

FCC PART 15 B TEST REPORT

For

Shanghai Wanyoo Information Technology Co.,Ltd.

6F/7F, BlockC, Section2, Headquarters Park, No.1528, GumeiRoad, Xuhui District, Shanghai, China

FCC ID: 2AK7T-YPC27

Report Type: **Product Name:** Original Report All - in -One - PC Kevin hu **Test Engineer:** Kevin Hu Report Number: RDG161114003 **Report Date:** 2017-02-22 Henry Ding Henry Ding **EMC Leader** Reviewed By: Bay Area Compliance Laboratories Corp. (Chengdu) **Test Laboratory:** No.5040, Huilongwan Plaza, No.1, Shawan Road, Jinniu District, Chengdu, Sichuan, China Tel: 028-65523123, Fax: 028-65525125 www.baclcorp.com

Note: This test report was prepared for the customer shown above and for the device described herein. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp. (Chengdu). Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. This report was valid only with a valid digital signature.

TABLE OF CONTENTS

| GENERAL INFORMATION | 3 |
|--|----|
| PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT) | 3 |
| Objective | 3 |
| RELATED SUBMITTAL(S)/GRANT(S) | |
| Test Methodology | |
| TEST FACILITY | 4 |
| SYSTEM TEST CONFIGURATION | 5 |
| DESCRIPTION OF TEST CONFIGURATION | 5 |
| EUT Exercise Software | 5 |
| EQUIPMENT MODIFICATIONS | 5 |
| LOCAL SUPPORT EQUIPMENT LIST AND DETAILS | 5 |
| SUPPORT CABLE LIST AND DETAILS | |
| CONFIGURATION OF TEST SETUP | 6 |
| SUMMARY OF TEST RESULTS | 7 |
| FCC§15.107 - CONDUCTED EMISSIONS | 8 |
| MEASUREMENT UNCERTAINTY | |
| EUT SETUP | |
| EMI TEST RECEIVER SETUP | 9 |
| TEST EQUIPMENT LIST AND DETAILS | 9 |
| Test Procedure | 9 |
| CORRECTED AMPLITUDE & MARGIN CALCULATION | |
| Test Data | 10 |
| FCC §15.109 - RADIATED SPURIOUS EMISSIONS | 17 |
| MEASUREMENT UNCERTAINTY | |
| EUT SETUP | |
| EMI Test Receiver Setup | |
| Test Procedure | |
| TEST EQUIPMENT LIST AND DETAILS | |
| CORRECTED AMPLITUDE & MARGIN CALCULATION | |
| TEST DATA | 20 |

GENERAL INFORMATION

Product Description for Equipment Under Test (EUT)

The **Shanghai Wanyoo Information Technology Co.,Ltd.**'s product, model number: yPC-27 (FCC ID: 2AK7T-YPC27) (the "EUT") in this report was a AII - in -One - PC, which was measured approximately: 67 cm (L) × 20 cm (W) × 51 cm (H), rated input voltage: DC19V from adapter. The highest operating frequency is 2480 MHz.

Switching Power Adapter Information:

Model No: FSP220-ABAN2

AC Input: 100-240V~, 3A, 50/60Hz

DC Output: 19V 11.57A

Note: The products, test model: yPC-27, multiple model: yPC ****. Their differences were presented in Product Difference Statement provided by the applicant. And we selected yPC-27 to fully test.

*All measurement and test data in this report was gathered from final production sample, serial number: 161114003 (assigned by the BACL, Chengdu). It may have deviation from any other sample. The EUT supplied by the applicant was received on 2016-11-18, and EUT conformed to test requirement.

Objective

This test report is prepared on behalf of **Shanghai Wanyoo Information Technology Co.,Ltd.** in accordance with Part 2, Subpart J, and Part 15-Subparts A and B of the Federal Communications Commission's rules.

The objective of the manufacturer is to determine the compliance of EUT with FCC Part 15 B Class B.

Related Submittal(s)/Grant(s)

No related submittal(s)/grant(s).

Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2014, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

The uncertainty of conducted disturbance at mains port is ±3.17 dB, the uncertainty of any radiation on emissions measurement is:

30M~200MHz: ±4.7 dB; 200M~1GHz: ±6.0 dB; 1G~6GHz: ±5.13dB; 6G~25GHz: ±5.47dB;

And the uncertainty will not be taken into consideration for all test data recorded in the report.

Report No.: RDG161114003 Page 3 of 25

Test Facility

The test site used by BACL to collect test data is located in the No.5040, Huilongwan Plaza, No.1, Shawan Road, Jinniu District, Chengdu, Sichuan, China.

Test site at BACL has been fully described in reports submitted to the Federal Communication Commission (FCC). The details of these reports have been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on April 24, 2015. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2014.

The Federal Communications Commission has the reports on file and is listed under FCC Registration No.: 560332. The test site has been approved by the FCC for public use and is listed in the FCC Public Access Link (PAL) database.

Report No.: RDG161114003 Page 4 of 25

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The system was configured for testing in a typical fashion (as normally used by a typical user). When Test, the EUT run the test software "BurnIn.exe v5.3" to transmit data with HDD, and link with monitor via HDMI cable, the Screen Resolution was set to High Resolution (1920*1080), middle Resolution (1280*1024) and Low Resolution (800*600) for testing and downloading form internet via RJ45 or WIFI.

EUT Exercise Software

The software "BurnIn.exe v5.3" was used during test.

Equipment Modifications

No modification was made to the EUT tested.

Local Support Equipment List and Details

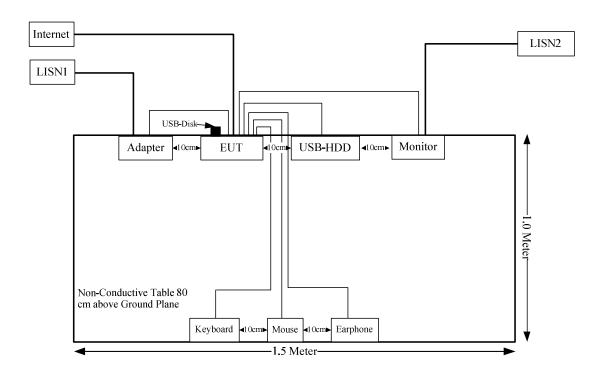
| Manufacturer | Description | Model | Serial Number |
|--------------|-------------|----------|-----------------|
| XI40MI | Earphone | T9 | N/A |
| KINGSTON | USB Disk | 101GB | N/A |
| QICAIHONG | MOUSE | C-K102 | C K102091106646 |
| TOSHIBA | HDD | V63700-A | 1397FHOYSRE8 |
| IBM | Keyboard | KM-110X | XBK133000993 |
| PHILIPS | Monitor | 227E3L | AU3A1140001077 |

Support Cable List and Details

| Cable Description | Shielding Type | Ferrite Core | Length (m) | From Port | То |
|------------------------|-------------------|--------------|---------------|-------------------|----------|
| Mouse Cable | yes | No | 1.5 | USB Port of EUT | Mouse |
| Keyboard Cable | yes | No | 1.5 | USB Port of EUT | Keyboard |
| Earphone Cable | No | No | 2 | Audio Port of EUT | Earphone |
| Hard Disk USB Cable | No | No | 0.4 | USB Port of HDD | EUT |
| HDMI Cable | yes | yes | 1.5 | Monitor | EUT |

Report No.: RDG161114003 Page 5 of 25

Configuration of Test Setup



Report No.: RDG161114003 Page 6 of 25

SUMMARY OF TEST RESULTS

| FCC Rules | Description of Test | Results |
|-----------|---------------------|------------|
| §15.107 | Conducted Emissions | Compliance |
| §15.109 | Radiated Emissions | Compliance |

Report No.: RDG161114003 Page 7 of 25

FCC§15.107 - CONDUCTED EMISSIONS

Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are Receiver, cable loss, and LISN.

Compliance or non- compliance with a disturbance limit shall be determined in the following manner:

If U_{lab} is less than or equal to U_{cispr} of Table 1, then:

- -compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit;
- -non compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.

If U_{lab} is greater than U_{cispr} of Table 1, then:

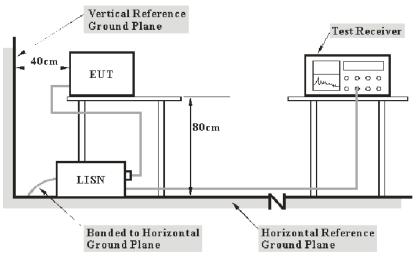
- -compliance is deemed to occur if no measured disturbance level, increased by $(U_{lab} U_{cispr})$, exceeds the disturbance limit;
- -non compliance is deemed to occur if any measured disturbance level, increased by (U_{lab} U_{cispr}), exceeds the disturbance limit.

Based on CISPR 16-4-2:2011, measurement uncertainty of conducted disturbance at mains port using AMN at Bay Area Compliance Laboratories Corp. (Chengdu) is ±3.17 dB (150 kHz to 30 MHz).

Table 1 – Values of U_{cispr}

| Measurement | U cispr |
|---|----------------|
| Conducted disturbance at mains port using AMN (150 kHz to 30 MHz) | 3.4 dB |

EUT Setup



Note: 1. Support units were connected to second LISN.

2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

Report No.: RDG161114003 Page 8 of 25

The setup of EUT is according with per ANSI C63.4-2014 measurement procedure. The specification used was with the FCC Part 15 B Class B limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The adapter was connected to a 120V/60Hz AC power source.

EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

| Frequency Range | IF B/W |
|------------------|--------|
| 150 kHz – 30 MHz | 9 kHz |

Test Equipment List and Details

| Manufacturer | Description | Model | Serial Number | Calibration Date | Calibration Due Date |
|-----------------|----------------------|---------|------------------|---------------------|-------------------------|
| Rohde & Schwarz | EMI Test Receiver | ESCS 30 | 836858/0016 | 2016-12-02 | 2017-12-01 |
| Rohde & Schwarz | L.I.S.N. | ENV216 | 100018 | 2016-12-02 | 2017-12-01 |
| Rohde & Schwarz | PULSE LIMITER | ESH3Z2 | DE14781 | 2016-10-31 | 2017-10-30 |
| N/A | Conducted Cable | NO.5 | N/A | 2016-11-10 | 2017-11-09 |
| R&S | Test Software | EMC32 | Version8.53.0 | N/A | N/A |

^{*} **Statement of Traceability:** BACL (Chengdu) attested that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Test Procedure

During the conducted emission test, the adapter of laptop was connected to the outlet of the first LISN and the other support equipments were connected to the outlet of the second LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All data was recorded in the Quasi-peak and average detection mode.

Corrected Amplitude & Margin Calculation

The basic equation is as follows:

$$V_C = V_R + A_C + VDF$$

Report No.: RDG161114003 Page 9 of 25

Bay Area Compliance Laboratories Corp. (Chengdu)

Herein,

V_C: corrected voltage amplitude

V_R: reading voltage amplitude

A_c: attenuation caused by cable loss

VDF: voltage division factor of AMN or ISN

The "Margin" column of the following data tables indicates the degree of compliance within the applicable limit. For example, a margin of 7dB means the emission is 7dB below the maximum limit. The equation for margin calculation is as follows:

Margin = Limit – Corrected Amplitude

Test Data

Environmental Conditions

| Temperature: | 24.4°C |
|--------------------|-----------|
| Relative Humidity: | 43 % |
| ATM Pressure: | 100.9 kPa |

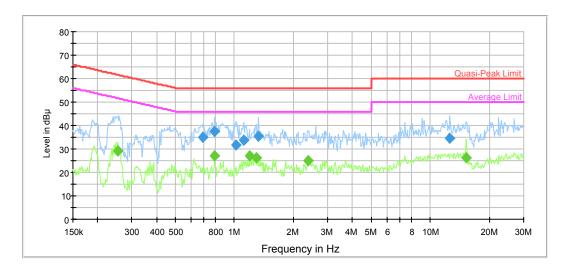
The testing was performed by Kevin Hu on 2017-02-08.

Report No.: RDG161114003 Page 10 of 25

Test Mode: Operating(RJ 45 Downloading mode was the worst)

Low Resolution

AC120V, 60Hz, Line:

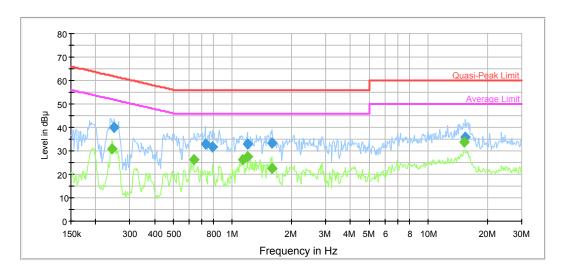


| Frequency (MHz) | QuasiPeak (dBµV) | Bandwidth (kHz) | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) | Comment |
|--------------------|---------------------|--------------------|------|---------------|----------------|-----------------|------------|
| 0.687153 | 35.2 | 9.000 | L1 | 9.8 | 20.8 | 56.0 | Compliance |
| 0.793127 | 37.4 | 9.000 | L1 | 9.8 | 18.6 | 56.0 | Compliance |
| 1.023481 | 31.9 | 9.000 | L1 | 9.8 | 24.1 | 56.0 | Compliance |
| 1.117238 | 33.9 | 9.000 | L1 | 9.8 | 22.1 | 56.0 | Compliance |
| 1.331304 | 35.6 | 9.000 | L1 | 9.7 | 20.4 | 56.0 | Compliance |
| 12.593528 | 34.6 | 9.000 | L1 | 9.9 | 25.4 | 60.0 | Compliance |

| Frequency (MHz) | Average (dBµV) | Bandwidth (kHz) | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) | Comment |
|--------------------|-------------------|--------------------|------|---------------|----------------|-----------------|------------|
| 0.253797 | 29.2 | 9.000 | L1 | 10.3 | 22.4 | 51.6 | Compliance |
| 0.793127 | 27.1 | 9.000 | L1 | 9.8 | 18.9 | 46.0 | Compliance |
| 1.190776 | 26.9 | 9.000 | L1 | 9.7 | 19.1 | 46.0 | Compliance |
| 1.289541 | 26.2 | 9.000 | L1 | 9.7 | 19.8 | 46.0 | Compliance |
| 2.381750 | 25.1 | 9.000 | L1 | 9.8 | 20.9 | 46.0 | Compliance |
| 15.247554 | 26.1 | 9.000 | L1 | 9.9 | 23.9 | 50.0 | Compliance |

Report No.: RDG161114003 Page 11 of 25

AC120V, 60Hz, Neutral:



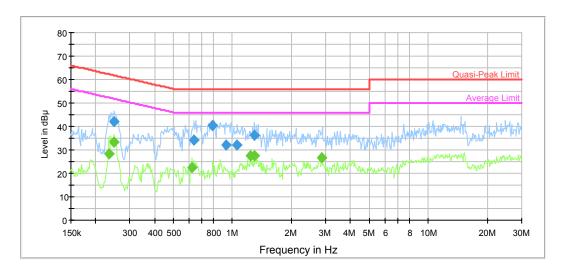
| Frequency (MHz) | QuasiPeak (dBµV) | Bandwidth (kHz) | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) | Comment |
|--------------------|---------------------|--------------------|------|---------------|----------------|-----------------|------------|
| 0.249785 | 40.2 | 9.000 | N | 10.3 | 21.6 | 61.8 | Compliance |
| 0.726569 | 33.0 | 9.000 | N | 9.8 | 23.0 | 56.0 | Compliance |
| 0.793127 | 31.8 | 9.000 | N | 9.8 | 24.2 | 56.0 | Compliance |
| 1.190776 | 33.0 | 9.000 | N | 9.7 | 23.0 | 56.0 | Compliance |
| 1.599078 | 33.2 | 9.000 | N | 9.7 | 22.8 | 56.0 | Compliance |
| 15.492490 | 35.9 | 9.000 | N | 9.9 | 24.1 | 60.0 | Compliance |

| Frequency (MHz) | Average (dBµV) | Bandwidth (kHz) | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) | Comment |
|--------------------|-------------------|--------------------|------|---------------|----------------|-----------------|------------|
| 0.243884 | 30.9 | 9.000 | N | 10.3 | 21.0 | 52.0 | Compliance |
| 0.634524 | 26.2 | 9.000 | N | 9.8 | 19.8 | 46.0 | Compliance |
| 1.126176 | 26.1 | 9.000 | N | 9.7 | 19.9 | 46.0 | Compliance |
| 1.190776 | 27.3 | 9.000 | N | 9.7 | 18.7 | 46.0 | Compliance |
| 1.599078 | 22.4 | 9.000 | N | 9.7 | 23.6 | 46.0 | Compliance |
| 15.247554 | 33.6 | 9.000 | N | 9.9 | 16.4 | 50.0 | Compliance |

Report No.: RDG161114003 Page 12 of 25

Middle Resolution

AC120V, 60Hz, Line:

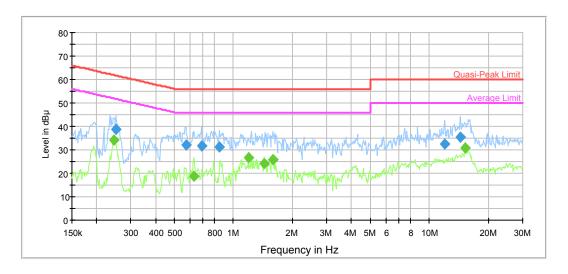


| Frequency (MHz) | QuasiPeak (dBµV) | Bandwidth (kHz) | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) | Comment |
|--------------------|---------------------|--------------------|------|---------------|----------------|-----------------|------------|
| 0.249785 | 42.0 | 9.000 | L1 | 10.3 | 19.8 | 61.8 | Compliance |
| 0.639600 | 34.4 | 9.000 | L1 | 9.8 | 21.6 | 56.0 | Compliance |
| 0.793127 | 40.6 | 9.000 | L1 | 9.8 | 15.4 | 56.0 | Compliance |
| 0.930151 | 32.0 | 9.000 | L1 | 9.8 | 24.0 | 56.0 | Compliance |
| 1.056628 | 32.1 | 9.000 | L1 | 9.8 | 23.9 | 56.0 | Compliance |
| 1.289541 | 36.2 | 9.000 | L1 | 9.7 | 19.8 | 56.0 | Compliance |

| Frequency (MHz) | Average (dBµV) | Bandwidth (kHz) | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) | Comment |
|--------------------|-------------------|--------------------|------|---------------|----------------|-----------------|------------|
| 0.234359 | 28.3 | 9.000 | L1 | 10.4 | 24.0 | 52.3 | Compliance |
| 0.249785 | 33.5 | 9.000 | L1 | 10.3 | 18.3 | 51.8 | Compliance |
| 0.624492 | 22.4 | 9.000 | L1 | 9.8 | 23.6 | 46.0 | Compliance |
| 1.239175 | 27.4 | 9.000 | L1 | 9.7 | 18.6 | 46.0 | Compliance |
| 1.289541 | 27.4 | 9.000 | L1 | 9.7 | 18.6 | 46.0 | Compliance |
| 2.860806 | 26.7 | 9.000 | L1 | 9.8 | 19.3 | 46.0 | Compliance |

Report No.: RDG161114003 Page 13 of 25

AC120V, 60Hz, Neutral:



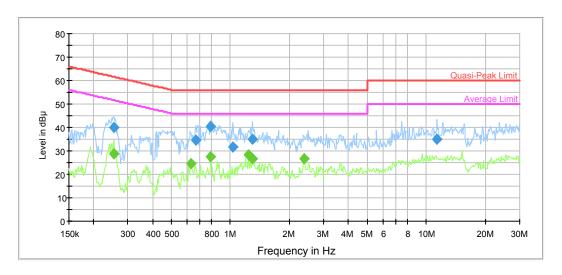
| Frequency (MHz) | QuasiPeak (dBµV) | Bandwidth (kHz) | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) | Comment |
|--------------------|---------------------|--------------------|------|---------------|----------------|-----------------|------------|
| 0.251783 | 38.6 | 9.000 | N | 10.3 | 23.1 | 61.7 | Compliance |
| 0.572086 | 32.0 | 9.000 | N | 9.8 | 24.0 | 56.0 | Compliance |
| 0.687153 | 31.6 | 9.000 | N | 9.8 | 24.4 | 56.0 | Compliance |
| 0.852094 | 31.2 | 9.000 | N | 9.8 | 24.8 | 56.0 | Compliance |
| 12.005609 | 32.5 | 9.000 | N | 9.9 | 27.5 | 60.0 | Compliance |
| 14.420371 | 35.5 | 9.000 | N | 9.9 | 24.5 | 60.0 | Compliance |

| Frequency (MHz) | Average (dBµV) | Bandwidth (kHz) | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) | Comment |
|--------------------|-------------------|--------------------|------|---------------|----------------|-----------------|------------|
| 0.245835 | 34.3 | 9.000 | N | 10.3 | 17.6 | 51.9 | Compliance |
| 0.629488 | 18.9 | 9.000 | N | 9.8 | 27.1 | 46.0 | Compliance |
| 1.190776 | 26.8 | 9.000 | N | 9.7 | 19.2 | 46.0 | Compliance |
| 1.430284 | 24.3 | 9.000 | N | 9.7 | 21.7 | 46.0 | Compliance |
| 1.599078 | 25.9 | 9.000 | N | 9.7 | 20.1 | 46.0 | Compliance |
| 15.247554 | 30.7 | 9.000 | N | 9.9 | 19.3 | 50.0 | Compliance |

Report No.: RDG161114003 Page 14 of 25

High Resolution

AC120V, 60Hz, Line:

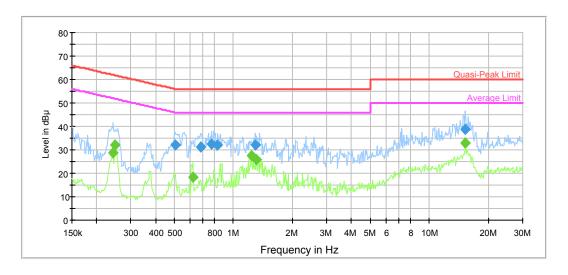


| Frequency (MHz) | QuasiPeak (dBµV) | Bandwidth (kHz) | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) | Comment |
|--------------------|---------------------|--------------------|------|---------------|----------------|-----------------|------------|
| 0.253797 | 40.1 | 9.000 | L1 | 10.3 | 21.5 | 61.6 | Compliance |
| 0.665597 | 34.4 | 9.000 | L1 | 9.8 | 21.6 | 56.0 | Compliance |
| 0.793127 | 40.5 | 9.000 | L1 | 9.8 | 15.5 | 56.0 | Compliance |
| 1.031669 | 31.5 | 9.000 | L1 | 9.8 | 24.5 | 56.0 | Compliance |
| 1.299858 | 34.9 | 9.000 | L1 | 9.7 | 21.1 | 56.0 | Compliance |
| 11.354303 | 35.1 | 9.000 | L1 | 9.9 | 24.9 | 60.0 | Compliance |

| Frequency (MHz) | Average (dBµV) | Bandwidth (kHz) | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) | Comment |
|--------------------|-------------------|--------------------|------|---------------|----------------|-----------------|------------|
| 0.253797 | 28.9 | 9.000 | L1 | 10.3 | 22.7 | 51.6 | Compliance |
| 0.629488 | 24.5 | 9.000 | L1 | 9.8 | 21.5 | 46.0 | Compliance |
| 0.793127 | 27.4 | 9.000 | L1 | 9.8 | 18.6 | 46.0 | Compliance |
| 1.239175 | 28.4 | 9.000 | L1 | 9.7 | 17.6 | 46.0 | Compliance |
| 1.289541 | 26.5 | 9.000 | L1 | 9.7 | 19.5 | 46.0 | Compliance |
| 2.381750 | 26.8 | 9.000 | L1 | 9.8 | 19.2 | 46.0 | Compliance |

Report No.: RDG161114003 Page 15 of 25

AC120V, 60Hz, Neutral:



| Frequency (MHz) | QuasiPeak (dBµV) | Bandwidth (kHz) | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) | Comment |
|--------------------|---------------------|--------------------|------|---------------|----------------|-----------------|------------|
| 0.503608 | 32.2 | 9.000 | N | 9.9 | 23.8 | 56.0 | Compliance |
| 0.681699 | 31.4 | 9.000 | N | 9.8 | 24.6 | 56.0 | Compliance |
| 0.774393 | 32.6 | 9.000 | N | 9.8 | 23.4 | 56.0 | Compliance |
| 0.831967 | 32.2 | 9.000 | N | 9.8 | 23.8 | 56.0 | Compliance |
| 1.289541 | 32.1 | 9.000 | N | 9.7 | 23.9 | 56.0 | Compliance |
| 15.247554 | 38.6 | 9.000 | N | 9.9 | 21.4 | 60.0 | Compliance |

| Frequency (MHz) | Average (dBµV) | Bandwidth (kHz) | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) | Comment |
|--------------------|-------------------|--------------------|------|---------------|----------------|-----------------|------------|
| 0.243884 | 28.8 | 9.000 | N | 10.3 | 23.2 | 52.0 | Compliance |
| 0.247802 | 32.1 | 9.000 | N | 10.3 | 19.7 | 51.8 | Compliance |
| 0.624492 | 18.3 | 9.000 | N | 9.8 | 27.7 | 46.0 | Compliance |
| 1.239175 | 27.4 | 9.000 | N | 9.7 | 18.6 | 46.0 | Compliance |
| 1.310256 | 26.0 | 9.000 | N | 9.7 | 20.0 | 46.0 | Compliance |
| 15.247554 | 33.0 | 9.000 | N | 9.9 | 17.0 | 50.0 | Compliance |

Report No.: RDG161114003 Page 16 of 25

FCC §15.109 - RADIATED SPURIOUS EMISSIONS

Measurement Uncertainty

Compliance or non- compliance with a disturbance limit shall be determined in the following manner:

If U_{lab} is less than or equal to U_{cispr} of Table 2, then:

- -compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit;
- -non compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.

If U_{lab} is greater than U_{cispr} of Table 2, then:

- -compliance is deemed to occur if no measured disturbance level, increased by $(U_{lab} U_{cispr})$, exceeds the disturbance limit;
- -non compliance is deemed to occur if any measured disturbance level, increased by (U_{lab} U_{cispr}), exceeds the disturbance limit.

Based on CISPR 16-4-2-2011, measurement uncertainty of radiated emission at a distance of 3m at Bay Area Compliance Laboratories Corp. (Chengdu) is:

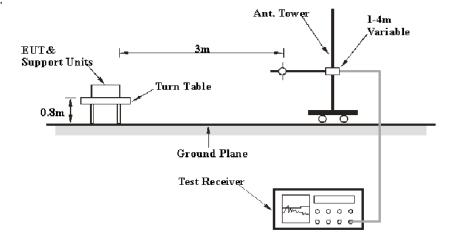
30M~200MHz: ±4.7 dB; 200M~1GHz: ±6.0 dB; 1G~6GHz: ±5.13 dB; 6G~25GHz: ±5.47 dB;

Table 2 – Values of U_{cispr}

| Measurement | | U cispr |
|---|----------------------|----------------|
| Radiated disturbance (electric field strength at an OATS or in a SAC) | (30 MHz to 1000 MHz) | 6.3 dB |
| Radiated disturbance (electric field strength in a FAR) | (1 GHz to 6 GHz) | 5.2 dB |
| Radiated disturbance (electric field strength in a FAR) | (6 GHz to 18 GHz) | 5.5 dB |

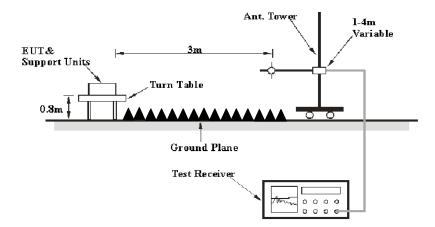
EUT Setup

Below 1GHz:



Report No.: RDG161114003 Page 17 of 25

Above 1GHz:



The radiated emission tests were performed at the 3 meters chamber test site, using the setup accordance with the ANSI C63.4-2014. The specification used was the FCC Part 15.109 Class B limits.

EMI Test Receiver Setup

The system was investigated from 30 MHz to 13.5 GHz.

During the radiated emission test, the EMI test receiver was set with the following configurations:

| Frequency Range | RBW | Video B/W | IF B/W | Detector |
|-------------------|---------|-----------|---------|----------|
| 30 MHz – 1000 MHz | 120 kHz | 300 kHz | 120 kHz | QP |
| Above 1 GHz | 1 MHz | 3 MHz | / | Peak |
| Above i GHZ | 1 MHz | 10 Hz | / | AVG |

Test Procedure

During the radiated emissions, the adapter of EUT was connected to the first AC floor outlet and the other support equipments were connected to the second AC floor outlet.

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

The data was recorded in the Quasi-peak detection mode for below 1 GHz, peak and average detection mode above 1 GHz.

Report No.: RDG161114003 Page 18 of 25

Test Equipment List and Details

| Manufacturer | Description | Model | Serial Number | Calibration Date | Calibration Due Date |
|--------------------|--------------------------|------------|------------------|---------------------|-------------------------|
| Agilent | Amplifier | 8447D | 2944A10442 | 2016-12-02 | 2017-12-01 |
| Rohde & Schwarz | EMI Test Receiver | ESCI | 100028 | 2016-12-02 | 2017-12-01 |
| Sunol Sciences | Broadband Antenna | JB3 | A121808 | 2016-04-10 | 2019-04-09 |
| Rohde & Schwarz | Spectrum Analyzer | FSEM30 | 100018 | 2016-12-02 | 2017-12-01 |
| ETS | Horn Antenna | 3115 | 003-6076 | 2016-12-02 | 2017-12-01 |
| Mini-circuits | Amplifier | ZVA-183-S+ | 771001215 | 2016-05-20 | 2017-05-19 |
| EMCT | Semi-Anechoic Chamber | 966 | N/A | 2015-04-24 | 2018-04-23 |
| N/A | RF Cable (below 1GHz) | NO.1 | N/A | 2016-11-10 | 2017-11-09 |
| N/A | RF Cable (below 1GHz) | NO.4 | N/A | 2016-11-10 | 2017-11-09 |
| N/A | RF Cable (above 1GHz) | NO.2 | N/A | 2016-11-10 | 2017-11-09 |

^{*} **Statement of Traceability:** BACL (Chengdu) attested that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Loss and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading. The basic equation is as follows:

Corrected Amplitude = Meter Reading + Antenna Loss + Cable Loss - Amplifier Gain

The "Margin" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7 dB means the emission is 7 dB below the limit. The equation for margin calculation is as follows:

Margin = Limit – Corrected Amplitude

Report No.: RDG161114003 Page 19 of 25

Test Data

Environmental Conditions

| Temperature: | 20.5~23.1 °C |
|--------------------|---------------|
| Relative Humidity: | 41~50 % |
| ATM Pressure: | 95.2~95.7 kPa |

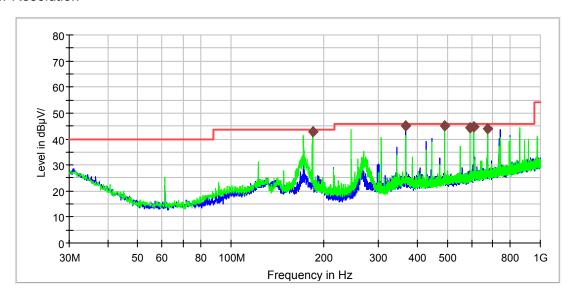
^{*} The testing was performed by Kevin Hu from 2017-02-10 to 2017-03-07.

Test Result: Compliance

Test Mode: Operating (RJ 45 Downloading mode was the worst)

1) Below 1GHz:

Low Resolution

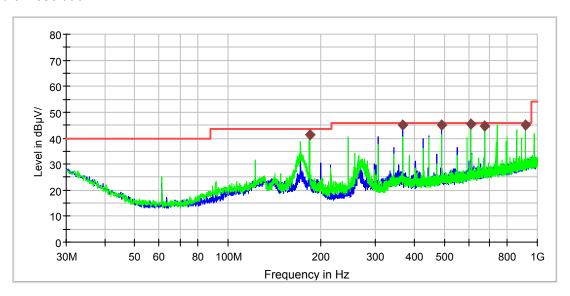


| Frequency (MHz) | QuasiPeak (dBµV/m) | Height (cm) | Polarization | Azimuth (deg) | Corr. (dB) | Margin (dB) | Limit (dBµV/m) |
|--------------------|-----------------------|----------------|--------------|---------------|---------------|----------------|-------------------|
| 183.623750 | 42.8 | 400.0 | V | 11.0 | -8.9 | 0.7 | 43.5 |
| 367.317500 | 44.9 | 400.0 | V | 18.0 | -4.2 | 1.1 | 46.0 |
| 489.780000 | 45.1 | 400.0 | V | 29.0 | -2.2 | 0.9 | 46.0 |
| 594.055000 | 44.3 | 400.0 | V | 328.0 | -0.7 | 1.7 | 46.0 |
| 612.242500 | 44.6 | 400.0 | Н | 24.0 | -0.4 | 1.4 | 46.0 |
| 673.473750 | 43.8 | 400.0 | Н | 61.0 | 0.8 | 2.2 | 46.0 |

Report No.: RDG161114003 Page 20 of 25

Bay Area Compliance Laboratories Corp. (Chengdu)

Middle Resolution

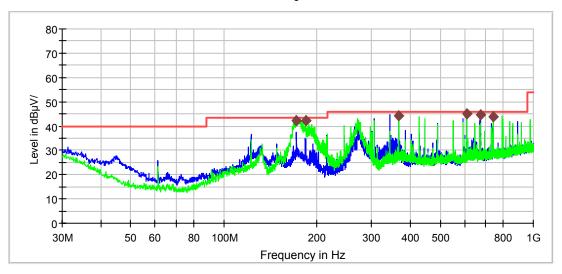


| Frequency (MHz) | QuasiPeak (dBµV/m) | Height (cm) | Polarization | Azimuth (deg) | Corr. (dB) | Margin (dB) | Limit (dBµV/m) |
|--------------------|-----------------------|----------------|--------------|---------------|---------------|----------------|-------------------|
| 183.623750 | 41.4 | 400.0 | V | 357.0 | -8.9 | 2.1 | 43.5 |
| 367.317500 | 44.9 | 400.0 | V | 357.0 | -4.2 | 1.1 | 46.0 |
| 489.780000 | 45.0 | 400.0 | V | 32.0 | -2.2 | 1.0 | 46.0 |
| 612.242500 | 45.4 | 400.0 | Н | 24.0 | -0.4 | 0.6 | 46.0 |
| 673.352500 | 44.6 | 400.0 | Н | 59.0 | 0.8 | 1.4 | 46.0 |
| 918.277500 | 45.1 | 400.0 | Н | 76.0 | 4.5 | 0.9 | 46.0 |

Report No.: RDG161114003 Page 21 of 25

High Resolution

Electric Field Strength with Scans



| Frequency (MHz) | QuasiPeak (dBµV/m) | Height (cm) | Polarization | Azimuth (deg) | Corr. (dB) | Margin (dB) | Limit (dBµV/m) |
|--------------------|-----------------------|----------------|--------------|---------------|---------------|----------------|-------------------|
| 171.741250 | 42.1 | 200.0 | Н | 180.0 | -8.8 | 1.4 | 43.5 |
| 183.623750 | 42.4 | 100.0 | Н | 174.0 | -8.9 | 1.1 | 43.5 |
| 367.196250 | 44.3 | 100.0 | V | 196.0 | -4.2 | 1.7 | 46.0 |
| 612.000000 | 45.0 | 100.0 | V | 142.0 | -0.4 | 1.0 | 46.0 |
| 673.231250 | 44.8 | 100.0 | V | 250.0 | 0.8 | 1.2 | 46.0 |
| 742.586250 | 44.0 | 100.0 | Н | 272.0 | 2.0 | 2.0 | 46.0 |

Report No.: RDG161114003 Page 22 of 25

2) 1GHz-13.5GHz:

Low Resolution

| Frequency | Receiver | | Rx Antenna | | Cable | Amplifier | Corrected | Limit | Margin |
|-----------|----------------|----------|----------------|----------------|--------------|--------------|-----------------------|-------------------|------------------------|
| (MHz) | Reading (dBµV) | Detector | Polar (H/V) | Factor (dB) | loss (dB) | Gain (dB) | Amplitude (dBµV/m) | | |
| 1037.5 | 58.86 | PK | (H/V) | 22.90 | 2.03 | 26.77 | 57.02 | (dBµV/m) 74.00 | (dB) 16.98 |
| 1037.5 | 50.09 | AV | Н | 22.90 | 2.03 | 26.77 | 48.25 | 54.00 | 5.75 |
| 1212.5 | 55.26 | PK | Н | 23.35 | 2.27 | 26.61 | 54.27 | 74.00 | 19.73 |
| 1212.5 | 46.11 | AV | Н | 23.35 | 2.27 | 26.61 | 45.12 | 54.00 | 8.88 |
| 1631.25 | 53.89 | PK | Н | 24.31 | 2.77 | 26.46 | 54.51 | 74.00 | 19.49 |
| 1631.25 | 45.07 | AV | Н | 24.31 | 2.77 | 26.46 | 45.69 | 54.00 | 8.31 |
| 2081.25 | 57.05 | PK | Н | 24.62 | 3.04 | 26.83 | 57.88 | 74.00 | 16.12 |
| 2081.25 | 47.8 | AV | Н | 24.62 | 3.04 | 26.83 | 48.63 | 54.00 | 5.37 |
| 2225 | 56.75 | PK | Н | 24.14 | 3.02 | 26.85 | 57.06 | 74.00 | 16.94 |
| 2225 | 47.84 | AV | Н | 24.14 | 3.02 | 26.85 | 48.15 | 54.00 | 5.85 |
| 2375 | 55.33 | PK | Н | 23.63 | 3.01 | 26.87 | 55.10 | 74.00 | 18.90 |
| 2375 | 46.74 | AV | Н | 23.63 | 3.01 | 26.87 | 46.51 | 54.00 | 7.49 |
| 1037.5 | 60.05 | PK | V | 22.90 | 2.03 | 26.77 | 58.21 | 74.00 | 15.79 |
| 1037.5 | 51.09 | AV | V | 22.90 | 2.03 | 26.77 | 49.25 | 54.00 | 4.75 |
| 1212.5 | 54.55 | PK | V | 23.35 | 2.27 | 26.61 | 53.56 | 74.00 | 20.44 |
| 1212.5 | 45.66 | AV | V | 23.35 | 2.27 | 26.61 | 44.67 | 54.00 | 9.33 |
| 1712.5 | 55.88 | PK | V | 24.44 | 2.83 | 26.54 | 56.61 | 74.00 | 17.39 |
| 1712.5 | 46.59 | AV | V | 24.44 | 2.83 | 26.54 | 47.32 | 54.00 | 6.68 |
| 2081.25 | 57.12 | PK | V | 24.62 | 3.04 | 26.83 | 57.95 | 74.00 | 16.05 |
| 2081.25 | 47.7 | AV | V | 24.62 | 3.04 | 26.83 | 48.53 | 54.00 | 5.47 |
| 2225 | 57.86 | PK | V | 24.14 | 3.02 | 26.85 | 58.17 | 74.00 | 15.83 |
| 2225 | 48.97 | AV | V | 24.14 | 3.02 | 26.85 | 49.28 | 54.00 | 4.72 |
| 2375 | 55.88 | PK | V | 23.63 | 3.01 | 26.87 | 55.65 | 74.00 | 18.35 |
| 2375 | 46.57 | AV | V | 23.63 | 3.01 | 26.87 | 46.34 | 54.00 | 7.66 |

Report No.: RDG161114003 Page 23 of 25

Middle Resolution

| Frequency | Rec | eiver | | ntenna | Cable | Amplifier | Corrected | Limit | Margin |
|-----------|-------------------|----------|----------------|----------------|--------------|--------------|-----------------------|----------|--------|
| (MHz) | Reading (dBµV) | Detector | Polar (H/V) | Factor (dB) | loss (dB) | Gain (dB) | Amplitude (dBµV/m) | (dBµV/m) | (dB) |
| 1337.5 | 56.82 | PK | H | 23.68 | 2.45 | 26.49 | 56.46 | 74.00 | 17.54 |
| 1337.5 | 47.1 | AV | Н | 23.68 | 2.45 | 26.49 | 46.74 | 54.00 | 7.26 |
| 1531.25 | 56.79 | PK | Н | 24.15 | 2.69 | 26.36 | 57.27 | 74.00 | 16.73 |
| 1531.25 | 47.17 | AV | Н | 24.15 | 2.69 | 26.36 | 47.65 | 54.00 | 6.35 |
| 1631.25 | 55.39 | PK | Н | 24.31 | 2.77 | 26.46 | 56.01 | 74.00 | 17.99 |
| 1631.25 | 45.81 | AV | Н | 24.31 | 2.77 | 26.46 | 46.43 | 54.00 | 7.57 |
| 1931.25 | 55.81 | PK | Н | 24.79 | 3.00 | 26.75 | 56.85 | 74.00 | 17.15 |
| 1931.25 | 45.55 | AV | Н | 24.79 | 3.00 | 26.75 | 46.59 | 54.00 | 7.41 |
| 2018.75 | 56.04 | PK | Н | 24.84 | 3.05 | 26.82 | 57.11 | 74.00 | 16.89 |
| 2018.75 | 46.45 | AV | Н | 24.84 | 3.05 | 26.82 | 47.52 | 54.00 | 6.48 |
| 2225 | 55.75 | PK | Н | 24.14 | 3.02 | 26.85 | 56.06 | 74.00 | 17.94 |
| 2225 | 46.06 | AV | Н | 24.14 | 3.02 | 26.85 | 46.37 | 54.00 | 7.63 |
| 1406.25 | 57.95 | PK | V | 23.86 | 2.54 | 26.42 | 57.93 | 74.00 | 16.07 |
| 1406.25 | 47.29 | AV | V | 23.86 | 2.54 | 26.42 | 47.27 | 54.00 | 6.73 |
| 1712.5 | 55.88 | PK | V | 24.44 | 2.83 | 26.54 | 56.61 | 74.00 | 17.39 |
| 1712.5 | 45.65 | AV | V | 24.44 | 2.83 | 26.54 | 46.38 | 54.00 | 7.62 |
| 1931.25 | 56.21 | PK | V | 24.79 | 3.00 | 26.75 | 57.25 | 74.00 | 16.75 |
| 1931.25 | 46.45 | AV | V | 24.79 | 3.00 | 26.75 | 47.49 | 54.00 | 6.51 |
| 2081.25 | 57.12 | PK | V | 24.62 | 3.04 | 26.83 | 57.95 | 74.00 | 16.05 |
| 2081.25 | 46.81 | AV | V | 24.62 | 3.04 | 26.83 | 47.64 | 54.00 | 6.36 |
| 2225 | 56.37 | PK | V | 24.14 | 3.02 | 26.85 | 56.68 | 74.00 | 17.32 |
| 2225 | 46.04 | AV | V | 24.14 | 3.02 | 26.85 | 46.35 | 54.00 | 7.65 |
| 2375 | 56.38 | PK | V | 23.63 | 3.01 | 26.87 | 56.15 | 74.00 | 17.85 |
| 2375 | 46.8 | AV | V | 23.63 | 3.01 | 26.87 | 46.57 | 54.00 | 7.43 |

Report No.: RDG161114003 Page 24 of 25

High Resolution

| | Resolution Receiver | | R _Y Δ ₁ | ntenna | Cable | Amplifier | Corrected | | |
|-----------|---------------------|----------|-------------------------------|--------|-------|-----------|-----------|----------|--------|
| Frequency | Reading | Detector | Polar | Factor | loss | Gain | Amplitude | Limit | Margin |
| (MHz) | (dBµV) | Detector | (H/V) | (dB) | (dB) | (dB) | (dBµV/m) | (dBµV/m) | (dB) |
| 1100 | 58.52 | PK | Н | 23.06 | 2.12 | 26.71 | 56.99 | 74.00 | 17.01 |
| 1100 | 48.26 | AV | Н | 23.06 | 2.12 | 26.71 | 46.73 | 54.00 | 7.27 |
| 1631.25 | 56.39 | PK | Н | 24.31 | 2.77 | 26.46 | 57.01 | 74.00 | 16.99 |
| 1631.25 | 46.23 | AV | Н | 24.31 | 2.77 | 26.46 | 46.85 | 54.00 | 7.15 |
| 1837.5 | 55.79 | PK | Н | 24.64 | 2.93 | 26.66 | 56.70 | 74.00 | 17.30 |
| 1837.5 | 45.61 | AV | Н | 24.64 | 2.93 | 26.66 | 46.52 | 54.00 | 7.48 |
| 2081.25 | 56.55 | PK | Н | 24.62 | 3.04 | 26.83 | 57.38 | 74.00 | 16.62 |
| 2081.25 | 46.76 | AV | Н | 24.62 | 3.04 | 26.83 | 47.59 | 54.00 | 6.41 |
| 2225 | 55.25 | PK | Н | 24.14 | 3.02 | 26.85 | 55.56 | 74.00 | 18.44 |
| 2225 | 45.56 | AV | Н | 24.14 | 3.02 | 26.85 | 45.87 | 54.00 | 8.13 |
| 2375 | 56.83 | PK | Н | 23.63 | 3.01 | 26.87 | 56.60 | 74.00 | 17.40 |
| 2375 | 46.57 | AV | Н | 23.63 | 3.01 | 26.87 | 46.34 | 54.00 | 7.66 |
| 1212.5 | 58.55 | PK | V | 23.35 | 2.27 | 26.61 | 57.56 | 74.00 | 16.44 |
| 1212.5 | 48.37 | AV | V | 23.35 | 2.27 | 26.61 | 47.38 | 54.00 | 6.62 |
| 1531.25 | 56.57 | PK | V | 24.15 | 2.69 | 26.36 | 57.05 | 74.00 | 16.95 |
| 1531.25 | 46.45 | AV | V | 24.15 | 2.69 | 26.36 | 46.93 | 54.00 | 7.07 |
| 1712.5 | 55.88 | PK | V | 24.44 | 2.83 | 26.54 | 56.61 | 74.00 | 17.39 |
| 1712.5 | 45.81 | AV | V | 24.44 | 2.83 | 26.54 | 46.54 | 54.00 | 7.46 |
| 1931.25 | 56.21 | PK | V | 24.79 | 3.00 | 26.75 | 57.25 | 74.00 | 16.75 |
| 1931.25 | 46.58 | AV | V | 24.79 | 3.00 | 26.75 | 47.62 | 54.00 | 6.38 |
| 2081.25 | 56.62 | PK | V | 24.62 | 3.04 | 26.83 | 57.45 | 74.00 | 16.55 |
| 2081.25 | 46.45 | AV | V | 24.62 | 3.04 | 26.83 | 47.28 | 54.00 | 6.72 |
| 2225 | 55.87 | PK | V | 24.14 | 3.02 | 26.85 | 56.18 | 74.00 | 17.82 |
| 2225 | 46.14 | AV | ٧ | 24.14 | 3.02 | 26.85 | 46.45 | 54.00 | 7.55 |

***** END OF REPORT *****

Report No.: RDG161114003 Page 25 of 25