

Issue Date: June22,2011 Ref. Report No. ISL-11LE277FA

Product Name: : Rugged Touch Display

Model(s) : xxxxxAGD-317D-HTT-xxxxxxxx; xxxxxAGD-315D-HTT-xxxxxxxx;

xxxxAGD-312D-HTT-xxxxxxx; xxxxAGD-310D-HTT-xxxxxxxx;

(Where x is 0-9, A-Z, or blank) for marketing purpose

Applicant : AAEON Technology Inc.

Address : 5F,NO.135,Lane 235,Pao Chiao Rd. Hsin-Tien Dist,New Tapei

, City, Taiwan, R.O.C.

We, International Standards Laboratory, hereby certify that:

The device bearing the trade name and model specified above has been shown to comply with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified. (refer to Test Report if any modifications were made for compliance).



Standards:

FCC CFR Title 47 Part 15 Subpart B: 2009- Section 15.107 and 15.109 ANSI C63.4-2003

Industry Canada Interference-Causing Equipment Standard ICES-003 Issue 4: 2004 Class A

I attest to the accuracy of data and all measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

International Standards Laboratory

Jim Chu / Director

Hsi-Chih LAB:

No. 65, Gu Dai Keng St., Hsichih District, New Taipei City 22117, Taiwan Tel: 886-2-2646-2550; Fax: 886-2-2646-4641







Lung-Tan LAB:

No. 120, Lane 180, San Ho Tsuen, Hsin Ho Rd. Lung-Tan Hsiang, Tao Yuan County 325, Taiwan Tel: 886-3-407-1718; Fax: 886-3407-1738







FCC TEST REPORT

of

CFR 47 Part 15 Subpart B Class A

Product : Rugged Touch Display

Model(s): xxxxxAGD-317D-HTT-xxxxxxxx;

xxxxxAGD-315D-HTT-xxxxxxxx; xxxxxAGD-312D-HTT-xxxxxxxx; xxxxxAGD-310D-HTT-xxxxxxxx;

(Where x is 0-9 , A-Z , -or blank) for marketing purpose

Applicant: AAEON Technology Inc.

Address: 5F,NO.135,Lane 235,Pao Chiao Rd.

Hsin-Tien Dist, New Tapei City, Taiwan, R.O.C.

Test Performed by:

International Standards Laboratory

<Lung-Tan LAB>

*Site Registration No.

BSMI: SL2-IN-E-0013; TAF: 0997; IC: IC4067B-1;

VCCI: R-1435, C-1440, T-1676, G-17, R-2598, C-2845, T-1464, G-16,

G-211

NEMKO: ELA 113B

*Address:

No. 120, Lane 180, San Ho Tsuen, Hsin Ho Rd. Lung-Tan Hsiang, Tao Yuan County 325, Taiwan *Tel: 886-3-407-1718; Fax: 886-3-407-1738

Report No.: **ISL-11LE277FA**Issue Date: **June22,2011**

This report totally contains 25 pages including this cover page and contents page.

Test results given in this report apply only to the specific sample(s) tested and are traceable to national or international standard through calibration of the equipment and evaluating measurement uncertainty herein.

This report MUST not be used to claim product endorsement by TAF, NVLAP or any agency of the Government.

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1. General

1.1 Certification of Accuracy of Test Data

FCC CFR Title 47 Part 15 Subpart B: 2009- Section **Standards:**

15.107 and 15.109 ANSI C63.4-2003

Industry Canada Interference-Causing Equipment

Standard ICES-003 Issue 4: 2004

Equipment Tested: Rugged Touch Display

xxxxxAGD-317D-HTT-xxxxxxxx; **Model:**

xxxxAGD-315D-HTT-xxxxxxxx; xxxxxAGD-312D-HTT-xxxxxxxx; xxxxAGD-310D-HTT-xxxxxxxx;

(Where x is 0-9, A-Z, or blank) for marketing purpose

AAEON Technology Inc. **Applicant:**

June14.2011 **Sample received Date:**

refer to the date of test data **Final test Date:**

Test Site: International Standards Laboratory

Chamber 02; Chamber 14; Conduction 02

Test Distance: 10M; 3M (above1GHz)

refer to each site test data **Temperature:**

Humidity: refer to each site test data

Conduction input power: AC 120 V / 60 Hz **Input power:**

Radiation input power: AC 120 V / 60 Hz

Report Number: ISL-11LE277FA

Test Result: PASS

Report Engineer: Midori Su

Test Engineer: Anson J Huang
Anson J Huang

Approved By:

Jim Chu / Director



1.2 Description of EUT

EUT

Description: Rugged Touch Display

Condition: Pre-Production

Model: xxxxxAGD-317D-HTT-xxxxxxxx;

xxxxxAGD-315D-HTT-xxxxxxxx; xxxxxAGD-312D-HTT-xxxxxxxx; xxxxxAGD-310D-HTT-xxxxxxxx; (Where x is 0-9, A-Z, or blank)

for marketing purpose

Serial Number: N/A

Maximum display Resolution: 1280x1024

The devices can be installed inside the EUT are listed below:

Components	Vendor	Model Name					
		AGD-317D-HTT	AGD-315D-HTT	AGD-312D-HTT	AGD-310D-HTT		
A/D Board	RGBTECH	S2555L-011	S2555L-011	S2555L-011	S2555L-011		
DC-DC Power Board	AAEON	PER-P17D	PER-P17D	PER-P17D	1		
USB Hub Board	AAEON	PER-T219	PER-T219	PER-T219			
EETI control board	Abon	A-15170-0302	A-15170-0302	A-15170-0302	A-15170-0302		
Inverter Board	HWA YOUN	QF132V1(A)	QF132V1(A)		1		
LCD Panel	AUO	G170EG01 V0	G150XG03	G121XN01	G104SN02		
Adapter	FSP	FSP060-DBAB1 AC Input:100V~240V,50~60Hz,1.5A DC Output:12V~5A					

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The I/O ports of EUT are listed below:

I/O Port Type	Quantity
DVI Port	one
D-SUB Port	one
USB2.0 Port	two
USB B Port	one
RS232 Port	one
DC IN Port	one



All the devices listed below are chosen by the applicant to be the representative configuration for testing in this report. The test worst configuration is listed below:

Test Configuration:

Configuration	1
Model	AGD-317D-HTT
A/D Board	RGBTECH (Model:S2555L-011)
DC-DC Power Board	AAEON (Model:PER-P17D)
USB Hub Board	AAEON (Model:PER-T219)
EETI control board	Abon (Model:A-15170-0302)
Inverter Board	HWA YOUN (Model:QF132V1(A))
LCD Panel	AUO (Model: G170EG01 V0)
Adapter	FSP (Model: FSP060-DBAB1)
Resolution	DVI 1280x1024 60Hz

EMI Noise Source:

Crystal:

12MHz (X1) (For USB Hub Board) (Please refer to the photo in EUT-24) 24MHz (Y1) (For A/D Board) (Please refer to the photo in EUT-25)

EMI Solution:

1. Adding core on Adapter Type cable(Please refer to the photo report red arrow point 1 in the page EUT-26)



1.3 Description of Support Equipment

NO	Unit	Model Serial No.	Brand	Power Cord	FCC ID
1	Personal Computer	D07M S/N: 9BY7628	DELL	Non-shielded	FCC DOC
2	VGA card	GeForce G310 S/N: J492528	NVIDIA	N/A	FCC DOC
3	DELL PS/2 Mouse	MO71KC S/N: N/A	DELL	N/A	FCC DOC
4	DELL PS/2 Keyboard	SK-8110 S/N: N/A	DELL	N/A	FCC DOC
5	HP Printer	C930 S/N: N/A	HP	Non-shielded	FCC DOC
6	Aceex Modem	DM1414 S/N: 0301000557	Aceex	Non-shielded	FCC DOC
7	External Hard Disk Case	RD1000 S/N:N/A	DELL	Non-shielded	FCC DOC
8	External Hard Disk Case	RD1000 S/N:N/A	DELL	Non-shielded	FCC DOC



1.4 Software for Controlling Support Unit

Test programs exercising various part of EUT were used. The programs were executed as follows:

- 1. Send H pattern to EUT through PC D-SUB Port.
- 2. Send H pattern to EUT through PC DVI Port.
- 3. Send signal to the Modem through PC Serial Port.
- 4. Send signal to the Printer through PC USB Port.
- 5. Read and write External Hard Disk Case(RD1000) through PC USB port.
- 6. Repeat the above steps.

	Filename	Issued Date
EUT Monitor	EMC TEST.exe	09/04/2000
HP Printer	EMC TEST.exe	09/04/2000
Aceex Modem	EMC TEST.exe	09/04/2000
External Hard Disk Case(RD1000)	EMC TEST.exe	09/04/2000



1.5 I/O Cable Condition of EUT and Support Units

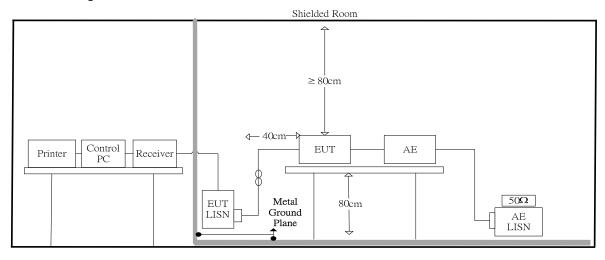
Description	Path	Cable Length	Cable Type	Connector Type
AC Power Cord	100~240V to EUT SPS	1.8M	Non-shielded	Plastic Head
D-SUB Data Cable	EUT D-SUB Port to PC D-SUB Port	1.8M	Shielded (With core*2)	Metal Head
DVI Data Cable	EUT DVI Port to PC DVI Port	1.8M	Shielded (With core*2)	Metal Head
PS/2 Mouse Data Cable	PS/2 Mouse to PC PS/2 Mouse Port	1.8M	Shielded	Metal Head
PS/2 Keyboard Data Cable	PS/2 Keyboard to PC PS/2 Keyboard Port	1.8M	Shielded	Metal Head
Modem Data Cable	Modem(serial) to PC serial Port	1.8M	Shielded	Metal Head
Printer Data Cable	Printer to PC USB Port	1.8M	Shielded	Metal Head
USB data cable *2	External Hard Disk Case(RD1000) to EUT USB2.0 Port	1.8M	Shielded (with core)	Metal Head
USB B data cable	PC USB Port to EUT USB B Port	0.9M	Shielded (with core)	Metal Head
RS232 data cable	EUT RS232 Port with dummy	1.0M	Shielded	Metal Head



2. Powerline Conducted Emissions

2.1 Test Setup and Procedure

2.1.1 Test Setup



2.1.2 Test Procedure

The measurements are performed in a 3.5m x 3.4m x 2.5m shielded room, which referred as Conduction 01 test site, or a 3m x 3m x 2.3m test site, which referred as Conduction 02 test site. The EUT was placed on non-conduction 1.0m x 1.5m table, which is 0.8 meters above an earth-grounded.

Power to the EUT was provided through the LISN which has the Impedance (500hm/50uH) vs. Frequency Characteristic in accordance with the standard. Power to the LISNs were filtered to eliminate ambient signal interference and these filters were bonded to the ground plane. Peripheral equipment required to provide a functional system (support equipment) for EUT testing was powered from the second LISN through a ganged, metal power outlet box which is bonded to the ground plane at the LISN.

The interconnecting cables were arranged and moved to get the maximum measurement. Both the line of power cord, hot and neutral, were measured.

The highest emissions were analyzed in details by operating the spectrum analyzer in fixed tuned mode to determine the nature of the emissions and to provide information which could be useful in reducing their amplitude.

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2.1.3 EMI Receiver/Spectrum Analyzer Configuration (for the frequencies tested)

Frequency Range: 150KHz~30MHz

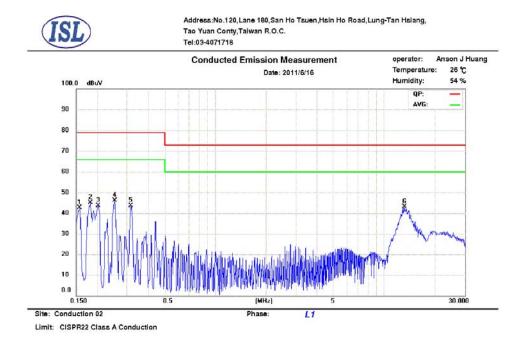
Detector Function: Quasi-Peak / Average Mode

Resolution Bandwidth: 9KHz



2.2 Conduction Test Data: Configuration 1

Table 2.2.1 Power Line Conducted Emissions (Hot)



No.	Frequency MHz	LISN Loss dB	Cable Loss dB	QP Correct. dBuV	QP Limit dBuV	QP Margin dB	AVG Correct. dBuV	AVG Limit dBuV	AVG Margin dB	Note
1	0.1580	0.11	0.01	37.50	79.00	-41.50	11.68	66.00	-54.32	
2	0.1820	0.11	0.01	39.06	79.00	-39.94	27.15	66.00	-38.85	
3	0.2020	0.11	0.01	33.51	79.00	-45.49	10.66	66.00	-55.34	
4	0.2540	0.11	0.02	45.14	79.00	-33.86	40.14	66.00	-25.86	
5	0.3180	0.11	0.02	41.85	79.00	-37.15	39.60	66.00	-26.40	
6	13.1700	0.69	0.19	40.71	73.00	-32.29	37.76	60.00	-22.24	

Note:

Margin = Corrected Amplitude - Limit

 $Corrected\ Amplitude = Receiver\ Reading + LISN\ Loss + Cable\ Loss$

A margin of -8dB means that the emission is 8dB below the limit

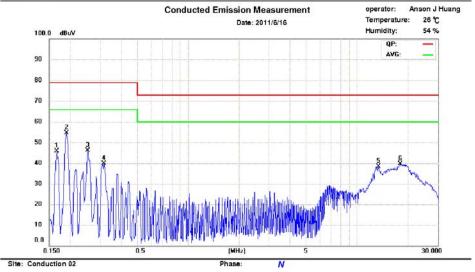
The frequency spectrum graph is for final peak graph, and the attached table is for QP/AVG test result. If peak data can pass, it will be shown in "QP/AVG Correct" column, if not, QP/AVG data will instead. The CISPR 22 limits would be applied to all FCC Part 15 devices.



Table 2.2.2 Power Line Conducted Emissions (Neutral)



Address:No.120,Lane 180,San Ho Tsuen,Hsin Ho Road,Lung-Tan Hsiang, Tao Yuan Conty,Talwan R.O.C. Tel:03-4071718



Limit: CISPR22 Class A Conduction

No.	Frequency MHz	LISN Loss dB	Cable Loss dB	QP Correct. dBuV	QP Limit dBuV	QP Margin dB	AVG Correct. dBuV	AVG Limit dBuV	AVG Margin dB	Note
1	0.1660	0.13	0.01	36.43	79.00	-42.57	11.39	66.00	-54.61	
2	0.1900	0.13	0.01	53.59	79.00	-25.41	44.95	66.00	-21.05	
3	0.2540	0.13	0.02	44.94	79.00	-34.06	39.39	66.00	-26.61	
4	0.3180	0.13	0.02	41.92	79.00	-37.08	38.74	66.00	-27.26	
5	13.3620	0.51	0.19	35.04	73.00	-37.96	29.64	60.00	-30.36	•
6	18.0380	0.63	0.2	36.73	73.00	-36.27	31.74	60.00	-28.26	

Note:

 $Margin = Corrected\ Amplitude\ -\ Limit$

 $Corrected\ Amplitude = Receiver\ Reading + LISN\ Loss + Cable\ Loss$

A margin of -8dB means that the emission is 8dB below the limit

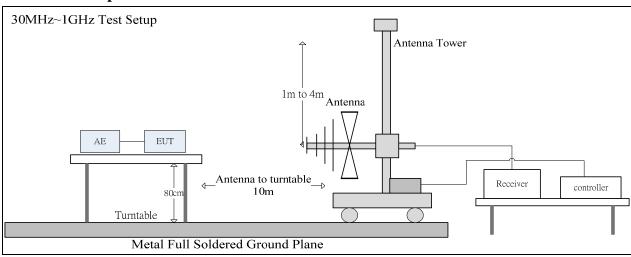
The frequency spectrum graph is for final peak graph, and the attached table is for QP/AVG test result. If peak data can pass, it will be shown in "QP/AVG Correct" column, if not, QP/AVG data will instead. The CISPR 22 limits would be applied to all FCC Part 15 devices.

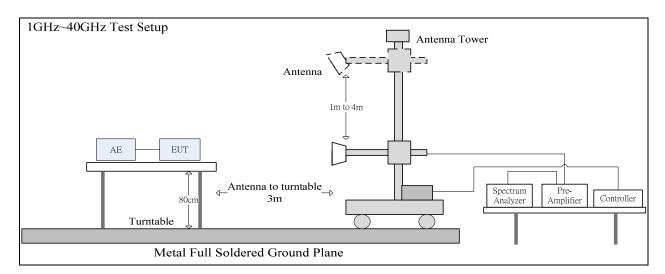


3. Radiated Emissions

3.1 Test Setup and Procedure

3.1.1 Test Setup





3.1.2 Test Procedure

The radiated emissions test will then be repeated on the open site or chamber to measure the amplitudes accurately and without the multiple reflections existing in the shielded room. The EUT and support equipment are set up on the turntable of one of 10 meter open field sites or 10 meter chamber. Desktop EUT are set up on a wooden stand 0.8 meter above the ground or floor-standing arrangement shall be placed on the horizontal ground reference plane. The test volume for a height of up to 30 cm may be obstructed by absorber placed on the ground plane.

For the initial measurements, the receiving antenna is varied from 1-4 meter height and is changed in the vertical plane from vertical to horizontal polarization at each frequency. The highest emissions between 30 MHz to 1000 MHz were analyzed in details by operating the spectrum analyzer and/or EMI receiver in quasi-peak mode to determine the precise amplitude of the emissions. The highest emissions between 1 GHz to 6 GHz were analyzed in details by



operating the spectrum analyzer in peak and average mode to determine the precise amplitude of the emissions.

Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the antenna in the cone of radiation from that area and pointed at the area both in azimuth and elevation, with polarization oriented for maximum response. At the highest amplitudes observed, the EUT is rotated in the horizontal plane while changing the antenna polarization in the vertical plane to maximize the reading. The interconnecting cables were arranged and moved to get the maximum measurement. Once the maximum reading is obtained, the antenna elevation and polarization will be varied between specified limits to maximize the readings.

The highest internal source of an EUT is defined as the highest frequency generated or used within the EUT or on which the EUT operates or tunes. If the highest frequency of the internal sources of the EUT is less than 108 MHz, the measurement shall only be made up to 1 GHz. If the highest frequency of the internal sources of the EUT is between 108 MHz and 500 MHz, the measurement shall only be made up to 2 GHz. If the highest frequency of the internal sources of the EUT is between 500 MHz and 1 GHz, the measurement shall only be made up to 5 GHz. If the highest frequency of the internal sources of the EUT is above 1 GHz, the measurement shall be made up to 6 times the highest frequency or 40 GHz, whichever is less. Spectrum Analyzer Configuration (for the frequencies tested).

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3.1.3 Spectrum Analyzer Configuration (for the frequencies tested)

Frequency Range: 30MHz--1000MHz Detector Function: Quasi-Peak Mode

Resolution Bandwidth: 120KHz

Frequency Range: Above 1000MHz
Detector Function: Peak/Average Mode

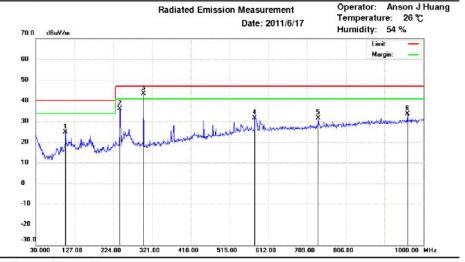
Resolution Bandwidth: 1MHz



3.2 Radiation Test Data: Configuration 1 Table 3.2.1 Radiated Emissions (Horizontal)



Address:No.120,Lane 180,San Ho Tsuen,Hsin Ho Road ,Lung-Tan Hsiang,Tao Yuan Conty,Taiwan R.O.C. Tel:03-4071718



Site: Chamber 02

Condition: CISPR22 ClassA 10M Radiation Polarization: Horizontal

Mk.	Frequency (MHz)	RX_R (dBuV/m)	Ant_F (dB)	Cab_L (dB)	PreAmp (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant.Pos (cm)	Tab.Pos (deg.)	Detector
1	104.6900	11.68	11.46	1.79	0.00	24.93	40.00	-15.07	383	104	peak
2	240.4900	21.92	11.35	2.78	0.00	36.05	47.00	-10.95	175	92	peak
3	299.6600	27.02	13.09	3.19	0.00	43.30	47.00	-3.70	100	46	peak
4	578.0500	8.27	18.73	4.55	0.00	31.55	47.00	-15.45	259	104	peak
5	737.1300	6.81	19.49	5.4	0.00	31.70	47.00	-15.30	100	270	peak
6	960.2300	6.08	20.98	6.64	0.00	33.70	47.00	-13.30	318	297	peak

* Note:

Margin = Corrected Amplitude – Limit

Corrected Amplitude = Radiated Amplitude + Antenna Correction Factor + Cable Loss - Pre-Amplifier Gain

A margin of -8dB means that the emission is 8dB below the limit

BILOG Antenna Distance: 10 meters

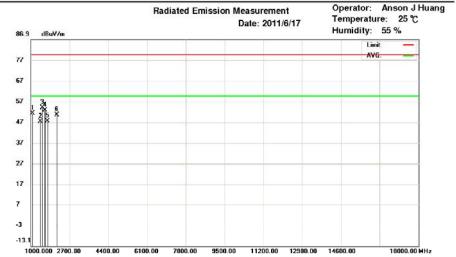
The CISPR 22 limits would be applied to all FCC Part 15 devices.

Below 1GHz test, if the peak measured value meets the QP limit, it is unnecessary to perform the QP measurement. measurement.





Address:No.120,Lane 180,San Ho Tsuen,Hsin Ho Road ,Lung-Tan Hsiang,Tao Yuan Conty,Taiwan R.O.C. Tel:03-4071718



Emission

(dBuV/m)

51.34

47.20

53.94

52.87

47.62

50.56

79.50

79.50

79.50

79.50

-25.56

-26.63

-31.88

-28.94

Site: Chamber 14

Frequency (MHz)

2

3

4

5

1068.000

1408.000

1510.000

1612.000

1731.000

2139.000

Condition : FCC Class A Radiation(Peak)

(dB)

28.6

28.6

28.67

29.38

30.22

32.35

(dB)

1.5

1.73

1.8

1.86

1.93

2.17

(dB)

36.95

36.38

36.28

36.82

37.45

38.03

RX_R (dBuV/m)

58.19

53.25

59.75

58.45

52.92

54.07

Limit (dBuV/m)	Margin (dB)	Ant.Pos (cm)	Tab.Pos (deg.)	Detector
79.50	-28.16	226	96	peak
79.50	-32.30	391	118	peak

100

100

354

100

179

230

55

336

Report Number: ISL-11LE277FA

peak

peak

peak

peak

Horizontal

Polarization:

*	Note:

Margin = Corrected Amplitude – Limit

 $Corrected\ Amplitude = Radiated\ Amplitude + Antenna\ Correction\ Factor + Cable\ Loss - Pre-Amplifier\ Gain$

A margin of -8dB means that the emission is 8dB below the limit

Horn Antenna Distance: 3 meters

The CISPR 22 limits would be applied to all FCC Part 15 devices.

Above 1GHz test, if the peak measured value meets the average limit, it is unnecessary to perform the average measurement.



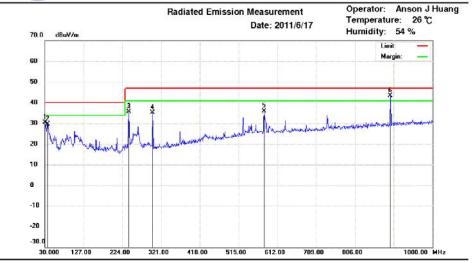
Table 3.2.2 Radiated Emissions (Vertical)



Address:No.120,Lane 180,San Ho Tsuen,Hsin Ho Road ,Lung-Tan Hsiang,Tao Yuan Conty,Taiwan R.O.C. Tel:03-4071718

Vertical

Report Number: ISL-11LE277FA



Site: Chamber 02

Condition: CISPR22 ClassA 10M Radiation Polarization:

Mk.	Frequency (MHz)	RX_R (dBuV/m)	Ant_F (dB)	Cab_L (dB)	PreAmp (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant.Pos (cm)	Tab.Pos (deg.)	Detector
1	30.0000	10.38	19	0.99	0.00	30.37	40.00	-9.63	143	117	peak
2	36.7900	13.54	14.99	1.09	0.00	29.62	40.00	-10.38	244	1	peak
3	240.4900	21.55	11.35	2.78	0.00	35.68	47.00	-11.32	200	298	peak
4	299.6600	18.82	13.09	3.19	0.00	35.10	47.00	-11.90	106	10	peak
5	579.0200	12.60	18.73	4.56	0.00	35.89	47.00	-11.11	303	22	peak
6	894.2700	16.58	20.48	6.34	0.00	43.40	47.00	-3.60	218	196	peak

* Note:

Margin = Corrected Amplitude - Limit

 $Corrected\ Amplitude = Radiated\ Amplitude + Antenna\ Correction\ Factor + Cable\ Loss - Pre-Amplifier\ Gain$

A margin of -8dB means that the emission is 8dB below the limit

BILOG Antenna Distance: 10 meters

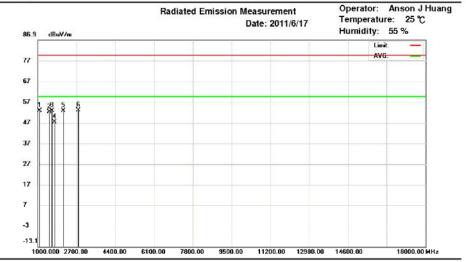
The CISPR 22 limits would be applied to all FCC Part 15 devices.

Below 1GHz test, if the peak measured value meets the QP limit, it is unnecessary to perform the QP measurement. measurement.





Address:No.120,Lane 180,San Ho Tsuen,Hsin Ho Road ,Lung-Tan Hsiang,Tao Yuan Conty,Taiwan R.O.C. Tel:03-4071718



Site: Chamber 14

Condition: FCC Class A Radiation(Peak) Polarization: Vertical

Mk.	Frequency (MHz)	RX_R (dBuV/m)	Ant_F (dB)	Cab_L (dB)	PreAmp (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant.Pos (cm)	Tab.Pos (deg.)	Detector
1	1068.000	59.73	28.6	1.5	36.95	52.88	79.50	-26.62	334	153	peak
2	1510.000	58.10	28.67	1.8	36.28	52.29	79.50	-27.21	100	63	peak
3	1612.000	58.40	29.38	1.86	36.82	52.82	79.50	-26.68	240	236	peak
4	1731.000	52.62	30.22	1.93	37.45	47.32	79.50	-32.18	100	130	peak
5	2122.000	56.40	32.32	2.16	38.13	52.75	79.50	-26.75	152	199	peak
6	2768.000	53.04	33.32	2.51	35.83	53.04	79.50	-26.46	287	124	peak

* Note:

Margin = Corrected Amplitude – Limit

Corrected Amplitude = Radiated Amplitude + Antenna Correction Factor + Cable Loss - Pre-Amplifier Gain

A margin of -8dB means that the emission is 8dB below the limit

Horn Antenna Distance: 3 meters

The CISPR 22 limits would be applied to all FCC Part 15 devices.

Above 1GHz test, if the peak measured value meets the average limit, it is unnecessary to perform the average measurement.



4. Appendix

4.1 Appendix A: Warning Labels

Label Requirements

A Class A digital device subject to certification by the FCC shall carry a warning label which includes the following statement:

* * * W A R N I N G * * *

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.



4.2 Appendix B: Warning Statement

Statement Requirements

The operators' manual for a Class A digital device shall contain the following statements or their equivalent:

* * * * W A R N I N G * * *

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and uses in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Notice: The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equivalent.

* * * * * * * *

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If the EUT was tested with special shielded cables the operators manual for such product shall also contain the following statements or their equivalent:

Shielded interface cables and/or AC power cord, if any, must be used in order to comply with the emission limits.



4.3 Appendix C: Test Equipment

4.3.1 Test Equipment List

Location	Equipment Name	Brand	Model	S/N	Last Cal.	Next Cal.
Con02					Date	Date
Conduction 02	LISN 06	R&S	ESH3-Z5	828874/009	01/12/2011	01/12/2012
Conduction 02	LISN 04	EMCO	3810/2	9604-1429	05/26/2011	05/26/2012
Conduction 02	Conduction 02-1	WOKEN	CFD 300-NL	Conduction	06/21/2011	06/21/2012
	Cable			02 -1		
Conduction 02	EMI Receiver 14	ROHDE&	ESCI	101034	02/17/2011	02/17/2012
		SCHWARZ				

Location	Equipment Name	Brand	Model	S/N	Last Cal.	Next Cal.
Chamber02					Date	Date
Radiation	BILOG Antenna 15	Teseq GmbH	CBL6112D	27622	01/18/2011	01/18/2012
(Chamber02)						
Radiation	Coaxial Cable Chmb	MIYAZAKI	8D-FB	Chmb	10/18/2010	10/18/2011
(Chamber02)	02-10M-02			02-10M-02		
Radiation	EMI Receiver 11	ROHDE &	ESCI	100568	06/18/2011	06/18/2012
(Chamber02)		SCHWARZ				

Location	Equipment Name	Brand	Model	S/N	Last Cal.	Next Cal.
Chamber 14					Date	Date
Radiation	Spectrum Analyzer	Agilent	N9010A	MY49060537	07/13/2010	07/13/2011
(Chamber14)	21					
Rad. Above	Horn Antenna 06	ETS	3117	00066665	09/28/2010	09/28/2011
1GHz						
(Chamber14)						
Rad. Above	SUCOFLEX	HUBER	Sucoflex 106	67618/6 and	02/09/2011	02/09/2012
1GHz	1GHz~18GHz cable	SUHNER		67619/6		
(Chamber14)						
Rad. Above	Preamplifier 13	MITEQ	JS44-0010180	1329256	06/10/2011	06/10/2012
1GHz			0-25-10P-44			
(Chamber14)						



4.3.2 Software for Controlling Spectrum/Receiver and Calculating Test Data

Radiation/Conduction	Filename	Version	Issued Date	
Lung_Tan Conduction	EZ EMC	1.1.4.2	2/10/2007	
Lung_Tan Radiation	EZ EMC	1.1.4.2	1/24/2007	



4.4 Appendix D: Uncertainty of Measurement

The measurement uncertainty refers to CISPR 16-4-2:2003. The coverage factor k=2 yields approximately a 95 % level of confidence.

<Conduction 02>: ±3.263dB

<Chamber 02 (10M)>

Horizontal

30MHz~200MHz: ±4.251 dB 200MHz~1GHz: ±4.380 dB

Vertical

30MHz~200MHz: ±4.382 dB 200MHz~1GHz: ±4.384 dB

<Chamber 14 (3M)>

1GHz~18GHz ±3.722 dB



4.5 Appendix E: Photographs of EUT Configuration Test Set Up

The Front View of Highest Conducted Set-up For EUT





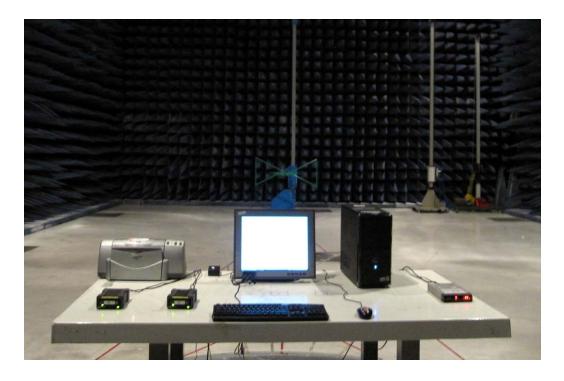
The Back View of Highest Conducted Set-up For EUT







The Front View of Highest Radiated Set-up For EUT



The Back View of Highest Radiated Set-up For EUT

