

# FCC PART 15 CLASS B

## EMI MEASUREMENT AND TEST REPORT

For

**Jinhua Boxesam Electronic Co., Ltd.**

#1417 Danxi Road, Jinhua City, Zhejiang Province, China

**FCC ID: UD766778800**

July 26, 2006

<b>This Report Concerns:</b> <input checked="" type="checkbox"/> Original Report	<b>Equipment Type:</b> Digital video broadcasting satellite receiver
<b>Test Engineer:</b> Louise Lu and Henry Yang 	
<b>Report No.:</b> RSH06062751	
<b>Test Date:</b> July 4-14, 2006	
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**Note:** The test report is specially limited to the above company and this particular sample only. It may not be duplicated without prior written consent of Bay Area Compliance Lab Corp. (ShenZhen). This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the US Government.

**TABLE OF CONTENTS**

<b>GENERAL INFORMATION.....</b>	<b>4</b>
PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT) .....	4
OBJECTIVE .....	4
RELATED SUBMITTAL(S)/GRANT(S).....	4
TEST METHODOLOGY .....	4
TEST FACILITY .....	4
LOCAL SUPPORT EQUIPMENT LIST AND DETAILS .....	5
EXTERNAL I/O CABLE.....	5
<b>SYSTEM TEST CONFIGURATION.....</b>	<b>6</b>
JUSTIFICATION .....	6
EQUIPMENT MODIFICATIONS .....	6
CONFIGURATION OF TEST SETUP .....	7
BLOCK DIAGRAM OF TEST SETUP .....	7
<b>SUMMARY OF TEST RESULTS .....</b>	<b>8</b>
<b>§15.107 - CONDUCTED EMISSION .....</b>	<b>9</b>
MEASUREMENT UNCERTAINTY .....	9
EUT SETUP .....	9
EMI TEST RECEIVER SETUP.....	10
TEST EQUIPMENT LIST AND DETAILS.....	10
TEST PROCEDURE .....	10
TEST RESULTS SUMMARY .....	10
TEST DATA .....	11
PLOT(S) OF TEST DATA.....	11
<b>§15.109 - RADIATED EMISSIONS TEST .....</b>	<b>14</b>
MEASUREMENT UNCERTAINTY .....	14
EUT SETUP .....	14
EMI TEST RECEIVER SETUP.....	15
TEST EQUIPMENT LIST AND DETAILS.....	15
TEST PROCEDURE .....	15
CORRECTED AMPLITUDE & MARGIN CALCULATION .....	15
TEST RESULTS SUMMARY .....	15
TEST DATA .....	16
<b>§15.111 – ANTENNA POWER CONDUCTION MEASUREMENT .....</b>	<b>17</b>
EUT SETUP .....	17
RECEIVER SETUP.....	17
TEST EQUIPMENT LIST AND DETAILS.....	17
TEST PROCEDURE .....	17
CORRECTED AMPLITUDE & MARGIN CALCULATION .....	18
TEST RESULTS SUMMARY .....	18
TEST DATA .....	18
<b>§15.115(b)(1)(ii) – OUTPUT SIGNAL LEVEL MEASUREMENT .....</b>	<b>19</b>
EUT SETUP .....	19
RECEIVER SETUP.....	19
TEST EQUIPMENT LIST AND DETAILS.....	19
TEST PROCEDURE .....	19
CORRECTED AMPLITUDE & MARGIN CALCULATION .....	20
TEST RESULTS SUMMARY .....	20
TEST DATA .....	20
<b>§15.115(b)(2)(ii) – OUTPUT TERMINAL CONDUCTED SPURIOUS EMISSION MEASUREMENT .....</b>	<b>21</b>
EUT SETUP .....	21
RECEIVER SETUP.....	21
TEST EQUIPMENT LIST AND DETAILS.....	21

TEST PROCEDURE .....	21
CORRECTED AMPLITUDE & MARGIN CALCULATION .....	22
TEST RESULTS SUMMARY .....	22
TEST DATA .....	22
<b>§15.115(c)(1)(ii) – ANTENNA TRANSFER SWITCH MEASUREMENT .....</b>	<b>23</b>
EUT SETUP .....	23
RECEIVER SETUP .....	23
TEST EQUIPMENT LIST AND DETAILS .....	23
TEST PROCEDURE .....	23
CORRECTED AMPLITUDE & MARGIN CALCULATION .....	24
TEST RESULTS SUMMARY .....	24
TEST DATA .....	24

## GENERAL INFORMATION

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

The *Jinhua Boxesam Electronic Co., Ltd.*'s product, the products's model: *YT6688* or the "EUT" as referred to in this report is a digital video broadcasting satellite receiver. The EUT is measured approximately 29.0 cm L x 20.2 cm W x 6.2 cm H, rated input voltage: AC 120V/60Hz.

The series products's model: *YT6688 and 7700*, we select *YT6688* to test.

*\* The test data gathered are from production sample, serial number: 0606108, provided by the manufacturer, we received EUT on 2006-6-27.*

### Objective

This Type approval report is prepared on behalf of *Jinhua Boxesam Electronic Co., Ltd.* in accordance with Part 2, Subpart J, and Part 15, Subparts A and B of the Federal Communication Commissions rules.

The objective is to determine compliance with FCC rules, sec 15.107 and sec 15.109.

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

No Related Submittals.

### Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2003, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

All radiated and conducted emissions measurement was performed at Bay Area Compliance Lab Corp. (ShenZhen). The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

### Test Facility

The Test site used by Bay Area Compliance Lab Corp. (ShenZhen) to collect radiated and conducted emission measurement data is located in the 6/F, the 3rd Phase of WanLi Industrial Building, ShiHua Road, FuTian Free Trade Zone, ShenZhen, Guangdong 518038, P.R.China.

Test site at Bay Area Compliance Lab 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 November 04, 2004. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2003.

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 Lab Corp. (ShenZhen) is a National Institute of Standards and Technology (NIST) accredited laboratory, under the National Voluntary Laboratory Accredited Program (Lab Code 200707-0). The current scope of accreditations can be found at  
<http://ts.nist.gov/ts/htdocs/210/214/scopes/2007070.htm>

**Local Support Equipment List and Details**

Manufacturer	Description	Model	Serial Number	FCC ID
KONKA	TV	T14FA073	AQX337YY5029056	DoC

**External I/O Cable**

Cable Description	Length (M)	From/Port	To
Unshielded Undetachable AC Cable	1.60	EUT	AC Mains
Unshielded Detachable AV Cable	1.00	EUT	TV
Unshielded Detachable S-Video Phone	1.00	EUT	Load

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## SYSTEM TEST CONFIGURATION

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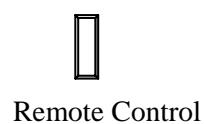
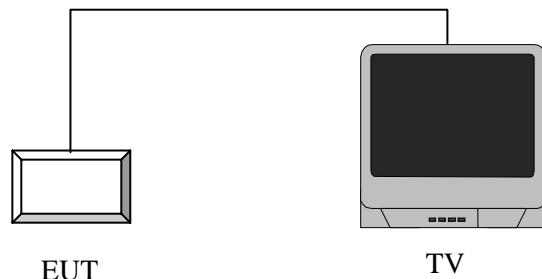
### Justification

The system was configured for testing in a typical fashion (as normally used by a typical user).

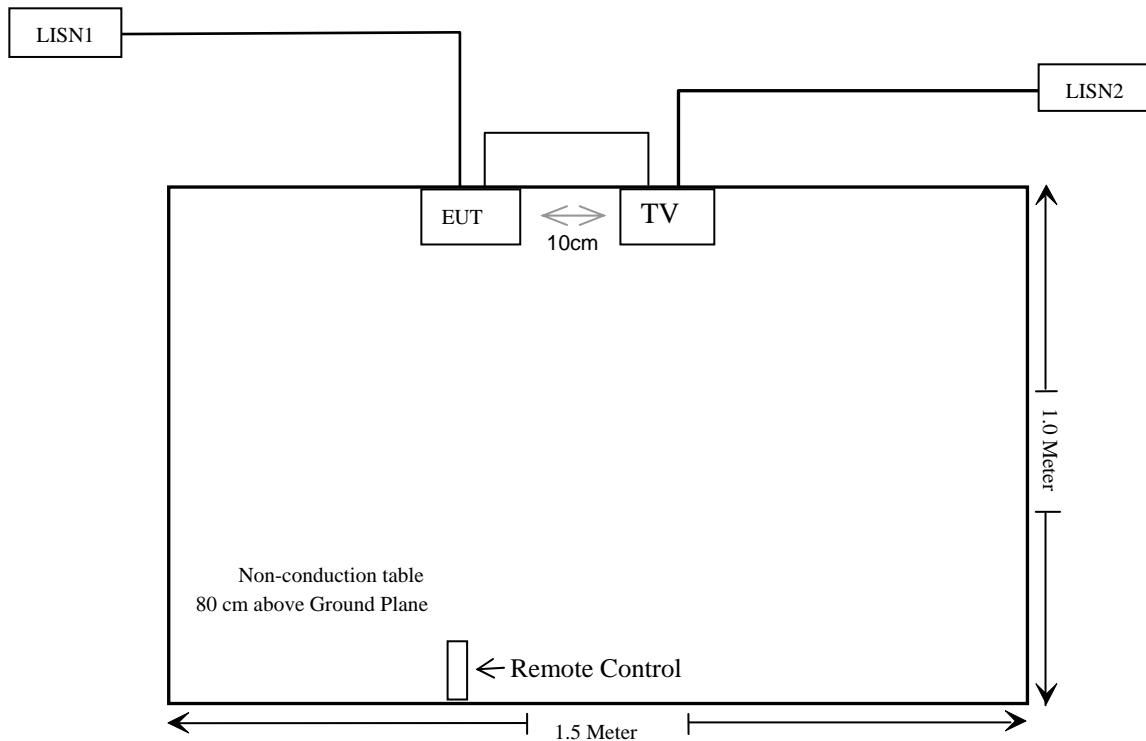
### Equipment Modifications

Bay Area Compliance Lab Corp. (ShenZhen) has not done any modification on the EUT.

## Configuration of Test Setup



## Block Diagram of Test Setup



## SUMMARY OF TEST RESULTS

FCC RULES	DESCRIPTION OF TEST	RESULT
§15.107	Conducted Emission	Compliant
§15.109	Radiated Emission	Compliant*
§15.111	Antenna Power Conduction Measurement	Compliant
§15.115(b)(1)(ii)	Output Signal Level Measurement	Compliant
§15.115(b)(2)(ii)	Output Terminal Conducted Spurious Emission Measurement	Compliant
§15.115(c)(1)(ii)	Antenna Transfer Switch Measurement	Compliant

\* Within measurement uncertainty

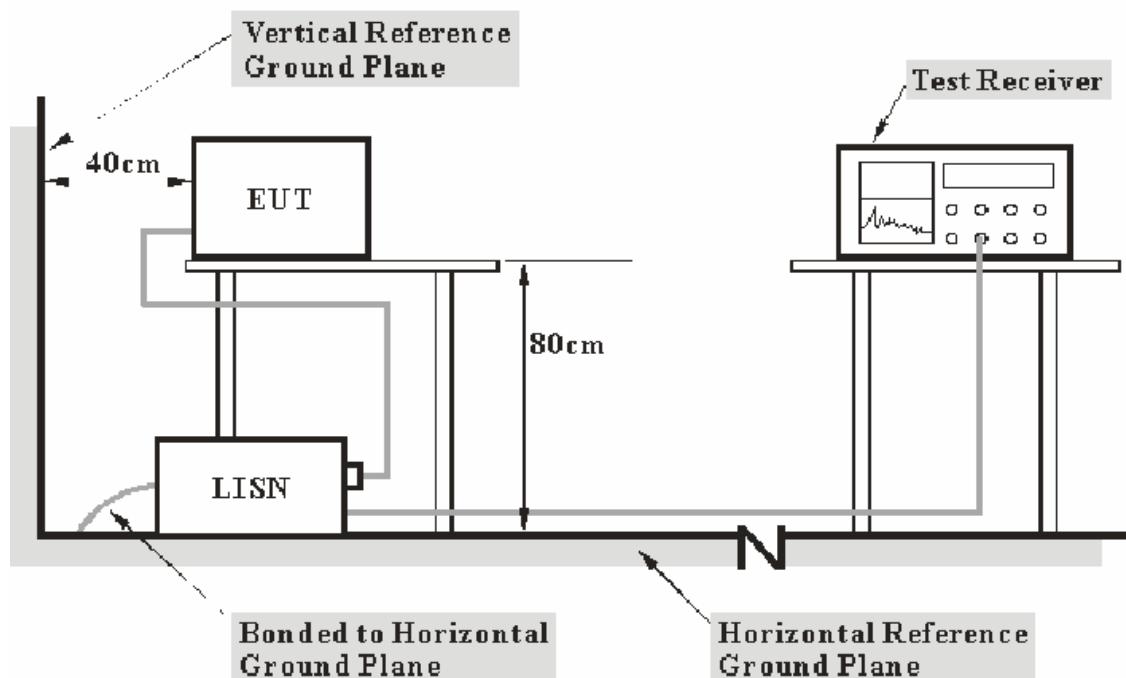
## §15.107 - CONDUCTED EMISSION

### 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 Lab Corp. (ShenZhen) is  $\pm 3.2$  dB.

### 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 C63.4-2003 measurement procedure. The specification used was with the FCC Part 15 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 a 120 VAC/60 Hz power source.

## 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>IFBW</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>
Com-Power	L.I.S.N.	LI-200	12005	N/A	N/A
Com-Power	L.I.S.N.	LI-200	12008	N/A	N/A
Rohde & Schwarz	EMI Test Receiver	ESCS30	830245/006	2006-1-26	2007-1-26
Rohde & Schwarz	L.I.S.N.	ESH2-Z5	892107/021	2006-2-28	2007-2-28

\* Com-Power's LISN were used as the supporting equipment.

\* **Statement of Traceability:** Bay Area Compliance Lab Corp. (ShenZhen) 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 outlet of the first LISN; the TV power cord was connected to the outlet of the second LISN.

Maximizing procedure were 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 Class B, with the worst margin reading of:

**-7.3 dB at 17.76 MHz** in the **Neutral** conductor mode.

## Test Data

### Environmental Conditions

Temperature:	27 ° C
Relative Humidity:	65%
ATM Pressure:	1000mbar

The testing was performed by Louise Lu on 2006-7-4.

Test Mode: operating

LINE CONDUCTED EMISSIONS				FCC PART 15 CLASS B	
Frequency MHz	Amplitude dB $\mu$ V	Detector QP/AV	Phase Live/Neutral	Limit dB $\mu$ V	Margin dB
17.76	52.7	QP	Neutral	60.0	-7.3
17.88	52.6	QP	Live	60.0	-7.4
0.16	56.8	QP	Live	65.5	-8.7
0.16	56.4	QP	Neutral	65.5	-9.1
10.55	48.4	QP	Live	60.0	-11.6
0.24	50.2	QP	Live	62.1	-11.9
0.24	49.9	QP	Neutral	62.1	-12.2
17.76	37.8	AV	Neutral	50.0	-12.2
10.23	47.3	QP	Neutral	60.0	-12.7
0.16	42.2	AV	Neutral	55.5	-13.3
0.24	38.7	AV	Neutral	52.1	-13.4
17.88	36.1	AV	Live	50.0	-13.9
0.24	37.9	AV	Live	52.1	-14.2
0.16	40.6	AV	Live	55.5	-14.9
0.49	30.1	AV	Neutral	46.2	-16.1
0.49	39.4	QP	Live	56.2	-16.8
5.02	43.1	QP	Neutral	60.0	-16.9
0.49	29.0	AV	Live	46.2	-17.2
0.49	38.7	QP	Neutral	56.2	-17.5
5.19	41.8	QP	Live	60.0	-18.2
10.23	28.1	AV	Neutral	50.0	-21.9
10.55	27.4	AV	Live	50.0	-22.6
5.02	26.2	AV	Neutral	50.0	-23.8
5.19	25.6	AV	Live	50.0	-24.4

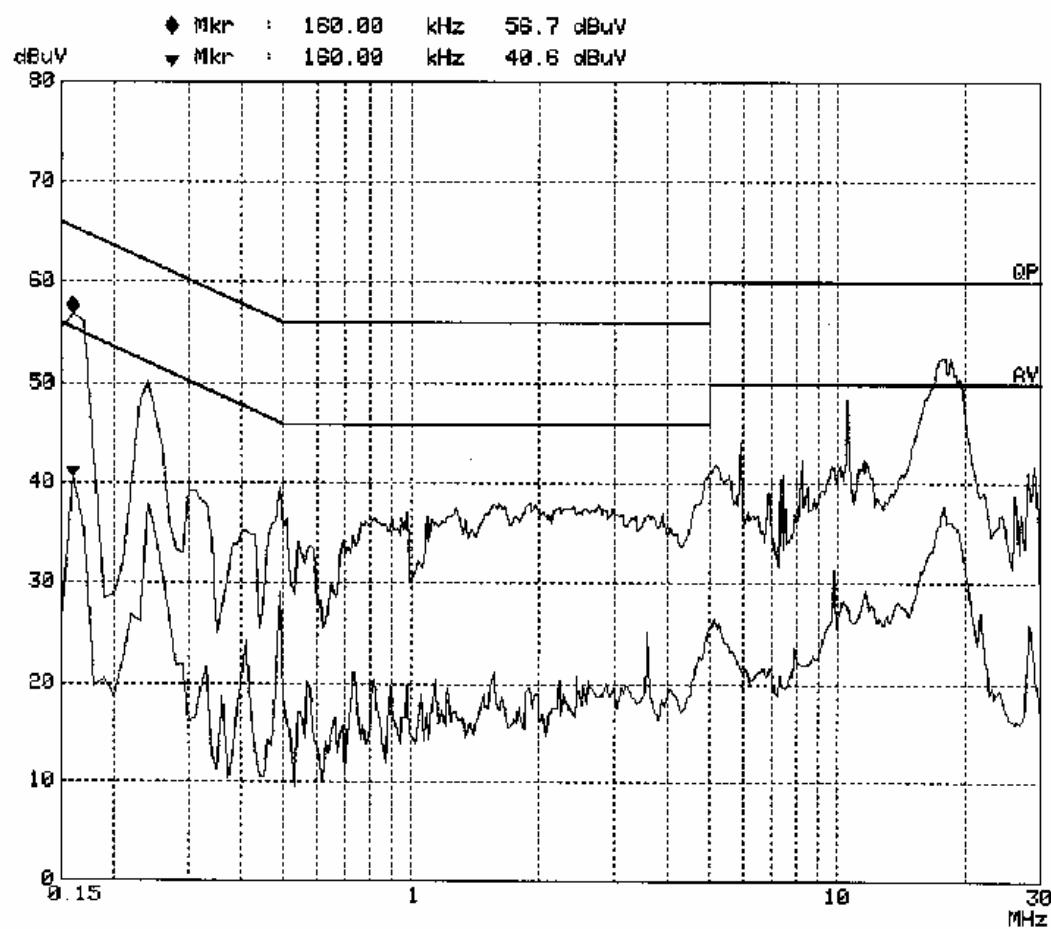
\* Within measurement uncertainty

### Plot(s) of Test Data

Plot(s) of Test Data is presented hereinafter as reference.

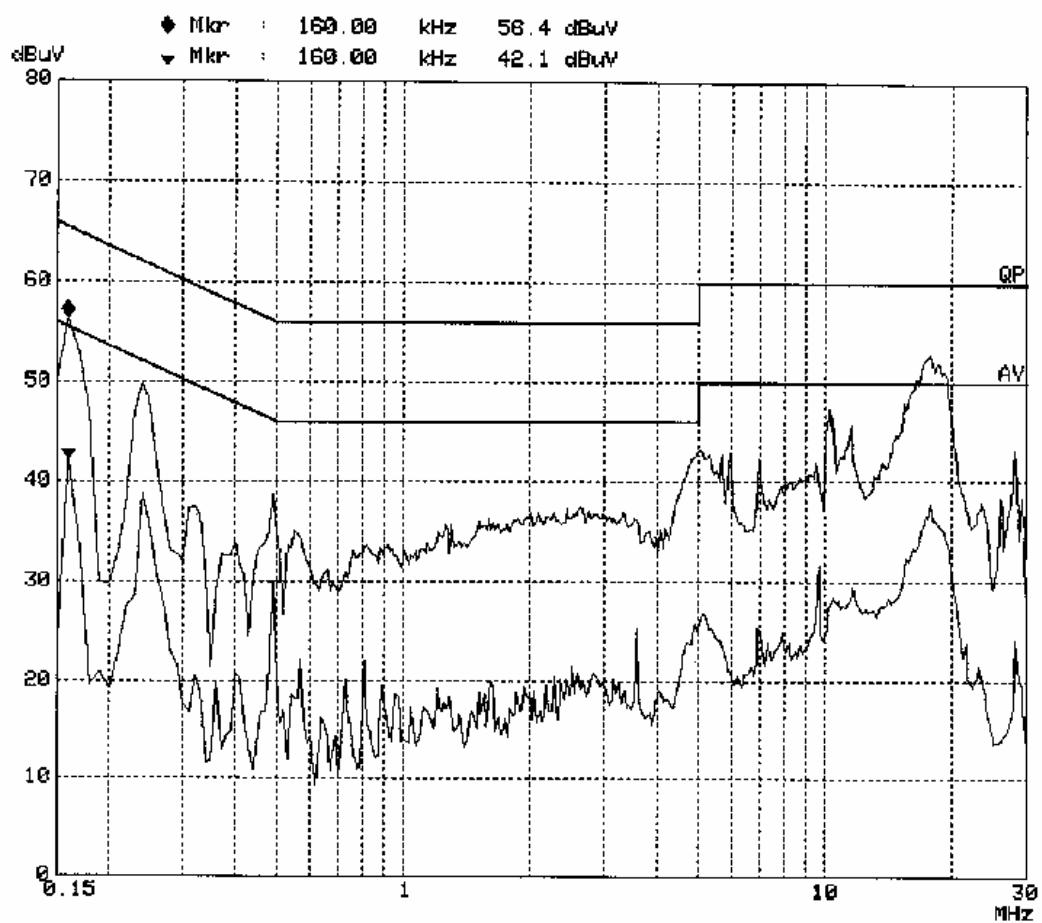
## Conducted emission FCC Part 15

SUT: DVB satellite receiver M/N:YT6688  
Manuf: Boxsam  
Op Cond: middle channel  
Operator: Louise  
Test Spec: AC 120V/60Hz L  
Comment: Temp.:25 Humi.: 56%  
Date: 04. Jul 06 15:48



## Conducted emission FCC Part 15

EUT: DVB satellite receiver M/N:YT6688  
Manuf: Boxsam  
Op Cond: middle channel  
Operator: Louise  
Test Spec: AC 120V/60Hz N  
Comment: Temp.:25 Humi.: 56%  
Date: 04. Jul 06 16:01



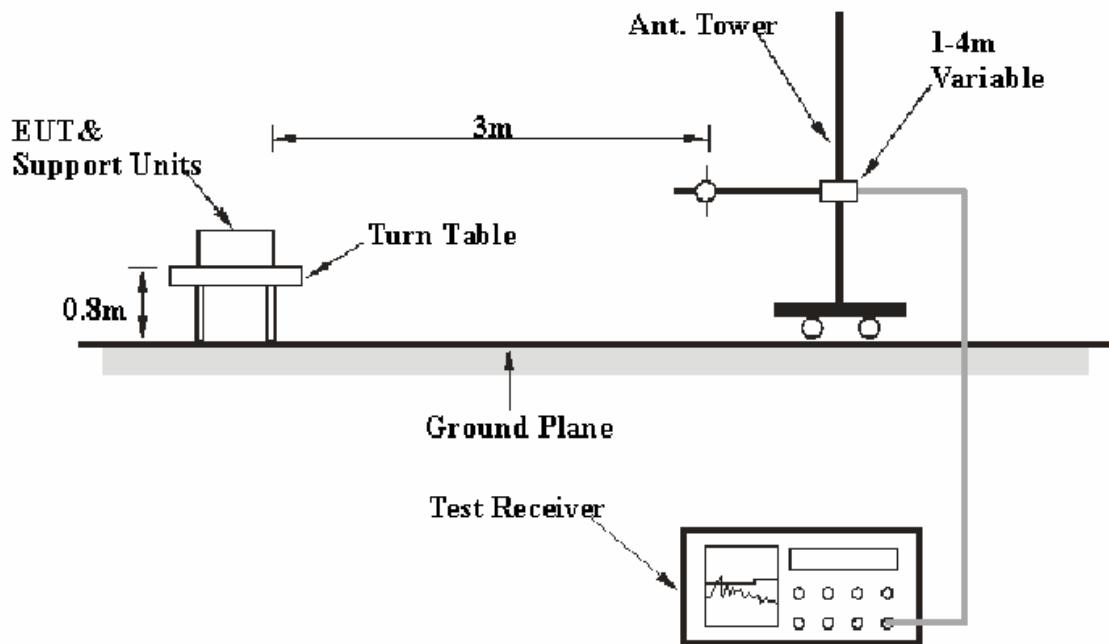
## §15.109 - RADIATED EMISSIONS TEST

### 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 Lab Corp. (ShenZhen) is  $\pm 4.0$  dB.

### EUT Setup



The radiated emission tests were performed in the 3 meters chamber A test site, using the setup accordance with the ANSI C63.4-2003. The specification used was the FCC PART 15 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 a 120 VAC/60 Hz power source.

## EMI Test Receiver Setup

The system was investigated from 30 MHz to 1000 MHz.

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

<b><i>Frequency Range</i></b>	<b><i>RBW</i></b>	<b><i>Video B/W</i></b>	<b><i>IF B/W</i></b>
30 – 1000 MHz	100 kHz	300 kHz	120 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>
HP	Amplifier	8447E	1937A01046	2005-8-17	2006-8-17
Rohde & Schwarz	EMI Test Receiver	ESCI	100035	2005-8-17	2006-8-17
Sunol Sciences	Broadband Antenna	JB1	A040904-2	2006-4-28	2007-4-28

\* **Statement of Traceability:** Bay Area Compliance Lab 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 and TV power cords were connected to the 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.

## 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:

$$\text{Corr. Ampl.} = \text{Meter Reading} + \text{Antenna Loss} + \text{Cable Loss} - \text{Amplifier Gain}$$

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

$$\text{Margin} = \text{Limit} - \text{Corr. Ampl.}$$

## Test Results Summary

According to the data in the following table, the EUT complied with the FCC Part 15 Class B, with the worst margin reading of:

**3.1 dB at 364.538125 MHz** in the **Vertical** polarization.

## Test Data

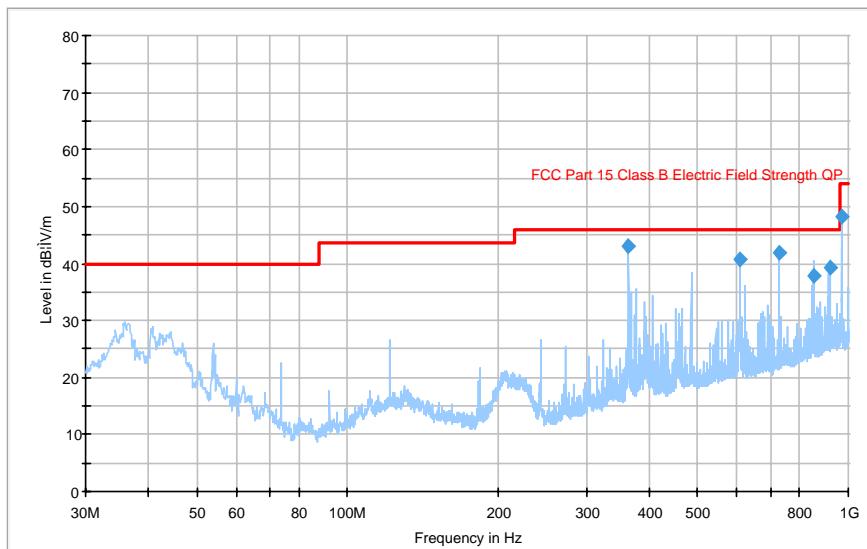
### Environmental Conditions

Temperature:	25 °C
Relative Humidity:	58 %
ATM Pressure:	998 mbar

The testing was performed by Henry Yang on 2006-7-14.

Test mode: operating

Auto Test(FCC 15 Class B)



Final Measurement Detector 1

Frequency (MHz)	QuasiPeak (dB $\mu$ V/m)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity
364.538125	42.9	3000.000	120.000	189.0	V
607.535575	40.7	3000.000	120.000	123.0	V
729.048450	41.8	3000.000	120.000	100.0	V
850.747350	37.9	3000.000	120.000	326.0	H
919.978600	39.4	3000.000	120.000	100.0	V
972.077775	48.1	3000.000	120.000	147.0	V

(continuation of the "Final Measurement Detector 1" table from column 6 ...)

Frequency (MHz)	Turntable position (deg)	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V/m)	Comment
364.538125	347.0	-9.1	3.1*	46.0	
607.535575	359.0	-5.3	5.3	46.0	
729.048450	329.0	-3.1	4.2	46.0	
850.747350	135.0	-1.4	8.1	46.0	
919.978600	21.0	0.3	6.6	46.0	
972.077775	27.0	1.3	5.8	53.9	

\* Within measurement uncertainty

## §15.111 – ANTENNA POWER CONDUCTION MEASUREMENT

### EUT Setup

The measurement was performed in the shielded room, using the same setup per ANSI C63.4-2003 measurement procedure. The specification used was FCC 15 Class B limits.

The spacing between the peripherals was 10 cm.

The external I/O cables were draped along the test table and bundled as required.

The EUT was connected to 120Vac/60Hz power source.

### Receiver Setup

The system was tested to 2000 MHz.

During the test, the receiver was set with the following configurations:

<b><i>Frequency Range</i></b>	<b><i>RBW</i></b>	<b><i>Video B/W</i></b>
30 – 1000 MHz	100 kHz	300 kHz

### Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Com-Power	L.I.S.N.	LI-200	12005	N/A	N/A
Com-Power	L.I.S.N.	LI-200	12008	N/A	N/A
Rohde & Schwarz	EMI Test Receiver	ESCS30	830245/006	2006-1-26	2007-1-26
Rohde & Schwarz	L.I.S.N.	ESH2-Z5	892107/021	2006-2-28	2007-2-28
Mini-Circuits	Splitter	ZFRSC-2050	BF009200418	N/A	N/A

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

### Test Procedure

The RF input terminal was connected to the test receiver through the matching pad(75-50 ohm). RF output was measured under the EUT operating mode. Result is displayed on the EMI Test Receiver.

## Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Loss and Cable Loss from the Amplitude reading. The basic equation is as follows:

$$\text{Corr. Ampl.} = \text{Meter Reading} + \text{Antenna Loss} + \text{Cable Loss}$$

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

$$\text{Margin} = \text{Corr. Ampl.} - \text{Limit}$$

The limit is 2.0 nanowatts in the frequency range from 30 MHz to 5000 MHz.

## Test Results Summary

According to the data in the following table, the EUT complied with the FCC Part 15 Class B, with the worst margin reading of:

**-15.7 dB at 64.0 MHz.**

## Test Data

### Environmental Conditions

Temperature:	27 °C
Relative Humidity:	56 %
ATM Pressure:	1000 mbar

*The testing was performed by Louise Lu on 2006-8-5.*

*Test mode: Running*

Frequency	Reading	Cable Loss	Matching Loss	Correction Factor	Limit	Margin
MHz	dBuV	dB	dB	dB	dBuV	dB
64.0	28.3	0.3	5.7	34.3	50	-15.7
670.6	27.6	0.7	5.7	34.0	50	-16.0
682.5	26.5	0.7	5.7	32.9	50	-17.1
1973.5	24.4	1.5	5.7	31.6	50	-18.4
853.6	22.3	0.8	5.7	28.8	50	-21.2

## §15.115(b)(1)(ii) – OUTPUT SIGNAL LEVEL MEASUREMENT

### EUT Setup

The measurement was performed in the shielded room, using the same setup per ANSI C63.4-2003 measurement procedure. The specification used was FCC 15 Class B limits.

The spacing between the peripherals was 10 cm.

The external I/O cables were draped along the test table and bundled as required.

The EUT was connected to 120Vac/60Hz power source.

### Receiver Setup

During the test, the receiver was set with the following configurations:

<b><i>Frequency Range</i></b>	<b><i>RBW</i></b>	<b><i>Video B/W</i></b>
30 – 1000 MHz	100 kHz	300 kHz

### Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Com-Power	L.I.S.N.	LI-200	12005	N/A	N/A
Com-Power	L.I.S.N.	LI-200	12008	N/A	N/A
Rohde & Schwarz	EMI Test Receiver	ESCS30	830245/006	2006-1-26	2007-1-26
Rohde & Schwarz	L.I.S.N.	ESH2-Z5	892107/021	2006-2-28	2007-2-28
ATTEN	Impedance Transformer	N/A	N/A	N/A	N/A

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

### Test Procedure

The RF output terminal was connected to the test receiver through the matching pad(75-50 ohm). RF output signal level was measured under the EUT operating mode. Result is displayed on EMI Test Receiver. Spectrum was checked in each test mode and operation mode, and the maximum measured data were reported.

## Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Loss and Cable Loss from the Amplitude reading. The basic equation is as follows:

$$\text{Corr. Ampl.} = \text{Meter Reading} + \text{Antenna Loss} + \text{Cable Loss}$$

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

$$\text{Margin} = \text{Corr. Ampl.} - \text{Limit}$$

## Test Results Summary

According to the data in the following table, the EUT complied with the FCC Part 15 Class B, with the worst margin reading of:

**-9.20 dB at 71.75 MHz at Channel 4.**

## Test Data

### Environmental Conditions

Temperature:	27 °C
Relative Humidity:	56 %
ATM Pressure:	1000 mbar

*The testing was performed by Louise Lu on 2006-8-5.*

*Test mode: Running*

Test Channel	Frequency	Reading	Cable Loss	Matching Loss	Correction Factor	Limit	Margin
	MHz	dBuV	dB	dB	dB	dBuV	dB
4	71.75	41.3	0.3	5.7	47.3	56.5	-9.20
3	65.75	40.5	0.3	5.7	46.5	56.5	-10.00
3	61.25	49.32	0.3	5.7	55.32	69.5	-14.18
4	67.25	48.52	0.3	5.7	54.52	69.5	-14.92

## §15.115(b)(2)(ii) – OUTPUT TERMINAL CONDUCTED SPURIOUS EMISSION MEASUREMENT

### EUT Setup

The measurement was performed in the shielded room, using the same setup per ANSI C63.4-2003 measurement procedure. The specification used was FCC 15 Class B limits.

The spacing between the peripherals was 10 cm.

The external I/O cables were draped along the test table and bundled as required.

The EUT was connected to 120Vac/60Hz power source.

### Receiver Setup

During the test, the receiver was set with the following configurations:

<b><u>Frequency Range</u></b>	<b><u>RBW</u></b>	<b><u>Video B/W</u></b>
30 – 1000 MHz	100 kHz	300 kHz

### Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Com-Power	L.I.S.N.	LI-200	12005	N/A	N/A
Com-Power	L.I.S.N.	LI-200	12008	N/A	N/A
Rohde & Schwarz	EMI Test Receiver	ESCS30	830245/006	2006-1-26	2007-1-26
Rohde & Schwarz	L.I.S.N.	ESH2-Z5	892107/021	2006-2-28	2007-2-28
ATTEN	Impedance Transformer	N/A	N/A	N/A	N/A

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

### Test Procedure

The RF output terminal was connected to the test receiver through the matching pad(75-50 ohm). RF output signal level was measured under the EUT operating mode. Result is displayed on EMI Test Receiver. Spectrum was checked in each test mode and operation mode, and the maximum measured data were reported.

Tested frequency range were from 30 MHz to more than 4.6 MHz below the visual carrier frequency, and from more than 7.4 MHz above the visual carrier frequency to 1000 MHz.

## Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Loss and Cable Loss from the Amplitude reading. The basic equation is as follows:

$$\text{Corr. Ampl.} = \text{Meter Reading} + \text{Antenna Loss} + \text{Cable Loss}$$

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

$$\text{Margin} = \text{Corr. Ampl.} - \text{Limit}$$

## Test Results Summary

According to the data in the following table, the EUT complied with the FCC Part 15 Class B, with the worst margin reading of:

**-22.7 dB at 32.64 MHz at Channel 4.**

## Test Data

### Environmental Conditions

Temperature:	27 °C
Relative Humidity:	56 %
ATM Pressure:	1000 mbar

*The testing was performed by Louise Lu on 2006-8-5.*

*Test mode: Running*

Test Channel	Frequency	Reading	Cable Loss	Matching Loss	Correction Factor	Limit	Margin
	MHz	dBuV	dB	dB	dBuV	dBuV	dB
4	32.64	10.6	0.5	5.7	16.8	39.5	-22.7
3	32.64	10.7	0.2	5.7	16.6	39.5	-22.9
4	154.58	9.4	0.5	5.7	15.6	39.5	-23.9
3	88.61	6.5	0.4	5.7	12.6	39.5	-26.9

## §15.115(c)(1)(ii) – ANTENNA TRANSFER SWITCH MEASUREMENT

### EUT Setup

The measurement was performed in the shielded room, using the same setup per ANSI C63.4-2003 measurement procedure. The specification used was FCC 15 Class B limits.

The spacing between the peripherals was 10 cm.

The external I/O cables were draped along the test table and bundled as required.

The EUT was connected to 120Vac/60Hz power source.

### Receiver Setup

During the test, the receiver was set with the following configurations:

<b><i>Frequency Range</i></b>	<b><i>RBW</i></b>	<b><i>Video B/W</i></b>
30 – 1000 MHz	100 kHz	300 kHz

### Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Com-Power	L.I.S.N.	LI-200	12005	N/A	N/A
Com-Power	L.I.S.N.	LI-200	12008	N/A	N/A
Rohde & Schwarz	EMI Test Receiver	ESCS30	830245/006	2006-1-26	2007-1-26
Rohde & Schwarz	L.I.S.N.	ESH2-Z5	892107/021	2006-2-28	2007-2-28
ATTEN	Impedance Transformer	N/A	N/A	N/A	N/A

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

### Test Procedure

The RF output terminal was connected to the test receiver through the matching pad(75-50 ohm). RF output signal level was measured under the EUT operating mode. Result is displayed on EMI Test Receiver. Spectrum was checked in each test mode and operation mode, and the maximum measured data were reported.

The spectrum was checked in each test mode and operation mode transfer switch isolation measurements were made on channel 3 or 4 video output frequency 61.25 or 67.25 and both positions of the transfer switch were checked for compliance.

## Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Loss and Cable Loss from the Amplitude reading. The basic equation is as follows:

$$\text{Corr. Ampl.} = \text{Meter Reading} + \text{Antenna Loss} + \text{Cable Loss}$$

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

$$\text{Margin} = \text{Corr. Ampl.} - \text{Limit}$$

## Test Results Summary

According to the data in the following table, the EUT complied with the FCC Part 15 Class B, with the worst margin reading of:

**\*No significant data measurement was observed during the test.**

## Test Data

### Environmental Conditions

Temperature:	27 °C
Relative Humidity:	56 %
ATM Pressure:	1000 mbar

*The testing was performed by Louise Lu on 2006-8-5.*

*Test mode: Running*

Test channel	Frequency MHz	Reading dBuV	Cable Loss dB	Matching Loss dB	Correction Factor dBuV	Limit dBuV	Margin dB
3	61.25	During this test, no signal detect				9.5	-
4	67.25					9.5	-