

# FCC 47 CFR PART 15 SUBPART B

# **TEST REPORT**

For

**ATX Industrial Motherboard** 

Model: FWB-880

**Trade Name: AAEON** 

Issued to

AAEON Technology Inc. 5F, No.135, Lane 235, Pao Chiao Rd., Hsin-Tien City, Taipei, Taiwan, R.O.C.

Issued by



Compliance Certification Services Inc. Hsintien Lab. No. 165, Chunghsen Road, Hsintien City Taipei Hsien, Taiwan TEL: (02) 2217-0894 FAX: (02) 2217-1029



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# **1 TEST RESULT CERTIFICATION**

Applicant:	AAEON Technology Inc. 5F, No.135, Lane 235, Pao Chiao Rd., Hsin-Tien City, Taipei, Taiwan, R.O.C.
Manufacturer:	AAEON Technology Inc. 5F, No.135, Lane 235, Pao Chiao Rd., Hsin-Tien City, Taipei, Taiwan, R.O.C.
Equipment Under Test:	ATX Industrial Motherboard
Trade Name:	AAEON
Model:	FWB-880
Detailed EUT Description:	See Item 2 of this report
Date of Test:	July 29, 2005 & August 3, 2005

Applicable Standard Class / Limit		Test Result			
FCC Part 15 Subpart B, IC ICES-003	Class A	No non-compliance noted			
Deviation from Applicable Standard					
None					

The above equipment was tested by Compliance Certification Services Inc. for compliance with the requirements set forth in the FCC Rules and Regulations Part 15, Subpart B and the measurement procedures were according to ANSI C63.4. This said equipment in the configuration described in this report shows the maximum emission levels emanating from equipment are within the compliance requirements.

Approved by:

David Wang Manager of Hsintien Laboratory Compliance Certification Services Inc.

Reviewed by:

Mang

Vince Chiang Assistant Manager of Hsintien Laboratory Compliance Certification Services Inc.



# **2** EUT DESCRIPTION

Product	ATX Industrial Motherboard
Trade Name	AAEON
Model	FWB-880
Housing Type	N/A
Power Adaptor Power Rating	3.3VDC/ 5VDC/ ±12VDC from Host PC Power Supply
AC Power During Test	120VAC / 60Hz to Host PC Power Supply
Power Supply Manufacturer	Seventeam
Power Supply Model Number	ST-350BKV
AC Power Cord Type	Unshielded, 1.8m (Detachable) to Host PC Power Supply
<b>OSC/Clock Frequencies</b>	32.768kHz; 14.31818MHz; 25MHz

### **I/O PORT OF EUT**

I/O PORT TYPE	Q'TY	TESTED WITH
1). PIO Port	1	1
2). SIO Port	2	2
3). PS/2 Keyboard Port	1	1
4). PS/2 Mouse Port	1	1
5). VIDEO-OUT Port (VGA)	1	1
6). AUDIO IN Port	1	1
7). Microphone Port	1	1
8). Earphone Port	1	1
9). LAN Port	1	1
10). USB Port	6	6

Note: Client consigns only one model sample (Model Number is FWB-880) to test.



# **3 TEST METHODOLOGY**

## 3.1 EUT SYSTEM OPERATION

- 1. Windows XP boots system.
- 2. Run Emctest.exe to activate all peripherals and display "H" pattern on monitor screen.
- 3. Run Emitest.exe choice "0" Run all test.
- 4. Run Winemc.exe then select (E:/  $\sim$  F:/  $\sim$  G:/  $\sim$  H:/  $\sim$  J:/) to test USB 2.0 port.
- 5. Run Winemc.exe and choose media player to play music.
- 6. Press the start menu, select executive and type ping 192.168.0.2 -t (EUT), ping 192.168.0.1 -t (Server Notebook).

*Note: Test program is self-repeating throughout the test.* 

## **3.2 DECISION OF FINAL TEST MODE**

1. The following test mode were scanned during the preliminary test:

#### **Conduction:**

1.  1280X1024, VF=75Hz
------------------------

#### **Radiation:**

1	1280X1024, VF=75Hz
1.	1280X1024, VF=75Hz / 1-14GHz

2. After the preliminary scan, the following test mode was found to produce the highest emission level.

Conduction: Mode 1

Radiation: Mode 1

Then, the EUT configuration and cable configuration of the above highest emission mode was recorded for all final test items.



# **4** SETUP OF EQUIPMENT UNDER TEST

### <u>Setup Diagram</u>

See test photographs attached in Appendix I for the actual connections between EUT and support equipment.

#### <u>Support Equipment</u>

#### **Host PC Devices:**

No	Equipment	Model #	Trade Name
1	CPU (2.8GHz)	Genuine	Intel
2	MEMORY (256MB DDR2)	Е5116АВ-5С-Е	ELPIDA
3	Power Supply	ST-350BKV	Seventeam
4	HDD (80GB)	WD800JD-00LSA0	WD
5	CD-ROM	CD-2052E	AFREEY

#### **Peripherals Devices:**

No	Equipment	Model	Serial No.	FCC/BSMI ID	Trade Name	Data Cable	Power Cord
1	Ear. / Mic.	MSB301	N/A	N/A	e-Sense	Unshielded, 1.8m	N/A
2	Player	RQ-L11LT	N/A	BSMI ID: 3912A162	Panasonic	Unshielded, 1.6m	N/A
3	PS/2 Mouse	M071KC	443029525	DoC BSMI: R41108	DELL	Shielded, 1.8m	N/A
4	PS/2 Keyboard	SK-8110	N/A	DoC BSMI: T3A002	DELL	Shielded, 1.8m	N/A
5	USB 2.0 HDD	F12-U	N/A	BSMI ID: 4912A002	TeraSys	Shielded, 1.6m	N/A
6	USB 2.0 HDD	F12-U	N/A	BSMI ID: 4912A002	TeraSys	Shielded, 1.6m	N/A
7	USB 2.0 HDD	F12-U	N/A	BSMI ID: 4912A002	TeraSys	Shielded, 1.6m	N/A
8	USB 2.0 HDD	F12-U	N/A	BSMI ID: 4912A002	TeraSys	Shielded, 1.6m	N/A
9	USB 2.0 HDD	F12-U	N/A	BSMI ID: 4912A002	TeraSys	Shielded, 1.6m	N/A
10	USB 2.0 HDD	F12-U	N/A	BSMI ID: 4912A002	TeraSys	Shielded, 1.6m	N/A
11	Printer	C20SX	N/A	BSMI ID: 3902E004	EPSON	Shielded, 1.8m	Unshielded, 1.8m
12	Modem	5JEG4033MKO	N/A	5RJTAI-35500-M5-E	TOP- SOLUTION	Shielded, 0.9m	Unshielded, 1.8m
13	Modem	5JEG4033MKO	N/A	5RJTAI-35500-M5-E	TOP- SOLUTION	Shielded, 0.9m	Unshielded, 1.8m
14	Monitor	710V	GS17H9NXA05875B	DoC BSMI: R33475	SAMSUNG	Shielded, 1.8m with two cores	Unshielded, 1.8m
15	Server Notebook	M285	RD49R-7YTJR- B3C4K-G2JQX- DD3CG	DoC BSMI: R31259	LEO	Unshielded, 20m	Unshielded, 1.8m

*Note:* All the above equipment/cables were placed in worse case positions to maximize emission signals during emission test.

*Grounding:* Grounding was in accordance with the manufacturer's requirements and conditions for the intended use.



# **5** FACILITIES AND ACCREDITATIONS

## **5.1 FACILITIES**

All measurement facilities used to collect the measurement data are located at CCS Taiwan Hsintien Lab at No. 165, Chunghsen Road, Hsintien City, Taipei Hsien, Taiwan.

The measurement facilities are constructed in conformance with the requirements of CISPR 16-1, ANSI C63.4 and other equivalent standards.

# 5.2 LABORATORY ACCREDITATIONS AND LISTINGS

The test facilities used to perform Electromagnetic compatibility tests are registered or accredited by the organizations listed in the following table which includes the recognized scope specifically.

Country	Agency	Scope of Accreditation	Logo
USA	A2LA	CFR 47, FCC Part 15/18 using ANSI 63.4; AS/NZS 3548; VCCI V3; CNS 13438; CNS 13439; CNS 13783; CNS 14115; CISPR 11/EN 55011; CISPR 14-1/EN 55014-1; CISPR 15/EN 55015; CISPR 22/EN 55022; EN 50081-1/EN 61000-6-3; EN 50082-1/EN 61000-6-4; IEC/EN 61000-4-2, IEC/EN 61000-4-3, IEC/EN 61000-4-4, IEC/EN 61000-4-5, IEC/EN 61000-4-6, IEC/EN 61000-4-8, IEC/EN 61000-4-11, IEC/EN 61000-3-2, IEC/EN 61000-3-3; CISPR 24/EN 55024; CISPR 14-2/EN 55014-2; EN 50081-2/EN 61000-6-1; EN 50082-2/EN 61000-6-2.	ACCREDITED 824.01
USA	FCC	3/10 meter Open Area Test Sites to perform FCC Part 15/18 measurements	<b>FCC</b> 250366
Japan	VCCI	3/10 meter Open Area Test Sites and Line Conducted Test Room to perform conducted/radiated measurements	<b>VCCI</b> R-1434/1630~4 C-1511/1882
Norway	NEMKO	EN 50081-1/2, EN 50082-1/2, IEC 61000-6-1/2/3/4, EN 50091-2, EN 50130-4, EN 55011, EN 55013, EN 55014-1/2, EN 55015, EN 55022, EN 55024, EN 61000-3-2/3, EN 61326-1, IEC 61000-4-2/3/4/5/6/8/11, Cispr 16-1/2/3/4	ELA 103
Taiwan	CNLA	47 CFR FCC Part 15 Subpart B, EN 61000-3-2, EN 61000-3-3, CNS 13439, CNS 13783-1, CNS 13438, AS/NZS 3548, VCCI, CNS 13022-1/2/3, EN 55022, EN 55013, EN 55014-1, EN 61000-4-2/3/4/5/6/8/11, ENV 50204, ENV 50141, ENV 50142	1108 ILAC MRA
Taiwan	BSMI	CNS 13438, CNS 13783-1, CNS 13439	SL2-IN-E-0005 SL2-A1-E-0005 SL2-R1-E-0005 SL2-R2-E-0005 SL2-R2-R2-E-0005 SL2-R2-R2-R2-R2-R2-R2-R2-R2-R2-R2-R2-R2-R2
Canada	Industry Canada	RSS212, Issue 1	Canada IC 5742

*Note:* No part of this report may be used to claim or imply product endorsement by CNLA, A2LA or other government agency.



# 6 INSTRUMENT AND CALIBRATION

## 6.1 MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated once a year or in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

# 6.2 TEST AND MEASUREMENT EQUIPMENT

The following list contains measurement equipment used for testing. The equipment conforms to the requirement of CISPR 16-1, ANSI C63.2 and. other equivalent standards.

Calibration of all test and measurement, including any accessories that may effect such calibration, is checked frequently to ensure the accuracy. Adjustments are made and correction factors are applied in accordance with the instructions contained in the respective manual.

<b>Open Area Test Site # I</b>						
EQUIPMENT	MFR	MODEL	SERIAL NUMBER	CAL. DUE		
SITE NSA	CCS	I Site	N/A	09/17/2005		
MEASURE RECEIVER	SCHAFFNER	SCR3501	338	06/27/2006		
SPECTRUM ANALYZER	ADVANTEST	R3132	120900008	No Calibration Required		
ANTENNA	SCHAFFNER	CBL 6112B	2809	09/24/2005		
AMPLIFIER	SCHAFFNER	CPA9231A	3626	10/08/2005		
CABLE	BELDEN	9913	N-TYPE #I2	02/18/2006		
ATTENUATOR	MCL	UNAT-6	AT06-3	10/08/2005		
THERMO- HYGRO METER	TFA	N/A	NO.2	11/09/2005		
		Above 1GHz Used	1			
EMC ANALYZER (100Hz-22GHz)	HP	8566B	2937A06102	06/30/2006		
ANTENNA (1-18GHz)	EMCO	3115	5761	01/17/2006		
AMPLIFIER (1-18GHz)	HP	8449B	3008A01266	02/16/2006		
CABLE (1-18GHz)	JYEBAO	LL142	SMA#RS1&2	02/16/2006		
CABLE (1-18GHz)	JYEBAO	LL142	SMA#C1	04/28/2006		

### **Equipment Used for Emission Measurement**

*Note:* The measurement uncertainty is less than +/- 3.36dB, which is evaluated as per the NAMAS NIS 81 and CISPR/A/291/CDV.



Conducted Emission Test Site # A							
EQUIPMENT MFR		MODEL	SERIAL NUMBER	CAL. DUE			
TEST RECEIVER	R&S	ESHS20	840455/006	02/17/2006			
LISN (EUT)	SCHWARZBECK	NSLK 8127	8127382	01/03/2006			
LISN	SOLAR	8012-50-R-24-BNC	8305114	01/03/2006			
BNC CABLE	MIYAZAKI	5D-FB	BNC A1	01/28/2006			
THERMO- HYGRO METER	ТОР	HA-202	9303-1	03/02/2006			

*Note:* The measurement uncertainty is less than +/-2.83dB, which is evaluated as per the NAMAS NIS 81 and CISPR/A/291/CDV.

# 7 LINE CONDUCTED & RADIATED EMISSION TEST

### **7.1 LIMIT**

### Maximum permissible level of Line Conducted Emission

FREQUENCY	Class A	(dBuV)	Class B (dBuV)		
(MHz)	Quasi-peak	Average	Quasi-peak	Average	
0.15 - 0.5	79	66	66 - 56	56 - 46	
0.50 - 5.0	73	60	56	46	
5.0 - 30.0	73	60	60	50	

*Note: The lower limit shall apply at the transition frequency.* 

#### Maximum permissible level of Radiated Emission measured at 10 meter

FREQUENCY	Class A (dBuV/m)	Class B (dBuV/m)		
(MHz)	Quasi-peak	Quasi-peak		
30-230	40	30		
230 - 1000	47	37		

*Note: The lower limit shall apply at the transition frequency.* 

#### Maximum permissible level of Radiated Emission measured at 3 meter

FREQUENCY	Class A (	dBuV/m)	Class B (dBuV/m)		
(MHz)	Average	Peak	Average	Peak	
Above 1000	59.3	79.3	53.9	73.9	

*Note: The lower limit shall apply at the transition frequency.* 



## 7.2 TEST PROCEDURE OF LINE CONDUCTED EMISSION

### **Procedure of Preliminary Test**

- The EUT was set up as per the test configuration to simulate typical usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.4 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
- Support equipment, if needed, was placed as per ANSI C63.4.
- All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4.
- The test system with EUT received AC power, 120V/60Hz, through a Line Impedance Stabilization Network (LISN), which supplied power source and was grounded to the ground plane.
- All support equipment received power from a second LISN.
- The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a EMI Test Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to the Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Receiver.
- The Receiver scanned from 150kHz to 30MHz for emissions in each of the test modes.
- During the above scans, the emissions were maximized by cable manipulation.
- The test mode(s) described in Item 3.2 were scanned during the preliminary test.
- After the preliminary scan, we found the test mode described in Item 3.2 producing the highest emission level.
- The EUT configuration and cable configuration of the above highest emission level were recorded for reference of the final test.



### **Procedure of Final Test**

- EUT and support equipment were set up on the test bench as per step 10 of the preliminary test.
- A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. If EUT emission level was less -2dB to the AV. limit in Q.P. mode, then the emission signal was re-checked using an AV. detector.
- The test data of the worst-case condition(s) was recorded.

#### **Data Sample:**

Freq. MHz	Read Level dBuV	Factor dB	Level dBuV	Limit dBuV	Over Limit dB	Reading Type (P/Q/A)	Line (L1/L2)
X.XX	42.95	0.55	43.50	73	-29.50	Q	L1

Freq.	= Emission frequency in MHz
Read Level	= Uncorrected Analyzer/Receiver reading
Factor	= Insertion loss of LISN + Cable Loss
Level	= Read Level + Factor
Limit	= Limit stated in standard
Over Limit	= Reading in reference to limit
Р	= Peak Reading
Q	= Quasi-peak Reading
А	= Average Reading
L1	= Hot side
L2	= Neutral side

### **Calculation Formula**

Over Limit (dB) = Level (dBuV) - Limit (dBuV)



## 7.3 TEST PROCEDURE OF RADIATED EMISSION

#### Procedure of Preliminary Test

- The equipment was set up as per the test configuration to simulate typical usage per the user's manual. When the EUT is a tabletop system, a wooden turntable with a height of 0.8 meters is used which is placed on the ground plane. When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
- Support equipment, if needed, was placed as per ANSI C63.4.
- All I/O cables were positioned to simulate typical usage as per ANSI C63.4.
- The EUT received AC power source, 120V/60Hz, from the outlet socket under the turntable. All support equipment received power from another socket under the turntable.
- The antenna was placed at 10 meter away from the EUT as stated in ANSI C63.4. The antenna connected to the Spectrum Analyzer via a cable and at times a pre-amplifier would be used.
- The Analyzer / Receiver quickly scanned from 30MHz to 14000MHz. The EUT test program was started. Emissions were scanned and measured rotating the EUT to 360 degrees and positioning the antenna 1 to 4 meters above the ground plane, in both the vertical and the horizontal polarization, to maximize the emission reading level.
- The test mode(s) described in Item 3.2 were scanned during the preliminary test:
- After the preliminary scan, we found the test mode described in Item 3.2 producing the highest emission level.
- The EUT and cable configuration, antenna position, polarization and turntable position of the above highest emission level were recorded for the final test.



### **Procedure of Final Test**

- EUT and support equipment were set up on the turntable as per step 8 of the preliminary test.
- The Analyzer / Receiver scanned from 30MHz to 14000MHz. Emissions were scanned and measured rotating the EUT to 360 degrees, varying cable placement and positioning the antenna 1 to 4 meters above the ground plane, in both the vertical and the horizontal polarization, to maximize the emission reading level.
- Recorded at least the six highest emissions. Emission frequency, amplitude, antenna position, polarization and turntable position were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit and only Q.P. reading is presented.
- The test data of the worst case condition(s) was recorded.

### **Data Sample:**

Freq. MHz	Read Level dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Over Limit dB	Reading Type (P/Q/A)	Pol. (H/V)
x.xx	14.0	12.2	26.2	30	-3.8	Q	Н

Freq.	= Emission frequency in MHz
Read Level	= Uncorrected Analyzer/Receiver reading
Factor	= Antenna Factor + Cable Loss + Attenuator (3/6/10dB) – Amplifier Gain
Level	= Read Level + Factor
Limit	= Limit stated in standard
Over Limit	= Reading in reference to limit
Р	= Peak Reading
Q	= Quasi-peak Reading
А	= Average Reading
Н	= Antenna Polarization: Horizontal
V	= Antenna Polarization: Vertical

### **Calculation Formula**

Over Limit (dB) = Level (dBuV/m) – Limit (dBuV/m)

### 7.4 TEST RESULTS

### **Line Conducted Emission**

#### Model: FWB-880

Temperature: 27°C

#### Test Results: Passed

Test Mode: Mode 1

#### Humidity: 50% RH

Tested by: Peter Jou

(The chart below shows the highest readings taken from the final data, see Appendix II for details.)

	Six Highest Conducted Emission Readings							
Fre	Frequency Range Investigated				150 kHz to 30 MHz			
Freq (MHz)	Read Level (dBuV)	Factor (dB)	Level (dBuV)	Limit Line (dBuV)	Over Limit (dB)	Reading Type (P/Q/A)	Line (L1/L2)	
0.169	58.17	0.03	58.20	79.00	-20.80	Р	L1	
0.170	60.31	0.03	60.34	79.00	-18.66	Р	L2	
0.206	63.44	0.03	63.47	79.00	-15.53	Р	L2	
0.234	63.79	0.03	63.82	79.00	-15.18	Р	L2	
0.247	58.25	0.03	58.28	79.00	-20.72	Р	L2	
0.853	51.82	0.05	51.87	73.00	-21.13	Р	L2	

NOTE: The emission level was or more than 2dB below the Average limit, so no re-check anymore.

**Radiated Emission** 

Model: FWB-880

**Temperature:** 29°C

#### Test Results: Passed

Test Mode: Mode 1

Humidity: 42% RH

### Tested by: Webber Jung

(The chart below shows the highest readings taken from the final data, see Appendix II for details.)

	Six Highest Radiated Emission Readings						
Fre	Frequency Range Investigated			30 MHz to 1000 MHz at 10m			
Freq (MHz)	Read Level (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Reading Type (P/Q/A)	Pol. (H/V)
60.050	50.28	-16.54	33.74	40.00	-6.26	Р	V
150.000	44.76	-10.62	34.14	40.00	-5.86	Р	V
999.300	36.11	5.67	41.78	47.00	-5.22	Р	V
150.000	45.52	-10.62	34.90	40.00	-5.10	Р	Н
479.300	44.87	-1.58	43.29	47.00	-3.71	Р	Н
600.050	42.50	0.69	43.19	47.00	-3.81	Р	Н

NOTE: 30MHz to 1000MHz test is Applicable CISPR 22 / EN 55022 standard.



# **APPENDIX I - PHOTOGRAPHS OF TEST SETUP**



## LINE CONDUCTED EMISSION TEST





## **RADIATED EMISSION TEST**





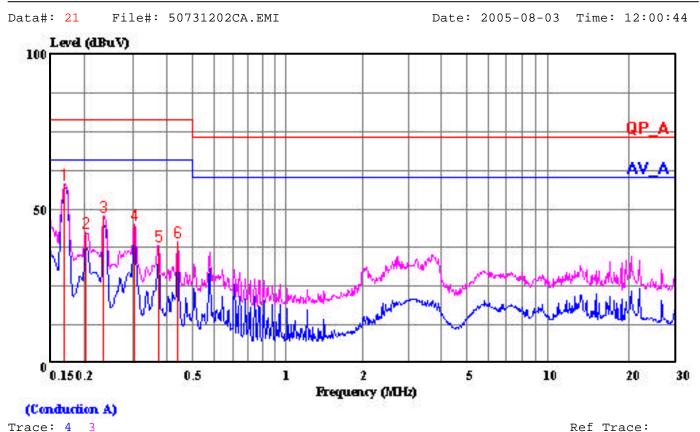


# **APPENDIX II - TEST RESULT OF FINAL DATAS**

## **Conducted Emission Plot**

### **Radiated Emission Data**



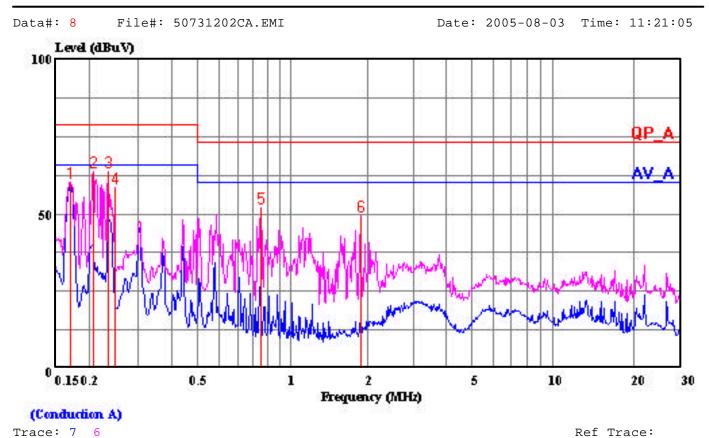


Ref Trace:

Condition: LINE Report No. : 50731202 Test Engr. : PETER JOU : AAEON Technology Inc. Company EUT : FWB-880 Test Config : EUT / ALL PERIPHERALS Type of Test: FCC CLASS A Mode of Op. : 1280X1024, VF=75Hz  $\,$ 

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.169	58.17	0.03	58.20	79.00	-20.80	Peak
2	0.203	42.60	0.03	42.63	79.00	-36.37	Peak
3	0.235	47.60	0.03	47.63	79.00	-31.37	Peak
4	0.305	45.12	0.03	45.15	79.00	-33.85	Peak
5	0.375	38.11	0.04	38.15	79.00	-40.85	Peak
б	0.440	39.19	0.04	39.23	79.00	-39.77	Peak





Ref Trace:

Condition: NEUTRAL Report No. : 50731202 Test Engr. : PETER JOU : AAEON Technology Inc. Company : FWB-880 EUT Test Config : EUT / ALL PERIPHERALS Type of Test: FCC CLASS A Mode of Op. : 1280X1024, VF=75Hz  $\,$ 

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.170	60.31	0.03	60.34	79.00	-18.66	Peak
2	0.206	63.44	0.03	63.47	79.00	-15.53	Peak
3	0.234	63.79	0.03	63.82	79.00	-15.18	Peak
4	0.247	58.25	0.03	58.28	79.00	-20.72	Peak
5	0.853	51.82	0.05	51.87	73.00	-21.13	Peak
6	1.991	49.18	0.07	49.25	73.00	-23.75	Peak



1

2 3 No. 199, Chung Sheng Road, Hsin Tien City, Taipei, Taiwan, R.O.C. Tel:02-2217-0894 Fax:02-2217-1029

Data#: 1 File#: AAEON\_FWB-880\_050729.EMI Date: 2005-07-29 Time: 13:56:16 Site#I

Condition: VE	RTICAL /10m
Report No. :	50731202
Test Engr. :	WEBBER JUNG
Company :	AAEON Technology Inc.
EUT :	FWB-880
Test Config :	EUT / ALL PERIPHERALS
Type of Test:	FCC CLASS A
Mode of Op. :	1280X1024, VF=75Hz

Limit Over Read Freq Level Factor Level Line Limit Remark MHz dBuV dB dBuV/m dBuV/m dB 50.150 45.06 -14.74 30.32 40.00 -9.68 Peak 60.050 50.28 -16.54 33.74 40.00 -6.26 Peak 80.830 47.73 -14.51 33.22 40.00 -6.78 Peak 150.000 44.76 -10.62 34.14 40.00 -5.86 Peak 4 225.030 42.82 -9.77 33.05 40.00 -6.95 Peak 5 240.060 47.26 -8.63 38.63 47.00 -8.37 Peak б 479.000 39.53 -1.60 37.93 47.00 -9.07 Peak 7 639.300 40.01 0.49 40.50 47.00 -6.50 Peak 8 999.300 36.11 5.67 41.78 47.00 -5.22 Peak 9

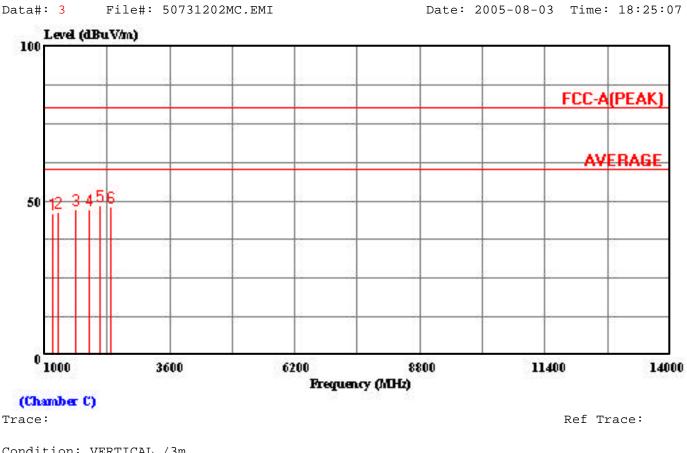


Data#: 3 File#: AAEON\_FWB-880\_050729.EMI Date: 2005-07-29 Time: 14:30:06 Site#I

Condition: HORIZONTAL /10m						
Report No. : 50731202						
Test Engr. : WEBBER JUNG						
Company : AAEON Technology Inc.						
EUT :	FWB-880					
Test Config :	EUT / ALL PERIPHERALS					
Type of Test:	FCC CLASS A					
Mode of Op. :	1280X1024, VF=75Hz					

Limit Over Read Freq Level Factor Level Line Limit Remark MHz dBuV dB dBuV/m dBuV/m dB 61.500 43.48 -16.66 26.82 40.00 -13.18 Peak 1 61.500 48.48 -16.66 31.82 40.00 -8.18 Peak 2 3 79.133 45.70 -14.86 30.84 40.00 -9.16 Peak 133.300 40.71 -9.98 30.73 40.00 -9.27 Peak 4 150.000 45.52 -10.62 34.90 40.00 -5.10 Peak 5 201.330 43.94 -11.65 32.29 40.00 -7.71 Peak 6 250.000 45.05 -7.88 37.17 47.00 -9.83 Peak 7 300.050 42.08 -6.74 35.34 47.00 -11.66 Peak 8 375.00043.32-4.3538.9747.00-8.03Peak400.05042.13-3.6138.5247.00-8.48Peak 9 10 11 479.300 44.87 -1.58 43.29 47.00 -3.71 Peak 12 600.050 42.50 0.69 43.19 47.00 -3.81 Peak

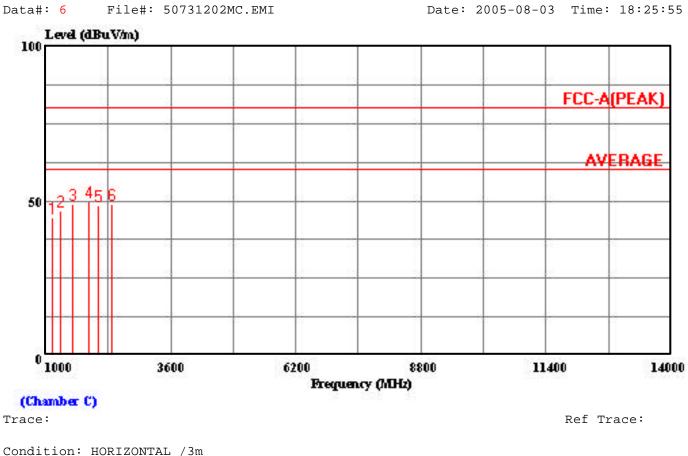




Condition: VER	TICAL / 3m
Report No. :	50731202
Test Engr. :	ALEX PAN
Company :	AAEON Technology Inc.
EUT :	FWB-880
Test Config :	EUT / ALL PERIPHERALS
Type of Test:	FCC CLASS A
Mode of Op. :	1280X1024, VF=75Hz/1-14GHz
:	All Test Data Under the Average Limit

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1 2 3 4 5 6	1159.000 1294.000 1648.000 1918.000 2164.000 2384.500	56.80 55.90 54.50	-11.19 -10.53 -8.80 -7.48 -6.62 -5.99	45.91 46.27 47.10 47.02 48.48 48.01	80.00 80.00 80.00 80.00	-34.09 -33.73 -32.90 -32.98 -31.52 -31.99	Peak Peak Peak Peak





CONGLETON, NO	
Report No. :	50731202
Test Engr. :	ALEX PAN
Company :	AAEON Technology Inc.
EUT :	FWB-880
Test Config :	EUT / ALL PERIPHERALS
Type of Test:	FCC CLASS A
Mode of Op. :	1280X1024, VF=75Hz/1-14GHz
:	All Test Data Under the Average Limit

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	 dBuV/m	dBuV/m	dB	
1 2 3 4 5 6	1130.500 1295.500 1574.500 1889.500 2087.500 2384.500	57.20 58.00	-11.32 -10.53 -9.16 -7.62 -6.84 -5.99		80.00		Peak Peak Peak Peak