

4.5 POWER SPECTRAL DENSITY MEASUREMENT

4.5.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

4.5.2 TEST INSTRUMENTS

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

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



4.5.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 3kHz RBW and 30kHz VBW, set sweep time=span/3kHz. The power spectral density was measured and recorded.

The sweep time is allowed to be longer than span/3KHz for a full response of the mixer in the spectrum analyzer.

4.5.4 DEVIATION FROM TEST STANDARD

No deviation

4.5.5 TEST SETUP



4.5.6 EUT OPERATING CONDITIONS

Same as 4.3.6

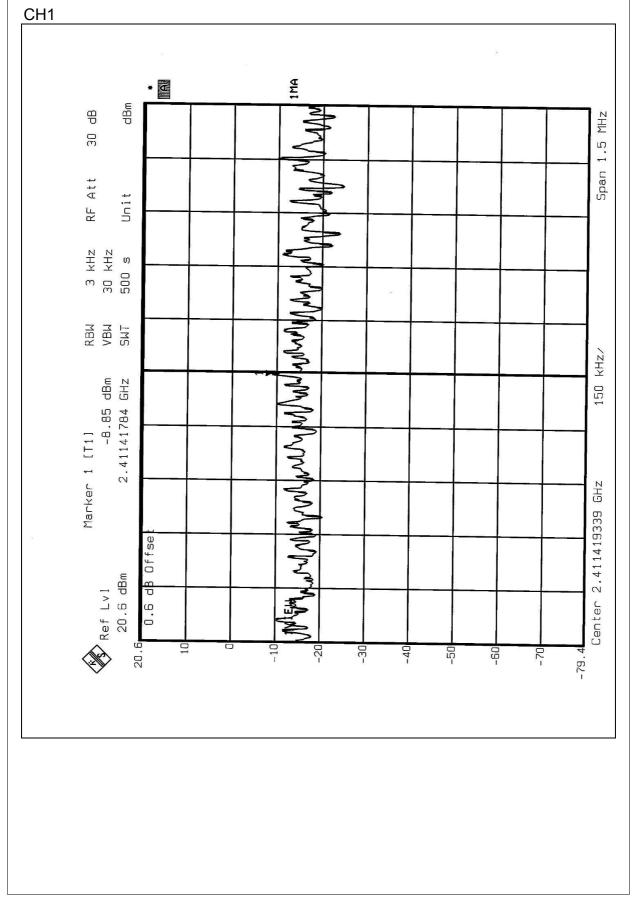


4.5.7 TEST RESULTS

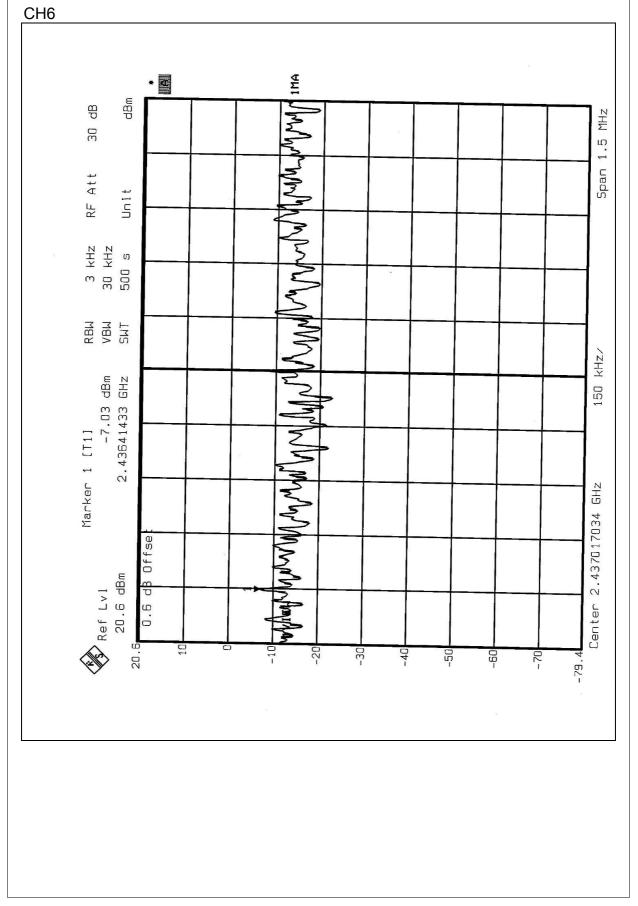
EUT	Mini-PCI Adapter	MODEL	WL-850F
201		MODE	ССК
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	21deg. C, 69%RH, 991hPa
TESTED BY: Ansen Lei			

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-8.85	8	PASS
6	2437	-7.03	8	PASS
11	2462	-8.60	8	PASS

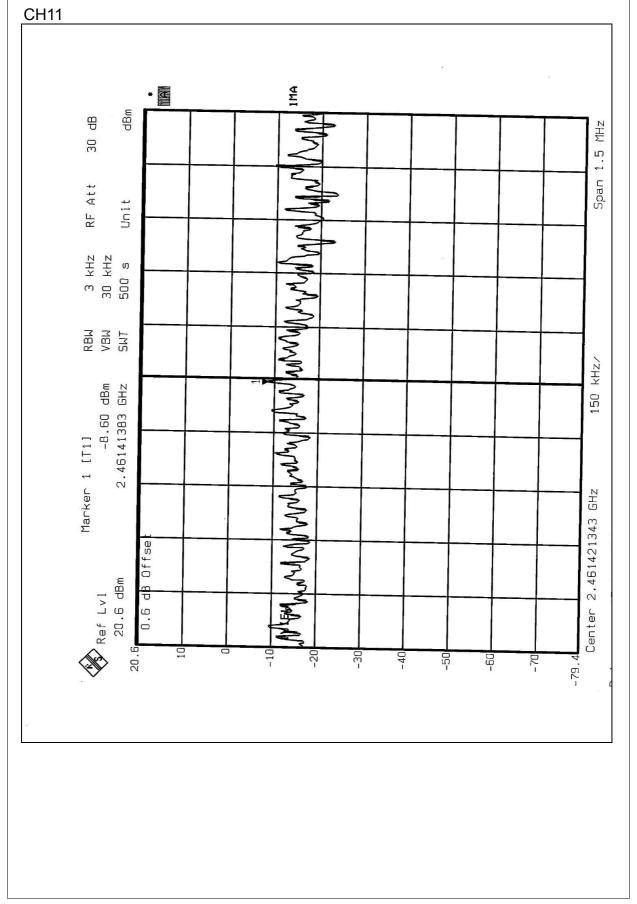










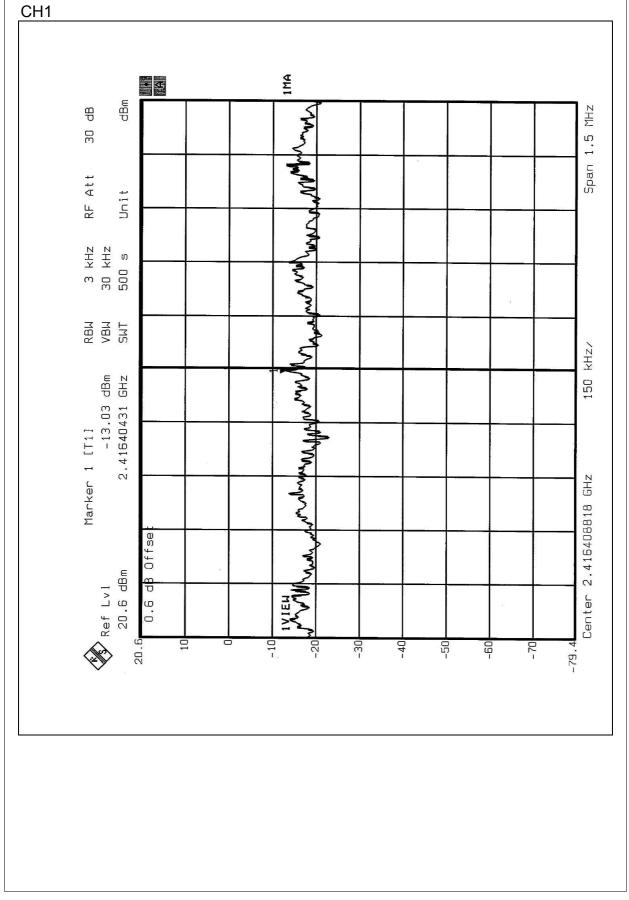




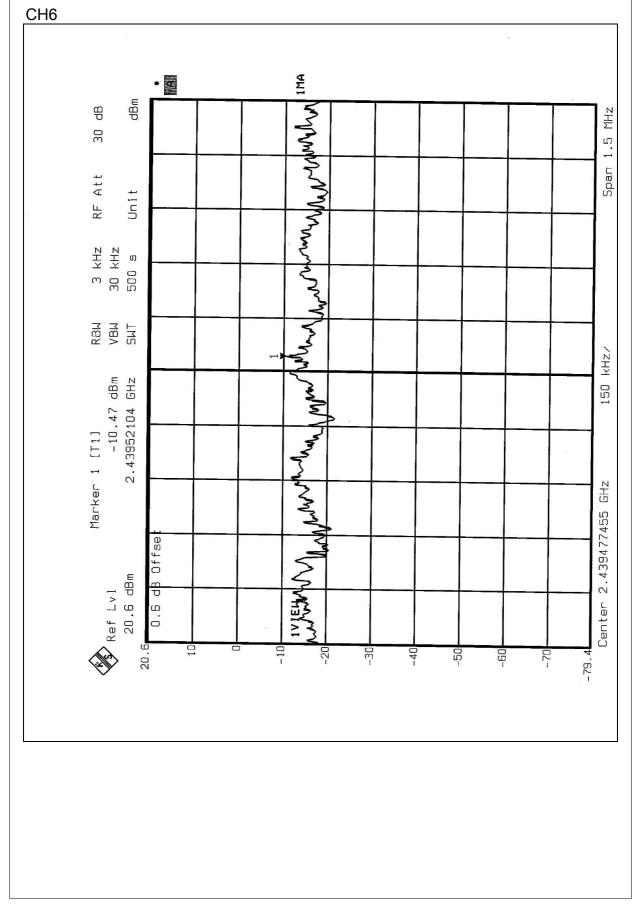
EUT	Mini-PCI Adapter	MODEL	WL-850F	
EUT		MODE	OFDM	
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	21deg. C, 69%RH, 991hPa	
TESTED BY: Ansen Lei				

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-13.03	8	PASS
6	2437	-10.47	8	PASS
11	2462	-14.96	8	PASS

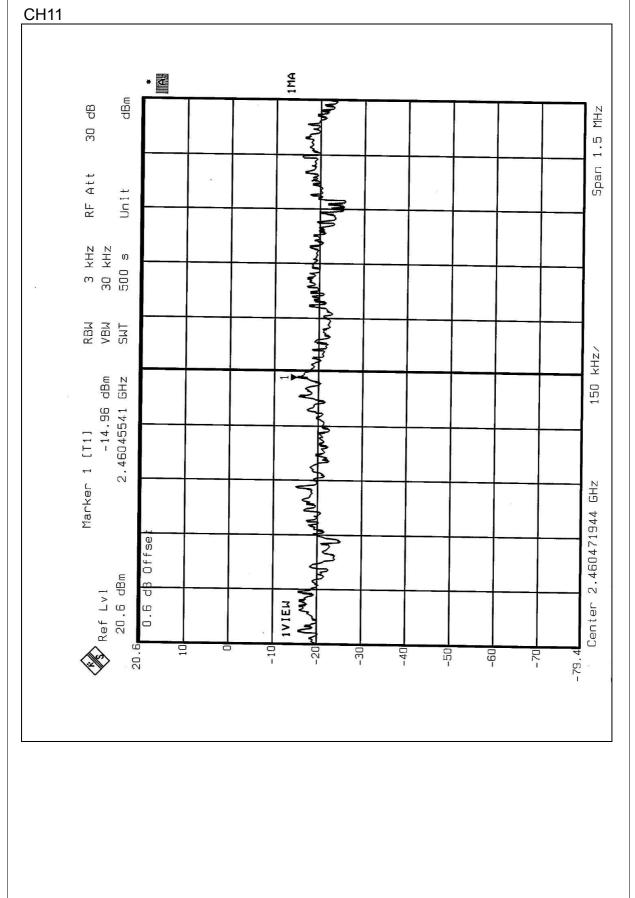














4.6 BAND EDGES MEASUREMENT

4.6.1 LIMITS OF BAND EDGES MEASUREMENT

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

4.6.2 TEST INSTRUMENTS

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

NOTE: 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

The transmitter output was connected to the spectrum analyzer via a low lose cable. Set both RBW and VBW of spectrum analyzer to 1MHz and 300Hz with suitable frequency span including 100kHz bandwidth from band edge. The band edges was measured and recorded.

4.6.4 DEVIATION FROM TEST STANDARD

No deviation



4.6.5 EUT OPERATING CONDITION

Same as Item 4.3.6

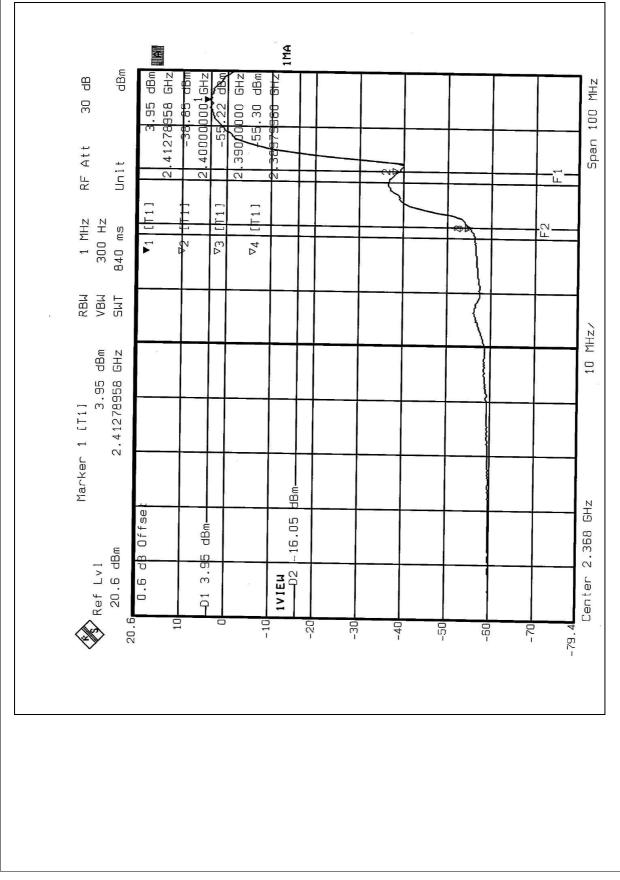
4.6.6 TEST RESULTS

The spectrum plots are attached on the following 2 pages. D2 line indicates the highest level, D1 line indicates the 20dB offset below D2. It shows compliance with the requirement in part 15.247(C).

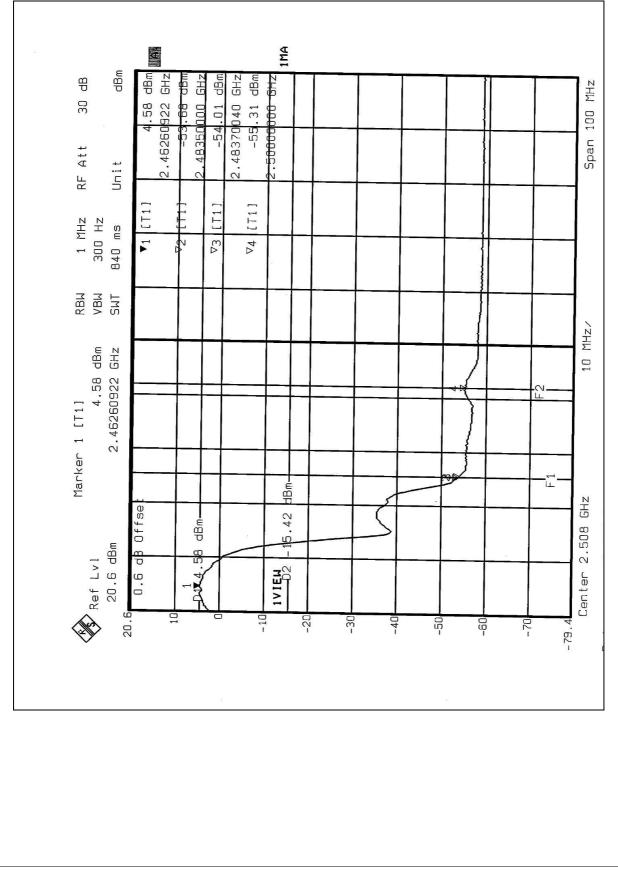
NOTE 1: The band edge emission plot on the following 1-2 pages shows 59.17dB / 58.26dB delta between carrier maximum power and local maximum emission in restrict band (2.3900GHz / 2.4835GHz). The emission of carrier strength list in the test result of channel 11 of CCK technique at the item 4.2.7 is 97.8dBuV/m, so the maximum field strength in restrict band is 97.8-58.26=39.54dBuV/m which is under 54dBuV/m limit.

NOTE 2: The band edge emission plot on the following 3-4 pages shows 49.58dB / 50.39dB delta between carrier maximum power and local maximum emission in restrict band (2.3900GHz / 2.4835GHz). The emission of carrier strength list in the test result of channel 11 of OFDM technique at the item 4.2.7 is 102.3dBuV/m, so the maximum field strength in restrict band is 102.3-50.39=51.91dBuV/m which is under 54dBuV/m limit.

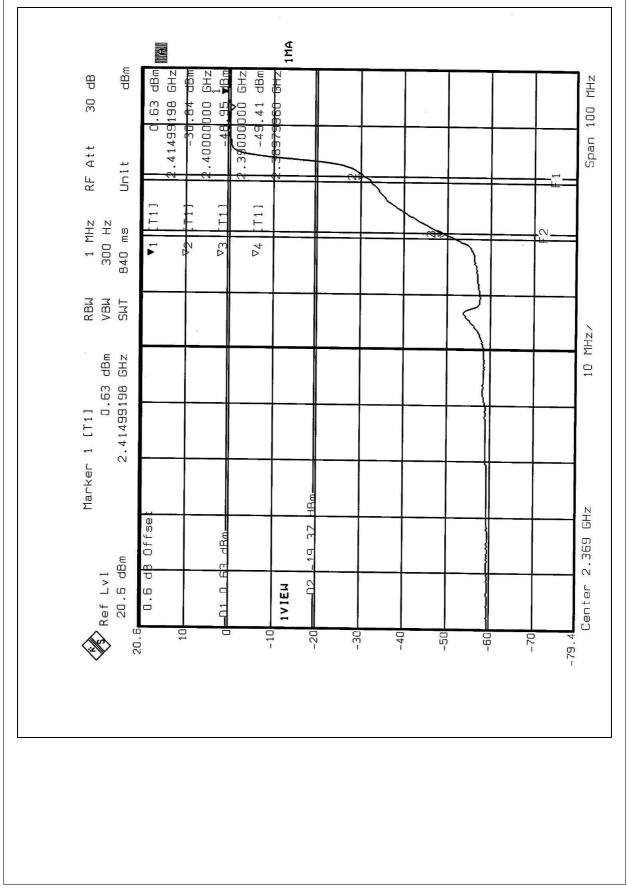














Marker i [T1] RBM I MHZ R Att 30 dB 20.6 dBm 2.6481563 GHz SHT 840 ms Unit dBm 20.6 dBm 2.46481563 GHz SHT 840 ms Unit dBm 20.6 dBm 2.46481563 GHz SHT 840 ms Unit dBm 20.6 dBm 2.46481563 GHz SHT 840 ms Unit dBm 20.6 dBm 2.46481563 GHz SHT 840 ms Unit dBm 20.1 dBm 2.46481563 GHz SHT 2.45481563 GHz GHz H	Marker i [T1] RBM I MHz RF Att 30 -0.91 dBm VBM 300 Hz Junit 2.46481563 GHz SWI 840 ms Unit 2.46481563 GHz SWI 840 ms Unit 2.46481563 GHz SWI 840 ms Unit 7 [T11] -0.91 -0.91 9 7 [T11] 2.46481563 9 7 [T11] 2.48350000 9 7 [T11] 2.48370000 9 7 [T11] 2.48370000 9 7 1 2.48370000 9 7 1 2.48370000 9 7 1 2.4837000 9 7 7 2.4837000 9 7 7 2.483700 <
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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 type used in this product is Dipole antenna with MMCX connector. The maximum Gain of this antenna is 2dBi.



5 PHOTOGRAPHS OF THE TEST CONFIGURATION

CONDUCTED 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:

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

Copies of accreditation certificates of our laboratories obtained from approval agencies can be downloaded from our web site: <u>www.adt.com.tw/index.5/phtml</u>.

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

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Lin Kou Safety Lab: Tel: 886-2-26093195 Hsin Chu EMC Lab: Tel: 886-35-935343 Fax: 886-35-935342

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