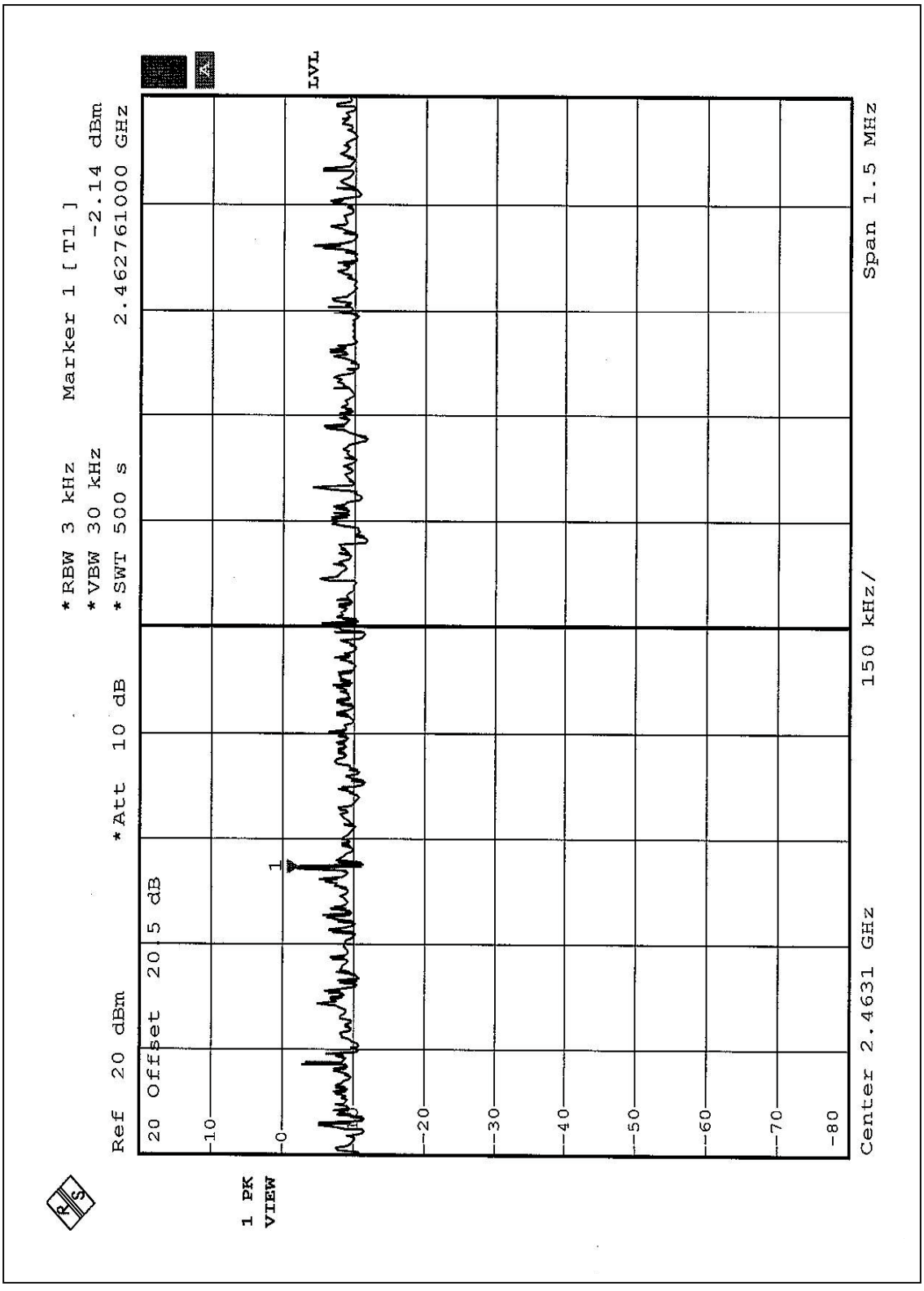
CH11

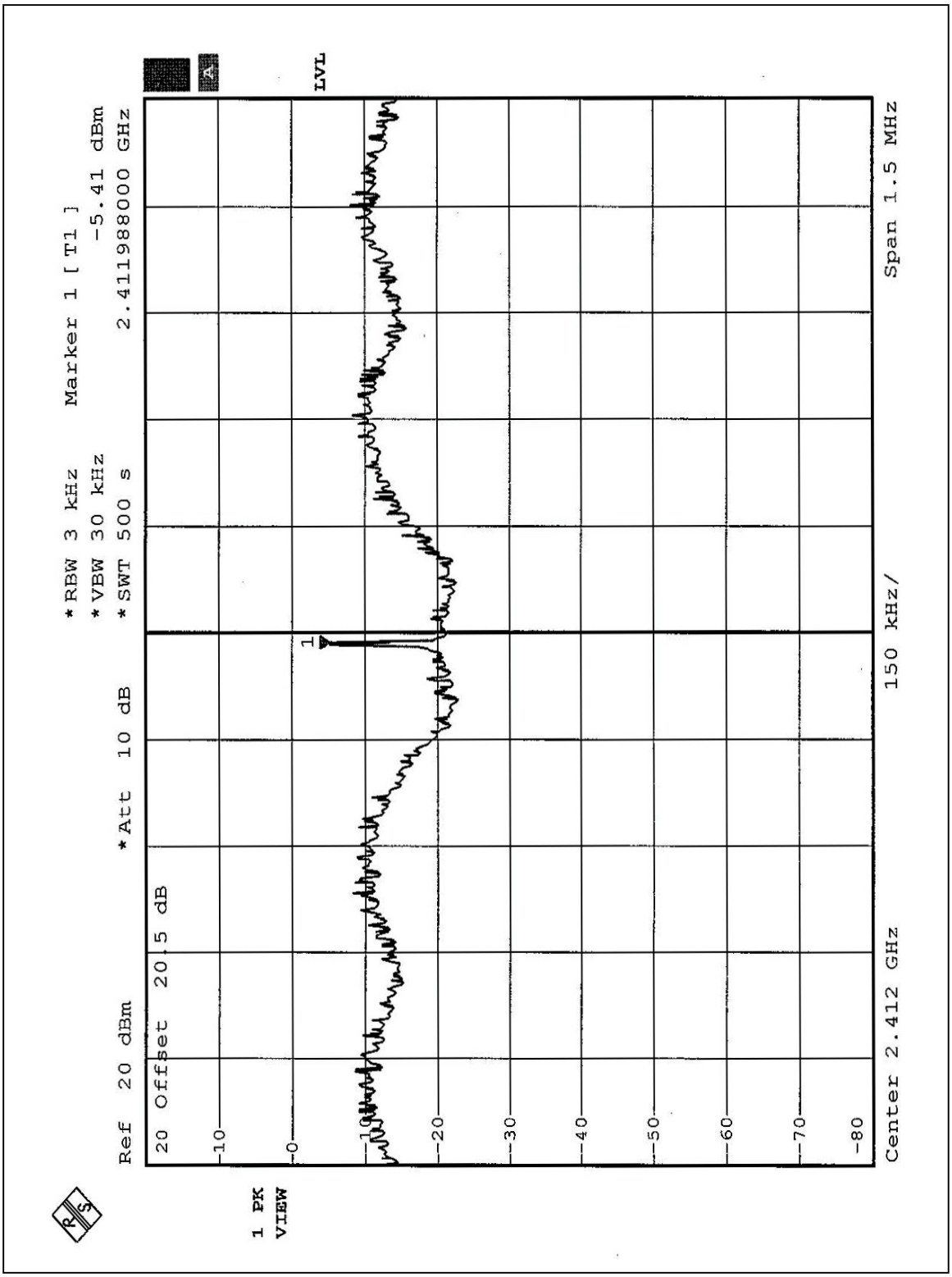

Ref 20 dBm
20 Offset 20.5 dB
*Att 10 dB
*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-2.14 dBm
2.462761000 GHz
LVL
1 PK
VIEW
Center 2.4631 GHz
150 kHz/
Span 1.5 MHz

4.5.8 TEST RESULTS (B)

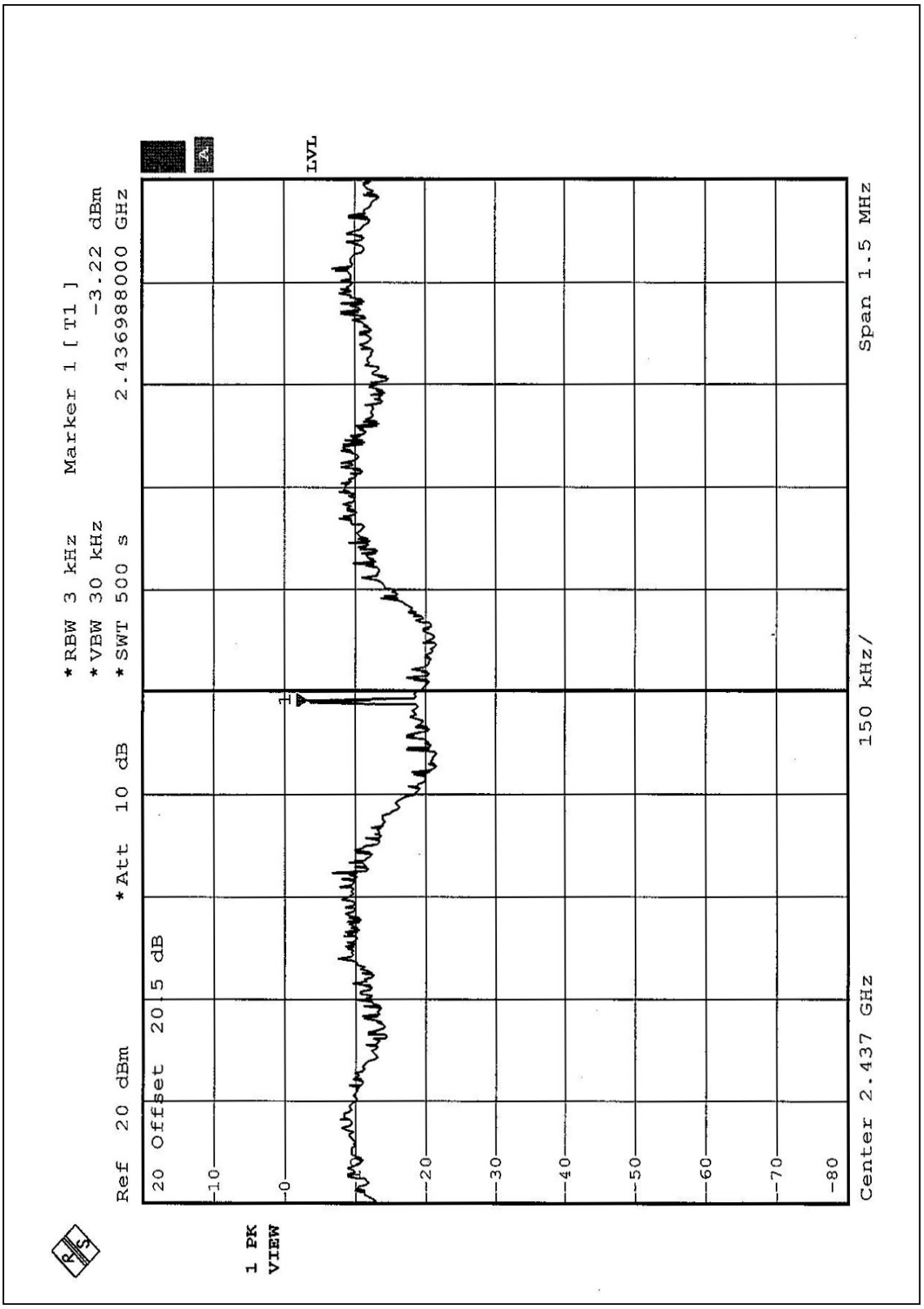
EUT	802.11b/g MiniPCI module		
MODEL	T60H786	**ENVIRONMENTAL CONDITIONS**	21 deg. C, 58 %RH, 974 hPa
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**TESTED BY**	Eric Lee

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 KHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-5.41	8	PASS
6	2437	-3.22	8	PASS
11	2462	-4.86	8	PASS

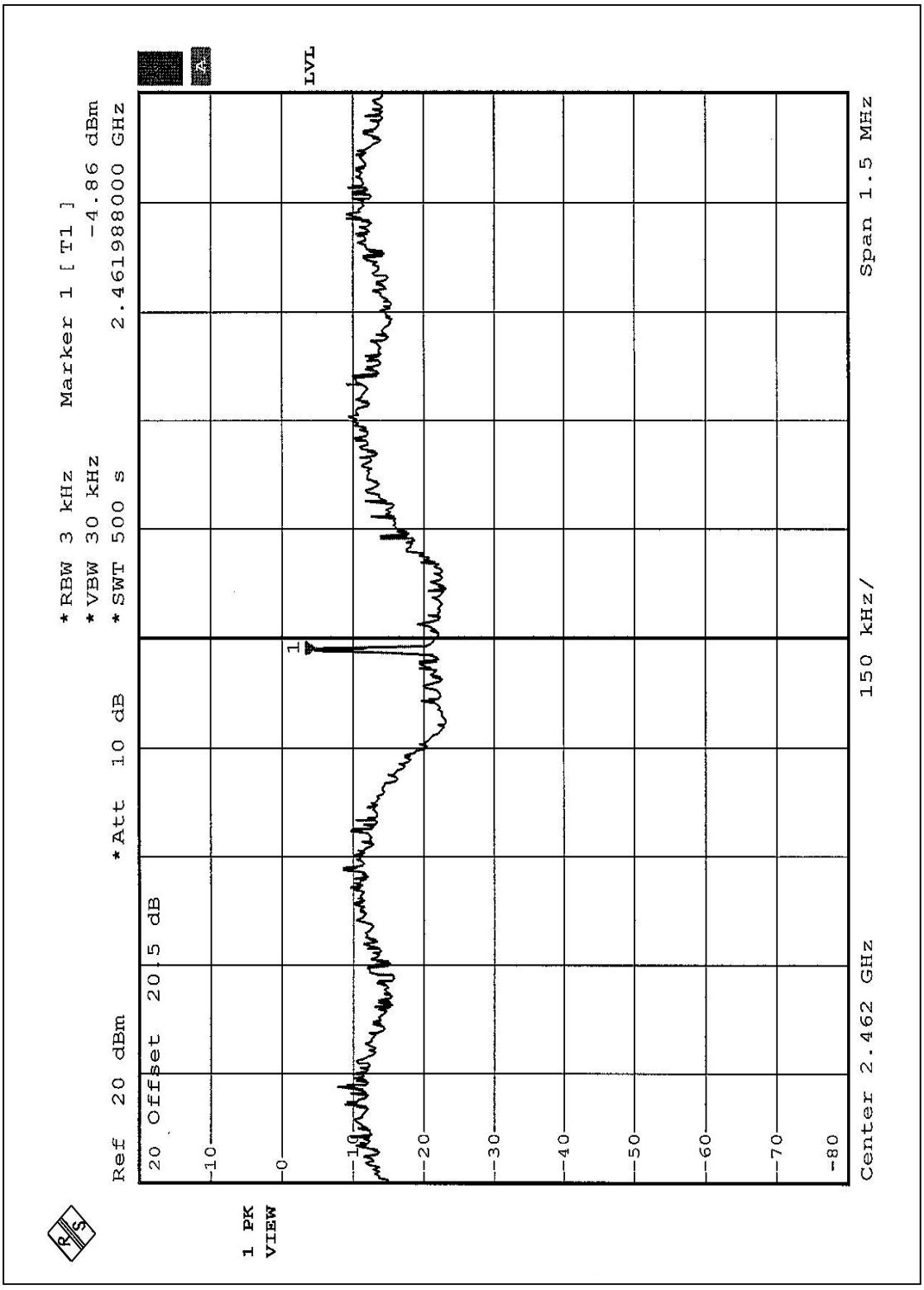
CH1


Ref 20 dBm
20 Offset 20.5 dB
*Att 10 dB
*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-5.41 dBm
2.411988000 GHz
LVL
A
1 PK
VIEW
Center 2.412 GHz
150 kHz/
Span 1.5 MHz

CH6


Ref 20 dBm
20 Offset 20.5 dB
*Att 10 dB
*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-3.22 dBm
2.436988000 GHz
1 PK
VIEW
Center 2.437 GHz
150 kHz/
Span 1.5 MHz

CH11


Ref 20 dBm
20 Offset 20.5 dB
*Att 10 dB
*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-4.86 dBm
2.461988000 GHz
LVL
1 PK
VIEW
Center 2.462 GHz
150 kHz/
Span 1.5 MHz

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 Resolution Bandwidth).

4.6.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSP40	100037	May 06, 2004

NOTE:

1. 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 1MHz and 300Hz with suitable frequency span including 100 MHz bandwidth from band edge. The band edges was measured and recorded.

4.6.4 EUT OPERATING CONDITION

Same as Item 4.3.6

4.6.5 TEST RESULTS (A)

The spectrum plots are attached on the following 4 pages. D1 line indicates the highest level, D2 line indicates the 20dB offset below D1. It shows compliance with the requirement in part 15.247(C).

Test Mode A

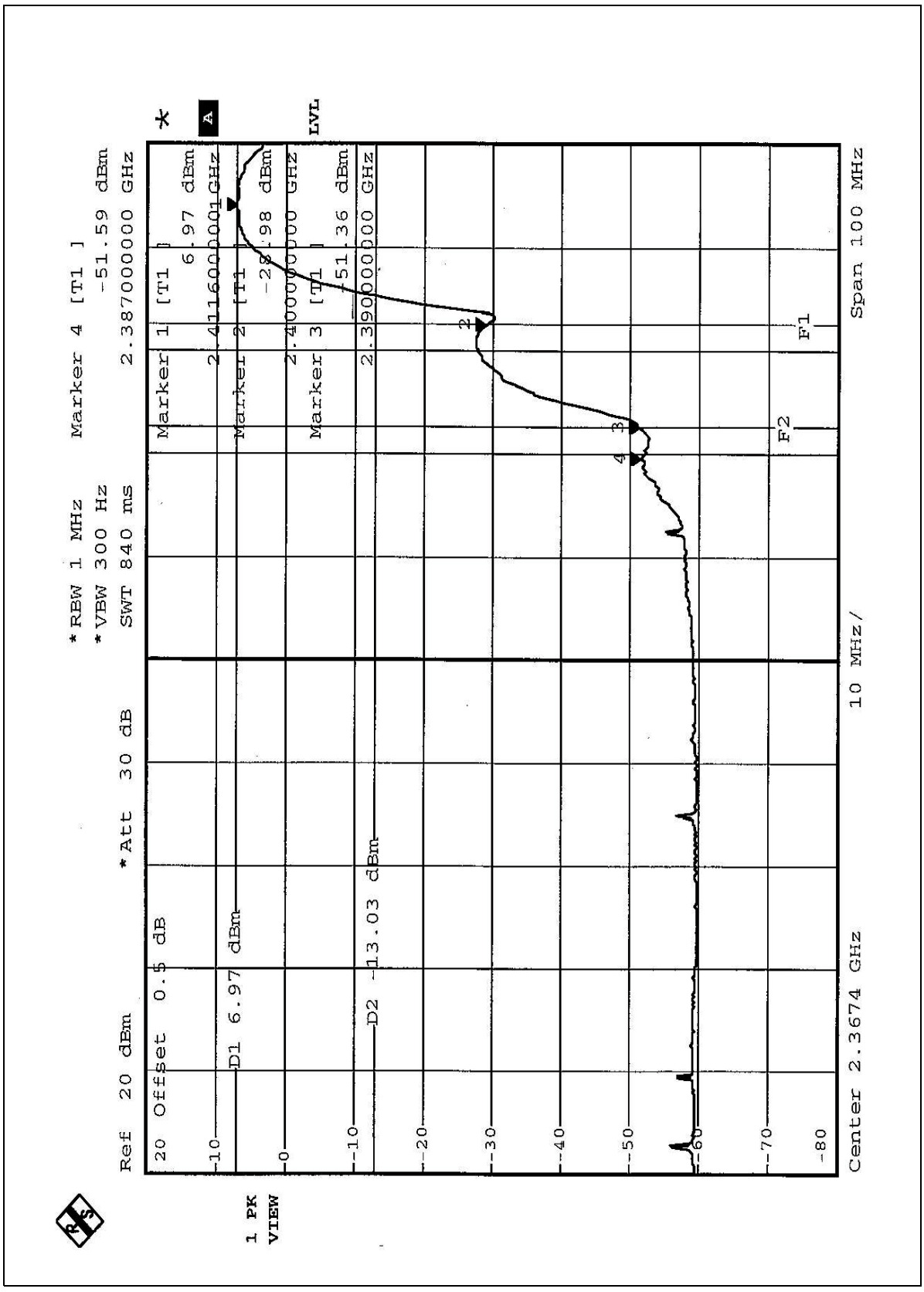
NOTE (1): The band edge emission plot on the following 1 ~ 2 page shows 58.33dB delta between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.8 is 102.5dBuV/m, so the maximum field strength in restrict band is 102.5-58.33=44.17dBuV/m which is under 54 dBuV/m limit.

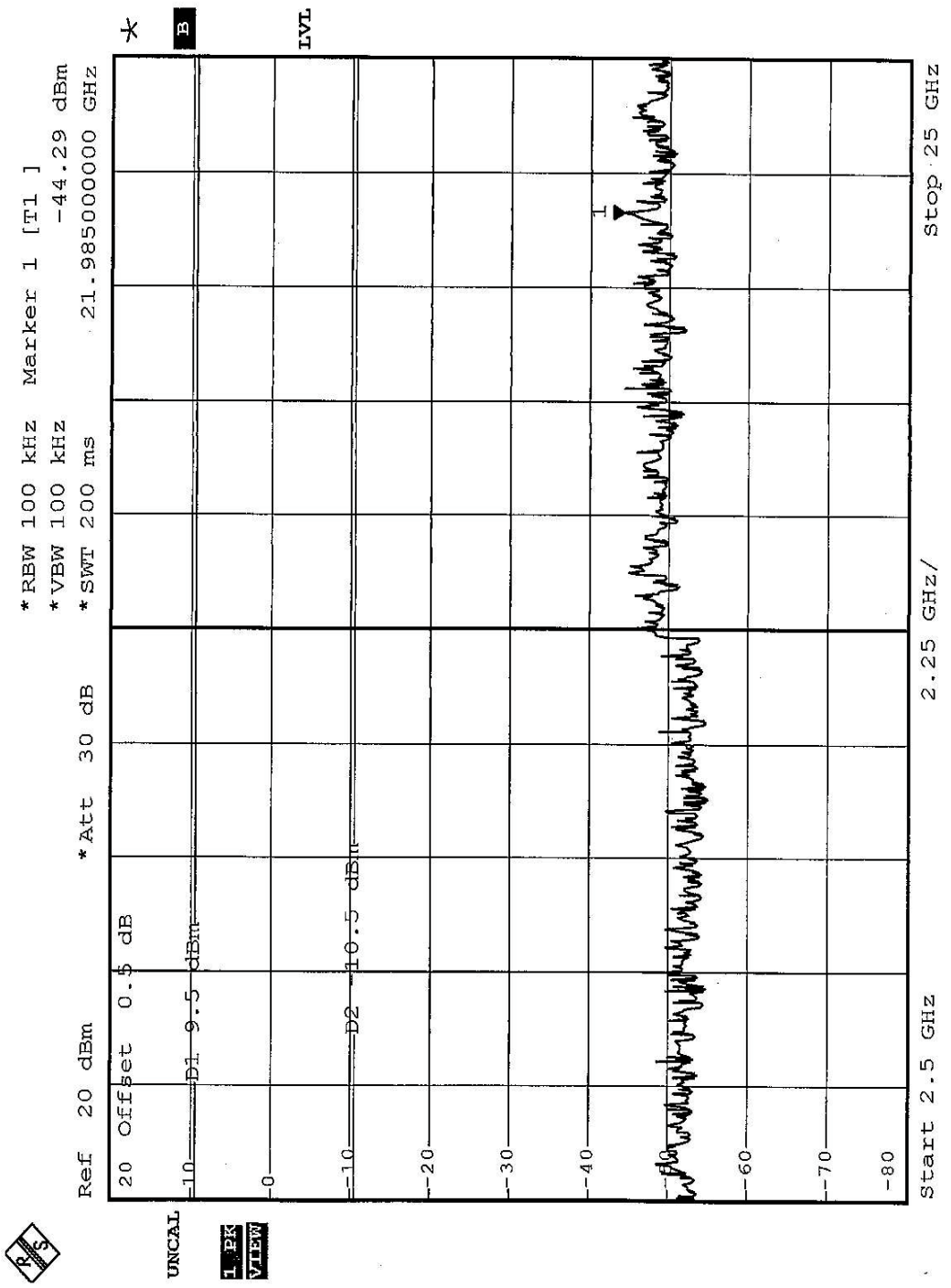
NOTE (2): The band edge emission plot on the following 3 ~ 4 page shows 57.36dB delta between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.8 is 102.7dBuV/m, so the maximum field strength in restrict band is 102.7-57.36=45.34dBuV/m which is under 54 dBuV/m limit.

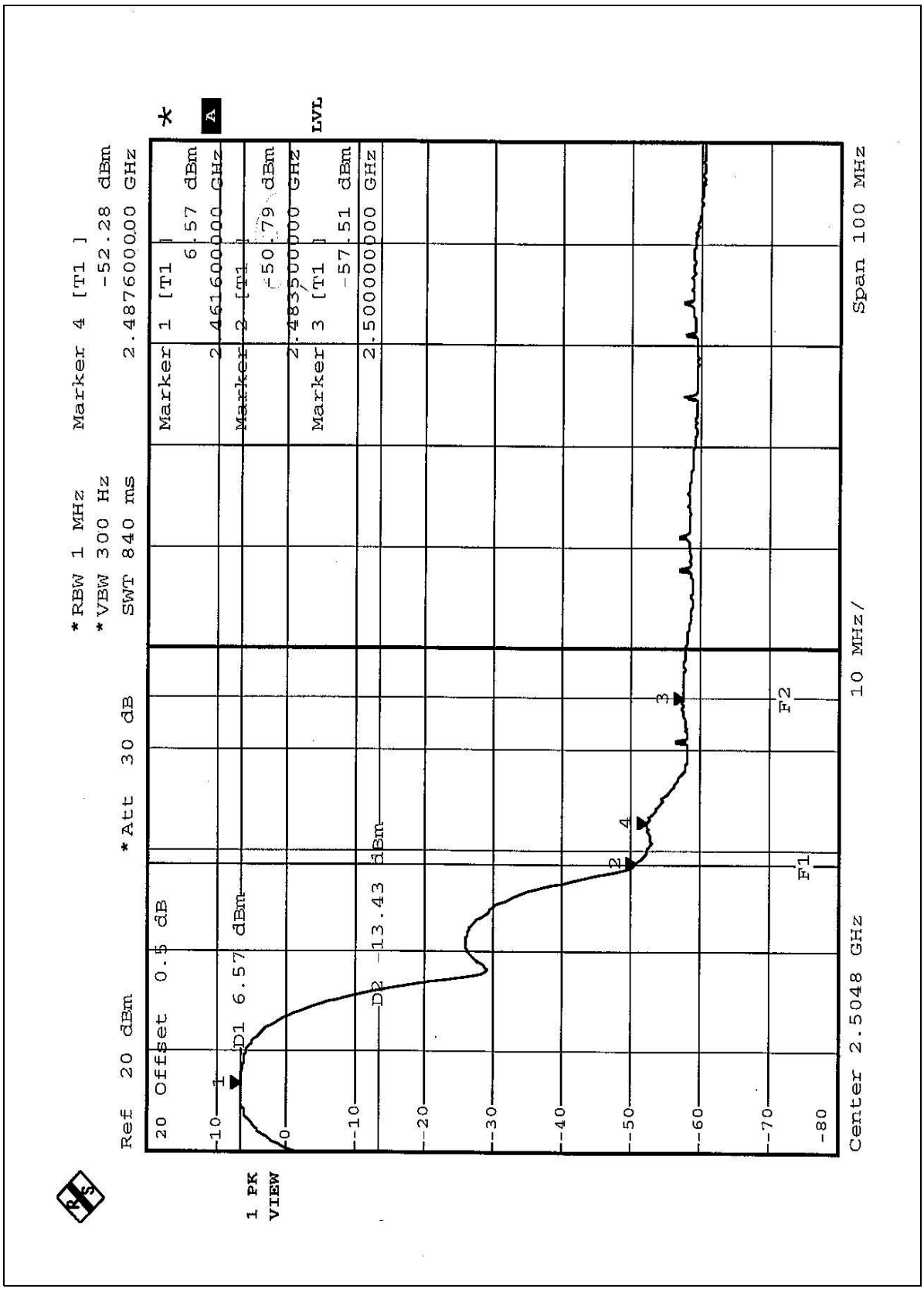
Test Mode B

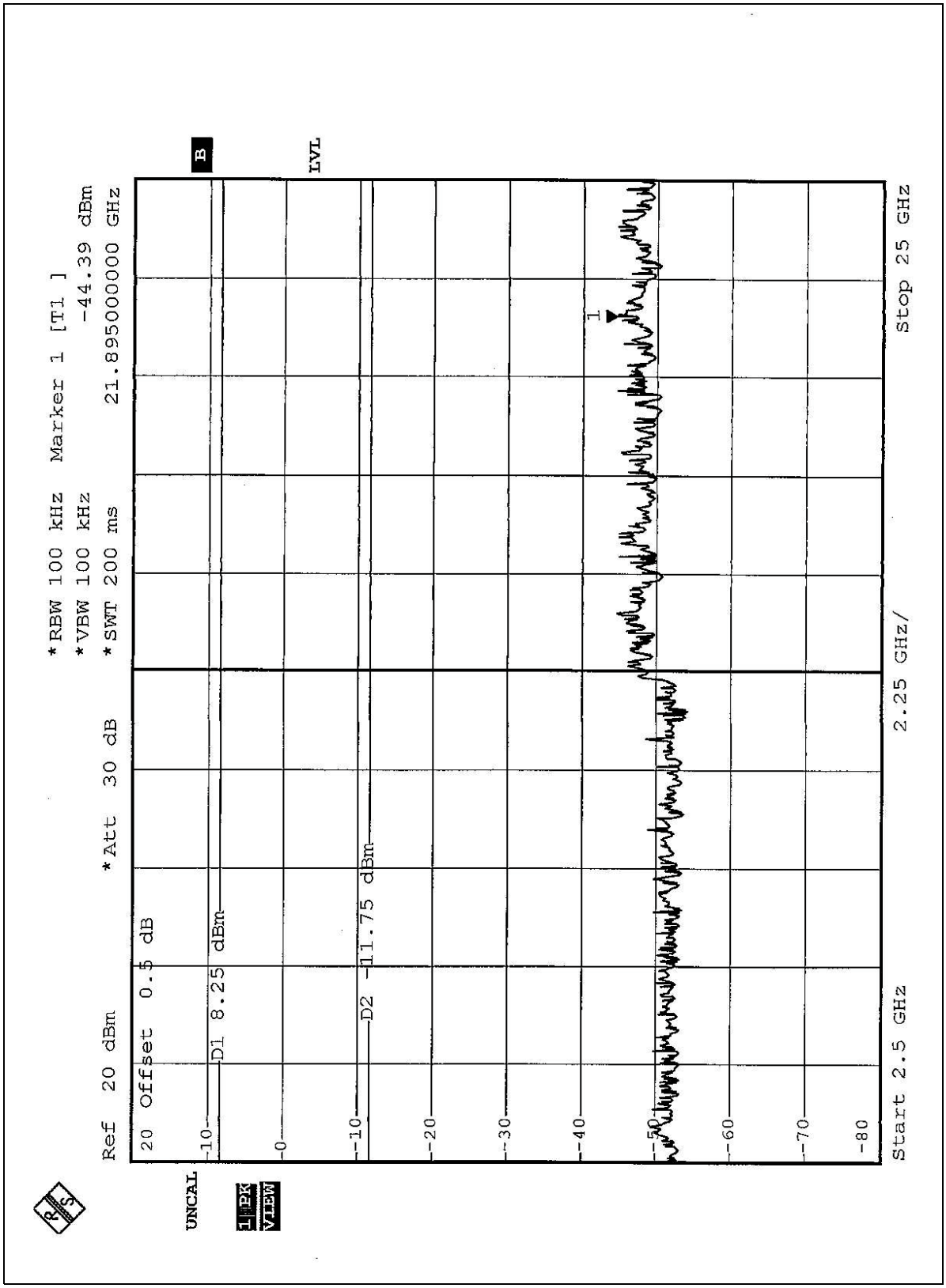
NOTE (1): The band edge emission plot on the following 1 ~ 2 page shows 58.33dB delta between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.8 is 105.4dBuV/m, so the maximum field strength in restrict band is 105.4-58.33=47.07dBuV/m which is under 54 dBuV/m limit.

NOTE (2): The band edge emission plot on the following 3 ~ 4 page shows 57.36dB delta between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.8 is 104.8dBuV/m, so the maximum field strength in restrict band is 104.8-57.36=47.44dBuV/m which is under 54 dBuV/m limit.


Ref 20 dBm
20 Offset 0.5 dB
*Att 30 dB
*RBW 1 MHz
*VBW 300 Hz
SWT 840 ms
Marker 4 [T1]
-51.59 dBm
2.387000000 GHz
Marker 1 [T1]
6.97 dBm
2.411600001 GHz
Marker 2 [T1]
-28.98 dBm
2.400000000 GHz
Marker 3 [T1]
-51.36 dBm
2.390000000 GHz
D1 6.97 dBm
D2 -13.03 dBm
1 PK
VIEW
Center 2.3674 GHz
10 MHz/
Span 100 MHz
F1
F2


Ref 20 dBm
20 Offset 0.5 dB
*Att 30 dB
*RBW 100 kHz
*VBW 100 kHz
*SWT 200 ms
Marker 1 [T1]
-44.29 dBm
21.985000000 GHz
D1 9.5 dBm
D2 -10.5 dBm
Start 2.5 GHz
2.25 GHz/
Stop 25 GHz
UNCAL
1 PK
VIEW
LVL
B


Ref 20 dBm
20 Offset 0.5 dB
*Att 30 dB
*RBW 1 MHz
*VBW 300 Hz
SWT 840 ms
Marker 4 [T1]
-52.28 dBm
2.48760000 GHz
Marker 1 [T1]
6.57 dBm
2.46160000 GHz
Marker 2 [T1]
-50.79 dBm
2.48350000 GHz
Marker 3 [T1]
-57.51 dBm
2.50000000 GHz
LVL
A
D1 6.57 dBm
D2 -13.43 dBm
F1
F2
1 PK
VIEW
Center 2.5048 GHz
10 MHz/
Span 100 MHz


*RBW 100 kHz
*VBW 100 kHz
*SWT 200 ms
Marker 1 [T1]
-44.39 dBm
21.895000000 GHz
Ref 20 dBm
20 Offset 0.5 dB
*Att 30 dB
D1 8.25 dBm
D2 -11.75 dBm
Start 2.5 GHz
2.25 GHz/
Stop 25 GHz
UNCAL
1 PK VIEW
B
LVL

4.6.6 TEST RESULTS (B)

The spectrum plots are attached on the following 4 pages. D1 line indicates the highest level, D2 line indicates the 20dB offset below D1. It shows compliance with the requirement in part 15.247(C).

Test Mode A

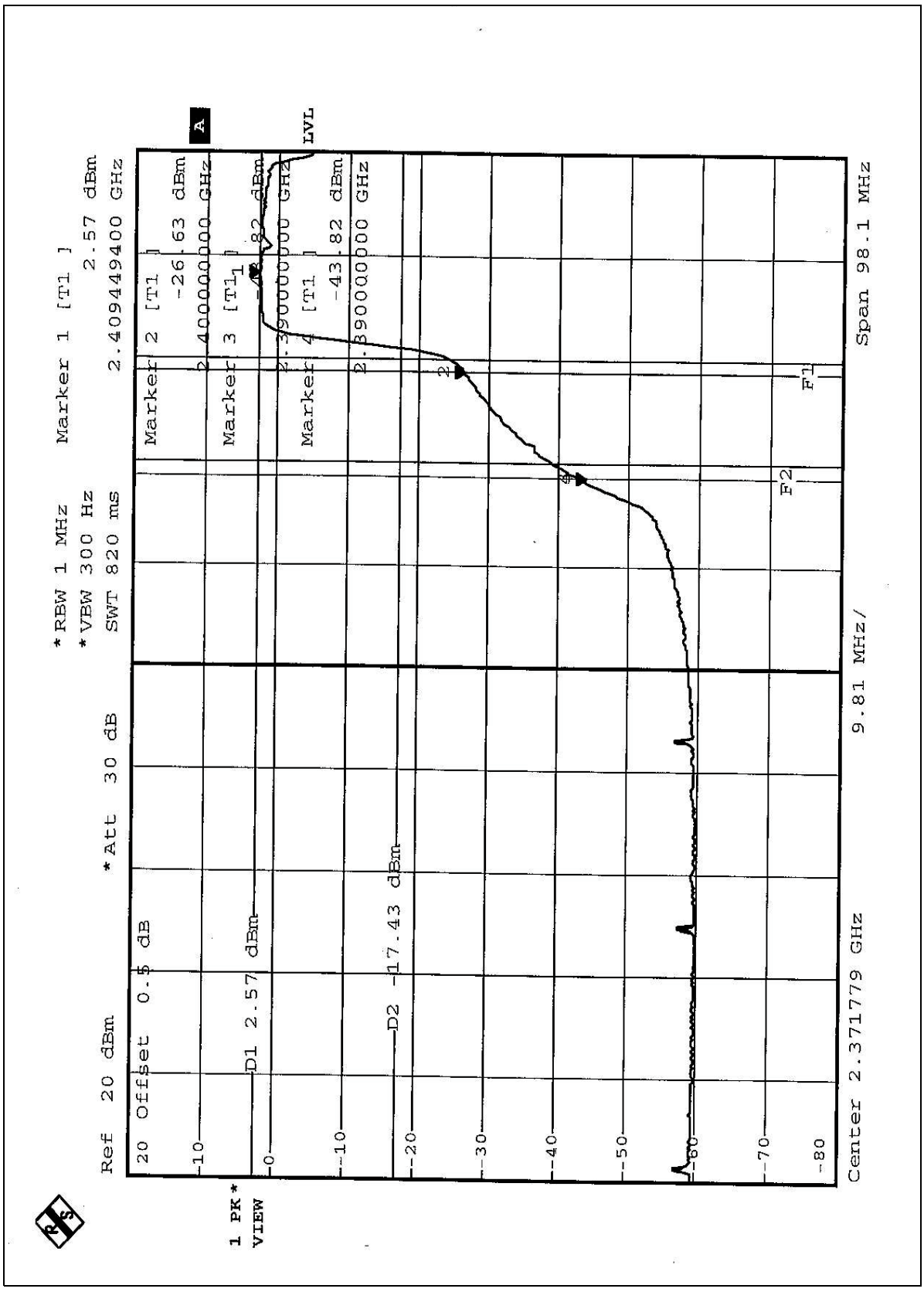
NOTE (1): The band edge emission plot on the following 1 ~ 2 page shows 46.39dB delta between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.9 is 96.8dBuV/m, so the maximum field strength in restrict band is 96.8-46.39=50.41dBuV/m which is under 54 dBuV/m limit.

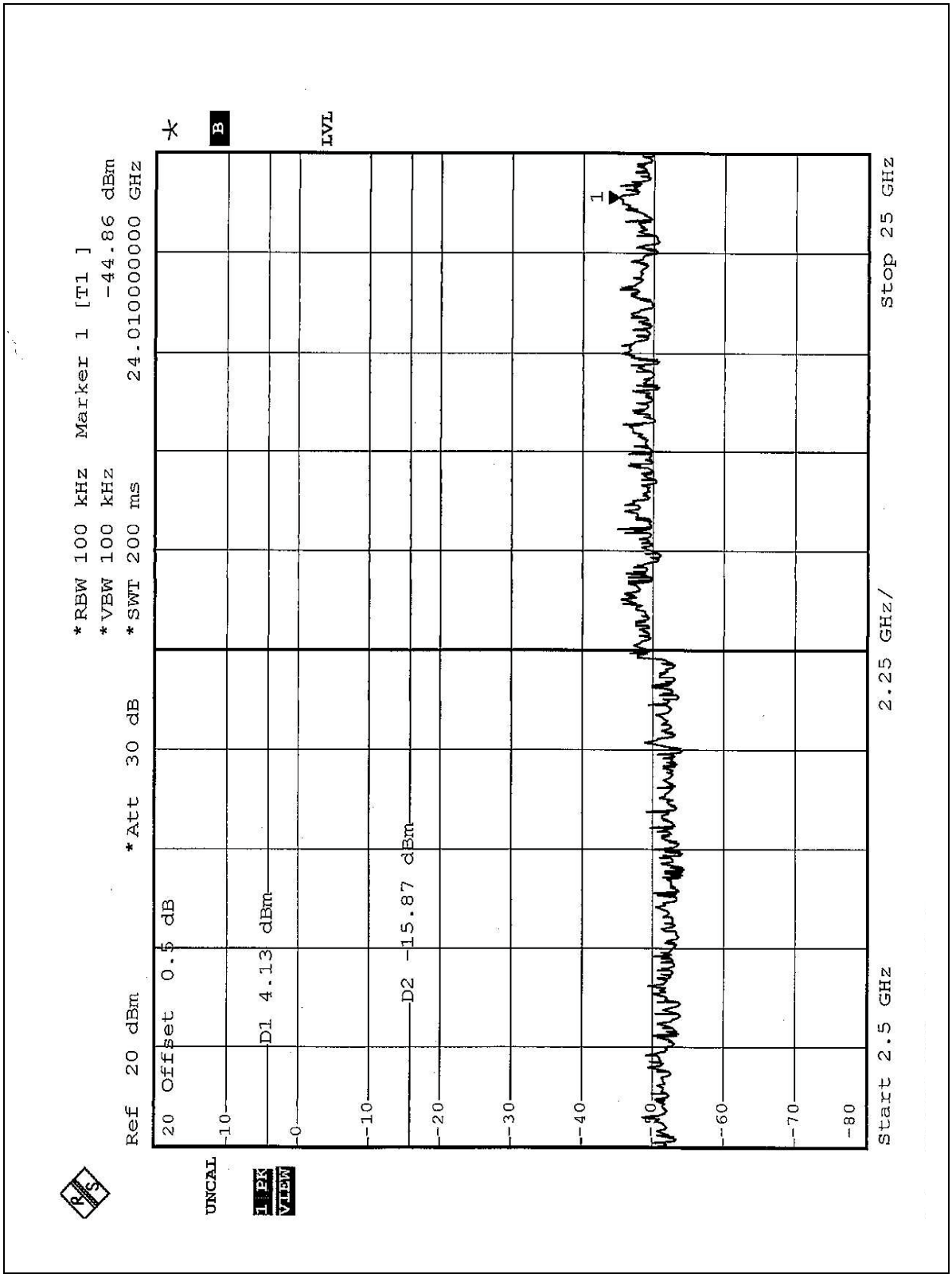
NOTE (2): The band edge emission plot on the following 3 ~ 4 page shows 44.12dB delta between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.9 is 96.1dBuV/m, so the maximum field strength in restrict band is 96.1-44.12=51.98dBuV/m which is under 54 dBuV/m limit.

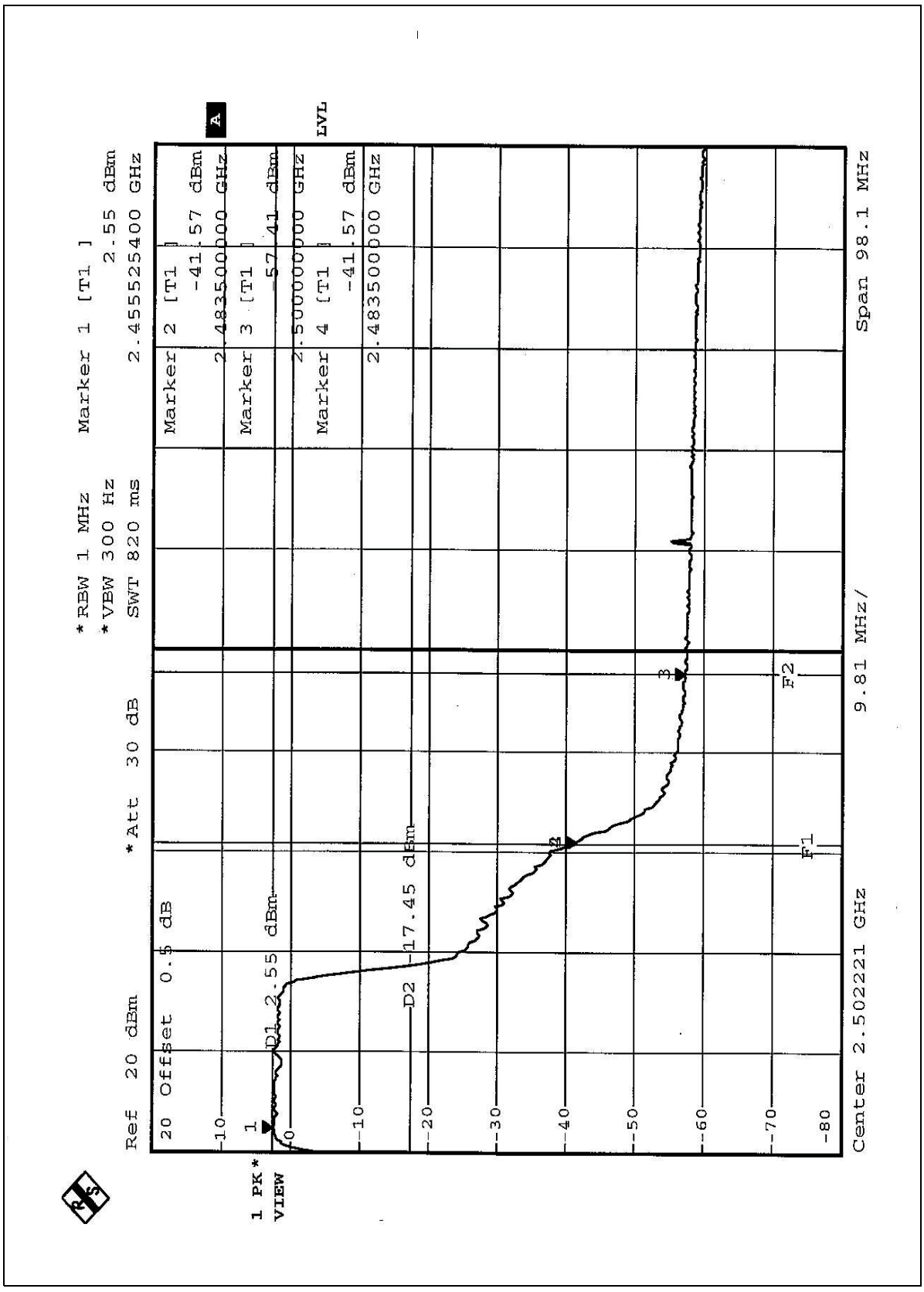
Test Mode B

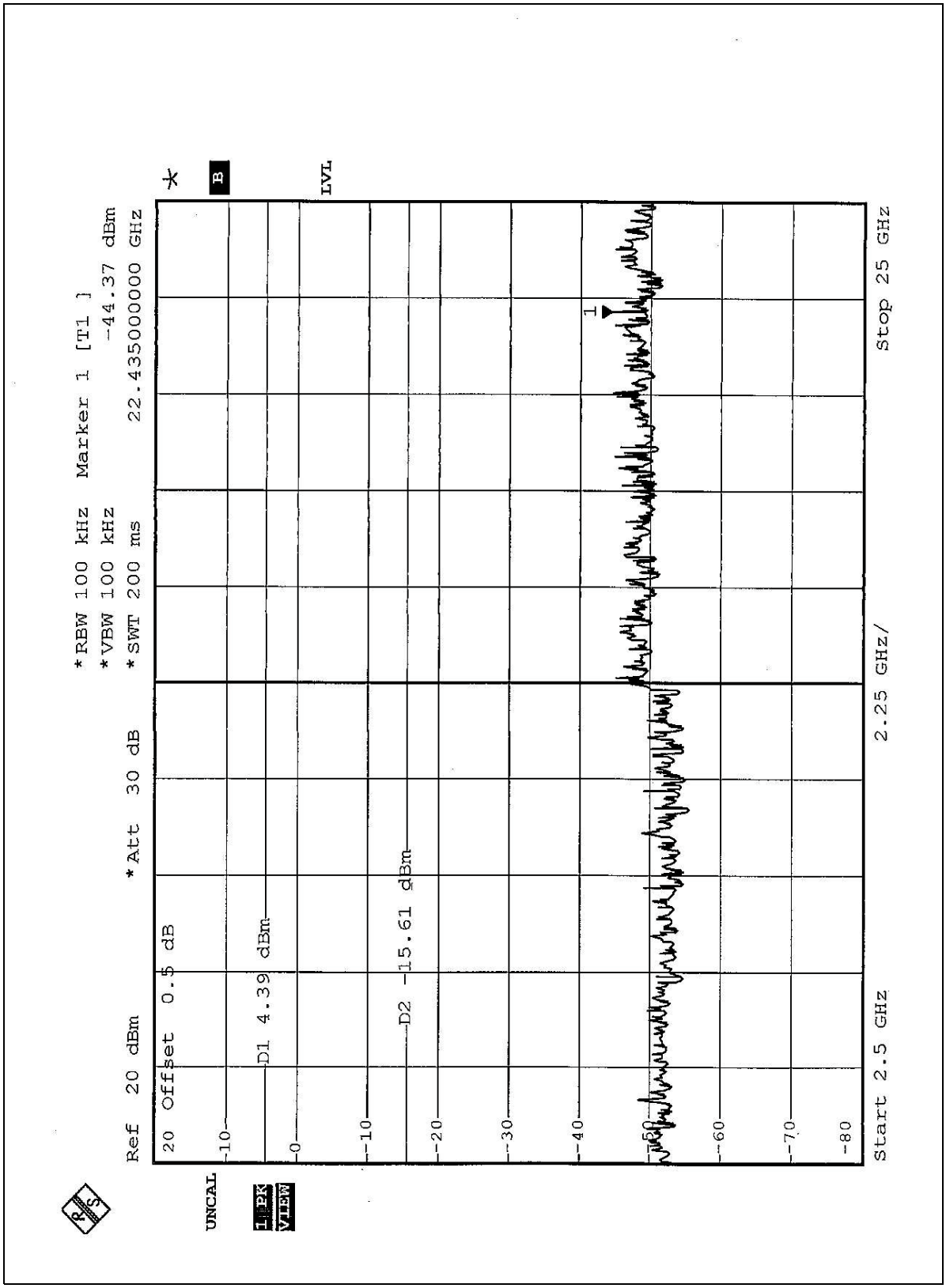
NOTE (1): The band edge emission plot on the following 1 ~ 2 page shows 46.39dB delta between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.9 is 96.4dBuV/m, so the maximum field strength in restrict band is 96.4-46.39=50.01dBuV/m which is under 54 dBuV/m limit.

NOTE (2): The band edge emission plot on the following 3 ~ 4 page shows 44.12dB delta between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.9 is 96.0dBuV/m, so the maximum field strength in restrict band is 96.0-44.12=51.88dBuV/m which is under 54 dBuV/m limit.


RBW 1 MHz
VBW 300 Hz
SWT 820 ms
Marker 1 [T1]
2.57 dBm
2.409449400 GHz
Ref 20 dBm
Offset 0.5 dB
Att 30 dB
Marker 2 [T1]
-26.63 dBm
2.400000000 GHz
Marker 3 [T1]
-43.82 dBm
2.390000000 GHz
Marker 4 [T1]
-43.82 dBm
2.390000000 GHz
LVL
D1 2.57 dBm
D2 -17.43 dBm
1 PK
VIEW
Center 2.371779 GHz
9.81 MHz/
Span 98.1 MHz
F1
F2


Ref 20 dBm
20 Offset 0.5 dB
*Att 30 dB
*RBW 100 kHz
*VBW 100 kHz
*SWT 200 ms
Marker 1 [T1]
-44.86 dBm
24.010000000 GHz
D1 4.13 dBm
D2 -15.87 dBm
Start 2.5 GHz
2.25 GHz/
Stop 25 GHz
UNCAL
LVL
B


RBW 1 MHz
VBW 300 Hz
SWT 820 ms
Marker 1 [T1]
2.55 dBm
2.45552540 GHz
Marker 2 [T1]
-41.57 dBm
2.48350000 GHz
Marker 3 [T1]
-57.41 dBm
2.50000000 GHz
Marker 4 [T1]
-41.57 dBm
2.48350000 GHz
Ref 20 dBm
20 Offset 0.5 dB
*Att 30 dB
1 PK*
VIEW
D1 2.55 dBm
D2 17.45 dBm
F1
F2
Center 2.502221 GHz
9.81 MHz/
Span 98.1 MHz


Ref 20 dBm
20 Offset 0.5 dB
*Att 30 dB
*RBW 100 kHz
*VBW 100 kHz
*SWT 200 ms
Marker 1 [T1]
-44.37 dBm
22.435000000 GHz
D1 4.39 dBm
D2 -15.61 dBm
Start 2.5 GHz
2.25 GHz/
Stop 25 GHz
UNCAL
LVL

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

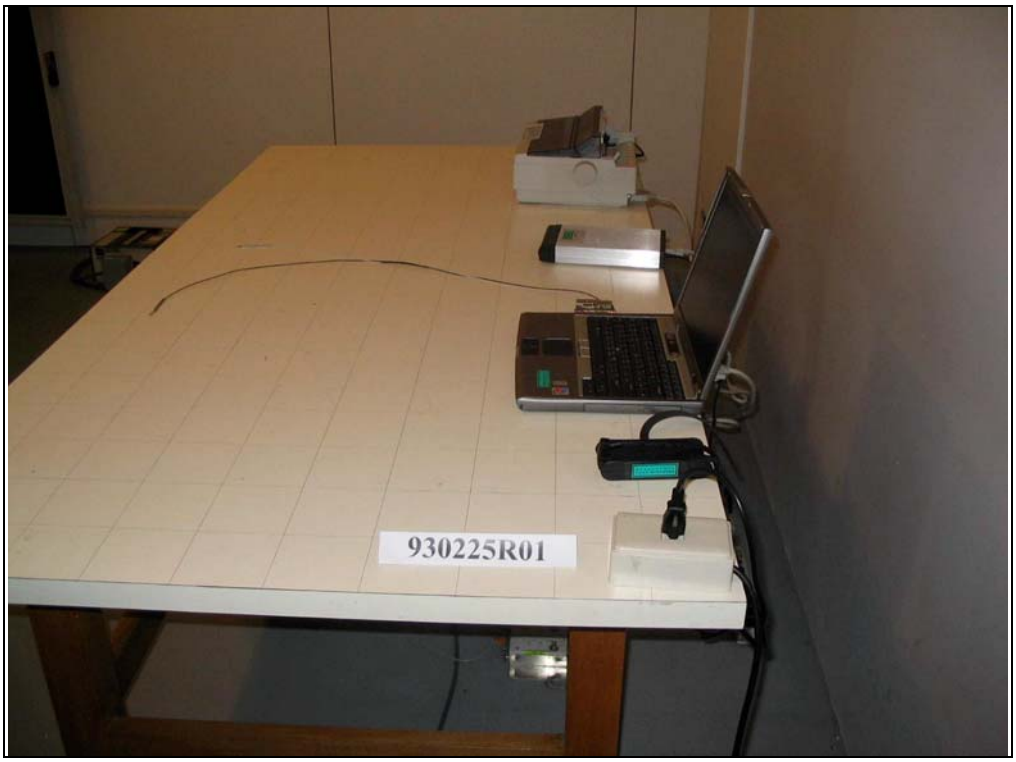
The antenna types used in this product are PIFA Antenna and Lambda/4 PIFI Antenna with HRS connector And the maximum Gain of this antenna is only 0.6dBi.

5 PHOTOGRAPHS OF THE TEST CONFIGURATION

CONDUCTED EMISSION TEST
(Test Mode A)

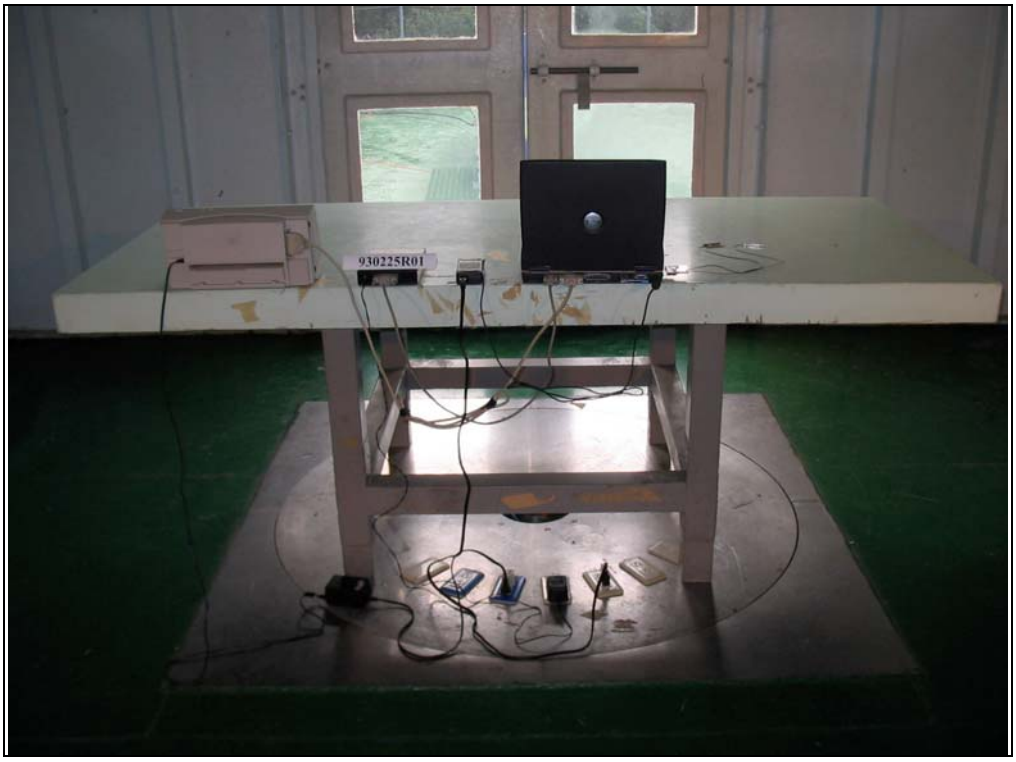

930225R01

(Test Mode B)




930225R01

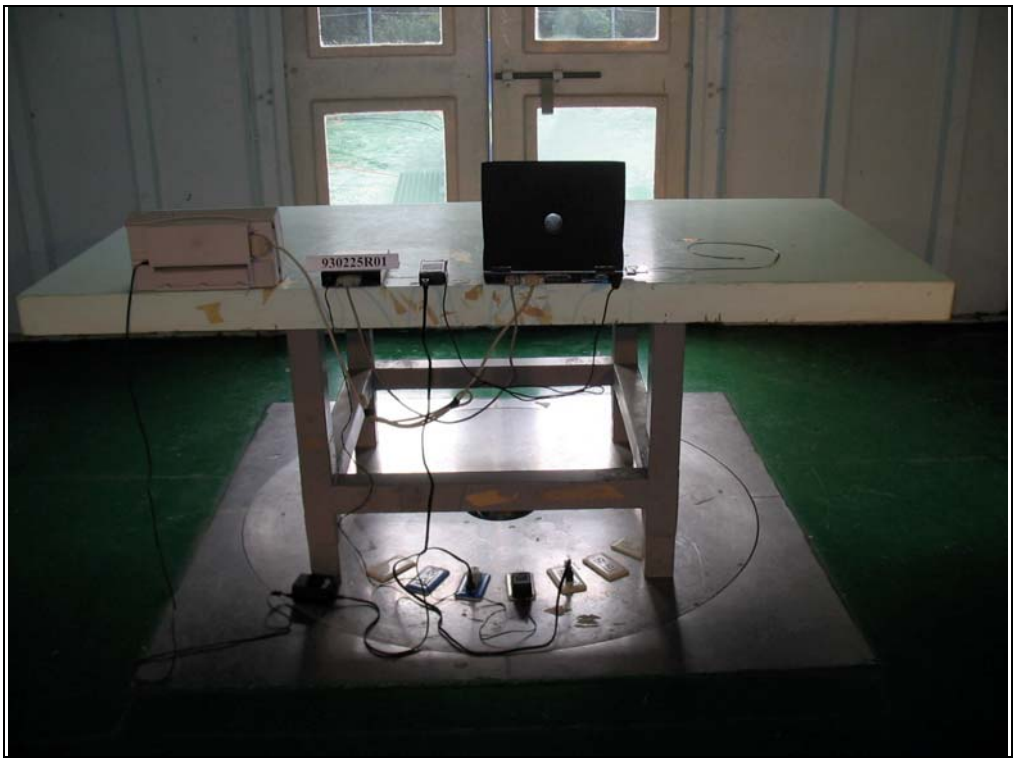
RADIATED EMISSION TEST
(Test Mode A)




930225R01


930225R01

(Test Mode B)




930225R01


930225R01
LATITUDE

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, Guide 25 or EN 45001:

USA	FCC, NVLAP, UL
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:

Linko EMC/RF Lab:
Tel: 886-2-26052180
Fax: 886-2-26052943

Hsin Chu EMC/RF Lab:
Tel: 886-3-5935343
Fax: 886-3-5935342

Hwa Ya EMC/RF/Safety Lab:
Tel: 886-3-3183232
Fax: 886-3-3185050

Linko RF & Telecom Lab.
Tel: 886-3-3270910
Fax: 886-3-3270892

Email: service@mail.adt.com.tw
Web Site: www.adt.com.tw

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