



## Test Report

Product Name : Access Point

Model No. : RTW030

FCC ID.: H8NRTW030

Applicant : ASKEY COMPUTER CORP.

Address : 2/FL, No. 2, Lane 497 Chung Cheng Road, Hsin  
Tien, Taipei, Taiwan, R.O.C.

Date of Receipt : Feb. 8, 2002

Date of Test : Feb. 23, 2002

Report No. : 022H041FI

The test results relate only to the samples tested.

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This report must not be used to claim product endorsement by NVLAP any agency of the U.S. Government

# Test Report Certification

Test Date : Feb. 23, 2002

Report No. : 022H041FI



Accredited by NIST (NVLAP)  
NVLAP Lab Code: 200347-0

Product Name : Access Point

Applicant : ASKEY COMPUTER CORP.

Address : 2/FL, No. 2, Lane 497 Chung Cheng Road, Hsin  
Tien, Taipei, Taiwan, R.O.C.

Manufacturer : ASKEY COMPUTER CORP.

Model No. : RTW030

FCC ID. : H8N-RTW030

Rated Voltage : AC 120V/60Hz

Trade Name : ASKEY

Measurement Standard : FCC Part 15 Subpart C Paragraph 15.247

Measurement Procedure : ANSI C63.4:1992


Test Result : Complied

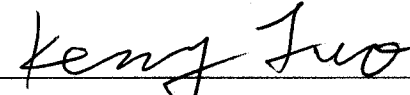



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Documented By :   
( Kim Hung )

Tested By :   
( Kenny Jwo )

Approved By :   
( Kevin Wang )

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Measurement Procedure : ANSI C63.4:1992

Test Result : Complied



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## 1. GENERAL INFORMATION

### 1.1. EUT Description

Product Name : Access Point  
 Trade Name : ASKEY  
 FCC ID. : H8NRTW030  
 Model No. : RTW030  
 Frequency Range : 2412MHz to 2462MHz  
 Channel Number : 11  
 Chip Rate : 1Mbps, 2Mbps, 5.5Mbps, 11Mbps  
 Type of Modulation : Direct Sequence Spread Spectrum  
 Antenna type : Internal permanently on board.  
 Operator Selection of Operating Frequency : By software  
 Power Adapter : DELTA, ADP-12SB, URD0136053188  
 Power Cord : Non-shielded, 1.6m  
 Power Cord : Non-shielded, 1.8m

Frequency of Each Channel:

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

Note:

1. This device is a 2.4GHz Access Point included a 2.4GHz receiving function, a 2.4GHz transmitting function for the desktop/ laptop computers. Direct Sequence device with 11 channels.
2. Regards to the frequency band operation; two rate that were included the lowest 、 middle and highest frequency of channel were selected to perform the test, then shown on this report.
3. These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with Part 15 Subpart C Paragraph 15.247 for spread spectrum devices.
4. This device is a composite device in accordance with Part 15 regulations. The function receiving was measured and made a test report that the report number is 022H041F under Declaration of Conformity.

### 1.2. Operational Description

EUT is a spread spectrum 2.4 GHz wireless access point which follows IEEE 802.11b. 11 channels were provided by EUT. The max transmission speed is 11Mbps with CCK, DQPSK and DBPSK modulation. This device provided four kind of transmitting speed 1,2,5.5 and 11Mbps.

The device adapts direct sequence spread spectrum modulation. The dual monopole antenna printed on PCB provides diversity function to improve the receiving function. Data can be transmitted by the radio signal connect to the Internet or Local network.

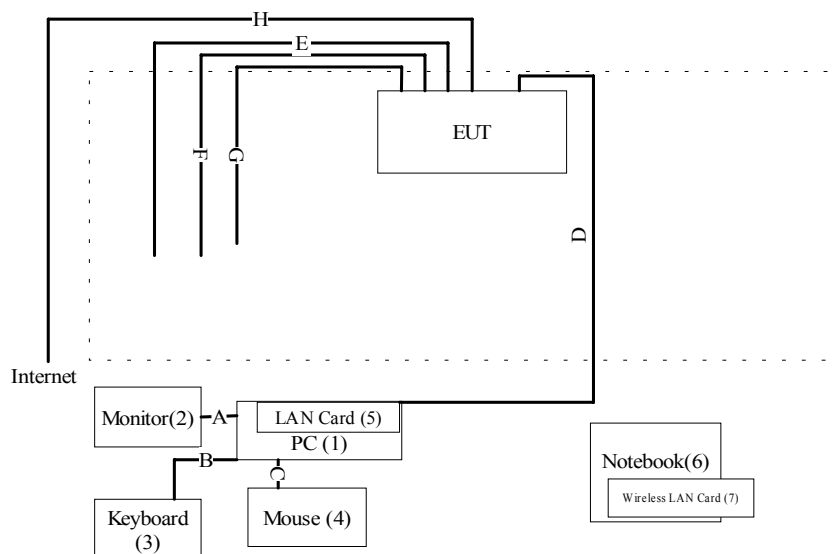
### 1.3. Tested System Details

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards ) are:

Product	Manufacturer	Model No.	Serial No.	Power Cord	FCC ID
(1) PC	IBM	16W	BNL676M	Non-shielded,1.8m	DoC
(2) Monitor	SYNCO	15CTO	1910882	Shielded,1.8m	ITLUZ15C
(3) Keyboard	ACER	6311-TW2C	916590702C87328856		DoC
(4) Mouse	Logitech	M-S35	LZA75102600		DZL211029
(5) LAN Card	D-LINK	DFE-500TX	0080C8 958320		KA2APC500X3
(6) Notebook	IBM	Think Pad 570	27L8835	Non-shielded,1.5m	DoC
(7) Wireless LAN Card	W-Link	DWL-650	--	--	KA22001060015-1

Signal Cable Type	Signal Cable Description
A. VGA Cable	Shielded, 1.6m
B. Keyboard Cable	Shielded, 1.8m
C. Mouse Cable	Shielded, 1.8m
D. LAN Cable	Non-shielded, 3.0m
E. LAN Cable	Non-shielded, 3.0m
F. LAN Cable	Non-shielded, 3.0m
G. LAN Cable	Non-shielded, 3.0m
H. LAN Cable	Non-shielded, 3.0m

### 1.4. Configuration of Tested System



**1.5. EUT Exercise Software**

- 1.4.1 Setup the EUT and simulators as shown on 1.3.
- 1.4.2 Turn on the power of all equipment.
- 1.4.3 Notebook PC reads data from disk.
- 1.4.4 Data will be transmitted through EUT.
- 1.4.5 The transmission status will be shown on the monitor.
- 1.4.6 Repeat the above procedure 1.4.4 to 1.4.5

**1.6. Test Facility**

Ambient conditions in the laboratory:

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	20-35
Humidity (%RH)	25-75	50-65
Barometric pressure (mbar)	860-1060	950-1000

Site Description: November 3, 1998 File on  
 Federal Communications Commission  
 FCC Engineering Laboratory  
 7435 Oakland Mills Road  
 Columbia, MD 21046  
 Reference 31040/SIT1300F2  
 September 30, 1998 Accreditation on NVLAP  
 NVLAP Lab Code: 200347-0



Site Name: Quietek Corporation

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## 2. Conducted Emission

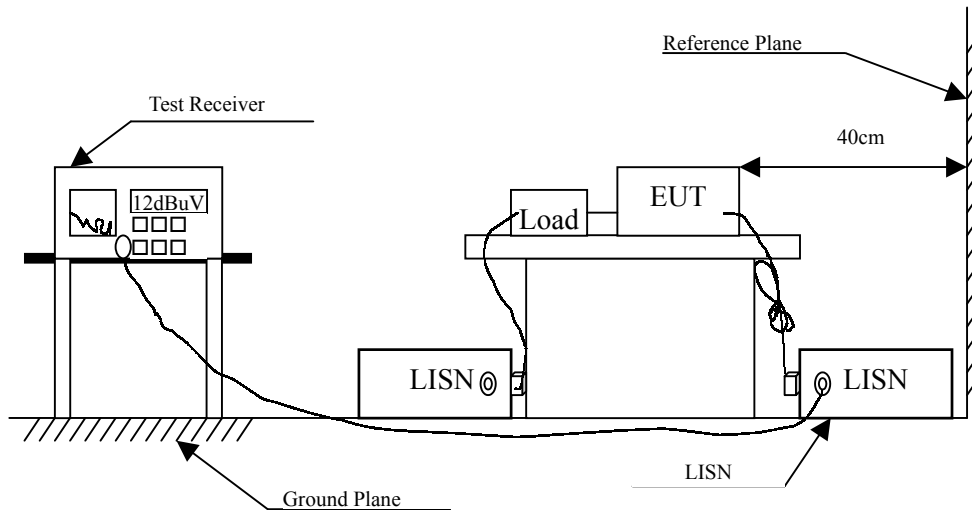
### 2.1. Test Equipment List

The following test equipment are used during the conducted emission test:

Item	Instrument	Manufacturer	Type No./Serial No	Last Cal.	Remark
1	Test Receiver	R & S	ESCS 30/825442/17	May, 2001	
2	L.I.S.N.	R & S	ESH3-Z5/825016/6	May, 2001	EUT
3	L.I.S.N.	Kyoritsu	KNW-407/8-1420-3	May, 2001	Peripherals
4	Pulse Limiter	R & S	ESH3-Z2	N/A	
5	No.2 Shielded Room			N/A	

Note: All equipment upon which need to calibrated are with calibration period of 1 year.

### 2.2. Test Setup



### 2.3. Limits

FCC Part 15 Paragraph 15.207 (dBuV)		
Frequency MHz	Limits	
	uV	dBuV
0.45 - 30	250	48.0

## 2.4. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs.)

Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4:1992 on conducted measurement.

Conducted emissions were investigated over the frequency range from 0.45MHz to 30MHz using a receiver bandwidth of 9kHz.

## 2.5. Test Result of Conducted Emission

Product : Access Point  
 Test Item : Conducted Emission Test  
 Test Mode : Normal Operation

Frequency	Cable Loss	LISN Factor	Reading Level	Emission Level	Limits
MHz	dB	dB	dBuV	dBuV	dBuV

### Line 1

#### Quasi-Peak:

*0.589	0.07	0.23	39.91	40.21	48.00
1.007	0.10	0.28	38.55	38.93	48.00
1.270	0.11	0.30	39.35	39.77	48.00
1.489	0.13	0.32	39.03	39.47	48.00
2.977	0.17	0.38	38.05	38.60	48.00
6.167	0.22	0.45	32.87	33.54	48.00

### Line 2

#### Quasi-Peak:

0.579	0.07	0.23	37.95	38.25	48.00
1.009	0.10	0.28	38.39	38.77	48.00
*1.270	0.11	0.30	38.99	39.41	48.00
2.196	0.15	0.35	35.75	36.25	48.00
3.110	0.17	0.39	36.31	36.87	48.00
3.989	0.19	0.41	34.49	35.09	48.00

#### Remarks :

1. All Readings below 1GHz are Quasi-Peak value.
2. “ \* ” means that this data is the worst emission level.
3. Emission Level = Reading Level + LISN Factor + Cable loss

### 3. Peak Power Output

#### 3.1. Test Equipment

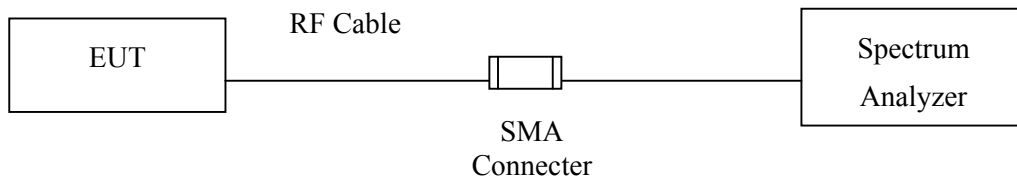
The following test equipments are used during the radiated emission tests:

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
X	Spectrum	Advantest	R3272 / 72421194	May, 2001

Note: 1. All equipment upon which need to calibrated are with calibration period of 1 year.  
 2. Mark "X" test instruments are used to measure the final test results.

#### 3.2. Test Setup

##### Conduction Power Measurement



#### 3.3. Test Condition

Standard Temperature and Humidity, Standard Test Voltage

#### 3.4. Minimum Standard

The maximum peak power shall be less 1 Watt.

### 3.5. Test Result of Peak Power Output

Product : Access Point  
 Test Item : Peak Power Output Data  
 Test Site : No.1 OATS  
 Test Mode : Normal Operation

#### Data Speed: 1Mbps

Channel No.	Frequency(MHz)	Measurement	Required Limit	Result
1	2412	17.72 dBm	1 Watt= 30 dBm	Pass
6	2437	19.13 dBm	1 Watt= 30 dBm	Pass
11	2462	19.21 dBm	1 Watt= 30 dBm	Pass

#### Data Speed: 11Mbps

Channel No.	Frequency(MHz)	Measurement	Required Limit	Result
1	2412	17.67 dBm	1 Watt= 30 dBm	Pass
6	2437	19.10 dBm	1 Watt= 30 dBm	Pass
11	2462	19.17 dBm	1 Watt= 30 dBm	Pass

#### 4. RF Exposure Evaluation

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)  
LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm <sup>2</sup> )	Average Time (Minutes)
(A) Limits for Occupational/ Control Exposures				
300-1500	--	--	F/300	6
1500-100,000	--	--	5	6
(B) Limits for General Population/ Uncontrolled Exposures				
300-1500	--	--	F/1500	6
1500-100,000	--	--	1	30

F= Frequency in MHz

##### 4.1. Friis Formula

$$\text{Friis transmission formula: } P_d = (P_{out} * G) / (4 * \pi * r^2)$$

Where

$P_d$  = power density in mW/cm<sup>2</sup>

$P_{out}$  = output power to antenna in mW

$G$  = gain of antenna in linear scale

$\pi$  = 3.1416

$R$  = distance between observation point and center of the radiator in cm

$P_d$  is the limit of MPE, 1 mW/cm<sup>2</sup>. If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance  $r$  where the MPE limit is reached.

##### 4.2. EUT Operation condition

A software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

### 4.3. Test Result of RF Exposure Evaluation

Product : Access Point  
 Test Item : RF Exposure Evaluation Data  
 Test Site : No.1 OATS  
 Test Mode : Normal Operation

#### 4.3.1 Antenna Gain

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 0dBi linear scale.

#### 4.3.2 Output Power Into Antenna & RF Exposure Evaluation Distance

Channel	Channel Frequency (MHz)	Output Power to Antenna (dBm)	Minimum Allowable Distance ® From Skin(cm)
1 (1Mbps)	2412	17.72	2.17
1 (11Mbps)	2412	17.67	2.16
6 (1Mbps)	2437	19.13	2.55
6 (11Mbps)	2437	19.10	2.54
11 (1Mbps)	2462	19.21	2.58
11 (11Mbps)	2462	19.17	2.56

The distance r (4<sup>th</sup> column) calculated from the Friis transmission formula is far shorter than 20 cm separation requirement. So, RF exposure limit warning or SAR test are not required.

## 5. Radiated Emission

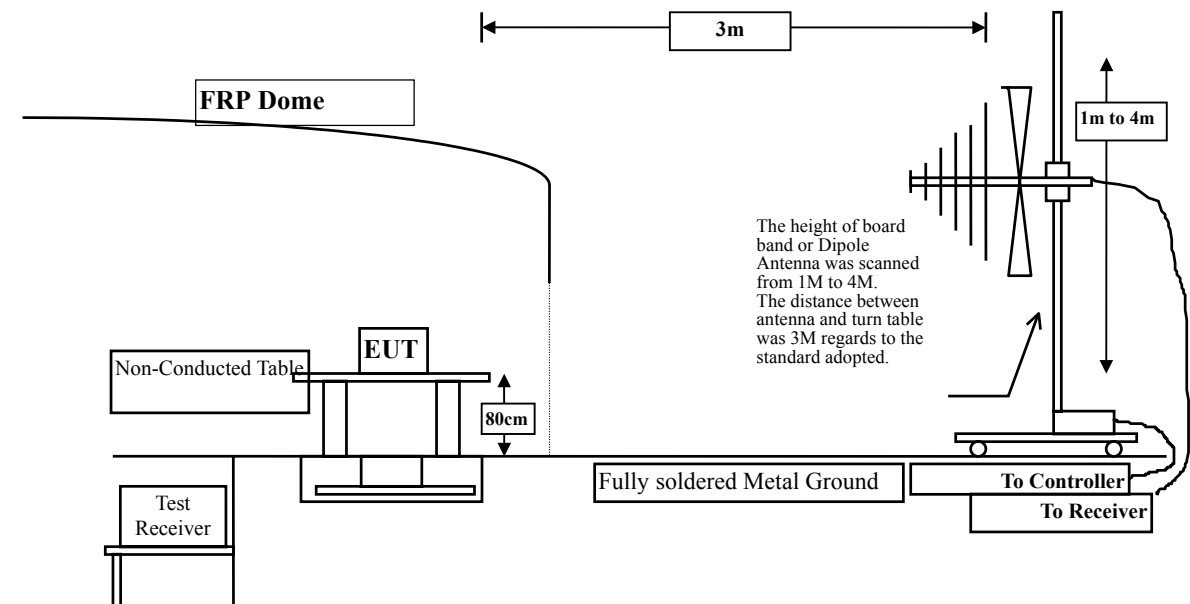
### 5.1. Test Equipment

The following test equipment are used during the radiated emission test:

Test Site	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
Site # 1	X Test Receiver	R & S	ESCS 30 / 825442/14	May, 2001
	X Spectrum Analyzer	Advantest	R3261C / 71720140	May, 2001
	X Pre-Amplifier	HP	8447D/3307A01812	May, 2001
	X Bilog Antenna	Chase	CBL6112B / 12452	Sep., 2001
	X Horn Antenna	EM	EM6917 / 103325	May, 2001
Site # 2	Test Receiver	R & S	ESCS 30 / 825442/17	May, 2001
	Spectrum Analyzer	Advantest	R3261C / 71720609	May, 2001
	Pre-Amplifier	HP	8447D/3307A01814	May, 2001
	Bilog Antenna	Chase	CBL6112B / 2455	Sep., 2001
	Horn Antenna	EM	EM6917 / 103325	May, 2001

- Note:
1. All equipments that need to calibrate are with calibration period of 1 year.
  2. Mark "X" test instruments are used to measure the final test results.

### 5.2. Test Setup



Spurious Emissions  
(Band Edge Antenna Radiated)



### 5.3. Test Condition

Standard Temperature and Humidity, Standard Test Voltage

### 5.4. Limits

#### ► General Radiated Emission Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

<b>FCC Part 15 Subpart C Paragraph 15.209(a) Limits</b>		
Frequency MHz	uV/m @3m	dBuV/m@3m
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

- Remarks :
1. RF Voltage (dBuV) = 20 log RF Voltage (uV)
  2. In the Above Table, the tighter limit applies at the band edges.
  3. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

## 5.5. Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.4:1992 on radiated measurement.

The additional latch filter below 1GHz was used to measure the level of harmonics radiated emission during field strength of harmonics measurement.

The bandwidth below 1GHz setting on the field strength meter (R&S Test Receiver ESCS 30 )is 120 kHz, above 1GHz are 1 MHz.

The frequency range from 30MHz to 10th harmonics is checked.

## 5.6. Test Result of Radiated Emission

Product : Access Point  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.1 OATS  
 Test Mode : Channel 1(1Mbps)

Frequency MHz	Cable Probe		PreAMP dB	Reading Level dBuV	Emission Margin Limit		
	Loss dB	Factor dB/m			Level dB	Level dBuV/m	Level dBuV/m
<b>Horizontal: (Peak)</b>							
4824.050	6.28	33.50	34.68	48.40	53.50	20.50	74.00
7237.452	8.32	36.24	34.97	39.53	49.12	24.88	74.00
9648.150	10.17	37.43	35.10	37.35	49.85	24.15	74.00
12060.25	11.92	39.13	34.61	34.73	<51.17	22.83	74.00
14472.05	13.52	40.82	33.85	23.29	<43.78	30.22	74.00
16884.15	15.08	42.56	33.97	26.98	<50.65	23.35	74.00
19295.94	15.76	47.30	33.80	22.15	<51.41	22.59	74.00
21707.94	15.76	47.30	33.80	22.86	<52.12	21.88	74.00
24120.35	15.76	47.30	33.80	23.18	<52.44	21.56	74.00
<b>Vertical: (Peak)</b>							
4823.949	6.28	33.50	34.68	49.92	55.02	18.98	74.00
7238.054	8.32	36.24	34.97	41.23	50.82	23.18	74.00
9648.050	10.17	37.43	35.10	37.78	50.28	23.72	74.00
12060.15	11.92	39.13	34.61	34.28	<50.72	23.28	74.00
14472.05	13.52	40.82	33.85	23.75	<44.24	29.76	74.00
16884.05	15.08	42.56	33.97	26.56	<50.23	23.77	74.00
19295.85	15.76	47.30	33.80	22.87	<52.13	21.87	74.00
21708.15	15.76	47.30	33.80	23.20	<52.46	21.54	74.00
24120.15	15.76	47.30	33.80	23.57	<52.83	21.17	74.00
<b>Vertical: (Average)</b>							
4824.350	6.28	33.50	34.68	45.85	50.95	3.05	54.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. “ \* ”, means this data is the worst emission level.
3. Emission Level = Reading Level + Probe Factor + Cable loss
4. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Access Point  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.1 OATS  
 Test Mode : Channel 6(1Mbps)

Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level	Emission Level	Margin	Limit
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m

**Horizontal: (Peak)**

4873.897	6.32	33.56	34.69	52.14	57.33	16.67	74.00
7312.899	8.38	36.31	34.99	40.04	49.74	24.26	74.00
9747.893	10.24	37.45	35.10	36.76	49.35	24.65	74.00
12187.39	12.00	39.18	34.48	33.93	<50.63	23.37	74.00
14624.99	13.61	40.53	34.05	20.67	<40.76	33.24	74.00
17063.19	15.17	42.86	33.89	24.97	<49.12	24.88	74.00
19501.39	15.76	47.30	33.80	21.20	<50.46	23.54	74.00
21939.19	15.76	47.30	33.80	22.06	<51.32	22.68	74.00
24377.19	15.76	47.30	33.80	23.52	<52.78	21.22	74.00

**Horizontal: (Average)**

4873.797	6.32	33.56	34.69	47.39	52.58	1.42	54.00
----------	------	-------	-------	-------	-------	------	-------

**Vertical: (Peak)**

4873.998	6.32	33.56	34.69	51.97	57.16	16.84	74.00
7313.601	8.38	36.31	34.99	42.51	52.21	21.79	74.00
9747.793	10.24	37.45	35.10	37.67	50.26	23.74	74.00
12186.89	12.00	39.18	34.48	34.59	<51.29	22.71	74.00
14625.39	13.61	40.53	34.05	20.67	<40.76	33.24	74.00
17063.09	15.17	42.86	33.89	25.87	<50.02	23.98	74.00
19500.89	15.76	47.30	33.80	21.76	<51.02	22.98	74.00
21939.19	15.76	47.30	33.80	22.37	<51.63	22.37	74.00
24377.59	15.76	47.30	33.80	22.88	<52.14	21.86	74.00

**Vertical: (Average)**

4873.797	6.32	33.56	34.69	46.94	52.13	1.87	54.00
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Note:

1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. “ \* ”, means this data is the worst emission level.
3. Emission Level = Reading Level + Probe Factor + Cable loss
4. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Access Point  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.1 OATS  
 Test Mode : Channel 11(1Mbps)

Frequency MHz	Cable Probe		PreAMP dB	Reading Level dBuV	Emission Margin Limit		
	Loss dB	Factor dB/m			Level dBuV/m	dB	dBuV/m
<b>Horizontal: (Peak)</b>							
4923.999	6.36	33.61	34.69	51.90	57.17	16.83	74.00
7387.152	8.46	36.41	35.02	37.95	47.79	26.21	74.00
9848.200	10.31	37.46	35.10	35.01	47.69	26.31	74.00
12310.14	12.08	39.23	34.35	32.69	<49.65	24.35	74.00
14772.30	13.73	40.13	34.31	23.73	<43.29	30.71	74.00
17234.24	15.28	43.66	33.88	24.90	<49.96	24.04	74.00
19696.40	15.76	47.30	33.80	20.86	<50.12	23.88	74.00
22158.55	15.76	47.30	33.80	21.85	<51.11	22.89	74.00
24620.50	15.76	47.30	33.80	22.97	<52.23	21.77	74.00
<b>Horizontal: (Average)</b>							
4923.300	6.36	33.61	34.69	47.66	52.93	1.07	54.00
<b>Vertical: (Peak)</b>							
4923.999	6.36	33.61	34.69	51.29	56.56	17.44	74.00
7385.949	8.46	36.41	35.02	39.61	49.45	24.55	74.00
9848.300	10.31	37.46	35.10	36.23	48.91	25.09	74.00
12310.25	12.08	39.23	34.35	32.98	<49.94	24.06	74.00
14772.19	13.73	40.13	34.31	24.39	<43.95	30.05	74.00
17234.24	15.28	43.66	33.88	24.15	<49.21	24.79	74.00
19696.40	15.76	47.30	33.80	20.95	<50.21	23.79	74.00
22158.04	15.76	47.30	33.80	21.75	<51.01	22.99	74.00
24619.99	15.76	47.30	33.80	22.86	<52.12	21.88	74.00
<b>Vertical: (Average)</b>							
4924.300	6.36	33.61	34.69	47.71	52.98	1.02	54.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. “ \* ”, means this data is the worst emission level.
3. Emission Level = Reading Level + Probe Factor + Cable loss
4. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Access Point  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.1 OATS  
 Test Mode : Channel 1(11Mbps)

Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level	Emission Level	Margin	Limit
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m

**Horizontal: (Peak)**

4823.849	6.28	33.50	34.68	49.84	54.94	19.06	74.00
7237.052	8.32	36.24	34.97	39.86	49.45	24.55	74.00
9648.050	10.17	37.43	35.10	37.96	50.46	23.54	74.00
12059.94	11.92	39.13	34.61	34.49	<50.93	23.07	74.00
14472.05	13.52	40.82	33.85	29.47	<49.96	24.04	74.00
16884.15	15.08	42.56	33.97	26.74	<50.41	23.59	74.00
19295.94	15.76	47.30	33.80	22.36	<51.62	22.38	74.00
21708.55	15.76	47.30	33.80	22.85	<52.11	21.89	74.00
24120.05	15.76	47.30	33.80	22.43	<51.69	22.31	74.00

**Horizontal: (Average)**

4824.250	6.28	33.50	34.68	45.67	50.77	3.23	54.00
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**Vertical: (Peak)**

4824.050	6.28	33.50	34.68	49.54	54.64	19.36	74.00
7237.352	8.32	36.24	34.97	41.36	50.95	23.05	74.00
9647.849	10.17	37.43	35.10	38.81	51.31	22.69	74.00
12059.94	11.92	39.13	34.61	34.55	<50.99	23.01	74.00
14472.45	13.52	40.82	33.85	22.92	<43.41	30.59	74.00
16884.05	15.08	42.56	33.97	26.61	<50.28	23.72	74.00
19296.05	15.76	47.30	33.80	22.55	<51.81	22.19	74.00
21708.55	15.76	47.30	33.80	21.70	<50.96	23.04	74.00
24120.05	15.76	47.30	33.80	23.33	<52.59	21.41	74.00

**Vertical: (Average)**

4824.250	6.28	33.50	34.68	46.05	51.15	2.85	54.00
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Note:

1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. “ \* ”, means this data is the worst emission level.
3. Emission Level = Reading Level + Probe Factor + Cable loss
4. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Access Point  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.1 OATS  
 Test Mode : Channel 6(11Mbps)

Frequency	Cable Loss	Probe Factor	PreAMP	Reading Level	Emission Level	Margin	Limit
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m

**Horizontal: (Peak)**

4873.998	6.32	33.56	34.69	52.31	57.50	16.50	74.00
7311.797	8.38	36.31	34.99	40.32	50.02	23.98	74.00
9748.094	10.24	37.45	35.10	36.76	49.35	24.65	74.00
12187.09	12.00	39.18	34.48	33.29	<49.99	24.01	74.00
14625.19	13.61	40.53	34.05	19.83	<39.92	34.08	74.00
17063.49	15.17	42.86	33.89	24.07	<48.22	25.78	74.00
19501.59	15.76	47.30	33.80	20.62	<49.88	24.12	74.00
21939.39	15.76	47.30	33.80	20.97	<50.23	23.77	74.00
24377.59	15.76	47.30	33.80	21.98	<51.24	22.76	74.00

**Horizontal: (Average)**

4873.797	6.32	33.56	34.69	47.54	52.73	1.27	54.00
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**Vertical: (Peak)**

4873.998	6.32	33.56	34.69	51.91	57.10	16.90	74.00
7312.599	8.38	36.31	34.99	42.66	52.36	21.64	74.00
9747.793	10.24	37.45	35.10	38.65	51.24	22.76	74.00
12186.89	12.00	39.18	34.48	33.69	<50.39	23.61	74.00
14624.99	13.61	40.53	34.05	20.44	<40.53	33.47	74.00
17063.29	15.17	42.86	33.89	25.66	<49.81	24.19	74.00
19501.19	15.76	47.30	33.80	20.85	<50.11	23.89	74.00
21939.19	15.76	47.30	33.80	21.95	<51.21	22.79	74.00
24377.29	15.76	47.30	33.80	23.07	<52.33	21.67	74.00

**Vertical: (Average)**

4873.797	6.32	33.56	34.69	47.68	52.87	1.13	54.00
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Note:

1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. “ \* ”, means this data is the worst emission level.
3. Emission Level = Reading Level + Probe Factor + Cable loss
4. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Access Point  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.1 OATS  
 Test Mode : Channel 11(11Mbps)

Frequency MHz	Cable Probe		PreAMP dB	Reading Level dBuV	Emission Margin Limit		
	Loss dB	Factor dB/m			Level dBuV/m	dB	dBuV/m
<b>Horizontal: (Peak)</b>							
4923.999	6.36	33.61	34.69	52.02	57.29	16.71	74.00
7383.845	8.44	36.39	35.02	38.96	48.77	25.23	74.00
9848.200	10.31	37.46	35.10	35.05	47.73	26.27	74.00
12310.25	12.08	39.23	34.35	32.70	<49.66	24.34	74.00
14772.30	13.73	40.13	34.31	23.90	<43.46	30.54	74.00
17234.35	15.28	43.66	33.88	24.06	<49.12	24.88	74.00
19696.50	15.76	47.30	33.80	20.96	<50.22	23.78	74.00
22158.55	15.76	47.30	33.80	22.08	<51.34	22.66	74.00
24620.60	15.76	47.30	33.80	23.40	<52.66	21.34	74.00
<b>Horizontal: (Average)</b>							
4924.300	6.36	33.61	34.69	47.33	52.60	1.40	54.00
<b>Vertical: (Peak)</b>							
4923.899	6.36	33.61	34.69	51.98	57.25	16.75	74.00
7384.446	8.44	36.39	35.02	37.93	47.74	26.26	74.00
9848.099	10.31	37.46	35.10	35.28	47.96	26.04	74.00
12310.25	12.08	39.23	34.35	33.08	<50.04	23.96	74.00
14772.19	13.73	40.13	34.31	24.32	<43.88	30.12	74.00
17234.35	15.28	43.66	33.88	24.06	<49.12	24.88	74.00
19696.40	15.76	47.30	33.80	20.97	<50.23	23.77	74.00
22158.44	15.76	47.30	33.80	21.85	<51.11	22.89	74.00
24620.50	15.76	47.30	33.80	22.85	<52.11	21.89	74.00
<b>Vertical: (Average)</b>							
4924.200	6.36	33.61	34.69	47.21	52.48	1.52	54.00

Note:

1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. “ \* ”, means this data is the worst emission level.
3. Emission Level = Reading Level + Probe Factor + Cable loss
4. The average measurement was not performed when the peak measured data under the limit of average detection.



Product : Access Point  
 Test Item : General Radiated Emission Data  
 Test Site : No.1 OATS  
 Test Mode : Channel 1(1Mbps)

Freq.	Cable	Probe	PreAMP	Reading	Emission	Margin	Limit
MHz	Loss	Factor	dB	Level	Level	dB	dBuV/m
	dB	dB/m	dB	dBuV	dBuV/m		

**Horizontal: (Quasi-Peak)**

118.270	1.38	17.71	26.88	48.40	40.60	2.90	43.50
199.750	1.71	15.24	26.91	51.00	41.04	2.46	43.50
238.550	1.87	17.07	26.93	48.40	40.41	5.59	46.00
*247.280	1.91	17.85	26.93	51.20	44.03	1.97	46.00
744.890	3.95	23.28	26.25	39.60	40.58	5.42	46.00
868.080	4.46	23.83	26.06	36.80	39.03	6.97	46.00

**Vertical: (Quasi-Peak)**

*58.130	1.13	10.79	26.86	53.20	38.26	1.74	40.00
107.600	1.34	17.54	26.88	47.40	39.39	4.11	43.50
132.820	1.44	17.82	26.89	46.20	38.57	4.93	43.50
249.220	1.92	17.87	26.93	45.60	38.46	7.54	46.00
558.650	3.19	21.79	26.54	40.40	38.84	7.16	46.00
714.820	3.83	22.60	26.30	37.20	37.33	8.67	46.00
714.820	3.83	22.60	26.30	37.20	37.33	8.67	46.00

**Note:**

1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. “ \* ”, means this data is the worst emission level.
3. Emission Level = Reading Level + Probe Factor + Cable loss- Pre Amp.

Product : Access Point  
 Test Item : General Radiated Emission Data  
 Test Site : No.1 OATS  
 Test Mode : Channel 6(1Mbps)

Freq.	Cable	Probe	PreAMP	Reading	Emission	Margin	Limit
MHz	Loss	Factor	dB	Level	Level	dB	dBuV/m
	dB	dB/m	dB	dBuV	dBuV/m		

**Horizontal: (Quasi-Peak)**

118.270	1.38	17.71	26.88	48.80	41.00	2.50	43.50
199.750	1.71	15.24	26.91	51.00	41.04	2.46	43.50
238.550	1.87	17.07	26.93	48.80	40.81	5.19	46.00
*247.280	1.91	17.85	26.93	51.80	44.63	1.37	46.00
597.450	3.35	21.95	26.48	40.20	39.01	6.99	46.00
744.890	3.95	23.28	26.25	40.80	41.78	4.22	46.00

**Vertical: (Quasi-Peak)**

*59.100	1.14	10.69	26.86	52.40	37.36	2.64	40.00
107.600	1.34	17.54	26.88	47.20	39.19	4.31	43.50
131.850	1.44	17.92	26.89	45.40	37.87	5.63	43.50
248.250	1.91	17.85	26.93	45.80	38.63	7.37	46.00
556.710	3.18	21.87	26.55	40.40	38.91	7.09	46.00
716.760	3.84	22.70	26.29	36.80	37.04	8.96	46.00

**Note:**

1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. “ \* ”, means this data is the worst emission level.
3. Emission Level = Reading Level + Probe Factor + Cable loss- Pre Amp.

Product : Access Point  
 Test Item : General Radiated Emission Data  
 Test Site : No.1 OATS  
 Test Mode : Channel 11(1Mbps)

Freq.	Cable	Probe	PreAMP	Reading	Emission	Margin	Limit
MHz	Loss	Factor	dB	Level	Level	dB	dBuV/m
	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m

### Horizontal: (Quasi-Peak)

118.270	1.38	17.71	26.88	48.40	40.60	2.90	43.50
*199.750	1.71	15.24	26.91	51.00	41.04	2.46	43.50
238.550	1.87	17.07	26.93	49.00	41.01	4.99	46.00
556.710	3.18	21.87	26.55	40.80	39.31	6.69	46.00
598.420	3.35	21.95	26.48	40.80	39.62	6.38	46.00
744.890	3.95	23.28	26.25	41.40	42.38	3.62	46.00

### Vertical: (Quasi-Peak)

*59.100	1.14	10.69	26.86	53.20	38.16	1.84	40.00
107.600	1.34	17.54	26.88	47.20	39.19	4.31	43.50
132.820	1.44	17.82	26.89	45.80	38.17	5.33	43.50
249.220	1.92	17.87	26.93	45.40	38.26	7.74	46.00
558.650	3.19	21.79	26.54	41.00	39.44	6.56	46.00
715.790	3.83	22.60	26.30	37.00	37.14	8.86	46.00

#### Note:

1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. “ \* ”, means this data is the worst emission level.
3. Emission Level = Reading Level + Probe Factor + Cable loss- Pre Amp.

Product : Access Point  
 Test Item : General Radiated Emission Data  
 Test Site : No.1 OATS  
 Test Mode : Channel 1(11Mbps)

Freq.	Cable	Probe	PreAMP Reading	Emission	Margin	Limit	
	Loss	Factor	Level	Level			
MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m

### Horizontal: (Quasi-Peak)

118.270	1.38	17.71	26.88	48.60	40.80	2.70	43.50
199.750	1.71	15.24	26.91	50.20	40.24	3.26	43.50
238.550	1.87	17.07	26.93	48.80	40.81	5.19	46.00
*248.250	1.91	17.85	26.93	52.00	44.83	1.17	46.00
744.890	3.95	23.28	26.25	42.40	43.38	2.62	46.00
870.020	4.47	23.83	26.05	36.80	39.04	6.96	46.00

### Vertical: (Quasi-Peak)

*58.130	1.13	10.79	26.86	52.80	37.86	2.14	40.00
109.540	1.34	17.55	26.88	47.80	39.81	3.69	43.50
132.820	1.44	17.82	26.89	46.40	38.77	4.73	43.50
249.220	1.92	17.87	26.93	45.40	38.26	7.74	46.00
556.710	3.18	21.87	26.55	40.80	39.31	6.69	46.00
715.790	3.83	22.60	26.30	37.20	37.34	8.66	46.00

#### Note:

1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. “ \* ”, means this data is the worst emission level.
3. Emission Level = Reading Level + Probe Factor + Cable loss- Pre Amp.

Product : Access Point  
 Test Item : General Radiated Emission Data  
 Test Site : No.1 OATS  
 Test Mode : Channel 6(11Mbps)

Freq.	Cable	Probe	PreAMP	Reading	Emission	Margin	Limit
MHz	Loss	Factor	dB	Level	Level	dB	dBuV/m
	dB	dB/m	dB	dBuV	dBuV/m		

### Horizontal: (Quasi-Peak)

*119.240	1.38	17.60	26.88	48.40	40.50	3.00	43.50
199.750	1.71	15.24	26.91	50.20	40.24	3.26	43.50
238.550	1.87	17.07	26.93	49.00	41.01	4.99	46.00
597.450	3.35	21.95	26.48	40.20	39.01	6.99	46.00
716.760	3.84	22.70	26.29	38.00	38.24	7.76	46.00
745.860	3.96	23.29	26.25	40.60	41.60	4.40	46.00

### Vertical: (Quasi-Peak)

*59.100	1.14	10.69	26.86	52.80	37.76	2.24	40.00
109.540	1.34	17.55	26.88	47.60	39.61	3.89	43.50
132.820	1.44	17.82	26.89	45.40	37.77	5.73	43.50
249.220	1.92	17.87	26.93	44.60	37.46	8.54	46.00
557.680	3.18	21.77	26.54	40.40	38.81	7.19	46.00
716.760	3.84	22.70	26.29	37.60	37.84	8.16	46.00

#### Note:

1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. “ \* ”, means this data is the worst emission level.
3. Emission Level = Reading Level + Probe Factor + Cable loss- Pre Amp.

Product : Access Point  
 Test Item : General Radiated Emission Data  
 Test Site : No.1 OATS  
 Test Mode : Channel 11(11Mbps)

Freq.	Cable	Probe	PreAMP	Reading	Emission	Margin	Limit
MHz	Loss	Factor	dB	Level	Level	dB	dBuV/m
	dB	dB/m	dB	dBuV	dBuV/m	dB	dBuV/m

### Horizontal: (Quasi-Peak)

*119.240	1.38	17.60	26.88	48.40	40.50	3.00	43.50
199.750	1.71	15.24	26.91	50.40	40.44	3.06	43.50
238.550	1.87	17.07	26.93	49.00	41.01	4.99	46.00
596.480	3.34	21.93	26.48	40.80	39.59	6.41	46.00
745.860	3.96	23.29	26.25	40.80	41.80	4.20	46.00
868.080	4.46	23.83	26.06	36.60	38.83	7.17	46.00

### Vertical: (Quasi-Peak)

*59.100	1.14	10.69	26.86	52.40	37.36	2.64	40.00
106.630	1.33	17.64	26.88	47.40	39.49	4.01	43.50
131.850	1.44	17.92	26.89	45.80	38.27	5.23	43.50
249.220	1.92	17.87	26.93	45.60	38.46	7.54	46.00
556.710	3.18	21.87	26.55	40.00	38.51	7.49	46.00
716.760	3.84	22.70	26.29	37.40	37.64	8.36	46.00

#### Note:

1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. “ \* ”, means this data is the worst emission level.
3. Emission Level = Reading Level + Probe Factor + Cable loss- Pre Amp.

## 6. Band Edge

### 6.1. Test Equipment

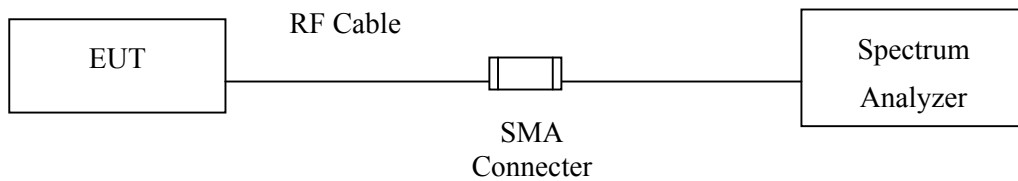
The following test equipments are used during the band edge tests:

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
X	Spectrum Analyzer	Advantest	R3272 / 72421194	May, 2001
X	Test Receiver	R & S	ESCS 30 / 825442/14	May, 2001
X	Spectrum Analyzer	Advantest	R3261C / 71720140	May, 2001
X	Pre-Amplifier	HP	8447D/3307A01812	May, 2001
X	Bilog Antenna	Chase	CBL6112B / 12452	Sep., 2001
X	Horn Antenna	EM	EM6917 / 103325	May, 2001

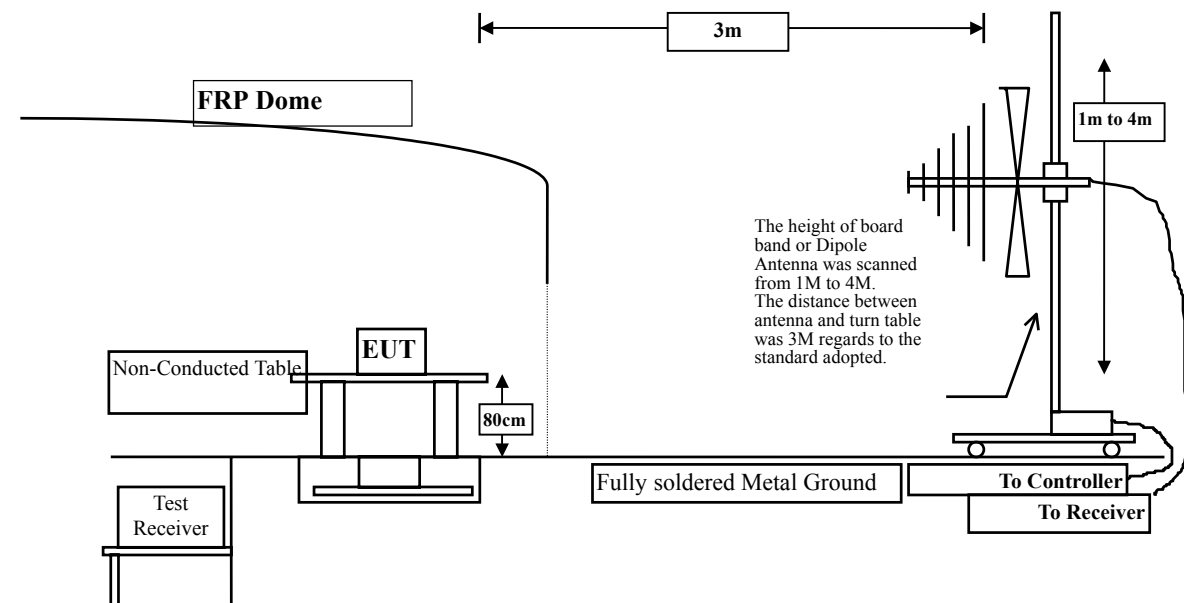
- Note: 1. All equipments that need to calibrate are with calibration period of 1 year.  
 2. Mark "X" test instruments are used to measure the final test results.

### 6.2. Test Setup

#### RF Conducted Measurement:



#### RF Radiated Measurement:



### **6.3. Test Condition**

Standard Temperature and Humidity, Standard Test Voltage

### **6.4. Standard Requirement**

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).



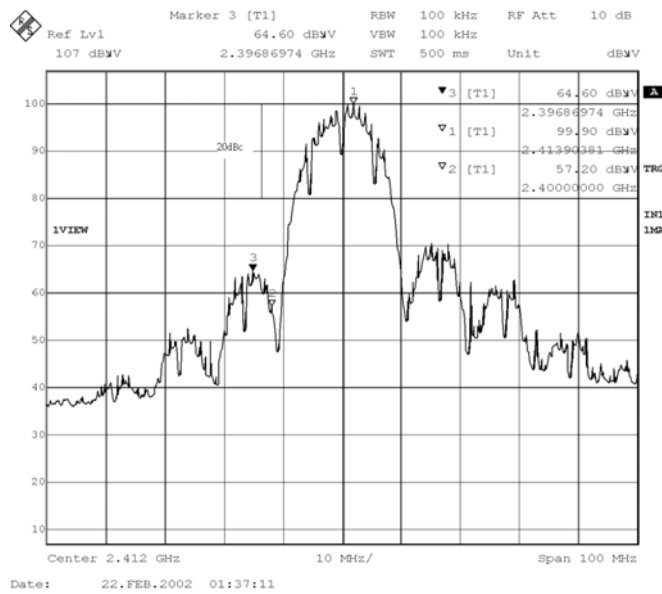
### 6.5. Test Result of Band Edge

Product : Access Point  
 Test Item : Band Edge Data  
 Test Site : No.1 OATS  
 Test Mode : Channel 1

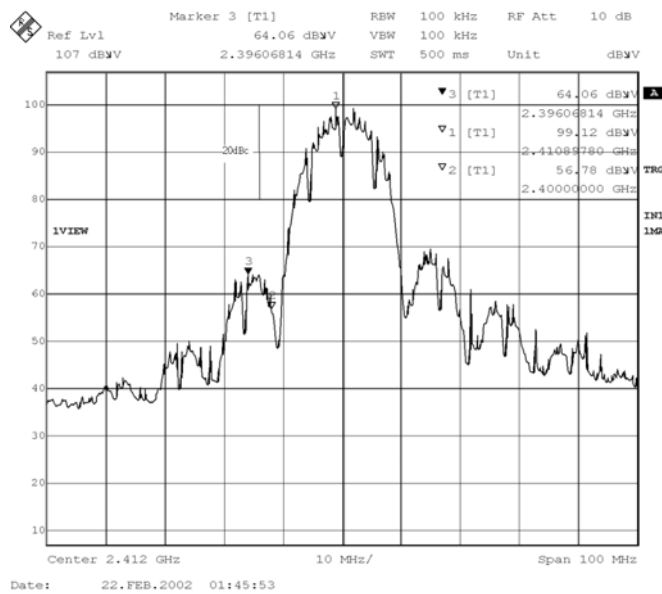
#### RF Conducted Measurement:

Channel No.	Frequency (MHz)	Required Limit (dBc)	Result
1 (1Mbps)	<2400	>20	Pass
1 (11Mbps)	<2400	>20	Pass

#### 1Mbps



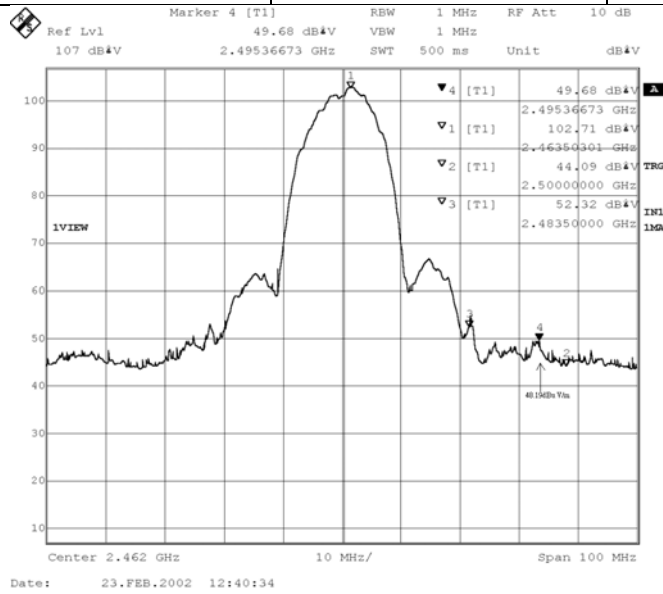
#### 11Mbps



Product : Access Point  
 Test Item : Band Edge Data  
 Test Site : No.1 OATS  
 Test Mode : Channel 11 (1Mbps)

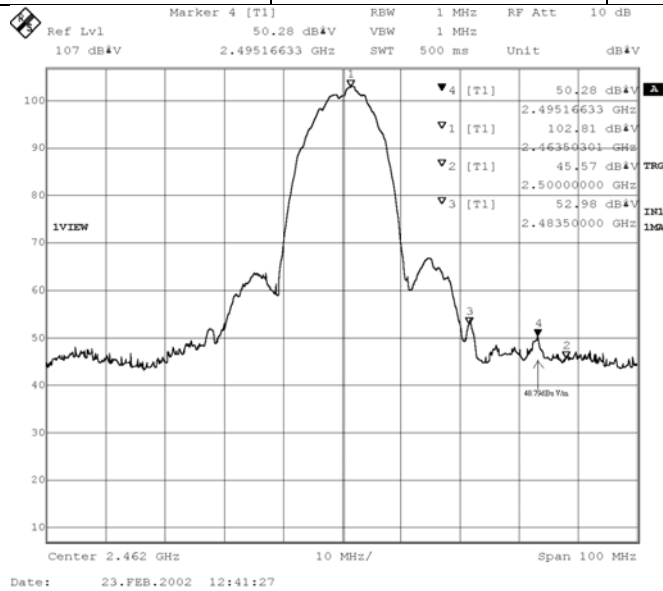
**RF Radiated Measurement:  
 1 Mbps (Horizontal)**

Frequency (MHz).	Reading (dBuV)	Measure (dBuV/m)	Result
2495.36673	49.68	48.19	Pass



**1 Mbps (Vertical)**

Frequency (MHz).	Reading (dBuV)	Measure (dBuV/m)	Result
2495.16633	50.28	48.79	Pass

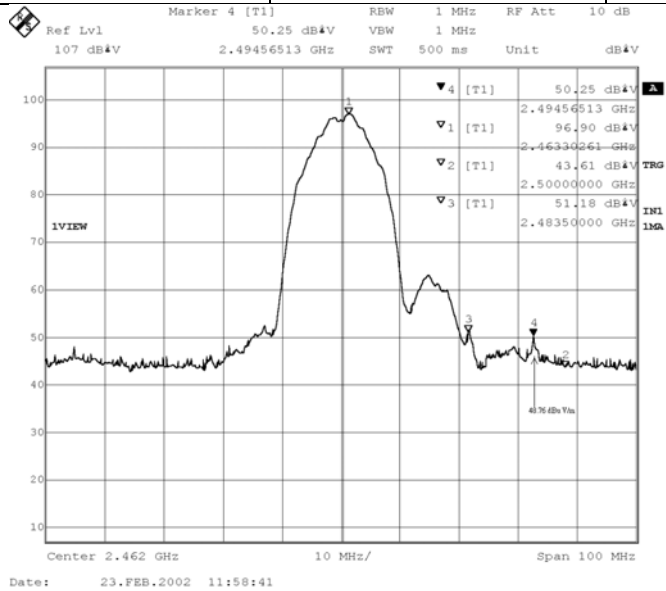


Product : Access Point  
 Test Item : Band Edge Data  
 Test Site : No.1 OATS  
 Test Mode : Channel 11 (11Mbps)

**RF Radiated Measurement:**

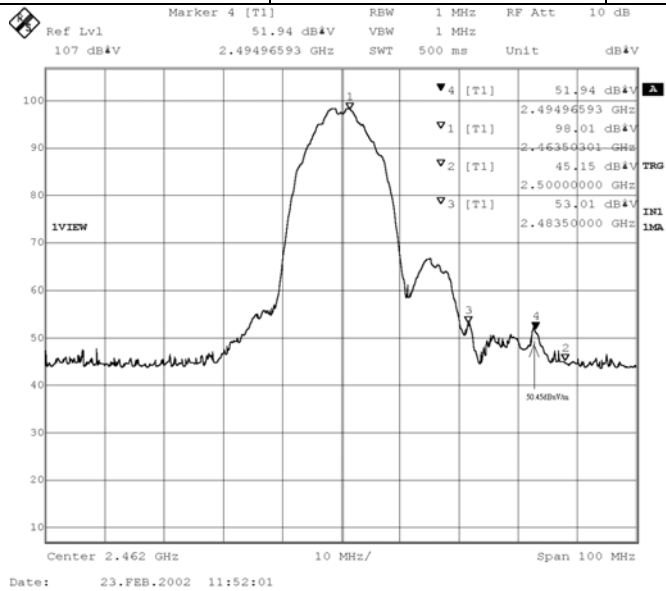
**11 Mbps (Horizontal)**

Frequency (MHz).	Reading (dBuV)	Measure (dBuV/m)	Result
2494.56513	50.25	48.76	Pass



**11 Mbps (Vertical)**

Frequency (MHz).	Reading (dBuV)	Measure (dBuV/m)	Result
2494.96593	51.94	50.45	Pass



## 7. Occupied Bandwidth

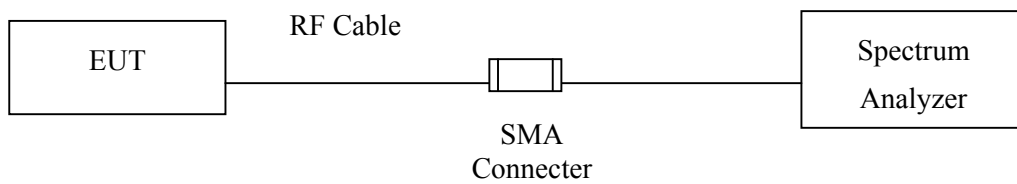
### 7.1. Test Equipment

The following test equipments are used during the radiated emission tests:

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
X	Spectrum	Advantest	R3272 / 72421194	May, 2001

Note: 1. All equipment upon which need to calibrated are with calibration period of 1 year.  
 2. Mark "X" test instruments are used to measure the final test results.

### 7.2. Test Setup



### 7.3. Test Condition

Standard Temperature and Humidity, Standard Test Voltage

### 7.4. Standard Requirement

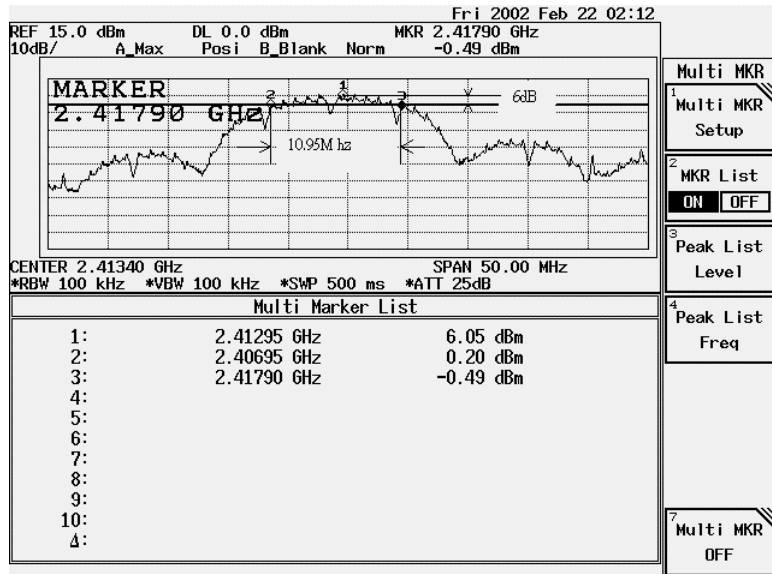
The minimum bandwidth shall be at least 500kHz.

### 7.5. Test Result of Occupied Bandwidth

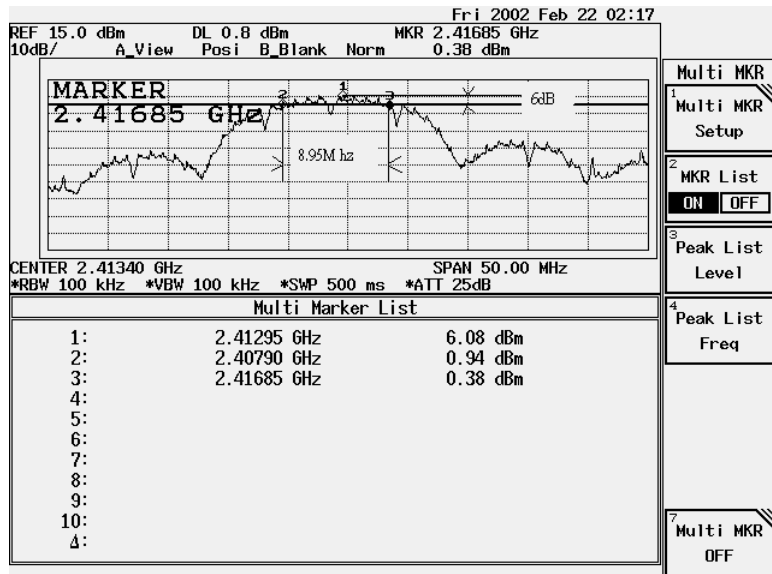
Product : Access Point  
 Test Item : Occupied Bandwidth Data  
 Test Site : No.1 OATS  
 Test Mode : Channel 1

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
1 (1Mbps)	2417.90	10950	>500	Pass
1 (11Mbps)	2416.85	8950	>500	Pass

#### 1Mbps



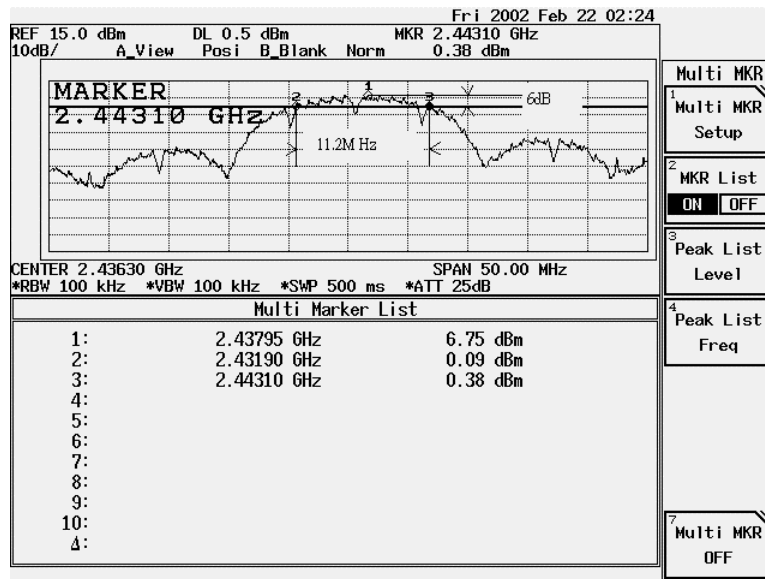
#### 11Mbps



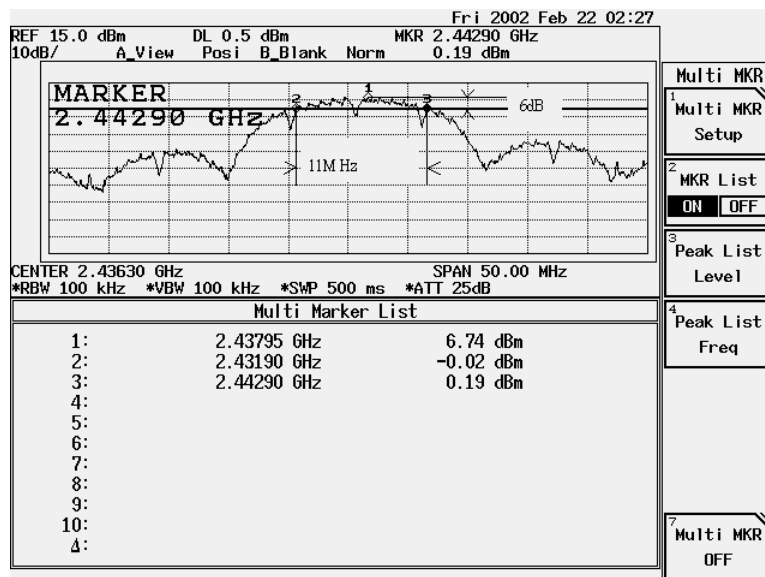
Product : Access Point  
 Test Item : Occupied Bandwidth Data  
 Test Site : No.1 OATS  
 Test Mode : Channel 6

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
6 (1Mbps)	2443.10	11200	>500	Pass
6 (11Mbps)	2442.90	11000	>500	Pass

**1Mbps**



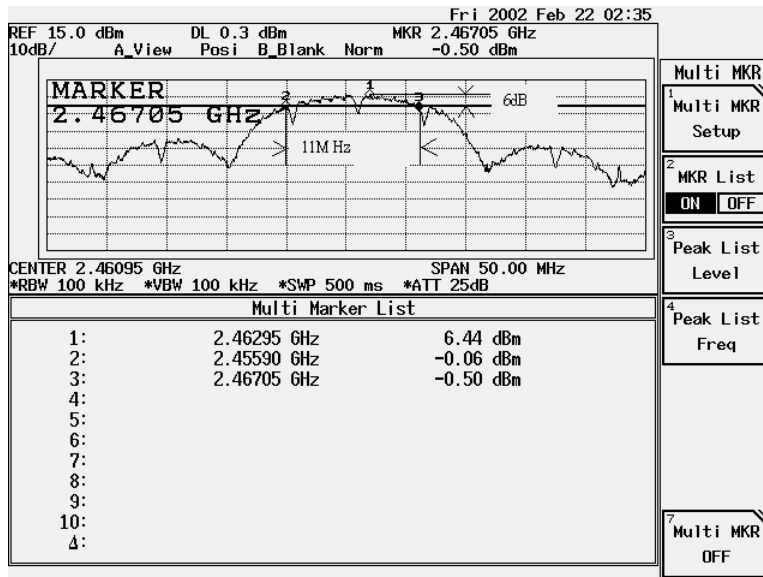
**11Mbps**



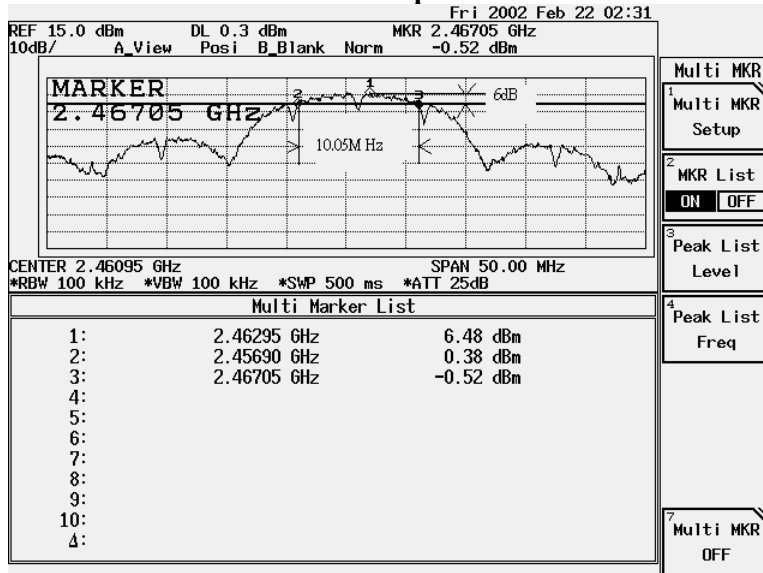
Product : Access Point  
 Test Item : Occupied Bandwidth Data  
 Test Site : No.1 OATS  
 Test Mode : Channel 11

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
11 (1Mbps)	2467.05	11000	>500	Pass
11 (11Mbps)	2467.05	10050	>500	Pass

**1Mbps**



**11Mbps**



**8. Transmitter Power Density**

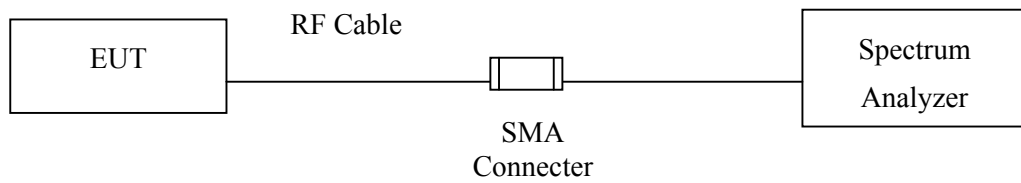
**8.1. Test Equipment**

The following test equipments are used during the radiated emission tests:

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
X	Spectrum	Advantest	R3272 / 72421194	May, 2001

Note: 1. All equipment upon which need to calibrated are with calibration period of 1 year.  
 2. Mark "X" test instruments are used to measure the final test results.

**8.2. Test Setup**



**8.3. Test Condition**

Standard Temperature and Humidity, Standard Test Voltage

**8.4. Standard Requirement**

The transmitted power density averaged over any 1 second interval shall not be greater +8dBm in any 3kHz bandwidth.

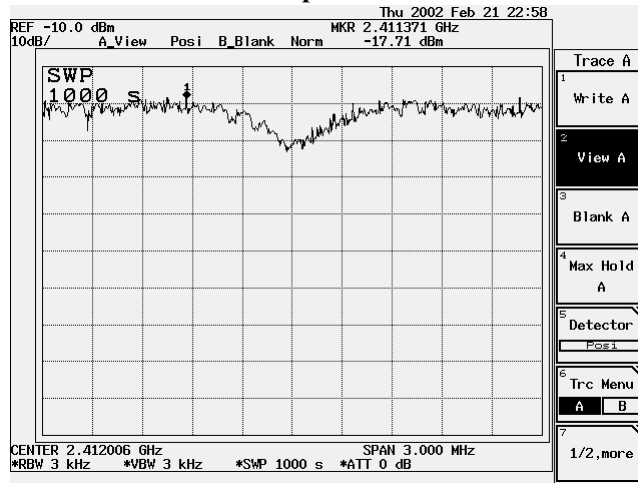


### 8.5. Test Result of Transmitter Power Density

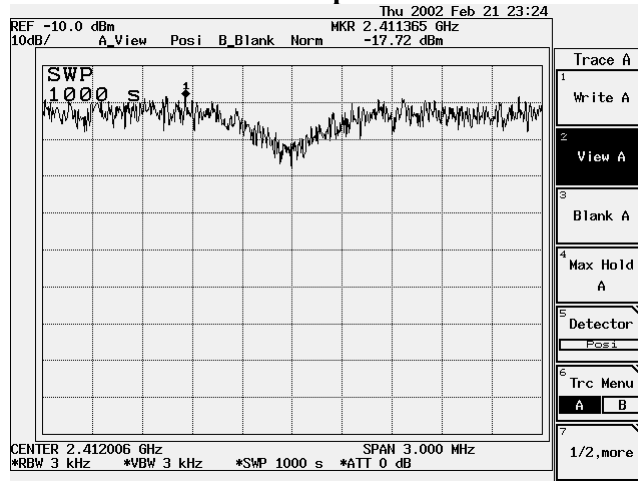
Product : Access Point  
 Test Item : Transmitter Power Density Data  
 Test Site : No.1 OATS  
 Test Mode : Channel 1

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
1 (1Mbps)	2411.371	-17.71	< 8dBm	Pass
1 (11Mbps)	2411.365	-17.72	< 8dBm	Pass

**1Mbps**



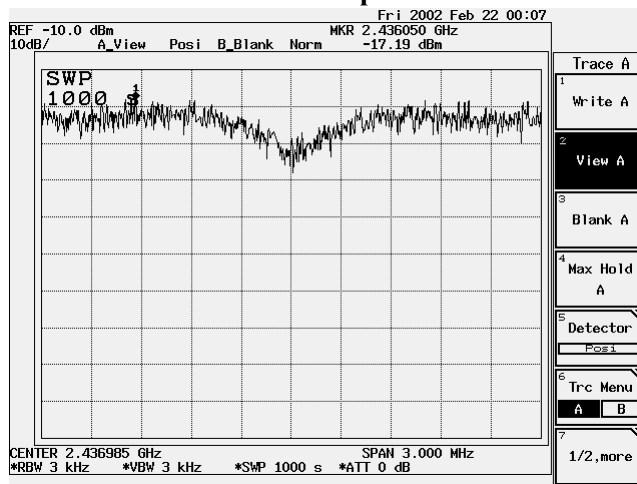
**11Mbps**



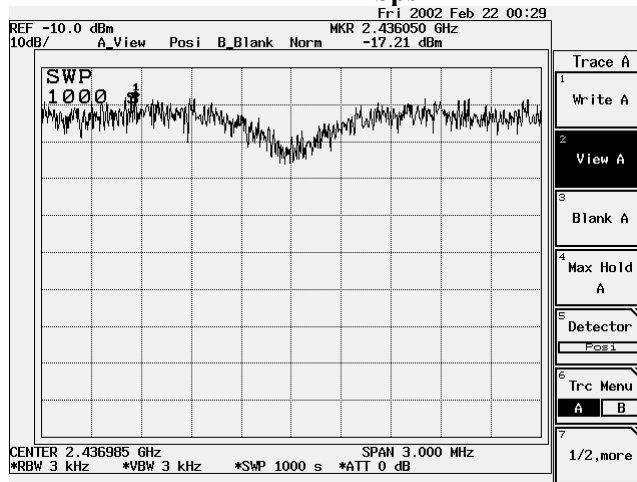
Product : Access Point  
 Test Item : Transmitter Power Density Data  
 Test Site : No.1 OATS  
 Test Mode : Channel 6

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
6 (1Mbps)	2436.050	-17.19	< 8dBm	Pass
6 (11Mbps)	2436.050	-17.21	< 8dBm	Pass

**1Mbps**



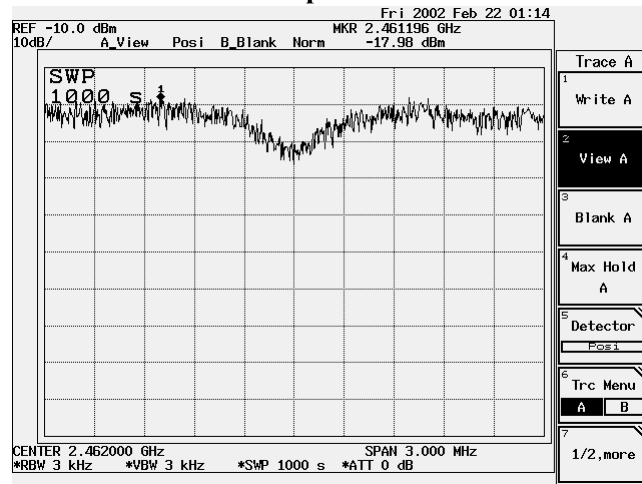
**11Mbps**



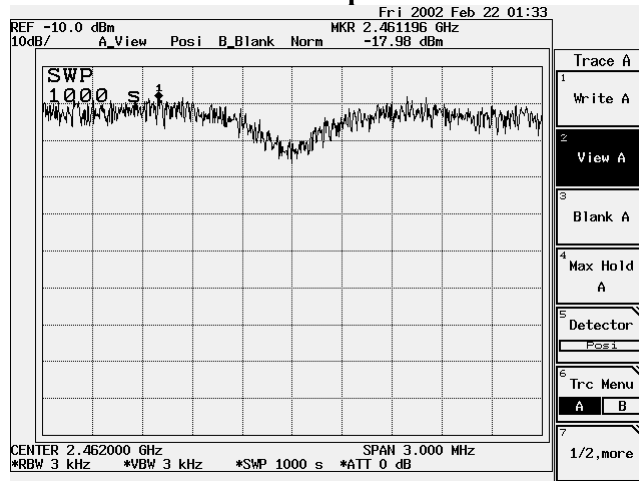
Product : Access Point  
 Test Item : Transmitter Power Density Data  
 Test Site : No.1 OATS  
 Test Mode : Channel 11

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
11 (1Mbps)	2461.196	-17.98	< 8dBm	Pass
11 (11Mbps)	2461.196	-17.98	< 8dBm	Pass

**1Mbps**



**11Mbps**



## **9. Processing Gain**

### **9.1. Test Condition**

Standard Temperature and Humidity, Standard Test Voltage

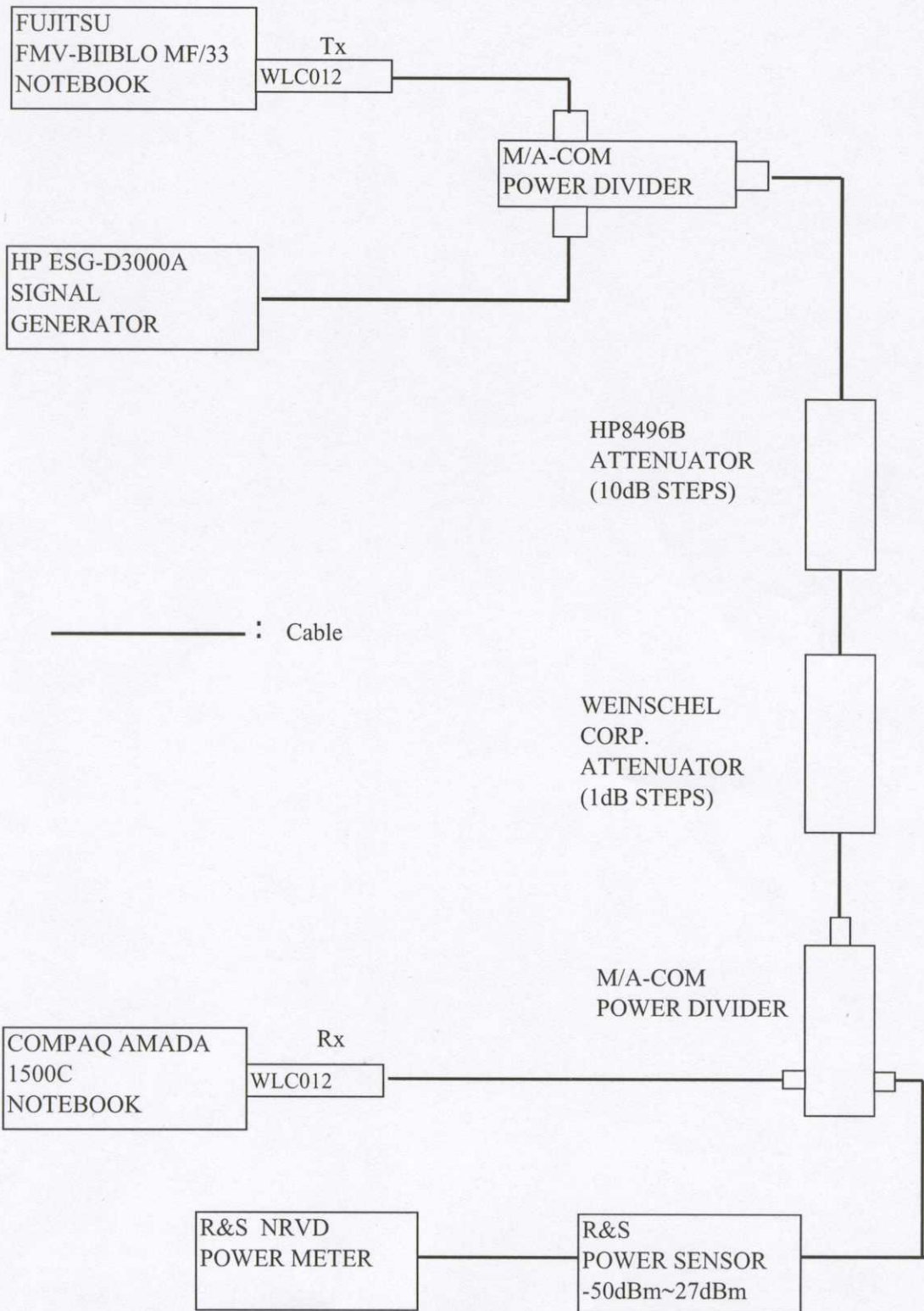
### **9.2. Minimum Standard**

According to FCC Part 15 Subpart C Paragraph 15.247(e), The processing gain shall be at least 10 dB.

### **9.3. Test Procedure & Result**

About the test procedure and result of processing gain are shown as below:

# Processing Gain Test Set Up



## Test Conditions

Askey Wireless LAN card : WLC012
Transmitter Signal Level at Rx = -40.5 dBm
Firmware = 8C3
Transmit Data rate = 11Mps @CH1=2412MHz, CH6=2437MHz, CH11=2462MHz
Measure Range = central frequency +/- 2MHz
Packet size = 1000 bytes
Intersil Chip versions on card : HFA3983 , HFA3683A , HFA3783 , HFA3861B HFA3841 , RF2163
All Test Data is under 8% Frame Error Rate

## 11 Mbps CHANNEL 1 Processing Gain

$$G_p = (S/N)_o + M_j + L_{sys}$$

Freq. (GHz)	Gp (dB)	(S/N) <sub>o</sub> (dB)	M <sub>j</sub> =J/S (dB)	L <sub>sys</sub> (dB)	Jammer (dBm)
2.41	11.2	16.4	-7.2	2	-47.7
2.4101	11.3	16.4	-7.1	2	-47.6
2.4102	11.5	16.4	-6.9	2	-47.4
2.4103	11.4	16.4	-7	2	-47.5
2.4104	11.4	16.4	-7	2	-47.5
2.4105	11.4	16.4	-7	2	-47.5
2.4106	11.4	16.4	-7	2	-47.5
2.4107	11.4	16.4	-7	2	-47.5
2.4108	11.7	16.4	-6.7	2	-47.2
2.4109	11.9	16.4	-6.5	2	-47
2.411	12.1	16.4	-6.3	2	-46.8
2.4111	12.1	16.4	-6.3	2	-46.8
2.4112	12.1	16.4	-6.3	2	-46.8
2.4113	11.9	16.4	-6.5	2	-47
2.4114	12	16.4	-6.4	2	-46.9
2.4115	12	16.4	-6.4	2	-46.9
2.4116	12.4	16.4	-6	2	-46.5
2.4117	12.5	16.4	-5.9	2	-46.4
2.4118	12.7	16.4	-5.7	2	-46.2
2.4119	12.5	16.4	-5.9	2	-46.4
2.412	12.5	16.4	-5.9	2	-46.4
2.4121	12.5	16.4	-5.9	2	-46.4
2.4122	12.6	16.4	-5.8	2	-46.3
2.4123	12.5	16.4	-5.9	2	-46.4
2.4124	12.5	16.4	-5.9	2	-46.4
2.4125	12.2	16.4	-6.2	2	-46.7
2.4126	12.2	16.4	-6.2	2	-46.7
2.4127	12	16.4	-6.4	2	-46.9
2.4128	11.8	16.4	-6.6	2	-47.1
2.4129	11.7	16.4	-6.7	2	-47.2
2.413	11.6	16.4	-6.8	2	-47.3
2.4131	11.6	16.4	-6.8	2	-47.3
2.4132	11.6	16.4	-6.8	2	-47.3
2.4133	11.5	16.4	-6.9	2	-47.4
2.4134	11.4	16.4	-7	2	-47.5
2.4135	11.4	16.4	-7	2	-47.5
2.4136	11.4	16.4	-7	2	-47.5
2.4137	11.4	16.4	-7	2	-47.5
2.4138	11.2	16.4	-7.2	2	-47.7
2.4139	11.2	16.4	-7.2	2	-47.7
2.414	11.1	16.4	-7.3	2	-47.8

## 11 Mbps CHANNEL 6 Processing Gain

$$G_p = (S/N)_o + M_j + L_{sys}$$

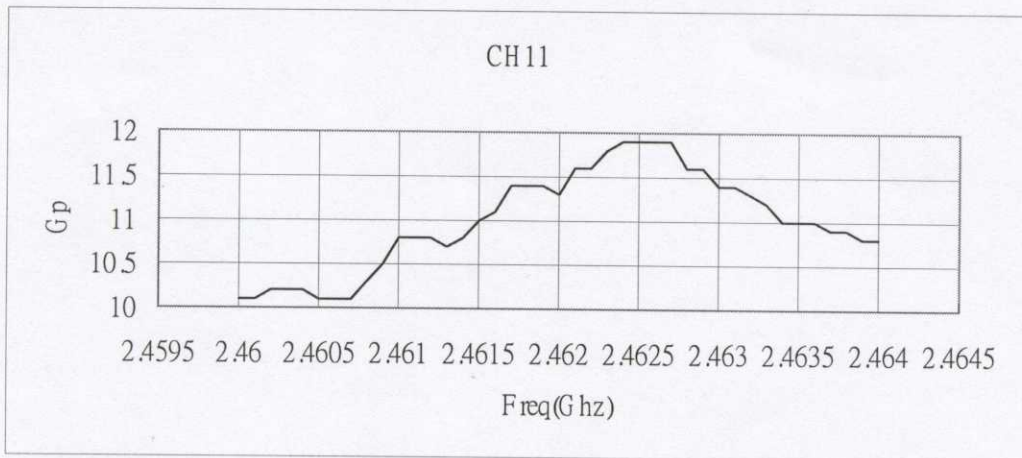
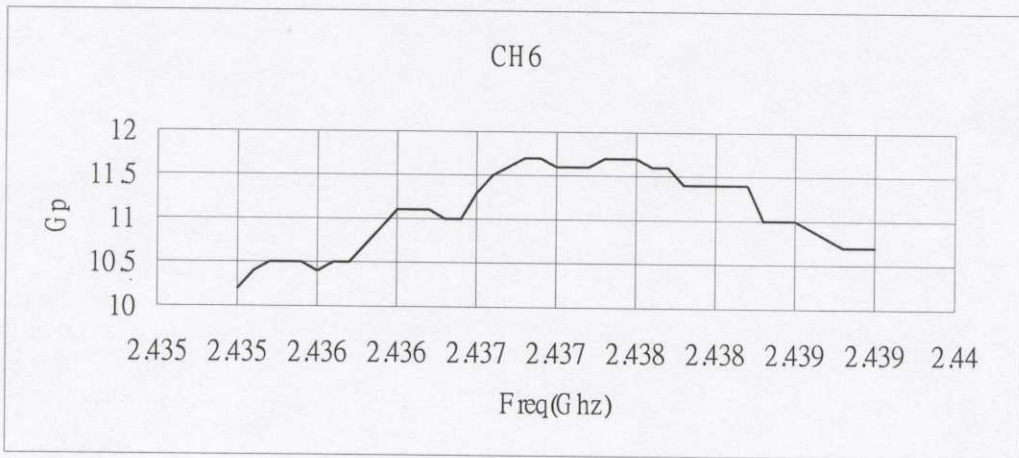
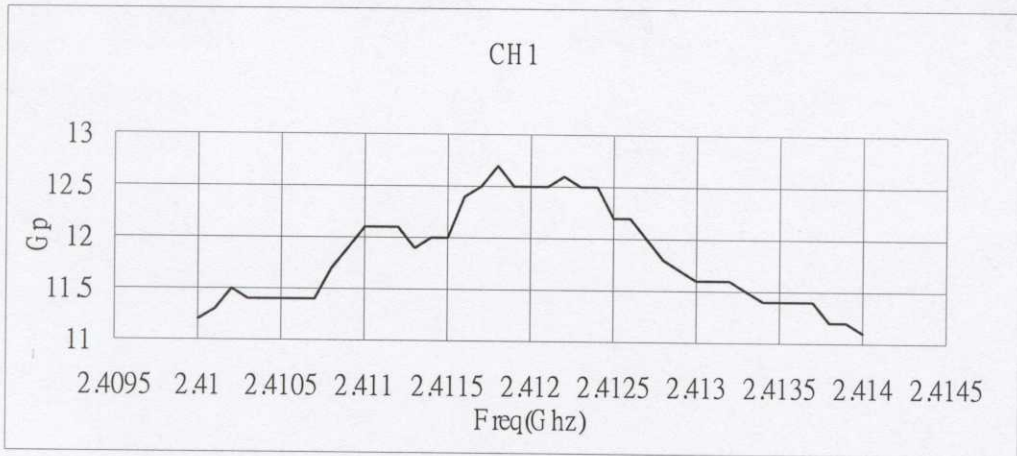
Freq. (GHz)	Gp (dB)	(S/N) <sub>o</sub> (dB)	M <sub>j</sub> =J/S (dB)	L <sub>sys</sub> (dB)	Jammer (dBm)
2.435	10.2	16.4	-8.2	2	-48.7
2.4351	10.4	16.4	-8	2	-48.5
2.4352	10.5	16.4	-7.9	2	-48.4
2.4353	10.5	16.4	-7.9	2	-48.4
2.4354	10.5	16.4	-7.9	2	-48.4
2.4355	10.4	16.4	-8	2	-48.5
2.4356	10.5	16.4	-7.9	2	-48.4
2.4357	10.5	16.4	-7.9	2	-48.4
2.4358	10.7	16.4	-7.7	2	-48.2
2.4359	10.9	16.4	-7.5	2	-48
2.436	11.1	16.4	-7.3	2	-47.8
2.4361	11.1	16.4	-7.3	2	-47.8
2.4362	11.1	16.4	-7.3	2	-47.8
2.4363	11	16.4	-7.4	2	-47.9
2.4364	11	16.4	-7.4	2	-47.9
2.4365	11.3	16.4	-7.1	2	-47.6
2.4366	11.5	16.4	-6.9	2	-47.4
2.4367	11.6	16.4	-6.8	2	-47.3
2.4368	11.7	16.4	-6.7	2	-47.2
2.4369	11.7	16.4	-6.7	2	-47.2
2.437	11.6	16.4	-6.8	2	-47.3
2.4371	11.6	16.4	-6.8	2	-47.3
2.4372	11.6	16.4	-6.8	2	-47.3
2.4373	11.7	16.4	-6.7	2	-47.2
2.4374	11.7	16.4	-6.7	2	-47.2
2.4375	11.7	16.4	-6.7	2	-47.2
2.4376	11.6	16.4	-6.8	2	-47.3
2.4377	11.6	16.4	-6.8	2	-47.3
2.4378	11.4	16.4	-7	2	-47.5
2.4379	11.4	16.4	-7	2	-47.5
2.438	11.4	16.4	-7	2	-47.5
2.4381	11.4	16.4	-7	2	-47.5
2.4382	11.4	16.4	-7	2	-47.5
2.4383	11	16.4	-7.4	2	-47.9
2.4384	11	16.4	-7.4	2	-47.9
2.4385	11	16.4	-7.4	2	-47.9
2.4386	10.9	16.4	-7.5	2	-48
2.4387	10.8	16.4	-7.6	2	-48.1
2.4388	10.7	16.4	-7.7	2	-48.2
2.4389	10.7	16.4	-7.7	2	-48.2
2.439	10.7	16.4	-7.7	2	-48.2



## 11 Mbps CHANNEL 11 Processing Gain

$$G_p = (S/N)_o + M_j + L_{sys}$$

Freq. (GHz)	Gp (dB)	(S/N) <sub>o</sub> (dB)	M <sub>j</sub> =J/S (dB)	L <sub>sys</sub> (dB)	Jammer (dBm)
2.46	10.1	16.4	-8.3	2	-48.8
2.4601	10.1	16.4	-8.3	2	-48.8
2.4602	10.2	16.4	-8.2	2	-48.7
2.4603	10.2	16.4	-8.2	2	-48.7
2.4604	10.2	16.4	-8.2	2	-48.7
2.4605	10.1	16.4	-8.3	2	-48.8
2.4606	10.1	16.4	-8.3	2	-48.8
2.4607	10.1	16.4	-8.3	2	-48.8
2.4608	10.3	16.4	-8.1	2	-48.6
2.4609	10.5	16.4	-7.9	2	-48.4
2.461	10.8	16.4	-7.6	2	-48.1
2.4611	10.8	16.4	-7.6	2	-48.1
2.4612	10.8	16.4	-7.6	2	-48.1
2.4613	10.7	16.4	-7.7	2	-48.2
2.4614	10.8	16.4	-7.6	2	-48.1
2.4615	11	16.4	-7.4	2	-47.9
2.4616	11.1	16.4	-7.3	2	-47.8
2.4617	11.4	16.4	-7	2	-47.5
2.4618	11.4	16.4	-7	2	-47.5
2.4619	11.4	16.4	-7	2	-47.5
2.462	11.3	16.4	-7.1	2	-47.6
2.4621	11.6	16.4	-6.8	2	-47.3
2.4622	11.6	16.4	-6.8	2	-47.3
2.4623	11.8	16.4	-6.6	2	-47.1
2.4624	11.9	16.4	-6.5	2	-47
2.4625	11.9	16.4	-6.5	2	-47
2.4626	11.9	16.4	-6.5	2	-47
2.4627	11.9	16.4	-6.5	2	-47
2.4628	11.6	16.4	-6.8	2	-47.3
2.4629	11.6	16.4	-6.8	2	-47.3
2.463	11.4	16.4	-7	2	-47.5
2.4631	11.4	16.4	-7	2	-47.5
2.4632	11.3	16.4	-7.1	2	-47.6
2.4633	11.2	16.4	-7.2	2	-47.7
2.4634	11	16.4	-7.4	2	-47.9
2.4635	11	16.4	-7.4	2	-47.9
2.4636	11	16.4	-7.4	2	-47.9
2.4637	10.9	16.4	-7.5	2	-48
2.4638	10.9	16.4	-7.5	2	-48
2.4639	10.8	16.4	-7.6	2	-48.1
2.464	10.8	16.4	-7.6	2	-48.1



## 10. EMI Reduction Method During Compliance Testing

No modification was made during testing.

## Attachment 1 : EUT Test Photographs

## Attachment 2 : EUT Detailed Photographs