

# **FCC TEST REPORT**

REPORT NO.: RF921225R02A

MODEL NO.: WE800Gv2

RECEIVED: NA

**TESTED:** December 25, 2003 ~ January 08, 2004

**APPLICANT:** GENERAL INSTRUMENT CORP.

ADDRESS: 101 Tournament Dr. Horsham, PA 19044

**United States of America** 

**ISSUED BY:** Advance Data Technology Corporation

LAB LOCATION: 47 14th Lin, Chiapau Tsun, Linko, Taipei,

Taiwan, R.O.C.

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### 1 CERTIFICATION

**PRODUCT:** Wireless Ethernet Bridge

MODEL NO.: WE800Gv2

**BRAND NAME:** Motorola

**APPLICANT:** GENERAL INSTRUMENT CORP.

**TEST ITEM:** ENGINEERING SAMPLE

**STANDARDS:** FCC Part 15, Subpart C (Section 15.247),

ANSI C63.4-1992

We, **Advance Data Technology Corporation**, hereby certify that one sample of the designation has been tested in our facility from December 25, 2003 to January 08, 2004. The test record, data evaluation and Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions herein specified.

PREPARED BY: Stacy - Synch., DATE: January 13, 2004

Stacy Hsueh

APPROVED BY: 4/13 Approved , DATE: January 13, 2004

Ellis Wu / Manager

FCC ID: ACQWE800GV2



# **2 SUMMARY OF TEST RESULTS**

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 15, Subpart C						
Standard Section	Test Type and Limit	Result	REMARK			
			Meet the requirement of limit			
15.207	AC Power Conducted Emission	PASS	Minimum passing margin is –8.47dB at 0.150MHz			
15.247(a)(2)	Spectrum Bandwidth of a Direct Sequence Spread Spectrum System. Limit: min. 500kHz	PASS	Meet the requirement of limit			
15.247(b)	Maximum Peak Output Power Limit: max. 30dBm	PASS	Meet the requirement of limit			
			Meet the requirement of limit			
15.247(c)	Transmitter Radiated Emissions Limit: Table 15.209	PASS	Minimum passing margin is –1.48dB at 1660.00MHz			
15.247(d)	5.247(d) Power Spectral Density Limit: max. 8dBm PASS		Meet the requirement of limit			
15.247(c)	Band Edge Measurement Limit: 20dB less than the peak value of fundamental frequency	PASS	Meet the requirement of limit			

**Note:** The information of measurement uncertainty is available upon the customer's request.



### 3 GENERAL INFORMATION

### 3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	Wireless Ethernet Bridge		
MODEL NO.	WE800Gv2		
BRAND NO.	Motorola		
POWER SUPPLY	12Vdc from power adapter		
POWER SUPPLI	5.0Vdc from power adapter		
MODULATION TYPE	BPSK, QPSK, CCK, 16QAM, 64QAM		
RADIO TECHNOLOGY	DSSS, OFDM		
TRANSFER RATE	1/2/5.5/6/9/11/12/18/24/36/48/54Mbps		
FREQUENCY RANGE	2412MHz ~ 2462MHz		
NUMBER OF CHANNEL	11		
OUTPUT POWER	15.10dBm		
ANTENNA TYPE	sleeve antenna with 1.8dBi gain		
DATA CABLE	NA		
I/O PORTS	RJ45		
ASSOCIATED DEVICES	NA		

#### NOTE:

1. The EUT were powered by the two adapter:

(A)

BRAND : Potrans Electrical Corporation		
MODEL: WD411200500		
INPUT:	120Vac,60Hz,11W	
OUTPUT:	12Vdc 500mA	

(B)

BRAND:	DELTA
MODEL:	ADP-10SB REV.H
INPUT:	100-240Vac,50-60Hz, 0.4A
OUTPUT:	DC 5V,2A

- 2. The EUT operates in the 2.4GHz frequency spectrum and compatible with the draft 802.11g standard to provide a wireless data rate of up to 54Mbps.
- 3. This is a duplicate report of RF921225R02, the difference is changing the model name and product name. And the Firmware is different.
- 4. For more detailed features description, please refer to the manufacturer's specifications or User's Manual.

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#### 3.2 DESCRIPTION OF TEST MODES

Eleven channels are provided to this EUT.

Channel	Frequency	Channel	Frequency
1	2412 MHz	7	2442 MHz
2	2417 MHz	8	2447 MHz
3	2422 MHz	9	2452 MHz
4	2427 MHz	10	2457 MHz
5	2432 MHz	11	2462 MHz
6	2437 MHz		

#### NOTE:

- 1. Below 1GHz, the channel 1, 6, and 11 were pre-tested in chamber. The channel 11, the worst case, was chosen for final test.
- 2. Above 1GHz, the channel 1, 6, and 11 were tested individually.
- 3. Transfer rate at 11Mbps with CCK technique and 6Mbps with OFDM technique, the worst cases, were chosen for final test.
- 4. For Conducted Emission Measurement and Radiated Emission Measurement (below 1GHz) test, two test modes were provided to this report. The test result A is for adapter which model is WD411200500, and test result B is for adapter which model is ADP-10SB REV.H.

#### 3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a Wireless Ethernet Bridge. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC Part 15, Subpart C. (15.247) ANSI C63.4- 1992

All test items have been performed and recorded as per the above standards.

**NOTE:** The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC). The test report has been issued separately.

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### 3.4 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	NOTEBOOK	DELL		TW-0791UH-12800- 11A-1063	
2	NOTEBOOK	DELL	PP01L	TW-0791UH-12800- 123-5423	FCC DoC Approved

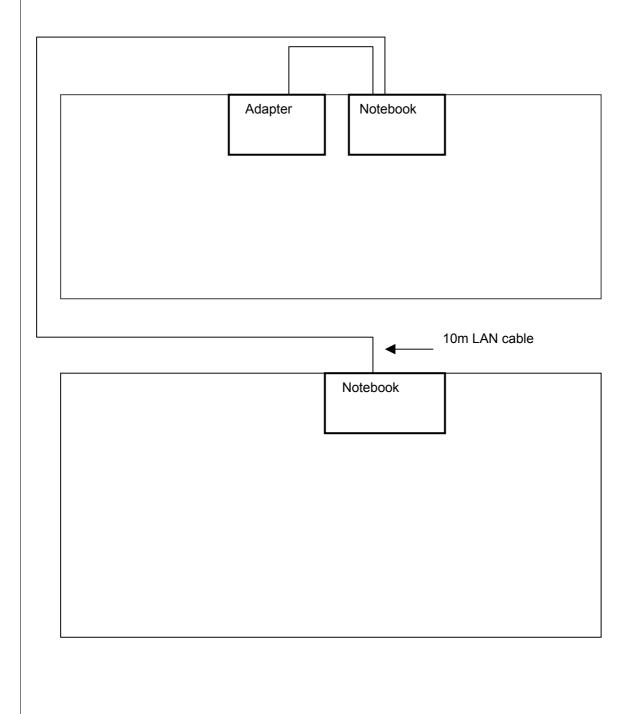
NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA
2	NA

#### NOTE:

- 1. All power cords of the above support units are non shielded (1.8m).
- 2. Item 1&2 act as a communication partner and transfer data.



### 3.5 CONFIGURATION OF SYSTEM UNDER TEST





### 4 TEST TYPES AND RESULTS

### 4.1 CONDUCTED EMISSION MEASUREMENT

#### 4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTE	ED LIMIT (dBµV)
	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.

#### 4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
ROHDE & SCHWARZ Test Receiver	ESCS 30	838251/021	Jan. 20, 2004
ROHDE & SCHWARZ Artificial Mains Network (for EUT)	ESH3-Z5	100218	Dec. 09, 2004
ROHDE & SCHWARZ Artificial Mains Network (for peripherals)		100219	Dec. 09, 2004
ROHDE & SCHWARZ Artificial Mains Network (for peripherals)	ESH3-Z5	100220	Dec. 09, 2004
*ROHDE & SCHWARZ 4-wire ISN	ENY41	837032/016	Nov. 19, 2004
*ROHDE & SCHWARZ 2-wire ISN	ENY22	837497/016	Nov. 19, 2004
Software	Cond-V2M3	NA	NA
RF cable (JYEBAO)	5D-FB	Cable-C10.01	May 01, 2004
SUHNER Terminator (For ROHDE & SCHWARZ LISN)	65BNC-5001	E1-010770	Mar. 24, 2004
SUHNER Terminator (For ROHDE & SCHWARZ LISN)	65BNC-5001	E1-010773	Apr. 06, 2004

**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. "\*": These equipment are used for conducted telecom port test only (if tested).
- 3. The test was performed in ADT Shielded Room No. 10.
- 4. The VCCI Site Registration No. is C-1312.

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### 4.1.3 TEST PROCEDURES

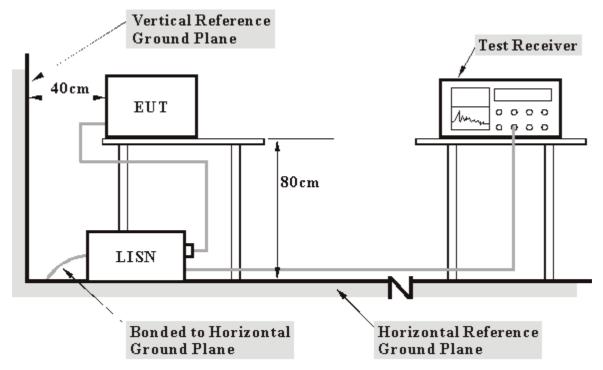
- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

4.1.4	DEVI	NOITA	FROM	TEST	STANDARD
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No deviation



#### 4.1.5 TEST SETUP



Note: 1. Support units were connected to second LISN.

2. Both of LISNs (AMIN) 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.

#### 4.1.6 EUT OPERATING CONDITIONS

- a. Placed the EUT on the testing table.
- b. Prepared another notebook system to act as a communication partner and placed it outside of testing area.
- c. The communication partner ran a test program to enable EUT under transmission/receiving condition continuously at specific channel frequency via an RJ45 cable.
- d. The communication partner sent data to EUT by command "PING".

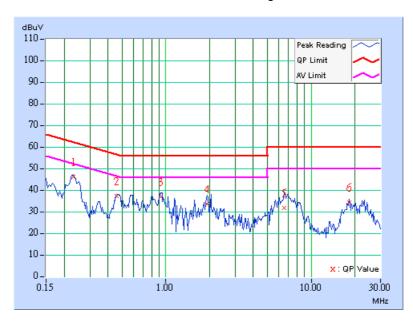


### 4.1.7 TEST RESULTS (A)

EUT	Wireless Ethernet Bridge	MODEL	WE800Gv2	
CHANNEL	Channel 1	6dB BANDWIDTH	9kHz	
INPUT POWER (SYSTEM)	1120Vac 60 Hz		Line (L)	
ENVIRONMENTAL CONDITIONS	20deg.C, 70%RH, 991hPa	TESTED BY: Jun Wu		

	Freq.	Corr.	Reading Value		Emission Level		Lir	nit	Margin	
No		Factor	[dB (uV)]		[dB (	(uV)]	[dB	(uV)]	(dl	3)
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.232	0.10	45.34	-	45.44	ı	62.38	52.38	-16.94	-
2	0.459	0.11	36.46	-	36.57	-	56.72	46.72	-20.15	-
3	0.920	0.19	36.06	-	36.25	-	56.00	46.00	-19.75	-
4	1.930	0.20	32.67	-	32.87	ı	56.00	46.00	-23.13	-
5	6.566	0.43	30.94	-	31.37	ı	60.00	50.00	-28.63	-
6	18.242	0.86	33.48	-	34.34	-	60.00	50.00	-25.66	-

- 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.

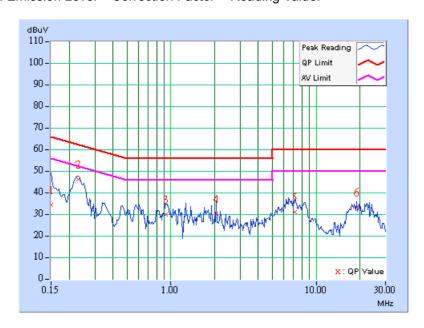




EUT	Wireless Ethernet Bridge	MODEL	WE800Gv2	
CHANNEL	Channel 1	6dB BANDWIDTH	9kHz	
INPUT POWER (SYSTEM) 120Vac, 60 Hz		PHASE	Neutral (N)	
ENVIRONMENTAL CONDITIONS	20deg.C, 70%RH, 991hPa	TESTED BY: Jun Wu		

	Freq.	Corr.	Reading Value			Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (	(uV)]	[dB	(uV)]	(dB)		
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	
1	0.150	0.10	33.67	-	33.77	ı	66.00	56.00	-32.23	-	
2	0.232	0.10	45.57	-	45.67	-	62.38	52.38	-16.71	-	
3	0.927	0.19	29.21	-	29.40	-	56.00	46.00	-26.60	-	
4	2.043	0.20	29.74	-	29.94	-	56.00	46.00	-26.06	-	
5	7.137	0.40	30.24	-	30.64	-	60.00	50.00	-29.36	-	
6	18.914	0.78	32.50	-	33.28	-	60.00	50.00	-26.72	-	

- 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.

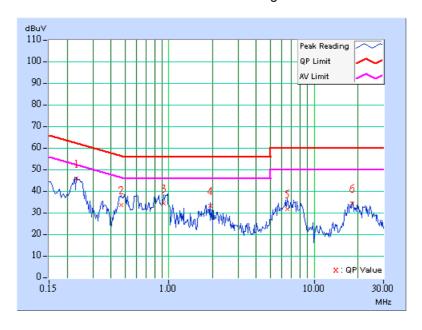




EUT	Wireless Ethernet Bridge	MODEL	WE800Gv2	
CHANNEL	Channel 6	6dB BANDWIDTH	9kHz	
INPUT POWER (SYSTEM)	1120Vac 60 Hz 1 <b>Pi</b>		Line (L)	
ENVIRONMENTAL CONDITIONS	20deg.C, 70%RH, 991hPa	TESTED BY: Jun Wu		

	Freq.	Corr.	Reading Value		Emission Level		Lir	nit	Margin		
No		Factor	[dB (uV)]		[dB (	uV)]	[dB	[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	
1	0.232	0.10	45.16	1	45.26	1	62.38	52.38	-17.12	-	
2	0.470	0.11	32.73	-	32.84	-	56.51	46.51	-23.67	-	
3	0.927	0.19	33.70	-	33.89	-	56.00	46.00	-22.11	-	
4	1.918	0.20	32.39	1	32.59	1	56.00	46.00	-23.41	-	
5	6.551	0.43	30.81	-	31.24	-	60.00	50.00	-28.76	-	
6	18.242	0.86	33.54	-	34.40	-	60.00	50.00	-25.60	-	

- 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.

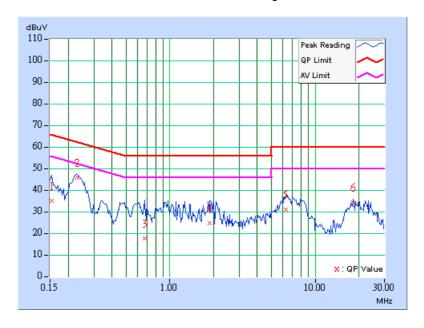




EUT	Wireless Ethernet Bridge	MODEL	WE800Gv2	
CHANNEL	Channel 6	6dB BANDWIDTH	9kHz	
NPUT POWER SYSTEM) 120Vac, 60 Hz		PHASE	Neutral (N)	
ENVIRONMENTAL CONDITIONS	20deg.C, 70%RH, 991hPa	TESTED BY: Jun Wu		

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (	[dB (uV)]		(uV)]	[dB	(uV)]	(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.154	0.10	34.43	-	34.53	ı	65.79	55.79	-31.26	-
2	0.230	0.10	45.19	-	45.29	-	62.46	52.46	-17.17	-
3	0.670	0.14	16.88	-	17.02	-	56.00	46.00	-38.98	-
4	1.887	0.20	24.02	-	24.22	ı	56.00	46.00	-31.78	-
5	6.297	0.38	30.51	-	30.89	ı	60.00	50.00	-29.11	-
6	18.242	0.76	33.78	-	34.54	-	60.00	50.00	-25.46	-

- 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.

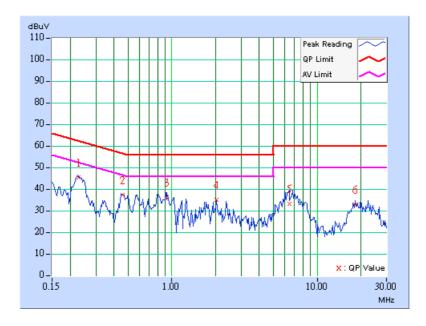




EUT	Wireless Ethernet Bridge	MODEL	WE800Gv2		
CHANNEL	Channel 11	6dB BANDWIDTH	9kHz		
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)		
ENVIRONMENTAL CONDITIONS	20deg.C, 70%RH, 991hPa	TESTED BY: Jun Wu			

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB	(uV)]	[dB	(uV)]	(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.227	0.10	44.66	-	44.76	ı	62.57	52.57	-17.81	-
2	0.459	0.11	36.36	-	36.47	-	56.72	46.72	-20.25	-
3	0.920	0.19	35.53	-	35.72	-	56.00	46.00	-20.28	-
4	2.031	0.20	34.26	-	34.46	ı	56.00	46.00	-21.54	-
5	6.418	0.42	32.43	-	32.85	ı	60.00	50.00	-27.15	-
6	18.305	0.87	32.05	-	32.92	-	60.00	50.00	-27.08	-

- 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.

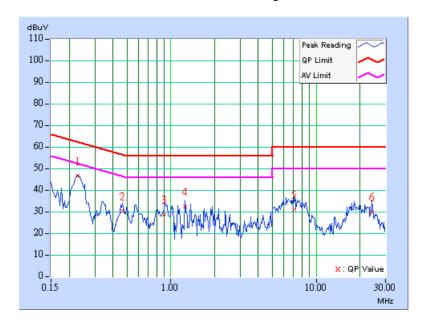




EUT	Wireless Ethernet Bridge	MODEL	WE800Gv2	
CHANNEL	Channel 11	6dB BANDWIDTH	9kHz	
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Neutral (N)	
ENVIRONMENTAL CONDITIONS	20deg.C, 70%RH, 991hPa	TESTED BY: Jun Wu		

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB	[dB (uV)]		(uV)]	[dB	(uV)]	(dl	B)
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.228	0.10	45.66	-	45.76	ı	62.52	52.52	-16.76	ı
2	0.463	0.11	29.30	-	29.41	-	56.65	46.65	-27.24	-
3	0.900	0.18	28.02	-	28.20	-	56.00	46.00	-27.80	-
4	1.254	0.20	31.75	-	31.95	ı	56.00	46.00	-24.05	-
5	7.070	0.40	29.97	-	30.37	ı	60.00	50.00	-29.63	_
6	24.145	0.97	29.11	-	30.08	-	60.00	50.00	-29.92	-

- 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.



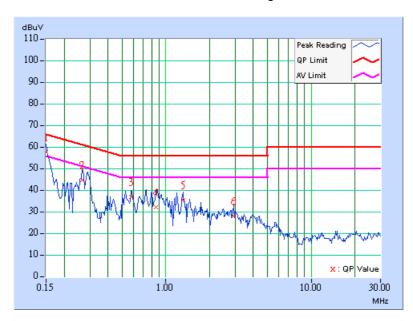


### 4.1.8 TEST RESULTS (B)

EUT	Wireless Ethernet Bridge	MODEL	WE800Gv2	
CHANNEL	Channel 1	6dB BANDWIDTH	9kHz	
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE Line (L)		
ENVIRONMENTAL CONDITIONS	24deg.C, 65%RH, 991hPa	TESTED BY: Steven Lu		

	Freq.	Corr.	Reading Value		Emission Level		Lir	nit	Margin	
No		Factor	[dB	(uV)]	[dB	(uV)]	[dB	(uV)]	(dl	В)
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.150	0.10	57.43	45.89	57.53	45.99	66.00	56.00	-8.47	-10.01
2	0.267	0.10	44.47	-	44.57	-	61.20	51.20	-16.63	-
3	0.580	0.13	36.92	-	37.05	-	56.00	46.00	-18.95	-
4	0.853	0.18	32.13	-	32.31	ı	56.00	46.00	-23.69	-
5	1.313	0.20	35.48	-	35.68	ı	56.00	46.00	-20.32	-
6	2.922	0.25	28.04	-	28.29	-	56.00	46.00	-27.71	-

- 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.

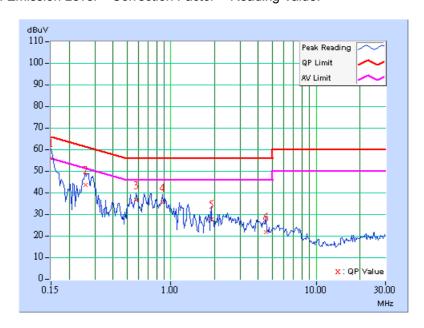




EUT	Wireless Ethernet Bridge	MODEL	WE800Gv2	
CHANNEL	Channel 1	6dB BANDWIDTH	9kHz	
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE		
ENVIRONMENTAL CONDITIONS	24deg.C, 65%RH, 991hPa	TESTED BY: Steven Lu		

	Freq.	Corr.	Reading Value		Emission Level		Lir	nit	Margin	
No		Factor	[dB	(uV)]	[dB	(uV)]	[dB	(uV)]	(dl	В)
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.150	0.10	56.03	44.55	56.13	44.65	66.00	56.00	-9.87	-11.35
2	0.259	0.10	43.52	-	43.62	-	61.45	51.45	-17.83	-
3	0.580	0.13	36.21	-	36.34	-	56.00	46.00	-19.66	-
4	0.873	0.18	35.38	-	35.56	-	56.00	46.00	-20.44	-
5	1.902	0.20	27.43	-	27.63	-	56.00	46.00	-28.37	-
6	4.535	0.32	21.39	-	21.71	-	56.00	46.00	-34.29	-

- 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.

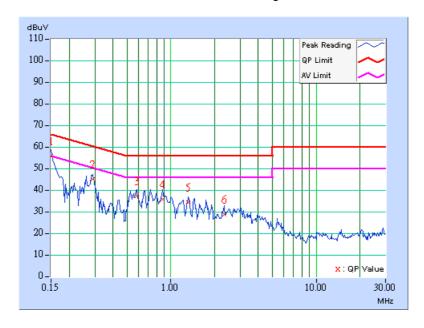




EUT	Wireless Ethernet Bridge	MODEL	WE800Gv2	
CHANNEL	Channel 6	6dB BANDWIDTH	9kHz	
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)	
ENVIRONMENTAL CONDITIONS	24deg.C, 65%RH, 991hPa	TESTED BY: Steven Lu		

	Freq.	Corr.	Reading Value		Emission Level		Lir	nit	Margin	
No		Factor	[dB (	(uV)]	[dB (	(uV)]	[dB	(uV)]	(dl	3)
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.150	0.10	55.55	1	55.65	ı	66.00	56.00	-10.35	-
2	0.291	0.10	45.14	-	45.24	ı	60.51	50.51	-15.27	-
3	0.584	0.13	37.10	-	37.23	ı	56.00	46.00	-18.77	-
4	0.873	0.18	35.69	-	35.87	ı	56.00	46.00	-20.13	-
5	1.324	0.20	34.15	-	34.35	ı	56.00	46.00	-21.65	-
6	2.320	0.22	28.67	-	28.89	-	56.00	46.00	-27.11	-

- 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.

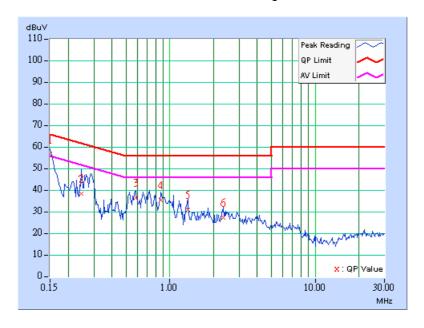




EUT	Wireless Ethernet Bridge	MODEL	WE800Gv2	
CHANNEL	Channel 6	6dB BANDWIDTH	9kHz	
INPUT POWER (SYSTEM)	120Vac, 60 Hz PHASE		Neutral (N)	
ENVIRONMENTAL CONDITIONS	24deg.C, 65%RH, 991hPa	TESTED BY: Steven Lu		

	Freq.	Corr.	Reading Value		Emission Level		Lir	nit	Margin	
No		Factor	[dB (uV)]		[dB	(uV)]	[dB	(uV)]	(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.150	0.10	56.28	44.50	56.38	44.60	66.00	56.00	-9.62	-11.40
2	0.248	0.10	38.42	-	38.52	-	61.84	51.84	-23.32	_
3	0.584	0.13	36.59	-	36.72	-	56.00	46.00	-19.28	_
4	0.869	0.18	35.20	-	35.38	-	56.00	46.00	-20.62	-
5	1.328	0.20	30.90	-	31.10	-	56.00	46.00	-24.90	_
6	2.328	0.22	27.22	-	27.44	-	56.00	46.00	-28.56	_

- 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.

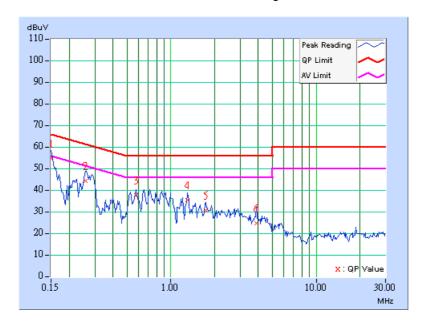




EUT	Wireless Ethernet Bridge	MODEL	WE800Gv2	
CHANNEL	Channel 11	6dB BANDWIDTH	9kHz	
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)	
ENVIRONMENTAL CONDITIONS	24deg.C, 65%RH, 991hPa	TESTED BY: Steven Lu		

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (	[dB (uV)]		[uV)]	[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.150	0.10	54.34	-	54.44	1	66.00	56.00	-11.56	-
2	0.259	0.10	43.98	-	44.08	-	61.45	51.45	-17.37	-
3	0.580	0.13	37.41	-	37.54	-	56.00	46.00	-18.46	-
4	1.305	0.20	35.36	-	35.56	1	56.00	46.00	-20.44	-
5	1.746	0.20	30.51	-	30.71	-	56.00	46.00	-25.29	_
6	3.883	0.29	24.58	-	24.87	-	56.00	46.00	-31.13	-

- 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.

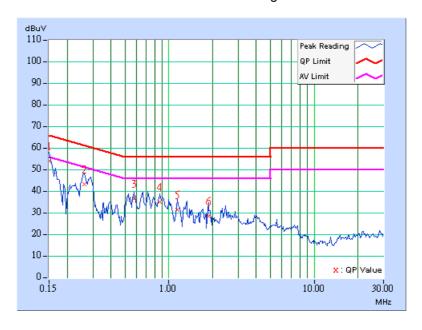




EUT	Wireless Ethernet Bridge	MODEL	WE800Gv2	
CHANNEL	Channel 11	6dB BANDWIDTH	9kHz	
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Neutral (N)	
ENVIRONMENTAL CONDITIONS	24deg.C, 65%RH, 991hPa	TESTED BY: Steven Lu		

	Freq.	Corr.	Reading Value		Emission Level		Lir	nit	Margin		
No		Factor	[dB (	[dB (uV)]		(uV)]	[dB	(uV)]	(dl	(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	
1	0.150	0.10	53.78	-	53.88	ı	66.00	56.00	-12.12	-	
2	0.263	0.10	42.97	-	43.07	-	61.33	51.33	-18.26	-	
3	0.576	0.13	36.61	-	36.74	-	56.00	46.00	-19.26	-	
4	0.865	0.18	34.98	-	35.16	ı	56.00	46.00	-20.84	-	
5	1.145	0.20	31.16	-	31.36	-	56.00	46.00	-24.64	-	
6	1.871	0.20	28.18	-	28.38	-	56.00	46.00	-27.62	-	

- 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.





### 4.2 RADIATED EMISSION MEASUREMENT

#### 4.2.1 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 above 1000MHz, 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.



### 4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
* HP Spectrum Analyzer	8593E	3911A07465	July 07, 2004
* HP Preamplifier	8447D	2432A03504	June 10, 2004
* HP Preamplifier	8449B	3008A01201	Dec. 11, 2004
SCHAFFNER Tunable Dipole Antenna	VHBA 9123	459	h 00 0004
SCHWARZBECK Tunable Dipole Antenna	UHA 9105	977	Jun. 26, 2004
* ROHDE & SCHWARZ TEST RECEIVER	ESMI	839013/007 839379/002	Feb. 13, 2004
*Schwarzbeck Antenna	VULB9168	137	Apr. 03, 2004
* SCHWARZBECK Horn Antenna	BBHA9120-D1	D130	June 30, 2004
* ADT. Turn Table	TT100	0306	NA
* ADT. Tower	AT100	0306	NA
* Software	ADT_Radiated_V 5.14	NA	NA
*TIMES RF cable	LL142	CABLE-CH6-01	Apr. 30, 2004

**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. "\*" = These equipment are used for the final measurement.
- 3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
- 4. The test was performed in ADT Chamber No. 6.



#### 4.2.3 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 10 meter open area test site. 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 10 dB 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 10 dB 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.

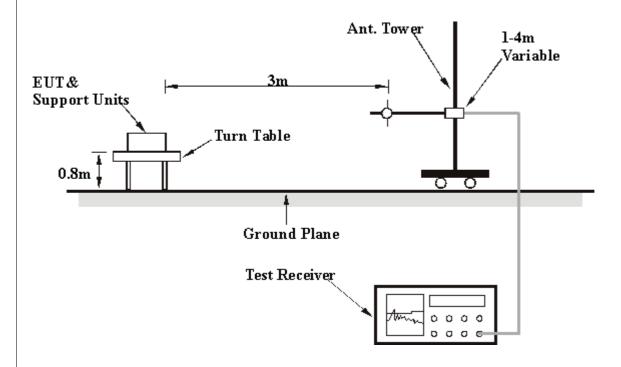
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### 4.2.4 DEVIATION FROM TEST STANDARD

No deviation



### 4.2.5 TEST SETUP



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

### 4.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6

FCC ID: ACQWE800GV2



## 4.2.7 TEST RESULTS(A)

EUT	Wireless Ethernet Bridge		WE800Gv2
CHANNEL	Channel 11		Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	20deg. C, 70%RH, 991hPa	TESTED BY: Hardaway Lee	

	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	57.21	28.32 QP	40.00	-11.68	2.50 H	301	14.94	13.38		
2	101.92	36.66 QP	43.50	-6.84	2.50 H	307	26.18	10.49		
3	125.25	40.85 QP	43.50	-2.65	3.00 H	271	28.15	12.70		
4	142.75	34.96 QP	43.50	-8.54	2.00 H	283	21.12	13.84		
5	249.66	43.59 QP	46.00	-2.41	1.25 H	253	30.22	13.37		
6	300.20	36.28 QP	46.00	-9.72	1.00 H	52	21.18	15.10		
7	399.34	43.80 QP	46.00	-2.20	1.00 H	125	26.11	17.69		
8	428.50	39.80 QP	46.00	-6.20	1.00 H	313	21.18	18.62		
9	449.88	36.04 QP	46.00	-9.96	2.00 H	43	16.74	19.30		
10	500.42	43.59 QP	46.00	-2.41	1.50 H	40	23.57	20.02		
11	599.56	33.84 QP	46.00	-12.16	1.50 H	289	11.25	22.59		
12	624.83	41.76 QP	46.00	-4.24	1.25 H	31	18.84	22.92		
13	700.64	37.87 QP	46.00	-8.13	1.00 H	328	13.87	24.00		
14	751.18	41.74 QP	46.00	-4.26	1.75 H	28	16.38	25.36		
15	799.78	32.45 QP	46.00	-13.55	1.00 H	346	6.83	25.62		
16	875.59	41.60 QP	46.00	-4.40	1.50 H	13	14.95	26.65		
17	945.57	43.68 QP	46.00	-2.32	1.75 H	20	16.02	27.66		
18	1000.00	38.36 QP	54.00	-15.64	1.25 H	70	10.43	27.93		

- 1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
- 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.





EUT	Wireless Ethernet Bridge	MODEL	WE800Gv2	
CHANNEL	Channel 11	FREQUENCY RANGE	Below 1000MHz	
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak	
ENVIRONMENTAL CONDITIONS	20deg. C, 70%RH, 991hPa	TESTED BY: Hardaway Lee		

	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	45.55	37.24 QP	40.00	-2.76	1.00 V	277	22.76	14.48				
2	125.25	38.16 QP	43.50	-5.34	2.00 V	34	25.46	12.70				
3	249.66	35.22 QP	46.00	-10.78	1.00 V	292	21.84	13.37				
4	300.20	36.46 QP	46.00	-9.54	1.50 V	334	21.36	15.10				
5	399.34	42.33 QP	46.00	-3.67	1.00 V	40	24.64	17.69				
6	500.42	43.52 QP	46.00	-2.48	1.00 V	340	23.50	20.02				
7	599.56	34.52 QP	46.00	-11.48	1.00 V	73	11.93	22.59				
8	624.83	37.03 QP	46.00	-8.97	1.25 V	22	14.10	22.92				
9	700.64	40.45 QP	46.00	-5.55	1.50 V	115	16.45	24.00				
10	751.18	37.96 QP	46.00	-8.04	1.75 V	67	12.61	25.36				
11	875.59	38.75 QP	46.00	-7.25	1.50 V	61	12.10	26.65				
12	900.86	42.00 QP	46.00	-4.00	1.25 V	82	14.85	27.15				
13	945.57	43.41 QP	46.00	-2.59	1.25 V	225	15.75	27.66				
14	1000.00	43.02 QP	54.00	-10.98	1.00 V	49	15.09	27.93				

- 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.

FCC ID: ACQWE800GV2



## 4.2.8 TEST RESULTS(B)

EUT	Wireless Ethernet Bridge	MODEL	WE800Gv2
CHANNEL	INEL Channel 11		Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 991hPa	TESTED BY: Hardaway Lee	

	ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M											
No.	Freq. (MHz)	Emission Level	Limit (dBuV/m)	Margin (dB)	Antenna Height	Table Angle	Raw Value	Correction Factor				
	(=)	(dBuV/m)	(4247111)	(42)	(m)	(Degree)	(dBuV)	(dB/m)				
1	125.25	40.95 QP	43.50	-2.55	3.00 H	97	28.25	12.70				
2	142.75	40.70 QP	43.50	-2.80	2.00 H	280	26.86	13.84				
3	249.66	43.20 QP	46.00	-2.80	1.00 H	274	29.83	13.37				
4	300.20	40.87 QP	46.00	-5.13	1.00 H	76	25.77	15.10				
5	399.34	43.50 QP	46.00	-2.50	1.00 H	32	25.81	17.69				
6	500.42	42.42 QP	46.00	-3.58	2.00 H	46	22.40	20.02				
7	624.83	39.35 QP	46.00	-6.65	1.00 H	10	16.43	22.92				
8	700.64	36.69 QP	46.00	-9.31	1.00 H	334	12.69	24.00				
9	751.18	37.63 QP	46.00	-8.37	1.00 H	28	12.27	25.36				
10	875.59	36.75 QP	46.00	-9.25	1.00 H	16	10.10	26.65				
11	945.57	43.20 QP	46.00	-2.80	3.00 H	274	15.54	27.66				
12	1000.00	36.56 QP	54.00	-17.44	1.00 H	37	8.63	27.93				

- 1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
- 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.





EUT	T Wireless Ethernet Bridge		WE800Gv2	
CHANNEL	Channel 11 FREQUENC RANGE		Below 1000MHz	
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak	
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 991hPa	TESTED BY: Hardaway Lee		

	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	45.20	33.80 QP	40.00	-6.20	1.10 V	341	19.28	14.52			
2	86.37	34.95 QP	40.00	-5.05	1.00 V	73	25.56	9.39			
3	115.53	31.80 QP	43.50	-11.70	1.85 V	225	19.93	11.87			
4	142.75	32.00 QP	43.50	-11.50	1.33 V	227	18.16	13.84			
5	249.66	39.78 QP	46.00	-6.22	1.00 V	223	26.40	13.37			
6	300.20	35.10 QP	46.00	-10.90	1.62 V	332	20.00	15.10			
7	399.34	41.80 QP	46.00	-4.20	1.05 V	112	24.11	17.69			
8	500.42	43.08 QP	46.00	-2.92	1.00 V	142	23.06	20.02			
9	601.50	35.20 QP	46.00	-10.80	1.75 V	115	12.58	22.62			
10	700.64	38.10 QP	46.00	-7.90	1.00 V	52	14.10	24.00			
11	751.18	36.20 QP	46.00	-9.80	1.32 V	62	10.84	25.36			
12	875.10	37.00 QP	46.00	-9.00	1.02 V	37	10.36	26.64			
13	900.40	41.00 QP	46.00	-5.00	1.02 V	37	13.86	27.14			
14	945.20	41.80 QP	46.00	-4.20	1.18 V	24	14.14	27.66			

- 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.



EUT	T Wireless Ethernet Bridge		WE800Gv2	
CHANNEL	Channel 1	FREQUENCY	1 ~ 25 GHz	
MODE	ССК	RANGE	20 0112	
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)	
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH, 991hPa	TESTED BY: Martin Lee		

	ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M											
	Freg.	Emission	Limit	Margin	Antenna	Table	Raw	Correction				
No.	(MHz)	Level	(dBuV/m)	(dB)	Height	Angle	Value	Factor				
	(IVITIZ)	(dBuV/m)	(ubuv/III)	(ub)	(m)	(Degree)	(dBuV)	(dB/m)				
1	1660.00	56.15 PK	74.00	-17.85	1.06 H	288	26.26	29.89				
1	1660.00	43.94 AV	54.00	-10.06	1.06 H	288	14.05	29.89				
2	2390.00	47.36 PK	74.00	-26.64	1.06 H	288	14.69	32.67				
2	2390.00	35.15 AV	54.00	-18.85	1.06 H	288	2.48	32.67				
3	*2412.00	95.39 PK			1.06 H	288	62.62	32.77				
3	*2412.00	83.18 AV			1.06 H	288	50.41	32.77				
4	4824.00	47.59 PK	74.00	-26.41	1.36 H	87	8.55	39.04				
4	4824.00	35.94 AV	54.00	-18.06	1.36 H	67	-3.10	39.04				

	ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
No.	Freq. (MHz)	Emission Level	Limit (dBuV/m)	Margin (dB)	Antenna Height	Table Angle	Raw Value	Correction Factor			
	(1711 12)	(dBuV/m)	(dbd v/iii)	(GD)	(m)	(Degree)	(dBuV)	(dB/m)			
1	1660.00	67.77 PK	74.00	-6.23	1.07 V	173	37.88	29.89			
1	1660.00	52.52 AV	54.00	-1.48	1.07 V	173	22.63	29.89			
2	2390.00	58.98 PK	74.00	-15.02	1.07 V	173	26.31	32.67			
2	2390.00	43.73 AV	54.00	-10.27	1.07 V	173	11.06	32.67			
3	*2412.00	107.80 PK			1.07 V	173	75.03	32.77			
3	*2412.00	94.90 AV			1.07 V	173	62.13	32.77			
4	2829.00	54.86 PK	74.00	-19.14	1.09 V	21	20.74	34.13			
4	2829.00	32.08 AV	54.00	-21.92	1.09 V	21	-2.04	34.13			
5	4824.00	47.58 PK	74.00	-26.42	1.00 V	77	8.54	39.04			
5	4824.00	36.44 AV	54.00	-17.56	1.00 V	77	-2.60	39.04			

- 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.





EUT	Wireless Ethernet Bridge	MODEL	WE800Gv2	
CHANNEL	Channel 6	FREQUENCY	1 ~ 25 GHz	
MODE	ССК	RANGE	20 0112	
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)	
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH, 991hPa	TESTED BY: M	artin Lee	

	ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M										
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	*2437.00	95.78 PK			1.05 H	289	62.88	32.90			
1	*2437.00	83.19 AV			1.05 H	289	50.29	32.90			
2	4874.00	47.25 PK	74.00	-26.75	1.52 H	36	8.20	39.05			
2	4874.00	35.15 AV	54.00	-18.85	1.52 H	36	-3.90	39.05			

	ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M											
	Freg.	Emission	Limit	Margin	Antenna	Table	Raw	Correction				
No.		Level	(dBuV/m)	•	Height	Angle	Value	Factor				
	(MHz)	(dBuV/m)	(ubuv/III)	(dB)	(m)	(Degree)	(dBuV)	(dB/m)				
1	*2437.00	108.60 PK			1.08 V	170	75.70	32.90				
1	*2437.00	95.70 AV			1.08 V	170	62.80	32.90				
2	2830.00	55.00 PK	74.00	-19.00	1.06 V	78	20.87	34.13				
2	2830.00	31.60 AV	54.00	-22.40	1.06 V	78	-2.40	34.13				
3	4874.00	47.95 PK	74.00	-26.05	1.00 V	158	8.90	39.05				
3	4874.00	36.65 AV	54.00	-17.35	1.00 V	158	-2.40	39.05				

- 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.



EUT	Wireless Ethernet Bridge	MODEL	WE800Gv2
CHANNEL	Channel 11	FREQUENCY	1 ~ 25 GHz
MODE	ССК	RANGE	20 0112
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH, 991hPa	TESTED BY: M	artin Lee

	ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M											
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	1728.00	53.83 PK	74.00	-20.17	1.03 H	78	23.68	30.15				
1	1728.00	42.12 AV	54.00	-11.88	1.03 H	78	11.97	30.15				
2	*2462.00	95.12 PK			1.03 H	78	62.09	33.03				
2	*2462.00	83.41 AV			1.03 H	78	50.38	33.03				
3	2483.50	47.74 PK	74.00	-26.26	1.03 H	78	14.60	33.14				
3	32483.50	36.03 AV	54.00	-17.97	1.03 H	78	2.89	33.14				
4	4924.00	47.01 PK	74.00	-26.99	1.00 H	89	7.90	39.11				
4	4924.00	35.31 AV	54.00	-18.69	1.00 H	89	-3.80	39.11				

	ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M										
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	1728.00	65.65 PK	74.00	-8.35	1.07 V	128	35.50	30.15			
1	1728.00	49.48 AV	54.00	-4.52	1.07 V	128	19.33	30.15			
2	*2462.00	108.20 PK			1.07 V	128	75.17	33.03			
2	*2462.00	95.70 AV			1.07 V	128	62.67	33.03			
3	2483.50	59.56 PK	74.00	-14.44	1.07 V	128	26.42	33.14			
3	2483.50	43.39 AV	54.00	-10.61	1.07 V	128	10.25	33.14			
4	2830.00	56.39 PK	74.00	-17.61	1.00 V	116	22.26	34.13			
4	2830.00	36.03 AV	54.00	-147.97	1.00 V	116	2.89	34.13			
5	4924.00	46.91 PK	74.00	-27.09	1.45 V	47	7.80	39.11			
5	4924.00	36.71 AV	54.00	-17.29	1.45 V	47	-2.40	39.11			

- 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.



EUT	Wireless Ethernet Bridge	MODEL	WE800Gv2	
CHANNEL	Channel 1	FREQUENCY	1 ~ 25 GHz	
MODE	OFDM	RANGE	20 0112	
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak(PK) Average (AV)	
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH, 991hPa	TESTED BY: M	artin Lee	

	ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M											
	Freq.	Emission	Limit	Margin	Antenna	Table	Raw	Correction				
No.	(MHz)	Level	(dBuV/m)	(dB)	Height	Angle	Value	Factor				
	(IVITIZ)	(dBuV/m)	(ubuv/iii)	(ub)	(m)	(Degree)	(dBuV)	(dB/m)				
1	1663.00	54.12 PK	74.00	-19.88	1.23 H	58	24.22	29.90				
1	1663.00	43.25 AV	54.00	-10.75	1.23 H	58	13.35	29.90				
2	2390.00	47.75 PK	74.00	-26.25	1.23 H	58	15.08	32.67				
2	2390.00	36.88 AV	54.00	-17.12	1.23 H	58	4.21	32.67				
3	*2412.00	95.03 PK			1.23 H	58	62.26	32.77				
3	*2412.00	84.16 AV			1.23 H	58	51.39	32.77				
4	4824.00	46.94 PK	74.00	-27.06	1.32 H	25	7.90	39.04				

	ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M											
	Freg.	Emission	Limit	Margin	Antenna	Table	Raw	Correction				
No.	(MHz)	Level	(dBuV/m)	0	Height	Angle	Value	Factor				
	(IVITZ)	(dBuV/m)	(ubuv/III)	(dB)	(m)	(Degree)	(dBuV)	(dB/m)				
1	1663.00	64.25 PK	74.00	-9.75	1.00 V	219	34.35	29.90				
1	1663.00	51.67 AV	54.00	-2.33	1.00 V	219	21.77	29.90				
2	2390.00	57.88 PK	74.00	-16.12	1.00 V	219	25.21	32.67				
2	2390.00	44.30 AV	54.00	-9.70	1.00 V	219	11.63	32.67				
3	*2412.00	105.16 PK			1.00 V	219	72.39	32.77				
3	*2412.00	92.58 AV			1.00 V	219	59.81	32.77				
4	2830.00	55.98 PK	74.00	-18.02	1.00 V	243	21.85	34.13				
4	2830.00	33.60 AV	54.00	-20.40	1.00 V	243	-0.53	34.13				
5	4824.00	46.57 PK	74.00	-27.43	1.25 V	360	7.53	39.04				

- 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.





EUT	Wireless Ethernet Bridge	MODEL	WE800Gv2	
CHANNEL	Channel 6	FREQUENCY	1 ~ 25 GHz	
MODE	OFDM	RANGE	. 20 0112	
INPUT POWER (SYSTEM) 120Vac, 60 Hz		DETECTOR FUNCTION	Peak(PK) Average (AV)	
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH, 991hPa	TESTED BY: Martin Lee		

	ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M								
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	*2437.00	95.57 PK	74.00		1.06 H	287	62.67	32.90	
1	*2437.00	84.17 AV	54.00		1.06 H	287	51.27	32.90	
2	4874.00	47.65 PK	74.00	-26.35	1.25 H	98	8.60	39.05	
2	4874.00	35.75 AV	54.00	-18.25	1.25 H	98	-3.30	39.05	

	ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M								
	Freq.	Emission	Limit	Margin	Antenna	Table	Raw	Correction	
No.		Level	-	•	Height	Angle	Value	Factor	
	(MHz)	(dBuV/m)	(dBuV/m) (dB)	(m)	(Degree)	(dBuV)	(dB/m)		
1	*2437.00	107.33 PK			1.02 V	170	74.43	32.90	
1	*2437.00	94.63 AV			1.02 V	170	61.73	32.90	
2	2830.00	56.30 PK	74.00	-17.70	1.02 V	118	22.17	34.13	
2	2830.00	33.00 AV	54.00	-21.00	1.02 V	118	-1.13	34.13	
3	4874.00	47.65 PK	74.00	-26.35	1.00 V	147	8.60	39.05	
3	4874.00	35.55 AV	54.00	-18.45	1.00 V	147	-3.50	39.05	

#### 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.
- 5. " \* " : Fundamental frequency.



EUT	Wireless Ethernet Bridge	MODEL	WE800Gv2	
CHANNEL	Channel 11	FREQUENCY	1 ~ 25 GHz	
MODE	OFDM	RANGE	. 20 01.12	
INPUT POWER (SYSTEM)	11200/20 60 Hz		Peak(PK) Average (AV)	
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH, 991hPa	TESTED BY: Martin Lee		

	ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M								
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	1728.00	51.43 PK	74.00	-22.57	1.32 H	58	21.28	30.15	
1	1728.00	40.17 AV	54.00	-13.83	1.32 H	58	10.02	30.15	
2	*2462.00	94.36 PK			1.32 H	58	61.33	33.03	
2	*2462.00	83.10 AV			1.32 H	58	50.07	33.03	
3	2483.50	50.83 PK	74.00	-23.17	1.32 H	58	17.69	33.14	
3	2483.50	39.57 AV	54.00	-14.43	1.32 H	58	6.43	33.14	
4	4924.00	46.10 PK	74.00	-27.90	1.00 H	36	6.99	39.11	
4	4924.00	34.61 AV	54.00	-19.39	1.00 H	36	-4.50	39.11	

	ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3M								
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	1728.00	65.20 PK	74.00	-8.80	1.00 V	170	35.05	30.15	
1	1728.00	51.30 AV	54.00	-2.70	1.00 V	170	21.15	30.15	
2	*2462.00	108.13 PK			1.00 V	170	75.10	33.03	
2	*2462.00	94.83 AV			1.00 V	170	61.80	33.03	
3	2483.50	64.60 PK	74.00	-9.40	1.00 V	170	31.46	33.14	
3	2483.50	51.30 AV	54.00	-2.70	1.00 V	170	18.16	33.14	
4	2829.00	56.38 PK	74.00	-17.62	1.12 V	296	22.26	34.13	
4	2829.00	33.05 AV	54.00	-20.95	1.12 V	296	-1.07	34.13	
5	4924.00	46.91 PK	74.00	-27.09	1.14 V	195	7.80	39.11	
5	4924.00	35.21 AV	54.00	-18.79	1.14 V	195	-3.90	39.11	

#### **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.
- 5. " \* " : Fundamental frequency.



#### 4.3 6dB BANDWIDTH MEASUREMENT

#### 4.3.1 LIMITS OF 6DB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

#### 4.3.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSEK30	100049	Aug. 12, 2004

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

#### 4.3.3 TEST PROCEDURE

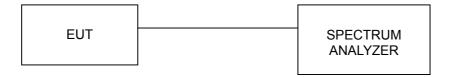
The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100kHz RBW and 100kHz VBW. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

# 4.3.4 DEVIATION FROM TEST STANDARD

No deviation



#### 4.3.5 TEST SETUP



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

# 4.3.6 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.



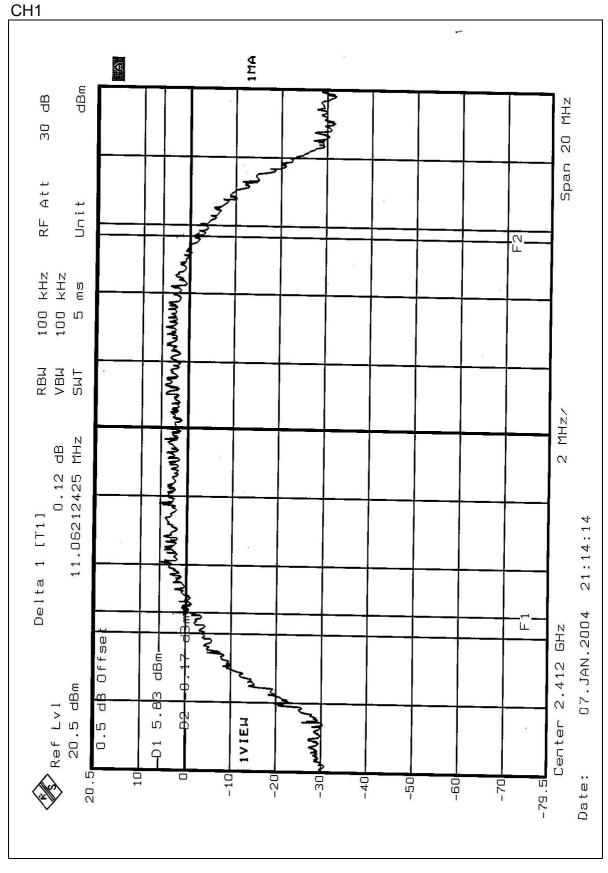
# 4.3.7 TEST RESULTS

EUT	Wireless Ethernet Bridge	ernet Bridge MODEL	
MODE	ССК	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	24deg. C, 60%RH, 991hPa	TESTED BY	Steven Lu

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	11.06	0.5	PASS
6	2437	10.74	0.5	PASS
11	2462	11.66	0.5	PASS

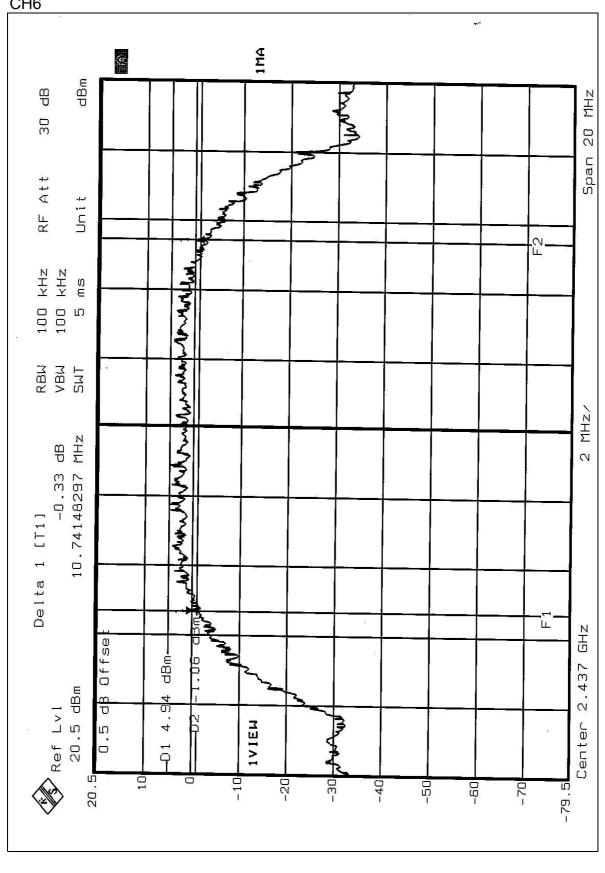






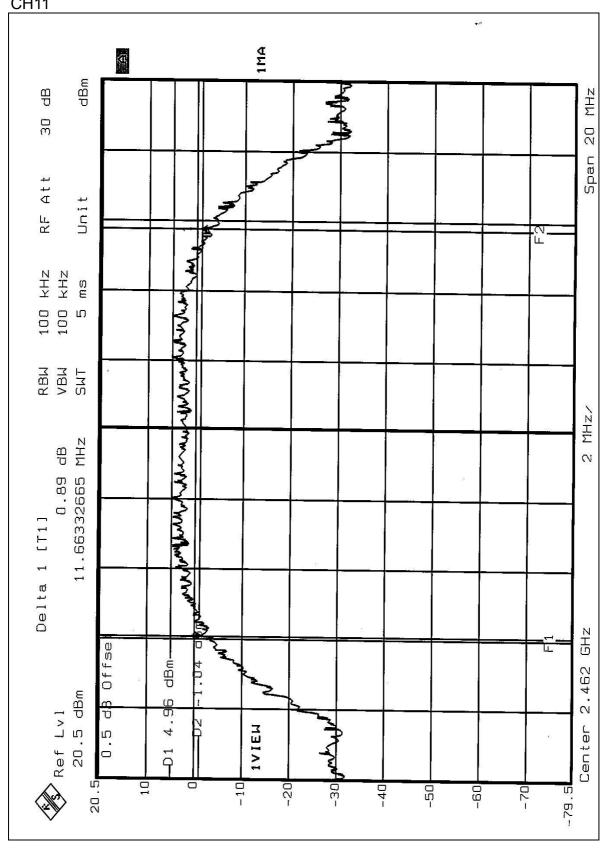












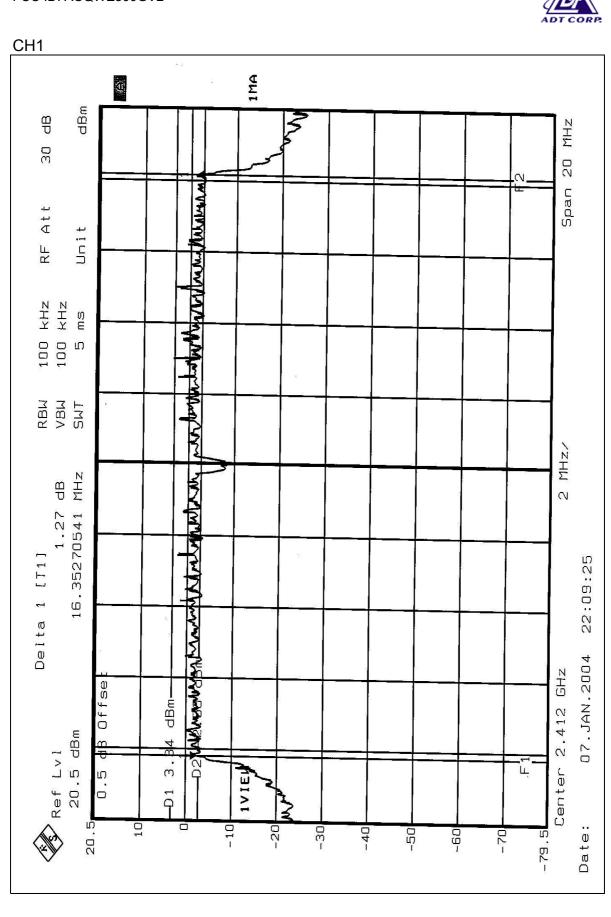




EUT	Wireless Ethernet Bridge	MODEL	WE800Gv2
MODE	OFDM	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	24deg. C, 60%RH, 991hPa	TESTED BY	Steven Lu

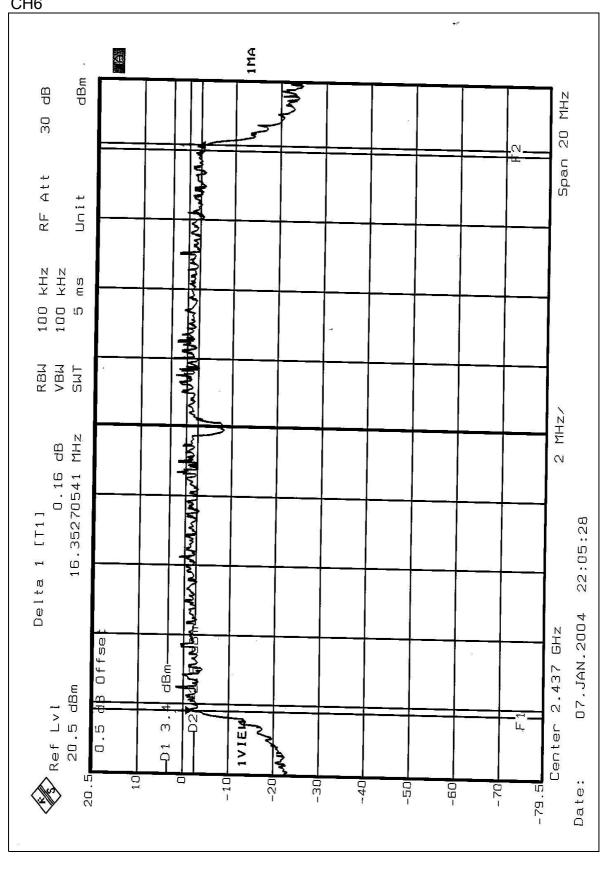
CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	16.35	0.5	PASS
6	2437	16.35	0.5	PASS
11	2462	16.43	0.5	PASS





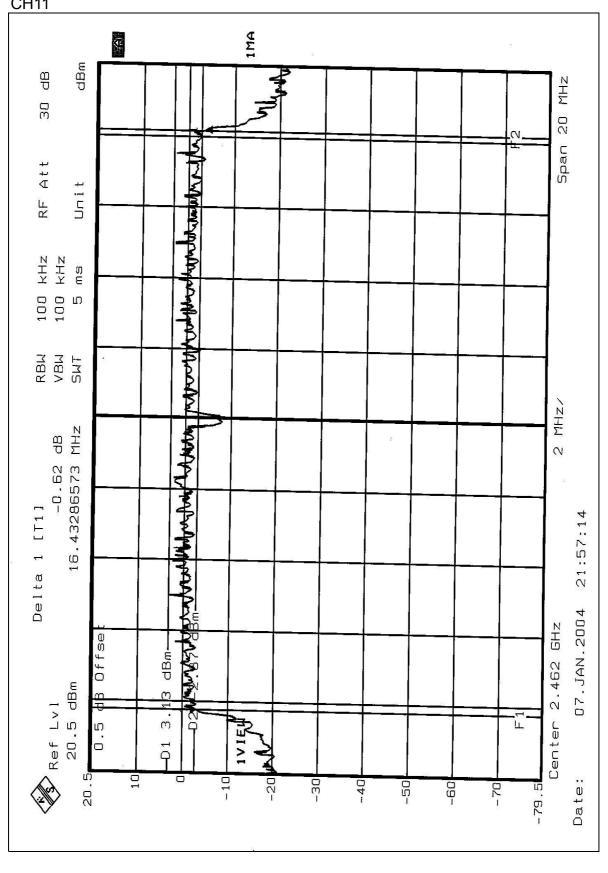














# 4.4 MAXIMUM PEAK OUTPUT POWER

# 4.4.1 LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT

The Maximum Peak Output Power Measurement is 30dBm.

# 4.4.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSEK30	100049	Aug. 12, 2004
R&S SIGNAL GENERATOR	SMP04	100011	May 28, 2004
TEKTRONIX OSCILLOSCOPE	TDS 220	B048470	Mar. 05, 2004
NARDA DETECTOR	4503A	FSCM99899	NA

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



#### 4.4.3 TEST PROCEDURES

- 1. A detector was used on the output port of the EUT. An oscilloscope was used to read the response of the detector.
- 2. Replaced the EUT by the signal generator. The center frequency of the S.G was adjusted to the center frequency of the measured channel.
- 3. Adjusted the power to have the same reading on oscilloscope. Record the power level.

#### 4.4.4 DEVIATION FROM TEST STANDARD

No deviation

# 4.4.5 TEST SETUP



#### 4.4.6 EUT OPERATING CONDITIONS

Same as Item 4.3.6.



# 4.4.7 TEST RESULTS

EUT	Wireless Ethernet Bridge	MODEL	WE800Gv2
MODE	ССК	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	24deg. C, 60%RH, 991hPa	TESTED BY	Steven Lu

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	14.90	30	PASS
6	2437	15.10	30	PASS
11	2462	15.00	30	PASS

EUT	Wireless Ethernet Bridge	MODEL	WE800GV2
MODE	OFDM	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	24deg. C, 60%RH, 991hPa	TESTED BY	Steven Lu

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	14.80	30	PASS
6	2437	15.00	30	PASS
11	2462	15.10	30	PASS



# 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
R&S SPECTRUM ANALYZER	FSEK30	100049	Aug. 12, 2004

**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



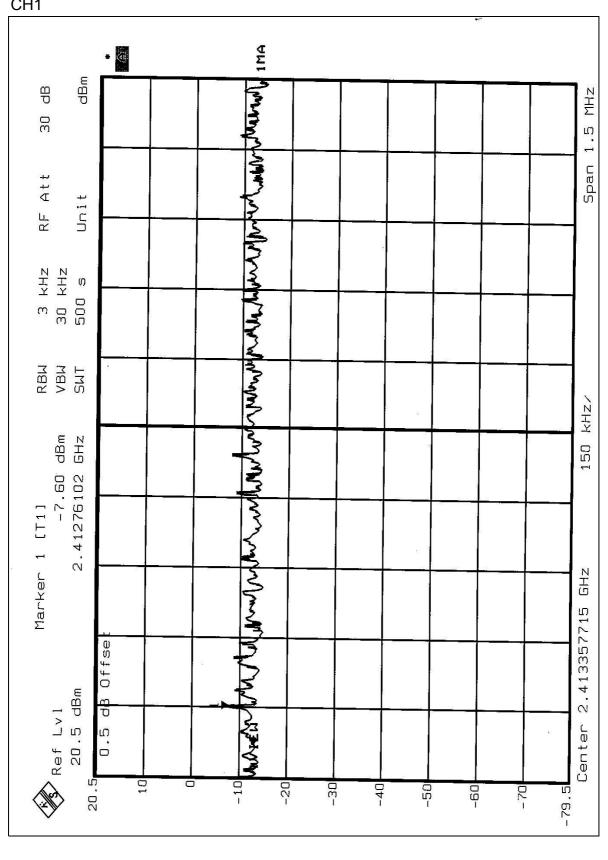
# 4.5.7 TEST RESULTS

EUT	Wireless Ethernet Bridge	MODEL	WE800Gv2
MODE	ССК	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	24deg. C, 60%RH, 991hPa	TESTED BY	Steven Lu

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-7.60	8	PASS
6	2437	-7.88	8	PASS
11	2462	-7.47	8	PASS

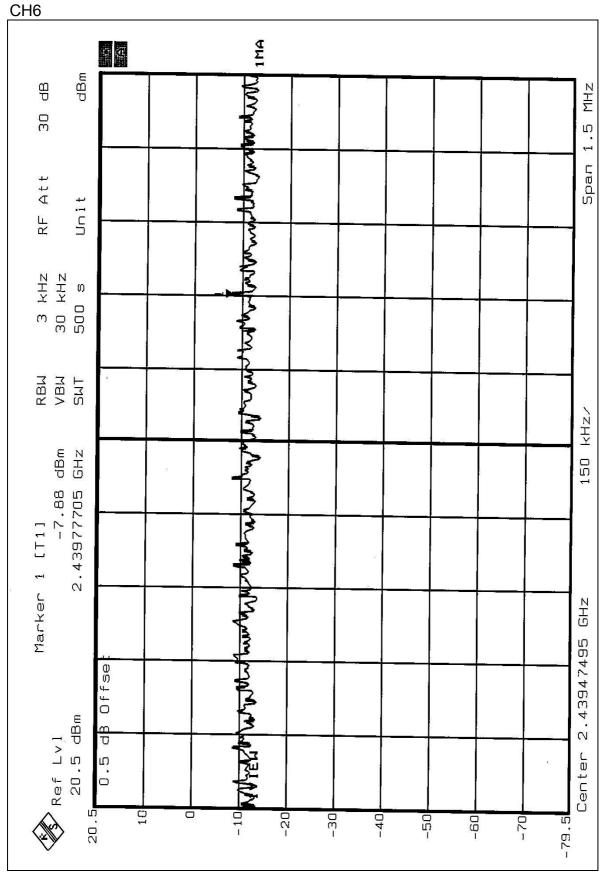


# CH1



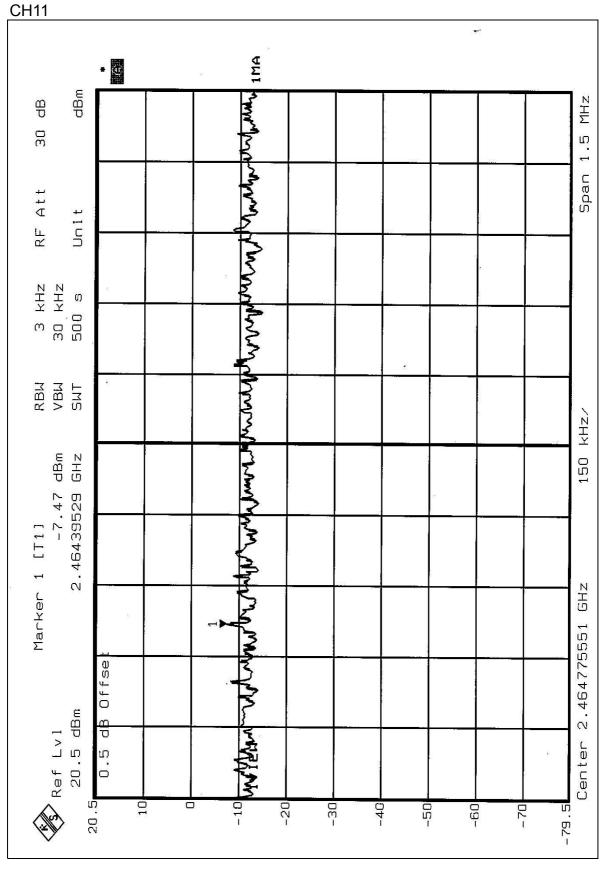














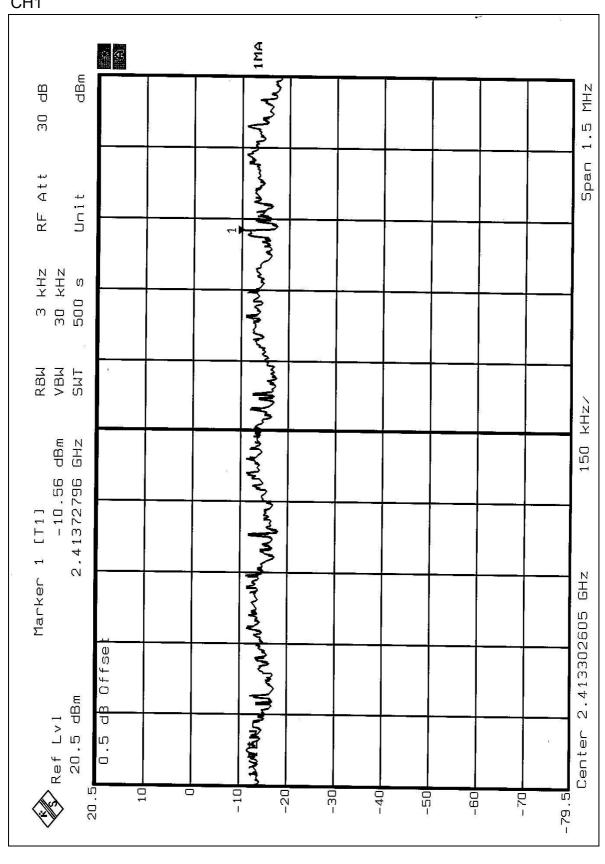


EUT	Wireless Ethernet Bridge	MODEL	WE800Gv2
MODE	OFDM	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	24deg. C, 60%RH, 991hPa	TESTED BY	Steven Lu

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-10.56	8	PASS
6	2437	-11.40	8	PASS
11	2462	-10.94	8	PASS

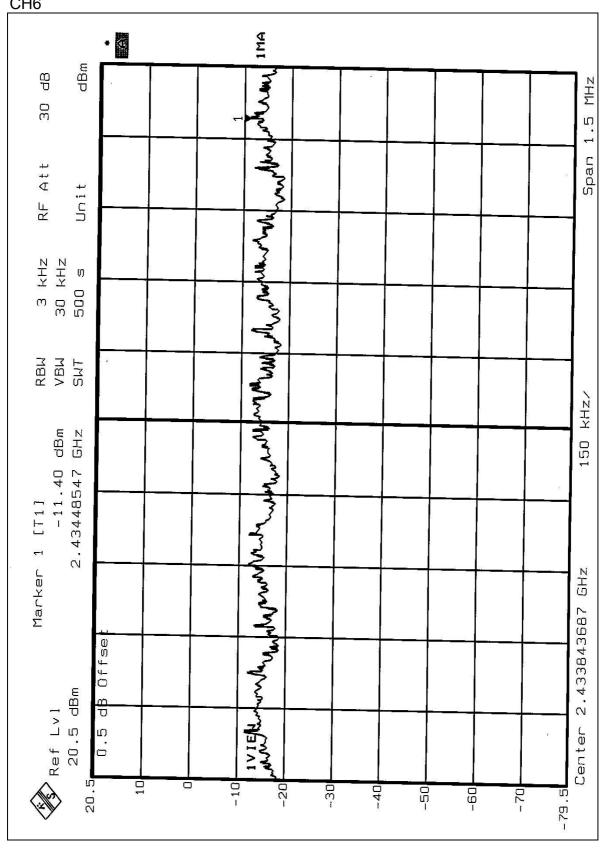






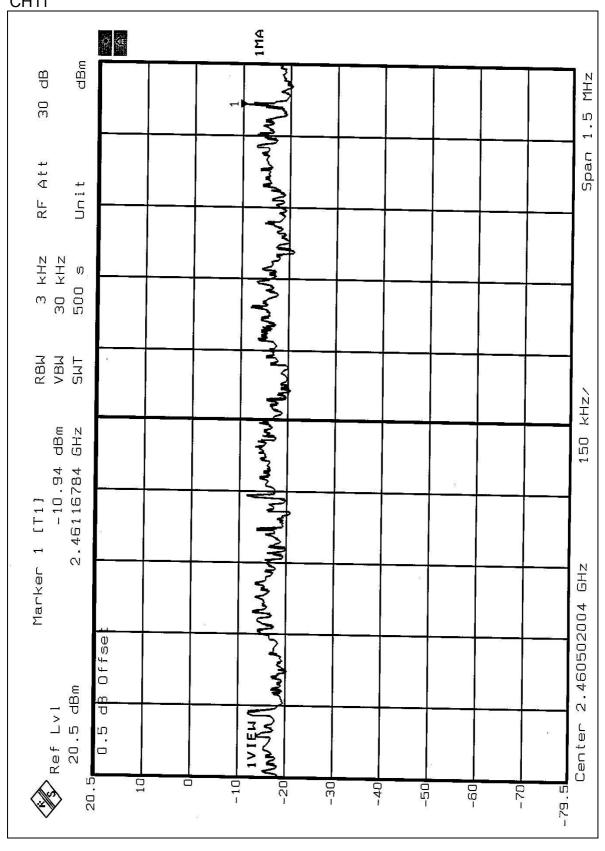














#### 4.6 BAND EDGES MEASUREMENT

#### 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
R&S SPECTRUM ANALYZER	FSEK30	100049	Aug. 12, 2004

**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 RBV=1MHz and VBW=1KHz for CCK technique and RBV=1MHz and VBW=1KHz for OFDM technique with suitable frequency span including 100MHz 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 8 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).

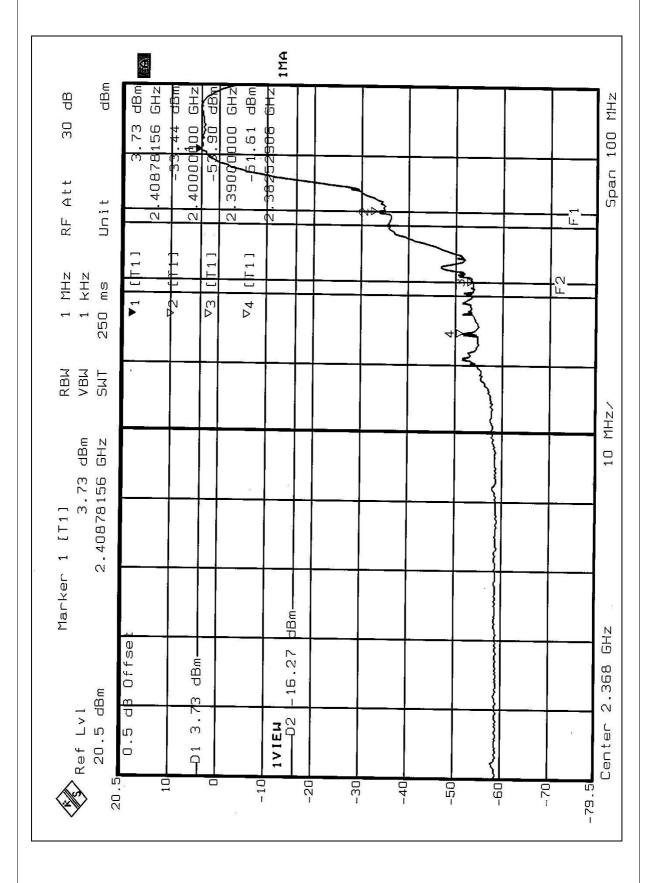
**NOTE 1:** The band edge emission plot of the CCK technique on the following four pages show 57.63dB delta between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.8 are 94.90dBuV/m, so the maximum field strength in restrict band is 94.90-57.63=37.27dBuV/m which is under 54dBuV/m limit.

**NOTE 2:** The band edge emission plot of the CCK technique on the following four pages show 55.72dB delta between carrier maximum power and local maximum emission in restrict band (2.4840GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.8 are 95.70dBuV/m, so the maximum field strength in restrict band is 95.70-55.72=39.98dBuV/m which is under 54dBuV/m limit

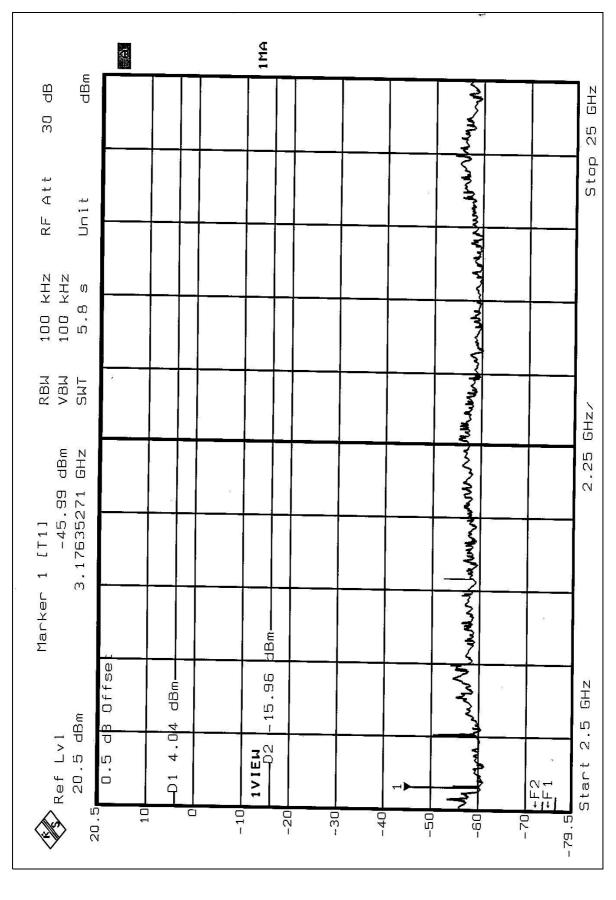
**NOTE 3:** The band edge emission plot of the OFDM technique on the following four pages show 42.97lta between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.8 are 92.58dBuV/m, so the maximum field strength in restrict band is 92.58-42.97=49.61dBuV/m which is under 54dBuV/m limit.

**NOTE 4:** The band edge emission plot of the OFDM technique on the following four pages show 41.35dB delta between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.8 are 94.83dBuV/m, so the maximum field strength in restrict band is 94.83-41.35=53.48dBuV/m which is under 54dBuV/m limit.

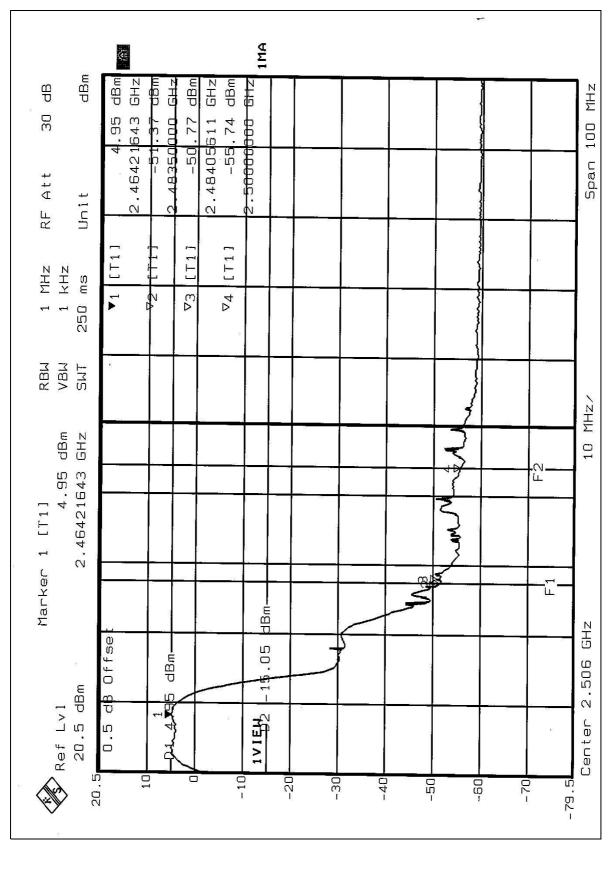




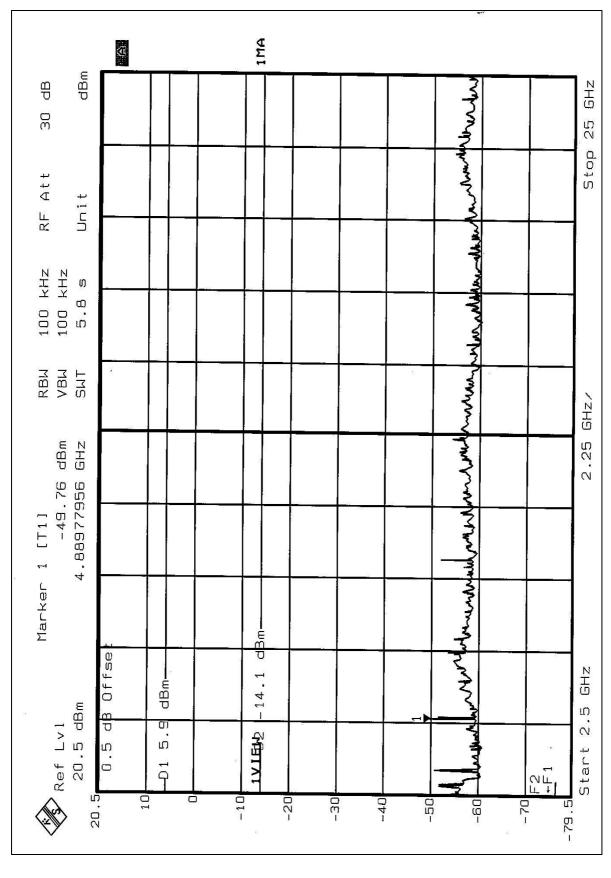




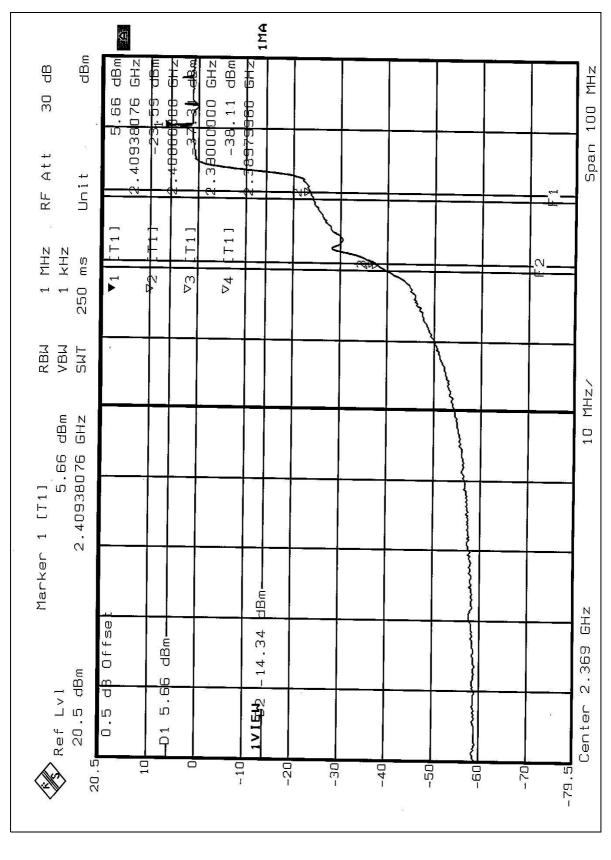




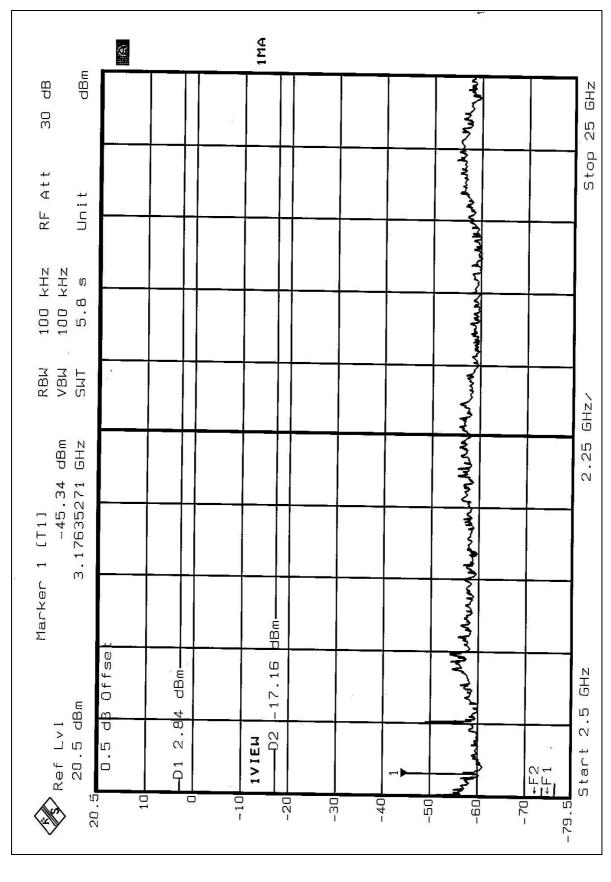




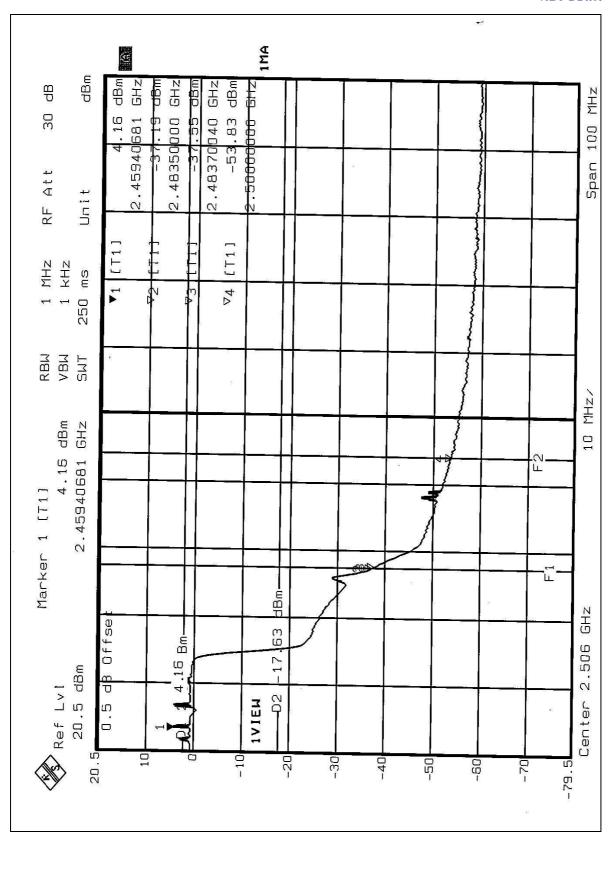




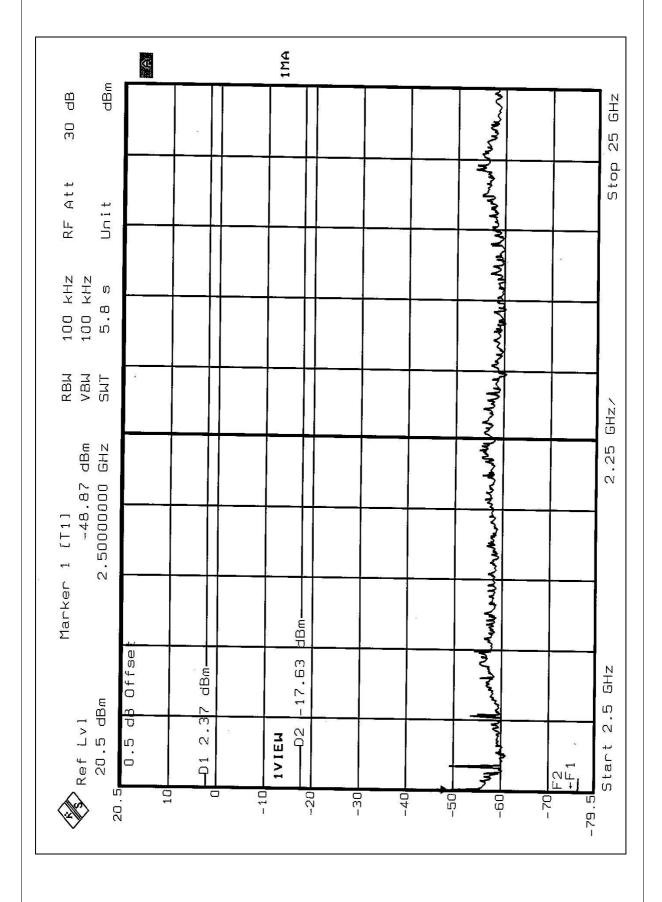














# 4.7 ANTENNA REQUIREMENT

#### 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 sleeve Antenna with Reverse SMA antenna connector. The maximum Gain of this antenna is only 1.8dBi.



# 5 PHOTOGRAPHS OF THE TEST CONFIGURATION

CONDUCTED EMISSION TEST (FOR MODE A)







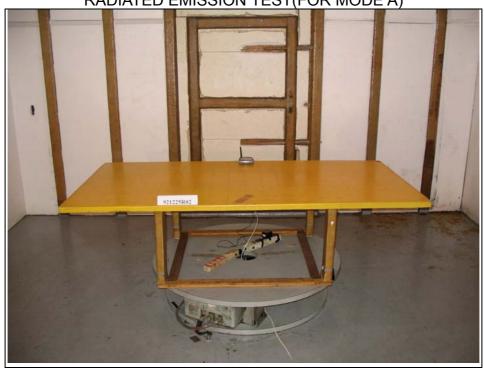
(FOR MODE B)







RADIATED EMISSION TEST(FOR MODE A)







(FOR MODE B)







# 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 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: <a href="https://www.adt.com.tw/index.5/phtml">www.adt.com.tw/index.5/phtml</a>.

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

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Email: <a href="mail:service@mail.adt.com.tw">service@mail.adt.com.tw</a>
Web Site: <a href="mail:www.adt.com.tw">www.adt.com.tw</a>

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