ONYX-150

With HDD

Environment Test Report

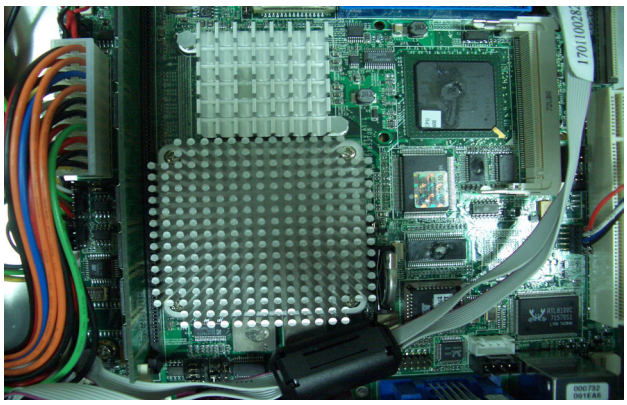
Report NO: 07P020016

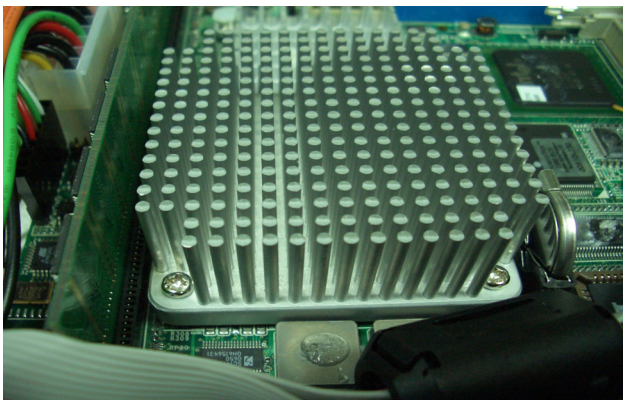
Issued by:	Sean Hsu	/	*06/01/2007*
	Test Engineer		**Date**
Reviewed by:	Wenyuan Yang	/	*06/01/2007*
	Manager		**Date**

Test item list

Num	Item	Spec
1.	**Low Noise Medical Station**:	ONYX-150
	1.LCD	15" CPT TFT-LCD CLAA150XP 03
	2.AC ADAPTER	FSP 105-AGB I/P：100~240VAC O/P:15V/7A
	3.DC/DC POWER SUPPLY	EPD-146 Rev：C
	4. Inverter	HWA YOUN QF83v3.21
2.	CPU Board:	EMB-852T Rev: A1.1
	1. Bios Ver.	ONYX-150 Ver 0.5 (05/14/2007)
	2.CPU	Intel Celeron M Processor 600MHz
	3.Memory	DSL 256MB SAMSUNG K4H560838H-UCB3 (DDR333)
	4. HDD	FUJITSU MHW2040AT / 40GB
	5.Test Software	Windows XP
	6.DVD-ROM	TEAC DV-28SL-R93

CPU Cooler





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Temperature cycle test

Test Date: 05-24~25-2007

Test Product: ONYX-150

Test Site: AAEON QA Internal Lab.

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

Test Equipment:

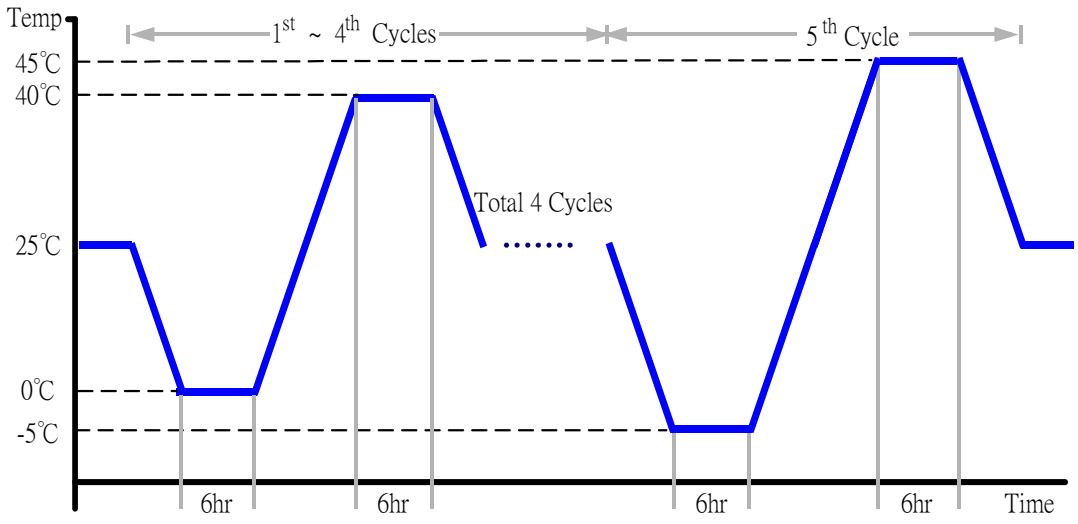
Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D4L+-100
Date of Calibration: 11/21/05
Serial Number: 2582

Temperature Measurement:

40 Channel Thermal Recorder:
YOKOGAWA Inc,
Model: DA100-13-1D
Date of Calibration: 12/11/06
Serial Number: 12A323190

Test Condition:

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



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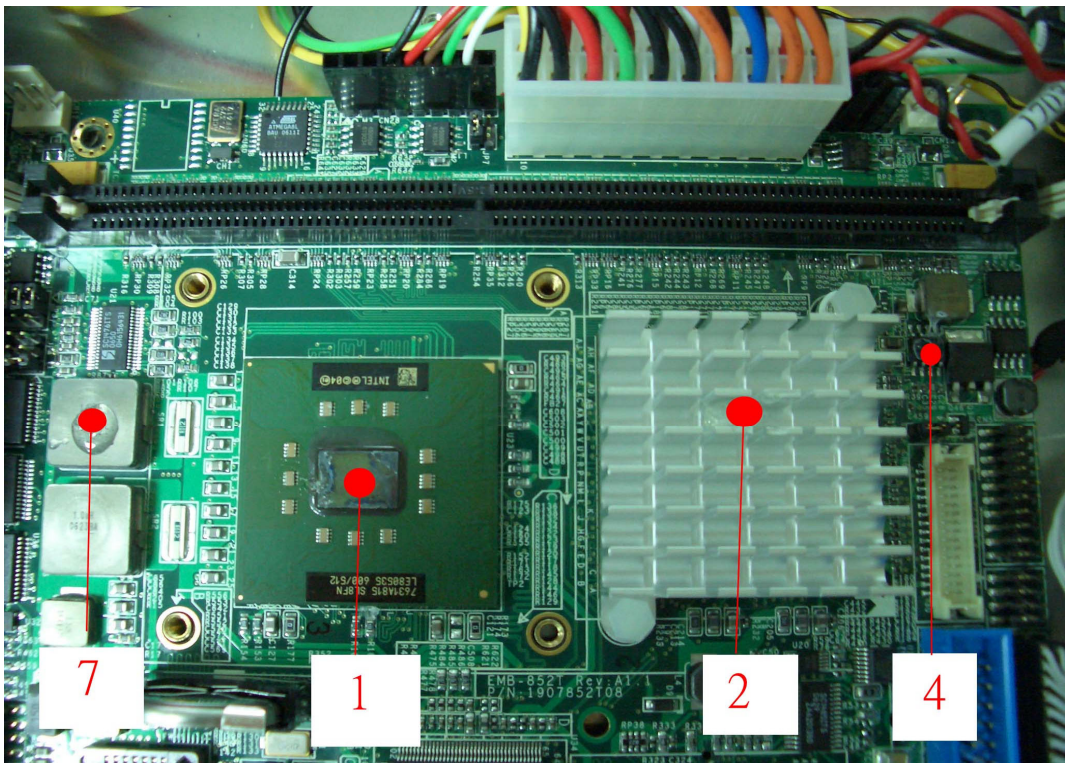
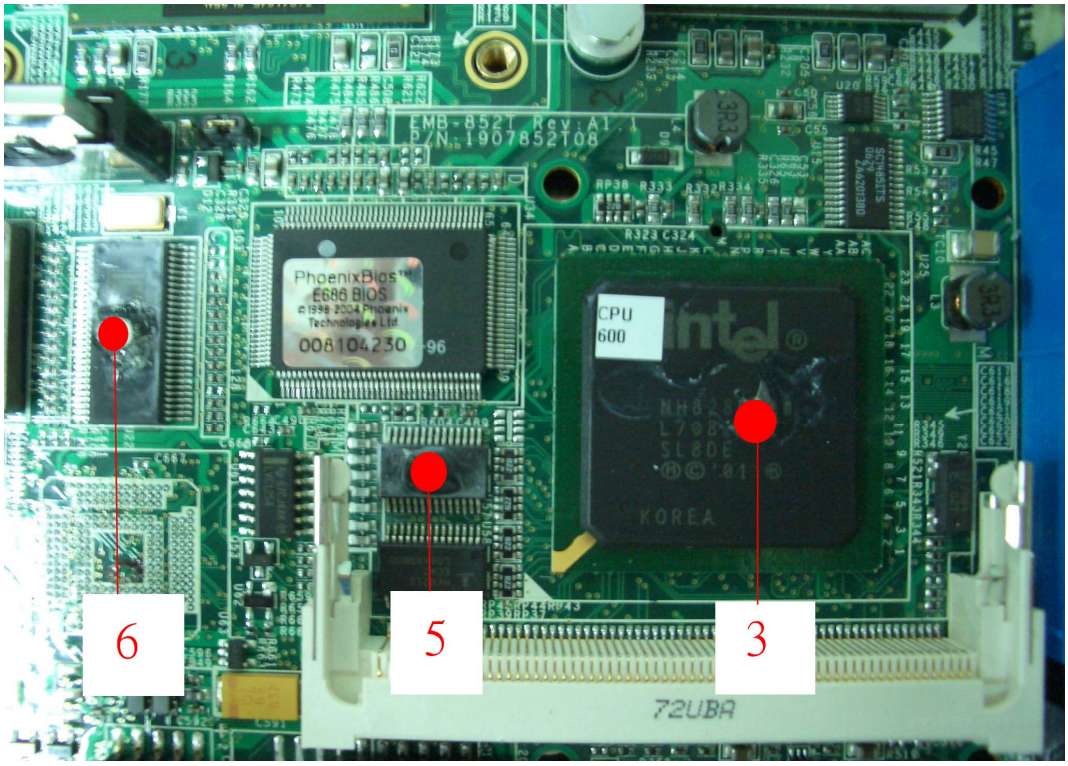
Temperature cycle test

Temperature Recorder:

Measuring Thermal Couple Position:





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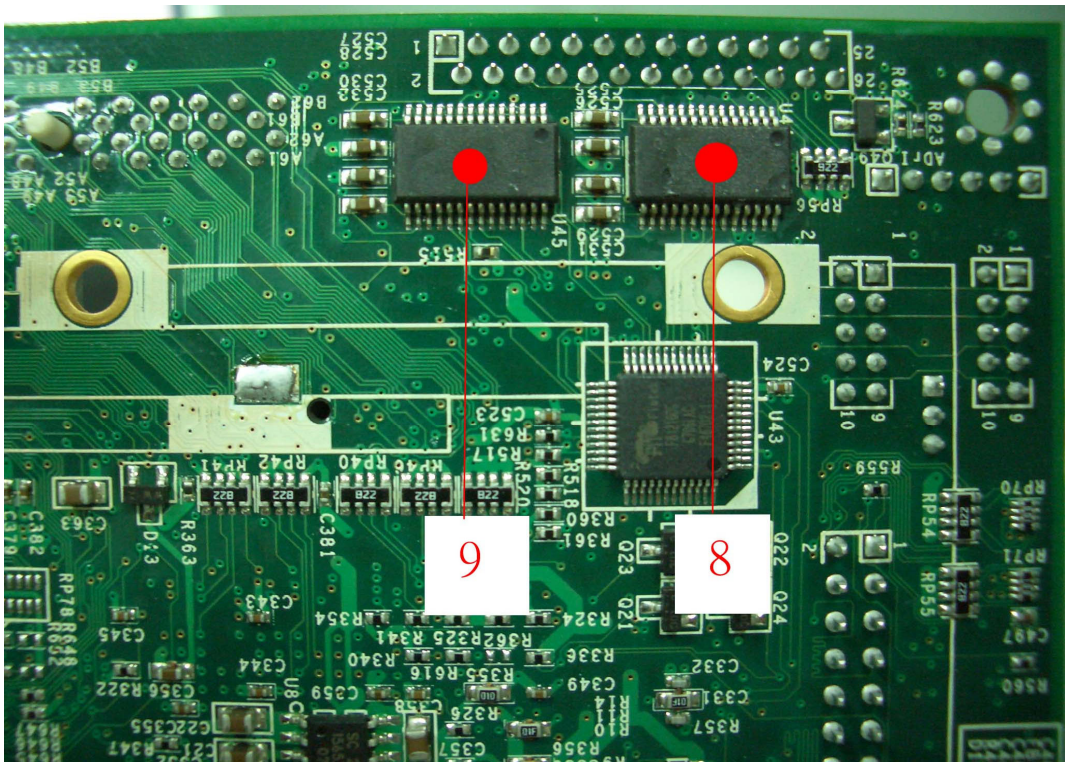
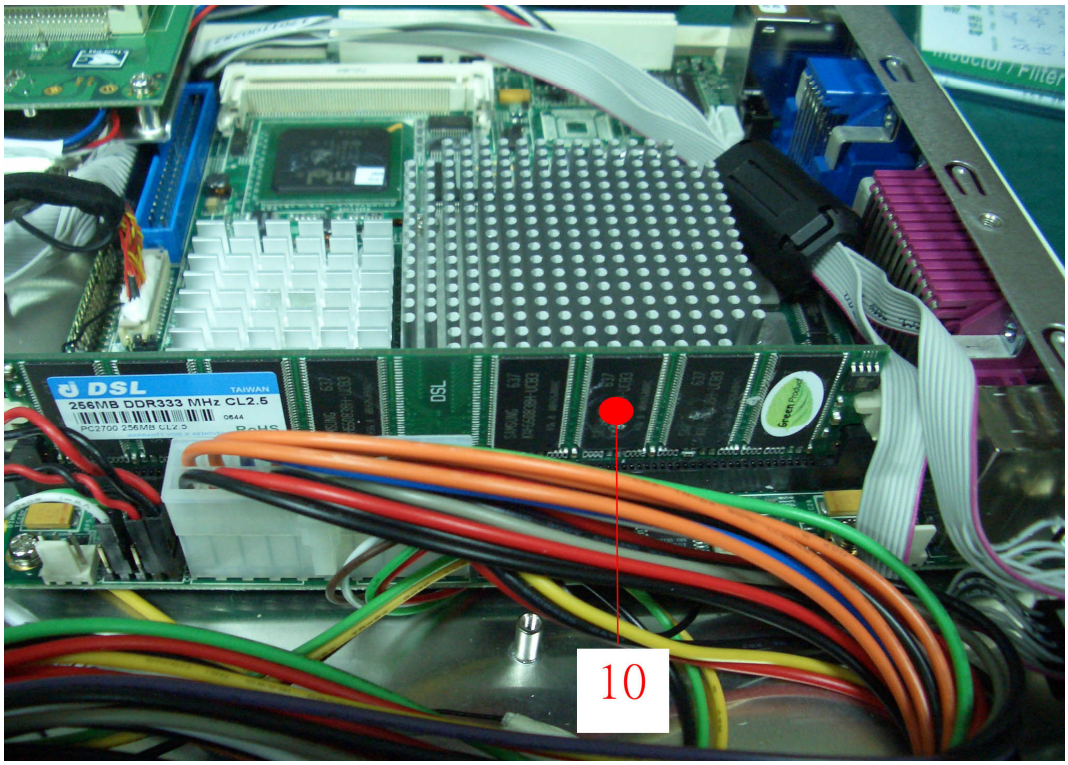
Temperature cycle test





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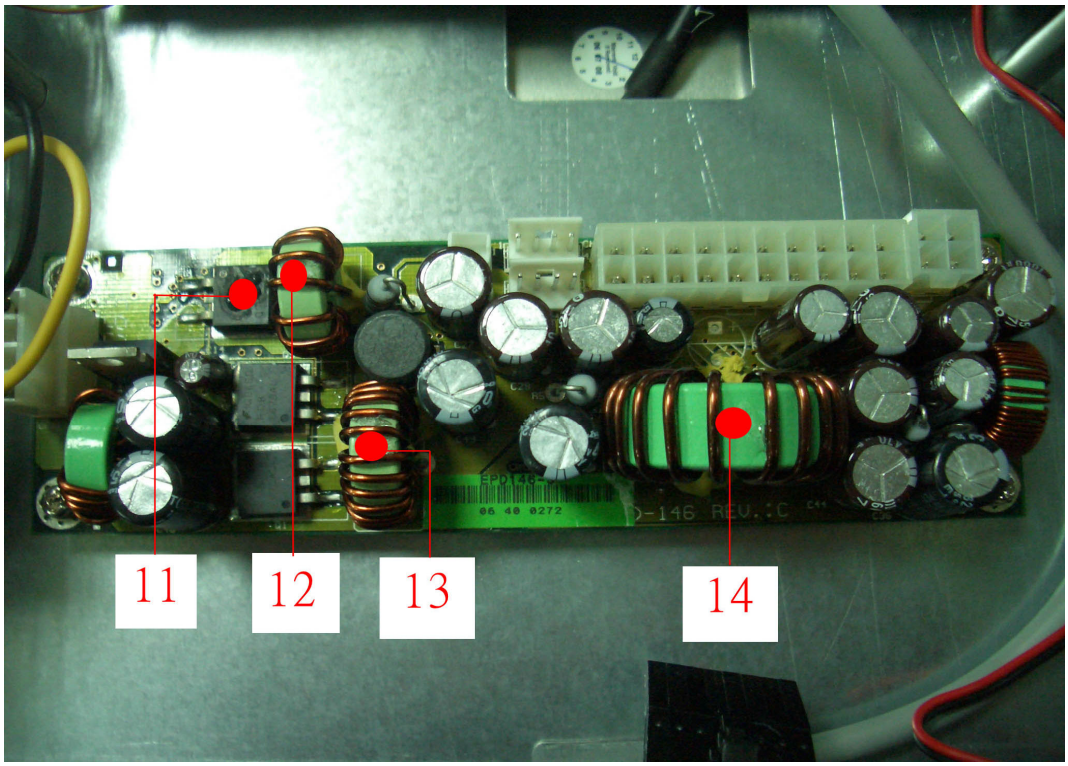

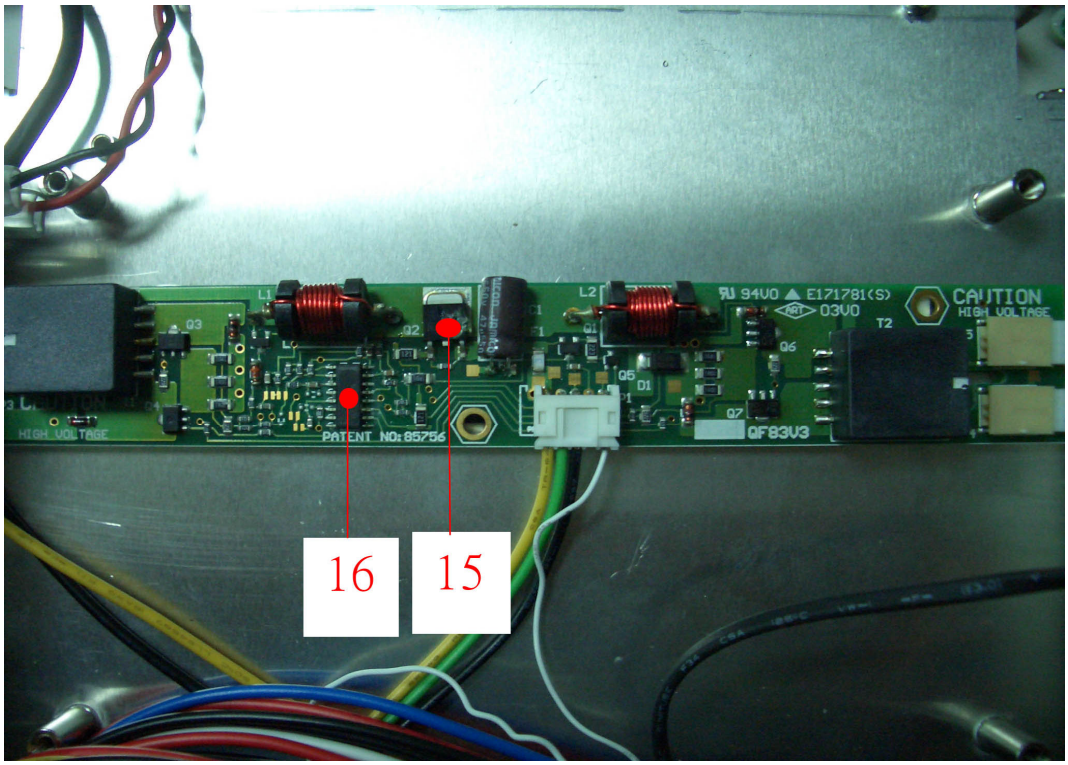

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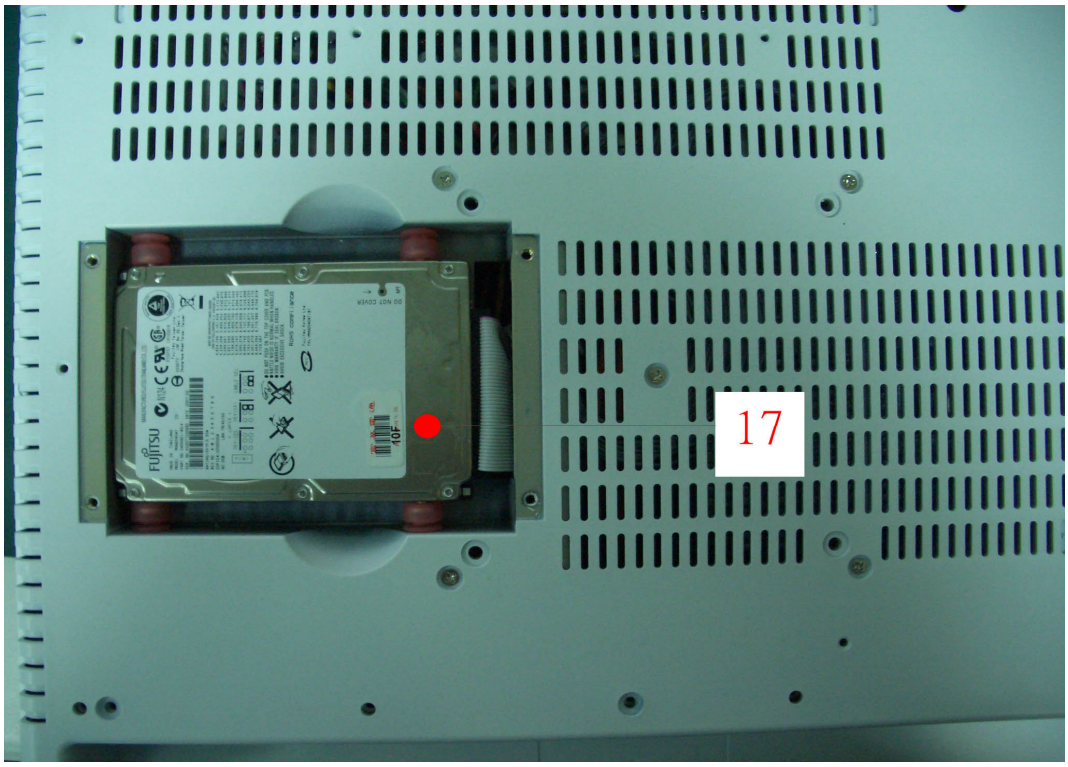

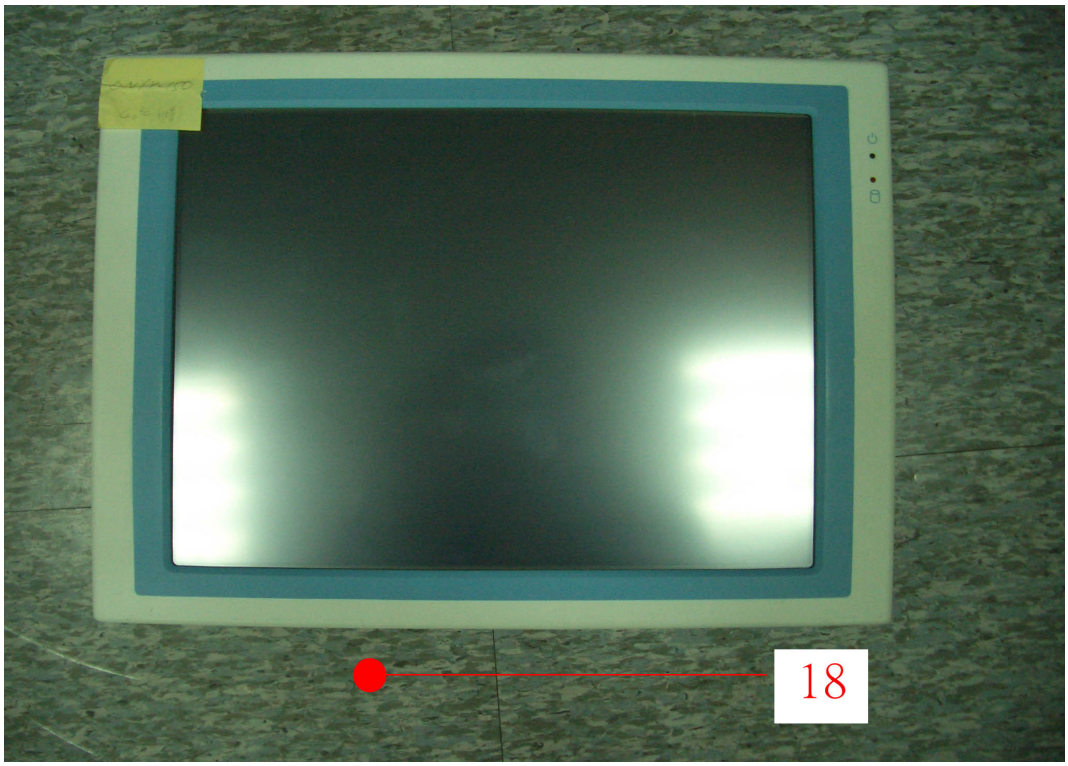

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Temperature cycle test

Thermal profile data:

Onyx-150

System						
Point / Temp. Stage(℃)	Spec	45	40	25	0	-5
Board-EMB-852T						
1. U23 CPU- INTEL CPU.Celeron-M. 600MHz.	100	72.7	67.7	52.7	27.7	22.7
2. U24-Chipset.NB82852GM.Intel.RG82852GM	105	79.1	74.1	59.1	34.1	29.1
3. U25-Chipset ICH4.INTEL.FW82801DB	110	71.0	66	51	26	21
4. U11-Step-Down DC/DC Controller.Anpec.APW7057	100	72.9	67.9	52.9	27.9	22.9
5. U57-(TF)RS232 Driver ESD 15KV.INTERSIL.HIN213ECAZ	100	66.3	61.3	46.3	21.3	16.3
6. U22-CLOCK GENERATOR.ICS.ICS952601	115	78.4	73.4	58.4	33.4	28.4
7. L5- (TF)COIL.1.0uH.SMD.12.9*12.9*5mm.VISHAY.HLP5050EZER1R0M01	125	72.0	67.0	52.0	27.0	22.0
8. U44-(TF)RS232 Driver ESD 15KV.INTERSIL.HIN213ECAZ	100	64.5	59.5	44.5	19.5	14.5
9. U45-(TF)RS232 Driver ESD 15KV.INTERSIL.HIN213ECAZ	100	64.3	59.3	44.3	19.3	14.3
10. Memory-DSL 256MB SAMSUNG K4H560838H-UCB3 DDR333	70	70.2	65.2	50.2	25.2	20.2
DC-DC POWER SUPPLY (EPD-146 REV:C)						
11.Q4 FAIRCHILD N-Channel MOSFET 80A/30V FDB6670AL	175	60.7	55.7	40.7	15.7	10.7
12.T2-COIL	125	52.8	47.8	32.8	7.8	2.8
13.T1-COIL	125	62.1	57.1	42.1	17.1	12.1
14.L2-COIL	125	58.60	53.6	38.6	13.6	8.6
Inverter						
15. Inverter - Q2	150	106.5	101.5	86.5	61.5	56.5
16. Inverter - IC1	100	96.9	91.9	76.9	51.9	46.9
17-HDD- FUJITSU MHW2040AT / 40GB	70	54.4	49.4	34.4	9.4	4.4
18.Chamber Air Temperature	N/A	45.1	40.1	25.1	0.1	-4.9
The description in red states which temperature is over the specification of the device.						

Sample Configuration & Quantity Under Test:

Quantity: 1 (ONYX-150)

Test Result:

No problem was found during the temperature operation cycle test.

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High temperature storage test

Test Date: 05-26~27-2007

Test Product: ONYX-150

Test Site: AAEON QA Internal Lab.

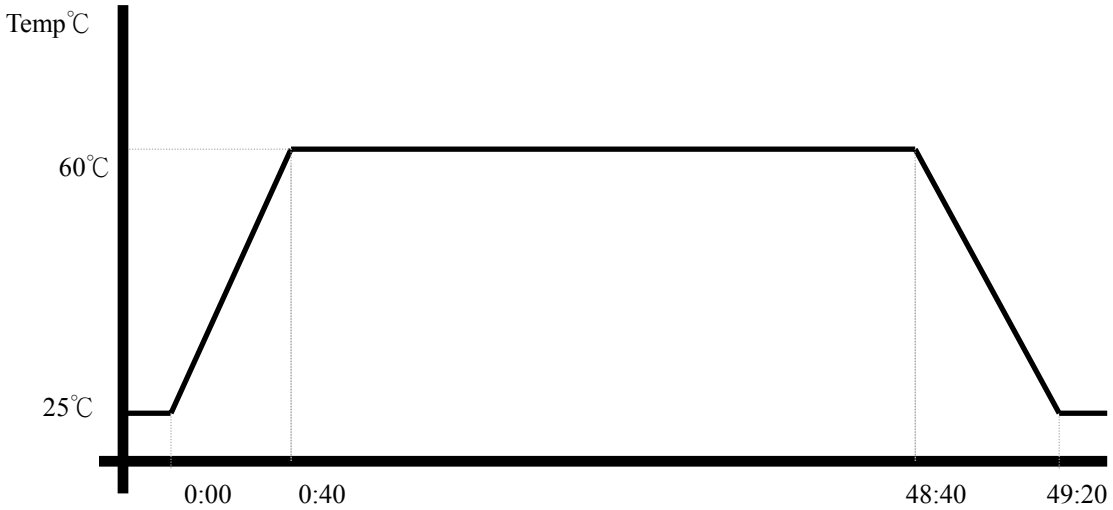
Test Standard: Reference IEC 68-2-2 Testing procedures
Test Bb: Dry Heat Test (Non-operation)

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D4L+-100
Date of Calibration: 11/21/05
Serial Number: 2582

Testing Item:

1. Test Temperature: 60℃
2. Test Times: 48Hrs
3. Test Software: Windows media Player (Video test soft-MPEG from HDD)
4. Test Environment Curve:



Sample Configuration & Quantity Under Test:
Quantity: 1 (ONYX-150)

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

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Low temperature storage test

Test Date: 05-28~29-2007

Test Product: ONYX-150

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-D4L+-100
Date of Calibration: 11/21/05
Serial Number: 2582

Testing Item:

1. Test Temperature: -20℃
2. Test Times: 48Hrs
3. Test Software: Windows media Player (Video test soft-MPEG from HDD)
4. Test Environment Curve:

Sample Configuration & Quantity Under Test:
Quantity: 1 (ONYX-150)

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

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Humidity test

Test Date: 05-23~24-2007

Test Product: ONYX-150

Test Site: AAEON QA Internal Lab.

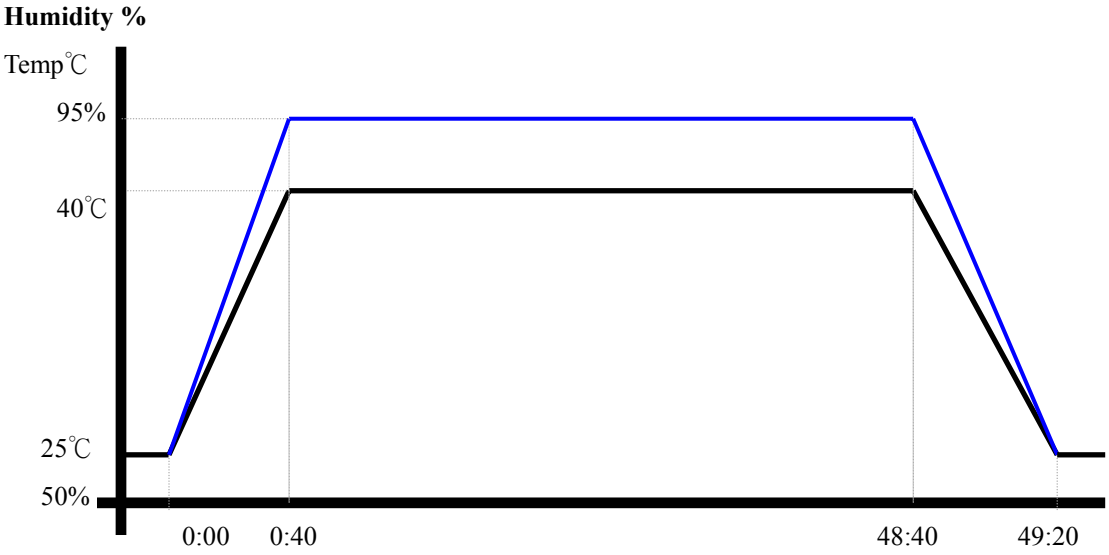
Test Standard: Reference IEC 68-2-3 Testing procedures
Test Ca: Damp heat, steady state (Non-operation)

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D4L+-100
Date of Calibration: 11/21/05
Serial Number: 2582

Testing Item:

1. Test Temperature: 40℃
2. Test Humidity: 95%RH
3. Test Times: 48Hrs
4. Test Software: Windows media Player (Video test soft-MPEG from HDD)
5. Test Environment Curve:



Sample Configuration & Quantity Under Test:
Quantity: 1 (ONYX-150)

Test Result:

No problem was found after the humidity storage test.

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Cold Start test

Test Date: 05-30-2007

Test Product: ONYX-150

Test Site: AAEON QA Internal Lab.

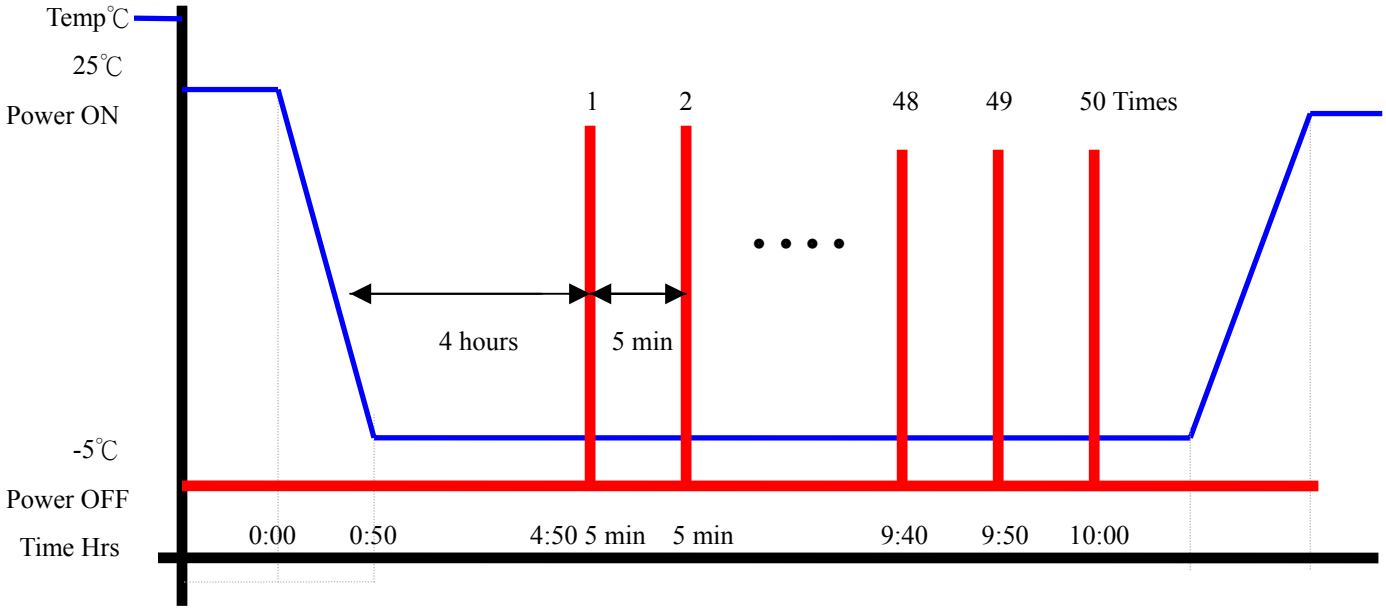
Test Standard: Reference IEC 68-2-1 Testing procedures
Test Ab: Cold Test

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D4L+-100
Date of Calibration: 11/21/05
Serial Number: 2582

Test Condition:

1. Test Temperature: -5℃
2. Test Times: 5 Hours or 50 times of ON/OFF
   (1) Power off for 4 hours before 1'st power on. Then once complete boot, power off immediately.
   (2) After 5 min later power on again and wait until booting is completed.
   (3) Repeat (2) for around 4:50
   (4) Power off then wait for 5 min before final power on operation.
3. Number of test: 50 times
4. Test Software: Windows XP
5. Test Environment Curve:



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Cold Start test

Sample Configuration & Quantity Under Test:

Quantity: 1 (ONYX-150)

Test Result:

No problem was found after the Cold Start test.

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