FCC PART 15 B
EMI MEASUREMENT AND TEST REPORT

For

Shanghai Jujo Electronics Co., Ltd.

Room 1001-1004, Cofco Mansion, 440 Zhongshan Rd. (S.2), Xuhui District, Shanghai, China

FCC ID: PIT-8018II

January 9, 2006

This Report Concerns:	**Equipment Type:**
☒ Original Report	USB STICK TYPE R/W

Test Engineer:	Merry Zhao
Report No.:	RSH05122301
Test Date:	January 6, 2006
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.

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GENERAL INFORMATION

Product Description for Equipment Under Test (EUT)

The Shanghai Jujo Electronics Co., Ltd. 's product, model number: 8018 or the "EUT" as referred to in this report was a USB STICK TYPE R/W which measured approximately 6.0 cm L x 1.8 cm W x 0.6 cm H, rated input voltage: DC 5V.

** The test data gathered are from production sample, serial number: 0512036, provided by the manufacturer, we receive the EUT on 2005-12-23.*

Objective

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

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

Host System Configuration List and Details

Manufacturer	Description	Model	Serial Number	FCC ID
Intel	Motherboard	D865GKD	11S19R1949ZJ1WCB46J1J4	DoC
IBM	Power	HIPRO-A2307F3T	11S49P2191ZJ1TAR47D1PG	DoC
IBM	Hard Disk	IC35L090AW207-0	VNVC32G3GGS52T	DoC
ALPS	3.5' Floppy	06P5226	11S06P5226ZJ1W25328053	DoC
Hitachi-LG	DVD-Rom	LTN-489S	B4F511412	DoC
Intel	Ethernet	PRO 10/100 VE	N/A	DoC

Local Support Equipment List and Details

Manufacturer	Description	Model	Serial Number	FCC ID
IBM	PC	ThinkCentre A50	99Y5681	DoC
Logitech	Keyboard	Y-SM48	SY513U68933	DoC
Logitech	Mouse	M-SAW83A	HCA31707689	DoC
IBM	CRT Monitor	6737-66W	23-P3242	BEJT17HD
ProMOS	Memory	V826616J24SATG-C0	BD070964H	DoC
Intel	CPU	Pentium4 2800MHz	N/A	DoC
HP	Laser Jet5L	C3941A	JPTVOB2337	DoC
SAST	Modem	AEM-2100	293	DoC

External I/O Cable

Cable Description	Length (M)	From/Port	To
Shielded Detachable Keyboard Cable	1.50	Keyboard Port / Host	Keyboard
Shielded Detachable Mouse Cable	1.50	Mouse Port / Host	Mouse
Shielded Detachable Printer Cable	1.20	Parallel Port / Host	Printer
Shielded Detachable Serial Cable	1.20	Serial Port / Host	Modem
Shielded Detachable VGA Cable	1.50	VGA Port / Host	Monitor

SYSTEM TEST CONFIGURATION

Justification

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

EUT Exercise Software

The EUT exercising program used during radiated and conducted testing was designed to exercise the various system components in a manner similar to a typical use. The software offered by Bay Area Compliance Lab Corp. (ShenZhen) can exercise the EUT as data transferring between the EUT and the host.

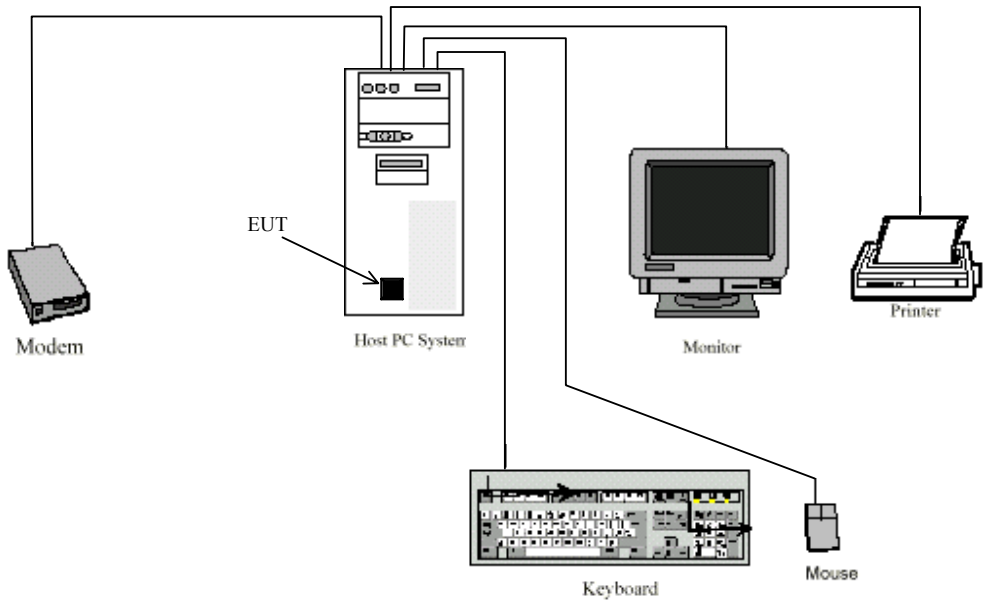
Special Accessories

N/A.

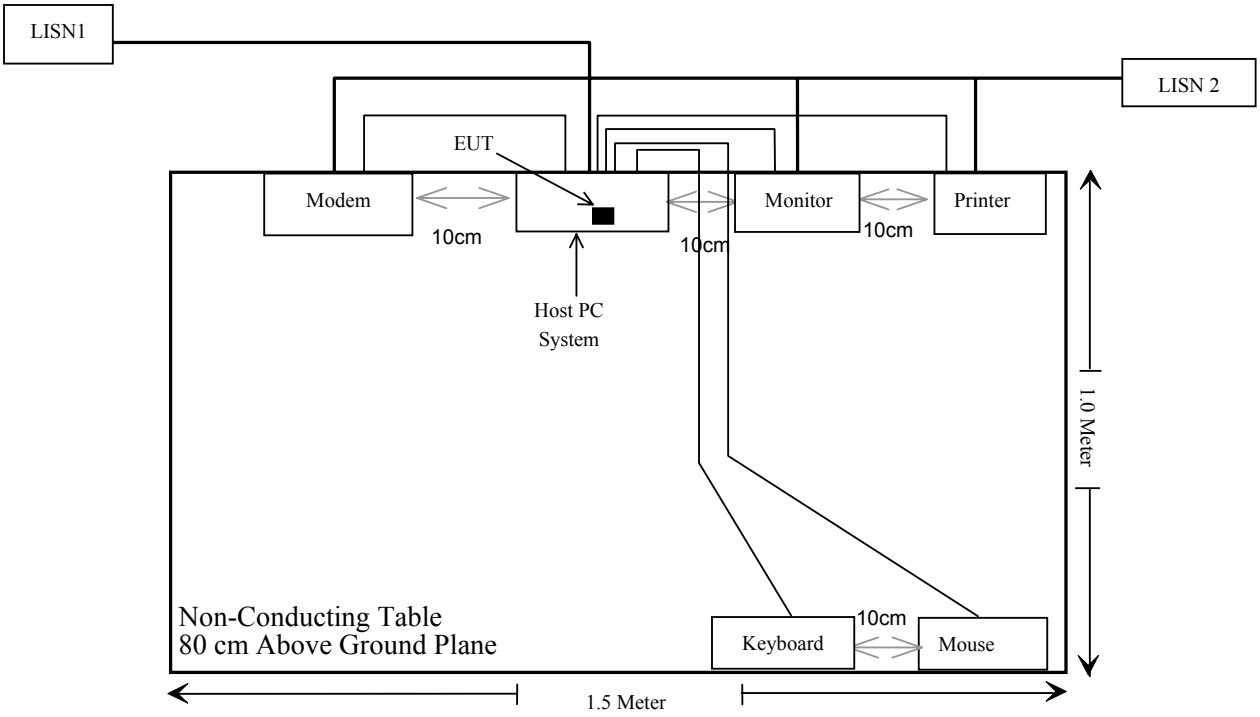
Equipment Modifications

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 Emissions	Compliant
§15.109(a)	Radiated Emission	Compliant

Note 1: The highest clocks of the EUT was 12 MHz.

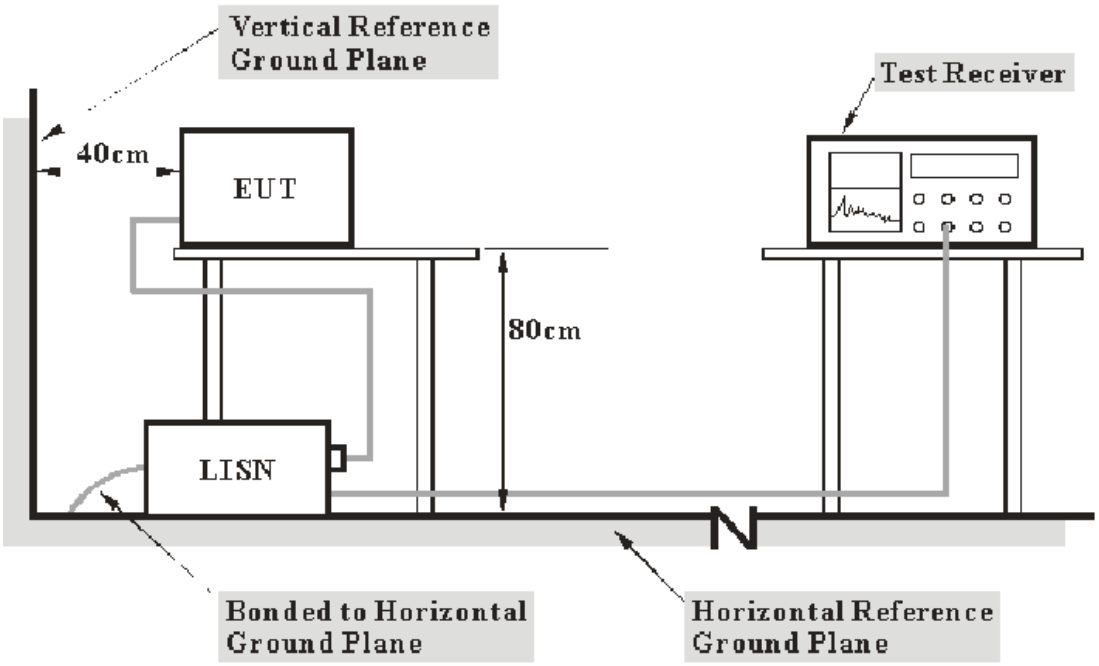
§15.107 - CONDUCTED EMISSION

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 ±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 15.107.

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 host PC 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:

Frequency Range	***IFBW***
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	ESCI	100028	2005-8-17	2006-8-17
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

During the conducted emission test, the host PC was connected to the outlet of the first LISN and all other support equipment power cords were 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 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:

-10.74 dB at **0.938 MHz** in the **Line** conductor mode.

Test Data

Environmental Conditions

Temperature:	23° C
Relative Humidity:	55%
ATM Pressure:	1000mbar

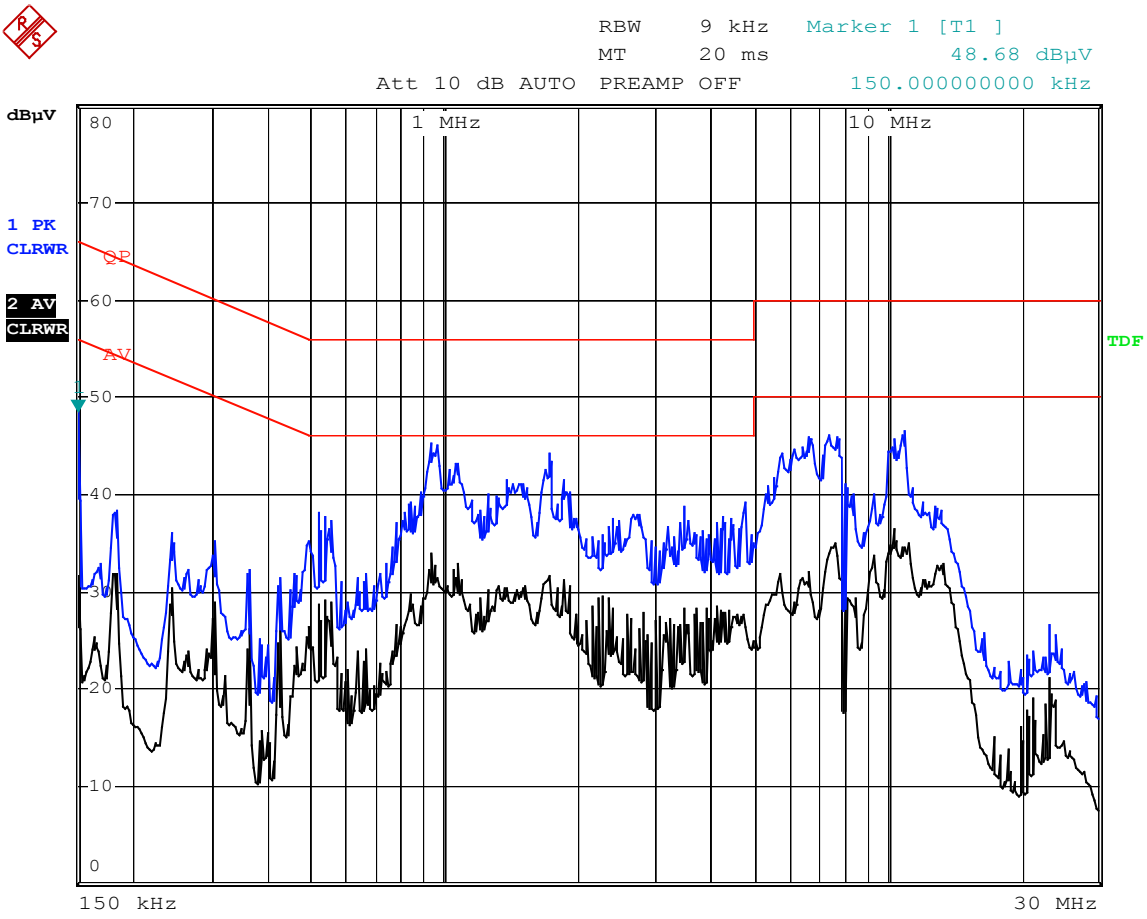
Testing was performed by Merry Zhao on 2006-1-6.

Test Mode: Running

LINE CONDUCTED EMISSIONS				FCC PART 15.107	
Frequency MHz	Amplitude dBµV	Detector QP/AV	Phase Line/Neutral	Limit dBµV	Margin dB
0.938	45.26	QP	Line	56.00	-10.74
1.726	44.21	QP	Line	56.00	-11.79
0.938	33.84	AV	Line	46.00	-12.16
10.942	47.17	QP	Neutral	60.00	-12.83
10.926	46.42	QP	Line	60.00	-13.58
0.918	42.22	QP	Neutral	56.00	-13.78
6.666	45.83	QP	Line	60.00	-14.17
10.942	35.76	AV	Neutral	50.00	-14.24
1.726	31.55	AV	Line	46.00	-14.45
6.666	45.08	QP	Neutral	60.00	-14.92
10.926	34.54	AV	Line	50.00	-15.46
5.820	44.16	QP	Line	60.00	-15.84
5.820	44.08	QP	Neutral	60.00	-15.92
0.538	39.82	QP	Neutral	56.00	-16.18
0.538	29.76	AV	Neutral	46.00	-16.24
6.666	31.93	AV	Line	50.00	-18.07
0.918	27.84	AV	Neutral	46.00	-18.16
6.666	31.22	AV	Neutral	50.00	-18.78
5.820	31.08	AV	Line	50.00	-18.92
5.820	30.03	AV	Neutral	50.00	-19.97
0.182	34.16	AV	Neutral	54.39	-20.23
0.182	31.86	AV	Line	54.39	-22.53
0.182	39.22	QP	Neutral	64.39	-25.17
0.182	38.35	QP	Line	64.39	-26.04

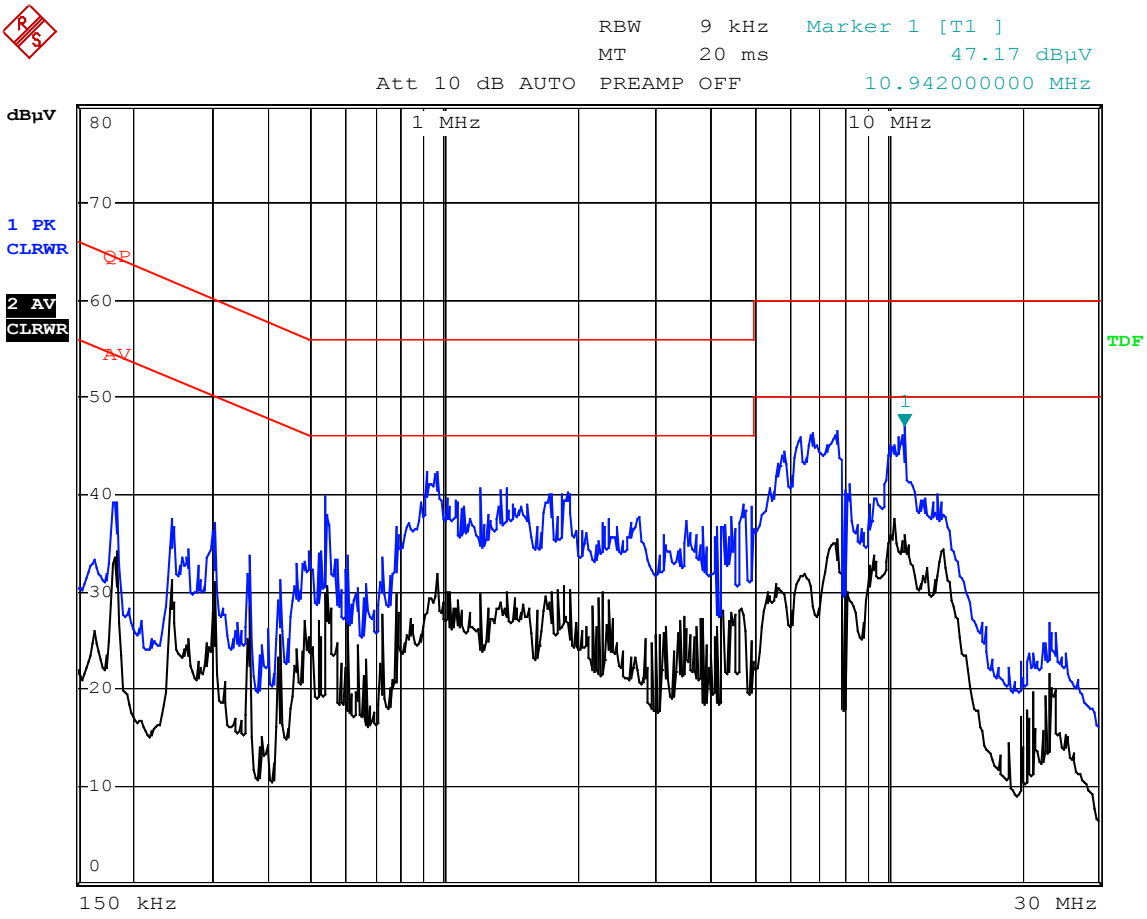
Plot(s) of Test Data

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



Jujo USB STICK TYPE R/W 8018 CONDUCTION EMISSION (L)

Date: 6.JAN.2006 09:44:07



Jujo USB STICK TYPE R/W 8018 CONDUCTION EMISSION (N)

Date: 6.JAN.2006 09:58:13

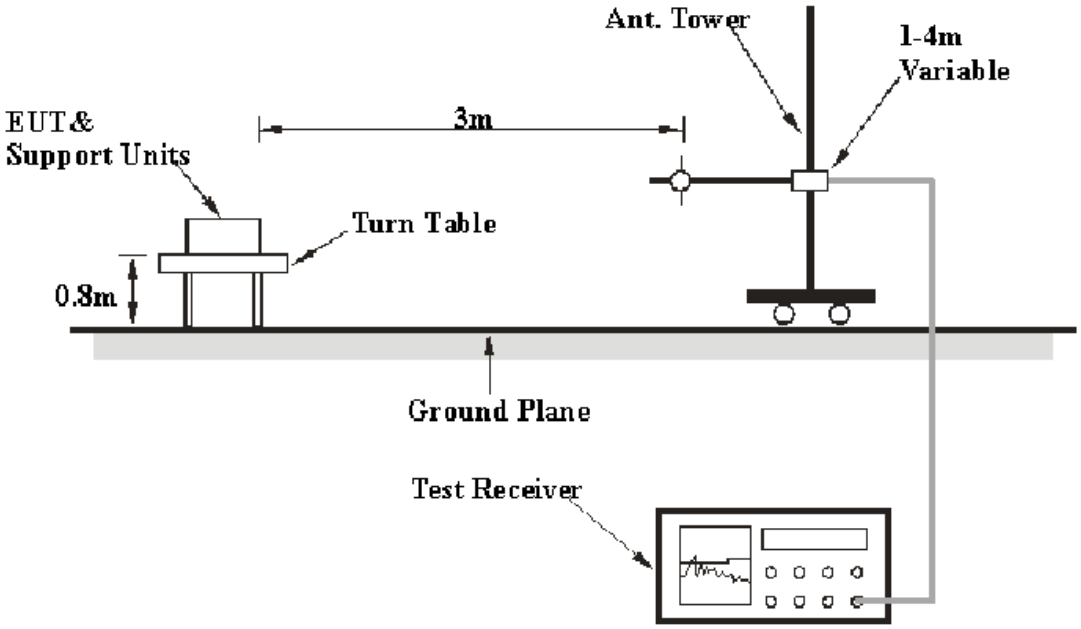
§15.109(a) - RADIATED EMISSION

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 chamber A test site, using the setup accordance with the ANSI C63.4-2003. The specification used was the FCC 15.109 limits.

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:

Frequency Range	***R B/W***	***Video B/W***	***IF B/W***
30 – 1000 MHz	100 kHz	300 kHz	120 kHz

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	EMI Test Receiver	ESCI	100035	2005-8-17	2006-8-17
HP	Amplifier	HP8447D	2944A09795	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) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

Test Procedure

For the radiated emissions test, the host PC was 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:

Corr. Ampl. = Meter Reading + Antenna Loss + Cable Loss - 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:

Margin = Corr. Ampl. – Limit

Test Results Summary

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

-5.0 dB at **31.28 MHz** in the **Vertical** polarization.

Test Data

Environmental Conditions

Temperature:	26 °C
Relative Humidity:	55 %
ATM Pressure:	1002mbar

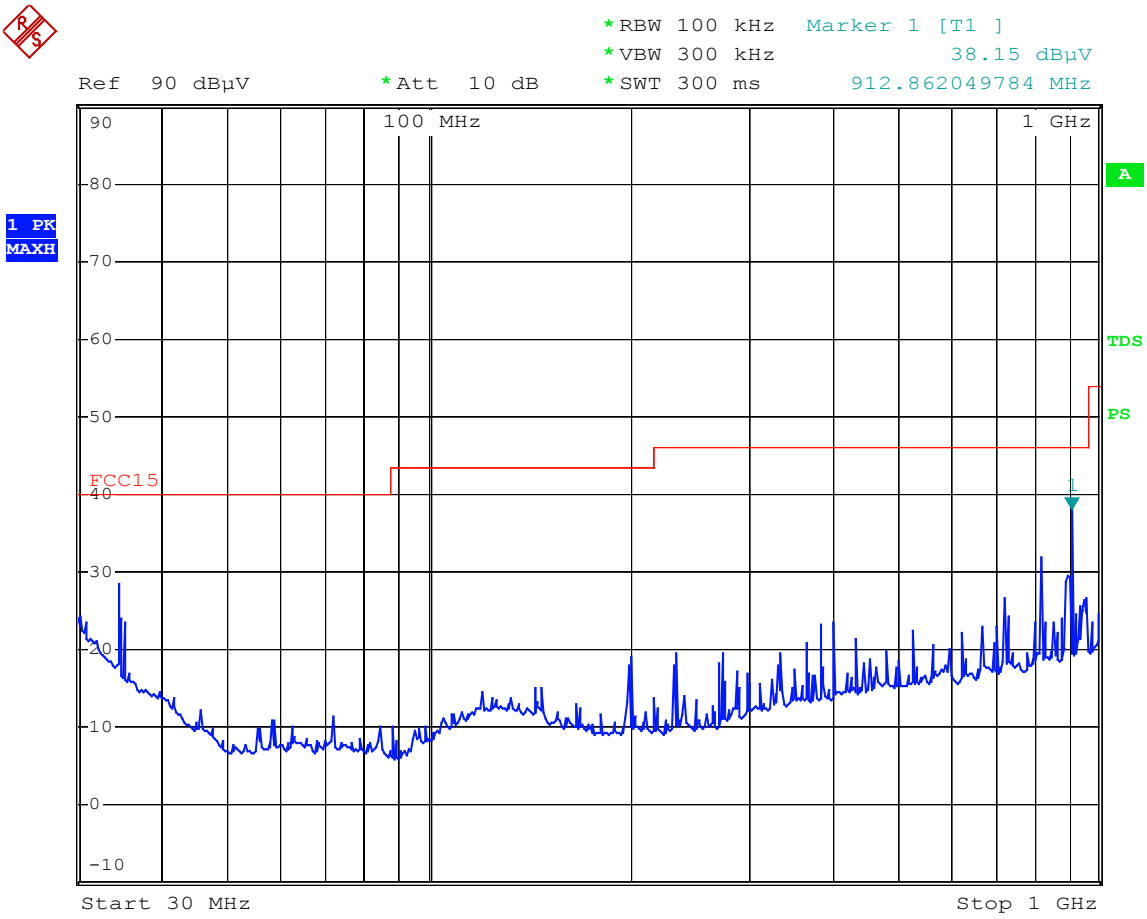
The testing was performed by Merry Zhao on 2006-1-6.

Test Mode: Running

Frequency	Meter Reading	Direction	Height	Polar	Antenna Loss	Cable loss	Amplifer Gain	Corr. Ampl.	FCC PART 15.109		
MHz	dBuV/m	Degree	Meter	H / V	dB	dB	dB	dBuV/m	Limit dBuV/m	Margin dB	Remark
31.28	39.1	45	1.0	V	24.1	0.6	28.8	35.0	40.0	-5.0	PK
893.85	41.4	90	1.0	V	22.6	3.5	28.1	39.4	46.0	-6.6	PK
912.86	39.5	360	1.2	H	22.8	3.6	27.8	38.1	46.0	-7.9	PK
34.51	32.5	45	1.0	H	24.1	0.6	28.8	28.4	40.0	-11.6	PK
821.71	34.8	45	1.2	H	22.1	3.3	28.2	32.0	46.0	-14.0	PK
36.00	35.5	180	1.0	V	17.7	0.6	28.8	25.0	40.0	-15.0	PK
141.32	37.1	120	1.5	V	13.8	1.1	28.5	23.5	43.5	-20.0	PK
286.98	36.8	60	1.0	V	13.8	1.5	27.6	24.5	46.0	-21.5	PK
385.28	33.7	270	1.0	H	15.6	1.9	27.9	23.3	46.0	-22.7	PK
62.65	36.0	60	1.0	V	8.1	0.8	28.7	16.1	40.0	-23.9	PK
200.68	33.1	180	1.5	H	12.6	1.3	28.0.	19.0	43.5	-24.5	PK
275.15	31.9	270	1.2	H	13.8	1.5	27.6	19.6	46.0	-26.4	PK

Plot(s) of Test Data

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



Jujo USB STICK TYPE R/W 8018 horizontal

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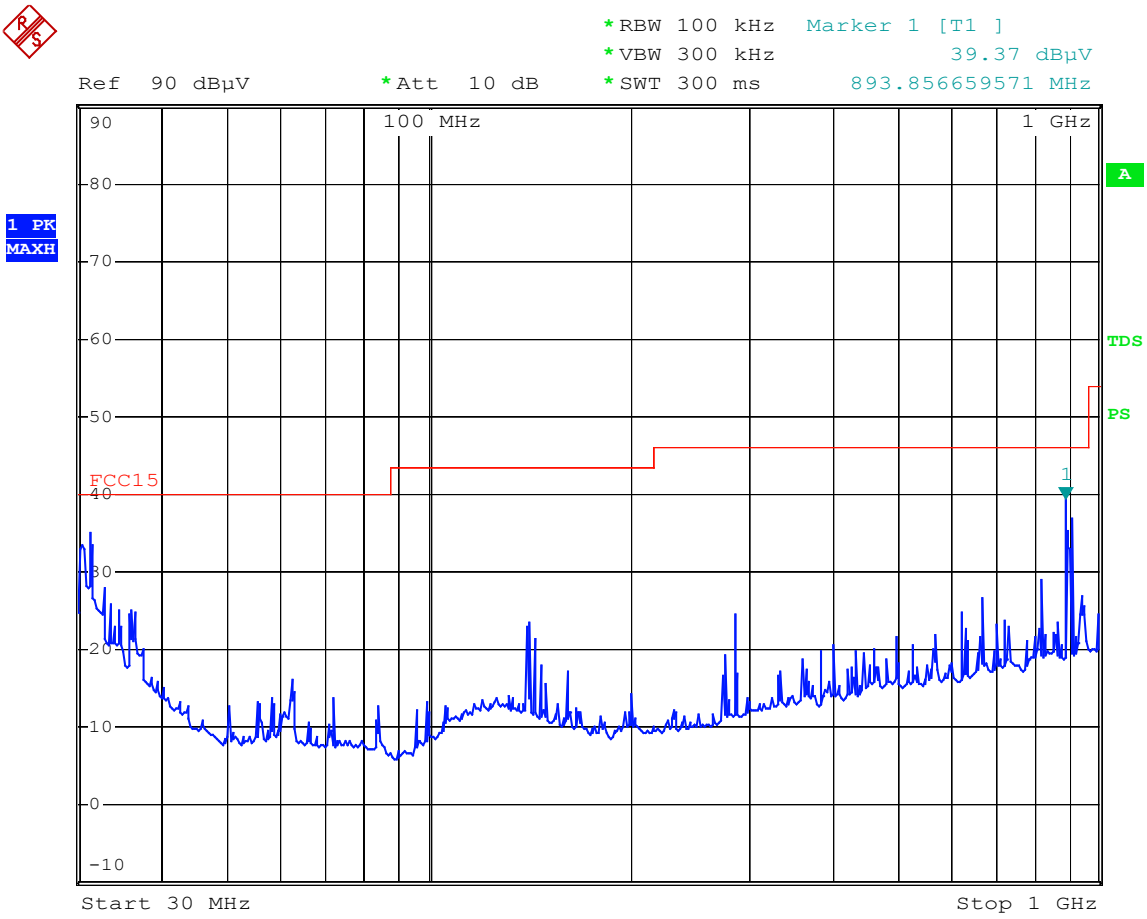

Jujo USB STICK TYPE R/W 8018 vertical

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