

### FCC 47 CFR PART 15 SUBPART B

# **TEST REPORT**

For

**Operator Panel** 

Model: AOP-8150

**Trade Name: AAEON** 

Issued to

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

Complia

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

Issued by



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# **1 TEST RESULT CERTIFICATION**

Applicant:	<ul> <li>AAEON Technology Inc.</li> <li>5F, No.135, Lane 235, Pao Chiao Rd.,</li> <li>Hsin-Tien City, Taipei, Taiwan, R.O.C.</li> <li>AAEON Technology Inc.</li> <li>5F, No.135, Lane 235, Pao Chiao Rd.,</li> <li>Hsin-Tien City, Taipei, Taiwan, R.O.C.</li> </ul>	
Manufacturer:		
Equipment Under Test:	Operator Panel	
Trade Name:	AAEON	
Model:	AOP-8150	
Detailed EUT Description:	See Item 2 of this report	
Date of Test:	November 18, 2004 ~ November 23, 2004	

Applicable Standard	Class / Limit	Test Result			
FCC Part 15 Subpart B	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:** 11/0 AL

Vince Chiang Section Manager of Hsintjen Laboratory Compliance Certification Services Inc.



# **2 EUT DESCRIPTION**

Product	Operator Panel	
Trade Name	AAEON	
Model	AOP-8150	
Housing Type	Plastic w/ metal plate	
EUT Power Rating	100VDC-230VDC from Power Supply	
AC Power During Test	120VAC / 60 Hz to Power Supply	
Power Supply Manufacturer	SUNPOWER	
Power Supply Model Number	SPL-075-D1	
AC Power Cord Type	Unshielded, 1.8m (Detachable) to Host PC Power Supply	
OSC/Clock Frequency	12MHz; 14.318MHz; 16MHz; 25MHz; 33MHz; 100MHz; 133MHz; 32.768kHz;	

### I/O PORT OF EUT

I/O PORT TYPE	Q'TY	TESTED WITH
1). PIO Port	1	1
2). SIO Port	5	5
3). PS/2 Keyboard Port	1	1
4). PS/2 Mouse Port	1	1
5). VIDEO-OUT Port (VGA)	1	1
6). Microphone Port	1	1
7). Earphone Port	1	1
8). Line Port (in)	1	1
9). LAN Port	2	2
10). USB 2.0 Port	4	4
11). Optical Fiber Port	1	1

Note: Client consigns only one model sample (Model Number is AOP-8150) to test.



# **3 TEST METHODOLOGY**

### 3.1 EUT System Operation

- 1. Windows 2000 boots system.
- 2. Run Emctest.exe To Activate All Peripherals And Display "H" Pattern On Monitor Screen.
- 3. Run Winemc.exe then choose "E:/ & F:/ & G:/ & H:/ " then Run Read/Write to test.
- 4. Press the start menu, select executive and type ping 192.168.0.1 –t (EUT), ping 192.168.0.2 –t (Sever Notebook).
- 5. Run Windows media player to play music.

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:

### Mode:

- 1. Normal Mode
- 2. Normal Mode / 1-5 GHz
- 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

### Setup Diagram

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

#### Support Equipment

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

No	Equipment	Model #	Serial #	FCC/BSMI ID	Trade Name
1	CPU (650MHz)	LV Celeron 650MHz	N/A	N/A	Intel
2	SD RAM (256MB)	HY5DU56822BT-J	N/A	N/A	DSL
3	Mother Board	MPC-6800	N/A	N/A	AAEON
4	PCI Board	1907110801	N/A	N/A	AAEON
5	LCD	M150XN07	N/A	N/A	AU
6	HDD	MHT2020AT	N/A	N/A	FUJITSU
7	CD-ROM	CD-224E	N/A	N/A	TEAC
8	INVERTER	HY1009	N/A	N/A	KING-CORE
9	AMP BOARD	TB-021	N/A	N/A	AAEON
10	Power Supply	SPL-075-D1	N/A	N/A	SUNPOWER



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### **Peripherals Devices:**

No	Equipment	Model	Serial No.	FCC/ BSMI ID	Trade Name	Data Cable	Power Cord
1	Printer	C60	N/A	BSMI ID: 3902E006	EPSON	Shielded, 1.8m	Unshielded, 1.4m
2	Monitor	710V	GS17H9NXA05858E	BSMI ID: R33475	SAMSUNG	Shielded, 1.8m with two cores	Unshielded, 1.8m
3	Modem	5JEG4033MKO	N/A	5RJTAI-35500-M5-E	TOP- SOLUTION	Shielded, 0.8m	Unshielded, 1.8m
4	Modem	5JEG4033MKO	N/A	5RJTAI-35500-M5-E	TOP- SOLUTION	Shielded, 0.8m	Unshielded, 1.8m
5	Modem	5JEG4033MKO	N/A	5RJTAI-35500-M5-E	TOP- SOLUTION	Shielded, 0.8m	Unshielded, 1.8m
6	Modem	5JEG4033MKO	N/A	5RJTAI-35500-M5-E	TOP- SOLUTION	Shielded, 0.8m	Unshielded, 1.8m
7	Modem	5JEG4033MKO	N/A	5RJTAI-35500-M5-E	TOP- SOLUTION	Shielded, 0.8m	Unshielded, 1.8m
8	USB 2.0 HDD	F12-U	N/A	BSMI ID: 4912A002	TeraSyS	Shielded, 1.7m	Unshielded, 1.8m with a core
9	USB 2.0 HDD	F12-U	N/A	BSMI ID: 4912A002	TeraSyS	Shielded, 1.7m	Unshielded, 1.8m with a core
10	USB 2.0 HDD	F12-U	N/A	BSMI ID: 4912A002	TeraSyS	Shielded, 1.7m	Unshielded, 1.8m with a core
11	USB 2.0 HDD	F12-U	N/A	BSMI ID: 4912A002	TeraSyS	Shielded, 1.7m	Unshielded, 1.8m with a core
12	Ear / mic	MSB301	N/A	N/A	e-Sense	Unshielded, 1.8m	N/A
13	Player	RQL309	N/A	N/A	Panasonic	Unshielded, 1.0m	N/A
14	PS/2 Keyboard	6311-TW4C16	N/A	BSMI ID: 4862A064	ACER	Shielded, 1.7m	N/A
15	PS/2 Mouse	M-BE5	LZE20309352	BSMI ID: 3892A471	Logitech	Shielded, 1.9m	N/A
16	Server Notebook	M285	RD49R-7YTJR- B3C4K-G2JQX- DD3CG	BSMI: R31259 DoC	LEO	Unshielded, 20m	Unshielded, 1.8m with a core
17	Load	LAN Cable	N/A	N/A	N/A	Unshielded, 1.0m	N/A

*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 IEC 610 EC 610 EC 610 EC 610 CIS		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>FC</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

*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.

Open Area Test Site # I				
EQUIPMENT	MFR	MODEL	SERIAL NUMBER	CAL. DUE
SITE NSA	CCS	I Site	N/A	09/17/2005
MEASURE RECEIVER	SCHAFFNER	SCR3501	338	07/05/2005
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 #I1	10/08/2005
ATTENUATOR	MCL	UNAT-6	AT06-3	10/08/2005
THERMO- HYGRO METER	TFA	N/A	NO.2	11/09/2005
	Abo	ove 1GHz Used		
EMC ANALYZER (100Hz-22GHz)	HP	8566B	2937A06102	07/26/2005
ANTENNA (1-18GHz)	EMCO	3115	5761	02/02/2005
AMPLIFIER (1-26.5GHz)	HP	8449B	3008A01266	02/15/2005
CABLE (1-18GHz)	JYEBAO HUBER+SUHNER	LL142 SUCOFLEX 104	SMA-RS1&2 SMA-RS3	02/15/2005

### **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.



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Conducted Emission Test Site # B					
EQUIPMENT	MFR	MODEL	SERIAL NUMBER	CAL. DUE	
TEST RECEIVER	R&S	ESHS10	843743/015	04/07/2005	
LISN (EUT)	EMCO	3825/2	9106-1810	01/27/2005	
LISN	EMCO	3825/2	1382	02/23/2005	
BNC CABLE	MIYAZAKI	5D-FB	BNC B1	07/18/2005	
Pulse Limiter	R&S	ESH3-Z2	100374	08/26/2005	
THERMO- HYGRO METER	ТОР	HA-202	9303-3	03/24/2005	

*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 5000MHz. 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 5000MHz. 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	Amptd dBuV/m	Margin dB	Limit dBuV/m	Reading dBuV	Factor dB/m	Reading Type (P/Q/A)	Pol. (H/V)
x.xx	26.2	-13.8	40	14	12.2	Q	Н

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

#### **Calculation Formula**

Margin (dB) = Amptd (dBuV/m) – Limit (dBuV/m)



### 7.4 TEST RESULTS

### **Line Conducted Emission**

Model: AOP-8150

Temperature: 22 °C

Test Results: Passed

Test Mode: Mode 1 Humidity: 48% RH Tested by: Alex Pan

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

Six Highest Conducted Emission Readings									
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)		
7.137	36.50	10.13	46.63	73.00	-26.37	Р	L1		
8.105	37.30	10.14	47.44	73.00	-25.56	Р	L1		
8.916	36.96	10.14	47.10	73.00	-25.90	Р	L1		
12.582	34.76	10.23	44.99	73.00	-28.01	Р	L1		
8.062	36.18	10.13	46.31	73.00	-26.69	Р	L2		
8.637	36.68	10.14	46.82	73.00	-26.18	Р	L2		

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



### **Radiated Emission**

<b>Model:</b> AOP-8150	Test Mode: Mode 1
<b>Temperature:</b> 25 °C	Humidity: 55% RH
Test Results: Passed	Tested by: Elvis Zeng

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

Six Highest Radiated Emission Readings								
Frequency Range Investigated			30]	MHz to 100	) MHz at 1	Om		
Freq (MHz)	Amptd (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Reading (dBuV)	Factor (dB/m)	Reading Type (P/Q/A)	Pol. (H/V)	
133.3600	34.23	-5.77	40.00	44.19	-9.96	Р	V	
143.0600	34.07	-5.93	40.00	44.37	-10.30	Р	V	
149.5700	35.29	-4.71	40.00	45.88	-10.59	Р	V	
166.6700	36.19	-3.81	40.00	47.53	-11.34	Р	V	
216.8200	34.80	-5.20	40.00	45.21	-10.41	Р	V	
166.7000	34.70	-5.30	40.00	46.04	-11.34	Р	Н	

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



# APPENDIX I - PHOTOGRAPHS OF TEST SETUP LINE CONDUCTED EMISSION TEST







# **RADIATED EMISSION TEST**







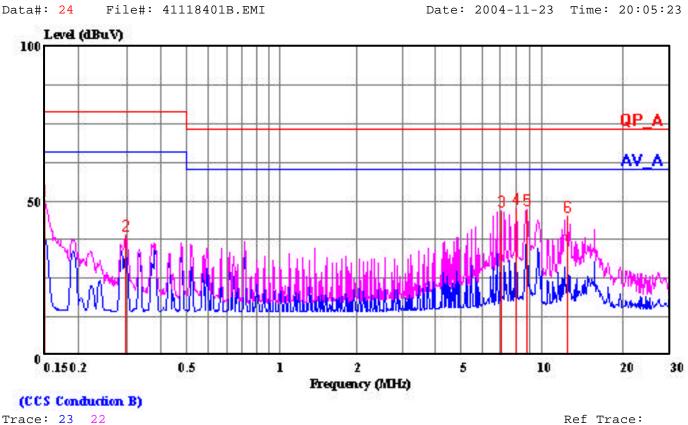
# **APPENDIX II - TEST RESULT OF FINAL DATAS**

**Conducted Emission Plot** 

**Radiated Emission Data** 



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



Ref Trace:

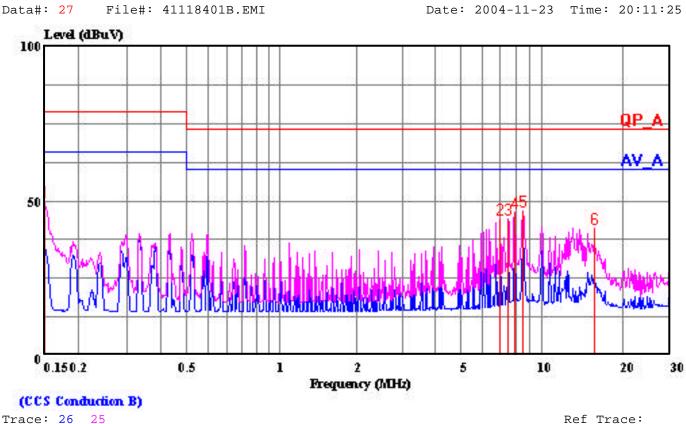
Condition: LINE	
Report No. : 4	1118401
Test Engr. : A	lex Pan
Company : A	AEON Technology Inc.
EUT : A	OP-8150
Test Config : E	UT / ALL PEIRPHERALS
Type of Test: F	CC CLASS A
Mode of Op. : N	ORMAL MODE

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.150	40.24	9.97	50.21	79.00	-28.79	Peak
2	0.297	28.80	9.97	38.77	79.00	-40.23	Peak
3	7.137	36.50	10.13	46.63	73.00	-26.37	Peak
4	8.105	37.30	10.14	47.44	73.00	-25.56	Peak
5	8.916	36.96	10.14	47.10	73.00	-25.90	Peak
б	12.582	34.76	10.23	44.99	73.00	-28.01	Peak

Page: 1



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



Ref Trace:

Condition: NEUTRAL Report No. : 41118401 Test Engr. : Alex Pan : AAEON Technology Inc. Company EUT : AOP-8150 Test Config : EUT / ALL PERIPHERALS Type of Test: FCC CLASS A Mode of Op. : NORMAL MODE

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.150	39.60	9.97	49.57	79.00	-29.43	Peak
2	7.100	33.82	10.13	43.95	73.00	-29.05	Peak
3	7.606	34.02	10.13	44.15	73.00	-28.85	Peak
4	8.062	36.18	10.13	46.31	73.00	-26.69	Peak
5	8.637	36.68	10.14	46.82	73.00	-26.18	Peak
б	15.801	30.94	10.32	41.26	73.00	-31.74	Peak

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Custom Name: AAEON Technology Inc. Model Name: AOP-8150 Test Mode: Normal Mode

Index:

Project No.: 41118401 Engineer Name: Elvis Zeng Date: 2004-11-18

EN55022 Class-A 10m Vertical dBuV/m 80 Limit 70-6 dB Peak 60 QP 50 40 1 30 20 10 MHz 0-100 300 30 EN55022 Class-A 10m Vertical dBuV/m 80 Limit -6 dB 70-Peak 60 QP K 50 40 Ы 12 18 30 20 10 MHz 0-300 1000 Freq(MHz) Peak(dBuV/m) QP(dBuV/m) Margin(dB) Limit(dBuV/m) Reading(dBuV) Factor(dB) Height Degree Comment 109.0000 -10.23 100 0 1 31.29 -8.71 40.00 41.52 2 117.0220 -9.73 33.17 -6.83 40.00 42.90 -9.73 100 0 133.3600 34.23 -5.77 40.00 44.19 -9.96 100 0 3 4 143.0600 34.07 -5.93 40.00 44.37 -10.30 100 0 149.5700 35.29 -4.71 40.00 45.88 -10.59 100 0 5 0 166.6700 -3.81 40.00 47.53 -11.34 100 6 36.19 0 100 7 216.8200 34.80 -5.20 40.00 45.21 -10.41 0 8 240.0400 36.98 -10.02 47.00 45.62 -8.64 100 266.6900 -10.21 47.00 44.30 -7.51 100 0 9 36.79 0 400.0500 -10.31 47.00 40.34 100 10 36.69 -3.65 0 -10.46 47.00 -2.87 11 427.1500 36.54 39.41 100 0 12 474.6800 35.77 -11.23 47.00 37.43 -1.66 100 13 500.0700 36.18 -10.82 47.00 37.27 -1.09 100 0

Site 1

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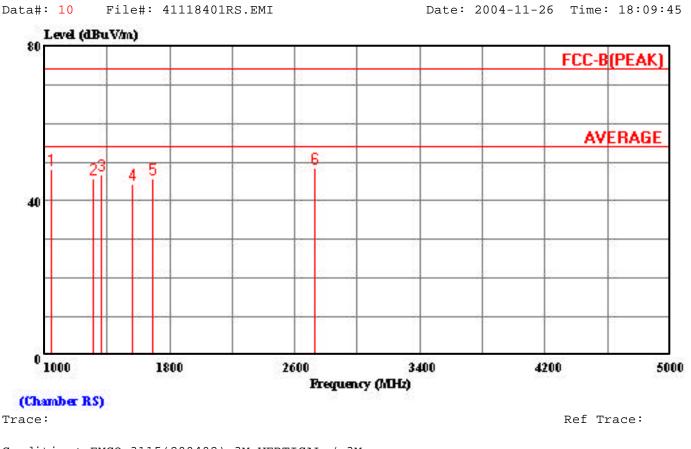
Custom Name: AAEON Technology Inc. Model Name: AOP-8150 Test Mode: Normal Mode Project No.: 41118401 Engineer Name: Elvis Zeng Date: 2004-11-18

Index: EN55022 Class-A 10m Horizontal dBuV/m 80 Limit 70-6 dB Peak 60 QP 50 40 2 1 30 20 10 MHz 0-100 300 30 EN55022 Class-A 10m Horizontal dBuV/m 80 Limit -6 dB 70-Peak 60 QP K 50 40 \$3 30 20 10 MHz 0-300 1000 Freq(MHz) Peak(dBuV/m) QP(dBuV/m) Margin(dB) Limit(dBuV/m) Reading(dBuV) Factor(dB) Height Degree Comment 133.3300 -10.56 100 1 29.44 40.00 39.40 -9.96 0 2 160.0200 30.24 -9.76 40.00 41.30 -11.06 100 0 166.7000 34.70 -5.30 40.00 46.04 -11.34 100 0 3 4 217.3600 32.09 -7.91 40.00 42.46 -10.37 100 0 240.0300 -8.41 47.00 100 0 5 38.59 47.23 -8.64 0 266.7300 -13.87 47.00 -7.51 100 6 33.13 40.64 0 7 300.0600 35.67 -11.33 47.00 42.45 -6.78 100 0 8 375.2100 37.99 -9.01 47.00 42.37 -4.38 100 -10.02 47.00 100 0 9 400.0500 36.98 40.63 -3.65 0 500.0600 38.11 -8.89 47.00 39.20 -1.09 100 10 0 -7.23 47.00 0.41 11 642.0000 39.77 39.36 100 0 12 773.3300 39.21 -7.79 47.00 37.29 1.92 100 13 910.3400 37.04 -9.96 47.00 33.20 3.84 100 0

Site 1



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



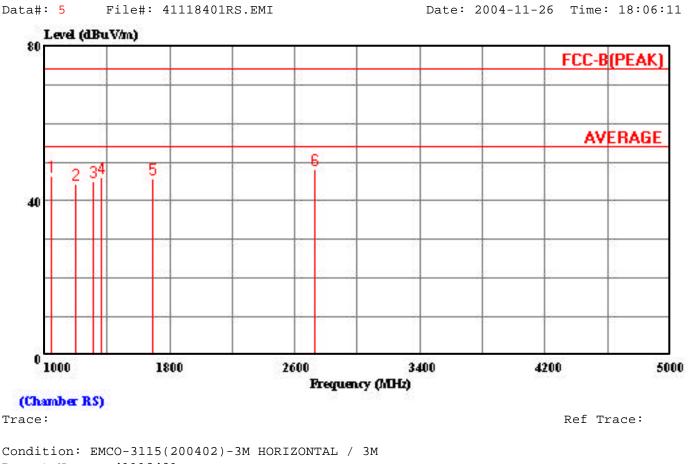
Condition: EMCO-3115(200402)-3M VERTICAL / 3M Report No. : 41118401 Test Engr. : Webber Jung Company : AAEON Technology Inc EUT : AOP-8150 Test Config : EUT / ALL PERIPHERALS Type of Test: FCC CLASS A Mode of Op. : Normal Mode / 1-5GHz : ALL TEST DATA UNDER THE AVERAGE LIMIT

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	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1 2 3 4 5 6	1039.000 1307.500 1364.500 1559.500 1690.000 2730.000	57.90 54.30 55.40 51.70 52.30 49.40	-9.87 -8.73 -8.49 -7.50 -6.67 -0.92	48.03 45.57 46.91 44.20 45.63 48.48	74.00 74.00 74.00 74.00	-25.97 -28.43 -27.09 -29.80 -28.37 -25.52	Peak Peak Peak Peak



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



Report No.	:	41118401					
Test Engr.	:	Webber Jung					
Company	:	AAEON Technology Inc.					
EUT	:	AOP-8150					
Test Config	:	EUT / ALL PERIPHERALS					
Type of Test	:	FCC CLASS A					
Mode of Op.	:	Normal Mode / 1-5GHz					
	:	ALL TEST DATA UNDER THE AVERAGE LIMIT					

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			Factor	Level	Line	Limit	Remark
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
2 119 3 130 4 130 5 169	39.000 98.000 07.500 54.500 90.000	56.30 53.40 53.90 54.70 52.30 49.20	-9.87 -9.20 -8.73 -8.49 -6.67	46.43 44.20 45.17 46.21 45.63 48.27	74.00 74.00 74.00 74.00	-27.57 -29.80 -28.83 -27.79 -28.37 -25.73	Peak Peak Peak Peak