NVLAP LAB CODE 200707-0

FCC PART 15B

MEASUREMENT AND TEST REPORT

For

ADVANCED PLUS TECHNOLOGY CO., LTD

3F., No. 13, Lane 120, Sec. 1, Neihu Road, Neihu District,

Taipei City 114, Taiwan

FCC ID: WPWAP030T1F

Report Type:	**Product Type:**
Original Report	Digital Video Communicator

Test Engineer: Cookies Bu

Report Number: RSZ08101606

Report Date: 2008-10-17

Reviewed By: Merry Zhao, EMC Engineer

Prepared By: Bay Area Compliance Laboratories Corp. (Shenzhen)
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GENERAL INFORMATION

Product Description for Equipment Under Test (EUT)

The *ADVANCED PLUS TECHNOLOGY CO.,LTD* 's product, model *AP030T1F*, *or* the "EUT" as referred to in this report is a digital video communicator which measures approximately 12.7cm L x 6.0cm W x 2.2cm H, rated input voltage: DC 6V battery or PC.

** All measurement and test data in this report was gathered from production sample serial number: 0810047 (Assigned by BACL, Shenzhen). The EUT was received on 2008-10-16.*

Objective

The following test report is prepared on behalf of *ADVANCED PLUS TECHNOLOGY CO., LTD* in accordance with Part 2, Subpart J, and Part 15, Subparts A and B of the Federal Communication Commissions rules.

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

Related Submittal(s)/Grant(s)

No related submittal(s).

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 Laboratories 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 Laboratories 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, 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 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 Laboratories 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/Standards/scopes/2007070.htm

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

N/A

Equipment Modifications

No modifications were made to the unit tested.

Host System Configuration List and Details

Manufacturer	Description	Model	Serial Number	FCC ID
Intel	Motherboard	D865GKD	11S19R1949ZJ1WCB46J1K8	DoC
IBM	Power	HIPRO-A2307F3T	11S49P2191ZJ1TAR472225	DoC
Maxtor	Hard Disk	6Y080L0	Y23QNXTE	DoC
ALPS	3.5' Floppy	06P5226	11S06P5226ZJ1W25373957	DoC
Lite-ON	CD-Rom	LTN-489S	11S71P7366ZJ1SYC130015	DoC
Intel	Ethernet	PRO 10/100 VE	N/A	DoC
ProMOS	Memory	V826616J24SATG-C0	D61A2605H	N/A
Intel	CPU	Pentium4 2800MHz	N/A	N/A

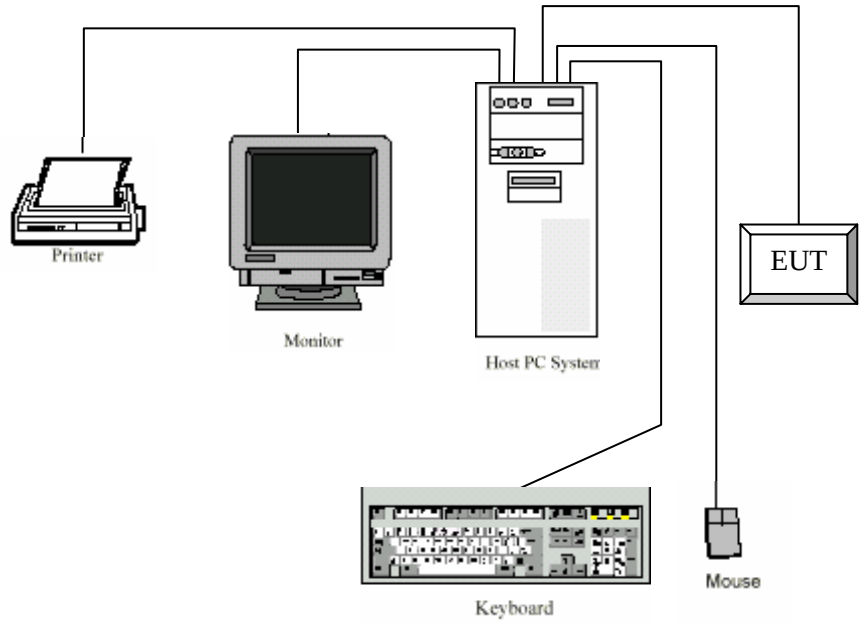
Local Support Equipment List and Details

Manufacturer	Description	Model	Serial Number	FCC ID
IBM	PC	Think Centre A50	99Y5469	DoC
Logitech	Keyboard	Y-SM48	SY513U22305	DoC
Logitech	Mouse	M-SAW83A	HCA33800404	DoC
IBM	CRT Monitor	6737-66W	23-P3229	BEJT17HD
HP	Laser Jet5L	C3941A	JPTVOB2337	DoC

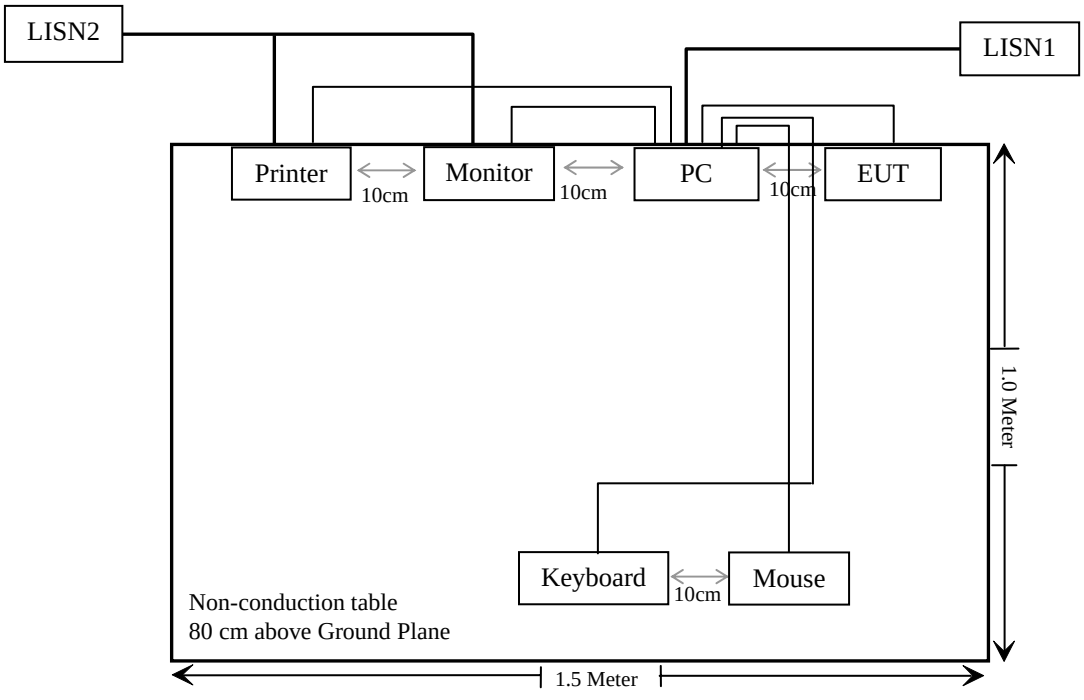
External I/O Cable

Cable Description	Length (m)	From/Port	To
Shielded Detachable K/B Cable	1.5	K/B Port	K/B
Shielded Detachable Mouse Cable	1.5	Mouse Port	Mouse
Shield Detachable Printer Cable	1.2	Parallel Port	Printer
Shielded Detachable VGA Cable	1.5	VGA Port	Monitor
Shielded Detachable USB Cable	1.22	EUT	PC USB Port

Configuration of Test Setup



Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Results
§15.107	Conducted Emissions	Compliant
§15.109	Radiated Emissions	Compliant*

** Within measurement uncertainty.*

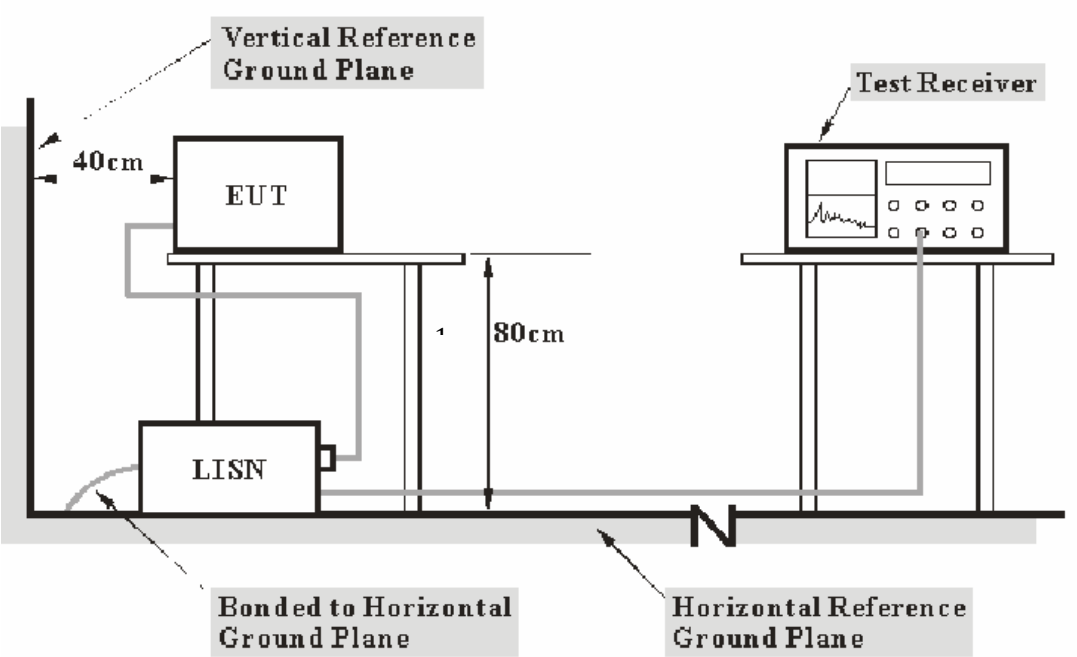
§15.107 - CONDUCTED EMISSIONS

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 ±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 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 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	***IF B/W***
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	12208	N/A	N/A
Rohde & Schwarz	EMI Test Receiver	ESCS30	830245/006	2008-03-25	2009-03-25
Rohde & Schwarz	L.I.S.N.	ESH2-Z5	892107/021	2008-03-25	2009-03-25

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

During the conducted emission test, the host PC was connected to the outlet of the first LISN, and all other 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 Class B, with the worst margin reading of:

8.70 dB at **27.4100 MHz** in the **Line** conductor mode.

Test Data

Environmental Conditions

Temperature:	25 ° C
Relative Humidity:	56 %
ATM Pressure:	100.2 kPa

The testing was performed by Cookies Bu on 2008-10-10.

Test Mode: Downloading

Line Conducted Emissions				FCC Part15.107 Class B	
Frequency (MHz)	**Amplitude (dBμV)**	**Detector (QP/AV)**	**Conductor (Line/Neutral)**	**Limit (dBμV)**	**Margin (dB)**
27.4100	51.30	QP	Line	60.00	8.70
29.4050	49.30	QP	Neutral	60.00	10.70
3.8900	44.20	QP	Neutral	56.00	11.80
3.3300	41.00	QP	Line	56.00	15.00
3.5950	40.80	QP	Line	56.00	15.20
0.4550	41.50	QP	Neutral	56.78	15.28
0.1600	49.50	QP	Line	65.46	15.96
12.0000	33.40	AV	Neutral	50.00	16.60
15.8250	43.10	QP	Line	60.00	16.90
3.9200	38.90	QP	Line	56.00	17.10
0.2050	46.20	QP	Neutral	63.41	17.21
0.1600	38.20	AV	Line	55.46	17.26
3.3200	36.10	QP	Neutral	56.00	19.90
12.0000	37.70	QP	Neutral	60.00	22.30
0.4550	21.30	AV	Neutral	46.78	25.48
0.2050	25.90	AV	Neutral	53.41	27.51
27.4100	22.40	AV	Line	50.00	27.60
15.8250	21.30	AV	Line	50.00	28.70
29.5450	21.10	AV	Neutral	50.00	28.90
3.5950	16.20	AV	Line	46.00	29.80
3.2950	15.90	AV	Neutral	46.00	30.10
3.8900	15.80	AV	Neutral	46.00	30.20
3.3300	15.80	AV	Line	46.00	30.20
3.9250	13.10	AV	Line	46.00	32.90

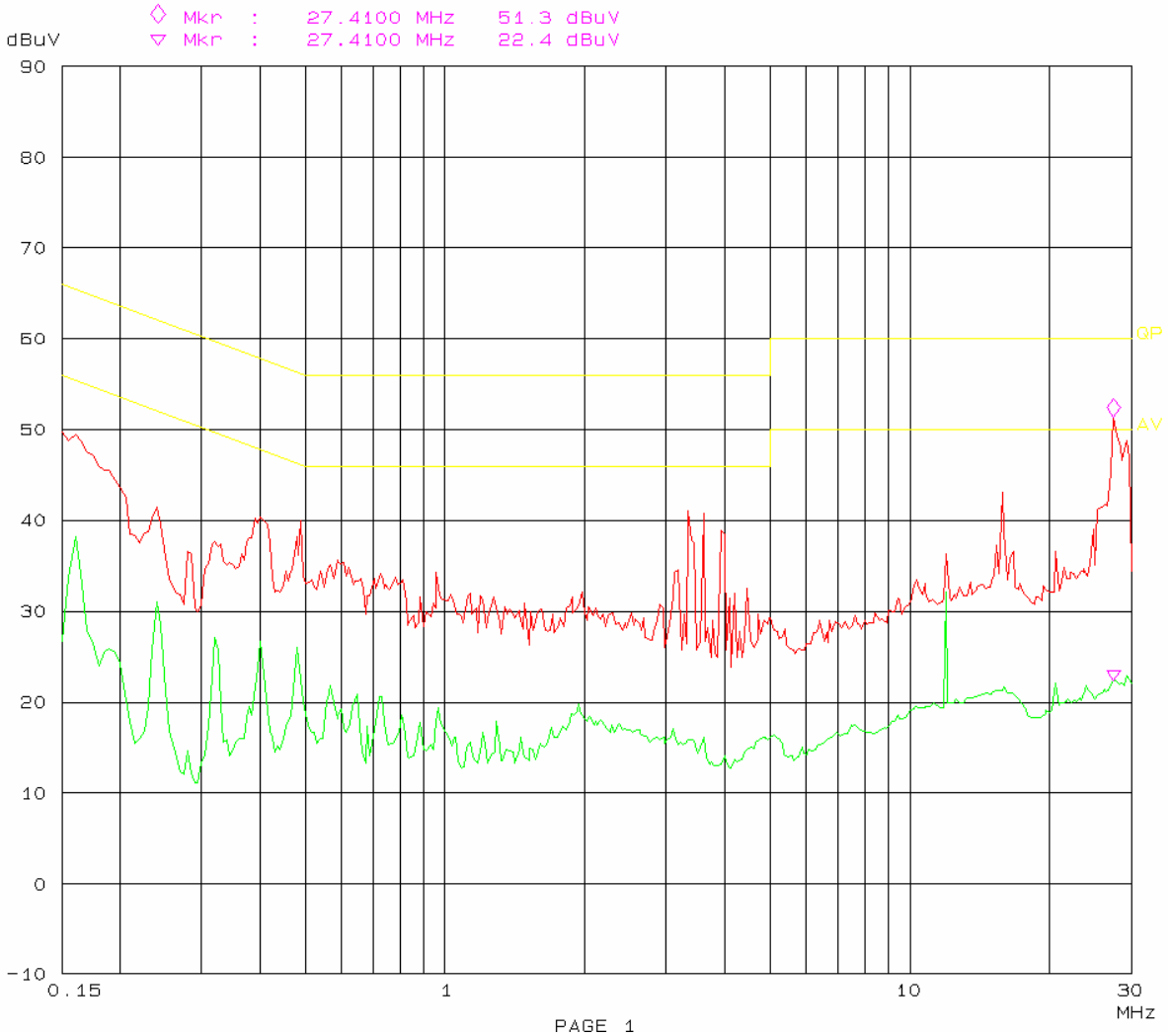
Plot(s) of Test Data

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

Conducted emission
FCC PART 15

10. Oct 08 15:49

EUT: walkie talkie
Manuf: ADVANCED PLUS TECHNOLOGY CO,LTD
Op Cond: Downloading
Operator: cookies
Test Spec: AC120V/60Hz L
Comment: Temp:25 Hum:56%



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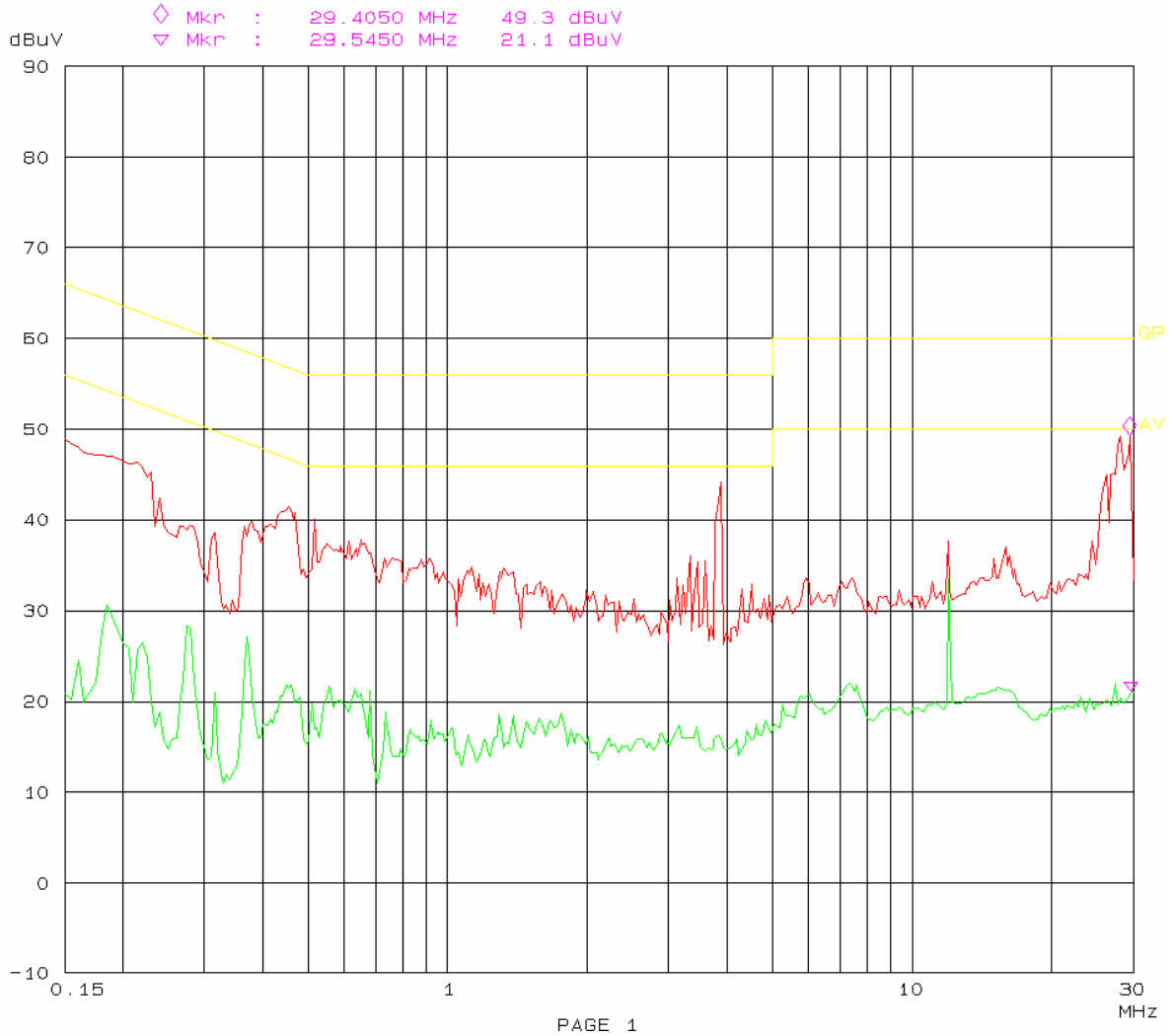
Conducted emission

10. Oct 08 16:10

FCC PART 15

EUT: walkie talkie
Manuf: ADVANCED PLUS TECHNOLOGY CO,LTD
Op Cond: Downloading
Operator: cookies
Test Spec: AC120V/60Hz N
Comment: Temp:25 Hum:56%



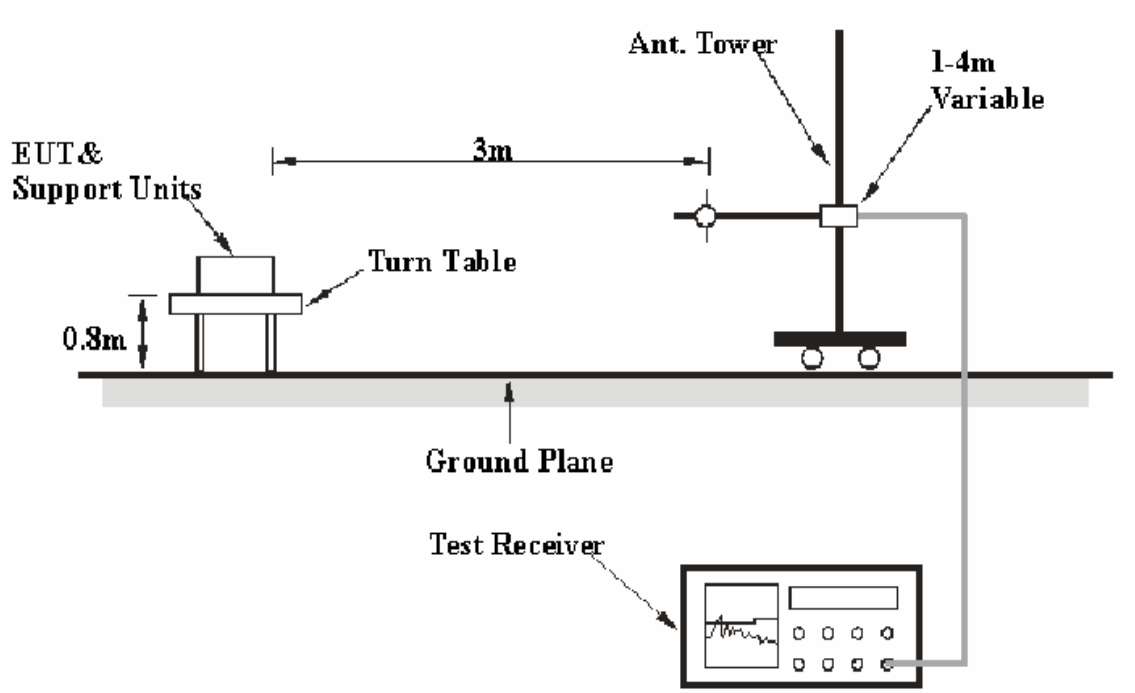
§15.109 - RADIATED EMISSIONS

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 ±4.0 dB.

EUT Setup



The radiated emission tests were performed in the 3 meters chamber B test site, using the setup accordance with the ANSI C63.4-2003. The specification used was the FCC PART 15.109 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 host PC 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:

Frequency Range	***RBW***	***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
HP	Amplifier	8447E	1937A01046	2007-11-15	2008-11-15
Rohde & Schwarz	EMI Test Receiver	ESCI	100224	2007-10-16	2008-10-16
Sunol Sciences	Bilog Antenna	JB1	A040904-2	2008-08-14	2009-08-14

*** 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 host PC and all other support 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.

Corrected Amplitude & Margin Calculation

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

Corrected Amplitude = Meter Reading + Antenna Factor + 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 for Class B. The equation for margin calculation is as follows:

Margin = Limit – Corrected Amplitude

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:

1.4 dB at **756.024450 MHz** in the **Vertical** polarization.

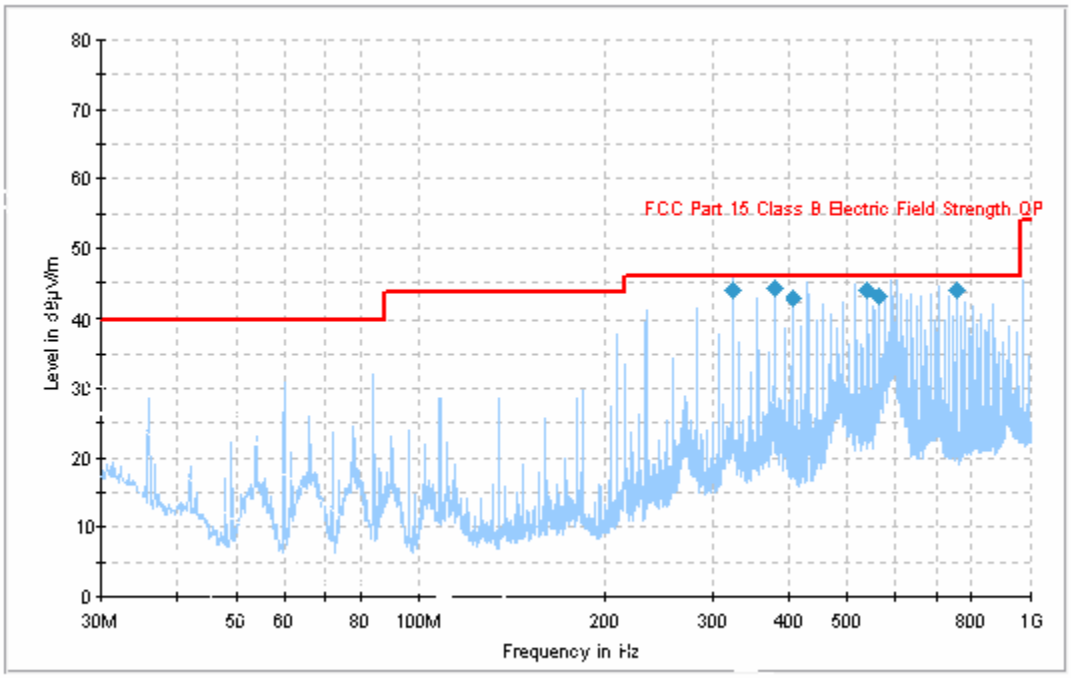
Test Data

Environmental Conditions

Temperature:	25 ° C
Relative Humidity:	56 %
ATM Pressure:	100.2 kPa

The testing was performed by Cookies Bu on 2008-10-10.

Test Mode: Downloading



Frequency (MHz)	Corrected Amplitude (dBµV/m)	Ant. Height (cm)	Ant. Polarity (H/V)	Turntable Position (deg)	Correction Factor (dB)	Limit (dBµV/m)	Margin (dB)
756.024450	44.6	109.0	V	232.0	-5.9	46.0	1.4*
380.955925	44.4	109.0	H	258.0	-12.9	46.0	1.6*
540.009075	44.3	224.0	H	281.0	-10.1	46.0	1.7*
324.013625	43.8	116.0	V	196.0	-13.7	46.0	2.2*
564.027750	43.3	109.0	H	274.0	-9.6	46.0	2.7*
405.545225	42.9	109.0	H	272.0	-12.3	46.0	3.1*

** Within measurement uncertainty.*

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