

5.3 PEAK TRANSMIT POWER MEASUREMENT

5.3.1 LIMITS OF PEAK TRANSMIT POWER MEASUREMENT

Frequency Band	Limit
5.15 – 5.25 GHz	The lesser of 50mW (17dBm) or 4dBm + 10logB
5.25 – 5.35 GHz	The lesser of 250mW (24dBm) or 11dBm + 10logB
5.725 – 5.825 GHz	The lesser of 1W (30dBm) or 17dBm + 10logB

Note: Where B is the 26 dB emission bandwidth in MHz.

5.3.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
ROHDE&SCHWARZ SINGLE CHANNEL POWER METER	NRVS	100026	Mar. 21, 2003
ROHDE&SCHWARZ PEAK POWER METER CHANNEL POWER METER	NRV-Z32	100013	Mar. 21, 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.

5.3.3 TEST PROCEDURE

The transmitter output was connected to the peak power sensor.

5.3.4 DEVIATION FROM TEST STANDARD

No deviation

5.3.5 TEST SETUP



5.3.6 EUT OPERATING CONDITIONS

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

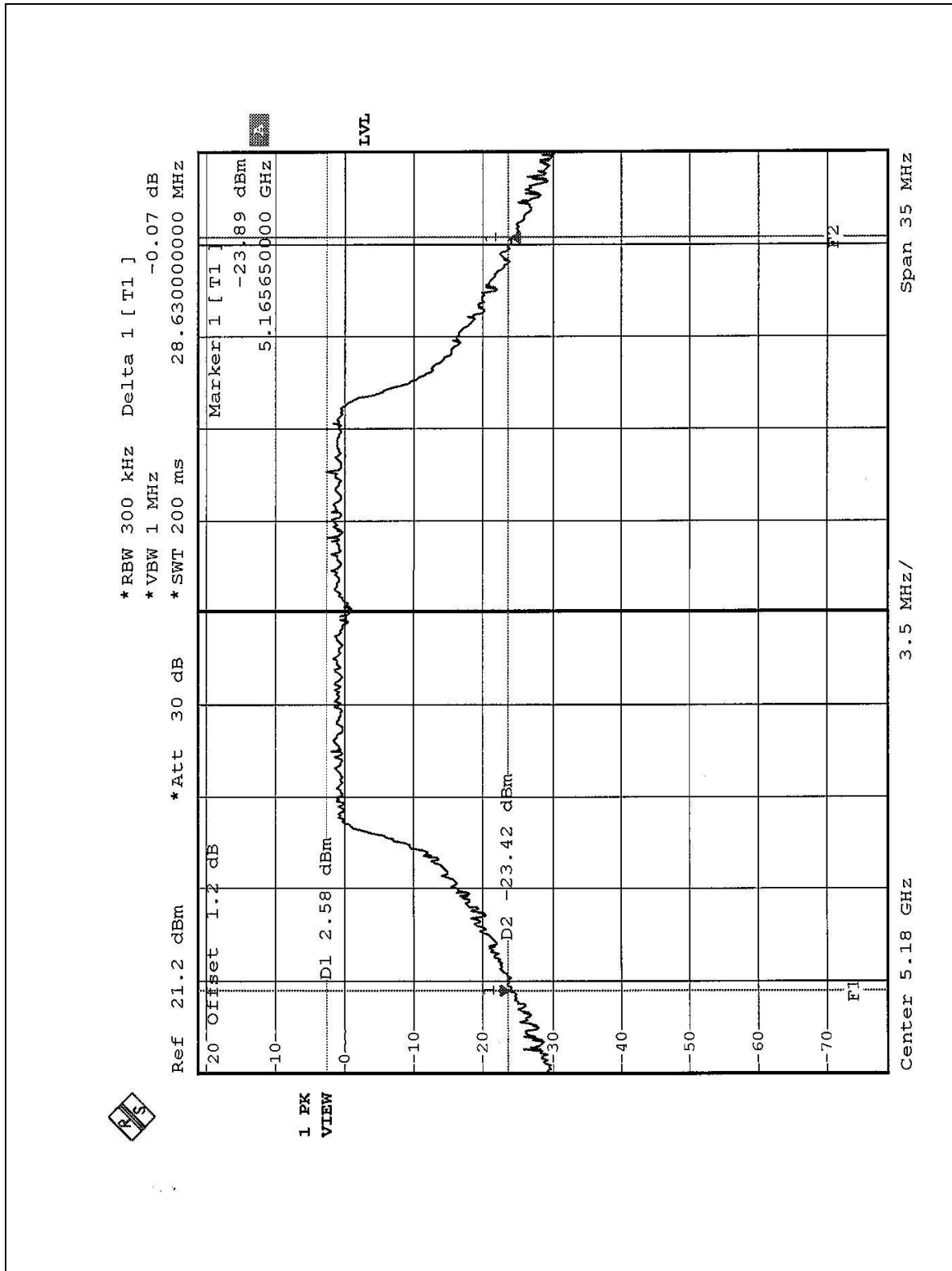
5.3.7 TEST RESULTS

EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Normal	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	30 deg. C, 55%RH, 1005 hPa	TESTED BY	Steven Lu

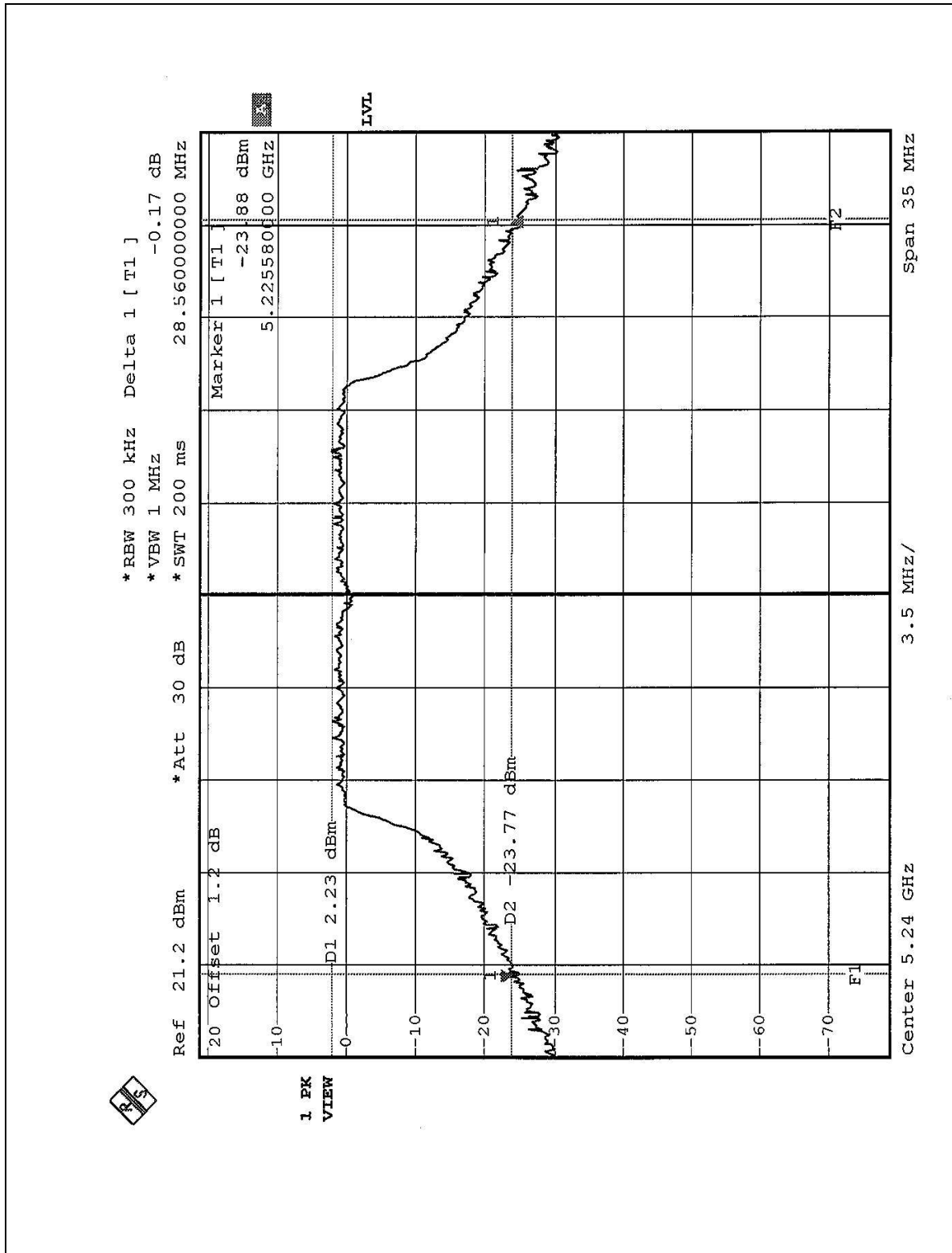
CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	26dBc Occupied Bandwidth (MHz)	PASS/FAIL
1	5180	13.22	17.00	28.63	PASS
4	5240	13.72	17.00	28.56	PASS
5	5260	13.80	24.00	28.07	PASS
8	5320	13.95	24.00	29.26	PASS
9	5745	11.59	30.00	27.58	PASS
12	5805	13.28	30.00	28.56	PASS

NOTE: The 26dBc Occupied Bandwidth plot, please refer to next 6 pages.

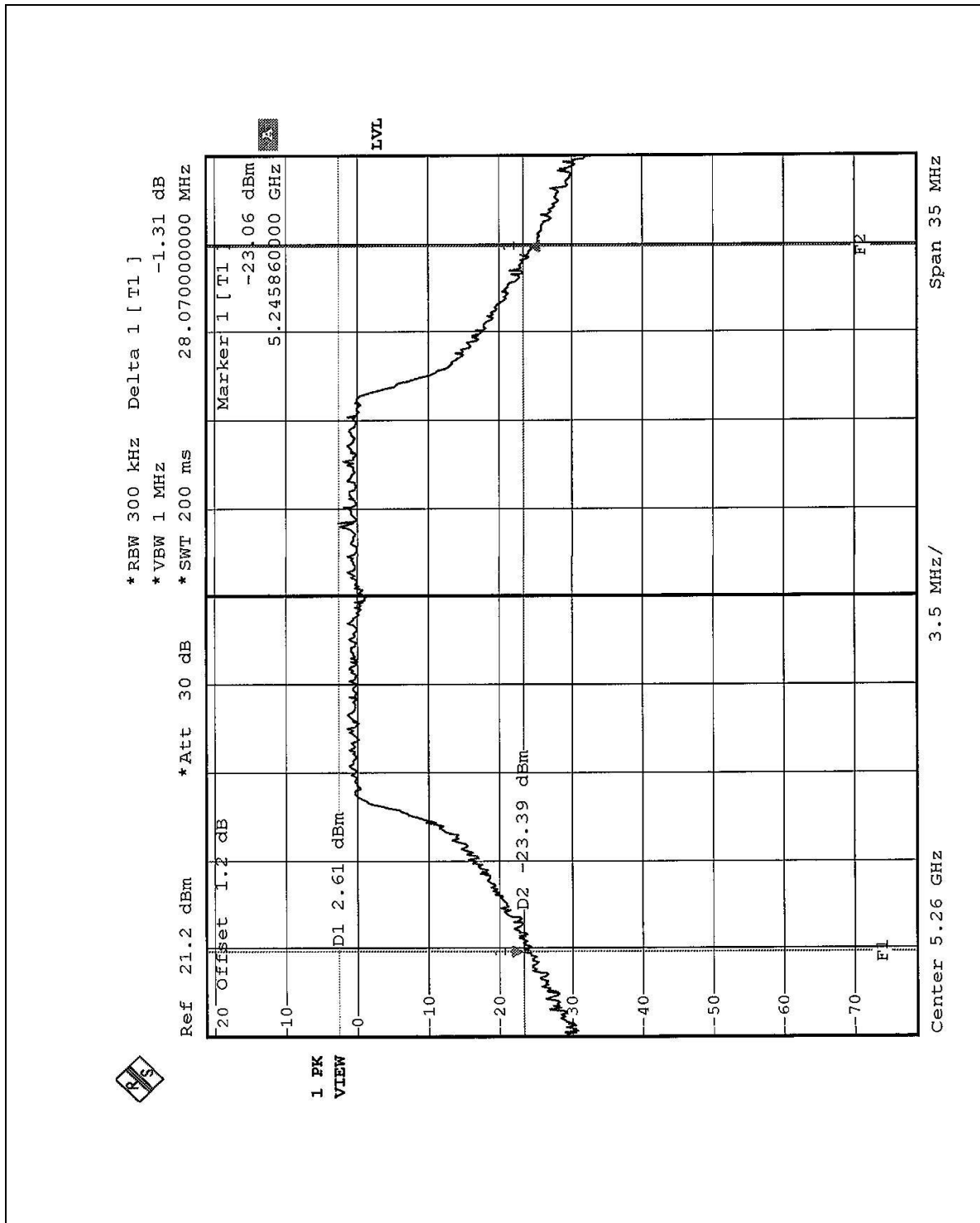
CHANNEL 1



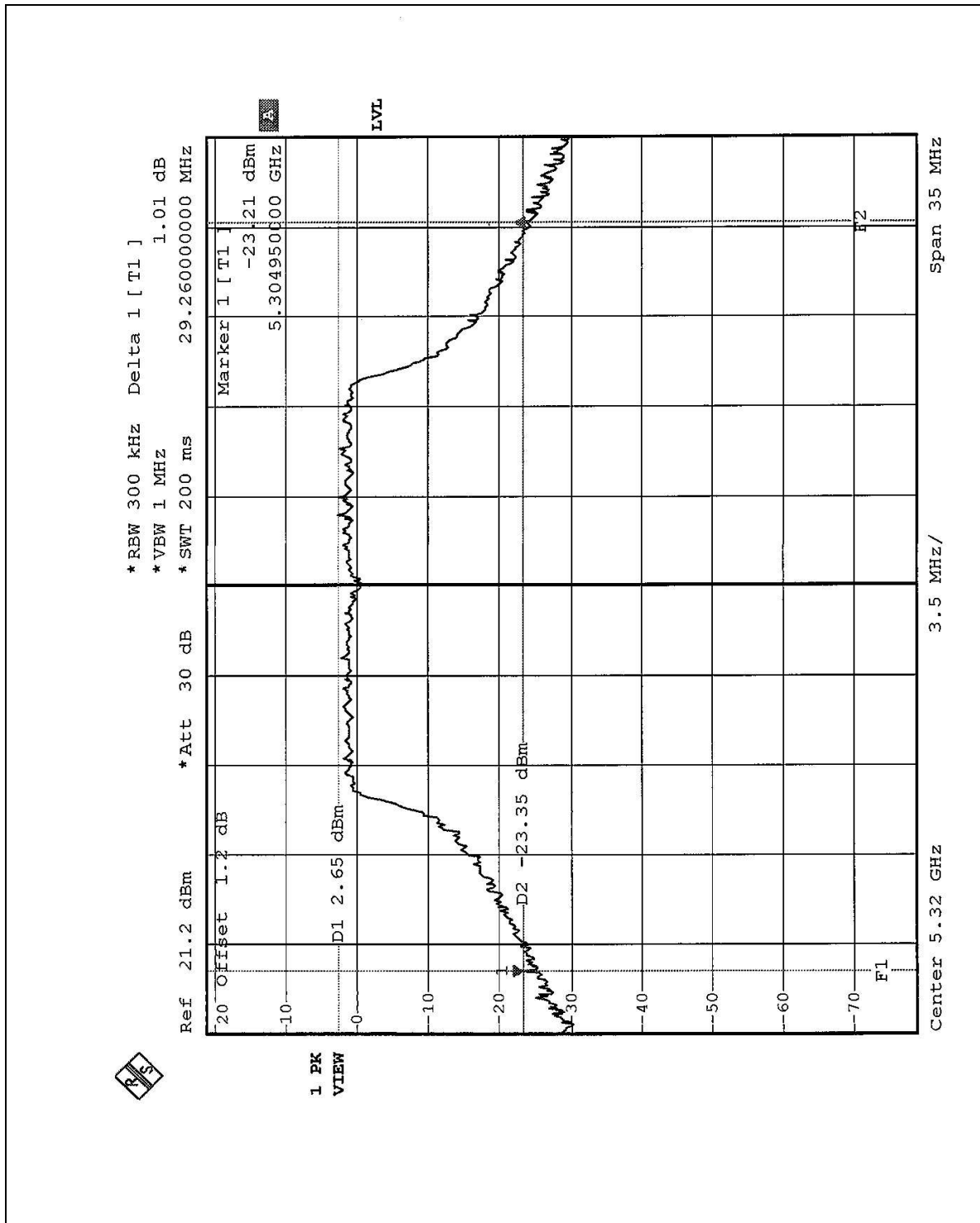
CHANNEL 4



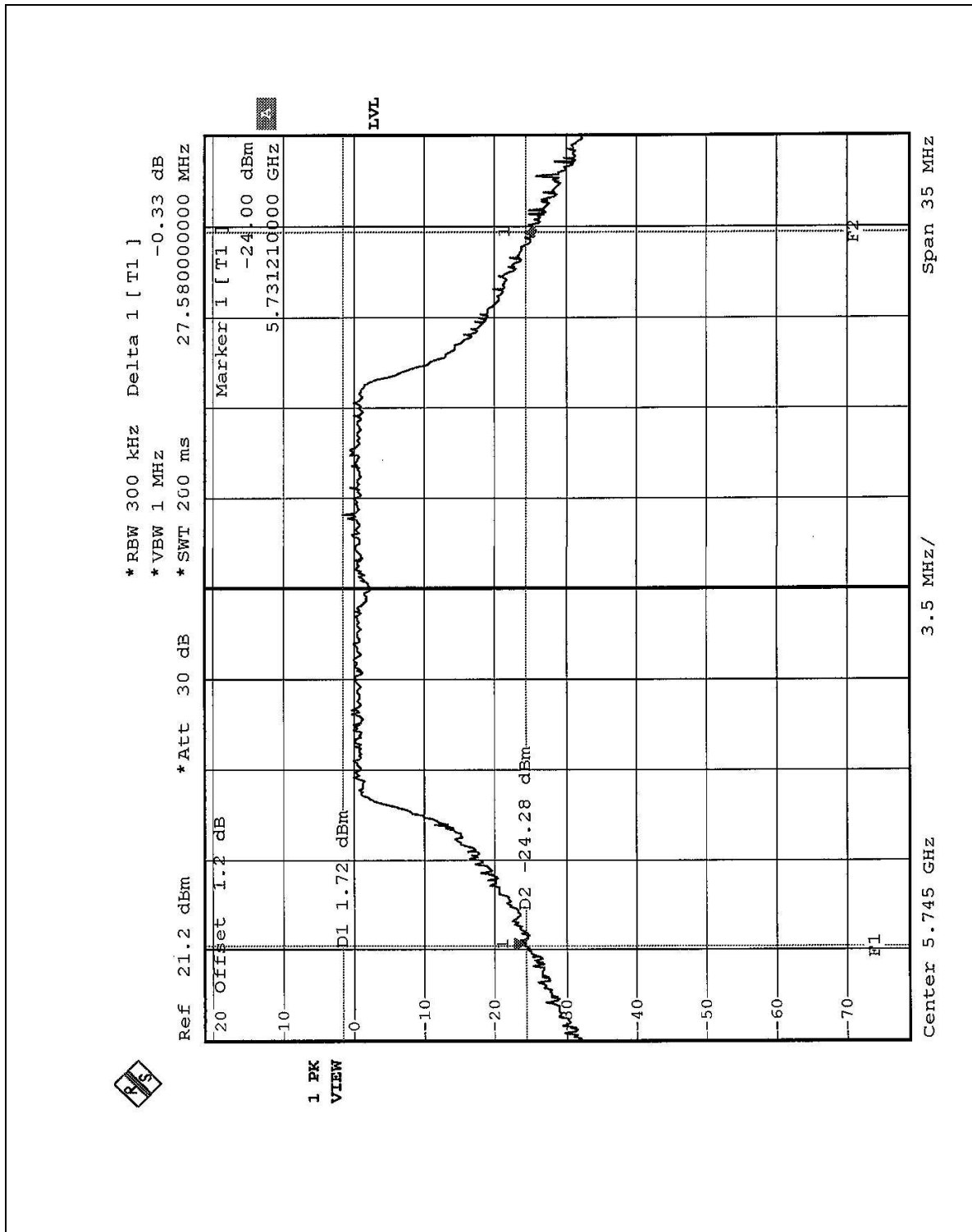
CHANNEL 5



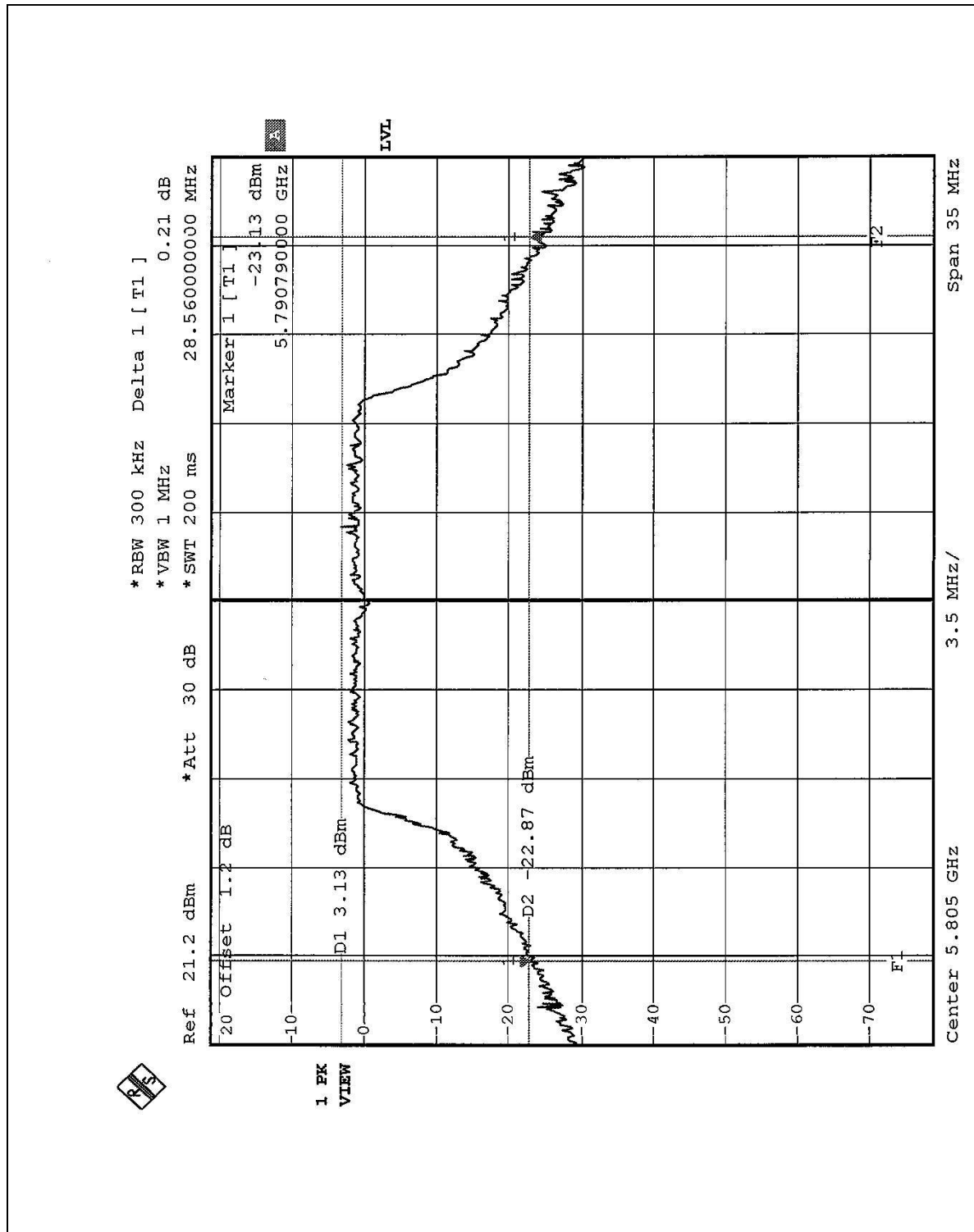
CHANNEL 8



CHANNEL 9



CHANNEL 12

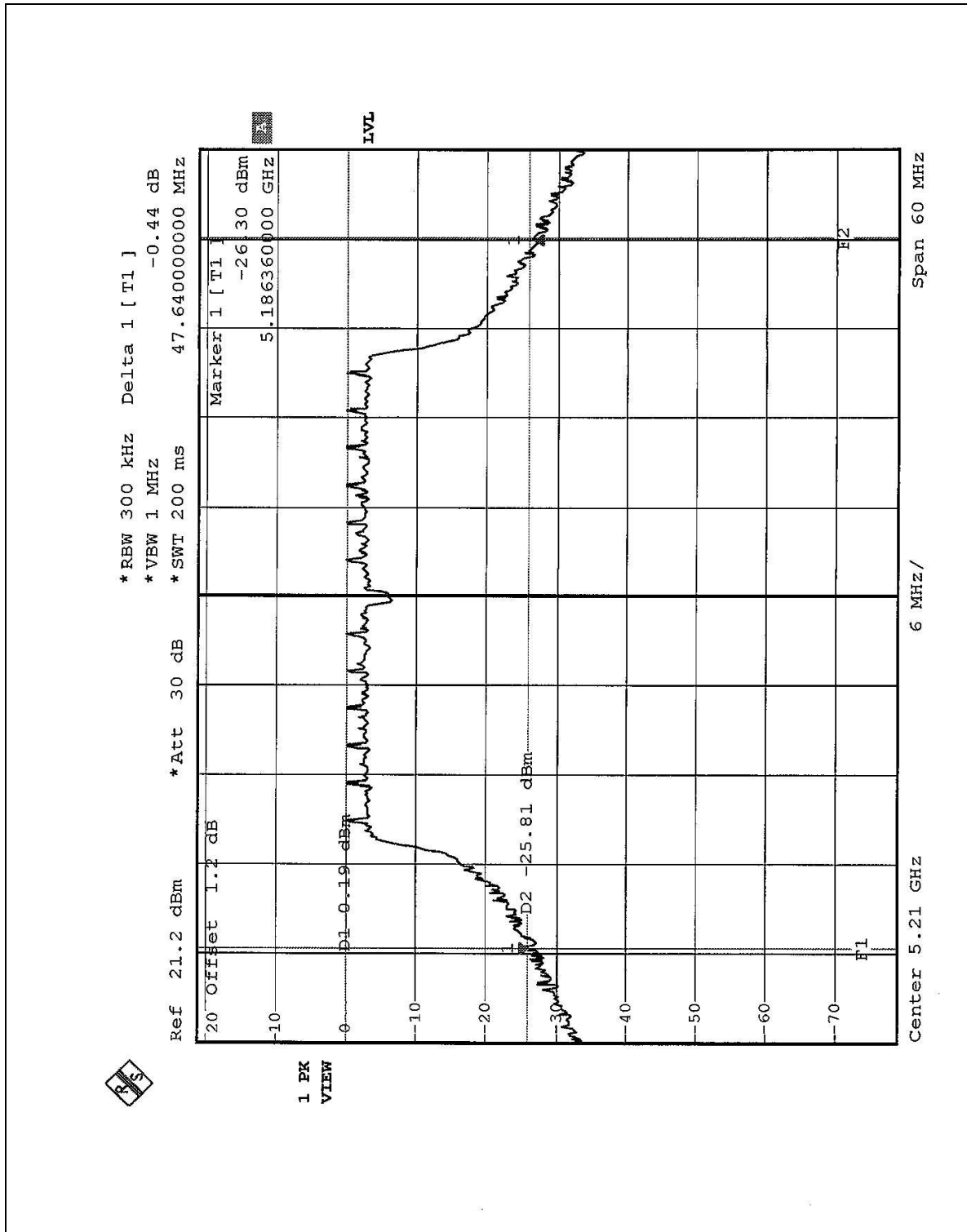


EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Turbo	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	30 deg. C, 55%RH, 1005 hPa	TESTED BY	Steven Lu

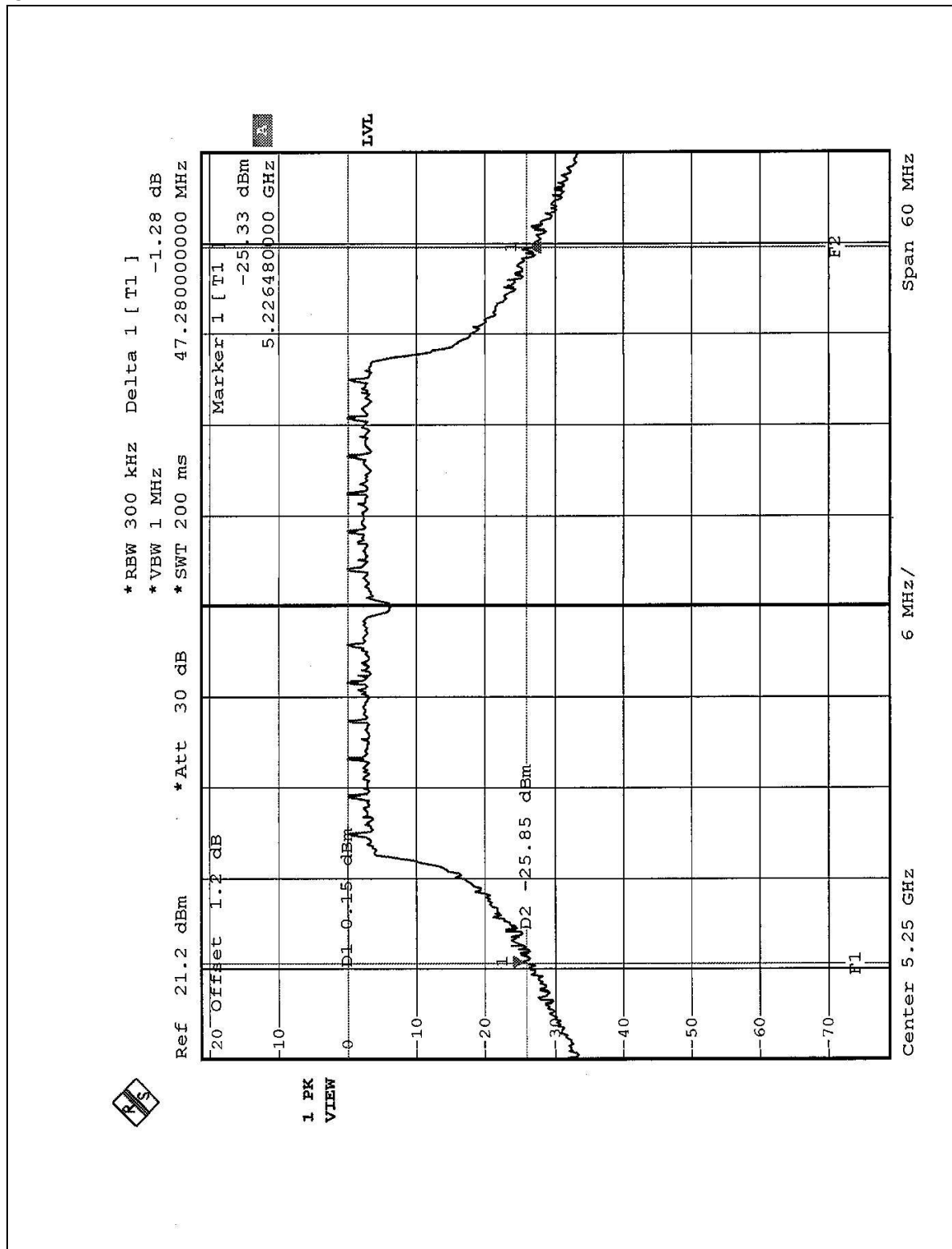
CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	26dBc Occupied Bandwidth (MHz)	PASS/FAIL
1	5210	12.29	17.00	47.64	PASS
2	5250	12.00	17.00	47.28	PASS
3	5290	11.83	24.00	47.28	PASS
4	5760	10.88	30.00	47.64	PASS
5	5800	12.14	30.00	47.28	PASS

NOTE: The 26dBc Occupied Bandwidth plot, please refer to next 6 pages.

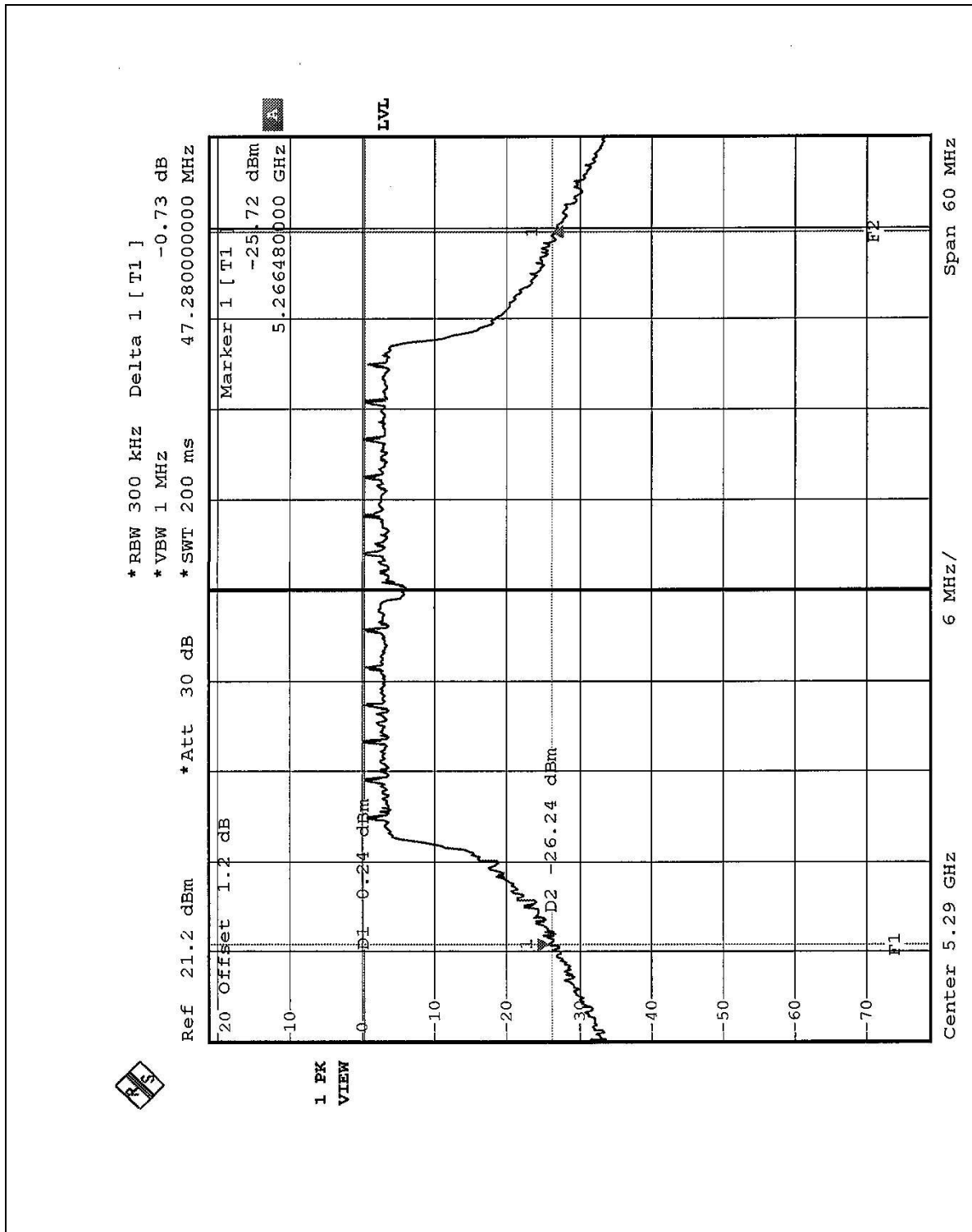
CHANNEL 1



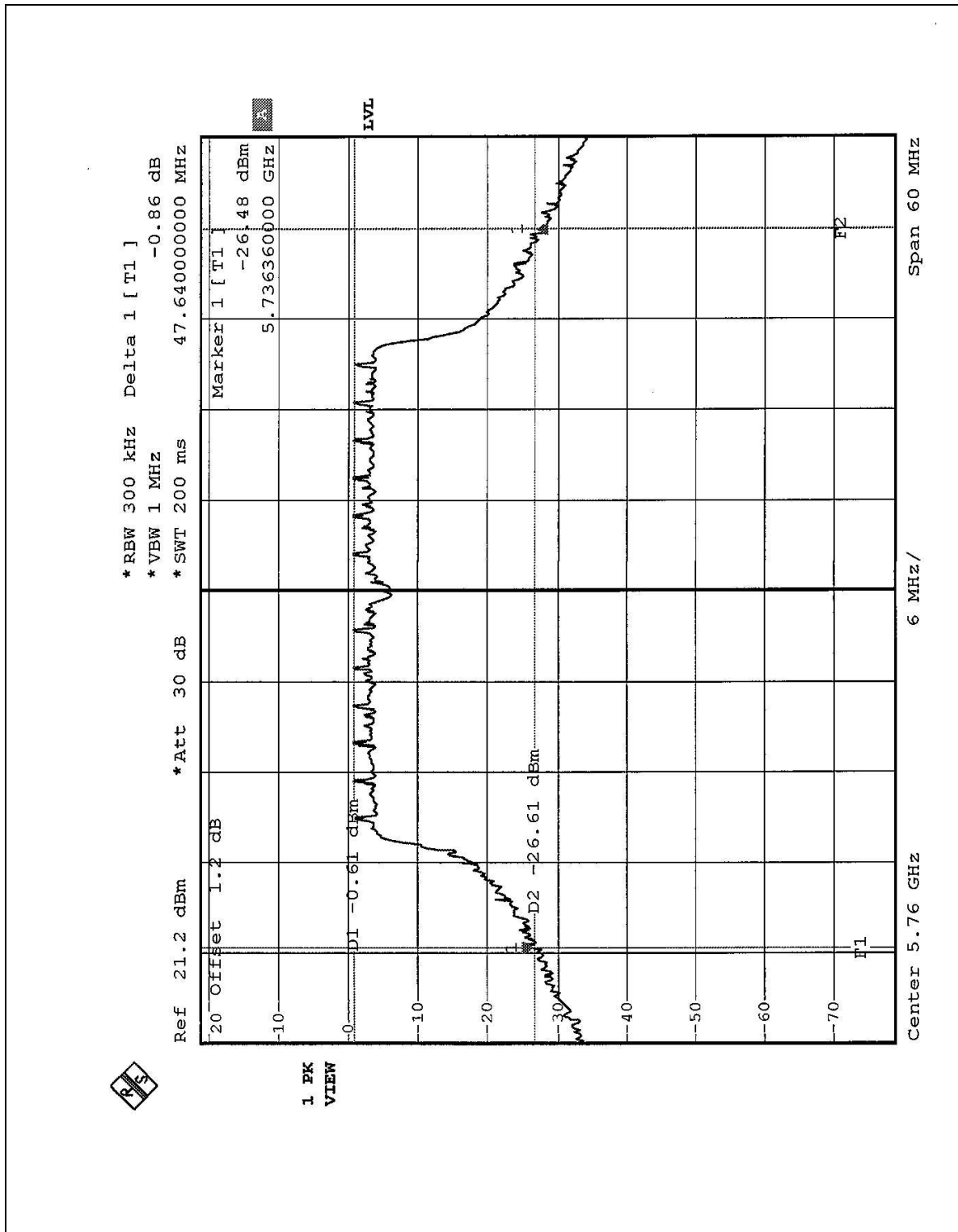
CHANNEL 2



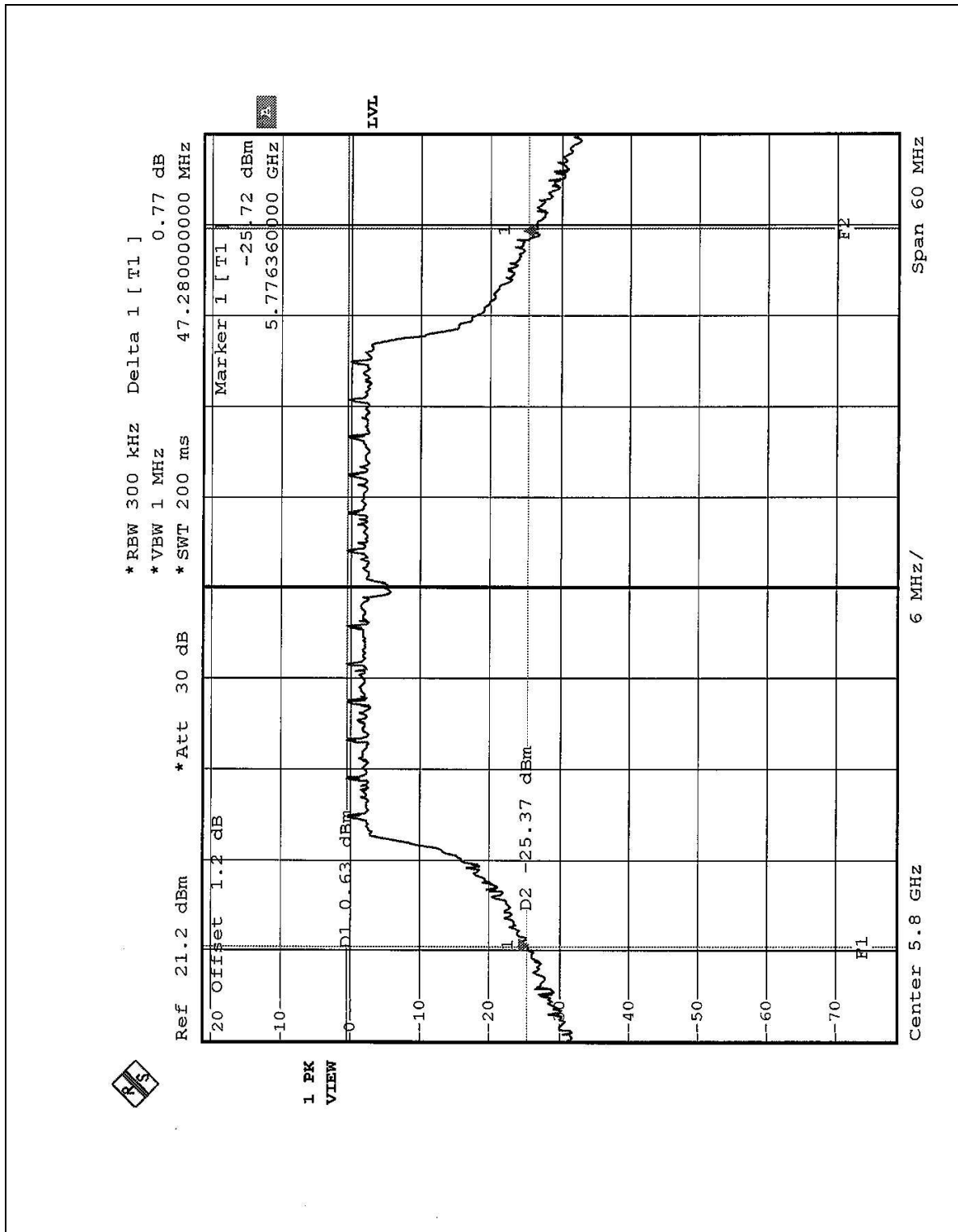
CHANNEL 3



CHANNEL 4



CHANNEL 5



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
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.

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=1MHz) and 2 (RB=1MHz, VB=30KHz).
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

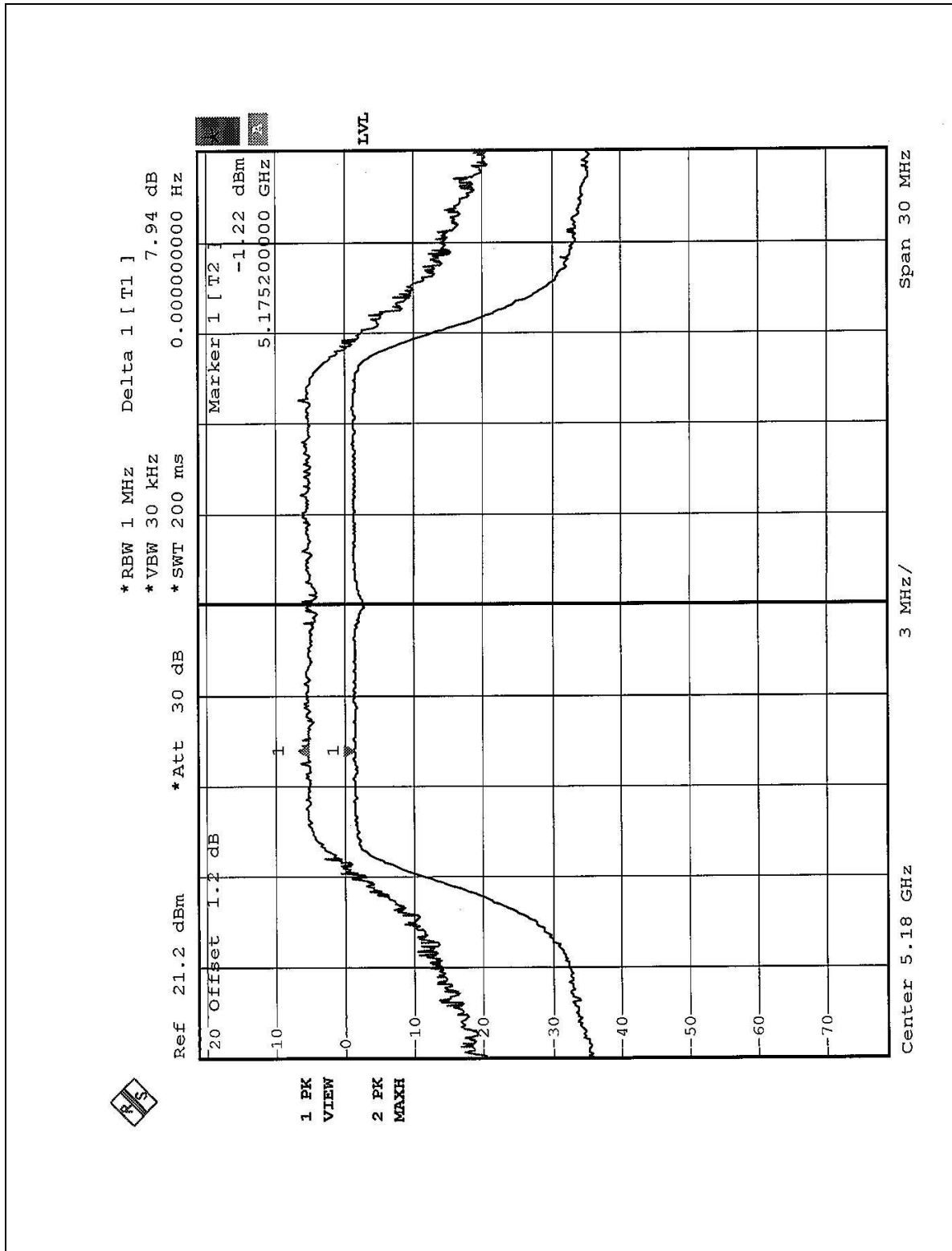
The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.

5.4.7 TEST RESULTS

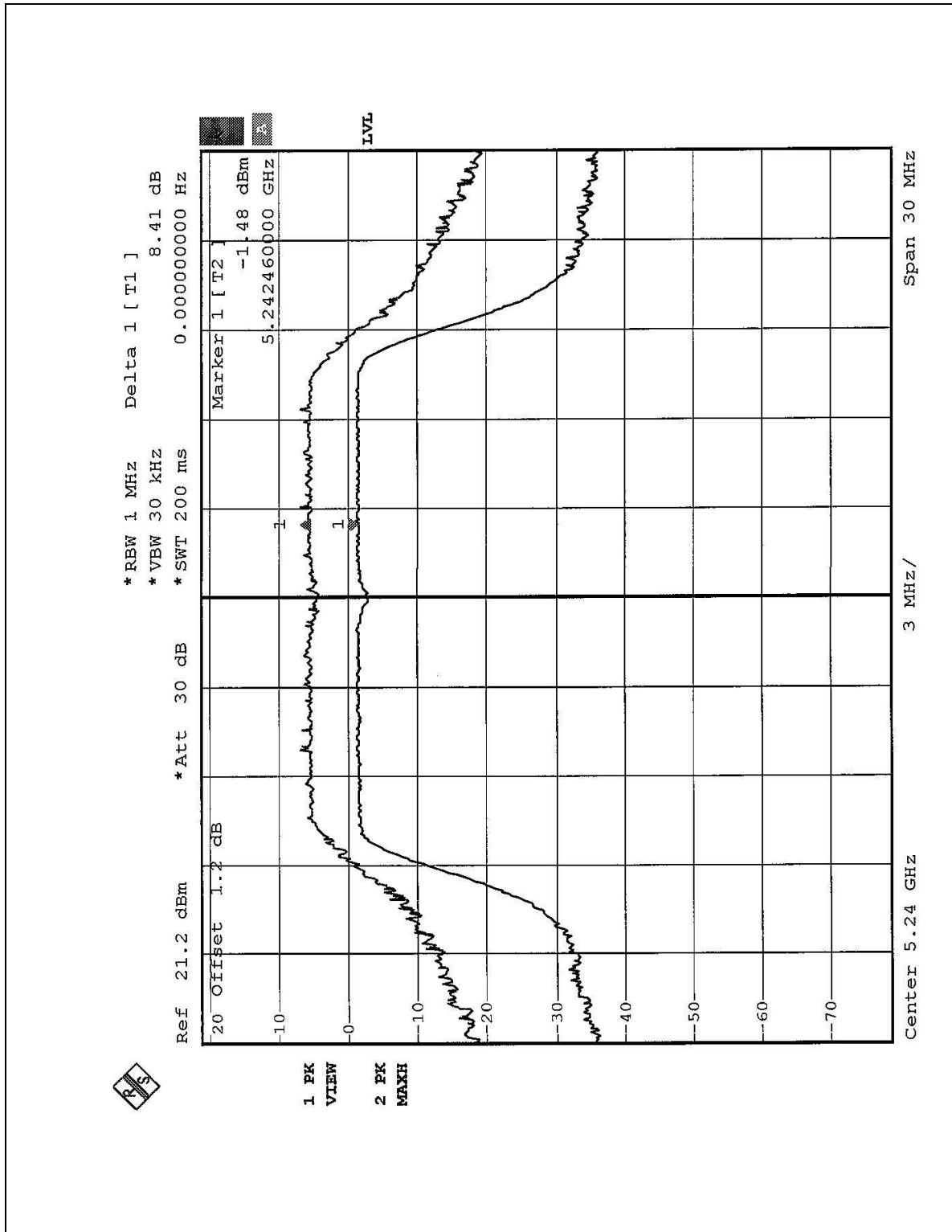
EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Normal	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	30 deg. C, 55%RH, 1005 hPa	TESTED BY	Steven Lu

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)	PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
1	5180	7.94	13	PASS
4	5240	8.41	13	PASS
5	5260	8.34	13	PASS
8	5320	7.23	13	PASS
9	5745	8.56	13	PASS
12	5805	8.86	13	PASS

CHANNEL 1



CHANNEL 4



*RBW 1 MHz
 *VBW 30 kHz
 *SWT 200 ms

Delta 1 [T1] 8.34 dB

Ref 21.2 dBm
 Att 30 dB

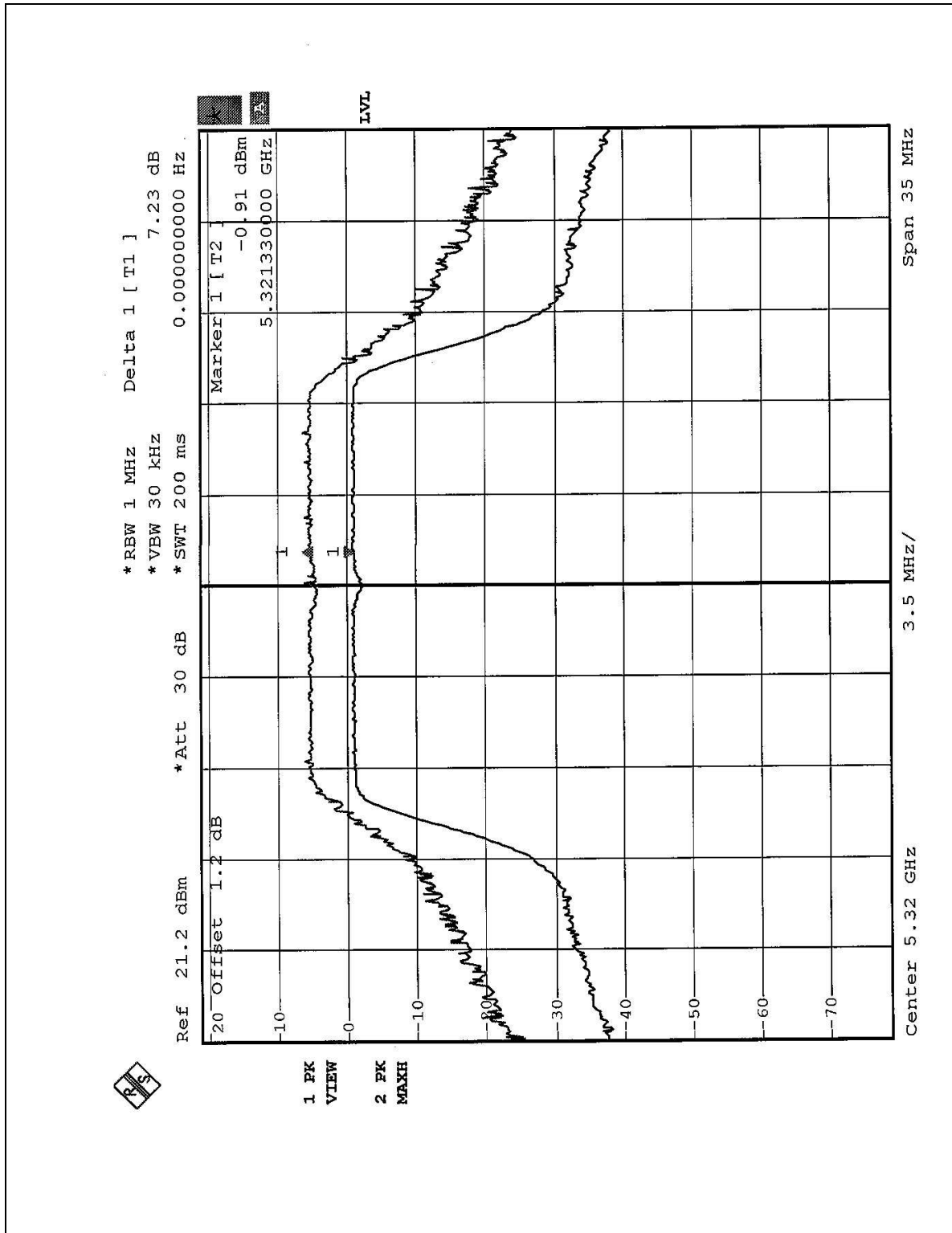
20 Offset 1.2 dB

1 PK VIEW
 2 PK MAXH

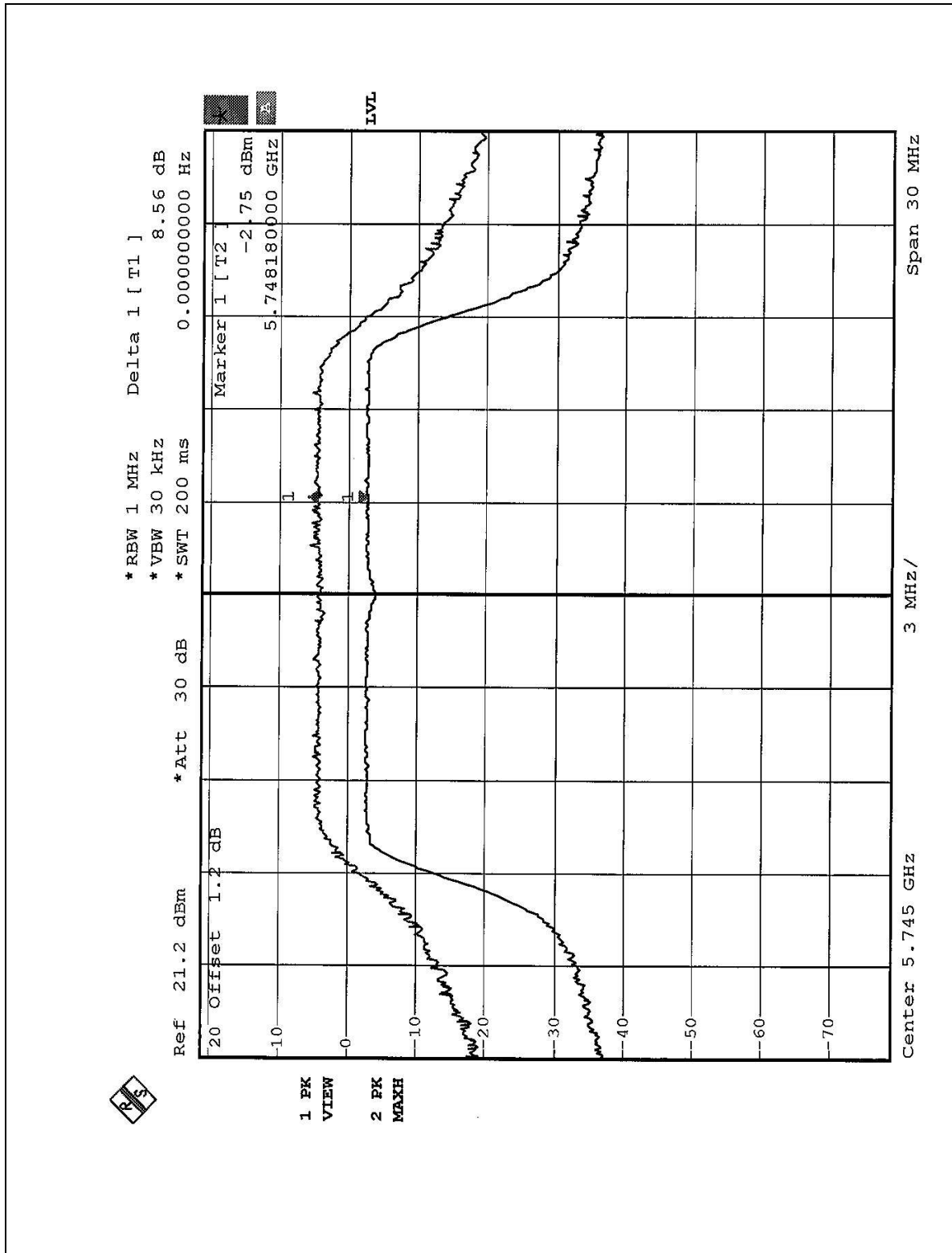
Marker 1 [T2]
 5.262520000 GHz
 -1.78 dBm

Center 5.26 GHz
 Span 35 MHz

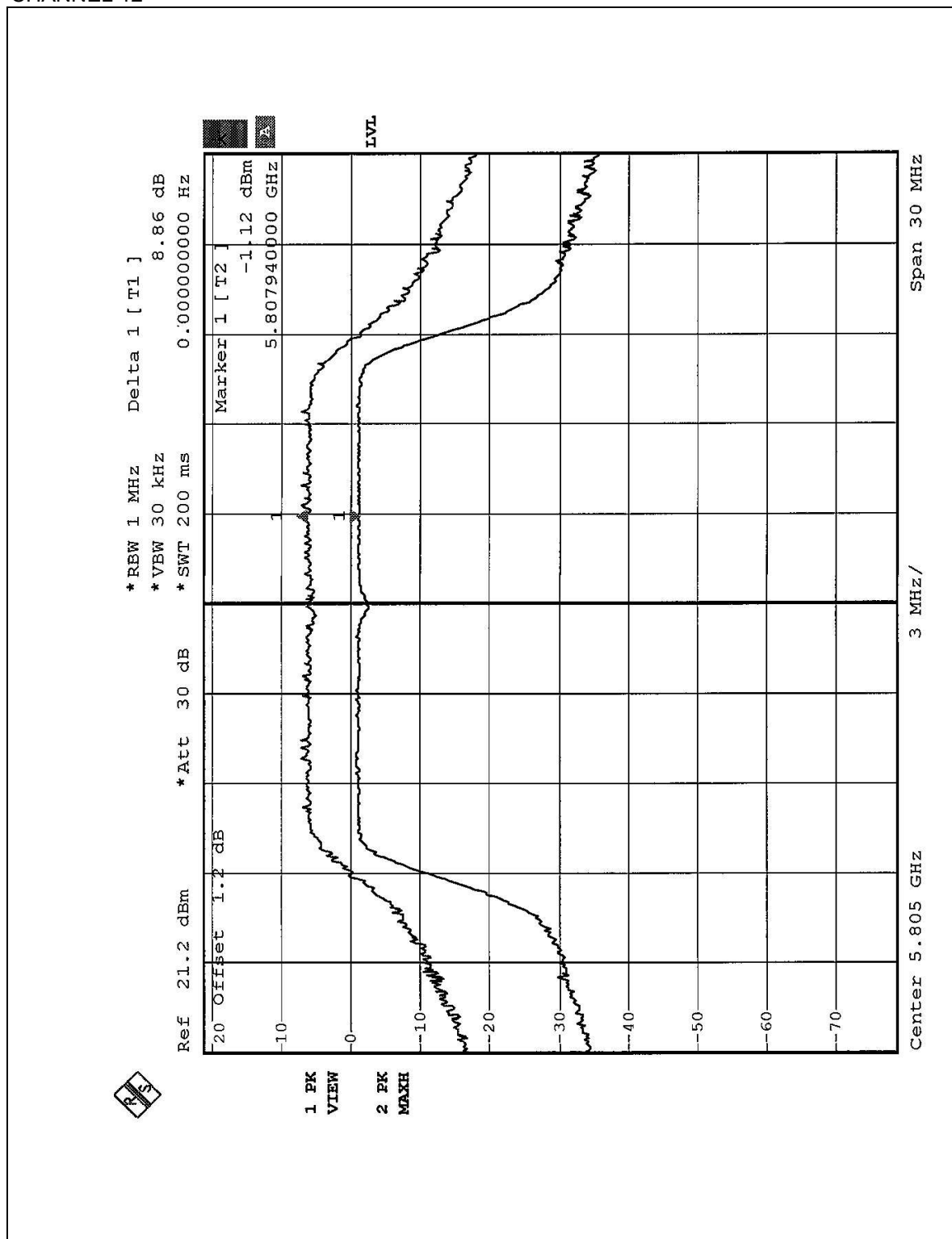
CHANNEL 8



CHANNEL 9



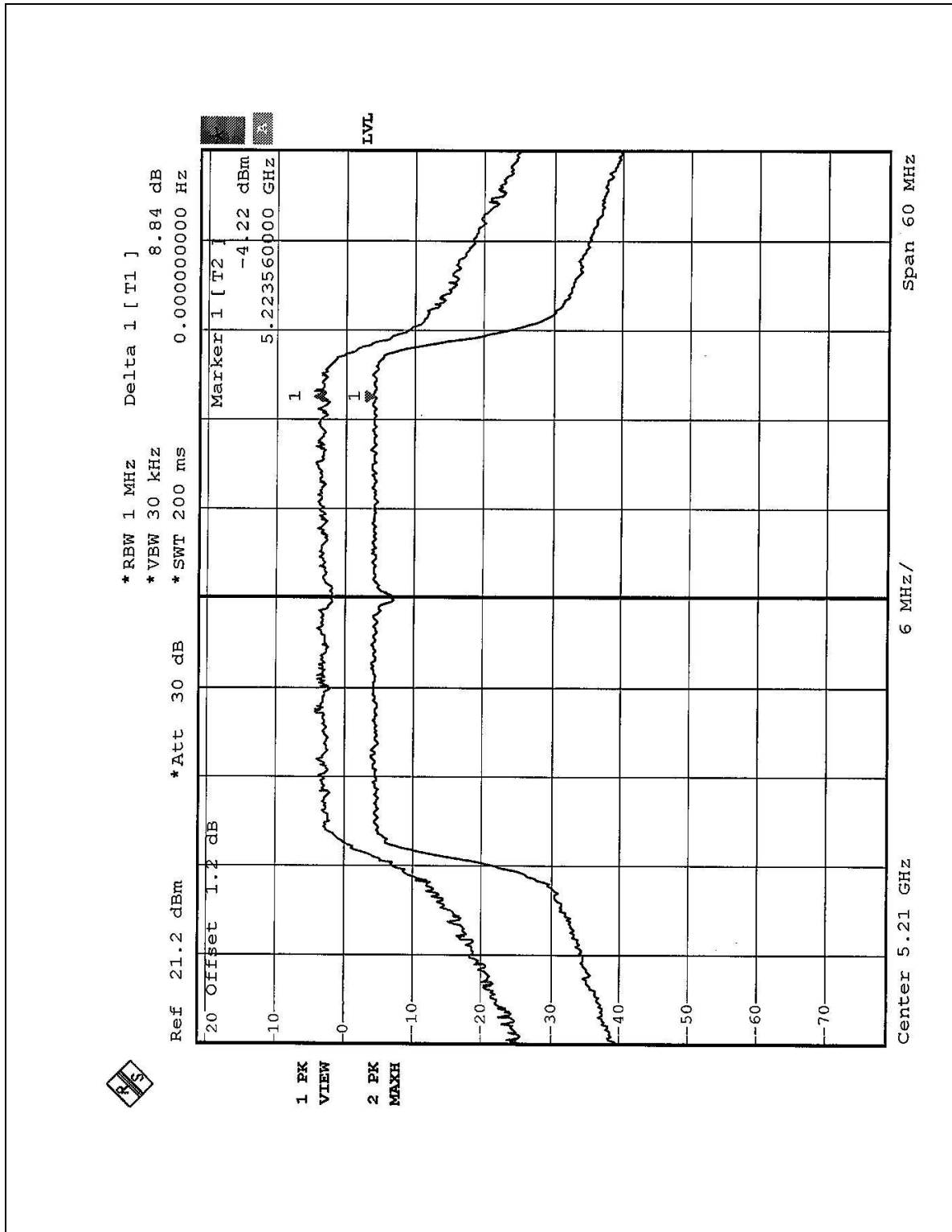
CHANNEL 12



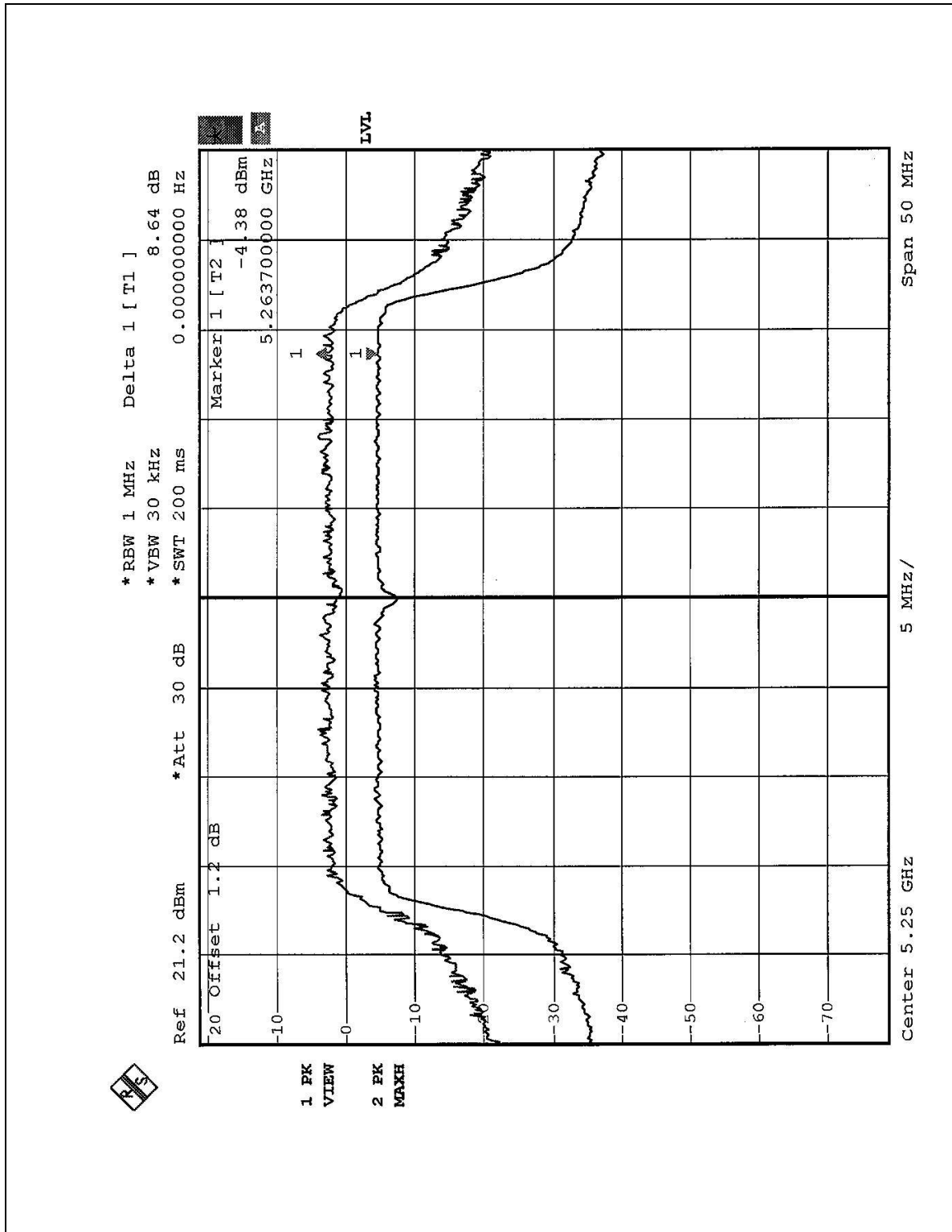
EUT	WLAN a+b combo mini-PCI	MODEL	VM4-3B
MODE	Turbo	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	30 deg. C, 55%RH, 1005 hPa	TESTED BY	Steven Lu

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)	PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
1	5210	8.84	13	PASS
2	5250	8.64	13	PASS
3	5290	8.65	13	PASS
4	5760	8.60	13	PASS
5	5800	8.44	13	PASS

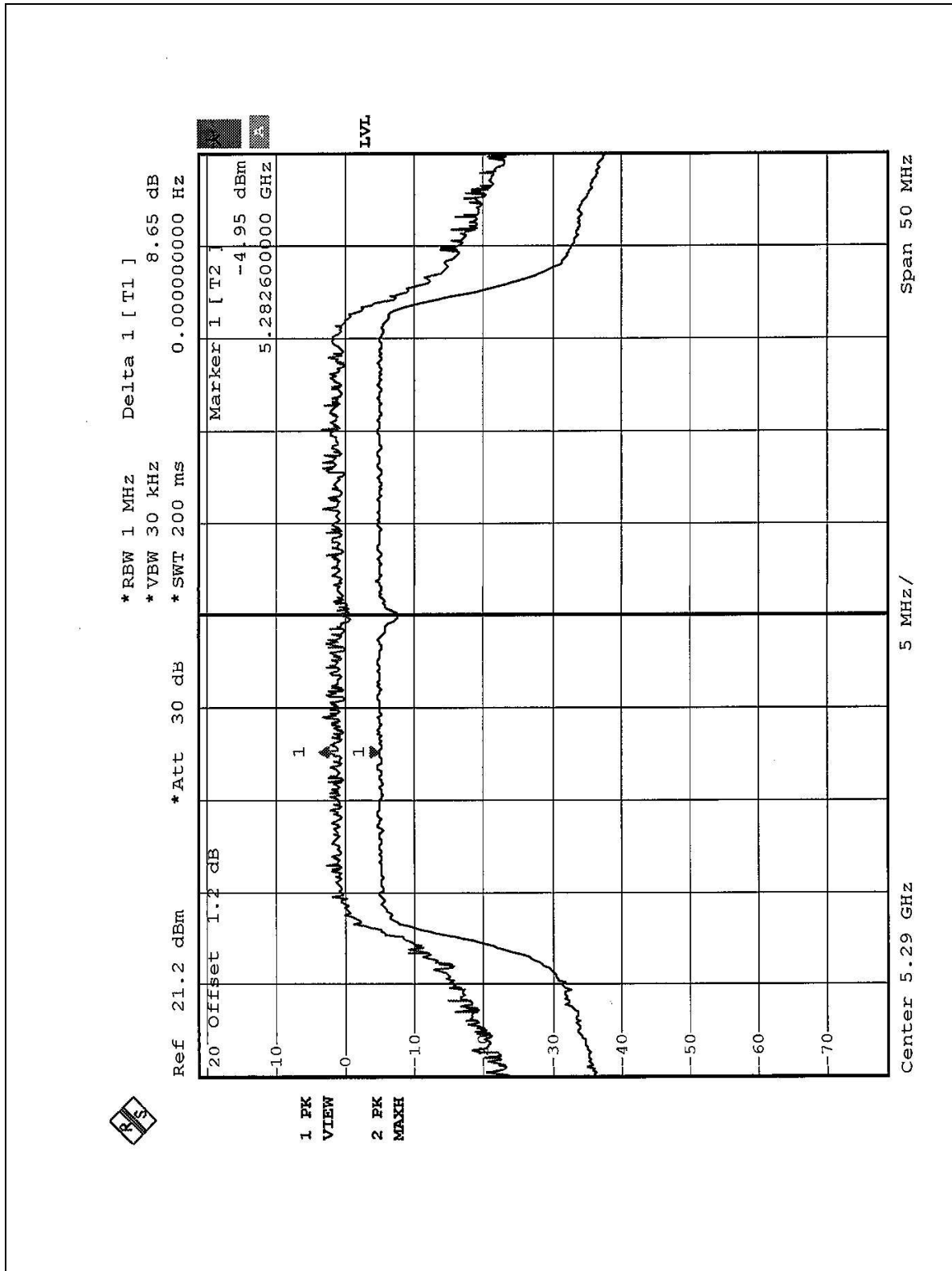
CHANNEL 1



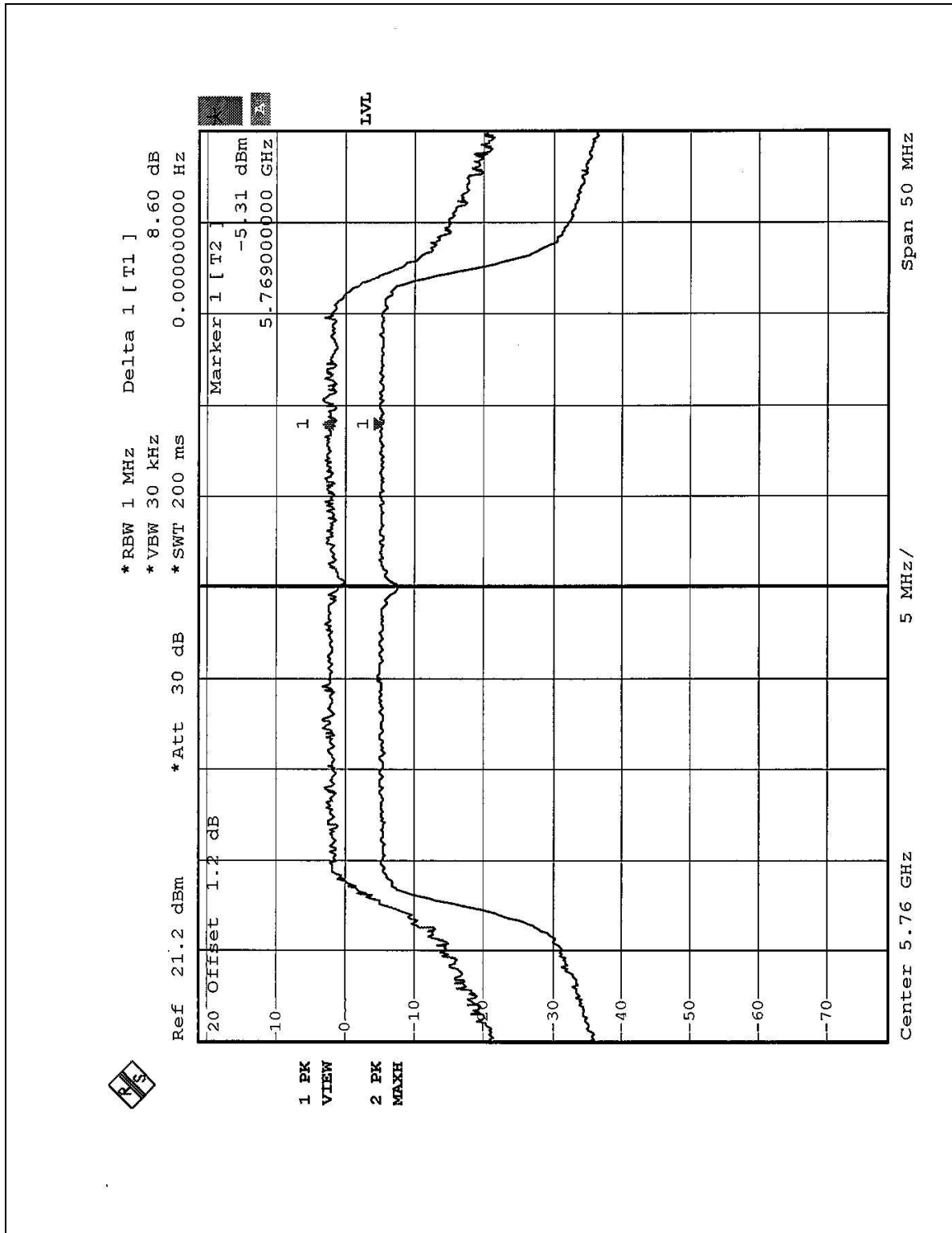
CHANNEL 2



CHANNEL 3



CHANNEL 4



CHANNEL 5

