



## ***EMC TEST REPORT (Class B)***

**REGULATORY MODEL NUMBER: 25420**

**REGULATORY TYPE: N/A**

**REPORT NUMBER: TA13009F**

**ISSUED DATE: June 25, 2013**

**Applicant: LSI Corporation**

3718 N. Rock Road Wichita, KS 67226 USA

**Manufacturer: LSI Corporation**

3718 N. Rock Road Wichita, KS 67226 USA

**Issued By: Inventec Corporation (Taoyuan) EMC Lab**

No. 349, Section 2, Jen-Ho Road, 33547 Tachi, Taoyuan, Taiwan

Receipt date of EUT: January 23, 2013

Date of testing: January 23, 2013 ~ June 11, 2013

**Approved By**

Jane Lin / EMC Lab Manager  
Inventec Corp. (Taoyuan) EMC Lab



NVLAP LAB CODE 200140-0

*The test results in this report only apply to the tested sample.*

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## 1. PRODUCT INFORMATION

### 1.1. GENERAL DESCRIPTION

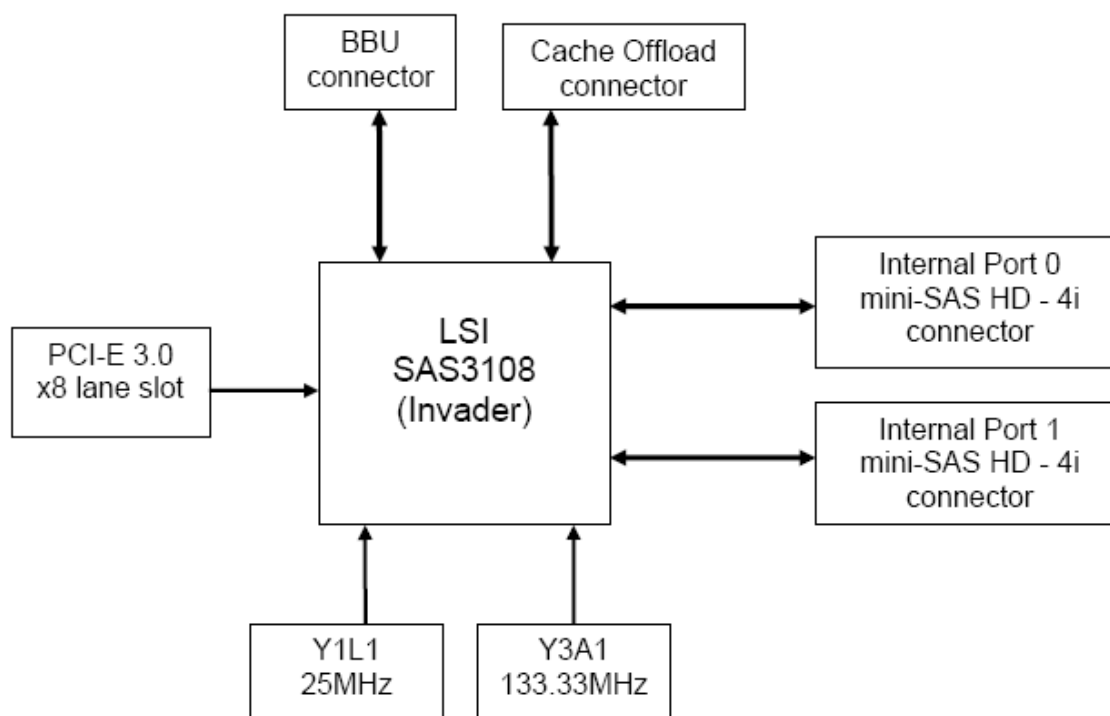
|                               |                                                                                                     |
|-------------------------------|-----------------------------------------------------------------------------------------------------|
| <b>Product Type:</b>          | PCI-E SAS HBA Card (Host Bus Adaptor Card)                                                          |
| <b>Regulatory Model:</b>      | 25420                                                                                               |
| <b>Regulatory Type:</b>       | N/A                                                                                                 |
| <b>Serial Number:</b>         | SR301P0028                                                                                          |
| <b>Firmware Version:</b>      | 24.0.1.0063                                                                                         |
| <b>Host System:</b>           | ML350p Gen8 (Server)                                                                                |
| <b>Host Operating System:</b> | Windows Server 2008 R2                                                                              |
| <b>Condition:</b>             | Engineering Sample                                                                                  |
| <b>Brand:</b>                 | LSI                                                                                                 |
| <b>Applicant:</b>             | LSI Corporation<br>3718 N. Rock Road Wichita, KS 67226 USA                                          |
| <b>Issued By:</b>             | Inventec Corporation (Taoyuan) EMC Lab                                                              |
| <b>Standard:</b>              | FCC CFR 47 Part 15, Subpart B<br>CISPR 22:2008<br>Canadian ICES-003:2004 Class B<br>ANSI C63.4:2009 |

### 1.2. PRODUCT FEATURE

| Feature Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>25420 is a Mega RAID controller which key features are listed as below:</p> <ul style="list-style-type: none"> <li>• Uses LSI SAS3108 ROC (Invader)</li> <li>• PCIe 3.0 Low Profile (Half Height) MD2 form factor complaint, 6.6" x 2.713"</li> <li>• PCIe 3.0 compliant x8 lane card edge connector</li> <li>• Two internal mini-SAS HD - 4i connectors (SFF - 8643)</li> <li>• Supporting 8 internal SAS/SATA drive ports</li> <li>• On board DDR3 1866MHz memory</li> <li>• Cache retention through "BBU Option" or "Cache Offload Option Using Supercaps"</li> </ul> |

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

### 1.3. PRODUCT BLOCK DIAGRAM



**1.4. PRODUCT COMPONENTS**

| Component                                                                      | Manufacture  | Model / Part Number       | Serial Number  |
|--------------------------------------------------------------------------------|--------------|---------------------------|----------------|
| PCI-E SAS HBA Card                                                             | LSI          | 25420                     | SR301P0028     |
| Daughter Card                                                                  | LSI          | --                        | SR244P0031     |
| Tecate Battery (Supercap)                                                      | LSI          | 53790-00                  | ST22700162     |
| iBBU09 Battery                                                                 | LSI          | BAT1S1P-A                 | SY25112736MA   |
| ML350p Gen8 Host System for conducted and radiated emission (above 1GHz) tests |              |                           |                |
| ML350p Gen8 Host System                                                        | HP           | TPS-F003                  | SGH22689JY     |
| Motherboard                                                                    | HP           | FXNESSN-002               | PCUXA0BTM2O08S |
| Memory (DDR3 4GB)                                                              | HP           | RBYYU8DXR2V09F            | 647647-071     |
| HDD (2.5" SAS 600GB)                                                           | HP           | MBF2600RC                 | PHD219E1CX     |
|                                                                                |              |                           | PHD219E117     |
|                                                                                |              |                           | PHD219E1CY     |
|                                                                                |              |                           | PHD219E1BU     |
|                                                                                |              |                           | PHD219E1BP     |
|                                                                                |              |                           | PHD219E11C     |
|                                                                                |              |                           | PHD219E1CS     |
| HDD (2.5" SATA 500GB)                                                          | HP (Seagate) | MM0500EANCR               | PHD219E11B     |
|                                                                                |              |                           | 9SP2PFXS       |
|                                                                                |              |                           | 9SP2PNCV       |
|                                                                                |              |                           | 9SP2LL1D       |
|                                                                                |              |                           | 9SP2P 2R4      |
|                                                                                |              |                           | 9SP2PJYW       |
|                                                                                |              |                           | 9SP2PNJ3       |
| HDD (2.5" SATA 500GB)                                                          | HP (Seagate) | MM0500EANCR               | 9SP2PG89       |
|                                                                                |              |                           | 9SP2PQ0P       |
| CPU                                                                            | Intel        | E5-2603                   | 1.80GHz        |
| Power Supply (1200W)                                                           | HP (Delta)   | HSTNS-PD30 (DPS-1200SB A) | 5BXRC0D4D2N1BA |
| ML350p Gen8 Host System for radiated emission (30MHz~1000MHz) test             |              |                           |                |
| ML350p Gen8 Host System                                                        | HP           | TPS-F003                  | SGH22689K1     |
| Motherboard                                                                    | HP           | FXNESSN-002               | PCUXA0BTM2O0AI |
| Memory (DDR3 4GB)                                                              | HP           | RBYYU8DXR2V090            | 647647-071     |
| HDD (2.5" SAS 600GB)                                                           | HP           | MBF2600RC                 | PHD219E1CX     |
|                                                                                |              |                           | PHD219E117     |
|                                                                                |              |                           | PHD219E1CY     |
|                                                                                |              |                           | PHD219E1BU     |
|                                                                                |              |                           | PHD219E1BP     |
|                                                                                |              |                           | PHD219E11C     |
|                                                                                |              |                           | PHD219E1CS     |
| HDD (2.5" SATA 500GB)                                                          | HP (Seagate) | MM0500EANCR               | PHD219E11B     |
|                                                                                |              |                           | 9SP2PFXS       |
|                                                                                |              |                           | 9SP2PNCV       |
|                                                                                |              |                           | 9SP2LL1D       |
|                                                                                |              |                           | 9SP2P 2R4      |
|                                                                                |              |                           | 9SP2PJYW       |
|                                                                                |              |                           | 9SP2PNJ3       |
| HDD (2.5" SATA 500GB)                                                          | HP (Seagate) | MM0500EANCR               | 9SP2PG89       |
|                                                                                |              |                           | 9SP2PQ0P       |
| CPU                                                                            | Intel        | E5-2603                   | 1.80GHz        |
| Power Supply (1200W)                                                           | HP (Delta)   | HSTNS-PD30 (DPS-1200SB A) | 5BXRC0B4D1L10V |

Note: Tecate Battery(Supercap) is attached on Daughter Card.

## 2. TEST INFORMATION

### 2.1. TEST MODE DESCRIPTION

The EUT (in Host: ML350p Gen8) has been pre-tested for Radiated and Conducted emission tests as the following configurations:

| Component                                                                       | Manufacturer | Type / Specification | SKU |    |    |
|---------------------------------------------------------------------------------|--------------|----------------------|-----|----|----|
|                                                                                 |              |                      | 1   | 2  | 3  |
| PCI-E SAS HBA Card                                                              | LSI          | 25420                | *1  | *1 | *1 |
| Daughter card                                                                   | LSI          | SR244P0031           | -   | *1 | -  |
| Tecate Battery (Supercap)                                                       | LSI          | 53790-00             | -   | *1 | -  |
| iBBU09 Battery                                                                  | LSI          | BAT1S1P-A            | *1  | -  | *1 |
| Components in ML350p Gen8 Host System for conducted and radiated emission tests |              |                      |     |    |    |
| Motherboard                                                                     | HP           | FXNESSN-002          | *1  | *1 | *1 |
| Memory                                                                          | HP           | 4GB, DDR3 DIMM       | *1  | *1 | *1 |
| CPU                                                                             | Intel        | 1.8GHz, 4 Core       | *1  | *1 | *1 |
| HDD                                                                             | HP (Seagate) | 2.5" SATA HDD, 500GB | *8  | -  | -  |
|                                                                                 | HP           | 2.5" SAS HDD, 600GB  | -   | *8 | *8 |
| PSU                                                                             | HP(DELTA)    | HSTNS-PD30 (1200W)   | *1  | *1 | *1 |

Note:

1. According to pre-tested data, SKU 1 was the worst combinations for conducted emission test.
2. According to pre-tested data, SKU 2 was the worst combinations for radiated emission test.

### 2.2. EUT OPERATING CONDITIONS

Programs should be run on EUT during the test are listed below:

- Run the program "WinHpattern.exe" on host server with full screen display, and let EUT to read and write data to all the HDDs.
- Run the "Smasher.exe" on host server, and let EUT to read and write data to all the HDDs.

## 2.3. SUPPORT TEST PERIPHERALS & CABLE CONFIGURATION

### 2.3.1. FOR CONDUCTED AND RADIATED EMISSION (ABOVE 1GHz) TESTS

| Test Peripherals |              |        |           |                |               |          | Cables   |       |     |
|------------------|--------------|--------|-----------|----------------|---------------|----------|----------|-------|-----|
| No.              | Name         | Brand  | Model     | Serial Number  | FCC ID or DoC | I/O Port | Shielded | LTH   | Qty |
| 1                | Monitor      | HP     | ZR24W     | CNT04516KN     | DoC           | VGA      | Yes      | 1.85m | 1   |
| 2                | USB Keyboard | HP     | KU-0841   | CD00904469     | DoC           | USB      | Yes      | 1.80m | 1   |
| 3                | USB Mouse    | HP     | N910      | K9P01231630    | DoC           | USB      | Yes      | 1.80m | 1   |
| 4                | USB HDD      | PQI    | H566      | PQ1011-0178024 | DoC           | USB      | Yes      | 1.00m | 1   |
| 5                | USB HDD      | PQI    | H566      | PQ1011-0178018 | DoC           | USB      | Yes      | 1.00m | 1   |
| 6                | USB HDD      | PQI    | H566      | PQ1011-0178021 | DoC           | USB      | Yes      | 1.00m | 1   |
| 7                | USB HDD      | PQI    | H566      | PQ1011-0178006 | DoC           | USB      | Yes      | 1.00m | 1   |
| 8                | USB HDD      | PQI    | H566      | PQ1011-0178003 | DoC           | USB      | Yes      | 1.00m | 1   |
| 9                | USB HDD      | PQI    | H566      | PQ1011-0178012 | DoC           | USB      | Yes      | 1.00m | 1   |
| 10               | Modem        | Hayes  | 3124US    | A01031003415   | BFJ9D9231 AA  | Series   | Yes      | 1.80m | 1   |
| 11               | HUB          | D-Link | DGS-1024D | DRC5BAC000184  | DoC           | NIC      | No       | 5.00m | 5   |
| 12               | Power        | -      | -         | -              | -             | Power    | No       | 1.80m | 1   |

Note: The items listed above are test peripherals of ML350p Gen8 Host System for conducted and radiated emission tests.

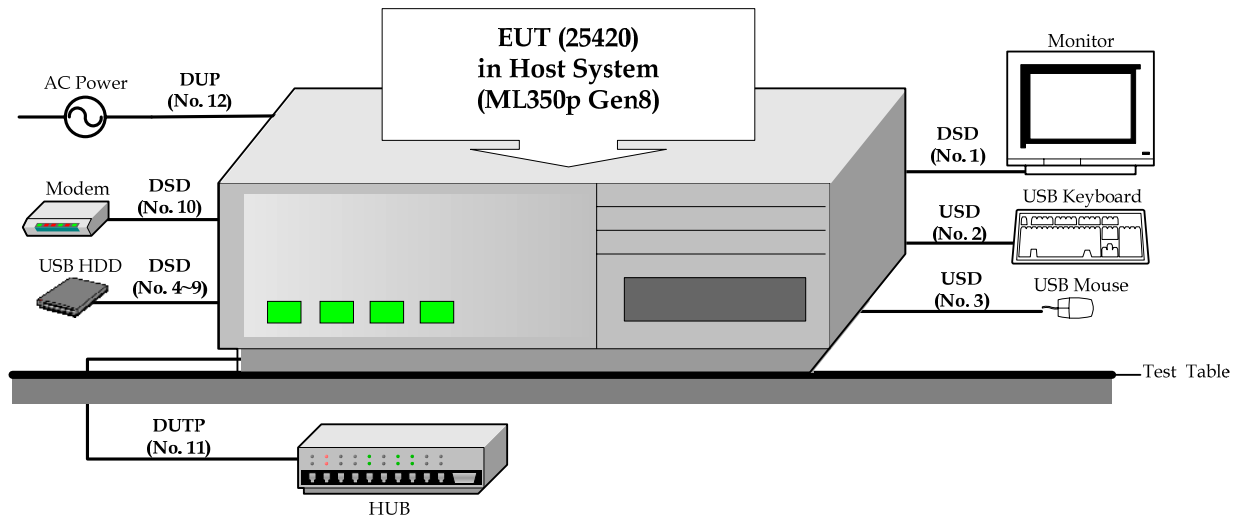
### 2.3.2. FOR RADIATED EMISSION (30MHz~1000MHz) TEST

| Test Peripherals |                 |         |            |                |               |          | Cables   |       |     |
|------------------|-----------------|---------|------------|----------------|---------------|----------|----------|-------|-----|
| No.              | Name            | Brand   | Model      | Serial Number  | FCC ID or DoC | I/O Port | Shielded | LTH   | Qty |
| 1                | Monitor         | HP      | ZR24W      | CNT04516QV     | DoC           | VGA      | Yes      | 1.85m | 1   |
| 2                | USB Keyboard    | HP      | KU-0841    | CD00904391     | DoC           | USB      | Yes      | 1.80m | 1   |
| 3                | USB Mouse       | HP      | M-UAE96    | FATSK0K5BZF35E | DoC           | USB      | Yes      | 1.85m | 1   |
| 4                | USB HDD         | DELL    | RD1000     | 85550124303    | DoC           | USB      | Yes      | 1.80m | 1   |
| 5                | USB HDD         | DELL    | RD1000     | 85550124276    | DoC           | USB      | Yes      | 1.80m | 1   |
| 6                | USB HDD         | DELL    | RD1000     | 85550124615    | DoC           | USB      | Yes      | 1.80m | 1   |
| 7                | USB HDD         | Seagate | 9ZR8N1-500 | NA0H1FHV       | DoC           | USB      | Yes      | 0.45m | 1   |
| 8                | USB HDD         | Seagate | 9ZR8N1-500 | NA0H1F3R       | DoC           | USB      | Yes      | 0.45m | 1   |
| 9                | USB HDD         | Seagate | 9ZR8N1-500 | NA0H1F82       | DoC           | USB      | Yes      | 1.00m | 1   |
| 10               | Modem           | Hayes   | 3124US     | A209531003675  | BFJ9D9231 AA  | Series   | Yes      | 1.80m | 1   |
| 11               | Client (Server) | HP      | TPS-F003   | SGH22689JY     | DoC           | NIC      | No       | 5.00m | 5   |
| 12               | Power           | -       | -          | -              | -             | Power    | No       | 1.80m | 1   |

Note: The items listed above are test peripherals of ML350p Gen8 Host System for conducted and radiated emission tests.

## 2.4. BLOCK DIAGRAM OF CONNECTIONS BETWEEN EUT AND TEST PERIPHERAL

### 2.4.1. FOR CONDUCTED AND RADIATED EMISSION (ABOVE 1GHz) TESTS



Legend:

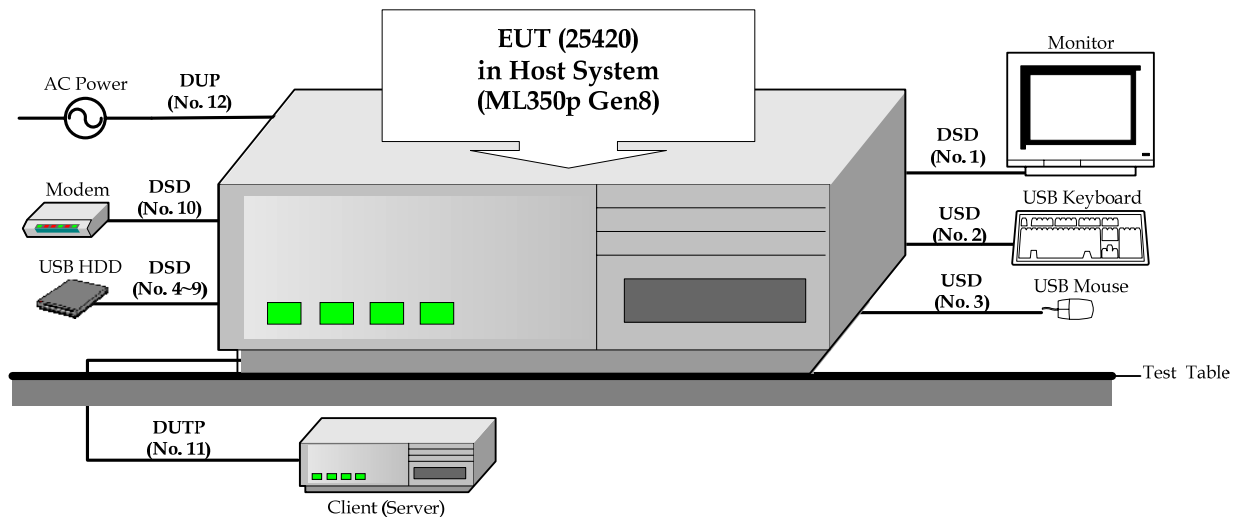
USD = Undetachable Shielded Data cable (No. refer to item 2.3.1.)

DSD = Detachable Shielded Data cable (No. refer to item 2.3.1.)

DUP = Detachable Unshielded Power cord (No. refer to item 2.3.1.)

DUTP = Detachable Unshielded Twisted Pair cable (No. refer to item 2.3.1.)

### 2.4.2. FOR RADIATED EMISSION (30MHz~1000MHz) TEST



Legend:

USD = Undetachable Shielded Data cable (No. refer to item 2.3.2.)

DSD = Detachable Shielded Data cable (No. refer to item 2.3.2.)

DUP = Detachable Unshielded Power cord (No. refer to item 2.3.2.)

DUTP = Detachable Unshielded Twisted Pair cable (No. refer to item 2.3.2.)

## 2.5. SUMMARY OF TEST RESULTS

The worst data was found as following:

| Standard                                                                                     | Test Item                             | Test Result | Remarks                                                                                                                                                                                                             | Tester                        |
|----------------------------------------------------------------------------------------------|---------------------------------------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| FCC CFR 47<br>Part 15,<br>Subpart B<br>CISPR 22:2008<br>Canadian<br>ICES-003:2004<br>Class B | Conducted Emission<br>for Mains Ports | PASS        | Worst emission frequency is <u>9.8320</u> MHz at <u>Neutral</u><br>And minimum passing margin is <u>-7.90</u> dB, <u>Average</u>                                                                                    | A-Kuan Yu<br><i>A-Kuan Yu</i> |
|                                                                                              | Radiated Emission<br>(30MHz~1000MHz)  | PASS        | Worst emission frequency is <u>875.01</u> MHz at <u>Vertical</u><br>And minimum passing margin is <u>-6.85</u> dB, <u>Quasi-Peak</u><br>Height of antenna is <u>1.28</u> m<br>Angle of turntable is <u>209</u> deg. | A-Kuan Yu<br><i>A-Kuan Yu</i> |
|                                                                                              | Radiated Emission<br>(Above 1GHz)     | PASS        | Worst emission frequency is <u>6000.00</u> MHz at <u>Vertical</u><br>And minimum passing margin is <u>-5.00</u> dB, <u>Average</u><br>Height of antenna is <u>1.18</u> m<br>Angle of turntable is <u>209</u> deg.   | A-Kuan Yu<br><i>A-Kuan Yu</i> |

Note:

1. The EUT's highest operating frequency is 6GHz. Radiated Emission need to be measured up to 30GHz.

## 2.6. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

| Measurement        | Frequency                    | Test Site       | Uncertainty |
|--------------------|------------------------------|-----------------|-------------|
| Conducted Emission | 150kHz ~ 30MHz (Mains ports) | SR No.4         | 2.50dB      |
| Radiated Emission  | 30MHz ~ 1000MHz              | 10m Chamber     | 4.54dB      |
|                    | Above 1GHz                   | 3m Chamber No.2 | 5.38dB      |

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

## 2.7. TEST FACILITY

The Inventec Corp. (Taoyuan) EMC lab located at:  
No. 349, Section 2, Jen-Ho Road, 33547 Tachi, Taoyuan, Taiwan  
The Lab has a turntable with a diameter at maximum 3 meters and can measure ITE products at the 3 and 10 meters of antenna distance.

A site description and calibration report to ANSI C63.4 is available upon request.  
It is authorized for testing ITE devices by NVLAP, NEMKO, TAF (BSMI) and VCCI..

EMC Laboratory Accreditation:

NVLAP Lab Code: 200140-0  
Nemko ELA No. 127  
BSMI EMI Testing Lab: SL2-IN-E-0009  
TAF Accreditation No. 1119  
VCCI Registration No. C-3891, T-2011 (SR No.1)  
C-3951, T-1043 (SR No.2)  
C-4179, T-1210 (SR No.3)  
C-4138, T-1172 (SR No.4)  
C-4178, T-1209 (SR No.5)  
R-3519, G-336 (10m Chamber)  
R-3477, G-302 (3m Chamber No.1)  
R-3540, G-346 (3m Chamber No.2)  
R-3696, G-444 (3m Chamber No.3)

## **2.8. TEST SETUP**

### **2.8.1. TEST METHODOLOGY**

- A. Both conducted and radiated tests were performed according to the following methods and procedures:
- ANSI C63.4  
Methods of Measurement of Radio-Noise Emissions for Low Voltage Electrical and Electronic Equipment in the range of 9kHz to 40GHz.
  - CISPR 22  
Limits and Methods of Measurement of Radio Interference Characteristics of Information Technology Equipment.
  - FCC CFR 47 Part 15  
Federal Communications Commission Radio Frequency Devices.
  - Canadian ICES-003  
Implementation and Interpretation off the Interference-Causing Equipment Standard for Digital Apparatus
- B. Description of departing from standard test method & any other specific: NONE

### **2.8.2. MODIFICATIONS IMPLEMENTED FOR COMPLIANCE**

No modifications were made to the equipment under test by Test Laboratory.

### **2.8.3. TECHNICAL BASIC FOR COMPLIANCE**

It was examined to the following sections of the standards FCC CFR 47 Part 15, Canadian ICES-003 and CISPR 22 underlying the basic requirements of the EMC directive 2004/108/EC.

### **2.8.4. RELATED SUBMITTAL(S) NOTES**

- A. The results relate only to the items tested.
- B. The report must not be used by the client to claim product certification, approval or endorsement by NVLAP, NIST, or any agency of the federal government.
- C. There are no related submittals to this file.

## 2.8.5. TEST CONDITION

### 2.8.5.1 Test of Conducted Emission

Conducted emissions were measured from 0.15MHz to 30MHz with a resolution bandwidth of 9kHz and return leads of the EUT according to the methods defines in ANSI C63.4: 2009.

The EUT was placed on a nonmetallic stand in a shielded room, 0.8 meter above the ground plane, as shown in section 3.3. The interface cables and equipment positions were varied within limits of reasonable applications to determine the positions producing maximum conducted emissions.

### 2.8.5.2 Test of Radiation Emission

The measurement range of radiation emission, which is from 30MHz to 5<sup>th</sup> harmonic of the highest frequency or 40GHz, whichever is lower was investigated.

The readings of frequency 30MHz to 1000MHz are measured with a resolution bandwidth of 120kHz according to the methods defines in ANSI C63.4: 2009 and above 1000MHz shall be performed using a minimum resolution bandwidth of 1MHz defines in FCC 15.35(b). The EUT was placed on a nonmetallic stand, 0.8 meter above the ground plane, as shown in section 4.3.

The interface cables and equipment positions were varied within limits of reasonable applications to determine the positions producing maximum radiated emissions.

Frequency range of radiated measurement:

| Highest frequency generated or used within the EUT or on which the EUT operates or tunes (MHz) | Upper frequency of measurement range (GHz)                                     |
|------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| Below 108                                                                                      | 1                                                                              |
| 108 ~ 500                                                                                      | 2                                                                              |
| 500 ~ 1000                                                                                     | 5                                                                              |
| Above 1000                                                                                     | 5 <sup>th</sup> harmonic of the highest frequency or 40GHz, whichever is lower |

### 3. CONDUCTION EMISSION MEASUREMENT

#### 3.1. TEST LIMIT

| Test Standard: FCC CFR 47 Part 15 Subpart B, CISPR 22 (Class B), ICES-003 (Class B), for mains ports |                |         |
|------------------------------------------------------------------------------------------------------|----------------|---------|
| Frequency (MHz)                                                                                      | Limit [dB(μV)] |         |
|                                                                                                      | Quasi-Peak     | Average |
| 0.15 ~ 0.50                                                                                          | 66 ~ 56        | 56 ~ 46 |
| 0.50 ~ 5                                                                                             | 56             | 46      |
| 5 ~ 30                                                                                               | 60             | 50      |

Note:

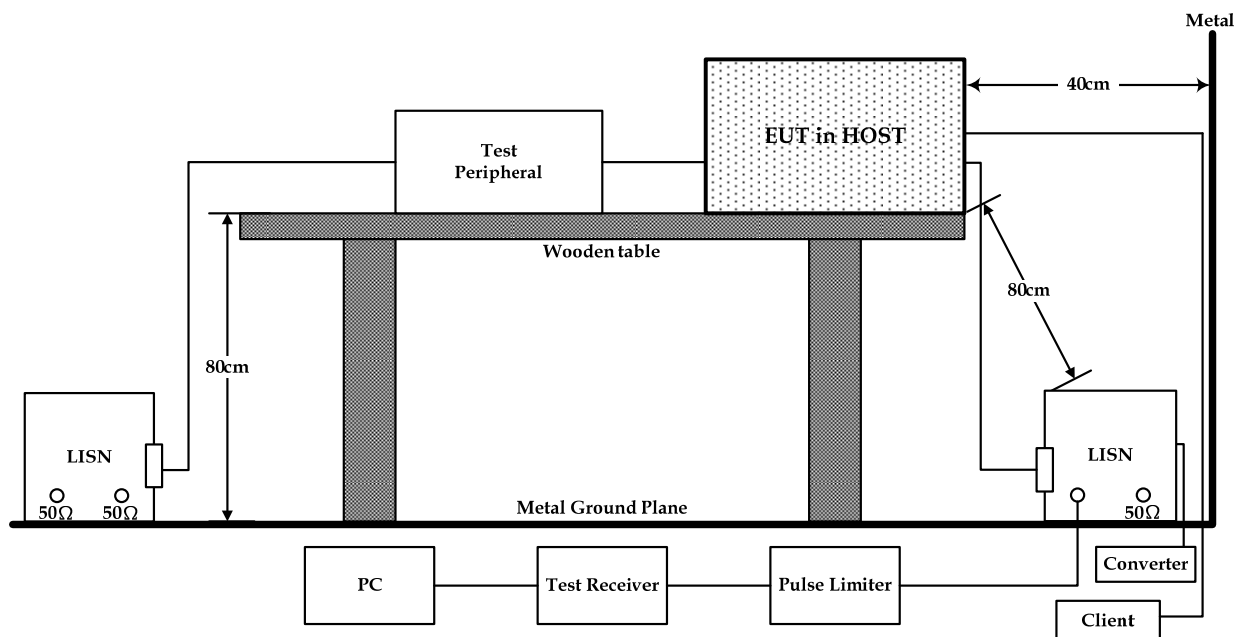
1. The lower limit shall apply at the transition frequencies.
2. The limit decreases linearly with the logarithm of the frequency in the range of 0.15 ~ 0.50MHz.

#### 3.2. TEST INSTRUMENTS

| Name             | Manufacturer       | Model      | Serial Number | Calibration Date | Calibration Due |
|------------------|--------------------|------------|---------------|------------------|-----------------|
| Receiver         | Rohde & Schwarz    | ESCI 7     | 100766        | 01-Oct-2012      | 01-Oct-2013     |
| Pulse Limiter    | Rohde & Schwarz    | ESH3-Z2    | 101168        | 13-Jun-2012      | 13-Jun-2013     |
| LISN             | Rohde & Schwarz    | ENV216     | 101055        | 26-Jun-2012      | 20-Jun-2013     |
| LISN             | Rohde & Schwarz    | ENV216     | 101103        | 19-Dec-2012      | 19-Dec-2013     |
| RF Cable         | Harbour Industries | RG400      | N/A           | 16-Nov-2012      | 16-Nov-2013     |
| EMI Test Program | Audix              | e3(Ver. 6) | N/A           | N/A              | N/A             |

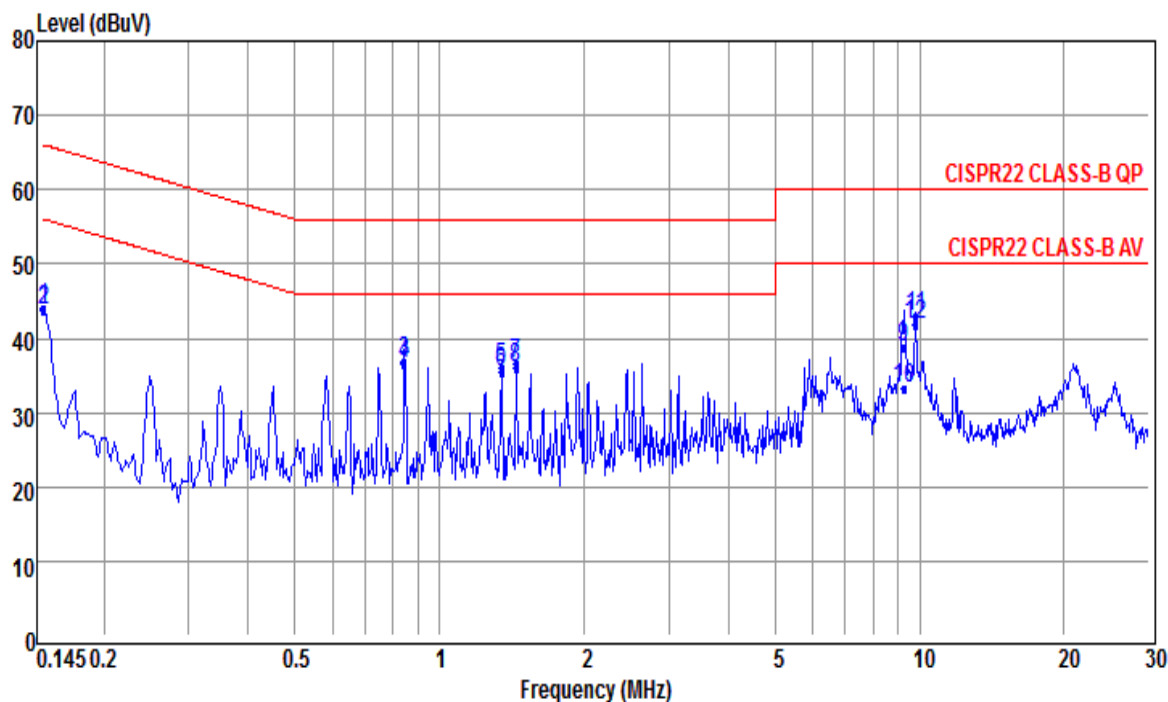
Note: The test equipments used are calibrated and can be traced to National ITRI and International Standards.

#### 3.3. BLOCK DIAGRAM OF TEST SETUP



### 3.4. TEST DATA

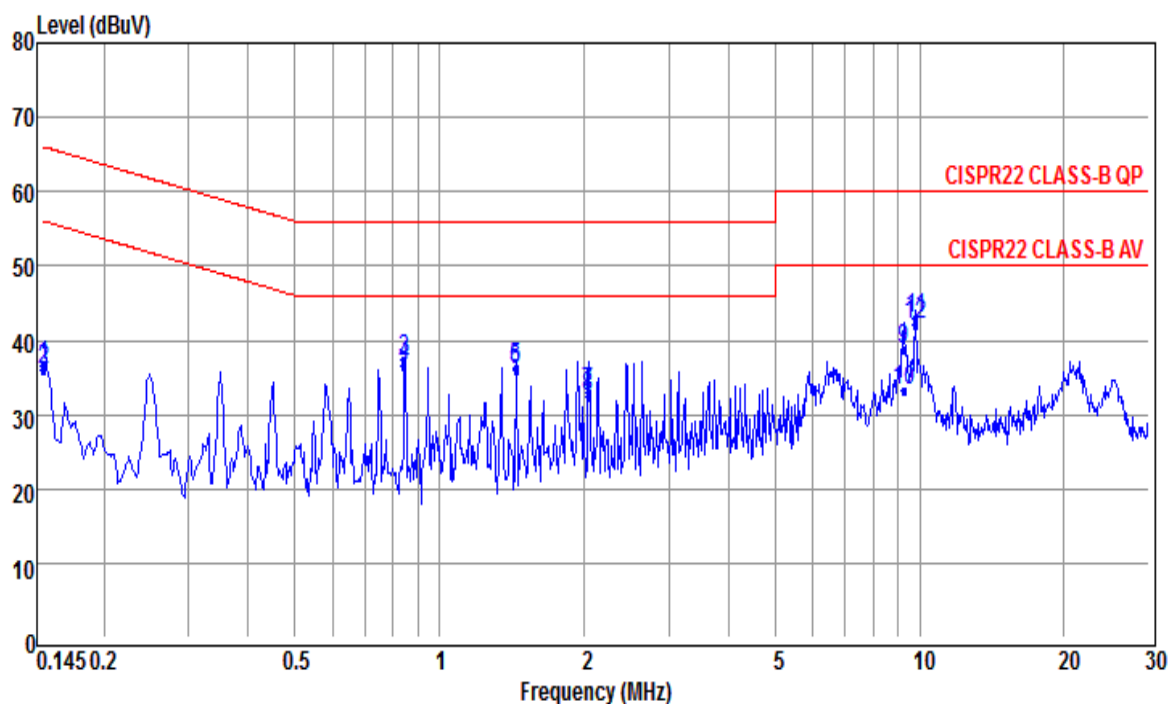
|                      |                            |                                |
|----------------------|----------------------------|--------------------------------|
| Data Log: 3413060602 | Date of Test: Jun 06, 2013 | Tested By: A-Kuan Yu           |
| EUT: 25420           | Main: 120V/60Hz            | Test Mode: SKU 1               |
| Temperature (°C): 24 | Humidity (%): 56           | Frequency Range: 0.15MHz~30MHz |



| Item<br>(Mark) | Freq<br>(MHz) | Read<br>Level<br>dBμV | Total<br>Factor<br>dB | Level<br>dBμV | Limit<br>Line<br>dB(μV) | Over<br>Limit<br>dB | Detector | Phase |
|----------------|---------------|-----------------------|-----------------------|---------------|-------------------------|---------------------|----------|-------|
| 1              | 0.1500        | 24.51                 | 19.54                 | 44.05         | 66.00                   | -21.95              | QP       | Line  |
| 2              | 0.1500        | 24.33                 | 19.54                 | 43.87         | 56.00                   | -12.13              | Average  | Line  |
| 3              | 0.8449        | 17.18                 | 19.59                 | 36.77         | 56.00                   | -19.23              | QP       | Line  |
| 4              | 0.8449        | 17.06                 | 19.59                 | 36.65         | 46.00                   | -9.35               | Average  | Line  |
| 5              | 1.3440        | 16.27                 | 19.63                 | 35.90         | 56.00                   | -20.10              | QP       | Line  |
| 6              | 1.3440        | 15.88                 | 19.63                 | 35.51         | 46.00                   | -10.49              | Average  | Line  |
| 7              | 1.4430        | 16.86                 | 19.65                 | 36.51         | 56.00                   | -19.49              | QP       | Line  |
| 8              | 1.4430        | 16.47                 | 19.65                 | 36.12         | 46.00                   | -9.88               | Average  | Line  |
| 9              | 9.2530        | 18.58                 | 20.09                 | 38.67         | 60.00                   | -21.33              | QP       | Line  |
| 10             | 9.2530        | 13.13                 | 20.09                 | 33.22         | 50.00                   | -16.78              | Average  | Line  |
| 11             | 9.8260        | 22.73                 | 20.12                 | 42.85         | 60.00                   | -17.15              | QP       | Line  |
| 12             | 9.8260        | 21.69                 | 20.12                 | 41.81         | 50.00                   | -8.19               | Average  | Line  |

Remark:

1. Negative number in the margin column indicates the amount (in dB) that the recorded emission is below the limit.



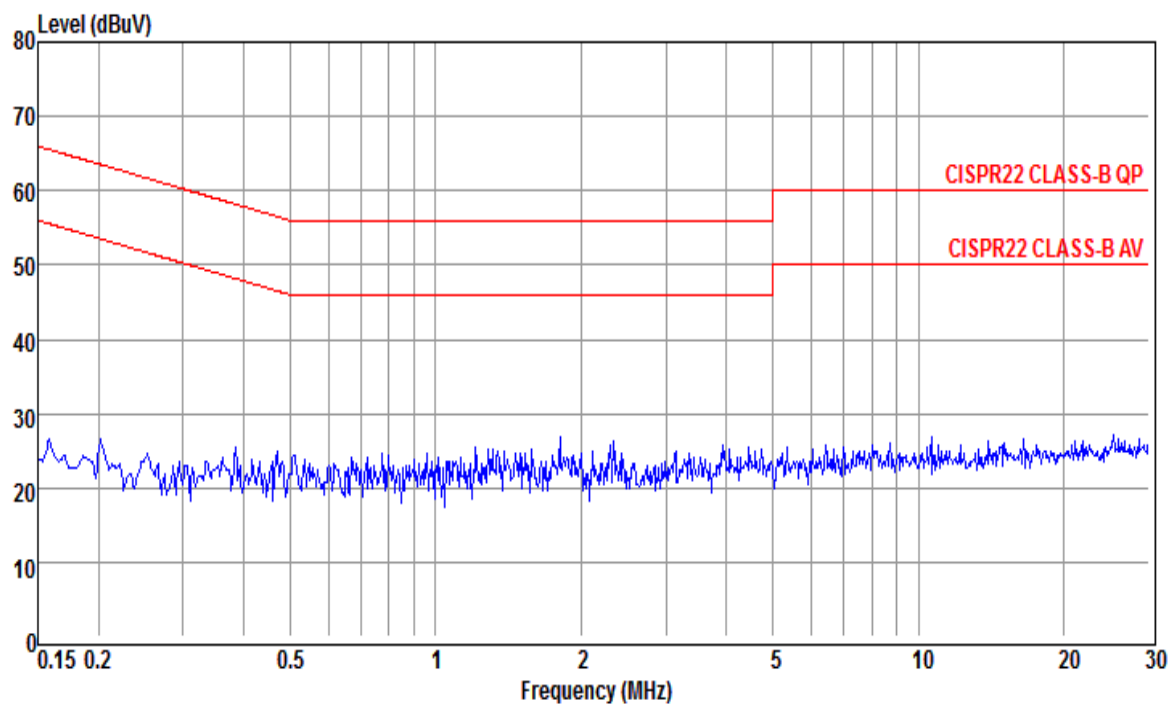
| Item<br>(Mark) | Freq<br>(MHz) | Read<br>Level<br>dBμV | Total<br>Factor<br>dB | Level<br>dBμV | Limit<br>Line<br>dB(μV) | Over<br>Limit<br>dB | Detector | Phase   |
|----------------|---------------|-----------------------|-----------------------|---------------|-------------------------|---------------------|----------|---------|
| 1              | 0.1500        | 16.96                 | 19.54                 | 36.50         | 66.00                   | -29.50              | QP       | Neutral |
| 2              | 0.1500        | 16.39                 | 19.54                 | 35.93         | 56.00                   | -20.07              | Average  | Neutral |
| 3              | 0.8452        | 17.89                 | 19.58                 | 37.47         | 56.00                   | -18.53              | QP       | Neutral |
| 4              | 0.8452        | 16.96                 | 19.58                 | 36.54         | 46.00                   | -9.46               | Average  | Neutral |
| 5              | 1.4440        | 16.56                 | 19.64                 | 36.20         | 56.00                   | -19.80              | QP       | Neutral |
| 6              | 1.4440        | 16.37                 | 19.64                 | 36.01         | 46.00                   | -9.99               | Average  | Neutral |
| 7              | 2.0440        | 13.32                 | 19.65                 | 32.97         | 56.00                   | -23.03              | QP       | Neutral |
| 8              | 2.0440        | 12.84                 | 19.65                 | 32.49         | 46.00                   | -13.51              | Average  | Neutral |
| 9              | 9.2530        | 18.74                 | 20.03                 | 38.77         | 60.00                   | -21.23              | QP       | Neutral |
| 10             | 9.2530        | 13.19                 | 20.03                 | 33.22         | 50.00                   | -16.78              | Average  | Neutral |
| 11             | 9.8320        | 22.91                 | 20.10                 | 43.01         | 60.00                   | -16.99              | QP       | Neutral |
| 12             | 9.8320        | 22.00                 | 20.10                 | 42.10         | 50.00                   | -7.90               | Average  | Neutral |

Remark:

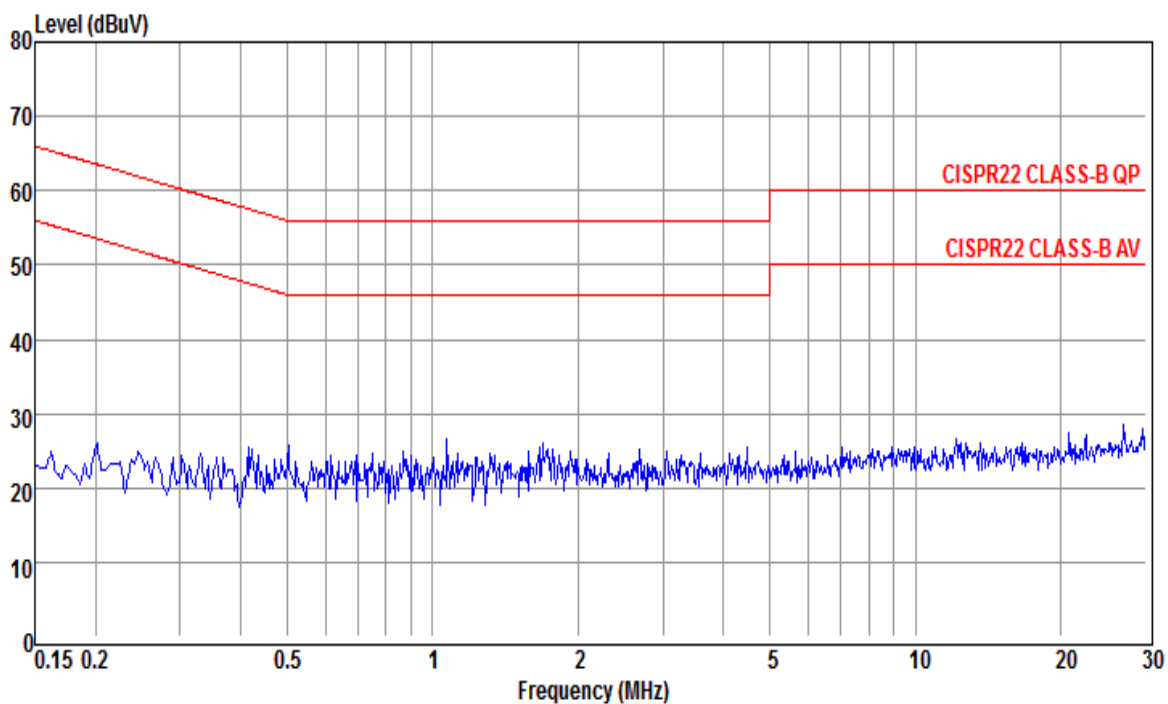
1. Negative number in the margin column indicates the amount (in dB) that the recorded emission is below the limit.

### 3.5. NOISE FLOOR MEASUREMENT

#### Line



#### Neutral



### 3.6. CALCULATION

1. Freq. (MHz), means Conducted Emission frequency.
2. Reading Level (dB $\mu$ V), means the reading of Analyzer or Test Receiver.
3. Total Factor (dB), means the value of LISN(or ISN) Loss + Cable Loss + Pulse Limiter.
4. Conducted Emission (dB $\mu$ V), means the values of Reading Level add CF added.  
 $CE=RL+CF$
5. Ave. Limit (dB $\mu$ V), means Limit stated in Standard.
6. Ave. DELTA (dB), Reading in reference to Limit.  
 $AD=CE - AL$

#### 4. RADIATION EMISSION MEASUREMENT

##### 4.1. TEST LIMIT

| Test Standard: FCC CFR 47 Part 15 Subpart B, CISPR 22 (Class B), ICES-003 (Class B) |                  |                                   |
|-------------------------------------------------------------------------------------|------------------|-----------------------------------|
| Frequency range (MHz)                                                               | Distance (Meter) | Quasi-peak limits dB ( $\mu$ V/m) |
| 30 ~ 230                                                                            | 10               | 30                                |
| 230 ~ 1000                                                                          | 10               | 37                                |

Note: 1. The lower limit shall apply at the transition frequency.  
 2. Additional provisions may be required for cases where interference occurs.  
 3. The limit for radiated test was performed according to CISPR 22: 2008, which was specified in FCC Part 15B 15.109(g). Also the limits of CISPR 22: 2008 is same.

| Test Standard: FCC CFR 47 Part 15 Subpart B, ICES-003 (Class B) |                  |                                |
|-----------------------------------------------------------------|------------------|--------------------------------|
| Frequency (MHz)                                                 | Distance (Meter) | Field Strength dB ( $\mu$ V/m) |
| Above 1000                                                      | 3                | 54                             |

Note: 1. The lower limit shall apply at the transition frequency.  
 2. Additional provisions may be required for cases where interference occurs.

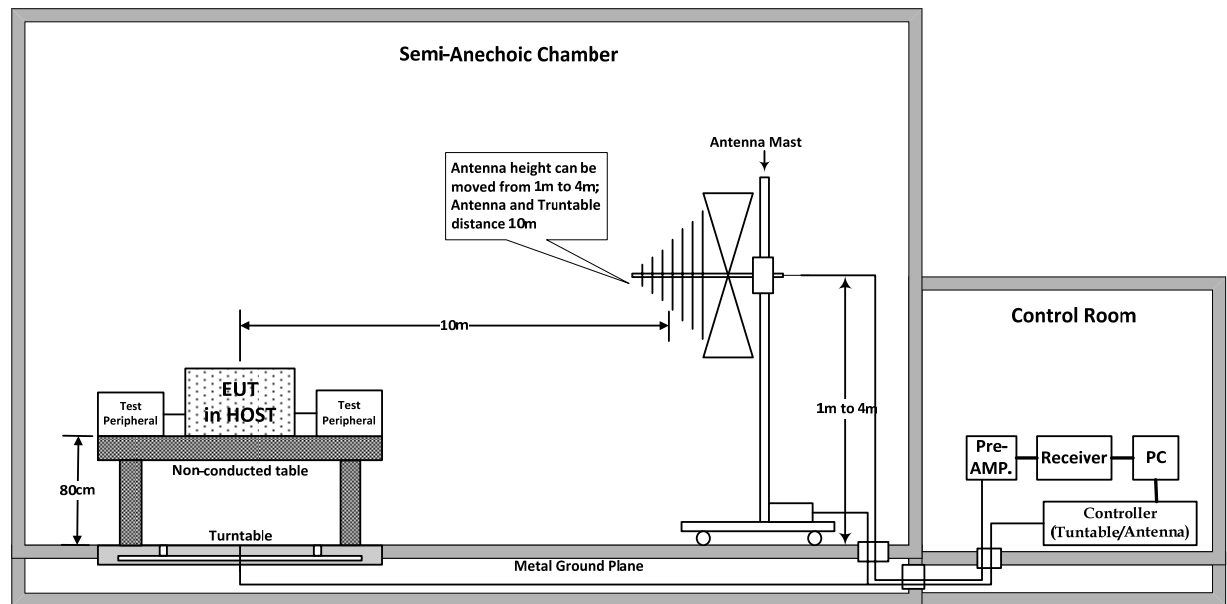
##### 4.2. TEST INSTRUMENTS

| Name         | Manufacturer    | Model      | Serial Number | Calibration Date | Calibration Due |
|--------------|-----------------|------------|---------------|------------------|-----------------|
| Receiver     | Rohde & Schwarz | ESU 8      | 100285        | 23-Jul-2012      | 23-Jul-2013     |
| Receiver     | Rohde & Schwarz | ESU 8      | 100365        | 01-Oct-2012      | 01-Oct-2013     |
| Receiver     | Rohde & Schwarz | ESU 40     | 100218        | 23-Jul-2012      | 23-Jul-2013     |
| Antenna      | TESEQ           | CBL6111D   | 29797         | 15-Aug-2012      | 15-Aug-2013     |
| Antenna      | TESEQ           | CBL6111D   | 29798         | 15-Aug-2012      | 15-Aug-2013     |
| Antenna      | ETS · LINDGREN  | 3117       | 00075934      | 26-Mar-2013      | 26-Mar-2014     |
| Antenna      | Com-Power       | AH-840     | 101007        | 18-Apr-2013      | 18-Apr-2014     |
| Pre-amp      | Agilent         | 11909A     | 186996        | 13-Sep-2012      | 13-Sep-2013     |
| Pre-amp      | Agilent         | 11909A     | 186999        | 13-Sep-2012      | 13-Sep-2013     |
| Pre-amp      | EMC Instruments | EMC051845  | 980073        | 04-Jun-2013      | 04-Jun-2014     |
| Pre-amp      | Agilent         | 83051A     | MY39500603    | 01-Aug-2012      | 01-Aug-2013     |
| RF Cable     | Huber+Suhner    | S 07262 BD | N/A           | 07-Jan-2013      | 07-Jan-2014     |
| RF Cable     | Huber+Suhner    | S 07262 BD | N/A           | 07-Jan-2013      | 07-Jan-2014     |
| RF Cable     | SUCOFLEX        | 104        | N/A           | 07-Jan-2013      | 07-Jan-2014     |
| RF Cable     | SUCOFLEX        | 102        | N/A           | 03-Apr-2013      | 03-Apr-2014     |
| Test Program | Audix           | e3(Ver. 6) | N/A           | N/A              | N/A             |

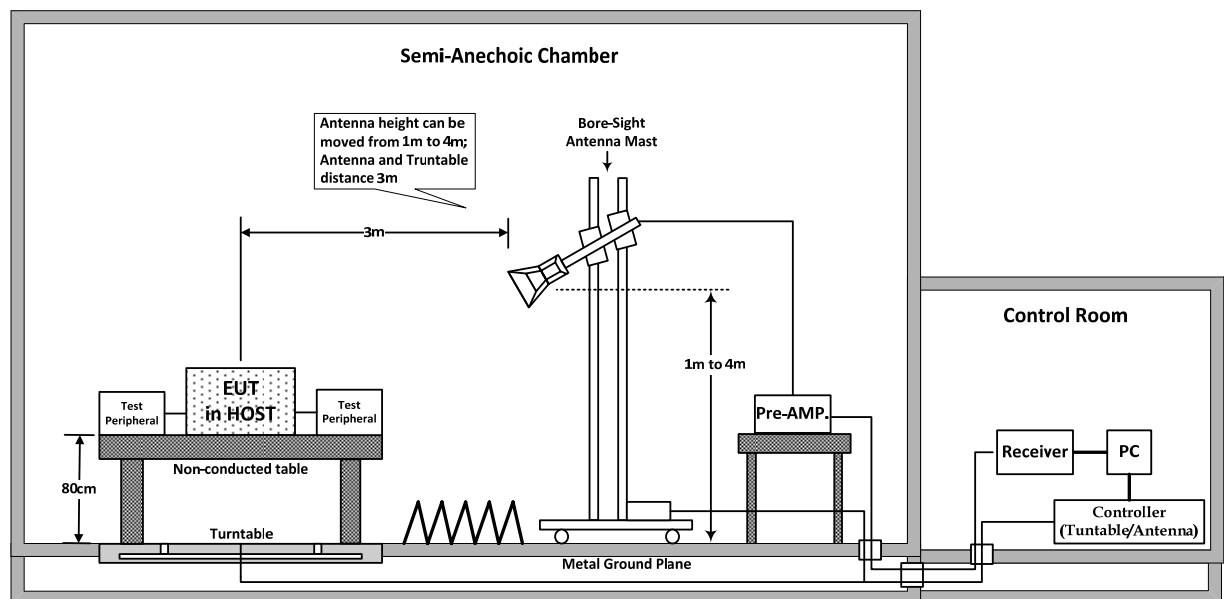
Note: The test equipments used are calibrated and can be traced to National ITRI and International Standards.

### 4.3. BLOCK DIAGRAM OF TEST SETUP

#### 4.3.1. TEST SETUP FOR 30MHz~1000MHz



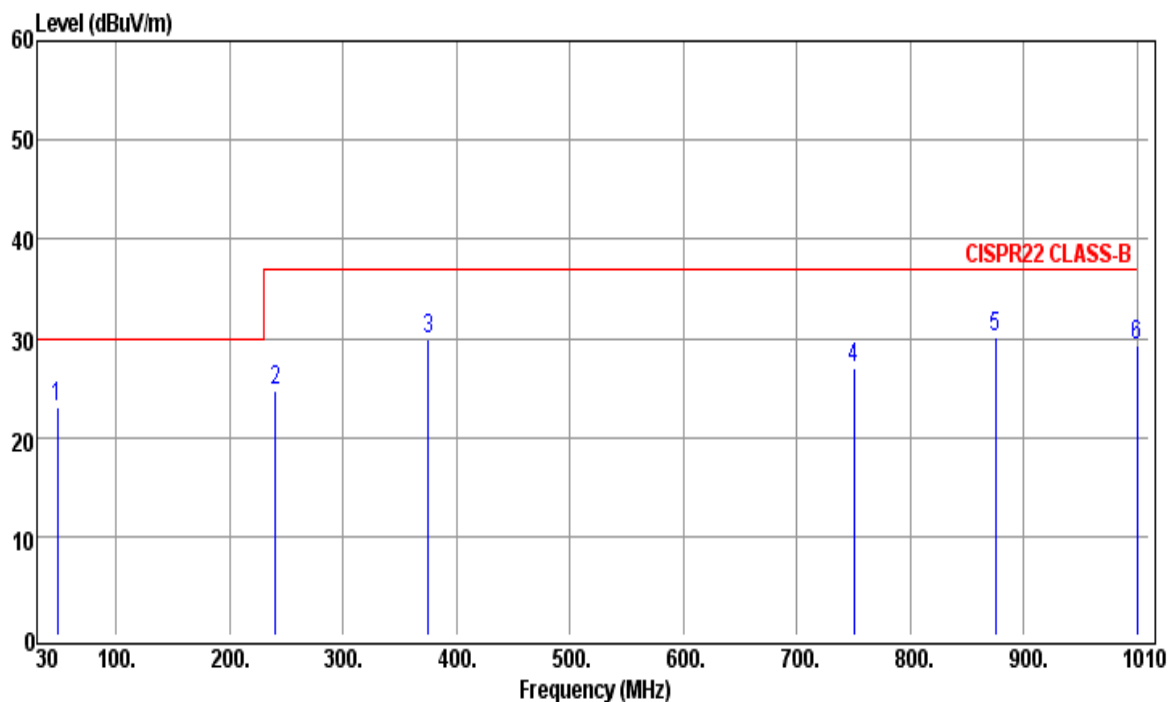
#### 4.3.2. TEST SETUP FOR ABOVE 1GHz



#### 4.4. TEST DATA

##### 4.4.1. FREQUENCY RANGE (30MHz~1000MHz)

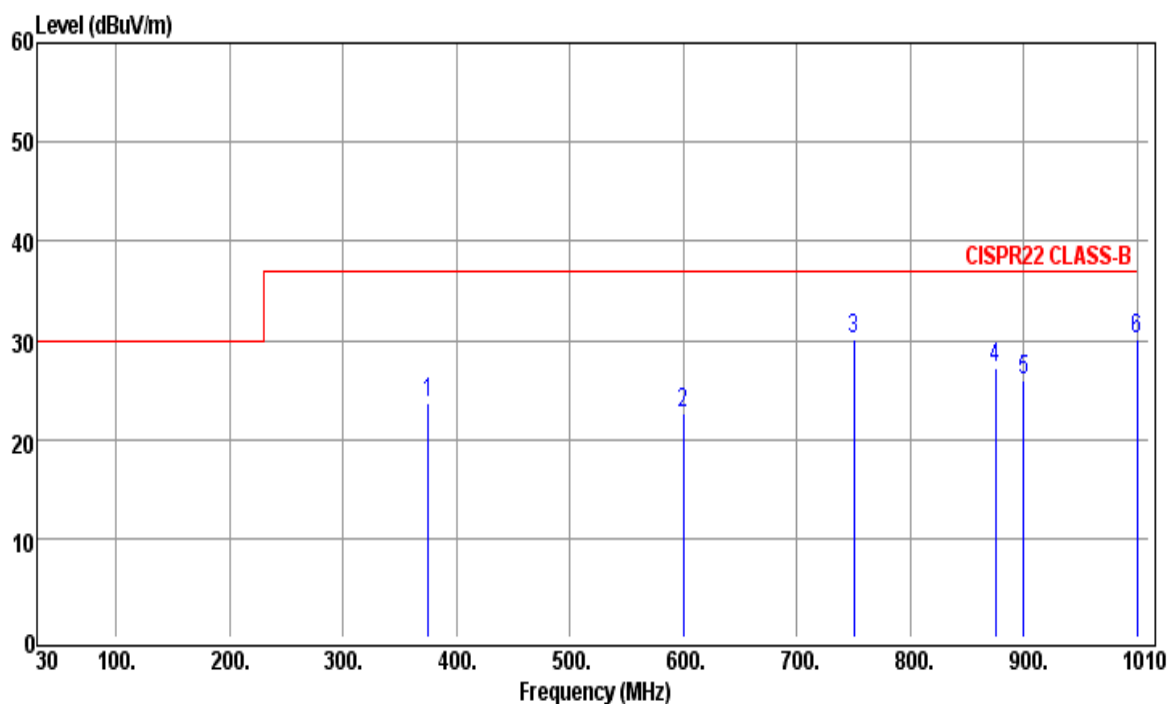
|                      |                            |                                |
|----------------------|----------------------------|--------------------------------|
| Data Log: 2013061102 | Date of Test: Jun 11, 2013 | Tested By: A-Kuan Yu           |
| EUT: 25420           | Main: 120V/60Hz            | Test Mode: SKU 2               |
| Temperature (°C): 22 | Humidity (%): 55           | Frequency Range: 30MHz~1000MHz |



| Item<br>(Mark) | Freq<br>(MHz) | Read<br>Level<br>dBμV | Total<br>Factor<br>dB/m | Level<br>dBμV/m | Limit<br>Line<br>dB(μV/m) | Over<br>Limit<br>dB | Detector | Ant.<br>Height<br>(cm) | Table<br>Ang.<br>(deg) | Ant.<br>Pol. |
|----------------|---------------|-----------------------|-------------------------|-----------------|---------------------------|---------------------|----------|------------------------|------------------------|--------------|
| 1              | 48.05         | 45.19                 | -22.08                  | 23.11           | 30.00                     | -6.89               | QP       | 100                    | 301                    | Vertical     |
| 2              | 239.99        | 43.29                 | -18.50                  | 24.79           | 37.00                     | -12.21              | QP       | 100                    | 199                    | Vertical     |
| 3              | 375.00        | 43.77                 | -13.96                  | 29.81           | 37.00                     | -7.19               | QP       | 100                    | 0                      | Vertical     |
| 4              | 750.00        | 32.89                 | -5.81                   | 27.08           | 37.00                     | -9.92               | QP       | 100                    | 50                     | Vertical     |
| 5              | 875.01        | 33.99                 | -3.84                   | 30.15           | 37.00                     | -6.85               | QP       | 128                    | 209                    | Vertical     |
| 6              | 1000.00       | 30.19                 | -0.91                   | 29.28           | 37.00                     | -7.72               | QP       | 172                    | 33                     | Vertical     |

Remark:

1. Negative number in the margin column indicates the amount (in dB) that the recorded emission is below the limit.



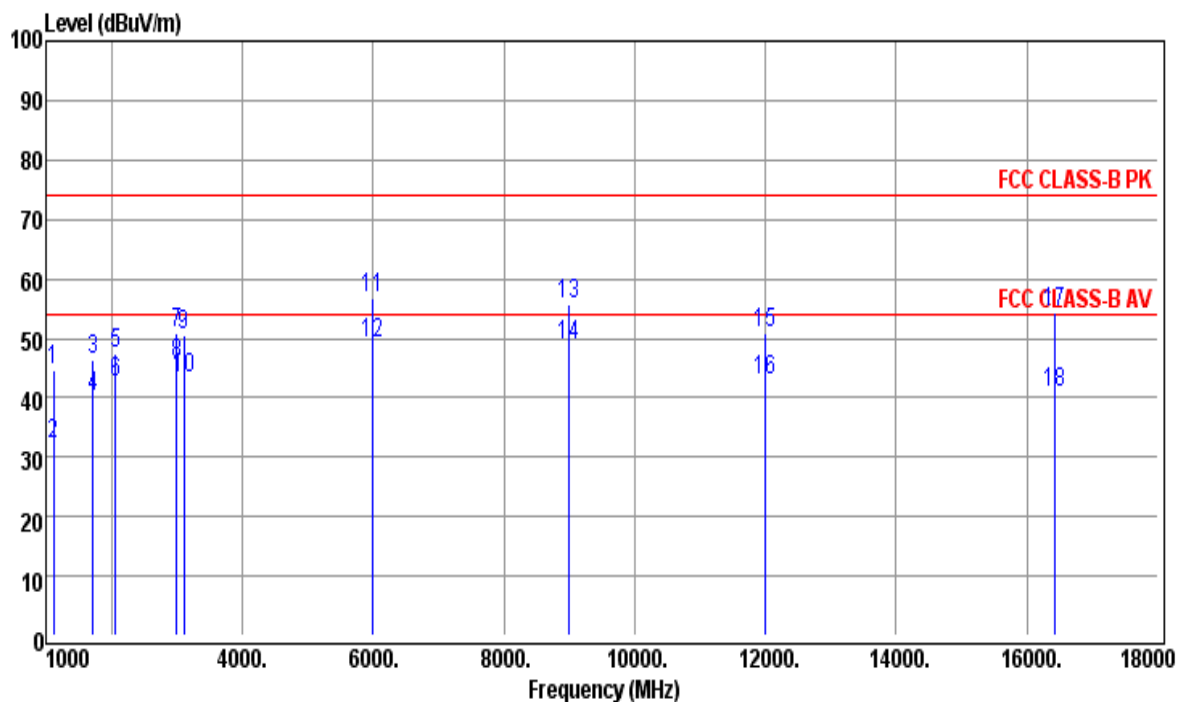
| Item<br>(Mark) | Freq<br>(MHz) | Read<br>Level<br>dBμV | Total<br>Factor<br>dB/m | Level<br>dBμV/m | Limit<br>Line<br>dB(μV/m) | Over<br>Limit<br>dB | Detector | Ant.<br>Height<br>(cm) | Table<br>Ang.<br>(deg) | Ant.<br>Pol. |
|----------------|---------------|-----------------------|-------------------------|-----------------|---------------------------|---------------------|----------|------------------------|------------------------|--------------|
| 1              | 375.01        | 38.28                 | -14.68                  | 23.60           | 37.00                     | -13.40              | QP       | 400                    | 291                    | Horizontal   |
| 2              | 600.03        | 32.58                 | -9.88                   | 22.70           | 37.00                     | -14.30              | QP       | 400                    | 248                    | Horizontal   |
| 3              | 750.04        | 36.98                 | -6.96                   | 30.02           | 37.00                     | -6.98               | QP       | 394                    | 271                    | Horizontal   |
| 4              | 875.02        | 32.53                 | -5.26                   | 27.27           | 37.00                     | -9.73               | QP       | 400                    | 264                    | Horizontal   |
| 5              | 899.99        | 30.93                 | -4.95                   | 25.98           | 37.00                     | -11.02              | QP       | 244                    | 328                    | Horizontal   |
| 6              | 1000.00       | 32.73                 | -2.62                   | 30.11           | 37.00                     | -6.89               | QP       | 242                    | 114                    | Horizontal   |

Remark:

1. Negative number in the margin column indicates the amount (in dB) that the recorded emission is below the limit.

#### 4.4.2. FREQUENCY RANGE (ABOVE 1GHz)

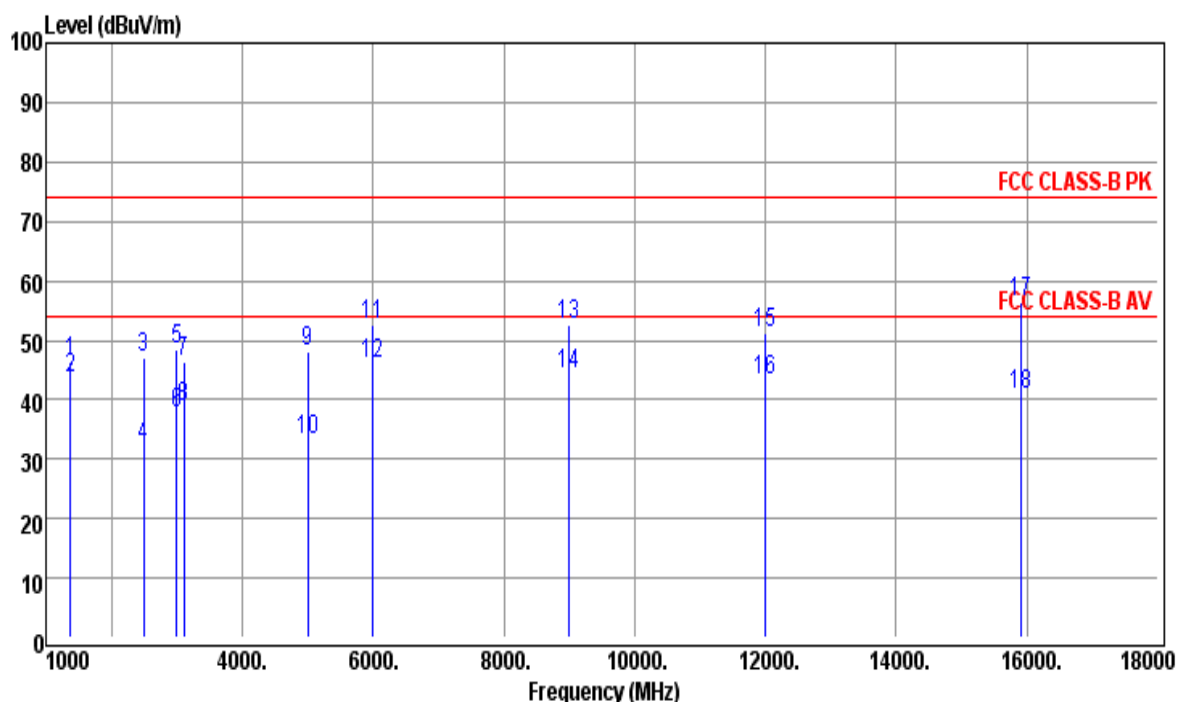
|                      |                            |                             |
|----------------------|----------------------------|-----------------------------|
| Data Log: 1213060704 | Date of Test: Jun 07, 2013 | Tested By: A-Kuan Yu        |
| EUT: 25420           | Main: 120V/60Hz            | Test Mode: SKU 2            |
| Temperature (°C): 20 | Humidity (%): 52           | Frequency Range: 1GHz~18GHz |



| Item<br>(Mark) | Freq<br>(MHz) | Read<br>Level<br>dBμV | Total<br>Factor<br>dB/m | Level<br>dBμV/m | Limit<br>Line<br>dB(μV/m) | Over<br>Limit<br>dB | Detector | Ant.<br>Height<br>(cm) | Table<br>Ang.<br>(deg) | Ant.<br>Pol. |
|----------------|---------------|-----------------------|-------------------------|-----------------|---------------------------|---------------------|----------|------------------------|------------------------|--------------|
| 1              | 1120.74       | 67.15                 | -22.65                  | 44.50           | 74.00                     | -29.50              | Peak     | 120                    | 11                     | Vertical     |
| 2              | 1120.74       | 54.74                 | -22.65                  | 32.09           | 54.00                     | -21.91              | Average  | 120                    | 11                     | Vertical     |
| 3              | 1724.92       | 67.60                 | -21.40                  | 46.20           | 74.00                     | -27.80              | Peak     | 125                    | 345                    | Vertical     |
| 4              | 1724.92       | 61.64                 | -21.40                  | 40.24           | 54.00                     | -13.76              | Average  | 125                    | 345                    | Vertical     |
| 5              | 2070.02       | 66.57                 | -19.21                  | 47.36           | 74.00                     | -26.64              | Peak     | 125                    | 198                    | Vertical     |
| 6              | 2070.02       | 61.83                 | -19.21                  | 42.62           | 54.00                     | -11.38              | Average  | 125                    | 198                    | Vertical     |
| 7              | 3000.00       | 68.42                 | -17.64                  | 50.78           | 74.00                     | -23.22              | Peak     | 118                    | 349                    | Vertical     |
| 8              | 3000.00       | 63.22                 | -17.64                  | 45.58           | 54.00                     | -8.42               | Average  | 118                    | 349                    | Vertical     |
| 9              | 3104.90       | 67.98                 | -17.48                  | 50.50           | 74.00                     | -23.50              | Peak     | 121                    | 9                      | Vertical     |
| 10             | 3104.90       | 60.60                 | -17.48                  | 43.12           | 54.00                     | -10.88              | Average  | 121                    | 9                      | Vertical     |
| 11             | 6000.00       | 66.66                 | -9.94                   | 56.72           | 74.00                     | -17.28              | Peak     | 118                    | 209                    | Vertical     |
| 12             | 6000.00       | 58.94                 | -9.94                   | 49.00           | 54.00                     | -5.00               | Average  | 118                    | 209                    | Vertical     |
| 13             | 8999.74       | 66.35                 | -10.55                  | 55.80           | 74.00                     | -18.20              | Peak     | 115                    | 343                    | Vertical     |
| 14             | 8999.74       | 59.26                 | -10.55                  | 48.71           | 54.00                     | -5.29               | Average  | 115                    | 343                    | Vertical     |
| 15             | 11999.54      | 57.39                 | -6.61                   | 50.78           | 74.00                     | -23.22              | Peak     | 115                    | 222                    | Vertical     |
| 16             | 11999.54      | 49.51                 | -6.61                   | 42.90           | 54.00                     | -11.10              | Average  | 115                    | 222                    | Vertical     |
| 17             | 16427.48      | 55.26                 | -0.92                   | 54.34           | 74.00                     | -19.66              | Peak     | 100                    | 11                     | Vertical     |
| 18             | 16427.48      | 41.91                 | -0.92                   | 40.99           | 54.00                     | -13.01              | Average  | 100                    | 11                     | Vertical     |

Remark:

1. Negative number in the margin column indicates the amount (in dB) that the recorded emission is below the limit.

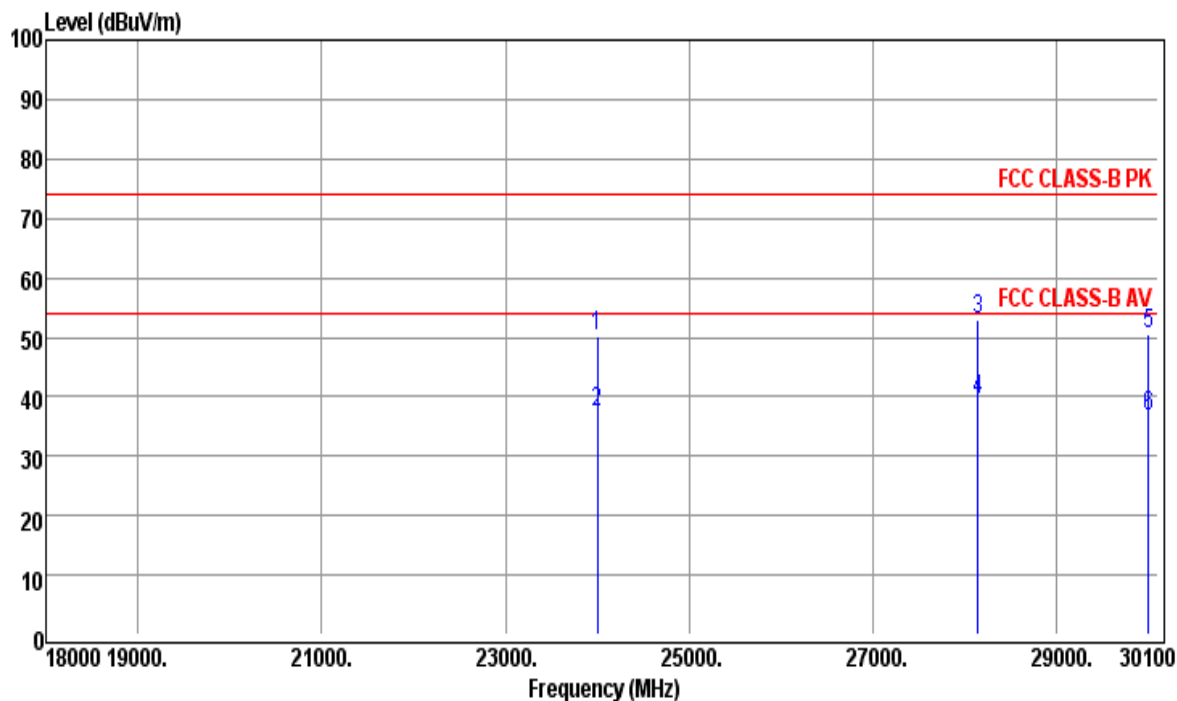


| Item<br>(Mark) | Freq<br>(MHz) | Read<br>Level<br>dBμV | Total<br>Factor<br>dB/m | Level<br>dBμV/m | Limit<br>Line<br>dB(μV/m) | Over<br>Limit<br>dB | Detector | Ant.<br>Height<br>(cm) | Table<br>Ang.<br>(deg) | Ant.<br>Pol. |
|----------------|---------------|-----------------------|-------------------------|-----------------|---------------------------|---------------------|----------|------------------------|------------------------|--------------|
| 1              | 1375.03       | 69.23                 | -22.96                  | 46.27           | 74.00                     | -27.73              | Peak     | 100                    | 161                    | Horizontal   |
| 2              | 1375.03       | 66.62                 | -22.96                  | 43.66           | 54.00                     | -10.34              | Average  | 100                    | 161                    | Horizontal   |
| 3              | 2498.57       | 65.74                 | -18.63                  | 47.11           | 74.00                     | -26.89              | Peak     | 102                    | 215                    | Horizontal   |
| 4              | 2498.57       | 50.88                 | -18.63                  | 32.25           | 54.00                     | -21.75              | Average  | 102                    | 215                    | Horizontal   |
| 5              | 3000.00       | 66.11                 | -17.64                  | 48.47           | 74.00                     | -25.53              | Peak     | 100                    | 314                    | Horizontal   |
| 6              | 3000.00       | 55.30                 | -17.64                  | 37.66           | 54.00                     | -16.34              | Average  | 100                    | 314                    | Horizontal   |
| 7              | 3105.03       | 63.87                 | -17.48                  | 46.39           | 74.00                     | -27.61              | Peak     | 100                    | 311                    | Horizontal   |
| 8              | 3105.03       | 56.37                 | -17.48                  | 38.89           | 54.00                     | -15.11              | Average  | 100                    | 311                    | Horizontal   |
| 9              | 4998.20       | 59.96                 | -11.80                  | 48.16           | 74.00                     | -25.84              | Peak     | 100                    | 134                    | Horizontal   |
| 10             | 4998.20       | 45.05                 | -11.80                  | 33.25           | 54.00                     | -20.75              | Average  | 100                    | 134                    | Horizontal   |
| 11             | 5999.83       | 62.71                 | -9.94                   | 52.77           | 74.00                     | -21.23              | Peak     | 120                    | 128                    | Horizontal   |
| 12             | 5999.83       | 55.93                 | -9.94                   | 45.99           | 54.00                     | -8.01               | Average  | 120                    | 128                    | Horizontal   |
| 13             | 8999.78       | 62.99                 | -10.55                  | 52.44           | 74.00                     | -21.56              | Peak     | 229                    | 233                    | Horizontal   |
| 14             | 8999.78       | 54.75                 | -10.55                  | 44.20           | 54.00                     | -9.80               | Average  | 229                    | 233                    | Horizontal   |
| 15             | 11999.74      | 57.75                 | -6.61                   | 51.14           | 74.00                     | -22.86              | Peak     | 229                    | 298                    | Horizontal   |
| 16             | 11999.74      | 49.91                 | -6.61                   | 43.30           | 54.00                     | -10.70              | Average  | 229                    | 298                    | Horizontal   |
| 17             | 15900.86      | 58.72                 | -2.43                   | 56.29           | 74.00                     | -17.71              | Peak     | 234                    | 75                     | Horizontal   |
| 18             | 15900.86      | 43.18                 | -2.43                   | 40.75           | 54.00                     | -13.25              | Average  | 234                    | 75                     | Horizontal   |

Remark:

1. Negative number in the margin column indicates the amount (in dB) that the recorded emission is below the limit.

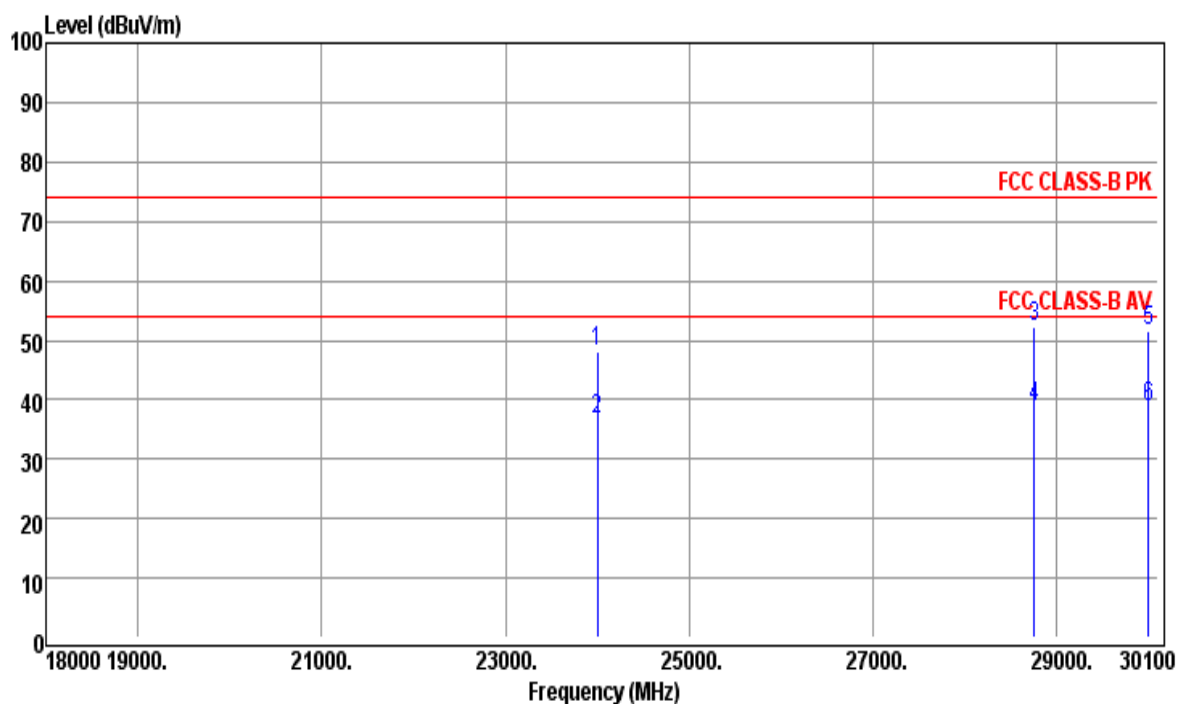
|                      |                            |                              |
|----------------------|----------------------------|------------------------------|
| Data Log: 1213060708 | Date of Test: Jun 07, 2013 | Tested By: A-Kuan Yu         |
| EUT: 25420           | Main: 120V/60Hz            | Test Mode: SKU 2             |
| Temperature (°C): 20 | Humidity (%): 52           | Frequency Range: Above 18GHz |



| Item<br>(Mark) | Freq<br>(MHz) | Read<br>Level<br>dB $\mu$ V | Total<br>Factor<br>dB/m | Level<br>dB $\mu$ V/m | Limit<br>Line<br>dB( $\mu$ V/m) | Over<br>Limit<br>dB | Detector | Ant.<br>Height<br>(cm) | Table<br>Ang.<br>(deg) | Ant.<br>Pol. |
|----------------|---------------|-----------------------------|-------------------------|-----------------------|---------------------------------|---------------------|----------|------------------------|------------------------|--------------|
| 1              | 23998.08      | 39.53                       | 10.80                   | 50.33                 | 74.00                           | -23.67              | Peak     | 102                    | 176                    | Vertical     |
| 2              | 23998.08      | 26.55                       | 10.80                   | 37.35                 | 54.00                           | -16.65              | Average  | 102                    | 176                    | Vertical     |
| 3              | 28140.00      | 43.60                       | 9.24                    | 52.84                 | 74.00                           | -21.16              | Peak     | 100                    | 240                    | Vertical     |
| 4              | 28140.00      | 30.07                       | 9.24                    | 39.31                 | 54.00                           | -14.69              | Average  | 100                    | 240                    | Vertical     |
| 5              | 30000.00      | 41.74                       | 8.84                    | 50.58                 | 74.00                           | -23.42              | Peak     | 102                    | 176                    | Vertical     |
| 6              | 30000.00      | 27.87                       | 8.84                    | 36.71                 | 54.00                           | -17.29              | Average  | 102                    | 176                    | Vertical     |

Remark:

1. Negative number in the margin column indicates the amount (in dB) that the recorded emission is below the limit.



| Item<br>(Mark) | Freq<br>(MHz) | Read<br>Level<br>dBμV | Total<br>Factor<br>dB/m | Level<br>dBμV/m | Limit<br>Line<br>dB(μV/m) | Over<br>Limit<br>dB | Detector | Ant.<br>Height<br>(cm) | Table<br>Ang.<br>(deg) | Ant.<br>Pol. |
|----------------|---------------|-----------------------|-------------------------|-----------------|---------------------------|---------------------|----------|------------------------|------------------------|--------------|
| 1              | 23997.51      | 37.30                 | 10.80                   | 48.10           | 74.00                     | -25.90              | Peak     | 100                    | 197                    | Horizontal   |
| 2              | 23997.51      | 25.98                 | 10.80                   | 36.78           | 54.00                     | -17.22              | Average  | 100                    | 197                    | Horizontal   |
| 3              | 28755.95      | 42.92                 | 9.40                    | 52.32           | 74.00                     | -21.68              | Peak     | 128                    | 156                    | Horizontal   |
| 4              | 28755.95      | 29.39                 | 9.40                    | 38.79           | 54.00                     | -15.21              | Average  | 128                    | 156                    | Horizontal   |
| 5              | 29997.01      | 42.57                 | 8.84                    | 51.41           | 74.00                     | -22.59              | Peak     | 124                    | 182                    | Horizontal   |
| 6              | 29997.01      | 29.86                 | 8.84                    | 38.70           | 54.00                     | -15.30              | Average  | 124                    | 182                    | Horizontal   |

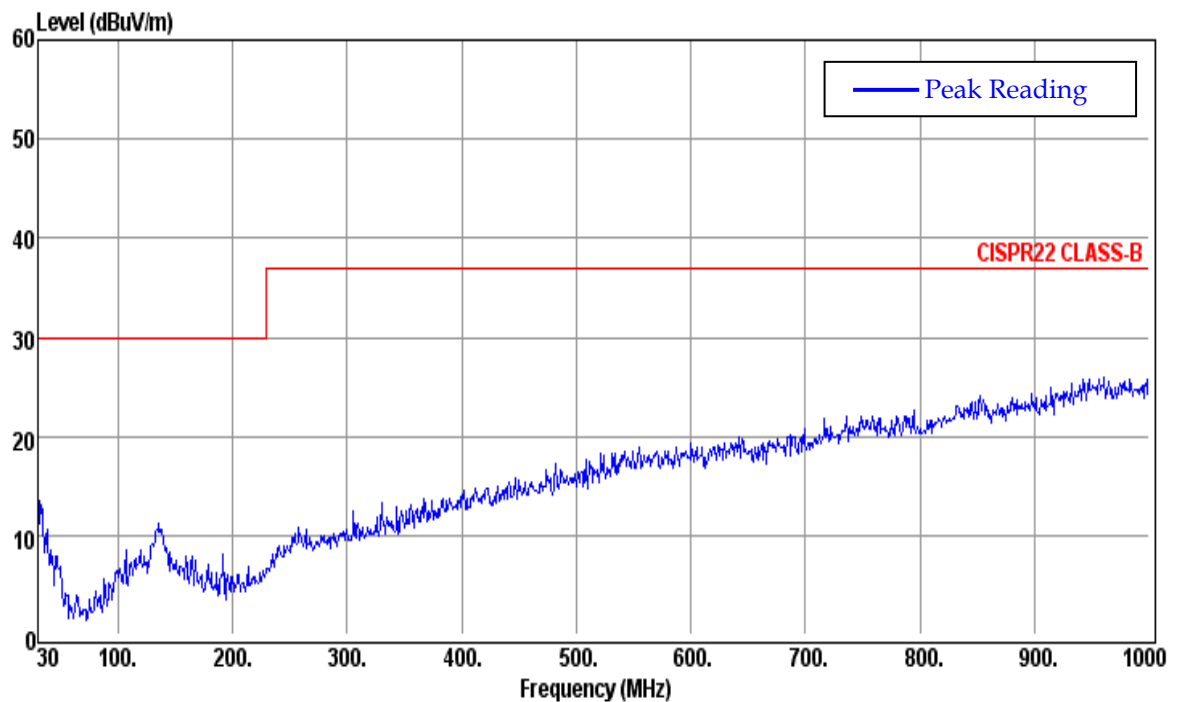
Remark:

1. Negative number in the margin column indicates the amount (in dB) that the recorded emission is below the limit.

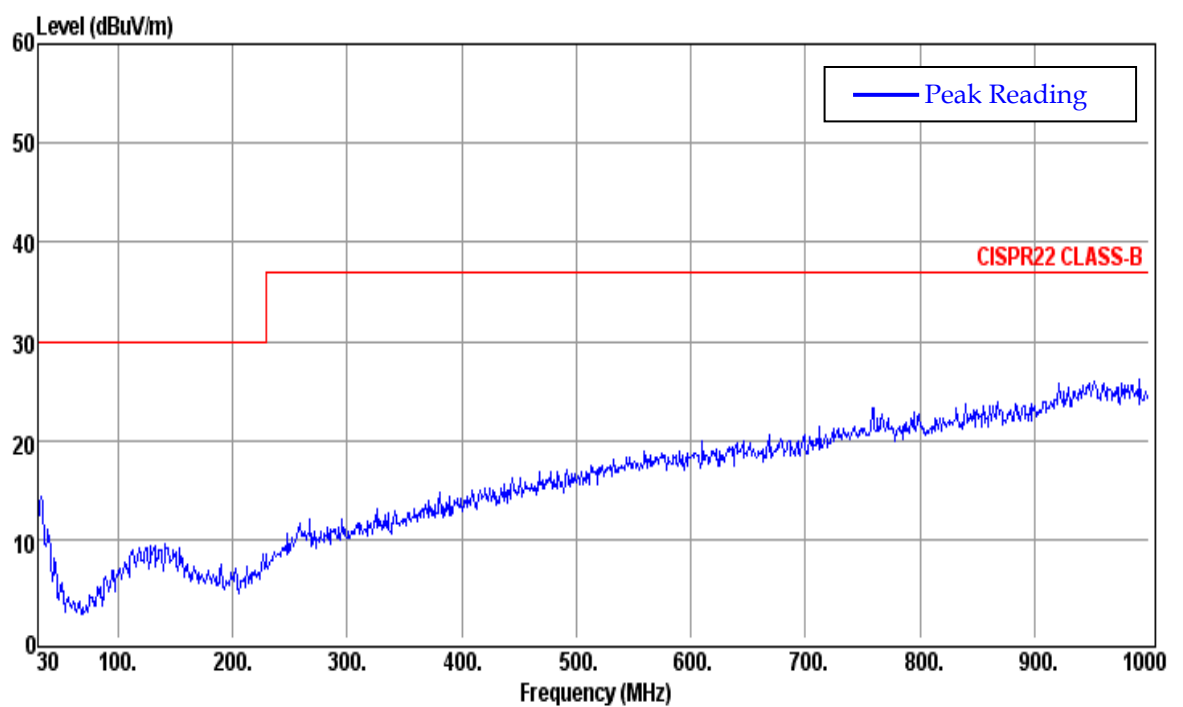
## 4.5. NOISE FLOOR MEASUREMENT

### 4.5.1. FREQUENCY RANGE (30MHz~1000MHz)

Vertical

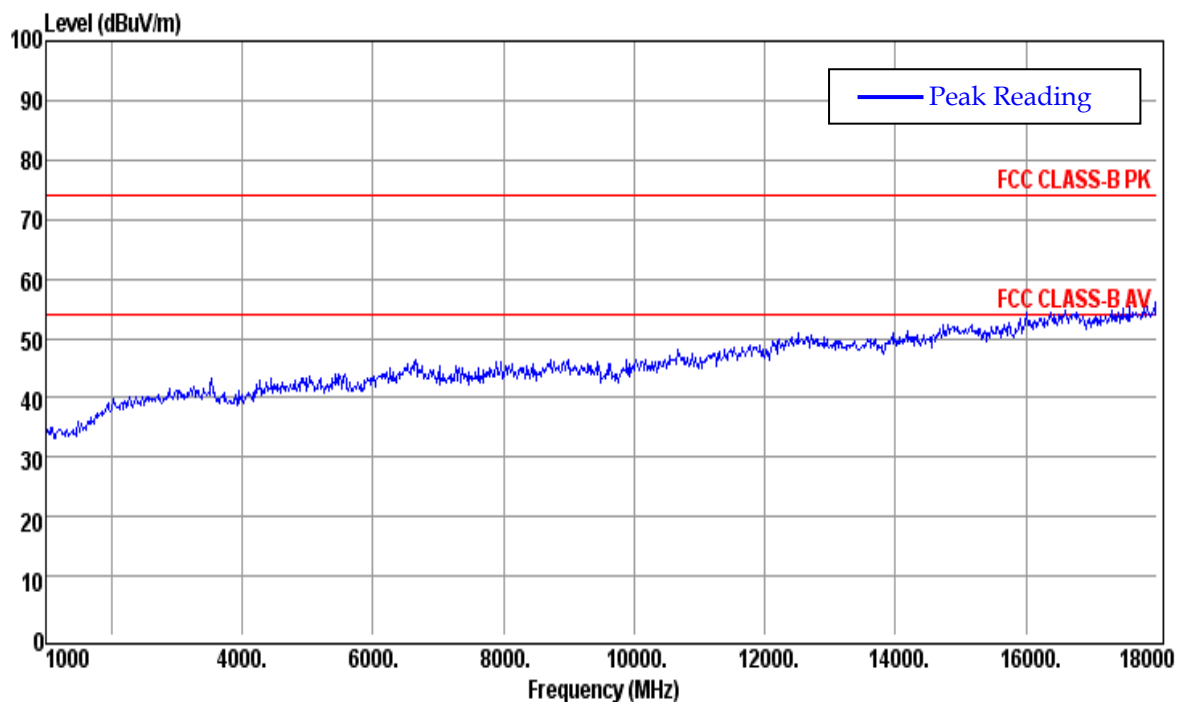


Horizontal

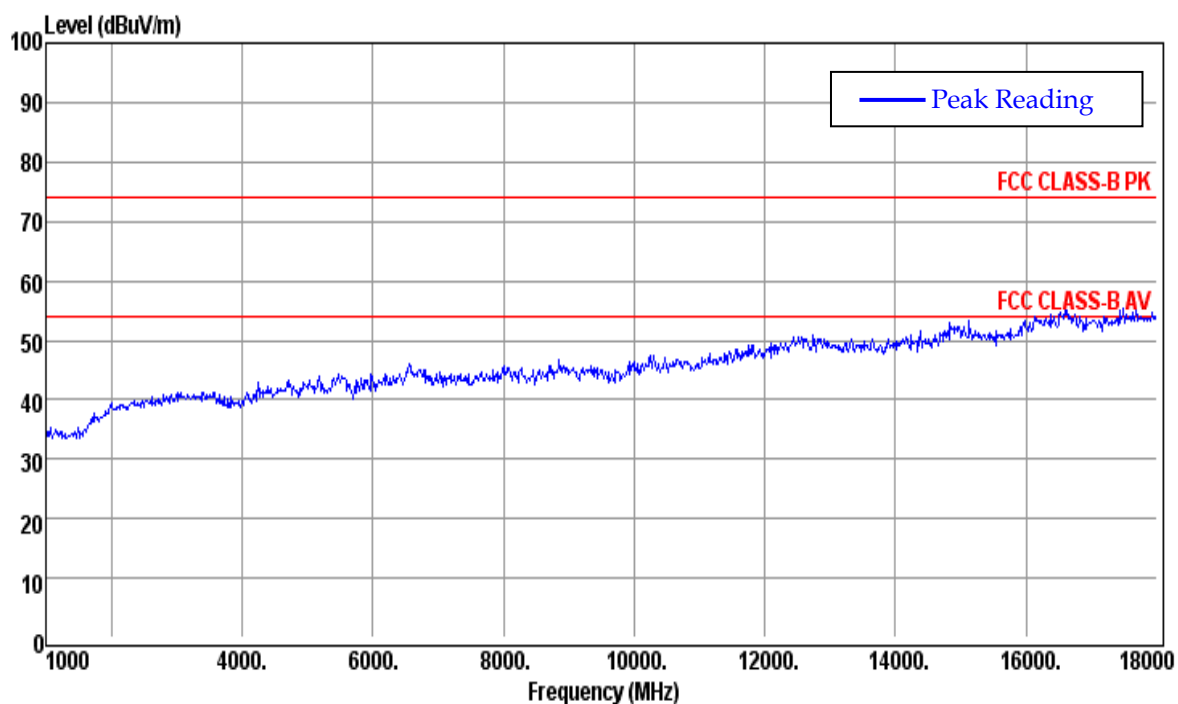


#### 4.5.2. FREQUENCY RANGE (1GHz~18GHz)

##### Vertical

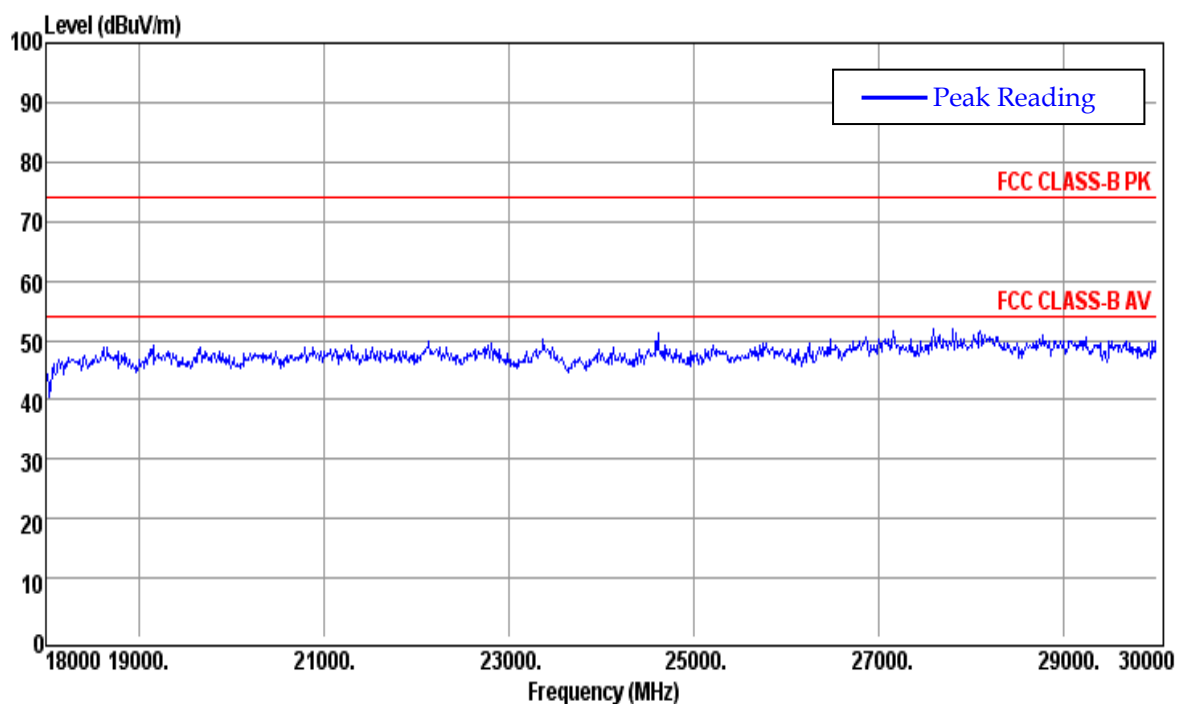


##### Horizontal

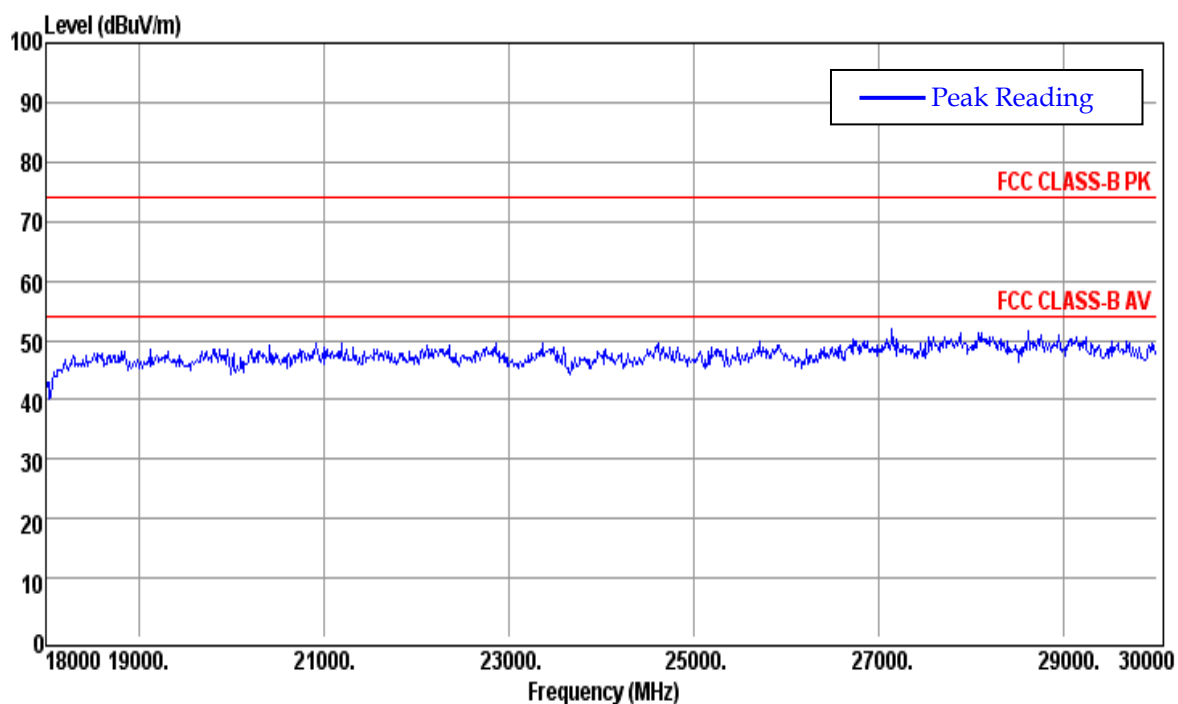


#### 4.5.3. FREQUENCY RANGE (ABOVE 18GHz)

Vertical



Horizontal



#### 4.6. CALCULATION

The field strength is calculated by adding the Total Factor to the receiver or analyzer reading to determine the resultant field strength.

The Total Factor is determined by adding the antenna factor and the loss of the cables connection the antenna to the receiver.

Front-end amplifier gain – if any – is accounted for in the receiver reading.

The basic equation with a sample calculation is as follows:

$$FS \text{ (dB}\mu\text{V/m)} = RA \text{ (dB}\mu\text{V)} + TF \text{ (dB/m)}$$

The sum of Total Factor is measured mean Antenna Factor, Cable Loss Factor and Amplifier Gain

$$TF = AF + CL - AG$$

FS = Field Strength

AF = Antenna Factor

CL = Cable Loss Factor

RA = Receiver Amplitude

AG = Amplifier Gain

The difference between Field Strength and Test Limit, Delta (dB) = FS - Limit [dB( $\mu\text{V/m}$ )]

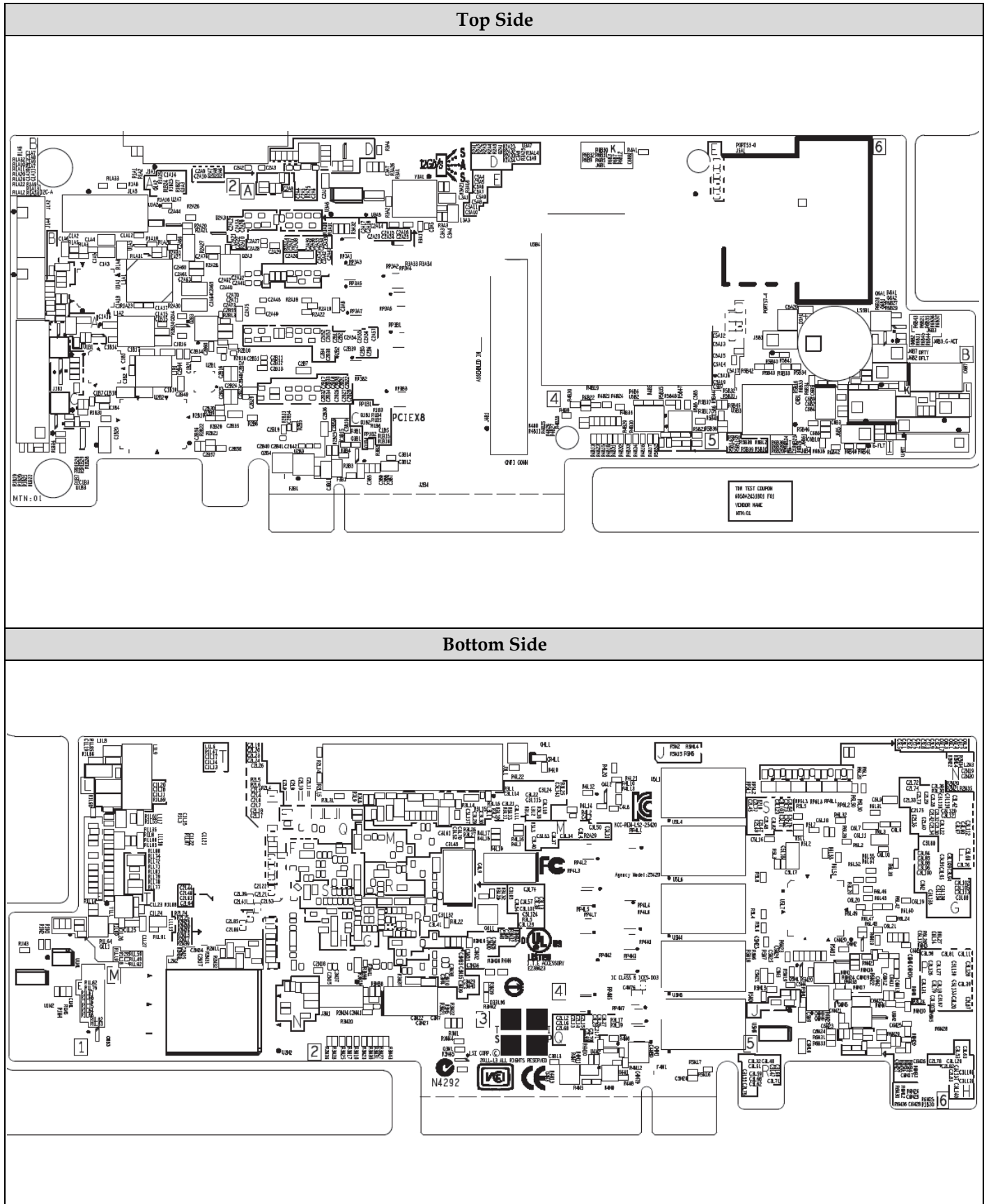
Assume a receiver reading of 22dB $\mu\text{V}$  is obtained.

The Antenna factor of 7.4dB and a cable loss factor of 1.1dB are added to yield 8.5dB Total Factor.

The Calculated Field Strength is the sum of  $22 + 8.5 = 30.5\text{dB}\mu\text{V/m}$ .

All values are listed as dB, either referenced to 1 $\mu\text{V}$  or 1 $\mu\text{V/m}$ .

## 5. PRODUCT LABELING

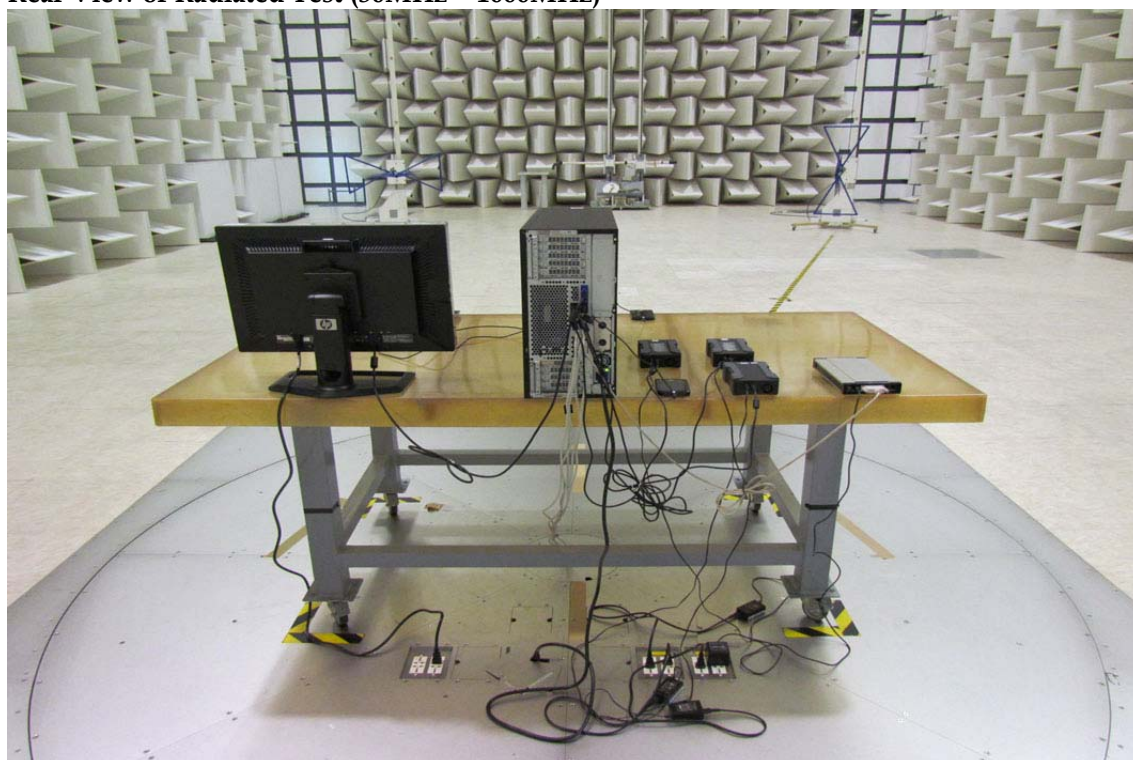


## 6. PHOTOGRAPHS

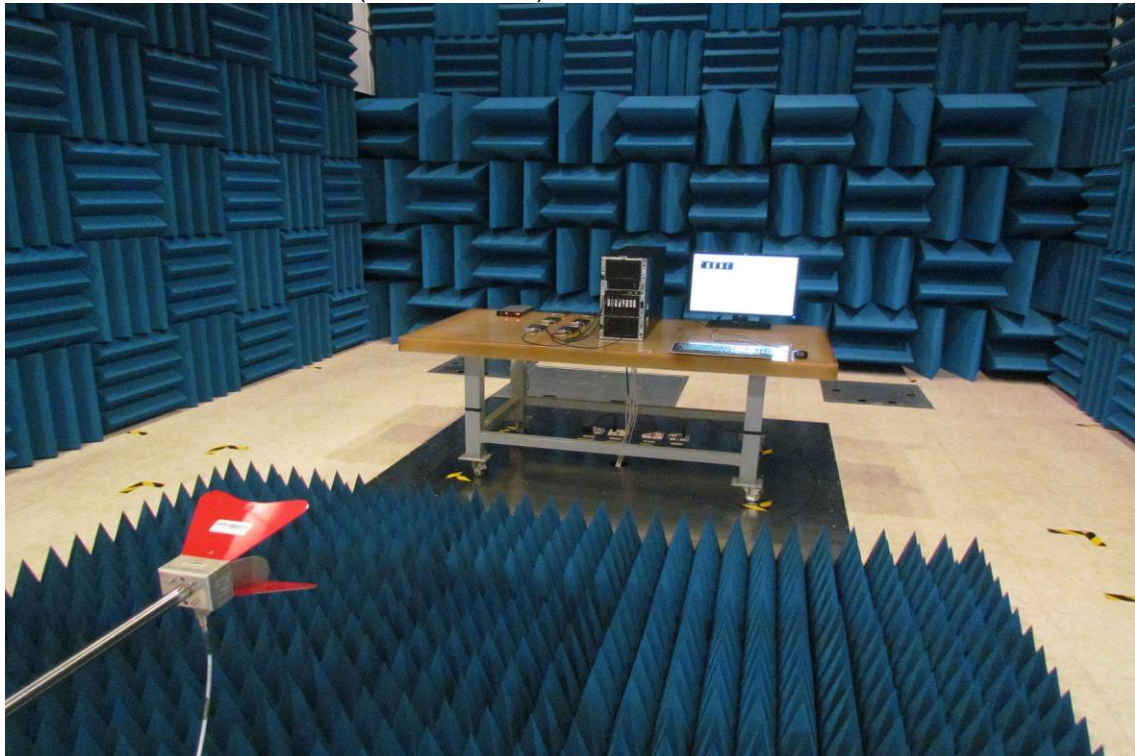
Front View of Radiated Test (30MHz ~ 1000MHz)



Rear View of Radiated Test (30MHz ~ 1000MHz)



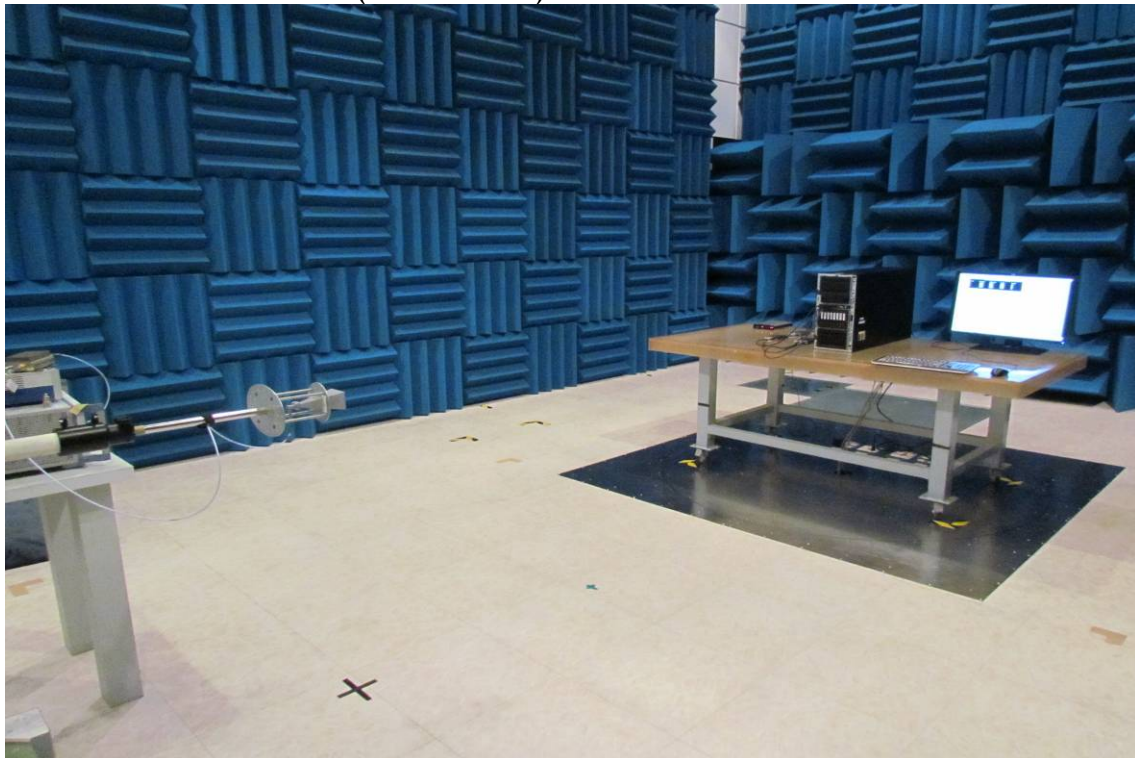
**Front View of Radiated Test (1GHz~18GHz)**



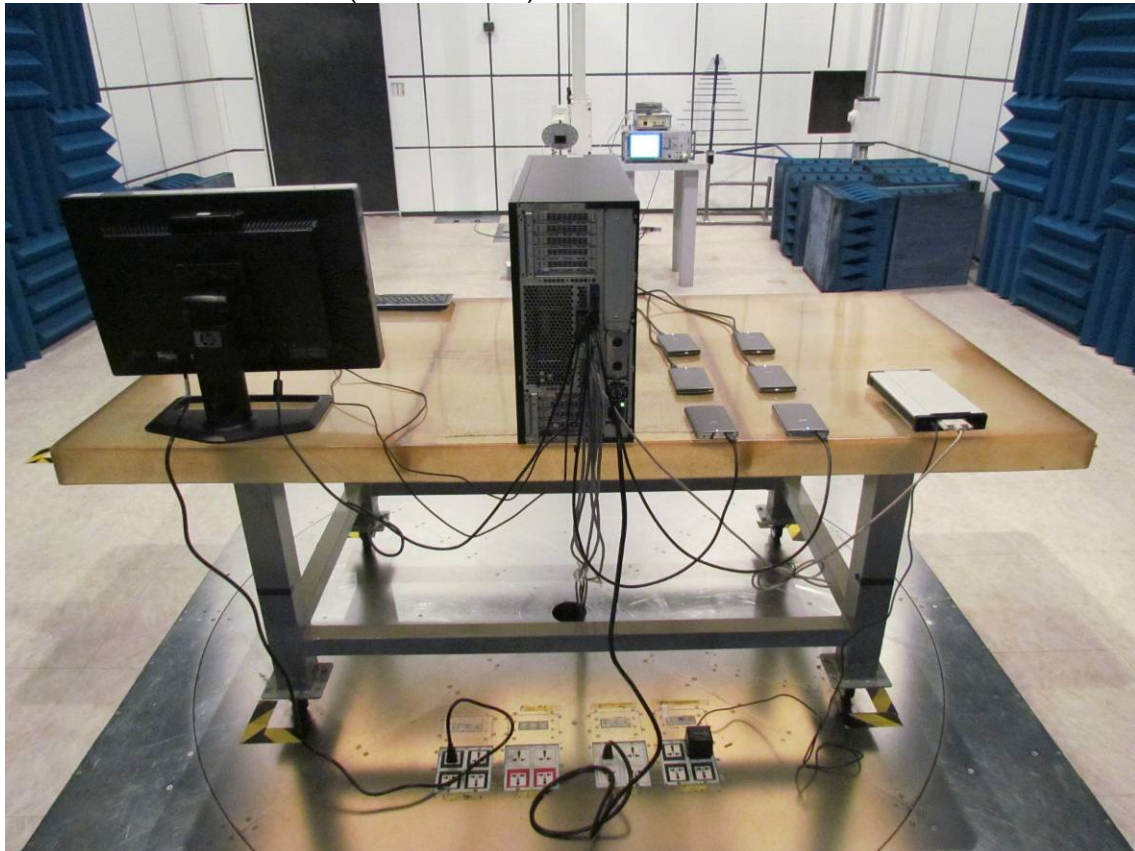
**Rear View of Radiated Test (1GHz~18GHz)**



Front View of Radiated Test (Above 18GHz)



Rear View of Radiated Test (Above 18GHz)



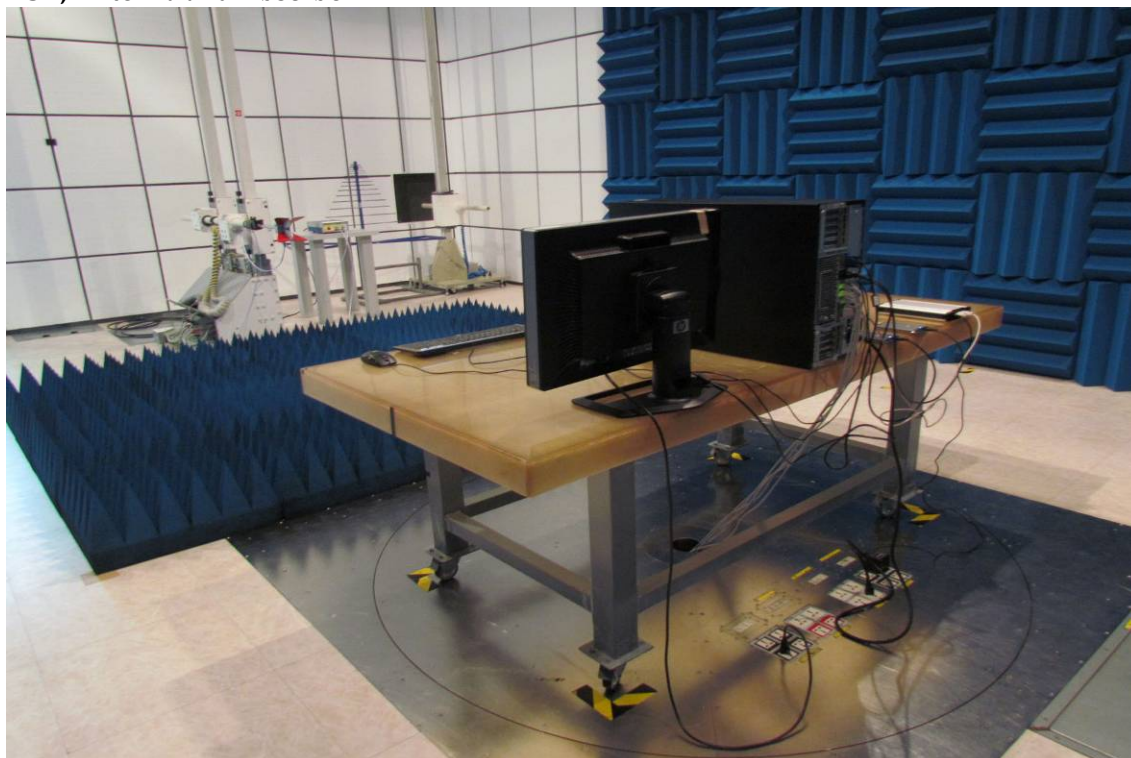
**Front View of Conducted Test**



**Side View of Conducted Test**



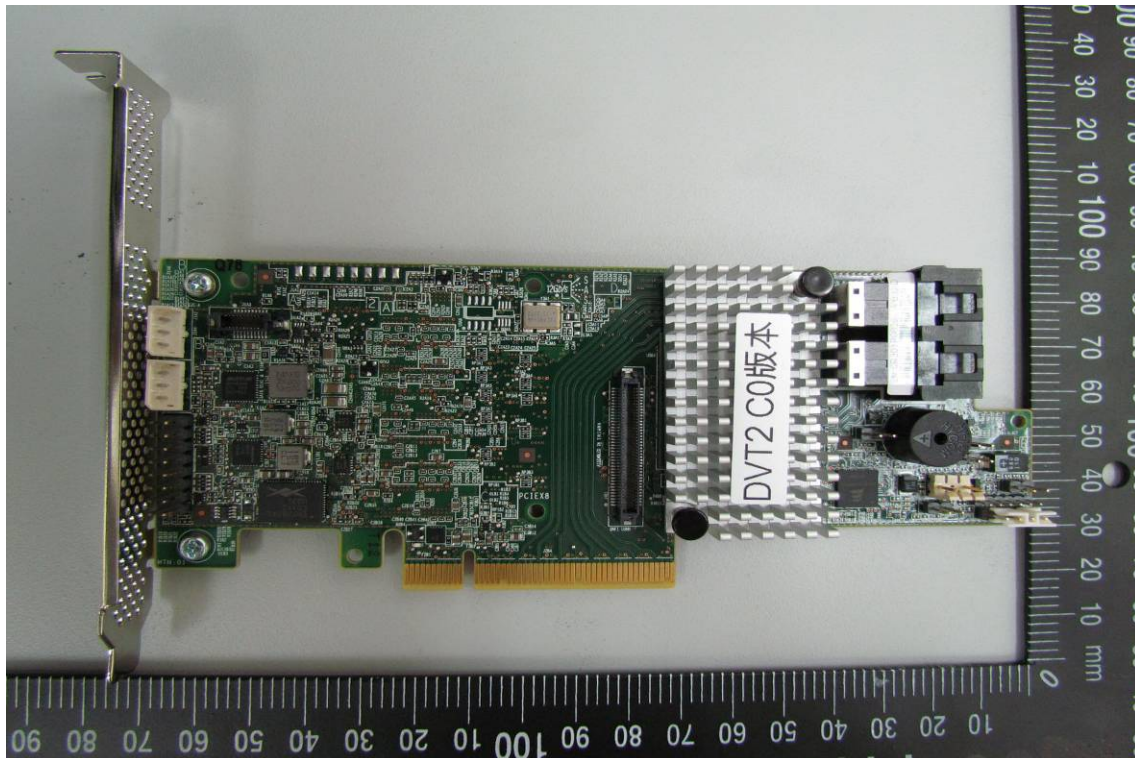
EUT, Antenna and Absorber



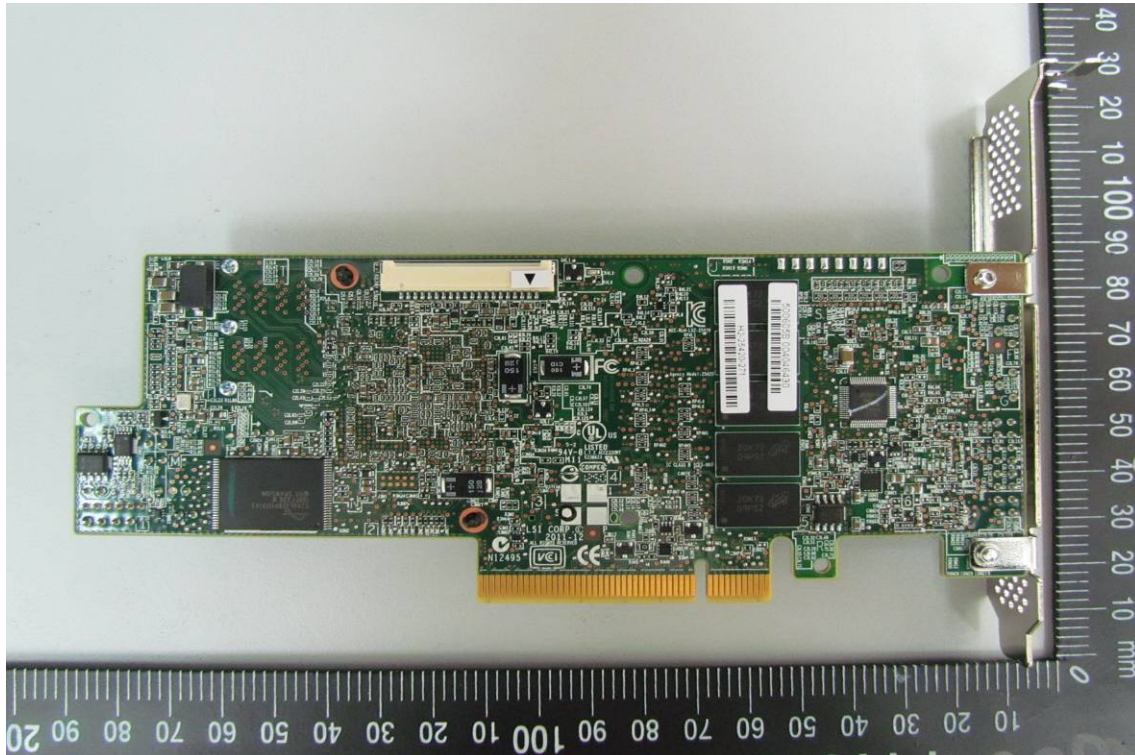
EUT in HOST System



Front View of PCI-E SAS HBA Card



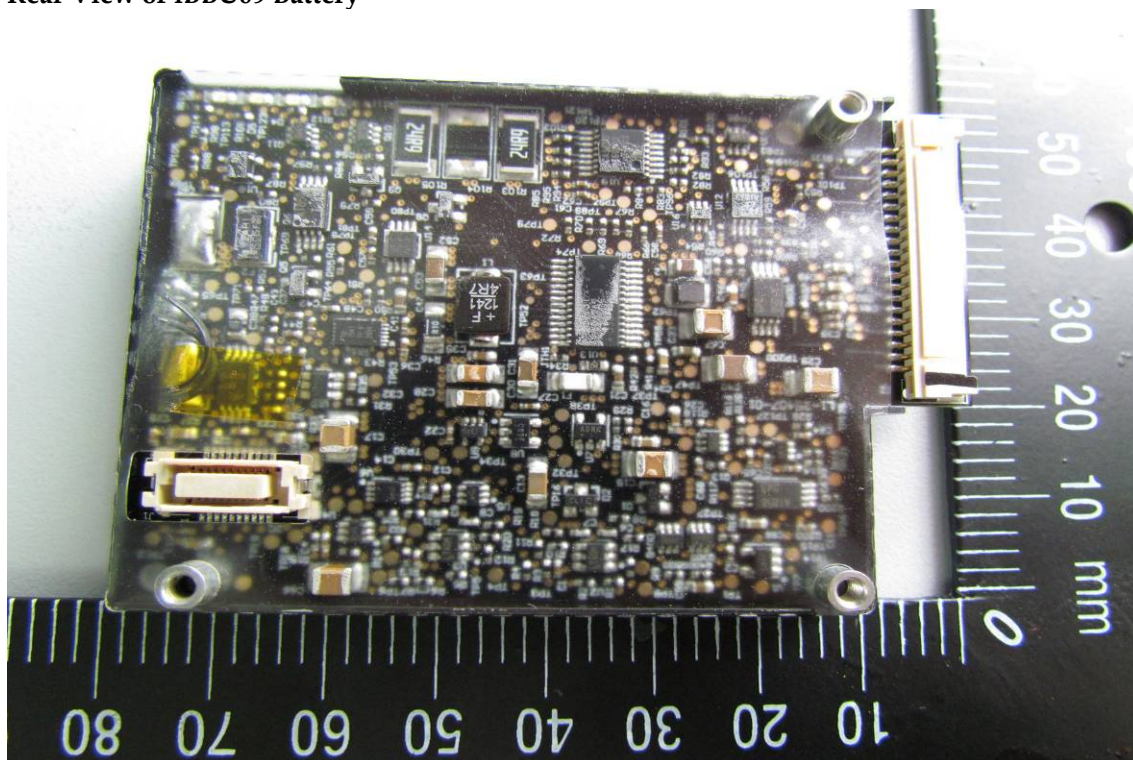
Rear View of PCI-E SAS HBA Card



Front View of iBBU09 Battery



Rear View of iBBU09 Battery



Front View of Daughter card with Tecate Battery



Rear View of Daughter card with Tecate Battery

