**Report NO: 13P0A0009_I**

# FSP060-DBAB1

# of

# AEC-6401

## Power Electronics Test Report

| | |
|---|---|
| Summary | ☑ **Pass**<br>☐ **Fail**<br>☐ **Pass with Deviation**<br>**Comment:** _____ |

| Test Result Summary | | | | |
|---|---|---|---|---|
| | Critical | Major | Minor | Enhancement |
| Defect Found | 0 | 0 | 0 | 0 |
| Defect Unsolved | 0 | 0 | 0 | 0 |

| Issue date | Approval | Test Engineer |
|---|---|---|
| ***07/16/2013*** | **Tom Lin** | **Sean Hsu** |



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## 1. Project

FSP060-DBAB1 AC-DC Adapter for AEC-6401 BIOS: R0.13

## 2. Power Manufacturer

FSP

## 3. Team Member

PM：Barnabas Chen；H/W：Tommy Taso

## 4. Test Equipment

4.1. PCB：AAEON，PBA-CV02 REV.A0.2
4.2. CPU：INTEL，ATOM N2600 1.6GHz
4.3. HDD：MEMORIGHT，MRMAJ5C016G2CM1C00，16GB
4.4. Memory：DSL，DDR3- 1333 2GB
4.5. Power Supply：FSP，M/N：FSP060-DBAB1，O/P：60Watt
4.6. USB Mouse：Logitech，Model：M-BT85
4.7. USB Keyboard：Logitech，Model：Y-BL49
4.8. LCD Monitor：CHIMEI，Model：22SH-L

## 5. AC Adapter Spec

AC Input：100VAC~240VAC / 47Hz~63Hz
DC Output：12Vdc Min Load：0A　Full Load：5A / 60W


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## 6. Test Item

| Test Item | Test Condition / Specification | | Sanction | |
|---|---|---|---|---|
| | | | Measured | Result |
| 6.1. AC Input Current | I/P:115VAC | 1.7A | 1.28A | PASS |
| 6.2. MAX Inrush Current | I/P:115VAC | A | 8.48A | - |
| | I/P:230VAC | A | 9.3A | - |
| 6.3. Input Frequency & Voltage | I/P:90VAC/47HZ | ■ON □ OFF | - | PASS |
| | I/P:90VAC/63HZ | ■ON □ OFF | - | PASS |
| | I/P:264VAC/47HZ | ■ON □ OFF | - | PASS |
| | I/P:264VAC/63HZ | ■ON □ OFF | - | PASS |
| 6.4. Switching Test | Switching Time: 0.5 Sec MIN Load / Full Load | @90VAC ■ON □ OFF | - | PASS |
| | Switching Time: 0.5 Sec MIN Load / Full Load | @115VAC ■ON □ OFF | - | PASS |
| | Switching Time: 0.5 Sec MIN Load / Full Load | @230VAC ■ON □ OFF | - | PASS |
| | Switching Time: 0.5 Sec MIN Load / Full Load | @264VAC ■ON □ OFF | - | PASS |
| 6.5. Efficiency | I/P:90VAC O/P:5A | @%Min | 84.188% | - |
| | I/P:115VAC O/P:5A | @85%Min | 85.107% | PASS |
| | I/P:230VAC O/P:5A | @85%Min | 86.695% | PASS |
| | I/P:264VAC O/P:5A | @%Min | 86.496% | - |
| 6.6. Line Regulation | I/P:90VAC~264VAC | <±1% | 0.25% | PASS |
| 6.7. Load Regulation | I/P:115VAC O/P:MIN~FULL LOAD | <±5% | 4.167 | PASS |
| | I/P:230VAC O/P:MIN~FULL LOAD | <±5% | 4.00 | PASS |
| 6.8. Over-Voltage Protection | I/P:230VAC O/P:MIN LOAD | V1：13~18 (MAX) | - | - |
| 6.9. Over-Circuit Protection | O/P: 12V | 7.2A(MAX) | 6.35A | PASS |
| 6.10. Over-Load Protection | I/P:90VAC O/P:MIN LOAD | 144% | 124 | PASS |
| | I/P:115VAC O/P:MIN LOAD | 144% | 127 | PASS |
| | I/P:230VAC O/P:MIN LOAD | 144% | 128 | PASS |
| | I/P:264VAC O/P:MIN LOAD | 144% | 125 | PASS |
| 6.11. Short Circuit Protect | I/P:115VAC O/P:MIN LOAD | 12V&GND Short | - | PASS |
| | I/P:230VAC O/P:MIN LOAD | 12V&GND Short | - | PASS |


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| | | | | |
|---|---|---|---|---|
| **6.12. Line Voltage Surge** | O/P: FULL LOAD | Surge voltage from 132VAC to 147VAC (0.5sec), back to 132VAC | - | PASS |
| | O/P: FULL LOAD | Surge voltage from 264VAC to 293VAC (0.5sec), back to 264VAC | - | PASS |
| **6.13. Line Voltage Sag** | O/P: FULL LOAD | Sag voltage from 108VAC to 80VAC (0.5sec), back to 108VAC | - | PASS |
| | O/P: FULL LOAD | Sag voltage from 198VAC to 161VAC (0.5sec), back to 198VAC | - | PASS |
| **6.14. Ripple & Noise** | I/P:115VAC O/P:FULL LOAD | ≦150mv | 99mv | PASS |
| | I/P:230VAC O/P:FULL LOAD | ≦150mv | 93mv | PASS |
| **6.15. Setup Time** | I/P:115VAC O/P:FULL LOAD | 4S(MAX) | 865ms | PASS |
| | I/P:230VAC O/P:FULL LOAD | mS(MAX) | 845ms | PASS |
| **6.16. Hold up Time** | I/P:115VAC O/P:FULL LOAD | 8mS(MIN) | 18.8ms | PASS |
| | I/P:230VAC O/P:FULL LOAD | 8mS(MIN) | 79.1ms | PASS |
| **6.17. Rise Time** | I/P:115VAC O/P:FULL LOAD | mS(MAX) | 24.5ms | PASS |
| | I/P:230VAC O/P:FULL LOAD | mS(MAX) | 24.4ms | PASS |
| **6.18. Turn on Overshoot** | Turn on overshoot shall not exceed 10% over nominal voltages@ 20 % LOAD | | - | PASS |
| | Turn on overshoot shall not exceed 10% over nominal voltages@ 20 % LOAD | | - | PASS |
| **6.19. Turn off Undershoot** | Turn off undershoot shall not exceed 10% over nominal voltages | | - | PASS |
| | Turn off undershoot shall not exceed 10% over nominal voltages | | - | PASS |
| **6.20. Remote ON/OFF** | Simulate TTL signal to test this function | | | - |
| **6.21. Power Good Signal** | Shall go high level with a delay of100~500ms | | - | - |
| **6.22. Power On In Low Temperature** | I/P:115VAC ( -40℃ ) After 2HR Power On | | | - |
| **6.23. Power On In High Temperature** | I/P:115VAC ( 75℃ )After 2HR Power On | | | - |
| **6.24. Power Consumption Test With AC Adapter** | No Run Prime95 | I/P:100VAC 0.19A 8W | O/P: 12V/0.46A 5.52W | PASS |
| | Run Prime95 | I/P:100VAC 0.26A 11.9W | O/P: 12V/0.79A 9.48W | PASS |


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