

# ELECTROMAGNETIC EMISSION COMPLIANCE REPORT FOR LOW-POWER, NON-LICENSED TRANSMITTER

**Test Report No.** : W153R-D023

**AGR No.** : A152A-137

**Applicant** : BLUEBIRD INC.

**Address** : (Dogok-dong, SEI Tower13,14)39, Eonjuro30-gil, Gangnam-gu, Seoul, South Korea

**Manufacturer** : BLUEBIRD INC.

**Address** : (Dogok-dong, SEI Tower13,14)39, Eonjuro30-gil, Gangnam-gu, Seoul, South Korea

**Type of Equipment** : Premium Enterprise Tablet

**FCC ID.** : SS4ET100

**Model Name** : ET100

**Serial number** : N/A

**Total page of Report** : 54 pages (including this page)

**Date of Incoming** : February 12, 2015

**Date of issue** : March 30, 2015

## SUMMARY

The equipment complies with the regulation; **FCC PART 15 SUBPART C Section 15.247**

This test report only contains the result of a single test of the sample supplied for the examination.

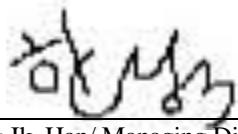
It is not a generally valid assessment of the features of the respective products of the mass-production.

Reviewed by:



Jae-Ho, Lee / Chief Engineer  
ONETECH Corp.

Approved by:



Sung-Ik, Han/ Managing Director  
ONETECH Corp.

**CONTENTS**

|  | <b>PAGE</b> |
|--|-------------|
| <b>1. VERIFICATION OF COMPLIANCE .....</b>                                     | <b>5</b>    |
| <b>2. TEST SUMMARY .....</b>   | <b>6</b>    |
| <b>2.1 TEST ITEMS AND RESULTS .....</b>  | 6           |
| <b>2.2 ADDITIONS, DEVIATIONS, EXCLUSIONS FROM STANDARDS.....</b>               | 6           |
| <b>2.3 RELATED SUBMITTAL(S) / GRANT(S) .....</b>                               | 6           |
| <b>2.4 PURPOSE OF THE TEST .....</b>   | 6           |
| <b>2.5 TEST METHODOLOGY.....</b>   | 6           |
| <b>2.6 TEST FACILITY.....</b>  | 7           |
| <b>3. GENERAL INFORMATION .....</b>  | <b>8</b>    |
| <b>3.1 PRODUCT DESCRIPTION.....</b>  | 8           |
| <b>3.2 ALTERNATIVE TYPE(S)/MODEL(S); ALSO COVERED BY THIS TEST REPORT.....</b> | 8           |
| <b>4. EUT MODIFICATIONS.....</b>   | <b>8</b>    |
| <b>5. SYSTEM TEST CONFIGURATION .....</b>                                      | <b>9</b>    |
| <b>5.1 JUSTIFICATION .....</b>   | 9           |
| <b>5.2 PERIPHERAL EQUIPMENT .....</b>  | 9           |
| <b>5.3 MODE OF OPERATION DURING THE TEST .....</b>                             | 10          |
| <b>5.4 CONFIGURATION OF TEST SYSTEM .....</b>                                  | 10          |
| <b>6. PRELIMINARY TEST .....</b>   | <b>11</b>   |
| <b>6.1 AC POWER LINE CONDUCTED EMISSIONS TESTS.....</b>                        | 11          |
| <b>6.2 GENERAL RADIATED EMISSIONS TESTS .....</b>                              | 11          |
| <b>7. 100 KHZ BANDWIDTH OUTSIDE THE FREQUENCY BAND.....</b>                    | <b>12</b>   |
| <b>7.1 OPERATING ENVIRONMENT .....</b>   | 12          |
| <b>7.2 TEST SET-UP FOR CONDUCTED MEASUREMENT .....</b>                         | 12          |
| <b>7.3 TEST SET-UP FOR RADIATED MEASUREMENT.....</b>                           | 12          |
| <b>7.4 TEST EQUIPMENT USED.....</b>  | 12          |
| <b>7.4 TEST DATA FOR TRANSMITTING MODE RADIATED EMISSION .....</b>             | 13          |
| <b>7.4.1 Radiated Emission which fall in the Restricted Band.....</b>          | 13          |
| <b>7.5.2 Spurious &amp; Harmonic Radiated Emission above 1 GHz.....</b>        | 16          |
| <b>7.5.3 Spurious Radiated Emission .....</b>                                  | 22          |
| <b>8. CONDUCTED EMISSION TEST.....</b>   | <b>38</b>   |
| <b>8.1 OPERATING ENVIRONMENT .....</b>   | 38          |

It should not be reproduced except in full, without the written approval of ONETECH Corp.

EMC-002 (Rev.3)

**HEAD OFFICE** : #505 SK APT. Factory 223-28, Sangdaewon 1 Dong, Jungwon-Gu, Seongnam-City, Gyeonggi-Do, 462-121, Korea  
(TEL: +82-31-746-8500 FAX: +82-31-746-8700)

**EMC Testing Div** : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

---

|  |    |
|--|----|
| <b>8.2 TEST SET-UP .....</b>   | 38 |
| <b>8.3 TEST EQUIPMENT USED.....</b>                                    | 38 |
| <b>8.4 TEST DATA FOR CHARGING &amp; TRANSMITTING MODE_1 MBPS .....</b> | 39 |

**Revision History**

| Issued Report No. | Issued Date    | Revisions     | Effect Section |
|-------------------|----------------|---------------|----------------|
| W153R-D023        | March 30, 2015 | Initial Issue | All            |
|                   |                |               |                |
|                   |                |               |                |

It should not be reproduced except in full, without the written approval of ONETECH Corp.

EMC-002 (Rev.3)

**HEAD OFFICE** : #505 SK APT. Factory 223-28, Sangdaewon 1 Dong, Jungwon-Gu, Seongnam-City, Gyeonggi-Do, 462-121, Korea  
(TEL: +82-31-746-8500 FAX: +82-31-746-8700)

**EMC Testing Div** : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

## 1. VERIFICATION OF COMPLIANCE

- . APPLICANT : BLUEBIRD INC.  
- . ADDRESS : (Dogok-dong, SEI Tower 13,14) 39, Eonjuro30-gil, Gangnam-gu, Seoul, South Korea  
- . CONTACT PERSON : Jaeho, Lee / Research Engineer  
- . TELEPHONE NO : +82-70-7730-8210  
- . FCC ID : SS4ET100  
- . MODEL NO/NAME : ET100  
- . SERIAL NUMBER : N/A  
- . DATE : March 28, 2015

| <b>EQUIPMENT CLASS</b>                                      |  | <b>DSS – PART 15 SPREAD SPECTRUM TRANSMITTER</b> |
|---|--|--|
| <b>KIND OF EQUIPMENT</b>                                    |  | Premium Enterprise Tablet                        |
| <b>THIS REPORT CONCERNS</b>                                 |  | Original Grant                                   |
| <b>MEASUREMENT PROCEDURES</b>                               |  | ANSI C63.10: 2013                                |
| <b>TYPE OF EQUIPMENT TESTED</b>                             |  | Pre-Production                                   |
| <b>KIND OF EQUIPMENT AUTHORIZATION REQUESTED</b>            |  | Certification                                    |
| <b>EQUIPMENT WILL BE OPERATED UNDER FCC RULES PART(S)</b>   |  | FCC PART 15 SUBPART C Section 15.247             |
| <b>MODIFICATIONS ON THE EQUIPMENT TO ACHIEVE COMPLIANCE</b> |  | None   |
| <b>FINAL TEST WAS CONDUCTED ON</b>                          |  | 3 m, Semi Anechoic Chamber                       |

- . The above equipment was tested by ONETECH Corp. for compliance with the requirement set forth in the FCC Rules and Regulations. This said equipment in the configuration described in this report, shows the maximum emission levels emanating from equipment are within the compliance requirements.

## 2. TEST SUMMARY

### 2.1 Test items and results

| SECTION    | TEST ITEMS  | RESULTS                |
|------------|---|------------------------|
| 15.247 (d) | 100 kHz Bandwidth Outside the Frequency Band        | Met the Limit / PASS   |
| 15.247 (d) | Radiated Emission which fall in the Restricted Band | Met the Limit / PASS   |
| 15.209     | Radiated Emission Limits, General Requirement       | Met the Limit / PASS   |
| 15.207     | Conducted Limits                                    | Met the Limit / PASS   |
| 15.203     | Antenna Requirement                                 | Met requirement / PASS |

### 2.2 Additions, deviations, exclusions from standards

No additions, deviations or exclusions have been made from standard.

### 2.3 Related Submittal(s) / Grant(s)

Original submittal only

### 2.4 Purpose of the test

To determine whether the equipment under test fulfills the requirements of the regulation stated in FCC PART 15 SUBPART C Section 15.247

### 2.5 Test Methodology

Both conducted and radiated testing was performed according to the procedures in ANSI C63.10: 2013. Radiated testing was performed at a distance of 3 m from EUT to the antenna.

## 2.6 Test Facility

The Onetech Corp. has been designated to perform equipment testing in compliance with ISO/IEC 17025.

The Electromagnetic compatibility measurement facilities are located at 301-14, Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do, 464-862 Korea.

- Site Filing:

VCCI (Voluntary Control Council for Interference) – Registration No. R-4112/ C-4617/ G-666/ T-1842 IC (Industry Canada) – Registration No. Site# 3736-3

- Site Accreditation:

KOLAS (Korea Laboratory Accreditation Scheme) - Accreditation No. 85

FCC (Federal Communications Commission) - Accreditation No. KR0013

RRA (Radio Research Agency) – Designation No. KR0013

### 3. GENERAL INFORMATION

#### 3.1 Product Description

The BLUEBIRD INC., Model ET100 (referred to as the EUT in this report) is a Premium Enterprise Tablet. The product specification described herein was obtained from product data sheet or user's manual.

|  |  |          |
|--|--|----------|
| DEVICE TYPE  | Premium Enterprise Tablet  |          |
| OPERATING FREQUENCY                                  | 2 402 MHz ~ 2 480 MHz  |          |
| RF OUTPUT POWER                                      | 1 Mbps   | 5.37 dBm |
|  | 2 Mbps   | 4.38 dBm |
|  | 3 Mbps   | 3.61 dBm |
| NUMBER OF CHANNEL                                    | 79 Channels  |          |
| MODULATION TYPE                                      | GFSK for 1 Mbps, DQPSK for 2 Mbps, 8-DPSK for 3 Mbps   |          |
| ANTENNA TYPE   | Chip Antenna   |          |
| ANTENNA GAIN   | 2.7 dBi  |          |
| LIST OF EACH OSC. OR CRYSTAL.<br>FREQ.(FREQ.>=1 MHz) | 24 MHz   |          |
| USED AC/DC ADAPTER                                   | Output: DC 12 V, 4.17 A<br>Model No: KPL-050F<br>Manufacturer: Ningbo ISO Electronic Co., Ltd. |          |

#### 3.2 Alternative type(s)/model(s); also covered by this test report.

- None

### 4. EUT MODIFICATIONS

- None

## 5. SYSTEM TEST CONFIGURATION

### 5.1 Justification

This device was configured for testing in a typical way as a normal customer is supposed to be used. During the test, the following components were installed inside of the EUT.

| DEVICE TYPE        | MANUFACTURER                                    | MODEL/PART NUMBER            | FCC ID    |
|--------------------|---|------------------------------|-----------|
| Mother board       | N/A   | PCB-BP80S-MAIN-REV.0.2       | N/A       |
| LCD panel          | Innolux Display                                 | EJ101IA-01G                  | N/A       |
| Card slot board    | N/A   | FPCB-BP80S-SD-SIMSAM-REV.0.1 | N/A       |
| Flash LED board    | N/A   | PCB-BP80S-FLASH-LED-REV.0.1  | N/A       |
| Battery            | XIAMEN POWERLONG INDUSTRY JOINT-STOCK CO., LTD. | PL8046135/3.7V               | N/A       |
| Light sensor board | N/A   | LIGHT-SENSOR-REV.0.1         | N/A       |
| Camera module      | N/A   | HU106-B                      | N/A       |
| SSD                | N/A   | MS-0460SSN                   | N/A       |
| Touch sensor board | N/A   | BP80_REV05                   | N/A       |
| GPS antenna        | N/A   | PE8G4006GB1_Rev1.0           | N/A       |
| Value sub board    | N/A   | PCB-BP80S-VALUE-SUB-REV01    | N/A       |
| Wireless module    | CINTERION                                       | PHS8-P                       | QIPPHS8-P |
| WLAN module        | INTEL   | 7265NGW                      | PD97265NG |
| WWAN antenna       | DONGNAM   | BP80S (MAIN)                 | N/A       |
| WLAN antenna       | DONGNAM   | BP80S (WiFi)                 | N/A       |
| NFC antenna        | N/A   | N/A                          | N/A       |
| Adaptor            | Ningbo Electronic Co., Ltd.                     | KPL-050F                     | N/A       |

### 5.2 Peripheral equipment

Defined as equipment needed for correct operation of the EUT, but not considered as tested:

| Model    | Manufacturer                | Description                     | Connected to |
|----------|-----------------------------|---------------------------------|--------------|
| ET100    | Bluebird Inc.               | Premium Enterprise Tablet (EUT) | Adaptor      |
| KPL-050F | Ningbo Electronic Co., Ltd. | Adaptor                         | EUT          |

### 5.3 Mode of operation during the test

- For the testing, software used to control the EUT for staying in continuous transmitting mode is programmed.
- Test should proceed in the worst of conditions.

### 5.4 Configuration of Test System

|                                |   |
|--------------------------------|---|
| <b>Line Conducted Test:</b>    | The EUT was tested in a charging mode. The EUT was connected to Adapter. All supporting equipments were connected to another LISN. Preliminary Power line Conducted Emission test was performed by using the procedure in ANSI C63.10: 2013 7.3.3 to determine the worse operating conditions.  |
| <b>Radiated Emission Test:</b> | Preliminary radiated emissions test were conducted using the procedure in ANSI C63.10: 2013 to determine the worse operating conditions. Final radiated emission tests were conducted at 3 meter open area test site.<br><br>The turntable was rotated through 360 degrees and the EUT was tested by positioned three orthogonal planes to obtain the highest reading on the field strength meter. Once maximum reading was determined, the search antenna was raised and lowered in both vertical and horizontal polarization. |

## 5.5 Antenna Requirement

For intentional device, according to section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

### Antenna Construction:

The transmitter antenna of the EUT is a Chip antenna, so no consideration of replacement by the user.

## 6. PRELIMINARY TEST

### 6.1 AC Power line Conducted Emissions Tests

During Preliminary Test, the following operating mode was investigated.

| Operation Mode    | The Worse operating condition (Please check one only) |
|-------------------|---|
| Transmitting Mode | X   |
| Receiving Mode    | -   |

### 6.2 General Radiated Emissions Tests

During Preliminary Test, the following operating mode was investigated.

| Operation Mode    | The Worse operating condition (Please check one only) |
|-------------------|---|
| Transmitting Mode | X   |
| Receiving Mode    | -   |

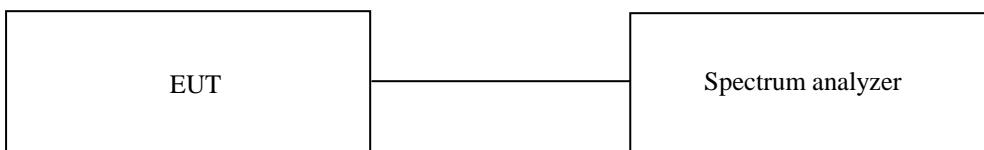
## 7. 100 kHz BANDWIDTH OUTSIDE THE FREQUENCY BAND

### 7.1 Operating environment

Temperature : 21.4 °C  
 Relative humidity : 45.1 % R.H

### 7.2 Test set-up for conducted measurement

The antenna output of the EUT was connected to the spectrum analyzer. The resolution and video bandwidth is set to 100 kHz, and peak detection was used.



### 7.3 Test set-up for radiated measurement

The radiated emissions measurements were performed on the 3 m, open-field test site. The EUT was placed on a non-conductive turntable above the ground plane.

The frequency spectrum from 30 MHz to 40 GHz was scanned and maximum emission levels at each frequency recorded. The system was rotated 360°, and the antenna was varied in the height between 1.0 m and 4.0 m in order to determine the maximum emission levels. This procedure was performed for horizontal and vertical polarization of the receiving antenna.

### 7.4 Test equipment used

| Model Number  | Manufacturer      | Description                   | Serial Number | Last Cal. (Interval) |
|---------------|-------------------|-------------------------------|---------------|----------------------|
| □ - ESCI      | Rohde & Schwarz   | EMI Test Receiver             | 101012        | Nov. 03, 2014(1Y)    |
| ■ - ESU       | Rohde & Schwarz   | EMI Test Receiver             | 100261        | Apr. 29, 2014(1Y)    |
| □ - 8564E     | HP                | Spectrum Analyzer             | 3650A00756    | Apr. 28, 2014(1Y)    |
| □ - FSP       | Rohde & Schwarz   | Spectrum Analyzer             | 100017        | Oct. 08, 2014(1Y)    |
| ■ - 310N      | Sonoma Instrument | AMPLIFIER                     | 312544        | Apr. 28, 2014(1Y)    |
| ■ - FSV30     | Rohde & Schwarz   | Signal Analyzer               | 101372        | Apr. 28, 2014(1Y)    |
| ■ - SCU-18    | Rohde & Schwarz   | PRE-AMPLIFIER                 | 102209        | Jun. 12, 2014(1Y)    |
| ■ - MA240     | HD GmbH           | Antenna Master                | N/A           | N/A                  |
| ■ - HD100     | HD GmbH           | Position Controller           | N/A           | N/A                  |
| ■ - DS420S    | HD GmbH           | Turn Table                    | N/A           | N/A                  |
| ■ - HFH2-Z2   | Rohde & Schwarz   | Loop Antenna                  | 879 285/26    | Dec. 09, 2014(2Y)    |
| ■ - VULB9163  | Schwarzbeck       | TRILOG Broadband Antenna      | 9163-255      | May 02, 2014(2Y)     |
| ■ - BBHA9120D | Schwarzbeck       | Horn Antenna                  | BBHA9120D295  | Sep. 05, 2013(2Y)    |
| ■ - BBHA9170  | Schwarzbeck       | Horn Antenna                  | BBHA9170178   | N/A                  |
| ■ - 83051A    | Agilent           | Microwave System Preamplifier | 3950M00201    | Apr. 30, 2014(1Y)    |

All test equipment used is calibrated on a regular basis.

## 7.4 Test data for Transmitting mode radiated emission

### 7.4.1 Radiated Emission which fall in the Restricted Band

#### 7.4.1.1 Test data for 1 Mbps

- Test Date : March 28, 2015
- Resolution bandwidth : 1 MHz for Peak and Average Mode
- Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode
- Measurement distance : 3 m
- Operating Condition : Highest Output Power Transmitting Mode(Low Channel and High Channel)
- Result : PASSED

| Frequency<br>(MHz)                | Reading<br>(dB $\mu$ V) | Detector<br>Mode | Ant. Pol.<br>(H/V) | Ant.<br>Factor | Cable<br>Loss | Amp<br>Gain | Total<br>(dB $\mu$ V/m) | Limits<br>(dB $\mu$ V/m) | Margin<br>(dB) |
|-----------------------------------|-------------------------|------------------|--------------------|----------------|---------------|-------------|-------------------------|--------------------------|----------------|
| <b>Test Data for Low Channel</b>  |                         |                  |                    |                |               |             |                         |                          |                |
| 2 342.18                          | 54.11                   | Peak             | H                  | 27.00          | 7.50          | 43.00       | 45.61                   | 74.00                    | 28.39          |
|                                   | 42.77                   | Average          | H                  |                |               |             | 34.27                   | 54.00                    | 19.73          |
| 2 342.18                          | 48.62                   | Peak             | V                  |                |               |             | 40.12                   | 74.00                    | 33.88          |
|                                   | 37.77                   | Average          | V                  |                |               |             | 29.27                   | 54.00                    | 24.73          |
| <b>Test Data for High Channel</b> |                         |                  |                    |                |               |             |                         |                          |                |
| 2 483.50                          | 55.06                   | Peak             | H                  | 27.40          | 7.70          | 43.00       | 47.16                   | 74.00                    | 26.84          |
|                                   | 43.11                   | Average          | H                  |                |               |             | 35.21                   | 54.00                    | 18.79          |
| 2 483.50                          | 48.35                   | Peak             | V                  |                |               |             | 40.45                   | 74.00                    | 33.55          |
|                                   | 37.45                   | Average          | V                  |                |               |             | 29.55                   | 54.00                    | 24.45          |

Tabulated test data for Restricted Band

Remark: "H": Horizontal, "V": Vertical



Tested by: Jun-Hui, Lee/ Senior Engineer

**7.5.1.2 Test data for 2 Mbps**

- Test Date : March 28, 2015
- Resolution bandwidth : 1 MHz for Peak and Average Mode
- Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode
- Measurement distance : 3 m
- Operating Condition : Highest Output Power Transmitting Mode(Low Channel and High Channel)
- Result : PASSED

| Frequency (MHz)                   | Reading (dB $\mu$ V) | Detector Mode | Ant. Pol. (H/V) | Ant. Factor | Cable Loss | Amp Gain | Total (dB $\mu$ V/m) | Limits (dB $\mu$ V/m) | Margin (dB) |
|-----------------------------------|----------------------|---------------|-----------------|-------------|------------|----------|----------------------|-----------------------|-------------|
| <b>Test Data for Low Channel</b>  |                      |               |                 |             |            |          |                      |                       |             |
| 2 342.07                          | 55.09                | Peak          | H               | 27.00       | 7.50       | 43.00    | 46.59                | 74.00                 | 27.41       |
|                                   | 42.76                | Average       | H               |             |            |          | 34.26                | 54.00                 | 19.74       |
| 2 342.07                          | 48.76                | Peak          | V               |             |            |          | 40.26                | 74.00                 | 33.74       |
|                                   | 38.04                | Average       | V               |             |            |          | 29.54                | 54.00                 | 24.46       |
| <b>Test Data for High Channel</b> |                      |               |                 |             |            |          |                      |                       |             |
| 2 483.50                          | 55.9                 | Peak          | H               | 27.40       | 7.70       | 43.00    | 48.00                | 74.00                 | 26.00       |
|                                   | 43.22                | Average       | H               |             |            |          | 35.32                | 54.00                 | 18.68       |
| 2 483.50                          | 48.16                | Peak          | V               |             |            |          | 40.26                | 74.00                 | 33.74       |
|                                   | 37.53                | Average       | V               |             |            |          | 29.63                | 54.00                 | 24.37       |

Tabulated test data for Restricted Band

Remark: "H": Horizontal, "V": Vertical


  
**Tested by: Jun-Hui, Lee/ Senior Engineer**

**7.5.1.3 Test data for 3 Mbps**

- Test Date : March 28, 2015
- Resolution bandwidth : 1 MHz for Peak and Average Mode
- Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode
- Measurement distance : 3 m
- Operating Condition : Highest Output Power Transmitting Mode(Low Channel and High Channel)
- Result : PASSED

| Frequency (MHz)                   | Reading (dB $\mu$ V) | Detector Mode | Ant. Pol. (H/V) | Ant. Factor | Cable Loss | Amp Gain | Total (dB $\mu$ V/m) | Limits (dB $\mu$ V/m) | Margin (dB) |
|-----------------------------------|----------------------|---------------|-----------------|-------------|------------|----------|----------------------|-----------------------|-------------|
| <b>Test Data for Low Channel</b>  |                      |               |                 |             |            |          |                      |                       |             |
| 2 322.84                          | 54.53                | Peak          | H               | 27.00       | 7.50       | 43.00    | 46.03                | 74.00                 | 27.97       |
|                                   | 42.62                | Average       | H               |             |            |          | 34.12                | 54.00                 | 19.88       |
| 2 322.84                          | 48.84                | Peak          | V               |             |            |          | 40.34                | 74.00                 | 33.66       |
|                                   | 38.11                | Average       | V               |             |            |          | 29.61                | 54.00                 | 24.39       |
| <b>Test Data for High Channel</b> |                      |               |                 |             |            |          |                      |                       |             |
| 2 483.50                          | 56.94                | Peak          | H               | 27.40       | 7.70       | 43.00    | 49.04                | 74.00                 | 24.96       |
|                                   | 43.97                | Average       | H               |             |            |          | 36.07                | 54.00                 | 17.93       |
| 2 483.50                          | 51.06                | Peak          | V               |             |            |          | 43.16                | 74.00                 | 30.84       |
|                                   | 40.76                | Average       | V               |             |            |          | 32.86                | 54.00                 | 21.14       |

Tabulated test data for Restricted Band

Remark: "H": Horizontal, "V": Vertical



Tested by: Jun-Hui, Lee/ Senior Engineer

## 7.5.2 Spurious & Harmonic Radiated Emission above 1 GHz

### 7.5.2.1 Test data for 1 Mbps

- Test Date : March 28, 2015
- Resolution bandwidth : 1 MHz for Peak and Average Mode for the emissions fall in restricted band,  
100 kHz for Peak Mode for the emissions outside restricted band
- Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode
- Frequency range : 1 GHz ~ 26.5 GHz
- Measurement distance : 3 m
- Operating Condition : Highest Output Power Transmitting Mode
- Result : PASSED

| Frequency (GHz)                  | Reading (dB $\mu$ V)                | Detector Mode | Ant. Pol. (H/V) | Ant. Factor | Cable Loss | Amp Gain | Total (dB $\mu$ V/m) | Limits (dB $\mu$ V/m) | Margin (dB) |
|----------------------------------|-------------------------------------|---------------|-----------------|-------------|------------|----------|----------------------|-----------------------|-------------|
| <b>Test Data for Low Channel</b> |                                     |               |                 |             |            |          |                      |                       |             |
| 2 402.00                         | 98.22                               | Peak          | H               | 27.20       | 7.50       | 42.80    | 90.12                | 113.98                | 23.86       |
|                                  | 99.83                               | Peak          | V               |             |            |          | 91.73                | 113.98                | 22.25       |
| 4 804.00                         | 43.82                               | Peak          | H               | 30.70       | 11.10      | 42.50    | 43.12                | 73.98                 | 30.86       |
|                                  | 42.17                               | Average       | H               |             |            |          | 41.47                | 53.98                 | 12.51       |
|                                  | 49.66                               | Peak          | V               |             |            |          | 48.96                | 73.98                 | 25.02       |
|                                  | 47.03                               | Average       | V               |             |            |          | 46.33                | 53.98                 | 7.65        |
|                                  | <b>Test Data for Middle Channel</b> |               |                 |             |            |          |                      |                       |             |
| 2 441.00                         | 97.97                               | Peak          | H               | 27.30       | 7.60       | 42.90    | 89.97                | 113.98                | 24.01       |
|                                  | 99.56                               | Peak          | V               |             |            |          | 91.56                | 113.98                | 22.42       |
| 4 882.00                         | 43.26                               | Peak          | H               | 30.70       | 11.20      | 42.50    | 42.76                | 73.98                 | 31.22       |
|                                  | 41.15                               | Average       | H               |             |            |          | 40.65                | 53.98                 | 13.33       |
|                                  | 48.00                               | Peak          | V               |             |            |          | 47.50                | 73.98                 | 26.48       |
|                                  | 46.48                               | Average       | V               |             |            |          | 45.98                | 53.98                 | 8.00        |

It should not be reproduced except in full, without the written approval of ONETECH Corp.

EMC-002 (Rev.3)

**HEAD OFFICE** : #505 SK APT. Factory 223-28, Sangdaewon 1 Dong, Jungwon-Gu, Seongnam-City, Gyeonggi-Do, 462-121, Korea  
 (TEL: +82-31-746-8500 FAX: +82-31-746-8700)

**EMC Testing Div** : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

| Test Data for High Channel |       |         |   |       |       |       |       |        |       |
|----------------------------|-------|---------|---|-------|-------|-------|-------|--------|-------|
| 2 480.00                   | 97.26 | Peak    | H | 27.40 | 7.70  | 42.90 | 89.46 | 113.98 | 24.52 |
|                            | 99.33 | Peak    | V |       |       |       | 91.53 | 113.98 | 22.45 |
| 4 960.00                   | 40.58 | Peak    | H | 30.80 | 11.80 | 42.30 | 40.88 | 73.98  | 33.10 |
|                            | 37.96 | Average | H |       |       |       | 38.26 | 53.98  | 15.72 |
|                            | 45.27 | Peak    | V |       |       |       | 45.57 | 73.98  | 28.41 |
|                            | 43.68 | Average | V |       |       |       | 43.98 | 53.98  | 10.00 |

Remark: "H": Horizontal, "V": Vertical, "\*" Frequency fall in restricted band



Tested by: Jun-Hui, Lee/ Senior Engineer

**7.5.2.2 Test data for 2 Mbps**

- Test Date : March 28, 2015
- Resolution bandwidth : 1 MHz for Peak and Average Mode for the emissions fall in restricted band,  
100 kHz for Peak Mode for the emissions outside restricted band
- Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode
- Frequency range : 1 GHz ~ 26.5 GHz
- Measurement distance : 3 m
- Operating Condition : Highest Output Power Transmitting Mode
- Result : PASSED

| Frequency<br>(GHz) | Reading<br>(dB $\mu$ V) | Detector<br>Mode | Ant. Pol.<br>(H/V) | Ant.<br>Factor | Cable<br>Loss | Amp<br>Gain | Total<br>(dB $\mu$ V/m) | Limits<br>(dB $\mu$ V/m) | Margin<br>(dB) |
|--------------------|-------------------------|------------------|--------------------|----------------|---------------|-------------|-------------------------|--------------------------|----------------|
|--------------------|-------------------------|------------------|--------------------|----------------|---------------|-------------|-------------------------|--------------------------|----------------|

**Test Data for Low Channel**

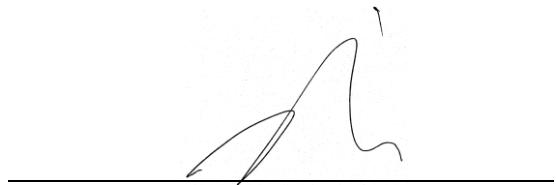
|          |        |         |   |       |      |       |       |        |       |
|----------|--------|---------|---|-------|------|-------|-------|--------|-------|
| 2 402.00 | 98.28  | Peak    | H | 27.20 | 7.50 | 42.80 | 90.18 | 113.98 | 23.8  |
|          | 100.54 | Peak    | V |       |      |       | 92.44 | 113.98 | 21.54 |
| 4 804.00 | 41.08  | Peak    | H | 30.7  | 11.1 | 42.5  | 40.38 | 73.98  | 33.60 |
|          | 39.38  | Average | H |       |      |       | 38.68 | 53.98  | 15.30 |
|          | 45.74  | Peak    | V |       |      |       | 45.04 | 73.98  | 28.94 |
|          | 42.37  | Average | V |       |      |       | 41.67 | 53.98  | 12.31 |

**Test Data for Middle Channel**

|          |        |         |   |       |       |       |       |        |       |
|----------|--------|---------|---|-------|-------|-------|-------|--------|-------|
| 2 441.00 | 98.04  | Peak    | H | 27.30 | 7.60  | 42.90 | 90.04 | 113.98 | 23.94 |
|          | 100.31 | Peak    | V |       |       |       | 92.31 | 113.98 | 21.67 |
| 4 882.00 | 40.03  | Peak    | H | 30.70 | 11.20 | 42.40 | 39.53 | 73.98  | 34.45 |
|          | 37.46  | Average | H |       |       |       | 36.96 | 53.98  | 17.02 |
|          | 44.29  | Peak    | V |       |       |       | 43.79 | 73.98  | 30.19 |
|          | 40.81  | Average | V |       |       |       | 40.31 | 53.98  | 13.67 |

| Test Data for High Channel |        |         |   |       |       |       |       |        |       |
|----------------------------|--------|---------|---|-------|-------|-------|-------|--------|-------|
| 2 480.00                   | 97.51  | Peak    | H | 27.40 | 7.70  | 42.90 | 89.71 | 113.98 | 24.27 |
|                            | 100.00 | Peak    | V |       |       |       | 92.20 | 113.98 | 21.78 |
| 4 960.00                   | 38.01  | Peak    | H | 30.80 | 11.80 | 42.30 | 38.31 | 73.98  | 35.67 |
|                            | 35.85  | Average | H |       |       |       | 36.15 | 53.98  | 17.83 |
|                            | 42.45  | Peak    | V |       |       |       | 42.75 | 73.98  | 31.23 |
|                            | 38.00  | Average | V |       |       |       | 38.30 | 53.98  | 15.68 |
|                            |        |         |   |       |       |       |       |        |       |

Remark: "H": Horizontal, "V": Vertical, "\*" Frequency fall in restricted band



Tested by: Jun-Hui, Lee/ Senior Engineer

**7.5.2.3 Test data for 3 Mbps**

- Test Date : March 28, 2015
- Resolution bandwidth : 1 MHz for Peak and Average Mode for the emissions fall in restricted band,  
100 kHz for Peak Mode for the emissions outside restricted band
- Video bandwidth : 1 MHz for Peak Mode, 10 Hz for Average Mode
- Frequency range : 1 GHz ~ 26.5 GHz
- Measurement distance : 3 m
- Operating Condition : Highest Output Power Transmitting Mode
- Result : PASSED

| Frequency<br>(GHz) | Reading<br>(dB $\mu$ V) | Detector<br>Mode | Ant. Pol.<br>(H/V) | Ant.<br>Factor | Cable<br>Loss | Amp<br>Gain | Total<br>(dB $\mu$ V/m) | Limits<br>(dB $\mu$ V/m) | Margin<br>(dB) |
|--------------------|-------------------------|------------------|--------------------|----------------|---------------|-------------|-------------------------|--------------------------|----------------|
|--------------------|-------------------------|------------------|--------------------|----------------|---------------|-------------|-------------------------|--------------------------|----------------|

**Test Data for Low Channel**

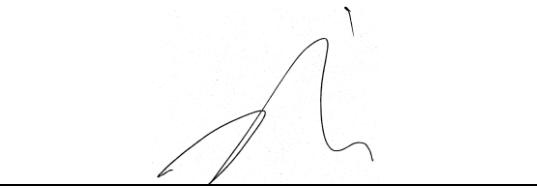
|          |        |         |   |       |       |       |       |        |       |
|----------|--------|---------|---|-------|-------|-------|-------|--------|-------|
| 2 402.00 | 98.86  | Peak    | H | 27.20 | 7.50  | 42.80 | 90.76 | 113.98 | 23.22 |
|          | 101.10 | Peak    | V |       |       |       | 93.00 | 113.98 | 20.98 |
| 4 804.00 | 41.37  | Peak    | H | 30.70 | 11.10 | 42.50 | 40.67 | 73.98  | 33.31 |
|          | 39.19  | Average | H |       |       |       | 38.49 | 53.98  | 15.49 |
|          | 45.86  | Peak    | V |       |       |       | 45.16 | 73.98  | 28.82 |
|          | 40.91  | Average | V |       |       |       | 40.21 | 53.98  | 13.77 |

**Test Data for Middle Channel**

|          |        |         |   |       |       |       |       |        |       |
|----------|--------|---------|---|-------|-------|-------|-------|--------|-------|
| 2 441.00 | 98.51  | Peak    | H | 27.30 | 7.60  | 42.90 | 90.51 | 113.98 | 23.47 |
|          | 100.97 | Peak    | V |       |       |       | 92.97 | 113.98 | 21.01 |
| 4 882.00 | 39.52  | Peak    | H | 30.70 | 11.20 | 42.40 | 39.02 | 73.98  | 34.96 |
|          | 38.20  | Average | H |       |       |       | 37.70 | 53.98  | 16.28 |
|          | 43.78  | Peak    | V |       |       |       | 43.28 | 73.98  | 30.70 |
|          | 39.13  | Average | V |       |       |       | 38.63 | 53.98  | 15.35 |

| Test Data for High Channel |        |         |   |       |       |       |       |        |       |
|----------------------------|--------|---------|---|-------|-------|-------|-------|--------|-------|
| 2 480.00                   | 98.12  | Peak    | H | 27.40 | 7.70  | 42.90 | 90.32 | 113.98 | 23.66 |
|                            | 100.57 | Peak    | V |       |       |       | 92.77 | 113.98 | 21.21 |
| 4 960.00                   | 37.83  | Peak    | H | 30.80 | 11.80 | 42.30 | 38.13 | 73.98  | 35.85 |
|                            | 36.35  | Average | H |       |       |       | 36.65 | 53.98  | 17.33 |
|                            | 41.30  | Peak    | V |       |       |       | 41.60 | 73.98  | 32.38 |
|                            | 36.69  | Average | V |       |       |       | 36.99 | 53.98  | 16.99 |
|                            |        |         |   |       |       |       |       |        |       |

Remark: "H": Horizontal, "V": Vertical, "\*" Frequency fall in restricted band



Tested by: Jun-Hui, Lee/ Senior Engineer

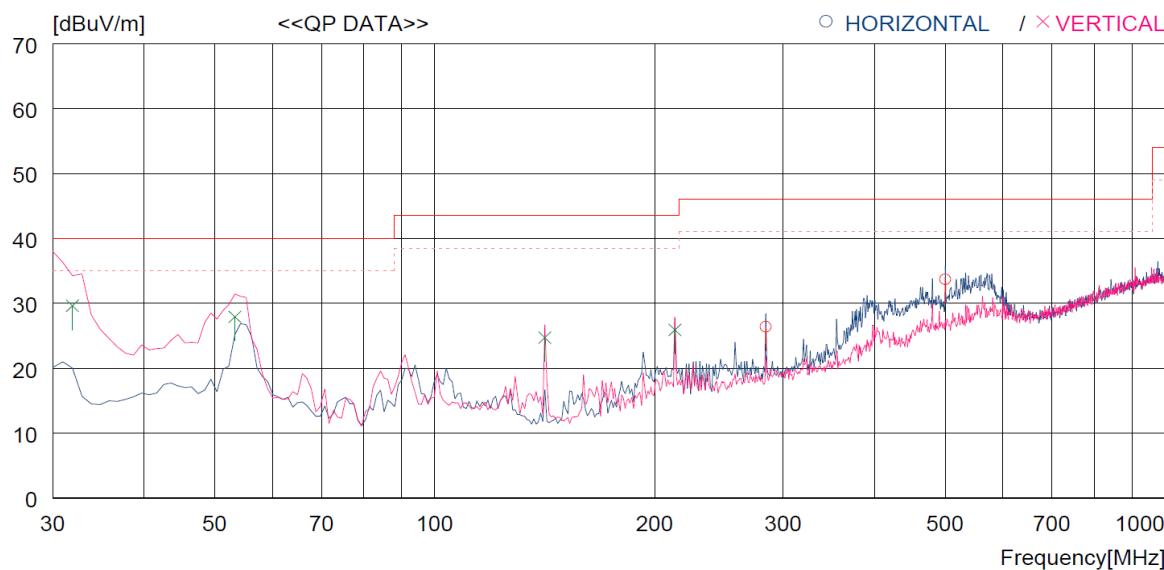
### 7.5.3 Spurious Radiated Emission

#### 7.5.3.1 Test Data for 1 Mbps

##### 7.5.3.1.1 Test Data for 30 MHz ~ 1 000 MHz

Humidity Level : (45 ~ 46) % R.H.      Temperature: (24 ~ 25) °C  
 Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.247  
 Result : PASSED

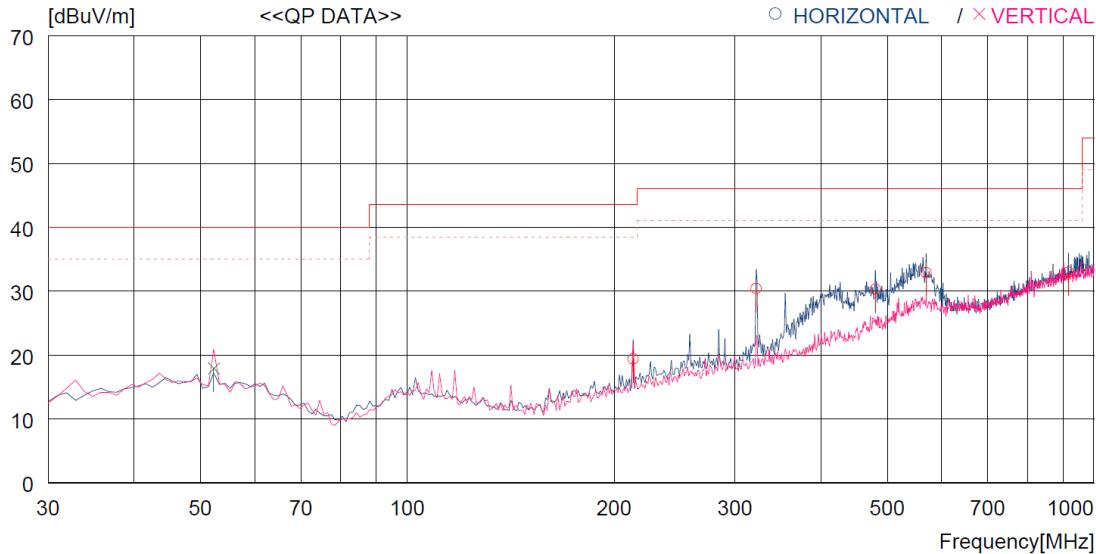
EUT : Premium Enterprise Tablet      Date: March 28, 2015  
 Detector : CISPR Quasi-Peak (6 dB Bandwidth: 120 kHz)  
 Operating condition : Tablet pc Charging Mode



| No.                    | FREQ    | READING | ANT    | LOSS | GAIN | RESULT   | LIMIT    | MARGIN | ANTENNA | TABLE |
|------------------------|---------|---------|--------|------|------|----------|----------|--------|---------|-------|
|                        | [MHz]   | [dBuV]  | FACTOR | [dB] | [dB] | [dBuV/m] | [dBuV/m] | [dB]   | [cm]    | [DEG] |
| ----- Horizontal ----- |         |         |        |      |      |          |          |        |         |       |
| 1                      | 284.140 | 35.6    |        | 14.4 | 9.4  | 33.0     | 26.4     | 46.0   | 19.6    | 100   |
| 2                      | 500.451 | 37.8    |        | 18.4 | 10.6 | 33.1     | 33.7     | 46.0   | 12.3    | 200   |
| ----- Vertical -----   |         |         |        |      |      |          |          |        |         |       |
| 3                      | 31.940  | 42.7    |        | 13.1 | 7.0  | 33.2     | 29.6     | 40.0   | 10.4    | 100   |
| 4                      | 53.280  | 38.9    |        | 14.8 | 7.4  | 33.2     | 27.9     | 40.0   | 12.1    | 100   |
| 5                      | 141.550 | 40.3    |        | 9.2  | 8.3  | 33.1     | 24.7     | 43.5   | 18.8    | 100   |
| 6                      | 213.330 | 37.4    |        | 12.6 | 8.9  | 33.0     | 25.9     | 43.5   | 17.6    | 207   |

Tested by: Jun-Hui, Lee/ Senior Engineer

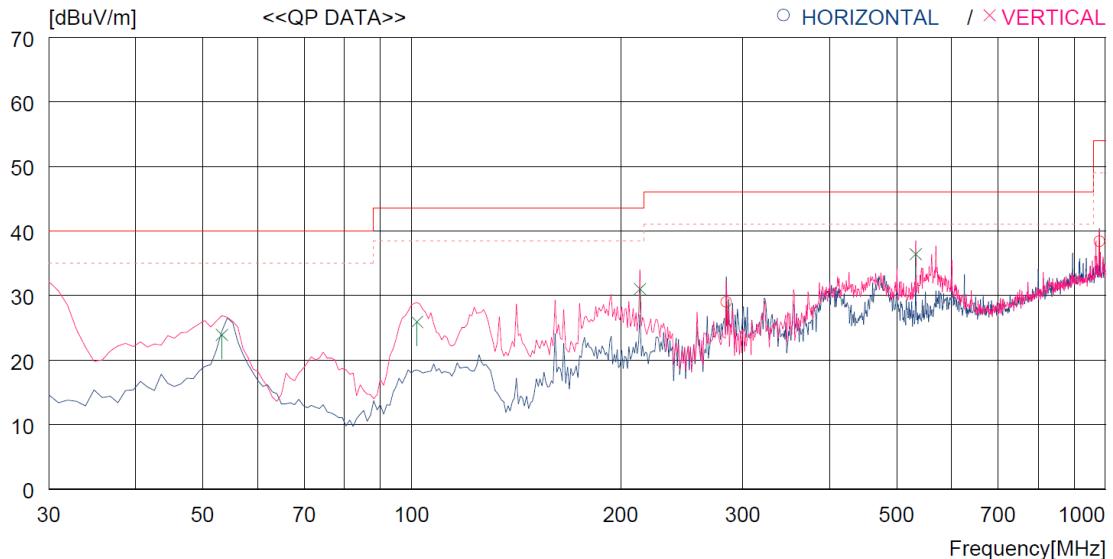
Operating condition : Tablet pc Portable Portable Mode



| No.                    | FREQ [MHz] | READING QP [dBuV] | ANT FACTOR [dB] | LOSS [dB] | GAIN [dB] | RESULT [dBuV/m] | LIMIT [dBuV/m] | MARGIN [cm] | ANTENNA [DEG] | TABLE |
|------------------------|------------|-------------------|-----------------|-----------|-----------|-----------------|----------------|-------------|---------------|-------|
| ----- Horizontal ----- |            |                   |                 |           |           |                 |                |             |               |       |
| 1                      | 213.330    | 30.9              | 12.6            | 8.9       | 33.0      | 19.4            | 43.5           | 24.1        | 100           | 158   |
| 2                      | 321.970    | 38.6              | 15.2            | 9.6       | 33.0      | 30.4            | 46.0           | 15.6        | 100           | 0     |
| 3                      | 480.081    | 34.8              | 18.1            | 10.5      | 33.1      | 30.3            | 46.0           | 15.7        | 200           | 288   |
| 4                      | 569.319    | 35.4              | 19.8            | 10.9      | 33.2      | 32.9            | 46.0           | 13.1        | 200           | 288   |
| 5                      | 917.538    | 29.3              | 23.5            | 12.5      | 32.3      | 33.0            | 46.0           | 13.0        | 100           | 214   |
| ----- Vertical -----   |            |                   |                 |           |           |                 |                |             |               |       |
| 6                      | 52.310     | 28.8              | 14.9            | 7.4       | 33.2      | 17.9            | 40.0           | 22.1        | 100           | 256   |

Tested by: Jun-Hui, Lee/ Senior Engineer

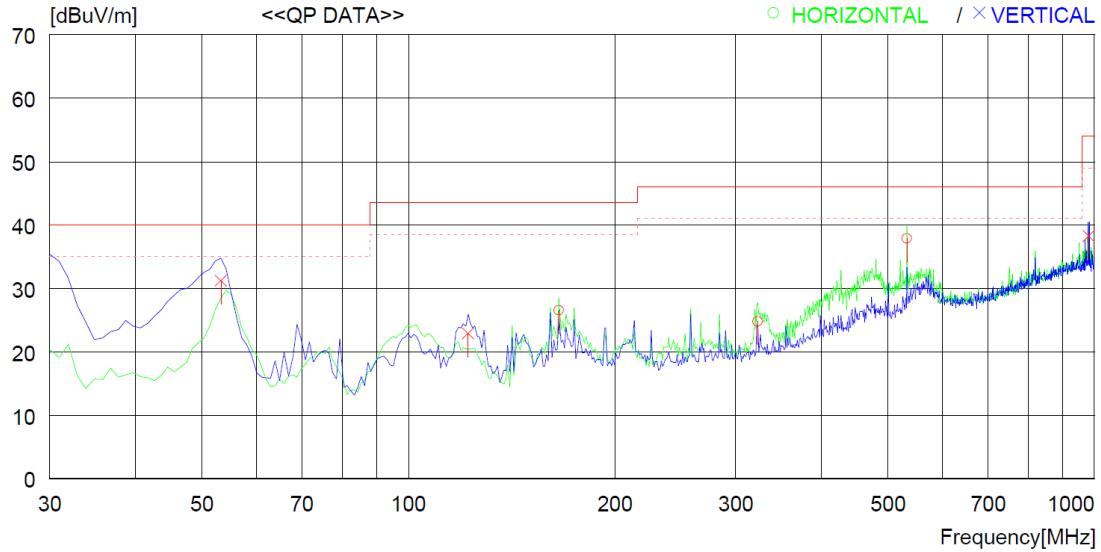
Operating condition : Tablet pc Cradle Charging Mode



| No.                    | FREQ<br>[MHz] | READING<br>QP | ANT<br>FACTOR | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|------------------------|---------------|---------------|---------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| ----- Horizontal ----- |               |               |               |              |              |                    |                   |                |                 |                |
| 1                      | 284.140       | 38.2          | 14.4          | 9.4          | 33.0         | 29.0               | 46.0              | 17.0           | 100             | 242            |
| 2                      | 979.617       | 33.5          | 24.0          | 12.7         | 31.8         | 38.4               | 54.0              | 15.6           | 111             | 0              |
| ----- Vertical -----   |               |               |               |              |              |                    |                   |                |                 |                |
| 3                      | 53.280        | 34.9          | 14.8          | 7.4          | 33.2         | 23.9               | 40.0              | 16.1           | 111             | 359            |
| 4                      | 101.780       | 37.5          | 13.5          | 8.0          | 33.1         | 25.9               | 43.5              | 17.6           | 111             | 359            |
| 5                      | 213.330       | 42.5          | 12.6          | 8.9          | 33.0         | 31.0               | 43.5              | 12.5           | 111             | 359            |
| 6                      | 532.460       | 39.7          | 19.1          | 10.8         | 33.2         | 36.4               | 46.0              | 9.6            | 100             | 89             |

Tested by: Jun-Hui, Lee/ Senior Engineer

Operating condition : Tablet pc IC Card Reader Charging Mode

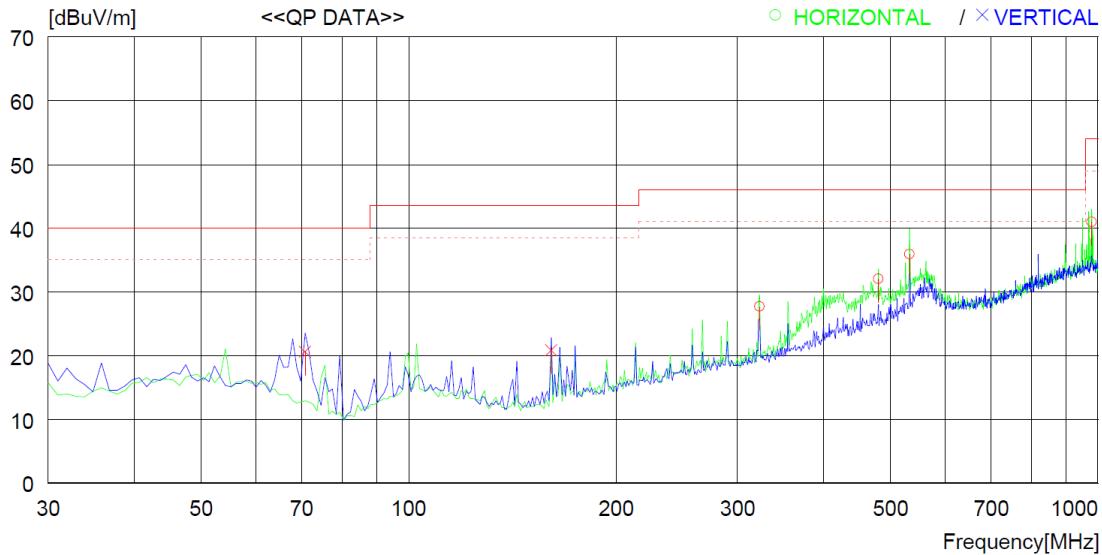


| No.                    | FREQ<br>QP | READING<br>[MHz] | ANT<br>FACTOR | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|------------------------|------------|------------------|---------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| ----- Horizontal ----- |            |                  |               |              |              |                    |                   |                |                 |                |
| 1                      | 165.800    | 41.5             | 8.9           | 9.1          | 33.0         | 26.5               | 43.5              | 17.0           | 200             | 359            |
| 2                      | 322.940    | 32.8             | 14.1          | 10.8         | 32.9         | 24.8               | 46.0              | 21.2           | 100             | 230            |
| 3                      | 532.460    | 40.4             | 17.9          | 12.7         | 33.2         | 37.8               | 46.0              | 8.2            | 200             | 359            |
| ----- Vertical -----   |            |                  |               |              |              |                    |                   |                |                 |                |
| 4                      | 53.280     | 43.3             | 13.6          | 7.3          | 33.0         | 31.2               | 40.0              | 8.8            | 100             | 359            |
| 5                      | 122.150    | 37.3             | 10.0          | 8.7          | 33.1         | 22.9               | 43.5              | 20.6           | 100             | 359            |
| 6                      | 979.617    | 31.8             | 22.6          | 15.6         | 31.8         | 38.2               | 54.0              | 15.8           | 100             | 180            |



Tested by: Jun-Hui, Lee/ Senior Engineer

Operating condition : Tablet pc IC Card Reader Portable Mode

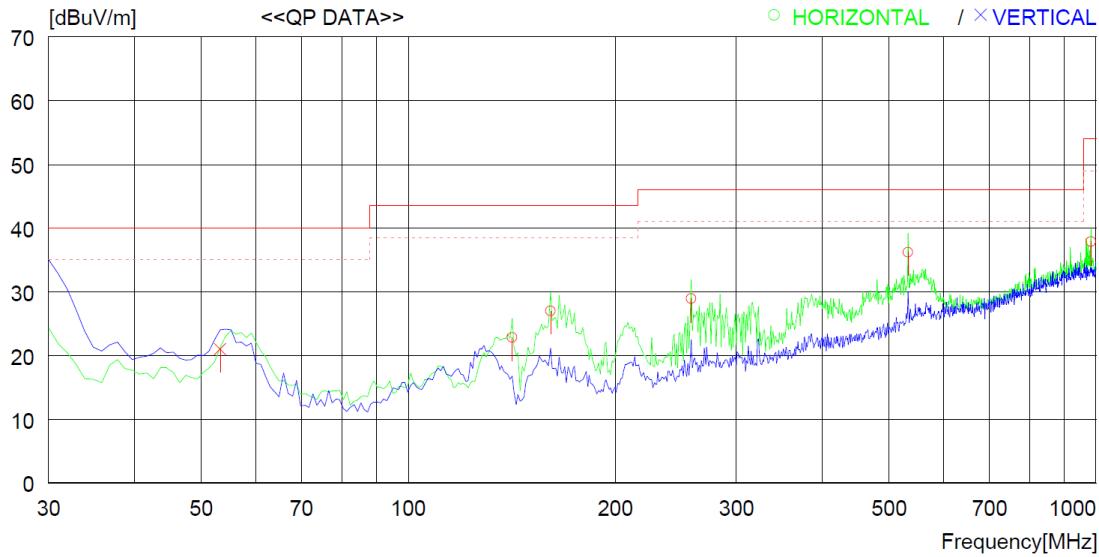


| No.                           | FREQ<br>[MHz] | READING<br>QP<br>[dBuV] | ANT<br>FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>TABLE<br>[cm]<br>[DEG] |
|-------------------------------|---------------|-------------------------|-----------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------------------------|
| <b>----- Horizontal -----</b> |               |                         |                       |              |              |                    |                   |                |                                   |
| 1                             | 322.940       | 35.7                    | 14.1                  | 10.8         | 32.9         | 27.7               | 46.0              | 18.3           | 100 165                           |
| 2                             | 480.081       | 36.1                    | 17.0                  | 12.1         | 33.2         | 32.0               | 46.0              | 14.0           | 200 359                           |
| 3                             | 532.460       | 38.5                    | 17.9                  | 12.7         | 33.2         | 35.9               | 46.0              | 10.1           | 200 201                           |
| 4                             | 979.617       | 34.5                    | 22.6                  | 15.6         | 31.8         | 40.9               | 54.0              | 13.1           | 100 208                           |
| <b>----- Vertical -----</b>   |               |                         |                       |              |              |                    |                   |                |                                   |
| 5                             | 70.740        | 36.3                    | 9.6                   | 7.7          | 33.0         | 20.6               | 40.0              | 19.4           | 100 359                           |
| 6                             | 160.950       | 36.1                    | 8.7                   | 9.0          | 33.0         | 20.8               | 43.5              | 22.7           | 100 174                           |



Tested by: Jun-Hui, Lee/ Senior Engineer

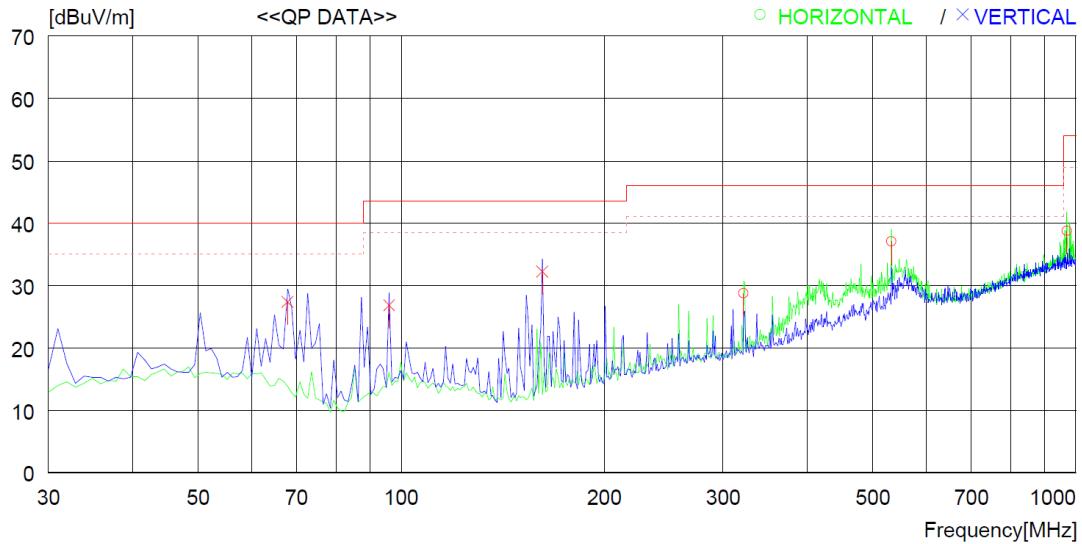
Operating condition : Tablet pc Barcord Reader Charging Mode



| No.                    | FREQ<br>[MHz] | READING<br>QP<br>[dBuV] | ANT<br>FACTOR | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|------------------------|---------------|-------------------------|---------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| ----- Horizontal ----- |               |                         |               |              |              |                    |                   |                |                 |                |
| 1                      | 141.550       | 38.9                    | 8.1           | 8.8          | 33.0         | 22.8               | 43.5              | 20.7           | 300             | 336            |
| 2                      | 160.950       | 42.3                    | 8.7           | 9.0          | 33.0         | 27.0               | 43.5              | 16.5           | 200             | 0              |
| 3                      | 257.950       | 38.9                    | 12.6          | 10.3         | 32.9         | 28.9               | 46.0              | 17.1           | 100             | 359            |
| 4                      | 532.460       | 38.8                    | 17.9          | 12.7         | 33.2         | 36.2               | 46.0              | 9.8            | 200             | 95             |
| 5                      | 982.526       | 31.3                    | 22.6          | 15.6         | 31.7         | 37.8               | 54.0              | 16.2           | 100             | 215            |
| ----- Vertical -----   |               |                         |               |              |              |                    |                   |                |                 |                |
| 6                      | 53.280        | 33.1                    | 13.6          | 7.3          | 33.0         | 21.0               | 40.0              | 19.0           | 400             | 46             |

Tested by: Jun-Hui, Lee/ Senior Engineer

Operating condition : Tablet pc Barcord Reader Portable Mode



| No.                  | FREQ<br>[MHz] | READING<br>QP | ANT<br>FACTOR | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|----------------------|---------------|---------------|---------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| <hr/>                |               |               |               |              |              |                    |                   |                |                 |                |
| 1                    | 321.970       | 36.7          | 14.1          | 10.8         | 32.9         | 28.7               | 46.0              | 17.3           | 100             | 181            |
| 2                    | 532.460       | 39.6          | 17.9          | 12.7         | 33.2         | 37.0               | 46.0              | 9.0            | 200             | 0              |
| 3                    | 970.887       | 32.4          | 22.6          | 15.5         | 31.8         | 38.7               | 54.0              | 15.3           | 100             | 359            |
| <hr/>                |               |               |               |              |              |                    |                   |                |                 |                |
| ----- Vertical ----- |               |               |               |              |              |                    |                   |                |                 |                |
| 4                    | 67.830        | 42.3          | 10.5          | 7.6          | 33.0         | 27.4               | 40.0              | 12.6           | 300             | 0              |
| 5                    | 95.960        | 40.6          | 11.2          | 8.1          | 33.1         | 26.8               | 43.5              | 16.7           | 300             | 0              |
| 6                    | 161.920       | 47.5          | 8.7           | 9.0          | 33.0         | 32.2               | 43.5              | 11.3           | 300             | 0              |

Tested by: Jun-Hui, Lee/ Senior Engineer

**7.5.3.1.2 Test Data for Below 30 MHz**

- Test Date : March 28, 2015
- Resolution bandwidth : 200 Hz (from 9 kHz to 0.15 MHz), 9 kHz (from 0.15 MHz to 30 MHz)
- Frequency range : 9 kHz ~ 30 MHz
- Measurement distance : 3 m
- Operating Condition : Highest Output Power Transmitting Mode
- Result : PASSED

| Frequency<br>(MHz)                              | Reading<br>(dB $\mu$ V) | Ant. Pol.<br>(H/V) | Ant. Factor<br>(dB/m) | Cable<br>Loss | Amp<br>Gain | Emission<br>Level(dB $\mu$ V/m) | Limits<br>(dB $\mu$ V/m) | Margin<br>(dB) |
|---|-------------------------|--------------------|-----------------------|---------------|-------------|---------------------------------|--------------------------|----------------|
| It was not observed any emissions from the EUT. |                         |                    |                       |               |             |                                 |                          |                |

**Tested by: Jun-Hui, Lee/ Senior Engineer**

### 7.5.3.3 Test Data for 3 Mbps

#### 7.5.3.3.1 Test Data for 30 MHz ~ 1 000 MHz

Humidity Level : (45 ~ 46) % R.H. Temperature: (24 ~ 25) °C

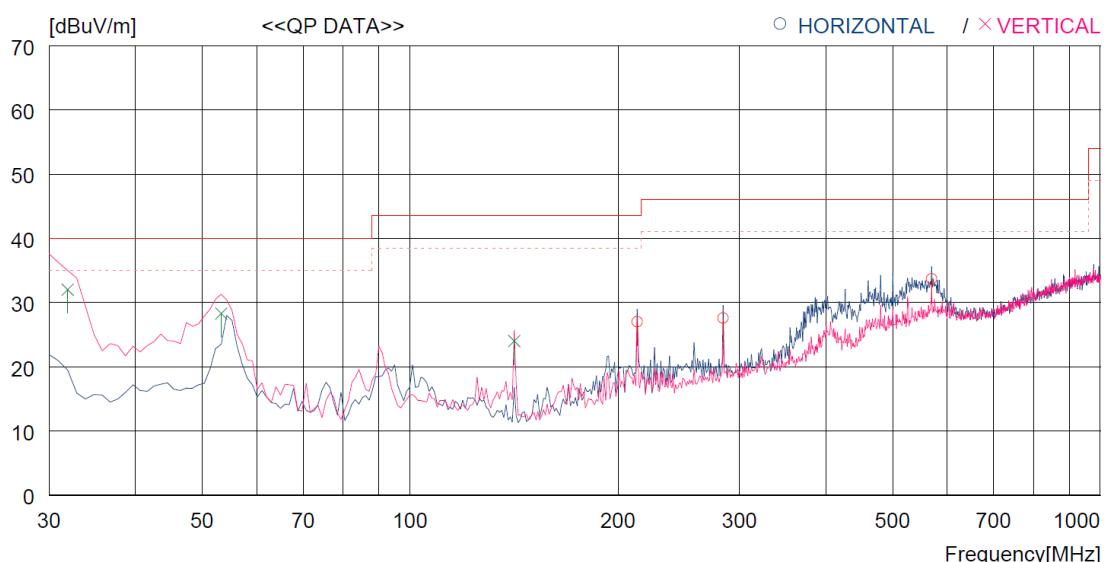
Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.247

Result : PASSED

EUT : Premium Enterprise Tablet Date: March 28, 2015

Detector : CISPR Quasi-Peak (6 dB Bandwidth: 120 kHz)

Operating condition : Tablet pc Charging Mode

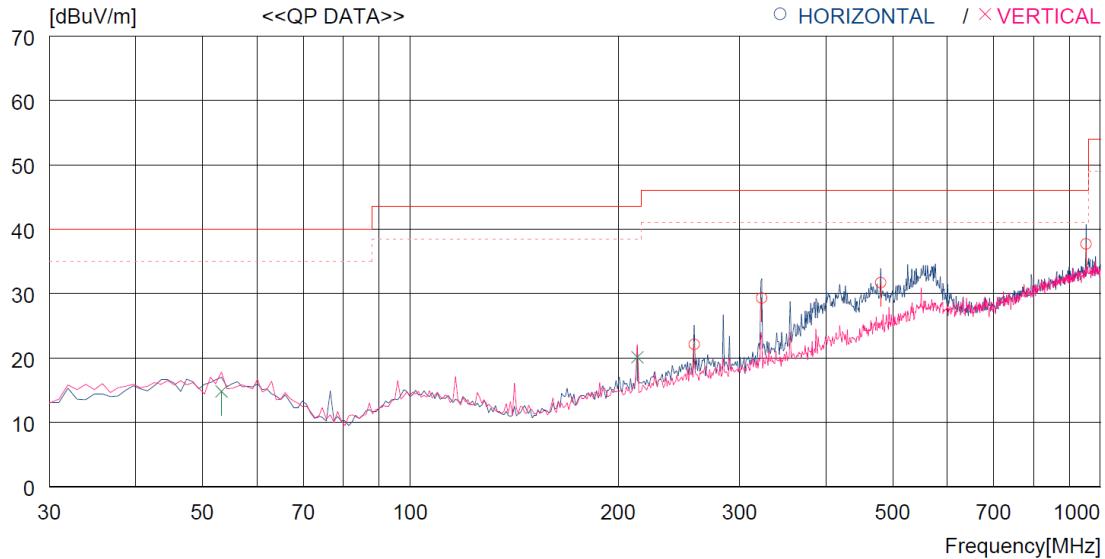


| No.                    | FREQ [MHz] | READING QP [dBuV] | ANT FACTOR [dB] | LOSS [dB] | GAIN [dB] | RESULT [dBuV/m] | LIMIT [dBuV/m] | MARGIN [dB] | ANTENNA [cm] | TABLE [DEG] |
|------------------------|------------|-------------------|-----------------|-----------|-----------|-----------------|----------------|-------------|--------------|-------------|
| ----- Horizontal ----- |            |                   |                 |           |           |                 |                |             |              |             |
| 1                      | 213.330    | 38.5              | 12.6            | 8.9       | 33.0      | 27.0            | 43.5           | 16.5        | 200          | 256         |
| 2                      | 284.140    | 36.8              | 14.4            | 9.4       | 33.0      | 27.6            | 46.0           | 18.4        | 100          | 359         |
| 3                      | 569.319    | 36.2              | 19.8            | 10.9      | 33.2      | 33.7            | 46.0           | 12.3        | 100          | 359         |
| ----- Vertical -----   |            |                   |                 |           |           |                 |                |             |              |             |
| 4                      | 31.940     | 45.1              | 13.1            | 7.0       | 33.2      | 32.0            | 40.0           | 8.0         | 100          | 179         |
| 5                      | 53.280     | 39.3              | 14.8            | 7.4       | 33.2      | 28.3            | 40.0           | 11.7        | 100          | 0           |
| 6                      | 141.550    | 39.6              | 9.2             | 8.3       | 33.1      | 24.0            | 43.5           | 19.5        | 100          | 229         |



Tested by: Jun-Hui, Lee/ Senior Engineer

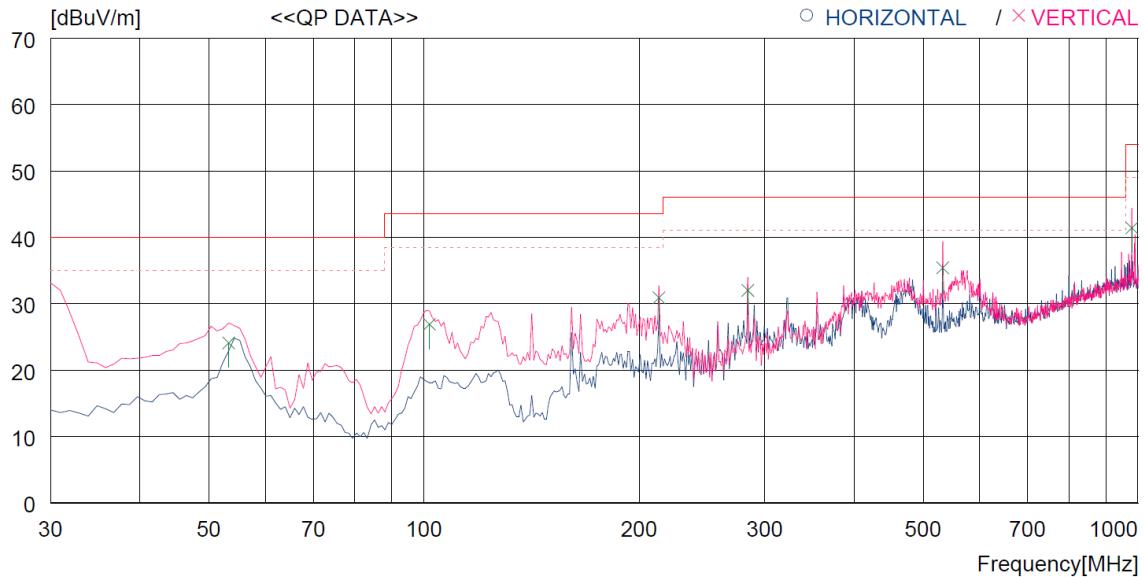
Operating condition : Tablet pc Portable Portable Mode



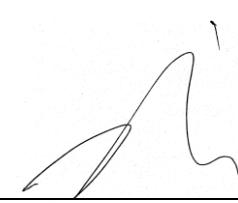
| No.                    | FREQ<br>[MHz] | READING<br>QP | ANT<br>FACTOR | LOSS | GAIN | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN | ANTENNA TABLE |      |
|------------------------|---------------|---------------|---------------|------|------|--------------------|-------------------|--------|---------------|------|
|                        |               |               |               |      |      |                    |                   |        | [dB]          | [cm] |
| ----- Horizontal ----- |               |               |               |      |      |                    |                   |        |               |      |
| 1                      | 257.950       | 32.2          | 13.7          | 9.2  | 33.0 | 22.1               | 46.0              | 23.9   | 100           | 180  |
| 2                      | 322.940       | 37.4          | 15.3          | 9.6  | 33.0 | 29.3               | 46.0              | 16.7   | 100           | 207  |
| 3                      | 480.081       | 36.2          | 18.1          | 10.5 | 33.1 | 31.7               | 46.0              | 14.3   | 200           | 153  |
| 4                      | 952.457       | 33.3          | 23.8          | 12.6 | 32.0 | 37.7               | 46.0              | 8.3    | 100           | 235  |
| ----- Vertical -----   |               |               |               |      |      |                    |                   |        |               |      |
| 5                      | 53.280        | 25.8          | 14.8          | 7.4  | 33.2 | 14.8               | 40.0              | 25.2   | 100           | 74   |
| 6                      | 213.330       | 31.6          | 12.6          | 8.9  | 33.0 | 20.1               | 43.5              | 23.4   | 100           | 0    |

Tested by: Jun-Hui, Lee/ Senior Engineer

Operating condition : Tablet pc Cradle Charging Mode

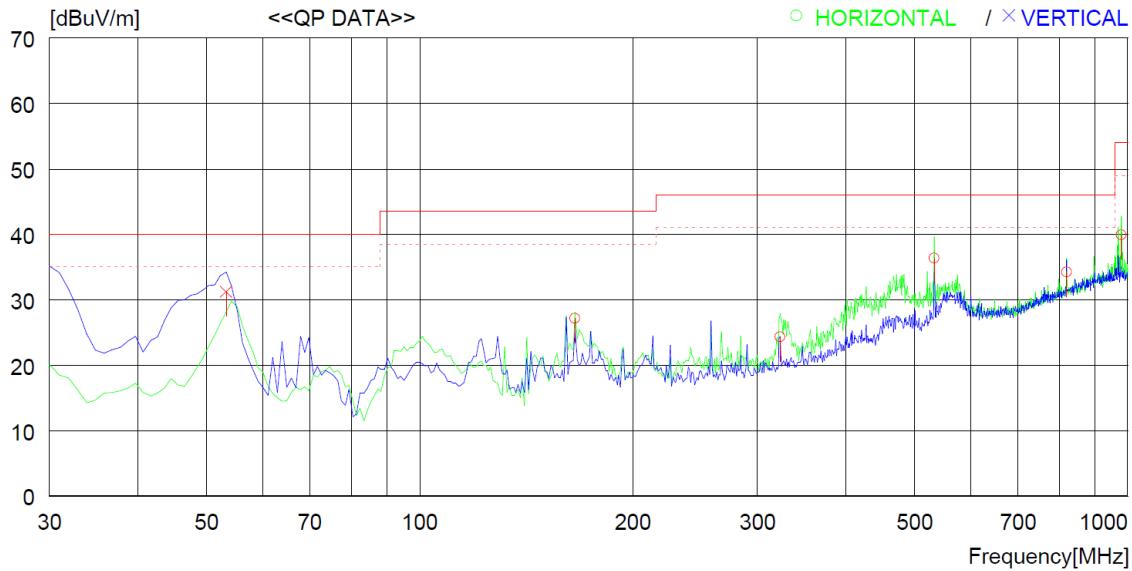


| No.                  | FREQ QP | READING | ANT  | LOSS | GAIN | RESULT   | LIMIT    | MARGIN | ANTENNA | TABLE |
|----------------------|---------|---------|------|------|------|----------|----------|--------|---------|-------|
|                      | [MHz]   | [dBuV]  | [dB] | [dB] | [dB] | [dBuV/m] | [dBuV/m] | [dB]   | [cm]    | [DEG] |
| ----- Vertical ----- |         |         |      |      |      |          |          |        |         |       |
| 1                    | 53.280  | 35.1    | 14.8 | 7.4  | 33.2 | 24.1     | 40.0     | 15.9   | 126     | 0     |
| 2                    | 101.780 | 38.5    | 13.5 | 8.0  | 33.1 | 26.9     | 43.5     | 16.6   | 100     | 96    |
| 3                    | 213.330 | 42.4    | 12.6 | 8.9  | 33.0 | 30.9     | 43.5     | 12.6   | 126     | 0     |
| 4                    | 284.140 | 41.2    | 14.4 | 9.4  | 33.0 | 32.0     | 46.0     | 14.0   | 126     | 0     |
| 5                    | 532.460 | 38.7    | 19.1 | 10.8 | 33.2 | 35.4     | 46.0     | 10.6   | 100     | 75    |
| 6                    | 979.617 | 36.5    | 24.0 | 12.7 | 31.8 | 41.4     | 54.0     | 12.6   | 126     | 0     |



Tested by: Jun-Hui, Lee/ Senior Engineer

Operating condition : Tablet pc IC Card Reader Charging Mode

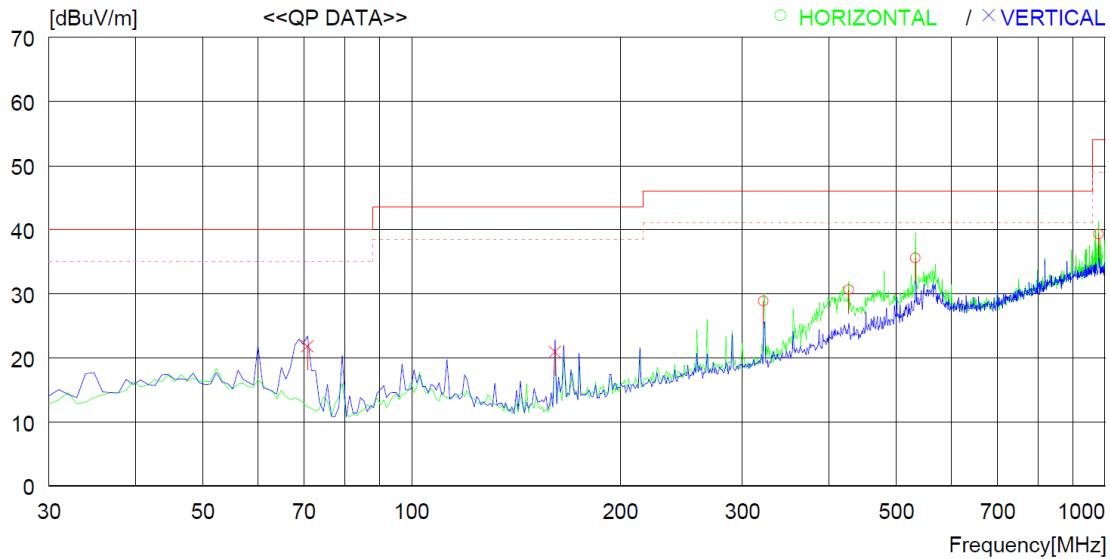


| No.                    | FREQ [MHz] | READING QP [dB <sub>UV</sub> ] | ANT FACTOR [dB] | LOSS [dB] | GAIN [dB] | RESULT [dB <sub>UV</sub> /m] | LIMIT [dB <sub>UV</sub> /m] | MARGIN [dB] | ANTENNA [cm] | TABLE [DEG] |
|------------------------|------------|--------------------------------|-----------------|-----------|-----------|------------------------------|-----------------------------|-------------|--------------|-------------|
| ----- Horizontal ----- |            |                                |                 |           |           |                              |                             |             |              |             |
| 1                      | 165.800    | 42.1                           | 8.9             | 9.1       | 33.0      | 27.1                         | 43.5                        | 16.4        | 200          | 153         |
| 2                      | 322.940    | 32.3                           | 14.1            | 10.8      | 32.9      | 24.3                         | 46.0                        | 21.7        | 100          | 144         |
| 3                      | 532.460    | 38.9                           | 17.9            | 12.7      | 33.2      | 36.3                         | 46.0                        | 9.7         | 200          | 359         |
| 4                      | 819.571    | 31.2                           | 21.1            | 14.8      | 32.9      | 34.2                         | 46.0                        | 11.8        | 100          | 348         |
| 5                      | 979.617    | 33.5                           | 22.6            | 15.6      | 31.8      | 39.9                         | 54.0                        | 14.1        | 100          | 208         |
| ----- Vertical -----   |            |                                |                 |           |           |                              |                             |             |              |             |
| 6                      | 53.280     | 43.3                           | 13.6            | 7.3       | 33.0      | 31.2                         | 40.0                        | 8.8         | 100          | 187         |

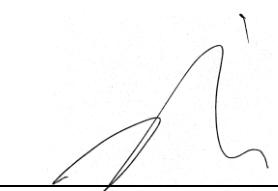


Tested by: Jun-Hui, Lee/ Senior Engineer

Operating condition : Tablet pc IC Card Reader Portable Mode

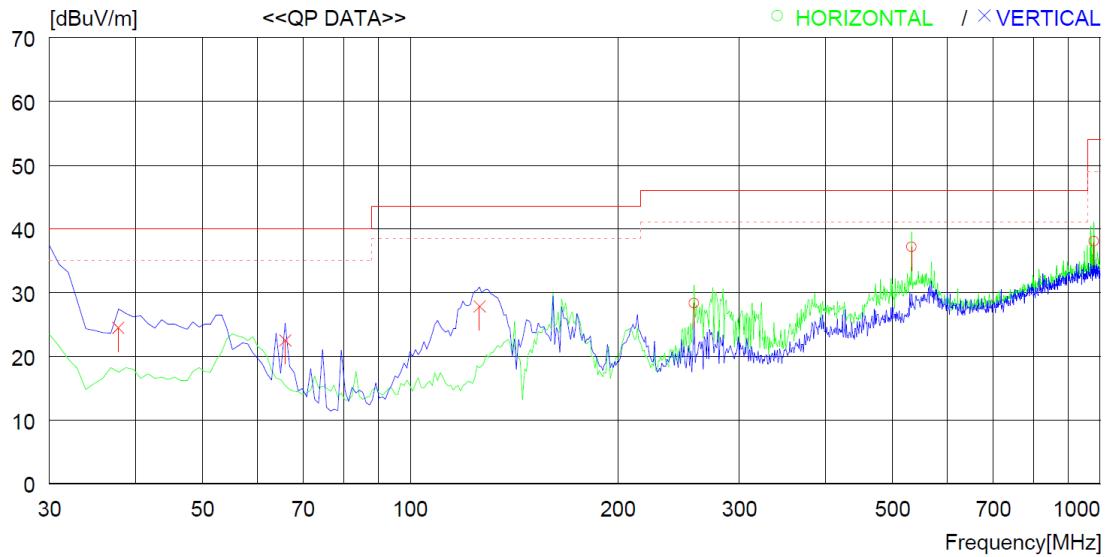


| No.                    | FREQ<br>[MHz] | READING<br>QP<br>[dBuV] | ANT<br>FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>TABLE<br>[cm] | TABLE<br>[DEG] |
|------------------------|---------------|-------------------------|-----------------------|--------------|--------------|--------------------|-------------------|----------------|--------------------------|----------------|
| ----- Horizontal ----- |               |                         |                       |              |              |                    |                   |                |                          |                |
| 1                      | 321.970       | 36.8                    | 14.1                  | 10.8         | 32.9         | 28.8               | 46.0              | 17.2           | 100                      | 208            |
| 2                      | 426.731       | 35.7                    | 16.3                  | 11.7         | 33.1         | 30.6               | 46.0              | 15.4           | 100                      | 13             |
| 3                      | 532.460       | 38.1                    | 17.9                  | 12.7         | 33.2         | 35.5               | 46.0              | 10.5           | 200                      | 359            |
| 4                      | 979.617       | 32.9                    | 22.6                  | 15.6         | 31.8         | 39.3               | 54.0              | 14.7           | 100                      | 166            |
| ----- Vertical -----   |               |                         |                       |              |              |                    |                   |                |                          |                |
| 5                      | 70.740        | 37.5                    | 9.6                   | 7.7          | 33.0         | 21.8               | 40.0              | 18.2           | 100                      | 359            |
| 6                      | 160.950       | 36.2                    | 8.7                   | 9.0          | 33.0         | 20.9               | 43.5              | 22.6           | 100                      | 359            |



Tested by: Jun-Hui, Lee/ Senior Engineer

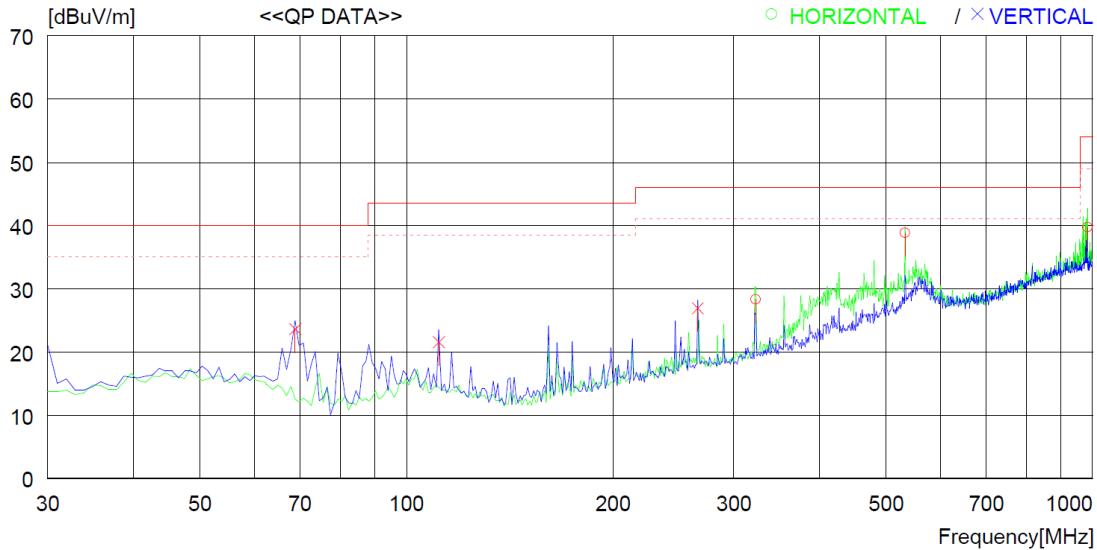
Operating condition : Tablet pc Barcord Reader Charging Mode



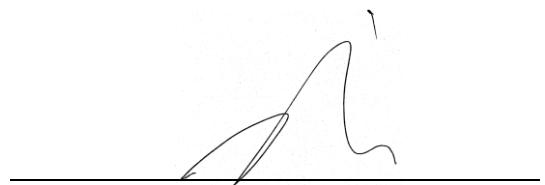
| No.                           | FREQ<br>[MHz] | READING<br>QP<br>[dBuV] | ANT<br>FACTOR | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|-------------------------------|---------------|-------------------------|---------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| <b>----- Horizontal -----</b> |               |                         |               |              |              |                    |                   |                |                 |                |
| 1                             | 257.950       | 38.3                    | 12.6          | 10.3         | 32.9         | 28.3               | 46.0              | 17.7           | 100             | 194            |
| 2                             | 532.460       | 39.7                    | 17.9          | 12.7         | 33.2         | 37.1               | 46.0              | 8.9            | 200             | 116            |
| 3                             | 979.617       | 31.6                    | 22.6          | 15.6         | 31.8         | 38.0               | 54.0              | 16.0           | 100             | 359            |
| <b>----- Vertical -----</b>   |               |                         |               |              |              |                    |                   |                |                 |                |
| 4                             | 37.760        | 37.6                    | 12.7          | 7.1          | 33.0         | 24.4               | 40.0              | 15.6           | 200             | 0              |
| 5                             | 65.890        | 36.8                    | 11.2          | 7.5          | 33.0         | 22.5               | 40.0              | 17.5           | 100             | 348            |
| 6                             | 126.030       | 42.5                    | 9.6           | 8.7          | 33.0         | 27.8               | 43.5              | 15.7           | 100             | 95             |

Tested by: Jun-Hui, Lee/ Senior Engineer

Operating condition : Tablet pc Barcord Reader Portable Mode



| No.                    | FREQ<br>[MHz] | READING<br>QP<br>[dBuV] | ANT<br>FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|------------------------|---------------|-------------------------|-----------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| <hr/>                  |               |                         |                       |              |              |                    |                   |                |                 |                |
| ----- Horizontal ----- |               |                         |                       |              |              |                    |                   |                |                 |                |
| 1                      | 322.940       | 36.3                    | 14.1                  | 10.8         | 32.9         | 28.3               | 46.0              | 17.7           | 100             | 359            |
| 2                      | 532.460       | 41.4                    | 17.9                  | 12.7         | 33.2         | 38.8               | 46.0              | 7.2            | 200             | 208            |
| 3                      | 982.526       | 33.2                    | 22.6                  | 15.6         | 31.7         | 39.7               | 54.0              | 14.3           | 100             | 250            |
| <hr/>                  |               |                         |                       |              |              |                    |                   |                |                 |                |
| ----- Vertical -----   |               |                         |                       |              |              |                    |                   |                |                 |                |
| 4                      | 68.800        | 38.7                    | 10.2                  | 7.7          | 33.0         | 23.6               | 40.0              | 16.4           | 100             | 115            |
| 5                      | 111.480       | 35.2                    | 11.0                  | 8.4          | 33.1         | 21.5               | 43.5              | 22.0           | 100             | 0              |
| 6                      | 265.710       | 36.7                    | 12.8                  | 10.3         | 32.9         | 26.9               | 46.0              | 19.1           | 100             | 271            |



Tested by: Jun-Hui, Lee/ Senior Engineer

**7.5.3.3.2 Test Data for Below 30 MHz**

- Test Date : March 28, 2015
- Resolution bandwidth : 200 Hz (from 9 kHz to 0.15 MHz), 9 kHz (from 0.15 MHz to 30 MHz)
- Frequency range : 9 kHz ~ 30 MHz
- Measurement distance : 3 m
- Operating Condition : Highest Output Power Transmitting Mode
- Result : PASSED

| Frequency<br>(MHz)                              | Reading<br>(dB $\mu$ V) | Ant. Pol.<br>(H/V) | Ant. Factor<br>(dB/m) | Cable<br>Loss | Amp<br>Gain | Emission<br>Level(dB $\mu$ V/m) | Limits<br>(dB $\mu$ V/m) | Margin<br>(dB) |
|---|-------------------------|--------------------|-----------------------|---------------|-------------|---------------------------------|--------------------------|----------------|
| It was not observed any emissions from the EUT. |                         |                    |                       |               |             |                                 |                          |                |

**Tested by: Jun-Hui, Lee/ Senior Engineer**

## 8. CONDUCTED EMISSION TEST

### 8.1 Operating environment

Temperature : (24 ~ 25) °C  
Relative humidity : (45 ~ 46) % R.H.

### 8.2 Test set-up

The EUT was placed on a wooden table, 0.8 m height above the floor. Power was fed to the EUT through a  $50 \Omega / 50 \mu\text{H} + 5 \Omega$  Artificial Mains Network (AMN). The ground plane was electrically bonded to the reference ground system and all power lines were filtered from ambient.

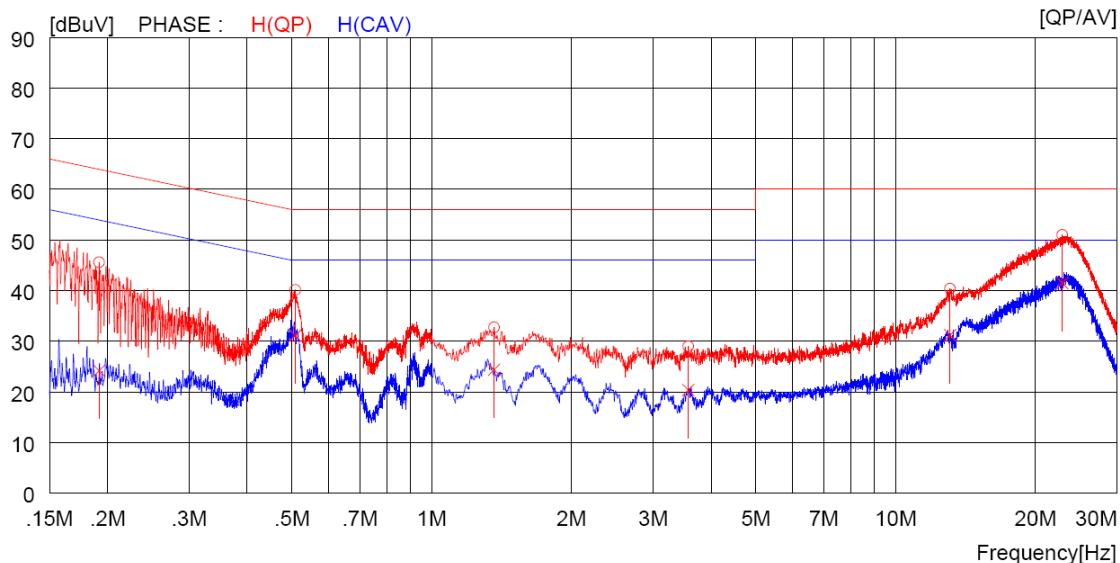
### 8.3 Test equipment used

| Model Number  | Manufacturer    | Description       | Serial Number | Last Cal.          |
|---------------|-----------------|-------------------|---------------|--------------------|
| ■ - ESCI      | Rohde & Schwarz | EMI Test Receiver | 101012        | Nov. 03, 2014 (1Y) |
| ■ - NSLK 8128 | Schwarzbeck     | LISN              | 8128-216      | Apr. 11, 2014 (1Y) |
| □ - 3825/2    | EMCO            | LISN              | 9109-1867     | Apr. 29, 2014 (1Y) |

All test equipment used is calibrated on a regular basis.

#### 8.4 Test data for Charging & Transmitting Mode\_1 Mbps

- Test Date : March 28, 2015
- Resolution bandwidth : 9 kHz
- Frequency range : 0.15 MHz ~ 30 MHz
- Operating condition : Tablet pc Charging Mode
- Tested Line : HOT LINE



| NO | FREQ<br>[MHz] | READING      |              | C.FACTOR<br>[dB] | RESULT       |              | LIMIT        |              | MARGIN       |              | PHASE   |
|----|---------------|--------------|--------------|------------------|--------------|--------------|--------------|--------------|--------------|--------------|---------|
|    |               | QP<br>[dBuV] | AV<br>[dBuV] |                  | QP<br>[dBuV] | AV<br>[dBuV] | QP<br>[dBuV] | AV<br>[dBuV] | QP<br>[dBuV] | AV<br>[dBuV] |         |
| 1  | 0.19200       | 35.7         | ----         | 9.9              | 45.6         | ----         | 63.9         | ----         | 18.3         | ----         | H (QP)  |
| 2  | 0.50800       | 30.1         | ----         | 10.0             | 40.1         | ----         | 56.0         | ----         | 15.9         | ----         | H (QP)  |
| 3  | 1.36400       | 22.7         | ----         | 10.0             | 32.7         | ----         | 56.0         | ----         | 23.3         | ----         | H (QP)  |
| 4  | 3.57600       | 19.0         | ----         | 10.0             | 29.0         | ----         | 56.0         | ----         | 27.0         | ----         | H (QP)  |
| 5  | 13.11000      | 30.2         | ----         | 10.2             | 40.4         | ----         | 60.0         | ----         | 19.6         | ----         | H (QP)  |
| 6  | 22.88000      | 40.8         | ----         | 10.2             | 51.0         | ----         | 60.0         | ----         | 9.0          | ----         | H (QP)  |
| 7  | 0.19200       | 14.3         | 9.9          | ----             | 24.2         | ----         | 53.9         | ----         | 29.7         | ----         | H (CAV) |
| 8  | 0.50800       | 21.1         | 10.0         | ----             | 31.1         | ----         | 46.0         | ----         | 14.9         | ----         | H (CAV) |
| 9  | 1.36400       | 14.4         | 10.0         | ----             | 24.4         | ----         | 46.0         | ----         | 21.6         | ----         | H (CAV) |
| 10 | 3.57600       | 10.4         | 10.0         | ----             | 20.4         | ----         | 46.0         | ----         | 25.6         | ----         | H (CAV) |
| 11 | 13.11000      | 21.0         | 10.2         | ----             | 31.2         | ----         | 50.0         | ----         | 18.8         | ----         | H (CAV) |
| 12 | 22.88000      | 31.3         | 10.2         | ----             | 41.5         | ----         | 50.0         | ----         | 8.5          | ----         | H (CAV) |

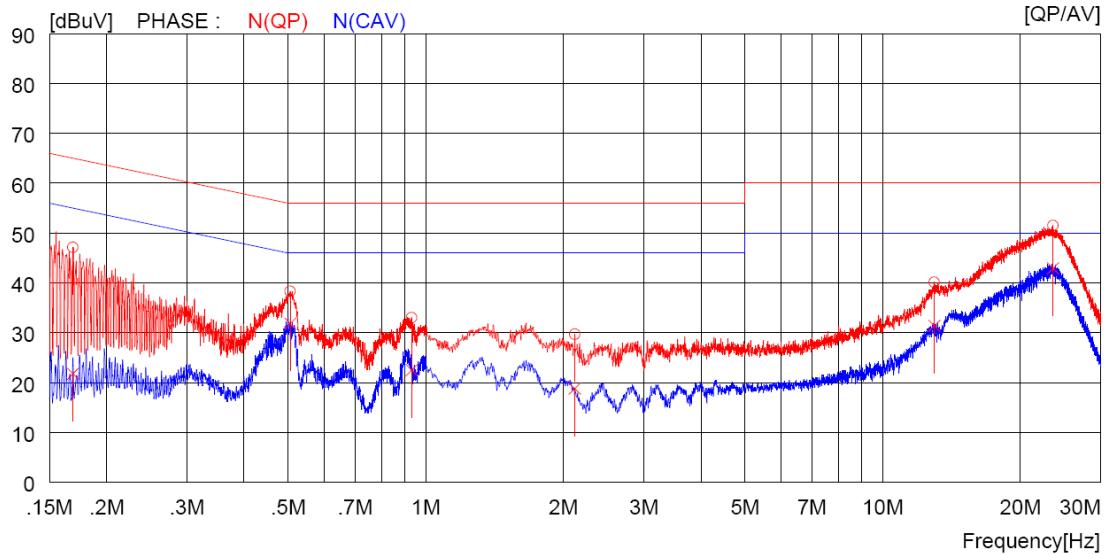
It should not be reproduced except in full, without the written approval of ONETECH Corp.

EMC-002 (Rev.3)

**HEAD OFFICE** : #505 SK APT. Factory 223-28, Sangdaewon 1 Dong, Jungwon-Gu, Seongnam-City, Gyeonggi-Do, 462-121, Korea  
 (TEL: +82-31-746-8500 FAX: +82-31-746-8700)

**EMC Testing Div** : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

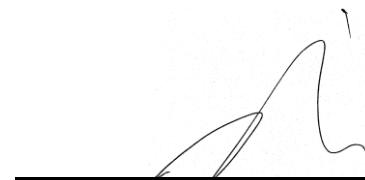
- Tested Line : NEUTRAL LINE



| NO | FREQ<br>[MHz] | READING      |              | C.FACTOR<br>[dB] | RESULT       |              | LIMIT        |              | MARGIN       |              | PHASE   |
|----|---------------|--------------|--------------|------------------|--------------|--------------|--------------|--------------|--------------|--------------|---------|
|    |               | QP<br>[dBuV] | AV<br>[dBuV] |                  | QP<br>[dBuV] | AV<br>[dBuV] | QP<br>[dBuV] | AV<br>[dBuV] | QP<br>[dBuV] | AV<br>[dBuV] |         |
| 1  | 0.16900       | 37.2         | ----         | 9.9              | 47.1         | ----         | 65.0         | ----         | 17.9         | ----         | N (QP)  |
| 2  | 0.50500       | 28.3         | ----         | 10.0             | 38.3         | ----         | 56.0         | ----         | 17.7         | ----         | N (QP)  |
| 3  | 0.93100       | 23.0         | ----         | 10.0             | 33.0         | ----         | 56.0         | ----         | 23.0         | ----         | N (QP)  |
| 4  | 2.12000       | 19.7         | ----         | 10.0             | 29.7         | ----         | 56.0         | ----         | 26.3         | ----         | N (QP)  |
| 5  | 12.97000      | 29.9         | ----         | 10.2             | 40.1         | ----         | 60.0         | ----         | 19.9         | ----         | N (QP)  |
| 6  | 23.60000      | 41.3         | ----         | 10.2             | 51.5         | ----         | 60.0         | ----         | 8.5          | ----         | N (QP)  |
| 7  | 0.16900       | ----         | 11.9         | 9.9              | 21.8         | ----         | 55.0         | ----         | 33.2         | ----         | N (CAV) |
| 8  | 0.50500       | ----         | 21.8         | 10.0             | 31.8         | ----         | 46.0         | ----         | 14.2         | ----         | N (CAV) |
| 9  | 0.93100       | ----         | 12.5         | 10.0             | 22.5         | ----         | 46.0         | ----         | 23.5         | ----         | N (CAV) |
| 10 | 2.12000       | ----         | 8.8          | 10.0             | 18.8         | ----         | 46.0         | ----         | 27.2         | ----         | N (CAV) |
| 11 | 12.97000      | ----         | 21.2         | 10.2             | 31.4         | ----         | 50.0         | ----         | 18.6         | ----         | N (CAV) |
| 12 | 23.60000      | ----         | 32.7         | 10.2             | 42.9         | ----         | 50.0         | ----         | 7.1          | ----         | N (CAV) |

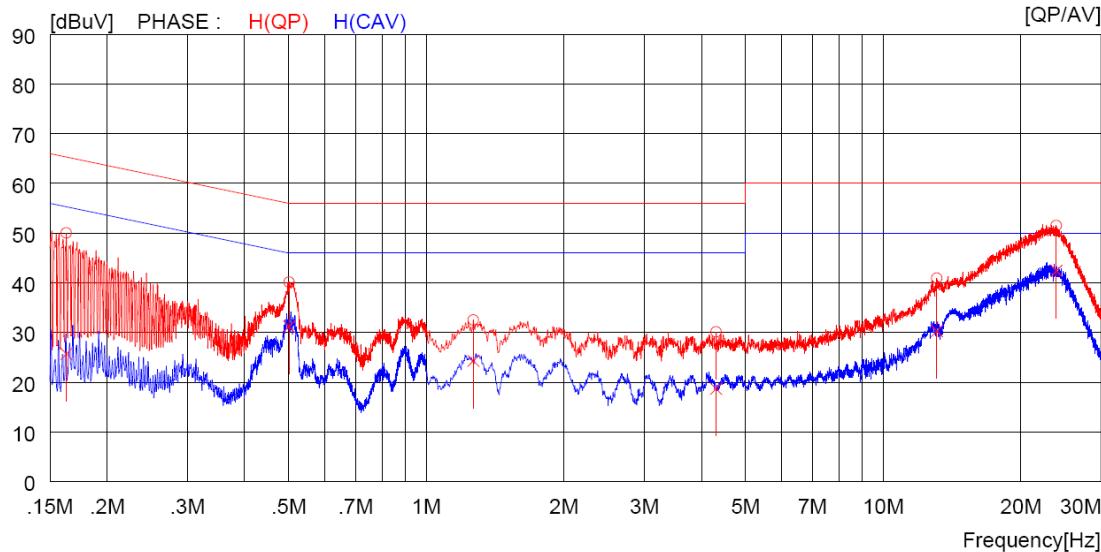
Remark: Margin (dB) = Limit – Level (Result)

The emission level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.



Tested by: Jun-Hui, Lee/ Senior Engineer

- Operating condition : Tablet pc Cradle Charging Mode
- Tested Line : HOT LINE



| NO | FREQ<br>[MHz] | READING      |              | C.FACTOR<br>[dB] | RESULT       |              | LIMIT        |              | MARGIN       |              | PHASE   |
|----|---------------|--------------|--------------|------------------|--------------|--------------|--------------|--------------|--------------|--------------|---------|
|    |               | QP<br>[dBuV] | AV<br>[dBuV] |                  | QP<br>[dBuV] | AV<br>[dBuV] | QP<br>[dBuV] | AV<br>[dBuV] | QP<br>[dBuV] | AV<br>[dBuV] |         |
| 1  | 0.16300       | 40.1         | ----         | 9.9              | 50.0         | ----         | 65.3         | ----         | 15.3         | ----         | H (QP)  |
| 2  | 0.50100       | 30.1         | ----         | 10.0             | 40.1         | ----         | 56.0         | ----         | 15.9         | ----         | H (QP)  |
| 3  | 1.26800       | 22.5         | ----         | 10.0             | 32.5         | ----         | 56.0         | ----         | 23.5         | ----         | H (QP)  |
| 4  | 4.30800       | 20.1         | ----         | 10.0             | 30.1         | ----         | 56.0         | ----         | 25.9         | ----         | H (QP)  |
| 5  | 13.10000      | 30.7         | ----         | 10.2             | 40.9         | ----         | 60.0         | ----         | 19.1         | ----         | H (QP)  |
| 6  | 23.96000      | 41.3         | ----         | 10.2             | 51.5         | ----         | 60.0         | ----         | 8.5          | ----         | H (QP)  |
| 7  | 0.16300       | 15.8         | 9.9          | ----             | 25.7         | ----         | 55.3         | ----         | 29.6         | ----         | H (CAV) |
| 8  | 0.50100       | 21.2         | 10.0         | ----             | 31.2         | ----         | 46.0         | ----         | 14.8         | ----         | H (CAV) |
| 9  | 1.26800       | 14.3         | 10.0         | ----             | 24.3         | ----         | 46.0         | ----         | 21.7         | ----         | H (CAV) |
| 10 | 4.30800       | 8.7          | 10.0         | ----             | 18.7         | ----         | 46.0         | ----         | 27.3         | ----         | H (CAV) |
| 11 | 13.10000      | 20.1         | 10.2         | ----             | 30.3         | ----         | 50.0         | ----         | 19.7         | ----         | H (CAV) |
| 12 | 23.96000      | 32.2         | 10.2         | ----             | 42.4         | ----         | 50.0         | ----         | 7.6          | ----         | H (CAV) |

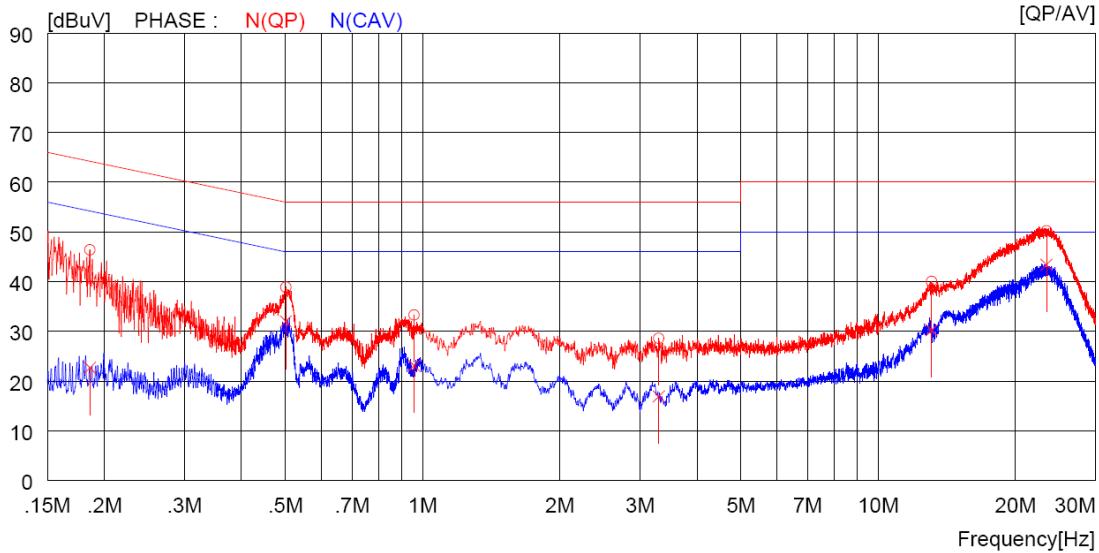
It should not be reproduced except in full, without the written approval of ONETECH Corp.

EMC-002 (Rev.3)

**HEAD OFFICE** : #505 SK APT. Factory 223-28, Sangdaewon 1 Dong, Jungwon-Gu, Seongnam-City, Gyeonggi-Do, 462-121, Korea  
 (TEL: +82-31-746-8500 FAX: +82-31-746-8700)

**EMC Testing Div** : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

- Tested Line : NEUTRAL LINE



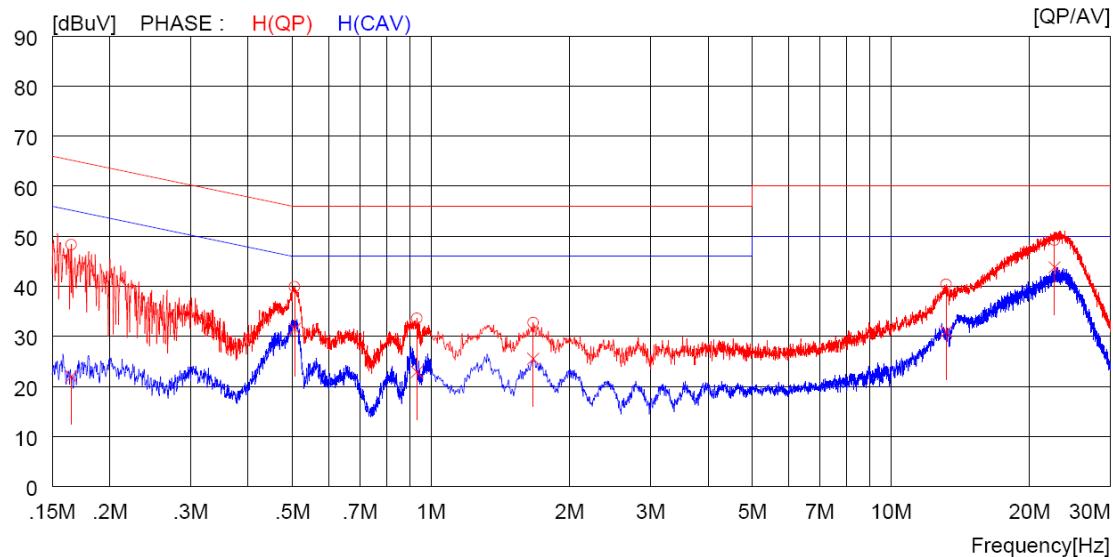
| NO | FREQ<br>[MHz] | READING      |              | C.FACTOR<br>[dB] | RESULT       |              | LIMIT        |              | MARGIN<br>[dBuV] | PHASE   |
|----|---------------|--------------|--------------|------------------|--------------|--------------|--------------|--------------|------------------|---------|
|    |               | QP<br>[dBuV] | AV<br>[dBuV] |                  | QP<br>[dBuV] | AV<br>[dBuV] | QP<br>[dBuV] | AV<br>[dBuV] |                  |         |
| 1  | 0.18600       | 36.5         | ----         | 9.9              | 46.4         | ----         | 64.2         | ----         | 17.8             | N (QP)  |
| 2  | 0.50100       | 28.9         | ----         | 10.0             | 38.9         | ----         | 56.0         | ----         | 17.1             | N (QP)  |
| 3  | 0.95800       | 23.3         | ----         | 10.0             | 33.3         | ----         | 56.0         | ----         | 22.7             | N (QP)  |
| 4  | 3.30000       | 18.6         | ----         | 10.0             | 28.6         | ----         | 56.0         | ----         | 27.4             | N (QP)  |
| 5  | 13.11000      | 29.8         | ----         | 10.2             | 40.0         | ----         | 60.0         | ----         | 20.0             | N (QP)  |
| 6  | 23.42000      | 40.0         | ----         | 10.2             | 50.2         | ----         | 60.0         | ----         | 9.8              | N (QP)  |
| 7  | 0.18600       | ----         | 12.8         | 9.9              | 22.7         | ----         | 54.2         | ----         | 31.5             | N (CAV) |
| 8  | 0.50100       | ----         | 22.0         | 10.0             | 32.0         | ----         | 46.0         | ----         | 14.0             | N (CAV) |
| 9  | 0.95800       | ----         | 13.1         | 10.0             | 23.1         | ----         | 46.0         | ----         | 22.9             | N (CAV) |
| 10 | 3.30000       | ----         | 6.9          | 10.0             | 16.9         | ----         | 46.0         | ----         | 29.1             | N (CAV) |
| 11 | 13.11000      | ----         | 20.0         | 10.2             | 30.2         | ----         | 50.0         | ----         | 19.8             | N (CAV) |
| 12 | 23.42000      | ----         | 33.2         | 10.2             | 43.4         | ----         | 50.0         | ----         | 6.6              | N (CAV) |

Remark: Margin (dB) = Limit – Level (Result)

The emission level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.

Tested by: Jun-Hui, Lee/ Senior Engineer

- Operating condition : Tablet pc IC Card Reader Charging Mode
- Tested Line : HOT LINE



| NO | FREQ<br>[MHz] | READING      |              | C.FACTOR<br>[dB] | RESULT       |              | LIMIT        |              | MARGIN       |              | PHASE   |
|----|---------------|--------------|--------------|------------------|--------------|--------------|--------------|--------------|--------------|--------------|---------|
|    |               | QP<br>[dBuV] | AV<br>[dBuV] |                  | QP<br>[dBuV] | AV<br>[dBuV] | QP<br>[dBuV] | AV<br>[dBuV] | QP<br>[dBuV] | AV<br>[dBuV] |         |
| 1  | 0.16500       | 38.4         | ----         | 9.9              | 48.3         | ----         | 65.2         | ----         | 16.9         | ----         | H (QP)  |
| 2  | 0.50500       | 29.9         | ----         | 10.0             | 39.9         | ----         | 56.0         | ----         | 16.1         | ----         | H (QP)  |
| 3  | 0.93100       | 23.6         | ----         | 10.0             | 33.6         | ----         | 56.0         | ----         | 22.4         | ----         | H (QP)  |
| 4  | 1.66800       | 22.7         | ----         | 10.0             | 32.7         | ----         | 56.0         | ----         | 23.3         | ----         | H (QP)  |
| 5  | 13.18000      | 30.2         | ----         | 10.2             | 40.4         | ----         | 60.0         | ----         | 19.6         | ----         | H (QP)  |
| 6  | 22.69000      | 39.0         | ----         | 10.2             | 49.2         | ----         | 60.0         | ----         | 10.8         | ----         | H (QP)  |
| 7  | 0.16500       | ----         | 12.1         | 9.9              | ----         | 22.0         | ----         | 55.2         | ----         | 33.2         | H (CAV) |
| 8  | 0.50500       | ----         | 21.5         | 10.0             | ----         | 31.5         | ----         | 46.0         | ----         | 14.5         | H (CAV) |
| 9  | 0.93100       | ----         | 12.9         | 10.0             | ----         | 22.9         | ----         | 46.0         | ----         | 23.1         | H (CAV) |
| 10 | 1.66800       | ----         | 15.5         | 10.0             | ----         | 25.5         | ----         | 46.0         | ----         | 20.5         | H (CAV) |
| 11 | 13.18000      | ----         | 20.7         | 10.2             | ----         | 30.9         | ----         | 50.0         | ----         | 19.1         | H (CAV) |
| 12 | 22.69000      | ----         | 33.6         | 10.2             | ----         | 43.8         | ----         | 50.0         | ----         | 6.2          | H (CAV) |

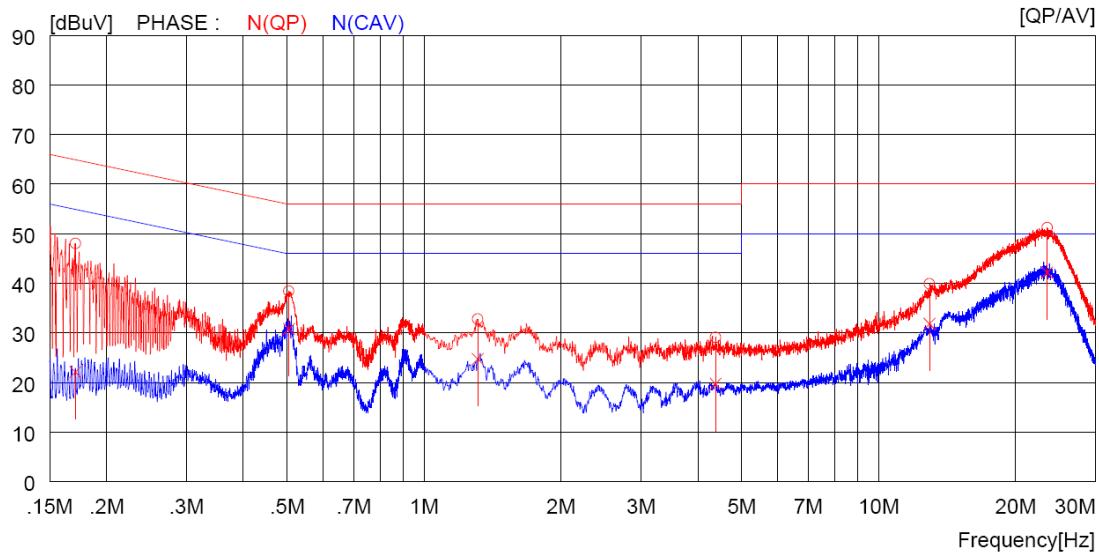
It should not be reproduced except in full, without the written approval of ONETECH Corp.

EMC-002 (Rev.3)

**HEAD OFFICE** : #505 SK APT. Factory 223-28, Sangdaewon 1 Dong, Jungwon-Gu, Seongnam-City, Gyeonggi-Do, 462-121, Korea  
 (TEL: +82-31-746-8500 FAX: +82-31-746-8700)

**EMC Testing Div** : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

- Tested Line : NEUTRAL LINE



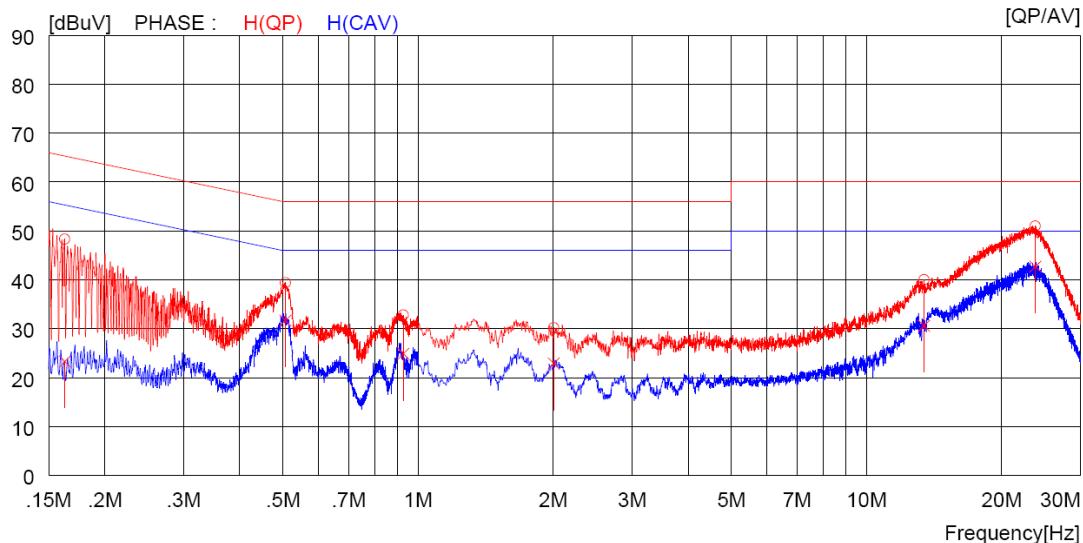
| NO | FREQ<br>[MHz] | READING      |              | C. FACTOR<br>[dB] | RESULT       |              | LIMIT        |              | MARGIN       |              | PHASE   |
|----|---------------|--------------|--------------|-------------------|--------------|--------------|--------------|--------------|--------------|--------------|---------|
|    |               | QP<br>[dBuV] | AV<br>[dBuV] |                   | QP<br>[dBuV] | AV<br>[dBuV] | QP<br>[dBuV] | AV<br>[dBuV] | QP<br>[dBuV] | AV<br>[dBuV] |         |
| 1  | 0.17100       | 38.1         | ----         | 9.9               | 48.0         | ----         | 64.9         | ----         | 16.9         | ----         | N (QP)  |
| 2  | 0.50400       | 28.4         | ----         | 10.0              | 38.4         | ----         | 56.0         | ----         | 17.6         | ----         | N (QP)  |
| 3  | 1.31200       | 22.8         | ----         | 10.0              | 32.8         | ----         | 56.0         | ----         | 23.2         | ----         | N (QP)  |
| 4  | 4.38000       | 19.1         | ----         | 10.0              | 29.1         | ----         | 56.0         | ----         | 26.9         | ----         | N (QP)  |
| 5  | 12.94000      | 29.7         | ----         | 10.2              | 39.9         | ----         | 60.0         | ----         | 20.1         | ----         | N (QP)  |
| 6  | 23.49000      | 41.0         | ----         | 10.2              | 51.2         | ----         | 60.0         | ----         | 8.8          | ----         | N (QP)  |
| 7  | 0.17100       | ----         | 12.2         | 9.9               | ----         | 22.1         | ----         | 54.9         | ----         | 32.8         | N (CAV) |
| 8  | 0.50400       | ----         | 20.8         | 10.0              | ----         | 30.8         | ----         | 46.0         | ----         | 15.2         | N (CAV) |
| 9  | 1.31200       | ----         | 14.7         | 10.0              | ----         | 24.7         | ----         | 46.0         | ----         | 21.3         | N (CAV) |
| 10 | 4.38000       | ----         | 9.7          | 10.0              | ----         | 19.7         | ----         | 46.0         | ----         | 26.3         | N (CAV) |
| 11 | 12.94000      | ----         | 21.6         | 10.2              | ----         | 31.8         | ----         | 50.0         | ----         | 18.2         | N (CAV) |
| 12 | 23.49000      | ----         | 32.0         | 10.2              | ----         | 42.2         | ----         | 50.0         | ----         | 7.8          | N (CAV) |

Remark: Margin (dB) = Limit – Level (Result)

The emission level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.

Tested by: Jun-Hui Lee/ Senior Engineer

- Operating condition : Tablet pc Barcord Reader Charging Mode
- Tested Line : HOT LINE



| NO | FREQ<br>[MHz] | READING      |              | C.FACTOR<br>[dB] | RESULT       |              | LIMIT        |              | MARGIN<br>[dBuV] | PHASE |
|----|---------------|--------------|--------------|------------------|--------------|--------------|--------------|--------------|------------------|-------|
|    |               | QP<br>[dBuV] | AV<br>[dBuV] |                  | QP<br>[dBuV] | AV<br>[dBuV] | QP<br>[dBuV] | AV<br>[dBuV] |                  |       |
| 1  | 0.16300       | 38.4         | ----         | 9.9              | 48.3         | ----         | 65.3         | ----         | 17.0             | ----  |
| 2  | 0.50600       | 29.4         | ----         | 10.0             | 39.4         | ----         | 56.0         | ----         | 16.6             | ----  |
| 3  | 0.92800       | 22.8         | ----         | 10.0             | 32.8         | ----         | 56.0         | ----         | 23.2             | ----  |
| 4  | 2.00800       | 20.2         | ----         | 10.0             | 30.2         | ----         | 56.0         | ----         | 25.8             | ----  |
| 5  | 13.44000      | 29.8         | ----         | 10.2             | 40.0         | ----         | 60.0         | ----         | 20.0             | ----  |
| 6  | 23.79000      | 40.8         | ----         | 10.2             | 51.0         | ----         | 60.0         | ----         | 9.0              | ----  |
| 7  | 0.16300       | ----         | 13.4         | 9.9              | ----         | 23.3         | ----         | 55.3         | ----             | 32.0  |
| 8  | 0.50600       | ----         | 21.7         | 10.0             | ----         | 31.7         | ----         | 46.0         | ----             | 14.3  |
| 9  | 0.92800       | ----         | 14.9         | 10.0             | ----         | 24.9         | ----         | 46.0         | ----             | 21.1  |
| 10 | 2.00800       | ----         | 12.9         | 10.0             | ----         | 22.9         | ----         | 46.0         | ----             | 23.1  |
| 11 | 13.44000      | ----         | 20.4         | 10.2             | ----         | 30.6         | ----         | 50.0         | ----             | 19.4  |
| 12 | 23.79000      | ----         | 32.5         | 10.2             | ----         | 42.7         | ----         | 50.0         | ----             | 7.3   |

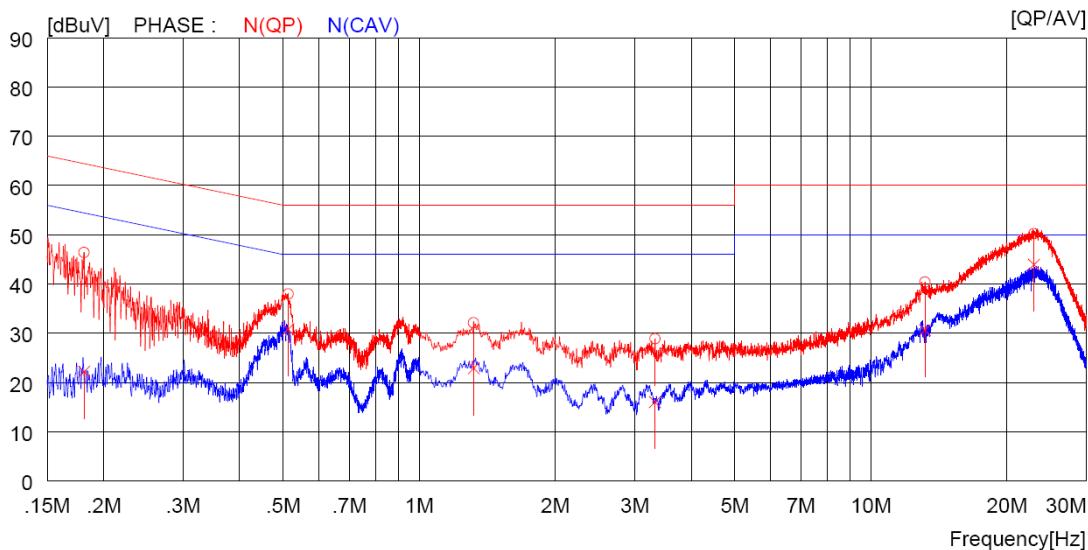
It should not be reproduced except in full, without the written approval of ONETECH Corp.

EMC-002 (Rev.3)

**HEAD OFFICE** : #505 SK APT. Factory 223-28, Sangdaewon 1 Dong, Jungwon-Gu, Seongnam-City, Gyeonggi-Do, 462-121, Korea  
 (TEL: +82-31-746-8500 FAX: +82-31-746-8700)

**EMC Testing Div** : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

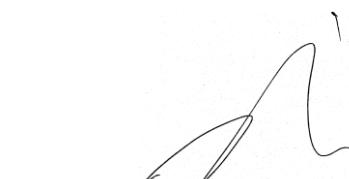
-. Tested Line : NEUTRAL LINE



| NO | FREQ<br>[MHz] | READING      |              | C.FACTOR<br>[dB] | RESULT       |              | LIMIT        |              | MARGIN       |              | PHASE   |
|----|---------------|--------------|--------------|------------------|--------------|--------------|--------------|--------------|--------------|--------------|---------|
|    |               | QP<br>[dBuV] | AV<br>[dBuV] |                  | QP<br>[dBuV] | AV<br>[dBuV] | QP<br>[dBuV] | AV<br>[dBuV] | QP<br>[dBuV] | AV<br>[dBuV] |         |
| 1  | 0.18100       | 36.5         | ----         | 9.9              | 46.4         | ----         | 64.4         | ----         | 18.0         | ----         | N (QP)  |
| 2  | 0.51300       | 28.0         | ----         | 10.0             | 38.0         | ----         | 56.0         | ----         | 18.0         | ----         | N (QP)  |
| 3  | 1.32000       | 22.1         | ----         | 10.0             | 32.1         | ----         | 56.0         | ----         | 23.9         | ----         | N (QP)  |
| 4  | 3.32800       | 18.9         | ----         | 10.0             | 28.9         | ----         | 56.0         | ----         | 27.1         | ----         | N (QP)  |
| 5  | 13.17000      | 30.2         | ----         | 10.2             | 40.4         | ----         | 60.0         | ----         | 19.6         | ----         | N (QP)  |
| 6  | 22.97000      | 40.0         | ----         | 10.2             | 50.2         | ----         | 60.0         | ----         | 9.8          | ----         | N (QP)  |
| 7  | 0.18100       | ----         | 12.3         | 9.9              | ----         | 22.2         | ----         | 54.4         | ----         | 32.2         | N (CAV) |
| 8  | 0.51300       | ----         | 20.8         | 10.0             | ----         | 30.8         | ----         | 46.0         | ----         | 15.2         | N (CAV) |
| 9  | 1.32000       | ----         | 12.9         | 10.0             | ----         | 22.9         | ----         | 46.0         | ----         | 23.1         | N (CAV) |
| 10 | 3.32800       | ----         | 6.0          | 10.0             | ----         | 16.0         | ----         | 46.0         | ----         | 30.0         | N (CAV) |
| 11 | 13.17000      | ----         | 20.4         | 10.2             | ----         | 30.6         | ----         | 50.0         | ----         | 19.4         | N (CAV) |
| 12 | 22.97000      | ----         | 33.7         | 10.2             | ----         | 43.9         | ----         | 50.0         | ----         | 6.1          | N (CAV) |

Remark: Margin (dB) = Limit – Level (Result)

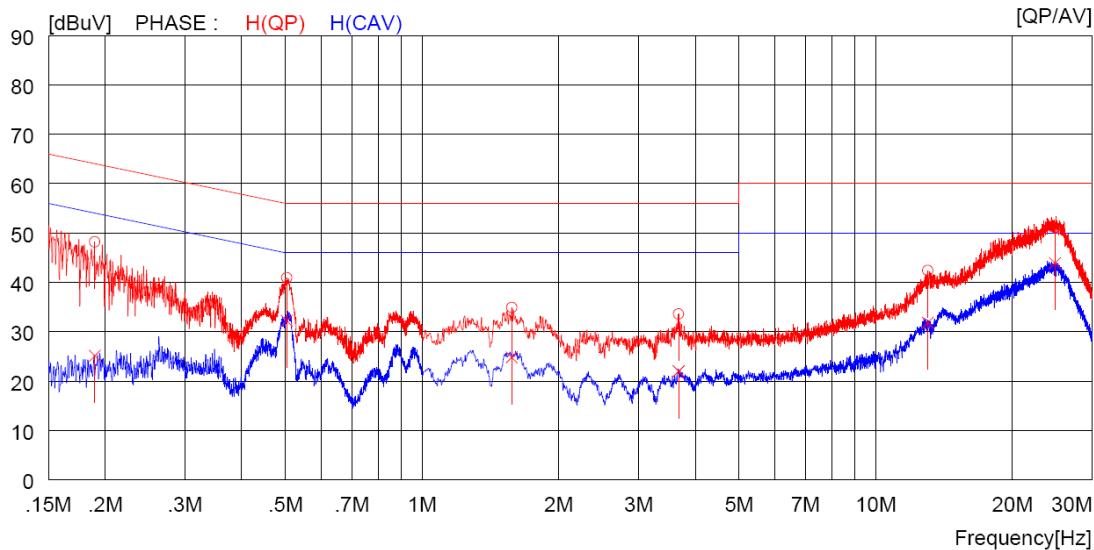
The emission level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.



Tested by: Jun-Hui, Lee/ Senior Engineer

## 8.6 Test data for Charging & Transmitting Mode\_3 Mbps

- Test Date : March 28, 2015
- Resolution bandwidth : 9 kHz
- Frequency range : 0.15 MHz ~ 30 MHz
- Operating condition : Tablet pc Charging Mode
- Tested Line : HOT LINE



| NO | FREQ<br>[MHz] | READING      |              | C.FACTOR<br>[dB] | RESULT       |              | LIMIT        |              | MARGIN       |              | PHASE   |
|----|---------------|--------------|--------------|------------------|--------------|--------------|--------------|--------------|--------------|--------------|---------|
|    |               | QP<br>[dBuV] | AV<br>[dBuV] |                  | QP<br>[dBuV] | AV<br>[dBuV] | QP<br>[dBuV] | AV<br>[dBuV] | QP<br>[dBuV] | AV<br>[dBuV] |         |
| 1  | 0.19000       | 38.2         | ----         | 10.0             | 48.2         | ----         | 64.0         | ----         | 15.8         | ----         | H (QP)  |
| 2  | 0.50300       | 30.9         | ----         | 10.0             | 40.9         | ----         | 56.0         | ----         | 15.1         | ----         | H (QP)  |
| 3  | 1.57600       | 24.9         | ----         | 10.0             | 34.9         | ----         | 56.0         | ----         | 21.1         | ----         | H (QP)  |
| 4  | 3.68000       | 23.6         | ----         | 10.0             | 33.6         | ----         | 56.0         | ----         | 22.4         | ----         | H (QP)  |
| 5  | 13.03000      | 32.2         | ----         | 10.2             | 42.4         | ----         | 60.0         | ----         | 17.6         | ----         | H (QP)  |
| 6  | 24.84000      | 40.9         | ----         | 10.2             | 51.1         | ----         | 60.0         | ----         | 8.9          | ----         | H (QP)  |
| 7  | 0.19000       | ----         | 15.1         | 10.0             | ----         | 25.1         | ----         | 54.0         | ----         | 28.9         | H (CAV) |
| 8  | 0.50300       | ----         | 22.2         | 10.0             | ----         | 32.2         | ----         | 46.0         | ----         | 13.8         | H (CAV) |
| 9  | 1.57600       | ----         | 14.8         | 10.0             | ----         | 24.8         | ----         | 46.0         | ----         | 21.2         | H (CAV) |
| 10 | 3.68000       | ----         | 12.0         | 10.0             | ----         | 22.0         | ----         | 46.0         | ----         | 24.0         | H (CAV) |
| 11 | 13.03000      | ----         | 21.6         | 10.2             | ----         | 31.8         | ----         | 50.0         | ----         | 18.2         | H (CAV) |
| 12 | 24.84000      | ----         | 33.7         | 10.2             | ----         | 43.9         | ----         | 50.0         | ----         | 6.1          | H (CAV) |

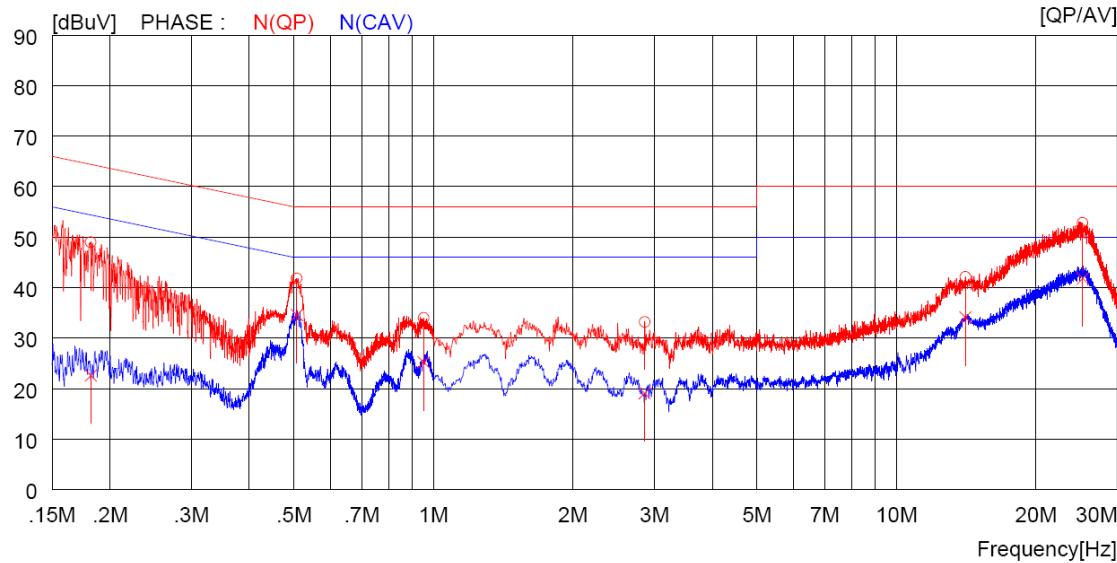
It should not be reproduced except in full, without the written approval of ONETECH Corp.

EMC-002 (Rev.3)

**HEAD OFFICE** : #505 SK APT. Factory 223-28, Sangdaewon 1 Dong, Jungwon-Gu, Seongnam-City, Gyeonggi-Do, 462-121, Korea  
 (TEL: +82-31-746-8500 FAX: +82-31-746-8700)

**EMC Testing Div** : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

- Tested Line : NEUTRAL LINE



| NO | FREQ<br>[MHz] | READING      |              | C.FACTOR<br>[dB] | RESULT       |              | LIMIT        |              | MARGIN       |              | PHASE   |
|----|---------------|--------------|--------------|------------------|--------------|--------------|--------------|--------------|--------------|--------------|---------|
|    |               | QP<br>[dBuV] | AV<br>[dBuV] |                  | QP<br>[dBuV] | AV<br>[dBuV] | QP<br>[dBuV] | AV<br>[dBuV] | QP<br>[dBuV] | AV<br>[dBuV] |         |
| 1  | 0.18200       | 39.0         | ----         | 10.0             | 49.0         | ----         | 64.4         | ----         | 15.4         | ----         | N (QP)  |
| 2  | 0.50700       | 31.8         | ----         | 10.0             | 41.8         | ----         | 56.0         | ----         | 14.2         | ----         | N (QP)  |
| 3  | 0.95300       | 24.0         | ----         | 10.0             | 34.0         | ----         | 56.0         | ----         | 22.0         | ----         | N (QP)  |
| 4  | 2.86000       | 23.2         | ----         | 10.0             | 33.2         | ----         | 56.0         | ----         | 22.8         | ----         | N (QP)  |
| 5  | 14.10000      | 31.9         | ----         | 10.2             | 42.1         | ----         | 60.0         | ----         | 17.9         | ----         | N (QP)  |
| 6  | 25.26000      | 42.6         | ----         | 10.2             | 52.8         | ----         | 60.0         | ----         | 7.2          | ----         | N (QP)  |
| 7  | 0.18200       | ----         | 12.6         | 10.0             | ----         | 22.6         | ----         | 54.4         | ----         | 31.8         | N (CAV) |
| 8  | 0.50700       | ----         | 24.6         | 10.0             | ----         | 34.6         | ----         | 46.0         | ----         | 11.4         | N (CAV) |
| 9  | 0.95300       | ----         | 15.2         | 10.0             | ----         | 25.2         | ----         | 46.0         | ----         | 20.8         | N (CAV) |
| 10 | 2.86000       | ----         | 9.1          | 10.0             | ----         | 19.1         | ----         | 46.0         | ----         | 26.9         | N (CAV) |
| 11 | 14.10000      | ----         | 23.9         | 10.2             | ----         | 34.1         | ----         | 50.0         | ----         | 15.9         | N (CAV) |
| 12 | 25.26000      | ----         | 31.6         | 10.2             | ----         | 41.8         | ----         | 50.0         | ----         | 8.2          | N (CAV) |

Remark: Margin (dB) = Limit – Level (Result)

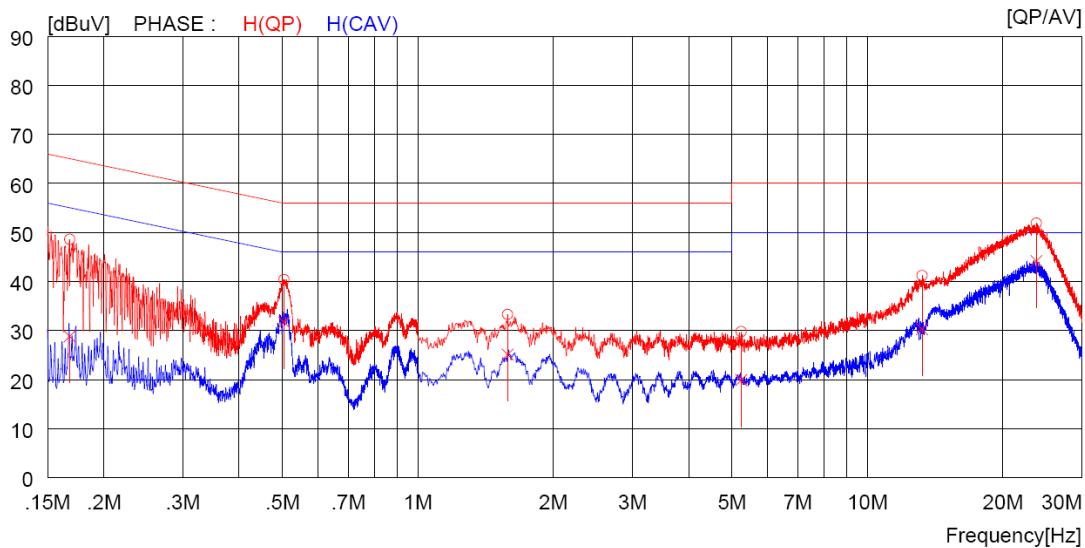
The emission level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.



Tested by: Jun-Hui, Lee/ Senior Engineer

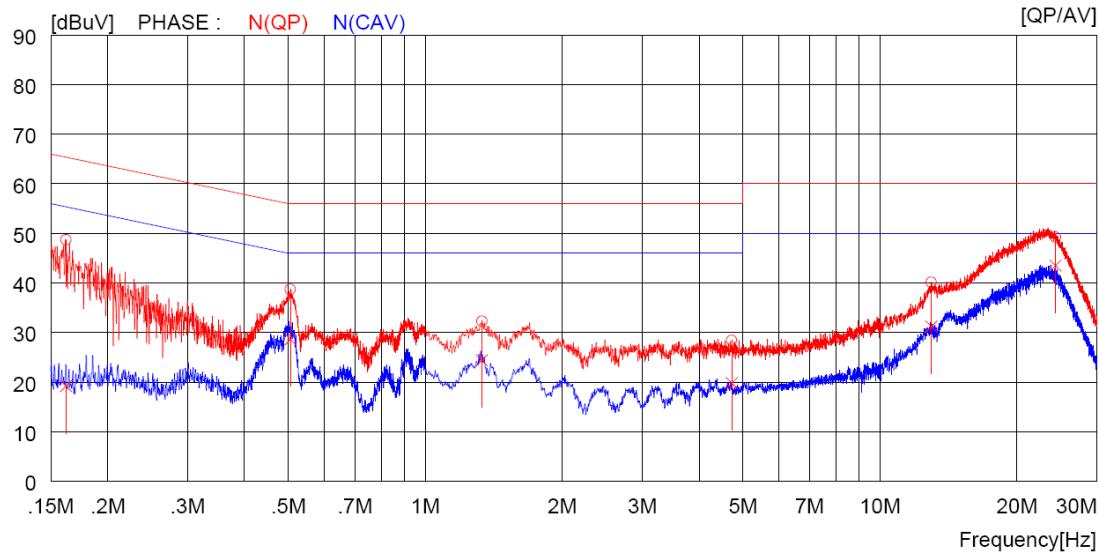
- Operating condition : Tablet pc Cradle Charging Mode

- Tested Line : HOT LINE



| NO | FREQ<br>[MHz] | READING      |              | C.FACTOR<br>[dB] | RESULT       |              | LIMIT        |              | MARGIN<br>[dBuV] | PHASE        |
|----|---------------|--------------|--------------|------------------|--------------|--------------|--------------|--------------|------------------|--------------|
|    |               | QP<br>[dBuV] | AV<br>[dBuV] |                  | QP<br>[dBuV] | AV<br>[dBuV] | QP<br>[dBuV] | AV<br>[dBuV] |                  |              |
| 1  | 0.16800       | 38.7         | ----         | 9.9              | 48.6         | ----         | 65.1         | ----         | 16.5             | ---- H (QP)  |
| 2  | 0.50400       | 30.4         | ----         | 10.0             | 40.4         | ----         | 56.0         | ----         | 15.6             | ---- H (QP)  |
| 3  | 1.58400       | 23.3         | ----         | 10.0             | 33.3         | ----         | 56.0         | ----         | 22.7             | ---- H (QP)  |
| 4  | 5.24000       | 19.8         | ----         | 10.0             | 29.8         | ----         | 60.0         | ----         | 30.2             | ---- H (QP)  |
| 5  | 13.24000      | 31.0         | ----         | 10.2             | 41.2         | ----         | 60.0         | ----         | 18.8             | ---- H (QP)  |
| 6  | 23.77000      | 41.7         | ----         | 10.2             | 51.9         | ----         | 60.0         | ----         | 8.1              | ---- H (QP)  |
| 7  | 0.16800       | ----         | 18.9         | 9.9              | ----         | 28.8         | ----         | 55.1         | ----             | 26.3 H (CAV) |
| 8  | 0.50400       | ----         | 21.7         | 10.0             | ----         | 31.7         | ----         | 46.0         | ----             | 14.3 H (CAV) |
| 9  | 1.58400       | ----         | 15.1         | 10.0             | ----         | 25.1         | ----         | 46.0         | ----             | 20.9 H (CAV) |
| 10 | 5.24000       | ----         | 9.9          | 10.0             | ----         | 19.9         | ----         | 50.0         | ----             | 30.1 H (CAV) |
| 11 | 13.24000      | ----         | 20.1         | 10.2             | ----         | 30.3         | ----         | 50.0         | ----             | 19.7 H (CAV) |
| 12 | 23.77000      | ----         | 34.0         | 10.2             | ----         | 44.2         | ----         | 50.0         | ----             | 5.8 H (CAV)  |

- Tested Line : NEUTRAL LINE



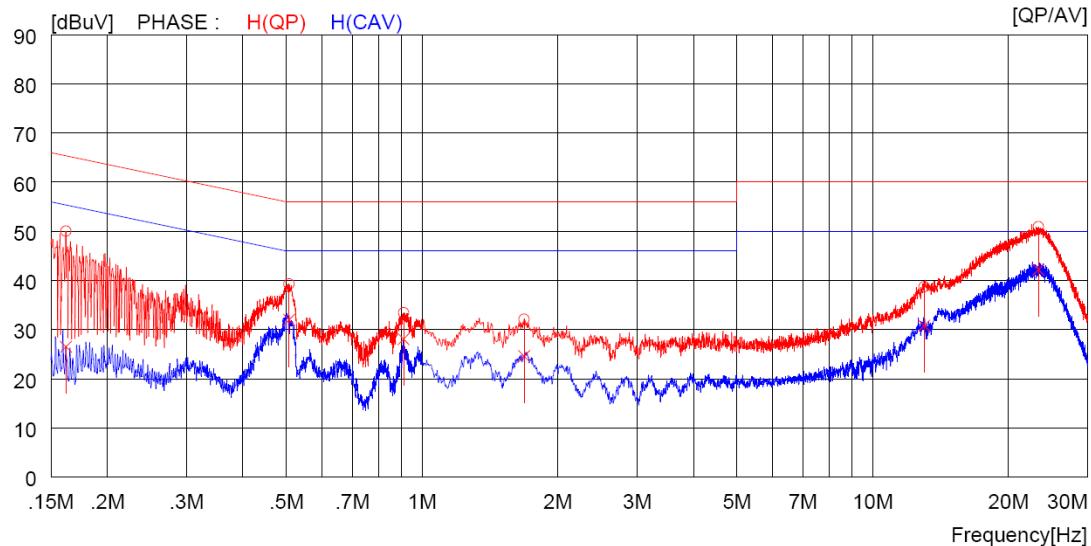
| NO | FREQ<br>[MHz] | READING      |              | C. FACTOR<br>[dB] | RESULT       |              | LIMIT        |              | MARGIN<br>[dBuV] | PHASE        |
|----|---------------|--------------|--------------|-------------------|--------------|--------------|--------------|--------------|------------------|--------------|
|    |               | QP<br>[dBuV] | AV<br>[dBuV] |                   | QP<br>[dBuV] | AV<br>[dBuV] | QP<br>[dBuV] | AV<br>[dBuV] |                  |              |
| 1  | 0.16200       | 38.8         | ----         | 9.9               | 48.7         | ----         | 65.4         | ----         | 16.7             | N (QP)       |
| 2  | 0.50500       | 28.7         | ----         | 10.0              | 38.7         | ----         | 56.0         | ----         | 17.3             | ----         |
| 3  | 1.33200       | 22.3         | ----         | 10.0              | 32.3         | ----         | 56.0         | ----         | 23.7             | ----         |
| 4  | 4.72400       | 18.4         | ----         | 10.0              | 28.4         | ----         | 56.0         | ----         | 27.6             | ----         |
| 5  | 12.98000      | 29.9         | ----         | 10.2              | 40.1         | ----         | 60.0         | ----         | 19.9             | ----         |
| 6  | 24.34000      | 39.0         | ----         | 10.2              | 49.2         | ----         | 60.0         | ----         | 10.8             | ----         |
| 7  | 0.16200       | ---          | 9.3          | 9.9               | ---          | 19.2         | ----         | 55.4         | ----             | 36.2 N (CAV) |
| 8  | 0.50500       | ----         | 18.6         | 10.0              | ----         | 28.6         | ----         | 46.0         | ----             | 17.4 N (CAV) |
| 9  | 1.33200       | ----         | 14.4         | 10.0              | ----         | 24.4         | ----         | 46.0         | ----             | 21.6 N (CAV) |
| 10 | 4.72400       | ----         | 9.8          | 10.0              | ----         | 19.8         | ----         | 46.0         | ----             | 26.2 N (CAV) |
| 11 | 12.98000      | ----         | 21.0         | 10.2              | ----         | 31.2         | ----         | 50.0         | ----             | 18.8 N (CAV) |
| 12 | 24.34000      | ----         | 33.3         | 10.2              | ----         | 43.5         | ----         | 50.0         | ----             | 6.5 N (CAV)  |

Remark: Margin (dB) = Limit – Level (Result)

The emission level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.

Tested by: Jun-Hui, Lee/ Senior Engineer

- Operating condition : Tablet pc IC Card Reader Charging Mode
- Tested Line : HOT LINE



| NO | FREQ<br>[MHz] | READING      |              | C.FACTOR<br>[dB] | RESULT       |              | LIMIT        |              | MARGIN       |              | PHASE   |
|----|---------------|--------------|--------------|------------------|--------------|--------------|--------------|--------------|--------------|--------------|---------|
|    |               | QP<br>[dBuV] | AV<br>[dBuV] |                  | QP<br>[dBuV] | AV<br>[dBuV] | QP<br>[dBuV] | AV<br>[dBuV] | QP<br>[dBuV] | AV<br>[dBuV] |         |
| 1  | 0.16200       | 40.1         | ----         | 9.9              | 50.0         | ----         | 65.4         | ----         | 15.4         | ----         | H (QP)  |
| 2  | 0.50700       | 29.3         | ----         | 10.0             | 39.3         | ----         | 56.0         | ----         | 16.7         | ----         | H (QP)  |
| 3  | 0.91000       | 23.4         | ----         | 10.0             | 33.4         | ----         | 56.0         | ----         | 22.6         | ----         | H (QP)  |
| 4  | 1.68400       | 22.1         | ----         | 10.0             | 32.1         | ----         | 56.0         | ----         | 23.9         | ----         | H (QP)  |
| 5  | 13.02000      | 28.5         | ----         | 10.2             | 38.7         | ----         | 60.0         | ----         | 21.3         | ----         | H (QP)  |
| 6  | 23.34000      | 40.7         | ----         | 10.2             | 50.9         | ----         | 60.0         | ----         | 9.1          | ----         | H (QP)  |
| 7  | 0.16200       | 16.6         | 9.9          | ----             | 26.5         | ----         | 55.4         | ----         | 28.9         | ----         | H (CAV) |
| 8  | 0.50700       | 22.0         | 10.0         | ----             | 32.0         | ----         | 46.0         | ----         | 14.0         | ----         | H (CAV) |
| 9  | 0.91000       | 18.1         | 10.0         | ----             | 28.1         | ----         | 46.0         | ----         | 17.9         | ----         | H (CAV) |
| 10 | 1.68400       | 14.6         | 10.0         | ----             | 24.6         | ----         | 46.0         | ----         | 21.4         | ----         | H (CAV) |
| 11 | 13.02000      | 20.6         | 10.2         | ----             | 30.8         | ----         | 50.0         | ----         | 19.2         | ----         | H (CAV) |
| 12 | 23.34000      | 32.0         | 10.2         | ----             | 42.2         | ----         | 50.0         | ----         | 7.8          | ----         | H (CAV) |

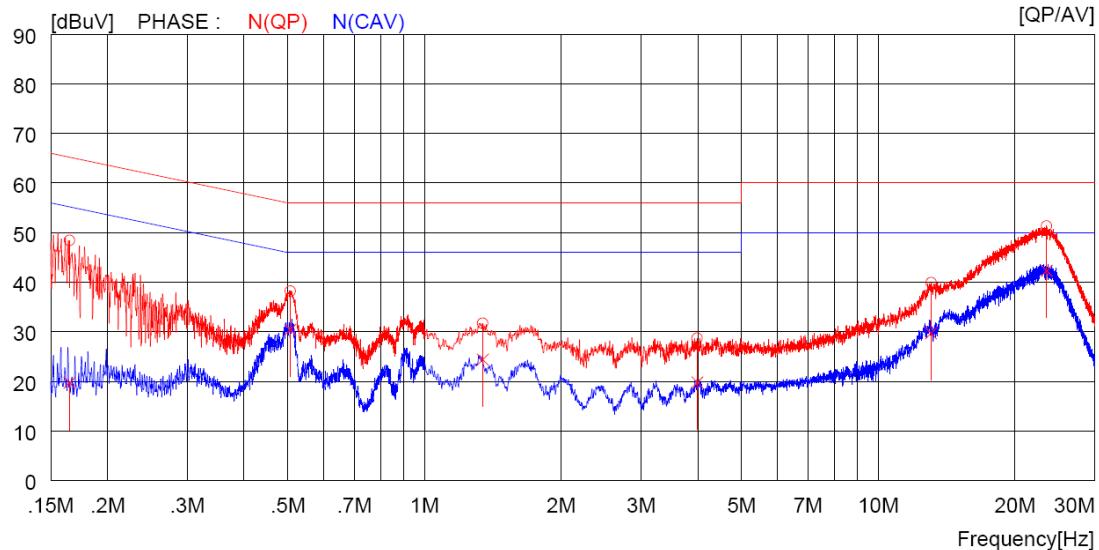
It should not be reproduced except in full, without the written approval of ONETECH Corp.

EMC-002 (Rev.3)

**HEAD OFFICE** : #505 SK APT. Factory 223-28, Sangdaewon 1 Dong, Jungwon-Gu, Seongnam-City, Gyeonggi-Do, 462-121, Korea  
 (TEL: +82-31-746-8500 FAX: +82-31-746-8700)

**EMC Testing Div** : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

- Tested Line : NEUTRAL LINE



| NO | FREQ<br>[MHz] | READING      |              | C.FACTOR<br>[dB] | RESULT       |              | LIMIT        |              | MARGIN       |              | PHASE  |
|----|---------------|--------------|--------------|------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------|
|    |               | QP<br>[dBuV] | AV<br>[dBuV] |                  | QP<br>[dBuV] | AV<br>[dBuV] | QP<br>[dBuV] | AV<br>[dBuV] | QP<br>[dBuV] | AV<br>[dBuV] |        |
| 1  | 0.16500       | 38.5         | ----         | 9.9              | 48.4         | ----         | 65.2         | ----         | 16.8         | ----         | N(QP)  |
| 2  | 0.50600       | 28.2         | ----         | 10.0             | 38.2         | ----         | 56.0         | ----         | 17.8         | ----         | N(QP)  |
| 3  | 1.34400       | 21.7         | ----         | 10.0             | 31.7         | ----         | 56.0         | ----         | 24.3         | ----         | N(QP)  |
| 4  | 3.99200       | 18.7         | ----         | 10.0             | 28.7         | ----         | 56.0         | ----         | 27.3         | ----         | N(QP)  |
| 5  | 13.08000      | 29.7         | ----         | 10.2             | 39.9         | ----         | 60.0         | ----         | 20.1         | ----         | N(QP)  |
| 6  | 23.52000      | 41.1         | ----         | 10.2             | 51.3         | ----         | 60.0         | ----         | 8.7          | ----         | N(QP)  |
| 7  | 0.16500       | ---          | 9.8          | 9.9              | ---          | 19.7         | ----         | 55.2         | ----         | 35.5         | N(CAV) |
| 8  | 0.50600       | ---          | 20.4         | 10.0             | ---          | 30.4         | ----         | 46.0         | ----         | 15.6         | N(CAV) |
| 9  | 1.34400       | ---          | 14.4         | 10.0             | ---          | 24.4         | ----         | 46.0         | ----         | 21.6         | N(CAV) |
| 10 | 3.99200       | ---          | 9.8          | 10.0             | ---          | 19.8         | ----         | 46.0         | ----         | 26.2         | N(CAV) |
| 11 | 13.08000      | ---          | 19.5         | 10.2             | ---          | 29.7         | ----         | 50.0         | ----         | 20.3         | N(CAV) |
| 12 | 23.52000      | ---          | 32.1         | 10.2             | ---          | 42.3         | ----         | 50.0         | ----         | 7.7          | N(CAV) |

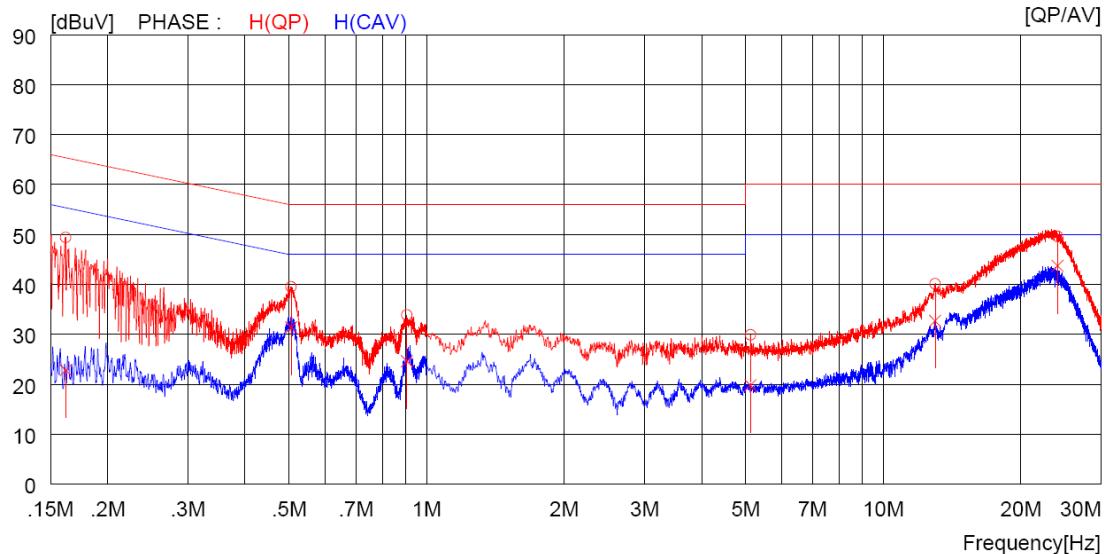
Remark: Margin (dB) = Limit – Level (Result)

The emission level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.



Tested by: Jun-Hui, Lee/ Senior Engineer

- Operating condition : Tablet pc Barcord Reader Charging Mode
- Tested Line : HOT LINE



| NO | FREQ<br>[MHz] | READING      |              | C.FACTOR<br>[dB] | RESULT       |              | LIMIT        |              | MARGIN       |              | PHASE   |
|----|---------------|--------------|--------------|------------------|--------------|--------------|--------------|--------------|--------------|--------------|---------|
|    |               | QP<br>[dBuV] | AV<br>[dBuV] |                  | QP<br>[dBuV] | AV<br>[dBuV] | QP<br>[dBuV] | AV<br>[dBuV] | QP<br>[dBuV] | AV<br>[dBuV] |         |
| 1  | 0.16200       | 39.5         | ----         | 9.9              | 49.4         | ----         | 65.4         | ----         | 16.0         | ----         | H (QP)  |
| 2  | 0.50500       | 29.5         | ----         | 10.0             | 39.5         | ----         | 56.0         | ----         | 16.5         | ----         | H (QP)  |
| 3  | 0.90500       | 23.9         | ----         | 10.0             | 33.9         | ----         | 56.0         | ----         | 22.1         | ----         | H (QP)  |
| 4  | 5.12000       | 19.9         | ----         | 10.0             | 29.9         | ----         | 60.0         | ----         | 30.1         | ----         | H (QP)  |
| 5  | 12.99000      | 29.9         | ----         | 10.2             | 40.1         | ----         | 60.0         | ----         | 19.9         | ----         | H (QP)  |
| 6  | 24.08000      | 39.4         | ----         | 10.2             | 49.6         | ----         | 60.0         | ----         | 10.4         | ----         | H (QP)  |
| 7  | 0.16200       | 12.9         | 9.9          | ----             | 22.8         | ----         | 55.4         | ----         | 32.6         | ----         | H (CAV) |
| 8  | 0.50500       | 21.4         | 10.0         | ----             | 31.4         | ----         | 46.0         | ----         | 14.6         | ----         | H (CAV) |
| 9  | 0.90500       | 14.6         | 10.0         | ----             | 24.6         | ----         | 46.0         | ----         | 21.4         | ----         | H (CAV) |
| 10 | 5.12000       | 9.8          | 10.0         | ----             | 19.8         | ----         | 50.0         | ----         | 30.2         | ----         | H (CAV) |
| 11 | 12.99000      | 22.5         | 10.2         | ----             | 32.7         | ----         | 50.0         | ----         | 17.3         | ----         | H (CAV) |
| 12 | 24.08000      | 33.5         | 10.2         | ----             | 43.7         | ----         | 50.0         | ----         | 6.3          | ----         | H (CAV) |

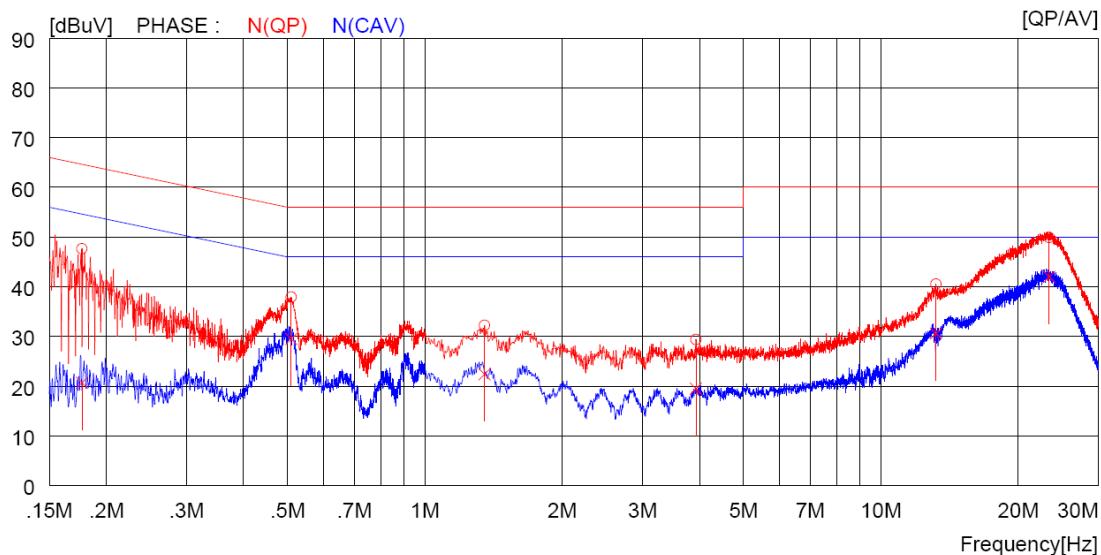
It should not be reproduced except in full, without the written approval of ONETECH Corp.

EMC-002 (Rev.3)

**HEAD OFFICE** : #505 SK APT. Factory 223-28, Sangdaewon 1 Dong, Jungwon-Gu, Seongnam-City, Gyeonggi-Do, 462-121, Korea  
 (TEL: +82-31-746-8500 FAX: +82-31-746-8700)

**EMC Testing Div** : 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)

-. Tested Line : NEUTRAL LINE



| NO | FREQ<br>[MHz] | READING      |              | C.FACTOR<br>[dB] | RESULT       |              | LIMIT        |              | MARGIN       |              | PHASE   |
|----|---------------|--------------|--------------|------------------|--------------|--------------|--------------|--------------|--------------|--------------|---------|
|    |               | QP<br>[dBuV] | AV<br>[dBuV] |                  | QP<br>[dBuV] | AV<br>[dBuV] | QP<br>[dBuV] | AV<br>[dBuV] | QP<br>[dBuV] | AV<br>[dBuV] |         |
| 1  | 0.17700       | 37.7         | ----         | 9.9              | 47.6         | ----         | 64.6         | ----         | 17.0         | ----         | N (QP)  |
| 2  | 0.50900       | 27.9         | ----         | 10.0             | 37.9         | ----         | 56.0         | ----         | 18.1         | ----         | N (QP)  |
| 3  | 1.35200       | 22.2         | ----         | 10.0             | 32.2         | ----         | 56.0         | ----         | 23.8         | ----         | N (QP)  |
| 4  | 3.93200       | 19.4         | ----         | 10.0             | 29.4         | ----         | 56.0         | ----         | 26.6         | ----         | N (QP)  |
| 5  | 13.21000      | 30.3         | ----         | 10.2             | 40.5         | ----         | 60.0         | ----         | 19.5         | ----         | N (QP)  |
| 6  | 23.39000      | 39.7         | ----         | 10.2             | 49.9         | ----         | 60.0         | ----         | 10.1         | ----         | N (QP)  |
| 7  | 0.17700       | ----         | 10.8         | 9.9              | ----         | 20.7         | ----         | 54.6         | ----         | 33.9         | N (CAV) |
| 8  | 0.50900       | ----         | 19.5         | 10.0             | ----         | 29.5         | ----         | 46.0         | ----         | 16.5         | N (CAV) |
| 9  | 1.35200       | ----         | 12.4         | 10.0             | ----         | 22.4         | ----         | 46.0         | ----         | 23.6         | N (CAV) |
| 10 | 3.93200       | ----         | 9.5          | 10.0             | ----         | 19.5         | ----         | 46.0         | ----         | 26.5         | N (CAV) |
| 11 | 13.21000      | ----         | 20.4         | 10.2             | ----         | 30.6         | ----         | 50.0         | ----         | 19.4         | N (CAV) |
| 12 | 23.39000      | ----         | 31.8         | 10.2             | ----         | 42.0         | ----         | 50.0         | ----         | 8.0          | N (CAV) |

Remark: Margin (dB) = Limit – Level (Result)

The emission level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.

Tested by: Jun-Hui, Lee/ Senior Engineer