# Application for FCC Certificate
On Behalf of
Hisense Electric Co., Ltd.

## LED LCD TV

| Brand | Model No. |
|---|---|
| Hisense | HU43K300UW |
| | 43H7C |
| | 43H7C+ |

FCC ID : W9HLCDD0048

Prepared For : Hisense Electric Co., Ltd.
No.218 Qianwangang Road, Economy & Technology Development Zone, Qingdao, China

Prepared By : Audix Technology (Shanghai) Co., Ltd.
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Report No. : ACI-F15252
Date of Test : Dec 15 – 18, 2015
Date of Report : Dec 25, 2015

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# TEST REPORT FOR FCC CERTIFICATE

Applicant : Hisense Electric Co., Ltd.

Manufacturer : Hisense Electric Co., Ltd.

Factory #1 : Hisense Electric Co., Ltd.

Factory #2 : Tatung Mexico S.A. de C.V.

Factory #3 : HISENSE ELECTRONICA MEXICO, S.A. DE C.V.

EUT Description : LED LCD TV

| Model No. | Brand | Power Supply |
|---|---|---|
| HU43K300UW | Hisense | 120V/60Hz |
| 43H7C | | |
| 43H7C+ | | |

Test Procedure Used:

*FCC RULES AND REGULATIONS PART 15 SUBPART B CLASS B OCTOBER 2014 AND ANSI C63.4-2003*

The device described above is tested by Audix Technology (Shanghai) Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart B (Class B) limits both radiated and conducted emissions.

The test results are contained in this test report and Audix Technology (Shanghai) Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements. This report shows that the EUT (M/N: Refer to Sec2.1) which was tested in 3m anechoic chamber Dec 15 – 18, 2015 is technically compliance with the FCC official limits also.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Audix Technology (Shanghai) Co., Ltd.

This report contains data that are not covered by the NVLAP accreditation.

This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

***The test results for EUT's TV functions are contained in No.F15251, a Verification report.***

Date of Test : Dec 15 – 18, 2015 Date of Report : Dec 25, 2015

Producer : HUIMIN YAN / Assistant

Review : SAMMY CHEN / Manager

For and on behalf of Audix Technology (Shanghai) Co., Ltd.

Signatory : Authorized Signature EMC BYRON KWO / Assistant General Manager

# 1 SUMMARY OF STANDARDS AND RESULTS

## 1.1 Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below:

| Description of Test Item | Standard | Limits | Results |
|---|---|---|---|
| **EMISSION** | | | |
| Conducted Disturbance at the Mains Terminal | FCC RULES AND REGULATIONS PART 15 SUBPART B OCTOBER 2014 AND ANSI C63.4-2003 | 15.107(a) Class B | Pass |
| Radiated Disturbance | FCC RULES AND REGULATIONS PART 15 SUBPART B OCTOBER 2014 AND ANSI C63.4-2003 | 15.109(a) Class B | Pass |

# 2 GENERAL INFORMATION

## 2.1 Description of Equipment Under Test

Description : LED LCD TV

Type of EUT : ☑ Production ☐ Pre-product ☐ Pro-type

| Brand | Model No. |
|---|---|
| Hisense | HU43K300UW |
| | 43H7C |
| | 43H7C+ |

Note#1 : The above models are all the same except for model number.HU43K300UW model is tested and recorded in the report.

Note#2 : "+ " represents any numerals, for different sales area.

Applicant : Hisense Electric Co., Ltd.
No.218 Qianwangang Road, Economy & Technology Development Zone, Qingdao, China

Manufacturer : same as Applicant

Factory #1 : same as Applicant

Factory #2 : Tatung Mexico S.A. de C.V.
Miguel Catalán 420, Parque Industrial Rio Bravo, Cd. Juarez, Chih., CP 32557

Factory #3 : HISENSE ELECTRONICA MEXICO, S.A. DE C.V.
Blvd. Sharp #3510 Parque Industrial Rosarito, C.P. 22710 Playas de Rosarito, B.C.

LCD Panel : Manufacturer : Hisense
M/N : HD426DU-B51 (010)

Tuner : Manufacturer : XuGuang Tech. Co., Ltd.
M/N : HFT-96S3/W11FJ2H\ROH

Max Resolution : 3840*2160@60Hz

HDMI Cable*4 (Lab provide) : Shielded, Detachable, 1.50m

Power Cord : Unshielded, Detachable, 1.80m

LAN Cable : Shielded, Detachable, 1.50m

| | | |
|---|---|---|
| USB Cable*3 (Lab provide) | : | Shielded, Detachable, 1.00m, without core |
| MHL to HDMI Adaptor: with RCP (Lab provide) | | Manufacture: CE-Link<br>M/N: 3002 |

**Remark:**
The EUT is a LED LCD TV which input/output ports as follows:

Side Port:
(1) One USB3 Port
: Connected with Hard-Disk #1
(2) One HDMI2/ARC Port
: Connected with DVD PLAYER #2
(3) One HDMI1/MHL Port
: Connected with Smart Mobile Phone
(4) One Audio out Port
: Connected with Earphone
(5) One Service Port
: Do not open to customer
(6) One USB1 Port
: Connected with Hard-Disk #2
(7) One USB2 Port
: Connected with Hard-Disk #3
(8) One ANT/CABLE IN Port
: Connected with Antenna or ATSC SG / TV SG

Back Port:
(9) One LAN Port
: Connected with PC
(10) One HDMI3 Port
: Connected with DVD PLAYER #1
(11) One HDMI4 Port
: Connected with PC
(12) One Digital Audio Out Port
: Connected with DVD PLAYER #1
(13) One component of YPbPr Port
: Connected with DVD PLAYER #2
(14) One AV Port
: Connected with DVD PLAYER #1

## 2.2 Peripherals

### 2.2.1 PC

| | | |
|---|---|---|
| Manufacturer | : | HP |
| Model Number | : | dx7400MT |
| Serial Number | : | CNG8130K89 |
| Power Cord | : | Unshielded, Detachable, 1.8m |
| Certificate | : | FCC DoC; CE/EMC; VCCI; C-Tick; |

2.2.2 Keyboard

| | | |
|---|---|---|
| Manufacturer | : | Microsoft |
| Model Number | : | RT2300 |
| Serial Number | : | 7668200662248 |
| Data Cable | : | Shielded, undetachable, 1.8m |
| Certificate | : | CE/EMC, FCC DoC, VCCI, MIC, C-Tick, BSMI |

2.2.3 Mouse

| | | |
|---|---|---|
| Manufacturer | : | Microsoft |
| Model Number | : | RT2300 |
| Serial Number | : | 6965712071551 |
| Data Cable | : | Shielded, Undetachable, 1.8m. |
| Certificate | : | CE/EMC, FCC DoC, VCCI, MIC, C-Tick, BSMI |

2.2.4 Modem

| | | |
|---|---|---|
| Manufacturer | : | TP-LINK |
| Model Number | : | TM-EC5658V |
| Serial Number | : | 07123301053 |
| Data Cable | : | Shielded, Detachable, 1.8m |
| Certificate | : | CCC |

2.2.5 Earphone

| | | |
|---|---|---|
| Manufacturer | : | audio-technica |
| Model Number | : | ATH-CKL200 |

2.2.6 TV Signal Generator

| | | |
|---|---|---|
| Manufacturer | : | FLUKE |
| Model Number | : | 54200M01 |
| Serial Number | : | 814008 |

2.2.7 ATSC Signal Generator

| | | |
|---|---|---|
| Manufacturer | : | SENCORE |
| Model Number | : | ATSC997 |
| Serial Number | : | 6790071 |

2.2.8 DVD PLAYER #1

| | | |
|---|---|---|
| Manufacturer | : | PHILIPS |
| Model Number | : | DVP3986K/93 |
| Serial Number | : | KX1A0902120108 |
| Certificate | : | CCC |

2.2.9 DVD PLAYER #2

| | | |
|---|---|---|
| Manufacturer | : | PHILIPS |
| Model Number | : | DVP3986K/93 |
| Serial Number | : | KX1A0902120082 |
| Certificate | : | CCC |

2.2.10 Hard Disk #1

| | | |
|---|---|---|
| Manufacturer | : | Tetasys |
| Model Number | : | F12 |
| Serial Number | : | A010022-4860010X |
| Data Cable | : | Shielded, Undetachable, 1.8m. |
| Certificate | : | CE, FCC DoC |

2.2.11 Hard Disk #2

| | | |
|---|---|---|
| Manufacturer | : | Tetasys |
| Model Number | : | F12 |
| Serial Number | : | A010022-4A60007 |
| Data Cable | : | Shielded, Undetachable, 1.8m. |
| Certificate | : | CE, FCC DoC |

2.2.12 Hard Disk #3

| | | |
|---|---|---|
| Manufacturer | : | Tetasys |
| Model Number | : | F12 |
| Serial Number | : | A010022-40F0005 |
| Data Cable | : | Shielded, Undetachable, 1.8m. |
| Certificate | : | CE, FCC DoC |

2.2.13 Smart Mobile Phone

| | | |
|---|---|---|
| Manufacturer | : | SAMSUNG |
| Model Number | : | GT-I9100G |
| Serial Number | : | 6935152011519 |
| Certificate | : | CE/EMC |

## 2.3 Description of Test Facility

| | | |
|---|---|---|
| Site Description (No.3 3m Chamber) | : | Sept. 17, 1998 file on<br>Jan.15, 2015 Renewed<br>Federal Communications Commission<br>FCC Engineering Laboratory<br>7435 Oakland Mills Road<br>Columbia, MD 21046, USA |
| Name of Firm | : | Audix Technology (Shanghai) Co., Ltd. |
| Site Location | : | 3F 34Bldg 680 Guiping Rd,<br>Caohejing Hi-Tech Park,<br>Shanghai 200233, China |
| NVLAP Lab Code | : | 200371-0 |

## 2.4 Measurement Uncertainty

Conducted Emission Expanded Uncertainty : U = 3.4dB
Radiated Emission Expanded Uncertainty (30-200MHz):
U = 4.6dB (Horizontal)
U = 4.3dB (Vertical)
Radiated Emission Expanded Uncertainty (200M-1GHz):
U = 4.5dB (Horizontal)
U = 5.4dB (Vertical)
Radiated Emission Expanded Uncertainty (1GHz-6GHz):
U = 5.1dB

# 3 CONDUCTED EMISSION TEST

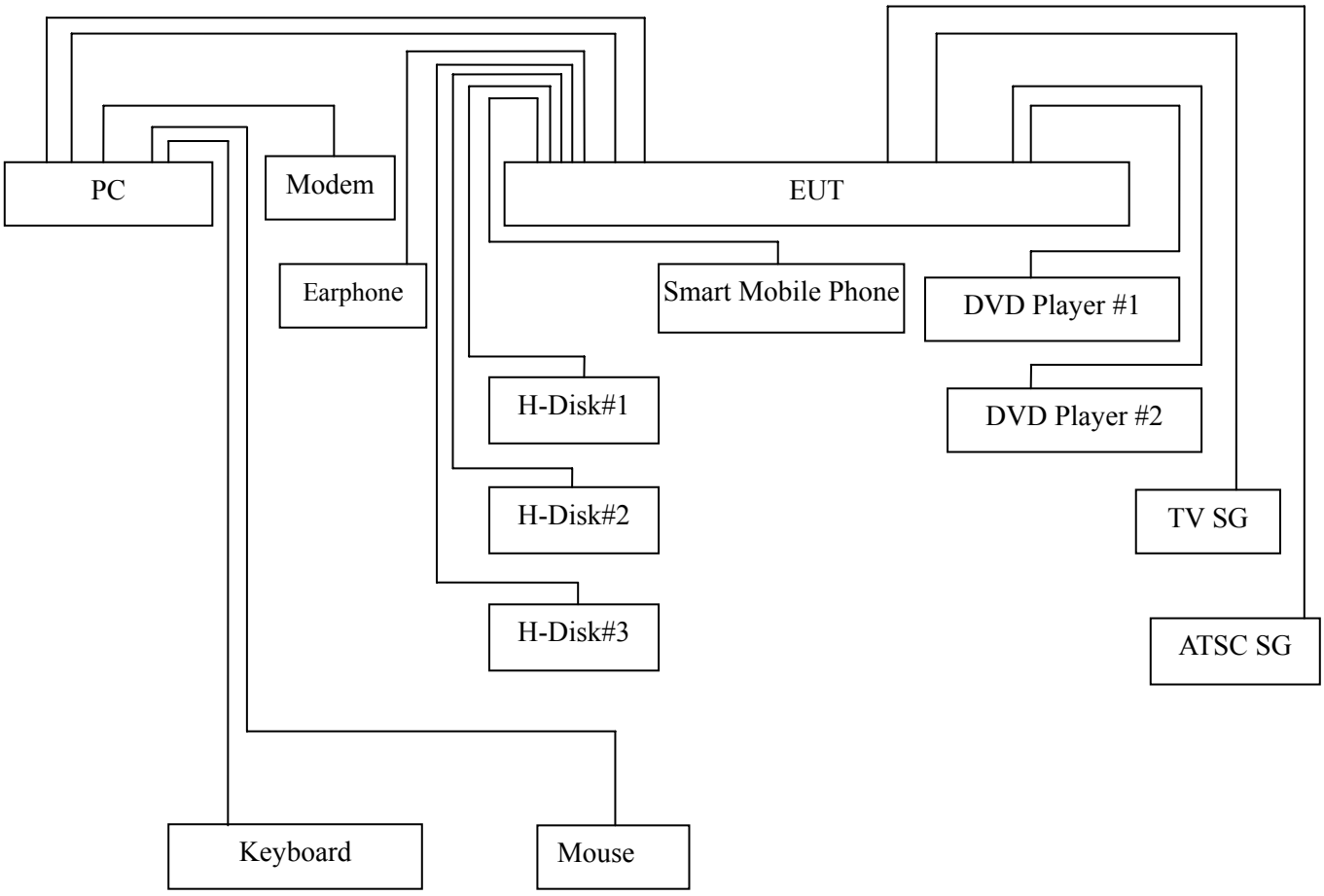
## 3.1 Test Equipment

The following test equipments are used during the conducted emission test in a shielded room:

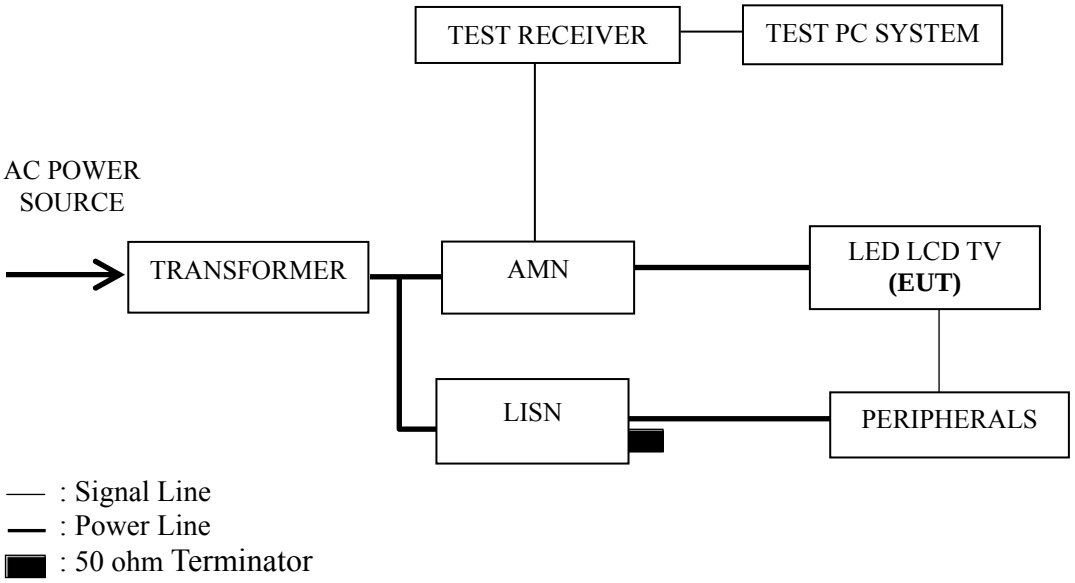
| Item | Type | Manufacturer | Model No. | Serial No. | Last Cal. | Next Cal. |
|---|---|---|---|---|---|---|
| 1. | Test Receiver | R&S | ESCI | 101302 | Jul 03, 2015 | Jul 02, 2016 |
| 2. | Artificial Mains Network (AMN) | R&S | ENV4200 | 100125 | Jun 27, 2015 | Jun 26, 2016 |
| 3. | Line Impedance Stabilization Network (LISN) | Kyoritsu | KNW-407 | 8-1280-5 | Mar 20, 2015 | Mar 19, 2016 |
| 4. | 50Ω Terminator | Anritsu | BNC | 001 | Mar 18, 2015 | Sep 17, 2016 |
| 5. | Software | Audix | E3 | 6.111206 | -- | -- |

## 3.2 Block Diagram of Test Setup

### 3.2.1 EUT & Peripherals



### 3.2.2 Conducted Disturbance Test Setup




## 3.3 Conducted Emission Limit [FCC Part 15 Subpart B 15.107(a)]

| Frequency Range (MHz) | Limits dB (μV) | |
|---|---|---|
| | Quasi-peak | Average |
| 0.15 ~ 0.5 | 66~56 | 56~46 |
| 0.5 ~ 5 | 56 | 46 |
| 5 ~ 30 | 60 | 50 |

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

## 3.4 Test Configuration

The EUT (listed in Sec.2.1) and the peripherals (listed in Sec 2.2) were installed as shown on Sec.3.2 to meet FCC requirement and operating in a manner that tends to maximize its emission level in a normal application.

## 3.5 Operating Condition of EUT

3.5.1 Setup the EUT and peripherals as shown in Sec. 3.2.

3.5.2 Turn on the power of all equipments and the EUT.

3.5.3 Set the contrast & brightness of EUT to maximum.

3.5.4 PC system ran the self-test program "EMC Test" by windows XP and sent "H" characters to EUT through graphic card, the EUT's screen displayed and filled with "H" pattern by its resolution (Via HDMI Input).

3.5.5 PC system sent the 1kHz audio signal to EUT through audio port, the EUT speak out 1kHz audio signal.

3.5.6 In USB Play mode, set the EUT play digital media from Hard Disk.

3.5.7 In LAN Play mode, set the EUT play digital media through LAN port.

3.5.8 In MHL mode, set the EUT play digital media from mobile phone.

3.5.9 The other peripherals devices were driven and operated during the test.

3.5.10 The test modes are as follows:

| Test Mode |
|---|
| HDMI 3840*2160@60Hz & 1kHz playing |
| HDMI 1920*1080@60Hz & 1kHz playing |
| HDMI 1280*1024@60Hz & 1kHz playing |
| HDMI 640*480@60Hz & 1kHz playing |
| HDMI1080P |
| MHL |
| USB Play |
| LAN Play |

## 3.6 Test Procedures

The EUT and peripherals were connected to the power mains through an Artificial Mains Network (AMN). This provided a 50 ohm coupling impedance for the measuring equipment.

Both sides of AC line (Line & Neutral) were checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables were changed or manipulated according to ANSI C63.4:2003 during conducted emission test.

The bandwidth of R&S Test Receiver ESCI was set at 9 kHz.

The frequency range from 150 kHz to 30 MHz was checked.

The test modes were done on conducted disturbance test and all the test results are listed in Sec. 3.7.

## 3.7 Test Results

**< PASS >**

The frequency and amplitude of the highest conducted emission relative to the limit is reported. All emissions not reported below are too low against the prescribed limits.

| Test Mode | Data Page |
|---|---|
| HDMI 3840*2160@60Hz & 1kHz playing | P14 |
| HDMI 1920*1080@60Hz & 1kHz playing | P15 |
| HDMI 1280*1024@60Hz & 1kHz playing | P16 |
| HDMI 640*480@60Hz & 1kHz playing | P17 |
| HDMI1080P | P18 |
| MHL | P19 |
| USB Play | P20 |
| LAN Play | P21 |

NOTE 1 – Factor = Cable Loss + AMN Factor.
NOTE 2 – Emission Level = Meter Reading + Factor.
NOTE 3 – "QP" means "Quasi-Peak" values, "AV" means "Average" values.
NOTE 4 – The worst case is for HDMI 640*480@60Hz & 1kHz playing test mode. The worst emission is detected at 7.426MHz (Average Value) with corrected signal level of 38.47 dB (μV) (limit is 50.00 dB (μV)), when the Line of the EUT is connected to AMN.

| | | | | | |
|---|---|---|---|---|---|
| EUT | : | LED LCD TV | Temperature : | 22℃ | |
| Model No. | : | HU43K300UW | Humidity | : | 48%RH |
| Test Mode | : | HDMI 3840*2160@60Hz & 1kHz Playing | Date of Test | : | Dec 15, 2015 |

| Test Line | Frequency (MHz) | Meter Reading dB(μV) | Factor (dB) | Emission Level dB(μV) | Limits dB(μV) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| Line | 0.213 | 37.20 | 10.51 | 47.71 | 63.07 | 15.36 | QP |
| | 0.475 | 28.90 | 10.40 | 39.30 | 56.42 | 17.12 | |
| | **0.611** | **31.20** | **10.38** | **41.58** | **56.00** | **14.42** | |
| | 1.279 | 26.20 | 10.39 | 36.59 | 56.00 | 19.41 | |
| | 2.636 | 24.29 | 10.44 | 34.73 | 56.00 | 21.27 | |
| | 7.522 | 24.00 | 10.47 | 34.47 | 60.00 | 25.53 | |
| | 0.213 | 21.80 | 10.51 | 32.31 | 53.07 | 20.76 | AV |
| | 0.475 | 17.00 | 10.40 | 27.40 | 46.42 | 19.02 | |
| | **0.611** | **18.90** | **10.38** | **29.28** | **46.00** | **16.72** | |
| | 1.279 | 15.30 | 10.39 | 25.69 | 46.00 | 20.31 | |
| | 2.636 | 15.39 | 10.44 | 25.83 | 46.00 | 20.17 | |
| | 7.522 | 17.10 | 10.47 | 27.57 | 50.00 | 22.43 | |
| Neutral | **0.212** | **38.90** | **10.49** | **49.39** | **63.14** | **13.75** | QP |
| | 0.459 | 29.80 | 10.38 | 40.18 | 56.72 | 16.54 | |
| | 0.635 | 28.80 | 10.36 | 39.16 | 56.00 | 16.84 | |
| | 1.213 | 27.69 | 10.39 | 38.08 | 56.00 | 17.92 | |
| | 3.389 | 23.49 | 10.45 | 33.94 | 56.00 | 22.06 | |
| | 7.514 | 24.20 | 10.52 | 34.72 | 60.00 | 25.28 | |
| | 0.212 | 24.30 | 10.49 | 34.79 | 53.14 | 18.35 | AV |
| | 0.459 | 16.70 | 10.38 | 27.08 | 46.72 | 19.64 | |
| | 0.635 | 15.60 | 10.36 | 25.96 | 46.00 | 20.04 | |
| | **1.213** | **17.79** | **10.39** | **28.18** | **46.00** | **17.82** | |
| | 3.389 | 15.29 | 10.45 | 25.74 | 46.00 | 20.26 | |
| | 7.514 | 17.70 | 10.52 | 28.22 | 50.00 | 21.78 | |

TEST ENGINEER: WENCY YANG

| | | | | | |
|---|---|---|---|---|---|
| EUT | : | LED LCD TV | Temperature : | 22℃ | |
| Model No. | : | HU43K300UW | Humidity : | 48%RH | |
| Test Mode | : | HDMI 1920*1080@60Hz & 1kHz Playing | Date of Test : | Dec 15, 2015 | |

| Test Line | Frequency (MHz) | Meter Reading dB(μV) | Factor (dB) | Emission Level dB(μV) | Limits dB(μV) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| Line | **0.213** | **37.30** | **10.51** | **47.81** | **63.11** | **15.30** | QP |
| | 0.478 | 28.80 | 10.40 | 39.20 | 56.38 | 17.18 | |
| | 0.586 | 29.90 | 10.38 | 40.28 | 56.00 | 15.72 | |
| | 1.209 | 27.50 | 10.39 | 37.89 | 56.00 | 18.11 | |
| | 3.525 | 24.20 | 10.45 | 34.65 | 56.00 | 21.35 | |
| | 7.232 | 27.90 | 10.47 | 38.37 | 60.00 | 21.63 | |
| | 0.213 | 21.50 | 10.51 | 32.01 | 53.11 | 21.10 | AV |
| | 0.478 | 14.90 | 10.40 | 25.30 | 46.38 | 21.08 | |
| | 0.586 | 17.00 | 10.38 | 27.38 | 46.00 | 18.62 | |
| | 1.209 | 16.70 | 10.39 | 27.09 | 46.00 | 18.91 | |
| | 3.525 | 14.90 | 10.45 | 25.35 | 46.00 | 20.65 | |
| | **7.232** | **22.60** | **10.47** | **33.07** | **50.00** | **16.93** | |
| Neutral | 0.211 | 38.70 | 10.49 | 49.19 | 63.16 | 13.97 | QP |
| | **0.490** | **32.70** | **10.37** | **43.07** | **56.18** | **13.11** | |
| | 0.636 | 28.80 | 10.36 | 39.16 | 56.00 | 16.84 | |
| | 1.175 | 26.21 | 10.37 | 36.58 | 56.00 | 19.42 | |
| | 3.583 | 24.60 | 10.45 | 35.05 | 56.00 | 20.95 | |
| | 6.775 | 26.20 | 10.51 | 36.71 | 60.00 | 23.29 | |
| | 0.211 | 22.80 | 10.49 | 33.29 | 53.16 | 19.87 | AV |
| | **0.490** | **22.50** | **10.37** | **32.87** | **46.18** | **13.31** | |
| | 0.636 | 15.90 | 10.36 | 26.26 | 46.00 | 19.74 | |
| | 1.175 | 15.11 | 10.37 | 25.48 | 46.00 | 20.52 | |
| | 3.583 | 13.90 | 10.45 | 24.35 | 46.00 | 21.65 | |
| | 6.775 | 19.30 | 10.51 | 29.81 | 50.00 | 20.19 | |

TEST ENGINEER: WENCY YANG

| | | | | | |
|---|---|---|---|---|---|
| EUT | : | LED LCD TV | Temperature : | 22℃ | |
| Model No. | : | HU43K300UW | Humidity : | 48%RH | |
| Test Mode | : | HDMI 1280*1024@60Hz & 1kHz Playing | Date of Test : | Dec 15, 2015 | |

| Test Line | Frequency (MHz) | Meter Reading dB(μV) | Factor (dB) | Emission Level dB(μV) | Limits dB(μV) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| Line | **0.212** | **37.50** | **10.51** | **48.01** | **63.13** | **15.12** | QP |
| | 0.472 | 28.80 | 10.40 | 39.20 | 56.48 | 17.28 | |
| | 0.975 | 27.40 | 10.38 | 37.78 | 56.00 | 18.22 | |
| | 1.707 | 26.19 | 10.41 | 36.60 | 56.00 | 19.40 | |
| | 2.562 | 24.50 | 10.43 | 34.93 | 56.00 | 21.07 | |
| | 7.178 | 27.70 | 10.47 | 38.17 | 60.00 | 21.83 | |
| | 0.212 | 21.40 | 10.51 | 31.91 | 53.13 | 21.22 | AV |
| | 0.472 | 17.40 | 10.40 | 27.80 | 46.48 | 18.68 | |
| | 0.975 | 16.70 | 10.38 | 27.08 | 46.00 | 18.92 | |
| | 1.707 | 15.49 | 10.41 | 25.90 | 46.00 | 20.10 | |
| | 2.562 | 16.20 | 10.43 | 26.63 | 46.00 | 19.37 | |
| | **7.178** | **22.40** | **10.47** | **32.87** | **50.00** | **17.13** | |
| Neutral | **0.211** | **38.60** | **10.49** | **49.09** | **63.17** | **14.08** | QP |
| | 0.472 | 31.40 | 10.38 | 41.78 | 56.48 | 14.70 | |
| | 0.976 | 29.10 | 10.37 | 39.47 | 56.00 | 16.53 | |
| | 1.955 | 27.50 | 10.41 | 37.91 | 56.00 | 18.09 | |
| | 4.362 | 23.90 | 10.46 | 34.36 | 56.00 | 21.64 | |
| | 7.268 | 26.20 | 10.52 | 36.72 | 60.00 | 23.28 | |
| | 0.211 | 23.40 | 10.49 | 33.89 | 53.17 | 19.28 | AV |
| | **0.472** | **18.30** | **10.38** | **28.68** | **46.48** | **17.80** | |
| | 0.976 | 17.70 | 10.37 | 28.07 | 46.00 | 17.93 | |
| | 1.955 | 17.70 | 10.41 | 28.11 | 46.00 | 17.89 | |
| | 4.362 | 15.80 | 10.46 | 26.26 | 46.00 | 19.74 | |
| | 7.268 | 20.80 | 10.52 | 31.32 | 50.00 | 18.68 | |

TEST ENGINEER: WENCY YANG

| | | | | | |
|---|---|---|---|---|---|
| EUT | : | LED LCD TV | Temperature : | 22℃ | |
| Model No. | : | HU43K300UW | Humidity : | 48%RH | |
| Test Mode | : | HDMI 640*480@60Hz & 1kHz Playing | Date of Test : | Dec 15, 2015 | |

| Test Line | Frequency (MHz) | Meter Reading dB(μV) | Factor (dB) | Emission Level dB(μV) | Limits dB(μV) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| Line | **0.212** | **37.30** | **10.51** | **47.81** | **63.11** | **15.30** | QP |
| | 0.468 | 28.80 | 10.40 | 39.20 | 56.55 | 17.35 | |
| | 1.141 | 27.81 | 10.38 | 38.19 | 56.00 | 17.81 | |
| | 1.951 | 27.10 | 10.41 | 37.51 | 56.00 | 18.49 | |
| | 4.254 | 24.10 | 10.47 | 34.57 | 56.00 | 21.43 | |
| | 7.426 | 31.20 | 10.47 | 41.67 | 60.00 | 18.33 | |
| | 0.212 | 21.40 | 10.51 | 31.91 | 53.11 | 21.20 | AV |
| | 0.468 | 18.10 | 10.40 | 28.50 | 46.55 | 18.05 | |
| | 1.141 | 16.21 | 10.38 | 26.59 | 46.00 | 19.41 | |
| | 1.951 | 17.30 | 10.41 | 27.71 | 46.00 | 18.29 | |
| | 4.254 | 16.80 | 10.47 | 27.27 | 46.00 | 18.73 | |
| | **7.426** | **28.00** | **10.47** | **38.47** | **50.00** | **11.53** | |
| Neutral | **0.212** | **38.80** | **10.49** | **49.29** | **63.13** | **13.84** | QP |
| | 0.467 | 30.70 | 10.38 | 41.08 | 56.57 | 15.49 | |
| | 1.212 | 27.79 | 10.39 | 38.18 | 56.00 | 17.82 | |
| | 1.889 | 27.50 | 10.41 | 37.91 | 56.00 | 18.09 | |
| | 4.181 | 24.50 | 10.46 | 34.96 | 56.00 | 21.04 | |
| | 7.384 | 26.80 | 10.52 | 37.32 | 60.00 | 22.68 | |
| | 0.212 | 23.50 | 10.49 | 33.99 | 53.13 | 19.14 | AV |
| | **0.467** | **18.60** | **10.38** | **28.98** | **46.57** | **17.59** | |
| | 1.212 | 17.59 | 10.39 | 27.98 | 46.00 | 18.02 | |
| | 1.889 | 16.20 | 10.41 | 26.61 | 46.00 | 19.39 | |
| | 4.181 | 17.10 | 10.46 | 27.56 | 46.00 | 18.44 | |
| | 7.384 | 21.40 | 10.52 | 31.92 | 50.00 | 18.08 | |

TEST ENGINEER: WENCY YANG

| | | | | | |
|---|---|---|---|---|---|
| EUT | : | LED LCD TV | Temperature : | 22℃ |
| Model No. | : | HU43K300UW | Humidity : | 48%RH |
| Test Mode | : | HDMI1080P | Date of Test : | Dec 15, 2015 |

| Test Line | Frequency (MHz) | Meter Reading dB(μV) | Factor (dB) | Emission Level dB(μV) | Limits dB(μV) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| Line | **0.212** | **37.30** | **10.51** | **47.81** | **63.13** | **15.32** | QP |
| | 0.462 | 28.20 | 10.40 | 38.60 | 56.65 | 18.05 | |
| | 0.902 | 25.90 | 10.38 | 36.28 | 56.00 | 19.72 | |
| | 1.198 | 26.90 | 10.39 | 37.29 | 56.00 | 18.71 | |
| | 2.695 | 26.59 | 10.44 | 37.03 | 56.00 | 18.97 | |
| | 7.269 | 26.90 | 10.47 | 37.37 | 60.00 | 22.63 | |
| | 0.212 | 20.80 | 10.51 | 31.31 | 53.13 | 21.82 | AV |
| | 0.462 | 17.10 | 10.40 | 27.50 | 46.65 | 19.15 | |
| | 0.902 | 11.00 | 10.38 | 21.38 | 46.00 | 24.62 | |
| | 1.198 | 16.70 | 10.39 | 27.09 | 46.00 | 18.91 | |
| | 2.695 | 15.99 | 10.44 | 26.43 | 46.00 | 19.57 | |
| | **7.269** | **21.20** | **10.47** | **31.67** | **50.00** | **18.33** | |
| Neutral | 0.212 | 38.80 | 10.49 | 49.29 | 63.12 | 13.83 | QP |
| | **0.480** | **32.20** | **10.38** | **42.58** | **56.34** | **13.76** | |
| | 1.198 | 27.49 | 10.39 | 37.88 | 56.00 | 18.12 | |
| | 1.952 | 27.10 | 10.41 | 37.51 | 56.00 | 18.49 | |
| | 4.351 | 24.00 | 10.46 | 34.46 | 56.00 | 21.54 | |
| | 7.319 | 26.10 | 10.52 | 36.62 | 60.00 | 23.38 | |
| | 0.212 | 23.90 | 10.49 | 34.39 | 53.12 | 18.73 | AV |
| | **0.480** | **20.30** | **10.38** | **30.68** | **46.34** | **15.66** | |
| | 1.198 | 15.59 | 10.39 | 25.98 | 46.00 | 20.02 | |
| | 1.952 | 17.20 | 10.41 | 27.61 | 46.00 | 18.39 | |
| | 4.351 | 16.20 | 10.46 | 26.66 | 46.00 | 19.34 | |
| | 7.319 | 20.20 | 10.52 | 30.72 | 50.00 | 19.28 | |

TEST ENGINEER: WENCY YANG

| | | | | | |
|---|---|---|---|---|---|
| EUT | : | LED LCD TV | Temperature : | 22℃ |
| Model No. | : | HU43K300UW | Humidity : | 48%RH |
| Test Mode | : | MHL | Date of Test : | Dec 15, 2015 |

| Test Line | Frequency (MHz) | Meter Reading dB(μV) | Factor (dB) | Emission Level dB(μV) | Limits dB(μV) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| Line | **0.212** | **36.10** | **10.51** | **46.61** | **63.12** | **16.51** | QP |
| | 0.471 | 27.50 | 10.40 | 37.90 | 56.51 | 18.61 | |
| | 0.635 | 26.20 | 10.38 | 36.58 | 56.00 | 19.42 | |
| | 1.208 | 28.00 | 10.39 | 38.39 | 56.00 | 17.61 | |
| | 2.544 | 25.30 | 10.43 | 35.73 | 56.00 | 20.27 | |
| | 7.563 | 27.70 | 10.47 | 38.17 | 60.00 | 21.83 | |
| | 0.212 | 17.90 | 10.51 | 28.41 | 53.12 | 24.71 | AV |
| | 0.471 | 14.90 | 10.40 | 25.30 | 46.51 | 21.21 | |
| | 0.635 | 14.30 | 10.38 | 24.68 | 46.00 | 21.32 | |
| | 1.208 | 17.30 | 10.39 | 27.69 | 46.00 | 18.31 | |
| | 2.544 | 16.40 | 10.43 | 26.83 | 46.00 | 19.17 | |
| | **7.563** | **24.50** | **10.47** | **34.97** | **50.00** | **15.03** | |
| Neutral | 0.214 | 38.50 | 10.49 | 48.99 | 63.05 | 14.06 | QP |
| | 0.463 | 30.30 | 10.38 | 40.68 | 56.64 | 15.96 | |
| | **0.601** | **31.60** | **10.36** | **41.96** | **56.00** | **14.04** | |
| | 1.211 | 27.89 | 10.39 | 38.28 | 56.00 | 17.72 | |
| | 4.349 | 24.20 | 10.46 | 34.66 | 56.00 | 21.34 | |
| | 7.250 | 26.60 | 10.52 | 37.12 | 60.00 | 22.88 | |
| | 0.214 | 24.60 | 10.49 | 35.09 | 53.05 | 17.96 | AV |
| | 0.463 | 18.10 | 10.38 | 28.48 | 46.64 | 18.16 | |
| | **0.601** | **20.00** | **10.36** | **30.36** | **46.00** | **15.64** | |
| | 1.211 | 16.09 | 10.39 | 26.48 | 46.00 | 19.52 | |
| | 4.349 | 16.40 | 10.46 | 26.86 | 46.00 | 19.14 | |
| | 7.250 | 20.90 | 10.52 | 31.42 | 50.00 | 18.58 | |

TEST ENGINEER: WENCY YANG

| | | | | | |
|---|---|---|---|---|---|
| EUT | : | LED LCD TV | Temperature : | 22℃ | |
| Model No. | : | HU43K300UW | Humidity | : | 48%RH |
| Test Mode | : | USB Play | Date of Test | : | Dec 15, 2015 |

| Test Line | Frequency (MHz) | Meter Reading dB(μV) | Factor (dB) | Emission Level dB(μV) | Limits dB(μV) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| Line | **0.214** | **35.60** | **10.51** | **46.11** | **63.06** | **16.95** | QP |
| | 0.467 | 27.50 | 10.40 | 37.90 | 56.57 | 18.67 | |
| | 1.136 | 28.51 | 10.38 | 38.89 | 56.00 | 17.11 | |
| | 1.879 | 26.60 | 10.41 | 37.01 | 56.00 | 18.99 | |
| | 4.369 | 24.50 | 10.47 | 34.97 | 56.00 | 21.03 | |
| | 7.348 | 27.50 | 10.47 | 37.97 | 60.00 | 22.03 | |
| | 0.214 | 17.70 | 10.51 | 28.21 | 53.06 | 24.85 | AV |
| | 0.467 | 16.80 | 10.40 | 27.20 | 46.57 | 19.37 | |
| | 1.136 | 18.31 | 10.38 | 28.69 | 46.00 | 17.31 | |
| | 1.879 | 16.40 | 10.41 | 26.81 | 46.00 | 19.19 | |
| | 4.369 | 16.40 | 10.47 | 26.87 | 46.00 | 19.13 | |
| | **7.348** | **22.30** | **10.47** | **32.77** | **50.00** | **17.23** | |
| Neutral | **0.197** | **40.79** | **10.51** | **51.30** | **63.74** | **12.44** | QP |
| | 0.460 | 32.70 | 10.38 | 43.08 | 56.69 | 13.61 | |
| | 0.597 | 31.50 | 10.36 | 41.86 | 56.00 | 14.14 | |
| | 1.096 | 26.11 | 10.37 | 36.48 | 56.00 | 19.52 | |
| | 1.855 | 26.30 | 10.41 | 36.71 | 56.00 | 19.29 | |
| | 7.288 | 26.20 | 10.52 | 36.72 | 60.00 | 23.28 | |
| | 0.197 | 25.49 | 10.51 | 36.00 | 53.74 | 17.74 | AV |
| | **0.460** | **22.20** | **10.38** | **32.58** | **46.69** | **14.11** | |
| | 0.597 | 20.90 | 10.36 | 31.26 | 46.00 | 14.74 | |
| | 1.096 | 14.01 | 10.37 | 24.38 | 46.00 | 21.62 | |
| | 1.855 | 16.00 | 10.41 | 26.41 | 46.00 | 19.59 | |
| | 7.288 | 20.70 | 10.52 | 31.22 | 50.00 | 18.78 | |

TEST ENGINEER: WENCY YANG

| | | | | | |
|---|---|---|---|---|---|
| EUT | : | LED LCD TV | Temperature : | 22℃ | |
| Model No. | : | HU43K300UW | Humidity | : | 48%RH |
| Test Mode | : | LAN Play | Date of Test | : | Dec 15, 2015 |

| Test Line | Frequency (MHz) | Meter Reading dB(μV) | Factor (dB) | Emission Level dB(μV) | Limits dB(μV) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| Line | **0.197** | **40.20** | **10.52** | **50.72** | **63.74** | **13.02** | QP |
| | 0.449 | 28.59 | 10.41 | 39.00 | 56.90 | 17.90 | |
| | 0.599 | 31.50 | 10.38 | 41.88 | 56.00 | 14.12 | |
| | 1.102 | 25.60 | 10.38 | 35.98 | 56.00 | 20.02 | |
| | 1.883 | 27.30 | 10.41 | 37.71 | 56.00 | 18.29 | |
| | 7.385 | 27.50 | 10.47 | 37.97 | 60.00 | 22.03 | |
| | 0.197 | 23.70 | 10.52 | 34.22 | 53.74 | 19.52 | AV |
| | 0.449 | 17.19 | 10.41 | 27.60 | 46.90 | 19.30 | |
| | **0.599** | **20.60** | **10.38** | **30.98** | **46.00** | **15.02** | |
| | 1.102 | 13.20 | 10.38 | 23.58 | 46.00 | 22.42 | |
| | 1.883 | 16.60 | 10.41 | 27.01 | 46.00 | 18.99 | |
| | 7.385 | 22.00 | 10.47 | 32.47 | 50.00 | 17.53 | |
| Neutral | 0.212 | 37.50 | 10.49 | 47.99 | 63.13 | 15.14 | QP |
| | **0.463** | **31.90** | **10.38** | **42.28** | **56.63** | **14.35** | |
| | 0.593 | 30.90 | 10.36 | 41.26 | 56.00 | 14.74 | |
| | 1.131 | 27.21 | 10.37 | 37.58 | 56.00 | 18.42 | |
| | 4.348 | 24.20 | 10.46 | 34.66 | 56.00 | 21.34 | |
| | 7.319 | 26.20 | 10.52 | 36.72 | 60.00 | 23.28 | |
| | 0.212 | 20.60 | 10.49 | 31.09 | 53.13 | 22.04 | AV |
| | **0.463** | **21.10** | **10.38** | **31.48** | **46.63** | **15.15** | |
| | 0.593 | 18.20 | 10.36 | 28.56 | 46.00 | 17.44 | |
| | 1.131 | 15.11 | 10.37 | 25.48 | 46.00 | 20.52 | |
| | 4.348 | 16.00 | 10.46 | 26.46 | 46.00 | 19.54 | |
| | 7.319 | 20.30 | 10.52 | 30.82 | 50.00 | 19.18 | |

TEST ENGINEER: WENCY YANG

# 4 RADIATED EMISSION TEST

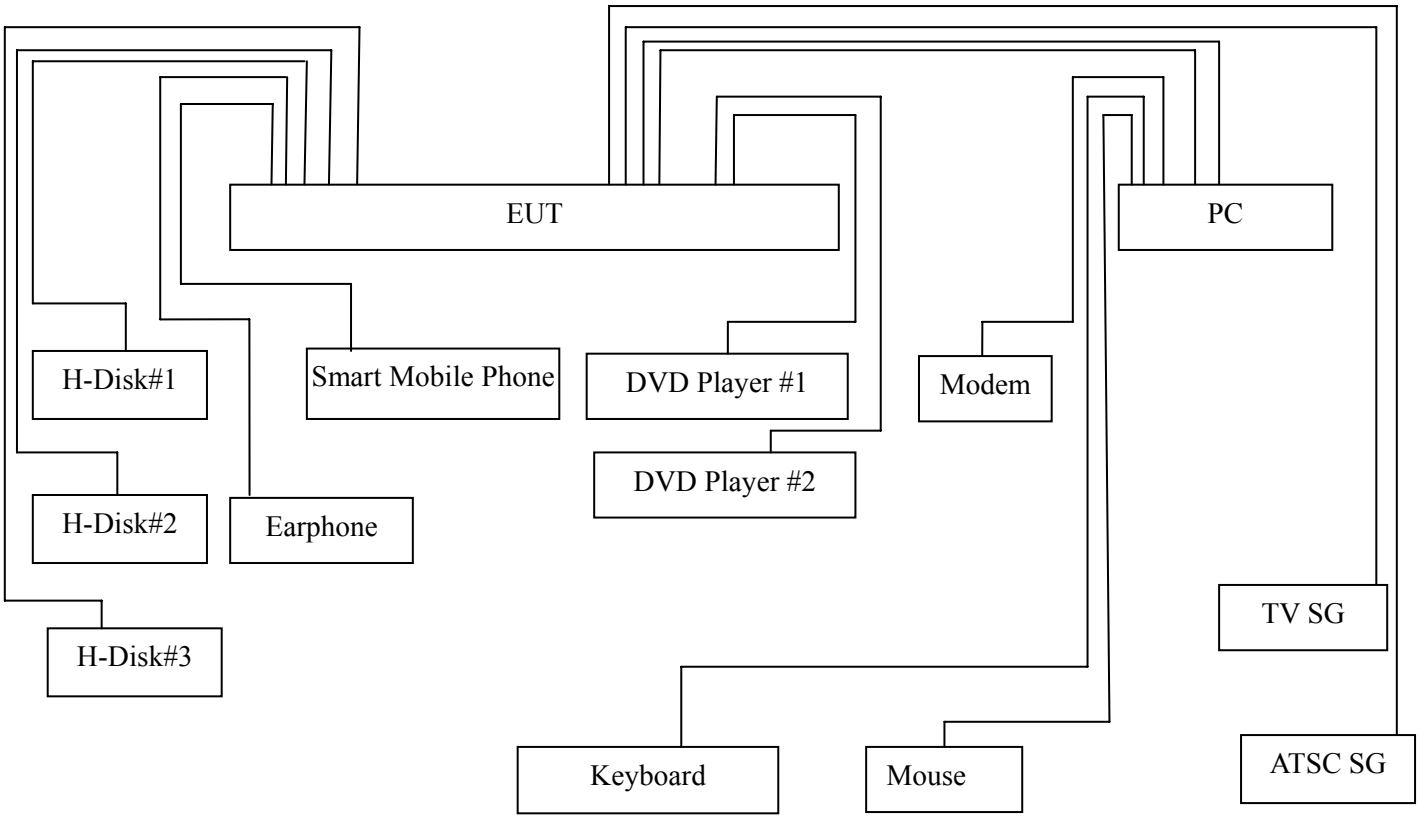
## 4.1 Test Equipment

The following test equipments are used during the radiated emission test in a semi-anechoic chamber:

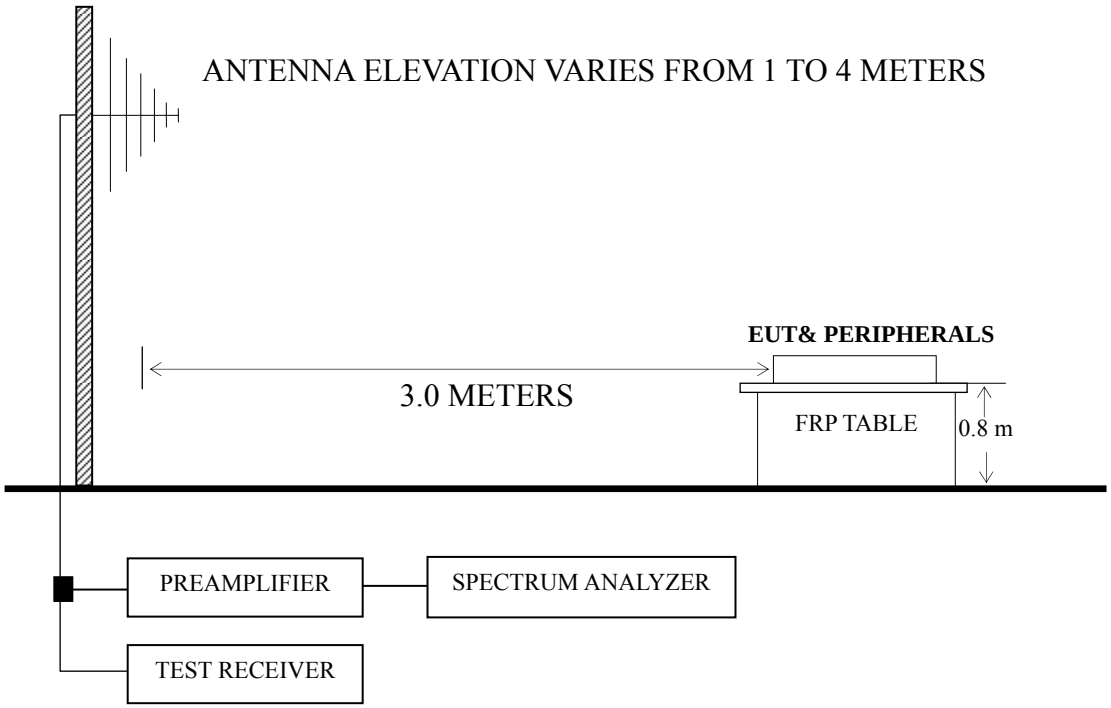
| Item | Type | Manufacturer | Model No. | Serial No. | Last Cal. | Next Cal. |
|---|---|---|---|---|---|---|
| 1. | Test Receiver | R&S | ESCI | 101303 | May 07, 2015 | May 06, 2016 |
| 2. | Preamplifier | Agilent | 8447D | 2944A06664 | Apr 27, 2015 | Apr 26, 2016 |
| 3. | Preamplifier | HP | 8449B | 3008A00864 | Mar 20, 2015 | Sep 19, 2016 |
| 4. | Bi-log Antenna | TESEQ | CBL6112D | 23193 | May 15, 2015 | May 14, 2016 |
| 5. | Horn Antenna | EMCO | 3115 | 9607-4878 | Jun 03, 2015 | Jun 02, 2016 |
| 6. | Spectrum | Agilent | N9010A | MY52221182 | Jun 12, 2015 | Jun 11, 2016 |
| 7. | Spectrum | HP | 8591EM | 3628A00908 | May 07, 2015 | May 06, 2016 |
| 8. | 50Ω Coaxial Switch | Anritsu | MP59B | 6200426390 | Sep 18, 2015 | Mar 17, 2016 |
| 9. | Software | Audix | E3 | 6.2007-9-10 | -- | -- |

## 4.2 Block Diagram of Test Setup

### 4.2.1 EUT & Peripherals



4.2.2 Radiated emission test setup




■ : 50 ohm Coaxial Switch

## 4.3 Radiated Emission Limit [FCC Part 15 Subpart B 15.109(a)]

| Frequency (MHz) | Distance (m) | Field strength limits | |
|---|---|---|---|
| | | (μV/m) | dB (μV/m) |
| 30 ~ 88 | 3 | 100 | 40.0 |
| 88 ~ 216 | 3 | 150 | 43.5 |
| 216 ~ 960 | 3 | 200 | 46.0 |
| Above 960 | 3 | 500 | 54.0 |

NOTE 1 - Emission Level dB (μV/m) = 20 log Emission Level (μV/m)
NOTE 2 - The tighter limit applies at the band edges.
NOTE 3 - Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.
NOTE 4 - The limits shown are based on Quasi-peak value detector.
NOTE 5 - Above 1 GHz, the limit on peak emission is 20 dB above the maximum permitted average emission limit applicable to the EUT.

## 4.4 Test Configuration

The configuration of the EUT and peripherals are same as those used in conducted emission test.

Please refer to Sec.3.4.

## 4.5 Operating Condition of EUT

Same as conducted emission test which is listed in Sec.3.5, except for the test setup replaced by Sec.4.2.

## 4.6 Test Procedures

The EUT and peripherals were placed on a FRP turntable that is 0.8 meter above ground. The FRP turntable rotated 360 degrees to determine the position of the maximum emission level. The EUT was set 3 meters away from the receiving antenna, which was mounted on an antenna tower. Broadband antenna (Calibrated Bilog Antenna) was used as receiving antenna. The antenna moved up and down between 1 meter and 4 meters to find out the maximum emission level. Both horizontal and vertical polarizations of the antenna were set on measurement. In order to find the maximum emission, all of the interference cables were manipulated according to ANSI C63.4:2003 requirements during radiated emission test.

The I.F. bandwidth of Test Receiver R&S ESCI was set at 120 kHz.

The frequency range from 30 MHz to 1000MHz was checked for all test modes.

The frequency range from 1 GHz to 6 GHz was checked for
HDMI 3840*2160@60Hz & 1kHz playing, HDMI 1920*1080@60Hz & 1kHz playing and HDMI1080P test mode.

The test modes were done on radiated disturbance test and all the test results are listed in Sec.4.7.

## 4.7 Test Results

**<PASS>**

The frequency and amplitude of the highest radiated emission relative the limit is reported. All the emissions not reported below are too low against the FCC limit.

| Test Mode | Data Page |
|---|---|
| HDMI 3840*2160@60Hz & 1kHz playing | P26 - P27 |
| HDMI 1920*1080@60Hz & 1kHz playing | P28- P29 |
| HDMI 1280*1024@60Hz & 1kHz playing | P30 |
| HDMI 640*480@60Hz & 1kHz playing | P31 |
| HDMI1080P | P32- P33 |
| MHL | P34 |
| USB Play | P35 |
| LAN Play | P36 |

NOTE 1 – Emission Level = Antenna Factor + Cable Loss + Meter Reading. (< 1GHz);
Emission Level = Antenna Factor + Cable Loss – Preamp Factor + Meter Reading. (> 1GHz)

NOTE 2 – All readings are Quasi-Peak values below or equal to 1GHz, Peak and Average values above 1GHz.

NOTE 3 – 0° was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

NOTE 4 – The worst case is for HDMI 3840*2160@60Hz & 1kHz playing test mode. The worst emission at horizontal polarization was detected at 297.000 MHz with corrected signal level of 44.16 dB (μV/m) (limit is 46.00 dB (μV/m)), when the antenna was 2.0 m height and the turntable was at 60°. The worst emission at vertical polarization was detected at 892.330 MHz with corrected signal level of 44.17dB (μV/m) (limit is 46.00 dB (μV/m)), when the antenna was 1.8m height and the turntable was at 240°.

| | | | | | |
|---|---|---|---|---|---|
| EUT | : | LED LCD TV | Temperature : | 22℃ |
| Model No. | : | HU43K300UW | Humidity : | 60%RH |
| Test Mode | : | HDMI 3840*2160@60Hz & 1kHz Playing | Date of Test : | Dec 18, 2015 |

| Polarization | Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| Horizontal | 74.620 | 8.43 | 24.88 | 1.01 | -- | 34.32 | 40.00 | 5.68 | QP |
| | 132.820 | 12.69 | 24.86 | 1.54 | **--** | 39.09 | 43.50 | 4.41 | |
| | 220.120 | 10.55 | 27.29 | 2.04 | -- | 39.88 | 46.00 | 6.12 | |
| | **297.000** | **13.70** | **27.90** | **2.56** | **--** | **44.16** | **46.00** | **1.84** | |
| | 719.670 | 19.90 | 16.75 | 3.57 | -- | 40.22 | 46.00 | 5.78 | |
| | 851.680 | 20.73 | 17.50 | 4.17 | -- | 42.40 | 46.00 | 3.60 | |
| | 1185.562 | 24.39 | 62.89 | 3.52 | 36.16 | 54.64 | 74.00 | 19.36 | PK |
| | 1702.593 | 26.44 | 57.77 | 4.07 | 35.43 | 52.85 | 74.00 | 21.15 | |
| | 2525.249 | 28.50 | 57.78 | 4.96 | 35.16 | 56.08 | 74.00 | 17.92 | |
| | 2961.827 | 30.37 | 62.87 | 5.76 | 35.20 | 63.80 | 74.00 | 10.20 | |
| | **3369.664** | **31.25** | **62.29** | **6.10** | **34.83** | **64.81** | **74.00** | **9.19** | |
| | 4253.498 | 33.22 | 51.50 | 6.43 | 34.19 | 56.96 | 74.00 | 17.04 | |
| | 1185.562 | 24.39 | 45.33 | 3.52 | 36.16 | 37.08 | 54.00 | 16.92 | AV |
| | 1702.593 | 26.44 | 41.05 | 4.07 | 35.43 | 36.13 | 54.00 | 17.87 | |
| | 2525.249 | 28.50 | 40.93 | 4.96 | 35.16 | 39.23 | 54.00 | 14.77 | |
| | **2961.827** | **30.37** | **48.74** | **5.76** | **35.20** | **49.67** | **54.00** | **4.33** | |
| | 3369.664 | 31.25 | 46.13 | 6.10 | 34.83 | 48.65 | 54.00 | 5.35 | |
| | 4253.498 | 33.22 | 37.33 | 6.43 | 34.19 | 42.79 | 54.00 | 11.21 | |

TEST ENGINEER: BILL WU

| | | | | | |
|---|---|---|---|---|---|
| EUT | : | LED LCD TV | Temperature : | 22℃ |
| Model No. | : | HU43K300UW | Humidity : | 60%RH |
| Test Mode | : | HDMI 3840*2160@60Hz & 1kHz Playing | Date of Test : | Dec 18, 2015 |

| Polarization | Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| Vertical | 31.940 | 17.50 | 18.66 | 0.65 | -- | 36.81 | 40.00 | 3.19 | QP |
| | 76.560 | 8.78 | 25.80 | 1.04 | -- | 35.62 | 40.00 | 4.38 | |
| | 220.120 | 10.55 | 25.89 | 2.04 | -- | 38.48 | 46.00 | 7.52 | |
| | 300.630 | 13.84 | 26.43 | 2.59 | -- | 42.86 | 46.00 | 3.14 | |
| | 719.670 | 19.90 | 17.87 | 3.57 | -- | 41.34 | 46.00 | 4.66 | |
| | **892.330** | **21.30** | **18.41** | **4.46** | **--** | **44.17** | **46.00** | **1.83** | |
| | 1215.678 | 24.52 | 66.91 | 3.54 | 36.10 | 58.87 | 74.00 | 15.13 | PK |
| | 1690.434 | 26.40 | 61.44 | 4.07 | 35.44 | 56.47 | 74.00 | 17.53 | |
| | 2114.790 | 27.72 | 59.16 | 4.55 | 35.11 | 56.32 | 74.00 | 17.68 | |
| | 2547.974 | 28.63 | 65.85 | 4.96 | 35.16 | 64.28 | 74.00 | 9.72 | |
| | **2972.460** | **30.40** | **64.98** | **5.76** | **35.20** | **65.94** | **74.00** | **8.06** | |
| | 3792.666 | 32.27 | 55.57 | 5.94 | 34.46 | 59.32 | 74.00 | 14.68 | |
| | 1215.678 | 24.52 | 50.95 | 3.54 | 36.10 | 42.91 | 54.00 | 11.09 | AV |
| | 1690.434 | 26.40 | 47.20 | 4.07 | 35.44 | 42.23 | 54.00 | 11.77 | |
| | 2114.790 | 27.72 | 42.11 | 4.55 | 35.11 | 39.27 | 54.00 | 14.73 | |
| | 2547.974 | 28.63 | 50.30 | 4.96 | 35.16 | 48.73 | 54.00 | 5.27 | |
| | **2972.460** | **30.40** | **50.54** | **5.76** | **35.20** | **51.50** | **54.00** | **2.50** | |
| | 3792.666 | 32.27 | 40.31 | 5.94 | 34.46 | 44.06 | 54.00 | 9.94 | |

TEST ENGINEER: BILL WU

| | | | | | |
|---|---|---|---|---|---|
| EUT | : | LED LCD TV | Temperature : | 22℃ |
| Model No. | : | HU43K300UW | Humidity : | 60%RH |
| Test Mode | : | HDMI 1920*1080@60Hz & 1kHz Playing | Date of Test : | Dec 18, 2015 |

| Polarization | Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| Horizontal | 78.500 | 9.12 | 25.17 | 1.05 | -- | 35.34 | 40.00 | 4.66 | QP |
| | 137.670 | 12.54 | 24.47 | 1.56 | -- | 38.57 | 43.50 | 4.93 | |
| | 223.030 | 10.70 | 26.67 | 2.05 | -- | 39.42 | 46.00 | 6.58 | |
| | **301.600** | **13.88** | **26.48** | **2.59** | **--** | **42.95** | **46.00** | **3.05** | |
| | 719.670 | 19.90 | 17.38 | 3.57 | -- | 40.85 | 46.00 | 5.15 | |
| | 847.710 | 20.70 | 17.95 | 4.07 | -- | 42.72 | 46.00 | 3.28 | |
| | 1702.593 | 26.44 | 61.76 | 4.07 | 35.43 | 56.84 | 74.00 | 17.16 | PK |
| | 2111.004 | 27.72 | 58.49 | 4.55 | 35.11 | 55.65 | 74.00 | 18.35 | |
| | 2543.413 | 28.60 | 62.85 | 4.96 | 35.16 | 61.25 | 74.00 | 12.75 | |
| | **2967.138** | **30.37** | **64.71** | **5.76** | **35.20** | **65.64** | **74.00** | **8.36** | |
| | 3387.825 | 31.29 | 61.66 | 6.10 | 34.82 | 64.23 | 74.00 | 9.77 | |
| | 4652.151 | 33.76 | 53.80 | 6.51 | 34.03 | 60.04 | 74.00 | 13.96 | |
| | 1702.593 | 26.44 | 45.43 | 4.07 | 35.43 | 40.51 | 54.00 | 13.49 | AV |
| | 2111.004 | 27.72 | 40.84 | 4.55 | 35.11 | 38.00 | 54.00 | 16.00 | |
| | 2543.413 | 28.60 | 50.74 | 4.96 | 35.16 | 49.14 | 54.00 | 4.86 | |
| | **2967.138** | **30.37** | **50.83** | **5.76** | **35.20** | **51.76** | **54.00** | **2.24** | |
| | 3387.825 | 31.29 | 46.11 | 6.10 | 34.82 | 48.68 | 54.00 | 5.32 | |
| | 4652.151 | 33.76 | 40.89 | 6.51 | 34.03 | 47.13 | 54.00 | 6.87 | |

TEST ENGINEER: BILL WU

| | | | | | |
|---|---|---|---|---|---|
| EUT | : | LED LCD TV | Temperature : | 22℃ |
| Model No. | : | HU43K300UW | Humidity : | 60%RH |
| Test Mode | : | HDMI 1920*1080@60Hz & 1kHz Playing | Date of Test : | Dec 18, 2015 |

| Polarization | Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| Vertical | 31.940 | 17.50 | 16.89 | 0.65 | -- | 35.04 | 40.00 | 4.96 | QP |
| | 74.620 | 8.43 | 24.74 | 1.01 | -- | 34.18 | 40.00 | 5.82 | |
| | 132.820 | 12.69 | 22.88 | 1.54 | -- | 37.11 | 43.50 | 6.39 | |
| | 222.060 | 10.65 | 27.23 | 2.05 | -- | 39.93 | 46.00 | 6.07 | |
| | 298.690 | 13.75 | 20.82 | 2.56 | -- | 37.13 | 46.00 | 8.87 | |
| | **725.490** | **20.03** | **17.91** | **3.59** | **--** | **41.53** | **46.00** | **4.47** | |
| | 1215.678 | 24.52 | 62.00 | 3.54 | 36.10 | 53.96 | 74.00 | 20.04 | PK |
| | 1702.593 | 26.44 | 60.84 | 4.07 | 35.43 | 55.92 | 74.00 | 18.08 | |
| | 2118.583 | 27.73 | 59.72 | 4.58 | 35.11 | 56.92 | 74.00 | 17.08 | |
| | 2534.314 | 28.57 | 65.23 | 4.96 | 35.16 | 63.60 | 74.00 | 10.40 | |
| | **2951.232** | **30.30** | **65.80** | **5.69** | **35.20** | **66.59** | **74.00** | **7.41** | |
| | 3375.707 | 31.27 | 56.07 | 6.10 | 34.83 | 58.61 | 74.00 | 15.39 | |
| | 1215.678 | 24.52 | 46.69 | 3.54 | 36.10 | 38.65 | 54.00 | 15.35 | AV |
| | 1702.593 | 26.44 | 43.29 | 4.07 | 35.43 | 38.37 | 54.00 | 15.63 | |
| | 2118.583 | 27.73 | 43.88 | 4.58 | 35.11 | 41.08 | 54.00 | 12.92 | |
| | 2534.314 | 28.57 | 50.03 | 4.96 | 35.16 | 48.40 | 54.00 | 5.60 | |
| | **2951.232** | **30.30** | **50.42** | **5.69** | **35.20** | **51.21** | **54.00** | **2.79** | |
| | 3375.707 | 31.27 | 43.21 | 6.10 | 34.83 | 45.75 | 54.00 | 8.25 | |

TEST ENGINEER: BILL WU

| | | | | | |
|---|---|---|---|---|---|
| EUT | : | LED LCD TV | Temperature : | 22℃ |
| Model No. | : | HU43K300UW | Humidity : | 60%RH |
| Test Mode | : | HDMI 1280*1024@60Hz & 1kHz Playing | Date of Test : | Dec 18, 2015 |

| Polarization | Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) |
|---|---|---|---|---|---|---|---|
| Horizontal | 72.680 | 7.97 | 25.00 | 0.98 | 33.95 | 40.00 | 6.05 |
| | **137.670** | **12.54** | **24.30** | **1.56** | **38.40** | **43.50** | **5.10** |
| | 224.000 | 10.75 | 26.51 | 2.07 | 39.33 | 46.00 | 6.67 |
| | 298.690 | 13.75 | 23.27 | 2.56 | 39.58 | 46.00 | 6.42 |
| | 717.730 | 19.88 | 16.18 | 3.57 | 39.63 | 46.00 | 6.37 |
| | 841.890 | 20.77 | 14.08 | 4.07 | 38.92 | 46.00 | 7.08 |
| Vertical | 57.160 | 6.24 | 27.39 | 0.86 | 34.49 | 40.00 | 5.51 |
| | 79.470 | 9.29 | 24.09 | 1.07 | 34.45 | 40.00 | 5.55 |
| | 222.060 | 10.65 | 26.00 | 2.05 | 38.70 | 46.00 | 7.30 |
| | 301.600 | 13.88 | 21.39 | 2.59 | 37.86 | 46.00 | 8.14 |
| | **717.730** | **19.88** | **17.10** | **3.57** | **40.55** | **46.00** | **5.45** |
| | 853.530 | 20.73 | 13.89 | 4.17 | 38.79 | 46.00 | 7.21 |

TEST ENGINEER: BILL WU

| | | | | | |
|---|---|---|---|---|---|
| EUT | : | LED LCD TV | Temperature : | 22℃ |
| Model No. | : | HU43K300UW | Humidity : | 60%RH |
| Test Mode | : | HDMI 640*480@60Hz & 1kHz Playing | Date of Test : | Dec 18, 2015 |

| Polarization | Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) |
|---|---|---|---|---|---|---|---|
| Horizontal | 74.620 | 8.43 | 25.25 | 1.01 | 34.69 | 40.00 | 5.31 |
| | 136.700 | 12.57 | 23.16 | 1.56 | 37.29 | 43.50 | 6.21 |
| | 224.970 | 10.80 | 25.54 | 2.07 | 38.41 | 46.00 | 7.59 |
| | **302.570** | **13.88** | **26.14** | **2.59** | **42.61** | **46.00** | **3.39** |
| | 719.670 | 19.90 | 17.40 | 3.57 | 40.87 | 46.00 | 5.13 |
| | 850.620 | 20.70 | 17.52 | 4.17 | 42.39 | 46.00 | 3.61 |
| Vertical | 32.910 | 16.99 | 16.77 | 0.66 | 34.42 | 40.00 | 5.58 |
| | 74.620 | 8.43 | 25.75 | 1.01 | 35.19 | 40.00 | 4.81 |
| | 133.790 | 12.64 | 22.73 | 1.54 | 36.91 | 43.50 | 6.59 |
| | 214.300 | 10.17 | 24.98 | 2.03 | 37.18 | 43.50 | 6.32 |
| | **725.490** | **20.03** | **17.83** | **3.59** | **41.45** | **46.00** | **4.55** |
| | 850.620 | 20.70 | 14.90 | 4.17 | 39.77 | 46.00 | 6.23 |

TEST ENGINEER: BILL WU

| | | | | | |
|---|---|---|---|---|---|
| EUT | : | LED LCD TV | Temperature : | 22℃ |
| Model No. | : | HU43K300UW | Humidity : | 60%RH |
| Test Mode | : | HDMI1080P | Date of Test : | Dec 18, 2015 |

| Polarization | Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| Horizontal | 81.410 | 9.51 | 21.32 | 1.10 | -- | 31.93 | 40.00 | 8.07 | QP |
| | **143.490** | **12.20** | **26.01** | **1.60** | **--** | **39.81** | **43.50** | **3.69** | |
| | 241.460 | 12.00 | 22.37 | 2.13 | -- | 36.50 | 46.00 | 9.50 | |
| | 316.150 | 14.35 | 19.08 | 2.61 | -- | 36.04 | 46.00 | 9.96 | |
| | 383.080 | 16.50 | 14.25 | 2.70 | -- | 33.45 | 46.00 | 12.55 | |
| | 741.010 | 19.97 | 18.20 | 3.60 | -- | 41.77 | 46.00 | 4.23 | |
| | 2126.188 | 27.75 | 57.48 | 4.58 | 35.11 | 54.70 | 74.00 | 19.30 | PK |
| | 2538.859 | 28.57 | 62.11 | 4.96 | 35.16 | 60.48 | 74.00 | 13.52 | |
| | 2972.460 | 30.40 | 63.90 | 5.76 | 35.20 | 64.86 | 74.00 | 9.14 | |
| | **3375.707** | **31.27** | **62.82** | **6.10** | **34.83** | **65.36** | **74.00** | **8.64** | |
| | 3799.467 | 32.30 | 52.46 | 5.94 | 34.46 | 56.24 | 74.00 | 17.76 | |
| | 4652.151 | 33.76 | 49.96 | 6.51 | 34.03 | 56.20 | 74.00 | 17.80 | |
| | 2126.188 | 27.75 | 40.22 | 4.58 | 35.11 | 37.44 | 54.00 | 16.56 | AV |
| | 2538.859 | 28.57 | 45.05 | 4.96 | 35.16 | 43.42 | 54.00 | 10.58 | |
| | **2972.460** | **30.40** | **50.63** | **5.76** | **35.20** | **51.59** | **54.00** | **2.41** | |
| | 3375.707 | 31.27 | 45.75 | 6.10 | 34.83 | 48.29 | 54.00 | 5.71 | |
| | 3799.467 | 32.30 | 37.22 | 5.94 | 34.46 | 41.00 | 54.00 | 13.00 | |
| | 4652.151 | 33.76 | 35.21 | 6.51 | 34.03 | 41.45 | 54.00 | 12.55 | |

TEST ENGINEER: BILL WU

| | | | | | |
|---|---|---|---|---|---|
| EUT | : | LED LCD TV | Temperature : | 22℃ |
| Model No. | : | HU43K300UW | Humidity : | 60%RH |
| Test Mode | : | HDMI1080P | Date of Test : | Dec 18, 2015 |

| Polarization | Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| Vertical | **72.680** | **7.97** | **25.99** | **0.98** | **--** | **34.94** | **40.00** | **5.06** | QP |
| | 143.490 | 12.20 | 20.77 | 1.60 | **--** | 34.57 | 43.50 | 8.93 | |
| | 230.790 | 11.24 | 22.03 | 2.09 | -- | 35.36 | 46.00 | 10.64 | |
| | 359.800 | 15.90 | 11.54 | 2.67 | -- | 30.11 | 46.00 | 15.89 | |
| | 512.090 | 17.95 | 11.58 | 2.84 | -- | 32.37 | 46.00 | 13.63 | |
| | 875.840 | 20.97 | 14.91 | 4.36 | -- | 40.24 | 46.00 | 5.76 | |
| | 1211.329 | 24.49 | 65.20 | 3.54 | 36.11 | 57.12 | 74.00 | 16.88 | PK |
| | 1690.434 | 26.40 | 59.01 | 4.07 | 35.44 | 54.04 | 74.00 | 19.96 | |
| | 2122.382 | 27.73 | 58.18 | 4.58 | 35.11 | 55.38 | 74.00 | 18.62 | |
| | 2529.778 | 28.53 | 64.47 | 4.96 | 35.16 | 62.80 | 74.00 | 11.20 | |
| | **2951.232** | **30.30** | **63.71** | **5.69** | **35.20** | **64.50** | **74.00** | **9.50** | |
| | 3381.760 | 31.29 | 54.22 | 6.10 | 34.82 | 56.79 | 74.00 | 17.21 | |
| | 1211.329 | 24.49 | 50.39 | 3.54 | 36.11 | 42.31 | 54.00 | 11.69 | AV |
| | 1690.434 | 26.40 | 45.00 | 4.07 | 35.44 | 40.03 | 54.00 | 13.97 | |
| | 2122.382 | 27.73 | 48.31 | 4.58 | 35.11 | 45.51 | 54.00 | 8.49 | |
| | 2529.778 | 28.53 | 50.22 | 4.96 | 35.16 | 48.55 | 54.00 | 5.45 | |
| | **2951.232** | **30.30** | **50.84** | **5.69** | **35.20** | **51.63** | **54.00** | **2.37** | |
| | 3381.760 | 31.29 | 47.29 | 6.10 | 34.82 | 49.86 | 54.00 | 4.14 | |

TEST ENGINEER: BILL WU

| | | | | | |
|---|---|---|---|---|---|
| EUT | : | LED LCD TV | Temperature : | 22℃ | |
| Model No. | : | HU43K300UW | Humidity | : | 60%RH |
| Test Mode | : | MHL | Date of Test | : | Dec 18, 2015 |

| Polarization | Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) |
|---|---|---|---|---|---|---|---|
| Horizontal | **78.500** | **9.12** | **24.36** | **1.05** | **34.53** | **40.00** | **5.47** |
| | 150.280 | 11.46 | 22.62 | 1.63 | 35.71 | 43.50 | 7.79 |
| | 232.730 | 11.32 | 22.39 | 2.09 | 35.80 | 46.00 | 10.20 |
| | 310.330 | 14.10 | 19.80 | 2.60 | 36.50 | 46.00 | 9.50 |
| | 373.380 | 16.36 | 14.58 | 2.69 | 33.63 | 46.00 | 12.37 |
| | 895.240 | 21.30 | 13.06 | 4.46 | 38.82 | 46.00 | 7.18 |
| Vertical | **85.290** | **9.85** | **23.31** | **1.15** | **34.31** | **40.00** | **5.69** |
| | 140.580 | 12.45 | 21.18 | 1.59 | 35.22 | 43.50 | 8.28 |
| | 209.450 | 10.00 | 23.00 | 2.01 | 35.01 | 43.50 | 8.49 |
| | 305.480 | 13.99 | 19.41 | 2.60 | 36.00 | 46.00 | 10.00 |
| | 530.520 | 18.30 | 12.74 | 2.73 | 33.77 | 46.00 | 12.23 |
| | 736.160 | 19.97 | 12.49 | 3.60 | 36.06 | 46.00 | 9.94 |

TEST ENGINEER: BILL WU

| | | | | | |
|---|---|---|---|---|---|
| EUT | : | LED LCD TV | Temperature : | 22℃ |
| Model No. | : | HU43K300UW | Humidity : | 60%RH |
| Test Mode | : | USB Play | Date of Test : | Dec 18, 2015 |

| Polarization | Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) |
|---|---|---|---|---|---|---|---|
| Horizontal | 71.710 | 7.68 | 25.08 | 0.96 | 33.72 | 40.00 | 6.28 |
| | 225.940 | 10.88 | 24.34 | 2.07 | 37.29 | 46.00 | 8.71 |
| | **301.600** | **13.88** | **23.93** | **2.59** | **40.40** | **46.00** | **5.60** |
| | 379.200 | 16.47 | 14.93 | 2.69 | 34.09 | 46.00 | 11.91 |
| | 522.760 | 18.18 | 15.33 | 2.78 | 36.29 | 46.00 | 9.71 |
| | 888.450 | 21.30 | 13.28 | 4.46 | 39.04 | 46.00 | 6.96 |
| Vertical | 40.670 | 12.74 | 19.54 | 0.74 | 33.02 | 40.00 | 6.98 |
| | **81.410** | **9.51** | **23.54** | **1.10** | **34.15** | **40.00** | **5.85** |
| | 138.640 | 12.53 | 20.76 | 1.57 | 34.86 | 43.50 | 8.64 |
| | 224.970 | 10.80 | 24.83 | 2.07 | 37.70 | 46.00 | 8.30 |
| | 522.760 | 18.18 | 18.51 | 2.78 | 39.47 | 46.00 | 6.53 |
| | 841.890 | 20.77 | 12.27 | 4.07 | 37.11 | 46.00 | 8.89 |

TEST ENGINEER: BILL WU

| | | | | | |
|---|---|---|---|---|---|
| EUT | : | LED LCD TV | Temperature : | 22℃ |
| Model No. | : | HU43K300UW | Humidity : | 60%RH |
| Test Mode | : | LAN Play | Date of Test : | Dec 18, 2015 |

| Polarization | Frequency (MHz) | Meter Reading dB (μV) | Antenna Factor (dB/m) | Cable Loss (dB) | Emission Level dB (μV/m) | Limits dB (μV/m) | Margin (dB) |
|---|---|---|---|---|---|---|---|
| Horizontal | **78.500** | **9.12** | **25.06** | **1.05** | **35.23** | **40.00** | **4.77** |
| | 136.700 | 12.57 | 24.53 | 1.56 | 38.66 | 43.50 | 4.84 |
| | 221.090 | 10.60 | 26.46 | 2.05 | 39.11 | 46.00 | 6.89 |
| | 297.000 | 13.70 | 23.10 | 2.56 | 39.36 | 46.00 | 6.64 |
| | 363.680 | 16.03 | 21.31 | 2.67 | 40.01 | 46.00 | 5.99 |
| | 844.800 | 20.73 | 14.46 | 4.07 | 39.26 | 46.00 | 6.74 |
| Vertical | **30.000** | **18.90** | **15.60** | **0.63** | **35.13** | **40.00** | **4.87** |
| | 76.560 | 8.78 | 23.90 | 1.04 | 33.72 | 40.00 | 6.28 |
| | 132.820 | 12.69 | 23.21 | 1.54 | 37.44 | 43.50 | 6.06 |
| | 300.630 | 13.84 | 23.28 | 2.59 | 39.71 | 46.00 | 6.29 |
| | 719.670 | 19.90 | 16.03 | 3.57 | 39.50 | 46.00 | 6.50 |
| | 844.800 | 20.73 | 15.14 | 4.07 | 39.94 | 46.00 | 6.06 |

TEST ENGINEER: BILL WU

# 5 DEBUG DESCRIPTION

The following components are used during the countermeasure procedures:

| Name | M/N | Manufacturer | Location |
|---|---|---|---|
| Conductive Tape | DCF40\ROH | Qingdao Joinset Co., Ltd | See Appendix Figure 26 |

Note: We had required the applicant and manufacturer that all electrical and mechanical devices employed for spurious radiation suppression, including any modifications made during certification testing, must be incorporated in each unit marked

TEST ENGINEER: Wency Yang

**(WENCY YANG)**

# 6 DEVIATION TO TEST SPECIFICATIONS

None.