GES-3300F

Socket CPU

Environment Test Report

Report NO: 10I020003

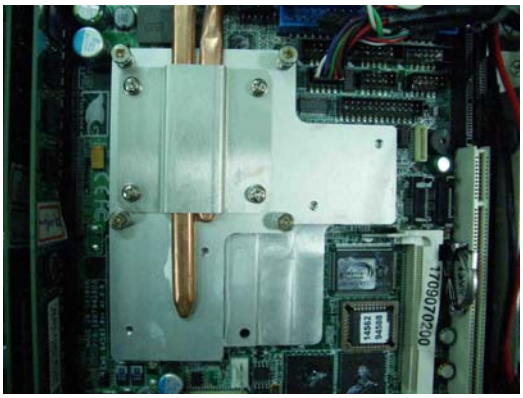
Issued by:	Rex-Chang	/	*03/11/2010*
	Test Engineer		**Date**
Reviewed by:	Jansin Lee	/	*03/11/2010*
	Sr. Manager		**Date**

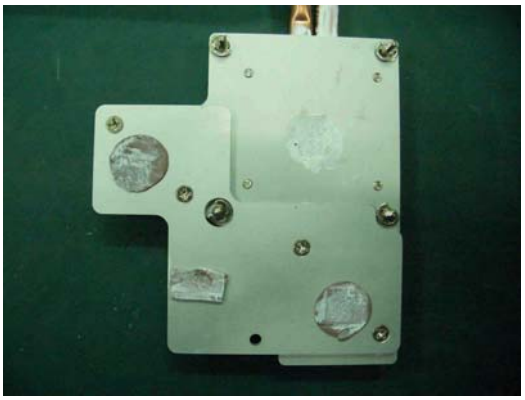
Test item list

Test Configuration:

Num	Item	Spec
1.	Mounting Chassis:	GES-3300F
	1. PCB / CPU	EMB-9458T A1.0-B (BIOS: 1.3) / Intel Celeron M 440 / 1.86GHz
	3. Memory	Transcend DDR2-800 2GB * 2 / SEC 904 HCF7 K4T1G084QQ
	4. 2.5” SATA SSD	Transcend ST23SGDS52-S / 32GB
	5. Test Software	Windows XP / Run PassMark Burn In Test 5.3 Pro
2.	Power Supply	FSP130-5DD01
3.	Adapter	FSP FSP135-AHAN1

Heatpip





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Temperature rise test

Test Date: 03-10-2010

Test Product: GES-3300F

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: 12/08/09
Serial Number: 12A323190

Test Condition:

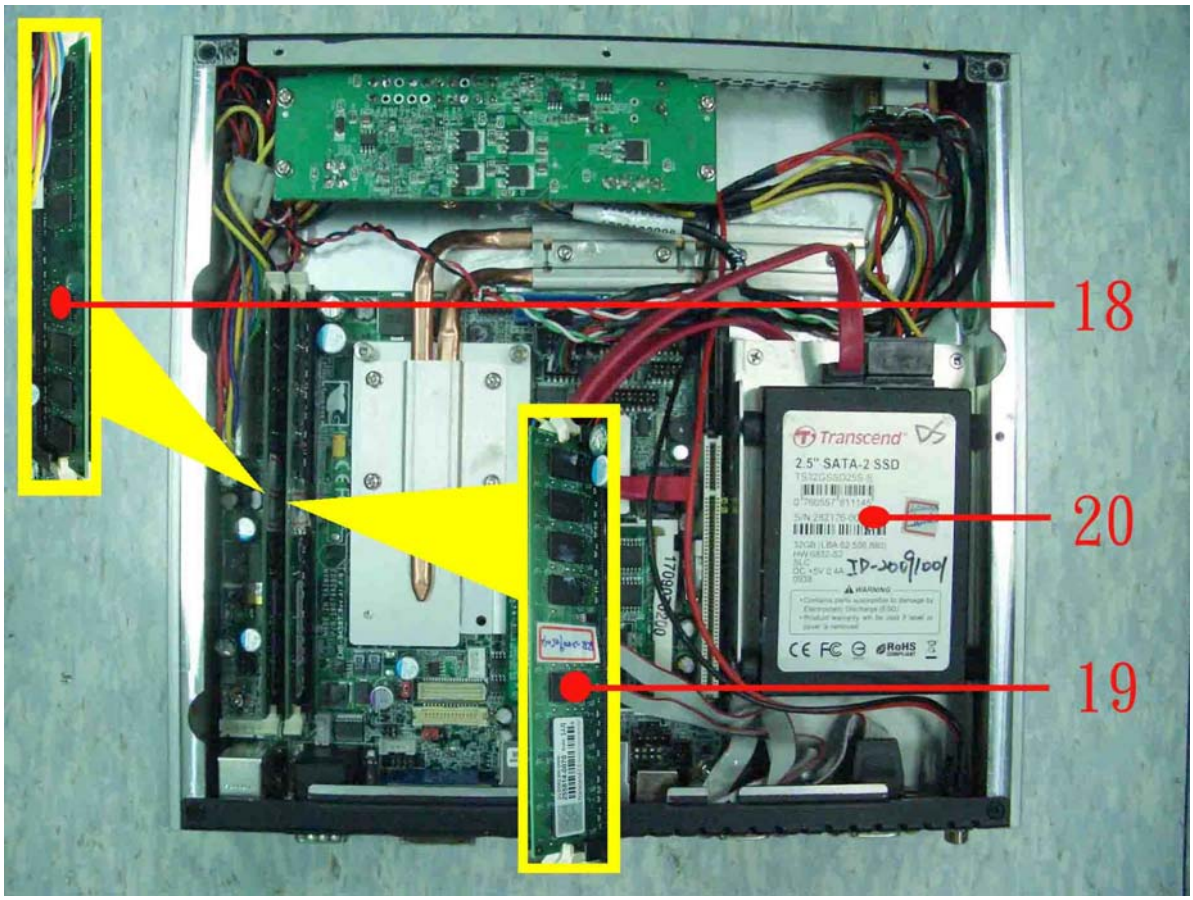
Ambient temperature: 45dC
Continuous running till thermal stability (within less than 1℃)

Test Software:

Windows XP / Run PassMark Burn In Test 5.3 Pro

Terminal Recorder:

Measuring Thermal Couple Position：



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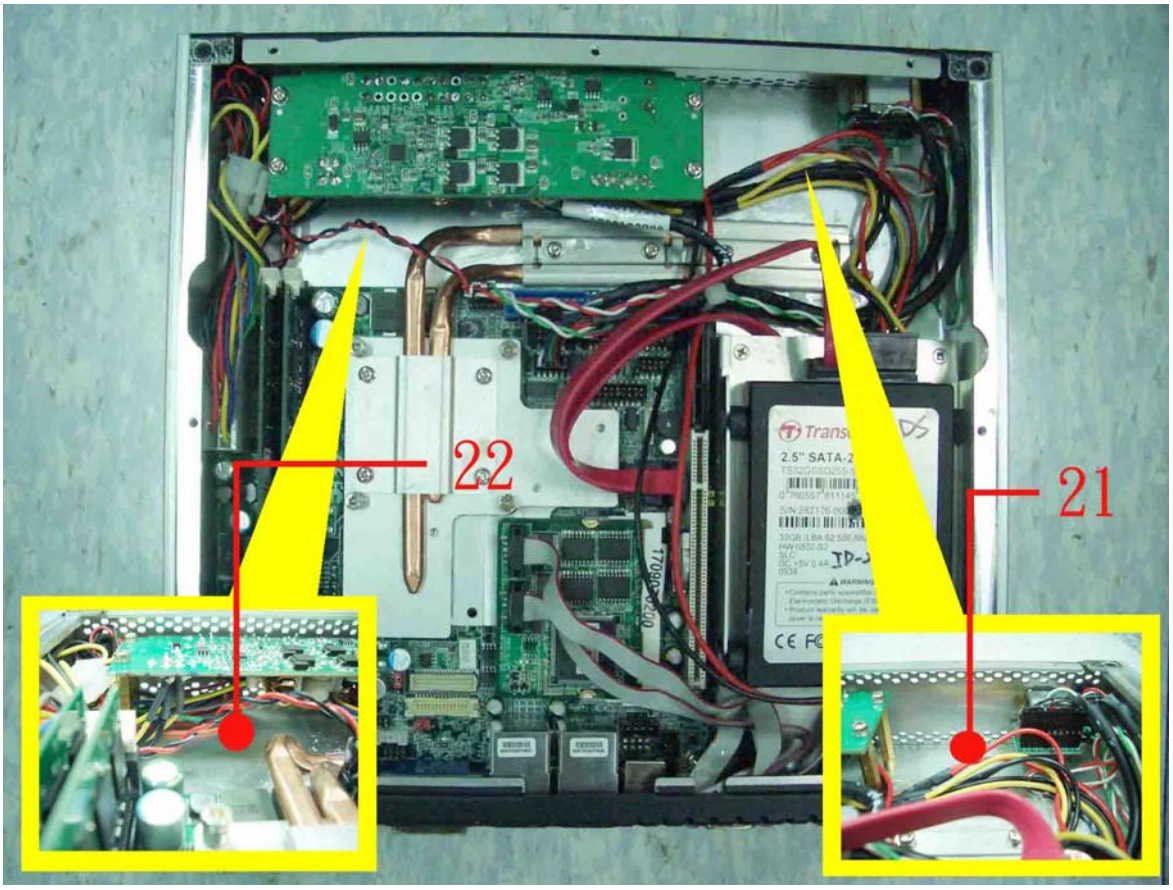

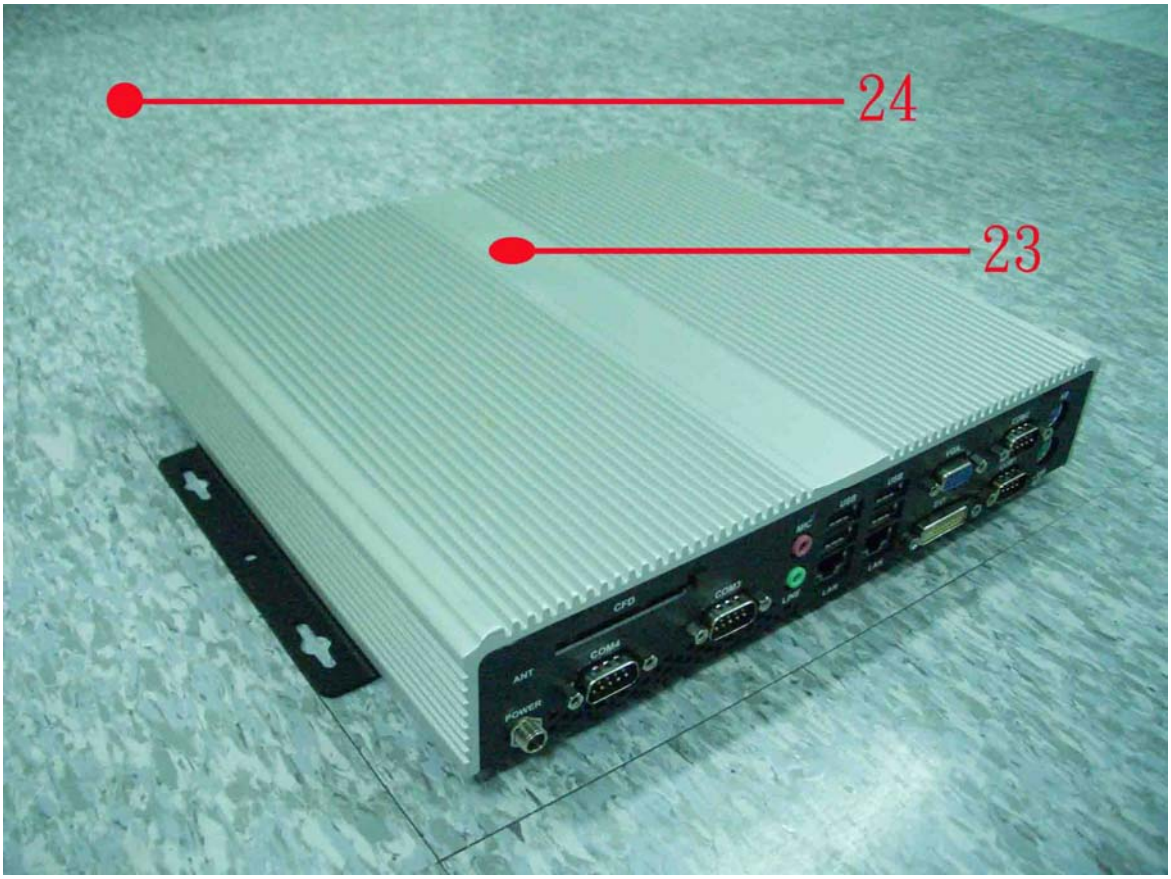

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Temperature rise test

Thermal profile data:

GES-3300F

Point / Temp. Stage(℃)	Spec	40	25
01. CPU	100	73.1	53.1
02. U11 - (TF) Intel.QG82945GME	105	86.9	66.9
03. U15 - (TF) Chipset ICH7M.Intel.NH82801GBM	99	73.4	53.4
04. U12 - (TF) CLOCK GENERATOR.ICS.ICS954226AGLF	115	81.5	61.5
05. U13 - (TF) Super I/O.ITE.IT8712F/KX-L	95	76.9	56.9
06. U6 - (TF) GigaBit Ethernet Chipset.Intel.PC82573L	100	80.5	60.5
07. U3 - (TF) AC'97 Audio Codec.REALTEK.ALC655-LF	95	78.6	58.6
08. Q7 - (TF) PWR.N-Channel.30V.12A.ANPEC.APM4410KC-TRL	125	93.7	73.7
09. Q8 - (TF) PWR.N-Channel.30V.12A.ANPEC.APM4410KC-TRL	125	79.3	59.3
10. U7 - (TF) Power Controller.for Dual Channel DDR.Intersil.ISL6537CRZ	100	78.6	58.6
11. Q13 - (TF) PWR. N-Channel Power MOSFET.APEC.AP70T03GH	150	87.6	67.6
12. L17 - (TF) COIL.GOTREND.GSTC135P-1R5MF	155	86.4	66.4
13. L27 - (TF) COIL.GOTREND.GSTC133P-R68MF	150	78.6	58.6
14. U18 - (TF) IMVP6 Two Phase PWM.Intersil.ISL6262CRZ-T	100	76.1	56.1
15. Q44 - (TF) PWR.N-channel Power MOSFET.FAIRCHILD.FDD8896_NL	150	76.4	56.4
16. Q43 - (TF) PWR.N-channel Power MOSFET.FAIRCHILD.FDD8896_NL	150	75.1	55.1
17. U21 - (TF) DVI Transmitter.CHRONTEL.CH7307C-DEF	110	78.2	58.2
18. Memory - 1	85	78.5	58.5
19. Memory - 2	85	77.6	57.6
20. SSD	70	68.0	48.0
21. Control Box Inside Air Temperature - 1	N/A	64.1	44.1
22. Control Box Inside Air Temperature - 2	N/A	66.7	46.7
23. Control Box External Surface	N/A	63.9	43.9
24. Chamber Air Temperature	N/A	45.0	25.0
Any Tm value showed in red words which meaning the value over the Tc degree C of this device specification.			

Temperature Measurement Table:

T_A=45.0℃ / Location	**Temp. Rise (Thermal Couple)**	**SpeedFan 4.31 (Read from BIOS)**
CPU	73.1℃	78.0℃
System Temp. 1 (North Bridge)	86.9℃	91.0℃
System Temp. 2	N/A	71.0℃

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Temperature rise test

Sample Configuration & Quantity Under Test:

Quantity: 1 (GES-3300F)

Test Result:

No problem was found during the temperature rise operation test.

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Temperature cycle test

Test Date: 03-02~04-2010

Test Product: GES-3300F

Test Site: AAEON QA Internal Lab.

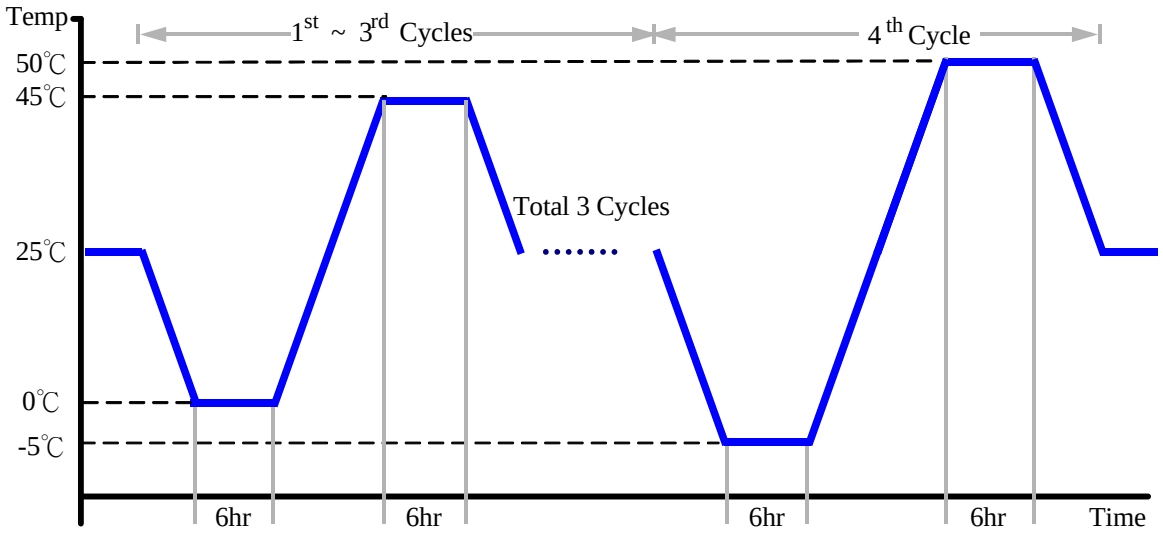
Test Standard: Reference IEC68-2-14 Testing procedures
Test N: Change of temperature Test

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-B6T-150+LN2
Date of Calibration: 04/10/09
Serial Number: 6488KT

Test Condition:

1. Test Low Temperature: 0℃ (1~3 cycles)
   -5℃ (4th cycle)
2. Test High Temperature: 45℃ (1~3 cycles)
   50℃ (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 (GES-3300F)

Test Result:

No problem was found during the temperature operation cycle test.

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High temperature storage test

Test Date: 02-26~28-2010

Test Product: GES-3300F

Test Site: AAEON QA Internal Lab.

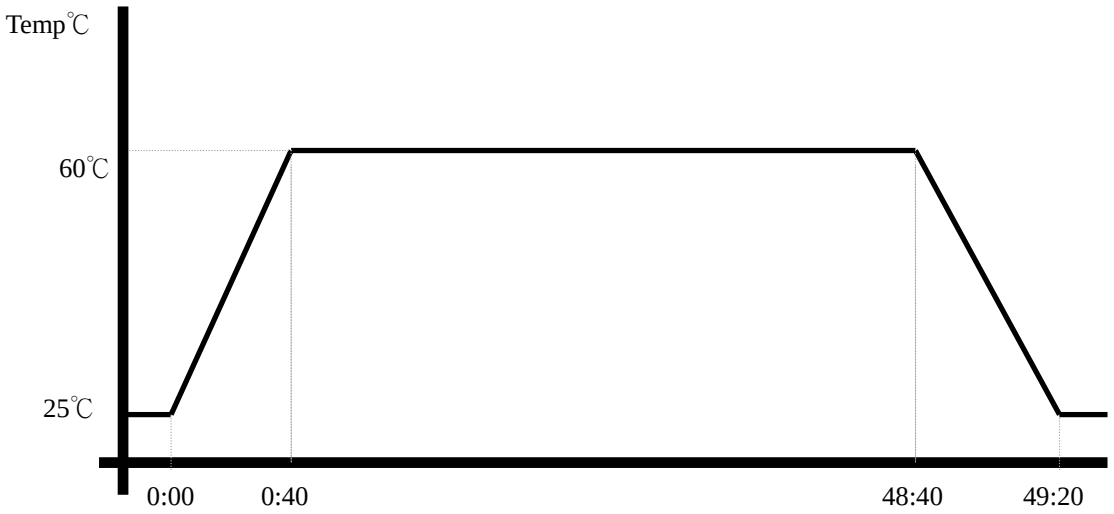
Test Standard: Reference IEC 68-2-2 Testing procedures
Test Bb: Dry Heat Test (Non-operation)

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-B6T-150+LN2
Date of Calibration: 04/10/09
Serial Number: 6488KT

Testing Item:

1. Test Temperature: 60℃
2. Test Times: 48Hrs
3. Test Software: Windows XP / Run PassMark Burn In Test 5.3 Pro
4. Test Environment Curve:



Sample Configuration & Quantity Under Test:
Quantity: 1 (GES-3300F)

Test Result:

No problem was found after the high temperature storage test.

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Low temperature storage test

Test Date: 03-07~09-2010

Test Product: GES-3300F

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-B6T-150+LN2
Date of Calibration: 04/10/09
Serial Number: 6488KT

Testing Item:

1. Test Temperature: -20℃
2. Test Times: 48Hrs
3. Test Software: Windows XP / Run PassMark Burn In Test 5.3 Pro
4. Test Environment Curve:

Sample Configuration & Quantity Under Test:
Quantity: 1 (GES-3300F)

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

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Humidity test

Test Date: 03-05~07-2010

Test Product: GES-3300F

Test Site: AAEON QA Internal Lab.

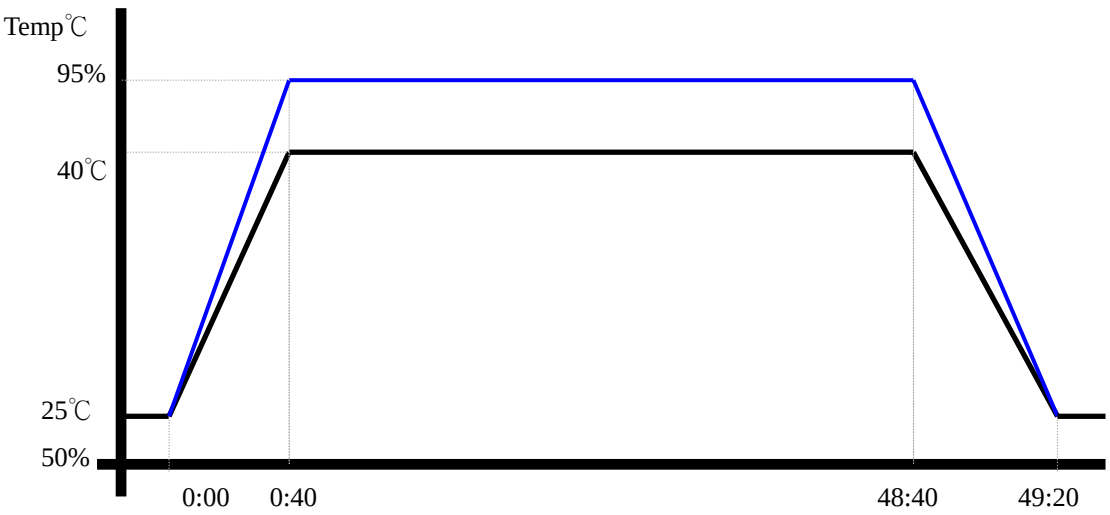
Test Standard: Reference IEC 68-2-3 Testing procedures
Test Ca: Damp heat, steady state (Non-operation)

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-B6T-150+LN2
Date of Calibration: 04/10/09
Serial Number: 6488KT

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 5.3 Pro
5. Test Environment Curve:



Sample Configuration & Quantity Under Test:
Quantity: 1 (GES-3300F)

Test Result:

No problem was found after the humidity storage test.

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Cold start and hot start test

Test Date: 03-01~02-2010

Test Product: GES-3300F

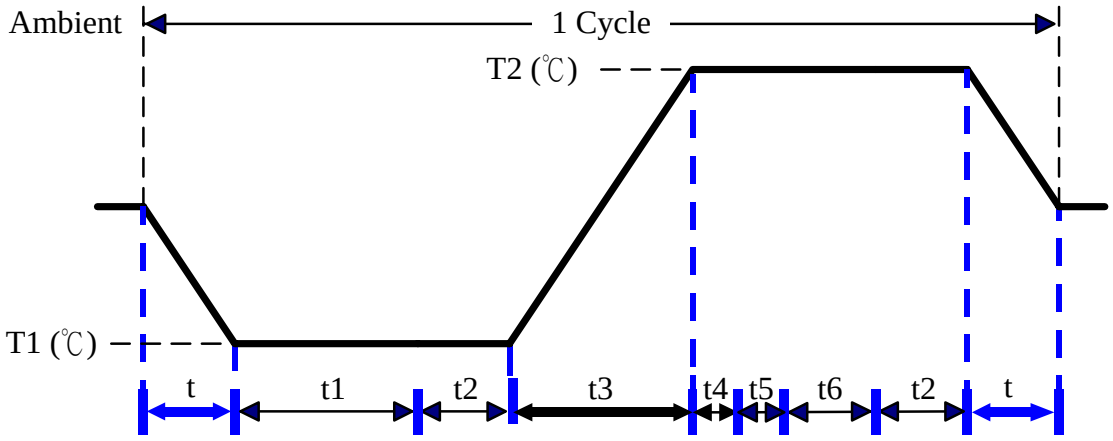
Test Site: AAEON QA Internal Lab.

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-B6T-150+LN2
Date of Calibration: 04/10/09
Serial Number: 6488KT

Test Condition:



Parameters	Description
T1	-5℃
T2	50℃
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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