

### 5.5.3 TEST PROCEDURES

1. The transmitter output was connected to the spectrum analyzer.
2. Set RBW=1MHz, VBW=3MHz. The PPSD is the highest level found across the emission in any 1MHz band.

### 5.5.4 DEVIATION FROM TEST STANDARD

No deviation

### 5.5.5 TEST SETUP



### 5.5.6 EUT OPERATING CONDITIONS

Same as 5.3.6

## 5.5.7 TEST RESULTS

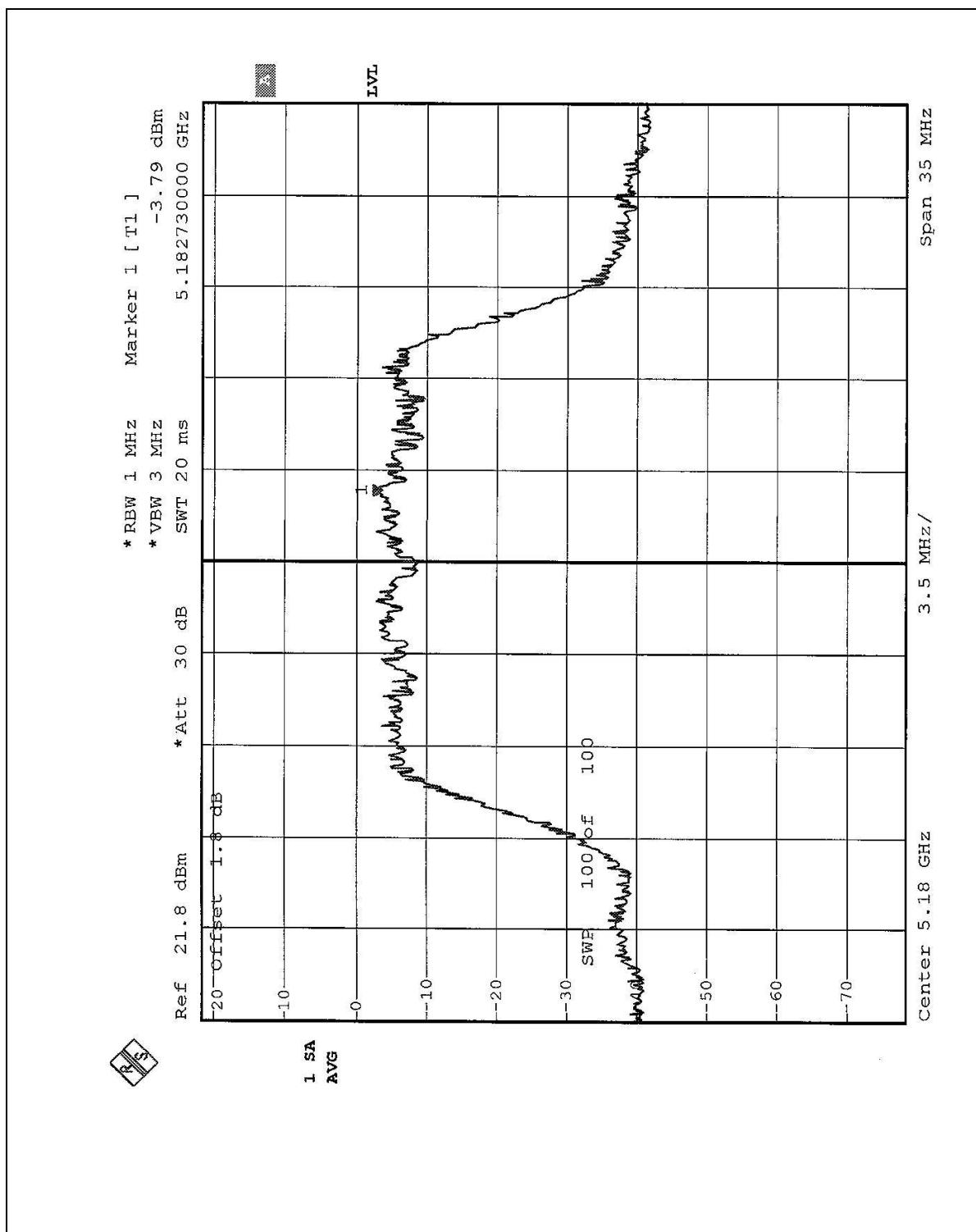
<b>EUT</b>	Dual-Band Wireless A+G Access Point	<b>MODEL</b>	WAP55AG
<b>MODE</b>	Normal	<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz
<b>ENVIRONMENTAL CONDITIONS</b>	23deg. C, 64%RH, 1005hPa	<b>TESTED BY</b>	Steven Lu

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1 MHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	5180	-3.79	4	PASS
4	5240	-4.59	4	PASS
5	5260	-1.80	11	PASS
8	5320	-2.78	11	PASS

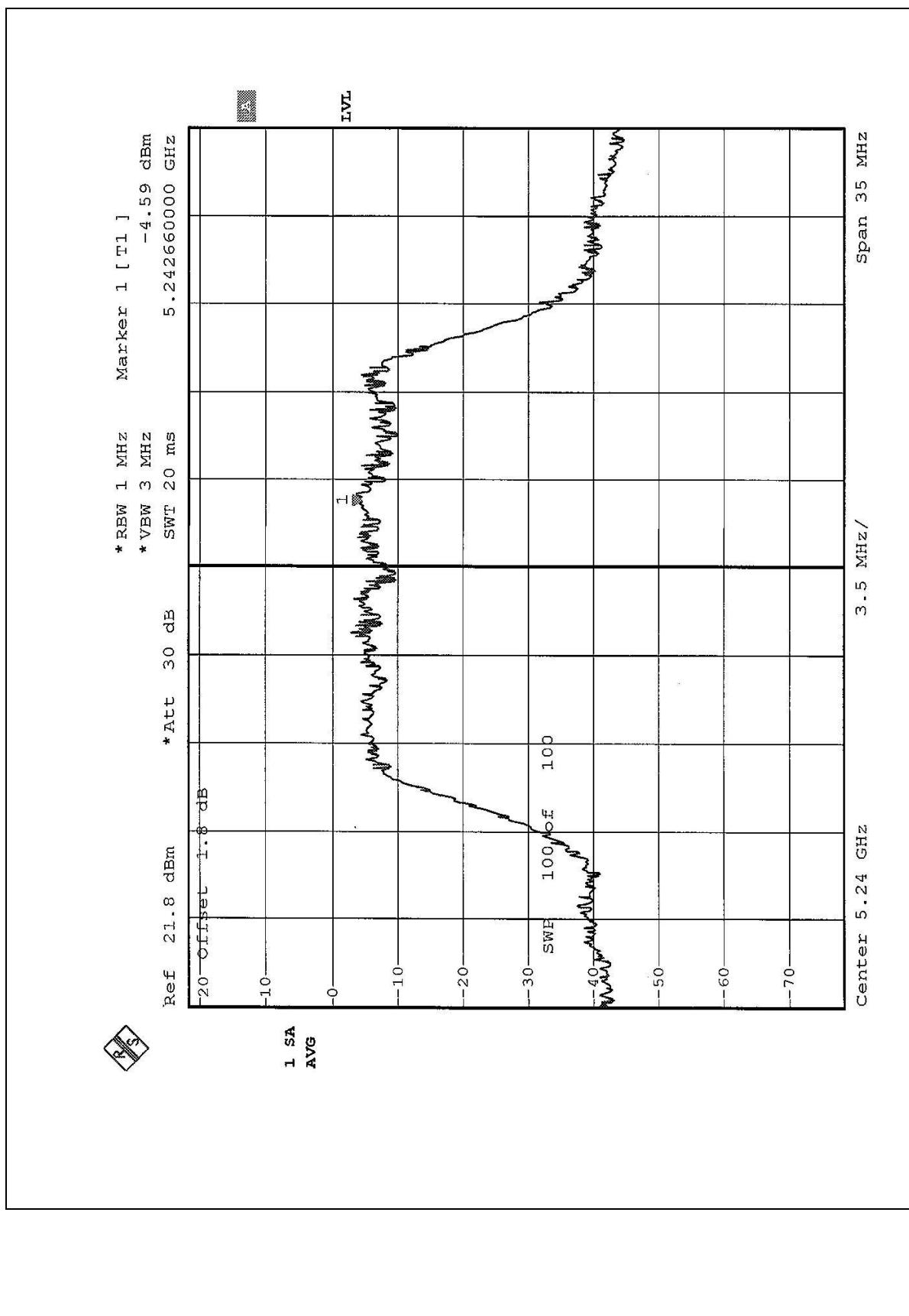
FCC ID: PKW-WAP55AG



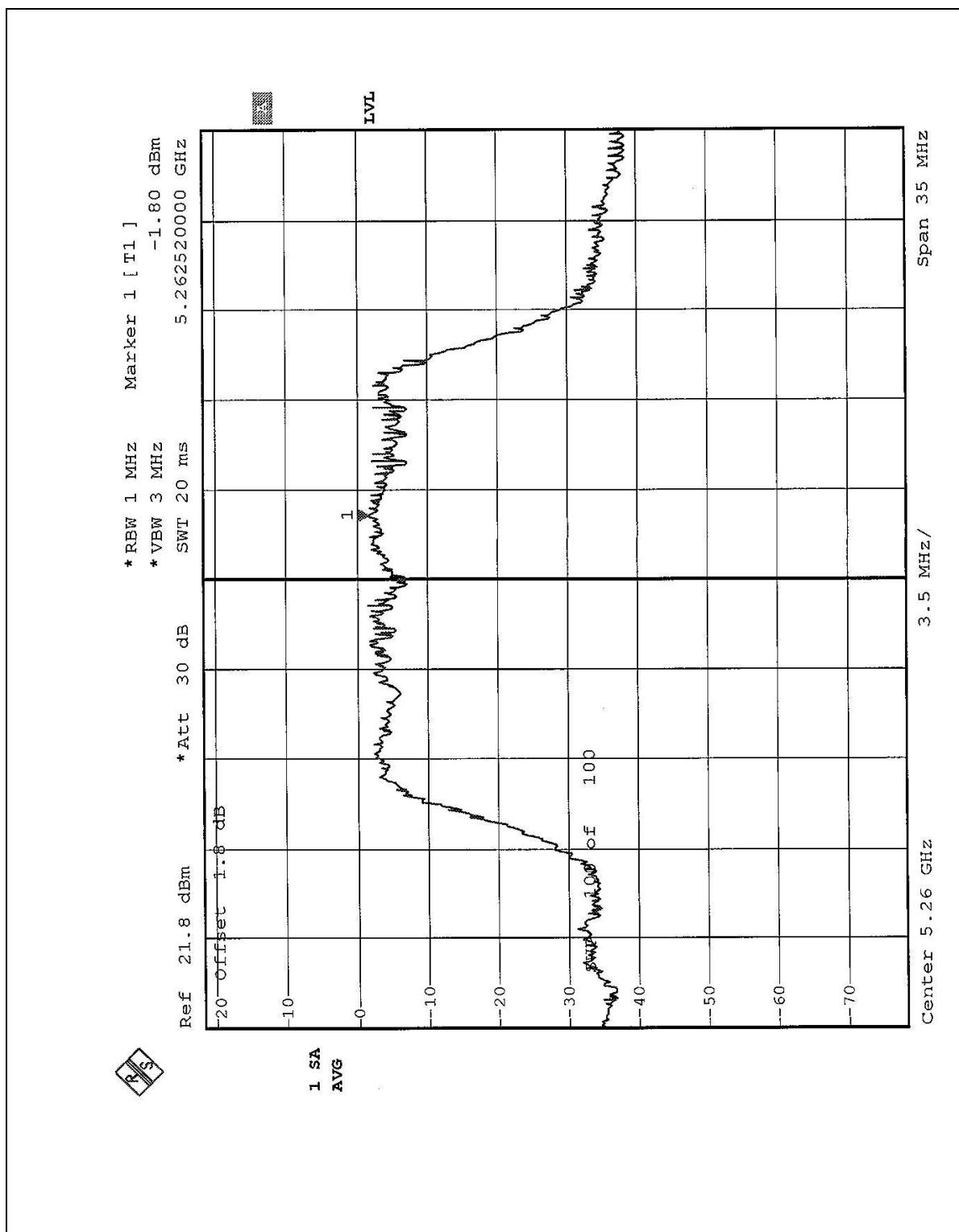
CHANNEL 1



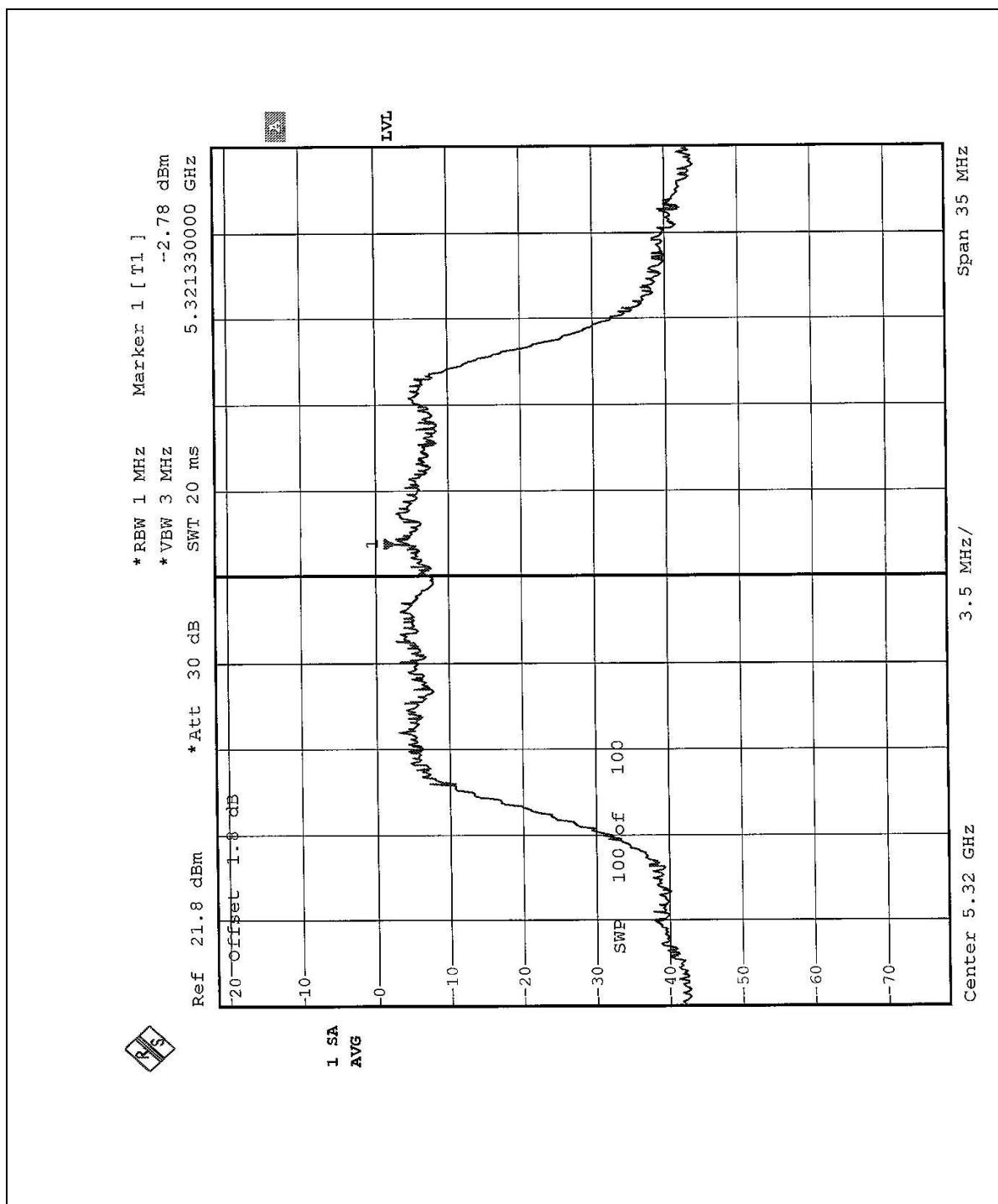
## CHANNEL 4



## CHANNEL 5



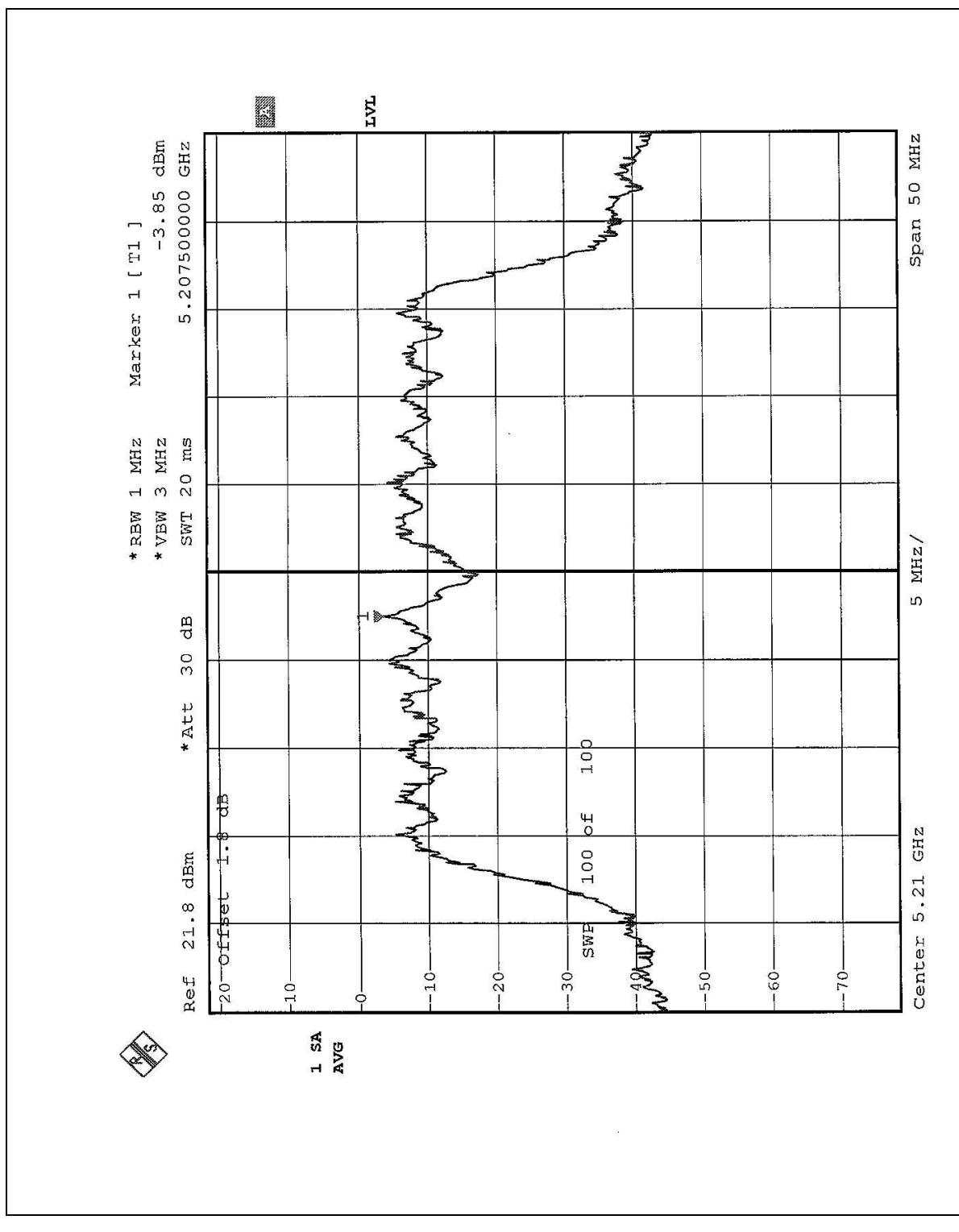
## CHANNEL 8



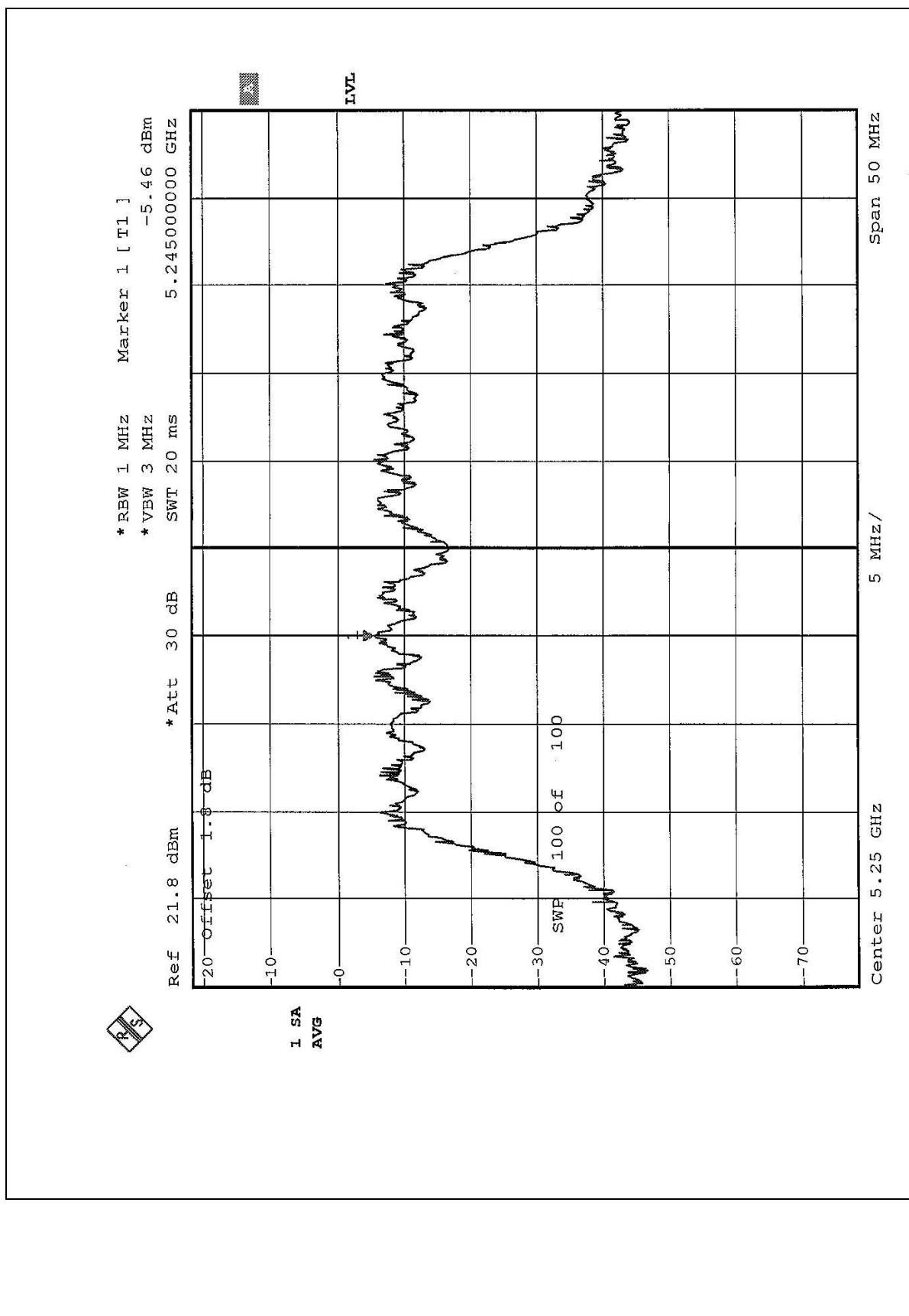
<b>EUT</b>	Dual-Band Wireless A+G Access Point	<b>MODEL</b>	WAP55AG
<b>MODE</b>	Turbo	<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz
<b>ENVIRONMENTAL CONDITIONS</b>	24deg. C, 65%RH, 1005hPa	<b>TESTED BY</b>	Steven Lu

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1 MHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	5210	-3.85	4	PASS
2	5250	-5.46	4	PASS
3	5290	-6.65	11	PASS

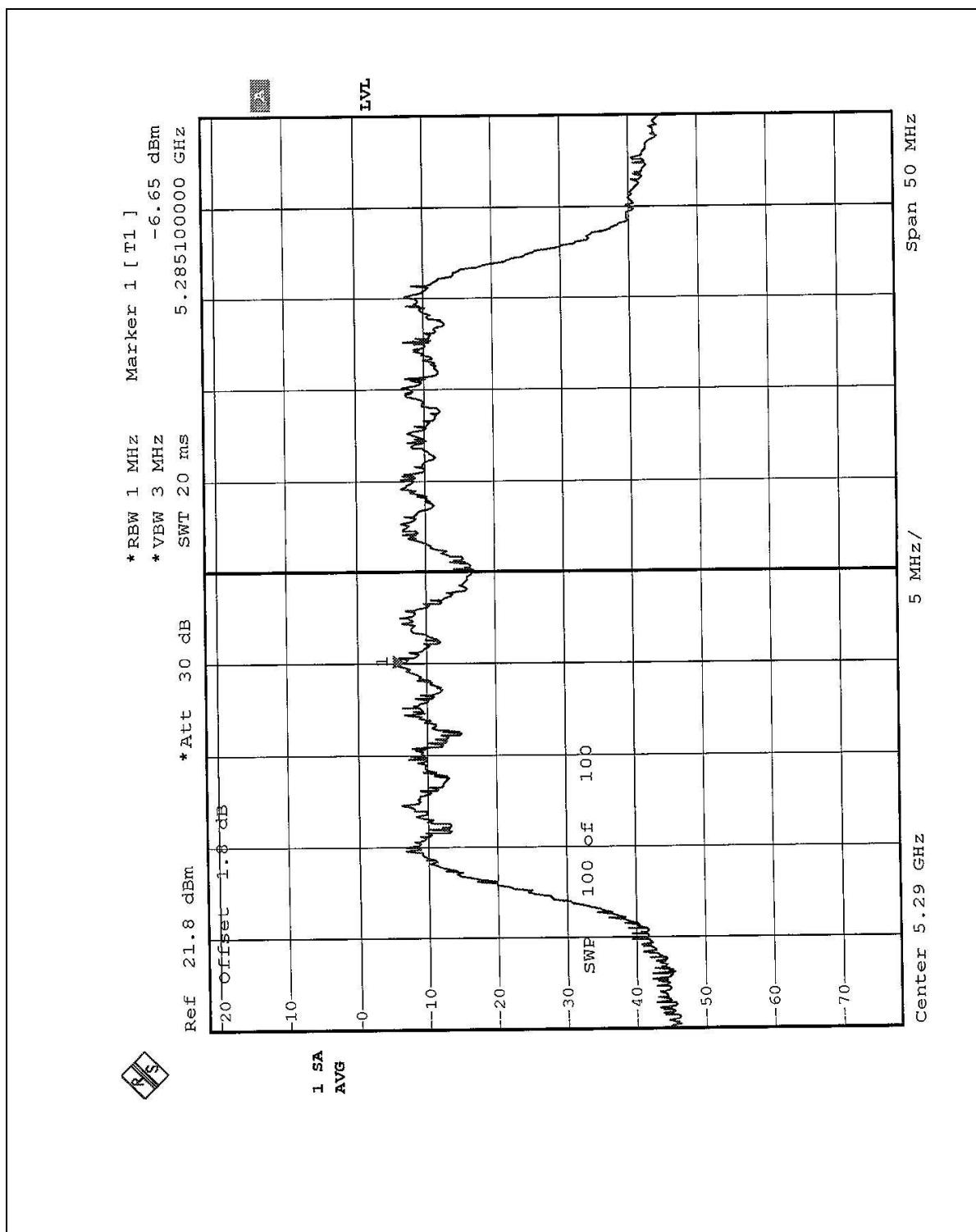
## CHANNEL 1



## CHANNEL 2



## CHANNEL 3



## 5.6 FREQUENCY STABILITY

### 5.6.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

The frequency tolerance of the carrier signal shall be maintained within +/- 0.02% of the operating frequency over a temperature variation of -30 degrees to 50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C.

### 5.6.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
ANRITSU SPECTRUM ANALYZER	MS2667C	M10281	Mar. 14, 2003
WIT STANDARD TEMPERATURE AND HUMIDITY CHAMBER	TH-4S-C	W901030	Jun. 24, 2003

**NOTE:** The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

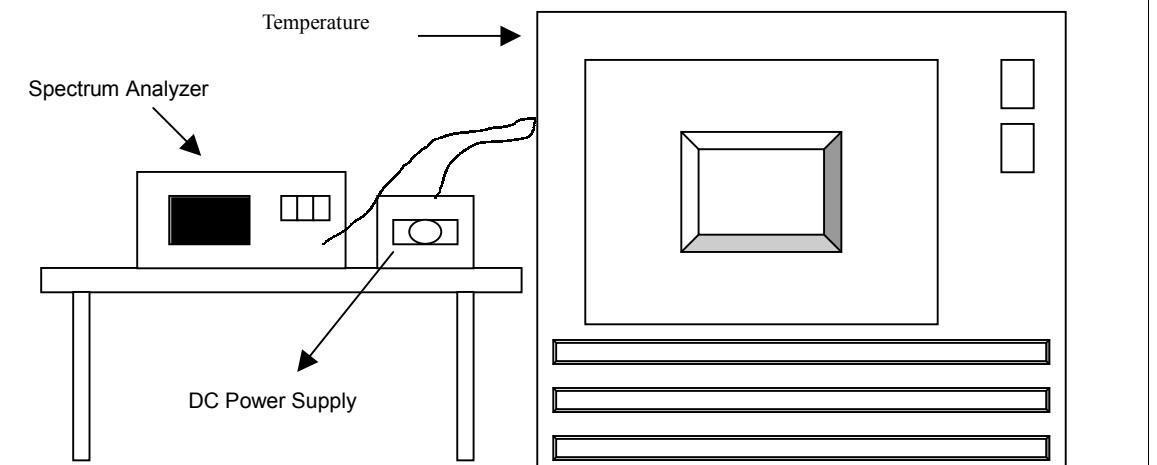
### 5.6.3 TEST PROCEDURE

1. The EUT was placed inside the environmental test chamber and powered by nominal DC voltage.
2. Turn the EUT on and couple its output to a spectrum analyzer.
3. Turn the EUT off and set the chamber to the highest temperature specified.
4. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.
5. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
6. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

### 5.6.4 DEVIATION FROM TEST STANDARD

No deviation

### 5.6.5 TEST SETUP



### 5.6.6 EUT OPERATING CONDITION

Same as Item 4.1.6

### 5.6.7 TEST RESULTS

Operating frequency: 5180MHz							Limit : $\pm 0.02\%$
Temp. (°C)	Power supply (VDC)	2 minute		5 minute		10 minute	
		(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
50	126.5	5179.9962	-0.0000734	5179.9964	-0.0000695	5179.9962	-0.0000734
	110.0	5179.9964	-0.0000695	5179.9962	-0.0000734	5179.9962	-0.0000734
	93.5	5179.9962	-0.0000734	5179.9962	-0.0000734	5179.9962	-0.0000734
40	126.5	5179.9782	-0.0004208	5179.9782	-0.0004208	5179.9780	-0.0004247
	110.0	5179.9782	-0.0004208	5179.9780	-0.0004247	5179.9782	-0.0004208
	93.5	5179.9780	-0.0004247	5179.9782	-0.0004208	5179.9782	-0.0004208
30	126.5	5179.9694	-0.0005907	5179.9692	-0.0005946	5179.9696	-0.0005869
	110.0	5179.9692	-0.0005946	5179.9694	-0.0005907	5179.9694	-0.0005907
	93.5	5179.9694	-0.0005907	5179.9692	-0.0005946	5179.9696	-0.0005869
20	126.5	5179.9704	-0.0005714	5179.9704	-0.0005714	5179.9706	-0.0005676
	110.0	5179.9706	-0.0005676	5179.9704	-0.0005714	5179.9706	-0.0005676
	93.5	5179.9708	-0.0005637	5179.9706	-0.0005676	5179.9706	-0.0005676
10	126.5	5179.9738	-0.0005058	5179.9740	-0.0005019	5179.9740	-0.0005019
	110.0	5179.9738	-0.0005058	5179.9740	-0.0005019	5179.9740	-0.0005019
	93.5	5179.9740	-0.0005019	5179.9740	-0.0005019	5179.9740	-0.0005019
0	126.5	5179.9798	-0.0003900	5179.9800	-0.0003861	5179.9798	-0.0003900
	110.0	5179.9798	-0.0003900	5179.9798	-0.0003900	5179.9798	-0.0003900
	93.5	5179.9800	-0.0003861	5179.9800	-0.0003861	5179.9798	-0.0003900
-10	126.5	5179.9832	-0.0003243	5179.9834	-0.0003205	5179.9834	-0.0003205
	110.0	5179.9832	-0.0003243	5179.9834	-0.0003205	5179.9834	-0.0003205
	93.5	5179.9832	-0.0003243	5179.9834	-0.0003205	5179.9834	-0.0003205
-20	126.5	5179.9864	-0.0002625	5179.9864	-0.0002625	5179.9864	-0.0002625
	110.0	5179.9864	-0.0002625	5179.9864	-0.0002625	5179.9862	-0.0002664
	93.5	5179.9864	-0.0002625	5179.9864	-0.0002625	5179.9864	-0.0002625
-30	126.5	5179.9888	-0.0002162	5179.9888	-0.0002162	5179.9888	-0.0002162
	110.0	5179.9888	-0.0002162	5179.9888	-0.0002162	5179.9888	-0.0002162
	93.5	5179.9888	-0.0002162	5179.9888	-0.0002162	5179.9888	-0.0002162

## 5.7 BAND EDGES MEASUREMENT

### 5.7.1 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
SPECTRUM ANALYZER	FSEK30	100049	July 24, 2003

**NOTE:** 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 loss cable. Set both RBW and VBW of spectrum analyzer to 1MHz with suitable frequency span including 100MHz 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.

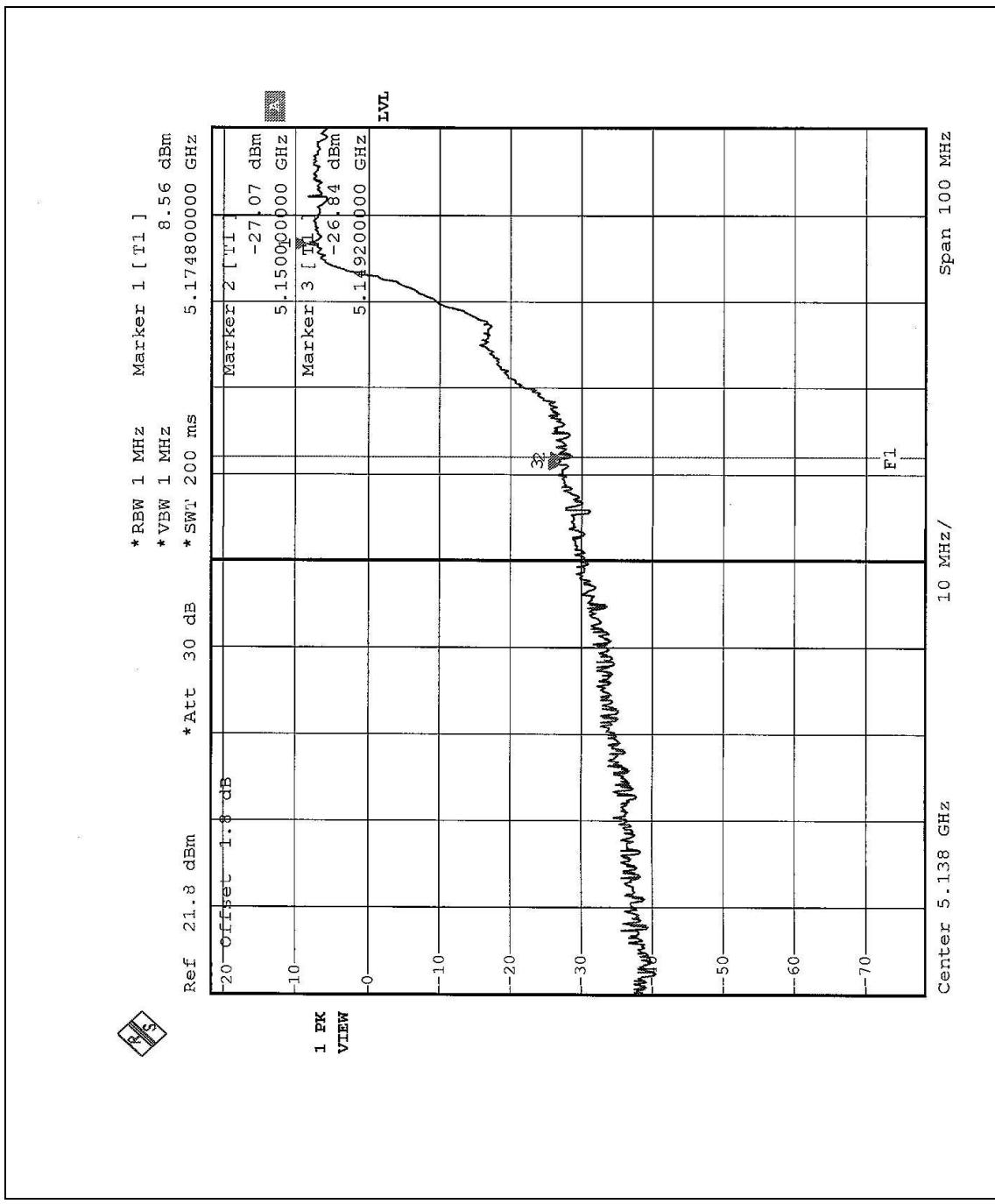
### 5.7.4 TEST RESULTS

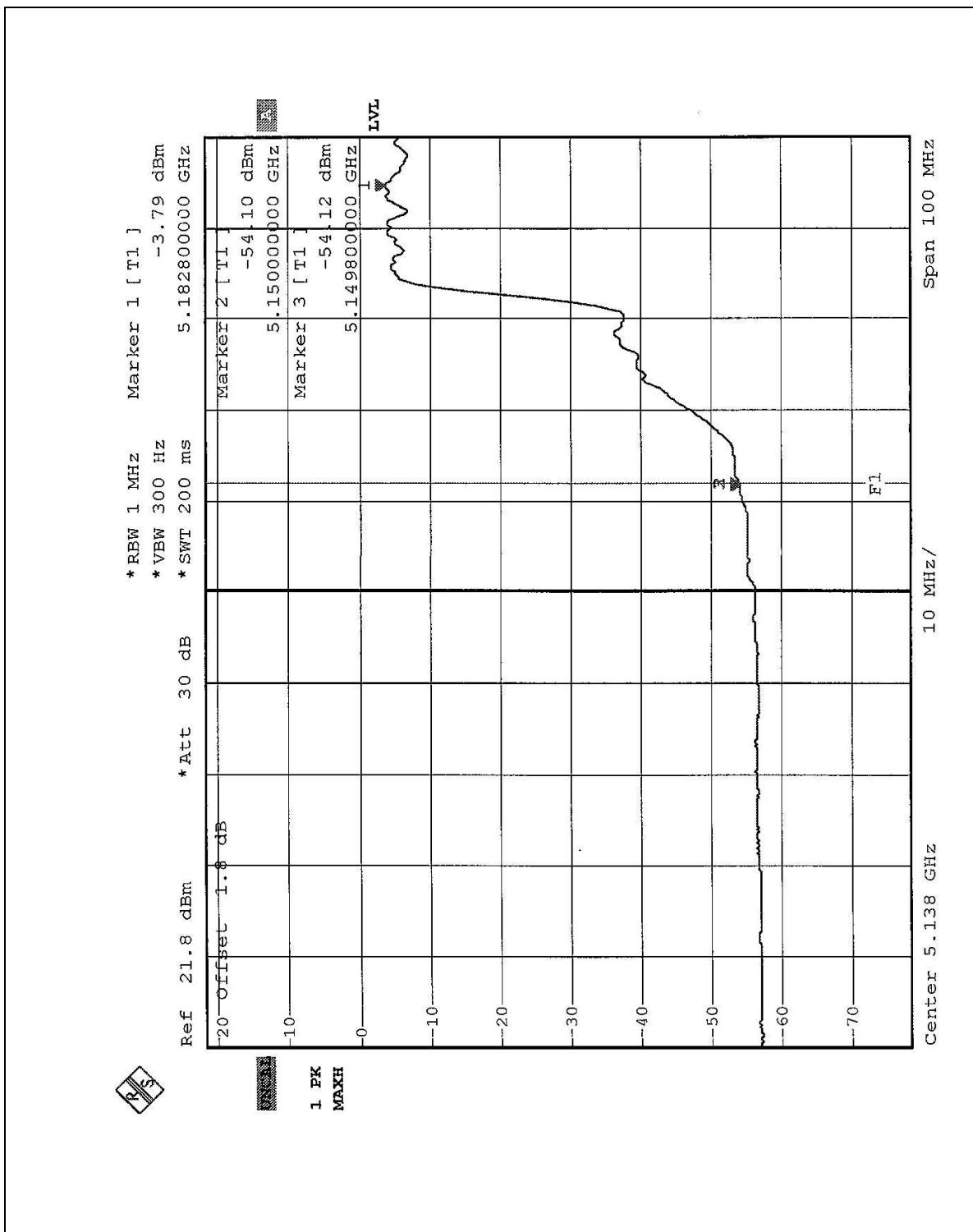
For signals in the restricted bands above and below the 5.15 to 5.35GHz allocated band a measurement was made of the amplitude of the spurious emissions with respect to the intentional signals. The relative amplitude, in dBc, was applied to the average and peak field strength of the intentional signal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

The spectrum plots (Peak RBW=VBW=1MHz; Average RBW=1MHz, VBW=300Hz) are attached on the following 8 pages.

Normal Mode: Channel 1 (5180 MHz)

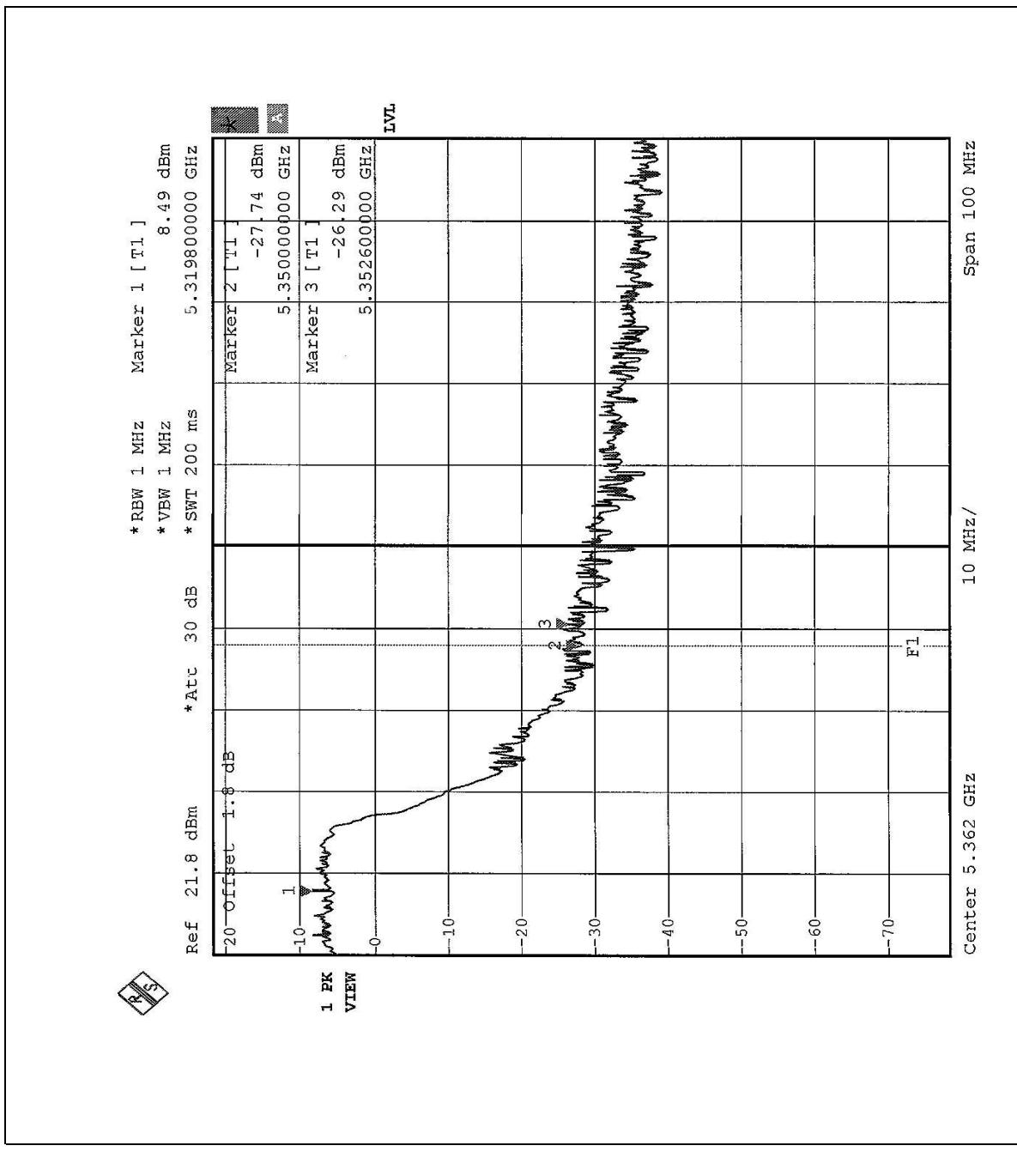
The band edge emission plot on the following 2 pages shows 35.4dBc (Peak) / 50.31dBc (Average) between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 (normal mode) is 91.2dBuV/m, so the maximum field strength in restrict band is  $91.2 - 50.31 = 40.89$ dBuV/m which is under 54dBuV/m limit.

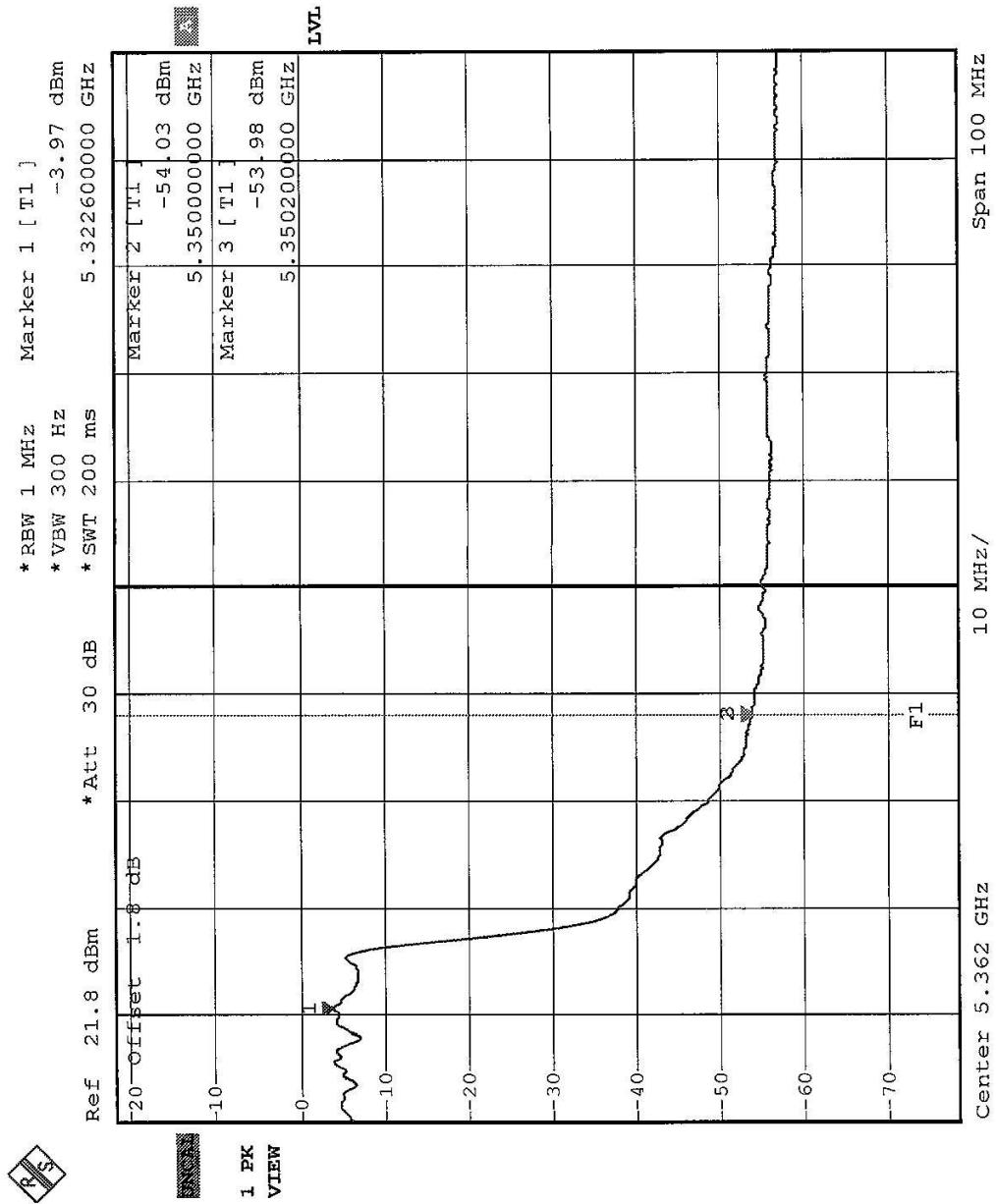




Normal Mode: Channel 8 (5320 MHz)

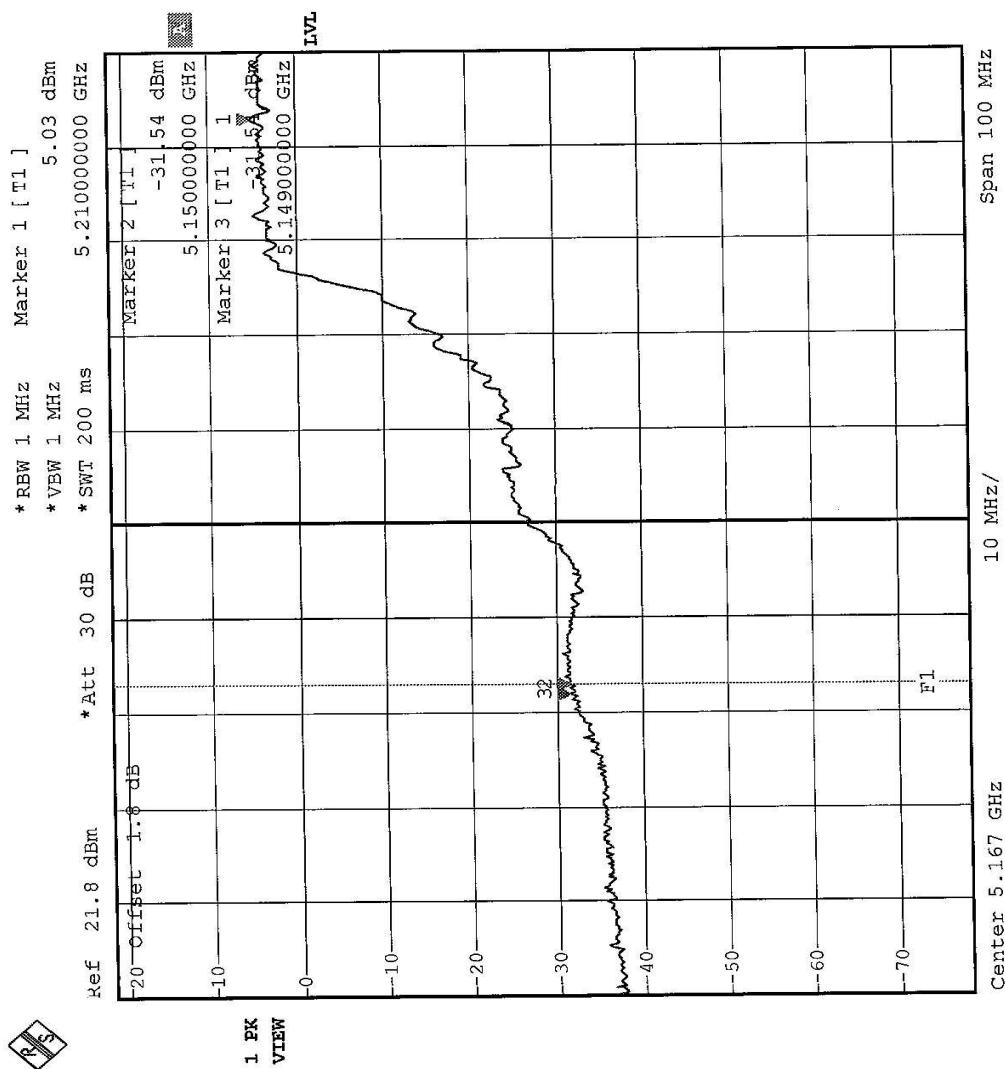
The band edge emission plot on the following 2 pages shows 34.78dBc (Peak) / 50.01dBc (Average) between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 8 (normal mode) is 91.1dBuV/m, so the maximum field strength in restrict band is  $91.1 - 50.01 = 41.09$  dBuV/m which is under 54dBuV/m limit.

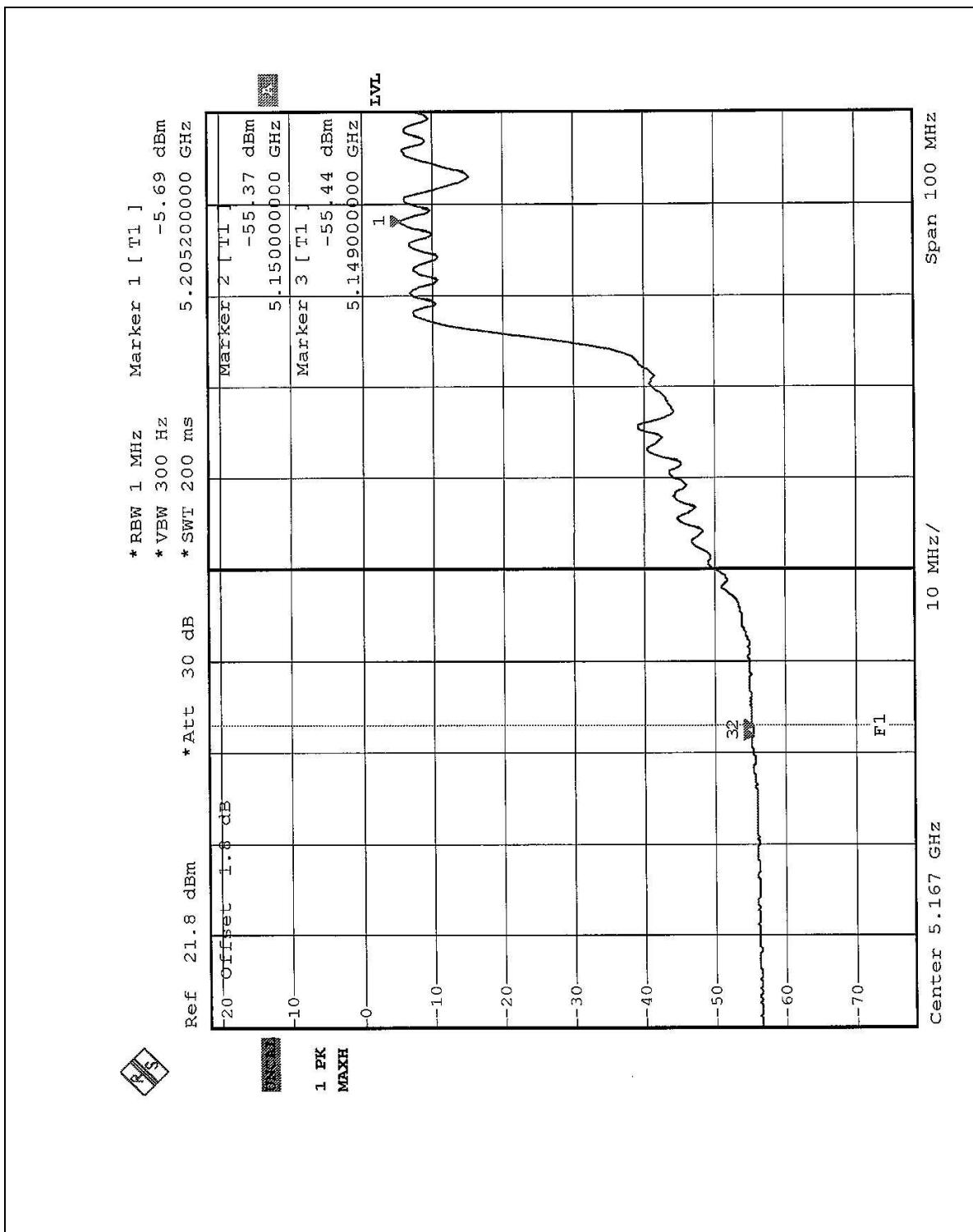




Turbo Mode: Channel 1 (5210 MHz)

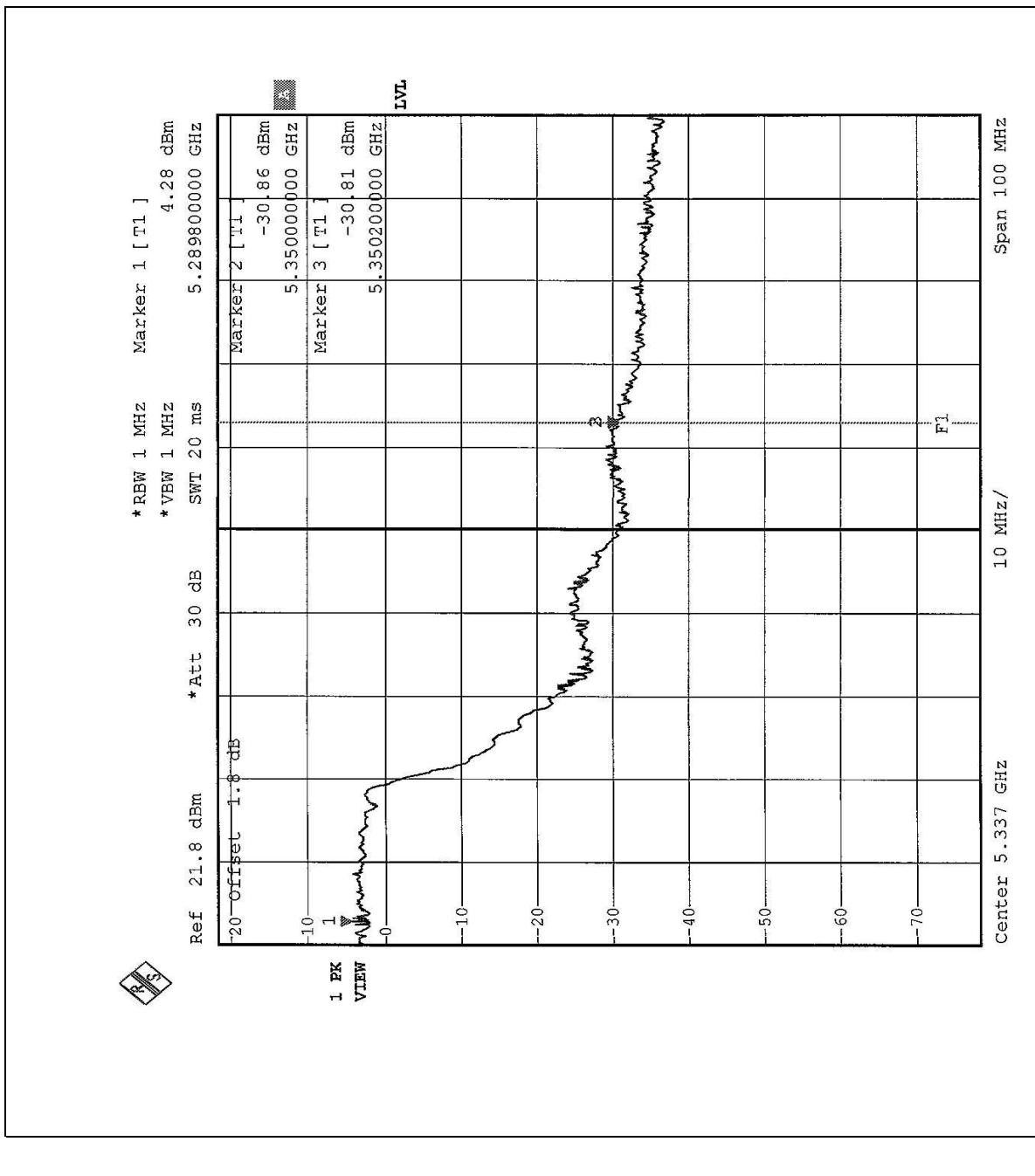
The band edge emission plot on the following 2 pages shows 36.57dBc (Peak) / 49.68dBc (Average) between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 (normal mode) is 90.2dB<sub>UV</sub>/m, so the maximum field strength in restrict band is  $90.2 - 49.68 = 40.52$ dB<sub>UV</sub>/m which is under 54dB<sub>UV</sub>/m limit.

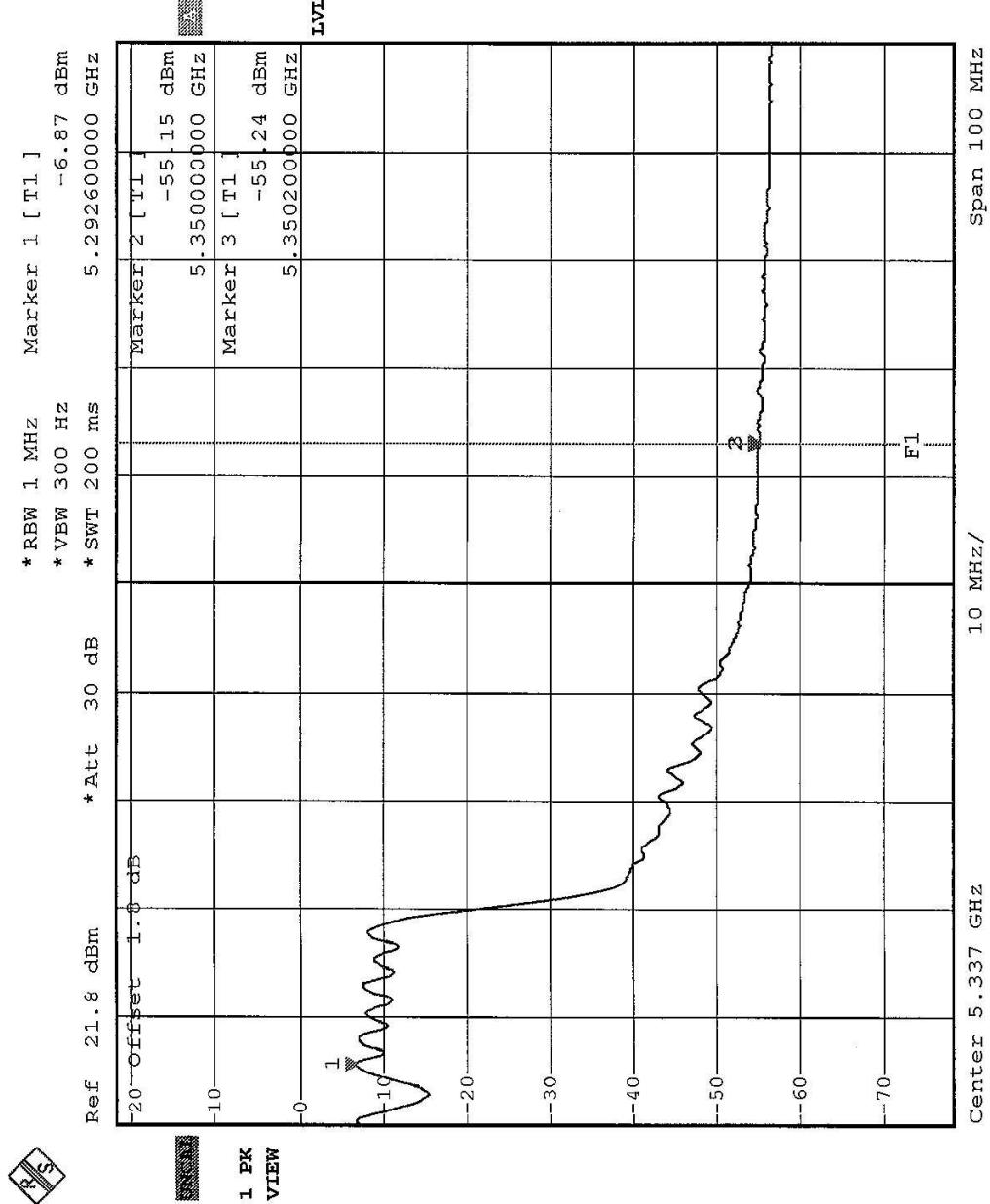




## Turbo Mode: Channel 3 (5290 MHz)

The band edge emission plot on the following 2 pages shows 35.09dBc (Peak) / 48.28dBc (Average) between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 3 (normal mode) is 90.6dBuV/m, so the maximum field strength in restrict band is  $90.6 - 48.28 = 42.32$  dBuV/m which is under 54dBuV/m limit.





## 5.8 ANTENNA REQUIREMENT

### 5.8.1 STANDARD APPLICABLE

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

And according to FCC 47 CFR Section 15.407(a), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

### 5.8.2 ANTENNA CONNECTED CONSTRUCTION

The antenna used in this product is Dipole Antenna without antenna connector. The maximum Gain of the antenna is 1dBi only.

## 6. PHOTOGRAPHS OF THE TEST CONFIGURATION

### CONDUCTED EMISSION TEST



RADIATED EMISSION TEST



## 7. INFORMATION ON THE TESTING LABORATORIES

We, ADT Corp., were founded in 1988 to provide our best service in EMC and Safety consultation. Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025, Guide 25 or EN 45001:

<b>USA</b>	FCC, NVLAP, UL
<b>Germany</b>	TUV Rheinland
<b>Japan</b>	VCCI
<b>New Zealand</b>	MoC
<b>Norway</b>	NEMKO
<b>R.O.C.</b>	BSMI, DGT, CNLA

Copies of accreditation certificates of our laboratories obtained from approval agencies can be downloaded from our web site:  
[www.adt.com.tw/index.5/phtml](http://www.adt.com.tw/index.5/phtml).

If you have any comments, please feel free to contact us at the following:

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Fax: 886-2-26052943

**Hsin Chu EMC Lab:**  
Tel: 886-35-935343  
Fax: 886-35-935342

**Lin Kou Safety Lab:**  
Tel: 886-2-26093195  
Fax: 886-2-26093184

**Lin Kou RF&Telecom Lab**  
Tel: 886-3-3270910  
Fax: 886-3-3270892

**Email:** [service@mail.adt.com.tw](mailto:service@mail.adt.com.tw)  
**Web Site:** [www.adt.com.tw](http://www.adt.com.tw)

The address and road map of all our labs can be found in our web site also.