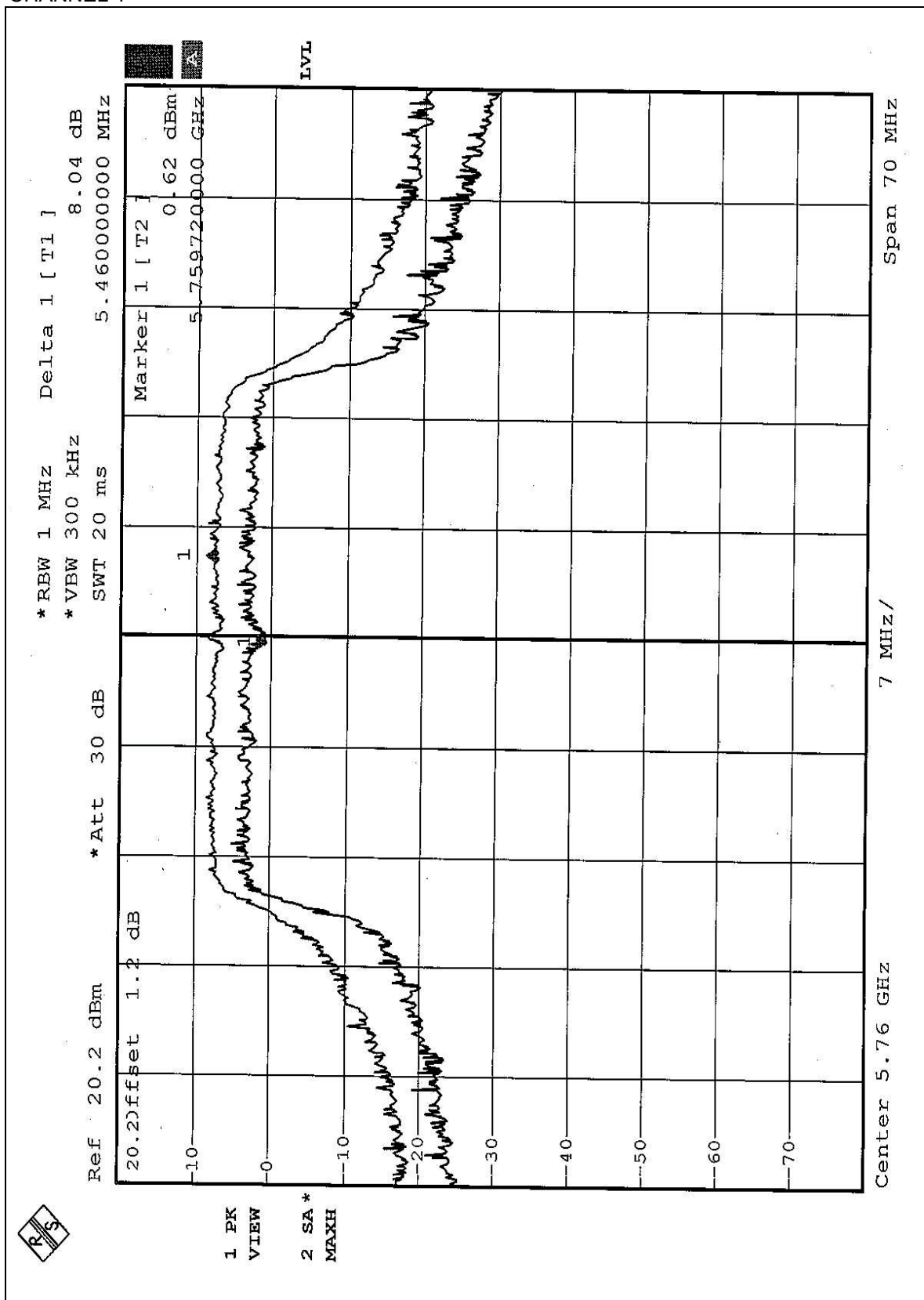


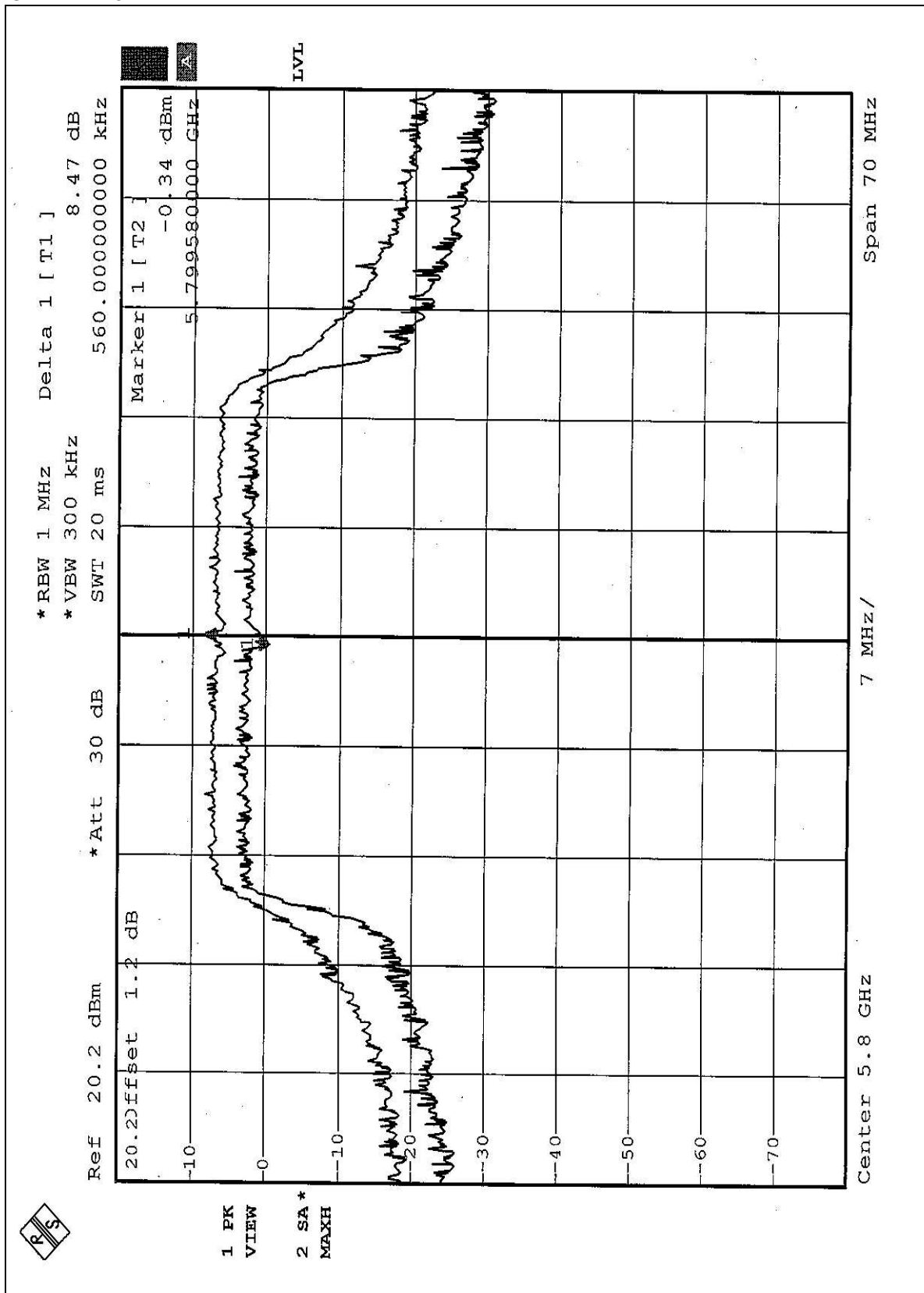


CHANNEL 4





CHANNEL 5



5.5 PEAK POWER SPECTRAL DENSITY MEASUREMENT

5.5.1 LIMITS OF PEAK POWER SPECTRAL DENSITY MEASUREMENT

Frequency Band	Limit
5.15 – 5.25GHz	4dBm
5.25 – 5.35GHz	11dBm
5.725 – 5.825GHz	17dBm

5.5.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
SPECTRUM ANALYZER	FSEK30	100049	August 12, 2004
SPECTRUM ANALYZER	8564EC	4208A00660	Nov. 20, 2003

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

5.5.3 TEST PROCEDURES

1. The transmitter output was connected to the spectrum analyzer.
2. Set RBW=1MHz, VBW=3MHz. The PPSD is the highest level found across the emission in any 1MHz band.

5.5.4 DEVIATION FROM TEST STANDARD

No deviation

5.5.5 TEST SETUP



5.5.6 EUT OPERATING CONDITIONS

Same as 5.3.6

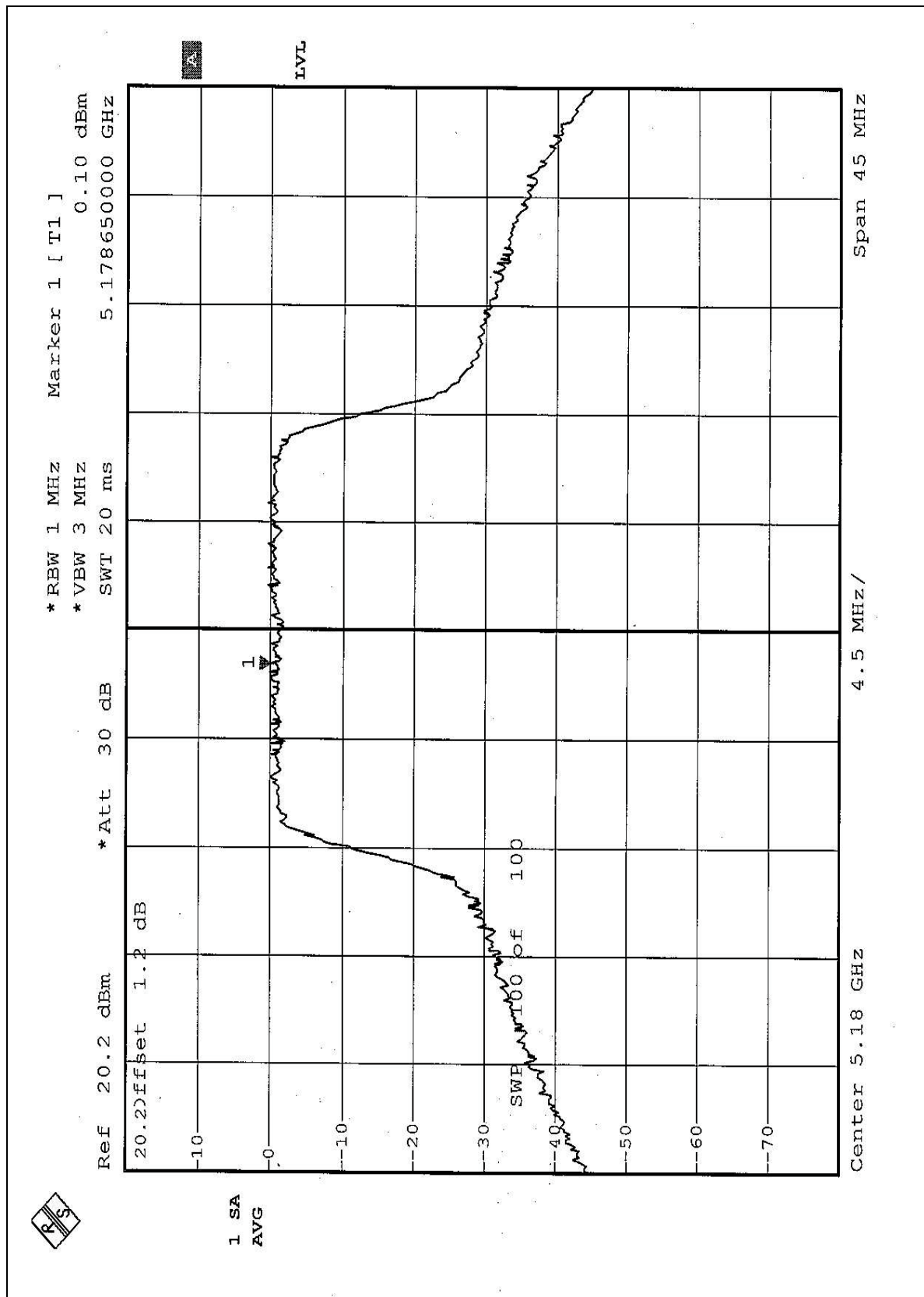


5.5.7 TEST RESULTS

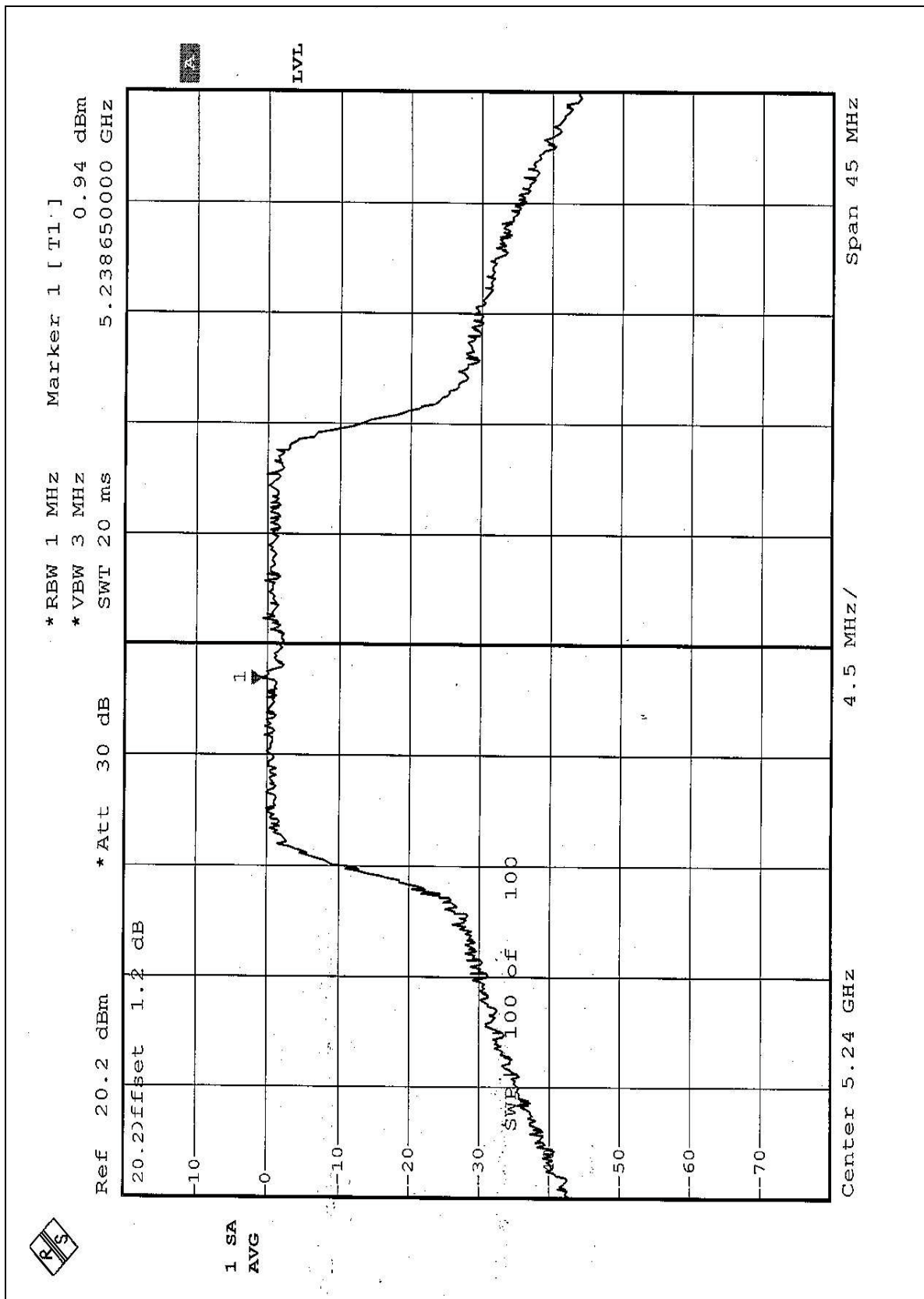
EUT	802.11a/b/g Wireless PCI Adapter	MODEL	DWL-AG520
MODE	Normal	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	28deg. C, 64%RH, 991hPa	TESTED BY	Hank Chung

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1MHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	5180	0.10	4	PASS
4	5240	0.94	4	PASS
5	5260	0.54	11	PASS
8	5320	1.54	11	PASS
9	5745	2.19	17	PASS
12	5805	2.34	17	PASS

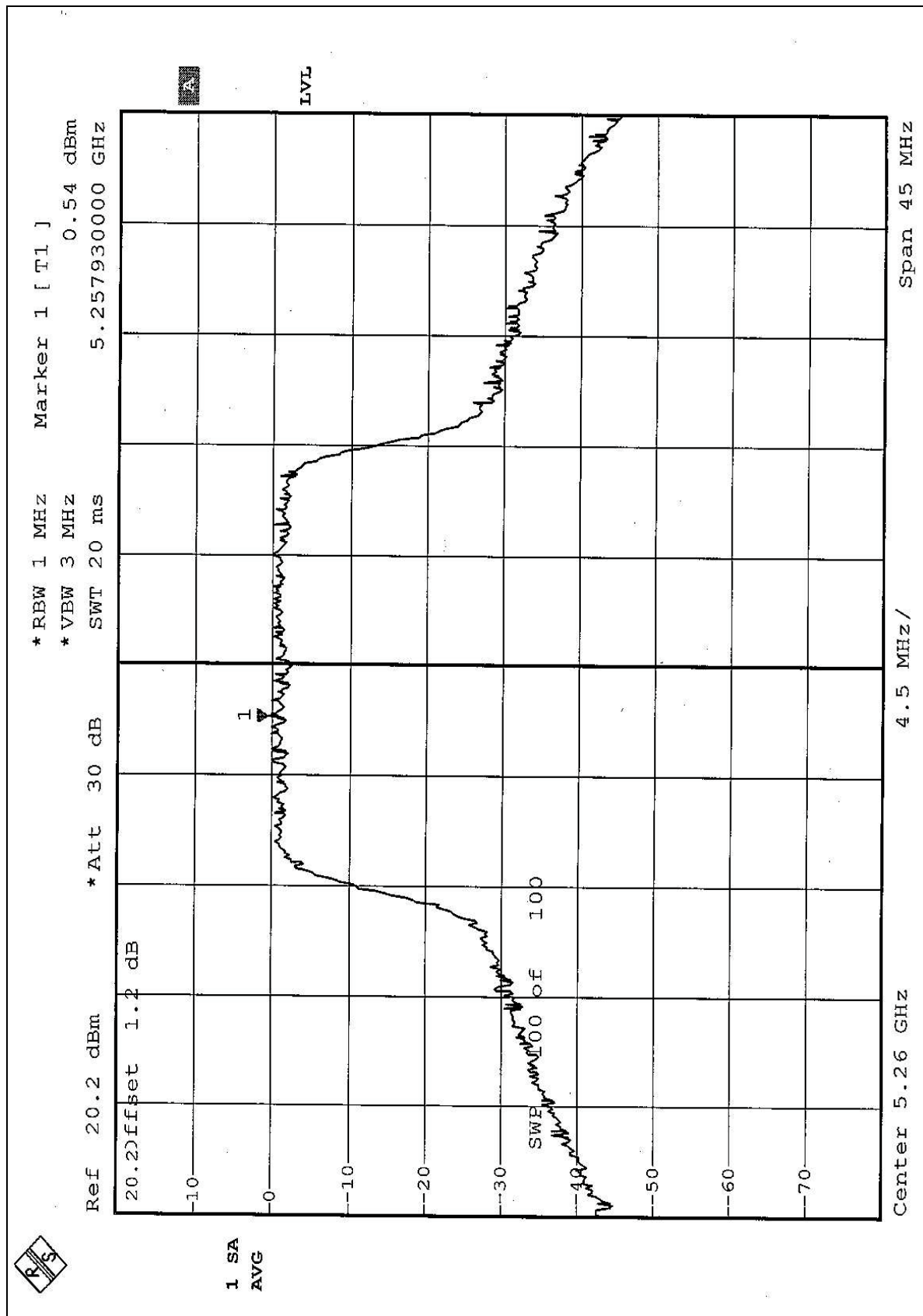
CHANNEL 1



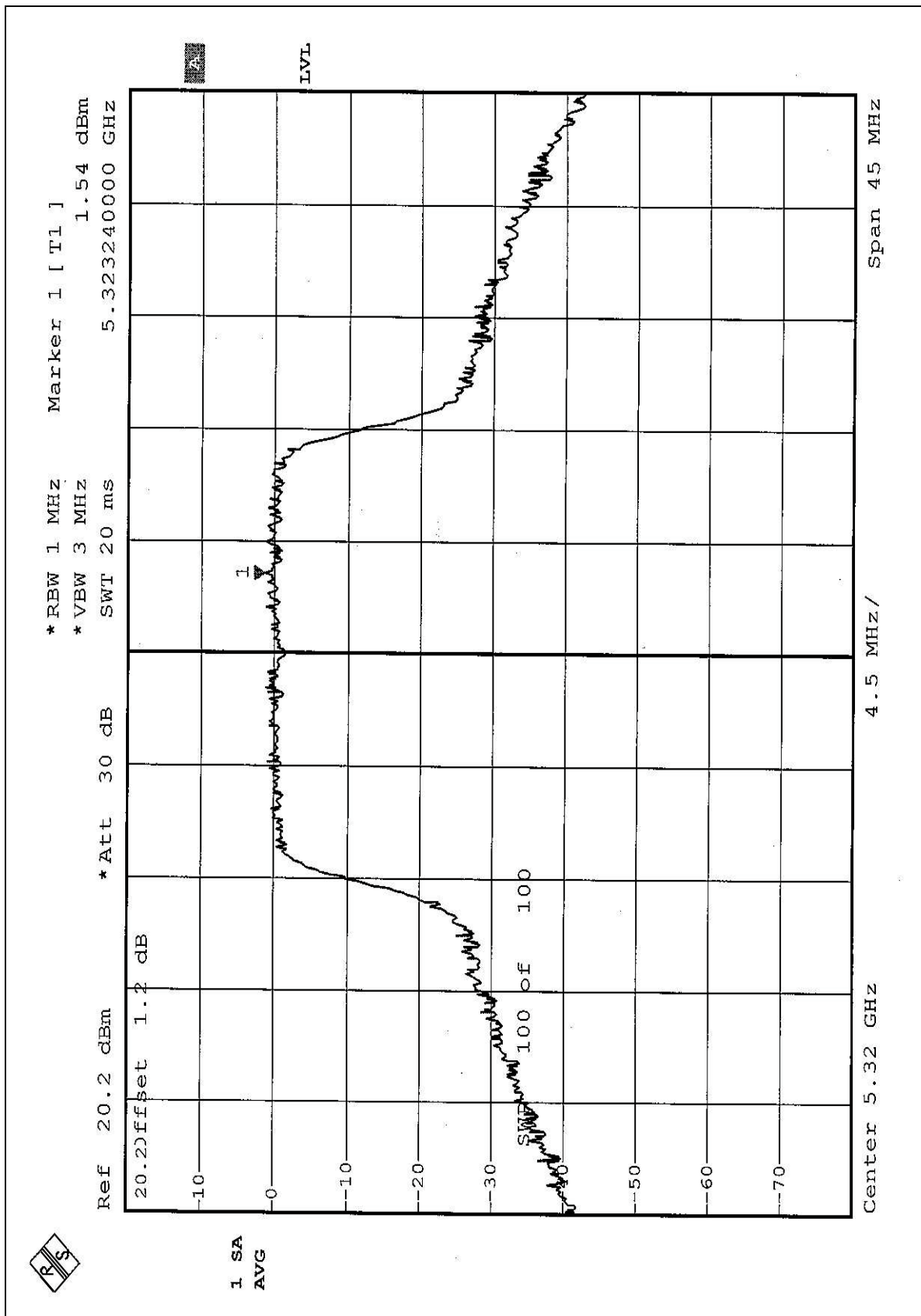
CHANNEL 4



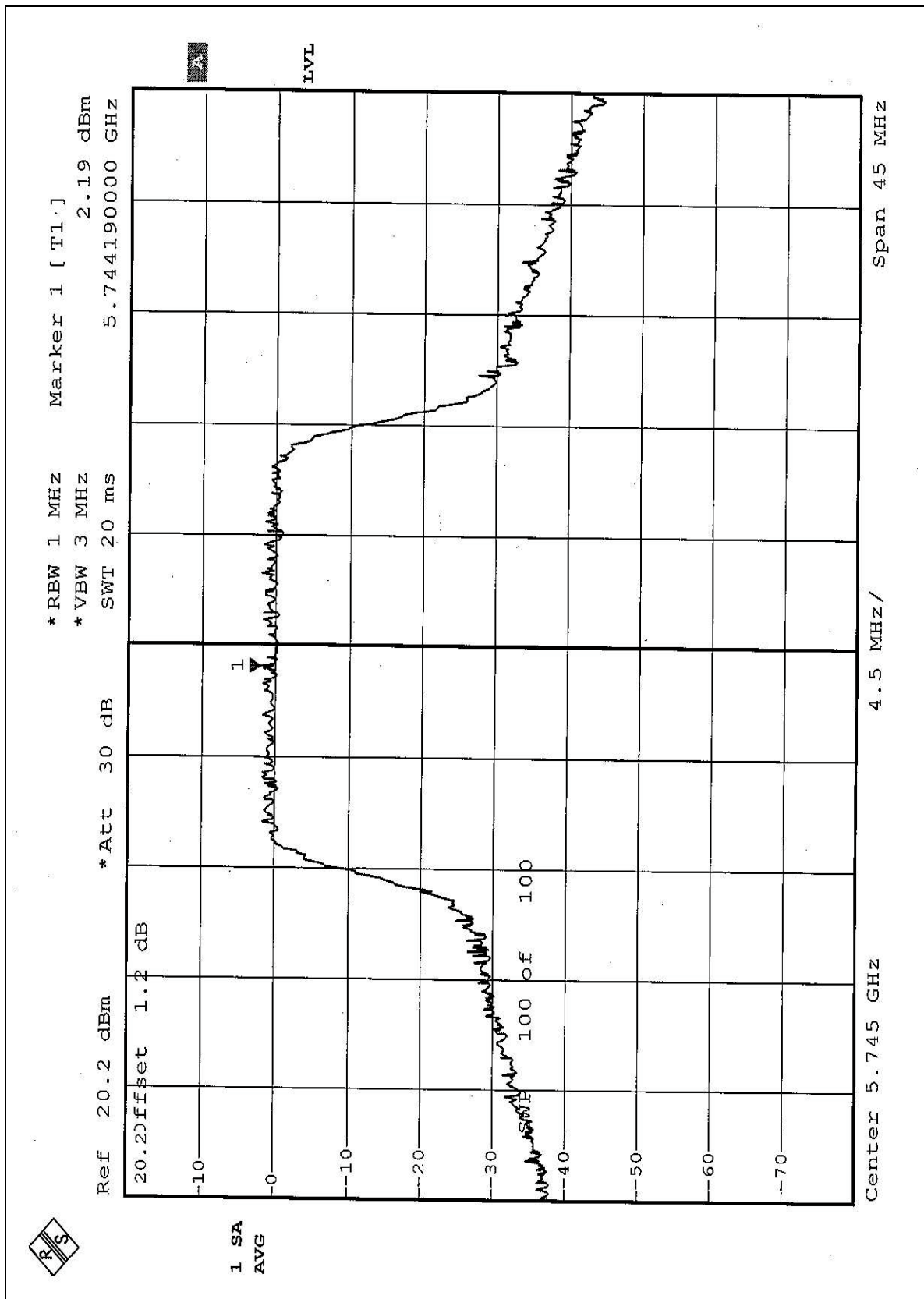
CHANNEL 5



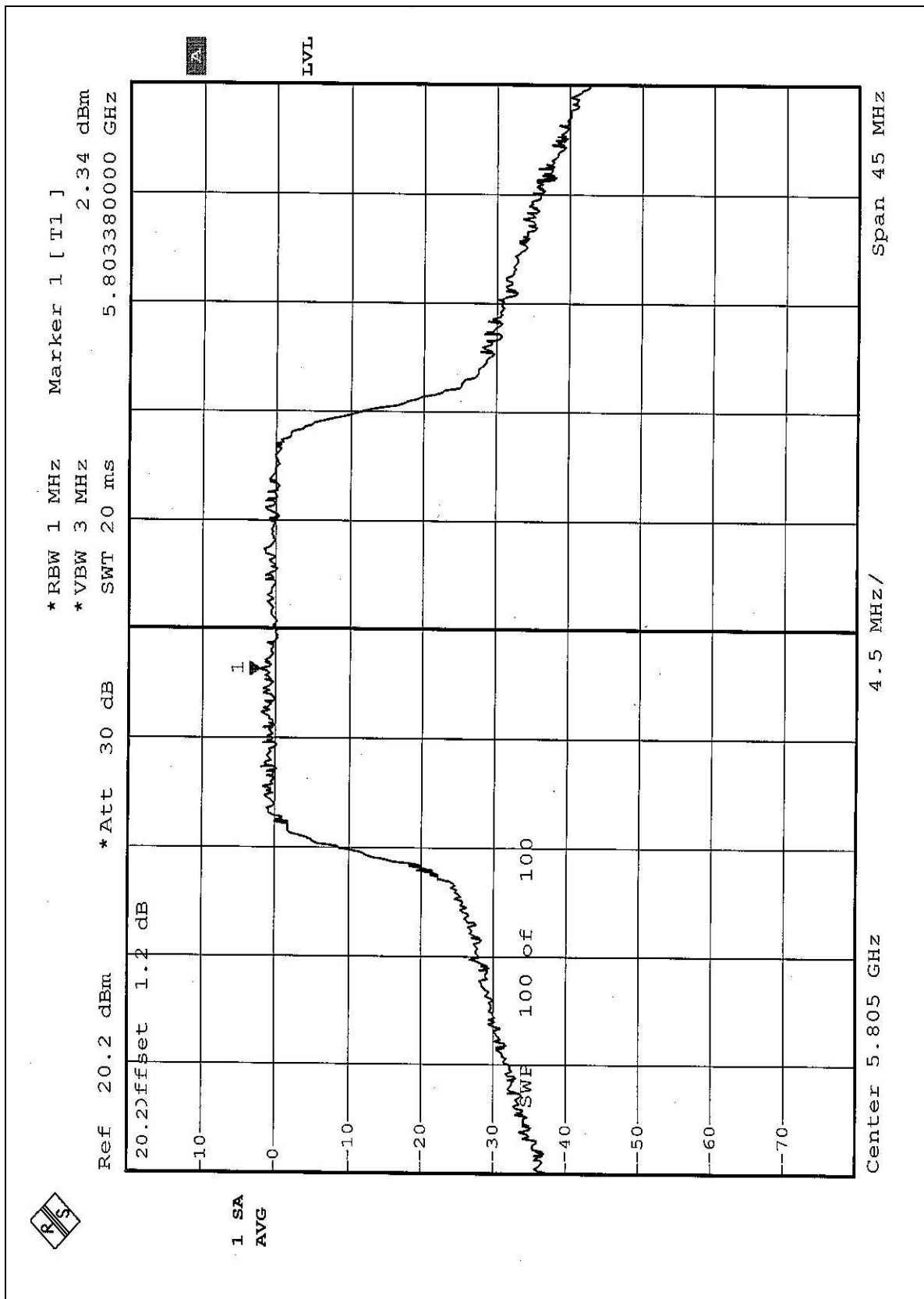
CHANNEL 8



CHANNEL 9



CHANNEL 12

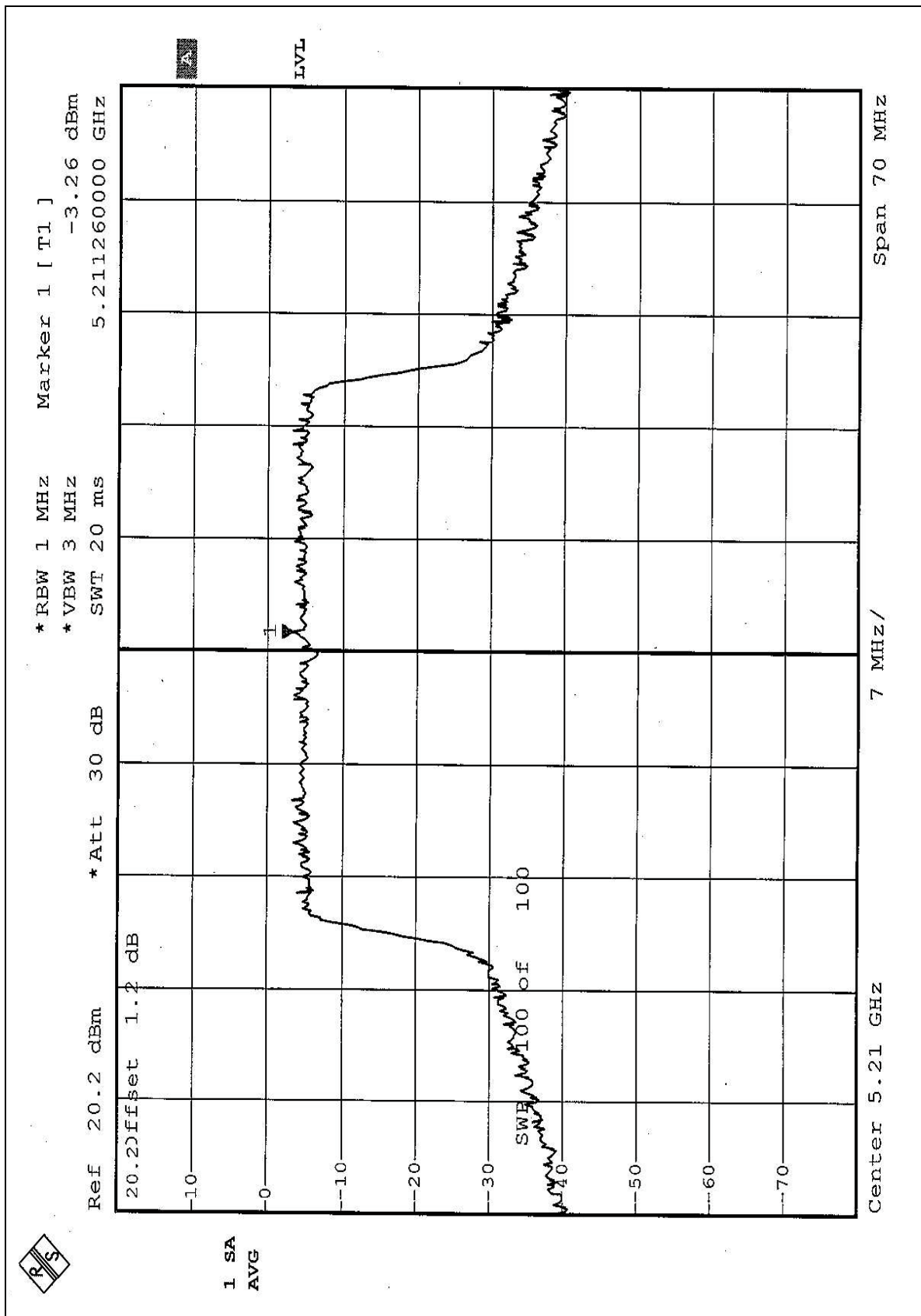




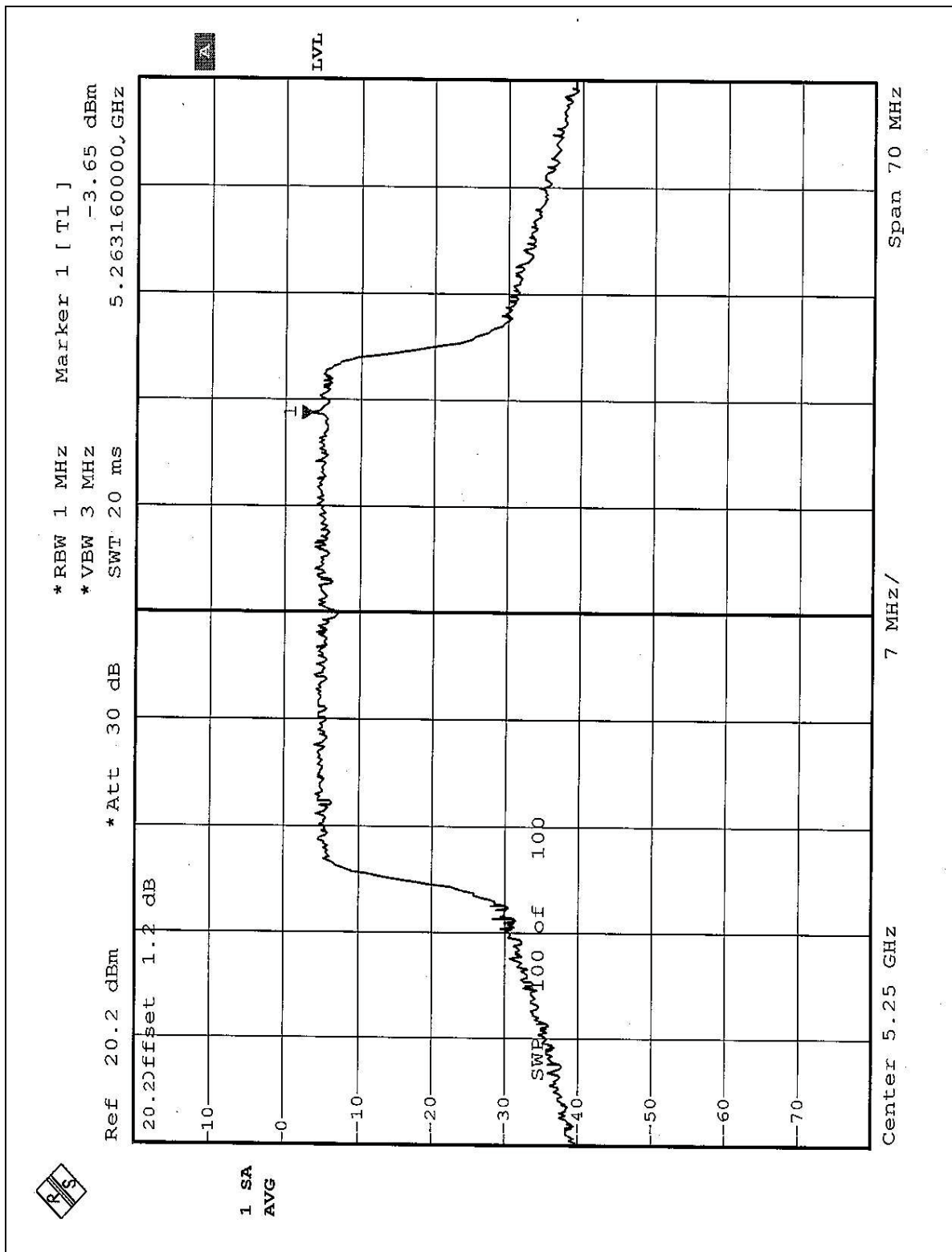
EUT	802.11a/b/g Wireless PCI Adapter	MODEL	DWL-AG520
MODE	Turbo	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	28deg. C, 64%RH, 991hPa	TESTED BY	Hank Chung

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1 MHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	5210	-3.26	4	PASS
2	5250	-3.65	4	PASS
3	5290	-1.74	11	PASS
4	5760	-0.78	17	PASS
5	5800	-1.14	17	PASS

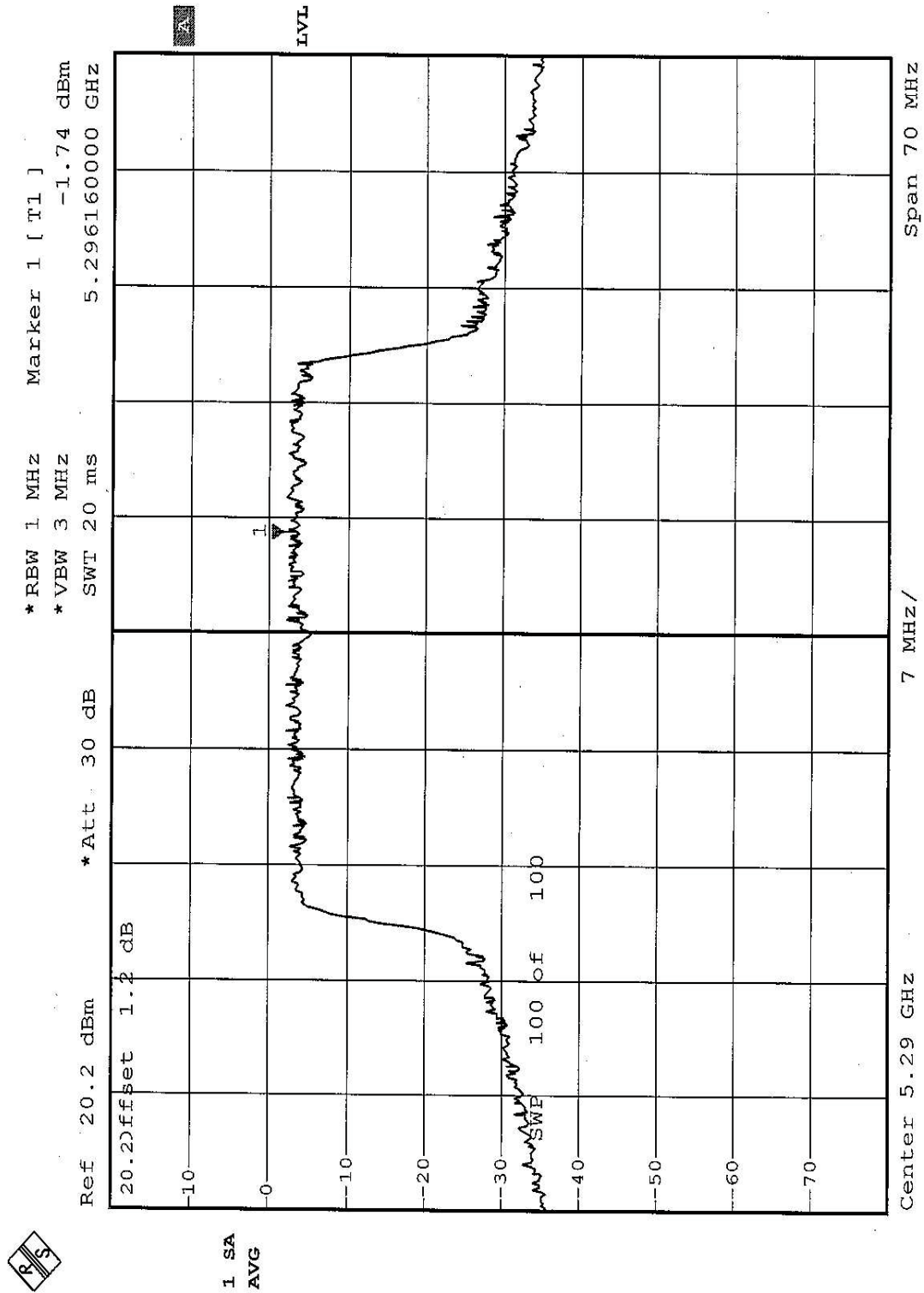
CHANNEL 1



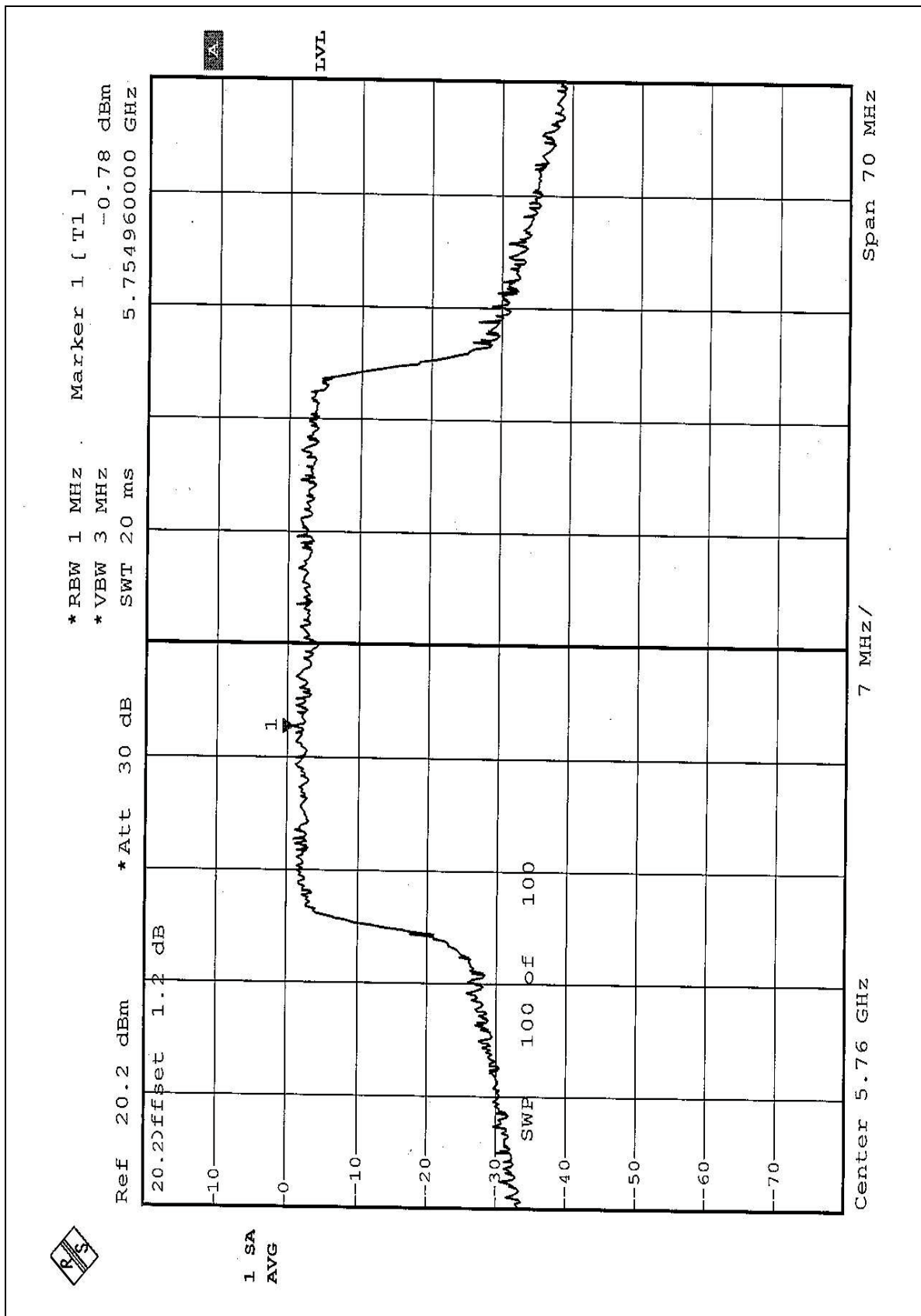
CHANNEL 2



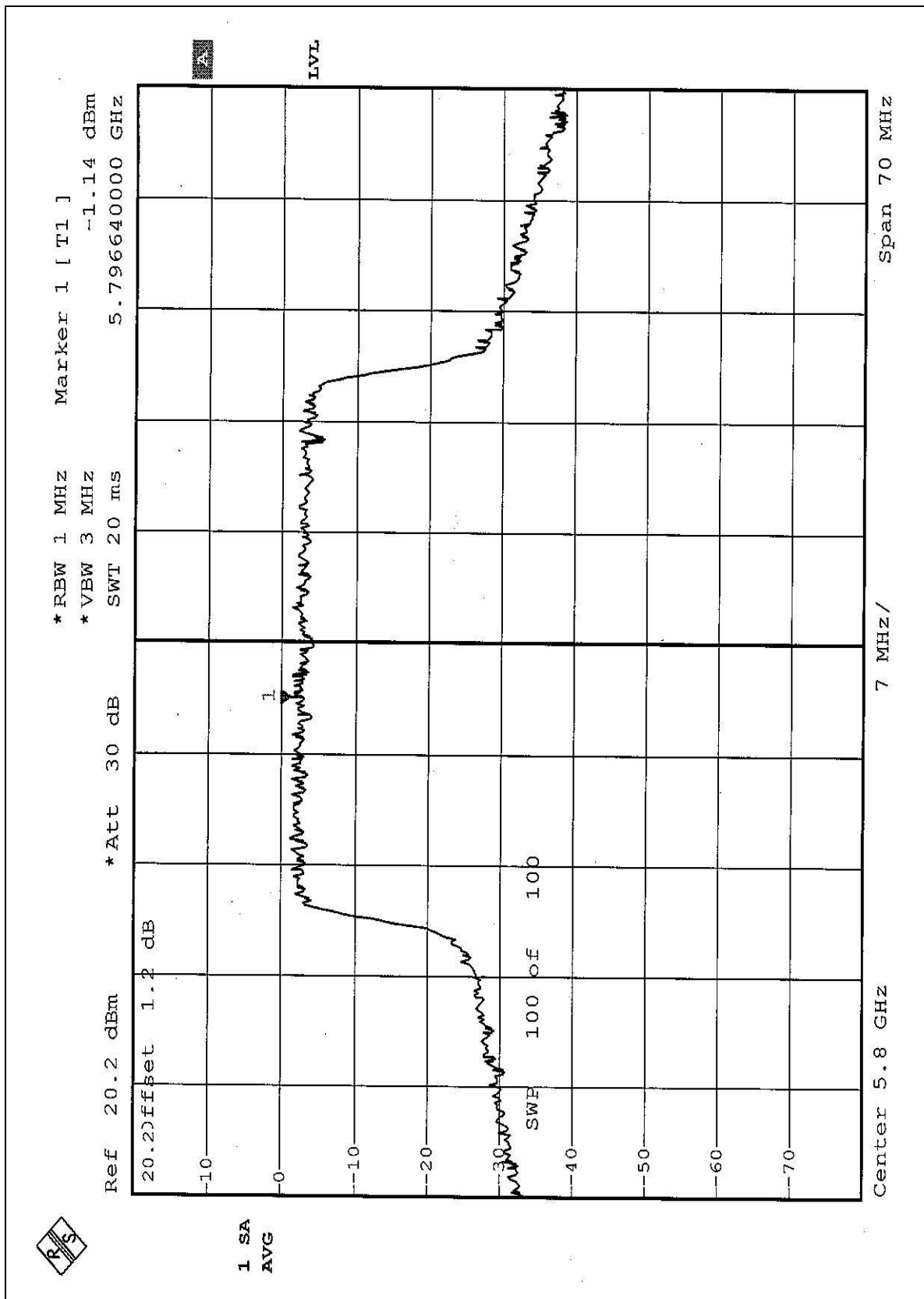
CHANNEL 3



CHANNEL 4



CHANNEL 5





5.6 FREQUENCY STABILITY

5.6.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

The frequency tolerance of the carrier signal shall be maintained within $\pm 0.02\%$ of the operating frequency over a temperature variation of -30 degrees to 50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C.

5.6.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
ANRITSU SPECTRUM ANALYZER	MS2667C	M10281	August 12, 2004
WIT STANDARD TEMPERATURE AND HUMIDITY CHAMBER	TH-4S-C	W901030	August 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.

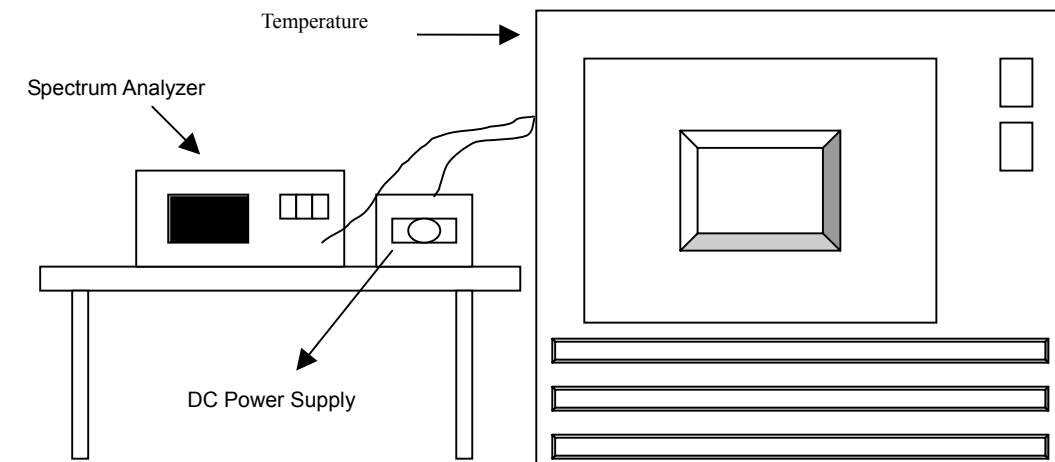
5.6.3 TEST PROCEDURE

1. The EUT was placed inside the environmental test chamber and powered by nominal DC voltage.
2. Turn the EUT on and couple its output to a spectrum analyzer.
3. Turn the EUT off and set the chamber to the highest temperature specified.
4. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.
5. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
6. The test chamber was allowed to stabilize at $+20$ degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

5.6.4 DEVIATION FROM TEST STANDARD

No deviation

5.6.5 TEST SETUP



5.6.6 EUT OPERATING CONDITION

Same as Item 4.1.6

5.6.7 TEST RESULTS

Operating frequency: 5180MHz				Limit : $\pm 0.02\%$			
Temp. (°C)	Power supply (VDC)	2 minute		5 minute		10 minute	
		(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
50	126.5	5320.0086	0.0001617	5320.0088	0.0001654	5320.0086	0.0001617
	110.0	5320.0084	0.0001579	5320.0086	0.0001617	5320.0088	0.0001654
	93.5	5320.0084	0.0001579	5320.0086	0.0001617	5320.0084	0.0001579
40	126.5	5320.0064	0.0001203	5320.0068	0.0001278	5320.0068	0.0001278
	110.0	5320.0068	0.0001278	5320.0066	0.0001241	5320.0066	0.0001241
	93.5	5320.0666	0.0012519	5320.0066	0.0001241	5320.0064	0.0001203
30	126.5	5320.0070	0.0001316	5320.0070	0.0001316	5320.0072	0.0001353
	110.0	5320.0070	0.0001316	5320.0072	0.0001353	5320.0070	0.0001316
	93.5	5320.0072	0.0001353	5320.0074	0.0001391	5320.0070	0.0001316
20	126.5	5320.0125	0.0002350	5320.0116	0.0002180	5320.0108	0.0002030
	110.0	5320.0126	0.0002368	5320.0118	0.0002218	5320.0108	0.0002030
	93.5	5320.0126	0.0002368	5320.0118	0.0002218	5320.0112	0.0002105
10	126.5	5320.0130	0.0002444	5320.0136	0.0002556	5320.0136	0.0002556
	110.0	5320.0128	0.0002406	5320.0136	0.0002556	5320.0138	0.0002594
	93.5	5320.0128	0.0002406	5320.0134	0.0002519	5320.0136	0.0002556
0	126.5	5320.0103	0.0001936	5320.0104	0.0001955	5320.0106	0.0001992
	110.0	5320.0102	0.0001917	5320.0104	0.0001955	5320.0108	0.0002030
	93.5	5320.0104	0.0001955	5320.0106	0.0001992	5320.0106	0.0001992
-10	126.5	5320.0086	0.0001617	5320.0088	0.0001654	5320.0088	0.0001654
	110.0	5320.0088	0.0001654	5320.0090	0.0001692	5320.0088	0.0001654
	93.5	5320.0088	0.0001654	5320.0088	0.0001654	5320.0090	0.0001692
-20	126.5	5320.0066	0.0001241	5320.0064	0.0001203	5320.0064	0.0001203
	110.0	5320.0066	0.0001241	5320.0066	0.0001241	5320.0068	0.0001278
	93.5	5320.0066	0.0001241	5320.0066	0.0001241	5320.0066	0.0001241
-30	126.5	5320.0114	0.0002143	5320.0112	0.0002105	5320.0114	0.0002143
	110.0	5320.0112	0.0002105	5320.0110	0.0002068	5320.0113	0.0002124
	93.5	5320.0112	0.0002105	5320.0114	0.0002143	5320.0112	0.0002105



5.7 BAND EDGES MEASUREMENT

5.7.1 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
SPECTRUM ANALYZER	FSEK30	100049	August 12, 2004
SPECTRUM ANALYZER	8564EC	4208A00660	Nov. 20, 2003

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

5.7.2 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer via a low loss cable. Set both RBW and VBW of spectrum analyzer to 1MHz with suitable frequency span including 100 MHz bandwidth from band edge. The band edges was measured and recorded.

5.7.3 EUT OPERATING CONDITION

The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.

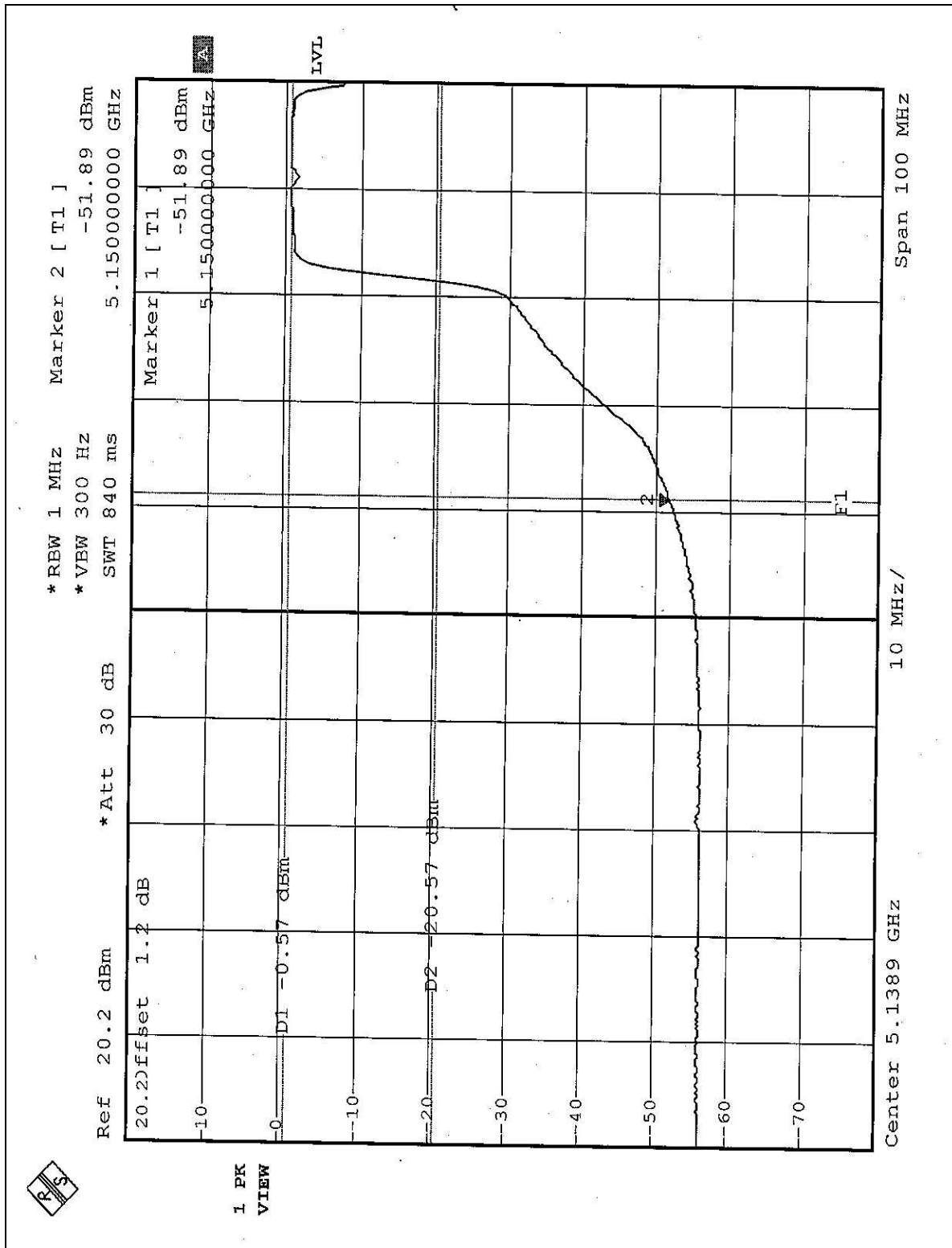
5.7.4 TEST RESULTS

For signals in the restricted bands above and below the 5.15 to 5.35GHz allocated band a measurement was made of the amplitude of the spurious emissions with respect to the intentional signals. The relative amplitude, in dBc, was applied to the average and peak field strength of the intentional signal made on the OATS to calculate the field strength of the unintentional signals.

The spectrum plots (Peak RBW=VBW=1MHz; Average RBW=1MHz, VBW=300Hz) are attached on the following 8 pages.

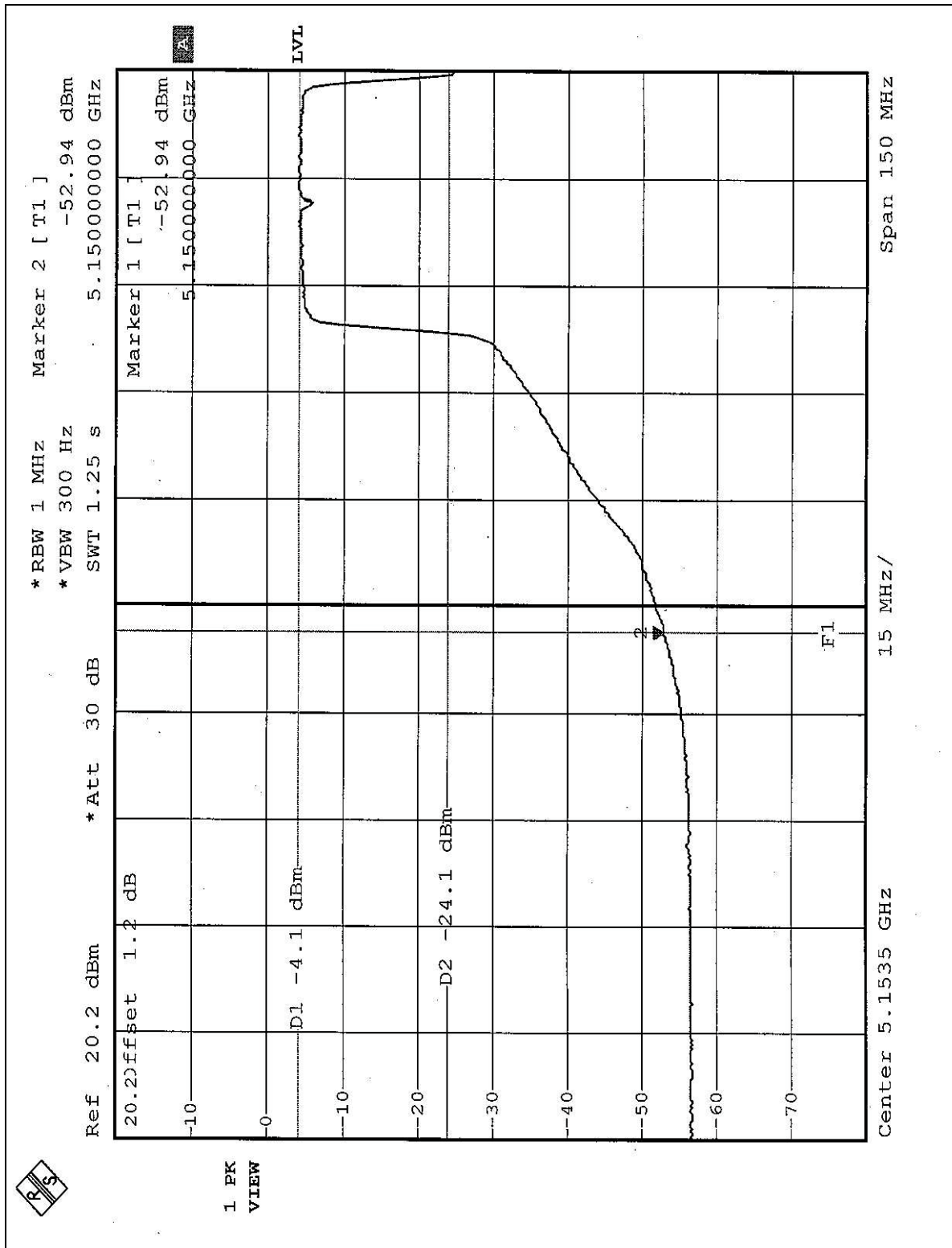
Normal Mode: Channel 1 (5180 MHz)

The band edge emission plot on the following 1 pages shows 51.32dBc (Average) between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 (normal mode) is 98.70dBuV/m, so the maximum field strength in restrict band is $98.70 - 51.32 = 47.38$ dBuV/m which is under 54dBuV/m limit.



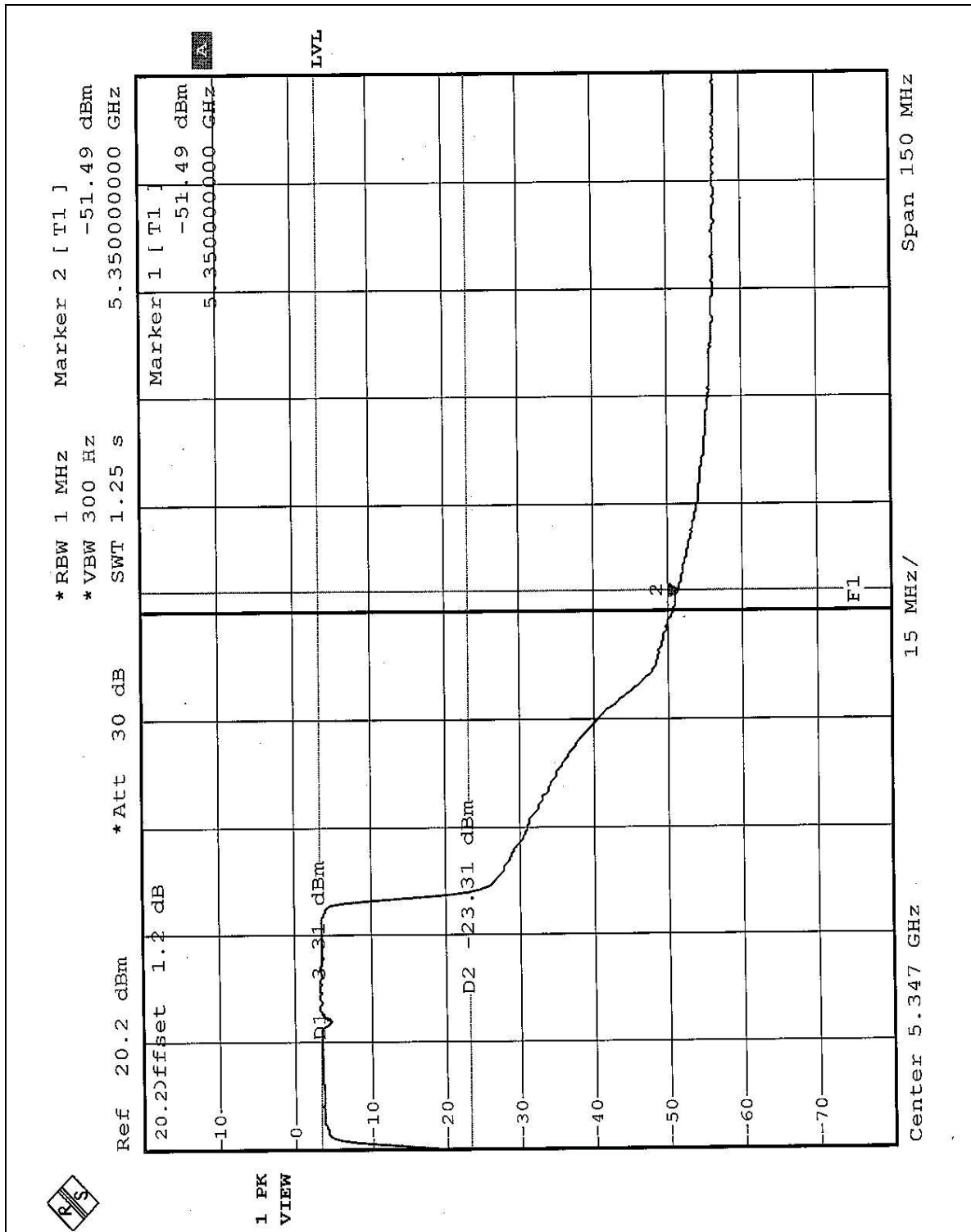
Turbo Mode: Channel 1 (5210 MHz)

The band edge emission plot on the following 1 pages shows 48.84dBc (Average) between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 (normal mode) is 95.20dBuV/m, so the maximum field strength in restrict band is $95.20 - 48.84 = 46.36$ dBuV/m which is under 54dBuV/m limit.



Turbo Mode: Channel 3 (5290 MHz)

The band edge emission plot on the following 1 pages shows 48.18dBc (Average) between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 3 (normal mode) is 97.0dBuV/m, so the maximum field strength in restrict band is $97.0 - 48.18 = 48.82$ dBuV/m which is under 54dBuV/m limit.





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 Dipole antenna without connector. The maximum Gain of the antenna is 5dBi.

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 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
New Zealand	MoC
Norway	NEMKO
R.O.C.	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.

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