



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

**TEST REPORT  
FOR**

**BT 2.1 + EDR HEADSET WITH VIDEO CAMERA**

**MODEL NUMBER: LX1**

**FCC ID: YJ8-LX1  
IC: 9087A-LX1**

**REPORT NUMBER: 10U13339-2, Revision B**

**ISSUE DATE: AUGUST 30, 2010**

*Prepared for*  
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**NVLAP**<sup>®</sup>

NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
---	08/12/10	Initial Issue	F. Ibrahim
A	08/25/10	Revised FCC ID per clients request	A. Zaffar
B	08/30/10	Added radiated and conducted data for second configuration (EUT connected to PC).	F. Ibrahim

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## 1. ATTESTATION OF TEST RESULTS

**COMPANY NAME:** LOOXCIE, INC.  
1196 BORREGAS AVE, SUITE 200  
SUNNYVALE, CA 94089, U.S.A.

**EUT DESCRIPTION:** BT 2.1 + EDR Headset with video camera

**MODEL:** LX1

**SERIAL NUMBER:** 02124

**DATE TESTED:** AUGUST 09-27, 2010

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

Compliance Certification Services, Inc. (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 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 CCS and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by 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 CCS By:



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FRANK IBRAHIM  
EMC SUPERVISOR  
COMPLIANCE CERTIFICATION SERVICES

Tested By:



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TOM CHEN  
EMC ENGINEER  
COMPLIANCE CERTIFICATION SERVICES

## 2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.4-2003.

## 3. FACILITIES AND ACCREDITATION

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

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 Bluetooth v2.1 + EDR headset with a video camera.

#### GENERAL INFORMATION

Power Requirements	5.0 Volts Battery
List of frequencies generated or used by the EUT	32KHz , 26MHz, 48MHz

### 5.2. TEST CONFIGURATIONS

The following configurations were investigated during testing:

EUT Configuration	Description
Configuration 1	EUT is stand alone unit with Charger (normal) mode.
Configuration 2	EUT with Peripherals (normal) mode.

### 5.3. MODE(S) OF OPERATION

Mode	Description
Configuration 1	TX ON and Charging.
Configuration 2	Laptop PC Playing movie file from EUT.

### 5.4. MODIFICATIONS

No modifications were made during testing.

## 5.5. DETAILS OF TESTED SYSTEM

### SUPPORT EQUIPMENT & PERIPHERALS

PERIPHERAL SUPPORT EQUIPMENT LIST			
Description	Manufacturer	Model	Serial Number
Laptop PC	Dell	PP18L	NR139A00
AC Adapter	Dell	LA65NS0-00	71615-72M-2925
Modem	ACEEX	1414	9013538
Printer	Microline 186	D22300A	AC5C018494A0
USB Mouse	Dell	0YH958	831890-0000

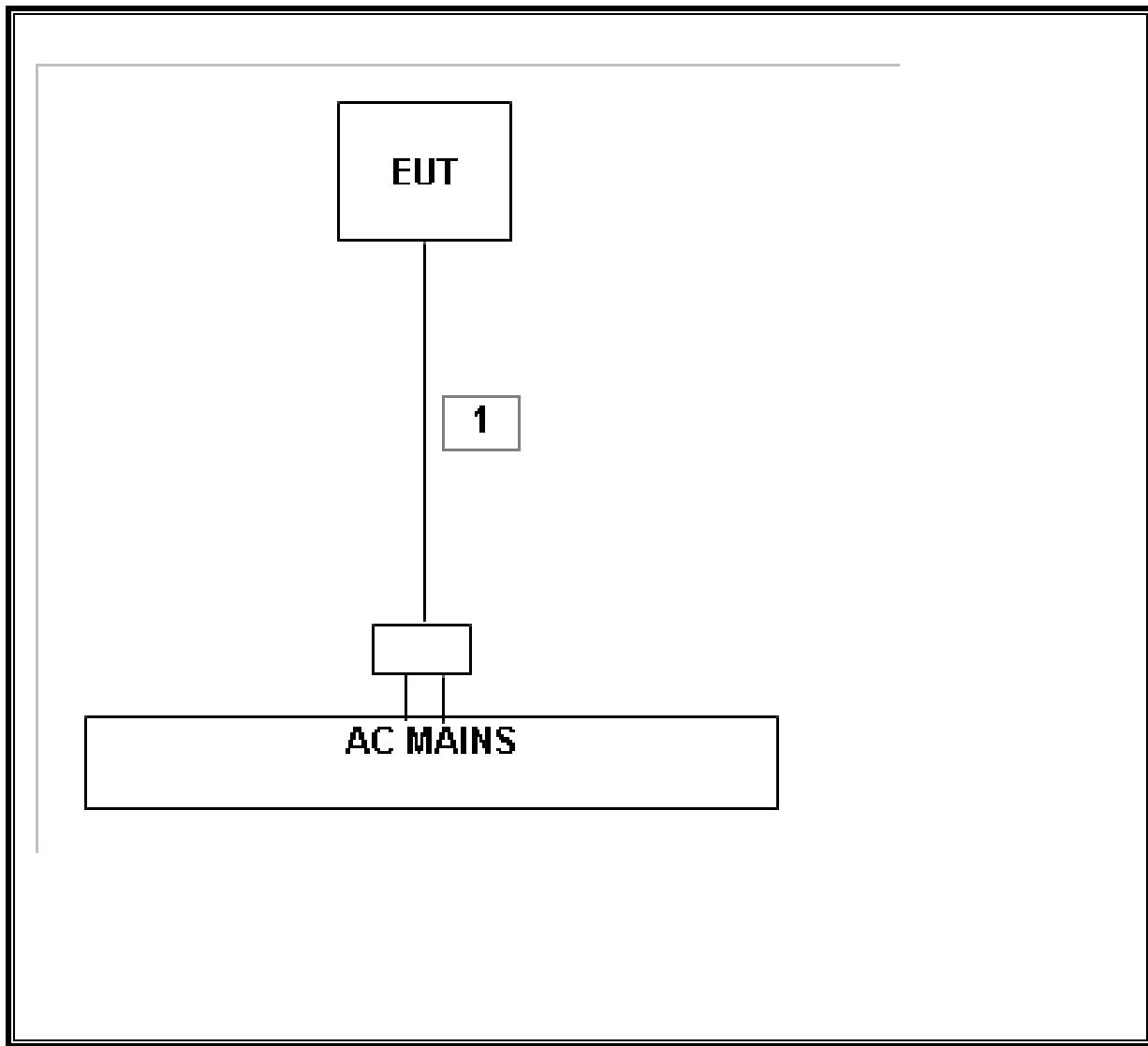
### I/O CABLES (CONFIGURATION 1)

I/O CABLE LIST						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length	Remarks
1	USB	1	MINI USB	Shielded	0.3m	N/A

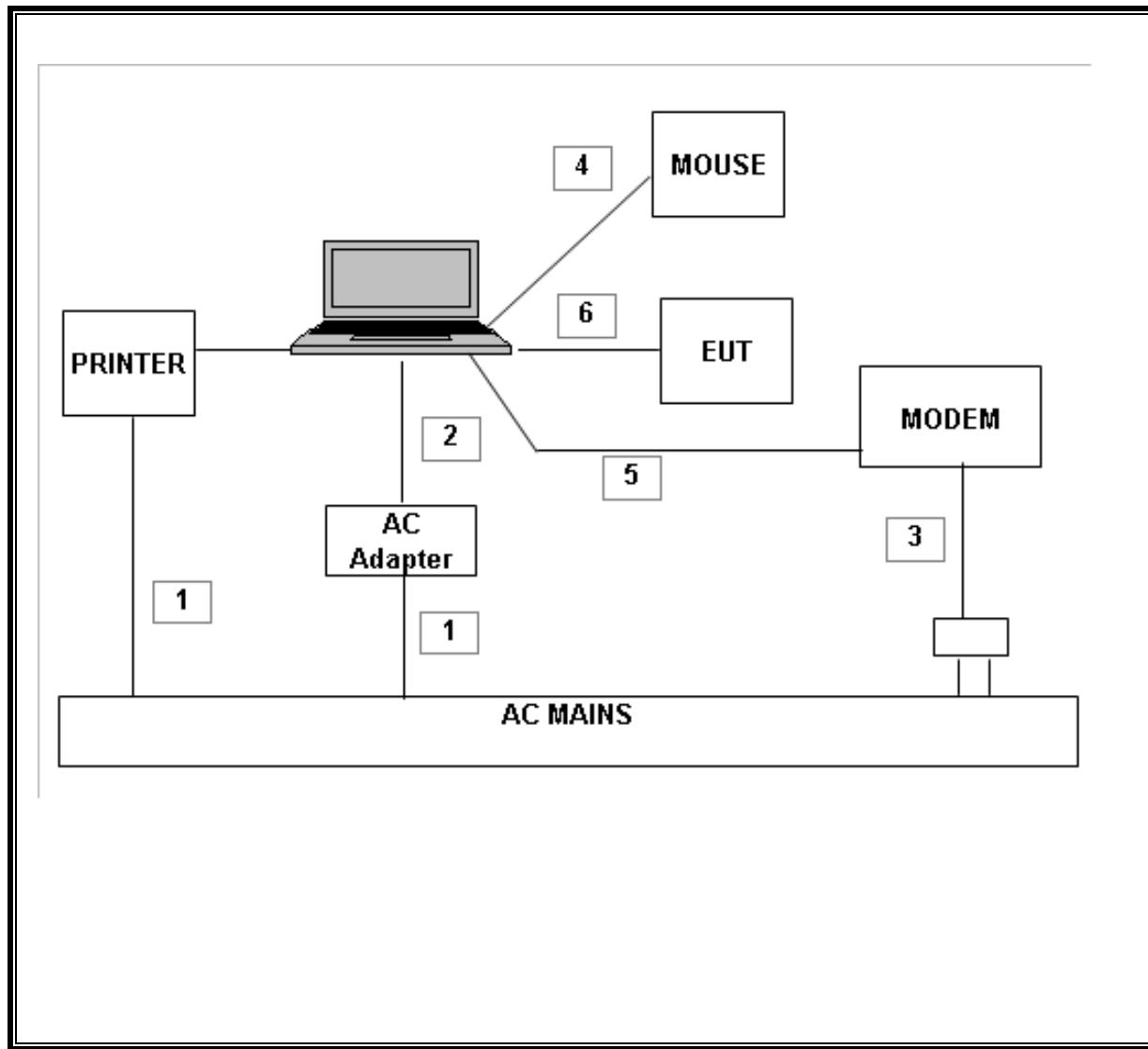
### I/O CABLES (CONFIGURATION 2)

I/O CABLE LIST						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length	Remarks
1	AC	2	US 115V	Un-shielded	2.0m	N/A
2	DC	1	DC	Un-shielded	1.5m	N/A
3	DC	1	Jack	Un-shielded	1.8m	N/A
4	USB	1	USB	Shielded	1.5m	N/A
5	Serial	1	DB9	Shielded	1.0m	N/A
6	USB	2	MINI USB	Shielded	0.3m	N/A

**SETUP DIAGRAM CONFIGURATION 1**



**SETUP DIAGRAM CONFIGURATION 2**



## 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	Asset	Cal Due
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C01159	05/08/11
Antenna, Bilog, 2 GHz	Sunol Sciences	JB1	C01016	07/14/11
Preamplifier, 1300 MHz	Agilent / HP	8447D	C00580	07/06/11
LISN, 30 MHz	FCC	LISN-50/250-25-2	N02625	11/06/10
EMI Test Receiver, 30 MHz	R & S	ESHS 20	N02396	05/06/11

## 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 48 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:

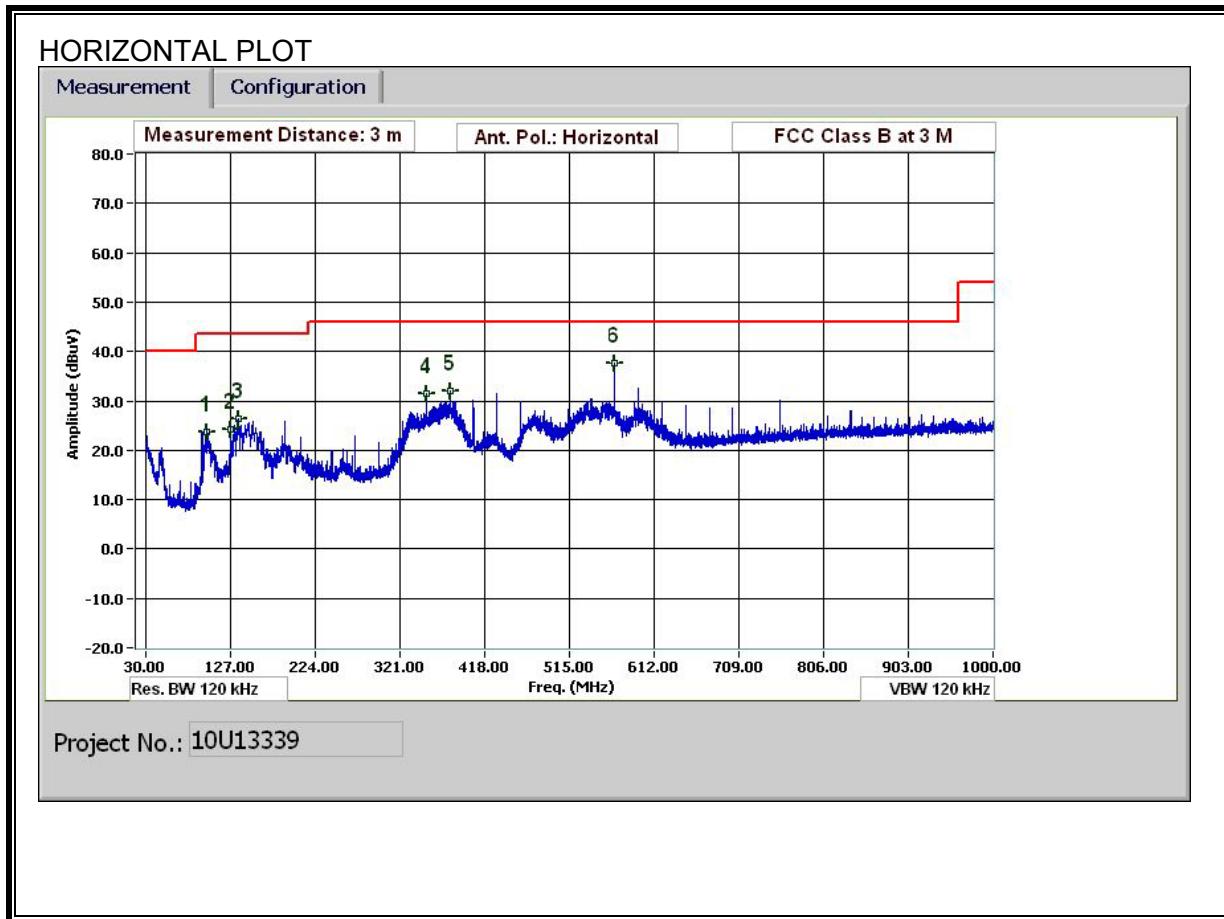
Limits for radiated disturbance of Class B ITE at measuring distance of 3 m	
Frequency range (MHz)	Quasi-peak limits (dB $\mu$ V/m)
30 to 88	40
88 to 216	43.5
216 to 960	46
Above 960 MHz	54

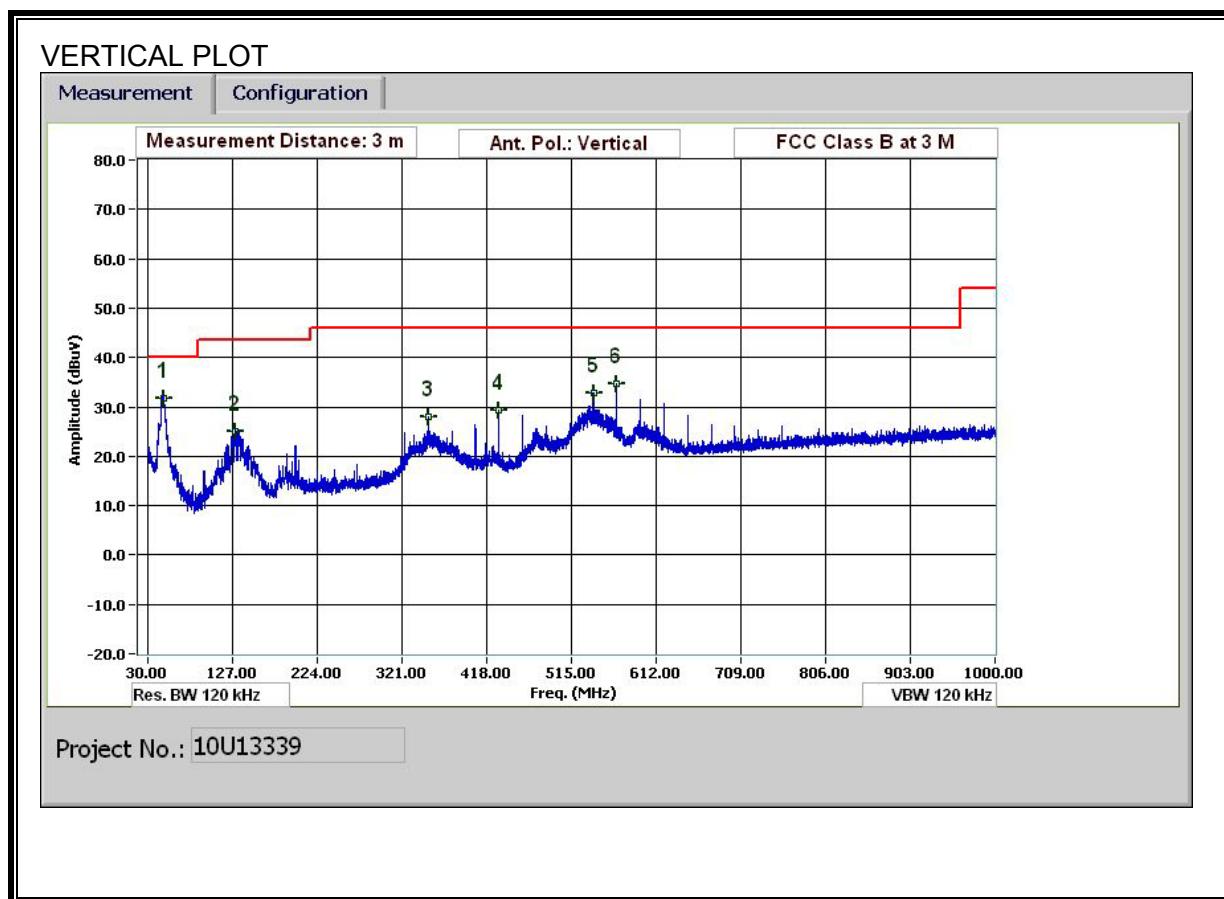
Note: The lower limit shall apply at the transition frequency.

## TEST RESULT

### 7.1.1. CONFIGURATION 1

## **SPURIOUS EMISSIONS 30 TO 1000 MHz (DIGITAL DEVICE, HORIZONTAL)**





## HORIZONTAL & VERTICAL DATA

### 30-1000MHz Frequency Measurement Compliance Certification Services, Fremont 5m Chamber

Test Engr: Tom Chen  
 Date: 08/04/10  
 Project #: 10U13339  
 Company: Looxicie  
 EUT Description: BT 2.1 + EDR Headset with video camera  
 EUT M/N: EUT only  
 Test Target: FCC Class B  
 Mode Oper: TX mode, Worst Case

	f	Measurement Frequency	Amp	Preamp Gain		Margin	Margin vs. Limit
Dist	Distance to Antenna	D	Corr	Distance Correct to 3 meters			
Read	Analyzer Reading	Filter		Filter Insert Loss			
AF	Antenna Factor	Corr.		Calculated Field Strength			
CL	Cable Loss	Limit		Field Strength Limit			

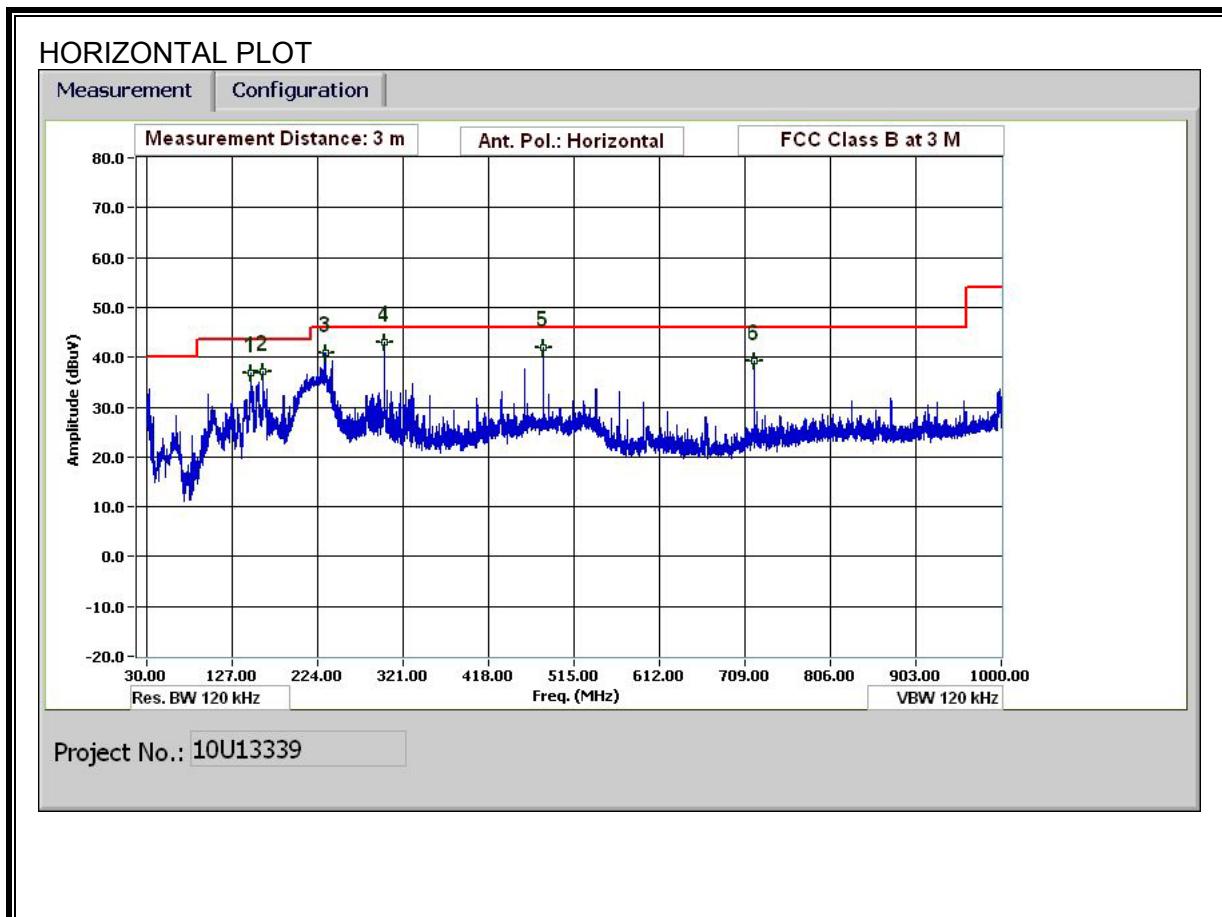
f MHz	Dist (m)	Read dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Filter dB	Corr. dBuV/m	Limit dBuV/m	Margin dB	Ant. Pol. V/H	Det. P/A/QP	Notes
<b>Horizontal</b>													
99.363	3.0	41.3	9.8	0.9	28.3	0.0	0.0	23.7	43.5	-19.8	H	P	
127.444	3.0	38.0	13.6	1.1	28.3	0.0	0.0	24.3	43.5	-19.2	H	P	
135.844	3.0	40.1	13.4	1.1	28.3	0.0	0.0	26.3	43.5	-17.2	H	P	
351.013	3.0	43.8	14.2	1.7	28.1	0.0	0.0	31.6	46.0	-14.4	H	P	
378.014	3.0	43.7	14.6	1.7	28.1	0.0	0.0	31.9	46.0	-14.1	H	P	
567.022	3.0	45.2	17.9	2.2	27.6	0.0	0.0	37.6	46.0	-8.4	H	P	
<b>Vertical</b>													
48.241	3.0	50.2	9.2	0.6	28.4	0.0	0.0	31.7	40.0	-8.3	V	P	
130.684	3.0	38.8	13.5	1.1	28.3	0.0	0.0	25.1	43.5	-18.4	V	P	
351.013	3.0	40.2	14.2	1.7	28.1	0.0	0.0	28.0	46.0	-18.0	V	P	
432.017	3.0	39.9	15.5	1.9	28.0	0.0	0.0	29.2	46.0	-16.8	V	P	
540.021	3.0	41.0	17.4	2.1	27.7	0.0	0.0	32.8	46.0	-13.2	V	P	
567.022	3.0	42.3	17.9	2.2	27.6	0.0	0.0	34.7	46.0	-11.3	V	P	

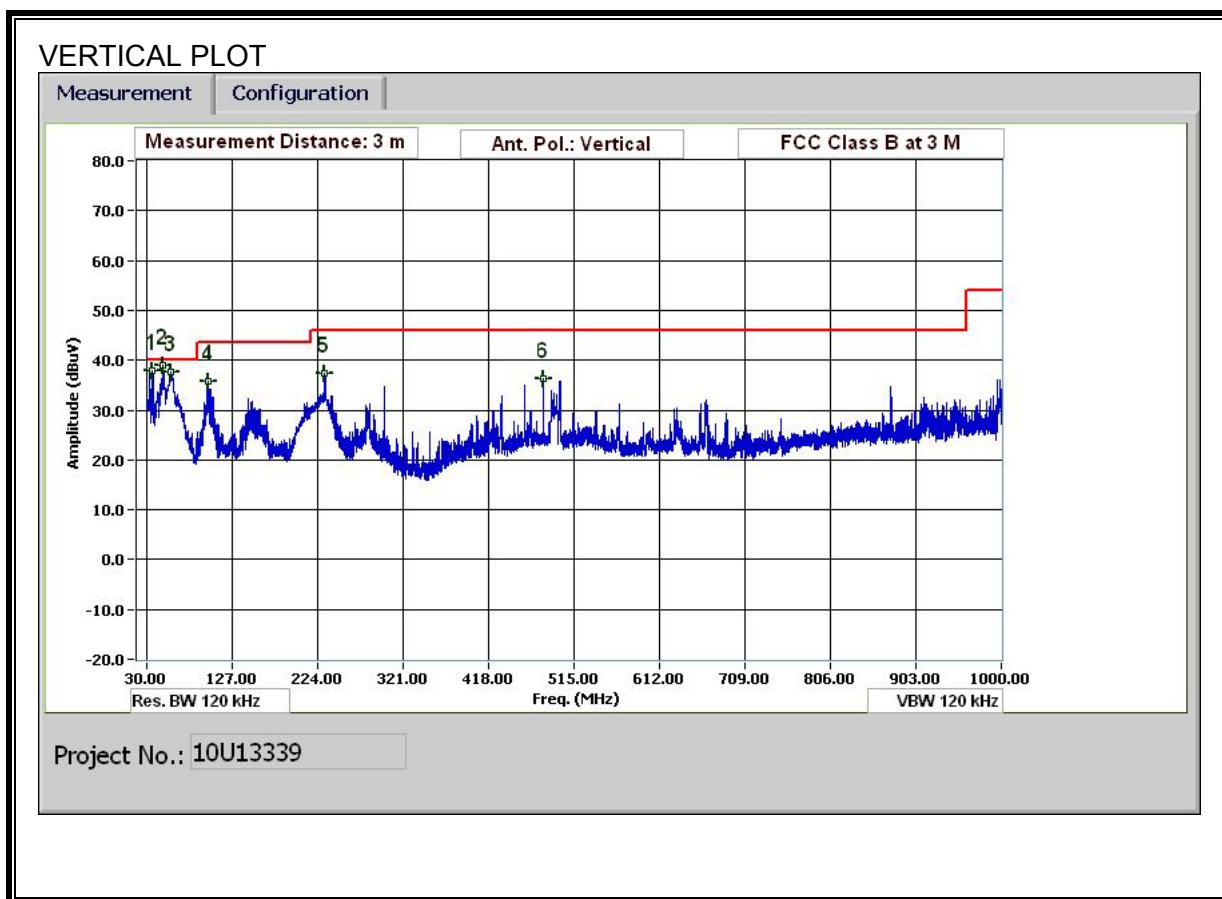
Rev. 1.27.09

Note: No other emissions were detected above the system noise floor.

## 7.1.2. CONFIGURATION 2

## **SPURIOUS EMISSIONS 30 TO 1000 MHz (DIGITAL DEVICE, HORIZONTAL)**





## HORIZONTAL & VERTICAL DATA

### 30-1000MHz Frequency Measurement Compliance Certification Services, Fremont 5m Chamber

Test Engr: Tom Chen  
Date: 08/27/10  
Project #: 10U13339  
Company: Loxxcie  
EUT Description: BT 2.1 + EDR Headset with video camera  
EUT M/N: EUT only  
Test Target: FCC Class B  
Mode Oper: Normal mode

f	Measurement Frequency	Amp	Preamp Gain	Margin	Margin vs. Limit
Dist	Distance to Antenna	D	Corr	Distance Correct to 3 meters	
Read	Analyzer Reading	Filter	Filter Insert Loss		
AF	Antenna Factor	Corr.	Calculated Field Strength		
CL	Cable Loss	Limit	Field Strength Limit		

f MHz	Dist (m)	Read dBuV	AF dB/m	CL	Amp dB	D Corr dB	Filter dB	Corr. dBuV/m	Limit dBuV/m	Margin dB	Ant. PoL V/H	Det. P/A/QP	Notes
<b>Horizontal</b>													
148.565	3.0	50.8	12.7	1.0	27.8	0.0	0.0	36.7	43.5	-6.8	H	P	
162.005	3.0	51.0	12.8	1.1	27.7	0.0	0.0	37.2	43.5	-6.3	H	P	
232.448	3.0	55.2	11.8	1.3	27.4	0.0	0.0	40.9	46.0	-5.1	H	P	
299.411	3.0	55.6	13.5	1.5	27.4	0.0	0.0	43.1	46.0	-2.9	H	P	
480.019	3.0	51.9	16.5	1.9	28.5	0.0	0.0	41.8	46.0	-4.2	H	P	
720.148	3.0	45.9	19.3	2.4	28.5	0.0	0.0	39.2	46.0	-6.8	H	P	
<b>Vertical</b>													
35.880	3.0	49.0	16.8	0.5	28.4	0.0	0.0	37.9	40.0	-2.1	V	P	
48.241	3.0	56.6	10.2	0.6	28.3	0.0	0.0	39.0	40.0	-1.0	V	P	
57.721	3.0	57.1	8.2	0.7	28.3	0.0	0.0	37.7	40.0	-2.3	V	P	
100.443	3.0	53.7	9.4	0.8	28.2	0.0	0.0	35.7	43.5	-7.8	V	P	
232.328	3.0	51.5	11.8	1.3	27.4	0.0	0.0	37.3	46.0	-8.7	V	P	
480.019	3.0	46.3	16.5	1.9	28.5	0.0	0.0	36.2	46.0	-9.8	V	P	

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Note: No other emissions were detected above the system noise floor.

## 7.2. AC POWER LINE CONDUCTED EMISSIONS

### LIMITS

FCC §15.207 (a)

RSS-Gen 7.2.2

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56 <sup>*</sup>	56 to 46 <sup>*</sup>
0.5-5	56	46
5-30	60	50

<sup>\*</sup> Decreases with the logarithm of the frequency.

### TEST PROCEDURE

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.4.

The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

Line conducted data is recorded for both NEUTRAL and HOT lines.

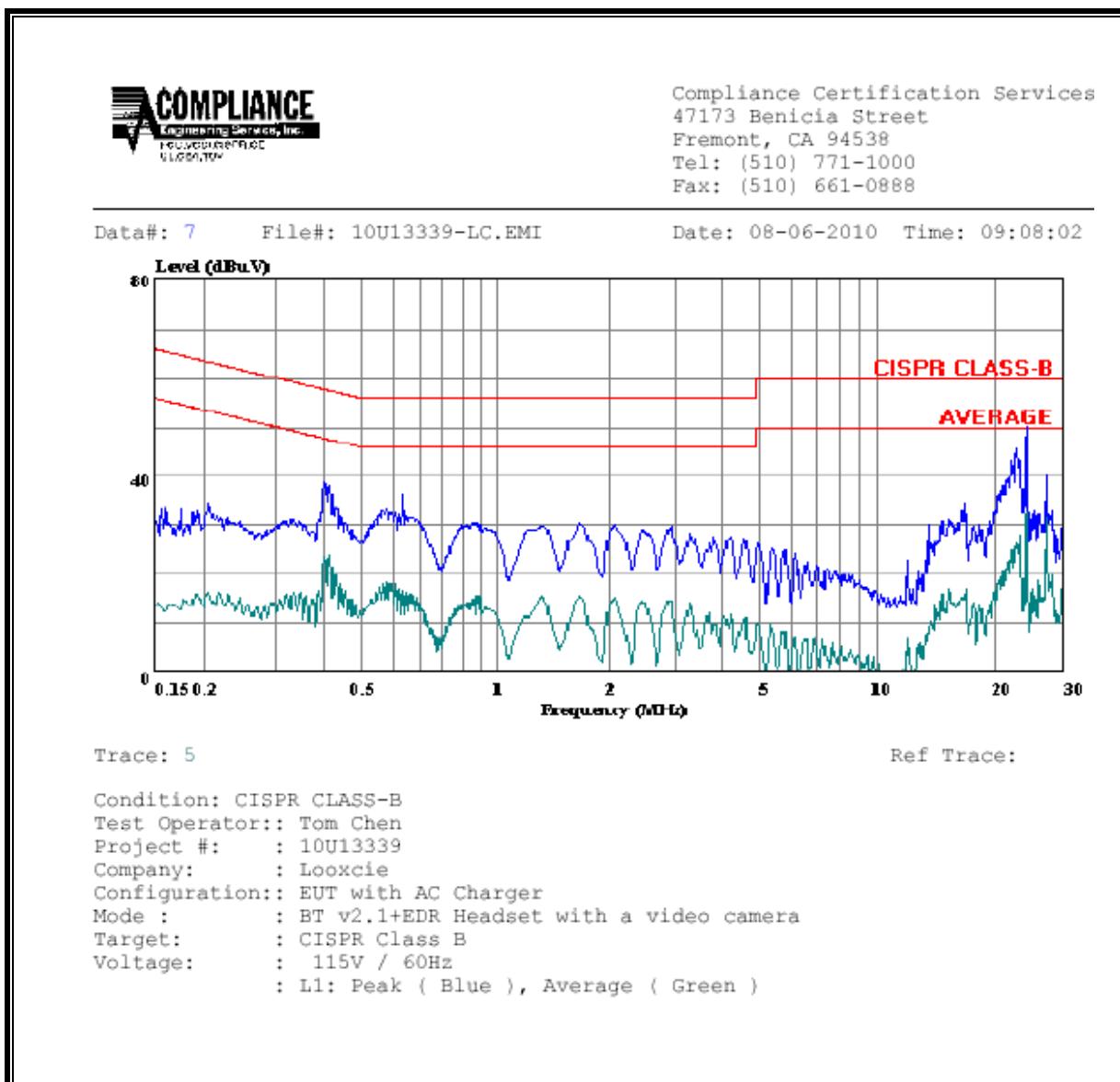
## RESULTS

### 7.2.1. CONFIGURATION 1

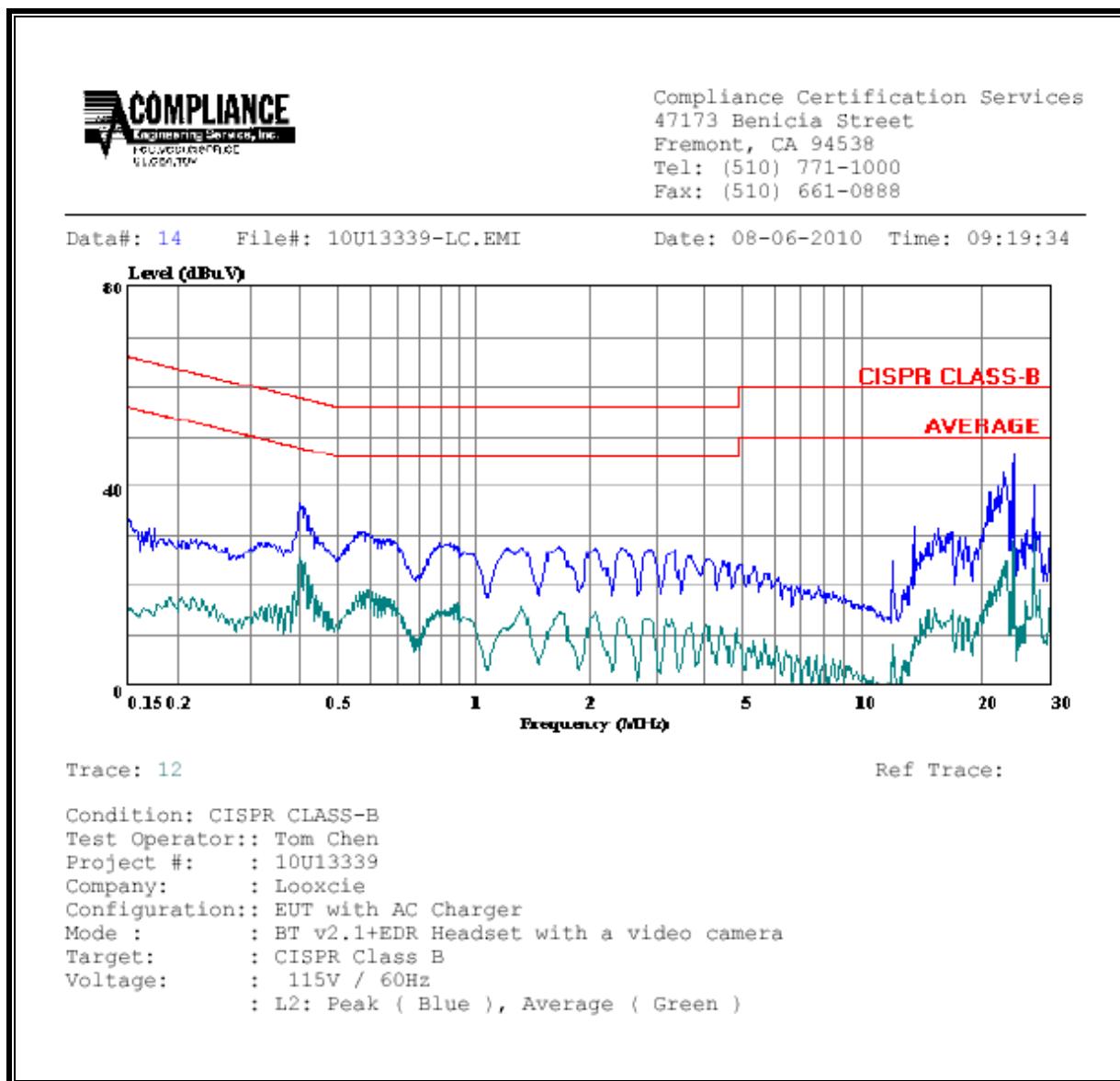
#### 6 WORST EMISSIONS

CONDUCTED EMISSIONS DATA (115VAC 60Hz)									
Freq. (MHz)	Reading			Closs (dB)	Limit QP	EN_B AV	Margin		Remark L1 / L2
	PK (dBuV)	QP (dBuV)	AV (dBuV)				QP (dB)	AV (dB)	
0.40	38.71	--	23.51	0.00	57.81	47.81	-19.10	-24.30	L1
0.64	36.49	--	15.24	0.00	56.00	46.00	-19.51	-30.76	L1
24.01	50.15	--	36.08	0.00	60.00	50.00	-9.85	-13.92	L1
0.40	36.57	--	25.46	0.00	57.81	47.81	-21.24	-22.35	L2
0.57	30.97	--	15.73	0.00	56.00	46.00	-25.03	-30.27	L2
24.01	46.01	--	32.44	0.00	60.00	50.00	-13.99	-17.56	L2
6 Worst Data									

**LINE 1 RESULTS**



**LINE 2 RESULTS**

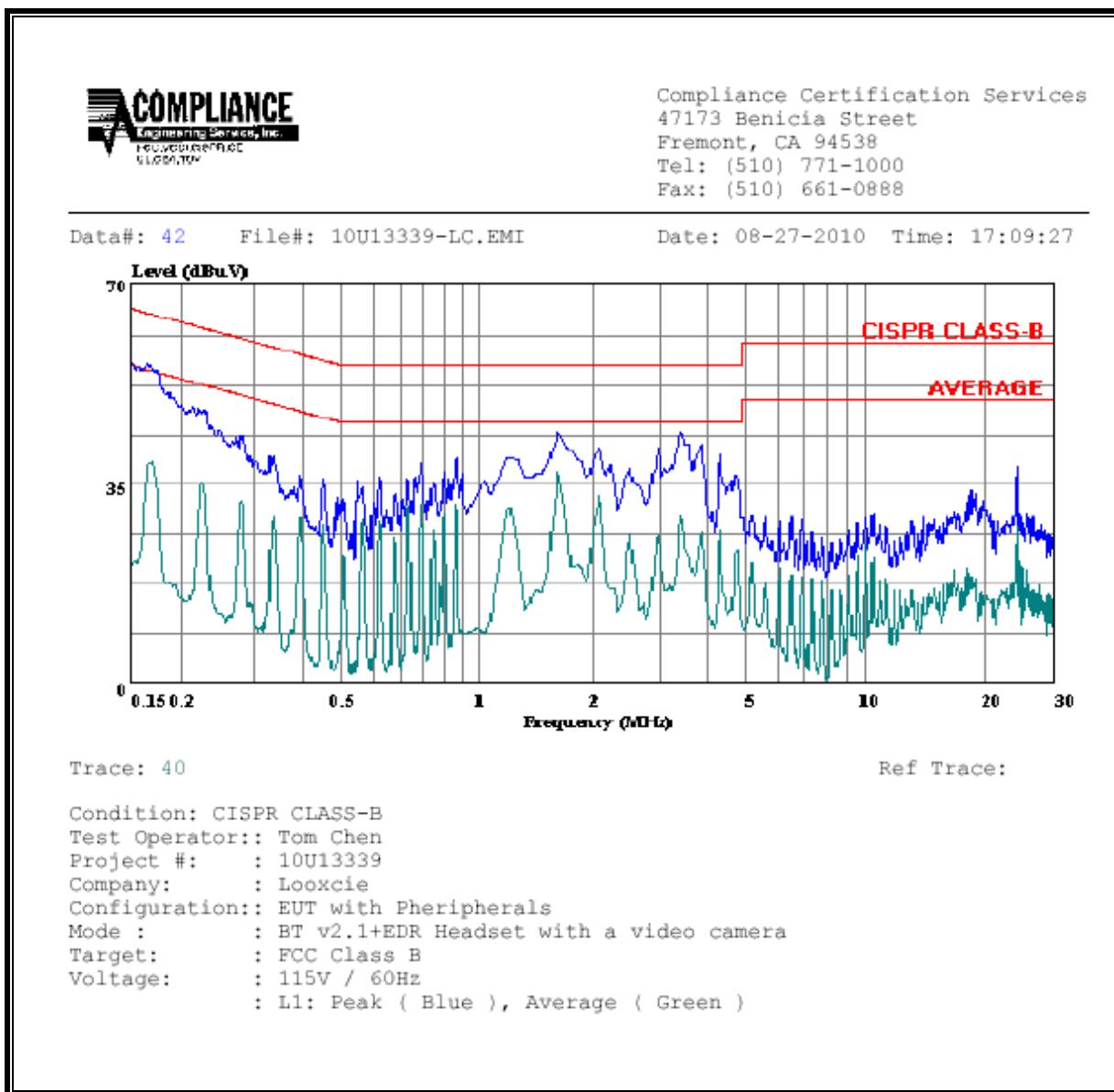


## 7.2.2. CONFIGURATION 2

### 6 WORST EMISSIONS

CONDUCTED EMISSIONS DATA (115VAC 60Hz)									
Freq. (MHz)	Reading			Closs (dB)	Limit	EN_B	Margin		Remark
	PK (dBuV)	QP (dBuV)	AV (dBuV)				QP	AV	
0.16	56.18	--	36.53	0.00	65.26	55.26	-9.08	-18.73	L1
1.73	44.08	--	37.20	0.00	56.00	46.00	-11.92	-8.80	L1
3.49	44.20	--	29.50	0.00	56.00	46.00	-11.80	-16.50	L1
0.16	56.23	--	36.77	0.00	65.26	55.26	-9.03	-18.49	L2
0.96	49.31	--	31.40	0.00	56.00	46.00	-6.69	-14.60	L2
3.57	47.43	--	27.14	0.00	56.00	46.00	-8.57	-18.86	L2
6 Worst Data									

**LINE 1 RESULTS**



**LINE 2 RESULTS**

