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FCC RADIO TEST REPORT

Applicant's company	**SYNTECH INFORMATION.,LTD**
Applicant Address	12F, , Dunhua S. Rd.,Sec. 2, Taipei, Taiwan 106333
FCC ID	**Q3N-ID-20**
Manufacturer's company	**SYNTECH INFORMATION.,LTD**
Manufacturer Address	12F, , Dunhua S. Rd.,Sec. 2, Taipei, Taiwan 106333

Product Name	RF ID READER MOUDULE
Brand Name	CIPHERLAB
Model Name	ID-20
Test Rule Part(s)	47 CFR Part 15.209
Test Freq. Range	125 kHz
Receive Date	Sep. 23, 2005
Test Date	Sep. 24, 2005
File Type	New Application (modular approval)

Statement

The test result in this report refers exclusively to the presented test model / sample.

Without written approval of SPORTON International Inc., the test report shall not be reproduced except in full.

The measurements and test results shown in this test report were made in accordance with the procedures and found in compliance with the limit given in **ANSI C63.4-2003** and **47 CFR FCC Part 15 Subpart C**.

The test equipment used to perform the test is calibrated and traceable to NML/ROC.

Lab Code: 200079-0

Table of Contents

History of This Test Report

Original Issue Date: Oct. 05, 2005

Report No.: FR592306

■ No additional attachment.

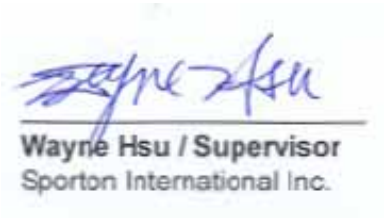
□ Additional attachment were issued as following record:

Attachment No.	Issue Date	Description
		15.205(a) 15.209(a)

1. CERTIFICATE OF COMPLIANCE

Product Name	:	**RF ID READER MOUDULE**
Brand Name	:	**CIPHERLAB**
Model Name	:	**ID-20**
Applicant	:	**SYNTECH INFORMATION.,LTD**
Test Rule Part(s)	:	**47 CFR Part 15.209**

Sporton International as requested by the applicant to evaluate the EMC performance of the product sample received on Sep. 23, 2005 would like to declare that the tested sample has been evaluated and found to be in compliance with the tested rule parts. The data recorded as well as the test configuration specified is true and accurate for showing the sample's EMC nature.



2. SUMMARY OF THE TEST RESULT

Applied Standard: 47 CFR FCC Part 15 Subpart C				
Part	**Rule Section**	**Description of Test**	**Result**	**Under Limit**
4.1	15.207	AC Power Line Conducted Emissions	Complies	14.84 dB
4.2	15.209(a)	Field Strength of Fundamental Emissions	Complies	32.80 dB
4.3	15.215(c)	20dB Spectrum Bandwidth	Complies	-
4.4	15.209(a)	Radiated Emissions	Complies	6.49 dB
4.5	15.203	Antenna Requirements	Complies	-

Test Items	Uncertainty	Remark
AC Power Line Conducted Emissions	±2.26dB	Confidence levels of 95%
Field Strength of Fundamental Emissions	±3.72dB	Confidence levels of 95%
20dB Spectrum Bandwidth	±6.25×10-7	Confidence levels of 95%
Radiated Emissions	±3.72dB	Confidence levels of 95%

3. GENERAL INFORMATION

3.1. Product Details

Items	Description
Product Type	RF ID READER MOUDULE
Radio Type	Intentional Transceiver module
Power Type	Powered by the host (DC 12V)
Interface Type	-
Modulation	ASK
Frequency Range	125 kHz
Channel Number	1
Channel Band Width (99%)	2.36 kHz
Max. Field Strength	72.70 dBuV/m at 3m (Average)
Carrier Frequencies	Please refer to section 3.4
Antenna	Please refer to section 3.3

3.2. Accessories

Power	Brand	Model	Rating
NA	-	-	-

3.3. Table for Filed Antenna

Ant.	Antenna Type	Connector	Gain (dBi)
1	Loop Antenna	NA	-

3.4. Table for Carrier Frequencies

Freqeuncy Band	Channel No.	Frequency
125 kHz	1	125 kHz

3.5. Table for Test Modes

Investigation has been done on all the possible configurations for searching the worst cases. The following table is a list of the test modes shown in this test report.

Test Items	Mode	Channel	Antenna
AC Power Line Conducted Emissions	Normal Use	1	1
Field Strength of Fundamental Emissions Radiated Emissions 9kHz~10th Harmonic	CTX	1	1
20dB Spectrum Bandwidth	CTX	1	NA

Note: CTX=continuously transmitting

3.6. Table for Testing Locations

Test Site No.	Site Category	Location	FCC Reg. No.	IC File No.	VCCI Reg. No
03CH03-HY	SAC	Hwa Ya	101377	IC 4088	-
CO04-HY	Conduction	Hwa Ya	101377	IC 4088	-
TH01-HY	OVEN Room	Hwa Ya	-	-	-

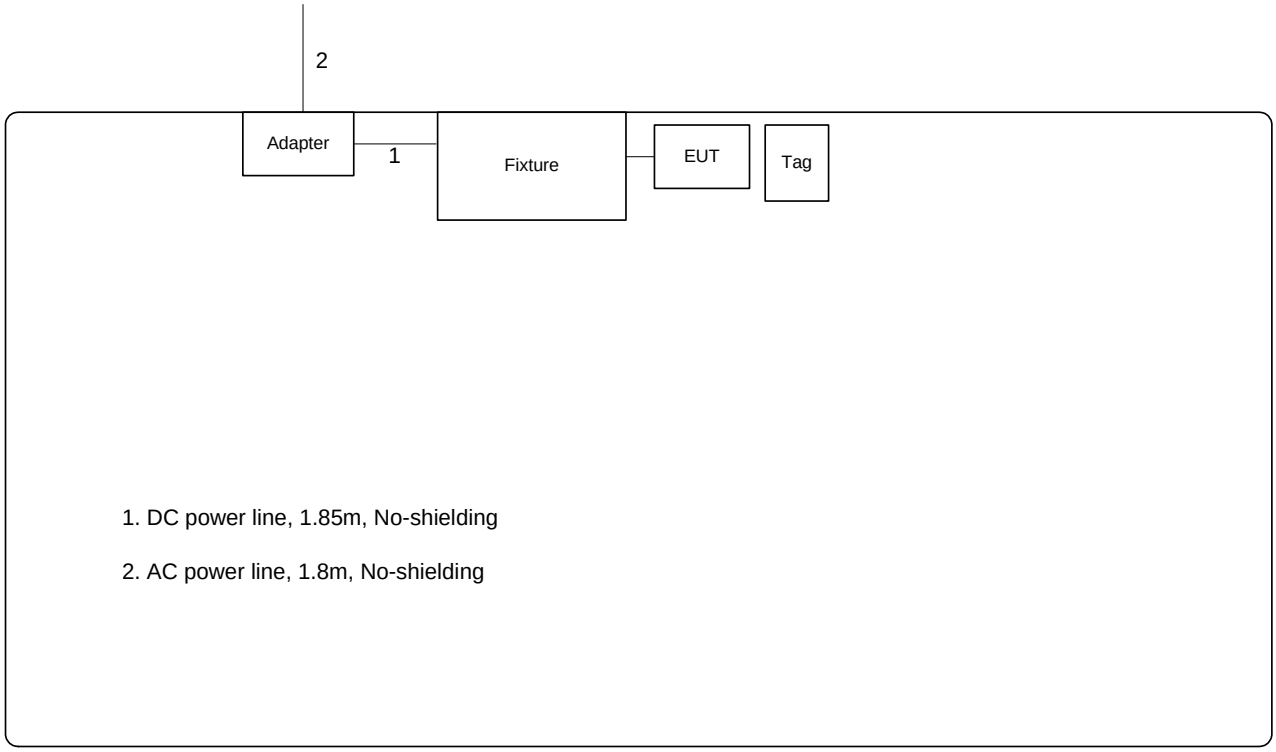
Open Area Test Site (OATS); Semi Anechoic Chamber (SAC); Fully Anechoic Chamber (FAC).

Please refer section 7 for Test Site Address.

3.7. Table for Supporting Units

Support Unit	Brand	Model	FCC ID
Host	CIPHERLAB	NA	DoC
Adapter	AHEAD	ADD-1201000	DoC
Tag	NA	NA	DoC

3.8. Test Configurations



1. DC power line, 1.85m, No-shielding

2. AC power line, 1.8m, No-shielding

4. TEST RESULT

4.1. AC Power Line Conducted Emissions Measurement

4.1.1. Limit

For a Low-power Radio-frequency Device which is designed to be connected to the AC power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed below limits table.

Frequency (MHz)	QP Limit (dBuV)	AV Limit (dBuV)
0.15~0.5	66~56	56~46
0.5~5	56	46
5~30	60	50

4.1.2. Measuring Instruments and Setting

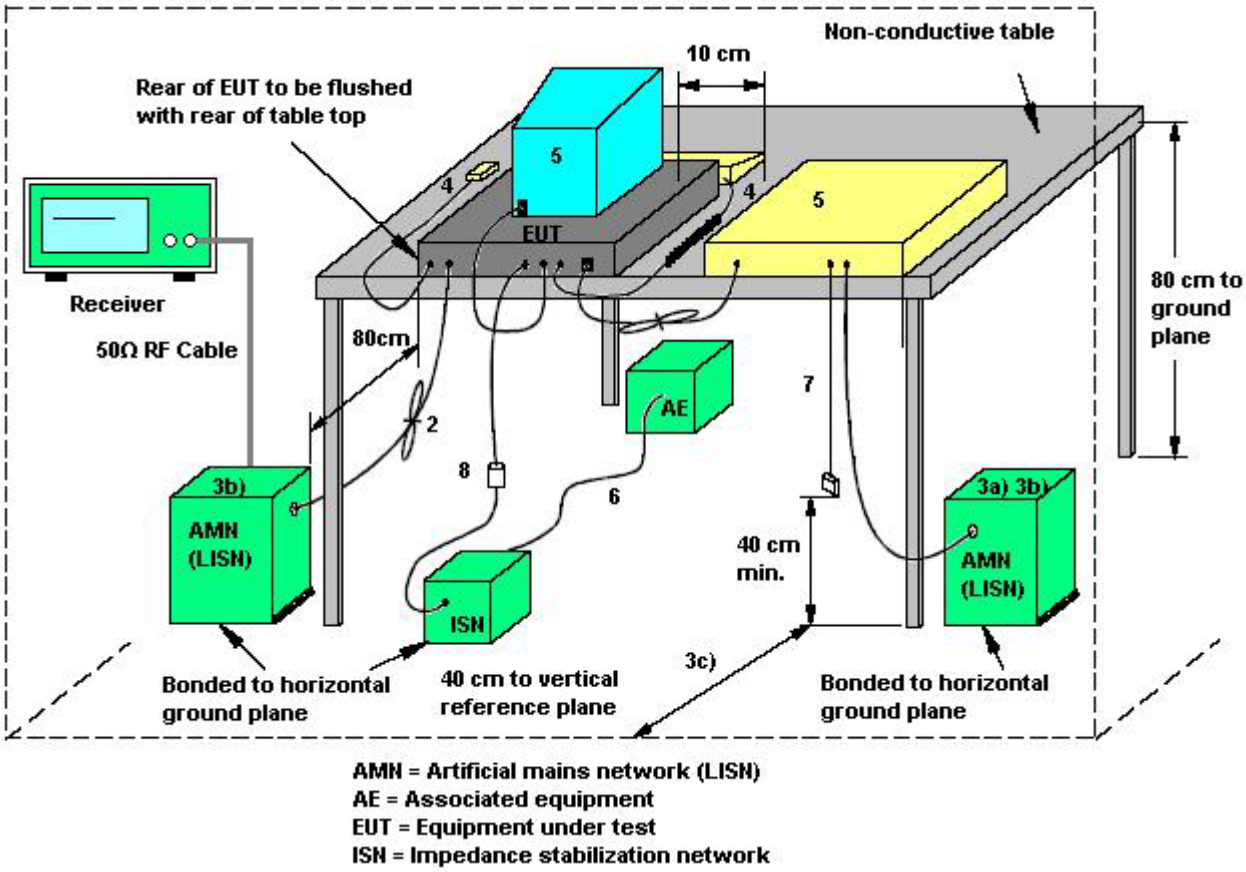
Please refer to section 6 in this report. The following table is the setting of the receiver.

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 KHz

4.1.3. Test Procedures

1. Configure the EUT according to ANSI C63.4. The EUT or host of EUT has to be placed 0.4 meter far from the conducting wall of the shielding room and at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT or host of EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connected to the other LISNs. The LISN should provide 50uH/50ohms coupling impedance.
4. The frequency range from 150 KHz to 30 MHz was searched.
5. Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
6. The measurement has to be done between each power line and ground at the power terminal.

4.1.4. Test Setup Layout



AMN = Artificial mains network (LISN)
AE = Associated equipment
EUT = Equipment under test
ISN = Impedance stabilization network

1. If cables, which hang closer than 40 cm to the horizontal metal groundplane, cannot be shortened to appropriate length, the excess shall be folded back and forth forming a bundle 30 cm to 40 cm long.
2. Excess mains cord shall be bundled in the centre or shortened to appropriate length.
3. EUT is connected to one artificial mains network (AMN). All AMNs and ISNs may alternatively be connected to a vertical reference plane or metal wall.
4. All other units of a system are powered from a second AMN. A multiple outlet strip can be used for multiple mains cords.
5. AMN and ISN are 80 cm from the EUT and at least 80 cm from other units and other metal planes.
6. Mains cords and signal cables shall be positioned for their entire lengths, as far as possible, at 40 cm from the vertical reference plane.
7. Cables of hand operated devices, such as keyboards, mouses, etc. shall be placed as for normal usage.
8. Peripherals shall be placed at a distance of 10 cm from each other and from the controller, except for the monitor which, if this is an acceptable installation practice, shall be placed directly on the top of the controller.
9. I/O signal cable intended for external connection.
10. The end of the I/O signal cables which are not connected to an AE may be terminated, if required, using correct terminating impedance.
11. If used, the current probe shall be placed at 0,1 m from the ISN.

4.1.5. Test Deviation

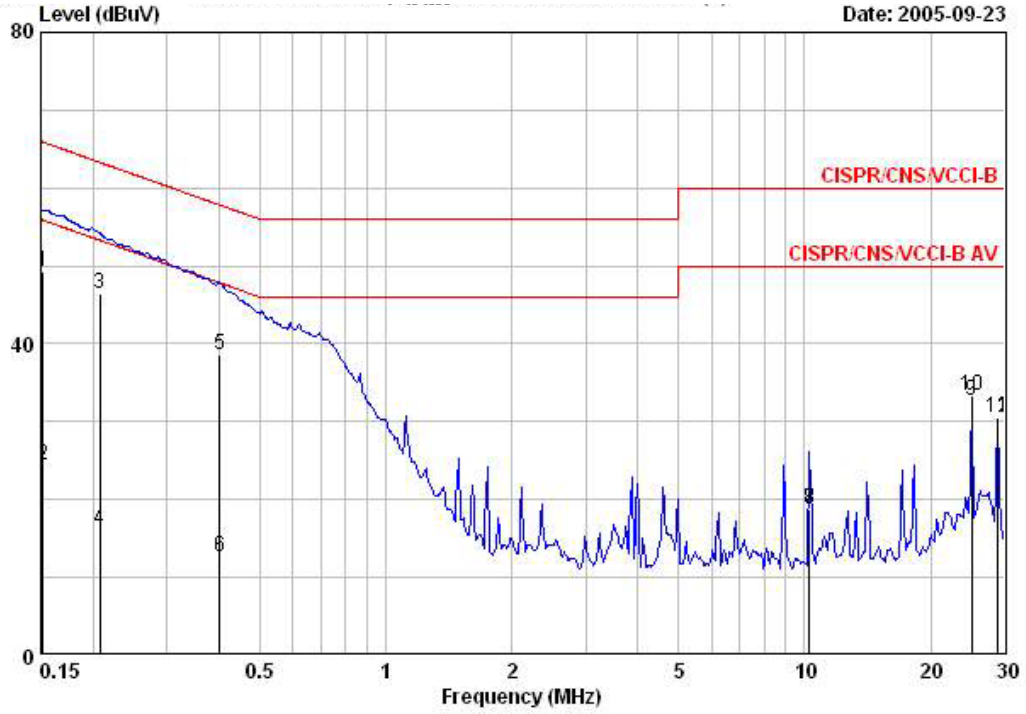
There are no deviations with the original standard.

4.1.6. EUT Operation during Test

The EUT was placed on the test table and programmed in normal function.

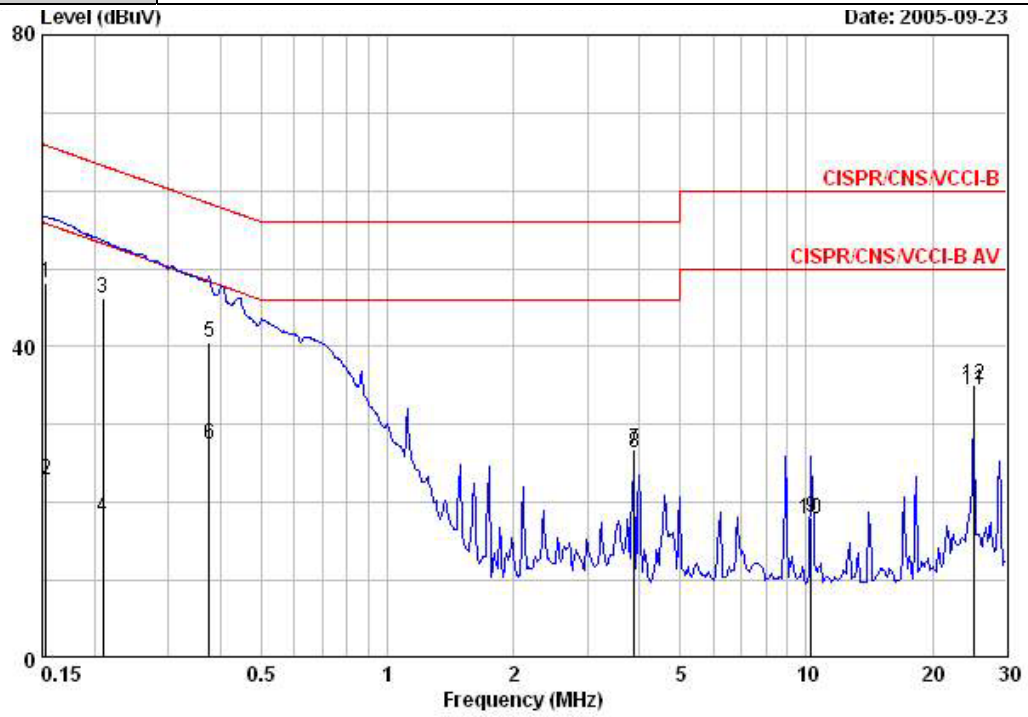
4.1.7. Results of AC Power Line Conducted Emissions Measurement

Temperature	20℃	Humidity	70%
Test Engineer	Sky Wu	Phase	Line
Configuration	Adapter		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1 @	0.15160	49.29	-16.63	65.91	47.07	2.02	0.20	QP
2	0.15160	24.51	-31.41	55.91	22.29	2.02	0.20	AVERAGE
3	0.20723	46.37	-16.95	63.32	44.94	1.23	0.20	QP
4	0.20723	16.05	-37.27	53.32	14.62	1.23	0.20	AVERAGE
5	0.40187	38.62	-19.19	57.81	37.84	0.58	0.20	QP
6	0.40187	12.58	-35.23	47.81	11.80	0.58	0.20	AVERAGE
7	10.263	18.72	-41.28	60.00	18.06	0.30	0.36	QP
8	10.263	18.80	-31.20	50.00	18.14	0.30	0.36	AVERAGE
9	25.032	32.61	-27.39	60.00	31.61	0.40	0.60	QP
10	25.032	33.29	-16.71	50.00	32.29	0.40	0.60	AVERAGE
11	28.913	30.47	-29.54	60.00	29.49	0.38	0.60	QP
12	28.913	30.61	-19.40	50.00	29.63	0.38	0.60	AVERAGE

Temperature	20℃	Humidity	70%
Test Engineer	Sky Wu	Phase	Neutral
Configuration	Adapter		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.15321	48.27	-17.55	65.82	46.17	1.90	0.20	QP
2	0.15321	22.81	-33.01	55.82	20.71	1.90	0.20	AVERAGE
3	0.20944	46.18	-17.05	63.23	44.87	1.11	0.20	QP
4	0.20944	18.01	-35.22	53.23	16.70	1.11	0.20	AVERAGE
5	0.37512	40.65	-17.74	58.39	39.95	0.50	0.20	QP
6	0.37512	27.36	-21.03	48.39	26.66	0.50	0.20	AVERAGE
7	3.880	26.90	-19.10	46.00	26.30	0.30	0.30	AVERAGE
8	3.880	26.31	-29.69	56.00	25.71	0.30	0.30	QP
9	10.263	18.18	-31.82	50.00	17.52	0.30	0.36	AVERAGE
10	10.263	17.93	-42.07	60.00	17.27	0.30	0.36	QP
11	25.032	34.44	-25.56	60.00	33.44	0.40	0.60	QP
12 @	25.032	35.16	-14.84	50.00	34.16	0.40	0.60	AVERAGE

Note:

Level = Read Level + LISN Factor + Cable Loss.

4.2. Field Strength of Fundamental Emissions Measurement

4.2.1. Limit

The field strength of any emissions which appear outside of 125 kHz band shall not exceed the general radiated emissions limits in Section 15.209(a).

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

4.2.2. Measuring Instruments and Setting

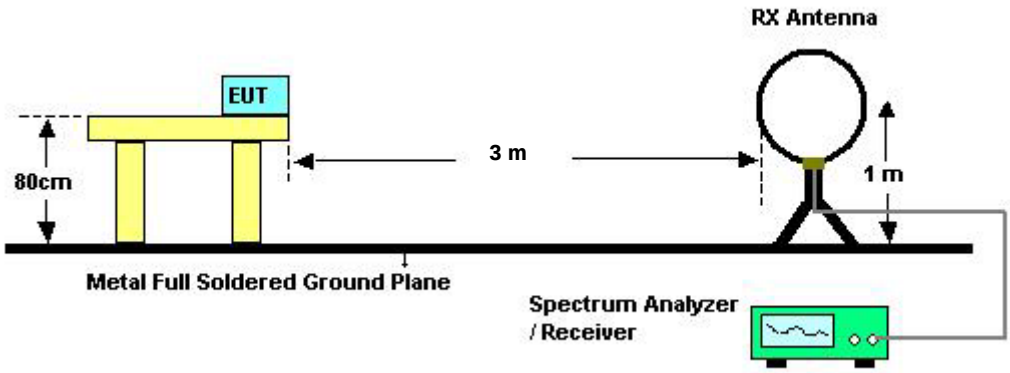
Please refer to section 6 in this report. The following table is the setting of the receiver.

Receiver Parameter	Setting
Attenuation	Auto
Center Frequency	Fundamental Frequency
RB	200 Hz
Detector	Peak / Average

4.2.3. Test Procedures

1. Configure the EUT according to ANSI C63.4. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the loop receiving antenna mounted antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the receiving antenna was fixed at one meter above ground to find the maximum emissions field strength.
4. For Fundamental emissions, use the receiver to measure peak and average reading.
5. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value.

4.2.4. Test Setup Layout



4.2.5. Test Deviation

There are no deviation with the original standard.

4.2.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.2.7. Test Result of Field Strength of Fundamental Emissions

Temperature	20℃	Humidity	70%
Test Engineer	Sam Lee	Configurations	X axis / Channel 1

Freq. (kHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m) at 3m	Remark
125 kHz	72.80	-32.8	105.66	PK
125 kHz	72.70	-32.9	105.66	AV

Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Distance extrapolation factor = 40 log (specific distance / test distance) (dB);

Limit line = specific limits (dBuV) + distance extrapolation factor.

4.3. 20dB Spectrum Bandwidth Measurement

4.3.1. Limit

Intentional radiators must be designed to ensure that the 20 dB bandwidth of the emissions in the specific band (125 kHz).

4.3.2. Measuring Instruments and Setting

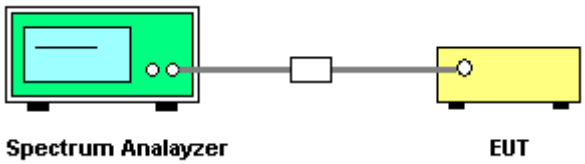
Please refer to section 6 in this report. The following table is the setting of the Spectrum Analyzer.

Spectrum Parameters	Setting
Attenuation	Auto
Span Frequency	> 20dB Bandwidth
RB	1 kHz
VB	1 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

4.3.3. Test Procedures

1. The transmitter output (antenna port) was connected to the spectrum analyser in peak hold mode.
2. The resolution bandwidth of 1 kHz and the video bandwidth of 1 kHz were used.
3. Measured the spectrum width with power higher than 20dB below carrier.

4.3.4. Test Setup Layout



4.3.5. Test Deviation

There are no deviations with the original standard.

4.3.6. EUT Operation during Test

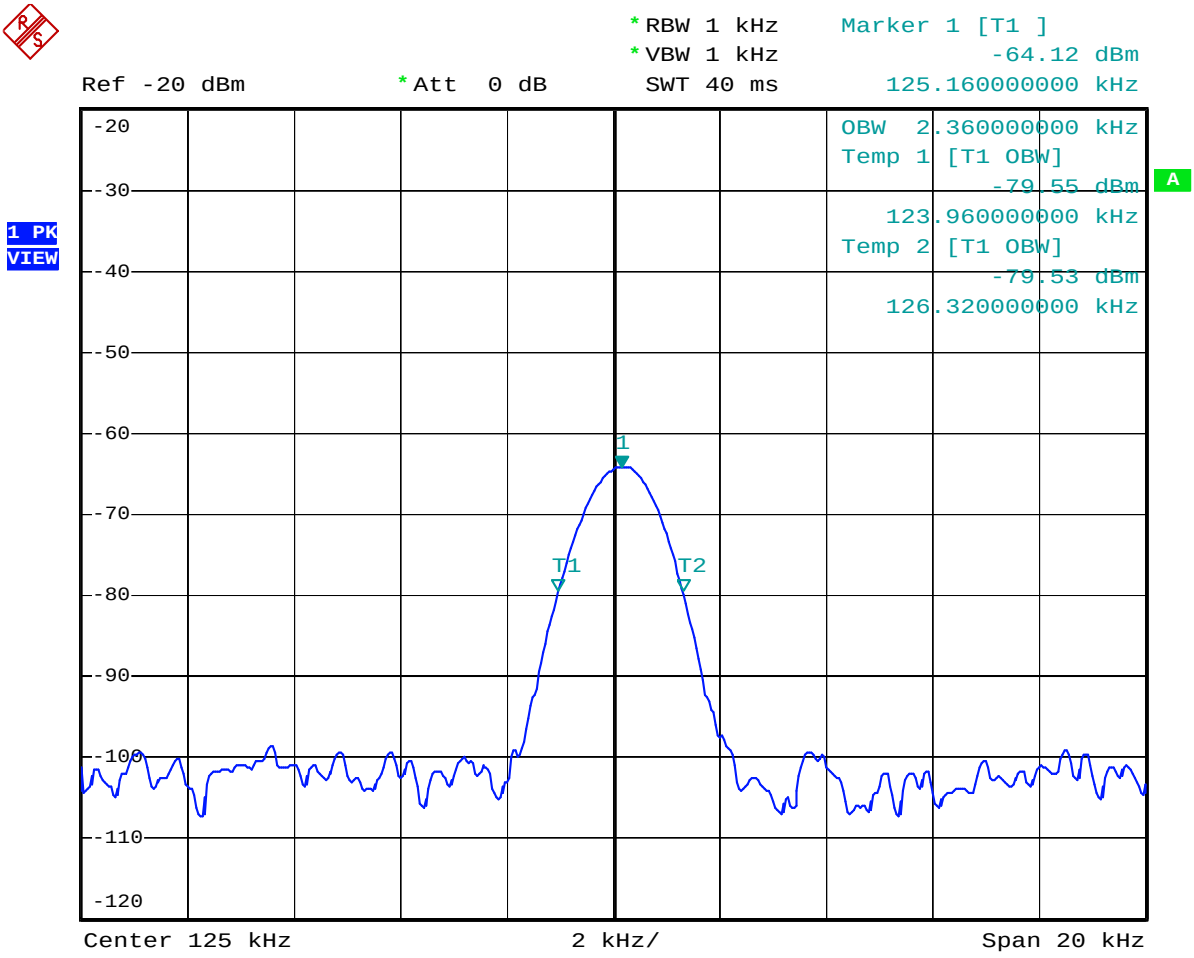
The EUT was programmed to be in continuously transmitting mode.

4.3.7. Test Result of 20dB Spectrum Bandwidth

Temperature	20℃	Humidity	70%
Test Engineer	Sam Lee	Configurations	Channel 1

Frequency	20dB BW (kHz)	99% OBW (kHz)	Test Result
125 kHz	3.2	2.36	**Complies**

20 dB/99% Bandwidth Plot on 125 kHz



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4.4. Radiated Emissions Measurement

4.4.1. Limit

The field strength of any emissions which appear outside of 125 kHz band shall not exceed the general radiated emissions limits in Section 15.209(a).

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

4.4.2. Measuring Instruments and Setting

Please refer to section 6 in this report. The following table is the setting of receiver.

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

4.4.3. Test Procedures

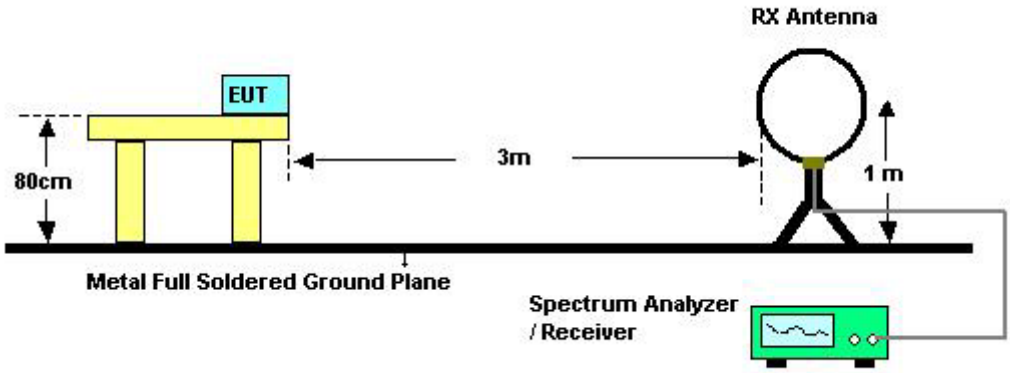
1. Configure the EUT according to ANSI C63.4. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
4. For each suspected emissions, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
6. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long

as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value.

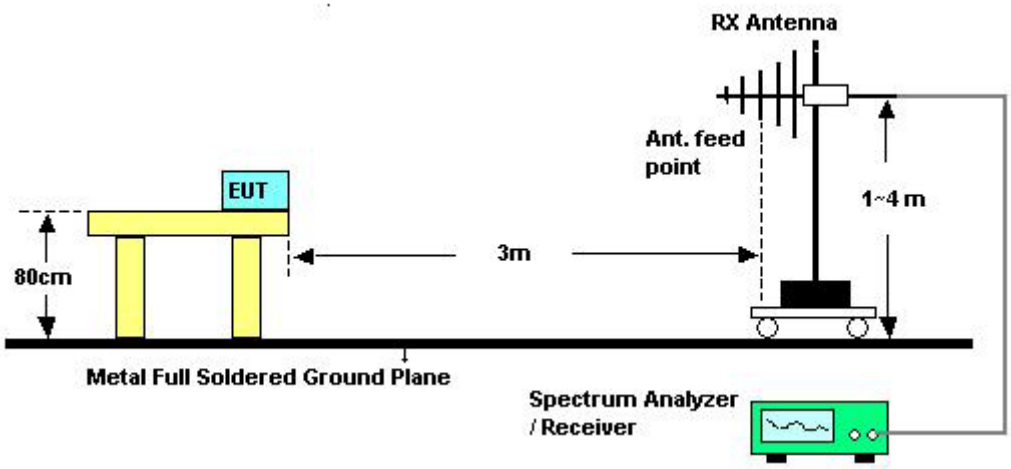
7. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High – Low scan is not required in this case.

4.4.4. Test Setup Layout

For radiated emissions below 30MHz



For radiated emissions above 30MHz



4.4.5. Test Deviation

There are no deviations with the original standard.

4.4.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.4.7. Results of Radiated Emissions (9kHz~30MHz)

Temperature	20℃	Humidity	70%
Test Engineer	Ted Chiu	Configurations	X axis / Channel 1

Freq. (MHz)	Level (dBuV)	Over Limit (dB)	Limit Line (dBuV/m) at 3m	Remark
0.250	-	-	99.65	Below limits 20dB
0.375	-	-	96.12	Below limits 20dB
0.500	62.70	-10.92	73.62	QP
0.625	66.40	-5.29	71.69	QP
0.750	64.30	-5.80	70.10	QP
0.875	64.40	-4.36	68.76	QP
1.000	60.10	-7.50	67.60	QP
1.125	65.10	-1.48	66.58	QP
1.250	-	-	65.67	Below limits 20dB

Note:

The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

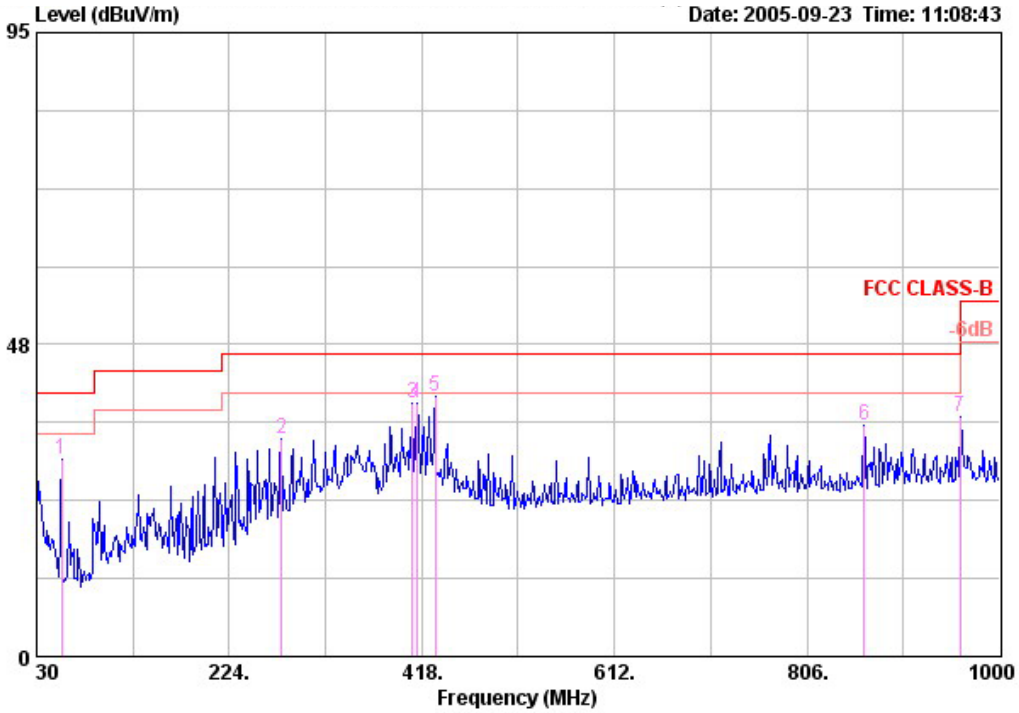
Distance extrapolation factor = 40 log (specific distance / test distance) (dB);

Limit line = specific limits (dBuV) + distance extrapolation factor.

4.4.8. Results for Radiated Emissions (30MHz~1GHz)

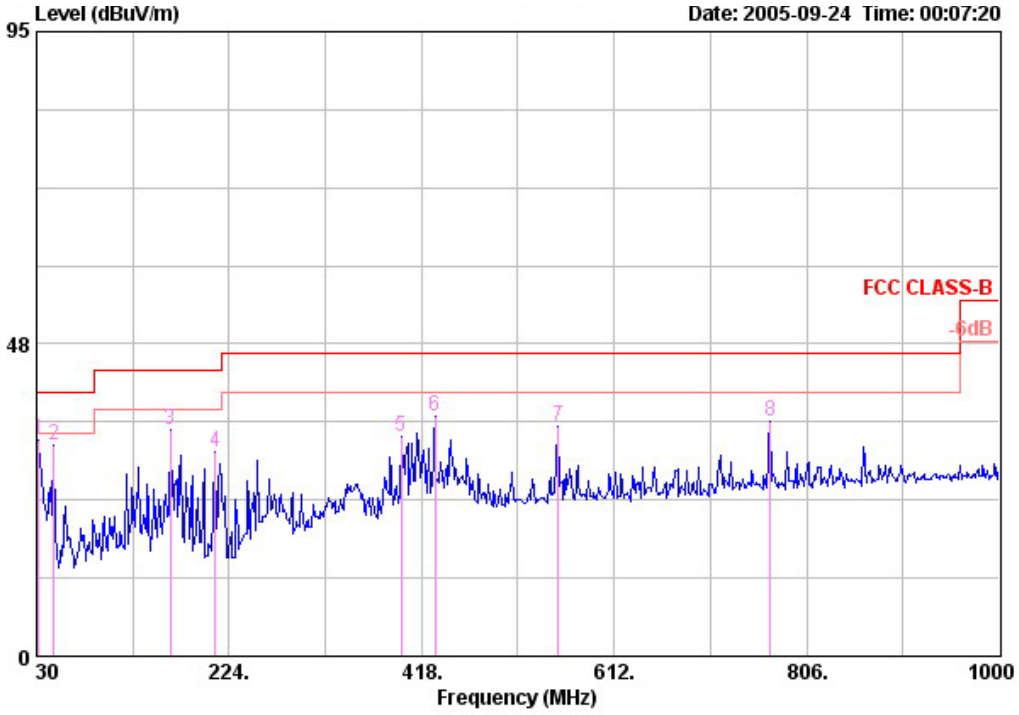
Temperature	20℃	Humidity	70%
Test Engineer	Steven Lu	Configurations	X axis / Channel 1

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	55.220	29.95	-10.05	40.00	54.50	5.80	1.30	31.65	Peak	---	---
2	276.380	33.05	-12.95	46.00	49.48	12.40	2.50	31.33	Peak	---	---
3	408.300	38.58	-7.42	46.00	50.66	16.20	2.73	31.01	Peak	---	---
4	413.150	38.44	-7.56	46.00	50.36	16.34	2.75	31.00	Peak	---	---
5 @	431.580	39.51	-6.49	46.00	51.34	16.30	2.83	30.96	Peak	---	---
6	863.230	35.24	-10.76	46.00	40.65	20.57	4.03	30.00	Peak	---	---
7	960.230	36.59	-17.41	54.00	41.06	21.10	3.92	29.49	Peak	---	---

Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 @	31.940	32.94	-7.06	40.00	46.88	16.80	0.93	31.67	Peak	---	---
2	47.460	32.13	-7.87	40.00	54.34	8.50	1.10	31.81	Peak	---	---
3	164.830	34.42	-9.08	43.50	54.66	9.30	2.00	31.54	Peak	---	---
4	210.420	31.05	-12.45	43.50	51.94	8.47	2.06	31.42	Peak	---	---
5	397.630	33.39	-12.61	46.00	46.02	15.73	2.69	31.04	Peak	---	---
6	431.580	36.47	-9.53	46.00	48.30	16.30	2.83	30.96	Peak	---	---
7	555.740	35.02	-10.98	46.00	43.98	18.60	3.19	30.75	Peak	---	---
8	769.140	35.65	-10.35	46.00	42.15	19.88	3.86	30.24	Peak	---	---

Note:

The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Pol. : V is Vertical Polarization ; H is Horizontal Polarization.

4.5. Antenna Requirements

4.5.1. Limit

Standard antenna jack or electrical connector is prohibited, but this requirement does not apply to intentional radiators that must be professionally installed.

4.5.2. Antenna Connector Construction

Please refer to section 3.3 in this test report, there is no connector for the antenna.

5. LIST OF MEASURING EQUIPMENTS

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Spectrum Monitor	R&S	EZM	894987/011	9kHz – 1.3GHz	Aug. 24, 2005	Conduction (CO01-NH)
Test Receiver	R&S	ESH3	893495/013	9kHz – 30MHz	Aug. 25, 2005	Conduction (CO01-NH)
LISN	FCC	FCC-LISN-50-32-2-01	05002	9kHz – 30MHz	Apr. 04, 2005	Conduction (CO01-NH)
LISN	KYORITSU	KNW-407	8-1010-15	9kHz – 30MHz	Dec. 02, 2004	Conduction (CO01-NH)
Power Filter	CORCOM	MR12030	N/A	30A*2	N/A	Conduction (CO01-NH)
RF Cable-CON	Suhner Switzerland	RG223/U	CB004	9kHz – 30MHz	Dec. 17, 2004	Conduction (CO01-NH)
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	30 MHz - 1 GHz 3m	Jun. 16, 2005	Radiation (03CH03-HY)
Amplifier	SCHAFFNER	CPA9231A	18667	9 kHz - 2 GHz	Jan. 10, 2005	Radiation (03CH03-HY)
Amplifier	Agilent	8449B	3008A02120	1 GHz - 26.5 GHz	May 31, 2005	Radiation (03CH03-HY)
Amplifier	MITEQ	AMF-6F-260400	923364	26.5 GHz - 40 GHz	Jan. 05, 2004*	Radiation (03CH03-HY)
Spectrum Analyzer	R&S	FSP40	100019	9 kHZ - 40 GHz	Jul. 21, 2005	Radiation (03CH03-HY)
Loop Antenna	R&S	HFH2-Z2	860004/001	9 kHz - 30 MHz	May 24, 2004*	Radiation (03CH03-HY)
Biconical Antenna	SCHWARZBECK	VHBB 9124	301	30 MHz - 200 MHz	Jul. 22, 2005	Radiation (03CH03-HY)
Log Antenna	SCHWARZBECK	VUSLP 9111	221	200 MHz - 1 GHz	Jul. 22, 2005	Radiation (03CH03-HY)
Horn Antenna	EMCO	3115	6741	1 GHz - 18 GHz	Apr. 22, 2005	Radiation (03CH03-HY)
Horn Antenna	SCHWARZBECK	BBHA9170	BBHA9170154	15 GHz - 40 GHz	Jun. 09, 2004*	Radiation (03CH03-HY)
RF Cable-R03m	Jye Bao	RG142	CB021	30 MHz - 1 GHz	Feb. 22, 2005	Radiation (03CH03-HY)
RF Cable-HIGH	SUHNER	SUCOFLEX 106	03CH03-HY	1 GHz - 40 GHz	Dec.01, 2004	Radiation (03CH03-HY)
Turn Table	HD	DS 420	420/650/00	0 - 360 degree	N/A	Radiation (03CH03-HY)
Antenna Mast	HD	MA 240	240/560/00	1 m - 4 m	N/A	Radiation (03CH03-HY)

※ Calibration Interval of instruments listed above is one year.

* Calibration Interval of instruments listed above is two year.

6. SPORTON COMPANY PROFILE

SPORTON Lab. was established in 1986 with one shielded room: the first private EMI test facility, offering local manufacturers an alternative EMI test familial apart from ERSO. In 1988, one 3M and 10M/3M open area test site were setup and also obtained official accreditation from FCC, VCCI and NEMKO. In 1993, a Safety laboratory was founded and obtained accreditation from UL of USA, CSA of Canada and TUV (Rhineland & PS) of Germany. In 1995, one EMC lab, including EMI and EMS test facilities was setup. In 1997, SPORTON Group has provided financial expense to relocate the headquarter to Orient Scientific Park in Taipei Hsien to offer more comprehensive, more qualified and better service to local suppliers and manufactures. In 1999, Safety Group and Component Group were setup. In 2001, SPORTON has established 3M/10M chamber in Hwa Ya Technology Park.

6.1. Test Location

SHIJR	ADD	: 6Fl., No. 106, Sec. 1, Shintai 5th Rd., Shijr City, Taipei, Taiwan 221, R.O.C.
	TEL	: 02-2696-2468
	FAX	: 02-2696-2255
HWA YA	ADD	: No. 52, Hwa Ya 1st Rd., Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.
	TEL	: 03-327-3456
	FAX	: 03-318-0055
LINKOU	ADD	: No. 30-2, Dingfu Tsuen, Linkou Shiang, Taipei, Taiwan 244, R.O.C
	TEL	: 02-2601-1640
	FAX	: 02-2601-1695
DUNGHU	ADD	: No. 3, Lane 238, Kangle St., Neihu Chiu, Taipei, Taiwan 114, R.O.C.
	TEL	: 02-2631-4739
	FAX	: 02-2631-9740
JUNGHE	ADD	: 7Fl., No. 758, Jungjeng Rd., Junghe City, Taipei, Taiwan 235, R.O.C.
	TEL	: 02-8227-2020
	FAX	: 02-8227-2626
NEIHU	ADD	: 4Fl., No. 339, Hsin Hu 2nd Rd., Taipei 114, Taiwan, R.O.C.
	TEL	: 02-2794-8886
	FAX	: 02-2794-9777
JHUBEI	ADD	: No.8, Lane 728, Bo-ai St., Jhubei City, Hsinchu County 302, Taiwan, R.O.C.
	TEL	: 03-656-9065
	FAX	: 03-656-9085

7. CERTIFICATE OF NVLAP ACCREDITATION

United States Department of Commerce
National Institute of Standards and Technology

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ISO/IEC 17025:1999
ISO 9002:1994

Certificate of Accreditation

DEPARTMENT OF COMMERCE * UNITED STATES OF AMERICA *

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TAIPEI HSIEN 221
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is recognized by the National Voluntary Laboratory Accreditation Program for satisfactory compliance with criteria set forth in NIST Handbook 150:2001, all requirements of ISO/IEC 17025:1999, and relevant requirements of ISO 9002:1994. Accreditation is awarded for specific services, listed on the Scope of Accreditation, for:

ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS

December 31, 2005
Effective through

For the National Institute of Standards and Technology

NVLAP Lab Code: 200079-0

NVLAP-01C (06-01)