



**FCC CFR47 PART 15 SUBPART B  
ICES-003 ISSUE 4**

**DECLARATION OF CONFORMITY TEST REPORT**

**FOR**

**WIRELESS ADAPTOR**

**MODEL NUMBER: CECHYA-0081**

**FCC ID: ZL2CECHYA0081  
IC: 409P-CECHYA0081**

**REPORT NUMBER: 11U13855-2, Revision A**

**ISSUE DATE: JUNE 30, 2011**

*Prepared for*

**Sony Computer Entertainment America  
919 East Hillsdale Blvd  
Foster City, CA United States 94404-2175**

*Prepared by*

**COMPLIANCE CERTIFICATION SERVICES (UL CCS)  
47173 BENICIA STREET  
FREMONT, CA 94538, U.S.A.  
TEL: (510) 771-1000  
FAX: (510) 661-0888**

**NVLAP**<sup>®</sup>

NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
--	06/28/11	Initial Issue	F. Ibrahim
A	06/30/11	Added FCC, IC ID and update support equipment list	C. Pang
-----	-----	-----	-----

## TABLE OF CONTENTS

<b>1. ATTESTATION OF TEST RESULTS.....</b>	<b>4</b>
<b>2. TEST METHODOLOGY .....</b>	<b>5</b>
<b>3. FACILITIES AND ACCREDITATION.....</b>	<b>5</b>
<b>4. CALIBRATION AND UNCERTAINTY .....</b>	<b>5</b>
4.1. <i>MEASURING INSTRUMENT CALIBRATION.....</i>	5
4.2. <i>SAMPLE CALCULATION.....</i>	5
4.3. <i>MEASUREMENT UNCERTAINTY.....</i>	5
<b>5. EQUIPMENT UNDER TEST .....</b>	<b>6</b>
5.1. <i>DESCRIPTION OF EUT.....</i>	6
5.2. <i>TEST CONFIGURATIONS.....</i>	6
5.3. <i>MODE(S) OF OPERATION.....</i>	6
5.4. <i>SOFTWARE AND FIRMWARE.....</i>	6
5.5. <i>MODIFICATIONS.....</i>	6
5.6. <i>DETAILS OF TESTED SYSTEM .....</i>	7
<b>6. TEST AND MEASUREMENT EQUIPMENT .....</b>	<b>9</b>
<b>7. APPLICABLE LIMITS AND TEST RESULTS .....</b>	<b>10</b>
7.1. <i>RADIATED EMISSIONS .....</i>	10
7.2. <i>AC MAINS LINE CONDUCTED EMISSIONS.....</i>	14
<b>8. SETUP PHOTOS.....</b>	<b>18</b>

## 1. ATTESTATION OF TEST RESULTS

**COMPANY NAME:** Sony Computer Entertainment America  
919 East Hillsdale Blvd  
Foster City, CA United States 94404-2175.

**EUT DESCRIPTION:** Wireless adaptor

**MODEL:** CECHYA-0081

**SERIAL NUMBER:** PVT-59, PVT-64

**DATE TESTED:** JUNE 23, 2011

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC PART 15 SUBPART B	Pass
ICES-003 ISSUE 4	Pass

Compliance Certification Services (UL CCS) tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL CCS based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

**Note:** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL CCS and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL CCS will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

Approved & Released For UL CCS By:



---

FRANK IBRAHIM  
EMC SUPERVISOR  
UL CCS

Tested By:



---

CHIN PANG  
EMC ENGINEER  
UL CCS

## 2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.4-2009.

## 3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 Benicia Street, Fremont, California, USA.

UL CCS is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at <http://www.ccsemc.com>.

## 4. CALIBRATION AND UNCERTAINTY

### 4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

### 4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

$$\begin{aligned} \text{Field Strength (dBuV/m)} &= \text{Measured Voltage (dBuV)} + \text{Antenna Factor (dB/m)} + \\ &\text{Cable Loss (dB)} - \text{Preamp Gain (dB)} \\ 36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} &= 28.9 \text{ dBuV/m} \end{aligned}$$

### 4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	3.52 dB
Radiated Disturbance, 30 to 1000 MHz	4.94 dB

Uncertainty figures are valid to a confidence level of 95%.

## 5. EQUIPMENT UNDER TEST

### 5.1. DESCRIPTION OF EUT

The EUT is a wireless adaptor.

#### GENERAL INFORMATION

Power Requirements	5VDC
Highest frequency generated or used by the EUT	16 MHz

### 5.2. TEST CONFIGURATIONS

EUT Configuration	Description
Minimum Configuration	EUT connected to PC with minimum peripheral complement.

### 5.3. MODE(S) OF OPERATION

Mode of Operation	Description
Normal Mode	Charging and BT pairing, playing music

### 5.4. SOFTWARE AND FIRMWARE

The EUT driver software installed during testing was AMD7 developer-1\_5\_1.exe.

The test utility software used during testing was AMD7developer Ver 1.5.1.setup

### 5.5. MODIFICATIONS

No modifications were made during testing.

## 5.6. DETAILS OF TESTED SYSTEM

### SUPPORT EQUIPMENT

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	Manufacturer	Model	Serial Number	FCC ID
Laptop	SONY	PCG-6F1L	281946303110705	DoC
AC Adapter	SONY	VGP-AC16V8	147886060112680	DoC
Wireless Stereo Headset	SONY	CECHYA-0080	PVT-67	ZL2CECHYA0080

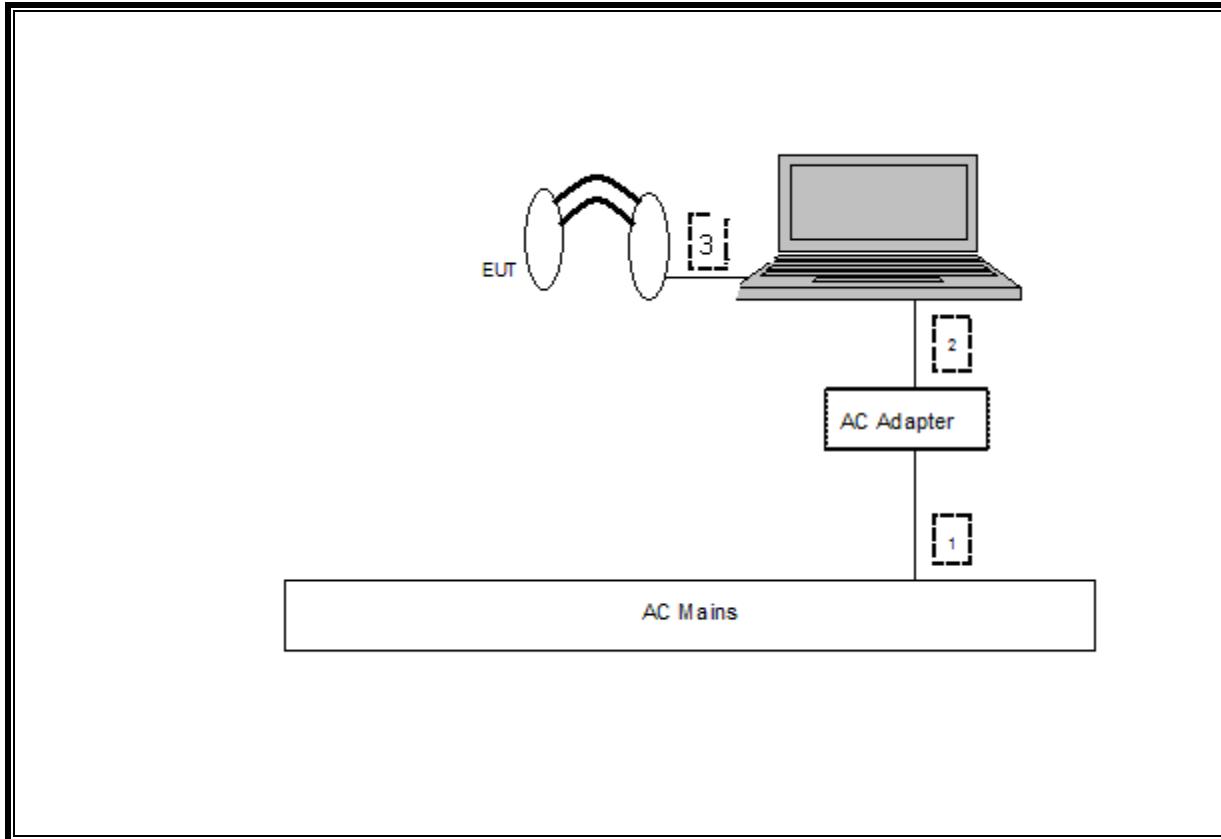
### I/O CABLES

I/O CABLE LIST						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length	Remarks
1	AC	1	US 115V	Shielded	1.5m	NA
2	DC	1	DC	Un-shielded	1.5m	Ferrite at laptop's end
3	USB	1	USB	Un-shielded	1.8m	NA

### TEST SETUP

The EUT is connected to a host laptop computer during the tests.

**TEST SETUP DIAGRAM**



## 6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

TEST EQUIPMENT LIST				
Description	Manufacturer	Model	Serial Number	Cal Due
Spectrum Analyzer, 26.5 GHz	Agilent / HP	E4440A	C01179	01/19/12
Antenna, Bilog, 2 GHz	Sunol Sciences	JB1	C01011	07/12/11
Pre-Amplifier, 1300 MHz	Agilent / HP	8447D	C00885	01/27/12
EMI Test Receiver, 9 kHz-7 GHz	R & S	ESCI 7	None	07/02/11
LISN, 30 MHz	FCC	LISN-50/250-25-2	N02625	11/10/11
LISN, 10 kHz ~ 30 MHz	Solar	8012-50-R-24-BNC	N02481	11/10/11

## 7. APPLICABLE LIMITS AND TEST RESULTS

### 7.1. RADIATED EMISSIONS

#### TEST PROCEDURE

ANSI C63.4

The highest clock frequency generated or used in the EUT is 16 MHz, therefore the frequency range was investigated from 30 MHz to 1000 MHz.

#### LIMIT

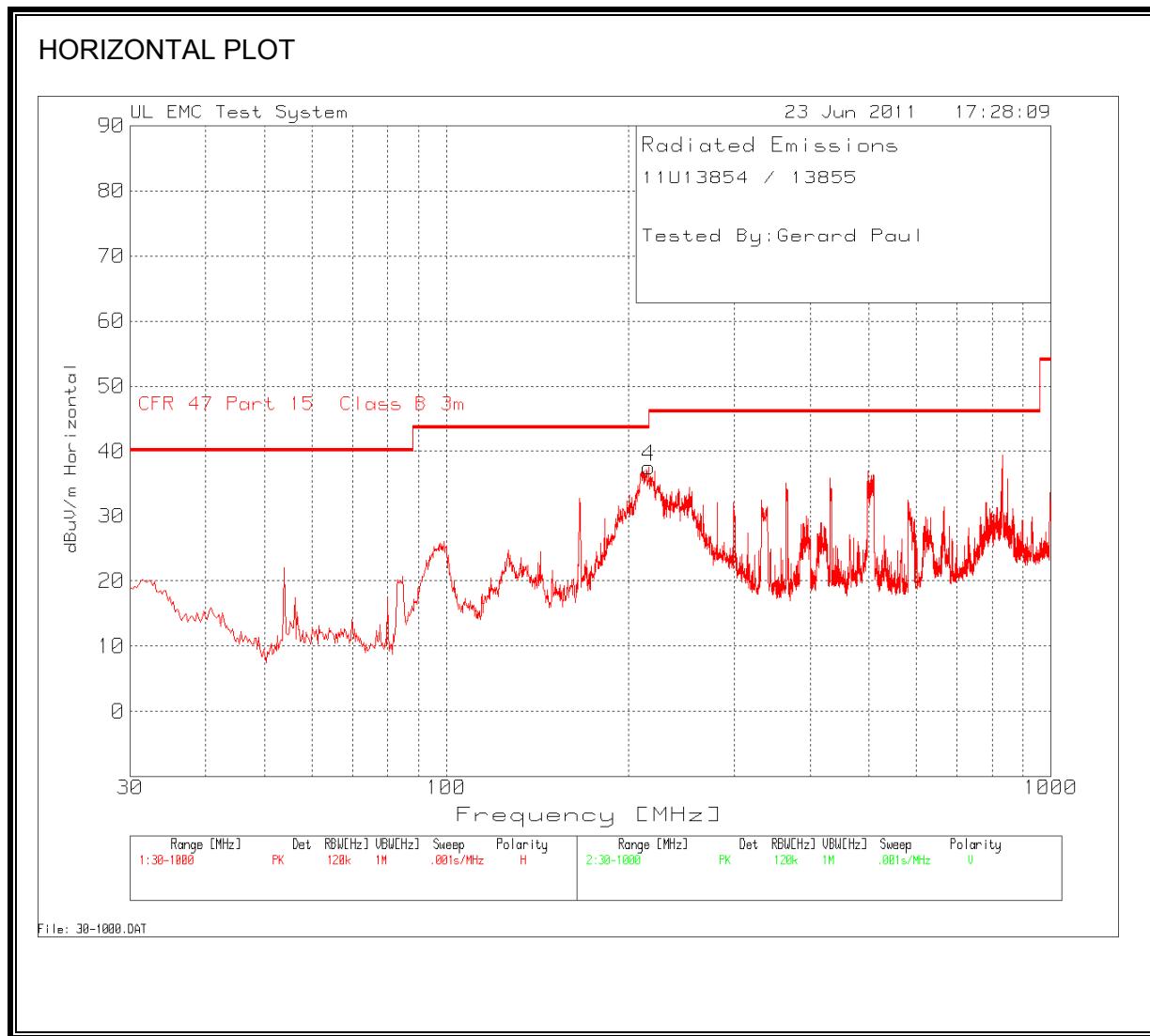
§15.109 (a) Except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Limits for radiated disturbance of Class B ITE at measuring distance of 3 m	
Frequency range (MHz)	Quasi-peak limits (dB $\mu$ V/m)
30 to 88	40
88 to 216	43.5
216 to 960	46
Above 960 MHz	54

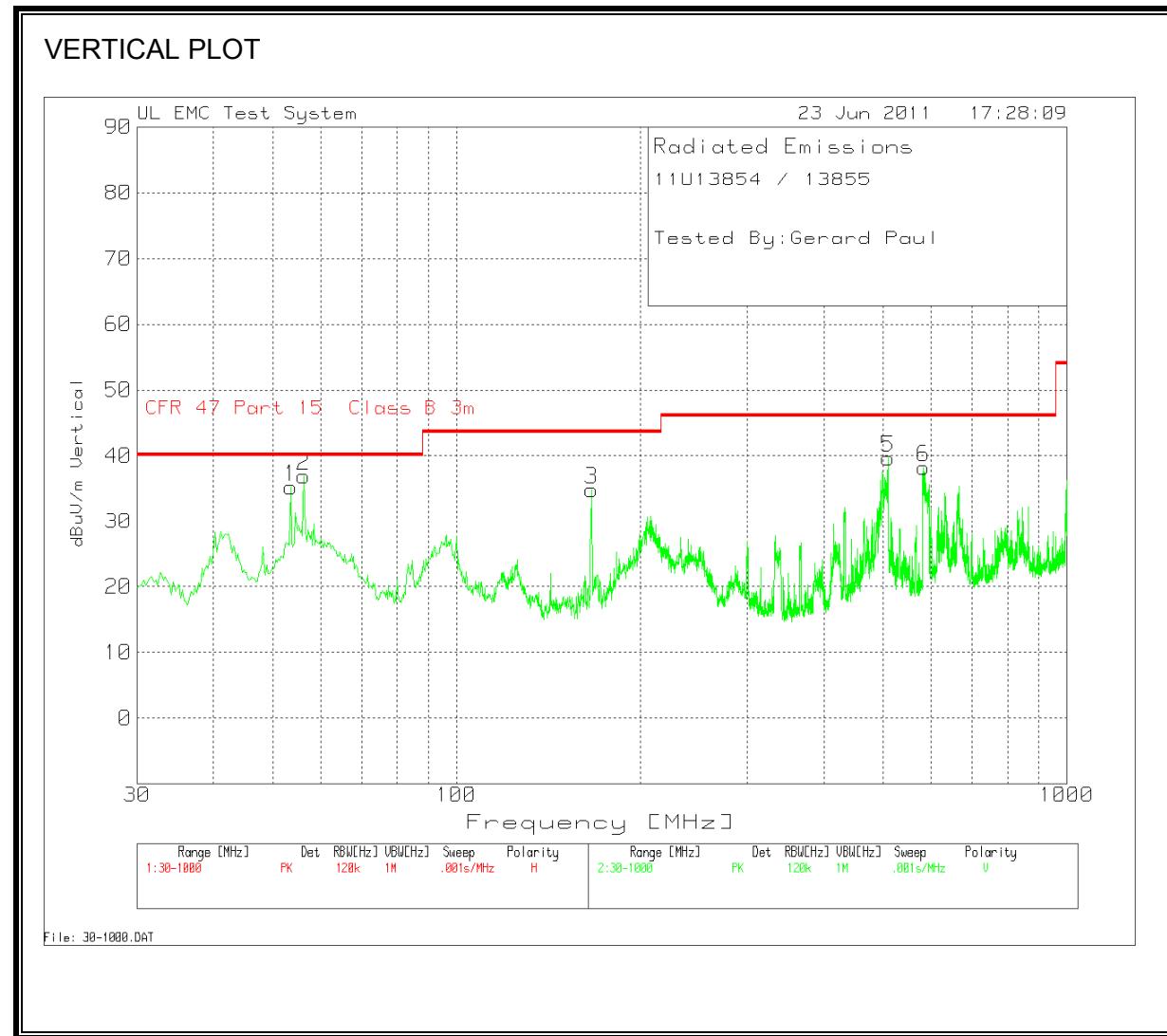
Note: The lower limit shall apply at the transition frequency.

## RESULTS

### SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL)



**SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, VERTICAL)**



HORIZONTAL AND VERTICAL DATA

11U13854 / 13855											
Tested By: Gerard Paul											
Range 1 30 - 1000MHz											
Test Frequency	Meter Reading	Detector	Cable (dB)	PreAmp (dB)	Bilog [dB]	Corrected Measurement dBuV/m	Limit Class B 3m	Margin	Height [cm]	Polarity	
216.3427	52.59	PK	2	-28.9	11.9	37.59	46	-8.41	91	Horz	
Range 2 30 - 1000MHz											
Test Frequency	Meter Reading	Detector	Cable (dB)	PreAmp (dB)	Bilog [dB]	Corrected Measurement dBuV/m	Limit Class B 3m	Margin	Height [cm]	Polarity	
53.5049	55.76	PK	1	-29.4	7.9	35.26	40	-4.74	109	Vert	
56.1704	57.37	PK	1.1	-29.4	7.9	36.97	40	-3.03	109	Vert	
166.4252	51.77	PK	1.8	-29.1	10.4	34.87	43.5	-8.63	109	Vert	
509.7902	49.07	PK	3.1	-29.4	16.9	39.67	46	-6.33	109	Vert	
582.9703	46.24	PK	3.4	-29.4	18	38.24	46	-7.76	109	Vert	
Range 1 30 - 1000MHz											
Test Frequency	Meter Reading	Detector	Cable (dB)	PreAmp (dB)	Bilog [dB]	Corrected Measurement dBuV/m	Limit Class B 3m	Margin	Azimuth [Degs]	Height [cm]	Polarity
213.2376	48.69	QP	2	-28.9	11.9	33.69	43.5	-9.81	223	160	Horz
Range 2 30 - 1000MHz											
Test Frequency	Meter Reading	Detector	Cable (dB)	PreAmp (dB)	Bilog [dB]	Corrected Measurement dBuV/m	Limit Class B 3m	Margin	Azimuth [Degs]	Height [cm]	Polarity
54.8001	44.73	QP	1.1	-29.4	7.9	24.33	40	-15.67	158	101	Vert
55.3116	44.29	QP	1.1	-29.4	7.9	23.89	40	-16.11	190	106	Vert
168.003	32.8	QP	1.8	-29.1	10.3	15.8	43.5	-27.7	11	105	Vert
PK - Peak detector											
QP - Quasi-Peak detector											

## 7.2. AC MAINS LINE CONDUCTED EMISSIONS

### TEST PROCEDURE

ANSI C63.4

### LIMIT

§15.107 (a) Except for Class A digital devices, for equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50  $\mu$ H/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the band edges.

Frequency range (MHz)	Limits (dB $\mu$ V)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50

Notes:

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

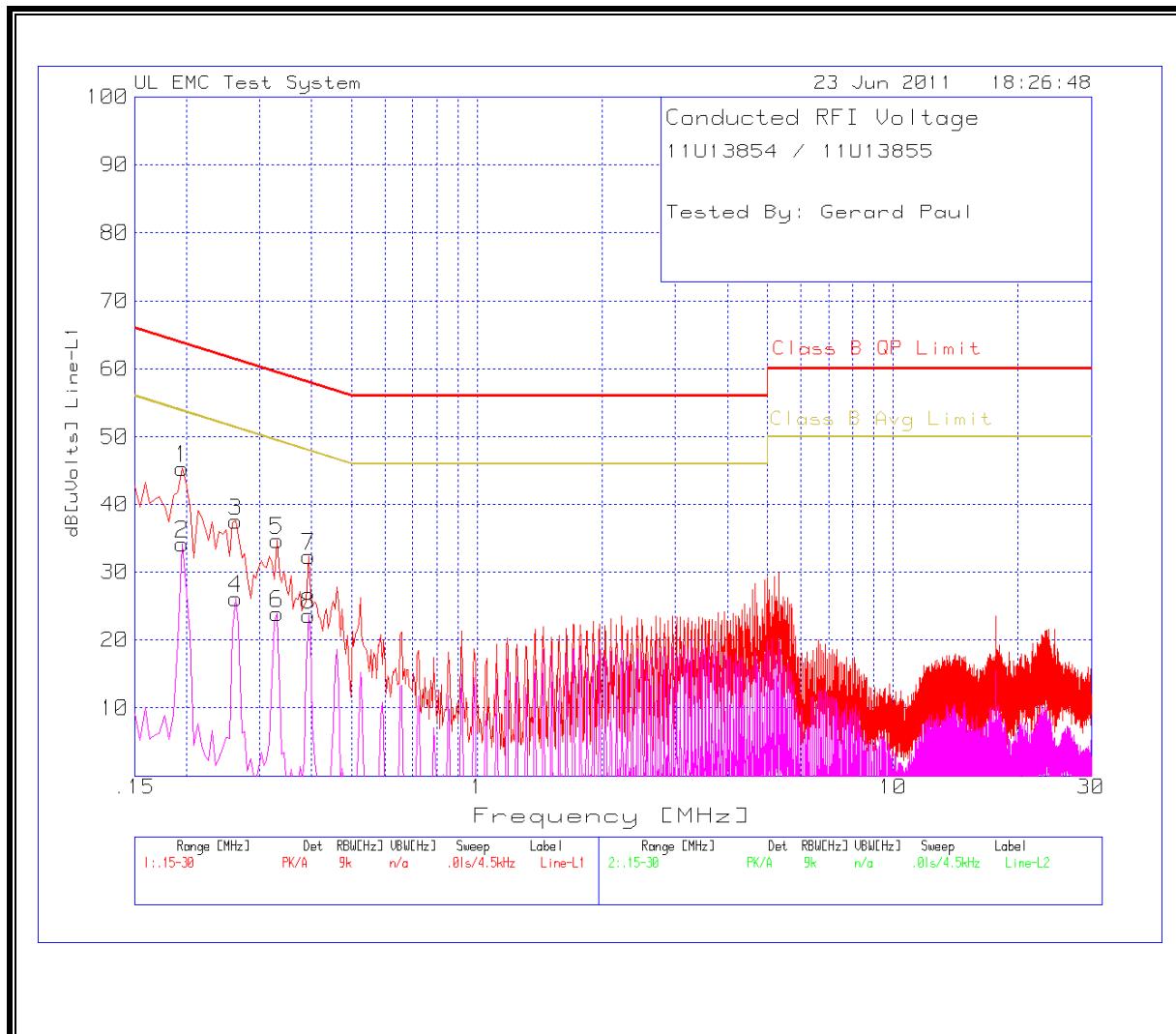
## RESULTS

### WORST EMISSIONS

11U13854 / 11U13855									
Tested By: Gerard Paul									
Line-L1 .15 - 30MHz									
Test Frequency	Meter Reading	Detector	LISN [dB]	Cable [dB]	Corrected Measurement dB[uVolts]	Class B QP Limit	Margin	Class B Avg Limit	Margin
0.195	45.35	PK	0	0	45.35	63.8	-18.45	53.8	-8.45
0.195	34.13	Av	0	0	34.13	63.8	-29.67	53.8	-19.67
0.2625	37.49	PK	0	0	37.49	61.4	-23.91	51.4	-13.91
0.2625	26.05	Av	0	0	26.05	61.4	-35.35	51.4	-25.35
0.33	34.65	PK	0	0	34.65	59.5	-24.85	49.5	-14.85
0.33	23.87	Av	0	0	23.87	59.5	-35.63	49.5	-25.63
0.393	32.26	PK	0	0	32.26	58	-25.74	48	-15.74
0.393	23.59	Av	0	0	23.59	58	-34.41	48	-24.41

PK - Peak detector  
QP - Quasi-Peak detector  
Av - Average detector

**LINE 1 RESULTS**



**LINE 2 RESULTS**

