



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

EMB-830 A0.2

Reliability Prediction Report

(MTBF)

Release Date: Apr. 11, 2003

04-11-2003

Issue Stamp

Wayne Chen

A.V.P

Rex Chang

Test Engineer

Reliability Prediction (MTBF)

. Model Name: EMB-830 A0.2 (Intel Pentium4 3.06GHz CPU)

.Description: Embedded ATX.

. Prediction Date: Apr. 11. 2003

. Prediction Site: AAEON DV Dept.

. Predicted by : Rex Chang

. Equipment: Relex Ver.7.2 Visual Reliability Software

. Simulation Environment:

Temperature: 22.7 degrees C(No temperature rise condition)

Standard: Telcordia (Bellcore) Standard

. 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:

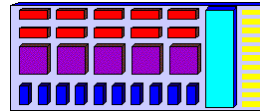
Failure Rate: 10.510530ppm

MTBF: 95,143Hours (about 10.8 years)

X. Prediction Table:

AAEON Reliability Prediction Report

Part Number System
Reference Des
Date 04. 10, 2003
Environment GB, GC - Ground Benign, Controlled
Temperature 30.00

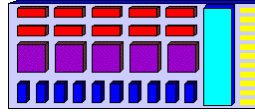


Description Top-level assembly
File Name EMB-830A0.2.RPJ
Time 5:07 PM
Failure Rate 10.510530
MTBF 95,143

Assembly Name	Part Number	Model	Method	Environment	Duty Cycle	Qty	Failure Rate	MTBF
System	System	Bellcore	Method I Case 3	GB, GC - Ground Benign,	100.00	1.00	10.510530	95,143

AAEON Reliability Prediction Report

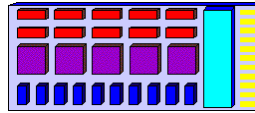
Part Number System
Reference Des
Date 04. 10, 2003
Environment GB, GC - Ground Benign, Controlled
Temperature 30.00



Description Top-level assembly
File Name EMB-830A0.2.RPJ
Time 5:07 PM
Failure Rate 10.510530
MTBF 95,143

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Failure Rate, Unit	Quantity	Failure Rate, %	Failure Rate	MTBF, Unit
1111610210	Capacitor	C465,C496,EC19-21,EC26,EC28-29	Bellcore Issue 6	Level I		0.029353	8.00	2.2342	0.234825	34067931.95
1231125051	Inductor	Y2-3	Bellcore Issue 6	Level I		0.001249	2.00	.0238	0.002497	800930098.66
1231124050	Inductor	Y5	Bellcore Issue 6	Level I		0.001249	1.00	.0119	0.001249	800930098.66
1653302150	Connection	U3	Bellcore Issue 6	Level I		0.000736	4.00	.0280	0.002943	1359297183.49
1654808304	Connection	USB1	Bellcore Issue 6	Level I		0.002943	1.00	.0280	0.002943	339824295.87
1750119011	Miscellaneous	BT1	Bellcore Issue 6	Level I		0.450000	1.00	4.2814	0.450000	2222222.22
1750220320	Connection	BT1	Bellcore Issue 6	Level I		0.000736	1.00	.0070	0.000736	1359297183.49
1655004020	Connection	CN2	Bellcore Issue 6	Level I		0.001471	1.00	.0140	0.001471	679648591.75
1653006100	Connection	CN6	Bellcore Issue 6	Level I		0.002207	1.00	.0210	0.002207	453099061.16
1655005021	Connection	CN14,CN9	Bellcore Issue 6	Level I		0.001839	2.00	.0350	0.003678	543718873.40
1655306021	Connection	CN15	Bellcore Issue 6	Level I		0.002207	1.00	.0210	0.002207	453099061.16
1655404020	Connection	CN16	Bellcore Issue 6	Level I		0.001471	1.00	.0140	0.001471	679648591.75
1111622191	Capacitor	C333,C337,EC12	Bellcore Issue 6	Level I		0.017612	3.00	.5027	0.052836	56779886.59
1119682193	Capacitor	EC13-18,EC22-23	Bellcore Issue 6	Level I		0.100303	8.00	7.6345	0.802427	9969760.00
1653220208	Connection	IDE1-2	Bellcore Issue 6	Level I		0.014713	2.00	.2800	0.029427	67964859.17
1653003201	Connection	JP2,JP4,JP8	Bellcore Issue 6	Level I		0.002207	3.00	.0630	0.006621	453099061.16
1653003200	Connection	JP10-11,JP3,JP5-7	Bellcore Issue 6	Level I		0.002207	6.00	.1260	0.013242	453099061.16
1654612304	Connection	KBMS1	Bellcore Issue 6	Level I		0.004414	1.00	.0420	0.004414	226549530.58
1211100107	Inductor	L43	Bellcore Issue 6	Level I	21.00	0.068841	1.00	.6550	0.068841	14526199.05
1211100660	Inductor	L45	Bellcore Issue 6	Level I		0.047445	1.00	.4514	0.047445	21077107.86
1654260201	Connection	PCI1	Bellcore Issue 6	Level I		0.044140	1.00	.4200	0.044140	22654953.06
1654530300	Connection	CRTAUD	Bellcore Issue 6	Level I		0.011035	1.00	.1050	0.011035	90619812.23
1655420020	Connection	CN27	Bellcore Issue 6	Level I		0.007357	1.00	.0700	0.007357	135929718.35
1759100002	Miscellaneous	BUZZ1	Bellcore Issue 6	Level I		0.075000	1.00	.7136	0.075000	13333333.33
1654222200	Connection	CN5	Bellcore Issue 6	Level I		0.008092	1.00	.0770	0.008092	123572471.23
1655003000	Connection	CN23,CN7-8	Bellcore Issue 6	Level I		0.001104	3.00	.0315	0.003311	906198122.33
1655304020	Connection	CN10	Bellcore Issue 6	Level I		0.001471	1.00	.0140	0.001471	679648591.75
1651592490	Connection	DIMM1-2	Bellcore Issue 6	Level I		0.067682	2.00	1.2879	0.135364	14774969.39
1653217202	Connection	FDD1	Bellcore Issue 6	Level I		0.012506	1.00	.1190	0.012506	79958657.85
1653003100	Connection	JP1,JP9	Bellcore Issue 6	Level I		0.001104	2.00	.0210	0.002207	906198122.33
1653005200	Connection	CN26	Bellcore Issue 6	Level I		0.003678	1.00	.0350	0.003678	271859436.70

AAEON Reliability Prediction Report



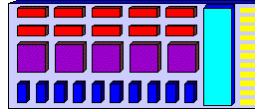
Part Number System
Reference Des
Date 04. 10, 2003
Environment GB, GC - Ground Benign, Controlled
Temperature 30.00

Description Top-level assembly
File Name EMB-830A0.2.RPJ
Time 5:07 PM
Failure Rate 10.510530
MTBF 95,143

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Failure Rate, Unit	Quantity	Failure Rate, %	Failure Rate	MTBF, Unit
1211100303	Inductor	L41	Bellcore Issue 6	Level I	12.30	0.059359	1.00	.5648	0.059359	16846604.23
1654262300	Connection	MPC1	Bellcore Issue 6	Level I		0.045612	1.00	.4340	0.045612	21924148.12
1654543500	Connection	PCON1	Bellcore Issue 6	Level I		0.015817	1.00	.1505	0.015817	63223124.81
1112610091	Capacitor	EC10-11	Bellcore Issue 6	Level I		0.013428	1.00	.1278	0.013428	74468940.72
1653002202	Connection	JP12	Bellcore Issue 6	Level I		0.001471	2.00	.0280	0.002943	679648591.75
1652514203	Connection	AN1	Bellcore Issue 6	Level I		0.005150	1.00	.0490	0.005150	194185311.93
1652522200	Connection	RJUSB1	Bellcore Issue 6	Level I		0.008092	1.00	.0770	0.008092	123572471.23
1653222200	Connection	CN1	Bellcore Issue 6	Level I		0.016185	1.00	.1540	0.016185	61786235.61
14S9669200	Integrated Circuit	U26	Bellcore Issue 6	Level I	26.30	0.235734	1.00	2.2428	0.235734	4242064.72
14S4630100	Integrated Circuit	U27	Bellcore Issue 6	Level I		0.042535	1.00	.4047	0.042535	23510284.61
1314012510	Integrated Circuit	U29	Bellcore Issue 6	Level I		0.042535	1.00	.4047	0.042535	23510284.61
14S5A00700	Integrated Circuit	U34	Bellcore Issue 6	Level I		0.025295	1.00	.2407	0.025295	39534043.95
14S5900600	Integrated Circuit	U32	Bellcore Issue 6	Level I	11.00	0.065285	1.00	.6211	0.065285	15317499.19
14S4142000	Integrated Circuit	U35	Bellcore Issue 6	Level I		0.026234	1.00	.2496	0.026234	38118760.86
14S2221600	Integrated Circuit	U36	Bellcore Issue 6	Level I		0.042535	1.00	.4047	0.042535	23510284.61
1231332721	Miscellaneous	X2	Bellcore Issue 6	Level I		0.075000	1.00	.7136	0.075000	13333333.33
105A733003	Resistor	R194,R299,R376,R416,R436,R468,- R473,R487,R489,R493,R559,R60,- R83	Bellcore Issue 6	Level I		0.001249	13.00	.1544	0.016231	800930098.66
105A524963	Resistor	R67-68	Bellcore Issue 6	Level I		0.001249	2.00	.0238	0.002497	800930098.66
105A700103	Resistor	R84,R89	Bellcore Issue 6	Level I		0.001249	2.00	.0238	0.002497	800930098.66
105A706823	Resistor	R273,R278	Bellcore Issue 6	Level I		0.001249	2.00	.0238	0.002497	800930098.66
105A706233	Resistor	R282-283,R415	Bellcore Issue 6	Level I		0.001249	3.00	.0356	0.003746	800930098.66
105A503033	Resistor	R342	Bellcore Issue 6	Level I		0.001249	1.00	.0119	0.001249	800930098.66
105A512033	Resistor	R344	Bellcore Issue 6	Level I		0.001249	1.00	.0119	0.001249	800930098.66
105A554903	Resistor	R375,R407	Bellcore Issue 6	Level I		0.001249	2.00	.0238	0.002497	800930098.66
105A702263	Resistor	R439	Bellcore Issue 6	Level I		0.001249	1.00	.0119	0.001249	800930098.66
105A556003	Resistor	R447,R453	Bellcore Issue 6	Level I		0.001249	2.00	.0238	0.002497	800930098.66
105A511503	Resistor	R449,R455	Bellcore Issue 6	Level I		0.001249	2.00	.0238	0.002497	800930098.66
105A700333	Resistor	R459-460,R466	Bellcore Issue 6	Level I		0.001249	3.00	.0356	0.003746	800930098.66
105A702233	Resistor	R497,R500	Bellcore Issue 6	Level I		0.001249	2.00	.0238	0.002497	800930098.66

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Part Number System
Reference Des
Date 04. 10, 2003
Environment GB, GC - Ground Benign, Controlled
Temperature 30.00

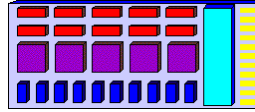


Description Top-level assembly
File Name EMB-830A0.2.RPJ
Time 5:07 PM
Failure Rate 10.510530
MTBF 95,143

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Failure Rate, Unit	Quantity	Failure Rate, %	Failure Rate	MTBF, Unit
105A704703	Resistor	R533-534	Bellcore Issue 6	Level I		0.001249	2.00	.0238	0.002497	800930098.66
105A701053	Resistor	R581	Bellcore Issue 6	Level I		0.001249	1.00	.0119	0.001249	800930098.66
14S3020101	Integrated Circuit	U2	Bellcore Issue 6	Level I	19.60	0.156487	1.00	1.4889	0.156487	6390303.56
1651203291	Connection	U6	Bellcore Issue 6	Level I		0.011771	1.00	.1120	0.011771	84956073.97
14S3065001	Integrated Circuit	U7	Bellcore Issue 6	Level I	10.90	0.035231	1.00	.3352	0.035231	28384381.84
14S4871201	Integrated Circuit	U10	Bellcore Issue 6	Level I	7.10	0.038921	1.00	.3703	0.038921	25693342.50
14S3128420	Integrated Circuit	U16	Bellcore Issue 6	Level I	12.30	0.098173	1.00	.9340	0.098173	10186139.35
14S4256200	Inductor	U21	Bellcore Issue 6	Level I	12.40	0.093889	1.00	.8933	0.093889	10650861.97
14S2303700	Integrated Circuit	U25	Bellcore Issue 6	Level I	6.40	0.066276	1.00	.6306	0.066276	15088511.15
1139710060	Capacitor	C8-C32,C105-106,C113,C139-140-,C171,C258,C269,C271,C274,C283-,C314,C322,C336,C339,C345,C37-,C426-427,C449-450,C458,C472,C474-475,C48,C481,C493,C495,C499,C541,C543,C547,C550,C554,C557,C561-562,C565,C569,C572,C574-,CA1	Bellcore Issue 6	Level I		0.001406	68.00	.9094	0.095580	711449301.06
1653207201	Connection	CN3	Bellcore Issue 6	Level I		0.005150	1.00	.0490	0.005150	194185311.93
1124522180	Capacitor	C289-290,C39	Bellcore Issue 6	Level I		0.000547	3.00	.0156	0.001642	1826769085.82
1124533080	Capacitor	C358-360,C532,C537,C540	Bellcore Issue 6	Level I		0.000547	6.00	.0312	0.003284	1826769085.82
1124556280	Capacitor	C486	Bellcore Issue 6	Level I		0.000547	1.00	.0052	0.000547	1826769085.82
1301005440	Semiconductor	D1-2,D17,D28,D3,D4	Bellcore Issue 6	Level I		0.013753	6.00	.7851	0.082518	72710998.66
1300103540	Semiconductor	D19	Bellcore Issue 6	Level I		0.013753	1.00	.1309	0.013753	72710998.66
1314101010	Integrated Circuit	Q28	Bellcore Issue 6	Level I		0.042535	1.00	.4047	0.042535	23510284.61
1540710080	Resistor	RN10-11,RN16-17,RN22-23,RN27--28,RN31-32,RN36-37,RN4-5,RN41--42	Bellcore Issue 6	Level I		0.003910	16.00	.5953	0.062566	255730457.04
1540782280	Resistor	RN46-51,RP1	Bellcore Issue 6	Level I		0.003910	7.00	.2604	0.027373	255730457.04
1540710380	Resistor	RN53-54	Bellcore Issue 6	Level I		0.003910	2.00	.0744	0.007821	255730457.04
1129747650	Capacitor	C392,C425,C431-432,C444,C452,C49,C518,C520,C527,C529,C70,C80-,C90	Bellcore Issue 6	Level I		0.001406	14.00	.1872	0.019678	711449301.06
105A505103	Resistor	R1,R13-14,R17,R19,R2,R20,R3-4,R7	Bellcore Issue 6	Level I		0.001249	10.00	.1188	0.012485	800930098.66

AAEON Reliability Prediction Report

Part Number System
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Temperature 30.00

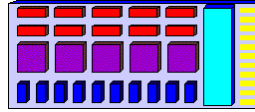


Description Top-level assembly
File Name EMB-830A0.2.RPJ
Time 5:07 PM
Failure Rate 10.510530
MTBF 95,143

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Failure Rate, Unit	Quantity	Failure Rate, %	Failure Rate	MTBF, Unit
105A549963	Resistor	R127,R131,R33-38,R426-433,R6,R-94	Bellcore Issue 6	Level I		0.001249	18.00	.2138	0.022474	800930098.66
105A706203	Resistor	R10,R136,R145	Bellcore Issue 6	Level I		0.001249	3.00	.0356	0.003746	800930098.66
105A768003	Resistor	R12	Bellcore Issue 6	Level I		0.001249	1.00	.0119	0.001249	800930098.66
105A702703	Resistor	R23	Bellcore Issue 6	Level I		0.001249	1.00	.0119	0.001249	800930098.66
105A703303	Resistor	R102-103,R105,R107,R184,R200,R-213,R263,R265,R27-30,R302,R398-,R45,R47-49,R51-52,R54-59,R596-,R61-62	Bellcore Issue 6	Level I		0.001249	30.00	.3564	0.037456	800930098.66
105A527463	Resistor	R39-44	Bellcore Issue 6	Level I		0.001249	6.00	.0713	0.007491	800930098.66
105A512103	Resistor	R372,R446	Bellcore Issue 6	Level I		0.001249	2.00	.0238	0.002497	800930098.66
105A540263	Resistor	R87	Bellcore Issue 6	Level I		0.001249	1.00	.0119	0.001249	800930098.66
105A522603	Resistor	R91	Bellcore Issue 6	Level I		0.001249	1.00	.0119	0.001249	800930098.66
105A530103	Resistor	R96	Bellcore Issue 6	Level I		0.001249	1.00	.0119	0.001249	800930098.66
105A501503	Resistor	R97	Bellcore Issue 6	Level I		0.001249	1.00	.0119	0.001249	800930098.66
105A705603	Resistor	R98-101,R5	Bellcore Issue 6	Level I		0.001249	5.00	.0594	0.006243	800930098.66
105A701003	Resistor	R104,R106,R108-121,R371,R492,R-494-496,R499,R501-502,R505-507-,R509-511	Bellcore Issue 6	Level I		0.001249	30.00	.3564	0.037456	800930098.66
105A704723	Resistor	R128,R130,R173,R180,R207,R210-,R212,R215,R220-222,R225-226,R-228-229,R240243,R245-246,R249--250,R272,R277,R293-295,R306,R3-09-311,R331-332,R336,R346-347,-R351,R363-365,R367,R469-471,R-476,R479-481,R484,R561-565,R58-3-587,R591,R603-604,R75,R77	Bellcore Issue 6	Level I		0.001249	65.00	.7721	0.081156	800930098.66
105A702203	Resistor	R158,R218,R233-234,R238,R286,R-288,R290,R582	Bellcore Issue 6	Level I		0.001249	9.00	.1069	0.011237	800930098.66
105A702723	Resistor	R166,R170,R181,R183,R227,R230	Bellcore Issue 6	Level I		0.001249	6.00	.0713	0.007491	800930098.66
105A522663	Resistor	R190	Bellcore Issue 6	Level I		0.001249	1.00	.0119	0.001249	800930098.66
105A733033	Resistor	R193,R458	Bellcore Issue 6	Level I		0.001249	2.00	.0238	0.002497	800930098.66
105A710053	Resistor	R196-197	Bellcore Issue 6	Level I		0.007491	2.00	.1425	0.014983	133488349.78
1059700001	Resistor	L34,R199,R280,R359,R389	Bellcore Issue 6	Level I		0.001249	5.00	.0594	0.006243	800930098.66

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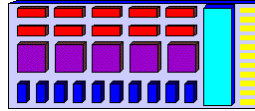
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Environment GB, GC - Ground Benign, Controlled
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Description Top-level assembly
File Name EMB-830A0.2.RPJ
Time 5:07 PM
Failure Rate 10.510530
MTBF 95,143

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Failure Rate, Unit	Quantity	Failure Rate, %	Failure Rate	MTBF, Unit
105A747003	Resistor	R209,R217,R224	Bellcore Issue 6	Level I		0.001249	3.00	.0356	0.003746	800930098.66
105A702223	Resistor	R231,R236-237,R378,R579	Bellcore Issue 6	Level I		0.001249	5.00	.0594	0.006243	800930098.66
105A710003	Resistor	R235,R467,R485	Bellcore Issue 6	Level I		0.001249	3.00	.0356	0.003746	800930098.66
105A703033	Resistor	R244,R255	Bellcore Issue 6	Level I		0.001249	2.00	.0238	0.002497	800930098.66
1304001340	Semiconductor	D24	Bellcore Issue 6	Level I		0.003823	1.00	.0364	0.003823	261592266.64
1301005441	Semiconductor	D25-27	Bellcore Issue 6	Level I		0.013753	3.00	.3926	0.041259	72710998.66
1212308054	Inductor	FB1,FB27,FB3-4,FB50-51,FB60,FB-69,FB71-75,L21,L26-28,L3,L37-39-L4-5,L66	Bellcore Issue 6	Level I		0.001249	24.00	.2851	0.029965	800930098.66
1212306035	Inductor	FB2,FB28-31,FB5-6,L10-18,L36,L6-4-65,L67-68	Bellcore Issue 6	Level I		0.001249	21.00	.2495	0.026220	800930098.66
121230805C	Inductor	FB26,FB9,L40	Bellcore Issue 6	Level I		0.001249	3.00	.0356	0.003746	800930098.66
1212308052	Inductor	FB40,FB49,L35	Bellcore Issue 6	Level I		0.001249	3.00	.0356	0.003746	800930098.66
1752311000	Miscellaneous	F2	Bellcore Issue 6	Level I		0.015000	1.00	.1427	0.015000	66666666.67
1653002201	Connection	JP12	Bellcore Issue 6	Level I		0.001471	1.00	.0140	0.001471	679648591.75
1211106870	Inductor	L6	Bellcore Issue 6	Level I		0.047445	1.00	.4514	0.047445	21077107.86
1211101005	Inductor	L8	Bellcore Issue 6	Level I		0.047445	1.00	.4514	0.047445	21077107.86
1211108270	Inductor	L9	Bellcore Issue 6	Level I		0.047445	1.00	.4514	0.047445	21077107.86
121230603D	Inductor	L29-33	Bellcore Issue 6	Level I		0.001249	5.00	.0594	0.006243	800930098.66
121230805A	Inductor	FB76-78,L47-51,L54-55	Bellcore Issue 6	Level I		0.001249	10.00	.1188	0.012485	800930098.66
121230805F	Inductor	L52-53,L56-63	Bellcore Issue 6	Level I		0.001249	10.00	.1188	0.012485	800930098.66
1174510180	Capacitor	NC10-13,NC2-9	Bellcore Issue 6	Level I		0.000547	12.00	.0625	0.006569	1826769085.82
1540733085	Resistor	NL13-16	Bellcore Issue 6	Level I		0.003910	4.00	.1488	0.015641	255730457.04
16540F0200	Connection	PCMCIA1	Bellcore Issue 6	Level I		0.055176	1.00	.5250	0.055176	18123962.45
1310390412	Semiconductor	Q1,Q21,Q37-38,Q4,Q41,Q5-7	Bellcore Issue 6	Level I		0.013753	9.00	1.1777	0.123778	72710998.66
1315700211	Semiconductor	Q10-16,Q2-3,Q20,Q31,Q39,Q43	Bellcore Issue 6	Level I		0.045844	13.00	5.6702	0.595967	21813299.60
1311390610	Semiconductor	Q19,Q42	Bellcore Issue 6	Level I		0.013753	2.00	.2617	0.027506	72710998.66
1124410080	Capacitor	C232-233,C346,C348,C352-357,C-388,C390,C400	Bellcore Issue 6	Level I		0.000547	13.00	.0677	0.007116	1826769085.82
1124547180	Capacitor	C278-280,C287,C308-309,C311,C-315-316,C323-325,C329-330,C603-604,C614-618	Bellcore Issue 6	Level I		0.000547	21.00	.1094	0.011496	1826769085.82

AAEON Reliability Prediction Report

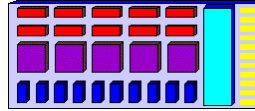


Part Number System
Reference Des
Date 04. 10, 2003
Environment GB, GC - Ground Benign, Controlled
Temperature 30.00

Description Top-level assembly
File Name EMB-830A0.2.RPJ
Time 5:07 PM
Failure Rate 10.510530
MTBF 95,143

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Failure Rate, Unit	Quantity	Failure Rate, %	Failure Rate	MTBF, Unit
14S9660100	Integrated Circuit	U28	Bellcore Issue 6	Level I	24.40	0.210233	1.00	2.0002	0.210233	4756628.06
14S5A01400	Integrated Circuit	U14	Bellcore Issue 6	Level I		0.042535	1.00	.4047	0.042535	23510284.61
14S5701411	Integrated Circuit	U33	Bellcore Issue 6	Level I		0.025295	1.00	.2407	0.025295	39534043.95
1231314350	Miscellaneous	X1, Y4	Bellcore Issue 6	Level I		0.075000	2.00	1.4271	0.150000	13333333.33
105A701533	Resistor	R247,R254,R457	Bellcore Issue 6	Level I		0.001249	3.00	.0356	0.003746	800930098.66
1315970110	Semiconductor	FS1-3	Bellcore Issue 6	Level I		0.091687	3.00	2.6170	0.275062	10906649.80
1211104760	Inductor	L1-2	Bellcore Issue 6	Level I		0.001249	2.00	.0238	0.002497	800930098.66
1214309000	Inductor	L19-20,L22-25	Bellcore Issue 6	Level I		0.001249	6.00	.0713	0.007491	800930098.66
105A501003	Resistor	L42	Bellcore Issue 6	Level I		0.001249	1.00	.0119	0.001249	800930098.66
1174533080	Capacitor	NC1	Bellcore Issue 6	Level I		0.000547	1.00	.0052	0.000547	1826769085.82
1213160008	Inductor	NL1-12	Bellcore Issue 6	Level I		0.001249	12.00	.1425	0.014983	800930098.66
1315002010	Semiconductor	Q8-9	Bellcore Issue 6	Level I		0.045844	2.00	.8723	0.091687	21813299.60
1121547661	Capacitor	C284,C498	Bellcore Issue 6	Level I		0.001311	2.00	.0249	0.002622	762806343.57
1124522280	Capacitor	C318,C331,C470	Bellcore Issue 6	Level I		0.000547	3.00	.0156	0.001642	1826769085.82
1124505080	Capacitor	C61-62	Bellcore Issue 6	Level I		0.000547	2.00	.0104	0.001095	1826769085.82
1124501780	Capacitor	C114-115,C118-119,C122,C262,C-389,C391,C424,C430,C439-440,C4-55,C482,C485,C492,C602,C613,C89	Bellcore Issue 6	Level I		0.000547	19.00	.0990	0.010401	1826769085.82
1121722650	Capacitor	C228,C479	Bellcore Issue 6	Level I		0.001311	2.00	.0249	0.002622	762806343.57
1122747880	Capacitor	C229	Bellcore Issue 6	Level I		0.000825	1.00	.0078	0.000825	1212335760.74
1124547080	Capacitor	C265-266	Bellcore Issue 6	Level I		0.000547	2.00	.0104	0.001095	1826769085.82
1122733750	Capacitor	C267,C270,C273,C317,C328	Bellcore Issue 6	Level I		0.000825	5.00	.0392	0.004124	1212335760.74
1122722080	Capacitor	C347,C351,C428-429,C445-446,C-533-534	Bellcore Issue 6	Level I		0.000547	8.00	.0417	0.004379	1826769085.82
1121733780	Capacitor	C285	Bellcore Issue 6	Level I		0.001311	1.00	.0125	0.001311	762806343.57
1124510280	Capacitor	C335,C340,C344	Bellcore Issue 6	Level I		0.000547	3.00	.0156	0.001642	1826769085.82
1124527180	Capacitor	C286,C536,C539,C546	Bellcore Issue 6	Level I		0.000547	4.00	.0208	0.002190	1826769085.82
1124420080	Capacitor	C578,C581	Bellcore Issue 6	Level I		0.000547	2.00	.0104	0.001095	1826769085.82
1301005442	Semiconductor	D18,D20-21	Bellcore Issue 6	Level I		0.013753	3.00	.3926	0.041259	72710998.66
1304101340	Semiconductor	D22-23	Bellcore Issue 6	Level I		0.003823	2.00	.0727	0.007645	261592266.64
1314108312	Integrated Circuit	Q26	Bellcore Issue 6	Level I	10.90	0.089553	1.00	.8520	0.089553	11166554.47
1315993310	Semiconductor	Q40	Bellcore Issue 6	Level I		0.091687	1.00	.8723	0.091687	10906649.80

AAEON Reliability Prediction Report



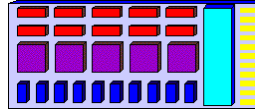
Part Number System
Reference Des
Date 04. 10, 2003
Environment GB, GC - Ground Benign, Controlled
Temperature 30.00

Description Top-level assembly
File Name EMB-830A0.2.RPJ
Time 5:07 PM
Failure Rate 10.510530
MTBF 95,143

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Failure Rate, Unit	Quantity	Failure Rate, %	Failure Rate	MTBF, Unit
1540756080	Resistor	RN1-3,RN6-9,RN12-15,RN18-21,RN24-26,RN29-30,RN33-35,RN38-40,RN43-44	Bellcore Issue 6	Level I		0.003910	28.00	1.0417	0.109490	255730457.04
1540733082	Resistor	RN45	Bellcore Issue 6	Level I		0.003910	1.00	.0372	0.003910	255730457.04
1540727280	Resistor	RN52	Bellcore Issue 6	Level I		0.003910	1.00	.0372	0.003910	255730457.04
1540701380	Resistor	RP3-4,RP6	Bellcore Issue 6	Level I		0.003910	3.00	.1116	0.011731	255730457.04
1540747282	Resistor	RP5	Bellcore Issue 6	Level I		0.003910	1.00	.0372	0.003910	255730457.04
106B501031	Resistor	RT1-3	Bellcore Issue 6	Level I		0.007357	3.00	.2100	0.022070	135929718.35
105A705103	Resistor	R335,R337,R350,R355,R590,R592	Bellcore Issue 6	Level I		0.001249	6.00	.0713	0.007491	800930098.66
105A530003	Resistor	R8	Bellcore Issue 6	Level I		0.001249	1.00	.0119	0.001249	800930098.66
105A510003	Resistor	R370,R9,R92-93,R95	Bellcore Issue 6	Level I		0.001249	5.00	.0594	0.006243	800930098.66
105A715003	Resistor	R11	Bellcore Issue 6	Level I		0.001249	1.00	.0119	0.001249	800930098.66
105A703903	Resistor	R15	Bellcore Issue 6	Level I		0.001249	1.00	.0119	0.001249	800930098.66
105A707503	Resistor	R18,R539,R540,R547-548	Bellcore Issue 6	Level I		0.001249	5.00	.0594	0.006243	800930098.66
105A700003	Resistor	R123,R125,R132-135,R137-141,R162-165,R171,R191,R205-206,R23-9,R24,R252-253,R270-271,R281,R291292,R300-301,R303,R307,R312-131,R315-316,R318,R320,R322-3-23,R326,R366,R379,R382,R391-39-3,R405,R419-420,R435,R438,R444-,R454,R464-465,R486,R512,R516--517,R519,R524	Bellcore Issue 6	Level I		0.001249	62.00	.7365	0.077410	800930098.66
105A701033	Resistor	R122,R124,R169,R175-176,R179,R208,R216,R223,R251,R284-285,R3-1,R368-369,R377,R408,R434,R452-,R477-478,R53,R535,R554-555,R5-66-668,R570,R574,R577-578,R580-,R594-595	Bellcore Issue 6	Level I		0.001249	35.00	.4158	0.043699	800930098.66
105A701523	Resistor	R32	Bellcore Issue 6	Level I		0.001249	1.00	.0119	0.001249	800930098.66
105A700133	Resistor	R195,R198,R211,R232,R334,R349-,R380,R451,R475,R490-491,R498,-R50,R503-504,R508,R589,R64-65	Bellcore Issue 6	Level I		0.001249	19.00	.2257	0.023722	800930098.66
105A547503	Resistor	R63	Bellcore Issue 6	Level I		0.001249	1.00	.0119	0.001249	800930098.66

AAEON Reliability Prediction Report

Part Number System
Reference Des
Date 04. 10, 2003
Environment GB, GC - Ground Benign, Controlled
Temperature 30.00

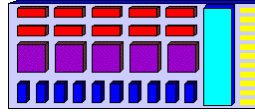


Description Top-level assembly
File Name EMB-830A0.2.RPJ
Time 5:07 PM
Failure Rate 10.510530
MTBF 95,143

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Failure Rate, Unit	Quantity	Failure Rate, %	Failure Rate	MTBF, Unit
105A568163	Resistor	R143,R69	Bellcore Issue 6	Level I		0.001249	2.00	.0238	0.002497	800930098.66
105A708223	Resistor	R142,R144,R146-157,R159-161,R-172,R174,R177,R182,R185,R187,R-192,R201-204,R214,R304,R518,R5-20-522,R537-538,R541-545,R85,R-88	Bellcore Issue 6	Level I		0.001249	43.00	.5108	0.053688	800930098.66
105A704733	Resistor	R248,R258-259,R261,R264,R314,R-317,R319,R321,R324-325,R327	Bellcore Issue 6	Level I		0.001249	12.00	.1425	0.014983	800930098.66
105A710033	Resistor	R256-257,R399,R404,R410-411,R-440,R442,R597-598	Bellcore Issue 6	Level I		0.001249	10.00	.1188	0.012485	800930098.66
105A505633	Resistor	R260,R262,R266	Bellcore Issue 6	Level I		0.001249	3.00	.0356	0.003746	800930098.66
105A537463	Resistor	R267-269	Bellcore Issue 6	Level I		0.001249	3.00	.0356	0.003746	800930098.66
105A507503	Resistor	R274-276	Bellcore Issue 6	Level I		0.001249	3.00	.0356	0.003746	800930098.66
105A501033	Resistor	R328-330,R338-340,R354,R357-3-58	Bellcore Issue 6	Level I		0.001249	9.00	.1069	0.011237	800930098.66
105A506823	Resistor	R341,R345	Bellcore Issue 6	Level I		0.001249	2.00	.0238	0.002497	800930098.66
105A523233	Resistor	R343	Bellcore Issue 6	Level I		0.001249	1.00	.0119	0.001249	800930098.66
105A556223	Resistor	R352-353	Bellcore Issue 6	Level I		0.001249	2.00	.0238	0.002497	800930098.66
105A561903	Resistor	R374,R409	Bellcore Issue 6	Level I		0.001249	2.00	.0238	0.002497	800930098.66
105A703323	Resistor	R397,R400,R413	Bellcore Issue 6	Level I		0.001249	3.00	.0356	0.003746	800930098.66
105A500133	Resistor	R441,R443	Bellcore Issue 6	Level I		0.001249	2.00	.0238	0.002497	800930098.66
105A703333	Resistor	R445	Bellcore Issue 6	Level I		0.001249	1.00	.0119	0.001249	800930098.66
105A520003	Resistor	R448	Bellcore Issue 6	Level I		0.001249	1.00	.0119	0.001249	800930098.66
1059701001	Resistor	R450,R462	Bellcore Issue 6	Level I		0.001249	2.00	.0238	0.002497	800930098.66
105A515433	Resistor	R456	Bellcore Issue 6	Level I		0.001249	1.00	.0119	0.001249	800930098.66
105A700233	Resistor	R461	Bellcore Issue 6	Level I		0.001249	1.00	.0119	0.001249	800930098.66
105A704333	Resistor	R514,R527-528,R532	Bellcore Issue 6	Level I		0.001249	4.00	.0475	0.004994	800930098.66
105A514003	Resistor	R557	Bellcore Issue 6	Level I		0.001249	1.00	.0119	0.001249	800930098.66
105A702423	Resistor	R560	Bellcore Issue 6	Level I		0.001249	1.00	.0119	0.001249	800930098.66
1651608990	Connection	U1	Bellcore Issue 6	Level I		0.175826	1.00	1.6729	0.175826	5687435.91
14S4280105	Integrated Circuit	U5	Bellcore Issue 6	Level I	10.50	0.046717	1.00	.4445	0.046717	21405659.27
14S6200400	Integrated Circuit	U6	Bellcore Issue 6	Level I		0.125803	1.00	1.1969	0.125803	7948915.27
14S1488000	Integrated Circuit	U8	Bellcore Issue 6	Level I		0.042535	1.00	.4047	0.042535	23510284.61

AAEON Reliability Prediction Report

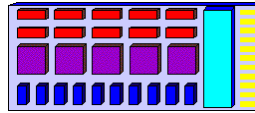
Part Number System
Reference Des
Date 04. 10, 2003
Environment GB, GC - Ground Benign, Controlled
Temperature 30.00



Description Top-level assembly
File Name EMB-830A0.2.RPJ
Time 5:07 PM
Failure Rate 10.510530
MTBF 95,143

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Failure Rate, Unit	Quantity	Failure Rate, %	Failure Rate	MTBF, Unit
14S3020100	Integrated Circuit	U9	Bellcore Issue 6	Level I		0.042535	1.00	.4047	0.042535	23510284.61
14S4048501	Integrated Circuit	U12	Bellcore Issue 6	Level I	11.30	0.091943	1.00	.8748	0.091943	10876276.00
14S4021300	Integrated Circuit	U18,U40-41	Bellcore Issue 6	Level I		0.042535	3.00	1.2141	0.127604	23510284.61
14S6334610	Integrated Circuit	U20,U23	Bellcore Issue 6	Level I		0.021923	2.00	.4172	0.043846	45614435.26
14S4255900	Integrated Circuit	U22	Bellcore Issue 6	Level I	12.90	0.053017	1.00	.5044	0.053017	18861898.95
1121501680	Capacitor	BC2-13,BC15-34,C100-104,C107,C-109-112,C116-117,C120-121,C123-138,C141-170,C172-197,C210-22-3,C236-255,C257,C259-261,C263,-C272,C276-277,C387,C397,C41,C-433-438,C44,C448,C451,C456-457-,C463,C466,C469,C47,C494,C497,-C50-54,C501-517,C519,C521-526,-C528,C542,C544,C	Bellcore Issue 6	Level I		0.001311	214.00	2.6692	0.280543	762806343.57
1189622185	Capacitor	C480,CA8,CP1,EC4-5	Bellcore Issue 6	Level I		0.139788	5.00	6.6499	0.698941	7153677.03
1189615186	Capacitor	CP3-4,EC8	Bellcore Issue 6	Level I		0.007788	3.00	.2223	0.023365	128396931.77
1189633082	Capacitor	C42-43	Bellcore Issue 6	Level I		0.007788	2.00	.1482	0.015577	128396931.77
1129701080	Capacitor	C227,C256,C288,C291-293,C295--307,C310,C312-313,C319,C321,C3-26-327,C334,C338,C342,C349,C40-,C408-411,C420-423,C464,C468,C-471,C476-478,C483-484,C488-489-,C491,C500,C576-577,C579-580,C-590-593,C605	Bellcore Issue 6	Level I		0.002822	60.00	1.6110	0.169321	354356744.52
1653925216	Connection	CFD2	Bellcore Issue 6	Level I		0.018392	1.00	.1750	0.018392	54371887.34
14S4070610	Integrated Circuit	U30	Bellcore Issue 6	Level I		0.042535	1.00	.4047	0.042535	23510284.61
1122722780	Capacitor	C343,C350	Bellcore Issue 6	Level I		0.000825	2.00	.0157	0.001650	1212335760.74
1124410180	Capacitor	C393-396,C535,C538,C545	Bellcore Issue 6	Level I		0.000547	7.00	.0365	0.003832	1826769085.82
14S4284504	Integrated Circuit	U3	Bellcore Issue 6	Level I		0.026234	1.00	.2496	0.026234	38118760.86
1211100109	Inductor	L7	Bellcore Issue 6	Level I		0.047445	1.00	.4514	0.047445	21077107.86
105A513703	Resistor	R86	Bellcore Issue 6	Level I		0.001249	1.00	.0119	0.001249	800930098.66
105A560463	Resistor	R70-73	Bellcore Issue 6	Level I		0.001249	4.00	.0475	0.004994	800930098.66
1189610186	Capacitor	C341,C473,EC6-7	Bellcore Issue 6	Level I		0.002716	4.00	.1034	0.010864	368200063.66

AAEON Reliability Prediction Report



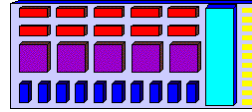
Part Number System
Reference Des
Date 04. 10, 2003
Environment GB, GC - Ground Benign, Controlled
Temperature 30.00

Description Top-level assembly
File Name EMB-830A0.2.RPJ
Time 5:07 PM
Failure Rate 10.510530
MTBF 95,143

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Failure Rate, Unit	Quantity	Failure Rate, %	Failure Rate	MTBF, Unit
1315700213	Semiconductor	Q24-25,Q36	Bellcore Issue 6	Level I		0.045844	3.00	1.3085	0.137531	21813299.60
1314917311	Integrated Circuit	U24	Bellcore Issue 6	Level I	7.10	0.069493	1.00	.6612	0.069493	14390038.11
14S4701700	Integrated Circuit	U37	Bellcore Issue 6	Level I	7.70	0.040207	1.00	.3825	0.040207	24871487.05
14S4887400	Integrated Circuit	U38	Bellcore Issue 6	Level I	6.80	0.038291	1.00	.3643	0.038291	26115629.37
1315600310	Semiconductor	Q29	Bellcore Issue 6	Level I	19.80	0.076853	1.00	.7312	0.076853	13011848.15
1315850210	Semiconductor	Q30	Bellcore Issue 6	Level I	18.30	0.074068	1.00	.7047	0.074068	13501109.95
1653205201	Connection	CN11-13,CN20-22,CN4	Bellcore Issue 6	Level I		0.003678	7.00	.2450	0.025749	271859436.70
1653204200	Connection	CN17	Bellcore Issue 6	Level I		0.002943	1.00	.0280	0.002943	339824295.87
1653210201	Connection	CN18	Bellcore Issue 6	Level I		0.007357	1.00	.0700	0.007357	135929718.35
1653209201	Connection	CN19	Bellcore Issue 6	Level I		0.006621	1.00	.0630	0.006621	151033020.39
105A533263	Resistor	R219	Bellcore Issue 6	Level I		0.001249	1.00	.0119	0.001249	800930098.66
105A700003	Resistor	R526,R530-531,R572-573,R593,R-599-600,R612,R82	Bellcore Issue 6	Level I		0.001249	10.00	.1188	0.012485	800930098.66
1121501680	Capacitor	C548-549,C551-553,C555-556,C5-58-560,C563-564,C566-568,C570--571,C573,C610,C64,C71,C81-82,C-84-86,C93-99,CB1-28,CB31-54,CB-56-74	Bellcore Issue 6	Level I		0.001311	106.00	1.3221	0.138961	762806343.57
1211100107	Inductor	L44	Bellcore Issue 6	Level I	24.10	0.072436	1.00	.6892	0.072436	13805314.12
1211100107	Inductor	L46	Bellcore Issue 6	Level I	22.10	0.070104	1.00	.6670	0.070104	14264606.15
14S4021300	Integrated Circuit	U11	Bellcore Issue 6	Level I	11.60	0.093773	1.00	.8922	0.093773	10663998.00
14S4021300	Integrated Circuit	U13	Bellcore Issue 6	Level I	12.50	0.099463	1.00	.9463	0.099463	10053959.41
14S4021300	Integrated Circuit	U19	Bellcore Issue 6	Level I	10.70	0.088379	1.00	.8409	0.088379	11314872.57
1315600310	Semiconductor	Q32	Bellcore Issue 6	Level I	18.80	0.074988	1.00	.7135	0.074988	13335502.13
1315600310	Semiconductor	Q34	Bellcore Issue 6	Level I	15.50	0.069072	1.00	.6572	0.069072	14477615.37
1314108312	Integrated Circuit	Q27	Bellcore Issue 6	Level I	22.20	0.183824	1.00	1.7490	0.183824	5439987.09
1311390610	Semiconductor	Q17	Bellcore Issue 6	Level I	11.60	0.018762	1.00	.1785	0.018762	53298794.95
1315700211	Semiconductor	Q18	Bellcore Issue 6	Level I	11.80	0.062864	1.00	.5981	0.062864	15907438.16
14S4871201	Integrated Circuit	U17	Bellcore Issue 6	Level I	8.50	0.041980	1.00	.3994	0.041980	23821072.47
14S4048501	Integrated Circuit	U15	Bellcore Issue 6	Level I	13.00	0.102757	1.00	.9777	0.102757	9731670.19
1315850210	Semiconductor	Q33	Bellcore Issue 6	Level I	24.00	0.085068	1.00	.8094	0.085068	11755362.29
1315850210	Semiconductor	Q35	Bellcore Issue 6	Level I	18.30	0.074068	1.00	.7047	0.074068	13501109.95

AAEON Reliability Prediction Report

Part Number System
Reference Des
Date 04. 10, 2003
Environment GB, GC - Ground Benign, Controlled
Temperature 30.00



Description Top-level assembly
File Name EMB-830A0.2.RPJ
Time 5:07 PM
Failure Rate 10.510530
MTBF 95,143

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Failure Rate. Unit	Quantity	Failure Rate. %	Failure Rate	MTBF. Unit
1189610186	Capacitor	EC3	Bellcore Issue 6	Level I	22.30	0.004026	1.00	.0383	0.004026	248372441.71