# EMC TEST REPORT

| | | | |
|---|---|---|---|
| **Project No.** | LBE20122330 | **Issue No.** | 0 |
| **Applicant** | **Name of organization** | **Samsung Electronics Co., Ltd.** | |
| | **Address** | 416 Maetan 3-Dong, Yeongtong-Gu, Suwon-Si, Gyeonggi-Do 443-742 Korea | |
| | **Date of application** | April 02, 2012 | |
| **EUT** | **Type of device** | Class B personal computers and peripherals | |
| | **Equipment authorization** | ☐ Declaration of Conformity ☒ Certification ☐ Verification | |
| | **FCC ID** | **A3LCLP365** | |
| | **Kind of product** | **Color laser printer** | |
| | **Model No.** | **CLP-365** | |
| | | **Variant Model No.** | CLP-360 |
| | **Manufacturer** | **Samsung Electronics Co., Ltd.**<br>259, Gongdan-Dong, Gumi-City, Gyeongsangbuk-Do, Korea 730-030<br>**Samsung Electronics (Shandong) Digital Printing Co., Ltd.**<br>264209, Samsung Road, Weihai Hi-Tech. IDZ, Shandong Province, P.R.China<br>**Weihai Shin Heung Digital Electronics Co., Ltd.**<br>98, Samsung Road, Weihai Hi-Tech. IDZ, Shandong Province, P.R.China<br>**Intops : Intops (Weihai) Electronics Co., Ltd.**<br>Keji Road-268-1 , Weihai Hi-Tech,Industries Development Zone , Shandong Province , CHINA | |
| **Applied Standards** | | FCC Part 15, Subpart B / ANSI C63.4-2009 | |
| **Test Period** | | May 2, 2012 ~ May 3, 2012 | |
| **Issue date** | | May 3, 2012 | |

**Test result** : **Complied**

The equipment under test has found to be compliant with the applied standards.
The result is not applied the uncertainty concept.
This mean that the result is applied the original (standard) limit.
(Refer to the attached test result for more detail.)

**Tested by** : Sung Jin Sim

**Reviewed by** : Tae Young Jang



SAMSUNG

416 Maetan 3-Dong, Yeongtong-Gu, Suwon-Si, Gyeonggi-Do, 443-742 Korea
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# 1. Report information

## 1.1 Revision history

| No. | Revised detailed information |
|---|---|
| Issue 0 | There are no revisions and this version is basic test report. |

## 1.2 Sample calculation

### 1.2.1 Conducted disturbance (at 10 MHz)

- Class B limit = 60 dBµV (Quasi-peak limit)
- Level (50 dBµV) = Meter Reading (40.2 dBµV) + factor ( 9.8 dB, AMN factor 9.7 dB + Cable loss 0.1 dB)
- Margin (10 dB) = Limit (60 dBµV) – Level (50 dBµV) = 10 dB below limit

### 1.2.2 Radiated disturbance (at 100 MHz)

- Class B limit = 30 dBµV/m at 10 m
- Level (20 dBµV/m)
  = Meter Reading (40 dBµV) + factor (- 20 dB (1/m), antenna factor + cable loss – amplifier gain)
- Margin (10 dB) = Limit (30 dBµV/m) – Level (20 dBµV/m) = 10 dB below limit

# 2. Summary of test results

## 2.1 Emission

The EUT has been tested according to the following specifications:

| Applied | Test type | Applied standard | Result |
|---|---|---|---|
| ☒ | Conducted Disturbance (Mains Port) | FCC Part 15 Subpart B / ANSI C63.4-2009 | Complied |
| ☒ | Radiated Disturbance | | Complied |

# 3. General Information

## 3.1 Test facility

The CS & Environment center is located on Samsung Electronics Co., Ltd. at 416 Maetan 3-Dong, Yeongtong-Gu, Suwon-Si, Gyeonggi-Do, South Korea.
All testing are performed in Semi-anechoic chambers conforming to the site attenuation Characteristics defined by ANSI C63.4, CISPR 22, 16-1 and 16-2. and Shielded rooms.

The CS & Environment center is operated as testing laboratory in accordance with the requirements of ISO/IEC 17025:2005.

# 4. Test Setup configuration

## 4.1 Test Peripherals

The cables used for these peripherals are either permanently attached by the peripheral manufacturer or coupled with an assigned cable as defined below.
The following is a listing of the EUT and peripherals utilized during the performance of EMC test:

| Seq | Description | Model No. | Serial No. | Manufacturer | Fcc ID / DoC |
|---|---|---|---|---|---|
| A | Color laser printer | CLP-365 | - | Samsung | EUT |
| B | PC | NT-P530 | ZSV293BZ600309F | DELL | DoC |
| C | Adapter | AD-6019R | CNBA4400242ABZ0415E0476 | DELTA Electronics | DoC |
| D | USB keyboard | SK-8115 | CN-0J4636-71616-641-0GIY | Dell | DoC |
| E | USB mouse | Moaruo | 0828008615 | Primax Electronics | DoC |
| F | Monitor | SP2208WFPt | CN-0PK977-71618-838-106S | DELL | DoC |
| G | Headset | - | - | ACTTO | - |

## 4.2 EUT operating mode

To achieve compliance applied standard specification, the following mode(s) were made during compliance testing:

| | |
|---|---|
| **Operating Mode 1** | Stand-by |
| **Operating Mode 2** | USB printing |

## 4.3 Details of Sampling

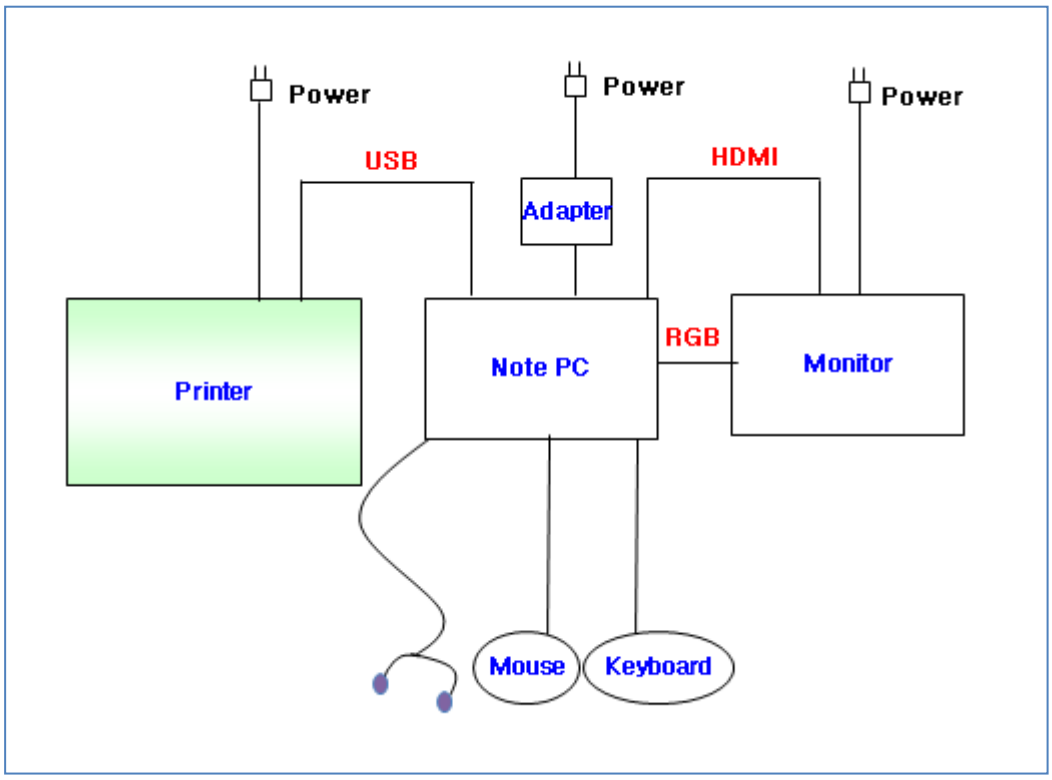
Customer selected, single unit.

## 4.4 Used cable description

The EUT is configured, installed, arranged and operated in a manner consistent with typical applications. Interface cables/loads/devices are connected to at least one of each type of interface port of the EUT, and where practical, each cable shall be terminated in a device typical of actual usage. The type(s) of interconnecting cables to be used and the interface port (of the EUT) to which these were connected;

| No. | Connected cable | Length [m] | Shielded [Y/N] | Note |
|---|---|---|---|---|
| 1 | Power | 1.5 | No | For EUT |
| 2 | Power | 1.8 | No | For PC |
| 3 | USB | 2.0 | Yes | From EUT to PC |
| 4 | USB | 1.8 | Yes | From EUT to keyboard |
| 5 | USB | 1.8 | Yes | From EUT to mouse |
| 6 | Headset | 1.0 | No | From PC to Headset |
| 7 | RGB | 1.5 | Yes | From PC to Monitor |
| 8 | HDMI | 1.5 | Yes | From PC to Monitor |
| 9 | Power | 1.5 | No | For Monitor |

## 4.5 Test arrangement



## 4.6 EUT Description

The following features describe EUT represented by this report:

| Item | Specification and Description |
|---|---|
| **Processor** | Temujin C (300 MHz, ARM926EJS core) |
| **Standard System memory** | 32 MB SDRAM on all configurations (Built in CPU) |
| **Resolution** | 600 x 600 dpi |
| **Paper Handling** | Paper Tray(standard) 130 Sheets |
| **Power Rating** | 110 VAC ~127 VAC, 5 A |
| **Power Consumption** | Sleep mode : 1 Watts<br>Stand by mode : 60 Watts<br>Printing simplex : 850 Watts |
| **Printer Language** | SPL-C |
| **Interfaces** | USB 2.0 |
| **OS compatibility** | Windows 2000/XP/2003/Vista/2008/7/2008 R2<br>RedHat Enterprise Linux WS 4, 5 (32/64 bit)<br>Fedora 5, 6, 7, 8, 9, 10, 11, 12, 13 (32/64 bit)<br>SuSE Linux 10.1 (32 bit)<br>OpenSuSE 10.2, 10.3, 11.0, 11.1, 11.2 (32/64 bit)<br>Mandriva 2007, 2008, 2009, 2009.1, 2010 (32/64 bit)<br>Ubuntu 6.06, 6.10, 7.04, 7.10, 8.04, 8.10, 9.04, 9.10, 10.04 (32/64 bit)<br>SuSE Linux Enterprise Desktop 10, 11 (32/64 bit)<br>Debian 4.0, 5.0 (32/64 bit)<br>Mac OS X 10.4~10.7 |
| **Modes of Operation** | USB Printing |
| **Intended Class for Emissions** | Class B |

## 4.7 Clock Frequencies

| Kind of Clocks | Frequency[MHz] | Kind of Clocks | Frequency[MHz] |
|---|---|---|---|
| **CPU internal clock** | **300** | Main source clock | 12 |
| Video clock | 12 | USB device clock | 12 |

## 4.8 Test configuration and condition

The system was configured for testing in typical fashion use. Cables were attached to each of the available I/O Ports. Where applicable, peripherals were attached to the I/O cables. The mode of operation utilized for testing was selected to best simulate typical EUT use.

Power source for the EUT operating was supplied by CVCF made by the Voltech Corp.

The EUT was measured all testing with toner cartridge.

**- Test Voltage : AC 120 V, 50 Hz**

## 4.9 Measurement uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus: (According to CISPR 16-4 and UKAS Lab 34.)

### 4.9.1 Emission

| Test type | | Measurement uncertainty (C.L. 95 %, k = 2) |
|---|---|---|
| Conducted disturbance | Main terminal | 3.30 dB |
| Radiated Disturbance (30 MHz ~ 1 GHz) | Horizontal | 5.27 dB |
| | Vertical | 4.68 dB |
| Radiated Disturbance (1 GHz ~ 6 GHz) | Horizontal | 4.76 dB |
| | Vertical | 3.40 dB |

# 5. Results of individual test

## 5.1 Conducted disturbance

Both conducted lines are measured in Quasi-Peak and Average mode, including the worst-case data points for each tested configuration. The EUT measured in accordance with the methods described in standards.

**Limits for conducted disturbance at the mains ports of class B ITE**

| Frequency range Limits MHz | Resolution Bandwidth | Limits dBµV | |
|---|---|---|---|
| | | Quasi-peak | Average |
| 0.15 to 0.50 | 9 kHz | 66 to 56 | 56 to 46 |
| 0.50 to 5 | 9 kHz | 56 | 46 |
| 5 to 30 | 9 kHz | 60 | 50 |
| NOTE 1 The lower limit shall apply at the transition frequency<br>NOTE 2 The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz. | | | |

### 5.1.1 Test instrumentation

| Test instrumentation | Model name | Manufacturer | Serial or Firmware (No./Ver.) | Calibration | |
|---|---|---|---|---|---|
| | | | | Date | Interval (Month) |
| Measuring receiver | ESU 08 | R&S | 100085 | 2012-03-23 | 12 |
| Artificial mains network | ENV216 | R&S | 100456 | 2011-09-28 | 12 |
| Artificial mains network | ESH3-Z5 | R&S | 831887/004 | 2011-07-27 | 12 |
| Test Software | EMC32 | R&S | Ver 5.20.1 | - | - |

### 5.1.2 Temperature and humidity condition

| | | | | |
|---|---|---|---|---|
| **Test date** | May 2, 2012 | **Test engineer** | Sung Jin Sim | |
| **Climate condition** | **Ambient temperature** | 22.4 ℃ | **Relative humidity** | 31 % |
| | **Atmospheric pressure** | 100.2 kPa | | |
| **Test place** | Shielded Room #1 | | | |

## 5.1.3 Photograph of Test Setup

**Front**

**Rear**

## 5.1.4 Test results (mains port)

- **Stand-by mode**

# Hardware Setup: Voltage with ENV 2-Line-LISN - [EMI conducted]

Subrange 1

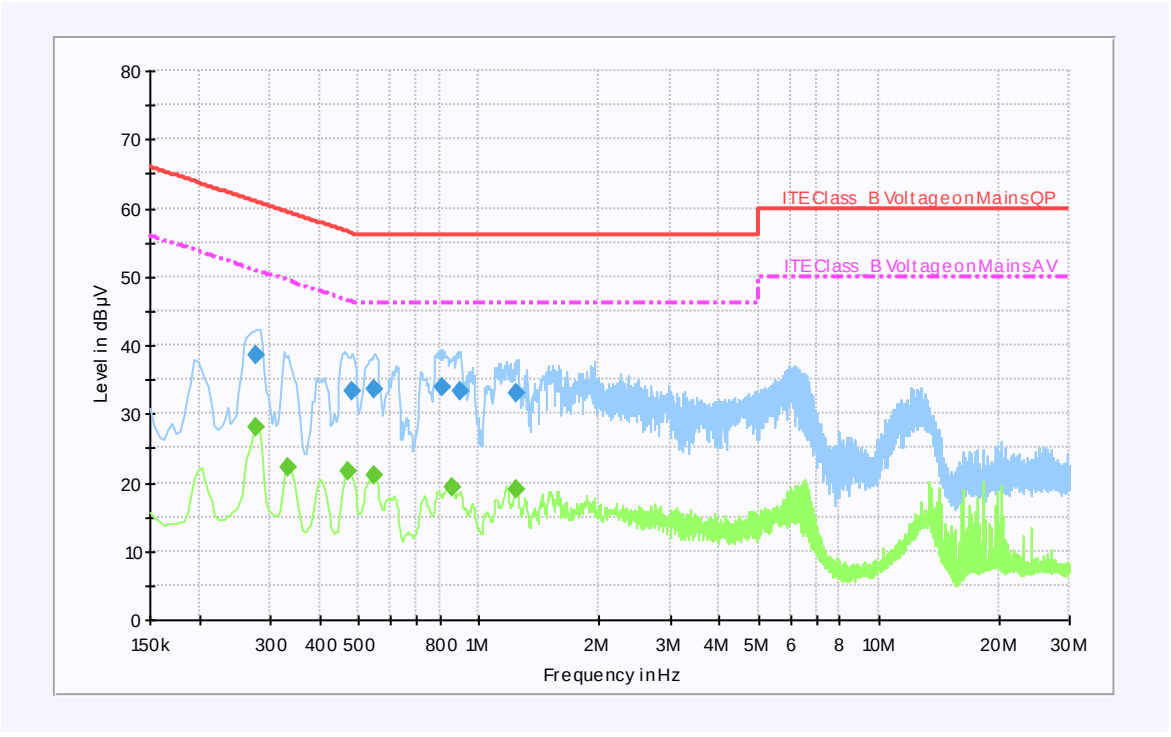
| | |
|---|---|
| Frequency Range: | 150 kHz – 30 MHz |
| Receiver: | ESU 8 |
| Transducer: | ENV216 / Receiver-2-Line-LISN ENV216 |

# Scan Setup: Class B_ENV 2-Line-LISN fin [EMI conducted]

| | |
|---|---|
| Hardware Setup: | Voltage with ENV 2-Line-LISN |
| Level Unit: | dB $\mu$ V |

| Subrange | Detectors | IF Bandwidth | Meas. Time | Receiver |
|---|---|---|---|---|
| 150 kHz – 30 MHz | Quasi Peak; Average | 9 kHz | 15 s | ESU 8 |

**Test Graph**




Note) Two graphs measured for both Live(L1) and Neutral(N) of the LISN are combined into one graph.

**Test Results ( Quasi-Peak and Average)**

Quasi-peak final measurement results table

| Frequency (MHz) | Quasi-Peak (dB $\mu$ V) | Line | Corr. (dB) | Margin (dB) | Limit (dB $\mu$ V) |
|---|---|---|---|---|---|
| 0.278 | 38.5 | N | 9.7 | 22.4 | 60.9 |
| 0.482 | 33.2 | L1 | 9.7 | 23.1 | 56.3 |
| 0.546 | 33.5 | N | 9.7 | 22.5 | 56.0 |
| 0.810 | 33.7 | L1 | 9.7 | 22.3 | 56.0 |
| 0.894 | 33.4 | N | 9.7 | 22.6 | 56.0 |
| 1.236 | 33.1 | N | 9.7 | 22.9 | 56.0 |

Average final measurement results table

| Frequency (MHz) | Average (dB $\mu$ V) | Line | Corr. (dB) | Margin (dB) | Limit (dB $\mu$ V) |
|---|---|---|---|---|---|
| 0.278 | 28.1 | N | 9.7 | 22.8 | 50.9 |
| 0.334 | 22.3 | N | 9.7 | 27.1 | 49.4 |
| 0.470 | 21.7 | N | 9.7 | 24.8 | 46.5 |
| 0.546 | 21.0 | L1 | 9.7 | 25.0 | 46.0 |
| 0.858 | 19.4 | N | 9.7 | 26.6 | 46.0 |
| 1.236 | 19.1 | N | 9.7 | 26.9 | 46.0 |

Note) Level (Quasi-Peak and/or Average) = Meter Reading (Quasi-Peak and/or Average) +
Factor (LISN Insertion Loss + Cable Loss)

Margin = Limit – Level (Quasi-Peak and/or Average)

- **USB printing mode**

## Hardware Setup: Voltage with ENV 2-Line-LISN - [EMI conducted]

Subrange 1

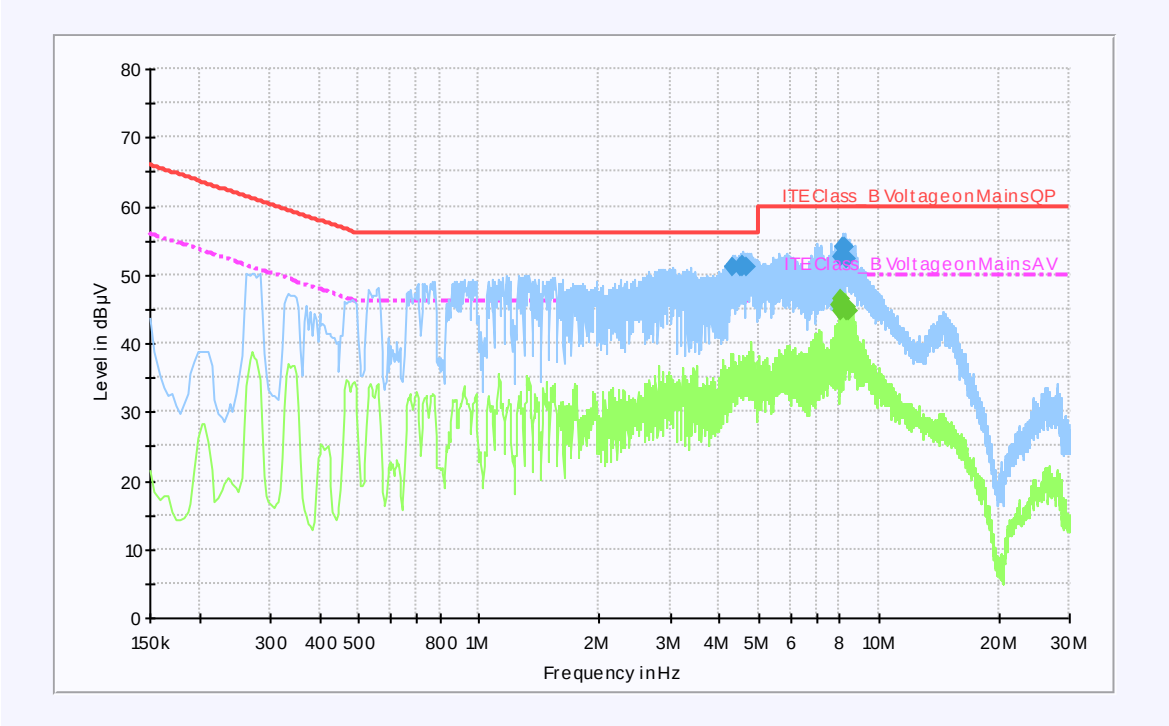
| | |
|---|---|
| Frequency Range: | 150 kHz – 30 MHz |
| Receiver: | ESU 8 |
| Transducer: | ENV216 / Receiver-2-Line-LISN ENV216 |

## Scan Setup: Class B_ENV 2-Line-LISN fin [EMI conducted]

| | |
|---|---|
| Hardware Setup: | Voltage with ENV 2-Line-LISN |
| Level Unit: | dB $\mu$ V |

| Subrange | Detectors | IF Bandwidth | Meas. Time | Receiver |
|---|---|---|---|---|
| 150 kHz – 30 MHz | Quasi Peak; Average | 9 kHz | 15 s | ESU 8 |

### Test Graph




Note) Two graphs measured for both Live(L1) and Neutral(N) of the LISN are combined into one graph.

**Test Results ( Quasi-Peak and Average)**

Quasi-peak final measurement results table

| Frequency (MHz) | Quasi-Peak (dB $\mu$ V) | Line | Corr. (dB) | Margin (dB) | Limit (dB $\mu$ V) |
|---|---|---|---|---|---|
| 4.588 | 51.3 | N | 9.7 | 4.7 | 56.0 |
| 4.320 | 51.2 | N | 9.7 | 4.8 | 56.0 |
| 4.568 | 51.2 | N | 9.7 | 4.8 | 56.0 |
| 4.656 | 51.1 | L1 | 9.7 | 4.9 | 56.0 |
| 4.528 | 51.1 | L1 | 9.7 | 4.9 | 56.0 |
| 8.152 | 54.0 | N | 9.8 | 6.0 | 60.0 |
| 8.224 | 54.0 | N | 9.8 | 6.0 | 60.0 |
| 8.080 | 52.4 | N | 9.8 | 7.6 | 60.0 |
| 8.284 | 52.2 | N | 9.8 | 7.8 | 60.0 |

Average final measurement results table

| Frequency (MHz) | Average (dB $\mu$ V) | Line | Corr. (dB) | Margin (dB) | Limit (dB $\mu$ V) |
|---|---|---|---|---|---|
| 7.944 | 45.4 | N | 9.8 | 4.6 | 50.0 |
| 8.012 | 44.8 | L1 | 9.8 | 5.2 | 50.0 |
| 8.084 | 46.5 | N | 9.8 | 3.5 | 50.0 |
| 8.152 | 45.3 | N | 9.8 | 4.7 | 50.0 |
| 8.220 | 45.2 | N | 9.8 | 4.8 | 50.0 |
| 8.288 | 45.4 | N | 9.8 | 4.6 | 50.0 |
| 8.360 | 44.8 | N | 9.8 | 5.2 | 50.0 |
| 8.432 | 44.5 | N | 9.8 | 5.5 | 50.0 |

Note) Level (Quasi-Peak and/or Average) = Meter Reading (Quasi-Peak and/or Average) +
Factor (LISN Insertion Loss + Cable Loss)

Margin = Limit – Level (Quasi-Peak and/or Average)

## 5.2 Radiated disturbance

Of those disturbances above (*L* - 20dB), where *L* is the limit level in logarithmic units, record at least the disturbance levels and the frequencies of the six highest disturbances.
The following data lists the significant emission frequencies, measured levels, correction factors (for antenna and cables), orientation of table, polarization and height of antenna, the corrected reading, the limit, and the amount of margin.
All measurements were taken utilizing quasi-peak detection unless stated otherwise.
Measurements were performed at an antenna to EUT distance of 10 m and elevated between 1 m and 4 m.
Both vertical and horizontal antenna polarizations were measured.
Above GHz, peak detector function mode was used with resolution bandwidth of 1 MHz and a video bandwidth of 1 MHz.
If the peak measured value complies with the average limit, it is unnecessary to perform an average measurement.

**Limits for radiated disturbance of ITE at a measuring distance of 10 m**

| Frequency range Limits MHz | Resolution Bandwidth | Quasi-peak Limits dBµV/m |
|---|---|---|
| | | Class B |
| 30 to 230 | 120 kHz | 30 |
| 230 to 1000 | 120 kHz | 37 |
| NOTE 1 The lower limit shall apply at the transition frequency<br>NOTE 2 Additional provisions may be required for cases where interference occurs. | | |

Peak measurements were made over the changeable frequency range 1 GHz to 6 GHz in accordance with internal maximum operating frequency at a measurement distance of 3 m for the following antenna and turntable arrangements:

| Antenna Height ( cm) | Antenna Polarisation | Turntable position (degrees) |
|---|---|---|
| **100 ~ 400** | **Horizontal, Vertical** | **Continuous** |

Above 1 GHz, peak detector function mode is used with a resolution bandwidth of 1 MHz and a video bandwidth of 1 MHz.

**Limits for Class B equipment at a measurement distance of 3 m**

| Class | Limits - dB(μV/m) | |
|---|---|---|
| | Peak | Average |
| **B** | **74** | **54** |
| **Average limit 500, 20 log 500 = 53.979 dB ≒ 54 dB** | | |

Measurements within 20 dB of the limit were then maximized by adjusting turntable position. Final measurements were made using a average detector.

Results checked manually; and points close to the limit line were re-measured.

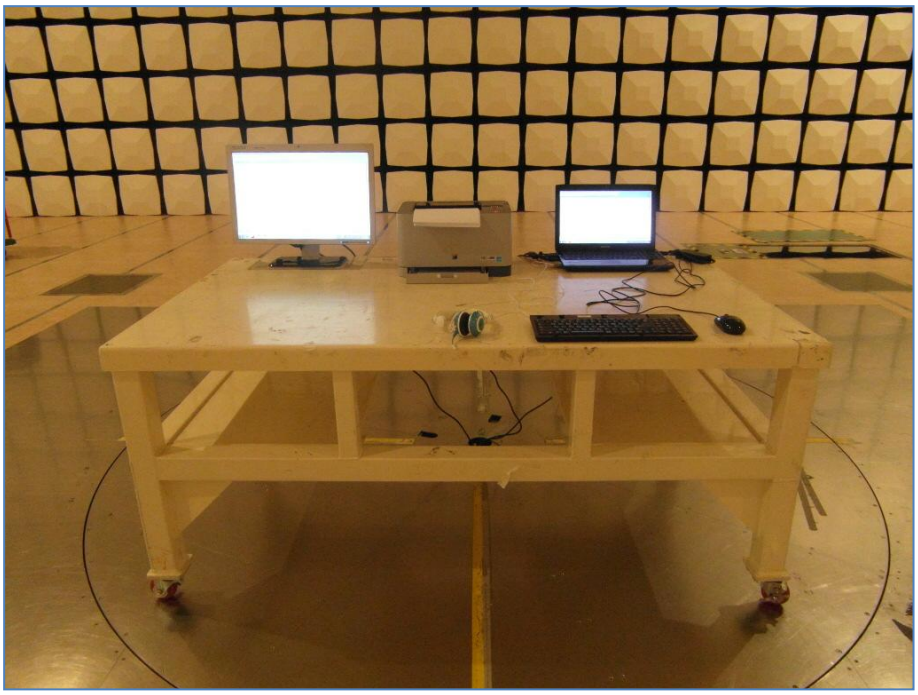
## 5.2.1 Test instrumentation

| Test instrumentation | Model name | Manufacturer | Serial or Firmware (No./Ver.) | Calibration | |
|---|---|---|---|---|---|
| | | | | Date | Interval (Month) |
| EMI Test Receiver | ESU | R&S | 100084 | 2011-10-10 | 12 |
| EMI Test Receiver | ESCI | R&S | 100370 | 2011-05-29 | 12 |
| Bi-log Antenna | CBL6112D | SCHAFFNER | 22248 | 2012-02-16 | 24 |
| Bi-log Antenna | CBL6112D | SCHAFFNER | 27627 | 2011-10-07 | 24 |
| Amplifier | 310N | SONOMA | 251673 | 2011-12-19 | 12 |
| Amplifier | 310N | SONOMA | 251675 | 2012-01-31 | 12 |
| Ant. Mast | MA4000 | inn-co | - | - | - |
| Ant. Mast | MA4000 | inn-co | - | - | - |
| Mast Controller | CO2000 | inn-co | - | - | - |
| RF selector | NS4900 | TOYO | - | - | - |
| EMI Test Receiver | ESIB | R&S | 832672/002 | 2011-11-11 | 12 |
| Horn antenna | HF907 | R&S | 100016 | 2011-06-15 | 24 |
| Preamplifier | SCU18 | R&S | 10001 | 2011-05-03 | 12 |
| Test Software | EP5/RE | TOYO | Ver 3.10.20 | - | - |

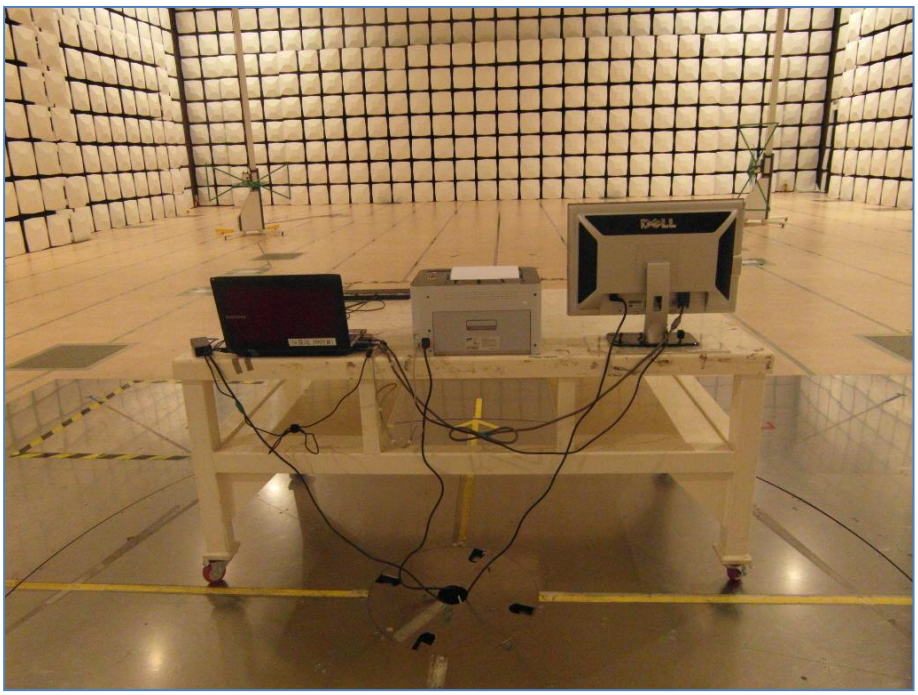
## 5.2.2 Temperature and humidity condition

| | | | | |
|---|---|---|---|---|
| **Test date** | May 2~3, 2012 | **Test engineer** | Sung Jin Sim | |
| **Climate condition** | **Ambient temperature** | 22.5 ℃ | **Relative humidity** | 30 % |
| | **Atmospheric pressure** | 100.8 kPa | | |
| **Test place** | 10 m Semi-Anechoic Chamber | | | |

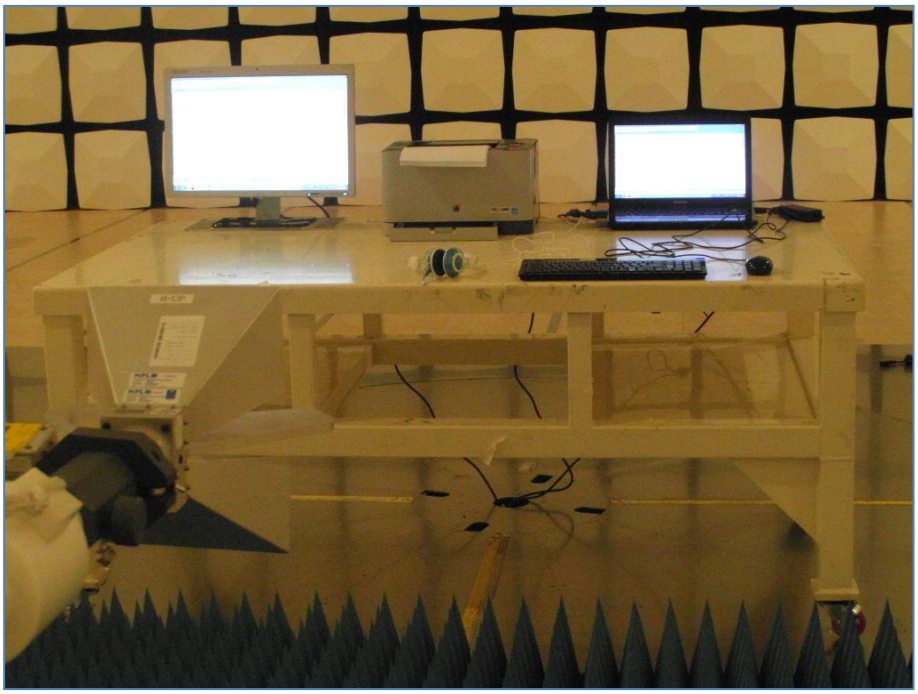
## 5.2.3 Photograph of Test Setup



**Front (Below 1GHz)**



**Rear (Below 1GHz)**



**Front (above 1GHz)**

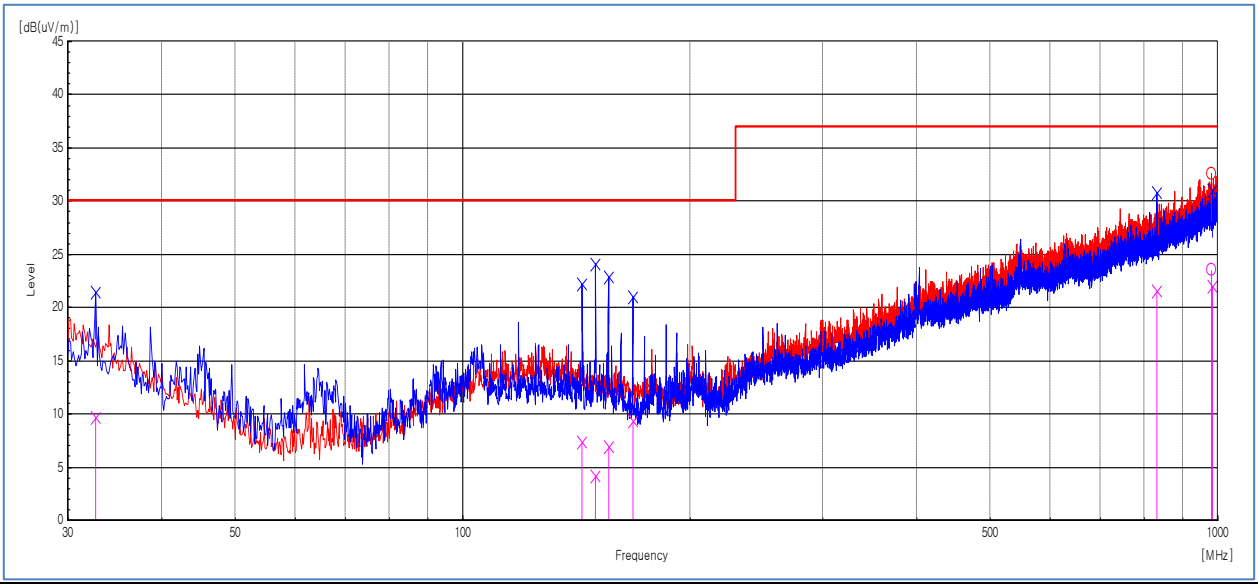
**Rear (above 1GHz)**

# 5.2.4 Test results

## 5.2.4.1 30 MHz to 1GHz test results

- **Stand-by Mode**

### Test Graph and Results

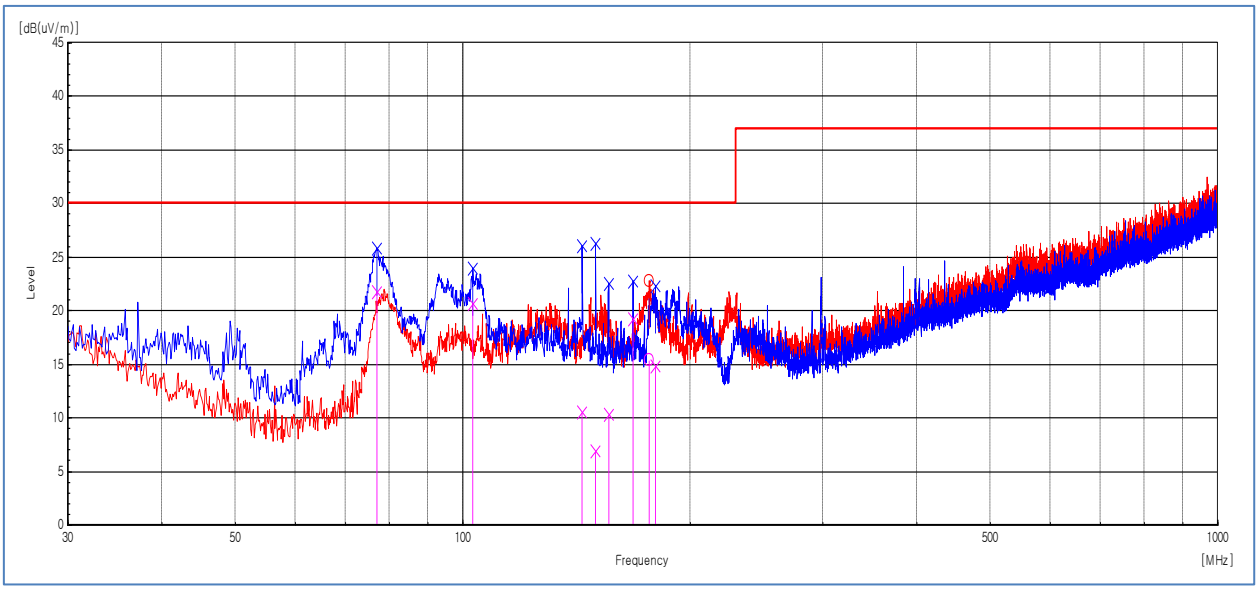



| Frequency [MHz] | Pol. | Reading QP [dB(μV)] | Factor [dB(1/m)] | Level QP [dB(μV /m)] | Limit [dB(μV /m)] | Margin QP [dB] | Height [cm] | Angle [deg] |
|---|---|---|---|---|---|---|---|---|
| 32.668 | V | 24.3 | -14.6 | 9.7 | 30 | 20.3 | 101 | 49.7 |
| 143.975 | V | 25.4 | -18 | 7.4 | 30 | 22.6 | 126 | 26.7 |
| 150.038 | V | 22.3 | -18.1 | 4.2 | 30 | 25.8 | 103 | 40.7 |
| 155.979 | V | 25.3 | -18.4 | 6.9 | 30 | 23.1 | 113 | 22.3 |
| 167.983 | V | 28.5 | -19.1 | 9.4 | 30 | 20.6 | 100 | 40.7 |
| 830.008 | V | 24.4 | -2.8 | 21.6 | 37 | 15.4 | 394 | 359.1 |
| 981.449 | H | 23.8 | -0.3 | 23.5 | 37 | 13.5 | 316 | 20.3 |
| 985.086 | V | 21.9 | 0.1 | 22 | 37 | 15 | 325 | 82.1 |

Note) Receiving antenna polarization : Horizontal and/or Vertical
Test Distance : 10 m, Antenna Height : 1 m to 4 m
Level QP (Quasi-Peak) = Reading QP + Factor (Antenna Factor + Cable Loss - Amp. Gain)
Margin QP (Quasi-Peak) = Limit – Level QP

- **USB printing Mode**

## Test Graph and Results



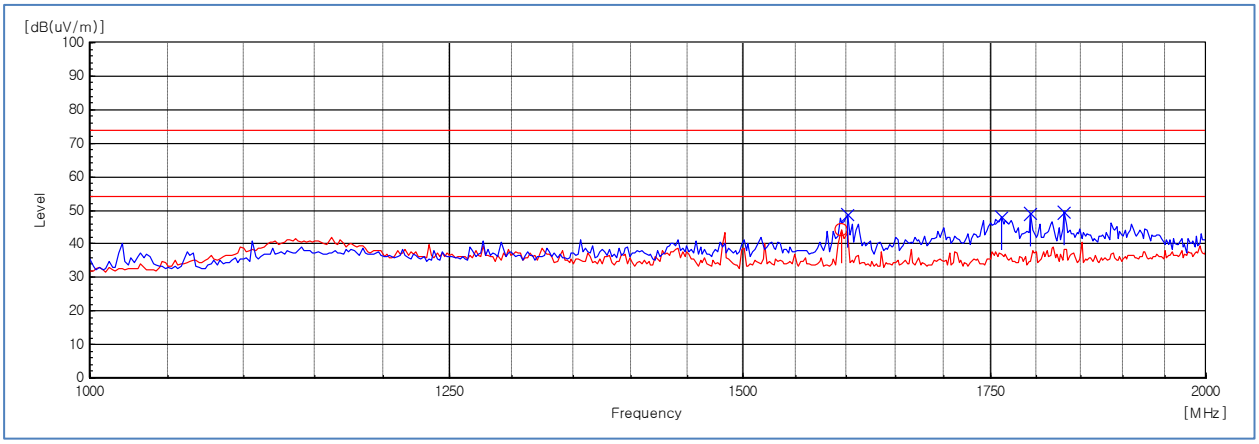

| Frequency [MHz] | Pol. | Reading QP [dB(μV)] | Factor [dB(1/m)] | Level QP [dB(μV /m)] | Limit [dB(μV /m)] | Margin QP [dB] | Height [cm] | Angle [deg] |
|---|---|---|---|---|---|---|---|---|
| 76.924 | V | 45.1 | -23.3 | 21.8 | 30 | 8.2 | 115 | 283.8 |
| 103.114 | V | 38.9 | -18.2 | 20.7 | 30 | 9.3 | 102 | 186.4 |
| 143.975 | V | 28.6 | -18 | 10.6 | 30 | 19.4 | 120 | 14.6 |
| 150.038 | V | 25 | -18.1 | 6.9 | 30 | 23.1 | 108 | 10.9 |
| 155.979 | V | 28.7 | -18.4 | 10.3 | 30 | 19.7 | 116 | 46.8 |
| 167.983 | V | 38.3 | -19.1 | 19.2 | 30 | 10.8 | 148 | 51.8 |
| 176.713 | H | 34.1 | -18.7 | 15.4 | 30 | 14.6 | 395 | 192.9 |
| 179.986 | V | 34.2 | -19.4 | 14.8 | 30 | 15.2 | 114 | 42.4 |

Note) Receiving antenna polarization : Horizontal and/or Vertical
Test Distance : 10 m, Antenna Height : 1 m to 4 m
Level QP (Quasi-Peak) = Reading QP + Factor (Antenna Factor + Cable Loss - Amp. Gain)
Margin QP (Quasi-Peak) = Limit – Level QP

### 5.2.4.2 1 GHz to 2 GHz test results

- **Stand-by Mode**

**Test Results**




Peak Measurement

| Frequency [MHz] | POL | Reading PK [dB(uV)] | Factor [dB(1/m)] | Level PK [dB(uV/m)] | Limit [dB(uV/m)] | Margin PK [dB] | Height [cm] | Angle [deg] |
|---|---|---|---|---|---|---|---|---|
| 1595.19 | H | 53.6 | -9.3 | 44.3 | 74 | 29.7 | 108 | 43.4 |
| 1601.202 | V | 58.2 | -9.3 | 48.9 | 74 | 25.1 | 108 | 74.4 |
| 1761.523 | V | 56.3 | -8.2 | 48.1 | 74 | 25.9 | 108 | 354.2 |
| 1793.587 | V | 57.2 | -8 | 49.2 | 74 | 24.8 | 108 | 56.5 |
| 1831.663 | V | 57 | -7.7 | 49.3 | 74 | 24.7 | 108 | 357.1 |

Note1) Receiving antenna polarization : Horizontal and Vertical

Level PK (Peak) = Reading PK (Peak) + Factor (Antenna Factor + Cable Loss - Amp. Gain)

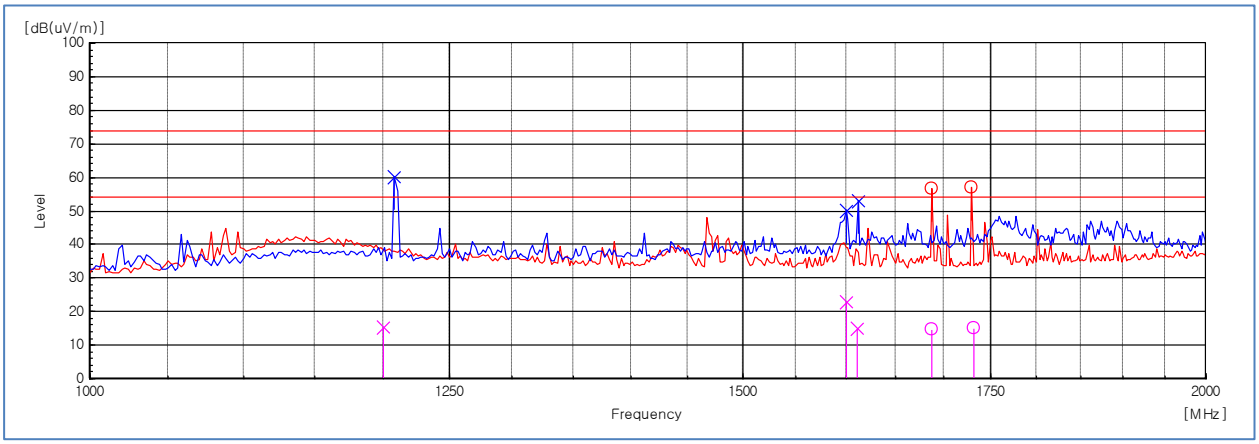
Level AV (Average) = Reading AV (Average) + Factor (Antenna Factor + Cable Loss - Amp. Gain)

Margin PK (Peak) = Limit – Level PK (Peak)

Margin AV (Average) = Limit – Level AV (Average)

- **USB printing Mode**

## Test Results




Peak Measurement

| Frequency [MHz] | POL | Reading PK [dB(uV)] | Factor [dB(1/m)] | Level PK [dB(uV/m)] | Limit [dB(uV/m)] | Margin PK [dB] | Height [cm] | Angle [deg] |
|---|---|---|---|---|---|---|---|---|
| 1208.417 | V | 70.6 | -10.2 | 60.4 | 74 | 13.6 | 108 | 13.3 |
| 1599.198 | V | 59.4 | -9.3 | 50.1 | 74 | 23.9 | 108 | 13.3 |
| 1611.223 | V | 62.3 | -9.3 | 53 | 74 | 21 | 108 | 170.3 |
| 1687.375 | H | 65.5 | -8.7 | 56.8 | 74 | 17.2 | 108 | 330.4 |
| 1729.459 | H | 65.4 | -8.4 | 57 | 74 | 17 | 108 | 183.8 |

Average Measurement

| Frequency [MHz] | POL | Reading AV [dB(uV)] | Factor [dB(1/m)] | Level AV [dB(uV/m)] | Limit [dB(uV/m)] | Margin AV [dB] | Height [cm] | Angle [deg] |
|---|---|---|---|---|---|---|---|---|
| 1199.92 | V | 25.8 | -10.2 | 15.6 | 54 | 38.4 | 108 | 12.8 |
| 1599.999 | V | 32.2 | -9.3 | 22.9 | 54 | 31.1 | 108 | 12.8 |
| 1611.083 | V | 24.3 | -9.3 | 15 | 54 | 39 | 108 | 169.7 |
| 1687.415 | H | 23.2 | -8.7 | 14.5 | 54 | 39.5 | 108 | 329.9 |
| 1731.764 | H | 23.5 | -8.4 | 15.1 | 54 | 38.9 | 108 | 184.3 |

Note1) Receiving antenna polarization : Horizontal and Vertical

Level PK (Peak) = Reading PK (Peak) + Factor (Antenna Factor + Cable Loss - Amp. Gain)

Level AV (Average) = Reading AV (Average) + Factor (Antenna Factor + Cable Loss - Amp. Gain)

Margin PK (Peak) = Limit – Level PK (Peak)

Margin AV (Average) = Limit – Level AV (Average)

# Appendix – EUT photography

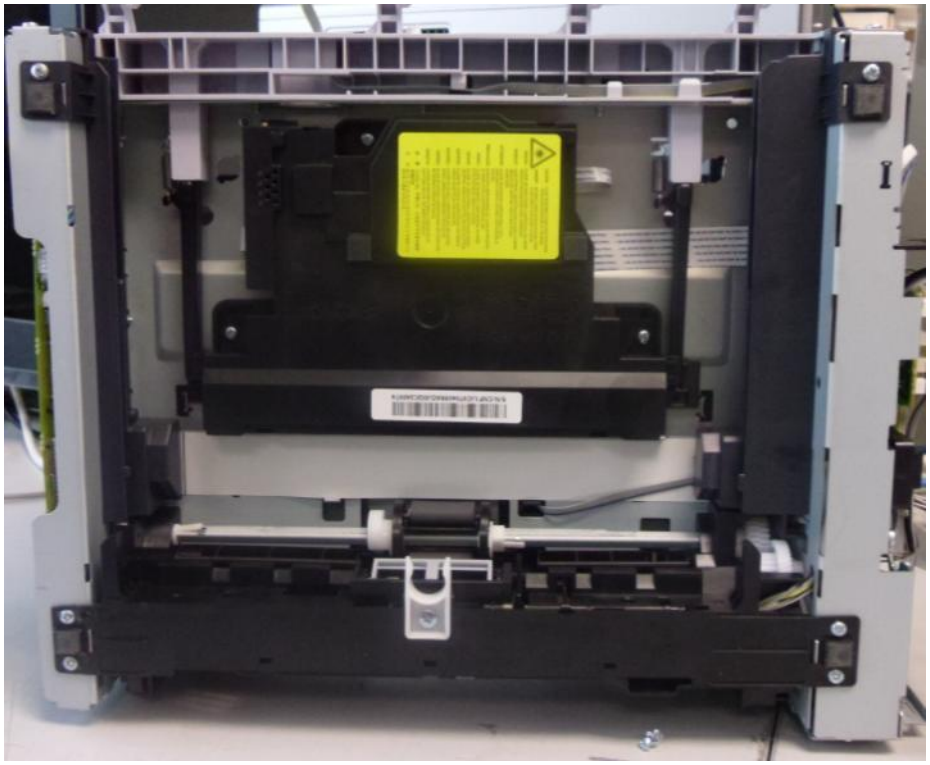
Front View

Rear View & Label location


Left View

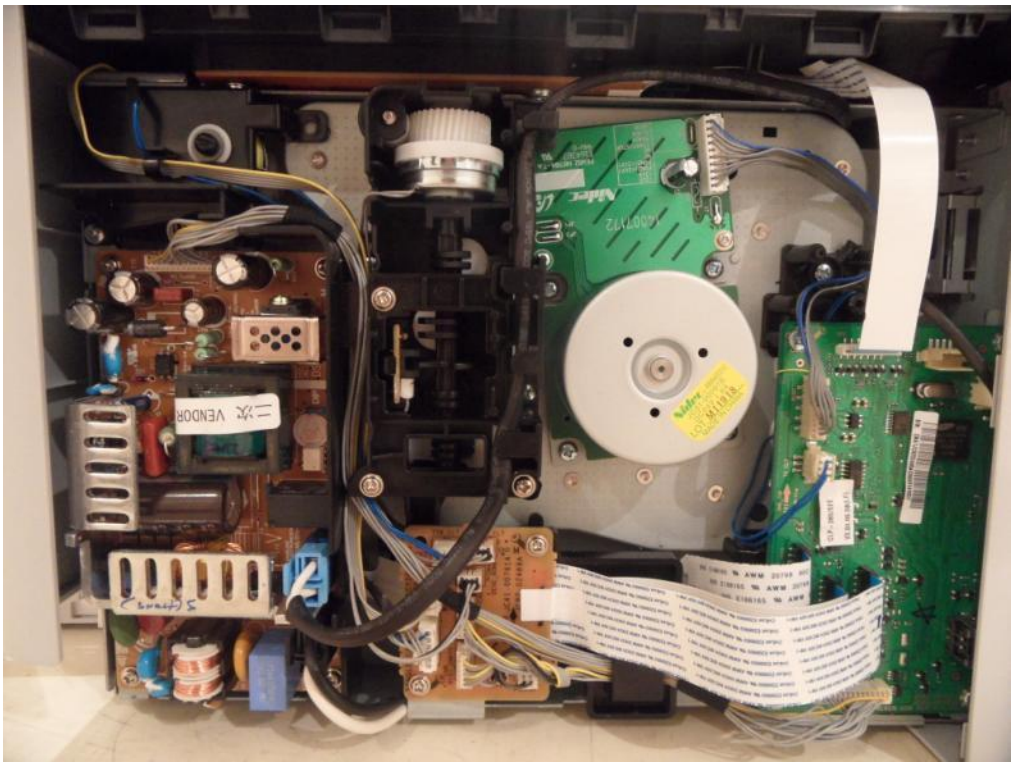

Right View


Top View

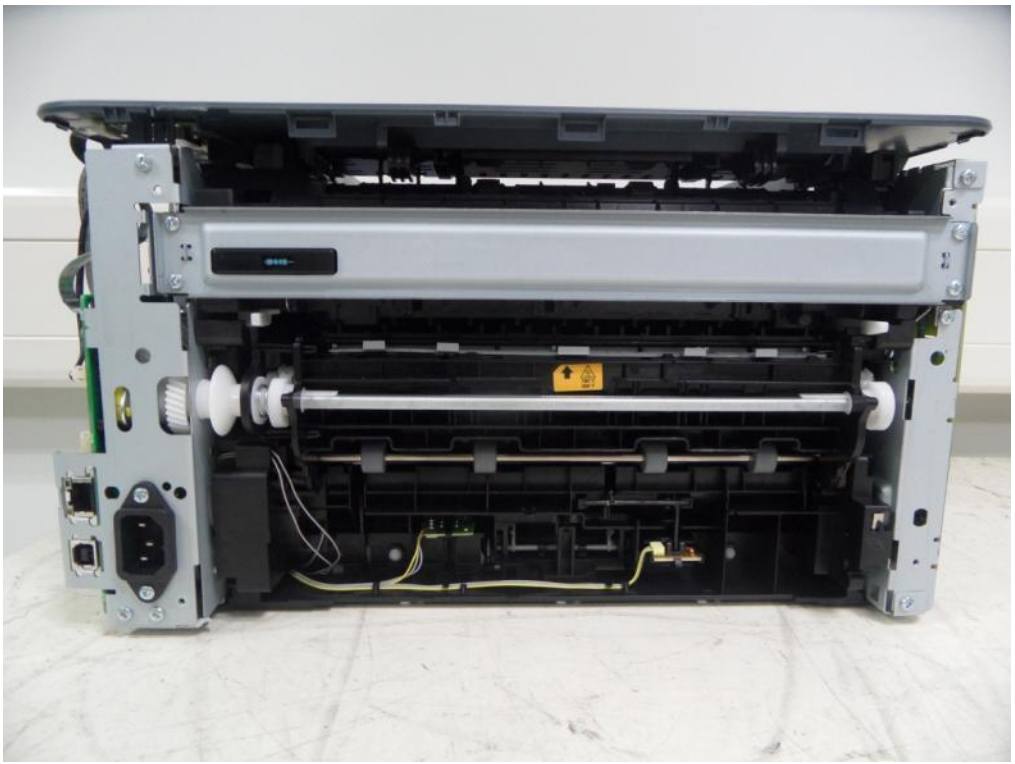


Bottom View

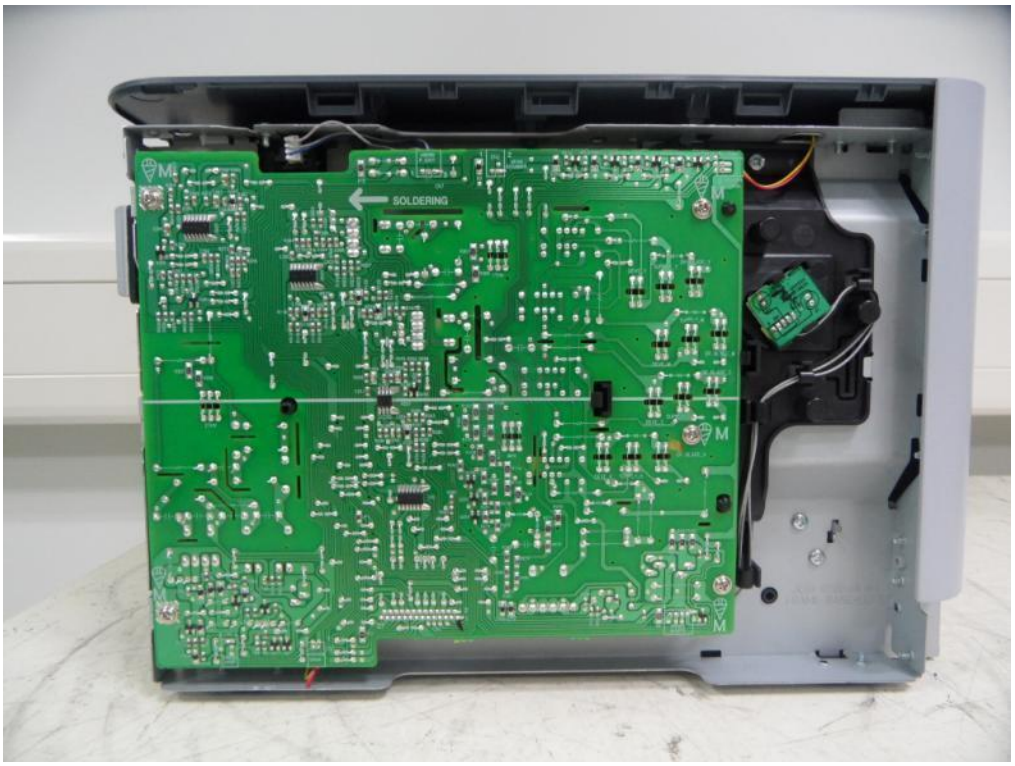
Inside View(Front)



Inside View(Leftside)



Inside View(Rear)




Inside View(Rightside)


Label