



4.7 BAND EDGES MEASUREMENT

4.7.1 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
SPECTRUM ANALYZER	FSEK30	100049	Aug. 12, 2005

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

4.7.2 TEST PROCEDURE

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

4.7.3 EUT OPERATING CONDITION

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

4.7.4 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 filed 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=10Hz) are attached on the following pages.

**802.11a OFDM modulation**

Channel 1 (5180MHz)

The band edge emission plot on the page 66 shows 42.27dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 is 103.93dBuV/m (Peak), so the maximum field strength in restrict band is $103.93-42.27=61.66$ dBuV/m which is under 74dBuV/m limit.

Channel 1 (5180MHz)

The band edge emission plot on the page 66 shows 45.68dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 is 94.28dBuV/m (Average), so the maximum field strength in restrict band is $94.28-45.68=48.60$ dBuV/m which is under 54dBuV/m limit.

Channel 8 (5320MHz)

The band edge emission plot on the page 67 shows 44.43dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 8 is 106.07BuV/m (Peak), so the maximum field strength in restrict band is $106.07-44.43=61.64$ dBuV/m which is under 74dBuV/m limit.

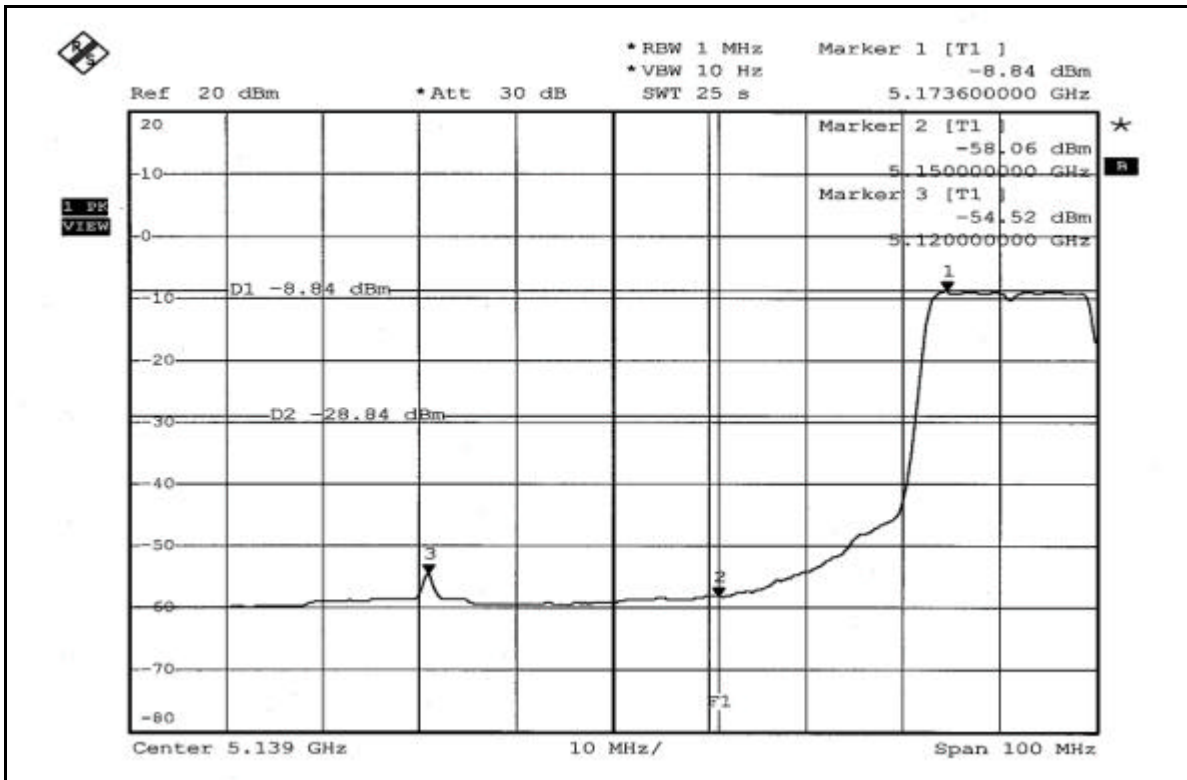
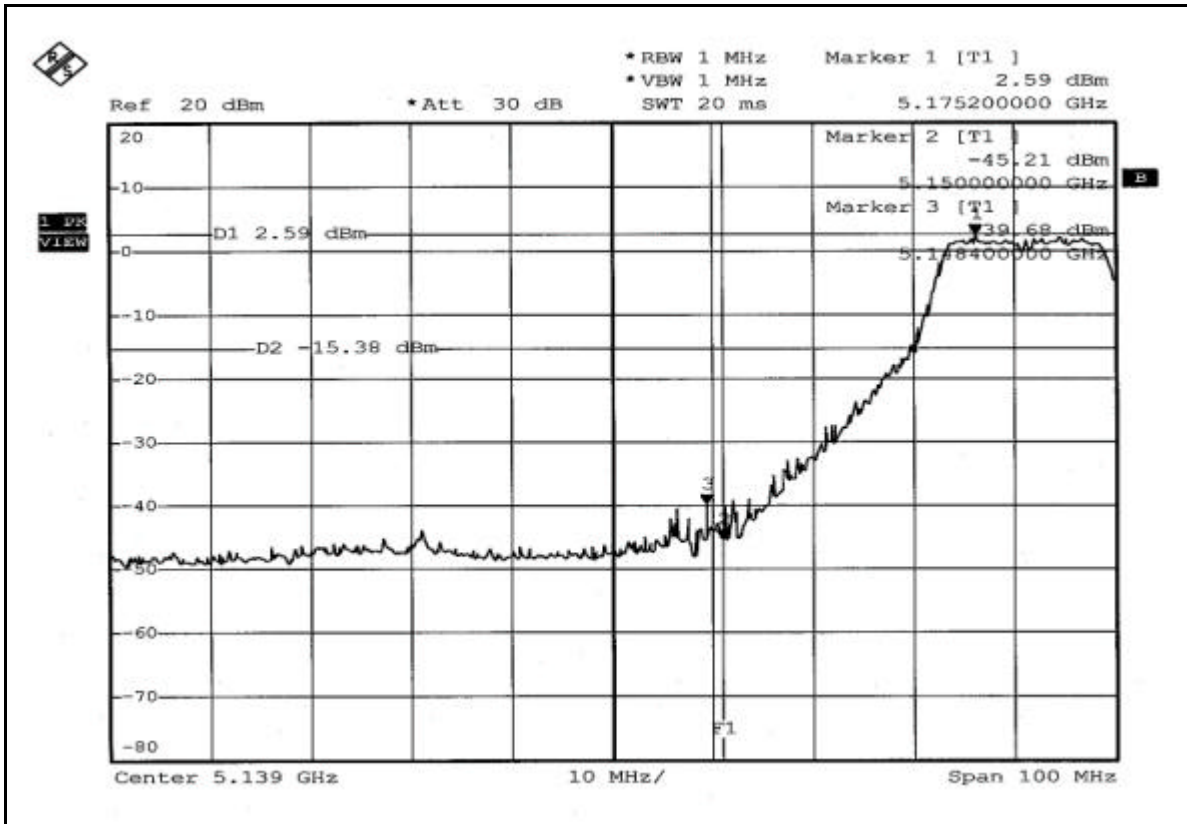
Channel 8 (5320MHz)

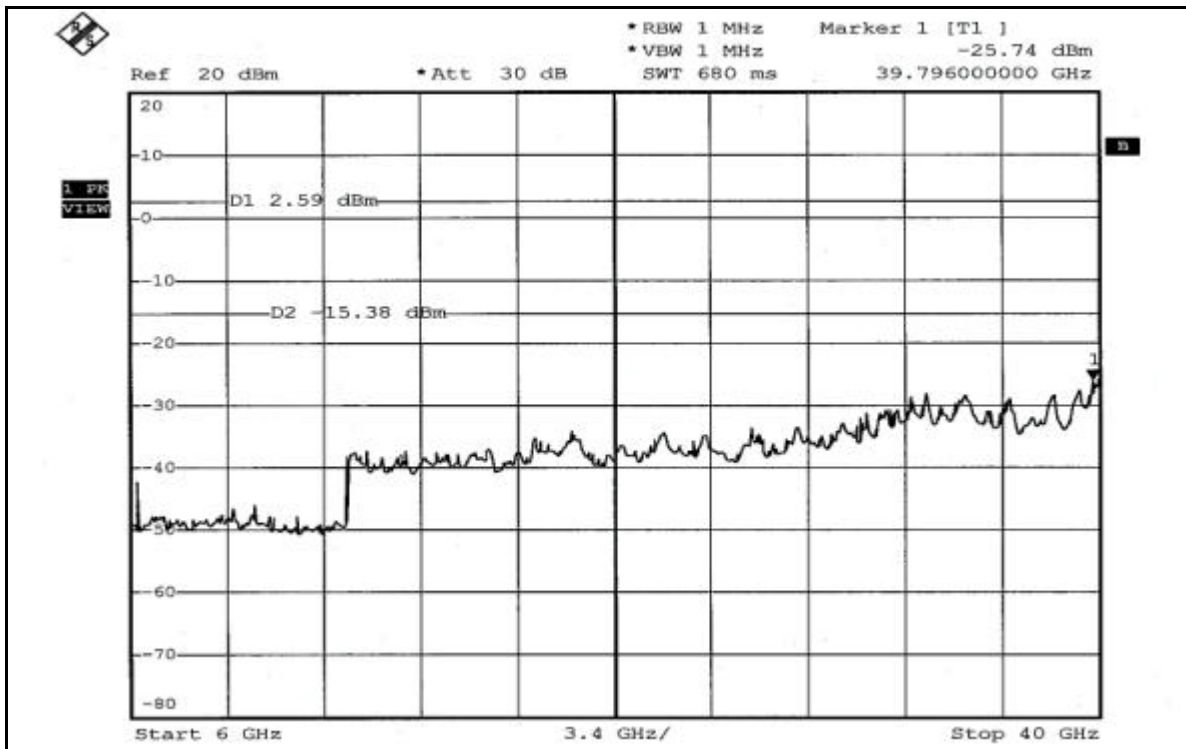
The band edge emission plot on the page 68 shows 49.07dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 8 is 96.79BuV/m (Average), so the maximum field strength in restrict band is $96.79-49.07=47.72$ dBuV/m which is under 54dBuV/m limit.



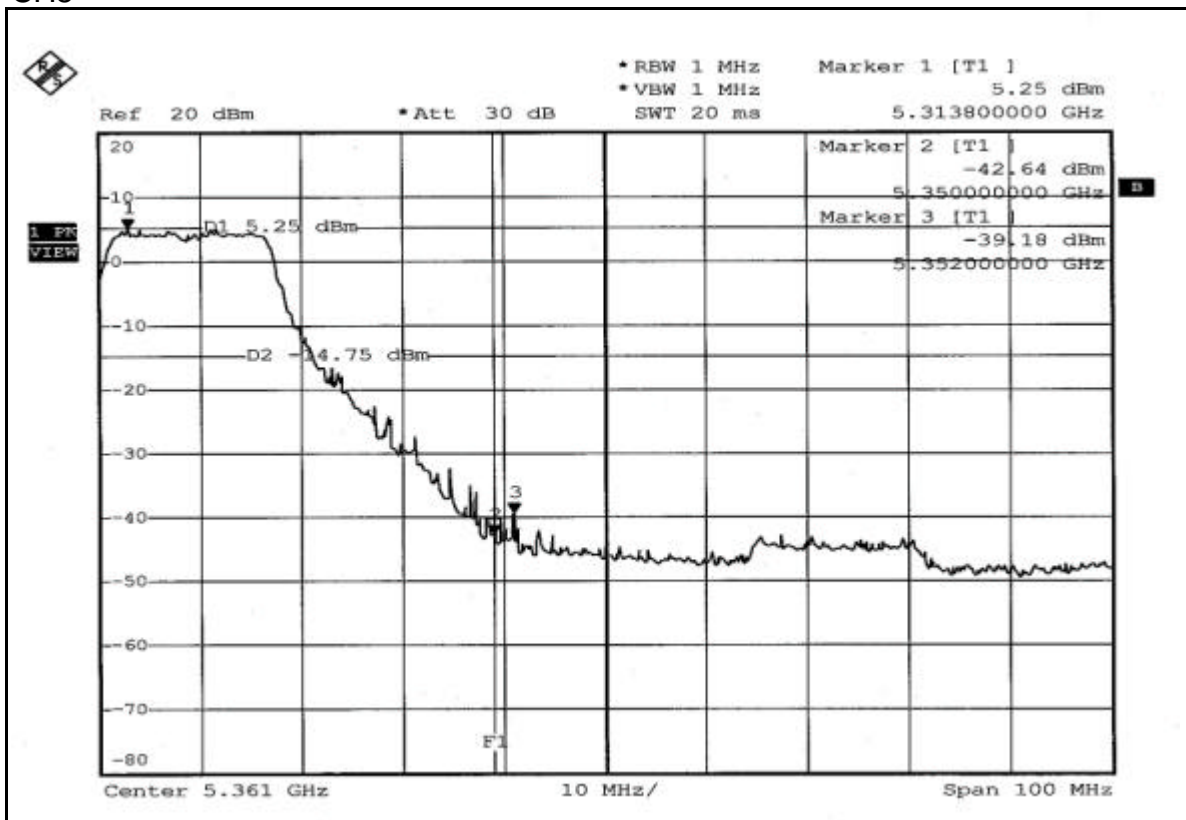
802.11a OFDM modulation

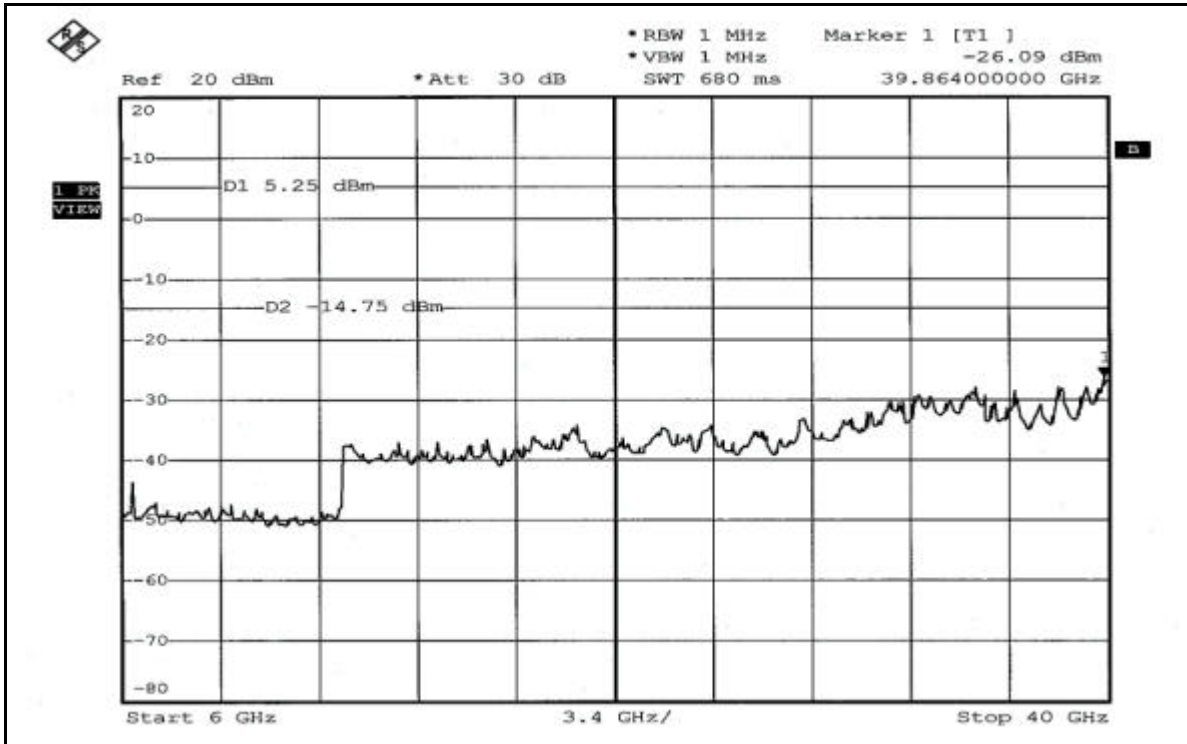
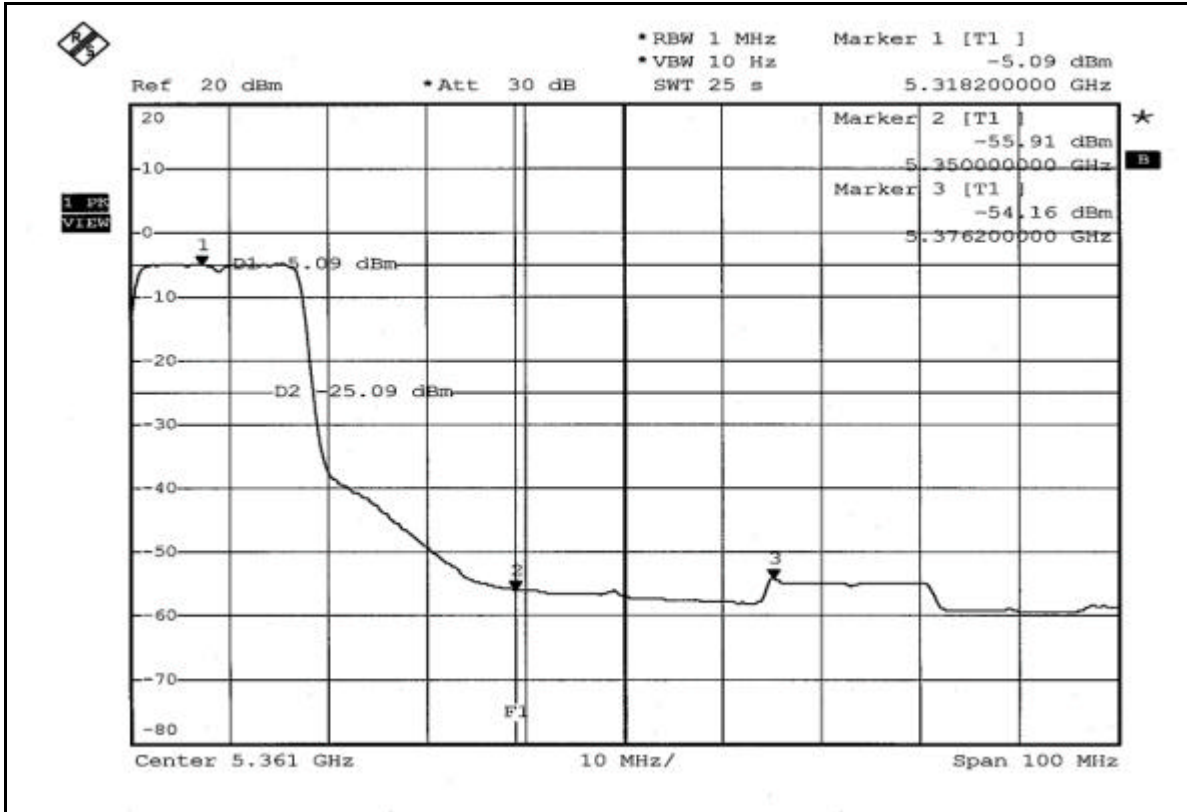
CH1





CH8







4.8 ANTENNA REQUIREMENT

4.8.1 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.

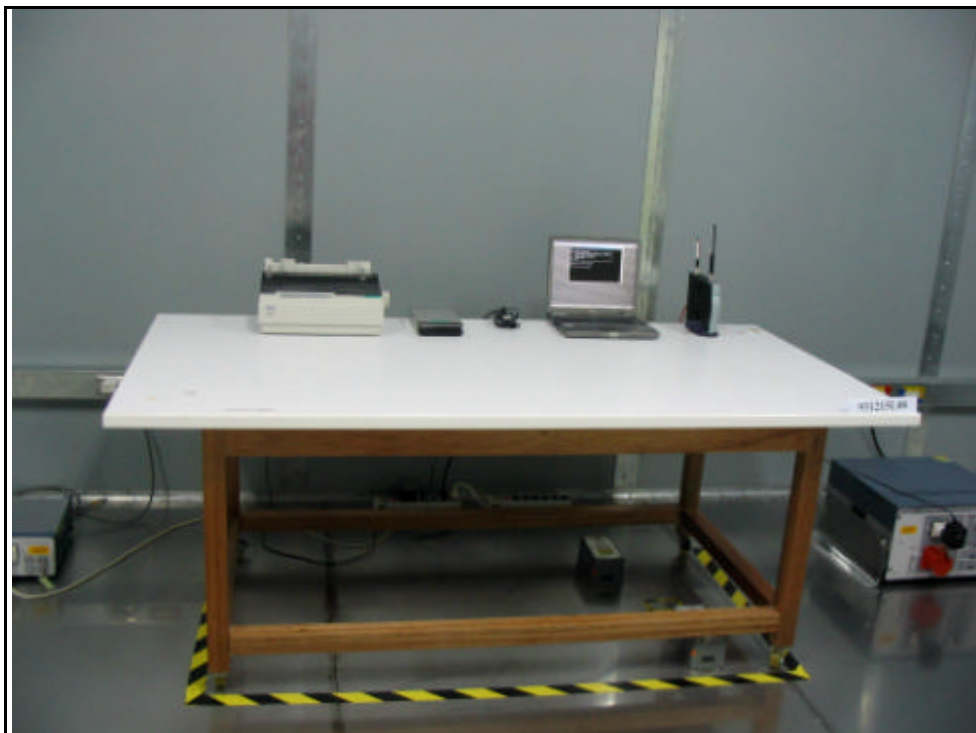
4.8.2 ANTENNA CONNECTED CONSTRUCTION

The antennas used in this product are Dipole and Patch antenna with UFL antenna connector. The maximum Gain of the antenna is 6dBi.

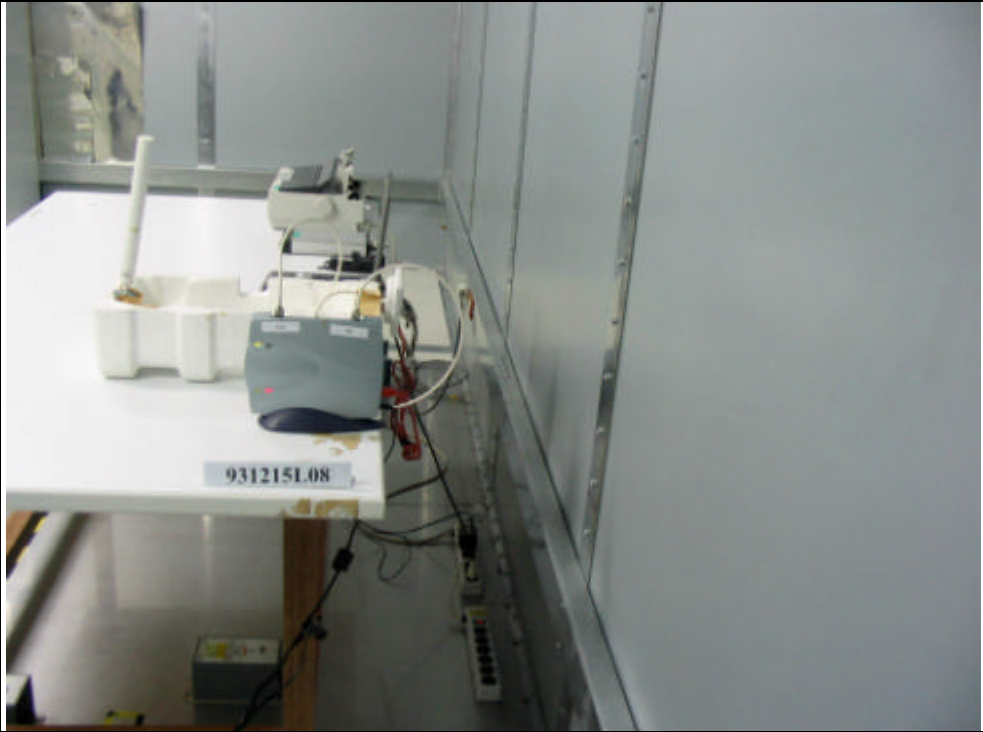
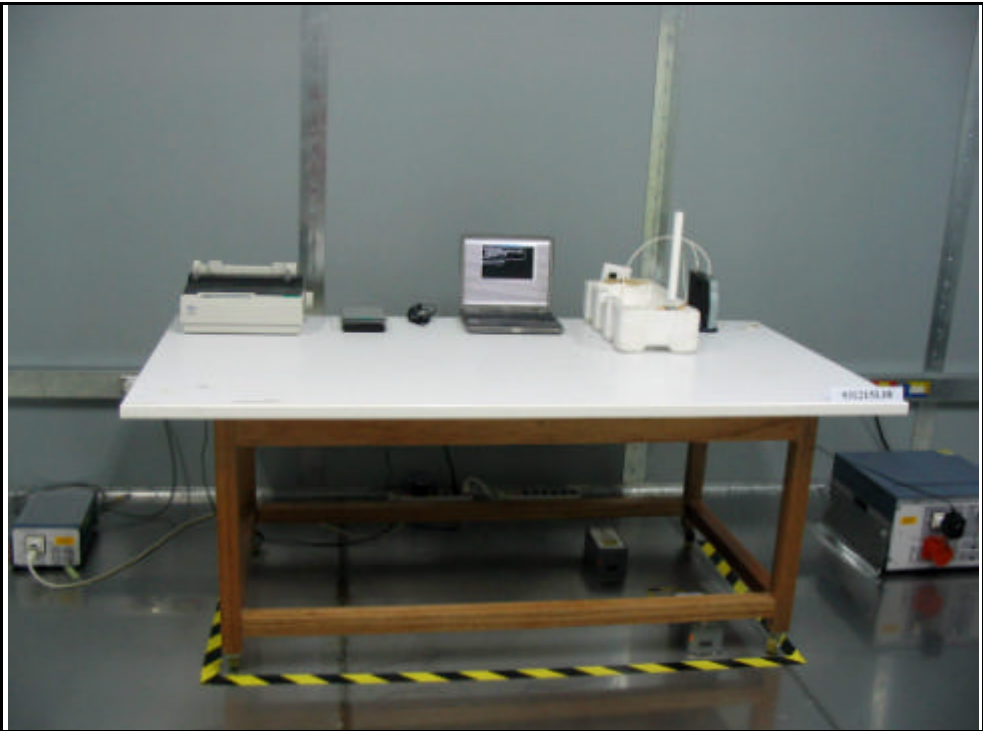
5. PHOTOGRAPHS OF THE TEST CONFIGURATION

CONDUCTED EMISSION TEST

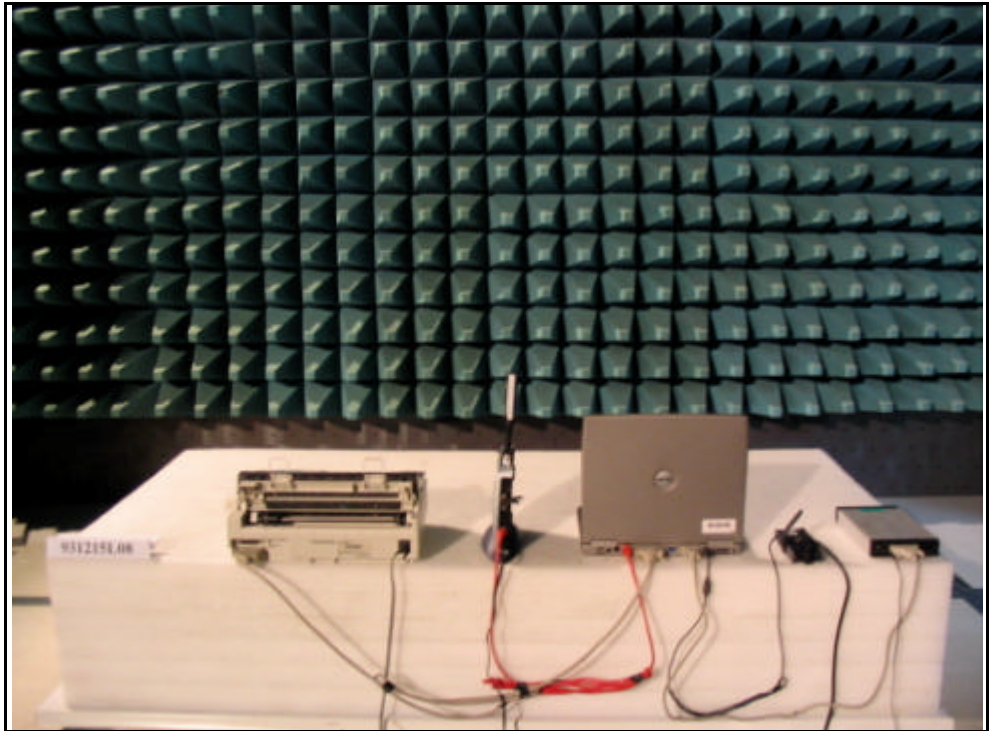
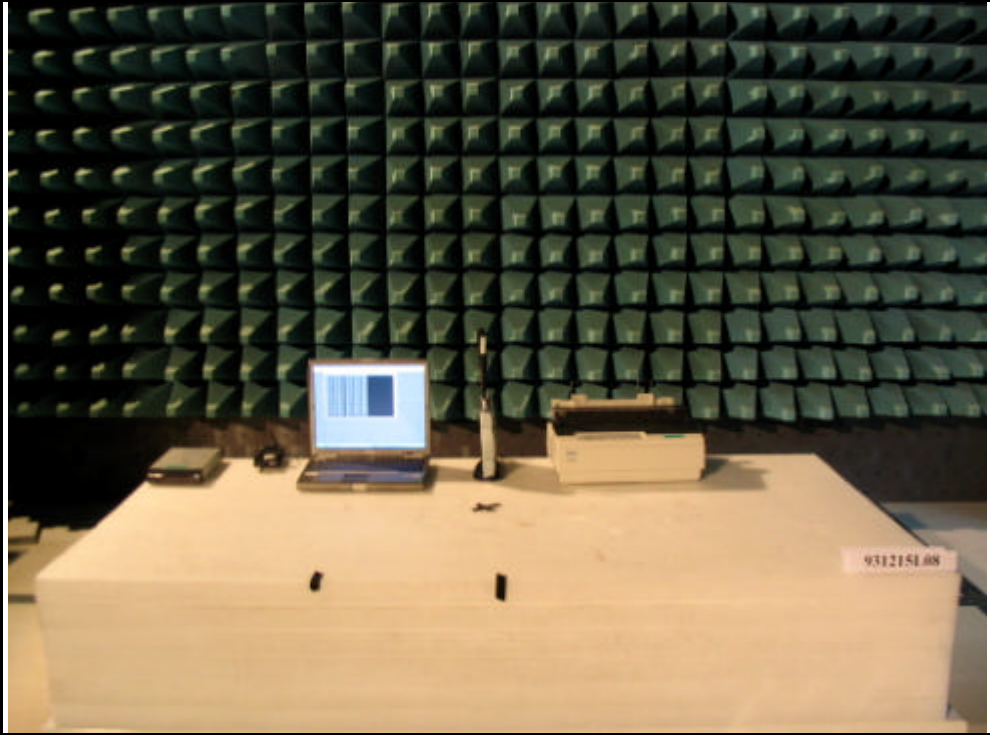
Test Mode 1



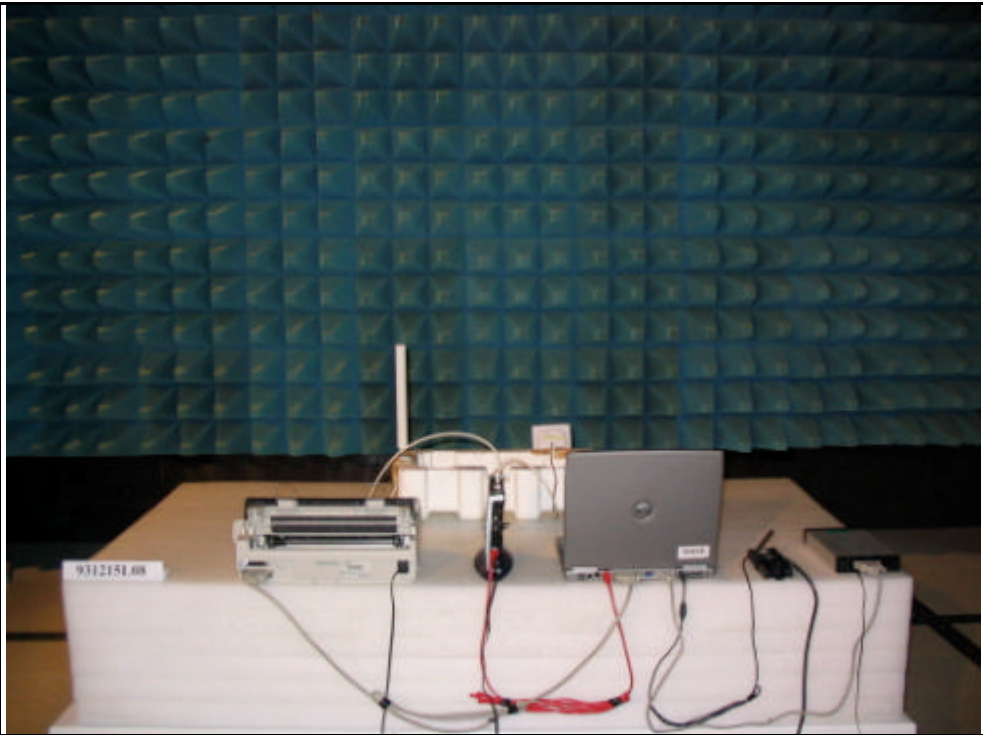
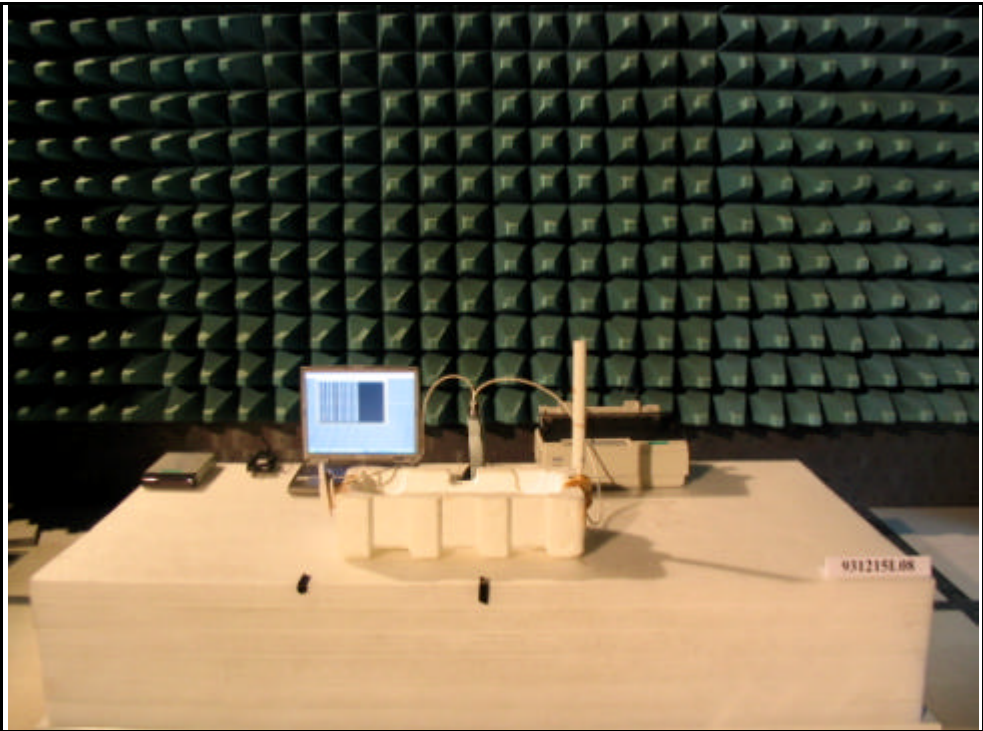
Test Mode 2



RADIATED EMISSION TEST
Test Mode 1



Test Mode 2





6. INFORMATION ON THE TESTING LABORATORIES

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

USA	FCC, NVLAP, UL, A2LA
Germany	TUV Rheinland
Japan	VCCI
Norway	NEMKO
Canada	INDUSTRY CANADA , CSA
R.O.C.	CNLA, BSMI, DGT
Netherlands	Telefication
Singapore	PSB , GOST-ASIA(MOU)
Russia	CERTIS(MOU)

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

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Hsin Chu EMC/RF Lab:

Tel: 886-3-5935343

Fax: 886-3-5935342

Hwa Ya EMC/RF/Safety Telecom Lab: Linko RF Lab.

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Fax: 886-3-3270892

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