



# TEST REPORT

For

**Golden Technology Co., Ltd.**

NO. 1232, JIUZHOU ROAD EAST,  
ZHUHAI CITY, GUANGDONG, P.R. OF CHINA

**FCC PART 15B**

**FCC ID: TBEOMV30**

<b>Report Type:</b> Original Report	<b>Product Type:</b> Video Sunglasses
<b>Test Engineer:</b> <u>JimmyXiao</u> <i>Jimmy Xiao</i>	
<b>Report Number:</b> <u>RSZ11031602</u>	
<b>Report Date:</b> <u>2011-06-23</u>	
<b>Reviewed By:</b> <u>EMC Engineer</u> <i>Merry Zhao</i> <i>merry_zhao</i>	
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**Note:** This test report is prepared for the customer shown above and for the equipment described herein. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp. This report **must not** be used by the customer to claim product certification, approval, or endorsement by NVLAP\*, or any agency of the Federal Government.

\* This report contains data that are not covered by the NVLAP accreditation and are marked with an asterisk “★” (Rev.2)

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## GENERAL INFORMATION

### Product Description for Equipment under Test (EUT)

The *Golden Technology Co., Ltd.*'s product, model number: *OMV30 (FCC ID: TBEOMV30)* (the "EUT") in this report is a *Video Sunglasses*, which was measured approximately: 16.2 cm (L) x 19.1 cm (W) x 6.5 cm (H), rated input voltage: DC 5V from PC.

*\* All measurement and test data in this report was gathered from production sample serial number: 1102157 (Assigned by BACL, Shenzhen). The EUT was received on 2011-03-16.*

### Objective

This report is prepared on behalf of *Golden Technology Co., Ltd.* in accordance with Part 2-Subpart J, Part 15-Subparts A and B of the Federal Communication Commissions rules.

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

### Related Submittal(s)/Grant(s)

No related submissions.

### Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect test data is located on the 6/F, the 3rd Phase of WanLi Industrial Building, ShiHua Road, FuTian Free Trade Zone Shenzhen, Guangdong, China.

Test site at Bay Area Compliance Laboratories Corp. (Shenzhen) has been fully described in reports submitted to the Federal Communication Commission (FCC). The details of these reports have been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on December 06, 2010. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2009.

The Federal Communications Commission has the reports on file and is listed under FCC Registration No.: 382179. The test site has been approved by the FCC for public use and is listed in the FCC Public Access Link (PAL) database.

Additionally, Bay Area Compliance Laboratories Corp. (Shenzhen) is an ISO/IEC 17025 accredited laboratory, and is accredited by National Voluntary Laboratory Accredited Program (Lab Code 200707-0).



The current scope of accreditations can be found at <http://ts.nist.gov/Standards/scopes/2007070.htm>.

## SYSTEM TEST CONFIGURATION

### Justification

The system was configured for testing in a manufacturer testing modes.

### EUT Exercise Software

N/A

### Equipment Modifications

No modification was made to the unit tested.

### Host System Configuration List and Details

Manufacturer	Device Name	Model	Serial Number
DELL	Motherboard	OWC297	CN-OWC297-70821-566-02BR
DELL	Power	NPS-250KB D	CN-0H2678-17972-56E8NBM
Seagate	Hard Disk	ST340014A	5JXK3NAD
DELL	3.5' Floppy	N/A	CN-0N8893-69802-54Q-02OZ
Lite-ON	CD-Rom	LTN-489S	N/A
Intel	CPU	Celeron D-2533	N/A
ProMOS	Memory	V826632K24SATG-C0	0525-K1933700
Intel	Ethernet	PRO 10/100 VE	N/A

### Local Support Equipment List and Details

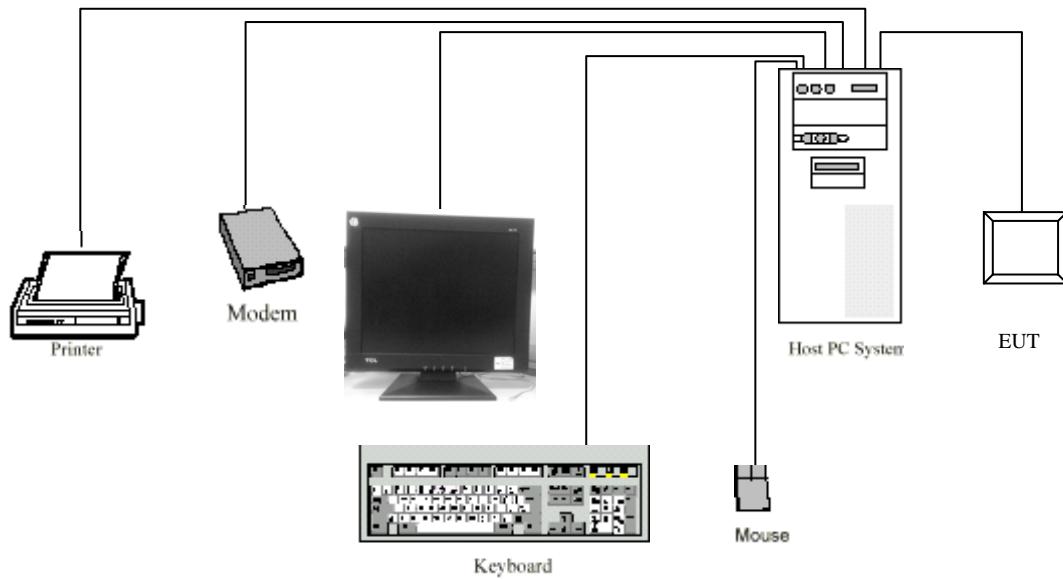
Manufacturer	Description	Model	Serial Number
DELL	PC	1#	N/A
DELL	Keyboard 1#	L100	CNORH656658907BL04TY
DELL	Mouse 2#	MOC5UO	G1900NKD
HP	Laser Jet5L	C3941A	JPTVOB2337
SAST	Modem	AEM-2100	0293

## External I/O Cable

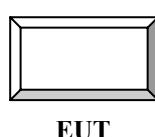
Cable Description	Length (m)	From/Port	To
Shielded Detachable K/B Cable	1.5	K/B Port/Host	K/B
Shielded Detachable Mouse Cable	1.5	Mouse Port/Host	Mouse
Shielded Detachable Printer Cable	1.2	Parallel Port/Host	Printer
Shielded Detachable Serial Cable	1.2	Serial Port/Host	Modem
Shielded Detachable VGA Cable	1.5	VGA Port/Host	Monitor
Unshielded Detachable Coaxial Cable	1.8	Video Port/Host	Color TV PG
Unshielded Detachable USB Cable	0.5	EUT	PC

## Configuration of Test Setup

Downloading:

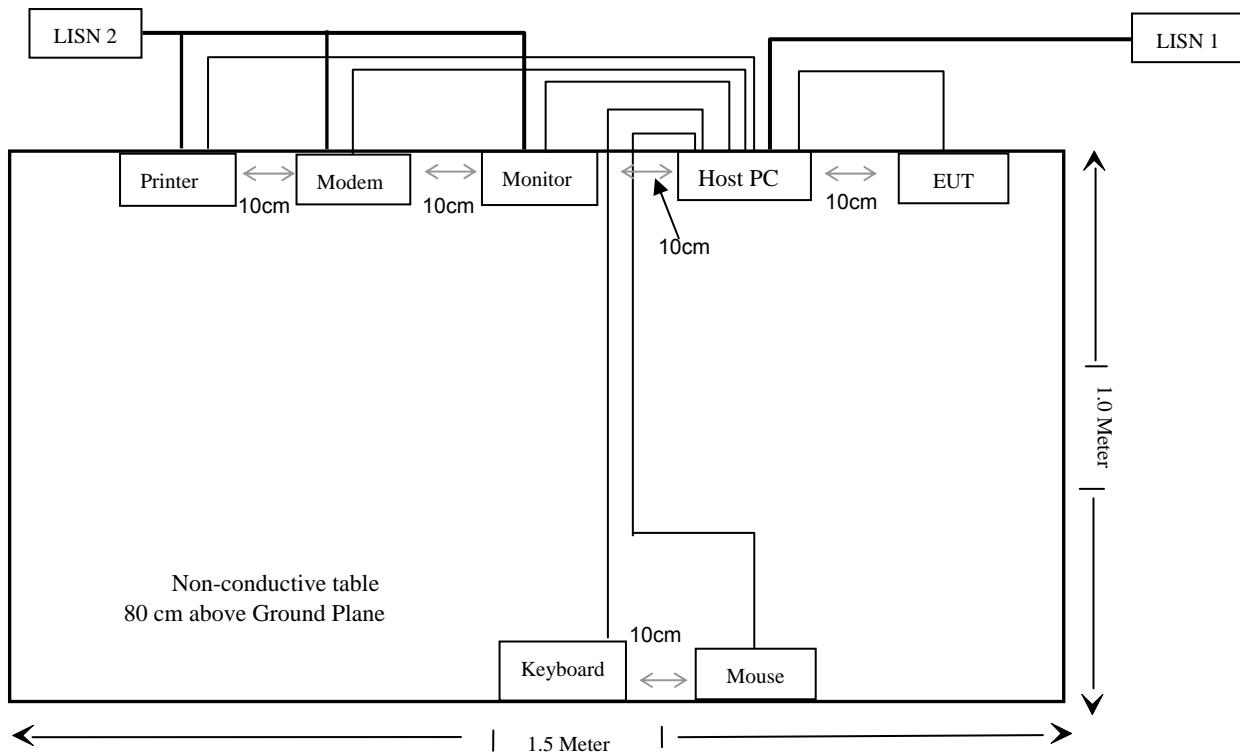


Playing & Recording:

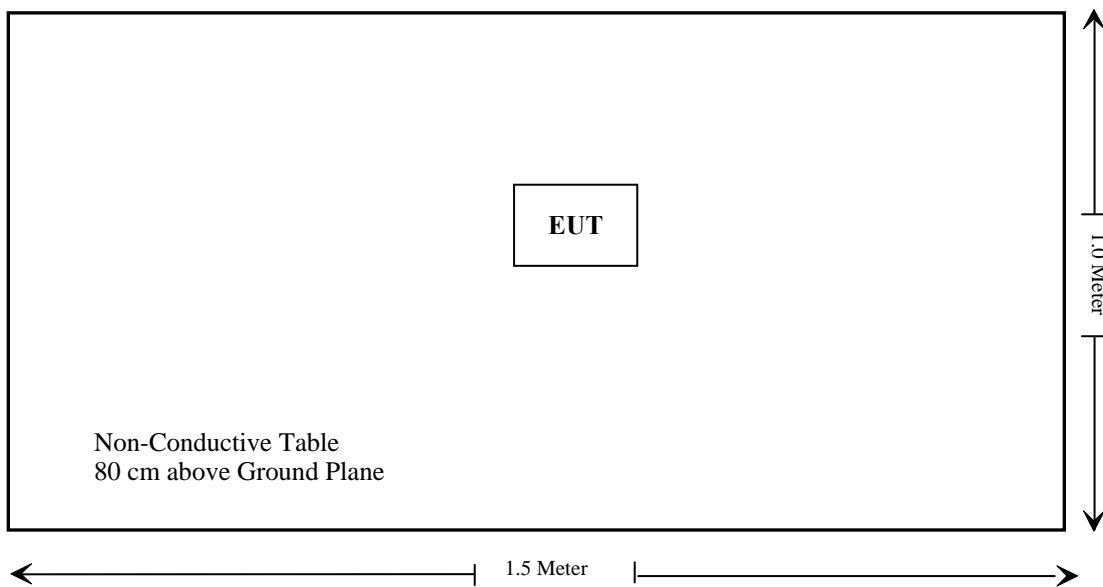


## Block Diagram of Test Setup

Downloading:



Playing & Recording:



**SUMMARY OF TEST RESULTS**

FCC Rules	Description of Test	Results
§15.107	AC Line Conducted Emissions	Compliance
§15.109	Radiated Spurious Emissions	Compliance

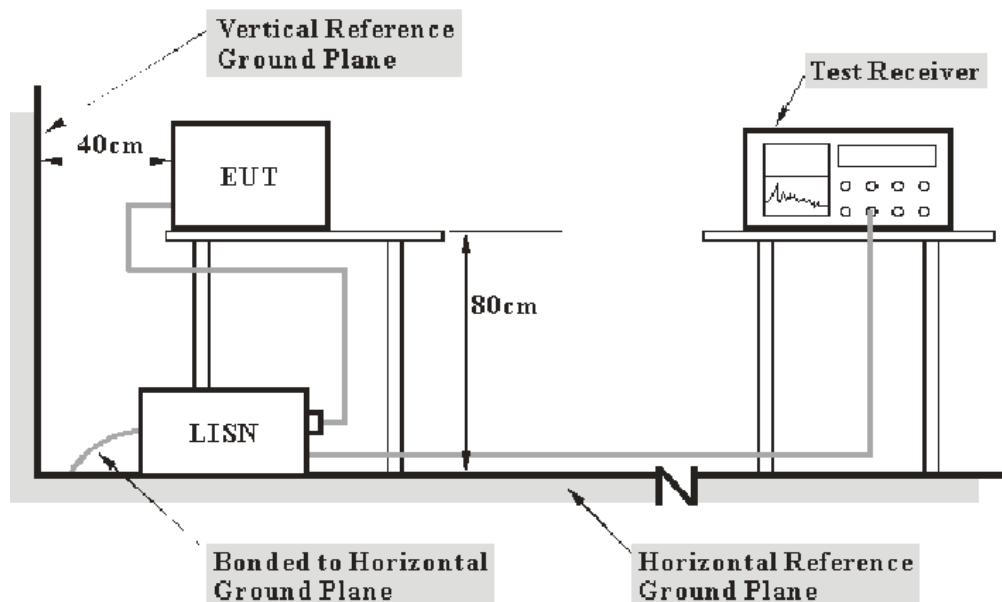
## FCC §15.107 – AC LINE CONDUCTED EMISSIONS

### Measurement Uncertainty

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

Based on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any conducted emissions measurement at Bay Area Compliance Laboratories Corp. (Shenzhen) is  $\pm 2.4$  dB.( $k=2$ , 95% level of confidence)

### EUT Setup



**Note:** 1. Support units were connected to second LISN.  
2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with per ANSI C63.4-2009 measurement procedure. The specification used was with the FCC Part 15.107 Class B limits.

The spacing between the peripherals was 10 cm.

The EUT was connected to the PC.

## EMI Test Receiver Setup

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

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

<b><u>Frequency Range</u></b>	<b><u>IF B/W</u></b>
150 kHz – 30 MHz	9 kHz

## Test Equipment List and Details

<b>Manufacturer</b>	<b>Description</b>	<b>Model</b>	<b>Serial Number</b>	<b>Calibration Date</b>	<b>Calibration Due Date</b>
Rohde & Schwarz	EMI Test Receiver	ESCS30	830245/006	2011-03-03	2012-03-02
Rohde & Schwarz	L.I.S.N.	ESH2-Z5	892107/021	2011-03-09	2012-03-08

\* **Statement of Traceability:** Bay Area Compliance Laboratory Corp. attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

## Test Procedure

During the conducted emission test, the EUT was connected to the PC, the host PC was connected to the outlet of the first LISN and the other relevant support equipments were connected to the outlet of the second LISN.

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

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

## Test Results Summary

According to the recorded data in following table, the EUT complied with the [FCC Part 15.107](#), with the worst margin reading of:

**10.77 dB at 0.600 MHz in the Live conducted mode**

## Test Data

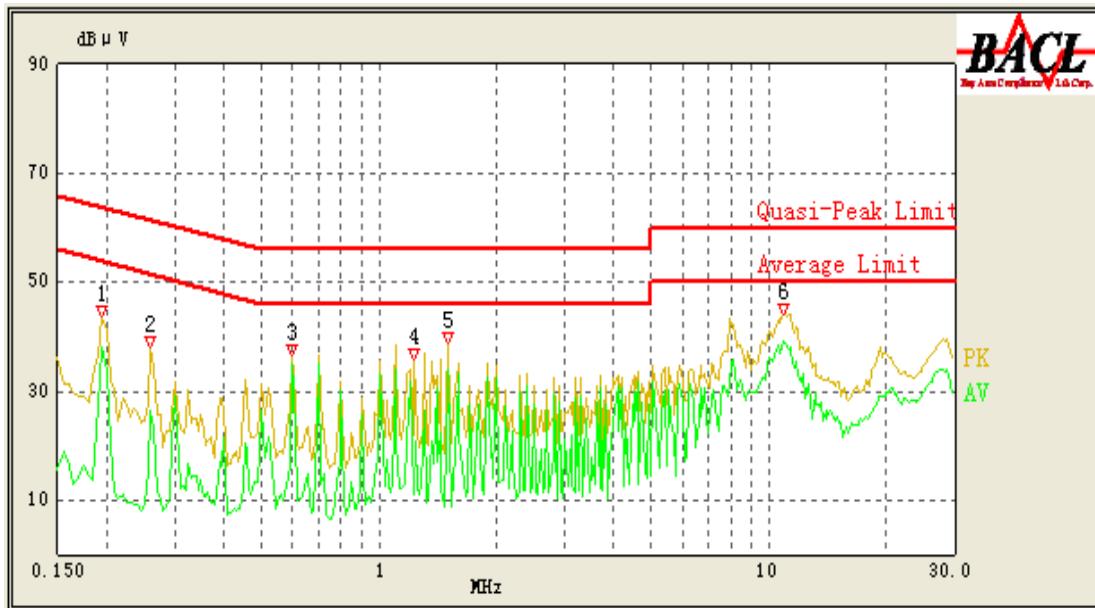
### Environmental Conditions

<b>Temperature:</b>	25 °C
<b>Relative Humidity:</b>	48 %
<b>ATM Pressure:</b>	100.0 kPa

*The testing was performed by Jimmy Xiao on 2011-03-19.*

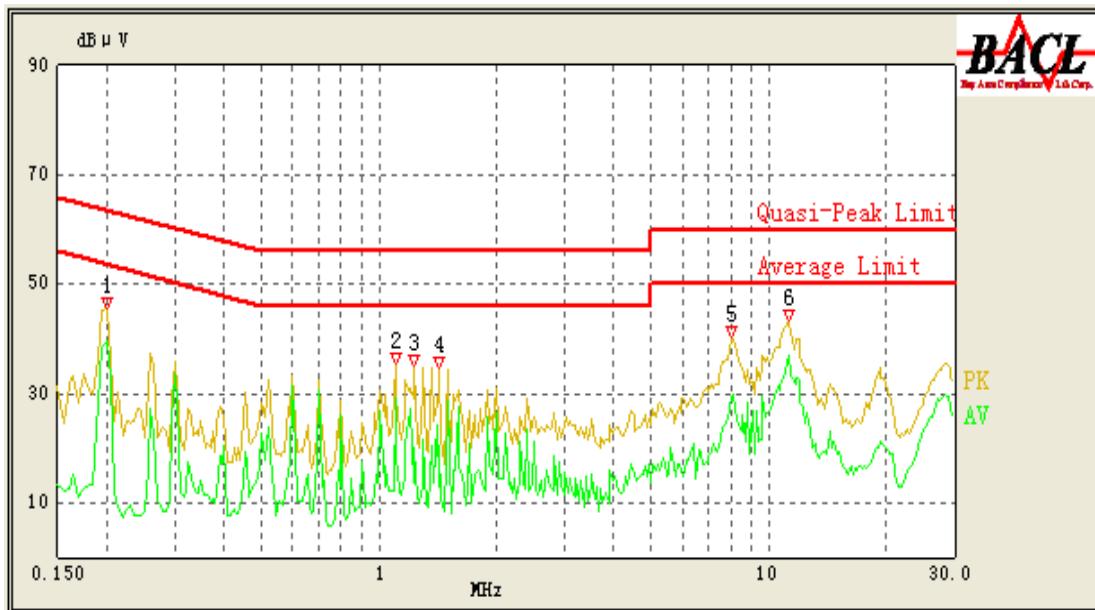
*EUT Operation Mode: Downloading*

## AC 120V/60 Hz, Live



Conducted Emissions FCC Part 15.107, Class B					
Frequency (MHz)	Corrected Result (dB $\mu$ V)	Correction Factor (dB)	Limit (dB $\mu$ V)	Margin (dB)	Remark (PK/ QP/Ave.)
0.600	35.23	10.18	46.00	10.77	Ave.
10.925	39.21	10.11	50.00	10.79	Ave.
1.500	31.73	10.15	46.00	14.27	Ave.
0.195	38.02	10.07	54.71	16.69	Ave.
10.925	41.89	10.11	60.00	18.11	QP
1.500	35.60	10.15	56.00	20.40	QP
0.600	35.37	10.18	56.00	20.63	QP
0.195	41.01	10.07	64.71	23.70	QP
1.240	20.79	10.12	46.00	25.21	Ave.
0.260	26.27	10.03	52.86	26.59	Ave.
0.260	33.91	10.03	62.86	28.95	QP
1.235	25.99	10.12	56.00	30.01	QP

## AC 120V/60 Hz, Neutral



Conducted Emissions FCC Part 15.107, Class B					
Frequency (MHz)	Corrected Result (dB $\mu$ V)	Correction Factor (dB)	Limit (dB $\mu$ V)	Margin (dB)	Remark (PK/ QP/Ave.)
11.215	36.78	10.11	50.00	13.22	Ave.
0.200	39.51	10.07	54.57	15.06	Ave.
1.100	29.17	10.11	46.00	16.83	Ave.
11.215	40.90	10.11	60.00	19.10	QP
8.120	29.81	10.10	50.00	20.19	Ave.
0.200	42.61	10.07	64.57	21.96	QP
1.105	32.24	10.11	56.00	23.76	QP
1.430	20.28	10.14	46.00	25.72	Ave.
1.430	29.96	10.14	56.00	26.04	QP
8.060	33.90	10.10	60.00	26.10	QP
1.235	19.89	10.12	46.00	26.11	Ave.
1.235	29.46	10.12	56.00	26.54	QP

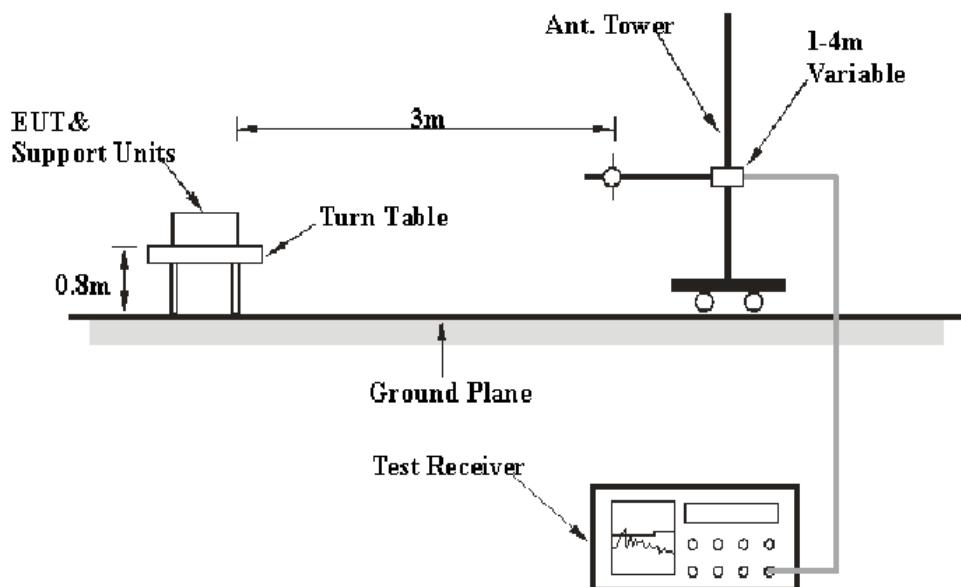
## FCC §15.109 - RADIATED SPURIOUS EMISSIONS

### Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, antenna factor calibration, antenna directivity, antenna factor variation with height, antenna phase center variation, antenna factor frequency interpolation, measurement distance variation, site imperfections, mismatch (average), and system repeatability.

Based on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of a radiation emissions measurement at Bay Area Compliance Laboratories Corp. (Shenzhen) is  $\pm 4.0$  dB. ( $k=2$ , 95% level of confidence)

### EUT Setup



The radiated emission tests were performed in the 3 meters chamber B test site, using the setup accordance with the ANSI C63.4-2009. The specification used was the FCC Part 15.109 Class B limits.

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

The spacing between the peripherals was 10 cm.  
The EUT was connected to the PC.

### EMI Test Receiver Setup

The system was investigated from 30 MHz to 2 GHz.

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

Frequency	RB/W	VB/W	IF B/W	Detection
30 MHz-1 GHz	100 kHz	300 kHz	120 kHz	Quasi-peak
1 GHz – 2.5 GHz	1 MHz	3 MHz		Peak
1 GHz – 2.5 GHz	1 MHz	10 Hz		Average

## Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
HP	Amplifier	HP8447E	1937A01046	2010-08-02	2011-08-02
Rohde & Schwarz	EMI Test Receiver	ESCI	100035	2010-11-11	2011-11-10
Sunol Sciences	Broadband Antenna	JB1	A040904-1	2010-07-05	2011-07-04
HP	Spectrum Analyzer	8593A	2919A00242	2010-07-08	2011-07-07
Mini-circuits	Amplifier	ZVA-213+	T-E27H	2010-09-12	2011-09-11
SUNOL SCIENCES	Horn Antenna	DRH-118	A052604	2010-05-05	2011-05-04

\* **Statement of Traceability:** Bay Area Compliance Laboratories Corp (Shenzhen). attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

## Test Procedure

For the radiated emissions test, the EUT was connected to the PC, and the host PC and all the other relevant equipments were connected to AC floor outlet.

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

All data was recorded in the Quasi-peak detection mode from 30 MHz to 1 GHz, Peak and average detection mode above 1 GHz.

## Corrected Amplitude & Margin Calculation

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

$$\text{Corrected Amplitude} = \text{Meter Reading} + \text{Antenna Loss} + \text{Cable Loss} - \text{Amplifier Gain}$$

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

$$\text{Margin} = \text{Limit} - \text{Corrected Amplitude}$$

## Test Results Summary

According to the data in the following table, the EUT complied with the FCC §15.109 Class B, with the worst margin reading of:

**Downloading: 4.4 dB at 958.495000 MHz in the Vertical polarization**

**Playing: 12.5 dB at 435.239500 MHz in the Horizontal polarization**

**Recording: 6.4 dB at 249.478000 MHz in the Horizontal polarization**

## Test Data

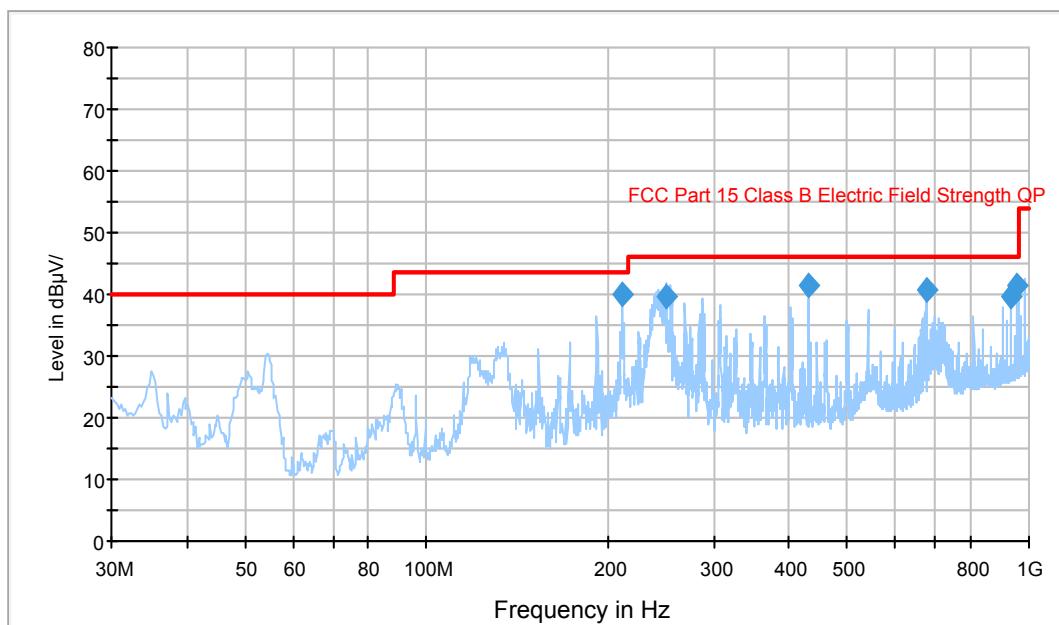
### Environmental Conditions

Temperature:	25 °C
Relative Humidity:	48 %
ATM Pressure:	100.0 kPa

The testing was performed by Jimmy Xiao on 2011-03-22.

EUT Operation Mode: Downloading

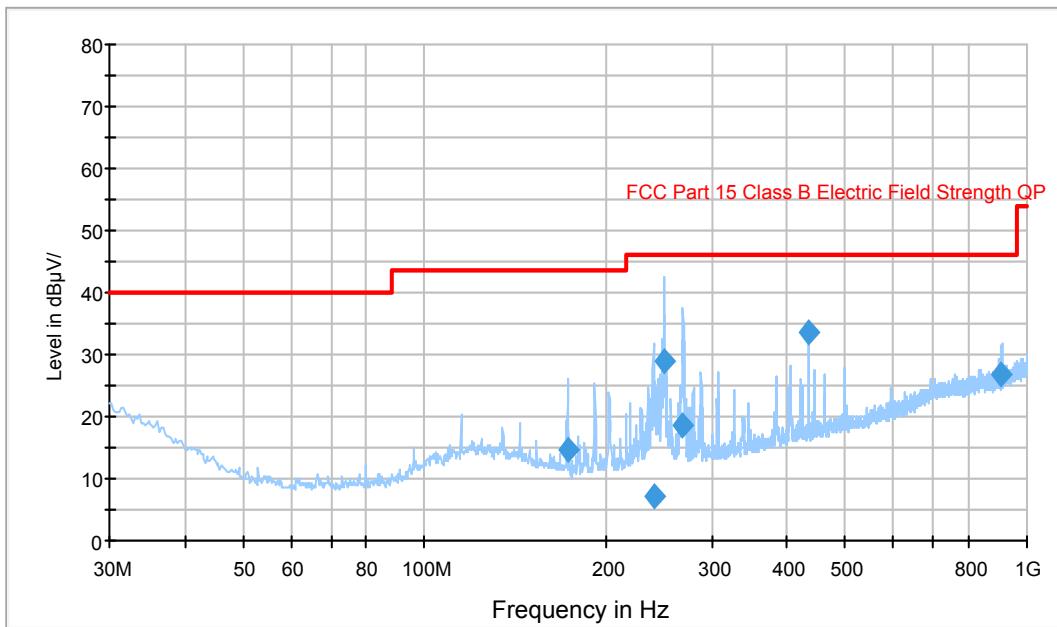
Auto Test(FCC 15 Class B)



Frequency (MHz)	Corrected Amplitude (dB $\mu$ V/m)	Test Antenna		Turntable Position (degree)	Correction Factor (dB)	Limit (dB $\mu$ V/m)	Margin (dB)
		Height (cm)	Polarity (H/V)				
958.495000	41.6	102.0	V	211.0	0.8	46.0	4.4
431.996000	41.3	159.0	V	285.0	-9.4	46.0	4.7
211.210000	38.7	155.0	H	190.0	-14.1	43.5	4.8
676.108500	40.9	141.0	H	223.0	-3.9	46.0	5.1
931.510500	39.7	104.0	V	215.0	0.2	46.0	6.3
249.550500	39.5	141.0	H	239.0	-13.5	46.0	6.5

*EUT Operation Mode: Playing*

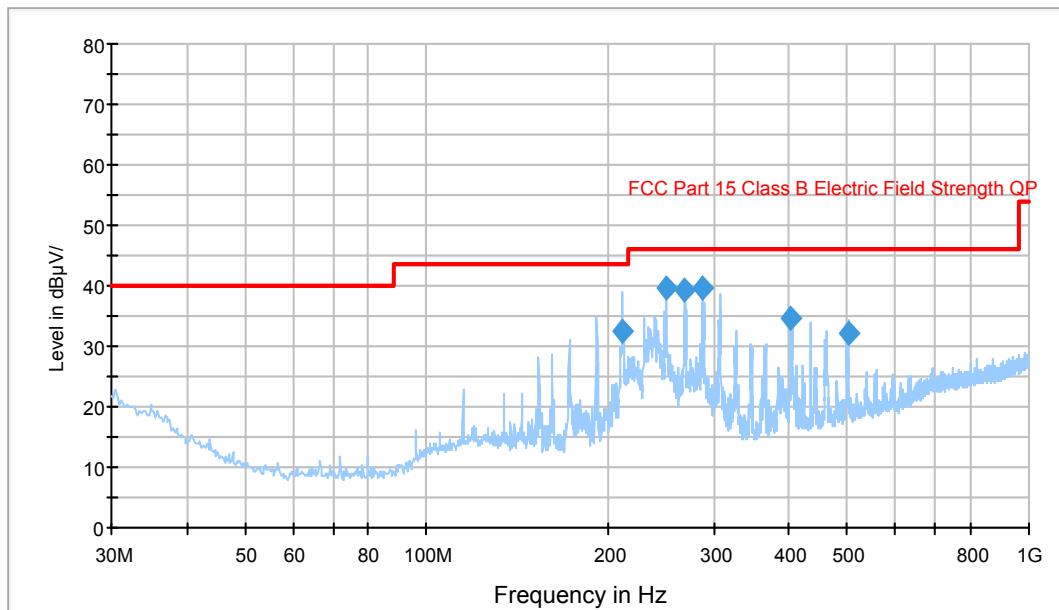
Auto Test(FCC 15 Class B)



Frequency (MHz)	Corrected Amplitude (dB $\mu$ V/m)	Test Antenna		Turntable Position (degree)	Correction Factor (dB)	Limit (dB $\mu$ V/m)	Margin (dB)
		Height (cm)	Polarity (H/V)				
435.239500	33.5	102.0	H	61.0	-9.4	46.0	12.5
249.414750	28.8	125.0	H	9.0	-13.5	46.0	17.2
908.583250	26.8	104.0	H	105.0	-0.5	46.0	19.2
268.187500	18.6	104.0	H	199.0	-13.1	46.0	27.4
172.848750	14.6	146.0	H	24.0	-15.0	43.5	28.9
239.981750	7.3	155.0	H	191.0	-13.7	46.0	38.7

## EUT Operation Mode: Recording

Auto Test(FCC 15 Class B)



Frequency (MHz)	Corrected Amplitude (dB $\mu$ V/m)	Test Antenna		Turntable Position (degree)	Correction Factor (dB)	Limit (dB $\mu$ V/m)	Margin (dB)
		Height (cm)	Polarity (H/V)				
249.478000	39.6	105.0	H	181.0	-13.5	46.0	6.4
287.840750	39.5	104.0	H	9.0	-12.6	46.0	6.5
268.817750	39.2	125.0	H	10.0	-13.1	46.0	6.8
211.320500	32.6	171.0	H	1.0	-14.1	43.5	10.9
401.995000	34.8	180.0	H	36.0	-9.9	46.0	11.2
500.450000	32.0	303.0	H	9.0	-8.4	46.0	14.0

**Above 1GHz:**

Frequency (MHz)	S.A. Reading (dB $\mu$ V)	Detector (PK/QP/Ave.)	Direction (Degree)	Test Antenna			Cable Loss (dB)	Pre-Amp. (dB)	Cord. Amp. (dB $\mu$ V/m)	FCC Part 15.109	
				Height (m)	Polar (H/V)	Factor (dB)				Limit (dB $\mu$ V/m)	Margin (dB)
2117.15	27.84	Ave.	210	2.1	V	30.2	2.82	26.84	34.02	54	19.98
2117.15	25.38	Ave.	270	1.5	H	30.2	2.82	26.84	31.56	54	22.44
2117.15	42.26	PK	210	2.1	V	30.2	2.82	26.84	48.44	74	25.56
2117.15	41.26	PK	270	1.5	H	30.2	2.82	26.84	47.44	74	26.56
1345.68	24.51	Ave.	360	1.8	H	25.8	2.14	26.61	25.84	54	28.16
1345.68	23.47	Ave.	135	1.4	V	25.8	2.14	26.61	24.8	54	29.2
1345.68	39.36	PK	360	1.8	H	25.8	2.14	26.61	40.69	74	33.31
1345.68	38.79	PK	135	1.4	V	25.8	2.14	26.61	40.12	74	33.88

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