



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

SBC-800

Reliability Prediction Report

(MTBF)

Release Date: JAN. 14, 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-800

**II .Description:** AIO Full-size CPU Card. P4 Socket 478. W/LVDs,TV-out, Dual Lan, Audio. CF2 & 4USB Ports.

Rev.A1.0

**III . Prediction Date:** JAN. 14. 2002

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

**V . Predicted by :** Linda Sun

**VI . Equipment:** Relex 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.

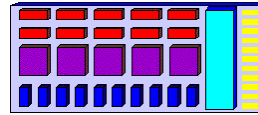
## **IX. Prediction Result:**

- Failure Rate: 16.606720ppm
- MTBF: 60,217Hours

## **X. Prediction Table:**

**AAEON Reliability Prediction Report**

**Part Number** 9697800002  
**Reference Des**  
**Date** 01. 14, 2002  
**Environment** GF, GU - Ground Fixed, Uncontrolled  
**Temperature** 25.00



**Description** Top-level assembly  
**File Name** Sbc-800.rpj  
**Time** 2:36 PM  
**Failure Rate** 16.606720  
**MTBF** 60,217

Assembly Name	Part Number	Model	Method	Environment	Duty Cycle	Qty	Failure Rate	MTBF
SBC-800-A10	9697800002	Bellcore	Method I Case 3	GF, GU - Ground Fixed,	100.00	1.00	16.606720	60,217

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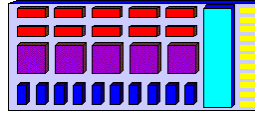
**Description** Top-level assembly  
**File Name** Sbc-800.rpj  
**Time** 2:36 PM  
**Failure Rate** 16.606720  
**MTBF** 60,217

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Failure Rate, Unit	Quantity	Failure Rate, %	Failure Rate	MTBF, Unit
1059549971	Resistor	R508-509	Bellcore Issue 6	Level I		0.002268	2.00	.0273	0.004535	440974090.03
1059501001	Resistor	R143	Bellcore Issue 6	Level I		0.002268	1.00	.0137	0.002268	440974090.03
1059700001	Resistor	FB4,FB7,R243,R307,R364-365,R4-36-437,R510	Bellcore Issue 6	Level I		0.002268	9.00	.1229	0.020409	440974090.03
105A563463	Resistor	R527	Bellcore Issue 6	Level I		0.002268	1.00	.0137	0.002268	440974090.03
105A511503	Resistor	R482	Bellcore Issue 6	Level I		0.002268	1.00	.0137	0.002268	440974090.03
105A556003	Resistor	R481	Bellcore Issue 6	Level I		0.002268	1.00	.0137	0.002268	440974090.03
105A500133	Resistor	R417-418,R420-421	Bellcore Issue 6	Level I		0.002268	4.00	.0546	0.009071	440974090.03
105A547503	Resistor	R45	Bellcore Issue 6	Level I		0.002268	1.00	.0137	0.002268	440974090.03
105A549963	Resistor	R42-43,R48,R50,R61,R63,R125,R-155,R381-382,R416	Bellcore Issue 6	Level I		0.002268	11.00	.1502	0.024945	440974090.03
105A503300	Resistor	R21-22,R26-30,R46-47,R49,R51-57-,R62,R64,R70-72,R90,R308	Bellcore Issue 6	Level I		0.002268	24.00	.3277	0.054425	440974090.03
105A524963	Resistor	R411,R415	Bellcore Issue 6	Level I		0.002268	2.00	.0273	0.004535	440974090.03
105A530103	Resistor	R412	Bellcore Issue 6	Level I		0.002268	7.00	.0956	0.015874	440974090.03
105A510003	Resistor	R126,R156,R414,R426-427,R498--499	Bellcore Issue 6	Level I		0.002268	7.00	.0956	0.015874	440974090.03
105A515003	Resistor	R113,R118,R214,R374,R398-399,-R413	Bellcore Issue 6	Level I		0.002268	7.00	.0956	0.015874	440974090.03
105A520003	Resistor	R134,R148,R257,R273	Bellcore Issue 6	Level I		0.002268	4.00	.0546	0.009071	440974090.03
105A512103	Resistor	R74,R93,R132,R149,R274,R512,R-526,R528	Bellcore Issue 6	Level I		0.002268	8.00	.1092	0.018142	440974090.03
105A561903	Resistor	R152,R503	Bellcore Issue 6	Level I		0.002268	2.00	.0273	0.004535	440974090.03
105A549903	Resistor	R157	Bellcore Issue 6	Level I		0.002268	1.00	.0137	0.002268	440974090.03
105A584503	Resistor	R158	Bellcore Issue 6	Level I		0.002268	1.00	.0137	0.002268	440974090.03
105A512033	Resistor	R202,R256	Bellcore Issue 6	Level I		0.002268	2.00	.0273	0.004535	440974090.03
105A523233	Resistor	R204	Bellcore Issue 6	Level I		0.002268	1.00	.0137	0.002268	440974090.03
105A530003	Resistor	R218	Bellcore Issue 6	Level I		0.002268	1.00	.0137	0.002268	440974090.03
105A556223	Resistor	R244	Bellcore Issue 6	Level I		0.002268	1.00	.0137	0.002268	440974090.03
105A561963	Resistor	R379	Bellcore Issue 6	Level I		0.002268	1.00	.0137	0.002268	440974090.03
105A502003	Resistor	R384	Bellcore Issue 6	Level I		0.002268	1.00	.0137	0.002268	440974090.03
105A540263	Resistor	R119,R397,R439	Bellcore Issue 6	Level I		0.002268	3.00	.0410	0.006803	440974090.03
105A506823	Resistor	R169,R208	Bellcore Issue 6	Level I		0.002268	2.00	.0273	0.004535	440974090.03
105A505633	Resistor	R203,R206	Bellcore Issue 6	Level I		0.002268	2.00	.0273	0.004535	440974090.03



### AAEON Reliability Prediction Report

**Part Number** 9697800002  
**Reference Des**  
**Date** 01. 14, 2002  
**Environment** GF, GU - Ground Fixed, Uncontrolled  
**Temperature** 25.00



**Description** Top-level assembly  
**File Name** Sbc-800.rpj  
**Time** 2:36 PM  
**Failure Rate** 16.606720  
**MTBF** 60,217

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Failure Rate, Unit	Quantity	Failure Rate, %	Failure Rate	MTBF, Unit
105A704723	Resistor	R2,R7,R10,R24,R35,R80,R83-84,R-97-98,R151,R165-166,R197,R231,-R245,R275,R281-282,R289,R291,-R302,R304,R325-328,R343-344,R-355,R357,R361,R386,R390,R396,-R422,424-425,R430,R451,R491-49-2,R501,R525,R542-543	Bellcore Issue 6	Level I		0.002268	46.00	.6281	0.104315	440974090.03
105A700133	Resistor	R4,R6,R23,R31,R65,R67-68,R154,-R183-186,R194,R213,R215,R217,-R246-247,R266,R268,R366-369,R-380,R445,R447,R449-450,R259,R-468,R483,R493-495,R541	Bellcore Issue 6	Level I		0.002268	36.00	.4916	0.081637	440974090.03
105A710003	Resistor	R17,R265	Bellcore Issue 6	Level I		0.002268	2.00	.0273	0.004535	440974090.03
105A756033	Resistor	R36,R38	Bellcore Issue 6	Level I		0.002268	2.00	.0273	0.004535	440974090.03
105A704703	Resistor	R59,R106	Bellcore Issue 6	Level I		0.002268	2.00	.0273	0.004535	440974090.03
105A701003	Resistor	R89	Bellcore Issue 6	Level I		0.002268	1.00	.0137	0.002268	440974090.03
105A701523	Resistor	R223,R402,R490	Bellcore Issue 6	Level I		0.002268	3.00	.0410	0.006803	440974090.03
105A701533	Resistor	R288,R301,R446	Bellcore Issue 6	Level I		0.002268	3.00	.0410	0.006803	440974090.03
105A710033	Resistor	R313,R387,R405,R429,R474,R500	Bellcore Issue 6	Level I		0.002268	6.00	.0819	0.013606	440974090.03
105A718003	Resistor	R336	Bellcore Issue 6	Level I		0.002268	1.00	.0137	0.002268	440974090.03
105A702703	Resistor	R373	Bellcore Issue 6	Level I		0.002268	1.00	.0137	0.002268	440974090.03
105A706233	Resistor	R406,R475	Bellcore Issue 6	Level I		0.002268	2.00	.0273	0.004535	440974090.03
105A708223	Resistor	R32,R75,R91,R99,R108,R195,R19-9,R225-226,R239,R249-250,R252,-R306	Bellcore Issue 6	Level I		0.002268	14.00	.1912	0.031748	440974090.03
105A703303	Resistor	R101,R167,R180,R189-190,R192--193,R292,R305,R316-319,R358,R-360,R362-363,R423	Bellcore Issue 6	Level I		0.002268	18.00	.2458	0.040819	440974090.03
105A700003	Resistor	FB10,FB12-13,FB15,FB17,FB40-41-,FB48,R19-20,R78,R92,R100,R104-105,R110,R114,R120-121,R124,R-127,R133,R137,R140,R142,R145,-R163,R168,R171,R174,R177,R181-,R187-188,R196,R200-201,R205,R-207,R210,R228-229,R293,R295-29-6,R310,R320-322,R330,R333,R338--341,R349-350,R35	Bellcore Issue 6	Level I		0.002268	73.00	.9968	0.165543	440974090.03
105A705133	Resistor	R392-393	Bellcore Issue 6	Level I		0.002268	2.00	.0273	0.004535	440974090.03

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**Reference Des**  
**Date** 01. 14, 2002  
**Environment** GF, GU - Ground Fixed, Uncontrolled  
**Temperature** 25.00



**Description** Top-level assembly  
**File Name** Sbc-800.rpj  
**Time** 2:36 PM  
**Failure Rate** 16.606720  
**MTBF** 60,217

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Failure Rate, Unit	Quantity	Failure Rate, %	Failure Rate	MTBF, Unit
106B501030	Resistor	RT1-2	Bellcore Issue 6	Level I		0.011379	2.00	.1370	0.022759	87878027.07
1121547661	Capacitor	C173	Bellcore Issue 6	Level I		0.002539	1.00	.0153	0.002539	393852661.82
1121501680	Capacitor	C4-8,C12-13,C15,C18-21,C27,C32-36,C43,C53,C55,C62,C64,C66,C6-8,C70,C76,C78-81,C85,C90,C93-94-,C106-110,C113,C116,C118-119,C-121-122,C124,C126-127,C129-130-,C132,C135-140,C142-145,C152-1-53,C156-158,C161-164,C167,C170-171,C175-176,C180,C182,C188-1-90,C193-196,C1	Bellcore Issue 6	Level I		0.002539	211.00	3.2260	0.535733	393852661.82
1121710090	Capacitor	C96,C481	Bellcore Issue 6	Level I		0.002539	2.00	.0306	0.005078	393852661.82
1121733780	Capacitor	C232-234,C280,C283,C335	Bellcore Issue 6	Level I		0.002539	6.00	.0917	0.015234	393852661.82
1121722650	Capacitor	C174	Bellcore Issue 6	Level I		0.002539	1.00	.0153	0.002539	393852661.82
1122722780	Capacitor	C49,C243	Bellcore Issue 6	Level I		0.001598	2.00	.0192	0.003195	625953979.55
1122747880	Capacitor	C75,C430	Bellcore Issue 6	Level I		0.001598	2.00	.0192	0.003195	625953979.55
1124456080	Capacitor	C151	Bellcore Issue 6	Level I		0.001060	1.00	.0064	0.001060	943198589.05
1124482080	Capacitor	C391,C423-427	Bellcore Issue 6	Level I		0.001060	6.00	.0383	0.006361	943198589.05
1124422080	Capacitor	C45-46,C83,C87,C91,C97,C123,C-128,C251-254,C257-258,C298-299-,C307-308,C315-318	Bellcore Issue 6	Level I		0.001060	22.00	.1405	0.023325	943198589.05
1124433080	Capacitor	C230-231,C244	Bellcore Issue 6	Level I		0.001060	3.00	.0192	0.003181	943198589.05
1124410080	Capacitor	C2,C51-52,C183-184,C228-229,C2-42,C300-301	Bellcore Issue 6	Level I		0.001060	10.00	.0638	0.010602	943198589.05
1124412080	Capacitor	C29-30	Bellcore Issue 6	Level I		0.001060	2.00	.0128	0.002120	943198589.05
1124447080	Capacitor	C44,C197,C211	Bellcore Issue 6	Level I		0.001060	3.00	.0192	0.003181	943198589.05
1124501780	Capacitor	C1,C3,C84,C147,C150,C185,C263-,C274,C311,C329-330,C378-381,C-383,C388,C408-409,C411,C415,C-417,C446-447,C449,C454,C477,C-480,C511-512	Bellcore Issue 6	Level I		0.001060	30.00	.1915	0.031807	943198589.05
1124527180	Capacitor	C71-72,C154-155,C159-160,C186--187,C191-192,C200-201,C205-206	Bellcore Issue 6	Level I		0.001060	14.00	.0894	0.014843	943198589.05
1124533180	Capacitor	C148	Bellcore Issue 6	Level I		0.001060	1.00	.0064	0.001060	943198589.05
1124547180	Capacitor	C169,C179,C217-220,C235,C282,-C284,C336,C422	Bellcore Issue 6	Level I		0.001060	11.00	.0702	0.011662	943198589.05
1124510280	Capacitor	C60-61,C149,C510	Bellcore Issue 6	Level I		0.001060	4.00	.0255	0.004241	943198589.05

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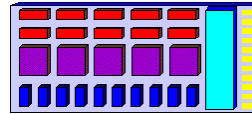
**Description** Top-level assembly  
**File Name** Sbc-800.rpj  
**Time** 2:36 PM  
**Failure Rate** 16.606720  
**MTBF** 60,217

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Failure Rate, Unit	Quantity	Failure Rate, %	Failure Rate	MTBF, Unit
1124522180	Capacitor	C88,C90,C101,C103,C333	Bellcore Issue 6	Level I		0.001060	5.00	.0319	0.005301	943198589.05
1124515281	Capacitor	C146	Bellcore Issue 6	Level I		0.001060	1.00	.0064	0.001060	943198589.05
1129610260	Capacitor	C364,C437	Bellcore Issue 6	Level I		0.000712	2.00	.0086	0.001425	1403854412.74
1129701080	Capacitor	C28,C31,C63,C73-74,C89,C102,C-105,C120,C215,C236,C238,C285,-C287,C290-295,C435,C491-494	Bellcore Issue 6	Level I		0.005466	25.00	.8228	0.136641	182961702.19
1129722680	Capacitor	C177-178,C181,C325,C428	Bellcore Issue 6	Level I		0.006031	5.00	.1816	0.030154	165815676.81
1129722090	Capacitor	C503	Bellcore Issue 6	Level I		0.005466	1.00	.0329	0.005466	182961702.19
1129747650	Capacitor	C9-10,C54,C133-134,C225,C338,C-360-362,C436,C458-460,C507,C50-9,C514-515	Bellcore Issue 6	Level I		0.005466	18.00	.5924	0.098381	182961702.19
1139710060	Capacitor	C48,C56,C59,C86,C92,C125,C165-166,C168,C172,C199,C212,C255,-C260,C269,C289,C313,C322,C331-C337,C357,C389,C392-393,C400,-C406,C416,C421,C443,C453,C455-C476,C498,C500	Bellcore Issue 6	Level I		0.005466	34.00	1.1190	0.185831	182961702.19
1139610060	Capacitor	C246-250,C302-305,C340-345,C3-67-370,C373-377,C395-399,C439--442,C464,C467-470	Bellcore Issue 6	Level I		0.006031	38.00	1.3800	0.229170	165815676.81
1174547080	Capacitor	CP3-6(*4)	Bellcore Issue 6	Level I		0.001060	16.00	.1021	0.016964	943198589.05
1174510180	Capacitor	CP1,CP7(*4)	Bellcore Issue 6	Level I		0.001060	8.00	.0511	0.008482	943198589.05
1174533080	Capacitor	CP2(*4)	Bellcore Issue 6	Level I		0.001060	4.00	.0255	0.004241	943198589.05
1174510080	Capacitor	CP8(*4)	Bellcore Issue 6	Level I		0.001060	4.00	.0255	0.004241	943198589.05
1111615210	Capacitor	TC6,TC8,TC10	Bellcore Issue 6	Level I		0.045403	3.00	.8202	0.136210	22024783.71
1119622210	Capacitor	TC1-5,TC11-15	Bellcore Issue 6	Level I		0.075338	10.00	4.5366	0.753382	13273483.15
1189610181	Capacitor	TC9	Bellcore Issue 6	Level I	43.00	0.004286	1.00	.0258	0.004286	233295383.99
1189610181	Capacitor	C475,TC7,TC16-21,TC23-26,TC28--29,TC36	Bellcore Issue 6	Level I		0.004933	15.00	.4456	0.073993	202722669.92
1181647080	Capacitor	TC27	Bellcore Issue 6	Level I	51.50	0.002427	1.00	.0146	0.002427	412028803.21
1181647080	Capacitor	TC30	Bellcore Issue 6	Level I	54.90	0.002591	1.00	.0156	0.002591	386014666.52
1181647080	Capacitor	TC35	Bellcore Issue 6	Level I	53.70	0.002532	1.00	.0152	0.002532	394936730.96
1189633180	Capacitor	TC32	Bellcore Issue 6	Level I	55.60	0.005494	1.00	.0331	0.005494	182022332.39
1189633180	Capacitor	TC33	Bellcore Issue 6	Level I		0.004933	1.00	.0297	0.004933	202722669.92
1189622181	Capacitor	TC31,TC34	Bellcore Issue 6	Level I		0.004535	2.00	.0546	0.009071	220487045.01



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**Temperature** 25.00

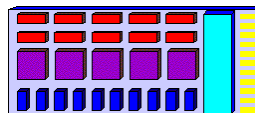


**Description** Top-level assembly  
**File Name** Sbc-800.rpj  
**Time** 2:36 PM  
**Failure Rate** 16.606720  
**MTBF** 60,217

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Failure Rate, Unit	Quantity	Failure Rate, %	Failure Rate	MTBF, Unit
1189633080	Capacitor	C216,C279,C350,C456	Bellcore Issue 6	Level I		0.004933	4.00	.1188	0.019731	202722669.92
1189633080	Capacitor	C352	Bellcore Issue 6	Level I	51.10	0.005040	1.00	.0303	0.005040	198415505.42
1189633080	Capacitor	C466	Bellcore Issue 6	Level I	51.40	0.005069	1.00	.0305	0.005069	197262194.82
1211100107	Inductor	L1,L3-4	Bellcore Issue 6	Level I		0.086173	3.00	1.5567	0.258519	11604581.32
1211100660	Inductor	L2	Bellcore Issue 6	Level I		0.086173	1.00	.5189	0.086173	11604581.32
1211104760	Inductor	L5-8	Bellcore Issue 6	Level I		0.002268	4.00	.0546	0.009071	440974090.03
1212308054	Inductor	FB1,FB8-9,FB26,FB30-31,FB37-39- FB46-47,FB49,FB51	Bellcore Issue 6	Level I		0.002268	13.00	.1775	0.029480	440974090.03
1212308052	Inductor	FB5,FB14,FB16,FB18,FB23	Bellcore Issue 6	Level I		0.002268	5.00	.0683	0.011339	440974090.03
121230805E	Inductor	FB25,FB34	Bellcore Issue 6	Level I		0.002268	2.00	.0273	0.004535	440974090.03
1212308050	Inductor	FB24,FB32-33	Bellcore Issue 6	Level I		0.002268	3.00	.0410	0.006803	440974090.03
1212306032	Inductor	FB2-3,FB6	Bellcore Issue 6	Level I		0.002268	3.00	.0410	0.006803	440974090.03
1212306035	Inductor	FB19-22,FB27-29,FB35,FB42-44	Bellcore Issue 6	Level I		0.002268	11.00	.1502	0.024945	440974090.03
1213130008	Inductor	BP2-3	Bellcore Issue 6	Level I		0.002268	2.00	.0273	0.004535	440974090.03
1213160008	Inductor	RP37-38,RP41-42	Bellcore Issue 6	Level I		0.002268	4.00	.0546	0.009071	440974090.03
1213112008	Inductor	BP1	Bellcore Issue 6	Level I		0.002268	1.00	.0137	0.002268	440974090.03
14S3000201	Inductor	TF1-2	Bellcore Issue 6	Level I		0.136062	2.00	1.6386	0.272125	7349568.17
1231332721	Miscellaneous	Y1	Bellcore Issue 6	Level I		0.150000	1.00	.9032	0.150000	6666666.67
1231314350	Miscellaneous	Y3	Bellcore Issue 6	Level I		0.150000	1.00	.9032	0.150000	6666666.67
1231327050	Miscellaneous	Y4	Bellcore Issue 6	Level I		0.150000	1.00	.9032	0.150000	6666666.67
1231324551	Miscellaneous	Y2	Bellcore Issue 6	Level I		0.150000	1.00	.9032	0.150000	6666666.67
1231325050	Miscellaneous	Y5-6	Bellcore Issue 6	Level I		0.150000	1.00	.9032	0.150000	6666666.67
1233314351	Miscellaneous	OSC1	Bellcore Issue 6	Level I		0.360000	1.00	2.1678	0.360000	2777777.78
1314780501	Integrated Circuit	Q14	Bellcore Issue 6	Level I	50.70	0.062478	1.00	.3762	0.062478	16005690.99
1314108312	Integrated Circuit	Q33	Bellcore Issue 6	Level I	57.80	0.103522	1.00	.6234	0.103522	9659805.28
1314108412	Integrated Circuit	Q13	Bellcore Issue 6	Level I	43.10	0.035410	1.00	.2132	0.035410	28240935.27
1314108412	Integrated Circuit	Q32	Bellcore Issue 6	Level I	45.10	0.041234	1.00	.2483	0.041234	24251757.09
1314012510	Integrated Circuit	Q11	Bellcore Issue 6	Level I		0.059366	1.00	.3575	0.059366	16844654.92
1314043210	Integrated Circuit	Q17,Q31,Q34	Bellcore Issue 6	Level I		0.059366	3.00	1.0724	0.178098	16844654.92
1314108411	Integrated Circuit	Q23	Bellcore Issue 6	Level I	54.10	0.079805	1.00	.4806	0.079805	12530499.27
1314108411	Integrated Circuit	Q25	Bellcore Issue 6	Level I	46.60	0.046160	1.00	.2780	0.046160	21663598.91

### AAEON Reliability Prediction Report

**Part Number** 9697800002  
**Reference Des**  
**Date** 01. 14, 2002  
**Environment** GF, GU - Ground Fixed, Uncontrolled  
**Temperature** 25.00

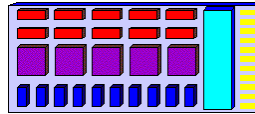


**Description** Top-level assembly  
**File Name** Sbc-800.rpj  
**Time** 2:36 PM  
**Failure Rate** 16.606720  
**MTBF** 60,217

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Failure Rate, Unit	Quantity	Failure Rate, %	Failure Rate	MTBF, Unit
1314108411	Integrated Circuit	Q36	Bellcore Issue 6	Level I	50.00	0.059366	1.00	.3575	0.059366	16844654.92
1314108411	Integrated Circuit	Q37	Bellcore Issue 6	Level I	60.80	0.127252	1.00	.7663	0.127252	7858408.92
1314101010	Integrated Circuit	Q28	Bellcore Issue 6	Level I		0.059366	1.00	.3575	0.059366	16844654.92
1301005442	Semiconductor	D4,D6	Bellcore Issue 6	Level I		0.023881	2.00	.2876	0.047762	41874327.58
1189610181	Capacitor	C475,TC7,TC16-21,TC23-26,TC28-29,TC36	Bellcore Issue 6	Level I		0.004933	15.00	.4456	0.073993	202722669.92
1301005440	Semiconductor	D1	Bellcore Issue 6	Level I	42.70	0.019260	1.00	.1160	0.019260	51921943.01
1301005440	Semiconductor	D5,D8,D15	Bellcore Issue 6	Level I		0.023881	3.00	.4314	0.071643	41874327.58
1304005441	Semiconductor	D2-3,D9-11,D13-14	Bellcore Issue 6	Level I		0.023881	7.00	1.0066	0.167167	41874327.58
1300103540	Semiconductor	D7	Bellcore Issue 6	Level I		0.023881	1.00	.1438	0.023881	41874327.58
1315700211	Semiconductor	Q1,Q20,Q22,Q26-27,Q29-30	Bellcore Issue 6	Level I		0.079603	7.00	3.3554	0.557223	12562298.27
1315002010	Semiconductor	Q7-9	Bellcore Issue 6	Level I		0.079603	3.00	1.4380	0.238810	12562298.27
1315100310	Semiconductor	Q6,Q12	Bellcore Issue 6	Level I		0.159207	2.00	1.9174	0.318413	6281149.14
1315100310	Semiconductor	Q16	Bellcore Issue 6	Level I	51.40	0.165712	1.00	.9979	0.165712	6034575.18
1315995310	Semiconductor	Q35	Bellcore Issue 6	Level I		0.159207	1.00	.9587	0.159207	6281149.14
1315050310	Semiconductor	Q4	Bellcore Issue 6	Level I		0.159207	1.00	.9587	0.159207	6281149.14
1315050310	Semiconductor	Q10	Bellcore Issue 6	Level I	53.70	0.176838	1.00	1.0649	0.176838	5654886.14
1315050310	Semiconductor	Q15	Bellcore Issue 6	Level I	50.90	0.163366	1.00	.9837	0.163366	6121242.34
1315970100	Semiconductor	U1,U21,U24	Bellcore Issue 6	Level I		0.159207	3.00	2.8761	0.477620	6281149.14
1310222210	Semiconductor	Q18	Bellcore Issue 6	Level I		0.023881	1.00	.1438	0.023881	41874327.58
1311290710	Semiconductor	Q2,Q19,Q21	Bellcore Issue 6	Level I		0.023881	3.00	.4314	0.071643	41874327.58
1310390412	Semiconductor	Q5,Q38	Bellcore Issue 6	Level I		0.023881	2.00	.2876	0.047762	41874327.58
1304100540	Semiconductor	LED1	Bellcore Issue 6	Level I		0.004877	1.00	.0294	0.004877	205063180.81
14S6334610	Integrated Circuit	U8,U14	Bellcore Issue 6	Level I		0.030598	2.00	.3685	0.061196	32681842.61
14S6200200	Integrated Circuit	U16	Bellcore Issue 6	Level I		0.136173	1.00	.8200	0.136173	7343591.05
14S3020101	Integrated Circuit	U4	Bellcore Issue 6	Level I	51.20	0.064790	1.00	.3901	0.064790	15434396.68
14S4382300	Integrated Circuit	U30	Bellcore Issue 6	Level I		0.059366	1.00	.3575	0.059366	16844654.92
14S3128420	Integrated Circuit	U22	Bellcore Issue 6	Level I		0.059366	1.00	.3575	0.059366	16844654.92
14S3020100	Integrated Circuit	U23	Bellcore Issue 6	Level I		0.059366	1.00	.3575	0.059366	16844654.92
14S4070600	Integrated Circuit	U31	Bellcore Issue 6	Level I		0.059366	1.00	.3575	0.059366	16844654.92
14S3020010	Integrated Circuit	U6	Bellcore Issue 6	Level I	44.30	0.038807	1.00	.2337	0.038807	25768491.10

### AAEON Reliability Prediction Report

**Part Number** 9697800002  
**Reference Des**  
**Date** 01. 14, 2002  
**Environment** GF, GU - Ground Fixed, Uncontrolled  
**Temperature** 25.00



**Description** Top-level assembly  
**File Name** Sbc-800.rpj  
**Time** 2:36 PM  
**Failure Rate** 16.606720  
**MTBF** 60,217

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Failure Rate, Unit	Quantity	Failure Rate, %	Failure Rate	MTBF, Unit
14S4021300	Integrated Circuit	U25-26	Bellcore Issue 6	Level I		0.059366	2.00	.7150	0.118732	16844654.92
14S5A01400	Integrated Circuit	U2-3,U18,U29,U33	Bellcore Issue 6	Level I		0.059366	5.00	1.7874	0.296830	16844654.92
14S1486300	Integrated Circuit	U7	Bellcore Issue 6	Level I		0.059366	1.00	.3575	0.059366	16844654.92
14S4048501	Integrated Circuit	U27-28	Bellcore Issue 6	Level I		0.059366	2.00	.7150	0.118732	16844654.92
14S4530100	Integrated Circuit	U20	Bellcore Issue 6	Level I	51.10	0.064322	1.00	.3873	0.064322	15546849.77
14S5A00700	Integrated Circuit	U34	Bellcore Issue 6	Level I		0.037889	1.00	.2282	0.037889	26392869.26
14S5A24500	Integrated Circuit	U35-38	Bellcore Issue 6	Level I		0.068903	4.00	1.6596	0.275613	14513109.62
14S5A00600	Integrated Circuit	U39	Bellcore Issue 6	Level I		0.037889	1.00	.2282	0.037889	26392869.26
14S4280102	Integrated Circuit	U5	Bellcore Issue 6	Level I	60.20	0.070168	1.00	.4225	0.070168	14251571.52
14S4000600	Integrated Circuit	U13	Bellcore Issue 6	Level I	44.20	0.027754	1.00	.1671	0.027754	36030431.57
14S4255900	Integrated Circuit	U10	Bellcore Issue 6	Level I	45.40	0.029858	1.00	.1798	0.029858	33491537.12
14S4255900	Integrated Circuit	U15	Bellcore Issue 6	Level I	44.90	0.028965	1.00	.1744	0.028965	34524400.99
14S4871200	Integrated Circuit	U12	Bellcore Issue 6	Level I	42.20	0.024539	1.00	.1478	0.024539	40751478.80
14S4888800	Integrated Circuit	U32	Bellcore Issue 6	Level I	57.40	0.060075	1.00	.3618	0.060075	16645894.67
14S4205000	Integrated Circuit	U17	Bellcore Issue 6	Level I	52.10	0.044421	1.00	.2675	0.044421	22512075.38
14S8416803	Integrated Circuit	U19	Bellcore Issue 6	Level I		0.039296	1.00	.2366	0.039296	25448028.36
14S4284500	Integrated Circuit	U9	Bellcore Issue 6	Level I	56.20	0.056158	1.00	.3382	0.056158	17807050.11
1540715080	Resistor	RP2,RP5	Bellcore Issue 6	Level I		0.006246	2.00	.0752	0.012492	160102772.00
1540747282	Resistor	RP6,RP35,RP54,RP63	Bellcore Issue 6	Level I		0.006246	4.00	.1504	0.024984	160102772.00
1540710380	Resistor	RP13-15,RP17-18,RP23-25	Bellcore Issue 6	Level I		0.006246	8.00	.3009	0.049968	160102772.00
1540715380	Resistor	RP36,RP39	Bellcore Issue 6	Level I		0.006246	2.00	.0752	0.012492	160102772.00
1540775080	Resistor	RP3	Bellcore Issue 6	Level I		0.006246	1.00	.0376	0.006246	160102772.00
1540782280	Resistor	RP4,RP10,RP40,RP43-44	Bellcore Issue 6	Level I		0.006246	5.00	.1881	0.031230	160102772.00
1540727280	Resistor	RP12,RP45,RP51-52	Bellcore Issue 6	Level I		0.006246	4.00	.1504	0.024984	160102772.00
15407103A0	Resistor	RP26-32,RP46-47,RP49,RP55-61	Bellcore Issue 6	Level I		0.006246	17.00	.6394	0.106182	160102772.00
1540701380	Resistor	RP33-34	Bellcore Issue 6	Level I		0.006246	2.00	.0752	0.012492	160102772.00
1540733082	Resistor	RP62	Bellcore Issue 6	Level I		0.006246	1.00	.0376	0.006246	160102772.00
1655306020	Connection	CN6	Bellcore Issue 6	Level I		0.003414	1.00	.0206	0.003414	292926756.90
1655003000	Connection	CN8-9	Bellcore Issue 6	Level I		0.001707	2.00	.0206	0.003414	585853513.81
1655305020	Connection	CN7	Bellcore Issue 6	Level I		0.002845	1.00	.0171	0.002845	351512108.28
1655404020	Connection	CN12	Bellcore Issue 6	Level I		0.002276	1.00	.0137	0.002276	439390135.35

