

FCC PART 15.249
EMI MEASUREMENT AND TEST REPORT

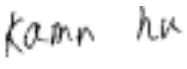
For

JOYO Electronics Company Limited

Unit D, 13/F., World Tech Centre, 95 How Ming Street, Kwun Tong,, Kowloon, Hong Kong

FCC ID: R4GJY238T01

January 17, 2006

This Report Concerns: ☒ Original Report	Equipment Type: Wireless Baby Monitor
Test Engineer: Kamn Hu 	
Report No.: RSZ05122001	
Test Date: December 23-28, 2005	
Reviewed By: Chris Zeng 	
Prepared By: Bay Area Compliance Lab Corp. (ShenZhen) 6/F, the 3rd Phase of WanLi Industrial Building, ShiHua Road, FuTian Free Trade Zone, ShenZhen, Guangdong 518038, P.R.China Tel: +86-755-33320018 Fax: +86-755-33320008	

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

GENERAL INFORMATION.....	3
PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT)	3
OBJECTIVE	3
RELATED SUBMITTAL(S)/GRANT(S).....	3
TEST METHODOLOGY	3
TEST FACILITY	3
LOCAL SUPPORT EQUIPMENT LIST AND DETAILS	4
EXTERNAL I/O CABLE	4
SYSTEM TEST CONFIGURATION.....	5
JUSTIFICATION	5
EUT EXERCISE SOFTWARE	5
SPECIAL ACCESSORIES.....	5
BLOCK DIAGRAM/SCHEMATICS	5
EQUIPMENT MODIFICATIONS	5
CONFIGURATION OF TEST SETUP	6
BLOCK DIAGRAM OF TEST SETUP	6
SUMMARY OF TEST RESULTS	7
§15.203 - ANTENNA APPLICATION	8
STANDARD APPLICABLE	8
§15.207 - CONDUCTED EMISSION	9
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	13
§15.205 §15.209(A) §15.249(A) - RADIATED EMISSION.....	20
MEASUREMENT UNCERTAINTY.....	20
EUT SETUP.....	20
EMI TEST RECEIVER SETUP	21
TEST EQUIPMENT LIST AND DETAILS.....	21
TEST PROCEDURE	21
CORRECTED AMPLITUDE & MARGIN CALCULATION	21
TEST RESULTS SUMMARY	22
TEST DATA	22
§15.249(D) – OUT OF BAND EMISSION	25
STANDARD APPLICABLE	25
TEST PROCEDURE	25
TEST EQUIPMENT LIST AND DETAILS.....	25
TEST DATA	25

GENERAL INFORMATION

Product Description for Equipment Under Test (EUT)

The JOYO Electronics Company Limited 's product, model number: JY-238T or the "EUT" as referred to in this report is a Wireless Baby Monitor. The EUT is measured approximately 8.5 cm L x 4.5 cm W x 12.5 cm H, rated input voltage: DC 9 V.

Adaptor: CLASS 2 POWER SUPPLY, model: KV35-9-300D; input: 120VAC 60Hz 7W, output: DC 9V 300mA

** The test data gathered are from production sample, serial number: JY0512026 provided by the manufacturer, we received EUT on 2005-12-20.*

Objective

This Type approval report is prepared on behalf of *JOYO Electronics Company Limited* in accordance with Part 2, Subpart J, and Part 15, Subparts A, B and C of the Federal Communication Commissions rules.

The tests were performed in order to determine compliance with FCC Part 15, Subpart C, and section 15.203,15.205,15.207,15.209 and 15.249 rules.

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
PHILIPS	Color TV PG	PM5418	LO670816	DoC
NanYan	Audio Generator	NY2201	N/A	DoC

External I/O Cable

Cable Description	Length (M)	From/Port	To
Unshielded AV Cable	0.65	EUT	AV Player
Unshielded DC Cable	1.80	EUT	Adaptor

SYSTEM TEST CONFIGURATION

Justification

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

EUT Exercise Software

N/A

Special Accessories

The special accessories were provided by Bay Area Compliance Lab Corp. (ShenZhen).

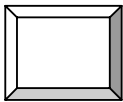
Block Diagram/Schematics

Please refer to the tech.

Equipment Modifications

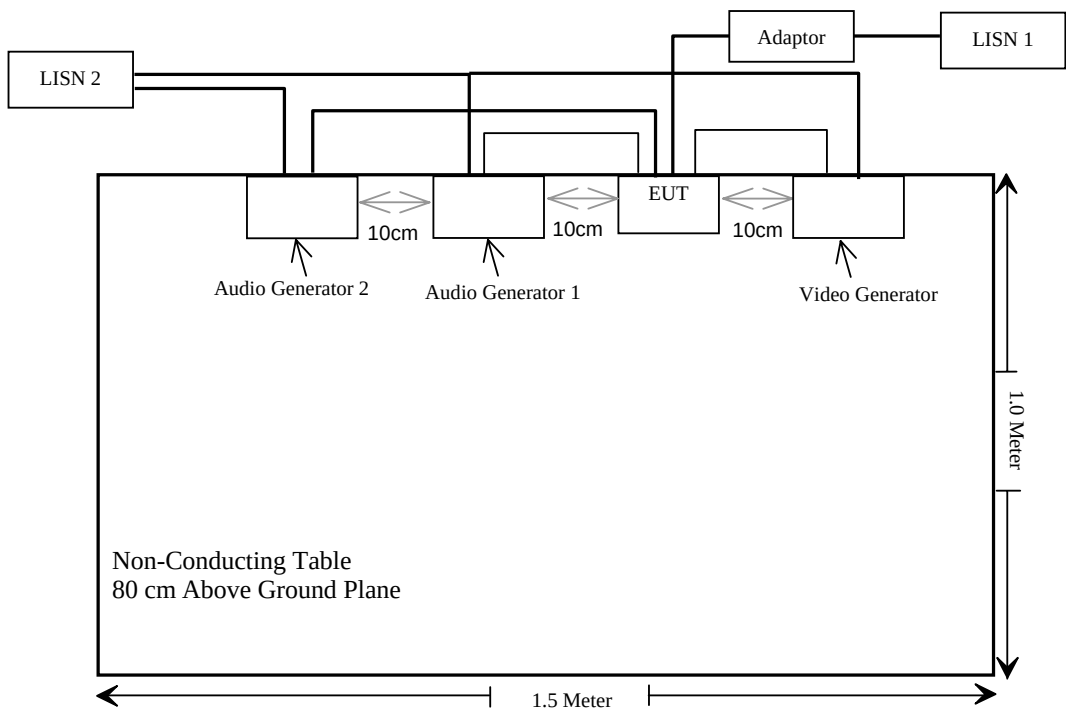
Bay Area Compliance Lab Corp. (ShenZhen) has not done any modification on the EUT.

Configuration of Test Setup



EUT

Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

FCC RULES	DESCRIPTION OF TEST	RESULT
§15.203	Antenna Requirement	Compliant
§15.205	Restricted Bands of Operation	Compliant
§15.207(a)	Conduction Emission	Compliant
§15.209(a), §15.249(a), §15.249(c)	Radiated Emission	Compliant*
§15.249(d)	Out of band emission	Compliant

* Within measurement uncertainty

§15.203 - ANTENNA APPLICATION

Standard Applicable

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

This product has a permanent antenna, fulfill the requirement of this section.

Test Result: Pass

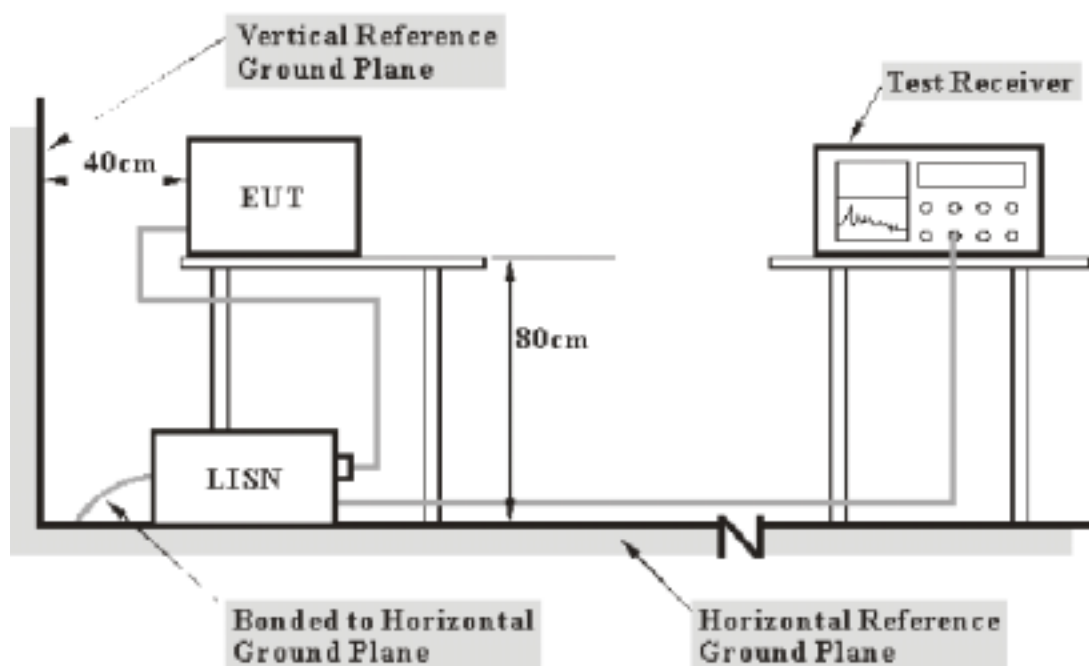
§15.207 - CONDUCTED EMISSION

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 ± 2.4 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 .207 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 adaptor 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:

<u>Frequency Range</u>	<u>IFBW</u>
150 kHz – 30 MHz	9 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	2005-1-26	2006-1-26
Rohde & Schwarz	L.I.S.N.	ESH2-Z5	892107/021	2005-2-28	2006-2-28

* 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

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.

From the audio signal generator connect to the speaker, the distance between the EUT and the speaker was 10 cm.

Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC Part 15.207, with the worst margin reading of:

Channel 1: **-16.87 dB** at **25.150 MHz** in the **Neutral** conductor mode.
Channel 2: **-18.01 dB** at **24.858 MHz** in the **Neutral** conductor mode.
Channel 4: **-17.18 dB** at **25.390 MHz** in the **Neutral** conductor mode.

Test Data**Environmental Conditions**

Temperature:	25 ° C
Relative Humidity:	55%
ATM Pressure:	1000mbar

The testing was performed by Kamn Hu on 2006-1-13.

Test mode: Transmitting (Channel 1)

LINE CONDUCTED EMISSIONS				FCC PART 15 .207	
Frequency MHz	Amplitude dBμV	Detector QP/AV	Phase Line/Neutral	Limit dBμV	Margin dB
25.150	43.13	QP	Neutral	60.00	-16.87
15.338	41.21	QP	Line	60.00	-18.79
12.854	40.18	QP	Line	60.00	-19.82
0.150	45.59	QP	Line	66.00	-20.41
25.730	39.01	QP	Line	60.00	-20.99
15.118	35.61	QP	Neutral	60.00	-24.39
12.230	35.12	QP	Neutral	60.00	-24.88
0.698	27.81	QP	Neutral	56.00	-28.19
0.150	21.44	AV	Neutral	50.00	-28.56
25.150	21.39	AV	Neutral	50.00	-28.61
15.338	20.58	AV	Line	50.00	-29.42
0.150	36.37	QP	Neutral	66.00	-29.63
0.698	16.20	AV	Neutral	46.00	-29.80
12.854	20.12	AV	Line	50.00	-29.88
25.730	19.45	AV	Line	50.00	-30.55
9.822	29.27	QP	Line	60.00	-30.73
0.150	24.93	AV	Line	56.00	-31.07
1.174	24.72	QP	Neutral	56.00	-31.28
1.370	23.63	QP	Line	56.00	-32.37
15.118	16.05	AV	Neutral	50.00	-33.95
1.174	11.78	AV	Neutral	46.00	-34.22
1.370	10.87	AV	Line	46.00	-35.13
12.230	12.23	AV	Neutral	50.00	-37.77
9.822	9.85	AV	Line	50.00	-40.15

Test mode: Transmitting (Channel 2)

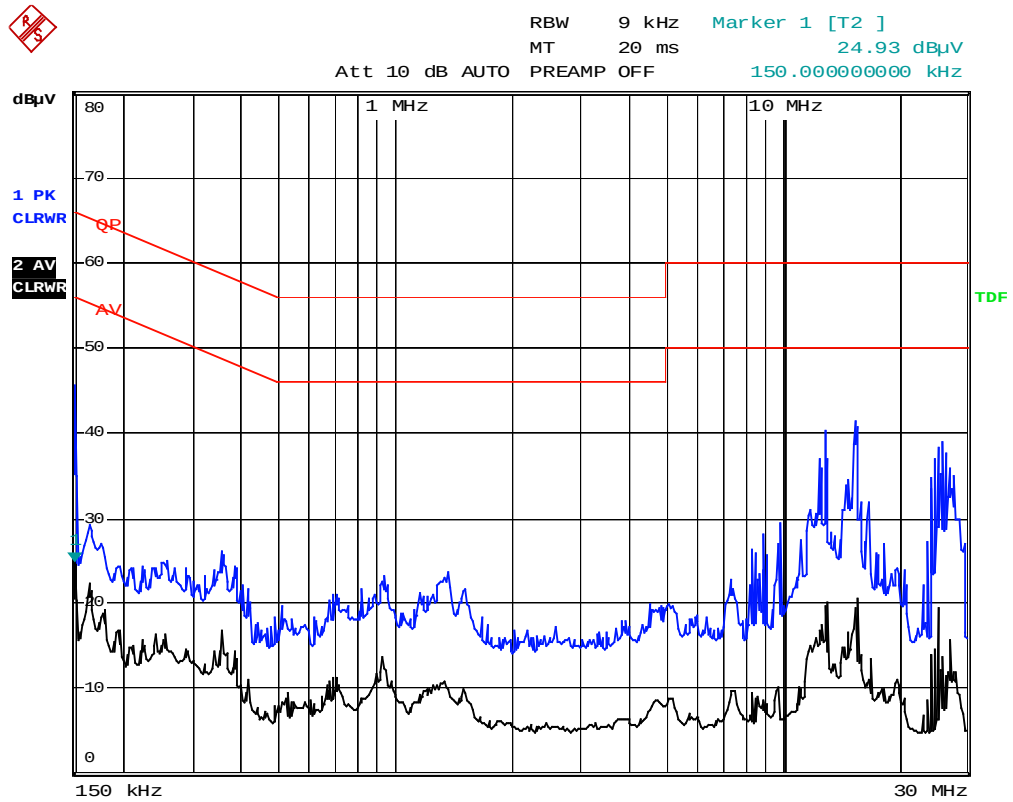
LINE CONDUCTED EMISSIONS				FCC PART 15.207	
Frequency MHz	Amplitude dB μ V	Detector QP/AV	Phase Line/Neutral	Limit dB μ V	Margin dB
24.858	41.99	QP	Neutral	60.00	-18.01
25.218	41.64	QP	Line	60.00	-18.36
12.538	40.24	QP	Neutral	60.00	-19.76
20.148	39.81	QP	Neutral	60.00	-20.19
15.854	39.33	QP	Line	60.00	-20.67
16.134	38.86	QP	Neutral	60.00	-21.14
0.150	42.69	QP	Line	66.00	-23.31
12.462	31.44	QP	Line	56.00	-24.56
0.706	28.96	QP	Neutral	56.00	-27.04
0.706	18.84	AV	Neutral	46.00	-27.16
20.148	21.65	AV	Neutral	50.00	-28.35
12.538	21.30	AV	Neutral	50.00	-28.70
0.354	30.07	QP	Neutral	58.87	-28.80
16.134	20.59	AV	Neutral	50.00	-29.41
0.354	20.19	AV	Neutral	50.00	-29.81
0.150	25.42	AV	Line	56.00	-30.58
0.938	24.78	QP	Line	56.00	-31.22
15.854	18.61	AV	Line	50.00	-31.39
1.342	24.29	QP	Line	56.00	-31.71
0.938	13.17	AV	Line	46.00	-32.83
24.858	16.92	AV	Neutral	50.00	-33.08
25.218	16.04	AV	Line	50.00	-33.96
12.462	15.18	AV	Line	50.00	-34.82
1.342	10.89	AV	Line	46.00	-35.11

Test mode: Transmitting (Channel 4)

LINE CONDUCTED EMISSIONS				FCC PART 15.207	
Frequency MHz	Amplitude dB μ V	Detector QP/AV	Phase Line/Neutral	Limit dB μ V	Margin dB
25.390	42.82	QP	Neutral	60.00	-17.18
24.210	41.10	QP	Line	60.00	-18.90
23.362	40.26	QP	Neutral	60.00	-19.74
15.566	40.21	QP	Line	60.00	-19.79
20.810	40.17	QP	Line	60.00	-19.83
0.150	44.31	QP	Line	66.00	-21.69
12.638	37.82	QP	Line	60.00	-22.18
12.314	37.61	QP	Neutral	60.00	-22.39
0.706	29.98	QP	Neutral	56.00	-26.02
20.810	22.50	AV	Line	50.00	-27.50
0.706	18.40	AV	Neutral	46.00	-27.60
0.354	31.26	QP	Neutral	58.87	-27.61
0.354	21.02	AV	Neutral	50.00	-28.98
25.390	20.90	AV	Neutral	50.00	-29.10
12.638	20.32	AV	Line	50.00	-29.68
24.210	20.23	AV	Line	50.00	-29.77
15.566	19.98	AV	Line	50.00	-30.02
1.170	25.91	QP	Neutral	56.00	-30.09
12.314	19.68	AV	Neutral	50.00	-30.32
23.362	19.24	AV	Neutral	50.00	-30.76
0.938	24.86	QP	Line	56.00	-31.14
0.938	14.53	AV	Line	46.00	-31.47
0.150	24.29	AV	Line	56.00	-31.71
1.170	14.19	AV	Neutral	46.00	-31.81

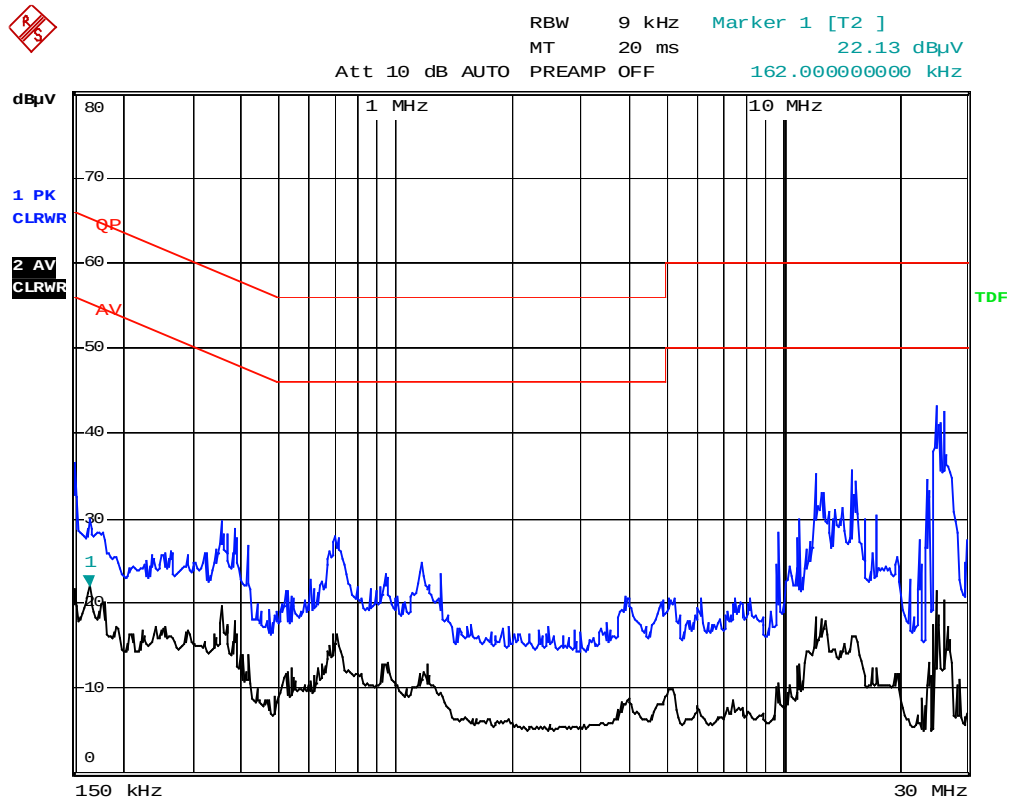
Plot(s) of Test Data

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



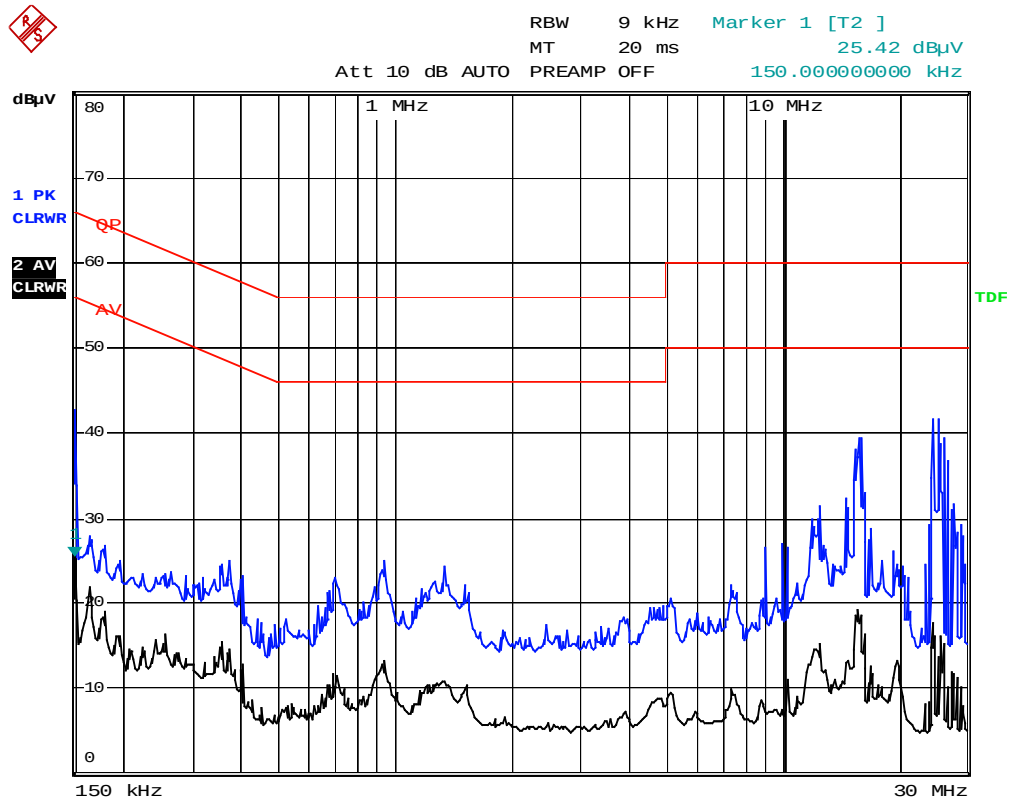
JOYO JY-238T 120V60HZ CH1 L

Date: 13.JAN.2006 13:04:05



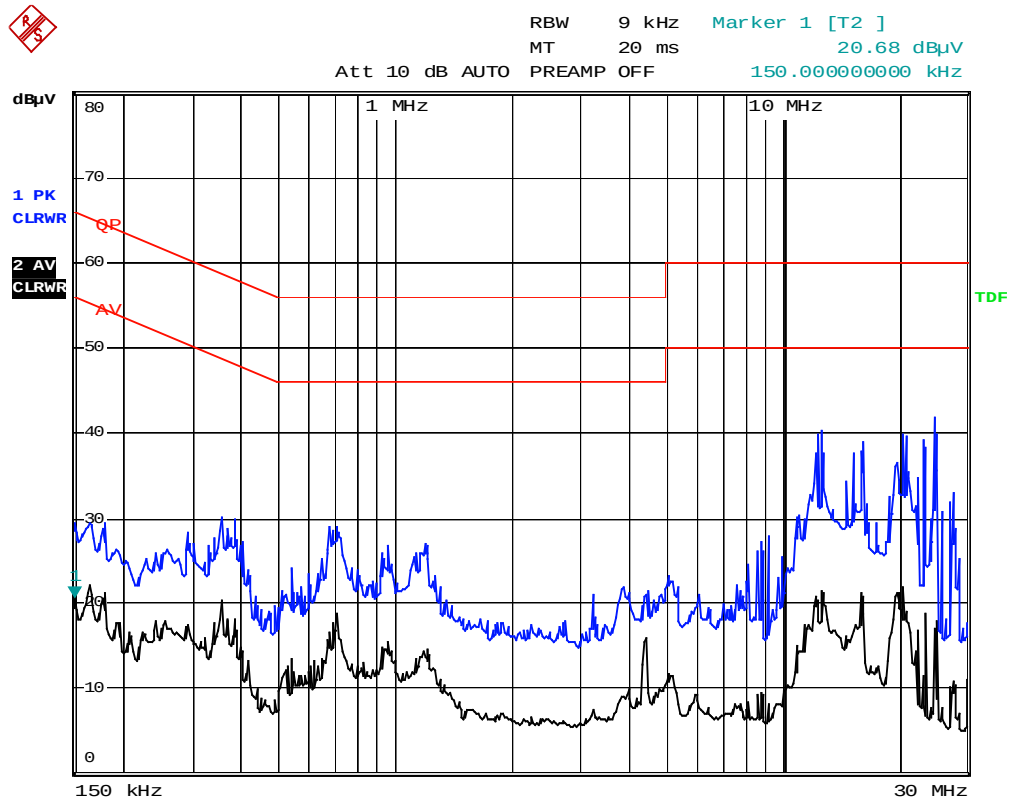
JOYO JY-238T 120V60HZ CH1 N

Date: 13.JAN.2006 12:56:45



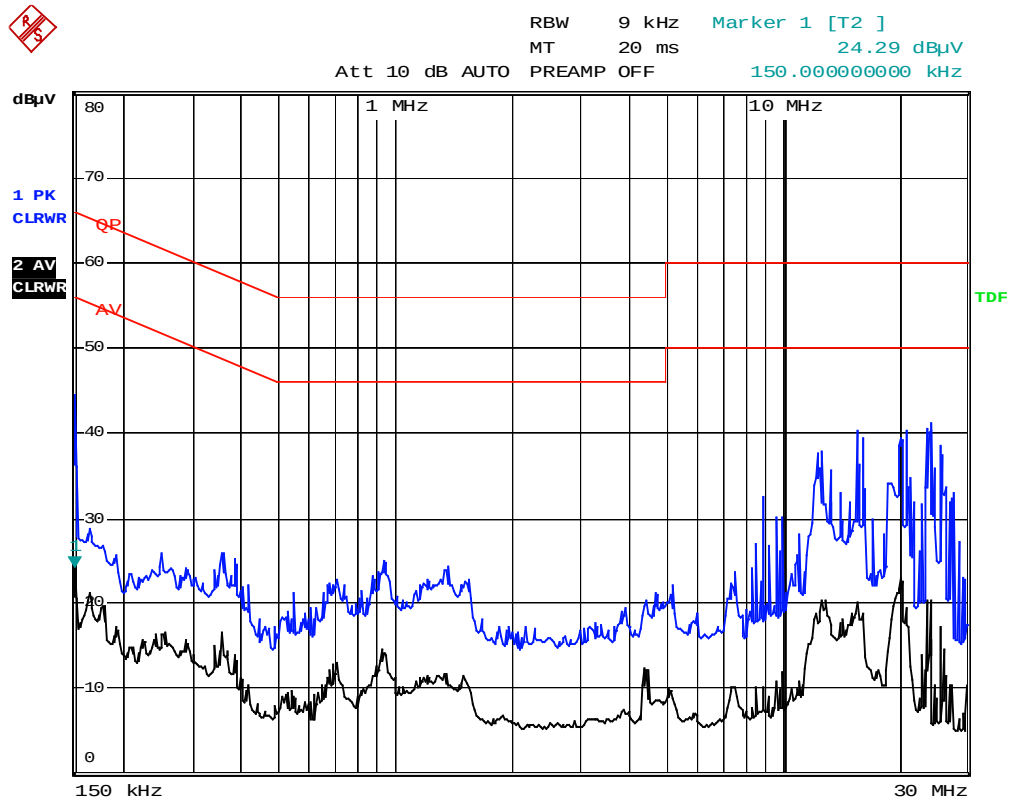
JOYO JY-238T 120V60HZ CH2 L

Date: 13.JAN.2006 13:10:45



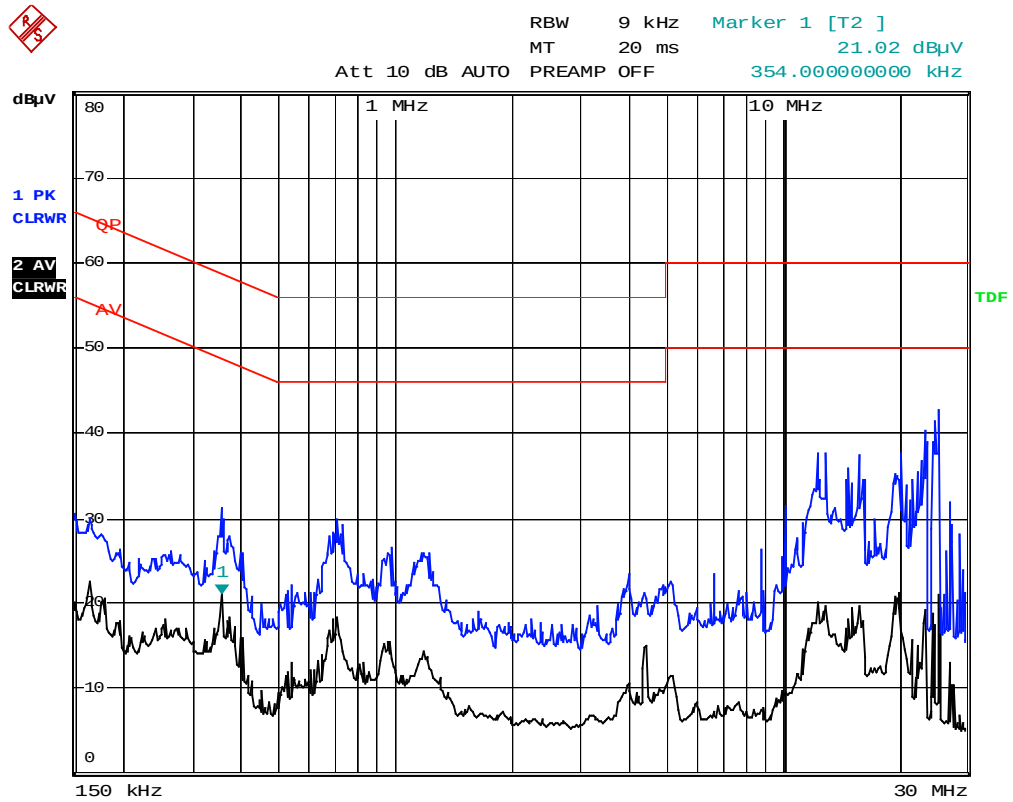
JOYO JY-238T 120V60HZ CH2 N

Date: 13.JAN.2006 13:53:50



JOYO JY-238T 120V60HZ CH4 L

Date: 13.JAN.2006 14:16:46



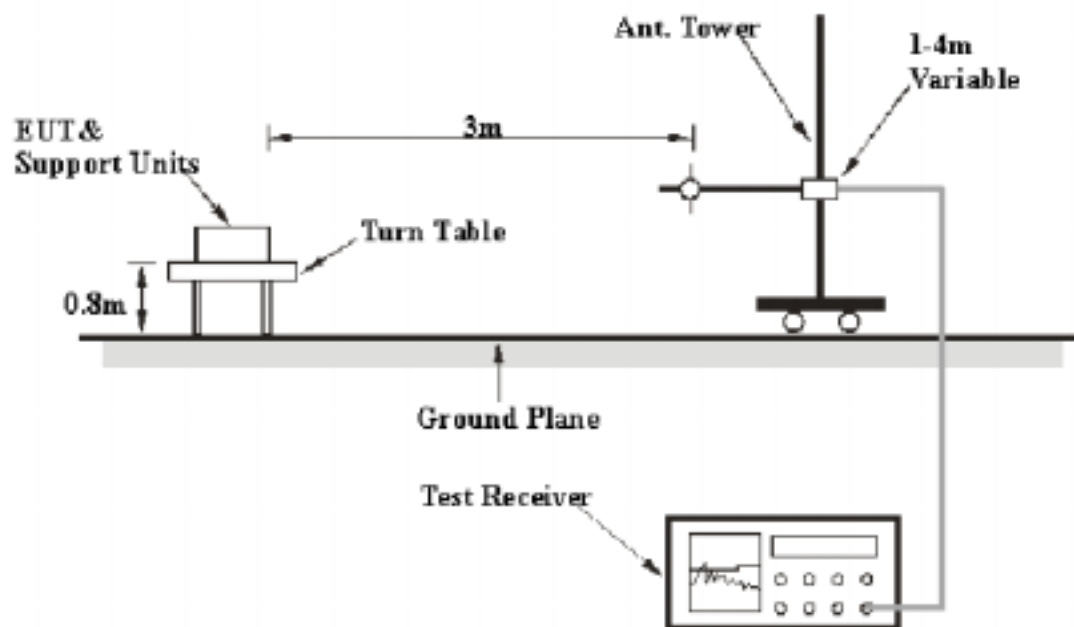
JOYO JY-238T 120V60HZ CH4 N

Date: 13.JAN.2006 14:01:45

§15.205 §15.209(a) §15.249(a) - RADIATED 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, 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 ± 4.0 dB.

EUT Setup

The radiated emission tests were performed in the 3-meter Chamber B, using the setup accordance with the ANSI C63.4-2003. The specification used was the FCC 15.209 and FCC 15.249 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 adaptor was connected to a 120 VAC/60 Hz power source.

EMI Test Receiver Setup

The system was investigated from 30 MHz to 25000 MHz.

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

<u>Frequency Range</u>	<u>RBW</u>	<u>Video B/W</u>
30 – 1000 MHz	100 kHz	300 kHz
1000 MHz – 25000 MHz	1MHz	3 MHz

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	EMI Test Receiver	ESCI	100028	2005-8-17	2006-8-17
HP	Amplifier	HP8447E	1937A01046	2005-8-17	2006-8-17
Sunol Sciences	Broadband Antenna	JB1	A040904-2	2005-4-28	2006-4-28
HP	Spectrum analyzer	8593A	2919A00242	2005-2-28	2006-2-28
HP	Preamplifier	8449B	3008A00277	2005-8-17	2006-8-17
SUNOL SCIENCES	Horn Antenna	DRH-118	A052604	2005-7-20	2006-7-20

* **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 adaptor 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.

From the audio generator connect to the speaker, the distance between the EUT and the speaker was 10 cm.

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:

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

Test Results Summary

According to the data in the following table, the EUT complied with the FCC Part 15.249, with the worst margin reading of:

30 -1000MHz: **-3.9 dB** at **30.64 MHz** in the **Vertical** polarization.
 1-25 GHz (Low channel): **-2.8 dB** at **2411 MHz** in the **Vertical** polarization.
 1-25 GHz (Middle channel): **-4.9 dB** at **2433 MHz** in the **Vertical** polarization.
 1-25 GHz (High channel): **-6.6 dB** at **2473 MHz** in the **Vertical** polarization.

Test Data

Environmental Conditions

Temperature:	25 ° C
Relative Humidity:	53%
ATM Pressure:	1000mbar

The testing was performed by Kamn Hu on 2006-1-13, 2006-1-26.

Test mode: Transmitting

Frequency MHz	Meter Reading dBuV/m	Detector PK/QP/AV	Direction Degree	Height Meter	Polar H / V	Antenna Loss dB	Cable loss dB	Amplifier Gain dB	Corr. Ampl. dBuV/m	FCC Part 15.249	
										Limit dBuV/m	Margin dB
30.64	40.2	PK	180	2.0	V	24.1	0.6	28.8	36.1	40	-3.9*
32.63	39.9	PK	60	1.5	V	24.1	0.6	28.8	35.8	40	-4.2
31.72	39.0	PK	90	1.0	V	24.1	0.6	28.8	34.9	40	-5.1
64.89	51.2	PK	60	2.0	V	8.1	0.8	28.7	31.3	40	-8.7
1000	45.1	PK	45	2.0	V	23.8	3.7	27.6	45.0	54	-9.0
1000	43.5	PK	90	1.5	H	23.8	3.7	27.6	43.4	54	-10.7
30.64	31.4	PK	45	1.5	H	24.1	0.6	28.8	27.3	40	-12.7
31.07	31.2	PK	60	2.0	H	24.1	0.6	28.8	27.1	40	-12.9
30	31.1	PK	45	2.0	H	24.1	0.6	28.8	27.0	40	-13.0
502.94	41.1	PK	60	1.0	V	18.0	2.4	28.6	32.9	46	-13.1
175.65	43.2	PK	270	1.0	H	11.9	1.2	28.2	28.1	43.5	-15.4
502.94	37.6	PK	45	2.0	H	18.0	2.4	28.6	29.4	46	-16.6

Frequency	Meter Reading	Detector	Direction	Height	Polar	Antenna Loss	Cable loss	Amplifier Gain	Corr. Ampl.	FCC Part 15.249		
										Limit	Margin	Comments
MHz	dBuV/m	PK/QP/AV	Degree	Meter	H / V	dB	dB	dB	dBuV/m	dBuV/m	dB	
1GHz-25GHz (Low Channel)												
2411	94.43	AV	180	1.2	V	28.1	3.7	35.0	91.2	94	-2.8*	fundamental
2411	87.91	AV	180	1.2	H	28.1	3.7	35.0	84.7	94	-9.3	fundamental
9644	33.02	AV	60	1.0	H	37.6	7.3	34.1	43.8	54	-10.2	harmonic
9644	33.02	AV	60	1.0	V	37.6	7.3	34.1	43.8	54	-10.2	harmonic
7233	34.36	AV	180	1.2	H	35.8	6.1	33.7	42.6	54	-11.4	harmonic
7233	33.02	AV	180	1.2	V	35.8	6.1	33.7	41.2	54	-12.8	harmonic
2411	103.24	PK	45	1.0	V	28.1	3.7	35.0	100.0	114	-14.0	fundamental
4822	33.71	AV	60	1.0	V	33.8	5.2	33.4	39.3	54	-14.7	harmonic
4822	33.02	AV	60	1.0	H	33.8	5.2	33.4	38.6	54	-15.4	harmonic
9644	47.28	PK	45	1.2	V	37.6	7.3	34.1	58.1	74	-15.9	harmonic
7233	48.82	PK	45	1.2	H	35.8	6.1	33.7	57.0	74	-17.0	harmonic
9644	45.59	PK	45	1.2	H	37.6	7.3	34.1	56.4	74	-17.6	harmonic
7233	48.08	PK	45	1.2	V	35.8	6.1	33.7	56.3	74	-17.7	harmonic
2411	97.06	PK	45	1.0	H	28.1	3.7	35.0	93.9	114	-20.1	fundamental
4822	48.08	PK	45	1.0	V	33.8	5.2	33.4	53.7	74	-20.3	harmonic
4822	47.28	PK	45	1.0	H	33.8	5.2	33.4	52.9	74	-21.1	harmonic

* Within measurement uncertainty

Frequency	Meter Reading	Detector	Direction	Height	Polar	Antenna Loss	Cable loss	Amplifier Gain	Corr. Ampl.	FCC Part 15.249		
										Limit	Margin	Comments
MHz	dBuV/m	PK/QP/AV	Degree	Meter	H / V	dB	dB	dB	dBuV/m	dBuV/m	dB	
1GHz-25GHz (Middle Channel)												
2433	92.28	AV	180	1.2	V	28.1	3.7	35.0	89.1	94	-4.9	fundamental
2433	86.71	AV	180	1.2	H	28.1	3.7	35.0	83.5	94	-10.5	fundamental
9732	32.26	AV	60	1.0	H	38.0	7.0	34.1	43.2	54	-10.8	harmonic
9732	32.26	AV	60	1.0	V	38.0	7.0	34.1	43.2	54	-10.8	harmonic
7299	33.02	AV	180	1.2	H	35.8	6.1	33.7	41.2	54	-12.8	harmonic
7299	33.02	AV	180	1.2	V	35.8	6.1	33.7	41.2	54	-12.8	harmonic
4866	33.02	AV	60	1.0	H	33.8	5.2	33.4	38.6	54	-15.4	harmonic
4866	33.02	AV	60	1.0	V	33.8	5.2	33.4	38.6	54	-15.4	harmonic
2433	101.17	PK	45	1.0	V	28.1	3.7	35.0	98.0	114	-16.0	fundamental
9732	46.70	PK	45	1.2	H	38.0	7.0	34.1	57.6	74	-16.4	harmonic
9732	45.92	PK	45	1.2	V	38.0	7.0	34.1	56.8	74	-17.2	harmonic
7299	46.70	PK	45	1.2	H	35.8	6.1	33.7	54.9	74	-19.1	harmonic
7299	46.08	PK	45	1.2	V	35.8	6.1	33.7	54.3	74	-19.7	harmonic
4866	47.69	PK	45	1.0	H	33.8	5.2	33.4	53.3	74	-20.7	harmonic
2433	95.82	PK	45	1.0	H	28.1	3.7	35.0	92.6	114	-21.4	fundamental
4866	45.59	PK	45	1.0	V	33.8	5.2	33.4	51.2	74	-22.8	harmonic

Frequency	Meter Reading	Detector	Direction	Height	Polar	Antenna Loss	Cable loss	Amplifier Gain	Corr. Ampl.	FCC Part 15.249		
MHz	dBuV/m	PK/QP/AV	Degree	Meter	H / V	dB	dB	dB	dBuV/m	Limit dBuV/m	Margin dB	Comments
1GHz-25GHz (High Channel)												
2473	90.62	AV	180	1.2	V	28.1	3.7	35.0	87.4	94	-6.6	fundamental
9892	33.02	AV	60	1.0	H	37.6	7.3	34.1	43.8	54	-10.2	harmonic
9892	33.02	AV	60	1.0	V	37.6	7.3	34.1	43.8	54	-10.2	harmonic
2473	85.47	AV	180	1.2	H	28.1	3.7	35.0	82.3	94	-11.7	fundamental
7419	31.43	AV	180	1.2	H	35.8	6.1	33.7	39.6	54	-14.4	harmonic
7419	31.43	AV	180	1.2	V	35.8	6.1	33.7	39.6	54	-14.4	harmonic
4946	32.26	AV	60	1.0	H	33.8	5.2	33.4	37.9	54	-16.1	harmonic
4946	32.26	AV	60	1.0	V	33.8	5.2	33.4	37.9	54	-16.1	harmonic
2473	100.82	PK	45	1.0	V	28.1	3.7	35.0	97.6	114	-16.4	fundamental
9892	46.08	PK	45	1.2	V	37.6	7.3	34.1	56.9	74	-17.1	harmonic
9892	45.41	PK	45	1.2	H	37.6	7.3	34.1	56.2	74	-17.8	harmonic
7419	45.24	PK	45	1.2	H	35.8	6.1	33.7	53.4	74	-20.6	harmonic
7419	44.69	PK	45	1.2	V	35.8	6.1	33.7	52.9	74	-21.1	harmonic
4946	46.08	PK	45	1.0	H	33.8	5.2	33.4	51.7	74	-22.3	harmonic
2473	94.42	PK	45	1.0	H	28.1	3.7	35.0	91.2	114	-22.8	fundamental
4946	45.40	PK	45	1.0	V	33.8	5.2	33.4	51.0	74	-23.0	harmonic

§15.249(d) – OUT OF BAND EMISSION

Standard Applicable

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.

Test Procedure

With the EUT's antenna attached, the EUT's radiated emission power was received by the test antenna which was connected to the spectrum analyzer with the START and STOP frequencies set to the EUT's operation band.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
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	2005-4-28	2006-4-28
HP	Amplifier	8447D	2994A09795	2005-8-17	2006-8-17
Rohde & Schwarz	EMI Test Receiver	ESCI	100028	2005-8-17	2006-8-17
Sunol Sciences	Broadband Antenna	JB1	A040904-1	2005-4-28	2006-4-28

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

Test Data

Environmental Conditions

Temperature:	25 °C
Relative Humidity:	55%
ATM Pressure:	1016mbar

The testing was performed by Kamn Hu on 2006-1-6.

The result has been complied with the 15.249(d), see the following plot:

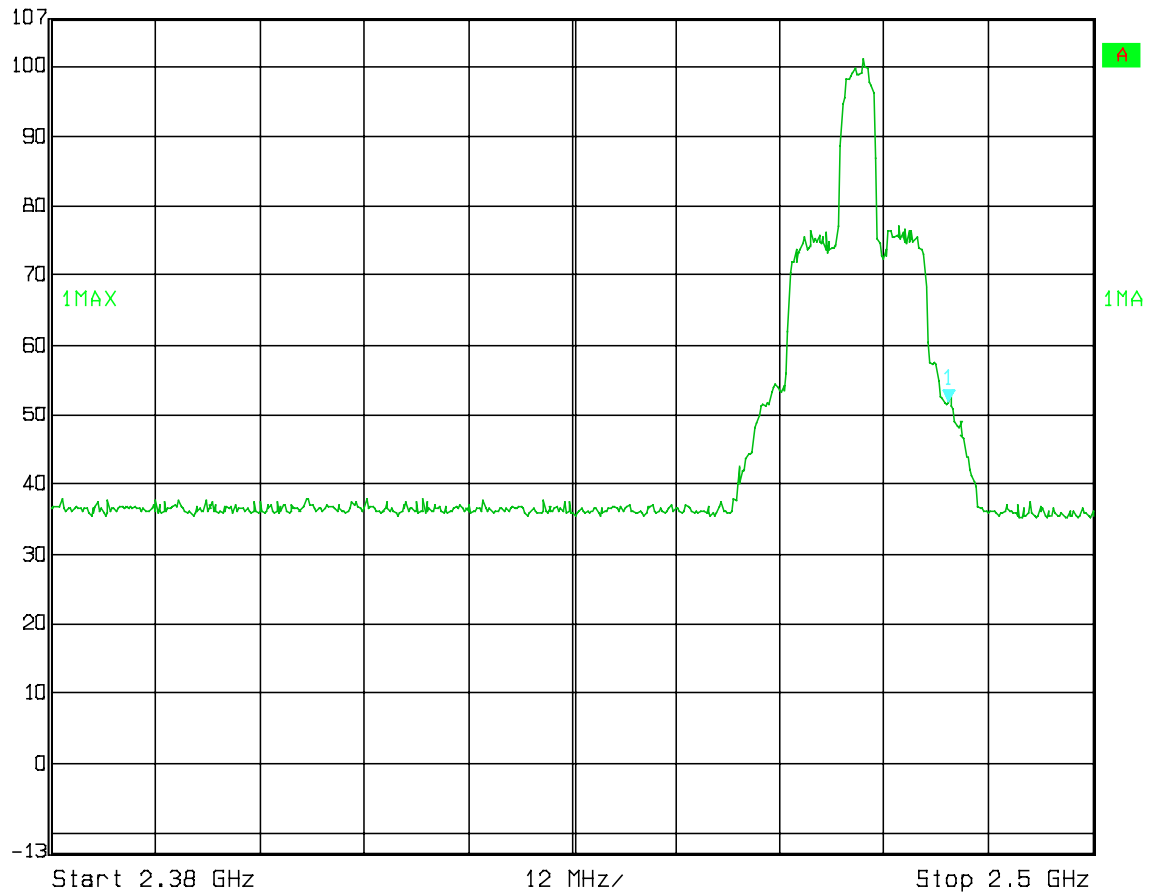
Frequency MHz	Emission dBμV	Limit dBμV/m
2483.5	51.84	54
2400.0	50.91	54

Test Result: Pass

High Channel:

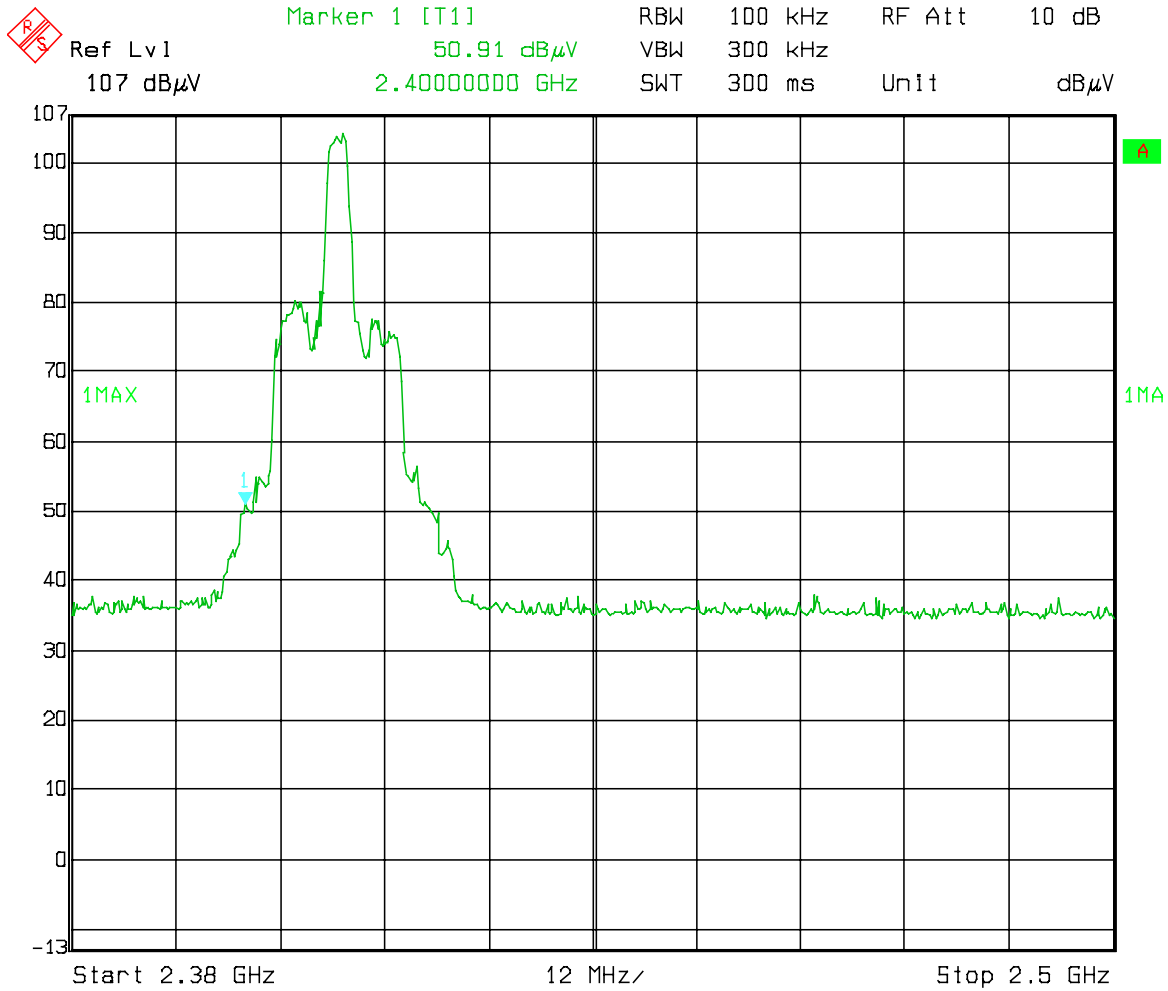


Marker 1 [T1] RBW 100 kHz RF Att 10 dB
Ref Lvl 51.84 dB μ V VBW 300 kHz
107 dB μ V 2.48350000 GHz SWT 300 ms Unit dB μ V



Date: 06.JAN.2006 10:26:13

Low Channel:



Date: 06.JAN.2006 10:29:27