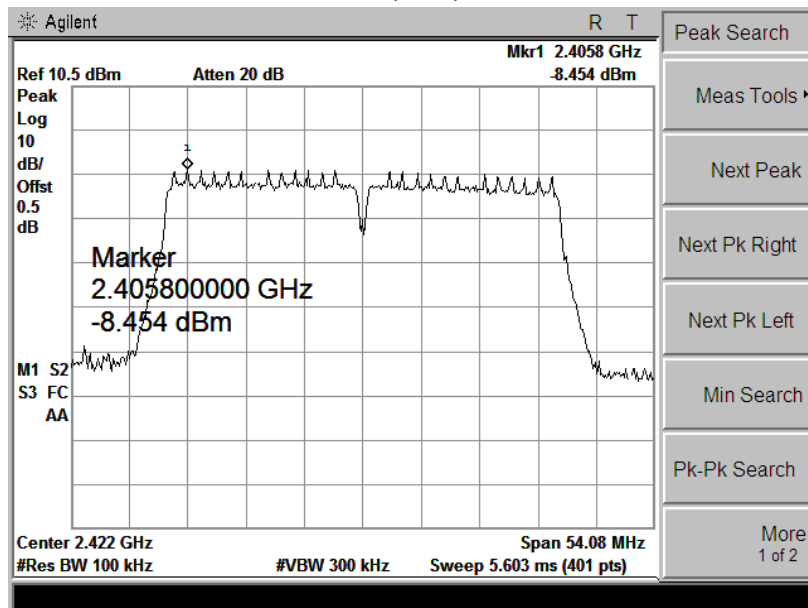
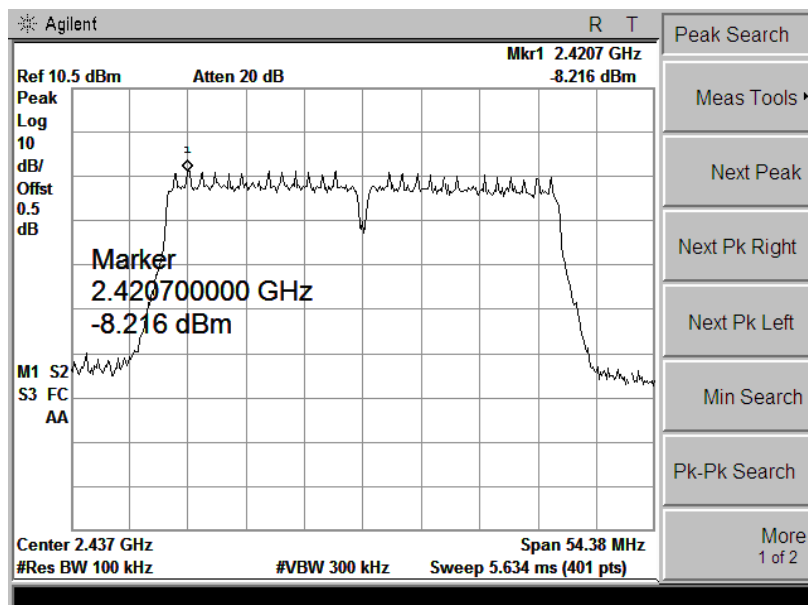


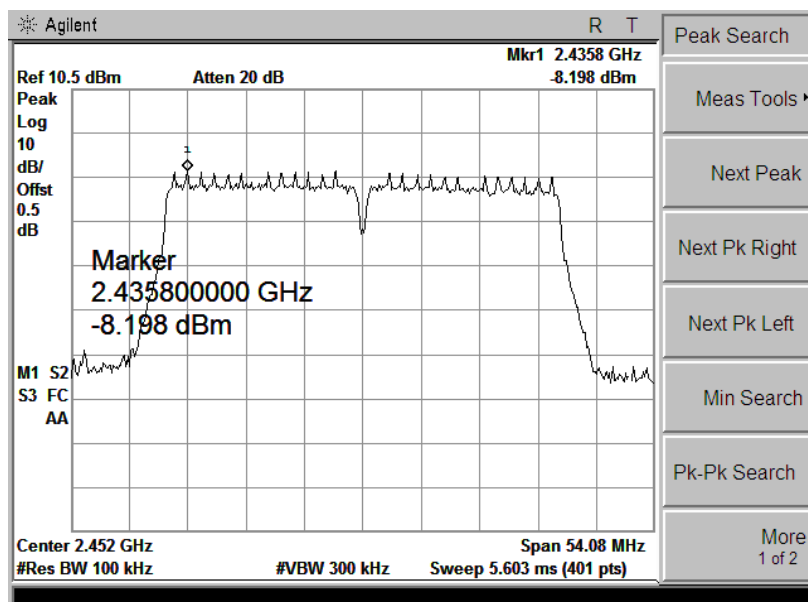
802.11 n(40M) Mode



Ch 1



Ch 6



5.8 Band Edge and Conducted Spurious Emissions

5.8.1 Test Requirement

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated 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, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required.

5.8.2 Test Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Remove the antenna from the EUT and then connect to a low loss RF cable from the antenna port to a EMI test receiver, then turn on the EUT and make it operate in transmitting mode. Then set it to Low Channel and High Channel within its operating range, and make sure the instrument is operated in its linear range.
3. Set both RBW and VBW of spectrum analyzer to 100 kHz with a convenient frequency span including 100 kHz bandwidth from band edge.
4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
5. Repeat above procedures until all measured frequencies were complete.

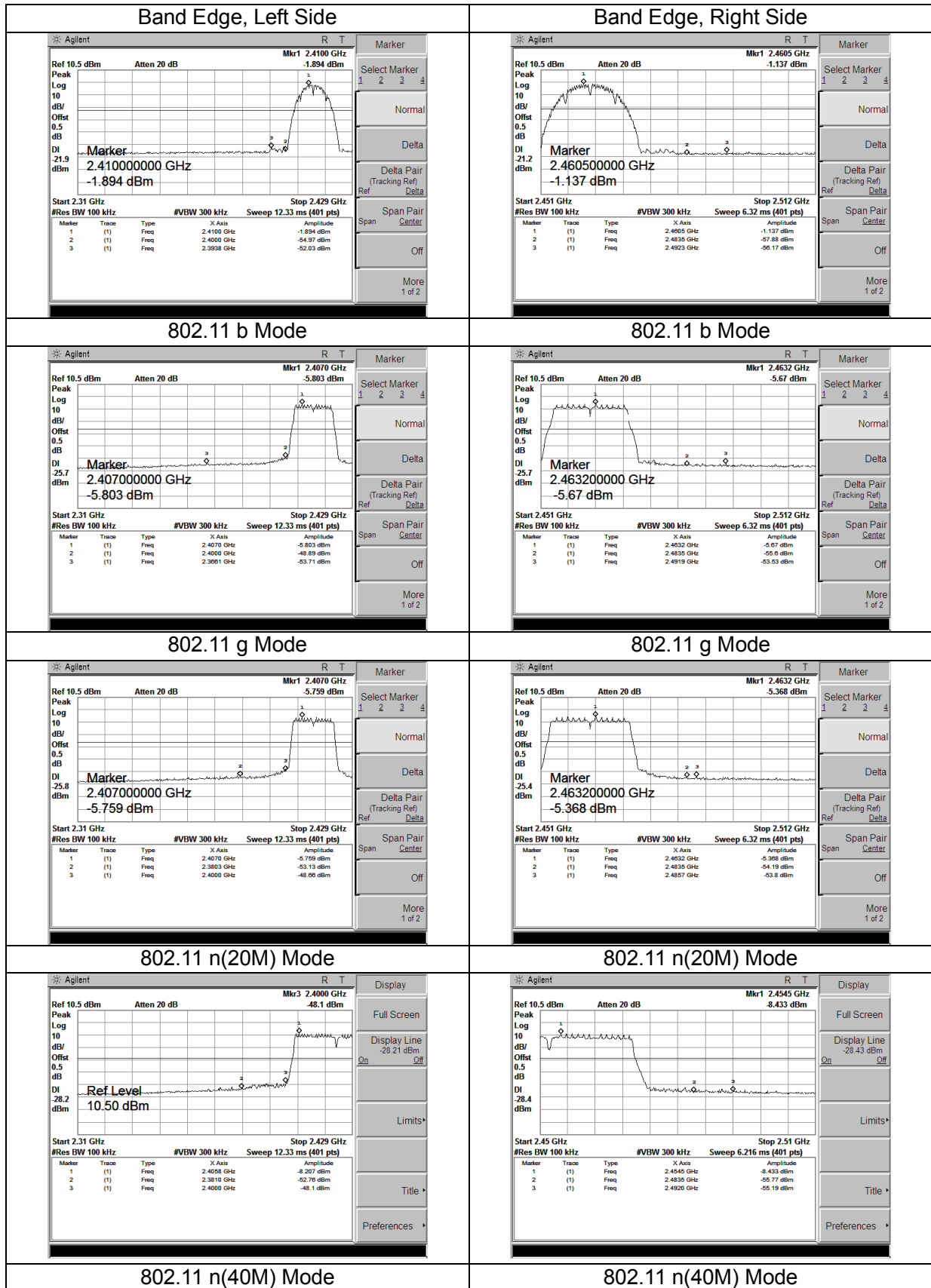
5.8.3 Test Result

Pass

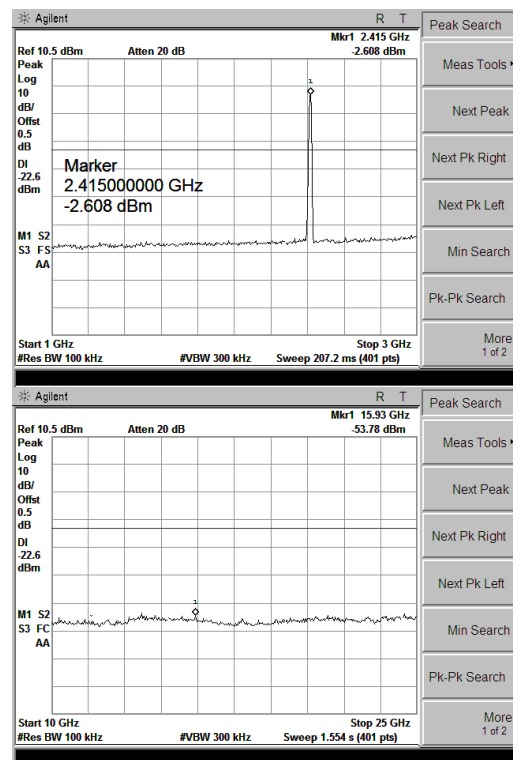
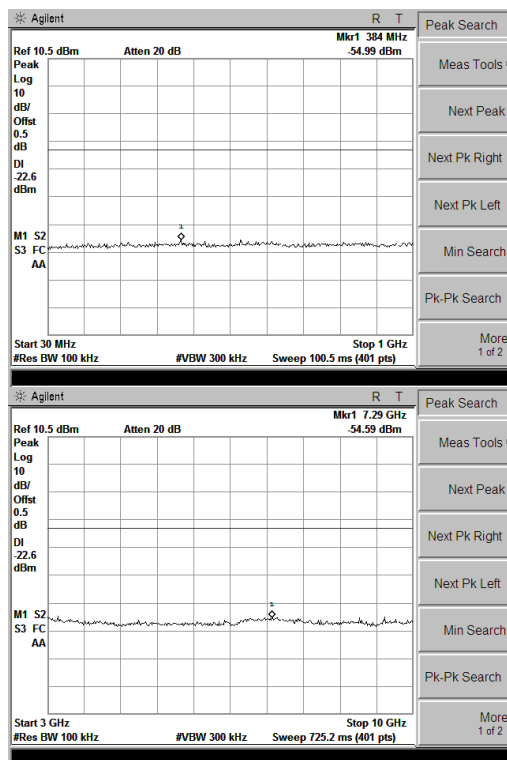
Remark:

During the Conducted Spurious Emissions test, pre-scan the 802.11b, 802.11g, 802.11n(20/40)modulation, and found the 802.11b modulation which it is worse case.

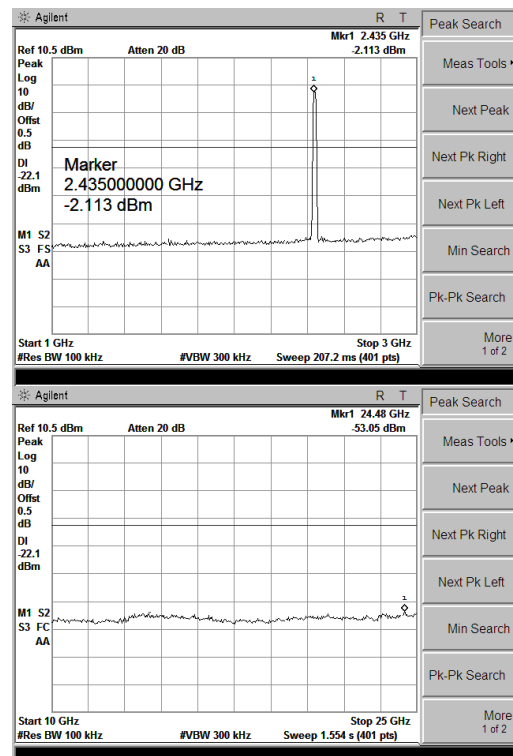
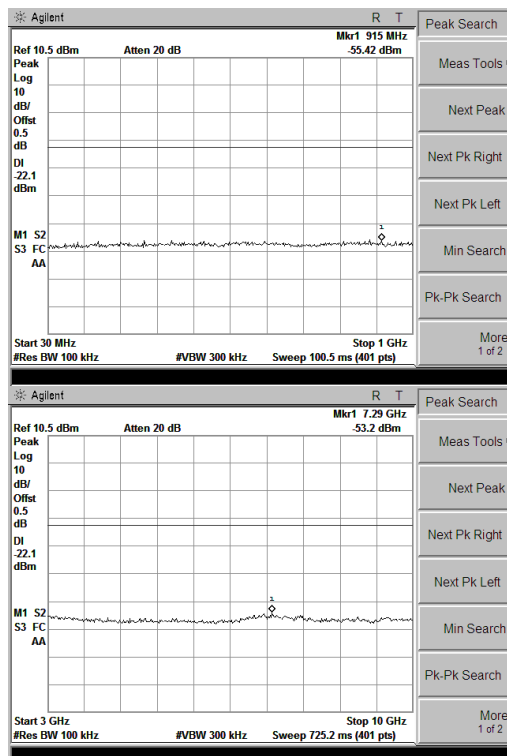
Test Item:	Band Edge	Temperature :	23°C
Test Engineer:	Kang	Relative Humidity :	65%



Conducted Spurious Emissions

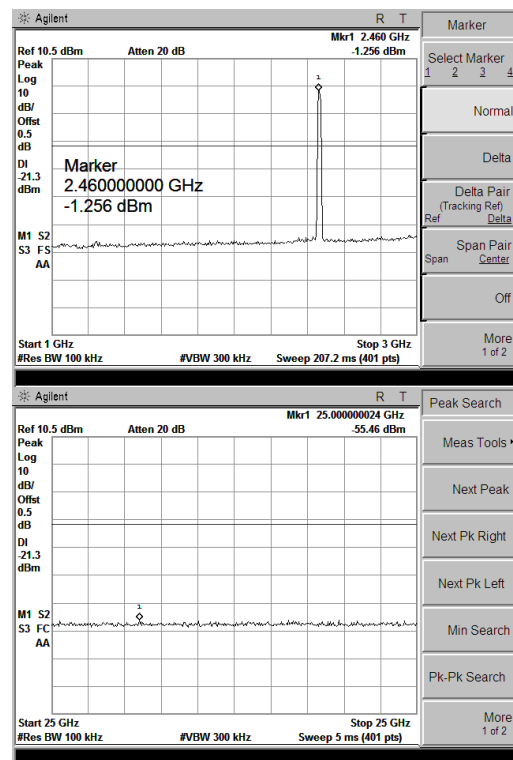
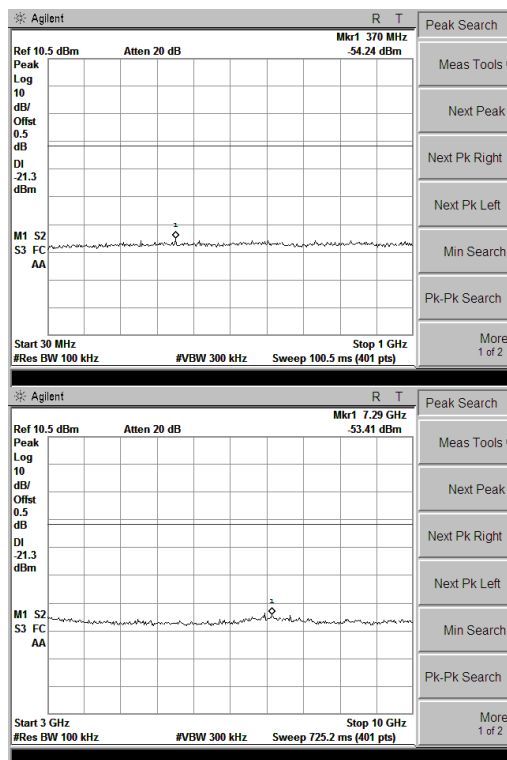


802.11b Mode Ch1

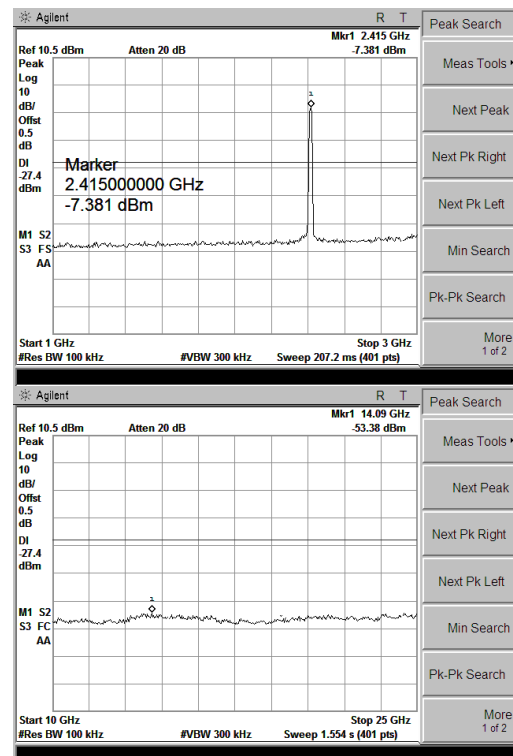
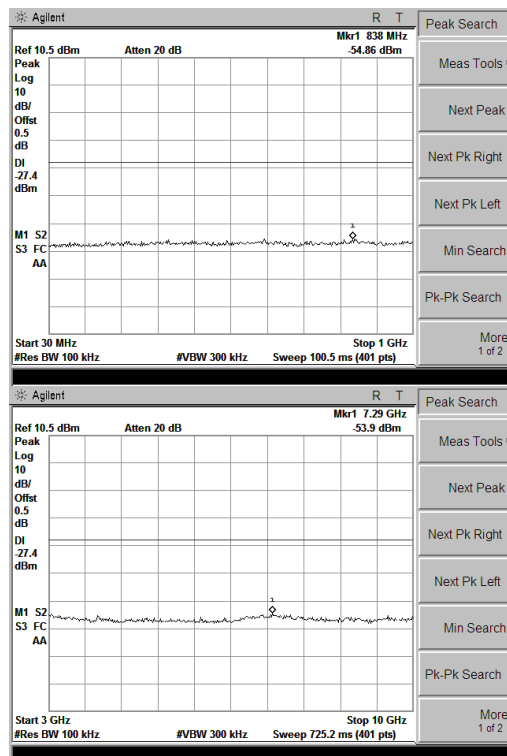


802.11b Mode Ch6

Conducted Spurious Emissions

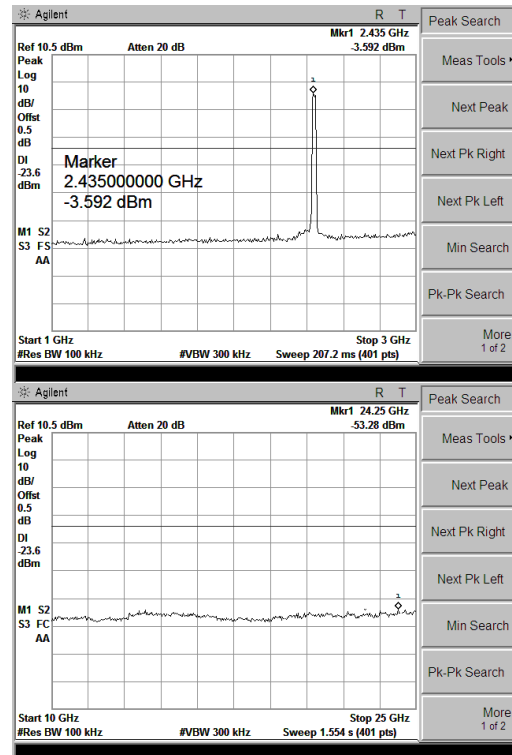
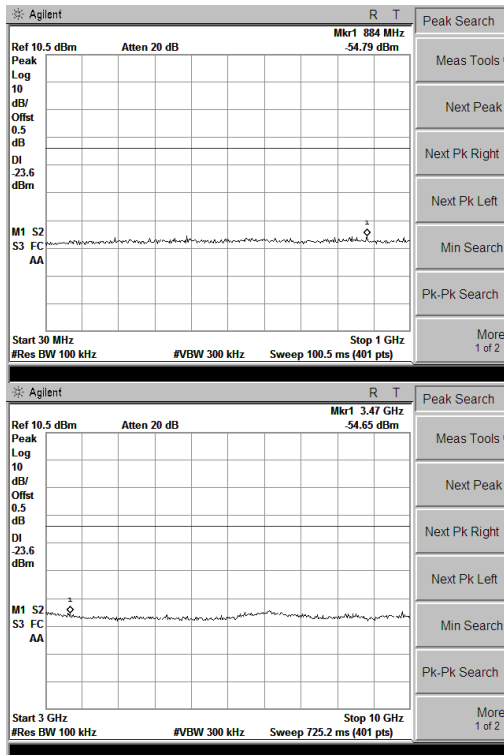


802.11b Mode Ch11

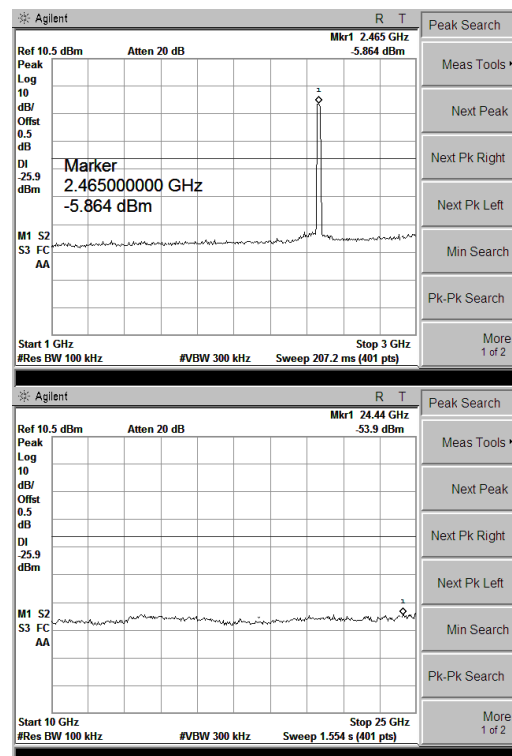
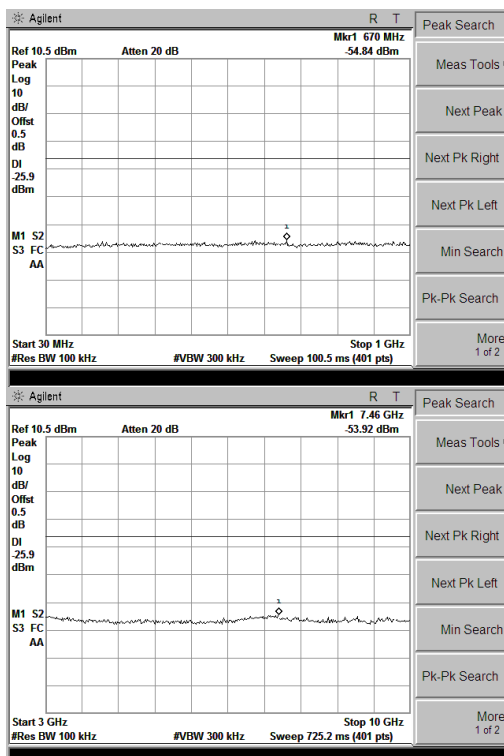


802.11g Mode Ch1

Conducted Spurious Emissions

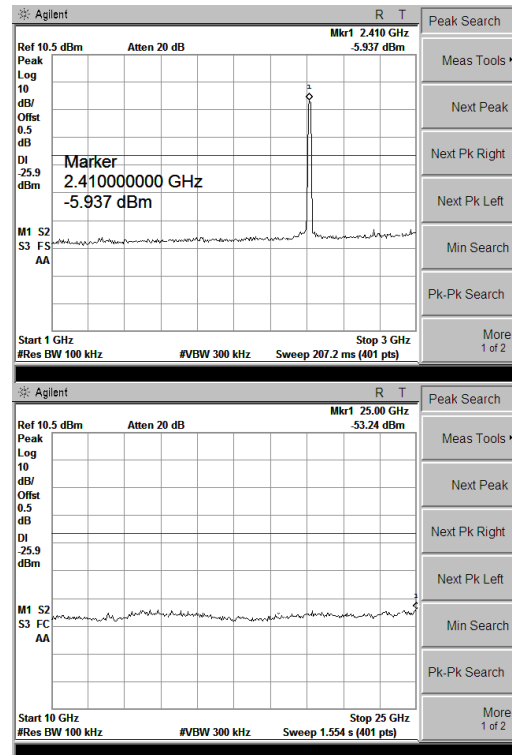
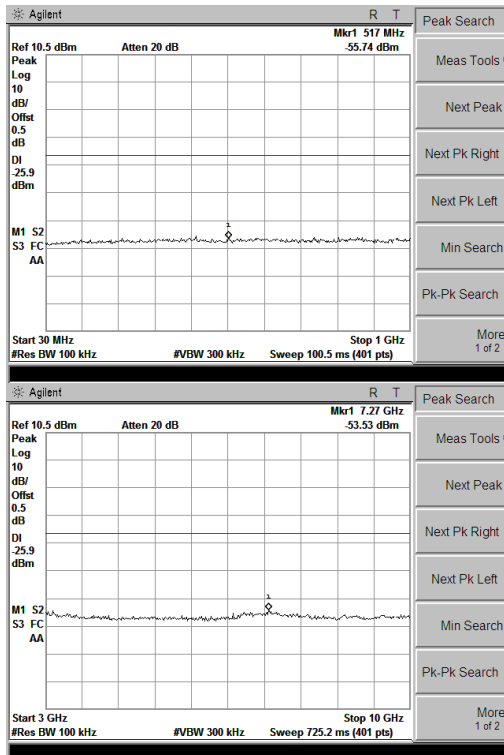


802.11g Mode Ch6

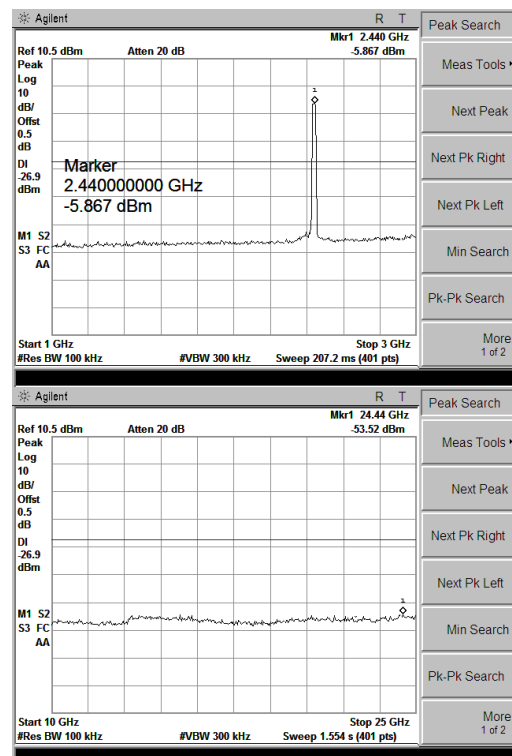
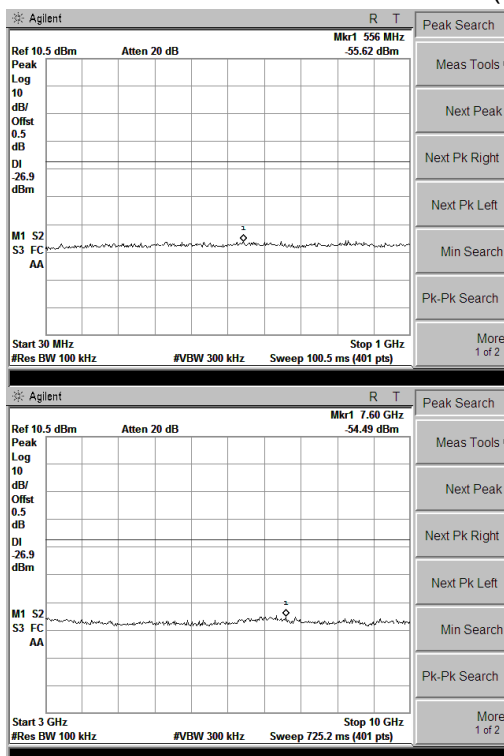


802.11g Mode Ch11

Conducted Spurious Emissions

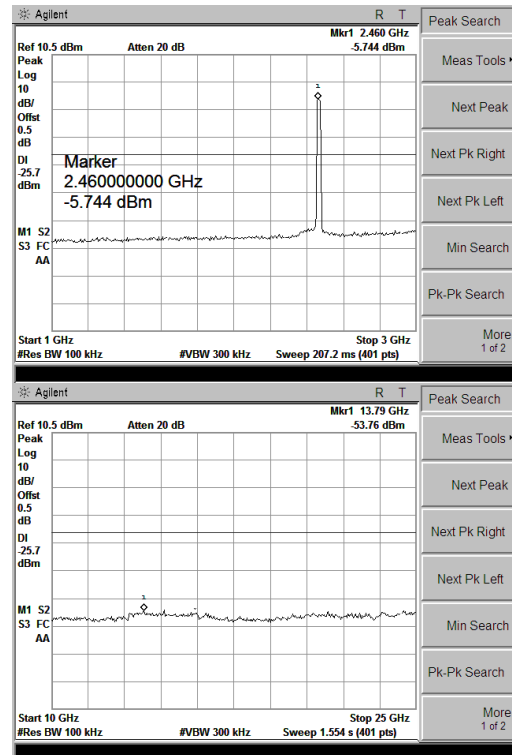
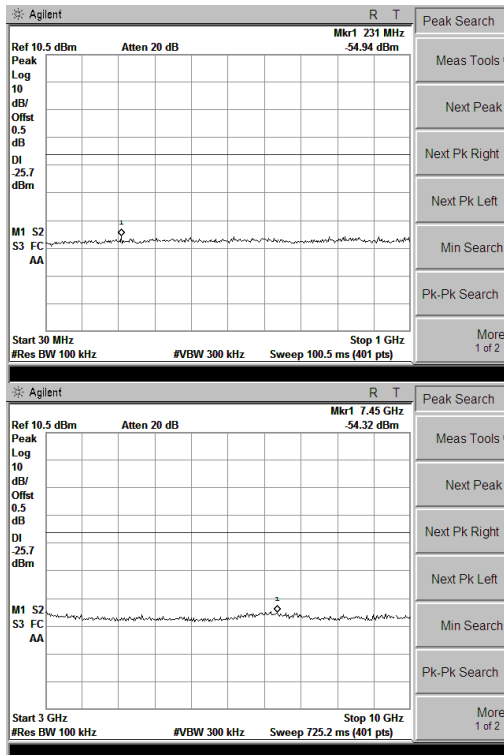


802.11n(20MHz) Mode Ch1

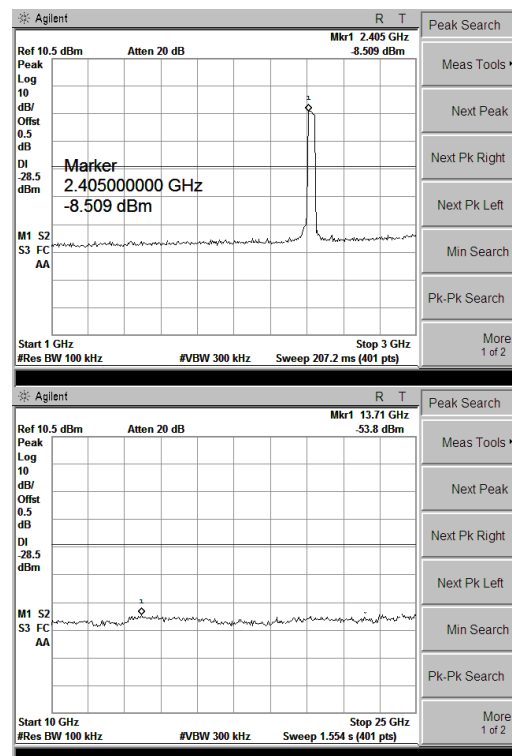
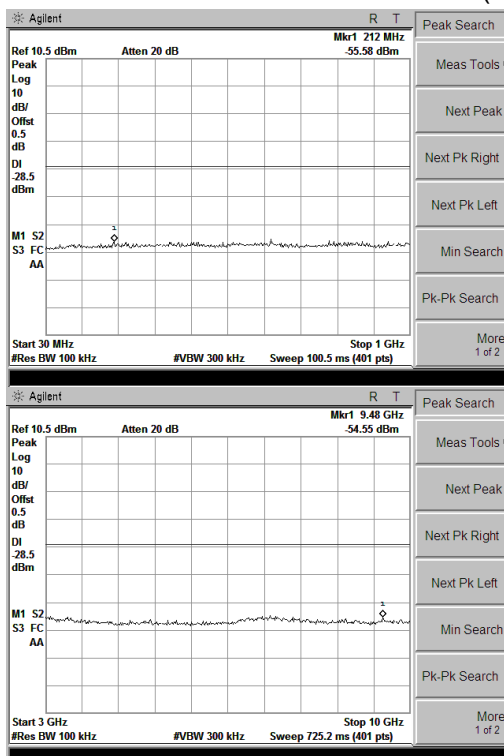


802.11g Mode, Ch6

Conducted Spurious Emissions

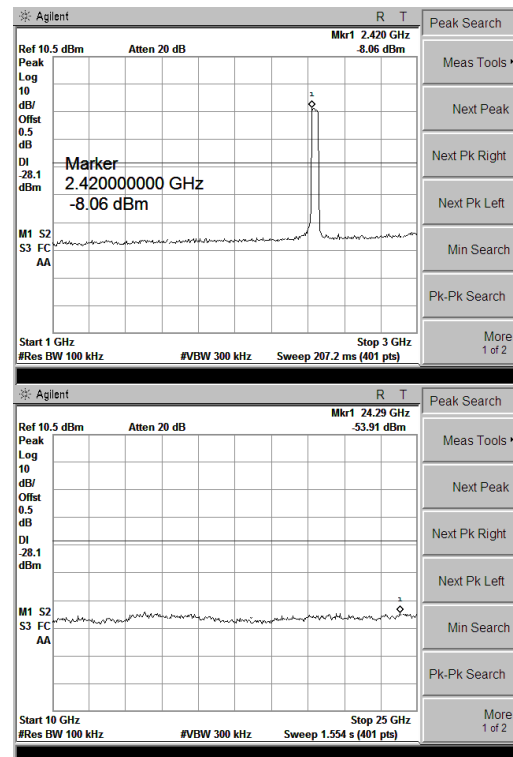
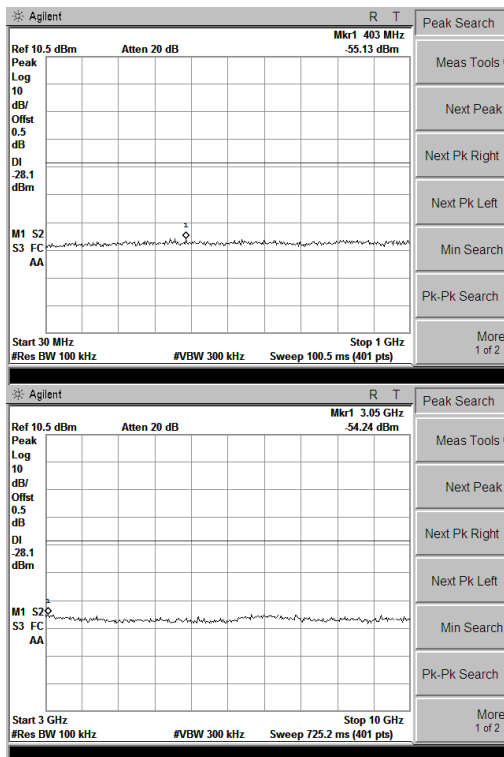


802.11n(20MHz) Mode Ch 11

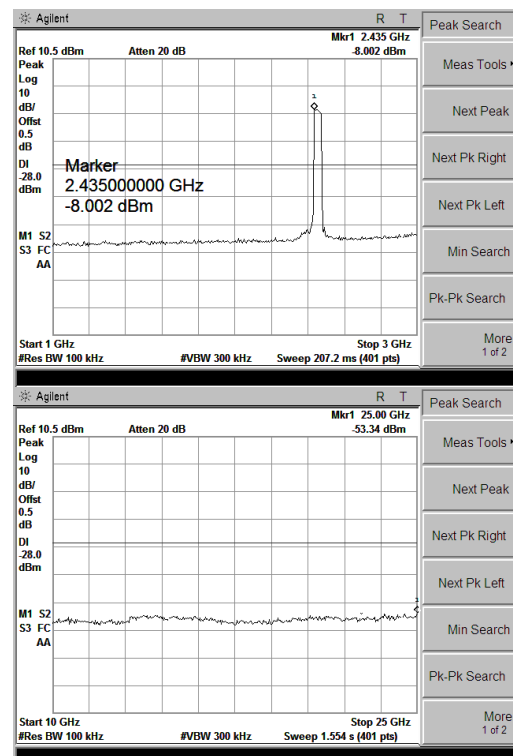
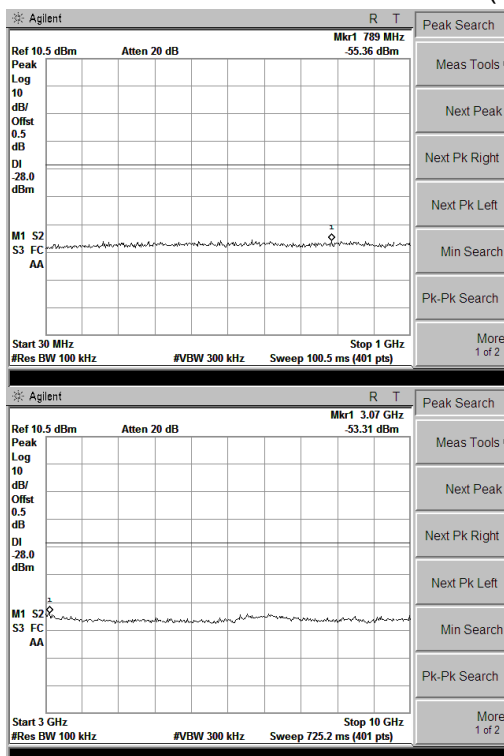


802.11n(40MHz) Mode Ch 3

Conducted Spurious Emissions



802.11n(40MHz) Mode Ch 6



802.11n(40MHz) Mode Ch 11

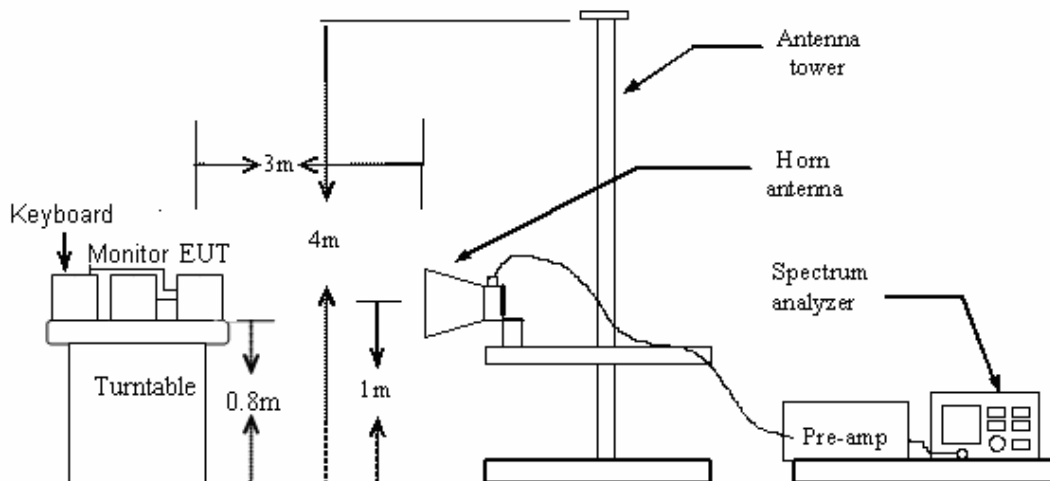
5.9 Restricted Frequency Bands

5.9.1 Test Requirement

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated 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. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

5.9.2 Test Configuration

Test Setup:



5.9.3 Test Procedure:

1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter 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 table was turned from 0 degrees to 360 degrees to find the maximum reading.

5.9.4 Test Result

Pass

Note: All test modes are performed, only the worst case is recorded in this report.

Please refer the following plots.



Address: No.5, Langshan 2nd Rd., North Hi-Tech Industrial park
Guangdong, China
Tel: 0755-86026850 Fax: 0755-26013350

Radiated Emission Measurement

File: UD-1404
111.0 dBuV/m

Data: #87

Date: 2015-6-29

Time: 19:48:35



Site: Chamber #1

Polarization: **Horizontal**

Temperature: 24.5

Limit: FCC RF LIMIT PEAK

Power: DC 19V by Adapter

Humidity: 51.7 %

EUT: Sound bar

Distance: 3m

M/N: UD-1404

Mode: 802.11b-CH78

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2483.500	51.68	-8.29	43.39	74.00	-30.61	peak		
2	*	2483.500	42.68	-8.29	34.39	54.00	-19.61	AVG		

*:Maximum data x:Over limit l:over margin

Engineer Signature:

Robert



Address: No.5, Langshan 2nd Rd., North Hi-Tech Industrial park
Guangdong, China
Tel: 0755-86026850 Fax: 0755-26013350

Radiated Emission Measurement

File: UD-1404
111.0 dBuV/m

Data: #88

Date: 2015-6-29

Time: 19:59:57



Site: Chamber #1

Polarization: **Vertical**

Temperature: 24.5

Limit: FCC RF LIMIT PEAK

Power: DC 19V by Adapter

Humidity: 51.7 %

EUT: Sound bar

Distance: 3m

M/N: UD-1404

Mode: 802.11b-CH78

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2483.500	53.52	-8.29	45.23	74.00	-28.77	peak		
2	*	2483.500	42.59	-8.29	34.30	54.00	-19.70	AVG		

*:Maximum data x:Over limit l:over margin

Engineer Signature: Robert



Address: No.5, Langshan 2nd Rd., North Hi-Tech Industrial park
Guangdong, China
Tel: 0755-86026850 Fax: 0755-26013350

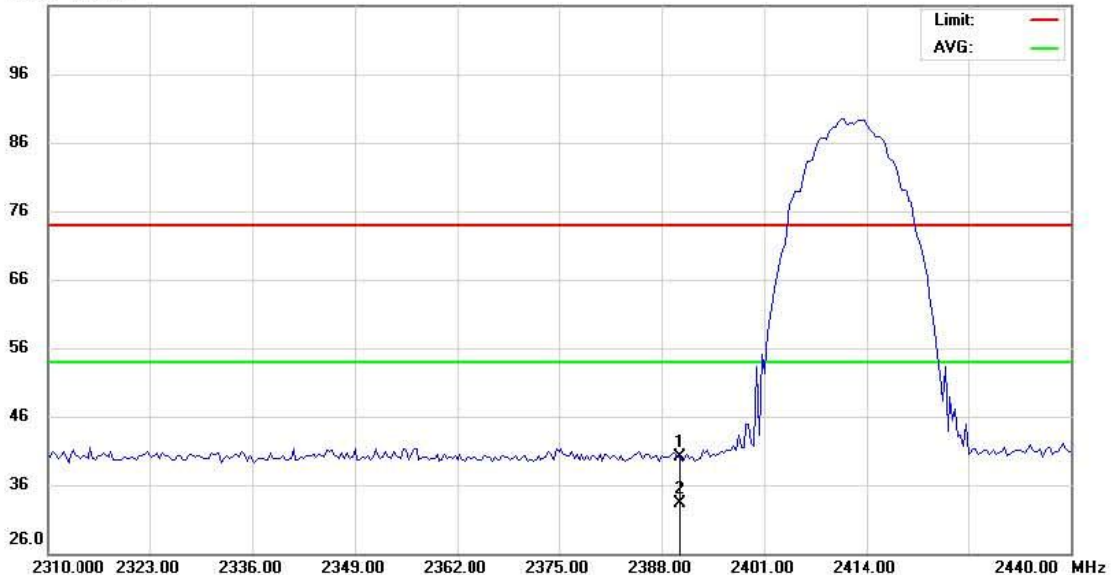
Radiated Emission Measurement

File: UD-1404
106.0 dBuV/m

Data: #86

Date: 2015-6-29

Time: 19:37:10



Site: Chamber #1

Polarization: **Horizontal**

Temperature: 24.5

Limit: FCC RF LIMIT PEAK

Power: DC 19V by Adapter

Humidity: 51.7 %

EUT: Sound bar

Distance: 3m

M/N: UD-1404

Mode: 802.11b-CH0

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		2390.000	48.56	-8.43	40.13	74.00	-33.87	peak		
2	*	2390.000	41.68	-8.43	33.25	54.00	-20.75	AVG		

*:Maximum data x:Over limit l:over margin

Engineer Signature: Robert



Address: No.5, Langshan 2nd Rd., North Hi-Tech Industrial park
Guangdong, China
Tel: 0755-86026850 Fax: 0755-26013350

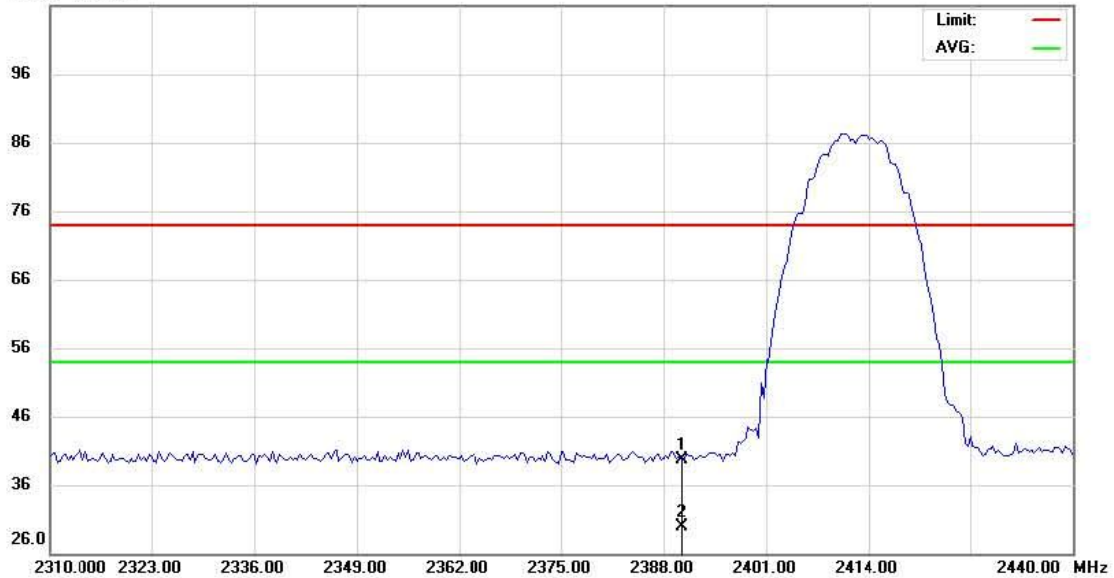
Radiated Emission Measurement

File: UD-1404
106.0 dBuV/m

Data: #85

Date: 2015-6-29

Time: 19:29:18



Site: Chamber #1

Polarization: **Vertical**

Temperature: 24.5

Limit: FCC RF LIMIT PEAK

Power: DC 19V by Adapter

Humidity: 51.7 %

EUT: Sound bar

Distance: 3m

M/N: UD-1404

Mode: 802.11b-CH0

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2390.000	48.17	-8.43	39.74	74.00	-34.26	peak		
2	*	2390.000	38.25	-8.43	29.82	54.00	-24.18	AVG		

*:Maximum data x:Over limit l:over margin

Engineer Signature:

Robert



Address: No.5, Langshan 2nd Rd., North Hi-Tech Industrial park
Guangdong, China
Tel: 0755-86026850 Fax: 0755-26013350

Radiated Emission Measurement

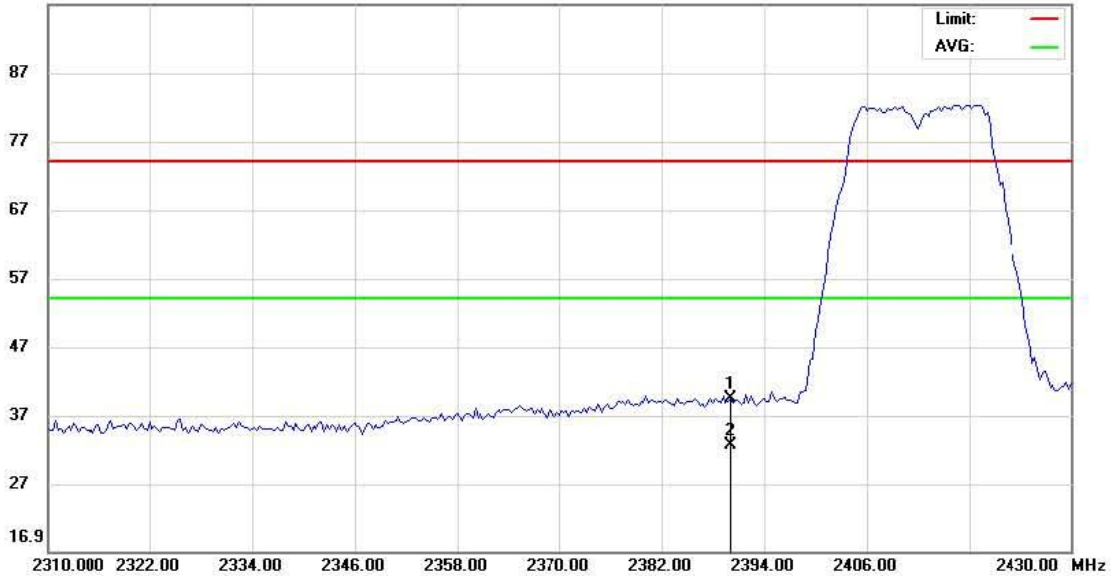
File: UD-1404

Data: #115

Date: 2015-6-30

Time: 17:00:11

96.9 dBuV/m



Site site #1

Polarization: **Horizontal**

Temperature: 24.5

Limit: FCC RF LIMIT PEAK

Power: DC 19V by Adapter

Humidity: 51.7 %

EUT: Sound bar

Distance: 3m

M/N: UD-1404

Mode: 802.11g-CH1

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2390.000	47.84	-8.43	39.41	74.00	-34.59	peak		
2	*	2390.000	41.11	-8.43	32.68	54.00	-21.32	AVG		

*:Maximum data x:Over limit !:over margin

Engineer Signature: Robert



Address: No.5, Langshan 2nd Rd., North Hi-Tech Industrial park
Guangdong, China
Tel: 0755-86026850 Fax: 0755-26013350

Radiated Emission Measurement

File: UD-1404

Data: #116

Date: 2015-6-30

Time: 17:18:33

96.9 dBuV/m



Site site #1

Polarization: **Vertical**

Temperature: 24.5

Limit: FCC RF LIMIT PEAK

Power: DC 19V by Adapter

Humidity: 51.7 %

EUT: Sound bar

Distance: 3m

M/N: UD-1404

Mode: 802.11g-CH1

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		2390.000	46.99	-8.43	38.56	74.00	-35.44	peak		
2	*	2390.000	39.28	-8.43	30.85	54.00	-23.15	AVG		

*:Maximum data x:Over limit !:over margin

Engineer Signature: Robert



Address: No.5, Langshan 2nd Rd., North Hi-Tech Industrial park
Guangdong, China
Tel: 0755-86026850 Fax: 0755-26013350

Radiated Emission Measurement

File: UD-1404

Data: #121

Date: 2015-6-30

Time: 18:15:21

111.0 dBuV/m



Site site #1

Polarization: **Vertical**

Temperature: 24.5

Limit: FCC RF LIMIT PEAK

Power: DC 19V by Adapter

Humidity: 51.7 %

EUT: Sound bar

Distance: 3m

M/N: UD-1404

Mode: 802.11g-CH11

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		2483.500	52.55	-8.29	44.26	74.00	-29.74	peak		
2	*	2483.500	46.17	-8.29	37.88	54.00	-16.12	AVG		

*:Maximum data x:Over limit !:over margin

Engineer Signature: Robert



Address: No.5, Langshan 2nd Rd., North Hi-Tech Industrial park
Guangdong, China
Tel: 0755-86026850 Fax: 0755-26013350

Radiated Emission Measurement

File: UD-1404

Data: #122

Date: 2015-6-30

Time: 18:29:30

111.0 dBuV/m



Site site #1

Polarization: **Horizontal**

Temperature: 24.5

Limit: FCC RF LIMIT PEAK

Power: DC 19V by Adapter

Humidity: 51.7 %

EUT: Sound bar

Distance: 3m

M/N: UD-1404

Mode: 802.11g-CH11

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		2483.500	52.57	-8.29	44.28	74.00	-29.72	peak		
2	*	2483.500	46.38	-8.29	38.09	54.00	-15.91	AVG		

*:Maximum data x:Over limit !:over margin

Engineer Signature: Robert



Address: No.5, Langshan 2nd Rd., North Hi-Tech Industrial park
Guangdong, China
Tel: 0755-86026850 Fax: 0755-26013350

Radiated Emission Measurement

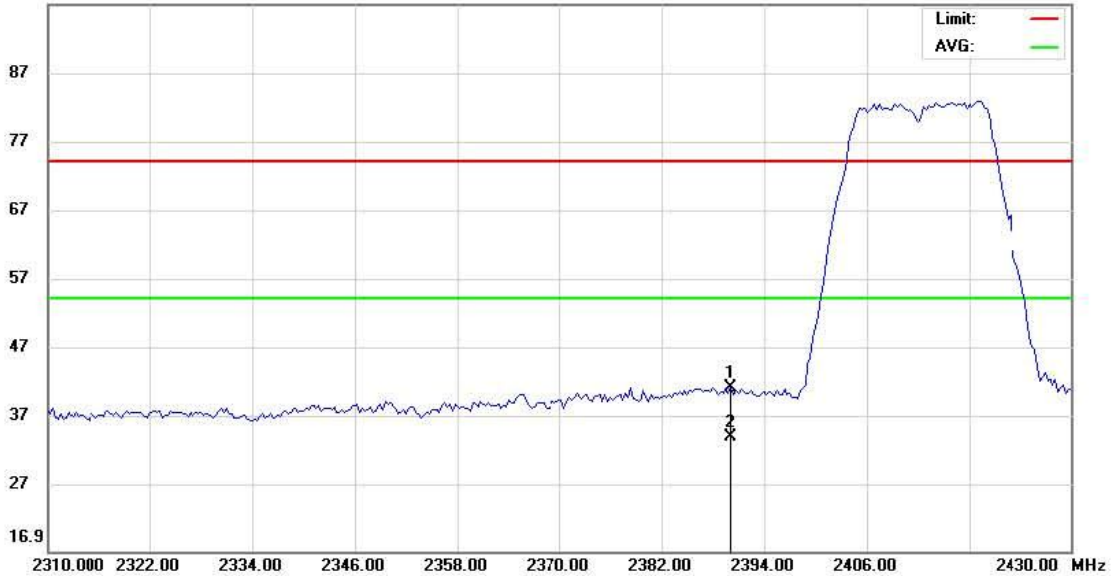
File: UD-1404

Data: #117

Date: 2015-6-30

Time: 17:30:15

96.9 dBuV/m



Site site #1

Polarization: **Horizontal**

Temperature: 24.5

Limit: FCC RF LIMIT PEAK

Power: DC 19V by Adapter

Humidity: 51.7 %

EUT: Sound bar

Distance: 3m

M/N: UD-1404

Mode: 802.11n(20MHz)-CH1

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		2390.000	49.49	-8.43	41.06	74.00	-32.94	peak		
2	*	2390.000	42.22	-8.43	33.79	54.00	-20.21	AVG		

*:Maximum data x:Over limit l:over margin

Engineer Signature: Robert



Address: No.5, Langshan 2nd Rd., North Hi-Tech Industrial park
Guangdong, China
Tel: 0755-86026850 Fax: 0755-26013350

Radiated Emission Measurement

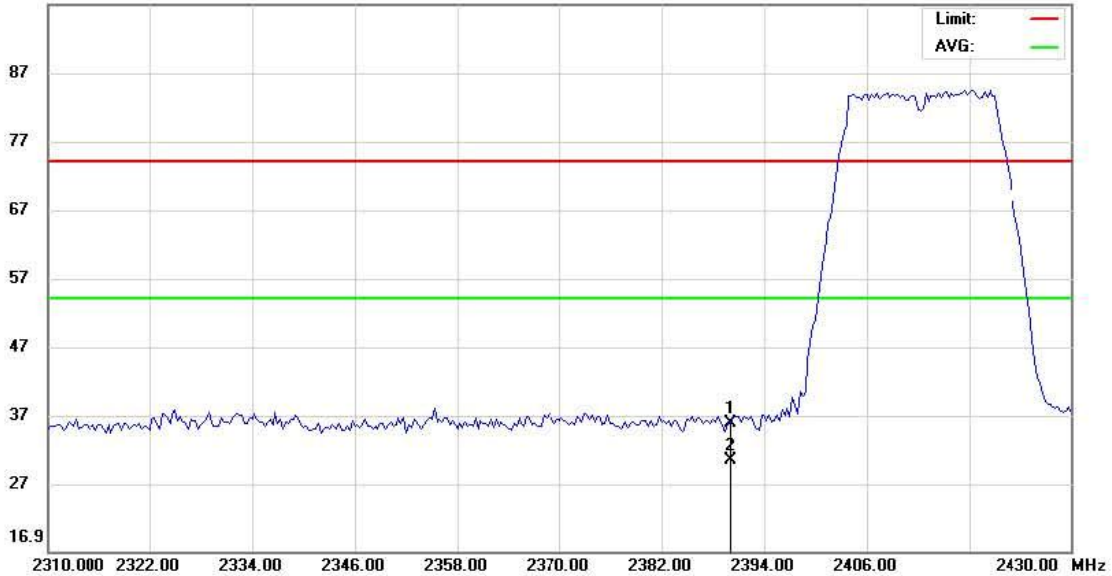
File: UD-1404

Data: #118

Date: 2015-6-30

Time: 17:44:29

96.9 dBuV/m



Site site #1

Polarization: **Vertical**

Temperature: 24.5

Limit: FCC RF LIMIT PEAK

Power: DC 19V by Adapter

Humidity: 51.7 %

EUT: Sound bar

Distance: 3m

M/N: UD-1404

Mode: 802.11n(20MHz)-CH1

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		2390.000	44.20	-8.43	35.77	74.00	-38.23	peak		
2	*	2390.000	38.80	-8.43	30.37	54.00	-23.63	AVG		

*:Maximum data x:Over limit !:over margin

Engineer Signature: Robert



Address: No.5, Langshan 2nd Rd., North Hi-Tech Industrial park
Guangdong, China
Tel: 0755-86026850 Fax: 0755-26013350

Radiated Emission Measurement

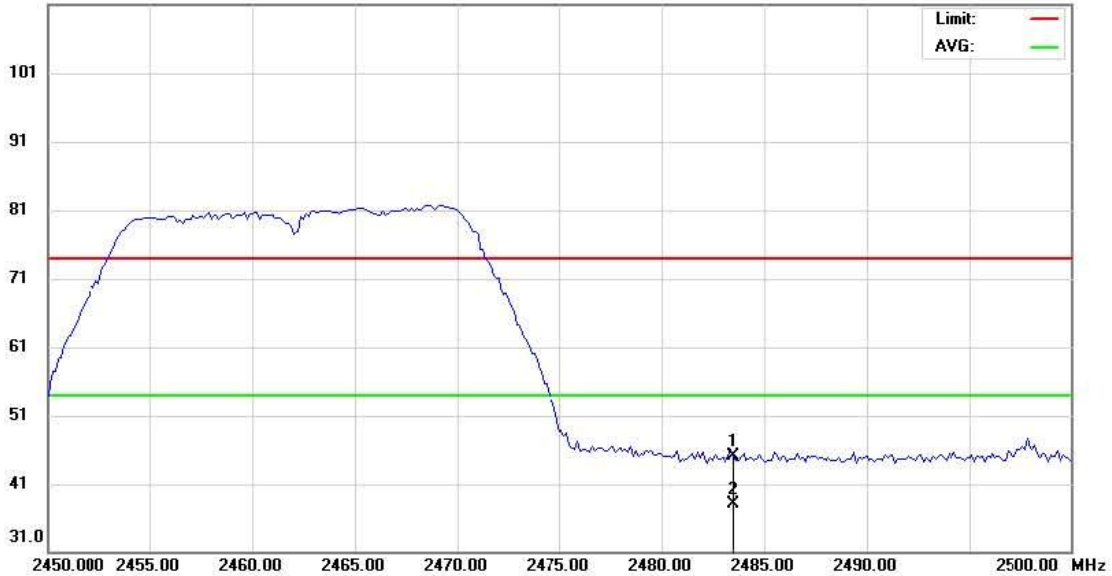
File: UD-1404

Data: #119

Date: 2015-6-30

Time: 17:52:00

111.0 dBuV/m



Site site #1

Polarization: **Vertical**

Temperature: 24.5

Limit: FCC RF LIMIT PEAK

Power: DC 19V by Adapter

Humidity: 51.7 %

EUT: Sound bar

Distance: 3m

M/N: UD-1404

Mode: 802.11n(20MHz)-CH11

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2483.500	53.42	-8.29	45.13	74.00	-28.87	peak		
2	*	2483.500	46.41	-8.29	38.12	54.00	-15.88	AVG		

*:Maximum data x:Over limit !:over margin

Engineer Signature: Robert



Address: No.5, Langshan 2nd Rd., North Hi-Tech Industrial park
Guangdong, China
Tel: 0755-86026850 Fax: 0755-26013350

Radiated Emission Measurement

File: UD-1404

Data: #120

Date: 2015-6-30

Time: 18:03:31

111.0 dBuV/m



Site site #1

Polarization: **Horizontal**

Temperature: 24.5

Limit: FCC RF LIMIT PEAK

Power: DC 19V by Adapter

Humidity: 51.7 %

EUT: Sound bar

Distance: 3m

M/N: UD-1404

Mode: 802.11n(20MHz)-CH11

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2483.500	54.54	-8.29	46.25	74.00	-27.75	peak		
2	*	2483.500	46.22	-8.29	37.93	54.00	-16.07	AVG		

*:Maximum data x:Over limit !:over margin

Engineer Signature: Robert



Address: No.5, Langshan 2nd Rd., North Hi-Tech Industrial park
Guangdong, China
Tel: 0755-86026850 Fax: 0755-26013350

Radiated Emission Measurement

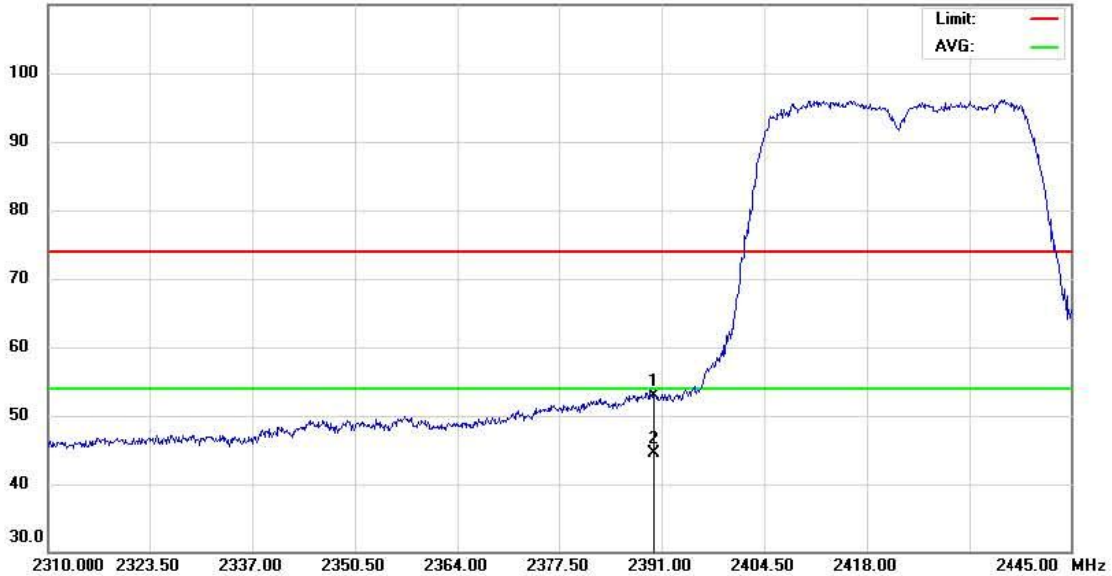
File: UD-1404

Data: #140

Date: 2015-6-30

Time: 20:44:10

110.0 dBuV/m



Site site #1

Polarization: **Horizontal**

Temperature: 26

Limit: FCC RF LIMIT PEAK

Power: DC 19V by Adapter

Humidity: 61 %

EUT: Sound bar

Distance:

M/N: UD-1404

Mode: 802.11n(40MHz)-CH1

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2390.000	42.46	10.36	52.82	74.00	-21.18	peak		
2	*	2390.000	34.19	10.36	44.55	54.00	-9.45	AVG		

*:Maximum data x:Over limit !:over margin

Engineer Signature:



Address: No.5, Langshan 2nd Rd., North Hi-Tech Industrial park
Guangdong, China
Tel: 0755-86026850 Fax: 0755-26013350

Radiated Emission Measurement

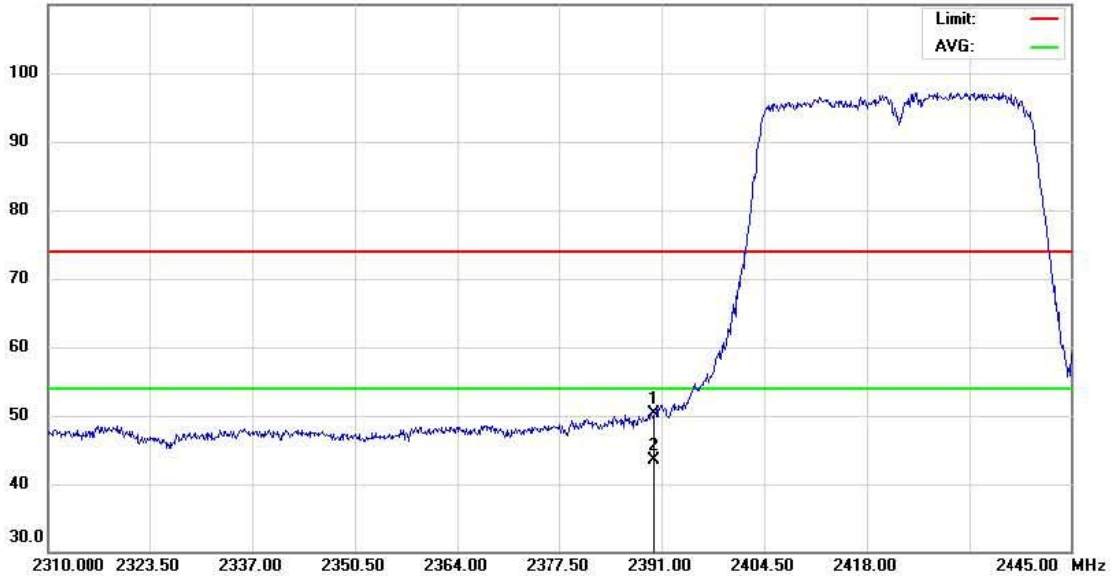
File: UD-1404

Data: #139

Date: 2015-6-30

Time: 20:29:08

110.0 dBuV/m



Site site #1

Polarization: **Vertical**

Temperature: 26

Limit: FCC RF LIMIT PEAK

Power: DC 19V by Adapter

Humidity: 61 %

EUT: Sound bar

Distance:

M/N: UD-1404

Mode: 802.11n(40MHz)-CH1

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2390.000	39.84	10.36	50.20	74.00	-23.80	peak		
2	*	2390.000	33.10	10.36	43.46	54.00	-10.54	AVG		

*:Maximum data x:Over limit !:over margin

Engineer Signature:



Address: No.5, Langshan 2nd Rd., North Hi-Tech Industrial park
Guangdong, China
Tel: 0755-86026850 Fax: 0755-26013350

Radiated Emission Measurement

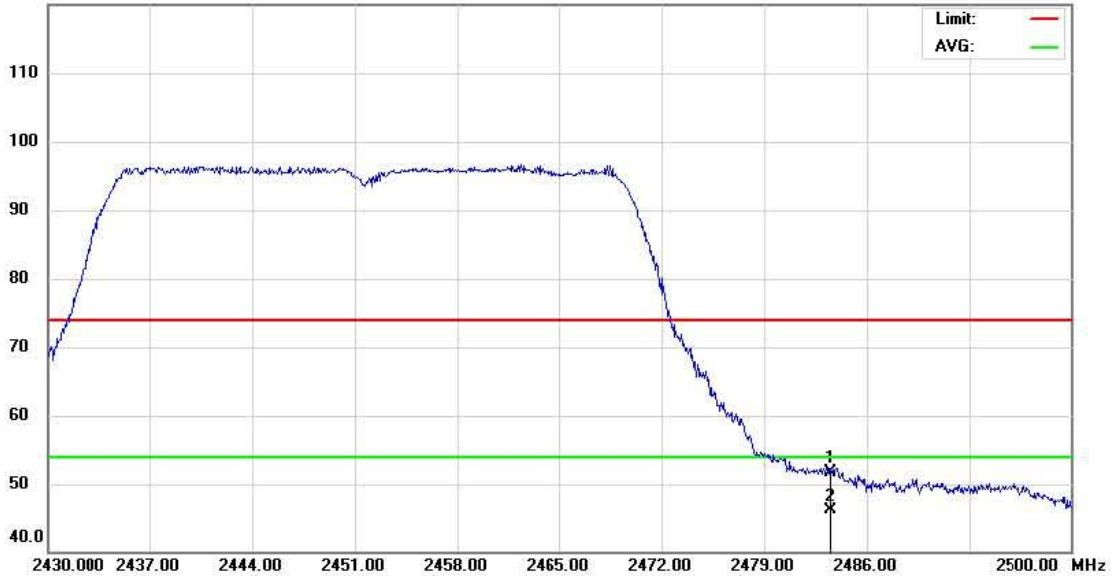
File: UD-1404

Data: #142

Date: 2015-6-30

Time: 21:14:33

120.0 dBuV/m



Site site #1

Polarization: **Vertical**

Temperature: 26

Limit: FCC RF LIMIT PEAK

Power: DC 19V by Adapter

Humidity: 61 %

EUT: Sound bar

Distance:

M/N: UD-1404

Mode: 802.11n(40MHz)-CH9

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2483.500	40.94	10.73	51.67	74.00	-22.33	peak		
2	*	2483.500	35.44	10.73	46.17	54.00	-7.83	AVG		

*:Maximum data x:Over limit !:over margin

Engineer Signature:



Address: No.5, Langshan 2nd Rd., North Hi-Tech Industrial park
Guangdong, China
Tel: 0755-86026850 Fax: 0755-26013350

Radiated Emission Measurement

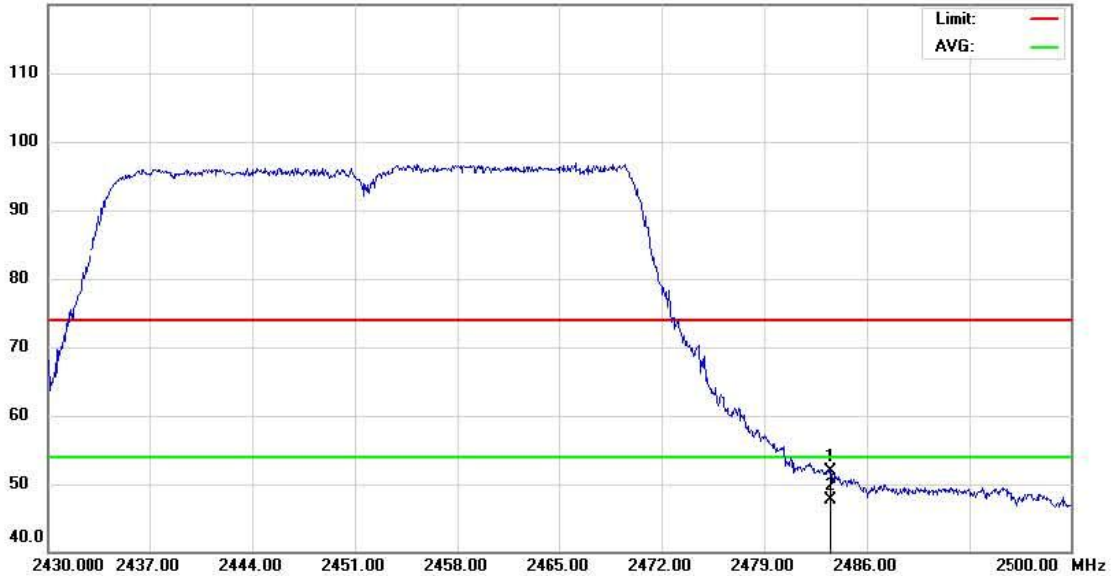
File: UD-1404

Data: #141

Date: 2015-6-30

Time: 20:59:09

120.0 dBuV/m



Site site #1

Polarization: **Horizontal**

Temperature: 26

Limit: FCC RF LIMIT PEAK

Power: DC 19V by Adapter

Humidity: 61 %

EUT: Sound bar

Distance:

M/N: UD-1404

Mode: 802.11n(40MHz)-CH9

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		2483.500	41.15	10.73	51.88	74.00	-22.12	peak		
2	*	2483.500	36.98	10.73	47.71	54.00	-6.29	AVG		

*:Maximum data x:Over limit !:over margin

Engineer Signature:

End of Report