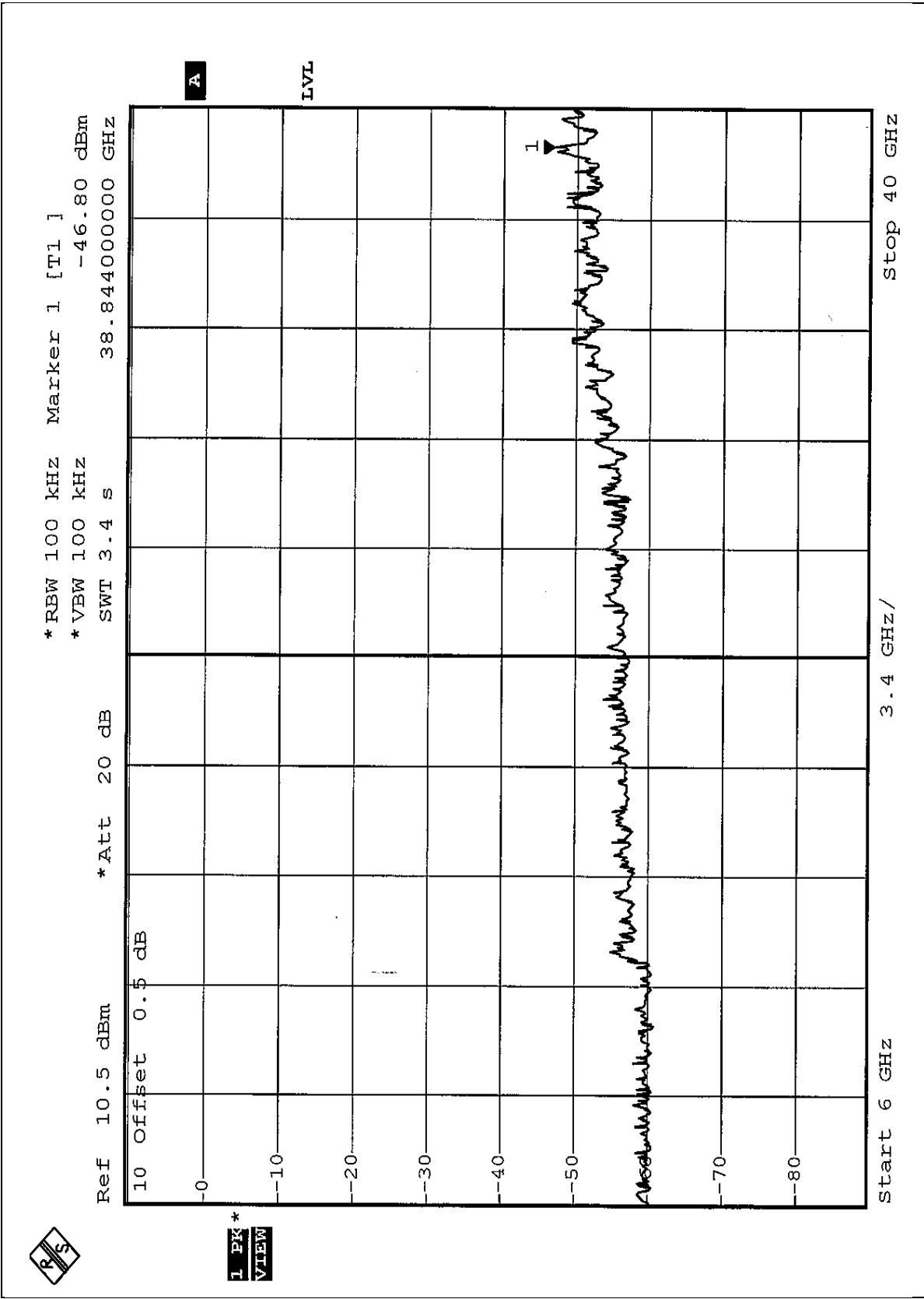
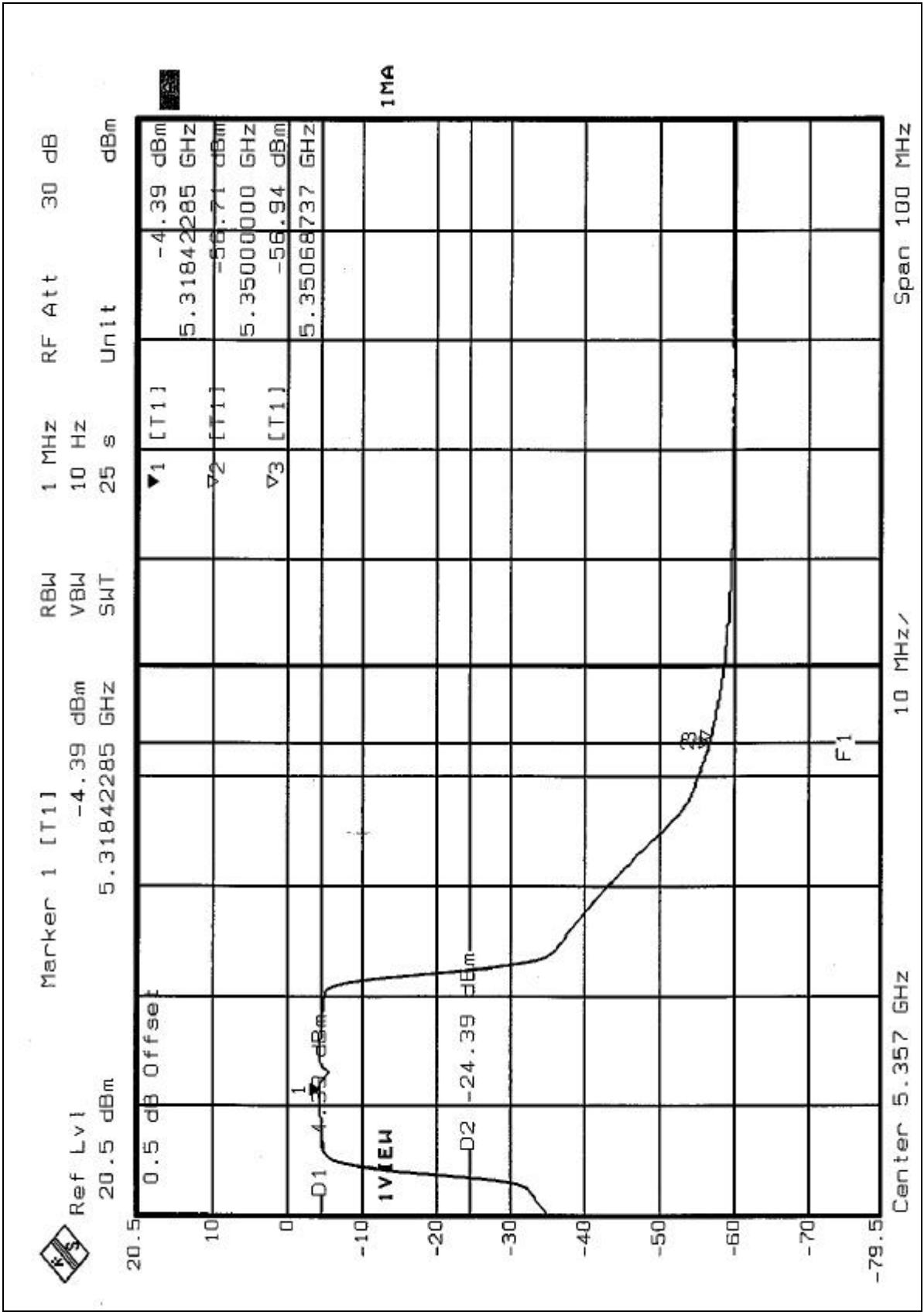
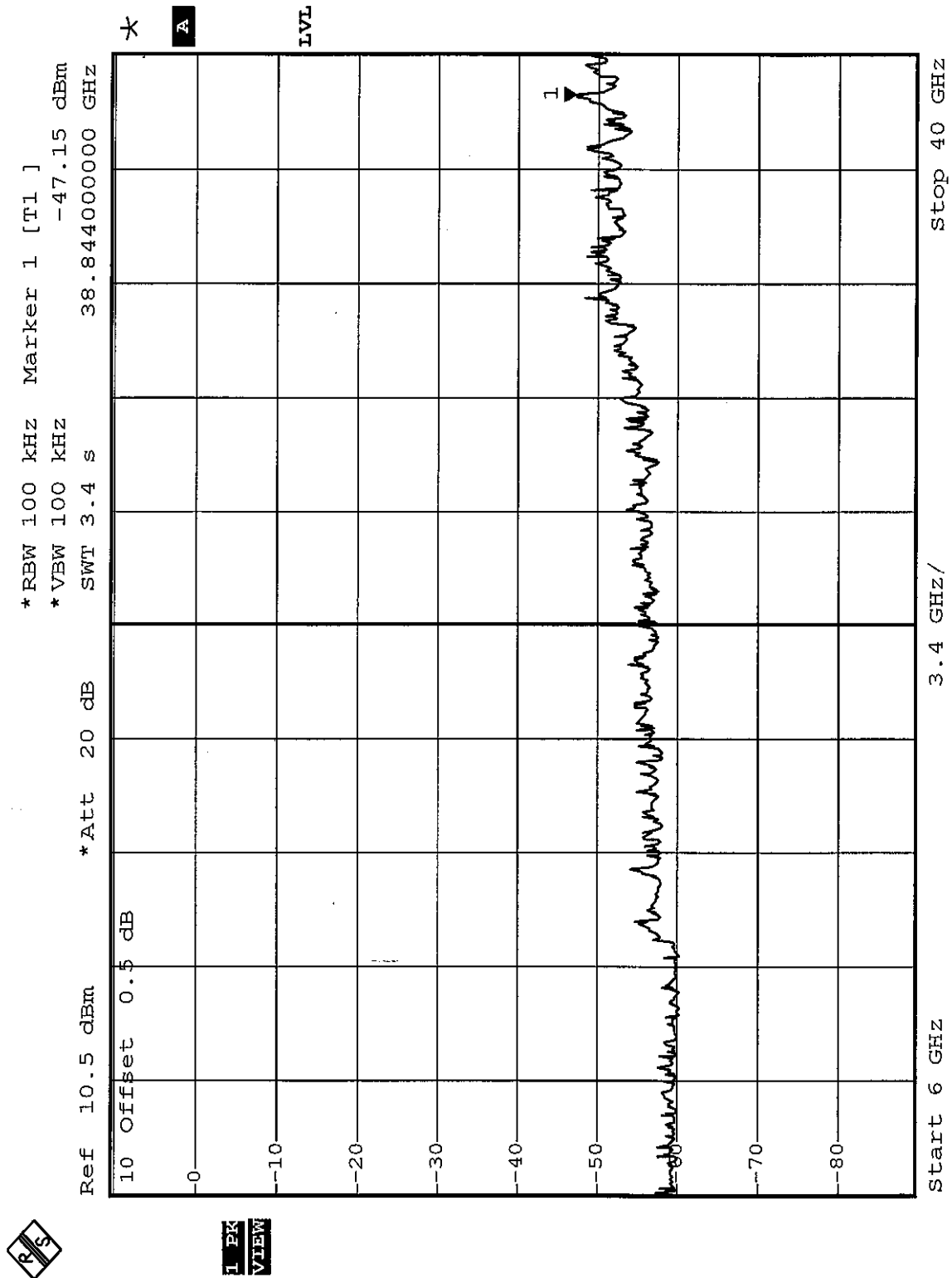




Marker 1 [T1]
 6.57 dBm
 5.32303206 GHz
 1 MHz
 1 MHz
 5 ms
 Unit
 dBm
 30 dB
 10 MHz
 Span 100 MHz
 Center 5.357 GHz

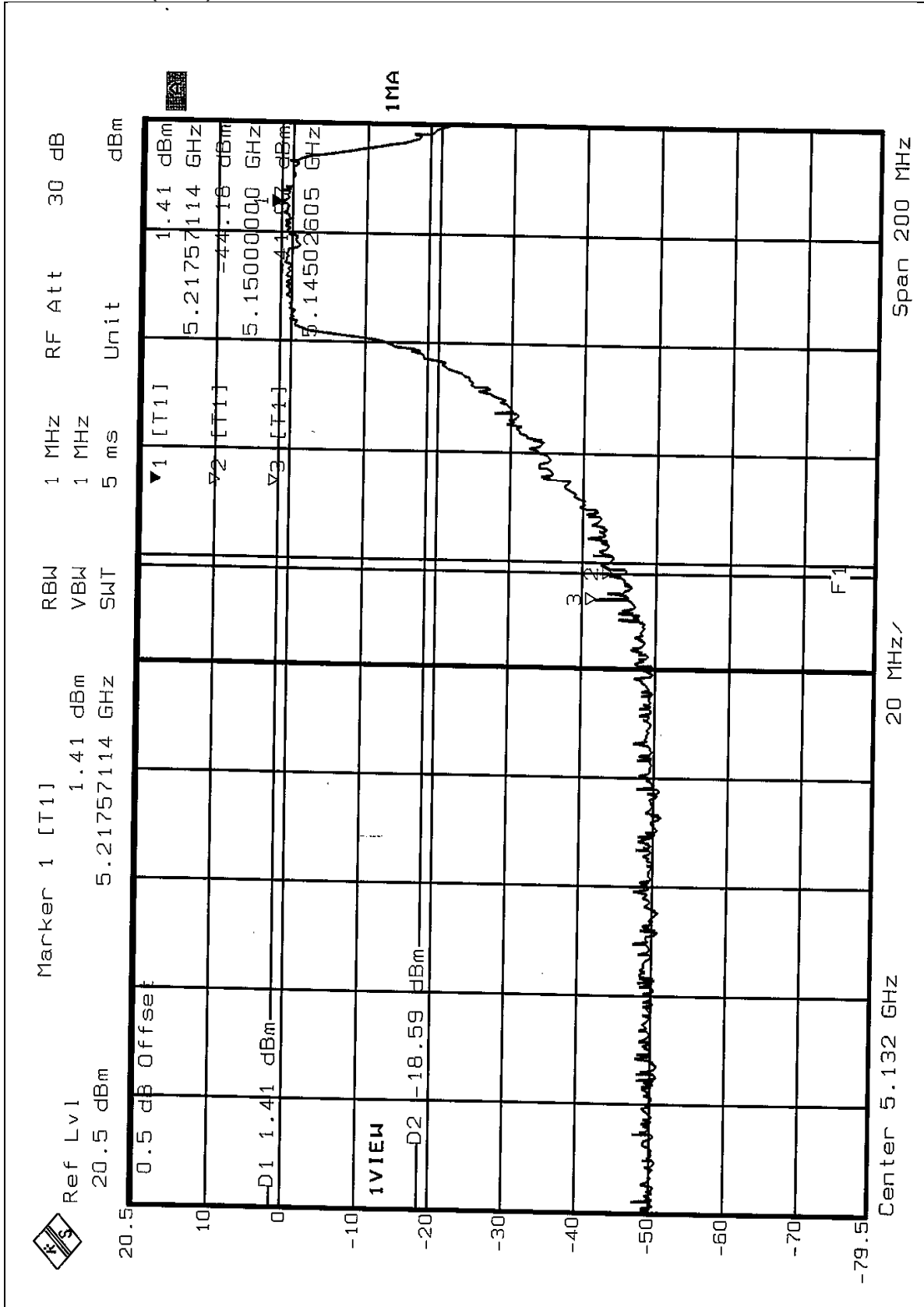
0.5 dB Offset
 D1 6.57 dBm
 -13.43 dBm
 F1
 1MA

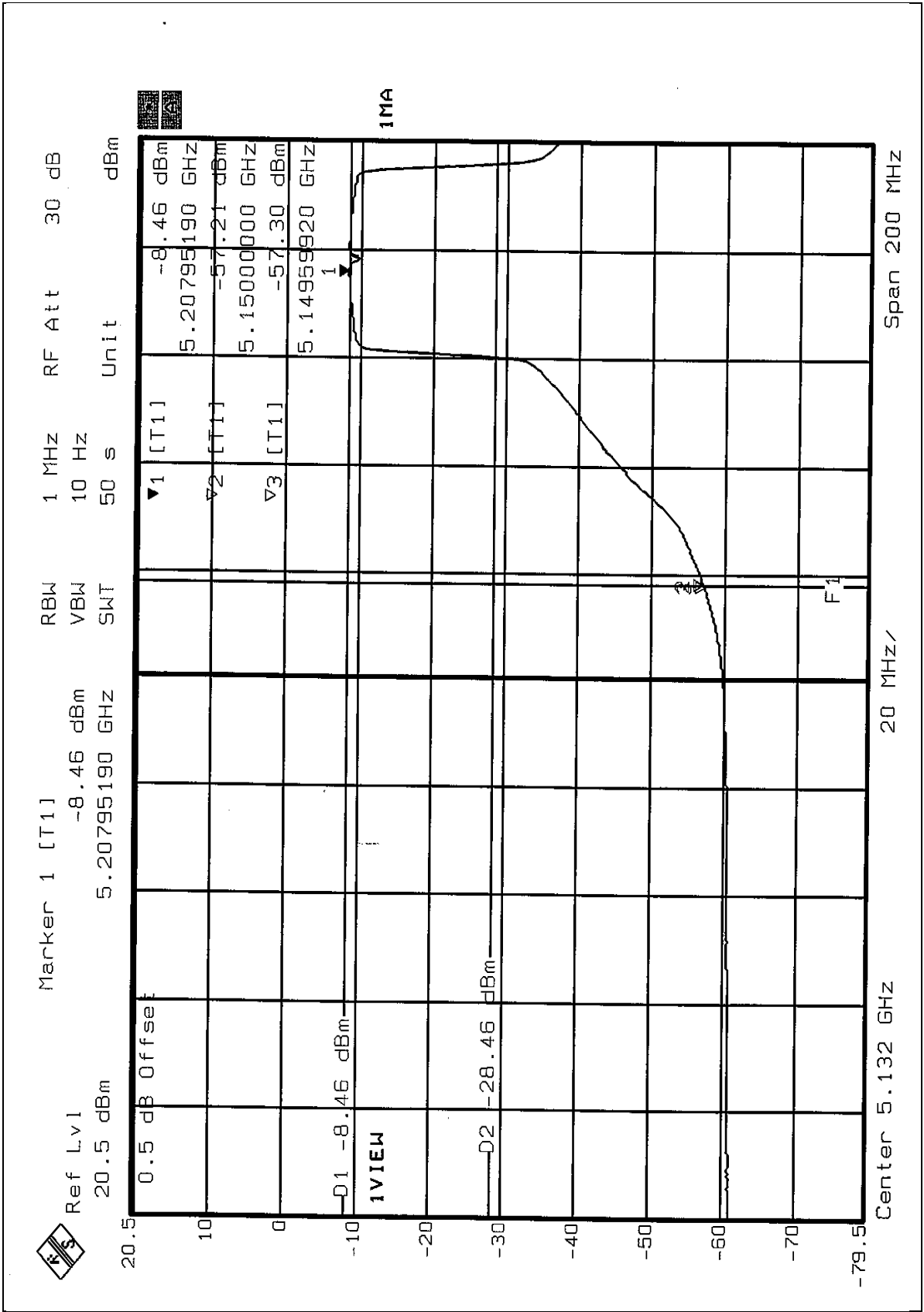


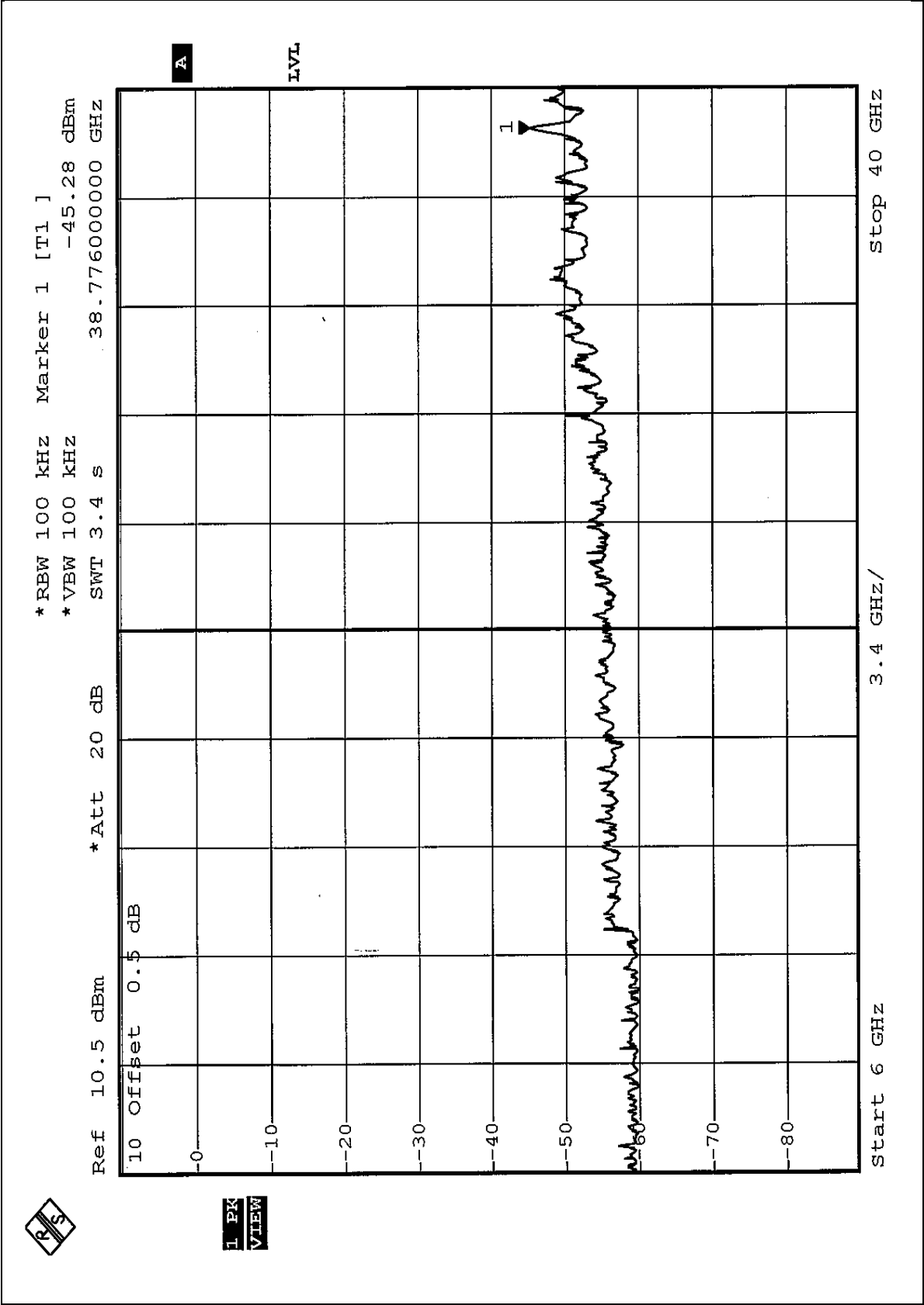




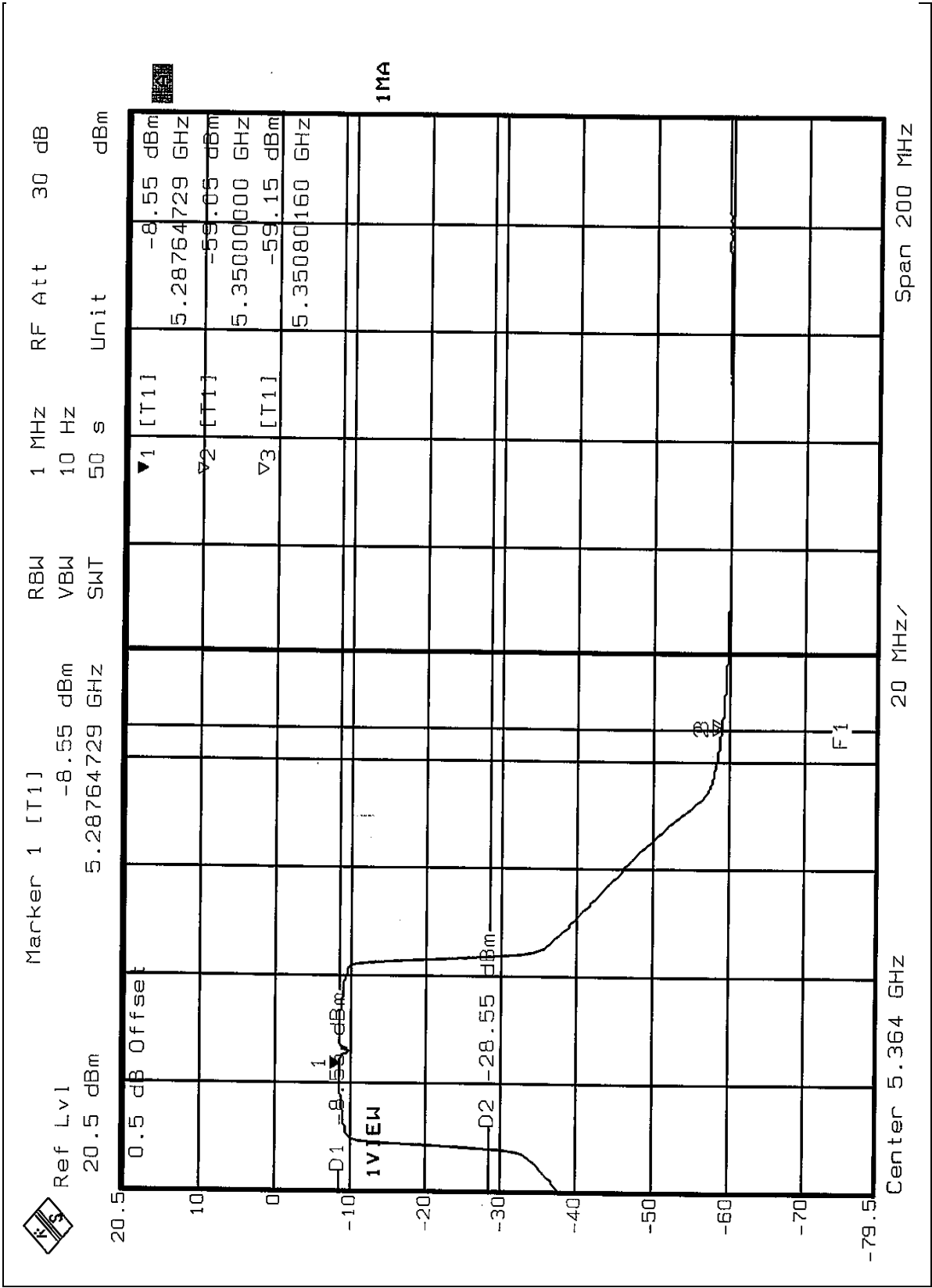
Turbo Mode (CH1)

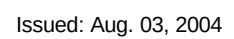






The image shows a spectrum analyzer display with a signal trace. The vertical axis (Y-axis) represents power in dBm, ranging from -79.5 to 20.5. The horizontal axis (X-axis) represents frequency in GHz, with a center frequency of 5.364 GHz and a span of 20 MHz. The signal trace shows a peak at approximately 5.364 GHz, labeled with a marker '1' and a value of 1.15 dBm. Other markers include 'D1' at 1.15 dBm, 'D2' at -18.85 dBm, and 'F1' at -79.5 dBm. The display also shows various settings: Ref Lvl (20.5 dBm), Marker 1 [T1] (1.15 dBm), RBW (1 MHz), VBW (1 MHz), and Unit (dBm). The text '1MA' is visible in the top right corner.







5.8 ANTENNA REQUIREMENT

5.8.1 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.

5.8.2 ANTENNA CONNECTED CONSTRUCTION

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

**FOR FREQUENCY 5.725~5.850GHz****5.9 6dB BANDWIDTH MEASUREMENT****5.9.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT**

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

5.9.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSEK30	100049	Aug. 12, 2004

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

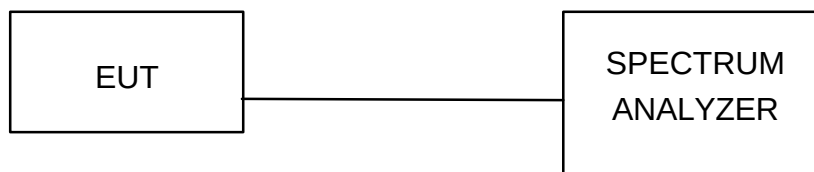
5.9.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100kHz RBW and 100kHz VBW. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

5.9.4 DEVIATION FROM TEST STANDARD

No deviation

5.9.5 TEST SETUP



5.9.6 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

5.9.7 TEST RESULTS

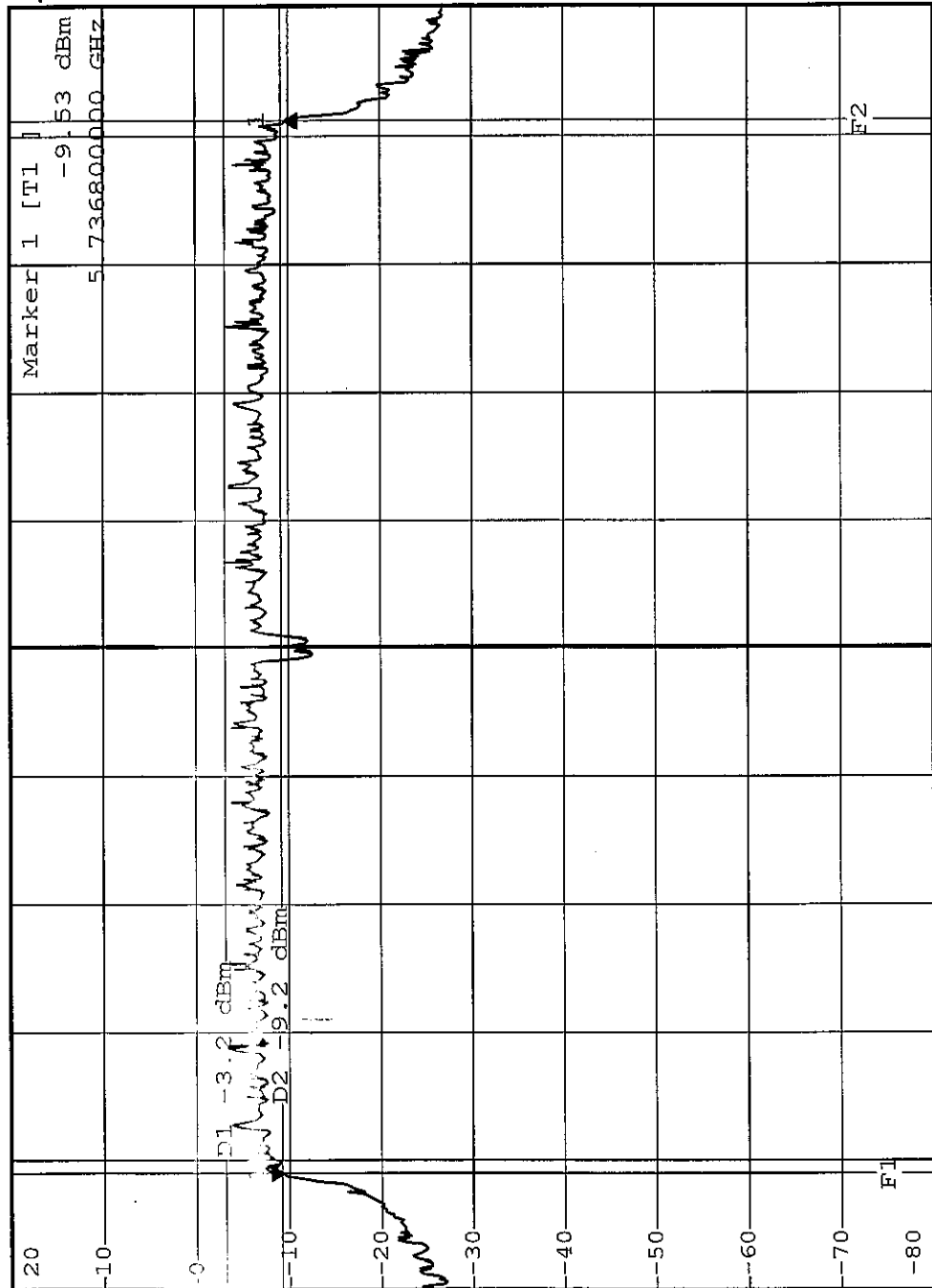
EUT	Wireless A+G Mini PCI Card	MODEL	WMIA-112AG
MODE	Normal	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH, 991 hPa	TESTED BY	Leo Hung

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
9	5745	16.44	0.5	PASS
11	5785	16.40	0.5	PASS
12	5805	16.40	0.5	PASS
13	5825	16.40	0.5	PASS



CH9

*RBW 100 kHz Delta 1 [T1] -0.26 dB
 *VBW 100 kHz
 *Att 30 dB SWT 20 ms 16.44000000 MHz
 Ref 20 dBm



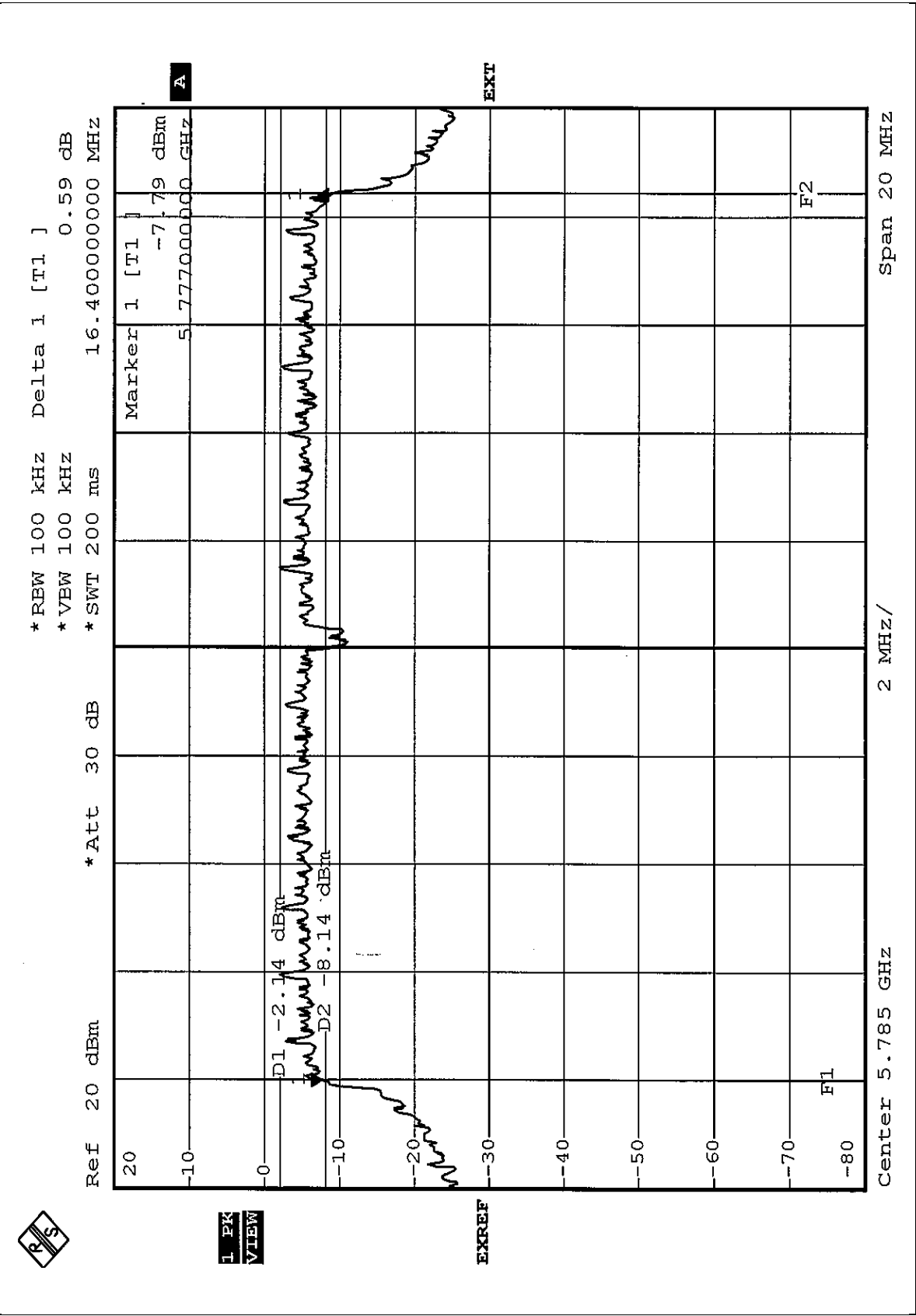
Center 5.745 GHz 2 MHz/ Span 20 MHz



1 PK
VIEW

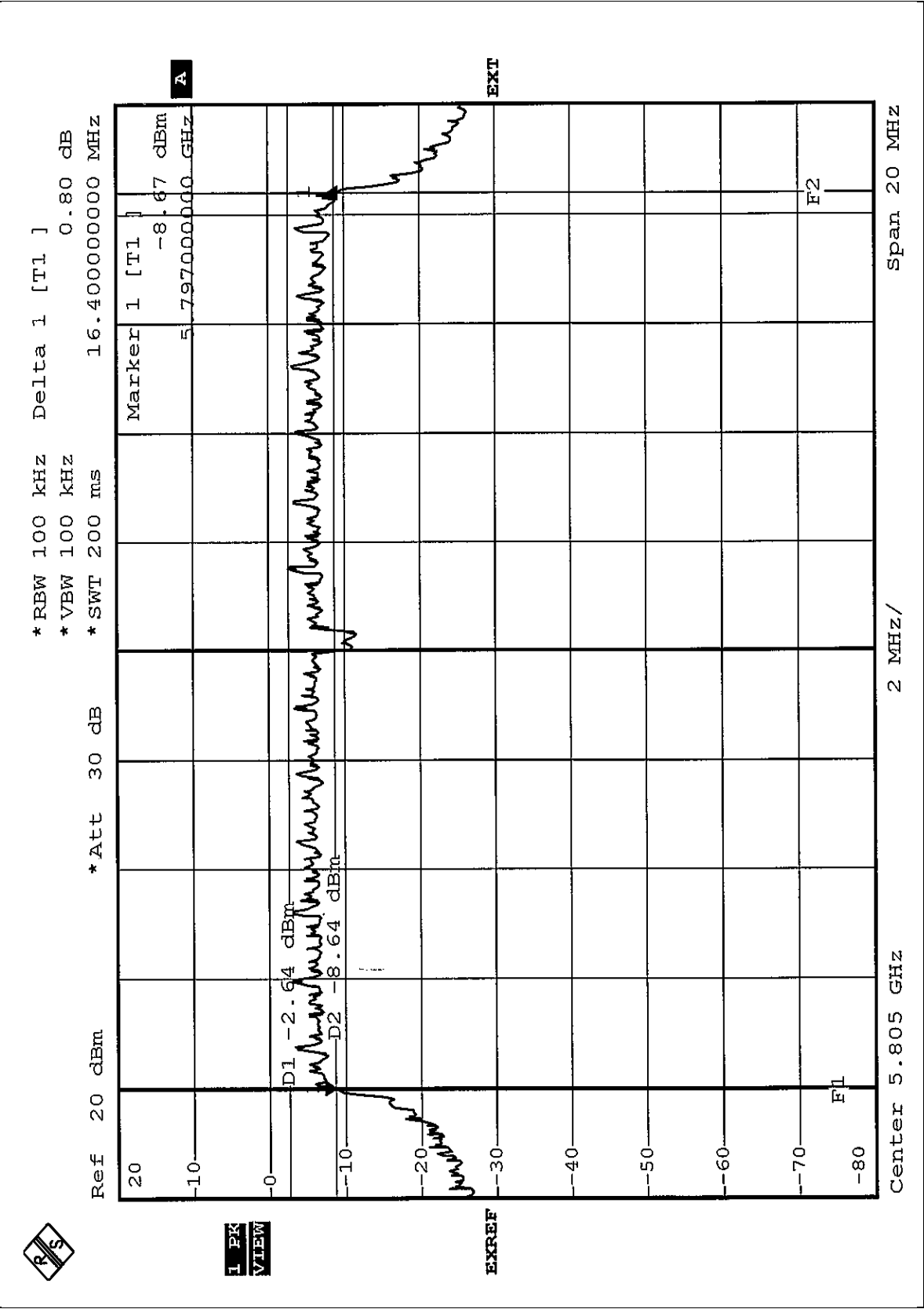


CH11

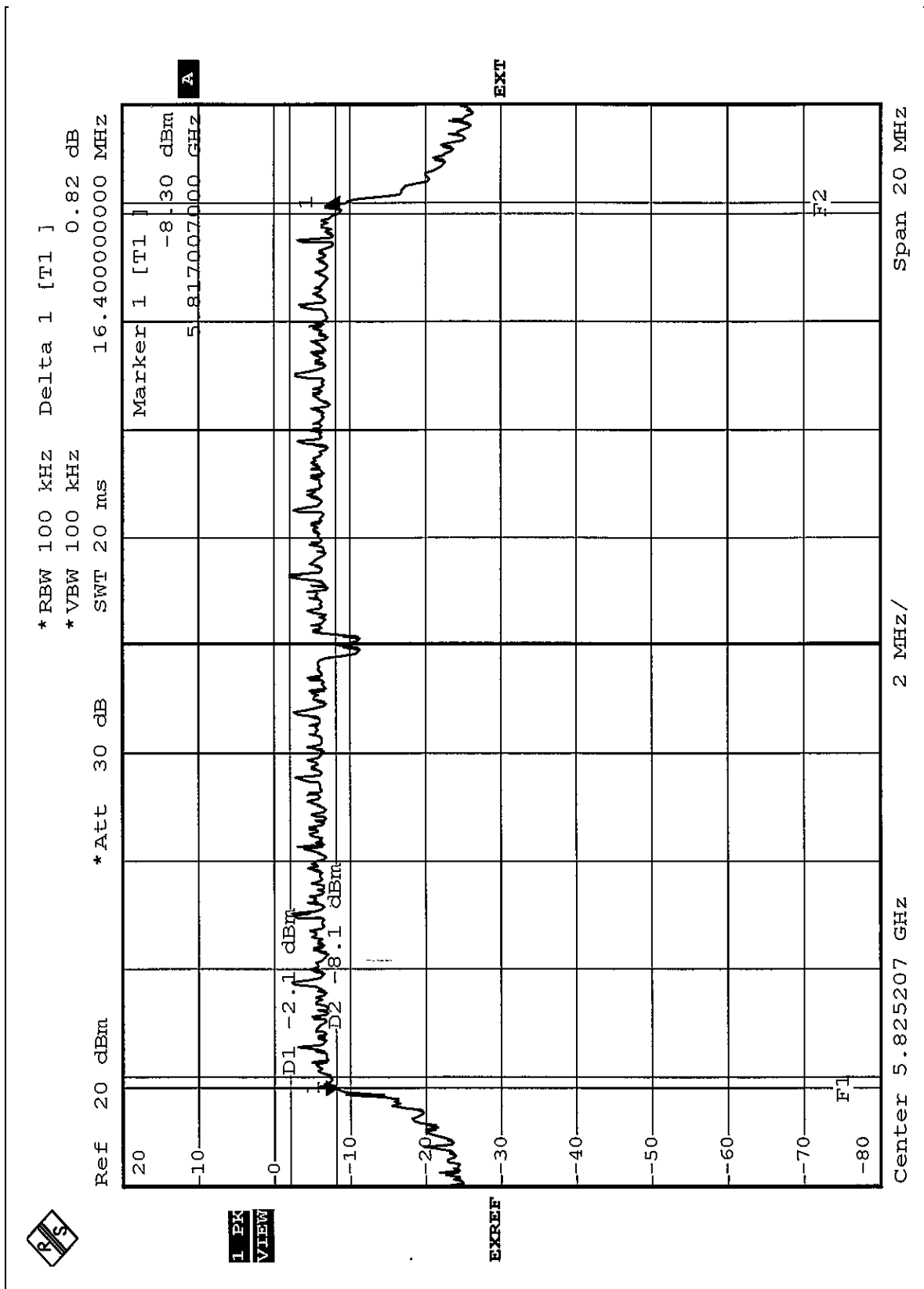




CH12



CH13



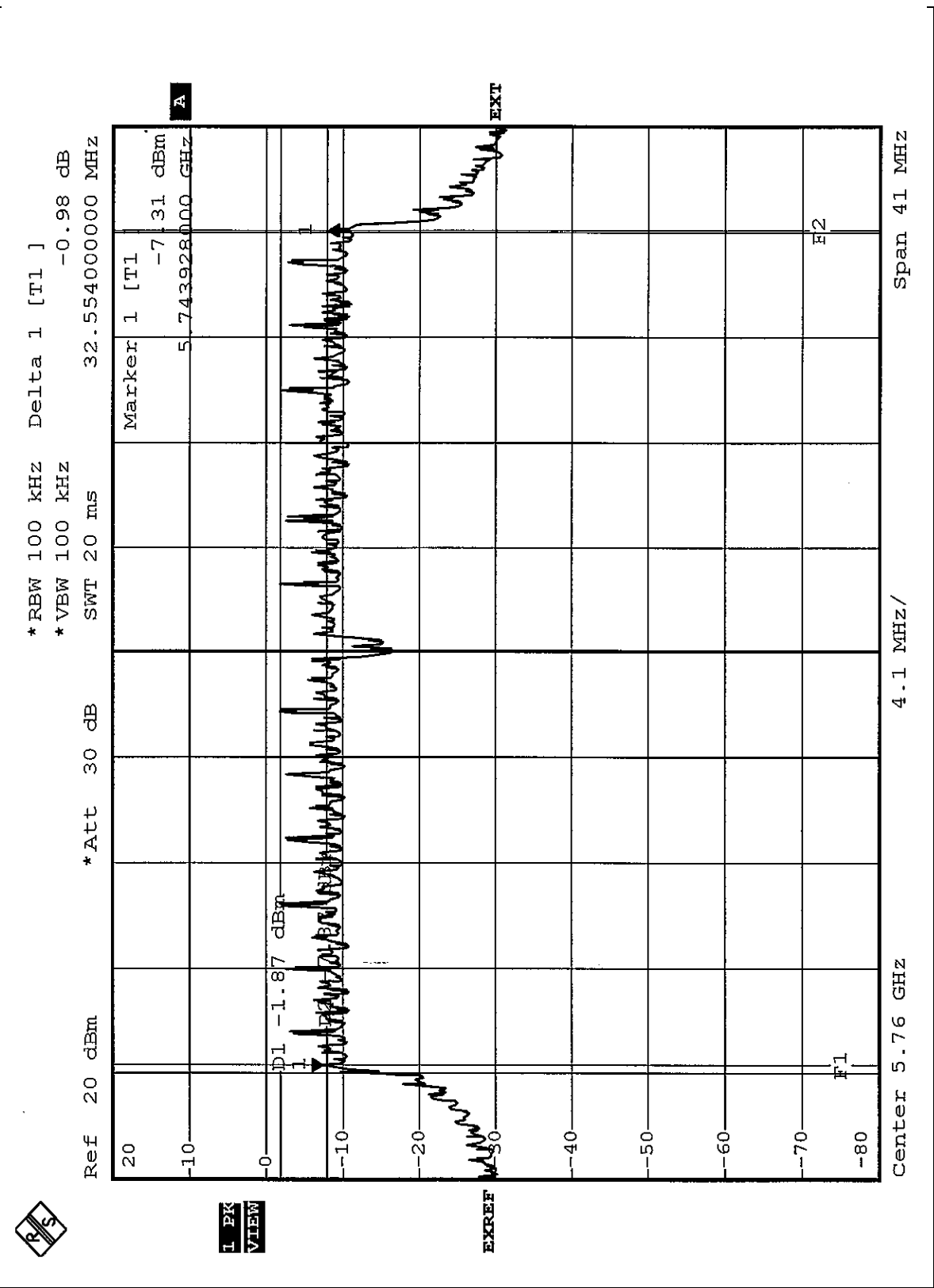


EUT	Wireless A+G Mini PCI Card	MODEL	WMIA-112AG
MODE	Turbo	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH, 991 hPa	TESTED BY	Leo Hung

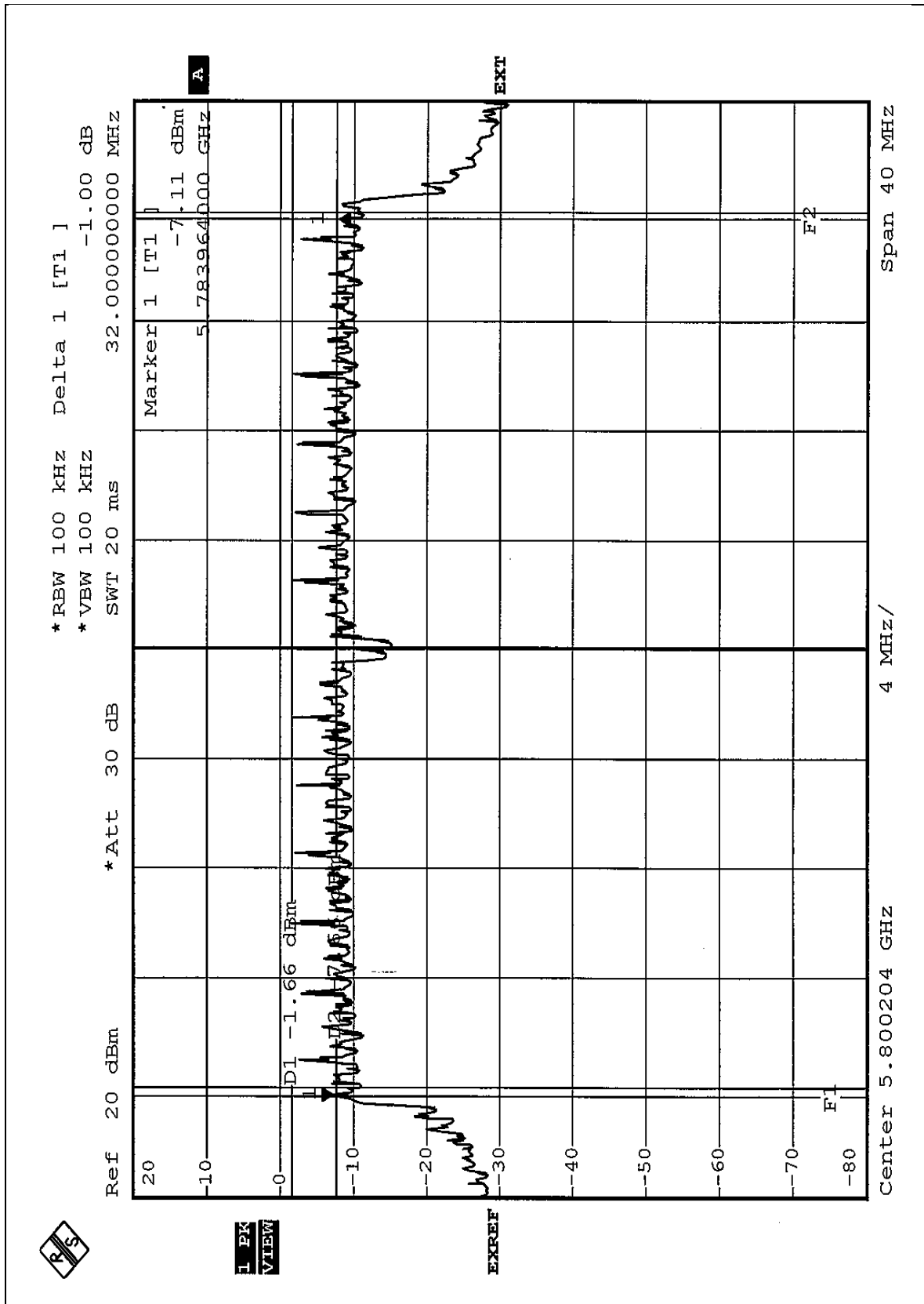
CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
4	5760	32.554	0.5	PASS
5	5800	32.000	0.5	PASS



CH4



CH5



5.10 MAXIMUM PEAK OUTPUT POWER

5.10.1 LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT

The Maximum Peak Output Power Measurement is 30dBm.

5.10.2 INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSEK30	100049	Aug. 12, 2004
AGILENT SIGNAL GENERATOR	E8257C	MY43320668	Dec. 31, 2004
TEKTRONIX OSCILLOSCOPE	TDS 1012	C019167	Feb. 01, 2005
NARDA DETECTOR	4503A	FSCM99899	NA

NOTE:

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

5.10.3 TEST PROCEDURES

1. A detector was used on the output port of the EUT. An oscilloscope was used to read the response of the detector.
2. Replaced the EUT by the signal generator . The center frequency of the S.G was adjusted to the center frequency of the measured channel.
3. Adjusted the power to have the same reading on oscilloscope. Record the power level.

5.10.4 DEVIATION FROM TEST STANDARD

No deviation

5.10.5 TEST SETUP



5.10.6 EUT OPERATING CONDITIONS

Same as Item 5.9.6

5.10.7 TEST RESULTS

EUT	Wireless A+G Mini PCI Card	MODEL	WMIA-112AG
MODE	Normal	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH, 991 hPa	TESTED BY	Leo Hung

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
9	5745	11.00	30	PASS
11	5785	11.00	30	PASS
12	5805	11.00	30	PASS
13	5825	11.00	30	PASS

EUT	Wireless A+G Mini PCI Card	MODEL	WMIA-112AG
MODE	Turbo	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH, 991 hPa	TESTED BY	Leo Hung

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
4	5760	11.00	30	PASS
5	5800	11.00	30	PASS

5.11 POWER SPECTRAL DENSITY MEASUREMENT

5.11.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

5.11.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSEK30	100049	Aug. 12, 2004

NOTES:

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

5.11.3 TEST PROCEDURE

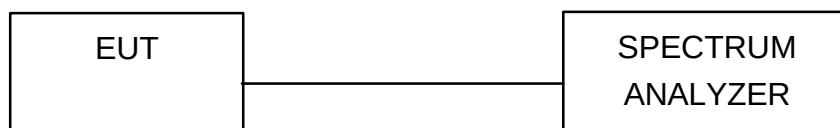
The transmitter output was connected to the spectrum analyzer through an attenuator, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 3 kHz RBW and 30 kHz VBW, set sweep time = span/3 kHz. The power spectral density was measured and recorded.

The sweep time is allowed to be longer than span/3 kHz for a full response of the mixer in the spectrum analyzer.

5.11.4 DEVIATION FROM TEST STANDARD

No deviation

5.11.5 TEST SETUP



5.11.6 EUT OPERATING CONDITION

Same as Item 5.9.6



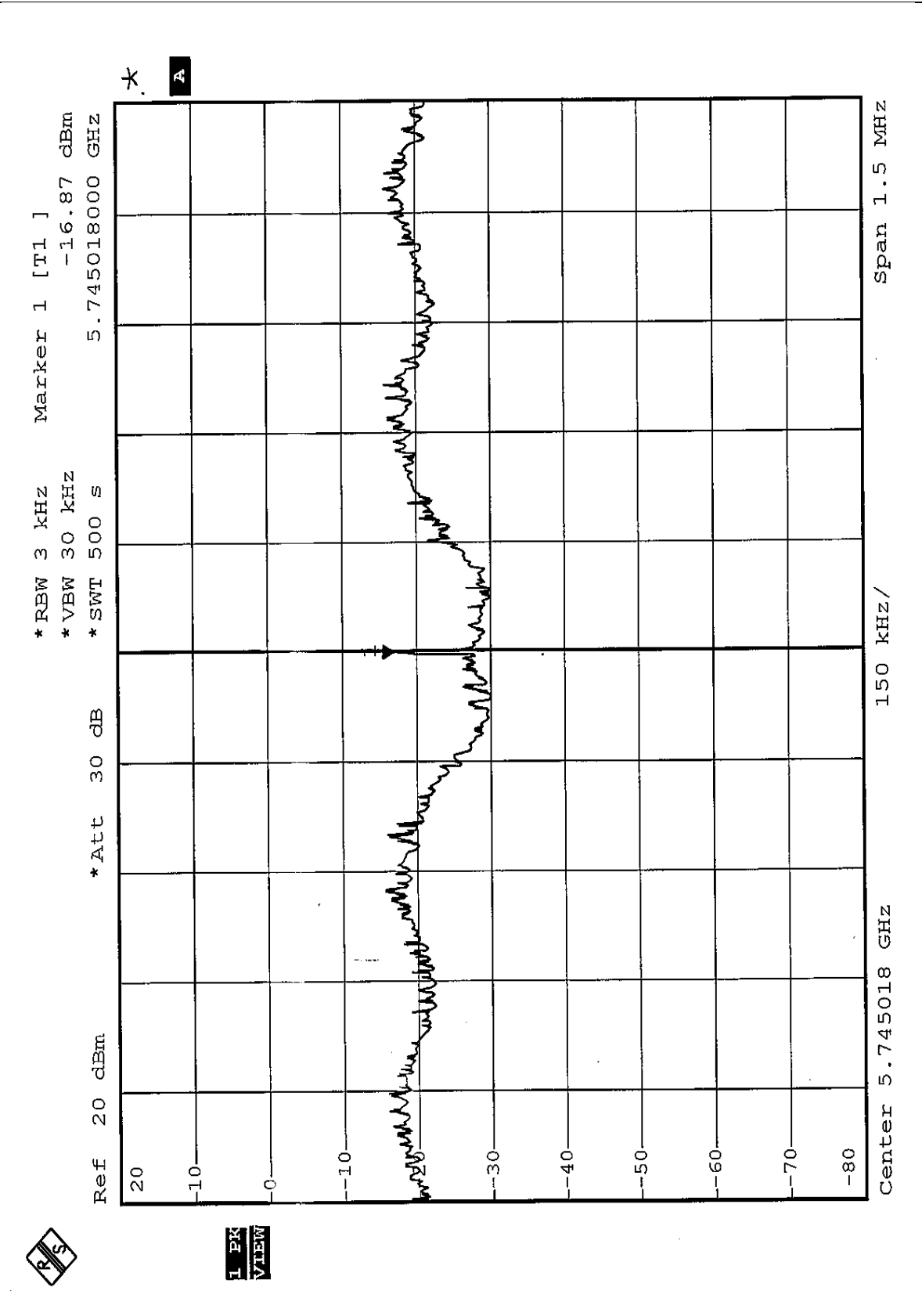
5.11.7 TEST RESULTS

EUT	Wireless A+G Mini PCI Card	MODEL	WMIA-112AG
MODE	Normal	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH, 991 hPa	TESTED BY	Leo Hung

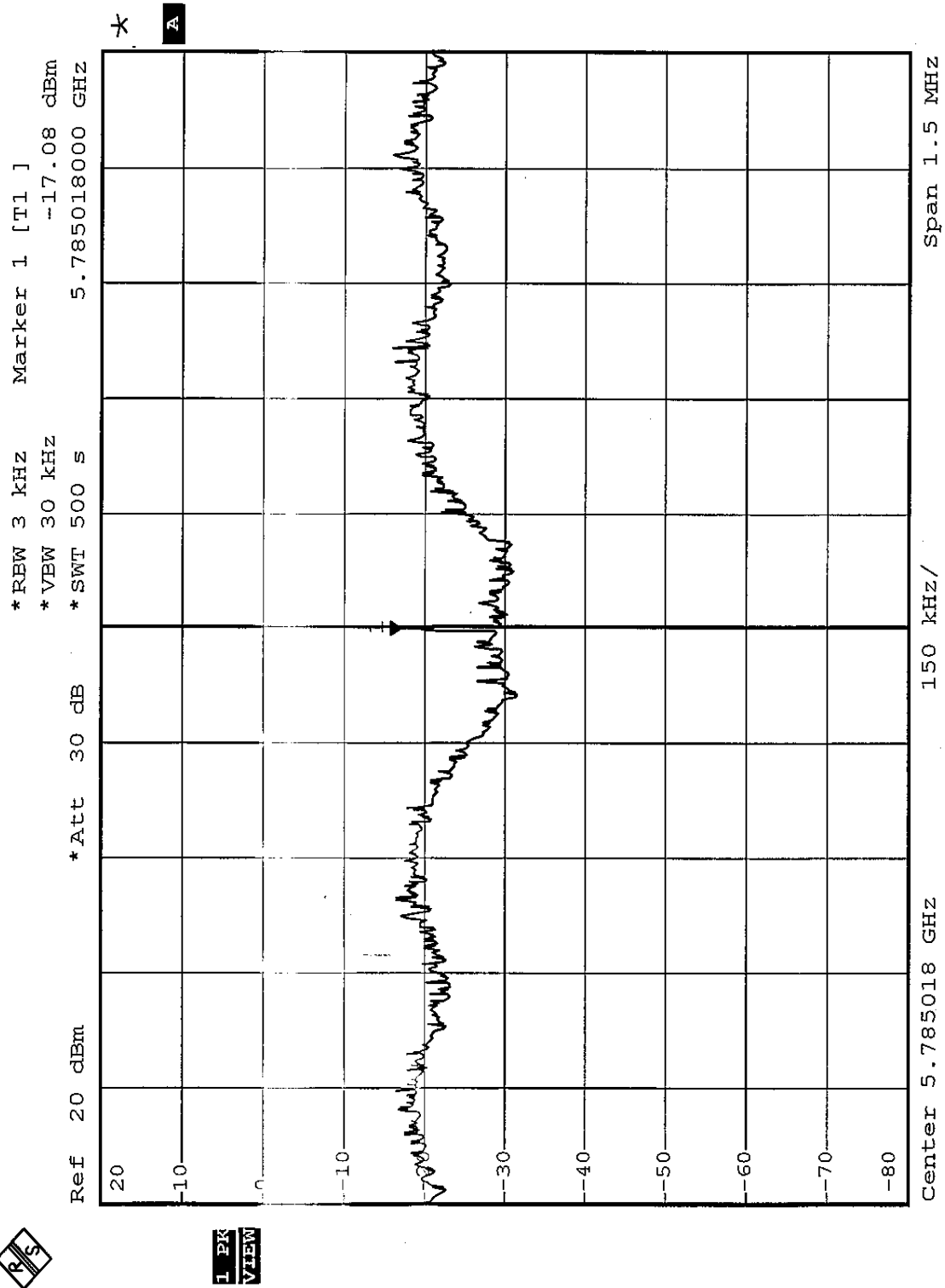
CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
9	5745	-16.87	8	PASS
11	5785	-17.08	8	PASS
12	5805	-16.33	8	PASS
13	5825	-16.50	8	PASS



CH9

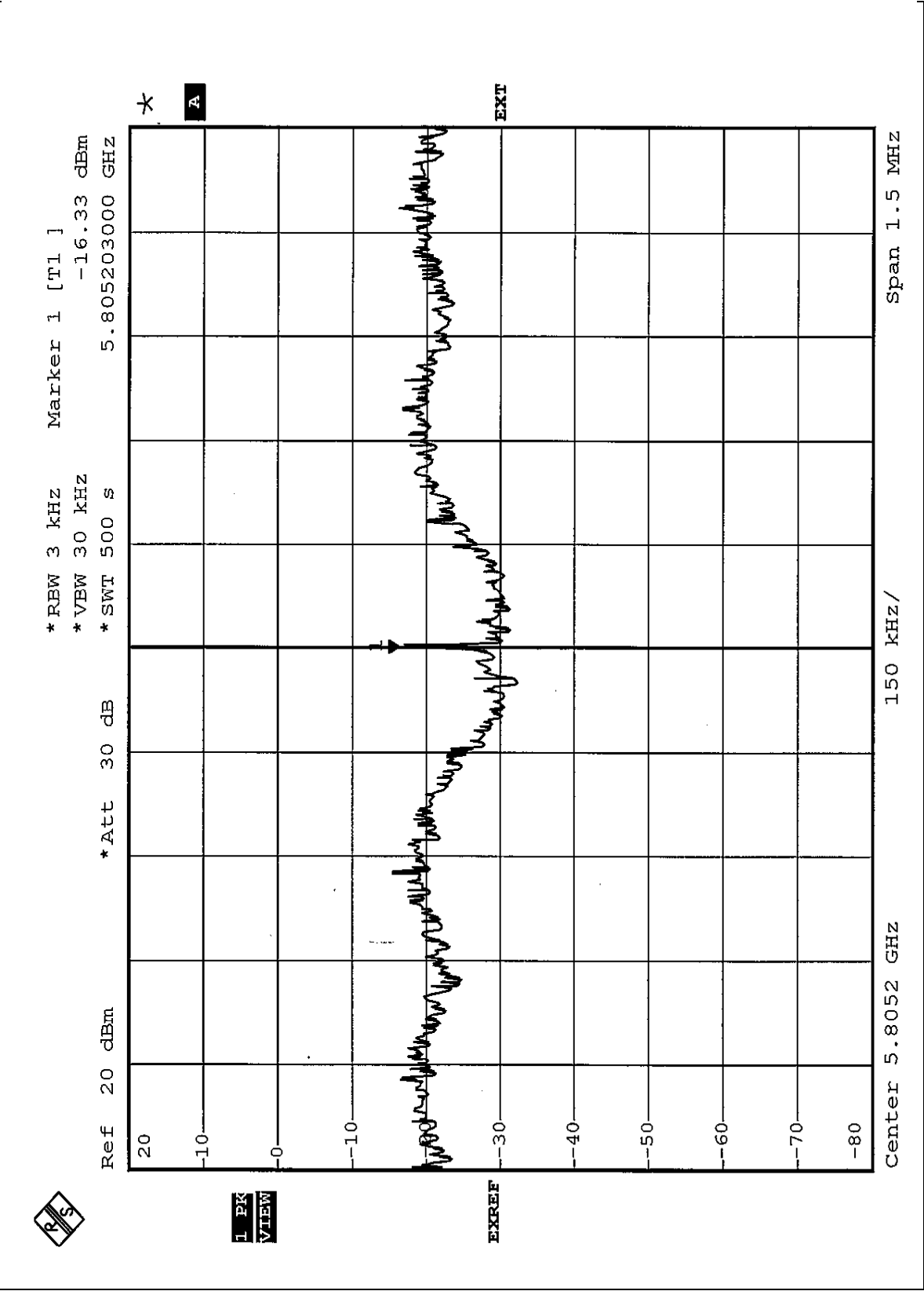


CH11



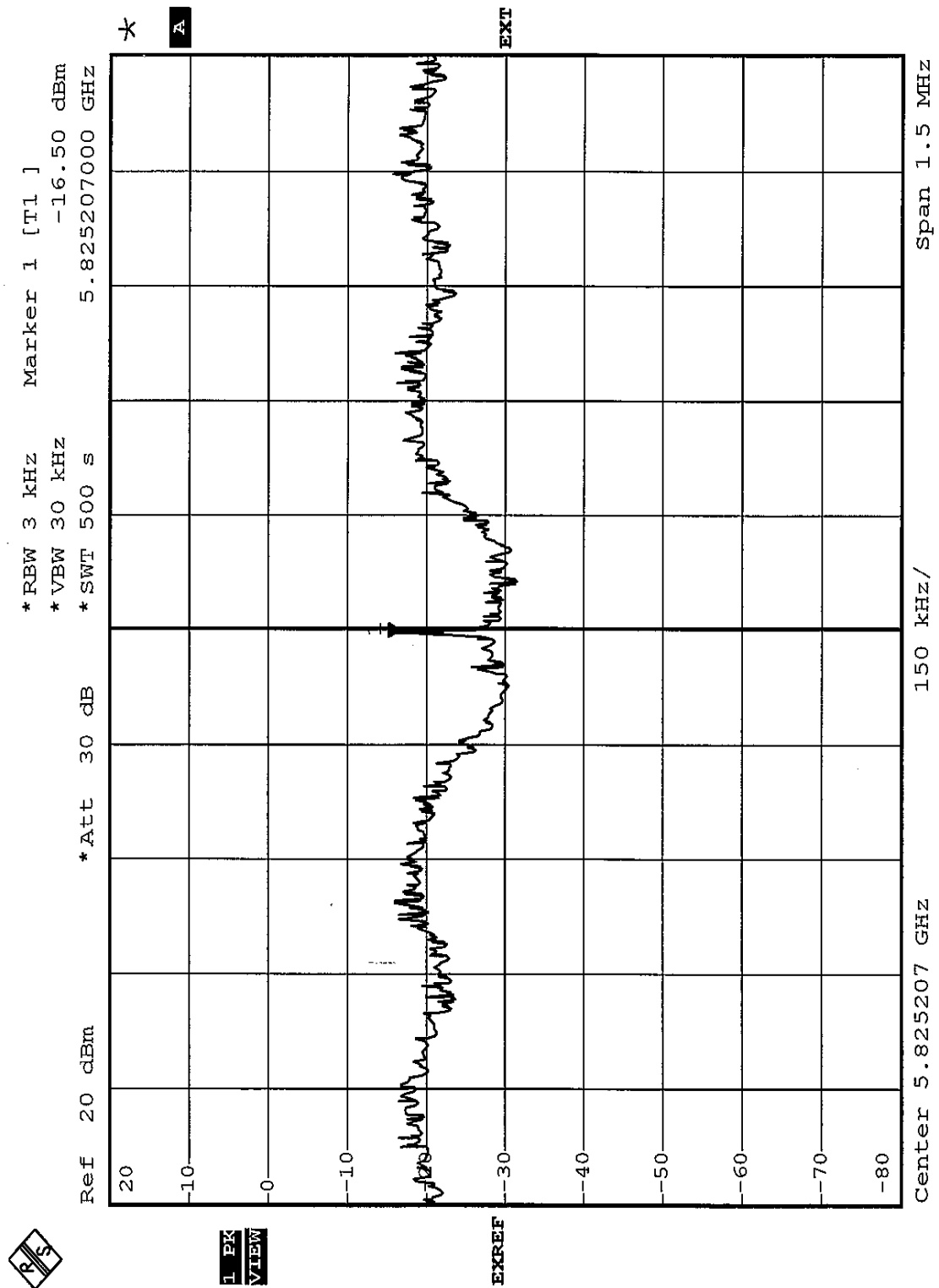


CH12





CH13



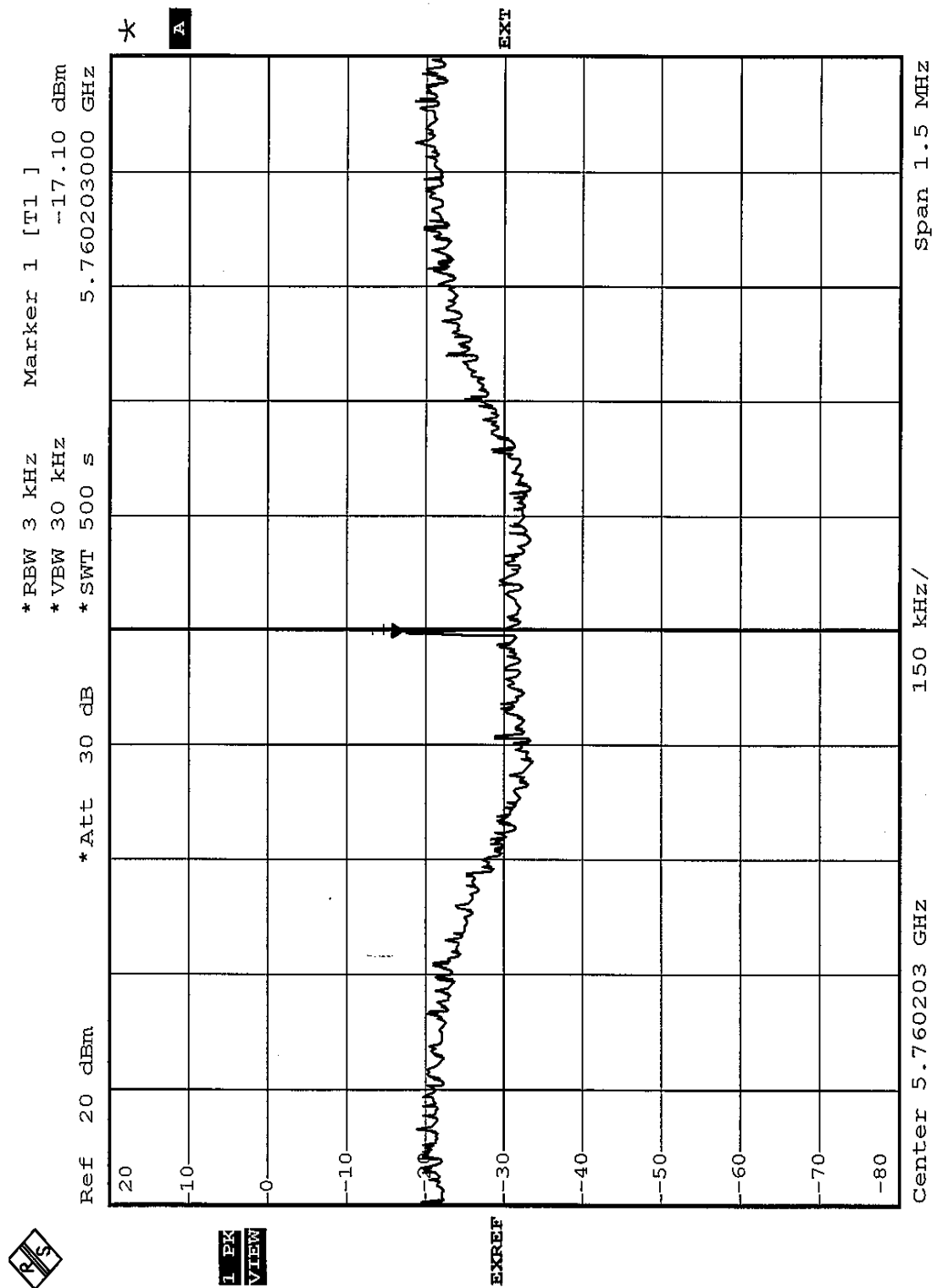


EUT	Wireless A+G Mini PCI Card	MODEL	WMIA-112AG
MODE	Turbo	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH, 991 hPa	TESTED BY	Leo Hung

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
4	5760	-17.10	8	PASS
5	5800	-16.65	8	PASS

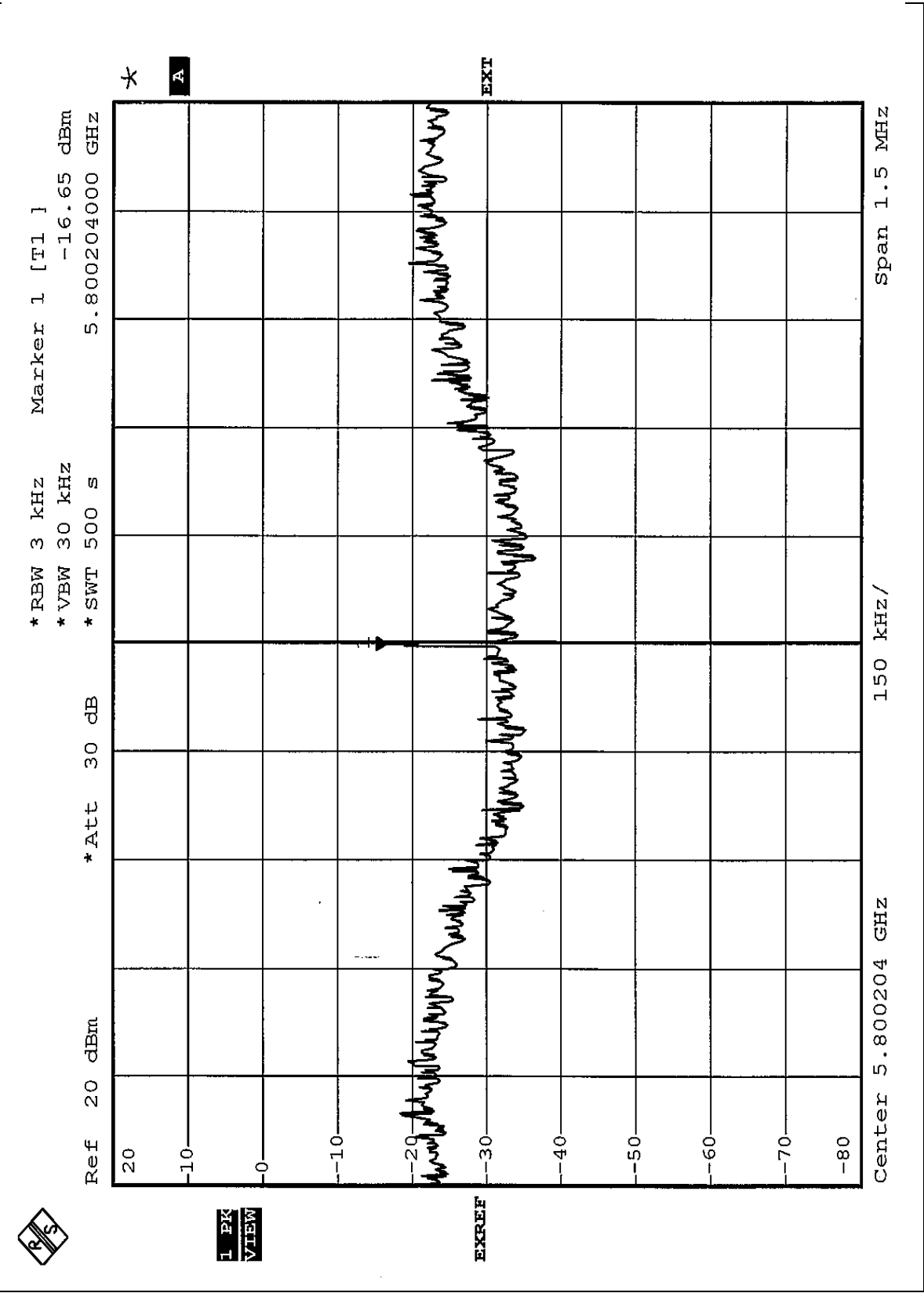


CH4





CH5



5.12 BAND EDGES MEASUREMENT

5.12.1 LIMITS OF BAND EDGES MEASUREMENT

Below -20dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).

5.12.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSEK30	100049	Aug. 12, 2004

NOTES:

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

5.12.3 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 MHz bandwidth from band edge. The band edges was measured and recorded.

5.12.4 DEVIATION FROM TEST STANDARD

No deviation



5.12.5 EUT OPERATING CONDITION

Same as Item 5.9.6

5.12.6 TEST RESULTS

The spectrum plots are attached on the following 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).

The figure is a spectrum analyzer display showing a signal at 5.724 GHz. The display includes a grid, a trace, and various measurement markers.

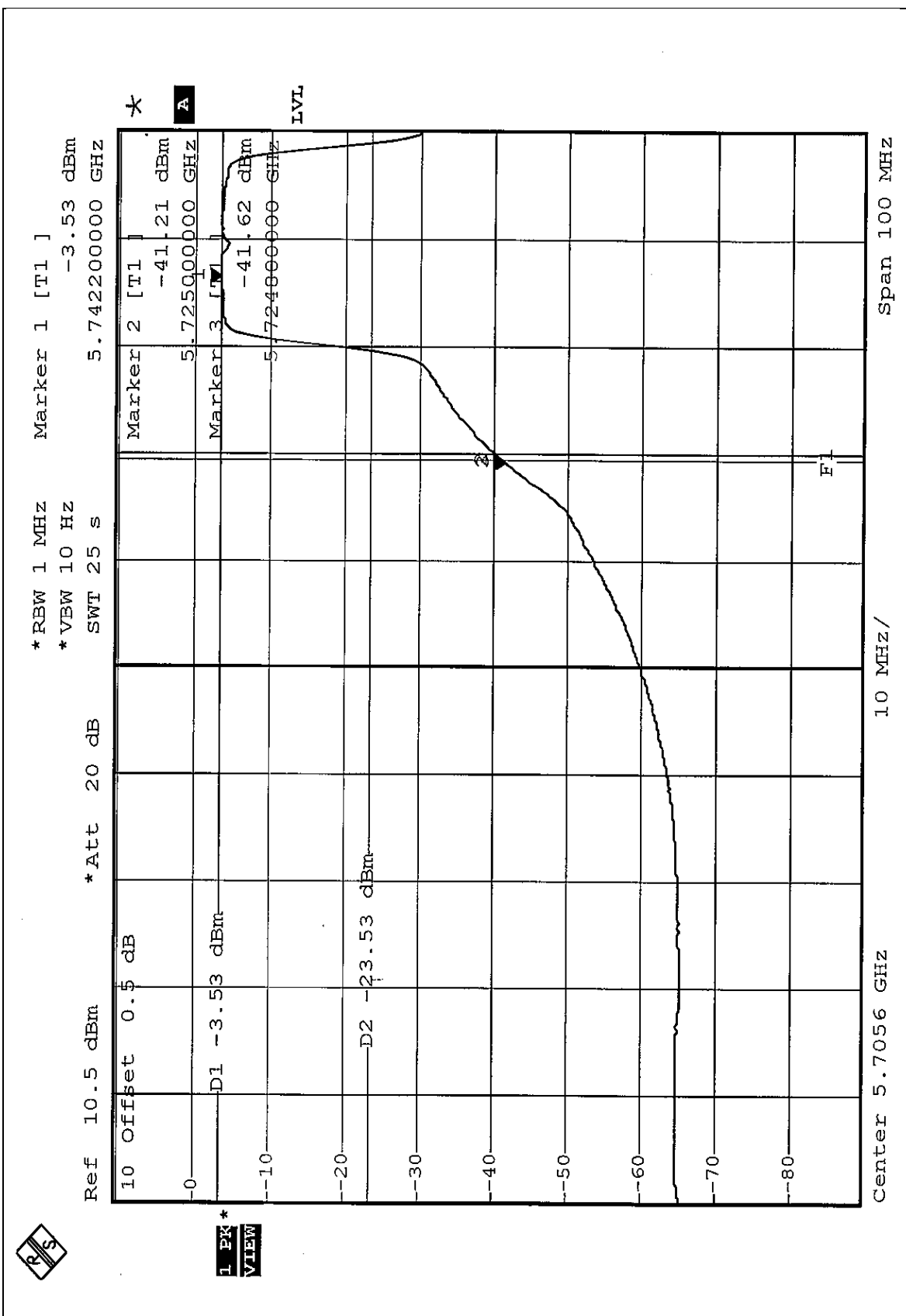
Display Parameters:

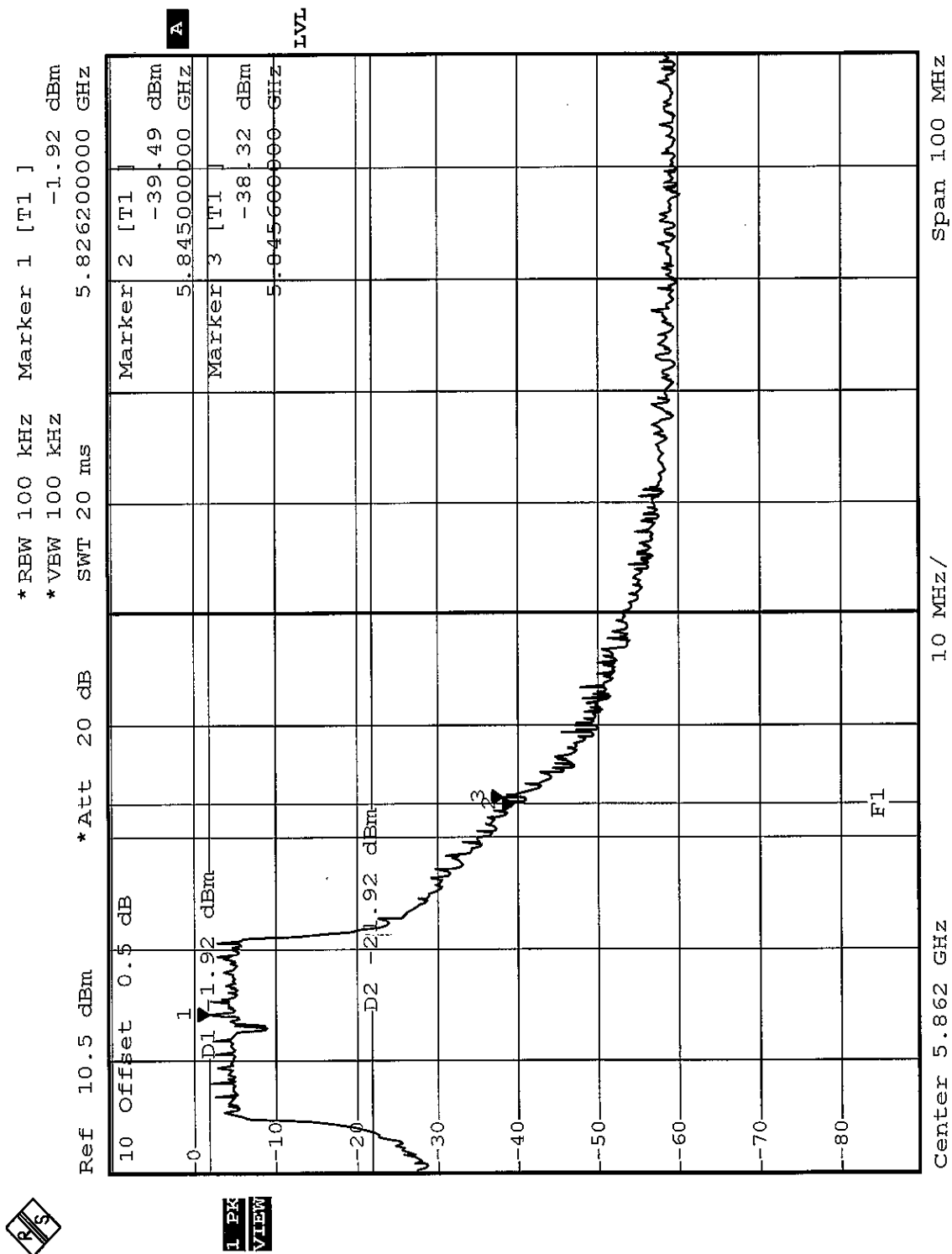
- Ref: 10.5 dBm
- *Att: 20 dB
- *RBW: 100 kHz
- *VBW: 100 kHz
- Marker 1 [T1]: -3.46 dBm
- Span: 100 MHz
- Center: 5.707 GHz
- 10 MHz/

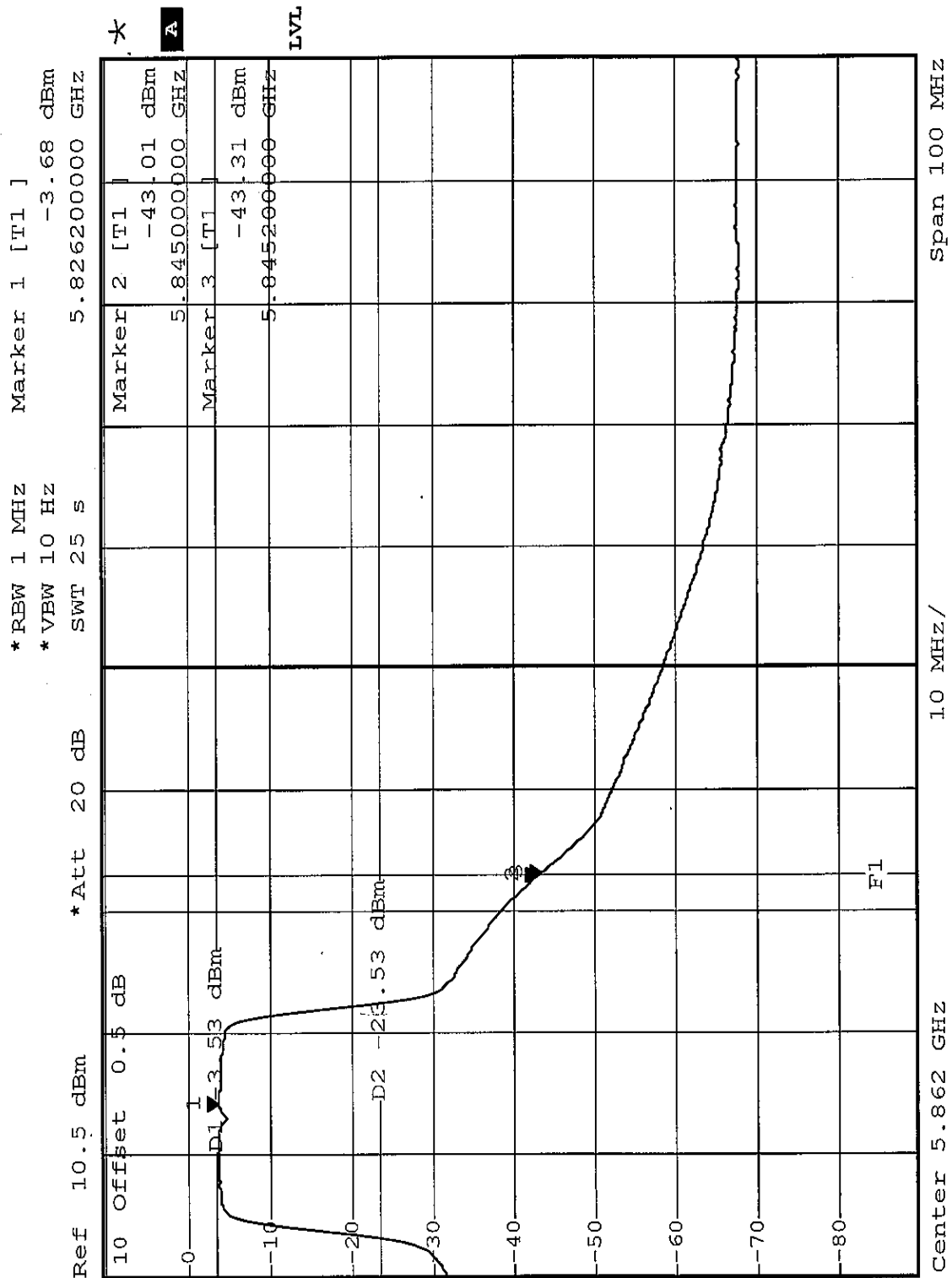
Measurements:

- D1: -3.46 dBm
- D2: -23.45 dBm
- Marker 2 [T1]: -38.94 dBm
- Marker 3 [T1]: -38.86 dBm

Trace: The trace shows a signal at 5.724 GHz with a peak level of -38.94 dBm. The signal is noisy and has a bandwidth of approximately 100 MHz.

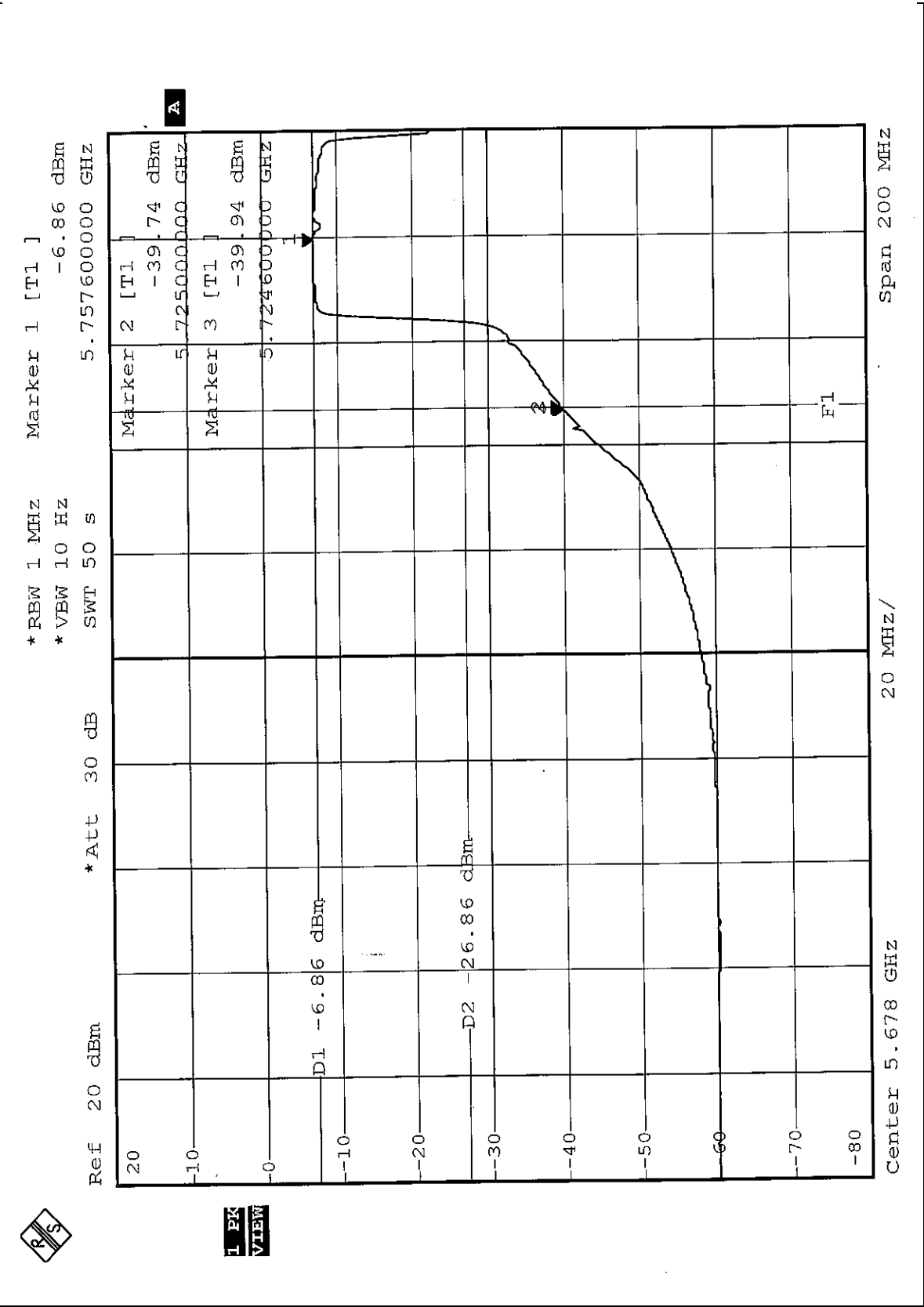


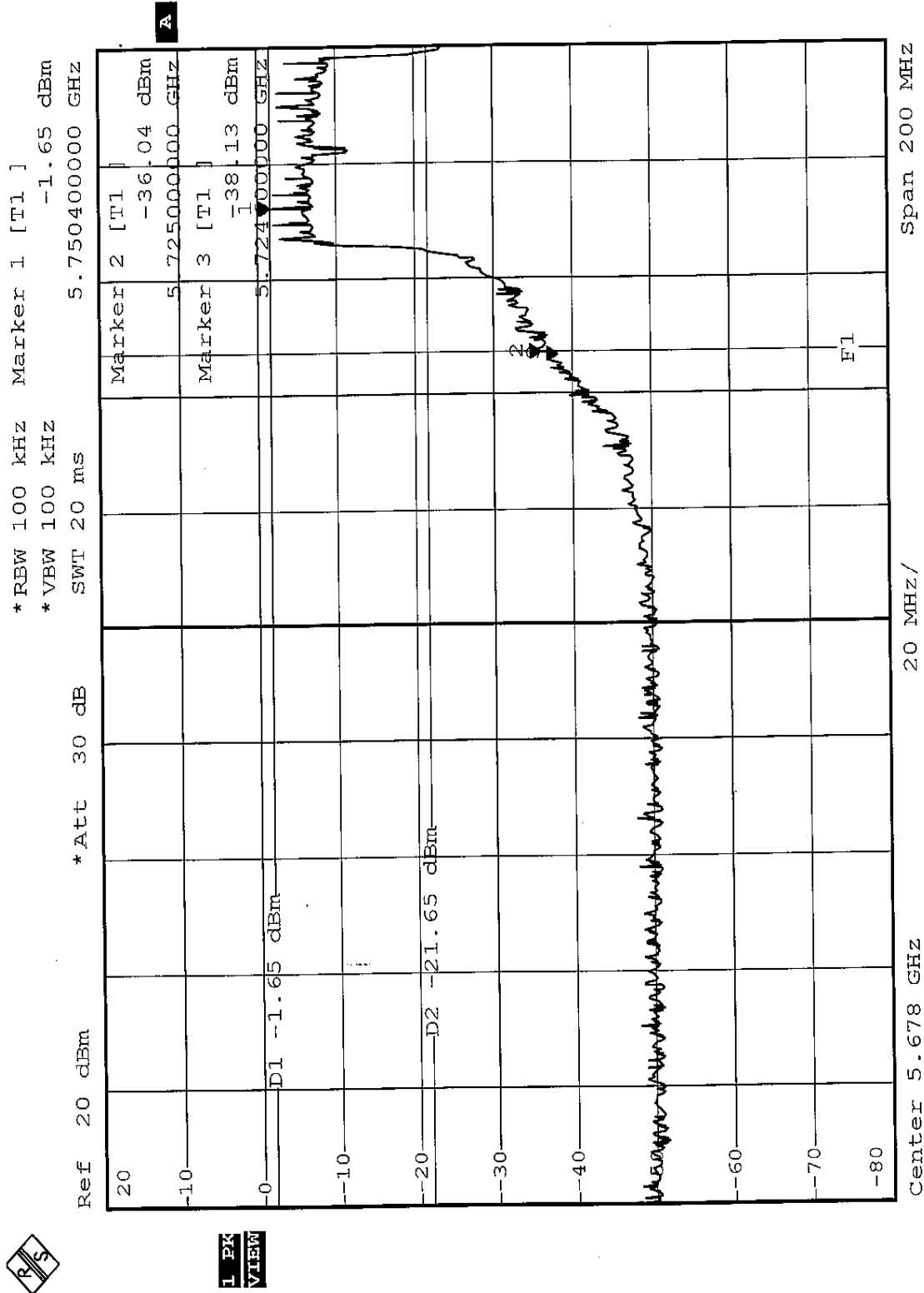


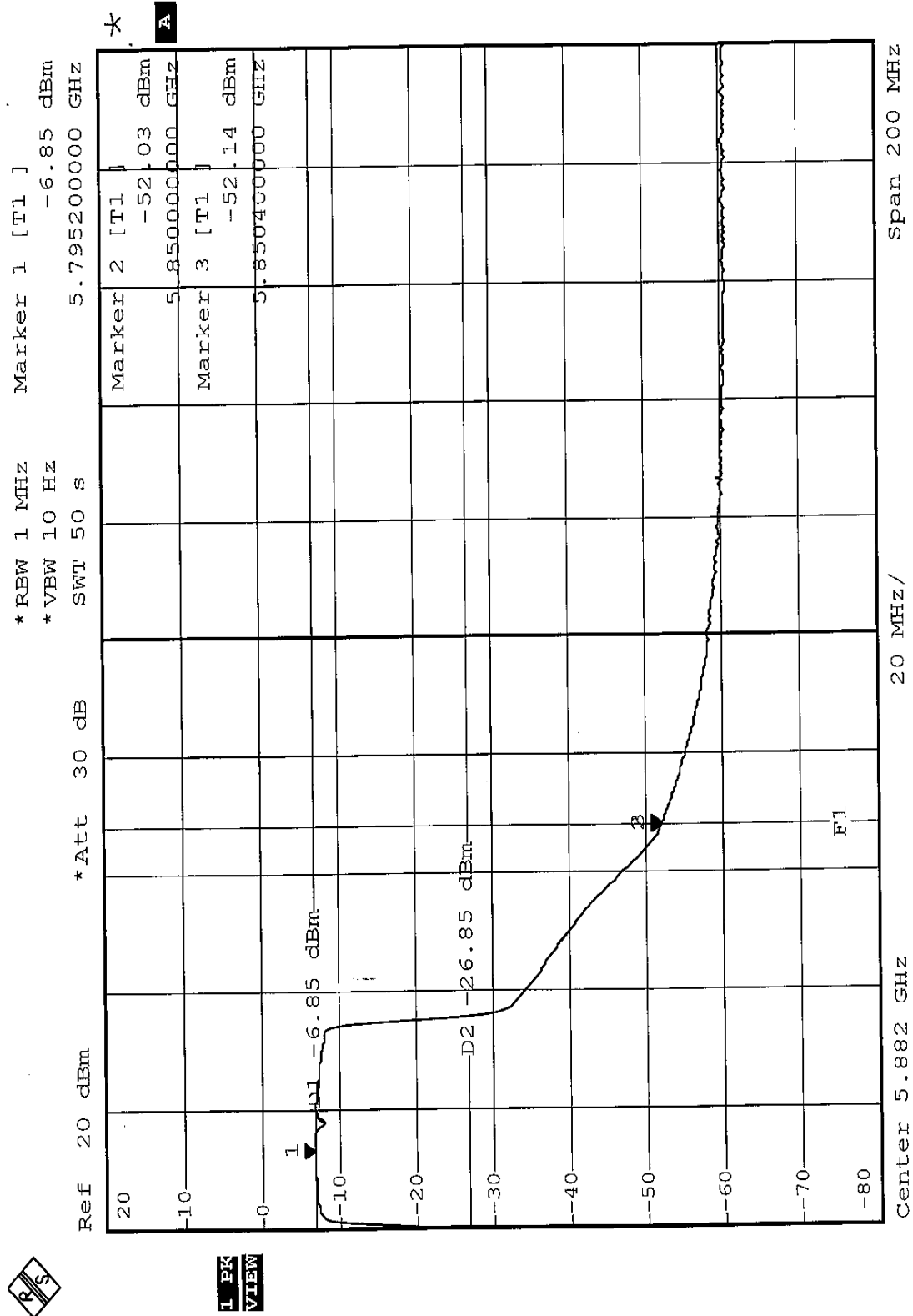


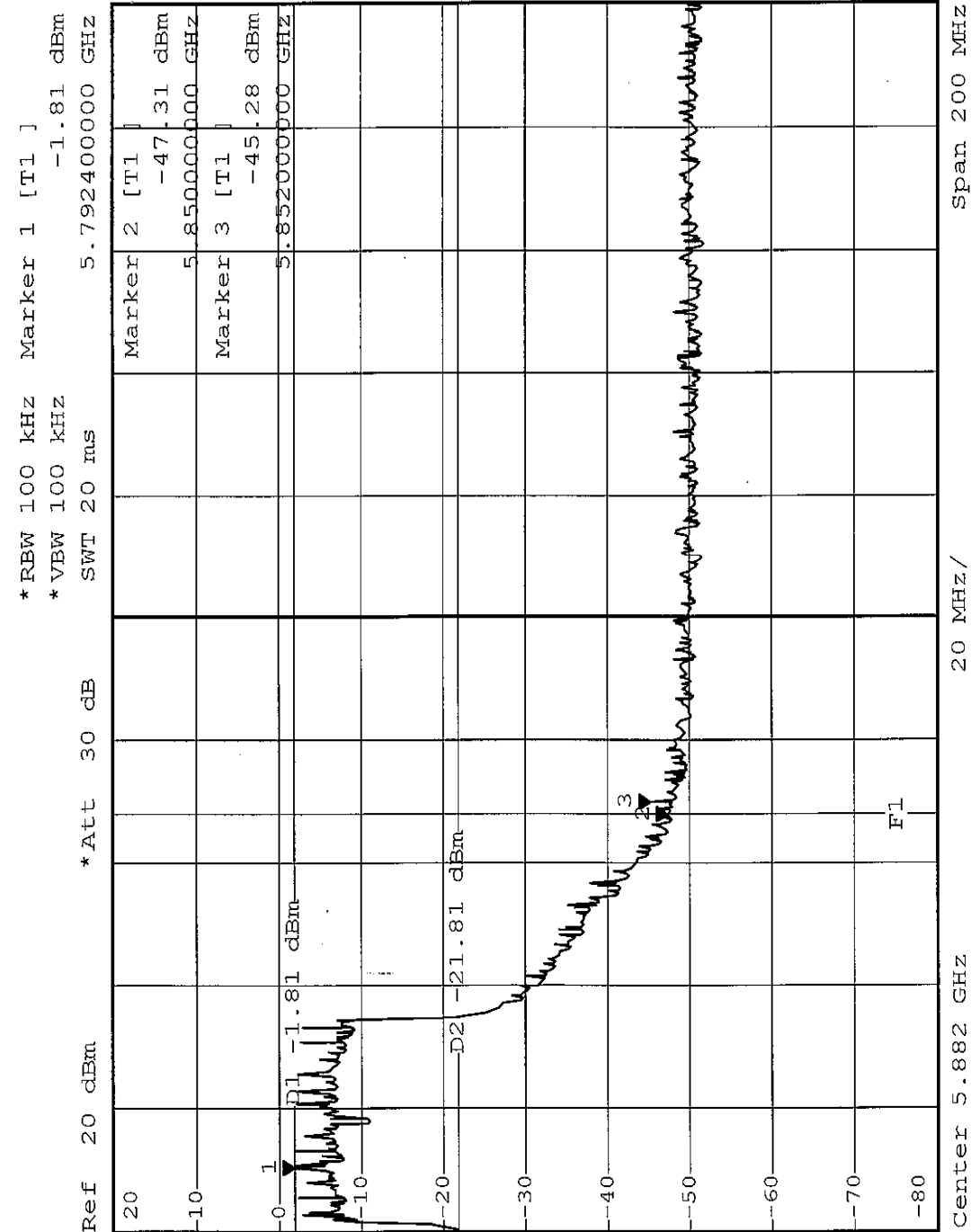


Turbo Mode











5.13 ANTENNA REQUIREMENT

5.13.1 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.

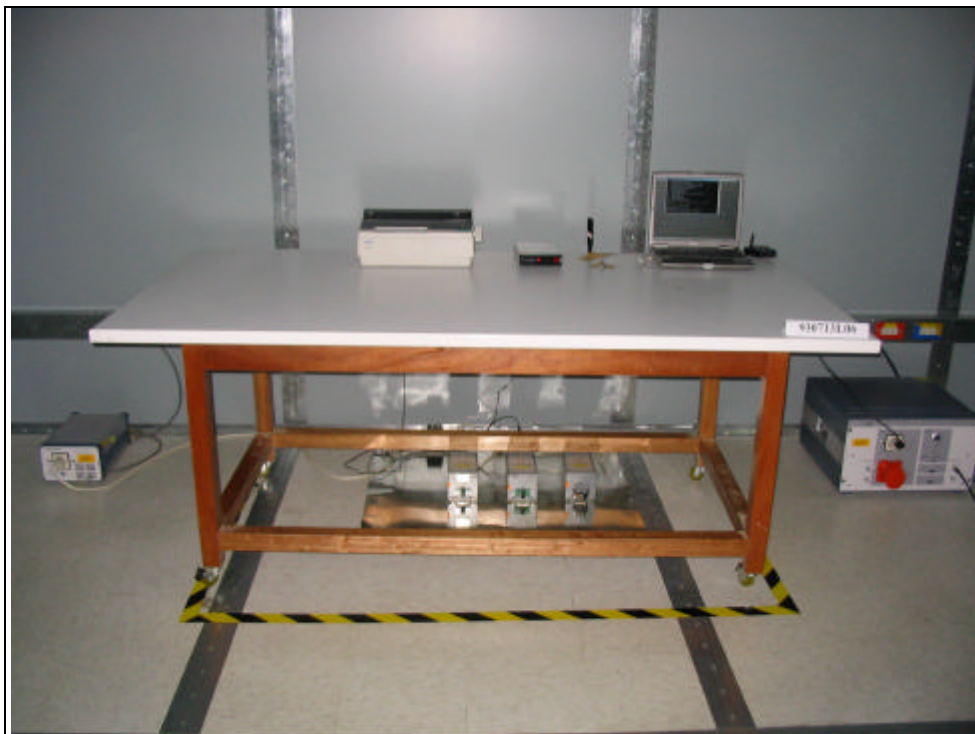
And according to FCC 47 CFR Section 15.247(a), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

5.13.2 ANTENNA CONNECTED CONSTRUCTION

The antenna used in this product is PIFA antenna with UFL antenna connector. The maximum Gain of the antenna is 4.50dBi.

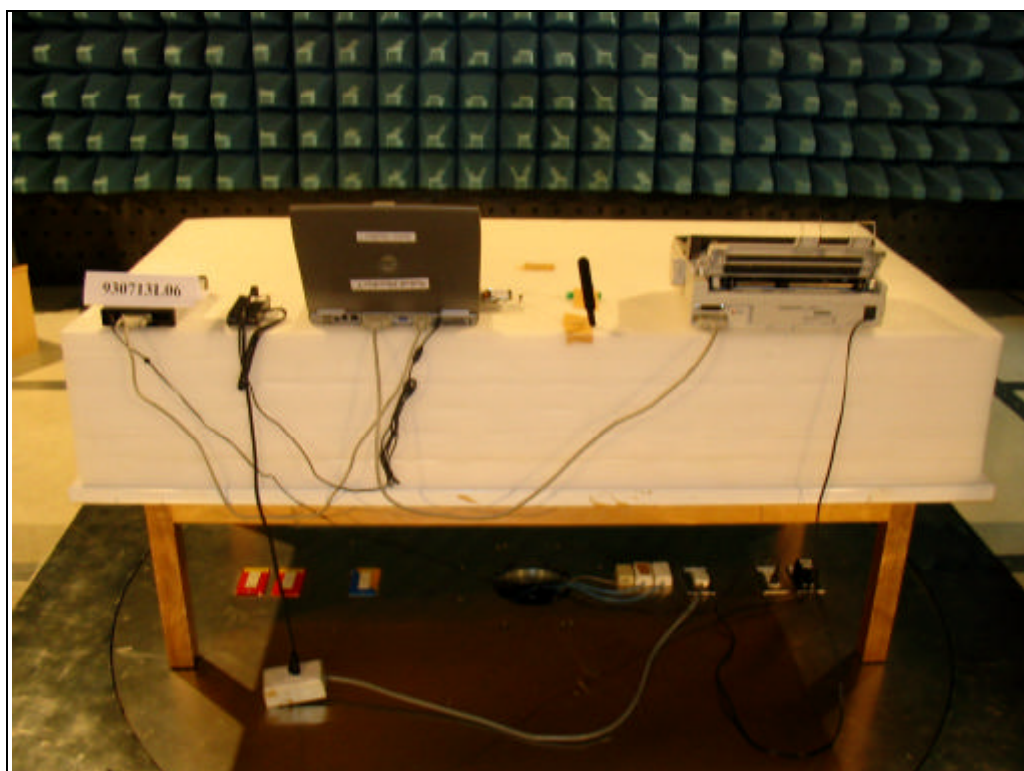
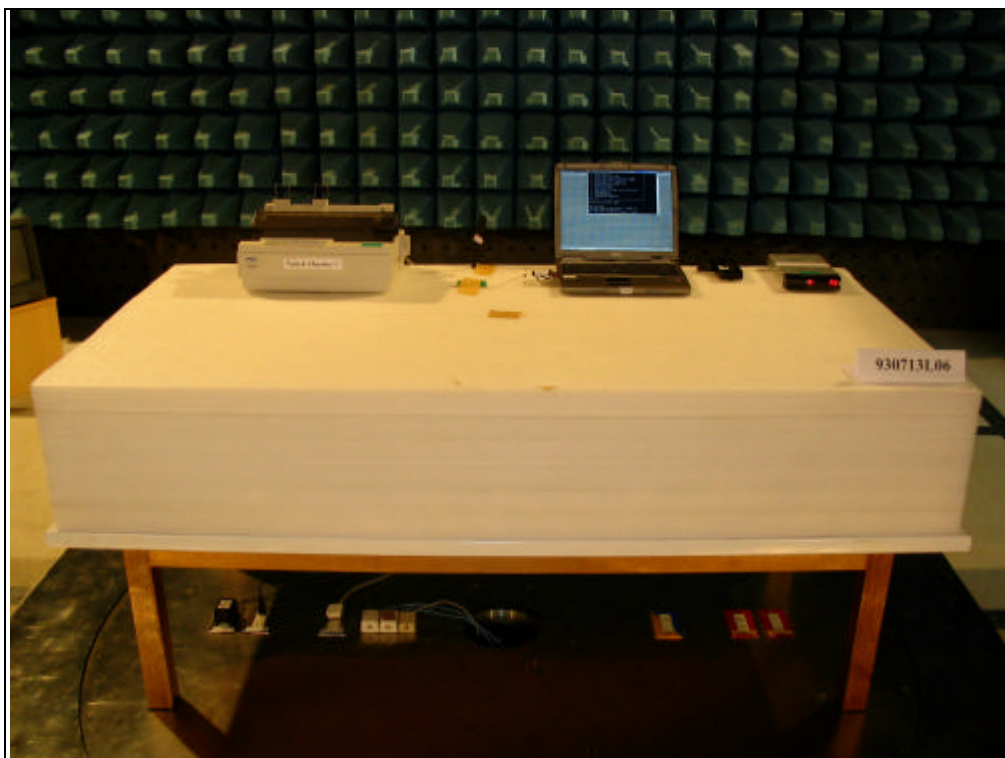
6. PHOTOGRAPHS OF THE TEST CONFIGURATION

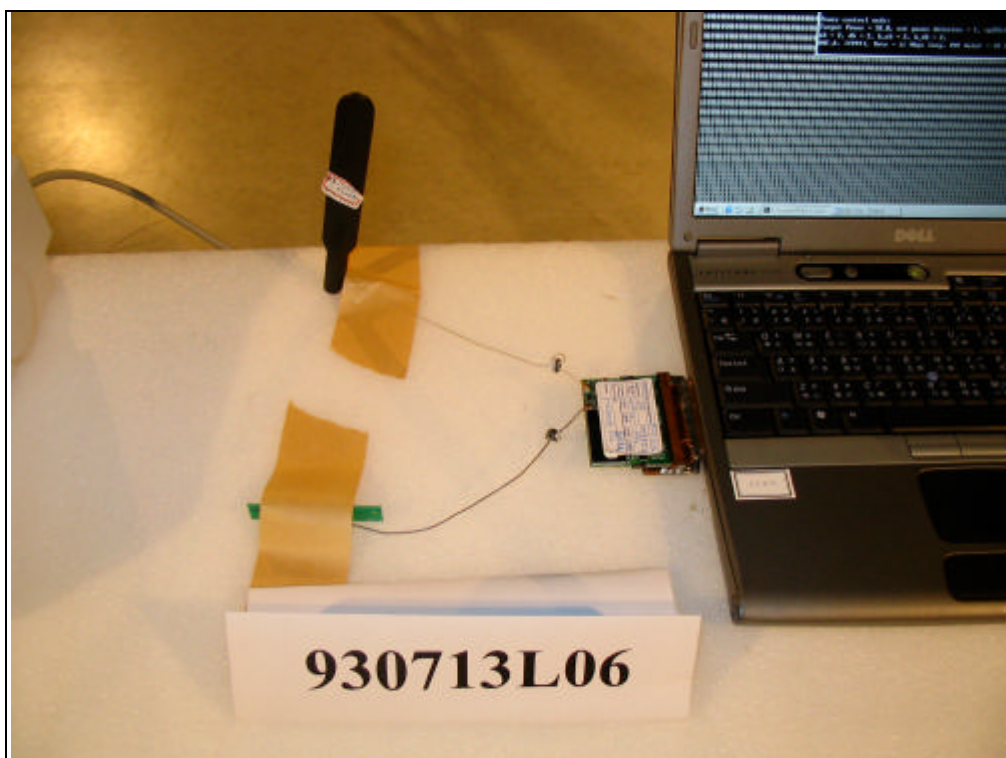
CONDUCTED EMISSION TEST





RADIATED EMISSION TEST







7. 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 Telecom Lab:

Tel: 886-3-3183232
Fax: 886-3-3185050

Linko RF 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

Report Format Version 1.2