

## 5.7 BAND EDGES MEASUREMENT

### 5.7.1 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSP	1093.4495.30	Dec. 19, 2003

**NOTE:**

- 1.The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.
- 2.The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

### 5.7.2 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer via a low lose cable. Set RBW of spectrum analyzer to 1MHz and VBW of spectrum analyzer to 300Hz with suitable frequency span including 100 MHz bandwidth from band edge. The band edges was measured and recorded.

### 5.7.3 EUT OPERATING CONDITION

The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.



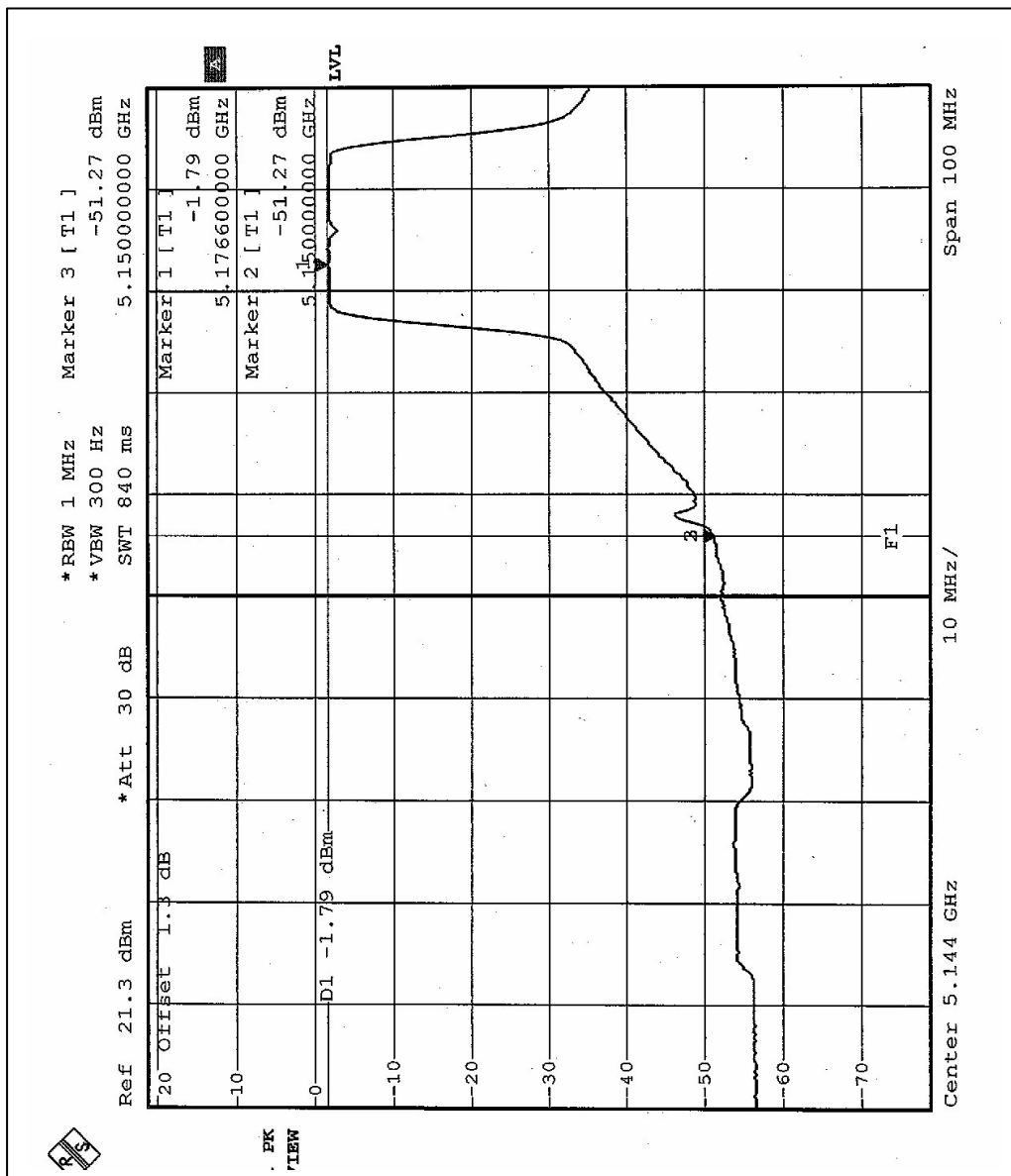
#### 5.7.4 TEST RESULTS

For signals in the restricted bands above and below the 5.15 to 5.35 GHz allocated band a measurement was made of the amplitude of the spurious emissions with respect to the intentional signals. The relative amplitude, in dBc, was applied to the average and peak field strength of the intentional signal made on the OATS to calculate the field strength of the unintentional signals.

The spectrum plots (Average RBW=1MHz, VBW=300Hz) are attached on the following 4 pages.

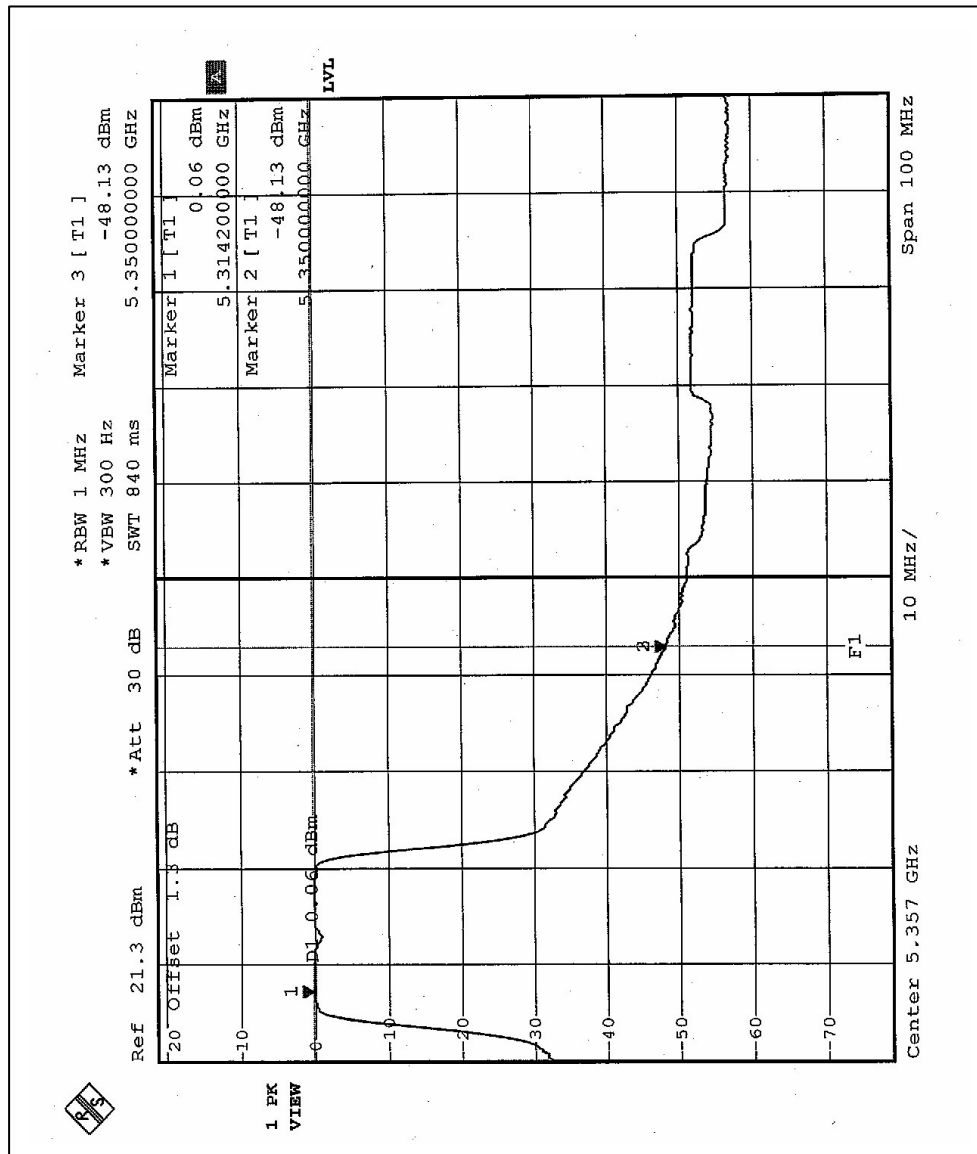
Normal Mode: Channel 1 (5180 MHz)

The band edge emission plot on the following page shows 49.48dBc (Average) between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 (normal mode) is 97.9dBuV/m, so the maximum field strength in restrict band is  $97.9 - 49.48 = 48.42$  dBuV/m which is under 54dBuV/m limit.



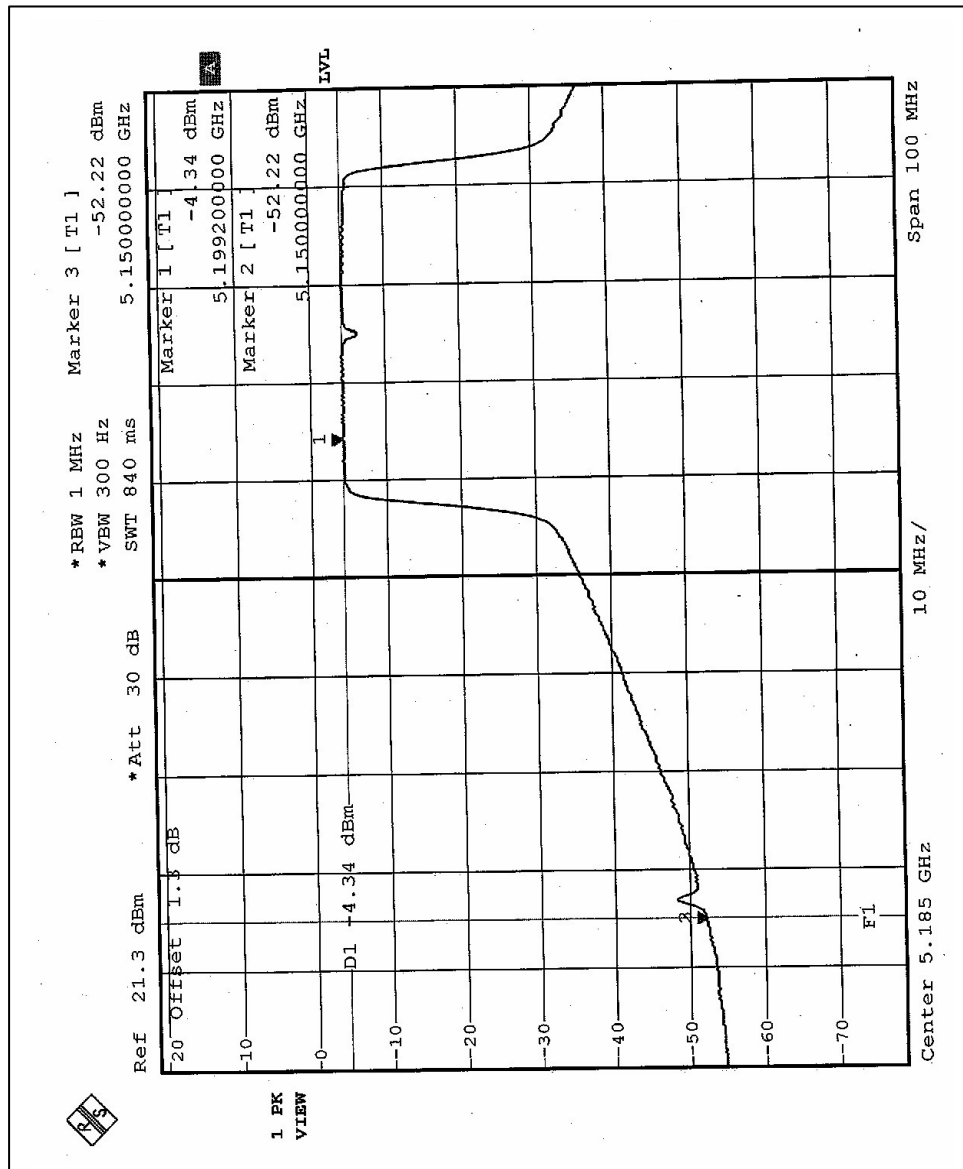
Normal Mode: Channel 8 (5320 MHz)

The band edge emission plot on the following page shows 48.19dBc (Average) between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 8(normal mode) is 96.8dBuV/m, so the maximum field strength in restrict band is  $96.8 - 48.19 = 48.61$  dBuV/m which is under 54dBuV/m limit.



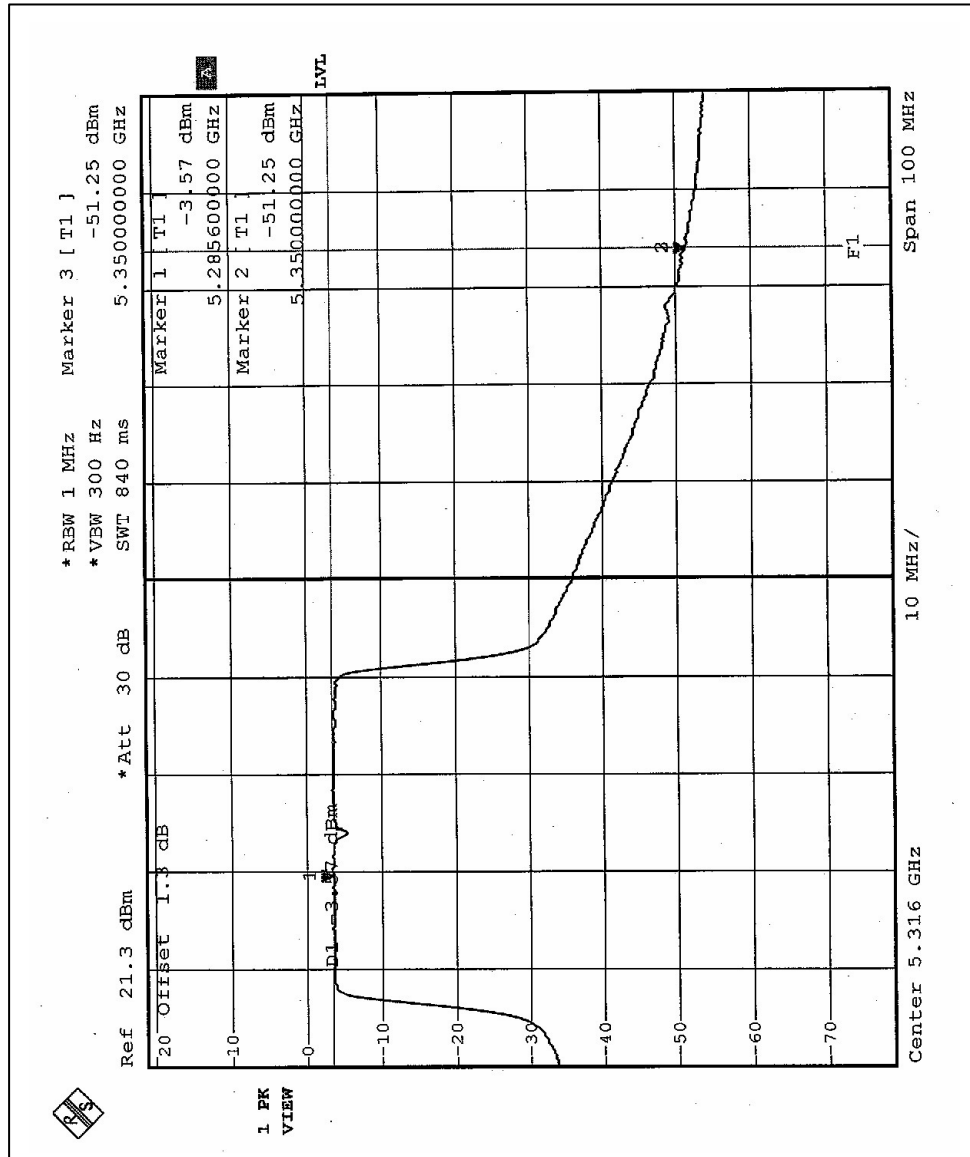
Turbo Mode: Channel 1 (5210 MHz)

The band edge emission plot on the following page shows 47.88dBc (Average) between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 (turbo mode) is 97.4dBuV/m, so the maximum field strength in restrict band is  $97.4 - 47.88 = 49.52$ dBuV/m which is under 54dBuV/m limit.



Turbo Mode: Channel 3 (5290 MHz)

The band edge emission plot on the following page shows 46.68dBc (Average) between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 8(turbo mode) is 96.6dBuV/m, so the maximum field strength in restrict band is  $96.6 - 46.68 = 49.92$ dBuV/m which is under 54dBuV/m limit.



**FOR FREQUENCY 5.725~5.850GHz****5.8 6dB BANDWIDTH MEASUREMENT****5.8.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT**

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

**5.8.2 TEST INSTRUMENTS**

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSP	1093.4495.30	Dec. 19, 2003

**NOTE:**

- 1.The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.
- 2.The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

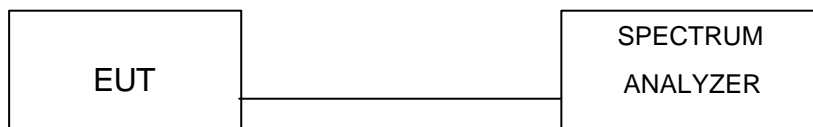
### 5.8.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100 kHz RBW and 100 kHz VBW. The 6 dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6 dB.

### 5.8.4 DEVIATION FROM TEST STANDARD

No deviation

### 5.8.5 TEST SETUP



### 5.8.6 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

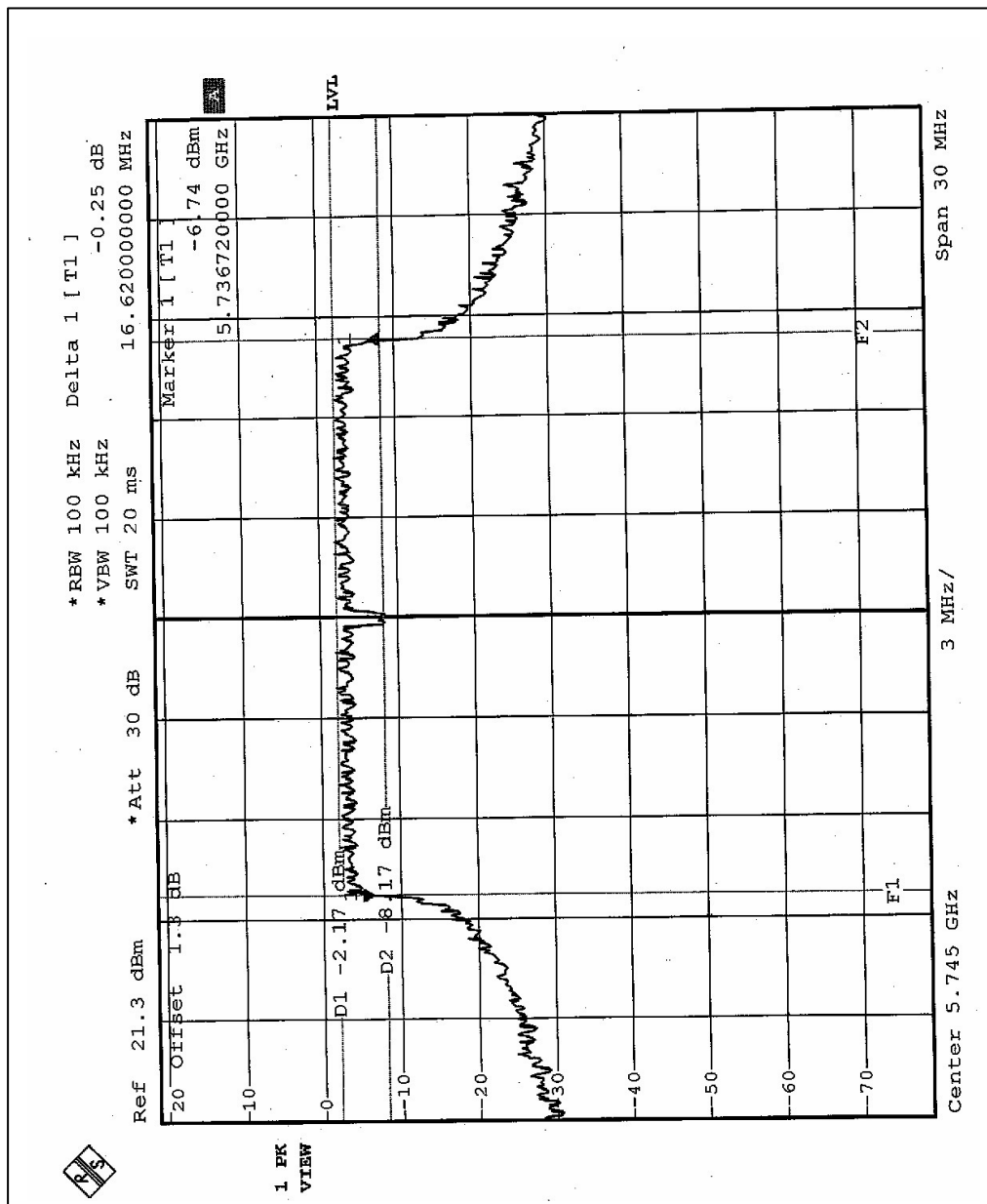
## 5.8.7 TEST RESULTS

<b>EUT</b>	802.11a/b/g PCI adapter card	<b>MODEL</b>	8482-WD
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60Hz	<b>ENVIRONMENTAL CONDITIONS</b>	27deg.C, 56%RH, 978 hPa
<b>TEST MODE</b>	Normal	<b>TEST BY</b>	Tony Chen

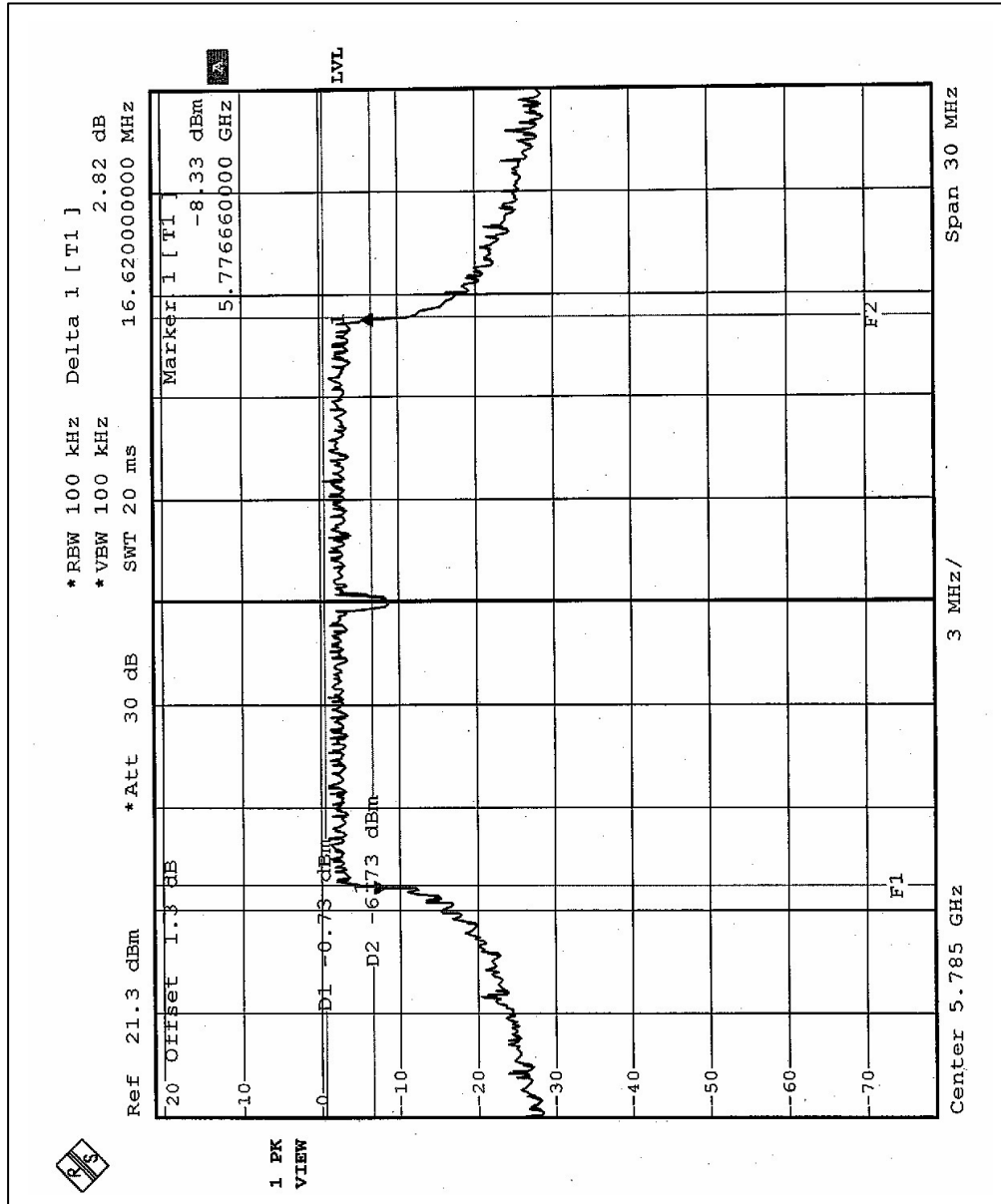
<b>CHANNEL</b>	<b>CHANNEL FREQUENCY (MHz)</b>	<b>6 dB BANDWIDTH (MHz)</b>	<b>MINIMUM LIMIT (MHz)</b>	<b>PASS/FAIL</b>
9	5745	16.62	0.5	PASS
11	5785	16.62	0.5	PASS
13	5825	16.56	0.5	PASS



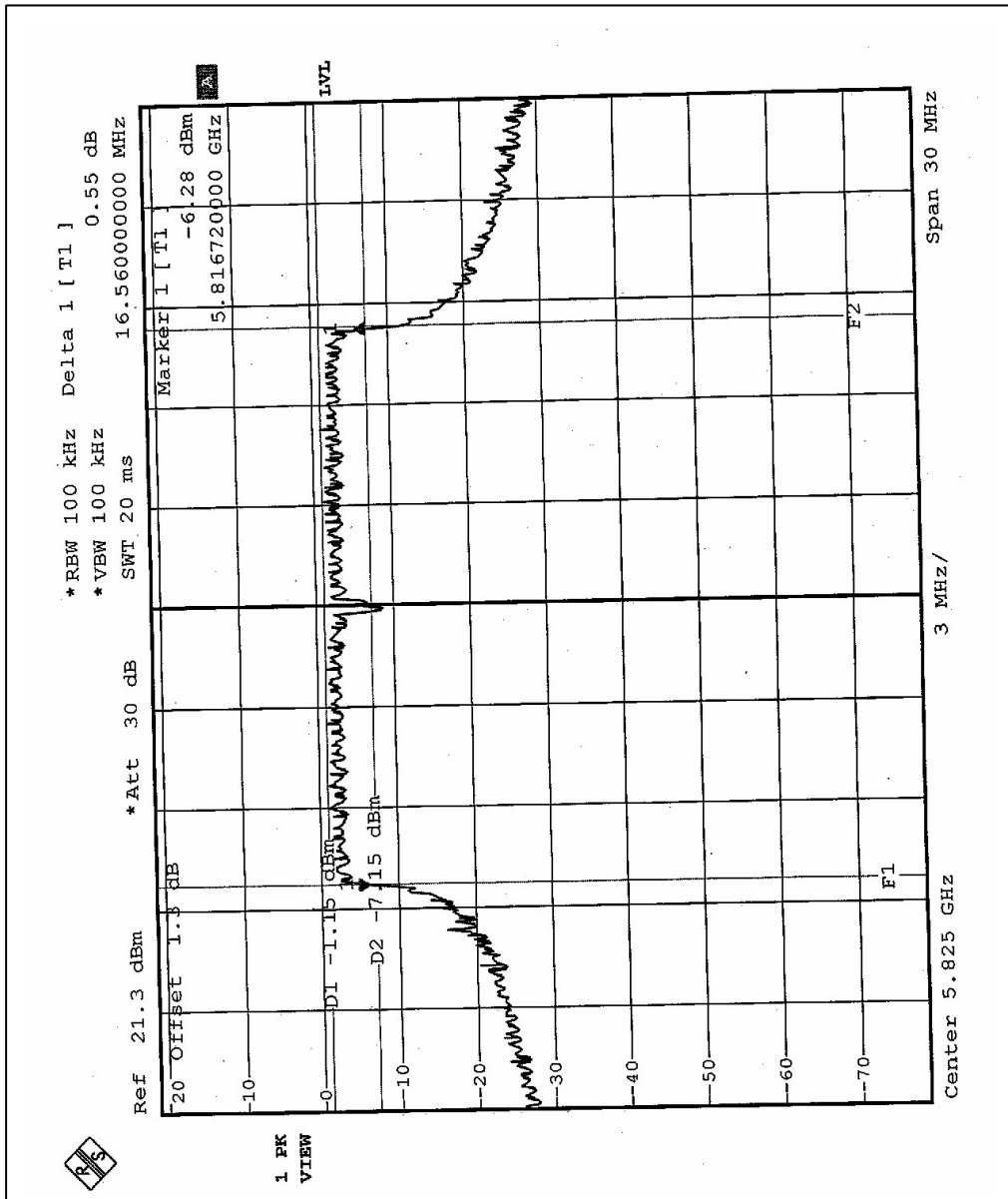
CH9



CH11



CH13

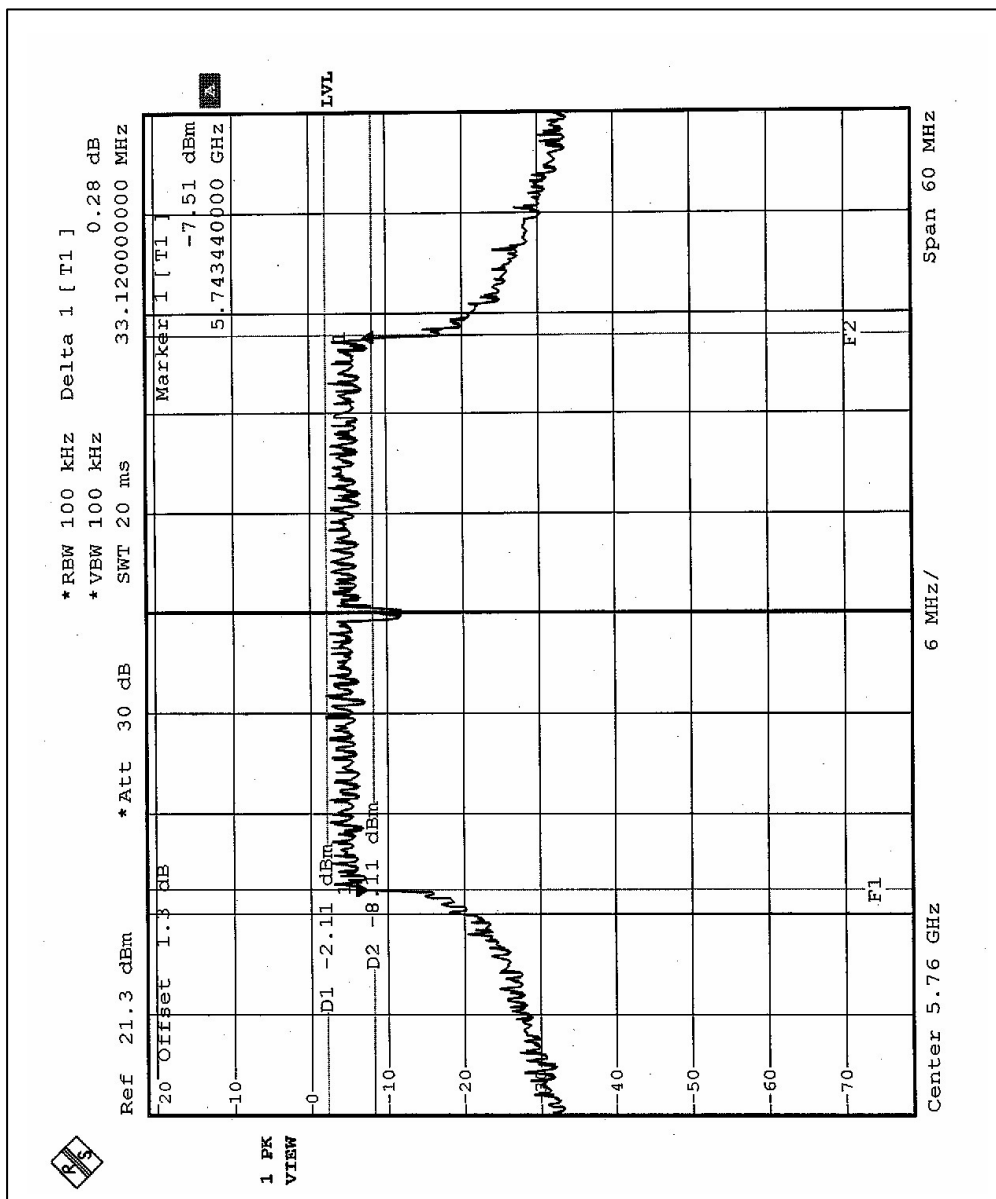


<b>EUT</b>	802.11a/b/g PCI adapter card	<b>MODEL</b>	8482-WD
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60Hz	<b>ENVIRONMENTAL CONDITIONS</b>	27deg.C, 56%RH, 978 hPa
<b>TEST MODE</b>	Turbo	<b>TEST BY</b>	Tony Chen

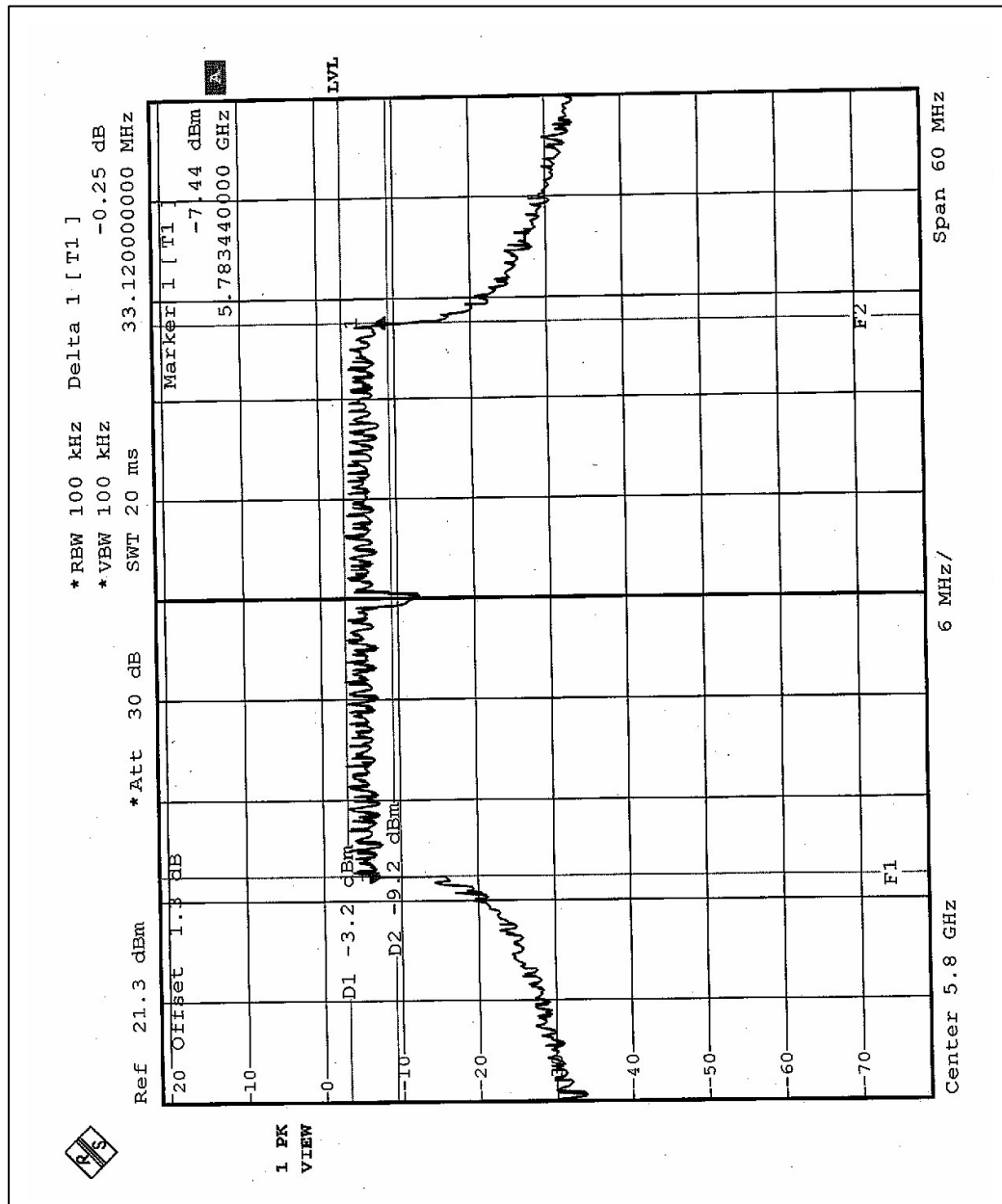
<b>CHANNEL</b>	<b>CHANNEL FREQUENCY (MHz)</b>	<b>6 dB BANDWIDTH (MHz)</b>	<b>MINIMUM LIMIT (MHz)</b>	<b>PASS/FAIL</b>
4	5760	33.12	0.5	PASS
5	5800	33.12	0.5	PASS



CH4



CH5



## 5.9 MAXIMUM PEAK OUTPUT POWER

### 5.9.1 LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT

The Maximum Peak Output Power Measurement is 30dBm.

### 5.9.2 INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
SINGLE CHANNEL POWER METER	NRVS	100026	Mar. 06, 2004
PEAK POWER SENSOR	NRV-Z32	100013	Mar. 06, 2004

**NOTE:**

1. The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

### 5.9.3 TEST PROCEDURES

The transmitter output was connected to the peak power meter.

### 5.9.4 DEVIATION FROM TEST STANDARD

No deviation

### 5.9.5 TEST SETUP



### 5.9.6 EUT OPERATING CONDITIONS

Same as Item 4.3.6

## 5.9.7 TEST RESULTS

<b>EUT</b>	802.11a/b/g PCI adapter card	<b>MODEL</b>	8482-WD
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60Hz	<b>ENVIRONMENTAL CONDITIONS</b>	24deg.C, 64%RH, 978 hPa
<b>TEST MODE</b>	Normal	<b>TEST BY</b>	Tony Chen

<b>CHANNEL</b>	<b>CHANNEL FREQUENCY (MHz)</b>	<b>PEAK POWER OUTPUT (dBm)</b>	<b>PEAK POWER LIMIT (dBm)</b>	<b>PASS/FAIL</b>
9	5745	14.92	30	PASS
11	5785	14.90	30	PASS
13	5825	14.88	30	PASS

<b>EUT</b>	802.11a/b/g PCI adapter card	<b>MODEL</b>	8482-WD
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60Hz	<b>ENVIRONMENTAL CONDITIONS</b>	24deg.C, 64%RH, 978 hPa
<b>TEST MODE</b>	Turbo	<b>TEST BY</b>	Tony Chen

<b>CHANNEL</b>	<b>CHANNEL FREQUENCY (MHz)</b>	<b>PEAK POWER OUTPUT (dBm)</b>	<b>PEAK POWER LIMIT (dBm)</b>	<b>PASS/FAIL</b>
4	5760	14.87	30	PASS
5	5800	14.82	30	PASS

### 5.9.8 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

### 5.9.9 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSP	1093.4495.30	Dec. 19, 2003

**NOTE:**

- 1.The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.
- 2.The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

#### 5.9.10 TEST PROCEDURE

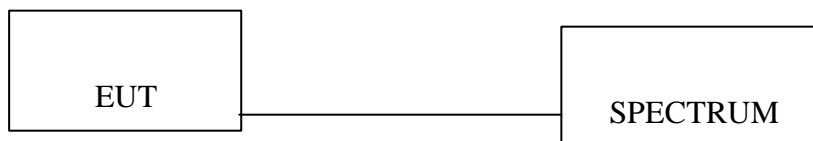
The transmitter output was connected to the spectrum analyzer through an attenuator, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 3 kHz RBW and 30 kHz VBW, set sweep time = span/3 kHz. The power spectral density was measured and recorded.

The sweep time is allowed to be longer than span/3 kHz for a full response of the mixer in the spectrum analyzer.

#### 5.9.11 DEVIATION FROM TEST STANDARD

No deviation

#### 5.9.12 TEST SETUP



#### 5.9.13 EUT OPERATING CONDITION

Same as Item 4.3.6