AOP-8060WT (MPC-5320)

With CFD

Environment Test Report

Report NO: 05P020023

Issued by:	Rex-Chang	/	*06/17/2005*
	Test Engineer		**Date**
Reviewed by:	Wenyuan Yang	/	*06/17/2005*
	Manager		**Date**

Num	Item	Spec
1.	Control Box:	AOP- 8060WT / Fanless Operator Panel PC
	1. Main Board	AAEON MPC-5320 Rev. A1.1 (BIOS: AOP- 8060 BIOS Rev: 0.4)
	2.LCD	LG. Philips 6.4” TFT LB064V02-A1 640*480 18 bit
	3.Inverter	ATBEL AV1-01L5V6
	4.Touch Screen	EEILIY 6.4” 1TO05S0934.4
	5. CPU	Onboard SiS CPU.BGA.686P.SiS552.200MHz.1.8V
	6. Memory	Onboard 128MB Hynix HY57V561620CTP-H (PC-133)
	7. CFD	SanDisk 64MB
	8. Adapter	EDAC 100/240V.12V.5A.60W.DC.With Lock EA1050A (13)

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Temperature cycle test

Report NO. 04P020023

Test Date: 06-12~16-2005

Test Product: AOP-8060WT (MPC-5320 Rev: A1.1) Fanless Operator Panel PC.

Test Site: AAEON QA Internal Lab.

Performed By: Rex Chang

Test Standard: Reference IEC68-2-14 Testing procedures
Test N: Change of temperature Test

Test Equipment:

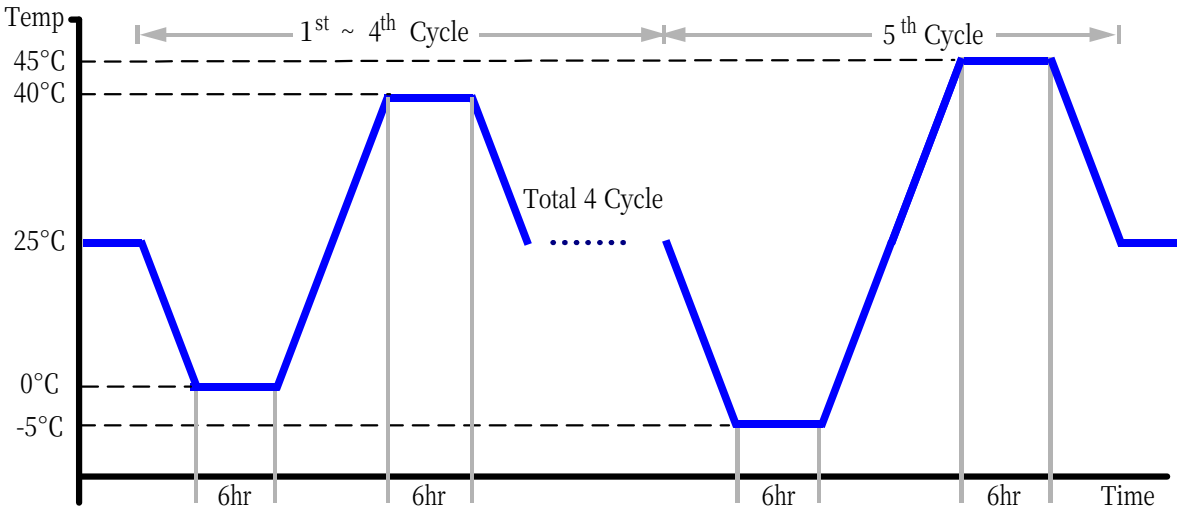
Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D4H+-100
Date of Calibration: 05/23/04
Serial Number: 1241

Temperature Measurement:

20 Channel Thermal Recorder:
YOKOGAWA Inc,
Model: DA100-13-1D
Date of Calibration: 12/25/04
Serial Number: 12A323190

Test Condition:

1. Test Low Temperature: 0°C (1~4 cycle)
   -5°C (5th cycle)
2. Test High Temperature: 40°C (1~4 cycle)
   45°C (5th cycle)
3. Test dwell time: 6Hrs
4. Temperature slope: 2°C/min
5. Test cycle: 5 cycle
6. Test Environment Curve:



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Temperature cycle test

Test O.S. / Software:

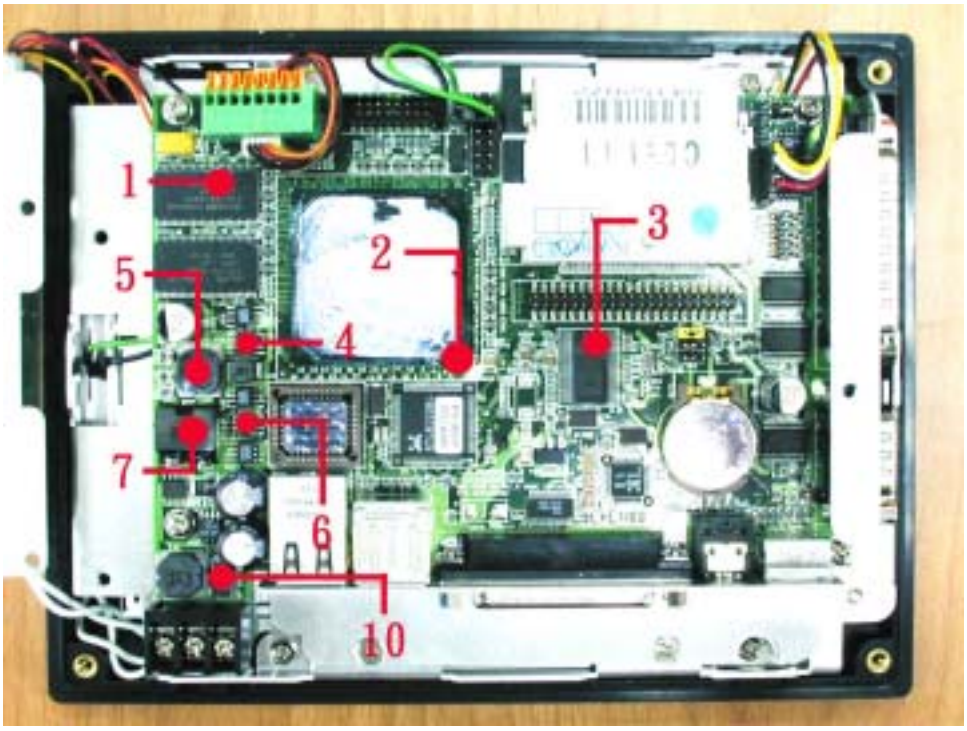
Windows CE / Run Media Player (Non-Audio)

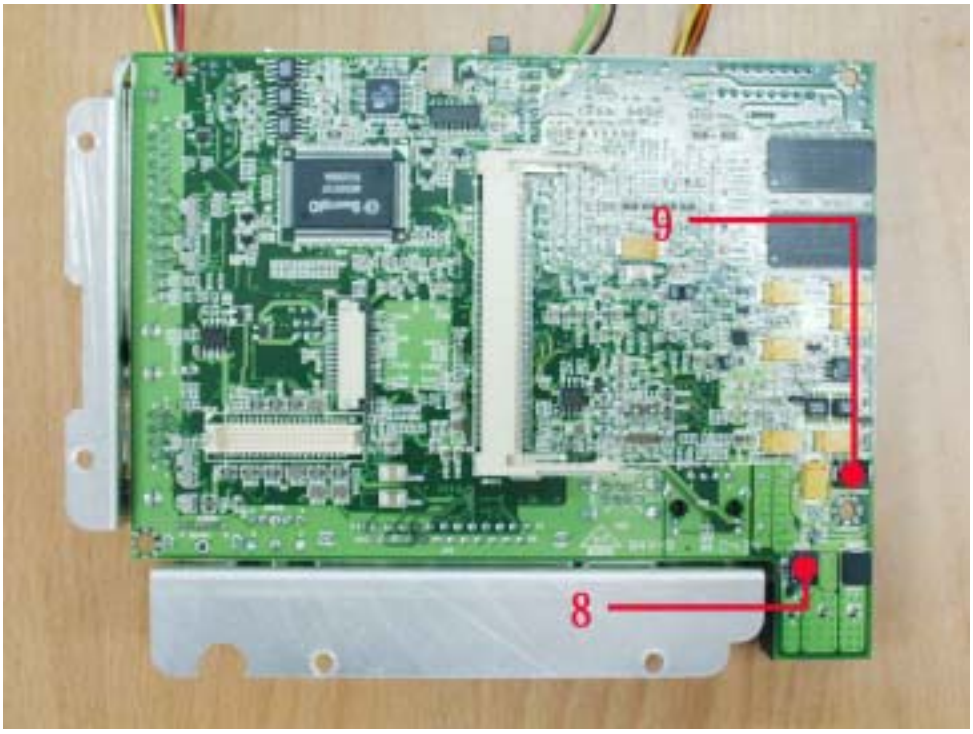
Sample Configuration & Quantity Under Test:

Using one AOP-8060WT (MPC-5320 A1.1) Embedded Control PC

Temperature Recorder:

Measuring Accelerometer Position:





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Temperature cycle test

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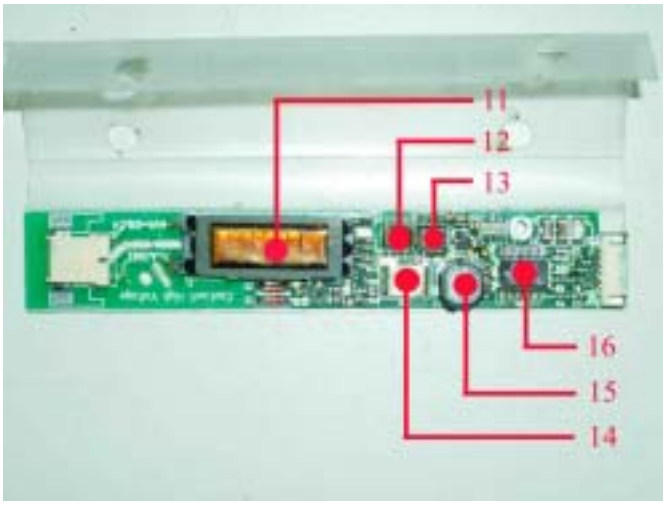

Thermal profile data:

AOP-8060WT (MPC-5320 A1.1) Fanless Operator Panel PC

Point / Temp. Stage(℃)	Spec	45	40	25	0	-5
1. U5 IC.SMD SDRAM.8M*16 PC-133 TSOPII 54P 3.3V. Hynix HY57V561620CTP-H	100	79.9	74.9	59.9	34.9	29.9
2. U32 SiS CPU.BGA.686P.SiS552.200MHz.1.8V	105	75.9	70.9	55.9	30.9	25.9
3. U1 IC.SMD.SSOP 48P.Clock Generator.ICS.ICS951901AF	115	82.2	77.2	62.2	37.2	32.2
4. U28 PWR.SMD SO-8.P-Channel 30V MOSFET.APEC.AP4435M	125	81.1	76.1	61.1	36.1	31.1
5. L48 INDUCTORS.3.3uH 6.5A.20%.SMD 2pin. SMTDR105-3R3M	125	81.6	76.6	61.6	36.6	31.6
6. U30 IC.SMD SOP.8Pin Switching PWM Controller.Intersil.ISL6520A	100	83.7	78.7	63.7	38.7	33.7
7. L47 INDUCTORS.3.2uH 12.8A.20%.SMD 3pin .CEP125U-3R2M	115	83.3	78.3	63.3	38.3	33.3
8. D6 Diode.SMD.DO-214AB.Transient Voltage Suppressor.CONCORD.SMCJ28A	125	71.0	66.0	51.0	26.0	21.0
9. D7 D Schottky.60V.3A.SMD.WILLAS.SK36C	125	84.8	79.8	64.8	39.8	34.8
10.D5 D Schottky.60V.3A.SMD.WILLAS.SK36C	125	77.6	72.6	57.6	32.6	27.6
11. Inverter - T1	N/A	72.2	67.2	52.2	27.2	22.2
12. Inverter - U1	N/A	81.3	76.3	61.3	36.3	31.3
13. Inverter - U2	N/A	79.6	74.6	59.6	34.6	29.6
14. Inverter - CR1	N/A	77.3	72.3	57.3	32.3	27.3
15. Inverter - L1	N/A	77.2	72.2	57.2	32.2	27.2
16. Inverter - CPU	N/A	71.9	66.9	51.9	26.9	21.9
17. Chamber Air Temperature		45.1	40.1	25.1	0.1	-4.9

Note: The description in red states which temperature is over the specification of the device.

Sample Configuration & Quantity Under Test:

Quantity: 1 (AOP-8060WT Fanless Operator Panel PC)

Test Result:

The system structure doesn't deformation; Function is OK during system test.

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High temperature storage test

Report NO. 04P020023

Test Date: 05-21~23-2005

Test Product: AOP-8060WT (MPC-5320 Rev: A1.1) Fanless Operator Panel PC.

Test Site: AAEON QA Internal Lab.

Performed By: Rex Chang

Test Standard: Reference IEC 68-2-2 Testing procedures
Test Bb: Dry Heat Test (Non-operation)

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D4H+-100
Date of Calibration: 05/24/04
Serial Number: 1241

Testing Item:

1. Test Temperature: 60℃
2. Test Times: 48Hrs
3. Test Software: Windows CE / Run Media Player from CFD
4. Test Environment Curve:

Sample Configuration & Quantity Under Test:
Quantity: 1 (AOP-8060WT Fanless Operator Panel PC)

Test Result:
The system structure doesn't have any deformation; All functions are OK after high temperature storage test.

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Low temperature storage test

Report NO. 04P020023

Test Date: 05-19~21-2005

Test Product: AOP-8060WT (MPC-5320 Rev: A1.1) Fanless Operator Panel PC.

Test Site: AAEON QA Internal Lab.

Performed By: Rex Chang

Test Standard: Reference IEC 68-2-1
Testing procedures Test Ab: Cold Test (Non-operation)

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D4H+-100
Date of Calibration: 05/24/04
Serial Number: 1241

Testing Item:

1. Test Temperature: -20℃
2. Test Times: 48Hrs
3. Test Software: Windows CE / Run Media Player from CFD
4. Test Environment Curve:

Sample Configuration & Quantity Under Test:

Quantity: 1 (AOP-8060WT Fanless Operator Panel PC)

Test Result:

The system structure doesn't have any deformation; All functions are OK after low temperature storage test.

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Humidity test

Test Date: 05-20~22-2005

Test Product: AOP-8060WT (MPC-5320 Rev: A1.1) Fanless Operator Panel PC.

Test Site: AAEON QA Internal Lab.

Performed By: Rex Chang

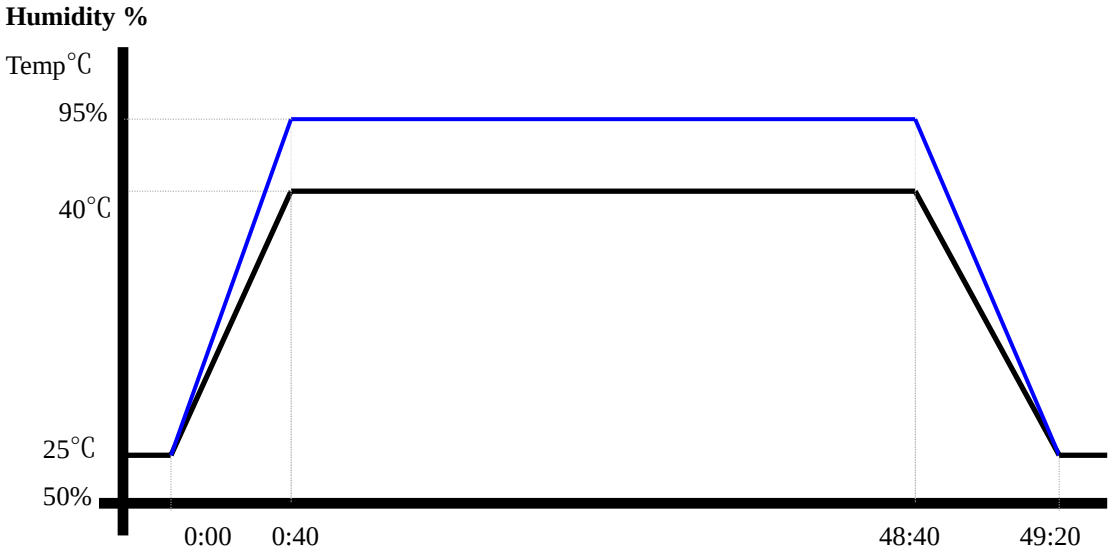
Test Standard: Reference IEC 68-2-3 Testing procedures
Test Ca: Damp heat, steady state (Non-operation)

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D4H+-100
Date of Calibration: 10/17/03
Serial Number: 2582

Testing Item:

1. Test Temperature: 40℃
2. Test Humidity: 95%RH
3. Test Times: 48Hrs
4. Test Software: Windows CE / Run Media Player from CFD
5. Test Environment Curve:



Sample Configuration & Quantity Under Test:
Quantity: 1 (AOP-8060WT Fanless Operator Panel PC)

Test Result:

The system structure doesn't have any deformation; All functions are OK after humidity test.

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Cold Start test

Test Date: 05-23~24-2005

Test Product: AOP-8060WT (MPC-5320 Rev: A1.1) Fanless Operator Panel PC.

Test Site: AAEON QA Internal Lab.

Performed By: Rex Chang

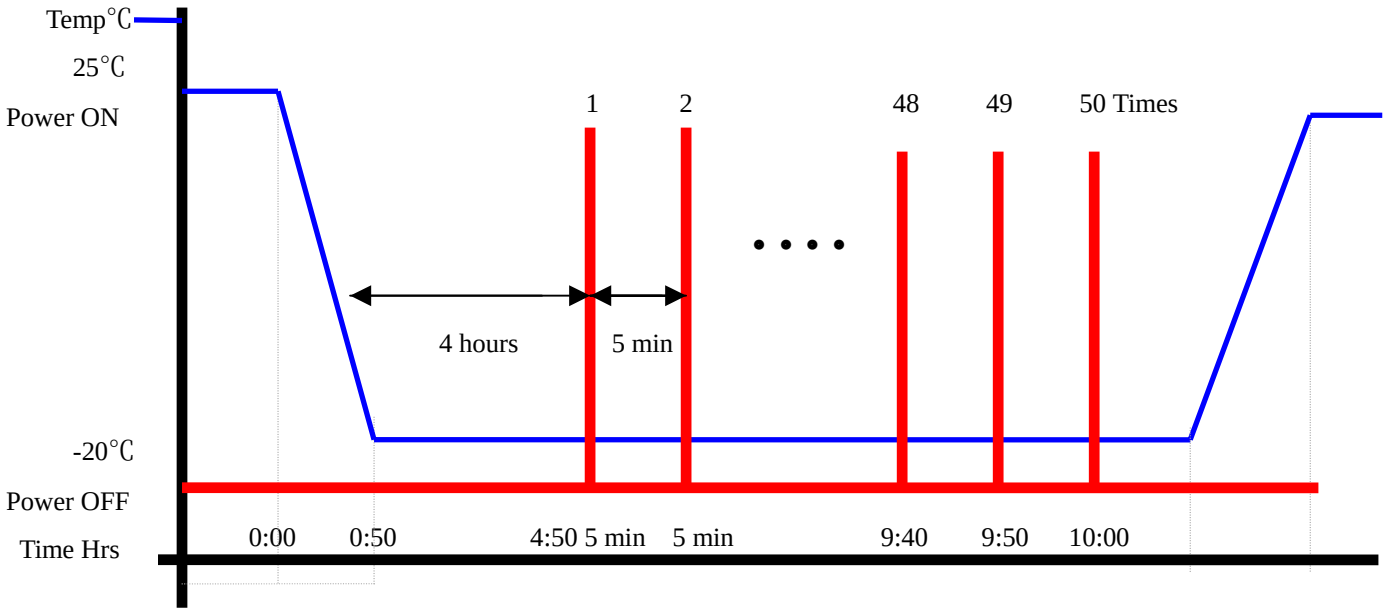
Test Standard: Reference IEC 68-2-1 Testing procedures
Test Ab: Cold Test

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: TS-F3L+-100
Date of Calibration: 04/02/04
Serial Number: 1467

Test Condition:

1. Test Temperature: -20℃
2. Test Times: 5 Hours or 50 times of ON/OFF
   (1) Power off for 4 hours before 1'st power on. Then once complete boot, power off immediately.
   (2) After 5 min later power on again and wait until booting is completed.
   (3) Repeat (2) for around 4:50
   (4) Power off then wait for 5 min before final power on operation.
3. Number of test: 50 times
4. Test Software: Windows CE from CFD
5. Test Environment Curve:



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Cold Start test

Sample Configuration & Quantity Under Test:

Quantity: 1 (AOP-8060WT Fanless Operator Panel PC)

Test Result:

Passed.

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