

## 4.6 BAND EDGES MEASUREMENT

### 4.6.1 LIMITS OF BAND EDGES MEASUREMENT

Below -20dB of the highest emission level of operating band (in 100KHz RB).

### 4.6.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
ROHDE & SCHWARZ TEST RECEIVER	ESMI	848926/005 846839/018	Dec 28, 2001
HP ATTENUATOR	8496B	3247A18505	Cal. on use
HP PLOTTER	7475A	2641V27755	N/A

Notes:

- 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.

### 4.6.3 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 100 kHz with suitable frequency span including 100 kHz bandwidth from band edge. The band edges was measured and recorded.



#### 4.6.4 EUT OPERATING CONDITION

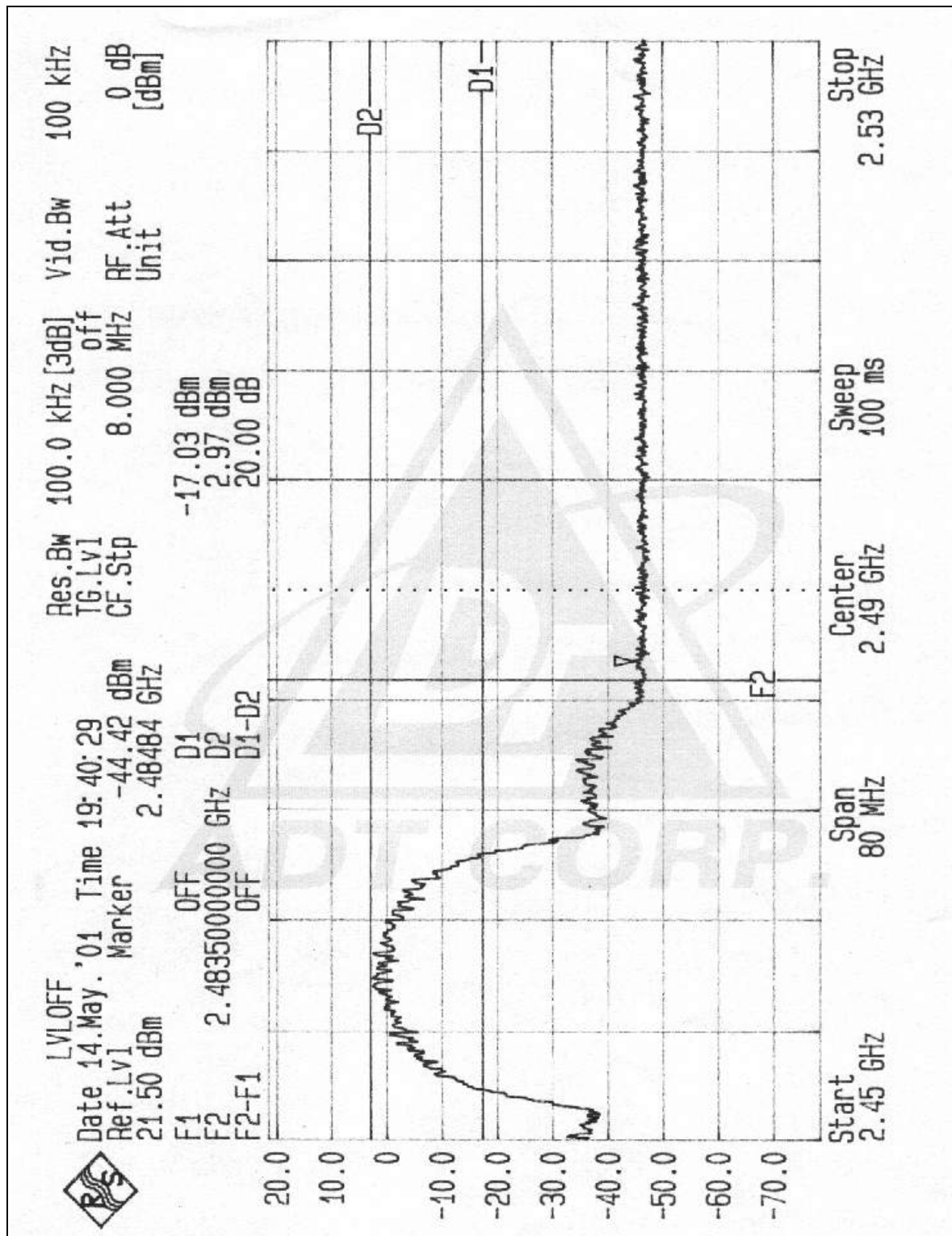
The software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel frequencies individually.

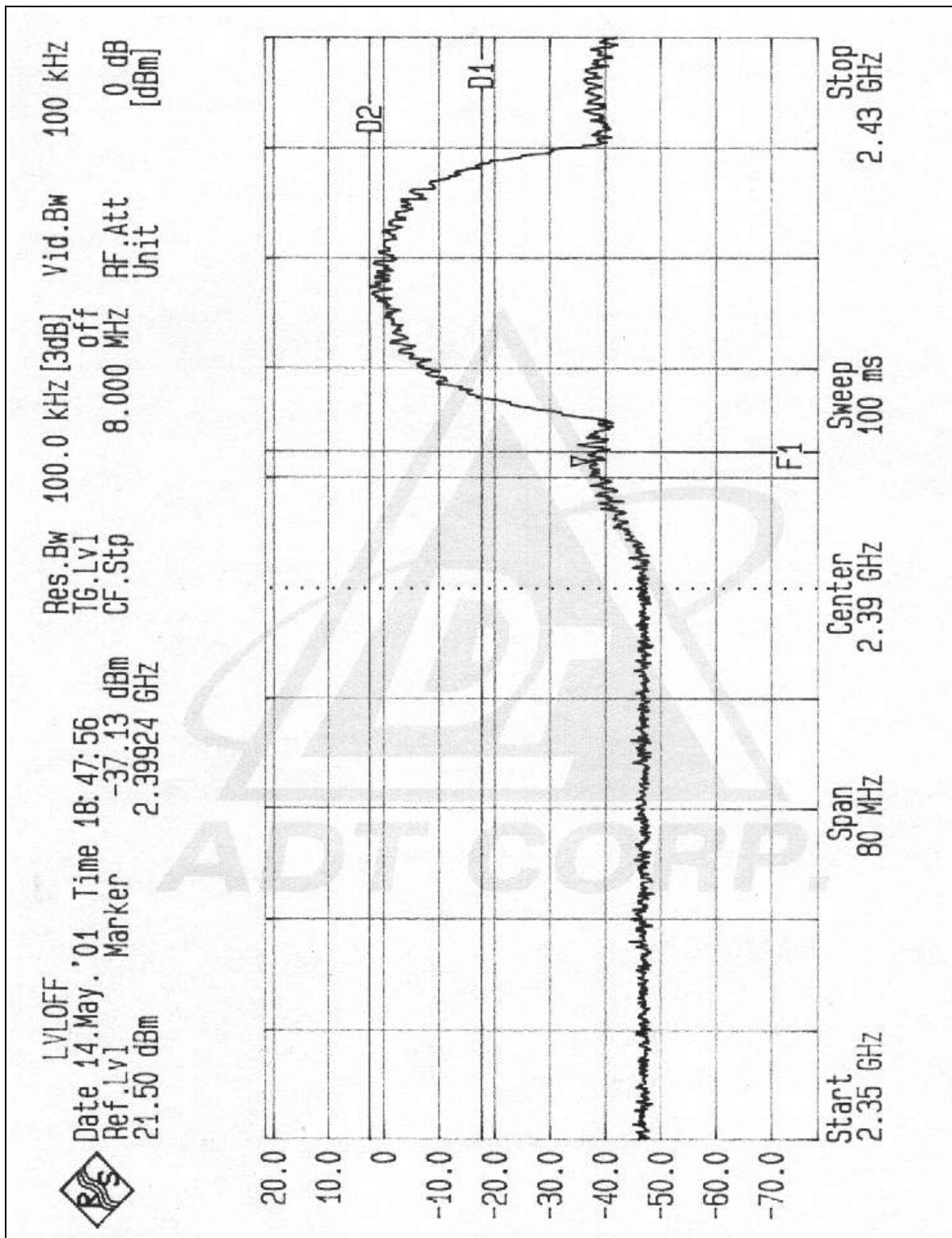
#### 4.6.5 TEST RESULTS

The spectrum plots are attached below. D2 line indicates the highest level, D1 line indicates the 20dB offset below D2. It shows compliance with the requirement in part 15.247(C).

#### 4.6.6 NOTE ON BAND EDGE EMISSION

The band edge emission plot on page 44 shows 47.39dB delta between carrier maximum power and local maximum emission in restrict band (2484.84GHz). The emission of carrier strength list in table of page 25 is 94.4dB  $\mu$  V/m, so the maximum field strength in restrict band is  $94.4 - 47.39 = 47.01$  dB  $\mu$  V/m which is under 54 dB  $\mu$  V/m limit.







## **4.7 ANTENNA REQUIREMENT**

### **4.7.1 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 15.247 (b), 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.

### **4.7.2 ANTENNA CONNECTED CONSTRUCTION**

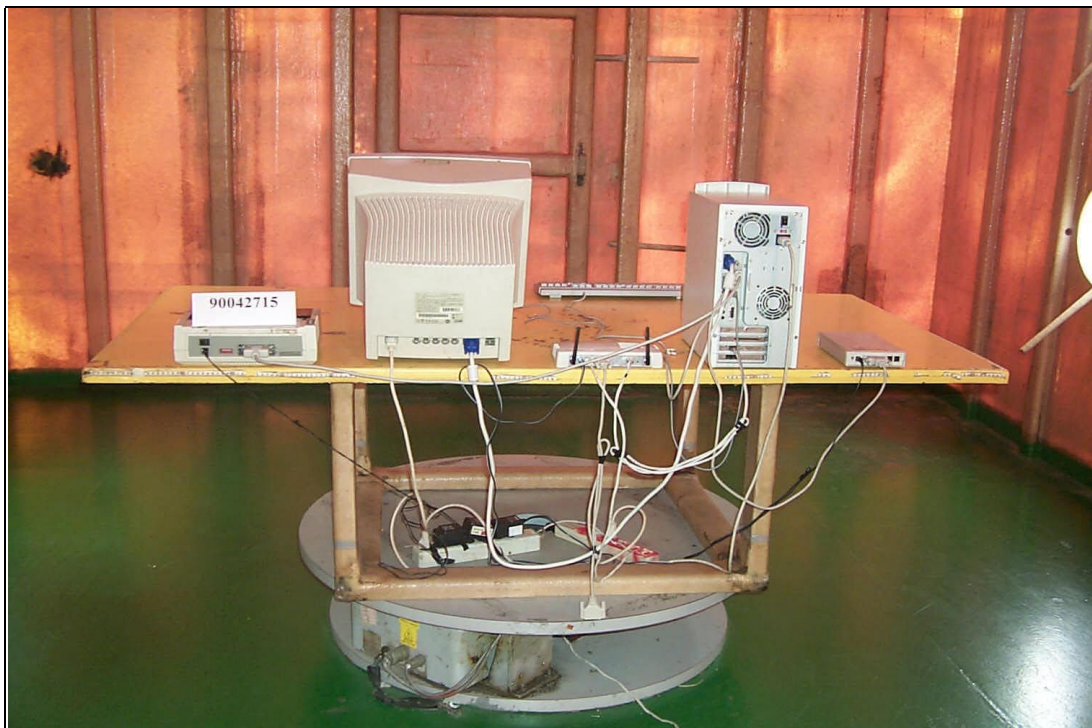
The antenna used in this product is dual monopole antenna. The antenna connector type is MMCX. And the maximum Gain of this antenna is only 1dBi.



## 5 PHOTOGRAPHS OF THE TEST CONFIGURATION CONDUCTED EMISSION TEST



## RADIATED EMISSION TEST





## 6 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
<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:

**Lin Kou EMC Lab:**

Tel: 886-2-26052180

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

**Design Center:**

Tel: 886-2-26093195

Fax: 886-2-26093184

**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.