FCC TEST REPORT

REPORT NO.: RF941020H04A
MODEL NO.: AW-GM120
RECEIVED: Nov. 29, 2005
TESTED: Dec. 07 to 14, 2005
ISSUED: Dec. 14, 2005

APPLICANT: AzureWave Technologies, Inc.

ADDRESS: 8F, No.94, Baozhong Rd., Xindian, Taipei , Taiwan 231

ISSUED BY: Advance Data Technology Corporation

LAB LOCATION: No. 81-1, Lu Liao Keng, 9 Ling, Wu Lung Tsuen,
Chiung Lin Hsiang, Hsin Chu Hsien,
Taiwan, R.O.C.

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1 CERTIFICATION

PRODUCT :	Wireless Digital Media Adapter Module
BRAND NAME :	AzureWave
MODEL NO. :	AW-GM120
TESTED:	Dec. 07 to 14, 2005
APPLICANT :	AzureWave Technologies, Inc.
TEST ITEM:	MASS-PRODUCTION
STANDARDS :	47 CFR Part 15, Subpart C (Section 15.247), ANSI C63.4-2003

The above equipment (Model: AW-GM120) has been tested by **Advance Data Technology Corporation**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY : _____ , **DATE:** Dec. 14, 2005
(Midoli Peng)

TECHNICAL ACCEPTANCE : _____ , **DATE:** Dec. 14, 2005
Responsible for RF
(Hank Chung)

APPROVED BY : _____ , **DATE:** Dec. 14, 2005
(May Chen, Deputy Manager)

2 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: 47 CFR Part 15, Subpart C			
Standard Section	**Test Type and Limit**	**Result**	**REMARK**
15.247(b)	Maximum Peak Output Power Limit: max. 30dBm	PASS	Meet the requirement of limit
15.247(c)	Radiated Emissions Limit: Table 15.209	PASS	Meet the requirement of limit Minimum passing margin is –2.2dB at 2390.00MHz
15.247(c)	Band Edge Measurement Limit: 20dB less than the peak value of fundamental frequency	PASS	Meet the requirement of limit

NOTE: This report is prepared for FCC class II permissive change. Only radiated emission, Maximum Peak Output Power and Band Edge Measurement were presented in this test report.

3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	Wireless Digital Media Adapter Module
MODEL NO.	AW-GM120
POWER SUPPLY	DC 3.3V from host equipment
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
CHANNEL SPACING	5MHz
OUTPUT POWER	802.11b: 56.364mW 802.11g: 54.075mW
ANTENNA TYPE	Please see note 1
DATA CABLE	NA
I/O PORTS	NA
ASSOCIATED DEVICES	NA

NOTE:

1. This report is prepared for FCC class II permissive change. The difference compared with the Report No.:RF941020H04 design is as the following:

Antennas of Report No.:RF941020H04				
No.	Antenna Type	Gain (dBi)		Antenna Connector
1	PIFA	3.0		I-PEX
2	1/2 λ Dipole	1.5		MHF
◆ ***Add one new antenna***				
No.	Antenna Type	Gain (dBi)	Cable lose(dB)	Antenna Connector
1	Dipole	1.8	1.3	SMA Plug Reverse

2. The EUT operates in the 2.4GHz frequency spectrum with throughput of up to 54Mbps.

3. The EUT complies with IEEE 802.11g standards, and backwards compatible with IEEE 802.11b products.

4. The above EUT information was declared by the manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

3.2 DESCRIPTION OF TEST MODES

Operated in 2400 ~ 2483.5MHz band:

For 802.11b/g: 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		

3.3 TEST MODE APPLICABLITY AND TESTED CHANNEL DETAIL:

EUT configure mode	Applicable to				Description
	PLC	RE<1G	RE≥1G	APCM	
-	-	x	x	x	NA

Where PLC: Power Line Conducted Emission RE<1G RE: Radiated Emission below 1GHz
RE≥1G: Radiated Emission above 1GHz APCM: Antenna Port Conducted Measurement

Radiated Emission Test (Below 1 GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11g	1 to 11	11	OFDM	BPSK	6

Radiated Emission Test (Above 1 GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11b	1 to 11	1, 6, 11	DSSS	CCK	11
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6

Bandedge Measurement:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11b	1 to 11	1, 11	DSSS	CCK	11
802.11g	1 to 11	1, 11	OFDM	BPSK	6

Antenna Port Conducted Measurement:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11b	1 to 11	1, 6, 11	DSSS	CCK	11
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6

3.4 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a Wireless Digital Media Adapter Module. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

47 CFR Part 15, Subpart C. (15.247)
ANSI C63.4 : 2003

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

3.5 DESCRIPTION OF SUPPORT UNITS

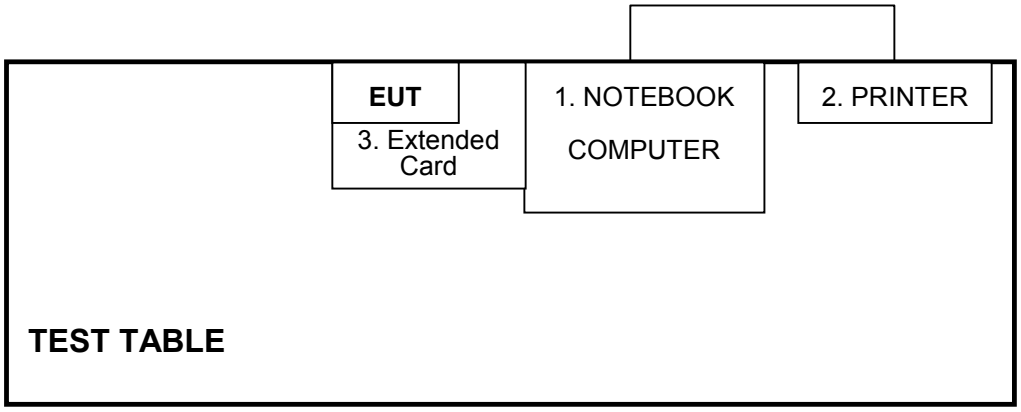
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

No.	Product	Brand	Model No.	Serial No.	FCC ID
1	Notebook Computer	ASUS	A2400H	49NG038481	NA
2	PRINTER	HP	C2642A	MY79F1C3MZ	B94C2642X
3	Extended Card	ADT	NA	ADT-RF-001	NA

No.	Signal cable description
1	NA
2	1.8 m braid shielded wire, terminated with DB25 and Centronics connector via metallic frame, w/o core.
3	NA

Note: 1. All power cords of the above support units are unshielded (1.8m).

3.6 CONFIGURATION OF SYSTEM UNDER TEST



NOTE: 1. Please refer to the photos of test configuration in Item 5 also.

4 TEST TYPES AND RESULTS

4.1 RADIATED EMISSION MEASUREMENT

4.1.1 LIMITS OF RADIATED EMISSION MEASUREMENT

Field strength limits are at the distance of 3 meters, 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.

4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
ADVANTEST Spectrum Analyzer	R3271A	85060311	July 07, 2006
HP Pre_Amplifier	8449B	3008A01922	Oct. 02, 2006
ROHDE & SCHWARZ Test Receiver	ESCS30	100287	Dec. 08, 2006
CHASE Broadband Antenna	VULB9168	138	Dec. 21, 2005
Schwarzbeck Horn_Antenna	BBHA9120	D124	Dec. 11, 2006
Schwarzbeck Horn_Antenna	BBHA 9170	BBHA9170153	Jan. 30, 2006
SCHWARZBECK Biconical Antenna	VHBA9123	459	Jun. 26, 2006
SCHWARZBECK Periodic Antenna	UPA6108	1148	Jun. 26, 2006
RF Switches (ARNITSU)	CS-201	1565157	NA
RF CABLE (Chaintek) 1GHz-20GHz	SF102	22054-2	Nov. 16. 2006
RF Cable(RICHTEC)	9913-30M	STCCAB-30M-1GHz-021	Jul. 16, 2006
Software	ADT_Radiated_V 5.14	NA	NA
CHANCE MOST Antenna Tower	AT-100	0203	NA
CHANCE MOST Turn Table	TT-100	0203	NA

Note: 1. The calibration interval of the above test instruments is 12 months (36 months for Periodic Antenna)and the calibrations are traceable to NML/ROC and NIST/USA.
2. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
3. The test was performed in ADT Open Site No. C.
4. The FCC Site Registration No. is 656396.
5. The VCCI Site Registration No. is R-1626.
6. The CANADA Site Registration No. is IC 4824-3.
7. The following table is for the measurement uncertainty, which is calculated as per the document CISPR 16-4. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Measurement	Value
Radiated emissions (30MHz-1GHz)	2.98 dB
Radiated emissions (1GHz ~18GHz)	2.21 dB
Radiated emissions (18GHz ~20GHz)	1.88 dB

4.1.3 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.

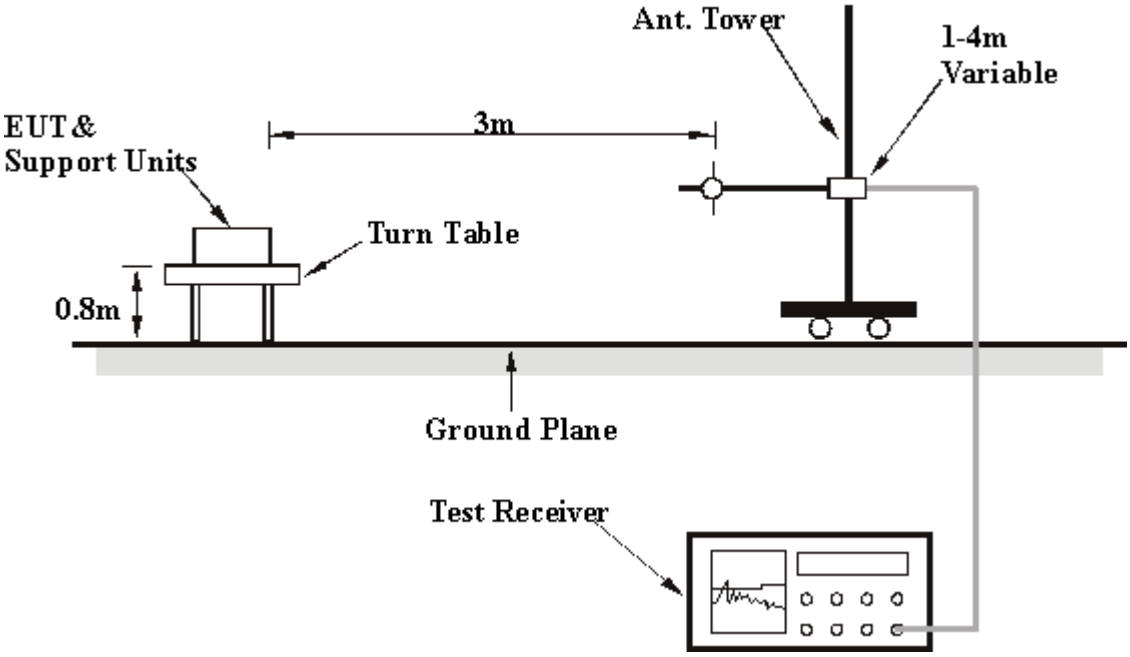
e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

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.

4.1.4 TEST SETUP



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

4.1.5 EUT OPERATING CONDITIONS

Same as 4.1.5.

4.1.6 TEST RESULTS

Below 1GHz Worst-Case Data

EUT	Wireless Digital Media Adapter Module	**MODEL**	AW-GM120
MODE	Channel 11	**FREQUENCY RANGE**	30-1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION & BANDWIDTH**	Quasi-Peak, 120kHz
ENVIRONMENTAL CONDITIONS	25 deg. C, 65%RH, 968 hPa	**TESTED BY**	Wen Yu

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	133.62	33.70 QP	43.50	-9.80	1.98 H	143	21.10	12.60
2	166.94	34.20 QP	43.50	-9.20	1.57 H	354	20.90	13.40
3	200.09	29.90 QP	43.50	-13.60	1.58 H	182	18.70	11.20
4	240.04	29.90 QP	46.00	-16.10	1.13 H	60	17.00	12.90
5	300.06	33.80 QP	46.00	-12.20	1.24 H	25	17.50	16.30
6	433.33	33.90 QP	46.00	-12.10	1.40 H	261	14.60	19.30
7	566.66	29.90 QP	46.00	-16.10	1.44 H	222	7.20	22.70
8	899.99	28.70 QP	46.00	-17.30	1.46 H	284	0.80	27.90

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	119.99	28.20 QP	43.50	-15.30	1.00 V	41	16.70	11.50
2	166.67	28.30 QP	43.50	-15.20	1.00 V	358	15.00	13.40
3	240.01	25.10 QP	46.00	-20.90	1.00 V	124	12.20	12.90
4	300.01	30.70 QP	46.00	-15.30	1.03 V	126	14.30	16.30
5	366.66	30.40 QP	46.00	-15.60	1.07 V	254	13.10	17.30
6	433.33	28.80 QP	46.00	-17.20	4.00 V	128	9.50	19.30
7	499.99	28.70 QP	46.00	-17.30	1.10 V	204	7.80	20.90
8	899.98	32.60 QP	46.00	-13.40	1.22 V	335	4.70	27.90

REMARKS:
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.

802.11b DSSS modulation

EUT	Wireless Digital Media Adapter Module	**MODEL**	AW-GM120
MODE	Channel 1	**FREQUENCY RANGE**	1000~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION & BANDWIDTH**	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	18 deg. C, 58%RH, 968 hPa	**TESTED BY**	Wen Yu

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	1608.00	40.50 PK	74.00	-33.50	1.20 H	321	13.10	27.40
1	1608.00	34.20 AV	54.00	-19.80	1.20 H	321	6.80	27.40
2	2390.00	49.60 PK	74.00	-24.40	1.00 H	38	15.90	33.70
2	2390.00	37.90 AV	54.00	-16.10	1.00 H	38	4.20	33.70
3	*2412.00	102.20 PK			1.00 H	38	72.40	29.80
3	*2412.00	95.20 AV			1.00 H	38	65.40	29.80
4	4824.00	44.00 PK	74.00	-30.00	1.59 H	45	8.90	35.10
4	4824.00	32.60 AV	54.00	-21.40	1.59 H	45	-2.50	35.10
5	7236.00	46.00 PK	74.00	-28.00	1.00 H	296	5.50	40.50
5	7236.00	34.20 AV	54.00	-19.80	1.00 H	296	-6.30	40.50

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	1608.00	44.30 PK	74.00	-29.70	1.00 V	305	16.90	27.40
1	1608.00	39.20 AV	54.00	-14.80	1.00 V	305	11.80	27.40
2	2390.00	59.50 PK	74.00	-14.50	1.19 V	352	25.80	33.70
2	2390.00	47.60 AV	54.00	-6.40	1.19 V	352	13.90	33.70
3	*2412.00	112.10 PK			1.19 V	352	82.30	29.80
3	*2412.00	104.90 AV			1.19 V	352	75.10	29.80
4	4824.00	42.50 PK	74.00	-31.50	1.00 V	329	7.40	35.10
4	4824.00	31.10 AV	54.00	-22.90	1.00 V	329	-4.00	35.10
5	7236.00	44.90 PK	74.00	-29.10	1.15 V	27	4.40	40.50
5	7236.00	34.00 AV	54.00	-20.00	1.15 V	27	-6.50	40.50

REMARKS:
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.
5. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	Wireless Digital Media Adapter Module	**MODEL**	AW-GM120
MODE	Channel 6	**FREQUENCY RANGE**	1000~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION & BANDWIDTH**	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	18 deg. C, 58%RH, 968 hPa	**TESTED BY**	Wen Yu

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	1624.60	41.90 PK	74.00	-32.10	1.24 H	326	14.50	27.40
1	1624.60	35.70 AV	54.00	-18.30	1.24 H	326	8.30	27.40
2	*2437.00	102.70 PK			1.00 H	41	72.80	29.90
2	*2437.00	95.20 AV			1.00 H	41	65.30	29.90
3	4874.00	44.50 PK	74.00	-29.50	1.57 H	48	9.20	35.30
3	4874.00	33.00 AV	54.00	-21.00	1.57 H	48	-2.30	35.30
4	7311.00	46.20 PK	74.00	-27.80	1.00 H	286	5.60	40.70
4	7311.00	34.40 AV	54.00	-19.60	1.00 H	286	-6.20	40.70

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	1624.60	45.40 PK	74.00	-28.60	1.00 V	308	18.00	27.40
1	1624.60	41.90 AV	54.00	-12.10	1.00 V	308	14.50	27.40
2	*2437.00	112.00 PK			1.20 V	255	82.10	29.90
2	*2437.00	104.40 AV			1.20 V	255	74.50	29.90
3	4874.00	42.80 PK	74.00	-31.20	1.00 V	331	7.50	35.30
3	4874.00	31.60 AV	54.00	-22.40	1.00 V	331	-3.70	35.30
4	7311.00	45.20 PK	74.00	-28.80	1.16 V	30	4.60	40.70
4	7311.00	34.20 AV	54.00	-19.80	1.16 V	30	-6.40	40.70

REMARKS:
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.
5. The limit value is defined as per 15.247
6. “ * “ : Fundamental frequency

EUT	Wireless Digital Media Adapter Module	**MODEL**	AW-GM120
MODE	Channel 11	**FREQUENCY RANGE**	1000~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION & BANDWIDTH**	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	18 deg. C, 58%RH, 968 hPa	**TESTED BY**	Wen Yu

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	1641.00	42.10 PK	74.00	-31.90	1.22 H	320	14.60	27.40
1	1641.00	36.90 AV	54.00	-17.10	1.22 H	320	9.40	27.40
2	*2462.00	102.50 PK			1.01 H	45	72.50	30.00
2	*2462.00	95.00 AV			1.01 H	45	65.00	30.00
3	2483.50	51.70 PK	74.00	-22.30	1.01 H	45	21.60	30.10
3	2483.50	39.40 AV	54.00	-14.60	1.01 H	45	9.30	30.10
4	4924.00	44.60 PK	74.00	-29.40	1.60 H	50	9.10	35.50
4	4924.00	33.10 AV	54.00	-20.90	1.60 H	50	-2.40	35.50
5	7386.00	46.40 PK	74.00	-27.60	1.00 H	300	5.60	40.80
5	7386.00	34.70 AV	54.00	-19.30	1.00 H	300	-6.10	40.80

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	1641.00	46.30 PK	74.00	-27.70	1.01 V	310	18.80	27.40
1	1641.00	42.30 AV	54.00	-11.70	1.01 V	310	14.80	27.40
2	*2462.00	112.00 PK			1.21 V	356	82.00	30.00
2	*2462.00	104.40 AV			1.21 V	356	74.40	30.00
3	2483.50	61.20 PK	74.00	-12.80	1.21 V	356	31.10	30.10
3	2483.50	48.80 AV	54.00	-5.20	1.21 V	356	18.70	30.10
4	4924.00	43.10 PK	74.00	-30.90	1.00 V	331	7.60	35.50
4	4924.00	31.70 AV	54.00	-22.30	1.00 V	331	-3.80	35.50
5	7386.00	45.20 PK	74.00	-28.80	1.11 V	31	4.40	40.80
5	7386.00	34.20 AV	54.00	-19.80	1.11 V	31	-6.60	40.80

REMARKS:
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.
5. The limit value is defined as per 15.247
6. “ * “ : Fundamental frequency

802.11g OFDM modulation

EUT	Wireless Digital Media Adapter Module	**MODEL**	AW-GM120
MODE	Channel 1	**FREQUENCY RANGE**	1000~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION & BANDWIDTH**	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	18 deg. C, 58%RH, 968 hPa	**TESTED BY**	Wen Yu

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	1608.00	39.90 PK	74.00	-34.10	1.22 H	326	12.50	27.40
1	1608.00	35.10 AV	54.00	-18.90	1.22 H	326	7.70	27.40
2	2390.00	56.40 PK	74.00	-17.60	1.00 H	309	22.70	33.70
2	2390.00	42.30 AV	54.00	-11.70	1.00 H	309	8.60	33.70
3	*2412.00	98.80 PK			1.00 H	309	69.00	29.80
3	*2412.00	90.20 AV			1.00 H	309	60.40	29.80
4	4824.00	40.40 PK	74.00	-33.60	1.05 H	126	5.30	35.10
4	4824.00	29.50 AV	54.00	-24.50	1.05 H	126	-5.60	35.10
5	7236.00	45.20 PK	74.00	-28.80	1.12 H	37	4.70	40.50
5	7236.00	34.30 AV	54.00	-19.70	1.12 H	37	-6.20	40.50

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	1608.00	44.60 PK	74.00	-29.40	1.00 V	317	17.20	27.40
1	1608.00	41.20 AV	54.00	-12.80	1.00 V	317	13.80	27.40
2	2390.00	66.30 PK	74.00	-7.70	1.19 V	14	32.60	33.70
2	**2390.00**	**51.80 AV**	**54.00**	**-2.20**	**1.19 V**	**14**	**18.10**	**33.70**
3	*2412.00	108.70 PK			1.19 V	14	78.90	29.80
3	*2412.00	99.70 AV			1.19 V	14	69.90	29.80
4	4824.00	40.20 PK	74.00	-33.80	1.00 V	31	5.10	35.10
4	4824.00	29.30 AV	54.00	-24.70	1.00 V	31	-5.80	35.10
5	7236.00	45.00 PK	74.00	-29.00	1.22 V	318	4.50	40.50
5	7236.00	34.10 AV	54.00	-19.90	1.22 V	318	-6.40	40.50

REMARKS:
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.
5. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	Wireless Digital Media Adapter Module	**MODEL**	AW-GM120
MODE	Channel 6	**FREQUENCY RANGE**	1000~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION & BANDWIDTH**	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	18 deg. C, 58%RH, 968 hPa	**TESTED BY**	Wen Yu

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	1624.60	43.00 PK	74.00	-31.00	1.20 H	321	15.60	27.40
1	1624.60	36.10 AV	54.00	-17.90	1.20 H	321	8.70	27.40
2	*2437.00	98.60 PK			1.00 H	310	68.70	29.90
2	*2437.00	90.00 AV			1.00 H	310	60.10	29.90
3	4874.00	40.70 PK	74.00	-33.30	1.06 H	122	5.40	35.30
3	4874.00	29.50 AV	54.00	-24.50	1.06 H	122	-5.80	35.30
4	7311.00	45.30 PK	74.00	-28.70	1.11 H	38	4.70	40.70
4	7311.00	34.20 AV	54.00	-19.80	1.11 H	38	-6.40	40.70

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	1624.60	47.20 PK	74.00	-26.80	1.00 V	311	19.80	27.40
1	1624.60	43.80 AV	54.00	-10.20	1.00 V	311	16.40	27.40
2	*2437.00	109.20 PK			1.20 V	15	79.30	29.90
2	*2437.00	99.00 AV			1.20 V	15	69.10	29.90
3	4874.00	40.70 PK	74.00	-33.30	1.00 V	25	5.40	35.30
3	4874.00	29.60 AV	54.00	-24.40	1.00 V	25	-5.70	35.30
4	7311.00	45.30 PK	74.00	-28.70	1.24 V	316	4.70	40.70
4	7311.00	34.30 AV	54.00	-19.70	1.24 V	316	-6.30	40.70

REMARKS:
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.
5. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	Wireless Digital Media Adapter Module	**MODEL**	AW-GM120
MODE	Channel 11	**FREQUENCY RANGE**	1000~25000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION & BANDWIDTH**	Peak (PK) Average (AV) 1 MHz
ENVIRONMENTAL CONDITIONS	18 deg. C, 58%RH, 968 hPa	**TESTED BY**	Wen Yu

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	1641.00	37.30 PK	74.00	-36.70	1.25 H	322	9.80	27.40
1	1641.00	30.70 AV	54.00	-23.30	1.25 H	322	3.20	27.40
2	*2462.00	98.10 PK			1.00 H	311	68.10	30.00
2	*2462.00	87.80 AV			1.00 H	311	57.80	30.00
3	2483.50	56.40 PK	74.00	-17.60	1.00 H	311	26.30	30.10
3	2483.50	40.90 AV	54.00	-13.10	1.00 H	311	10.80	30.10
4	4924.00	40.80 PK	74.00	-33.20	1.07 H	128	5.30	35.50
4	4924.00	29.80 AV	54.00	-24.20	1.07 H	128	-5.70	35.50
5	7386.00	45.50 PK	74.00	-28.50	1.16 H	35	4.70	40.80
5	7386.00	34.50 AV	54.00	-19.50	1.16 H	35	-6.30	40.80

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	1641.00	47.30 PK	74.00	-26.70	1.00 V	314	19.80	27.40
1	1641.00	44.10 AV	54.00	-9.90	1.00 V	314	16.60	27.40
2	*2462.00	108.00 PK			1.20 V	16	78.00	30.00
2	*2462.00	98.10 AV			1.20 V	16	68.10	30.00
3	2483.50	66.30 PK	74.00	-7.70	1.20 V	16	36.20	30.10
3	2483.50	51.20 AV	54.00	-2.80	1.20 V	16	21.10	30.10
4	4924.00	40.70 PK	74.00	-33.30	1.01 V	28	5.20	35.50
4	4924.00	29.70 AV	54.00	-24.30	1.01 V	28	-5.80	35.50
5	7386.00	45.40 PK	74.00	-28.60	1.25 V	31	4.60	40.80
5	7386.00	34.40 AV	54.00	-19.60	1.25 V	31	-6.40	40.80

REMARKS:
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.
5. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

4.2 MAXIMUM PEAK OUTPUT POWER

4.2.1 LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT

The Maximum Peak Output Power Measurement is 30dBm.

4.2.2 TEST INSTRUMENTS

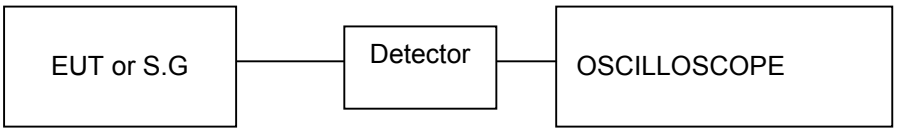
Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSP40	100036	Nov. 23, 2006
Agilent SIGNAL GENERATOR	E8257C	MY43320668	Jun. 15, 2006
TEKTRONIX OSCILLOSCOPE	TDS380	B016335	Jun. 22, 2006
NARDA DETECTOR	4503A	FSCM99899	NA

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

4.2.3 TEST PROCEDURES

1. A detector was used on the output port of the EUT. An oscilloscope was used to read the peak 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 peak reading on oscilloscope. Record the power level.

4.2.4 TEST SETUP



4.2.5 EUT OPERATING CONDITIONS

Same as Item 4.3.5

4.2.6 TEST RESULTS

802.11b DSSS modulation

EUT	Wireless Digital Media Adapter Module		
MODEL	AW-GM120	**ENVIRONMENTAL CONDITIONS**	23 deg. C, 58%RH, 968 hPa
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**TESTED BY**	Rex Huang

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	55.719	17.46	30	PASS
6	2437	56.364	17.51	30	PASS
11	2462	54.702	17.38	30	PASS

802.11g OFDM modulation

EUT	Wireless Digital Media Adapter Module		
MODEL	AW-GM120	**ENVIRONMENTAL CONDITIONS**	23 deg. C, 58%RH, 968 hPa
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**TESTED BY**	Rex Huang

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	54.075	17.33	30	PASS
6	2437	52.602	17.21	30	PASS
11	2462	44.361	16.47	30	PASS

4.3 BAND EDGES MEASUREMENT

4.3.1 LIMITS OF BAND EDGES MEASUREMENT

Below –20dB of the highest emission level of operating band (in 1MHz Resolution Bandwidth).

4.3.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSP40	100036	Nov. 23, 2006

NOTE:

1. The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.
2. 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 via a low lose cable. Set RBW spectrum analyzer to 1 MHz and set VBW spectrum analyzer to 10 Hz with suitable frequency span including 1 MHz bandwidth from band edge. The band edges was measured and recorded.

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

4.3.4 EUT OPERATING CONDITION

Same as Item 4.3.5

4.3.5 TEST RESULTS

802.11b DSSS modulation

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

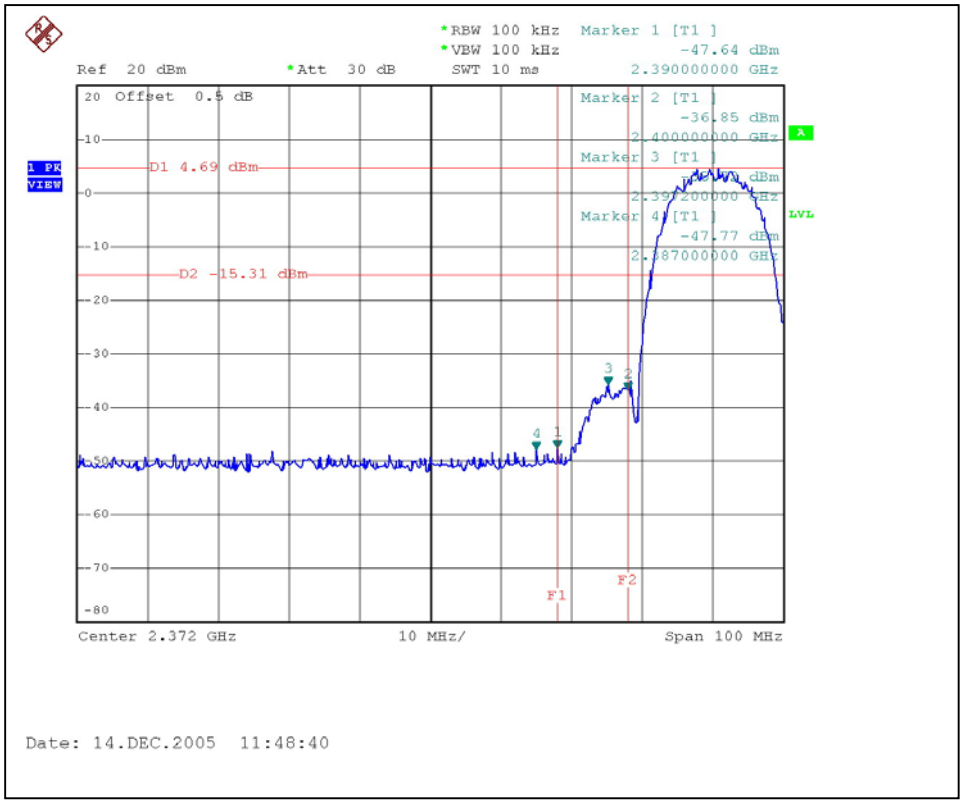
Note - The delta method is only used up to 2 MHz away from the restricted bandage, The radiated emissions which located in other restricted frequency band, the result, please refer to 4.2.

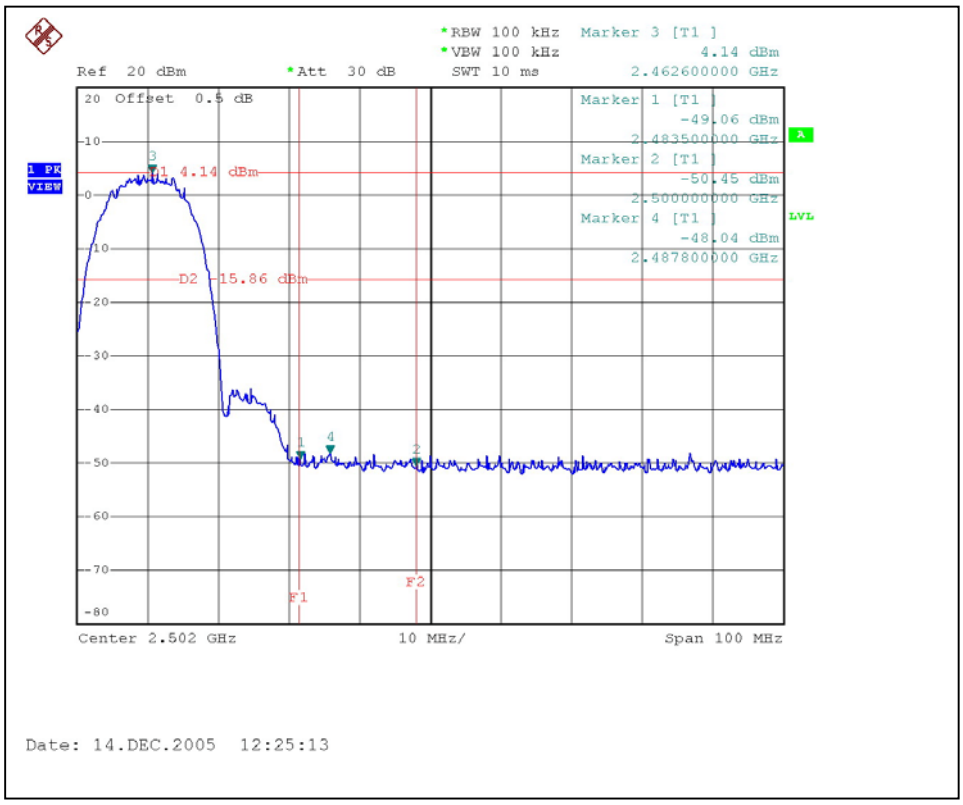
NOTE (Peak):
The band edge emission plot of DSSS technique on the following first page show 52.33dB delta between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2 is 112.1dBuV/m, so the maximum field strength in restrict band is 112.1-52.33=59.77dBuV/m which is under 74 dBuV/m limit.

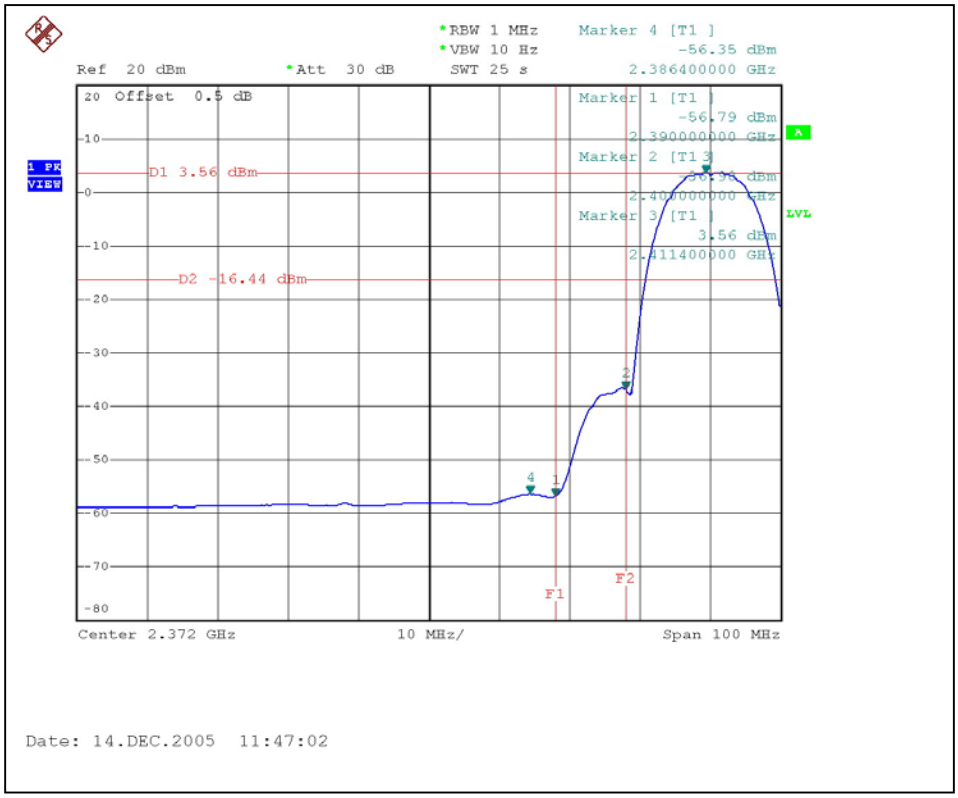
The band edge emission plot of DSSS technique on the following first page shows 53.2dB delta between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2 is 112.0dBuV/m, so the maximum field strength in restrict band is 112.0-53.2=58.8dBuV/m which is under 74 dBuV/m limit.

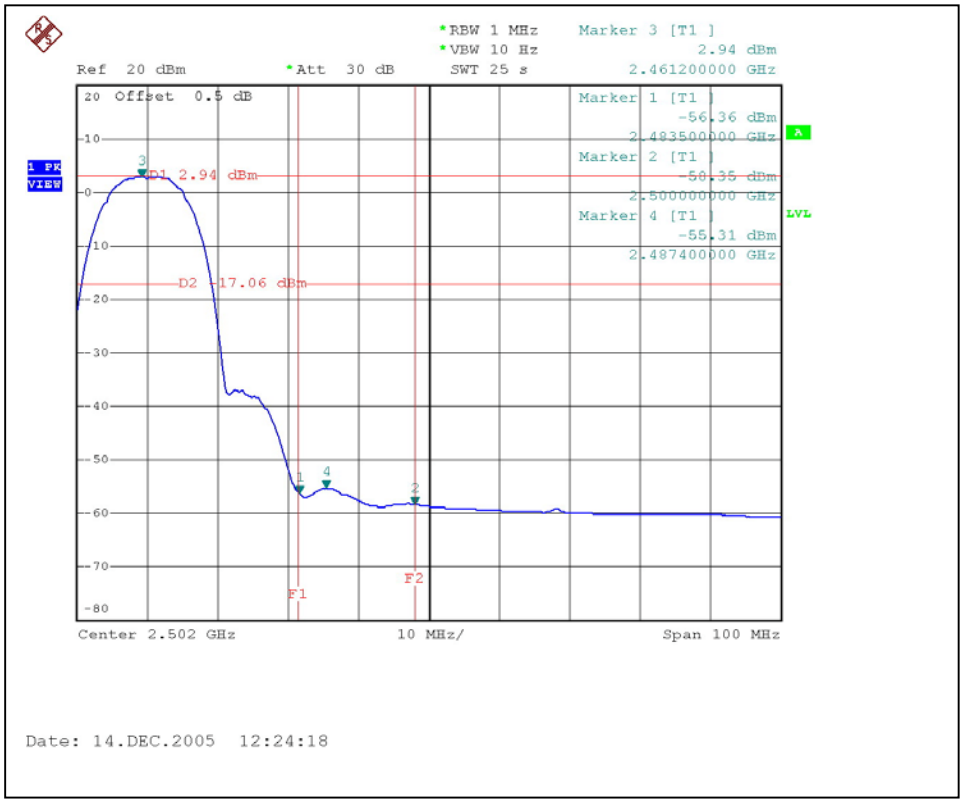
NOTE (Average):
The band edge emission plot of DSSS technique on the following second page shows 60.35dB delta between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2 is 104.9dBuV/m, so the maximum field strength in restrict band is 104.9-60.35=44.55dBuV/m which is under 54 dBuV/m limit.

The band edge emission plot of DSSS technique on the following second page shows 59.3dB 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 is 104.4dBuV/m, so the maximum field strength in restrict band is 104.4-59.3=45.1dBuV/m which is under 54 dBuV/m limit.

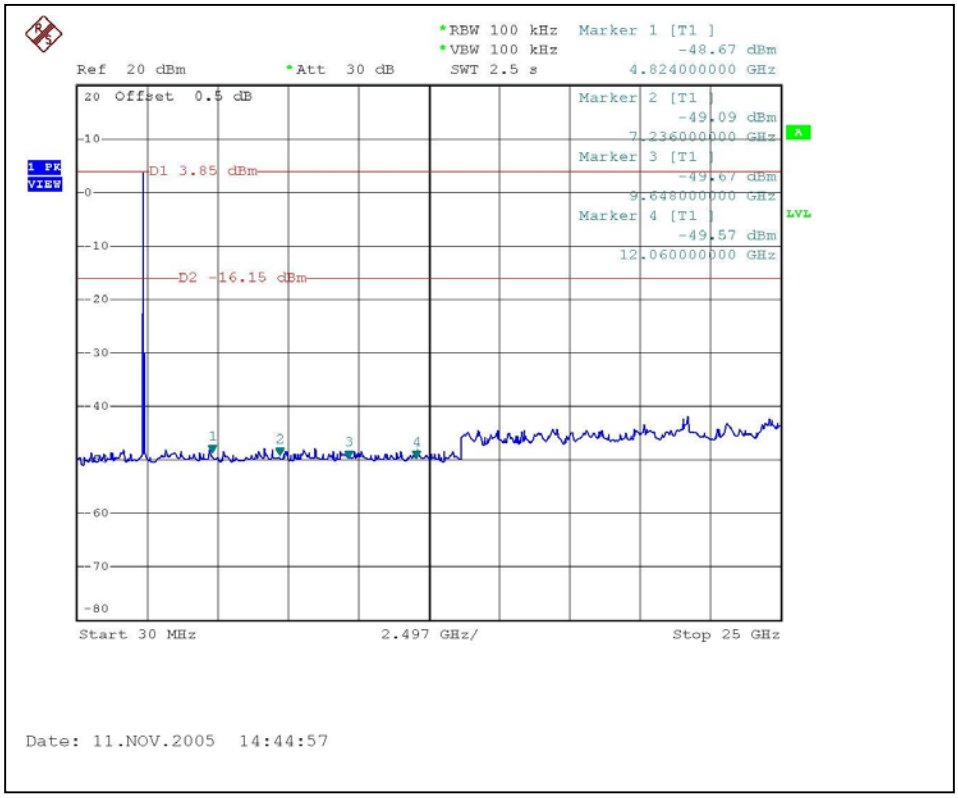

*RBW 100 kHz
*VBW 100 kHz
SWT 10 ms
Marker 1 [T1]
-47.64 dBm
2.390000000 GHz
Ref 20 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-36.85 dBm
2.400000000 GHz
Marker 3 [T1]
Marker 4 [T1]
-47.77 dBm
2.387000000 GHz
1 PK
VIEW
D1 4.69 dBm
D2 -15.31 dBm
F1
F2
Center 2.372 GHz
10 MHz/
Span 100 MHz
Date: 14.DEC.2005 11:48:40


*RBW 100 kHz
*VBW 100 kHz
SWT 10 ms
Marker 3 [T1]
4.14 dBm
2.462600000 GHz
Ref 20 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 1 [T1]
-49.06 dBm
2.483500000 GHz
Marker 2 [T1]
-50.45 dBm
2.500000000 GHz
Marker 4 [T1]
-48.04 dBm
2.487800000 GHz
1 PK
VIEW
D1 4.14 dBm
D2 -15.86 dBm
F1
F2
Center 2.502 GHz
10 MHz/
Span 100 MHz
Date: 14.DEC.2005 12:25:13

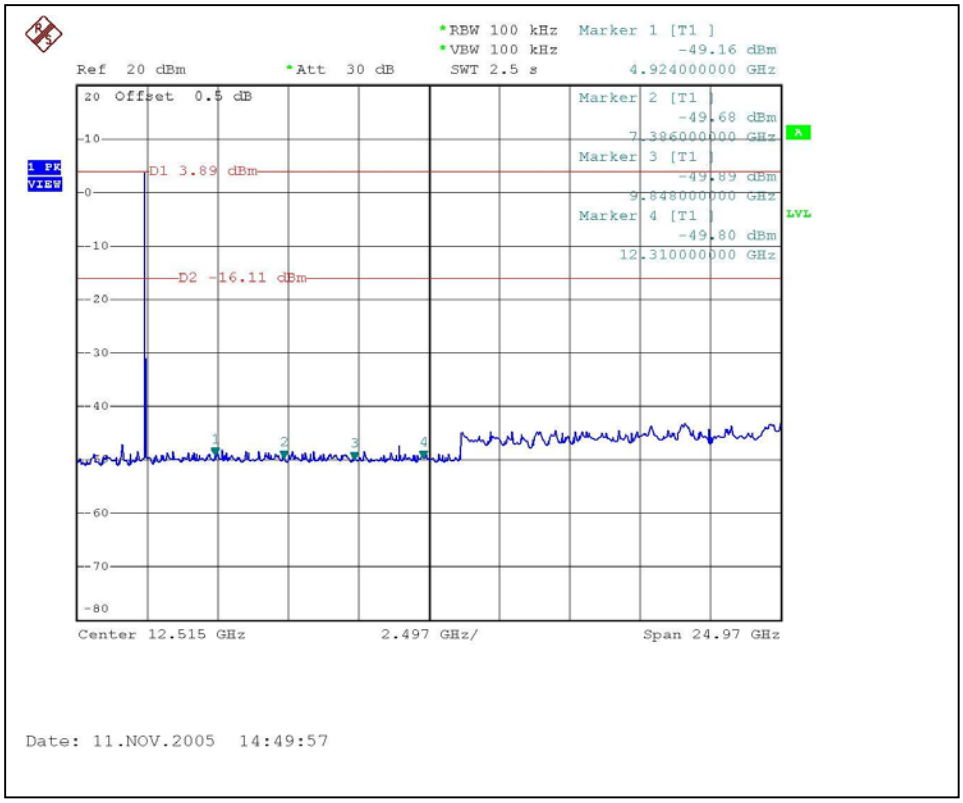

*RBW 1 MHz
*VBW 10 Hz
SWT 25 s
Ref 20 dBm
*Att 30 dB
Marker 4 [T1]
-56.35 dBm
2.386400000 GHz
20 Offset 0.5 dB
Marker 1 [T1]
-56.79 dBm
2.390000000 GHz
Marker 2 [T1]
Marker 3 [T1]
3.56 dBm
2.411400000 GHz
1 PK
VIEW
D1 3.56 dBm
D2 -16.44 dBm
F1
F2
Center 2.372 GHz
10 MHz/
Span 100 MHz
Date: 14.DEC.2005 11:47:02


*RBW 1 MHz
*VBW 10 Hz
SWT 25 s
Ref 20 dBm
*Att 30 dB
Marker 3 [T1]
2.94 dBm
2.461200000 GHz
20 Offset 0.5 dB
Marker 1 [T1]
-56.36 dBm
2.483500000 GHz
Marker 2 [T1]
Marker 4 [T1]
-55.31 dBm
2.487400000 GHz
1 PK
VIEW
D1 2.94 dBm
D2 -17.06 dBm
F1
F2
Center 2.502 GHz
10 MHz/
Span 100 MHz
Date: 14.DEC.2005 12:24:18

CH1


*RBW 100 kHz
*VBW 100 kHz
SWT 2.5 s
Marker 1 [T1]
-48.67 dBm
4.824000000 GHz
Ref 20 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-49.09 dBm
7.236000000 GHz
Marker 3 [T1]
-49.67 dBm
9.648000000 GHz
Marker 4 [T1]
-49.57 dBm
12.060000000 GHz
D1 3.85 dBm
D2 -16.15 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz
Date: 11.NOV.2005 14:44:57

CH11


*RBW 100 kHz
*VBW 100 kHz
SWT 2.5 s
Marker 1 [T1]
-49.16 dBm
4.924000000 GHz
Ref 20 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-49.68 dBm
7.386000000 GHz
Marker 3 [T1]
-49.89 dBm
9.848000000 GHz
Marker 4 [T1]
-49.80 dBm
12.310000000 GHz
D1 3.89 dBm
D2 -16.11 dBm
Center 12.515 GHz
2.497 GHz/
Span 24.97 GHz
Date: 11.NOV.2005 14:49:57

802.11g OFDM modulation

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

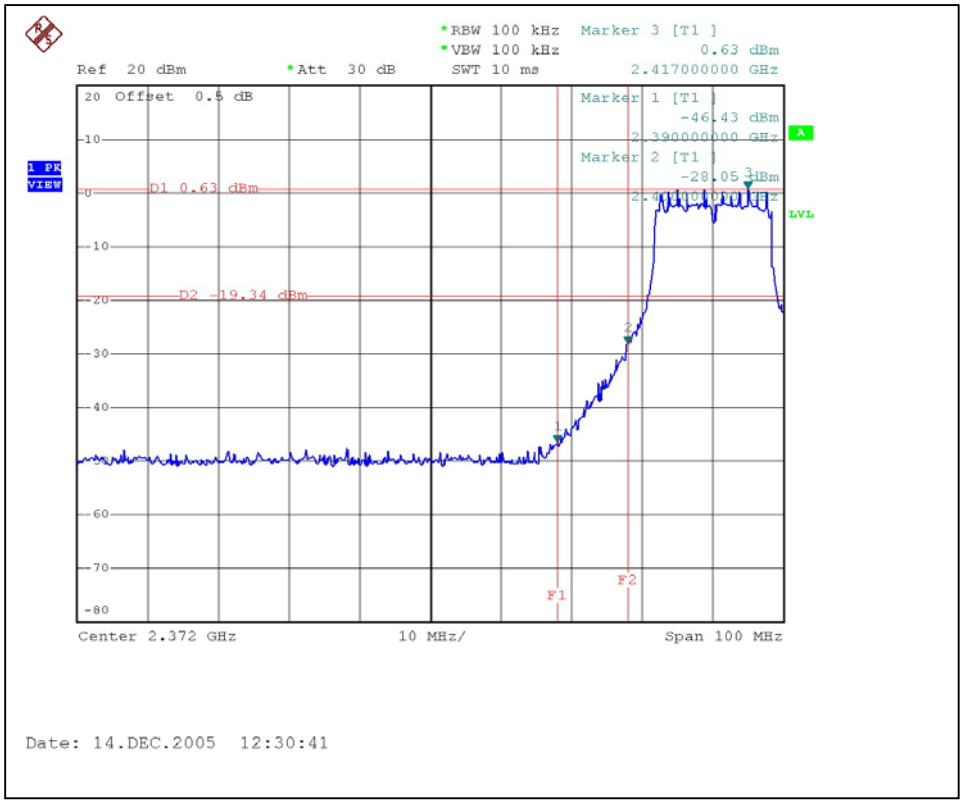
Note - The delta method is only used up to 2 MHz away from the restricted bandage, The radiated emissions which located in other restricted frequency band, the result, please refer to 4.2.

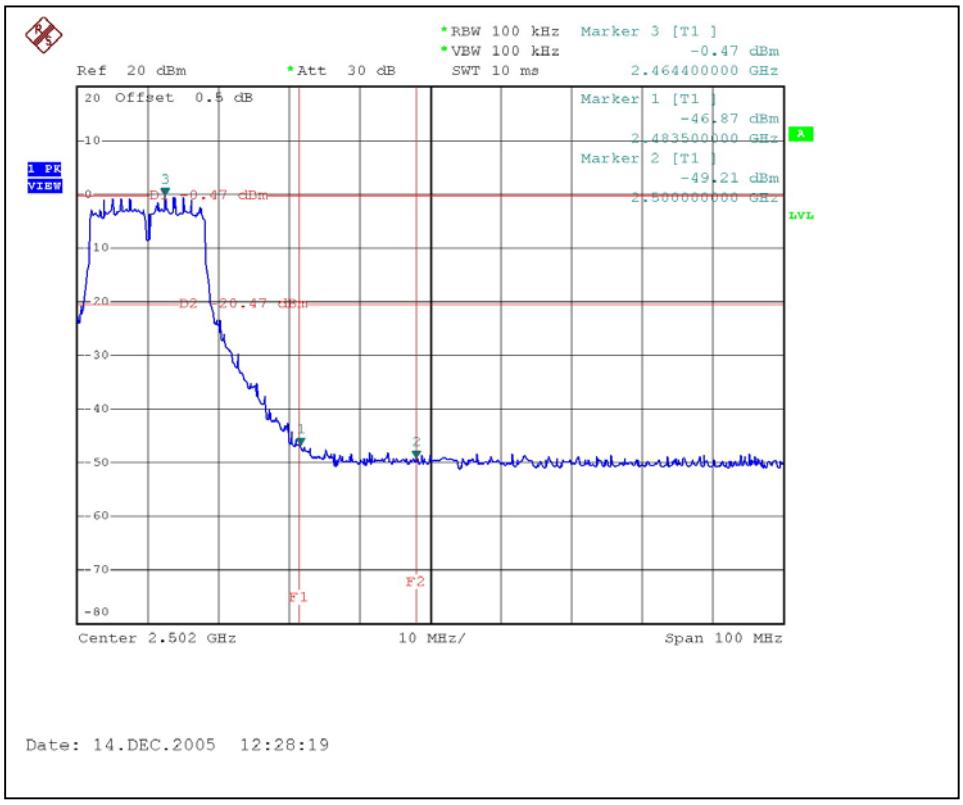
NOTE (Peak):
The band edge emission plot of OFDM technique on the following first page show 47.06dB delta between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2 is 108.7dBuV/m, so the maximum field strength in restrict band is 108.7-47.06=61.64dBuV/m which is under 74 dBuV/m limit.

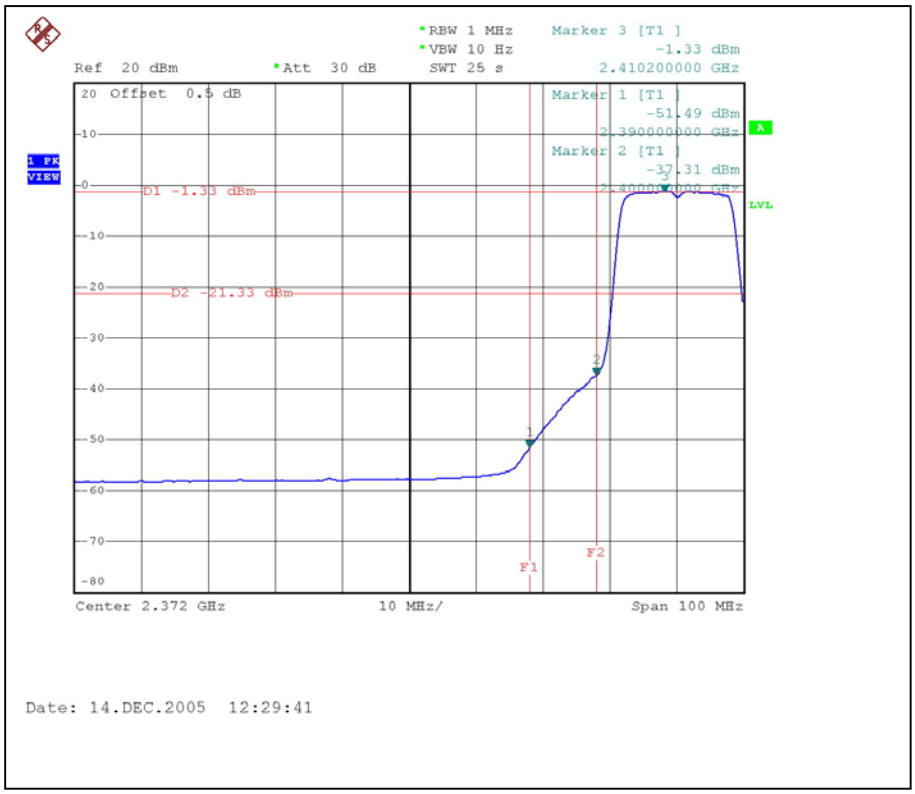
The band edge emission plot of OFDM technique on the following first page shows 46.4dB delta between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2 is 108.0dBuV/m, so the maximum field strength in restrict band is 108.0-46.4=61.6dBuV/m which is under 74 dBuV/m limit.

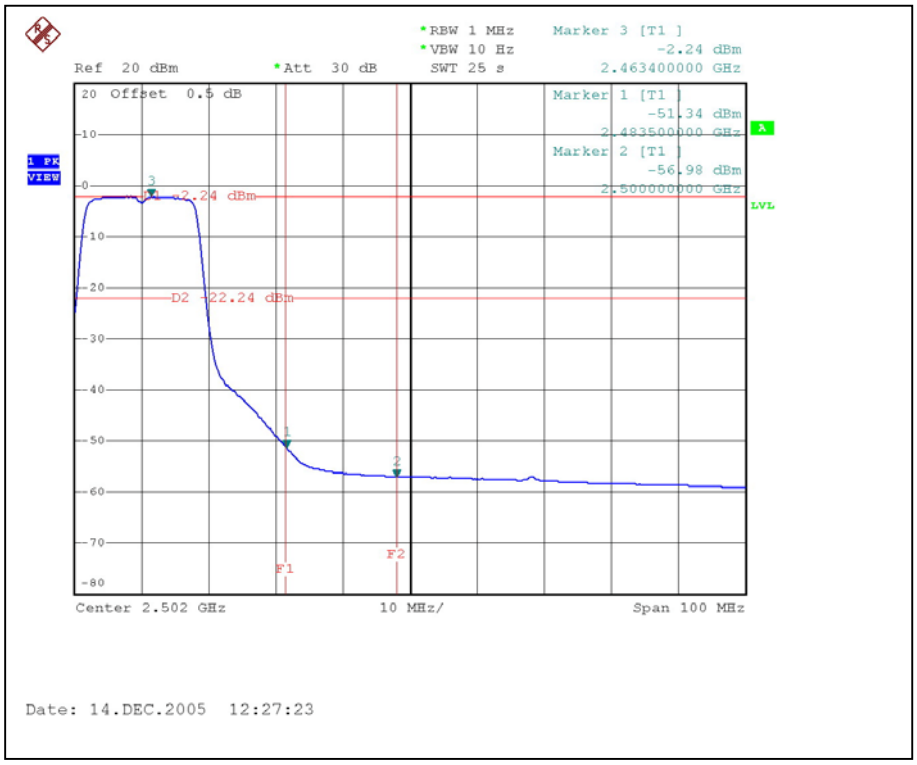
NOTE (Average):
The band edge emission plot of OFDM technique on the following second page shows 50.16dB delta between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2 is 99.7dBuV/m, so the maximum field strength in restrict band is 99.7-50.16=49.54dBuV/m which is under 54 dBuV/m limit.

The band edge emission plot of OFDM technique on the following second page shows 49.1dB 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 is 98.1dBuV/m, so the maximum field strength in restrict band is 98.1-49.1=49.0dBuV/m which is under 54 dBuV/m limit.

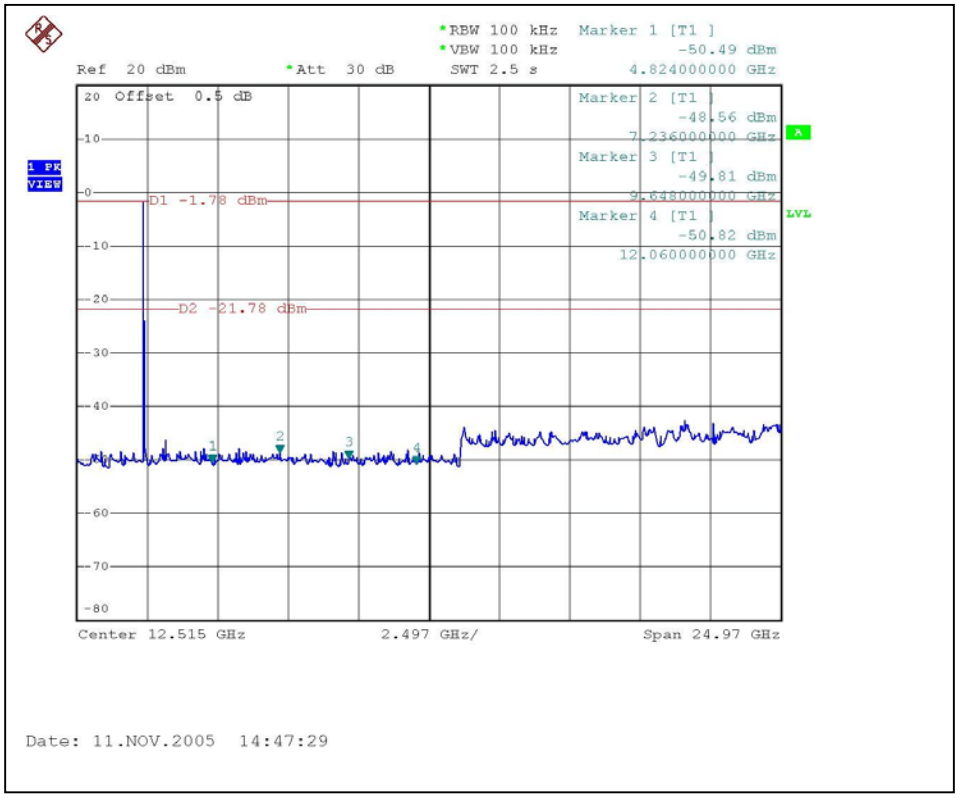

*RBW 100 kHz
*VBW 100 kHz
SWT 10 ms
Marker 3 [T1]
0.63 dBm
2.417000000 GHz
Ref 20 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 1 [T1]
-46.43 dBm
2.390000000 GHz
Marker 2 [T1]
-28.05 dBm
1 PK
VIEW
D1 0.63 dBm
D2 -19.34 dBm
LVL
F1
F2
Center 2.372 GHz
10 MHz/
Span 100 MHz
Date: 14.DEC.2005 12:30:41


*RBW 100 kHz
*VBW 100 kHz
SWT 10 ms
Marker 3 [T1]
-0.47 dBm
2.464400000 GHz
Ref 20 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 1 [T1]
-46.87 dBm
2.483500000 GHz
Marker 2 [T1]
-49.21 dBm
2.500000000 GHz
1 PK
VIEW
D1 -0.47 dBm
D2 -20.47 dBm
LVL
F1
F2
Center 2.502 GHz
10 MHz/
Span 100 MHz
Date: 14.DEC.2005 12:28:19

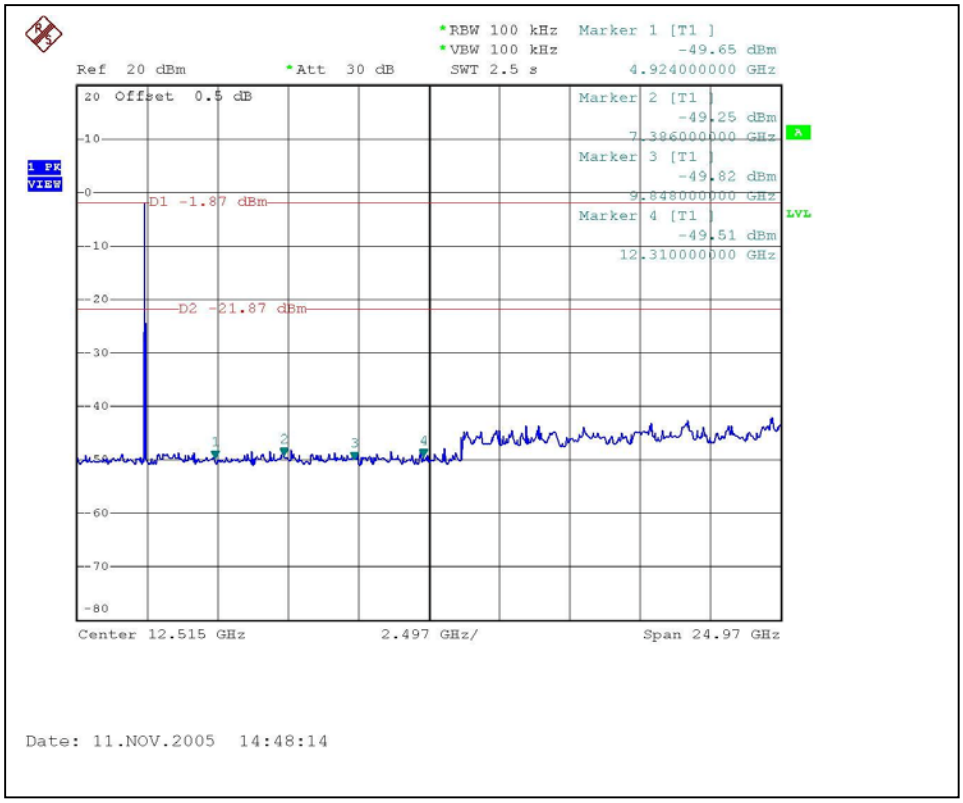

RBW 1 MHz
VBW 10 Hz
SWT 25 s
Marker 3 [T1]
-1.33 dBm
2.410200000 GHz
Ref 20 dBm
Att 30 dB
20 Offset 0.5 dB
Marker 1 [T1]
-51.49 dBm
2.390000000 GHz
Marker 2 [T1]
-37.31 dBm
2.400000000 GHz
1 PK
VIEW
D1 -1.33 dBm
D2 -21.33 dBm
F1
F2
Center 2.372 GHz
10 MHz/
Span 100 MHz
Date: 14.DEC.2005 12:29:41


RBW 1 MHz
VBW 10 Hz
SWT 25 s
Marker 3 [T1]
-2.24 dBm
2.463400000 GHz
Ref 20 dBm
Att 30 dB
20 Offset 0.5 dB
Marker 1 [T1]
-51.34 dBm
2.483500000 GHz
Marker 2 [T1]
-56.98 dBm
2.500000000 GHz
1 PK
VIEW
D1 -2.24 dBm
D2 -22.24 dBm
F1
F2
Center 2.502 GHz
10 MHz/
Span 100 MHz
Date: 14.DEC.2005 12:27:23

CH1


*RBW 100 kHz
*VBW 100 kHz
SWT 2.5 s
Marker 1 [T1]
-50.49 dBm
4.824000000 GHz
Ref 20 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-48.56 dBm
7.236000000 GHz
Marker 3 [T1]
-49.81 dBm
9.648000000 GHz
Marker 4 [T1]
-50.82 dBm
12.060000000 GHz
D1 -1.78 dBm
D2 -21.78 dBm
Center 12.515 GHz
2.497 GHz/
Span 24.97 GHz
Date: 11.NOV.2005 14:47:29

CH11


*RBW 100 kHz
*VBW 100 kHz
SWT 2.5 s
Marker 1 [T1]
-49.65 dBm
4.924000000 GHz
Ref 20 dBm
*Att 30 dB
20 Offset 0.5 dB
Marker 2 [T1]
-49.25 dBm
7.386000000 GHz
Marker 3 [T1]
-49.82 dBm
9.848000000 GHz
Marker 4 [T1]
-49.51 dBm
12.310000000 GHz
D1 -1.87 dBm
D2 -21.87 dBm
Center 12.515 GHz
2.497 GHz/
Span 24.97 GHz
Date: 11.NOV.2005 14:48:14

4.4 ANTENNA REQUIREMENT

4.4.1 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.

4.4.2 ANTENNA CONNECTED CONSTRUCTION

The antenna used in this product is as following:

Antenna Type	Gain (dBi)	Cable lose(dB)	Antenna Connector
Dipole	1.8	1.3	SMA Plug Reverse

5 PHOTOGRAPHS OF THE TEST CONFIGURATION

RADIATED EMISSION TEST

941129H02

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
Fax: 886-3-5935342

Hwa Ya EMC/RF/Safety/Telecom Lab:
Tel: 886-3-3183232
Fax: 886-3-3185050

Email: service@adt.com.tw
Web Site: www.adt.com.tw

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

APPENDIX-A

MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No any modifications are made to the EUT by the lab during the test.