



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

TD-312

Reliability Prediction Report

(MTBF)

Release Date: MAY.09, 2002

Issue Stamp

QA Manager

QE Manager

Test Engineer

Reliability Prediction (MTBF)

I . Model Name: TD-312

II . Prediction Date: MAY. 09, 2002

III . Prediction Site: AAEON QE Dept.

IV . Predicted by : Linda Sun

V . Equipment: Relex Ver.7.2 Visual Reliability Software

VI. Simulation Environment:

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

VII. Term and Definition:

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

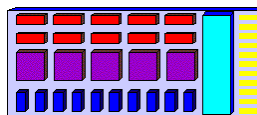
VIII. Prediction Result:

- Failure Rate: 73.552297ppm
- MTBF: 13,596Hours

IX. Prediction Table:

AAEON Reliability Prediction Report

Part Number TD-312(AC/DC)
Reference Des
Date 05. 9, 2002
Environment GF, GU - Ground Fixed, Uncontrolled
Temperature 25.00

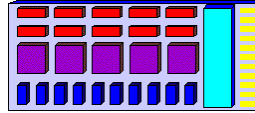


Description Top-level assembly
File Name Td-312.RPJ
Time 3:23 PM
Failure Rate 73.552297
MTBF 13,596

Assembly Name	Part Number	Model	Method	Environment	Duty Cycle	Qty	Failure Rate	MTBF
TD-312(AC/DC)	TD-312(AC/DC)	Bellcore	Method I Case 3	GF, GU - Ground Fixed,	100.00	1.00	73.552297	13,596
A/D Board V688A	V688A	Bellcore	Method I Case 3	GF, GU - Ground Fixed,		1.00	2.299012	434,969
TB-908A	969B908A30	Bellcore	Method I Case 3	GF, GU - Ground Fixed,		1.00	0.071610	13,964,594
1254151850		Bellcore	Method I Case 3	GF, GU - Ground Fixed,		1.00	1.181675	846,257

AAEON Reliability Prediction Report

Part Number TD-312(AC/DC)
Reference Des
Date 05. 9, 2002
Environment GF, GU - Ground Fixed, Uncontrolled
Temperature 25.00

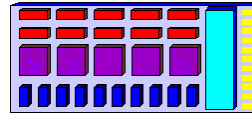


Description Top-level assembly
File Name Td-312.RPJ
Time 3:23 PM
Failure Rate 73.552297
MTBF 13,596

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Failure Rate, Unit	Quantity	Failure Rate, %	Failure Rate	MTBF, Unit
LTM12C275C	Other	12" LCD(Toshiba,LTM12C275C)	Bellcore Issue 6			20.000000	1.00	28.5714	20.000000	50000.00
BACKLIGHT	Other	12" LCD Backlight	Bellcore Issue 6			16.666670	1.00	23.8095	16.666670	59999.99
1757306001	Other	AC Power Adapter(AC Only)	Bellcore Issue 6			33.333330	1.00	47.6190	33.333330	30000.00
DC POWER ADAPTER	Other	SUN POWER SDS-060B12.60W(DC Only)	Bellcore Issue 6			0.000000	1.00	.0000	0.000000	.00
MEMBRANE	Other	OSD Membrane Switch 5Key	Bellcore Issue 6			0.000000	1.00	.0000	0.000000	.00

AAEON Reliability Prediction Report

Part Number V688A
Reference Des
Date 05. 9, 2002
Environment GF, GU - Ground Fixed, Uncontrolled
Temperature 25.00

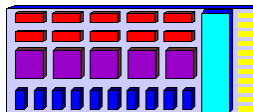


Description
File Name Td-312.RPJ
Time 3:23 PM
Failure Rate 2.299012
MTBF 434,969

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Failure Rate, Unit	Quantity	Failure Rate, %	Failure Rate	MTBF, Unit
RESISTOR	Resistor	R3-41,R43-48,R55,R58,R61,R66-8-6,R90-91,L11,L25,L29-35,L38	Bellcore Issue 6	Level I		0.002268	81.00	7.9897	0.183684	440974090.03
NETWORK FILM	Resistor	RP1-18,RP24-30	Bellcore Issue 6	Level I		0.006246	25.00	6.7920	0.156150	160102772.00
CAP-A	Capacitor	C1-2,C5,C8-9,C11,C13,C17,C43,C-46,C54,C75,C124	Bellcore Issue 6	Level I		0.045403	13.00	25.6738	0.590244	22024783.71
CAP-B	Capacitor	C3-4,C6-7,C10,C12,C14-16,C18-24-,C26-28,C30-31,C33-37,C40-42,C4-4-45,C47-53,C55-65,C67-74,C76-8-9,C122-123,C125-126,C143-146,C-148-152,C154-155,C158-160,C164-167,C169	Bellcore Issue 6	Level I		0.001060	94.00	4.3349	0.099661	943198589.05
1N5882	Semiconductor	D1A1	Bellcore Issue 6	Level I		0.023881	1.00	1.0387	0.023881	41874327.58
DIODE	Semiconductor	D2-7	Bellcore Issue 6	Level I		0.023881	6.00	6.2325	0.143286	41874327.58
FUSE	Miscellaneous	F1	Bellcore Issue 6	Level I		0.030000	1.00	1.3049	0.030000	33333333.33
X'TAL	Miscellaneous	X2	Bellcore Issue 6	Level I		0.150000	1.00	6.5245	0.150000	6666666.67
CON-A	Connection	J1	Bellcore Issue 6	Level I		0.003983	1.00	.1732	0.003983	251080077.35
CON-B	Connection	J2	Bellcore Issue 6	Level I		0.001707	1.00	.0742	0.001707	585853513.81
CON-C	Connection	J9	Bellcore Issue 6	Level I		0.022759	1.00	.9899	0.022759	43939013.54
CON-D	Connection	J10	Bellcore Issue 6	Level I		0.023897	1.00	1.0394	0.023897	41846679.56
CON-E	Connection	J13	Bellcore Issue 6	Level I		0.004552	1.00	.1980	0.004552	219695067.68
CON-F	Connection	J15	Bellcore Issue 6	Level I		0.002276	1.00	.0990	0.002276	439390135.35
CON-G	Connection	JP1	Bellcore Issue 6	Level I		0.004552	1.00	.1980	0.004552	219695067.68
CON-H	Connection	SK1	Bellcore Issue 6	Level I		0.025035	1.00	1.0889	0.025035	39944557.76
CON-I	Connection	W1	Bellcore Issue 6	Level I		0.009672	1.00	.4207	0.009672	103385914.20
INDUCTOR-A	Inductor	L1-2,L5-10,L12-15,L24,L37,L39	Bellcore Issue 6	Level I		0.002268	15.00	1.4796	0.034016	440974090.03
INDUCTOR-B	Inductor	L4A1	Bellcore Issue 6	Level I		0.086173	1.00	3.7483	0.086173	11604581.32
TRANSISTOR	Semiconductor	Q1-7	Bellcore Issue 6	Level I		0.023881	7.00	7.2712	0.167167	41874327.58
SK-SI8050S	Integrated Circuit	U1A1	Bellcore Issue 6	Level I		0.059366	1.00	2.5822	0.059366	16844654.92
SI9433DY-S08	Semiconductor	U2,U4	Bellcore Issue 6			0.000000	2.00	.0000	0.000000	.00
SD1010QFP	Integrated Circuit	U8	Bellcore Issue 6	Level I		0.039296	1.00	1.7092	0.039296	25448028.36
MK9173SOP	Integrated Circuit	U14	Bellcore Issue 6	Level I		0.038583	1.00	1.6782	0.038583	25918198.70
SN74LVC125A	Integrated Circuit	U18	Bellcore Issue 6	Level I		0.037813	1.00	1.6448	0.037813	26445709.42
7414S-SO14	Integrated Circuit	U6	Bellcore Issue 6	Level I		0.039296	1.00	1.7092	0.039296	25448028.36

AAEON Reliability Prediction Report

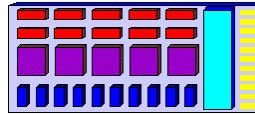
Part Number V688A
Reference Des
Date 05. 9, 2002
Environment GF, GU - Ground Fixed, Uncontrolled
Temperature 25.00



Description
File Name Td-312.RPJ
Time 3:23 PM
Failure Rate 2.299012
MTBF 434,969

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Failure Rate, Unit	Quantity	Failure Rate, %	Failure Rate	MTBF, Unit
24LC21DIP	Integrated Circuit	U7	Bellcore Issue 6	Level I		0.030598	1.00	1.3309	0.030598	32681842.61
AD9883QFP	Integrated Circuit	U5	Bellcore Issue 6	Level I		0.039296	1.00	1.7092	0.039296	25448028.36
24LC16SOP	Integrated Circuit	U19	Bellcore Issue 6	Level I		0.030598	1.00	1.3309	0.030598	32681842.61
24LC08DIP	Integrated Circuit	U9	Bellcore Issue 6	Level I		0.047855	1.00	2.0815	0.047855	20896551.49
AIC1084-TO263	Integrated Circuit	U3	Bellcore Issue 6	Level I		0.059366	1.00	2.5822	0.059366	16844654.92
SM0230PLCC-SO-CKET	Integrated Circuit	U17	Bellcore Issue 6	Level I		0.039296	1.00	1.7092	0.039296	25448028.36
SAA7114LQFP	Integrated Circuit	U10	Bellcore Issue 6	Level I		0.074957	1.00	3.2604	0.074957	13340981.79

AAEON Reliability Prediction Report



Part Number
Reference Des
Date 05. 9, 2002
Environment GF, GU - Ground Fixed, Uncontrolled
Temperature 25.00

Description
File Name Td-312.RPJ
Time 3:24 PM
Failure Rate 1.181675
MTBF 846,257

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Failure Rate, Unit	Quantity	Failure Rate, %	Failure Rate	MTBF, Unit
R-1	Resistor	R1,R14	Bellcore Issue 6	Level I		0.002268	2.00	.3838	0.004535	440974090.03
R-2	Resistor	R2	Bellcore Issue 6	Level I		0.002268	1.00	.1919	0.002268	440974090.03
R-3	Resistor	R3,R7	Bellcore Issue 6	Level I		0.002268	2.00	.3838	0.004535	440974090.03
R-4	Resistor	R4	Bellcore Issue 6	Level I		0.002268	1.00	.1919	0.002268	440974090.03
R-5	Resistor	R5	Bellcore Issue 6	Level I		0.002268	1.00	.1919	0.002268	440974090.03
R-6	Resistor	R6	Bellcore Issue 6	Level I		0.002268	1.00	.1919	0.002268	440974090.03
R-7	Resistor	R8,R12	Bellcore Issue 6	Level I		0.002268	2.00	.3838	0.004535	440974090.03
R-8	Resistor	R9	Bellcore Issue 6	Level I		0.002268	1.00	.1919	0.002268	440974090.03
R-9	Resistor	R10,R19	Bellcore Issue 6	Level I		0.002268	2.00	.3838	0.004535	440974090.03
R-10	Resistor	R11	Bellcore Issue 6	Level I		0.002268	1.00	.1919	0.002268	440974090.03
R-11	Resistor	R13,R21	Bellcore Issue 6	Level I		0.002268	2.00	.3838	0.004535	440974090.03
R-12	Resistor	R16-18	Bellcore Issue 6	Level I		0.002268	3.00	.5757	0.006803	440974090.03
R-13	Resistor	R20	Bellcore Issue 6	Level I		0.002268	1.00	.1919	0.002268	440974090.03
R-14	Resistor	R22	Bellcore Issue 6	Level I		0.002268	1.00	.1919	0.002268	440974090.03
R-15	Resistor	R23	Bellcore Issue 6	Level I		0.002268	1.00	.1919	0.002268	440974090.03
R-16	Resistor	R24	Bellcore Issue 6	Level I		0.002268	1.00	.1919	0.002268	440974090.03
C-1	Capacitor	C1,C26	Bellcore Issue 6	Level I		0.020771	2.00	3.5155	0.041542	48143876.61
C-2	Resistor	C2,C18	Bellcore Issue 6	Level I		0.002268	2.00	.3838	0.004535	440974090.03
C-3	Capacitor	C3	Bellcore Issue 6	Level I		0.001598	1.00	.1352	0.001598	625953979.55
C-4	Capacitor	C4,C21	Bellcore Issue 6	Level I		0.005466	2.00	.9251	0.010931	182961702.19
C-5	Capacitor	C5,C15	Bellcore Issue 6	Level I		0.001598	2.00	.2704	0.003195	625953979.55
C-6	Capacitor	C6,C22	Bellcore Issue 6	Level I		0.001060	2.00	.1794	0.002120	943198589.05
C-7	Capacitor	C7	Bellcore Issue 6	Level I		0.001060	1.00	.0897	0.001060	943198589.05
C-8	Capacitor	C8,C16,C20	Bellcore Issue 6	Level I		0.001060	3.00	.2692	0.003181	943198589.05
C-9	Capacitor	C9	Bellcore Issue 6	Level I		0.005466	1.00	.4625	0.005466	182961702.19
C-10	Capacitor	C10	Bellcore Issue 6	Level I		0.002539	1.00	.2149	0.002539	393852661.82
C-11	Capacitor	C11	Bellcore Issue 6	Level I		0.002539	1.00	.2149	0.002539	393852661.82
C-12	Capacitor	C12	Bellcore Issue 6	Level I		0.001060	1.00	.0897	0.001060	943198589.05
C-13	Capacitor	C13-14,C24	Bellcore Issue 6	Level I		0.001060	3.00	.2692	0.003181	943198589.05
C-14	Capacitor	C17	Bellcore Issue 6	Level I		0.001060	1.00	.0897	0.001060	943198589.05
C-15	Capacitor	C19,C23	Bellcore Issue 6	Level I		0.002539	2.00	.4297	0.005078	393852661.82

