



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

# SBC-659

## Reliability Prediction Report

### (MTBF)

Release Date: JAN. 07, 2002

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Issue Stamp

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QA Manager

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QE Manager

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Test Engineer

# Reliability Prediction (MTBF)

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**I . Model Name:** SBC-659

**II .Description:** AIO Half-size CPU Card. FC/Socket 370. 2 LAN. (Rev:A1.0)

**III . Prediction Date:** JAN. 07. 2002

**IV. Prediction Site:** AAEON QE Dept.

**V . Predicted by :** Linda Sun

**VI. Equipment:** Relx Ver.7.2 Visual Reliability Software

## **VII. Simulation Environment:**

- Temperature: 25 degrees C(No temperature rise condition )
- Standard: Telcordia (Bellcore) Standard

## **VIII. 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.

## **IX. Prediction Result:**

- Failure Rate: 8.194700ppm
- MTBF: 122,030Hours

## **X. Prediction Table:**

**AAEON Reliability Prediction Report**

**Part Number** 9697659006  
**Reference Des**  
**Date** 01. 7, 2002  
**Environment** GF, GU - Ground Fixed, Uncontrolled  
**Temperature** 25.00



**Description** Top-level assembly  
**File Name** 659a10.rpj  
**Time** 3:21 PM  
**Failure Rate** 8.194700  
**MTBF** 122,030

Assembly Name	Part Number	Model	Method	Environment	Duty Cycle	Qty	Failure Rate	MTBF
SBC-659	9697659006	Bellcore	Method I Case 3	GF, GU - Ground Fixed,	100.00	1.00	8.194700	122,030

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**Date** 01. 7, 2002  
**Environment** GF, GU - Ground Fixed, Uncontrolled  
**Temperature** 25.00

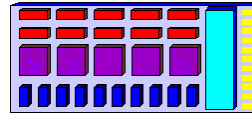


**Description** Top-level assembly  
**File Name** 659a10.rpj  
**Time** 3:21 PM  
**Failure Rate** 8.194700  
**MTBF** 122,030

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Failure Rate, Unit	Quantity	Failure Rate, %	Failure Rate	MTBF, Unit
1059501001	Resistor	R203	Bellcore Issue 6	Level I		0.002268	1.00	.0277	0.002268	440974090.03
1059700001	Resistor	FB1,FB22,FB45	Bellcore Issue 6	Level I		0.002268	3.00	.0830	0.006803	440974090.03
105A515003	Resistor	R4-5,R12-15,R18,R38,R41,R44,R1-53,R325	Bellcore Issue 6	Level I		0.002268	12.00	.3321	0.027212	440974090.03
105A511103	Resistor	R6-7	Bellcore Issue 6	Level I		0.002268	2.00	.0553	0.004535	440974090.03
105A507503	Resistor	R22-23,R33,R51,R213-215,R233,R-256,R266,R270-272	Bellcore Issue 6	Level I		0.002268	13.00	.3597	0.029480	440974090.03
105A502223	Resistor	R28,R201	Bellcore Issue 6	Level I		0.002268	2.00	.0553	0.004535	440974090.03
105A501033	Resistor	R34,R36-37,R56,R124,R127,R258--259	Bellcore Issue 6	Level I		0.002268	8.00	.2214	0.018142	440974090.03
105A508203	Resistor	R40,R257	Bellcore Issue 6	Level I		0.002268	2.00	.0553	0.004535	440974090.03
105A502200	Resistor	R48,R103-105	Bellcore Issue 6	Level I		0.002268	4.00	.1107	0.009071	440974090.03
105A504763	Resistor	R50,R72	Bellcore Issue 6	Level I		0.002268	2.00	.0553	0.004535	440974090.03
105A505633	Resistor	R53,R222	Bellcore Issue 6	Level I		0.002268	2.00	.0553	0.004535	440974090.03
105A512033	Resistor	R54	Bellcore Issue 6	Level I		0.002268	1.00	.0277	0.002268	440974090.03
105A512103	Resistor	R58,R243,R260,R263,R333-334,R-341	Bellcore Issue 6	Level I		0.002268	7.00	.1937	0.015874	440974090.03
105A520003	Resistor	R59,R206,R264,R335,R337	Bellcore Issue 6	Level I		0.002268	5.00	.1384	0.011339	440974090.03
105A530003	Resistor	R68,R70,R322,R323	Bellcore Issue 6	Level I		0.002268	4.00	.1107	0.009071	440974090.03
105A503033	Resistor	R128	Bellcore Issue 6	Level I		0.002268	1.00	.0277	0.002268	440974090.03
105A502033	Resistor	R187,R195,R208	Bellcore Issue 6	Level I		0.002268	3.00	.0830	0.006803	440974090.03
105A511823	Resistor	R188,R196	Bellcore Issue 6	Level I		0.002268	2.00	.0553	0.004535	440974090.03
105A523233	Resistor	R223	Bellcore Issue 6	Level I		0.002268	1.00	.0277	0.002268	440974090.03
105A554903	Resistor	R230,R278	Bellcore Issue 6	Level I		0.002268	2.00	.0553	0.004535	440974090.03
105A561903	Resistor	R232,R279	Bellcore Issue 6	Level I		0.002268	2.00	.0553	0.004535	440974090.03
105A505603	Resistor	R242	Bellcore Issue 6	Level I		0.002268	1.00	.0277	0.002268	440974090.03
105A517403	Resistor	R245	Bellcore Issue 6	Level I		0.002268	1.00	.0277	0.002268	440974090.03
105A540363	Resistor	R296,R318,R320,R332	Bellcore Issue 6	Level I		0.002268	4.00	.1107	0.009071	440974090.03
105A501003	Resistor	R326,R359	Bellcore Issue 6	Level I		0.002268	2.00	.0553	0.004535	440974090.03
105A510003	Resistor	R229,R269,R277	Bellcore Issue 6	Level I		0.002268	3.00	.0830	0.006803	440974090.03
105A512003	Resistor	R216	Bellcore Issue 6	Level I		0.002268	1.00	.0277	0.002268	440974090.03
105A503300	Resistor	R85-87,R90-91,R106-119,R121-12-3,R132,R169-170,R175,R226,R239-,R293,R348-349,R360-361	Bellcore Issue 6	Level I		0.002268	33.00	.9132	0.074834	440974090.03

**AAEON Reliability Prediction Report**

**Part Number** 9697659006  
**Reference Des**  
**Date** 01. 7, 2002  
**Environment** GF, GU - Ground Fixed, Uncontrolled  
**Temperature** 25.00

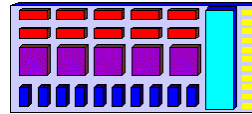


**Description** Top-level assembly  
**File Name** 659a10.rpj  
**Time** 3:21 PM  
**Failure Rate** 8.194700  
**MTBF** 122,030

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Failure Rate, Unit	Quantity	Failure Rate, %	Failure Rate	MTBF, Unit
105A704733	Resistor	R2,R144,R146,R151-152,R339	Bellcore Issue 6	Level I		0.002268	6.00	.1660	0.013606	440974090.03
105A733003	Resistor	R3,R42,R46,R84,R131,R148,R211-212,R265,R267-268,R274	Bellcore Issue 6	Level I		0.002268	12.00	.3321	0.027212	440974090.03
105A704703	Resistor	R16,R19,R197	Bellcore Issue 6	Level I		0.002268	3.00	.0830	0.006803	440974090.03
105A700133	Resistor	R17,R32,R60-61,R77,R81,R130,R-133,R138,R231,R244,R276,R280,-R281,R312-313,R343,R358	Bellcore Issue 6	Level I		0.002268	18.00	.4981	0.040819	440974090.03
105A702233	Resistor	R24,R158,R176,R367	Bellcore Issue 6	Level I		0.002268	4.00	.1107	0.009071	440974090.03
105A704723	Resistor	R25-26,R52,R69,R97,R100-101,R1-35,R139,R143,R147,R154,R156,R-171,R177,R180,R189-194,R227,R-238,R240,R241,R286,R309,R340,-R345,R347,R355	Bellcore Issue 6	Level I		0.002268	32.00	.8855	0.072567	440974090.03
105A722003	Resistor	R30	Bellcore Issue 6	Level I		0.002268	1.00	.0277	0.002268	440974090.03
105A768003	Resistor	R43	Bellcore Issue 6	Level I		0.002268	1.00	.0277	0.002268	440974090.03
105A705603	Resistor	R45	Bellcore Issue 6	Level I		0.002268	1.00	.0277	0.002268	440974090.03
105A705103	Resistor	R47,R338,R344	Bellcore Issue 6	Level I		0.002268	3.00	.0830	0.006803	440974090.03
105A701033	Resistor	R49,R95,R102,R134,R160,R184,R-273,R290,R294,R306,R317,R319,-R351,R362-363	Bellcore Issue 6	Level I		0.002268	15.00	.4151	0.034016	440974090.03
105A706823	Resistor	R57,R125	Bellcore Issue 6	Level I		0.002268	2.00	.0553	0.004535	440974090.03
105A708223	Resistor	R64-65,R76,R78,R140,R178,R217-,R247,R297,R300,R302,R304-305,-R308,R311,R316,R327,R329,R330-,R336,R357	Bellcore Issue 6	Level I		0.002268	21.00	.5811	0.047622	440974090.03
105A703923	Resistor	R71	Bellcore Issue 6	Level I		0.002268	1.00	.0277	0.002268	440974090.03
105A701533	Resistor	R79	Bellcore Issue 6	Level I		0.002268	1.00	.0277	0.002268	440974090.03
105A710053	Resistor	R82,R314	Bellcore Issue 6	Level I		0.013606	2.00	.3321	0.027212	73495681.67
105A756033	Resistor	R94,R354	Bellcore Issue 6	Level I		0.002268	2.00	.0553	0.004535	440974090.03
105A710003	Resistor	R159,R356	Bellcore Issue 6	Level I		0.002268	2.00	.0553	0.004535	440974090.03
105A702723	Resistor	R198-199,R289	Bellcore Issue 6	Level I		0.002268	3.00	.0830	0.006803	440974090.03
105A701823	Resistor	R200,R202	Bellcore Issue 6	Level I		0.002268	2.00	.0553	0.004535	440974090.03
105A736033	Resistor	R207	Bellcore Issue 6	Level I		0.002268	1.00	.0277	0.002268	440974090.03
105A701523	Resistor	R210	Bellcore Issue 6	Level I		0.002268	1.00	.0277	0.002268	440974090.03
105A710033	Resistor	R275,R284-285,R350	Bellcore Issue 6	Level I		0.002268	4.00	.1107	0.009071	440974090.03

**AAEON Reliability Prediction Report**

**Part Number** 9697659006  
**Reference Des**  
**Date** 01. 7, 2002  
**Environment** GF, GU - Ground Fixed, Uncontrolled  
**Temperature** 25.00



**Description** Top-level assembly  
**File Name** 659a10.rpj  
**Time** 3:21 PM  
**Failure Rate** 8.194700  
**MTBF** 122,030

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Failure Rate, Unit	Quantity	Failure Rate, %	Failure Rate	MTBF, Unit
105A706233	Resistor	R292	Bellcore Issue 6	Level I		0.002268	1.00	.0277	0.002268	440974090.03
105A700003	Resistor	R20,R29,R31,R35,R39,R55,R66-67-,R75,R80,R83,R88-89,R92-93,R99-,R126,R129,R136-137,R141-142,R-145,R149-151,R161,R164,R168,R-181-182,R185-186,R219-221,R224-,R228,R235,R246,R252-255,R261--262,R282,R291,R310,R315,R321,-R324,R346,R352-353,R364-366	Bellcore Issue 6	Level I		0.002268	57.00	1.5774	0.129259	440974090.03
106B501030	Resistor	RT1	Bellcore Issue 6	Level I		0.011379	1.00	.1389	0.011379	87878027.07
1121647780	Capacitor	BC102,BC180-181,BC187-190,BC-192-193,BC195-196	Bellcore Issue 6	Level I		0.002539	11.00	.3408	0.027929	393852661.82
1121722780	Capacitor	BC40,C62,C84	Bellcore Issue 6	Level I		0.002539	3.00	.0930	0.007617	393852661.82
1121747660	Capacitor	BC120,BC123-124,BC128,C152,T-C11,TC15-16,TC25-27,TC29,TC32-,TC36,TC38,TC41-43,TC46,TC48--50,TC52	Bellcore Issue 6	Level I		0.002539	23.00	.7126	0.058397	393852661.82
1121747660	Capacitor	TC28	Bellcore Issue 6	Level I	39.00	0.002356	1.00	.0288	0.002356	424359108.74
1121733780	Capacitor	C6,C67,C69-71,C80	Bellcore Issue 6	Level I		0.002539	6.00	.1859	0.015234	393852661.82
1121722660	Capacitor	BC137,BC144,C96	Bellcore Issue 6	Level I		0.002539	3.00	.0930	0.007617	393852661.82
1121722650	Capacitor	C148-150,C154	Bellcore Issue 6	Level I		0.002539	4.00	.1239	0.010156	393852661.82
1121710090	Capacitor	C157	Bellcore Issue 6	Level I		0.002539	1.00	.0310	0.002539	393852661.82
1122701680	Capacitor	BC1,BC3,BC5-10,BC12,BC14-15,-BC17-20,BC22-25,BC28-39,BC41,-BC48,BC50-51,BC53-77,BC79-94,-BC97-101,BC103-110,BC112-119,-BC121-122,BC125-127,BC129-133-,BC138-143,BC145-147,BC149-153-,BC162,BC164,BC166,BC168,BC1-70-173,BC182-186,BC191,BC194,-BC197-204,C9-10,C13-16,C	Bellcore Issue 6	Level I		0.001598	179.00	3.4896	0.285964	625953979.55
1124410080	Capacitor	C17,C36-37,C58,C61,C82,C114	Bellcore Issue 6	Level I		0.001060	7.00	.0906	0.007422	943198589.05
1124422080	Capacitor	C11-12,C59-60,C93-94,C101-102,-C110-111,C118-119,C121-126	Bellcore Issue 6			0.001822	18.00	.4002	0.032794	548885106.58
1124405080	Capacitor	C2-3,C19,C63-64,C85,C158-160	Bellcore Issue 6	Level I		0.001060	9.00	.1164	0.009542	943198589.05
1124447080	Capacitor	BC49,C23,C51	Bellcore Issue 6	Level I		0.001060	3.00	.0388	0.003181	943198589.05
1124418080	Capacitor	C29-30,C130-131	Bellcore Issue 6	Level I		0.001060	4.00	.0518	0.004241	943198589.05

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**Reference Des**  
**Date** 01. 7, 2002  
**Environment** GF, GU - Ground Fixed, Uncontrolled  
**Temperature** 25.00



**Description** Top-level assembly  
**File Name** 659a10.rpj  
**Time** 3:21 PM  
**Failure Rate** 8.194700  
**MTBF** 122,030

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Failure Rate, Unit	Quantity	Failure Rate, %	Failure Rate	MTBF, Unit
1124547180	Capacitor	BC4,BC26-27,BC43-47	Bellcore Issue 6	Level I		0.001060	8.00	.1035	0.008482	943198589.05
1124522180	Capacitor	BC52	Bellcore Issue 6	Level I		0.001060	1.00	.0129	0.001060	943198589.05
1124510280	Capacitor	C7-8,C18,C25,C81	Bellcore Issue 6	Level I		0.001060	5.00	.0647	0.005301	943198589.05
1124527180	Capacitor	C74-75	Bellcore Issue 6	Level I		0.001060	2.00	.0259	0.002120	943198589.05
1124527280	Capacitor	C83	Bellcore Issue 6	Level I		0.001060	1.00	.0129	0.001060	943198589.05
1124522280	Capacitor	C107	Bellcore Issue 6	Level I		0.001060	1.00	.0129	0.001060	943198589.05
1124501780	Capacitor	BC11,BC111,BC134-136,BC148,B-C154-155,BC157-161,BC163,BC16-5,BC167,BC169,BC174-179,C108,-C115	Bellcore Issue 6	Level I		0.001060	25.00	.3234	0.026506	943198589.05
1129610260	Capacitor	C27,C90	Bellcore Issue 6	Level I		0.000712	2.00	.0174	0.001425	1403854412.74
1129701080	Capacitor	BC13,BC78,BC156,C4-5,C20,C24,-C35,C54-57,C66,C68,C72,C77,C79,-C86-88,C92	Bellcore Issue 6	Level I		0.005466	21.00	1.4006	0.114778	182961702.19
1139710060	Capacitor	C151,C153,C156,TC5,TC8-10,TC2-3-24,TC34,TC39-40,TC44-45,TC47-TC51,TC55-56,TC58,TC60,TC63	Bellcore Issue 6	Level I		0.005466	21.00	1.4006	0.114778	182961702.19
1174510180	Capacitor	CP1-2(*4)	Bellcore Issue 6	Level I		0.001060	8.00	.1035	0.008482	943198589.05
1174547080	Capacitor	CP3-5,CP7(*4)	Bellcore Issue 6	Level I		0.001060	16.00	.2070	0.016964	943198589.05
1174510080	Capacitor	CP6,CP8(*4)	Bellcore Issue 6	Level I		0.001060	8.00	.1035	0.008482	943198589.05
1119622290	Capacitor	TC2-4,TC13,TC17	Bellcore Issue 6	Level I		0.075338	5.00	4.5968	0.376691	13273483.15
1119610292	Capacitor	TC19	Bellcore Issue 6	Level I		0.075338	1.00	.9194	0.075338	13273483.15
1119610295	Capacitor	TC18	Bellcore Issue 6	Level I		0.071121	1.00	.8679	0.071121	14060484.33
1189610180	Capacitor	TC6-7,TC31,TC57,TC61-62	Bellcore Issue 6	Level I		0.004535	6.00	.3321	0.027212	220487045.01
1189610180	Capacitor	TC59	Bellcore Issue 6	Level I	36.30	0.003423	1.00	.0418	0.003423	292139297.77
1189633180	Capacitor	C47,C112,C116,TC12,TC20-21	Bellcore Issue 6	Level I		0.004933	6.00	.3612	0.029597	202722669.92
1189633180	Capacitor	TC14	Bellcore Issue 6	Level I	38.40	0.003894	1.00	.0475	0.003894	256813627.23
1189633180	Capacitor	TC22	Bellcore Issue 6	Level I	40.40	0.004061	1.00	.0496	0.004061	246217519.74
1181647080	Capacitor	C113,C132	Bellcore Issue 6	Level I		0.002357	2.00	.0575	0.004714	424256814.77
1189633080	Capacitor	TC1	Bellcore Issue 6	Level I		0.004933	1.00	.0602	0.004933	202722669.92
1189633080	Capacitor	TC53	Bellcore Issue 6	Level I	40.60	0.004078	1.00	.0498	0.004078	245190129.71
1189633080	Capacitor	TC-54	Bellcore Issue 6	Level I	40.10	0.004036	1.00	.0493	0.004036	247769369.34
1231324550	Miscellaneous	Y2	Bellcore Issue 6	Level I		0.150000	1.00	1.8305	0.150000	6666666.67

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**Date** 01. 7, 2002  
**Environment** GF, GU - Ground Fixed, Uncontrolled  
**Temperature** 25.00



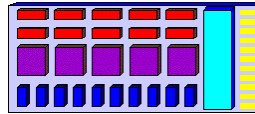
**Description** Top-level assembly  
**File Name** 659a10.rpj  
**Time** 3:21 PM  
**Failure Rate** 8.194700  
**MTBF** 122,030

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Failure Rate, Unit	Quantity	Failure Rate, %	Failure Rate	MTBF, Unit
1231332721	Miscellaneous	Y4	Bellcore Issue 6	Level I		0.150000	1.00	1.8305	0.150000	6666666.67
1231114350	Miscellaneous	Y5	Bellcore Issue 6	Level I		0.150000	1.00	1.8305	0.150000	6666666.67
1231125050	Miscellaneous	Y1,Y3	Bellcore Issue 6	Level I		0.150000	2.00	3.6609	0.300000	6666666.67
1212308052	Inductor	FB5,FB9,FB20-21,FB29,FB39	Bellcore Issue 6	Level I		0.002268	6.00	.1660	0.013606	440974090.03
1212306035	Inductor	FB6,FB11-13,FB15,FB18-19,FB26--28,FB31,FB34,FB41-44,FB49-51,F-B53,FB56	Bellcore Issue 6	Level I		0.002268	21.00	.5811	0.047622	440974090.03
1212308050	Inductor	FB23,FB37	Bellcore Issue 6	Level I		0.002268	2.00	.0553	0.004535	440974090.03
1212306032	Inductor	FB24-25,FB36	Bellcore Issue 6	Level I		0.002268	3.00	.0830	0.006803	440974090.03
1212308054	Inductor	FB4,FB7,FB10,FB17,FB30,FB32-33-,FB47-48,FB55	Bellcore Issue 6	Level I		0.002268	10.00	.2767	0.022677	440974090.03
1211100300	Inductor	L2	Bellcore Issue 6	Level I		0.086173	1.00	1.0516	0.086173	11604581.32
1211100103	Inductor	L3	Bellcore Issue 6	Level I		0.086173	1.00	1.0516	0.086173	11604581.32
1211104760	Inductor	L1	Bellcore Issue 6	Level I		0.002268	1.00	.0277	0.002268	440974090.03
14S3000300	Inductor	TF1-2	Bellcore Issue 6	Level I		0.136062	2.00	3.3207	0.272125	7349568.17
14S4256200	Inductor	U9	Bellcore Issue 6	Level I	36.70	0.103578	1.00	1.2640	0.103578	9654592.75
1314780501	Integrated Circuit	Q1	Bellcore Issue 6	Level I	47.10	0.047918	1.00	.5847	0.047918	20869103.72
1314108301	Integrated Circuit	Q3	Bellcore Issue 6	Level I		0.059366	1.00	.7244	0.059366	16844654.92
1314101010	Integrated Circuit	Q2	Bellcore Issue 6	Level I	40.40	0.028733	1.00	.3506	0.028733	34803069.99
1314101010	Integrated Circuit	U8	Bellcore Issue 6	Level I	37.40	0.022675	1.00	.2767	0.022675	44101325.59
1314101010	Integrated Circuit	U25	Bellcore Issue 6	Level I		0.059366	1.00	.7244	0.059366	16844654.92
1314101010	Integrated Circuit	U26	Bellcore Issue 6	Level I	39.60	0.026988	1.00	.3293	0.026988	37053580.84
1314101010	Integrated Circuit	U29	Bellcore Issue 6	Level I	40.70	0.029414	1.00	.3589	0.029414	33997868.10
1300014040	Semiconductor	D6	Bellcore Issue 6	Level I	39.40	0.017413	1.00	.2125	0.017413	57429041.45
1300014040	Semiconductor	D7	Bellcore Issue 6	Level I	41.60	0.018628	1.00	.2273	0.018628	53682609.34
1301005441	Semiconductor	D1-3,D8	Bellcore Issue 6	Level I		0.023881	4.00	1.1657	0.095524	41874327.58
1301005442	Semiconductor	D4-5	Bellcore Issue 6	Level I		0.023881	2.00	.5828	0.047762	41874327.58
1304100540	Semiconductor	LED1	Bellcore Issue 6	Level I		0.004877	1.00	.0595	0.004877	205063180.81
1315610710	Semiconductor	Q8	Bellcore Issue 6	Level I		0.159207	1.00	1.9428	0.159207	6281149.14
1315610710	Semiconductor	Q9	Bellcore Issue 6	Level I	40.10	0.118617	1.00	1.4475	0.118617	8430478.19
1315610710	Semiconductor	Q10	Bellcore Issue 6	Level I	39.00	0.114657	1.00	1.3992	0.114657	8721636.40
1315613710	Semiconductor	Q7,Q11	Bellcore Issue 6	Level I		0.079603	2.00	1.9428	0.159207	12562298.27



### AAEON Reliability Prediction Report

**Part Number** 9697659006  
**Reference Des**  
**Date** 01. 7, 2002  
**Environment** GF, GU - Ground Fixed, Uncontrolled  
**Temperature** 25.00

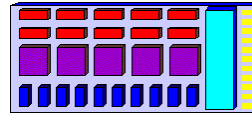


**Description** Top-level assembly  
**File Name** 659a10.rpj  
**Time** 3:21 PM  
**Failure Rate** 8.194700  
**MTBF** 122,030

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Failure Rate, Unit	Quantity	Failure Rate, %	Failure Rate	MTBF, Unit
1315700211	Semiconductor	Q4-6,Q12	Bellcore Issue 6	Level I		0.079603	4.00	3.8856	0.318413	12562298.27
1311290710	Semiconductor	Q13	Bellcore Issue 6	Level I		0.023881	1.00	.2914	0.023881	41874327.58
1310222210	Semiconductor	Q14	Bellcore Issue 6	Level I		0.023881	1.00	.2914	0.023881	41874327.58
14S3020010	Integrated Circuit	U6	Bellcore Issue 6	Level I	38.60	0.024943	1.00	.3044	0.024943	40092177.17
14S4070600	Integrated Circuit	U14	Bellcore Issue 6	Level I	36.00	0.020268	1.00	.2473	0.020268	49338321.08
14S3128420	Integrated Circuit	U19	Bellcore Issue 6	Level I		0.059366	1.00	.7244	0.059366	16844654.92
14S3020100	Integrated Circuit	U2	Bellcore Issue 6	Level I		0.059366	1.00	.7244	0.059366	16844654.92
14S1486300	Integrated Circuit	U5	Bellcore Issue 6			0.059366	1.00	.7244	0.059366	16844654.92
14S3420100	Integrated Circuit	U15	Bellcore Issue 6	Level I	50.10	0.059802	1.00	.7298	0.059802	16721916.86
14S4602100	Integrated Circuit	U16	Bellcore Issue 6	Level I		0.059366	1.00	.7244	0.059366	16844654.92
14S4021300	Integrated Circuit	U17-18	Bellcore Issue 6	Level I		0.059366	2.00	1.4489	0.118732	16844654.92
14S5A01400	Integrated Circuit	U20	Bellcore Issue 6	Level I		0.059366	1.00	.7244	0.059366	16844654.92
14S4048500	Integrated Circuit	U22,U3	Bellcore Issue 6	Level I		0.059366	2.00	1.4489	0.118732	16844654.92
14S4382300	Integrated Circuit	U27	Bellcore Issue 6	Level I		0.059366	1.00	.7244	0.059366	16844654.92
14S5A38400	Integrated Circuit	U1	Bellcore Issue 6	Level I		0.074957	1.00	.9147	0.074957	13340981.79
14S5A01421	Integrated Circuit	U21	Bellcore Issue 6	Level I		0.037889	1.00	.4624	0.037889	26392869.26
14S5A00700	Integrated Circuit	U23	Bellcore Issue 6	Level I		0.037889	1.00	.4624	0.037889	26392869.26
14S6200200	Integrated Circuit	U10	Bellcore Issue 6	Level I		0.136173	1.00	1.6617	0.136173	7343591.05
14S6334610	Integrated Circuit	U24,U28	Bellcore Issue 6	Level I		0.030598	2.00	.7468	0.061196	32681842.61
14S4871200	Integrated Circuit	U4	Bellcore Issue 6	Level I		0.039296	1.00	.4795	0.039296	25448028.36
14S4281500	Integrated Circuit	U13	Bellcore Issue 6	Level I	43.50	0.026589	1.00	.3245	0.026589	37609874.62
14S4280100	Integrated Circuit	U12	Bellcore Issue 6	Level I	40.20	0.021659	1.00	.2643	0.021659	46169958.69
14S4255900	Integrated Circuit	U11	Bellcore Issue 6	Level I	38.30	0.019206	1.00	.2344	0.019206	52067457.00
1540700080	Resistor	RP1,RP10,RP14,RP17-19	Bellcore Issue 6	Level I		0.006246	6.00	.4573	0.037476	160102772.00
1540782280	Resistor	RP2,RP31,RP46	Bellcore Issue 6	Level I		0.006246	3.00	.2287	0.018738	160102772.00
1540747282	Resistor	RP3,RP47,RP50,RP53	Bellcore Issue 6	Level I		0.006246	4.00	.3049	0.024984	160102772.00
1540733082	Resistor	RP4	Bellcore Issue 6	Level I		0.006246	1.00	.0762	0.006246	160102772.00
1540715380	Resistor	RP5,RP51	Bellcore Issue 6	Level I		0.006246	2.00	.1524	0.012492	160102772.00
1540727280	Resistor	RP6-9	Bellcore Issue 6	Level I		0.006246	4.00	.3049	0.024984	160102772.00
1540722280	Resistor	RP11	Bellcore Issue 6	Level I		0.006246	1.00	.0762	0.006246	160102772.00
1540701380	Resistor	RP12	Bellcore Issue 6	Level I		0.006246	1.00	.0762	0.006246	160102772.00

**AAEON Reliability Prediction Report**

**Part Number** 9697659006  
**Reference Des**  
**Date** 01. 7, 2002  
**Environment** GF, GU - Ground Fixed, Uncontrolled  
**Temperature** 25.00



**Description** Top-level assembly  
**File Name** 659a10.rpj  
**Time** 3:21 PM  
**Failure Rate** 8.194700  
**MTBF** 122,030

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Failure Rate, Unit	Quantity	Failure Rate, %	Failure Rate	MTBF, Unit
1540756080	Resistor	RP13,RP15-16,RP20-30,RP32-45	Bellcore Issue 6	Level I		0.006246	28.00	2.1342	0.174888	160102772.00
1540715080	Resistor	RP52,RP54	Bellcore Issue 6	Level I		0.006246	2.00	.1524	0.012492	160102772.00
1653003201	Connection	JP2-4	Bellcore Issue 6	Level I		0.003414	3.00	.1250	0.010241	292926756.90
1653005101	Connection	CN24	Bellcore Issue 6	Level I		0.002845	1.00	.0347	0.002845	351512108.28
1653006100	Connection	CN2	Bellcore Issue 6	Level I		0.003414	1.00	.0417	0.003414	292926756.90
1653004201	Connection	CN6	Bellcore Issue 6	Level I		0.004552	1.00	.0555	0.004552	219695067.68
1653007201	Connection	CN10	Bellcore Issue 6	Level I		0.007966	1.00	.0972	0.007966	125540038.67
1655304020	Connection	CN11	Bellcore Issue 6	Level I		0.002276	1.00	.0278	0.002276	439390135.35
1653005201	Connection	CN15,CN19	Bellcore Issue 6	Level I		0.005690	2.00	.1389	0.011379	175756054.14
1655003000	Connection	CN16	Bellcore Issue 6	Level I		0.001707	1.00	.0208	0.001707	585853513.81
1653003100	Connection	CN17	Bellcore Issue 6	Level I		0.001707	1.00	.0208	0.001707	585853513.81
1653003101	Connection	JP6*4,JP7	Bellcore Issue 6	Level I		0.001707	5.00	.1041	0.008535	585853513.81
1653130420	Connection	PCI1	Bellcore Issue 6	Level I		0.068276	1.00	.8332	0.068276	14646337.85
1653220208	Connection	CN3	Bellcore Issue 6	Level I		0.022759	1.00	.2777	0.022759	43939013.54
1653005202	Connection	CN4,CN7,CN12,JP1	Bellcore Issue 6	Level I		0.005690	4.00	.2777	0.022759	175756054.14
1653013202	Connection	CN9	Bellcore Issue 6	Level I		0.014793	1.00	.1805	0.014793	67598482.36
1653925212	Connection	CN23	Bellcore Issue 6	Level I		0.028449	1.00	.3472	0.028449	35151210.83
1653004202	Connection	JP5	Bellcore Issue 6			0.009483	1.00	.1157	0.009483	105453632.48
1651607920	Connection	U7	Bellcore Issue 6	Level I		0.210519	1.00	2.5690	0.210519	4750163.63
1651203291	Connection	U10	Bellcore Issue 6	Level I		0.018207	1.00	.2222	0.018207	54923766.92
1651572990	Connection	DIMM1	Bellcore Issue 6	Level I		0.081932	1.00	.9998	0.081932	12205281.54
1653020206	Connection	CN5	Bellcore Issue 6	Level I		0.022759	1.00	.2777	0.022759	43939013.54
1655005021	Connection	CN21	Bellcore Issue 6	Level I		0.002845	1.00	.0347	0.002845	351512108.28
1655306020	Connection	CN22	Bellcore Issue 6	Level I		0.003414	1.00	.0417	0.003414	292926756.90
1653017202	Connection	CN1	Bellcore Issue 6	Level I		0.019345	1.00	.2361	0.019345	51692957.10
1654515302	Connection	CN8	Bellcore Issue 6	Level I		0.009672	1.00	.1180	0.009672	103385914.20
1652512200	Connection	CN13-14	Bellcore Issue 6	Level I		0.005690	2.00	.1389	0.011379	175756054.14
1655420020	Connection	CN18	Bellcore Issue 6	Level I		0.011379	1.00	.1389	0.011379	87878027.07
1654606303	Connection	CN20	Bellcore Issue 6	Level I		0.004552	1.00	.0555	0.004552	219695067.68
1653003101	Connection	JP8	Bellcore Issue 6	Level I		0.001707	1.00	.0208	0.001707	585853513.81
1750220320	Connection	BAT1	Bellcore Issue 6	Level I		0.001138	1.00	.0139	0.001138	878780270.71

