TF-ONYX-154HT-A1-1110

Environment Test Report

Report NO: 08P020009

Issued by:	Rex-Chang	/	*06/04/2008*
	Test Engineer		**Date**
Reviewed by:	Wenyuan Yang	/	*06/04/2008*
	Manager		**Date**

Test item list

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Test Configuration:

Num	Item	Spec
1.	**Operator Panel**:	TF-ONYX-154HT-A1-1110
	1.LCD	15" CPT CLAA150XP07FQ
	2. Power Supply	Astordyne ASM-150-24
	4. Inverter	HWA YOUN QF132v1.16
2.	CPU Board:	EMB-852T Rev: A1.1
	1. Bios Ver.	ONYX-154 A0.2
	2.CPU	Intel Pentium-M Processor 1.6GHz
	3.Memory	DSL 512MB / Hynix HY5DU121622CTP-J
	4. HDD	FUJITSU MHW2040AT / 40GB
	5.Test Software	Windows XP / Run PassMark Burn In Test 5.1 Pro

CPU Cooler

AAEON Technology Inc.
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Temperature cycle test

Test Date: 05-27~30-2008

Test Product: ONYX-154

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:

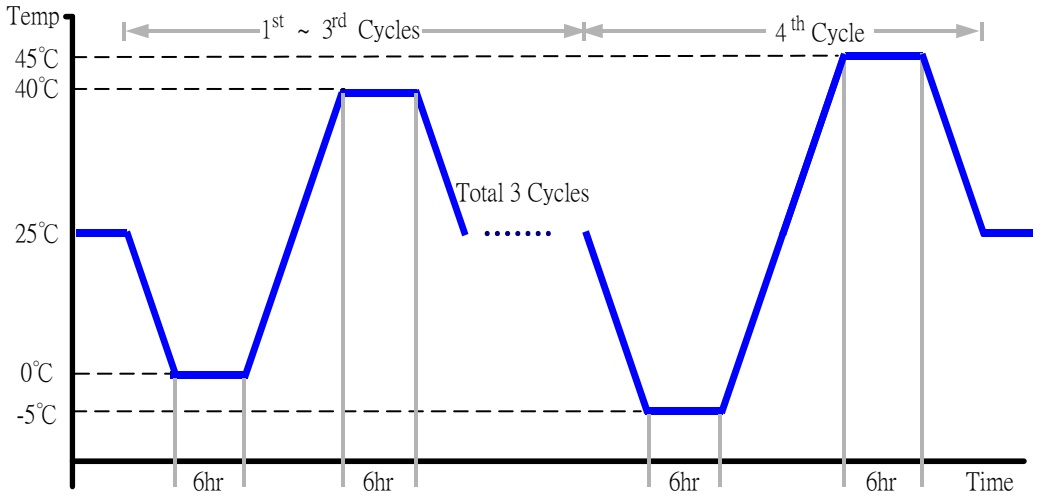
Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D4H+-100
Date of Calibration: 05/16/07
Serial Number: 1241

Temperature Measurement:

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

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:



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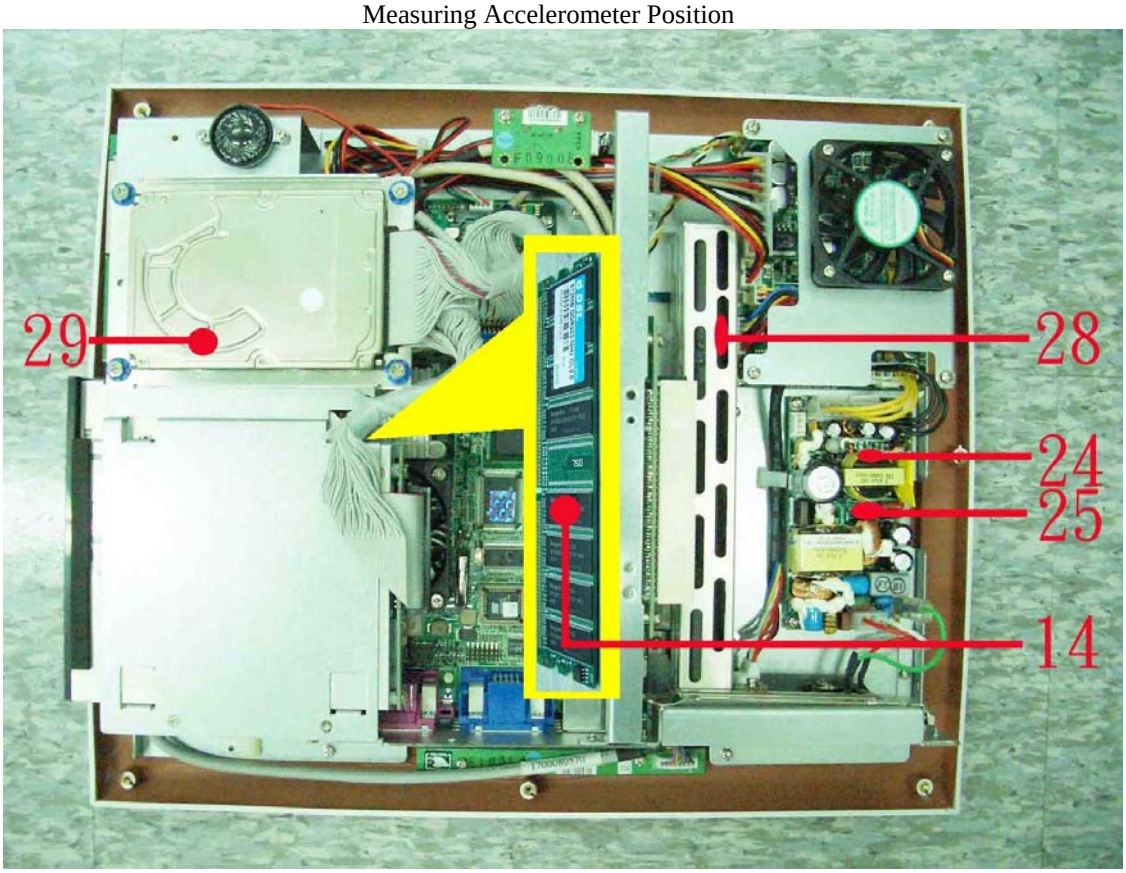
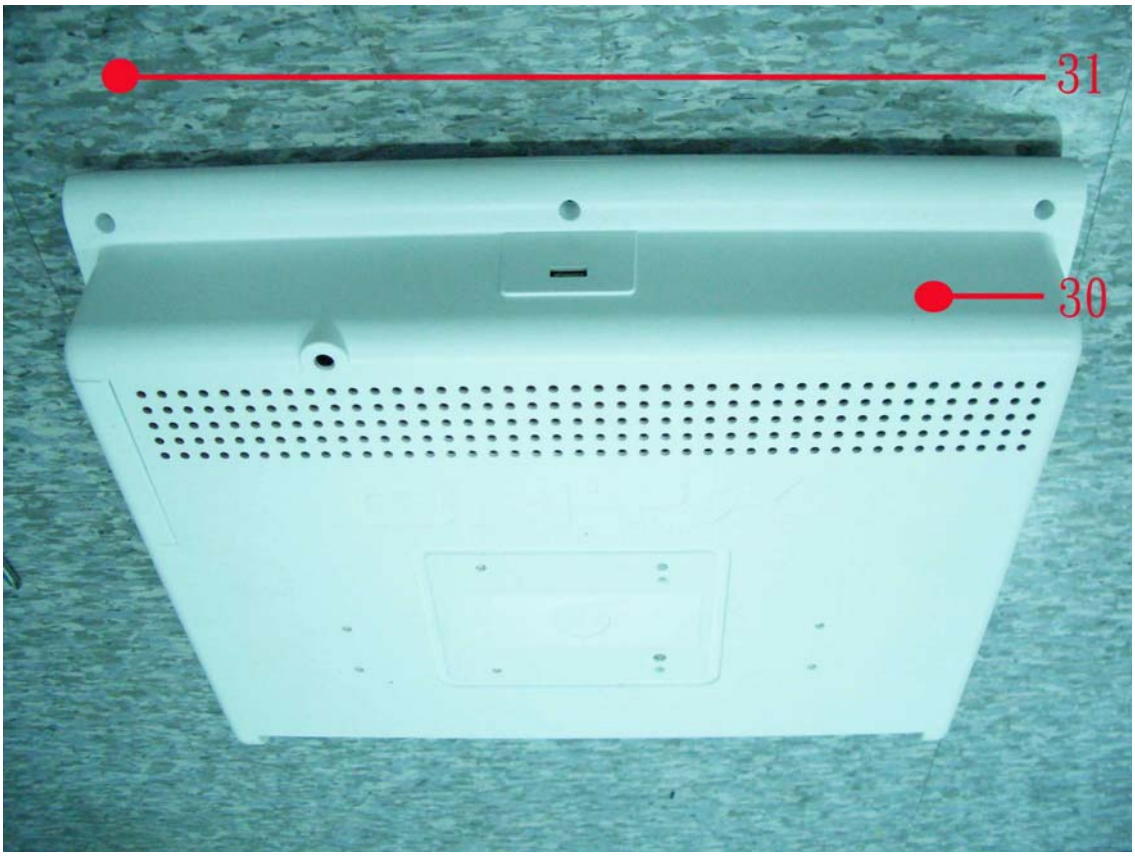
Temperature cycle test

Terminal Recorder:

Measuring Accelerometer Position





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Temperature cycle test

Thermal profile data:

ONYX-154

Point / Temp. Stage(℃)	Spec	40	25	0
EMB-852T				
01. CPU	100	82.8	67.8	42.8
02. U24-Chipset.NB82852GM.Intel.RG82852GM	105	78.4	63.4	38.4
03. U25-Chipset ICH4.INTEL.FW82801DB	110	76.8	61.8	36.8
04. U54-ACPI Power Controller.Intersil.ISL6506BCB	100	70.3	55.3	30.3
05. U10-N-Channel.30V.10A.13.5mΩ.MOSFET.APEC.AP4410M	125	72.5	57.5	32.5
06. L2- INDUCTOR.3.3uH.20%. VISHAY.IHLP2525CZRZ3R3M01	125	73.5	58.5	33.5
07. U11-Step-Down DC/DC Controller.Anpec.APW7057	100	73.4	58.4	33.4
08. U57-(TF)RS232 Driver ESD 15KV.INTERSIL.HIN213ECAZ	70	73.4	58.4	33.4
09. U22-CLOCK GENERATOR.ICS.ICS952601	115	84.0	69.0	44.0
10. U45-(TF)RS232 Driver ESD 15KV.INTERSIL.HIN213ECAZ	70	67.9	52.9	27.9
11. U44-(TF)RS232 Driver ESD 15KV.INTERSIL.HIN213ECAZ	70	68.4	53.4	28.4
12. TC25-220uF.2V.Panasonic.EEFSX0D221YR	105	77.3	62.3	37.3
13. TC27-150uF.6.3V.Panasonic.ECGUD0J151R	105	79.2	64.2	39.2
14. Memory	70	67.9	52.9	27.9
PER-P12D A02				
15. L2 - (TF)COIL.3.3uH.GOTREND.GSTC135P-3R3MF	125	78.7	63.7	38.7
16. L3 - (TF)COIL.2.2uH.GOTREND.GSTC135P-2R2MF	125	75.5	60.5	35.5
17. U4 - (TF) Regulator.Vin 3.5-36V.LINEAR.LTC3728EUH#PBF	85	69.0	54.0	29.0
18. L7 - (TF)COIL.33uH.GOTREND.GDO-0804-P-330-M	85	60.3	45.3	20.3
19. D11 - (TF) D Schottky.60V.3A.SMD.WILLAS.SK36C-TG	125	60.4	45.4	20.4
20. T2 - (TF)POWER MOSFET.SMD.SO-8.International Rectifier.IRF7416PbF	125	61.1	46.1	21.1
21. U6 - (TF) Lithium-Ion Battery.Charger.LINEAR.LTC4007EGN#PBF	85	58.3	43.3	18.3
22. T3 - (TF)POWER MOSFET.SMD.SO-8.International Rectifier.IRF7416PbF	125	67.3	52.3	27.3
23. D10 - (TF)D Schottky.SMC.Power Rectifiler.ON.MBRS330T3G	100	61.4	46.4	21.4
Power				
24. T1	125	72.9	57.9	32.9
25. Q5	105	81.2	66.2	41.2
Inverter				
26. IC1	85	69.1	54.1	29.1
27. Q2	150	73.0	58.0	33.0
28. Battery	55	59.7	44.7	19.7
29. HDD	60	54.7	39.7	14.7
30. Control Box Surface	N/A	50.4	35.4	10.4
31. Chamber Air Temperature	N/A	41.0	26.0	1.0

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Temperature cycle test

Sample Configuration & Quantity Under Test:

Quantity: 1 (ONYX-154)

Test Result:

No problem was found during the temperature operation cycle test.

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High temperature storage test

Test Date: 05-19~21-2008

Test Product: ONYX-154

Test Site: AAEON QA Internal Lab.

Performed By: Rex Chang

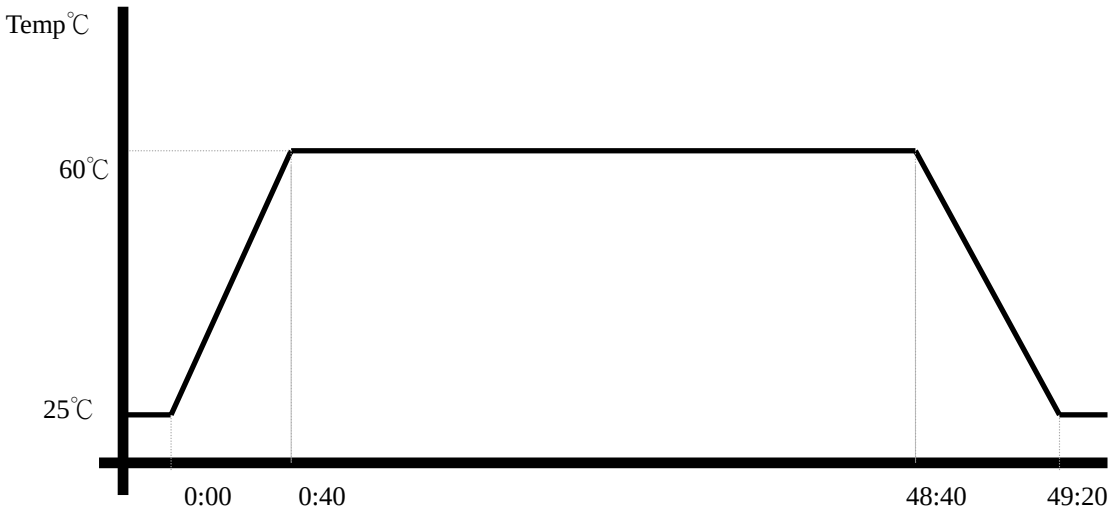
Test Standard: Reference IEC 68-2-2 Testing procedures
Test Bb: Dry Heat Test (Non-operation)

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D4H+-100
Date of Calibration: 05/16/07
Serial Number: 1241

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 (ONYX-154)

Test Result:

No problem was found after the high temperature storage test.

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Low temperature storage test

Test Date: 05-16~19-2008

Test Product: ONYX-154

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: 05/16/07
Serial Number: 1241

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 (ONYX-154)

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

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Humidity test

Test Date: 05-12~15-2008

Test Product: ONYX-154

Test Site: AAEON QA Internal Lab.

Performed By: Rex Chang

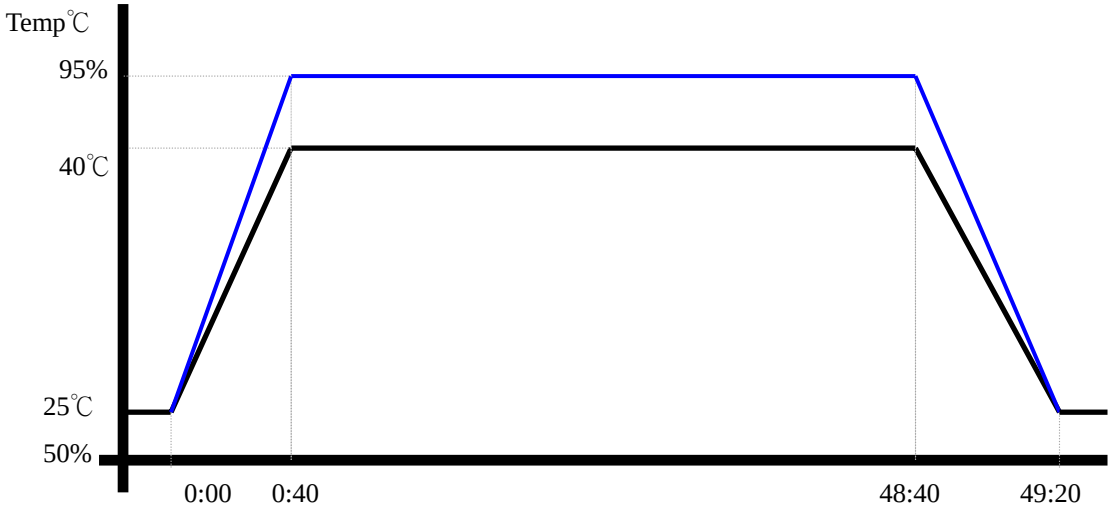
Test Standard: Reference IEC 68-2-3 Testing procedures
Test Ca: Damp heat, steady state (Non-operation)

Test Equipment:
Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D4H+-100
Date of Calibration: 05/16/07
Serial Number: 1241

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 (ONYX-154)

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

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Cold start and hot start test

Test Date: 05-15~16-2008

Test Product: ONYX-154

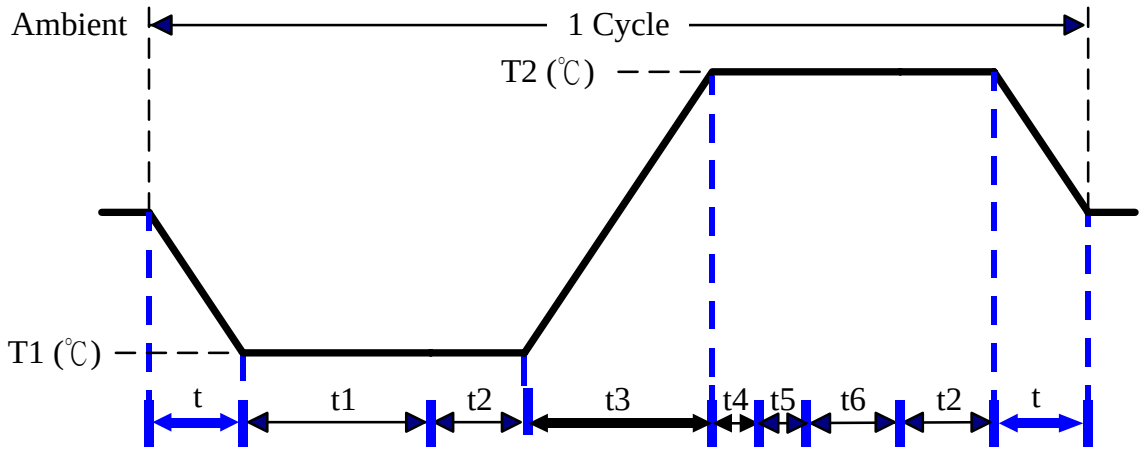
Test Site: AAEON QA Internal Lab.

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-D4H+-100
Date of Calibration: 05/16/07
Serial Number: 1241

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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