

#### Jinpin Electrical Company Ltd. ZhuHai S.E.Z.

Application For Certification

FCC ID: 2AAHY32DF2013393

#### **LED TV**

Model: IQ32 Additional Models: E32DF2210, E32DF2##0 ("#"can be A-Z or 0-9 or blank)

**Brand Name: IQ, JPE** 

Computer Peripheral

Report No.: 161024030SZN-001

Prepared and Checked by: Approved by:

Sign on file

Jenner Liu Kidd Yang

Engineer Senior Project Engineer
Date: November 11, 2016

- The test results reported in this test report shall refer only to the sample actually tested and shall not refer or be deemed to refer to bulk from which such a sample may be said to have been obtained.
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- The evaluation data of the report will be kept for 3 years from the date of issuance.

TRF No.: FCC 15C\_PC\_b

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#### **MEASUREMENT / TECHNICAL REPORT**

Jinpin Electrical Company Ltd. ZhuHai S.E.Z. MODEL: IQ32

Additional Models: E32DF2210, E32DF2##0 ("#"can be A-Z or 0-9 or blank)

## Manufacturer: CEC INTERNATIONAL INVESTMENT LIMITED ROOM 1905, 19/F., KOWLOON BUILDING, 555 NATHAN ROAD, MONG KOK, KOWLOON, HONGKONG

FCC ID: 2AAHY32DF2013393

| 1 00 10. 1  | EAAIT102D1 2010030   |
|---|--|
| This report concerns (check one:)                         | Original Grant X Class II Change   |
| Equipment Type: <u>JBP-Class B Comput</u>                 | ting Device Peripheral   |
| Deferred grant requested per 47 CFR (                     | 0.457(d)(1)(ii)? Yes NoX   |
|   | If yes, defer until:date   |
| Company Name agrees to notify the C                       | ommission by:date  |
| of the intended date of announcement that date.           | date tof the product so that the grant can be issued or  |
| Transition Rules Request per 15.37?                       | Yes NoX  |
| If no, assumed Part 15, Subpart B for Edition] provision. | unintentional radiator – the new 47 CFR [10-01-15  |
| Report prepared by:                                       |  |
|   | Jenner Liu Intertek Testing Services Shenzhen Ltd. Kejiyuan Branch 6F, D Block, Huahan Building, Langshan Road Nanshan District, Shenzhen, P. R. China Phone: (86 755) 8614 0639 Fax: (86 755) 8601 6751 |

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| Exhibit Type        | File Description           | Filename             |
|---------------------|----------------------------|----------------------|
| Test Report         | Test Report                | report.pdf           |
| Test Setup Photo    | Radiated photos            | radiated photos.pdf  |
| Test Setup Photo    | Conducted photos           | conducted photos.pdf |
| External Photo      | External Photos            | external photos.pdf  |
| Internal Photo      | Internal Photos            | internal photos.pdf  |
| Block Diagram       | Block Diagram              | block.pdf            |
| ID Label / Location | Label Artwork and Location | label.pdf            |
| User Manual         | User Manual                | manual.pdf           |
| Cover Letter        | Confidential Letter        | request.pdf          |
| Cover Letter        | Letter of Agency           | agency.pdf           |

## EXHIBIT 1 GENERAL DESCRIPTION

#### 1.0 **General Description**

#### 1.1 Product Description

The Equipment Under Test (EUT) is a LED TV. The device can be used to connect PC by VGA port and HDMI port. The EUT is powered by AC100-240V, 50/60Hz, 60W.

The Model: E32DF2210, E32DF2##0 ("#"can be A-Z or 0-9 or blank) are the same as the Model: IQ32 in hardware and electrical aspect. The models are difference in packaging and marketing purpose only.

#### 1.2 Related Submittal(s) Grants

This is an application for certification of a computer peripheral. Other digital functions were reported in the verification report: 161024028SZN-002.

#### 1.3 Test Methodology

Both AC mains line-conducted and radiated emission measurements were performed according to the procedures in ANSI C63.4 (2014). Radiated emission measurement was performed in Semi-anechoic chamber and conducted emission measurement was performed in shield room. For radiated emission measurement, preliminary scans were performed in the semi-anechoic chamber only to determine the worst case modes. All radiated tests were performed at an antenna to EUT distance of 3 meters, unless stated otherwise in the "Justification Section" of this Application.

#### 1.4 Test Facility

The Semi-anechoic chamber and shielding room used to collect the radiated data and conducted data are **Intertek Testing Services Shenzhen Ltd. Kejiyuan Branch** and located at 6F, D Block, Huahan Building, Langshan Road, Nanshan District, Shenzhen, P. R. China. This test facility and site measurement data have been fully placed on file with the FCC (Registration Number: 242492).

## EXHIBIT 2 SYSTEM TEST CONFIGURATION

#### 2.0 **System Test Configuration**

#### 2.1 Justification

The system was configured for testing in a typical fashion (as a customer would normally use it), and in the confines as outlined in ANSI C63.4 (2014).

The device was powered by AC 120V/60Hz during the test. Only the worst case data was reported in this report.

For maximizing emissions, the EUT was rotated through 360°, the antenna height was varied from 1 meter to 4 meters above the ground plane, and the antenna polarization was changed. The step by step procedure for maximizing emissions led to the data reported in Exhibit 3.0.

The rear of unit shall be flushed with the rear of the table.

The equipment under test (EUT) was configured for testing in a typical fashion (as a customer would normally use it). The EUT was placed on turn table, which enabled the engineer to maximize emissions through its placement in the three orthogonal axes.

The frequency range from 30MHz to 2GHz was searched for spurious emissions from the device. Only those emissions reported were detected. All other emissions were at least 20 dB below the applicable limits.

#### 2.2 EUT Exercising Software

N/A

#### 2.3 Special Accessories

N/A

#### 2.4 Equipment Modification

Any modifications installed previous to testing by Jinpin Electrical Company Ltd. ZhuHai S.E.Z. will be incorporated in each production model sold / leased in the United States.

No modifications were installed by Intertek Testing Services Shenzhen Ltd. Kejiyuan Branch.

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## 2.5 Measurement Uncertainty

When determining the test conclusion, the Measurement Uncertainty of test has been considered.

## 2.6 Support Equipment List and Description

This product was tested in the following configuration:

#### Refer List:

| Description       | Manufacturer | Model No.                |
|-------------------|--------------|--------------------------|
| Laptop            | HP           | ProBook 430 G1           |
| Hard Disk         | Smart.drive  | HD-003                   |
| RJ45 Cable        | N/A          | Unshielded, Length 450cm |
| USB Cable         | Smart.drive  | Unshielded, Length 155cm |
| USB Memory        | TOSHIBA      | UHYBS-004G-BL            |
| Dummy Load        | N/A          | N/A                      |
| HDMI Cable*2      | N/A          | UnShielded, Length 180cm |
| AV Cable*2        | N/A          | Unshielded, Length 120cm |
| VGA Cable         | N/A          | UnShielded, Length 180cm |
| PC Audio Cable    | N/A          | UnShielded, Length 180cm |
| Headphone         | N/A          | Unshielded, Length 120cm |
| Tuner Resister    | N/A          | 75ohm                    |
| Remote controller | TCL          | N/A                      |

## **EXHIBIT 3**

## **EMISSION RESULTS**

#### 3.0 **Emission Results**

Data is included worst case configuration (the configuration which resulted in the highest emission levels). A sample calculation, configuration photographs and data tables of the emissions are included.

#### 3.1 Field Strength Calculation

The field strength is calculated by adding the reading on the Spectrum Analyzer to the factors associated with preamplifiers (if any), antennas, cables, pulse desensitization and average factors (when specified limit is in average and measurements are made with peak detectors). A sample calculation is included below.

$$FS = RA + AF + CF - AG$$

where FS = Field Strength in  $dB\mu V/m$ 

RA = Receiver Amplitude (including preamplifier) in dBμV

CF = Cable Attenuation Factor in dB

AF = Antenna Factor in dB/m AG = Amplifier Gain in dB

In the radiated emission table which follows, the reading shown on the data table may reflect the preamplifier gain. An example of the calculations, where the reading does not reflect the preamplifier gain, follows:

$$FS = RA + AF + CF - AG$$

#### 3.1 Field Strength Calculation (cont'd)

#### **Example**

Assume a receiver reading of  $62.0dB\mu V$  is obtained. The antenna factor of 7.4dB/m and cable factor of 1.6dB is added. The amplifier gain of 29dB is subtracted. The net field strength for comparison to the appropriate emission limit is  $42dB\mu V/m$ . This value in  $dB\mu V/m$  was converted to its corresponding level in  $\mu V/m$ .

 $RA = 62.0dB\mu V$  AF = 7.4dB/m CF = 1.6dBAG = 29.0dB

 $FS = 62 + 7.4 + 1.6 - 29 = 42dB\mu V/m$ 

Level in  $\mu V/m = Common Antilogarithm [(42dB<math>\mu V/m)/20] = 125.9 \mu V/m$ 

TRF No.: FCC 15C\_PC\_b FCC ID: 2AAHY32DF2013393 Report No.: 161024030SZN-001

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3.2 Radiated Emission Configuration Photograph

Worst Case Radiated Emission At 75.255MHz (VGA Mode)

For electronic filing, the worst case radiated emission configuration photograph is saved with filename: radiated photos.pdf.

#### 3.3 Radiated Emission Data

The data on the following page lists the significant emission frequencies, the limit and the margin of compliance. Numbers with a minus sign are below the limit.

Judgement: Passed by 3.2dB margin (VGA Mode)

| TEST PERSONNEL:                            |
|--|
| Sign on file                               |
| Jenner Liu, Engineer<br>Typed/Printed Name |
| November 09, 2016                          |
| Date                                       |

Company: Jinpin Electrical Company Ltd. ZhuHai S.E.Z.

Date of Test: November 09, 2016

Model: IQ32

Operating Mode: VGA

Table 1

#### **Radiated Emissions**

| Polarization | Frequency | Reading | Pre- | Antenna | Net      | Limit    | Margin |
|--------------|-----------|---------|------|---------|----------|----------|--------|
|              | (MHz)     | (dBµV)  | Amp  | Factor  | at 3m    | at 3m    | (dB)   |
|              |           |         | Gain | (dB)    | (dBµV/m) | (dBµV/m) |        |
|              |           |         | (dB) |         |          |          |        |
| Horizontal   | 84.320    | 46.0    | 20.0 | 8.9     | 34.9     | 40.0     | -5.1   |
| Horizontal   | 250.190   | 43.1    | 20.0 | 14.1    | 37.2     | 46.0     | -8.8   |
| Horizontal   | 322.552   | 41.6    | 20.0 | 16.0    | 37.6     | 46.0     | -8.4   |
| Horizontal   | 1200.000  | 26.0    | 20.0 | 24.0    | 30.0     | 54.0     | -24.0  |
| Horizontal   | 1400.000  | 24.9    | 20.0 | 25.2    | 30.1     | 54.0     | -23.9  |
| Horizontal   | 1998.000  | 20.1    | 20.0 | 29.8    | 29.9     | 54.0     | -24.1  |
| Vertical     | 75.255    | 48.4    | 20.0 | 8.4     | 36.8     | 40.0     | -3.2   |
| Vertical     | 84.320    | 46.2    | 20.0 | 8.9     | 35.1     | 40.0     | -4.9   |
| Vertical     | 241.571   | 45.2    | 20.0 | 13.6    | 38.8     | 46.0     | -7.2   |
| Vertical     | 1401.000  | 25.0    | 20.0 | 25.0    | 30.0     | 54.0     | -24.0  |
| Vertical     | 1896.000  | 21.9    | 20.0 | 28.4    | 30.3     | 54.0     | -23.7  |
| Vertical     | 1998.000  | 21.9    | 20.0 | 29.1    | 31.0     | 54.0     | -23.0  |

#### NOTES:

- 1. Quasi-Peak detector is used for frequency up to 1GHz and Peak detector is used for frequency from 1-2GHz.
- 2. All measurements were made at 3 meters.
- 3. Negative value in the margin column shows emission below limit.
- 4. All emissions up to 1GHz are below the QP limit and all emissions between 1-2GHz are below the AV limit.

Test Engineer: Jenner Liu

Company: Jinpin Electrical Company Ltd. ZhuHai S.E.Z.

Date of Test: November 09, 2016

Model: IQ32

Operating Mode: HDMI In

Table 1

#### **Radiated Emissions**

| Polarization | Frequency | Reading | Pre- | Antenna | Net      | Limit    | Margin |
|--------------|-----------|---------|------|---------|----------|----------|--------|
|              | (MHz)     | (dBµV)  | Amp  | Factor  | at 3m    | at 3m    | (dB)   |
|              |           |         | Gain | (dB)    | (dBµV/m) | (dBµV/m) |        |
|              |           |         | (dB) |         |          |          |        |
| Horizontal   | 191.505   | 48.0    | 20.0 | 11.2    | 39.2     | 43.5     | -4.3   |
| Horizontal   | 323.425   | 42.8    | 20.0 | 16.1    | 38.9     | 46.0     | -7.1   |
| Horizontal   | 430.000   | 38.2    | 20.0 | 18.9    | 37.1     | 46.0     | -8.9   |
| Horizontal   | 1200.000  | 26.5    | 20.0 | 24.0    | 30.5     | 54.0     | -23.5  |
| Horizontal   | 1600.000  | 24.4    | 20.0 | 26.6    | 31.0     | 54.0     | -23.0  |
| Horizontal   | 1890.000  | 26.1    | 20.0 | 29.0    | 35.1     | 54.0     | -18.9  |
| Vertical     | 38.635    | 41.5    | 20.0 | 13.4    | 34.9     | 40.0     | -5.1   |
| Vertical     | 191.020   | 43.8    | 20.0 | 11.2    | 35.0     | 43.5     | -8.5   |
| Vertical     | 416.545   | 35.1    | 20.0 | 18.9    | 34.0     | 46.0     | -12.0  |
| Vertical     | 1196.000  | 29.4    | 20.0 | 23.6    | 33.0     | 54.0     | -21.0  |
| Vertical     | 1896.000  | 26.9    | 20.0 | 28.4    | 35.3     | 54.0     | -18.7  |
| Vertical     | 1998.000  | 21.1    | 20.0 | 29.1    | 30.2     | 54.0     | -23.8  |

#### NOTES:

- 1. Quasi-Peak detector is used for frequency up to 1GHz and Peak detector is used for frequency from 1-2GHz.
- 2. All measurements were made at 3 meters.
- 3. Negative value in the margin column shows emission below limit.
- 4. All emissions up to 1GHz are below the QP limit and all emissions between 1-2GHz are below the AV limit.

Test Engineer: Jenner Liu

- 3.4 Conducted Emission at Mains Terminal
- 3.5 Conducted Emission Configuration Photograph

Worst Case Conducted Configuration at 17.182 MHz(VGA Mode)

For electronic filing, the worst case conducted emission configuration photograph is saved with filename: conducted photos.pdf.

#### 3.6 Conducted Emission Data

Judgement: Passed by 3.4 dB margin(VGA Mode)

#### **TEST PERSONNEL:**

Sign on file

Jenner Liu, Engineer Typed/Printed Name

November 09, 2016

Date

Company: Jinpin Electrical Company Ltd. ZhuHai S.E.Z.

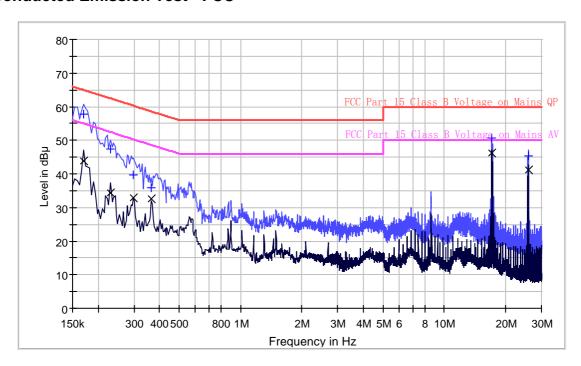
Date of Test: November 09, 2016

Model: IQ32

Operating Mode: VGA

Phase: Live

**Conducted Emission Test - FCC** 



## **Result Table QP**

| Frequency (MHz) | QuasiPeak<br>(dB µ V) | Line | Corr.<br>(dB) | Margin<br>(dB) | Limit<br>(dB µ V) |
|-----------------|-----------------------|------|---------------|----------------|-------------------|
| 0.170           | 57.9                  | L1   | 9.6           | 7.1            | 65.0              |
| 0.230           | 47.5                  | L1   | 9.7           | 14.9           | 62.4              |
| 0.298           | 39.8                  | L1   | 9.7           | 20.5           | 60.3              |
| 0.366           | 35.8                  | L1   | 9.7           | 22.8           | 58.6              |
| 17.182          | 50.7                  | L1   | 10.2          | 9.3            | 60.0              |
| 25.822          | 45.5                  | L1   | 10.7          | 14.5           | 60.0              |

#### **Result Table AV**

| Frequency | Average  | Line | Corr. | Margin | Limit    |
|-----------|----------|------|-------|--------|----------|
| (MHz)     | (dB µ V) |      | (dB)  | (dB)   | (dB μ V) |
| 0.170     | 44.0     | L1   | 9.6   | 11.0   | 55.0     |
| 0.230     | 34.4     | L1   | 9.7   | 18.0   | 52.4     |
| 0.298     | 33.0     | L1   | 9.7   | 17.3   | 50.3     |
| 0.366     | 32.5     | L1   | 9.7   | 16.1   | 48.6     |
| 17.182    | 46.2     | L1   | 10.2  | 3.8    | 50.0     |
| 25.822    | 41.0     | L1   | 10.7  | 9.0    | 50.0     |

Test Engineer: Jenner Liu

Company: Jinpin Electrical Company Ltd. ZhuHai S.E.Z.

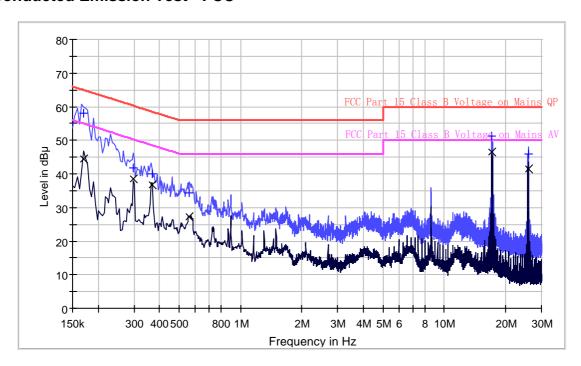
Date of Test: November 09, 2016

Model: IQ32

Operating Mode: VGA

Phase: Neutral

**Conducted Emission Test - FCC** 



## **Result Table QP**

| Frequency (MHz) | QuasiPeak<br>(dB µ V) | Line | Corr.<br>(dB) | Margin<br>(dB) | Limit<br>(dB µ V) |
|-----------------|-----------------------|------|---------------|----------------|-------------------|
| 0.170           | 58.0                  | N    | 9.6           | 7.0            | 65.0              |
| 0.298           | 41.8                  | N    | 9.7           | 18.5           | 60.3              |
| 0.370           | 40.0                  | N    | 9.7           | 18.5           | 58.5              |
| 0.562           | 34.4                  | N    | 9.7           | 21.6           | 56.0              |
| 17.182          | 51.2                  | N    | 10.2          | 8.8            | 60.0              |
| 25.822          | 45.9                  | N    | 10.7          | 14.1           | 60.0              |

#### **Result Table AV**

| Frequency | Average  | Line | Corr. | Margin | Limit    |
|-----------|----------|------|-------|--------|----------|
| (MHz)     | (dB µ V) |      | (dB)  | (dB)   | (dB µ V) |
| 0.170     | 44.3     | N    | 9.6   | 10.7   | 55.0     |
| 0.298     | 38.5     | N    | 9.7   | 11.8   | 50.3     |
| 0.370     | 36.6     | N    | 9.7   | 11.9   | 48.5     |
| 0.562     | 27.4     | N    | 9.7   | 18.6   | 46.0     |
| 17.182    | 46.6     | N    | 10.2  | 3.4    | 50.0     |
| 25.822    | 41.5     | N    | 10.7  | 8.5    | 50.0     |

Test Engineer: Jenner Liu

Company: Jinpin Electrical Company Ltd. ZhuHai S.E.Z.

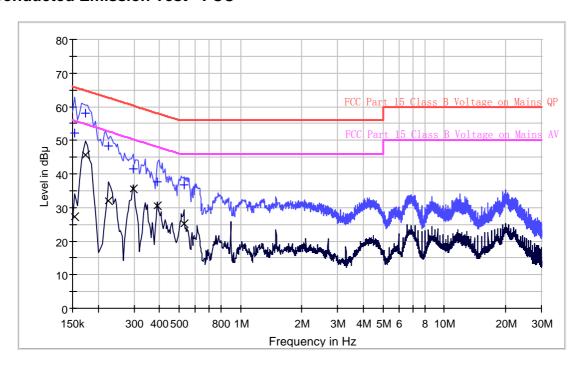
Date of Test: November 09, 2016

Model: IQ32

Operating Mode: HDMI In

Phase: Live

**Conducted Emission Test - FCC** 



## **Result Table QP**

| Frequency<br>(MHz) | QuasiPeak<br>(dB µ V) | Line | Corr.<br>(dB) | Margin<br>(dB) | Limit<br>(dB µ V) |
|--------------------|-----------------------|------|---------------|----------------|-------------------|
| 0.154              | 52.3                  | L1   | 9.6           | 13.5           | 65.8              |
| 0.174              | 58.0                  | L1   | 9.7           | 6.8            | 64.8              |
| 0.226              | 48.3                  | L1   | 9.7           | 14.3           | 62.6              |
| 0.298              | 41.5                  | L1   | 9.7           | 18.8           | 60.3              |
| 0.390              | 37.8                  | L1   | 9.7           | 20.3           | 58.1              |
| 0.526              | 36.7                  | L1   | 9.7           | 19.3           | 56.0              |

#### **Result Table AV**

| Frequency | Average  | Line | Corr. | Margin | Limit    |
|-----------|----------|------|-------|--------|----------|
| (MHz)     | (dB µ V) |      | (dB)  | (dB)   | (dB μ V) |
| 0.154     | 27.2     | L1   | 9.6   | 28.6   | 55.8     |
| 0.174     | 45.7     | L1   | 9.7   | 9.1    | 54.8     |
| 0.226     | 32.0     | L1   | 9.7   | 20.6   | 52.6     |
| 0.298     | 35.6     | L1   | 9.7   | 14.7   | 50.3     |
| 0.390     | 30.6     | L1   | 9.7   | 17.5   | 48.1     |
| 0.526     | 25.1     | L1   | 9.7   | 20.9   | 46.0     |

Test Engineer: Jenner Liu

Company: Jinpin Electrical Company Ltd. ZhuHai S.E.Z.

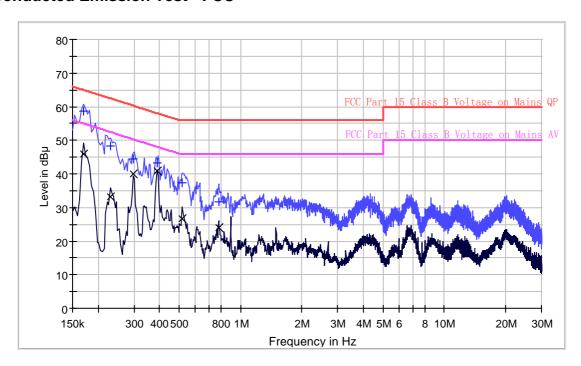
Date of Test: November 09, 2016

Model: IQ32

Operating Mode: HDMI In

Phase: Neutral

**Conducted Emission Test - FCC** 



## **Result Table QP**

| Frequency<br>(MHz) | QuasiPeak<br>(dB µ V) | Line | Corr.<br>(dB) | Margin<br>(dB) | Limit<br>(dB µ V) |
|--------------------|-----------------------|------|---------------|----------------|-------------------|
| 0.170              | 58.5                  | N    | 9.6           | 6.5            | 65.0              |
| 0.230              | 48.2                  | N    | 9.7           | 14.2           | 62.4              |
| 0.298              | 44.3                  | N    | 9.7           | 16.0           | 60.3              |
| 0.390              | 43.3                  | N    | 9.7           | 14.8           | 58.1              |
| 0.518              | 37.3                  | N    | 9.7           | 18.7           | 56.0              |
| 0.786              | 31.6                  | N    | 9.7           | 24.4           | 56.0              |

#### **Result Table AV**

| Frequency | Average  | Line | Corr. | Margin | Limit    |
|-----------|----------|------|-------|--------|----------|
| (MHz)     | (dB µ V) |      | (dB)  | (dB)   | (dB µ V) |
| 0.170     | 45.8     | N    | 9.6   | 9.2    | 55.0     |
| 0.230     | 33.3     | N    | 9.7   | 19.1   | 52.4     |
| 0.298     | 40.0     | N    | 9.7   | 10.3   | 50.3     |
| 0.390     | 40.9     | N    | 9.7   | 7.2    | 48.1     |
| 0.518     | 26.7     | N    | 9.7   | 19.3   | 46.0     |
| 0.786     | 24.0     | N    | 9.7   | 22.0   | 46.0     |

Test Engineer: Jenner Liu

## EXHIBIT 4 EQUIPMENT PHOTOGRAPHS

## 4.0 **Equipment Photographs**

For electronic filing, photographs of the tested EUT are saved with filename: external photos.pdf and internal photos.pdf.

# EXHIBIT 5 PRODUCT LABELLING

## 5.0 **Product Labelling**

For electronics filing, the FCC ID label artwork and the label location are saved with filename: label.pdf.

## EXHIBIT 6 TECHNICAL SPECIFICATIONS

## 6.0 <u>Technical Specifications</u>

For electronic filing, the block diagram of the tested EUT is saved with filename: block.pdf.

# EXHIBIT 7 INSTRUCTION MANUAL

#### 7.0 **Instruction Manual**

For electronic filing, a preliminary copy of the Instruction Manual is saved with filename: manual.pdf.

This manual will be provided to the end-user with each unit sold / leased in the United States.

## **EXHIBIT 8**

## **MISCELLANEOUS INFORMATION**

## 8.0 <u>Miscellaneous Information</u>

This miscellaneous information includes emission measuring procedure.

#### 8.1 Emissions Test Procedures

The following is a description of the test procedure used by Intertek Testing Services in the measurements of computer peripheral operating under Part 15, Subpart B rules.

The test set-up and procedures described below are designed to meet the requirements of ANSI C63.4 – 2014.

The computer peripheral equipment under test (EUT) is placed on a styrene turntable which is four feet in diameter and approximately 0.8 meter in height above the ground plane. During the radiated emissions test, the turntable is rotated and any cables leaving the EUT are manipulated to find the configuration resulting in maximum emissions. The antenna height and polarization are varied during the testing to search for maximum signal levels. The height of the antenna is varied from one to four meters.

Detector function for radiated emissions are in QP mode from the frequency band 30MHz to 1GHz with RBW setting 120kHz and in PK & AV mode from frequency band 1GHz to 2GHz with RBW setting 1MHz. Detector function for conducted emissions are in QP & AV mode and IFBW setting is 9kHz from the frequency band 150kHz to 30MHz.

For radiated emission, the frequency range scanned is 30MHz to 2GHz. For line-conducted emissions, the range scanned is 150kHz to 30MHz with RBW setting 9KHz.

## 8.1 Emissions Test Procedures (cont'd)

The EUT is warmed up for 15 minutes prior to the test.

Conducted measurements are made as described in ANSI C63.4 – 2014.

## EXHIBIT 9

## **TEST EQUIPMENT LIST**

## 9.0 Test Equipment List

| Equipment No. | Equipment              | Manufacturer | Model<br>No.     | Serial<br>No. | Cal. Date   | Due Date    |
|---------------|------------------------|--------------|------------------|---------------|-------------|-------------|
| SZ061-12      | Biconilog<br>Antenna   | ETS          | 3142E            | 00166158      | 09-Sep-2016 | 09-Sep-2017 |
| SZ061-08      | Horn<br>Antenna        | ETS          | 3115             | 00092346      | 12-Oct-2016 | 12-Oct-2017 |
| SZ056-03      | Spectrum<br>Analyzer   | R&S          | FSP30            | 101148        | 14-Jun-2016 | 14-Jun-2017 |
| SZ185-01      | EMI<br>Receiver        | R&S          | ESCI             | 100547        | 23-Jan-2016 | 23-Jan-2017 |
| SZ188-01      | Anechoic<br>Chamber    | ETS          | RFD-F/A-<br>100  | 4102          | 16-Apr-2016 | 16-Apr-2018 |
| SZ062-02      | RF Cable               | RADIALL      | RG 213U          |               | 08-Jul-2016 | 08-Jan-2017 |
| SZ062-05      | RF Cable               | RADIALL      | 0.04-<br>26.5GHz |               | 26-Sep-2016 | 26-Mar-2017 |
| SZ062-12      | RF Cable               | RADIALL      | 0.04-<br>26.5GHz |               | 26-Sep-2016 | 26-Mar-2017 |
| SZ185-02      | EMI Test<br>Receiver   | R&S          | ESCI             | 100692        | 01-Nov-2016 | 01-Nov-2017 |
| SZ187-01      | Two-Line V-<br>Network | R&S          | ENV216           | 100072        | 01-Nov-2016 | 01-Nov-2017 |
| SZ187-02      | Two-Line V-<br>Network | R&S          | ENV216           | 100073        | 01-Jul-2016 | 01-Jul-2017 |
| SZ188-03      | Shielding<br>Room      | ETS          | RFD-100          | 4100          | 17-Aug-2016 | 17-Aug-2018 |

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