AAEON Technology INC.
ISO-9001/ISO-14001 Certified
Industrial Automation PCs

# AMB-551 (SBC-676)
## Temperature / Humidity Test Report

| | | | |
|---|---|---|---|
| **Issued by:** | | / | *05/21/2002* |
| | **Rex Chang**<br>**QE Engineer** | | **Date** |
| **Reviewed by:** | | / | *05/21/2002* |
| | **Wen - Yuan Yang**<br>**QE Manager** | | **Date** |

1.Test Product: Modular System Industrial Panel PCs

2. Model Name: AMB-551(SBC-676)

3. Test Date: 05-18-2002

4. Test Site: AAEON QA Internal Lab.

5. Test Equipment

| Type | MFR | Model Number | Serial Number | Last CAL. |
|---|---|---|---|---|
| Programmable Temperature & Humidity Chamber | KSON | THS-D4H+-100 | 1241 | 06/10/01 |

6. Test Standard:

| NO. | Description |
|---|---|
| IEC 68-2-61 | Test Z/ABD : Climatic Sequence Test |
| N/A | Power ON/OFF 50 Times at 0℃ |

7. Testing Item:

Temperature & Humidity Cycle
Test 0℃ Power On/Off Test

8. Additional Test Peripheral:

| Configuration | Model |
|---|---|
| Test O.S. | Win98SE |
| Test Software | Windows Media Player (VCD viewing) |
| Test Fixture (For Test Software) | Temperature Recorder Fixture |
| Test Fixture | Power on/off(110V) Fixture |

9. Sample Configuration & Quantity Under Test:

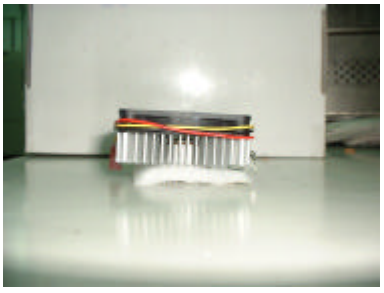
Quantity: 1 (15" LCD + Control Box)
Sample Configuration:
9-1 15" VGA Color TFT LCD Displays

| Conponent | Model Name | Temperature | | Humidity | |
|---|---|---|---|---|---|
| | | Operation | Storage | Operation | Storage |
| 15" LCD | Fujitsu FLC 38XGC6V-06 | 0 ~ 50℃ | -20 ~ 60℃ | 20 ~85%RH. | 5 ~85% RH. |
| Inverter | SI JING HARNG 8592F-01 | 0 ~ 50℃ | -10 ~ 85℃ | 90% MAX.RH. | 95% MAX.RH. |
| Switching Power Supply | Magic Power MPI-925A | 0 ~ 70℃ (-20℃ Can be started up) | -40 ~ 75℃ | 5 ~95%RH (noncondensing at 40℃) | 90%RH (at 65℃ for 24 hours) |

9-2 Control Box

| | |
|---|---|
| CPU | Intel PentiumⅢ1GHz(100x10) |
| DRAM | 64MB NEC D4564841G5-A10-9JF(PC100 SDRAM) |
| PCB | SBC-676 A1.0 |
| System BIOS Version | SBC-676 BIOS 1.1 |
| HDD | Fujitsu MPG3204AT-E |
| Power (P/N) | 1757325030 |
| Cooler (P/N) | 1759200152 |

Cooler (P/N) : 1759200152



10. Test Result:

| Standard | Description | Result |
|---|---|---|
| IEC 68-2-61 | Temperature & Humidity Cycle Test (Windows Media player used for viewing VCD) | Pass |
| N/A | Power ON/OFF 50 Times at 0℃ | Pass |

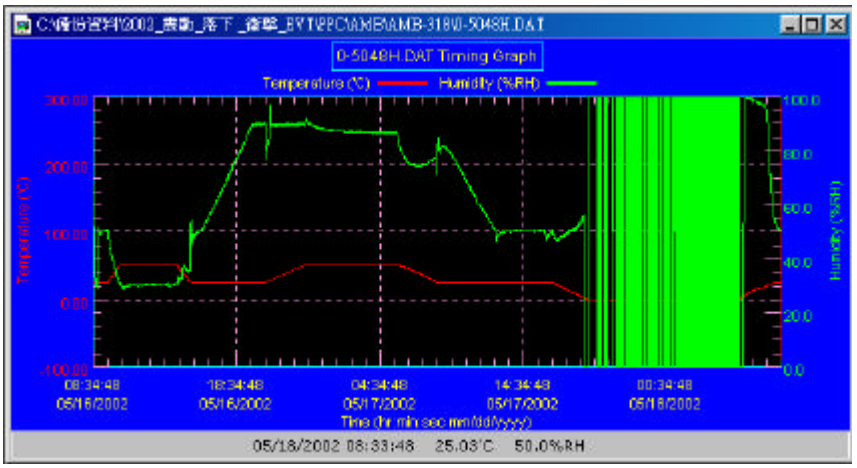
**Note :** 1.Dummy load : 5V/1A(5W);12V/0.5A(6W) x 2 pcs

11. Temperature & Humidity Cycle Test:

11-1 Testing Specification:

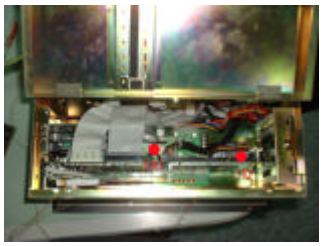
| Step | Temperature (℃) | Humidity (%RH) | Duration (HH:MM) |
|---|---|---|---|
| **1** | 25 | 50 | 00:30 |
| **2** | 25 | 50 | 00:30 |
| **3** | 50 | 30 | 00:50 |
| **4** | 50 | 30 | 04:00 |
| **5** | 25 | 50 | 00:50 |
| **6** | 25 | 50 | 00:50 |
| **7** | 25 | 90 | 03:30 |
| **8** | 25 | 90 | 01:00 |
| **9** | 50 | 90 | 02:46 |
| **10** | 50 | 90 | 06:21 |
| **11** | 25 | 90 | 02:46 |
| **12** | 25 | 50 | 04:07 |
| **13** | 25 | 50 | 03:30 |
| **14** | 25 | 50 | 00:30 |
| **15** | 0 | 0 | 02:30 |
| **16** | 0 | 0 | 10:30 |
| **17** | 25 | 50 | 02:30 |
| **18** | 25 | 50 | 00:30 |

11-2 Test Curve:

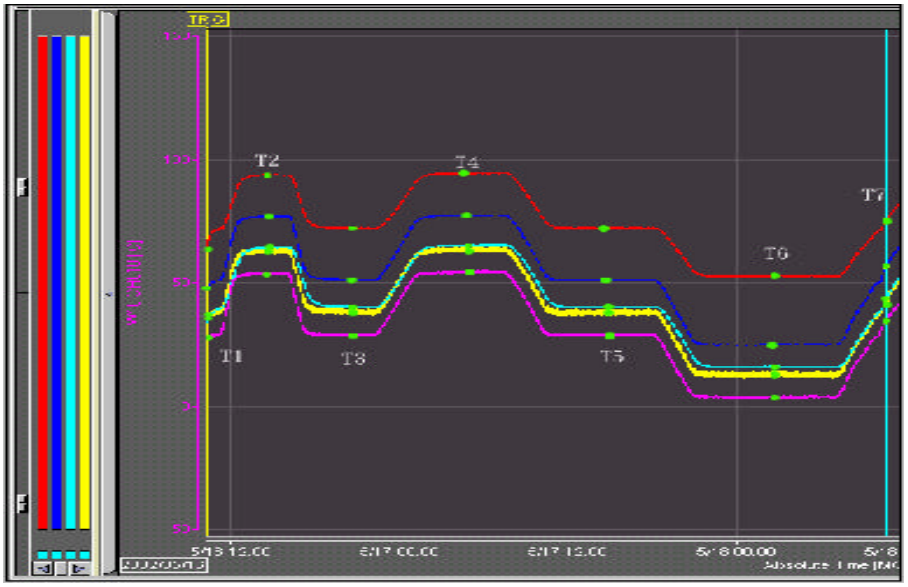



12. Temperature Recorder

12-1 Measuring Accelerometer Position:

12-2 Temperature chart:




| Channel / Temp. Stage | Channel 1 (Inverter) | Channel 2 (CPU) | Channel 3 (Control Box) | Channel 4 (HDD) | Channel 5 (Chamber) |
|---|---|---|---|---|---|
| **T1 (25℃)** | 63.1℃ | 46.9℃ | 33.8℃ | 34.7℃ | 27.8℃ |
| **T2 (50℃)** | 93.8℃ | 76.8℃ | 64.2℃ | 63.2℃ | 53.4℃ |
| **T3 (25℃)** | 72.0℃ | 50.9℃ | 40.3℃ | 38.4℃ | 28.9℃ |
| **T4 (50℃)** | 94.5℃ | 77.3℃ | 65.1℃ | 63.7℃ | 54.3℃ |
| **T5 (25℃)** | 72.0℃ | 51.1℃ | 40.4℃ | 38.2℃ | 29.0℃ |
| **T6 ( 0℃)** | 52.7℃ | 25.0℃ | 16.1℃ | 12.2℃ | 3.7℃ |
| **T7 (25℃)** | 67.3℃ | 45.7℃ | 33.3℃ | 33.9℃ | 25.0℃ |

13. Power ON/OFF 50 Times at 0℃:

13-1 Testing Specification:

| Step | Temperature (℃) | Humidity (%RH) | Duration (HH:MM) |
|---|---|---|---|
| **1** | 25 | 50 | 00:01 |
| **2** | 25 | 50 | 00:05 |
| **3** | 0 | 0 | 00:40 |
| **4** | 0 | 0 | 01:00 |
| **5** | 25 | 0 | 00:40 |
| **6** | 25 | 50 | 00:01 |

13-2 Test Curve: