



4.7.7 TEST RESULTS (Mode 4)

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

The spectrum plots (Peak RBW=VBW=100KHz; Average RBW=1MHz, VBW=10Hz) are attached on the following pages.

**802.11a OFDM modulation****NOTE (Peak):**

The band edge emission plot on the following first page shows 47.72dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 is 104.5dBuV/m (Peak), so the maximum field strength in restrict band is $104.5 - 47.72 = 56.78$ dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the following first page shows 49.68dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 8 is 108.4dBuV/m (Peak), so the maximum field strength in restrict band is $108.4 - 49.68 = 58.72$ dBuV/m which is under 74dBuV/m limit.

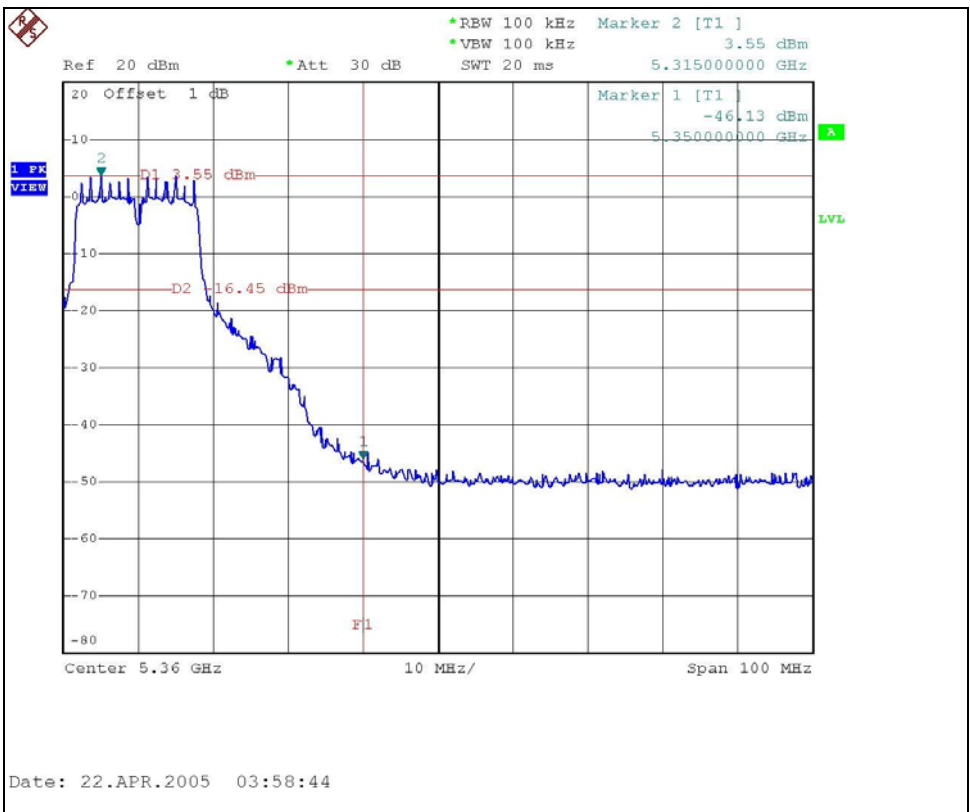
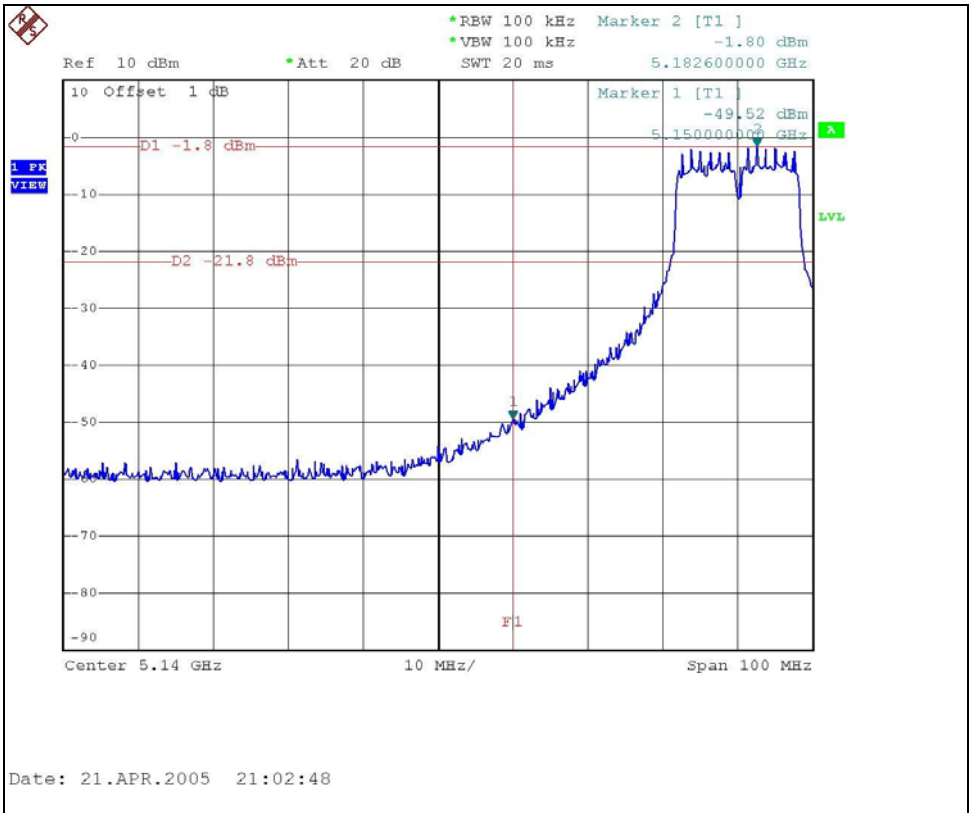
NOTE (Average):

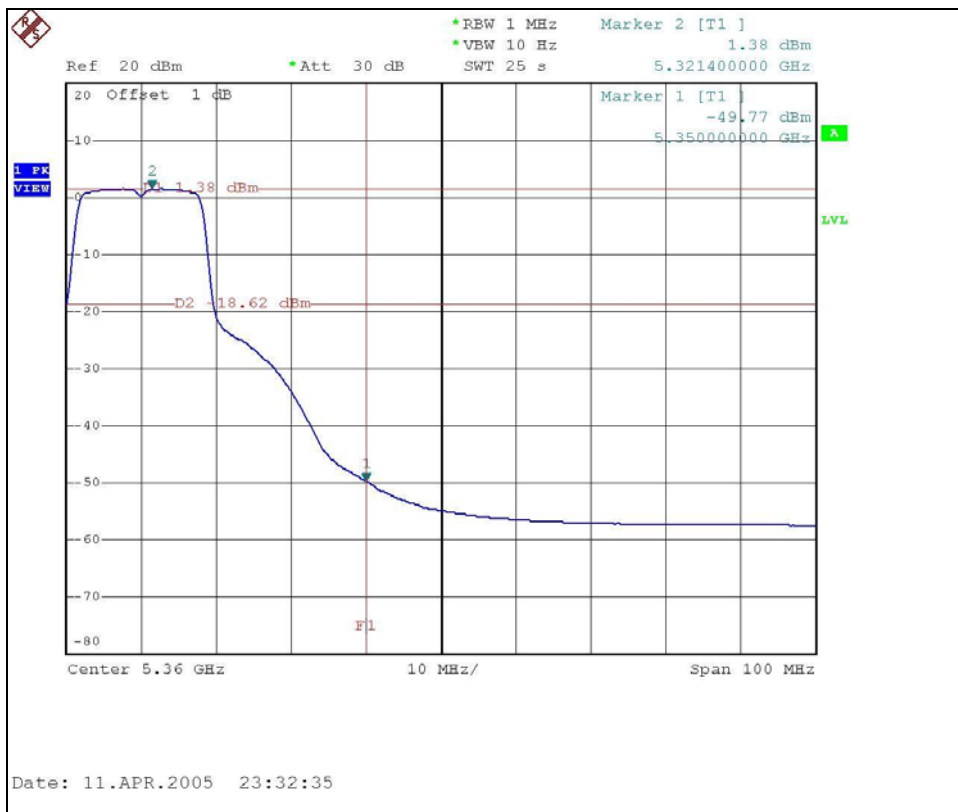
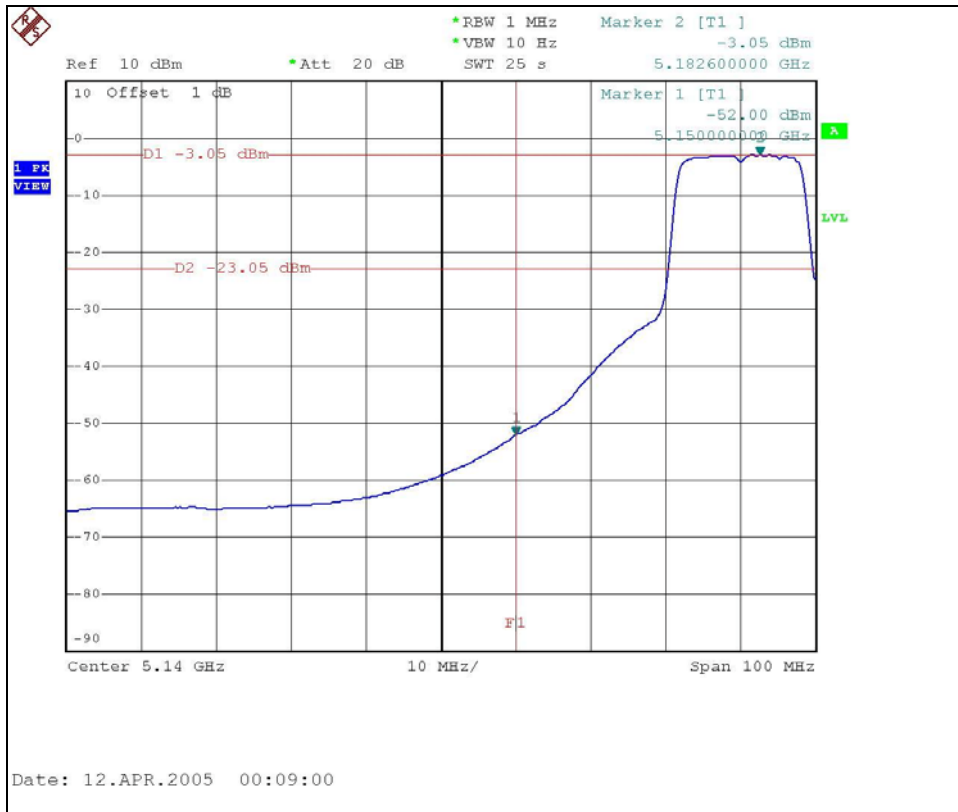
The band edge emission plot on the following second page shows 48.95dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 is 94.6dBuV/m (Average), so the maximum field strength in restrict band is $94.6 - 48.95 = 45.65$ dBuV/m which is under 54dBuV/m limit.

The band edge emission plot on the following second page shows 51.15dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 8 is 99.3dBuV/m (Average), so the maximum field strength in restrict band is $99.3 - 51.15 = 48.15$ dBuV/m which is under 54dBuV/m limit.



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NOTE (Peak):

The band edge emission plot on the following first page shows 52.04dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 is 100.4dBuV/m (Peak), so the maximum field strength in restrict band is $100.4 - 52.04 = 48.36$ dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the following first page shows 47.67dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 3 is 106.0dBuV/m (Peak), so the maximum field strength in restrict band is $106.0 - 47.67 = 58.33$ dBuV/m which is under 74dBuV/m limit.

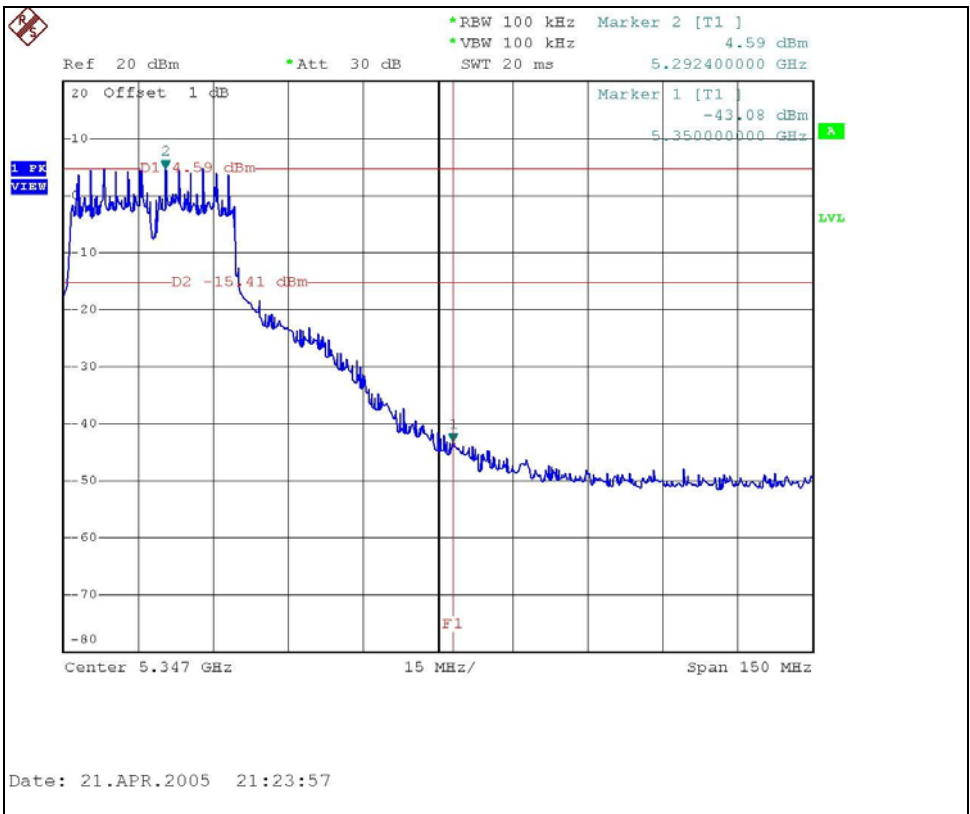
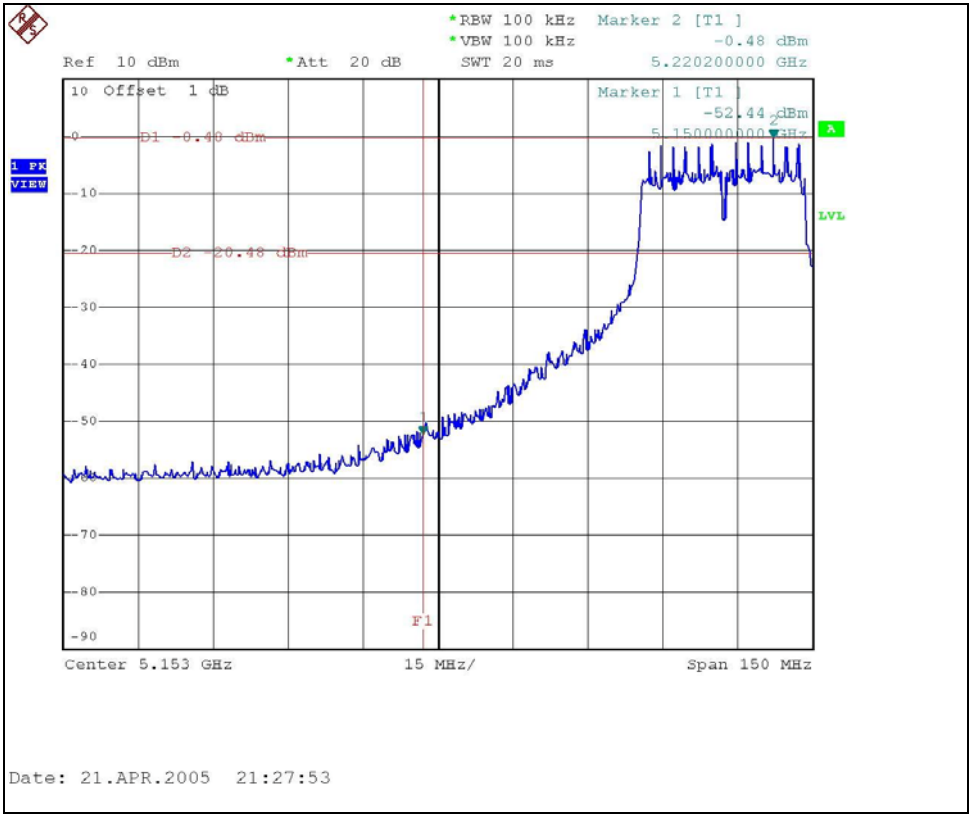
NOTE (Average):

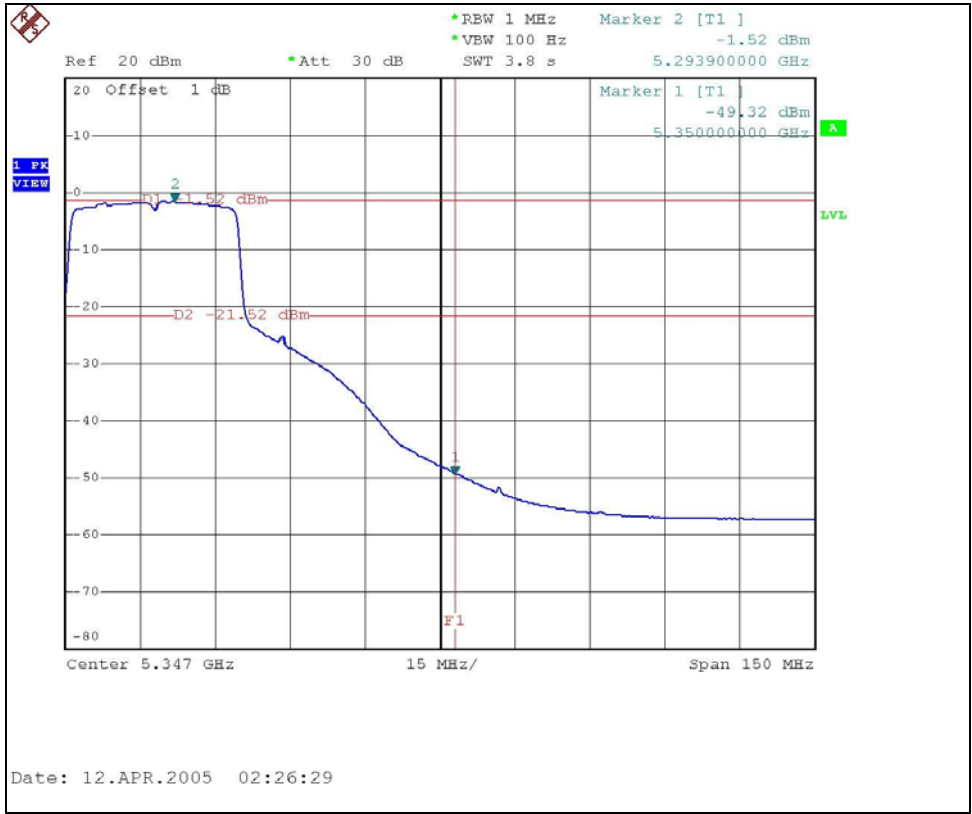
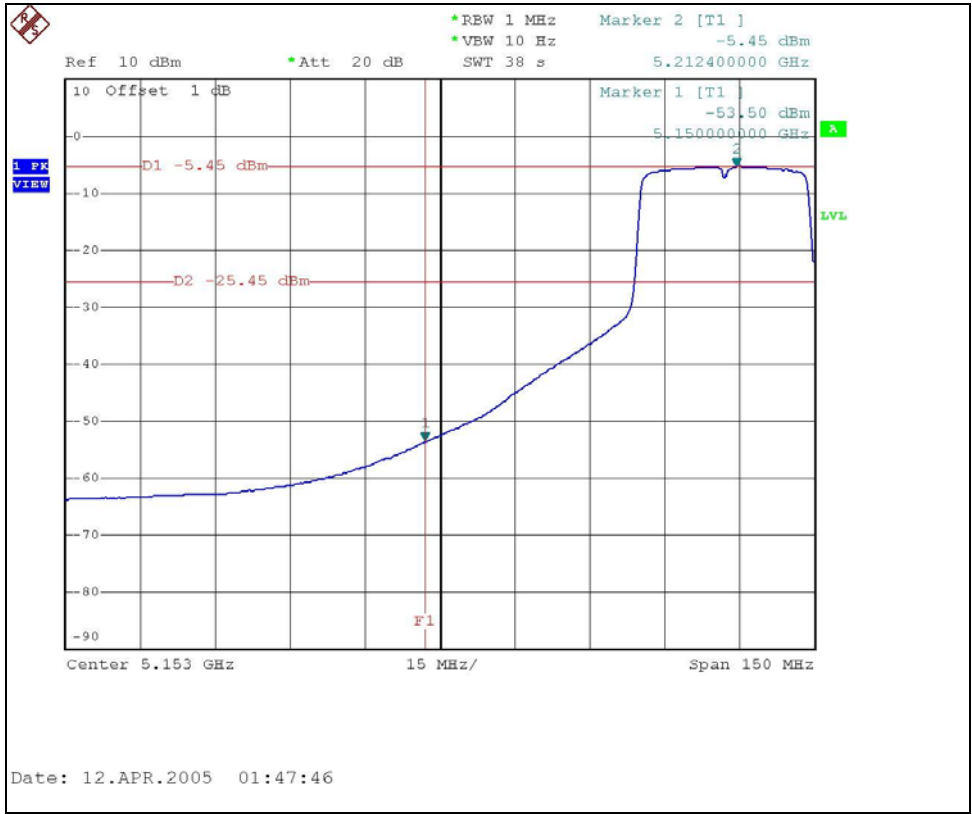
The band edge emission plot on the following second page shows 48.05dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 is 91.6dBuV/m (Average), so the maximum field strength in restrict band is $91.6 - 48.05 = 43.55$ dBuV/m which is under 54dBuV/m limit.

The band edge emission plot on the following second page shows 47.8dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 3 is 97.0dBuV/m (Average), so the maximum field strength in restrict band is $97.0 - 47.8 = 49.2$ dBuV/m which is under 54dBuV/m limit.



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4.8 ANTENNA REQUIREMENT

4.8.1 STANDARD APPLICABLE

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

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

4.8.2 ANTENNA CONNECTED CONSTRUCTION

The antennas used in this product are as below:

No.	Model	Antnna Type	2.4/ 5GHz Antenna Gain	Connector Type
1	3CWE591 (Z1996)	High gain omni antenna	6/ 8 dBi	N Female
2	3CWE598 (Z1997)	Medium gain panel antenna	8/ 10 dBi	N Female
3	3CWE596	High gain panel antenna	18/ 20 dBi	N Female
4	3CWE502	Small Omni (Rubber Duck)	2.5/ 2.5 dBi	SMA Male

5. PHOTOGRAPHS OF THE TEST CONFIGURATION

CONDUCTED EMISSION TEST (ANTENNA 1)



CONDUCTED EMISSION TEST (ANTENNA 2)



CONDUCTED EMISSION TEST (ANTENNA 3)



CONDUCTED EMISSION TEST (ANTENNA 4)



RADIATED EMISSION TEST (ANTENNA 1)



RADIATED EMISSION TEST (ANTENNA 2)



RADIATED EMISSION TEST (ANTENNA 3)



RADIATED EMISSION TEST (ANTENNA 4)





6. INFORMATION ON THE TESTING LABORATORIES

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

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

Copies of accreditation certificates of our laboratories obtained from approval agencies can be downloaded from our web site:

www.adt.com.tw/index.5/phtml. If you have any comments, please feel free to contact us at the following:

Linko EMC/RF Lab:

Tel: 886-2-26052180

Fax: 886-2-26052943

Hsin Chu EMC/RF Lab:

Tel: 886-3-5935343

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Hwa Ya EMC/RF/Safety Telecom Lab:

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Fax: 886-3-3185050

Web Site: www.adt.com.tw

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