§15.247(d) - 100 KHZ BANDWIDTH OF BAND EDGES

Standard Applicable

According to §15.247(d), in *any* 100 kHz bandwidth outside the frequency bands 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. 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)).

Measurement Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency 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 100kHz 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.

Equipment Lists

Manufacturer	Description	Model	Serial Number	Cal. Date
Hewlett Packard	Spectrum Analyzer	8564E	3943A01781	10/04/2004

* Statement of Traceability: BACL Corp. attests that all calibrations have been performed per the NVLAP requirements, traceable to the NIST.

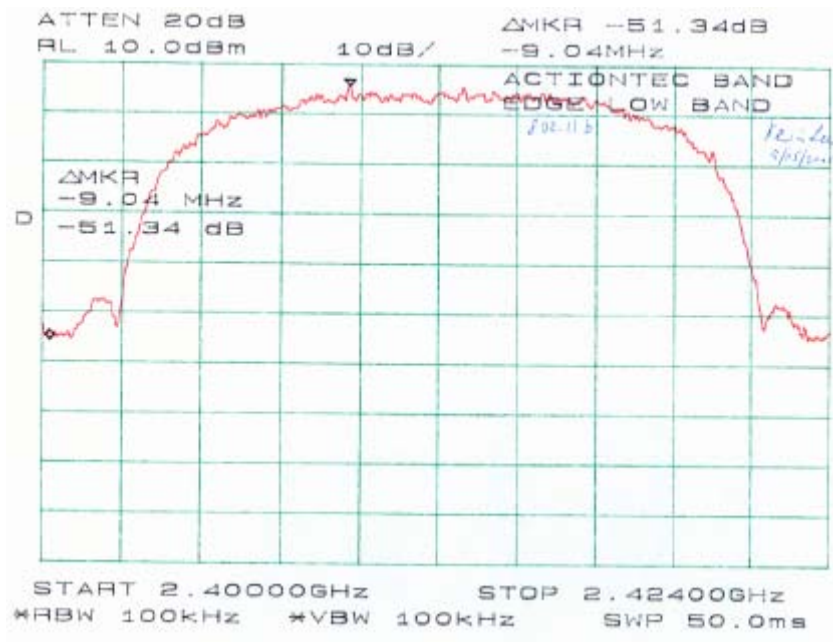### Measurement Result

Environmental Conditions

Temperature:	25° C
Relative Humidity:	46%
ATM Pressure:	1018 mbar

*The testing was performed by Kevin Lee on 2005-09-16.
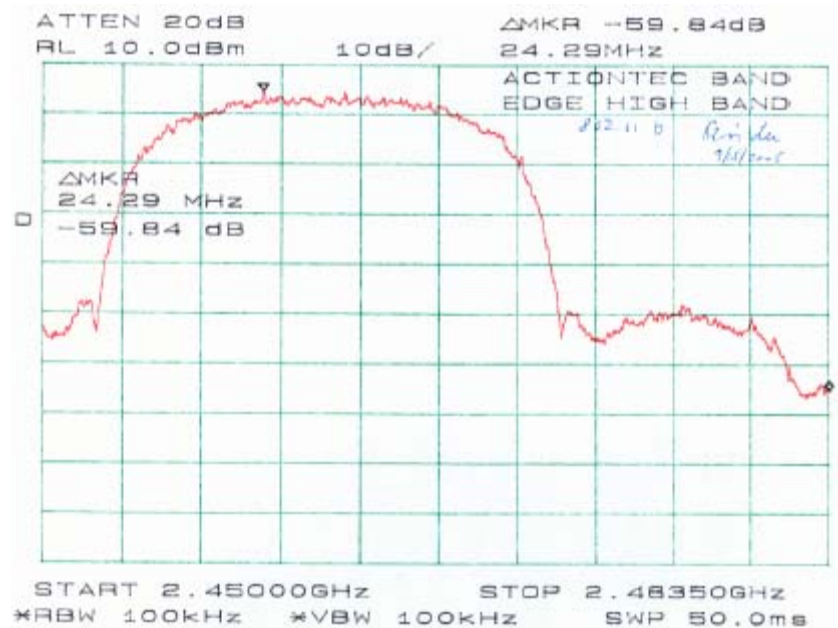
Please refer to following pages for plots of band edge.
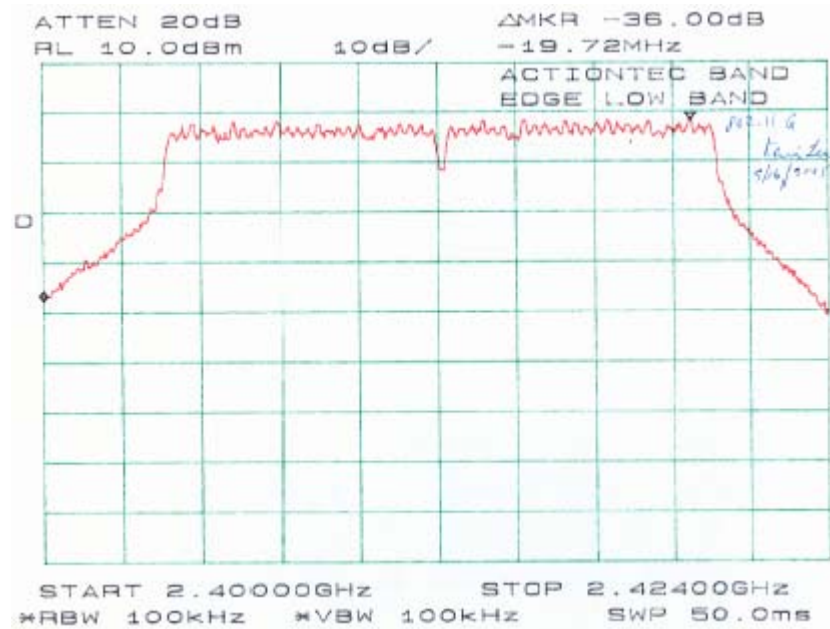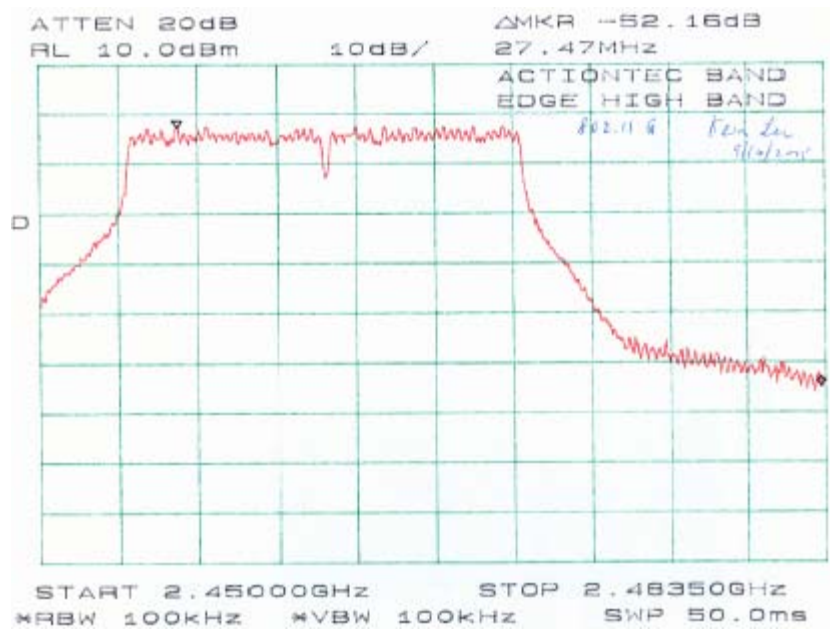
802.11b

Low Channel

High Channel

802.11g

Low Channel

High Channel

§15.247(e) - POWER SPECTRAL DENSITY

Standard Applicable

According to §15.247 (e), for direct sequence systems, the peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

Measurement Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT was set without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
3. Adjust the center frequency of SA on any frequency be measured and set SA to 1.5MHz span mode. And then, set RBW and VBW of spectrum analyzer to proper value. (DTS)
4. Repeat above procedures until all frequencies measured were complete.

Equipment Lists

Manufacturer	Description	Model	Serial Number	Cal. Date
Hewlett Packard	Spectrum Analyzer	8564E	3943A01781	10/04/2004

* Statement of Traceability: BACL Corp. attests that all calibrations have been performed per the NVLAP requirements, traceable to the NIST.

Measurement Result

Environmental Conditions

Temperature:	21° C
Relative Humidity:	47%
ATM Pressure:	1010 mbar

The testing was performed by Daniel Deng on 2005-10-05.

Test Result

802.11b

Channel	Frequency (MHz)	Peak Power Spectral Density (dBm)	Standard (dBm)	Result
Low	2412	-9.0	≤ 8	Pass
Mid	2442	-10.5	≤ 8	Pass
High	2462	-11.0	≤ 8	Pass

802.11g

Channel	Frequency (MHz)	Peak Power Spectral Density (dBm)	Standard (dBm)	Result
Low	2412	-14.5	≤ 8	Pass
Mid	2442	-14.0	≤ 8	Pass
High	2462	-15.33	≤ 8	Pass

Please refer to the following plots

Plots for 802.11b

Low Channel


```
*ATTEN  10dB                    MKR  -9.00dBm
 RL  1.5dBm         10dB/       2.412130GHz
                               ACTION 802.11B
                               L.C
 MKR
 2.412130  GHz
 -9.00  dBm

R

 CENTER  2.412000GHz           SPAN  1.500MHz
*RBW  3.0kHz    *VBW  3.0kHz    *SWP  300sec
```

Mid. Channel


```
*ATTEN  10dB                    MKR  -10.50dBm
 RL  1.5dBm         10dB/       2.437130GHz
                               ACTION 802.11B
                               M.C
 MKR
 2.437130  GHz
 -10.50  dBm

R

 CENTER  2.437000GHz           SPAN  1.500MHz
*RBW  3.0kHz    *VBW  3.0kHz    *SWP  300sec
```
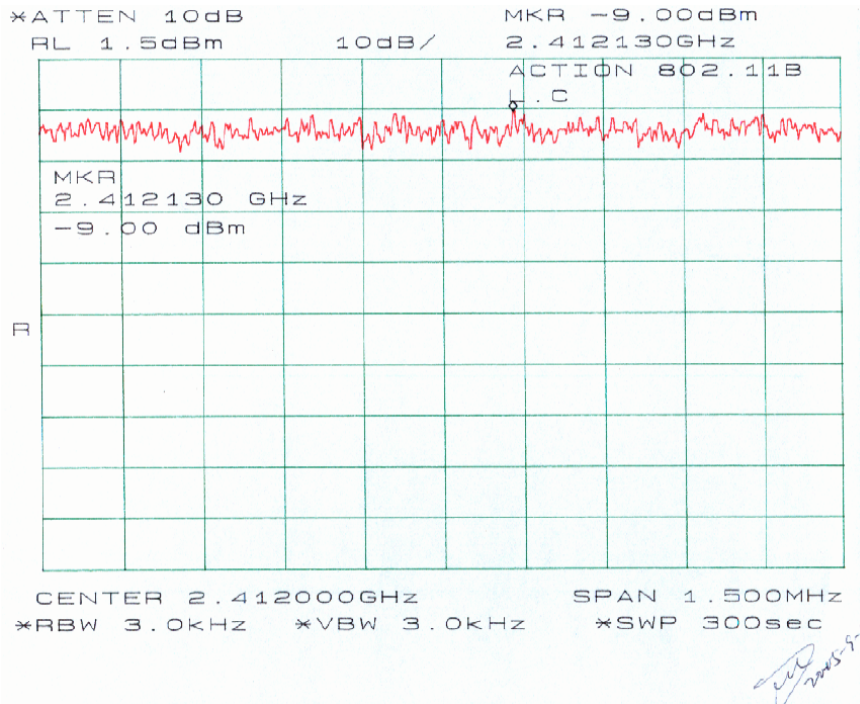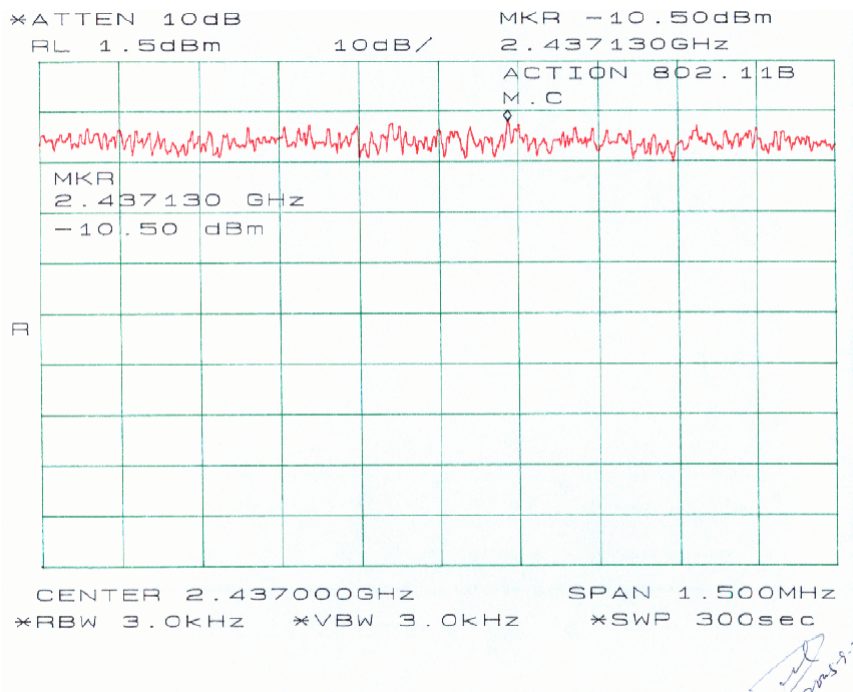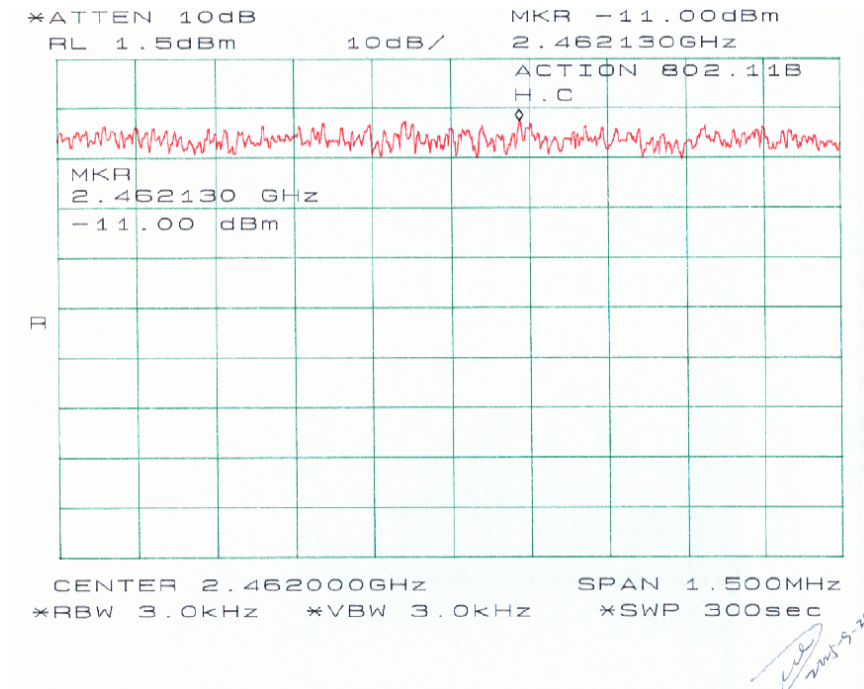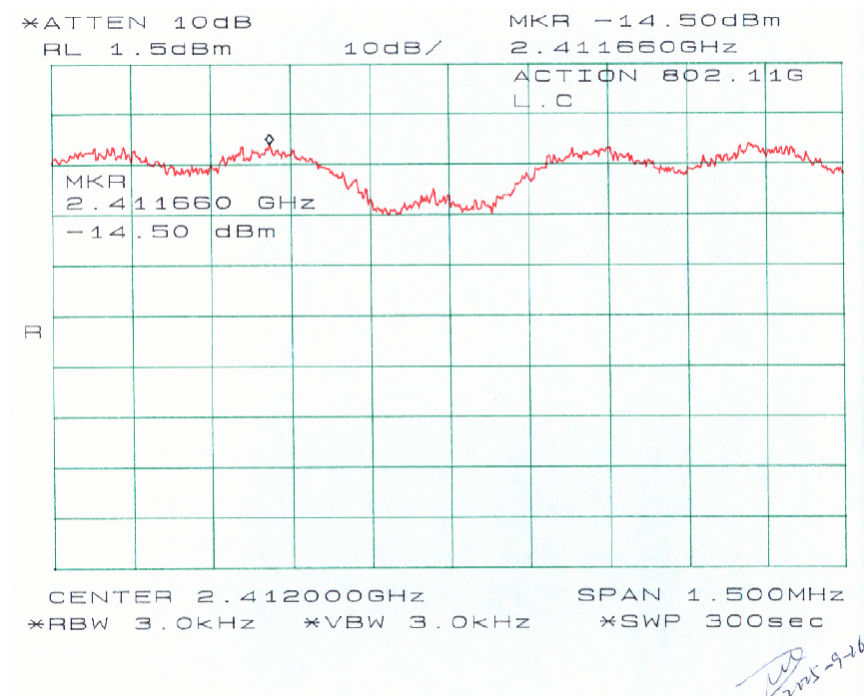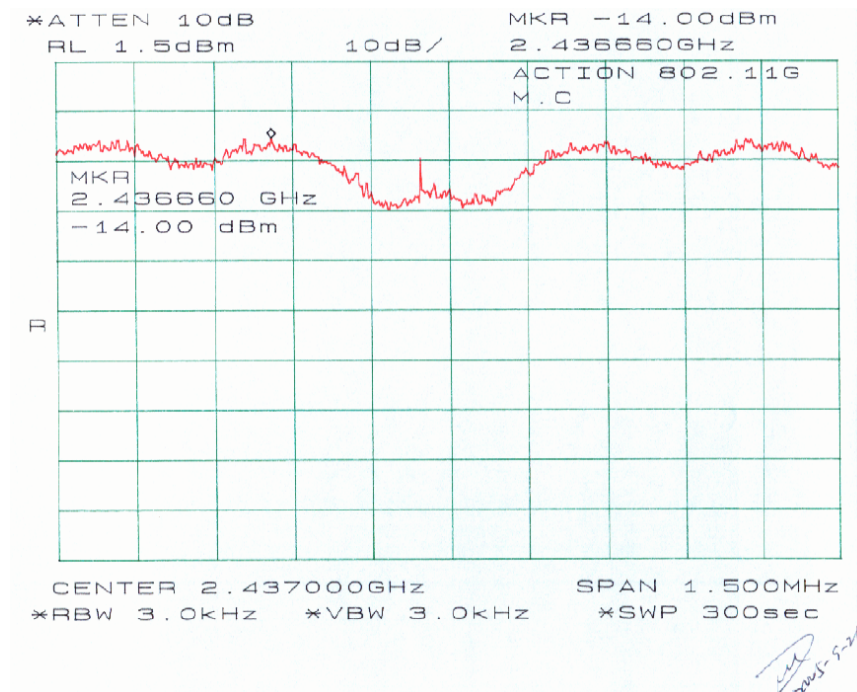
High Channel

Plots for 802.11g

Low Channel

Mid. Channel

High Channel