

#### FCC CFR47 PART 15 DIGITAL DEVICE

#### **TEST REPORT**

**FOR** 

**CPU BOARD** 

**MODEL: SBC-676(N)** 

**REPORT NUMBER: 01E9697** 

**ISSUE DATE: August 27, 2001** 

Prepared for

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

Prepared by

COMPLIANCE ENGINEERING SERVICES, INC. No. 199, CHUNG SHENG ROAD HSIN TIEN CITY, TAIPEI, TAIWAN R.O.C. TEL: (02) 2217-0894

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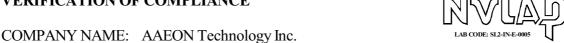
FCC, VCCI, CISPR, CE UL, CSA, TÜV, VDE

U.S.A.: P.O.BOX 612650, SAN JOSE, CA 95161-2650 TAIPEI: P.O.BOX 17-82, HSIN TIEN, TAIWAN, R.O.C.

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#### 1. VERIFICATION OF COMPLIANCE



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

raiwan, R. O. C.

 $CONTACT\ PERSON: Jack\ Chao\ /\ Deputy\ Director$ 

TELEPHONE NO: 8919-1234

MODEL NO/NAME: SBC-676(N)

SERIAL NO:

N/A

DATE TESTED:

August 08, 2001 ~ August 22, 2001

TYPE OF EQUIPMENT:	INFORMATION TECHNOLOGY EQUIPMENT (ITE)
MEASUREMENT DISTANCE:	(x ) 3 METER (x ) 10 METER
TECHNICAL LIMIT:	Class B
FCC RULES:	PART 15
MEASUREMENT PROCEDURE	ANSI C63.4:92 / EN55022
EQUIPMENT AUTHORIZATION PROCEDURE	DECLARATION OF CONFORMITY
MODIFICATION MADE ON EUT	☐ YES   ☑ NO
DEVIATIONS FROM MEASUREMENT	☐ YES (refer to section 21 for comments)
PROCEDURE	⊠NO
RADIATED EMISSION TEST RESULT	-0.33dB @ 229.170 MHz / VERTICAL
CONDUCTED EMISSION TEST RESULT	-14.11dB @ 0.153 MHz / L1

The above equipment was tested by Compliance Engineering Services, Inc. for compliance with the requirements set forth in the FCC CFR 47, PART 15. The results of testing in this report apply to the product/system which was tested only. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Approved By	Acknowledged By
Rick yell	
RICK YEO / EMC MANAGER COMPLIANCE ENGINEERING SERVICES	Jack Chao / Deputy Director AAEON Technology Inc.

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## SYSTEM DESCRIPTION

#### **EUT Test Procedure:**

- 1. Windows 98 Boots System.
- 2. Run Winemc. Exe To Activate All Peripherals And Display "H" Pattern On Monitor Screen.
- 3. Run ReadWrite.Exe to Link EUT and Notebook PC.
  Data Through the EUT and Transmit Between PC Systems and Notebook PC Via RJ45 Cable.

## PRODU INFORMATION

**Housing Type:** N/A

AC 115/230V, 60H/50Hz, 2/1A

**EUT Power Rating:** DC +5V:25A, -5V:0.1A; +12V:10A, -12V:1.0A;

+5Vsb:1.5A; +3.3V:2.0A

**AC power during Test:** AC 110, 60Hz

**Power Supply Manufacturer:** Seventeam

**Power Supply Model Number:** ST-250GL

**AC Power Cord Type:** Unshielded, 1.8m (Detachable)

OSC/Clock Frequencies: Y4= 29.4989MHz, Y2=14.318MHz,

X1=25MHz, X2=25MHz

#### I/O Port of EUT:

I/O PORT TYPES	Q'TY	TESTED WITH
1). USB Port	2	2
2). PS/2 Port	1	1
3). RJ45 Port	2	1
4). DB9 Port	2	2
5). DB15 Port	1	1
6). DB25 Port	1	1

Note: N/A

## SUPPORT EQUIPMENT

## **Host Computer:**

No	Equipment	Model#	Serial#	FCCID	Trade Name
1.	Main Board	BP-208SG-P3	1907208000	N/A	N/A
2.	VGA Chipset	Mobility-M1 AGP-2X	N/A	N/A	ATI RAGE
3.	HDD	DPTA-372050	P760A30A	DOC	IBM
4.	RAM (32MB)	SDRAM 32MB(PC100)	N/A	N/A	N/A
5.	CPU	P-III 700MHz	N/A	N/A	Intel
6.	Chassis	ACR-6414	N/A	N/A	N/A
7.	Power Supply	ST-250GL	N/A	DOC	Seventeam

## **External Peripheral Devices:**

No	Equipment	Model	Serial	FCC	Trade	Data	Power
		#	#	ID	Name	Cable	Cord
1.	Server PC	Valiant 6380iPID	SPL052980024	DOC	KDS	Un-Shielded, 30m (RJ45)	Unshielded, 1.8m
2.	USB Mouse	M-BB48	LZE93851294	DOC	Logitech	Un-Shielded, 1.8m	N/A
3.	Mouse	M-S34	LZE02353706	DZL211029	Logitech	Un-Shielded, 1.8m	N/A
4.	USB Mouse	M-BB46	N/A	DOC	Logitech	Un-Shielded, 1.8m	N/A
5.	Keyboard	6311-TA	N/A	DOC	ACER	Un-Shielded, 1.8m	N/A
6.	Modem	1414	N/A	IFAXDM1414	ACEEX	Shielded, 1.4m	Unshielded, 1.8m
7.	Modem	2496CF	N/A	DOC	Datatronics	Shielded, 1.4m	Unshielded, 1.8m
8.	Monitor	1503FP	N/A	DOC	Dell	Shielded, 1.8m Two Ferrite Core	Unshielded, 1. 8m A Ferrite Core
9.	Printer	2225C+	2927S50444	DSI6XU2225	НР	Shielded, 1.7m	Unshielded, 1.8m
10.	RJ45 Cable	N/A	N/A	N/A	N/A	Un-Shielded, 1.0m	N/A

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

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

## MEASUREMENT PROCEDURE (PRELIMINARY LINE CONDUCTED EMISSION TEST)

- 1) The equipment was set up as per the test configuration to simulate typical actual 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.
- 2) Support equipment, if needed, was placed as per ANSI C63.4.
- 3) All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4.
- 4) The EUT received DC power through Host PC and Line Impedance Stabilization Network (LISN) which supplied power source of 110VAC/ 60Hz and was grounded to the ground plane.
- 5) All support equipment received power from a second LISN supplying power of 110VAC/60Hz, if any.
- 6) The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / 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 Analyzer / 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 Analyzer / Receiver.
- 7) Analyzer / Receiver scanned from 150kHz to 30MHz for emissions in each of the test modes.
- 8) During the above scans, the emissions were maximized by cable manipulation.
- 9) The following test mode(s) were scanned during the preliminary test:

#### Mode(s):

#### 1. Normal Mode (Data No.: 9697E# 48, 56; Date: 08/14/2001)

10) After the preliminary scan, we found the following test mode(s) producing the highest emission level.

#### **Mode(s): 1.**

Then, the EUT configuration and cable configuration of the above highest emission level were recorded for reference of final testing.

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## MEASUREMENT PROCEDURE (FINAL LINE CONDUCTED EMISSION TEST)

- 1) EUT and support equipment was set up on the test bench as per step 10 of the preliminary test.
- 2) 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 A.V. limit in Q.P. mode, then the emission signal was re-checked using an Average detector.
- 3) The test data of the worst case condition(s) was reported on the Summary Data page.

## **Data Sample:**

	Meter		Corrected			Reading	
Freq	Reading	C.F.	Reading	Limits	Margin	Type	Line
(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	(P/Q/A)	(L1/L2)
X.XX	x.xx	X.XX	38.38	56.00	-17.62	P	L1

C.F.(Correction Factor)=Insertion Loss + Cable Loss Corrected Reading = Metering Reading + C.F. Margin=Corrected Reading - Limits

P=Peak Reading L1=Hot L2=Neutral O=Ouasi-peak

A=Average Reading

Comments: N/A

## LINE CONDUCTED EMISSION LIMIT

Frequency	Maximum RF Line Voltage			
	Q.P.	AVERAGE		
150kHz-500kHz	66-56dBuV	56-46dBuV		
500kHz-5MHz	56dBuV	46dBuV		
5MHz-30MHz	60dBuV	50dBuV		

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

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## MEASUREMENT PROCEDURE (PRELIMINARY RADIATED EMISSION TEST)

- 1) The equipment was set up as per the test configuration to simulate typical actual 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 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.
- 2) Support equipment, if needed, was placed as per ANSI C63.4.
- 3) All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4.
- 4) The EUT received DC power source from Host PC to the outlet socket under the turntable. All support equipment received 110VAC/60Hz to power from another socket under the turntable, if any.
- 5) The antenna was placed at 3/10 meter away from the EUT as stated in ANSI C63.4: 1992. The antenna connected to the Analyzer via a cable and at times a pre-amplifier would be used.
- 6) The Analyzer / Receiver quickly scanned from 30MHz to 1000MHz. 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.
- 7) The following test mode(s) were scanned during the preliminary test:

#### Mode:

- 1. Close Case (Data No. 9462F# 14, 15; Date: 08/08/2001)
- 2. Open Case (Data No. 9642F# 17, 19; Date: 08/21/2001)
- 3. 1-5GHz (Data No. 9697G# 11, 14; Date: 08/22/2001)
- 8) After the preliminary scan, we found the following test mode(s) producing the highest emission level.

#### Mode(s): 2.

Then, the EUT and cable configuration, antenna position, polarization and turntable position of the above highest emission level were recorded for reference of final testing.

# MEASUREMENT PROCEDURE (FINAL RAIDATED EMISSION TEST)

- 1) EUT and support equipment were set up on the turntable as per step 8 of the preliminary test.
- 2) The Analyzer / Receiver scanned from 30MHz to 1000MHz. 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.
- 3) 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 Peak reading is presented. If EUT emission level was less-2dB to the limit, then the emission signal was re-checked using a Q.P. detector.
- 4) The test data of the worst case condition(s) was reported on the Summary Data page.

#### **Data Sample:**

	Meter		Corrected			Reading	
Freq	Reading	C.F.	Reading	Limits	Margin	Type	Pol.
(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	P/Q/A	H/V
X.XX	X.XX	X.XX	30.82	37.00	-5.18	P	V

 $\label{eq:correction} \begin{tabular}{l} C.F. (Correction Factor) = Antenna Factor + Cable Loss + Attenuator (3/6 dB) - Amplifier Gain Corrected Reading = Metering Reading + C.F. \\ \end{tabular}$ 

Margin=Corrected Reading – Limits

P=Peak Reading Q=Quasi-peak A=Average Reading H=Horizontal Polarization/Antenna V=Vertical Polarization/Antenna

Comments: N/A

## **RADIATED EMISSION LIMIT**

Frequency (MHz)	Distance (m)	Maximum Field Strength Limit (dBu V/m/ Q.P.)		
30-230	10	30		
230-1000	10	37		

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

## **SUMMARY DATA** (LINE CONDUCTED TEST)

**Location:** Site # E **Model Number:** SBC-676(N)

Tested by: Cliff Lai

Test Model: Mode 1

Test Results: Passed

**Temperature:** 25°C **Humidity:** 64%RH

(The chart below shows the highest readings taken from the final data)

	Frequency Range Investigated (150 kHz TO 30 MHz)						
	Meter		Corrected			Reading	
Freq	Reading	C.F.	Reading	Limits	Margin	Type	Line
(MHz)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dB)	(P/Q/A)	(L1/L2)
0.153	51.69	0.02	51.71	65.82	-14.11	P	L1
0.188	38.98	0.02	39.00	64.11	-25.11	P	L1
0.277	36.23	0.02	36.25	60.90	-24.65	P	L1
10.125	37.13	0.34	37.47	60.00	-22.53	P	L1
0.153	47.19	0.02	47.21	65.82	-18.61	P	L2
0.183	40.93	0.02	40.95	64.33	-23.38	P	L2

C.F.(Correction Factor)=Insertion Loss + Cable Loss

Corrected Reading = Metering Reading + C.F.

Margin=Corrected Reading - Limits

P=Peak Reading L1=Hot Q=Quasi-peak L2=Neutral

A=Average Reading

Comments: N/A

## DATE: August 27, 2001

# SUMMARY DATA (RADIATED EMISSION TEST)

**Model Number:** SBC-676(N) **Location:** Site # E

Tested by: Cliff Lai Polar: Vertical / Horizontal— 10m

**Test Mode:** Mode 2

Test Results: Passed

**Temperature:** 28<sup>o</sup>C **Humidity:** 62%RH

(The chart below shows the highest readings taken from the final data)

	Frequency Range Investigated (30 MHz TO 5000 MHz)						
	Meter		Corrected			Reading	
Freq	Reading	C.F.	Reading	Limits	Margin	Type	Pol.
(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	P/Q/A	H/V
167.139	46.90	-15.50	31.40	36.00	-4.60	P	V
229.170	48.33	-12.66	35.67	36.00	-0.33	Q	V
568.200	45.10	-5.86	39.24	43.00	-3.76	P	V
155.810	50.10	-16.32	33.78	36.00	-2.22	P	Н
200.470	46.30	-13.91	32.39	36.00	-3.61	P	Н
567.910	43.70	-5.86	37.84	43.00	-5.16	P	Н

C.F.(Correction Factor)=Antenna Factor +Cable Loss(+ Attenuator 3dB)- Amplifier Gain

Corrected Reading = Metering Reading + C.F.

Margin=Corrected Reading - Limits

P=Peak Reading H=Horizontal Polarization/Antenna Q=Quasi-peak V=Vertical Polarization/Antenna

A=Average Reading

Comments: N/A

## **TEST EQUIPMENT LIST (EMISSION)**

**Instrumentation:** The following list contains equipment used at Compliance Engineering Services, Inc.. for testing. The equipment conforms to the CISPR 16-1 / ANSI C63.2-1988 Specifications for Electromagnetic Interference and Field Strength Instrumentation from 9kHz to 1.0 / 2.0 GHz.

## **Equipment used during the tests:**

Open Area Test Site: #D

	a resustice.				
				Cal Date	Due Date
Equipment	Manuf.	Model No.	Serial No.		
EMI TEST DISPLAY	R&S	DSAI-D 804.8932.52	827832/001	11/05/00	11/05/01
EMI TEST RF UNIT	R&S	ESBI-RF/1005.4300.52	827832/003	11/05/00	11/05/01
AMPLIFIER	HP	8447D A	2727A05764	05/07/01	05/07/02
ANTENNA	SCHWARZBECK	VULB 9160	3104	05/17/01	05/17/02
CABLE	TIME MICROWAVE	LMR-400	N-TYPE02	07/09/01	07/09/02

**⊘** Open Area Test Site: # E

				Cal Date	Due Date
Equipment	Manuf.	Model No.	Serial No.		
SPECTRUM	H.P.	8566B	2937A06102	06/06/01	06/06/02
ANALYZER					
SPECTRUM	H.P.	85662A	2848A18276	06/06/01	06/06/02
DISPLAY					
QUASI-PEAK	H.P.	85650A	2811A01439	06/07/01	06/07/02
DETECTOR					
AMPLIFIER	H.P.	8447D B	1644A02328	05/07/01	05/07/02
ANTENNA	EMCO	3142	1310	06/30/01	06/30/02
CABLE	TIME MICROWAVE	LMR-400	N-TYPE04	07/09/01	07/09/02
ANTENNA	EMCO	3115	5761	02/23/01	02/23/02
(1-18GHz)					
CABLE	JYEBAO	N30-L142-1	N/A	03/02/01	03/02/02
(1-18GHz)					
AMPLIFIER	MITEQ	NSP2600-44	646455	02/26/01	02/26/02
(1-26GHz)					

#### **◯** Conducted Area Test Site: # E

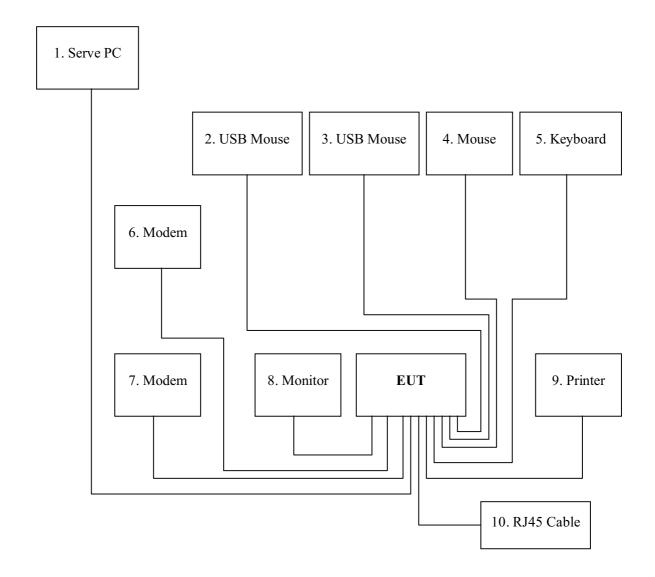
				Cal Date	Due Date
Equipment	Manuf.	Model No.	Serial No.		
TEST	R&S	ESHS20	840455/006	03/15/01	03/15/02
RECEIVER					
LISN	SOLAR	8012-50-R-24BNC	8305114	07/23/01	07/23/02
LISN(EUT)	EMCO	3825/2	1435	01/10/01	01/10/02

The calibrations of the measuring instruments, including any accessories that may effect such calibration, are checked frequently to assure their accuracy. Adjustments are made and correction factors applied in accordance with instructions contained in the manual for the measuring instrument.

## **BLOCK DIAGRAM OF TEST SETUP**

## **System Diagram of Connections between EUT and Simulators**

**EUT:** CPU BOARD Trade Name: N/A **Model Number:** SBC-676(N)



## **APPENDIX 1**

PHOTOGRAPHS OF TEST SETUP (TEST SETUP OF LINE CONDUCTED EMISSION)

## LINE CONDUCTED EMISSION TEST





## **APPENDIX 2**

# PHOTOGRAPHS OF TEST SETUP (TEST SETUP OF LINE RADIATED EMISSION )

## **RADIATED EMISSION TEST (CLOSE CHASSIS)**





## **RADIATED EMISSION TEST (OPEN CHASSIS)**





## **APPENDIX 3**

## PHOTOGRAPHS OF EUT











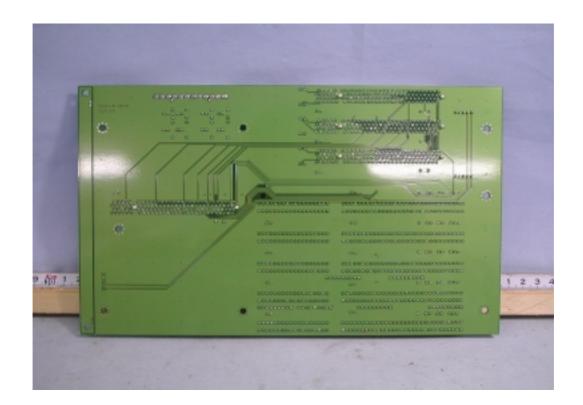












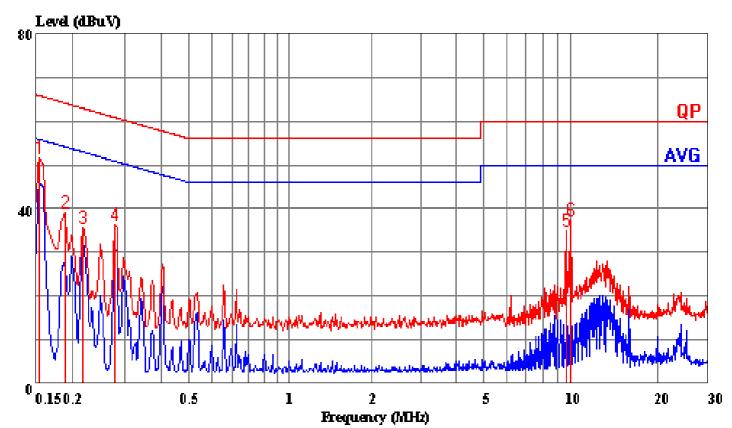
## **APPENDIX 4**

# CONDUCTED EMISSION PLOT RADIATED EMISSION DATA

No. 199, Chung Sheng Road, Hsin Tien City, Taipei, Taiwan, R.O.C.

Tel:02-2217-0894 Fax:02-2217-1254

Data#: 57 File#: 9697e.emi Date: 2001-08-14 Time: 11:59:20



## (CES Conducted)

Trace: 55 56 Ref Trace:

Condition: LINE

Report No. : 01E9697 Test Engr. : CLIFF LAI

Company : AAEON Technology Inc. EUT : SBC-676(N) Test Config : EUT/ ALL PERIPHERALS

Type of Test: FCC CLASS B W/ EN 55022 CLASS B LIMIT

Mode of Op. : NORMAL MODE

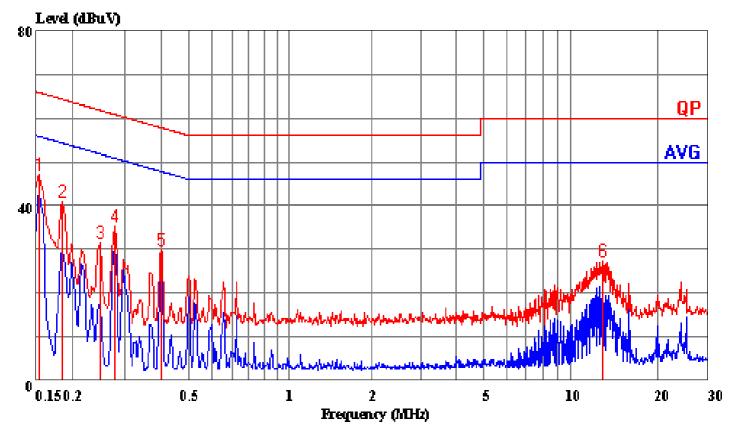
Page: 1

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1 2 3	0.153 0.188 0.217	51.69 38.98 35.71	0.02 0.02 0.02	51.71 39.00 35.73	64.11	-14.11 -25.11 -27.19	Peak
4 5	0.277 9.757	36.23 34.53	0.02	36.25 34.87	60.90 60.00	-24.65 -25.13	Peak Peak
6	10.125	37.13	0.34	37.47	60.00	-22.53	Peak

No. 199, Chung Sheng Road, Hsin Tien City, Taipei, Taiwan, R.O.C.

Tel:02-2217-0894 Fax:02-2217-1254

Data#: 58 File#: 9697e.emi Date: 2001-08-14 Time: 11:59:52



## (CES Conducted)

Trace: 47 48 Ref Trace:

Condition: NEUTRAL
Report No. : 01E9697
Test Engr. : CLIFF LAI

Company : AAEON Technology Inc. EUT : SBC-676(N) Test Config : EUT/ ALL PERIPHERALS

Type of Test: FCC CLASS B W/ EN 55022 CLASS B LIMIT

Mode of Op. : NORMAL MODE

Page: 1

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1 2 3	0.153 0.183 0.248	47.19 40.93 31.44	0.02 0.02 0.02	47.21 40.95 31.46	64.33	-18.61 -23.38 -30.36	Peak
4	0.277	35.33	0.02	35.35	60.90	-25.55	Peak
5	0.400	29.84	0.05	29.89	57.86	-27.97	Peak
6	13.057	27.11	0.38	27.49	60.00	-32.51	Peak



Data#: 17 File#: 9462f.EMI Date: 2001-08-21 Time: 15:49:48

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CCS E-Site

Condition: VERTICAL / 10m Report No. : 01E9697
Test Engr. : CLIFF LAI
Company : AAEON Technology Inc.
EUT : SBC-676(N)

Test Config : EUT/ ALL PERIPHERALS

Type of Test: FCC CLASS B W/ EN 55022 CLASS B LIMIT Mode of Op. : Open Chassis W/ Limit+6dB

		Read			Limit	Over	
	Freq	Level	Factor	Level	Line	Limit	Remark
	MHz	dBuV	dB	dBuV/m	dBuV/m	dВ	
-	26 200	40 20	11 05	00 55	26.00		D 1
1	36.320	40.30	-11.75	28.55	36.00	-7.45	Реак
2	133.580	45.20	-18.15	27.05	36.00	-8.95	Peak
3	167.139	46.90	-15.50	31.40	36.00	-4.60	Peak
4	229.170	48.33	-12.66	35.67	36.00	-0.33	QP
5	250.330	48.00	-11.74	36.26	43.00	-6.74	Peak
6	300.690	48.40	-11.49	36.91	43.00	-6.09	Peak
7	325.720	44.90	-10.76	34.14	43.00	-8.86	Peak
8	501.400	41.80	-7.55	34.25	43.00	-8.75	Peak
9	568.200	45.10	-5.86	39.24	43.00	-3.76	Peak



Data#: 19 File#: 9462f.EMI Date: 2001-08-21 Time: 16:04:24

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CCS E-Site

Condition: HORIZONTAL / 10m

Report No. : 01E9697

Test Engr. : CLIFF LAI

Company : AAEON TEchnology Inc.

EUT : SBC-676(N)

Test Config : EUT/ ALL PERIPHERALS

Type of Test: FCC CLASS B W/ EN 55022 CLASS B LIMIT Mode of Op. : Open Chassis W/ Limit+6dB

	Freq			Level			Remark
	MHz	dBuV	ав	dBuV/m	UBUV/III	dB	
1	42.410	41.50	-14.10	27.40	36.00	-8.60	Peak
2	58.480	44.50	-18.42	26.08	36.00	-9.92	Peak
3	136.610	47.70	-17.65	30.05	36.00	-5.95	Peak
4	155.810	50.10	-16.32	33.78	36.00	-2.22	Peak
5	167.060	43.70	-15.50	28.20	36.00	-7.80	Peak
6	200.470	46.30	-13.91	32.39	36.00	-3.61	Peak
7	272.020	49.20	-11.65	37.55	43.00	-5.45	Peak
8	501.140	41.60	-7.55	34.05	43.00	-8.95	Peak
9	567.910	43.70	-5.86	37.84	43.00	-5.16	Peak



Date: 2001-08-08 Time: 13:59:57

Data#: 15 File#: 9462f.EMI

CCS E-Site

Condition: VERTICAL Report No. : 01E9697
Test Engr. : CLIFF LAI
Company : AAEON Technology Inc.
EUT : SBC-676(N)

Test Config : EUT/ ALL PERIPHERALS
Type of Test: EN 55022 CLASS B
Mode of Op. : NORMAL MODE

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV/m	$\overline{\text{dBuV/m}}$	dB	
1	33.432		-10.93		30.00	-2.87	~
2	37.520	36.60	-12.07	24.53	30.00	-5.47	Peak
3	56.780	39.80	-17.92	21.88	30.00	-8.12	Peak
4	84.370	42.10	-19.61	22.49	30.00	-7.51	Peak
5	111.640	41.60	-18.38	23.22	30.00	-6.78	Peak
6	116.260	40.40	-18.58	21.82	30.00	-8.18	Peak
7	167.030	38.80	-15.50	23.30	30.00	-6.70	Peak
8	183.800	35.10	-14.30	20.80	30.00	-9.20	Peak
9	243.420	39.10	-12.03	27.07	37.00	-9.93	Peak
10	266.520	36.10	-11.67	24.43	37.00	-12.57	Peak
11	300.680	42.80	-11.49	31.31	37.00	-5.69	Peak
12	400.910	37.40	-8.51	28.89	37.00	-8.11	Peak
13	409.260	33.10	-8.44	24.66	37.00	-12.34	Peak
14	567.930	38.10	-5.86	32.24	37.00	-4.76	Peak
15	619.760	31.70	-4.56	27.14	37.00	-9.86	Peak



Data#: 14 File#: 9462f.EMI Date: 2001-08-08 Time: 14:42:09

CCS E-Site

Condition: HORIZONTAL Report No. : 01E9697
Test Engr. : CLIFF LAI
Company : AAEON Technology Inc.
EUT : SBC-676(N)

Test Config : EUT/ ALL PERIPHERALS
Type of Test: EN 55022 CLASS B
Mode of Op. : NORMAL MODE

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	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	$\overline{\text{dBuV/m}}$	$\overline{\text{dBuV/m}}$	dB	
1 2 3 4	61.860 87.070 116.940 120.320	43.70 42.70	-19.03 -19.31 -18.63 -18.84	20.07 24.39 24.07 21.76	30.00 30.00 30.00 30.00	-9.93 -5.61 -5.93 -8.24	Peak
5 6 7 8	132.310 157.520 167.090 200.470	40.80	-18.32 -16.13 -15.50 -13.91	20.88 24.67 20.60 27.09	30.00 30.00 30.00 30.00	-9.12 -5.33 -9.40 -2.91	Peak Peak
9 10 11 12 13	243.390 300.690 334.070 359.190 400.950 567.980	44.80 41.90 38.80 39.00 33.10 33.20	-12.07 -11.49 -10.50 -9.74 -8.51 -5.86	32.73 30.41 28.30 29.26 24.59 27.34	37.00 37.00 37.00 37.00 37.00	-4.27 -6.59 -8.70 -7.74 -12.41 -9.66	Peak Peak Peak Peak



Date: 2001-08-22 Time: 09:56:35

Data#: 11 File#: 9697g.emi

CES Chamber

Condition: VERTICAL / 3m Report No. : 01E9697
Test Engr. : VINCE CHIANG
Company : AAEON Technology Inc.
EUT : SBC-676 (N)

Test Config : EUT /ALL PERIPHERALS
Type of Test: FCC CLASS B
Mode of Op. : Open Chassis/1-5GHz

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								Pa
		Read			Limit	Over		
	Freq	Level	Factor	Level	Line	Limit	Remark	
	MHz	dBuV	dВ	dBuV/m	dBuV/m	dВ		
1	1000.168	65.50	-10.38	55.12	74.00	-18.88	Peak	
2	1000.168	37.38	-10.38	27.00	54.00	-27.00	Average	
3	1069.488	71.16	-9.96	61.20	74.00	-12.80	Peak	
4	1069.488	34.28	-9.96	24.32	54.00	-29.68	Average	
5	1429.200	67.08	-7.94	59.14	74.00	-14.86	Peak	
6	1429.200	34.54	-7.94	26.60	54.00	-27.40	Average	
7	1598.150	64.52	-6.93	57.59	74.00	-16.41	Peak	
8	1598.150	42.82	-6.93	35.89	54.00	-18.11	Average	
9	1856.928	34.32	-5.35	28.97	54.00	-25.03	Average	
10	1856.950	53.91	-5.35	48.56	74.00	-25.44	Peak	
11	2125.000	59.64	-4.01	55.63	74.00	-18.37	Peak	
12	2125.000	38.52	-4.01	34.51	54.00	-19.49	Average	



Data#: 14 File#: 9697g.emi Date: 2001-08-22 Time: 10:12:53

CES Chamber

Condition: HORIZONTAL / 3m Report No. : 01E9697
Test Engr. : VINCE CHIANG
Company : AAEON Technology Inc.
EUT : SBC-676 (N)

Test Config : EUT /ALL PERIPHERALS
Type of Test: FCC CLASS B
Mode of Op. : Open Chassis/1-5GHz

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	Freq MHz	Read Level dBuV	Factor dB	$\frac{\text{Level}}{\text{dBuV/m}}$		Over Limit ———————————————————————————————————	Remark
1	1000.750	60.55	-10.38	50.17	74.00	-23.83	Peak
2	1000.750	33.65	-10.38	23.27	54.00	-30.73	Average
3	1065.150	65.02	-9.98	55.04		-18.96	_
4	1065.150	38.45	-9.98	28.47	54.00	-25.53	Average
5	1428.950	57.17	-7.94	49.23	74.00	-24.77	Peak
6	1428.950	33.65	-7.94	25.71	54.00	-28.29	Average
7	1595.650	61.78	-6.96	54.82	74.00	-19.18	Peak
8	1595.650	38.64	-6.96	31.68	54.00	-22.32	Average
9	1862.400	48.88	-5.33	43.56	74.00	-30.44	Peak
10	1862.400	33.41	-5.33	28.09	54.00	-25.91	Average
11	2122.700	52.35	-4.02	48.33	74.00	-25.67	Peak
12	2122.700	36.48	-4.02	32.46	54.00	-21.54	Average