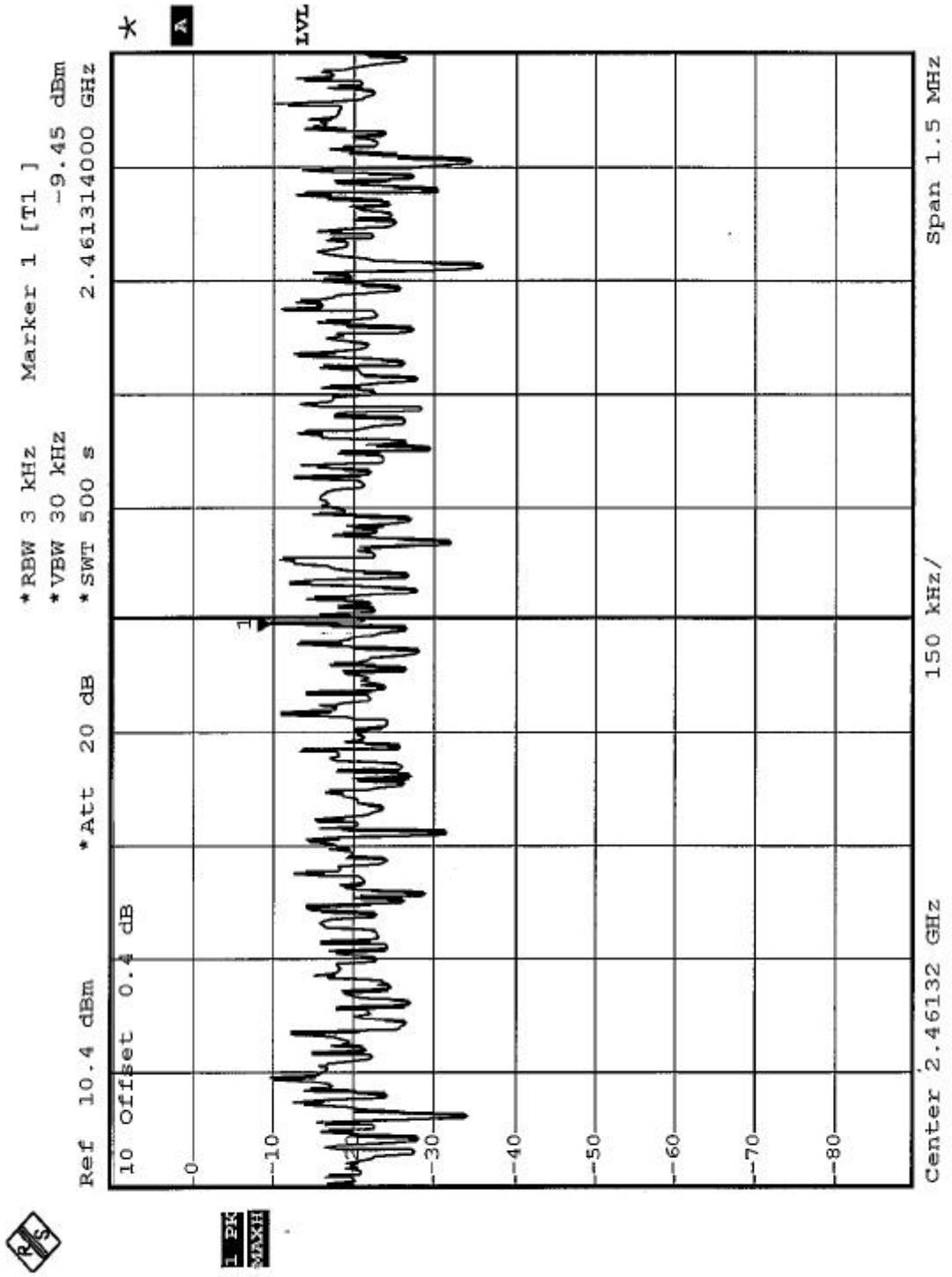
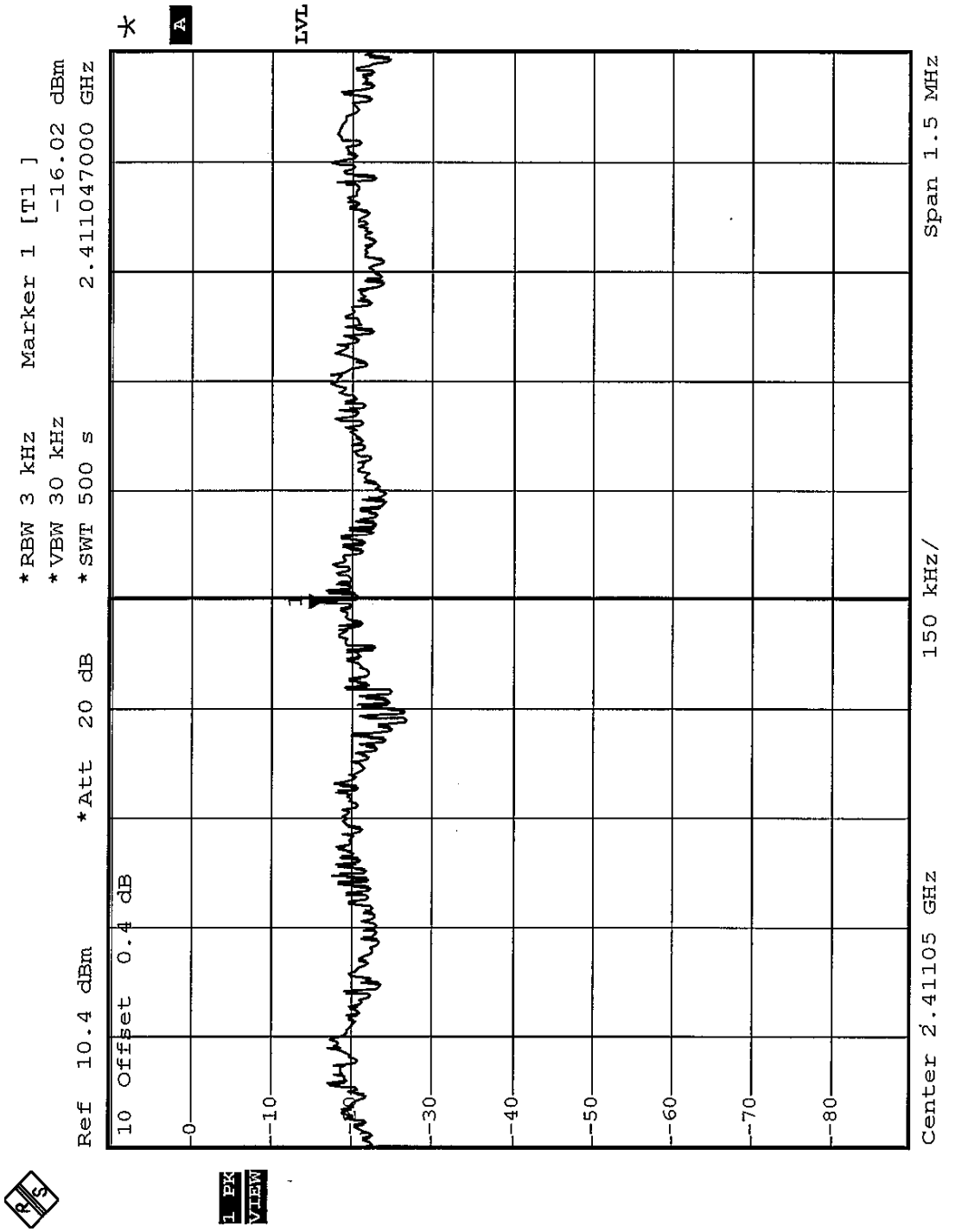
CH11


Ref 10.4 dBm
10 Offset 0.4 dB
*Att 20 dB
*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-9.45 dBm
2.461314000 GHz
Center 2.46132 GHz
150 kHz/
Span 1.5 MHz
1 PK
MAXH
A
LVL

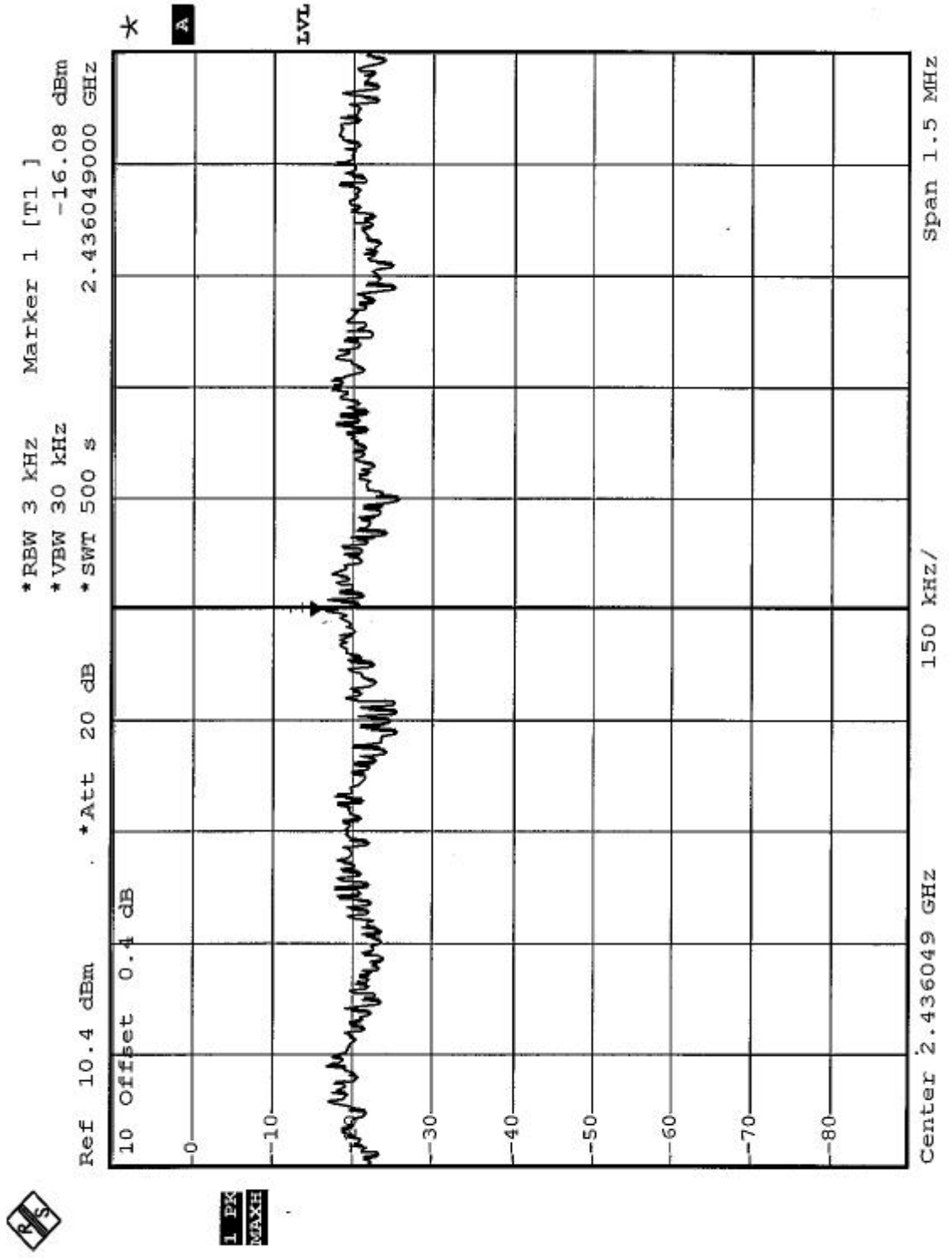
EUT	Wireless AP VPN Router	**MODEL**	WRTD-117GW
INPUT POWER (SYSTEM)	120 Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	24 deg. C, 65% RH, 991 hPa
TEST MODE	OFDM	**TESTED BY**	Leo Hung

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3KHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-16.02	8	PASS
6	2437	-16.08	8	PASS
11	2462	-15.97	8	PASS

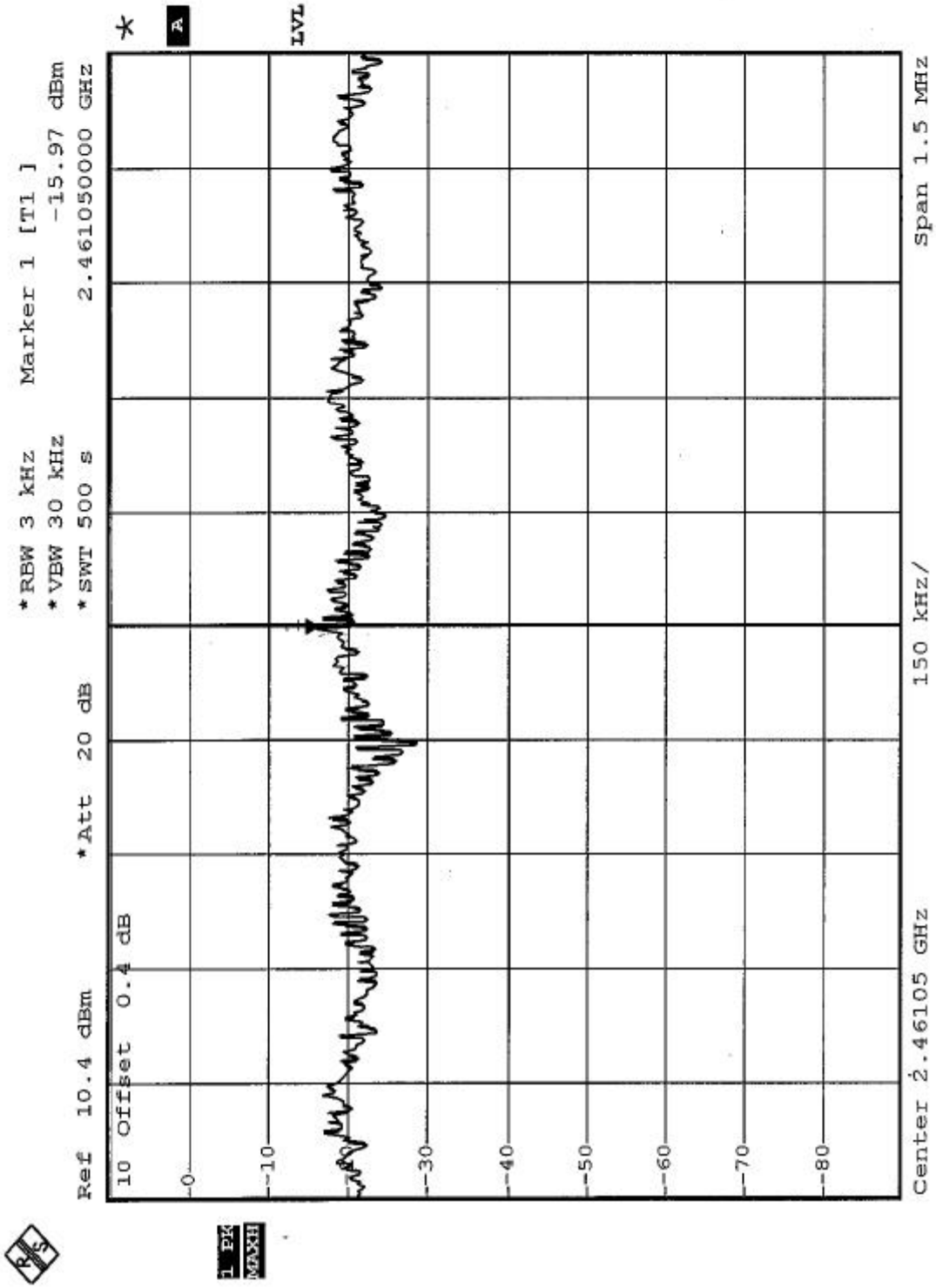
CH1


Ref 10.4 dBm
10 Offset 0.4 dB
*Att 20 dB
*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-16.02 dBm
2.411047000 GHz
Center 2.41105 GHz
150 kHz/
Span 1.5 MHz
1 PK VIEW
LVL
A
0
-10
-30
-40
-50
-60
-70
-80

CH6


*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-16.08 dBm
2.436049000 GHz
Ref 10.4 dBm
10 Offset 0.4 dB
*Att 20 dB
Center 2.436049 GHz
150 kHz/
Span 1.5 MHz
1 PK MAXH
0
-10
-30
-40
-50
-60
-70
-80

CH11


Ref 10.4 dBm
10 Offset 0.4 dB
*Att 20 dB
*RBW 3 kHz
*VBW 30 kHz
*SWT 500 s
Marker 1 [T1]
-15.97 dBm
2.461050000 GHz
1 PK MAXH
A
LVL
Center 2.46105 GHz
150 kHz/
Span 1.5 MHz
0
-10
-30
-40
-50
-60
-70
-80

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
SPECTRUM ANALYZER	FSEK30	100049	Aug. 12, 2004

NOTE:
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 10Hz with suitable frequency span including 100MHz bandwidth from band edge. The band edges was measured and recorded.

4.6.4 DEVIATION FROM TEST STANDARD

No deviation

4.6.5 EUT OPERATING CONDITION

Same as Item 4.3.6

4.6.6 TEST RESULTS

The spectrum plots are attached on the following 8 pages. 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).

For test mode A

NOTE:

The band edge emission plot of CCK technique on the following 1~2 pages show 59.69dB delta between carrier maximum power and local maximum emission in restrict band (2.3744GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.9 is 103.90dBuV/m, so the maximum field strength in restrict band is 103.90-59.69=44.21dBuV/m which is under 54dBuV/m limit.

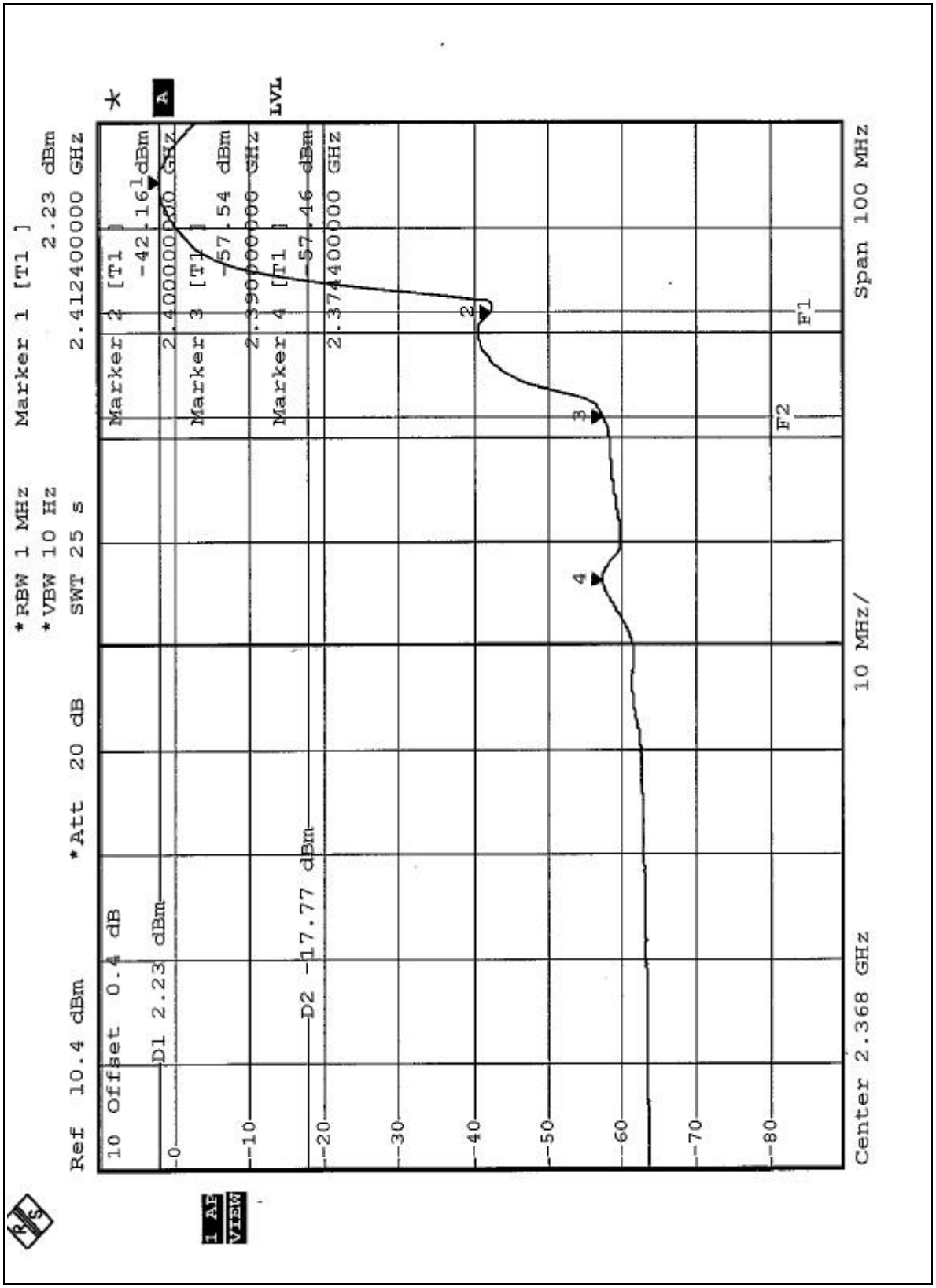
The band edge emission plot of CCK technique on the following 3~4 pages show 59.62dB delta between carrier maximum power and local maximum emission in restrict band (2.4836GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.9 is 104.89dBuV/m, so the maximum field strength in restrict band is 104.89-59.62=45.27dBuV/m which is under 54dBuV/m limit.

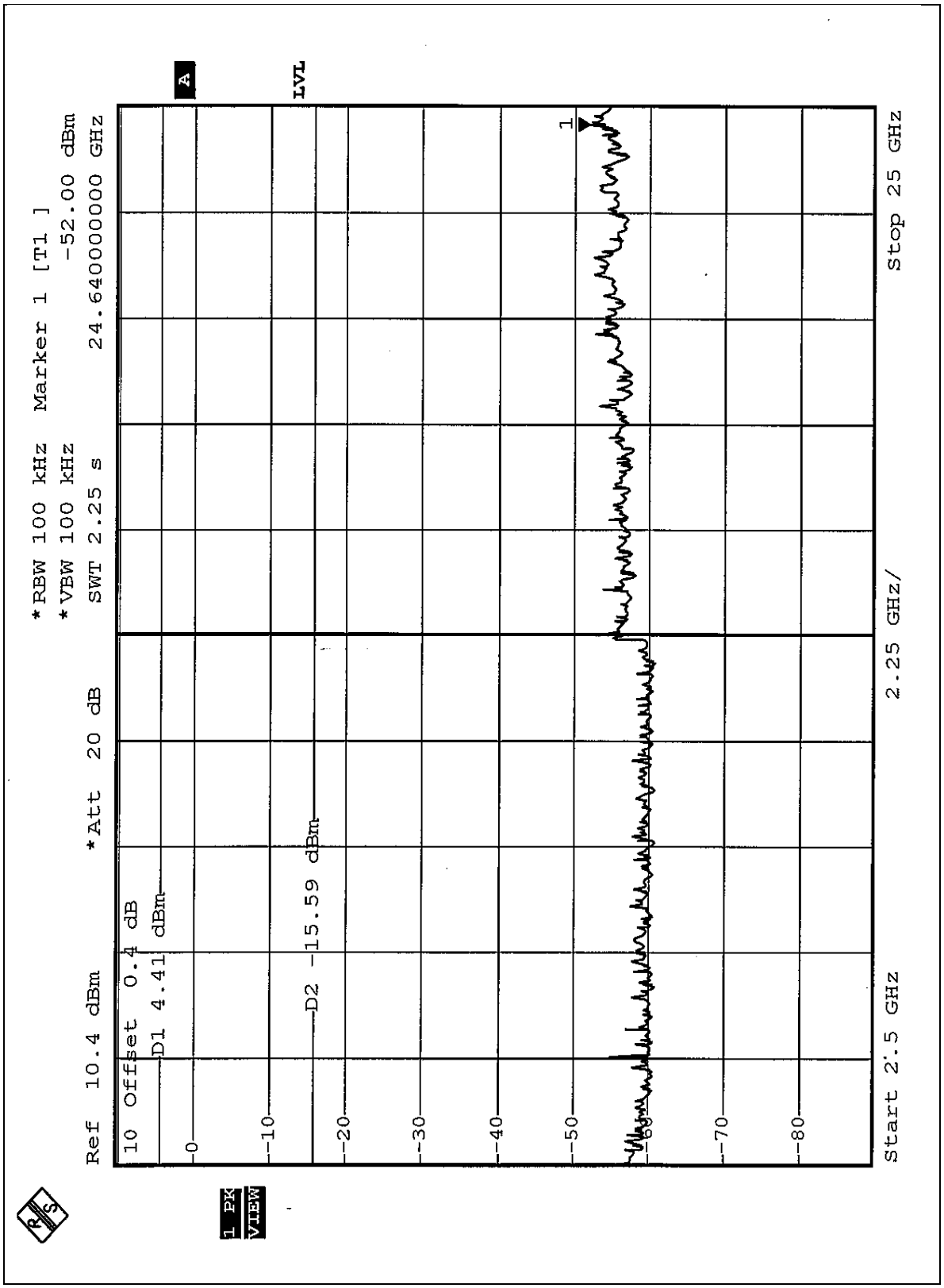
For test mode B

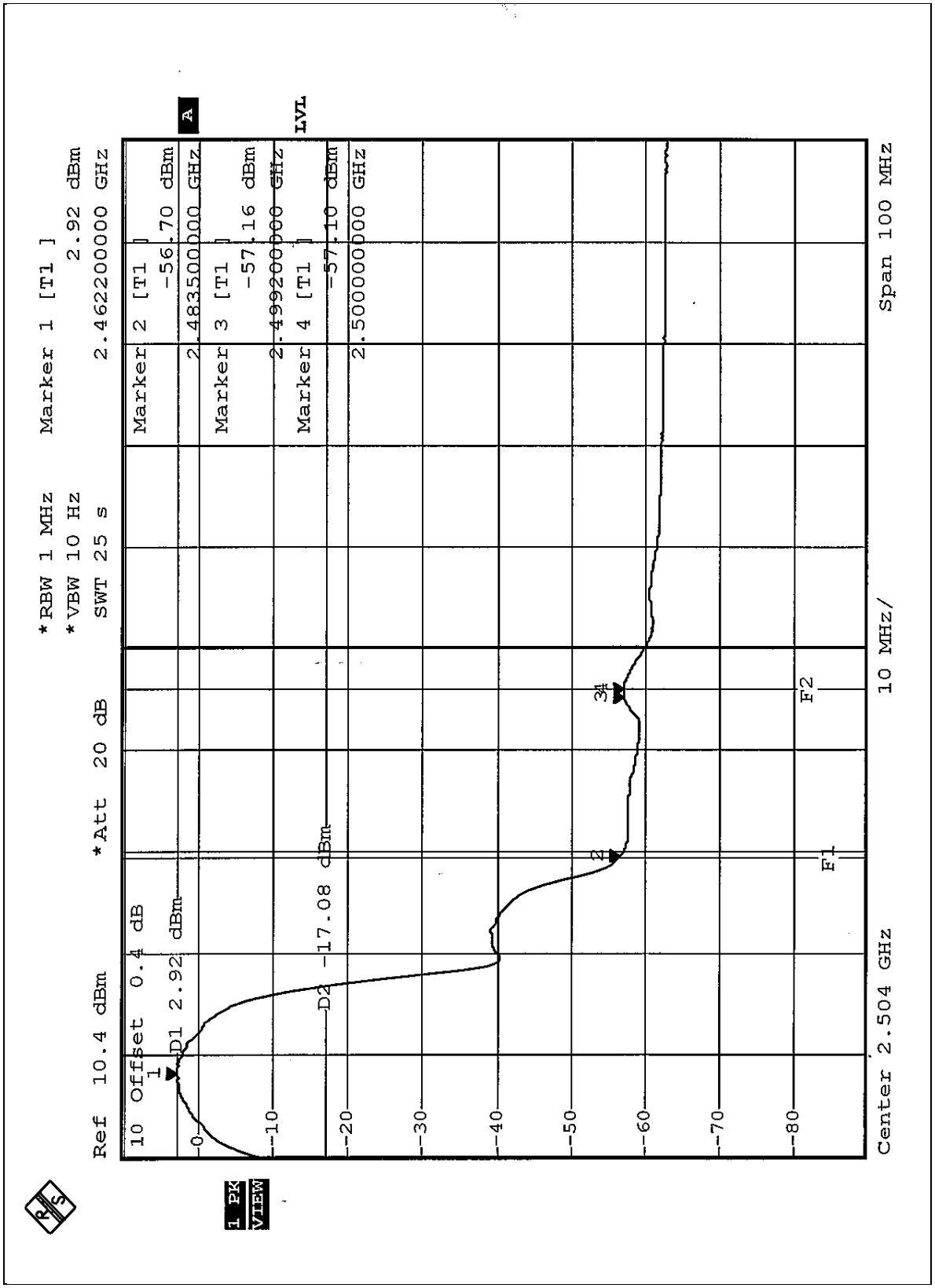
NOTE:

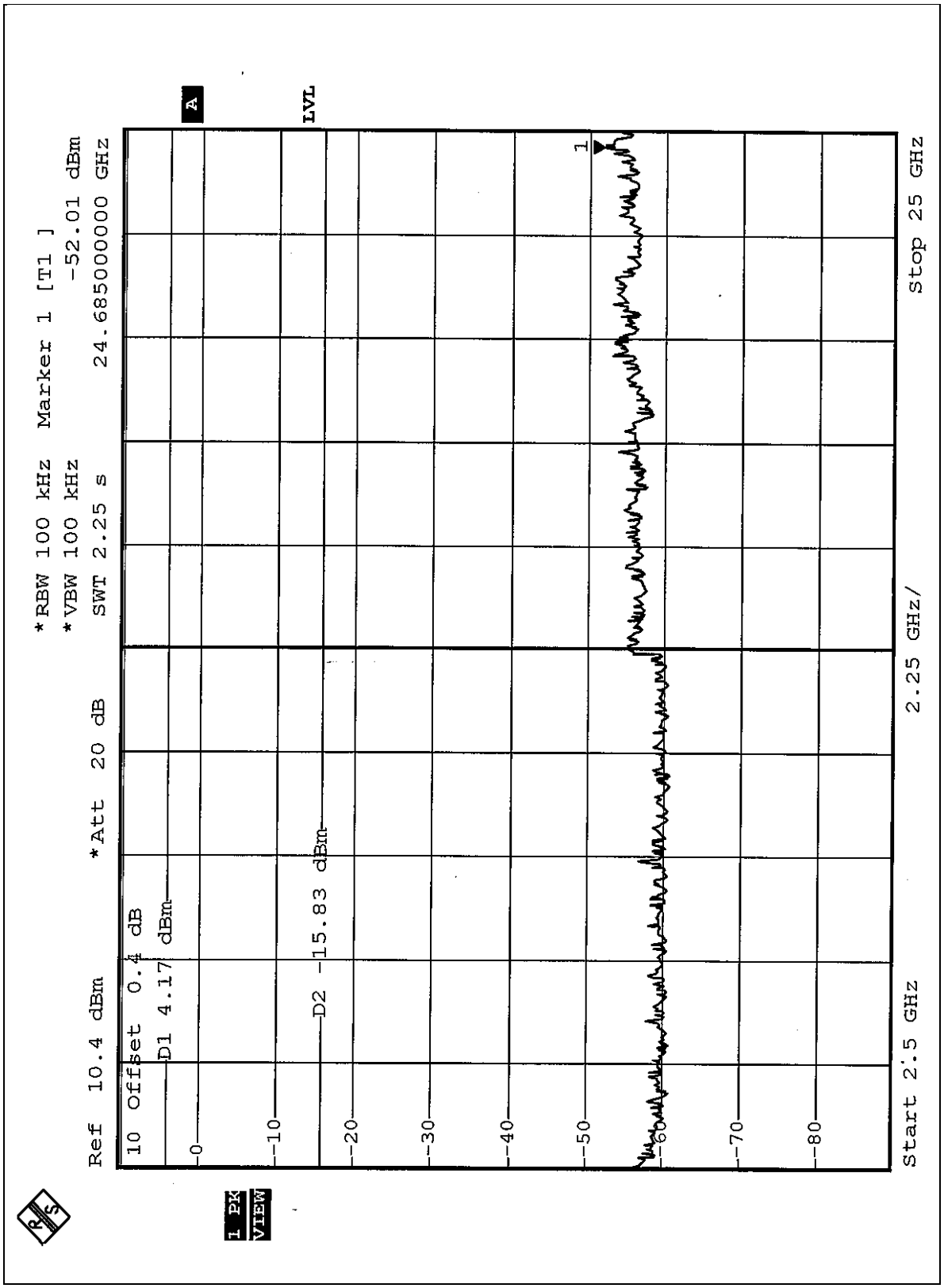
The band edge emission plot of OFDM technique on the following 5~6 pages show 51.45dB delta between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.9 is 100.98dBuV/m, so the maximum field strength in restrict band is 100.98-51.45=49.53dBuV/m which is under 54dBuV/m limit.

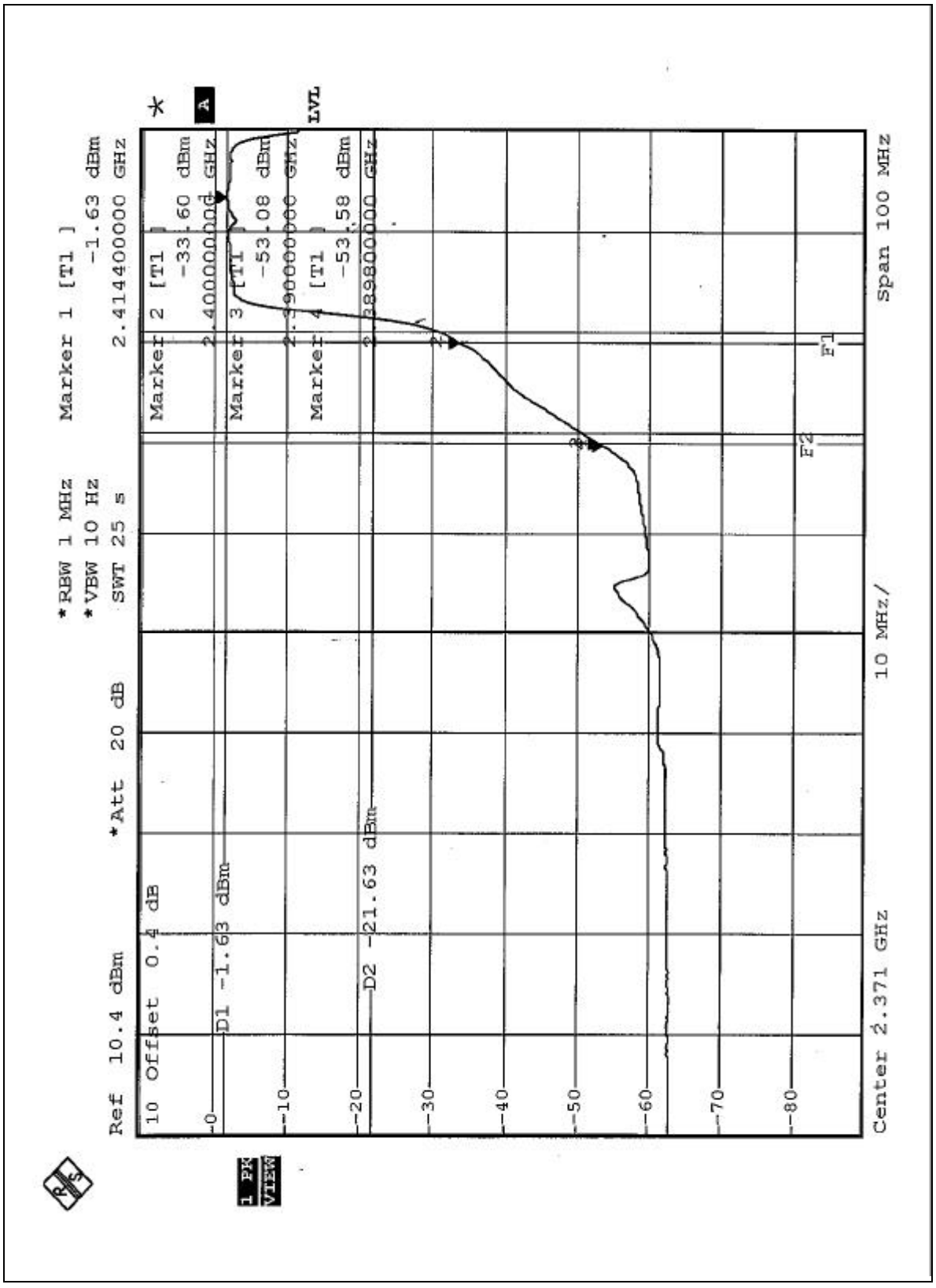
The band edge emission plot of OFDM technique on the following 7~8 pages show 49.75dB delta between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.9 is 103.40dBuV/m, so the maximum field strength in restrict band is 103.40-49.75=53.65dBuV/m which is under 54dBuV/m limit.

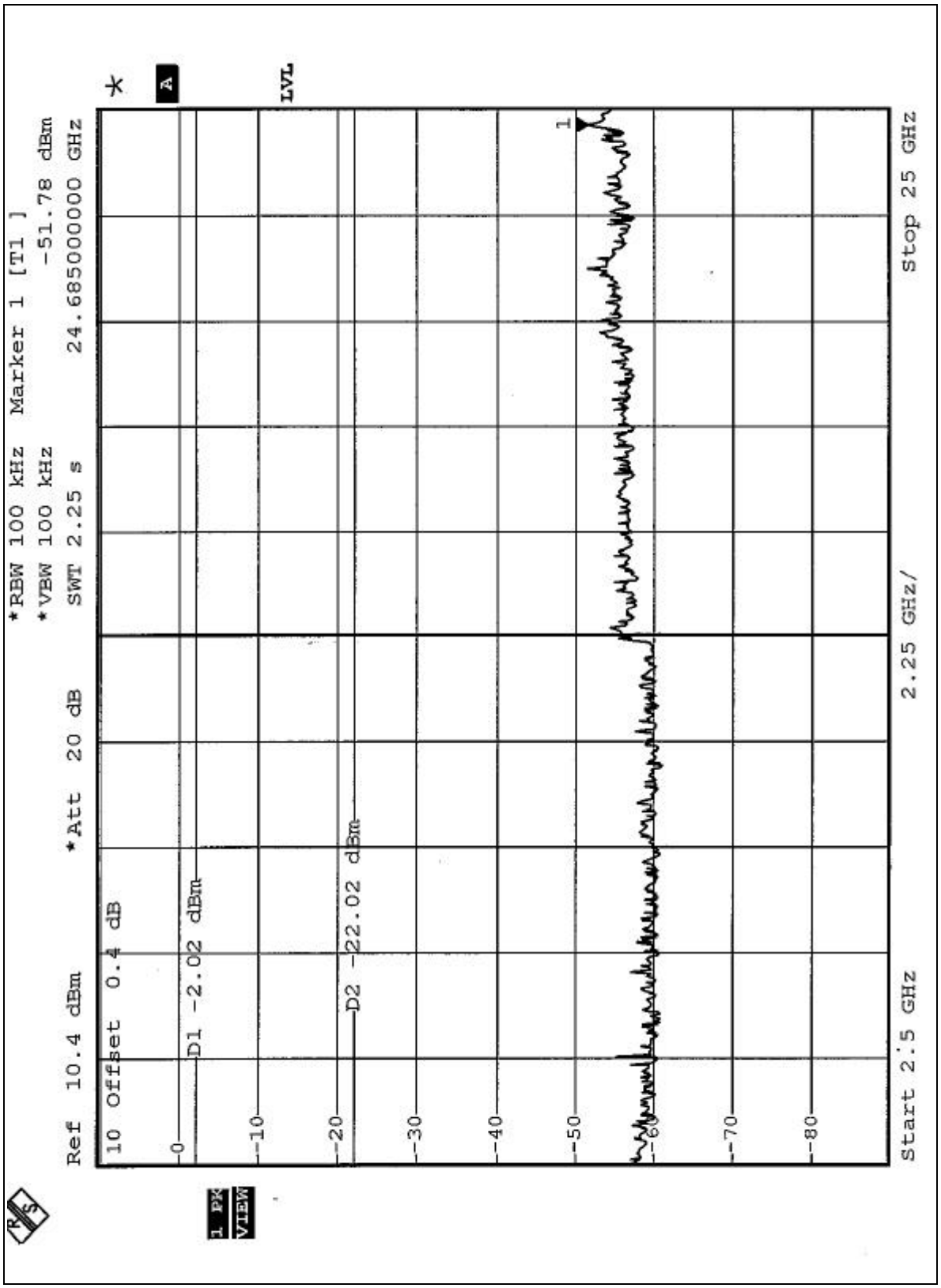

Ref 10.4 dBm
10 Offset 0.4 dB
D1 2.23 dBm
D2 -17.77 dBm
*Att 20 dB
*RBW 1 MHz
*VBW 10 Hz
SWT 25 s
Marker 1 [T1]
2.23 dBm
2.412400000 GHz
Marker 2 [T1]
-42.16 dBm
2.400000000 GHz
Marker 3 [T1]
-57.54 dBm
2.390000000 GHz
Marker 4 [T1]
-57.46 dBm
2.374000000 GHz
Center 2.368 GHz
10 MHz/
Span 100 MHz
F1
F2
1 AP
VIEW

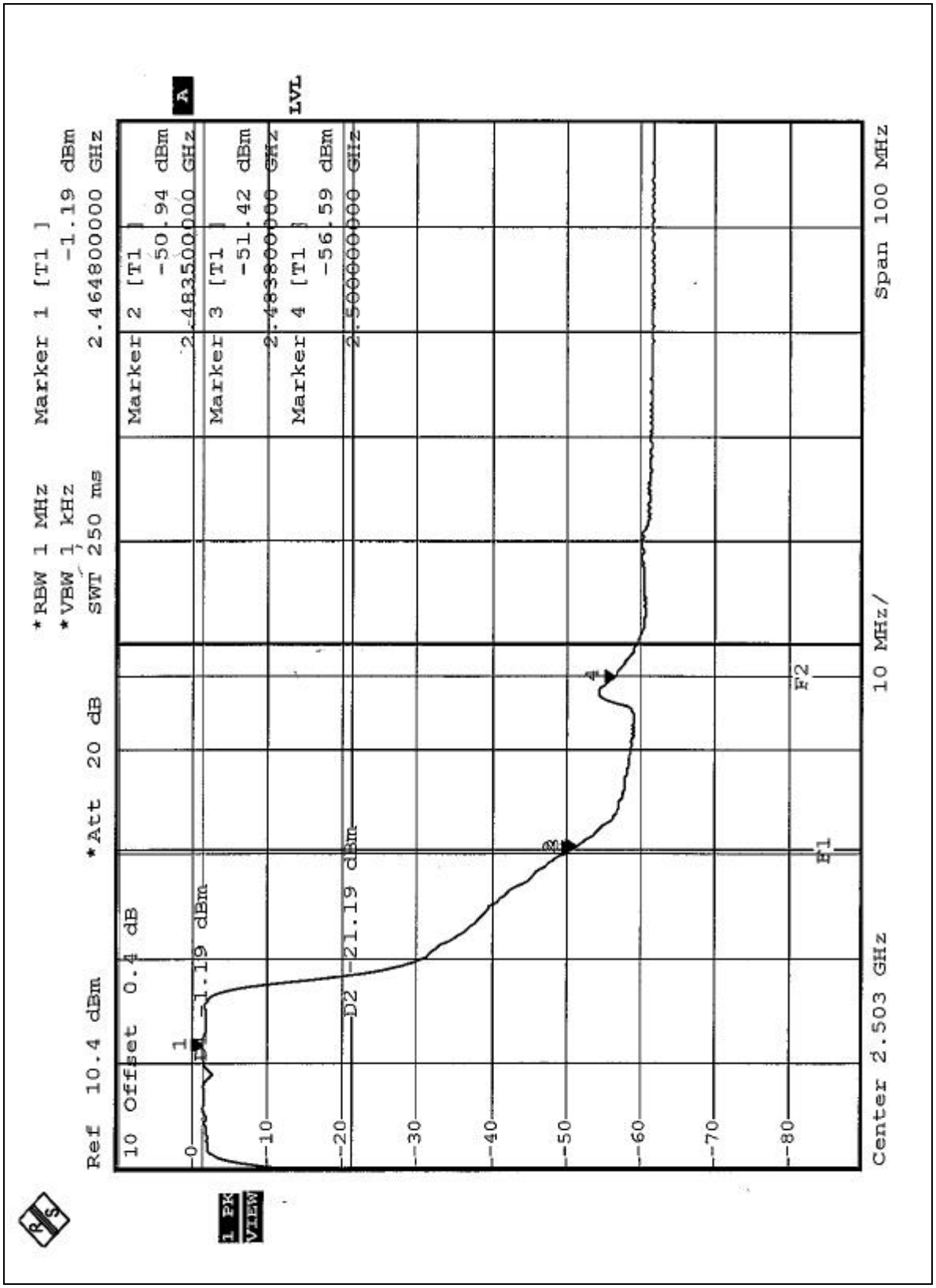

*RBW 100 kHz
*VBW 100 kHz
SWT 2.25 s
Marker 1 [T1]
-52.00 dBm
24.640000000 GHz
Ref 10.4 dBm
*Att 20 dB
10 Offset 0.4 dB
D1 4.41 dBm
D2 -15.59 dBm
LVL
A
1 PK
VIEW
Start 2.5 GHz
2.25 GHz/
Stop 25 GHz

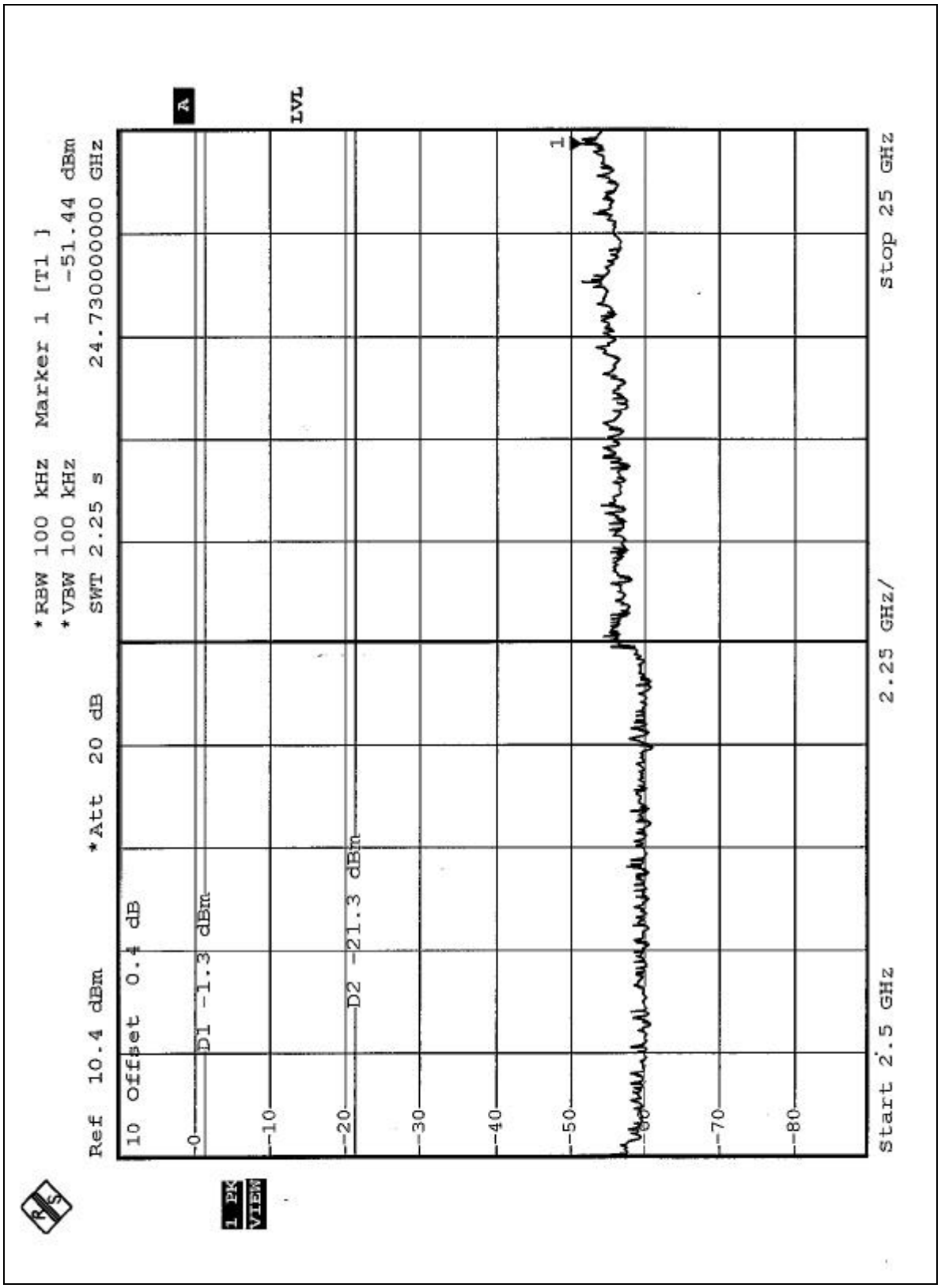

*RBW 1 MHz
*VBW 10 Hz
SWT 25 s
Marker 1 [T1]
2.92 dBm
2.462200000 GHz
*Att 20 dB
Ref 10.4 dBm
10 Offset 0.4 dB
D1 2.92 dBm
D2 -17.08 dBm
Marker 2 [T1]
-56.70 dBm
2.483500000 GHz
Marker 3 [T1]
-57.16 dBm
2.499200000 GHz
Marker 4 [T1]
-57.10 dBm
2.500000000 GHz
LVL
A
Center 2.504 GHz
10 MHz/
Span 100 MHz
F1
F2
1 PK VIEW


*RBW 100 kHz
*VBW 100 kHz
SWT 2.25 s
Marker 1 [T1]
-52.01 dBm
24.685000000 GHz
Ref 10.4 dBm
*Att 20 dB
10 Offset 0.4 dB
D1 4.17 dBm
D2 -15.83 dBm
A
LVL
1
1 PK
VIEW
Start 2.5 GHz
2.25 GHz/
Stop 25 GHz


Ref 10.4 dBm
10 Offset 0.4 dB
*Att 20 dB
*RBW 1 MHz
*VBW 10 Hz
SWT 25 s
Marker 1 [T1]
-1.63 dBm
2.414400000 GHz
Marker 2 [T1]
-33.60 dBm
2.400000000 GHz
Marker 3 [T1]
-53.08 dBm
2.390000000 GHz
Marker 4 [T1]
-53.58 dBm
2.388800000 GHz
D1 -1.63 dBm
D2 -21.63 dBm
Center 2.371 GHz
10 MHz/
Span 100 MHz
1 PK VIEW


*RBW 100 kHz
*VBW 100 kHz
*Att 20 dB
SWT 2.25 s
Marker 1 [T1]
-51.78 dBm
24.685000000 GHz
Ref 10.4 dBm
10 Offset 0.4 dB
D1 -2.02 dBm
D2 -22.02 dBm
Start 2.5 GHz
2.25 GHz/
Stop 25 GHz
1 PK VIEW
LVL
A


Ref 10.4 dBm
10 Offset 0.4 dB
*Att 20 dB
*RBW 1 MHz
*VBW 1 kHz
SWT 250 ms
Marker 1 [T1]
-1.19 dBm
2.464800000 GHz
Marker 2 [T1]
-50.94 dBm
2.483500000 GHz
Marker 3 [T1]
-51.42 dBm
2.483800000 GHz
Marker 4 [T1]
-56.59 dBm
2.500000000 GHz
LVL
A
1 PK
VIEW
D2 -21.19 dBm
F1
F2
Center 2.503 GHz
10 MHz/
Span 100 MHz


Ref 10.4 dBm
10 Offset 0.4 dB
*Att 20 dB
*RBW 100 kHz
*VBW 100 kHz
SWT 2.25 s
Marker 1 [T1]
-51.44 dBm
24.730000000 GHz
D1 -1.3 dBm
D2 -21.3 dBm
A
LVL
1
1 PK
VIEW
Start 2.5 GHz
2.25 GHz/
Stop 25 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.

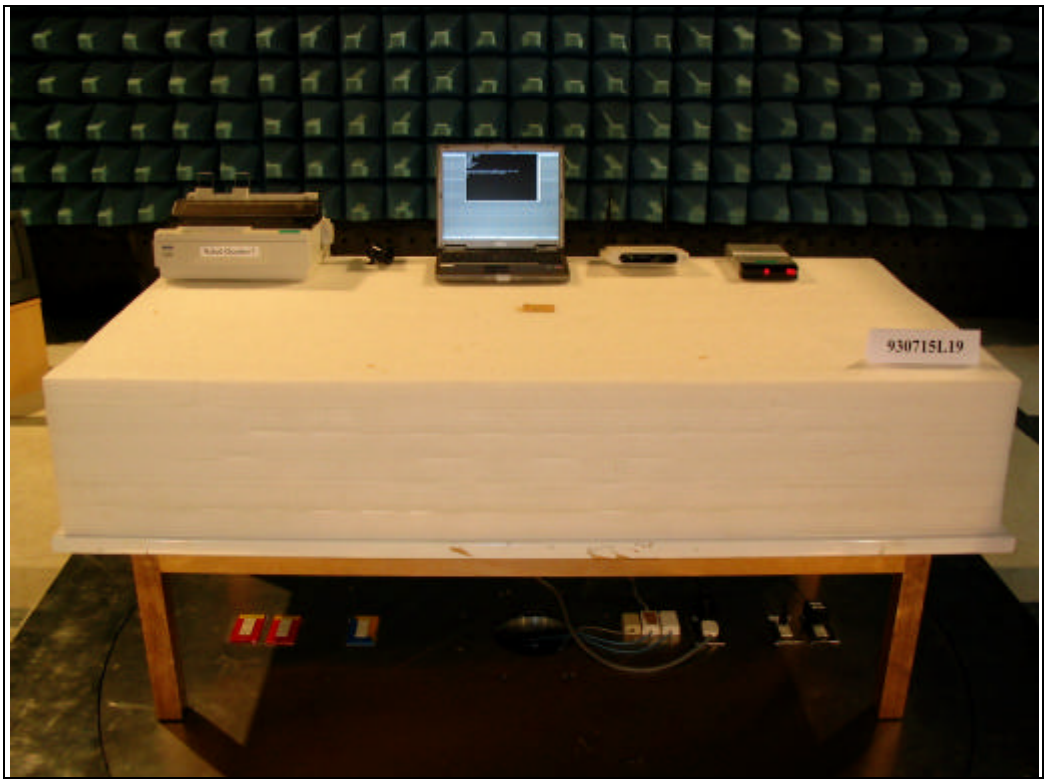
4.7.2 ANTENNA CONNECTED CONSTRUCTION

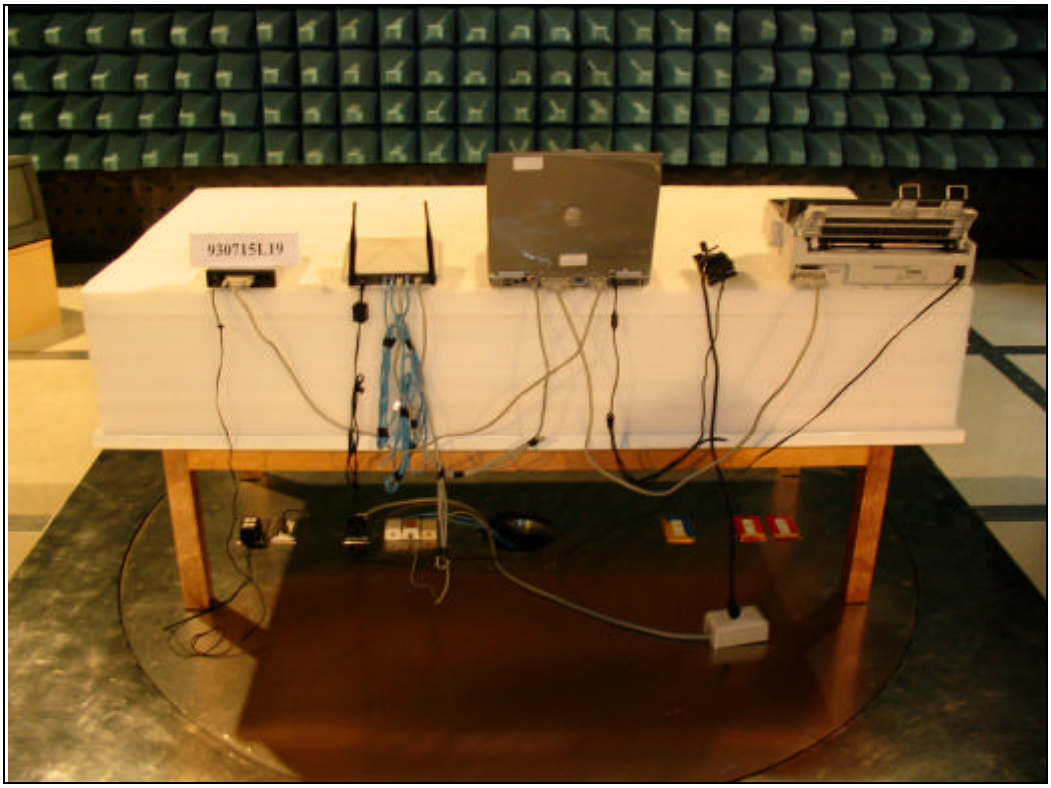
The antenna used in this product is dipole antenna with UFL connector. And the maximum Gain of this antenna is 5dBi.

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, 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

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Fax: 886-3-3185050

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Tel: 886-3-3270910
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The address and road map of all our labs can be found in our web site also.

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