

5.4 PEAK POWER EXCURSION MEASUREMENT

5.4.1 LIMITS OF PEAK POWER EXCURSION MEASUREMENT

Frequency Band	Limit
5.15 – 5.25 GHz	13dB
5.25 – 5.35 GHz	13dB
5.725 – 5.825 GHz	13dB

5.4.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
SPECTRUM ANALYZER	FSEK30	100049	Aug. 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.

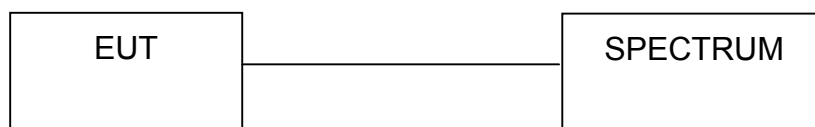
5.4.3 TEST PROCEDURE

1. The transmitter output was connected to the spectrum analyzer.
2. Set the spectrum bandwidth span to view the entire spectrum.
3. Using peak detector and Max-hold function for Trace 1 (RB=1MHz, VB=3MHz) and 2 (RB=1MHz, VB=300KHz).
4. The largest difference between Trace 1 and Trace 2 in any 1MHz band on any frequency was recorded.

5.4.4 DEVIATION FROM TEST STANDARD

No deviation

5.4.5 TEST SETUP



5.4.6 EUT OPERATING CONDITIONS

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

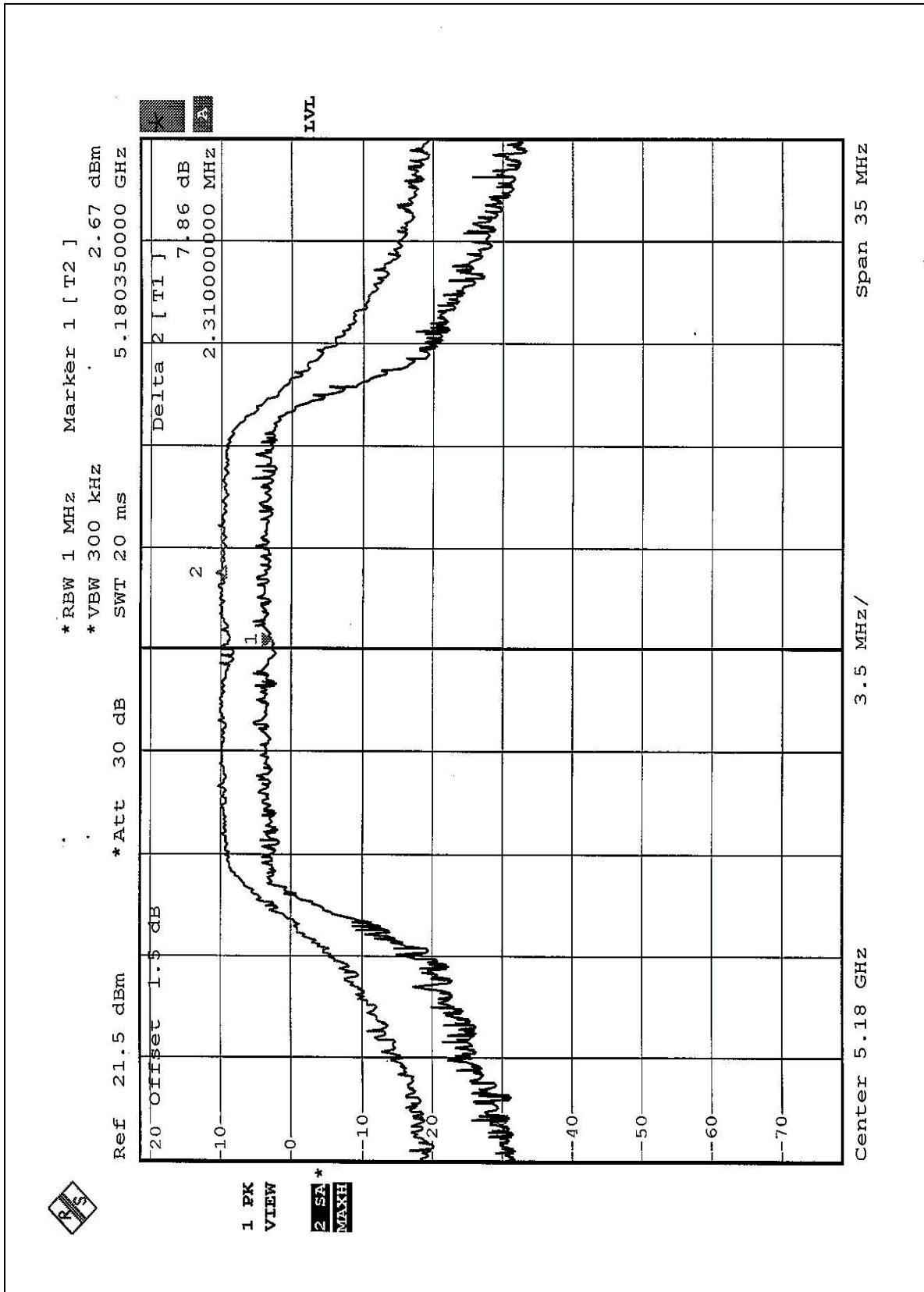


5.4.7 TEST RESULTS

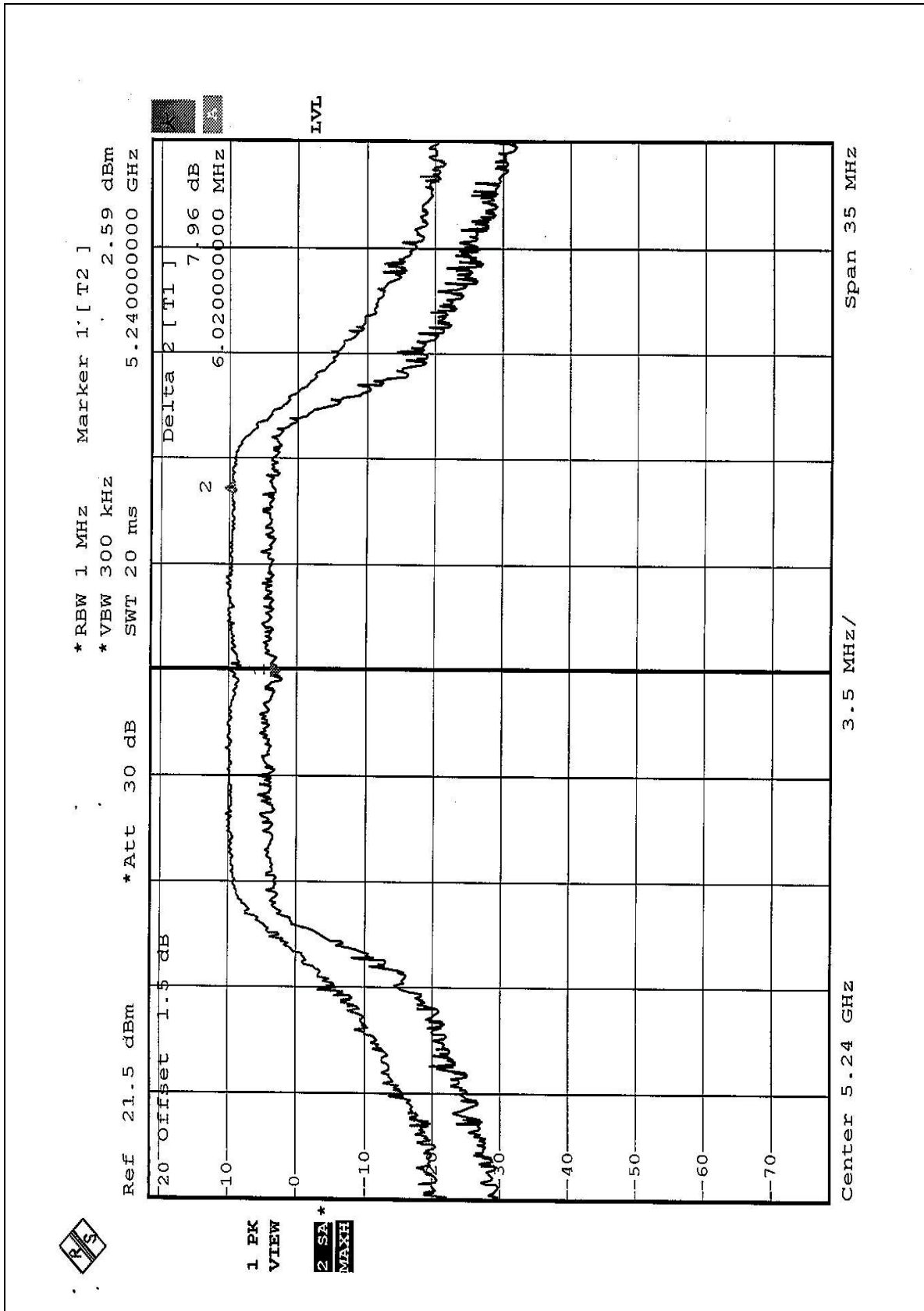
EUT	11a/b/g Wireless PCI Adapter	MODEL	3CRDAG675
MODE	Normal	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	26deg. C, 62%RH, 991hPa	TESTED BY	Ansen Lei

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)	PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
1	5180	7.86	13	PASS
4	5240	7.96	13	PASS
5	5260	8.86	13	PASS
8	5320	9.21	13	PASS
9	5745	8.35	13	PASS
12	5805	9.08	13	PASS

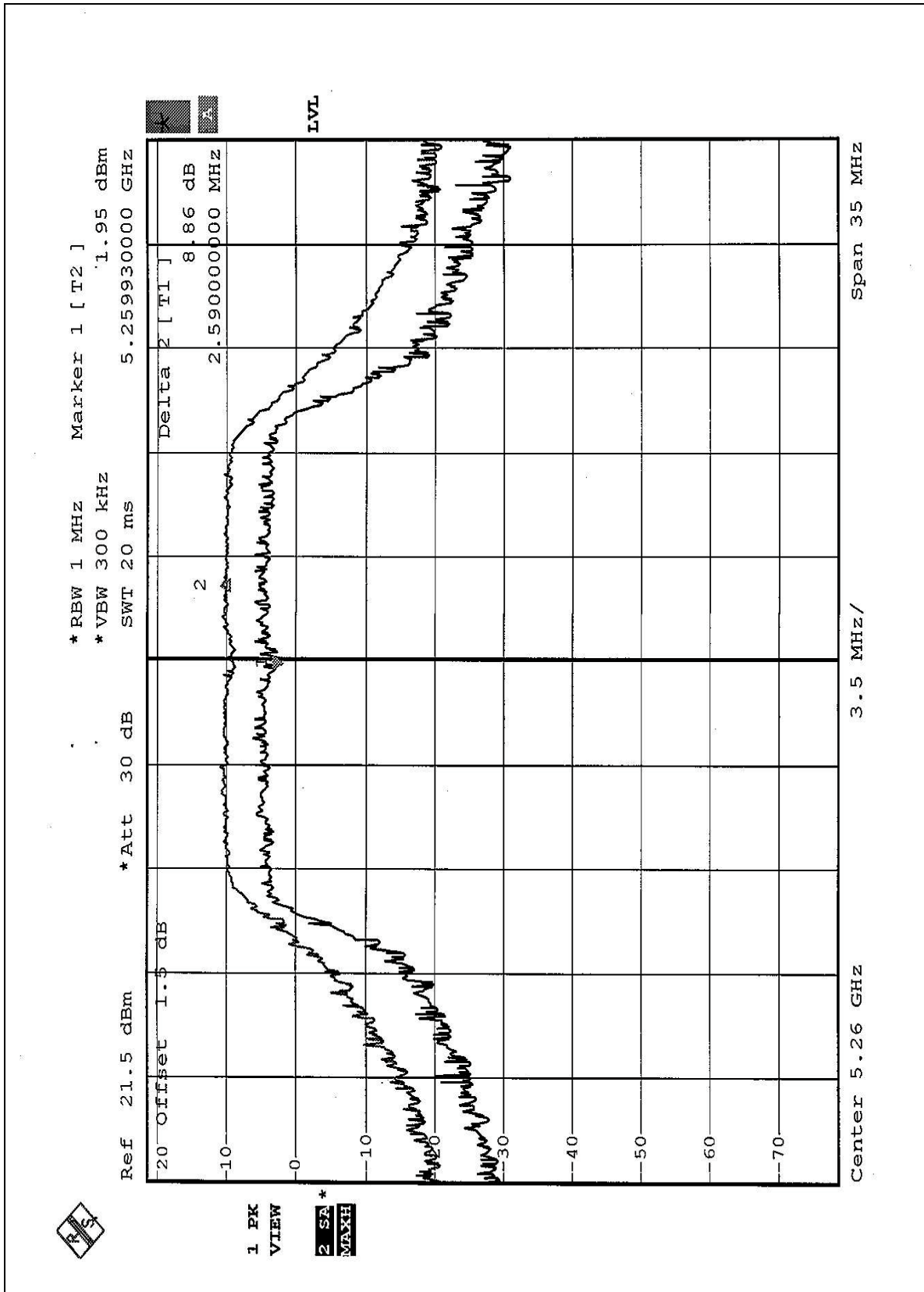
CHANNEL 1



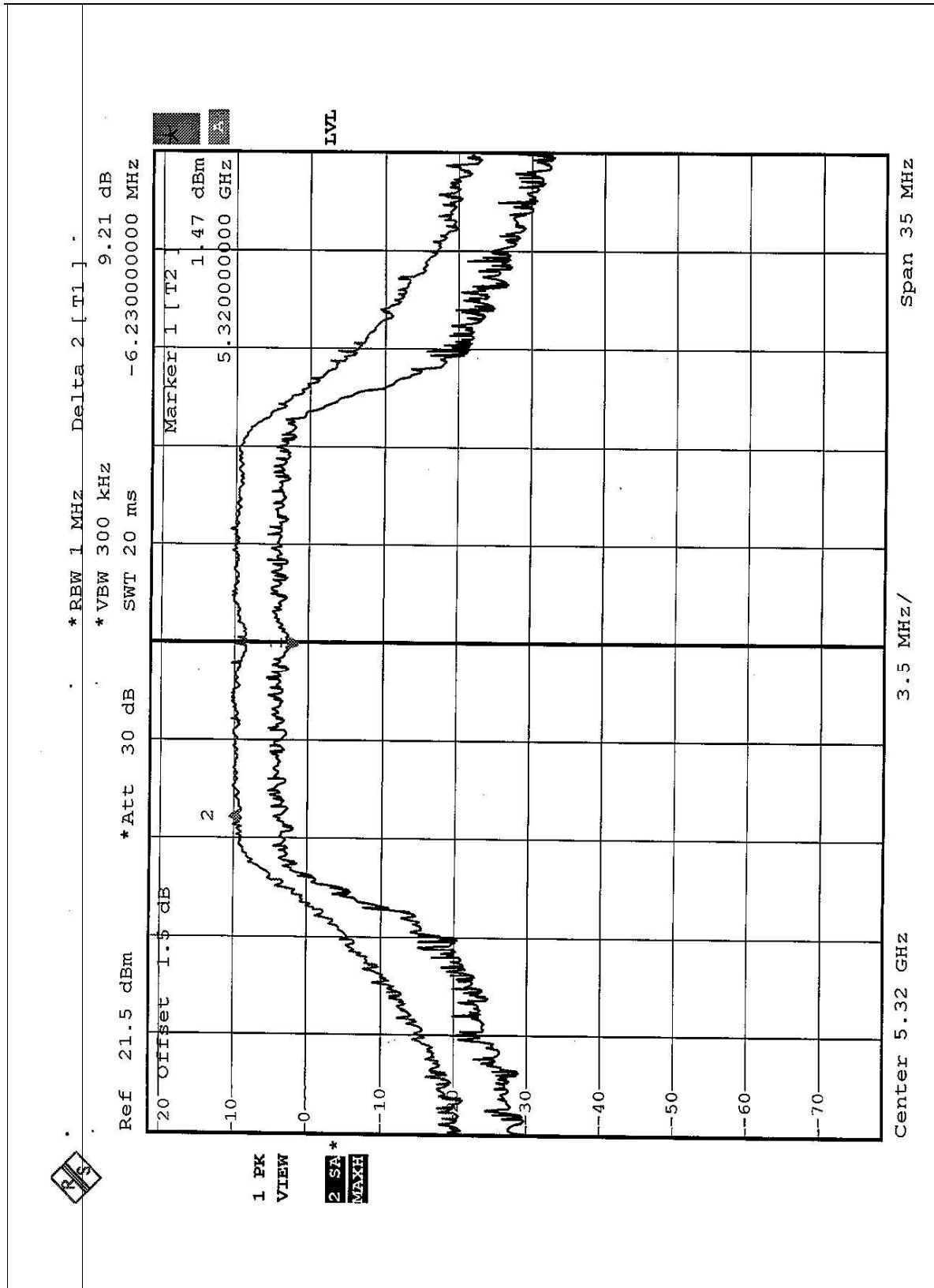
CHANNEL 4



CHANNEL 5

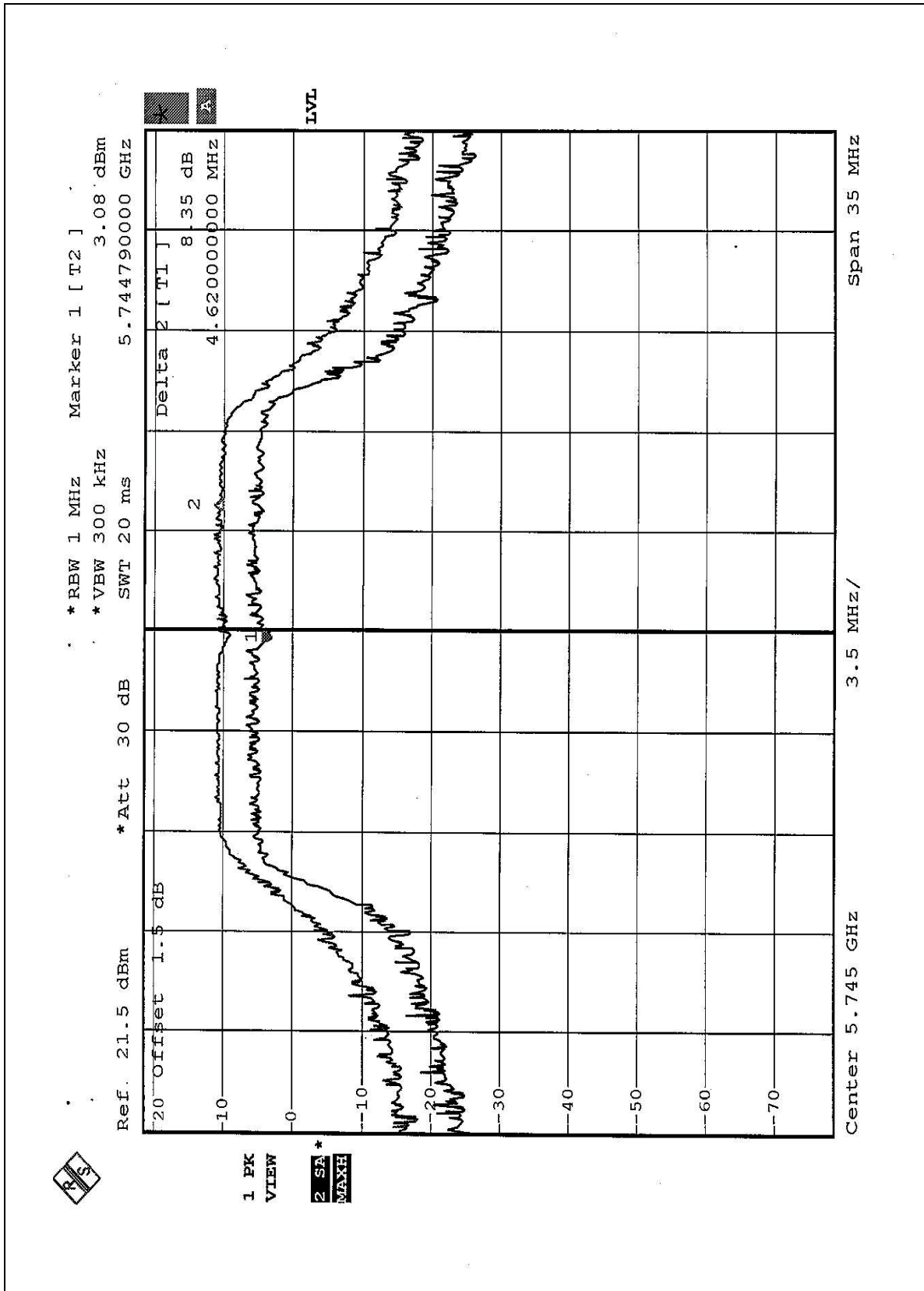


CHANNEL 8

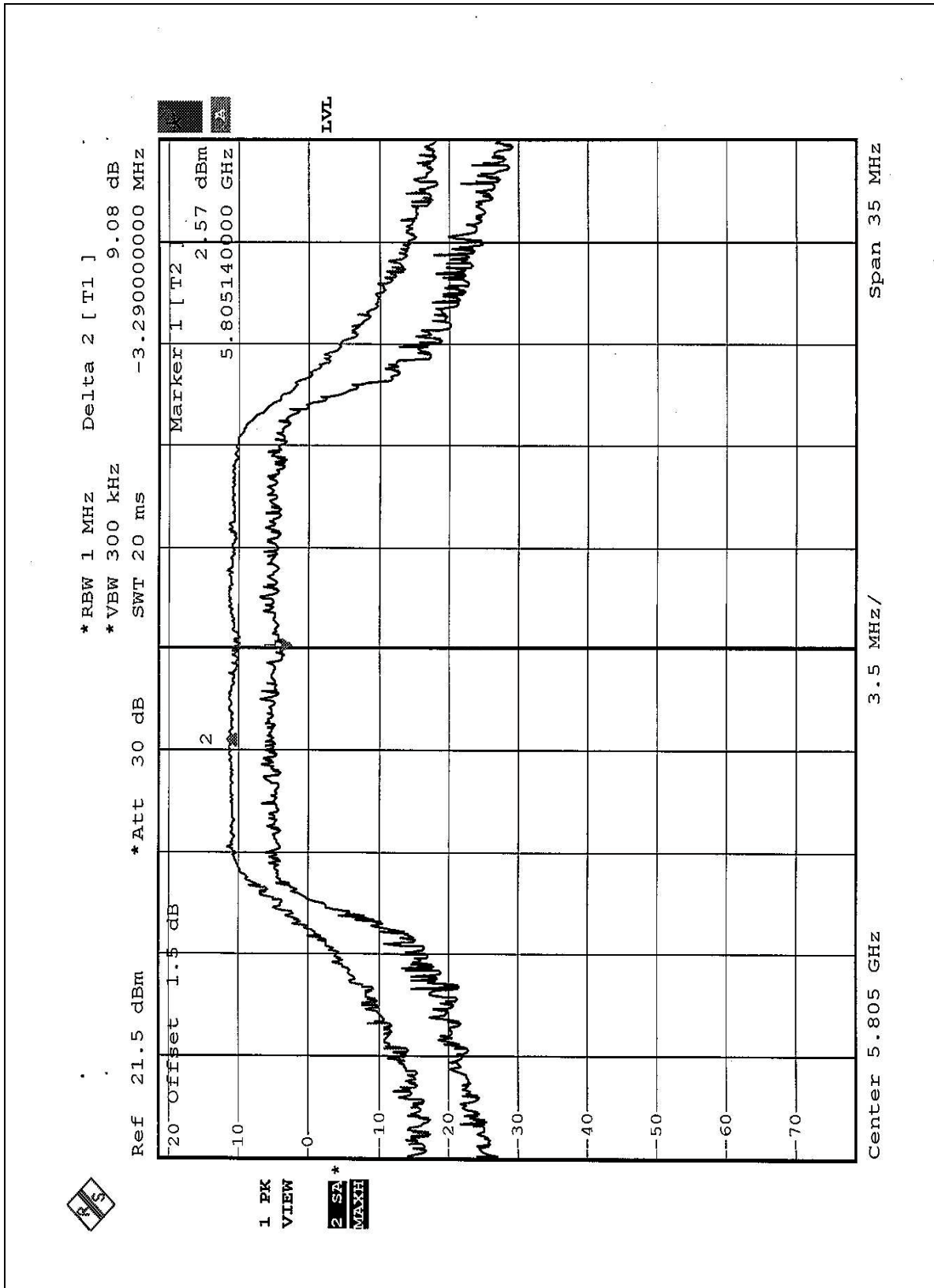




CHANNEL 9



CHANNEL 12

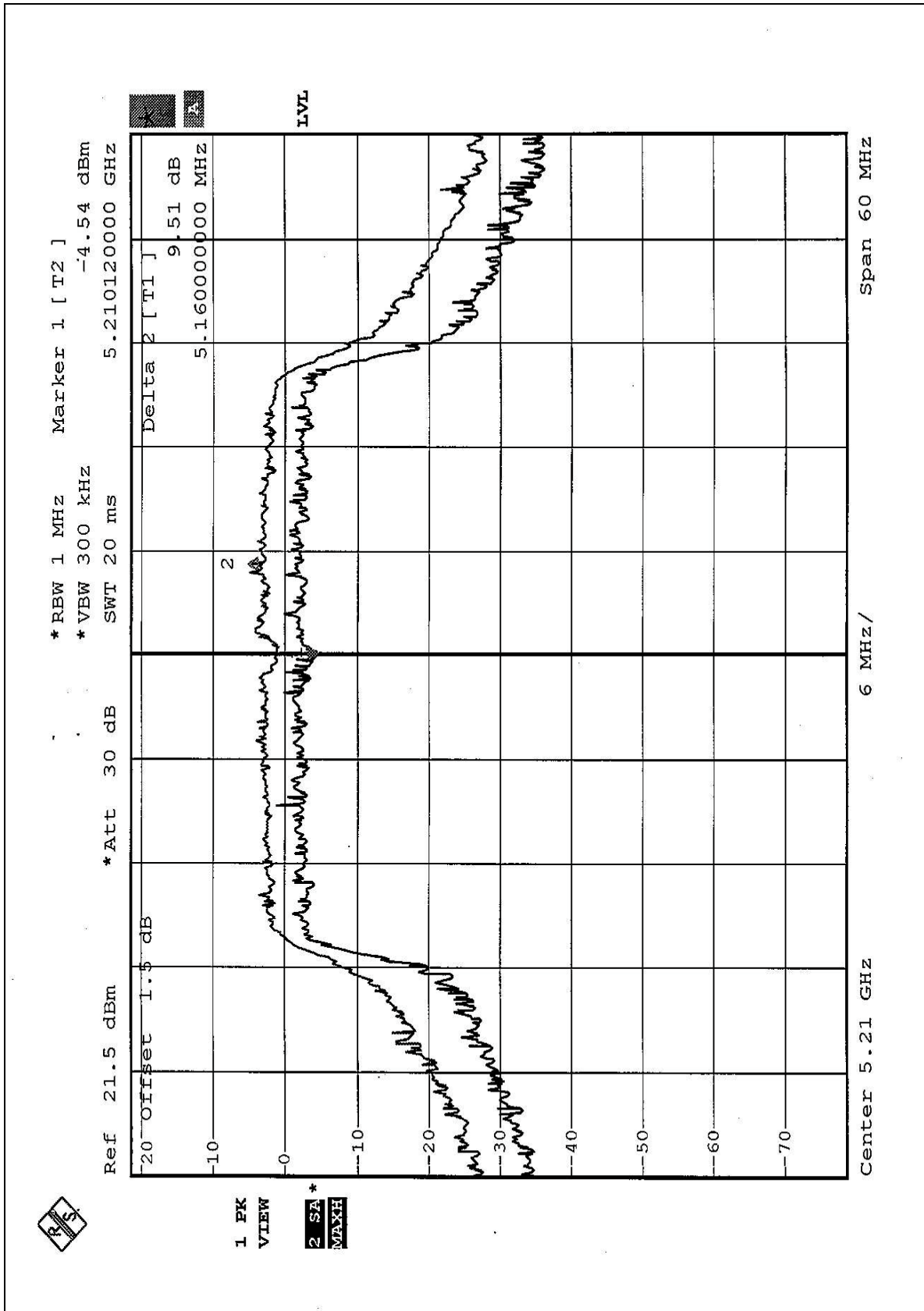




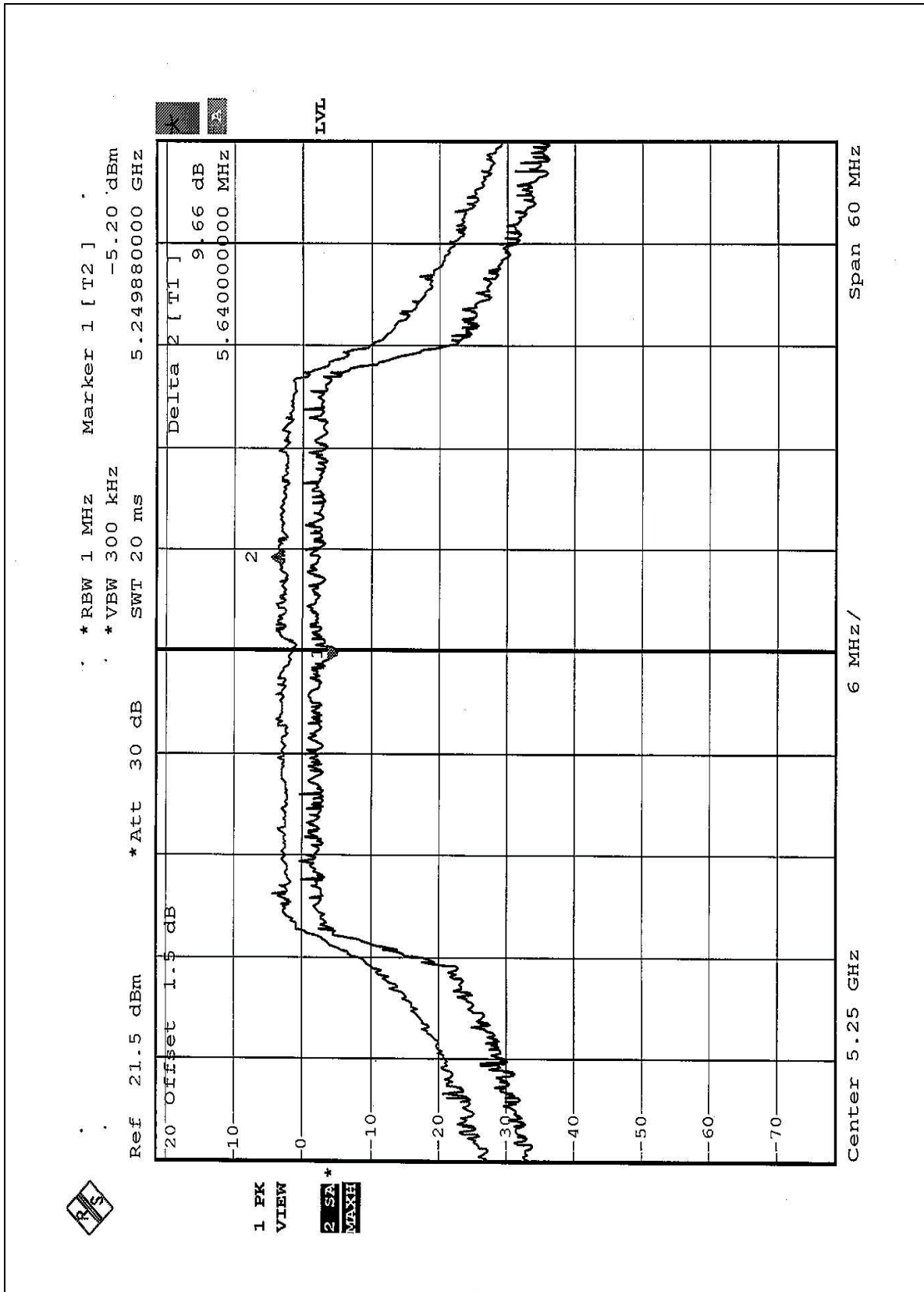
EUT	11a/b/g Wireless PCI Adapter	MODEL	3CRDAG675
MODE	Turbo	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	26deg. C, 62%RH, 991hPa	TESTED BY	Ansen Lei

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)	PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
1	5210	9.51	13	PASS
2	5250	9.66	13	PASS
3	5290	10.66	13	PASS
4	5760	9.83	13	PASS
5	5800	10.85	13	PASS

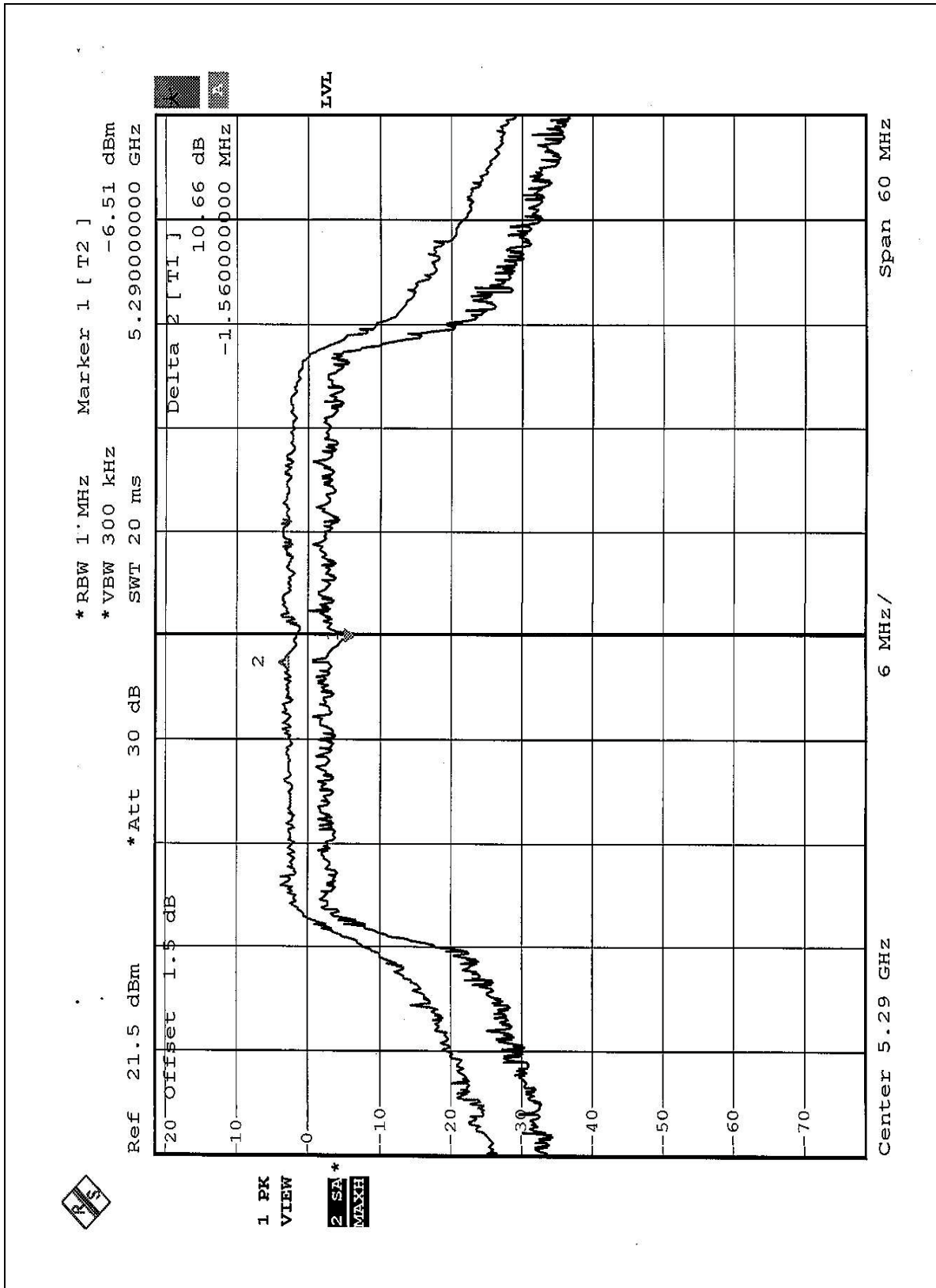
CHANNEL 1



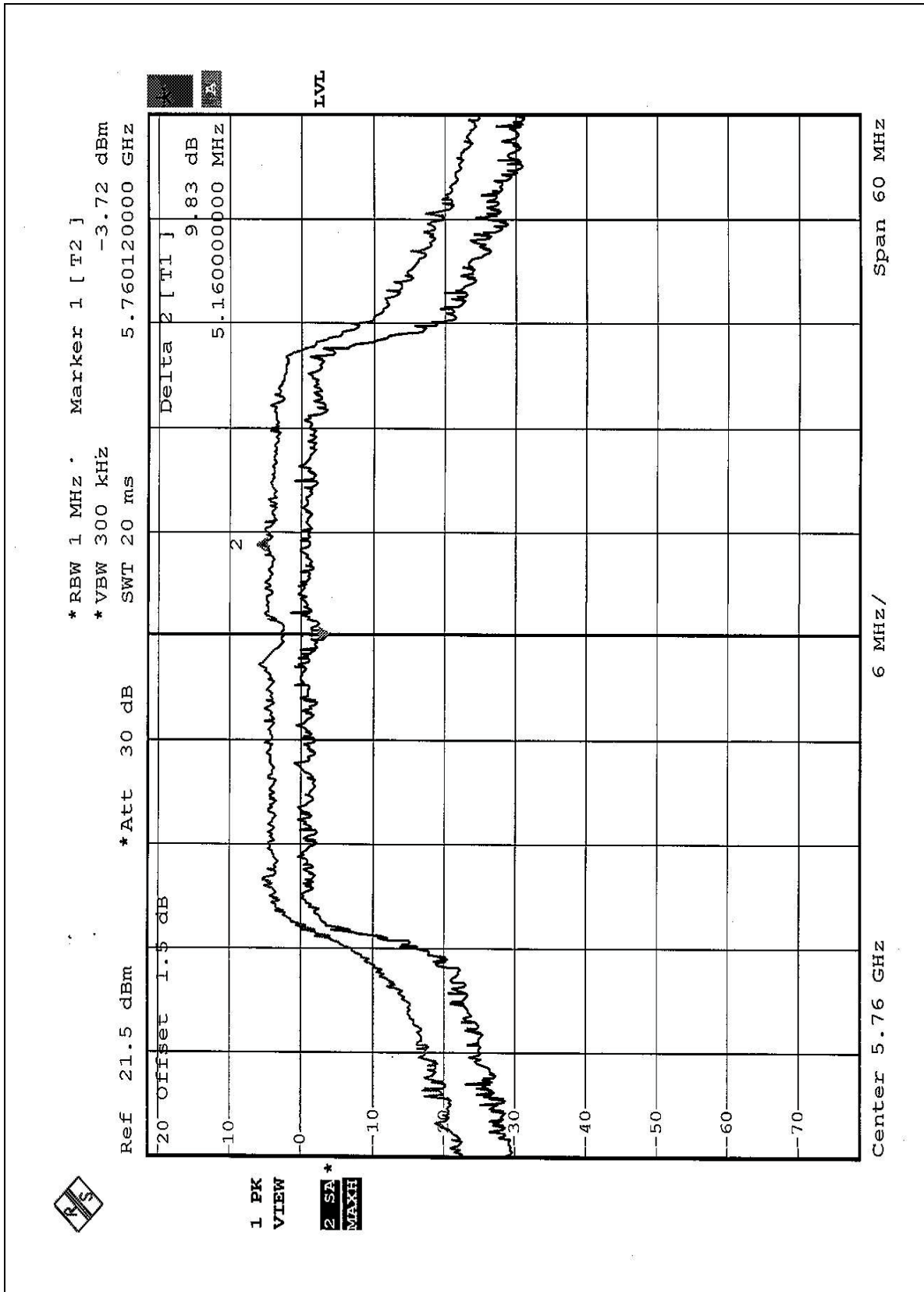
CHANNEL 2



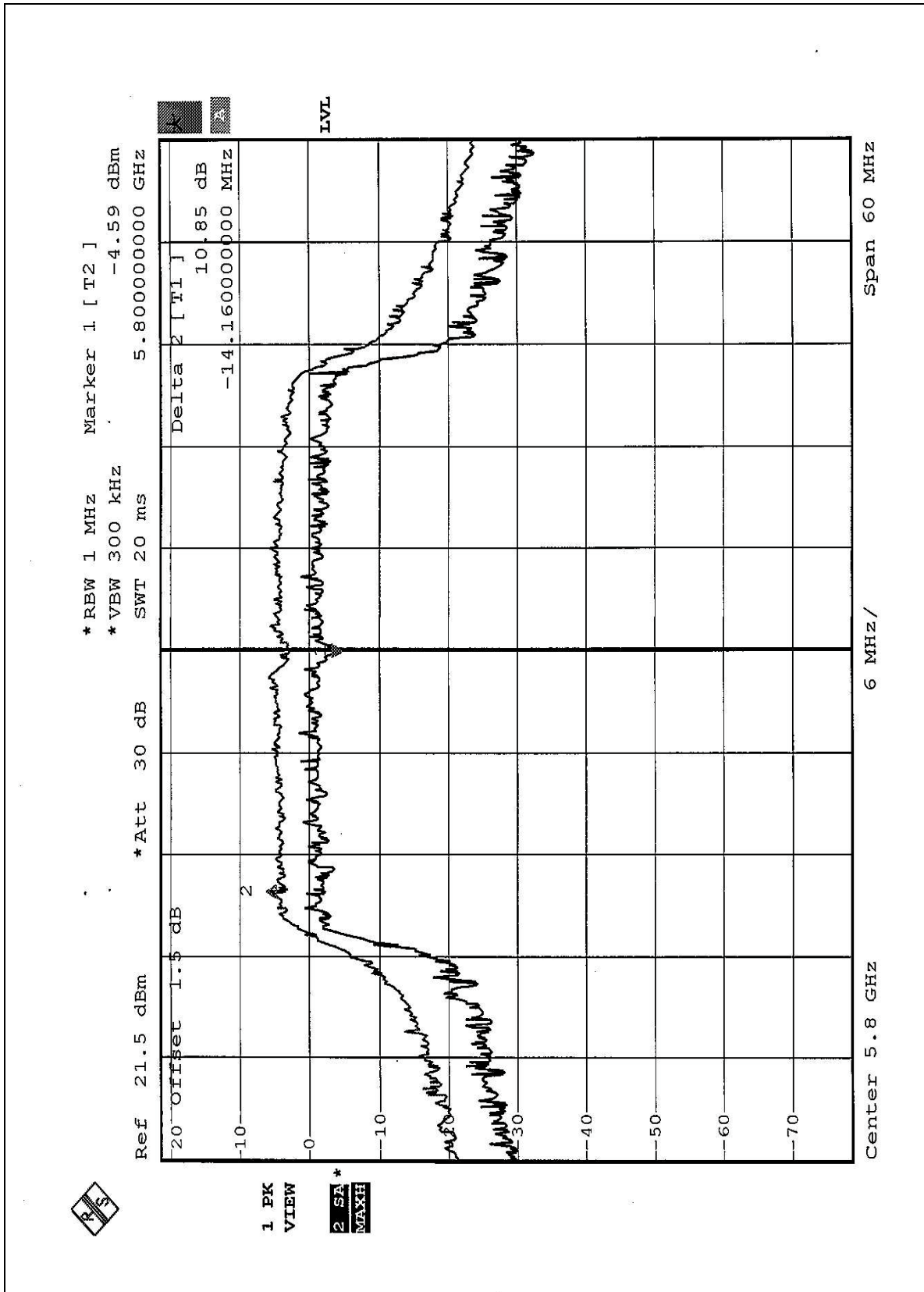
CHANNEL 3



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	Aug. 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.

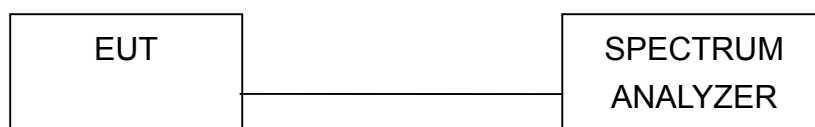
5.5.3 TEST PROCEDURES

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

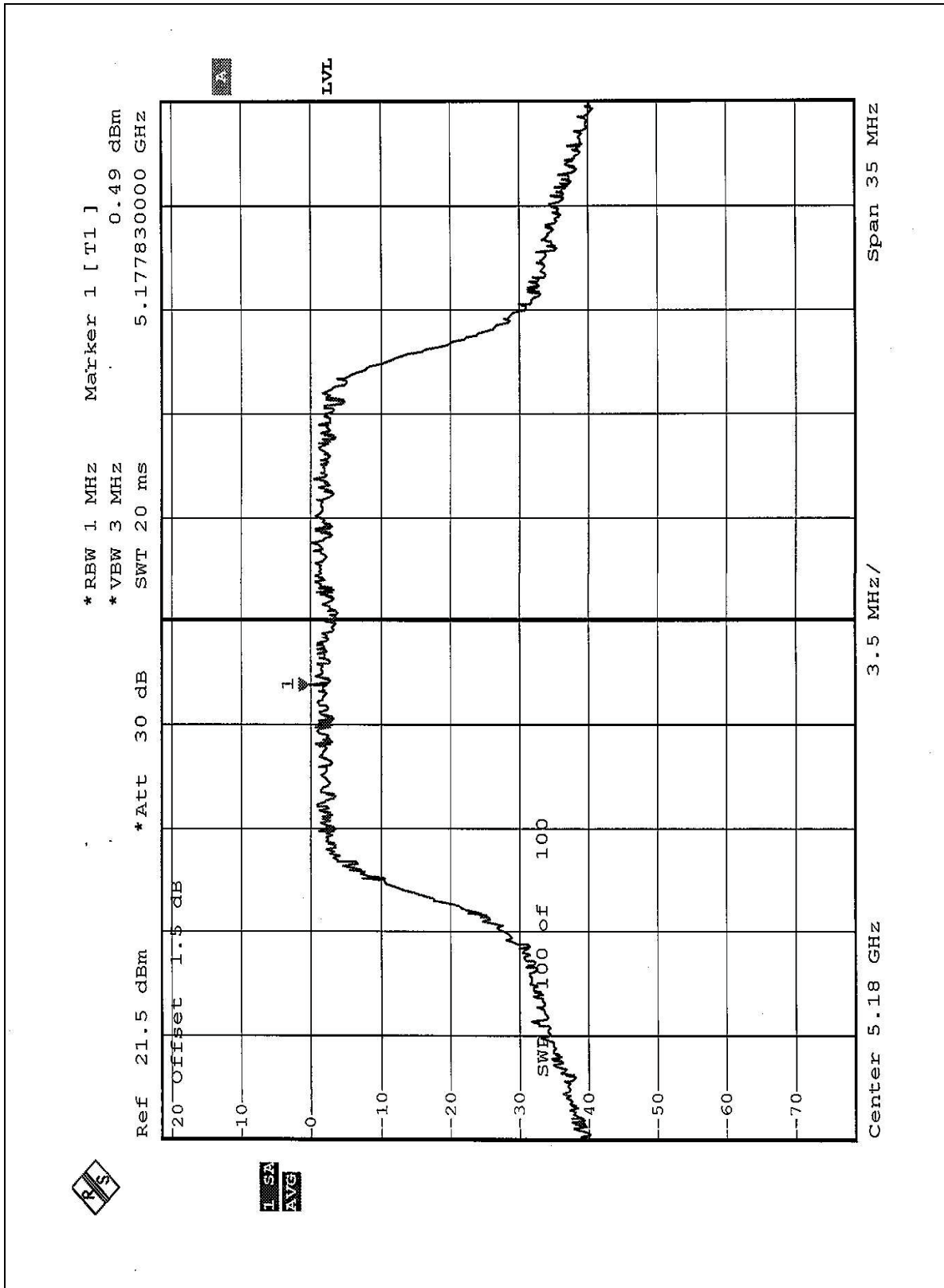


5.5.7 TEST RESULTS

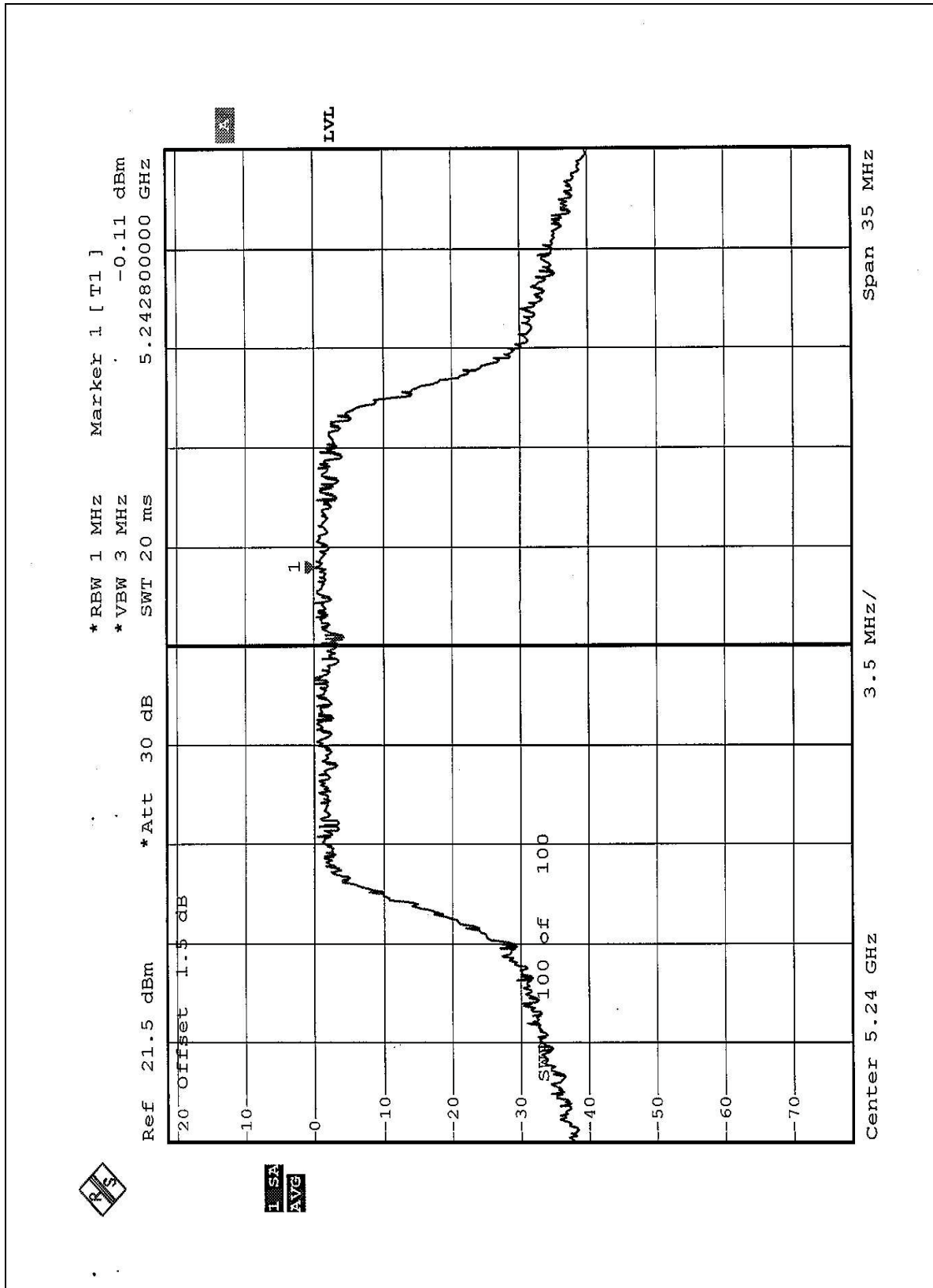
EUT	11a/b/g Wireless PCI Adapter	MODEL	3CRDAG675
MODE	Normal	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	26deg. C, 62%RH, 991hPa	TESTED BY	Ansen Lei

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1MHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	5180	0.49	4	PASS
4	5240	-0.11	4	PASS
5	5260	0.81	11	PASS
8	5320	-0.45	11	PASS
9	5745	1.09	17	PASS
12	5805	1.18	17	PASS

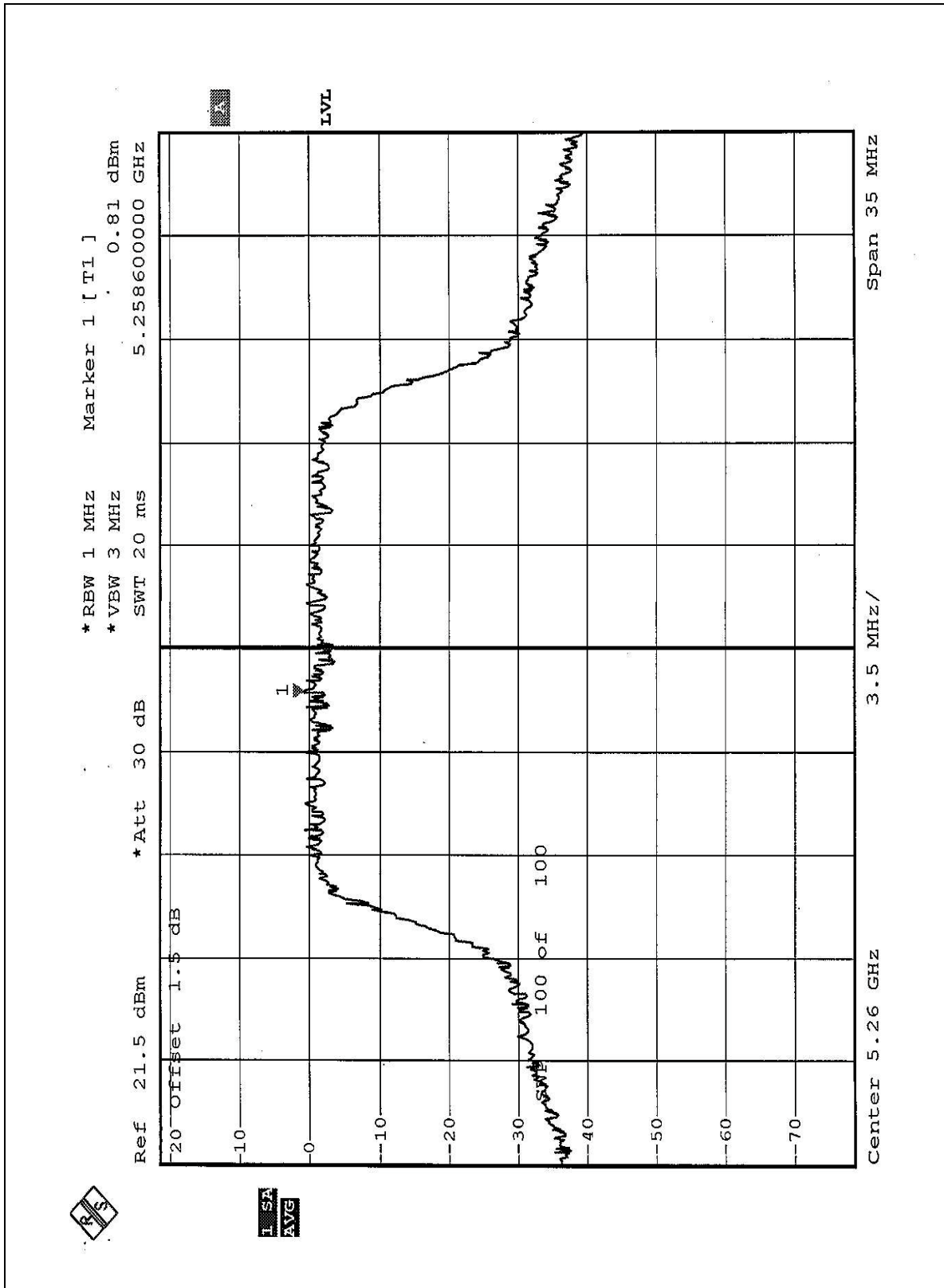
CHANNEL 1



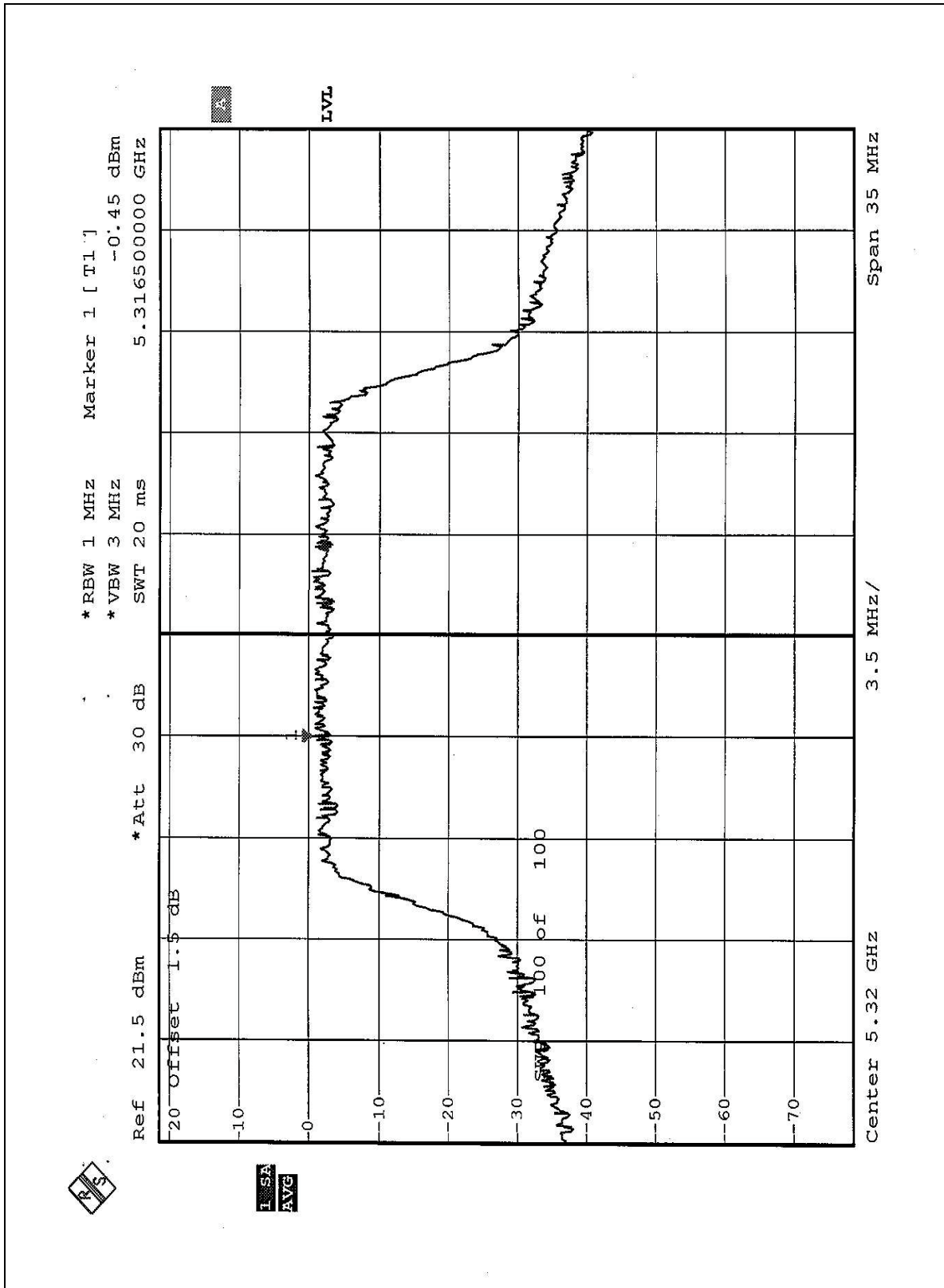
CHANNEL 4



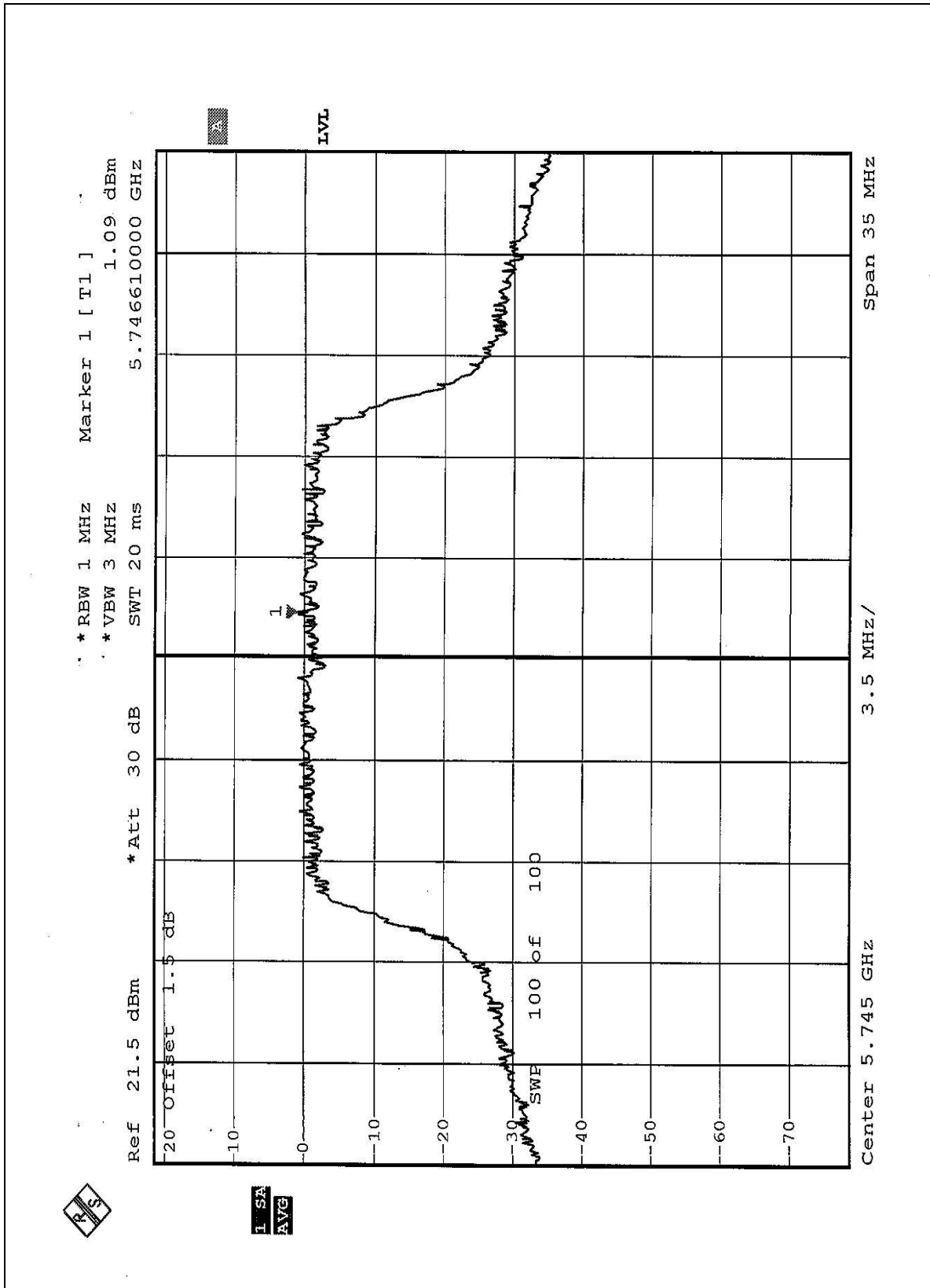
CHANNEL 5



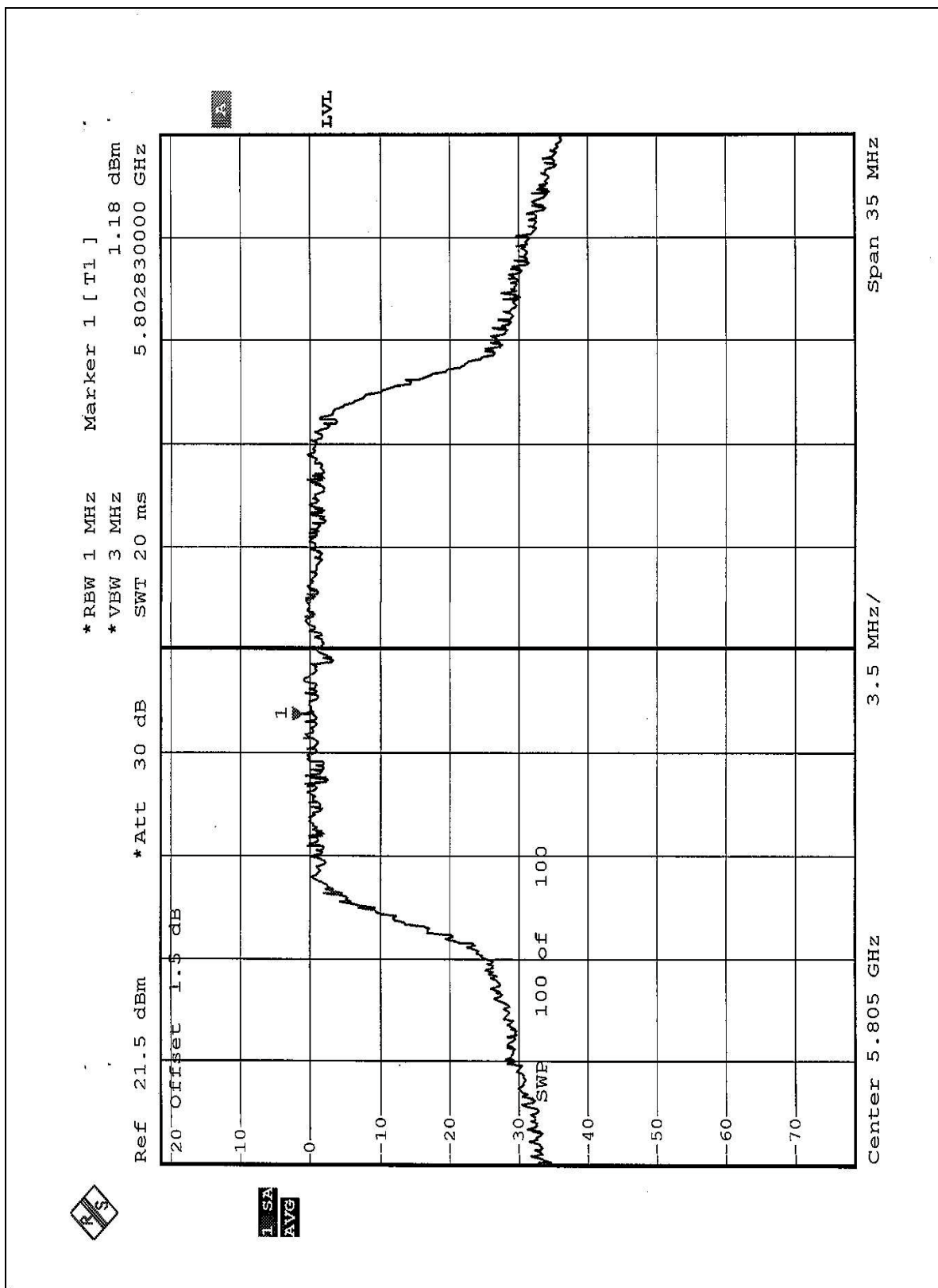
CHANNEL 8



CHANNEL 9



CHANNEL 12

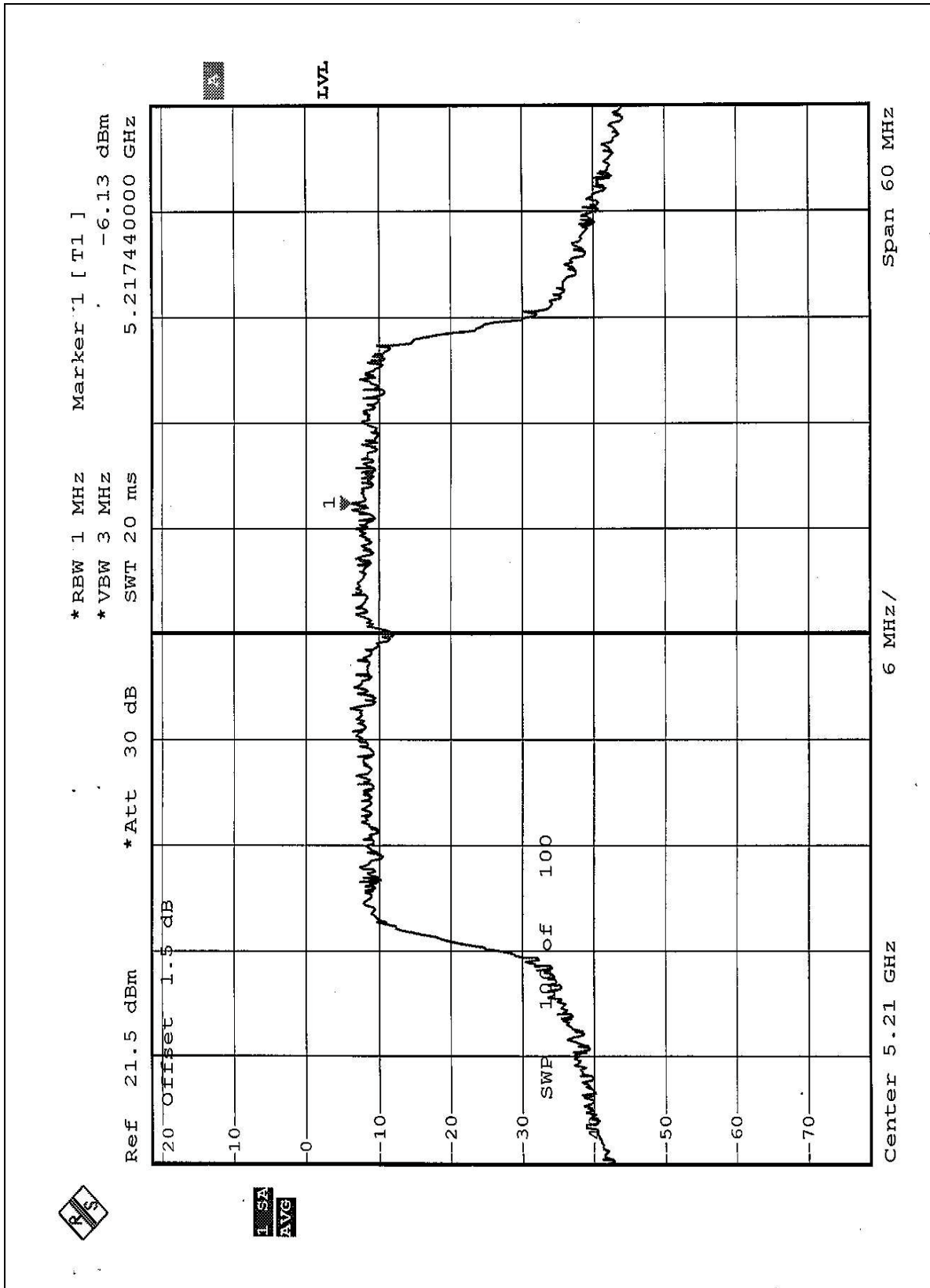




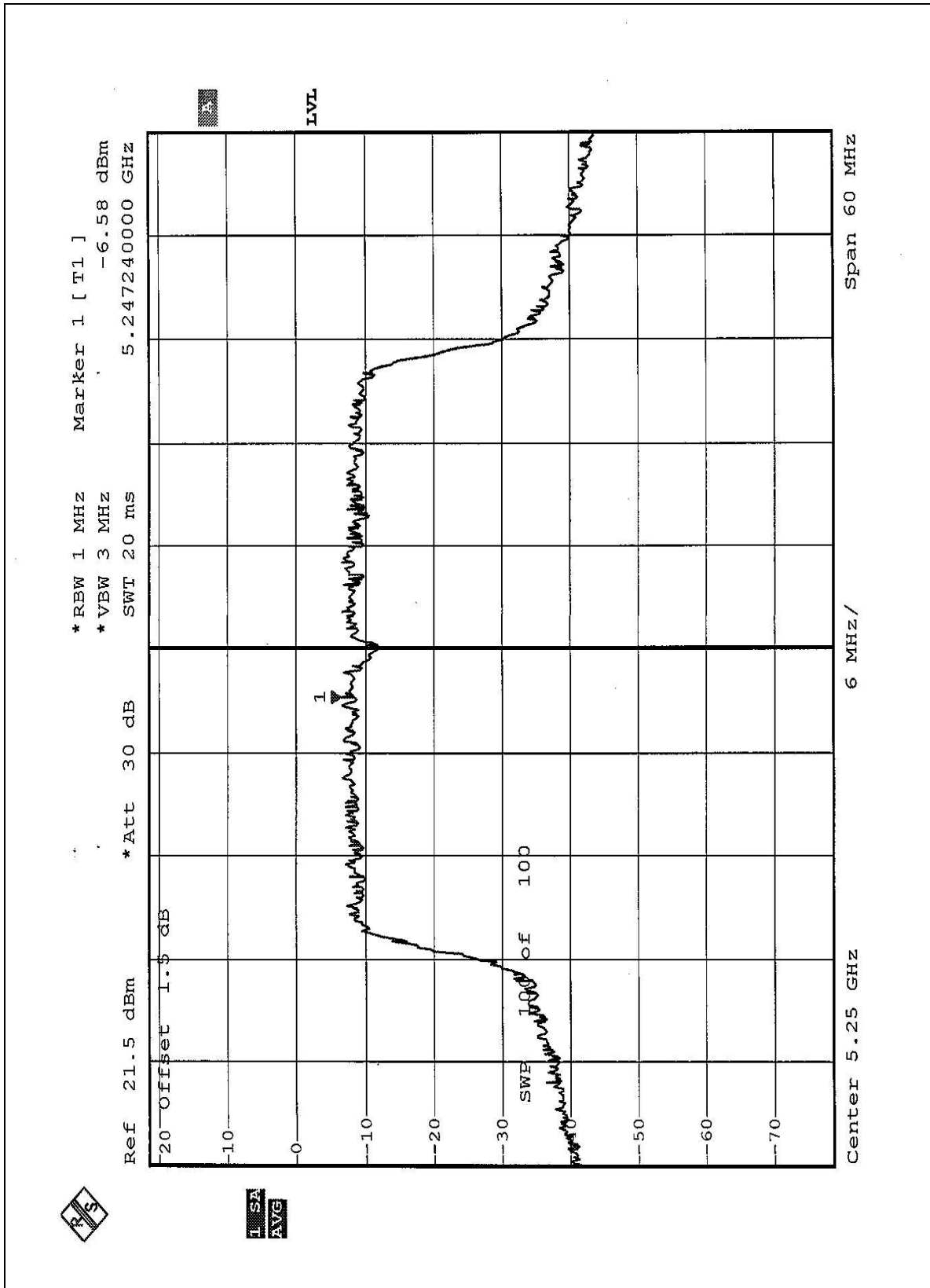
EUT	11a/b/g Wireless PCI Adapter	MODEL	3CRDAG675
MODE	Turbo	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	26deg. C, 62%RH, 991hPa	TESTED BY	Ansen Lei

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1 MHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	5210	-6.13	4	PASS
2	5250	-6.58	4	PASS
3	5290	-7.01	11	PASS
4	5760	-5.11	17	PASS
5	5800	-5.16	17	PASS

CHANNEL 1



CHANNEL 2



R/S

1 SA
AVG

*RBW 1 MHz
*VBW 3 MHz
*Att 30 dB
SWT 20 ms

Marker 1 [T1]
-7.01 dBm
5.287720000 GHz

Ref 21.5 dBm
Offset 1.5 dB

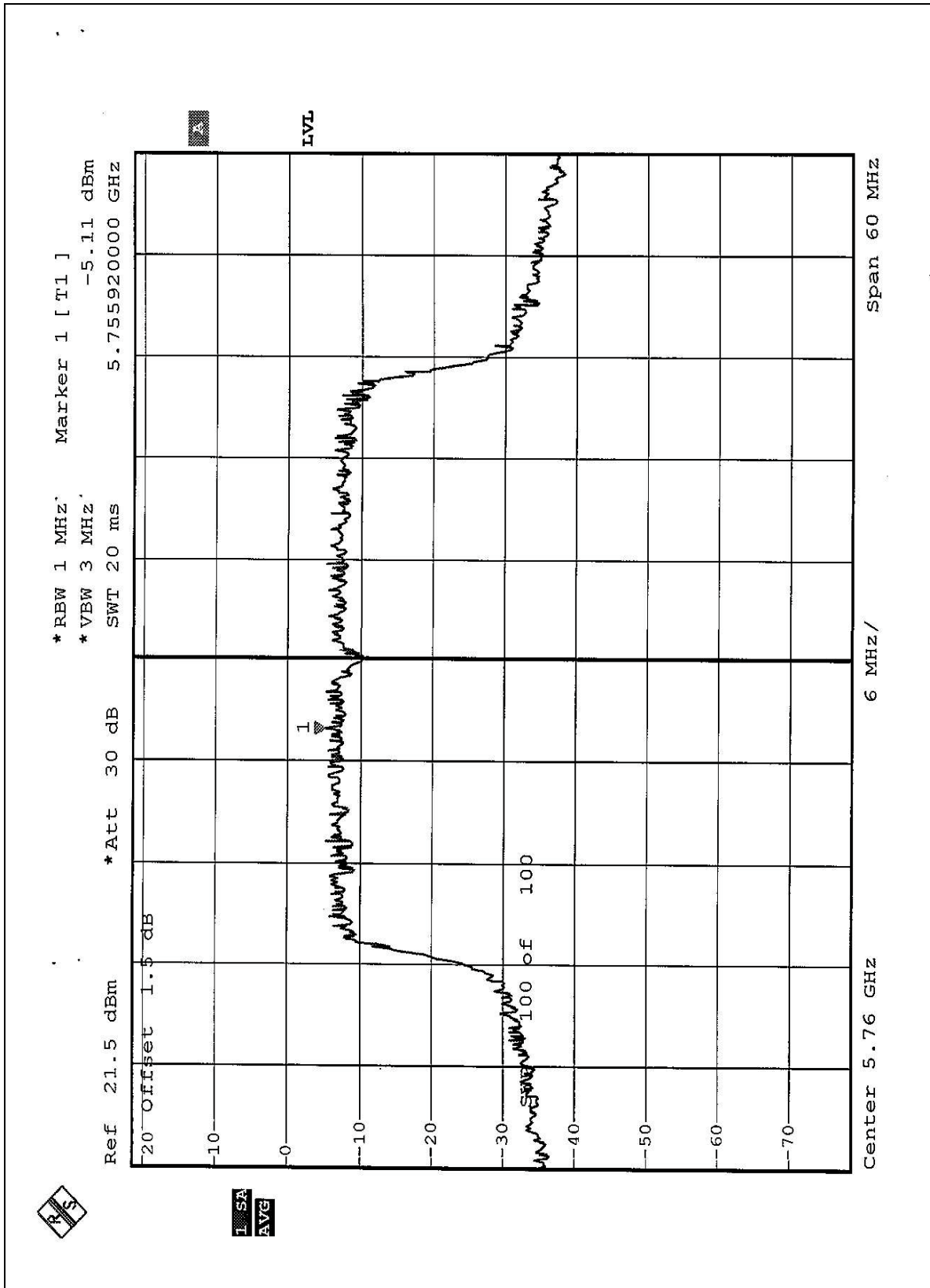
SWP 100 of 100

LVL

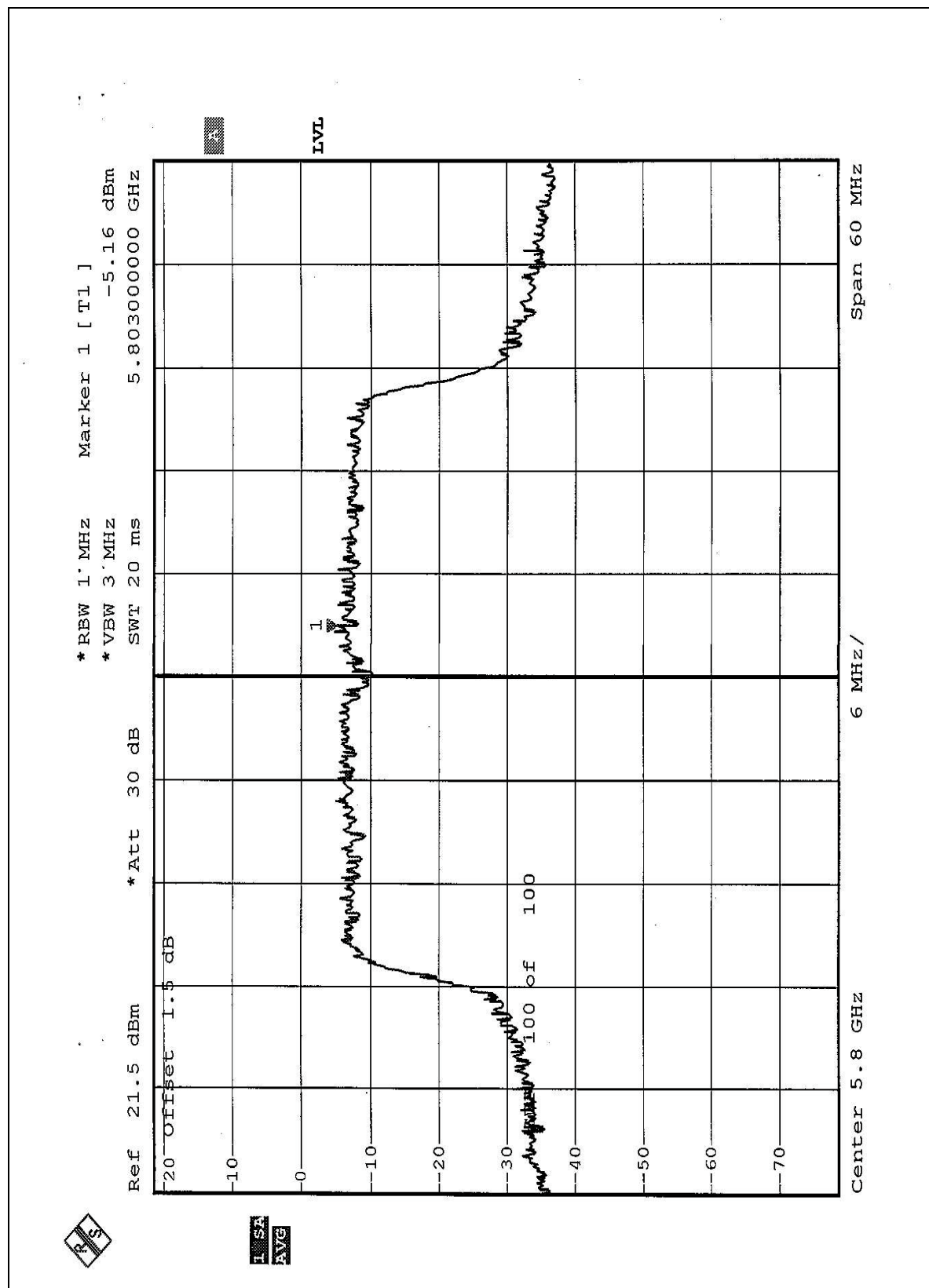
Center 5.29 GHz
Span 60 MHz
6 MHz/

The figure is a spectrum plot from a radio receiver. It features a grid with a vertical axis for level (dBm) and a horizontal axis for frequency (GHz). A signal trace is visible, showing a peak at 5.28772 GHz. The peak level is -7.01 dBm. The plot includes various measurement parameters: RBW 1 MHz, VBW 3 MHz, Att 30 dB, SWT 20 ms, and a span of 60 MHz. The center frequency is 5.29 GHz. The plot also shows a reference level of 21.5 dBm and an offset of 1.5 dB. The signal is identified as '1 SA' and 'AVG'.

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	Aug. 12, 2004
WIT STANDARD TEMPERATURE AND HUMIDITY CHAMBER	TH-4S-C	W901030	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.

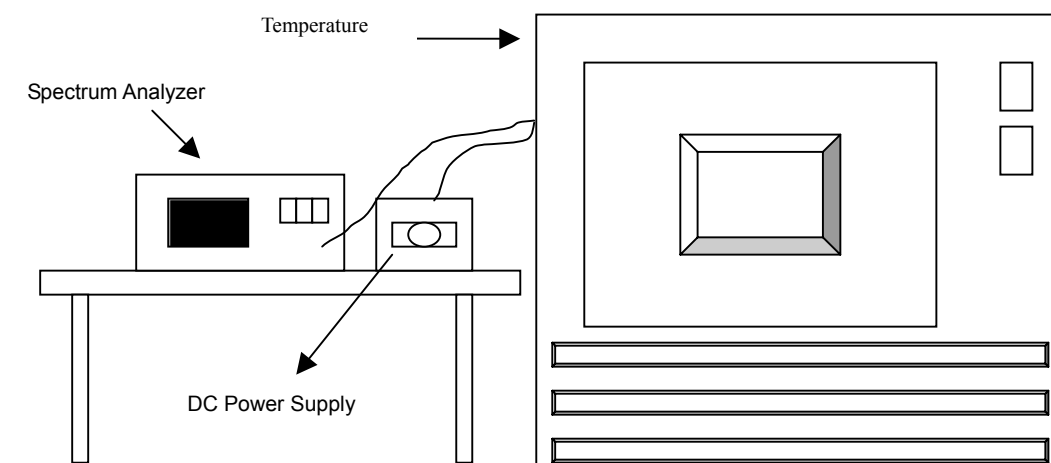
5.6.3 TEST PROCEDURE

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: 5320MHz				Limit : $\pm 0.02\%$			
Temp. (°C)	Power supply (VDC)	2 minute		5 minute		10 minute	
		(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
50	126.5	5319.9776	-0.0004211	5319.9776	-0.0004211	5319.9776	-0.0004211
	110.0	5319.9780	-0.0004135	5319.9778	-0.0004173	5319.9776	-0.0004211
	93.5	5319.9782	-0.0004098	5319.9780	-0.0004135	5319.9778	-0.0004173
40	126.5	5319.9782	-0.0004098	5319.9776	-0.0004211	5319.9778	-0.0004173
	110.0	5319.9780	-0.0004135	5319.9778	-0.0004173	5319.9776	-0.0004211
	93.5	5319.9778	-0.0004173	5319.9778	-0.0004173	5319.9774	-0.0004248
30	126.5	5319.9786	-0.0004023	5319.9788	-0.0003985	5319.9786	-0.0004023
	110.0	5319.9788	-0.0003985	5319.9786	-0.0004023	5319.9788	-0.0003985
	93.5	5319.9786	-0.0004023	5319.9784	-0.0004060	5319.9786	-0.0004023
20	126.5	5319.9796	-0.0003835	5319.9796	-0.0003835	5319.9796	-0.0003835
	110.0	5319.9794	-0.0003872	5319.9796	-0.0003835	5319.9795	-0.0003853
	93.5	5319.9794	-0.0003872	5319.9796	-0.0003835	5319.9798	-0.0003797
10	126.5	5319.9846	-0.0002895	5319.9850	-0.0002820	5319.9850	-0.0002820
	110.0	5319.9848	-0.0002857	5319.9848	-0.0002857	5319.9852	-0.0002782
	93.5	5319.9850	-0.0002820	5319.9852	-0.0002782	5319.9854	-0.0002744
0	126.5	5319.9948	-0.0000977	5319.9950	-0.0000940	5319.9952	-0.0000902
	110.0	5319.9950	-0.0000940	5319.9952	-0.0000902	5319.9950	-0.0000940
	93.5	5319.9950	-0.0000940	5319.9952	-0.0000902	5319.9952	-0.0000902
-10	126.5	5319.9996	-0.0000075	5320.0004	0.0000075	5320.0002	0.0000038
	110.0	5319.9998	-0.0000038	5320.0000	0.0000000	5320.0006	0.0000113
	93.5	5319.9998	-0.0000038	5320.0002	0.0000038	5320.0004	0.0000075
-20	126.5	5320.0052	0.0000977	5320.0058	0.0001090	5320.0068	0.0001278
	110.0	5320.0058	0.0001090	5320.0056	0.0001053	5320.0060	0.0001128
	93.5	5320.0056	0.0001053	5320.0054	0.0001015	5320.0070	0.0001316
-30	126.5	5320.0192	0.0003609	5320.0196	0.0003684	5320.0194	0.0003647
	110.0	5320.0194	0.0003647	5320.0192	0.0003609	5320.0196	0.0003684
	93.5	5320.0192	0.0003609	5320.0194	0.0003647	5320.0198	0.0003722