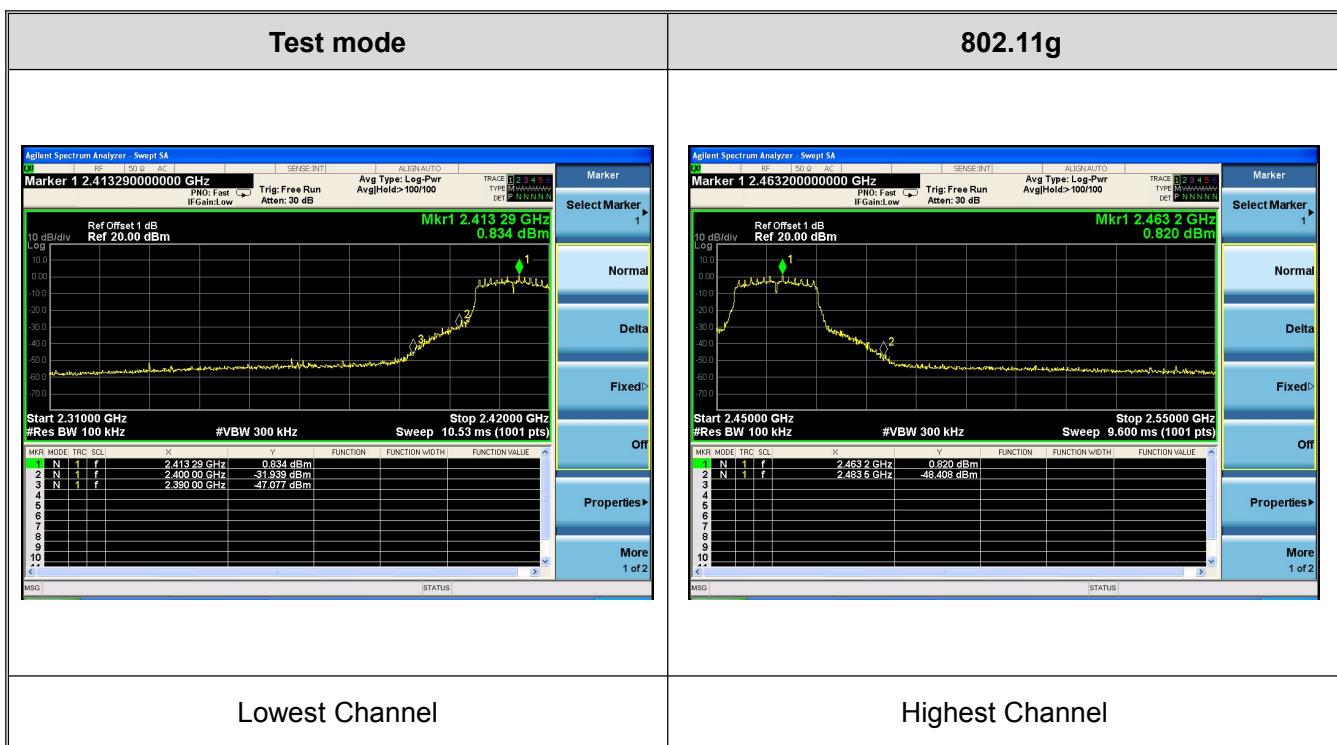
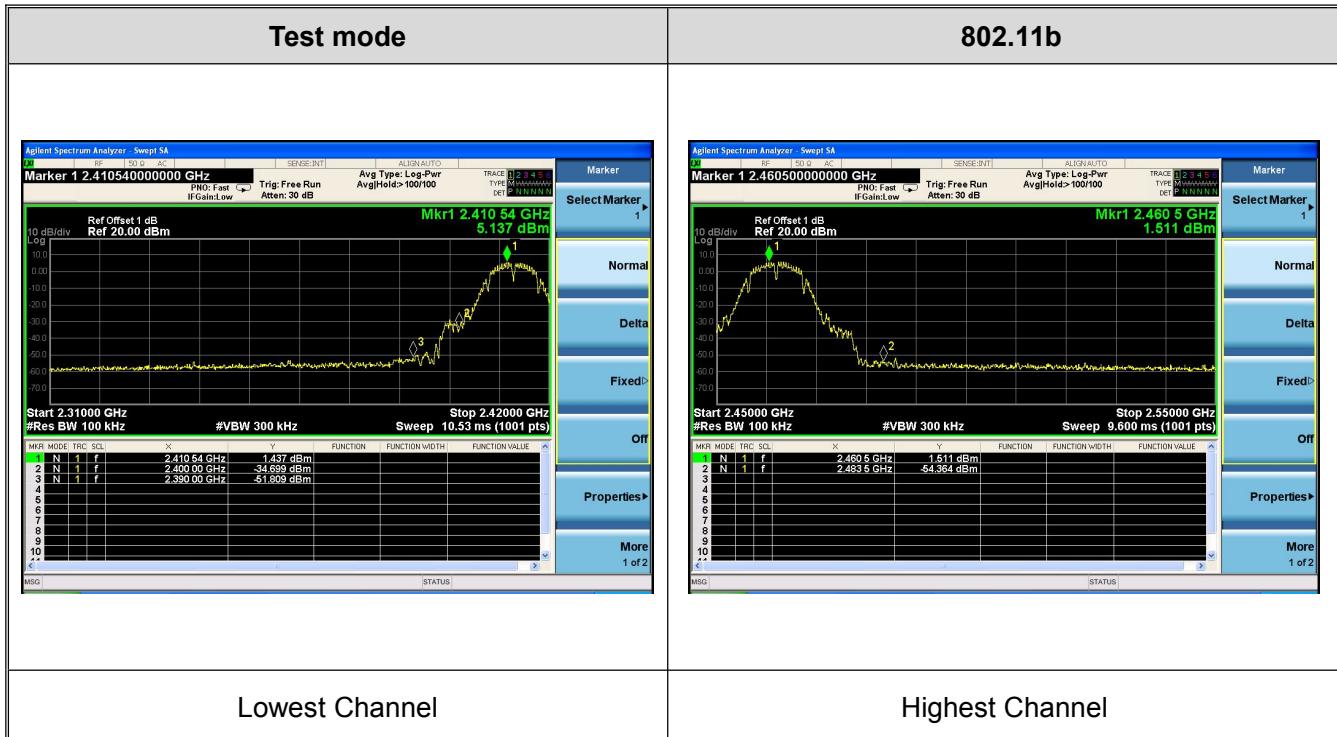




ATA Testing Technology Service Co., Ltd.

Report No.: ATA150720007F

Page: 31 of 57

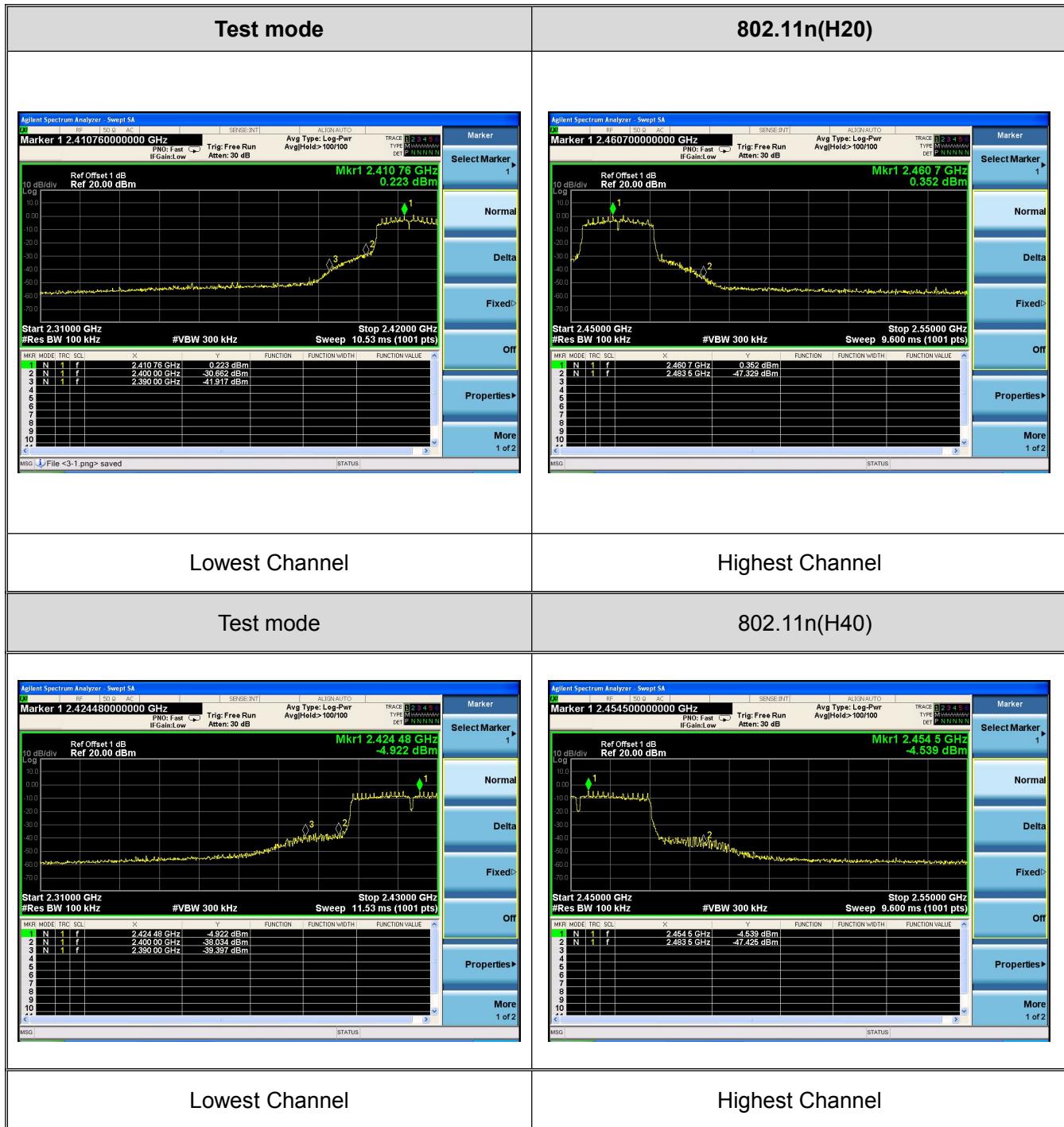




ATA Testing Technology Service Co., Ltd.

Report No.: ATA150720007F

Page: 32 of 57





9. Band Edge Requirement (Radiated Emission Method)

9.1. Test Standard and Limit

9.1.1 Test Standard

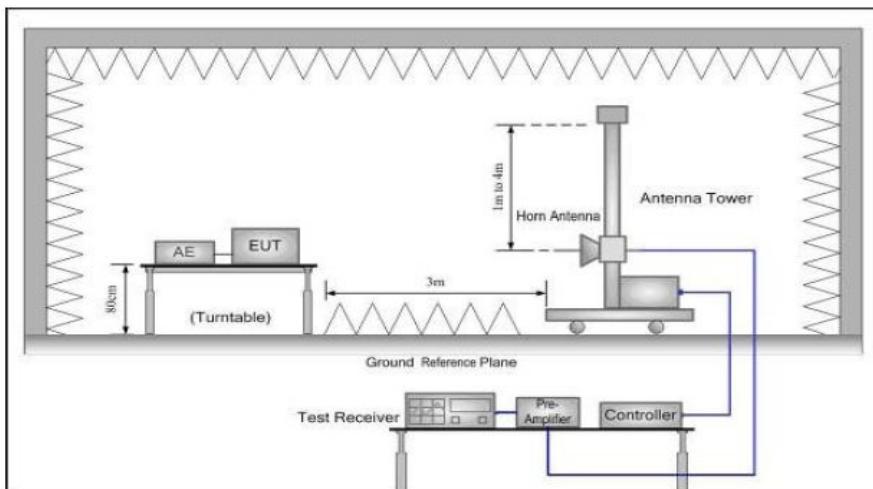
FCC Part15 C Section 15.209 and 15.205

9.1.2 Test Limit

Radiated Emission Test Limit

Frequency	Limit (dB μ V/m @3m)	Remark
Above 1GHz	54.00	Average value
	74.00	Peak value

9.2. Test Setup



9.3. Test Procedure

- 1) The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- 2) The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- 3) The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- 4) For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- 5) The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.



ATA Testing Technology Service Co., Ltd.

Report No.: ATA150720007F

Page: 34 of 57

- 6) If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

9.4. Test Data

Test mode: 802.11b					Test channel: Lowest				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.	Level
2390.00	20.78	27.58	5.67	0	54.03	74.00	-19.97	H	PEAK
2390.00	21.12	27.58	5.67	0	54.37	74.00	-19.63	V	PEAK
2390.00	8.14	27.58	5.67	0	41.39	54.00	-12.61	H	AVG.
2390.00	9.25	27.58	5.67	0	42.5	54.00	-11.50	V	AVG.
Test mode: 802.11b					Test channel: Highest				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.	Level
2483.50	21.82	27.52	5.7	0	55.04	74.00	-18.96	H	PEAK
2483.50	21.93	27.52	5.7	0	55.15	74.00	-18.85	V	PEAK
2483.50	9.23	27.52	5.7	0	42.45	54.00	-11.55	H	AVG.
2483.50	9.58	27.52	5.7	0	42.8	54.00	-11.20	V	AVG.



ATA Testing Technology Service Co., Ltd.

Report No.: ATA150720007F

Page: 35 of 57

Test mode: 802.11g					Test channel: Lowest				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.	Level
2390.00	21.49	27.58	5.67	0	54.74	74.00	-19.26	H	PEAK
2390.00	21.58	27.58	5.67	0	54.83	74.00	-19.17	V	PEAK
2390.00	8.77	27.58	5.67	0	42.02	54.00	-11.98	H	AVG.
2390.00	9.32	27.58	5.67	0	42.57	54.00	-11.43	V	AVG.

Test mode: 802.11g					Test channel: Highest				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.	Level
2483.50	21.23	27.52	5.7	0	54.45	74.00	-19.55	H	PEAK
2483.50	21.84	27.52	5.7	0	55.06	74.00	-18.94	V	PEAK
2483.50	8.78	27.52	5.7	0	42	54.00	-12.00	H	AVG.
2483.50	9.14	27.52	5.7	0	42.36	54.00	-11.64	V	AVG.

Test mode: 802.11n(H20)					Test channel: Lowest				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.	Level
2390.00	20.67	27.58	5.67	0	53.92	74.00	-20.08	H	PEAK
2390.00	21.21	27.58	5.67	0	54.46	74.00	-19.54	V	PEAK
2390.00	8.43	27.58	5.67	0	41.68	54.00	-12.32	H	AVG.
2390.00	9.22	27.58	5.67	0	42.47	54.00	-11.53	V	AVG.

Test mode: 802.11n(H20)					Test channel: Highest				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.	Level
2483.50	20.56	27.52	5.7	0	53.78	74.00	-20.22	H	PEAK
2483.50	21.49	27.52	5.7	0	54.71	74.00	-19.29	V	PEAK
2483.50	8.37	27.52	5.7	0	41.59	54.00	-12.41	H	AVG.
2483.50	9.15	27.52	5.7	0	42.37	54.00	-11.63	V	AVG.



ATA Testing Technology Service Co., Ltd.

Report No.: ATA150720007F

Page: 36 of 57

Test mode: 802.11n(H40)					Test channel: Lowest				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.	Level
2390.00	20.83	27.58	5.67	0	54.08	74.00	-19.92	H	PEAK
2390.00	21.35	27.58	5.67	0	54.6	74.00	-19.40	V	PEAK
2390.00	8.46	27.58	5.67	0	41.71	54.00	-12.29	H	AVG.
2390.00	9.11	27.58	5.67	0	42.36	54.00	-11.64	V	AVG.
Test mode: 802.11n(H20)					Test channel: Highest				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.	Level
2483.50	20.67	27.52	5.7	0	53.89	74.00	-20.11	H	PEAK
2483.50	21.53	27.52	5.7	0	54.75	74.00	-19.25	V	PEAK
2483.50	8.72	27.52	5.7	0	41.94	54.00	-12.06	H	AVG.
2483.50	9.16	27.52	5.7	0	42.38	54.00	-11.62	V	AVG.

Remark:

- Final Level = Read Level + Antenna Factor + Cable Loss
- The emission levels of other frequencies are very lower than the limit and not show in test report.



10. Spurious Emission (Radiated Emission Method)

10.1 Test Standard and Limit

10.1.1 Test Standard

FCC Part15 C Section 15.209 and 15.205

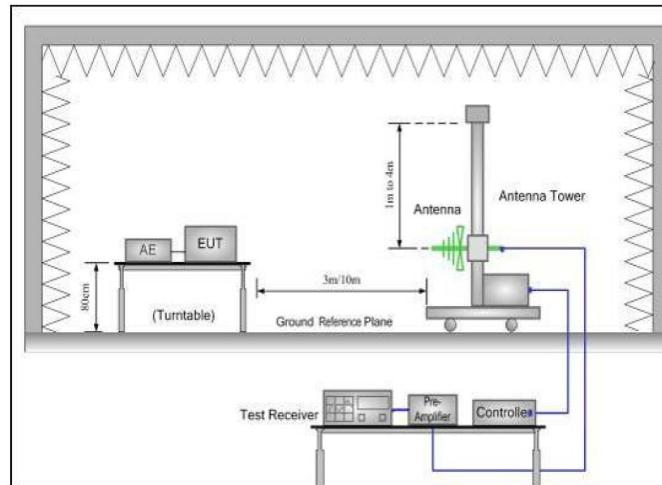
10.1.2 Test Limit

Frequency (MHz)	Limit (dB μ V/m)	
	At 3m Distance	
30MHz~88MHz	40	Quasi-peak
88MHz~216MHz	43.5	Quasi-peak
216MHz~960MHz	46	Quasi-peak
960MHz~1000MHz	54	Quasi-peak
Above 1000MHz	54	Average
	74	Peak

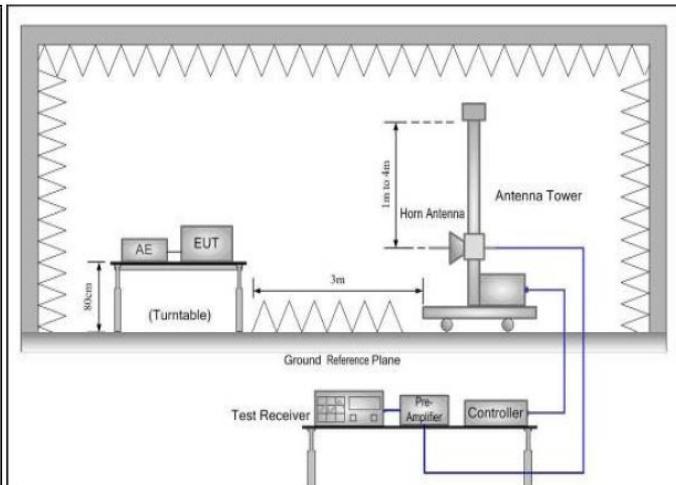
Remark: 1. The lower limit shall apply at the transition frequency.

10.2 Test Setup

Below 1GHz



Above 1GHz



10.3 Test Procedure

- 1) The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- 2) The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.



- 3) The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- 4) For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- 5) The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- 6) If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

10.4 Test Data

Remark:

1. Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the Y-axis is the worst case.
2. 9 kHz to 30MHz is noise floor, so only shows the data of above 30MHz in this report.



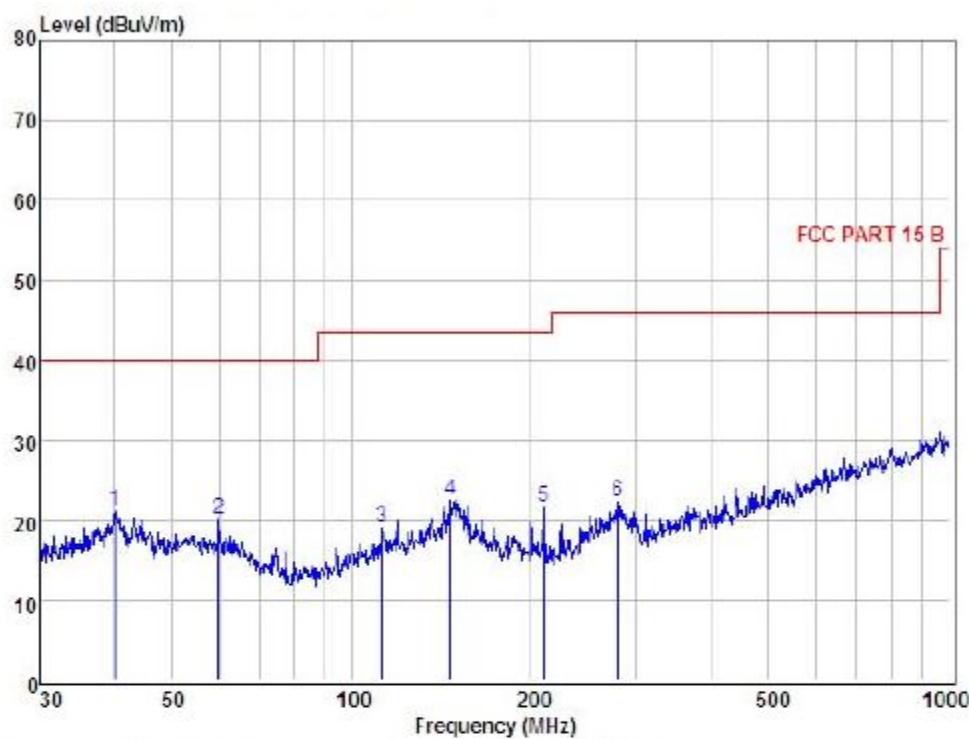
ATA Testing Technology Service Co., Ltd.

Report No.: ATA150720007F

Page: 39 of 57

Radiated Emission Test Data (Below 1GHz)

EUT: Tablet PC M/N: TU-W7982
Operating Condition: WIFI mode
Test Site: 3m chamber
Operator: Tom
Test Specification: AC 120V/60Hz
Polarization: Horizontal
Note Tem:25°C Hum:50%



Item	Condition : FCC PART 15 B			3m			POL: HORIZONTAL		
	Freq MHz	Read Level dBuV	Antenna Factor dB	Preamp Factor dB	Cable Loss dB	Level dBuV	Limit dBuV	Margin dBuV	Remark
1	40.13	38.83	14.07	31.89	0.17	21.18	40.00	-18.82	Peak
2	59.86	38.90	12.75	31.75	0.24	20.14	40.00	-19.86	Peak
3	112.52	38.46	11.50	31.34	0.47	19.09	43.50	-24.41	Peak
4	146.37	39.40	13.90	31.20	0.41	22.51	43.50	-20.99	Peak
5	210.05	41.97	10.07	30.91	0.62	21.75	43.50	-21.75	Peak
6	280.02	39.99	12.37	30.63	0.60	22.33	46.00	-23.67	Peak

Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss



ATA Testing Technology Service Co., Ltd.

Report No.: ATA150720007F

Page: 40 of 57

Radiated Emission Test Data (Below 1GHz)

EUT: Tablet PC M/N: TU-W7982

Operating Condition: WIFI mode

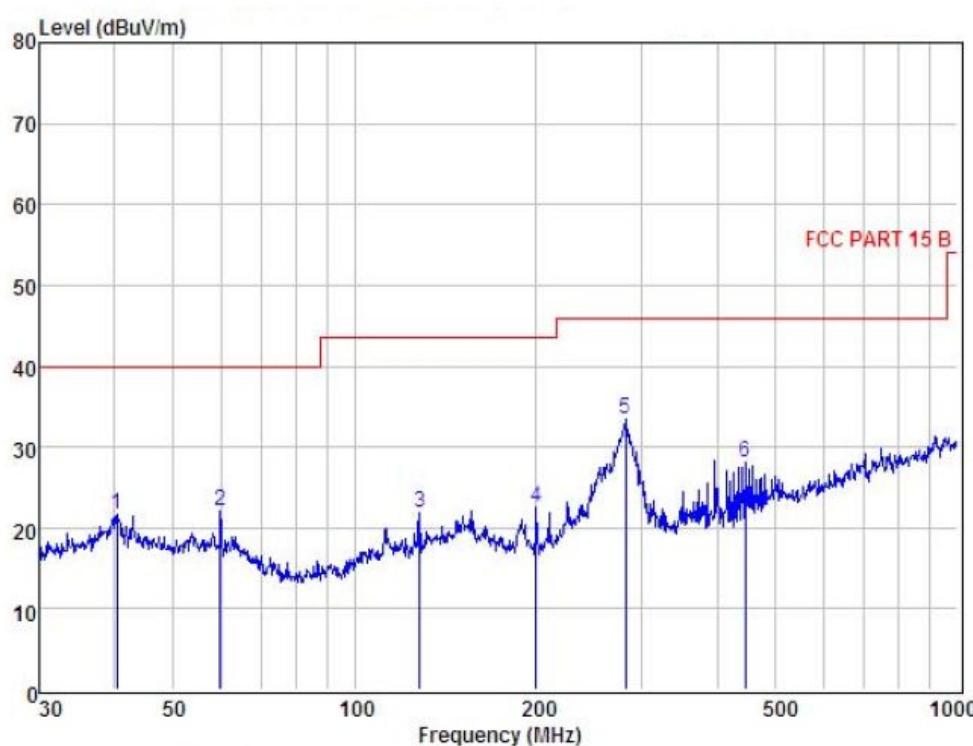
Test Site: 3m chamber

Operator: Tom

Test Specification: AC 120V/60Hz

Polarization: Vertical

Note Tem:25°C Hum:50%



Item	Condition	FCC PART 15 B		3m			POL: VERTICAL			Margin	Remark
		Freq	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Level	Limit			
		MHz	dBuV	dB	dB	dB	dBuV	dBuV			
1	40.42	39.28	14.07	31.89	0.18	21.64	40.00	-18.36	Peak		
2	59.86	40.80	12.75	31.75	0.24	22.04	40.00	-17.96	Peak		
3	128.11	40.05	12.68	31.27	0.40	21.86	43.50	-21.64	Peak		
4	199.99	43.20	9.90	30.94	0.43	22.59	43.50	-20.91	Peak		
5	281.01	51.04	12.41	30.62	0.53	33.36	46.00	-12.64	Peak		
6	444.85	41.60	15.87	30.07	0.76	28.16	46.00	-17.84	Peak		

Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss



ATA Testing Technology Service Co., Ltd.

Report No.: ATA150720007F

Page: 41 of 57

Radiated Emission Test Data (Above 1GHz)

Test mode: 802.11b					Test channel: Lowest				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.	Level
4824.00	43.24	31.53	8.9	40.24	43.43	74.00	-30.57	V	PEAK
7236.00	43.49	36.47	10.59	41.24	49.31	74.00	-24.69	V	PEAK
9648.00	*					74.00		V	PEAK
12060.00	*					74.00		V	PEAK
14472.00	*					74.00		V	PEAK
16884.00	*					74.00		V	PEAK
4824.00	43.5	31.54	8.92	40.22	43.74	74.00	-30.26	H	PEAK
7236.00	43.93	36.5	10.62	41.22	49.83	74.00	-24.17	H	PEAK
9648.00	*					74.00		H	PEAK
12060.00	*					74.00		H	PEAK
14472.00	*					74.00		H	PEAK
16884.00	*					74.00		H	PEAK
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.	Level
4824.00	31.7	31.54	8.92	40.22	31.94	54.00	-22.06	V	AVG.
7236.00	31.35	36.5	10.62	41.22	37.25	54.00	-16.75	V	AVG.
9648.00	*					54.00		V	AVG.
12060.00	*					54.00		V	AVG.
14472.00	*					54.00		V	AVG.
16884.00	*					54.00		V	AVG.
4824.00	31.84	31.54	8.92	40.22	32.08	54.00	-21.92	H	AVG.
7236.00	35.04	36.5	10.62	41.22	40.94	54.00	-13.06	H	AVG.
9648.00	*					54.00		H	AVG.
12060.00	*					54.00		H	AVG.
14472.00	*					54.00		H	AVG.
16884.00	*					54.00		H	AVG.

Remark:

- Final Level = Read Level + Antenna Factor + Cable Loss – Preamplifier Factor
- “*”, means this data is the too weak instrument of signal is unable to test.
- The emission levels of other frequencies are very lower than the limit and not show in test report.



ATA Testing Technology Service Co., Ltd.

Report No.: ATA150720007F

Page: 42 of 57

Radiated Emission Test Data (Above 1GHz)

Test mode: 802.11b					Test channel: Middle				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.	Level
4874.00	43.01	31.57	8.98	40.15	43.41	74.00	-30.59	V	PEAK
7311.00	42.74	36.48	10.68	41.16	48.74	74.00	-25.26	V	PEAK
9748.00	*					74.00		V	PEAK
12185.00	*					74.00		V	PEAK
14622.00	*					74.00		V	PEAK
17059.00	*					74.00		V	PEAK
4874.00	43.26	31.57	8.98	40.15	43.66	74.00	-30.34	H	PEAK
7311.00	42.83	36.48	10.68	41.16	48.83	74.00	-25.17	H	PEAK
9748.00	*					74.00		H	PEAK
12185.00	*					74.00		H	PEAK
14622.00	*					74.00		H	PEAK
17059.00	*					74.00		H	PEAK
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.	Level
4874.00	31.24	31.57	8.98	40.15	31.64	54.00	-22.36	V	AVG.
7311.00	30.81	36.48	10.68	41.16	36.81	54.00	-17.19	V	AVG.
9748.00	*					54.00		V	AVG.
12185.00	*					54.00		V	AVG.
14622.00	*					54.00		V	AVG.
17059.00	*					54.00		V	AVG.
4874.00	29.86	31.57	8.98	40.15	30.26	54.00	-23.74	H	AVG.
7311.00	30.74	36.48	10.68	41.16	36.74	54.00	-17.26	H	AVG.
9748.00	*					54.00		H	AVG.
12185.00	*					54.00		H	AVG.
14622.00	*					54.00		H	AVG.
17059.00	*					54.00		H	AVG.

Remark:

- Final Level = Read Level + Antenna Factor + Cable Loss – Preamplifier Factor
- “*”, means this data is the too weak instrument of signal is unable to test.
- The emission levels of other frequencies are very lower than the limit and not show in test report.



ATA Testing Technology Service Co., Ltd.

Report No.: ATA150720007F

Page: 43 of 57

Radiated Emission Test Data (Above 1GHz)

Test mode: 802.11b					Test channel: Highest				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.	Level
4924.00	42.7	31.61	9.04	40.08	43.27	74.00	-30.73	V	PEAK
7386.00	42.84	36.52	10.75	41.09	49.02	74.00	-24.98	V	PEAK
9848.00	*					74.00		V	PEAK
12310.00	*					74.00		V	PEAK
14772.00	*					74.00		V	PEAK
17234.00	*					74.00		V	PEAK
4924.00	42.74	31.61	9.04	40.08	43.31	74.00	-30.69	H	PEAK
7386.00	41.7	36.52	10.75	41.09	47.88	74.00	-26.12	H	PEAK
9848.00	*					74.00		H	PEAK
12310.00	*					74.00		H	PEAK
14772.00	*					74.00		H	PEAK
17234.00	*					74.00		H	PEAK
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.	Level
4924.00	29.81	31.61	9.04	40.08	30.38	54.00	-23.62	V	AVG.
7386.00	29.59	36.52	10.75	41.09	35.77	54.00	-18.23	V	AVG.
9848.00	*					54.00		V	AVG.
12310.00	*					54.00		V	AVG.
14772.00	*					54.00		V	AVG.
17234.00	*					54.00		V	AVG.
4924.00	29.96	31.61	9.04	40.08	30.53	54.00	-23.47	H	AVG.
7386.00	29.84	36.52	10.75	41.09	36.02	54.00	-17.98	H	AVG.
9848.00	*					54.00		H	AVG.
12310.00	*					54.00		H	AVG.
14772.00	*					54.00		H	AVG.
17234.00	*					54.00		H	AVG.

Remark:

- Final Level = Read Level + Antenna Factor + Cable Loss – Preamplifier Factor
- “*”, means this data is the too weak instrument of signal is unable to test.
- The emission levels of other frequencies are very lower than the limit and not show in test report.



ATA Testing Technology Service Co., Ltd.

Report No.: ATA150720007F

Page: 44 of 57

Radiated Emission Test Data (Above 1GHz)

Test mode: 802.11g					Test channel: Lowest				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.	Level
4824.00	42.59	31.54	8.92	40.22	42.83	74.00	-31.17	V	PEAK
7236.00	41.7	36.5	10.62	41.22	47.6	74.00	-26.40	V	PEAK
9648.00	*					74.00		V	PEAK
12060.00	*					74.00		V	PEAK
14472.00	*					74.00		V	PEAK
16884.00	*					74.00		V	PEAK
4824.00	42.93	31.54	8.92	40.22	43.17	74.00	-30.83	H	PEAK
7236.00	41.9	36.5	10.62	41.22	47.8	74.00	-26.20	H	PEAK
9648.00	*					74.00		H	PEAK
12060.00	*					74.00		H	PEAK
14472.00	*					74.00		H	PEAK
16884.00	*					74.00		H	PEAK
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.	Level
4824.00	30.84	31.54	8.92	40.22	31.08	54.00	-22.92	V	AVG.
7236.00	30.26	36.5	10.62	41.22	36.16	54.00	-17.84	V	AVG.
9648.00	*					54.00		V	AVG.
12060.00	*					54.00		V	AVG.
14472.00	*					54.00		V	AVG.
16884.00	*					54.00		V	AVG.
4824.00	30.94	31.54	8.92	40.22	31.18	54.00	-22.82	H	AVG.
7236.00	30.45	36.5	10.62	41.22	36.35	54.00	-17.65	H	AVG.
9648.00	*					54.00		H	AVG.
12060.00	*					54.00		H	AVG.
14472.00	*					54.00		H	AVG.
16884.00	*					54.00		H	AVG.

Remark:

- Final Level = Read Level + Antenna Factor + Cable Loss – Preamplifier Factor
- “*”, means this data is the too weak instrument of signal is unable to test.
- The emission levels of other frequencies are very lower than the limit and not show in test report.



ATA Testing Technology Service Co., Ltd.

Report No.: ATA150720007F

Page: 45 of 57

Radiated Emission Test Data (Above 1GHz)

Test mode: 802.11g					Test channel: Middle				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.	Level
4874.00	42.09	31.57	8.98	40.15	42.49	74.00	-31.51	V	PEAK
7311.00	40.91	36.48	10.68	41.16	46.91	74.00	-27.09	V	PEAK
9748.00	*					74.00		V	PEAK
12185.00	*					74.00		V	PEAK
14622.00	*					74.00		V	PEAK
17059.00	*					74.00		V	PEAK
4874.00	42.38	31.57	8.98	40.15	42.78	74.00	-31.22	H	PEAK
7311.00	41.45	36.48	10.68	41.16	47.45	74.00	-26.55	H	PEAK
9748.00	*					74.00		H	PEAK
12185.00	*					74.00		H	PEAK
14622.00	*					74.00		H	PEAK
17059.00	*					74.00		H	PEAK
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.	Level
4874.00	30.9	31.57	8.98	40.15	31.3	54.00	-22.70	V	AVG.
7311.00	30.57	36.48	10.68	41.16	36.57	54.00	-17.43	V	AVG.
9748.00	*					54.00		V	AVG.
12185.00	*					54.00		V	AVG.
14622.00	*					54.00		V	AVG.
17059.00	*					54.00		V	AVG.
4874.00	30.91	31.57	8.98	40.15	31.31	54.00	-22.69	H	AVG.
7311.00	28.8	36.48	10.68	41.16	34.8	54.00	-19.20	H	AVG.
9748.00	*					54.00		H	AVG.
12185.00	*					54.00		H	AVG.
14622.00	*					54.00		H	AVG.
17059.00	*					54.00		H	AVG.

Remark:

- Final Level = Read Level + Antenna Factor + Cable Loss – Preamplifier Factor
- “*”, means this data is the too weak instrument of signal is unable to test.
- The emission levels of other frequencies are very lower than the limit and not show in test report.



ATA Testing Technology Service Co., Ltd.

Report No.: ATA150720007F

Page: 46 of 57

Radiated Emission Test Data (Above 1GHz)

Test mode: 802.11g					Test channel: Highest				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.	Level
4924.00	41.54	31.61	9.04	40.08	42.11	74.00	-31.89	V	PEAK
7386.00	40.4	36.52	10.75	41.09	46.58	74.00	-27.42	V	PEAK
9848.00	*					74.00		V	PEAK
12310.00	*					74.00		V	PEAK
14772.00	*					74.00		V	PEAK
17234.00	*					74.00		V	PEAK
4924.00	41.64	31.61	9.04	40.08	42.21	74.00	-31.79	H	PEAK
7386.00	40.54	36.52	10.75	41.09	46.72	74.00	-27.28	H	PEAK
9848.00	*					74.00		H	PEAK
12310.00	*					74.00		H	PEAK
14772.00	*					74.00		H	PEAK
17234.00	*					74.00		H	PEAK
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.	Level
4924.00	30.61	31.61	9.04	40.08	31.18	54.00	-22.82	V	AVG.
7386.00	28.26	36.52	10.75	41.09	34.44	54.00	-19.56	V	AVG.
9848.00	*					54.00		V	AVG.
12310.00	*					54.00		V	AVG.
14772.00	*					54.00		V	AVG.
17234.00	*					54.00		V	AVG.
4924.00	30.74	31.61	9.04	40.08	31.31	54.00	-22.69	H	AVG.
7386.00	30.54	36.52	10.75	41.09	36.72	54.00	-17.28	H	AVG.
9848.00	*					54.00		H	AVG.
12310.00	*					54.00		H	AVG.
14772.00	*					54.00		H	AVG.
17234.00	*					54.00		H	AVG.

Remark:

- Final Level = Read Level + Antenna Factor + Cable Loss – Preamplifier Factor
- “*”, means this data is the too weak instrument of signal is unable to test.
- The emission levels of other frequencies are very lower than the limit and not show in test report.



ATA Testing Technology Service Co., Ltd.

Report No.: ATA150720007F

Page: 47 of 57

Radiated Emission Test Data (Above 1GHz)

Test mode: 802.11n(H20)					Test channel: Lowest				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.	Level
4824.00	40.51	31.54	8.92	40.22	40.75	74.00	-33.25	V	PEAK
7236.00	40.74	36.5	10.62	41.22	46.64	74.00	-27.36	V	PEAK
9648.00	*					74.00		V	PEAK
12060.00	*					74.00		V	PEAK
14472.00	*					74.00		V	PEAK
16884.00	*					74.00		V	PEAK
4824.00	40.87	31.54	8.92	40.22	41.11	74.00	-32.89	H	PEAK
7236.00	41	36.5	10.62	41.22	46.9	74.00	-27.10	H	PEAK
9648.00	*					74.00		H	PEAK
12060.00	*					74.00		H	PEAK
14472.00	*					74.00		H	PEAK
16884.00	*					74.00		H	PEAK
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.	Level
4824.00	30.7	31.54	8.92	40.22	30.94	54.00	-23.06	V	AVG.
7236.00	30.77	36.5	10.62	41.22	36.67	54.00	-17.33	V	AVG.
9648.00	*					54.00		V	AVG.
12060.00	*					54.00		V	AVG.
14472.00	*					54.00		V	AVG.
16884.00	*					54.00		V	AVG.
4824.00	30.86	31.54	8.92	40.22	31.1	54.00	-22.90	H	AVG.
7236.00	31.35	36.5	10.62	41.22	37.25	54.00	-16.75	H	AVG.
9648.00	*					54.00		H	AVG.
12060.00	*					54.00		H	AVG.
14472.00	*					54.00		H	AVG.
16884.00	*					54.00		H	AVG.

Remark:

- Final Level = Read Level + Antenna Factor + Cable Loss – Preamplifier Factor
- “*”, means this data is the too weak instrument of signal is unable to test.
- The emission levels of other frequencies are very lower than the limit and not show in test report.



ATA Testing Technology Service Co., Ltd.

Report No.: ATA150720007F

Page: 48 of 57

Radiated Emission Test Data (Above 1GHz)

Test mode: 802.11n(H20)					Test channel: Middle				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.	Level
4874.00	39.91	31.57	8.98	40.15	40.31	74.00	-33.69	V	PEAK
7311.00	40.34	36.48	10.68	41.16	46.34	74.00	-27.66	V	PEAK
9748.00	*					74.00		V	PEAK
12185.00	*					74.00		V	PEAK
14622.00	*					74.00		V	PEAK
17059.00	*					74.00		V	PEAK
4874.00	40.3	31.57	8.98	40.15	40.7	74.00	-33.30	H	PEAK
7311.00	40.58	36.48	10.68	41.16	46.58	74.00	-27.42	H	PEAK
9748.00	*					74.00		H	PEAK
12185.00	*					74.00		H	PEAK
14622.00	*					74.00		H	PEAK
17059.00	*					74.00		H	PEAK
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.	Level
4874.00	30.77	31.57	8.98	40.15	31.17	54.00	-22.83	V	AVG.
7311.00	30.69	36.48	10.68	41.16	36.69	54.00	-17.31	V	AVG.
9748.00	*					54.00		V	AVG.
12185.00	*					54.00		V	AVG.
14622.00	*					54.00		V	AVG.
17059.00	*					54.00		V	AVG.
4874.00	30.9	31.57	8.98	40.15	31.3	54.00	-22.70	H	AVG.
7311.00	30.54	36.48	10.68	41.16	36.54	54.00	-17.46	H	AVG.
9748.00	*					54.00		H	AVG.
12185.00	*					54.00		H	AVG.
14622.00	*					54.00		H	AVG.
17059.00	*					54.00		H	AVG.

Remark:

- Final Level = Read Level + Antenna Factor + Cable Loss – Preamplifier Factor
- “*”, means this data is the too weak instrument of signal is unable to test.
- The emission levels of other frequencies are very lower than the limit and not show in test report.



ATA Testing Technology Service Co., Ltd.

Report No.: ATA150720007F

Page: 49 of 57

Radiated Emission Test Data (Above 1GHz)

Test mode: 802.11n(H20)					Test channel: Highest				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.	Level
4924.00	40.46	31.61	9.04	40.08	41.03	74.00	-32.97	V	PEAK
7386.00	40.88	36.52	10.75	41.09	47.06	74.00	-26.94	V	PEAK
9848.00	*					74.00		V	PEAK
12310.00	*					74.00		V	PEAK
14772.00	*					74.00		V	PEAK
17234.00	*					74.00		V	PEAK
4924.00	40.63	31.61	9.04	40.08	41.2	74.00	-32.80	H	PEAK
7386.00	41.04	36.52	10.75	41.09	47.22	74.00	-26.78	H	PEAK
9848.00	*					74.00		H	PEAK
12310.00	*					74.00		H	PEAK
14772.00	*					74.00		H	PEAK
17234.00	*					74.00		H	PEAK
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.	Level
4924.00	30.7	31.61	9.04	40.08	31.27	54.00	-22.73	V	AVG.
7386.00	30.01	36.52	10.75	41.09	36.19	54.00	-17.81	V	AVG.
9848.00	*					54.00		V	AVG.
12310.00	*					54.00		V	AVG.
14772.00	*					54.00		V	AVG.
17234.00	*					54.00		V	AVG.
4924.00	31.18	31.61	9.04	40.08	31.75	54.00	-22.25	H	AVG.
7386.00	30.47	36.52	10.75	41.09	36.65	54.00	-17.35	H	AVG.
9848.00	*					54.00		H	AVG.
12310.00	*					54.00		H	AVG.
14772.00	*					54.00		H	AVG.
17234.00	*					54.00		H	AVG.

Remark:

- Final Level = Read Level + Antenna Factor + Cable Loss – Preamplifier Factor
- “*”, means this data is the too weak instrument of signal is unable to test.
- The emission levels of other frequencies are very lower than the limit and not show in test report.



ATA Testing Technology Service Co., Ltd.

Report No.: ATA150720007F

Page: 50 of 57

Radiated Emission Test Data (Above 1GHz)

Test mode: 802.11n(H40)					Test channel: Lowest				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.	Level
4844.00	38.9	31.57	8.93	40.17	39.23	74.00	-34.77	V	PEAK
7266.00	38.57	36.62	10.65	41.19	44.65	74.00	-29.35	V	PEAK
9688.00	*					74.00		V	PEAK
12110.00	*					74.00		V	PEAK
14532.00	*					74.00		V	PEAK
16954.00	*					74.00		V	PEAK
4844.00	39.51	31.57	8.93	40.17	39.84	74.00	-34.16	H	PEAK
7266.00	38.27	36.62	10.65	41.19	44.35	74.00	-29.65	H	PEAK
9688.00	*					74.00		H	PEAK
12110.00	*					74.00		H	PEAK
14532.00	*					74.00		H	PEAK
16954.00	*					74.00		H	PEAK
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.	Level
4844.00	29.84	31.57	8.93	40.17	30.17	54.00	-23.83	V	AVG.
7266.00	30.01	36.62	10.65	41.19	36.09	54.00	-17.91	V	AVG.
9688.00	*					54.00		V	AVG.
12110.00	*					54.00		V	AVG.
14532.00	*					54.00		V	AVG.
16954.00	*					54.00		V	AVG.
4844.00	30.37	31.57	8.93	40.17	30.7	54.00	-23.30	H	AVG.
7266.00	30.54	36.62	10.65	41.19	36.62	54.00	-17.38	H	AVG.
9688.00	*					54.00		H	AVG.
12110.00	*					54.00		H	AVG.
14532.00	*					54.00		H	AVG.
16954.00	*					54.00		H	AVG.

Remark:

4. Final Level = Read Level + Antenna Factor + Cable Loss – Preamplifier Factor
5. **, means this data is the too weak instrument of signal is unable to test.
6. The emission levels of other frequencies are very lower than the limit and not show in test report.



ATA Testing Technology Service Co., Ltd.

Report No.: ATA150720007F

Page: 51 of 57

Radiated Emission Test Data (Above 1GHz)

Test mode: 802.11n(H40)					Test channel: Middle				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.	Level
4874.00	38.45	31.57	8.98	40.15	38.85	74.00	-35.15	V	PEAK
7311.00	37.7	36.48	10.68	41.16	43.7	74.00	-30.30	V	PEAK
9748.00	*					74.00		V	PEAK
12185.00	*					74.00		V	PEAK
14622.00	*					74.00		V	PEAK
17059.00	*					74.00		V	PEAK
4874.00	38.17	31.57	8.98	40.15	38.57	74.00	-35.43	H	PEAK
7311.00	37.5	36.48	10.68	41.16	43.5	74.00	-30.50	H	PEAK
9748.00	*					74.00		H	PEAK
12185.00	*					74.00		H	PEAK
14622.00	*					74.00		H	PEAK
17059.00	*					74.00		H	PEAK
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.	Level
4874.00	29.77	31.57	8.98	40.15	30.17	54.00	-23.83	V	AVG.
7311.00	29.51	36.48	10.68	41.16	35.51	54.00	-18.49	V	AVG.
9748.00	*					54.00		V	AVG.
12185.00	*					54.00		V	AVG.
14622.00	*					54.00		V	AVG.
17059.00	*					54.00		V	AVG.
4874.00	30.2	31.57	8.98	40.15	30.6	54.00	-23.40	H	AVG.
7311.00	29.88	36.48	10.68	41.16	35.88	54.00	-18.12	H	AVG.
9748.00	*					54.00		H	AVG.
12185.00	*					54.00		H	AVG.
14622.00	*					54.00		H	AVG.
17059.00	*					54.00		H	AVG.

Remark:

4. Final Level = Read Level + Antenna Factor + Cable Loss – Preamplifier Factor
5. **, means this data is the too weak instrument of signal is unable to test.
6. The emission levels of other frequencies are very lower than the limit and not show in test report.



ATA Testing Technology Service Co., Ltd.

Report No.: ATA150720007F

Page: 52 of 57

Radiated Emission Test Data (Above 1GHz)

Test mode: 802.11n(H40)					Test channel: Highest				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.	Level
4904.00	38.04	31.68	9.13	39.98	38.87	74.00	-35.13	V	PEAK
7356.00	37.39	36.62	10.79	40.89	43.91	74.00	-30.09	V	PEAK
9808.00	*					74.00		V	PEAK
12260.00	*					74.00		V	PEAK
14712.00	*					74.00		V	PEAK
17164.00	*					74.00		V	PEAK
4904.00	37.91	31.68	9.13	39.98	38.74	74.00	-35.26	H	PEAK
7356.00	37.05	36.62	10.79	40.89	43.57	74.00	-30.43	H	PEAK
9808.00	*					74.00		H	PEAK
12260.00	*					74.00		H	PEAK
14712.00	*					74.00		H	PEAK
17164.00	*					74.00		H	PEAK
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.	Level
4904.00	30.5	31.68	9.13	39.98	31.33	54.00	-22.67	V	AVG.
7356.00	30.26	36.62	10.79	40.89	36.78	54.00	-17.22	V	AVG.
9808.00	*					54.00		V	AVG.
12260.00	*					54.00		V	AVG.
14712.00	*					54.00		V	AVG.
17164.00	*					54.00		V	AVG.
4904.00	30.86	31.68	9.13	39.98	31.69	54.00	-22.31	H	AVG.
7356.00	31.01	36.62	10.79	40.89	37.53	54.00	-16.47	H	AVG.
9808.00	*					54.00		H	AVG.
12260.00	*					54.00		H	AVG.
14712.00	*					54.00		H	AVG.
17164.00	*					54.00		H	AVG.

Remark:

4. Final Level = Read Level + Antenna Factor + Cable Loss – Preamplifier Factor
5. **, means this data is the too weak instrument of signal is unable to test.
6. The emission levels of other frequencies are very lower than the limit and not show in test report.



11. Spurious Emission (Conducted Emission Method)

11.1 Test Standard and Limit

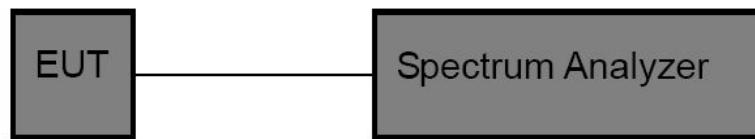
11.1.1 Test Standard

FCC Part15 C Section 15.247 (d)

11.1.2 Test Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

11.2 Test Setup



11.3 Test Procedure

According to KDB 558074 v03r02:

(1) The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.

(2) Spectrum Setting: RBW=100 KHz, VBW=300 KHz.

Frequency range from 30MHz to 25 GHz.

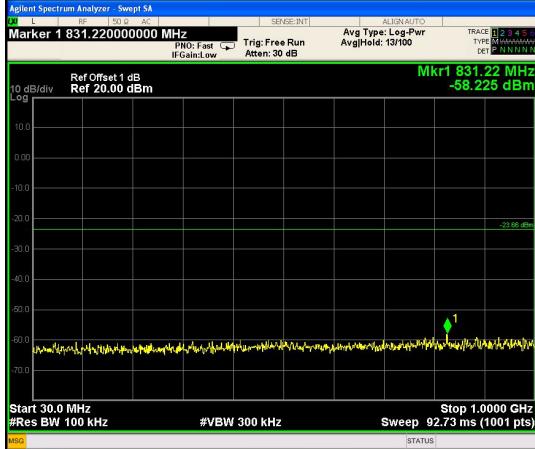
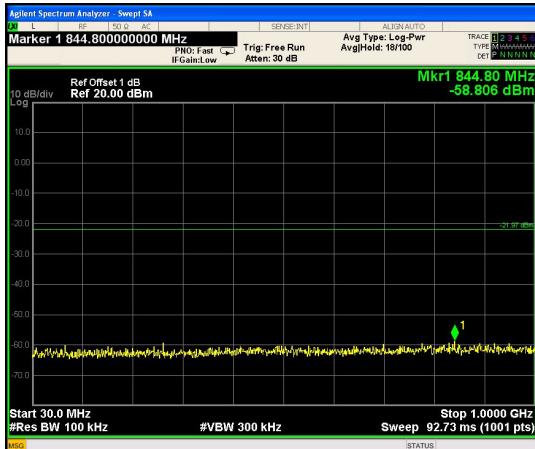
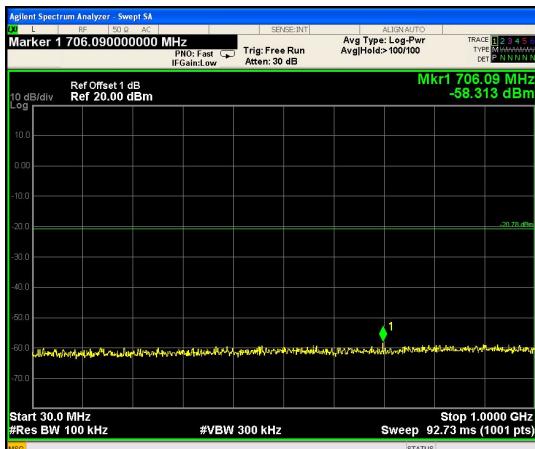
11.4 Test Data



ATA Testing Technology Service Co., Ltd.

Report No.: ATA150720007F

Page: 54 of 57

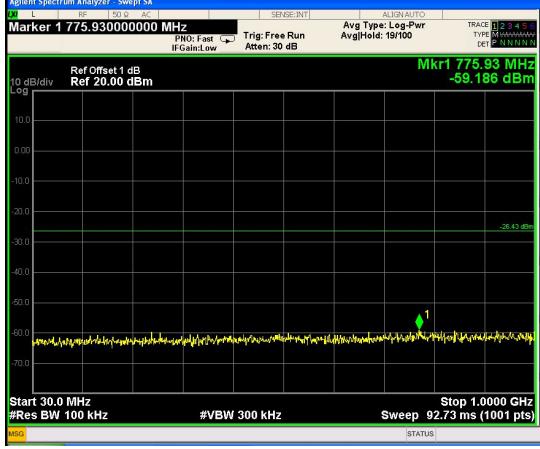
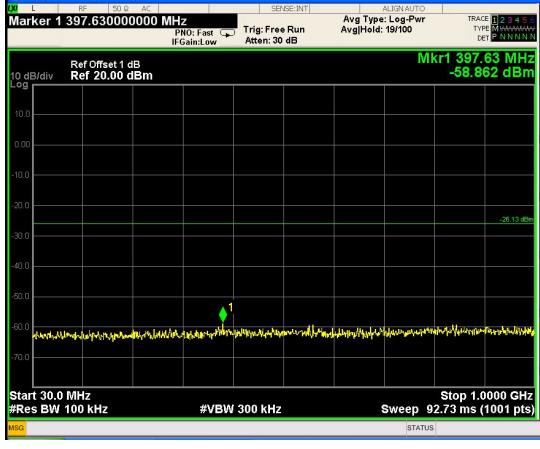
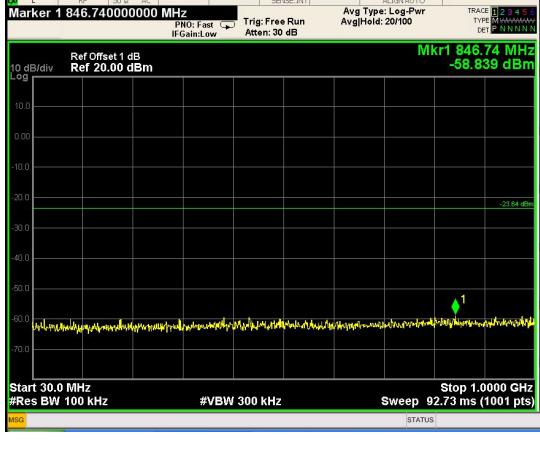
Modulation mode	802.11b	Frequency range	30MHz~25GHz
Lowest			
Middle			
Highest			
	30MHz~1GHz	1GHz~25GHz	
	30MHz~1GHz	1GHz~25GHz	



ATA Testing Technology Service Co., Ltd.

Report No.: ATA150720007F

Page: 55 of 57

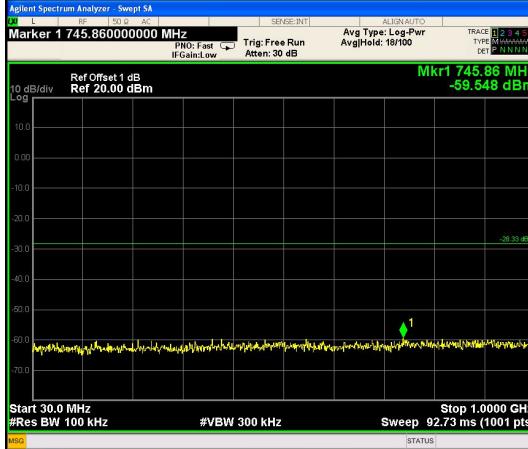
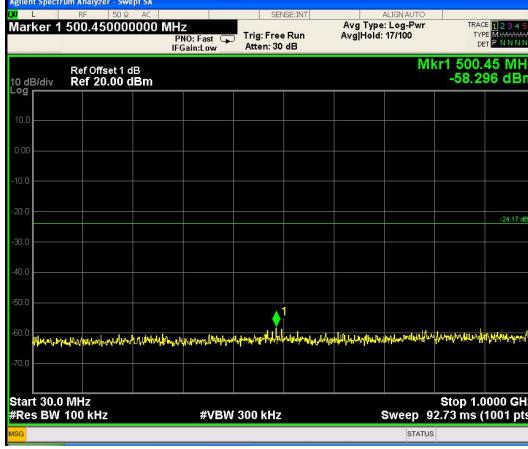
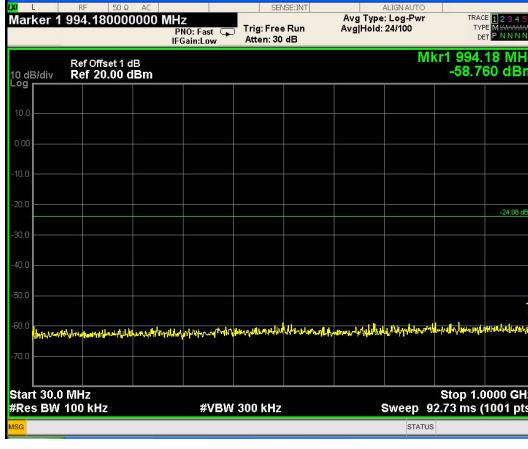
Modulation mode	802.11g	Frequency range	30MHz~25GHz
Lowest			
	30MHz~1GHz	1GHz~25GHz	
Middle			
	30MHz~1GHz	1GHz~25GHz	
Highest			
	30MHz~1GHz	1GHz~25GHz	



ATA Testing Technology Service Co., Ltd.

Report No.: ATA150720007F

Page: 56 of 57

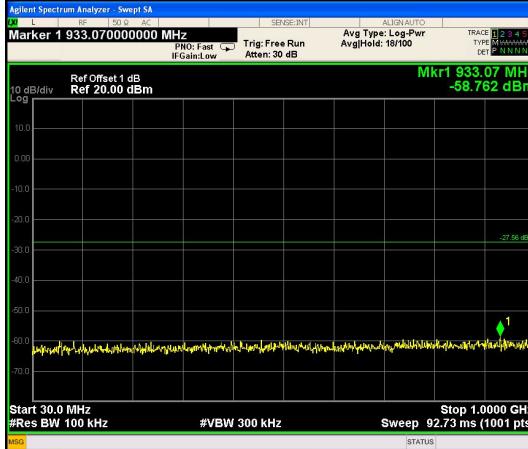
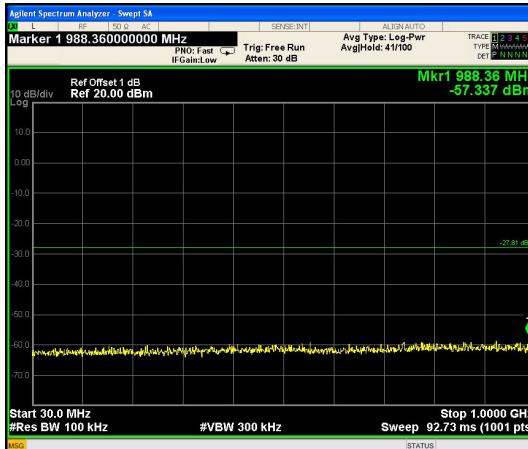
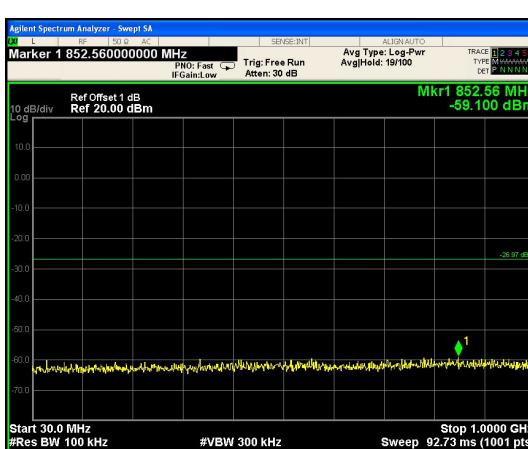
Modulation mode	802.11n(H20)	Frequency range	30MHz~25GHz
Lowest	 <p>Agilent Spectrum Analyzer - Swept SA Marker 1 745.8600000000 MHz PNO: Fast IF Gain:Low Trig: Free Run Atten: 30 dB Avg Type: Log-Pwr AvgHold: 10/100 TRACE 1 2 3 4 5 6 7 8 9 10 SENSE: INT ALIGN: AUTO TYPE: MMWMMW DET: PNNNNN Marker 1 745.86 MHz -59.548 dBm Ref Offset 1 dB Ref 20.00 dBm 10 dB/div Log Start 30.0 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 92.73 ms (1001 pts) Mkr1 2.416 GHz -8.333 dBm PNO: Fast IF Gain:Low Trig: Free Run Atten: 30 dB Avg Type: Log-Pwr AvgHold: 11/100 TRACE 1 2 3 4 5 6 7 8 9 10 SENSE: INT ALIGN: AUTO TYPE: MMWMMW DET: PNNNNN Marker 1 2.4160000000000000 GHz Ref Offset 1 dB Ref 20.00 dBm 10 dB/div Log Start 1.00 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 2.294 s (1001 pts) Mkr1 2.416 GHz -8.333 dBm</p>	Peak Search	Peak Search
Middle	 <p>Agilent Spectrum Analyzer - Swept SA Marker 1 500.4500000000 MHz PNO: Fast IF Gain:Low Trig: Free Run Atten: 30 dB Avg Type: Log-Pwr AvgHold: 11/100 TRACE 1 2 3 4 5 6 7 8 9 10 SENSE: INT ALIGN: AUTO TYPE: MMWMMW DET: PNNNNN Marker 1 500.45 MHz -68.296 dBm Ref Offset 1 dB Ref 20.00 dBm 10 dB/div Log Start 30.0 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 92.73 ms (1001 pts) Mkr1 2.440 GHz -4.170 dBm PNO: Fast IF Gain:Low Trig: Free Run Atten: 30 dB Avg Type: Log-Pwr AvgHold: 5/100 TRACE 1 2 3 4 5 6 7 8 9 10 SENSE: INT ALIGN: AUTO TYPE: MMWMMW DET: PNNNNN Display Line -24.17 dBm Ref Offset 1 dB Ref 20.00 dBm 10 dB/div Log Start 1.00 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 2.294 s (1001 pts) Mkr1 2.440 GHz -4.170 dBm</p>	Peak Search	Peak Search
Highest	 <p>Agilent Spectrum Analyzer - Swept SA Marker 1 994.1800000000 MHz PNO: Fast IF Gain:Low Trig: Free Run Atten: 30 dB Avg Type: Log-Pwr AvgHold: 24/100 TRACE 1 2 3 4 5 6 7 8 9 10 SENSE: INT ALIGN: AUTO TYPE: MMWMMW DET: PNNNNN Marker 1 994.18 MHz -58.760 dBm Ref Offset 1 dB Ref 20.00 dBm 10 dB/div Log Start 30.0 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 92.73 ms (1001 pts) Mkr1 2.464 GHz -4.076 dBm PNO: Fast IF Gain:Low Trig: Free Run Atten: 30 dB Avg Type: Log-Pwr AvgHold: 3/100 TRACE 1 2 3 4 5 6 7 8 9 10 SENSE: INT ALIGN: AUTO TYPE: MMWMMW DET: PNNNNN Display Line -24.08 dBm Ref Offset 1 dB Ref 20.00 dBm 10 dB/div Log Start 1.00 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 2.294 s (1001 pts) Mkr1 2.464 GHz -4.076 dBm</p>	Peak Search	Peak Search
	30MHz~1GHz	1GHz~25GHz	1GHz~25GHz



ATA Testing Technology Service Co., Ltd.

Report No.: ATA150720007F

Page: 57 of 57

Modulation mode	802.11n(H40)	Frequency range	30MHz~25GHz
Lowest			
30MHz~1GHz		1GHz~25GHz	
Middle			
30MHz~1GHz		1GHz~25GHz	
Highest			
30MHz~1GHz		1GHz~25GHz	