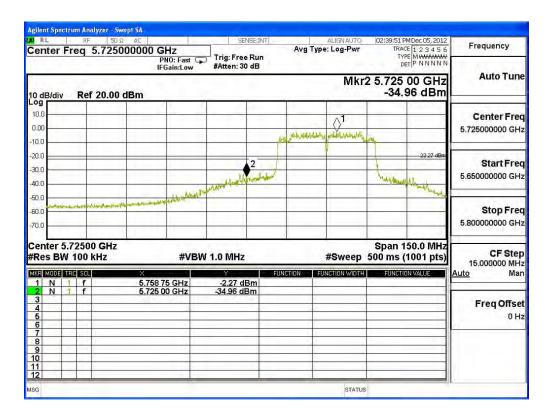




Test Mode : Mode 7: Transmit - 802.11n-40BW_30Mbps(5G Band)

Chain A

Test Frequency	Measurement Level	Limit	Result
(MHz)	Δ (dB)	Δ (dB)	
5755	32.69	>20	PASS

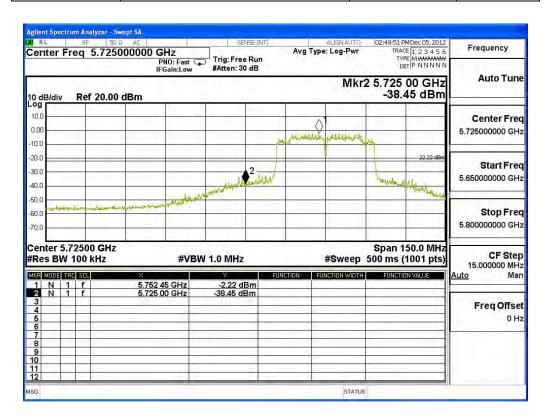




Test Mode : Mode 7: Transmit - 802.11n-40BW_30Mbps(5G Band)

Chain B

Test Frequency	Measurement Level	Limit	Result
(MHz)	Δ (dB)	Δ (dB)	
5755	36.23	>20	PASS

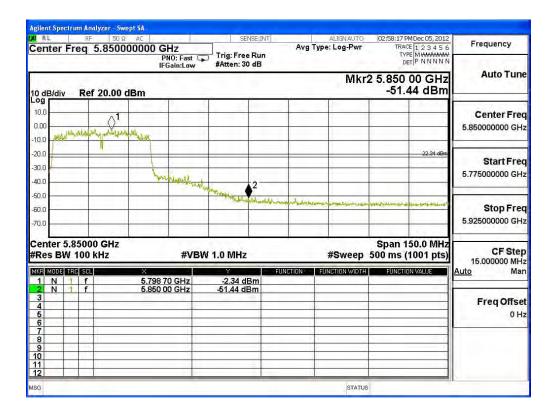




Test Mode : Mode 7: Transmit - 802.11n-40BW_30Mbps(5G Band)

Chain A

Test Frequency	Measurement Level	Limit	Result
(MHz)	Δ (dB)	Δ (dB)	
5795	49.1	>20	PASS

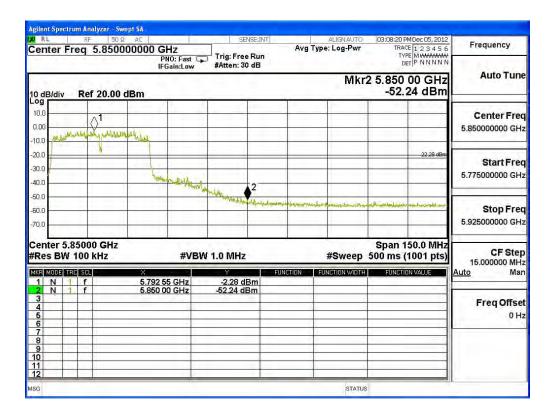




Test Mode : Mode 7: Transmit - 802.11n-40BW_30Mbps(5G Band)

Chain B

Test Frequency	Measurement Level	Limit	Result
(MHz)	Δ (dB)	Δ (dB)	
5795	49.96	>20	PASS





7. Occupied Bandwidth

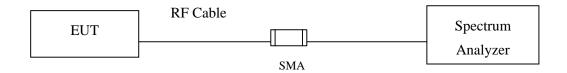
7.1. Test Equipment

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

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.

7.2. Test Setup



7.3. Limits

The minimum bandwidth shall be at least 500 kHz.

7.4. Test Procedure

The EUT was setup according to ANSI C63.4, 2003; tested according to DTS test procedure of ANSI C63.10: 2009 for compliance to FCC 47CFR 15.247 requirements.

Set RBW = 1-5% of the emission bandwidth, VBW≥3*RBW

7.5. Uncertainty

± 150Hz



7.6. Test Result of Occupied Bandwidth

Product : TABLET PC

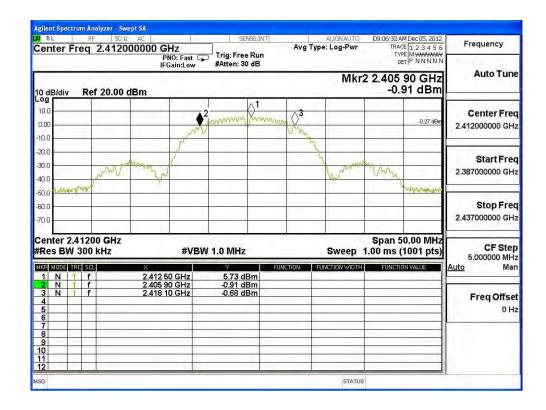
Test Item : Occupied Bandwidth Data

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit - 802.11b 1Mbps (2412MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
1	2412.00	12200	>500	Pass

Figure Channel 1:





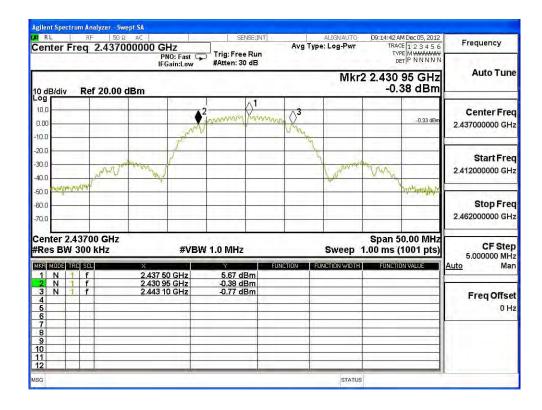
Test Item : Occupied Bandwidth Data

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit - 802.11b 1Mbps (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
6	2437.00	12150	>500	Pass

Figure Channel 6:





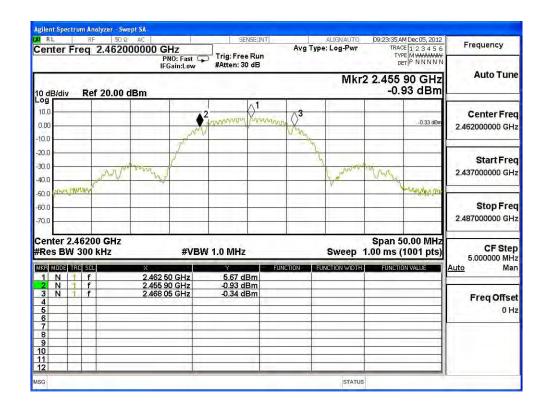
Test Item : Occupied Bandwidth Data

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit - 802.11b 1Mbps (2462MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
11	2462.00	12150	>500	Pass

Figure Channel 11:





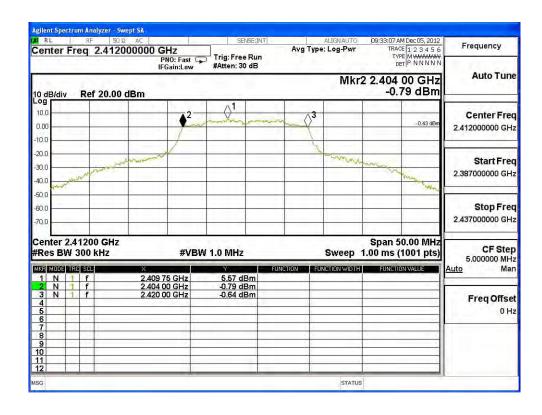
Test Item : Occupied Bandwidth Data

Test Site : No.3 OATS

Test Mode : Mode 2: Transmit - 802.11g 6Mbps (2412MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
1	2412.00	16000	>500	Pass

Figure Channel 1:





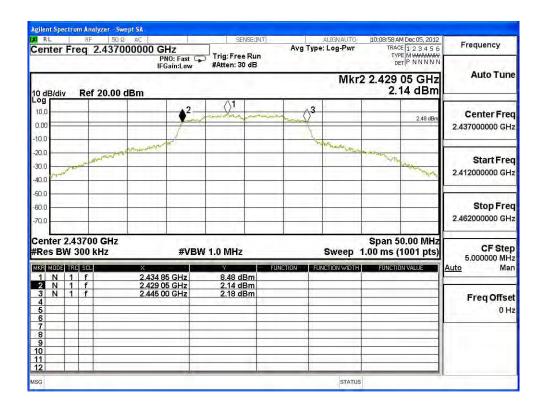
Test Item : Occupied Bandwidth Data

Test Site : No.3 OATS

Test Mode : Mode 2: Transmit - 802.11g 6Mbps (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
6	2437.00	15950	>500	Pass

Figure Channel 6:





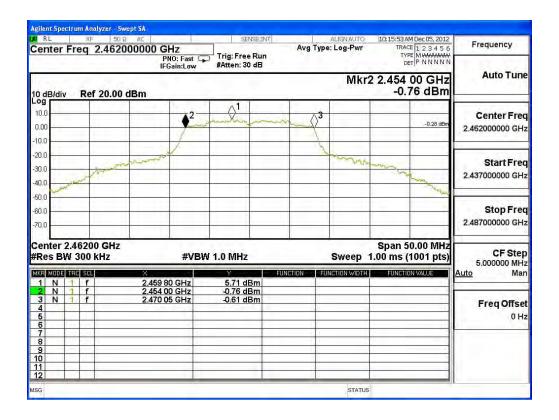
Test Item : Occupied Bandwidth Data

Test Site : No.3 OATS

Test Mode : Mode 2: Transmit - 802.11g 6Mbps (2462MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
11	2462.00	16050	>500	Pass

Figure Channel 11:





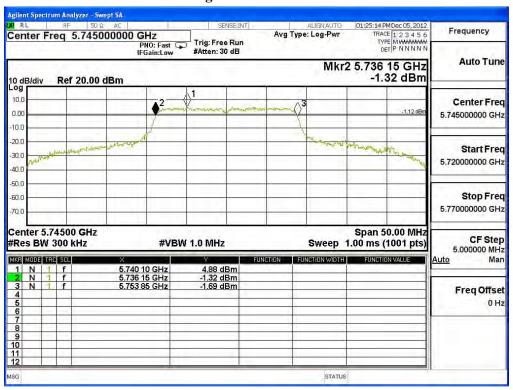
Test Item : Occupied Bandwidth Data

Test Site : No.3 OATS

Test Mode : Mode 3: Transmit - 802.11a 6Mbps (5745MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
149	5745.00	17700	>500	Pass

Figure Channel 149:





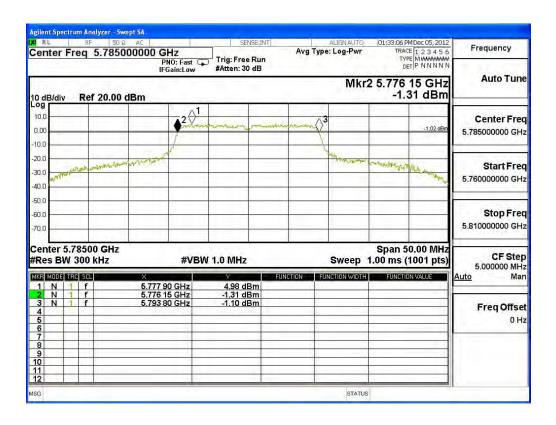
Test Item : Occupied Bandwidth Data

Test Site : No.3 OATS

Test Mode : Mode 3: Transmit - 802.11a 6Mbps (5785MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
157	5785.00	17650	>500	Pass

Figure Channel 157:





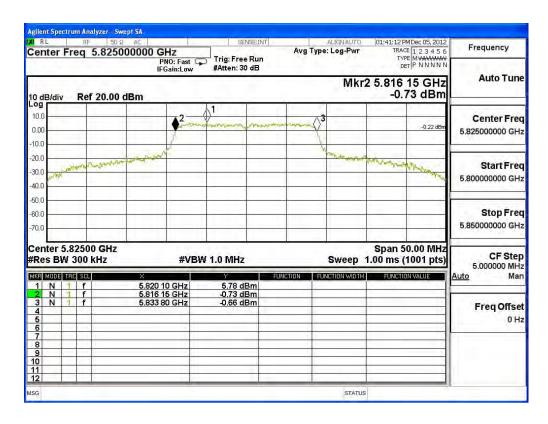
Test Item : Occupied Bandwidth Data

Test Site : No.3 OATS

Test Mode : Mode 3: Transmit - 802.11a 6Mbps (5825MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
165	5825.00	17650	>500	Pass

Figure Channel 165:





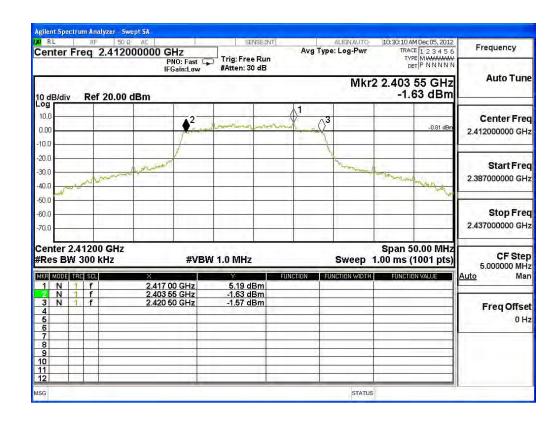
Test Item : Occupied Bandwidth Data

Test Site : No.3 OATS

Test Mode : Mode 4: Transmit - 802.11n-20BW_14.4Mbps(2.4G Band) (2412MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
1	2412.00	16950	>500	Pass

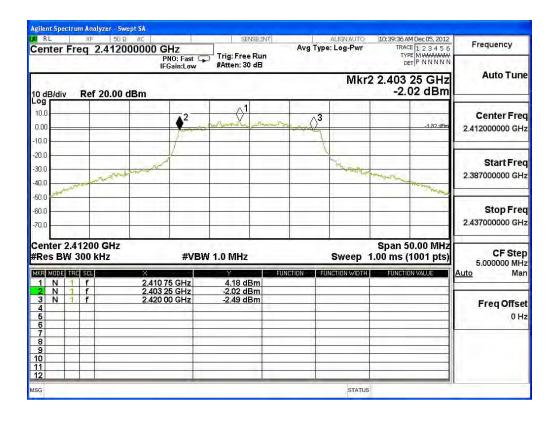
Figure Channel 1: (Chain A)





Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
1	2412.00	16750	>500	Pass

Figure Channel 1: (Chain B)





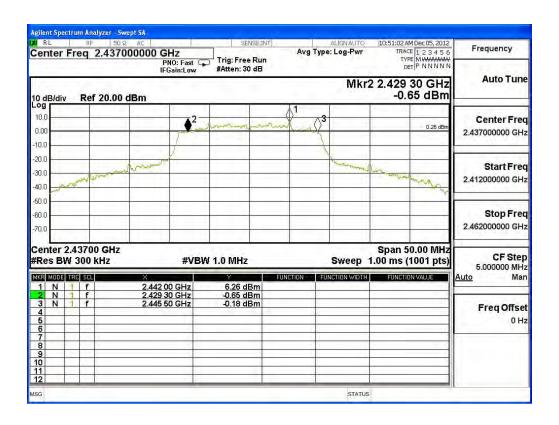
Test Item : Occupied Bandwidth Data

Test Site : No.3 OATS

Test Mode : Mode 4: Transmit - 802.11n-20BW_14.4Mbps(2.4G Band) (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
6	2437.00	16200	>500	Pass

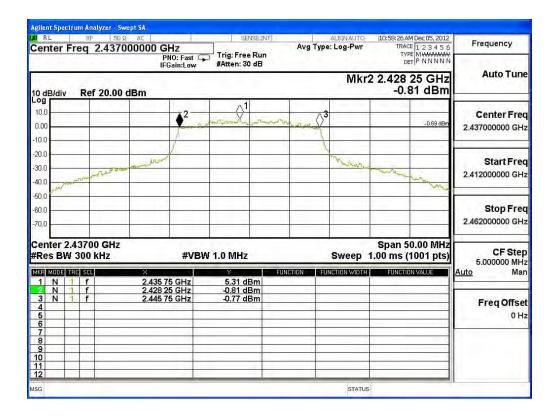
Figure Channel 6: (Chain A)





Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
6	2437.00	17500	>500	Pass

Figure Channel 6: (Chain B)





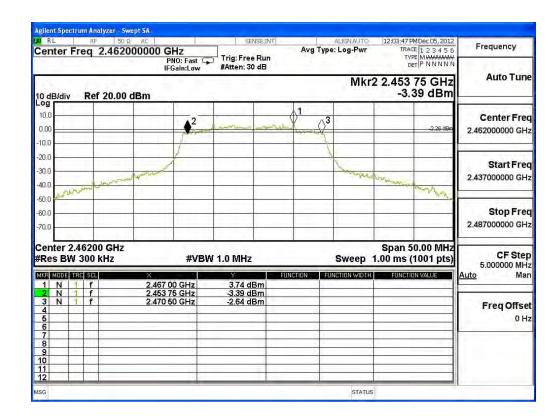
Test Item : Occupied Bandwidth Data

Test Site : No.3 OATS

Test Mode : Mode 4: Transmit - 802.11n-20BW_14.4Mbps(2.4G Band) (2462MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
11	2462.00	16750	>500	Pass

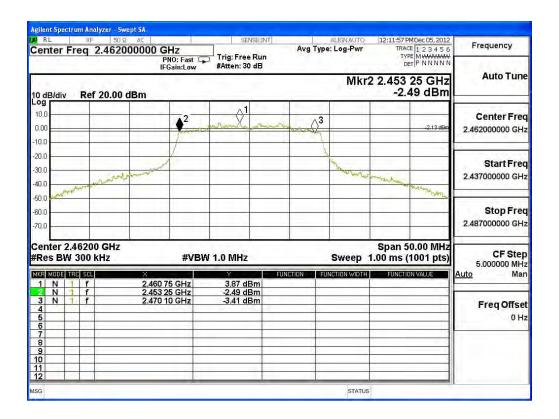
Figure Channel 11: (Chain A)

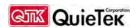




Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
11	2462.00	16850	>500	Pass

Figure Channel 11: (Chain B)





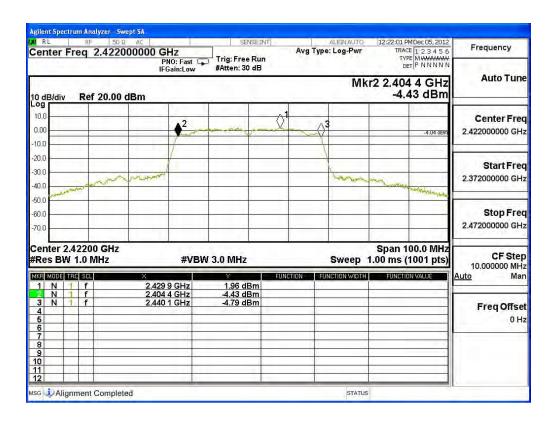
Test Item : Occupied Bandwidth Data

Test Site : No.3 OATS

Test Mode : Mode 5: Transmit - 802.11n-40BW_30Mbps(2.4G Band) (2422MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
3	2422.00	35700	>500	Pass

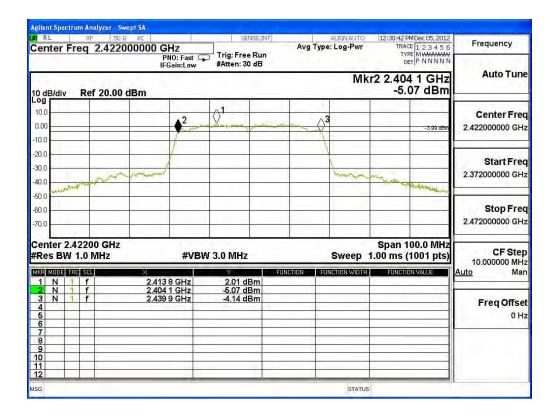
Figure Channel 3: (Chain A)





Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
3	2422.00	35800	>500	Pass

Figure Channel 3: (Chain B)





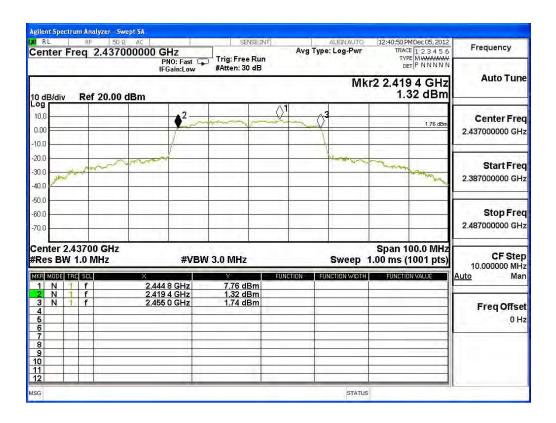
Test Item : Occupied Bandwidth Data

Test Site : No.3 OATS

Test Mode : Mode 5: Transmit - 802.11n-40BW_30Mbps(2.4G Band) (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
6	2437.00	35600	>500	Pass

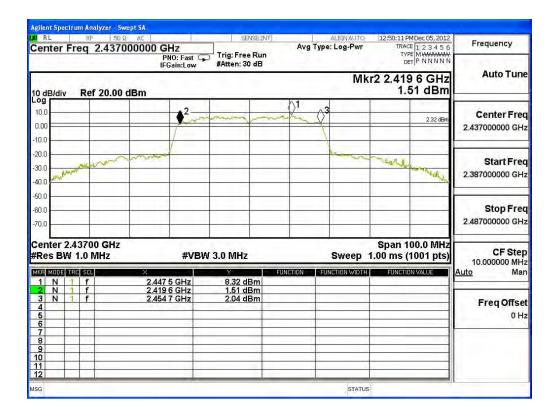
Figure Channel 6: (Chain A)





Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
6	2437.00	35100	>500	Pass

Figure Channel 6: (Chain B)





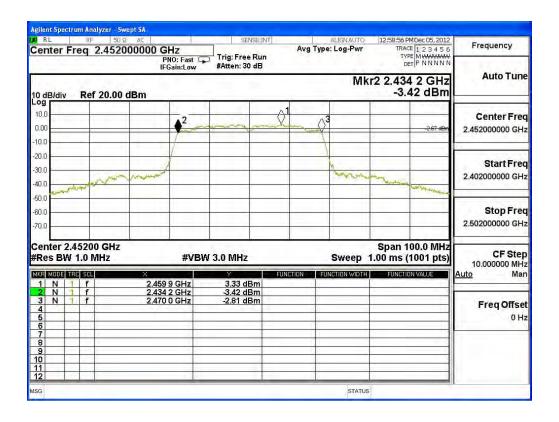
Test Item : Occupied Bandwidth Data

Test Site : No.3 OATS

Test Mode : Mode 5: Transmit - 802.11n-40BW_30Mbps(2.4G Band) (2452MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
9	2452.00	35800	>500	Pass

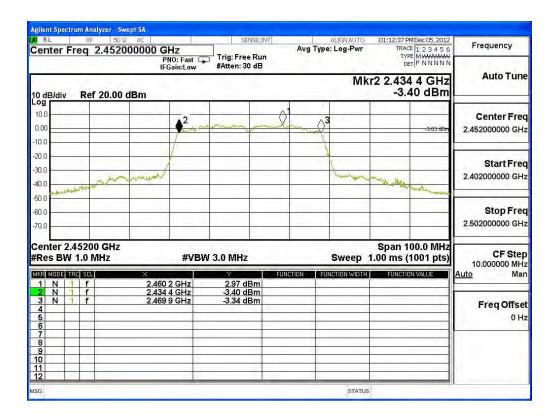
Figure Channel 9: (Chain A)





Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
9	2452.00	35500	>500	Pass

Figure Channel 9: (Chain B)





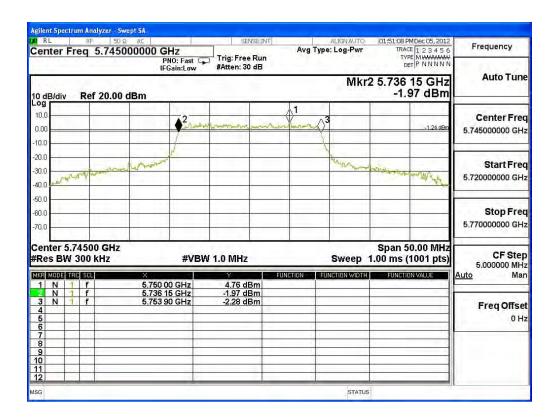
Test Item : Occupied Bandwidth Data

Test Site : No.3 OATS

Test Mode : Mode 6: Transmit - 802.11n-20BW_14.4Mbps(5G Band) (5745MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
149	5745.00	17750	>500	Pass

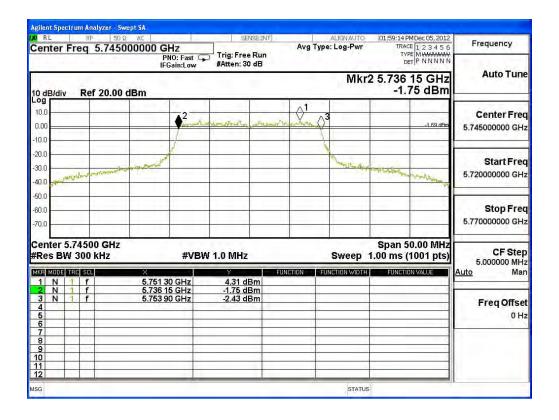
Figure Channel 149: (Chain A)





Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
149	5745.00	17750	>500	Pass

Figure Channel 149: (Chain B)





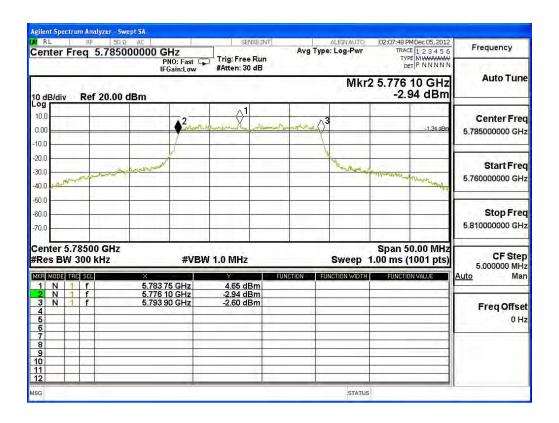
Test Item : Occupied Bandwidth Data

Test Site : No.3 OATS

Test Mode : Mode 6: Transmit - 802.11n-20BW_14.4Mbps(5G Band) (5785MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
157	5785.00	17800	>500	Pass

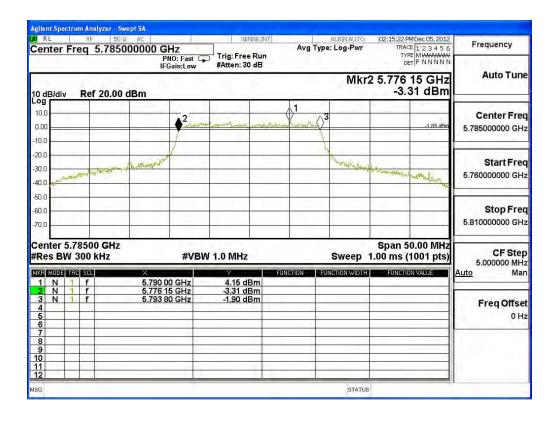
Figure Channel 157: (Chain A)





Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
157	5785.00	17650	>500	Pass

Figure Channel 157: (Chain B)





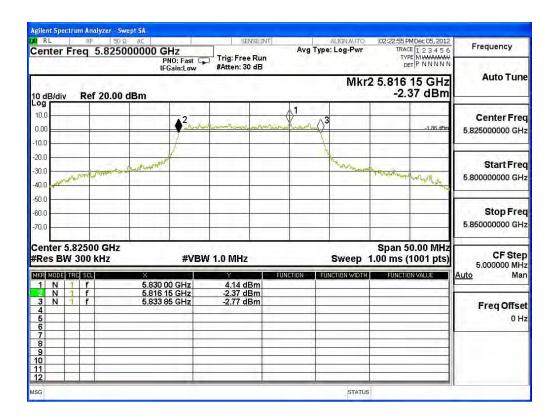
Test Item : Occupied Bandwidth Data

Test Site : No.3 OATS

Test Mode : Mode 6: Transmit - 802.11n-20BW_14.4Mbps(5G Band) (5825MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
165	5825.00	17700	>500	Pass

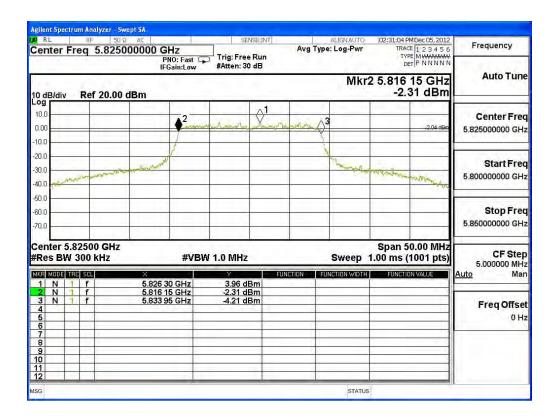
Figure Channel 165: (Chain A)





Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
165	5825.00	17800	>500	Pass

Figure Channel 165: (Chain B)





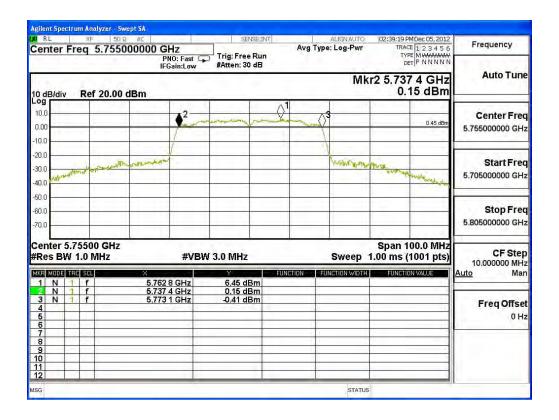
Test Item : Occupied Bandwidth Data

Test Site : No.3 OATS

Test Mode : Mode 7: Transmit - 802.11n-40BW_30Mbps(5G Band) (5755MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
151	5755.00	35700	>500	Pass

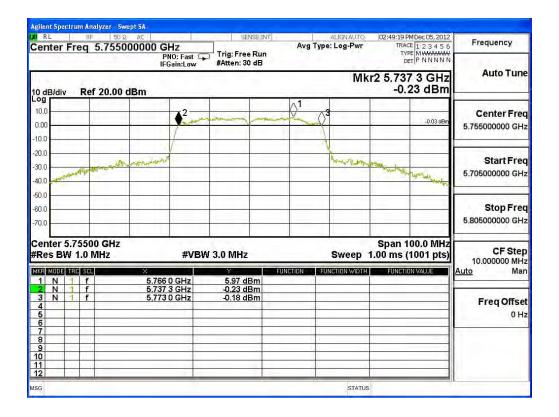
Figure Channel 151: (Chain A)





Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
151	5755.00	35700	>500	Pass

Figure Channel 151: (Chain B)





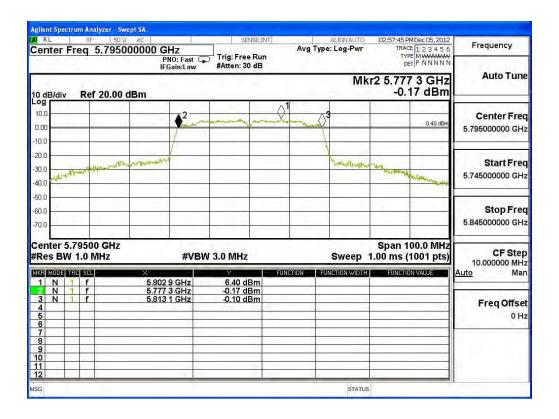
Test Item : Occupied Bandwidth Data

Test Site : No.3 OATS

Test Mode : Mode 7: Transmit - 802.11n-40BW_30Mbps(5G Band) (5795MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
159	5795.00	35800	>500	Pass

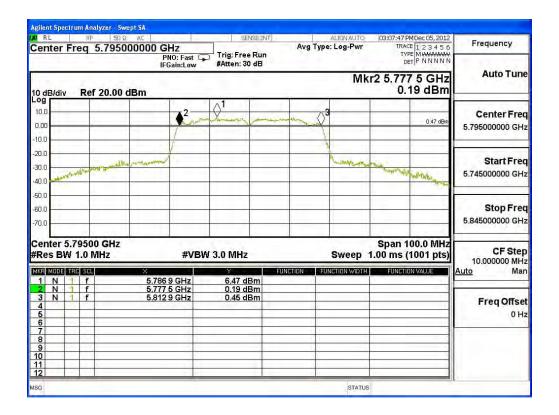
Figure Channel 159: (Chain A)





Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
159	5795.00	35400	>500	Pass

Figure Channel 159: (Chain B)





8. Power Density

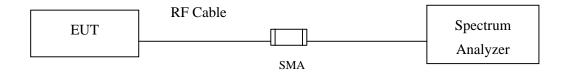
8.1. Test Equipment

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

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.

8.2. Test Setup



8.3. Limits

The transmitted power density averaged over any 1 second interval shall not be greater +8dBm in any 3kHz bandwidth.

8.4. Test Procedure

The EUT was setup according to ANSI C63.4, 2003; tested according to DTS test procedure of ANSI C63.10: 2009 for compliance to FCC 47CFR 15.247 requirements.

Set RBW= 100 kHz, VBW\geg300KHz, SPAN to 5-30 \% greater than the EBW,

Scale the observed power level to an equivalent value in 3 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where BWCF = $10\log(3 \text{ kHz}/100 \text{ kHz} = -15.2 \text{ dB})$.

8.5. Uncertainty

± 1.27 dB



8.6. Test Result of Power Density

Product : TABLET PC

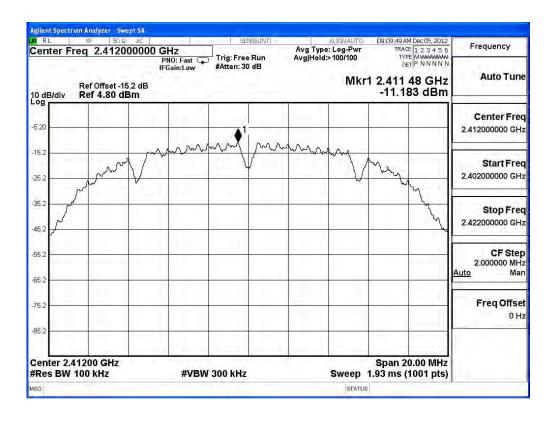
Test Item : Power Density Data

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit - 802.11b 1Mbps (2412MHz)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412.00	-11.183	< 8dBm	Pass

Figure Channel 1:





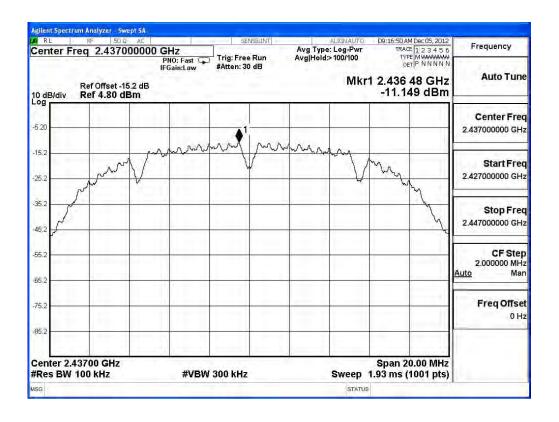
Test Item : Power Density Data

Test Site : No.3OATS

Test Mode : Mode 1: Transmit - 802.11b 1Mbps (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
6	2437.000	-11.149	< 8dBm	Pass

Figure Channel 6:





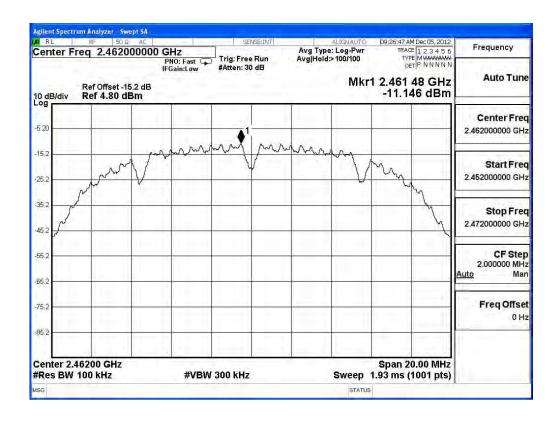
Test Item : Power Density Data

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit - 802.11b 1Mbps (2462MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
11	2462.00	-11.146	< 8dBm	Pass

Figure Channel 11:





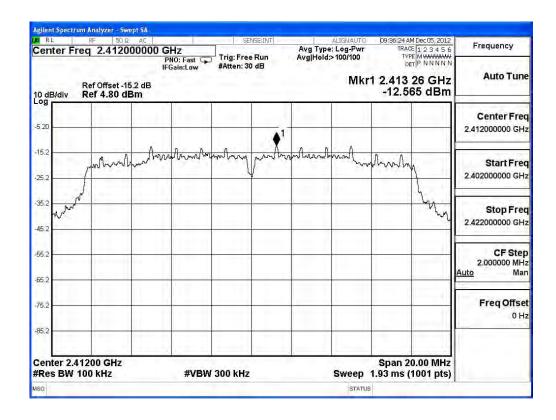
Test Item : Power Density Data

Test Site : No.3 OATS

Test Mode : Mode 2: Transmit - 802.11g 6Mbps (2412MHz)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412.00	-12.565	< 8dBm	Pass

Figure Channel 1:





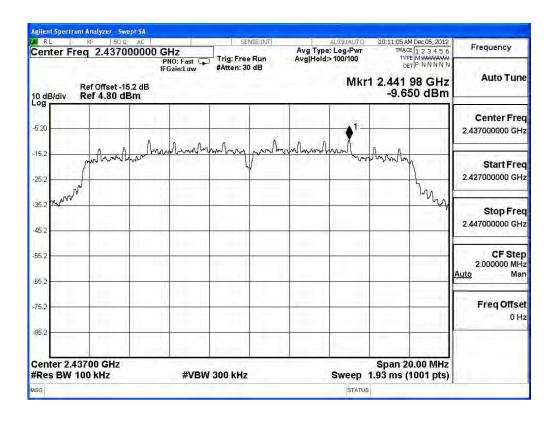
Test Item : Power Density Data

Test Site : No.3OATS

Test Mode : Mode 2: Transmit - 802.11g 6Mbps (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
6	2437.000	-9.650	< 8dBm	Pass

Figure Channel 6:





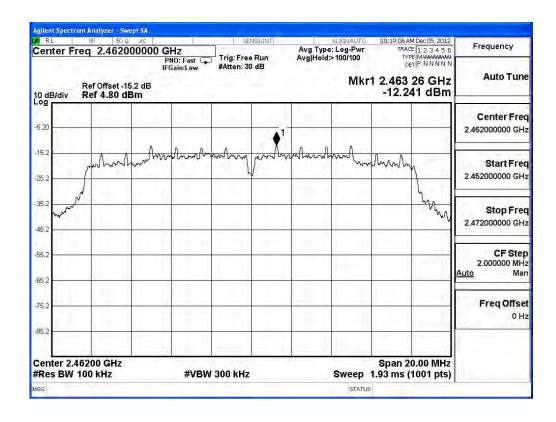
Test Item : Power Density Data

Test Site : No.3 OATS

Test Mode : Mode 2: Transmit - 802.11g 6Mbps (2462MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
11	2462.00	-12.241	< 8dBm	Pass

Figure Channel 11:





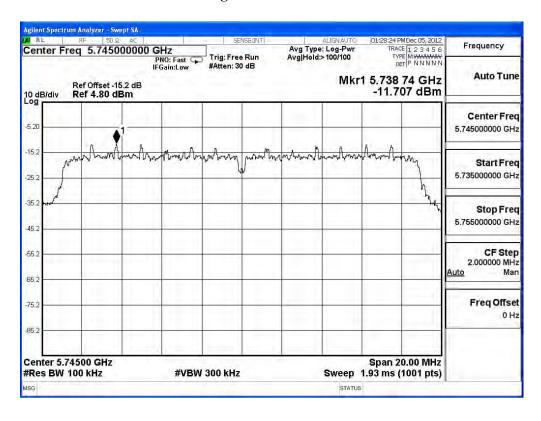
Test Item : Power Density Data

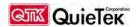
Test Site : No.3 OATS

Test Mode : Mode 3: Transmit - 802.11a 6Mbps (5745MHz)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
149	5745.000	-11.707	< 8dBm	Pass

Figure Channel 149:





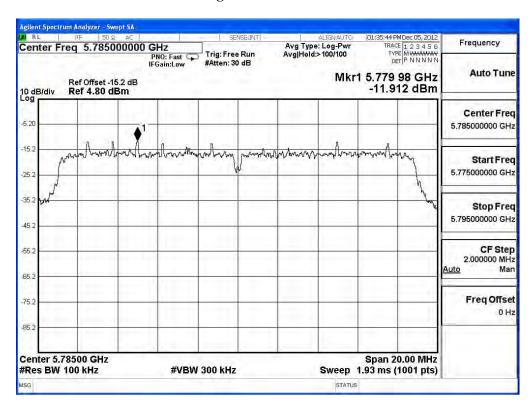
Test Item : Power Density Data

Test Site : No.3 OATS

Test Mode : Mode 3: Transmit - 802.11a 6Mbps (5785MHz)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
157	5785.000	-11.912	< 8dBm	Pass

Figure Channel 157:





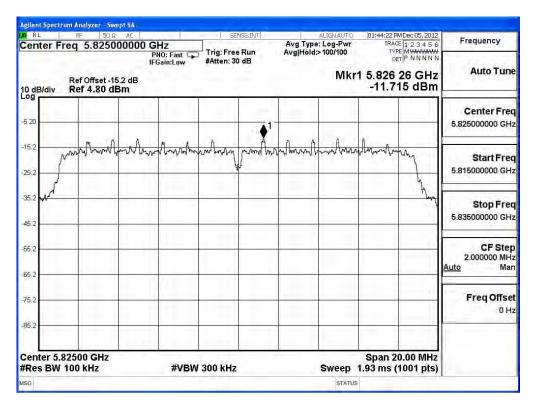
Test Item : Power Density Data

Test Site : No.3 OATS

Test Mode : Mode 3: Transmit - 802.11a 6Mbps (5825MHz)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
165	5825.000	-11.715	< 8dBm	Pass

Figure Channel 165:





Test Item : Power Density Data

Test Site : No.3 OATS

Test Mode : Mode 4: Transmit - 802.11n-20BW_14.4Mbps(2.4G Band) (2412MHz)

Channel No.	Frequency (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain A+B Power (dBm)	Limit (dBm)	Result
1	2412.00	-13.892	-13.578	-10.722	< 8dBm	Pass

Note: Power Density Value (dBm) = 10*LOG (Chain A (mW) + Chain B (mW))

Figure Channel 1: (Chain A)

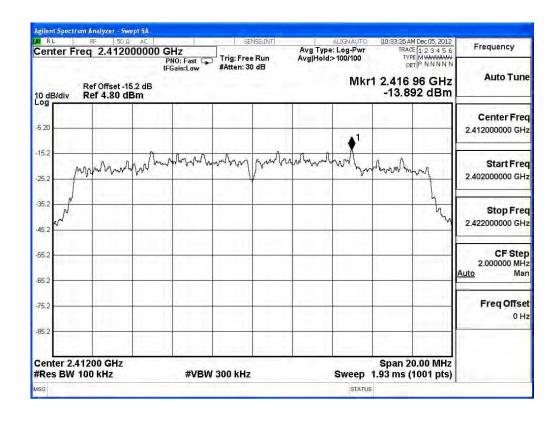
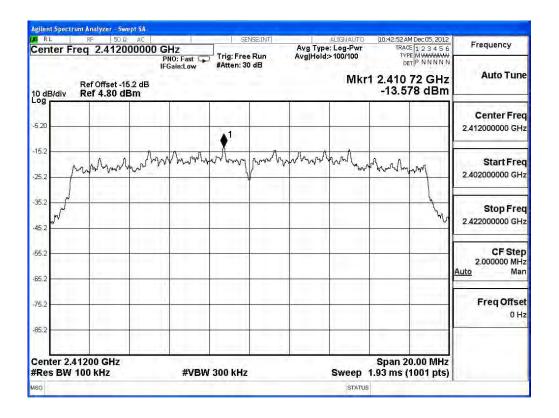




Figure Channel 1: (Chain B)





Test Item : Power Density Data

Test Site : No.3OATS

Test Mode : Mode 4: Transmit - 802.11n-20BW_14.4Mbps(2.4G Band) (2437MHz)

Channel No.	Frequency (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain A+B Power (dBm)	Limit (dBm)	Result
6	2437.00	-12.167	-12.391	-9.267	< 8dBm	Pass

Figure Channel 6: (Chain A)

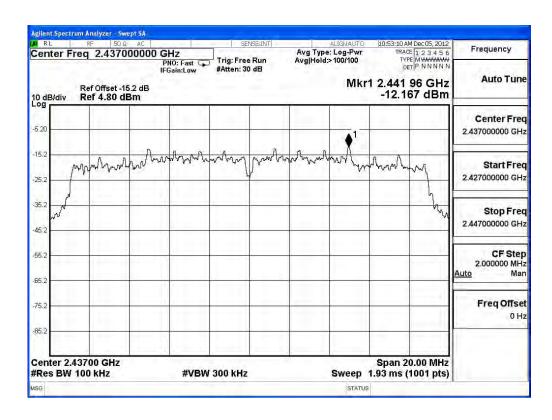
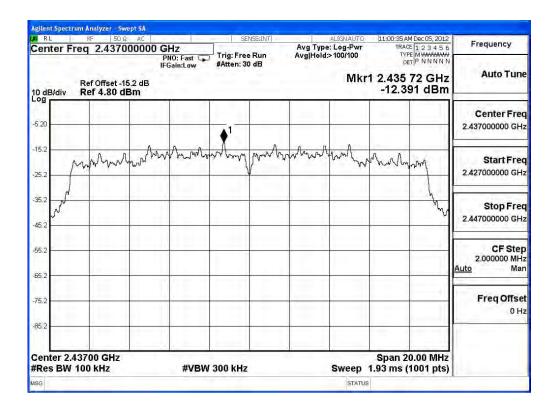




Figure Channel 6: (Chain B)





Test Item : Power Density Data

Test Site : No.3 OATS

Test Mode : Mode 4: Transmit - 802.11n-20BW_14.4Mbps(2.4G Band) (2462MHz)

Channel No.	Frequency (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain A+B Power (dBm)	Limit (dBm)	Result
11	2462.00	-14.481	-13.894	-11.167	< 8dBm	Pass

Figure Channel 11: (Chain A)

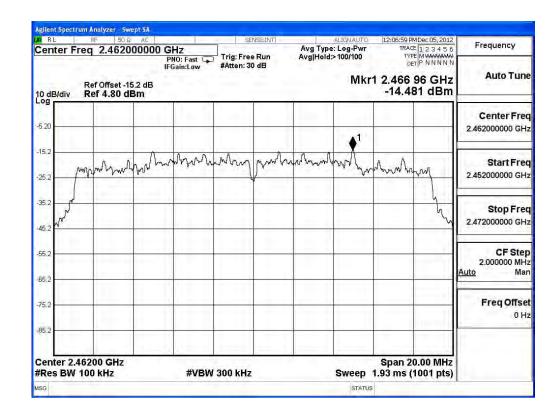
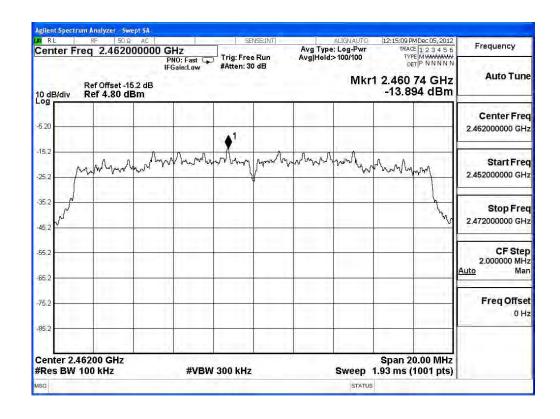




Figure Channel 11: (Chain B)





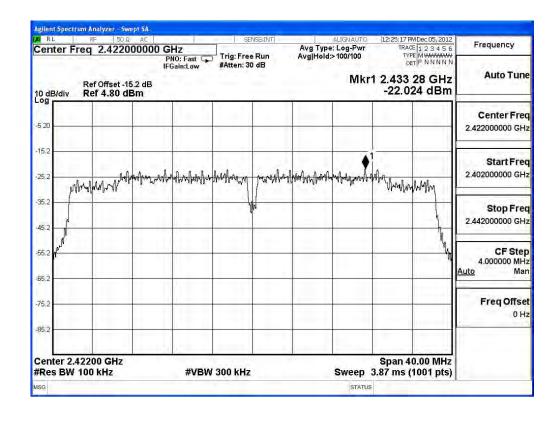
Test Item : Power Density Data

Test Site : No.3 OATS

Test Mode : Mode 5: Transmit - 802.11n-40BW_30Mbps(2.4G Band) (2422MHz)

Channel No.	Frequency (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain A+B Power (dBm)	Limit (dBm)	Result
3	2422.00	-22.024	-22.007	-19.005	< 8dBm	Pass

Figure Channel 3: (Chain A)



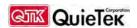
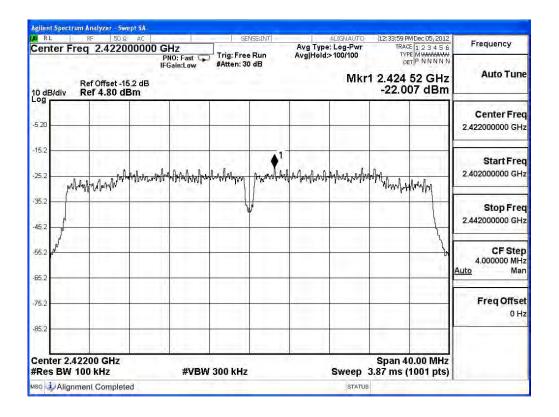


Figure Channel 3: (Chain B)





Test Item : Power Density Data

Test Site : No.3OATS

Test Mode : Mode 5: Transmit - 802.11n-40BW_30Mbps(2.4G Band) (2437MHz)

Channel No.	Frequency (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain A+B Power (dBm)	Limit (dBm)	Result
6	2437.00	-16.249	-16.305	-13.267	< 8dBm	Pass

Figure Channel 6: (Chain A)

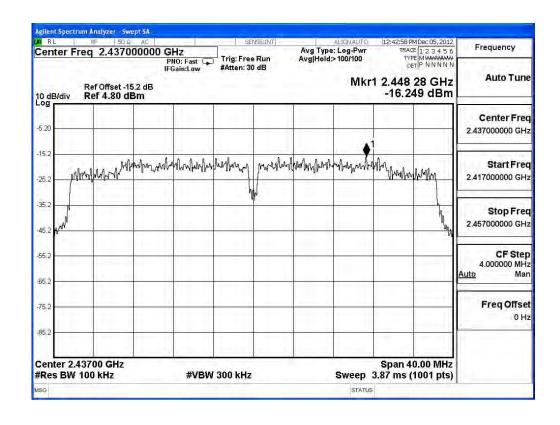
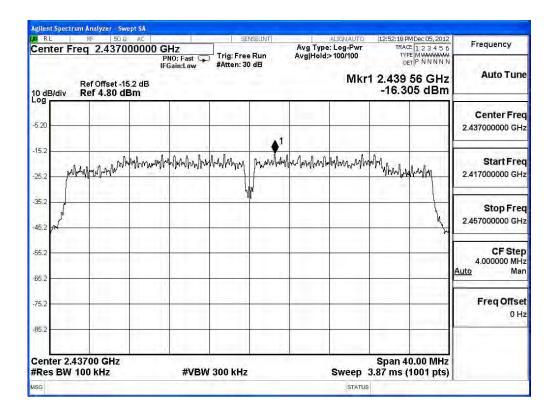




Figure Channel 6: (Chain B)





Test Item : Power Density Data

Test Site : No.3 OATS

Test Mode : Mode 5: Transmit - 802.11n-40BW_30Mbps(2.4G Band) (2452MHz)

Channel No.	Frequency (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain A+B Power (dBm)	Limit (dBm)	Result
9	2452.00	-21.094	-20.978	-18.025	< 8dBm	Pass

Figure Channel 9: (Chain A)

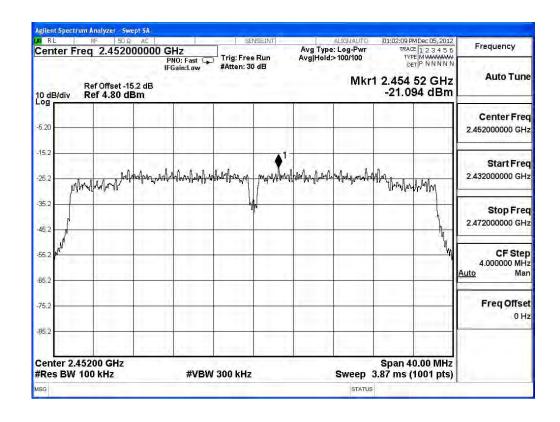
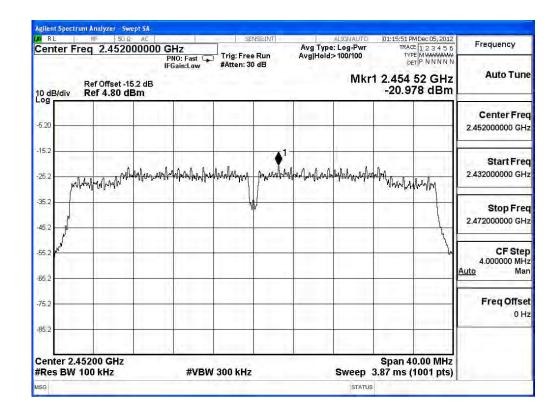




Figure Channel 9: (Chain B)



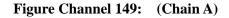


Test Item : Power Density Data

Test Site : No.3 OATS

Test Mode : Mode 6: Transmit - 802.11n-20BW_14.4Mbps(5G Band) (5745MHz)

Channel No.	Frequency (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain A+B Power (dBm)	Limit (dBm)	Result
149	5745.00	-13.362	-14.070	-10.691	< 8dBm	Pass



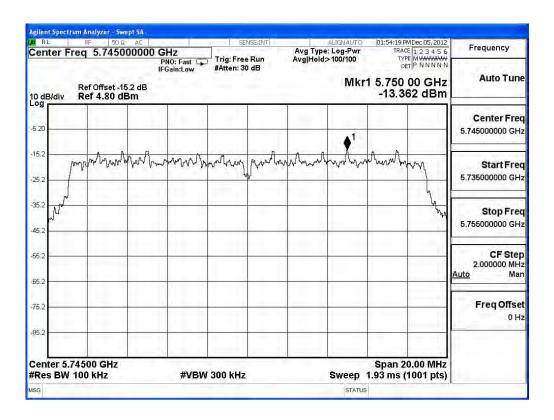
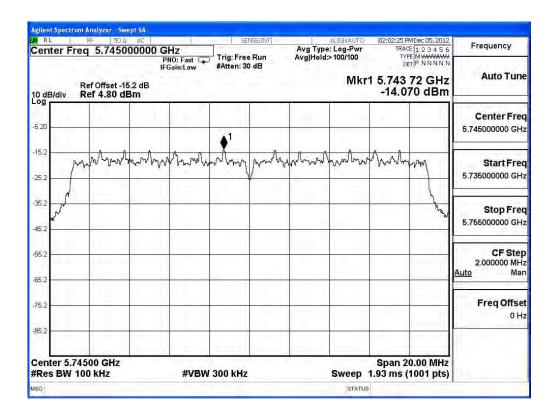




Figure Channel 149: (Chain B)





Test Item : Power Density Data

Test Site : No.3OATS

Test Mode : Mode 6: Transmit - 802.11n-20BW_14.4Mbps(5G Band) (5785MHz)

Channel No.	Frequency (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain A+B Power (dBm)	Limit (dBm)	Result
157	5785.00	-13.476	-13.527	-10.491	< 8dBm	Pass

Figure Channel 157: (Chain A)

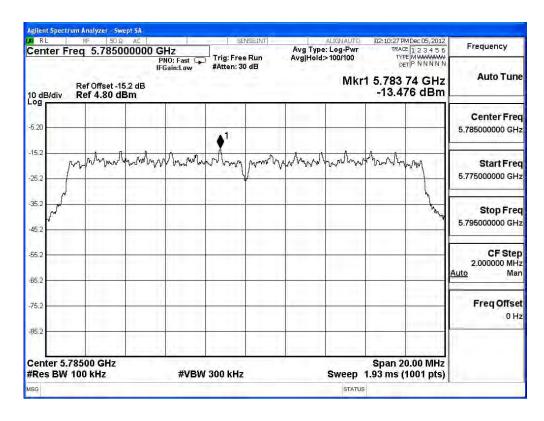
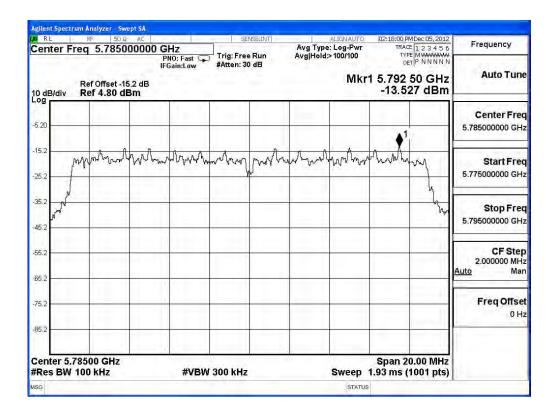




Figure Channel 157: (Chain B)





Test Item : Power Density Data

Test Site : No.3 OATS

Test Mode : Mode 6: Transmit - 802.11n-20BW_14.4Mbps(5G Band) (5825MHz)

Channel No.	Frequency (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain A+B Power (dBm)	Limit (dBm)	Result
165	5825.00	-13.750	-13.601	-10.665	< 8dBm	Pass

Figure Channel 165: (Chain A)

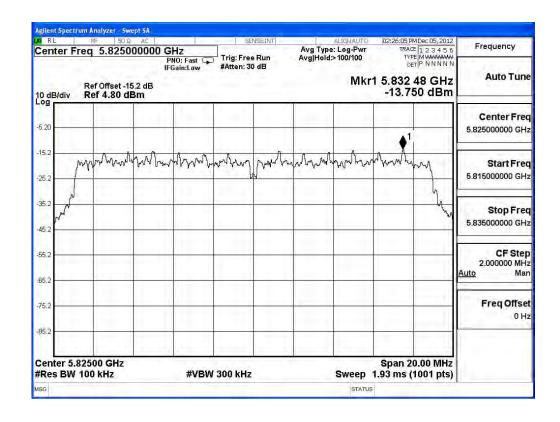
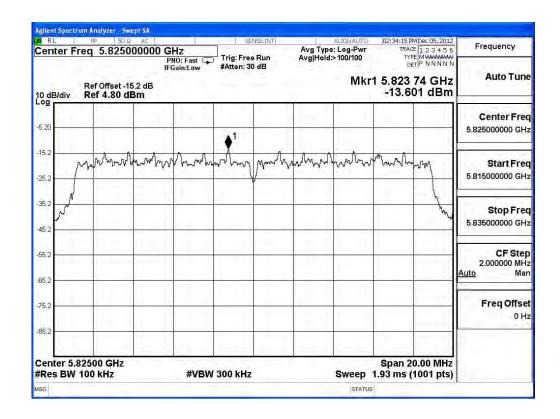




Figure Channel 165: (Chain B)



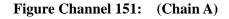


Test Item : Power Density Data

Test Site : No.3 OATS

Test Mode : Mode 7: Transmit - 802.11n-40BW_30Mbps(5G Band) (5755MHz)

Channel No.	Frequency (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain A+B Power (dBm)	Limit (dBm)	Result
151	5755.00	-17.382	-17.194	-14.277	< 8dBm	Pass



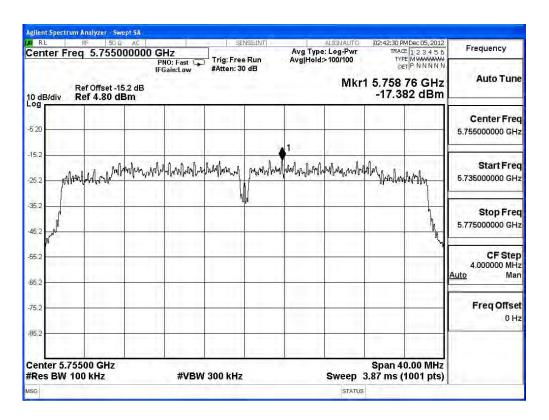
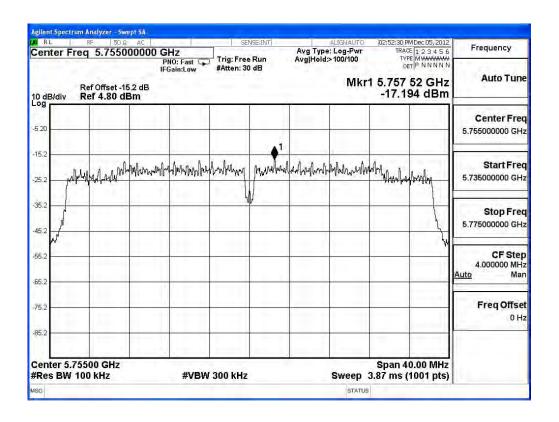




Figure Channel 151: (Chain B)





Test Item : Power Density Data

Test Site : No.3OATS

Test Mode : Mode 7: Transmit - 802.11n-40BW_30Mbps(5G Band) (5795MHz)

Channel No.	Frequency (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain A+B Power (dBm)	Limit (dBm)	Result
159	5795.00	-17.512	-17.533	-14.512	< 8dBm	Pass



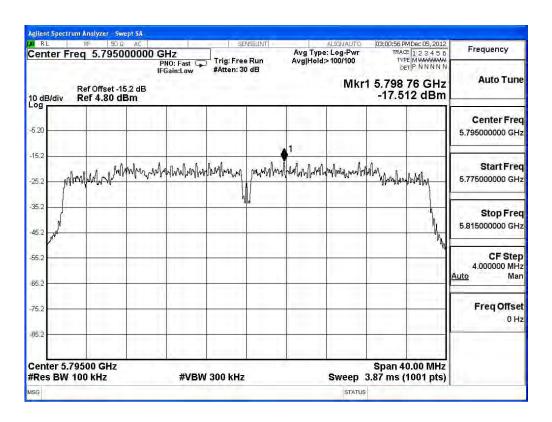
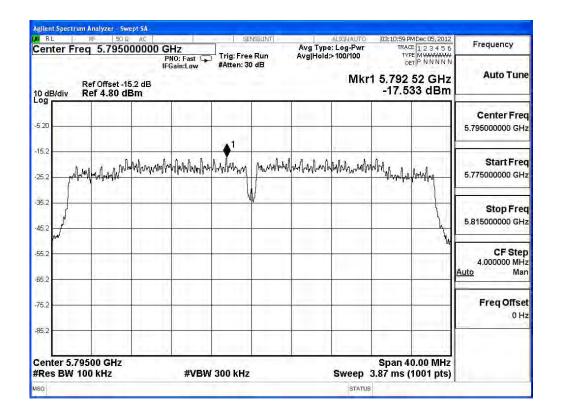




Figure Channel 159: (Chain B)





9. EMI Reduction Method During Compliance Testing

No modification was made during testing.