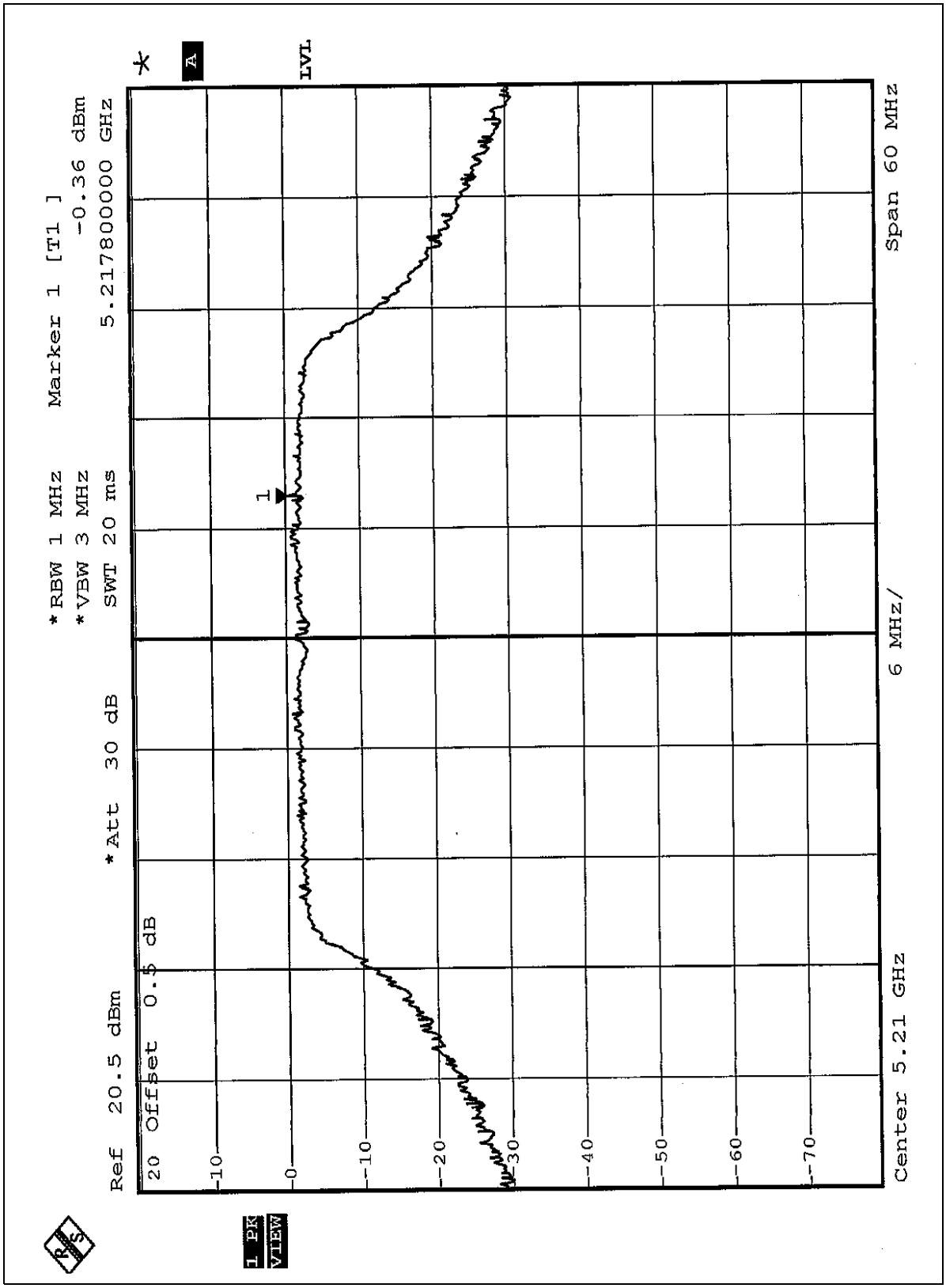
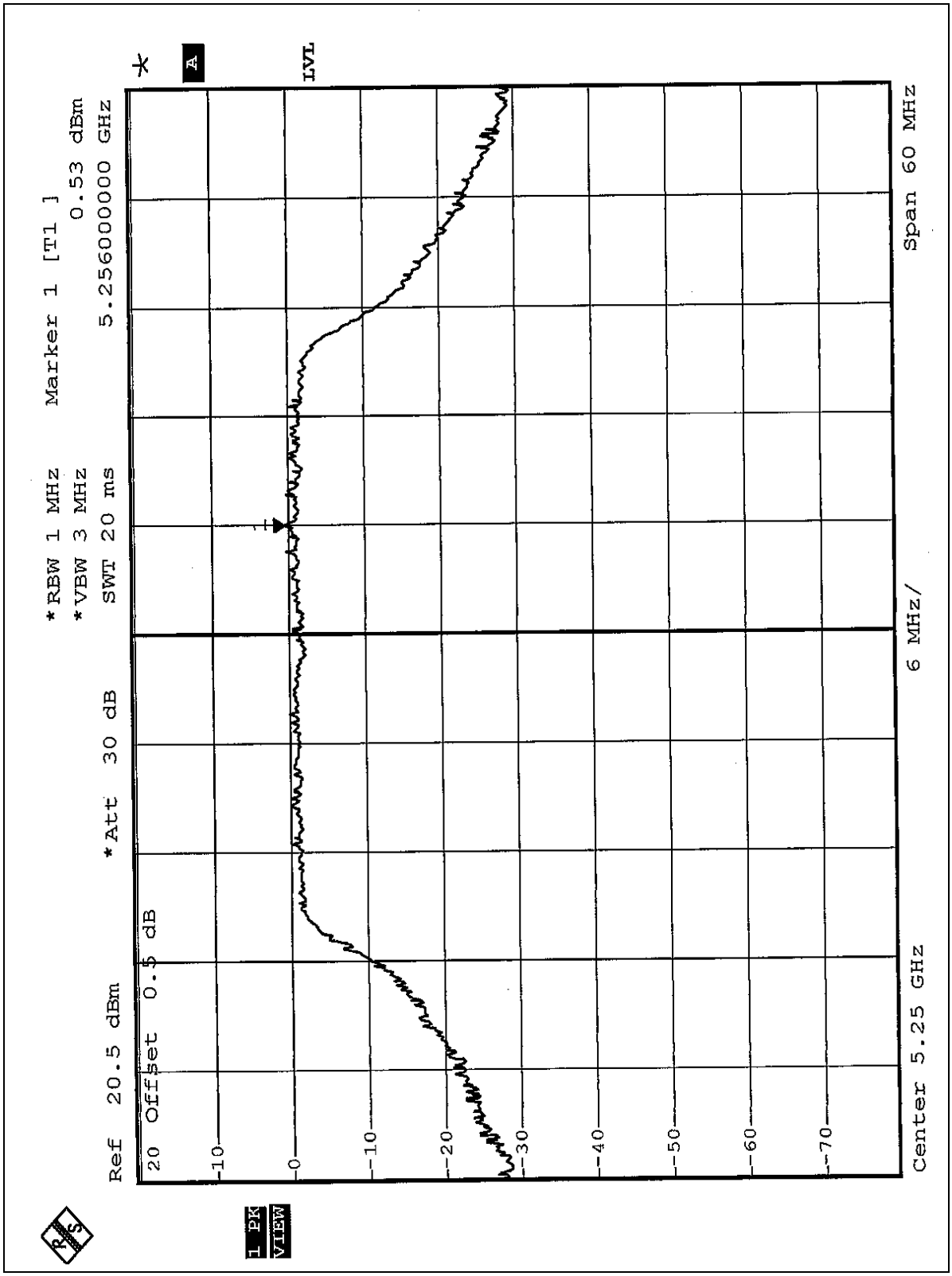
EUT	Wireless A/G Game Adapter	**MODEL**	WGA54AG
MODE	Turbo	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	**TESTED BY**	Leo Hung

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1 MHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	5210	-0.36	4	PASS
2	5250	0.53	4	PASS
3	5290	0.87	11	PASS

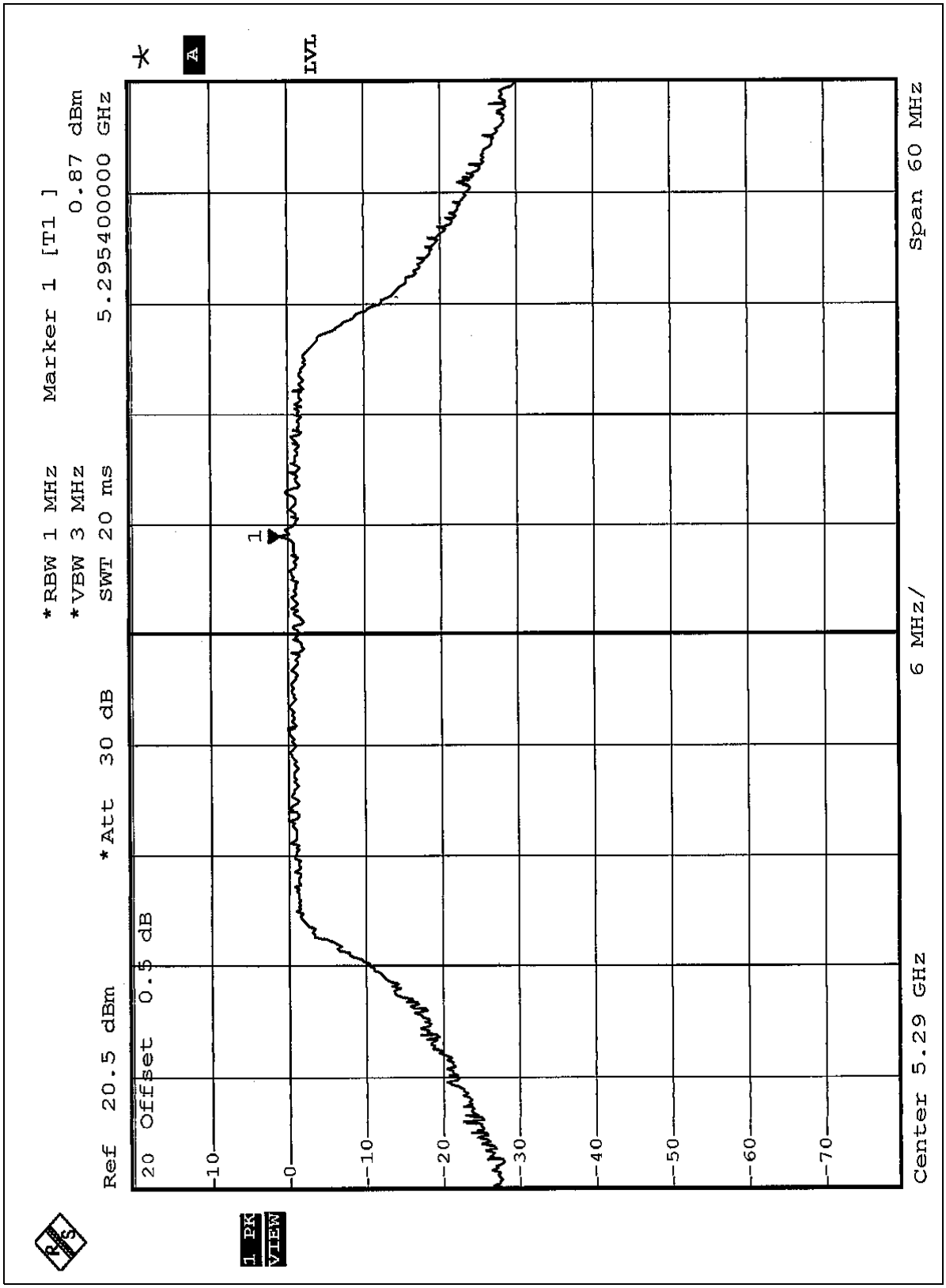
CH1


Marker 1 [T1]
-0.36 dBm
5.217800000 GHz
*RBW 1 MHz
*VBW 3 MHz
SWT 20 ms
*Att 30 dB
Ref 20.5 dBm
20 Offset 0.5 dB
Center 5.21 GHz
6 MHz/
Span 60 MHz
LVL
A
1 PK
VIEW

CH2


Marker 1 [T1]
0.53 dBm
5.256000000 GHz
*RBW 1 MHz
*VBW 3 MHz
SWT 20 ms
*Att 30 dB
Offset 0.5 dB
Ref 20.5 dBm
Center 5.25 GHz
6 MHz/
Span 60 MHz
1 PK
VIEW

CH3


Marker 1 [T1]
0.87 dBm
5.295400000 GHz
*RBW 1 MHz
*VBW 3 MHz
SWT 20 ms
*Att 30 dB
Ref 20.5 dBm
20 Offset 0.5 dB
Center 5.29 GHz
6 MHz/
Span 60 MHz
1 PK
VIEW

5.6 FREQUENCY STABILITY

5.6.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

The frequency tolerance of the carrier signal shall be maintained within +/- 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, 2005
WIT STANDARD TEMPERATURE AND HUMIDITY CHAMBER	TH-4S-C	W901030	Aug. 12, 2005

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

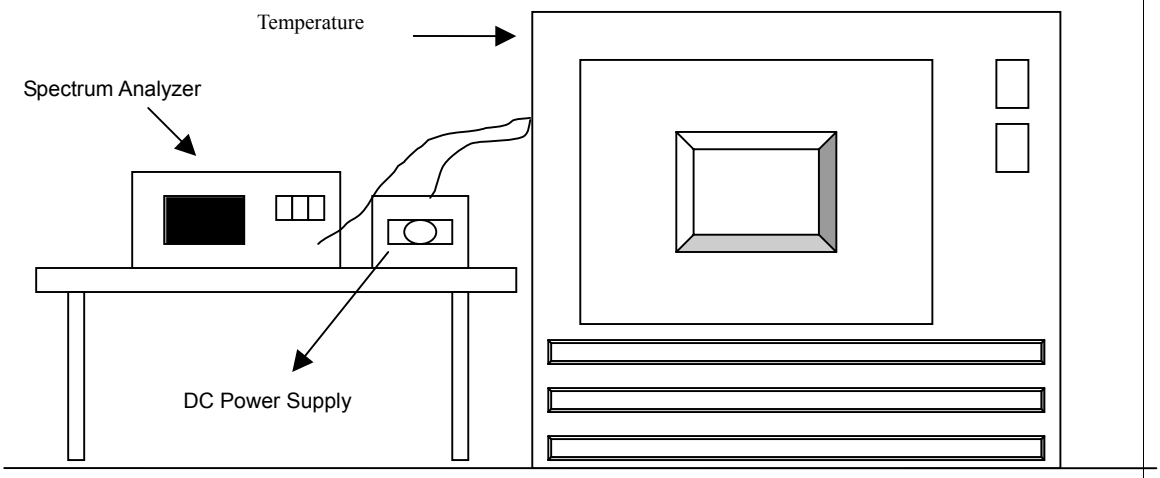
5.6.3 TEST PROCEDURE

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 : ± 0.015%			
Temp. (℃)	Power supply (VDC)	2 minute		5 minute		10 minute	
		(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
50	93.5	5319.9880	-0.0002256	5319.9920	-0.0001504	5319.9946	-0.0001015
	110.0	5319.9895	-0.0001974	5319.9930	-0.0001316	5319.9953	-0.0000883
	126.5	5319.9910	-0.0001692	5319.9939	-0.0001147	5319.9696	-0.0005714
40	93.5	5319.9704	-0.0005564	5319.9729	-0.0005094	5319.9750	-0.0004699
	110.0	5319.9712	-0.0005414	5319.9737	-0.0004944	5319.9758	-0.0004549
	126.5	5319.9722	-0.0005226	5319.9745	-0.0004793	5319.9761	-0.0004492
30	93.5	5319.9618	-0.0007180	5319.9625	-0.0007049	5319.9632	-0.0006917
	110.0	5319.9612	-0.0007293	5319.9629	-0.0006974	5319.9636	-0.0006842
	126.5	5319.9623	-0.0007086	5319.9313	-0.0012914	5319.9640	-0.0006767
20	93.5	5319.9653	-0.0006523	5319.9632	-0.0006917	5319.9640	-0.0006767
	110.0	5319.9637	-0.0006823	5319.9634	-0.0006880	5319.9637	-0.0006823
	126.5	5319.9634	-0.0006880	5319.9634	-0.0006880	5319.9634	-0.0006880
10	93.5	5319.9632	-0.0006917	5319.9632	-0.0006917	5319.9636	-0.0006842
	110.0	5319.9632	-0.0006917	5319.9636	-0.0006842	5319.9637	-0.0006823
	126.5	5319.9634	-0.0006880	5319.9636	-0.0006842	5319.9636	-0.0006842
0	93.5	5319.9687	-0.0005883	5319.9687	-0.0005883	5319.9623	-0.0007086
	110.0	5319.9689	-0.0005846	5319.9689	-0.0005846	5319.9693	-0.0005771
	126.5	5319.9689	-0.0005846	5319.9690	-0.0005827	5319.9693	-0.0005771
-10	93.5	5319.9791	-0.0003929	5319.9795	-0.0003853	5319.9798	-0.0003797
	110.0	5319.9792	-0.0003910	5319.9797	-0.0003816	5319.9798	-0.0003797
	126.5	5319.9794	-0.0003872	5319.9790	-0.0003947	5319.9810	-0.0003571
-20	93.5	5319.9930	-0.0001316	5319.9936	-0.0001203	5319.9935	-0.0001222
	110.0	5319.9933	-0.0001259	5319.9935	-0.0001222	5319.9938	-0.0001165
	126.5	5319.9936	-0.0001203	5319.9936	-0.0001203	5319.9939	-0.0001147
-30	93.5	5320.0008	0.0000150	5320.0016	0.0000301	5320.0021	0.0000395
	110.0	5320.0010	0.0000188	5320.0019	0.0000357	5320.0021	0.0000395
	126.5	5320.0014	0.0000263	5320.0019	0.0000357	5320.0021	0.0000395

5.7 BAND EDGES MEASUREMENT

5.7.1 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
SPECTRUM ANALYZER	FSEK30	100049	Aug. 12, 2005

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 lose 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 filed 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=10Hz) are attached on the following pages.

Normal Mode:

Channel 1 (5180MHz)

The band edge emission plot on the following page 1 ~ 2 shows 42.86dBc (Peak) / 47.20Bc (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 is 94.08dBuV/m, so the maximum field strength in restrict band is 94.08-47.20=46.88dBuV/m which is under 54dBuV/m limit.

Channel 8 (5320MHz)

The band edge emission plot on the following page 3 ~ 4 shows 43.88dBc (Peak) / 48.94dBc (Average) between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 8 is 100.75dBuV/m, so the maximum field strength in restrict band is 100.75-48.94=51.81dBuV/m which is under 54dBuV/m limit.

Turbo Mode:

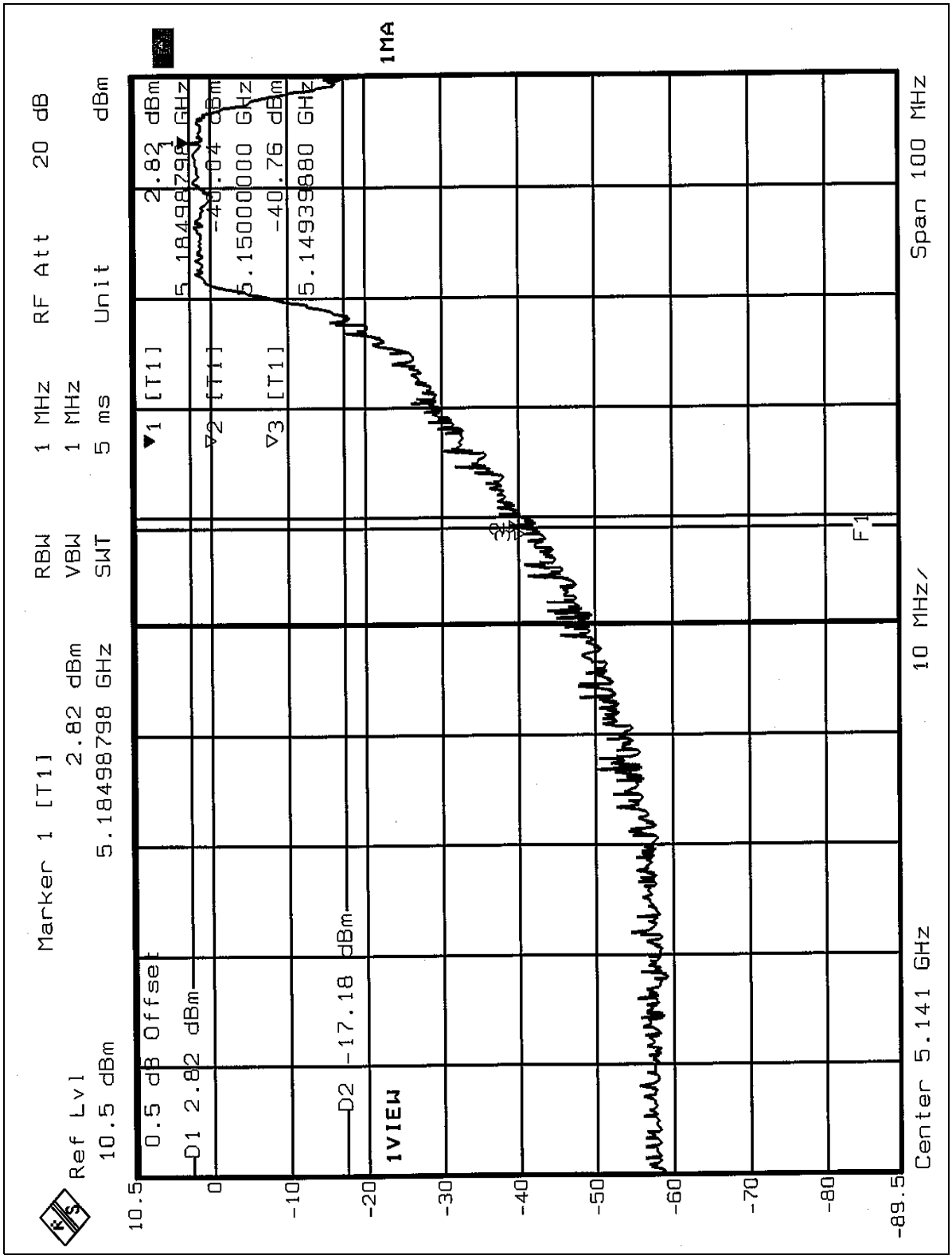
Channel 1 (5210MHz)

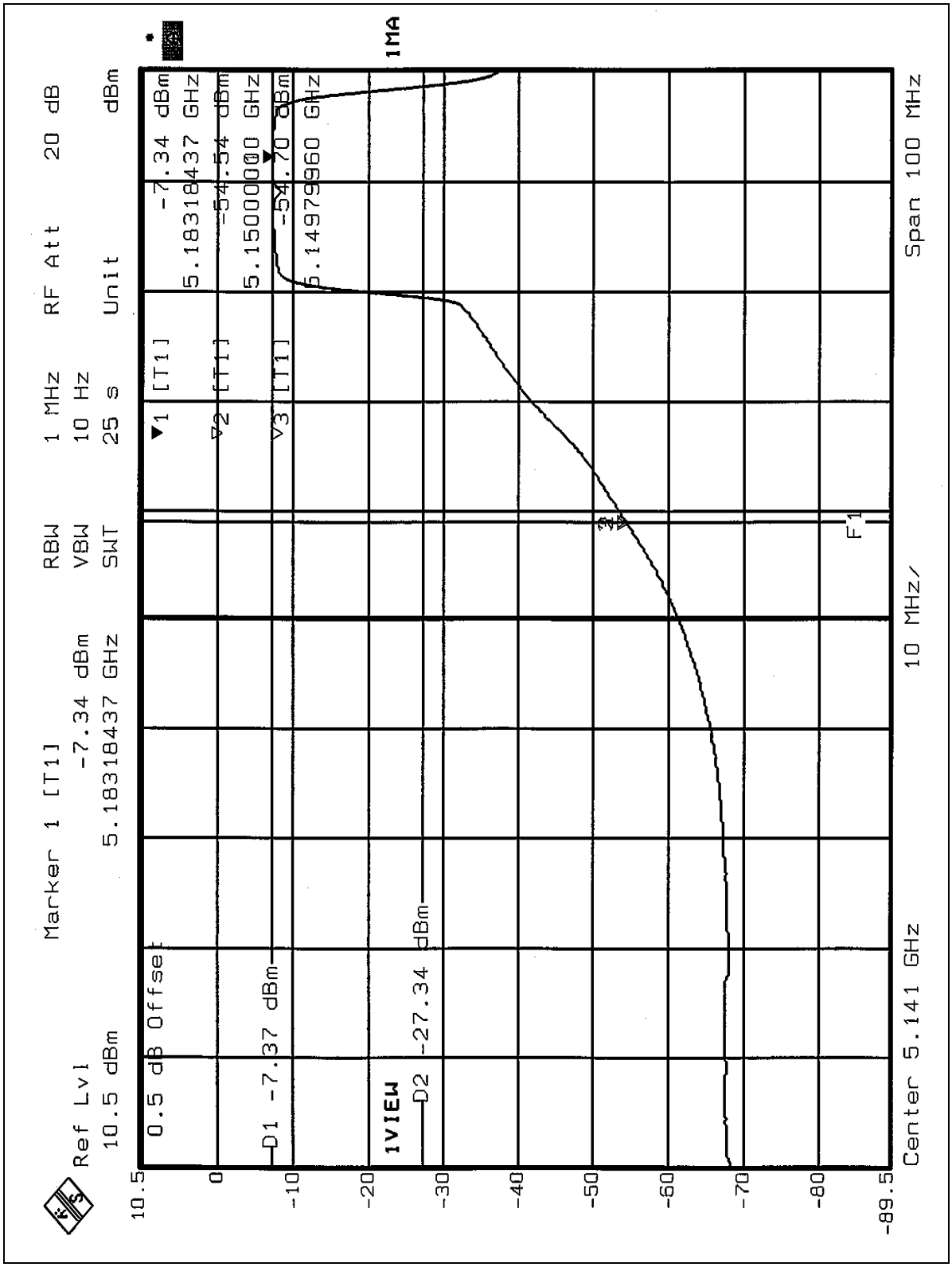
The band edge emission plot on the following page 5 ~ 6 shows 38.64dBc (Peak) / 45.18dBc (Average) between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 is 95.52dBuV/m, so the maximum field strength in restrict band is 95.52-45.18=50.34dBuV/m which is under 54dBuV/m limit.

Channel 3 (5290MHz)

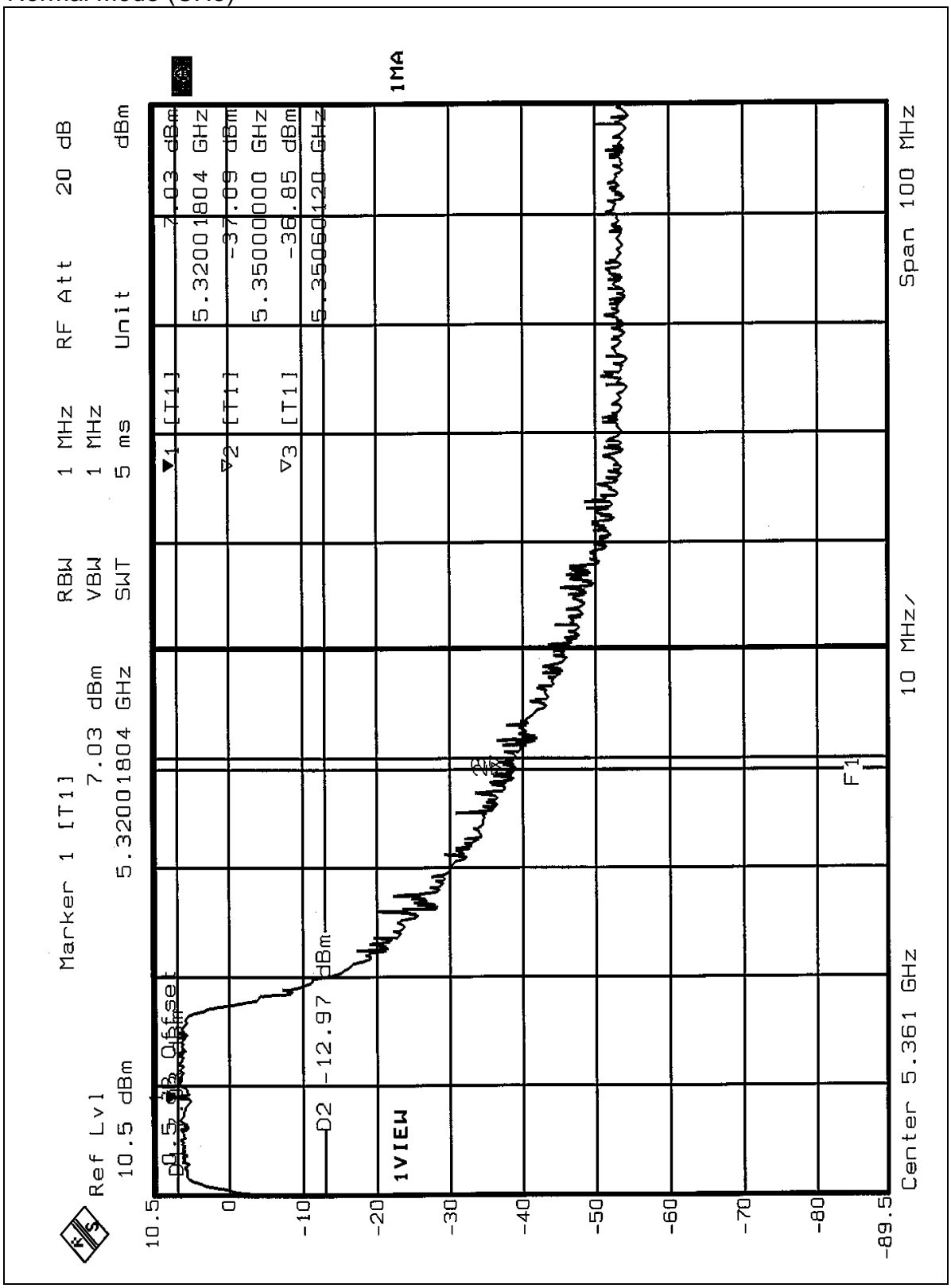
The band edge emission plot on the following page 7 ~ 8 shows 43.83dBc (Peak) / 49.05dBc (Average) between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 3 is 99.26dBuV/m, so the maximum field strength in restrict band is 99.26-49.05=50.21dBuV/m which is under 54dBuV/m limit.

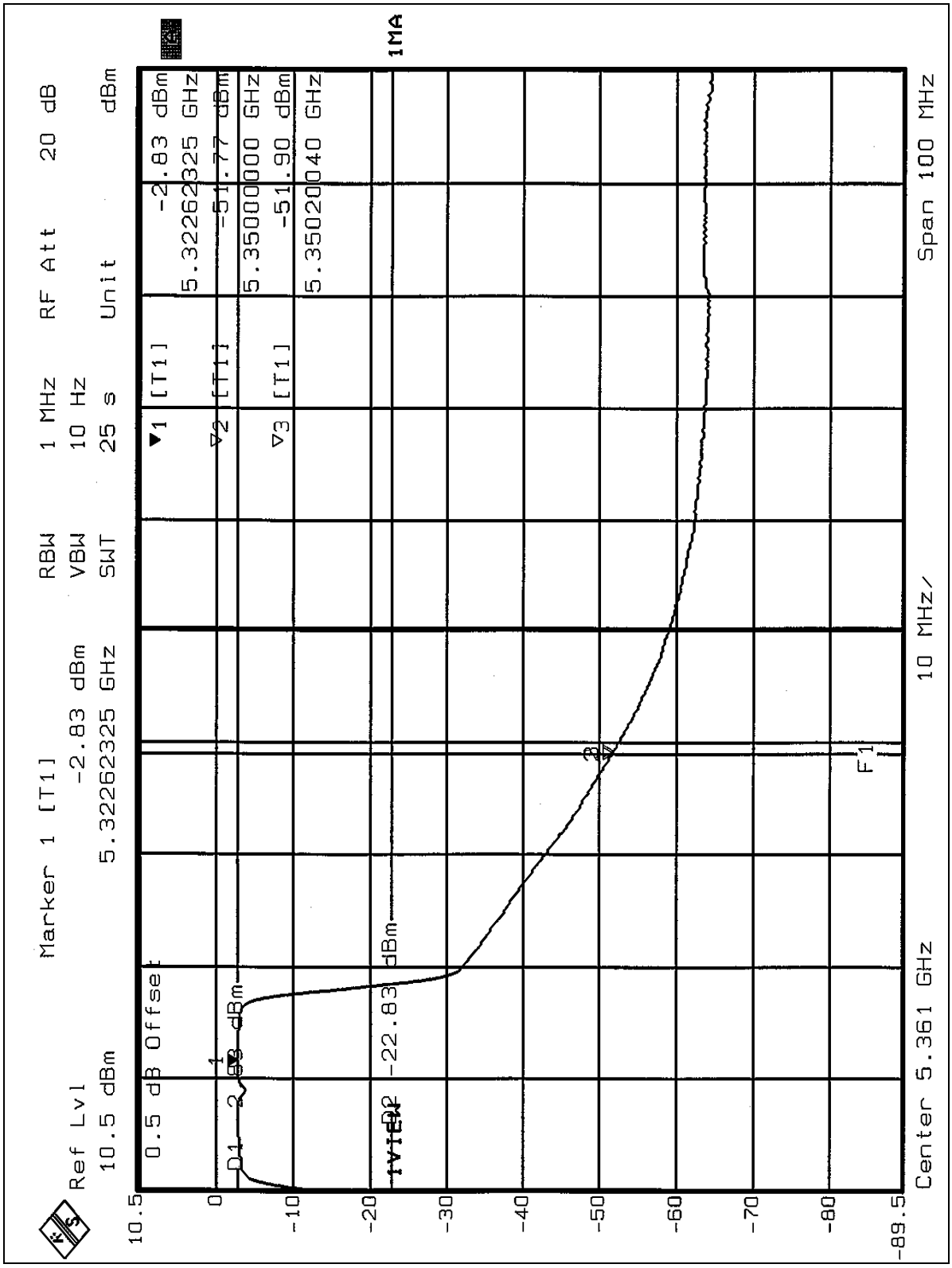
Normal Mode (CH1)



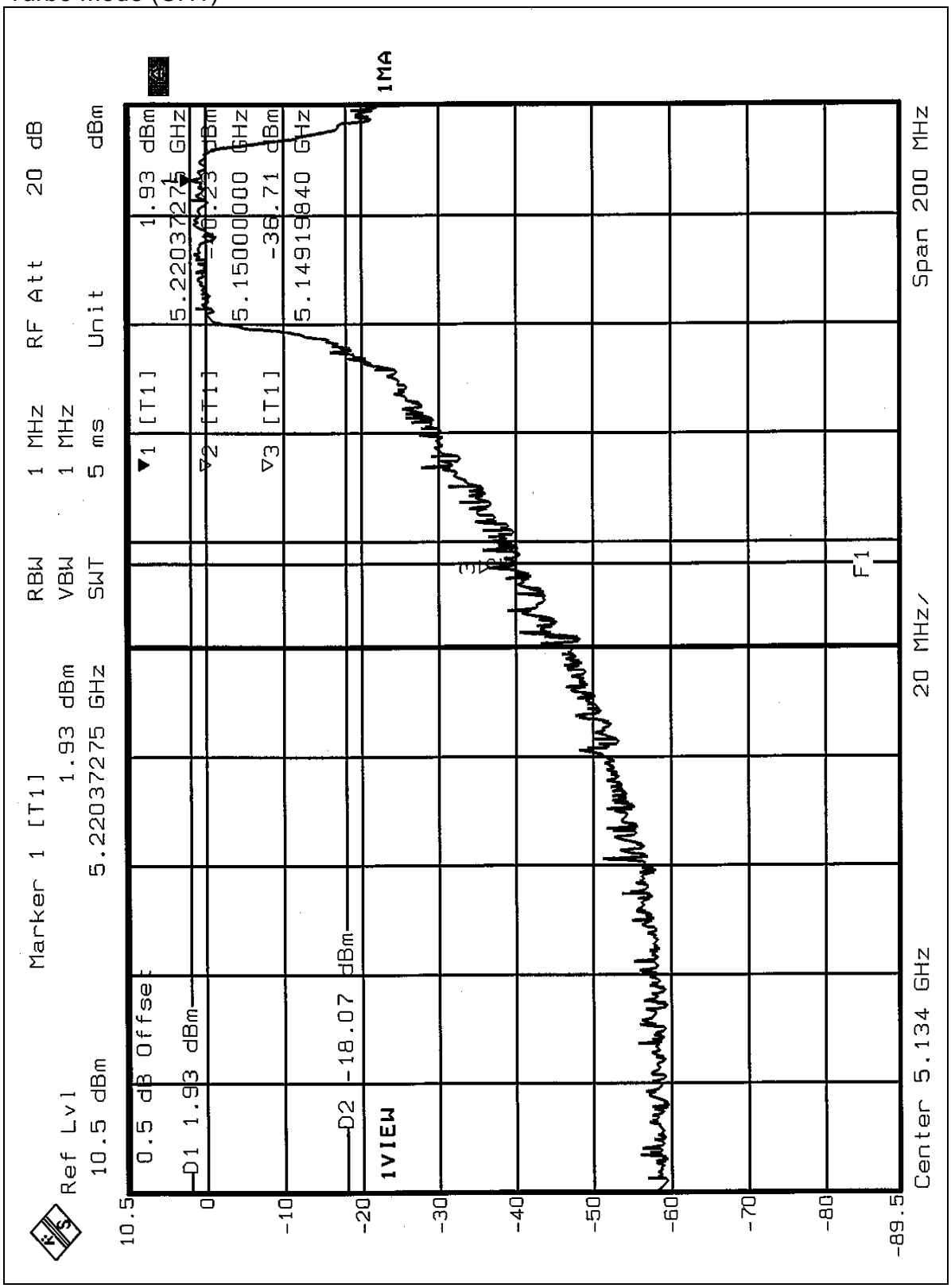

Marker 1 [T1]
-7.34 dBm
5.18318437 GHz
RBW 1 MHz
VBW 10 Hz
SWT 25 s
RF Att 20 dB
Unit dBm
Ref Lvl
10.5 dBm
0.5 dB Offset
D1 -7.37 dBm
1VIEW
D2 -27.34 dBm
1MA
▼1 [T1] -7.34 dBm 5.18318437 GHz
▽2 [T1] -54.54 dBm 5.15000000 GHz
V3 [T1] -54.70 dBm 5.14979960 GHz
Center 5.141 GHz
10 MHz/
Span 100 MHz
F1
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

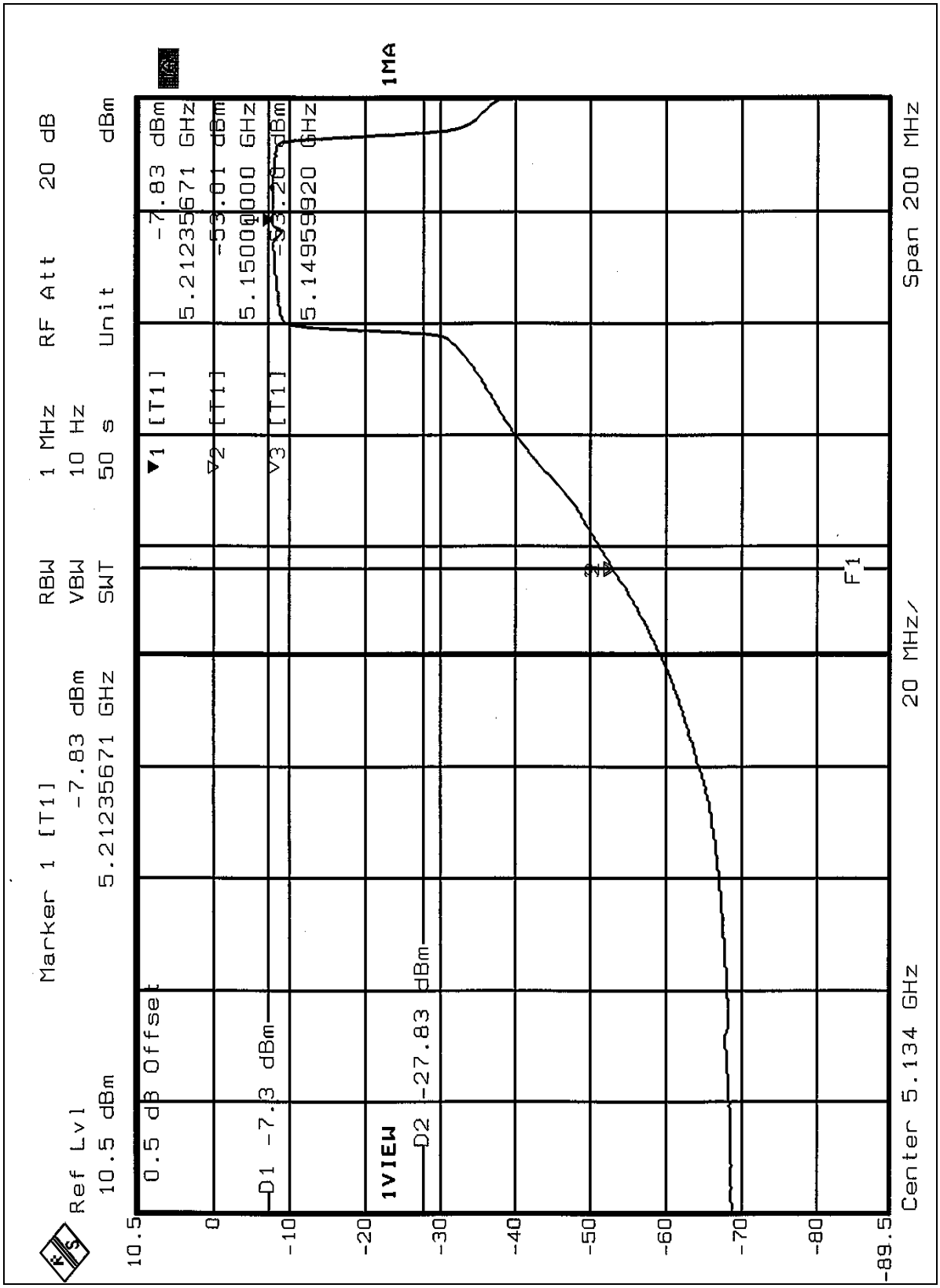
Normal Mode (CH8)



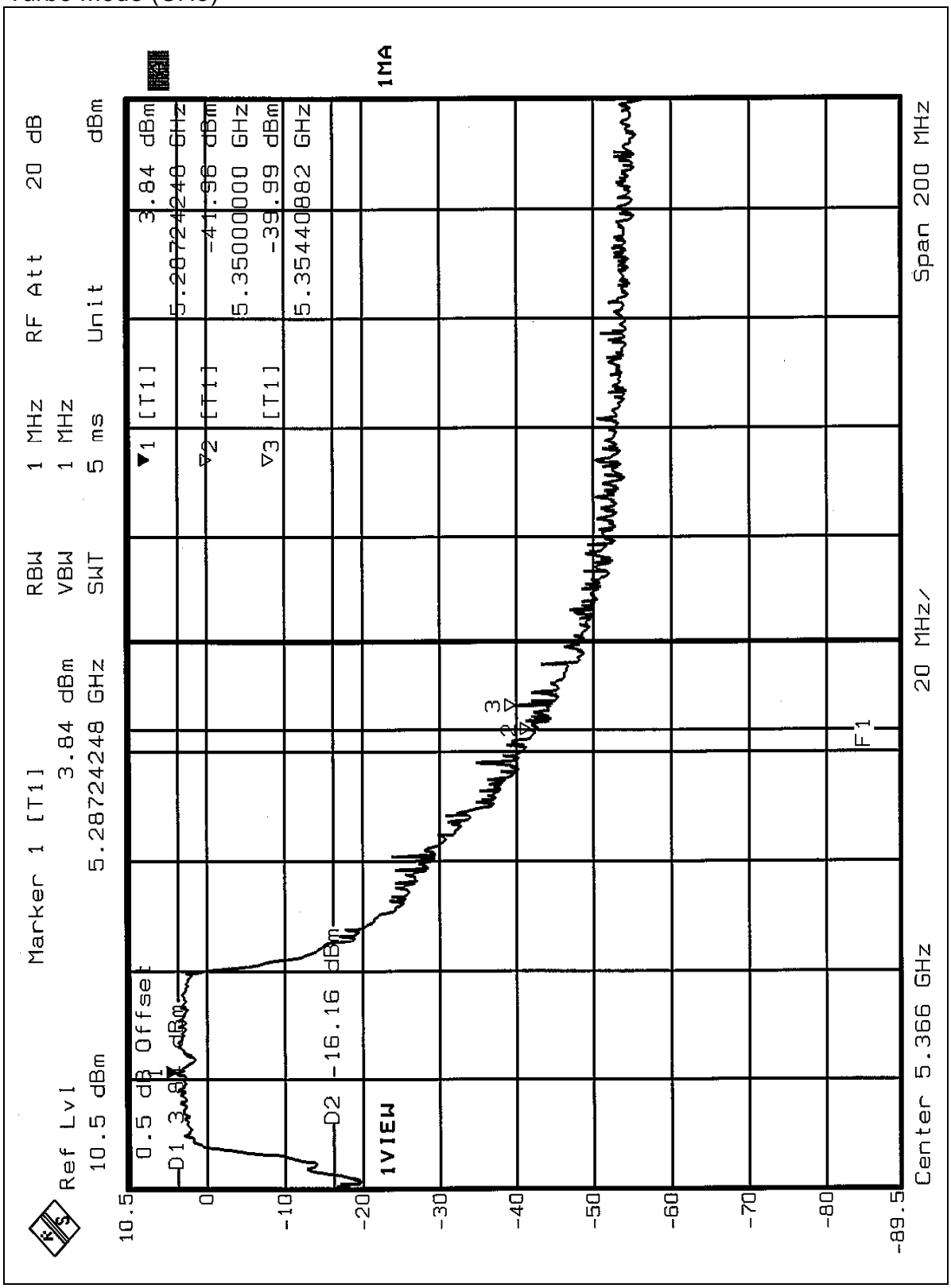

Marker 1 [T1]
-2.83 dBm
5.3226325 GHz
RBW 1 MHz
VBW 10 Hz
SWT 25 s
RF Att 20 dB
Unit dBm
Ref Lvl
10.5 dBm
0.5 dB Offset
1MA
Center 5.361 GHz
10 MHz/
Span 100 MHz
F1
D1 2.83 dBm
-22.83 dBm
1 [T1] -2.83 dBm 5.3226325 GHz
2 [T1] -51.77 dBm 5.3500000 GHz
3 [T1] -51.90 dBm 5.3502040 GHz

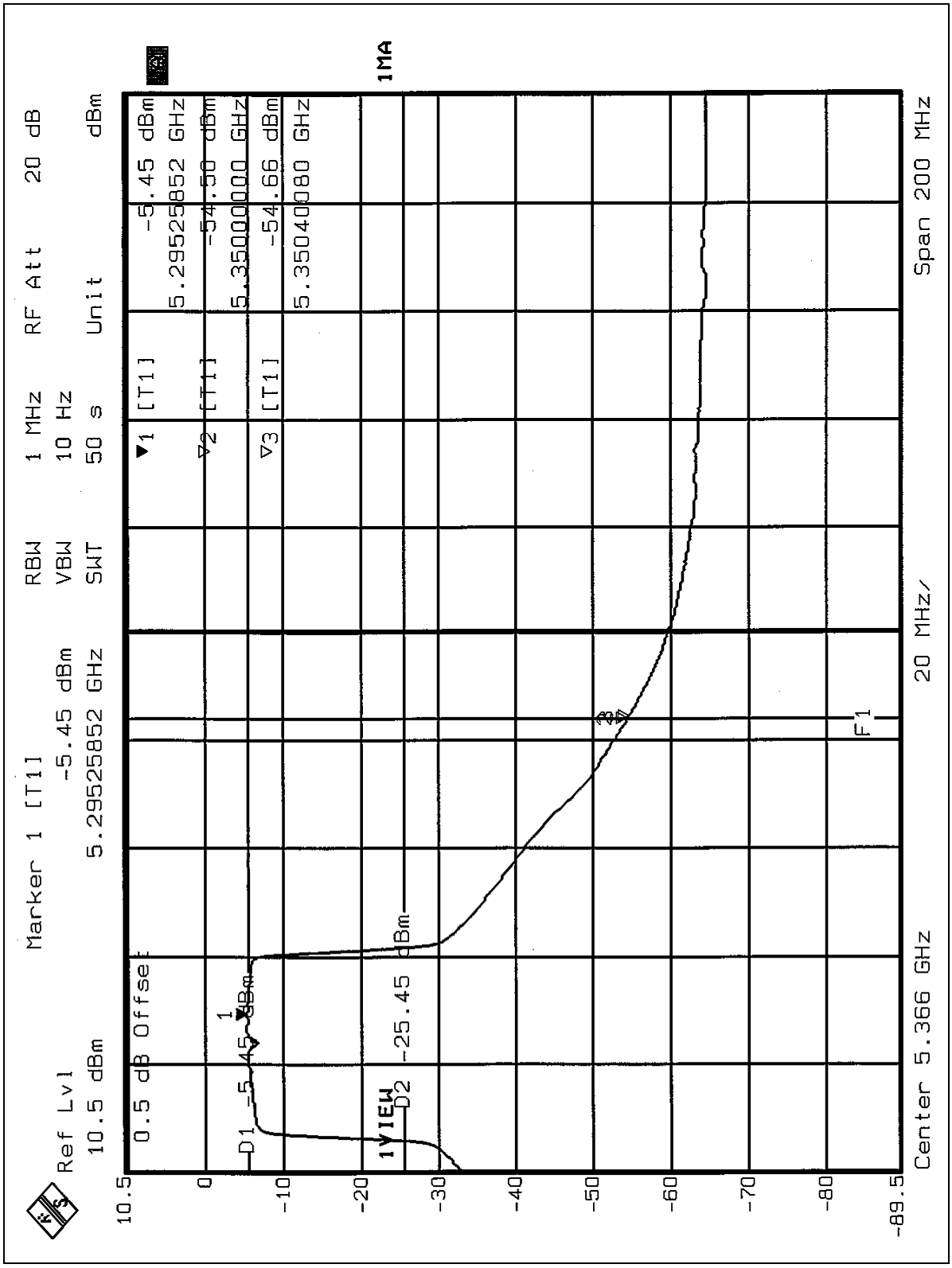
Turbo Mode (CH1)




Marker 1 [T1]
-7.83 dBm
5.21235671 GHz
RBW 1 MHz
VBW 10 Hz
SWT 50 s
RF Att 20 dB
Unit dBm
Ref Lvl
10.5 dBm
0.5 dB Offset
1VIEW
D1 -7.3 dBm
D2 -27.83 dBm
1MA
V1 [T1] -7.83 dBm 5.21235671 GHz
V2 [T1] -53.01 dBm 5.15000000 GHz
V3 [T1] -53.28 dBm 5.14959920 GHz
Center 5.134 GHz
20 MHz/
Span 200 MHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

Turbo Mode (CH3)




Ref Lvl
10.5 dBm
0.5 dB Offset
Marker 1 [T1]
-5.45 dBm
5.29525852 GHz
RBW 1 MHz
VBW 10 Hz
SWT 50 s
RF Att 20 dB
Unit dBm
1 [T1] -5.45 dBm 5.29525852 GHz
2 [T1] -54.50 dBm 5.35000000 GHz
3 [T1] -54.66 dBm 5.35040080 GHz
1MA
1VIEW
D1 -5.45 dBm
D2 -25.45 dBm
Center 5.366 GHz
20 MHz/
Span 200 MHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

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 with UFL antenna connector. The maximum Gain of the antenna is 3.0dBi.

FOR FREQUENCY 5.725~5.850GHz

5.9 6dB BANDWIDTH MEASUREMENT

5.9.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

5.9.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSEK30	100049	Aug. 12, 2005

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

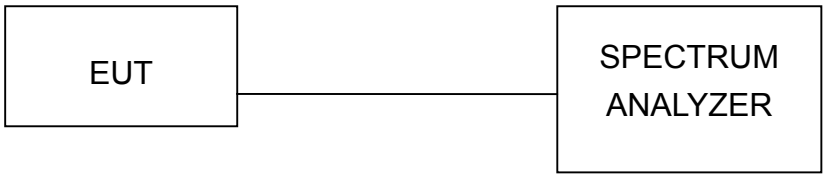
5.9.3 TEST PROCEDURE

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

5.9.4 DEVIATION FROM TEST STANDARD

No deviation

5.9.5 TEST SETUP



5.9.6 EUT OPERATING CONDITIONS

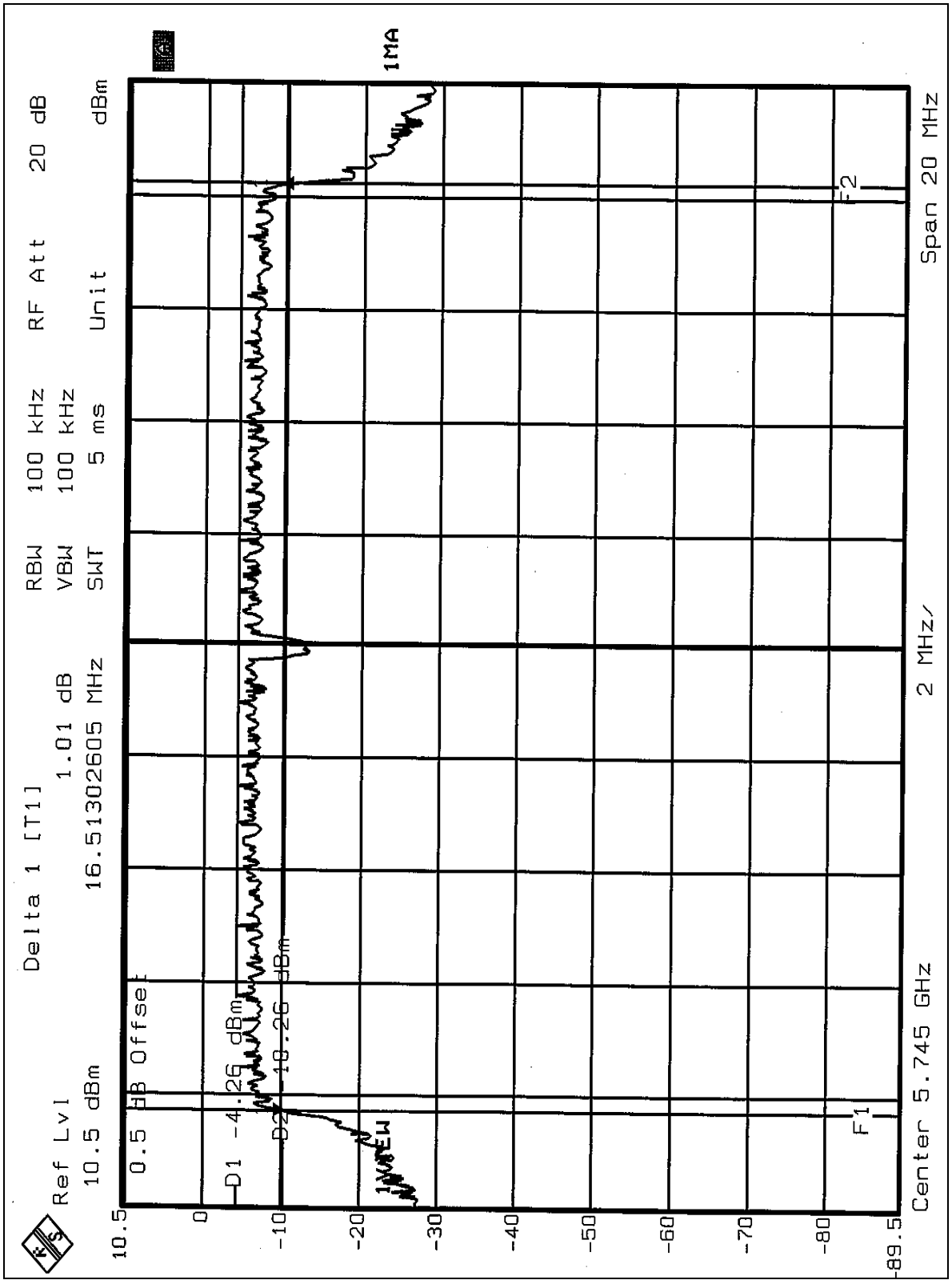
The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

5.9.7 TEST RESULTS

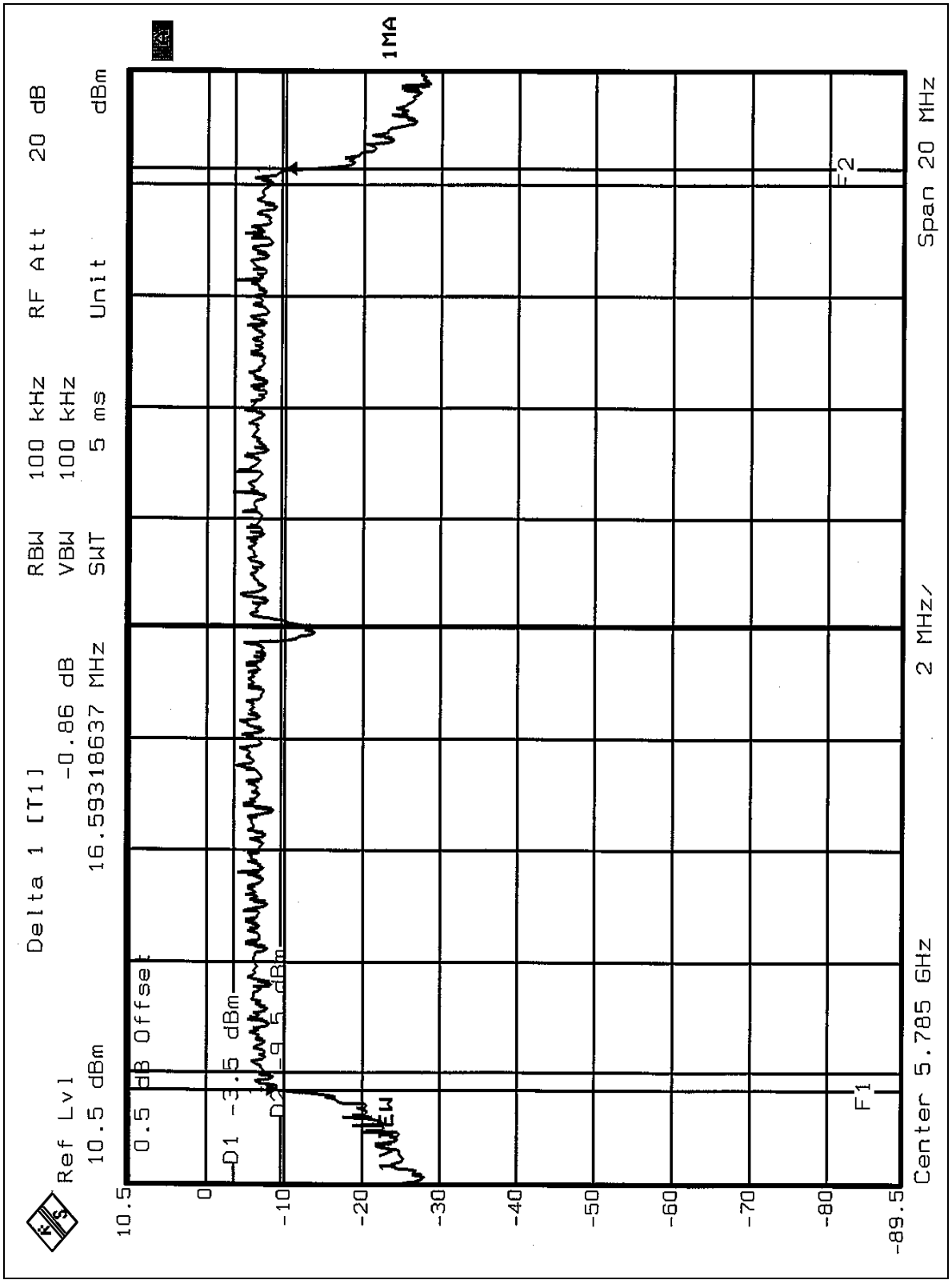
EUT	Wireless A/G Game Adapter	**MODEL**	WGA54AG
MODE	Normal	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	23deg. C, 67%RH, 991 hPa	**TESTED BY**	Leo Hung

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
9	5745	16.51	0.5	PASS
11	5785	16.59	0.5	PASS
13	5825	16.47	0.5	PASS

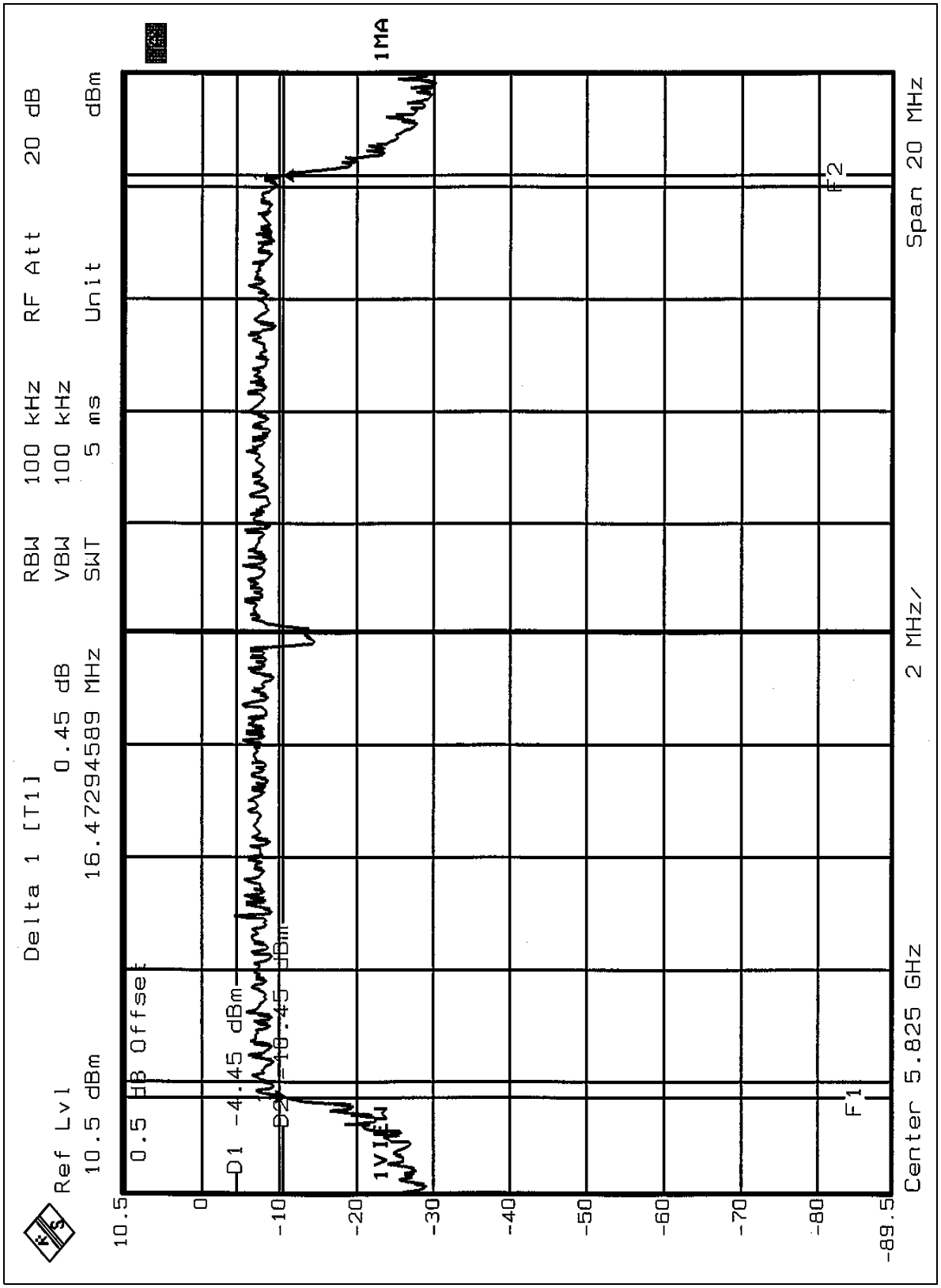
CH9


Ref Lvl
10.5 dBm
0.5 dB Offset
Delta 1 [T1]
1.01 dB
16.51302605 MHz
RBW 100 kHz
VBW 100 kHz
SWT 5 ms
RF Att 20 dB
Unit dBm
1MA
D1 -4.26 dBm
D2 -10.26 dBm
1VIEW
F1
F2
Center 5.745 GHz
2 MHz/
Span 20 MHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

CH11


Delta 1 [T1]
-0.86 dB
16.59318637 MHz
Ref Lvl
10.5 dBm
0.5 dB Offset
D1 -3.5 dBm
D2 -9.5 dBm
RBW 100 kHz
VBW 100 kHz
SWT 5 ms
RF Att 20 dB
Unit dBm
1MA
F1
F2
Center 5.785 GHz
2 MHz/
Span 20 MHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

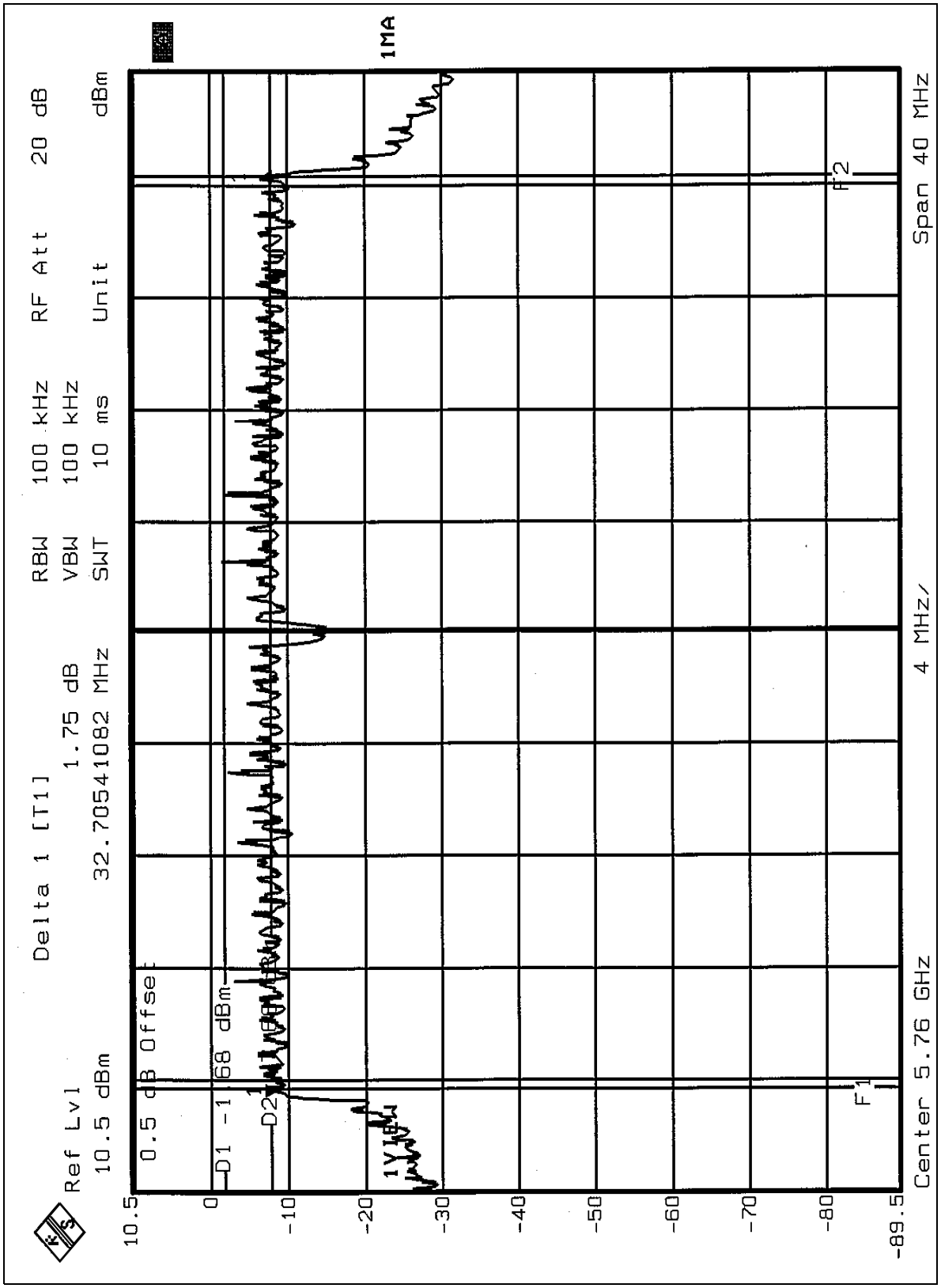
CH13


Ref Lvl
10.5 dBm
0.5 dB Offset
Delta 1 [T1]
0.45 dB
16.47294589 MHz
RBW 100 kHz
VBW 100 kHz
SWT 5 ms
RF Att 20 dB
Unit dBm
1MA
1VIEW
D1 -4.45 dBm
D2 -10.45 dBm
F1
F2
Center 5.825 GHz
2 MHz/
Span 20 MHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

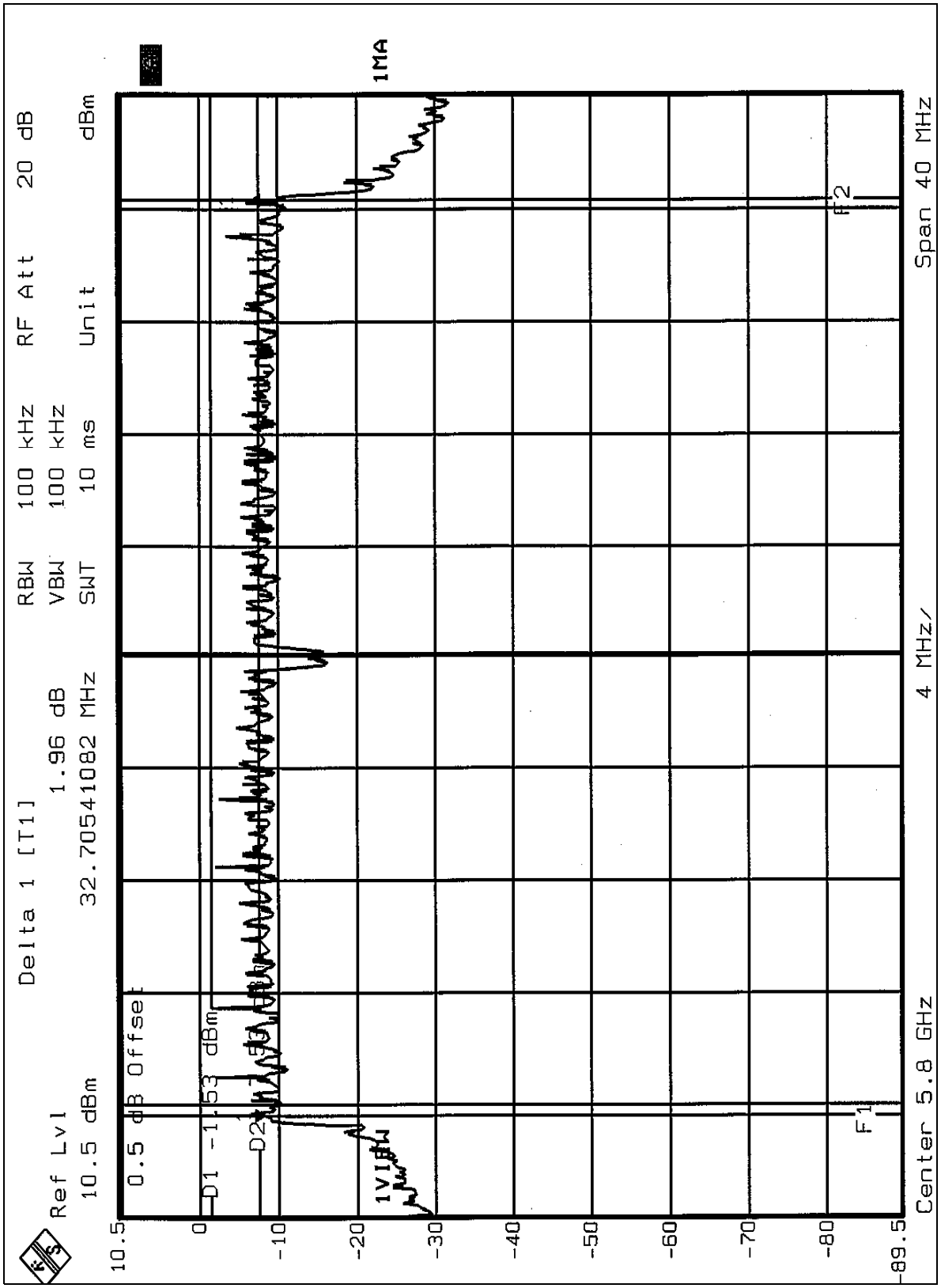
EUT	Wireless A/G Game Adapter	**MODEL**	WGA54AG
MODE	Turbo	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	23deg. C, 67%RH, 991 hPa	**TESTED BY**	Leo Hung

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
4	5760	32.71	0.5	PASS
5	5800	32.71	0.5	PASS

CH4


Ref Lvl
10.5 dBm
0.5 dB Offset
D1 -1.68 dBm
D2
Delta 1 [T1]
1.75 dB
32.70541082 MHz
RBW 100 kHz
VBW 100 kHz
SWT 10 ms
RF Att 20 dB
Unit dBm
1MA
1VIEW
F1
F2
Center 5.76 GHz
4 MHz/
Span 40 MHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

CH5


Ref Lvl
10.5 dBm
0.5 dB Offset
Delta 1 [T1]
1.96 dB
32.705410820 MHz
D1 -1.53 dBm
D2
RBW 100 kHz
VBW 100 kHz
SWT 10 ms
RF Att 20 dB
Unit dBm
1MA
1VIEW
F1
F2
Center 5.8 GHz
4 MHz/
Span 40 MHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

5.10 MAXIMUM PEAK OUTPUT POWER

5.10.1 LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT

The Maximum Peak Output Power Measurement is 30dBm.

5.10.2 INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSEK30	100049	Aug. 12, 2005
AGILENT SIGNAL GENERATOR	E8257C	MY43320668	Dec. 31, 2004
TEKTRONIX OSCILLOSCOPE	TDS 1012	C019167	Feb. 01, 2005
NARDA DETECTOR	4503A	FSCM99899	NA

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

5.10.3 TEST PROCEDURES

1. A detector was used on the output port of the EUT. An oscilloscope was used to read the response of the detector.
2. Replaced the EUT by the signal generator . The center frequency of the S.G was adjusted to the center frequency of the measured channel.
3. Adjusted the power to have the same reading on oscilloscope. Record the power level.

5.10.4 DEVIATION FROM TEST STANDARD

No deviation

5.10.5 TEST SETUP

5.10.6 EUT OPERATING CONDITIONS

Same as Item 5.9.6

5.10.7 TEST RESULTS

EUT	Wireless A/G Game Adapter	MODEL	WGA54AG
MODE	Normal	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	23deg. C, 67%RH, 991 hPa	TESTED BY	Leo Hung

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
9	5745	20.137	13.04	30	PASS
11	5785	20.184	13.05	30	PASS
13	5825	20.277	13.07	30	PASS

EUT	Wireless A/G Game Adapter	MODEL	WGA54AG
MODE	Turbo	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	23deg. C, 67%RH, 991 hPa	TESTED BY	Leo Hung

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
4	5760	20.417	13.10	30	PASS
5	5800	20.277	13.07	30	PASS

5.11 POWER SPECTRAL DENSITY MEASUREMENT

5.11.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

5.11.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSEK30	100049	Aug. 12, 2005

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

5.11.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 3 kHz RBW and 30 kHz VBW, set sweep time = span/3 kHz. The power spectral density was measured and recorded.
The sweep time is allowed to be longer than span/3 kHz for a full response of the mixer in the spectrum analyzer.

5.11.4 DEVIATION FROM TEST STANDARD

No deviation

5.11.5 TEST SETUP

5.11.6 EUT OPERATING CONDITION

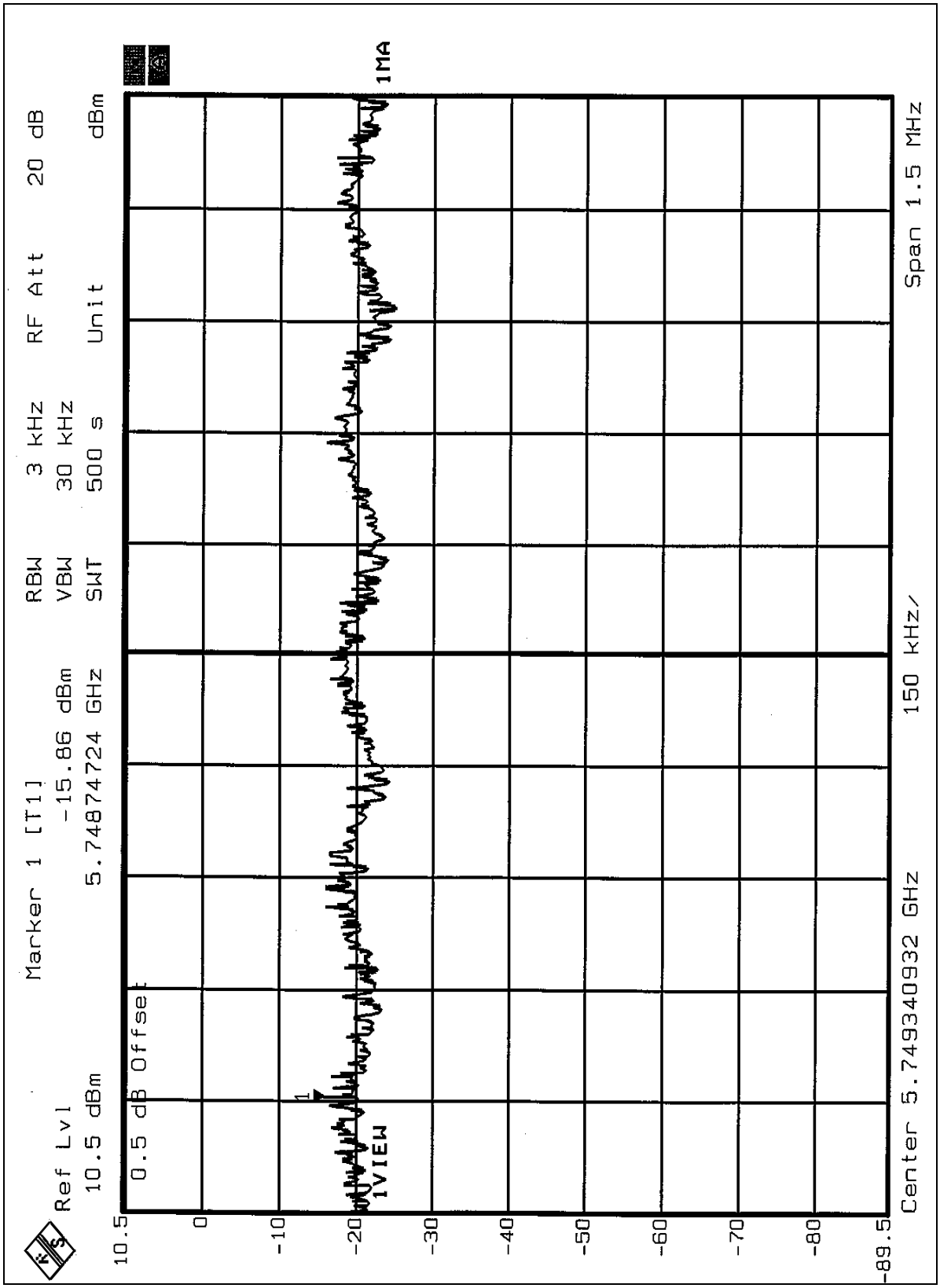
Same as Item 5.9.6

5.11.7 TEST RESULTS

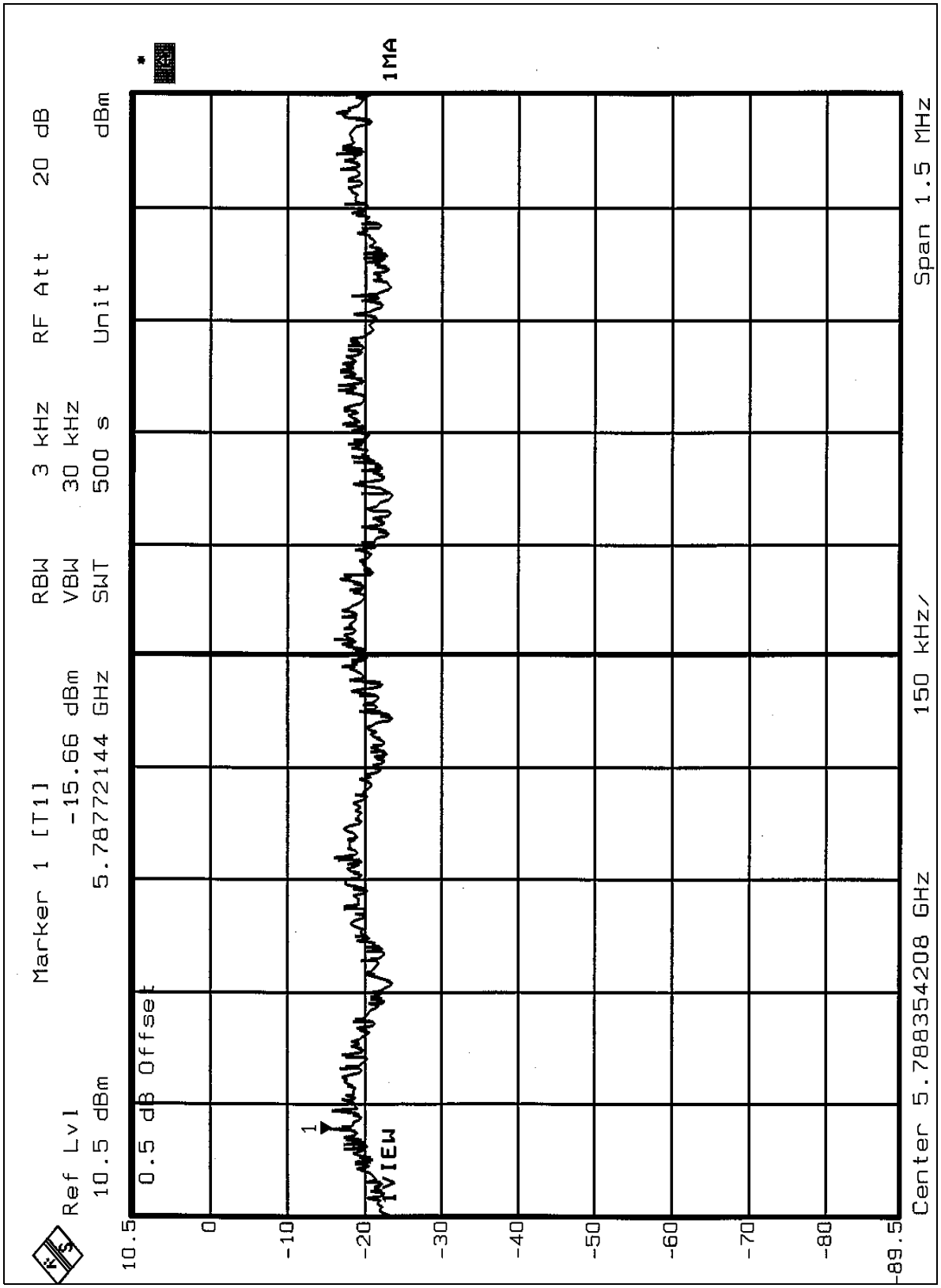
EUT	Wireless A/G Game Adapter	MODEL	WGA54AG
MODE	Normal	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	23deg. C, 67%RH, 991 hPa	TESTED BY	Leo Hung

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
9	5745	-15.86	8	PASS
11	5785	-15.66	8	PASS
13	5825	-15.40	8	PASS

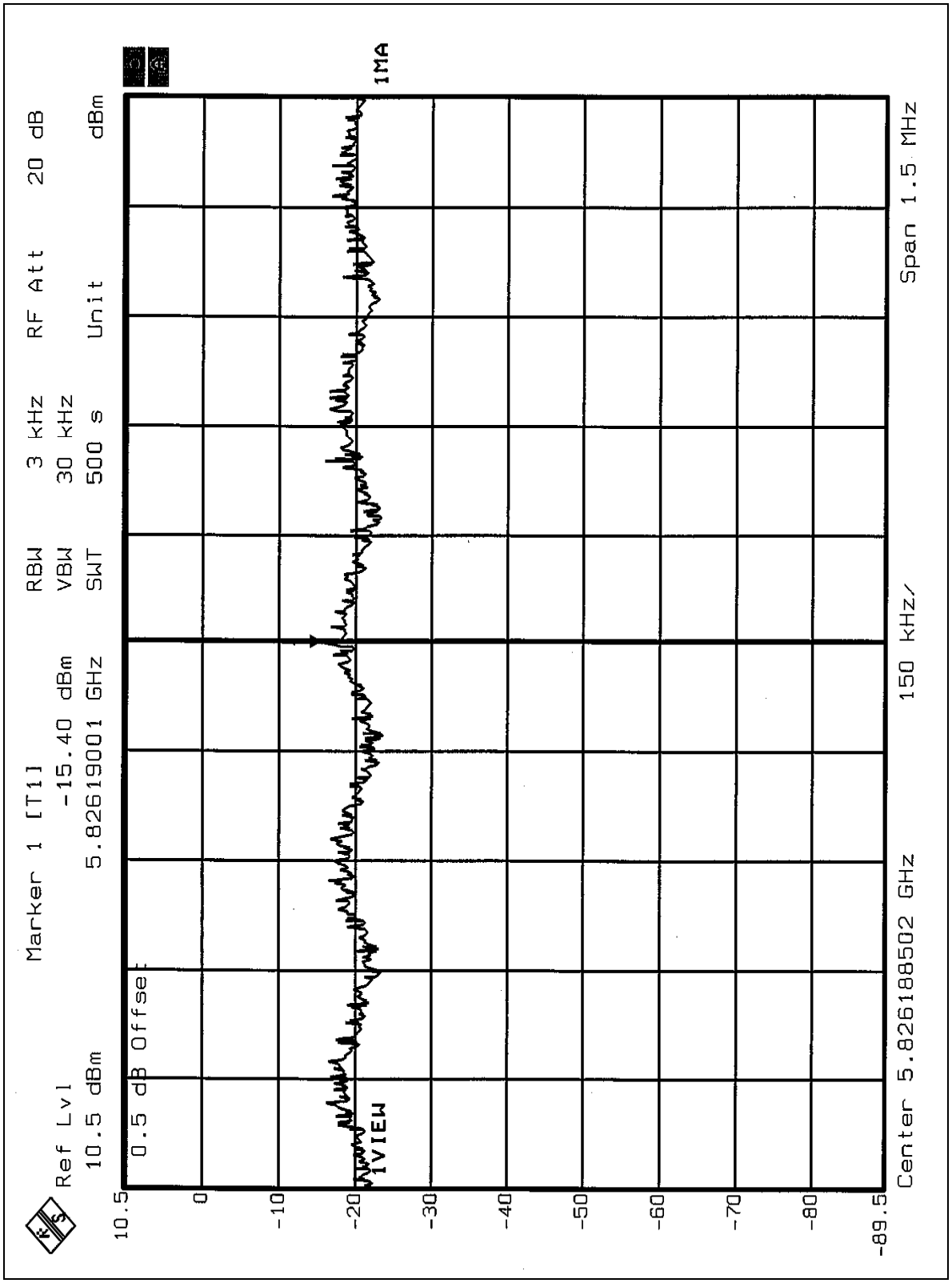
CH9


Marker 1 [T1]
-15.86 dBm
5.74874724 GHz
RBW 3 kHz
VBW 30 kHz
SWT 500 s
RF Att 20 dB
Unit dBm
Ref Lvl
10.5 dBm
0.5 dB Offset
1VIEW
1MA
Center 5.74940932 GHz
150 kHz/
Span 1.5 MHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

CH11


Marker 1 [T1]
-15.66 dBm
5.78772144 GHz
RBW 3 kHz
VBW 30 kHz
SWT 500 s
RF Att 20 dB
Unit dBm
Ref Lvl
10.5 dBm
0.5 dB Offset
1MA
1VIEW
Center 5.788354208 GHz
150 kHz/
Span 1.5 MHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

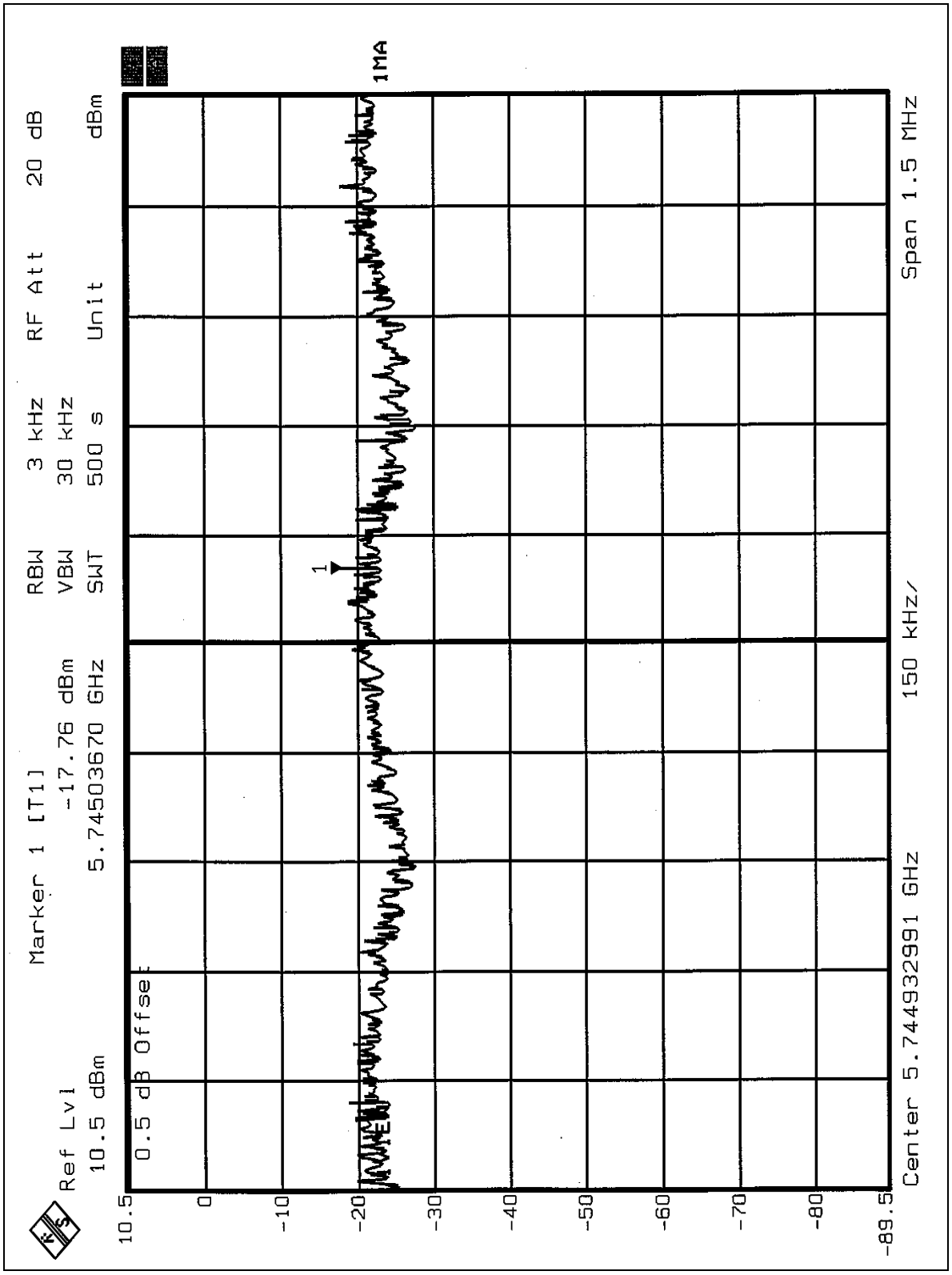
CH13


Ref Lvl
10.5 dBm
0.5 dB Offset
Marker 1 [T1]
-15.40 dBm
5.82619001 GHz
RBW 3 kHz
VBW 30 kHz
SWT 500 s
RF Att 20 dB
Unit dBm
1MA
1VIEW
Center 5.826188502 GHz
150 kHz/
Span 1.5 MHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

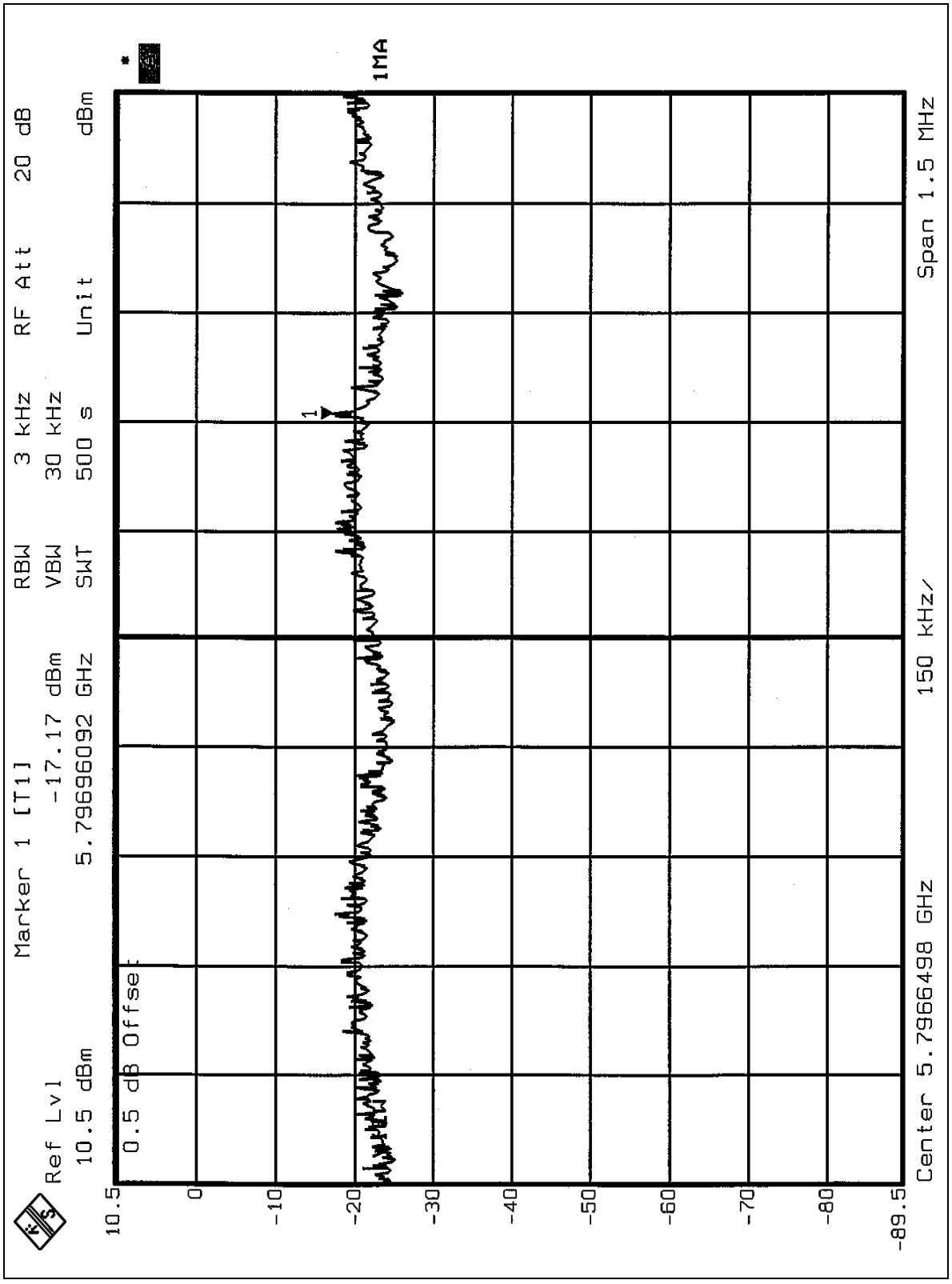
EUT	Wireless A/G Game Adapter	**MODEL**	WGA54AG
MODE	Turbo	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	23deg. C, 67%RH, 991 hPa	**TESTED BY**	Leo Hung

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
4	5760	-17.76	8	PASS
5	5800	-17.17	8	PASS

CH4


Marker 1 [T1]
-17.76 dBm
5.74503670 GHz
RBW 3 kHz
VBW 30 kHz
SWT 500 s
RF Att 20 dB
Unit dBm
Ref Lvl
10.5 dBm
0.5 dB Offset
1MA
Center 5.744932991 GHz
150 kHz/
Span 1.5 MHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

CH5


Marker 1 [T1]
-17.17 dBm
5.79696092 GHz
RBW 3 kHz
VBW 30 kHz
SWT 500 s
RF Att 20 dB
Unit dBm
Ref Lvl
10.5 dBm
0.5 dB Offset
1MA
Center 5.7966498 GHz
150 kHz/
Span 1.5 MHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

5.12 BAND EDGES MEASUREMENT

5.12.1 LIMITS OF BAND EDGES MEASUREMENT

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

5.12.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSEK30	100049	Aug. 12, 2004

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

5.12.3 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 MHz bandwidth from band edge. The band edges was measured and recorded.

5.12.4 DEVIATION FROM TEST STANDARD

No deviation

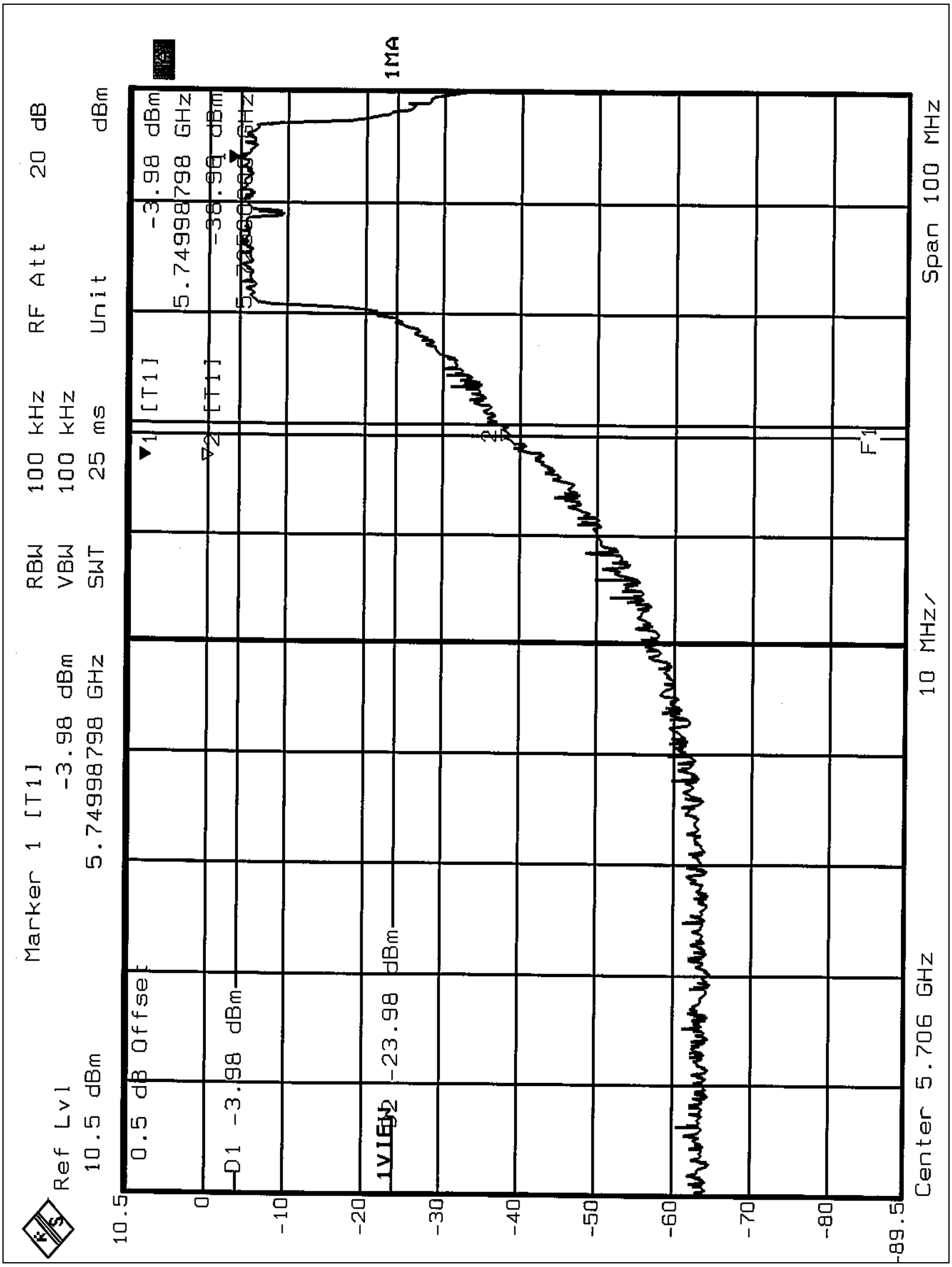
5.12.5 EUT OPERATING CONDITION

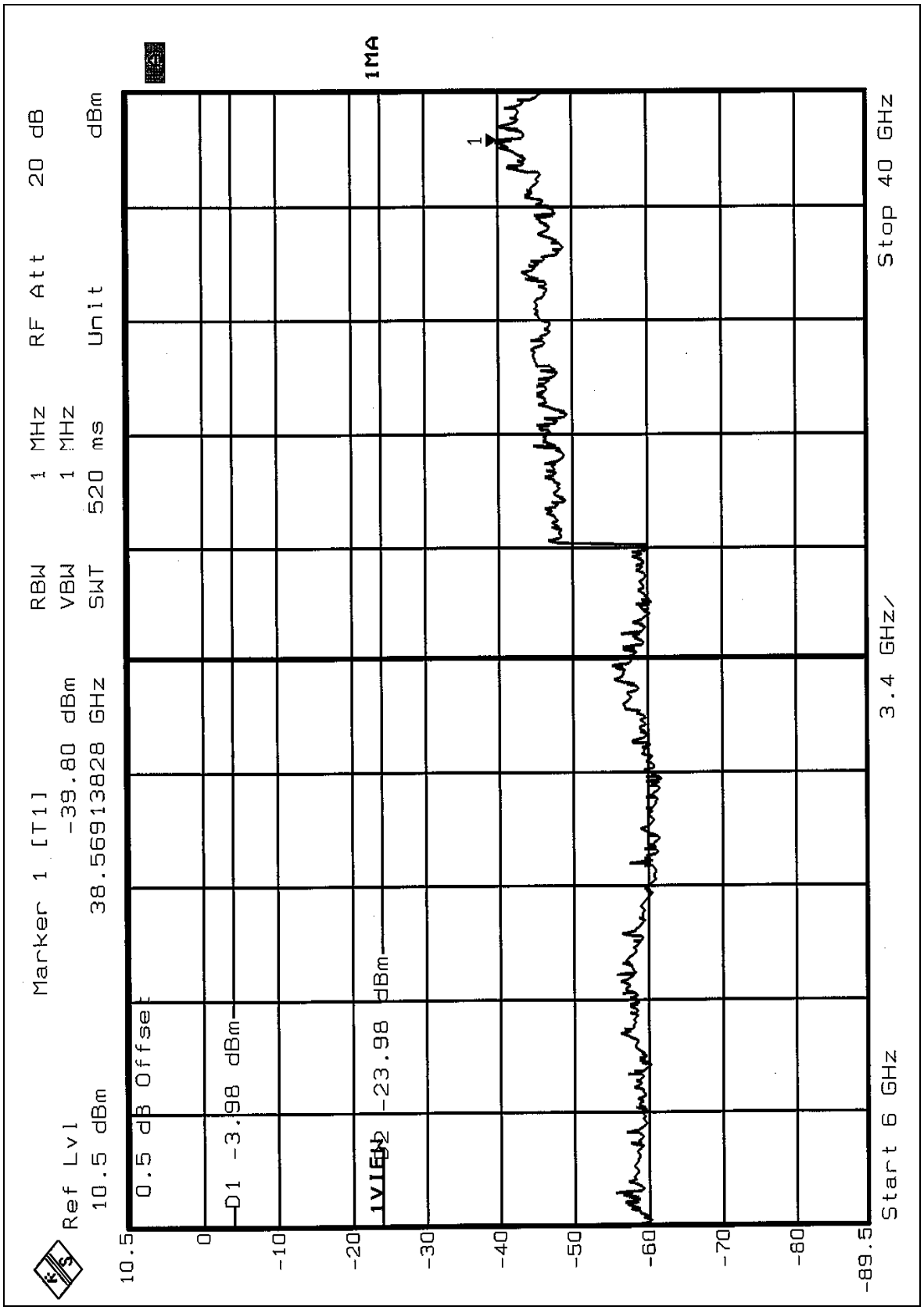
Same as Item 5.9.6

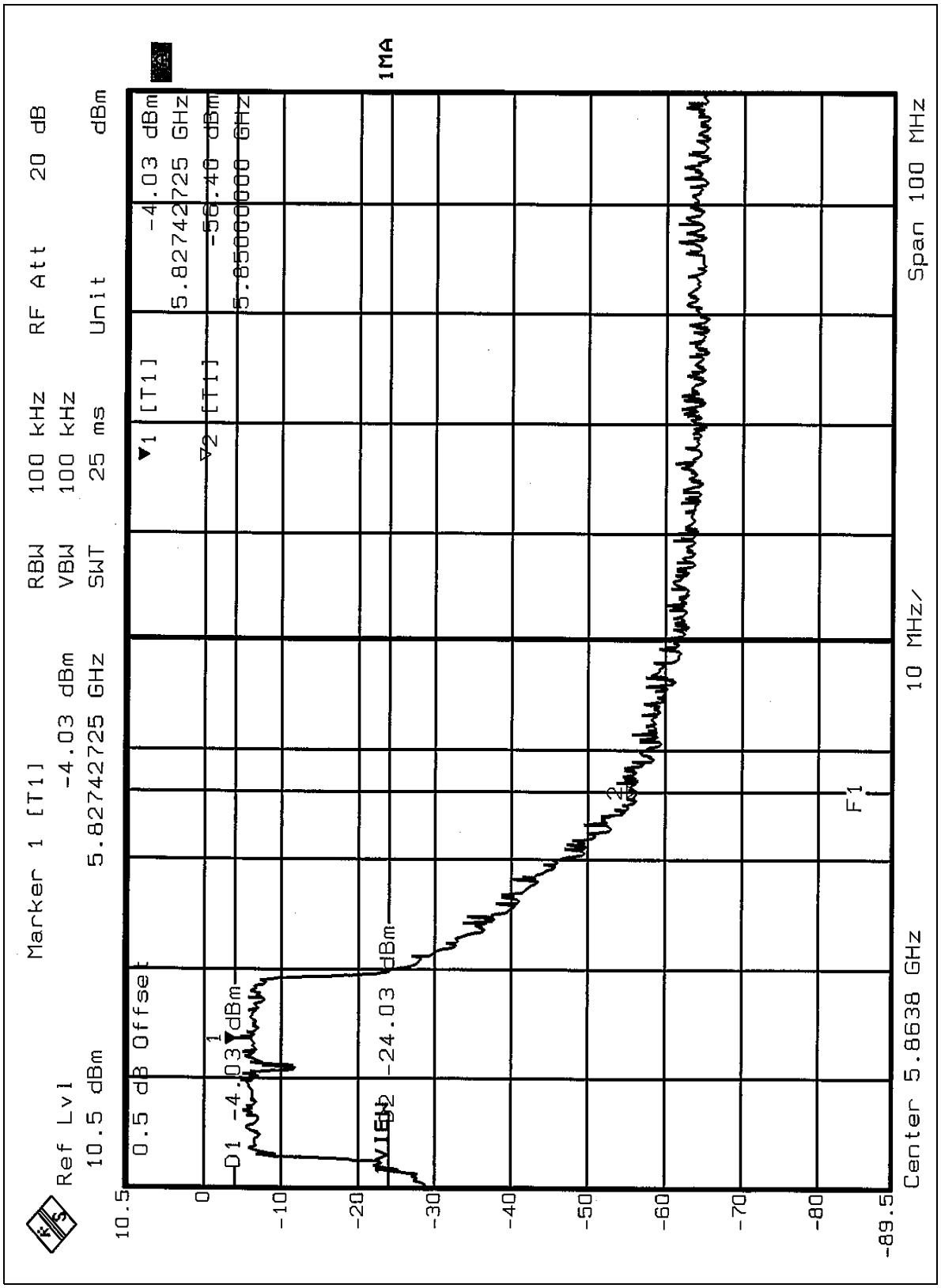
5.12.6 TEST RESULTS

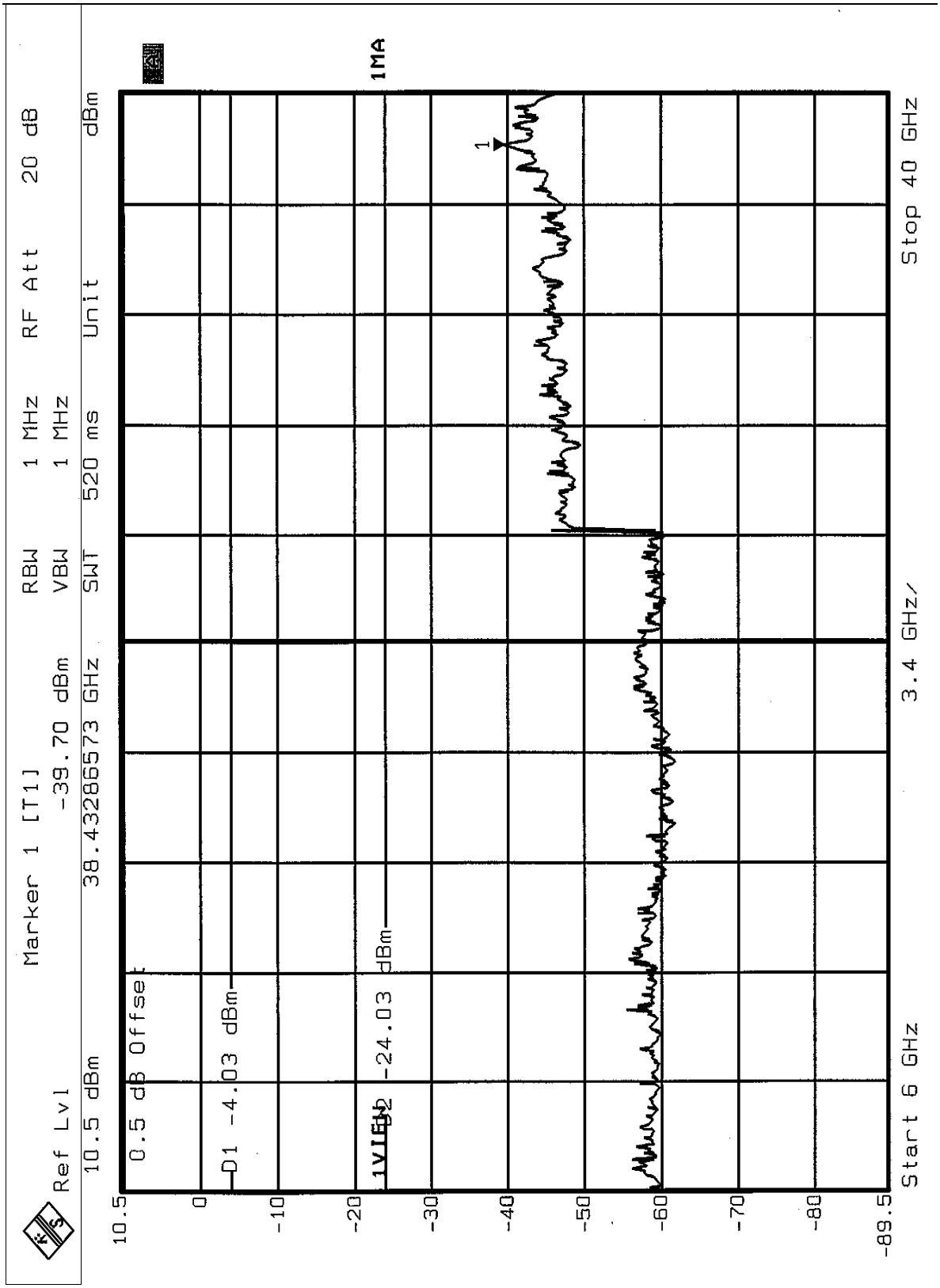
The spectrum plots are attached on the following pages. D2 line indicates the highest level, D1 line indicates the 20dB offset below D2. It shows compliance with the requirement in part 15.247(C).

Normal Mode

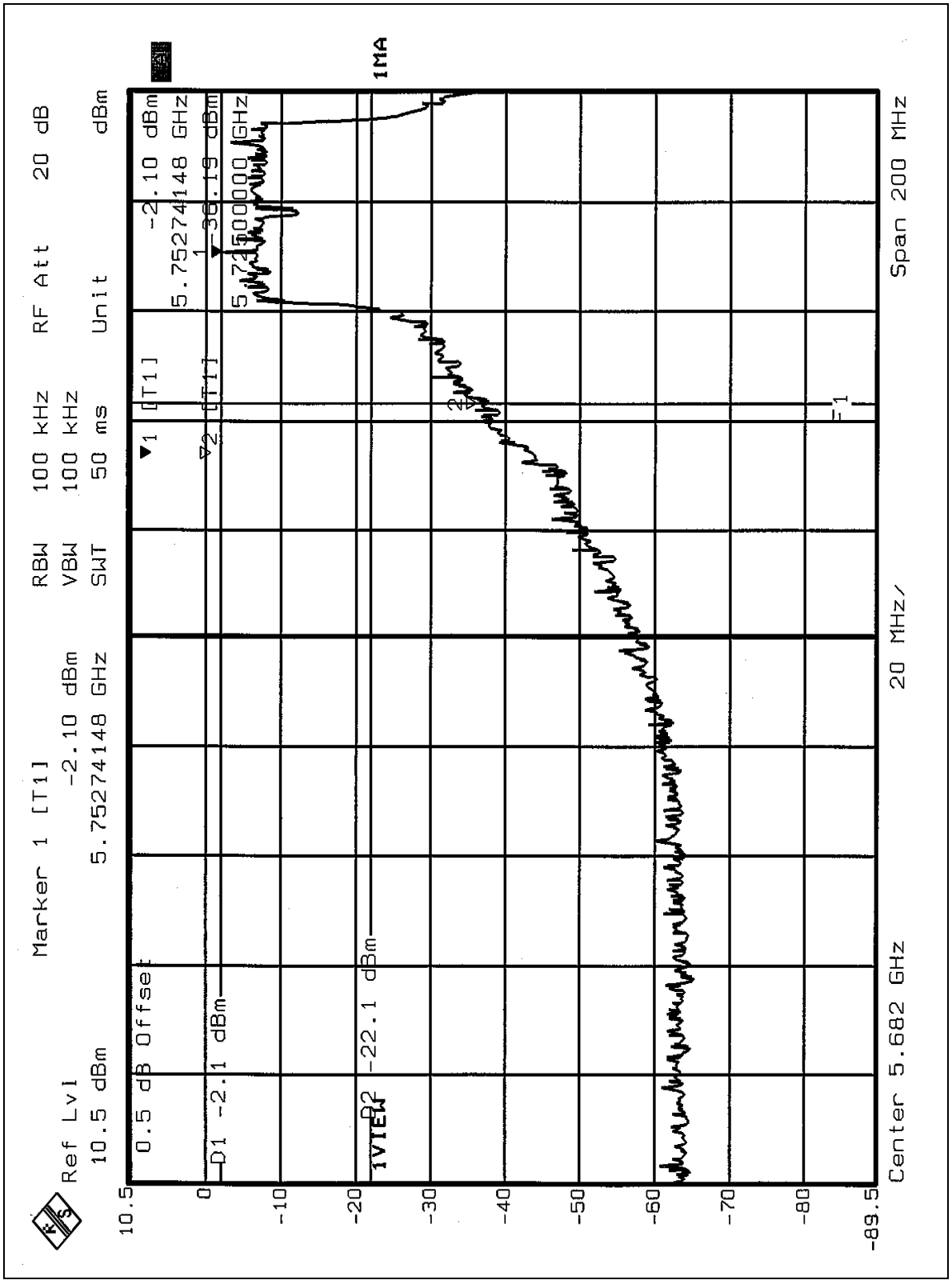

Marker 1 [T1]
-3.98 dBm
5.74998798 GHz
RBW 100 kHz
VBW 100 kHz
SWT 25 ms
RF Att 20 dB
Unit dBm
Ref Lvl
10.5 dBm
0.5 dB Offset
D1 -3.98 dBm
D2 -23.98 dBm
1 [T1] -3.98 dBm
5.74998798 GHz
2 [T1] -38.90 dBm
1MA
1VIEW
F1
Center 5.706 GHz
10 MHz/
Span 100 MHz

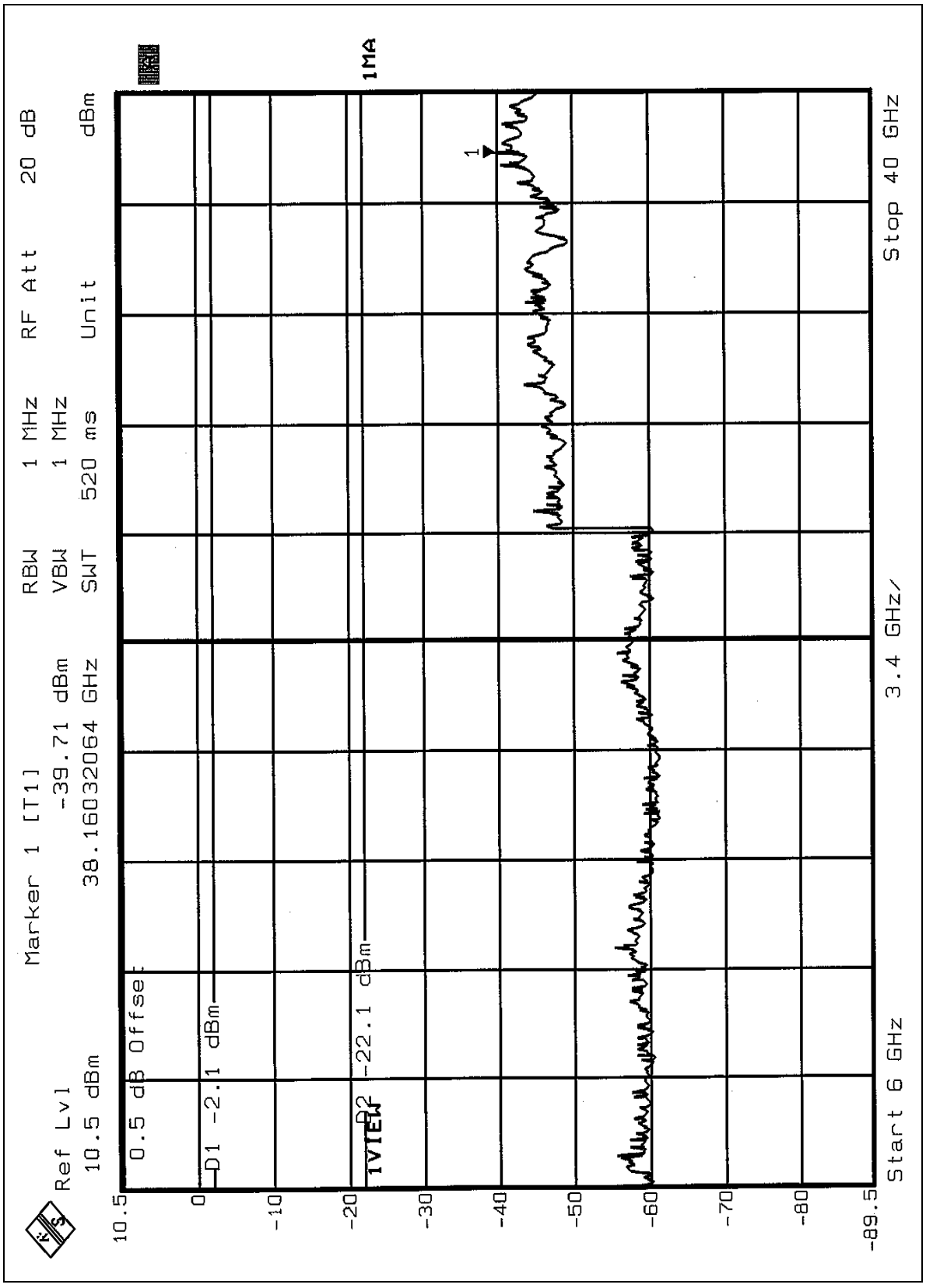

Ref Lvl
10.5 dBm
0.5 dB Offset
Marker 1 [T1]
-39.80 dBm
38.56913828 GHz
D1 -3.98 dBm
1VIEW 2 -23.98 dBm
RBW 1 MHz
VBW 1 MHz
SWT 520 ms
RF Att 20 dB
Unit dBm
1MA
Start 6 GHz
3.4 GHz/
Stop 40 GHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

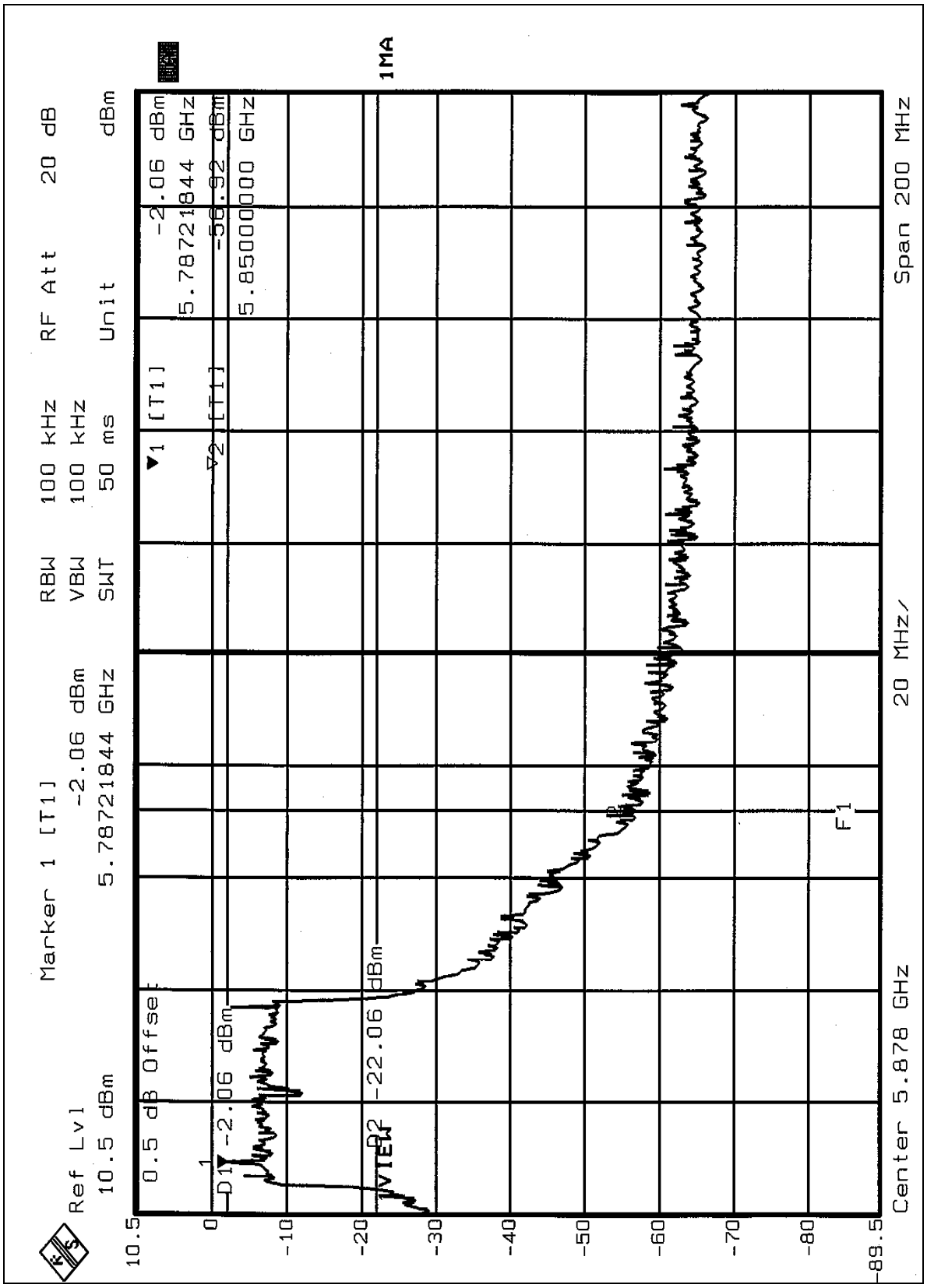

Marker 1 [T1]
-4.03 dBm
5.82742725 GHz
RBW 100 kHz
VBW 100 kHz
SWT 25 ms
RF Att 20 dB
Unit dBm
Ref Lvl
10.5 dBm
0.5 dB Offset
1MA
1 [T1] -4.03 dBm
2 [T1] -24.03 dBm
D1 -4.03 dBm
D2 -24.03 dBm
F1
Center 5.8638 GHz
10 MHz/
Span 100 MHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

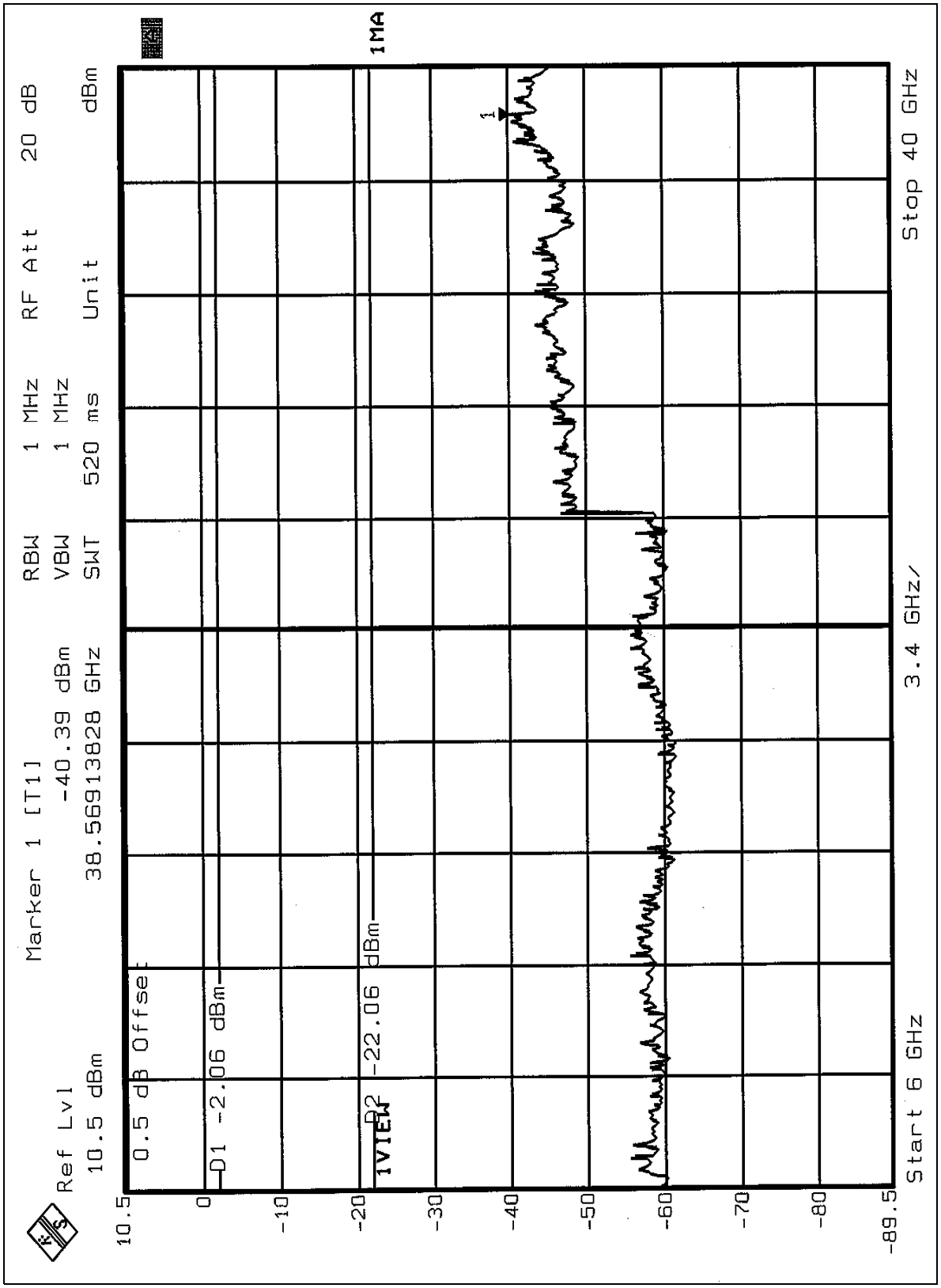

Marker 1 [T1]
-39.70 dBm
38.43286573 GHz
Ref Lvl
10.5 dBm
0.5 dB Offset
D1 -4.03 dBm
D2 -24.03 dBm
RBW 1 MHz
VBW 1 MHz
SWT 520 ms
RF Att 20 dB
Unit dBm
1MA
Start 6 GHz
3.4 GHz/
Stop 40 GHz

Turbo Mode


Ref Lvl
10.5 dBm
0.5 dB Offset
Marker 1 [T1]
-2.10 dBm
5.75274148 GHz
RBW 100 kHz
VBW 100 kHz
SWT 50 ms
RF Att 20 dB
Unit dBm
1MA
1VIEW
D1 -2.1 dBm
D2 -22.1 dBm
Center 5.682 GHz
20 MHz/
Span 200 MHz


Ref Lvl
10.5 dBm
0.5 dB Offset
D1 -2.1 dBm
D2 -22.1 dBm
Marker 1 [T1]
-39.71 dBm
38.16032064 GHz
RBW 1 MHz
VBW 1 MHz
SWT 520 ms
RF Att 20 dB
Unit dBm
1MA
Start 6 GHz
3.4 GHz/
Stop 40 GHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5


Marker 1 [T1]
-2.06 dBm
5.78721844 GHz
RBW 100 kHz
VBW 100 kHz
SWT 50 ms
RF Att 20 dB
Unit dBm
1MA
Ref Lvl
10.5 dBm
0.5 dB Offset
D1 -2.06 dBm
VIEW
D2 -22.06 dBm
1 [T1]
-2.06 dBm
5.78721844 GHz
2 [T1]
-56.92 dBm
5.85000000 GHz
Center 5.878 GHz
20 MHz/
Span 200 MHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5


Marker 1 [T1]
-40.39 dBm
38.56913828 GHz
RBW 1 MHz
VBW 1 MHz
SWT 520 ms
RF Att 20 dB
Unit dBm
Ref Lvl
10.5 dBm
0.5 dB Offset
D1 -2.06 dBm
D2 -22.06 dBm
1VIEW
1MA
Start 6 GHz
3.4 GHz/
Stop 40 GHz
10.5
0
-10
-20
-30
-40
-50
-60
-70
-80
-89.5

5.13 ANTENNA REQUIREMENT

5.13.1 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 15.247(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.

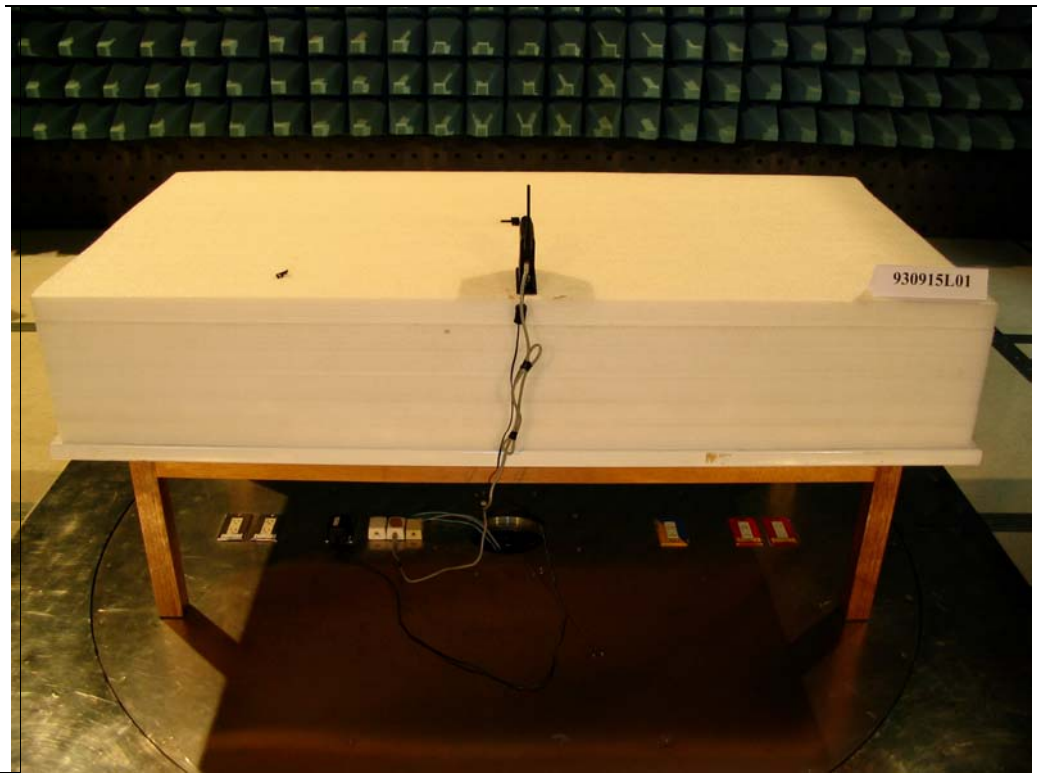
5.13.2 ANTENNA CONNECTED CONSTRUCTION

The antenna used in this product is Dipole antenna with UFL antenna connector. The maximum Gain of the antenna is 3.0dBi.

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, Radio, Telecom 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, A2LA
Germany	TUV Rheinland
Japan	VCCI
Norway	NEMKO
Canada	INDUSTRY CANADA , CSA
R.O.C.	CNLA, BSMI, DGT
Netherlands	Telefication
Singapore	PSB , GOST-ASIA(MOU)
Russia	CERTIS(MOU)

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. If you have any comments, please feel free to contact us at the following:

Linko EMC/RF Lab:
Tel: 886-2-26052180
Fax: 886-2-26052943

Hsin Chu EMC/RF Lab:
Tel: 886-3-5935343
Fax: 886-3-5935342

Hwa Ya EMC/RF/Safety Telecom Lab:
Tel: 886-3-3183232
Fax: 886-3-3185050

Linko RF Lab.
Tel: 886-3-3270910
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The address and road map of all our labs can be found in our web site also

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