DSS-5300

With 2.5” SATA HDD

Environment Test Report

Report NO: 09I020021

Issued by:	Rex-Chang	/	*06/30/2009*
	Test Engineer		**Date**
Reviewed by:	Wenyuan Yang	/	*06/30/2009*
	Manager		**Date**

Test item list

Test Configuration:

Num	Item	Spec
1.	Control Box:	DSS- 5300
	1. Main Board	AAEON EMB-9459T Rev. A1.0 (BIOS: DSS-5300 BIOS V0.3)
	2. CPU	Intel Atom N270 / 1.6GHz
	3. Memory	DSL 1GB / ELPIDA E5108AGB-6E-E / DDR2-533
	5. SATA HDD	Fujitsu MHZ2180BH / 80GB
	6. Test Software	Windows XP / Run PassMark Burn In Test
	7. Adapter	FSP FSP060-DBAB1 12V/5.0A 60W MAX

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Temperature rise test

Test Date: 06-30-2009

Test Product: DSS-5300

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:

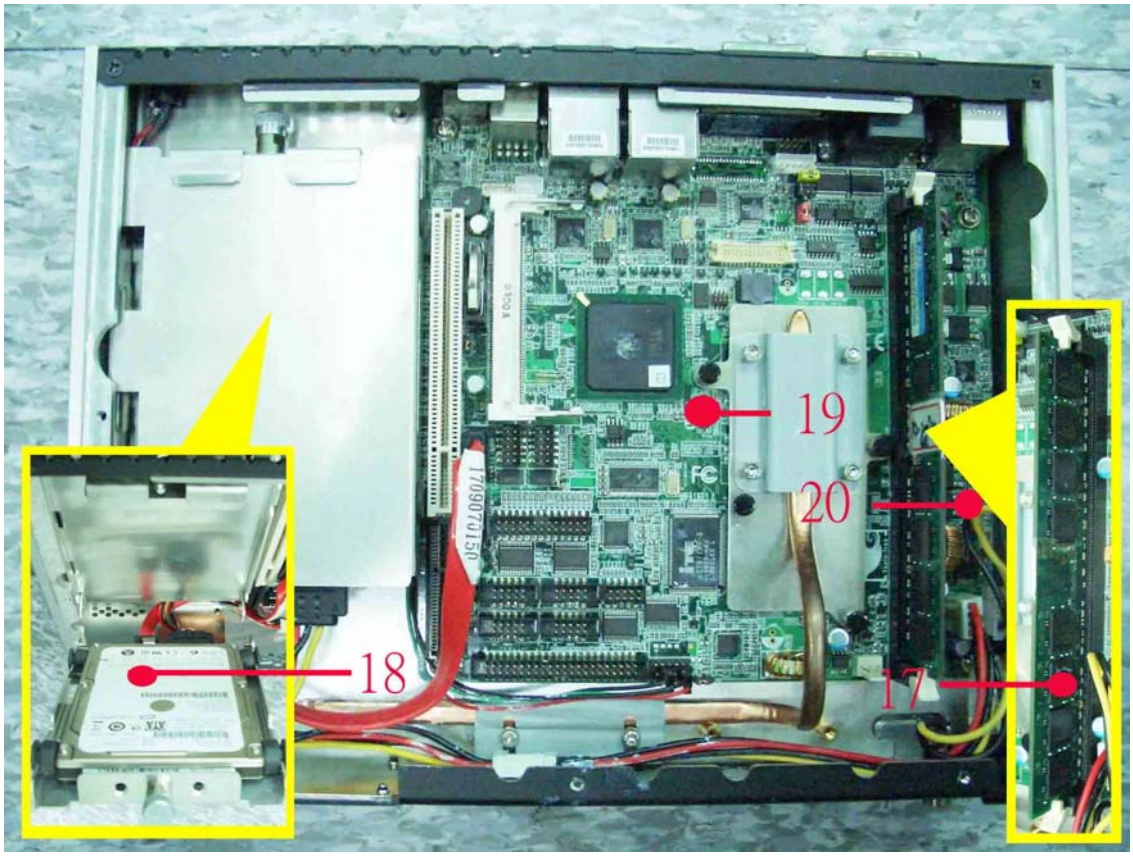
Ambient temperature: 40dC
Continuous running till thermal stability (within less than 1℃)

Test Software:

Windows XP / Run PassMark Burn In Test 5.1

Terminal Recorder:

Measuring Thermal Couple Position：



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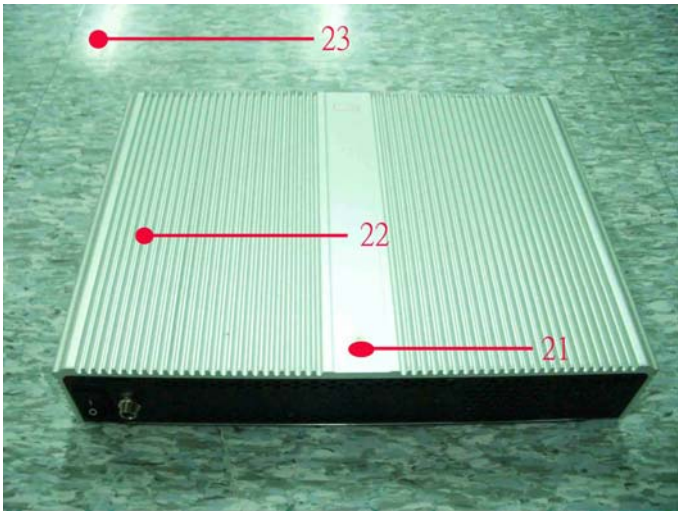

Thermal profile data:

DSS-5300

Point / Temp. Stage(℃)	Spec	40	25
1. U38 - (TF) Intel CPU.Diamondville.N270.1.6GHz/FSB	90	61.1	46.1
2. U30 - (TF) Chipset.Intel.QG82945GSE SLB2R	105	57.8	42.8
3. U28 - (TF) Chipset ICH7M.Intel.NH82801GBM SL8YB	99	84.4	69.4
4. U33 - (TF) CLOCK GENERATOR.ICS.ICS954226AGLF	115	95.2	80.2
5. U35 - (TF) Super I/O.ITE.IT8712F/KX-L	95	67.1	52.1
6. U10 - (TF) DVI Transmitter.CHRONTEL.CH7307C-DEF	110	68.7	53.7
7. U18 - (TF) Ethernet Chip.REALTEK.RTL8111C-VB-GR	95	68.6	53.6
8. U17 - (TF) Ethernet Chip.REALTEK.RTL8111C-VB-GR	95	67.8	52.8
9. U2 - (TF) AC'97 Audio Codec.REALTEK.ALC655-LF	95	70.8	55.8
10. L66 - (TF) Coil. GOTREND.C4452P-08A09YDPS	110	88.5	73.5
11. U53 - Linear Regulator.Diodes.AP1084DL-13	100	79.1	64.1
12. U51 - (TF) REG.SMD SOT223.1A Adjustable Linear	125	81.6	66.6
13. Q65 - (TF) N-Channel MOSFET.ST.STD17NF03LT4	150	81.8	66.8
14. U49 - (TF) Power Controller.for Dual Channel DDR.Intersil.ISL6537CRZ	95	80.5	65.5
15. Q74 - (TF) N-Channel MOSFET.ST.STD17NF03LT4	150	83.7	68.7
16. Q64 - (TF) N-Channel MOSFET.ST.STD17NF03LT4	150	81.8	66.8
17. Memory	95	70.1	55.1
18. HDD Surface	60	59.3	44.3
19. Control Box Inside Air Temperature -1	N/A	59.2	44.2
20. Control Box Inside Air Temperature -1	N/A	62.8	47.8
21. Control Box External Surface - 1	N/A	53.6	38.6
22. Control Box External Surface - 2	N/A	52.6	37.6
23. Chamber Air Temperature	N/A	39.7	24.7

Any Tm value showed in red words which meaning the value over the Tc degree C of this device specification.

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Temperature rise test

Sample Configuration & Quantity Under Test:

Quantity: 1 (DSS-5300)

Test Result:

No problem was found during the temperature rise operation test.

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Temperature cycle test

Test Date: 06-26~29-2009

Test Product: DSS-5300

Test Site: AAEON QA Internal Lab.

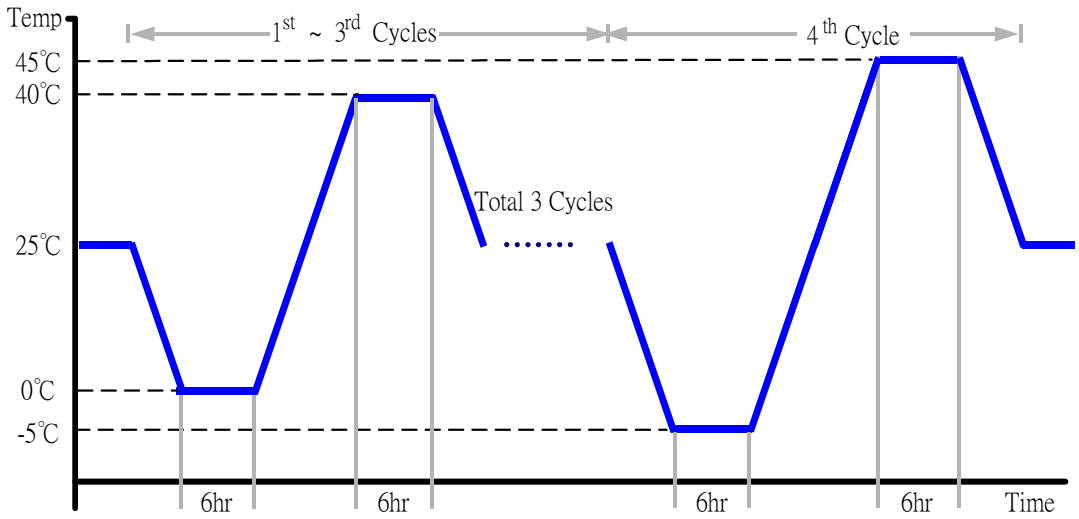
Test Standard: Reference IEC68-2-14 Testing procedures
Test N: Change of temperature Test

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-A4C-100
Date of Calibration: 06/17/09
Serial Number: 3188

Test Condition:

1. Test Low Temperature: 0℃ (1~3 cycles)
   -5℃ (4^{th} cycle)
2. Test High Temperature: 40℃ (1~3 cycles)
   45℃ (4^{th} 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 (DSS-5300)

Test Result:

No problem was found during the temperature operation cycle test.

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High temperature storage test

Test Date: 06-19~22-2009

Test Product: DSS-5300

Test Site: AAEON QA Internal Lab.

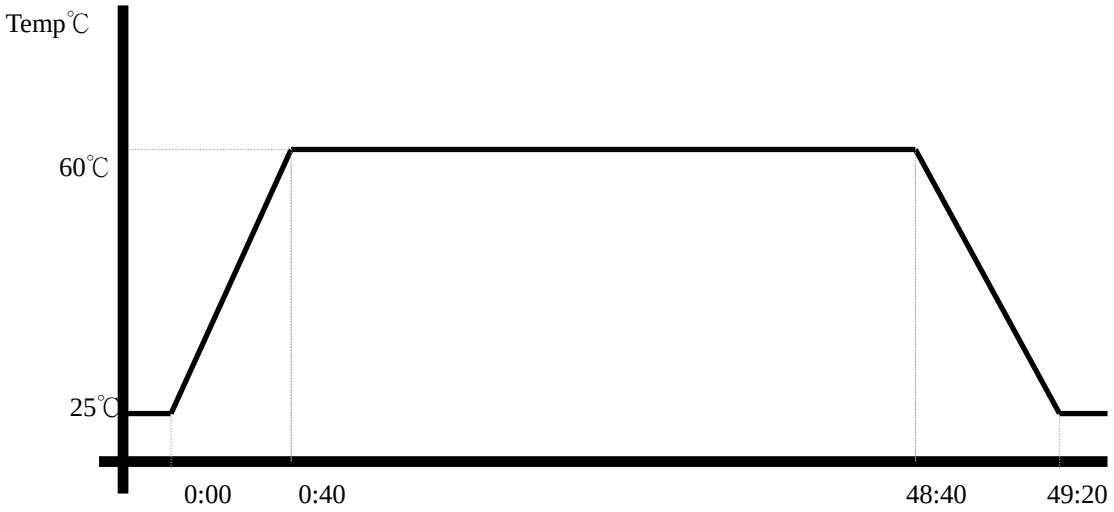
Test Standard: Reference IEC 68-2-2 Testing procedures
Test Bb: Dry Heat Test (Non-operation)

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-A4C-100
Date of Calibration: 06/17/09
Serial Number: 3188T

Testing Item:

1. Test Temperature: 60℃
2. Test Times: 48Hrs
3. Test Software: Windows XP / Run PassMark Burn In Test 5.1 Pro
4. Test Environment Curve:



Sample Configuration & Quantity Under Test:
Quantity: 1 (DSS-5300)

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

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Low temperature storage test

Test Date: 06-22~24-2009

Test Product: DSS-5300

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: 06/17/09
Serial Number: 3188

Testing Item:

1. Test Temperature: -20℃
2. Test Times: 48Hrs
3. Test Software: Windows XP / Run PassMark Burn In Test 5.1 Pro
4. Test Environment Curve:

Sample Configuration & Quantity Under Test:
Quantity: 1 (DSS-5300)

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

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Humidity test

Test Date: 06-24~26-2009

Test Product: DSS-5300

Test Site: AAEON QA Internal Lab.

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

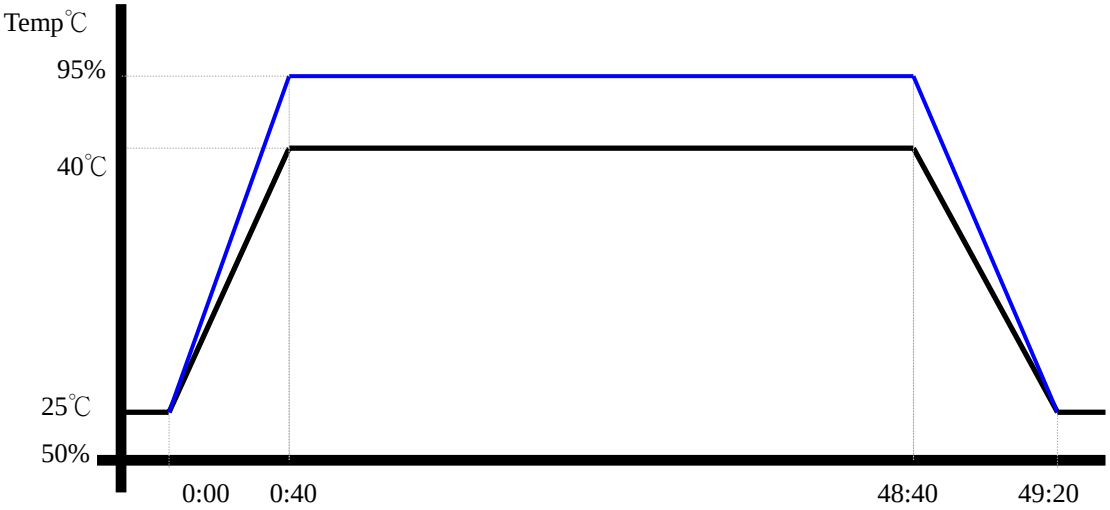
Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-A4C-100
Date of Calibration: 06/17/09
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 5.1 Pro
5. Test Environment Curve:

Humidity %



Sample Configuration & Quantity Under Test:

Quantity: 1 (DSS-5300)

Test Result:

No problem was found after the humidity storage test.

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Cold start and hot start test

Test Date: 06-18~19-2009

Test Product: DSS-5300

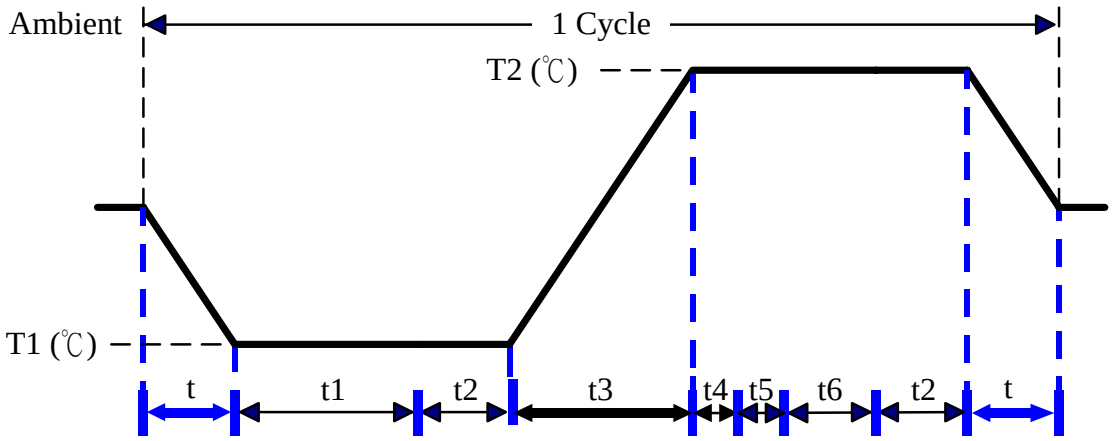
Test Site: AAEON QA Internal Lab.

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: 06/17/09
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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