GES-5500F

Environment Test Report

Report NO: 10I020018

Summary	☑ **Pass** ☐ **Fail** Note : There is/are ___ defect(s) not list in the report, please check it in the DTS Website. ☐ **Pass with Deviation** **Comment:** _____

Issue date	Approval	Test Engineer
2010-10-20	**Jansin Lee**	**Rex Chang**

Test item list

Testing Result

Num	Test item list	Result	Remark
1	Temperature rise test	Pass	
2	Temperature cycle operation test	Pass	
3	High temperature storage test	Pass	
4	Low temperature storage test	Pass	
5	Temperature variation operation test	Pass	
6	Cold start and hot start test	Pass	

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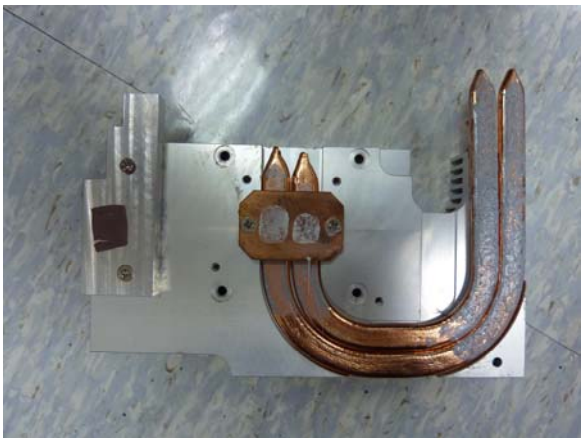
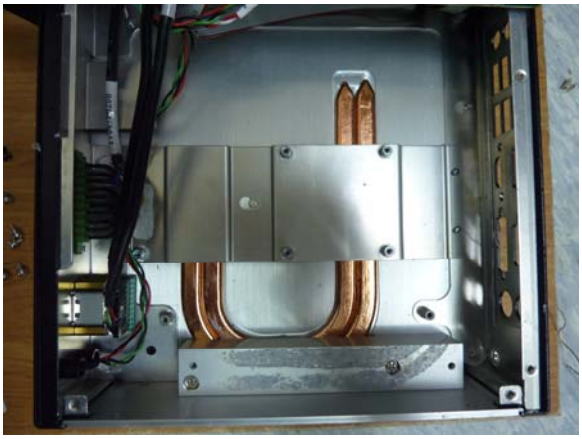
Configuration of EUT

Num	Item	Spec
1.	**Embedded System**:	GES-5500F
	1. Main Board	IMBI-QM57 Rev A1.0 (BIOS 1.0)
	2. CPU	Intel Core I7 620M 2.67GHz
	3. Memory	DSL ELPIDA / Jii08BDSE-DJ-F /DDR3 1066 /2G *2
	4. 3.5” SATA SSD	TOSHIBA MK1060GSC / HDD2G32 / 100GB
	5. Test Software	Windows 7 / Run PassMark Burn In Test 5.1 Pro
2.	Power Supply	MAGIC POWER MPD-810H
3.	Power Adapter	FSP FSP084-DMAA1

Heat Sink





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Temperature rise test

Test Date: 10-18-2010

Test Product: GES-5500F

Test Site: AAEON 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:

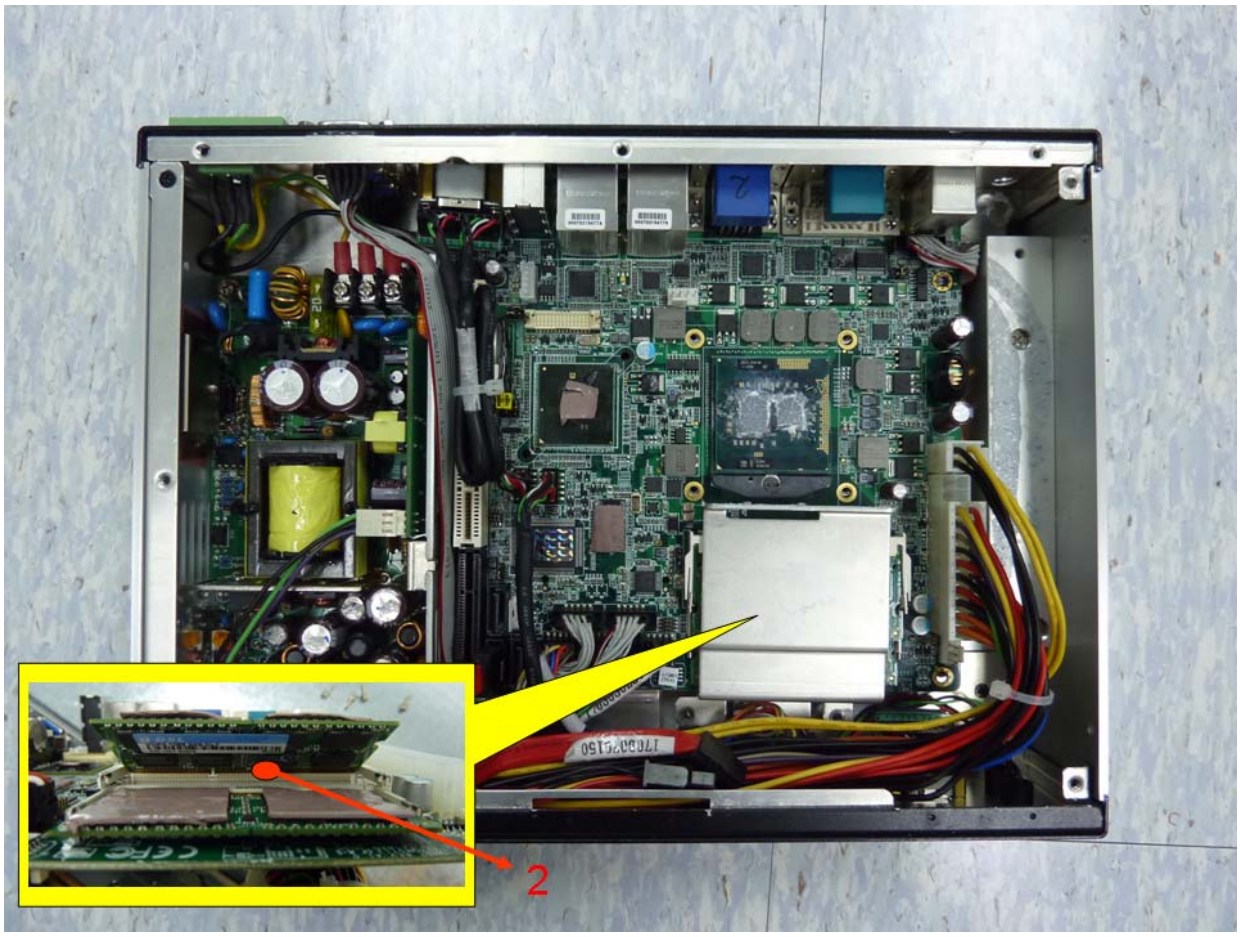
Ambient temperature: 45℃
Continuous running till thermal stability (within less than 1℃)

Test Software:

Windows 7/ Run PassMark Burn In Test 5.1 Pro

Terminal Recorder:

Measuring Thermal Couple Position：



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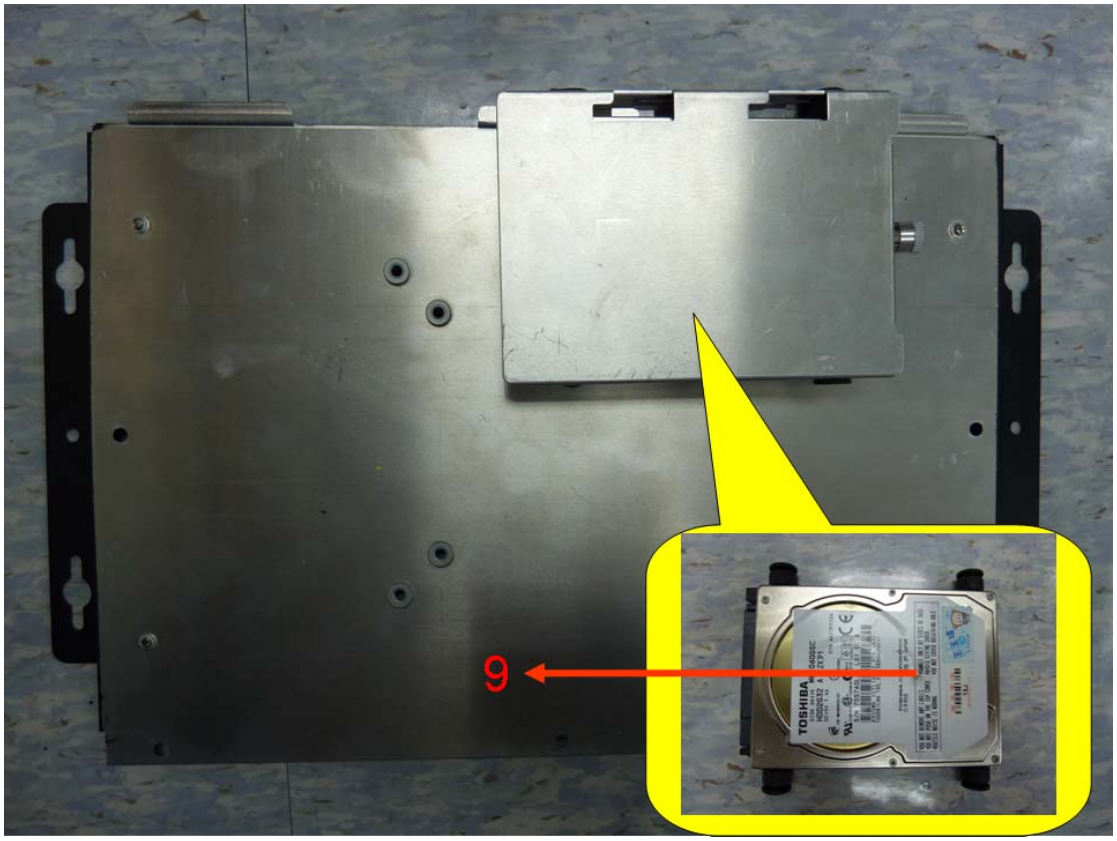
Temperature rise test



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Temperature rise test

Thermal profile data:

GES-5500F

Point / Temp. Stage(℃)	Spec	45	25
IMBI-QM57			
01. CPU	105	80.1	60.1
02. Mamory	95	78.2	58.2
03. U29- (TF) RS-232 Driver&Receivers	95	89.9	69.9
04. U2 - (TF) INTEL.BD82QM57 SLGZQ	125	78.2	58.2
05. U12 - (TF)REG. Regulator.Diodes.AP1084DG-13	100	90.7	70.7
06. L14 - (TF) COIL. Panasonic.ETQP4LR36AFC	130	87.3	67.3
07. U6 - (TF) CLOCK GENERATOR.SILEGO.SLG505YC264BTTR	95	83.1	63.1
08. U58 - (TF) RS-232 Driver&Receivers	95	91.2	71.2
09. SATA H.D	85	78.1	58.1
MAGIC POWER			
10. POWER – C53	105	80.5	60.5
11. POWER – Q1A	120	72.9	52.9
12. POWER – C55	105	87.1	67.1
13. POWER – C11A	105	78.4	58.4
14. POWER – T1	120	84.8	68.8
15. POWER – C51	105	84.9	64.9
16. POWER – C57	105	84.1	64.1
17. POWER – C54	105	79.7	59.7
18. POWER – C56	105	82.1	62.1
19. POWER – C52	105	82.2	62.2
20. Control Box Surface	N/A	67.9	47.9
21. Chamber Air Temperature	N/A	45.1	25.1
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=45.1℃ / Location	**Temp. Rise (Thermal Couple)**	**SpeedFan 4.31 (Read from BIOS)**
Senser 1 Temp.(System)	N/A	75℃

Sample Configuration & Quantity Under Test:

Quantity: 1 (GES-5500F)

Test Result:

No problem was found during the temperature rise operation test.

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Temperature cycle test

Test Date: 10-11~13-2010

Test Product: GES-5500F

Test Site: AAEON Internal Lab.

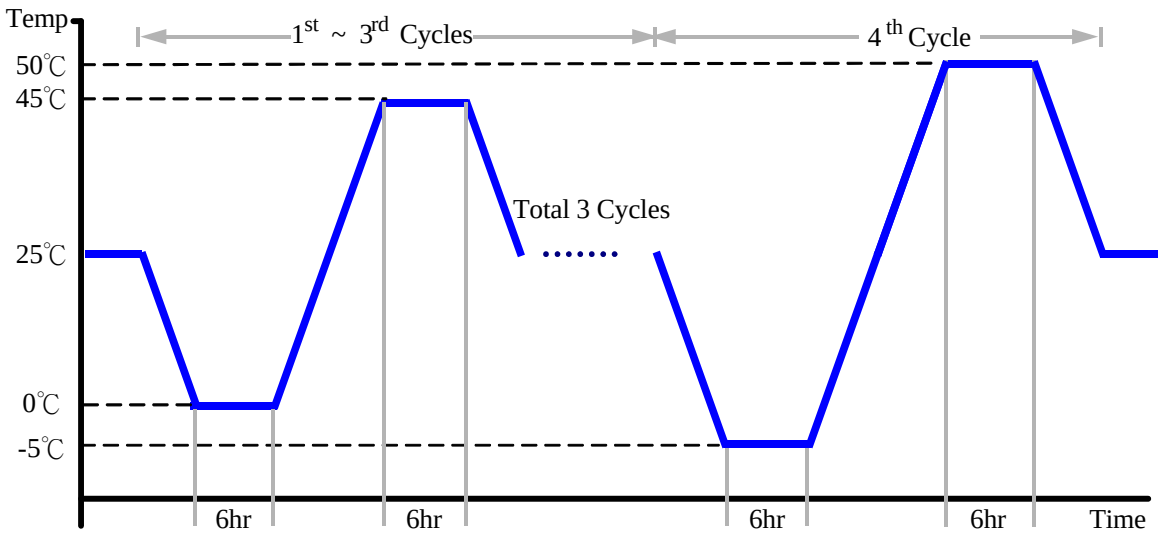
Test Standard: Reference IEC68-2-14 Testing procedures
Test N: Change of temperature Test

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-B6T-150+LN2
Date of Calibration: 04/01/10
Serial Number: 6487KT

Test Condition:

1. Test Low Temperature: 0℃ (1~3 cycles)
   -5℃ (4^{th} cycle)
2. Test High Temperature: 45℃ (1~3 cycles)
   50℃ (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 (GES-5500F)

Test Result:

No problem was found during the temperature operation cycle test.

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High temperature storage test

Test Date: 10-07~11-2010

Test Product: GES-5500F

Test Site: AAEON Internal Lab.

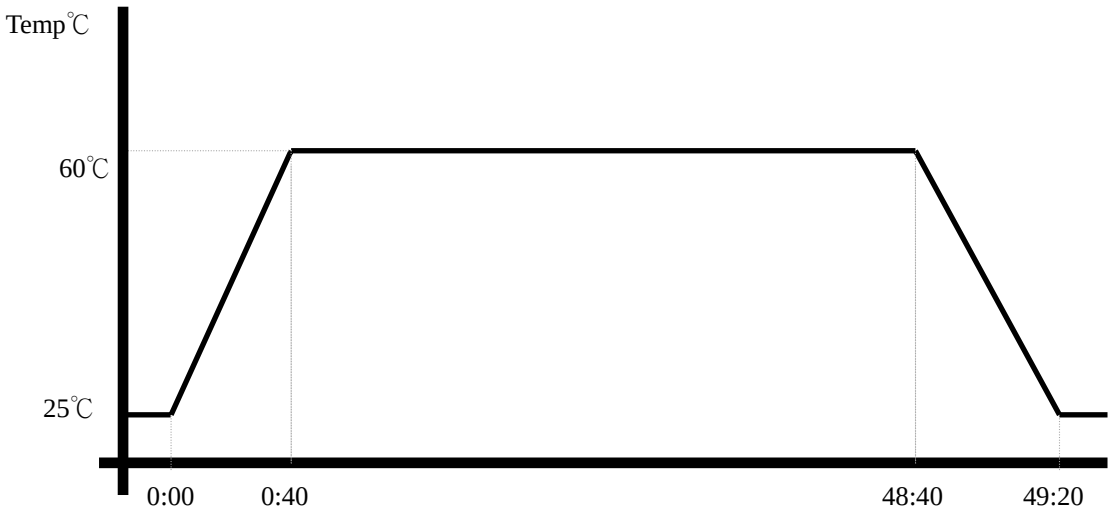
Test Standard: Reference IEC 68-2-2 Testing procedures
Test Bb: Dry Heat Test (Non-operation)

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-B6T-150+LN2
Date of Calibration: 04/01/10
Serial Number: 6487KT

Testing Item:

1. Test Temperature: 60℃
2. Test Times: 48Hrs
3. Test Software: Windows 7 / Run PassMark Burn In Test 5.1 Pro
4. Test Environment Curve:



Sample Configuration & Quantity Under Test:
Quantity: 1 (GES-5500F)

Test Result:

No problem was found after the high temperature storage test.

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Low temperature storage test

Test Date: 10-05~07-2010

Test Product: GES-5500F

Test Site: AAEON 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: 04/01/10
Serial Number: 6487KT

Testing Item:

1. Test Temperature: -10℃
2. Test Times: 48Hrs
3. Test Software: Windows 7 / Run PassMark Burn In Test 5.1 Pro
4. Test Environment Curve:

Sample Configuration & Quantity Under Test:
Quantity: 1 (GES-5500F)

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

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Humidity test

Test Date: 10-18-2010 ~ 10-20-2010

Test Product: GES-5500F

Test Site: AAEON Internal Lab.

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

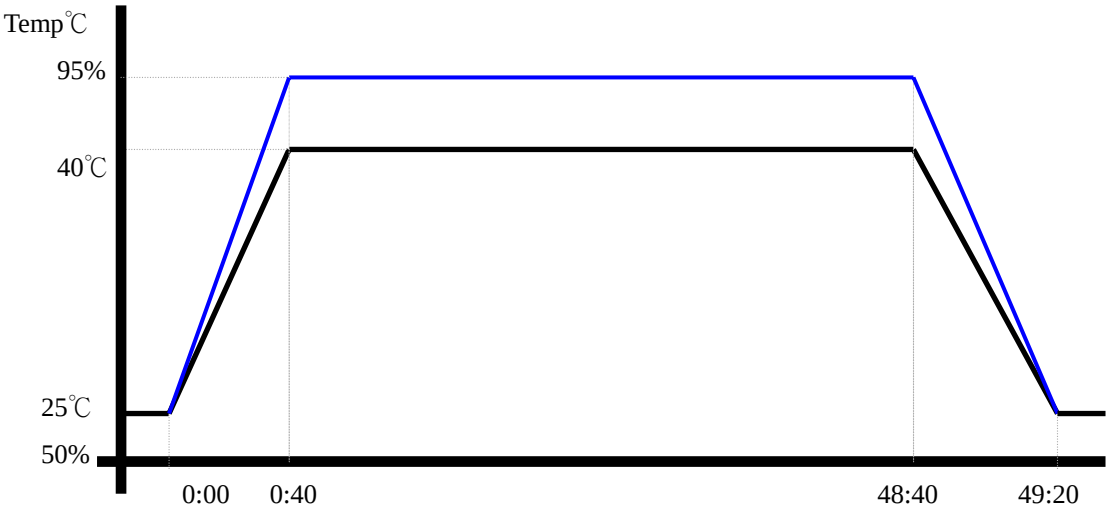
Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-B6T-150+LN2
Date of Calibration: 04/01/10
Serial Number: 6487KT

Testing Item:

1. Test Temperature: 40℃
2. Test Humidity: 95%RH
3. Test Times: 48Hrs
4. Test Software: Windows 7 / Run PassMark Burn In Test 5.1 Pro
5. Test Environment Curve:

Humidity %



Sample Configuration & Quantity Under Test:
Quantity: 1 (GES-5500F)

Test Result:

No problem was found after the humidity storage test.

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Cold start and hot start test

Test Date: 10-13~15-2010

Test Product: GES-5500F

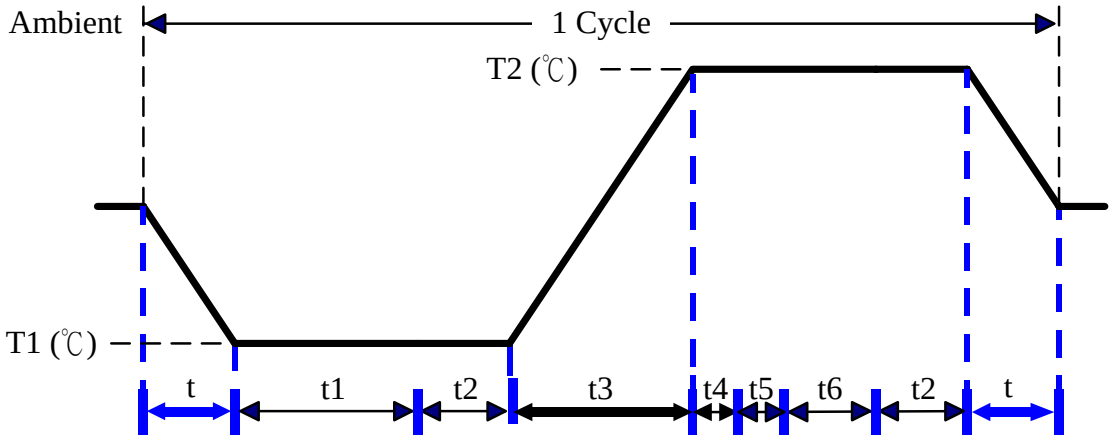
Test Site: AAEON Internal Lab.

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: 04/01/10
Serial Number: 6487KT

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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