



## **4.7 ANTENNA REQUIREMENT**

### **4.7.1 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 (b), 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.

### **4.7.2 ANTENNA CONNECTED CONSTRUCTION**

The antenna used in this product are Inverted F and Monopole antenna with UFL connector. The maximum Gain of the antenna is 2.85dBi.



## 5. TEST TYPES AND RESULTS (FOR PART 802.11a)

### 5.1 CONDUCTED EMISSION MEASUREMENT

#### 5.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dB $\mu$ V)	
	Quasi-peak	Average
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50

- NOTE:**
1. The lower limit shall apply at the transition frequencies.
  2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.
  3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

#### 5.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESCS30	100288	Dec. 11, 2004
RF signal cable Woken	5D-FB	Cable-HyC02-01	Mar. 07, 2005
LISN ROHDE & SCHWARZ	ESH2-Z5	100100	Mar. 10, 2005
LISN ROHDE & SCHWARZ	ESH3-Z5	100311	Mar. 04, 2005
Software ADT	ADT_Cond_V3	NA	NA

- NOTE:**
1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
  2. The test was performed in HwaYa Shielded Room 2.
  3. The VCCI Site Registration No. is C-2047.



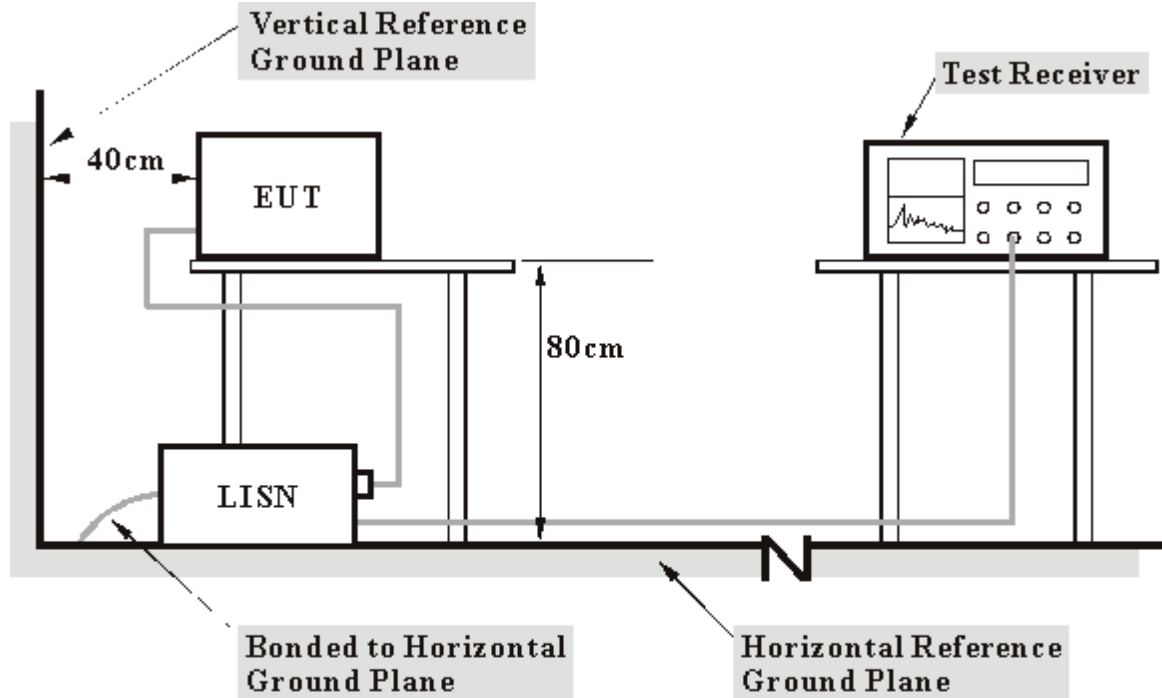
### 5.1.3 TEST PROCEDURES

- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. The frequency range from 150kHz to 30MHz was searched. Emission levels under ( Limit - 20dB) was not recorded.

### 5.1.4 DEVIATION FROM TEST STANDARD

No deviation

### 5.1.5 TEST SETUP



- Note:**
1. Support units were connected to second LISN.
  2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

### 5.1.6 EUT OPERATING CONDITIONS

Same as 4.1.6

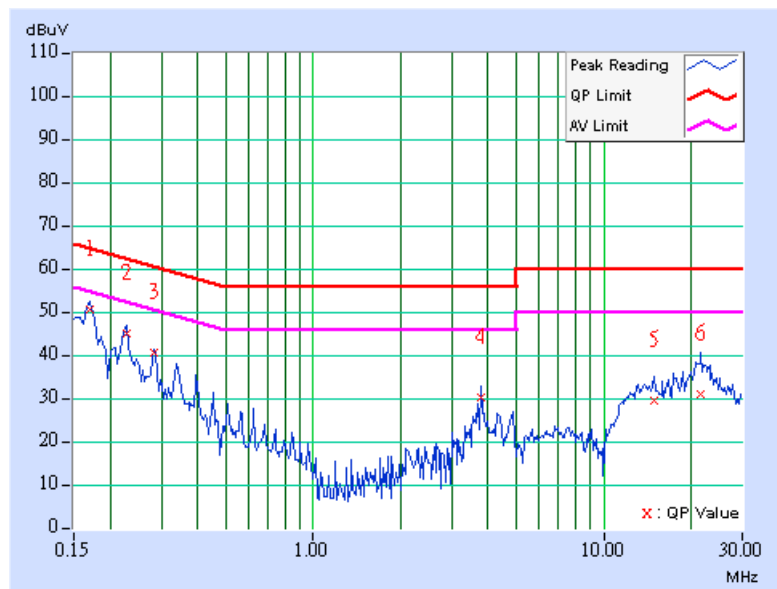


5.1.7 TEST RESULTS

<b>EUT</b>	Mini- PCI CARD	<b>MODEL</b>	WLL4030
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>6dB BANDWIDTH</b>	9 kHz
<b>ENVIRONMENTAL CONDITIONS</b>	23deg. C, 65%RH, 991hPa	<b>PHASE</b>	Line (L)
<b>TESTED BY</b>	Gary Chang		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
			1	0.170	0.10	49.86	-	49.96	-	64.98
2	0.228	0.10	44.04	-	44.14	-	62.52	52.52	-18.38	-
3	0.283	0.11	39.68	-	39.79	-	60.73	50.73	-20.95	-
4	3.793	0.31	29.53	-	29.84	-	56.00	46.00	-26.16	-
5	14.949	0.70	28.75	-	29.45	-	60.00	50.00	-30.55	-
6	21.551	0.99	30.03	-	31.02	-	60.00	50.00	-28.98	-

- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
  2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
  3. The emission levels of other frequencies were very low against the limit.
  4. Margin value = Emission level - Limit value
  5. Correction factor = Insertion loss + Cable loss
  6. Emission Level = Correction Factor + Reading Value.



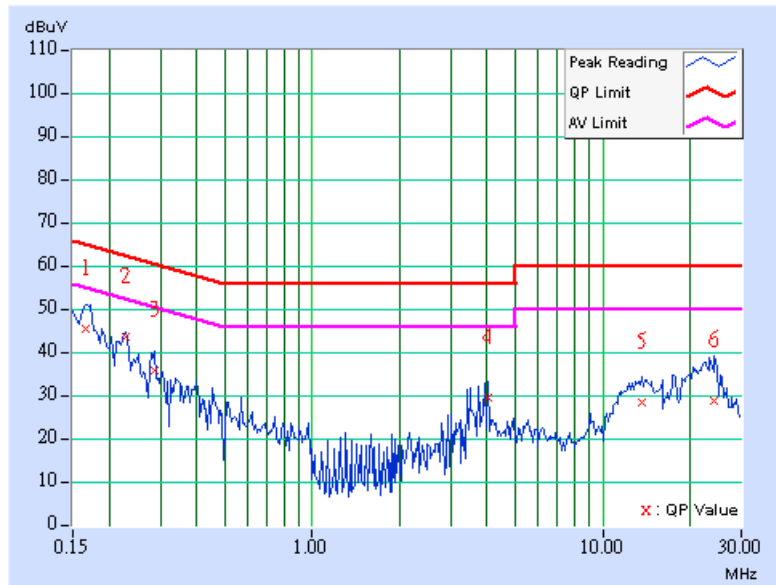




<b>EUT</b>	Mini- PCI CARD	<b>MODEL</b>	WLL4030
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>PHASE</b>	Neutral (N)
<b>ENVIRONMENTAL CONDITIONS</b>	26deg. C, 62%RH, 991hPa	<b>6dB BANDWIDTH</b>	9 kHz
<b>TESTED BY</b>	Gary Chang		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
			1	0.166	0.10	44.82	-	44.92	-	65.18
2	0.228	0.10	42.83	-	42.93	-	62.52	52.52	-19.59	-
3	0.287	0.11	35.31	-	35.42	-	60.62	50.62	-25.20	-
4	4.020	0.30	28.96	-	29.26	-	56.00	46.00	-26.74	-
5	13.688	0.54	27.75	-	28.29	-	60.00	50.00	-31.71	-
6	24.297	0.69	28.34	-	29.03	-	60.00	50.00	-30.97	-

- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
  2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
  3. The emission levels of other frequencies were very low against the limit.
  4. Margin value = Emission level - Limit value
  5. Correction factor = Insertion loss + Cable loss
  6. Emission Level = Correction Factor + Reading Value.





## 5.2 RADIATED EMISSION MEASUREMENT

### 5.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

Emissions radiated outside of the specified bands, shall be according to the general radiated limits in 15.209 as following:

Frequencies (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

**NOTE:**

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. As shown in 15.35(b), for frequencies 1 ~ 25 GHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.



## 5.2.2 LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS

Frequencies (MHz)	EIRP Limit (dBm)	Equivalent Field Strength at 3m (dB $\mu$ V/m) *note 3
5150~5250	-27	68.3
5250~5350	-27	68.3
5725~5825	-27 *note 1	68.3
	-17 *note 2	78.3

### NOTE:

1. For frequencies 10MHz or greater above or below the band edge.
2. All emissions within the frequency range from the band edge to 10MHz above or below the band edge.
3. The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength

$$E = \frac{1000000\sqrt{30P}}{3} \mu\text{V/m, where P is the eirp (Watts)}$$



## 5.2.3 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESI7	100033	Jun, 08, 2005
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100040	Dec. 15, 2004
BILOG Antenna SCHWARZBECK	VULB9168	9168-153	Feb. 03, 2005
HORN Antenna SCHWARZBECK	9120D	9120D-408	Feb. 03, 2005
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA 9170243	Feb. 23, 2005
Preamplifier Agilent	8447D	2944A10633	Jan. 15, 2005
Preamplifier Agilent	8449B	3008A01964	Jan. 27, 2005
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	218183/4	Mar. 05, 2005
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	218195/4	Mar. 05, 2005
Software ADT.	ADT_Radiated_V5.14	NA	NA
Antenna Tower inn-co GmbH	MA 4000	013303	NA
Antenna Tower Controller inn-co GmbH	CO2000	017303	NA
Turn Table ADT.	TT100.	TT93021703	NA
Turn Table Controller ADT.	SC100.	SC93021703	NA

- NOTE:**
1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
  2. The test was performed in HwaYa Chamber 2.
  3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
  4. The IC Site Registration No. is IC4924-3.



#### 5.2.4 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

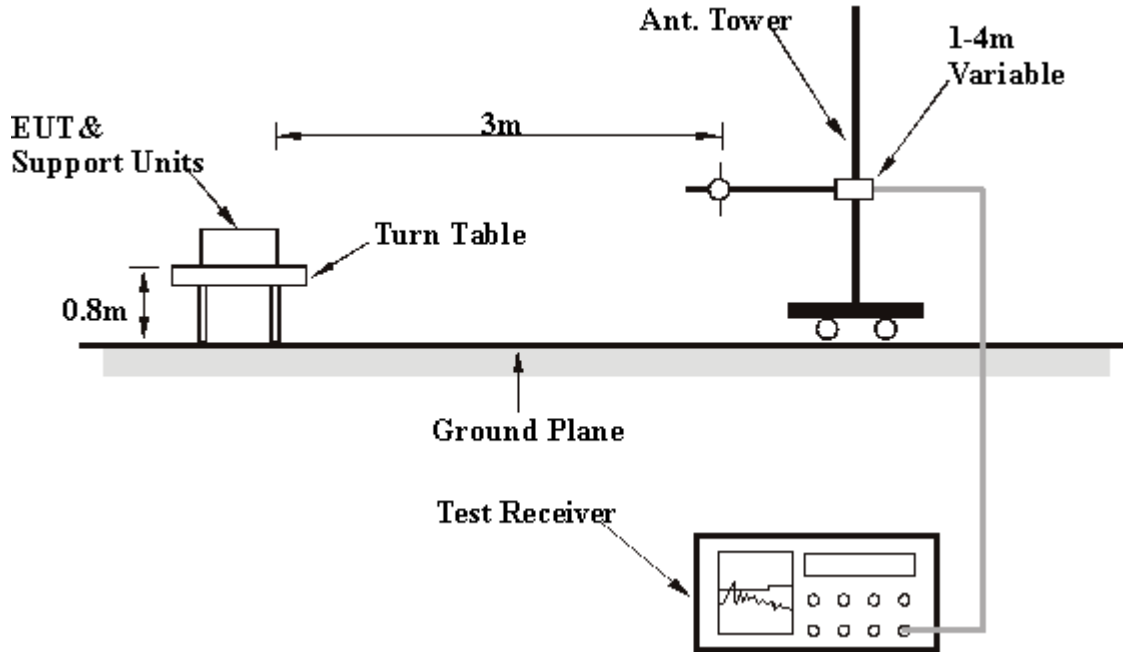
**NOTE:**

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 10 Hz for Average detection (AV) at frequency above 1GHz.

#### 5.2.5 DEVIATION FROM TEST STANDARD

No deviation

5.2.6 TEST SETUP



For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

5.2.7 EUT OPERATING CONDITIONS

Same as 4.1.6



## 5.2.8 TEST RESULTS

## Test Mode 1

<b>EUT</b>	Mini- PCI CARD	<b>MODEL</b>	WLL4030
<b>MODE</b>	Channel 11	<b>FREQUENCY RANGE</b>	Below 1000MHz
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>DETECTOR FUNCTION</b>	Quasi-Peak
<b>ENVIRONMENTAL CONDITIONS</b>	28deg. C, 65%RH, 991hPa	<b>TESTED BY</b>	Long Chen

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	100.69	40.78 QP	43.50	-2.72	1.15 H	85	29.58	11.20
2	166.56	39.51 QP	43.50	-3.99	2.54 H	159	25.35	14.16
3	198.90	38.00 QP	43.50	-5.50	1.00 H	216	26.46	11.54
4	233.18	39.08 QP	46.00	-6.92	1.23 H	86	26.27	12.81
5	265.51	40.37 QP	46.00	-5.63	1.00 H	50	26.53	13.84
6	298.26	36.72 QP	46.00	-9.28	2.56 H	41	21.94	14.78
7	364.43	33.10 QP	46.00	-12.90	2.58 H	325	16.92	16.18
8	398.30	30.68 QP	46.00	-15.32	1.00 H	6	13.76	16.92
9	633.30	38.87 QP	46.00	-7.13	1.90 H	259	17.16	21.71
10	799.16	42.12 QP	46.00	-3.88	1.00 H	346	18.35	23.77

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	98.77	40.88 QP	43.50	-2.62	1.00 V	177	29.82	11.06
2	132.59	37.07 QP	43.50	-6.43	1.00 V	44	23.42	13.65
3	165.79	38.07 QP	43.50	-5.43	1.00 V	335	23.84	14.23
4	200.03	31.67 QP	43.50	-11.83	1.00 V	68	20.21	11.46
5	231.98	38.84 QP	46.00	-7.16	1.91 V	89	26.11	12.73
6	566.51	40.60 QP	46.00	-5.40	1.00 V	248	20.31	20.29
7	633.17	42.43 QP	46.00	-3.57	2.02 V	217	20.72	21.71

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
  2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
  3. The other emission levels were very low against the limit.
  4. Margin value = Emission level – Limit value.



## Test Mode 2

<b>EUT</b>	Mini- PCI CARD	<b>MODEL</b>	WLL4030
<b>MODE</b>	Channel 11	<b>FREQUENCY RANGE</b>	Below 1000MHz
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>DETECTOR FUNCTION</b>	Quasi-Peak
<b>ENVIRONMENTAL CONDITIONS</b>	28deg. C, 65%RH, 991hPa	<b>TESTED BY</b>	Long Chen

### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	67.95	28.75 QP	40.00	-11.25	1.93 H	302	15.58	13.17
2	99.51	39.00 QP	43.50	-4.50	1.61 H	357	27.89	11.11
3	166.56	36.03 QP	43.50	-7.47	2.52 H	249	21.87	14.16
4	198.84	38.41 QP	43.50	-5.09	1.50 H	257	26.86	11.55
5	399.70	3.57 QP	46.00	-42.43	1.18 H	347	-13.38	16.95
6	800.20	40.32 QP	46.00	-5.68	1.00 H	175	16.55	23.77
7	932.00	35.08 QP	46.00	-10.92	1.04 H	120	9.47	25.61

### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	99.88	39.90 QP	43.50	-3.60	1.00 V	85	28.77	11.13
2	133.69	30.38 QP	43.50	-13.12	1.00 V	154	16.66	13.72
3	166.50	33.86 QP	43.50	-9.64	1.00 V	37	19.70	14.16
4	199.80	36.61 QP	43.50	-6.89	1.00 V	353	25.13	11.48
5	232.00	27.81 QP	46.00	-18.19	1.01 V	64	15.08	12.73
6	397.80	32.05 QP	46.00	-13.95	1.00 V	290	15.14	16.91
7	532.78	36.84 QP	46.00	-9.16	1.70 V	264	17.41	19.43
8	657.78	41.28 QP	46.00	-4.72	1.00 V	81	19.25	22.03
9	799.88	37.54 QP	46.00	-8.46	1.73 V	95	13.77	23.77

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
  2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
  3. The other emission levels were very low against the limit.
  4. Margin value = Emission level – Limit value.





### Test Mode 3

<b>EUT</b>	Mini- PCI CARD	<b>MODEL</b>	WLL4030
<b>MODE</b>	Channel 11	<b>FREQUENCY RANGE</b>	Below 1000MHz
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>DETECTOR FUNCTION</b>	Quasi-Peak
<b>ENVIRONMENTAL CONDITIONS</b>	23deg. C, 65%RH, 991hPa	<b>TESTED BY</b>	Long Chen

#### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	99.70	39.10 QP	43.50	-4.40	1.31 H	84	27.98	11.12
2	133.80	31.50 QP	43.50	-12.00	1.65 H	79	17.77	13.73
3	165.40	38.10 QP	43.50	-5.40	1.67 H	94	23.84	14.26
4	199.80	37.10 QP	43.50	-6.40	1.07 H	248	25.62	11.48
5	234.50	38.70 QP	46.00	-7.30	1.36 H	38	25.80	12.90
6	265.50	38.40 QP	46.00	-7.60	1.52 H	77	24.56	13.84
7	299.80	37.10 QP	46.00	-8.90	1.04 H	34	22.29	14.81
8	362.80	32.80 QP	46.00	-13.20	1.31 H	62	16.66	16.14
9	400.80	32.50 QP	46.00	-13.50	1.06 H	92	15.52	16.98
10	632.40	35.10 QP	46.00	-10.90	1.15 H	81	13.40	21.70
11	800.90	41.80 QP	46.00	-4.20	1.37 H	197	18.02	23.78

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	99.60	39.20 QP	43.50	-4.30	1.52 V	63	28.08	11.12
2	133.50	36.10 QP	43.50	-7.40	1.09 V	214	22.39	13.71
3	167.90	35.40 QP	43.50	-8.10	1.68 V	52	21.36	14.04
4	199.63	32.90 QP	43.50	-10.60	1.08 V	268	21.41	11.49
5	232.60	37.20 QP	46.00	-8.80	1.06 V	91	24.43	12.77
6	500.40	35.20 QP	46.00	-10.80	1.94 V	74	16.48	18.72
7	575.00	39.10 QP	46.00	-6.90	1.42 V	84	18.57	20.53
8	635.10	41.80 QP	46.00	-4.20	1.57 V	234	20.07	21.73

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
  2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
  3. The other emission levels were very low against the limit.
  4. Margin value = Emission level – Limit value.



**Test Mode 4**

<b>EUT</b>	Mini- PCI CARD	<b>MODEL</b>	WLL4030
<b>MODE</b>	Channel 11	<b>FREQUENCY RANGE</b>	Below 1000MHz
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>DETECTOR FUNCTION</b>	Quasi-Peak
<b>ENVIRONMENTAL CONDITIONS</b>	23deg. C, 65%RH, 991hPa	<b>TESTED BY</b>	Long Chen

<b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b>								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	99.50	41.50 QP	43.50	-2.00	1.07 H	85	30.39	11.11
2	167.50	40.20 QP	43.50	-3.30	1.15 H	332	26.12	14.08
3	199.50	37.50 QP	43.50	-6.00	1.02 H	304	26.00	11.50
4	235.20	38.40 QP	46.00	-7.60	1.15 H	62	25.46	12.94
5	264.50	41.50 QP	46.00	-4.50	1.05 H	335	27.70	13.80
6	351.40	32.50 QP	46.00	-13.50	1.44 H	85	16.61	15.89
7	400.20	32.80 QP	46.00	-13.20	1.07 H	31	15.84	16.96
8	599.50	34.50 QP	46.00	-11.50	1.18 H	98	13.26	21.24
9	732.50	38.40 QP	46.00	-7.60	1.02 H	62	15.13	23.27

<b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b>								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
<b>1</b>	<b>99.50</b>	<b>42.80 QP</b>	<b>43.50</b>	<b>-0.70</b>	<b>1.24 V</b>	<b>54</b>	<b>31.69</b>	<b>11.11</b>
2	133.50	38.50 QP	43.50	-5.00	1.07 V	84	24.79	13.71
3	168.20	39.50 QP	43.50	-4.00	1.15 V	82	25.48	14.02
4	199.80	32.80 QP	43.50	-10.70	1.02 V	112	21.32	11.48
5	232.50	39.50 QP	46.00	-6.50	1.12 V	352	26.73	12.77
6	545.20	39.50 QP	46.00	-6.50	1.02 V	325	19.80	19.70
7	635.60	41.85 QP	46.00	-4.15	1.32 V	85	20.11	21.74

- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
  2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
  3. The other emission levels were very low against the limit.
  4. Margin value = Emission level – Limit value.



**Test Mode 1**

<b>EUT</b>	Mini- PCI CARD	<b>MODEL</b>	WLL4030
<b>FREQUENCY RANGE</b>	1 ~ 40 GHz	<b>CHANNEL</b>	1
<b>ENVIRONMENTAL CONDITIONS</b>	28deg. C, 65%RH, 991hPa	<b>DETECTOR FUNCTION</b>	Peak(PK) Average (AV)
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60Hz	<b>TESTED BY</b>	Long Chen

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB)
1	3453.00	47.28 PK	68.30	-21.02	1.47 H	189	13.02	34.26
2	#5150.00	58.94 PK	74.00	-15.06	1.00 H	211	20.50	38.44
2	#5150.00	47.77 AV	54.00	-6.23	1.00 H	211	9.33	38.44
3	*5180.00	110.13 PK			1.00 H	211	71.56	38.57
3	*5180.00	98.96 AV			1.00 H	211	60.39	38.57
4	10360.00	64.50 PK	68.30	-3.80	1.54 H	275	14.82	49.68

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB)
1	3453.00	45.25 PK	68.30	-23.05	1.10 V	258	10.99	34.26
2	#5150.00	53.47 PK	74.00	-20.53	1.03 V	300	15.03	38.44
2	#5150.00	42.74 AV	54.00	-11.26	1.03 V	300	4.30	38.44
3	*5180.00	104.66 PK			1.03 V	300	66.09	38.57
3	*5180.00	93.93 AV			1.03 V	300	55.36	38.57
4	10360.00	65.40 PK	68.30	-2.90	1.82 V	123	15.73	49.68

**NOTE:**

1. Emission level = Raw value + Correction Factor
2. Correction Factor = Ant. Factor + Cable loss
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "\*" : Fundamental frequency
6. "#": The radiated frequency falling in the restricted band.



<b>EUT</b>	Mini- PCI CARD	<b>MODEL</b>	WLL4030
<b>FREQUENCY RANGE</b>	1 ~ 40 GHz	<b>CHANNEL</b>	4
<b>ENVIRONMENTAL CONDITIONS</b>	28deg. C, 65%RH, 991hPa	<b>DETECTOR FUNCTION</b>	Peak(PK) Average (AV)
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60Hz	<b>TESTED BY</b>	Long Chen

#### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB)
1	3494.00	47.58 PK	68.30	-20.72	1.32 H	174	13.37	34.21
2	*5240.00	109.48 PK			1.02 H	208	70.86	38.62
2	*5240.00	98.35 AV			1.02 H	208	59.73	38.62
3	10480.00	64.21 PK	68.30	-4.09	1.52 H	279	15.11	49.10

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB)
1	3494.00	45.17 PK	68.30	-23.13	1.18 V	294	10.96	34.21
2	*5240.00	103.40 PK			1.03 V	308	64.78	38.62
2	*5240.00	93.04 AV			1.03 V	308	54.42	38.62
3	10480.00	63.88 PK	68.30	-4.42	1.64 V	122	14.78	49.10

#### NOTE:

1. Emission level = Raw value + Correction Factor
2. Correction Factor = Ant. Factor + Cable loss
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "\*" : Fundamental frequency
6. "#": The radiated frequency falling in the restricted band.



<b>EUT</b>	Mini- PCI CARD	<b>MODEL</b>	WLL4030
<b>FREQUENCY RANGE</b>	1 ~ 40 GHz	<b>CHANNEL</b>	5
<b>ENVIRONMENTAL CONDITIONS</b>	28deg. C, 65%RH, 991hPa	<b>DETECTOR FUNCTION</b>	Peak(PK) Average (AV)
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60Hz	<b>TESTED BY</b>	Long Chen

<b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b>								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3506.00	48.57 PK	68.30	-19.73	1.49 H	257	14.34	34.23
2	*5260.00	110.37 PK			1.00 H	215	71.76	38.61
2	*5260.00	99.39 AV			1.00 H	215	60.78	38.61
3	10520.00	64.43 PK	68.30	-3.87	1.50 H	283	15.47	48.97

<b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b>								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3506.00	43.79 PK	68.30	-24.51	1.09 V	184	9.56	34.23
2	*5260.00	105.21 PK			1.03 V	310	66.60	38.61
2	*5260.00	94.21 AV			1.03 V	310	55.60	38.61
3	10520.00	64.32 PK	68.30	-3.98	1.50 V	276	15.35	48.97

**NOTE:**

1. Emission level = Raw value + Correction Factor
2. Correction Factor = Ant. Factor + Cable loss
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "\*" : Fundamental frequency
6. "#"The radiated frequency falling in the restricted band.



<b>EUT</b>	Mini- PCI CARD	<b>MODEL</b>	WLL4030
<b>FREQUENCY RANGE</b>	1 ~ 40 GHz	<b>CHANNEL</b>	8
<b>ENVIRONMENTAL CONDITIONS</b>	28deg. C, 65%RH, 991hPa	<b>DETECTOR FUNCTION</b>	Peak(PK) Average (AV)
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60Hz	<b>TESTED BY</b>	Long Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)
1	3574.00	48.19 PK	68.30	-20.11	1.43 H	184	13.56	34.63
2	*5320.00	109.74 PK			1.00 H	215	71.18	38.56
2	*5320.00	98.82 AV			1.00 H	215	60.26	38.56
3	#5350.00	58.32 PK	74.00	-15.68	1.00 H	215	19.79	38.53
3	#5350.00	47.40 AV	54.00	-6.60	1.00 H	215	8.87	38.53
4	#10640.00	64.55 PK	74.00	-9.45	1.49 H	286	15.22	49.33
4	#10640.00	51.51 AV	54.00	-2.49	1.49 H	286	2.18	49.33

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)
1	3574.00	44.91 PK	68.30	-23.39	1.61 V	347	10.28	34.63
2	*5320.00	104.35 PK			1.00 V	205	65.79	38.56
2	*5320.00	93.46 AV			1.00 V	205	54.90	38.56
3	#5350.00	52.93 PK	74.00	-21.07	1.00 V	205	14.40	38.53
3	#5350.00	42.04 AV	54.00	-11.96	1.00 V	205	3.51	38.53
4	#10640.00	63.78 PK	74.00	-10.22	1.43 V	115	14.45	49.33
4	#10640.00	52.66 AV	54.00	-1.34	1.43 V	115	3.33	49.33

**NOTE:**

1. Emission level = Raw value + Correction Factor
2. Correction Factor = Ant. Factor + Cable loss
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "\*" : Fundamental frequency
6. "#" The radiated frequency falling in the restricted band.



<b>EUT</b>	Mini- PCI CARD	<b>MODEL</b>	WLL4030
<b>FREQUENCY RANGE</b>	1 ~ 40 GHz	<b>CHANNEL</b>	9
<b>ENVIRONMENTAL CONDITIONS</b>	28deg. C, 65%RH, 991hPa	<b>DETECTOR FUNCTION</b>	Peak(PK) Average (AV)
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60Hz	<b>TESTED BY</b>	Long Chen

#### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#3830.00	48.93 PK	74.00	-25.07	1.73 H	174	13.92	35.01
2	5715.00	65.74 PK	68.30	-2.56	1.12 H	195	26.70	39.04
3	5725.00	76.63 PK	78.30	-1.67	1.12 H	195	37.54	39.09
4	*5745.00	108.98 PK			1.12 H	195	69.78	39.20
4	*5745.00	98.52 AV			1.12 H	195	59.32	39.20
5	#11490.00	61.31 PK	74.00	-12.69	1.28 H	200	11.56	49.75

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#3830.00	44.21 PK	74.00	-29.79	1.00 V	294	9.20	35.01
2	5715.00	62.78 PK	68.30	-5.52	1.00 V	218	23.74	39.04
3	5725.00	73.67 PK	78.30	-4.63	1.00 V	218	34.58	39.09
4	*5745.00	106.02 PK			1.00 V	218	66.82	39.20
4	*5745.00	94.97 AV			1.00 V	218	55.77	39.20
5	#11490.00	62.24 PK	74.00	-11.76	1.32 V	219	12.49	49.75

#### NOTE:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB).
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. “ \* “ : Fundamental frequency.
6. “ # ” The radiated frequency falling in the restricted band.



<b>EUT</b>	Mini- PCI CARD	<b>MODEL</b>	WLL4030
<b>FREQUENCY RANGE</b>	1 ~ 40 GHz	<b>CHANNEL</b>	12
<b>ENVIRONMENTAL CONDITIONS</b>	28deg. C, 65%RH, 991hPa	<b>DETECTOR FUNCTION</b>	Peak(PK) Average (AV)
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60Hz	<b>TESTED BY</b>	Long Chen

#### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#3870.00	48.37 PK	74.00	-25.63	1.21 H	194	13.32	35.05
2	*5805.00	108.21 PK			1.00 H	225	68.72	39.49
2	*5805.00	98.18 AV			1.00 H	225	58.69	39.49
3	5825.00	75.86 PK	78.30	-2.44	1.00 H	225	36.38	39.48
4	5835.00	61.62 PK	68.30	-6.68	1.00 H	225	22.14	39.48
5	#11610.00	62.18 PK	74.00	-11.82	1.00 H	289	12.35	49.83

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#3870.00	44.87 PK	74.00	-29.13	1.09 V	243	9.82	35.05
2	*5805.00	105.58 PK			1.03 V	310	66.09	39.49
2	*5805.00	94.56 AV			1.03 V	310	55.07	39.49
3	5825.00	73.23 PK	78.30	-5.07	1.03 V	310	33.75	39.48
4	5835.00	58.99 PK	68.30	-9.31	1.03 V	310	19.51	39.48
5	#11610.00	63.87 PK	74.00	-10.13	1.28 V	225	14.04	49.83

#### NOTE:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB).
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. “ \* “ : Fundamental frequency.
6. “#” The radiated frequency falling in the restricted band.





**Test Mode 2**

<b>EUT</b>	Mini- PCI CARD	<b>MODEL</b>	WLL4030
<b>FREQUENCY RANGE</b>	1 ~ 40 GHz	<b>CHANNEL</b>	1
<b>ENVIRONMENTAL CONDITIONS</b>	28deg. C, 65%RH, 991hPa	<b>DETECTOR FUNCTION</b>	Peak(PK) Average (AV)
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60Hz	<b>TESTED BY</b>	Long Chen

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB)
1	3453.00	46.32 PK	68.30	-21.98	1.09 H	128	12.44	33.88
2	#5150.00	55.66 PK	74.00	-18.34	1.25 H	225	17.05	38.61
2	#5150.00	45.48 AV	54.00	-8.52	1.25 H	225	6.87	38.61
3	*5180.00	106.85 PK			1.25 H	225	68.12	38.73
3	*5180.00	96.67 AV			1.25 H	225	57.94	38.73
4	10360.00	62.62 PK	68.30	-5.68	1.56 H	103	14.51	48.11

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB)
1	3453.00	46.92 PK	68.30	-21.38	1.03 V	199	13.03	33.88
2	#5150.00	52.41 PK	74.00	-21.59	1.04 V	284	13.80	38.61
2	#5150.00	42.21 AV	54.00	-11.79	1.04 V	284	3.60	38.61
3	*5180.00	103.60 PK			1.04 V	284	64.87	38.73
3	*5180.00	93.40 AV			1.04 V	284	54.67	38.73
4	10360.00	64.32 PK	68.30	-3.98	1.01 V	29	16.22	48.11

**NOTE:**

1. Emission level = Raw value + Correction Factor
2. Correction Factor = Ant. Factor + Cable loss
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "\*" : Fundamental frequency
6. "#"The radiated frequency falling in the restricted band.



<b>EUT</b>	Mini- PCI CARD	<b>MODEL</b>	WLL4030
<b>FREQUENCY RANGE</b>	1 ~ 40 GHz	<b>CHANNEL</b>	4
<b>ENVIRONMENTAL CONDITIONS</b>	28deg. C, 65%RH, 991hPa	<b>DETECTOR FUNCTION</b>	Peak(PK) Average (AV)
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60Hz	<b>TESTED BY</b>	Long Chen

#### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB)
1	3494.00	48.36 PK	68.30	-19.94	1.53 H	117	14.55	33.81
2	*5240.00	107.24 PK			1.24 H	219	68.47	38.77
2	*5240.00	97.51 AV			1.24 H	219	58.74	38.77
3	10480.00	62.92 PK	68.30	-5.38	1.28 H	311	15.25	47.68

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB)
1	3494.00	45.84 PK	68.30	-22.46	1.05 V	98	12.03	33.81
2	*5240.00	103.78 PK			1.08 V	278	65.01	38.77
2	*5240.00	93.85 AV			1.08 V	278	55.08	38.77
3	10480.00	63.29 PK	68.30	-5.01	1.80 V	225	15.62	47.68

#### NOTE:

1. Emission level = Raw value + Correction Factor
2. Correction Factor = Ant. Factor + Cable loss
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "\*" : Fundamental frequency
6. "#": The radiated frequency falling in the restricted band.



<b>EUT</b>	Mini- PCI CARD	<b>MODEL</b>	WLL4030
<b>FREQUENCY RANGE</b>	1 ~ 40 GHz	<b>CHANNEL</b>	5
<b>ENVIRONMENTAL CONDITIONS</b>	28deg. C, 65%RH, 991hPa	<b>DETECTOR FUNCTION</b>	Peak(PK) Average (AV)
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60Hz	<b>TESTED BY</b>	Long Chen

#### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3506.00	47.63 PK	68.30	-20.67	1.21 H	178	13.79	33.84
2	*5260.00	108.60 PK			1.24 H	225	69.84	38.76
2	*5260.00	97.70 AV			1.24 H	225	58.94	38.76
3	10560.00	63.11 PK	68.30	-5.19	1.81 H	102	15.36	47.75

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3560.00	45.91 PK	68.30	-22.39	1.74 V	153	11.73	34.18
2	*5260.00	104.39 PK			1.04 V	279	65.63	38.76
2	*5260.00	94.40 AV			1.04 V	279	55.64	38.76
3	10560.00	64.95 PK	68.30	-3.35	1.49 V	296	17.20	47.75

#### NOTE:

1. Emission level = Raw value + Correction Factor
2. Correction Factor = Ant. Factor + Cable loss
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "\*" : Fundamental frequency
6. "#"The radiated frequency falling in the restricted band.



<b>EUT</b>	Mini- PCI CARD	<b>MODEL</b>	WLL4030
<b>FREQUENCY RANGE</b>	1 ~ 40 GHz	<b>CHANNEL</b>	8
<b>ENVIRONMENTAL CONDITIONS</b>	28deg. C, 65%RH, 991hPa	<b>DETECTOR FUNCTION</b>	Peak(PK) Average (AV)
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60Hz	<b>TESTED BY</b>	Long Chen

<b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b>								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)
1	3547.00	47.51 PK	68.30	-20.79	1.14 H	169	13.41	34.10
2	*5320.00	107.37 PK			1.22 H	220	68.67	38.70
2	*5320.00	97.10 AV			1.22 H	220	58.40	38.70
3	#5350.00	55.95 PK	74.00	-18.05	1.22 H	220	17.29	38.66
3	#5350.00	45.68 AV	54.00	-8.32	1.22 H	220	7.02	38.66
4	#10640.00	62.43 PK	74.00	-11.57	1.65 H	158	14.34	48.09
4	#10640.00	50.13 AV	54.00	-3.87	1.65 H	158	2.04	48.09

<b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b>								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)
1	3547.00	44.87 PK	68.30	-23.43	1.28 V	144	10.77	34.10
2	*5320.00	103.72 PK			1.04 V	279	65.02	38.70
2	*5320.00	93.75 AV			1.04 V	279	55.05	38.70
3	#5320.00	52.30 PK	74.00	-21.70	1.04 V	279	13.60	38.70
3	#5320.00	42.33 AV	54.00	-11.67	1.04 V	279	3.63	38.70
4	#10640.00	63.25 PK	74.00	-10.75	1.68 V	120	15.15	48.09
4	#10640.00	49.96 AV	54.00	-4.04	1.68 V	120	1.86	48.09

**NOTE:**

1. Emission level = Raw value + Correction Factor
2. Correction Factor = Ant. Factor + Cable loss
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "\*" : Fundamental frequency
6. "#" The radiated frequency falling in the restricted band.



<b>EUT</b>	Mini- PCI CARD	<b>MODEL</b>	WLL4030
<b>FREQUENCY RANGE</b>	1 ~ 40 GHz	<b>CHANNEL</b>	9
<b>ENVIRONMENTAL CONDITIONS</b>	28deg. C, 65%RH, 991hPa	<b>DETECTOR FUNCTION</b>	Peak(PK) Average (AV)
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60Hz	<b>TESTED BY</b>	Long Chen

#### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3830.00	49.81 PK	74.00	-24.19	1.00 H	319	15.00	34.81
2	5715.00	65.84 PK	68.30	-2.46	1.18 H	247	26.57	39.27
3	5725.00	75.34 PK	78.30	-2.96	1.18 H	247	36.01	39.33
4	*5745.00	107.69 PK			1.18 H	247	68.24	39.45
4	*5745.00	97.62 AV			1.18 H	247	58.17	39.45
5	#11490.00	63.74 PK	74.00	-10.26	1.00 H	143	14.59	49.15
5	#11490.00	50.80 AV	54.00	-3.20	1.00 H	143	1.65	49.15

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3830.00	43.71 PK	74.00	-30.29	1.49 V	284	8.90	34.81
2	5715.00	61.27 PK	68.30	-7.03	1.08 V	279	22.00	39.27
3	5725.00	72.23 PK	78.30	-6.07	1.08 V	279	32.90	39.33
4	*5745.00	104.58 PK			1.08 V	279	65.13	39.45
4	*5745.00	94.43 AV			1.08 V	279	54.98	39.45
5	#11490.00	60.06 PK	74.00	-13.94	1.48 V	108	10.91	49.15
5	#11490.00	46.96 AV	54.00	-7.04	1.48 V	108	-2.19	49.15

#### NOTE:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB).
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. “ \* “ : Fundamental frequency.
6. “#” The radiated frequency falling in the restricted band.



<b>EUT</b>	Mini- PCI CARD	<b>MODEL</b>	WLL4030
<b>FREQUENCY RANGE</b>	1 ~ 40 GHz	<b>CHANNEL</b>	12
<b>ENVIRONMENTAL CONDITIONS</b>	28deg. C, 65%RH, 991hPa	<b>DETECTOR FUNCTION</b>	Peak(PK) Average (AV)
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60Hz	<b>TESTED BY</b>	Long Chen

#### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3870.00	48.16 PK	74.00	-25.84	1.76 H	339	13.29	34.87
2	*5805.00	108.48 PK			1.49 H	217	68.71	39.77
2	*5805.00	98.09 AV			1.49 H	217	58.32	39.77
3	5825.00	76.13 PK	78.30	-2.17	1.49 H	217	36.35	39.78
4	5835.00	66.04 PK	68.30	-2.26	1.49 H	217	26.26	39.78
5	#11610.00	64.41 PK	74.00	-9.59	1.38 H	143	15.14	49.28
5	#11610.00	51.08 AV	54.00	-2.92	1.38 H	143	1.81	49.28

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3870.00	46.97 PK	74.00	-27.03	1.41 V	174	12.10	34.87
2	*5805.00	105.15 PK			1.00 V	267	65.38	39.77
2	*5805.00	94.89 AV			1.00 V	267	55.12	39.77
3	5825.00	72.80 PK	78.30	-5.50	1.00 V	267	33.02	39.78
4	5835.00	63.17 PK	68.30	-5.13	1.00 V	267	23.39	39.78
5	#11610.00	60.19 PK	74.00	-13.81	1.22 V	137	10.91	49.28
5	#11610.00	46.97 AV	54.00	-7.03	1.22 V	137	-2.31	49.28

#### NOTE:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB).
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. “ \* “ : Fundamental frequency.
6. “#” The radiated frequency falling in the restricted band.



### Test Mode 3

<b>EUT</b>	Mini- PCI CARD	<b>MODEL</b>	WLL4030
<b>FREQUENCY RANGE</b>	1 ~ 40 GHz	<b>CHANNEL</b>	1
<b>ENVIRONMENTAL CONDITIONS</b>	23deg. C, 65%RH, 991hPa	<b>DETECTOR FUNCTION</b>	Peak(PK) Average (AV)
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60Hz	<b>TESTED BY</b>	Long Chen

#### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB)
1	3453.20	46.90 PK	68.30	-21.40	1.36 H	82	12.64	34.26
2	#5150.00	57.90 PK	74.00	-16.10	1.26 H	164	19.46	38.44
2	#5150.00	46.20 AV	54.00	-7.80	1.26 H	164	7.76	38.44
3	*5180.00	108.90 PK			1.26 H	164	70.33	38.57
3	*5180.00	97.80 AV			1.26 H	164	59.23	38.57
4	10360.00	63.70 PK	68.30	-4.60	1.04 H	227	14.02	49.68

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB)
1	3543.80	46.50 PK	68.30	-21.80	1.15 V	75	12.05	34.45
2	#5150.00	52.70 PK	74.00	-21.30	1.42 V	271	14.26	38.44
2	#5150.00	42.10 AV	54.00	-11.90	1.42 V	271	3.66	38.44
3	*5180.00	103.60 PK			1.42 V	271	65.03	38.57
3	*5180.00	92.40 AV			1.42 V	271	53.83	38.57
4	10360.00	64.20 PK	68.30	-4.10	1.72 V	291	14.52	49.68

#### NOTE:

1. Emission level = Raw value + Correction Factor
2. Correction Factor = Ant. Factor + Cable loss
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "\*" : Fundamental frequency
6. "#"The radiated frequency falling in the restricted band.



<b>EUT</b>	Mini- PCI CARD	<b>MODEL</b>	WLL4030
<b>FREQUENCY RANGE</b>	1 ~ 40 GHz	<b>CHANNEL</b>	4
<b>ENVIRONMENTAL CONDITIONS</b>	23deg. C, 65%RH, 991hPa	<b>DETECTOR FUNCTION</b>	Peak(PK) Average (AV)
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60Hz	<b>TESTED BY</b>	Long Chen

#### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB)
1	3494.50	46.80 PK	68.30	-21.50	1.12 H	327	12.59	34.21
2	*5240.00	108.70 PK			1.82 H	55	70.08	38.62
2	*5240.00	97.50 AV			1.82 H	55	58.88	38.62
3	10480.00	63.80 PK	68.30	-4.50	1.13 H	62	14.70	49.10

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB)
1	3494.10	45.20 PK	68.30	-23.10	1.72 V	85	10.99	34.21
2	*5240.00	102.70 PK			1.03 V	332	64.08	38.62
2	*5240.00	92.40 AV			1.03 V	332	53.78	38.62
3	10480.00	62.80 PK	68.30	-5.50	1.08 V	92	13.70	49.10

#### NOTE:

1. Emission level = Raw value + Correction Factor
2. Correction Factor = Ant. Factor + Cable loss
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "\*" : Fundamental frequency
6. "#" The radiated frequency falling in the restricted band.





<b>EUT</b>	Mini- PCI CARD	<b>MODEL</b>	WLL4030
<b>FREQUENCY RANGE</b>	1 ~ 40 GHz	<b>CHANNEL</b>	5
<b>ENVIRONMENTAL CONDITIONS</b>	23deg. C, 65%RH, 991hPa	<b>DETECTOR FUNCTION</b>	Peak(PK) Average (AV)
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60Hz	<b>TESTED BY</b>	Long Chen

#### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3506.00	47.10 PK	68.30	-21.20	1.31 H	225	12.87	34.23
2	*5260.00	108.70 PK			1.71 H	33	70.09	38.61
2	*5260.00	98.40 AV			1.71 H	33	59.79	38.61
3	10520.00	62.80 PK	68.30	-5.50	1.07 H	352	13.83	48.97

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3506.00	44.50 PK	68.30	-23.80	1.82 V	62	10.27	34.23
2	*5260.00	104.10 PK			1.31 V	226	65.49	38.61
2	*5260.00	93.20 AV			1.31 V	226	54.59	38.61
3	10520.00	63.40 PK	68.30	-4.90	1.67 V	84	14.43	48.97

#### NOTE:

1. Emission level = Raw value + Correction Factor
2. Correction Factor = Ant. Factor + Cable loss
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "\*" : Fundamental frequency
6. "#"The radiated frequency falling in the restricted band.



<b>EUT</b>	Mini- PCI CARD	<b>MODEL</b>	WLL4030
<b>FREQUENCY RANGE</b>	1 ~ 40 GHz	<b>CHANNEL</b>	8
<b>ENVIRONMENTAL CONDITIONS</b>	23deg. C, 65%RH, 991hPa	<b>DETECTOR FUNCTION</b>	Peak(PK) Average (AV)
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60Hz	<b>TESTED BY</b>	Long Chen

<b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b>								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)
1	3574.00	47.90 PK	68.30	-20.40	1.31 H	62	13.27	34.63
2	*5320.00	108.10 PK			1.87 H	54	69.54	38.56
2	*5320.00	97.40 AV			1.87 H	54	58.84	38.56
3	#5350.00	57.40 PK	74.00	-16.60	1.87 H	54	18.87	38.53
3	#5350.00	46.80 AV	54.00	-7.20	1.87 H	54	8.27	38.53
4	#10640.00	63.10 PK	74.00	-10.90	1.63 H	157	13.77	49.33
4	#10640.00	51.40 AV	54.00	-2.60	1.63 H	157	2.07	49.33

<b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b>								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)
1	3574.00	45.80 PK	68.30	-22.50	1.14 V	234	11.17	34.63
2	*5320.00	103.40 PK			1.84 V	245	64.84	38.56
2	*5320.00	92.70 AV			1.84 V	245	54.14	38.56
3	#5350.00	51.40 PK	74.00	-22.60	1.84 V	245	12.87	38.53
3	#5350.00	41.10 AV	54.00	-12.90	1.84 V	245	2.57	38.53
4	#10640.00	62.10 PK	74.00	-11.90	1.30 V	24	12.77	49.33
4	#10640.00	51.10 AV	54.00	-2.90	1.30 V	24	1.77	49.33

**NOTE:**

1. Emission level = Raw value + Correction Factor
2. Correction Factor = Ant. Factor + Cable loss
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "\*" : Fundamental frequency
6. "#" The radiated frequency falling in the restricted band.



<b>EUT</b>	Mini- PCI CARD	<b>MODEL</b>	WLL4030
<b>FREQUENCY RANGE</b>	1 ~ 40 GHz	<b>CHANNEL</b>	9
<b>ENVIRONMENTAL CONDITIONS</b>	23deg. C, 65%RH, 991hPa	<b>DETECTOR FUNCTION</b>	Peak(PK) Average (AV)
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60Hz	<b>TESTED BY</b>	Long Chen

#### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3830.00	48.10 PK	74.00	-25.90	1.97 H	224	13.09	35.01
2	5715.00	63.10 PK	68.30	-5.20	1.42 H	30	24.06	39.04
3	5725.00	75.10 PK	78.30	-3.20	1.42 H	30	36.01	39.09
4	*5745.00	107.10 PK			1.42 H	30	67.90	39.20
4	*5745.00	97.80 AV			1.42 H	30	58.60	39.20
5	#11490.00	61.80 PK	74.00	-12.20	1.82 H	32	12.05	49.75
5	#11490.00	50.40 AV	54.00	-3.60	1.82 H	32	0.65	49.75

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3831.00	45.40 PK	74.00	-28.60	1.21 V	65	10.39	35.01
2	5715.00	61.80 PK	68.30	-6.50	1.52 V	138	22.76	39.04
3	5725.00	72.40 PK	78.30	-5.90	1.52 V	138	33.31	39.09
4	*5745.00	104.90 PK			1.52 V	138	65.70	39.20
4	*5745.00	92.80 AV			1.52 V	138	53.60	39.20
5	#11490.00	62.24 PK	74.00	-11.76	1.59 V	94	12.49	49.75
5	#11490.00	50.70 AV	54.00	-3.30	1.59 V	94	0.95	49.75

#### NOTE:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB).
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. “ \* “ : Fundamental frequency.
6. “#” The radiated frequency falling in the restricted band.



<b>EUT</b>	Mini- PCI CARD	<b>MODEL</b>	WLL4030
<b>FREQUENCY RANGE</b>	1 ~ 40 GHz	<b>CHANNEL</b>	12
<b>ENVIRONMENTAL CONDITIONS</b>	23deg. C, 65%RH, 991hPa	<b>DETECTOR FUNCTION</b>	Peak(PK) Average (AV)
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60Hz	<b>TESTED BY</b>	Long Chen

#### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3870.00	46.10 PK	74.00	-27.90	1.31 H	325	11.05	35.05
2	*5805.00	107.10 PK			1.52 H	44	67.61	39.49
2	*5805.00	97.10 AV			1.52 H	44	57.61	39.49
3	5825.00	74.10 PK	78.30	-4.20	1.52 H	44	34.62	39.48
4	5835.00	62.10 PK	68.30	-6.20	1.52 H	44	22.62	39.48
5	#11610.00	62.40 PK	74.00	-11.60	1.42 H	51	12.57	49.83
5	#11610.00	51.10 AV	54.00	-2.90	1.42 H	51	1.27	49.83

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3870.00	46.20 PK	74.00	-27.80	1.93 V	335	11.15	35.05
2	*5805.00	104.40 PK			1.52 V	74	64.91	39.49
2	*5805.00	93.10 AV			1.52 V	74	53.61	39.49
3	5825.00	72.10 PK	78.30	-6.20	1.52 V	74	32.62	39.48
4	5835.00	59.10 PK	68.30	-9.20	1.52 V	74	19.62	39.48
5	#11610.00	63.10 PK	74.00	-10.90	1.72 V	310	13.27	49.83
5	#11610.00	51.50 AV	54.00	-2.50	1.72 V	310	1.67	49.83

#### NOTE:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB).
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. “ \* “ : Fundamental frequency.
6. “#” The radiated frequency falling in the restricted band.



### Test Mode 4

<b>EUT</b>	Mini- PCI CARD	<b>MODEL</b>	WLL4030
<b>FREQUENCY RANGE</b>	1 ~ 40 GHz	<b>CHANNEL</b>	1
<b>ENVIRONMENTAL CONDITIONS</b>	23deg. C, 65%RH, 991hPa	<b>DETECTOR FUNCTION</b>	Peak(PK) Average (AV)
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60Hz	<b>TESTED BY</b>	Long Chen

#### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB)
1	3452.00	48.00 PK	68.30	-20.30	1.13 H	2	13.74	34.26
2	#5150.00	58.40 PK	74.00	-15.60	1.21 H	55	19.96	38.44
2	#5150.00	47.50 AV	54.00	-6.50	1.21 H	55	9.06	38.44
3	*5180.00	109.80 PK			1.21 H	55	71.23	38.57
3	*5180.00	98.50 AV			1.21 H	55	59.93	38.57
4	10360.00	63.80 PK	68.30	-4.50	1.52 H	91	14.12	49.68

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB)
1	3452.00	46.20 PK	68.30	-22.10	1.31 V	35	11.94	34.26
2	#5150.00	52.70 PK	74.00	-21.30	1.08 V	81	14.26	38.44
2	#5150.00	43.20 AV	54.00	-10.80	1.08 V	81	4.76	38.44
3	*5180.00	103.90 PK			1.08 V	81	65.33	38.57
3	*5180.00	93.00 AV			1.08 V	81	54.43	38.57
4	10360.00	64.80 PK	68.30	-3.50	1.15 V	328	15.12	49.68

#### NOTE:

1. Emission level = Raw value + Correction Factor
2. Correction Factor = Ant. Factor + Cable loss
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "\*" : Fundamental frequency
6. "#"The radiated frequency falling in the restricted band.



<b>EUT</b>	Mini- PCI CARD	<b>MODEL</b>	WLL4030
<b>FREQUENCY RANGE</b>	1 ~ 40 GHz	<b>CHANNEL</b>	4
<b>ENVIRONMENTAL CONDITIONS</b>	23deg. C, 65%RH, 991hPa	<b>DETECTOR FUNCTION</b>	Peak(PK) Average (AV)
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60Hz	<b>TESTED BY</b>	Long Chen

#### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB)
1	3495.40	47.10 PK	68.30	-21.20	1.18 H	97	12.89	34.21
2	*5240.00	108.90 PK			1.35 H	62	70.28	38.62
2	*5240.00	97.80 AV			1.35 H	62	59.18	38.62
3	10480.00	62.90 PK	68.30	-5.40	1.51 H	224	13.80	49.10

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB)
1	3495.50	46.80 PK	68.30	-21.50	1.36 V	115	12.59	34.21
2	*5240.00	103.10 PK			1.05 V	35	64.48	38.62
2	*5240.00	92.10 AV			1.05 V	35	53.48	38.62
3	10480.00	63.50 PK	68.30	-4.80	1.18 V	22	14.40	49.10

#### NOTE:

1. Emission level = Raw value + Correction Factor
2. Correction Factor = Ant. Factor + Cable loss
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "\*" : Fundamental frequency
6. "#" The radiated frequency falling in the restricted band.



<b>EUT</b>	Mini- PCI CARD	<b>MODEL</b>	WLL4030
<b>FREQUENCY RANGE</b>	1 ~ 40 GHz	<b>CHANNEL</b>	5
<b>ENVIRONMENTAL CONDITIONS</b>	23deg. C, 65%RH, 991hPa	<b>DETECTOR FUNCTION</b>	Peak(PK) Average (AV)
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60Hz	<b>TESTED BY</b>	Long Chen

#### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3506.20	49.50 PK	68.30	-18.80	1.12 H	57	15.26	34.24
2	*5260.00	109.10 PK			1.52 H	74	70.49	38.61
2	*5260.00	100.20 AV			1.52 H	74	61.59	38.61
3	10520.00	63.80 PK	68.30	-4.50	1.15 H	85	14.83	48.97

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3506.50	45.50 PK	68.30	-22.80	1.82 V	77	11.26	34.24
2	*5260.00	104.40 PK			1.07 V	35	65.79	38.61
2	*5260.00	93.80 AV			1.07 V	35	55.19	38.61
3	10520.00	63.10 PK	68.30	-5.20	1.55 V	75	14.13	48.97

#### NOTE:

1. Emission level = Raw value + Correction Factor
2. Correction Factor = Ant. Factor + Cable loss
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "\*" : Fundamental frequency
6. "#"The radiated frequency falling in the restricted band.



<b>EUT</b>	Mini- PCI CARD	<b>MODEL</b>	WLL4030
<b>FREQUENCY RANGE</b>	1 ~ 40 GHz	<b>CHANNEL</b>	8
<b>ENVIRONMENTAL CONDITIONS</b>	23deg. C, 65%RH, 991hPa	<b>DETECTOR FUNCTION</b>	Peak(PK) Average (AV)
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60Hz	<b>TESTED BY</b>	Long Chen

#### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)
1	3574.00	47.00 PK	68.30	-21.30	1.31 H	64	12.37	34.63
2	*5320.00	108.70 PK			1.54 H	185	70.14	38.56
2	*5320.00	97.50 AV			1.54 H	185	58.94	38.56
3	#5350.00	57.70 PK	74.00	-16.30	1.54 H	185	19.17	38.53
3	#5350.00	46.80 AV	54.00	-7.20	1.54 H	185	8.27	38.53
4	#10640.00	63.50 PK	74.00	-10.50	1.54 H	168	14.17	49.33
4	#10640.00	50.70 AV	54.00	-3.30	1.54 H	168	1.37	49.33

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)
1	3574.00	45.50 PK	68.30	-22.80	1.36 V	62	10.87	34.63
2	*5320.00	103.40 PK			1.18 V	332	64.84	38.56
2	*5320.00	92.50 AV			1.18 V	332	53.94	38.56
3	#5350.00	51.80 PK	74.00	-22.20	1.18 V	332	13.27	38.53
3	#5350.00	43.00 AV	54.00	-11.00	1.18 V	332	4.47	38.53
4	#10640.00	62.70 PK	74.00	-11.30	1.28 V	36	13.37	49.33
4	#10640.00	51.80 AV	54.00	-2.20	1.28 V	36	2.47	49.33

#### NOTE:

1. Emission level = Raw value + Correction Factor
2. Correction Factor = Ant. Factor + Cable loss
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "\*" : Fundamental frequency
6. "#"The radiated frequency falling in the restricted band.





<b>EUT</b>	Mini- PCI CARD	<b>MODEL</b>	WLL4030
<b>FREQUENCY RANGE</b>	1 ~ 40 GHz	<b>CHANNEL</b>	9
<b>ENVIRONMENTAL CONDITIONS</b>	23deg. C, 65%RH, 991hPa	<b>DETECTOR FUNCTION</b>	Peak(PK) Average (AV)
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60Hz	<b>TESTED BY</b>	Long Chen

#### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#3830.00	47.50 PK	74.00	-26.50	1.31 H	68	12.49	35.01
2	5715.00	64.50 PK	68.30	-3.80	1.68 H	91	25.46	39.04
3	5725.00	75.00 PK	78.30	-3.30	1.68 H	91	35.91	39.09
4	*5745.00	107.80 PK			1.68 H	91	68.60	39.20
4	*5745.00	97.20 AV			1.68 H	91	58.00	39.20
5	#11490.00	61.80 PK	74.00	-12.20	1.85 H	262	12.05	49.75
5	#11490.00	50.10 AV	54.00	-3.90	1.85 H	262	0.35	49.75

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#3830.00	45.80 PK	74.00	-28.20	1.03 V	91	10.79	35.01
2	5715.00	61.80 PK	68.30	-6.50	1.21 V	68	22.76	39.04
3	5725.00	72.80 PK	78.30	-5.50	1.21 V	68	33.71	39.09
4	*5745.00	105.10 PK			1.21 V	68	65.90	39.20
4	*5745.00	93.50 AV			1.21 V	68	54.30	39.20
5	#11490.00	60.40 PK	74.00	-13.60	1.62 V	94	10.65	49.75
5	#11490.00	49.90 AV	54.00	-4.10	1.62 V	94	0.15	49.75

#### NOTE:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB).
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. “ \* “ : Fundamental frequency.
6. “#” The radiated frequency falling in the restricted band.



<b>EUT</b>	Mini- PCI CARD	<b>MODEL</b>	WLL4030
<b>FREQUENCY RANGE</b>	1 ~ 40 GHz	<b>CHANNEL</b>	12
<b>ENVIRONMENTAL CONDITIONS</b>	23deg. C, 65%RH, 991hPa	<b>DETECTOR FUNCTION</b>	Peak(PK) Average (AV)
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60Hz	<b>TESTED BY</b>	Long Chen

#### ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#3870.00	47.50 PK	74.00	-26.50	1.85 H	328	12.45	35.05
2	*5805.00	107.50 PK			1.52 H	84	68.01	39.49
2	*5805.00	97.50 AV			1.52 H	84	58.01	39.49
3	#5825.00	74.40 PK	78.30	-3.90	1.52 H	84	34.92	39.48
4	#5835.00	60.80 PK	68.30	-7.50	1.52 H	84	21.32	39.48
5	#11610.00	61.50 PK	74.00	-12.50	1.31 H	65	11.67	49.83
5	#11610.00	50.00 AV	54.00	-4.00	1.31 H	65	0.17	49.83

#### ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#3870.00	46.50 PK	74.00	-27.50	1.27 V	81	11.45	35.05
2	*5805.00	104.80 PK			1.31 V	71	65.31	39.49
2	*5805.00	93.20 AV			1.31 V	71	53.71	39.49
3	#5825.00	72.80 PK	78.30	-5.50	1.31 V	71	33.32	39.48
4	#5835.00	59.50 PK	68.30	-8.80	1.31 V	71	20.02	39.48
5	#11610.00	62.80 PK	74.00	-11.20	1.39 V	82	12.97	49.83
5	#11610.00	50.70 AV	54.00	-3.30	1.39 V	82	0.87	49.83

#### NOTE:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB).
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. “ \* ” : Fundamental frequency.
6. “#” The radiated frequency falling in the restricted band.



### 5.3 PEAK TRANSMIT POWER MEASUREMENT

#### 5.3.1 LIMITS OF PEAK TRANSMIT POWER MEASUREMENT

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

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

#### 5.3.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S 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.

### 5.3.3 TEST PROCEDURE

1. The transmitter output was connected to the spectrum analyzer.
2. Set span to encompass the entire emission bandwidth of the signal.
3. Set RBW to 1MHz, VBW to 300kHz.
4. Using the spectrum analyzer's channel power measurement function to measure the output power.

### 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

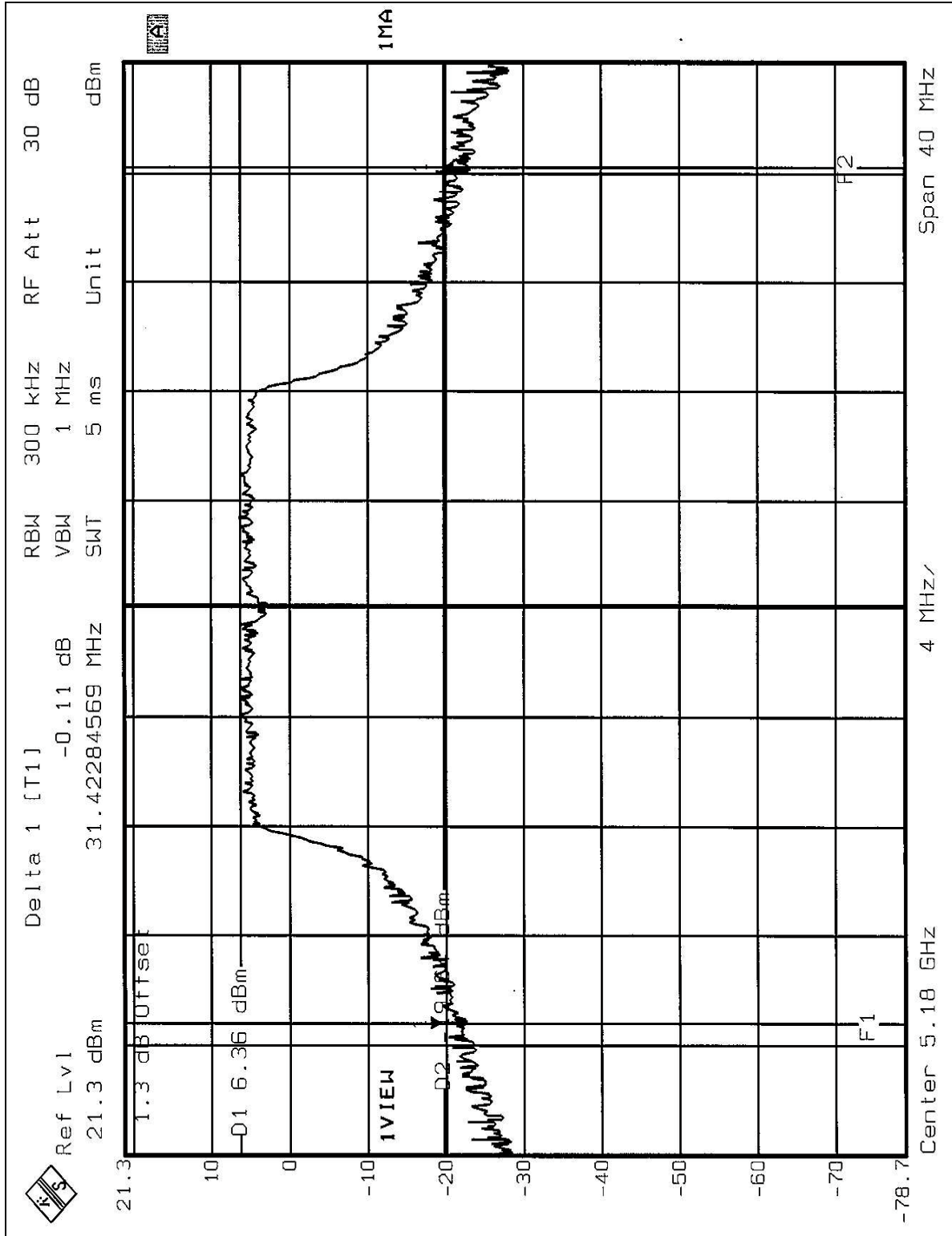
<b>EUT</b>	Mini- PCI CARD	<b>MODEL</b>	WLL4030
<b>ENVIRONMENTAL CONDITIONS</b>	26deg. C, 68%RH, 991hPa	<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz
<b>TESTED BY</b>	Long Chen		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	26dBc Occupied Bandwidth (MHz)	PASS/FAIL
1	5180	15.27	17.00	31.422	PASS
4	5240	15.39	17.00	29.739	PASS
5	5260	16.64	24.00	28.136	PASS
8	5320	16.57	24.00	26.693	PASS
9	5745	18.42	30.00	33.587	PASS
12	5805	18.22	30.00	35.831	PASS

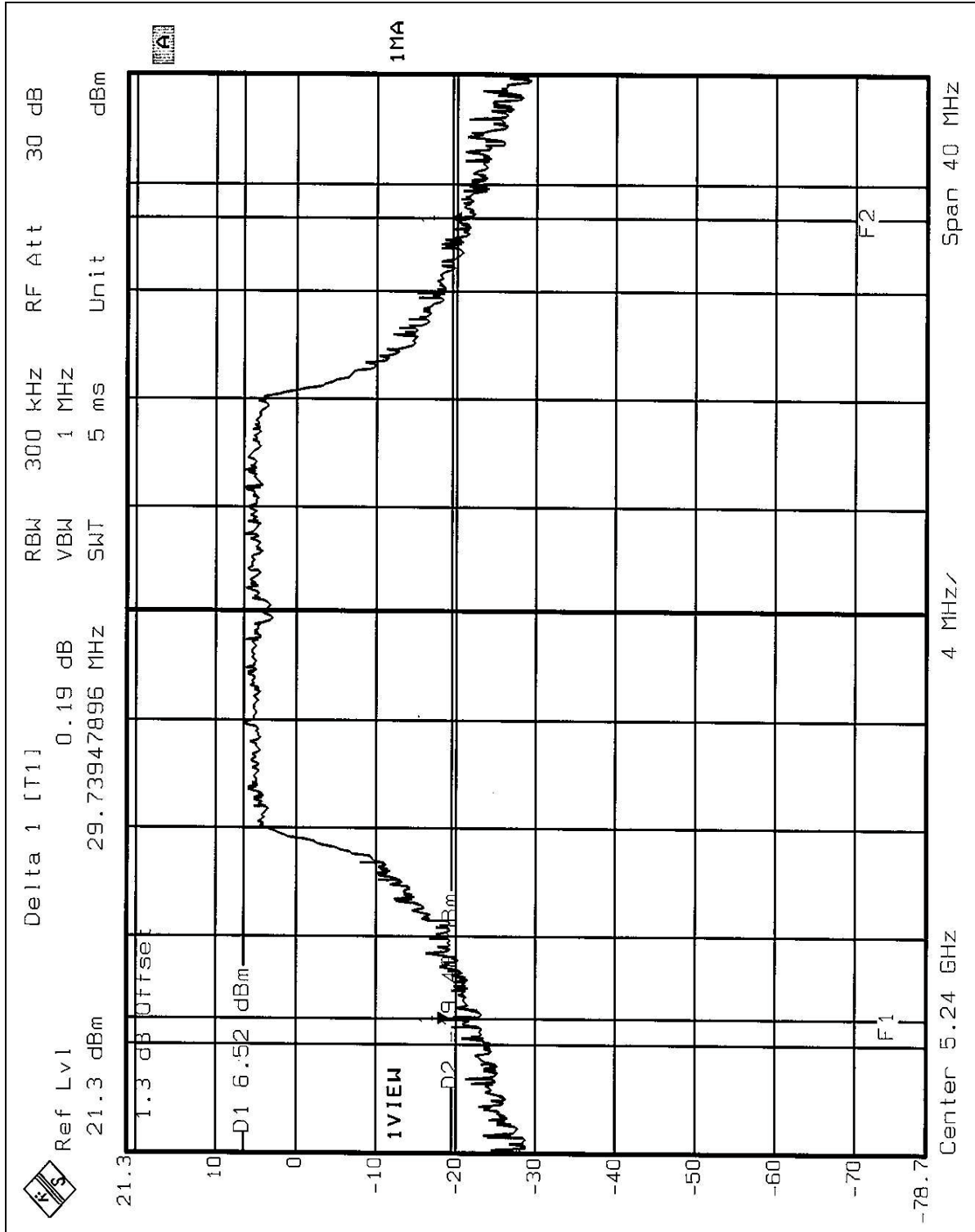
**NOTE:** The 26dBc Occupied Bandwidth plot, please refer to the following pages.



26dB Occupied Bandwidth:  
CH1

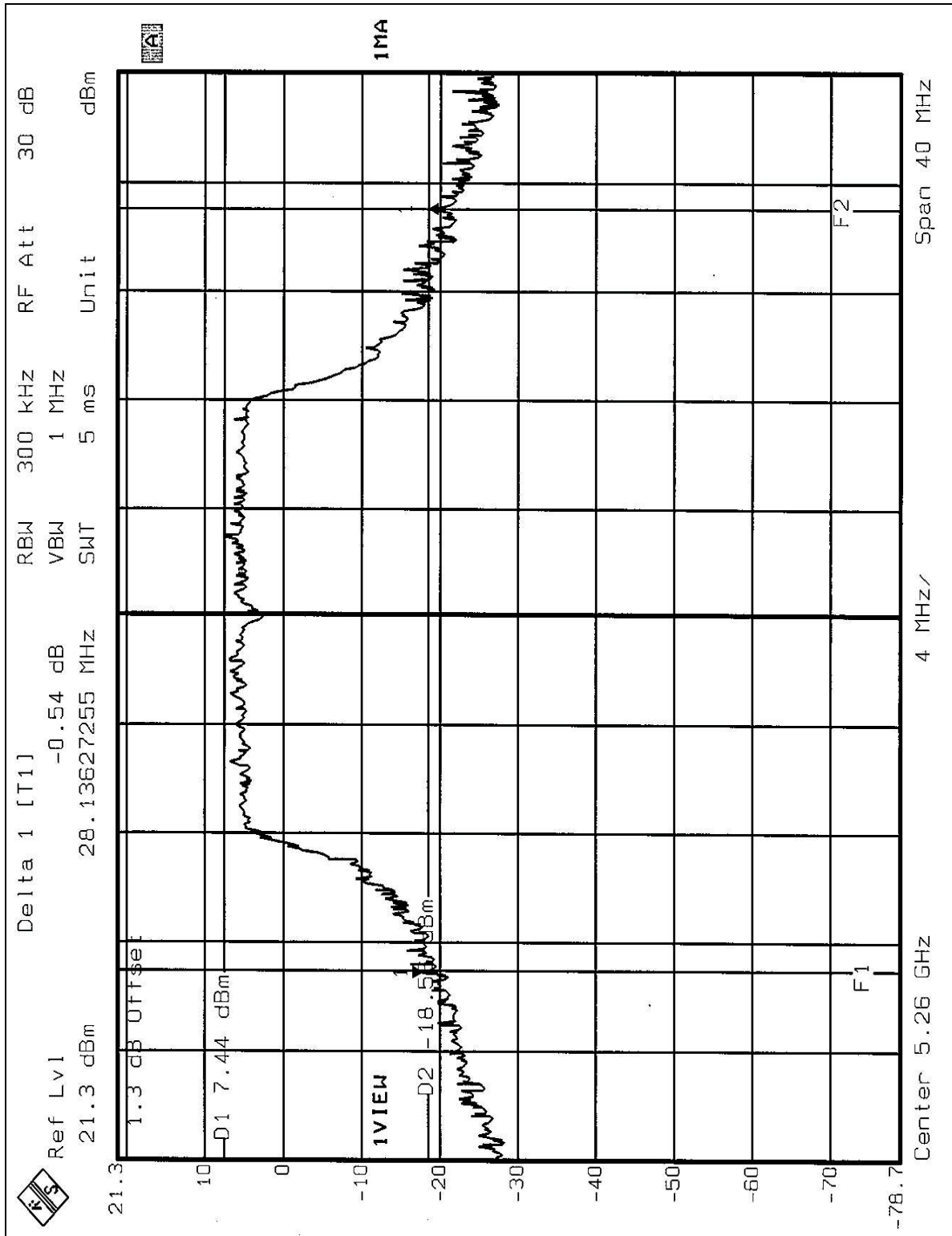


CH4





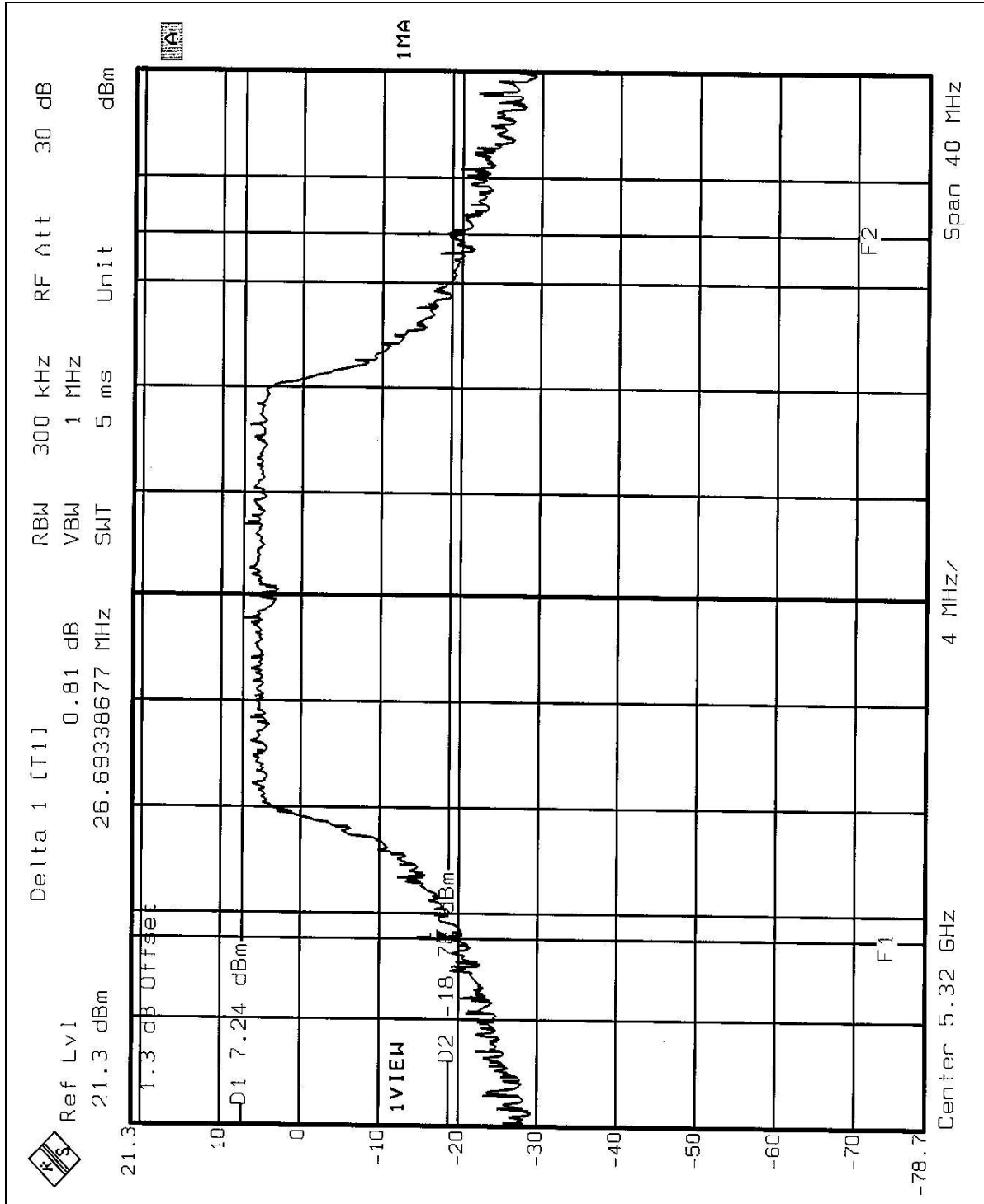
CH5





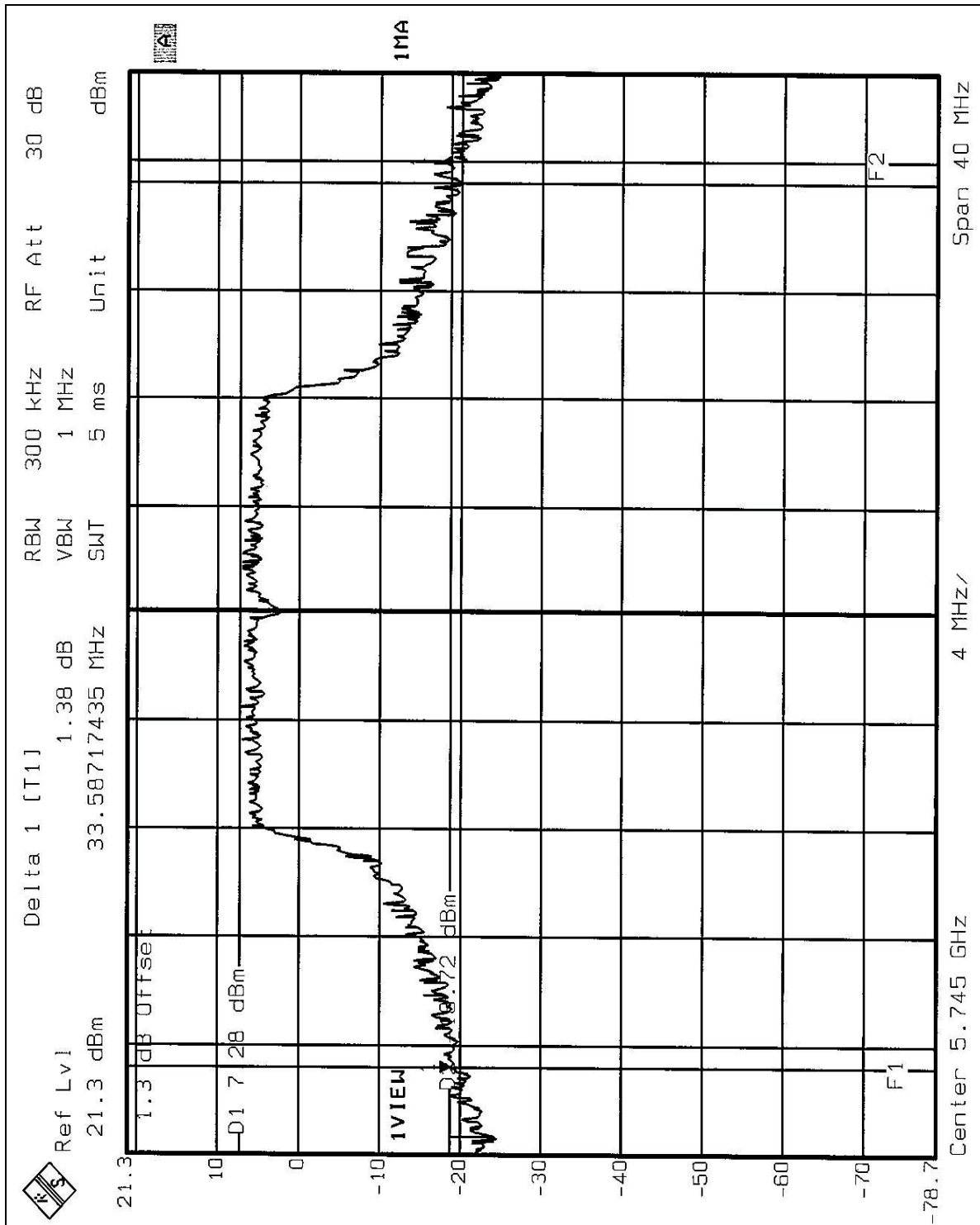


CH8



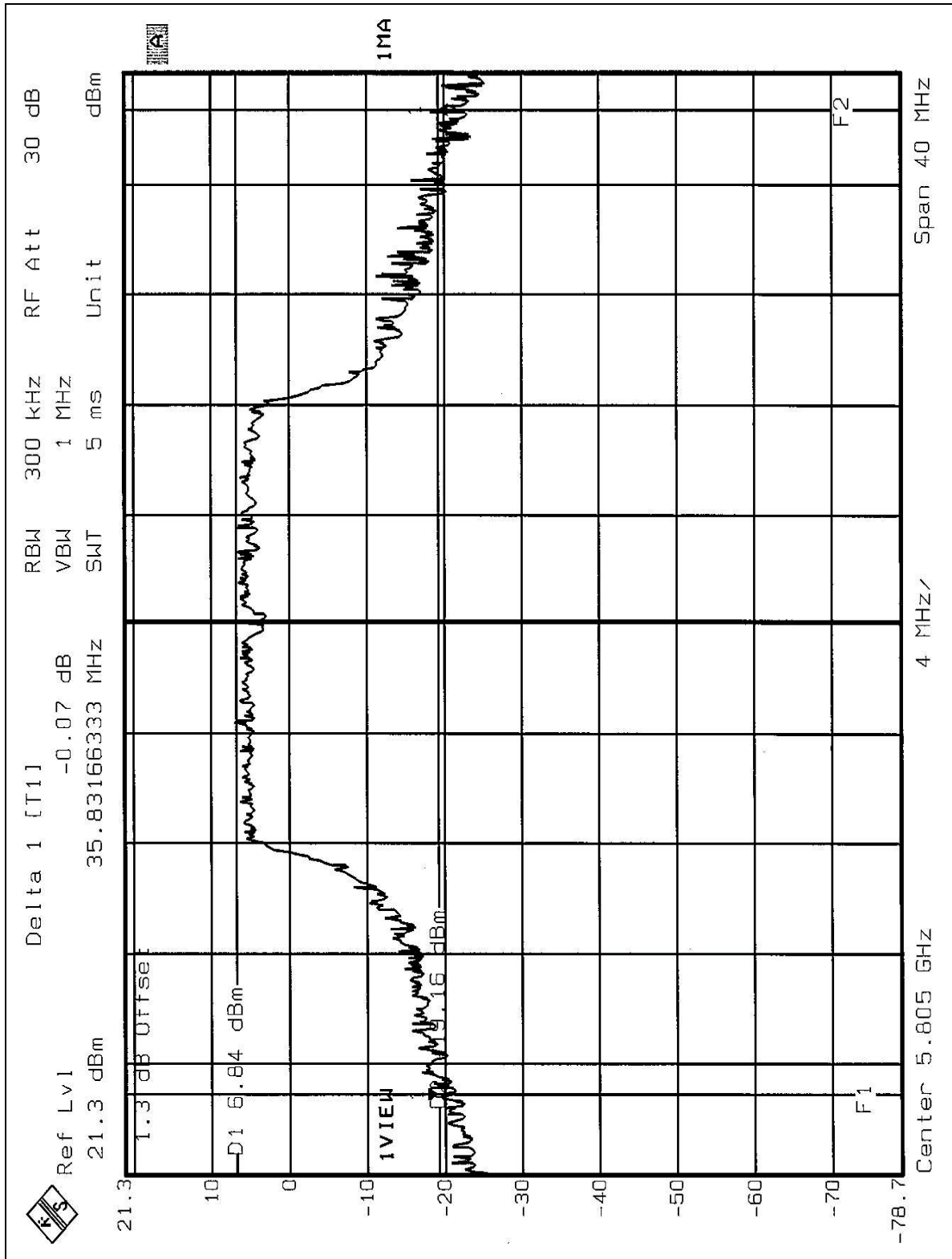


CH9



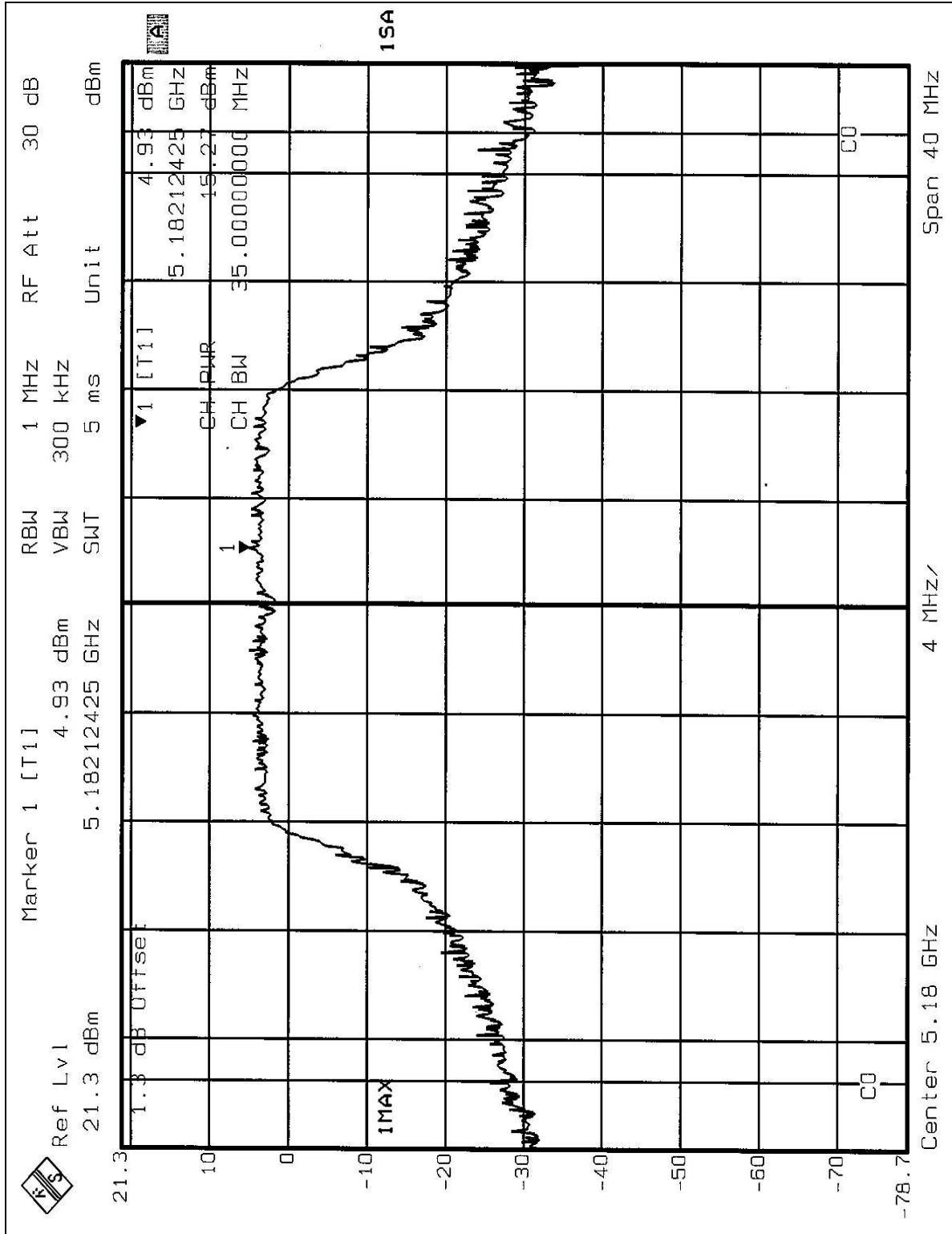


CH12



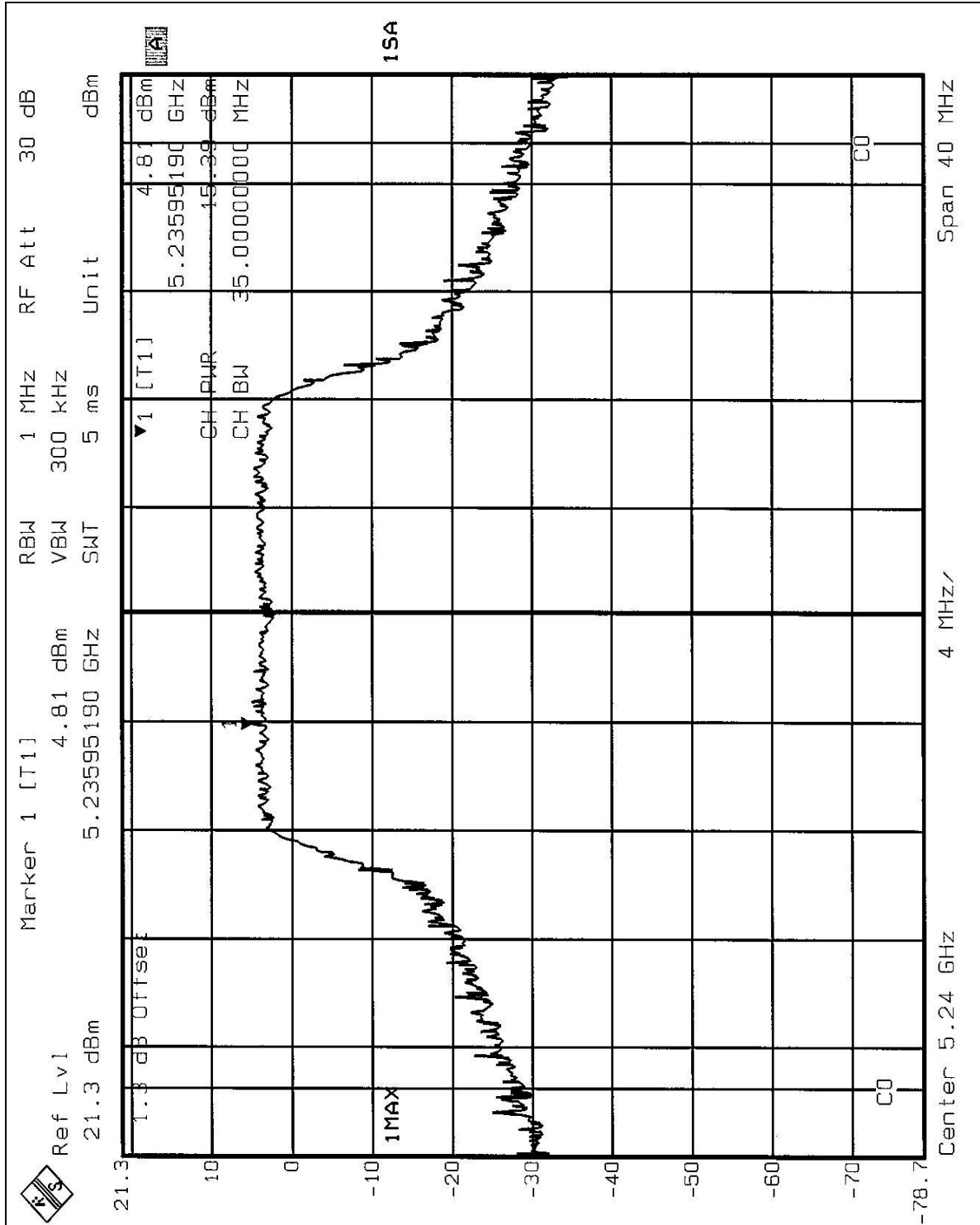


Peak Power Output:  
CH1



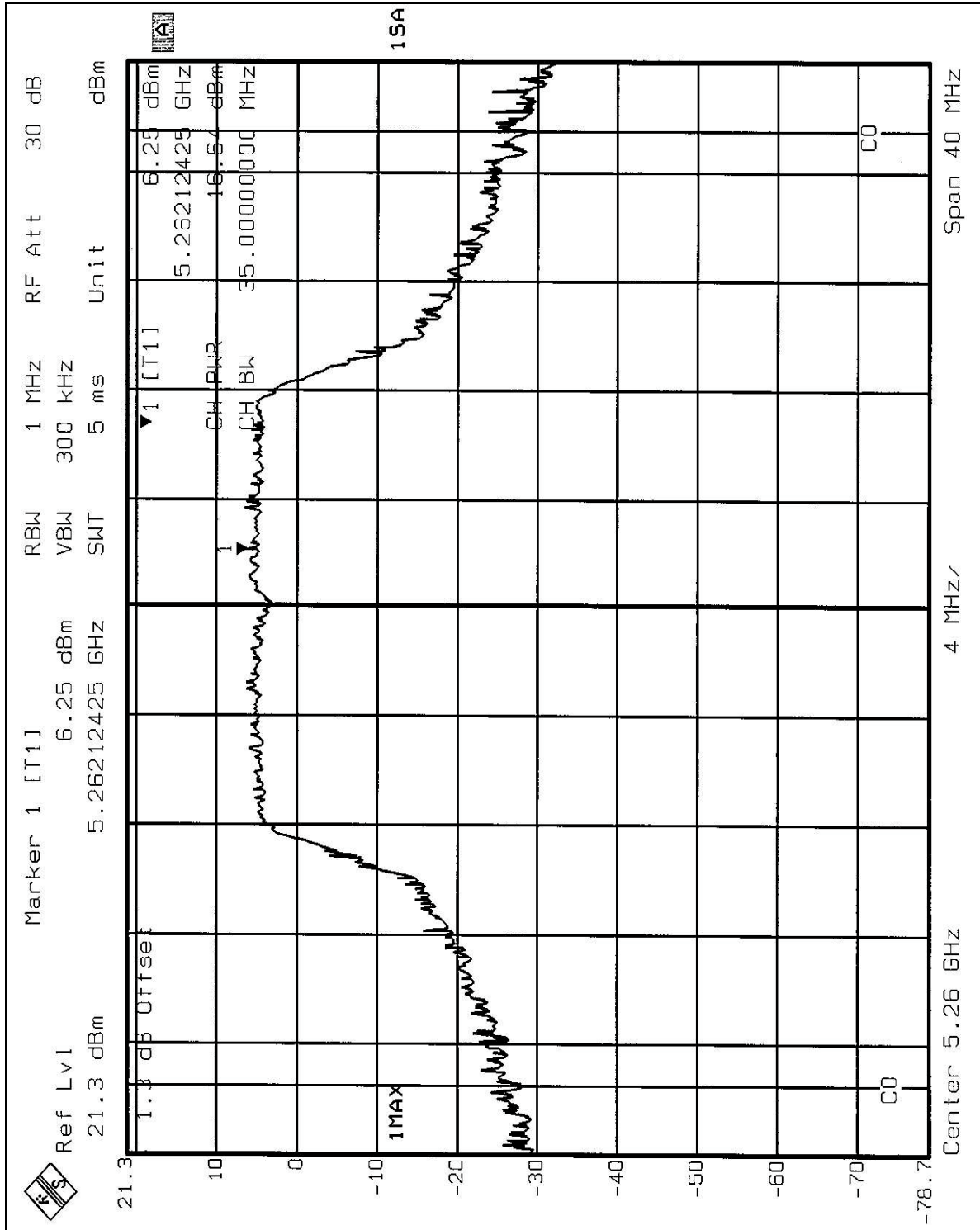


CH4



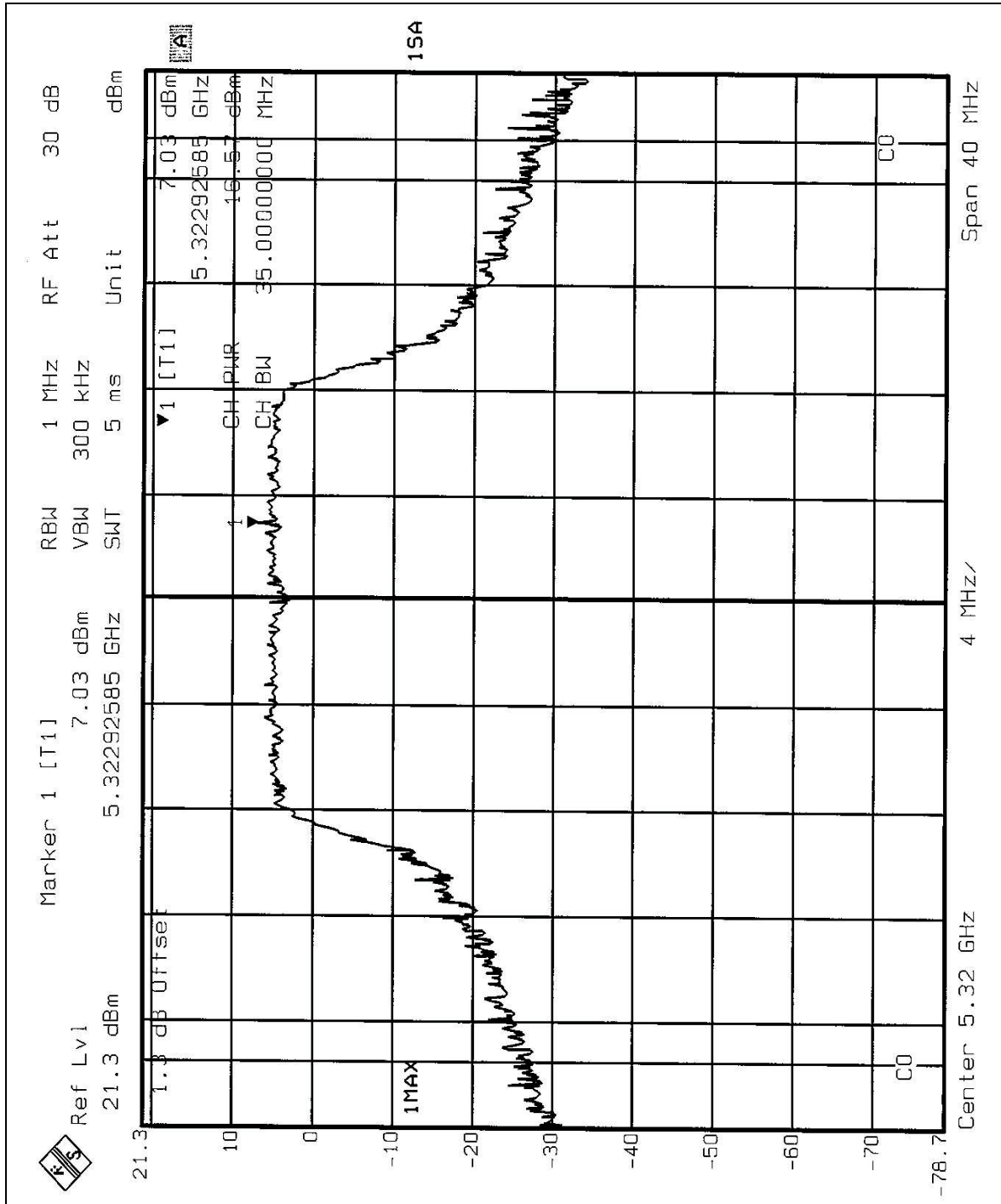


CH5



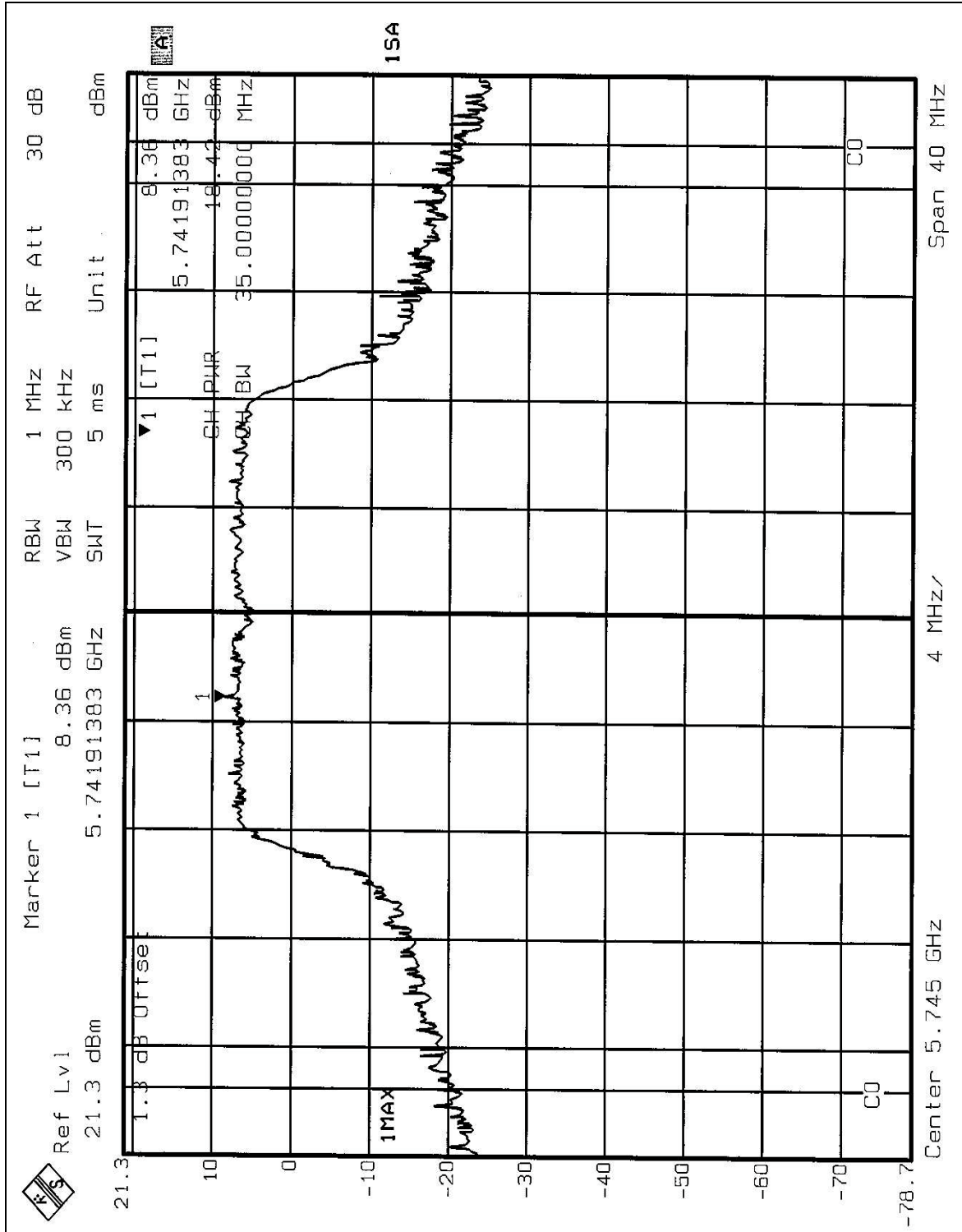


CH8





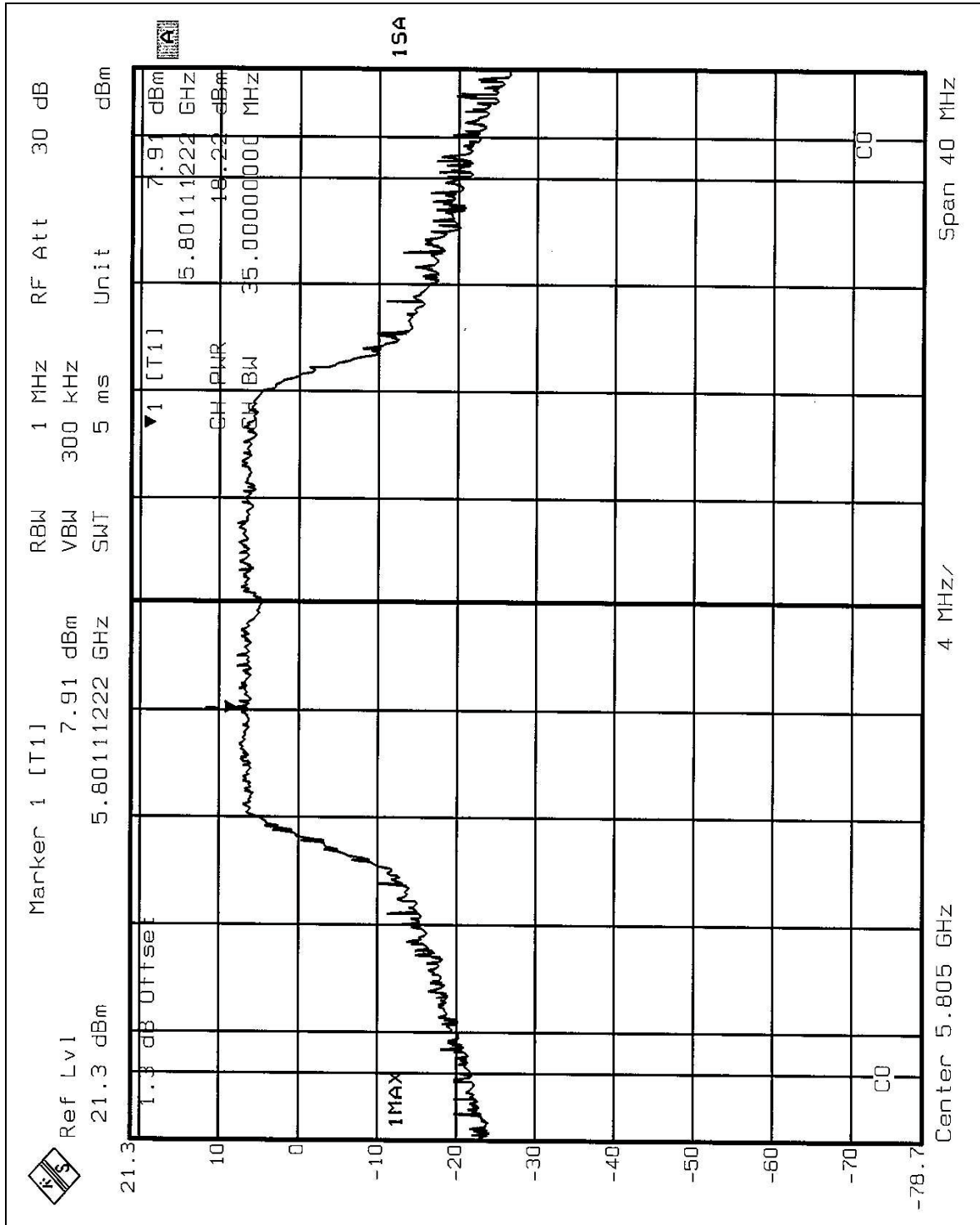
CH9







CH12





## 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, 2005

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

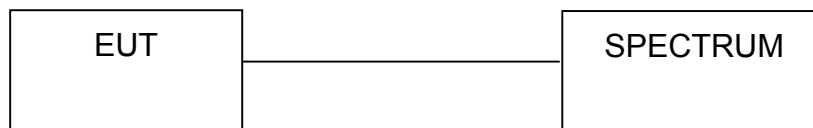
### 5.4.3 TEST PROCEDURE

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.



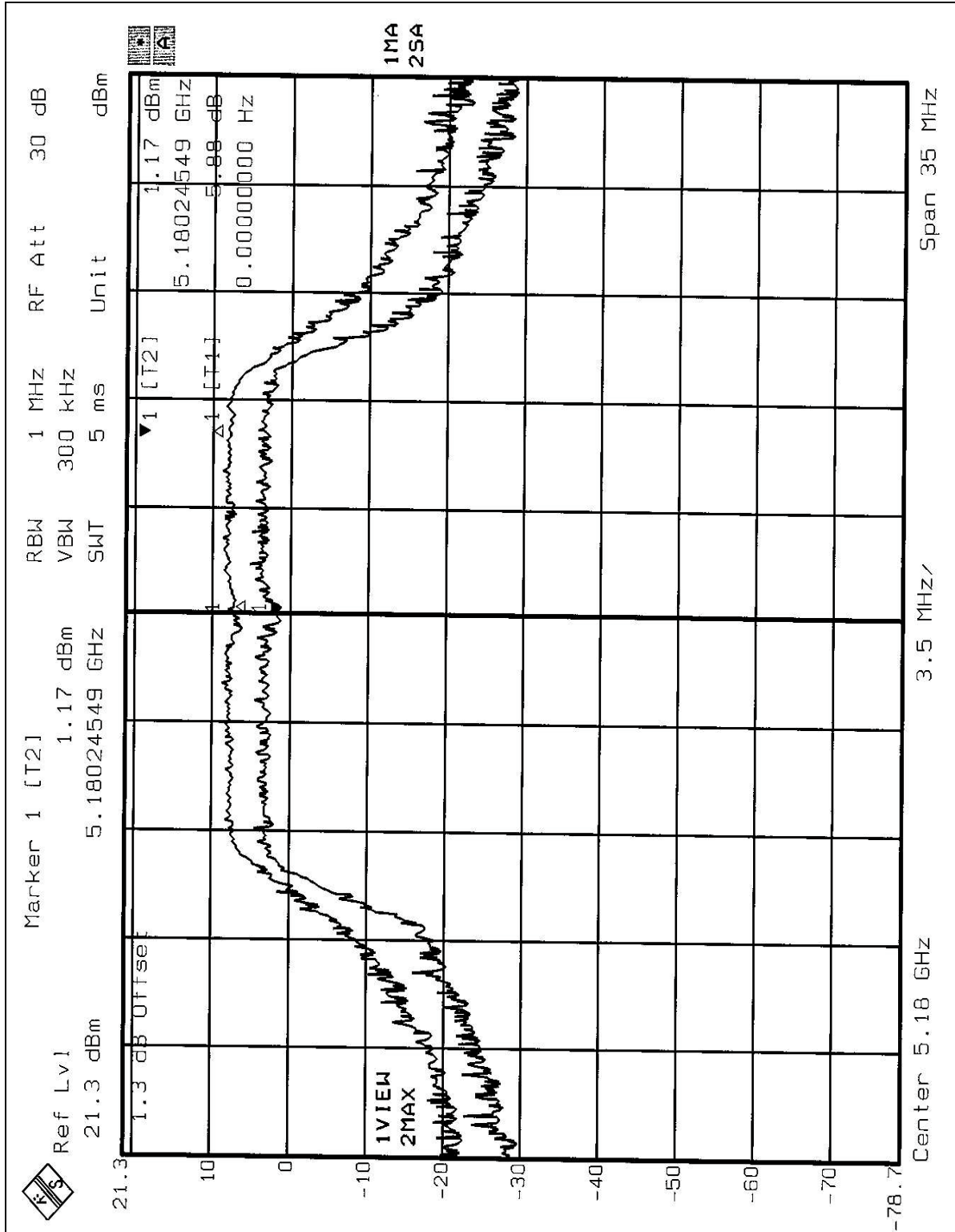
## 5.4.7 TEST RESULTS

<b>EUT</b>	Mini- PCI CARD	<b>MODEL</b>	WLL4030
<b>ENVIRONMENTAL CONDITIONS</b>	26deg. C, 68%RH, 991hPa	<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz
<b>TESTED BY</b>	Ansen Lei		

<b>CHANNEL</b>	<b>CHANNEL FREQUENCY (MHz)</b>	<b>PEAK POWER EXCURSION (dB)</b>	<b>PEAK to AVERAGE EXCURSION LIMIT (dB)</b>	<b>PASS/FAIL</b>
1	5180	5.88	13	PASS
4	5240	5.74	13	PASS
5	5260	6.32	13	PASS
8	5320	6.21	13	PASS
9	5745	6.01	13	PASS
12	5805	7.03	13	PASS

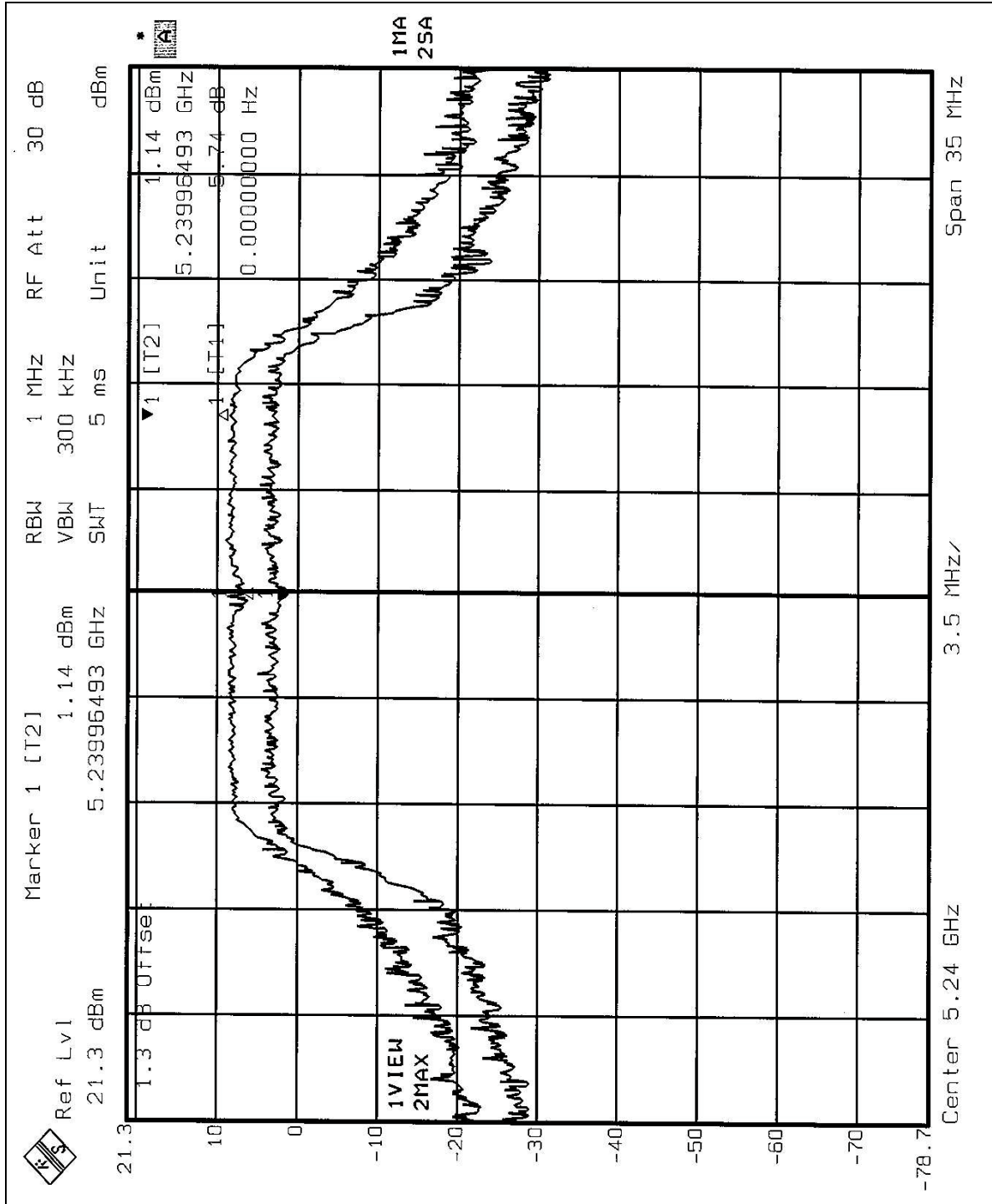


CH1



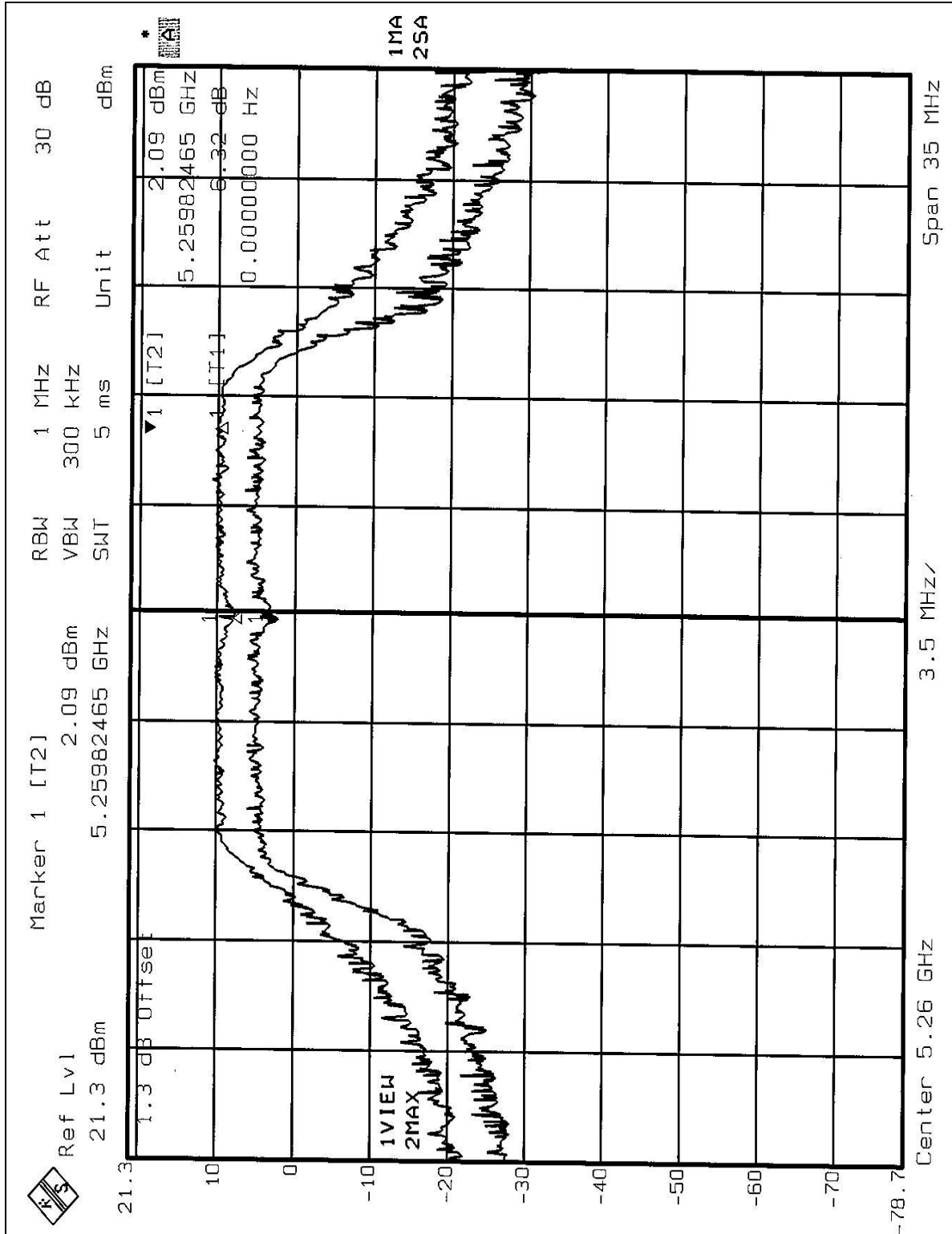


CH4



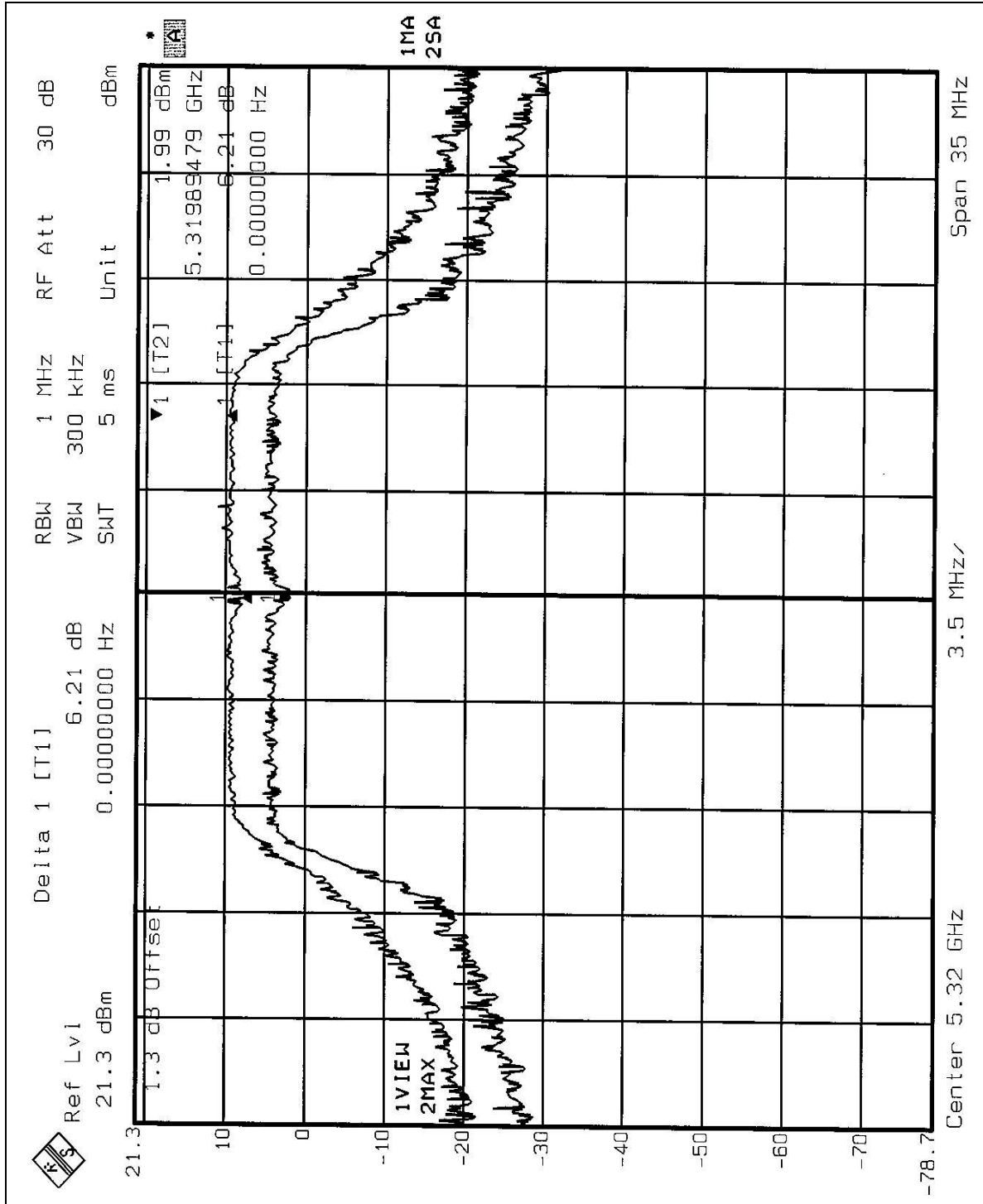


CH5





CH8







CH9

