

# **PFM-540I**

## **Reliability Prediction Report**

### **(MTBF)**

Report NO : 06E070024

**12-05-2006**

Issue Date

**Wenyuan Yang**

Manager

**Jessica Chou**

Test Engineer

## Reliability Prediction (MTBF)

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I . **Model Name:** PFM-540I

II . **Prediction Date:** Dec. 05, 2006

III . **Prediction Site:** AAEON Q.E. Dept.

IV . **Predicted by:** Jessica Chou

V . **Equipment:** Relex Ver.7.3 Visual Reliability Software

### VI. Simulation Environment:

- Temperature: 28.1 degrees C
- Standard: Telcordia (Bellcore) Standard

### VII. Term and Definition:

- Unit : An assembly of device.
- Duty Cycle : Used to specify the percentage of time that the element is in an on state, and it is equal to the percentage of total time the item is in the active environment.
- Quantity : The quantity of the selected item.
- Failure Rate : Used to specify that the failure rate is to be calculated based the selected Calculation models. The multiplier is 1,000,000.
- MTBF : MTBF is always specified in hours.

### VIII. Prediction Result:

- PFM-540I
  - Failure Rate: 9.191609 ppm
  - MTBF: 108,795 Hours

### AAEON Reliability Prediction Report

**Part Number** 9697540I02  
**Reference Des**  
**Date** 12. 5, 2006  
**Environment** GF, GU - Ground Fixed, Uncontrolled  
**Temp. (°C)** 28.10



**Description** Top-level assembly  
**File Name** PFM-540I.RPJ  
**Time** 2:55 下午  
**Failure Rate** 9.191609  
**MTBF** 108,795

| Assembly Name | Part Number | Model    | Method          | Environment            | Duty Cycle | Qty  | Failure Rate | MTBF    |
|---------------|-------------|----------|-----------------|------------------------|------------|------|--------------|---------|
| PFM-540I      | 9697540I02  | Bellcore | Method I Case 3 | GF, GU - Ground Fixed, | 100.00     | 1.00 | 9.191609     | 108,795 |

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**Environment** GF, GU - Ground Fixed, Uncontrolled  
**Temp. (°C)** 28.10

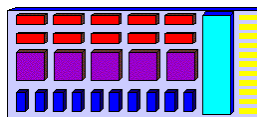


**Description** Top-level assembly  
**File Name** PFM-540I.RPJ  
**Time** 2:55 下午  
**Failure Rate** 9.191609  
**MTBF** 108,795

| Part Number | Category           | Location  | Calculation Model | Quality | Tem. Rise | Failure Rate, Unit | Quantity | Failure Rate, % | Failure Rate | MTBF, Unit   |
|-------------|--------------------|---|-------------------|---------|-----------|--------------------|----------|-----------------|--------------|--------------|
| 1653003100  | Connection         | CN3   | Bellcore Issue 6  | Level I |           | 0.026716           | 1.00     | .2907           | 0.026716     | 37430381.32  |
| 1653003101  | Connection         | JP1   | Bellcore Issue 6  | Level I |           | 0.002004           | 1.00     | .0218           | 0.002004     | 499071750.88 |
| 1653003201  | Connection         | JP2,JP3   | Bellcore Issue 6  | Level I |           | 0.004007           | 2.00     | .0872           | 0.008015     | 249535875.44 |
| 1653120221  | Connection         | CN7   | Bellcore Issue 6  | Level I |           | 0.026716           | 1.00     | .2907           | 0.026716     | 37430381.32  |
| 1653132225  | Connection         | CN7   | Bellcore Issue 6  | Level I |           | 0.042746           | 1.00     | .4651           | 0.042746     | 23393988.32  |
| 1653300102  | Connection         | JP1   | Bellcore Issue 6  | Level I |           | 0.001336           | 1.00     | .0145           | 0.001336     | 748607626.31 |
| 1655004110  | Connection         | CN12  | Bellcore Issue 6  | Level I |           | 0.026716           | 1.00     | .2907           | 0.026716     | 37430381.32  |
| 1653022100  | Connection         | CN1   | Bellcore Issue 6  | Level I |           | 0.026716           | 1.00     | .2907           | 0.026716     | 37430381.32  |
| 1655306023  | Connection         | CN2   | Bellcore Issue 6  | Level I |           | 0.026716           | 1.00     | .2907           | 0.026716     | 37430381.32  |
| 1655902030  | Connection         | BAT1  | Bellcore Issue 6  | Level I |           | 0.026716           | 1.00     | .2907           | 0.026716     | 37430381.32  |
| 175011901C  | Miscellaneous      | BAT1  | Bellcore Issue 6  | Level I |           | 0.900000           | 1.00     | 9.7915          | 0.900000     | 1111111.11   |
| 1653300107  | Connection         | JP2   | Bellcore Issue 6  | Level I |           | 0.001336           | 1.00     | .0145           | 0.001336     | 748607626.31 |
| 1653300108  | Connection         | JP3   | Bellcore Issue 6  | Level I |           | 0.001336           | 1.00     | .0145           | 0.001336     | 748607626.31 |
| 105A512113  | Resistor           | R208  | Bellcore Issue 6  | Level I |           | 0.002408           | 1.00     | .0262           | 0.002408     | 415243940.42 |
| 105A700003  | Resistor           | R105,R123,R131,R145,R149,R161-<br>R178,R199,R228,R229,R231,R232-<br>R237,R257 | Bellcore Issue 6  | Level I |           | 0.002408           | 14.00    | .3668           | 0.033715     | 415243940.42 |
| 105A700003  | Resistor           | R26,R264,R280,R30,R45,R66,R70-<br>R78-R80,R88,R93,R99                         | Bellcore Issue 6  | Level I |           | 0.002408           | 13.00    | .3406           | 0.031307     | 415243940.42 |
| 1059700001  | Resistor           | R148,R251,R252,R83  | Bellcore Issue 6  | Level I |           | 0.002408           | 4.00     | .1048           | 0.009633     | 415243940.42 |
| 105A503033  | Resistor           | R276  | Bellcore Issue 6  | Level I |           | 0.002408           | 1.00     | .0262           | 0.002408     | 415243940.42 |
| 105A503323  | Resistor           | R56   | Bellcore Issue 6  | Level I |           | 0.002408           | 1.00     | .0262           | 0.002408     | 415243940.42 |
| 105A505623  | Resistor           | R230  | Bellcore Issue 6  | Level I |           | 0.002408           | 1.00     | .0262           | 0.002408     | 415243940.42 |
| 1231332721  | Miscellaneous      | Y1  | Bellcore Issue 6  | Level I |           | 0.150000           | 1.00     | 1.6319          | 0.150000     | 6666666.67   |
| 1124427080  | Capacitor          | C286,C287   | Bellcore Issue 6  | Level I |           | 0.004816           | 2.00     | .1048           | 0.009633     | 207621970.21 |
| 1301005440  | Semiconductor      | D12,D2-D4   | Bellcore Issue 6  | Level I |           | 0.026082           | 4.00     | 1.1350          | 0.104329     | 38340124.44  |
| 1301005441  | Semiconductor      | D7  | Bellcore Issue 6  | Level I | 15.20     | 0.039197           | 1.00     | .4264           | 0.039197     | 25512397.75  |
| 1301005441  | Semiconductor      | D5-D6   | Bellcore Issue 6  | Level I |           | 0.026082           | 2.00     | .5675           | 0.052165     | 38340124.44  |
| 14S3000300  | Inductor           | TF1   | Bellcore Issue 6  | Level I |           | 0.144493           | 1.00     | 1.5720          | 0.144493     | 6920732.34   |
| 14S4021301  | Integrated Circuit | U11   | Bellcore Issue 6  | Level I |           | 0.074304           | 1.00     | .8084           | 0.074304     | 13458158.75  |
| 14S4021301  | Integrated Circuit | U9  | Bellcore Issue 6  | Level I | 14.40     | 0.198927           | 1.00     | 2.1642          | 0.198927     | 5026979.71   |
| 1651203291  | Connection         | SKT1  | Bellcore Issue 6  | Level I | 15.40     | 0.045241           | 1.00     | .4922           | 0.045241     | 22103834.60  |

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**Reference Des**  
**Date** 12. 5, 2006  
**Environment** GF, GU - Ground Fixed, Uncontrolled  
**Temp. (°C)** 28.10



**Description** Top-level assembly  
**File Name** PFM-540I.RPJ  
**Time** 2:55 下午  
**Failure Rate** 9.191609  
**MTBF** 108,795

| Part Number | Category           | Location   | Calculation Model | Quality | Tem. Rise | Failure Rate, Unit | Quantity | Failure Rate, % | Failure Rate | MTBF, Unit   |
|-------------|--------------------|--|-------------------|---------|-----------|--------------------|----------|-----------------|--------------|--------------|
| 1653205201  | Connection         | CN10,CN13,CN14   | Bellcore Issue 6  | Level I |           | 0.026716           | 3.00     | .8720           | 0.080149     | 37430381.32  |
| 1653925210  | Connection         | CFD1   | Bellcore Issue 6  | Level I |           | 0.033395           | 1.00     | .3633           | 0.033395     | 29944305.05  |
| 14S6334610  | Integrated Circuit | U23  | Bellcore Issue 6  | Level I |           | 0.038297           | 1.00     | .4167           | 0.038297     | 26111394.28  |
| 1301005442  | Semiconductor      | D10,D8   | Bellcore Issue 6  | Level I |           | 0.026082           | 2.00     | .5675           | 0.052165     | 38340124.44  |
| 1129610260  | Capacitor          | HC1  | Bellcore Issue 6  | Level I |           | 0.004816           | 1.00     | .0524           | 0.004816     | 207621970.21 |
| 14S5A01400  | Integrated Circuit | U13,U25  | Bellcore Issue 6  | Level I |           | 0.074304           | 2.00     | 1.6168          | 0.148609     | 13458158.75  |
| 105A556223  | Resistor           | R265,R275  | Bellcore Issue 6  | Level I |           | 0.002408           | 2.00     | .0524           | 0.004816     | 415243940.42 |
| 105A523233  | Resistor           | R274   | Bellcore Issue 6  | Level I |           | 0.002408           | 1.00     | .0262           | 0.002408     | 415243940.42 |
| 105A503423  | Resistor           | R138   | Bellcore Issue 6  | Level I |           | 0.002408           | 1.00     | .0262           | 0.002408     | 415243940.42 |
| 1540710382  | Resistor           | RP1,RP10-RP20,RP2,RP23,RP25,-<br>RP28,RP3,RP44,RP48,RP5,RP51,-<br>RP6,RP64,RP7-RP9 | Bellcore Issue 6  | Level I |           | 0.007187           | 26.00    | 2.0329          | 0.186852     | 139147707.84 |
| 1540733085  | Resistor           | RP21,RP22,RP24,RP26,RP27,RP2-<br>9,RP30,RP32,RP38,RP39,RP4,RP-<br>43,RP52-RP54     | Bellcore Issue 6  | Level I |           | 0.007187           | 15.00    | 1.1728          | 0.107799     | 139147707.84 |
| 1540733085  | Resistor           | RP56,RP57,RP60,RP63,RP65,RP66  | Bellcore Issue 6  | Level I |           | 0.007187           | 6.00     | .4691           | 0.043120     | 139147707.84 |
| 105A700103  | Resistor           | R151,R155,R186,R205,R282,R76,-<br>R85  | Bellcore Issue 6  | Level I |           | 0.002408           | 7.00     | .1834           | 0.016858     | 415243940.42 |
| 105A506823  | Resistor           | R238,R239  | Bellcore Issue 6  | Level I |           | 0.002408           | 2.00     | .0524           | 0.004816     | 415243940.42 |
| 1540722085  | Resistor           | RP31,RP33,RP34,RP36,RP41,RP4-<br>2,RP45,RP47,RP49,RP58,RP61,R-<br>P67-RP72         | Bellcore Issue 6  | Level I |           | 0.007187           | 17.00    | 1.3292          | 0.122172     | 139147707.84 |
| 105A700139  | Resistor           | R101,R106,R127,R134,R136,R174-<br>,R182,R190,R212,R235,R261,R28,-<br>R285,R42,R8   | Bellcore Issue 6  | Level I |           | 0.002408           | 15.00    | .3930           | 0.036123     | 415243940.42 |
| 105A700139  | Resistor           | R87,R89,R9,R91   | Bellcore Issue 6  | Level I |           | 0.002408           | 4.00     | .1048           | 0.009633     | 415243940.42 |
| 105A704729  | Resistor           | R1,R142,R143,R153,R16,R162,R1-<br>81,R209,R223,R224,R226,R23,R24-<br>7,R254,R259   | Bellcore Issue 6  | Level I |           | 0.002408           | 15.00    | .3930           | 0.036123     | 415243940.42 |
| 105A704729  | Resistor           | R262,R267,R269,R271,R3,R62,R68-<br>,R69,R7   | Bellcore Issue 6  | Level I |           | 0.002408           | 9.00     | .2358           | 0.021674     | 415243940.42 |
| 105A700009  | Resistor           | R100,R116,R124,R129,R137,R144-<br>,R146,R173,R175,R187,R195,R200-<br>,R201,R202    | Bellcore Issue 6  | Level I |           | 0.002408           | 14.00    | .3668           | 0.033715     | 415243940.42 |
| 105A700009  | Resistor           | R210,R211,R225,R234,R246,R25,-<br>R57,R60,R65                                      | Bellcore Issue 6  | Level I |           | 0.002408           | 9.00     | .2358           | 0.021674     | 415243940.42 |

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**Part Number** 9697540I02  
**Reference Des**  
**Date** 12. 5, 2006  
**Environment** GF, GU - Ground Fixed, Uncontrolled  
**Temp. (°C)** 28.10

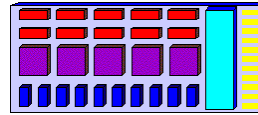


**Description** Top-level assembly  
**File Name** PFM-540I.RPJ  
**Time** 2:55 下午  
**Failure Rate** 9.191609  
**MTBF** 108,795

| Part Number | Category           | Location   | Calculation Model | Quality | Tem. Rise | Failure Rate, Unit | Quantity | Failure Rate, % | Failure Rate | MTBF, Unit   |
|-------------|--------------------|--|-------------------|---------|-----------|--------------------|----------|-----------------|--------------|--------------|
| 105A701039  | Resistor           | R107,R109,R126,R140,R156-R157-,R164,R168,R169,R171,R177,R179-,R19,R2,R206    | Bellcore Issue 6  | Level I |           | 0.002408           | 16.00    | .4192           | 0.038532     | 415243940.42 |
| 105A701039  | Resistor           | R215,R221,R248,R29,R31,R32,R36-,R38,R4,R43,R44,R46-R48,R50-R53               | Bellcore Issue 6  | Level I |           | 0.002408           | 19.00    | .4978           | 0.045756     | 415243940.42 |
| 105A703309  | Resistor           | R111,R112,R139,R147,R152,R154-,R160,R166,R172,R176,R185,R194-,R196,R197      | Bellcore Issue 6  | Level I |           | 0.002408           | 14.00    | .3668           | 0.033715     | 415243940.42 |
| 105A703309  | Resistor           | R204,R218,R219,R84,R90,R95   | Bellcore Issue 6  | Level I |           | 0.002408           | 6.00     | .1572           | 0.014449     | 415243940.42 |
| 105A733009  | Resistor           | R214,R253,R27,R33,R39,R40,R49  | Bellcore Issue 6  | Level I |           | 0.002408           | 7.00     | .1834           | 0.016858     | 415243940.42 |
| 1129710390  | Capacitor          | C104,C112,C115,C124,C126,C176-,C187,C188,C191,C194,C203,C205-,C210,C237      | Bellcore Issue 6  | Level I |           | 0.004816           | 14.00    | .7336           | 0.067430     | 207621970.21 |
| 1129710390  | Capacitor          | C274,C293,C301,C325,C63  | Bellcore Issue 6  | Level I |           | 0.004816           | 5.00     | .2620           | 0.024082     | 207621970.21 |
| 1129701790  | Capacitor          | C103,C106,C107,C110,C111,C118-,C134,C142,C143,C178,C182,C190-,C197,C202      | Bellcore Issue 6  | Level I |           | 0.004816           | 14.00    | .7336           | 0.067430     | 207621970.21 |
| 1129701790  | Capacitor          | C206,C208,C211,C216,C217,C219-,C225,C230,C234,C239,C244,C246-,C252,C253      | Bellcore Issue 6  | Level I |           | 0.004816           | 19.00    | .9956           | 0.091512     | 207621970.21 |
| 1129701790  | Capacitor          | C255,C257,C261,C265,C269,C271-,C279,C304,C327,C91-C93                        | Bellcore Issue 6  | Level I |           | 0.004816           | 12.00    | .6288           | 0.057797     | 207621970.21 |
| 1121610060  | Capacitor          | C100,C351,C64,C67  | Bellcore Issue 6  | Level I |           | 0.004816           | 4.00     | .2096           | 0.019266     | 207621970.21 |
| 1129710050  | Capacitor          | C1,C101,C108,C113,C128,C129,C-,132,C136,C137,C149,C156,C169,C-,175,C179,C181 | Bellcore Issue 6  | Level I |           | 0.004816           | 15.00    | .7860           | 0.072247     | 207621970.21 |
| 1129710050  | Capacitor          | C184,C200,C201,C21,C213,C215-,C22,C229,C231,C235,C240,C241-,C249,C25,C259    | Bellcore Issue 6  | Level I |           | 0.004816           | 15.00    | .7860           | 0.072247     | 207621970.21 |
| 1129710050  | Capacitor          | C28,C288,C3,C321,C322,C326,C3-,35,C346,C349,C361,C362,C42,C58-,C72,C75,C80   | Bellcore Issue 6  | Level I |           | 0.004816           | 16.00    | .8384           | 0.077063     | 207621970.21 |
| 1129710050  | Capacitor          | C87-C89  | Bellcore Issue 6  | Level I |           | 0.004816           | 3.00     | .1572           | 0.014449     | 207621970.21 |
| 14S5A12503  | Integrated Circuit | U24  | Bellcore Issue 6  | Level I |           | 0.074304           | 1.00     | .8084           | 0.074304     | 13458158.75  |
| 106B501031  | Resistor           | RT1  | Bellcore Issue 6  | Level I |           | 0.013358           | 1.00     | .1453           | 0.013358     | 74860762.63  |
| 14S4813905  | Integrated Circuit | U7   | Bellcore Issue 6  | Level I | 13.60     | 0.099558           | 1.00     | 1.0831          | 0.099558     | 10044359.81  |
| 1311119710  | Semiconductor      | Q3   | Bellcore Issue 6  | Level I |           | 0.026082           | 1.00     | .2838           | 0.026082     | 38340124.44  |
| 1122539980  | Capacitor          | C148,C59,C78   | Bellcore Issue 6  | Level I |           | 0.004816           | 3.00     | .1572           | 0.014449     | 207621970.21 |

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**Description** Top-level assembly  
**File Name** PFM-540I.RPJ  
**Time** 2:55 下午  
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**MTBF** 108,795

| Part Number | Category      | Location   | Calculation Model | Quality | Tem. Rise | Failure Rate, Unit | Quantity | Failure Rate, % | Failure Rate | MTBF, Unit   |
|-------------|---------------|--|-------------------|---------|-----------|--------------------|----------|-----------------|--------------|--------------|
| 1304101340  | Semiconductor | D1   | Bellcore Issue 6  | Level I |           | 0.006456           | 1.00     | .0702           | 0.006456     | 154896676.78 |
| 105A505109  | Resistor      | R240-R243  | Bellcore Issue 6  | Level I |           | 0.002408           | 4.00     | .1048           | 0.009633     | 415243940.42 |
| 105A507509  | Resistor      | R113,R133,R150,R255,R256,R272-R273                                     | Bellcore Issue 6  | Level I |           | 0.002408           | 7.00     | .1834           | 0.016858     | 415243940.42 |
| 105A702209  | Resistor      | R10,R103,R104,R108,R11,R115,R12,R122,R13-R15,R17,R18,R198,R20-R22,R260 | Bellcore Issue 6  | Level I |           | 0.002408           | 18.00    | .4716           | 0.043348     | 415243940.42 |
| 105A702209  | Resistor      | R268,R278,R279,R35,R5,R6   | Bellcore Issue 6  | Level I |           | 0.002408           | 6.00     | .1572           | 0.014449     | 415243940.42 |
| 1124405090  | Capacitor     | C141,C144,C145,C147,C150,C151-C158,C160,C161,C164,C166,C167-C174,C177  | Bellcore Issue 6  | Level I |           | 0.004816           | 14.00    | .7336           | 0.067430     | 207621970.21 |
| 1124405090  | Capacitor     | C34,C352,C353,C358,C359,C38,C44,C45,C49                                | Bellcore Issue 6  | Level I |           | 0.004816           | 9.00     | .4716           | 0.043348     | 207621970.21 |
| 105A501039  | Resistor      | R120,R220,R244,R245,R249,R258-R266,R277,R55,R71,R73,R98                | Bellcore Issue 6  | Level I |           | 0.002408           | 12.00    | .3144           | 0.028899     | 415243940.42 |
| 1121701080  | Capacitor     | C163,C2336,C238,C278,C306,C4   | Bellcore Issue 6  | Level I |           | 0.004816           | 6.00     | .3144           | 0.028899     | 207621970.21 |
| 1124410190  | Capacitor     | C114,C119,C122,C123,C125,C130-C131,C133,C154,C170,C171,C180-C183,C185  | Bellcore Issue 6  | Level I |           | 0.004816           | 14.00    | .7336           | 0.067430     | 207621970.21 |
| 1124410190  | Capacitor     | C186,C189,C192,C198,C199,C204-C207,C212,C214,C218,C226,C227-C243,C248  | Bellcore Issue 6  | Level I |           | 0.004816           | 14.00    | .7336           | 0.067430     | 207621970.21 |
| 1124410190  | Capacitor     | C256,C262,C263,C270,C333,C48,-C51,C60,C66,C68,C74                      | Bellcore Issue 6  | Level I |           | 0.004816           | 12.00    | .6288           | 0.057797     | 207621970.21 |
| 105A512039  | Resistor      | R110,R227,R263,R270,R283,R284  | Bellcore Issue 6  | Level I |           | 0.002408           | 6.00     | .1572           | 0.014449     | 415243940.42 |
| 1189922180  | Capacitor     | TC2  | Bellcore Issue 6  | Level I |           | 0.004816           | 1.00     | .0524           | 0.004816     | 207621970.21 |
| 1752001600  | Miscellaneous | FS1,FS2  | Bellcore Issue 6  | Level I |           | 0.030000           | 2.00     | .6528           | 0.060000     | 33333333.33  |
| 1124522190  | Capacitor     | C116,C117,C138,C254,C283,C289-C290,C295,C297,C302,C305,C31,-C317,C340  | Bellcore Issue 6  | Level I |           | 0.004816           | 14.00    | .7336           | 0.067430     | 207621970.21 |
| 1124522190  | Capacitor     | C341-C343,C354-C357,C37,C40,C41,C77,C85                                | Bellcore Issue 6  | Level I |           | 0.004816           | 12.00    | .6288           | 0.057797     | 207621970.21 |
| 1189615187  | Capacitor     | TC1  | Bellcore Issue 6  | Level I |           | 0.004816           | 1.00     | .0524           | 0.004816     | 207621970.21 |
| 1189615187  | Capacitor     | TC3  | Bellcore Issue 6  | Level I | 14.40     | 0.006270           | 1.00     | .0682           | 0.006270     | 159483795.54 |
| 105A501133  | Resistor      | R74,R75  | Bellcore Issue 6  | Level I |           | 0.002408           | 2.00     | .0524           | 0.004816     | 415243940.42 |
| 1653213208  | Connection    | CN8  | Bellcore Issue 6  | Level I |           | 0.026716           | 1.00     | .2907           | 0.026716     | 37430381.32  |
| 165321720A  | Connection    | CN11   | Bellcore Issue 6  | Level I |           | 0.026716           | 1.00     | .2907           | 0.026716     | 37430381.32  |

### AAEON Reliability Prediction Report

**Part Number** 9697540I02  
**Reference Des**  
**Date** 12. 5, 2006  
**Environment** GF, GU - Ground Fixed, Uncontrolled  
**Temp. (°C)** 28.10



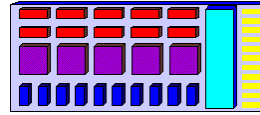
**Description** Top-level assembly  
**File Name** PFM-540I.RPJ  
**Time** 2:55 下午  
**Failure Rate** 9.191609  
**MTBF** 108,795

| Part Number | Category           | Location                                 | Calculation Model | Quality | Tem. Rise | Failure Rate, Unit | Quantity | Failure Rate, % | Failure Rate | MTBF, Unit   |
|-------------|--------------------|--|-------------------|---------|-----------|--------------------|----------|-----------------|--------------|--------------|
| 1653222209  | Connection         | CN9                                      | Bellcore Issue 6  | Level I |           | 0.026716           | 1.00     | .2907           | 0.026716     | 37430381.32  |
| 14S2200900  | Integrated Circuit | U19                                      | Bellcore Issue 6  | Level I |           | 0.074304           | 1.00     | .8084           | 0.074304     | 13458158.75  |
| 14S4048502  | Integrated Circuit | U12                                      | Bellcore Issue 6  | Level I |           | 0.074304           | 1.00     | .8084           | 0.074304     | 13458158.75  |
| 14S4048502  | Integrated Circuit | U8                                       | Bellcore Issue 6  | Level I | 15.30     | 0.210926           | 1.00     | 2.2948          | 0.210926     | 4740997.72   |
| 1315230111  | Semiconductor      | Q11,Q9                                   | Bellcore Issue 6  | Level I |           | 0.173882           | 2.00     | 3.7835          | 0.347764     | 5751018.67   |
| 14S4871203  | Integrated Circuit | U28                                      | Bellcore Issue 6  | Level I | 13.70     | 0.100084           | 1.00     | 1.0889          | 0.100084     | 9991570.54   |
| 14S4081110  | Integrated Circuit | U29                                      | Bellcore Issue 6  | Level I |           | 0.074304           | 1.00     | .8084           | 0.074304     | 13458158.75  |
| 16515A0995  | Connection         | SODIMM1                                  | Bellcore Issue 6  | Level I |           | 0.026716           | 1.00     | .2907           | 0.026716     | 37430381.32  |
| 1214309003  | Inductor           | CH1-CH4                                  | Bellcore Issue 6  | Level I |           | 0.002408           | 4.00     | .1048           | 0.009633     | 41524394.42  |
| 121230603T  | Inductor           | FB1-FB3                                  | Bellcore Issue 6  | Level I |           | 0.002408           | 3.00     | .0786           | 0.007225     | 41524394.42  |
| 14S4888801  | Integrated Circuit | U3                                       | Bellcore Issue 6  | Level I | 13.30     | 0.097995           | 1.00     | 1.0661          | 0.097995     | 10204614.26  |
| 14S3149103  | Integrated Circuit | U10                                      | Bellcore Issue 6  | Level I | 16.70     | 0.117045           | 1.00     | 1.2734          | 0.117045     | 8543724.76   |
| 123131435B  | Miscellaneous      | Y2                                       | Bellcore Issue 6  | Level I |           | 0.150000           | 1.00     | 1.6319          | 0.150000     | 6666666.67   |
| 1231325058  | Miscellaneous      | Y3                                       | Bellcore Issue 6  | Level I |           | 0.150000           | 1.00     | 1.6319          | 0.150000     | 6666666.67   |
| 105A551119  | Resistor           | R117,R54,R72                             | Bellcore Issue 6  | Level I |           | 0.002408           | 3.00     | .0786           | 0.007225     | 41524394.42  |
| 121110336B  | Inductor           | L3                                       | Bellcore Issue 6  | Level I | 14.40     | 0.003135           | 1.00     | .0341           | 0.003135     | 318967591.07 |
| 121110336B  | Inductor           | L1-L2                                    | Bellcore Issue 6  | Level I |           | 0.002408           | 2.00     | .0524           | 0.004816     | 41524394.42  |
| 1315700214  | Semiconductor      | Q10,Q5                                   | Bellcore Issue 6  | Level I |           | 0.086941           | 2.00     | 1.8917          | 0.173882     | 11502037.33  |
| 1315731310  | Semiconductor      | Q1                                       | Bellcore Issue 6  | Level I | 13.70     | 0.251455           | 1.00     | 2.7357          | 0.251455     | 3976859.54   |
| 1315731310  | Semiconductor      | Q2                                       | Bellcore Issue 6  | Level I |           | 0.173882           | 1.00     | 1.8917          | 0.173882     | 5751018.67   |
| 1315731310  | Semiconductor      | Q7                                       | Bellcore Issue 6  | Level I | 19.20     | 0.289015           | 1.00     | 3.1443          | 0.289015     | 3460029.86   |
| 165320520C  | Connection         | CN4,CN6                                  | Bellcore Issue 6  | Level I |           | 0.026716           | 2.00     | .5813           | 0.053433     | 37430381.32  |
| 165320820D  | Connection         | CN5                                      | Bellcore Issue 6  | Level I |           | 0.026716           | 1.00     | .2907           | 0.026716     | 37430381.32  |
| 1540700082  | Resistor           | RP35,RP37,RP40,RP46,RP50,RP5-5,RP59,RP62 | Bellcore Issue 6  | Level I |           | 0.007187           | 8.00     | .6255           | 0.057493     | 139147707.84 |
| 1315970211  | Semiconductor      | U15,U18                                  | Bellcore Issue 6  | Level I |           | 0.086941           | 2.00     | 1.8917          | 0.173882     | 11502037.33  |
| 1654040001  | Connection         | CN15                                     | Bellcore Issue 6  | Level I |           | 0.026716           | 1.00     | .2907           | 0.026716     | 37430381.32  |
| 14S3128421  | Integrated Circuit | U20                                      | Bellcore Issue 6  | Level I |           | 0.074304           | 1.00     | .8084           | 0.074304     | 13458158.75  |
| 14S4195710  | Integrated Circuit | U16                                      | Bellcore Issue 6  | Level I |           | 0.074304           | 1.00     | .8084           | 0.074304     | 13458158.75  |
| 105A501413  | Resistor           | R119                                     | Bellcore Issue 6  | Level I |           | 0.002408           | 1.00     | .0262           | 0.002408     | 41524394.42  |
| 14S5A12506  | Integrated Circuit | U26                                      | Bellcore Issue 6  | Level I |           | 0.074304           | 1.00     | .8084           | 0.074304     | 13458158.75  |



**AAEON Reliability Prediction Report**

**Part Number** 9697540I02  
**Reference Des**  
**Date** 12. 5, 2006  
**Environment** GF, GU - Ground Fixed, Uncontrolled  
**Temp. (°C)** 28.10



**Description** Top-level assembly  
**File Name** PFM-540I.RPJ  
**Time** 2:55 下午  
**Failure Rate** 9.191609  
**MTBF** 108,795

| Part Number | Category           | Location   | Calculation Model | Quality | Tem. Rise | Failure Rate, Unit | Quantity | Failure Rate, % | Failure Rate | MTBF, Unit   |
|-------------|--------------------|--|-------------------|---------|-----------|--------------------|----------|-----------------|--------------|--------------|
| 14S4553600  | Integrated Circuit | U6   | Bellcore Issue 6  | Level I | 11.20     | 0.087642           | 1.00     | .9535           | 0.087642     | 11410032.60  |
| 14S4800002  | Integrated Circuit | U5   | Bellcore Issue 6  | Level I | 12.10     | 0.091955           | 1.00     | 1.0004          | 0.091955     | 10874910.61  |
| 105A593113  | Resistor           | R188   | Bellcore Issue 6  | Level I |           | 0.002408           | 1.00     | .0262           | 0.002408     | 415243940.42 |
| 105A556213  | Resistor           | R189   | Bellcore Issue 6  | Level I |           | 0.002408           | 1.00     | .0262           | 0.002408     | 415243940.42 |
| 1050502224  | Resistor           | R114,R125,R167,R180,R184,R193-R77,R82                                      | Bellcore Issue 6  | Level I |           | 0.002408           | 8.00     | .2096           | 0.019266     | 415243940.42 |
| 14S2362400  | Integrated Circuit | U1   | Bellcore Issue 6  | Level I | 14.80     | 0.204181           | 1.00     | 2.2214          | 0.204181     | 4897604.47   |
| 14S2362400  | Integrated Circuit | U2,U4  | Bellcore Issue 6  | Level I |           | 0.074304           | 2.00     | 1.6168          | 0.148609     | 13458158.75  |
| 1121533480  | Capacitor          | C140,C146  | Bellcore Issue 6  | Level I |           | 0.004816           | 2.00     | .1048           | 0.009633     | 207621970.21 |
| 1129701690  | Capacitor          | C102,C105,C109,C11,C12,C120,C-121,C127,C13,C135,C15,C153,C15-5,C157,C165   | Bellcore Issue 6  | Level I |           | 0.004816           | 15.00    | .7860           | 0.072247     | 207621970.21 |
| 1129701690  | Capacitor          | C168,C17,C172,C173,C18,C193,C-195,C196,C2,C209,C23,C232,C233-C24,C247,C250 | Bellcore Issue 6  | Level I |           | 0.004816           | 16.00    | .8384           | 0.077063     | 207621970.21 |
| 1129701690  | Capacitor          | C251,C26,C267,C268,C27,C272,C-273,C275,C277,C280,C282,C284,C-298,C30,C300  | Bellcore Issue 6  | Level I |           | 0.004816           | 15.00    | .7860           | 0.072247     | 207621970.21 |
| 1129701690  | Capacitor          | C307-C310,C312-C314,C316,C318-C320,C32,C323,C324,C328,C329,-C33,C330,C332  | Bellcore Issue 6  | Level I |           | 0.004816           | 19.00    | .9956           | 0.091512     | 207621970.21 |
| 1129701690  | Capacitor          | C334,C337-C339,C344,C345,C347-C348,C35,C350,C36,C366,C39,C4-3,C46,C47,C5   | Bellcore Issue 6  | Level I |           | 0.004816           | 17.00    | .8908           | 0.081880     | 207621970.21 |
| 1129701690  | Capacitor          | C50,C52-C57,C6,C61,C62,C65,C69-C71,C73,C76,C79,C81-C84,C86,C-90,C94-C98    | Bellcore Issue 6  | Level I |           | 0.004816           | 28.00    | 1.4672          | 0.134860     | 207621970.21 |
| 105A701059  | Resistor           | R207   | Bellcore Issue 6  | Level I |           | 0.002408           | 1.00     | .0262           | 0.002408     | 415243940.42 |
| 1124412090  | Capacitor          | C260,C264  | Bellcore Issue 6  | Level I |           | 0.004816           | 2.00     | .1048           | 0.009633     | 207621970.21 |
| 11E9501091  | Capacitor          | C367   | Bellcore Issue 6  | Level I |           | 0.004816           | 1.00     | .0524           | 0.004816     | 207621970.21 |
| 1050722054  | Resistor           | R286   | Bellcore Issue 6  | Level I |           | 0.014449           | 1.00     | .1572           | 0.014449     | 69207323.40  |
| 11A4901090  | Capacitor          | C258   | Bellcore Issue 6  | Level I |           | 0.004816           | 1.00     | .0524           | 0.004816     | 207621970.21 |
| 165313222A  | Connection         | CN7  | Bellcore Issue 6  | Level I |           | 0.042746           | 1.00     | .4651           | 0.042746     | 23393988.32  |
| 165312022B  | Connection         | CN7  | Bellcore Issue 6  | Level I |           | 0.026716           | 1.00     | .2907           | 0.026716     | 37430381.32  |
| 175910000B  | Miscellaneous      | BUZZ1  | Bellcore Issue 6  | Level I |           | 0.150000           | 1.00     | 1.6319          | 0.150000     | 6666666.67   |
| 14S6200404  | Integrated Circuit | SKT1   | Bellcore Issue 6  | Level I |           | 0.212459           | 1.00     | 2.3114          | 0.212459     | 4706792.66   |