FWS-7300

Socket CPU

Environment Test Report

Report NO: 08I020020

Issued by:	Rex-Chang	/	*10/31/2008*
	Test Engineer		**Date**
Reviewed by:	Wenyuan Yang	/	*10/31/2008*
	Manager		**Date**

Test item list

Test Configuration:

Num	Item	Spec
1.	Mounting Chassis:	FWS-7300
	1. PCB / CPU	FWB-7300 A1.0 (BIOS: 0.B) / Intel Pentium M 1.8GHz
	3. Memory	Transcend DDR2-667 1GB / ELPIDA E5108AJBG-6E-E * 1 ADATA DDR2-667 1GB / ADATA AD29608A8A-3EG80818 * 1
	4. CFD	PQI 32MB (for DOS mode Power on/off test)
	5. SATA HDD	Seagate ST3160815AS / 160GB
	6. Test Software	Windows XP / Run PassMark Burn In Test 4.0 Pro
2.	Power Supply	FSP FSP150-50LE

AAEON Technology Inc.
5F, No.135, Lane 235, Pao Chiao Rd.,
Hsin-Tien City, Taipei, Taiwan, R.O.C.
TEL: +886-2-8919-1234
FAX: +886-2-8919-1056
http://www.aaeon.com.tw

Temperature rise test

Test Date: 10-24-2008

Test Product: FWS-7300

Test Site: AAEON QA Internal Lab.

Test Standard: Reference EN 61131-2(94), UL508 (94)

Temperature Measurement:

40 Channel Thermal Recorder:
YOKOGAWA Inc,
Model: DA100-13-1D
Date of Calibration: 12/13/07
Serial Number: 12A323190

Test Condition:

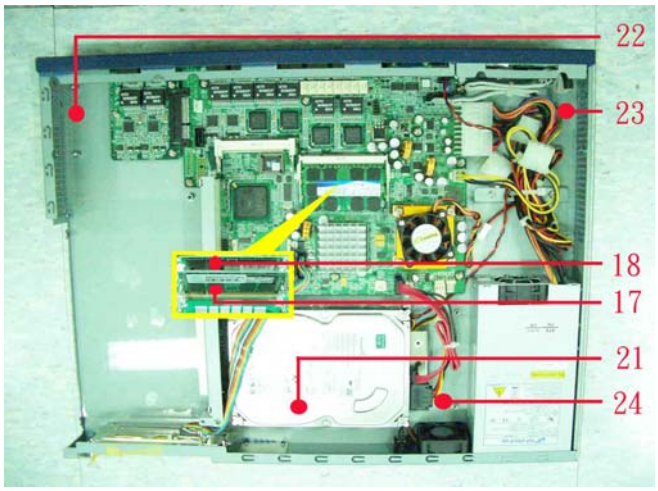
Ambient temperature: 40dC
Continuous running till thermal stability (within less than 1℃)

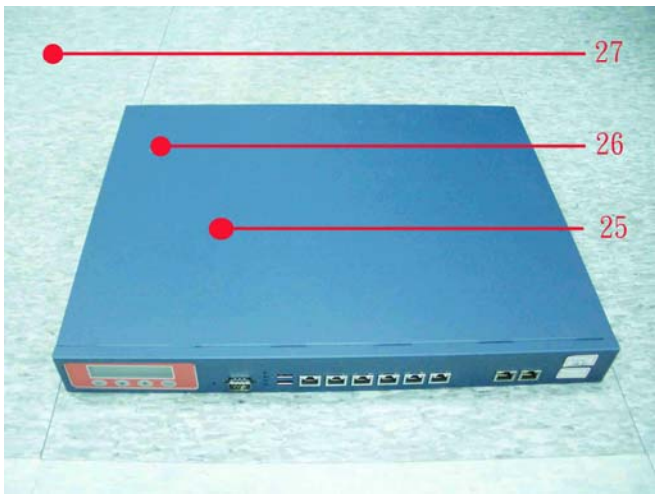
Test Software:

Windows XP / Run PassMark Burn In Test 4.0 Pro

Terminal Recorder:

Measuring Thermal Couple Position：





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Temperature rise test

Thermal profile data:

FWS-7300

Point / Temp. Stage(℃)	Spec	40	25
FWB-7300			
1. CPU: Intel Celeron M / 600MHz	100	66.2	51.2
2. U3 - (TF) Chipset Alviso 910GMLE.Intel.QG82910GMLE SLA9L	99	68.3	53.3
3. U8 - (TF) Chipset ICH6M.Intel.NH82801FBM SL89K B2	95	80.5	65.5
4. U12 - (TF) IMVP4 Single Phase PWM.Intersil.ISL6218CVZ	100	57.7	42.7
5. L12 - (TF) COIL.1.2uH.TRIO.LG-12AM11C03	105	57.1	42.1
6. U21 - (TF) Power Controller.for Dual Channel DDR.Intersil.ISL6537CRZ	100	54.4	39.4
7. U20 - (TF) REG.SMD.TO-263 5A Linear Regulator.ATC.AP-1084KLA	125	67.4	52.4
8. U18 - (TF) GigaBit Ethernet Chipset.INTEL.LU82541PI	95	60.7	45.7
9. U19 - (TF) GigaBit Ethernet Chipset.INTEL.LU82541PI	95	61.8	46.8
10.U22 - (TF) GigaBit Ethernet Chipset.INTEL.LU82541PI	95	61.6	46.6
11.U23 - (TF) GigaBit Ethernet Chipset.INTEL.LU82541PI	95	62.8	47.8
12.U24 - (TF) PCI-E GigaBit Ethernet Chipset.Intel.WG82574L	95	66.7	51.7
13.U25 - (TF) PCI-E GigaBit Ethernet Chipset.Intel.WG82574L	95	65.3	50.3
14.BC78 - (TF) MCC.0.1uF.16V.10%.X7R.0402 SMD	125	59.6	44.6
15.U11 - (TF) CLOCK GENERATOR.ICS.ICS954206AGLFT	95	83.4	68.4
16.U13 - (TF) Clock Output Buffer.ICS.ICS9112M-16LF-T	95	65.2	50.2
17. Memory - 1	70	57.8	42.8
18. Memory - 2	70	58.6	43.6
PER-C34L			
19. U1 - (TF) PCI-E GigaBit Ethernet Chipset.Intel.WG82574L	95	66.2	51.2
20. U3 - (TF) PCI-E GigaBit Ethernet Chipset.Intel.WG82574L	95	64.6	49.6
21.HDD	60	50.9	35.9
22.Control Box Internal Air Temperature - 1	N/A	40.2	25.2
23.Control Box Internal Air Temperature - 2	N/A	40.6	25.6
24.Power Supply - Ambient Temperature	50	51.5	36.5
25.Control Box External Surface - 1	N/A	48.1	33.1
26.Control Box External Surface - 2	N/A	42.5	27.5
27.Chamber Air Temperature	N/A	40.1	25.1
Any Tm value showed in red words which meaning the value over the Tc + 5 degree C of this device specification.			

Sample Configuration & Quantity Under Test:

Quantity: 1 (FWS-7300)

Test Result:

No problem was found during the temperature rise operation test.

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Temp./humidity power on/off test

Test Date: 07-11~12-2008

Test Product: FWB-7300 A0.1

Test Site: AAEON QA Internal Lab.

Test Standard: Reference IEC 68-2-30 Testing procedures
Test Db: Damp Heat Test

Test Equipment:

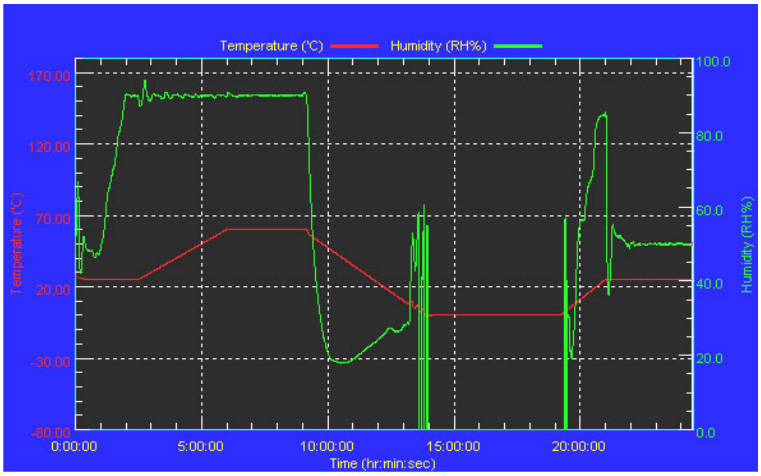
Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D7S-100+1 N2
Date of Calibration: 12/13/07
Serial Number: 3898

Temperature & Humidity Power On/Off Test:

Testing Specification:

Step	Temperature (℃)	Humidity (%RH)	Duration (HH:MM)
1	25	50	00:30
2	25	50	00:30
3	25	90	01:00
4	25	90	00:30
5	60	90	03:30
6	60	90	03:00
7	0	0	04:50
8	0	0	05:23
9	25	50	01:47
10	25	50	03:00

Test Curve:



Sample Configuration & Quantity Under Test:

Quantity: 1 (FWB-7300)

Test Result:

No problem was found during the temperature & humidity power on/off test.

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Temperature cycle test

Test Date: 10-20~22-2008

Test Product: FWS-7300

Test Site: AAEON QA Internal Lab.

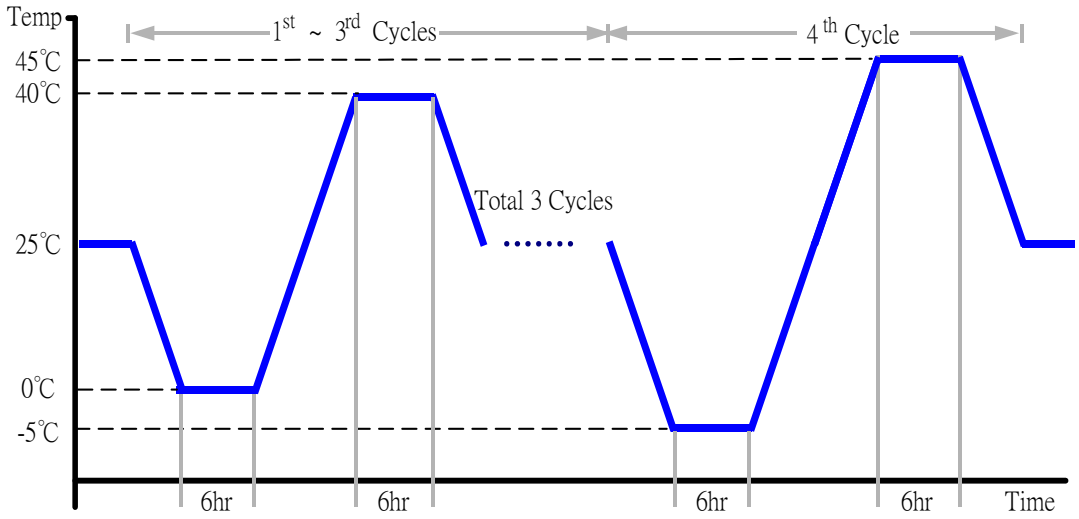
Test Standard: Reference IEC68-2-14 Testing procedures
Test N: Change of temperature Test

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-A4C-100
Date of Calibration: 06/18/08
Serial Number: 3188

Test Condition:

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



Sample Configuration & Quantity Under Test:

Quantity: 1 (FWS-7300)

Test Result:

No problem was found during the temperature operation cycle test.

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High temperature storage test

Test Date: 10-15~17-2008

Test Product: FWS-7300

Test Site: AAEON QA Internal Lab.

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-A4C-100
Date of Calibration: 06/18/08
Serial Number: 3188

Testing Item:

1. Test Temperature: 60℃
2. Test Times: 48Hrs
3. Test Software: Windows XP / Run PassMark Burn In Test 4.0 Pro
4. Test Environment Curve:

Sample Configuration & Quantity Under Test:
Quantity: 1 (FWS-7300)

Test Result:

No problem was found after the high temperature storage test.

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Low temperature storage test

Test Date: 10-10~12-2008

Test Product: FWS-7300

Test Site: AAEON QA Internal Lab.

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-A4C-100
Date of Calibration: 06/18/08
Serial Number: 3188

Testing Item:

1. Test Temperature: -20℃
2. Test Times: 48Hrs
3. Test Software: Windows XP / Run PassMark Burn In Test 4.0 Pro
4. Test Environment Curve:

Sample Configuration & Quantity Under Test:
Quantity: 1 (FWS-7300)

Test Result:
No problem was found after the low temperature storage test.

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Humidity test

Test Date: 10-17~19-2008

Test Product: FWS-7300

Test Site: AAEON QA Internal Lab.

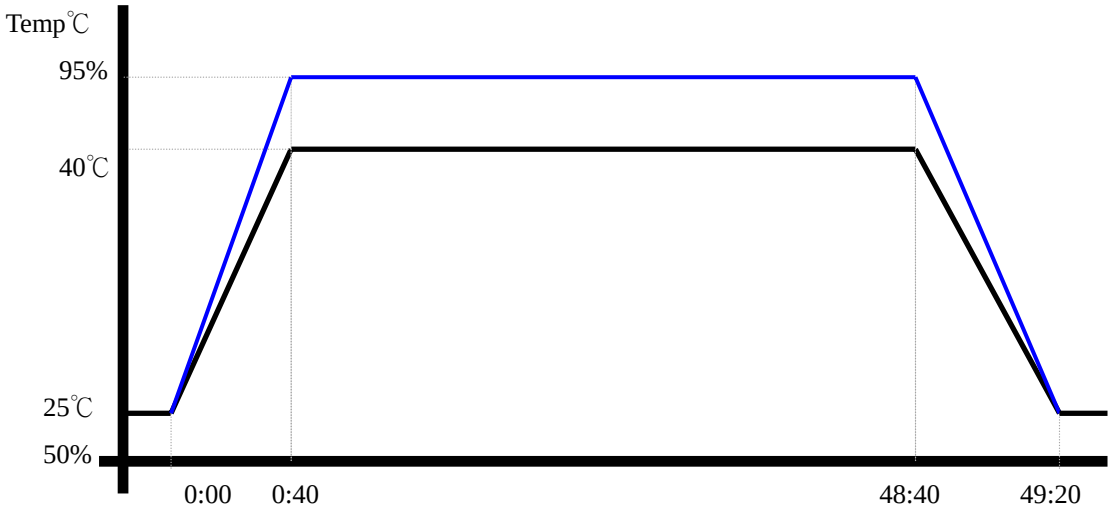
Test Standard: Reference IEC 68-2-3 Testing procedures
Test Ca: Damp heat, steady state (Non-operation)

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-A4C-100
Date of Calibration: 06/18/08
Serial Number: 3188

Testing Item:

1. Test Temperature: 40℃
2. Test Humidity: 95%RH
3. Test Times: 48Hrs
4. Test Software: Windows XP / Run PassMark Burn In Test 4.0 Pro
5. Test Environment Curve:



Sample Configuration & Quantity Under Test:
Quantity: 1 (FWS-7300)

Test Result:

No problem was found after the humidity storage test.

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Cold start and hot start test

Test Date: 10-22~23-2008

Test Product: FWS-7300

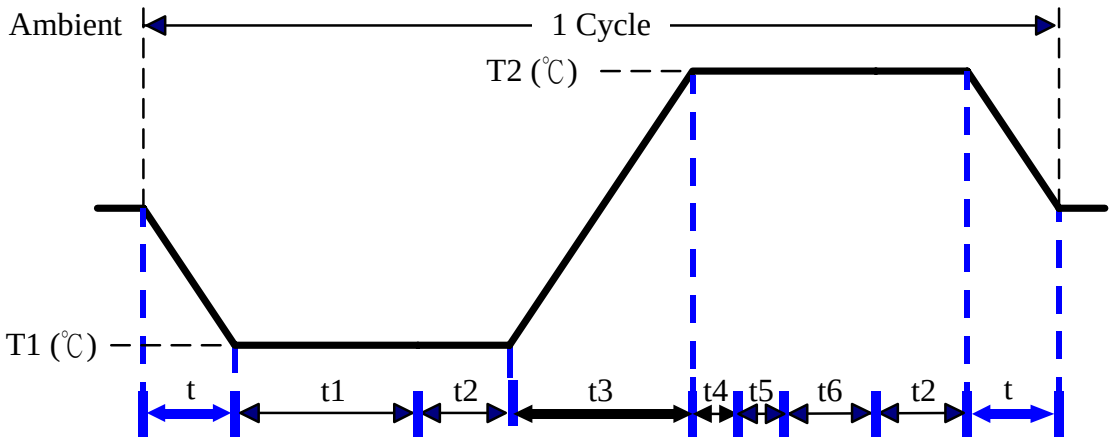
Test Site: AAEON QA Internal Lab.

Test Standard: Reference IEC 68-2-14 Testing procedures
Test N: Change of temperature Test

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-A4C-100
Date of Calibration: 06/18/08
Serial Number: 3188

Test Condition:



Parameters	Description
T1	-5℃
T2	45℃
t1	4 hrs
t2, t6	2 hrs
t4, t5	1hrs
t, t3	2℃/min
n (Cycle)	1

t = temprature slope
t , t1, t6: Power Off
t2: Power on/off test 10 times (on 2 min / off 5min)
t3, t4: Run PassMark Burn In Test
t5: Win XP Software restart test 3 times
Test Software:Windows XP

Test Result:

a. No problem was found during the cold start test.

b. No problem was found during the hot start test.

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