



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

PCM-3336

Reliability Prediction Report

(MTBF)

Release Date: JUNE.07, 2000

Issue Stamp

QA Manager

QE Manager

Test Engineer

Reliability Prediction (MTBF)

I . Model Name: PCM-3336

II . Description: CPU Module with LCD & SSD

III. Prediction Date:JUNE. 07, 2000

IV. Prediction Site: AAEON QE Dept.

V. Predicted by : Milo Wang

VI.Equipment: Relex Ver.7.0 Visual Reliability Software

VII. Simulation Environment:

- **Temperature: 25 degrees C**
- **Standard: Telcordia (Bellcore) Standard**

VIII. Prediction Result:

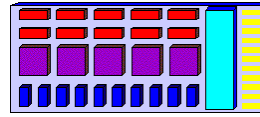
- **Failure Rate: 5.274533 ppm**
- **MTBF: 189,590. hours**

IX.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.**

AAEON Reliability Prediction Report

Part Number 9697333600
Reference Des
Date 06. 7, 2000
Environment GF, GU - Ground Fixed, Uncontrolled
Temperature 25.00

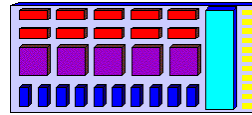


Description Top-level assembly
File Name Pcm-3336A02.rpj
Time 11:36 AM
Failure Rate 5.274533
MTBF 189,590

Assembly Name	Part Number	Model	Method	Environment	Duty Cycle	Qty	Failure Rate	MTBF
PCM-3336	9697333600	Bellcore	Method I Case 3	GF, GU - Ground Fixed,	100.00	1.00	5.274533	189,590

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Temperature 25.00

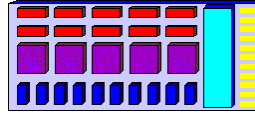


Description Top-level assembly
File Name Pcm-3336A02.rpj
Time 11:36 AM
Failure Rate 5.274533
MTBF 189,590

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Failure Rate, Unit	Quantity	Failure Rate, %	Failure Rate	MTBF, Unit
1122701680	Capacitor	BC1-20,C10,C13,C23-25,C28-32,C-4-7,C9,CB4	Bellcore Issue 6	Level I	.00	0.001598	36.00	1.0904	0.057512	625953979.55
1124518180	Capacitor	CB1-2,CB5-21	Bellcore Issue 6	Level I	.00	0.001060	19.00	.3819	0.020144	943198589.05
1653013202	Connection	CN8	Bellcore Issue 6	Level I	.00	0.014793	1.00	.2805	0.014793	67598482.36
1653005202	Connection	CN9,CN11	Bellcore Issue 6	Level I	.00	0.005690	2.00	.2157	0.011379	175756054.14
1653017201	Connection	CN10	Bellcore Issue 6	Level I	.00	0.019345	1.00	.3668	0.019345	51692957.10
1124415080	Capacitor	C1	Bellcore Issue 6	Level I	.00	0.001060	1.00	.0201	0.001060	943198589.05
1124422080	Capacitor	C11-12,C2-3,C8	Bellcore Issue 6	Level I	.00	0.001060	5.00	.1005	0.005301	943198589.05
1124522180	Capacitor	C14-16,C19	Bellcore Issue 6	Level I	.00	0.001060	4.00	.0804	0.004241	943198589.05
1124410080	Capacitor	C17,C22	Bellcore Issue 6	Level I	.00	0.001060	2.00	.0402	0.002120	943198589.05
1129701080	Capacitor	C18,C26	Bellcore Issue 6	Level I	.00	0.005466	2.00	.2072	0.010931	182961702.19
1124510280	Capacitor	C20-21	Bellcore Issue 6	Level I	.00	0.001060	2.00	.0402	0.002120	943198589.05
14S3006000	Integrated Circuit	DN1	Bellcore Issue 6	Level I	12.00	0.138049	1.00	2.6173	0.138049	7243806.82
1301005440	Semiconductor	D1	Bellcore Issue 6	Level I	.00	0.023881	1.00	.4528	0.023881	41874327.58
1304100540	Semiconductor	D2	Bellcore Issue 6	Level I	.00	0.004877	1.00	.0925	0.004877	205063180.81
1300001240	Semiconductor	D3	Bellcore Issue 6	Level I	.00	0.023881	1.00	.4528	0.023881	41874327.58
1752311000	Miscellaneous	F1	Bellcore Issue 6	Level I	.00	0.030000	1.00	.5688	0.030000	33333333.33
1212306031	Inductor	L1-10	Bellcore Issue 6	Level I	.00	0.002268	10.00	.4299	0.022677	440974090.03
1212308050	Inductor	L11-13,LB1-4	Bellcore Issue 6	Level I	.00	0.002268	7.00	.3010	0.015874	440974090.03
1174510180	Capacitor	NC1-4	Bellcore Issue 6	Level I	.00	0.001060	16.00	.3216	0.016964	943198589.05
105A704723	Resistor	R14-15,RA2-7,R18,R20,R24-26,R4-6,R5,R50,R52,R54-55,R57,R59,R6-1,R63RA1,RA11-12	Bellcore Issue 6	Level I	.00	0.002268	26.00	1.1178	0.058960	440974090.03
105A527003	Resistor	RA10	Bellcore Issue 6	Level I	.00	0.002268	1.00	.0430	0.002268	440974090.03
1059700001	Resistor	R2,RA13	Bellcore Issue 6	Level I	.00	0.002268	1.00	.0430	0.002268	440974090.03
105A700003	Resistor	R22,R27,R31,R38,R4,RA16-17,RB3	Bellcore Issue 6	Level I	.00	0.002268	8.00	.3439	0.018142	440974090.03
1504700080	Resistor	RN1-2,RN26-27	Bellcore Issue 6	Level I	.00	0.006246	4.00	.4737	0.024984	160102772.00
1540700080	Resistor	RN9-11,RN14,RN3,RN30-36	Bellcore Issue 6	Level I	.00	0.006246	12.00	1.4210	0.074952	160102772.00
1540747282	Resistor	RN15,RN18,RN22,RN25,RN4-5	Bellcore Issue 6	Level I	.00	0.006246	6.00	.7105	0.037476	160102772.00
1540710380	Resistor	RN12-13,RN16-17,RN19-21,RN23--24,RN28-29,RN38,RN6-8	Bellcore Issue 6	Level I	.00	0.006246	15.00	1.7763	0.093690	160102772.00
1540722080	Resistor	RN37	Bellcore Issue 6	Level I	.00	0.006246	1.00	.1184	0.006246	160102772.00
105A501033	Resistor	R1,R19,R23,R49	Bellcore Issue 6	Level I	.00	0.002268	4.00	.1720	0.009071	440974090.03

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MTBF 189,590

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Failure Rate, Unit	Quantity	Failure Rate, %	Failure Rate	MTBF, Unit
105A702233	Resistor	R3	Bellcore Issue 6	Level I	.00	0.002268	1.00	.0430	0.002268	440974090.03
105A703303	Resistor	R30,R6,R62	Bellcore Issue 6	Level I	.00	0.002268	3.00	.1290	0.006803	440974090.03
105A702203	Resistor	R12-13,R16-17,R21,R9	Bellcore Issue 6	Level I	.00	0.002268	6.00	.2580	0.013606	440974090.03
105A733003	Resistor	R10,R29,R35,40,R45,R60	Bellcore Issue 6	Level I	.00	0.002268	6.00	.2580	0.013606	440974090.03
105A700133	Resistor	R11,R39,R43	Bellcore Issue 6	Level I	.00	0.002268	3.00	.1290	0.006803	440974090.03
105A747003	Resistor	R28	Bellcore Issue 6	Level I	.00	0.002268	1.00	.0430	0.002268	440974090.03
105A515003	Resistor	R32-33,R36	Bellcore Issue 6	Level I	.00	0.002268	3.00	.1290	0.006803	440974090.03
105A720053	Resistor	R34,R37	Bellcore Issue 6	Level I	.00	0.013606	2.00	.5159	0.027212	73495681.67
1141610050	Capacitor	CB3,TBC1-6,TC1-3,TC5-6	Bellcore Issue 6	Level I	.00	0.002357	12.00	.5363	0.028285	424256814.77
14S8416812	Integrated Circuit	U2	Bellcore Issue 6	Level I	9.00	0.065672	1.00	1.2451	0.065672	15227088.64
14S6100210	Integrated Circuit	U5,U19	Bellcore Issue 6	Level I	15.00	0.191547	2.00	7.2631	0.383093	5220661.23
14S3128420	Integrated Circuit	U6	Bellcore Issue 6	Level I	15.00	0.168759	1.00	3.1995	0.168759	5925622.25
14S4021300	Integrated Circuit	U7,U10	Bellcore Issue 6	Level I	17.00	0.192530	2.00	7.3004	0.385060	5193998.23
14S4611702	Integrated Circuit	U8	Bellcore Issue 6	Level I	28.00	0.176929	1.00	3.3544	0.176929	5651999.15
14S3065000	Integrated Circuit	U9	Bellcore Issue 6	Level I	12.00	0.138049	1.00	2.6173	0.138049	7243806.82
14S4048500	Integrated Circuit	U11-12	Bellcore Issue 6	Level I	.00	0.059366	2.00	2.2510	0.118732	16844654.92
14S5200400	Integrated Circuit	U13,U22	Bellcore Issue 6	Level I	1.00	0.068251	2.00	2.5880	0.136502	14651747.93
14S3000000	Integrated Circuit	U15	Bellcore Issue 6	Level I	21.00	0.249350	1.00	4.7274	0.249350	4010425.02
14S5537300	Integrated Circuit	U16	Bellcore Issue 6	Level I	23.00	0.184658	1.00	3.5009	0.184658	5415402.48
14S4554500	Integrated Circuit	U17	Bellcore Issue 6	Level I	29.00	0.185809	1.00	3.5227	0.185809	5381882.44
14S5524410	Integrated Circuit	U18	Bellcore Issue 6	Level I	19.00	0.148780	1.00	2.8207	0.148780	6721339.69
14S4866100	Integrated Circuit	U20	Bellcore Issue 6	Level I	10.00	0.069400	1.00	1.3158	0.069400	14409189.92
14S6125700	Integrated Circuit	U21	Bellcore Issue 6	Level I	7.00	0.144246	1.00	2.7348	0.144246	6932624.91
1651203291	Connection	U3	Bellcore Issue 6	Level I	.00	0.018207	1.00	.3452	0.018207	54923766.92
14S6201010	Integrated Circuit	U3	Bellcore Issue 6	Level I	11.00	0.304833	1.00	5.7793	0.304833	3280488.42
1750119013	Miscellaneous	BT1	Bellcore Issue 6	Level I	.00	0.900000	1.00	17.0631	0.900000	1111111.11
1653222200	Connection	CN1,CN6	Bellcore Issue 6	Level I	.00	0.025035	2.00	.9493	0.050069	39944557.76
1653004205	Connection	CN2	Bellcore Issue 6	Level I	.00	0.004552	1.00	.0863	0.004552	219695067.68
1653132225	Connection	CN3	Bellcore Issue 6	Level I	.00	0.036414	1.00	.6904	0.036414	27461883.46
1653208200	Connection	CN4	Bellcore Issue 6	Level I	.00	0.009104	1.00	.1726	0.009104	109847533.84
1655004110	Connection	CN5	Bellcore Issue 6	Level I	.00	0.002276	1.00	.0431	0.002276	439390135.35

