



#### 5 Radiated Emission Test

#### 5.1 Limits of Radiated Emission

The field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency of Emission (MHz)	Field Strength $(\mu V/m)$	Field Strength (dBµV/m)	
30 - 88	100	40	
88 -216	150	43.5	
216 - 960	200	46	
Above 960	500	54	

#### **NOTE:**

- 1. Field Strength ( $dB\mu V/m$ )=20log Field Strength ( $\mu V/m$ ).
- 2. In the emission tables above, the tighter limit applies at the band edges.

#### 5.2 Test Instruments

Description	Manufacturer	Model No.	Serial No.	Calibration Date
Test Receiver	ROHDE&SCHWARZ	ESIB26	100130	2004.01.15
Ultra Broadband Ant.	ROHDE&SCHWARZ	HL562	100089	2004.06.04
Semi-Anechoic Chamber	Albatross	H-249	P21505-016-001	2004.08.20

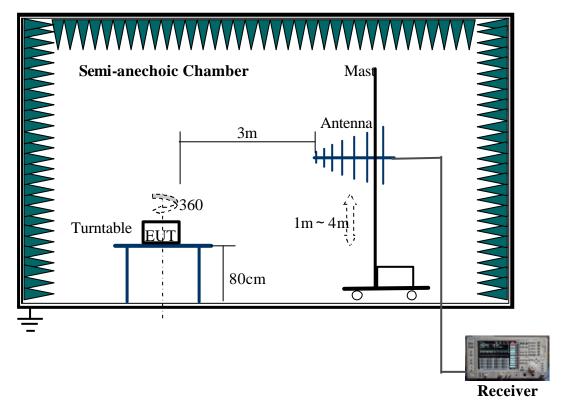
#### 5.3 Test Procedure

- a. The EUT was placed on the top of a ratable 0.8 meters above the ground at a 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 meter 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 the heights from 1 to 4 meters and the ratable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detector Function and Specified Bandwidth with Maximum Hold Mode.



f. If the emission level of the EUT in peak mode was 10 dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emission that did not have 10 dB margin would be retested one by one using the quasi-peak method.

# 5.4 Test Setup



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

## 5.5 EUT Operating Conditions

The EUT was powered by 120V AC Mains.

The brightness and contrast was set to maximum, and the resolution was set to 1024\*768@60Hz.



# 5.6 Test Results

## Sample1:

No.	Frequency (MHz)	Antenna Polarization	Antenna Height (cm)	Table Angle (Degree)	QP Limits (dBmV/m)	Emission Level (dBmV/m)
1	111.12	Horizontal	150	0	43.5	29.70
2	135.06	Vertical	100	0	43.5	38.43
3	298.22	Horizontal	150	0	46	37.05

### Sample2:

No.	Frequency (MHz)	Antenna Polarization	Antenna Height (cm)	Table Angle (Degree)	QP Limits (dBmV/m)	Emission Level (dBmV/m)
1	178.60	Vertical	100	0	43.5	29.88
2	218.45	Horizontal	150	0	46	31.23
3	456.02	Vertical	100	0	46	35.47
4	604.76	Horizontal	150	0	46	33.78

# Sample3:

No.	Frequency (MHz)	Antenna Polarization	Antenna Height (cm)	Table Angle (Degree)	QP Limits (dBmV/m)	Emission Level (dBmV/m)
1	108.06	Horizontal	150	180	43.5	30.28
2	398.87	Horizontal	150	0	46	28.76
3	431.84	Vertical	100	0	46	32.77
4	599.78	Vertical	100	0	46	33.22

## Sample4:

No.	Frequency (MHz)	Antenna Polarization	Antenna Height (cm)	Table Angle (Degree)	QP Limits (dBmV/m)	Emission Level (dBmV/m)
1	54.00	Vertical	100	0	40	31.79
2	364.52	Horizontal	150	0	46	36.45
3	486.02	Vertical	100	0	46	39.28
4	729.02	Horizontal	150	0	46	39.30

### Sample5:

No.	Frequency (MHz)	Antenna Polarization	Antenna Height (cm)	Table Angle (Degree)	QP Limits (dBmV/m)	Emission Level (dBmV/m)
1	33.78	Vertical	100	0	40	30.77
2	398.18	Horizontal	150	0	46	39.89