



**JAPAN QUALITY ASSURANCE ORGANIZATION**  
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JQA File No: 441-50593  
Issue Date : September 20, 2005  
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## **EMI TEST REPORT**

JQA File No : 441-50593  
Model No. : GN-1041  
Type of Equipment : WIRELESS LAN  
Regulations Applied : CFR 47 FCC Rules and Regulations Part 15  
: Industry Canada RSS-210 Issue 5(inc. Amendment)  
FCC ID : BJI-GN1041  
IC : 1004C-GN1041  
Applicant : TOSHIBA TEC CORPORATION.  
Address : 6-78, Minami-Cho, Mishima, Shizuoka, 411-8520 Japan  
Manufacturer : TOSHIBA TEC CORPORATION.  
Address : 6-78, Minami-Cho, Mishima, Shizuoka, 411-8520 Japan  
Received date of EUT : September 9, 2005

**Final Judgment : Passed**

Test results in this report are obtained in use of equipment that is traceable to National Institute of Advanced Industrial Science and Technology (AIST) of Japan and National Institute of Information and Communications Technology (NICT) of Japan.

The test results only respond to the tested sample. This report should not be reproduced except in full, without the written approval of JQA EMC Engineering Dept. Testing Div.

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2.2 Minimum Hopping Channel	<u>N/A</u>
2.3 Occupied Bandwidth	<u>N/A</u>
2.4 Dwell Time	<u>N/A</u>
2.5 Peak Output Power (Conduction)	<u>N/A</u>
2.6 Peak Output Power (Radiation)	<u>N/A</u>
2.7 Peak Power Density (Conduction)	<u>N/A</u>
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### 1.3 TEST CONDITION

#### 1.3.1 The measurement of Channel Separation

- was performed.  
 - was not applicable.

**Used test instruments :**

Type	Number of test instruments (Refer to Appendix)
Test Receiver	N/A
Spectrum Analyzer	N/A
Cable	N/A
Attenuator	N/A
Antenna	N/A

#### 1.3.2 The measurement of Minimum Hopping Channel

- was performed.  
 - was not applicable.

**Used test instruments :**

Type	Number of test instruments (Refer to Appendix)
Test Receiver	N/A
Spectrum Analyzer	N/A
Cable	N/A
Attenuator	N/A
Antenna	N/A

#### 1.3.3 The measurement of Occupied Bandwidth

- was performed.  
 - was not applicable.

**Used test instruments :**

Type	Number of test instruments (Refer to Appendix)
Test Receiver	N/A
Spectrum Analyzer	N/A
Cable	N/A
Attenuator	N/A
Antenna	N/A

**1.3.4 The measurement of Dwell Time**

- was performed.

- was not applicable.

**Used test instruments :**

Type	Number of test instruments (Refer to Appendix)
Test Receiver	N/A
Spectrum Analyzer	N/A
Cable	N/A
Attenuator	N/A
Antenna	N/A

**1.3.5 The measurement of Peak Output Power and Density (Conduction)**

- was performed.

- was not applicable.

**Used test instruments :**

Type	Number of test instruments (Refer to Appendix)
Test Receiver	N/A
Spectrum Analyzer	N/A
Cable	N/A
Attenuator	N/A
Antenna	N/A
Digitizing Oscilloscope	N/A
RF Detector	N/A
Signal Generator	N/A



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**1.3.6 The measurement of Peak Output Power and Density (Radiation)**

- was performed in the following test site.

- was not applicable.

**Test location :**

JQA Safety & EMC Center EMC Engineering Department TSURU EMC Branch  
2096 Ohata, Tsuru-shi Yamanashi-ken 402-0045, JAPAN

- Anechoic Chamber  - 3 meters  
 - Open Site No.1  - 10 meters  
 - Open Site No.2  - 30 meters

**Validation of Site Attenuation :**

- 1) Last Confirmed Date : N/A
- 2) Interval : N/A

**Used test instruments :**

Type	Number of test instruments (Refer to Appendix)
Test Receiver	N/A
Spectrum Analyzer	N/A
Cable	N/A
Attenuator	N/A
Antenna	N/A
Power Meter	N/A
Power Sensor	N/A
Signal Generator	N/A



**1.3.7 The measurement of Spurious Emissions (Conduction)**

- was performed.  
 - was not applicable.

**Used test instruments :**

Type	Number of test instruments (Refer to Appendix)
Test Receiver	N/A
Spectrum Analyzer	N/A
Cable	N/A
Attenuator	N/A

**1.3.8 The measurement of Spurious Emissions (Radiation)(9 kHz - 30 MHz)**

- was performed in the following test site.  
 - was not applicable.

**Test location :**

JQA Safety & EMC Center EMC Engineering Department TSURU EMC Branch  
2096 Ohata, Tsuru-shi Yamanashi-ken 402-0045, JAPAN

- |   |                                      |
|---|--------------------------------------|
| <input type="checkbox"/> - Anechoic Chamber | <input type="checkbox"/> - 3 meters  |
| <input type="checkbox"/> - Open Site No.1   | <input type="checkbox"/> - 10 meters |
| <input type="checkbox"/> - Open Site No.2   | <input type="checkbox"/> - 30 meters |

**Validation of Site Attenuation :**

- 1) Last Confirmed Date : N/A  
2) Interval : N/A

**Used test instruments :**

Type	Number of test instruments (Refer to Appendix)
Test Receiver	N/A
Cable	N/A
Antenna	N/A





**1.3.9 The measurement of Spurious Emissions (Radiation) (30 MHz - 1000 MHz)**

- was performed in the following test site.
- was not applicable.

**Test location :**

JQA Safety & EMC Center EMC Engineering Department TSURU EMC Branch  
2096 Ohata, Tsuru-shi Yamanashi-ken 402-0045, JAPAN

- Anechoic Chamber                                       - 3 meters
- Open Site No.1     - 10 meters
- Open Site No.2     - 30 meters

**Validation of Site Attenuation :**

- 1) Last Confirmed Date : 2005/5
- 2) Interval : 1 year

**Used test instruments :**

Type	Number of test instruments (Refer to Appendix)
Test Receiver	TR06
Cable	CA01
Antenna	AN06, AN08
RF Amplifier	N/A



**1.3.10 The measurement of Spurious Emissions (Radiation) (Above 1000 MHz)**

- was performed in the following test site.  
 - was not applicable.

**Test location :**

JQA Safety & EMC Center EMC Engineering Department TSURU EMC Branch  
2096 Ohata, Tsuru-shi Yamanashi-ken 402-0045, JAPAN

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> - Anechoic Chamber | <input checked="" type="checkbox"/> - 3 meters |
| <input type="checkbox"/> - Open Site No.1              | <input type="checkbox"/> - 10 meters           |
| <input type="checkbox"/> - Open Site No.2              | <input type="checkbox"/> - 30 meters           |

**Validation of Site Attenuation :**

- 1) Last Confirmed Date : 2005/5
- 2) Interval : 1 year

**Used test instruments :**

Type	Number of test instruments (Refer to Appendix)
Test Receiver	TR07
Spectrum Analyzer	N/A
Cable	CA11, CA13
Antenna	AN10, AN12
RF Amplifier	AM09
Band Reject Filter	AU16
High Pass Filter	AU17

**1.3.11 The measurement of AC Power Line Conducted Emissions**

- was performed in the following test site.

- was not applicable.

**Test location :**

JQA Safety & EMC Center EMC Engineering Department TSURU EMC Branch  
2096 Ohata, Tsuru-shi Yamanashi-ken 402-0045, JAPAN

- Shielded Room A  
 - Shielded Room B  
 - Anechoic Chamber  
 - Open Site No.1  
 - Open Site No.2

**Used test instruments :**

Type	Number of test instruments (Refer to Appendix)
Test Receiver	TR06
Spectrum Analyzer	-
Cable	CA03
AMN(for EUT)	NE01
AMN(for Peripheral)	NE02
Termination	AU01



**1.4 EUT MODIFICATION / Deviation from Standard**

**1.4.1 EUT MODIFICATION**

- No modifications were conducted by JQA to achieve compliance to Class B levels.
- To achieve compliance to Class B levels, the following changes were made by JQA during the compliance test.

**The modifications will be implemented in all production models of this equipment.**

Applicant :	Date :
Typed Name :	Position :

**1.4.2 Deviation from Standard:**

- No deviations from the standard described in clause 1.1.
- The following deviations were employed from the standard described in clause 1.1:

\_\_\_\_\_  
\_\_\_\_\_

### 1.5 TEST RESULTS

<p><b>Channel Separation</b>          [§15.247(a)(1)], [§6.2.2(o)(a1)]          The requirements are  <b>Remarks :</b></p>	<p>___ - Applicable    <u>x</u> - NOT Applicable          ___ - PASSED        ___ - NOT PASSED</p>
<p><b>Minimum Hopping Channel</b>          [§15.247(a)(1)(iii)], [§6.2.2(o)(a3)]          The requirements are  <b>Remarks :</b></p>	<p>___ - Applicable    <u>x</u> - NOT Applicable          ___ - PASSED        ___ - NOT PASSED</p>
<p><b>Occupied Bandwidth</b>          [§15.247(a)(2)], [§5.9.1]          The requirements are  <b>Remarks:</b> It is considered that this requirement dose not affect by equipment modifications.</p>	<p>___ - Applicable    <u>x</u> - NOT Applicable          ___ - PASSED        ___ - NOT PASSED</p>
<p><b>Dwell Time</b>          [§15.247(a)(1)(iii)/(g)], [§6.2.2(o)(a3)/(c2)]          The requirements are  <b>Remarks :</b></p>	<p>___ - Applicable    <u>x</u> - NOT Applicable          ___ - PASSED        ___ - NOT PASSED</p>
<p><b>Peak Output Power (Conduction)</b>          [§15.247(b)(3)], [§6.2.2(o)(b)]          The requirements are  <b>Remarks:</b> It is considered that this requirement dose not affect by equipment modifications.</p>	<p>___ - Applicable    <u>x</u> - NOT Applicable          ___ - PASSED        ___ - NOT PASSED</p>
<p><b>Peak Output Power (Radiation)</b>          [§15.247(b)(1)], [§6.2.2(o)(b)]          The requirements are  <b>Remarks :</b></p>	<p>___ - Applicable    <u>x</u> - NOT Applicable          ___ - PASSED        ___ - NOT PASSED</p>
<p><b>Peak Power Density (Conduction)</b>          [§15.247(d)], [§6.2.2(o)(b)]          The requirements are  <b>Remarks:</b> It is considered that this requirement dose not affect by equipment modifications.</p>	<p>___ - Applicable    <u>x</u> - NOT Applicable          ___ - PASSED        ___ - NOT PASSED</p>
<p><b>Peak Power Density (Radiation)</b>          [§15.247(d)], [§6.2.2(o)(b)]          The requirements are  <b>Remarks:</b></p>	<p>___ - Applicable    <u>x</u> - NOT Applicable          ___ - PASSED        ___ - NOT PASSED</p>



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<b>Spurious Emissions (Conduction)</b> [§15.247(c)], [§6.2.2(o)(e1)]	<input type="checkbox"/> - Applicable	<input checked="" type="checkbox"/> - NOT Applicable
The requirements are	<input type="checkbox"/> - PASSED	<input type="checkbox"/> - NOT PASSED
<b>Remarks:</b>	It is considered that this requirement dose not affect by equipment modifications.	
<b>Spurious Emissions (Radiation)</b> [§15.247(c), §15.35(b), §15.209(a)], [§6.2.2(o)(e1)]	<input checked="" type="checkbox"/> - Applicable	<input type="checkbox"/> - NOT Applicable
The requirements are	<input checked="" type="checkbox"/> - PASSED	<input type="checkbox"/> - NOT PASSED
<b>Remarks:</b>		
<b>AC Power Line Conducted Emissions</b> [§15.207(a)], [§6.6]	<input checked="" type="checkbox"/> - Applicable	<input type="checkbox"/> - NOT Applicable
The requirements are	<input checked="" type="checkbox"/> - PASSED	<input type="checkbox"/> - NOT PASSED
<b>Remarks:</b>		
<b>RF Exposure Compliance</b> [§15.247(b)(5)], [§14]	<input type="checkbox"/> - Applicable	<input checked="" type="checkbox"/> - NOT Applicable
The requirements are	<input type="checkbox"/> - PASSED	<input type="checkbox"/> - NOT PASSED
<b>Remarks:</b>		
<b>Spurious Emissions for Receiver</b> (Radiation)[§15.109(a)], [§7.3]	<input checked="" type="checkbox"/> - Applicable	<input type="checkbox"/> - NOT Applicable
The requirements are	<input checked="" type="checkbox"/> - PASSED	<input type="checkbox"/> - NOT PASSED
<b>Remarks:</b>		
<b>AC Power Line Conducted Emissions</b> for Receiver [§15.107(a)], [§7.4]	<input checked="" type="checkbox"/> - Applicable	<input type="checkbox"/> - NOT Applicable
The requirements are	<input checked="" type="checkbox"/> - PASSED	<input type="checkbox"/> - NOT PASSED
<b>Remarks:</b>		

---

**1.6 SUMMARY****General Remarks :**

The EUT was tested according to the requirements of FCC Rules and Regulations Part 15 Subpart B, Subpart C and IC RSS-210 issue 5 (including Amendment) under the test configuration, as shown in clause 1.7 to 1.10.

The conclusion for the test items which are required by the applied regulation is indicated under the final judgment.

**Final Judgment :**

The "as received" sample;

- x   - fulfill the test requirements of the regulation mentioned on clause 1.1.
- fulfill the test requirements of the regulation mentioned on clause 1.1, but with certain qualifications.
- doesn't fulfill the test regulation mentioned on clause 1.1.

Begin of testing : September 9, 2005

End of testing : September 10, 2005

**- JAPAN QUALITY ASSURANCE ORGANIZATION -**

Tested by:



Eiichi Saegusa  
Deputy Manager  
TSURU EMC Branch  
JQA EMC Engineering Dept.

Approved by:



Takaharu Hada  
Director  
TSURU EMC Branch  
JQA EMC Engineering Dept.







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### 1.7.2 Operating condition

Power supply Voltage : 120VAC, 60 Hz for the HOST

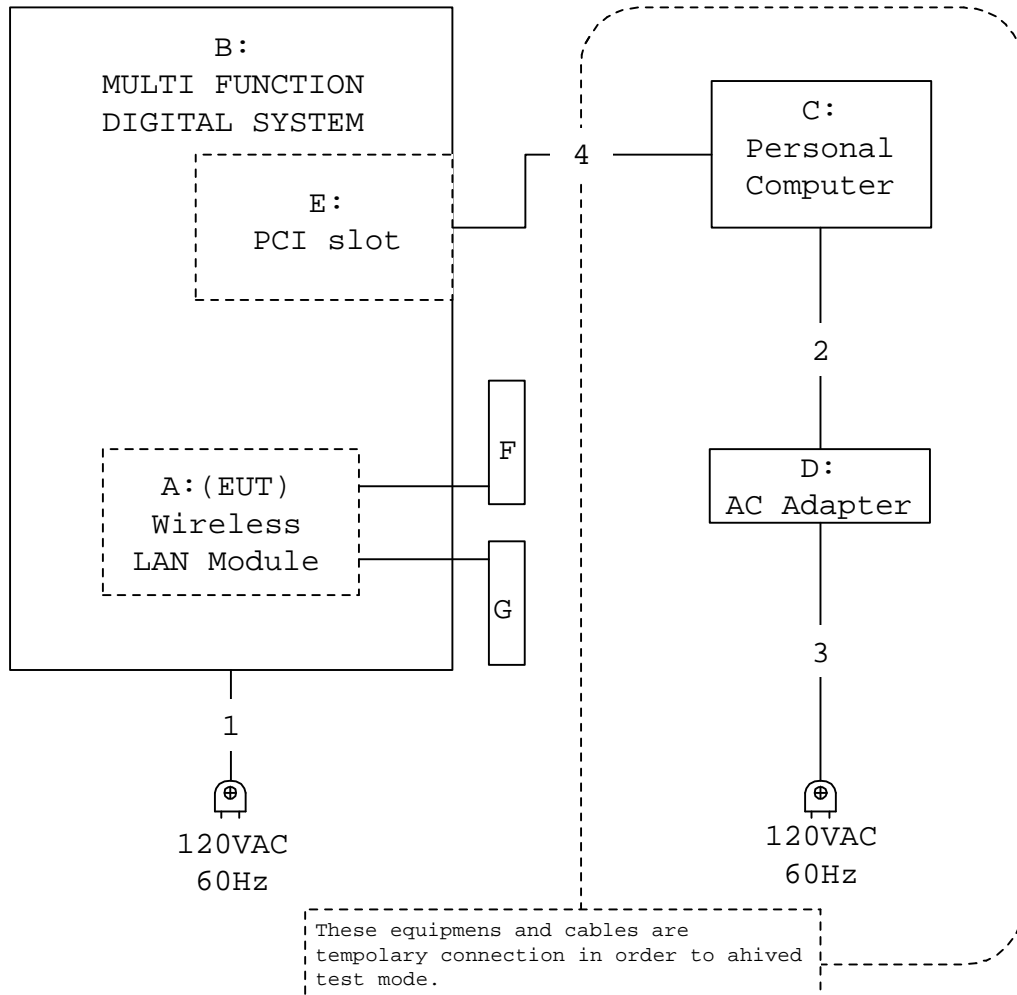
The tests have been carried out the following mode.

(1-1) 801.11b Mode, TX ( 1ch: 2412 MHz)  
(1-2) 801.11b Mode, TX ( 6ch: 2437 MHz)  
(1-3) 801.11b Mode, TX (11ch: 2462 MHz)  
(1-4) 801.11b Mode, RX ( 1ch: 2412 MHz)  
(1-5) 801.11b Mode, RX ( 6ch: 2437 MHz)  
(1-6) 801.11b Mode, RX (11ch: 2462 MHz)

(2-1) 801.11g Mode, TX ( 1ch: 2412 MHz)  
(2-2) 801.11g Mode, TX ( 6ch: 2437 MHz)  
(2-3) 801.11g Mode, TX (11ch: 2462 MHz)  
(2-4) 801.11g Mode, RX ( 1ch: 2412 MHz)  
(2-5) 801.11g Mode, RX ( 6ch: 2437 MHz)  
(2-6) 801.11g Mode, RX (11ch: 2462 MHz)

A setup of transmitted power was made into the certified maximum.

**1.8 EUT ARRANGEMENT (DRAWINGS)**



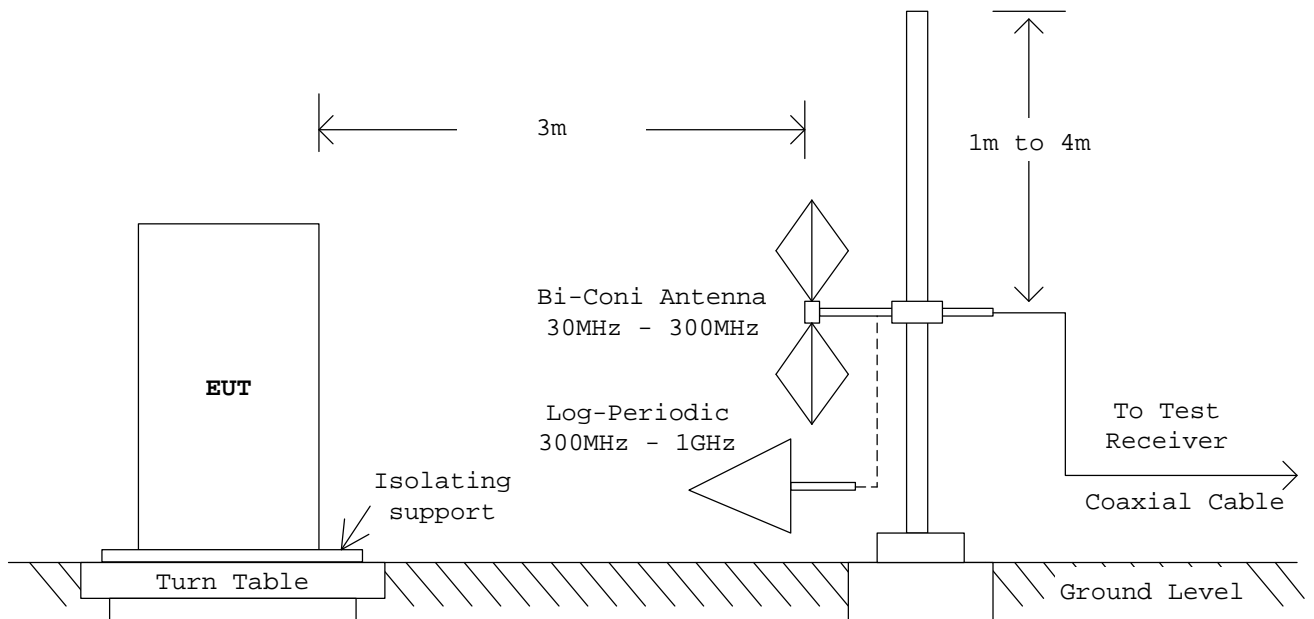
**1.9 PRELIMINARY TEST AND TEST-SETUP (DRAWINGS)**

**1.9.10 Radiated Emission ( 30 MHz - 1000 MHz ) :**

According to description of ANSI C63.4-2003 sec.13.1.4, the preliminary radiated emissions measurement were carried out. The preliminary radiated measurements were performed at the measurement distance that specified for compliance to determine the emission characteristics of the EUT.

The EUT configuration, cable configuration and mode of operation were determined for producing the maximum level of emissions. These configurations were used for the final radiated emissions measurements.

- Side View -

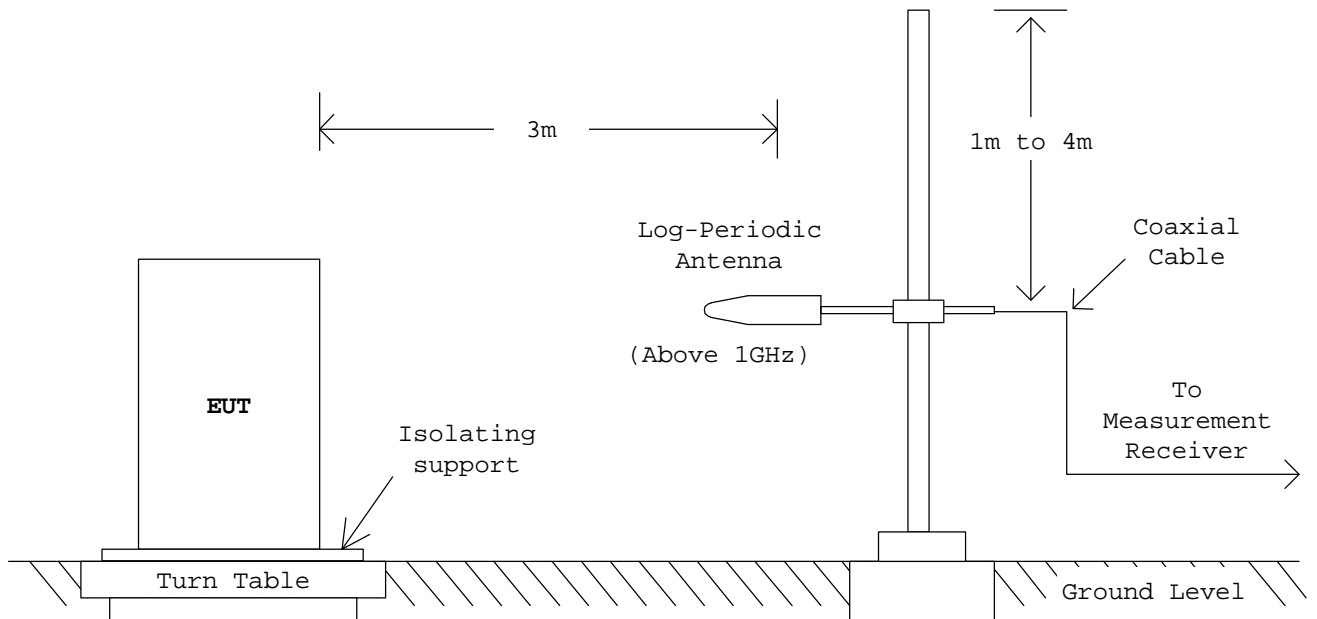


**1.9.11 Radiated Emission (Above 1 GHz) :**

According to description of ANSI C63.4-2003 sec.13.1.4, the preliminary radiated emissions measurements were carried out. The preliminary radiated measurements were performed at the measurement distance that specified for compliance to determine the emission characteristics of the EUT.

The EUT configuration, cable configuration and mode of operation were determined for producing the maximum level of emissions. These configurations were used for the final radiated emissions measurements.

- Side View -



### 1.9.12 AC Power Line Conducted Emission ( 150 kHz - 30 MHz ) :

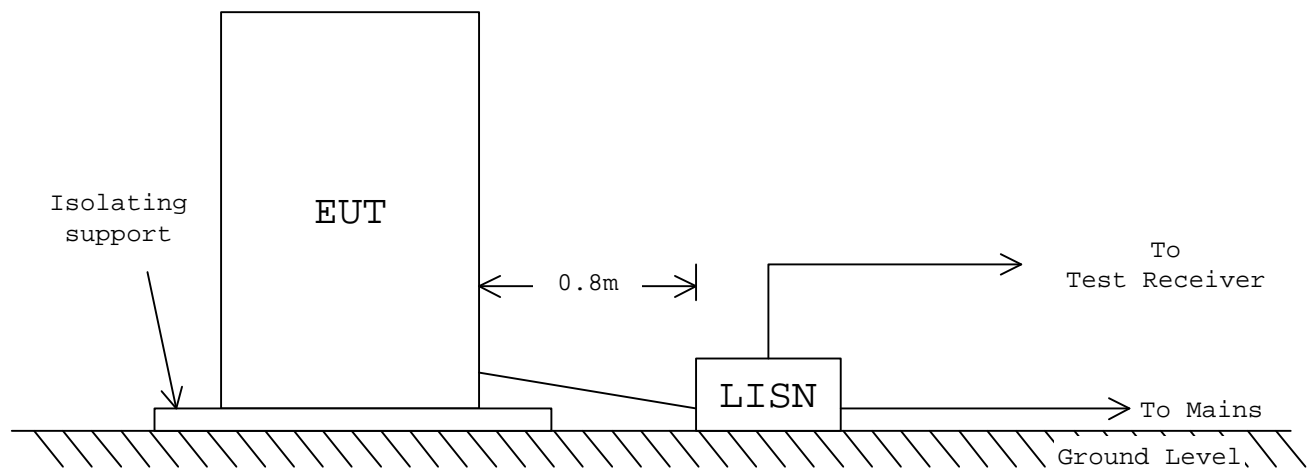
According to description of ANSI C63.4-2003 sec.13.1.3, the AC power line preliminary conducted emissions measurements were carried out.

The preliminary conducted measurements were performed using the spectrum analyzer to observe the emission characteristics of the EUT.

The EUT configuration, cable configuration and mode of operation were determined for producing the maximum level of emissions. These configurations were used for final AC power line conducted emissions measurements.

### Anechoic Chamber

- Side View -

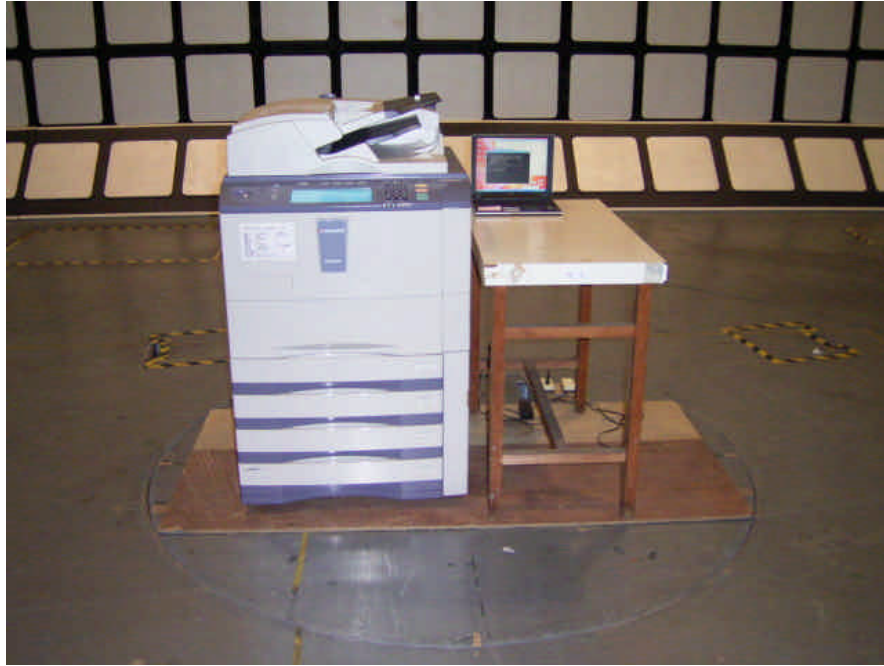


\*EUT : Equipment Under Test

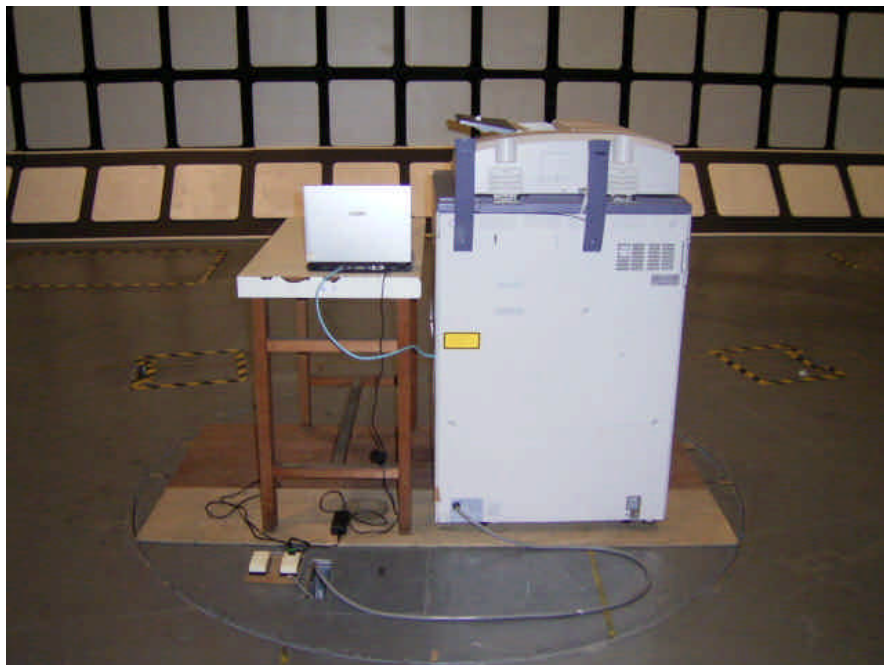
\*LISN : Line Impedance Stabilization Network

**1.10 TEST ARRANGEMENT (PHOTOGRAPHS)****PHOTOGRAPHS OF EUT CONFIGURATION FOR RADIATED EMISSIONS MEASUREMENT**

Photograph present configuration with maximum emission



- Front View -



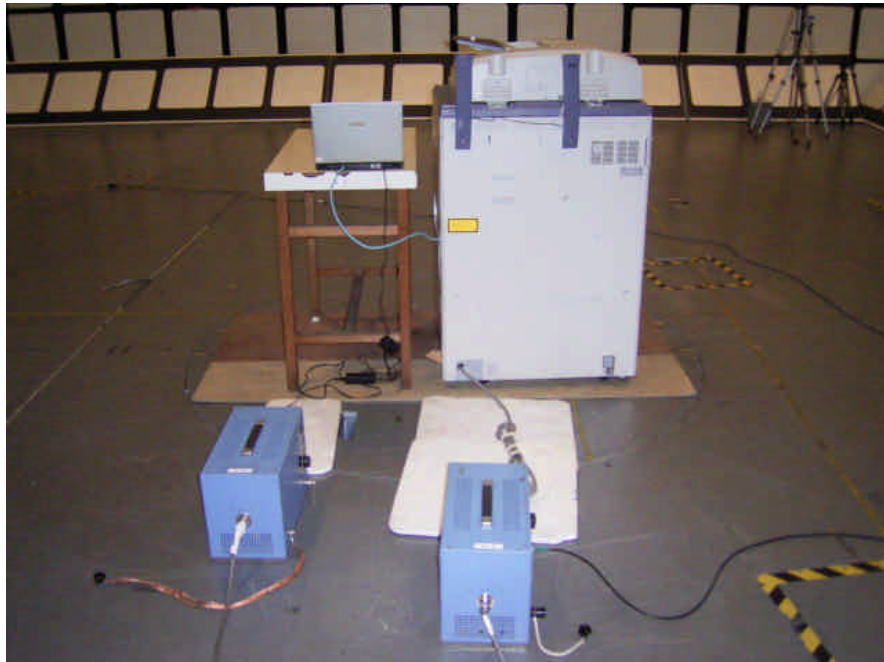
- Rear View -

**PHOTOGRAPHS OF EUT CONFIGURATION FOR AC POWER LINE CONDUCTED EMISSION MEASUREMENT**

Photograph present configuration with maximum emission



- Side View -



- Rear View -



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## **2. TEST DATA**

**2.1 Channel Separation**  
Not Applicable

**2.2 Minimum Hopping Channel**  
Not Applicable

**2.3 Occupied Bandwidth**  
Not Applicable

**2.4 Dwell Time**  
Not Applicable

**2.5 Peak Output Power (Conduction)**  
Not Applicable

**2.6 Peak Output Power (Radiation)**  
Not Applicable

**2.7 Peak Power Density (Conduction)**  
Not Applicable

**2.8 Peak Power Density (Radiation)**  
Not Applicable

**2.9 Spurious Emissions (Conduction)**  
Not Applicable

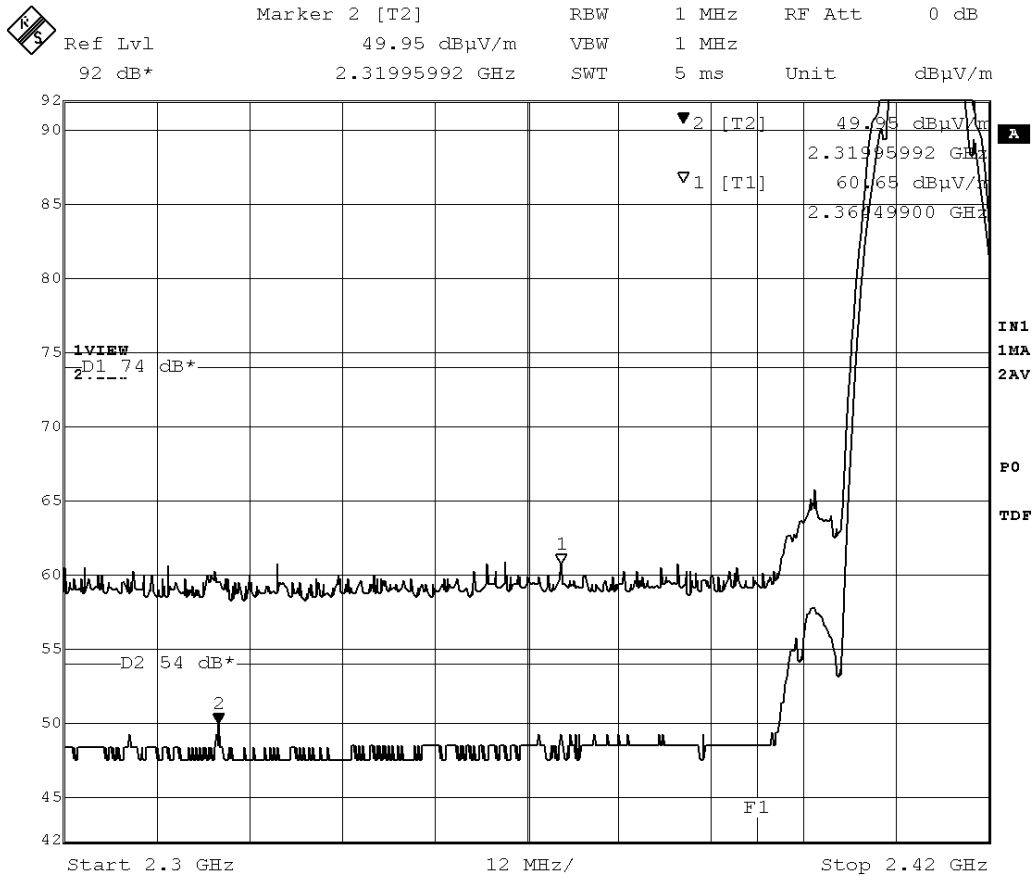


## 2.10 Spurious Emissions (Radiation)

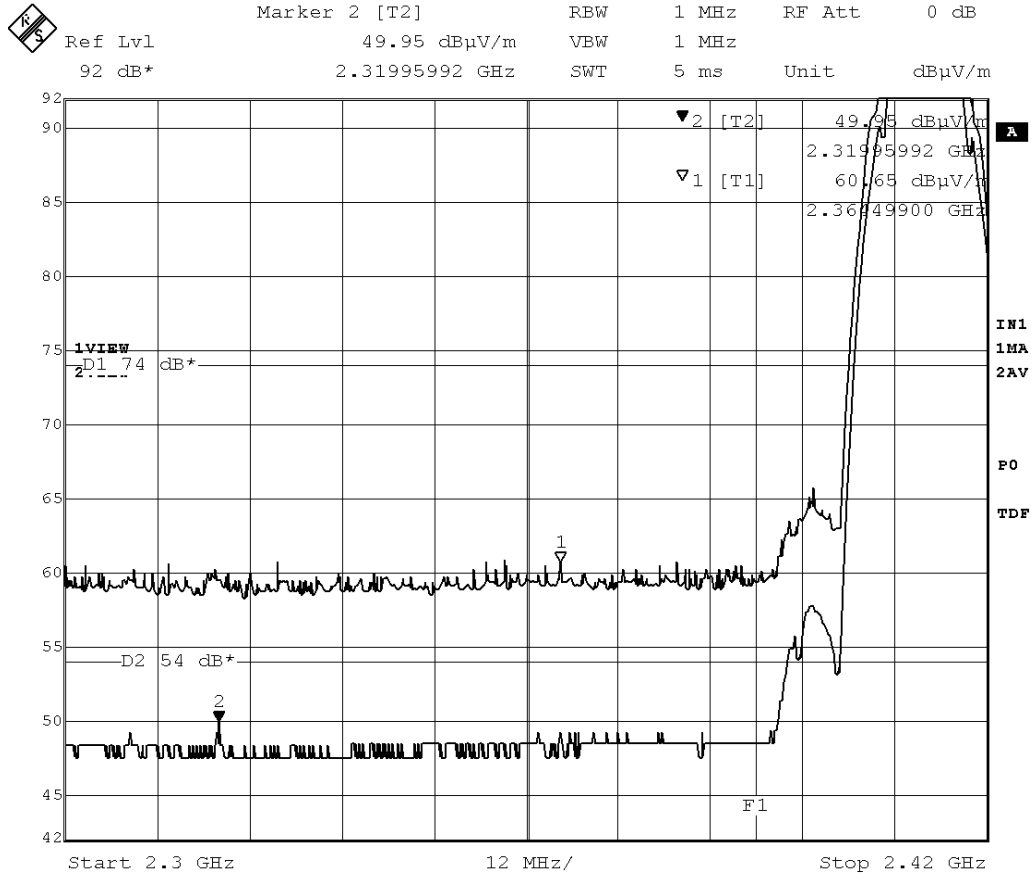
Date : September 9, 2005  
 Temp.: 25 °C Humi.: 62 %

### 2.10.1 Band Edge Compliance 2.10.1.1 801.11b Mode

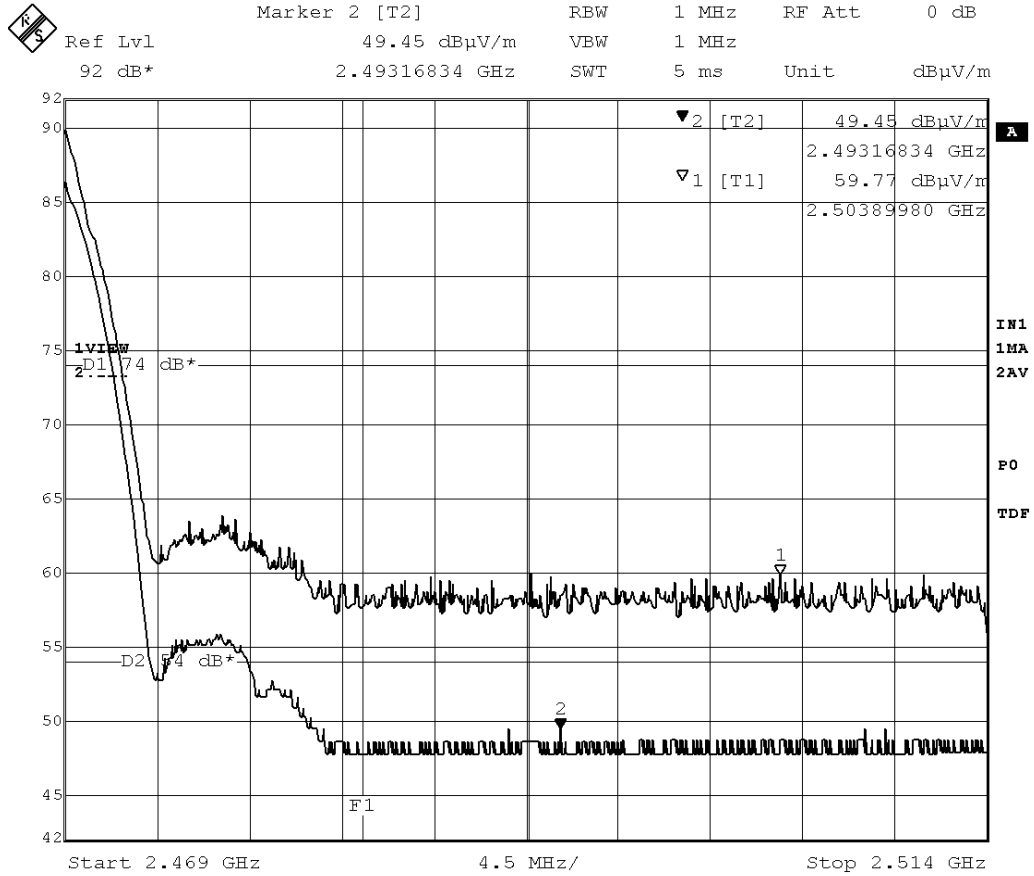
Mode of EUT : (1-1) 801.11b Mode, TX( 1ch: 2412 MHz)  
 Test Port : Enclosure  
 Antenna Polarization: Horizontal



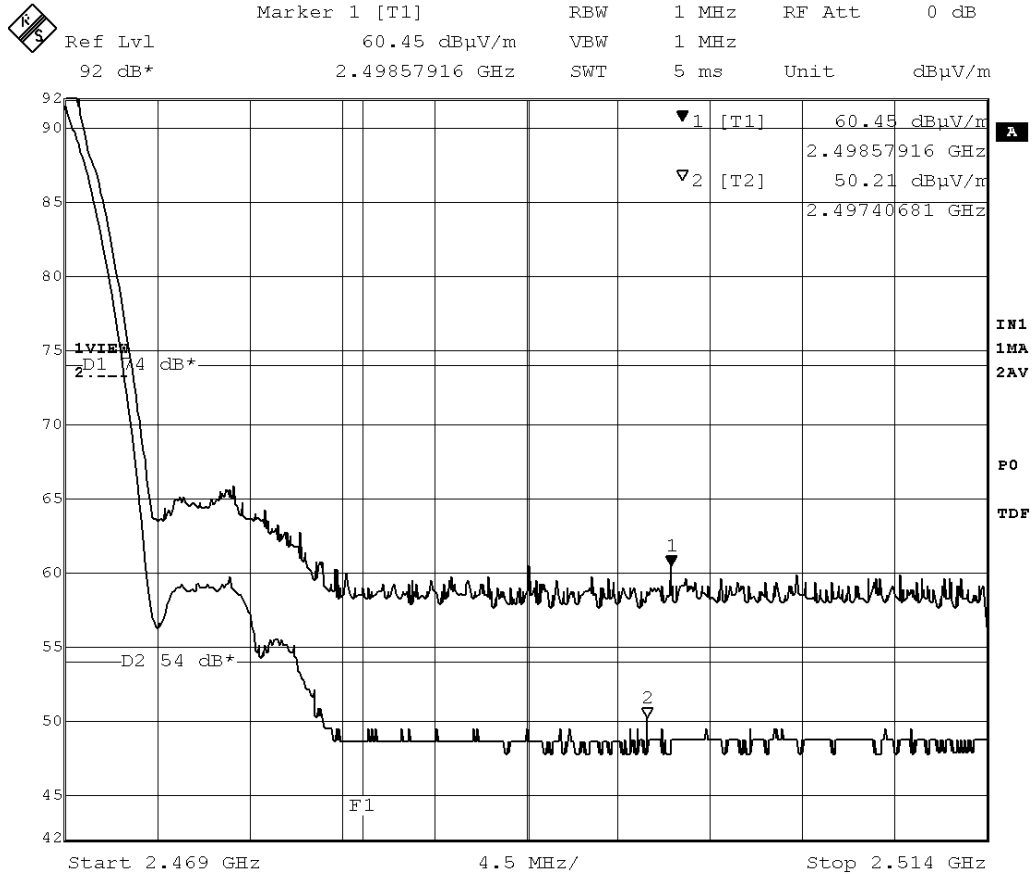
Mode of EUT : (1-1) 801.11b Mode, TX( 1ch: 2412 MHz)  
 Test Port : Enclosure  
 Antenna Polarization: Vertical



Mode of EUT : (1-3) 801.11b Mode, TX (11ch: 2462 MHz)  
 Test Port : Enclosure  
 Antenna Polarization: Horizontal

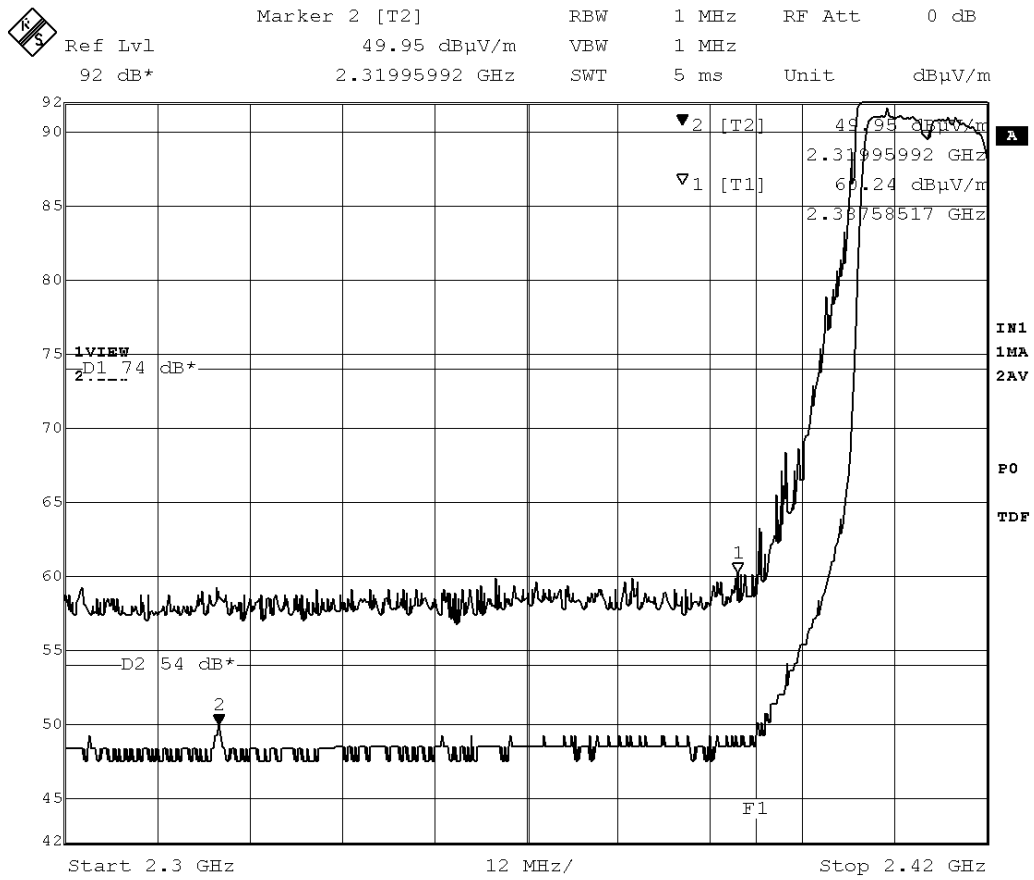


Mode of EUT : (1-3) 801.11b Mode, TX (11ch: 2462 MHz)  
 Test Port : Enclosure  
 Antenna Polarization: Vertical

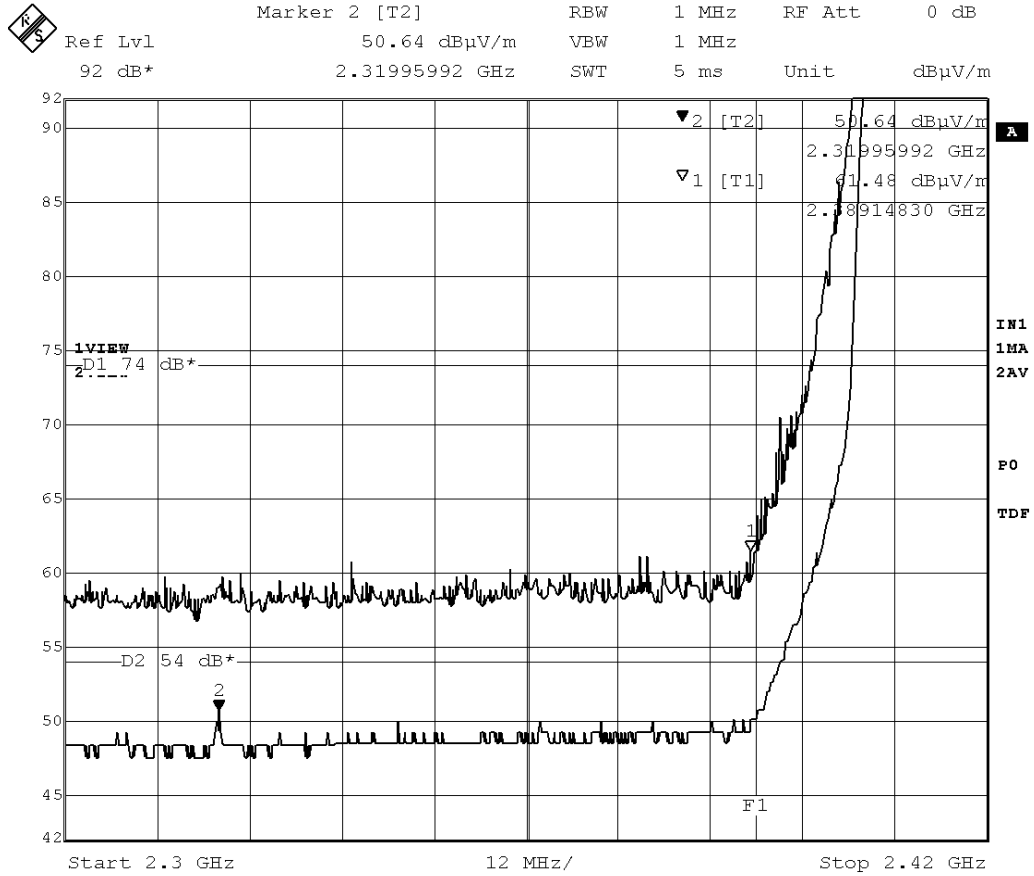


2.10.1.2 801.11g Mode

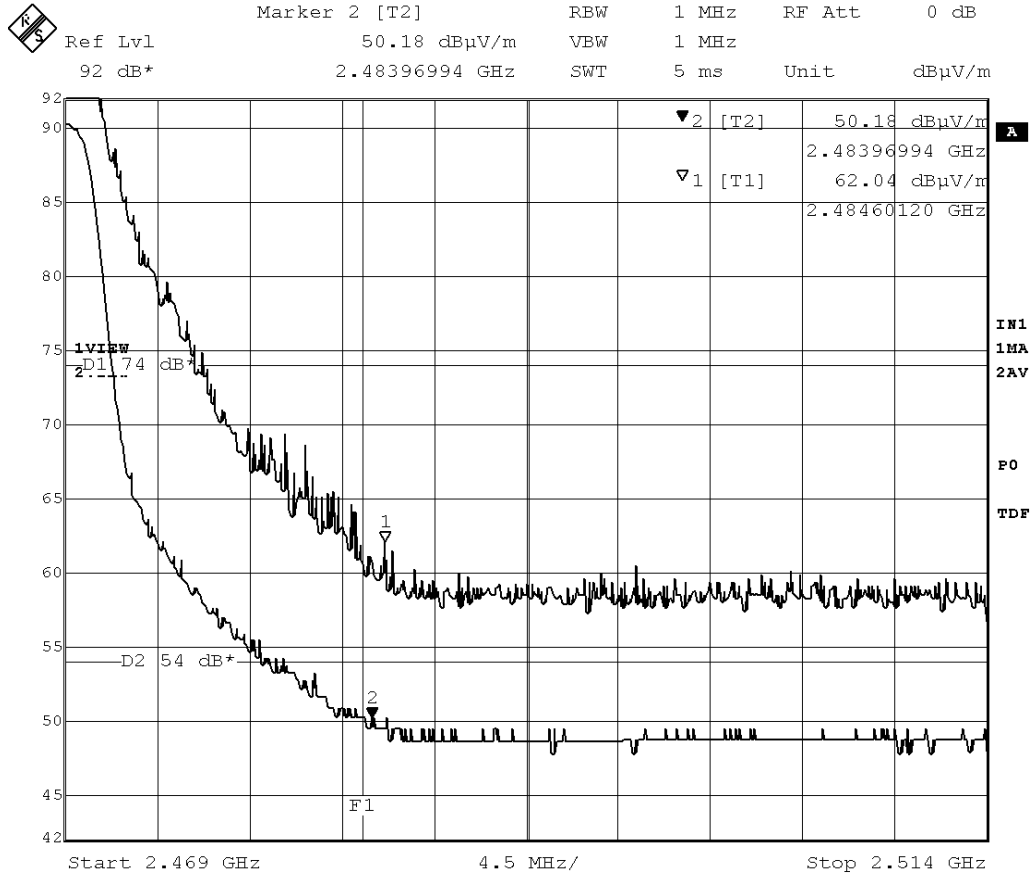
Mode of EUT : (2-1) 801.11g Mode, TX( 1ch: 2412 MHz)  
 Test Port : Enclosure  
 Antenna Polarization: Horizontal



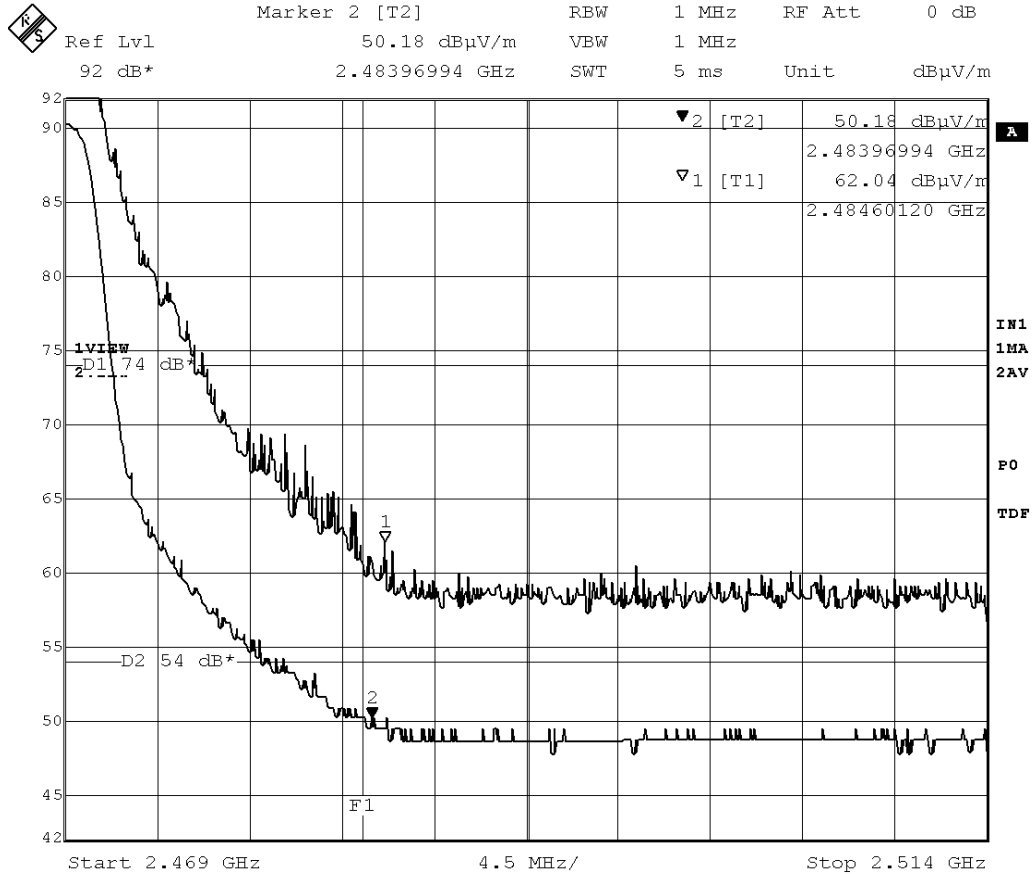
Mode of EUT : (2-1) 801.11g Mode, TX( 1ch: 2412 MHz)  
 Test Port : Enclosure  
 Antenna Polarization: Vertical



Mode of EUT : (2-3) 801.11g Mode, TX (11ch: 2462 MHz)  
 Test Port : Enclosure  
 Antenna Polarization: Horizontal



Mode of EUT : (2-3) 801.11g Mode, TX (11ch: 2462 MHz)  
 Test Port : Enclosure  
 Antenna Polarization: Vertical









2.10.2.2 801.11g Mode

Test Port : Enclosure

Spurious Emissions in the frequency range from 30 MHz to 1000 MHz

Mode of EUT : 801.11g Mode, TX (Worst Case)

Category : Class B

Frequency (MHz)	Antenna Factor (dB/m)	Meter Reading (dBμV)		Limits (dBμV/m)	Emission Level (dBμV/m)		Margin (dB)		Comment
		Horiz.	Ver.		Horiz.	Ver.	Horiz.	Ver.	
30.0	19.0	4.5	14.8	40.0	23.5	33.8	16.5	6.2	
60.0	8.9	22.0	34.0	40.0	30.9	42.9	9.1	-2.9	note 9
80.0	7.3	26.0	30.8	40.0	33.3	38.1	6.7	1.9	
100.0	11.3	25.2	25.0	43.5	36.5	36.3	7.0	7.2	
180.0	17.7	19.9	19.8	43.5	37.6	37.5	5.9	6.0	
260.0	19.7	31.3	25.3	46.0	51.0	45.0	-5.0	1.0	note 9
325.1	16.7	28.9	25.4	46.0	45.6	42.1	0.4	3.9	
433.2	19.6	33.0	26.3	46.0	52.6	45.9	-6.6	0.1	note 9
540.0	21.6	26.0	25.9	46.0	47.6	47.5	-1.6	-1.5	note 9
640.0	23.1	31.8	31.0	46.0	54.9	54.1	-8.9	-8.1	note 9
800.0	24.6	15.5	25.3	46.0	40.1	49.9	5.9	-3.9	note 9

- Notes:
- 1) Test Location : Anechoic Chamber
  - 2) Test Distance : 3 m
  - 3) The spectrum was checked from 30 MHz to 1000 MHz.
  - 4) Antenna factor includes the cable loss for 33 meter.
  - 5) The symbol of "<" means "or less".
  - 6) The symbol of ">" means "more than".
  - 7) A sample calculation was made at 30.0 MHz  
 $Af + Mr = 19.0 + 12.3 = 31.3 \text{ dB}\mu\text{V/m}$   
 Af : Antenna Factor    Mr : Meter Reading
  - 8) Setting of measuring instrument :  
 Detector Function : CISPR Quasi-Peak  
 IF Bandwidth : 120 kHz
  - 9) When WLAN transceiver is in off the measurement value is not change, therefore it is judged for the emission to be not EUT(WLAN).

Spurious Emissions in the frequency above 1000 MHz

Mode of EUT : (2-1) 801.11g Mode, TX( 1ch: 2412 MHz)

Frequency (GHz)	P-A Factor (dB)	Correction Factor (dB)	Polarization	Meter Reading (dBuV)		Limits (dBuV/m)		Emission Levels (dBuV/m)		Margins (dB)	
				AV	Peak	AV	Peak	AV	Peak	AV	Peak
4.8240	0.0	8.8	H/V	< 28.0	< 41.0	54.0	74.0	< 36.8	< 49.8	> 17.2	> 24.2
7.2360	0.0	13.4	H/V	< 28.0	< 41.0	54.0	74.0	< 41.4	< 54.4	> 12.6	> 19.6
9.6480	0.0	16.5	H/V	< 28.0	< 41.0	54.0	74.0	< 44.5	< 57.5	> 9.5	> 16.5
12.0600	0.0	18.2	H/V	< 28.0	< 41.0	54.0	74.0	< 46.2	< 59.2	> 7.8	> 14.8
14.4720	0.0	19.4	H/V	< 28.0	< 41.0	54.0	74.0	< 47.4	< 60.4	> 6.6	> 13.6

Mode of EUT : (2-2) 801.11g Mode, TX ( 6ch: 2437 MHz)

Frequency (GHz)	P-A Factor (dB)	Correction Factor (dB)	Polarization	Meter Reading (dBuV)		Limits (dBuV/m)		Emission Levels (dBuV/m)		Margins (dB)	
				AV	Peak	AV	Peak	AV	Peak	AV	Peak
4.8740	0.0	8.9	H/V	< 28.0	< 41.0	54.0	74.0	< 36.9	< 49.9	> 17.1	> 24.1
7.3110	0.0	13.5	H/V	< 28.0	< 41.0	54.0	74.0	< 41.5	< 54.5	> 12.5	> 19.5
9.7480	0.0	16.6	H/V	< 28.0	< 41.0	54.0	74.0	< 44.6	< 57.6	> 9.4	> 16.4
12.1850	0.0	18.3	H/V	< 28.0	< 41.0	54.0	74.0	< 46.3	< 59.3	> 7.7	> 14.7
14.6220	0.0	19.5	H/V	< 28.0	< 41.0	54.0	74.0	< 47.5	< 60.5	> 6.5	> 13.5

Mode of EUT : (2-3) 801.11g Mode, TX (11ch: 2462 MHz)

Frequency (GHz)	P-A Factor (dB)	Correction Factor (dB)	Polarization	Meter Reading (dBuV)		Limits (dBuV/m)		Emission Levels (dBuV/m)		Margins (dB)	
				AV	Peak	AV	Peak	AV	Peak	AV	Peak
4.9240	0.0	8.9	H/V	< 28.0	< 41.0	54.0	74.0	< 36.9	< 49.9	> 17.1	> 24.1
7.3860	0.0	13.6	H/V	< 28.0	< 41.0	54.0	74.0	< 41.6	< 54.6	> 12.4	> 19.4
9.8480	0.0	16.6	H/V	< 28.0	< 41.0	54.0	74.0	< 44.6	< 57.6	> 9.4	> 16.4
12.3100	0.0	18.4	H/V	< 28.0	< 41.0	54.0	74.0	< 46.4	< 59.4	> 7.6	> 14.6
14.7720	0.0	19.6	H/V	< 28.0	< 41.0	54.0	74.0	< 47.6	< 60.6	> 6.4	> 13.4

- Notes :
- 1) The spectrum was checked from 1.0 GHz to 26.5 GHz.
  - 2) The cable loss, amp. gain and antenna factor are included in the correction factor.
  - 3) The symbol of "<"means "or less".
  - 4) The symbol of ">"means "or greater".
  - 5) A sample calculation(Peak) was made at 4.824 (GHz).  
 $PA + Cf + Mr = 0 + 8.8 + 41 = 49.8$  (dBuV/m)  
 PA = Peak to Average Factor(P-A Factor)  
 Cf = Correction Factor  
 Mr = Meter Reading

6) Measuring Instrument Setting :

Detector function	Resolution Bandwidth	Video Bandwidth
Average(AV)	1 MHz	-
Peak	1 MHz	1 MHz







Spurious Emissions in the frequency above 1000 MHz

Mode of EUT : (1-4) 801.11b Mode, RX ( 1ch: 2412 MHz)

Frequency (GHz)	P-A Factor (dB)	Correction Factor (dB)	Polarization	Meter Reading (dBuV)		Limits (dBuV/m)		Emission Levels (dBuV/m)		Margins (dB)	
				AV	Peak	AV	Peak	AV	Peak	AV	Peak
1.0590	0.0	-6.2	V	43.2	49.0	54.0	74.0	37.0	42.8	17.0	31.2
1.3440	0.0	-3.6	H/V	< 28.0	< 41.0	54.0	74.0	< 24.4	< 37.4	> 29.6	> 36.6
2.0160	0.0	0.6	H/V	< 28.0	< 41.0	54.0	74.0	< 28.6	< 41.6	> 25.4	> 32.4
2.6880	0.0	2.9	H/V	< 28.0	< 41.0	54.0	74.0	< 30.9	< 43.9	> 23.1	> 30.1
3.3600	0.0	5.5	H/V	< 28.0	< 41.0	54.0	74.0	< 33.5	< 46.5	> 20.5	> 27.5

Mode of EUT : (1-5) 801.11b Mode, RX ( 6ch: 2437 MHz)

Frequency (GHz)	P-A Factor (dB)	Correction Factor (dB)	Polarization	Meter Reading (dBuV)		Limits (dBuV/m)		Emission Levels (dBuV/m)		Margins (dB)	
				AV	Peak	AV	Peak	AV	Peak	AV	Peak
1.0590	0.0	-6.2	V	43.2	49.0	54.0	74.0	37.0	42.8	17.0	31.2
1.3940	0.0	-3.2	H/V	< 28.0	< 41.0	54.0	74.0	< 24.8	< 37.8	> 29.2	> 36.2
2.0910	0.0	1.2	H/V	< 28.0	< 41.0	54.0	74.0	< 29.2	< 42.2	> 24.8	> 31.8
2.7880	0.0	3.4	H/V	< 28.0	< 41.0	54.0	74.0	< 31.4	< 44.4	> 22.6	> 29.6
3.4850	0.0	5.8	H/V	< 28.0	< 41.0	54.0	74.0	< 33.8	< 46.8	> 20.2	> 27.2





2.13.2 801.11g Mode

Test Port : Enclosure

Spurious Emissions in the frequency range from 30 MHz to 1000 MHz

Mode of EUT : 801.11g Mode, RX (Worst Case)

Category : Class B

Frequency (MHz)	Antenna Factor (dB/m)	Meter Reading (dBµV)		Limits (dBµV/m)	Emission Level (dBµV/m)		Margin (dB)		Comment
		Horiz.	Ver.		Horiz.	Ver.	Horiz.	Ver.	
30.0	19.0	4.4	14.4	40.0	23.4	33.4	16.6	6.6	
60.0	8.9	21.8	33.0	40.0	30.7	41.9	9.3	-1.9	noto 9
80.0	7.3	25.0	30.0	40.0	32.3	37.3	7.7	2.7	
100.0	11.3	24.8	25.3	43.5	36.1	36.6	7.4	6.9	
180.0	17.7	20.0	19.0	43.5	37.7	36.7	5.8	6.8	
260.0	19.7	30.8	24.3	46.0	50.5	44.0	-4.5	2.0	noto 9
325.0	16.7	28.6	25.0	46.0	45.3	41.7	0.7	4.3	
433.4	19.6	32.4	26.3	46.0	52.0	45.9	-6.0	0.1	noto 9
540.0	21.6	26.3	27.0	46.0	47.9	48.6	-1.9	-2.6	noto 9
640.0	23.1	32.0	29.8	46.0	55.1	52.9	-9.1	-6.9	noto 9
800.0	24.6	17.0	23.8	46.0	41.6	48.4	4.4	-2.4	noto 9

- Notes:
- 1) Test Location : Anechoic Chamber
  - 2) Test Distance : 3 m
  - 3) The spectrum was checked from 30 MHz to 1000 MHz.
  - 4) Antenna factor includes the cable loss for 33 meter.
  - 5) The symbol of "<" means "or less".
  - 6) The symbol of ">" means "more than".
  - 7) A sample calculation was made at 30.0 MHz  
 $Af + Mr = 19.0 + 12.3 = 31.3 \text{ dBµV/m}$   
 Af : Antenna Factor    Mr : Meter Reading
  - 8) Setting of measuring instrument :  
 Detector Function : CISPR Quasi-Peak  
 IF Bandwidth : 120 kHz
  - 9) When WLAN transceiver is in off the measurement value is not change, therefore it is judged for the emission to be not EUT(WLAN).



Spurious Emissions in the frequency above 1000 MHz

Mode of EUT : (2-4) 801.11g Mode, RX ( 1ch: 2412 MHz)

Frequency (GHz)	P-A Factor (dB)	Correction Factor (dB)	Polariz- ation	Meter Reading (dBuV)		Limits (dBuV/m)		Emission Levels (dBuV/m)		Margins (dB)	
				AV	Peak	AV	Peak	AV	Peak	AV	Peak
1.0590	0.0	-6.2	V	43.2	49.0	54.0	74.0	37.0	42.8	17.0	31.2
1.3440	0.0	-3.6	H/V	< 28.0	< 41.0	54.0	74.0	< 24.4	< 37.4	> 29.6	> 36.6
2.0160	0.0	0.6	H/V	< 28.0	< 41.0	54.0	74.0	< 28.6	< 41.6	> 25.4	> 32.4
2.6880	0.0	2.9	H/V	< 28.0	< 41.0	54.0	74.0	< 30.9	< 43.9	> 23.1	> 30.1
3.3600	0.0	5.5	H/V	< 28.0	< 41.0	54.0	74.0	< 33.5	< 46.5	> 20.5	> 27.5

Mode of EUT : (2-5) 801.11g Mode, RX ( 6ch: 2437 MHz)

Frequency (GHz)	P-A Factor (dB)	Correction Factor (dB)	Polariz- ation	Meter Reading (dBuV)		Limits (dBuV/m)		Emission Levels (dBuV/m)		Margins (dB)	
				AV	Peak	AV	Peak	AV	Peak	AV	Peak
1.0590	0.0	-6.2	V	43.2	49.0	54.0	74.0	37.0	42.8	17.0	31.2
1.3940	0.0	-3.2	H/V	< 28.0	< 41.0	54.0	74.0	< 24.8	< 37.8	> 29.2	> 36.2
2.0910	0.0	1.2	H/V	< 28.0	< 41.0	54.0	74.0	< 29.2	< 42.2	> 24.8	> 31.8
2.7880	0.0	3.4	H/V	< 28.0	< 41.0	54.0	74.0	< 31.4	< 44.4	> 22.6	> 29.6
3.4850	0.0	5.8	H/V	< 28.0	< 41.0	54.0	74.0	< 33.8	< 46.8	> 20.2	> 27.2







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# Appendix

## Test Instruments List

September 13, 2005



September 5, 2005

### Test Receivers

No.	Type	Model	Manufacturer	Serial	ID	Last Cal.	Interval
TR01	Test Receiver	ESH2	Rohde & Schwarz	880370/016	119-01-503E0	May 2005	1 Year
TR02	Test Receiver	ESH3	Rohde & Schwarz	881460/030	119-01-023E0	May 2005	1 Year
TR03	Test Receiver	ESHS10	Rohde & Schwarz	835871/004	119-01-505E0	Apr. 2005	1 Year
TR05	Test Receiver	ESVS10	Rohde & Schwarz	826148/002	119-03-504E0	Apr. 2005	1 Year
TR06	Test Receiver	ESVS10	Rohde & Schwarz	832699/001	119-03-506E0	Apr. 2005	1 Year
TR07	Test Receiver	ESI26	Rohde & Schwarz	100043	119-04-511E0	Aug. 2005	1 Year

### Spectrum Analyzers

No.	Type	Model	Manufacturer	Serial	ID	Last Cal.	Interval
SA01	Spectrum Analyzer	R3182	ADVANTEST	120600581	122-02-521E0	Mar. 2005	1 Year
SA02	Spectrum Analyzer	8566B	Hewlett Packard	2140A01091	122-02-501E0	Oct. 2004	1 Year
SA03	RF Pre-selector	85685A	Hewlett Packard	2648A00522	122-02-503E0	Oct. 2004	1 Year
SA04	Spectrum Analyzer	8566B	Hewlett Packard	2747A05855	122-02-517E0	Apr. 2005	1 Year
SA05	RF Pre-selector	85685A	Hewlett Packard	2901A00933	122-02-519E0	Apr. 2005	1 Year
SA06	Spectrum Analyzer	R3132	ADVANTEST	120500072	122-02-520E0	Sep. 2005	1 Year
SA07	Spectrum Analyzer	R3132	ADVANTEST	150400998	122-02-523E0	Aug. 2005	1 Year

### Antennas

No.	Type	Model	Manufacturer	Serial	ID	Last Cal.	Interval
AN01	Loop Antenna	HFH2-Z2	Rohde & Schwarz	881058/62	119-05-033E0	May. 2005	1 Year
AN02	Dipole Antenna	KBA-511	Kyoritsu	0-170-1	119-05-506E0	Oct. 2004	1 Year
AN03	Dipole Antenna	KBA-511A	Kyoritsu	0-201-13	119-05-504E0	Oct. 2004	1 Year
AN04	Dipole Antenna	KBA-611	Kyoritsu	0-147-14	119-05-507E0	Oct. 2004	1 Year
AN05	Dipole Antenna	KBA-611	Kyoritsu	0-210-5	119-05-505E0	Oct. 2004	1 Year
AN06	Biconical Antenna	BBA9106	Schwarzbeck	VHA91031150	119-05-111E0	Nov. 2004	1 Year
AN07	Biconical Antenna	BBA9106	Schwarzbeck	-	119-05-078E0	Nov. 2004	1 Year
AN08	Log-peri. Antenna	UHALP9107	Schwarzbeck	-	119-05-079E0	Nov. 2004	1 Year
AN09	Log-peri. Antenna	UHALP9107	Schwarzbeck	-	119-05-110E0	Nov. 2004	1 Year
AN10	Log-peri. Antenna	HL025	Rohde & Schwarz	340182/015	119-05-100E0	Feb. 2005	1 Year
AN11	Horn Antenna	3115	EMC Test Systems	6442	119-05-514E0	Jan. 2005	1 Year
AN12	Horn Antenna	3116	EMC Test Systems	2547	119-05-515E0	May 2005	2 Year



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## Networks

No.	Type	Model	Manufacturer	Serial	ID	Last Cal.	Interval
NE01	LISN	KNW-407	Kyoritsu	8-833-6	149-04-052E0	Apr. 2005	1 Year
NE02	LISN	KNW-407	Kyoritsu	8-855-2	149-04-055E0	Apr. 2005	1 Year
NE03	LISN	KNW-407	Kyoritsu	8-1130-6	149-04-062E0	Apr. 2005	1 Year
NE04	LISN	KNW-242C	Kyoritsu	8-837-13	149-04-054E0	Apr. 2005	1 Year
NE05	Absorbing Clamp	MDS21	Luthi	03293	119-06-506E0	Aug. 2005	1 Year

## Cables

No.	Type	Model	Manufacturer	Serial	ID	Last Cal.	Interval
CA01	RF Cable	5D-2W	Fujikura	-	155-21-001E0	Feb. 2005	1 Year
CA02	RF Cable	5D-2W	Fujikura	-	155-21-002E0	Feb. 2005	1 Year
CA03	RF Cable	3D-2W	Fujikura	-	155-21-005E0	Apr. 2005	1 Year
CA04	RF Cable	3D-2W	Fujikura	-	155-21-006E0	Apr. 2005	1 Year
CA05	RF Cable	3D-2W	Fujikura	-	155-21-007E0	Apr. 2005	1 Year
CA06	RF Cable	RG213/U	Rohde & Schwarz	-	155-21-010E0	Apr. 2005	1 Year
CA07	RF Cable(10m)	S 04272B	Suhner	-	155-21-011E0	May 2005	1 Year
CA08	RF Cable(2m 18GHz)	SUCOFLEX 104	Suhner	-	155-21-012E0	May 2005	1 Year
CA09	RF Cable(1m 18GHz)	SUCOFLEX 104	Suhner	-	155-21-013E0	May 2005	1 Year
CA10	RF Cable(1m N)	S 04272B	Suhner	-	155-21-015E0	May 2005	1 Year
CA11	RF Cable(1m 26GHz)	SUCOFLEX 104	Suhner	182811/4	155-21-016E0	Dec. 2004	1 Year
CA12	RF Cable(4m 26GHz)	SUCOFLEX 104	Suhner	190630	155-21-017E0	Dec. 2004	1 Year
CA13	RF Cable(10m)	F130-S1S1 -394	MEGA PHASE	10510	155-21-018E0	Dec. 2004	1 Year
CA14	RF Cable(7m)	3D-2W	Fujikura	-	155-21-009E0	Apr. 2005	1 Year
CA15	RF Cable(7m)	RG223/U	Suhner	-	155-21-021E0	May 2005	1 Year

## Amplifiers

No.	Type	Model	Manufacturer	Serial	ID	Last Cal.	Interval
AM01	AF Amplifier	P-500L	Accuphase	BOY806	127-01-501E0	Feb. 2005	1 Year
AM06	RF Amplifier	WJ-6882-814	Watkins-Johnson	0414	127-04-017E0	Jun. 2005	1 Year
AM07	RF Amplifier	WJ-5315-556	Watkins-Johnson	106	127-04-006E0	Jun. 2005	1 Year
AM08	RF Amplifier	WJ-5320-307	Watkins-Johnson	645	127-04-005E0	Jun. 2005	1 Year
AM09	RF Amplifier	JS4-00102600 -28-5A	MITEQ	669167	127-04-502E0	Apr. 2005	1 Year

**Signal Generators**

No.	Type	Model	Manufacturer	Serial	ID	Last Cal.	Interval
SG01	Function Generator	3325B	Hewlett Packard	2847A03284	118-08-124E0	Jul. 2005	1 Year
SG02	Function Generator	VP-7422A	Matsushita Communication	050351E122	118-08-503E0	Jul. 2005	1 Year
SG03	Signal Generator	8664A	Hewlett Packard	3035A00140	118-03-014E0	Jun. 2005	1 Year
SG04	Signal Generator	8664A	Hewlett Packard	3438A00756	118-04-502E0	Jun. 2005	1 Year
SG05	Signal Generator	6061A	Gigatronics	5130593	118-04-024E0	Mar. 2005	1 Year

**Auxiliary Equipment**

No.	Type	Model	Manufacturer	Serial	ID	Last Cal.	Interval
AU01	Termination(50)	-	Suhner	-	154-06-501E0	Jan. 2005	1 Year
AU02	Termination(50)	-	Suhner	-	154-06-502E0	Jan. 2005	1 Year
AU03	Power Meter	436A	Hewlett Packard	1725A01930	100-02-501E0	Apr. 2005	1 Year
AU04	Power Sensor	8482A	Hewlett Packard	1551A01013	100-02-501E0	Apr. 2005	1 Year
AU05	Power Sensor	8485A	Hewlett Packard	2942A08969	100-04-021E0	Apr. 2005	1 Year
AU06	FM Linear Detector	MS61A	Anritsu	M77486	123-02-008E0	Oct. 2004	1 Year
AU07	Level Meter	ML422C	Anritsu	M87571	114-02-501E0	Jun. 2005	1 Year
AU08	Measuring Amplifier	2636	B & K	1614851	082-01-502E0	May 2005	1 Year
AU09	Microphone	4134	B & K	1253497	147-01-502E0	May 2005	1 Year
AU10	Preamplifier	2639	B & K	1268763	127-01-504E0	N/A	N/A
AU11	Pistonphone	4220	B & K	1165008	147-02-501E0	Mar. 2005	1 Year
AU12	Artificial Mouth	4227	B & K	1274869	-	N/A	N/A
AU13	Frequency Counter	53131A	Hewlett Packard	3546A11807	102-02-075E0	May 2005	1 Year
AU14	Oven	-	Ohnishi	-	023-02-018E0	May 2005	1 Year
AU15	DC Power Supply	6628A	Hewlett Packard	3224A00284	072-05-503E0	Jun. 2005	1 Year
AU16	Band Reject Filter	BRM12294	Micro-tronics	003	149-01-501E0	Jan. 2005	1 Year
AU17	High Pass Filter	F-100-4000-5-R	RLC Electronics	0149	149-01-502E0	Feb. 2005	1 Year
AU18	Attenuator	43KC-10	Anritsu	-	148-03-506E0	Feb. 2005	1 Year
AU19	Attenuator	43KC-20	Anritsu	-	148-03-507E0	Feb. 2005	1 Year
AU20	Attenuator	355D	Hewlett Packard	219-10782	148-03-065E0	Apr. 2005	1 Year
AU21	FFT Analyzer	R9211C	Advantest	02020253	122-02-506E0	Jun. 2005	1 Year
AU22	Noise Meter	MN-446	Meguro	53030478	082-01-144E0	Apr. 2005	1 Year
AU23	RF Detector	75KC-50	Anritsu	305002	100-02-506E0	Jul. 2005	1 Year
AU24	Peak Power Analyzer	8990A/84815A	Hewlett Packard	3220A00486/ 3227A00118	100-02-016E0	Apr. 2005	1 Year