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 03, 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

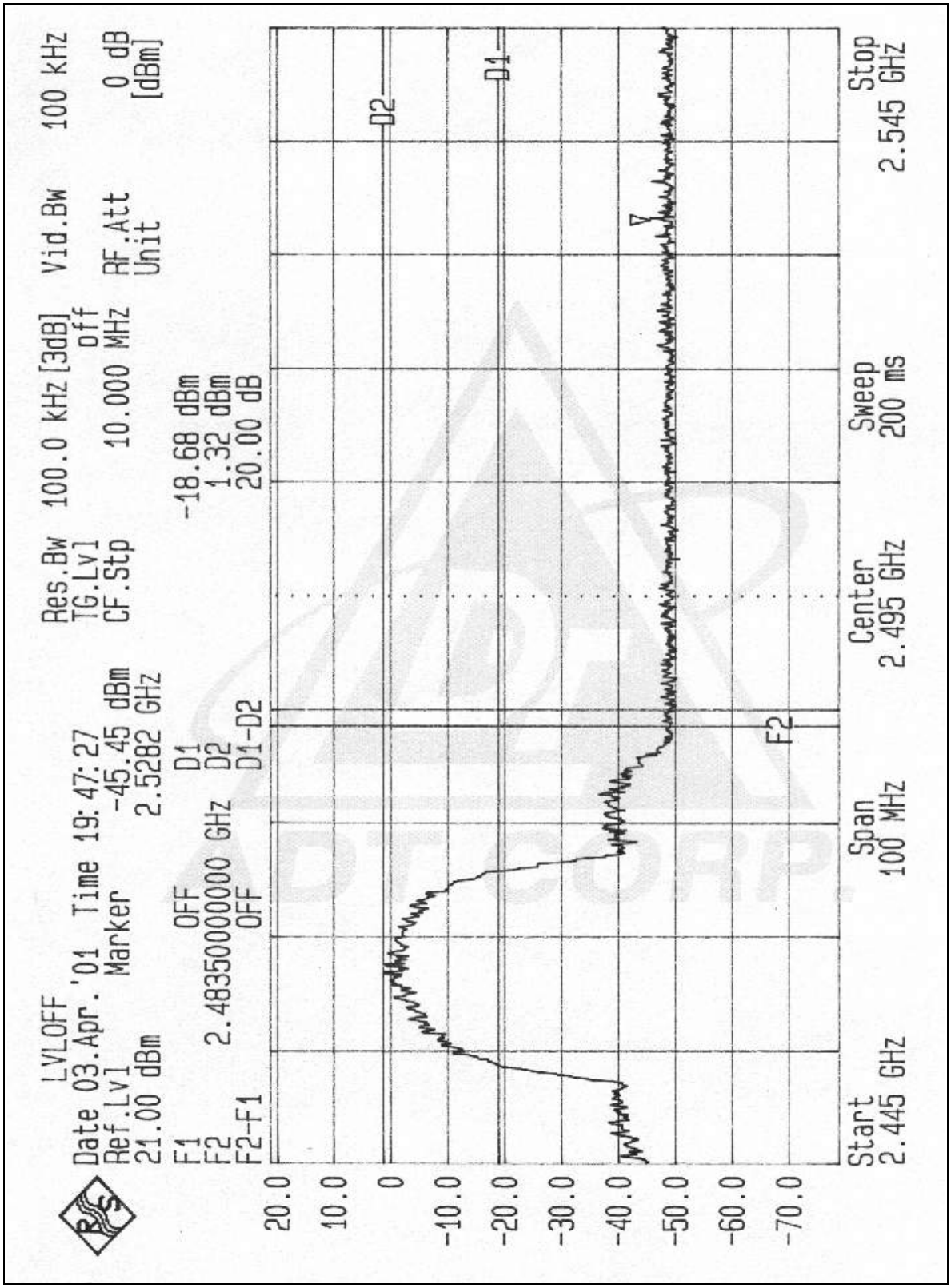
The software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel frequencies individually.

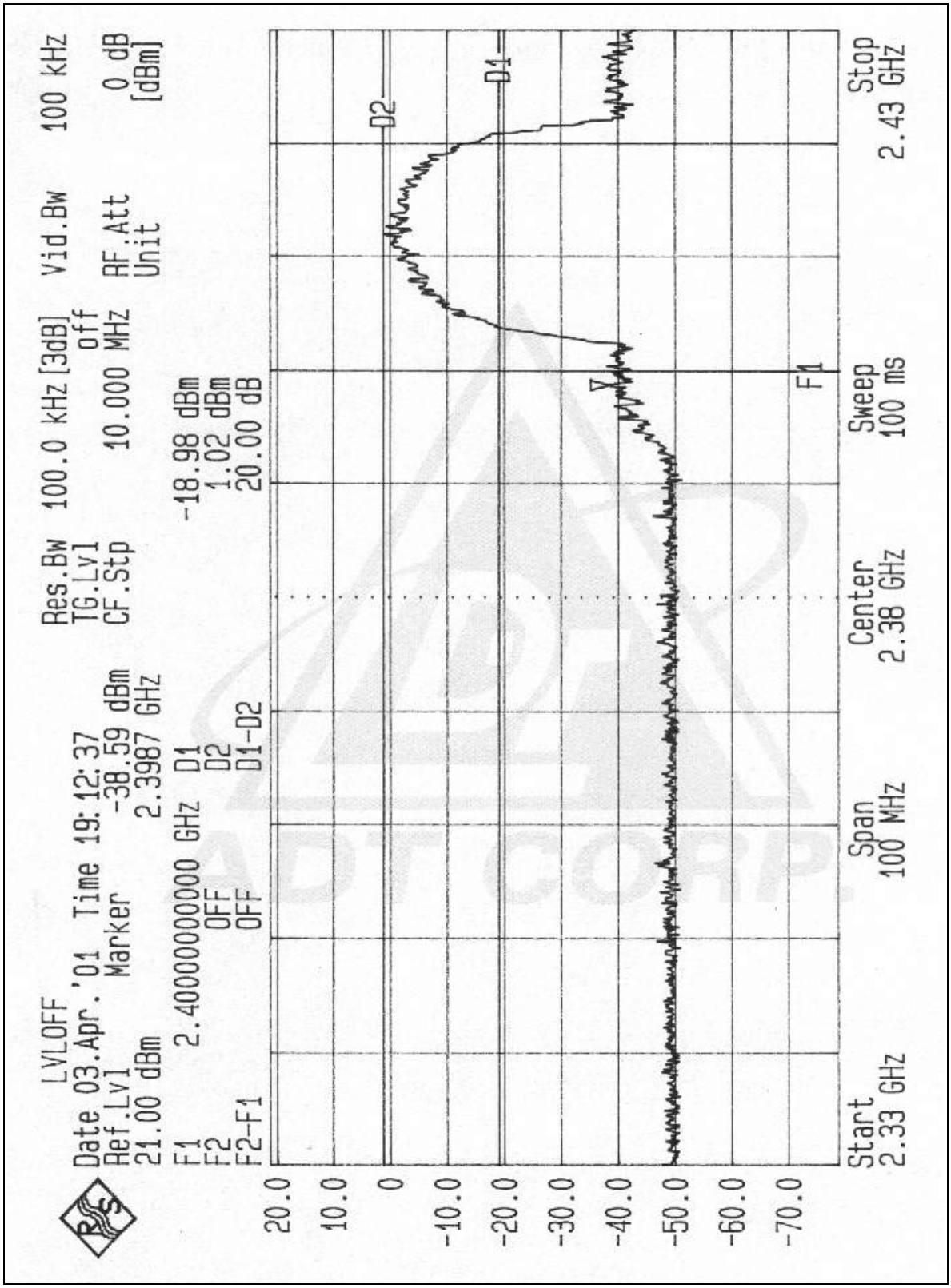
4.6.5 TEST RESULTS

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 53 shows 46.77dB delta between carrier maximum power and local maximum emission in restrict band (2.484GHz). The emission of carrier strength list in table of page 31 is 98.4dB μ V/m, so the maximum field strength in restrict band is 98.4-46.77=51.63 dB μ V/m which is under 54 dB μ V/m limit.


LVLOFF
Date 03.Apr.'01 Time 19:47:27
Ref.Lvl Marker -45.45 dBm
21.00 dBm 2.5282 GHz
F1 OFF
F2 2.48350000000 GHz
F2-F1 OFF
D1
D2
D1-D2
Res.Bw 100.0 kHz [3dB]
TG.Lvl off
CF.Stp 10.000 MHz
-18.68 dBm
1.32 dBm
20.00 dB
Vid.Bw 100 kHz
RF.Att 0 dB
Unit [dBm]
20.0
10.0
0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
D2
D1
F2
Start 2.445 GHz
Span 100 MHz
Center 2.495 GHz
Sweep 200 ms
Stop 2.545 GHz


LVLOFF
Date 03.Apr.'01 Time 19:12:37
Ref.Lvl Marker -38.59 dBm
21.00 dBm 2.3987 GHz
F1 2.40000000000 GHz D1
F2 OFF D2
F2-F1 OFF D1-D2
Res.Bw 100.0 kHz [3dB] Vid.Bw 100 kHz
TG.Lvl off
CF.Stp 10.000 MHz RF.Att 0 dB
Unit [dBm]
-18.98 dBm
1.02 dBm
20.00 dB
20.0
10.0
0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
D2
D1
F1
Start 2.33 GHz
Span 100 MHz
Center 2.38 GHz
Sweep 100 ms
Stop 2.43 GHz

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 monopole antenna. The antenna connector is MCX. And the maximum Gain of this antenna is only 1dBi.

5 PHOTOGRAPHS OF THE TEST CONFIGURATION

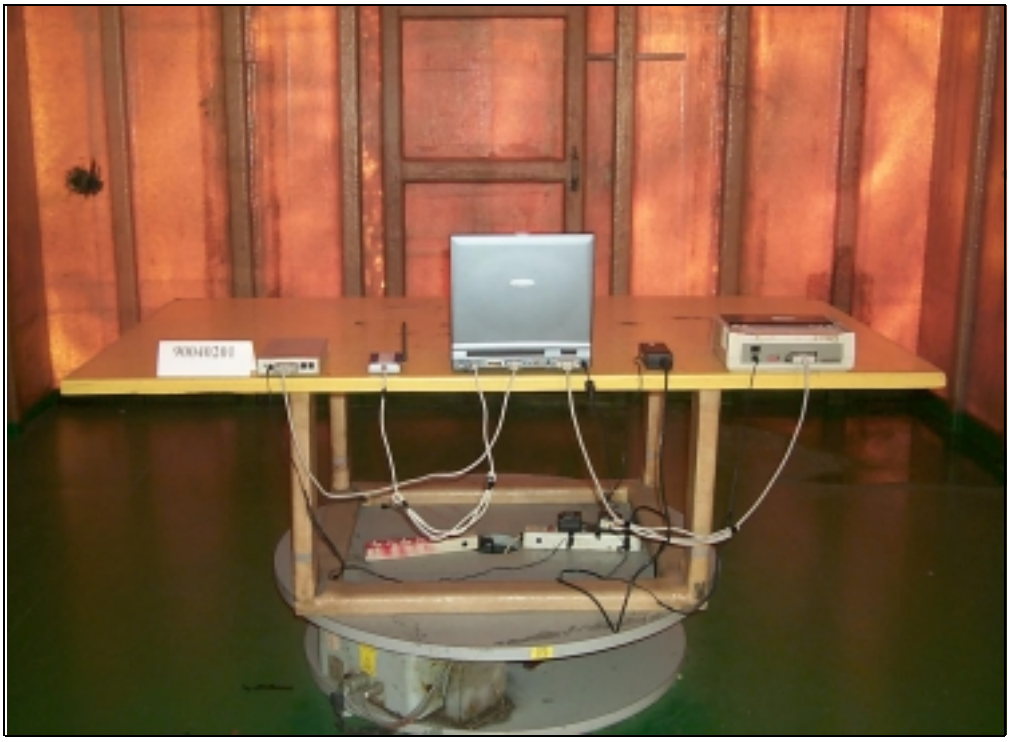
CONDUCTED EMISSION TEST

Model :GL2411EU

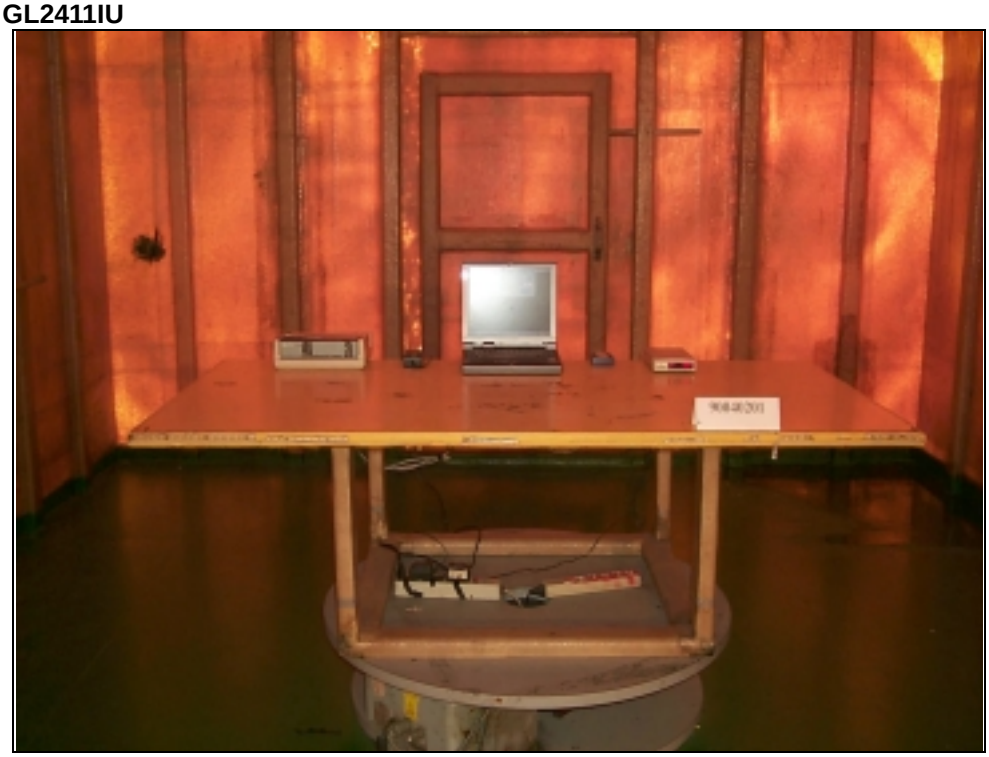
Model: GL2411IU

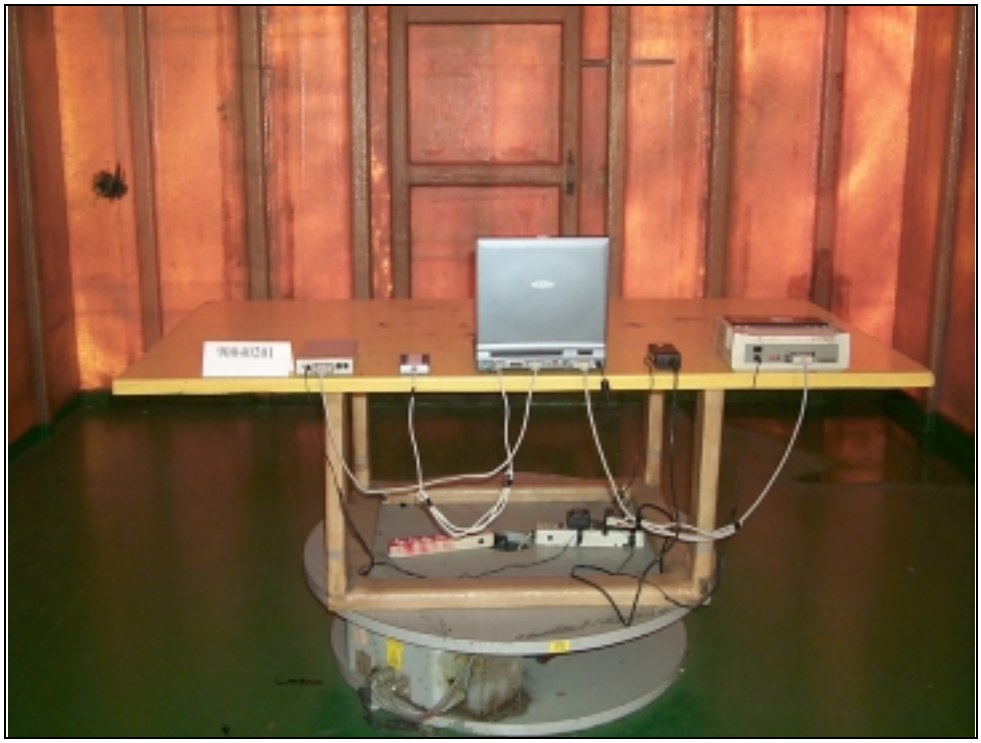
RADIATED EMISSION TEST

Model: GL2411EU



Model: GL2411IU





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 by the following approval agencies according to ISO/IEC Guide 25 or EN 45001:

USA	FCC, NVLAP
Germany	TUV Rheinland
Japan	VCCI
New Zealand	RFS
Norway	NEMKO, DNV
U.K.	INCHCAPE
R.O.C.	BSMI

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.

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