



## ANNEX

### 1. 6dB BANDWIDTH MEASUREMENT

#### 1.1 LIMITS OF 6DB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

#### 1.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
SPECTRUM ANALYZER	FSEK30	100049	July 24, 2003

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

### 1.3 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 6 dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

### 1.4 DEVIATION FROM TEST STANDARD

No deviation

### 1.5 TEST SETUP



For the actual test configuration, please refer to the related Item – Photographs of the Test Configuration.

### 1.6 EUT OPERATING CONDITIONS

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



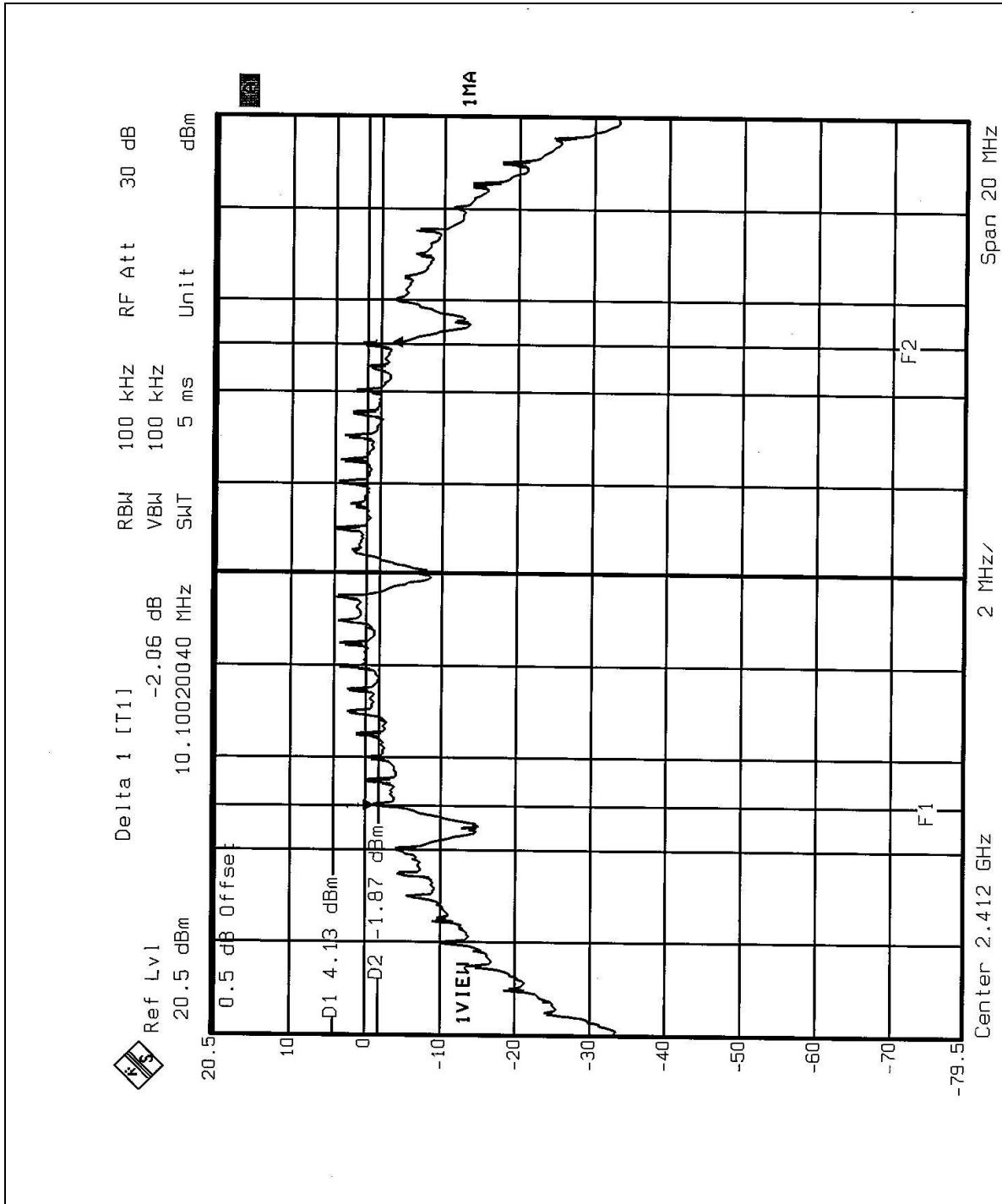
## 1.7 TEST RESULTS

<b>EUT</b>	11Mbps Wireless LAN Card	<b>MODEL</b>	GN-WLMS502
<b>DATA RATE</b>	1Mbps	<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz
<b>ENVIRONMENTAL CONDITIONS</b>	20deg. C, 70%RH, 1005hPa	<b>TESTED BY</b>	Ansen Lei

<b>CHANNEL</b>	<b>CHANNEL FREQUENCY (MHz)</b>	<b>6dB BANDWIDTH (MHz)</b>	<b>MINIMUM LIMIT (MHz)</b>	<b>PASS/FAIL</b>
1	2412	10.100	0.5	PASS
6	2437	11.102	0.5	PASS
11	2462	11.102	0.5	PASS

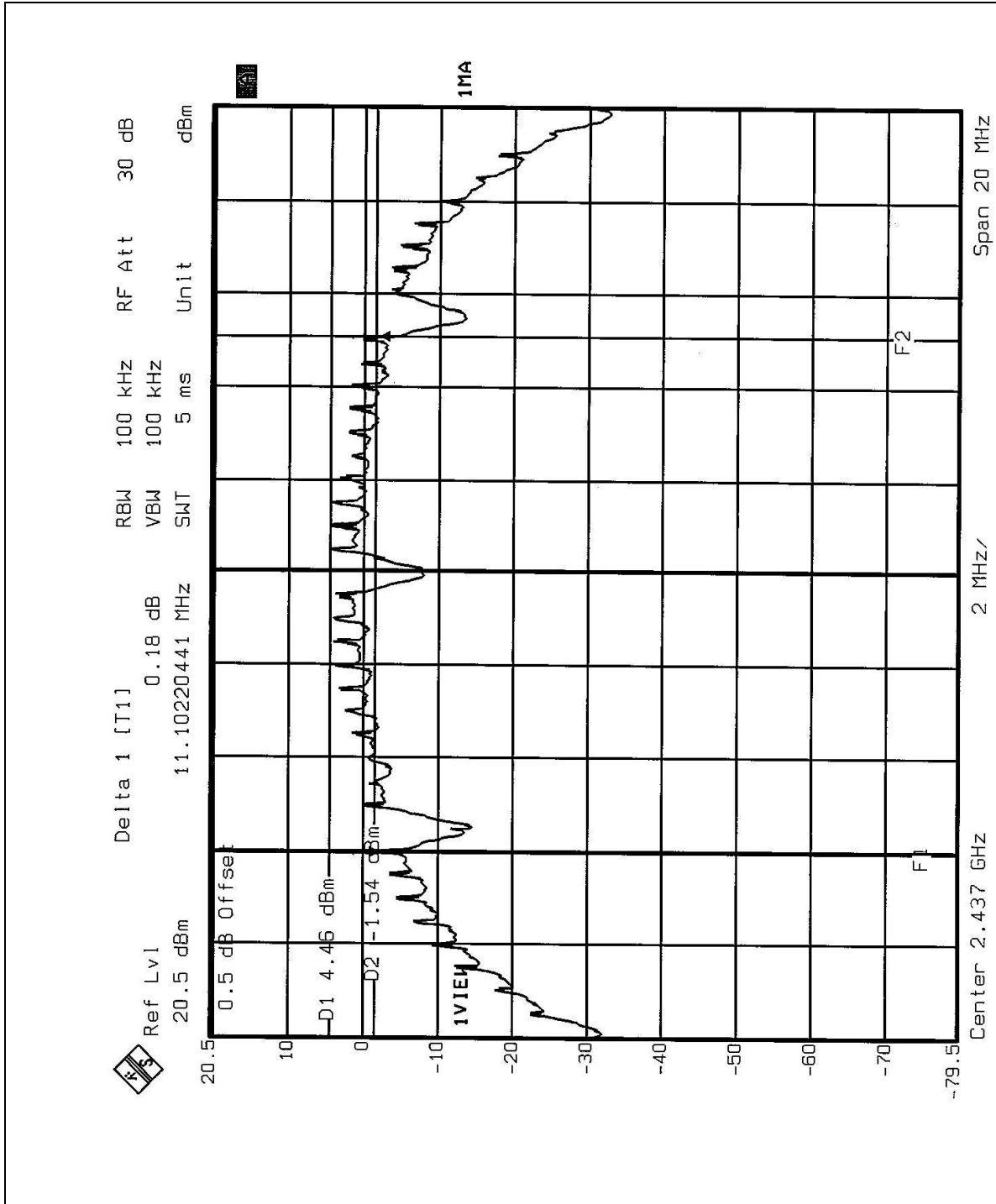


CH1



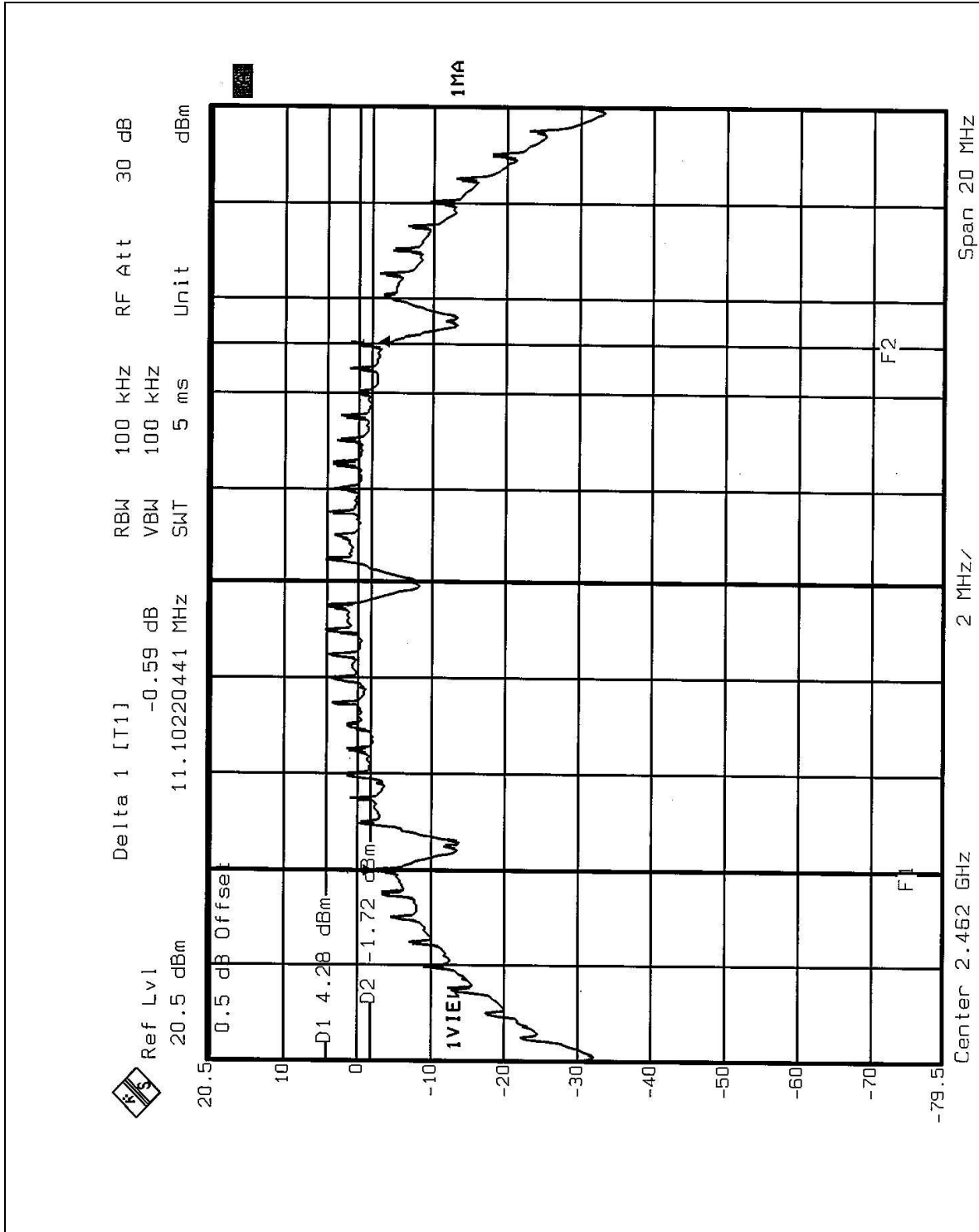


CH6





CH11



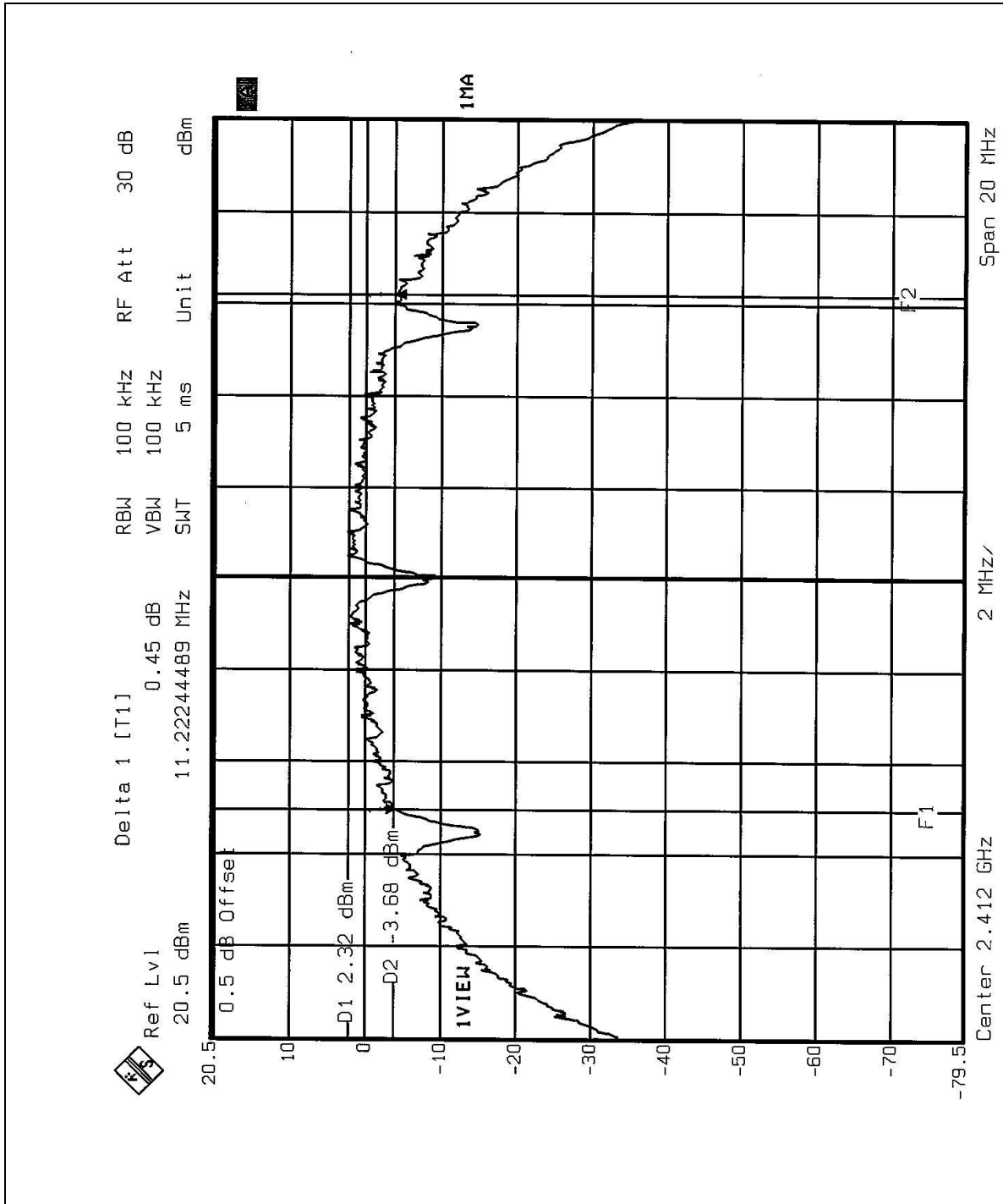


<b>EUT</b>	11Mbps Wireless LAN Card	<b>MODEL</b>	GN-WLMS502
<b>DATA RATE</b>	2Mbps	<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz
<b>ENVIRONMENTAL CONDITIONS</b>	20deg. C, 70%RH, 1005hPa	<b>TESTED BY</b>	Ansen Lei

<b>CHANNEL</b>	<b>CHANNEL FREQUENCY (MHz)</b>	<b>6dB BANDWIDTH (MHz)</b>	<b>MINIMUM LIMIT (MHz)</b>	<b>PASS/FAIL</b>
1	2412	11.222	0.5	PASS
6	2437	10.020	0.5	PASS
11	2462	11.102	0.5	PASS



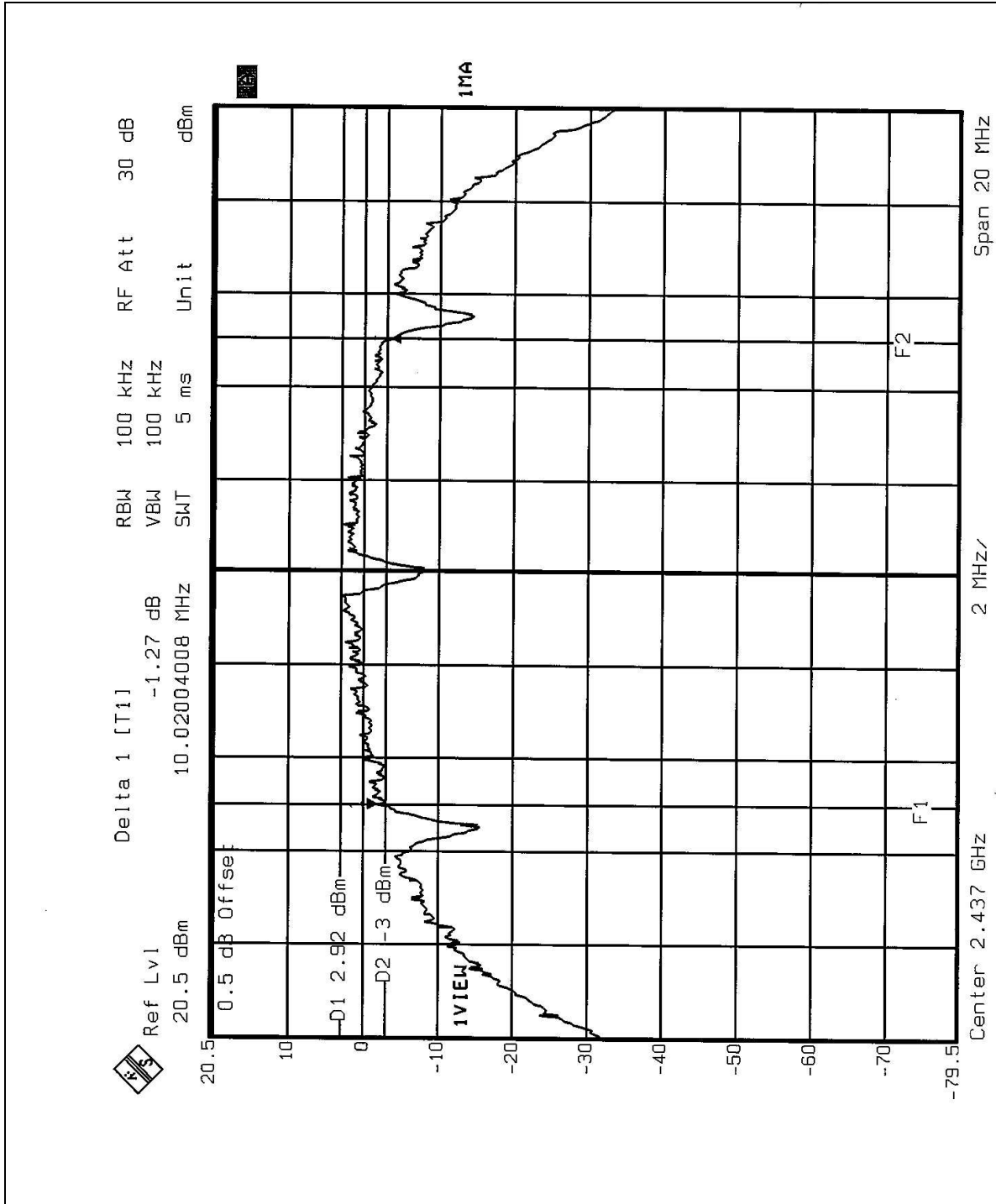
CH1





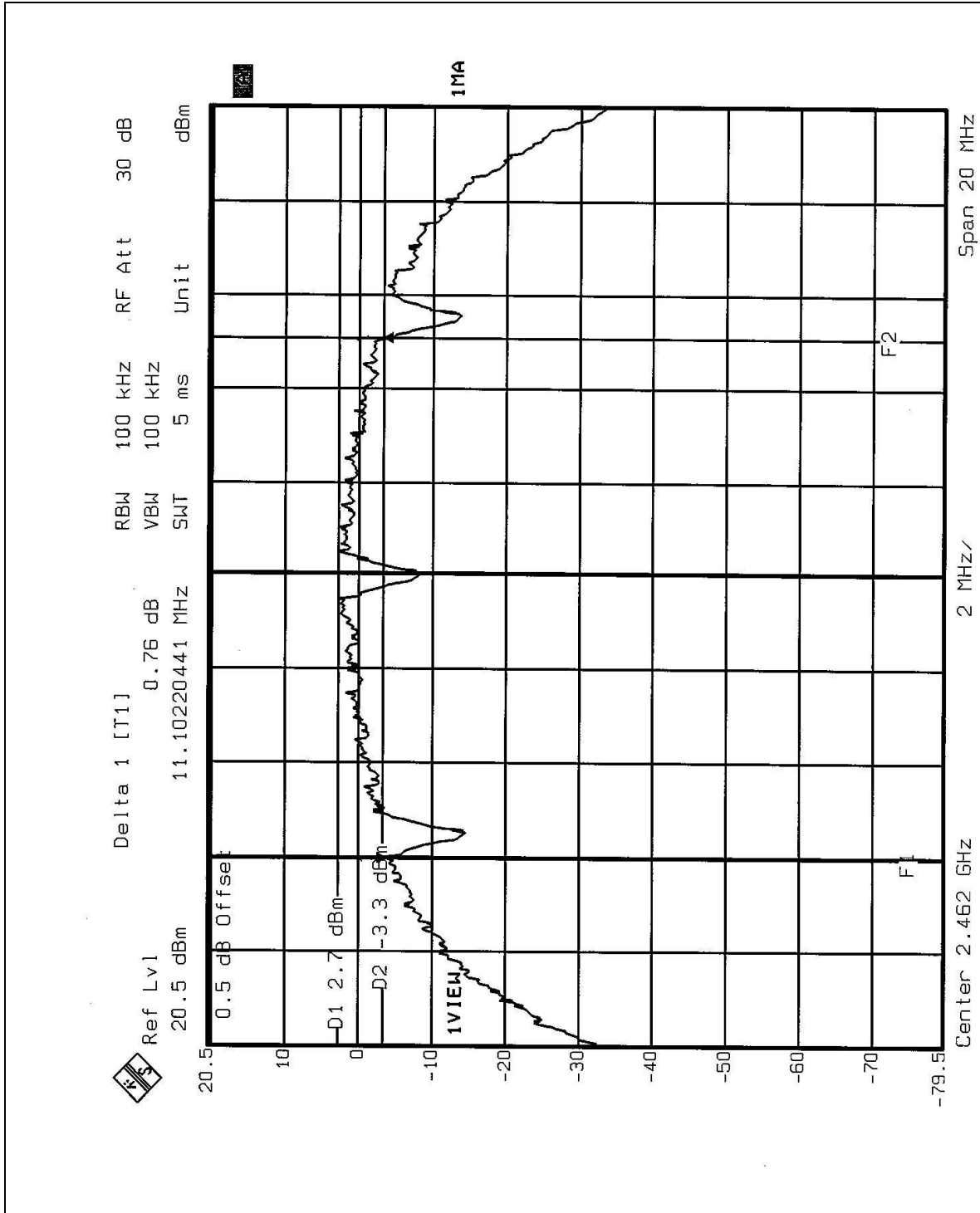


CH6





CH11



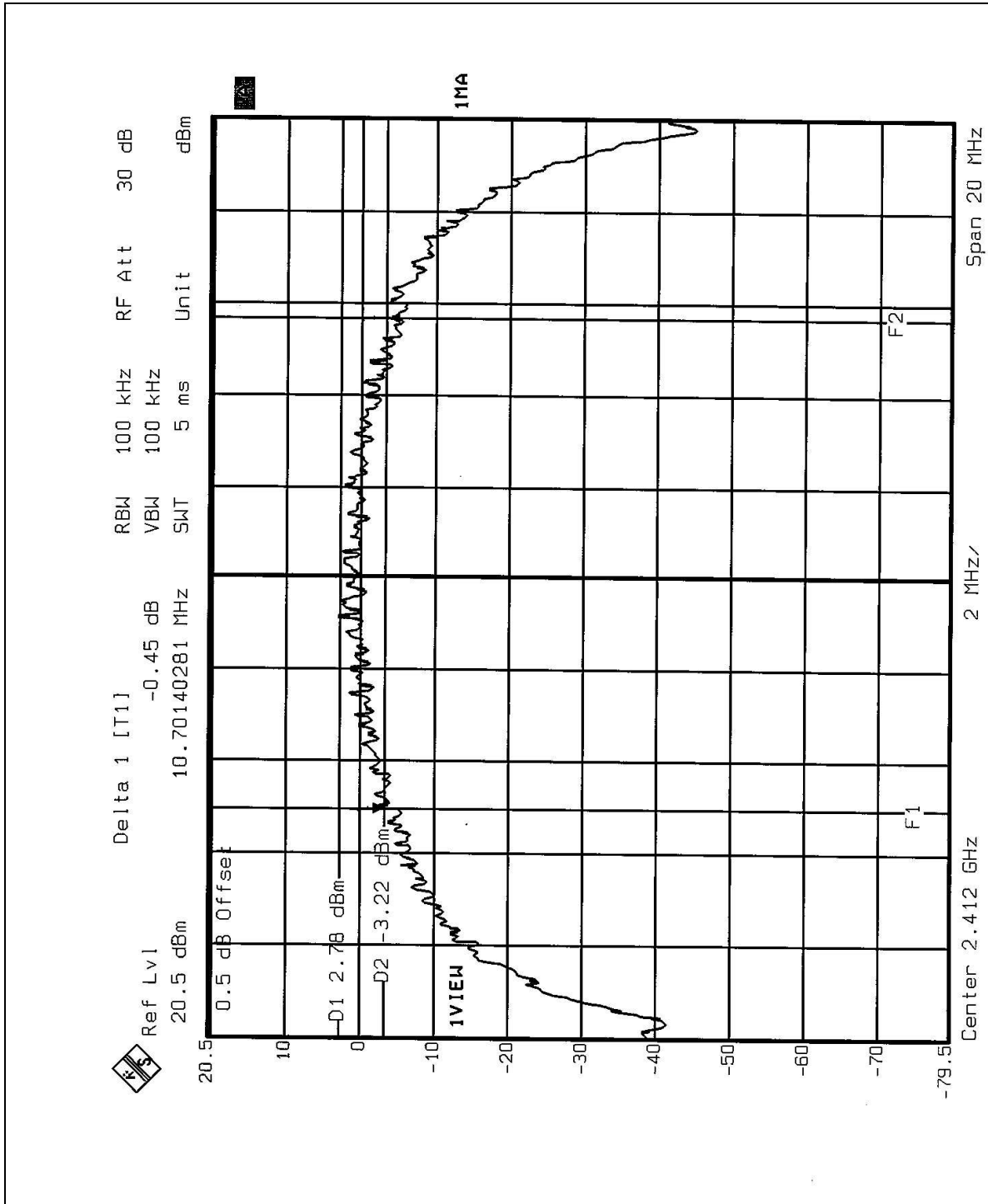


<b>EUT</b>	11Mbps Wireless LAN Card	<b>MODEL</b>	GN-WLMS502
<b>DATA RATE</b>	5.5Mbps	<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz
<b>ENVIRONMENTAL CONDITIONS</b>	20deg. C, 70%RH, 1005hPa	<b>TESTED BY</b>	Ansen Lei

<b>CHANNEL</b>	<b>CHANNEL FREQUENCY (MHz)</b>	<b>6dB BANDWIDTH (MHz)</b>	<b>MINIMUM LIMIT (MHz)</b>	<b>PASS/FAIL</b>
1	2412	10.701	0.5	PASS
6	2437	10.340	0.5	PASS
11	2462	10.581	0.5	PASS

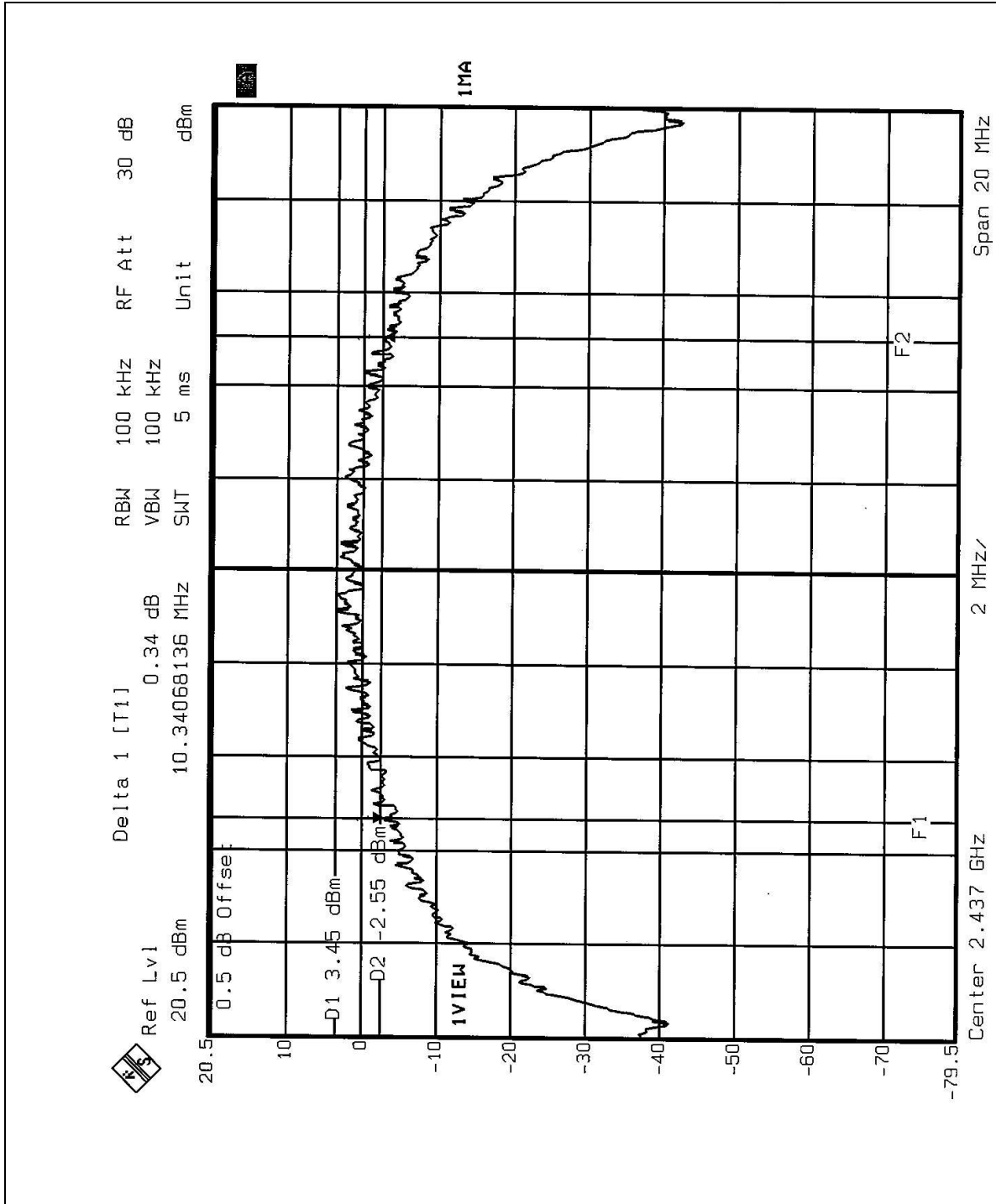


CH1



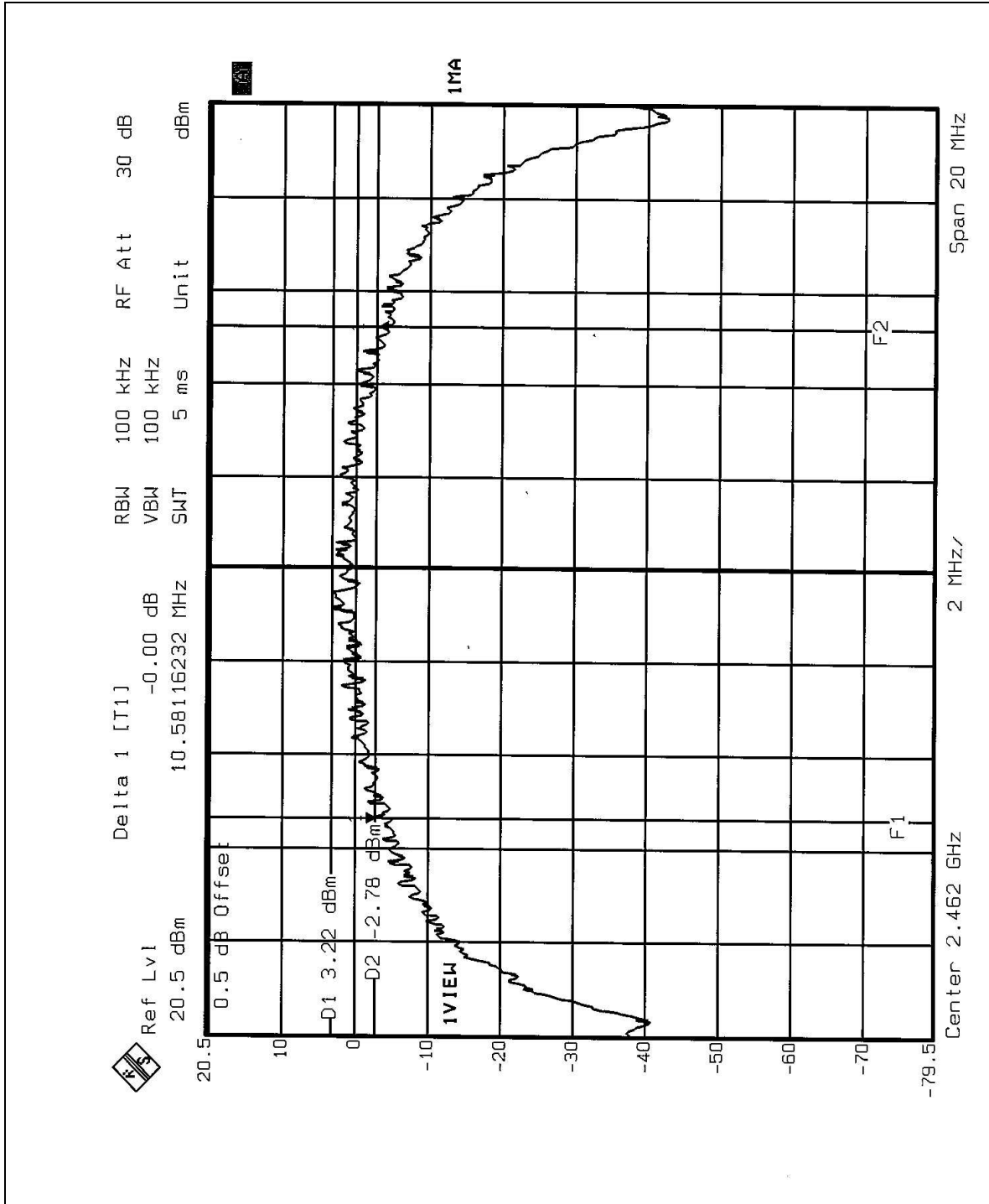


CH6





CH11





## 2. BAND EDGES MEASUREMENT

### 2.1 LIMITS OF BAND EDGES MEASUREMENT

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

### 2.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
SPECTRUM ANALYZER	FSEK30	100049	July 24, 2003

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

### 2.3 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.

### 2.4 DEVIATION FROM TEST STANDARD

No deviation



## 2.5 EUT OPERATING CONDITION

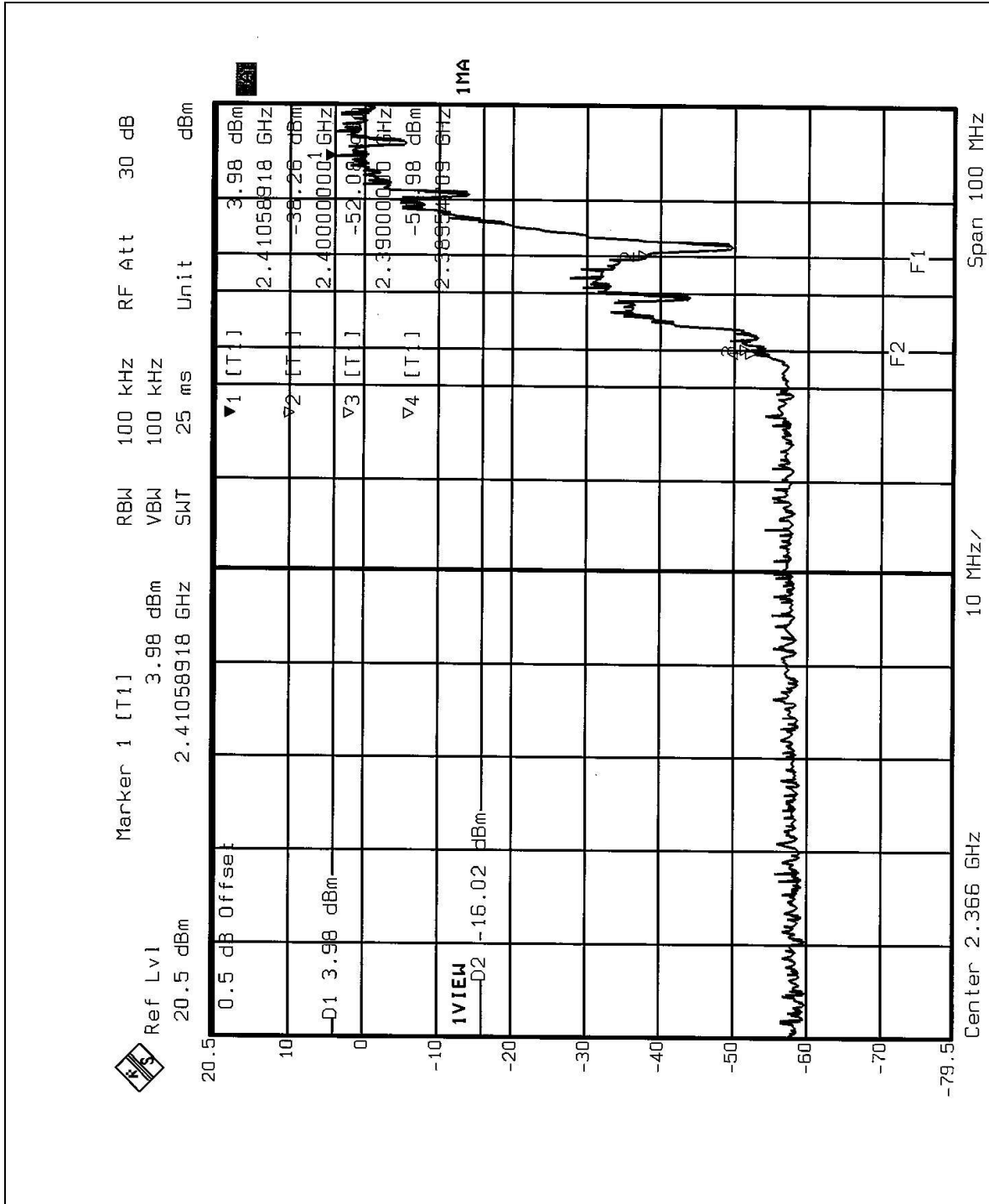
Same as Item 1.6.

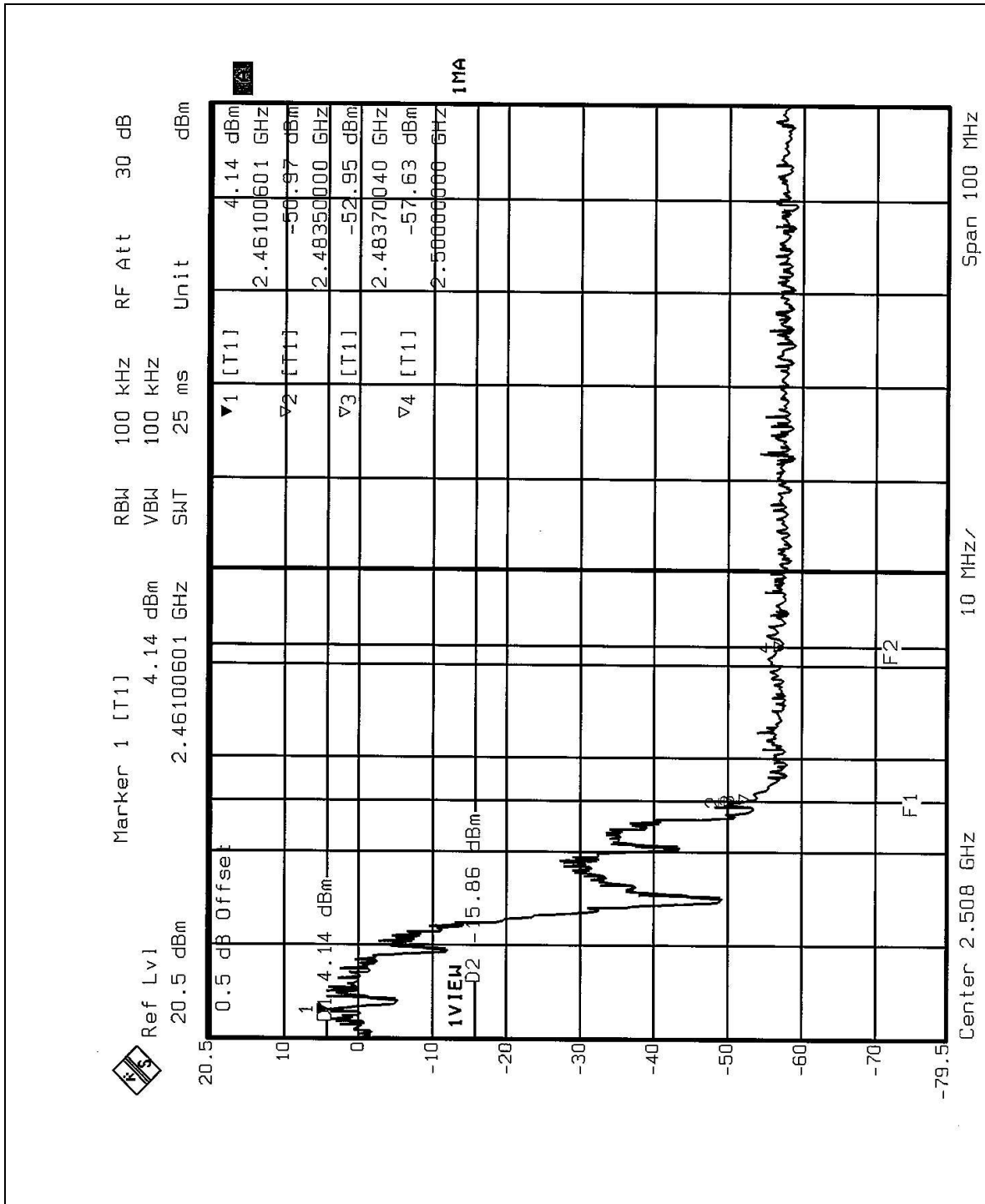
## 2.6 TEST RESULTS

The spectrum plots are attached on the following 2 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).

**NOTE 1:** The band edge emission plot for data rate **1Mbps** on the following 2 pages shows 56.06dB / 55.11dB delta between carrier maximum power and local maximum emission in restrict band (2.3900GHz / 2.4835GHz). The emission of carrier strength list in the test result of channel 11 is 99.3dBuV/m, so the maximum field strength in restrict band is  $99.3 - 55.11 = 44.19$ dBuV/m which is under 54dBuV/m limit.

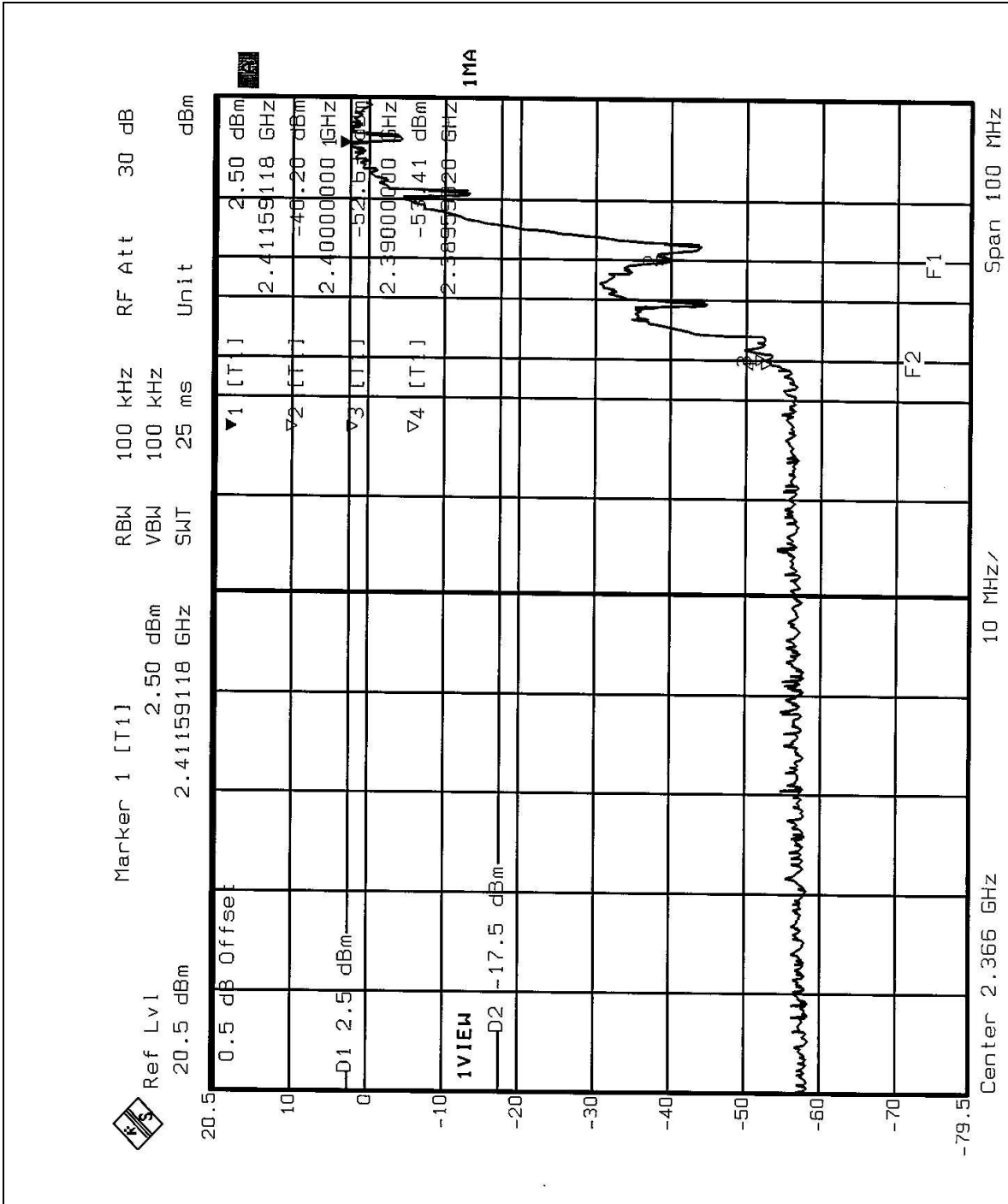


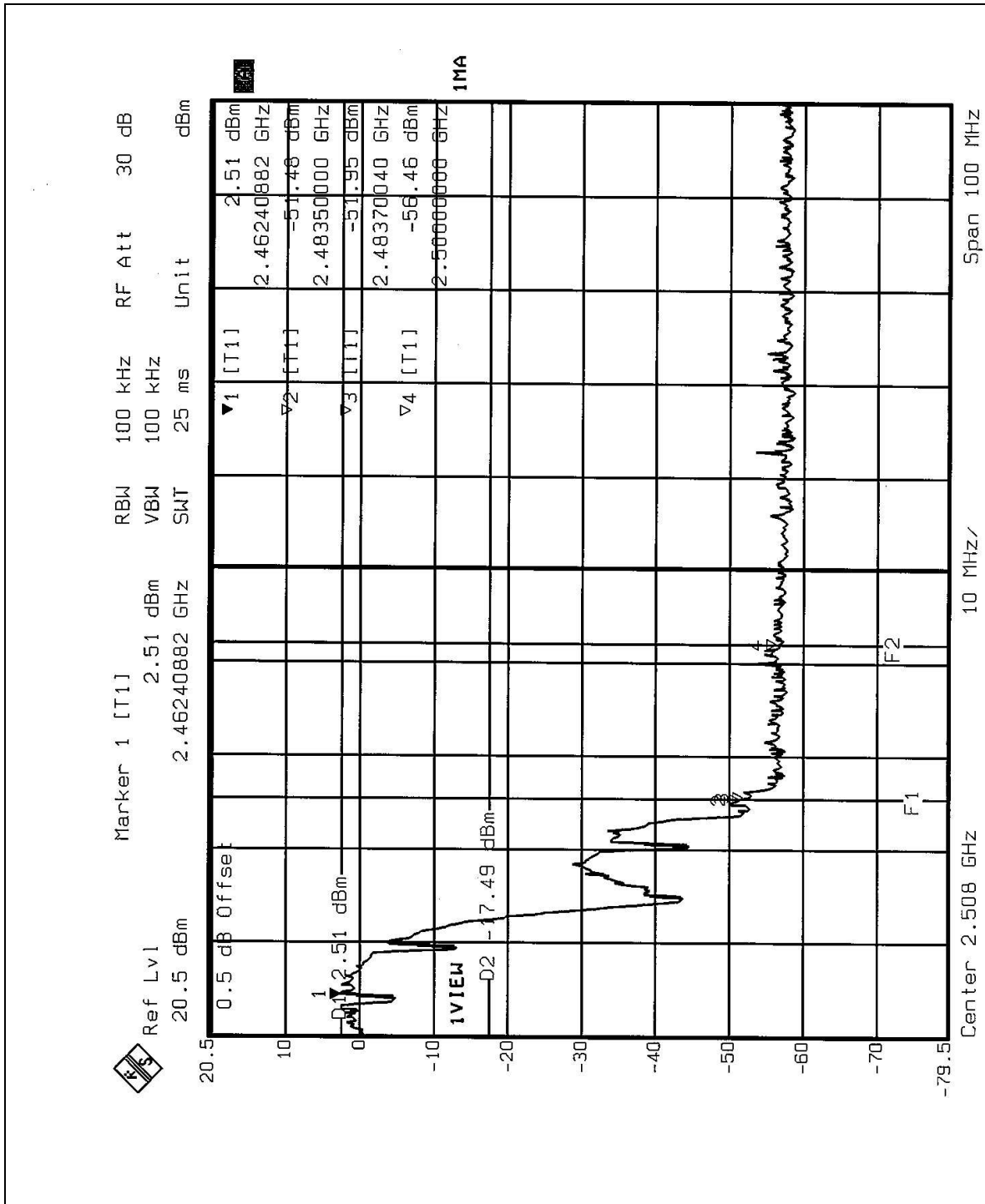






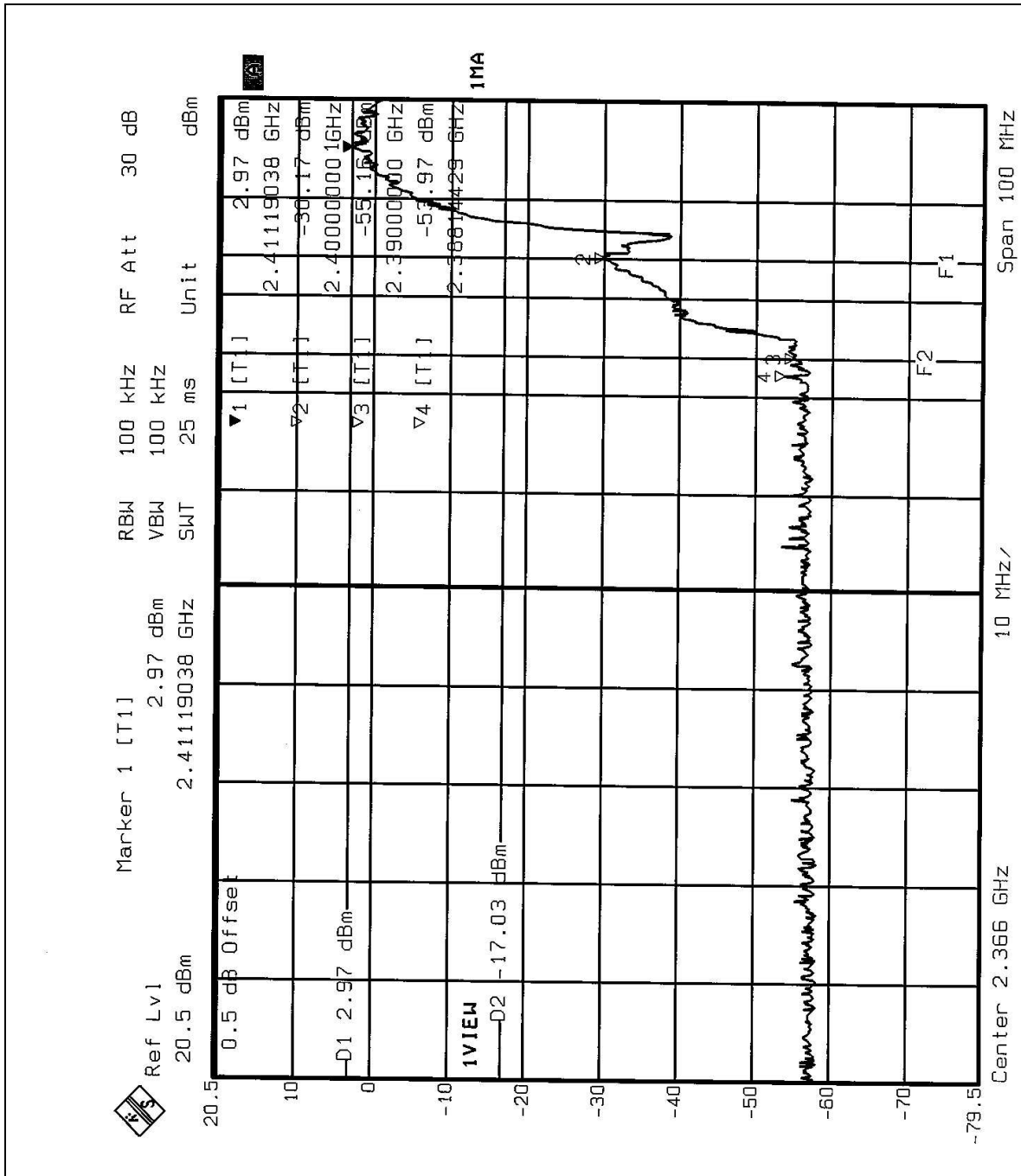
**NOTE 2:** The band edge emission plot for data rate **2Mbps** on the following shows 55.13dB / 53.99dB delta between carrier maximum power and local maximum emission in restrict band (2.3900GHz / 2.4835GHz). The emission of carrier strength list in the test result of channel 11 is 99.3dBuV/m, so the maximum field strength in restrict band is 99.3-53.99=45.31dBuV/m which is under 54dBuV/m limit.

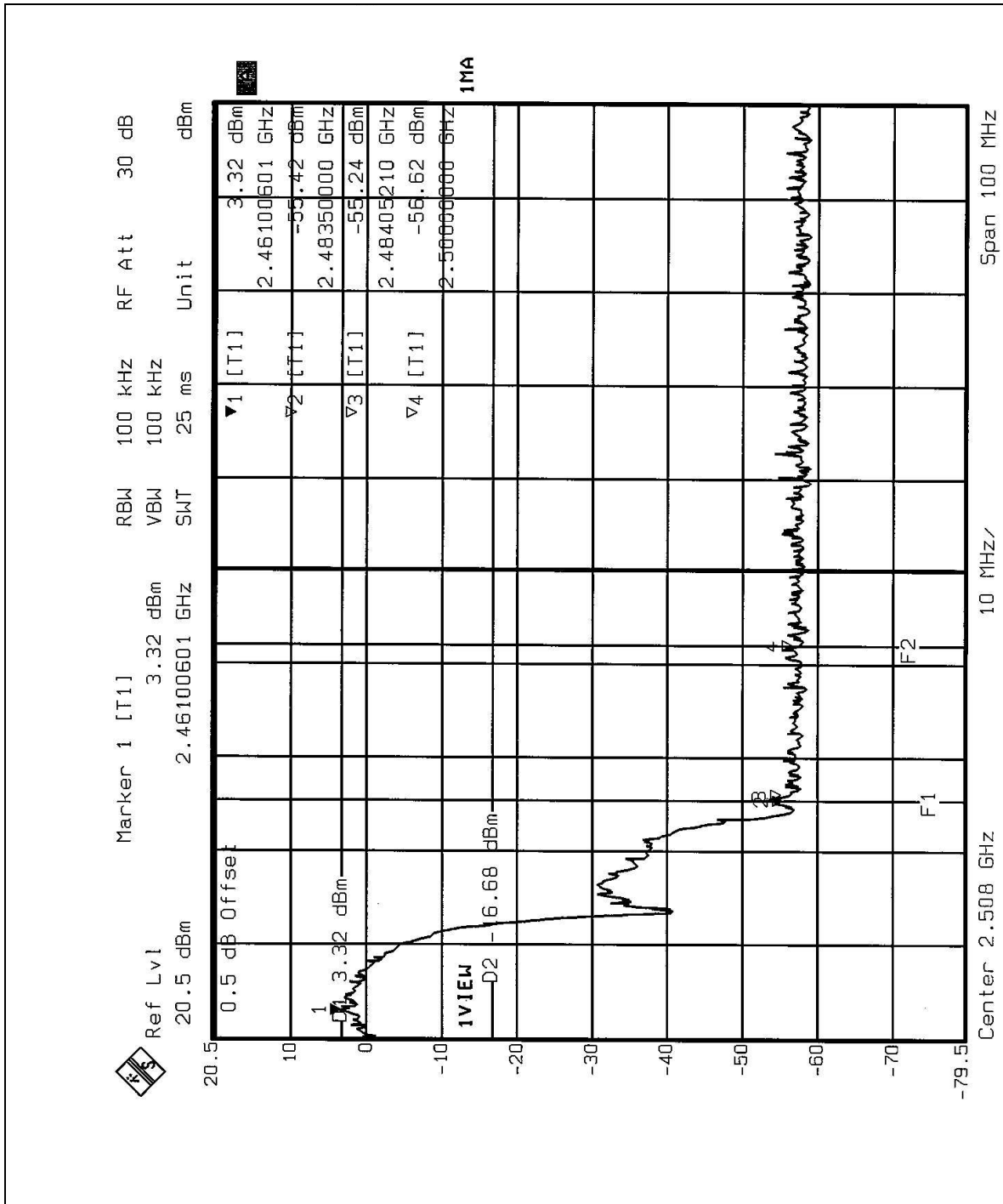






**NOTE 3:** The band edge emission plot for data rate **5.5Mbps** on the following shows 56.94dB / 58.56dB delta between carrier maximum power and local maximum emission in restrict band (2.3881GHz / 2.4841GHz). The emission of carrier strength list in the test result of channel 11 is 99.3dBuV/m, so the maximum field strength in restrict band is 99.3-58.56=40.74dBuV/m which is under 54dBuV/m limit.







## 2 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).

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