



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

#### EIRP SPURIOUS EMISSION LEVEL

Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin	Remark
10477.70	H	-33.9	-27.0	-6.9	
10482.30	V	-36.4	-27.0	-9.4	
15720.60	-	-	-	-	NOTE
20963.51	-	-	-	-	NOTE
26142.08	H	-52.4	-27.0	-25.4	
26190.18	V	-51.1	-27.0	-24.1	

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



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

#### EIRP SPURIOUS EMISSION LEVEL

Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin	Remark
10520.50	H	-30.8	-27.0	-3.8	
10521.50	V	-30.8	-27.0	-3.8	
15779.00	-	-	-	-	NOTE
21036.29	-	-	-	-	NOTE
26339.68	H	-53.6	-27.0	-26.6	
26381.36	V	-51.4	-27.0	-24.4	

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



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

<b>EIRP SPURIOUS EMISSION LEVEL</b>					
<b>Frequency (MHz)</b>	<b>Antenna Polarization</b>	<b>Level (dBm)</b>	<b>Limit (dBm)</b>	<b>Margin</b>	<b>Remark</b>
5350.00	-	-	-	-	NOTE
10639.10	-	-	-	-	NOTE
15961.00	-	-	-	-	NOTE
21276.89	-	-	-	-	NOTE
26522.85	H	-50.7	-27.0	-23.7	
26624.05	V	-49.2	-27.0	-22.2	

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



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

#### EIRP SPURIOUS EMISSION LEVEL

Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin	Remark
5715.00	V	-34.97	-27.0	-7.97	
5725.00	V	-23.54	-17.0	-6.54	
11483.29	-	-	-	-	NOTE
17230.39	H	-47.2	-27.0	-20.2	
17240.21	V	-43.9	-27.0	-16.9	
22979.30	-	-	-	-	NOTE

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



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

#### EIRP SPURIOUS EMISSION LEVEL

Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin	Remark
5825.00	V	-23.82	-17.0	-6.82	
5835.00	V	-36.60	-27.0	-9.60	
11604.69	-	-	-	-	NOTE
17401.37	V	-40.9	-27.0	-13.9	
17407.59	H	-46.0	-27.0	-19.0	
23240.14	V	-55.3	-27.0	-28.3	
23272.20	H	-56.0	-27.0	-29.0	

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



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

#### EIRP SPURIOUS EMISSION LEVEL

Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin	Remark
5150.00	-	-	-	-	NOTE
10417.29	V	-34.6	-27.0	-7.6	
10422.71	H	-33.2	-27.0	-6.2	
15629.80	-	-	-	-	NOTE
20839.90	-	-	-	-	NOTE
26046.99	H	-53.6	-27.0	-26.6	
26137.37	V	-51.2	-27.0	-24.2	

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



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

#### EIRP SPURIOUS EMISSION LEVEL

Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin	Remark
10502.30	H	-35.5	-27.0	-8.5	
10502.30	V	-34.3	-27.0	-7.3	
15754.21	-	-	-	-	NOTE
21009.92	-	-	-	-	NOTE
26269.24	V	-51.6	-27.0	-24.6	
26299.50	H	-53.9	-27.0	-26.9	

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



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

#### EIRP SPURIOUS EMISSION LEVEL

Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin	Remark
5350.00	-	-	-	-	NOTE
10577.49	V	-30.9	-27.0	-3.9	
10582.51	H	-34.4	-27.0	-7.4	
15870.50	-	-	-	-	NOTE
21163.41	-	-	-	-	NOTE
26397.19	V	-51.4	-27.0	-24.4	
26414.53	H	-53.8	-27.0	-26.8	

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





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

#### EIRP SPURIOUS EMISSION LEVEL

Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin	Remark
5715.00	V	-33.85	-27.0	-6.85	
5725.00	V	-24.48	-17.0	-7.48	
11512.48	-	-	-	-	NOTE
17271.38	V	-45.1	-27.0	-18.1	
17274.29	H	-49.0	-27.0	-22.0	
23003.63	-	-	-	-	NOTE

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



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

#### EIRP SPURIOUS EMISSION LEVEL

Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin	Remark
5825.00	V	-21.29	-17.0	-4.29	
5835.00	V	-29.63	-27.0	-2.63	
11612.71	-	-	-	-	NOTE
17390.08	V	-46.1	-27.0	-19.1	
17397.80	H	-49.9	-27.0	-22.9	
23248.60	H	-56.6	-27.0	-29.6	
23283.87	V	-54.4	-27.0	-27.4	

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



## 4.6.8 TEST RESULTS (C)

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

EIRP SPURIOUS EMISSION LEVEL					
Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin	Remark
5150.00	-	-	-	-	NOTE
10355.29	V	-34.9	-27.0	-7.9	
10359.30	H	-34.0	-27.0	-7.0	
15540.80	-	-	-	-	NOTE
20724.51	-	-	-	-	NOTE
25831.86	H	-52.4	-27.0	-25.4	
25845.59	V	-50.6	-27.0	-23.6	

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



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

#### EIRP SPURIOUS EMISSION LEVEL

Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin	Remark
10480.70	V	-32.5	-27.0	-5.5	
10486.31	H	-35.8	-27.0	-8.8	
15727.01	-	-	-	-	NOTE
20962.71	-	-	-	-	NOTE
26175.15	H	-51.5	-27.0	-24.5	
26187.07	V	-50.6	-27.0	-23.6	

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



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

#### EIRP SPURIOUS EMISSION LEVEL

Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin	Remark
10517.90	H	-31.5	-27.0	-4.5	
10520.50	V	-31.4	-27.0	-4.4	
15781.60	-	-	-	-	NOTE
21037.29	-	-	-	-	NOTE
26269.14	V	-51.0	-27.0	-24.0	
26378.36	H	-53.3	-27.0	-26.3	

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



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

#### EIRP SPURIOUS EMISSION LEVEL

Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin	Remark
5350.00	-	-	-	-	NOTE
10641.50	-	-	-	-	NOTE
15964.71	-	-	-	-	NOTE
21281.90	-	-	-	-	NOTE
26591.68	H	-50.9	-27.0	-23.9	
26614.43	V	-48.9	-27.0	-21.9	

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



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

<b>EIRP SPURIOUS EMISSION LEVEL</b>					
<b>Frequency (MHz)</b>	<b>Antenna Polarization</b>	<b>Level (dBm)</b>	<b>Limit (dBm)</b>	<b>Margin</b>	<b>Remark</b>
5715.00	V	-36.78	-27.0	-9.78	
5725.00	V	-23.43	-17.0	-6.43	
11513.75	-	-	-	-	NOTE
17240.41	V	-39.7	-27.0	-12.7	
17247.12	H	-43.5	-27.0	-16.5	
22975.89	-	-	-	-	NOTE

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



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

<b>EIRP SPURIOUS EMISSION LEVEL</b>					
<b>Frequency (MHz)</b>	<b>Antenna Polarization</b>	<b>Level (dBm)</b>	<b>Limit (dBm)</b>	<b>Margin</b>	<b>Remark</b>
5825.00	V	-24.23	-17.0	-7.23	
5835.00	V	-33.04	-27.0	-6.04	
11601.28	-	-	-	-	NOTE
17411.49	H	-42.6	-27.0	-15.6	
17415.80	V	-39.3	-27.0	-12.3	
23229.12	H	-55.2	27.0	-28.2	
23258.78	V	-55.2	-27.0	-28.2	

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





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

#### EIRP SPURIOUS EMISSION LEVEL

Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin	Remark
5150.00	-	-	-	-	NOTE
10413.09	V	-35.1	-27.0	-8.1	
10417.49	H	-34.9	-27.0	-7.9	
15636.41	-	-	-	-	NOTE
20839.90	-	-	-	-	NOTE
26050.00	-	-	-	-	NOTE
26108.12	V	-50.6	-27.0	-23.6	
26133.77	H	-52.1	-27.0	-25.1	

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



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

#### EIRP SPURIOUS EMISSION LEVEL

Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin	Remark
10498.30	V	-36.2	-27.0	-9.2	
10501.10	H	-36.9	-27.0	-9.9	
15749.80	-	-	-	-	NOTE
20995.89	-	-	-	-	NOTE
26239.98	V	-51.2	-27.0	-24.2	
26260.72	H	-52.2	-27.0	-25.2	

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



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

#### EIRP SPURIOUS EMISSION LEVEL

Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin	Remark
5350.00	-	-	-	-	NOTE
10577.49	H	-35.3	-27.0	-8.3	
10580.30	V	-34.3	-27.0	-7.3	
15868.90	-	-	-	-	NOTE
21163.51	-	-	-	-	NOTE
26462.93	H	-52.8	-27.0	-25.8	
26468.24	V	-51.6	-27.0	-24.6	

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



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

#### EIRP SPURIOUS EMISSION LEVEL

Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin	Remark
5715.00	V	-34.35	-27.0	-7.35	
5725.00	V	-26.88	-17.0	-9.88	
11503.27	-	-	-	-	NOTE
17271.98	H	-42.7	-27.0	-15.7	
17283.21	V	-43.2	-27.0	-16.2	
22974.87	-	-	-	-	NOTE

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



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

#### EIRP SPURIOUS EMISSION LEVEL

Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin	Remark
5825.00	V	-22.13	-17.0	-5.13	
5835.00	V	-30.01	-27.0	-3.01	
11593.69	-	-	-	-	NOTE
17397.80	V	-46.2	-27.0	-19.2	
17403.71	H	-45.5	-27.0	-18.5	
23239.18	H	-56.8	-27.0	-29.8	
23267.23	V	-55.4	-27.0	-28.4	

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



## 4.7 FREQUENCY STABILITY

### 4.6.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

The frequency tolerance of the carrier signal shall be maintained within +/- 0.01% 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.

### 4.6.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
ANRITSU SPECTRUM ANALYZER	MS2667C	M10281	Mar. 15, 2003
WIT STANDARD TEMPERATURE AND HUMIDITY CHAMBER	TH-4S-C	W901030	Jun. 24, 2003

**NOTE:**

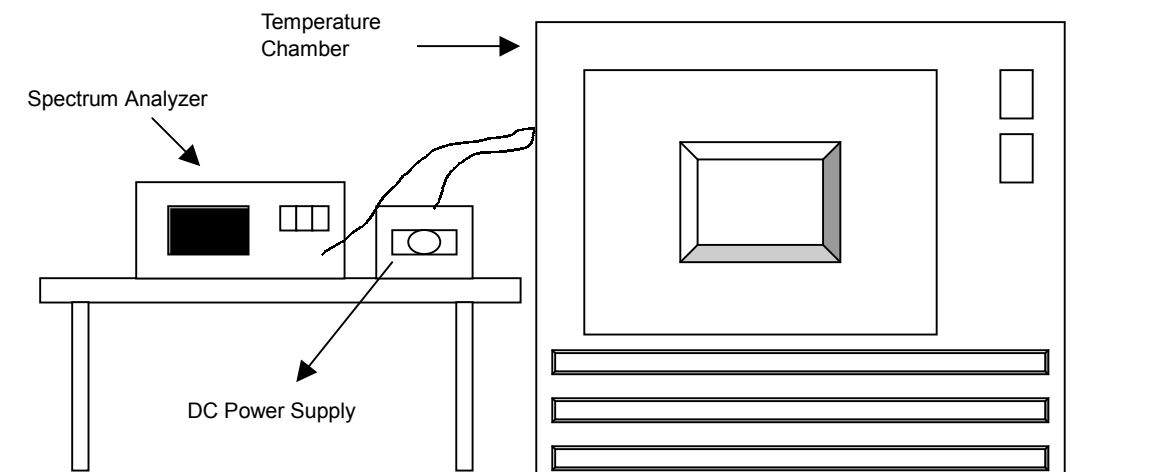
The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.

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

### 4.6.3 TEST PROCEDURE

1. The EUT was placed 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.

#### 4.6.4 TEST SETUP



#### 4.6.5 EUT OPERATING CONDITION

Same as Item 4.1.5



4.6.6 TEST RESULTS

Operating frequency: 5180MHz								Limit : ± 0.02%							
Temp. (°C)	Power supply (VDC)	2 minute		5 minute		10 minute									
		(MHz)	(%)	(MHz)	(%)	(MHz)	(%)								
50	126.5	5179.9952	0.000092	5179.9981	0.000037	5180.0007	-0.000014								
	110.0	5179.9943	0.000110	5179.9965	0.000067	5179.9989	0.000021								
	93.5	5179.9946	0.000105	5179.9972	0.000053	5179.9996	0.000008								
40	126.5	5179.9945	0.000105	5179.9941	0.000114	5179.9943	0.000110								
	110.0	5179.9944	0.000108	5179.9942	0.000112	5179.9943	0.000111								
	93.5	5179.9943	0.000110	5179.9943	0.000110	5179.9942	0.000112								
30	126.5	5179.9942	0.000111	5179.9927	0.000140	5179.9925	0.000145								
	110.0	5179.9943	0.000109	5179.9941	0.000113	5179.9929	0.000137								
	93.5	5179.9946	0.000105	5179.9931	0.000134	5179.9927	0.000142								
20	126.5	5179.9950	0.000097	5179.9950	0.000097	5179.9948	0.000100								
	110.0	5179.9952	0.000093	5179.9948	0.000100	5179.9950	0.000097								
	93.5	5179.9954	0.000089	5179.9950	0.000097	5179.9950	0.000097								
10	126.5	5180.0028	-0.000054	5180.0022	-0.000042	5180.0017	-0.000033								
	110.0	5180.0035	-0.000068	5180.0025	-0.000048	5180.0020	-0.000039								
	93.5	5180.0032	-0.000062	5180.0023	-0.000044	5180.0018	-0.000035								
0	126.5	5180.0047	-0.000091	5180.0049	-0.000095	5180.0047	-0.000091								
	110.0	5180.0047	-0.000091	5180.0049	-0.000095	5180.0047	-0.000091								
	93.5	5180.0049	-0.000095	5180.0049	-0.000095	5180.0047	-0.000091								
-10	126.5	5180.0071	-0.000137	5180.0071	-0.000137	5180.0070	-0.000135								
	110.0	5180.0071	-0.000137	5180.0072	-0.000139	5180.0071	-0.000137								
	93.5	5180.0072	-0.000139	5180.0072	-0.000139	5180.0069	-0.000133								
-20	126.5	5180.0077	-0.000149	5180.0072	-0.000139	5180.0072	-0.000139								
	110.0	5180.0078	-0.000151	5180.0073	-0.000141	5180.0072	-0.000139								
	93.5	5180.0078	-0.000151	5180.0077	-0.000149	5180.0070	-0.000135								
-30	126.5	5180.0062	-0.000120	5180.0057	-0.000110	5180.0057	-0.000110								
	110.0	5180.0057	-0.000110	5180.0060	-0.000116	5180.0054	-0.000104								
	93.5	5180.0058	-0.000112	5180.0057	-0.000110	5180.0057	-0.000110								





## 4.8 BAND EDGES MEASUREMENT

### 4.8.1 TEST INSTRUMENTS

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

#### NOTE:

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

### 4.8.2 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.

### 4.8.3 EUT OPERATING CONDITION

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

### 4.8.4 TEST RESULTS

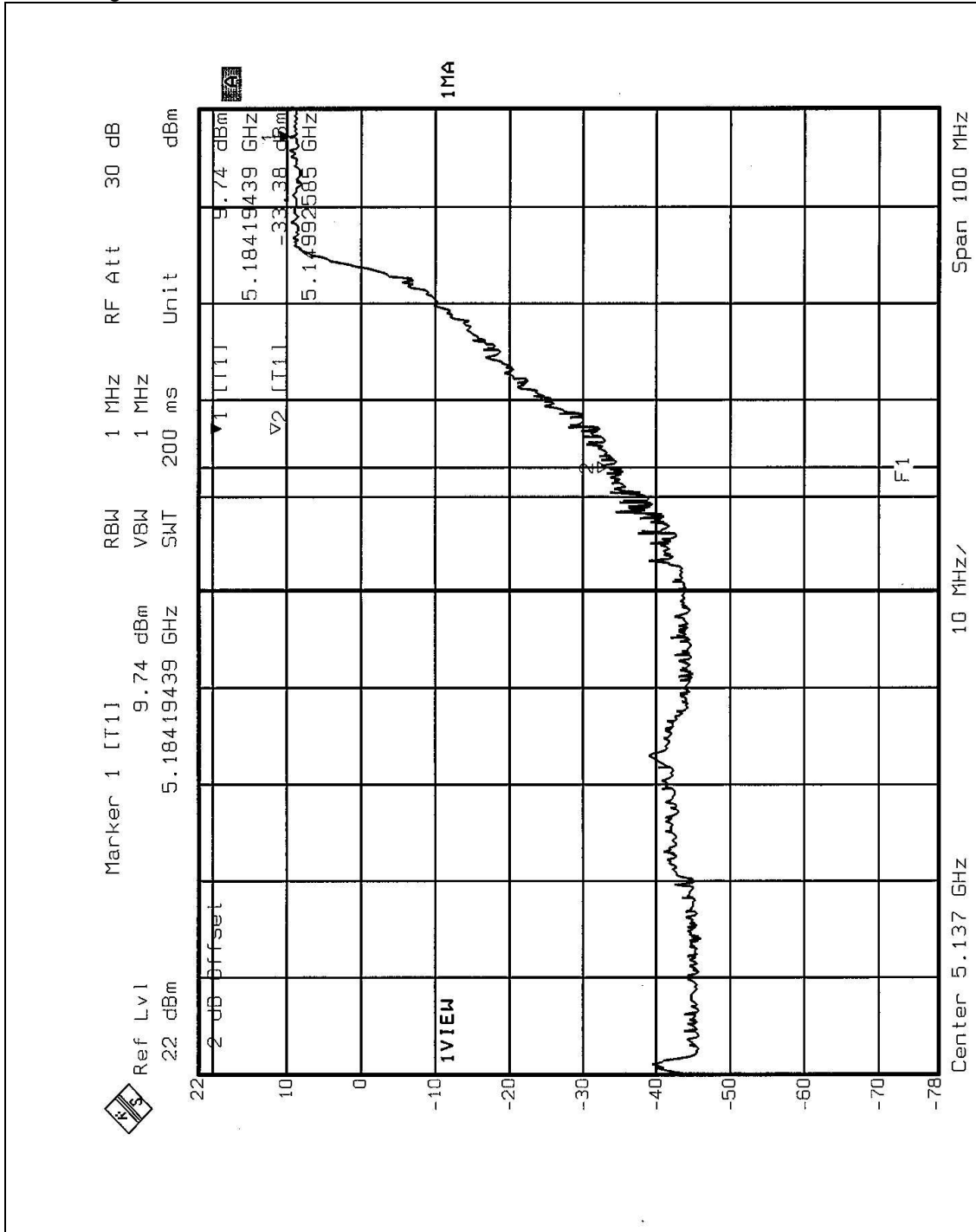
For signals in the restricted bands above and below the 5.15 to 5.35 GHz allocated band a measurement was made of the amplitude of the spurious emissions with respect to the intentional signals. The relative amplitude, in dBc, was applied to the average and peak filed strength of the intentional signal made on the OATS to calculate the field strength of the unintentional signals.

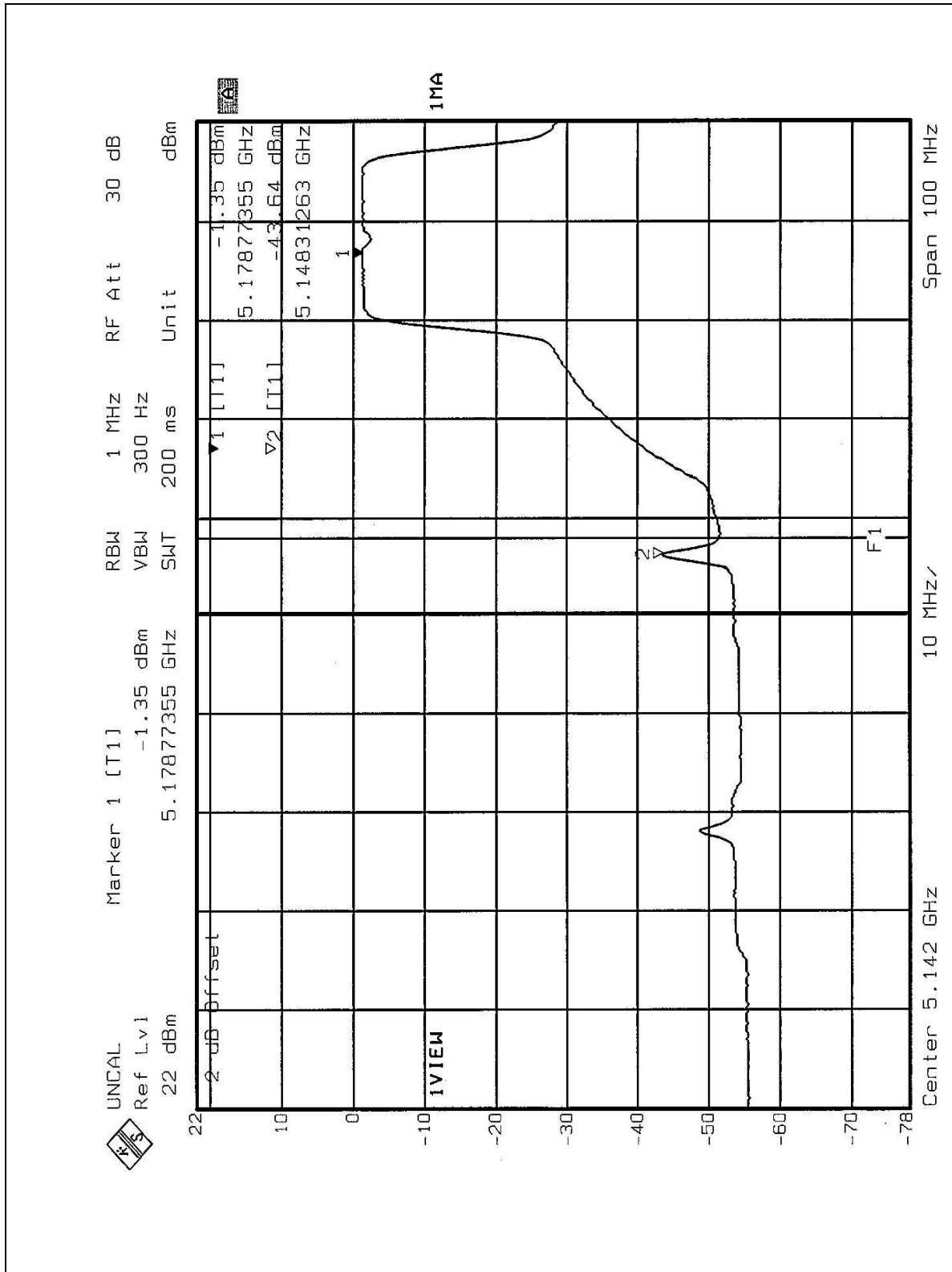
The spectrum plots (Peak RBW=VBW=1MHz; Average RBW=1MHz, VBW=300Hz) are attached on the following 8 pages.



Normal Mode: Channel 1 (5180 MHz)

The band edge emission plot on the following 2 pages shows 43.12dBc (Peak) / 42.29dBc (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 (normal mode) is 90.7dBuV/m, so the maximum field strength in restrict band is  $90.7 - 42.29 = 48.41$  dBuV/m which is under 54 dBuV/m limit.

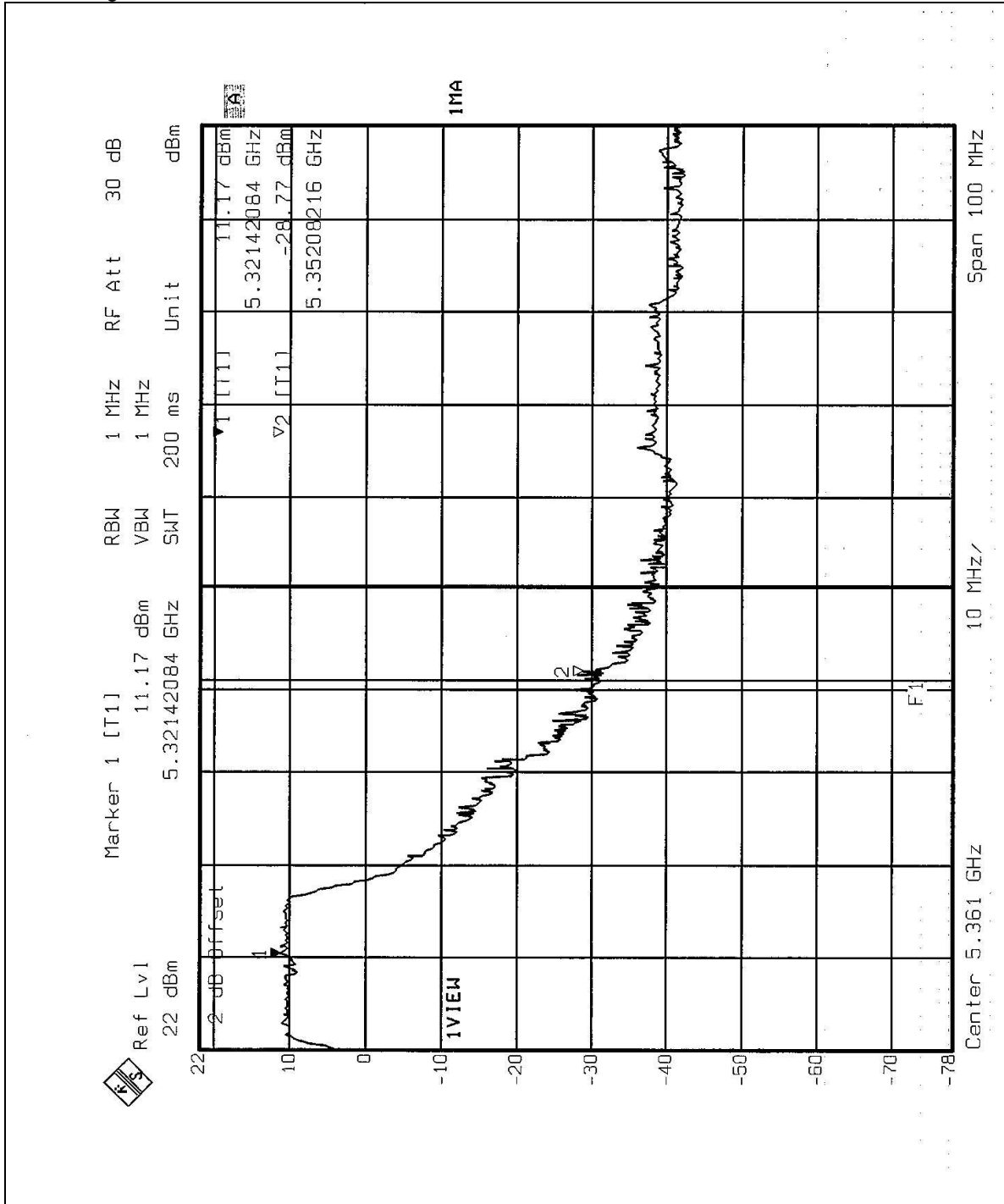


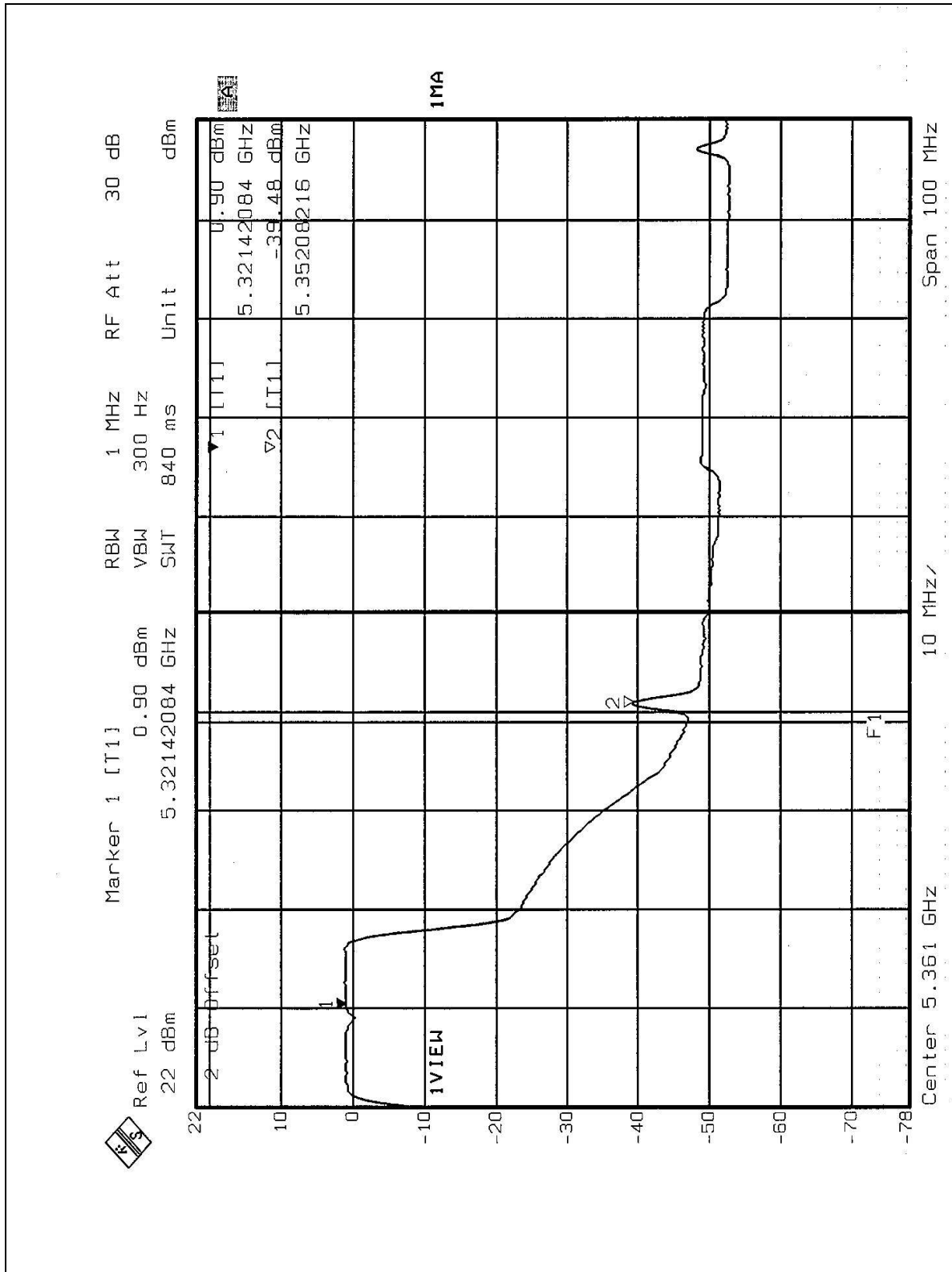




Normal Mode: Channel 8 (5320 MHz)

The band edge emission plot on the following 2 pages shows 39.94dBc (Peak) / 40.38dBc (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 (normal mode) is 90.8dBuV/m, so the maximum field strength in restrict band is  $90.8 - 40.38 = 50.42$  dBuV/m which is under 54 dBuV/m limit.

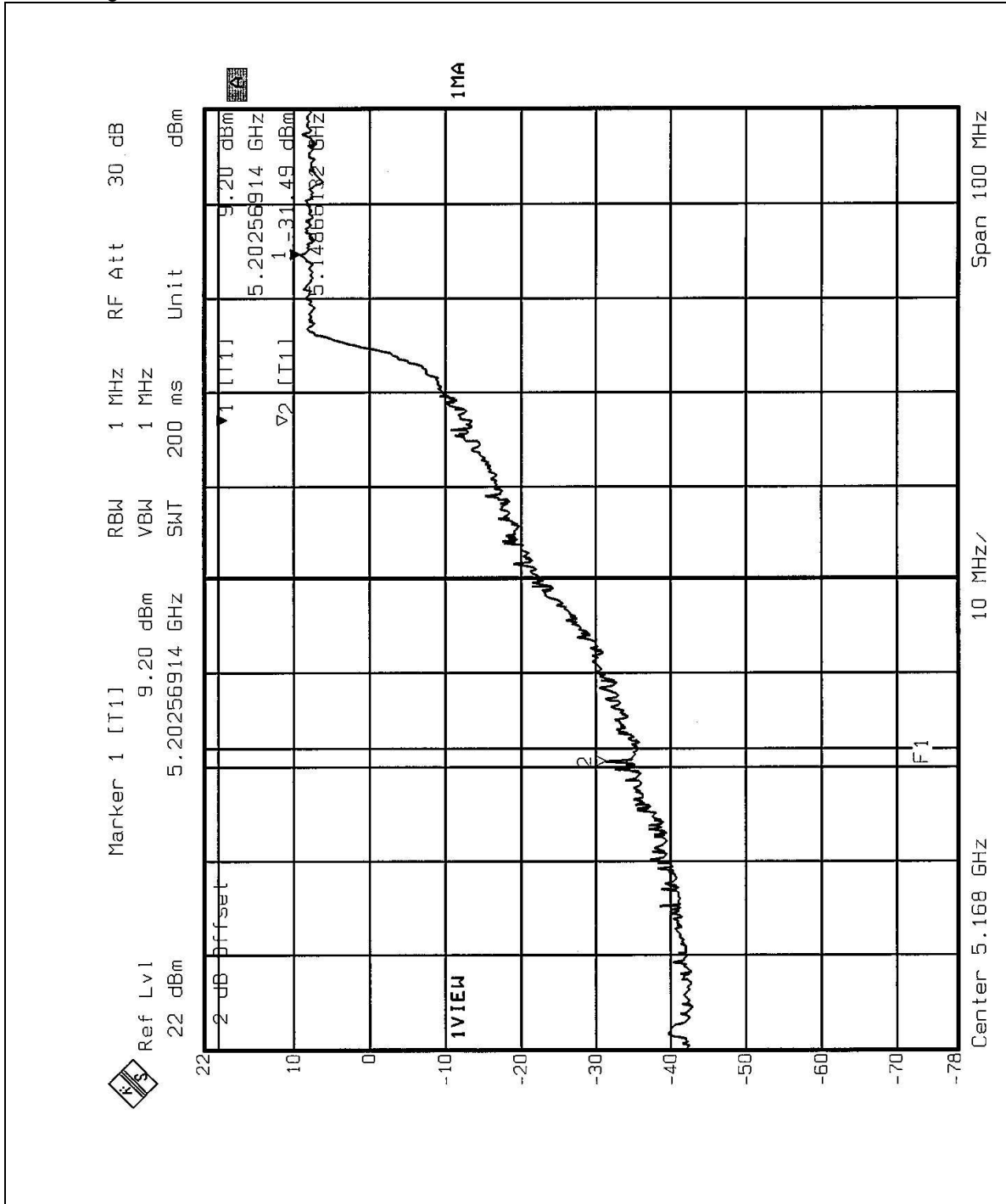






Turbo Mode: Channel 1 (5210 MHz)

The band edge emission plot on the following 2 pages shows 40.69dBc (Peak) / 46.51dBc (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 (normal mode) is 89.6dBuV/m, so the maximum field strength in restrict band is  $89.6 - 46.51 = 43.09$  dBuV/m which is under 54 dBuV/m limit.

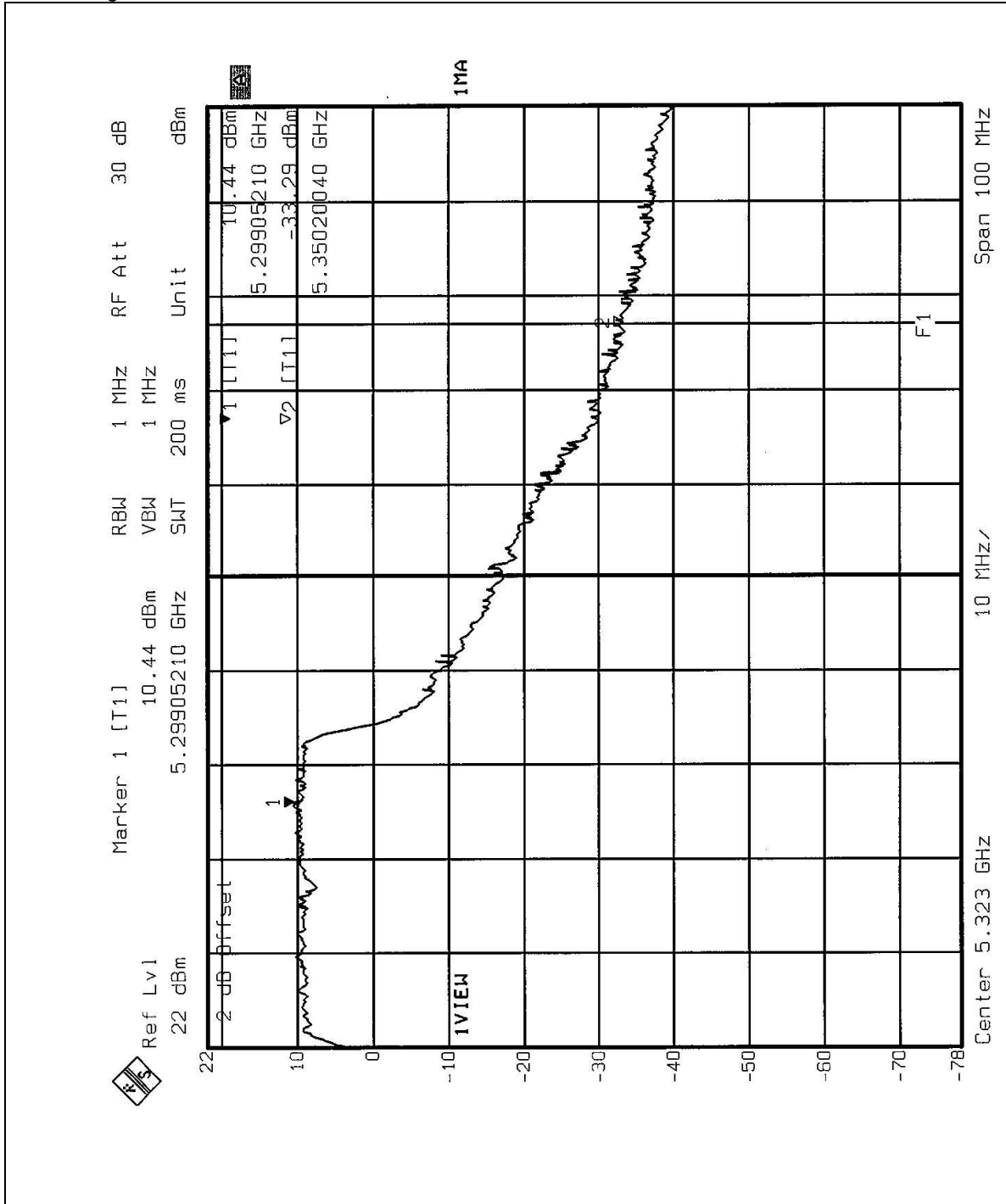




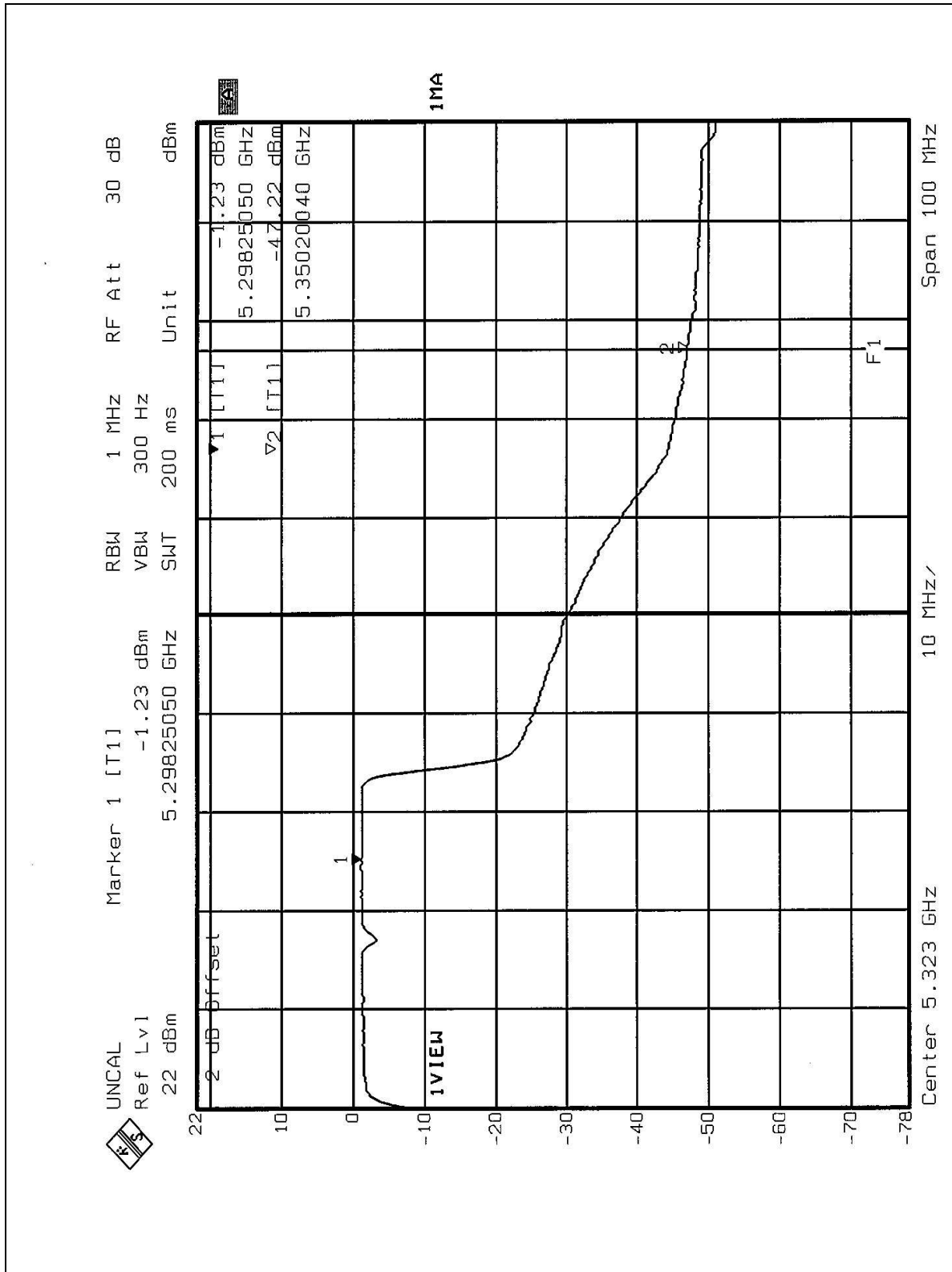


Turbo Mode: Channel 3 (5290 MHz)

The band edge emission plot on the following 2 pages shows 43.73dBc (Peak) / 45.99dBc (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 (normal mode) is 89.8dBuV/m, so the maximum field strength in restrict band is 89.8-45.99=43.81dBuV/m which is under 54 dBuV/m limit.









## **4.9 ANTENNA REQUIREMENT**

### **4.9.1 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.

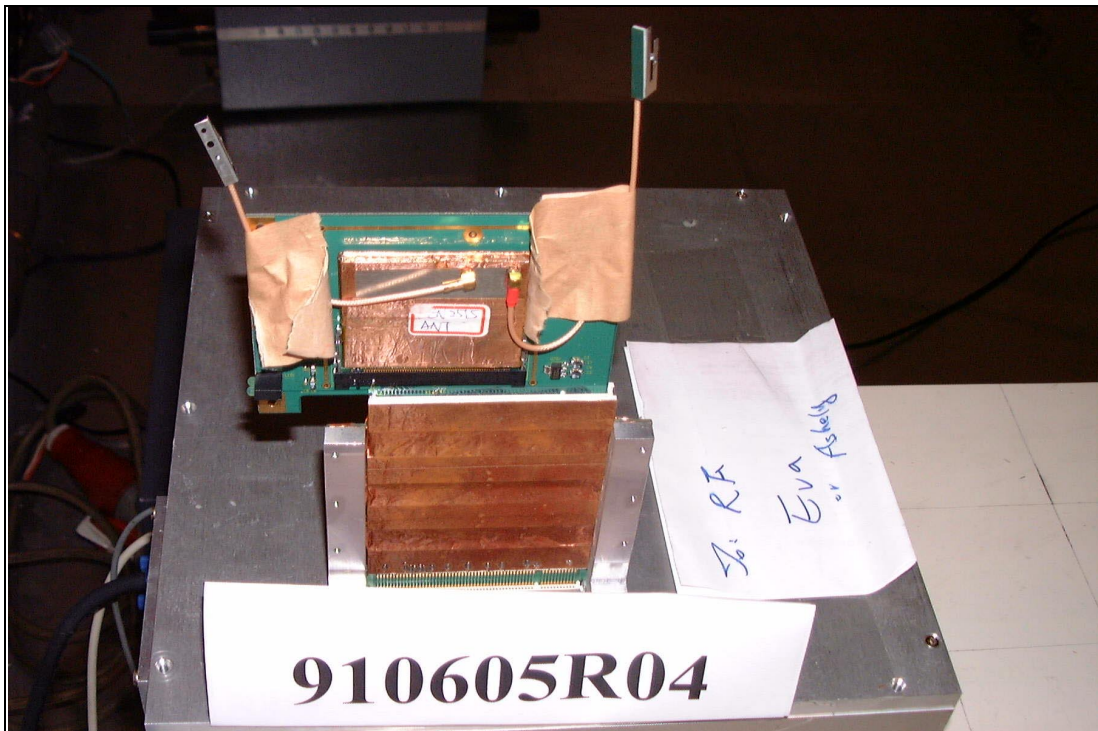
And according to FCC 47 CFR Section 15.407(a), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

### **4.9.2 ANTENNA CONNECTED CONSTRUCTION**

The antenna used in this product are Dipole and PIFA Antenna. The antenna connector for the device is MMCX connector. And the maximum Gain of this antenna is only 3.5dBi.

## 5 PHOTOGRAPHS OF THE TEST CONFIGURATION CONDUCTED EMISSION TEST





### RADIATED EMISSION TEST







## 6 INFORMATION ON THE TESTING LABORATORIES

We, ADT Corp., were founded in 1988 to provide our best service in EMC and Safety consultation. Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025, Guide 25 or EN 45001:

<b>USA</b>	FCC, NVLAP
<b>Germany</b>	TUV Rheinland
<b>Japan</b>	VCCI
<b>New Zealand</b>	MoC
<b>Norway</b>	NEMKO
<b>R.O.C.</b>	BSMI, DGT, CNLA

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](http://www.adt.com.tw/index.5/phtml).

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**Web Site:** [www.adt.com.tw](http://www.adt.com.tw)

The address and road map of all our labs can be found in our web site also.