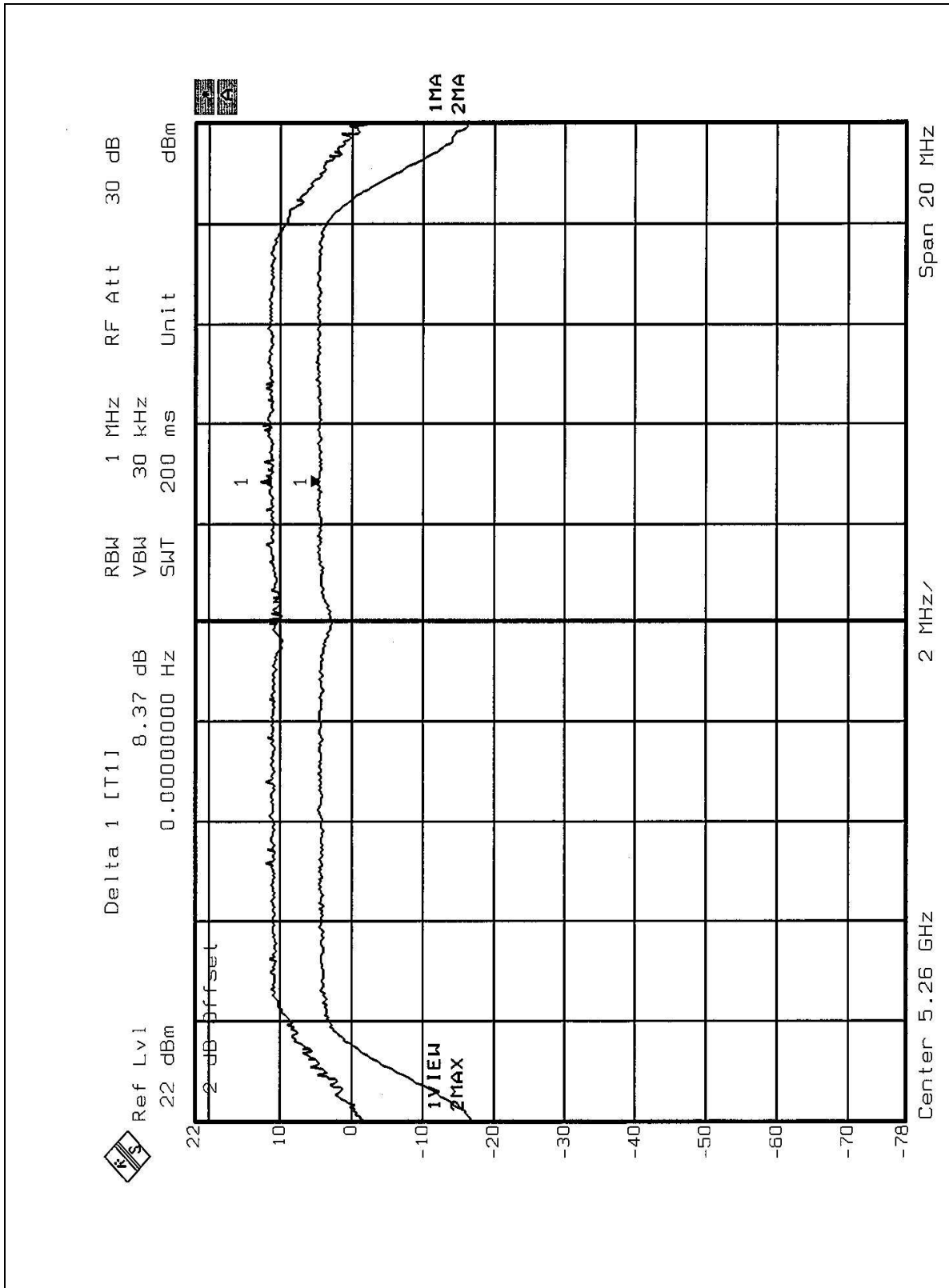


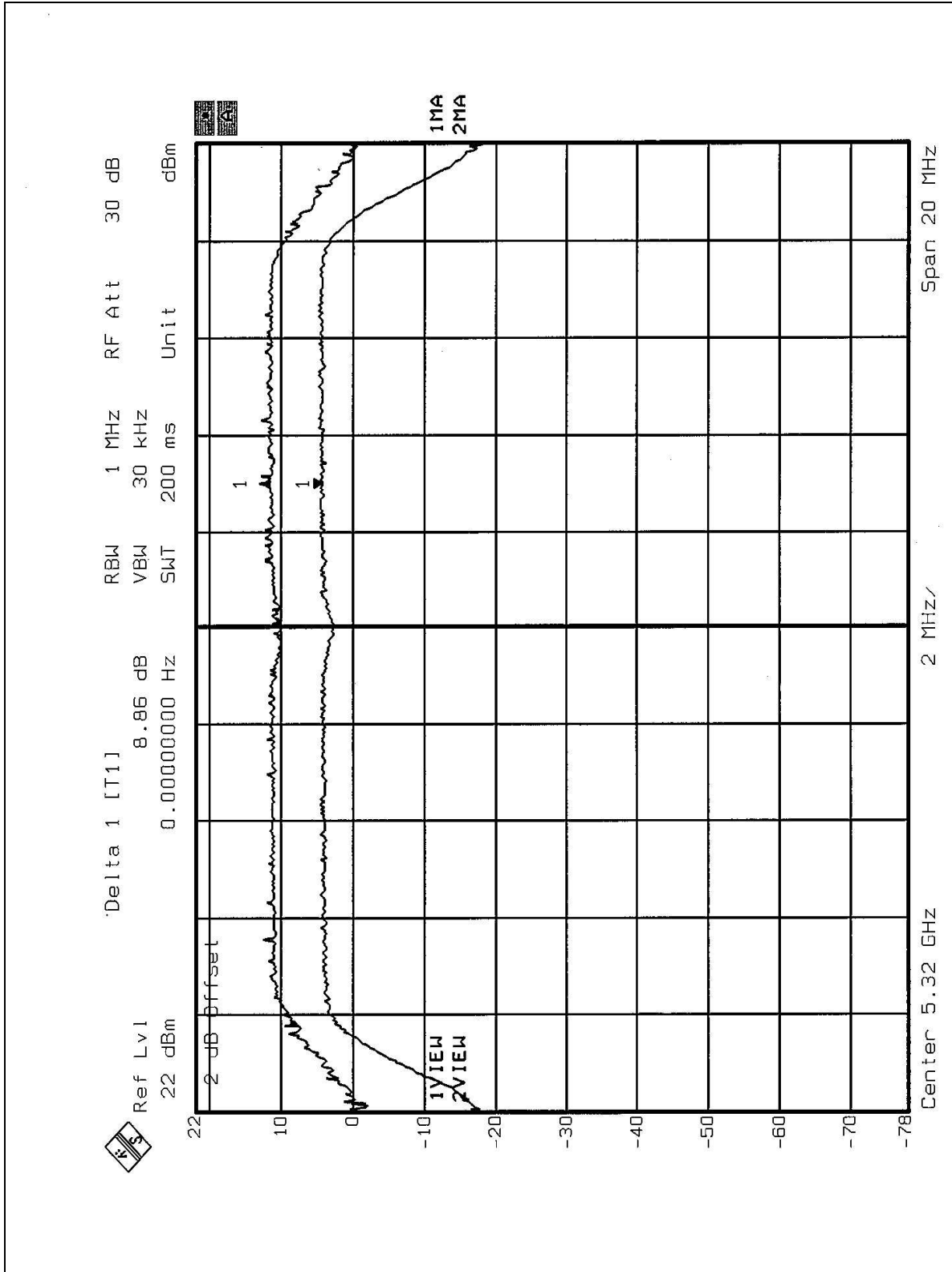


CHANNEL 5



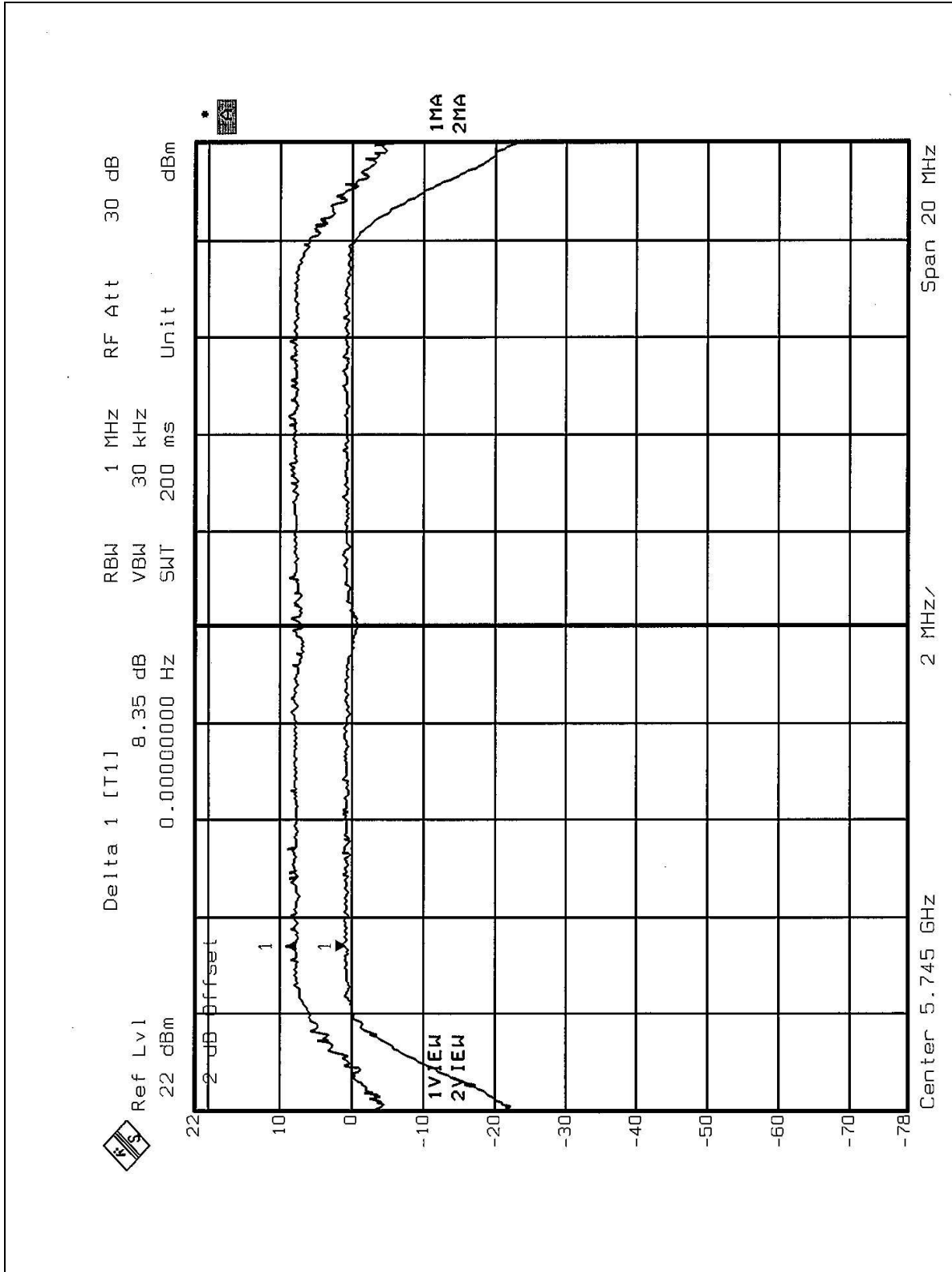


CHANNEL 8



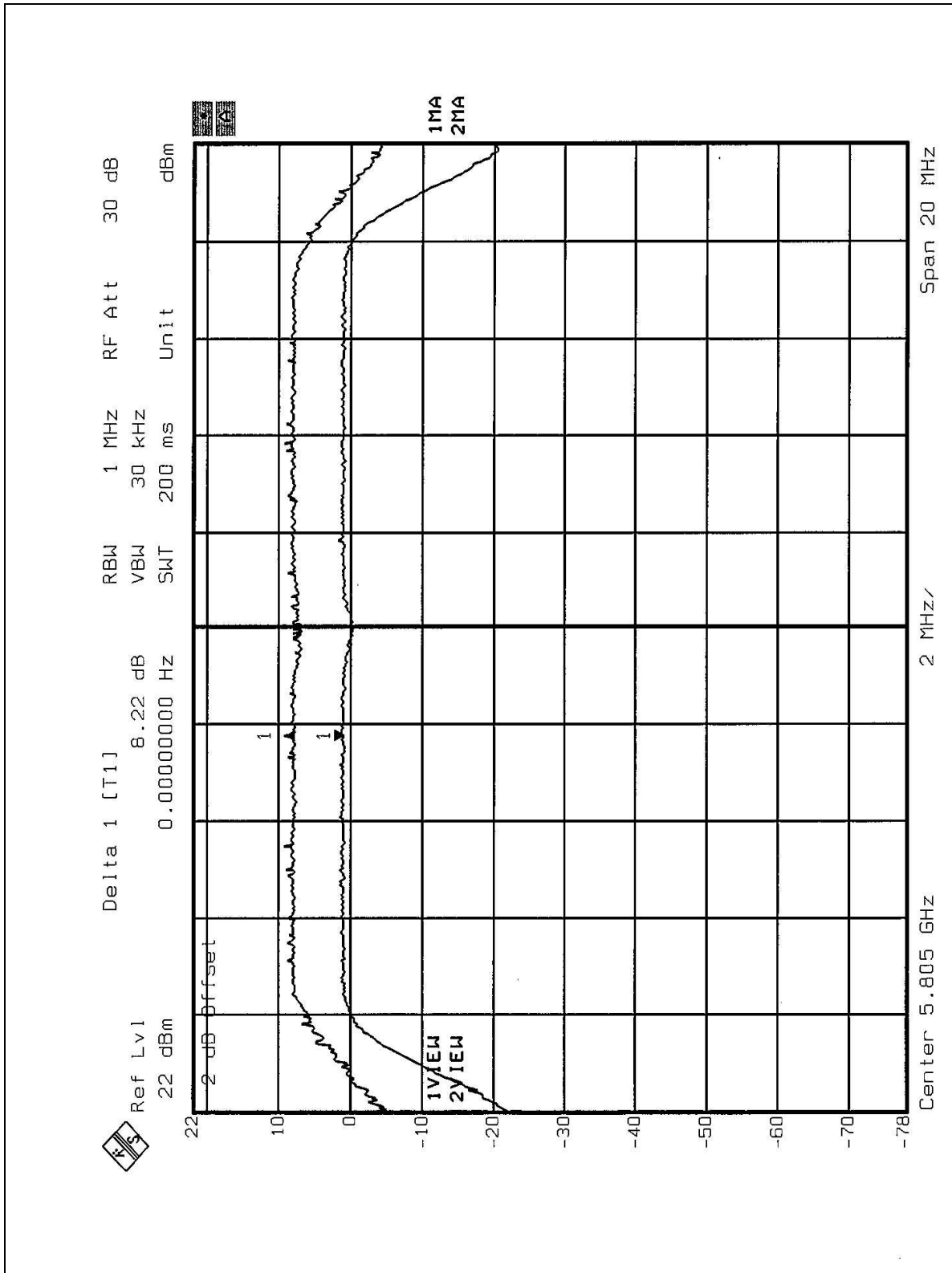


CHANNEL 9





CHANNEL 12



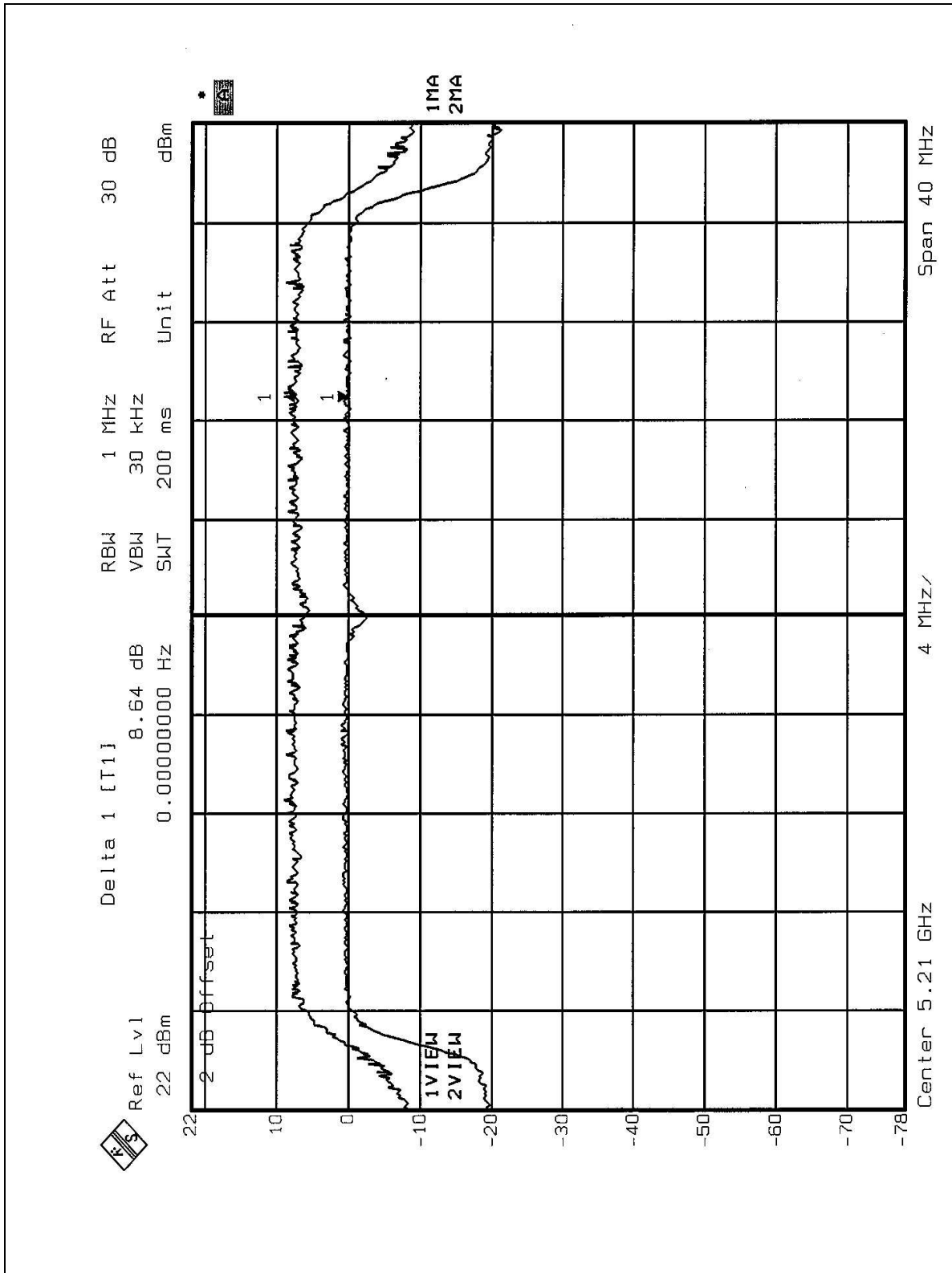


EUT	IEEE 802.11a Wide band Mini PCI	MODEL	MB-23
MODE	Turbo	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	29 deg. C, 54%RH, 1005 hPa	TESTED BY	Steven Lu

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dBm)	PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
1	5210	8.64	13	PASS
2	5250	8.88	13	PASS
3	5290	8.29	13	PASS
4	5760	8.45	13	PASS
5	5800	8.63	13	PASS

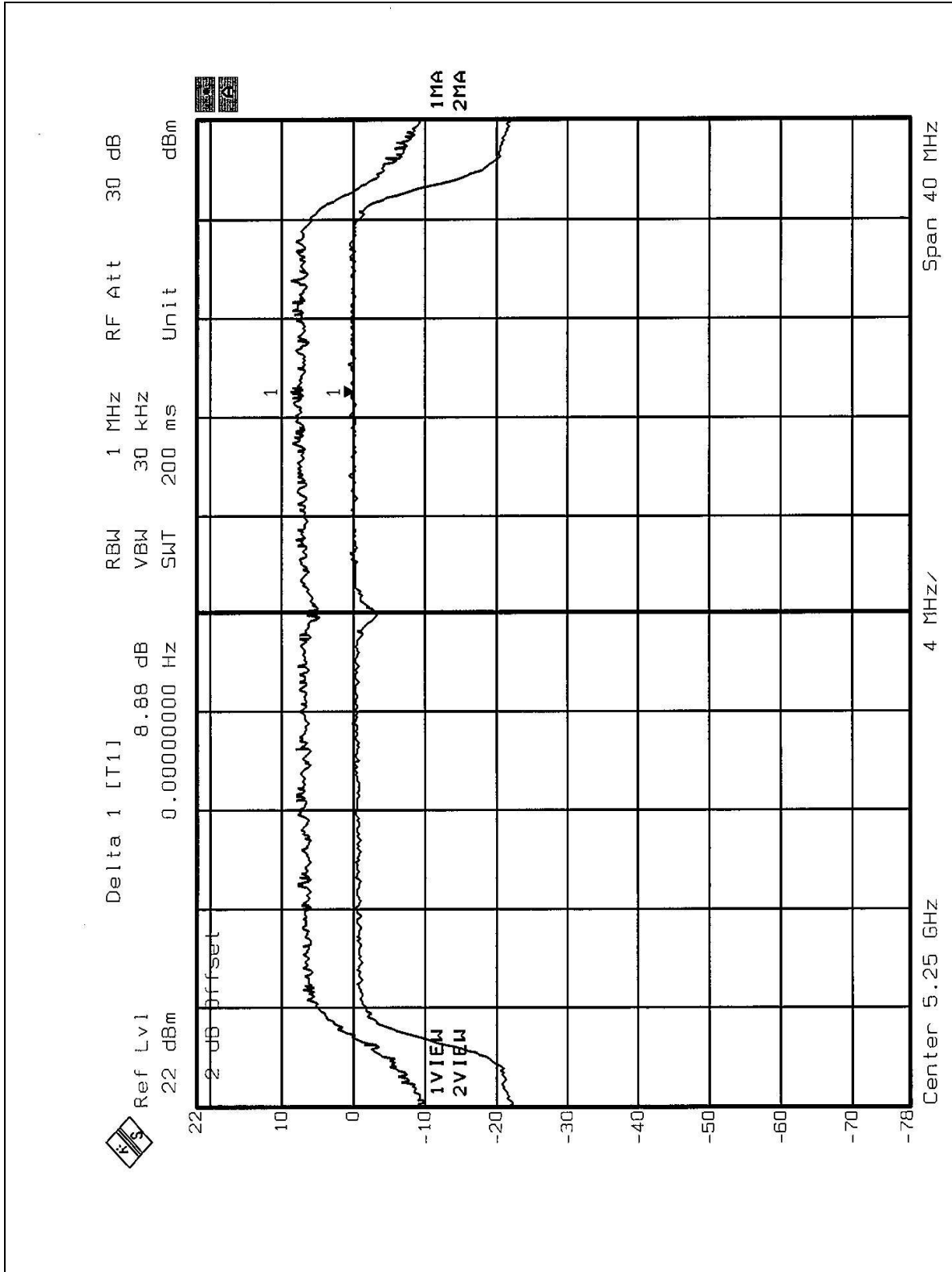


CHANNEL 1



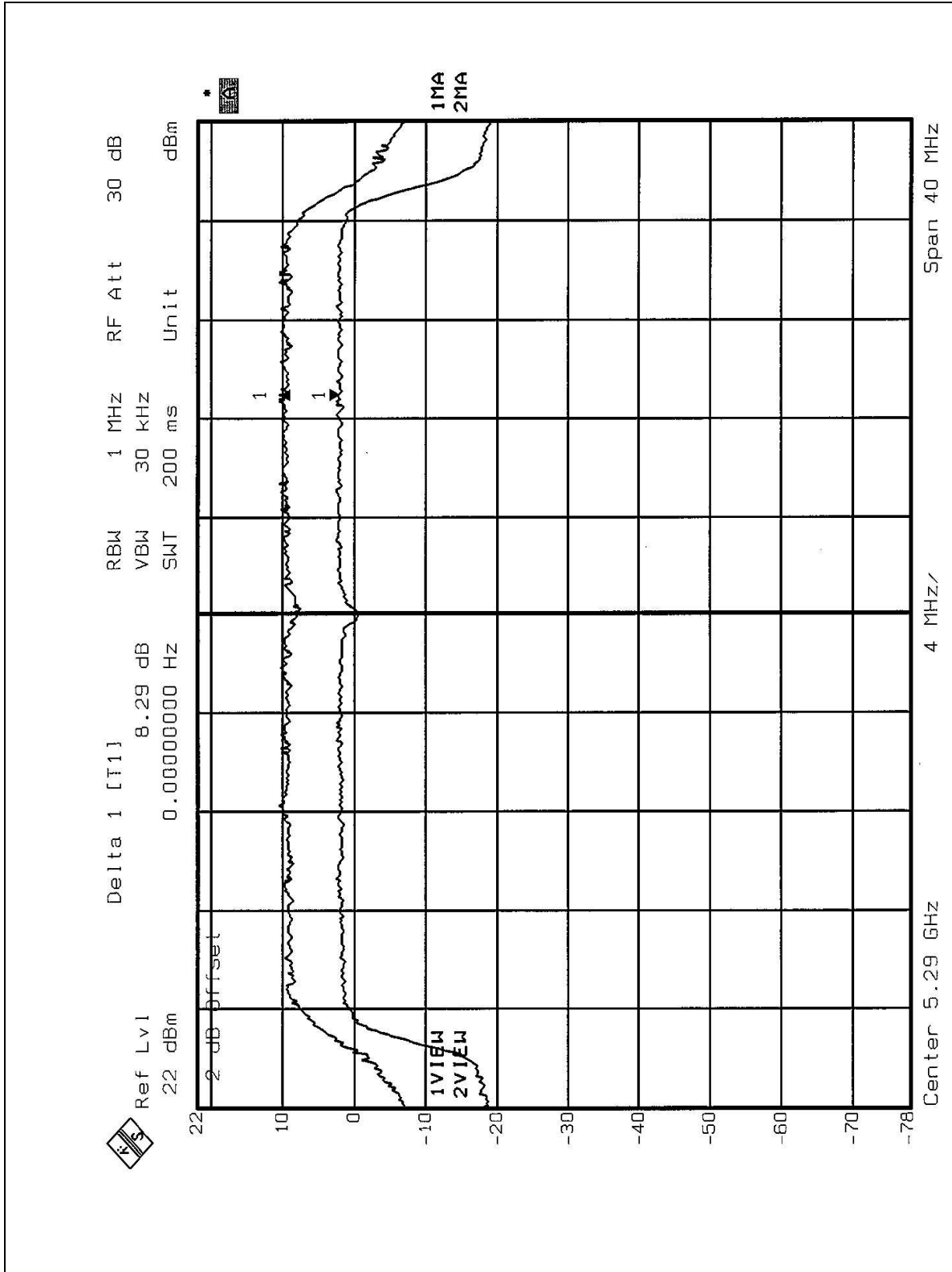


CHANNEL 2



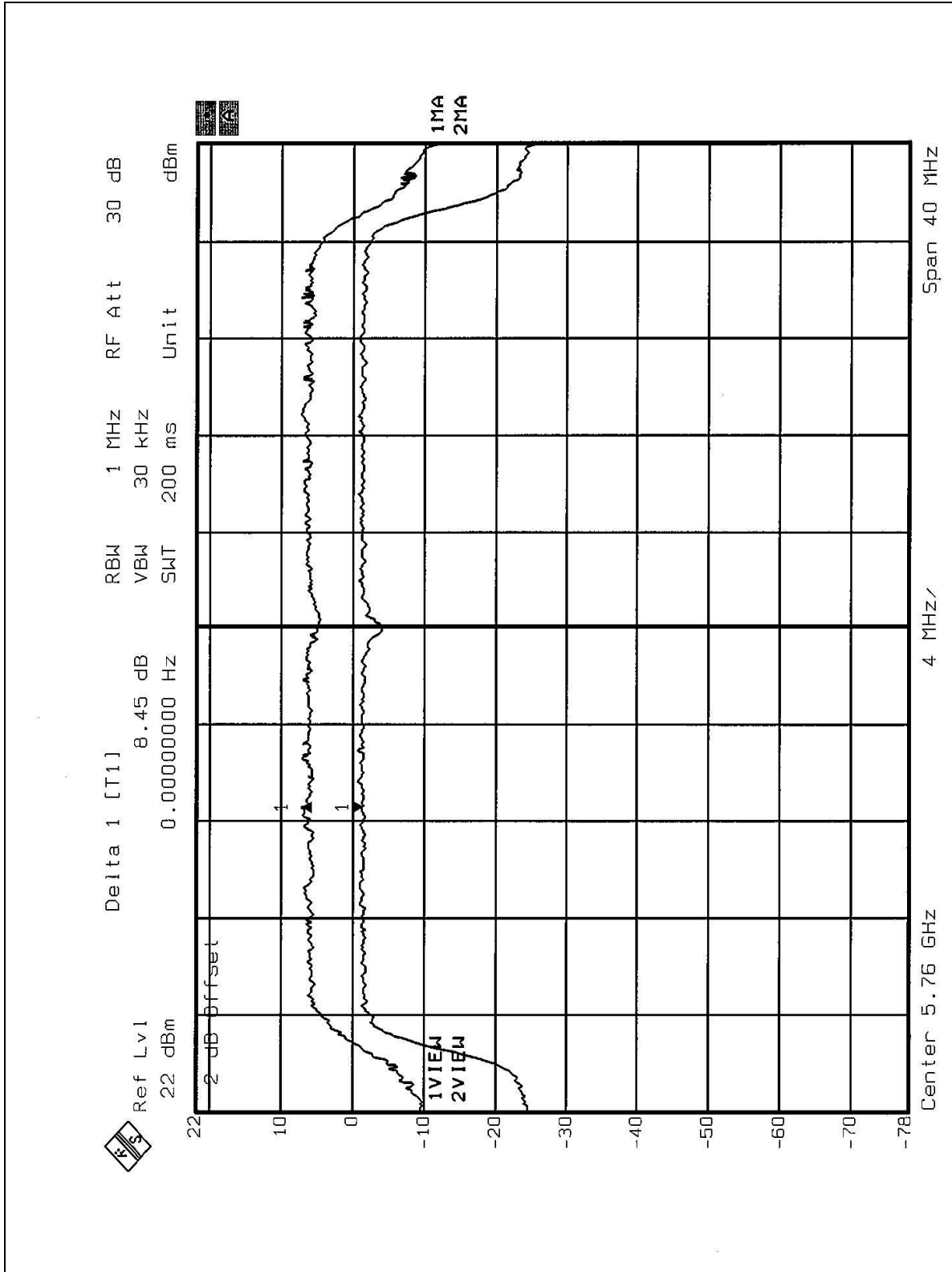


CHANNEL 3



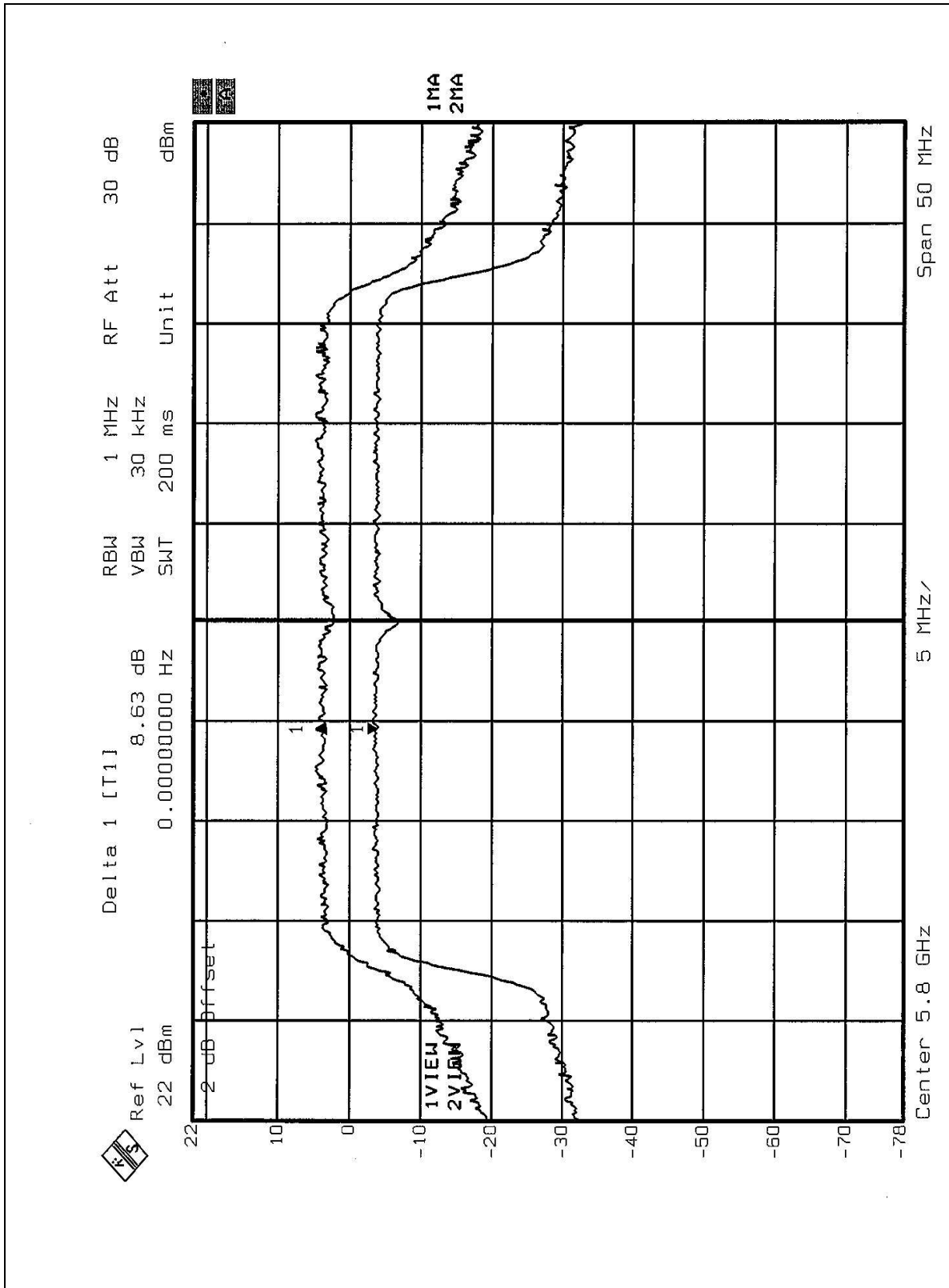


CHANNEL 4





CHANNEL 5





4.5 PEAK POWER SPECTRAL DENSITY MEASUREMENT

4.5.1 LIMITS OF PEAK POWER SPECTRAL DENSITY MEASUREMENT

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

4.5.2 TEST INSTRUMENTS

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

NOTE:

1. The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.5.3 TEST PROCEDURES

1. The transmitter output was connected to the spectrum analyzer.
2. Set RBW=1MHz, VBW=3MHz. The PPSD can be found.

4.5.4 TEST SETUP



4.5.5 EUT OPERATING CONDITIONS

Same as 4.3.5



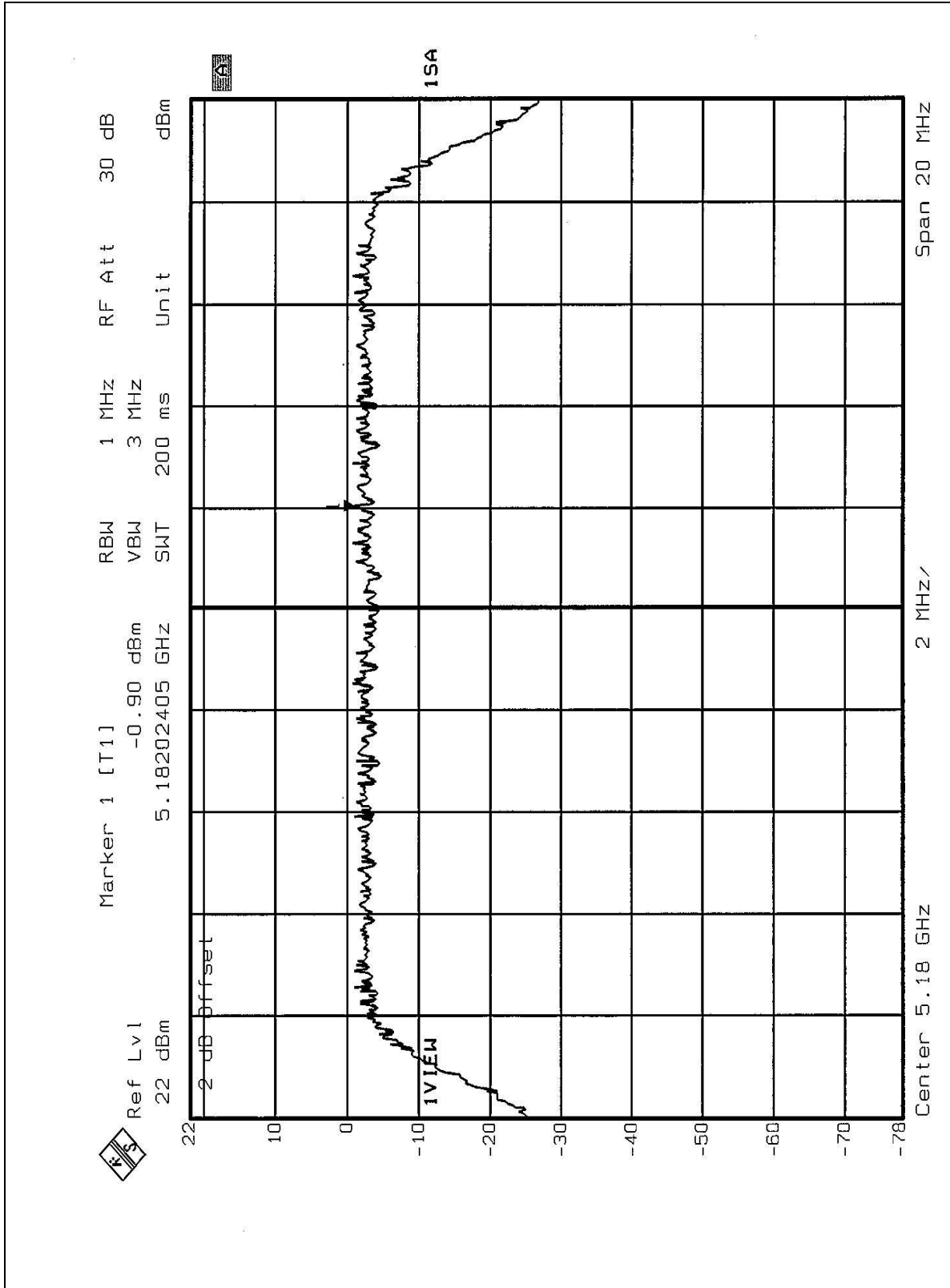
4.5.6 TEST RESULTS

EUT	IEEE 802.11a Wide band Mini PCI	MODEL	MB-23
MODE	Normal	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	29 deg. C, 54%RH, 1005 hPa	TESTED BY	Steven Lu

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1 MHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	5180	-0.90	4	PASS
4	5240	-0.67	4	PASS
5	5260	2.58	11	PASS
8	5320	2.86	11	PASS
9	5745	-1.27	17	PASS
12	5805	0.13	17	PASS

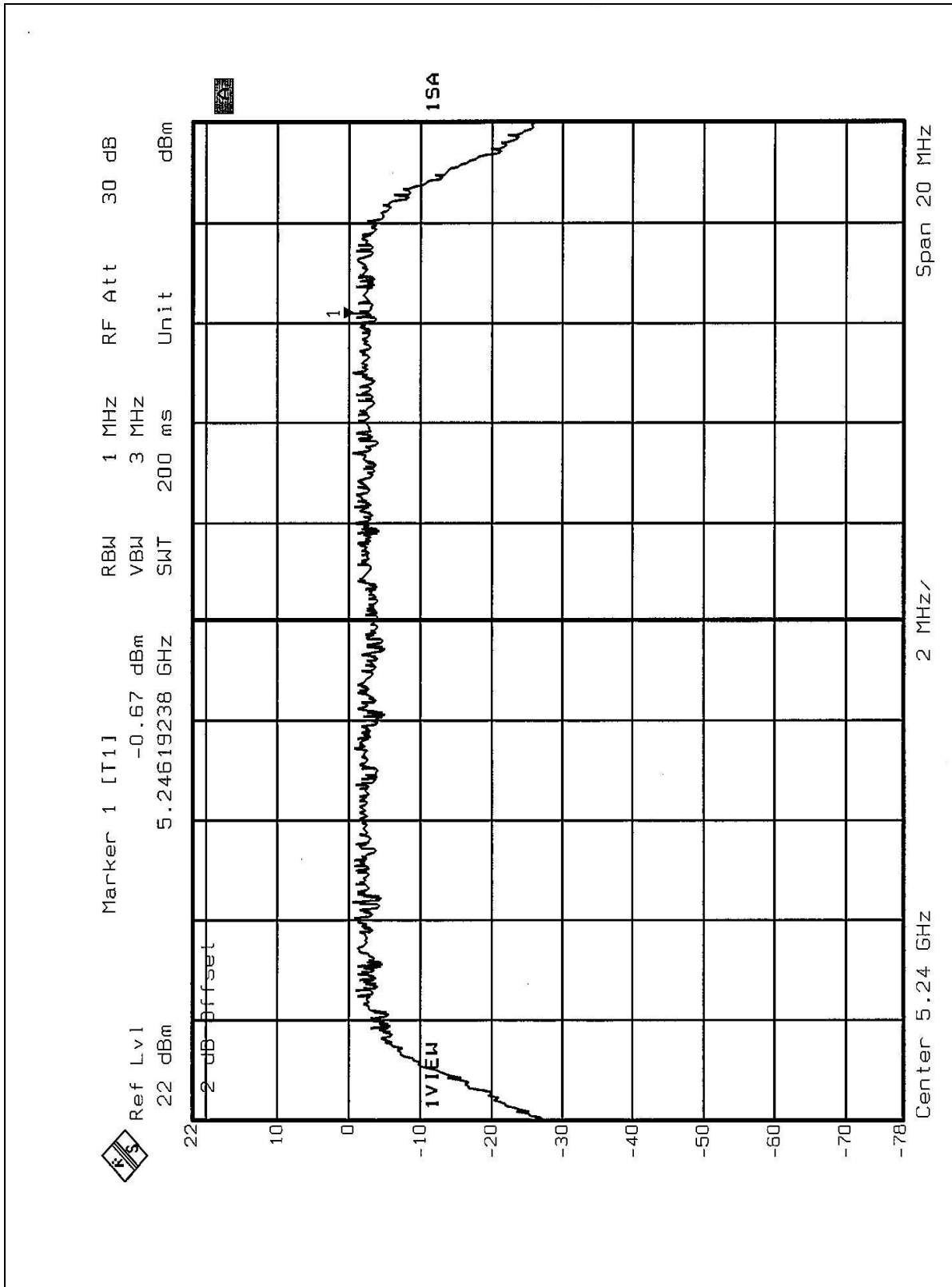


CHANNEL 1



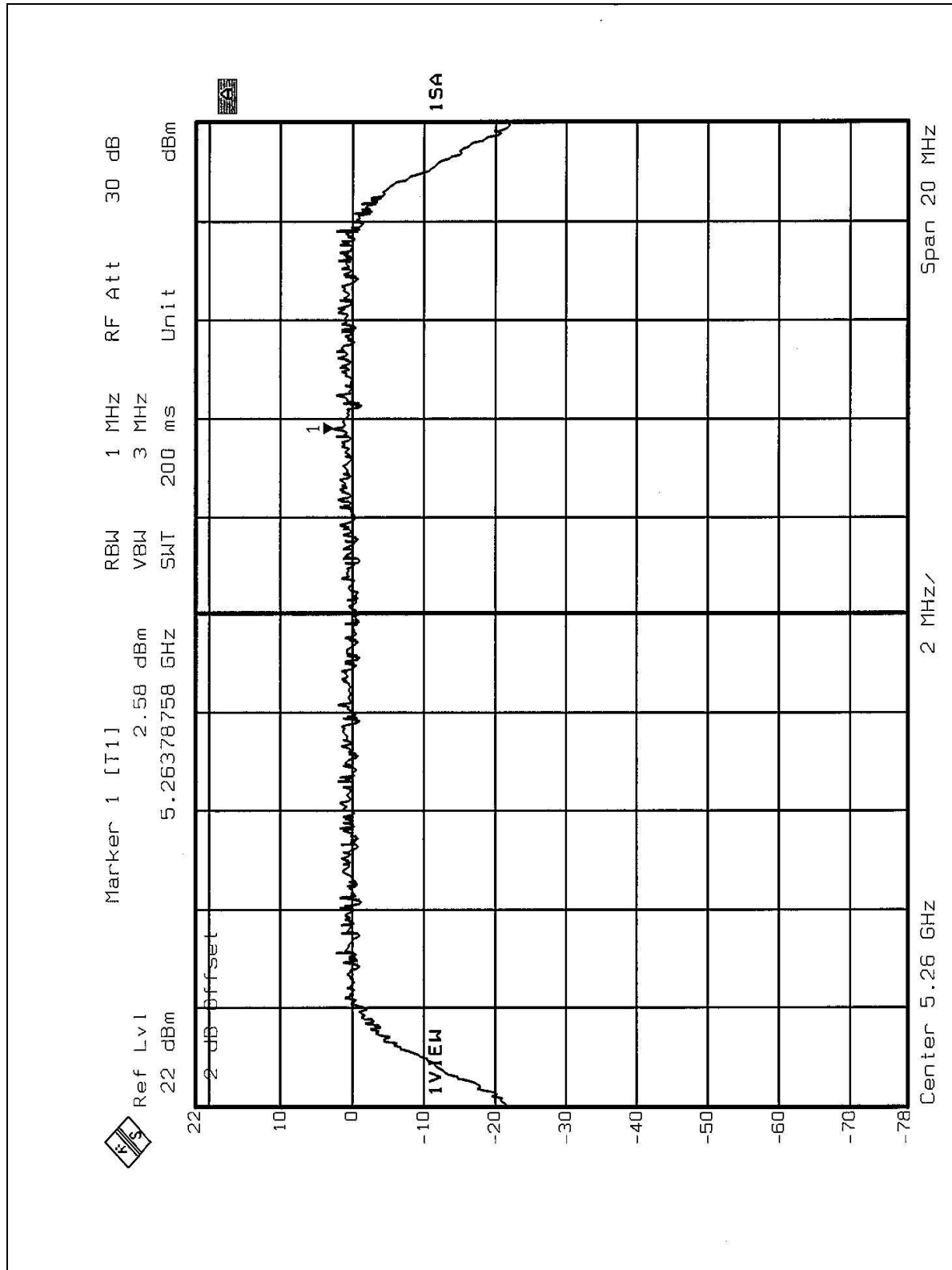


CHANNEL 4



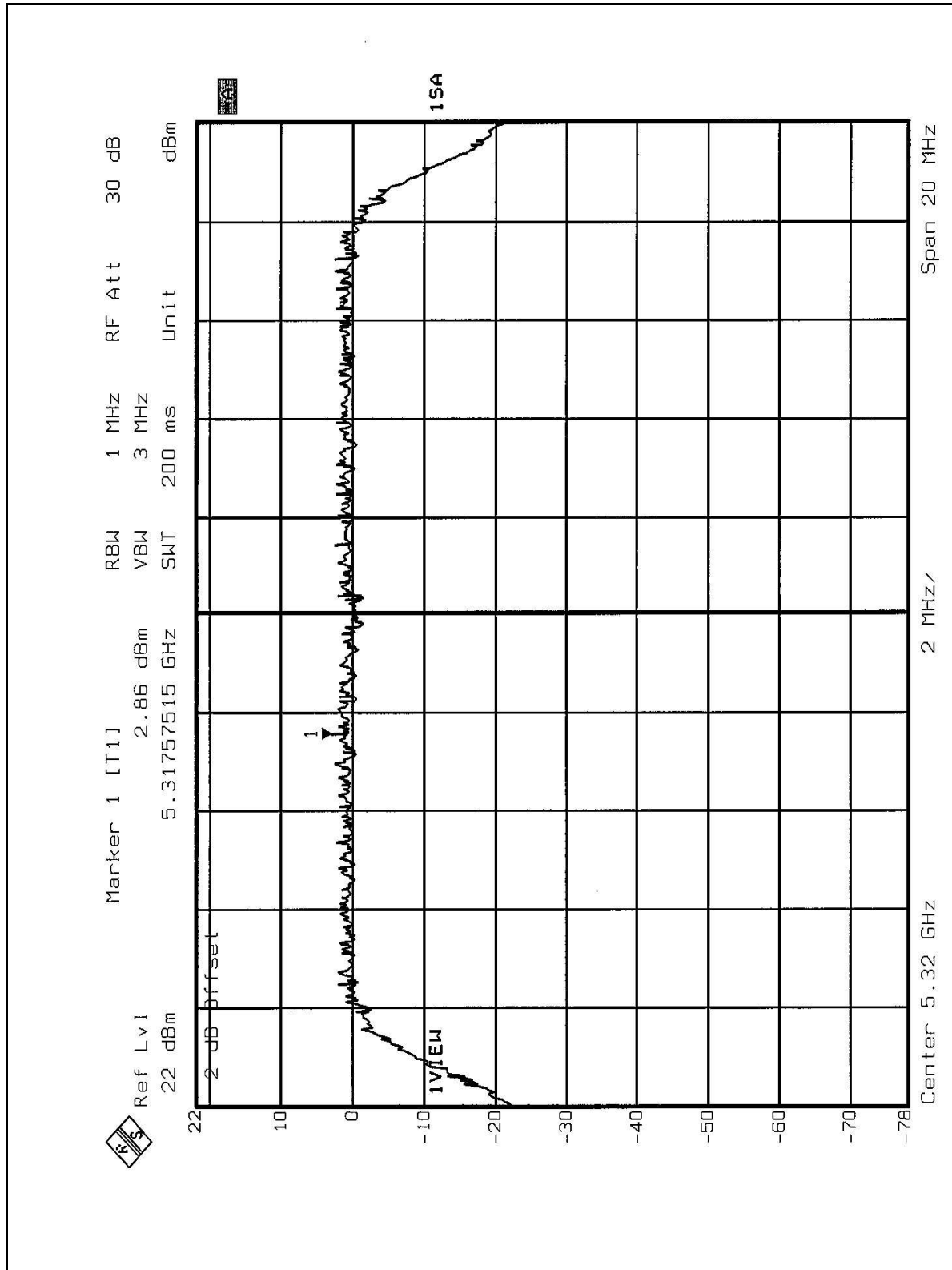


CHANNEL 5



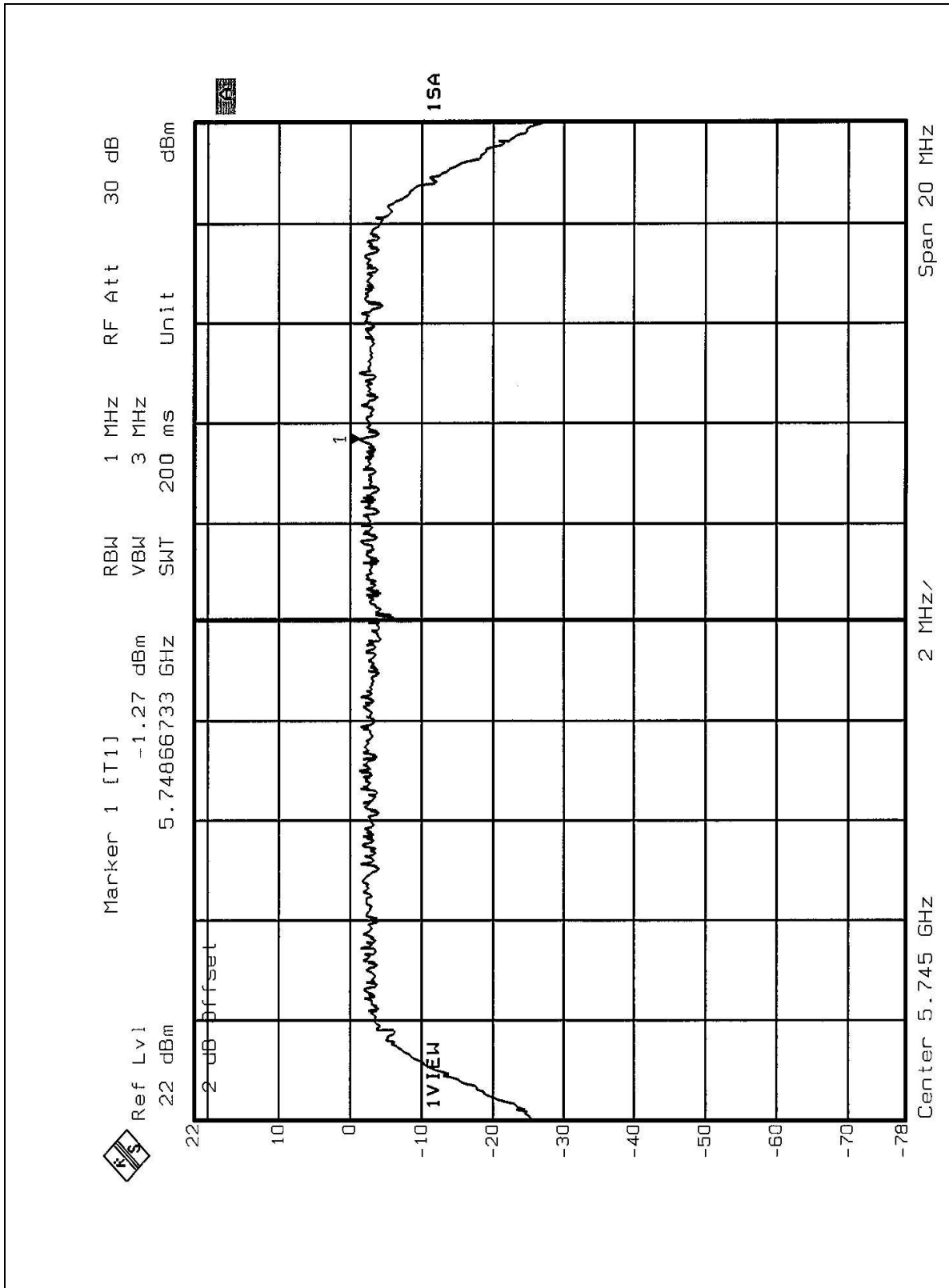


CHANNEL 8



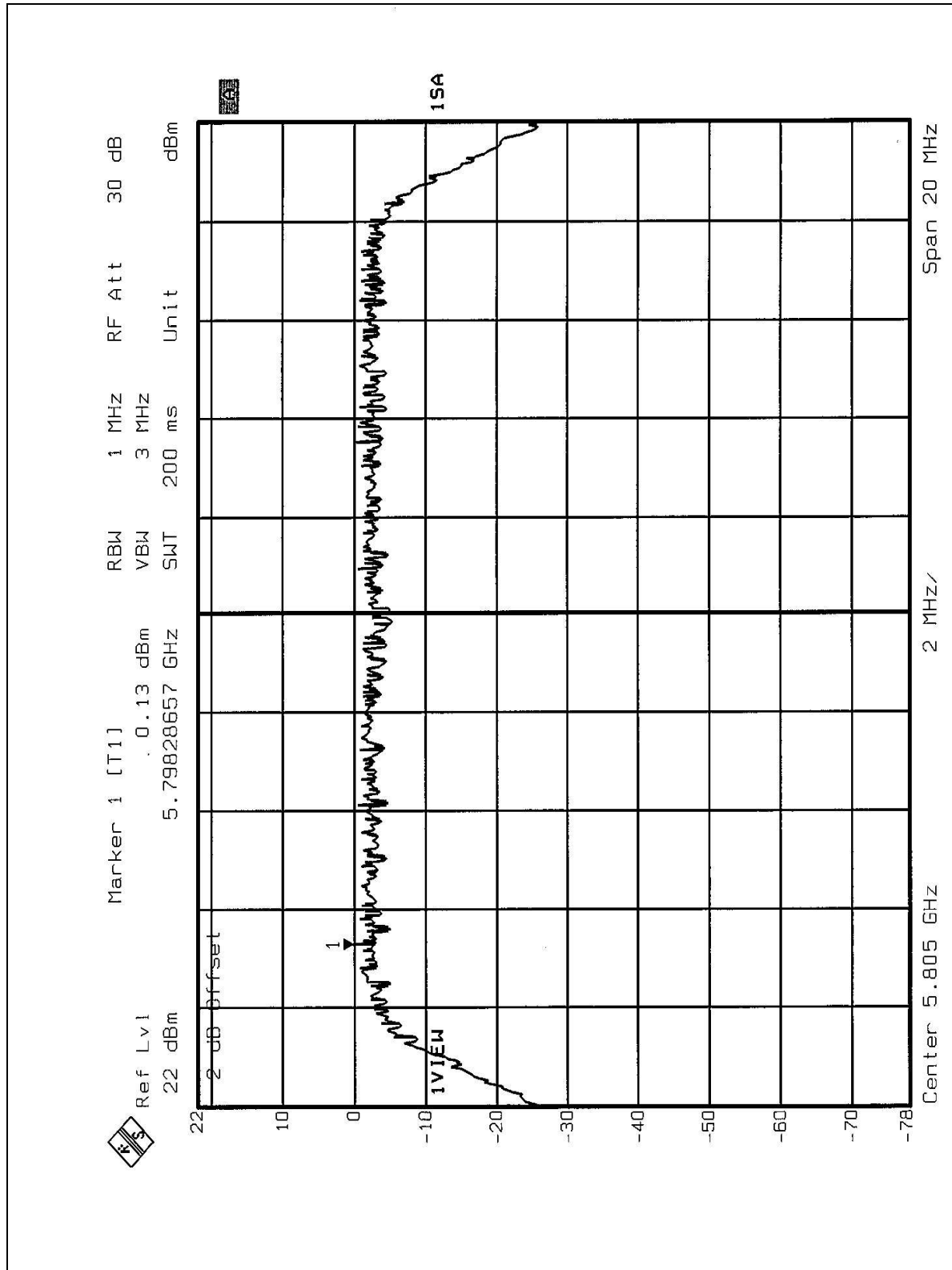


CHANNEL 9





CHANNEL 12



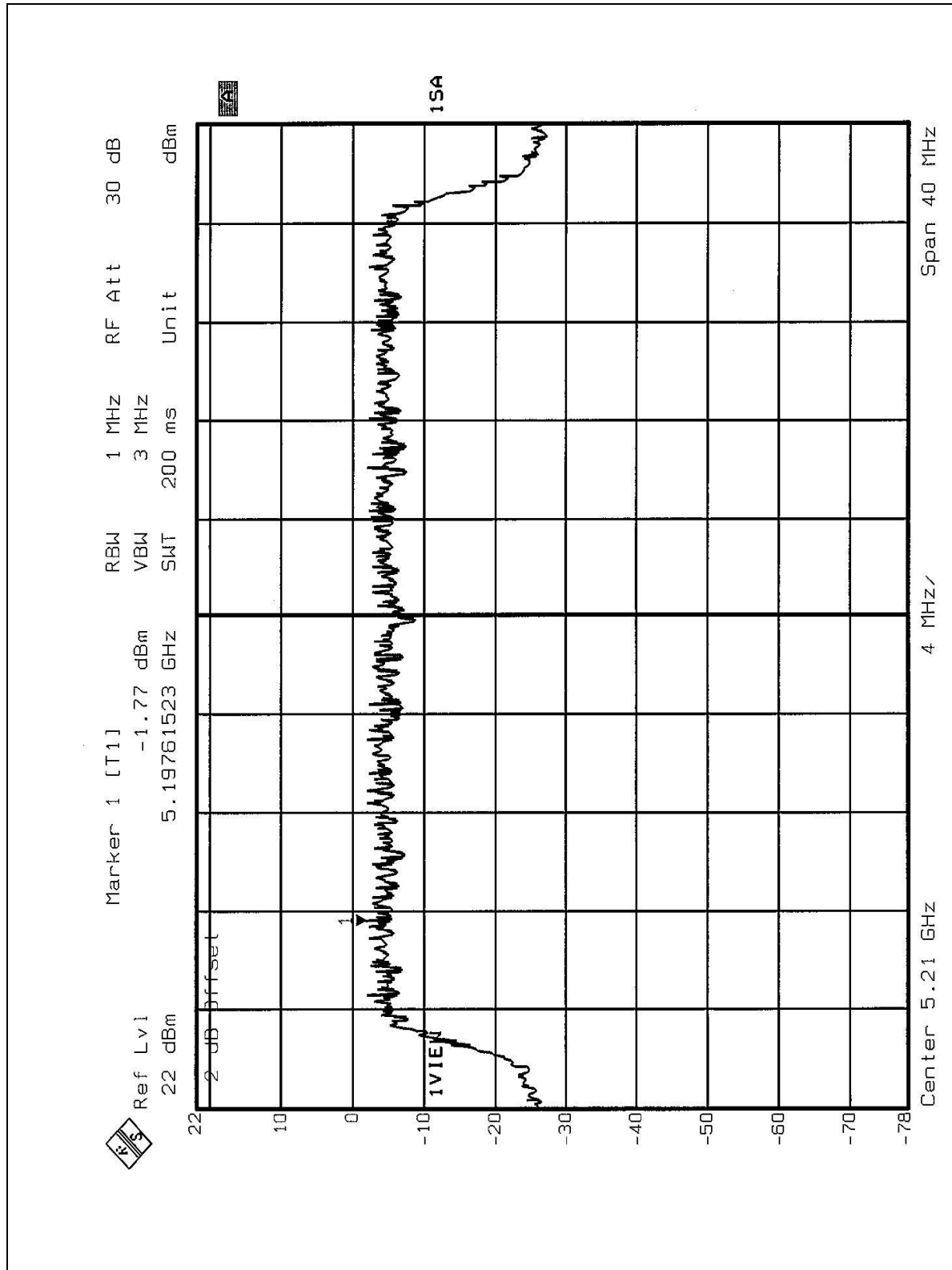


EUT	IEEE 802.11a Wide band Mini PCI	MODEL	MB-23
MODE	Turbo	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	29 deg. C, 54%RH, 1005 hPa	TESTED BY	Steven Lu

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1 MHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	5210	-1.77	4	PASS
2	5250	-2.60	4	PASS
3	5290	-0.33	11	PASS
4	5760	-3.25	17	PASS
5	5800	-5.77	17	PASS

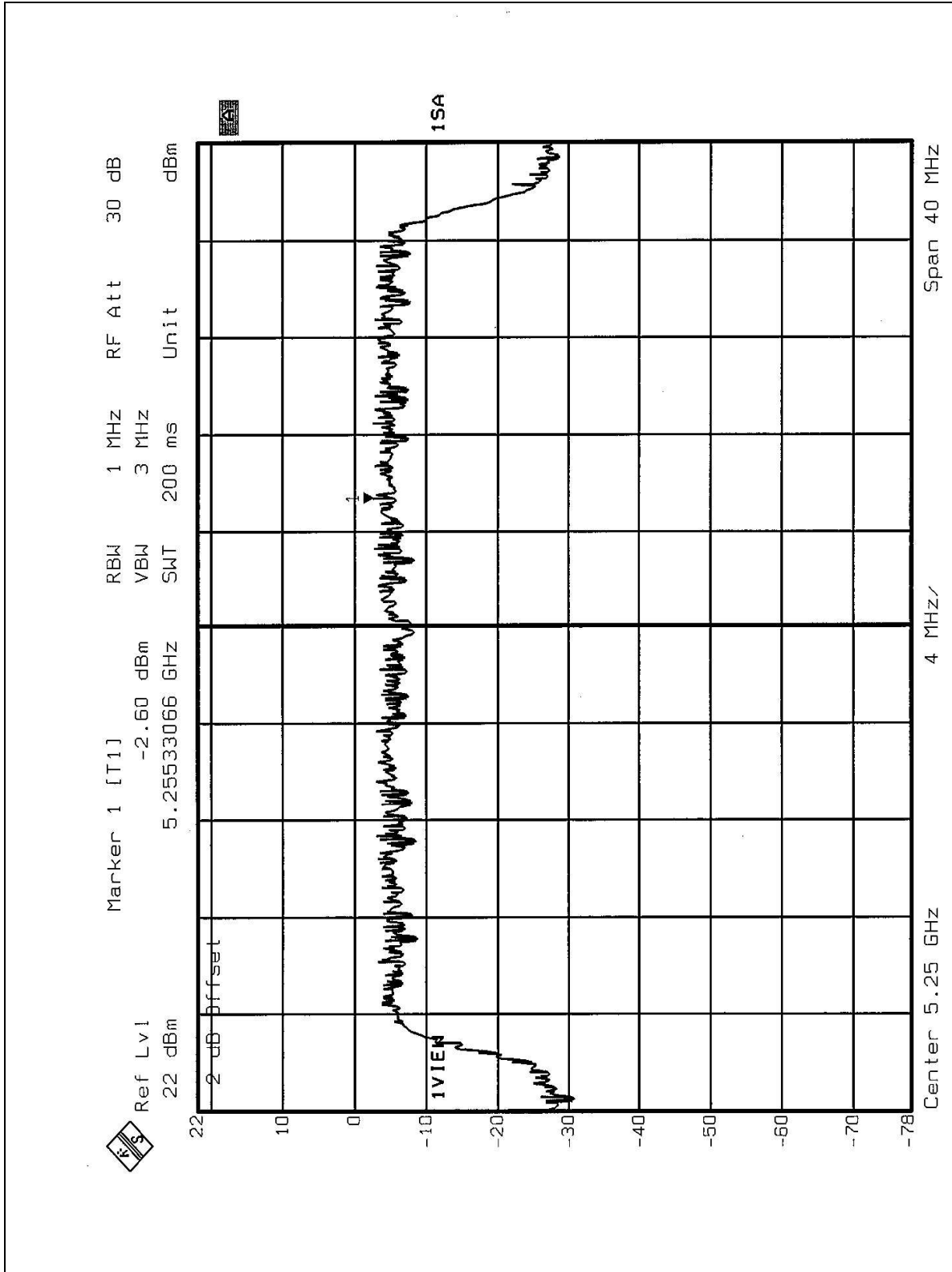


CHANNEL 1



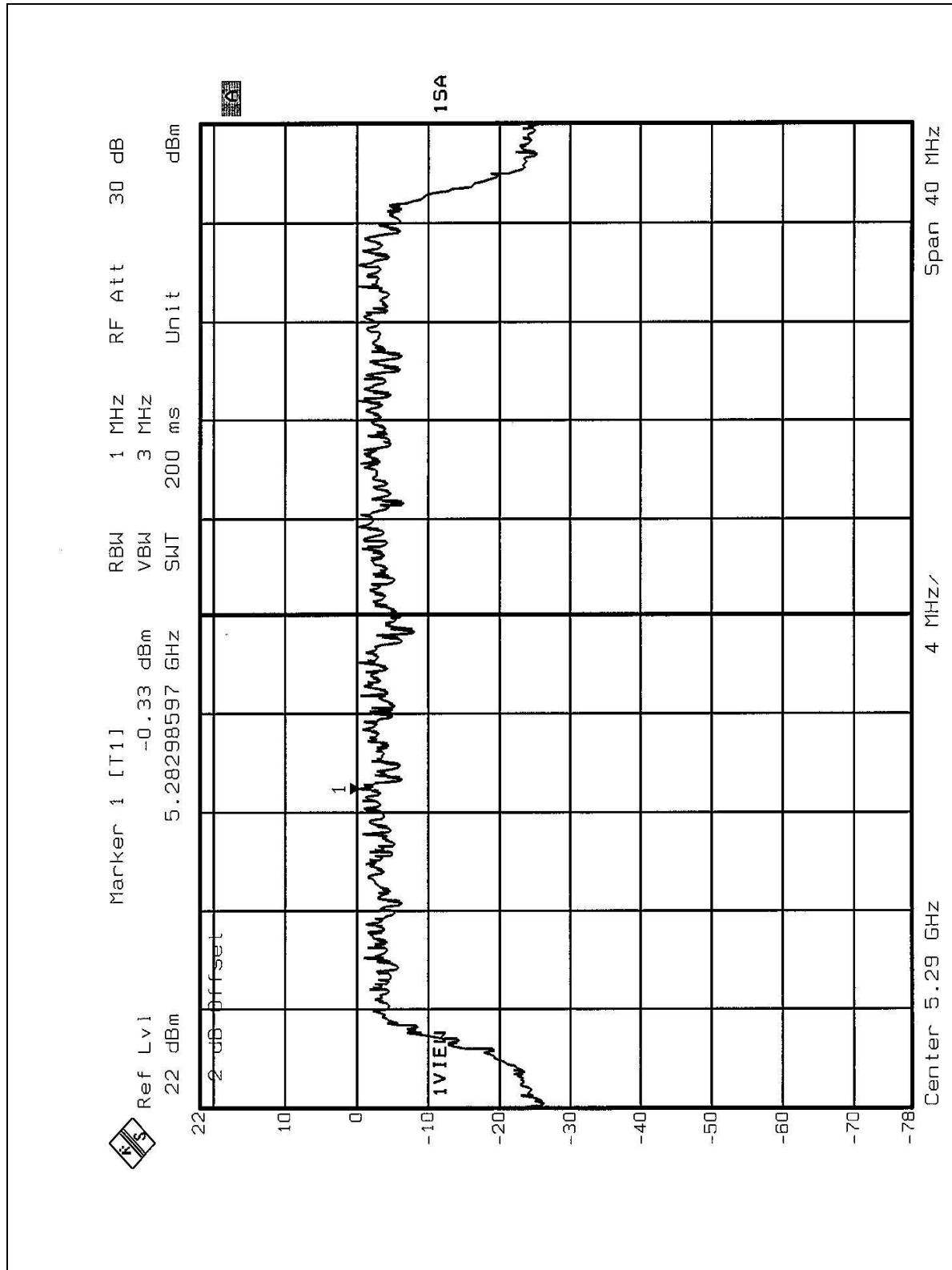


CHANNEL 2



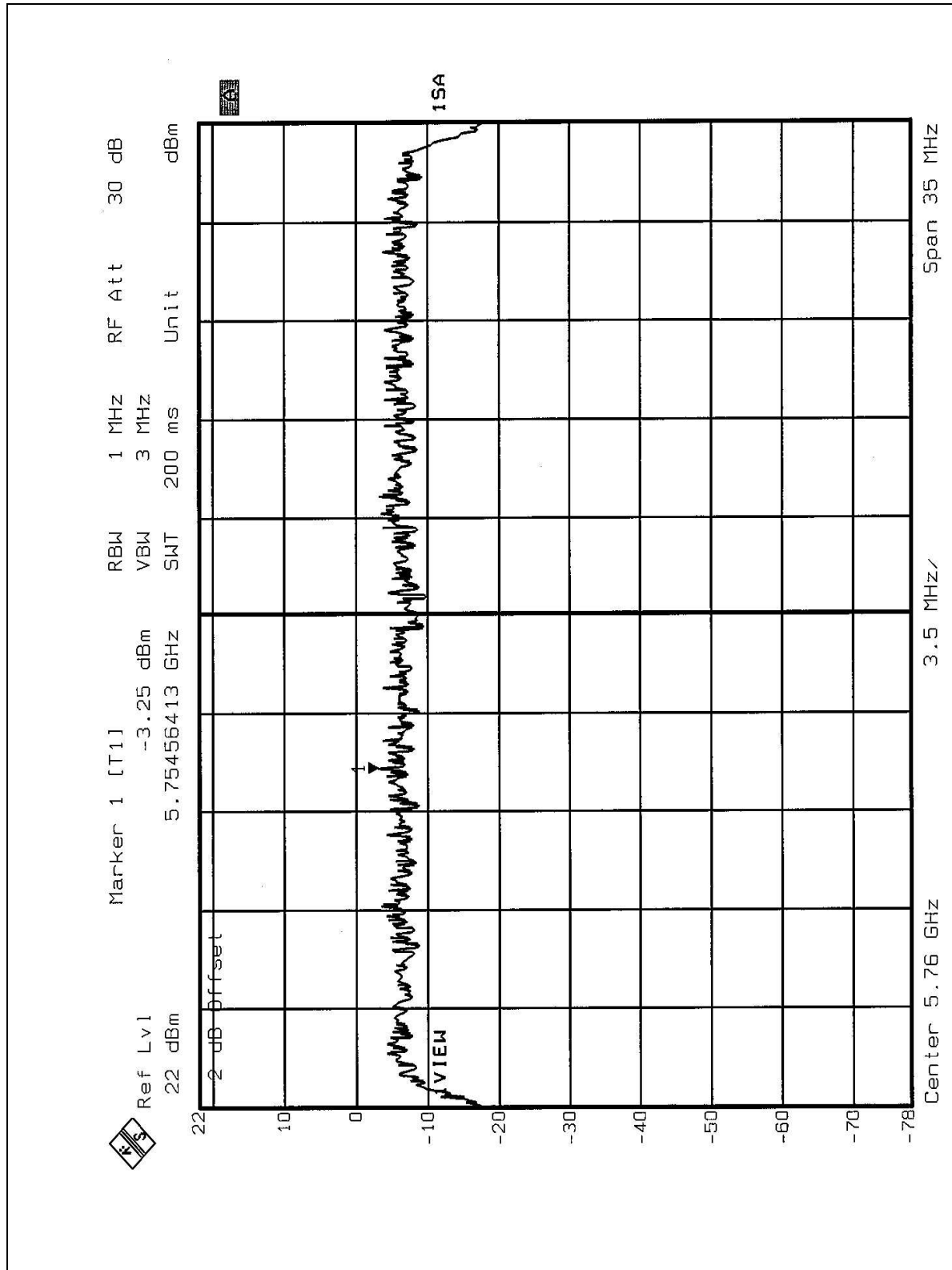


CHANNEL 3



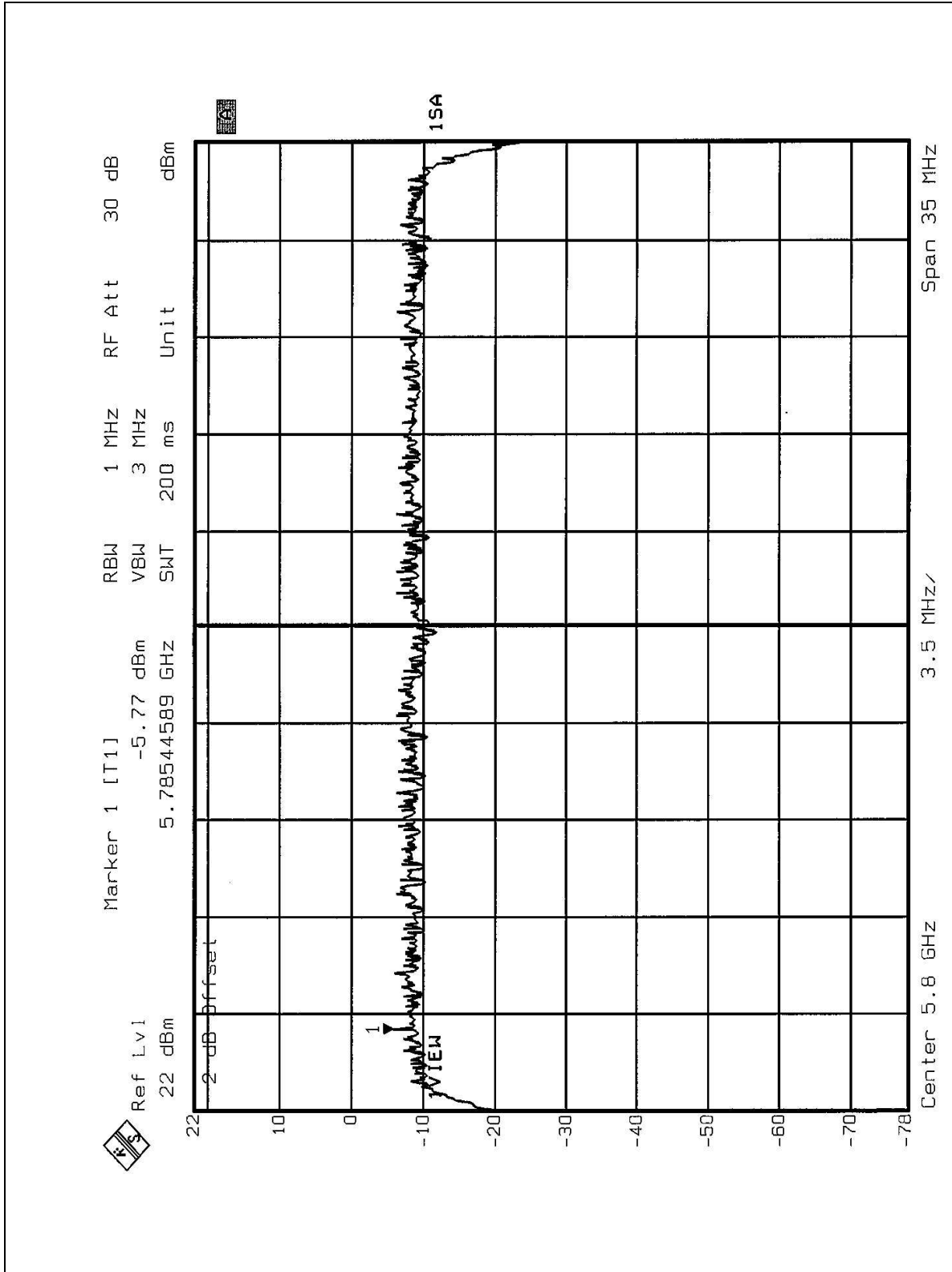


CHANNEL 4





CHANNEL 5





4.6 EFFECTIVE ISOTROPIC RADIATED POWER SPURIOUS EMISSIONS MEASUREMENT

4.6.1 LIMITS OF EFFECTIVE ISOTROPIC RADIATED POWER SPURIOUS EMISSIONS MEASUREMENT

- (1) For transmitters operating in the 5.15 – 5.25 GHz band:
All emissions outside of the 5.15 – 5.25 GHz band shall not exceed an EIRP of -27dBm/MHz .
- (2) For transmitters operating in the 5.25 – 5.35 GHz band:
All emissions outside of the 5.25 – 5.35 GHz band shall not exceed an EIRP of -27dBm/MHz .
- (3) For transmitters operating in the 5.725 – 5.825 GHz band:
All emissions operating within the frequency range from the band edge 10 MHz above or below the band edge shall not exceed an EIRP of -17dBm/MHz ; for frequencies 10 MHz or greater above or below the band edge shall not exceed an EIRP of -27dBm/MHz .

4.6.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
* ROHDE & SCHWARZ Spectrum Analyzer	FSEK30	100049	July 24, 2003
ROHDE & SCHWARZ Signal Generator	68247B	984703	May 31, 2003
* EMCO Horn Antenna	3115	5623	May 23, 2003
* EMCO Horn Antenna	3115	5619	May 22, 2003
MITEQ Preamplifier	AMF-4D-0051	692677	NA
MITEQ Preamplifier	AFS33-18002	690751	NA
Broadband Horn Antenna	BBHA 9170	147	May 30, 2003
Broadband Horn Antenna	BBHA 9170	148	May 31, 2003

NOTE:

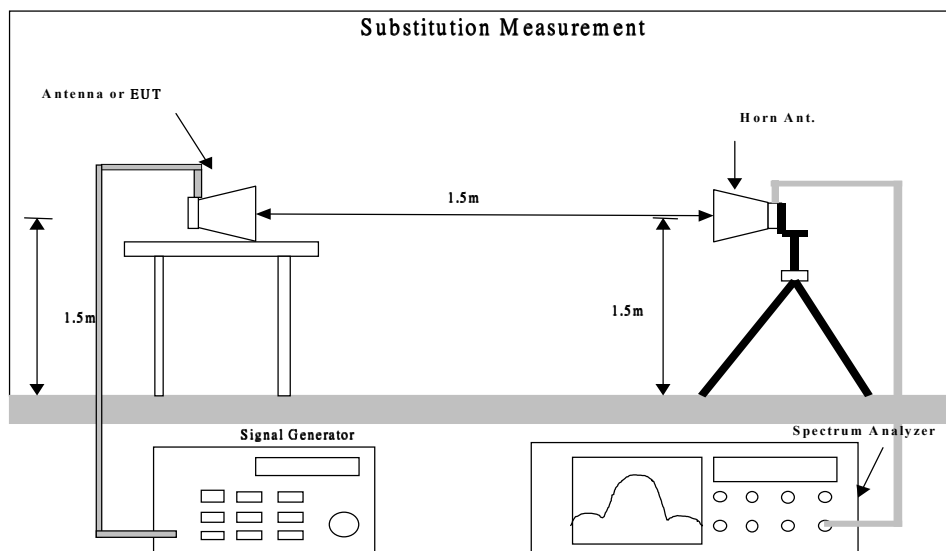
1. The measurement uncertainty is less than $\pm 2.6\text{dB}$, which is calculated as per the NAMAS document NIS81.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.



4.6.3 TEST PROCEDURE

1. The EUT was placed on the top of a rotating table 1.5 meters above the ground.
2. The table was rotated 360 degrees to determine the position of the highest radiation.
3. The EUT was set 1.5 meters away from the receiving antenna, which was mounted on antenna tower and its position at 1.5 m above the ground.
4. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading and recorded the value.
5. The EUT is replaced by a horn antenna connected to a signal generator tuned to the frequency of emission and with the same radiation nature.
6. The radiated power can be calculated via the factor and antenna gain.
7. Repeat step 1-6 for horizontal polarization.

4.6.4 TEST SETUP



4.6.5 EUT OPERATING CONDITION

Same as Item 4.3.5



4.6.6 TEST RESULTS (A)

EUT	IEEE 802.11a Wide band Mini PCI	MODEL	MB-23
MODE	Normal Mode	CHANNEL	1
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK)
ENVIRONMENTAL CONDITIONS	25 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Steven Lu		

EIRP SPURIOUS EMISSION LEVEL					
Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin	Remark
5150.00	-	-	-	-	NOTE
10339.76	H	-39.0	-27.0	-12.0	
10361.30	V	-32.2	-27.0	-5.2	
15541.00	-	-	-	-	NOTE
20718.05	-	-	-	-	NOTE
25781.76	V	-50.5	-27.0	-23.5	
25860.52	H	-52.5	-27.0	-25.5	

NOTE: The emissions appearing in the restricted Bands shall not exceed the general limits of 15.209.



EUT	IEEE 802.11a Wide band Mini PCI	MODEL	MB-23
MODE	Normal Mode	CHANNEL	4
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK)
ENVIRONMENTAL CONDITIONS	25 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Steven Lu		

EIRP SPURIOUS EMISSION LEVEL

Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin	Remark
10477.60	V	-37.7	-27.0	-10.7	
10510.26	H	-41.7	-27.0	-14.7	
15724.26	-	-	-	-	NOTE
20841.96	-	-	-	-	NOTE
26154.71	V	-50.5	-27.0	-23.5	
26176.70	H	-51.2	-27.0	-24.2	

NOTE: The emissions appearing in the restricted Bands shall not exceed the general limits of 15.209.



EUT	IEEE 802.11a Wide band Mini PCI	MODEL	MB-23
MODE	Normal Mode	CHANNEL	5
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK)
ENVIRONMENTAL CONDITIONS	25 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Steven Lu		

EIRP SPURIOUS EMISSION LEVEL					
Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin	Remark
10518.20	V	-33.4	-27.0	-6.4	
10521.40	H	-41.1	-27.0	-14.1	
15780.80	-	-	-	-	NOTE
21033.24	-	-	-	-	NOTE
26258.72	V	-51.2	-27.0	-24.2	
26290.83	H	-52.6	-27.0	-25.6	

NOTE: The emissions appearing in the restricted Bands shall not exceed the general limits of 15.209.



EUT	IEEE 802.11a Wide band Mini PCI	MODEL	MB-23
MODE	Normal Mode	CHANNEL	8
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK)
ENVIRONMENTAL CONDITIONS	25 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Steven Lu		

EIRP SPURIOUS EMISSION LEVEL

Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin	Remark
5320.00	-	-	-	-	NOTE
10643.01	-	-	-	-	NOTE
15962.00	-	-	-	-	NOTE
21297.40	-	-	-	-	NOTE
26508.62	V	-48.4	-27.0	-21.4	
26634.57	H	-50.5	-27.0	-23.5	

NOTE: The emissions appearing in the restricted Bands shall not exceed the general limits of 15.209.



EUT	IEEE 802.11a Wide band Mini PCI	MODEL	MB-23
MODE	Normal Mode	CHANNEL	9
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK)
ENVIRONMENTAL CONDITIONS	25 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Steven Lu		

EIRP SPURIOUS EMISSION LEVEL

Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin	Remark
5725.00	V	-19.32	-17.0	-2.32	
5715.00	V	-33.07	-27.0	-6.07	
11489.80	-	-	-	-	NOTE
17235.80	V	-41.1	-27.0	-14.1	
17247.22	H	-47.8	-27.0	-20.8	
22968.43	-	-	-	-	NOTE
28799.15	V	-31.7	-27.0	-4.7	

NOTE: The emissions appearing in the restricted Bands shall not exceed the general limits of 15.209.



EUT	IEEE 802.11a Wide band Mini PCI	MODEL	MB-23
MODE	Normal Mode	CHANNEL	12
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK)
ENVIRONMENTAL CONDITIONS	25 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Steven Lu		

EIRP SPURIOUS EMISSION LEVEL

Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin	Remark
5825.20	V	-21.16	-17.0	-4.16	
5835.20	V	-32.04	-27.0	-5.04	
11615.01	-	-	-	-	NOTE
17407.94	H	-43.6	-27.0	-16.6	
17418.21	V	-45.1	-27.0	-18.1	
23221.75	H	-55.0	-27.0	-28.0	
23328.42	V	-52.9	-27.0	-25.9	

NOTE: The emissions appearing in the restricted Bands shall not exceed the general limits of 15.209.



EUT	IEEE 802.11a Wide band Mini PCI	MODEL	MB-23
MODE	Turbo Mode	CHANNEL	1
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK)
ENVIRONMENTAL CONDITIONS	25 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Steven Lu		

EIRP SPURIOUS EMISSION LEVEL

Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin	Remark
5150.00	-	-	-	-	NOTE
10399.76	V	-36.4	-27.0	-9.4	
10443.85	H	-40.0	-27.0	-13.0	
15637.62	-	-	-	-	NOTE
20828.58	-	-	-	-	NOTE
26056.56	H	-53.4	-27.0	-26.4	
26080.06	V	-51.8	-27.0	-24.8	

NOTE: The emissions appearing in the restricted Bands shall not exceed the general limits of 15.209.



EUT	IEEE 802.11a Wide band Mini PCI	MODEL	MB-23
MODE	Turbo Mode	CHANNEL	2
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK)
ENVIRONMENTAL CONDITIONS	25 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Steven Lu		

EIRP SPURIOUS EMISSION LEVEL

Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin	Remark
10500.60	V	-38.7	-27.0	-11.7	
10501.80	H	-41.2	-27.0	-14.2	
15754.26	-	-	-	-	NOTE
21019.39	-	-	-	-	NOTE
26236.62	H	-51.7	-27.0	-24.7	
26258.82	V	-51.2	-27.0	-24.2	

NOTE: The emissions appearing in the restricted Bands shall not exceed the general limits of 15.209.



EUT	IEEE 802.11a Wide band Mini PCI	MODEL	MB-23
MODE	Turbo Mode	CHANNEL	3
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK)
ENVIRONMENTAL CONDITIONS	25 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Steven Lu		

EIRP SPURIOUS EMISSION LEVEL

Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin	Remark
5350.00	-	-	-	-	NOTE
10576.59	H	-40.8	-27.0	-13.8	
10577.80	V	-35.8	-27.0	-8.8	
15862.89	-	-	-	-	NOTE
21133.60	-	-	-	-	NOTE
26405.81	H	-52.7	-27.0	-25.7	
26485.67	V	-51.1	-27.0	-24.1	

NOTE: The emissions appearing in the restricted Bands shall not exceed the general limits of 15.209.



EUT	IEEE 802.11a Wide band Mini PCI	MODEL	MB-23
MODE	Turbo Mode	CHANNEL	4
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK)
ENVIRONMENTAL CONDITIONS	25 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Steven Lu		

EIRP SPURIOUS EMISSION LEVEL

Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin	Remark
5715.00	V	-30.44	-27.0	-3.44	
5725.00	V	-20.87	-17.0	-3.87	
11527.01	-	-	-	-	NOTE
17269.78	V	-45.1	-27.0	-18.1	
17280.25	H	-45.7	-27.0	-18.7	
23037.75	-	-	-	-	NOTE

NOTE: The emissions appearing in the restricted Bands shall not exceed the general limits of 15.209.



EUT	IEEE 802.11a Wide band Mini PCI	MODEL	MB-23
MODE	Turbo Mode	CHANNEL	5
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK)
ENVIRONMENTAL CONDITIONS	25 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Steven Lu		

EIRP SPURIOUS EMISSION LEVEL

Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin	Remark
11602.20	-	-	-	-	NOTE
17388.78	V	-43.2	-27.0	-16.2	
17399.60	H	-47.3	-27.0	-20.3	
23098.00	-	-	-	-	NOTE
23231.51	H	-55.3	-27.0	-28.3	

NOTE: The emissions appearing in the restricted Bands shall not exceed the general limits of 15.209.



4.6.7 TEST RESULTS (B)

EUT	IEEE 802.11a Wide band Mini PCI	MODEL	MB-23
MODE	Normal Mode	CHANNEL	1
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK)
ENVIRONMENTAL CONDITIONS	25 deg. C, 70%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Steven Lu		

EIRP SPURIOUS EMISSION LEVEL					
Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin	Remark
5150.00	-	-	-	-	NOTE
10358.90	H	-33.2	-27.0	-6.2	
10362.51	V	-34.2	-27.0	-7.2	
15541.20	-	-	-	-	NOTE
20720.30	-	-	-	-	NOTE
25820.64	V	-51.0	-27.0	-24.0	
25821.44	H	-53.2	-27.0	-26.2	

NOTE: The emissions appearing in the restricted Bands shall not exceed the general limits of 15.209.